

# 737-600/700/800/900

# **CFM56-7 Powerplant Buildup Manual**

# **TUI Airlines Nederland B.V.**

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To: All holders of this Boeing Document D633A106-HXL

Attached is the current revision to the Boeing 737-600/700/800/900 CFM56-7 Powerplant Buildup Manual.

The CFM56-7 Powerplant Buildup Manual (PPBU) is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). The pages that contain customer originated data will be identified on the LEP by a C (COC). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

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# TRANSMITTAL LETTER

Page 1 Oct 05/2008



#### TEMPORARY REVISIONS

Remove any Temporary Revisions that have a date earlier than the date of this revision.

Do not remove any Temporary Revisions (TRs) that have a date later than the date of this revision. TRs with a later date will be incorporated into the next revision of the manual (unless they are superseded by a subsequent TR).

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When you have more than one TR, the TR status report with the latest date and time gives you the most current information.

# TRANSMITTAL LETTER



#### **Location of Change Description of Change** CHAPTER 71 71-00-02 FIGURE 2-1 Changed the data for the Materials and Tools List. FIGURE 3-1 Changed the data for the Materials and Tools List. FIGURE 4-1 Changed the data for the Materials and Tools List. Changed the data for the materials and tools list. FIGURE 5-1 Changed the data for the materials and tools list. Changed the data for the Materials and Tools List. FIGURE 6-1 Changed the data for the Materials and Tools List. FIGURE 7-1 Changed the data for the Materials and Tools List. Added the data to show that flag notes 1 and 2 are not used. FIGURE 8-1 Changed the data for the Materials and Tools List. FIGURE 9-1 Changed the data for the Materials and Tools List. Changed the data for the Materials and Tools List. FIGURE 10-1 FIGURE 12-1 Changed the data for the Materials and Tools List. FIGURE 13-1 Changed the instructions to the PPBU manual. Changed the data for the materials and tools list. Changed the data for the Materials and Tools List. Changed the data to show applicable consumable materials. FIGURE 14-1 Changed the data for the Materials and Tools List. Changed the data to show the applicable part numbers. Added the data to provide PPBU coverage. FIGURE 15-1 Changed the data for the Materials and Tools List. FIGURE 16-1 Changed the data for the Materials and Tools List. FIGURE 17-1 Changed the data for the Materials and Tools List. FIGURE 18-1 Changed the data to show the applicable part numbers. Added the data to provide PPBU coverage. Changed the data for the Materials and Tools List. FIGURE 20-1 Changed the data for the Materials and Tools List. FIGURE 21-1 Changed the data for the Materials and Tools List. FIGURE 22-1 Changed the data for the Materials and Tools List. FIGURE 23-1 Changed the data for the Materials and Tools List. FIGURE 24-1 Changed the data for the Materials and Tools List. Added the data to provide PPBU coverage. FIGURE 25-1 Changed the data for the Materials and Tools List. Added a reference to clarify the bonding jumper location. FIGURE 27-1 Changed the data for the Materials and Tools List. Changed the data to show the new specifications for the bulk code G00251 (item C1).

## **HIGHLIGHTS**

Page 1 Oct 05/2008

FIGURE 28-1

Changed the data for the materials and tools list.

Changed the data for the Materials and Tools List.



# Location of ChangeDescription of ChangeFIGURE 29-1Changed the data for the Materials and Tools List.FIGURE 30-1Changed the data for the Materials and Tools List.FIGURE 31-1Changed the data for the Materials and Tools List.FIGURE 32-1Changed the data for the Materials and Tools List.FIGURE 33-1Changed the data for the Materials and Tools List.Changed the data for the Materials and Tools List.

# **HIGHLIGHTS**



Subject/Page	Date COC	Subject/Page	Date	coc	Subject/Page	Date	coc
TITLE PAGE		INTRODUCTION	I (cont)		NUMERICAL IN	DEX (cont)	
0 1	Oct 05/2008	R 22	Oct 05/2008		O 30	Oct 05/2008	
2	BLANK	R 23	Oct 05/2008				
TRANSMITTAL	LETTER	R 24	Oct 05/2008				
R 1	Oct 05/2008	R 25	Oct 05/2008				
2	Feb 05/2008	O 26	Oct 05/2008				
HIGHLIGHTS		INSTALLATION	INDEX				
R 1	Oct 05/2008	1	Oct 05/2007				
R 2	Oct 05/2008	2	Oct 05/2007				
EFFECTIVE PAG	GES	NUMERICAL IN	DEX				
1	Oct 05/2008	R 1	Oct 05/2008				
2	BLANK	2	Jun 05/2008				
REVISION RECO		3	Oct 05/2007				
1	Oct 05/2007	R 4	Oct 05/2008				
2	Oct 05/2007	5	Oct 05/2007				
RECORD OF TE	MPORARY REVISIONS	6	Oct 05/2007				
1	Oct 05/2007	7	Jun 05/2008				
2	Oct 05/2007	8	Jun 05/2008				
INTRODUCTION		9	Oct 05/2007				
1	Jun 05/2008	10	Jun 05/2008				
2	Oct 05/2007	11	Jun 05/2008				
3	Oct 05/2007	12	Oct 05/2007				
4	Oct 05/2007	13	Jun 05/2008				
5	Oct 05/2007	R 14	Oct 05/2008				
6	Oct 05/2007	R 15	Oct 05/2008				
7	Oct 05/2007	R 16	Oct 05/2008				
8	Oct 05/2007	O 17	Oct 05/2008				
9	Oct 05/2007	R 18	Oct 05/2008				
10	Jun 05/2008	O 19	Oct 05/2008				
11	Oct 05/2007	O 20	Oct 05/2008				
12	Oct 05/2007	R 21	Oct 05/2008				
13	Jun 05/2008	R 22	Oct 05/2008				
14	Oct 05/2007	O 23	Oct 05/2008				
15	Oct 05/2007	R 24	Oct 05/2008				
16	Oct 05/2007	O 25	Oct 05/2008				
R 17	Oct 05/2008	O 26	Oct 05/2008				
R 18	Oct 05/2008	O 27	Oct 05/2008				
R 19	Oct 05/2008	O 28	Oct 05/2008				
R 20	Oct 05/2008	O 29	Oct 05/2008				
O 21	Oct 05/2008						

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# **EFFECTIVE PAGES**

Page 1 Oct 05/2008



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Revi	Revision		led	Rev	ision	Fi	led
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# **REVISION RECORD**

Page 1 Oct 05/2007



Revis	Revision		evision Filed		Revis	sion	Fil	ed
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# **REVISION RECORD**

Page 2 Oct 05/2007



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# **RECORD OF TEMPORARY REVISION**

Page 1 Oct 05/2007



Temporary	Revision	Ins	erted	Rei	moved	Temporary	Revision	Ins	erted	Rer	noved
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# **RECORD OF TEMPORARY REVISION**



#### INTRODUCTION

#### 1. General

- A. The 737-600/700/800/900 CFM56-7 series Powerplant Buildup Manual provides procedures for installing a Boeing QEC kit on a CFM56-7 series engine.
  - (1) The manual is divided into four major sections: Front Matter, 71-00-02 Powerplant Buildup, 71-00-03 QEC System Tests, and 71-00-04 QEC Inspection/Check.
  - (2) Section Front Matter contains these items:
    - (a) Description of major characteristics of the powerplant
    - (b) Usage instructions for this manual
    - (c) List of special tools, fixtures, and equipment used in this manual
    - (d) List of vendor names and addresses
    - (e) List of all consumable materials used in this manual
    - (f) A summary of applicable standard practices
    - (g) An index which lists all installation tasks in the manual in alphanumerical sequence by title, and
    - (h) A numerical index which lists all part numbers contained in each installation parts list.
  - (3) Section 71-00-02 Powerplant Buildup contains these items:
    - (a) An illustrated installation index of all buildup installations in order of accomplishment.
    - (b) Parts lists and procedures to build up a basic engine into a demountable powerplant.
  - (4) Section 71-00-03 QEC System Test contains procedures that are used to test the installed components before engine installation on an airplane.
  - (5) Section 71-00-04 QEC Inspection/Check contains general inspection/check procedures for QEC components.
- B. Abbreviations and terms used in this manual are defined below as follows:

#### Table 1:

ABBREVIATION	DEFINITION
AEW&C	Airborne Early Warning and Control
AGB	Accessory Gearbox
ASSY	Assembly
BIFUR	Bifurcation
BLD	Bleed
BRKT	Bracket
BTWN	Between
CFMI	Commercial Fan Moteur International
CON	Consumable
CONFIG	Configuration
C/L	Centerline
CONT	Continued
COMP	Compressor



(Continued)

(Continued)  ABBREVIATION	DEFINITION
CSK	Countersink/Countersunk
CRES	Corrosion Resistant Steel
CW	Clockwise
DAC	Double Annular Combustor
DEL	Deleted
DET	Detector, Detection
DIM	Dimension
DN	Down
DR	Drain
EEC	Electronic Engine Control
ELEC	Electrical
ENG	Engine
EXH	Exhaust
EXT	Extension
FIG	Figure
FLG	Flange
FLT	Flight
FTG	Fitting
FURN	Furnished
FWD	Forward
GE	General Electric
GRD	Ground
GSE	Ground Support Equipment
HDWR	Hardware
HMU	Hydro/Mechanical Unit
HORIZ	Horizontal
HPT	High Pressure Turbine
HYD	Hydraulic
ID	Inner Diameter
IDG	Integrated Drive Generator
INBD	Inboard
INCLD	Included
INSTL	Install
INSTLD	Installed
INSTLN	Installation

# **INTRODUCTION**

Page 2 Oct 05/2007



(Continued)

(Continued)  ABBREVIATION	DEFINITION
LB-FT	Pound-Feet (Torque)
LB-IN	Pound-Inches (Torque)
LH, LFT	Left
LTD	Limited
LPT	Low Pressure Turbine
LWR	Lower
MAX	Maximum
MIN	Minimum
MISC	Miscellaneous
MNFLD	Manifold
MTG	Mounting
N.M	Newton-Meters (Torque)
N1	Low Pressure Rotor
N2	High Pressure Rotor
OD	Outer Diameter
OPP	Opposite
OPT	Optional
OUTBD	Outboard
OVRHT	Overheat
PNEU	Pneumatic
PRESS	Pressure
QAD	Quick Attach Detach
QEC	Quick Engine Change (Kit)
QTY	Quantity
R/B	Replaced By
REF	Reference
REG	Regulator
REQD	Required
RH, RT	Right
SAC	Single Annular Combustor
SN	SNECMA
SUPT	Support
SWT	Switch
SYS	System
TAI	Thermal Anti-Ice

# **INTRODUCTION**

Page 3 Oct 05/2007



(Continued)

ABBREVIATION	DEFINITION
TBF	To Be Furnished
TEMP	Temperature
TGB	Transfer Gearbox
TOL	Tool
TRF	Turbine Rear Frame
UPR	Upper
VBV	Variable Bleed Valve
VSV	Variable Stator Vane
VEN	Vendor
W/B	Wire Bundle
W/	With
W/O	Without
XFMR	Transformer
XMTR	Transmitter

#### Table 2:

TERMS:	DEFINITION
Basic Engine	The assembled engine as furnished by the engine manufacturer.
Demountable Powerplant	Basic engine with QEC equipment installed.
QEC Equipment	Airframe manufacturer supplied parts installed during powerplant buildup.
Run-On Torque	Torque required to check self-locking features of nuts or nut plates.

#### 2. Description

- A. CFM56-7 Series Basic Engine
  - (1) The CFM56-7 series engine is a dual-rotor, axial-flow, high bypass ratio turbofan. A single-stage high pressure turbine drives the 9 stage high pressure compressor. A four stage low pressure turbine drives the integrated front fan and low pressure compressor. The accessory drive system extracts energy from the high pressure, high-speed rotor to drive engine accessories and engine mounted airplane accessories.
  - (2) Accessory items pertaining to engine operation such as hydro/mechanical unit, electronic engine control, fuel filter, fuel pump, oil/fuel heat exchanger, oil tank, oil filter, oil pump, starter, and other necessary equipment are supplied and installed by CFMI. Installation procedures for these items are contained in the CFMI CFM56-7 Engine Manual.
  - (3) Identification of engine flanges is given in Figure 1.
- B. Demountable Powerplant
  - (1) The demountable powerplant consists of the CFMI CFM56-7 series basic engine and Boeing furnished QEC kit parts.



(2) Principal physical characteristics of the powerplant are approximately Figure 2:

**NOTE**: The weights provided below are approximate and should not be used for weight and balance purposes.

Table 3:

ITEM	WEIGHT	LENGTH	DIAMETER
Basic Engine	5185 lb	121.7 in.	66.1 in.
	(2357 kg)	(309 cm.)	(167.8 cm.)
Primary Nozzle Assembly	111 lb	45 in.	38 in.
	(50 kg)	(115 cm.)	(96 cm.)
Primary Plug Assembly	53 lb	43 in.	26 in.
	(24 kg)	(110 cm.)	(66 cm.)
Inlet Cowl	355 lb	TBD in.	89 in.
	(161 kg)	(TBD cm.)	(225 cm.)
Demountable Powerplant	6600 lb	203 in.	89 in.*
	(3000 kg)	(516 cm.)	(225 cm.)
* Maximum diameter.	_		

(3) Engines and inlet cowls are directly interchangeable between engine positions 1 and 2 on all 737-600/700/800/900 series airplanes.

#### C. QEC Equipment

- (1) Accessory items installed on the engine are supplied by Boeing in the form of a QEC (Quick Engine Change) kit. Contact Boeing Customer Services-Spares for the correct kit part/dash number. Procedures for installing this equipment are given in this manual.
- (2) QEC kit parts packaging
  - (a) The QEC kit parts are packaged in a series of tasks identified in the Special Spares Breakdown Powerplant document issued by Boeing Customer Services Spares. The task numbers correlate to the figure numbers of 71-00-02. As an example, parts for Figure 8-1 are contained in Task No. 8.
  - (b) Task No. 110 contains all standards and attaching hardware of the QEC kit with the exception of, Figure 2-1, Figure 3-1, and Figure 31-1. For these figures, the standards and attaching hardware will be packaged together with the other Figure/Item hardware. As an example, the standards and attaching hardware for Figure 2-1 are contained in Task No. 2.
- (3) The installations that follow make up a QEC kit:

Table 4:

INSTALLATION	DWG NUMBER
ENGINE TO STRUT	310A2010
FWD ENGINE MOUNT	310A2020
AFT ENGINE MOUNT	310A2030
THRUST LINK	310A2040
MARKER	330A2010
DRAINS	332A2100



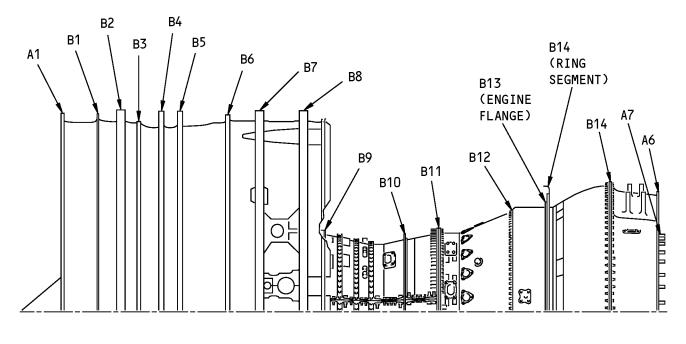
(Continued)

INSTALLATION	DWG NUMBER
FUEL SUPPLY HOSE	332A2100
IDG PLUMBING	332A2100
PNEU BLEED SYSTEM	332A2100
WIRE HARNESS	332A2200
INLET COWL TAI SYSTEM	332A2300
PNEU BLEED CONTROLLER	332A2300
PNEU BLEED DUCT	332A2300
START VALVE AND DUCT	332A2300
12 O'CLOCK STRUT	332A2370
HYDRAULIC PUMP	332A2400
FIRE DETECTION	332A2500
IDG	332A2600
BRACKET	332A2900
PRIMARY EXHAUST	333A2100
INLET	334A2000

# **INTRODUCTION**

Page 6 Oct 05/2007





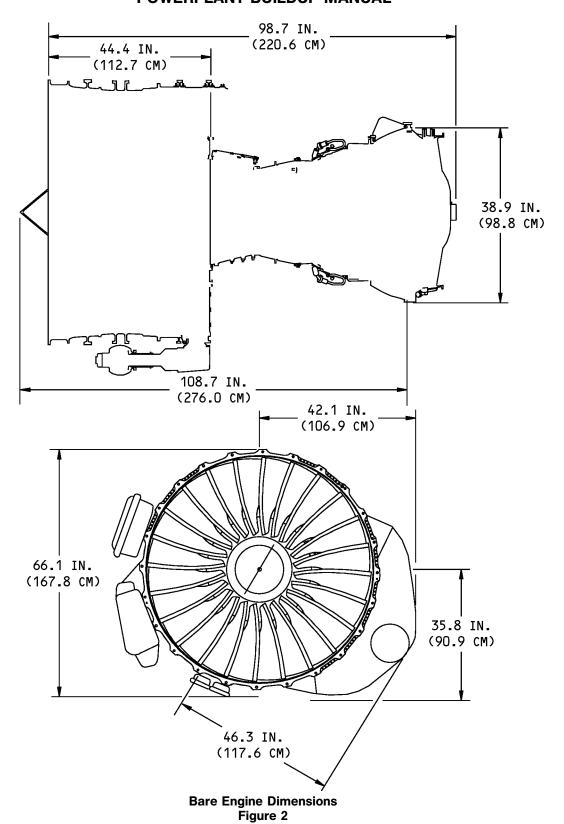
FWD 📛

Engine Flange Locations Figure 1

# **INTRODUCTION**

Page 7 Oct 05/2007





# **INTRODUCTION**

Page 8 Oct 05/2007



#### 3. Instructions for Using Manual

- A. Figure and Item Numbers (71-00-02)
  - (1) Figure numbers are assigned to individual segments of build up in a sequential order of accomplishment. Figures in 71-00-02, Powerplant Buildup, utilize a two-part naming nomenclature. The first part is the assigned buildup sequence number. The second part is used to control the configuration. (An exception is Figure 1-1, which is an index figure for 71-00-02.). Please note that if a particular configuration is not applicable to your fleet, it will not be included.
  - (2) Item numbers are assigned to parts, wherever possible, in order of installation. The part listing with item numbers and nomenclatures appear on the text pages immediately following the applicable steps for installation of the parts. Unless specified differently, each figure is a complete task and contains its individual set of item numbers.
  - (3) Item numbers for consumable materials are assigned a prefix C (e.g. C1). Each of the consumable materials has a unique item number that remains the same throughout each figure. The item number, bulk code number, nomenclature and specification for each consumable material appears on the text page immediately following the applicable steps for the use of that consumable material.
  - (4) Item numbers for special tools, fixtures and equipment are assigned a prefix T (e.g. T1). Each of the tools has a unique item number that remains the same throughout each figure. The item number, tool part number and nomenclature for each tool appears on the text page immediately following the applicable steps for the use of that tool.
  - (5) Item numbers preceded by a dash (-) in the FIG. ITEM or ITEM NO. column indicates the item is not illustrated.
  - (6) Gaps in item numbers are used either for configuration control or for future growth, and does not indicate missing parts.
  - (7) This manual uses the indenture system for listing its parts. This system shows the relationship of one part to another. For a given part, the number of indentures defines the relationship of that part to the associated installation, next higher assembly, or components of the part as follows:

    Detail parts, Assembly, or Attaching parts for assembly
    - Detail parts for assembly, or Sub-assembly, or Attaching parts for sub-assembly

#### B. Locating a Part

- (1) If a part number is known and it is required to identify the location of the part, find the part number in the Numerical Index in section 71-00-00 and note the section, figure and item number of the part. Locate the item number on the text page of the applicable figure for identification of the part.
- (2) If the part number is not known, but the system or general area on the engine is known, then it may be possible to locate the applicable figure from the alphabetical listing of installations in the Installation Index, 71-00-00, or from the sequential listing in Figure 1-1.
- (3) BCREF() (Boeing Company Ref) part number is a reference number assigned to all part numbers that exceed 15 digits.
  - (a) The actual part number is included in parenthesis after the part name in the nomenclature column.
  - (b) When ordering these parts from Boeing, use either the BCREF() part number or the actual part number.
- C. Use of Assembly Procedures



- (1) Assembly procedures assume the engine is supported on pedestals, adapters, and brackets.
- (2) Each area of work as illustrated has the instructions and parts list located on the page facing the illustration. The parts required to perform a step are listed immediately following the step.
- (3) Vendor codes are listed for vendor parts in the parts list to enable identification of the vendors. A list of vendors and their codes and addresses is provided in the Vendor Codes list.
- (4) All tightening requirements are specified in the applicable steps of the buildup procedures.
- (5) Consumable materials, such as lubricants, sealants and tape as specified in buildup procedures, are listed in section 71-00-00 with their specification. In addition, if all usage location are required for a consumable, use the table in paragraph () of section 71-00-00 to determine the bulk code. Then use the Numerical Index, section 71-00-00 to find all locations where that consumable is used.
- D. Definitions of part effectivity terms
  - (1) AR Parts with AR (AS REQUIRED) in the QTY (quantity) column can be used as required.
  - (2) BOE Parts with BOE (BOEING) in the UC (usage code) column, and a dash in the QTY (quantity) column, are Boeing Specification numbers.
    - (a) The assigned vendor part number(s) is (are) assigned the same Item No. and is (are) listed immediately above the Boeing Specification number.

**NOTE**: Some Boeing Specification numbers are assigned multiple vendor part numbers.

- (3) CON Items with CON (CONSUMABLE) in the UC (usage code) column, and AR (as required) in the QTY (quantity) column, are consumable materials that are used in that figure. Each consumable material's bulk code is listed in the PART NUMBER column and the description and specification are listed in the NOMENCLATURE column. These consumable materials are not part of the QEC kit.
- (4) DEL Parts with DEL in the UC (usage code) column and a dash in the QTY (quantity) column should not be used or reinstalled.
- (5) OPT Parts with OPT (OPTIONAL) in the NOMENCLATURE column, OPT in the UC (usage code) column and a dash in the QTY (quantity) column, are optional and interchangeable with the same item number listed with a quantity listed in the QTY column. Parts listed with a quantity are preferred and should be used if available.
- (6) REF Parts with REF (REFERENCE) in the UC (usage code) column and a dash in the QTY (quantity) column have been identified and installed on an earlier or later sheet or page in the same figure or is a sub-part of an assembly and included for clarification.
- (7) REPLD BY Parts with REPLD BY (REPLACED BY) in the NOMENCLATURE column, a LTD (LIMITED) in the UC (usage code) column and a dash in the QTY (quantity) column have been installed on engines delivered on earlier new airplanes and/or have been supplied in earlier QEC kits. These parts are no longer preferred and should not be ordered. Parts having the same item number with a quantity listed in the QTY column are improved designs or are required due to adjacent engine configuration changes and are supplied in current QEC kits.
- (8) TOL Parts with TOL (TOOL) in the UC (usage code) column, and a dash in the QTY (quantity) column, are special tools, fixtures and equipment that may be required. These tools are not part of the QEC kit.
- (9) VEN Parts with a vendor cage code in the NOMENCLATURE column and/or VEN (VENDOR) in the UC (usage code) column are vendor part number.



#### 4. Standard Practices

A. Before starting engine buildup, read applicable section of manual to become familiar with items to be installed and procedures to be followed.

Also, review the Standard Overhaul Practices Manual (D6-51702) for additional information on standard practices, specifically the following:

Table 5:

Title	Standard Overhaul Practices Manual Chapter
Repair of electrical terminations and electrical bonding areas	20-11-03
Bolt and Nut Installation	20-50-01
Installation of Safety Devices	20-50-02
Bearing Installation and Retention	20-50-03
Installation of Permanent Drill Passage Pin and Plug	20-50-04
Application of Aluminum Foil and Other Markers	20-50-05
Installation of O-Rings and Teflon Seals	20-50-06
Lubrication	20-50-07
Application of Dry Lubricant	20-50-08
Installation of Protective Grommets	20-50-09
Application of Stencils, Insignia, Silk Screen, Part Numbering and Identification Markings	20-50-10
Application of Aerodynamic Smoothing Sealant	20-50-11
Application of Adhesives	20-50-12
Application of Weather, Fuel Oil, Solvent and Heat Resistant Protective Coatings	20-50-13
Cleaners	20-60-01
Finishing Materials	20-60-02
Lubricants	20-60-03
Miscellaneous Materials	20-60-04

#### B. Counter-Sunk (CSK) Washers

(1) CSK washers are manufactured with a chamfer on one of the edges of the inside diameter. Position the chamfered edge of the washer against the bottom surface of the bolt head.

#### C. Electrical Harness

- (1) Position electrical harness between connectors to provide equal distribution of support loading on clamps. Maintain sufficient slack at connectors to prevent stress loading the connection.
- (2) Do not wrap tape on the wire bundle under the clamp.
- (3) When connecting to electrical connectors, turn knurled coupling ring while wiggling the backshell assembly. After fully seating the coupling ring, use soft-jawed pliers or a strap wrench to tighten the coupling ring an additional 1/8 turn or until plier slippage occurs Figure 3 (Sheet 1).



- (4) Install protective covers on connectors and receptacles not connected. Lockwire all threaded connectors after installation.
- (5) Boeing-furnished wire bundles shall have a maximum tie spacing of 2 inches.

#### D. Floating Clamps.

- Floating clamps are utilized to establish adequate clearance between tubing, hoses and wire bundles to dampen vibration and prevent chafing.
- (2) Illustrations which show clamping for wire bundles, tubing, and hoses in most cases show floating clamp installations in approximate clamping locations.
- (3) Actual clamp locations may be adjusted from those illustrated and additional clamps may be used to provide required clearances. A minimum clearance of 0.5 inch is desirable, however, 0.2 inch is permissible where 0.5 inch cannot be obtained.

#### E. Lockwiring

- (1) Perform all lockwiring using double twist method per Overhaul Manual 20-50-02 and standard industry practice.
- (2) Use of safety cable in place of lockwire is allowed. Safety cable can only be used with bolts which have center drilled heads. Refer to the applicable installation figures for usage instructions.

#### F. Lubrication

- (1) Lubricate O-ring packings and fittings prior to installation unless specified otherwise.
- (2) Apply grease or antiseize compound to splines as specified.

#### G. Tubes and Fittings

(1) Proper alignment must be obtained between fittings and tubing to prevent preloading of lines and assure proper mating of threaded parts.

#### Table 6:

# FLUID TUBING MINIMUM CLEARANCE REQUIREMENTS: (UNLESS NOTED OTHERWISE)

BETWEEN ALL RIGID LINES AND ADJACENT STRUCTURE

0.50 INCH - AT NON-SUPPORTED LOCATIONS

0.10 INCH - AT SUPPORTED LOCATIONS (OR THE THICKNESS OF THE SUPPORTING CLAMPS WHEN THE TUBING IS CLAMPED DIRECTLY TO THE SUPPORTING STRUCTURE)

NEAR ANY POSITION OF AN OPERATING MECHANISM

0.50 INCH - AT NON-SUPPORTED LOCATIONS

0.25 INCH - AT SUPPORTED LOCATIONS WHEN IT IS EVIDENT THAT NO CHAFING OR INTERFERENCE WILL RESULT

#### BETWEEN TUBES THAT CROSS OR RUN PARALLEL

0.50 INCH - OR THE THICKNESS RESULTING FROM BACK-TO-BACK CLAMPING (ADDITIONAL BACK-TO-BACK CLAMPING MAY BE USED TO MEET MINIMUM CLEARANCE REQUIREMENTS)

BETWEEN TUBES AND CONTROL CABLES

0.625 INCH - BETWEEN BREAK POINTS OR FAIRLEADS AND CLAMPBLOCK

# INTRODUCTION

Page 12 Oct 05/2007



(Continued)

# FLUID TUBING MINIMUM CLEARANCE REQUIREMENTS: (UNLESS NOTED OTHERWISE)

NOTE: Tubing installations shall be considered supported for a distance of 3 inches from a B-nut that attaches a tube to a rigid piece of equipment.

(2) Allowable preload shall not exceed the following limits at clamp points when end fittings are attached and torqued.

Table 7:

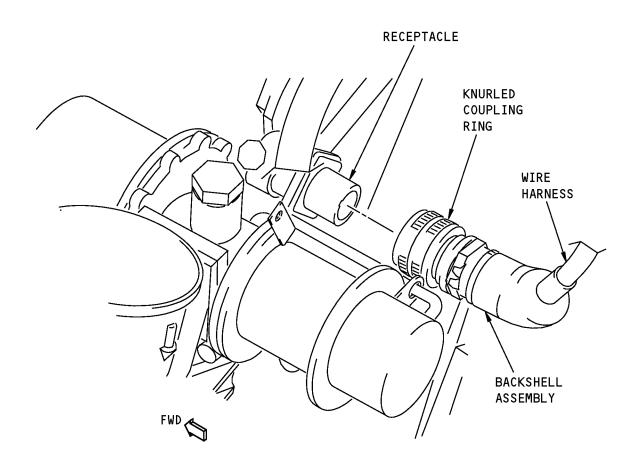
Tube Size	Max. Preload
5/8" & Larger	20 lbs.
1/2"	10 lbs.
3/8"	5 lbs.
1/4"	3 lbs.

(3) Up to three BACS18AF spacers may be used under support clamp to meet preload limitations.

**NOTE**: Ovality of tubes shall not exceed 5% after installation.

- H. Tamper-proof "Inspection Verification" seal
  - (1) This seal can be used as a visual check of the component after the final torque is applied. It is not required, but its application may be operator policy.
  - (2) Make the seal an 1/8-inch wide strip of tamper-proof putty that extends across the junction of the mating parts and continues for 1/2-inch on each side of the mating connection.
    - (a) On tubes, locate the tamper-proof putty to minimize the possibility of the putty entering the tube when the tube is disconnected later.





Wire Harness Connectors Figure 3

# **INTRODUCTION**

Page 14 Oct 05/2007



#### 5. Part Substitution

- A. Preferred parts are listed first and are applicable to the engine buildup configuration which was installed on the most recent engine configuration to be delivered.
- B. Replaced-by parts should not be used on new engines but may be required for buildup of previous engine configurations.
- C. Optional parts are listed immediately below the preferred part and may be used in place of preferred parts.
- D. Optional parts may be ordered if preferred parts are not available.
- E. Replaced by parts should not be ordered if preferred parts are not available.
- F. The following table lists obsolete part numbers for standard parts. These obsolete parts are no longer preferred and are not shown in the installation procedure.

#### Table 8:

I adie 8:			
OBSOLETE	PREFERRED		
PART NUMBER	PART NUMBER		
AS3236-06	BACB30ZF3-06		
AS3236-08	BACB30ZF3-08		
AS3236-10	BACB30ZF3-10		
AS3236-28	BACB30ZF3-28		
AS3237-05	BACB30ZF4-05		
AS3237-06	BACB30ZF4-06		
AS3237-07	BACB30ZF4-07		
AS3237-08	BACB30ZF4-08		
AS3237-09	BACB30ZF4-09		
AS3237-10	BACB30ZF4-10		
AS3237-11	BACB30ZF4-11		
AS3237-12	BACB30ZF4-12		
AS3237-14	BACB30ZF4-14		
AS3237-22	BACB30ZF4-22		
AS3237-23	BACB30ZF4-23		
AS3237-24	BACB30ZF4-24		
AS3237-29	BACB30ZF4-29		
AS3237-32	BACB30ZF4-32		
AS3237-34	BACB30ZF4-34		
AS3510-02( )K	BACC13AT3K( )		
MS21043-3	BACN10JC3C		
MS21902K6	MS21902J6		
MS24391J6	AS5169J06		
MS35338-120	BACW10EC4M		



(Continued)

OBSOLETE PART NUMBER	PREFERRED PART NUMBER	
MS35842-12	BACC10JB034C064	
NAS1611-024	NAS1611-024A	
NAS1611-153	NAS1611-153A	
NAS1612-12	NAS1612-12A	
NAS1612-20	NAS1612-20A	
NAS1612-6	NAS1612-6A	
NAS1802-4-16	BACS12HN4U16	
NAS1805-3	BACN11Z3CK	
NAS1805-4	BACN11Z4CK	
NAS1805-6L	BACN11Z6CD	
NAS1805-8P	BACN11Z8C	

#### 6. <u>Customer Originated Material</u>

- A. Customer originated material, incorporated into the manual at customer request to reflect data or procedures originated by and peculiar to that specific customer, will be permanently identified by the customer's three-letter designator in the space adjacent to the revision bar. In addition, these pages are identified on the List of Effective Pages (LEP) with a special character called a hollow lozenge which is located to the right of the date field. THE BOEING COMPANY does not assume responsibility for the validity and/or the technical accuracy of material so identified. THE BOEING COMPANY will not undertake to test or evaluate in any form the validity or the technical accuracy of the customer-originated material, and the customer shall have the sole and exclusive responsibility for the validity and accuracy of material submitted for incorporation into the manual.
- B. THE BOEING COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED, ORAL OR WRITTEN, ARISING BY LAW, COURSE OF DEALING, OR OTHERWISE, AND WITHOUT LIMITATION ALL WARRANTIES AS TO QUALITY, OPERATION, MERCHANTABILITY, FITNESS FOR ANY INTENDED PURPOSE, AND ALL OTHER CHARACTERISTICS WHATSOEVER, OF CUSTOMER-ORIGINATED MATERIAL INCORPORATED INTO THIS MANUAL. THE FOREGOING DISCLAIMER SHALL ALSO APPLY TO ANY OTHER PORTION OF THIS MANUAL WHICH MAY BE AFFECTED OR COMPROMISED BY SUCH CUSTOMER-ORIGINATED CHANGES.

#### 7. Normal Revision Service

A. Aircraft operators who have contracted continuing revision service for this manual receive revisions 3 times per year dated February 5, June 5 and October 5. Pages which are revised will be so indicated on the list of effective pages by an symbol (R) and identified by both a date and a page code. A revised page may carry a new or the same code and may be dated prior to, the same as, or subsequent to the date of the page it replaces. On each individual page the revised area is indicated by a revision bar on the left margin. Those pages which have not been technically revised, but have been reprinted due to recomposition, are so indicated by a revision bar opposite the page number and date.

# INTRODUCTION

Page 16 Oct 05/2007



#### 8. Temporary Revision Service

- A. Temporary revision service to this manual will be issued as necessary to alert the customer of configuration changes and to provide advance information prior to the next scheduled revision. Each temporary revision will be incorporated into the next available scheduled revision of the manual, except for "open dated" temporary revisions issued to cover temporary configuration changes, due to e.g., installation of test equipment. These "open dated" temporary revisions will remain active until Boeing has been advised by the customer that the final configuration has been completed.
- B. Each temporary revision will apply to one subject only and will be keyed within this manual so that the temporary revision may be filed facing or to replace the affected pages. Temporary revisions will not be revised.

If changes are required to an existing temporary revision, the temporary revision will be reissued.

#### 9. Publications Change Requests

A. Communications concerning this publication should be directed to Boeing Commercial Airplanes; Attention: Maintenance Engineering Technical Services, M/S 2J-02; P.O. Box 3707, Seattle WA 98124. To facilitate uniform handling and to provide direct routing of your questions to the proper Boeing organization, use of the Publications Change Request (PCR) Form is encouraged. Boeing makes this form available through your publications organization.

#### 10. Consumable Material Lists

The tables that follow list all of the consumable materials used in this manual.

A separate table will be shown for each different material code. The data in the table is then sorted by the bulk reference number.

- The first set of tables contain all the standard consumable materials.
- The second set of tables contain all the engine consumable materials and will include the engine manufacturers reference number.

Table 9: Adhesives, Cements, Sealants

Reference	Description	Specification	Material	Supplier
A00027	Adhesive - Silicone Rubber, 1 Part, RTV	BAC5010, Type 60	RTV 102	71984
A00803	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63 Type I	Dapco 18-4	0V7G8
A50096	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63 Type II		

Table 10: Cleaners, Polishes

Reference	Description	Specification	Material	Supplier
B00074	Solvent - Degreasing	MIL-PRF-680 (Supersedes P- D-680)		
B00083	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II, ASTM D-3735 Type III		
B00130	Alcohol - Isopropyl	TT-I-735		

# INTRODUCTION

Page 17 Oct 05/2008



Reference	Description	Specification	Material	Supplier
B00571	Coating - Clear Hydraulic Fluid Resistant Topcoat	BAC5710, Type 41		

### Table 11: Finishing Materials

Reference	Description	Specification	Material	Supplier
C00944	Primer - Firewall - Dapco No. 1-100	BMS5-63, Type I	Dapco No. 1-100	58093

### Table 12: Lubricants (Oils, Greases, Dry Lubes)

	Reference	Description	Specification	Material	Supplier
	D00006	Compound - Antiseize Pure Nickel Special - Never-Seez NSBT-8N	MIL-PRF-907F	Never-Seez NSBT-8N	5W425
	D00054	Fluid - Hydraulic Assembly Lubricant - MCS 352B (Formerly Monsanto MCS 352B)		MCS 352B	1CHP6
	D00109	engine, synthetic base	MIL-L-7808		
	D00153	Fluid - Hydraulic, Erosion Arresting, Fire Resistant	BMS3-11 Type IV (interchangeable & intermixable with Type V)		
	D00173	Grease - Aircraft and Instrument, Fuel And Oxidizer Resistant	MIL-PRF-27617 (Supersedes MIL-G-27617)		
	D00254	Compound - Silicone	SAE AS8660 (NATO S-736) (Supercedes MIL-S-8660)	DC-4	71984
I	D00276	Compound - Silicone (Novagard Silicones - G624)	SAE AS8660 (Supercedes MIL-S-8660)	G624	0609Y
	D00504	Grease - Petrolatum	VV-P-236		
	D00523	engine, MIL-L-23699	MIL-L-23699		
	D00648	Lubricant - O-Ring - Syn-Tech NS-6074			
	D50004	Compound - Antiseize	BMS3-28	ARMITE LF-AS 328	81205

#### Table 13: Miscellaneous Materials

	Reference	Description	Specification	Material	Supplier
I	G00251	Abrasive - Mat, Non-Woven, Non-Metallic	A-A-58054		

# **INTRODUCTION**

Page 18 Oct 05/2008



	Reference	Description	Specification	Material	Supplier
	G01912	Lockwire - Monel (0.032 In. Dia.)	NASM20995NC32 (QQ-N-281)		
	G02061	Marker - Permanent, Felt Tip Pen		13601 or 13801	86874
	G50043	Tubing - Fluoroelastomer, Tyco Electronics Viton-3/16-0-SP (Formerly Raychem RT- 1146 Tubing)	AMS-DTL-23053/ 13	Viton-3/16- 0-SP	06090
I	G50044	Sleeve - Ben-Har Viton 44, 3/16 inch, P/N 3800300503			
	G50365	Agent - Peelable Parting (AC Products - AC962-73C)		AC962-73C	77490
	G50367	Agent - Peelable Parting (Aztec Chemical AZ 634-2)	MIL-PRF-6799, BAC 5000	AZ 634-2	0A3C8
	G50368	Agent - Peelable Parting (Rexco Chemical Company - Partall Coverall Film)		Partall Film	17629
	G50369	Agent - Peelable Parting (Spraylat - SC- 1071H-1 Blue, ZR-5827)	BAC5000, PSD 6- 187	Spraylat SC-1071H-1	87354
	G50375	Kit - Safety Cable, 321 CRES - 0.032 Inch (0.81 mm) Diameter, (Contains both Cable and Ferrule)	BACC13AT3K, AMS 5689	BAC <sup>~</sup> C13AT3K	70958

Table 14: Lubricants (Oils, Greases, Dry Lubes) - CFM International

Reference	Engine Mfr Reference	Description	Specification	Material	Supplier
D00601	CP2101	Grease - Graphite, High Temperature	SAE AMS2518		
D00625	CP2338	Grease - Conductive - Brisal OX		Brisal OX	K0680

#### 11. Tool Lists

Refer to the tables below for the complete applicability before you use a tool.

The tables that follow show all of the tools that are referred to in this manual.

There is a table for each type of tool. The data in each table is sorted by the GSE requirement identifier.

- The table for Standard Tools shows the standard tools.
- The table for Commercial Tools shows the tools that are commercially available.
- The table for Special Tools shows the tools that are manufactured for specific requirements.
- When there is a fourth table, it shows the airline-specific tools.



Table 15: Commercial Tools

Reference	Description	Part Number	Supplier	A/P Effectivity
COM-1443	Jack - Hydraulic, General Low Profile, Capacity: 2000 lbs, Lift: 10 to 44 Inches, or Equivalent Jack Capable of Lifting 300 lbs.	HW93718	28047	737-ALL
		Opt: W93718	36251	737-ALL
COM-1568	Jack - Hydraulic, General Low Profile	B67563	36251	737-ALL
		HW93718	28047	737-ALL
		Opt: W93718	36251	737-ALL
COM-2060	Dolly - Nose Cowl, Removal/ Installation, CFM56-3 and -7 Engine	AM-1940-400	9M323	737-300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -ALL, -BBJ

Table 16: Special Tools

I

Reference	Description	Part Number	Supplier	A/P Effectivity
SPL-1634	Jack Adapter - VSCF and IDG	C24002-40	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
		C24002-41	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
		C24002-45	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ

# **INTRODUCTION**

Page 20 Oct 05/2008



Reference	Description	Part Number	Supplier	A/P Effectivity
SPL-2062	Sling - Inlet Cowl	B71040-39	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
		Opt: B71040-38	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
SPL-2107	Fixture - Lift, CFM56-7 Engine Aft Mount	C71024-1	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
SPL-2165	Installation/Removal Frame Equipment - Inlet Cowl, CFM56-7 Engine	C71027-1	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
SPL-2419	Equipment - Handling, Primary Exhaust Sleeve and Plug	C78009-33	81205	737-300, -400, -500, -600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ
SPL-2430	Hoist - Boom, Ground Based	C78026-156	81205	737-600, -700, -700C, -700ER, -700QC, -800, -900, -900ER, -BBJ

# **INTRODUCTION**

Page 21 Oct 05/2008



#### 12. Supplier List for Consumables and Tools

The table that follows lists all of the suppliers for the consumable materials and tools used in this manual.

The table is sorted by the CAGE code.

#### **VENDOR CODES**

	VENDOR CODES
Code	Name
00624	EATON AEROQUIP INC ENGINEERED SYSTEMS DIV 300 S EAST AVE JACKSON, MICHIGAN 49203-1972 FORMERLY AEROQUIP ELBEE PLANT V99879 OR WESTERN PLANT V70128; FORMERLY AEROQUIP AEROSP DIV JACKSON PLANT; FORMERLY V11328 AEROQUIP LINAIR DIV; LAWRENCE PLANT V26622
05228	PTI TECHNOLOGIES INC 501 DEL NORTE BLVD OXNARD, CALIFORNIA 93030-7983 FORMERLY PUROLATOR TECH; PTI TECH; TEXTRON FILTRATION SYS; FORMERLY IN NEWBURY PARK, CA
06090	TYCO ELECTRONICS CORPORATION (FORMALLY RAYCHEM CORP.) 300 CONSTITUTION DR. MENLO PARK, CA 94025-1164 Telephone: +1-650-361-3333 Facsimile: +1-650-361-5447
0609Y	NOVAGARD SOLUTIONS 5109 HAMILTON AVENUE CLEVELAND, OH 44114 Telephone: +1-800-380-0138 Facsimile: +1-216-881-6977
0A3C8	AZTEC CHEMICAL INCORPORATED 10770 LOWER AZUSA ROAD EL MONTE, CA 91733 Telephone: +1-626-448-9262 Facsimile: +1-626-448-9628
0V7G8	CYTEC INDUSTRIES INC 5 GARRET MOUNTAIN PLZ LITTLE FALLS, NJ 0

# **INTRODUCTION**

Page 22 Oct 05/2008

Telephone: 973-357-3100



Code	Name
11362	PARKER-HANIFFIN CORP STRATOFLEX DIV 3353 OLD CONEJO ROAD NEWBURY PARK, CALIFORNIA 91320-2162 FORMERLY SYMETRICS INC.
15284	PERKINELMER INC DBA PERKINELMER FLUID SERVICES 11642 OLD BALTIMORE PIKE BELTSVILLE, MARYLAND 20705-1294 FORMERLY V0NYS5; EGG PRESSURE SCIENCE INC
17629	REXCO CHEMICAL CO 879 DAVIS DR SE CONYERS, GA 30094 Telephone: +1-800-888-1060 Facsimile: +1-700-483-8550
1CHP6	SOLUTIA INC. 575 MARYVILLE CENTRE DRIVE SAINT LOUIS, MO 63166-6760 Telephone: 314-674-3651
25693	WHITTAKER CORP WHITTAKER SAFETY SYSTEMS DIV 2731 SYSTRON DRIVE CONCORD, CALIFORNIA 94518-1355 FORMERLY IN BERKLEY, CALIF.; LINDBERG, JOHN E VB0124 FORMERLY SAFETY SYS DIV SYSTRON DONNER; SYSTRON-DONNER CORP
28047	HEIN-WERNER CORP. (SNAP-ON TOOLS) 1005 PERKINS AVENUE 2514 181st NE REDMOND, WA 98052 WAUKESHA, WI 53187-1606 Telephone: 262-542-6611 Facsimile: 414-464-4298 (SALES DEPT)
36251	LINCOLN AUTOMOTIVE 1 LINCOLN WAY ST. LOUIS, MO 63120-1578 Telephone: (314) 679-4200/

# **INTRODUCTION**

Page 23 Oct 05/2008

Facsimile: (314) 679-4380/4359



Code Name

51563 ROHR INC

FOOT OF H STREET PO BOX 878 CHULA VISTA, CALIFORNIA 92012

58093 D AIRCRAFT PRODUCTS CO

1191 HAWK CIR ANAHEIM

ANAHEIM, CA

0

Telephone: 714-632-8444

59364 HONEYWELL INTERNATIONAL INC DBA ENGINES & SYSTEMS DIV

1300 WEST WARNER ORAD M/S 1207-2W

TEMPE, ARIZONA 85285-2986 FORMERLY IN PHOENIX, ARIZONA

FORMERLY GARRETT PNEUMATIC SYSTEMS DIV OF GARRETT CORP

5W425 BOSTIK INC

211 BOSTON ST MIDDLETON, MA

0

Telephone: 978-777-0100

60980 MEGGITT-OREGON INC DBA MEGGITT SILICONE PROD DIV MSP

2010 LAFAYETTE AVE P.O. BOX 887 MCMINNVILLE, OREGON 97128

FORMERLY ELASTOMERIC SILICON PRODUCTS

62983 EATON AEROSPACE VICKERS FLUID POWER

5353 HIGHLAND DRIVE

JACKSON, MISSISSIPPI 39206-3449

FORMERLY V63977; FORMERLY VICKERS INC AEROSP

70958 BERGEN CABLE TECHNOLOGIES INC

343 KAPLAN DRIVE FAIRFIELD, NJ 07004-2510

Telephone: 973-276-9596 Facsimile: 973-276-9566

71984 DOW CORNING CORPORATION

P.O. BOX 994 2200 WEST SALZBURG ROAD

MIDLAND, MI 48686-0994

Telephone: 1-989-496-4400 Facsimile: 1-989-496-6731



Code	Name
77490	AC PRODUCTS INCORPORATED (DIVISION OF QUAKER CHEMICAL CORPORATION) 172 EAST LA JOLLA STREET One Quaker Park, 901 Hector Street, Conshohocken, PA 19428-0809 PLACENTIA, CA 92870 Telephone: +1-714-630-7311
78570	TITEFLEX CORP SUB OF BUNDY CORP 603 HENDEE STREET PO BOX 90054 SPRINGFIELD, MASSACHUSETTS 01139
78943	TRIUMPH THERMAL SYSTEMS INC 200 RAILROAD STREET FOREST, OHIO 45843-9193 FORMERLY UNITED AIRCRAFT PRODUCTS FORMERLY PARKER HANNIFIN CORP. UNITED AIRCRAFT PRODUCTS DIV.
81205	THE BOEING COMPANY 7755 E. MARGINAL WAY P. O. BOX 3707 11-14N.4 SEATTLE, WA 98124 Telephone: 206-544-5000 Facsimile: 425-965-8202
84971	TA MFG CO TA DIV 28065 W FRANKLIN PKY PO BOX 931 VALENCIA, CALIFORNIA 91380-9031 FORMERLY IN LA, CALIF; SUB OF CRITON CORP, GLENDALE, CALIF
86874	SANFORD CORP 2740 WASHINGTON BLVD BELLWOOD, IL 0 Telephone: 708-547-6650
87354	SPRAYLAT CORPORATION (WORLDWIDE HEADQUARTERS) 143 SPARKS AVENUE 716 SOUTH COLUMBUS AVENUE, MOUNT VERNON, NY 10550 PELHAM, NY 10803 Telephone: +1-914-738-1600 Facsimile: +1-914-712-2838

# **INTRODUCTION**

Page 25 Oct 05/2008



Code Name

97393 SHUR-LOK CORPORATION

2541 WHITE ROAD PO BOX 19584

IRVINE, CALIFORNIA 92713

FORMERLY SHUR LOK CORP VB0060

FORMERLY IN SANTA ANA, CALIFORNIA 92714

98441 STRATOFLEX AEROSPACE MILITARY CONNECTOR DIV

220 ROBERTS CUT-OFF FT. WORTH, TEXAS 76114

FORMERLY STRATOFLEX INC: PARKER-HANNIFIN FLUID CONN GROUP:

FORMERLY PARKER-HANNIFIN FLUID PWR DIV V82271

99167 HAMILTON SUNDSTRAND CORP

4747 HARRISON AVE PO BOX 7002 ROCKFORD, ILLINOIS 61125-7002

FORMERLY SUNDSTRAND DENVER DIV V05237; V50907 & V77200

99755 FMH INVESTOR GROUP

17072 DAIMLER STREET

IRVINE, CALIFORNIA 92614-4541

FORMERLY FLEXIBLE METAL HOSE MFG CO

9M323 ADVANCED GROUND SYSTEMS ENGINEERING CORP (AGSE)

10805 PAINTER AVENUE SANTA FE SPRINGS, CA

90670

Telephone: (562) 906-9300

Facsimile: (562) 906-9308 /(714) 632-9095

K0680 ROLLS-ROYCE PLC

P. O. BOX 31

FOR 717 CONTACT 49-337-086-1479

DERBY, ENGLAND, -

DE2 8BJ

Telephone: 44-1332-248399 Facsimile: (44) (1332) 245418



### **INSTALLATION INDEX (ALPHA/NUMERICAL ORDER)**

	LOCATION	
FIGURE TITLE	SUBJECT	FIG
AFT ENGINE MOUNT INSTALLATION	71-00-02	3-1
BLEED CONTROL SYSTEM INSTALLATION - LOWER	71-00-02	15-1
BLEED CONTROL SYSTEM INSTALLATION - UPPER	71-00-02	17-1
BLEED CONTROLLER INSTALLATION	71-00-02	14-1
BLEED DUCT INSTALLATION - LOWER 5TH- AND 9TH-STAGE	71-00-02	16-1
BLEED DUCT INSTALLATION - UPPER 5TH- AND 9TH-STAGE	71-00-02	18-1
BRACKET INSTALLATION - LEFT SIDE CORE CASE	71-00-02	7-1
BRACKET INSTALLATION - LOWER LEFT FAN CASE	71-00-02	5-1
BRACKET INSTALLATION - RIGHT SIDE CORE CASE	71-00-02	8-1
BRACKET INSTALLATION - RIGHT SIDE FAN CASE	71-00-02	6-1
BRACKET INSTALLATION - UPPER LEFT FAN CASE	71-00-02	4-1
DRAINS INSTL - LEFT SIDE FAN CASE	71-00-02	9-1
DRAINS INSTL - RIGHT SIDE FAN CASE	71-00-02	10-1
FIRE/OVERHEAT DETECTOR INSTALLATION	71-00-02	28-1
FORWARD ENGINE MOUNT INSTALLATION	71-00-02	2-1
FUEL SUPPLY HOSE INSTALLATION	71-00-02	12-1
HYDRAULIC PLUMBING INSTALLATION	71-00-02	21-1
HYDRAULIC PUMP INSTALLATION - VICKERS	71-00-02	20-1
IDG AIR/OIL COOLER INSTALLATION	71-00-02	23-1
IDG PLUMBING INSTALLATION	71-00-02	24-1
INLET COWL INSTALLATION	71-00-02	33-1
INLET COWL TAI SYSTEM INSTALLATION	71-00-02	27-1
INTEGRATED DRIVE GENERATOR INSTALLATION	71-00-02	22-1
MARKERS INSTALLATION	71-00-02	30-1
PRIMARY EXHAUST INSTALLATION	71-00-02	32-1
STARTER VALVE AND DUCT INSTALLATION	71-00-02	25-1

# **INSTALLATION INDEX**

Page 1 Oct 05/2007



FIGURE TITLE	LOCATION	
FIGURE TITLE	SUBJECT	FIG
THIS FIGURE NOT USED	71-00-02	11-1
THIS FIGURE NOT USED	71-00-02	19-1
THIS FIGURE NOT USED	71-00-02	26-1
THRUST LINK INSTALLATION	71-00-02	31-1
W1062 WIRE BUNDLE INSTALLATION	71-00-02	29-1
12 O'CLOCK STRUT INSTALLATION	71-00-02	13-1

# **INSTALLATION INDEX**

Page 2 Oct 05/2007



### **NUMERICAL INDEX**

		LOCATION				
	PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
			71-00-02	3-1	T1	-
	AE713733-1		71-00-02	12-1	10	1
I	AM-1940-400		71-00-02	33-1	T2	-
	AS1895-1-350		71-00-02	16-1	180	1
	AS1895-1-350		71-00-02	16-1	210	1
	AS1895-1-350		71-00-02	18-1	55	1
	AS1895-1-350		71-00-02	18-1	110	1
	AS1895-4-175		71-00-02	16-1	320	1
	AS1895-4-175		71-00-02	27-1	260	1
	AS1895-4-200		71-00-02	27-1	235	1
	AS1895-4-200		71-00-02	27-1	305	1
	AS1895-4-200		71-00-02	27-1	380	1
	AS1895-4-200		71-00-02	33-1	100	-
	AS1895-4-325		71-00-02	25-1	110	1
	AS1895-4-350		71-00-02	16-1	260	1
	AS1895-4-350		71-00-02	16-1	310	2
	AS1895-4-400		71-00-02	14-1	120	1
	AS1895-4-450		71-00-02	18-1	155	1
	AS1895-7-175		71-00-02	16-1	315	1
	AS1895-7-175		71-00-02	27-1	255	1
	AS1895-7-200		71-00-02	27-1	230	1
	AS1895-7-200		71-00-02	27-1	300	1
	AS1895-7-200		71-00-02	27-1	375	1
	AS1895-7-200		71-00-02	33-1	50	-
	AS1895-7-300		71-00-02	25-1	180	1
	AS1895-7-300		71-00-02	25-1	255	1
	AS1895-7-300		71-00-02	25-1	300	1
	AS1895-7-325		71-00-02	25-1	105	1
	AS1895-7-350		71-00-02	16-1	175	1
	AS1895-7-350		71-00-02	16-1	205	1
	AS1895-7-350		71-00-02	16-1	255	1

# **NUMERICAL INDEX**

Page 1 Oct 05/2008



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
AS1895-7-350		71-00-02	16-1	305	2
AS1895-7-350		71-00-02	18-1	50	1
AS1895-7-350		71-00-02	18-1	105	1
AS1895-7-400		71-00-02	14-1	115	1
AS1895-7-450		71-00-02	18-1	150	1
AS3209-216		71-00-02	22-1	55	-
AS3485-09		71-00-02	14-1	110	4
AS3485-09		71-00-02	25-1	235	1
AS3485-09		71-00-02	27-1	360	1
AS3485-10		71-00-02	4-1	20	2
AS3485-10		71-00-02	4-1	90	2
AS3485-10		71-00-02	4-1	115	2
AS3485-10		71-00-02	4-1	290	2
AS3485-10		71-00-02	4-1	380	2
AS3485-10		71-00-02	4-1	565	1
AS3485-10		71-00-02	4-1	610	2
AS3485-10		71-00-02	4-1	670	2
AS3485-10		71-00-02	4-1	720	2
AS3485-10		71-00-02	4-1	785	1
AS3485-10		71-00-02	4-1	815	2
AS3485-10		71-00-02	4-1	840	2
AS3485-10		71-00-02	5-1	20	3
AS3485-10		71-00-02	5-1	40	2
AS3485-10		71-00-02	5-1	165	2
AS3485-10		71-00-02	5-1	195	3
AS3485-10		71-00-02	5-1	215	3
AS3485-10		71-00-02	5-1	240	2
AS3485-10		71-00-02	5-1	265	2
AS3485-10		71-00-02	6-1	90	2
AS3485-10		71-00-02	6-1	140	2
AS3485-10		71-00-02	6-1	190	1
AS3485-10		71-00-02	6-1	365	1

# **NUMERICAL INDEX**

Page 2 Jun 05/2008



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
AS3485-10		71-00-02	6-1	425	2
AS3485-10		71-00-02	6-1	465	2
AS3485-10		71-00-02	7-1	185	3
AS3485-10		71-00-02	7-1	235	2
AS3485-10		71-00-02	7-1	310	2
AS3485-10		71-00-02	7-1	360	2
AS3485-10		71-00-02	8-1	35	1
AS3485-10		71-00-02	9-1	25	1
AS3485-10		71-00-02	9-1	45	1
AS3485-10		71-00-02	9-1	90	1
AS3485-10		71-00-02	9-1	120	1
AS3485-10		71-00-02	9-1	165	2
AS3485-10		71-00-02	9-1	260	2
AS3485-10		71-00-02	10-1	20	2
AS3485-10		71-00-02	10-1	45	2
AS3485-10		71-00-02	10-1	65	2
AS3485-10		71-00-02	10-1	90	1
AS3485-10		71-00-02	10-1	120	1
AS3485-10		71-00-02	10-1	145	2
AS3485-10		71-00-02	16-1	30	1
AS3485-10		71-00-02	16-1	65	1
AS3485-10		71-00-02	16-1	420	1
AS3485-10		71-00-02	16-1	470	1
AS3485-10		71-00-02	21-1	155	1
AS3485-10		71-00-02	21-1	242	1
AS3485-10		71-00-02	24-1	65	1
AS3485-10		71-00-02	24-1	165	2
AS3485-10		71-00-02	25-1	80	2
AS3485-10		71-00-02	25-1	145	2
AS3485-10		71-00-02	27-1	205	2
AS3485-10		71-00-02	27-1	270	3
AS3485-10		71-00-02	27-1	340	2

# **NUMERICAL INDEX**

Page 3 Oct 05/2007



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
AS3485-10		71-00-02	28-1	290	1
AS3485-10		71-00-02	29-1	35	4
AS3485-10		71-00-02	33-1	140	1
AS3485-10		71-00-02	33-1	265	1
AS3485-11		71-00-02	22-1	30	3
AS3485-11		71-00-02	22-1	110	1
AS3485-11		71-00-02	22-1	125	1
AS3485-12		71-00-02	5-1	300	1
AS3485-12		71-00-02	16-1	535	1
AS5169J06		71-00-02	18-1	35	1
A00027		71-00-02	4-1	C6	AR
A00027		71-00-02	27-1	C6	AR
A00803		71-00-02	4-1	C4	AR
A00803		71-00-02	13-1	C3	AR
A00803		71-00-02	27-1	C4	AR
A50096		71-00-02	4-1	C5	AR
A50096		71-00-02	13-1	C4	AR
A50096		71-00-02	27-1	C5	AR
BACB28AK03-027		71-00-02	4-1	885	1
BACB28AK04-030		71-00-02	16-1	55	1
BACB28AK04-030		71-00-02	16-1	410	1
BACB28AK04-030		71-00-02	16-1	460	1
BACB28AK04-030		71-00-02	25-1	70	2
BACB28AK04-030		71-00-02	25-1	135	2
BACB28AK04-030		71-00-02	27-1	195	2
BACB28AK04-030		71-00-02	27-1	330	2
BACB28AK04-042		71-00-02	16-1	20	1
BACB28AK06-040		71-00-02	16-1	525	1
BACB28AK06-055		71-00-02	16-1	525	-
BACB28BA0608060		71-00-02	5-1	290	1
BACB30LE3U18		71-00-02	4-1	875	1
BACB30LE4HU1		71-00-02	7-1	30	1

# **NUMERICAL INDEX**

Page 4 Oct 05/2008



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30LE4HU1		71-00-02	7-1	50	2
BACB30LE4HU2		71-00-02	7-1	31	1
BACB30LE4K10		71-00-02	5-1	180	3
BACB30LE4K4		71-00-02	13-1	215	2
BACB30LE4K6		71-00-02	5-1	135	2
BACB30LE4K6		71-00-02	13-1	210	-
BACB30LE4K6		71-00-02	13-1	210	2
BACB30LE4K8		71-00-02	13-1	215	-
BACB30LE5K14		71-00-02	22-1	100	1
BACB30LE5K8		71-00-02	22-1	20	3
BACB30LE5K8		71-00-02	22-1	115	1
BACB30LE5U6		71-00-02	4-1	955	2
BACB30LE5U6		71-00-02	6-1	230	2
BACB30LE6K14		71-00-02	5-1	280	1
BACB30LH3U4		71-00-02	14-1	105	4
BACB30LK4U1		71-00-02	32-1	15	-
BACB30NM4K5		71-00-02	4-1	630	1
BACB30NM4K5		71-00-02	5-1	230	2
BACB30NM4K6		71-00-02	5-1	30	2
BACB30NM4K6		71-00-02	21-1	145	1
BACB30NM4K7		71-00-02	4-1	655	2
BACB30NM4K7		71-00-02	5-1	10	3
BACB30NM4K7		71-00-02	5-1	205	3
BACB30NN4K11		71-00-02	13-1	250	-
BACB30NN4K16		71-00-02	13-1	110	2
BACB30NN4K18		71-00-02	13-1	105	4
BACB30NN4K6		71-00-02	13-1	100	-
BACB30NN4K6		71-00-02	13-1	250	2
BACB30NN4K7		71-00-02	13-1	100	6
BACB30PN10-19		71-00-02	2-1	100	-
BACB30PN10-19M		71-00-02	2-1	100	4
BACB30PN14-32M		71-00-02	3-1	100	4

# **NUMERICAL INDEX**

Page 5 Oct 05/2007



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30PN4-10		71-00-02	32-1	125	3
BACB30PN4-10		71-00-02	32-1	175	3
BACB30PN4-14		71-00-02	16-1	40	1
BACB30PN4-14		71-00-02	16-1	400	1
BACB30PN4-14		71-00-02	16-1	450	1
BACB30PN4-14		71-00-02	25-1	50	2
BACB30PN4-14		71-00-02	25-1	125	2
BACB30PN4-14		71-00-02	27-1	175	2
BACB30PN4-14		71-00-02	27-1	320	2
BACB30PN4-16		71-00-02	16-1	5	1
BACB30PN4-6		71-00-02	32-1	225	85
BACB30PN4H7		71-00-02	13-1	15	4
BACB30PN5H3		71-00-02	16-1	100	4
BACB30PN6C22		71-00-02	16-1	500	1
BACB30PN6C24		71-00-02	16-1	500	-
BACB30US4-10		71-00-02	32-1	125	-
BACB30US4-10		71-00-02	32-1	175	-
BACB30US4-6		71-00-02	32-1	225	-
BACB30US8K29		71-00-02	33-1	75	24
BACB30VF4K3		71-00-02	13-1	60	2
BACB30ZF3-06		71-00-02	25-1	225	1
BACB30ZF3-06		71-00-02	27-1	350	1
BACB30ZF3-08		71-00-02	14-1	205	3
BACB30ZF3-08		71-00-02	27-1	70	-
BACB30ZF3-08		71-00-02	27-1	70	2
BACB30ZF3-10		71-00-02	14-1	200	1
BACB30ZF3-28		71-00-02	14-1	15	3
BACB30ZF4-05		71-00-02	15-1	40	2
BACB30ZF4-05		71-00-02	15-1	135	2
BACB30ZF4-05		71-00-02	17-1	240	2
BACB30ZF4-06		71-00-02	4-1	120	2
BACB30ZF4-06		71-00-02	4-1	365	-

# **NUMERICAL INDEX**

Page 6 Oct 05/2007



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30ZF4-06		71-00-02	4-1	385	2
BACB30ZF4-06		71-00-02	4-1	615	2
BACB30ZF4-06		71-00-02	6-1	330	2
BACB30ZF4-06		71-00-02	7-1	105	5
BACB30ZF4-06		71-00-02	7-1	130	4
BACB30ZF4-06		71-00-02	7-1	280	2
BACB30ZF4-06		71-00-02	7-1	330	2
BACB30ZF4-06		71-00-02	8-1	130	2
BACB30ZF4-06		71-00-02	10-1	180	1
BACB30ZF4-06		71-00-02	21-1	130	1
BACB30ZF4-06		71-00-02	21-1	180	2
BACB30ZF4-06		71-00-02	24-1	115	3
BACB30ZF4-06		71-00-02	24-1	160	2
BACB30ZF4-06		71-00-02	24-1	215	3
BACB30ZF4-06		71-00-02	28-1	25	4
BACB30ZF4-06		71-00-02	28-1	50	2
BACB30ZF4-06		71-00-02	28-1	55	1
BACB30ZF4-06		71-00-02	28-1	150	4
BACB30ZF4-06		71-00-02	28-1	175	8
BACB30ZF4-06		71-00-02	28-1	275	2
BACB30ZF4-06		71-00-02	28-1	300	2
BACB30ZF4-06		71-00-02	28-1	302	2
BACB30ZF4-06		71-00-02	28-1	400	2
BACB30ZF4-06		71-00-02	28-1	425	1
BACB30ZF4-06		71-00-02	29-1	55	3
BACB30ZF4-07		71-00-02	5-1	335	-
BACB30ZF4-07		71-00-02	7-1	155	2
BACB30ZF4-07		71-00-02	7-1	205	3
BACB30ZF4-07		71-00-02	7-1	305	2
BACB30ZF4-07		71-00-02	7-1	355	2
BACB30ZF4-07		71-00-02	8-1	30	1
BACB30ZF4-07		71-00-02	10-1	40	1

# **NUMERICAL INDEX**

Page 7 Jun 05/2008



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30ZF4-07		71-00-02	10-1	60	2
BACB30ZF4-07		71-00-02	10-1	85	2
BACB30ZF4-07		71-00-02	12-1	55	4
BACB30ZF4-07		71-00-02	17-1	20	3
BACB30ZF4-07		71-00-02	17-1	115	2
BACB30ZF4-07		71-00-02	24-1	60	1
BACB30ZF4-07		71-00-02	24-1	170	2
BACB30ZF4-07		71-00-02	28-1	215	1
BACB30ZF4-07		71-00-02	28-1	250	4
BACB30ZF4-07		71-00-02	28-1	405	2
BACB30ZF4-07		71-00-02	29-1	60	1
BACB30ZF4-08		71-00-02	4-1	270	2
BACB30ZF4-08		71-00-02	4-1	485	1
BACB30ZF4-08		71-00-02	4-1	770	2
BACB30ZF4-08		71-00-02	5-1	350	2
BACB30ZF4-08		71-00-02	7-1	230	2
BACB30ZF4-08		71-00-02	8-1	10	1
BACB30ZF4-08		71-00-02	9-1	40	1
BACB30ZF4-08		71-00-02	9-1	85	1
BACB30ZF4-08		71-00-02	9-1	110	1
BACB30ZF4-08		71-00-02	9-1	160	3
BACB30ZF4-08		71-00-02	9-1	255	3
BACB30ZF4-08		71-00-02	10-1	15	2
BACB30ZF4-08		71-00-02	10-1	35	1
BACB30ZF4-08		71-00-02	10-1	115	1
BACB30ZF4-08		71-00-02	13-1	155	2
BACB30ZF4-08		71-00-02	14-1	280	4
BACB30ZF4-08		71-00-02	21-1	190	2
BACB30ZF4-08		71-00-02	21-1	240	5
BACB30ZF4-08		71-00-02	21-1	275	3
BACB30ZF4-08		71-00-02	21-1	315	1
BACB30ZF4-08		71-00-02	21-1	330	4

# **NUMERICAL INDEX**

Page 8 Jun 05/2008



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30ZF4-08		71-00-02	24-1	1	-
BACB30ZF4-08		71-00-02	24-1	161	2
BACB30ZF4-08		71-00-02	27-1	105	-
BACB30ZF4-08		71-00-02	28-1	276	1
BACB30ZF4-08		71-00-02	28-1	301	1
BACB30ZF4-08		71-00-02	29-1	30	4
BACB30ZF4-08		71-00-02	33-1	125	4
BACB30ZF4-09		71-00-02	5-1	105	2
BACB30ZF4-09		71-00-02	9-1	20	1
BACB30ZF4-10		71-00-02	4-1	370	2
BACB30ZF4-10		71-00-02	4-1	510	1
BACB30ZF4-10		71-00-02	5-1	85	2
BACB30ZF4-10		71-00-02	5-1	155	2
BACB30ZF4-10		71-00-02	5-1	255	2
BACB30ZF4-10		71-00-02	6-1	130	2
BACB30ZF4-10		71-00-02	6-1	180	1
BACB30ZF4-10		71-00-02	7-1	180	-
BACB30ZF4-10		71-00-02	10-1	135	2
BACB30ZF4-10		71-00-02	21-1	241	1
BACB30ZF4-10		71-00-02	21-1	280	1
BACB30ZF4-10		71-00-02	23-1	15	8
BACB30ZF4-10		71-00-02	27-1	10	1
BACB30ZF4-10		71-00-02	27-1	265	3
BACB30ZF4-11		71-00-02	4-1	80	2
BACB30ZF4-11		71-00-02	4-1	105	2
BACB30ZF4-12		71-00-02	4-1	10	2
BACB30ZF4-12		71-00-02	4-1	155	2
BACB30ZF4-12		71-00-02	4-1	765	1
BACB30ZF4-12		71-00-02	4-1	805	2
BACB30ZF4-12		71-00-02	4-1	830	2
BACB30ZF4-12		71-00-02	6-1	80	2
BACB30ZF4-12		71-00-02	6-1	355	1

# **NUMERICAL INDEX**

Page 9 Oct 05/2007



		LOCATION			
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACB30ZF4-12		71-00-02	6-1	455	2
BACB30ZF4-12		71-00-02	7-1	180	3
BACB30ZF4-12		71-00-02	21-1	355	2
BACB30ZF4-14		71-00-02	4-1	555	1
BACB30ZF4-14		71-00-02	12-1	15	4
BACB30ZF4-22		71-00-02	6-1	410	1
BACB30ZF4-23		71-00-02	4-1	265	1
BACB30ZF4-23		71-00-02	4-1	605	2
BACB30ZF4-24		71-00-02	6-1	415	1
BACB30ZF4-24		71-00-02	29-1	10	2
BACB30ZF4-29		71-00-02	4-1	260	1
BACB30ZF4-32		71-00-02	21-1	50	3
BACB30ZF4-34		71-00-02	4-1	710	2
BACC10GF24CT		71-00-02	27-1	50	1
BACC10GT2-04		71-00-02	15-1	30	4
BACC10GT2-04		71-00-02	15-1	125	4
BACC10GT2-04		71-00-02	17-1	15	6
BACC10GT2-04		71-00-02	17-1	110	6
BACC10GT2-04		71-00-02	17-1	235	4
BACC10GT2-06		71-00-02	9-1	35	4
BACC10GT2-08		71-00-02	28-1	65	-
BACC10GT2-08		71-00-02	28-1	185	-
BACC10GT2-08		71-00-02	28-1	285	-
BACC10GT2-08		71-00-02	28-1	310	-
BACC10GT2-08		71-00-02	28-1	435	-
BACC10JB034C064		71-00-02	33-1	105	1
BACC14AD04J		71-00-02	25-1	200	-
BACE21BT0606JN		71-00-02	27-1	125	1
BACE21BT0606JN		71-00-02	27-1	140	1
BACE21BT0606T		71-00-02	21-1	100	1
BACJ40AC54-7		71-00-02	4-1	500	1
BACJ40AC54-9		71-00-02	27-1	5	1

# **NUMERICAL INDEX**

Page 10 Jun 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACM10L1EBZ		71-00-02	30-1	5	1
BACM10L1EBZ		71-00-02	30-1	35	1
BACN10HR4C		71-00-02	32-1	145	3
BACN10HR4C		71-00-02	32-1	195	3
BACN10HR4C		71-00-02	32-1	240	85
BACN10HR5CS		71-00-02	22-1	30	-
BACN10HR5CS		71-00-02	22-1	110	-
BACN10HR5CS		71-00-02	22-1	125	-
BACN10HR8C		71-00-02	32-1	60	16
BACN10HR8CS		71-00-02	33-1	90	24
BACN10HY6AC		71-00-02	20-1	120	6
BACN10JC3C		71-00-02	28-1	105	-
BACN10JC3C		71-00-02	28-1	205	-
BACN10JC3C		71-00-02	28-1	355	-
BACN10JC3C		71-00-02	28-1	455	-
BACN10JC8CM		71-00-02	2-1	85	3
BACN10JC8CM		71-00-02	31-1	40	2
BACN10JC8CM		71-00-02	31-1	65	2
BACN10YR3C		71-00-02	28-1	105	-
BACN10YR3C		71-00-02	28-1	205	-
BACN10YR3C		71-00-02	28-1	355	-
BACN10YR3C		71-00-02	28-1	455	-
BACN10YR4CD		71-00-02	4-1	525	1
BACN10YR4CD		71-00-02	27-1	20	1
BACN10YR4CM		71-00-02	28-1	120	1
BACN10YR4CM		71-00-02	33-1	15	2
BACN11Z3CK		71-00-02	4-1	900	1
BACN11Z4C		71-00-02	17-1	30	1
BACN11Z4CK		71-00-02	6-1	40	1
BACN11Z4CK		71-00-02	6-1	210	1
BACN11Z4CK		71-00-02	13-1	70	2
BACN11Z4CK		71-00-02	13-1	120	6

# **NUMERICAL INDEX**

Page 11 Jun 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACN11Z4CK		71-00-02	13-1	270	2
BACN11Z8C		71-00-02	3-1	35	2
BACN11Z8C		71-00-02	3-1	65	2
BACP18BC03B06P		71-00-02	2-1	87	3
BACP18BC03B06P		71-00-02	3-1	40	-
BACP18BC03B06P		71-00-02	3-1	70	2
BACP18BC03B06P		71-00-02	31-1	42	2
BACP18BC03B06P		71-00-02	31-1	67	2
BACP18BC03B07P		71-00-02	2-1	87	-
BACP18BC03B07P		71-00-02	3-1	40	2
BACP18BC03B07P		71-00-02	3-1	70	-
BACP18BC03B07P		71-00-02	31-1	42	-
BACP18BC03B07P		71-00-02	31-1	67	-
BACP18BC03B08P		71-00-02	2-1	87	-
BACP18BC03B08P		71-00-02	3-1	40	-
BACP18BC03B08P		71-00-02	3-1	70	-
BACP18BC03B08P		71-00-02	31-1	42	-
BACP18BC03B08P		71-00-02	31-1	67	-
BACS12HN4U16		71-00-02	4-1	50	1
BACS18K25-39W		71-00-02	5-1	380	2
BACS18K25-45W		71-00-02	6-1	405	2
BACV10CE12		71-00-02	21-1	15	1
BACW10BN6UC		71-00-02	16-1	520	1
BACW10BP10ACU		71-00-02	2-1	105	4
BACW10BP12ACU		71-00-02	31-1	30	2
BACW10BP12ACU		71-00-02	31-1	55	2
BACW10BP14ACU		71-00-02	3-1	105	4
BACW10BP3ACU		71-00-02	4-1	880	1
BACW10BP4ACU		71-00-02	4-1	85	2
BACW10BP4ACU		71-00-02	4-1	110	2
BACW10BP4ACU		71-00-02	4-1	160	2
BACW10BP4ACU		71-00-02	4-1	560	1

# **NUMERICAL INDEX**

Page 12 Oct 05/2007



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACW10BP4ACU		71-00-02	4-1	635	1
BACW10BP4ACU		71-00-02	4-1	660	2
BACW10BP4ACU		71-00-02	5-1	15	3
BACW10BP4ACU		71-00-02	5-1	35	2
BACW10BP4ACU		71-00-02	5-1	140	2
BACW10BP4ACU		71-00-02	5-1	185	3
BACW10BP4ACU		71-00-02	5-1	210	3
BACW10BP4ACU		71-00-02	5-1	235	2
BACW10BP4ACU		71-00-02	7-1	35	2
BACW10BP4ACU		71-00-02	7-1	60	2
BACW10BP4ACU		71-00-02	13-1	17	4
BACW10BP4ACU		71-00-02	16-1	15	1
BACW10BP4ACU		71-00-02	16-1	50	1
BACW10BP4ACU		71-00-02	16-1	405	1
BACW10BP4ACU		71-00-02	16-1	455	1
BACW10BP4ACU		71-00-02	21-1	150	1
BACW10BP4ACU		71-00-02	25-1	60	2
BACW10BP4ACU		71-00-02	25-1	130	2
BACW10BP4ACU		71-00-02	27-1	190	2
BACW10BP4ACU		71-00-02	27-1	325	2
BACW10BP4ACU		71-00-02	32-1	135	3
BACW10BP4ACU		71-00-02	32-1	185	3
BACW10BP4ACU		71-00-02	32-1	230	85
BACW10BP4APU		71-00-02	4-1	60	2
BACW10BP4CD		71-00-02	5-1	140	-
BACW10BP4CD		71-00-02	27-1	190	-
BACW10BP4PK		71-00-02	13-1	65	2
BACW10BP4PK		71-00-02	13-1	115	6
BACW10BP4PK		71-00-02	13-1	265	2
BACW10BP5ACU		71-00-02	4-1	960	2
BACW10BP5ACU		71-00-02	6-1	235	2
BACW10BP5ACU		71-00-02	16-1	115	4

# **NUMERICAL INDEX**

Page 13 Jun 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
BACW10BP5ACU		71-00-02	22-1	25	3
BACW10BP5ACU		71-00-02	22-1	105	1
BACW10BP5ACU		71-00-02	22-1	120	1
BACW10BP5APU		71-00-02	22-1	106	1
BACW10BP5CD		71-00-02	22-1	25	-
BACW10BP5CD		71-00-02	22-1	105	-
BACW10BP5CD		71-00-02	22-1	120	-
BACW10BP6ACU		71-00-02	5-1	285	1
BACW10BP8ACU		71-00-02	2-1	25	10
BACW10BP8ACU		71-00-02	33-1	85	24
BACW10BP8APU		71-00-02	32-1	55	16
BACW10EC4M		71-00-02	4-1	55	1
BAC27DHY0337		71-00-02	30-1	25	1
BAC27DPP466		71-00-02	30-1	15	-
BAC27DPP470		71-00-02	30-1	15	1
B00083		71-00-02	28-1	C1	AR
B00083		71-00-02	30-1	C1	AR
B00130		71-00-02	4-1	C2	AR
B00130		71-00-02	5-1	C1	AR
B00130		71-00-02	6-1	C1	AR
B00130		71-00-02	7-1	C1	AR
B00130		71-00-02	8-1	C1	AR
B00130		71-00-02	14-1	C1	AR
B00130		71-00-02	27-1	C2	AR
B00571		71-00-02	30-1	C2	AR
B700-2		71-00-02	10-1	100	1
B71040		71-00-02	33-1	T1	-
C00944		71-00-02	4-1	C3	AR
C00944		71-00-02	13-1	C2	AR
C00944		71-00-02	27-1	C3	AR
C24002		71-00-02	22-1	T1	-
C71024-1		71-00-02	3-1	T1	-

# **NUMERICAL INDEX**

Page 14 Oct 05/2008

I



				LOCATION		
	PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
I	C71027		71-00-02	33-1	Т3	-
I	C78009		71-00-02	32-1	T1	-
I	C78026		71-00-02	33-1	T4	-
	D00006		71-00-02	2-1	C1	AR
	D00006		71-00-02	3-1	C1	AR
	D00006		71-00-02	7-1	C2	AR
	D00006		71-00-02	9-1	C6	AR
	D00006		71-00-02	10-1	C6	AR
	D00006		71-00-02	13-1	C1	AR
	D00006		71-00-02	14-1	C2	AR
	D00006		71-00-02	15-1	C1	AR
	D00006		71-00-02	16-1	C1	AR
	D00006		71-00-02	17-1	C1	AR
	D00006		71-00-02	18-1	C1	AR
	D00006		71-00-02	22-1	C5	AR
	D00006		71-00-02	23-1	C1	AR
	D00006		71-00-02	24-1	C1	AR
	D00006		71-00-02	25-1	C1	AR
	D00006		71-00-02	27-1	C7	AR
	D00006		71-00-02	28-1	C2	AR
	D00006		71-00-02	29-1	C1	AR
	D00006		71-00-02	31-1	C1	AR
	D00006		71-00-02	32-1	C1	AR
	D00054		71-00-02	20-1	C1	AR
	D00054		71-00-02	21-1	C1	AR
	D00109		71-00-02	22-1	C2	AR
	D00153		71-00-02	20-1	C2	AR
	D00173		71-00-02	21-1	C2	AR
	D00254		71-00-02	22-1	C4	AR
I	D00276		71-00-02	20-1	C3	AR
	D00504		71-00-02	9-1	C1	AR
	D00504		71-00-02	10-1	C1	AR

# **NUMERICAL INDEX**

Page 15 Oct 05/2008



				LOCATION		
	PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
	D00504		71-00-02	12-1	C1	AR
	D00523		71-00-02	22-1	C3	AR
	D00601		71-00-02	33-1	C1	AR
I	D00625		71-00-02	33-1	C1	AR
	D00648		71-00-02	22-1	C1	AR
	D50004		71-00-02	4-1	C7	AR
	D50004		71-00-02	5-1	C2	AR
	D50004		71-00-02	6-1	C6	AR
	G00251		71-00-02	27-1	C1	AR
	G01912		71-00-02	2-1	C2	AR
	G01912		71-00-02	7-1	C4	AR
	G01912		71-00-02	13-1	C7	AR
	G01912		71-00-02	16-1	C2	AR
	G01912		71-00-02	22-1	C7	AR
	G01912		71-00-02	25-1	C2	AR
	G01912		71-00-02	27-1	C8	AR
I	G02061		71-00-02	4-1	C1	AR
	G50043		71-00-02	2-1	C4	AR
	G50044		71-00-02	2-1	C5	-
I	G50365		71-00-02	13-1	C5	AR
	G50367		71-00-02	13-1	C8	AR
	G50368		71-00-02	13-1	C9	AR
I	G50369		71-00-02	13-1	C10	AR
	G50375		71-00-02	2-1	C3	1
	G50375		71-00-02	7-1	C3	3
	G50375		71-00-02	13-1	C6	AR
	G50375		71-00-02	16-1	C3	2
	G50375		71-00-02	22-1	C6	1
	G50375		71-00-02	25-1	C3	2
	G50375		71-00-02	27-1	C9	2
I	HW93718		71-00-02	22-1	T2	-
	HW93718		71-00-02	32-1	T2	-

# **NUMERICAL INDEX**

Page 16 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
J1221G06		71-00-02	9-1	15	1
J1221G06		71-00-02	9-1	30	2
J1221G06		71-00-02	9-1	80	2
J1221G06		71-00-02	9-1	105	1
J1221G06		71-00-02	9-1	155	3
J1221G06		71-00-02	9-1	250	3
J1221G06		71-00-02	10-1	110	1
J1221G06		71-00-02	10-1	130	3
J1221G06		71-00-02	10-1	175	1
J1221G06		71-00-02	21-1	125	1
J1221G06		71-00-02	21-1	140	1
J1221G06		71-00-02	21-1	175	2
J1221G08		71-00-02	10-1	10	2
J1221G08		71-00-02	10-1	30	2
J1221G08		71-00-02	10-1	55	2
J1221G08		71-00-02	10-1	80	2
J1221G10		71-00-02	24-1	55	1
J1221G10		71-00-02	24-1	110	3
J1221G12		71-00-02	24-1	155	4
J1221G12		71-00-02	24-1	210	3
J1221G28		71-00-02	21-1	310	1
J1238P54		71-00-02	14-1	30	1
J1238P54		71-00-02	15-1	155	1
J522P52		71-00-02	14-1	160	2
J522P52		71-00-02	14-1	260	1
J522P52		71-00-02	16-1	155	1
J522P52		71-00-02	18-1	15	1
J522P53		71-00-02	14-1	85	2
J522P53		71-00-02	14-1	170	1
J522P53		71-00-02	14-1	270	1
J522P53		71-00-02	17-1	175	1
J522P53		71-00-02	18-1	25	1

# **NUMERICAL INDEX**

Page 17 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
MS21902-12T		71-00-02	20-1	10	1
MS21902-6T		71-00-02	20-1	80	1
MS21902-6T		71-00-02	21-1	30	1
MS21902J6		71-00-02	27-1	130	1
MS21914-4J		71-00-02	25-1	200	-
MS21924-20T		71-00-02	20-1	55	1
MS21924J20		71-00-02	20-1	55	-
MS27198-24		71-00-02	12-1	5	1
MS35650-3254		71-00-02	4-1	65	1
M83248/1-216		71-00-02	22-1	55	-
NAS1057T3-050		71-00-02	14-1	10	3
NAS1057W4A-064		71-00-02	4-1	275	-
NAS1057W4A-080		71-00-02	4-1	280	-
NAS1057W4A025		71-00-02	13-1	220	-
NAS1057W4A025		71-00-02	13-1	255	_
NAS1149C0316R		71-00-02	25-1	230	1
NAS1149C0316R		71-00-02	27-1	355	1
NAS1149C0316R		71-00-02	28-1	100	2
NAS1149C0316R		71-00-02	28-1	200	2
NAS1149C0316R		71-00-02	28-1	350	2
NAS1149C0316R		71-00-02	28-1	450	2
NAS1149C0332R		71-00-02	28-1	100	_
NAS1149C0332R		71-00-02	28-1	200	_
NAS1149C0332R		71-00-02	28-1	350	_
NAS1149C0332R		71-00-02	28-1	450	_
NAS1149C0363R		71-00-02	27-1	75	_
NAS1149C0416R		71-00-02	13-1	20	AR
NAS1149C0432R		71-00-02	4-1	15	2
NAS1149C0432R		71-00-02	4-1	285	2
NAS1149C0432R		71-00-02	4-1	375	2
NAS1149C0432R		71-00-02	4-1	715	2
NAS1149C0432R		71-00-02	4-1	775	1

# **NUMERICAL INDEX**

Page 18 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
NAS1149C0432R		71-00-02	4-1	810	2
NAS1149C0432R		71-00-02	4-1	835	2
NAS1149C0432R		71-00-02	5-1	110	2
NAS1149C0432R		71-00-02	5-1	160	2
NAS1149C0432R		71-00-02	5-1	190	3
NAS1149C0432R		71-00-02	5-1	260	2
NAS1149C0432R		71-00-02	6-1	35	1
NAS1149C0432R		71-00-02	6-1	85	4
NAS1149C0432R		71-00-02	6-1	135	2
NAS1149C0432R		71-00-02	6-1	185	1
NAS1149C0432R		71-00-02	6-1	205	1
NAS1149C0432R		71-00-02	6-1	360	1
NAS1149C0432R		71-00-02	6-1	420	2
NAS1149C0432R		71-00-02	6-1	460	2
NAS1149C0432R		71-00-02	8-1	15	1
NAS1149C0432R		71-00-02	10-1	140	2
NAS1149C0432R		71-00-02	13-1	20	AR
NAS1149C0432R		71-00-02	16-1	25	1
NAS1149C0432R		71-00-02	16-1	60	1
NAS1149C0432R		71-00-02	16-1	415	1
NAS1149C0432R		71-00-02	16-1	465	1
NAS1149C0432R		71-00-02	21-1	55	3
NAS1149C0432R		71-00-02	25-1	75	2
NAS1149C0432R		71-00-02	25-1	140	2
NAS1149C0432R		71-00-02	27-1	200	2
NAS1149C0432R		71-00-02	27-1	335	2
NAS1149C0432R		71-00-02	28-1	115	1
NAS1149C0432R		71-00-02	28-1	220	1
NAS1149C0463R		71-00-02	23-1	20	8
NAS1149C0632R		71-00-02	5-1	295	1
NAS1149D0416H		71-00-02	4-1	515	2
NAS1149D0416H		71-00-02	4-1	665	2

# **NUMERICAL INDEX**

Page 19 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
NAS1149D0416H		71-00-02	27-1	15	3
NAS1149E0332R		71-00-02	4-1	895	1
NAS1149E0416P		71-00-02	17-1	25	1
NAS1149E0432P		71-00-02	9-1	115	1
NAS1149E0432P		71-00-02	33-1	10	2
NAS1149E0432R		71-00-02	33-1	130	4
NAS1149E0432R		71-00-02	33-1	135	1
NAS1149E0432R		71-00-02	33-1	255	1
NAS1149E0516P		71-00-02	22-1	27	2
NAS1149E0516P		71-00-02	22-1	122	1
NAS1149E0532P		71-00-02	22-1	26	4
NAS1149E0532P		71-00-02	22-1	121	1
NAS1149E0563R		71-00-02	22-1	28	3
NAS1149E0563R		71-00-02	22-1	107	1
NAS1149E0563R		71-00-02	22-1	123	1
NAS1149E0616R		71-00-02	16-1	505	4
NAS1149E0632R		71-00-02	16-1	530	1
NAS1611-024A		71-00-02	21-1	301	-
NAS1611-153A		71-00-02	20-1	100	-
NAS1612-12A		71-00-02	20-1	5	1
NAS1612-20A		71-00-02	20-1	50	1
NAS1612-6A		71-00-02	20-1	75	1
NAS1612-6A		71-00-02	21-1	10	1
NAS1612-6A		71-00-02	21-1	25	1
RC2769-1		71-00-02	4-1	890	1
RP235-00		71-00-02	33-1	200	-
SL4147CA10A		71-00-02	2-1	110	4
SL4147CA14EBSP1		71-00-02	3-1	110	4
S281A001-101		71-00-02	22-1	50	-
S281A001-501		71-00-02	22-1	75	-
S314A210-21		71-00-02	33-1	25	-
S314A210-5		71-00-02	33-1	25	

# **NUMERICAL INDEX**

Page 20 Oct 05/2008



	AIRLINE PART NUMBER	LOCATION			
PART NUMBER		SUBJECT	FIG	ITEM	QTY
S332A002-2		71-00-02	25-1	175	-
S332A102-1		71-00-02	14-1	100	-
S332A210-11		71-00-02	21-1	300	-
S332A210-16		71-00-02	21-1	200	-
S332A210-20		71-00-02	20-1	20	-
S332A210-21		71-00-02	21-1	225	-
S332A210-23		71-00-02	21-1	75	-
S332A239-4		71-00-02	27-1	225	-
S332A240-2		71-00-02	24-1	200	-
S332A240-4		71-00-02	24-1	100	-
S332A260-1		71-00-02	23-1	5	-
S332A260-4		71-00-02	23-1	10	-
S332A280-5		71-00-02	12-1	10	-
S332T100-30		71-00-02	28-1	10	-
S332T100-38		71-00-02	28-1	20	-
S332T100-43		71-00-02	28-1	15	-
S332T100-44		71-00-02	28-1	5	-
S332W110-2		71-00-02	10-1	100	-
TAO910064-06		71-00-02	21-1	185	1
TAO910083		71-00-02	21-1	325	2
TAO910083		71-00-02	21-1	350	1
TAO910091H1		71-00-02	12-1	50	2
TA025146-15		71-00-02	29-1	25	5
TA025146-15		71-00-02	29-1	50	4
UA538551-3		71-00-02	23-1	5	1
U542648		71-00-02	23-1	10	1
VR1030-300		71-00-02	25-1	185	-
VR1030-300		71-00-02	25-1	260	-
VR1030-300		71-00-02	25-1	305	-
X-310A		71-00-02	30-1		-
0646C624-18		71-00-02	22-1	90	-
10-60555-7		71-00-02	21-1	5	_

**NUMERICAL INDEX** 

Page 21 Oct 05/2008



			ı		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
10-62008-1		71-00-02	16-1	250	-
10-62008-22		71-00-02	14-1	5	-
10-62008-30		71-00-02	18-1	5	-
10-62008-32		71-00-02	16-1	150	-
10-62008-33		71-00-02	14-1	75	-
10-62008-41		71-00-02	14-1	250	-
10-62008-43		71-00-02	18-1	5	-
10-62167-3		71-00-02	20-1	15	-
107484-7		71-00-02	14-1	150	1
107492-6		71-00-02	14-1	250	1
115096-2		71-00-02	24-1	200	1
115096-4		71-00-02	24-1	100	1
11777-08		71-00-02	28-1	60	3
11777-08		71-00-02	28-1	180	8
11777-08		71-00-02	28-1	280	3
11777-08		71-00-02	28-1	305	5
11777-08		71-00-02	28-1	430	1
155006-06-16		71-00-02	21-1	200	1
155006-06-23		71-00-02	21-1	75	1
155012-12-21		71-00-02	21-1	225	1
155012-73-20		71-00-02	20-1	20	1
155016-20-11		71-00-02	21-1	300	1
16135-80		71-00-02	17-1	50	1
16135-80		71-00-02	17-1	275	1
16135-81		71-00-02	17-1	125	1
16135-83		71-00-02	17-1	75	-
16135-84		71-00-02	15-1	175	1
16135-95		71-00-02	17-1	75	1
1794M49P01		71-00-02	15-1	35	2
1794M49P01		71-00-02	15-1	130	2
1794M49P01		71-00-02	17-1	10	3
1794M49P01		71-00-02	17-1	105	3

# **NUMERICAL INDEX**

Page 22 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
1794M49P01		71-00-02	17-1	230	2
21SN41-52		71-00-02	27-1	60	-
21SN41-52		71-00-02	27-1	60	1
286A1062		71-00-02	29-1	5	-
286A1062-002		71-00-02	29-1	5	1
30645-300		71-00-02	25-1	185	1
30645-300		71-00-02	25-1	260	1
30645-300		71-00-02	25-1	305	1
310A2020-11		71-00-02	2-1	15	1
310A2020-6		71-00-02	2-1	20	2
310A2021-4		71-00-02	2-1	50	1
310A2029-11		71-00-02	2-1	5	8
310A2029-19		71-00-02	2-1	10	2
310A2030-17		71-00-02	3-1	5	1
310A2037-14		71-00-02	3-1	25	2
310A2037-15		71-00-02	3-1	50	1
310A2037-16		71-00-02	3-1	55	1
310A2039-1		71-00-02	3-1	30	2
310A2039-2		71-00-02	3-1	60	2
310A2040-7		71-00-02	2-1	78	2
310A2040-7		71-00-02	31-1	32	1
310A2040-7		71-00-02	31-1	57	1
310A2041-10		71-00-02	31-1	10	1
310A2041-9		71-00-02	31-1	5	1
310A2042-3		71-00-02	2-1	75	3
310A2042-3		71-00-02	31-1	25	2
310A2042-3		71-00-02	31-1	50	2
310A2043-1		71-00-02	2-1	80	3
310A2043-1		71-00-02	31-1	35	2
310A2043-1		71-00-02	31-1	60	2
314-2100-2		71-00-02	33-1	25	-
314-2100-3		71-00-02	33-1	25	1

# **NUMERICAL INDEX**

Page 23 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
314A2610-1		71-00-02	32-1	100	-
314A2610-62		71-00-02	32-1	100	1
314A2620-1		71-00-02	32-1	5	-
314A2620-1		71-00-02	32-1	5	1
314A2620-2		71-00-02	32-1	10	-
314A2620-5		71-00-02	32-1	20	-
314T3019-3		71-00-02	33-1	5	2
315A2080-1		71-00-02	13-1	72	-
315A2080-4		71-00-02	13-1	72	1
315A2081-5		71-00-02	13-1	80	-
315A2083-1		71-00-02	13-1	75	-
3202222-1		71-00-02	16-1	250	1
320548-2		71-00-02	14-1	5	1
3214446-4		71-00-02	16-1	150	1
3214552-5		71-00-02	18-1	5	-
3214552-6		71-00-02	18-1	5	1
3215618-4		71-00-02	27-1	225	1
322U2338-2		71-00-02	25-1	55	2
3289562-5		71-00-02	14-1	75	1
3289630-2		71-00-02	25-1	175	1
332A1325-1		71-00-02	27-1	55	-
332A1325-1		71-00-02	27-1	55	1
332A2240-1		71-00-02	24-1	50	1
332A2240-10		71-00-02	24-1	5	1
332A2240-11		71-00-02	24-1	150	1
332A2310-4		71-00-02	25-1	250	1
332A2313-1		71-00-02	25-1	100	1
332A2321-10		71-00-02	16-1	200	1
332A2322-54		71-00-02	16-1	300	1
332A2323-14		71-00-02	16-1	105	1
332A2326-45		71-00-02	18-1	100	1
332A2341-2		71-00-02	27-1	185	1

# **NUMERICAL INDEX**

Page 24 Oct 05/2008



			LOCATION		
PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
332A2341-3		71-00-02	27-1	180	1
332A2341-4		71-00-02	16-1	10	1
332A2341-5		71-00-02	16-1	45	1
332A2350-1		71-00-02	27-1	145	1
332A2350-11		71-00-02	15-1	55	1
332A2350-12		71-00-02	17-1	200	1
332A2350-13		71-00-02	17-1	225	1
332A2350-14		71-00-02	17-1	150	1
332A2350-4		71-00-02	15-1	100	1
332A2350-5		71-00-02	17-1	5	1
332A2350-7		71-00-02	17-1	100	1
332A2350-9		71-00-02	15-1	5	1
332A2371-3		71-00-02	13-1	5	1
332A2372-3		71-00-02	13-1	50	1
332A2372-4		71-00-02	13-1	55	1
332A2373-1		71-00-02	13-1	30	AR
332A2373-2		71-00-02	13-1	35	AR
332A2374-10		71-00-02	13-1	205	-
332A2374-13		71-00-02	13-1	200	1
332A2374-14		71-00-02	13-1	205	1
332A2374-9		71-00-02	13-1	200	-
332A2376-1		71-00-02	13-1	225	-
332A2376-1		71-00-02	13-1	260	-
332A2390-12		71-00-02	27-1	250	1
332A2390-3		71-00-02	27-1	100	-
332A2390-43		71-00-02	13-1	10	-
332A2390-45		71-00-02	13-1	10	1
332A2390-48		71-00-02	27-1	100	1
332A2410-1		71-00-02	21-1	110	1
332A2600-4		71-00-02	22-1	5	1
332A2600-5		71-00-02	22-1	10	1
332A2600-6		71-00-02	22-1	15	1

# **NUMERICAL INDEX**

Page 25 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
332A2710-1		71-00-02	9-1	10	1
332A2710-11		71-00-02	9-1	125	-
332A2710-13		71-00-02	9-1	150	1
332A2710-15		71-00-02	9-1	200	1
332A2710-25		71-00-02	10-1	105	1
332A2710-27		71-00-02	9-1	225	1
332A2710-3		71-00-02	9-1	5	1
332A2710-30		71-00-02	9-1	100	-
332A2710-31		71-00-02	10-1	75	1
332A2710-32		71-00-02	10-1	5	1
332A2710-33		71-00-02	10-1	50	1
332A2710-36		71-00-02	9-1	75	1
332A2710-38		71-00-02	9-1	100	1
332A2910-1		71-00-02	27-1	65	-
332A2910-101		71-00-02	5-1	225	1
332A2910-104		71-00-02	5-1	375	-
332A2910-106		71-00-02	7-1	275	1
332A2910-108		71-00-02	7-1	325	1
332A2910-11		71-00-02	7-1	225	1
332A2910-111		71-00-02	7-1	150	1
332A2910-112		71-00-02	5-1	100	1
332A2910-125		71-00-02	4-1	700	1
332A2910-128		71-00-02	7-1	200	1
332A2910-130		71-00-02	4-1	400	1
332A2910-132		71-00-02	4-1	450	1
332A2910-134		71-00-02	5-1	75	1
332A2910-136		71-00-02	4-1	755	1
332A2910-138		71-00-02	4-1	625	1
332A2910-141		71-00-02	5-1	375	1
332A2910-143		71-00-02	4-1	75	1
332A2910-24		71-00-02	5-1	5	1
332A2910-26		71-00-02	6-1	325	1

# **NUMERICAL INDEX**

Page 26 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
332A2910-39		71-00-02	7-1	300	1
332A2910-41		71-00-02	4-1	505	1
332A2910-46		71-00-02	4-1	400	-
332A2910-48		71-00-02	4-1	450	-
332A2910-51		71-00-02	6-1	400	1
332A2910-67		71-00-02	5-1	325	-
332A2910-69		71-00-02	5-1	75	-
332A2910-74		71-00-02	5-1	150	1
332A2910-87		71-00-02	4-1	355	-
332A2910-89		71-00-02	4-1	755	-
332A2910-91		71-00-02	4-1	625	-
332A2910-95		71-00-02	6-1	125A	-
332A2910-96		71-00-02	6-1	125B	-
332A2910-99		71-00-02	6-1	125	1
332A2911-1		71-00-02	5-1	275	1
332A2911-2		71-00-02	5-1	175	1
332A2911-5		71-00-02	5-1	200	1
332A2911-9		71-00-02	8-1	125	1
332A2920-110		71-00-02	5-1	25	-
332A2920-115		71-00-02	4-1	360	-
332A2920-117		71-00-02	4-1	255	-
332A2920-119		71-00-02	5-1	250	1
332A2920-124		71-00-02	7-1	25	-
332A2920-131		71-00-02	4-1	250	-
332A2920-132		71-00-02	6-1	175	2
332A2920-142		71-00-02	4-1	150	1
332A2920-143		71-00-02	7-1	100	-
332A2920-15		71-00-02	4-1	825	1
332A2920-157		71-00-02	4-1	250	1
332A2920-178		71-00-02	4-1	325	1
332A2920-179		71-00-02	7-1	175	1
332A2920-182		71-00-02	5-1	330	-

# **NUMERICAL INDEX**

Page 27 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
332A2920-185		71-00-02	7-1	125	1
332A2920-193		71-00-02	5-1	25	1
332A2920-197		71-00-02	4-1	350	1
332A2920-199		71-00-02	7-1	100	1
332A2920-201		71-00-02	7-1	25	1
332A2920-222		71-00-02	4-1	800	1
332A2920-224		71-00-02	4-1	750	1
332A2920-225		71-00-02	7-1	55	1
332A2920-228		71-00-02	4-1	600	1
332A2920-229		71-00-02	4-1	5	1
332A2920-230		71-00-02	8-1	5	1
332A2920-232		71-00-02	4-1	100	1
332A2920-235		71-00-02	5-1	330	1
332A2920-29		71-00-02	6-1	175	-
332A2920-39		71-00-02	7-1	125	-
332A2920-48		71-00-02	6-1	450	1
332A2920-55		71-00-02	7-1	350	1
332A2920-92		71-00-02	5-1	80	1
332A2920-92		71-00-02	5-1	130	1
332A2921-1		71-00-02	8-1	25	1
332A2930-1		71-00-02	6-1	50	1
332A2930-1		71-00-02	6-1	75	1
332A2930-17		71-00-02	7-1	175	-
332A2930-26		71-00-02	6-1	405	-
332A2930-30		71-00-02	4-1	325	-
332A2930-33		71-00-02	4-1	550	-
332A2930-49		71-00-02	14-1	10	-
332A2930-54		71-00-02	5-1	330	-
332A2930-57		71-00-02	4-1	700	-
332A2930-60		71-00-02	5-1	380	-
332A2930-61		71-00-02	4-1	950	1
332A2930-62		71-00-02	6-1	225	1

# **NUMERICAL INDEX**

Page 28 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
332A2930-7		71-00-02	4-1	650	1
332A2930-85		71-00-02	4-1	550	1
332A2930-88		71-00-02	4-1	705	1
332A2930-90		71-00-02	6-1	350	1
332A2931-3		71-00-02	5-1	125	1
332T3323-2		71-00-02	20-1	110	1
332W1910-9		71-00-02	24-1	220	3
332W3130-18		71-00-02	21-1	245	3
332W3130-18		71-00-02	21-1	285	2
332W5101-10		71-00-02	21-1	250	3
332W5101-10		71-00-02	21-1	290	2
333A2020-5		71-00-02	32-1	130	1
333A2020-5		71-00-02	32-1	180	1
334A2010-1		71-00-02	33-1	80	24
340-087-904-0		71-00-02	24-1	2	-
370D1005-5		71-00-02	6-1	30	1
370D1005-5		71-00-02	6-1	200	1
387999		71-00-02	20-1	105	-
60B90135-84		71-00-02	15-1	175	-
649-304-004-0		71-00-02	33-1	270	-
649-341-011-0		71-00-02	33-1	260	-
683-3-20		71-00-02	30-1		-
69A94		71-00-02	33-1	250	-
731476		71-00-02	22-1	85	-
7579078		71-00-02	21-1	5	1
761574		71-00-02	22-1	50	-
761574B		71-00-02	22-1	50	1
762075		71-00-02	22-1	80	-
762246		71-00-02	22-1	75	1
801A50-0004A		71-00-02	14-1	25	1
801A50-0004A		71-00-02	15-1	150	1
801A50-0005A		71-00-02	14-1	155	2

# **NUMERICAL INDEX**

Page 29 Oct 05/2008



PART NUMBER	AIRLINE PART NUMBER	SUBJECT	FIG	ITEM	QTY
801A50-0005A		71-00-02	14-1	255	1
801A50-0005A		71-00-02	16-1	160	1
801A50-0005A		71-00-02	18-1	10	1
801A50-0006A		71-00-02	14-1	80	2
801A50-0006A		71-00-02	14-1	165	1
801A50-0006A		71-00-02	14-1	265	1
801A50-0006A		71-00-02	17-1	180	1
801A50-0006A		71-00-02	18-1	20	1
801A50-0006A		71-00-02	18-1	30	1
801A50-0006A		71-00-02	27-1	135	1
82C10020-1		71-00-02	14-1	100	1
849589		71-00-02	20-1	15	1
3757-350		71-00-02	16-1	110	1
902016-01		71-00-02	28-1	10	1
902018-01		71-00-02	28-1	20	1
902862		71-00-02	28-1	15	1
902864		71-00-02	28-1	5	1
9134M25P29		71-00-02	13-1	150	1
9352M41P03		71-00-02	9-1	35	-
9352M41P04		71-00-02	28-1	65	6
9352M41P04		71-00-02	28-1	185	16
9352M41P04		71-00-02	28-1	285	6
9352M41P04		71-00-02	28-1	310	10
9352M41P04		71-00-02	28-1	435	2
9352M41P16		71-00-02	15-1	30	-
9352M41P16		71-00-02	15-1	125	-
9352M41P16		71-00-02	17-1	15	-
9352M41P16		71-00-02	17-1	110	-
9352M41P16		71-00-02	17-1	235	-
974219		71-00-02	20-1	150	_

# **NUMERICAL INDEX**

Page 30 Oct 05/2008

# CHAPTER 7

# POWERPLANT BUILDUP



### **CHAPTER 71**

Subject/Page	Date COC	Subject/Page	Date	coc	Subject/Page	Date	coc
EFFECTIVE PAGES		71-00-02 P/P BU	ILDUP FIGURE	4-1	71-00-02 P/P BU	ILDUP FIGURE	4-1
1 thru 6	Oct 05/2008	1	Oct 05/2007		(cont)	0 1 05/0007	
		2	Oct 05/2007		40	Oct 05/2007	
71–CONTENTS		R 3	Oct 05/2008		41	Oct 05/2007	
1	Oct 05/2007	4	Oct 05/2007		42	Oct 05/2007	
2	Oct 05/2007	R 5	Oct 05/2008		43	Oct 05/2007	
	CT INDEX FIGURE 1-1	6	Jun 05/2008		44	Oct 05/2007	
1	Oct 05/2007	R 7	Oct 05/2008		45	Jun 05/2008	
2	Oct 05/2007	8	Oct 05/2007		46	Feb 05/2008	
3	Jun 05/2008	9	Oct 05/2007		47	Jun 05/2008	
4	Oct 05/2007	10	Oct 05/2007		48	Oct 05/2007	
5	Jun 05/2008	11	Jun 05/2008		49	Jun 05/2008	
6	Oct 05/2007	12	Oct 05/2007		50	Oct 05/2007	
7	Jun 05/2008	13	Oct 05/2007		R 51	Oct 05/2008	
8	BLANK	14	Oct 05/2007		52	Oct 05/2007	
71-00-02 P/P BU	ILDUP FIGURE 2-1	15	Oct 05/2007		53	Oct 05/2007	
1	Oct 05/2007	16	Oct 05/2007		54	Oct 05/2007	
2	Oct 05/2007	17	Oct 05/2007		R 55	Oct 05/2008	
R 3	Oct 05/2008	18	Oct 05/2007		56	BLANK	
4	Oct 05/2007	19	Oct 05/2007		71-00-02 P/P BU	ILDUP FIGURE	5-1
R 5	Oct 05/2008	20	Oct 05/2007		1	Oct 05/2007	
6	Oct 05/2007	21	Oct 05/2007		2	Oct 05/2007	
R 7	Oct 05/2008	22	Oct 05/2007		3	Oct 05/2007	
8	Oct 05/2007	23	Oct 05/2007		4	Oct 05/2007	
R 9	Oct 05/2008	24	Oct 05/2007		5	Oct 05/2007	
10	Oct 05/2007	25	Oct 05/2007		6	Oct 05/2007	
11	Oct 05/2007	26	Oct 05/2007		7	Oct 05/2007	
12	BLANK	27	Oct 05/2007		8	Oct 05/2007	
71-00-02 P/P BU	ILDUP FIGURE 3-1	28	Oct 05/2007		9	Oct 05/2007	
1	Oct 05/2007	29	Oct 05/2007		10	Oct 05/2007	
2	Oct 05/2007	30	Oct 05/2007		11	Oct 05/2007	
R 3	Oct 05/2008	R 31	Oct 05/2007 Oct 05/2008		12	Oct 05/2007	
4	Oct 05/2007	32	Oct 05/2007		13	Oct 05/2007	
R 5	Oct 05/2008	R 33	Oct 05/2007 Oct 05/2008		14	Oct 05/2007	
6	Oct 05/2007				15	Oct 05/2007	
R 7	Oct 05/2008	34 35	Oct 05/2007 Oct 05/2007		16	Oct 05/2007	
8	Oct 05/2007	36			17	Oct 05/2007	
R 9	Oct 05/2008		Oct 05/2007		18	Oct 05/2007	
10	BLANK	37	Oct 05/2007		19	Oct 05/2007	
		38	Oct 05/2007		20	Oct 05/2007	
		39	Jun 05/2008				

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# 71-EFFECTIVE PAGES

Page 1 Oct 05/2008



### **CHAPTER 71**

Subject/Page	Date CO	C Subject/Page	Date	coc	Subject/Page	Date	coc
71-00-02 P/P BUI	ILDUP FIGURE 5-1		BUILDUP FIGURE 7	-1	71-00-02 P/P BU	IILDUP FIGUR	E 8-1
21	Oct 05/2007	1	Oct 05/2007		9	Oct 05/2007	
22	Oct 05/2007	2	Oct 05/2007		10	Oct 05/2007	
23	Oct 05/2007	3	Oct 05/2007		11	Oct 05/2007	
24	Oct 05/2007	4	Oct 05/2007		12	BLANK	
25	Feb 05/2008	R 5	Oct 05/2008		71-00-02 P/P BL		E 9-1
26	Oct 05/2007	R 6	Oct 05/2008		1	Oct 05/2007	
R 27	Oct 05/2008	R 7	Oct 05/2008		2	Oct 05/2007	
28	Oct 05/2007	8	Oct 05/2007		R 3	Oct 05/2008	
R 29	Oct 05/2008	R 9	Oct 05/2008		4	Oct 05/2007	
30	BLANK	10	Oct 05/2007		R 5	Oct 05/2008	
	ILDUP FIGURE 6-1	R 11	Oct 05/2008		6	Oct 05/2007	
1	Oct 05/2007	12	Oct 05/2007		R 7	Oct 05/2008	
2	Oct 05/2007	13	Oct 05/2007		8	Oct 05/2007	
3	Oct 05/2007	14	Oct 05/2007		R 9	Oct 05/2008	
4	Oct 05/2007	15	Oct 05/2007		10	Oct 05/2007	
5	Oct 05/2007	16	Oct 05/2007		R 11	Oct 05/2008	
6	Oct 05/2007	17	Oct 05/2007		12	Oct 05/2007	
7	Oct 05/2007	18	Oct 05/2007		R 13	Oct 05/2008	
8	Oct 05/2007	19	Oct 05/2007		14	Oct 05/2007	
9	Oct 05/2007	20	Oct 05/2007		R 15	Oct 05/2008	
10	Oct 05/2007	21	Oct 05/2007		16	Oct 05/2007	
11	Oct 05/2007	22	Oct 05/2007		R 17	Oct 05/2008	
12	Oct 05/2007	23	Oct 05/2007		18	BLANK	
13	Oct 05/2007	24	Oct 05/2007		71-00-02 P/P BL		F 10-1
14	Oct 05/2007	25	Oct 05/2007		1	Oct 05/2007	_ 10 1
15	Oct 05/2007	26	Oct 05/2007		2	Oct 05/2007	
16	Oct 05/2007	27	Oct 05/2007		R 3	Oct 05/2008	
R 17	Oct 05/2008	28	Oct 05/2007		4	Oct 05/2007	
18	Oct 05/2007	29	Oct 05/2007		R 5	Oct 05/2008	
19	Oct 05/2007	30	BLANK		6	Oct 05/2007	
20	Oct 05/2007	71-00-02 P/P E	BUILDUP FIGURE 8	-1	R 7	Oct 05/2008	
21	Oct 05/2007	1	Oct 05/2007		8	Oct 05/2007	
22	Oct 05/2007	2	Oct 05/2007		R 9	Oct 05/2008	
23	Oct 05/2007	R 3	Oct 05/2008		10	Oct 05/2007	
24	Oct 05/2007	4	Oct 05/2007		R 11	Oct 05/2008	
R 25	Oct 05/2008	5	Oct 05/2007		12	Oct 05/2007	
26	BLANK	6	Oct 05/2007		R 13	Oct 05/2007	
20	DEMINI	7	Oct 05/2007		14	Feb 05/2008	
		8	Oct 05/2007		'7	1 00 00/2000	•

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# 71-EFFECTIVE PAGES

Page 2 Oct 05/2008



### **CHAPTER 71**

Subject/Page	Date CO	C Subject/Page	Date	coc	Subject/Page	Date	coc
71-00-02 P/P BU (cont)	LDUP FIGURE 10-1	71-00-02 P/P BU (cont)	JILDUP FIGURE	13-1	71-00-02 P/P BU (cont)	ILDUP FIGURE	15-1
R 15	Oct 05/2008	R 24	Oct 05/2008		8	Oct 05/2007	
16	BLANK	R 25	Oct 05/2008		9	Oct 05/2007	
71-00-02 P/P BU	LDUP FIGURE 11-1	R 26	Oct 05/2008		10	Oct 05/2007	
1	Oct 05/2007	A 27	Oct 05/2008		11	Oct 05/2007	
2	Oct 05/2007	A 28	BLANK		12	Oct 05/2007	
3	Oct 05/2007	71-00-02 P/P BL	JILDUP FIGURE	14-1	R 13	Oct 05/2008	
4	BLANK	1	Oct 05/2007		14	BLANK	
71-00-02 P/P BU	LDUP FIGURE 12-1	2	Oct 05/2007		71-00-02 P/P BU	ILDUP FIGURE	16-1
1	Oct 05/2007	R 3	Oct 05/2008		1	Oct 05/2007	
2	Oct 05/2007	4	Oct 05/2007		2	Oct 05/2007	
R 3	Oct 05/2008	R 5	Oct 05/2008		R 3	Oct 05/2008	
4	Oct 05/2007	6	Oct 05/2007		4	Oct 05/2007	
5	Oct 05/2007	7	Oct 05/2007		R 5	Oct 05/2008	
6	BLANK	8	Oct 05/2007		6	Oct 05/2007	
71-00-02 P/P BU	LDUP FIGURE 13-1	R 9	Oct 05/2008		R 7	Oct 05/2008	
1	Oct 05/2007	10	Oct 05/2007		8	Oct 05/2007	
2	Oct 05/2007	11	Oct 05/2007		R 9	Oct 05/2008	
R 3	Oct 05/2008	12	Oct 05/2007		10	Oct 05/2007	
R 4	Oct 05/2008	R 13	Oct 05/2008		11	Oct 05/2007	
R 5	Oct 05/2008	14	Oct 05/2007		12	Oct 05/2007	
R 6	Oct 05/2008	15	Oct 05/2007		13	Oct 05/2007	
R 7	Oct 05/2008	16	Oct 05/2007		14	Oct 05/2007	
R 8	Oct 05/2008	R 17	Oct 05/2008		15	Oct 05/2007	
R 9	Oct 05/2008	18	Oct 05/2007		16	Oct 05/2007	
R 10	Oct 05/2008	19	Oct 05/2007		17	Oct 05/2007	
R 11	Oct 05/2008	20	Oct 05/2007		18	Oct 05/2007	
R 12	Oct 05/2008	21	Oct 05/2007		R 19	Oct 05/2008	
R 13	Oct 05/2008	22	Oct 05/2007		20	Oct 05/2007	
R 14	Oct 05/2008	23	Oct 05/2007		R 21	Oct 05/2008	
R 15	Oct 05/2008	24	BLANK		22	Oct 05/2007	
R 16	Oct 05/2008	71-00-02 P/P BL	JILDUP FIGURE	15-1	R 23	Oct 05/2008	
R 17	Oct 05/2008	1	Oct 05/2007		24	Oct 05/2007	
R 18	Oct 05/2008	2	Oct 05/2007		R 25	Oct 05/2008	
R 19	Oct 05/2008	3	Oct 05/2007		26	BLANK	
R 20	Oct 05/2008	4	Oct 05/2007		71-00-02 P/P BU	ILDUP FIGURE	17-1
R 21	Oct 05/2008	5	Oct 05/2007		1	Oct 05/2007	
R 22	Oct 05/2008	6	Oct 05/2007		2	Jun 05/2008	
R 23	Oct 05/2008	7	Oct 05/2007		3	Jun 05/2008	

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# 71-EFFECTIVE PAGES

Page 3 Oct 05/2008



#### **CHAPTER 71**

Subject/Page	Date CC	OC Subject/Pa	ge Date	coc	Subject/Page	Date	coc
71-00-02 P/P BU (cont)			P BUILDUP FIGUR Oct 05/2007		71-00-02 P/P BU (cont)	IILDUP FIGURE	E 21-1
4	Oct 05/2007	1 2	Oct 05/2007		25	Oct 05/2007	
5	Jun 05/2008	R 3	Oct 05/2007		26	Oct 05/2007	
6	Oct 05/2007	11 3	Oct 05/2007		27	Oct 05/2007	
7	Jun 05/2008	R 5	Oct 05/2007		28	Oct 05/2007	
8	Jun 05/2008	6	Oct 05/2007		29	Oct 05/2007	
9	Jun 05/2008	R 7	Oct 05/2008		30	Oct 05/2007	
10	Oct 05/2007	8	Oct 05/2007		71-00-02 P/P BU	IILDUP FIGURE	E 22-1
11	Jun 05/2008	R 9	Oct 05/2008		1	Oct 05/2007	
12	Oct 05/2007	10	Oct 05/2007		2	Oct 05/2007	
13	Oct 05/2007	11	Oct 05/2007		3	Oct 05/2007	
14	Oct 05/2007	12	Oct 05/2007		4	Feb 05/2008	
R 15	Oct 05/2008	13	Oct 05/2007		R 5	Oct 05/2008	
16	Oct 05/2007	14	BLANK		6	Oct 05/2007	
17	Oct 05/2007		P BUILDUP FIGUR	PE 21_1	R 7	Oct 05/2008	
18	Oct 05/2007	1	Oct 05/2007		8	Oct 05/2007	
19	Oct 05/2007	2	Oct 05/2007		R 9	Oct 05/2008	
20	Oct 05/2007	R 3	Oct 05/2007		10	Oct 05/2007	
21	Jun 05/2008	11 3	Oct 05/2007		R 11	Oct 05/2008	
22	BLANK	R 5	Oct 05/2007		12	Jun 05/2008	
71-00-02 P/P BU	ILDUP FIGURE 18-1	6	Oct 05/2007		13	Jun 05/2008	
1	Oct 05/2007	7	Oct 05/2007		14	Oct 05/2007	
2	Oct 05/2007	8	Oct 05/2007		15	Oct 05/2007	
R 3	Oct 05/2008	R 9	Oct 05/2008		16	BLANK	
4	Oct 05/2007	10	Oct 05/2007		71-00-02 P/P BU	IILDUP FIGURE	E 23-1
5	Oct 05/2007	11	Oct 05/2007		1	Oct 05/2007	
6	Oct 05/2007	12	Oct 05/2007		2	Oct 05/2007	
7	Oct 05/2007	13	Oct 05/2007		R 3	Oct 05/2008	
8	Oct 05/2007	14	Oct 05/2007		4	BLANK	
9	Oct 05/2007	15	Oct 05/2007		71-00-02 P/P BU	IILDUP FIGURE	E 24-1
10	Oct 05/2007	16	Oct 05/2007		1	Oct 05/2007	
11	Oct 05/2007	17	Oct 05/2007		2	Oct 05/2007	
12	BLANK	18	Oct 05/2007		R 3	Oct 05/2008	
71-00-02 P/P BU	ILDUP FIGURE 19-1	19	Oct 05/2007		4	Oct 05/2007	
1	Oct 05/2007	20	Oct 05/2007		5	Oct 05/2007	
2	Oct 05/2007	R 21	Oct 05/2007		6	Oct 05/2007	
3	Oct 05/2007	22	Oct 05/2000		7	Oct 05/2007	
4	BLANK	R 23	Oct 05/2007		8	Oct 05/2007	
		24	Oct 05/2000 Oct 05/2007		9	Oct 05/2007	
		24	OCI 05/2007				

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# 71-EFFECTIVE PAGES

Page 4 Oct 05/2008



#### **CHAPTER 71**

Subject/Page	Date COC	Subject/Page	Date	coc	Subject/Page	Date	coc
71-00-02 P/P BUILDUP FIGURE 24-1 (cont)		71-00-02 P/P BU	IILDUP FIGURE Oct 05/2007	26-1	71-00-02 P/P BU (cont)	IILDUP FIGURE	28-1
10	Oct 05/2007	2	Oct 05/2007		10	Oct 05/2007	
11	Oct 05/2007	3	Oct 05/2007		R 11	Oct 05/2008	
12	Oct 05/2007	4	BLANK		12	Oct 05/2007	
13	Oct 05/2007	71-00-02 P/P BU		27-1	R 13	Oct 05/2008	
14	Oct 05/2007	1	Oct 05/2007		14	Oct 05/2007	
15	Oct 05/2007	2	Oct 05/2007		15	Oct 05/2007	
16	Oct 05/2007	R 3	Oct 05/2008		16	Oct 05/2007	
17	Oct 05/2007	4	Oct 05/2007		R 17	Oct 05/2008	
18	Oct 05/2007	5	Oct 05/2007		18	Oct 05/2007	
19	Oct 05/2007	6	Oct 05/2007		R 19	Oct 05/2008	
20	Oct 05/2007	7	Oct 05/2007		20	Oct 05/2007	
21	Oct 05/2007	8	Oct 05/2007		R 21	Oct 05/2008	
22	Oct 05/2007	9	Oct 05/2007		22	Feb 05/2008	
R 23	Oct 05/2008	10	Oct 05/2007		23	Jun 05/2008	
24	BLANK	R 11	Oct 05/2008		24	Feb 05/2008	
71-00-02 P/P BU	ILDUP FIGURE 25-1	12	Oct 05/2007		25	Feb 05/2008	
1	Oct 05/2007	13	Oct 05/2007		26	Feb 05/2008	
2	Oct 05/2007	14	Oct 05/2007		R 27	Oct 05/2008	
3	Oct 05/2007	15	Oct 05/2007		28	Feb 05/2008	
4	Oct 05/2007	16	Oct 05/2007		R 29	Oct 05/2008	
R 5	Oct 05/2008	17	Oct 05/2007		30	Feb 05/2008	
6	Oct 05/2007	18	Oct 05/2007		31	Jun 05/2008	
7	Oct 05/2007	R 19	Oct 05/2008		32	Feb 05/2008	
8	Oct 05/2007	20	Oct 05/2007		33	Feb 05/2008	
R 9	Oct 05/2008	R 21	Oct 05/2008		34	Feb 05/2008	
10	Oct 05/2007	22	Oct 05/2007		35	Feb 05/2008	
11	Oct 05/2007	23	Oct 05/2007		36	BLANK	
12	Oct 05/2007	24	BLANK		71-00-02 P/P BU	IILDUP FIGURE	29-1
R 13	Oct 05/2008	71-00-02 P/P BU		28-1	1	Oct 05/2007	
14	Oct 05/2007	1	Oct 05/2007		2	Oct 05/2007	
15	Oct 05/2007	2	Oct 05/2007		3	Oct 05/2007	
16	Oct 05/2007	3	Oct 05/2007		4	Oct 05/2007	
17	Oct 05/2007	4	Oct 05/2007		R 5	Oct 05/2008	
18	Oct 05/2007	R 5	Oct 05/2008		6	Oct 05/2007	
19	Oct 05/2007	6	Oct 05/2007		7	Oct 05/2007	
20	Oct 05/2007	R 7	Oct 05/2008		8	Oct 05/2007	
21	Oct 05/2007	8	Oct 05/2007		9	Oct 05/2007	
22	BLANK	9	Oct 05/2007		10	BLANK	
		J	JUL 00/2001				

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# 71-EFFECTIVE PAGES

Page 5 Oct 05/2008



#### **CHAPTER 71**

Subject/Page	Date	сос	Subject/Page	Date	coc	Subject/Page	Date	coc
71-00-02 P/P BU	JILDUP FIGURE	30-1	71-00-02 P/P BU	ILDUP FIGURE	32-1			
1	Oct 05/2007		(cont)					
2	Oct 05/2007		16	Oct 05/2007				
R 3	Oct 05/2008		17	Oct 05/2007				
4	Oct 05/2007		18	BLANK				
R 5	Oct 05/2008		71-00-02 P/P BU		33-1			
6	Oct 05/2007		1	Oct 05/2007				
R 7	Oct 05/2008		2	Oct 05/2007				
8	Oct 05/2007		3	Oct 05/2007				
R 9	Oct 05/2008		4	Oct 05/2007				
10	Oct 05/2007		R 5	Oct 05/2008				
11	Oct 05/2007		6	Oct 05/2007				
12	Oct 05/2007		R 7	Oct 05/2008				
R 13	Oct 05/2008		8	Oct 05/2007				
14	BLANK		R 9	Oct 05/2008				
71-00-02 P/P BU	JILDUP FIGURE	31-1	10	Oct 05/2007				
1	Oct 05/2007		11	Oct 05/2007				
2	Oct 05/2007		12	Oct 05/2007				
R 3	Oct 05/2008		13	Jun 05/2008				
4	Oct 05/2007		14	Oct 05/2007				
R 5	Oct 05/2008		15	Oct 05/2007				
6	Oct 05/2007		16	Oct 05/2007				
R 7	Oct 05/2008		17	Oct 05/2007				
8	BLANK		18	Oct 05/2007				
71-00-02 P/P BU		32-1	R 19	Oct 05/2008				
1	Oct 05/2007	·	20	Oct 05/2007				
2	Oct 05/2007		R 21	Oct 05/2008				
3	Oct 05/2007		22	Oct 05/2007				
4	Oct 05/2007		23	Oct 05/2007				
R 5	Oct 05/2008		24	BLANK				
6	Oct 05/2007		71-00-03 FIGURE	<b>∃</b> 1				
R 7	Oct 05/2008		1	Oct 05/2007				
8	Oct 05/2007		2	Oct 05/2007				
R 9	Oct 05/2007 Oct 05/2008		71-00-04 FIGURE	<b></b> 1				
10	Oct 05/2007		1	Oct 05/2007				
R 11	Oct 05/2007 Oct 05/2008		2	Oct 05/2007				
12	Oct 05/2007							
R 13	Oct 05/2007 Oct 05/2008							
14	Oct 05/2007							
R 15	Oct 05/2007 Oct 05/2008							
11 15	JUL 03/2006							

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# 71-EFFECTIVE PAGES

Page 6 Oct 05/2008



#### **CHAPTER 71**

SUBJECT

POWERPLANT BUILDUP

CHAPTER SECTION SUBJECT

71-00-02

- FIGURE 1-1, CFM56-7 SERIES POWERPLANT WITH QEC INSTALLED
  - FIGURE 2-1, FORWARD ENGINE MOUNT INSTALLATION
  - FIGURE 3-1, AFT ENGINE MOUNT INSTALLATION
  - FIGURE 4-1, BRACKET INSTALLATION UPPER LEFT FAN CASE
  - FIGURE 5-1, BRACKET INSTALLATION LOWER LEFT FAN CASE
  - FIGURE 6-1, BRACKET INSTALLATION RIGHT SIDE FAN CASE
  - FIGURE 7-1, BRACKET INSTALLATION LEFT SIDE CORE CASE
  - FIGURE 8-1, BRACKET INSTALLATION RIGHT SIDE CORE CASE
  - FIGURE 9-1, DRAINS INSTL LEFT SIDE FAN CASE
  - FIGURE 10-1, DRAINS INSTL RIGHT SIDE FAN CASE
  - FIGURE 11-1, THIS FIGURE NOT USED
  - FIGURE 12-1, FUEL SUPPLY HOSE INSTALLATION
  - FIGURE 13-1, 12 O'CLOCK STRUT INSTALLATION
  - FIGURE 14-1, BLEED CONTROLLER INSTALLATION
  - FIGURE 15-1, BLEED CONTROL SYSTEM INSTALLATION LOWER
  - FIGURE 16-1, BLEED DUCT INSTALLATION LOWER 5TH- AND 9TH-STAGE
  - FIGURE 17-1, BLEED CONTROL SYSTEM INSTALLATION UPPER
  - FIGURE 18-1, BLEED DUCT INSTALLATION UPPER 5TH- AND 9TH-STAGE
  - FIGURE 19-1, THIS FIGURE NOT USED
  - FIGURE 20-1, HYDRAULIC PUMP INSTALLATION VICKERS
  - FIGURE 21-1, HYDRAULIC PLUMBING INSTALLATION
  - FIGURE 22-1, INTEGRATED DRIVE GENERATOR INSTALLATION

# 71-CONTENTS

Page 1 Oct 05/2007

#### **CFM56 ENGINES (CFM56-7)**



#### 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

#### **CHAPTER 71**

**CHAPTER SECTION SUBJECT SUBJECT** FIGURE 23-1, IDG AIR/OIL COOLER INSTALLATION FIGURE 24-1, IDG PLUMBING INSTALLATION FIGURE 25-1, STARTER VALVE AND DUCT INSTALLATION FIGURE 26-1, THIS FIGURE NOT USED FIGURE 27-1, INLET COWL TAI SYSTEM INSTALLATION FIGURE 28-1, FIRE/OVERHEAT DETECTOR INSTALLATION FIGURE 29-1, W1062 WIRE BUNDLE INSTALLATION FIGURE 30-1, MARKERS INSTALLATION FIGURE 31-1, THRUST LINK INSTALLATION FIGURE 32-1, PRIMARY EXHAUST INSTALLATION FIGURE 33-1, INLET COWL INSTALLATION **QEC SYSTEM TESTS** 71-00-03 FIGURE 1, QEC System Tests General

#### QEC INSPECTION/CHECK

71-00-04

FIGURE 1, QEC INSPECTION/CHECK General Inspection

IDG Cooling Lines Flushing Procedure

# 71-CONTENTS

Page 2 Oct 05/2007



#### FIGURE 1-1

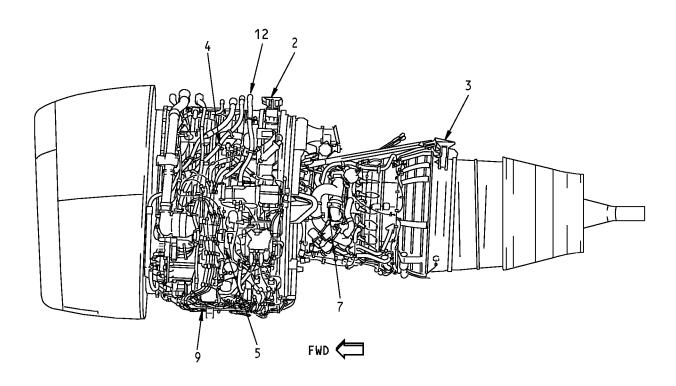
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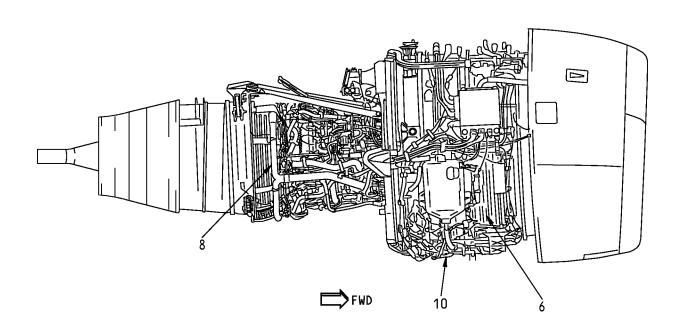
**REF DWG: 300A2020** 

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 1 Oct 05/2007







CFM56-7 Powerplant with QEC Installed Figure 1-1 (Sheet 1)

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 2 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



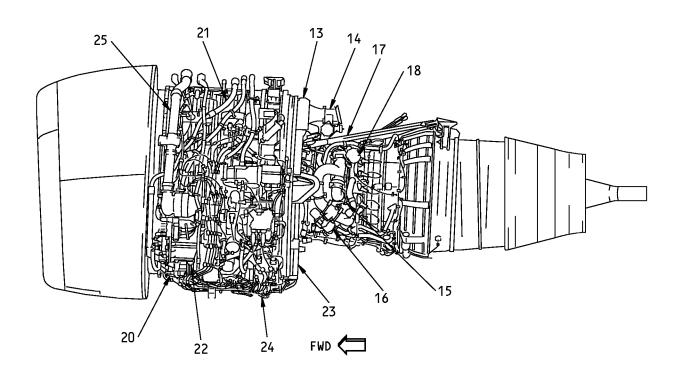
## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

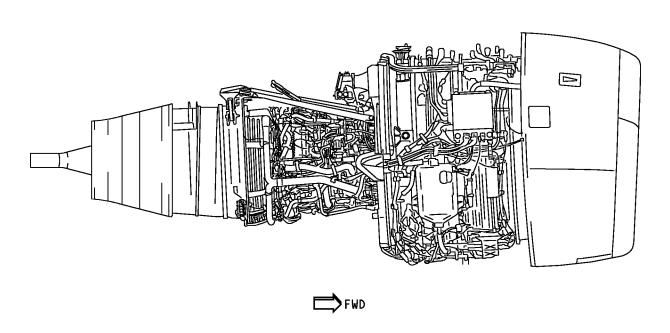
ITEM NO.	FIGURE TITLE	FIGURE
NO.	FIGURE TILE	FIGURE
1-1	CFM56-7 POWERPLANT WITH QEC INSTALLED (FIGURE 1-1, SHEET 1)	
2	FORWARD ENGINE MOUNT INSTALLATION	2-1
3	AFT ENGINE MOUNT INSTALLATION	3-1
4	BRACKET INSTALLATION - UPPER LEFT FAN CASE	4-1
5	BRACKET INSTALLATION - LOWER LEFT FAN CASE	5-1
6	BRACKET INSTALLATION - RIGHT SIDE FAN CASE	6-1
7	BRACKET INSTALLATION - LEFT SIDE CORE CASE	7-1
8	BRACKET INSTALLATION - RIGHT SIDE CORE CASE	8-1
9	DRAINS INSTL - LEFT SIDE FAN CASE	9-1
10	DRAINS INSTL - RIGHT SIDE FAN CASE	10-1
11	THIS FIGURE NOT USED	11-1
12	FUEL SUPPLY HOSE INSTALLATION	12-1

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 3 Jun 05/2008







CFM56-7 Powerplant with QEC Installed Figure 1-1 (Sheet 2)

71-00-02

SUBJECT INDEX FIGURE 1-1
Page 4
Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



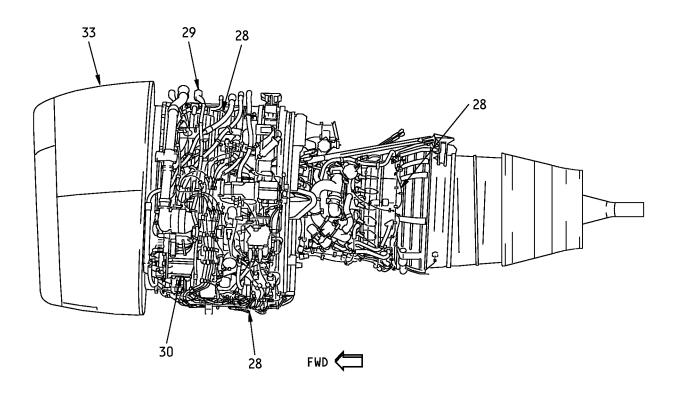
## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

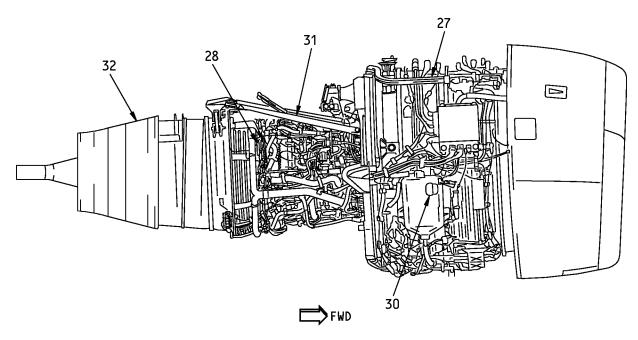
ITEM NO.	FIGURE TITLE	FIGURE
1-1	CFM56-7 POWERPLANT WITH QEC INSTALLED (FIGURE 1-1, SHEET 2)	
13	12 O'CLOCK STRUT INSTALLATION	13-1
14	BLEED CONTROLLER INSTALLATION	14-1
15	BLEED CONTROL SYSTEM INSTALLATION - LOWER	15-1
16	BLEED DUCT INSTALLATION - LOWER 5TH- AND 9TH-STAGE	16-1
17	BLEED CONTROL SYSTEM INSTALLATION - UPPER	17-1
18	BLEED DUCT INSTALLATION - UPPER 5TH- AND 9TH-STAGE	18-1
19	THIS FIGURE NOT USED	19-1
20	HYDRAULIC PUMP INSTALLATION - VICKERS	20-1
21	HYDRAULIC PLUMBING INSTALLATION	21-1
22	INTEGRATED DRIVE GENERATOR INSTALLATION	22-1
23	IDG AIR/OIL COOLER INSTALLATION	23-1
24	IDG PLUMBING INSTALLATION	24-1
25	STARTER VALVE AND DUCT INSTALLATION	25-1
26	THIS FIGURE NOT USED	26-1

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 5 Jun 05/2008







CFM56-7 Powerplant with QEC Installed Figure 1-1 (Sheet 3)

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 6 Oct 05/2007

## CFM56 ENGINES (CFM56-7)



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

ITEM NO.	FIGURE TITLE	FIGURE
1-1	CFM56-7 POWERPLANT WITH QEC INSTALLED (FIGURE 1-1, SHEET 3)	
27	INLET COWL TAI SYSTEM INSTALLATION	27-1
28	FIRE/OVERHEAT DETECTOR INSTALLATION	28-1
29	W1062 WIRE BUNDLE INSTALLATION	29-1
30	MARKERS INSTALLATION	30-1
31	THRUST LINK INSTALLATION	31-1
32	PRIMARY EXHAUST INSTALLATION	32-1
33	INLET COWL INSTALLATION	33-1

71-00-02

SUBJECT INDEX FIGURE 1-1 Page 7 Jun 05/2008



#### FIGURE 2-1

# FORWARD ENGINE MOUNT INSTALLATION

**REF QEC TASK NO.: 2** 

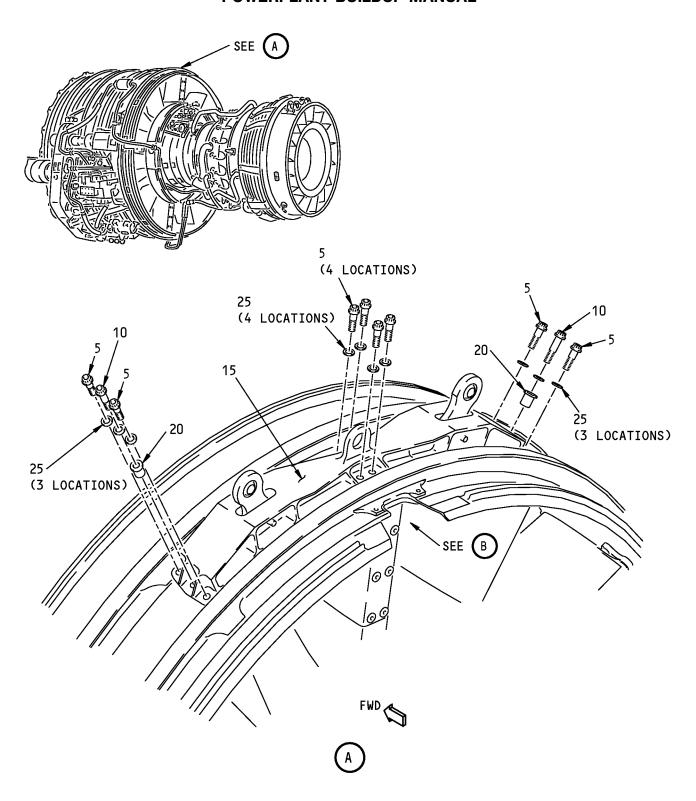
**REF DWG: 310A2020** 

310A2010

71-00-02

P/P BUILDUP FIGURE 2-1 Page 1 Oct 05/2007





Forward Engine Mount Installation Figure 2-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 2-1 Page 2 Oct 05/2007

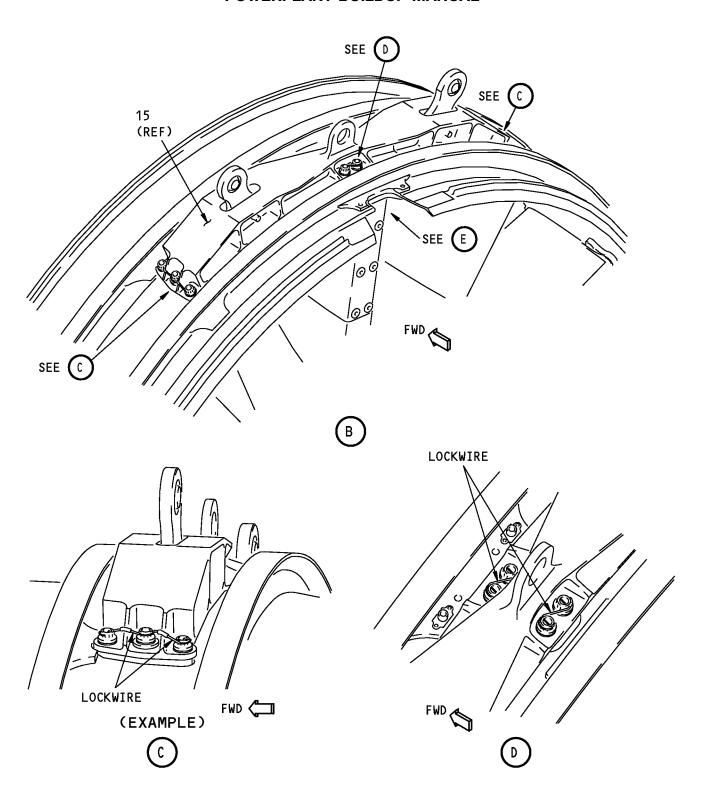


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
2-1		FORWARD ENGINE MOUNT INSTALLATION (FIGURE 2-1, SHEET 1)		
		NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED THAT Figure 4-1 ITEM NO. (800) BRACKET ASSY BE INSTALLED PRIOR TO FORWARD MOUNT SUB-ASSY (15) INSTALLATION.		
		APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND UNDERSIDE HEAD OF BOLTS (5) AND (10).		
		<b>NOTE</b> : DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.		
5 10 C1	310A2029-11 310A2029-19 D00006	. BOLT . BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	8 2 AR
		WARNING: FWD MOUNT SUB-ASSY WEIGHS APPROXIMATELY 55 POUNDS (25 KG). MAKE SURE YOU USE A SLING OR A SUFFICIENT NUMBER OF PERSONS TO LIFT THE MOUNT ONTO ENGINE. IF YOU DO NOT, MOUNT CAN FALL AND CAUSE INJURIES TO PERSONS.		
15	310A2020-11	USE SLING OR TWO PERSONS TO POSITION FWD MOUNT SUB-ASSY (15) ON ENGINE FAN FRAME BETWEEN FLANGES B7 AND B8 FWD MOUNT SUB-ASSY		1
		LOOSELY SECURE FWD MOUNT SUB-ASSY (15) TO ENGINE WITH LUBRICATED BOLTS (5) AND (10), BUSHINGS (20) AND WASHERS (25). MAKE SURE BOLTS (10) AND BUSHINGS (20) ARE IN OUTBOARD CENTER POSITION ONLY AND CSK SIDE OF WASHER IS AGAINST BOLT HEAD.		
20	310A2020-6	. BUSHING		2
25	BACW10BP8ACU	. WASHER (CSK)		10

71-00-02

P/P BUILDUP FIGURE 2-1 Page 3 Oct 05/2008





Forward Engine Mount Installation Figure 2-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 2-1 Page 4 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



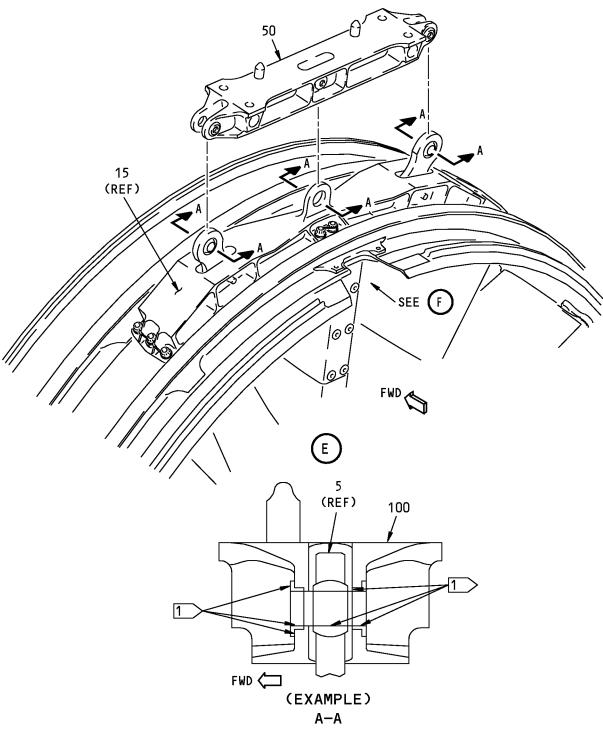
## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
2-1		FORWARD ENGINE MOUNT INSTALLATION (FIGURE 2-1, SHEET 2)		
		TIGHTEN BOLTS (5) AND (10) TO 585-715 POUND-INCHES (66-81 NEWTON METERS).		
C2 C3 C4 C5	G01912 G50375 G50043 G50044		CON CON CON OPT	AR 1 AR -

71-00-02

P/P BUILDUP FIGURE 2-1 Page 5 Oct 05/2008





1 APPLY ANTI-SEIZE COMPOUND AS INDICATED.

Forward Engine Mount Installation Figure 2-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 2-1 Page 6 Oct 05/2007

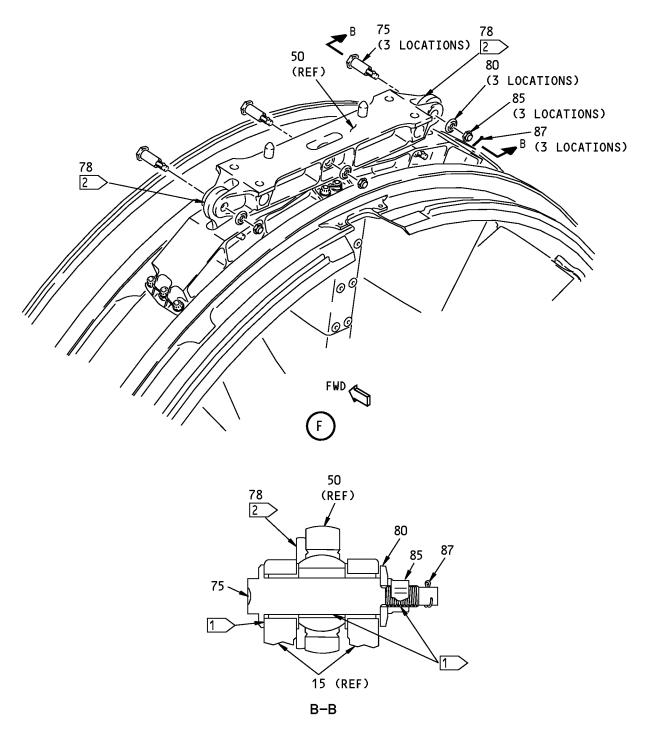


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	2-1		FORWARD ENGINE MOUNT INSTALLATION (FIGURE 2-1, SHEET 3)		
			POSITION HANGER FTG ASSY (50) ON FWD MOUNT SUB ASSY (15). MAKE SURE ALL HOLES ARE ALIGNED.		
			CAUTION: MAKE SURE SHEAR PINS ARE ON FWD SIDE OF HANGER FTG ASSY. IF THEY ARE NOT, DAMAGE TO AIRPLANE STRUT CAN OCCUR DURING ENGINE INSTALLATION.		
	50	310A2021-4	. HANGER FTG ASSY		1
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO SPHERICAL BEARING BORE AND BALL FLAT SURFACES OF HANGER FTG ASSY (50).		
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO BUSHING BORES AND FLANGE FACES OF FWD MOUNT SIDE LINKS.		
			NOTE: DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.		
I	C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR

71-00-02

P/P BUILDUP FIGURE 2-1 Page 7 Oct 05/2008





- 1 APPLY ANTI-SEIZE COMPOUND AS INDICATED.
- 2 INSTALL ON EITHER FORWARD OR AFT SIDE OF HANGER FITTING ASSEMBLY (50).

Forward Engine Mount Installation Figure 2-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 2-1 Page 8 Oct 05/2007

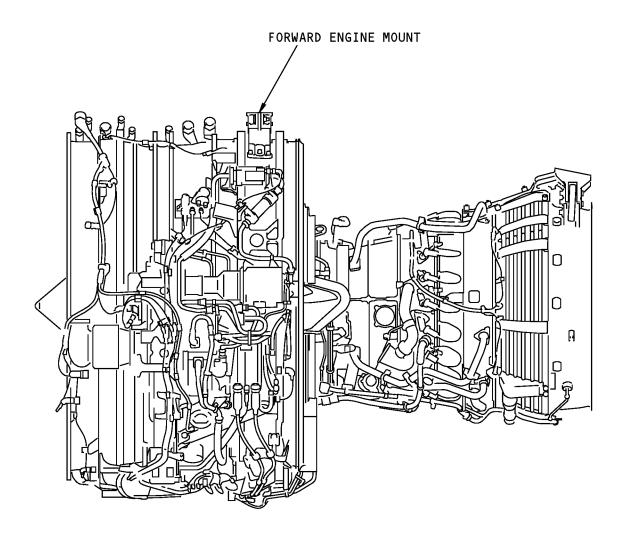


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	2-1		FORWARD ENGINE MOUNT INSTALLATION (FIGURE 2-1, SHEET 4)		
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS, SHANK AND UNDERNEATH HEAD OF PINS (75).		
			NOTE: DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.		
I	75 C1	310A2042-3 D00006	. THRUST LINK PIN . NEVER-SEEZ NSBT-8N COMPOUND	CON	3 AR
			INSTALL THRUST LINK PIN (75) WITH HEAD SIDE FORWARD IN THREE LOCATIONS ON HANGER FTG ASSY (50). INSTALL WASHER (78) BETWEEN EITHER FORWARD OR AFT SIDE OF HANGER FITTING ASSY (50) AND FORWARD MOUNT (15). ENSURE WASHER (78) CHAMFER FACES BEARING THEN ATTACH WITH END CAP (80) AND NUT (85).		
			<b><u>MOTE</u></b> : MAKE SURE FLAT SIDE OF END CAP IS AGAINST PIN SHOULDER.		
	78 80 85	310A2040-7 310A2043-1 BACN10JC8CM	. WASHER . END CAP . NUT		2 3 3
	30	D/ (e/ V) de de de l'	TIGHTEN NUT (85) TO 290-510 POUND-INCHES (33-58 N.M.). APPLY TORQUE TO NUT.		J
	87 87	BACP18BC03B06P BACP18BC03B07P	INSTALL COTTER PINS (87) COTTER PIN . COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT	3
	87	BACP18BC03B08P	. COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT	-

71-00-02

P/P BUILDUP FIGURE 2-1 Page 9 Oct 05/2008





Forward Engine Mount Installation Figure 2-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 2-1 Page 10 Oct 05/2007



ITEM	DART NUMBER	NOMENOLATURE	110	OTY
	PARI NUMBER		UC	QIY
100 100 105 110	BACB30PN10-19M BACB30PN10-19 BACW10BP10ACU SL4147CA10A	NOMENCLATURE  FORWARD ENGINE MOUNT INSTALLATION (FIGURE 2-1, SHEET 5)  PUT ITEMS (100) THRU (110) IN A BAG AND SECURE TO FWD MOUNT ASSY.  NOTE: ITEMS (100) THRU (110) ARE INSTALLED DURING POWERPLANT INSTALLATION ON AIRPLANE STRUT (AMM PAGEBLOCK 71-00-02/401).  BOLT <sup>*[1]</sup> BOLT (OPTIONAL TO BACB30PN10-19M)**[1] WASHER**[1] BARREL NUT ASSY (V97393) *[1]  *[1] ITEM NOT ILLUSTRATED	OPT VEN	4 - 4 4

71-00-02

P/P BUILDUP FIGURE 2-1 Page 11 Oct 05/2007



#### FIGURE 3-1

# **AFT ENGINE MOUNT INSTALLATION**

**REF QEC TASK NO.: 3** 

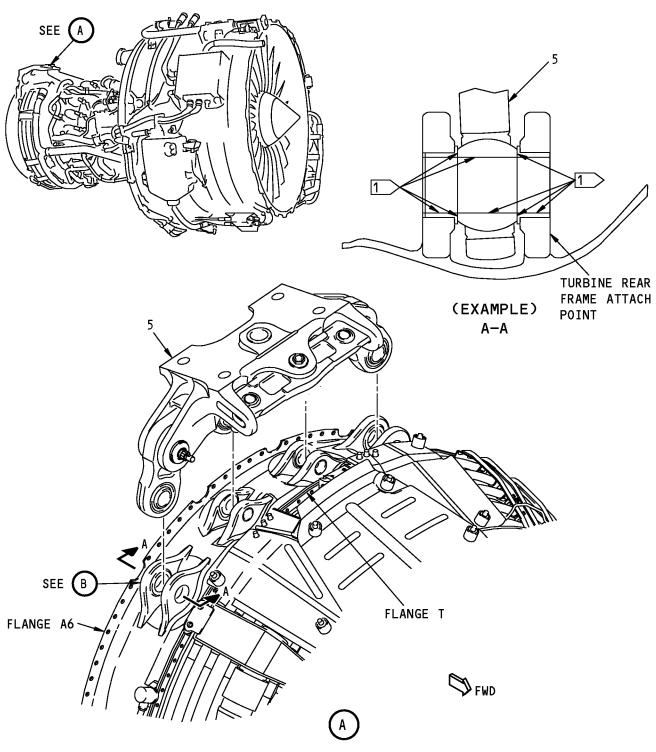
**REF DWG: 310A2030** 

310A2010

71-00-02

P/P BUILDUP FIGURE 3-1 Page 1 Oct 05/2007





1 APPLY ANTI-SEIZE COMPOUND AS INDICATED.

Aft Engine Mount Installation Figure 3-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 3-1 Page 2 Oct 05/2007

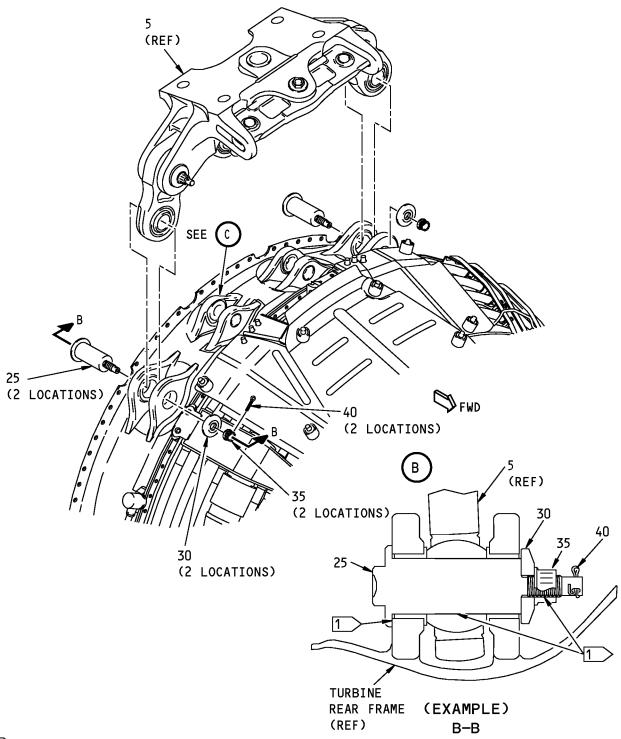


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	3-1		AFT ENGINE MOUNT INSTALLATION (FIGURE 3-1, SHEET 1)		<b>4.</b> 11
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO SPHERICAL BEARING BORE AND BALL FLAT SURFACES OF AFT ENGINE MOUNT ASSY (5).		
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO BUSHING BORES AND FLANGE FACES OF TURBINE REAR FRAME ATTACH POINTS.		
			NOTE: DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.		
I	5 C1	310A2030-17 D00006	. AFT ENGINE MOUNT ASSY . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
			WARNING: AFT ENGINE MOUNT ASSY WEIGHS APPROXIMATELY 80 POUNDS (36 KG). MAKE SURE YOU USE SLING OR SUFFICIENT NUMBER OF PERSONS TO LIFT MOUNT ONTO ENGINE. IF YOU DO NOT, MOUNT CAN FALL AND CAUSE INJURIES TO PERSONS.		
			ATTACH fixture, SPL-2107 (T1) TO AFT ENGINE MOUNT ASSY (5) AND POSITION MOUNT ON ENGINE TURBINE REAR FRAME BETWEEN FLANGES T AND A6.		
I	T1	C71024-1	. FIXTURE, SPL-2107	TOL	-

71-00-02

P/P BUILDUP FIGURE 3-1 Page 3 Oct 05/2008





1 APPLY ANTI-SEIZE COMPOUND AS INDICATED.

Aft Engine Mount Installation Figure 3-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 3-1 Page 4 Oct 05/2007

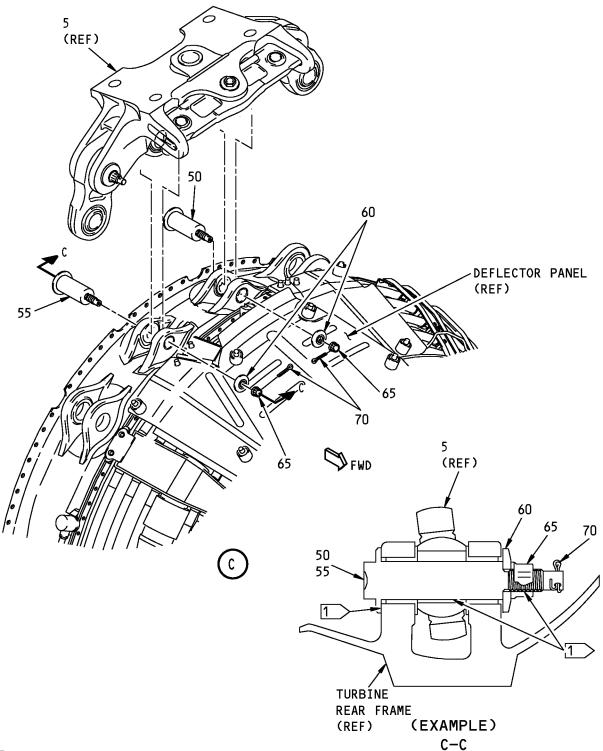


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	3-1				
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS, SHANK AND UNDERNEATH HEAD OF PIN (25).		
			NOTE: DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.		
I	25 C1	310A2037-14 D00006	. LINK PIN USED WITH COTTER PIN . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 AR
			INSTALL PIN (25) IN OUTBOARD LOCATIONS OF ENGINE MOUNT (5) AND ATTACH WITH END CAP (30) AND NUT (35).		
			NOTE: MAKE SURE FLAT SIDE OF END CAP IS AGAINST PIN SHOULDER.		
			MAKE SURE NO PRELOAD IS PRESENT WHEN LINK PINS ARE INSTALLED.		
	30 35	310A2039-1 BACN11Z8C			2
TIGHTEN NUT (35) TO 440-6		_,,,,,,,,,	TIGHTEN NUT (35) TO 440-650 POUND-INCHES (50-73 N.M.). APPLY TORQUE TO EITHER NUT OR PIN HEAD.		
	40	BACP18BC03B07P	INSTALL COTTER PINS (40) COTTER PIN		2
	40 40	BACP18BC03B06P BACP18BC03B08P	. COTTER PIN (OPTIONAL TO BACP18BC03B07P) . COTTER PIN (OPTIONAL TO BACP18BC03B07P)	OPT OPT	-

71-00-02

P/P BUILDUP FIGURE 3-1 Page 5 Oct 05/2008





1 > APPLY ANTI-SEIZE COMPOUND AS INDICATED.

Aft Engine Mount Installation Figure 3-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 3-1 Page 6 Oct 05/2007

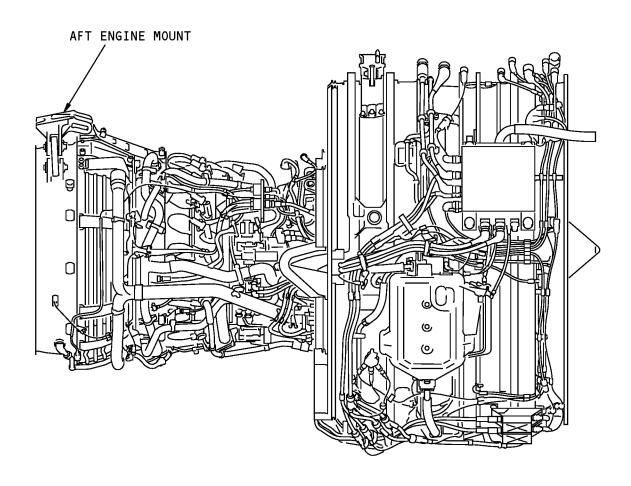


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	3-1	AFT ENGINE MOUNT INSTALLATION (FIGURE 3-1, SHEET 3)			
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS, SHANK AND UNDERNEATH HEAD OF PINS (50) AND (55).		
		NOTE: DO NOT APPLY LUBRICANT IN HEAVY AMOUNTS.			
	50	310A2037-15	. LINK PIN USED WITH COTTER PIN		1
ı	55 C1	310A2037-16 D00006	. LINK PIN USED WITH COTTER PIN . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
•	O1		INSTALL PIN (50) IN LEFT INBOARD LOCATION OF ENGINE MOUNT (5) AND PIN (55) IN RIGHT INBOARD LOCATION. ATTACH WITH END CAPS (60) AND NUTS (65).		7.11
			NOTE: MAKE SURE FLAT SIDE OF END CAP IS AGAINST PIN SHOULDER. MAKE SURE NO PRELOAD IS PRESENT WHEN LINK PINS ARE INSTALLED.		
	60	310A2039-2	. END CAP		2
	65		. NUT TIGHTEN NUTS (65) TO 440-650 POUND-INCHES (50-73 N.M.). APPLY TORQUE TO EITHER NUT OR PIN HEAD.		2
			NOTE: PIN (55) DIAMETER IS UNDERSIZED TO SHPERICAL BEARING BORE OF MOUNT BY DESIGN. PIN SERVES AS A FAIL-SAFE BOLT.		
			INSTALL PROTECTIVE PAD BETWEEN AFT ENGINE MOUNT ASSY (5) AND DEFLECTOR PANEL.		
			NOTE: PROTECTIVE PAD WILL BE REMOVED AFTER THRUST LINKS ARE INSTALLED.		
			INSTALL COTTER PINS (70).		
	70 70	BACP18BC03B06P BACP18BC03B07P	. COTTER PIN . COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT	2
	70	BACP18BC03B08P	. COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT	-

71-00-02

P/P BUILDUP FIGURE 3-1 Page 7 Oct 05/2008





Aft Engine Mount Installation Figure 3-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 3-1 Page 8 Oct 05/2007



	ITEM NO.	PART NUMBER NOMENCLATURE		UC	QTY
	3-1	AFT ENGINE MOUNT INSTALLATION (FIGURE 3-1, SHEET 4)			
<b>I</b>   T1			REMOVE fixture, SPL-2107 (T1) FROM AFT ENGINE MOUNT FIXTURE, SPL-2107		_
			PUT ITEMS (100) THRU (110) IN A BAG AND SECURE TO AFT MOUNT ASSY.		
			NOTE: ITEMS (100) THRU (110) ARE INSTALLED DURING POWERPLANT INSTALLATION ON AIRPLANE STRUT (AMM PAGEBLOCK 71-00-02/401).		
	00 05	BACB30PN14-32M BACW10BP14ACU	. BOLT <sup>*[1]</sup> . WASHER <sup>*[1]</sup>		4
	10	SL4147CA14EBSP1	. BARREL NUT ASSY (V97393) *[1]	VEN	4
			*[1] ITEM NOT ILLUSTRATED		

71-00-02

P/P BUILDUP FIGURE 3-1 Page 9 Oct 05/2008



#### FIGURE 4-1

# BRACKET INSTALLATION - UPPER LEFT FAN CASE

**REF QEC TASK NO.: 4** 

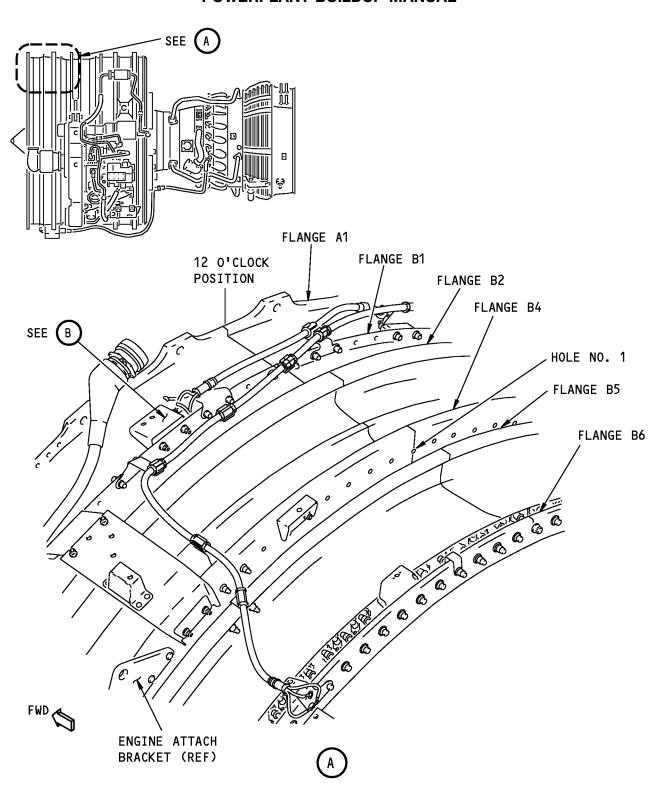
**REF DWG: 332A2900** 

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 4-1 Page 1 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 2 Oct 05/2007

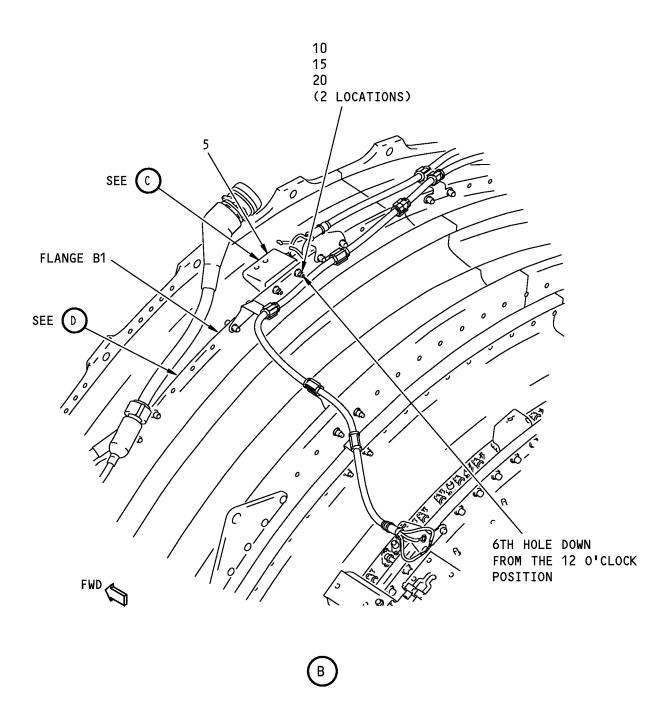


				BRACKET LOCATION AND ORIENTATION			
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 1)  COUNT 12 HOLES UP FROM ENGINE ATTACH BRACKET ON FLANGE B4. USE A marker, G02061 (C1) TO MARK THE LOCATION OF THIS HOLE ON ALL FAN FLANGES. THIS IS HOLE NO. 1 AND INDICATES THE 12 O'CLOCK POSITION.  NOTE: IN THIS FIGURE, HOLES ARE COUNTED FROM THE NO. 1 HOLE COUNTERCLOCKWISE (AFT LOOKING FWD) UNLESS OTHERWISE STATED.				
1	C1	G02061	. MARKER			CON	AR

71-00-02

P/P BUILDUP FIGURE 4-1 Page 3 Oct 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 4 Oct 05/2007

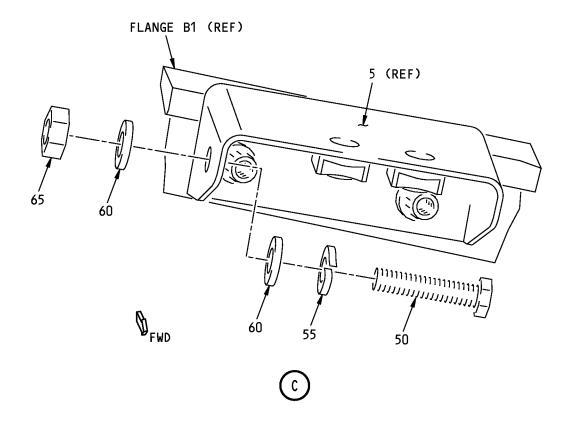


					LOCATION	I AND	
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 2)				
1	5 C2	332A2920-229 B00130	CLEAN MATING SURFACES OF BRACKET ASSY (5) AND FLANGE B1 WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS. . BRACKET ASSY . ALCOHOL	FWD	FWD	CON	1 AR
			NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED ITEMS 50 THRU 65 BE INSTALLED PRIOR TO BRACKET (5) ATTACHMENT.				
	10 15 20	BACB30ZF4-12 NAS1149C0432R	ATTACH BRACKET ASSY (5) TO 6TH AND 7TH HOLE DOWN FROM 12 O'CLOCK ON FLANGE B1. USE BOLTS (10), WASHERS (15) AND NUT (20).  . BOLT (FWD SIDE)  . WASHER (UNDER NUT)				2 2 2
	20	AS3485-10	. NUT TIGHTEN BOLTS (10) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 5 Oct 05/2008





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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 6 Jun 05/2008

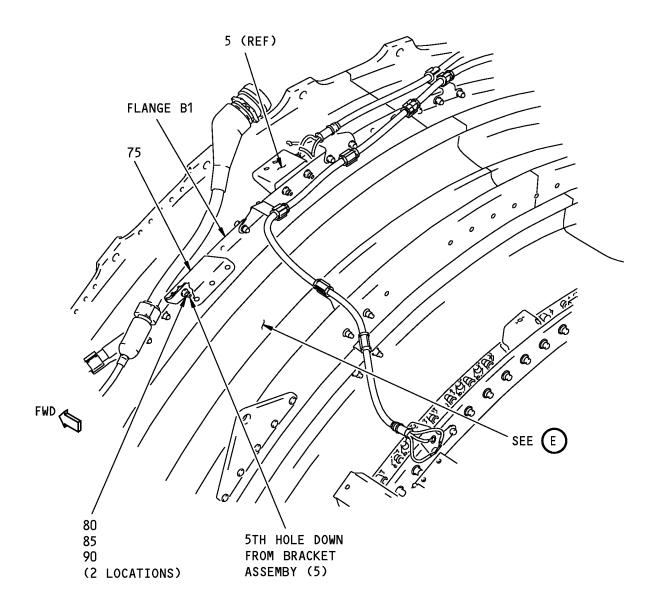


BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 3)  CLEAN SURFACES OF TOP BOLT HOLE ON BRACKET ASSY (5) WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.  ALCOHOL  ON TOP HOLE OF BRACKET ASSY (5), ATTACH GROUNDING BOLT (50), LOCK WASHER (55), WASHERS (60) AND ELECTRICAL NUT (65).  SCREW  LOCK WASHER WASHER ELECTRICAL NUT  TIGHTEN BOLT (50) TO 90-105 POUND-INCHES (10.2-11.9 NEWTON METERS).	BRKT OR FLG SIDE	ANGLE FACES	CON	<b>QTY</b> AR  1 1 2
FAN CASE (FIGURE 4-1, SHEET 3)  CLEAN SURFACES OF TOP BOLT HOLE ON BRACKET ASSY (5) WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.  ALCOHOL  ON TOP HOLE OF BRACKET ASSY (5), ATTACH GROUNDING BOLT (50), LOCK WASHER (55), WASHERS (60) AND ELECTRICAL NUT (65).  SCREW  LOCK WASHER WASHER ELECTRICAL NUT  TIGHTEN BOLT (50) TO 90-105 POUND-INCHES			CON	1
BRACKET ASSY (5) WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.  . ALCOHOL  ON TOP HOLE OF BRACKET ASSY (5), ATTACH GROUNDING BOLT (50), LOCK WASHER (55), WASHERS (60) AND ELECTRICAL NUT (65).  . SCREW  . LOCK WASHER  . WASHER  . ELECTRICAL NUT  TIGHTEN BOLT (50) TO 90-105 POUND-INCHES			CON	1
ATTACH GROUNDING BOLT (50), LOCK WASHER (55), WASHERS (60) AND ELECTRICAL NUT (65) SCREW . LOCK WASHER . WASHER . ELECTRICAL NUT TIGHTEN BOLT (50) TO 90-105 POUND-INCHES				1
. LOCK WASHER . WASHER . ELECTRICAL NUT TIGHTEN BOLT (50) TO 90-105 POUND-INCHES				1
				1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 7 Oct 05/2008







Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 8 Oct 05/2007

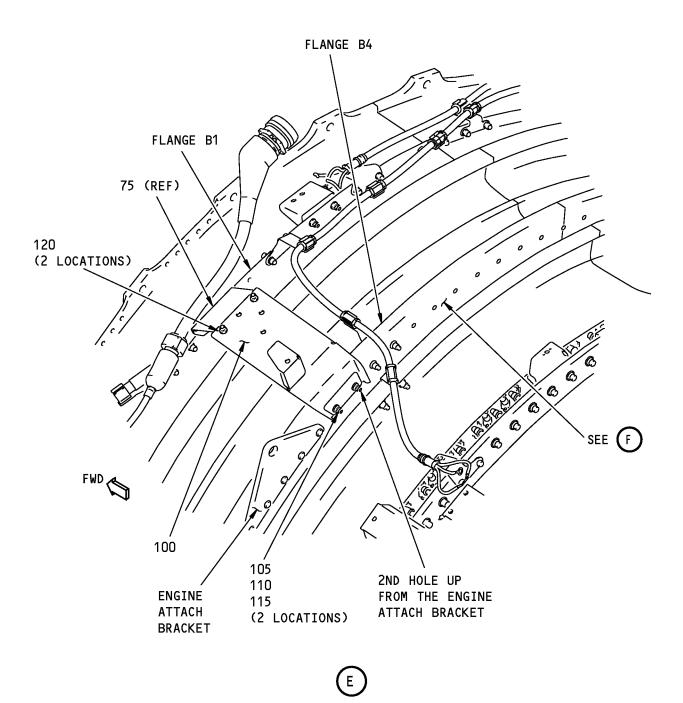


				LOCATION IENTATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	332A2910-143 BACB30ZF4-11 BACW10BP4ACU AS3485-10	NOMENCLATURE  BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 4)  ATTACH BRACKET (75) TO 4TH AND 5TH HOLES DOWN FROM BRACKET ASSY (5) ON FLANGE B1. USE BOLTS (80), WASHERS (85) AND NUTS (90).  BRACKET  BOLT (FWD SIDE)  WASHER (UNDER BOLT)  NUT  TIGHTEN BOLTS (80) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).			UC	1 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 9 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 10 Oct 05/2007

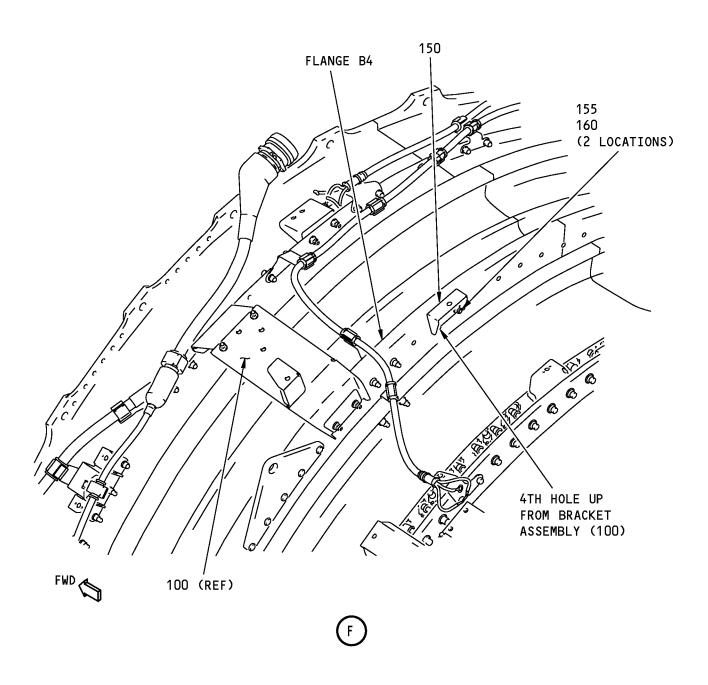


			BRACKET	LOCATION	AND	
			OR	ENTATION	1	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
100 105 110 115 120	332A2920-232 BACB30ZF4-11 BACW10BP4ACU AS3485-10 BACB30ZF4-06	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 5)  ATTACH BRACKET ASSY (100) TO 1ST AND 2ND HOLES UP FROM ENGINE ATTACH BRACKET ON FLANGE B4 ALIGNING HOLES ON FWD END WITH BRACKET (75). USE BOLTS (105), WASHERS (110) AND NUTS (115) ON FLANGE B4 AND BOLTS (120) ON BRACKET (75).  NOTE: DO NOT INSTALL BOLT IN CENTER HOLE OF BRACKET ASSY (100). HOLE WILL BE USED TO ATTACH HYDRAULIC FILTER (REF Figure 21-1).  BRKT ASSY BOLT (FWD SIDE) WASHER (UNDER BOLT) NUT BOLT TIGHTEN BOLTS (105) AND (120) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	AFT	FWD		1 2 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 11 Jun 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 12 Oct 05/2007



			BRACKET	LOCATION	AND	
			OR	ENTATION	1	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	332A2920-142 BACB30ZF4-12 BACW10BP4ACU	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 6)  ATTACH BRACKET ASSY (150) TO 4TH AND 5TH HOLES UP FROM BRACKET ASSY (100) ON FLANGE B4. USE BOLTS (155) AND WASHERS (160).  BRACKET ASSY BOLT (FWD SIDE) WASHER (UNDER BOLT) TIGHTEN BOLTS (155) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).			UC	1 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 13 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 14 Oct 05/2007



ITEM	DADT MUMPES	NOMENOLATURE	110	OTY
NO. 4-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE	UC	QTY
-		(FIGURE 4-1, SHEET 7)		
		THIS SHEET NOT USED		
				I I
				1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 15 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 16 Oct 05/2007

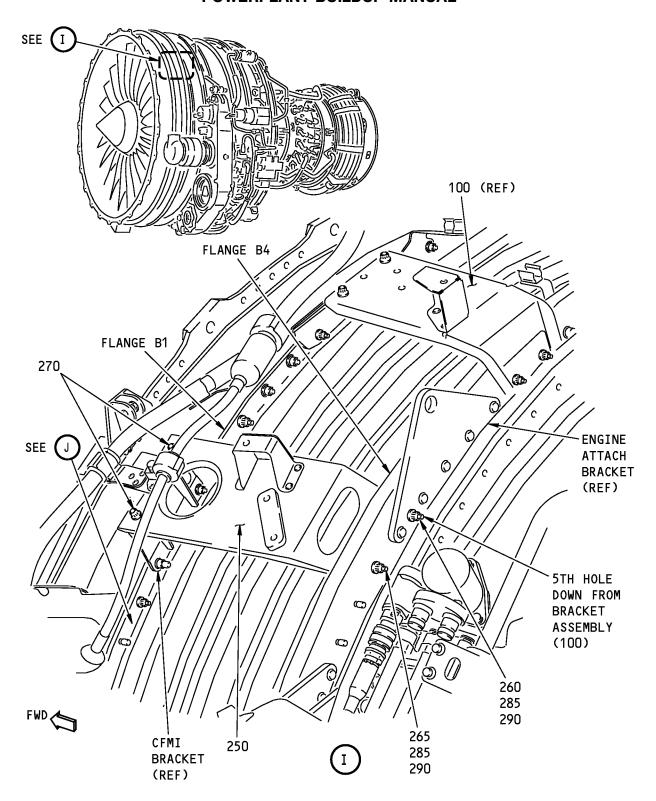


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	PART NUMBER	NOMENCLATURE  BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 8)  THIS SHEET NOT USED	UC	QTY

71-00-02

P/P BUILDUP FIGURE 4-1 Page 17 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 18 Oct 05/2007

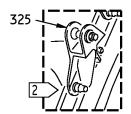


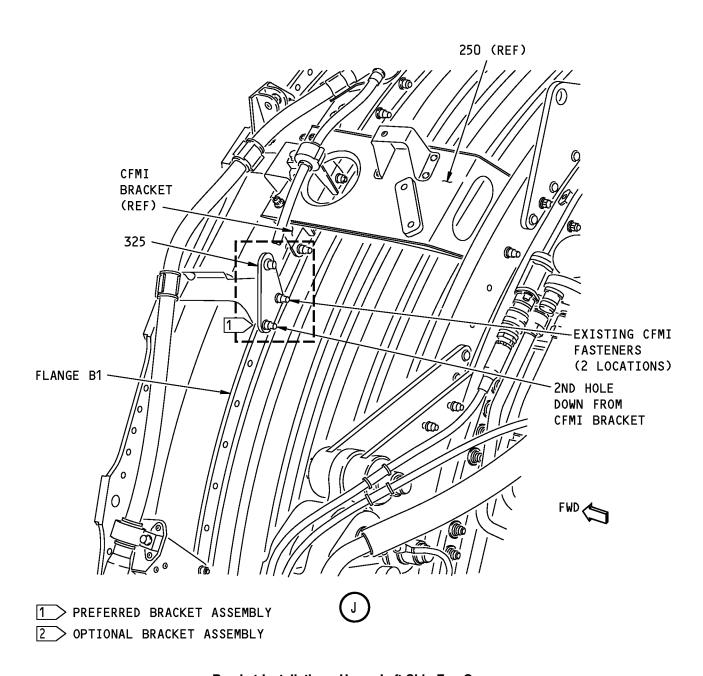
				LOCATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 9)				
		ATTACH BRACKET ASSY (250) OR (255) TO 5TH AND 7TH HOLES DOWN FROM BRACKET ASSY (100) ON FLANGE B4, ALIGNING FWD HOLES WITH CFMI BRACKET ON FLANGE B1. USE BOLTS (260) AND (265), WASHERS (285) AND NUTS (290) ON FLANGE B4 AND BOLTS (270) ON CFMI BRACKET ON FLANGE B1.				
		IF BRACKET ASSY (255) IS USED, INSTALL SPACER (275) ON UPR HOLE AND SPACER (280) ON LWR HOLE.				
250	332A2920-157	. BRACKET ASSY	FWD	FWD		1
250 255	332A2920-131 332A2920-117	. BRACKET ASSY (OPTIONAL) . BRACKET ASSY (OPTIONAL)*[1]*[2]	FWD FWD	FWD FWD	OPT OPT	-
260	BACB30ZF4-29	. BOLT (FWD SIDE) (UPPER HOLE)	5	2		1
265 270	BACB30ZF4-23 BACB30ZF4-08	. BOLT (FWD SIDE) (LOWER HOLE) . BOLT				1 2
275 280 285 290	NAS1057W4A-064 NAS1057W4A-080 NAS1149C0432R AS3485-10	. SPACER (UPR HOLE) (1 REQD)*[1]*[2] . SPACER (LWR HOLE) (1 REQD)*[1]*[2] . WASHER (UNDER NUT) . NUT			OPT OPT	- - 2 2
250	7.00-00 10	TIGHTEN BOLTS (260), (265) AND (270) TO 110- 120 POUND-INCHES (12.4-13.6 NEWTON METERS).				
		*[1] BRACKET ASSY (255) WITH SPACERS (275) AND (280) IS OPTIONAL TO BRACKET ASSY (250)				
		*[2] ITEM NOT ILLUSTRATED				

71-00-02

P/P BUILDUP FIGURE 4-1 Page 19 Oct 05/2007







Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 20 Oct 05/2007

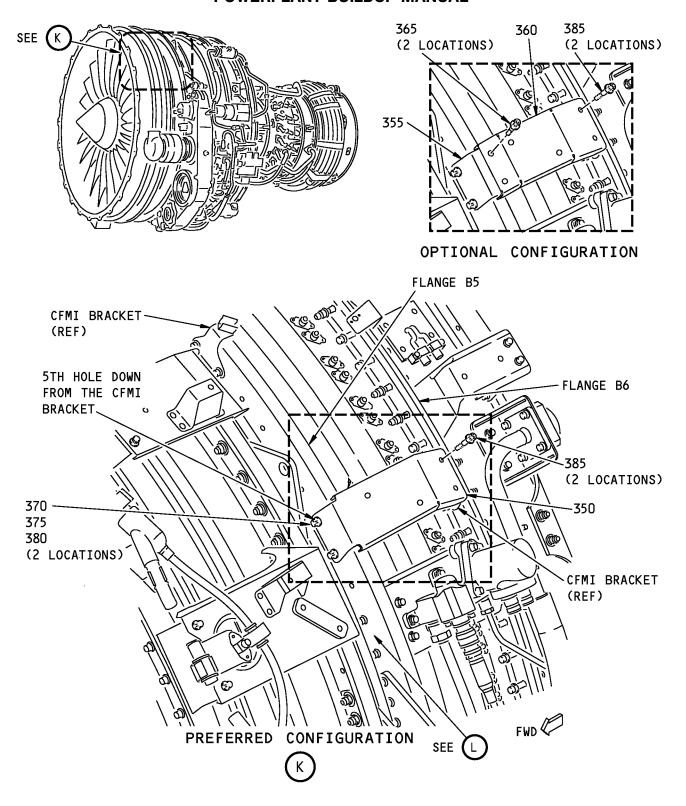


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 10)  REMOVE EXISTING CFMI FASTENERS FROM 1ST AND 2ND HOLES DOWN FROM CFMI BRACKET ON FLANGE B1.  ATTACH BRACKET ASSY (325) USING EXISTING CFMI FASTENERS.				
325 325	332A2920-178 332A2930-30	. BRACKET ASSY . BRKT ASSY (OPTIONAL TO 332A2920-178)	AFT AFT		ОРТ	1 -
OZU		TIGHTEN EXISTING CFMI FASTENERS TO 110- 120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 4-1 Page 21 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 22 Oct 05/2007

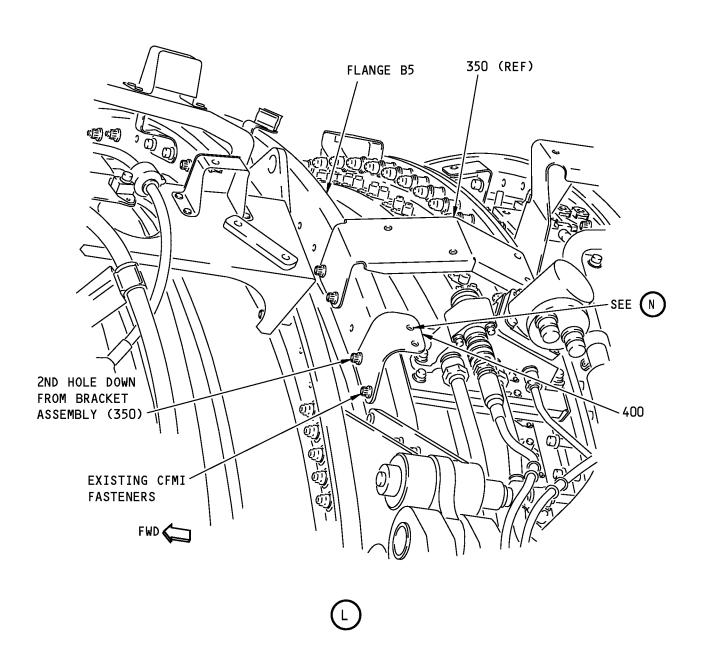


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 11)				
		PREFERRED CONFIGURATION;  ATTACH BRACKET ASSY (350) TO 5TH AND 6TH HOLES DOWN FROM CFMI BRACKET ON FLANGE B5 USING BOLTS (370), WASHERS (375) AND NUTS (380) AND TO CFMI BRACKET ON FLANGE B6 USING BOLTS (385).				
		OPTIONAL CONFIGURATION;				
		ATTACH BRACKET (355) TO BRACKET ASSY (360) USING BOLTS (365). TIGHTEN BOLTS TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				
		ATTACH BRACKET (355) TO 5TH AND 6TH HOLES DOWN FROM CFMI BRACKET ON FLANGE B5 USING BOLTS (370), WASHERS (375) AND NUTS (380).				
		ATTACH BRACKET (360) TO CFMI BRACKET ON FLANGE B6 USING BOLTS (385).				
350 355 360 365 370 375 380 385	332A2920-197 332A2910-87 332A2920-115 BACB30ZF4-06 BACB30ZF4-10 NAS1149C0432R AS3485-10 BACB30ZF4-06	. BRACKET ASSY . BRACKET (1 REQD) . BRACKET ASSY (1 REQD) . BOLT (2 REQD) . BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT . BOLT TIGHTEN BOLTS (370, 385) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD FWD	AFT AFT	OPT OPT OPT	1 2 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 23 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 24 Oct 05/2007



				LOCATION ENTATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 12)  REMOVE EXISTING CFMI FASTENERS FROM 2ND AND 3RD HOLES DOWN FROM BRACKET (350) (OR BRACKET (355).  IF OPTIONAL CONFIGURATION IS USED) ON FLANGE B5; DISCARD THE RED CFMI				
400 400	332A2910-130 332A2910-46	SPACERS. ATTACH BRACKET ASSY (400) USING EXISTING CFMI FASTENERS.  BRACKET ASSY BRACKET ASSY (OPTIONAL TO	FWD FWD	AFT AFT	OPT	1 -
400	332A2910-46	I. BRACKET ASSY (OPTIONAL TO 332A2910-130)  TIGHTEN EXISTING CFMI FASTENERS TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD	AFT	OPT	

71-00-02

P/P BUILDUP FIGURE 4-1 Page 25 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 13)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 26 Oct 05/2007

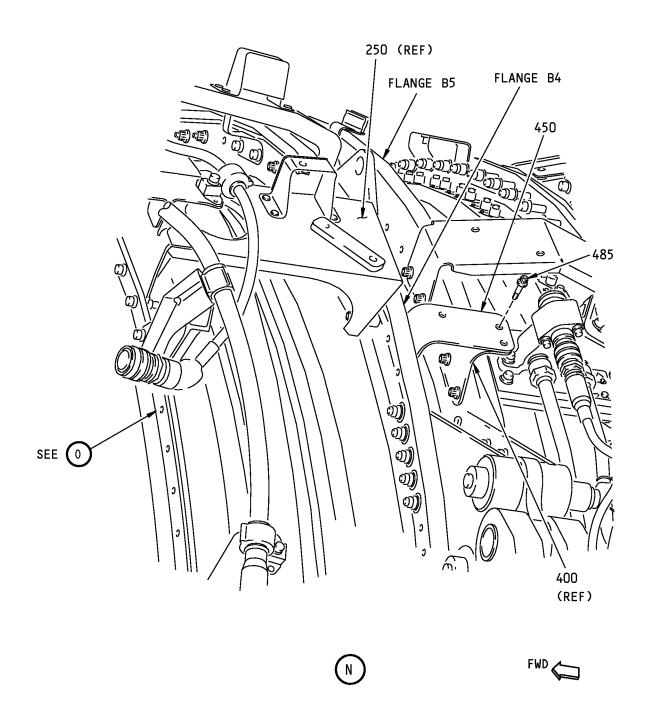


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 13)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 4-1 Page 27 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 14)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 28 Oct 05/2007

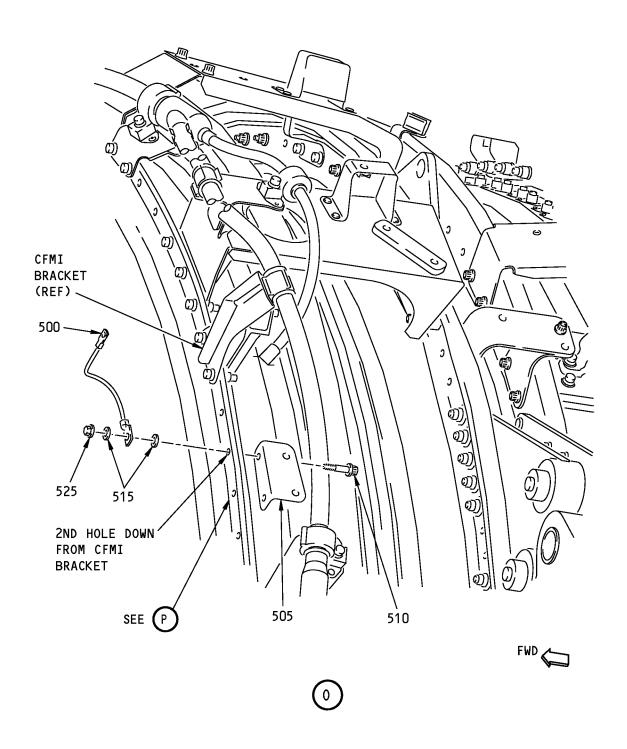


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
450 450 450 485	332A2910-132 332A2910-48 BACB30ZF4-08	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 14)  ATTACH BRACKET ASSY (450) TO BRACKET ASSY (400) WITH BOLT (485) AT UPPER LOCATION ONLY. TIGHTEN BOLT TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS)  NOTE: LOWER HOLE WILL BE USED TO ATTACH HYD PRESSURE HOSE (REF Figure 21-1).  BRACKET (450) FASTENERS TO FLANGE B4 ARE INSTALLED LATER.  BRACKET ASSY  BRACKET ASSY (OPTIONAL TO 332A2910-132)  BOLT	AFT AFT	AFT	OPT	1 - 1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 29 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 15)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 30 Oct 05/2007

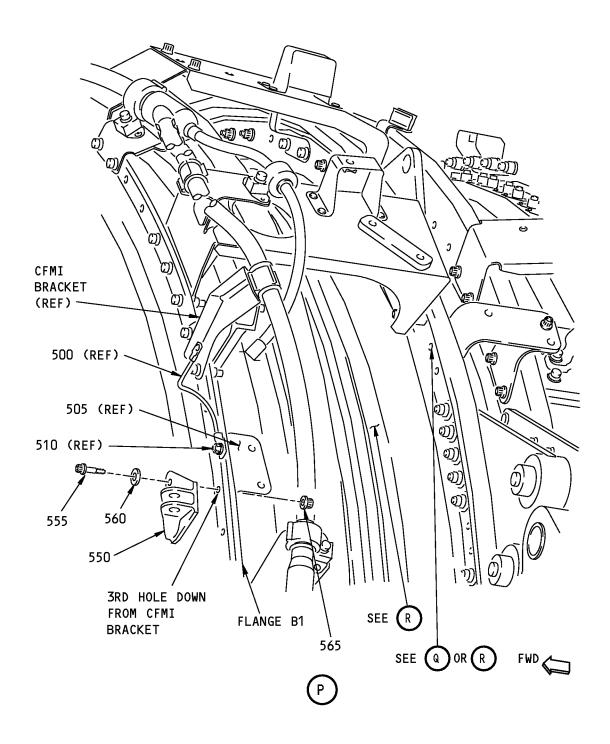


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 15)				
		CLEAN MATING SURFACES OF BONDING JUMPER (500) AND 2ND HOLE DOWN FROM CFMI BRKT ON FLANGE B1 WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.				
500 C2	BACJ40AC54-7 B00130	. BONDING JUMPER . ALCOHOL			CON	1 AR
		POSITION BRACKET ASSY (505) ON 2ND AND 3RD HOLE DOWN FROM CFMI BRKT. AT UPPER HOLE, LOOSELY ATTACH BONDING JUMPER (500) WITH BOLT (510), WASHERS (515) AND NUT (525) (LOWER BOLT WILL BE ATTACHED LATER).				
		NOTE: 3RD HOLE DOWN IS SHARED WITH BRACKET ASSY (550).				
		MOTE: UPPER END OF BONDING JUMPER (500) IS ATTACHED IN Figure 4-1 (Sheet 25).				
505 510 515 525	332A2910-41 BACB30ZF4-10 NAS1149D0416H BACN10YR4CD	. BRACKET ASSY . BOLT (AFT SIDE) (UPPER HOLE) . WASHER . NUT	AFT	AFT		1 1 2 1
	NO. 4-1 500 C2 505 510 515	NO. PART NUMBER  4-1  500 BACJ40AC54-7 C2 B00130  505 332A2910-41 510 BACB30ZF4-10 515 NAS1149D0416H	NO.         PART NUMBER         NOMENCLATURE           4-1         BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 15)           CLEAN MATING SURFACES OF BONDING JUMPER (500) AND 2ND HOLE DOWN FROM CFMI BRKT ON FLANGE B1 WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.           500         BACJ40AC54-7 B00130         . BONDING JUMPER . ALCOHOL           POSITION BRACKET ASSY (505) ON 2ND AND 3RD HOLE DOWN FROM CFMI BRKT. AT UPPER HOLE, LOOSELY ATTACH BONDING JUMPER (500) WITH BOLT (510), WASHERS (515) AND NUT (525) (LOWER BOLT WILL BE ATTACHED LATER).         NOTE: 3RD HOLE DOWN IS SHARED WITH BRACKET ASSY (550).           NOTE: UPPER END OF BONDING JUMPER (500) IS ATTACHED IN Figure 4-1 (Sheet 25).         . BRACKET ASSY . BOLT (AFT SIDE) (UPPER HOLE)           505         332A2910-41 BACB30ZF4-10 BACB30ZF4-10 BACB30ZF4-10 IN FIGURE HOLE)         . WASHER	NO.         PART NUMBER         NOMENCLATURE         FLG SIDE           4-1         BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 15)         CLEAN MATING SURFACES OF BONDING JUMPER (500) AND 2ND HOLE DOWN FROM CFMI BRKT ON FLANGE BI WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.           500         BACJ40AC54-7         BONDING JUMPER         ALCOHOL           POSITION BRACKET ASSY (505) ON 2ND AND 3RD HOLE DOWN FROM CFMI BRKT. AT UPPER HOLE, LOOSELY ATTACH BONDING JUMPER (500) WITH BOLT (510), WASHERS (515) AND NUT (525) (LOWER BOLT WILL BE ATTACHED LATER).         NOTE: 3RD HOLE DOWN IS SHARED WITH BRACKET ASSY (550).           NOTE: UPPER END OF BONDING JUMPER (500) IS ATTACHED IN Figure 4-1 (Sheet 25).         BRACKET ASSY         AFT           505         332A2910-41 (Sheet 25).         BRACKET ASSY (DPPER HOLE)         AFT           510         BACB30ZF4-10 (NAS1149D0416H)         BRACKET SIDE) (UPPER HOLE)         AFT	NO.         PART NUMBER         NOMENCLATURE         FLG SIDE         FACES           4-1         BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 15)         CLEAN MATING SURFACES OF BONDING JUMPER (500) AND 2ND HOLE DOWN FROM CFMI BRKT ON FLANGE B1 WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.         BONDING JUMPER         . ALCOHOL         POSITION BRACKET ASSY (505) ON 2ND AND 3RD HOLE DOWN FROM CFMI BRKT. AT UPPER HOLE, LOOSELY ATTACH BONDING JUMPER (500) WITH BOLT (510), WASHERS (515) AND NUT (525) (LOWER BOLT WILL BE ATTACHED LATTER).         NOTE: 3RD HOLE DOWN IS SHARED WITH BRACKET ASSY (550).         NOTE: UPPER END OF BONDING JUMPER (500) IS ATTACHED IN Figure 4-1 (Sheet 25).         AFT         AFT         AFT         AFT           505         332A2910-41 (Sheet 25).         . BRACKET ASSY (DUPPER HOLE)         . BOLT (AFT SIDE) (UPPER HOLE)         . WASHER         AFT         AFT	NO.   PART NUMBER   NOMENCLATURE   FLG SIDE   FACES   UC

71-00-02

P/P BUILDUP FIGURE 4-1 Page 31 Oct 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 16)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 32 Oct 05/2007



			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 16)				
		LOOSELY ATTACH BRACKET ASSY (550) TO 3RD HOLE DOWN FROM CFMI BRKT. USE BOLT (555), WASHER (560) AND NUT (565) AT UPPER LOCATION ONLY (LOWER HOLE WILL BE ATTACHED LATER).				
		NOTE: 3RD HOLE DOWN IS SHARED WITH BRACKET ASSY (505).				
550 550 555 560 565	332A2930-85 332A2930-33 BACB30ZF4-14 BACW10BP4ACU AS3485-10	. BRACKET ASSY . BRKT ASSY (OPTIONAL TO 332A2930-85) . BOLT (FWD SIDE) . WASHER (CSK) (UNDER BOLT HEAD) . NUT	FWD FWD		OPT	1 - 1 1
		WHILE ALIGNING LOWER HOLE ON BRACKET ASSY (550), TIGHTEN BOLTS (510) AND (555) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				
		APPLY FILLET SEAL OF sealant, A00803 (C4) OR sealant, A50096 (C5) OR adhesive, A00027 (C6) AROUND JUMPER (500) AND BOLT (510). IF sealant, A00803 (C4) IS USED, APPLY Dapco No. 1-100 primer, C00944 (C3) BEFORE SEALANT APPLICATION.				
C3 C4 C5 C6	C00944 A00803 A50096 A00027	. DAPCO NO. 1-100 PRIMER . SEALANT . SEALANT . ADHESIVE			CON CON CON	AR AR AR

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P/P BUILDUP FIGURE 4-1 Page 33 Oct 05/2008 **CFM56 ENGINES (CFM56-7)** 



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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 17)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 34 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 17)		
		THIS SHEET NOT USED		

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P/P BUILDUP FIGURE 4-1 Page 35 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 18)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 36 Oct 05/2007

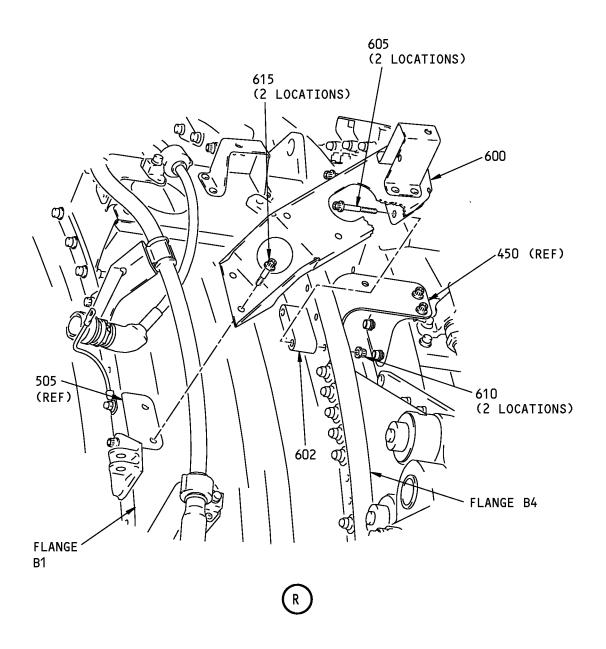


ITEM	DART MIMOER	NOMENOLATURE		OTY.
NO. 4-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE	UC	QTY
		(FIGURE 4-1, SHEET 18)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 4-1 Page 37 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 19)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 38 Oct 05/2007

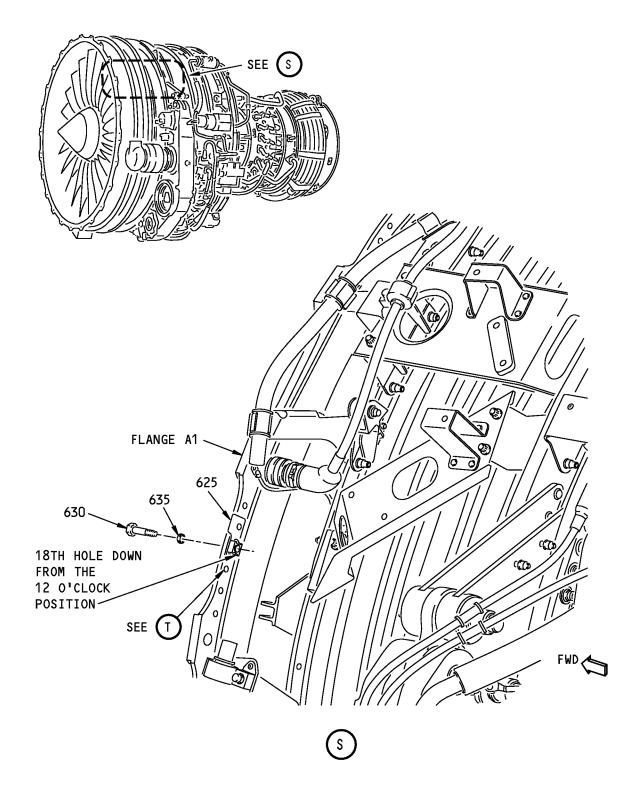


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 19) ATTACH BRACKET ASSY (600), BRACKET DETAIL (602), AND BRACKET ASSY (450) TO FLANGE B4 USING BOLTS (605) AND NUTS (610).				
600 605 610	332A2920-228 BACB30ZF4-23 AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . NUT ATTACH BRACKET ASSY (600) TO BRACKET (505) USING BOLTS (615).				1 2 2
615	BACB30ZF4-06	. BOLT TIGHTEN BOLTS (605) AND BOLTS (615) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 39 Jun 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 20)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 40 Oct 05/2007

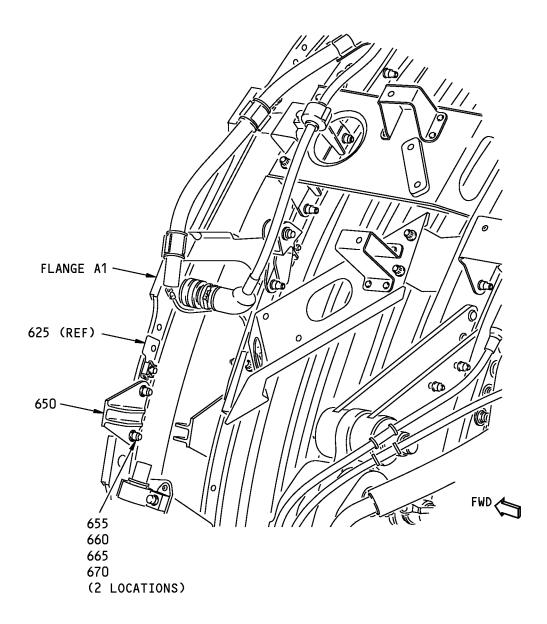


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	uc	QTY
4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 20) ATTACH BRACKET ASSY (625) TO 18TH HOLE DOWN ON FLANGE A1. USE BOLT (630) AND WASHER (635).				
625 625	332A2910-138 332A2910-91	. BRACKET ASSY . BRACKET ASSY (OPTIONAL TO 332A2910-138)	AFT AFT		ОРТ	1 -
630 635	BACB30NM4K5 BACW10BP4ACU	. BOLT (FWD SIDE) . WASHER (CSK) (UNDER BOLT HEAD) TIGHTEN BOLT (630) TO 90-110 POUND-INCHES (10.2-12.4 NEWTON METERS).				1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 41 Oct 05/2007







Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 21)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 42 Oct 05/2007

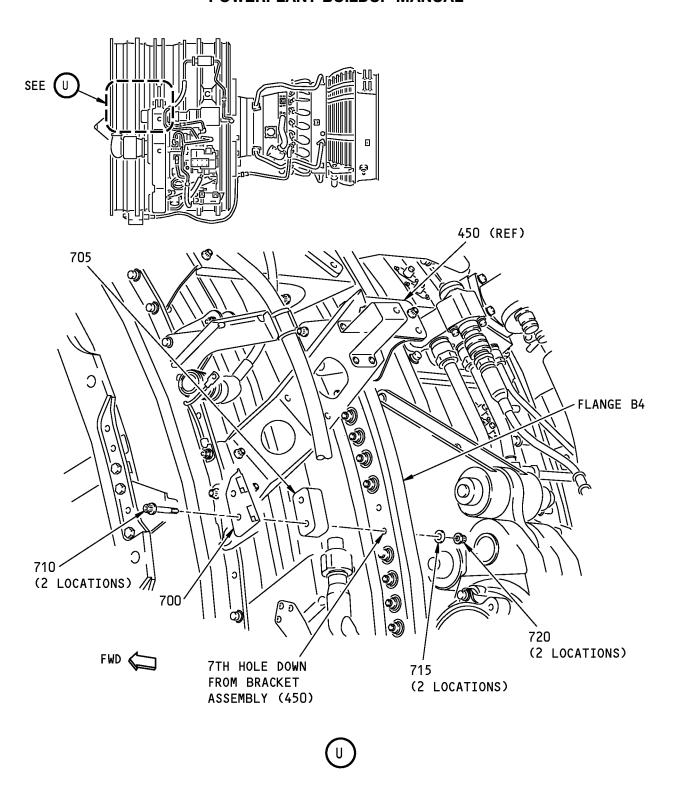


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
<b>4-1</b> 650	332A2930-7	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 21)  ATTACH BRACKET ASSY (650) TO 1ST AND 3RD HOLES DOWN FROM BRACKET ASSY (625) ON FLANGE A1. USE BOLTS (655), WASHER (660) AND (665), AND NUTS (670).  BRACKET ASSY	AFT			1
650 655 660 665 670	332A2930-7 BACB30NM4K7 BACW10BP4ACU NAS1149D0416H AS3485-10	BRACKET ASSY BOLT (FWD SIDE) WASHER (CSK) (UNDER BOLT) WASHER (UNDER NUT) NUT TIGHTEN BOLTS (655) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).	AFT			1 2 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 43 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 22)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 44 Oct 05/2007

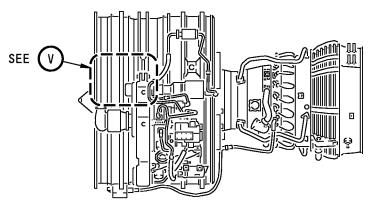


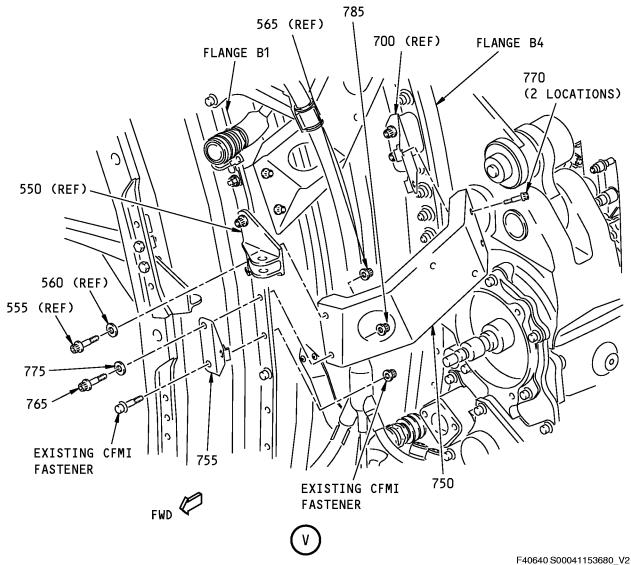
			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
<b>4-1</b> 700	332A2910-125	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 22)  ATTACH BRACKET ASSYS (700) AND (705) TO 6TH AND 7TH HOLES DOWN FROM BRACKET ASSY (450) ON FLANGE B4. USE BOLTS (710), WASHERS (715) AND NUTS (720).  . BRACKET ASSY	FWD	FWD		1
700 705 710 715 720	332A2930-57 332A2930-88 BACB30ZF4-34 NAS1149C0432R AS3485-10	BRACKET ASSY (OPTIONAL TO 332A2910-125) BRACKET BOLT (FWD SIDE) WASHER (UNDER NUT) NUT TIGHTEN BOLTS (710) TO 110-120 POUNDINCHES (12.4-13.6 NEWTON METERS).	FWD	FWD	OPT	1 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 45 Jun 05/2008







Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 23)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 46 Feb 05/2008

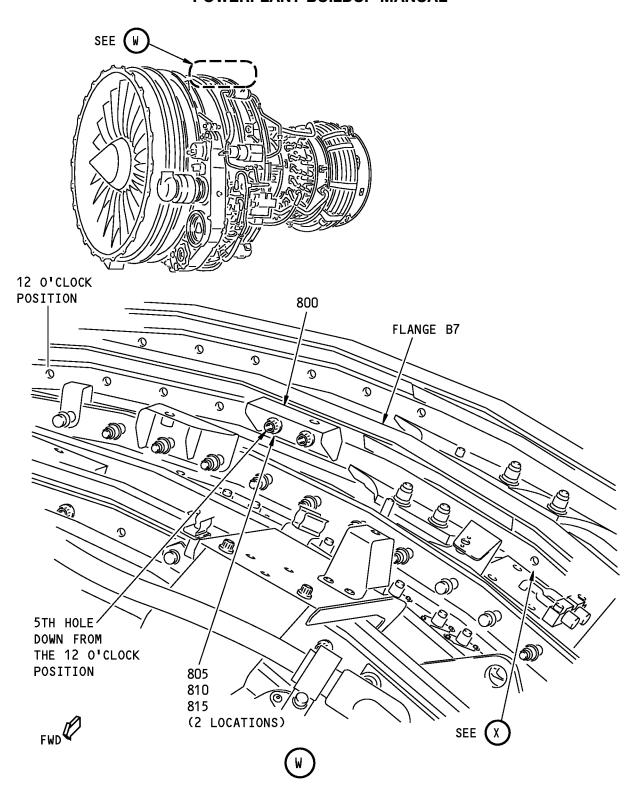


				BRACKET LOCATION AND ORIENTATION		
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	332A2920-224 332A2910-136 332A2910-89 BACB30ZF4-12 BACB30ZF4-08 NAS1149C0432R AS3485-10	NOMENCLATURE  BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 23)  ATTACH BRACKET ASSY (750) TO BRACKET ASSY (700) ON FLANGE B4 AND BRACKET ASSYS (550) AND (755) ON FLANGE B1. USE BOLTS (765) AND (770), WASHERS (775), NUT (785) AND EXISTING CFMI FASTENER.  BRACKET ASSY  BRACKET ASSY  BRACKET ASSY (OPTIONAL TO 332A2910-136)  BOLT (FWD SIDE) (LOWER HOLE)  BOLT  WASHER (UNDER BOLT (765))  NUT  TIGHTEN BOLTS (765) AND (770) AND EXISTING CFMI FASTENER TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	BRKT OR	ANGLE	<b>UC</b>	QTY  1 1 2 1 1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 47 Jun 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 24)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 48 Oct 05/2007

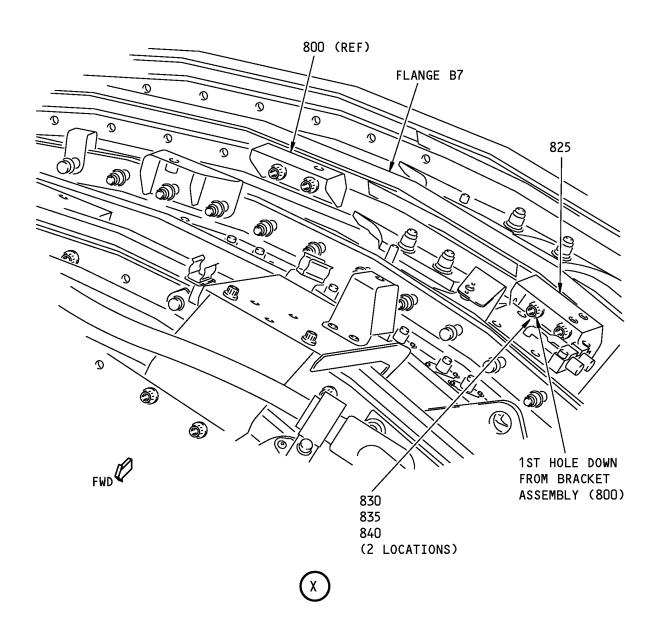


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
<b>4-1</b>	332A2920-222	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 24)  ATTACH BRACKET ASSY (800) TO 5TH AND 6TH HOLES DOWN FROM 12 O'CLOCK ON FLANGE B7. USE BOLTS (805), WASHERS (810), AND NUTS (815).  BRACKET ASSY	FWD	FWD		1
800 805 810 815	332A2920-222 BACB30ZF4-12 NAS1149C0432R AS3485-10	BRACKET ASSY BOLT (FWD SIDE) WASHER (UNDER NUT) NUT TIGHTEN BOLTS (805) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).  NOTE: BRACKET (800) MAY BE INSTALLED IN Figure 2-1 FORWARD ENGINE MOUNT INSTALLATION.	FWD	FWD		1 2 2 2

71-00-02

P/P BUILDUP FIGURE 4-1 Page 49 Jun 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 25)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 50 Oct 05/2007

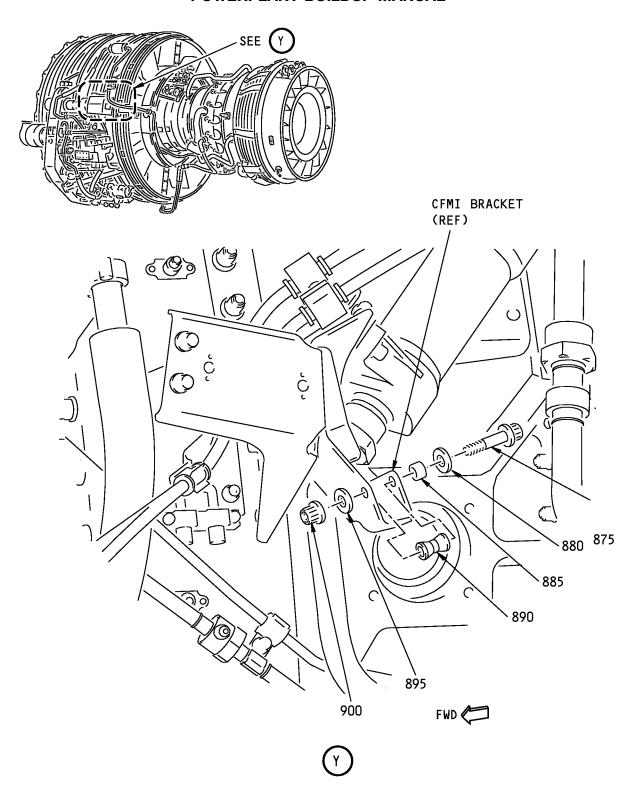


				BRACKET LOCATION AND ORIENTATION			
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	4-1		BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 25)				
			CLEAN MATING SURFACES OF BRACKET ASSY (825) AND FLANGE B7 WITH alcohol, B00130 (C2). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.				
I	825 C2	332A2920-15 B00130	. BRACKET ASSY . ALCOHOL	FWD	FWD	CON	1 AR
			ATTACH BRACKET ASSY (825) TO 1ST AND 2ND HOLES DOWN FROM BRACKET ASSY (800) ON FLANGE B7. USE BOLTS (830), WASHERS (835), AND NUTS (840).				
	830 835 840	BACB30ZF4-12 NAS1149C0432R AS3485-10	. BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT				2 2 2
			TIGHTEN BOLTS (830) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 4-1 Page 51 Oct 05/2008





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 26)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 52 Oct 05/2007

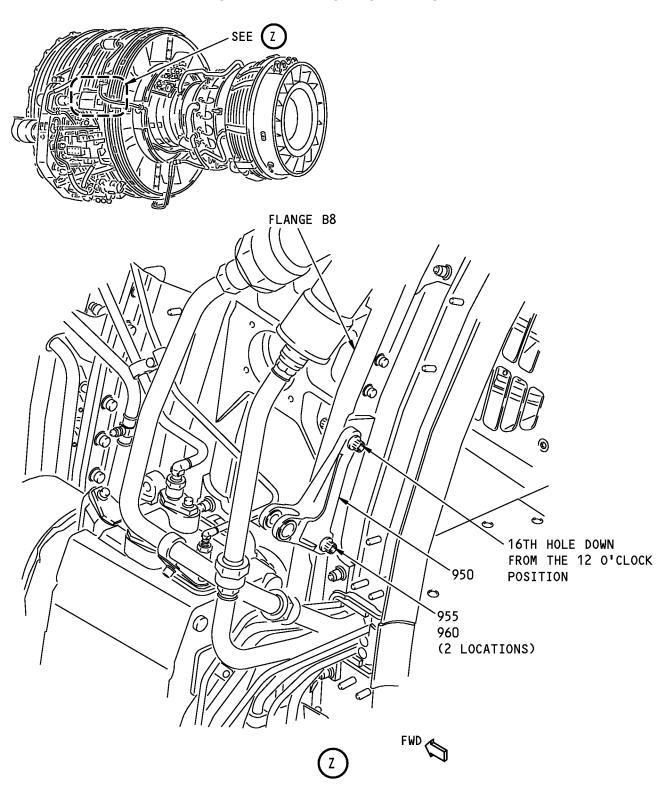


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
4-1	TAIT NOME.	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 26) INSTALL SPOOL (890) USING BOLT (875), WASHERS (880) AND (895), BUSHING (885) AND NUT (900).	110 0151	17020		<u> </u>
875 880 885 890 895 900	BACB30LE3U18 BACW10BP3ACU BACB28AK03-027 RC2769-1 NAS1149E0332R BACN11Z3CK	. BOLT (AFT SIDE) . WASHER (CSK) (UNDER BOLT HEAD) . BUSHING . SPOOL . WASHER (UNDER NUT) . NUT (FWD SIDE) TIGHTEN BOLT (875) TO 30-35 POUND-INCHES (3.4-4.0 NEWTON METERS).				1 1 1 1 1 1

71-00-02

P/P BUILDUP FIGURE 4-1 Page 53 Oct 05/2007





Bracket Installation - Upper Left Side Fan Case Figure 4-1 (Sheet 27)

71-00-02

P/P BUILDUP FIGURE 4-1 Page 54 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

					LOCATION	AND	
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
1		332A2930-61 BACB30LE5U6 BACW10BP5ACU D50004	BRACKET INSTALLATION - UPPER LEFT SIDE FAN CASE (FIGURE 4-1, SHEET 27)  APPLY A THIN COATING OF compound, D50004 (C7) TO BOLTS (955).  ATTACH BRACKET ASSY (950) TO 16TH AND 17TH HOLE DOWN FROM 12 O'CLOCK ON FLANGE B8. USE BOLTS (955) AND WASHERS (960).  BRACKET ASSY  BOLT (AFT SIDE)  WASHER (CSK) (UNDER BOLT HEAD)  COMPOUND  TIGHTEN BOLTS (955) TO 123-136 POUND-INCHES (13.9-15.4 NEWTON METERS).	BRKT OR	ANGLE	CON	<b>QTY</b> 1 2 2 AR

71-00-02

P/P BUILDUP FIGURE 4-1 Page 55 Oct 05/2008



#### FIGURE 5-1

# BRACKET INSTALLATION - LOWER LEFT FAN CASE

**REF QEC TASK NO.: 5** 

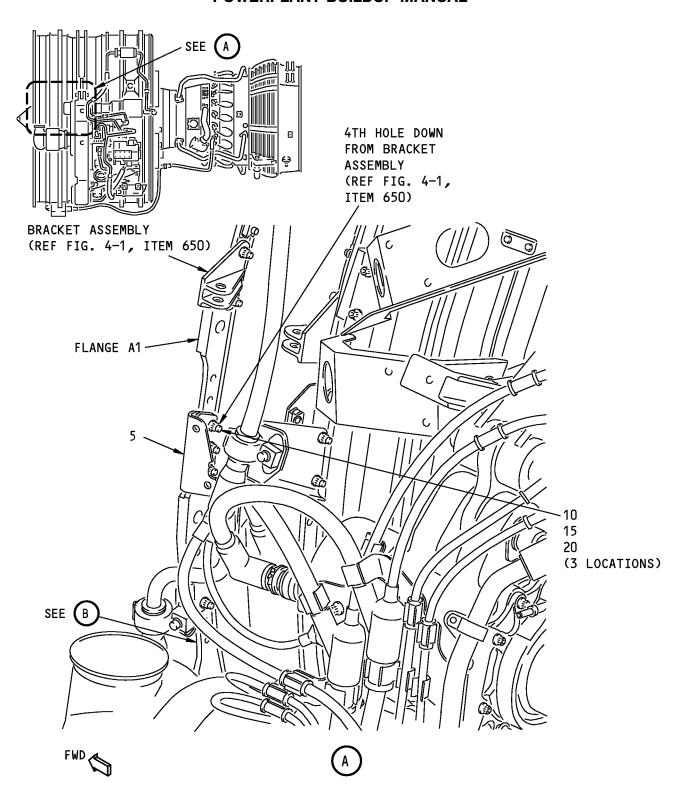
**REF DWG: 332A2900** 

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 5-1 Page 1 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 2 Oct 05/2007

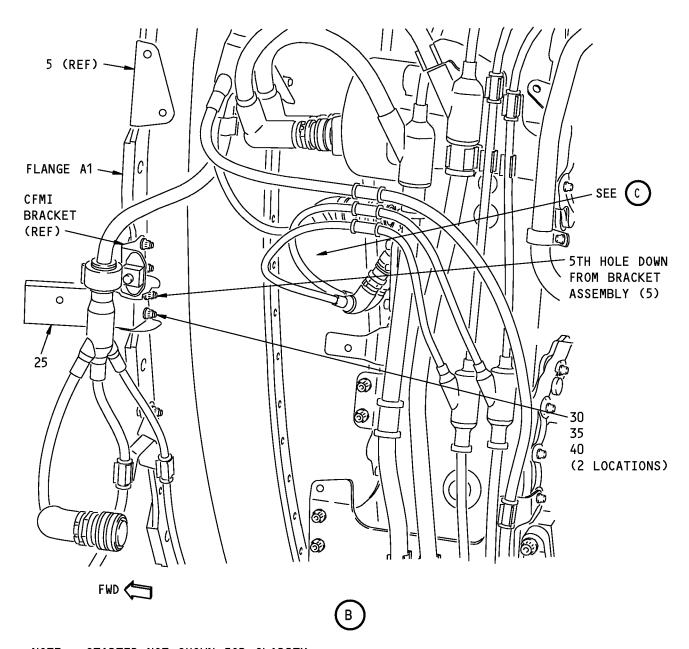


			BBACKET	LOCATION	I AND	
			ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 1)  ATTACH BRACKET ASSY (5) TO 4TH, 5TH AND 6TH HOLE DOWN FROM BRACKET ASSY(Figure 4-1 ITEM (650) ON FLANGE A1.  USE BOLTS (10), WASHERS (15) AND NUTS (20).				
5 10 15 20	332A2910-24 BACB30NM4K7 BACW10BP4ACU AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . WASHER (CSK) (UNDER BOLT HEAD) . NUT TIGHTEN BOLTS (10) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).	AFT	AFT		1 3 3 3 3

71-00-02

P/P BUILDUP FIGURE 5-1 Page 3 Oct 05/2007





NOTE: STARTER NOT SHOWN FOR CLARITY.

Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 4 Oct 05/2007



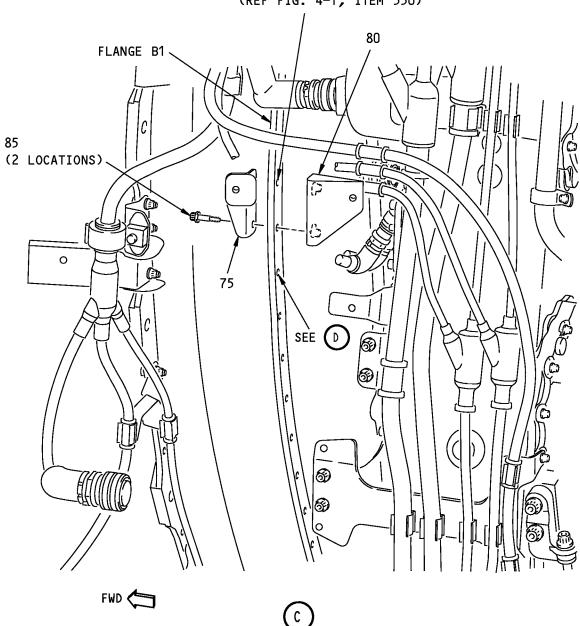
			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 2)  ATTACH BRACKET ASSY (25) TO 5TH AND 6TH HOLE DOWN FROM BRACKET ASSY (5) ON FLANGE A1.  USE BOLTS (30), WASHERS (35) AND NUTS (40).				
25 25 30 35 40	332A2920-193 332A2920-110 BACB30NM4K6 BACW10BP4ACU AS3485-10	BRACKET ASSY BRACKET ASSY (OPTIONAL TO 332A2920-193) BOLT (FWD SIDE) WASHER (CSK) (UNDER BOLT HEAD) NUT TIGHTEN BOLTS (30) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).	AFT	FWD	OPT	1 - 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 5 Oct 05/2007



6TH HOLE DOWN FROM BRACKET ASSEMBLY (REF FIG. 4-1, ITEM 550)



NOTE: STARTER NOT SHOWN FOR CLARITY.

Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 6 Oct 05/2007

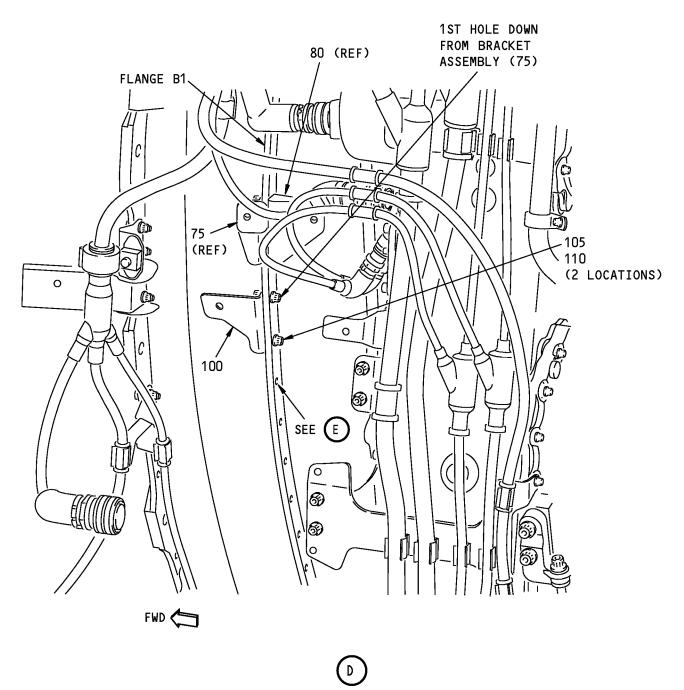


	Ι	Т	l			
			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 3) ATTACH BRACKET ASSYS (75) AND (80) ON 6TH AND 7TH HOLE DOWN FROM BRACKET ASSY (Figure 4-1 ITEM (550) ON FLANGE B1.				
		USE BOLTS (85).				
75 75 80	332A2910-134 332A2910-69 332A2920-92	. BRACKET ASSY . BRACKET ASSY (OPTIONAL TO 332A2910-134) . BRACKET ASSY	FWD FWD	FWD FWD	OPT	1 -
85	BACB30ZF4-10	. BOLT (FWD SIDE) TIGHTEN BOLTS (85) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 7 Oct 05/2007





NOTE: STARTER NOT SHOWN FOR CLARITY.

Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 8 Oct 05/2007

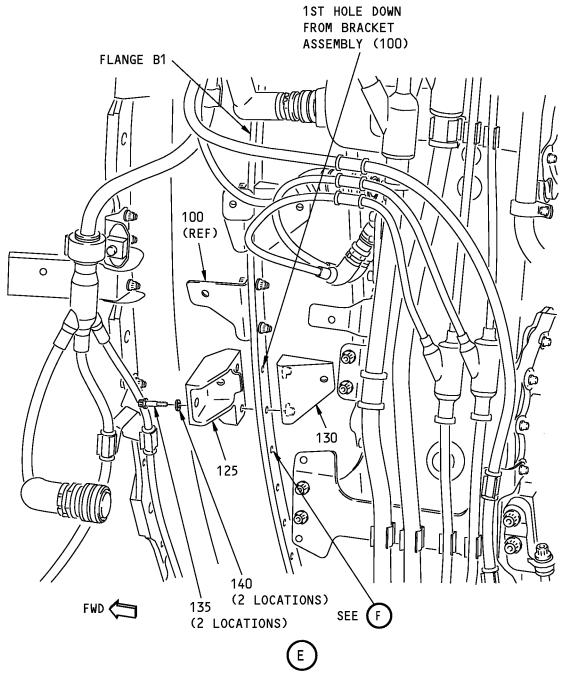


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 4) ATTACH BRACKET ASSY (100) ON 1ST AND 2ND HOLE DOWN FROM BRACKET ASSY (75) ON FLANGE B1. USE BOLTS (105) AND WASHERS (110).				
100 105 110	332A2910-112 BACB30ZF4-09 NAS1149C0432R	. BRKT ASSY . BOLT (AFT SIDE) . WASHER (UNDER BOLT) TIGHTEN BOLTS (105) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD	FWD		1 2 2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 9 Oct 05/2007





NOTE: STARTER NOT SHOWN FOR CLARITY.

Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 10 Oct 05/2007

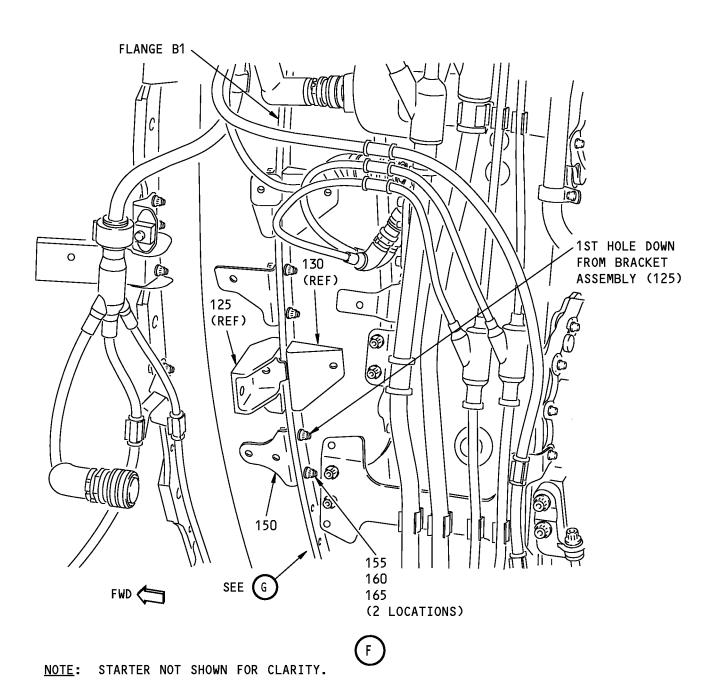


			BRACKET LOCATION AND ORIENTATION		AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
<b>5-1</b> 125	332A2931-3	BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 5)  NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED THAT Figure 22-1 ITEM NO. (15) LANYARD ASSY BE LOOSELY ATTACHED TO BRACKET (125) PRIOR TO BRACKET INSTALLATION.  ATTACH BRACKET (125) AND BRACKET ASSY (130) ON 1ST AND 2ND HOLES DOWN FROM BRACKET ASSY (100) ON FLANGE B1.  USE BOLTS (135) AND WASHERS (140).	FWD	FWD		1
130 135 140 140	332A2920-92 BACB30LE4K6 BACW10BP4ACU BACW10BP4CD	BRACKET ASSY BOLT (FWD SIDE) WASHER (CSK) (UNDER BOLT HEAD) WASHER (CSK) (OPTIONAL TO BACW10BP4ACU) TIGHTEN BOLTS (135) TO 90-110 POUNDINCHES (10.2-12.4 NEWTON METERS).	AFT	AFT	ОРТ	1 2 2 2 -

71-00-02

P/P BUILDUP FIGURE 5-1 Page 11 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case

71-00-02

P/P BUILDUP FIGURE 5-1 Page 12 Oct 05/2007

Figure 5-1 (Sheet 6)

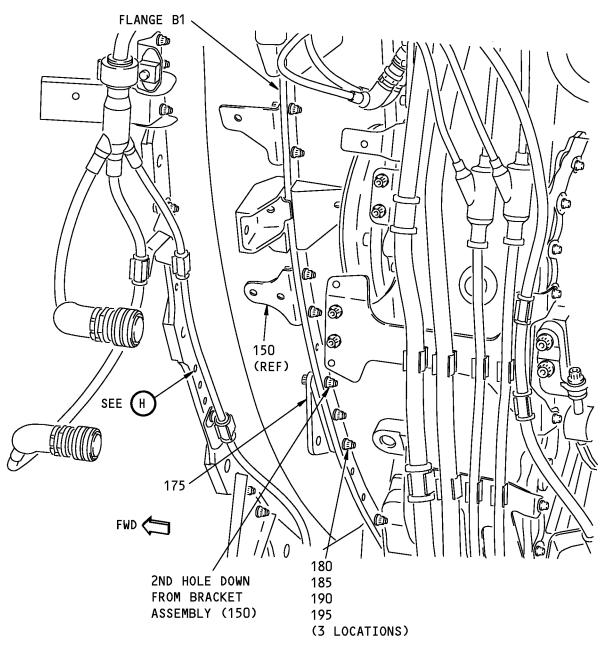


			BRACKET	LOCATION	AND	
			OR	ENTATION		
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 6)  ATTACH BRACKET ASSY (150) ON 1ST AND 2ND HOLE DOWN FROM BRACKET ASSY (125) ON FLANGE B1.  USE BOLTS (155), WASHERS (160) AND NUTS (165).				
150 155 160 165	332A2910-74 BACB30ZF4-10 NAS1149C0432R AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT TIGHTEN BOLTS (155) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD	FWD		1 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 13 Oct 05/2007





NOTE: STARTER NOT SHOWN FOR CLARITY.



Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 14 Oct 05/2007

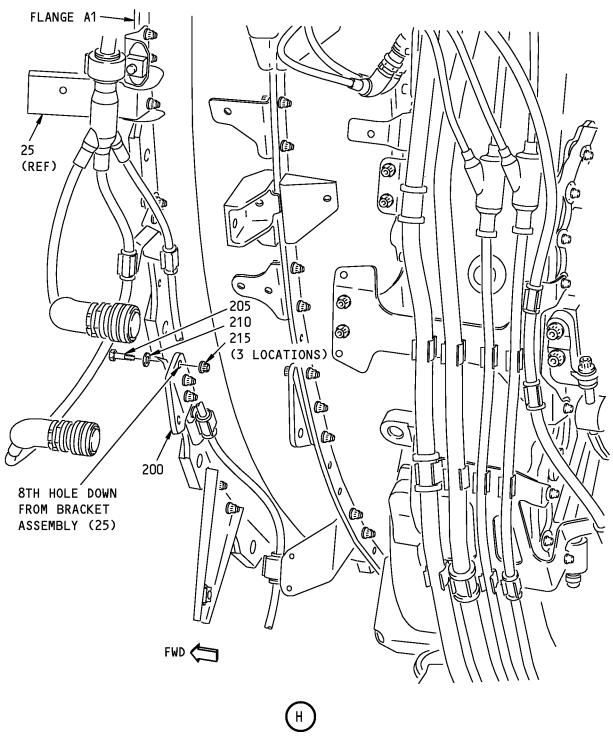


			BRACKET LOCATION AND ORIENTATION		AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
175 180 185 190 195	332A2911-2 BACB30LE4K10 BACW10BP4ACU NAS1149C0432R AS3485-10	BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 7)  NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED THAT FIGURE 22-1 ITEM NO. (5) LANYARD ASSY BE LOOSELY ATTACHED TO BRACKET ASSY (175) PRIOR TO BRACKET ASSY INSTALLATION.  ATTACH BRACKET ASSY (175) TO 2ND, 3RD AND 4TH HOLES DOWN FROM BRACKET ASSY (150) ON FLANGE B1.  USE BOLTS (180), WASHERS (185) AND (190) AND NUTS (195).  BRACKET ASSY BOLT (FWD SIDE) WASHER (CSK) (UNDER BOLT HEAD) WASHER (UNDER NUT) NUT  TIGHTEN BOLTS (180) TO 72-88 POUND-INCHES (8.1-9.9 NEWTON METERS).	FWD FWD	PACES		1 3 3 3 3 3

71-00-02

P/P BUILDUP FIGURE 5-1 Page 15 Oct 05/2007





NOTE: STARTER NOT SHOWN FOR CLARITY.

Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 16 Oct 05/2007

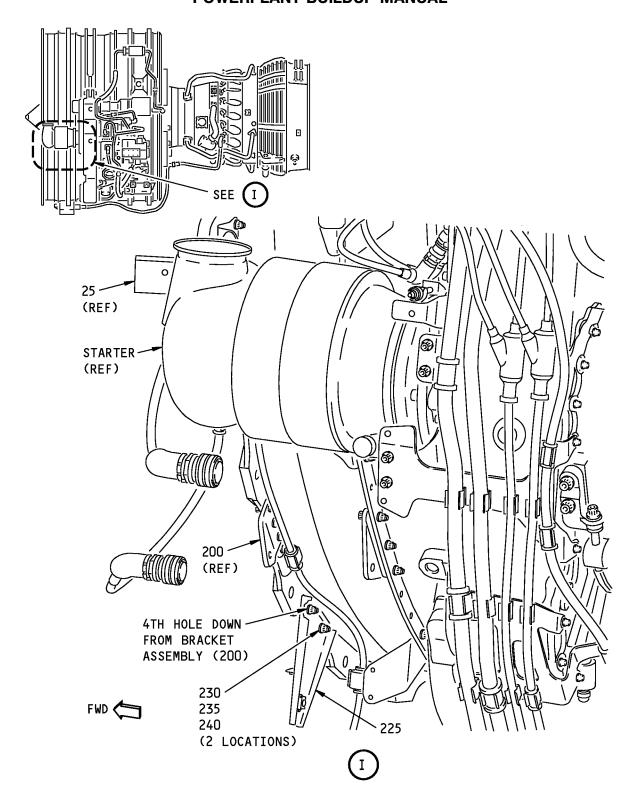


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
200 205 210 215	332A2911-5 BACB30NM4K7 BACW10BP4ACU AS3485-10	BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 8)  NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED THAT Figure 22-1 ITEM NO. (10) LANYARD ASSY BE LOOSELY ATTACHED TO BRACKET (200) PRIOR TO BRACKET INSTALLATION.  ATTACH BRACKET DETAIL (200) TO 8TH, 9TH AND 10TH HOLES DOWN FROM BRACKET ASSY (25) ON FLANGE A1.  USE BOLTS (205), WASHERS (210) AND NUTS (215).  BRACKET DETAIL BOLT (FWD SIDE) WASHER (CSK) (UNDER BOLT HEAD) NUT TIGHTEN BOLTS (205) TO 50-80 POUNDINCHES (5.6-9.0 NEWTON METERS).	AFT	AFT		1 3 3 3

71-00-02

P/P BUILDUP FIGURE 5-1 Page 17 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 18 Oct 05/2007

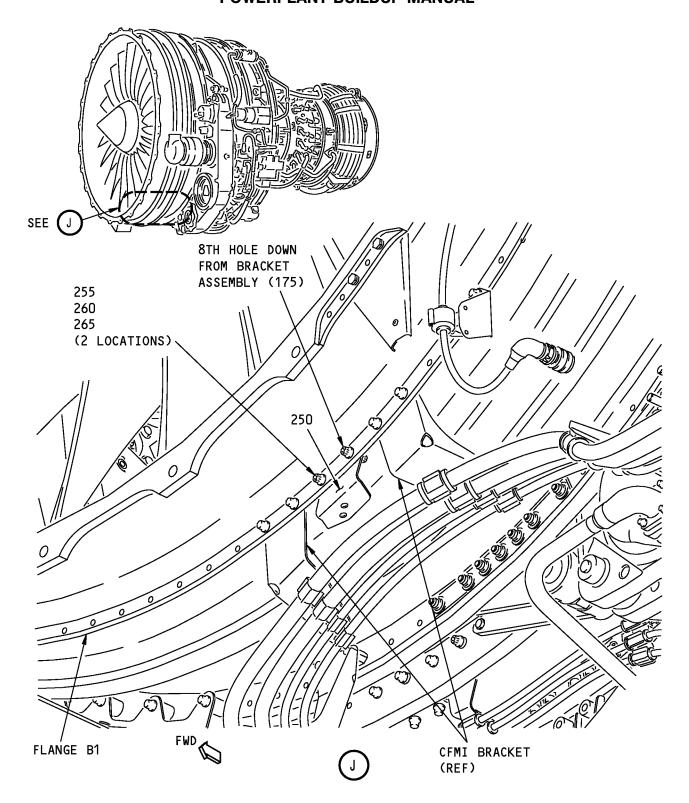


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 9)  ATTACH BRACKET ASSY (225) TO 4TH AND 6TH HOLES DOWN FROM BRACKET DETAIL (200) ON FLANGE A1.  USE BOLTS (230), WASHERS (235) AND NUTS (240).				
225 230 235 240	332A2910-101 BACB30NM4K5 BACW10BP4ACU AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . WASHER (CSK) (UNDER BOLT HEAD) . NUT TIGHTEN BOLTS (230) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).	AFT	AFT		1 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 19 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 20 Oct 05/2007

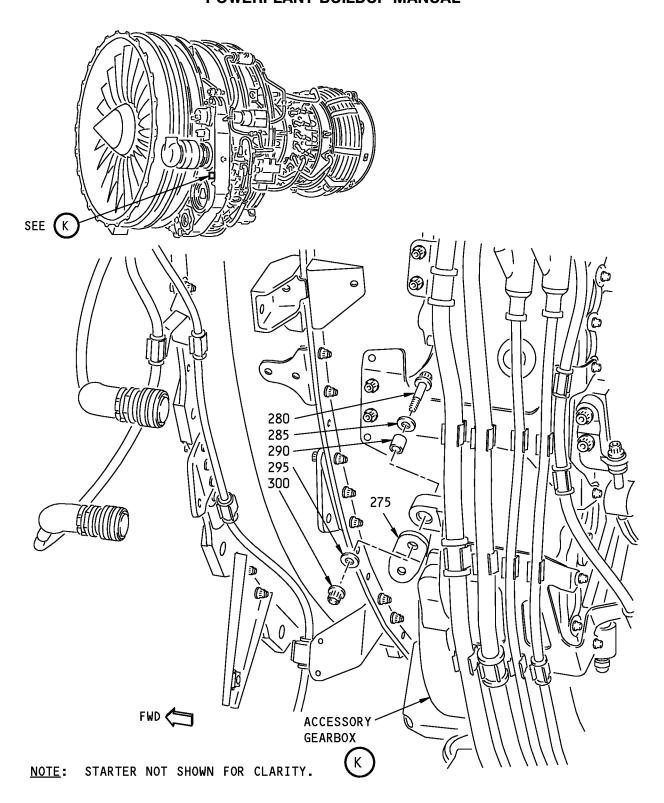


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 10)  ATTACH BRACKET (250) TO 8TH AND 9TH HOLES DOWN FROM BRACKET ASSY (175) ON FLANGE B1 (BETWEEN TWO CFMI BRACKETS).  USE BOLTS (255), WASHERS (260), AND NUTS (265).				
250 255 260 265	332A2920-119 BACB30ZF4-10 NAS1149C0432R AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . WASHER (UNDER BOLT HEAD) . NUT TIGHTEN BOLTS (255) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	AFT	AFT		1 2 2 2

71-00-02

P/P BUILDUP FIGURE 5-1 Page 21 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 22 Oct 05/2007

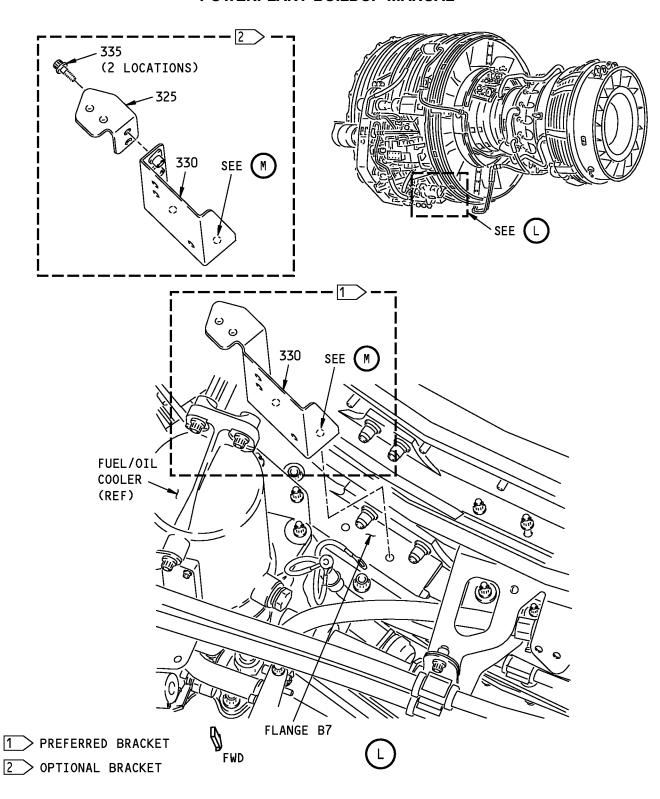


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 11) ATTACH BRACKET DETAIL (275) TO ACCESSORY GEARBOX NEAR IDG PAD. USE BOLT (280), WASHER (285), BUSHING (290) AND NUT (295).				
275 280 285 290 295 300	332A2911-1 BACB30LE6K14 BACW10BP6ACU BACB28BA0608060 NAS1149C0632R AS3485-12	. BRACKET DETAIL . BOLT . WASHER (CSK) (UNDER BOLT HEAD) . BUSHING . WASHER (UNDER NUT) . NUT TIGHTEN BOLT (280) TO 160-240 POUND-INCHES (18.0-27.2 NEWTON METERS).				1 1 1 1 1 1 1

71-00-02

P/P BUILDUP FIGURE 5-1 Page 23 Oct 05/2007





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 24 Oct 05/2007

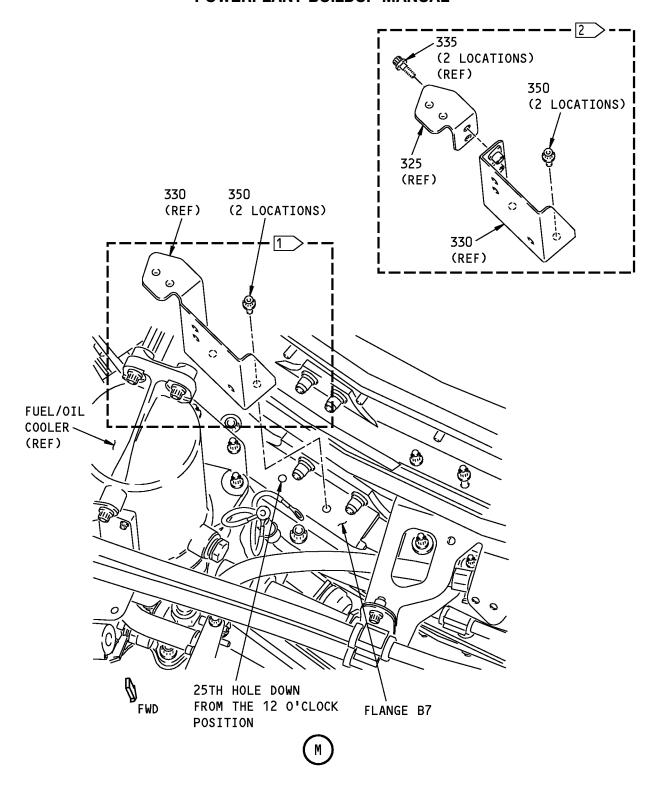


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 12)				
330 330	332A2920-235 332A2920-182	PREFERRED BRACKET CONFIGURATION; ATTACH BRACKET ASSY (330) TO FLANGE ON SHEET 13 BRACKET ASSY (1 PIECE BRACKET) . BRACKET ASSY (REPLACED BY 332A2920-235) (1 PIECE BRACKET)	AFT AFT	AFT AFT	LTD	1 -
		OPTIONAL BRACKET CONFIGURATION; ATTACH BRACKET ASSY (325) TO BRACKET ASSY (330) USING BOLTS (335).				
325 330 335	332A2910-67 332A2930-54 BACB30ZF4-07	. BRACKET ASSY (OPT) . BRACKET ASSY (OPT) . BOLT (2 REQD) (OPT) TIGHTEN BOLTS (335) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	OTBD AFT	OUTBD AFT	OPT OPT OPT	

71-00-02

P/P BUILDUP FIGURE 5-1 Page 25 Feb 05/2008





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 13)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 26 Oct 05/2007

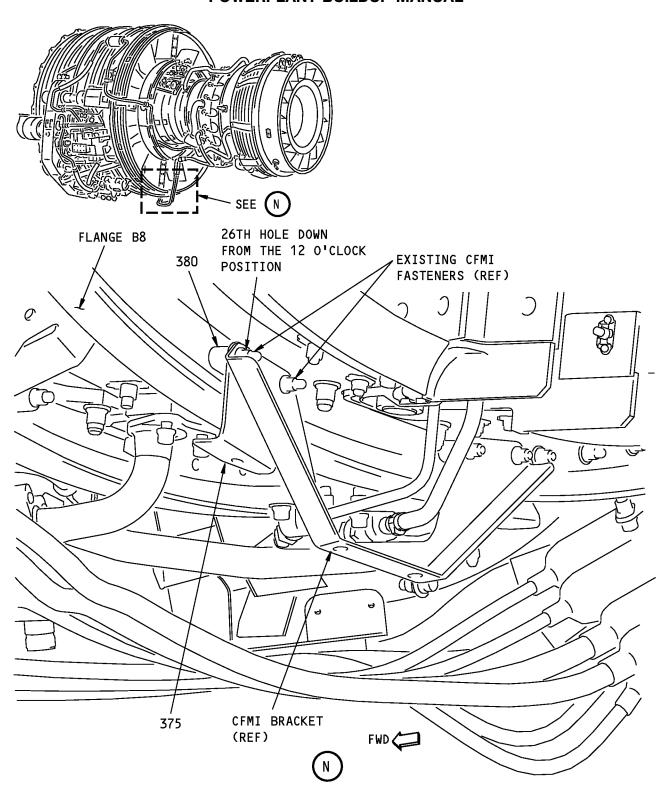


					LOCATION	AND	
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 13)				
			CLEAN MATING SURFACES OF BRACKET (330) AND 25TH AND 26TH HOLES DOWN FROM 12 O'CLOCK ON FLANGE B7 WITH alcohol, B00130 (C1). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.				
I	C1	B00130	. ALCOHOL			CON	AR
	350	BACB30ZF4-08	ATTACH BRACKET ASSY (330) TO FLANGE B7 WITH BOLTS (350) BOLT				2
			TIGHTEN BOLTS (350) TO 110-120 POUND- INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 5-1 Page 27 Oct 05/2008





Bracket Installation - Lower Left Side Fan Case Figure 5-1 (Sheet 14)

71-00-02

P/P BUILDUP FIGURE 5-1 Page 28 Oct 05/2007



				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
5-1		BRACKET INSTALLATION - LOWER LEFT SIDE FAN CASE (FIGURE 5-1, SHEET 14)				
		REMOVE EXISTING CFMI FASTENERS AND SPACER FROM 26TH AND 27TH HOLES DOWN FROM 12 O'CLOCK ON FLANGE B8.				
		APPLY THIN COATING OF ANTI-SEIZE compound, D50004 (C2) TO EXISTING CFMI FASTENERS.				
		ATTACH BRACKET ASSY (375) AND SPACERS (380) OR BRACKET DETAIL (380) BETWEEN CFMI BRACKET AND FLANGE B8 USING EXISTING FASTENERS.				
375	332A2910-141	. BRACKET ASSY	AFT	FWD		1
375	332A2910-104	. BRACKET ASSY (OPTIONAL TO 332A2910-141) . SPACER <sup>*[1]</sup>	AFT	FWD	OPT	-
380 380	BACS18K25-39W 332A2930-60	. BRACKET DETAIL (1 REQD)*[1]	AFT AFT		OPT	2
C2	D50004	. COMPOUND TIGHTEN EXISTING CFMI FASTENERS TO 98- 110 POUND-INCHES (11.1-12.4 NEWTON METERS). *[1] QTY (1) 332A2930-60 BRACKET DETAIL OPTIONAL TO QTY (2) BACS18K25-39W SPACER.			CON	AR

71-00-02

P/P BUILDUP FIGURE 5-1 Page 29 Oct 05/2008



#### FIGURE 6-1

# BRACKET INSTALLATION - RIGHT SIDE FAN CASE

**REF QEC TASK NO.: 6** 

**REF DWG: 332A2900** 

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 6-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 1)

**71-00-02**P/P BUILDUP FIGURE 6-1
Page 2

Oct 05/2007

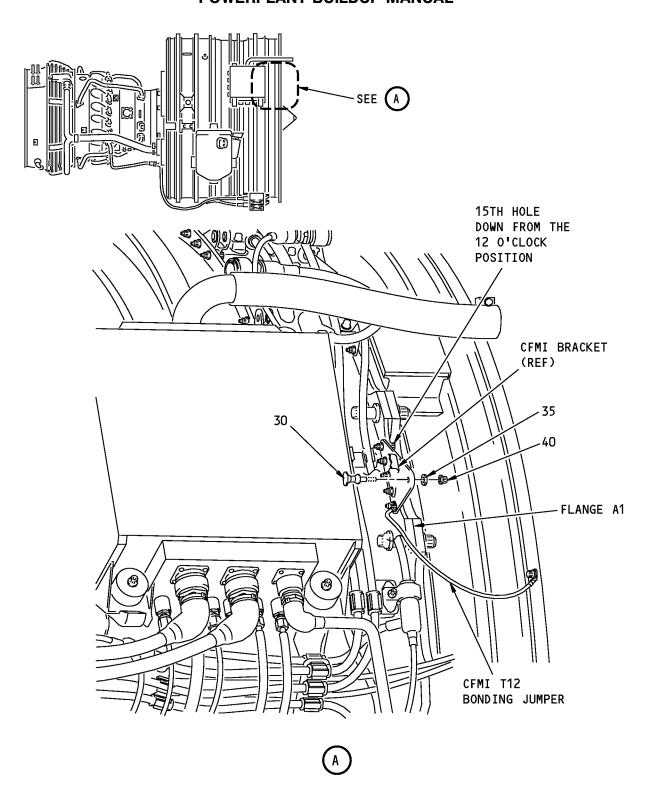


ITEM	2427			OT1/
NO. 6-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - RIGHT SIDE FAN CASE	UC	QTY
		(FIGURE 6-1, SHEET 1)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 6-1 Page 3 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 4 Oct 05/2007

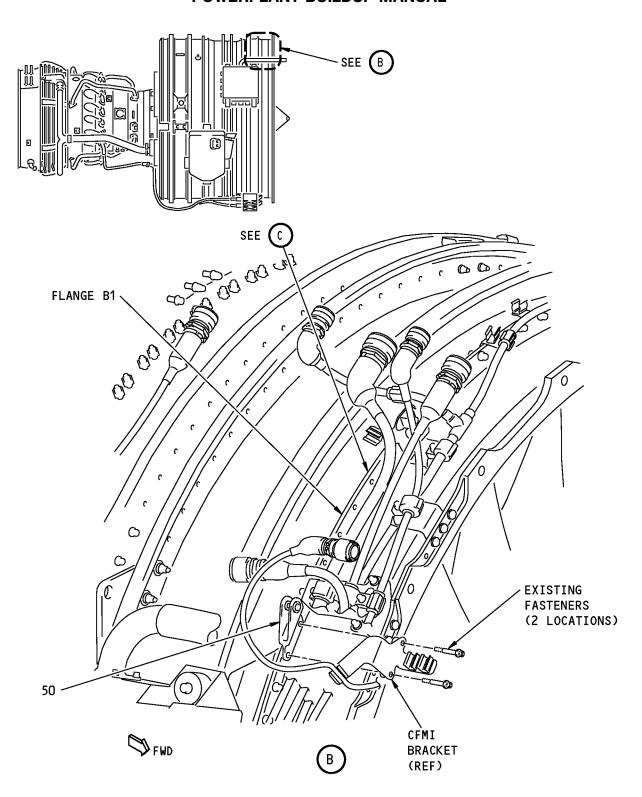


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 2)  ATTACH RECEIVER (30) TO HOLE ON CFMI BRACKET LOCATED ON 15TH THRU 19TH HOLES DOWN FROM 12 O'CLOCK POSITION ON FLANGE A1. USE WASHER (35) AND NUT (40).				
30 35 40	370D1005-5 NAS1149C0432R BACN11Z4CK	RECEIVER WASHER (UNDER NUT) NUT TIGHTEN NUT (40) TO 65-100 POUND-INCHES (7.3-11.3 NEWTON METERS).	AFT			1 1 1 1

71-00-02

P/P BUILDUP FIGURE 6-1 Page 5 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 6 Oct 05/2007

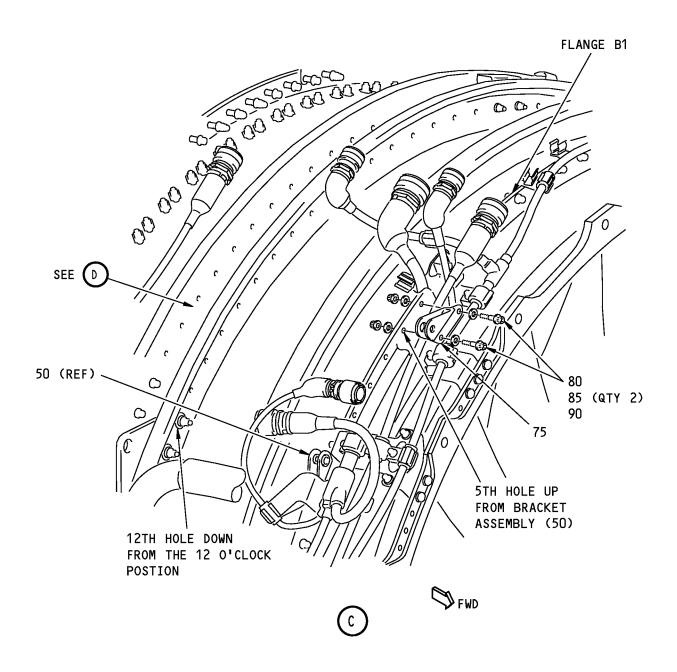


				LOCATION	AND	
ITEM			BRKT OR	ENTATION ANGLE		
NO.	PART NUMBER	NOMENCLATURE	FLG SIDE	FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 3)  REMOVE EXISTING CFMI FASTENERS AND CFMI BRACKET FROM FLANGE B1. INSTALL BRACKET ASSY (50) BETWEEN FLANGE B1 AND CFMI BRACKET. REINSTALL CFMI BRACKET USING EXISTING CFMI FASTENERS.				
50	332A2930-1	I BRACKET ASSY  TIGHTEN EXISTING CFMI FASTENERS TO 110- 120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD			1

71-00-02

P/P BUILDUP FIGURE 6-1 Page 7 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 8 Oct 05/2007

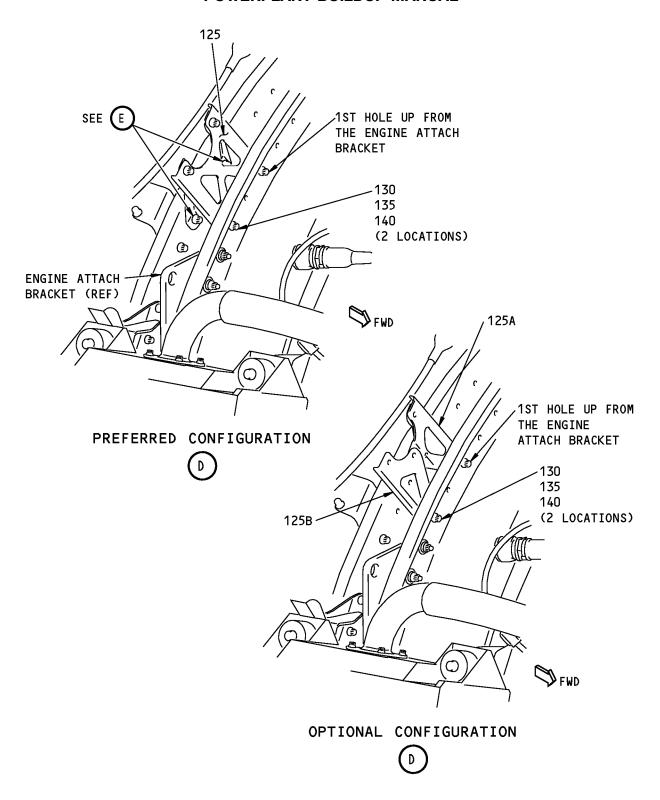


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	332A2930-1 BACB30ZF4-12 NAS1149C0432R AS3485-10	NOMENCLATURE  BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 4)  ATTACH BRACKET ASSY (75) TO 5TH AND 6TH HOLES UP FROM BRACKET ASSY (50) ON FLANGE B1. USE BOLTS (80), WASHERS (85) AND NUTS (90).  BRACKET ASSY BOLT (FWD SIDE) WASHER NUT  TIGHTEN BOLTS (80) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	BRKT OR	ANGLE	UC	QTY  1 2 4 2

71-00-02

P/P BUILDUP FIGURE 6-1 Page 9 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 10 Oct 05/2007

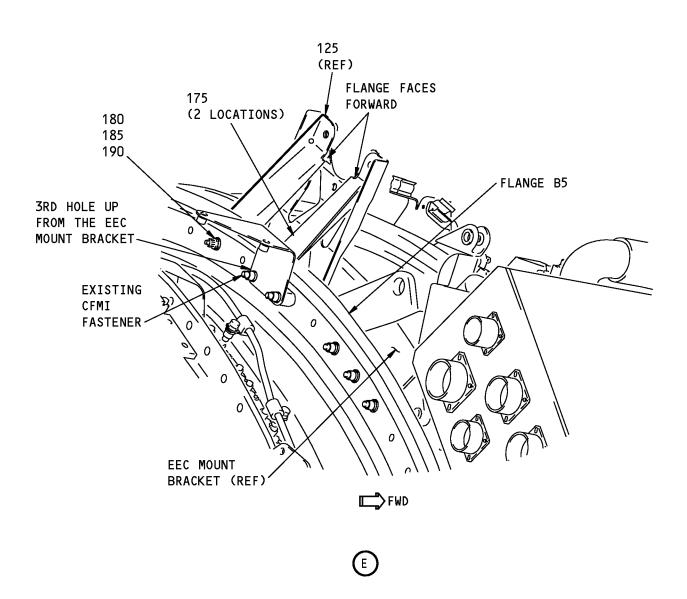


				LOCATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
125 125A 125B 130 135 140	332A2910-99 332A2910-95 332A2910-96 BACB30ZF4-10 NAS1149C0432R AS3485-10	BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 5)  PREFERRED CONFIGURATION;  ATTACH BRACKET ASSY (125) TO 1ST AND 3RD HOLES UP FROM ENGINE ATTACH BRACKET ON FLANGE B4. USE BOLTS (130), WASHERS (135) AND NUTS (140).  OPTIONAL CONFIGURATION;  ATTACH BRACKET (125B) TO 1ST HOLE UP FROM ENGINE ATTACH BRACKET AND ATTACH BRACKET (125A) TO 3RD HOLE UP. USE BOLTS (130), WASHERS (135) AND NUTS (140).  NOTE: DO NOT INSTALL A FASTENER BETWEEN BRACKETS (125A) AND (125B) AT THIS TIME.  BRACKET  BRACKET (OPTIONAL) 111  BRACKET (OPTIONAL) 111  BOLT (FWD SIDE)  WASHER (UNDER BOLT HEAD)  NUT  TIGHTEN BOLTS (130) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).  *[1] BRACKETS (125A) AND (125B) TOGETHER ARE OPTIONAL TO BRACKET (125).	AFT AFT AFT	TAGES	OPT OPT	1 2 2 2 2

71-00-02

P/P BUILDUP FIGURE 6-1 Page 11 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 12 Oct 05/2007

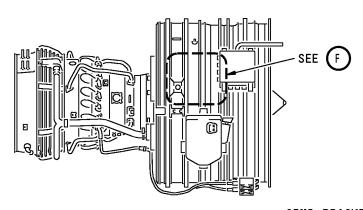


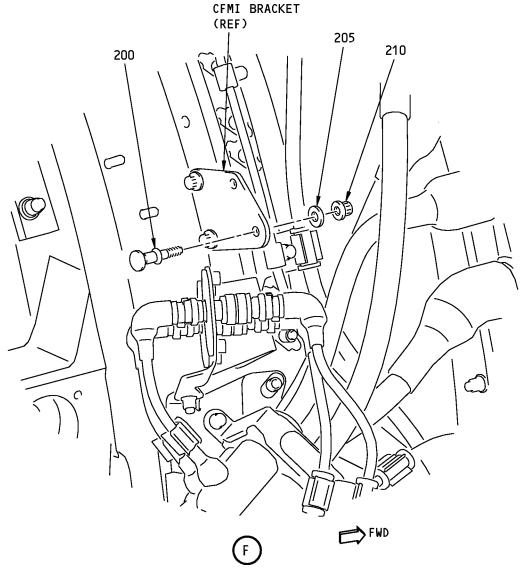
				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
175 175 180 185 190	332A2920-132 332A2920-29 BACB30ZF4-10 NAS1149C0432R AS3485-10	BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 6)  REMOVE EXISTING CFMI FASTENER FROM 3RD HOLE UP FROM EEC MOUNT BRACKET ON FLANGE B5.  ATTACH BRACKET ASSYS (175) TO 3RD AND 5TH HOLES UP FROM EEC MOUNT BRACKET ON FLANGE B5. USE EXISTING CFMI FASTENER AT LOWER HOLE AND BOLT (180), WASHER (185) AND NUT (190) AT UPPER HOLE.  NOTE: BRACKETS (125) AND (175) WILL BE CONNECTED TO INLET COWL TAI DUCT (REF Figure 27-1).  BRACKET ASSY BRACKET ASSY (OPTIONAL) BOLT (FWD SIDE) WASHER (UNDER NUT) NUT TIGHTEN BOLT (180) AND EXISTING CFMI FASTENER TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD FWD	FWD FWD	OPT	2 - 1 1 1 1

71-00-02

P/P BUILDUP FIGURE 6-1 Page 13 Oct 05/2007







Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 14 Oct 05/2007

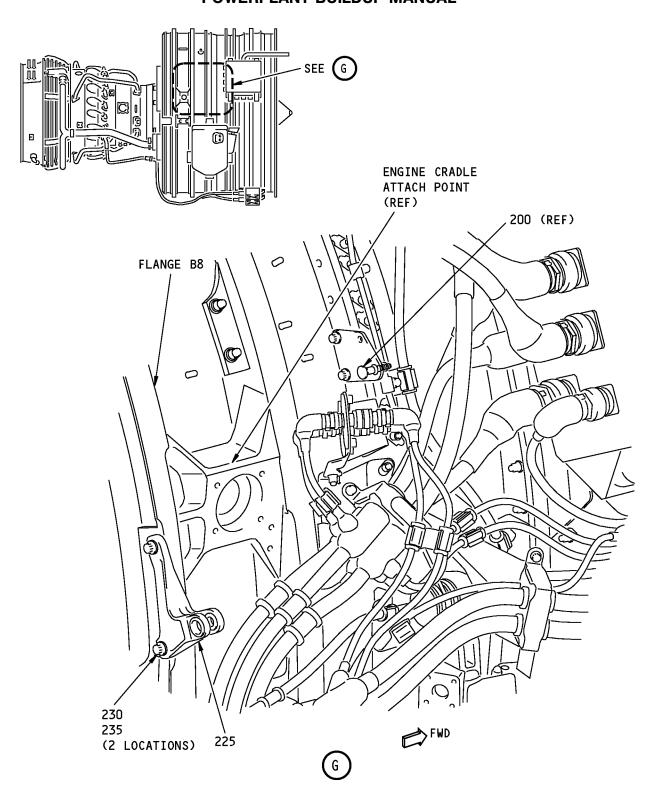


				LOCATION	AND	
				ENTATION	1	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 7)  ATTACH RECEIVER (200) TO HOLE ON CFMI BRACKET ON 21ST AND 22ND HOLES DOWN FROM 12 O'CLOCK POSITION ON FLANGE B6. USE WASHER (205) AND NUT (210).				
200 205 210	370D1005-5 NAS1149C0432R BACN11Z4CK	. RECEIVER . WASHER (UNDER NUT) . NUT	AFT			1 1 1
		TIGHTEN NUT (210) TO 65-100 POUND-INCHES (7.3-11.3 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 6-1 Page 15 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 16 Oct 05/2007

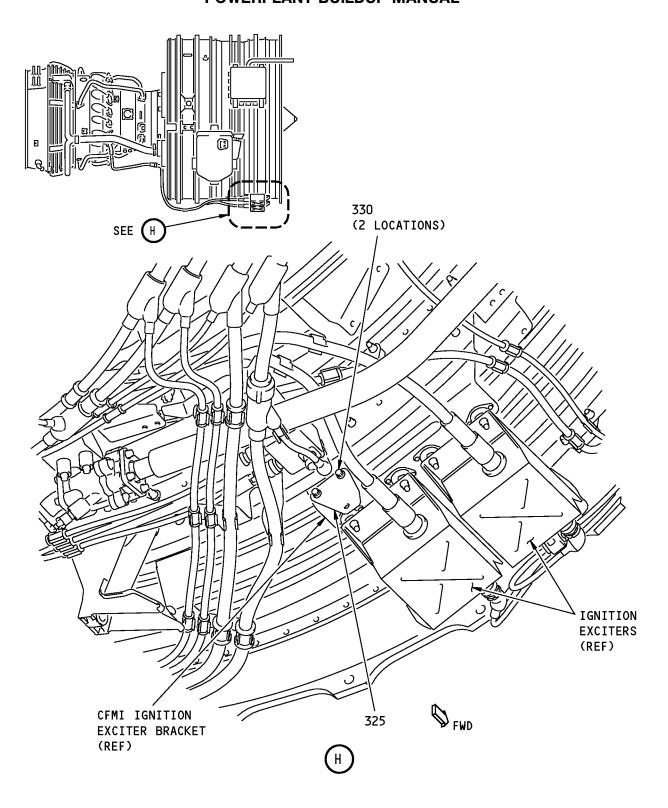


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 8)				
		APPLY A THIN COATING OF ANTI-SEIZE compound, D50004 (C6) TO BOLTS (230).				
		ATTACH BRACKET ASSY (225) TO FLANGE B8 JUST ABOVE 3 O'CLOCK POSITION AND AFT OF ENGINE CRADLE ATTACH POINT. USE BOLTS (230) AND WASHERS (235).				
225 230 235 C6	332A2930-62 BACB30LE5U6 BACW10BP5ACU D50004	. BRACKET ASSY . BOLT (AFT SIDE) . WASHER (UNDER BOLT HEAD) . COMPOUND	AFT		CON	1 2 2 AR
		TIGHTEN BOLTS (230) TO 123-136 POUND-INCHES (13.89-15.36 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 6-1 Page 17 Oct 05/2008





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 18 Oct 05/2007

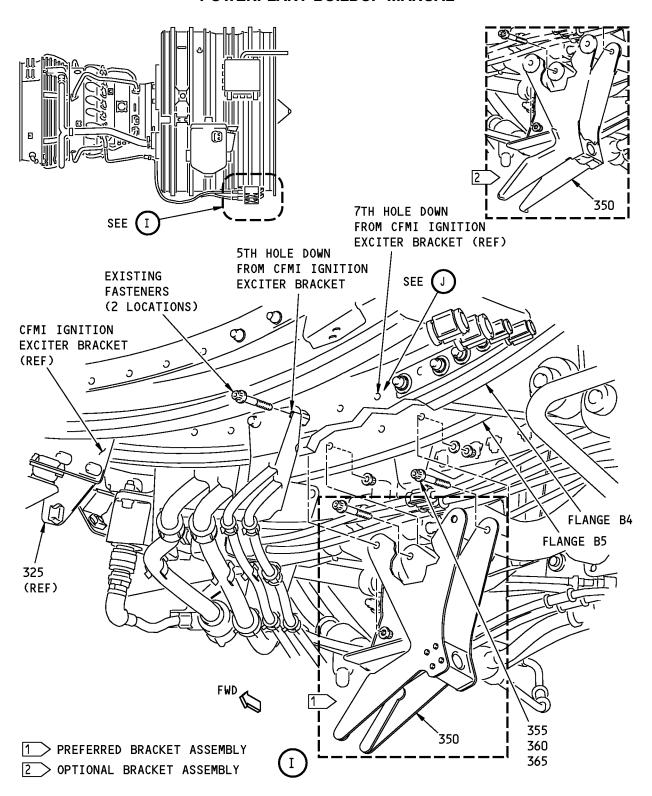


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 9)  ATTACH BRACKET (325) TO LOWER AFT SIDE OF CFMI IGNITION EXCITER BRACKET ON FLANGE B4. USE BOLTS (330).				
325 330	332A2910-26 BACB30ZF4-06	. BRACKET . BOLT TIGHTEN BOLTS (330) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				1 2

71-00-02

P/P BUILDUP FIGURE 6-1 Page 19 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 20 Oct 05/2007

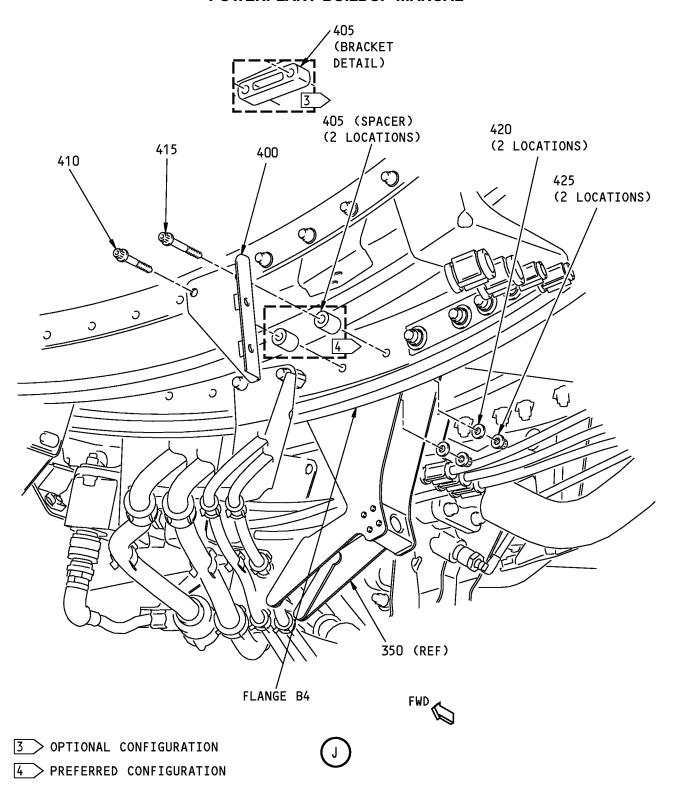


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 10)				
		REMOVE EXISTING CFMI FASTENERS FROM 5TH AND 7TH HOLES DOWN ON FLANGE B4 FROM CFMI IGNITION EXCITER BRACKET AND 7TH HOLE DOWN ON FLANGE B5.				
		POSITION BRACKET ASSY (350) BETWEEN FLANGES B4 AND B5 AND ATTACH WITH EXISTING CFMI FASTENERS AT 5TH HOLES DOWN ON FLANGES B4 AND B5 AND BOLT (355), WASHER (360) AND NUT (365) AT 7TH HOLE DOWN ON FLANGE B5.				
		NOTE: DO NOT INSTALL A FASTENER AT THE 7TH HOLE DOWN ON FLANGE B4 AT THIS TIME.				
350 355 360 365	332A2930-90 BACB30ZF4-12 NAS1149C0432R AS3485-10	. BRKT ASSY . BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT		*[1]		1 1 1 1
		TIGHTEN BOLT (355) TO 80–90 POUNDS-INCHES (9.0–10.1 NEWTON METERS) AND EXISTING CFM BOLTS TO 100-112 POUND-INCHES (11.3-12.6 NEWTON METERS).				
		*[1] FORKS OF BRACKET ASSY (350) FACE RIGHT SIDE OF ENGINE (SIDE WITH THE OIL TANK).				

71-00-02

P/P BUILDUP FIGURE 6-1 Page 21 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 22 Oct 05/2007

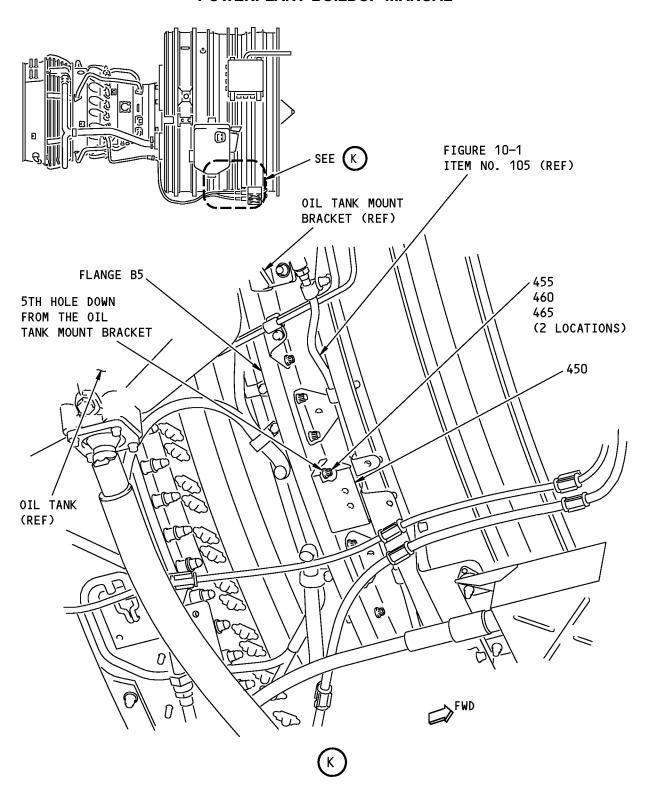


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 11)  AT REMAINING BOLT LOCATION ON BRACKET ASSY (350), ATTACH BRACKET ASSY (400) AND SPACERS (405) OR BRACKET DETAIL (405) TO FLANGE B4. USE BOLTS (410) AND (415), WASHERS (420) AND NUTS (425).				
400 405 405 410 415 420 425	332A2910-51 BACS18K25-45W 332A2930-26 BACB30ZF4-22 BACB30ZF4-24 NAS1149C0432R AS3485-10	. BRACKET ASSY . SPACER (PREFERRED CONFIGURATION) . BRACKET DETAIL (OPT CONFIGURATION) . BOLT (FWD SIDE) . BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT TIGHTEN BOLTS (410) AND (415) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD	FWD	OPT	1 2 - 1 1 2 2 2

71-00-02

P/P BUILDUP FIGURE 6-1 Page 23 Oct 05/2007





Bracket Installation - Right Side Fan Case Figure 6-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 6-1 Page 24 Oct 05/2007



				BRACKET LOCATION AND ORIENTATION			
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	6-1		BRACKET INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 6-1, SHEET 12)  NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED THAT Figure 10-1 ITEM NO. (100) HOSE ASSY AND (105) TUBE ASSY BE INSTALLED PRIOR TO INSTALLATION OF BRACKET ASSY (450).  CLEAN MATING SURFACES OF BRACKET ASSY (450) AND FLANGE B5 WITH alcohol, B00130 (C1). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.				
I	450 C1	332A2920-48 B00130	. BRACKET ASSY . ALCOHOL ATTACH BRACKET ASSY (450) TO 5TH AND 6TH HOLES DOWN FROM OIL TANK MOUNT BRACKET ON FLANGE B5. USE BOLTS (455), WASHERS (460) AND NUTS (465).	FWD		CON	1 AR
	455 460 465	BACB30ZF4-12 NAS1149C0432R AS3485-10	. BOLT (FWD SIDE) . WASHER (UNDER NUT) . NUT TIGHTEN BOLTS (455) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				2 2 2

71-00-02

P/P BUILDUP FIGURE 6-1 Page 25 Oct 05/2008



#### FIGURE 7-1

# BRACKET INSTALLATION - LEFT SIDE CORE CASE

**REF QEC TASK NO.: 7** 

**REF DWG: 332A2900** 

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 7-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 1)

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P/P BUILDUP FIGURE 7-1 Page 2 Oct 05/2007

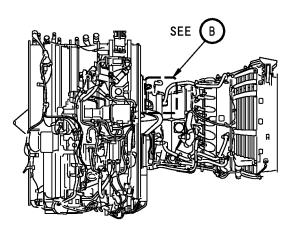


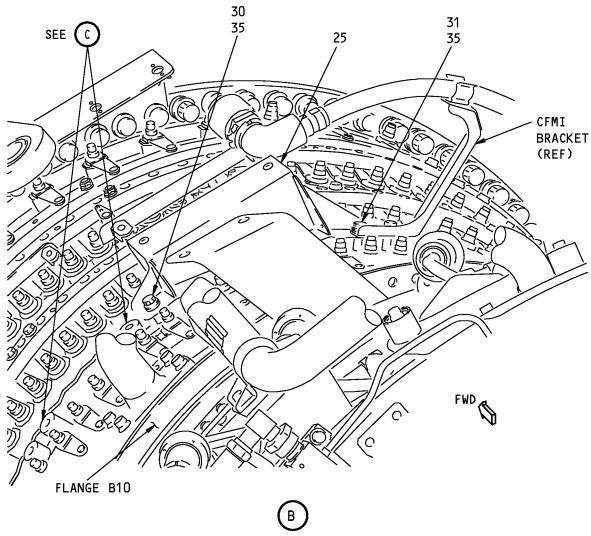
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 1)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 7-1 Page 3 Oct 05/2007







Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 4 Oct 05/2007

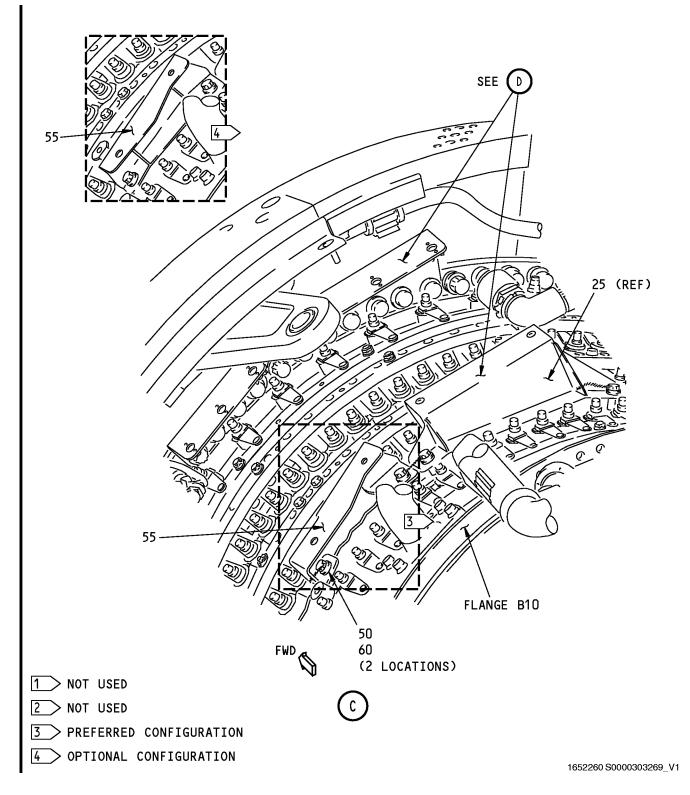


					LOCATION	I AND	
	ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
	7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 2)  NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN BOLTS UNTIL INSTRUCTED.				
			CLEAN MATING SURFACES OF BRACKET ASSY (25) AND ENGINE BOSSES FWD OF FLANGE B10 WITH alcohol, B00130 (C1). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.				
I	25 25 C1	332A2920-201 332A2920-124 B00130	. BRACKET ASSY . BRKT ASSY (OPTIONAL TO 332A2920-201) . ALCOHOL			OPT CON	1 - AR
			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C2) TO BOLT (30) AND BOLT (31) THREADS.				
I	30 31 C2	BACB30LE4HU1 BACB30LE4HU2 D00006	. BOLT . BOLT . NEVER-SEEZ NSBT-8N COMPOUND			CON	1 1 AR
			LOOSELY ATTACH BRACKET ASSY (25) TO ENGINE BOSSES WITH LUBRICATED BOLTS (30, 31) AND WASHERS (35). POSITION UPPER FLANGE OF BRACKET UNDER CFMI BRACKET (IF INSTALLED)				
	35	BACW10BP4ACU	. WASHER (CSK)				2

71-00-02

P/P BUILDUP FIGURE 7-1 Page 5 Oct 05/2008





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 6 Oct 05/2008

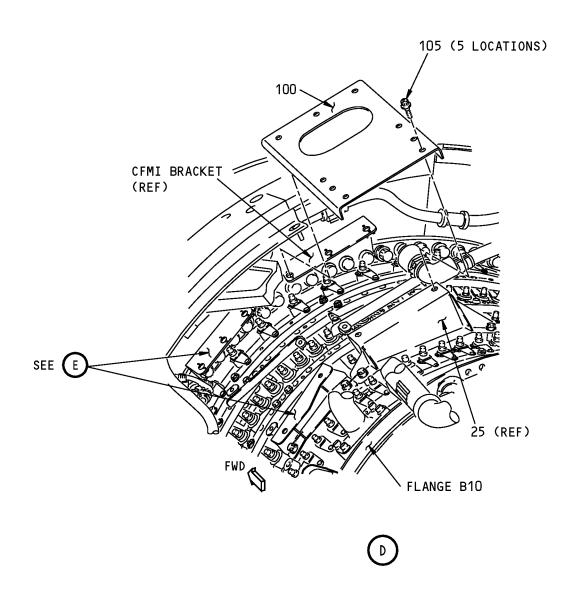


				LOCATION ENTATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 3)				
		APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C2) TO BOLT (50) THREADS.				
50 C2	BACB30LE4HU1 D00006	. BOLT . NEVER-SEEZ NSBT-8N COMPOUND				2 AR
		LOOSELY ATTACH BRACKET ASSY (55) TO ENGINE BOSSES FWD OF FLANGE B10 AT APPROXIMATELY 10 O'CLOCK POSITION WITH LUBRICATED BOLTS (50) AND WASHERS (60).				
55 60	332A2920-225 BACW10BP4ACU	. BRACKET ASSY . WASHER (CSK)				1 2

71-00-02

P/P BUILDUP FIGURE 7-1 Page 7 Oct 05/2008





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 8 Oct 05/2007

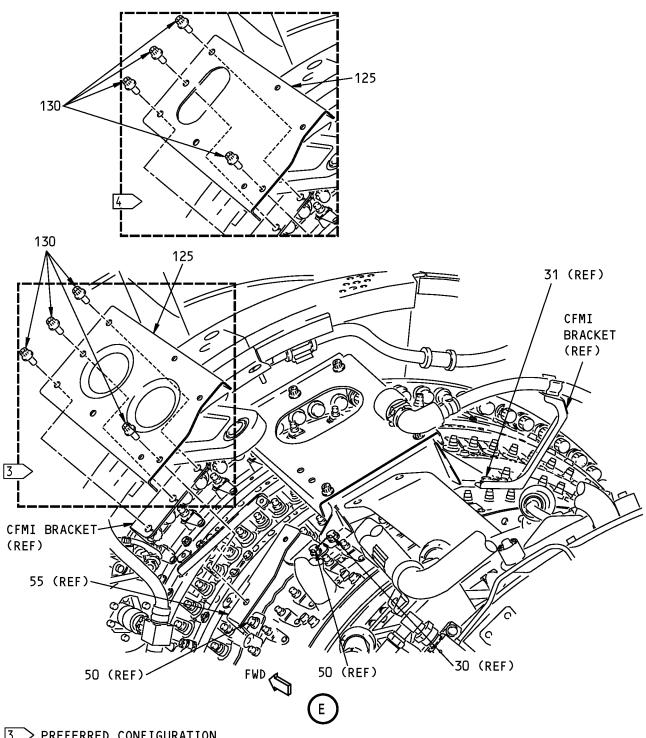


				LOCATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 4)				
		CLEAN MATING SURFACES OF CFMI BRACKET, BRACKET ASSY (100) AND BRACKET ASSY (25) WITH alcohol, B00130 (C1).				
100 100 C1	332A2920-199 332A2920-143 B00130	. BRACKET ASSY . BRKT ASSY (OPTIONAL TO 332A2920-199) . ALCOHOL			OPT CON	1 - AR
		ATTACH BRACKET ASSY (100) TO BRACKET BRACKET ASSY (25) AND CFMI BRACKET USING BOLTS (105).				
105	BACB30ZF4-06	. BOLT				5
		TIGHTEN BOLTS (105) TO 70-80 POUND- INCHES (7.9-9.0 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 7-1 Page 9 Oct 05/2008





3 PREFERRED CONFIGURATION

4 OPTIONAL CONFIGURATION

**Bracket Installation - Left Side Core Case** Figure 7-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 10 Oct 05/2007

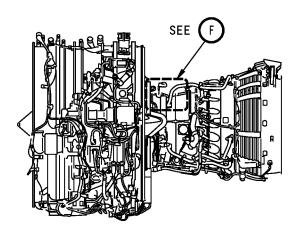


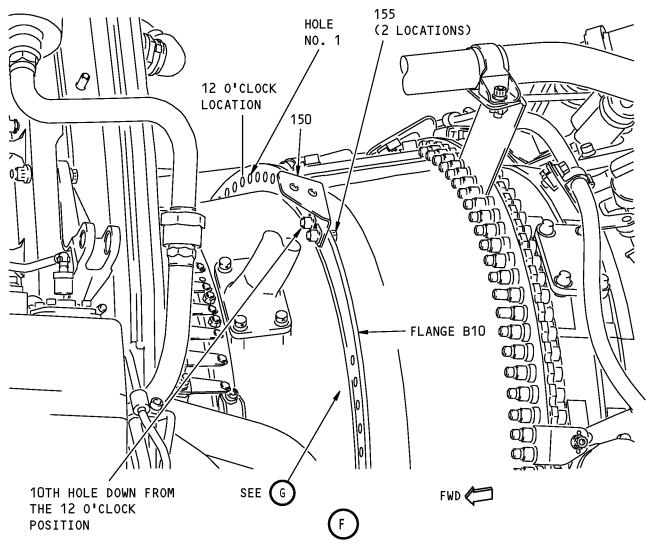
				LOCATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 5) ATTACH BRACKET ASSY (125) TO BRACKET ASSY (55) AND CFMI BRACKET USING BOLTS (130).				
125 125 130	332A2920-185 332A2920-39 BACB30ZF4-06	. BRACKET ASSY . BRKT ASSY (OPTIONAL TO 332A2920-185) . BOLT TIGHTEN BOLTS (130) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).			ОРТ	1 - 4
		TIGHTEN BOLT (30), BOLT (31) AND BOLTS (50) TO 90-110 POUND-INCHES (10.2-12.4 NEWTON METERS). SECURE BOLTS USING safety cable kit, G50375 (C3) OR lockwire, G01912 (C4) AS SHOWN.				
		NOTE: IF OPT BRACKET ASSY (55) IS INSTALLED, SECURE LOWER BOLT (50) TO STIFFENER ABOVE BOLT.				
C3 C4	G50375 G01912	. SAFETY CABLE KIT . LOCKWIRE			CON CON	3 AR

71-00-02

P/P BUILDUP FIGURE 7-1 Page 11 Oct 05/2008







Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 12 Oct 05/2007

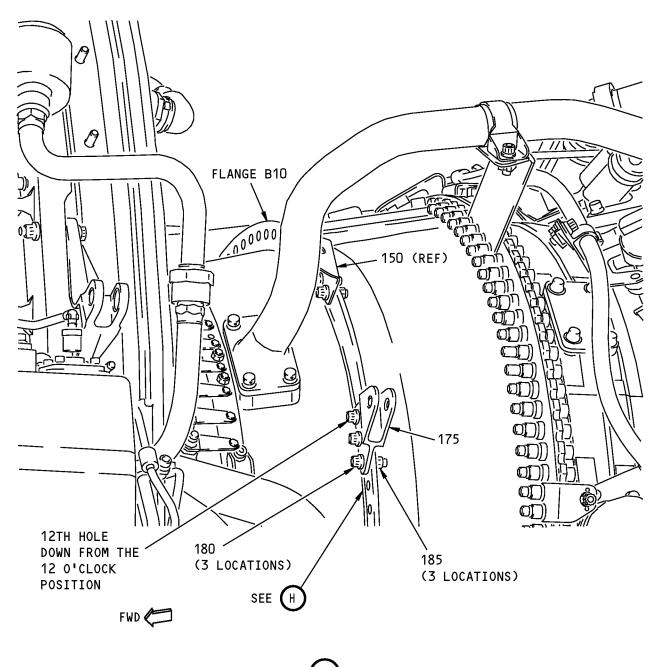


				LOCATION	AND	
ITEM			BRKT OR	ANGLE		
NO.	PART NUMBER	NOMENCLATURE	FLG SIDE	FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 6) ATTACH BRACKET ASSY (150) TO LEFT BOTTOM 2 HOLES ON TOP HOLE SEGMENT				
		(10TH AND 11TH HOLE DOWN FROM 12 O'CLOCK) ON FLANGE B10. USE BOLTS (155).				
150 155	332A2910-111 BACB30ZF4-07	. BRACKET ASSY . BOLT	FWD	FWD		1 2
		TIGHTEN BOLTS (155) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 7-1 Page 13 Oct 05/2007





(G)

Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 14 Oct 05/2007

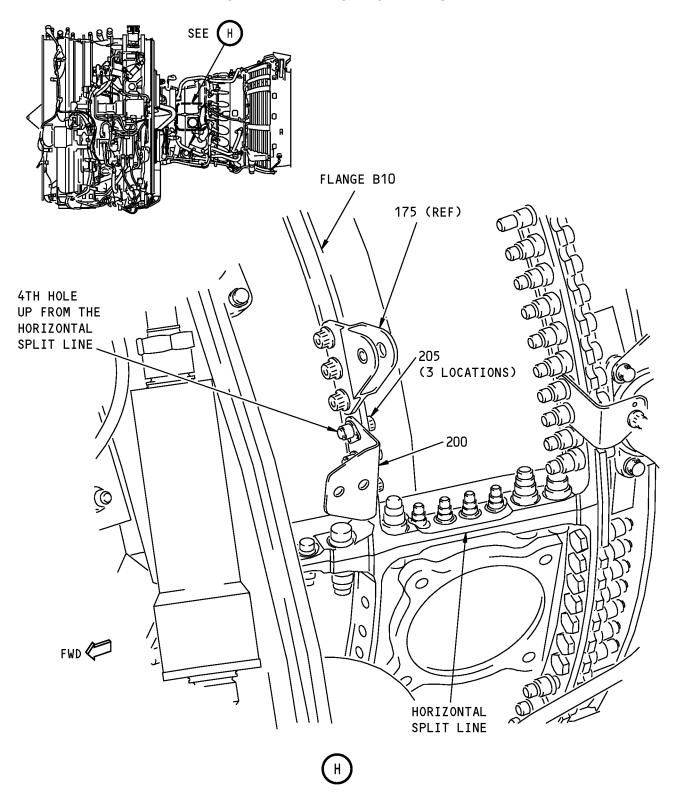


				LOCATION	I AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 7)  ATTACH BRACKET ASSY (175) TO FIRST THREE HOLES IN CENTER BOLT HOLE SEGMENT (12TH, 13TH AND 14TH HOLE DOWN FROM 12 O'CLOCK) ON FLANGE B10. USE BOLTS (180) AND NUTS (185).				
175 175 180 180 185	332A2920-179 332A2930-17 BACB30ZF4-12 BACB30ZF4-10 AS3485-10	BRACKET ASSY BRACKET ASSY BRACKET ASSY BRACKET ASSY BOLT (FWD SIDE) BOLT (FWD SIDE) NUT  TIGHTEN BOLTS (180) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).  *[1] 332A2930-17 BRACKET ASSY (175) TOGETHER WITH BACB30ZF4-10 BOLTS (180) OPTIONAL TO 332A2920-179 BRACKET ASSY (175) TOGETHER WITH BACB30ZF4-12 BOLTS (180).	FWD FWD		OPT OPT	1 - 3 - 3

71-00-02

P/P BUILDUP FIGURE 7-1 Page 15 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 16 Oct 05/2007

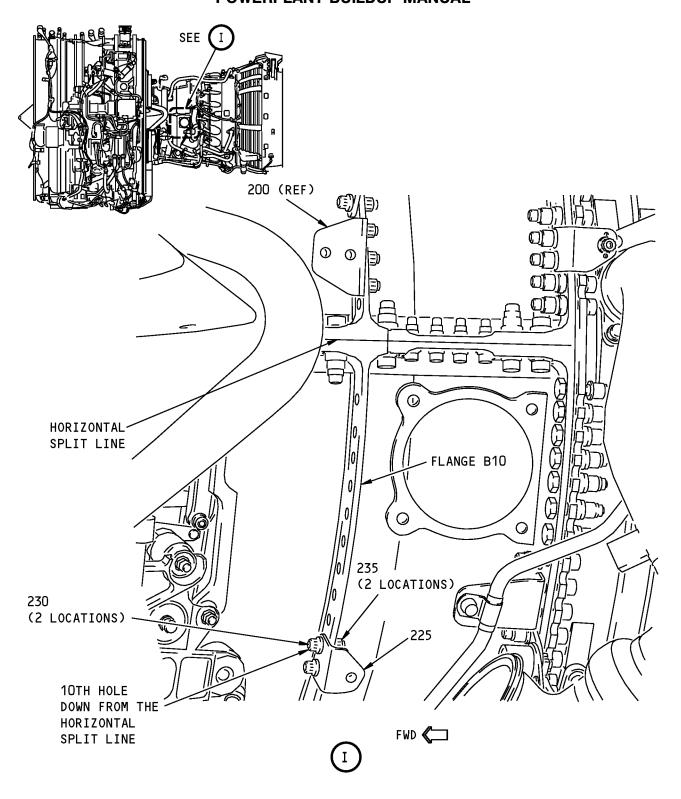


				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 8) ATTACH BRACKET ASSY (200) TO 2ND, 3RD AND 4TH HOLES UP FROM HORIZONTAL SPLIT LINE ON FLANGE B10. USE BOLTS (205).				
200 205	332A2910-128 BACB30ZF4-07	. BRACKET ASSY . BOLT TIGHTEN BOLTS (205) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD	FWD		1 3

71-00-02

P/P BUILDUP FIGURE 7-1 Page 17 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 18 Oct 05/2007



				LOCATION	AND	
ITEM NO. PART NU	MBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1  225 332A2910-11 230 BACB307F4-	CASE (FIGURE ATTACH 11TH HO LINE ON NUTS (2	KET ASSY	FWD	AFT		1 2
225 332A2910-11 230 BACB30ZF4- 235 AS3485-10	08 . BOLT . NUT TIGHTE	(FWD SIDE)  N BOLTS (230) TO 110-120 POUND-(12.4-13.6 NEWTON METERS).	FWD	AFI		1 2 2

71-00-02

P/P BUILDUP FIGURE 7-1 Page 19 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 20 Oct 05/2007

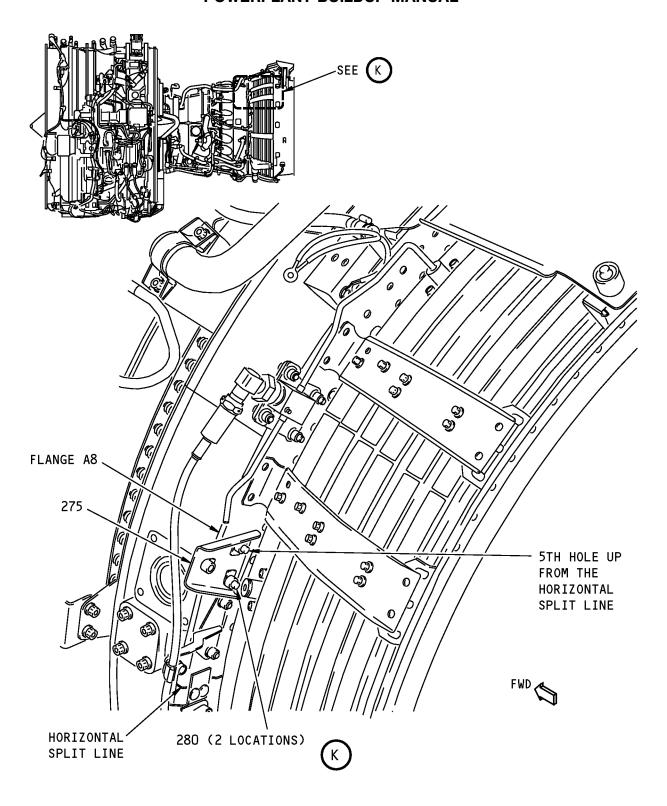


ITEM				
NO. 7-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - LEFT SIDE CORE CASE	UC	QTY
/-1		(FIGURE 7-1, SHEET 10)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 7-1 Page 21 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 22 Oct 05/2007

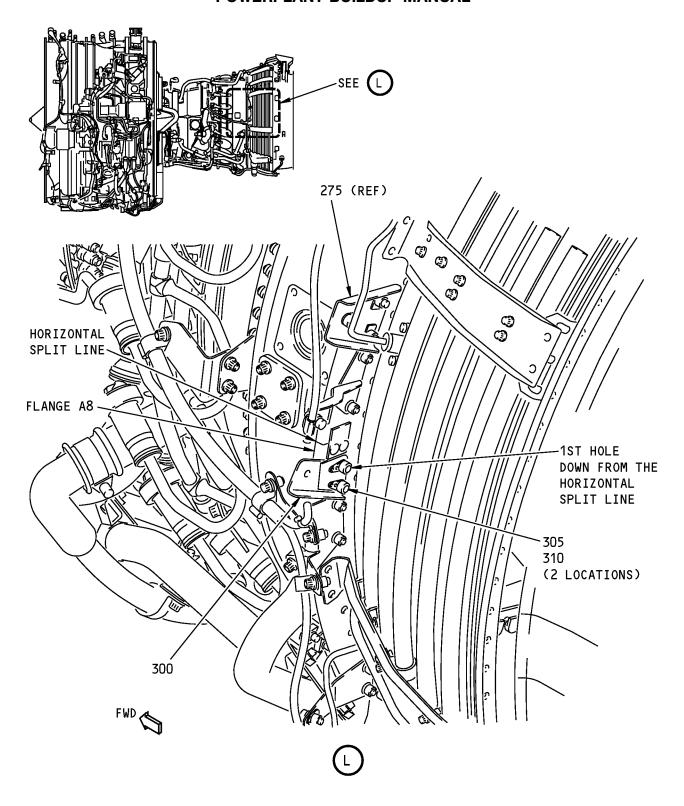


				LOCATION	AND	
17584				ENTATION		
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE				
		(FIGURE 7-1, SHEET 11)				
		ATTACH BRACKET ASSY (275) TO 4TH AND 5TH HOLES UP FROM HORIZONTAL SPLIT LINE ON FLG A8 USING BOLTS (280).				
275 280	332A2910-106 BACB30ZF4-06	. BRACKET ASSY . BOLT (FWD SIDE)	AFT			1 2
		TIGHTEN BOLTS (280) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 7-1 Page 23 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 24 Oct 05/2007

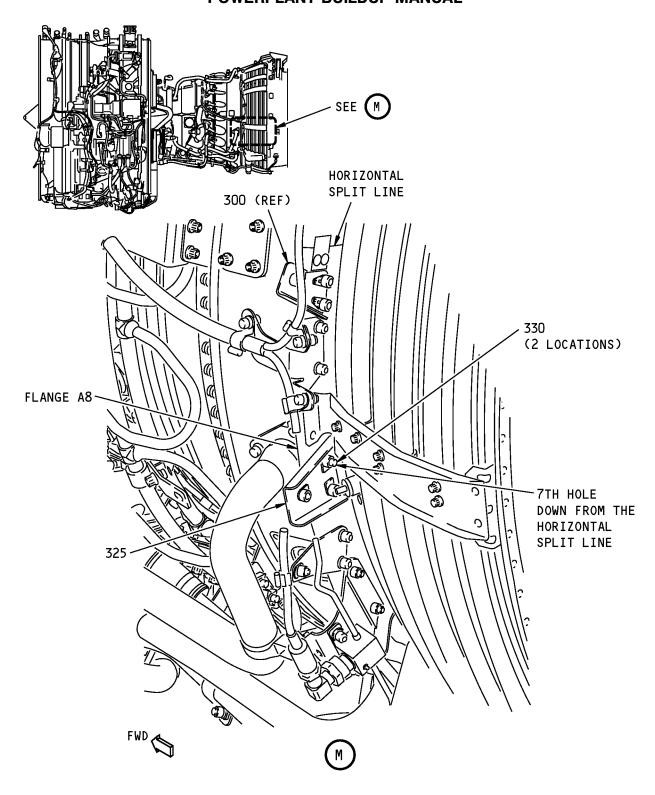


7-1  BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 12)  ATTACH BRACKET ASSY (300) TO 1ST AND 2ND HOLES DOWN FROM HORIZONTAL SPLIT LINE ON FLANGE A8 USING BOLTS (305) AND NUTS (310).  300 332A2910-39 . BRACKET ASSY . BOLT (FWD SIDE) 310 AS3485-10 . NUT	ND	LOCATION IENTATION				
CASE (FIGURE 7-1, SHEET 12)  ATTACH BRACKET ASSY (300) TO 1ST AND 2ND HOLES DOWN FROM HORIZONTAL SPLIT LINE ON FLANGE A8 USING BOLTS (305) AND NUTS (310).  300 332A2910-39 . BRACKET ASSY . BACB30ZF4-07 . BOLT (FWD SIDE) . NUT	UC QTY			NOMENCLATURE	PART NUMBER	
305 BACB30ZF4-07 . BOLT (FWD SIDE) . 2 310 AS3485-10 . NUT				CASE (FIGURE 7-1, SHEET 12)  ATTACH BRACKET ASSY (300) TO 1ST AND 2ND HOLES DOWN FROM HORIZONTAL SPLIT LINE ON FLANGE A8 USING BOLTS (305) AND		7-1
TIGHTEN BOLTS (305) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	2		AFT	. BOLT (FWD SIDE) . NUT TIGHTEN BOLTS (305) TO 110-120 POUND-	BACB30ZF4-07	305

71-00-02

P/P BUILDUP FIGURE 7-1 Page 25 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 13)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 26 Oct 05/2007

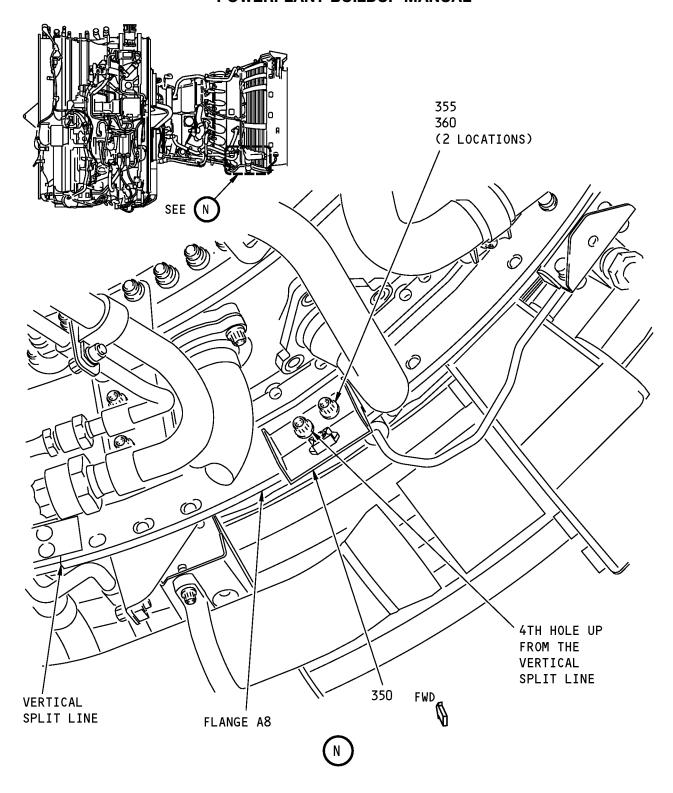


				LOCATION	AND	
ITEM			BRKT OR	ANGLE		
NO.	PART NUMBER	NOMENCLATURE	FLG SIDE	FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE				
		(FIGURE 7-1, SHEET 13)				
		ATTACH BRACKET ASSY (325) TO 7TH AND 8TH HOLES DOWN FROM HORIZONTAL SPLIT LINE ON FLANGE A8 USING BOLTS (330).				
325 330	332A2910-108 BACB30ZF4-06	. BRACKET ASSY . BOLT (FWD SIDE)	AFT			1 2
		TIGHTEN BOLTS (330) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 7-1 Page 27 Oct 05/2007





Bracket Installation - Left Side Core Case Figure 7-1 (Sheet 14)

71-00-02

P/P BUILDUP FIGURE 7-1 Page 28 Oct 05/2007



			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
7-1		BRACKET INSTALLATION - LEFT SIDE CORE CASE (FIGURE 7-1, SHEET 14)  ATTACH BRACKET ASSY (350) TO 4TH AND 5TH HOLES UP FROM VERTICAL SPLIT LINE AT 6 0'CLOCK POSITION ON FLANGE A8. USE BOLTS (355) AND NUTS (360).				
350 355 360	332A2920-55 BACB30ZF4-07 AS3485-10	. BRACKET ASSY . BOLT (FWD SIDE) . NUT TIGHTEN BOLTS (355) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	FWD			1 2 2 2

71-00-02

P/P BUILDUP FIGURE 7-1 Page 29 Oct 05/2007



#### FIGURE 8-1

# BRACKET INSTALLATION - RIGHT SIDE CORE CASE

**REF QEC TASK NO.: 8** 

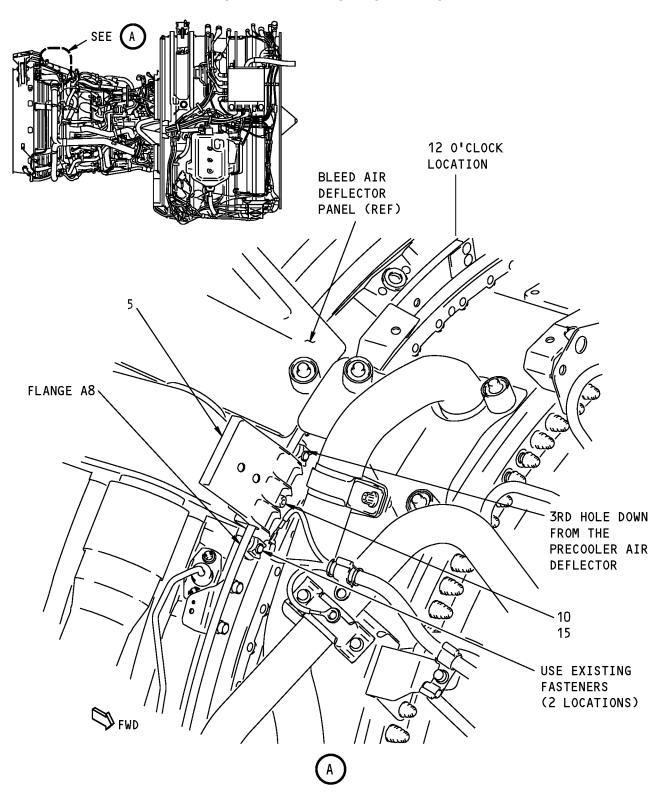
**REF DWG: 332A2900** 

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 8-1 Page 1 Oct 05/2007





Bracket Installation - Right Side Core Case Figure 8-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 8-1 Page 2 Oct 05/2007

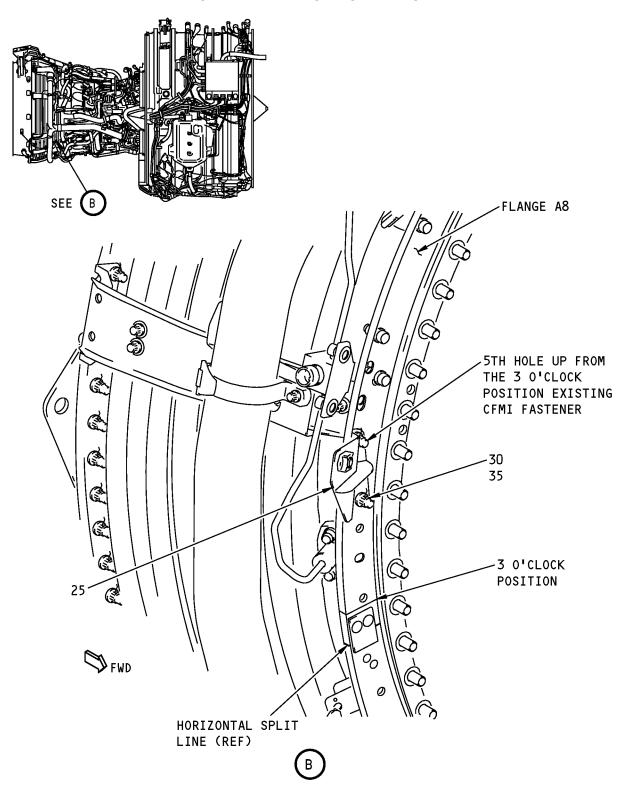


			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
8-1		BRACKET INSTALLATION - RIGHT SIDE CORE CASE (FIGURE 8-1, SHEET 1)				
5 C1	332A2920-230 B00130	REMOVE EXISTING CFMI FASTENERS FROM 3RD, 4TH AND 5TH HOLES DOWN FROM PRECOOLER AIR DEFLECTOR ON FLANGE A8. CLEAN MATING SURFACES OF BRACKET ASSY (5) AND ENGINE FLANGE WITH alcohol, B00130 (C1). MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.  . BRACKET ASSY  . ALCOHOL	FWD		CON	1 AR
10 15	BACB30ZF4-08 NAS1149C0432R	ATTACH BRACKET ASSY (5) TO ENGINE FLANGE A8. USE EXISTING CFMI FASTENERS ON OUTBOARD HOLES AND BOLT (10), WASHER (15) AND EXISTING CFMI NUT AT CENTER LOCATION BOLT (FWD SIDE) . WASHER (UNDER BOLT HEAD)				1
		TIGHTEN BOLT (10) AND EXISTING CFMI BOLTS TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				

71-00-02

P/P BUILDUP FIGURE 8-1 Page 3 Oct 05/2008





Bracket Installation - Right Side Core Case Figure 8-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 8-1 Page 4 Oct 05/2007



			BRACKET LOCATION AND ORIENTATION			
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
8-1	PART NUMBER	BRACKET INSTALLATION - RIGHT SIDE CORE	FLG SIDE	FACES	UC	QIT
		CASE (FIGURE 8-1, SHEET 2)				
		REMOVE EXISTING CFMI FASTENER FROM 5TH HOLE UP FROM 3 O'CLOCK POSITION ON FLANGE A8.				
25 30	332A2921-1 BACB30ZF4-07	ATTACH BRACKET ASSY (25) TO 5TH HOLE UP FROM 3 O'CLOCK POSITION ON FLANGE A8 USING EXISTING CFMI FASTENER AND 4TH HOLE UP USING BOLT (30) AND NUT (35).  BRACKET ASSY BOLT	FWD			1 1
35	AS3485-10	. NUT TIGHTEN BOLTS (30) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).				1

71-00-02

P/P BUILDUP FIGURE 8-1 Page 5 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



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Bracket Installation - Right Side Core Case Figure 8-1 (Sheet 3)

**71-00-02**P/P BUILDUP FIGURE 8-1

Page 6 Oct 05/2007



ITEM				
NO. 8-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - RIGHT SIDE CORE CASE	UC	QTY
0-1		(FIGURE 8-1, SHEET 3)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 8-1 Page 7 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



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Bracket Installation - Right Side Core Case Figure 8-1 (Sheet 4)

**71-00-02** P/P BUILDUP FIGURE 8-1

Page 8 Oct 05/2007

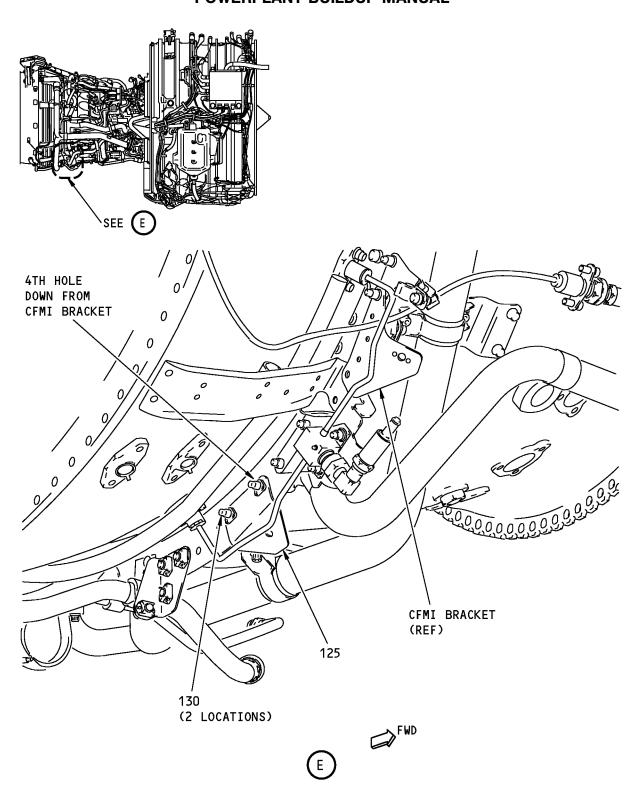


ITEM				
NO. 8-1	PART NUMBER	NOMENCLATURE BRACKET INSTALLATION - RIGHT SIDE CORE CASE	UC	QTY
0-1		(FIGURE 8-1, SHEET 4)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 8-1 Page 9 Oct 05/2007





Bracket Installation - Right Side Core Case Figure 8-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 8-1 Page 10 Oct 05/2007



				LOCATION	AND	
ITEM NO.	PART NUMBER	NOMENCLATURE	BRKT OR FLG SIDE	ANGLE FACES	UC	QTY
8-1 125 130	332A2911-9 BACB30ZF4-06	BRACKET INSTALLATION - RIGHT SIDE CORE CASE (FIGURE 8-1, SHEET 5)  ATTACH BRACKET ASSY (125) TO 4TH AND 5TH HOLES DOWN FROM CFMI BRACKET (REF) ON FLANGE A8. USE BOLTS (130).  BRACKET ASSY  BOLT  TIGHTEN BOLTS (130) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	AFT	FWD		1 2

71-00-02

P/P BUILDUP FIGURE 8-1 Page 11 Oct 05/2007



#### FIGURE 9-1

# **DRAINS INSTL - LEFT SIDE FAN CASE**

**REF QEC TASK NO.: 9** 

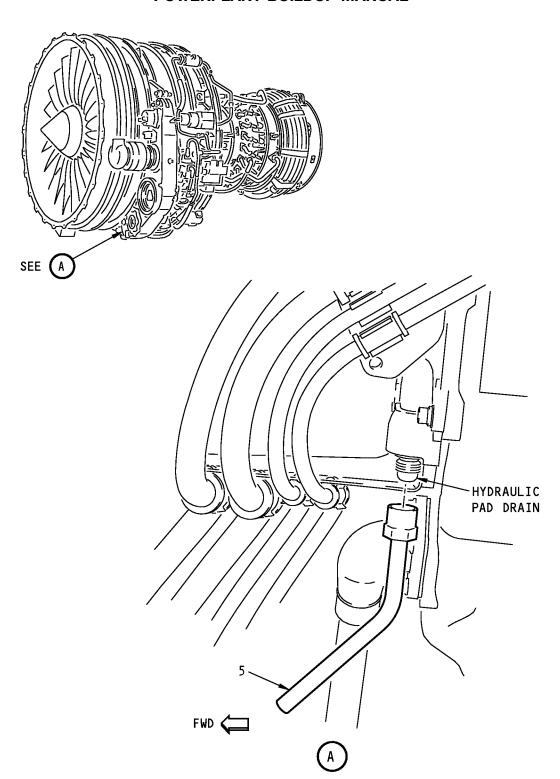
**REF DWG: 332A2100** 

**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 9-1 Page 1 Oct 05/2007





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 2 Oct 05/2007

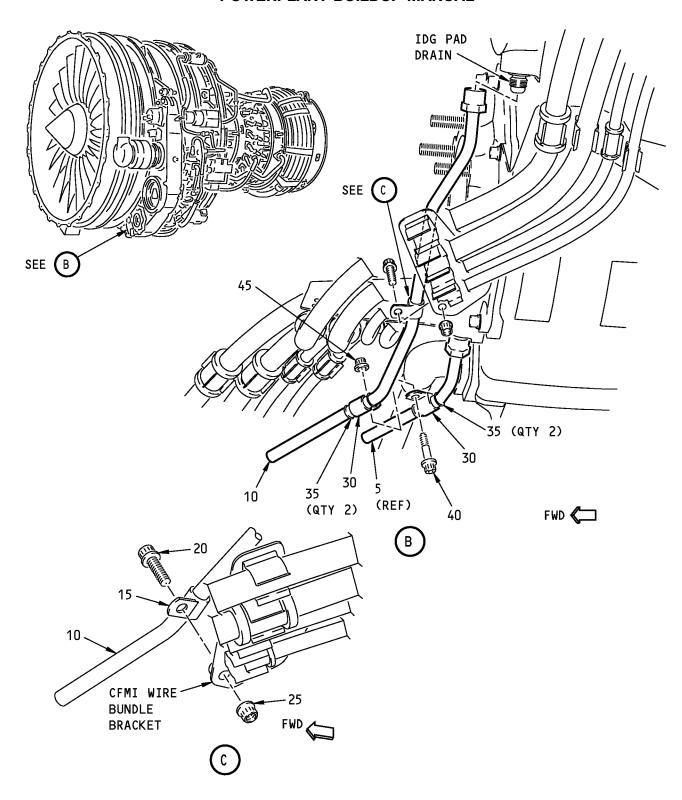


ITEM	DART NUMBER	NOMENCI ATLIDE	IIC	QTY
9-1	PART NOWIDER	DRAINS INSTALLATION - LEFT SIDE FAN CASE	00	QII
		(FIGURE 9-1, SHEET 1)		
		OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED. WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.		
		APPLY grease, D00504 (C1) UNDER HEAD OF BOLTS ATTACHING LOOP CLAMPS TO PREVENT DISTORTION OF CLAMP DURING TORQUING. APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS.		
C1 C6	D00504 D00006	REMOVE PROTECTIVE CAP FROM NIPPLE ON HYDRAULIC PAD DRAIN. LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1).  GREASE  NEVER-SEEZ NSBT-8N COMPOUND	CON CON	AR AR
		LOOSELY ATTACH TUBE ASSY (5) TO NIPPLE.		
5	332A2/10-3	. TUBE ASSY		1
	NO. 9-1	NO. PART NUMBER  9-1  C1 D00504 C6 D00006	PART NUMBER  DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 1)  NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED. WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.  APPLY grease, D00504 (C1) UNDER HEAD OF BOLTS ATTACHING LOOP CLAMPS TO PREVENT DISTORTION OF CLAMP DURING TORQUING. APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS.  REMOVE PROTECTIVE CAP FROM NIPPLE ON HYDRAULIC PAD DRAIN. LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1).  GREASE  NEVER-SEEZ NSBT-8N COMPOUND  LOOSELY ATTACH TUBE ASSY (5) TO NIPPLE.	NO. PART NUMBER  DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 1)  NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED. WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT. APPLY grease, D00504 (C1) UNDER HEAD OF BOLTS ATTACHING LOOP CLAMPS TO PREVENT DISTORTION OF CLAMP DURING TORQUING. APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS.  REMOVE PROTECTIVE CAP FROM NIPPLE ON HYDRAULIC PAD DRAIN. LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1). GREASE ON NEVER-SEEZ NSBT-8N COMPOUND LOOSELY ATTACH TUBE ASSY (5) TO NIPPLE.

71-00-02

P/P BUILDUP FIGURE 9-1 Page 3 Oct 05/2008





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 4 Oct 05/2007

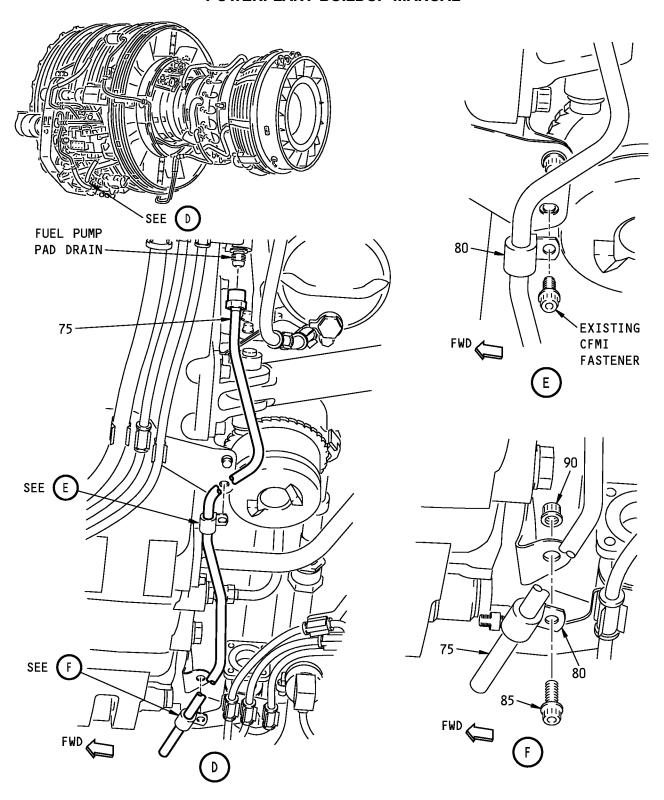


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 2)		
I I I	C1 C6	D00504 D00006	REMOVE PROTECTIVE CAP FROM NIPPLE ON IDG PAD DRAIN AND LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1). APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS.  GREASE  NEVER-SEEZ NSBT-8N COMPOUND	CON CON	AR AR
	10	332A2710-1	ROUTE TUBE ASSY (10) INBOARD OF CFMI WIRE BUNDLE BRACKET AND LOOSELY ATTACH TO NIPPLE TUBE ASSY		1
I			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLT. LOOSELY ATTACH TUBE ASSY (10) TO CFMI WIRE BUNDLE BRACKET WITH CLAMP (15), BOLT (20) AND NUT (25).		
I	15 20 25 C6	J1221G06 BACB30ZF4-09 AS3485-10 D00006	. CLAMP . BOLT . NUT . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 1 1 AR
I	30	J1221G06	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLT. LOOSELY INSTALL FLOATING CLAMPS (30) BETWEEN TUBE ASSY (5) AND (10) AT APPROXIMATE LOCATION SHOWN. USE CLAMPSHELLS (35), BOLT (40) AND NUT (45).  . CLAMP		2
ī	35 35 40 45	BACC10GT2-06 9352M41P03 BACB30ZF4-08 AS3485-10 D00006	. CLAMPSHELL . CLAMPSHELL (OPTIONAL) . BOLT . NUT	OPT	4 - 1 1
I	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND  ADJUST TUBE ASSY (5) AND (10) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).	CON	AR
			TIGHTEN TUBE ASSY (5) AND (10) TO 257-284 POUND-INCHES (29.0-32.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
			TIGHTEN BOLTS (20) AND (40) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 5 Oct 05/2008





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 6 Oct 05/2007

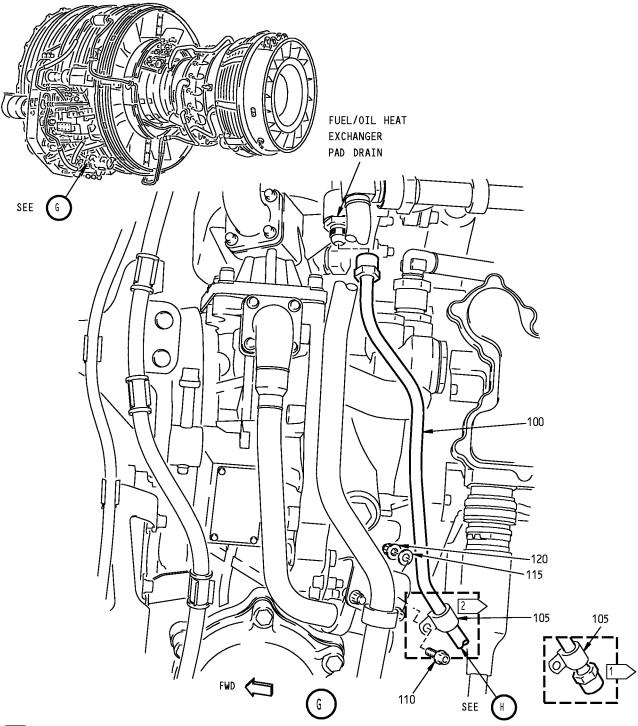


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 3)		
I	C1	D00504	REMOVE PROTECTIVE CAP FROM NIPPLE ON FUEL PUMP PAD DRAIN AND LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1).  . GREASE	CON	AR
	75	332A2710-36	LOOSELY ATTACH TUBE ASSY (75) TO NIPPLE. . TUBE ASSY		1
I			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLT. AT 2 LOCATIONS, LOOSELY ATTACH TUBE ASSY (75) TO ENGINE BRACKETS ON AFT SIDE OF AGB. USE CLAMP (80) AND EXISTING CFMI FASTENERS AT UPPER LOCATION AND CLAMP (80), BOLT (85) AND NUT (90) AT LOWER LOCATION.		
Ī	80 85 90 C6	J1221G06 BACB30ZF4-08 AS3485-10 D00006	. CLAMP . BOLT . NUT . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 1 1 AR
	00	200000	ADJUST TUBE ASSY (75) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).	OON	AIT
			TIGHTEN TUBE ASSY (75) TO 257-284 POUND-INCHES (29.0-32.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
			TIGHTEN BOLT (85) AND EXISTING CFMI FASTENER TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 7 Oct 05/2008





1 > ENGINES WITH 332A2710-30 TUBE ASSEMBLY (100) (OPTIONAL)

2 ENGINES WITH 332A2710-38 TUBE ASSEMBLY (100) (PREFERRED)

Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 8 Oct 05/2007

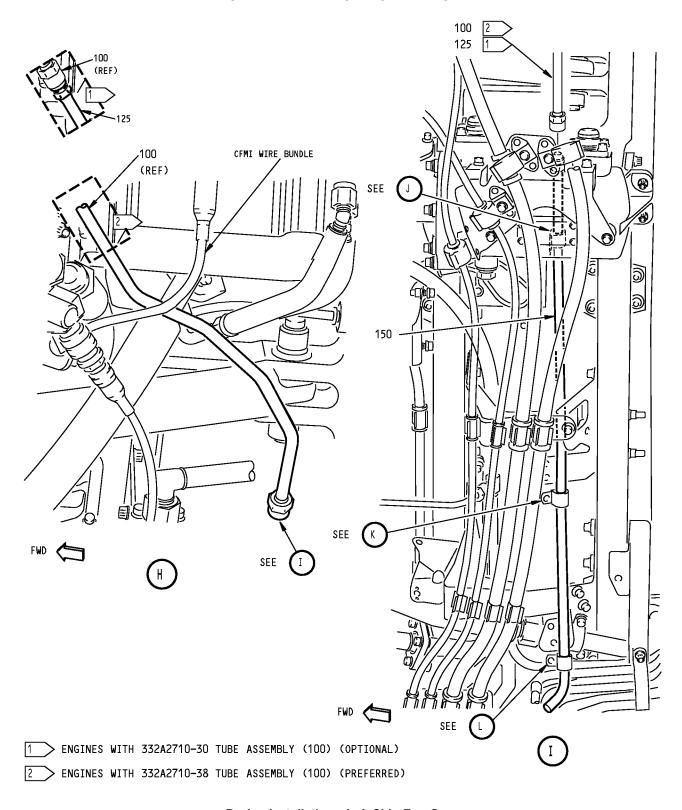


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 4)		
			NOTE: DUE TO LIMITED ACCESS, IT IS RECOMMENDED Figure 23-1 IDG AIR/OIL COOLER INSTALLATION AND Figure 24-1 IDG PLUMBING INSTALLATION BE INSTALLED AT THIS TIME.		
ı	C1	D00504	REMOVE PROTECTIVE CAP FROM NIPPLE ON FUEL/OIL HEAT EXCHANGER PAD DRAIN AND LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1) GREASE	CON	AR
			PREFERRED CONFIGURATION;		
			ENGINES WITH 332A2710-38 TUBE ASSY (100); ROUTE TUBE ASSY (100) UNDER CFMI WIRE BUNDLE (REF SHEET 5) AND LOOSELY ATTACH TUBE ASSY (100) TO NIPPLE.		
			OPTIONAL CONFIGURATION;		
	100	332A2710-38	ENGINES WITH 332A2710-30 TUBE ASSY (100); LOOSELY ATTACH TUBE ASSY (100) TO NIPPLE.  . TUBE ASSY <sup>*[1]</sup>		1
	100	332A2710-30	. TUBE ASSY*[1]	OPT	-
I	105 110	J1221G06 BACB30ZF4-08	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006(C6) TO THREADS AND UNDERSIDE HEAD OF BOLT. LOOSELY ATTACH TUBE ASSY (100) TO ENGINE BRACKET JUST ABOVE FUEL FILTER. USE CLAMP (105), BOLT (110), WASHER (115) AND NUT (120) CLAMP . BOLT		1
	115 120	NAS1149E0432P AS3485-10	. WASHER . NUT		1
I	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			ADJUST TUBE ASSY (100) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
			TIGHTEN TUBE ASSY (100) TO HAND TIGHT.		
			*[1] 332A2710-30 TUBE ASSY (100) TOGETHER WITH 332A2710-11 TUBE ASSY (125) OPTIONAL TO 332A2710-38 TUBE ASSY (100). ENGINES WITH 332A2710-38 TUBE ASSY (100) DO NOT REQUIRE TUBE (125).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 9 Oct 05/2008





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 10 Oct 05/2007

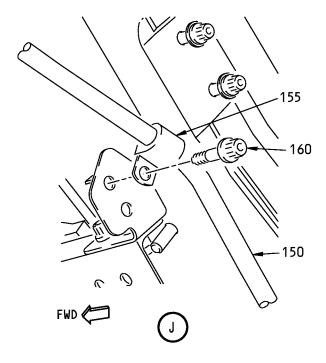


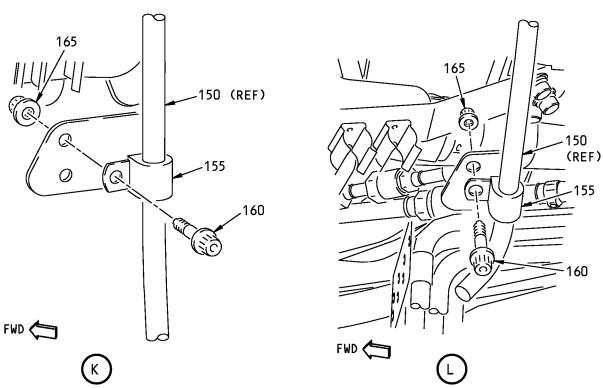
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 5)		
		ENGINES WITH 332A2710-30 TUBE ASSY (100); LUBRICATE THREADS OF TUBE ASSY (125) WITH grease, D00504 (C1). ROUTE TUBE ASSY (125) UNDER CFMI WIRE BUNDLE AND LOOSELY ATTACH TO 332A2710-30 TUBE ASSY (100).		
125	332A2710-11	. TUBE ASSY*[1]	OPT	-
C1	D00504	. GREASE LUBRICATE THREADS OF TUBE ASSY (150) WITH grease, D00504 (C1). ROUTE TUBE ASSY (150) BEHIND FUEL/OIL COOLER AND UNDER CFMI WIRE BUNDLE BRACKETS AND LOOSELY ATTACH TO	CON	AR
150	332A2710-13	332A2710-38 TUBE ASSY (100) OR TUBE ASSY (125) TUBE ASSY		1
C1	D00504	. GREASE	CON	AR
		*[1] 332A2710-30 TUBE ASSY (100) TOGETHER WITH 332A2710-11 TUBE ASSY (125) OPTIONAL TO 332A2710-38 TUBE ASSY (100). ENGINES WITH 332A2710-38 TUBE ASSY (100) DO NOT REQUIRE TUBE (125).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 11 Oct 05/2008







Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 12 Oct 05/2007

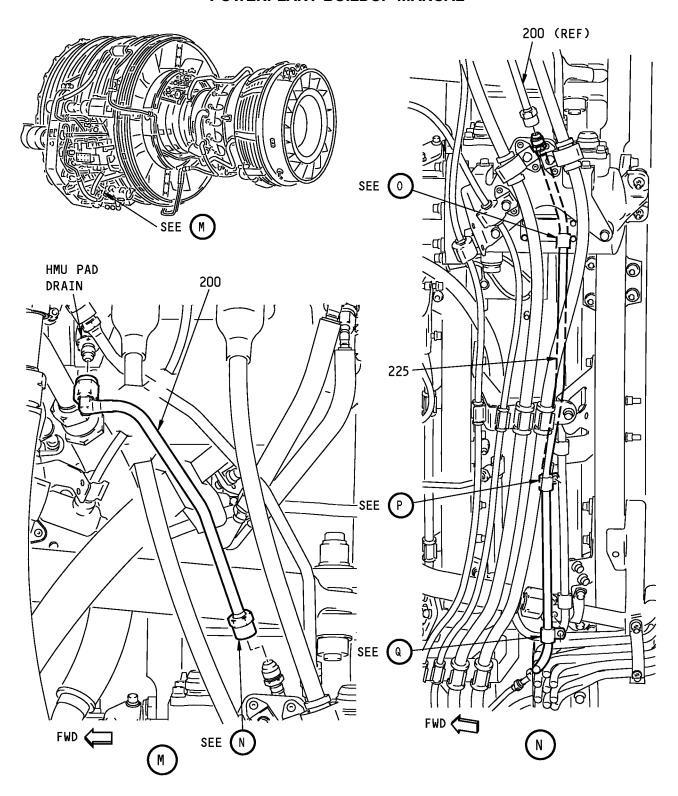


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 6)		
1	155	11001.000	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006(C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. AT 3 LOCATIONS, ATTACH TUBE (150) TO ENGINE BRACKETS. USE CLAMP (155) AND BOLT (160) AT UPR LOCATION AND CLAMPS (155), BOLTS (160) AND NUTS (165) AT LWR LOCATIONS.		c
	155 160	J1221G06 BACB30ZF4-08	. CLAMP . BOLT		3 3
	165 C6	AS3485-10 D00006	. NUT . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 AR
•		500000	ADJUST TUBE ASSY (100), (125) (IF USED) AND (150) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).	OON	7.11
			TIGHTEN TUBE ASSY (100), (125) (IF USED) AND (150) TO 257-284 POUND-INCHES (29.0-32.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
			TIGHTEN BOLTS (110) AND (160) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 13 Oct 05/2008





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 14 Oct 05/2007

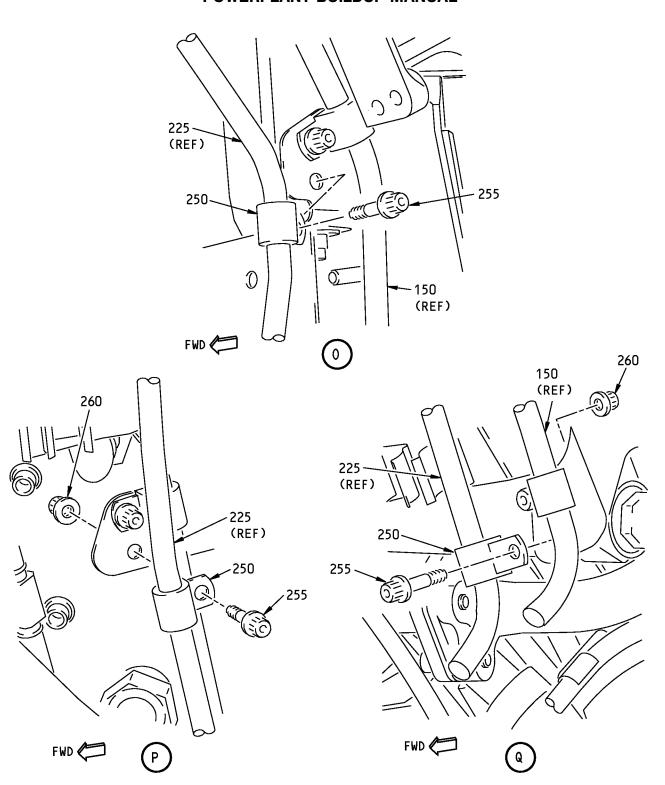


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 7)		
I	C1	D00504	REMOVE PROTECTIVE CAP FROM NIPPLE ON HMU PAD DRAIN AND LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1) GREASE	CON	AR
	200	332A2710-15	LOOSELY ATTACH TUBE ASSY (200) TO NIPPLE. . TUBE ASSY		1
I	C1	D00504	LUBRICATE THREADS OF TUBE ASSY (225) WITH grease, D00504 (C1) GREASE	CON	AR
			ROUTE TUBE ASSY (225) BEHIND FUEL/OIL COOLER AND UNDER CFMI WIRE BUNDLE BRACKETS AND LOOSELY ATTACH TO TUBE ASSY (200).		
	225	332A2710-27	. TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 9-1 Page 15 Oct 05/2008





Drains Installation - Left Side Fan Case Figure 9-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 9-1 Page 16 Oct 05/2007



	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	9-1		DRAINS INSTALLATION - LEFT SIDE FAN CASE (FIGURE 9-1, SHEET 8)		
I			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006(C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. AT 3 LOCATIONS, ATTACH TUBE ASSY (225) TO ENGINE BRACKETS. USE CLAMP (250) AND BOLT (255) AT UPR LOCATION AND CLAMPS (250), BOLTS (255) AND NUTS (260) AT LWR LOCATIONS.		
	250 255 260	J1221G06 BACB30ZF4-08 AS3485-10	. CLAMP . BOLT . NUT		3 3 2
I	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			ADJUST TUBES ASSY (200) AND (225) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
			TIGHTEN TUBE ASSY (200) AND (225) TO 257-284 POUND-INCHES (53.7-59.3 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
			TIGHTEN BOLTS (255) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 9-1 Page 17 Oct 05/2008



#### **FIGURE 10-1**

# **DRAINS INSTL - RIGHT SIDE FAN CASE**

**REF QEC TASK NO.: 10** 

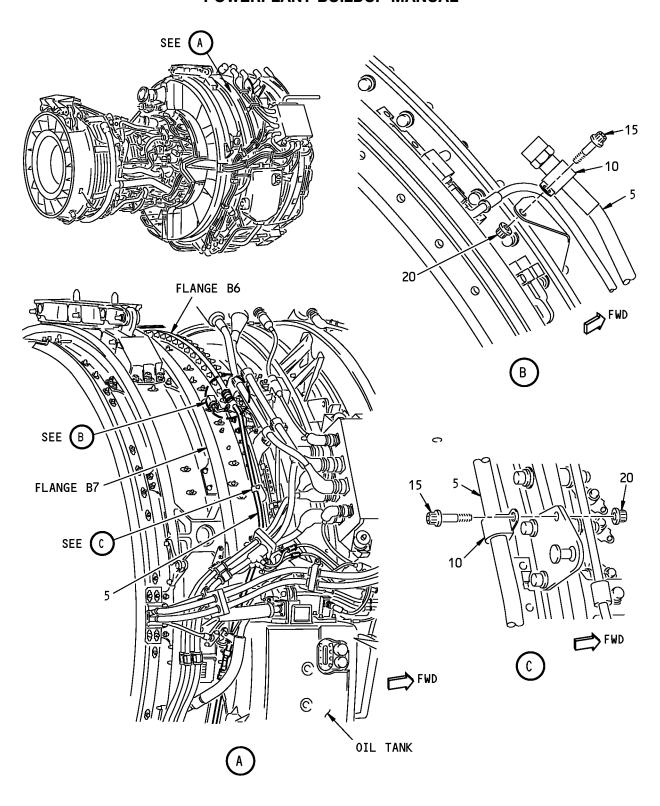
**REF DWG: 332A2100** 

**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 10-1 Page 1 Oct 05/2007





Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 2 Oct 05/2007

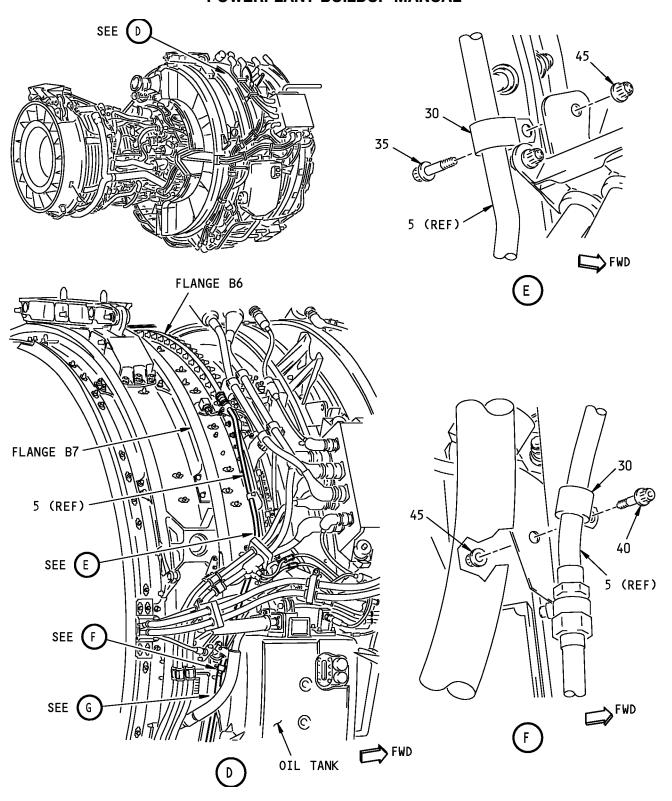


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 1)		
		NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED. WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.		
		APPLY grease, D00504 (C1) UNDER HEAD OF BOLTS ATTACHING LOOP CLAMPS TO PREVENT DISTORTION OF CLAMP DURING TORQUING. APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS.		
C1 C6	D00504 D00006	. GREASE . NEVER-SEEZ NSBT-8N COMPOUND	CON CON	AR AR
		POSITION TUBE ASSY (5) ON ENGINE FAN CASE AT 1 AND 3 O'CLOCK POSITIONS BETWEEN FLANGES B6 AND B7.		
		LOOSELY ATTACH TUBE ASSY (5) AT TOP TWO LOCATIONS TO ENGINE BRACKETS WITH CLAMPS (10), BOLTS (15) AND NUTS (20). MAKE SURE UPPER CLAMP (10) IS INSTALLED BETWEEN MARKS ON TUBE ASSY (5).		
5 10 15 20	332A2710-32 J1221G08 BACB30ZF4-08 AS3485-10	. TUBE ASSY . CLAMP . BOLT . NUT		1 2 2 2
		ADJUST TUBE ASSY (5) TO BEST POSITION. MAKE SURE PRELOAD ON ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
		TIGHTEN BOLTS (15) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		INSTALL PROTECTIVE CAP ON UPPER END OF TUBE ASSY (5).		

71-00-02

P/P BUILDUP FIGURE 10-1 Page 3 Oct 05/2008





Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 4 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



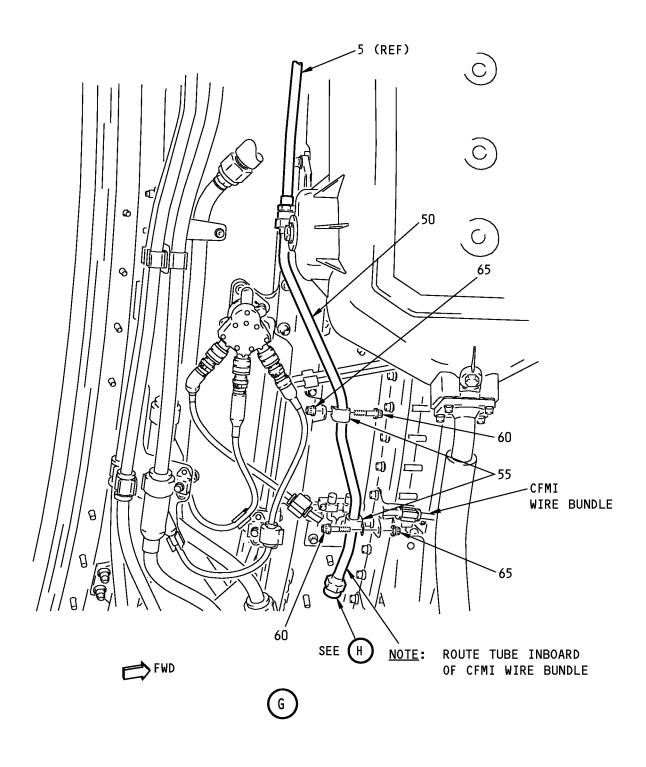
# 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 2)		
1	30 35 40 45 C6	J1221G08 BACB30ZF4-08 BACB30ZF4-07 AS3485-10 D00006	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. LOOSELY ATTACH TUBE ASSY (5) WITH CLAMP (30), BOLT (35) AND NUT (45) AT UPPER LOCATION AND CLAMP (30), BOLT (40) AND NUT (45) AT LOWER LOCATION.  CLAMP  BOLT  NUT  NEVER-SEEZ NSBT-8N COMPOUND	CON	2 1 1 2 AR
			TIGHTEN BOLT (35) AND (40) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 10-1 Page 5 Oct 05/2008





Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 6 Oct 05/2007

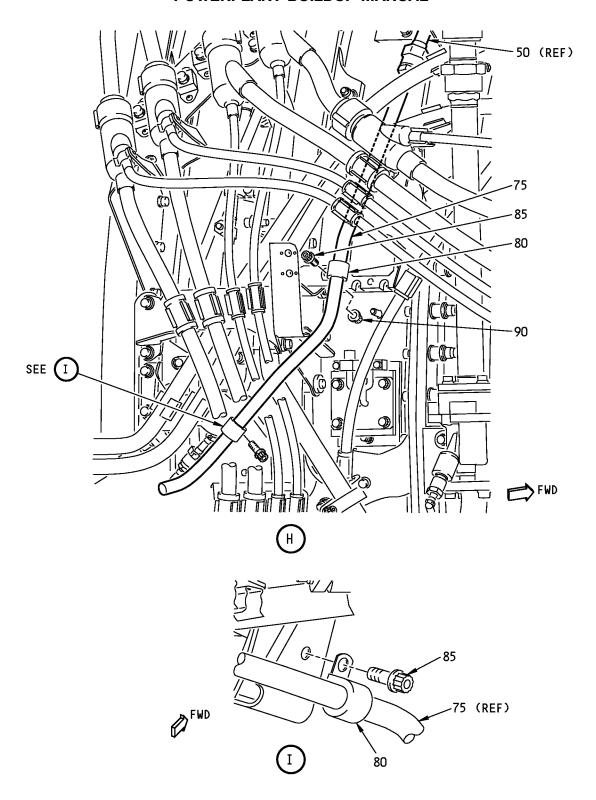


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 3)		
			LUBRICATE THREADS OF TUBE ASSY (5) WITH grease, D00504(C1). ALIGN TUBE ASSY (50) ON ENGINE FAN CASE AND LOOSELY CONNECT TO TUBE ASSY (5).		
			NOTE: ROUTE TUBE ASSY (50) INBOARD OF CFMI WIRE BUNDLE.		
ı	50 C1	332A2710-33 D00504	. TUBE ASSY . GREASE	CON	1 AR
Ī			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. LOOSELY SECURE TUBE ASSY (50) TO ENGINE BRACKETS AT 2 LOCATIONS WITH CLAMPS (55), BOLTS (60) AND NUTS (65).		
	55 60 65	J1221G08 BACB30ZF4-07 AS3485-10	. CLAMP . BOLT . NUT	CON	2 2 2
	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND TIGHTEN TUBE ASSY (50) TO 475-525 POUND-INCHES (53.7-59.3 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.	CON	AR
			ADJUST TUBE ASSY (50) TO BEST POSITION. MAKE SURE PRELOAD AT CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
			TIGHTEN BOLTS (60) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 10-1 Page 7 Oct 05/2008





Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 8 Oct 05/2007

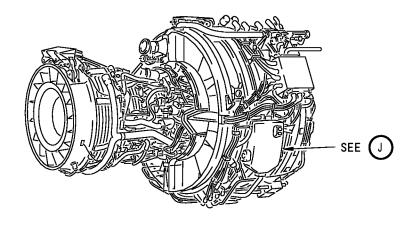


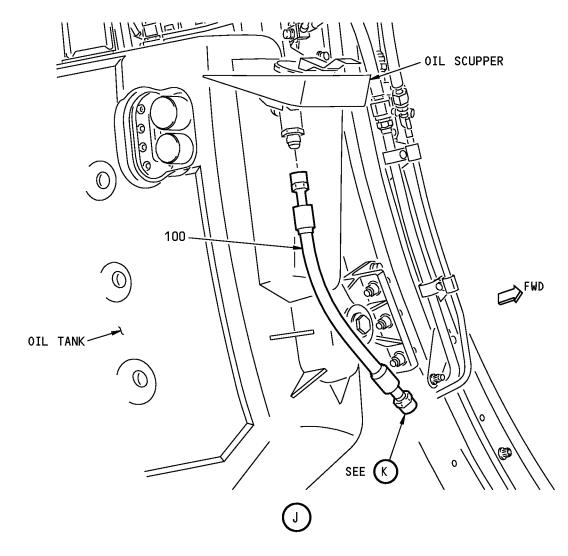
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 4)		
		LUBRICATE THREADS OF TUBE ASSY (50) WITH grease, D00504 (C1). APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. POSITION TUBE ASSY (75) UNDER CFMI WIRE BUNDLES AND BRACKETS AND LOOSELY CONNECT TO TUBE ASSY (50).		
75	332A2710-31	. TUBE ASSY	0011	1
C1 C6	D00504 D00006	. GREASE . NEVER-SEEZ NSBT-8N COMPOUND	CON	AR AR
00	500000	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. LOOSELY ATTACH TUBE ASSY (75) AT TWO LOCATIONS TO ENGINE BRACKETS WITH CLAMPS (80), BOLTS (85) AND NUT (90).	CON	Alt
80	J1221G08	. CLAMP		2
85	BACB30ZF4-07	BOLT		2
90	AS3485-10	NUT	001	1
C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
		TIGHTEN TUBE ASSY (75) TO 475-525 POUND-INCHES (53.7-59.3 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		ADJUST TUBE ASSY (75) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
		TIGHTEN BOLTS (85) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 10-1 Page 9 Oct 05/2008







Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 10 Oct 05/2007

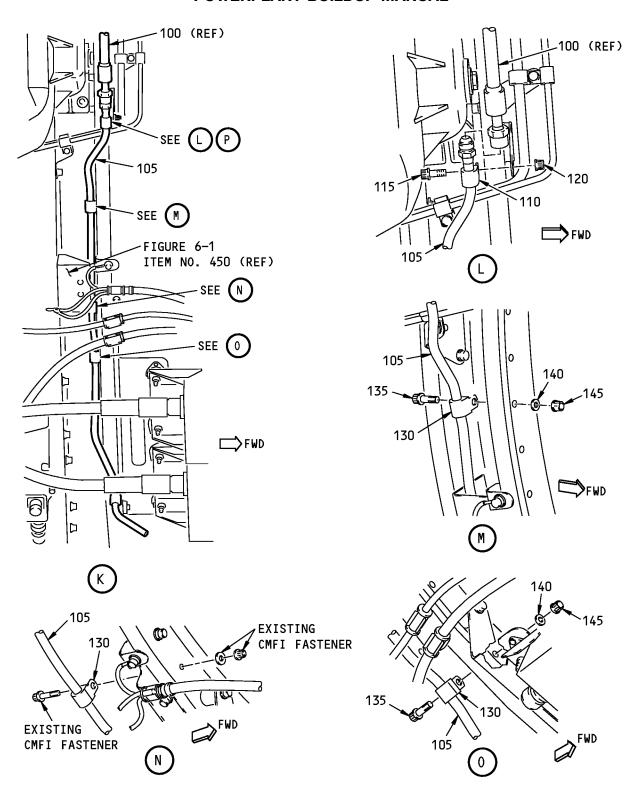


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 5)		
I	C1	D00504	REMOVE PROTECTIVE CAP FROM OIL SCUPPER DRAIN NIPPLE. LUBRICATE THREADS OF NIPPLE WITH grease, D00504 (C1). . GREASE	CON	AR
			ATTACH HOSE ASSY (100) TO NIPPLE AND TIGHTEN TO 257-284 POUND-INCHES (29.0-32.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
	100 100	B700-2 S332W110-2	. HOSE ASSY (V98441) . BOEING SPEC FOR B700-2	VEN BOE	1

71-00-02

P/P BUILDUP FIGURE 10-1 Page 11 Oct 05/2008





Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 12 Oct 05/2007

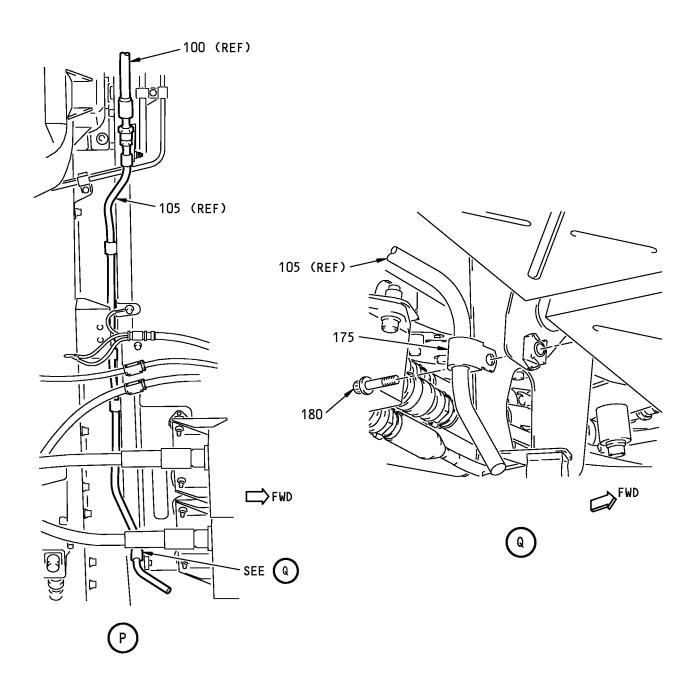


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 6)		
Ī	105 C1	332A2710-25 D00504	LUBRICATE THREADS ON TUBE ASSY (105) WITH grease, D00504 (C1) AND POSITION TUBE ASSY (105) ON ENGINE FAN CASE AND LOOSELY CONNECT TO HOSE ASSY (100).  . TUBE ASSY . GREASE	CON	1 AR
Ī			APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. JUST BELOW TUBE UNION, LOOSELY ATTACH TUBE (105) TO ENGINE BRACKETS WITH CLAMP (110), BOLT (115) AND NUT (120).		
	110	J1221G06	. CLAMP		1
	115	BACB30ZF4-08	. BOLT		1
ı	120	AS3485-10	NUT	001	1
1	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND  APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. AT FIRST AND THIRD THREE LOCATIONS, LOOSELY ATTACH TUBE ASSY (105) TO ENGINE BRACKETS. USE CLAMPS (130), BOLTS (135), WASHERS (140) AND NUTS (145). AT REMAINING LOCATION USE EXISTING CFMI FASTENER.	CON	AR
	130	J1221G06	. CLAMP		3
	135	BACB30ZF4-10	. BOLT		2
	140	NAS1149C0432R	. WASHER (AGAINST ENGINE CASE)		2
	145	AS3485-10	NUT	001	2
	C6	D00006	. NEVER-SEEZ NSBT-8N COMPOUND TIGHTEN TUBE ASSY (105) TO 257-284 POUND-INCHES (29.0-32.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.	CON	AR

71-00-02

P/P BUILDUP FIGURE 10-1 Page 13 Oct 05/2008





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Drains Installation - Right Side Fan Case Figure 10-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 10-1 Page 14 Feb 05/2008



	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	10-1		DRAINS INSTALLATION - RIGHT SIDE FAN CASE (FIGURE 10-1, SHEET 7)		
_	175 180 C6	J1221G06 BACB30ZF4-06 D00006	APPLY LIGHT COATING OF Never-Seez NSBT-8N compound, D00006 (C6) TO THREADS AND UNDERSIDE HEAD OF BOLTS. AT BOTTOM LOCATION, LOOSELY ATTACH TUBE ASSY (105) TO ENGINE BRACKET WITH CLAMP (175) AND BOLT (180).  . CLAMP . BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 1 AR
			ADJUST TUBE ASSY (105) TO BEST POSITION. MAKE SURE PRELOAD AT ALL CLAMP POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS).		
			TIGHTEN BOLTS (115), (135), (180) AND EXISTING CFMI FASTENER TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 10-1 Page 15 Oct 05/2008



#### **FIGURE 11-1**

# THIS FIGURE NOT USED

71-00-02

P/P BUILDUP FIGURE 11-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



# 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

THIS SHEET NOT USED Figure 11-1 (Sheet 1)

**71-00-02**P/P BUILDUP FIGURE 11-1
Page 2
Oct 05/2007



ITEM	DART MIMBER	NOMENOLATURE	110	OTV
NO.	PART NUMBER	NOMENCLATURE THIS SHEET NOT USED	UC	QTY
		(FIGURE 11-1, SHEET 1)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 11-1 Page 3 Oct 05/2007



#### **FIGURE 12-1**

# **FUEL SUPPLY HOSE INSTALLATION**

**REF QEC TASK NO.: 12** 

**REF DWG: 332A2100** 

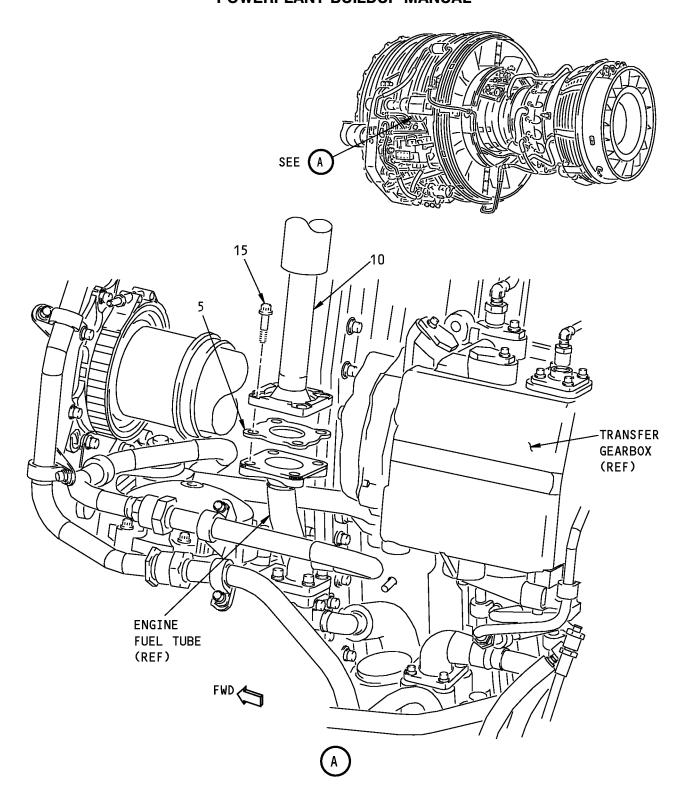
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 12-1 Page 1 Oct 05/2007





Fuel Supply Hose Installation Figure 12-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 12-1 Page 2 Oct 05/2007

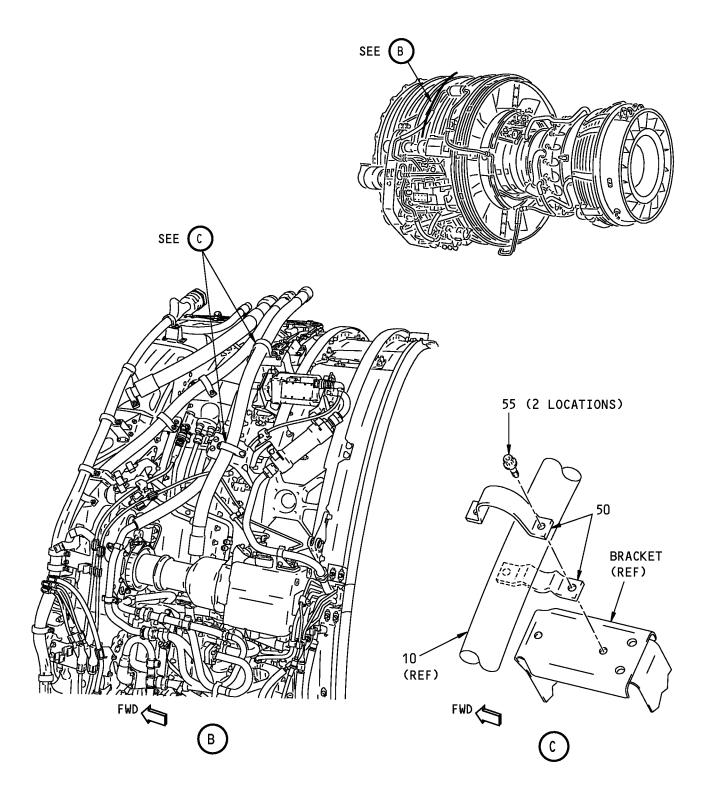


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
12-1		FUEL SUPPLY HOSE INSTALLATION (FIGURE 12-1, SHEET 1)		
		VISUALLY EXAMINE ALL GASKETS AND FITTINGS FOR DAMAGE. REJECT PARTS WITH DAMAGE TO THREADS, SEAL AREAS ON FITTINGS, AND O-RINGS.		
5 C1	MS27198-24 D00504	LUBRICATE GASKET (5) WITH grease, D00504 (C1). POSITION GASKET (5) ON ENGINE FUEL TUBE.  . GASKET  . GREASE	CON	1 AR
C1	D00504	POSITION FUEL SUPPLY HOSE ASSY (10) ON ENGINE FUEL TUBE AND GASKET (5). ATTACH HOSE ASSY (10) TO ENGINE FUEL TUBE WITH BOLTS (15).	CON	AK
10 10 15	AE713733-1 S332A280-5 BACB30ZF4-14	. HOSE ASSY, FUEL SUPPLY (V00624) . BOEING SPEC FOR AE713733-1 . BOLT	VEN BOE	1 - 4
		TIGHTEN BOLTS (15) TO 50-55 POUND-INCHES (5.6 - 6.2 NEWTON METERS)		

71-00-02

P/P BUILDUP FIGURE 12-1 Page 3 Oct 05/2008





Fuel Supply Hose Installation Figure 12-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 12-1 Page 4 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
12-1	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	FUEL SUPPLY HOSE INSTALLATION		<b></b>
50 55	TAO910091H1 BACB30ZF4-07	(FIGURE 12-1, SHEET 2) AT TWO LOCATIONS, LOOSELY INSTALL HOSE ASSY (10) ON LEFT FAN CASE WITH CLAMP (50) AND BOLTS (55) CLAMP (V84971) . BOLT	VEN	2 4
		ADJUST HOSE ASSY (10) TO BEST POSITION AND TIGHTEN BOLTS (55) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 12-1 Page 5 Oct 05/2007



#### **FIGURE 13-1**

# 12 O'CLOCK STRUT INSTALLATION

**REF QEC TASK NO.: 13** 

**REF DWG: 332A2300** 

332A2370

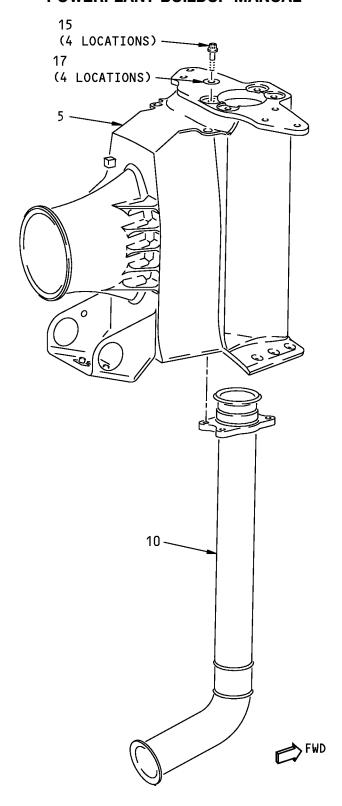
NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 13-1 Page 1 Oct 05/2007





12 O'Clock Strut Installation Figure 13-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 2 Oct 05/2007

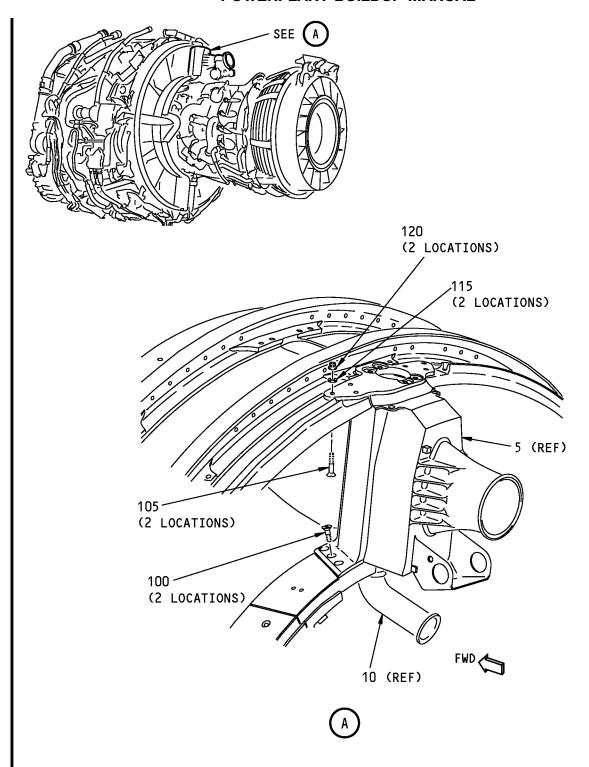


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	332A2371-3 332A2390-45 332A2390-43 BACB30PN4H7 BACW10BP4ACU	NOMENCLATURE  12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 1)  IN THIS PROCEDURE, DO NOT TIGHTEN BOLTS UNLESS INSTRUCTED OR INSTALL PARTS IN A DIFFERENT SEQUENCE. PREASSEMBLY OF 12 O'CLOCK STRUT  CAUTION: BE CAREFUL NOT TO GOUGE THE INNER WALL OF THE 12 O'CLOCK STRUT WHEN THE CTAI DUCT ASSY IS INSTALLED.  INSTALL DUCT ASSY (10) INTO 12 O'CLOCK STRUT (5) FROM BOTTOM.  LOOSELY SECURE WITH BOLTS (15) AND WASHERS (17) 12 O'CLOCK STRUT ASSY . DUCT ASSY-CTAI . DUCT ASSY-CTAI (OPTIONAL TO 332A2390-45) . BOLT . WASHER	<b>UC</b>	<b>QTY</b> 1 1 - 4 4

71-00-02

P/P BUILDUP FIGURE 13-1 Page 3 Oct 05/2008





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12 O'Clock Strut Installation Figure 13-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 4 Oct 05/2008

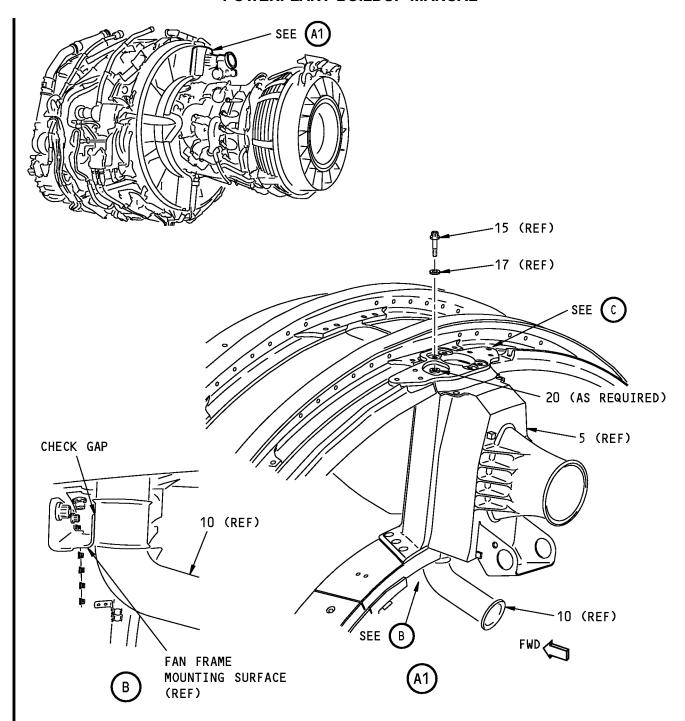


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1	PART NUMBER	12 O'CLOCK STRUT INSTALLATION	- 00	QII
		(FIGURE 13-1, SHEET 2) TEMPORARILY SECURE 12 O'CLOCK STRUT ASSY (5) TO FAN CASE.		
		LOOSELY ATTACH LOWER FLANGES OF STRUT ASSY TO EXTENSION RING OF ENGINE USING BOLTS (100) IN CENTER HOLE OF FLANGES.		
		LOOSELY ATTACH UPPER FLANGES OF STRUT ASSY TO OUTER FAN CASE USING BOLTS (105), WASHERS (115) AND NUTS (120) IN OUTER HOLE OF FLANGES.		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 5 Oct 05/2008





NOTE: DUCT MUST BE FLUSH WITH FAN MOUNTING SURFACE. INSTALL ITEM 20 IN MATCHING PAIRS BETWEEN DUCT FLANGE AND STRUT ASSEMBLY. DIAGONAL PAIRS ARE NOT ACCEPTABLE.

1654260 S0000243204\_V1

12 O'Clock Strut Installation Figure 13-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 6 Oct 05/2008

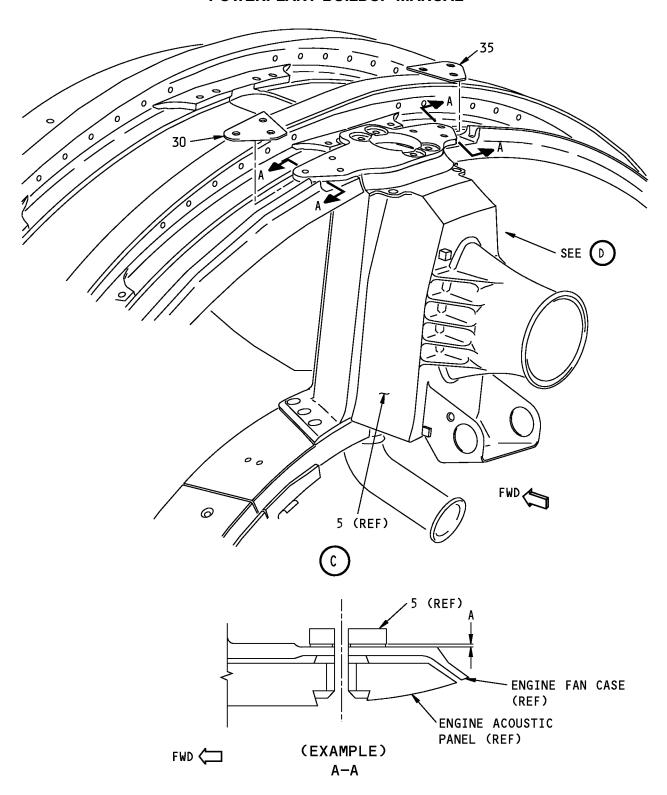


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
ı	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 3)		
			CHECK DUCT ASSY (10) POSITION.		
			DUCT MUST BE FLUSH TO FAN FRAME MOUNTING SURFACE WITHOUT PRELOADING DUCT.		
			TO ADJUST DUCT POSITION AFT;		
			REMOVE 12 O'CLOCK STRUT ASSY (5) FROM ENGINE. REMOVE DUCT ASSY (10) FROM 12 O'CLOCK STRUT.		
			INSTALL WASHERS (20) BETWEEN FWD FLANGE HOLES OF DUCT ASSY AND 12 O'CLOCK STRUT. WASHERS MUST BE INSTALLED IN MATCHED FORWARD, AFT, LEFT OR RIGHT PAIRS ONLY. DIAGONAL PAIRS NOT ACCEPTABLE.		
			TO ADJUST DUCT POSITION FWD;		
			REMOVE 12 O'CLOCK STRUT ASSY (5) FROM ENGINE. REMOVE DUCT ASSY (10) FROM 12 O'CLOCK STRUT.		
			INSTALL WASHERS (20) BETWEEN AFT FLANGE HOLES OF DUCT ASSY AND 12 O'CLOCK STRUT. WASHERS MUST BE INSTALLED IN MATCHED FORWARD, AFT, LEFT OR RIGHT PAIRS ONLY. DIAGONAL PAIRS NOT ACCEPTABLE.		
			TEMPORARILY RE-SECURE 12 O'CLOCK STRUT. RECHECK DUCT POSITION. REPEAT THE ABOVE PROCEDURE UNTIL DUCT IS ALIGNED.		
			IF INSTALLED, MAKE A RECORD OF THE QUANTITY AND LOCATIONS OF WASHERS (20).		
			REMOVE BOLTS (15), WASHERS (17) AND, IF INSTALLED, WASHERS (20).		
			APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLTS (15).		
			INSTALL BOLTS (15), WASHERS (17) AND, IF REQUIRED, WASHERS (20)		
	20	NAS1149C0432R	. WASHER (THICK)		AR
	20 C1	NAS1149C0416R D00006	. WASHER (THIN) . NEVER-SEEZ NSBT-8N COMPOUND	OPT CON	AR AR
			ONCE DUCT IS ALIGNED, TIGHTEN BOLTS (15) TO 73-77 POUND-INCHES (8.25-8.7 NEWTON METERS) AND INSTALL safety cable kit, G50375 (C6) OR lockwire, G01912 (C7).		,
	C6	G50375	. SAFETY CABLE KIT	CON	AR
	C7	G01912	. LOCKWIRE	CON	AR

71-00-02

P/P BUILDUP FIGURE 13-1 Page 7 Oct 05/2008





12 O'Clock Strut Installation Figure 13-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 8 Oct 05/2008

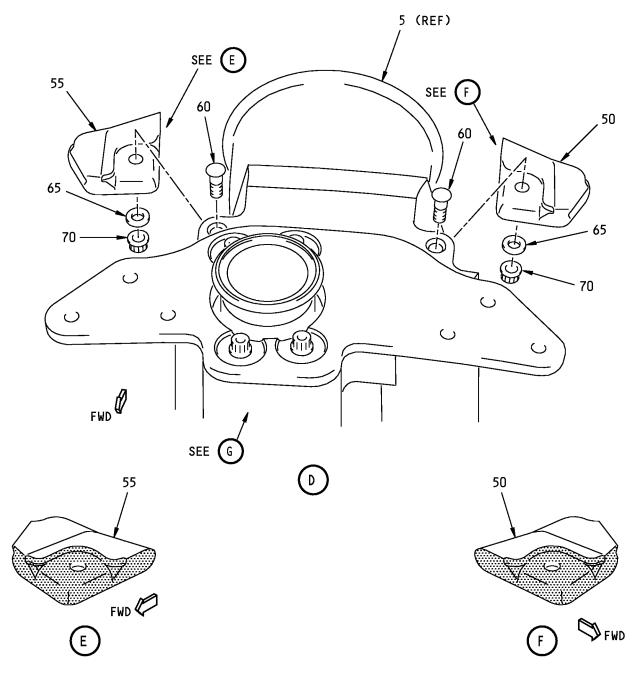


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
1	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 4)		
			MEASURE GAP "A" BETWEEN OUTER FAN CASE AND 12 O'CLOCK STRUT ON BOTH SIDES. PEEL SHIMS (30) AND (35) UNTIL DESIRED THICKNESS IS ACHIEVED.		
			NOTE: IF GAP EXCEEDS 0.063 INCH (1.6 MM), USE TWO SHIMS. GAPS OF 0.070 INCH (1.78 MM) OR MORE ARE NOT PERMITTED.		
	30 35	332A2373-1 332A2373-2	. SHIM, LH (MAX OF 2) . SHIM, RH (MAX OF 2)		AR AR
			REMOVE 12 O'CLOCK STRUT (5) FROM ENGINE. KEEP SHIMS AND FASTENERS FOR LATER INSTALLATION.		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 9 Oct 05/2008





AREAS OF SEALANT APPLICATION.

12 O'Clock Strut Installation Figure 13-1 (Sheet 5)

**71-00-02**P/P BUILDUP FIGURE 13-1
Page 10
Oct 05/2008

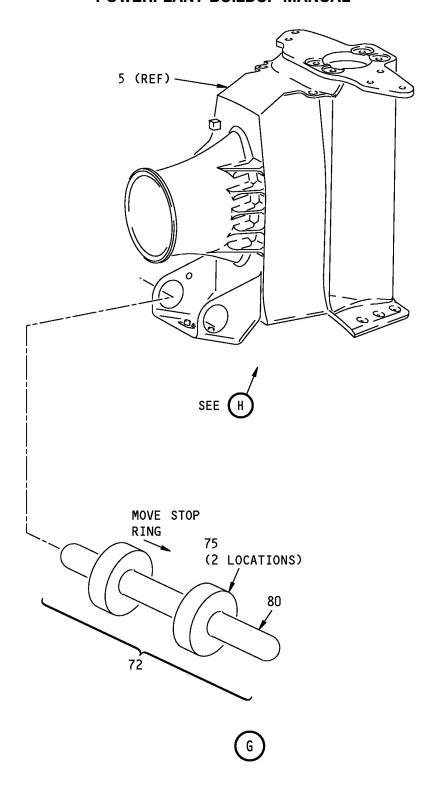


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
I	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 5)		
•			CAUTION: MAKE SURE ALL SEALANTS ARE APPLIED CORRECTLY. 12 O'CLOCK STRUT IS PART OF FIRE SHIELD BETWEEN ENGINE AND STRUT. INCORRECT APPLICATION OF SEALANTS MAY WEAKEN FIRE PROTECTION.		
I			IF sealant, A00803 (C3) IS USED, BRUSH APPLY Dapco No. 1-100 primer, C00944 (C2) TO FAYING SURFACES ON SEALS (50) AND (55) AND 12 O'CLOCK STRUT (5).		
I	50 55 C2	332A2372-3 332A2372-4 C00944	. SEAL, LH . SEAL, RH . DAPCO NO. 1-100 PRIMER	CON	1 1 AR
I		D 4 0 D 00 V 5 V 6	APPLY sealant, A00803 (C3) OR sealant, A50096 (C4) TO FAYING SURFACES SHOWN ON SEALS (50) AND (55). ATTACH SEALS TO 12 O'CLOCK STRUT (5) WITH BOLTS (60), WASHERS (65) AND NUTS (70).		
Ī	60 65 70 C3	BACB30VF4K3 BACW10BP4PK BACN11Z4CK A00803	. BOLT . WASHER (UNDER NUT) . NUT . SEALANT	CON	2 2 2 AR
i	C4	A50096	. SEALANT . SEALANT TIGHTEN BOLTS (60) TO 10 POUND-INCHES (1.1 NEWTON METERS).	CON	AR
			NOTE: TO FACILITATE INSTALLATION, Figure 14-1 ITEMS 5 THRU 30 MAY BE ATTACHED TO 12 O'CLOCK STRUT (5) AT THIS TIME.		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 11 Oct 05/2008





12 O'Clock Strut Installation Figure 13-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 12 Oct 05/2008

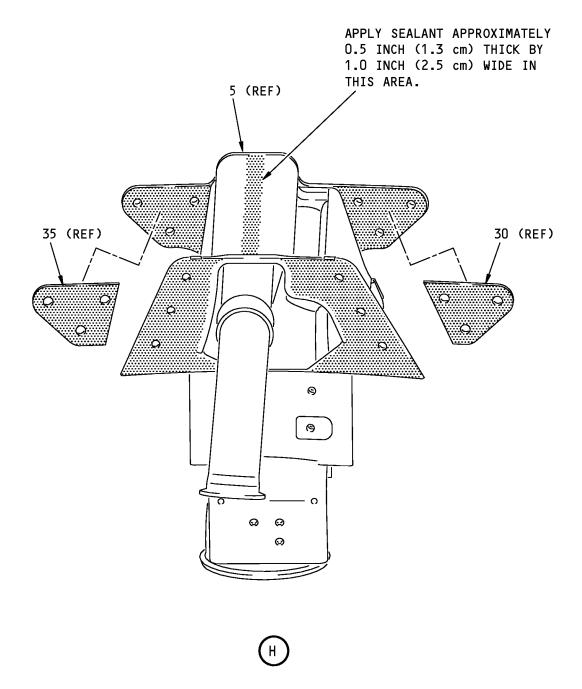


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 6)		
		MOVE LH RUBBER STOP RING (75) TOWARDS CENTER OF ROD (80). POSITION ROD ASSY (72) IN 12 O'CLOCK STRUT (5) BRACKET.		
72 72	315A2080-4 315A2080-1	RE-POSITION LH STOP RING (75) IN ROD (80) CHANNEL.  ROD ASSY  ROD ASSY (OPTIONAL TO 315A2080-4)	OPT	1 -
75 80	315A2083-1 315A2081-5	STOP RING (QTY 2) ROD (QTY 1)	REF REF	-

71-00-02

P/P BUILDUP FIGURE 13-1 Page 13 Oct 05/2008





AREAS OF SEALANT APPLICATION.

12 O'Clock Strut Installation Figure 13-1 (Sheet 7)

**71-00-02**P/P BUILDUP FIGURE 13-1
Page 14
Oct 05/2008

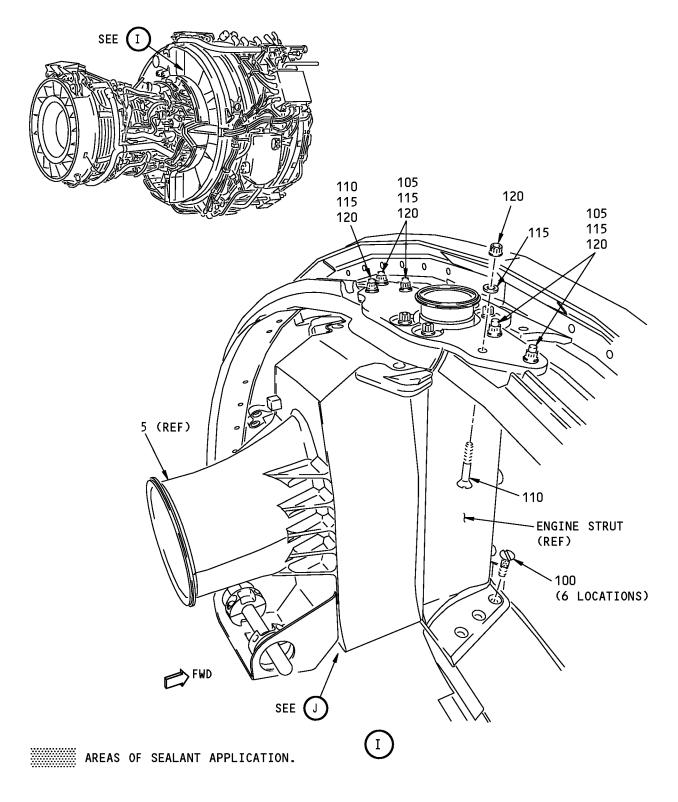


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
1	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 7)		
			IF sealant, A00803 (C3) IS USED, APPLY Dapco No. 1-100 primer, C00944 (C2) TO FAYING SURFACES OF 12 O'CLOCK STRUT ASSY (5) AND INNER AND OUTER ENGINE FAN CASE AND TO BOTH SIDES OF SHIMS (30) AND (35). PERMIT PRIMER TO DRY.		
			NOTE: Dapco No. 1-100 primer, C00944 (C2) DRIES IN APPROXIMATELY 1 HOUR AND CHANGES FROM A GREEN COLOR TO A PINK COLOR.		
I	C2	C00944	. DAPCO NO. 1-100 PRIMER	CON	AR
			APPLY sealant, A00803 (C3) OR sealant, A50096 (C4) TO FAYING SURFACES OF 12 O'CLOCK STRUT ASSY (5) WITH INNER AND OUTER FAN CASE, TO FORWARD LOCATION OF 12 O'CLOCK STRUT AND TO BOTTOM OF SHIMS (30) AND (35) AS SHOWN.		
			NOTE: WHEN APPLYING SEALANT, ENSURE LAYER IS UNIFORM AND COVERS ENTIRE FAYING SURFACE TO A DEPTH OF 0.005-0.010 INCH. AN ADDITIONAL SMALL BEAD OF SEALANT NEAR EDGE OF FAYING SURFACE IS PERMITTED TO ENSURE PROPER SQUEEZE-OUT OF SEALANT.		
I			ATTACH SHIMS (30) AND (35) TO OUTER ENGINE FAN CASE FAYING SURFACES, ALIGNING HOLES IN SHIMS WITH HOLES IN ENGINE FAN CASE. APPLY sealant, A00803 (C3) TO TOP FAYING SURFACE OF SHIMS (30) AND (35).		
			<u>NOTE</u> : SEALANT MUST BE APPLIED ON BOTH SIDES OF SHIMS.		
	C3 C4	A00803 A50096	. SEALANT . SEALANT	CON	AR AR

71-00-02

P/P BUILDUP FIGURE 13-1 Page 15 Oct 05/2008





12 O'Clock Strut Installation Figure 13-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 16 Oct 05/2008

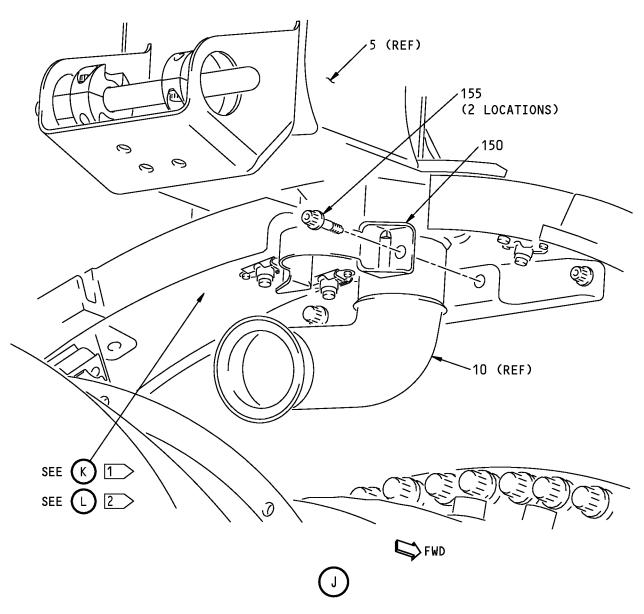


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 8)		
		APPLY AC962-73C peelable parting agent, G50365 (C5) OR AZ 634-2 peelable parting agent, G50367 (C8) OR Rexco Partall Coverall Film peelable parting agent, G50368 (C9) OR Spraylat SC-1071H-1 agent, G50369 (C10) TO SURFACES ON ENGINE OPPOSITE WHERE PRIMER (C2) WAS APPLIED (INNER AND OUTER ENGINE FAN CASE INTERFACES AND DOWN THE CENTER AREA OF ENGINE STRUT INTERFACE WITH 12 O'CLOCK STRUT (5)).		
		NOTE: APPLY AGENT TO A WIDE ENOUGH AREA TO ALLOW FOR SEALANT SQUEEZE-OUT.		
C5 C8 C9	G50365 G50367 G50368	. PARTING AGENT . PEELABLE PARTING AGENT . PEELABLE PARTING AGENT	CON CON	AR AR AR
C10	G50369	. SPRAYLAT SC-1071H-1 AGENT LUBRICATE SHANKS OF BOLTS (105) AND (110) WITH sealant, A00803 (C3) OR sealant, A50096 (C4). APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLTS (100). IF sealant, A00803 (C3) IS USED, APPLY Dapco No. 1-100 primer, C00944 (C2) BEFORE SEALANT APPLICATION.	CON	AR
100 100 105	BACB30NN4K7 BACB30NN4K6 BACB30NN4K18	. BOLT . BOLT*[1] . BOLT	OPT	6 - 4
110 C1 C2 C3 C4	BACB30NN4K16 D00006 C00944 A00803 A50096	. BOLT . NEVER-SEEZ NSBT-8N COMPOUND . DAPCO NO. 1-100 PRIMER . SEALANT . SEALANT	CON CON CON	2 AR AR AR AR
		POSITION 12 O'CLOCK STRUT ASSY (5) ON ENGINE FAN CASE. ATTACH 12 O'CLOCK STRUT ASSY (5) TO INNER FAN CASE WITH LUBRICATED BOLTS (100). ATTACH 12 O'CLOCK STRUT ASSY TO OUTER FAN CASE WITH LUBRICATED BOLTS (105) AND (110), WASHERS (115) AND NUTS (120).		
		NOTE: IF GAP REMAINS AFTER TIGHTENING BOLT (105, 110), USE OF AN ADDITIONAL WASHER (115) IS PERMITTED.		
115 120	BACW10BP4PK BACN11Z4CK	. WASHER . NUT		6 6
		MAKE SURE BOLTS (100) FULLY ENGAGE NUTPLATES. CHECK BOLT PROTRUSION. MINIMUM BOLT PROTRUSION IS WHEN BOLT IS FLUSH WITH THE END OF THE NUTPLATE. TIGHTEN BOLTS (100) TO 68-82 POUND-INCHES (7.7-9.3 NEWTON METERS). TIGHTEN BOLTS (105) AND (110) TO 72-88 POUND-INCHES (8.1-9.9 NEWTON METERS).		
		*[1] USE IF BACB30NN4K7 CANNOT BE FULLY TIGHTENED		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 17 Oct 05/2008





1 PREFERRED CONFIGURATION

2 OPTIONAL CONFIGURATION

12 O'Clock Strut Installation Figure 13-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 18 Oct 05/2008

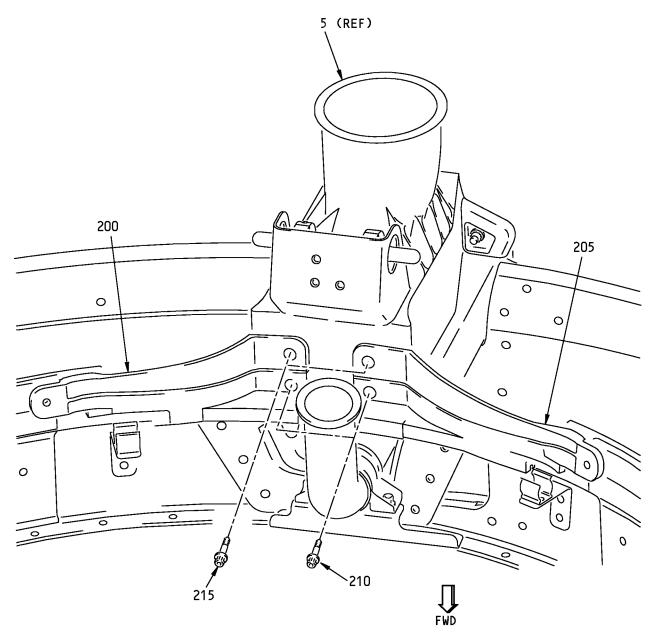


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 9)		
150 155	9134M25P29 BACB30ZF4-08	SECURE CTAI DUCT (10) TO ENGINE FAN FRAME WITH RETAINING STRAP (150) AND BOLTS (155).  RETAINING STRAP  BOLT		1 2
		TIGHTEN BOLTS (155) TO 60-70 POUND-INCHES (6.77-7.9 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 19 Oct 05/2008





PREFERRED CONFIGURATION



12 O'Clock Strut Installation Figure 13-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 20 Oct 05/2008

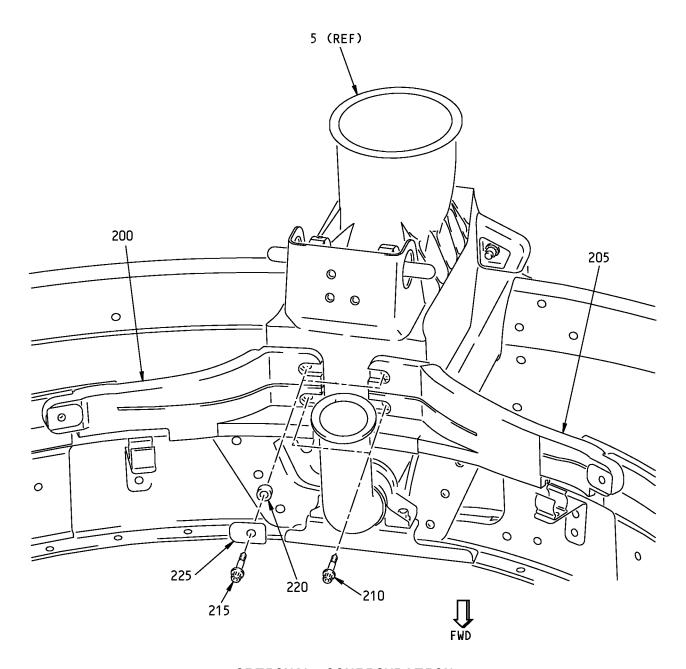


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 10)		
		PREFERRED CONFIGURATION  APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS		
•		AND SHANK OF BOLTS (210) AND (515).		
200 205 210 215 C1	332A2374-13 332A2374-14 BACB30LE4K6 BACB30LE4K4 D00006	LOOSELY ATTACH TRANSITION FITTINGS (200) AND (205) TO BOTTOM OF 12 O'CLOCK STRUT ASSY (5). USE BOLT (210) AT FWD LOCATIONS AND BOLT (215) AT AFT LOCATIONS.  . TRANSITION FITTING ASSY, LH  . TRANSITION FITTING ASSY, RH  . BOLT (FWD LOCATIONS)  . BOLT (AFT LOCATIONS)  . NEVER-SEEZ NSBT-8N COMPOUND  TIGHTEN BOLTS (210) AND (215) TO 68-82 POUND-INCHES (7.7-9.3	CON	1 1 2 2 AR
		NEWTON METERS).		
		NOTE: BOLTS (210) AND (215) WILL BE TIGHTENED AFTER OUTBOARD FASTENERS ARE INSTALLED.		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 21 Oct 05/2008





OPTIONAL CONFIGURATION



12 O'Clock Strut Installation Figure 13-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 22 Oct 05/2008

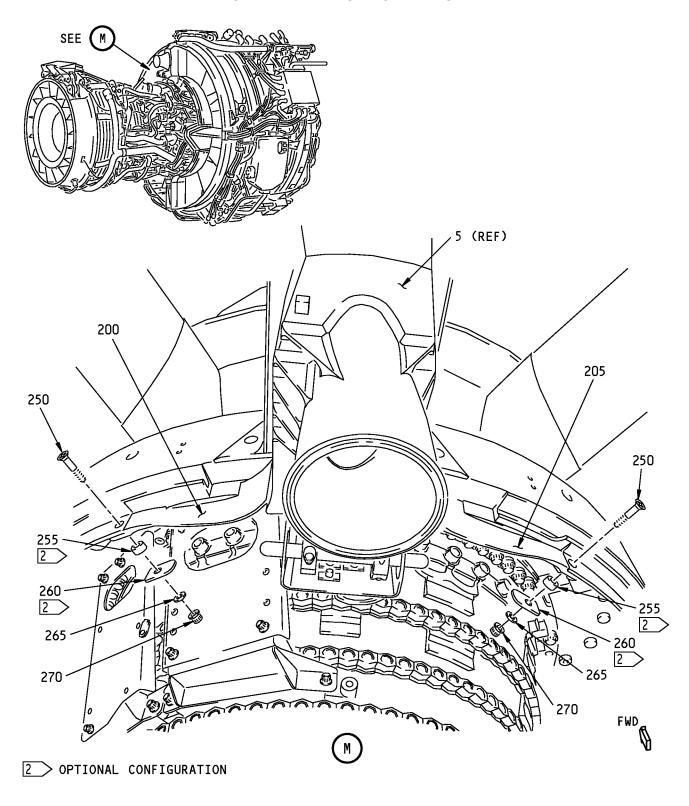


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
I	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 11)		
•			OPTIONAL CONFIGURATION		
			LOOSELY ATTACH TRANSITION FITTINGS (200) AND (205) TO BOTTOM OF 12 O'CLOCK STRUT ASSY (5).		
	200 205 210 215 220 225	332A2374-9 332A2374-10 BACB30LE4K6 BACB30LE4K8 NAS1057W4A025 332A2376-1	BOTTOM OF 12 O'CLOCK STRUT ASSY (5).  USE BOLT (210) AT FWD LOCATIONS AND BOLT (215), SPACER (220) AND CLIP (225) AT AFT LOCATIONS.  . TRANSITION FITTING ASSY, LH (1 REQD)  . TRANSITION FITTING ASSY, RH (1 REQD)  . BOLT (FWD LOCATIONS) (2 REQD)  . BOLT (AFT LOCATIONS) (2 REQD)  . SPACER (AFT LOCATIONS) (2 REQD)  . CLIP (AFT LOCATIONS) (2 REQD)  NOTE: BOLTS (210) AND (215) WILL BE TIGHTENED AFTER OUTBOARD FASTENERS ARE INSTALLED.	OPT OPT OPT OPT OPT	

71-00-02

P/P BUILDUP FIGURE 13-1 Page 23 Oct 05/2008





12 O'Clock Strut Installation Figure 13-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 13-1 Page 24 Oct 05/2008

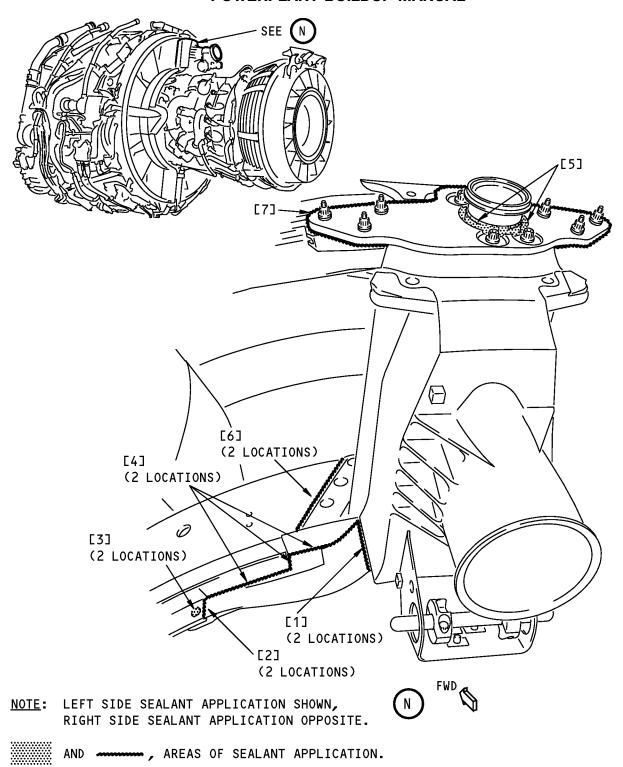


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 12)		
		SECURE LEFT AND RIGHT TRANSITION FITTINGS (200) AND (205) TO ENGINE EXTENSION RING WITH BOLTS (250), WASHERS (265) AND NUTS (270).		
250 250 255 260 265 270	BACB30NN4K6 BACB30NN4K11 NAS1057W4A025 332A2376-1 BACW10BP4PK BACN11Z4CK	USE SPACERS (255) AND CLIPS (260) IF OPTIONAL CONFIGURATION IS INSTALLED.  . BOLT *[2]*  . BOLT (2 REQD)*[1]*  . SPACER (2 REQD)*[1]*  . CLIP (2 REQD)*[1]*  . WASHER  . NUT	OPT OPT OPT	2 - - 2 2
		TIGHTEN BOLTS (210) AND (215) TO 90-110 POUND-INCHES (10.2-12.4 NEWTON METERS).  TIGHTEN BOLTS (250) TO 65-100 POUND-INCHES (7.3-11.3 NEWTON		
		METERS).  *[1] USED WITH OPTIONAL CONFIGURATION 332A2374-9 (LH) AND 332A2374-10 (RH) FITTING ASSEMBLIES (REF VIEW L).		
		*[2] USED WITH PREFERRED CONFIGURATION 332A2374-13 (LH) AND 332A2374-14 (RH) FITTING ASSEMBLIES (REF VIEW K).		

71-00-02

P/P BUILDUP FIGURE 13-1 Page 25 Oct 05/2008





12 O'Clock Strut Installation Figure 13-1 (Sheet 13)

**71-00-02**P/P BUILDUP FIGURE 13-1
Page 26
Oct 05/2008



	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
I	13-1		12 O'CLOCK STRUT INSTALLATION (FIGURE 13-1, SHEET 13)		
ı			APPLY FILLET SEAL AROUND PARTS OF 12 O'CLOCK STRUT ASSY (5) IDENTIFIED BELOW USING sealant, A00803 (C3) OR sealant, A50096 (C4).		
			MAKE SURE ALL AREAS IDENTIFIED BELOW ARE FLUSH AND/OR SMOOTH WITH SURROUNDING SURFACES.		
I			IF sealant, A00803 (C3) IS USED, MAKE SURE ALL FILLET SURFACES HAVE BEEN PRIMED USING Dapco No. 1-100 primer, C00944 (C2) BEFORE SEALANT APPLICATION.		
			1. TRANSITION FITTINGS AND 12 O'CLOCK STRUT.		
			2. TRANSITION FITTINGS AND ENGINE EXTENSION RING.		
			3. BOLT (200) CAVITY AND ENGINE EXTENSION RING.		
			<ol> <li>FWD EDGE OF TRANSITION FITTINGS AND ENGINE EXTENSION RING.</li> </ol>		
			5. 12 O'CLOCK STRUT AND CTAI DUCT.		
			6. 12 O'CLOCK STRUT LOWER FLANGE AND ENGINE EXTENSION RING.		
			7. 12 O'CLOCK STRUT AND ENGINE OUTER FAN CASE.		
	C2 C3 C4	C00944 A00803 A50096	. DAPCO NO. 1-100 PRIMER . SEALANT . SEALANT	CON	AR AR AR

71-00-02

P/P BUILDUP FIGURE 13-1 Page 27 Oct 05/2008



#### **FIGURE 14-1**

# **BLEED CONTROLLER INSTALLATION**

**REF QEC TASK NO.: 14** 

**REF DWG: 332A2300** 

332A2100

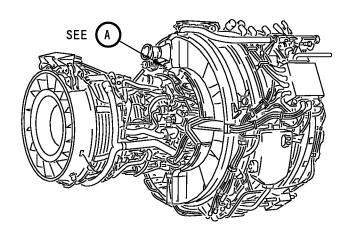
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

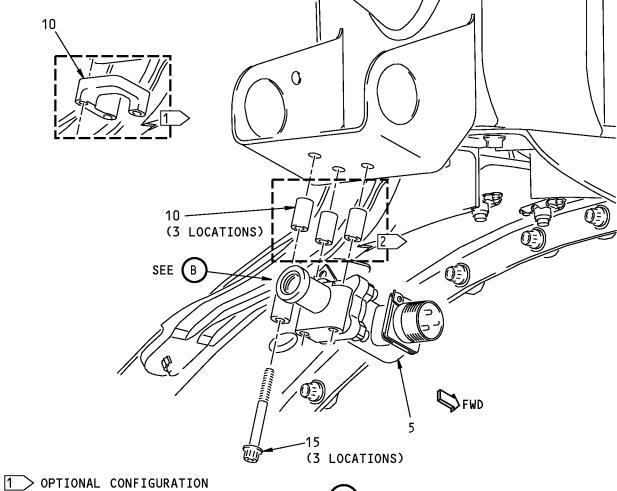
IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 14-1 Page 1 Oct 05/2007







2 PREFERRED CONFIGURATION

**Bleed Controller Installation** Figure 14-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 2 Oct 05/2007

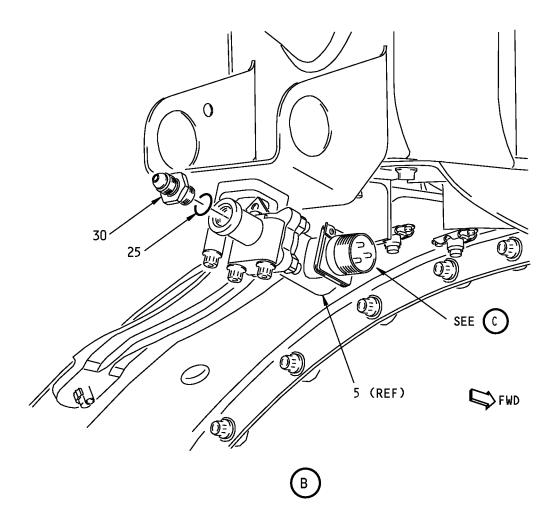


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 1)		
			ROTATE BONDING TAB ON VALVE (5) TO GIVE A MINIMUM OF 0.25 INCH (6.4 MM) OF CLEARANCE WITH STRUCTURE.		
			CLEAN MATING SURFACES OF VALVE (5), SPACERS (10) OR SPACER BLOCK (10) AND ENGINE BRACKET WITH alcohol, B00130 (C1).		
			MAKE SURE YOU REMOVE ALL GREASE AND OTHER CONTAMINANTS.		
	5 5 10	320548-2 10-62008-22 NAS1057T3-050	. VALVE, GROUND WING TAI TEMP SOLENOID (V59364) . BOEING SPEC FOR 320548-2 . SPACER	VEN BOE	1 - 3
I	10 C1	332A2930-49 B00130	. SPACER BLOCK (1 REQD) . ALCOHOL	OPT CON	- AR
			INSTALL VALVE (5) ON BOTTOM BRACKET ON 12 O'CLOCK STRUT SUCH THAT ELECTRICAL CONNECTOR IS ON RIGHT SIDE.		
	15	BACB30ZF3-28	INSTALL WITH SPACERS (10) OR SPACER BLOCK (10) AND BOLTS (15) BOLT		3
	15	DAODS021 0-20	TIGHTEN BOLTS (15) TO 50-56 POUND-INCHES (5.6-6.3 NEWTON METERS).		3

71-00-02

P/P BUILDUP FIGURE 14-1 Page 3 Oct 05/2008





Bleed Controller Installation Figure 14-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 4 Oct 05/2007

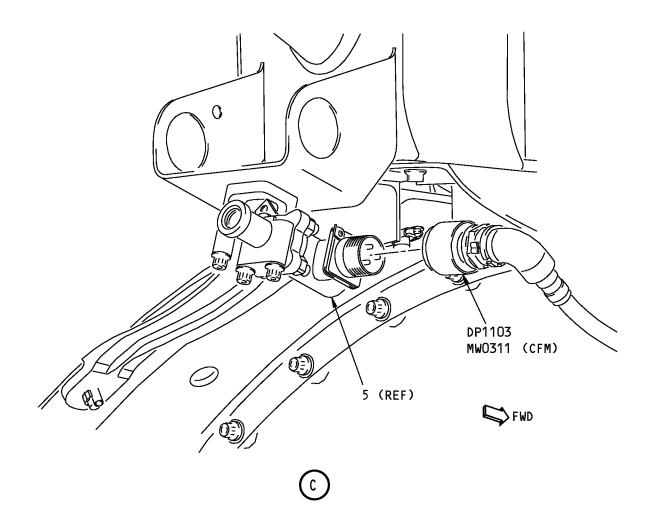


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 2)		
			INSTALL O-RING (25) ON UNION (30).		
I	25 30 C2	801A50-0004A J1238P54 D00006	LUBRICATE THREADS OF UNION (30) WITH Never-Seez NSBT-8N compound, D00006 (C2) AND INSTALL UNION (30) ON VALVE (5).  O-RING (V15284)  UNION  NEVER-SEEZ NSBT-8N COMPOUND	VEN CON	1 1 AR
•	0_		TIGHTEN UNION (30) TO 133-147 POUND-INCHES (15-17 NEWTON METERS).		7

71-00-02

P/P BUILDUP FIGURE 14-1 Page 5 Oct 05/2008





Bleed Controller Installation Figure 14-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 6 Oct 05/2007

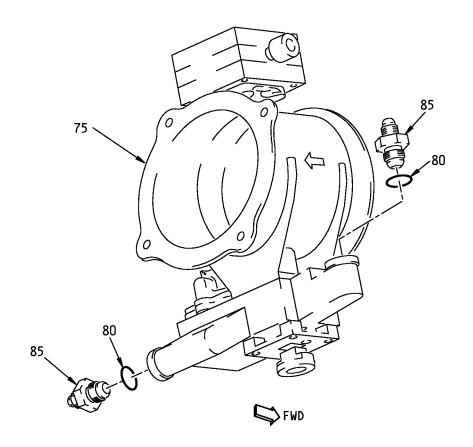


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 3)		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE WATER PUMP PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT MW0311 ELECTRICAL CONNECTOR, DP1103, TO RECEPTACLE ON GROUND WING TAI TEMP SOLENOID VALVE (5).		
		TURN KNURLED COUPLING RING WHILE WIGGLING THE BACKSHELL ASSEMBLY.		
		AFTER FULLY SEATING THE COUPLING RING, USE SOFT-JAWED PLIERS OR A STRAP WRENCH TO TIGHTEN THE COUPLING RING AN ADDITIONAL 1/8-TURN OR UNTIL PLIER SLIPPAGE OCCURS.		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 7 Oct 05/2007





Bleed Controller Installation Figure 14-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 8 Oct 05/2007

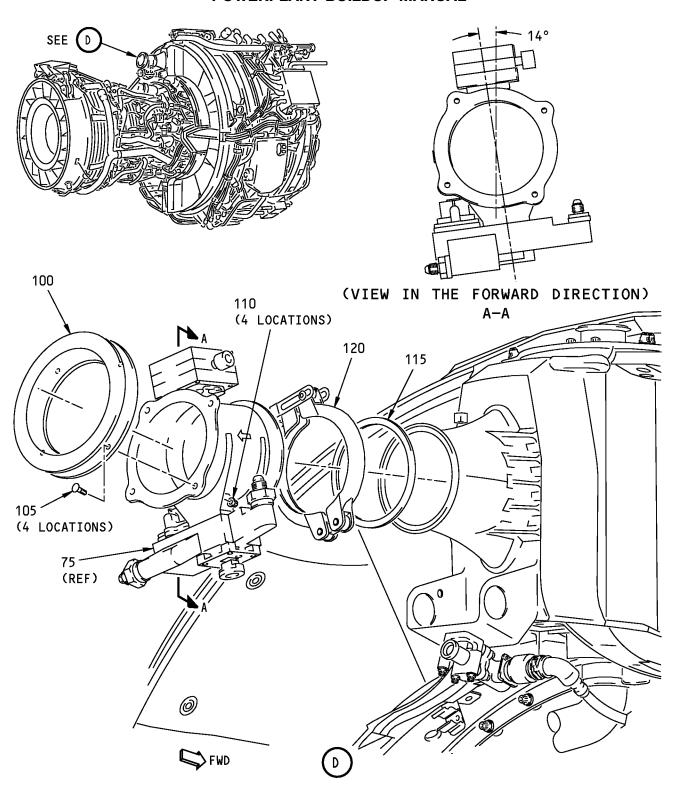


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 4)		
		INSTALL ONE O-RING (80) ON EACH REDUCER (85).		
		LUBRICATE THREADS OF REDUCERS WITH Never-Seez NSBT-8N compound, D00006 (C2) AND INSTALL ON PRECOOLER CONTROL VALVE (75).		
75 75 80 85	3289562-5 10-62008-33 801A50-0006A J522P53	. PRECOOLER CONTROL VALVE (V59364) . BOEING SPEC FOR 3289562-5 . O-RING (V15284) . REDUCER	BOE VEN	1 - 2 2
C2	D00006	. NEVER-SEEZ NSBT-8N COMPOUND TIGHTEN REDUCERS (85) TO 258-284 POUND-INCHES (29-32 NEWTON METERS).	CON	AR
		INSTALL PROTECTIVE CAPS ON ENDS OF UNION (30) AND REDUCER (85).		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 9 Oct 05/2008





Bleed Controller Installation Figure 14-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 10 Oct 05/2007

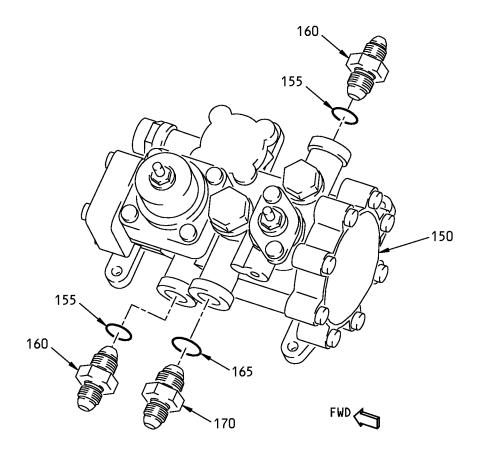


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1	PART NOWBER	BLEED CONTROLLER INSTALLATION	00	QII
		(FIGURE 14-1, SHEET 5)		
		INSTALL SEAL (100) ON PRECOOLER CONTROL VALVE (75) WITH BOLTS (105) AND NUTS (110).		
100 100 105 110	82C10020-1 S332A102-1 BACB30LH3U4 AS3485-09	. SEAL (V60980) . BOEING SPEC FOR 82C10020-1 . BOLT . NUT	VEN BOE	1 - 4 4
		TIGHTEN BOLTS (105) UNTIL 1 1/2 TO 2 THREADS EXTEND OUT FROM NUTS (110).		
		NOTE: REQUIRED TORQUE RANGE 14-22 POUND-INCHES (1.6-2.5 NEWTON METERS).		
		INSTALL A PROTECTIVE COVER OVER THE SEAL OPENING.		
		POSITION SEAL (115) AND VALVE (75) ON 12 O'CLOCK STRUT FLANGE WITH VALVE ORIENTED AS SHOWN.		
		LOOSELY CONNECT WITH COUPLING (120).		
		MAKE SURE COUPLING IS POSITIONED AS SHOWN. LOOSELY TIGHTEN COUPLING BOLT.		
		NOTE: COUPLING ORIENTATION ALLOWS ADEQUATE TOOL ACCESS TO COUPLING NUT WHEN VALVE IS REPLACED WITH T/R INSTALLED.		
		NOTE: DO NOT TIGHTEN COUPLING AT THIS TIME. FINAL ORIENTATION OF VALVE WILL OCCUR DURING UPPER BLEED CONTROL INSTALLATION (REF Figure 17-1).		
115	AS1895-7-400	. SEAL		1
120	AS1895-4-400	. COUPLING		1

71-00-02

P/P BUILDUP FIGURE 14-1 Page 11 Oct 05/2007





Bleed Controller Installation Figure 14-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 12 Oct 05/2007

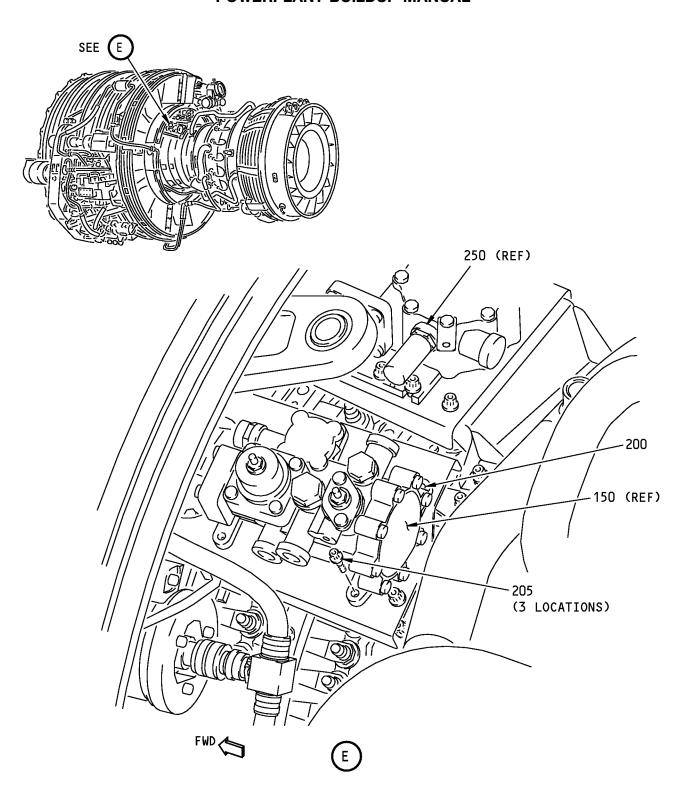


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 6)		
			INSTALL ONE O-RING (155) ON EACH REDUCER (160) AND INSTALL ORING (165) ON REDUCER (170).		
			LUBRICATE THREADS OF REDUCERS WITH Never-Seez NSBT-8N compound, D00006 (C2) AND INSTALL ON HIGH STAGE REGULATOR (150) AS SHOWN.		
	150 155 160	107484-7 801A50-0005A J522P52	. HIGH STAGE REGULATOR (V59364) . O-RING (V15284) . REDUCER	VEN VEN	1 2 2
ı	165 170 C2	801A50-0006A J522P53 D00006	. O-RING (V15284) . REDUCER . NEVER-SEEZ NSBT-8N COMPOUND	VEN CON	1 1 AR
•	02	D00000	TIGHTEN REDUCERS (160) TO 180-200 POUND-INCHES (20-22 NEWTON METERS) AND TIGHTEN REDUCER (170) TO 258-284 POUND-INCHES (29-32 NEWTON METERS).	CON	Alt

71-00-02

P/P BUILDUP FIGURE 14-1 Page 13 Oct 05/2008





Bleed Controller Installation Figure 14-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 14 Oct 05/2007

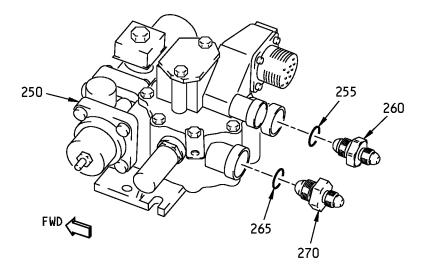


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1	PART NUMBER	BLEED CONTROLLER INSTALLATION	00	QII
'-'		(FIGURE 14-1, SHEET 7)		
		ATTACH HIGH STAGE REGULATOR (150) TO ENGINE CORE BRACKET.		
		USE BOLT (200) AT UPPER AFT LOCATION AND BOLTS (205) AT REMAINING LOCATIONS.		
200 205	BACB30ZF3-10 BACB30ZF3-08	. BOLT . BOLT		1 3
		TIGHTEN BOLTS (200) AND (205) TO 34-36 POUND-INCHES (3.8-4.1 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 15 Oct 05/2007





Bleed Controller Installation Figure 14-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 16 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 8)		
		INSTALL O-RING (255) ON REDUCER (260) AND INSTALL O-RING (265) ON REDUCER (270).		
		APPLY Never-Seez NSBT-8N compound, D00006 (C2) TO THREADS OF REDUCERS.		
250 250 255 260 265 270 C2	107492-6 10-62008-41 801A50-0005A J522P52 801A50-0006A J522P53 D00006		VEN BOE VEN VEN CON	1 - 1 1 1 AR

71-00-02

P/P BUILDUP FIGURE 14-1 Page 17 Oct 05/2008 **CFM56 ENGINES (CFM56-7)** 



### 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

Bleed Controller Installation Figure 14-1 (Sheet 9)

**71-00-02**P/P BUILDUP FIGURE 14-1
Page 18
Oct 05/2007

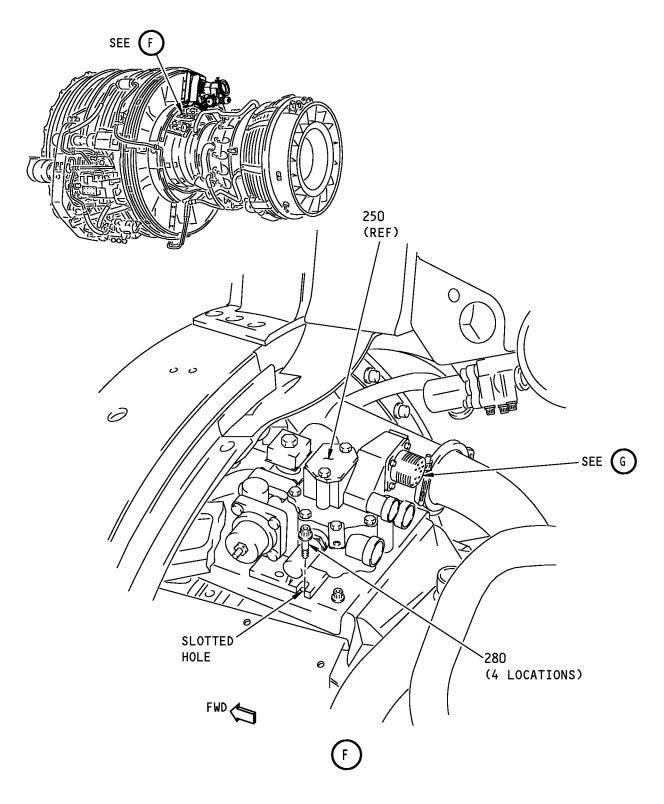


ITEM		MONEYO 45/105		071
NO. 14-1	PART NUMBER	NOMENCLATURE BLEED CONTROLLER INSTALLATION	UC	QTY
14-1		(FIGURE 14-1, SHEET 9)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 19 Oct 05/2007





Bleed Controller Installation Figure 14-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 20 Oct 05/2007

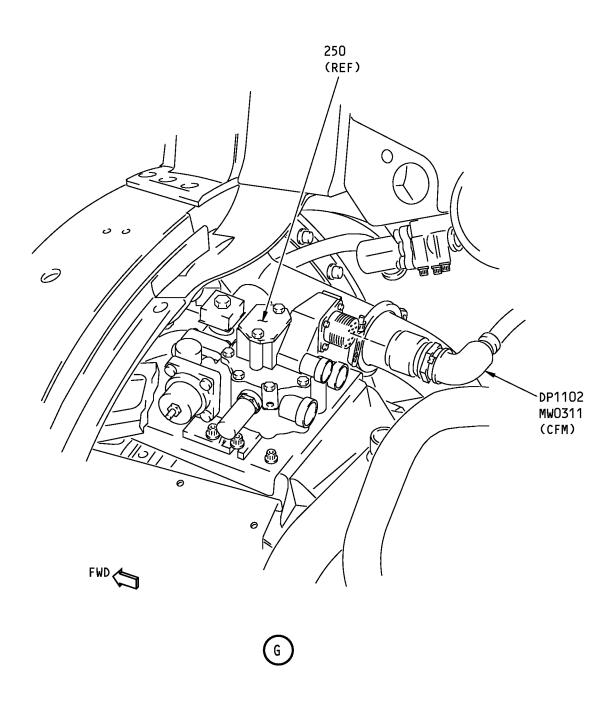


ITEM	DART NUMBER	NOMENOLATURE		OTV
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 10)		
		INSTALL ONE BOLT (280) IN AFT OUTBOARD HOLE OF UPPER CORE BRACKET.		
		PUT SLOTTED HOLE OF BLEED AIR REGULATOR OVER BOLT AND INSTALL REMAINING BOLTS (280).		
280	BACB30ZF4-08	. BOLT		4
		TIGHTEN BOLTS (280) TO 78-82 POUND-INCHES (8.8-9.3 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 21 Oct 05/2007





Bleed Controller Installation Figure 14-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 14-1 Page 22 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
14-1		BLEED CONTROLLER INSTALLATION (FIGURE 14-1, SHEET 11)		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE WATER PUMP PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT MW0311 ELECTRICAL CONNECTOR, DP1102, TO RECEPTACLE ON BLEED AIR REGULATOR.		
		TURN KNURLED COUPLING RING WHILE WIGGLING THE BACKSHELL ASSEMBLY.		
		AFTER FULLY SEATING THE COUPLING RING, USE SOFT-JAWED PLIERS OR A STRAP WRENCH TO TIGHTEN THE COUPLING RING AN ADDITIONAL 1/8-TURN OR UNTIL PLIER SLIPPAGE OCCURS.		

71-00-02

P/P BUILDUP FIGURE 14-1 Page 23 Oct 05/2007



### **FIGURE 15-1**

# BLEED CONTROL SYSTEM INSTALLATION - LOWER

**REF QEC TASK NO.: 15** 

**REF DWG: 332A2100** 

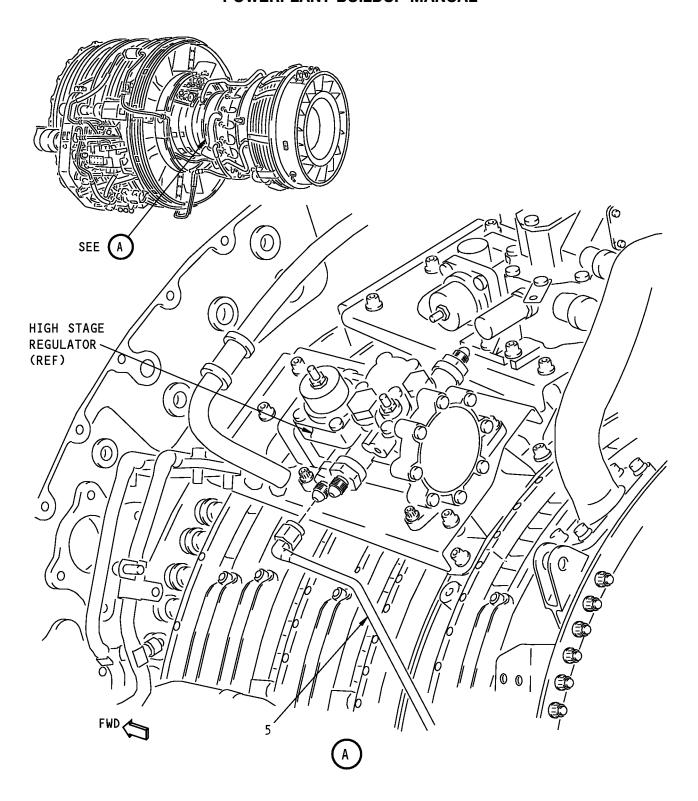
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 15-1 Page 1 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 2 Oct 05/2007

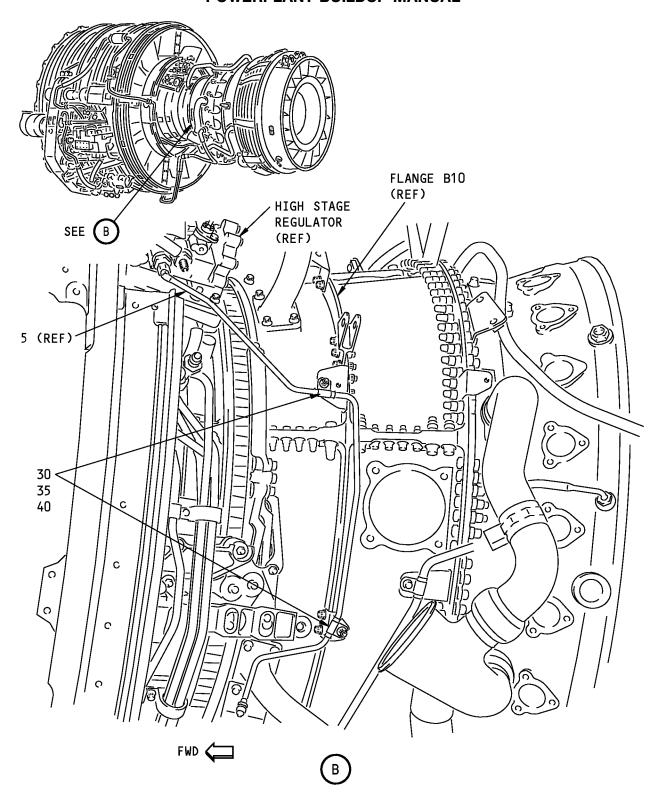


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
15-1		LOWER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 15-1, SHEET 1)		
		NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED.  WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.  ALL TUBE NUTS HAVE A DRY-FILM LUBRICANT AND DO NOT NEED ADDITIONAL LUBRICATION.		
5	332A2350-9	LOOSELY ATTACH TUBE (5) TO UNION ON FWD PORT OF HIGH STAGE REGULATOR. . TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 15-1 Page 3 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 4 Oct 05/2007

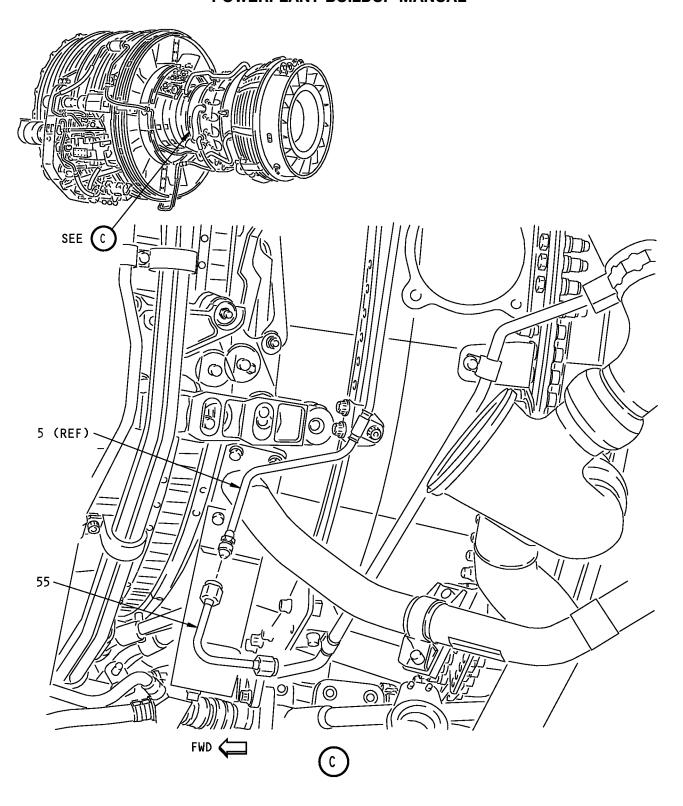


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
15-1		LOWER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 15-1, SHEET 2)		
		LOOSELY ATTACH TUBE (5) TO ENGINE BRACKETS AT 8 AND 9 O'CLOCK POSITIONS ON FLANGE B10 WITH CLAMPSHELLS (30), CLAMPS (35) AND BOLTS (40).		
		NOTE: USE FWD HOLE ON BRACKET LOCATED AT 9 O'CLOCK POSITION.		
30 30 35 40	BACC10GT2-04 9352M41P16 1794M49P01 BACB30ZF4-05	. CLAMPSHELL . CLAMPSHELL (OPTIONAL) . CLAMP . BOLT	ОРТ	4 - 2 2
		MAKE SURE NO PRELOAD FORCE ON TUBE, OR REGULATOR IS PRESENT.		
		IF PRELOAD IS PRESENT, ADJUST TUBE (5) AND CLAMPS (35) TO BEST POSITION.		
		TIGHTEN BOLTS (40) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		TIGHTEN TUBE ASSY (5) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METER).		
		BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		

71-00-02

P/P BUILDUP FIGURE 15-1 Page 5 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 6 Oct 05/2007

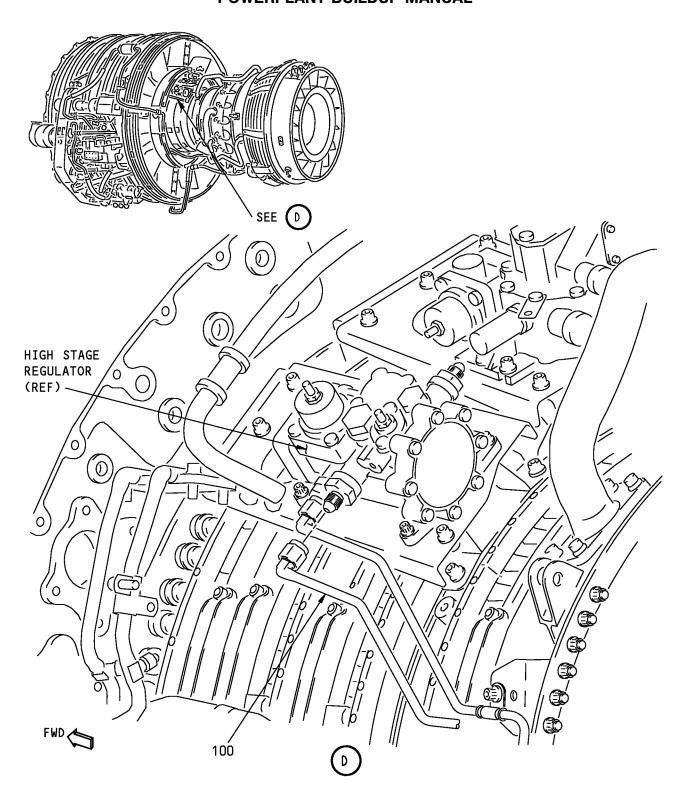


ITEM NO.	DADT NUMBER	NOMENCI ATURE	UC	QTY
15-1	PART NUMBER	NOMENCLATURE  LOWER BLEED CONTROL SYSTEM INSTALLATION	UC	QIY
15-1		(FIGURE 15-1, SHEET 3)		
		LOOSELY INSTALL TUBE (55) TO TUBE (5).		
		NOTE: DO NOT TIGHTEN TUBE (55) AT THIS TIME.		
		TUBE WILL BE TIGHTENED DURING THE HIGH STAGE VALVE INSTALLATION (REF Figure 16-1 ).		
55	332A2350-11	. TUBE ASSY		1
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON END OF TUBE (55).		

71-00-02

P/P BUILDUP FIGURE 15-1 Page 7 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 8 Oct 05/2007

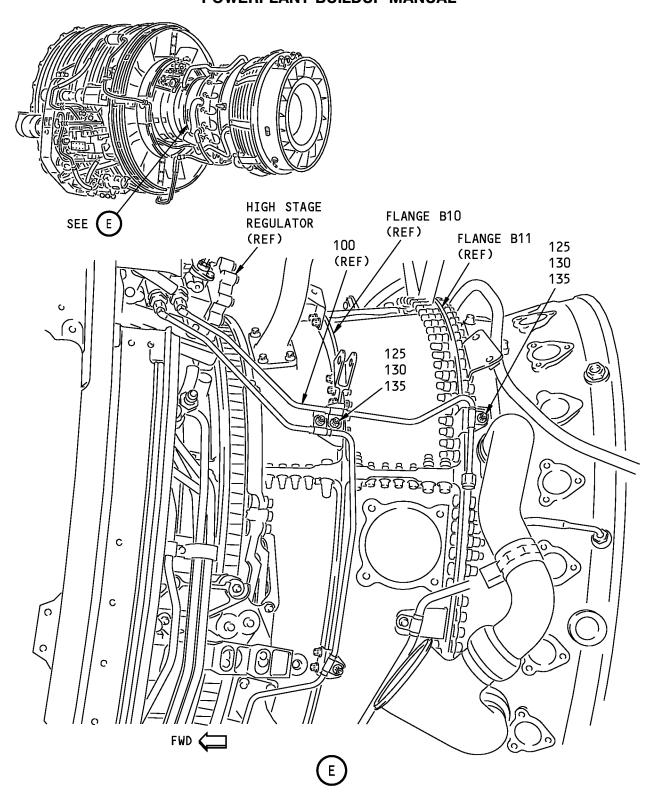


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
15-1	TAIT NOMBER	LOWER BLEED CONTROL SYSTEM INSTALLATION	- 00	Q.I.
100	332A2350-4	(FIGURE 15-1, SHEET 4)  LOOSELY ATTACH TUBE (100) TO UNION ON AFT PORT OF HIGH STAGE REGULATOR.  . TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 15-1 Page 9 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 10 Oct 05/2007

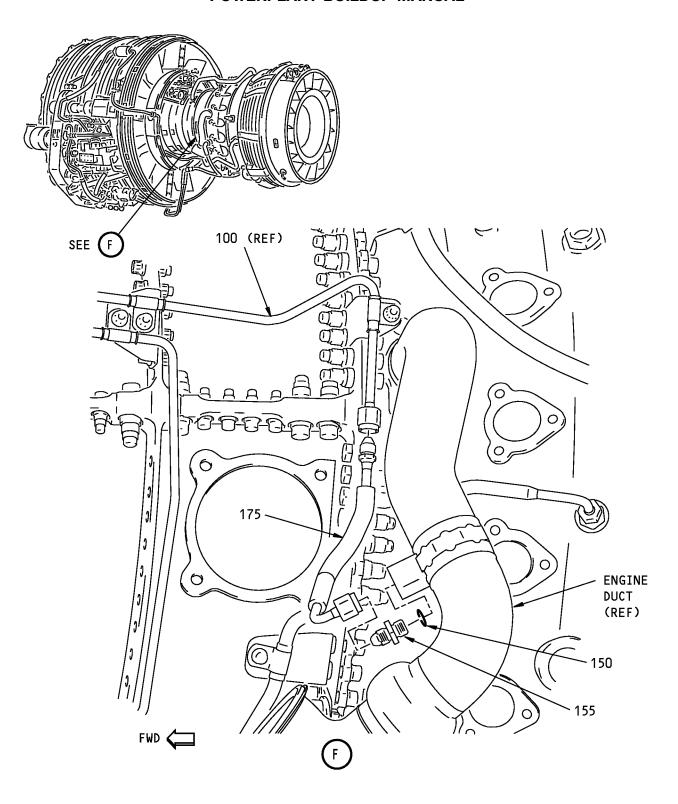


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
15-1		LOWER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 15-1, SHEET 5)  LOOSELY ATTACH TUBE (100) TO ENGINE BRACKETS JUST ABOVE 9 O'CLOCK POSITION ON FLANGE B10 AND FLANGE B11 WITH CLAMPSHELLS (125), CLAMPS (130) AND BOLTS (135).		
125 125 130 135	BACC10GT2-04 9352M41P16 1794M49P01 BACB30ZF4-05	. CLAMPSHELL (OPTIONAL) . CLAMP . BOLT	OPT	4 - 2 2

71-00-02

P/P BUILDUP FIGURE 15-1 Page 11 Oct 05/2007





Lower Bleed Control System Installation Figure 15-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 15-1 Page 12 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
15-1		LOWER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 15-1, SHEET 6)		
		INSTALL O-RING (150) ON UNION (155).		
		LUBRICATE THREADS OF UNION (155) WITH Never-Seez NSBT-8N compound, D00006 (C1) AND INSTALL UNION (155) ON ENGINE DUCT.		
150 155	801A50-0004A J1238P54	. O-RING (V15284) . UNION	VEN	1
C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
		TIGHTEN UNION (155) TO 130-150 POUND-INCHES (14.7-16.9 NEWTON METERS)		
		LOOSELY INSTALL HOSE ASSY (175) BETWEEN TUBE (100) AND UNION (155).		
175	16135-84	. HOSE ASSY (V99755)	VEN	1
175	60B90135-84	. BOEING SPEC FOR 16135-84	BOE	-
		MAKE SURE NO PRELOAD FORCE ON TUBE, HOSE, REGULATOR OR ENGINE DUCT IS PRESENT.		
		IF PRELOAD IS PRESENT, ADJUST TUBE (100) AND CLAMPS (130) TO BEST POSITION.		
		TIGHTEN TUBE ASSY (100) AND HOSE ASSY (175) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METER). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		TIGHTEN BOLTS (135) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 15-1 Page 13 Oct 05/2008



#### **FIGURE 16-1**

# BLEED DUCT INSTALLATION - LOWER 5TH-AND 9TH-STAGE

**REF QEC TASK NO.: 16** 

**REF DWG: 332A2100** 

332A2300

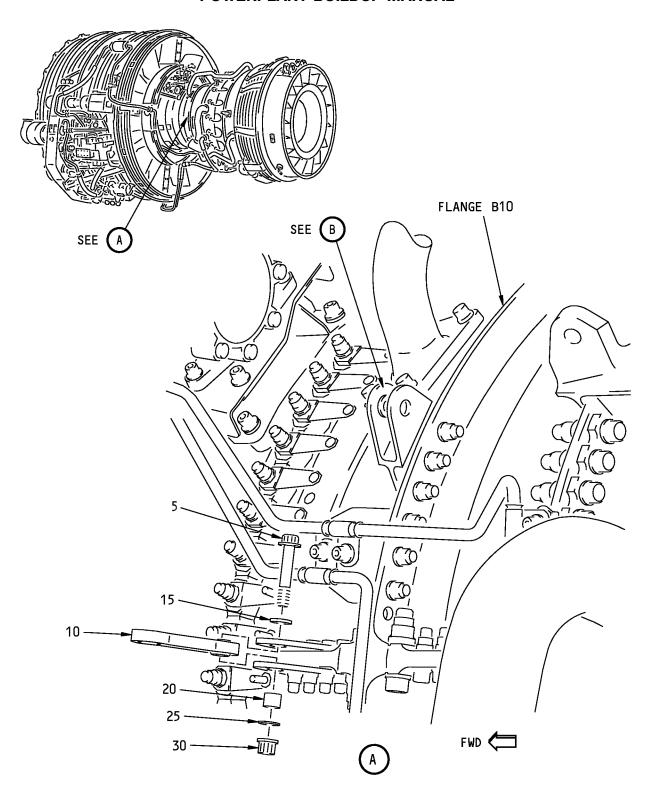
NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 16-1 Page 1 Oct 05/2007





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 2 Oct 05/2007

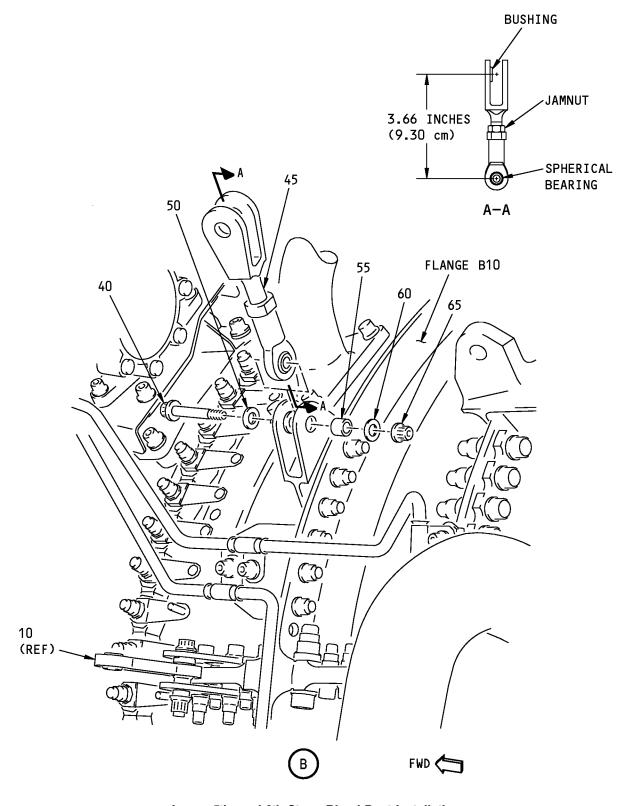


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 1)		
			NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED.  WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.		
1	5 C1	BACB30PN4-16 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLT (5).  BOLT  NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
•			LOOSEN CFMI BRACKETS FWD OF FLANGE B10 AT 9 O'CLOCK POSITION ON ENGINE CORE.		
	10 15 20 25 30	332A2341-4 BACW10BP4ACU BACB28AK04-042 NAS1149C0432R AS3485-10	ATTACH LINK (10) BETWEEN CFMI BRACKETS USING LUBRICATED BOLT (5), WASHERS (15) AND (25), BUSHING (20) AND NUT (30).  LINK ASSY  WASHER (CSK) (UNDER BOLTHEAD)  BUSHING  WASHER (UNDER NUT)  NUT  TIGHTEN BOLT (5) TO 50-75 POUND-INCHES (5.6-8.5 NEWTON METERS).		1 1 1 1 1

71-00-02

P/P BUILDUP FIGURE 16-1 Page 3 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 4 Oct 05/2007

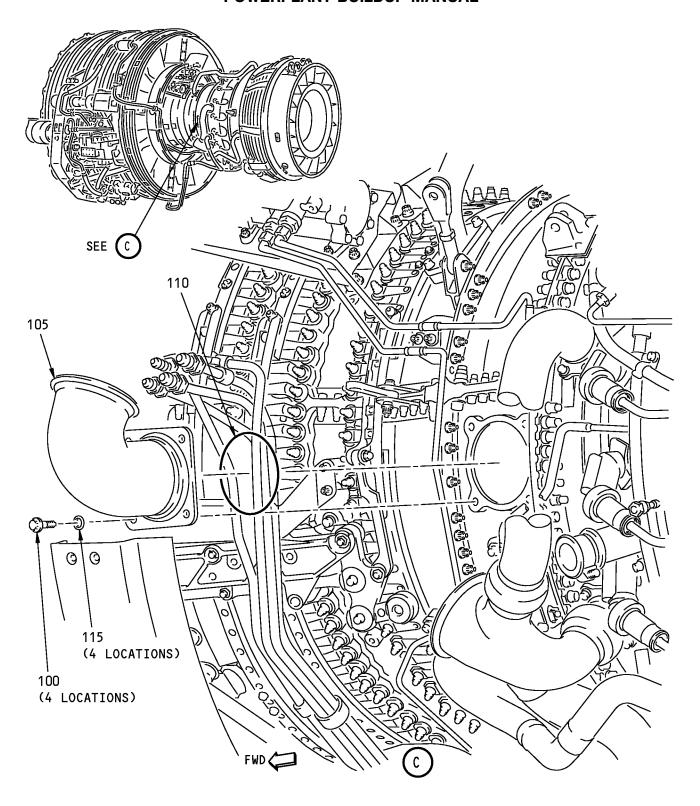


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 2)		
I	40 C1	BACB30PN4-14 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLT (40).  . BOLT  . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
			LOOSEN JAMNUT OF LINK ASSY (45) TO FREE ROD END.		
			ADJUST LINK ASSY TO 3.66 INCHES (9.30 CM) FROM CENTERLINE OF BUSHING TO CENTERLINE OF SPHERICAL BEARING.		
			RETIGHTEN JAMNUT.		
			LOOSEN CLEVIS BRACKET ON FLANGE B10 AT 10 O'CLOCK POSITION ON ENGINE CORE.		
	45 50	332A2341-5 BACW10BP4ACU	ATTACH LINK ASSY (45) TO CLEVIS BRACKET USING LUBRICATED BOLT (40), WASHERS (50) AND (60), BUSHING (55) AND NUT (65).  LINK ASSY  . WASHER (CSK) (UNDER BOLTHEAD)		1
	55	BACB28AK04-030	. BUSHING		1
	60 65	NAS1149C0432R AS3485-10	. WASHER (UNDER NUT) . NUT		1
		7.00 100 10	TIGHTEN BOLT (40) TO 50-75 POUND-INCHES (5.6-8.5 NEWTON METERS).		'

71-00-02

P/P BUILDUP FIGURE 16-1 Page 5 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 6 Oct 05/2007

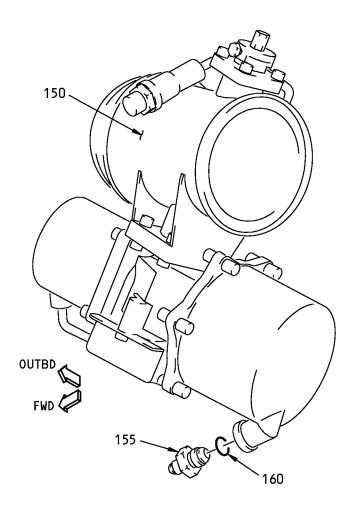


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 3)		
I	100 C1	BACB30PN5H3 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLTS (100).  . BOLT  . NEVER-SEEZ NSBT-8N COMPOUND	CON	4 AR
			REMOVE PROTECTIVE COVER FROM ENGINE PORT.		
	105 110 115	332A2323-14 8757-350 BACW10BP5ACU	POSITION DUCT ASSY (105) AND SEAL (110) ON ENGINE PORT AND ATTACH USING BOLTS (100) AND WASHERS (115) (WITH COUNTERSINK TOWARD BOLTHEADS).  . DUCT ASSY  . SEAL (V15284)  . WASHERS (CSK)	VEN	1 1 4
	113	BACWIODESACO	TIGHTEN BOLTS (100) TO 115-125 POUND-INCHES (13.0-14.2 NEWTON METERS).		4
ı	C2	G01912	INSTALL lockwire, G01912 (C2) OR safety cable kit, G50375 (C3) TO FWD AND AFT PAIR OF BOLTS (100).  . LOCKWIRE	CON	AR
İ	C3	G50375	. SAFETY CABLE KIT	CON	2

71-00-02

P/P BUILDUP FIGURE 16-1 Page 7 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 8 Oct 05/2007

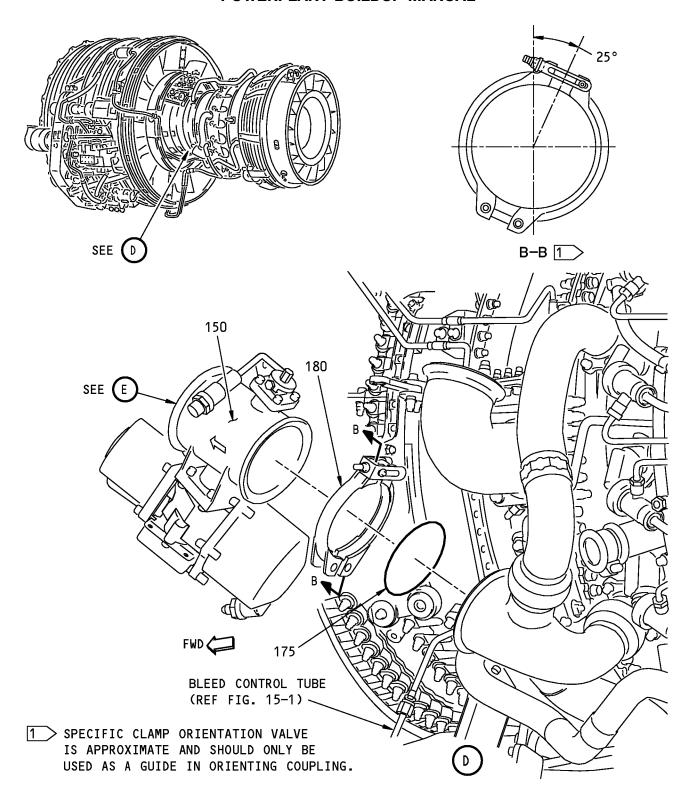


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 4)		
		LUBRICATE THREADS OF REDUCER (155) WITH Never-Seez NSBT-8N compound, D00006 (C1).		
150 150 155 160	3214446-4 10-62008-32 J522P52 801A50-0005A	INSTALL O-RING (160) ON REDUCER (155) AND INSTALL ON HIGH STAGE VALVE (150). . HIGH STAGE VALVE (V59364) . BOEING SPEC FOR 3214446-4 . REDUCER . O-RING (V15284)	VEN BOE VEN	1 - 1
C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND TIGHTEN REDUCER (155) TO 180-200 POUND-INCHES (20.3-22.6 NEWTON METERS).	CON	AR

71-00-02

P/P BUILDUP FIGURE 16-1 Page 9 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 10 Oct 05/2007

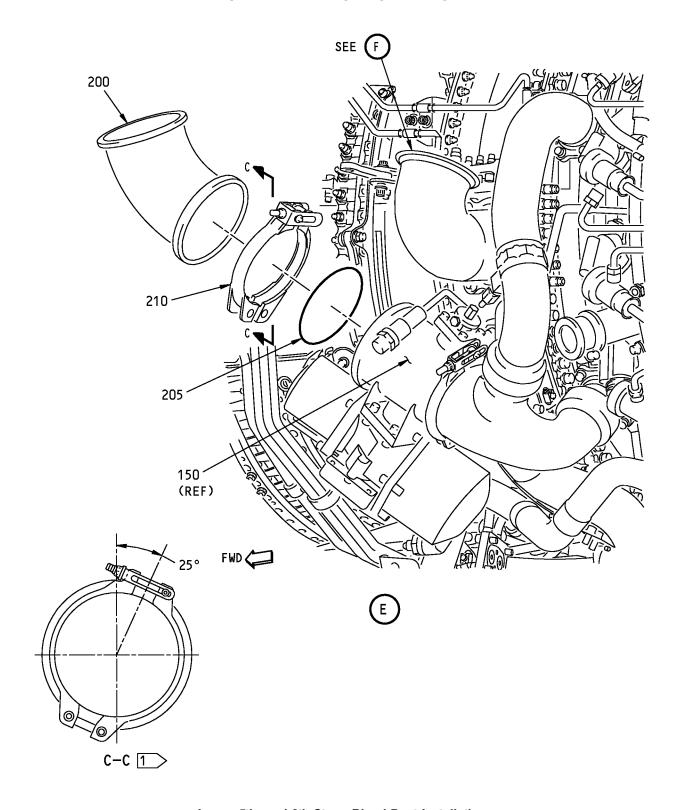


ITEM	DART NUMBER	NOMENOLATURE	110	OTV
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 5)		
		NOTE: ALL DUCT COUPLINGS HAVE A DRY-FILM LUBRICANT AND SHOULD NOT BE LUBRICATED FURTHER.  VISUALLY EXAMINE ALL SEAL AND FLANGE SEALING SURFACES BEFORE INSTALLATION TO ENSURE NO SCRATCHES, CUTS, PITS, OR FORIEGN MATERIAL IS PRESENT.		
		LOOSELY ATTACH HIGH STAGE VALVE (150) TO CFMI DUCT AT 8 O'CLOCK LOCATION ON ENGINE CORE.		
175 180	AS1895-7-350 AS1895-1-350	USE SEAL (175) AND COUPLING (180) SEAL . COUPLING		1 1
		LOOSELY INSTALL BLEED CONTROL TUBE (REF Figure 15-1) TO UNION AND ORIENT HIGH STAGE VALVE TO BEST POSITION.		
		NOTE: FINAL ORIENTATION OF HIGH STAGE VALVE IS DETERMINED BY BLEED CONTROL TUBE.		
		ORIENT COUPLING (180) WITH COUPLING BOLT ON TOP AND COUPLING NUT FACING OUTBOARD.		
		COUPLING LINK MUST BE CENTERED ALONG THE TAB LOCATED AT THE BOTTOM OF THE 9TH STAGE BLEED DUCT.		
		TIGHTEN COUPLING (180) TO TORQUE SPECIFIED ON PART.		
		LIGHTLY TAP OUTER SURFACE OF COUPLING WITH NON-METALLIC MALLET.		
		RETIGHTEN COUPLING TO TORQUE GIVEN ON PART.		
		TIGHTEN BLEED CONTROL TUBE TO AT BOTH ENDS TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		

71-00-02

P/P BUILDUP FIGURE 16-1 Page 11 Oct 05/2007





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 12 Oct 05/2007

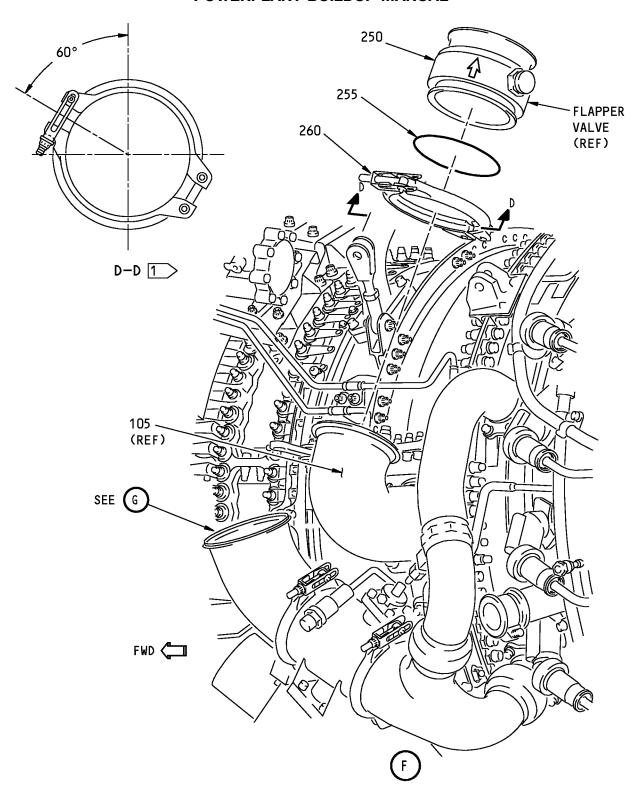


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1	TAIT NOMBER	LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 6)	00	Q.I.
200 205 210	332A2321-10 AS1895-7-350 AS1895-1-350	LOOSELY ATTACH DUCT ASSY (200) TO HIGH STAGE VALVE (150) WITH SEAL (205) AND COUPLING (210).  . DUCT ASSY . SEAL . COUPLING <sup>*[2]</sup>		1 1 1
		ORIENT COUPLING (210) WITH COUPLING BOLT ON TOP AND COUPLING NUT FACING OUTBOARD.		
		*[2] ORIENT COUPLING TO MAXIMIZE CLEARANCE.		

71-00-02

P/P BUILDUP FIGURE 16-1 Page 13 Oct 05/2007





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 14 Oct 05/2007

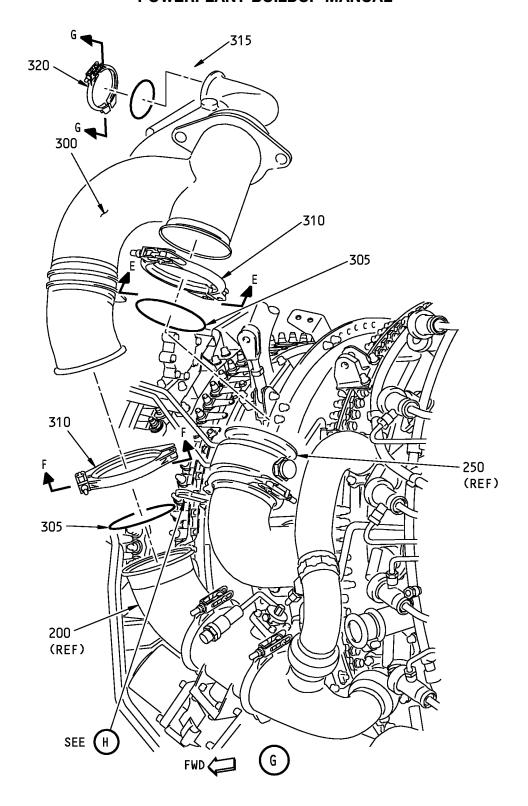


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 7)		
		LOOSELY ATTACH CHECK VALVE (250) TO DUCT (105) AT 9 O'CLOCK LOCATION ON ENGINE CORE.		
		USE SEAL (255) AND COUPLING (260).		
		ORIENT CHECK VALVE SO FLOW ARROW POINTS UP AND FLAPPER VALVE SHAFT IS APPROXIMATELY PARALLEL TO 5TH-STAGE PORT +/-0.25 INCH TO MAXIMIZE CLEARANCE WITH THRUST REVERSER.		
		NOTE: DO NOT TIGHTEN COUPLING AT THIS TIME.		
250 250 255 260	3202222-1 10-62008-1 AS1895-7-350 AS1895-4-350	. CHECK VALVE (V59364) . BOEING SPEC FOR 3202222-1 . SEAL . COUPLING	VEN BOE	1 - 1 1

71-00-02

P/P BUILDUP FIGURE 16-1 Page 15 Oct 05/2007





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 16 Oct 05/2007

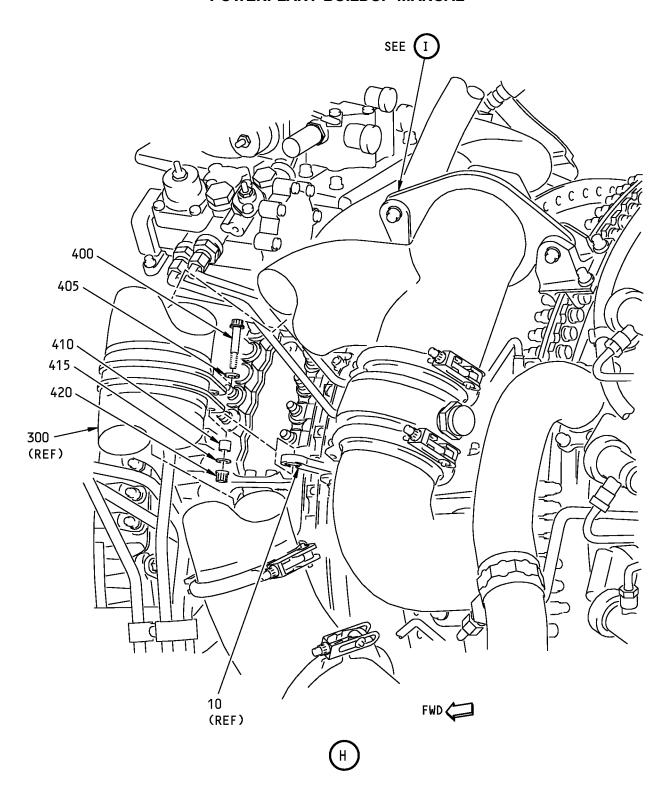


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 8)		
		POSITION DUCT ASSY (300) AND SEALS (305) ON DUCT ASSY (200) AND CHECK VALVE (250).		
		LOOSELY CONNECT DUCT ASSY (300) WITH COUPLINGS (310).		
		NOTE: DO NOT TIGHTEN COUPLINGS AT THIS TIME.		
300 305 310	332A2322-54 AS1895-7-350 AS1895-4-350	. DUCT ASSY, INTERSECTION MANIFOLD . SEAL . COUPLING*[2]		1 2 2
		*[2] ORIENT COUPLING TO MAXIMIZE CLEARANCE.		
		LOOSELY CONNECT CTAI FLANGE OF DUCT (300) TO CTAI BIFUR DUCT AT 12 O'CLOCK POSITION (REF Figure 13-1) WITH SEAL (315) AND COUPLING (320).		
		NOTE: DO NOT TIGHTEN COUPLING AT THIS TIME.		
315	AS1895-7-175	. SEAL		1
320	AS1895-4-175	. COUPLING <sup>*[2]</sup>		1
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON TOP OF DUCT (300).		
		*[2] ORIENT COUPLING TO MAXIMIZE CLEARANCE.		

71-00-02

P/P BUILDUP FIGURE 16-1 Page 17 Oct 05/2007





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 18 Oct 05/2007

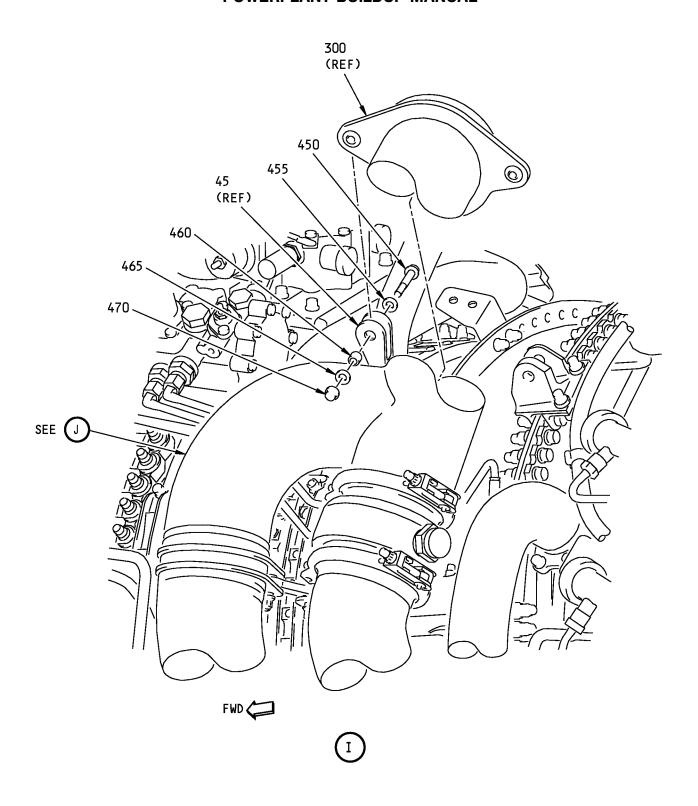


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 9)		
I	400 C1	BACB30PN4-14 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLT (400).  . BOLT  . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
			LOOSELY ATTACH DUCT (300) TO LINK ASSY (10) WITH LUBRICATED BOLT (400), WASHERS (405) AND (415), BUSHING (410) AND NUT (420).		
			NOTE: DO NOT TIGHTEN BOLT AT THIS TIME.		
	405 410 415 420	BACW10BP4ACU BACB28AK04-030 NAS1149C0432R AS3485-10	. WASHER (CSK) (UNDER BOLTHEAD) . BUSHING . WASHER (UNDER NUT) . NUT		1 1 1 1

71-00-02

P/P BUILDUP FIGURE 16-1 Page 19 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 20 Oct 05/2007

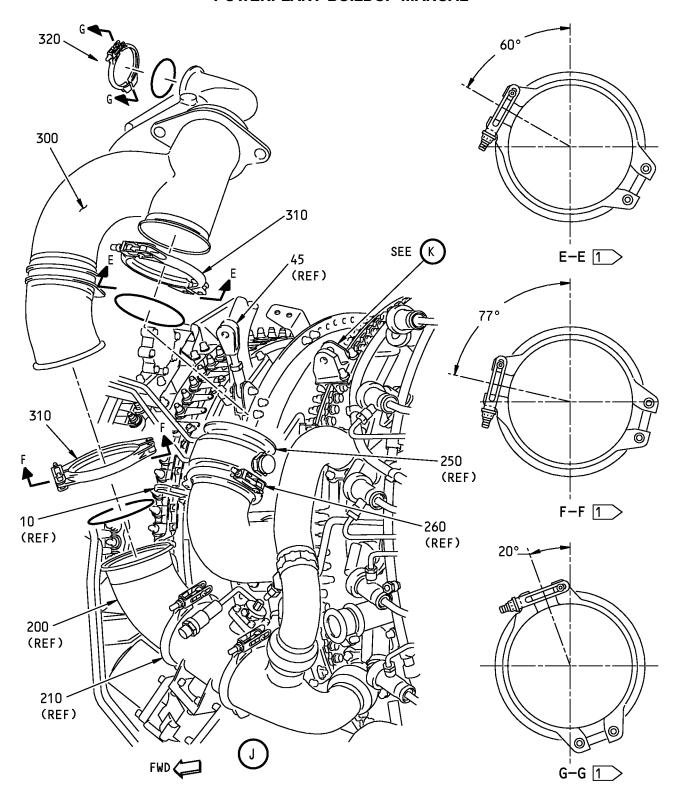


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 10)		
450 C1	BACB30PN4-14 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLT (450).  . BOLT  . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
455 460 465 470	BACW10BP4ACU BACB28AK04-030 NAS1149C0432R AS3485-10	LOOSELY ATTACH LINK (45) TO ATTACH FLANGE OF DUCT ASSY (300) WITH LUBRICATED BOLT (450), WASHERS (455) AND (465), BUSHING (460) AND NUT (470).  . WASHER (CSK) (UNDER BOLTHEAD)  . BUSHING  . WASHER (UNDER NUT)  . NUT		1 1 1

71-00-02

P/P BUILDUP FIGURE 16-1 Page 21 Oct 05/2008





Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 22 Oct 05/2007

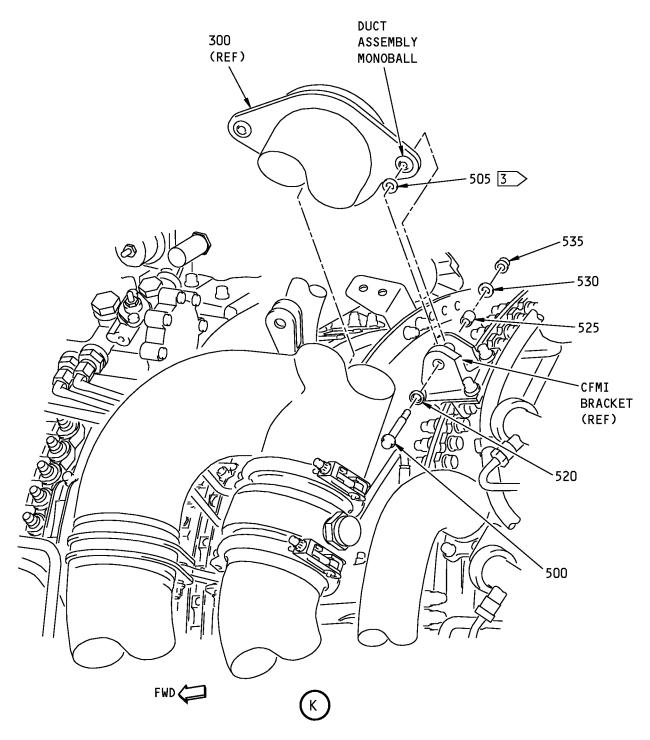


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 11)		
			ORIENT COUPLINGS (310) AND (320) AS SHOWN.		
			ADJUST DUCT ASSYS (200) AND (300) TO MAKE SURE NO PRELOAD EXISTS ON DUCTS, CHECK VALVE (250) AND LINKS (10) AND (45).		
			TIGHTEN COUPLINGS (210), (260), (310) AND (320) TO TORQUE GIVEN ON PART.		
			LIGHTLY TAP OUTER SURFACE WITH NON-METALLIC MALLET.		
			RETIGHTEN COUPLINGS TO TORQUE GIVEN ON PART.		
			TIGHTEN CFMI BRACKETS SUPPORTING LINK (10) AND CLEVIS BRACKET SUPPORTING LINK (45) TO ENGINE FLANGES. TIGHTEN BOLTS TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
			TIGHTEN BOLTS (400) AND (450) TO 50-75 POUND-INCHES (5.6-8.5 NEWTON METERS).		
			NOTE: MAKE SURE LINKS DO NOT APPLY A PRELOAD TO ADJACENT DUCT OR SUPPORT HARDWARE.		
			IF NECESSARY, ADJUST LINK (10) BY REPOSITIONING CFMI BRACKETS.		
			LOOSEN CFMI FASTENERS, REPOSITION BRACKETS AND RETIGHTEN FASTENERS TO 110-120 POUND-INCHES (12.5-13.5 NEWTON METERS).		
			IF NECESSARY, ADJUST LINK (45) BY LOOSENING JAMNUT ON LINK TO FREE ROD END.		
			ADJUST AS NECESSARY AND RETIGHTEN JAMNUT.		
			APPLY lockwire, G01912 (C2) OR safety cable kit, G50375 (C3) BETWEEN JAMNUT AND FEMALE SIDE OF LINK (45).		
- 1	C2 C3	G01912 G50375	. LOCKWIRE . SAFETY CABLE KIT	CON	AR 2
•		333073	. 6/11 6/1022 1111	00.1	_

71-00-02

P/P BUILDUP FIGURE 16-1 Page 23 Oct 05/2008





3 INSTALL UP TO 4 WASHERS AS NECESSARY BETWEEN LOWER SIDE OF DUCT ASSEMBLY MONOBALL AND CFMI BRACKET.

Lower 5th- and 9th-Stage Bleed Duct Installation Figure 16-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 16-1 Page 24 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
16-1		LOWER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 16-1, SHEET 12)		
500 500 C1	BACB30PN6C22 BACB30PN6C24 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS AND SHANK OF BOLT (500).  BOLT <sup>*[4]</sup> BOLT (OPTIONAL TO BACB30PN6C22) <sup>*[4]</sup> NEVER-SEEZ NSBT-8N COMPOUND	OPT CON	1 - AR
		INSTALL UP TO 4 WASHERS (505) TO ELIMINATE GAP BETWEEN LOWER SIDE OF DUCT ASSY MONOBALL AND CFMI BRACKET.		
		IF GAP BETWEEN CFMI BRACKET AND DUCT ASSY MONOBALL IS MORE THAN 0.12 INCHES (3.0 MM), REPOSITION CFMI BRACKET TO REDUCE GAP.		
505	NAS1149E0616R	RETIGHTEN BRACKET FASTENERS TO 210-230 POUND-INCHES (23.7-26.0 NEWTON METERS) WASHER		4
		SECURE WASHERS (505) TO DUCT FLANGE AND BRACKET CLEVIS WITH BOLT (500), WASHERS (520) AND (530), BUSHING (525), AND NUT (535).		
520 525	BACW10BN6UC BACB28AK06-040	MAKE SURE DUCT INSTALLATION DOES NOT APPLY A PRELOAD OF MORE THAN 50 POUNDS ON ADJACENT STRUCTURE.  . WASHER (CSK) (UNDER BOLTHEAD)  . BUSHING <sup>*[4]</sup>		1 1
525 530 535	BACB28AK06-055 NAS1149E0632R AS3485-12	. BUSHING <sup>*[4]</sup> . WASHER (UNDER NUT) . NUT	OPT	- 1 1
		TIGHTEN BOLT (500) TO 150-250 POUND-INCHES (17.0-28.2 NEWTON METERS).		
		*[4] BACB30PN6C24 BOLT (500) TOGETHER WITH BACB28AK06-055 BUSHING (525) OPTIONAL TO BACB30PN6C22 BOLT (500) TOGETHER WITH BACB28AK06-040 BUSHING (525).		

71-00-02

P/P BUILDUP FIGURE 16-1 Page 25 Oct 05/2008



#### **FIGURE 17-1**

# BLEED CONTROL SYSTEM INSTALLATION - UPPER

**REF QEC TASK NO.: 17** 

**REF DWG: 332A2100** 

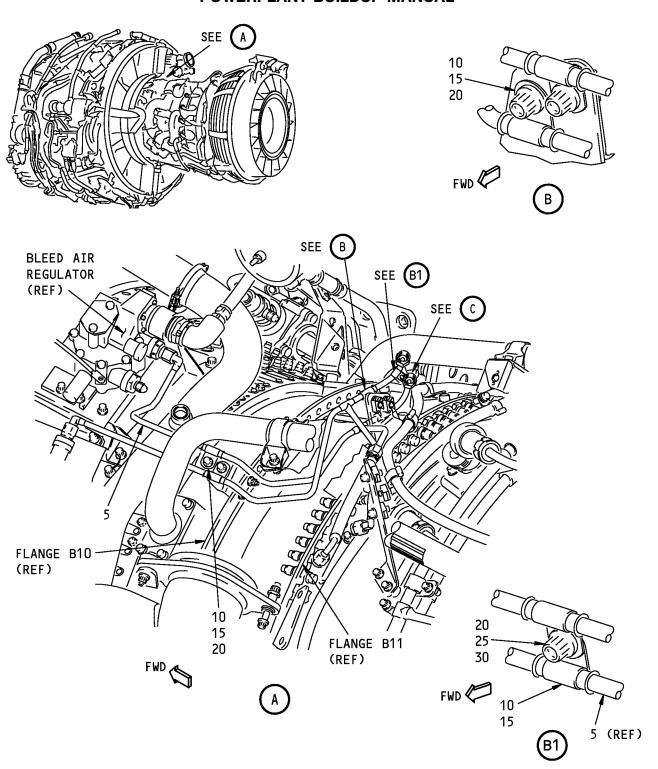
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 17-1 Page 1 Oct 05/2007





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Upper Bleed Control System Installation Figure 17-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 2 Jun 05/2008

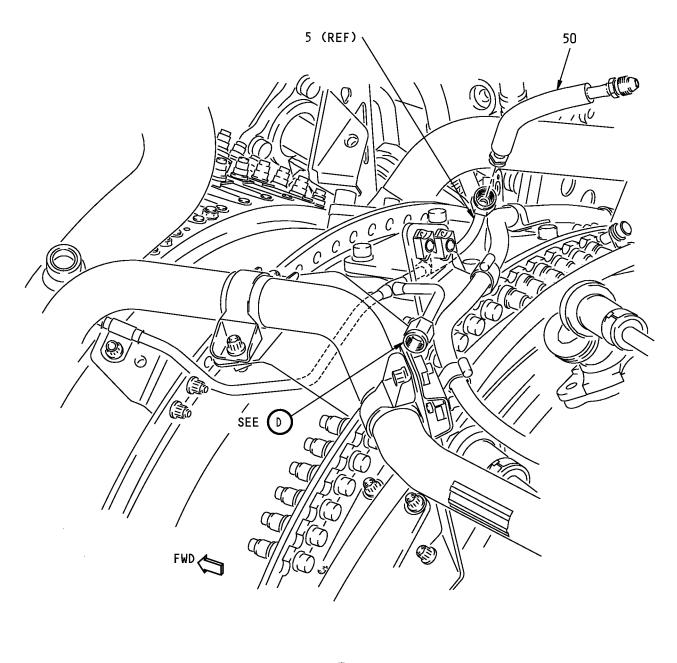


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
NO. 17-1 5 10 15 15 20 25	332A2350-5 1794M49P01 BACC10GT2-04 9352M41P16 BACB30ZF4-07 NAS1149E0416P BACN11Z4C	UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 1)  NOTE: IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBE OR HOSE NUTS TO THE INDICATED TORQUE UNTIL INSTRUCTED.  WHEN TIGHTENING TUBE AND HOSE NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.  ALL TUBE NUTS HAVE A DRY-FILM LUBRICANT AND DO NOT NEED ADDITIONAL LUBRICATION.  POSITION TUBE ASSY (5) ON ENGINE CORE, ALIGNING FOWARD END WITH UPPER UNION ON BLEED AIR REGULATOR.  LOOSELY ATTACH TUBE ASSY (5) TO ENGINE CORE BRACKETS ON FLANGES B10 AND B11. USE CLAMPS (10), CLAMPSHELLS (15), BOLTS (20), WASHER (25) AND NUT (30).  TUBE ASSY  . CLAMP  . CLAMPSHELL  . CLAMPSHELL  . CLAMPSHELL (OPTIONAL)  . BOLT  . WASHER  . NUT  ADJUST TUBE ASSY (5) TO BEST POSITION, ENSURING NO PRELOAD EXISTS ON TUBE. TIGHTEN TUBE NUT AT BLEED AIR REGULATOR TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.  TIGHTEN BOLTS (20) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).	ОРТ	11 3 66 - 3 1 1

71-00-02

P/P BUILDUP FIGURE 17-1 Page 3 Jun 05/2008





 $\bigcirc$ 

Upper Bleed Control System Installation Figure 17-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 4 Oct 05/2007

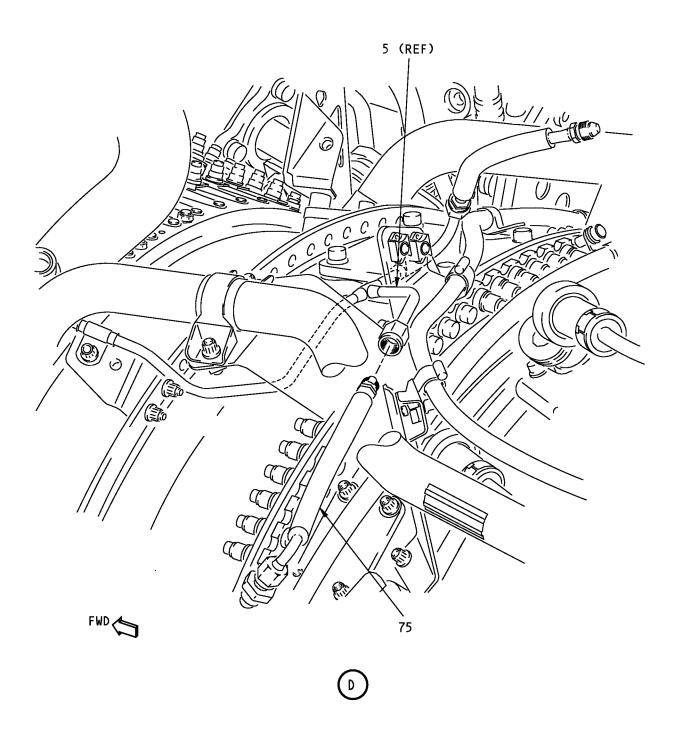


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 2)		
50	16135-80	INSTALL HOSE ASSY (50) ON END OF TUBE ASSY (5) HOSE ASSY (V99755) 60B90135-80	VEN	1
		TIGHTEN TUBE NUT ON HOSE ASSY (50) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON END OF HOSE ASSY (50).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 5 Jun 05/2008





Upper Bleed Control System Installation Figure 17-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 6 Oct 05/2007

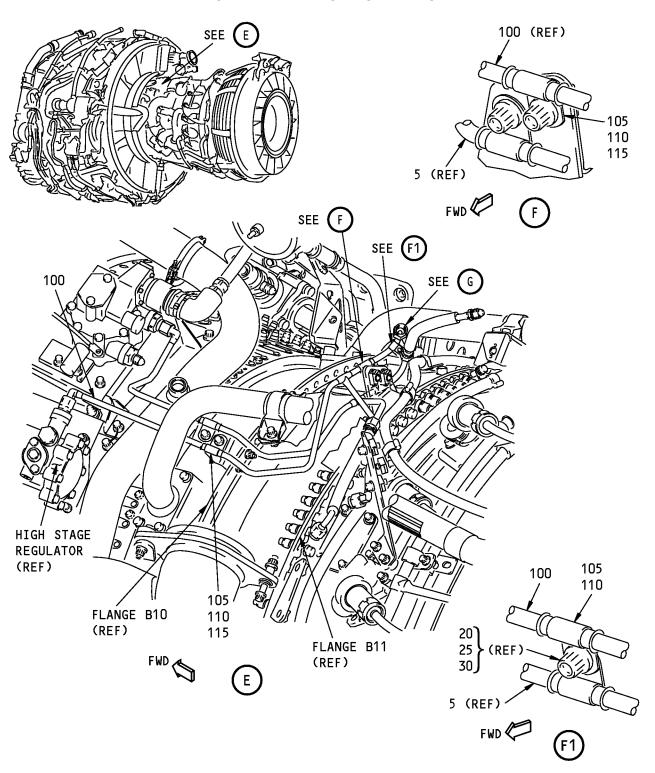


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 3)		
		LOOSELY INSTALL HOSE ASSY (75) TO TUBE ASSY (5).		
		NOTE: DO NOT TIGHTEN HOSE ASSY (75) AT THIS TIME. HOSE WILL BE TIGHTENED DURING THE PRSOV INSTALLATION (REF Figure 18-1).		
75 75	16135-95 16135-83	. HOSE ASSY (V99755) . HOSE ASSY (V99755) 60B90135-83 (OPTIONAL TO 16135-95)	VEN OPT	1
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON END OF HOSE ASSY (75).		,

71-00-02

P/P BUILDUP FIGURE 17-1 Page 7 Jun 05/2008





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Upper Bleed Control System Installation Figure 17-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 8 Jun 05/2008

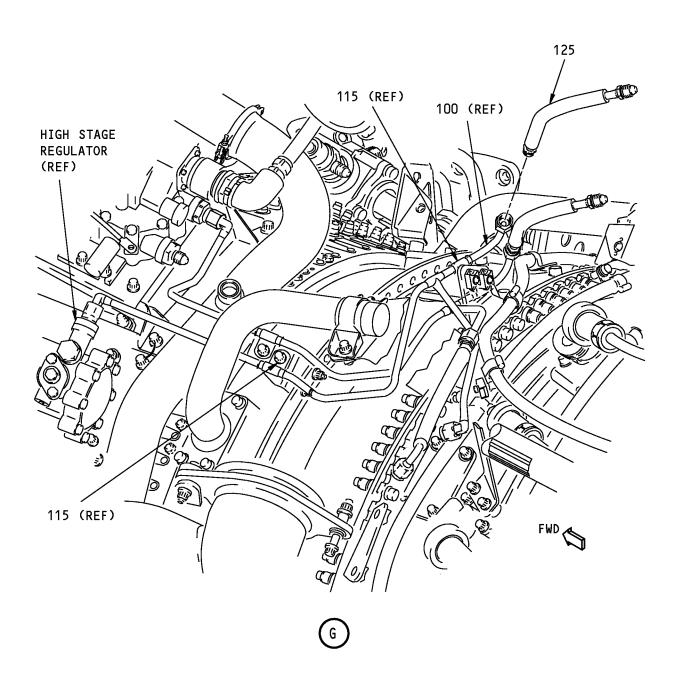


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 4)		
		POSITION TUBE ASSY (100) ON ENGINE CORE, ALIGNING FOWARD END WITH TOP UNION ON HIGH STAGE REGULATOR.		
100 105 110 110 115	332A2350-7 1794M49P01 BACC10GT2-04 9352M41P16 BACB30ZF4-07	LOOSELY ATTACH TUBE ASSY (100) TO ENGINE CORE BRACKETS ON FLANGES B10 AND B11. USE CLAMPS (105), CLAMPSHELLS (110) AND BOLTS (115) TUBE ASSY . CLAMP . CLAMPSHELL . CLAMPSHELL (OPTIONAL) . BOLT	ОРТ	1 3 6 - 2
		ADJUST TUBE ASSY (100) TO BEST POSITION, ENSURING NO PRELOAD EXISTS ON TUBE. TIGHTEN TUBE NUT AT HIGH STAGE REGULATOR TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		TIGHTEN BOLTS (115) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 9 Jun 05/2008





Upper Bleed Control System Installation Figure 17-1 (Sheet 5)

**71-00-02**P/P BUILDUP FIGURE 17-1

Page 10 Oct 05/2007

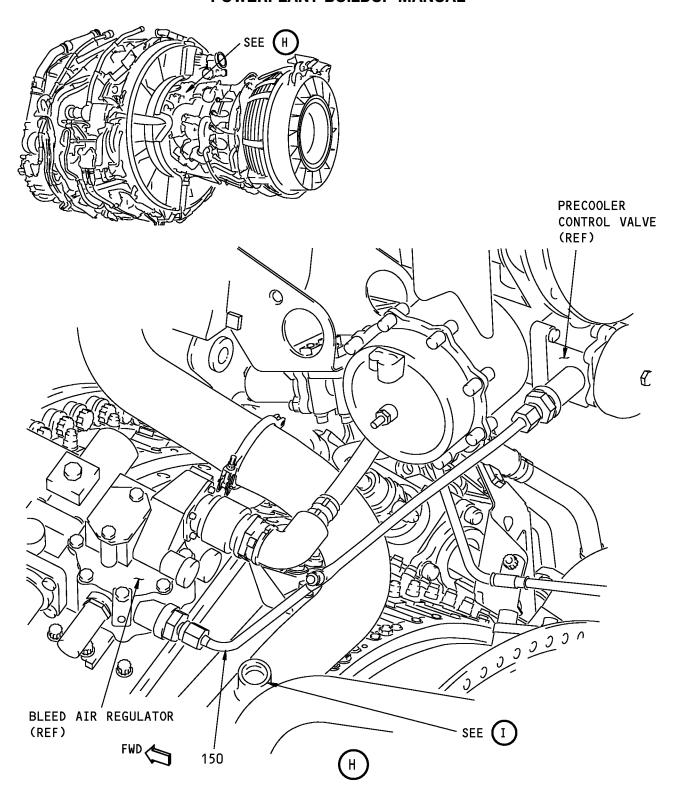


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 5)		
125	16135-81	INSTALL HOSE ASSY (125) ON END OF TUBE ASSY (100) HOSE ASSY (V99755) 60B90135-81	VEN	1
		TIGHTEN TUBE NUT ON HOSE ASSY TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON END OF HOSE ASSY (125).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 11 Jun 05/2008





Upper Bleed Control System Installation Figure 17-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 12 Oct 05/2007

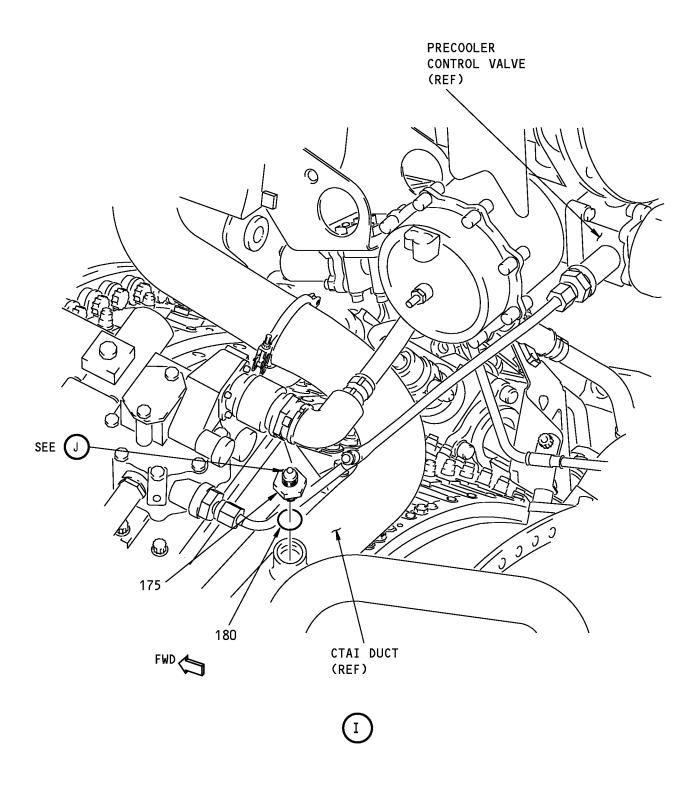


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 6)		
		LOOSELY INSTALL TUBE ASSY (150) BETWEEN UNIONS ON BLEED AIR REGULATOR AND PRECOOLER CONTROL VALVE.		
		NOTE: DO NOT TIGHTEN TUBE ASSY (150) AT THIS TIME.		
150	332A2350-14	. TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 17-1 Page 13 Oct 05/2007





Upper Bleed Control System Installation Figure 17-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 14 Oct 05/2007

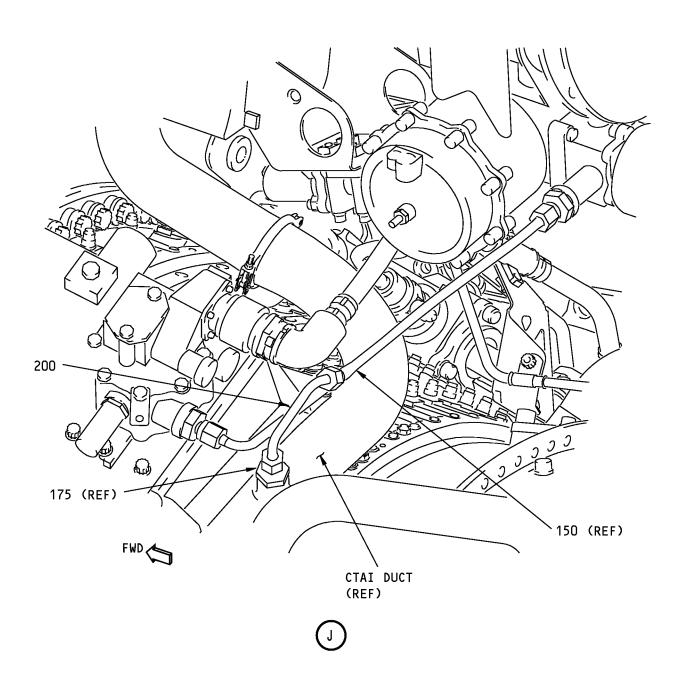


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 7)		
175 180 C1	J522P53 801A50-0006A D00006	INSTALL O-RING (180) ON REDUCER (175). LUBRICATE THREADS ON O-RING SIDE OF REDUCER (175) WITH Never-Seez NSBT-8N compound, D00006 (C1) AND INSTALL ON CTAI DUCT.  . REDUCER . O-RING (V15284) . NEVER-SEEZ NSBT-8N COMPOUND	VEN CON	1 1 AR
		TIGHTEN REDUCER (175) TO 258-284 POUND-INCHES (29-32 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 15 Oct 05/2008





Upper Bleed Control System Installation Figure 17-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 16 Oct 05/2007

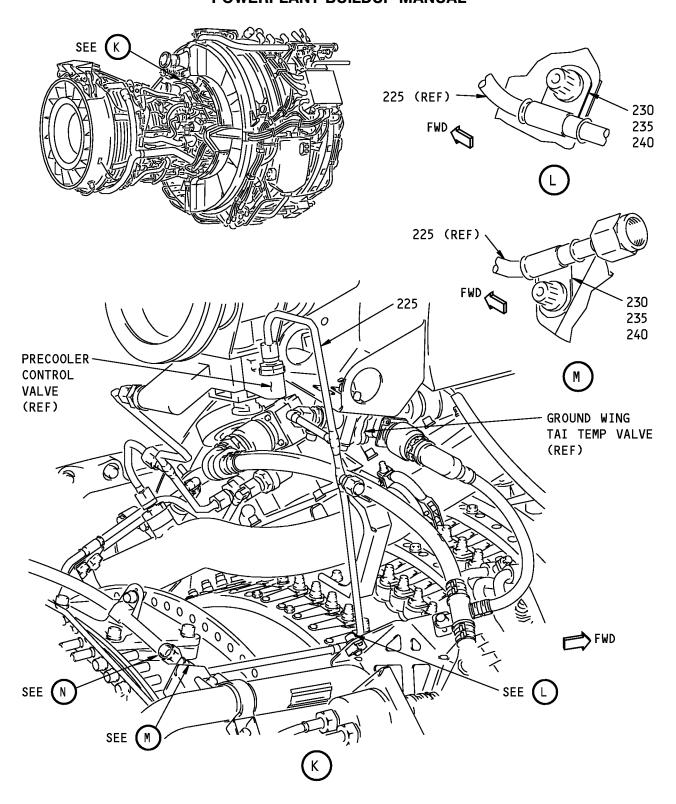


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 8)		
200	332A2350-12	INSTALL TUBE ASSY (200) BETWEEN TUBE ASSY (150) AND UNION (175) ON CTAI DUCT.  . TUBE ASSY		1
		ADJUST TUBE ASSY (150) AND (200) TO BEST POSITION, ENSURING NO PRELOAD EXISTS ON TUBES, BLEED AIR REGULATOR, PRECOOLER CONTROL VALVE AND CTAI DUCT.		
		TIGHTEN TUBE ASSY (150) AND (200) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 17 Oct 05/2007





Upper Bleed Control System Installation Figure 17-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 18 Oct 05/2007

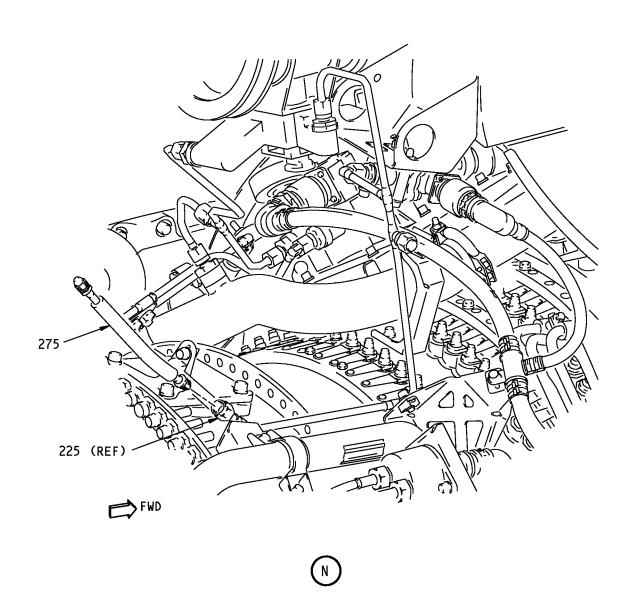


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 9)		
		LOOSELY INSTALL TUBE ASSY (225) ON ENGINE CORE, ALIGNING FOWARD END WITH UNION ON RIGHT SIDE OF PRECOOLER CONTROL VALVE AND UNION ON GROUND WING TAI TEMP VALVE.		
		LOOSELY ATTACH TUBE ASSY (225) TO ENGINE CORE BRACKETS AT 1 O'CLOCK POSITION. USE CLAMPS (230), CLAMPSHELLS (235) AND BOLTS (240).		
225	332A2350-13	. TUBE ASSY		1
230 235	1794M49P01 BACC10GT2-04	. CLAMP . CLAMPSHELL		2 4
235	9352M41P16	. CLAMPSHELL (OPTIONAL)	OPT	-
240	BACB30ZF4-05	. BOLT		2
		ADJUST TUBE ASSY (225) TO BEST POSITION, ENSURING NO PRELOAD EXISTS. TIGHTEN TUBE ASSY (225) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METER). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		TIGHTEN PRECOOLER CONTROL VALVE COUPLING (REF Figure 14-1 ITEM NO. 120) TO TORQUE GIVEN ON PART. LIGHTLY TAP OUTER SURFACE WITH NON-METALLIC MALLET. RETIGHTEN COUPLING TO TORQUE GIVEN ON PART.		
		TIGHTEN BOLTS (240) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 19 Oct 05/2007





Upper Bleed Control System Installation Figure 17-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 17-1 Page 20 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
17-1		UPPER BLEED CONTROL SYSTEM INSTALLATION (FIGURE 17-1, SHEET 10)		
275	16135-80	INSTALL HOSE ASSY (275) ON END OF TUBE ASSY (225) HOSE ASSY (V99755) 60B90135-80	VEN	1
		TIGHTEN TUBE NUT ON HOSE ASSY (275) TO 133-147 POUND-INCHES (15.0-16.6 NEWTON METERS). BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON END OF HOSE ASSY (275).		

71-00-02

P/P BUILDUP FIGURE 17-1 Page 21 Jun 05/2008



#### **FIGURE 18-1**

# BLEED DUCT INSTALLATION - UPPER 5TH-AND 9TH-STAGE

**REF QEC TASK NO.: 18** 

**REF DWG: 332A2100** 

332A2300

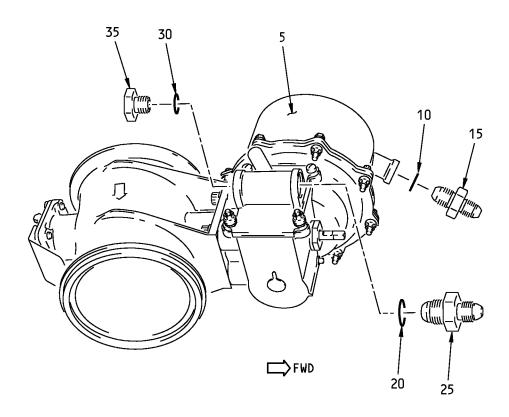
NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 18-1 Page 1 Oct 05/2007





Upper 5th- and 9th-Stage Bleed Duct Installation Figure 18-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 18-1 Page 2 Oct 05/2007

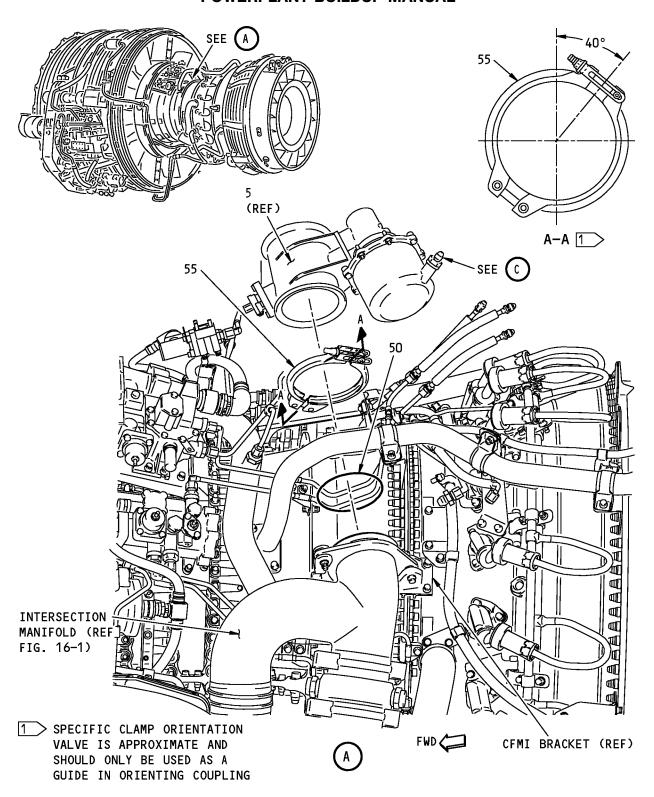


	EM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
N	NO. 8-1	3214552-6 10-62008-43 3214552-5 10-62008-30 801A50-0005A J522P52 801A50-0006A J522P53 801A50-0006A AS5169J06 D00006	NOMENCLATURE  UPPER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 18-1, SHEET 1)  INSTALL O-RING (10) ON REDUCER (15), O-RING (20) ON REDUCER (25) AND O-RING (30) ON PLUG (35).  LUBRICATE THREADS OF REDUCERS (15) AND (25) AND PLUG (35) WITH Never-Seez NSBT-8N compound, D00006 (C1).  INSTALL REDUCER (15) ON AFT PORT OF PRSOV (5).  INSTALL REDUCER (25) ON OUTBOARD PORT OF VALVE BODY AND PLUG (35) IN INBOARD PORT OF VALVE BODY.  PRESS REG AND SHUTOFF VALVE (PRSOV) (V59364)  BOEING SPEC FOR 3214552-6  PRESS REG AND SHUTOFF VALVE (PRSOV) (V59364) (REPLACED BY 3214552-6)  BOEING SPEC FOR 3214552-5  O-RING (V15284)  REDUCER  O-RING (V15284)  REDUCER  O-RING (V15284)  PLUG  NEVER-SEEZ NSBT-8N COMPOUND  TIGHTEN REDUCER (15) TO 180-200 POUND-INCHES (20-23 NEWTON METERS).  TIGHTEN REDUCER (25) AND PLUG (35) TO 257-284 POUND-INCHES (29-32 NEWTON METERS).	VEN BOE LTD BOE VEN VEN CON	1 1 1 1 1 1 AR

71-00-02

P/P BUILDUP FIGURE 18-1 Page 3 Oct 05/2008





Upper 5th- and 9th-Stage Bleed Duct Installation Figure 18-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 18-1 Page 4 Oct 05/2007

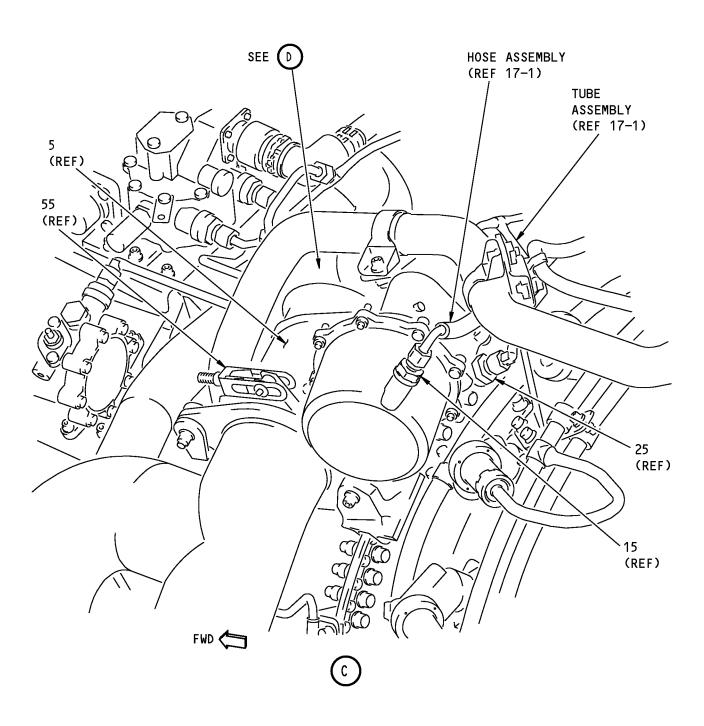


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
18-1		UPPER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 18-1, SHEET 2)		
		NOTE: ALL DUCT COUPLINGS HAVE A DRY-FILM LUBRICANT.		
		DO NOT APPLY ANY ADDITIONAL LUBRICANT.		
		VISUALLY EXAMINE ALL SEAL AND FLANGE SEALING SURFACES BEFORE INSTALLATION TO ENSURE NO SCRATCHES, CUTS, PITS, OR FOREIGN MATERIAL IS PRESENT.		
		LOOSELY ATTACH PRSOV (5) TO TOP PORT OF INTERSECTION MANIFOLD WITH SEAL (50) AND COUPLING (55).		
		ORIENT COUPLING (55) AS SHOWN.		
		NOTE: FINAL ORIENTATION OF PRSOV IS DETERMINED BY BLEED CONTROL LINES.		
50 55	AS1895-7-350 AS1895-1-350	. SEAL . COUPLING		1
		NOTE: CFMI BRACKET (REF) MAY BE LOOSENED TO ALLOW COUPLING (55) TO BE INSTALLED OVER VALVE (5).  RETIGHTEN CFMI FASTENERS TO 209-231 POUNDS-INCHES (23.6-26.1 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 18-1 Page 5 Oct 05/2007





Upper 5th- and 9th-Stage Bleed Duct Installation Figure 18-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 18-1 Page 6 Oct 05/2007

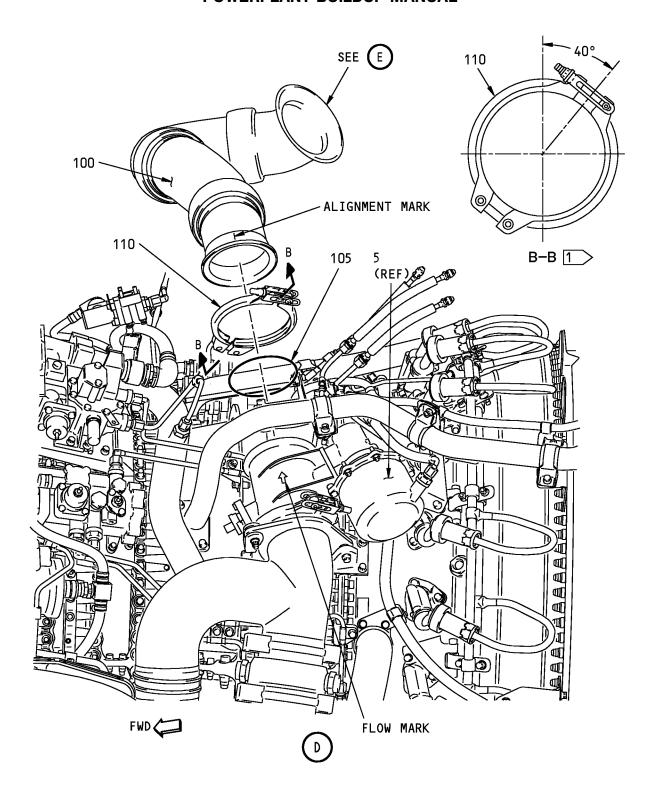


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
18-1		UPPER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 18-1, SHEET 3)		
		CAUTION: MAKE SURE NO PRELOAD EXISTS BETWEEN PRSOV AND BLEED CONTROL LINES.		
		ATTACH TUBE ASSY Figure 17-1 TO REDUCER (25) AND ATTACH HOSE ASSY Figure 17-1 TO REDUCER (15).		
		USE TUBE AND HOSE ASSYS TO ORIENT PRSOV (5).		
		TIGHTEN COUPLING (55) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP SURFACE OF COUPLING WITH NON-METALLIC MALLET.		
		RETIGHTEN COUPLING TO TORQUE SPECIFIED ON PART.		

71-00-02

P/P BUILDUP FIGURE 18-1 Page 7 Oct 05/2007





Upper 5th- and 9th-Stage Bleed Duct Installation Figure 18-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 18-1 Page 8 Oct 05/2007

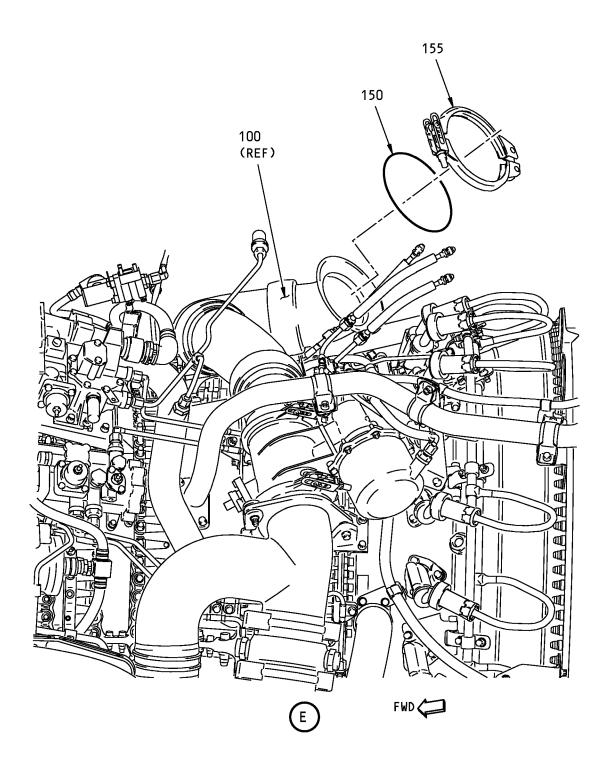


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
18-1		UPPER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 18-1, SHEET 4)		
		LOOSELY ATTACH DUCT ASSY (100) TO TOP OF PRSOV (5) WITH SEAL (105) AND COUPLING (110).		
		MAKE SURE ALIGNMENT MARK ON DUCT ASSY (100) ALIGNS WITH FLOW ARROW ON PRSOV (5).		
		ORIENT COUPLING (110) AS SHOWN.		
		NOTE: IT WILL BE NECESSARY TO ADJUST THE DUCT ASSY FOR PROPER ALIGNMENT WITH THE PRECOOLER DURING ENGINE INSTALLATION.		
100 105	332A2326-45 AS1895-7-350	. DUCT ASSY . SEAL		1
110	AS1895-1-350	. COUPLING		1
		TIGHTEN COUPLING (110) TO TORQUE SPECIFIED ON PART.		
		LIGHTLY TAP SURFACE OF COUPLING WITH NON-METALLIC MALLET.		
		RETIGHTEN COUPLING TO TORQUE SPECIFIED ON PART.		

71-00-02

P/P BUILDUP FIGURE 18-1 Page 9 Oct 05/2007





Upper 5th- and 9th-Stage Bleed Duct Installation Figure 18-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 18-1 Page 10 Oct 05/2007



ITEM				
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
18-1		UPPER 5TH- AND 9TH-STAGE BLEED DUCT INSTALLATION (FIGURE 18-1, SHEET 5)		
		PUT ITEMS (150) AND (155) IN A BAG AND SECURE TO DUCT ASSY (100).		
		NOTE: ITEMS (150) AND (155) ARE INSTALLED DURING POWERPLANT INSTALLATION ON AIRPLANE STRUT (AMM PAGEBLOCK 71-00-02/401).		
150 155	AS1895-7-450 AS1895-4-450	. SEAL . COUPLING		1

71-00-02

P/P BUILDUP FIGURE 18-1 Page 11 Oct 05/2007



#### **FIGURE 19-1**

# THIS FIGURE NOT USED

71-00-02

P/P BUILDUP FIGURE 19-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

THIS FIGURE NOT USED Figure 19-1 (Sheet 1)

**71-00-02**P/P BUILDUP FIGURE 19-1
Page 2
Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
19-1		THIS FIGURE NOT USED (FIGURE 19-1, SHEET 1)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 19-1 Page 3 Oct 05/2007



#### **FIGURE 20-1**

## **HYDRAULIC PUMP INSTALLATION - VICKERS**

**REF QEC TASK NO.: 20** 

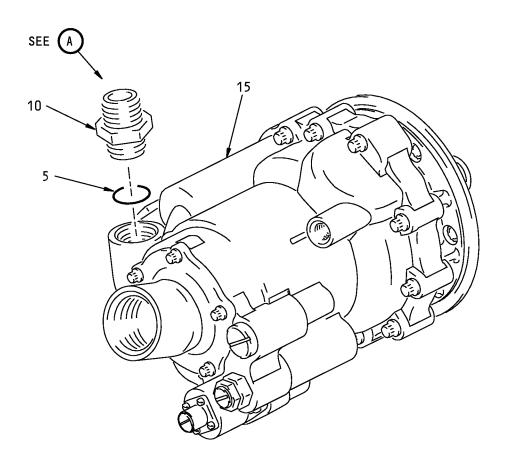
**REF DWG: 332A2400** 

**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 20-1 Page 1 Oct 05/2007





VICKERS HYDRAULIC PUMP

Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 2 Oct 05/2007

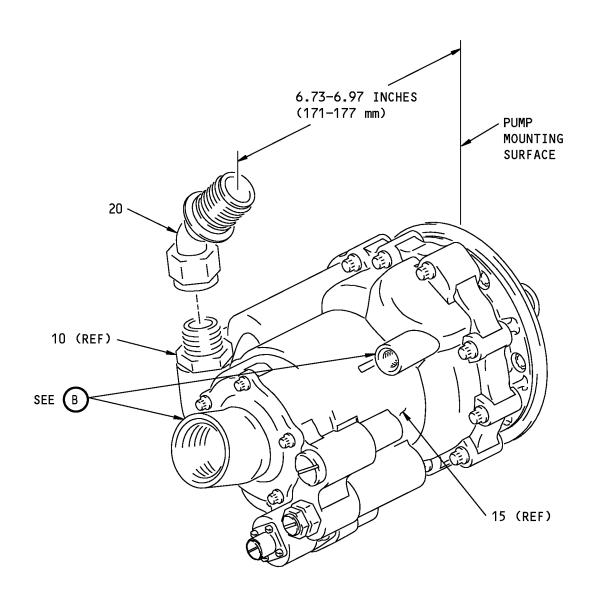


ITEM	DART NUMBER	NOMENCI ATURE	110	OTV
NO. 20-1	PART NUMBER	HYDRAULIC PUMP INSTALLATION - VICKERS	UC	QIY
5 10 15 15 C1	NAS1612-12A MS21902-12T 849589 10-62167-3 D00054	HYDRAULIC PUMP INSTALLATION - VICKERS (FIGURE 20-1, SHEET 1)  WARNING: FIRE-RESISTANT HYDRAULIC FLUIDS CONFORMING TO BMS 3-11 (SKYDROL) MAY CAUSE SKIN IRRITATION. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. IN CASE OF EVE CONTACT, FLUSH EYES WITH WATER AND GET MEDICAL AID. IN CASE OF INGESTION, GET MEDICAL AID.  LUBRICATE PACKING (5) AND THREADS OF UNION (10) WITH MCS 352B fluid, D00054 (C1).  INSTALL PACKING (5) ON UNION (10) AND INSTALL UNION (10) TO PRESSURE PORT OF HYDRAULIC PUMP (15). TIGHTEN UNION (10) TO 428-473 POUND-INCHES (48.3-53.4 NEWTON METERS).  PACKING  UNION  VICKERS HYDRAULIC PUMP (V62983)  BOEING SPEC FOR 849589  MCS 352B FLUID	VEN BOE CON	1 1 1 - AR

71-00-02

P/P BUILDUP FIGURE 20-1 Page 3 Oct 05/2008





VICKERS HYDRAULIC PUMP

Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 4 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



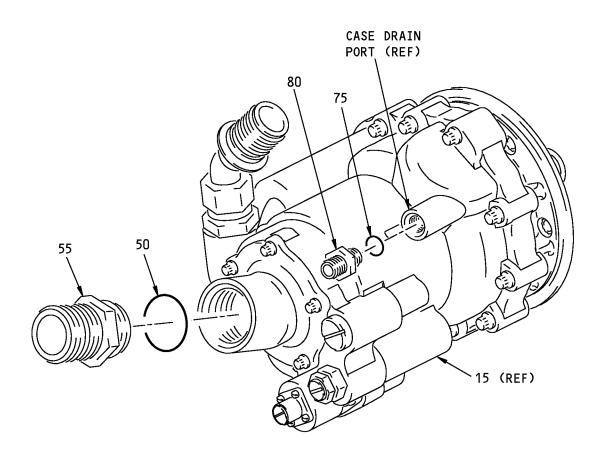
## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
20-1		HYDRAULIC PUMP INSTALLATION - VICKERS (FIGURE 20-1, SHEET 2)		
20 20 C1 C2	155012-73-20 S332A210-20 D00054 D00153	LUBRICATE THREADS OF QUICK-RELEASE FITTING (20) WITH MCS 352B fluid, D00054 (C1) OR fluid, D00153 (C2).  FITTING, QUICK RELEASE (V11362)  BOEING SPEC FOR 155012-73-20  MCS 352B FLUID  FLUID	VEN BOE CON CON	1 - AR AR
		LOOSELY ATTACH FITTING (20) TO UNION (10) AND ORIENT FITTING (20) UNTIL CENTER OF FITTING IS 6.73-6.97 (171-177 NM) FROM PUMP MOUNTING FACE.		
		TIGHTEN FITTING (20) TO 855-945 POUND-INCHES (96.6-106.8 NEWTON METERS). BACK OFF FITTING TO RELAX TORQUE, THEN RETIGHTEN.		
		RECHECK DISTANCE BETWEEN FITTING (20) AND PUMP MOUNTING FLANGE. IF OUTSIDE LIMIT, LOOSEN AND READJUST.		

71-00-02

P/P BUILDUP FIGURE 20-1 Page 5 Oct 05/2008





(B)

Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 6 Oct 05/2007

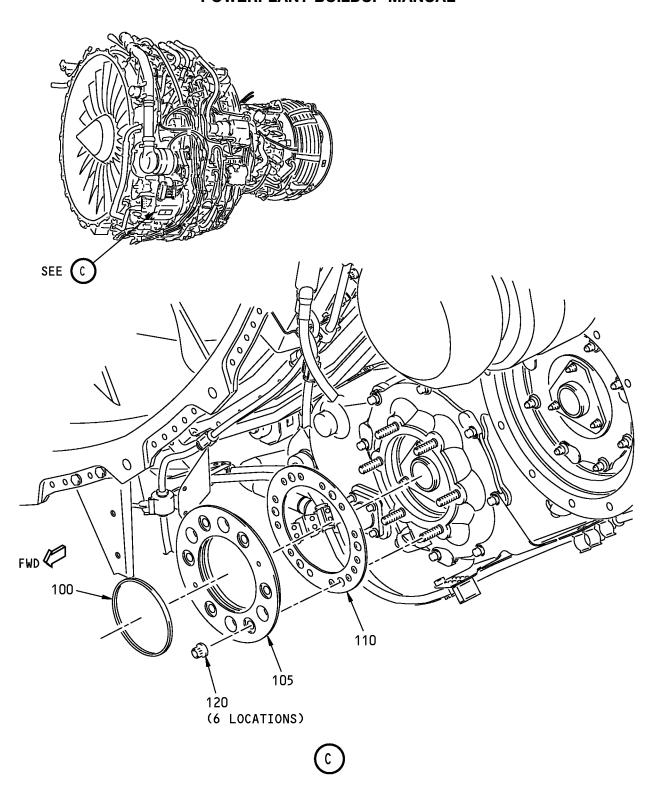


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
20-1		HYDRAULIC PUMP INSTALLATION - VICKERS (FIGURE 20-1, SHEET 3)		
		LUBRICATE PACKING (50) AND THREADS OF UNION (55) WITH MCS 352B fluid, D00054 (C1).		
		INSTALL PACKING (50) ON UNION (55) AND INSTALL UNION (55) TO HYDRAULIC SUPPLY PORT OF HYDRAULIC PUMP (15). TIGHTEN UNION (55) TO 855-945 POUND-INCHES (96.6-106.8 NEWTON METERS).		
		NOTE: MAKE SURE SINGLE THREADED END OF FITTING IS INSTALLED IN PUMP END.		
50 55 55	NAS1612-20A MS21924-20T MS21924J20	. PACKING . UNION . UNION (OPTIONAL TO MS21924-20T)	OPT	1 1 -
C1	D00054	. MCS 352B FLUID  LUBRICATE PACKING (75) AND THREADS OF UNION (80) WITH MCS 352B fluid, D00054 (C1).	CON	AR
		INSTALL PACKING (75) ON UNION (80) AND INSTALL UNION (80) TO CASE DRAIN PORT OF HYDRAULIC PUMP (15). TIGHTEN UNION (80) TO 162-179 POUND-INCHES (18.3-20.2 NEWTON METERS).		
75 80 C1	NAS1612-6A MS21902-6T D00054	. PACKING . UNION . MCS 352B FLUID	CON	1 1 AR
	D00054	. NICS SOZE FLUID	CON	An

71-00-02

P/P BUILDUP FIGURE 20-1 Page 7 Oct 05/2008





Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 8 Oct 05/2007

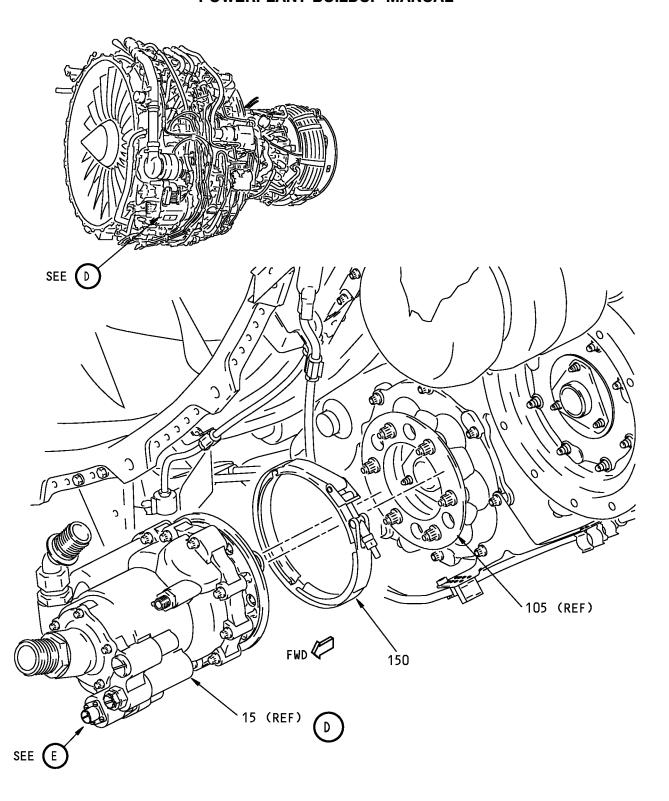


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	20-1		HYDRAULIC PUMP INSTALLATION - VICKERS (FIGURE 20-1, SHEET 4)		
			REMOVE PROTECTIVE CAP, WASHERS AND NUTS FROM AGB HYDRAULIC PAD AND DISCARD.		
	100	NAS1611-153A	LUBRICATE PUMP PACKING WITH MCS 352B fluid, D00054 (C1) AND INSTALL ON INNER SURFACE OF ADAPTER PLATE PUMP PACKING (PART OF 849589 (15)) (VENDOR PART NUMBER	REF	-
	105 C1	387999 D00054	972703) (V62983) ADAPTER PLATE (PART OF 849589 (15)) . MCS 352B FLUID	REF CON	- AR
			APPLY A THIN COATING OF Novagard G624 Compound, D00276 (C3) TO MATING SURFACES OF ADAPTER PLATE (105) AND ACCESSORY GEARBOX.		,
	C3	D00276	. NOVAGARD G624 COMPOUND ATTACH ADAPTER PLATE (105) AND GASKET (110) TO ENGINE GEARBOX WITH NUTS (120).	CON	AR
			CROSS-TIGHTEN NUTS (120) TO 260-320 POUND-INCHES (29.4-36.1 NEWTON METERS).		
			MAKE SURE INDEXING PINS ON ADAPTER PLATE ARE AT 2 AND 8 O'CLOCK POSITIONS (VIEW LOOKING AFT) AFTER INSTALLATION.		
	110 120	332T3323-2 BACN10HY6AC	. GASKET . NUT		1 6

71-00-02

P/P BUILDUP FIGURE 20-1 Page 9 Oct 05/2008





Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 10 Oct 05/2007

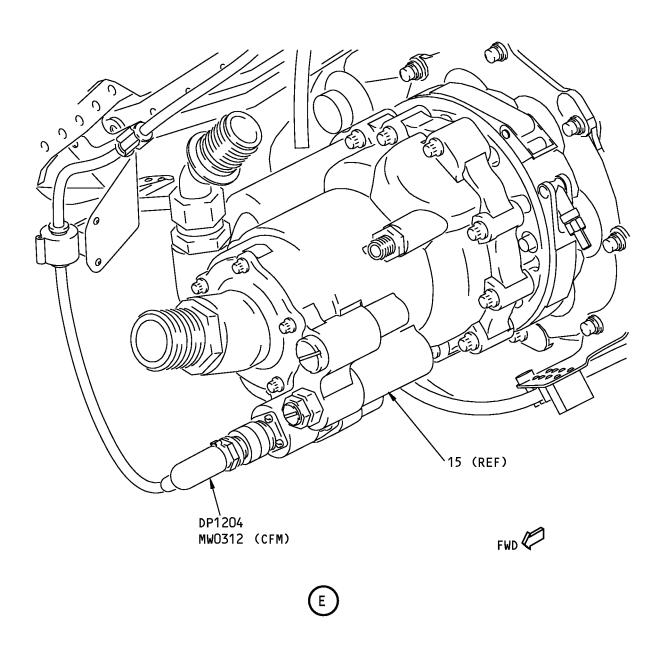


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
20-1	TAIT NOMBER	HYDRAULIC PUMP INSTALLATION - VICKERS	00	Q.I.
		(FIGURE 20-1, SHEET 5)		
		INSTALL CLAMP RING (150) ON ADAPTER PLATE FLANGES.		
		POSITION HYDRAULIC PUMP (15) ON ADAPTER PLATE (105) AND SECURE WITH CLAMP RING.		
		POSITION CLAMP RING (150) WITH BOLT CLOCKED AT 2 O'CLOCK POSITION (LOOKING AFT) TO CLEAR ENGINE DRAIN PORT.		
		TIGHTEN CLAMP RING (150) NUT TO 45-55 POUND-INCHES (5.1-6.2 NEWTON METERS).		
150	974219	CLAMP RING (PART OF 849589 (15))	REF	-

71-00-02

P/P BUILDUP FIGURE 20-1 Page 11 Oct 05/2007





Hydraulic Pump Installation - Vickers Figure 20-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 20-1 Page 12 Oct 05/2007



ITEM				
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
20-1		HYDRAULIC PUMP INSTALLATION - VICKERS (FIGURE 20-1, SHEET 6)		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT MW0312 ELECTRICAL CONNECTOR, DP1204, TO PUMP CONNECTOR RECEPTACLE. TURN KNURLED COUPLING RING WHILE WIGGLING THE BACKSHELL ASSEMBLY.		
		AFTER FULLY SEATING THE COUPLING RING, TIGHTEN THE COUPLING RING TO FINGER TIGHT. DO NOT TWIST BACKSHELL WHILE TIGHTENING THE COUPLING RING.		
		NOTE: AFTER TIGHTENING, MINOR ROTATION OF THE MATED BACKSHELL IS ACCEPTABLE, AND THE CONNECTOR MAY APPEAR LOOSE.		

71-00-02

P/P BUILDUP FIGURE 20-1 Page 13 Oct 05/2007



#### **FIGURE 21-1**

## HYDRAULIC PLUMBING INSTALLATION

**REF QEC TASK NO.: 21** 

**REF DWG: 332A2400** 

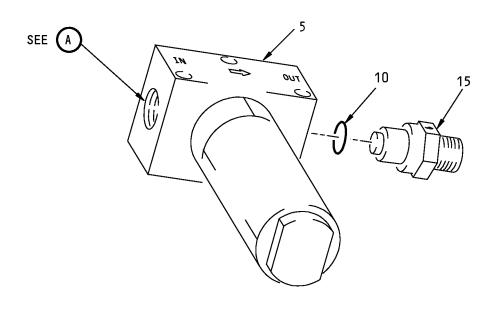
NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 21-1 Page 1 Oct 05/2007





HYDRAULIC FILTER

Hydraulic Plumbing Installation Figure 21-1 (Sheet 1)

71-00-02

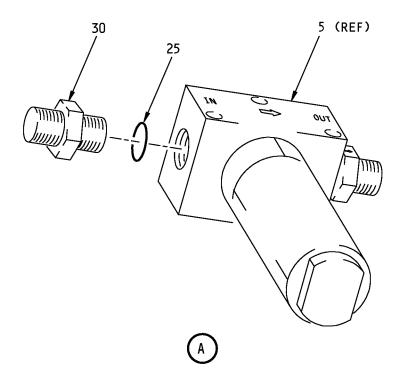
P/P BUILDUP FIGURE 21-1 Page 2 Oct 05/2007



71-00-02

P/P BUILDUP FIGURE 21-1 Page 3 Oct 05/2008





Hydraulic Plumbing Installation Figure 21-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 4 Oct 05/2007

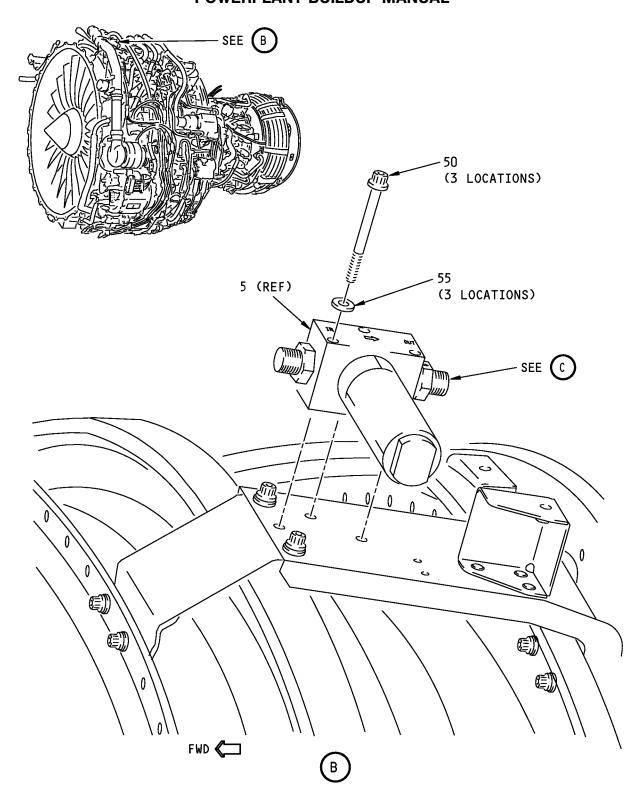


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 2)		
25 30 C1	NAS1612-6A MS21902-6T D00054	LUBRICATE PACKING (25) AND THREADS OF UNION (30) WITH MCS 352B fluid, D00054 (C1).  INSTALL PACKING (25) ON UNION (30) AND INSTALL ON "IN" PORT OF HYDRAULIC FILTER (5).  PACKING  UNION  MCS 352B FLUID  TIGHTEN UNION (30) TO 162-178 POUND-INCHES (18.3-20.1 NEWTON METERS).	CON	1 1 AR

71-00-02

P/P BUILDUP FIGURE 21-1 Page 5 Oct 05/2008





Hydraulic Plumbing Installation Figure 21-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 6 Oct 05/2007

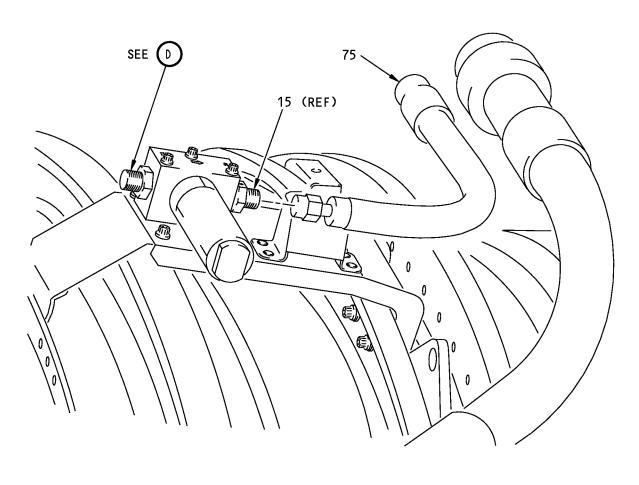


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1	. , , , , , , , , , , , , , , , , , , ,	HYDRAULIC PLUMBING INSTALLATION		<b></b>
		(FIGURE 21-1, SHEET 3)  ATTACH HYDRAULIC FILTER (5) TO ENGINE BRACKET AT 11 O'CLOCK POSITION WITH BOLTS (50) AND WASHERS (55).  NOTE: MAKE SURE FLOW ARROW ON FILTER ASSY POINTS AFT (IN		
		DIRECTION OF FLOW).		
50 55	BACB30ZF4-32 NAS1149C0432R	. BOLT . WASHER		3 3
		TIGHTEN THE BOLTS (50) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 7 Oct 05/2007





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Hydraulic Plumbing Installation Figure 21-1 (Sheet 4)

**71-00-02**P/P BUILDUP FIGURE 21-1
Page 8

Oct 05/2007

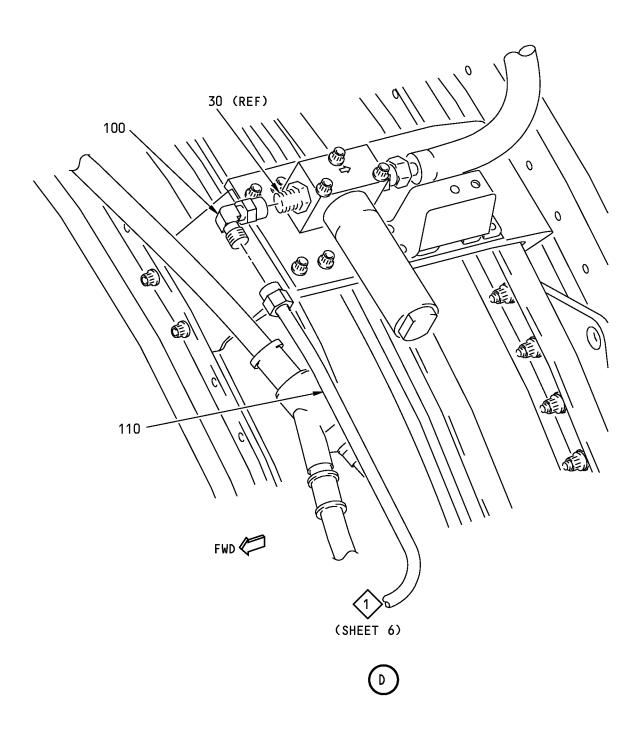


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 4)		
		LUBRICATE THREADS OF CHECK VALVE (15) WITH MCS 352B fluid, D00054 (C1).		
		SECURE HYDRAULIC CASE DRAIN HOSE ASSY (75) TO CHECK VALVE (15).		
		NOTE: MAKE SURE NO PRELOAD IS PRESENT ON HOSE ASSY.		
75 75 C1	155006-06-23 S332A210-23 D00054	. HOSE ASSY, HYDRAULIC CASE DRAIN (V11362) . BOEING SPEC FOR 155006-06-23 . MCS 352B FLUID	VEN BOE CON	1 - AR
		TIGHTEN HOSE ASSY (75) TO 257-283 POUND-INCHES (29.0-32.0 NEWTON METERS).		
		BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON OPEN END OF HOSE ASSY (75).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 9 Oct 05/2008





Hydraulic Plumbing Installation Figure 21-1 (Sheet 5)

**71-00-02**P/P BUILDUP FIGURE 21-1

Page 10 Oct 05/2007

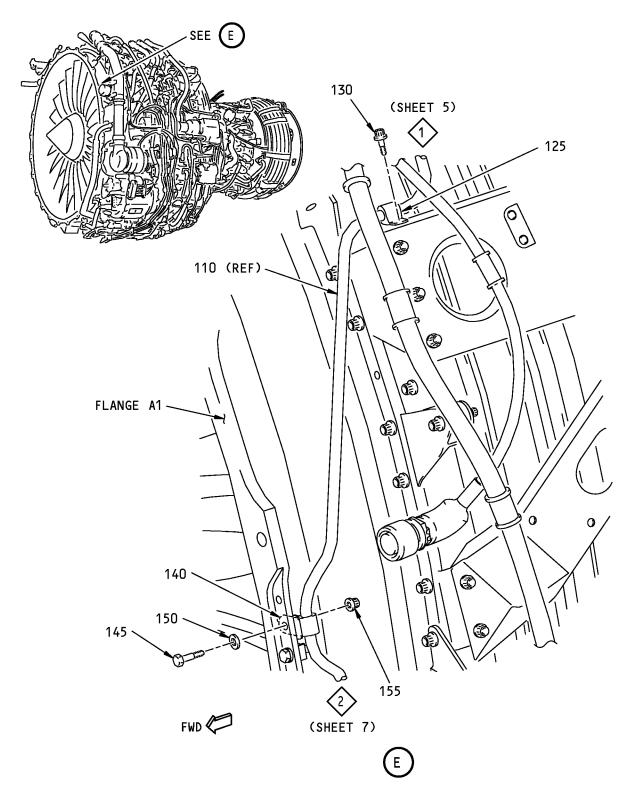


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 5)		
		LOOSELY CONNECT ELBOW (100) TO UNION (30).		
		NOTE: ELBOW HAS A FILM OF DRY FILM LUBRICANT AND DOES NOT REQUIRE LUBRICATION.		
100	BACE21BT0606T	. TUBE ASSY		1
		POSITION TUBE ASSY (110) ON ENGINE FAN CASE, ALIGNING TOP END OF TUBE ASSY WITH ELBOW (100) AND LOWER END WITH CLAMP LOCATIONS.		
		LOOSELY INSTALL TUBE ASSY (110) TO ELBOW (100).		
		NOTE: DO NOT TIGHTEN TUBE ASSY AND ELBOW AT THIS TIME.		
110	332A2410-1	. TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 21-1 Page 11 Oct 05/2007





Hydraulic Plumbing Installation Figure 21-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 12 Oct 05/2007

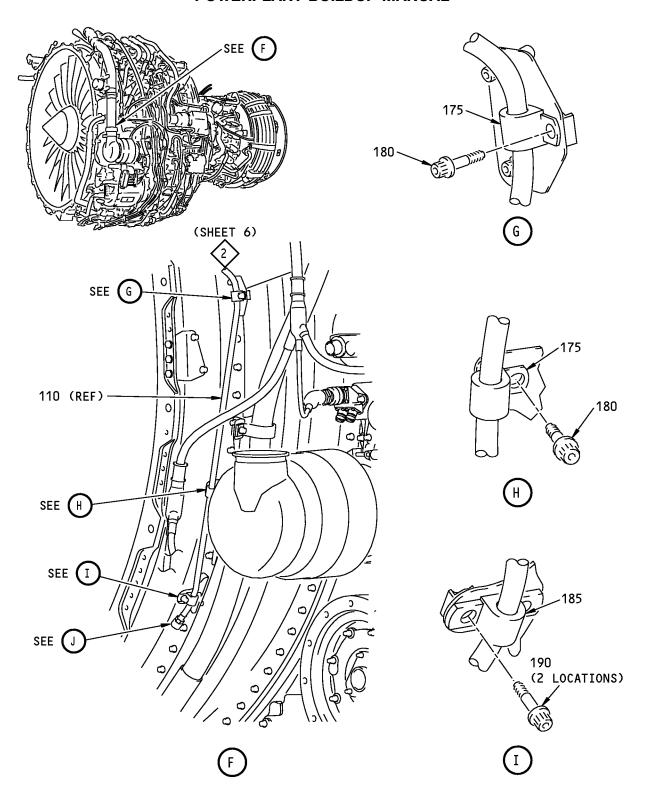


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 6)		
125 130	J1221G06 BACB30ZF4-06	ATTACH TUBE ASSY (110) TO TOP SIDE OF ENGINE BRACKET AT 10:30 O'CLOCK POSITION WITH CLAMP (125) AND BOLT (130).  CLAMP BOLT		1 1
		LOOSELY ATTACH TUBE ASSY (110) TO BRACKET ON FLANGE A1.		
140 145 150 155	J1221G06 BACB30NM4K6 BACW10BP4ACU AS3485-10	USE CLAMP (140), BOLT (145), WASHER (150) AND NUT (155).  CLAMP  BOLT  WASHER (CSK) (UNDER BOLT HEAD)  NUT		1 1 1 1
		ADJUST TUBE ASSY (110) AND ELBOW (100) TO BEST POSITION.		
		MAKE SURE NO PRELOAD FORCE EXISTS ON TUBE ASSY (110).		
		TIGHTEN ELBOW (100) ON UNION (30) TO 257-283 POUND-INCHES (29.0-32.0 NEWTON METERS).		
		BACK OFF UNION TO RELAX TORQUE, THEN RETIGHTEN.		
		TIGHTEN TUBE ASSY (110) AT ELBOW (100) TO 257-283 POUND-INCHES (29.0-32.0 NEWTON METERS).		
		BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		TIGHTEN BOLT (130) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS) AND TIGHTEN BOLT (145) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 13 Oct 05/2007





Hydraulic Plumbing Installation Figure 21-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 14 Oct 05/2007

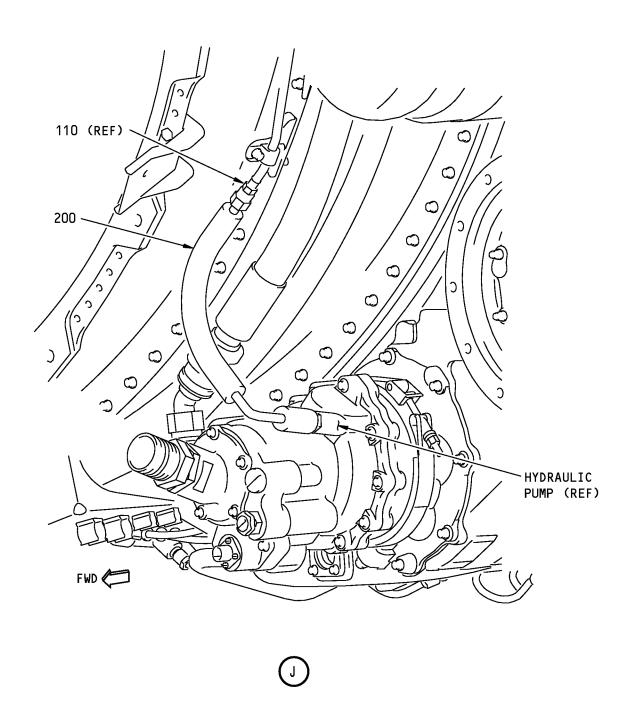


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 7)		
175 180	J1221G06 BACB30ZF4-06	ATTACH TUBE ASSY (110) TO ENGINE BRACKETS AT 9 AND 8 O'CLOCK POSITIONS USING CLAMPS (175) AND BOLTS (180).  CLAMP BOLT		2 2
		TIGHTEN BOLTS (180) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
185 190	TAO910064-06 BACB30ZF4-08	ATTACH TUBE ASSY (110) TO ENGINE BRACKET AT 7:30 O'CLOCK POSITION WITH CLAMP (185) AND BOLTS (190).  . CLAMP (V84971)  . BOLT	VEN	1 2
		TIGHTEN BOLTS (190) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		,

71-00-02

P/P BUILDUP FIGURE 21-1 Page 15 Oct 05/2007



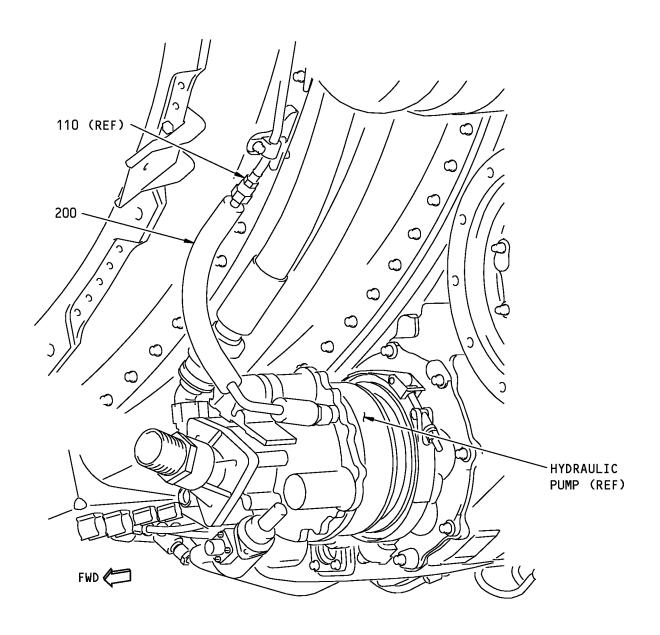


Hydraulic Plumbing Installation Figure 21-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 16 Oct 05/2007







Hydraulic Plumbing Installation Figure 21-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 17 Oct 05/2007

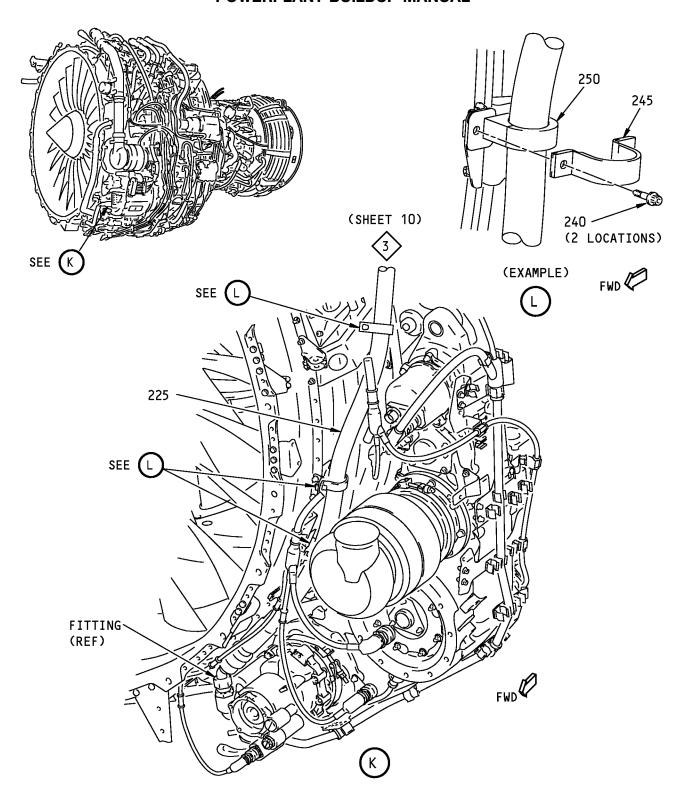


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1	TAIT NOMBER	HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 9)	- 00	Q I I
200 200	155006-06-16 S332A210-16	LOOSELY CONNECT HYDRAULIC CASE DRAIN HOSE ASSY (200) TO TUBE ASSY (110) AND CASE DRAIN PORT OF HYDRAULIC PUMP.  . HOSE ASSY, HYDRAULIC CASE DRAIN (V11362)  . BOEING SPEC FOR 155006-06-16	VEN BOE	1 -
		CAUTION: USE 2 WRENCHES TO TIGHTEN THE HOSE ASSY; ONE TO HOLD THE HOSE ASSY AND ONE TO HOLD THE UNION. DAMAGE TO EQUIPMENT CAN OCCUR.		
		TIGHTEN HOSE ASSY (200) AT UNION ON HYDRAULIC PUMP AND AT TUBE ASSY (110) TO 257-283 POUND-INCHES (29.0-32.0 NEWTON METERS).		
		BACK OFF TUBE NUT TO RELAX TORQUE, THEN RETIGHTEN. MAKE SURE HOSE DOES NOT TWIST OR KINK WHEN TIGHTENING.		
		MAKE SURE NO PRELOAD FORCE IS PRESENT ON HOSE ASSY (200) AND TUBE ASSY (110).		
		MAKE SURE THERE IS MINIMUM OF 0.5 INCH (12.7 MILLIMETERS) CLEARANCE WITH ADJACENT HARDWARE.		
		IF NECESSARY, LOOSEN CLAMPS AND ADJUST AS REQUIRED. TIGHTEN ALL BOLTS.		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 18 Oct 05/2007



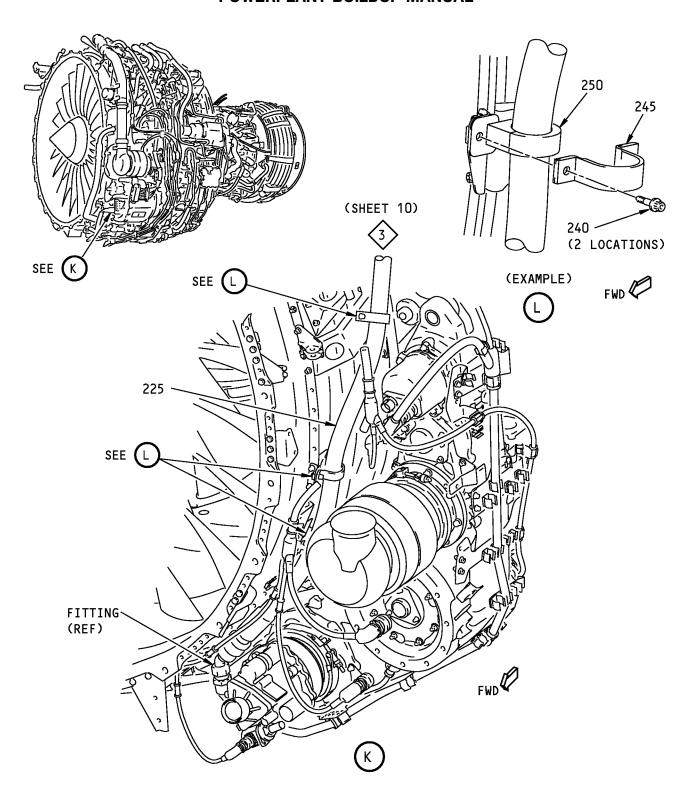


Hydraulic Plumbing Installation Figure 21-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 19 Oct 05/2007





Hydraulic Plumbing Installation Figure 21-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 20 Oct 05/2007

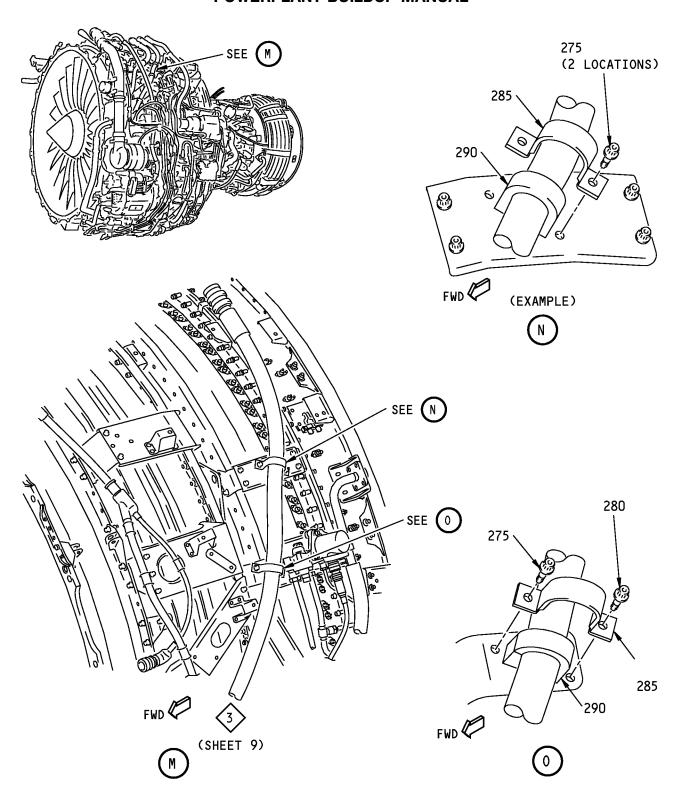


Ī	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 11)		
			CONNECT HYDRAULIC PRESSURE HOSE ASSY (225) TO FITTING ON HYDRAULIC PUMP.		
			TIGHTEN HOSE ASSY (225) UNTIL FITTING LOCKS.  NOTE: ENDS OF HOSE ASSY ARE IDENTICAL. THEREFORE, HOSE ASSY IS END-TO-END INTERCHANGEABLE.		
	225 225	155012-12-21 S332A210-21	. HOSE ASSY, HYDRAULIC PRESSURE (V11362) . BOEING SPEC FOR 155012-12-21	VEN BOE	1 -
			OPTIONAL STEP;		
			COAT ID OF CLAMP BLOCK (250) WITH grease, D00173 (C2) TO FACILITATE POSITIONING OF BLOCK UPON INSTALLATION.		
			AT THREE LOCATIONS ON ENGINE FAN CASE, LOOSELY ATTACH HOSE ASSY (225) TO ENGINE BRACKETS.		
			USE BOLTS (240), CLAMP BLOCK STRAPS (245) AND CLAMP BLOCKS (250).		
	240	BACB30ZF4-08	USE BOLT (241) AND NUT (242) AT FWD HOLE OF LOWER BRACKET IF BRACKET DOES NOT HAVE NUTPLATE.  . BOLT		5
	241	BACB30ZF4-10	. BOLT (NOT ILLUSTRATED)		1
	242 245	AS3485-10 332W3130-18	. NUT (NOT ILLUSTRATED) . CLAMP BLOCK STRAP		1 3
	250	332W5101-10	. CLAMP BLOCK		3
	C2	D00173	. GREASE	CON	AR
			ADJUST HOSE ASSY (225) TO BEST POSITION AND TIGHTEN BOLTS (240) AND BOLT (241)TO 97-103 POUND-INCHES (11.0-11.6 NEWTON METERS). TIGHTEN NUT (242) TO 82–88 POUND-INCHES (9.26-9.94 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 21 Oct 05/2008





Hydraulic Plumbing Installation Figure 21-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 22 Oct 05/2007

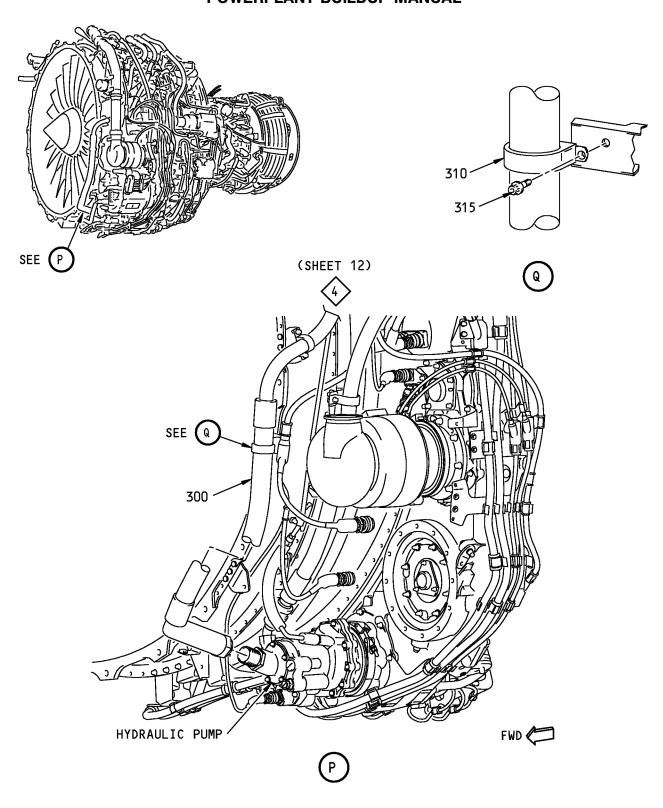


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 12)		
		OPTIONAL STEP; COAT ID OF CLAMP BLOCK (290) WITH grease, D00173 (C2) TO FACILITATE POSITIONING OF BLOCK UPON INSTALLATION.		
		AT TWO LOCATIONS ON ENGINE FAN CASE, LOOSELY ATTACH HOSE ASSY (225) TO ENGINE BRACKETS.		
		USE BOLTS (275) AND (280), CLAMP BLOCK STRAP (285) AND CLAMP BLOCK (290) AT LOWER LOCATION AND BOLTS (275), CLAMP BLOCK STRAP (285) AND CLAMP BLOCK (290) AT UPPER HOLE.		
275	BACB30ZF4-08	. BOLT		3
280 285	BACB30ZF4-10 332W3130-18	. BOLT . CLAMP BLOCK STRAP		1 2
290	332W5101-10	. CLAMP BLOCK		2
C2	D00173	. GREASE	CON	AR
		ADJUST HOSE ASSY (225) TO BEST POSITION AND TIGHTEN BOLTS (275) AND (280) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON OPEN END OF HOSE ASSY (225).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 23 Oct 05/2008



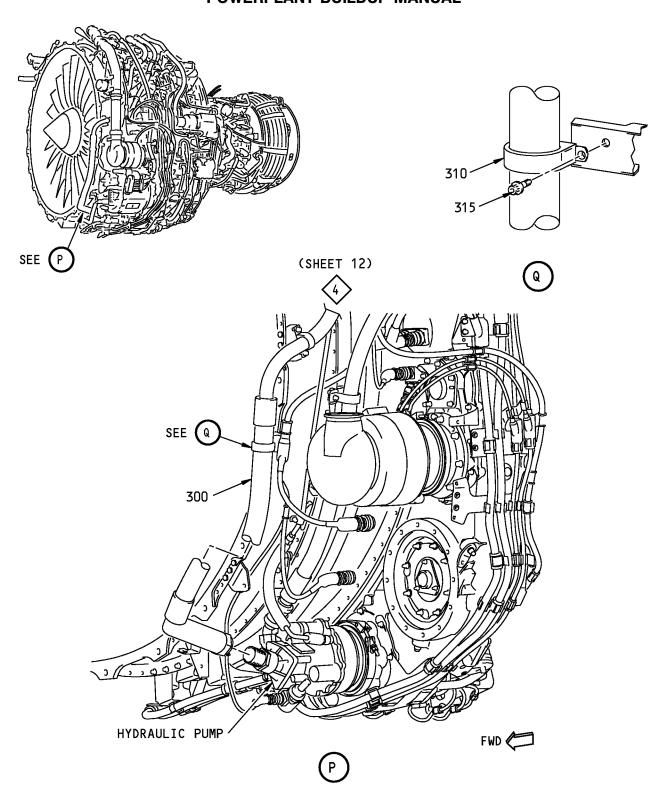


Hydraulic Plumbing Installation Figure 21-1 (Sheet 13)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 24 Oct 05/2007





Hydraulic Plumbing Installation Figure 21-1 (Sheet 14)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 25 Oct 05/2007

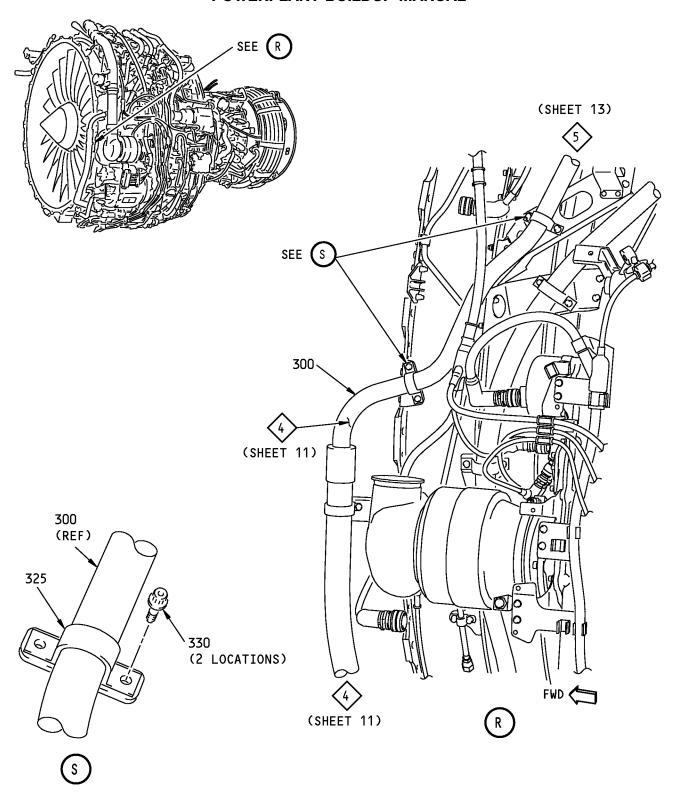


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 14)		
		CAUTION: USE 2 WRENCHES TO TIGHTEN THE HOSE ASSY; ONE TO HOLD THE HOSE ASSY AND ONE TO HOLD THE UNION. DAMAGE TO EQUIPMENT CAN OCCUR.		
		MAKE SURE INTERNAL O-RING (301) IS INSTALLED ON HOSE ASSY (300) COUPLING.		
		IF O-RING IS MISSING, INSTALL NEW O-RING (301).		
		NOTE: O-RING (301) NOT INCLUDED IN QEC KIT.		
		CONNECT HOSE ASSY (300) TO SUPPLY PORT OF HYDRAULIC PUMP.		
		TIGHTEN HOSE ASSY (300) TO 1520-1680 POUND-INCHES (127-140 POUND-FEET) (172-190 NEWTON METERS).		
		NOTE: MAKE SURE HOSE ASSY DOES NOT KINK OR TWIST DURING TIGHTENING.		
300 300 301	155016-20-11 S332A210-11 NAS1611-024A	. HOSE ASSY, HYDRAULIC SUPPLY (V11362) . BOEING SPEC FOR 155016-20-11 O-RING (1 REQD) <sup>*[1]</sup>	VEN BOE REF	1 - -
		LOOSELY ATTACH HOSE ASSY (300) TO ENGINE BRACKET FORWARD OF FLANGE A1 WITH CLAMP (310) AND BOLT (315).		
		NOTE: DO NOT TIGHTEN BOLT (315) AT THIS TIME.		
310 315	J1221G28 BACB30ZF4-08	. CLAMP . BOLT		1
		*[1] ITEM NOT ILLUSTRATED		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 26 Oct 05/2007





Hydraulic Plumbing Installation Figure 21-1 (Sheet 15)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 27 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1	TAIT NOWIEL	HYDRAULIC PLUMBING INSTALLATION		Q
		(FIGURE 21-1, SHEET 15)		
		CONNECT HOSE ASSY (300) TO ENGINE BRACKETS AT 10:00 AND 9:00 O'CLOCK POSITIONS WITH CLAMPS (325) AND BOLTS (330).		
		NOTE: DO NOT TIGHTEN BOLTS (330) AT THIS TIME.		
325	TAO910083	. CLAMP (V84971)	VEN	2
330	BACB30ZF4-08	. BOLT		4

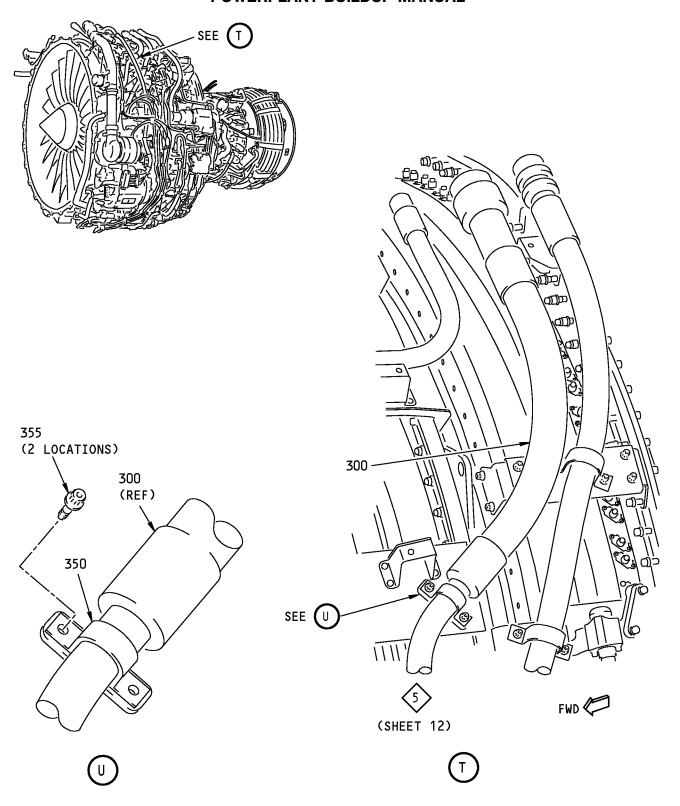
71-00-02

P/P BUILDUP FIGURE 21-1 Page 28 Oct 05/2007

#### **CFM56 ENGINES (CFM56-7)**



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL



Hydraulic Plumbing Installation Figure 21-1 (Sheet 16)

71-00-02

P/P BUILDUP FIGURE 21-1 Page 29 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
21-1		HYDRAULIC PLUMBING INSTALLATION (FIGURE 21-1, SHEET 16)		
350 355	TAO910083 BACB30ZF4-12	LOOSELY ATTACH HOSE ASSY (300) TO BRACKET AT 10:30 O'CLOCK POSITION WITH CLAMP (350) AND BOLTS (355).  . CLAMP (V84971)  . BOLT	VEN	1 2
		ADJUST HOSE ASSY (300) TO BEST POSITION.		
		MAKE SURE THERE IS MINIMUM OF 0.5 INCH (12.7 MILLIMETERS) CLEARANCE WITH ADJACENT HARDWARE.		
		TIGHTEN BOLTS (315), (330) AND (355) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		MAKE SURE PROTECTIVE CAP IS INSTALLED ON OPEN END OF HOSE ASSY (300).		

71-00-02

P/P BUILDUP FIGURE 21-1 Page 30 Oct 05/2007



#### **FIGURE 22-1**

# INTEGRATED DRIVE GENERATOR INSTALLATION

**REF QEC TASK NO.: 22** 

**REF DWG: 332A2600** 

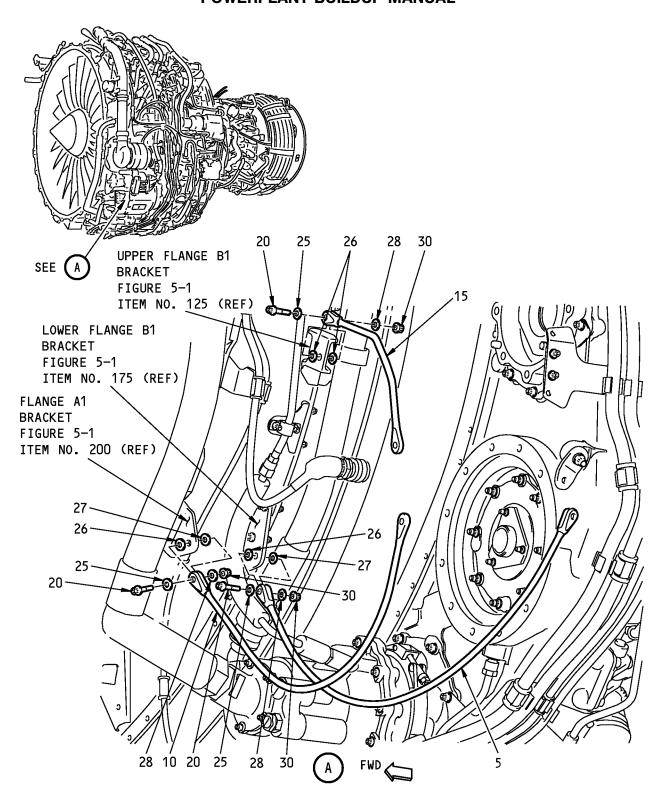
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 22-1 Page 1 Oct 05/2007





Integrated Drive Generator Installation Figure 22-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 2 Oct 05/2007

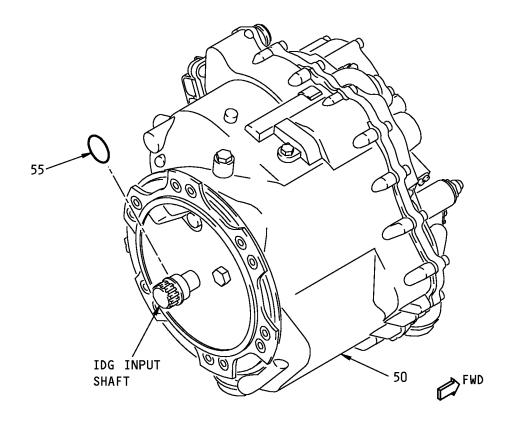


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 1)		
		LOOSELY ATTACH LANYARD ASSY (5) TO LOWER FLANGE B1 BRACKET Figure 5-1 ITEM NO. 175) USING BOLT (20), WASHERS (25 THRU 27) AND NUT (30).		
		LOOSELY ATTACH LANYARD ASSY (10) TO FLANGE A1 BRACKET Figure 5-1 ITEM NO. 200) USING BOLT (20), WASHERS (25 THRU 27) AND NUT (30).		
		LOOSELY ATTACH LANYARD ASSY (15) TO UPPER FLANGE B1 BRACKET (REF Figure 5-1 ITEM NO. 125) USING BOLT (20), WASHERS (25 THRU 28) AND NUT (30).		
5	332A2600-4	. LANYARD ASSY		1
10	332A2600-5	. LANYARD ASSY		1
15	332A2600-6	. LANYARD ASSY		1
20	BACB30LE5K8	. BOLT		3
25	BACW10BP5ACU	. WASHER (CSK) (UNDER BOLT HEAD)		3
25	BACW10BP5CD	. WASHER (CSK) (OPTIONAL TO BACW10BP5ACU)	OPT	-
26	NAS1149E0532P	. WASHER (BETWEEN LANYARD CLEVIS AND ENGINE BRKT) (BOLT SIDE)		4
27	NAS1149E0516P	. WASHER (BETWEEN LANYARD CLEVIS AND ENGINE BRKT) (NUT SIDE)		2
28	NAS1149E0563R	. WASHER (UNDER NUT)		3
30	AS3485-11	. NUT		3
30	BACN10HR5CS	. NUT (OPTIONAL TO AS3485-11)	OPT	-
		POSITION LANYARD ASSYS (5), (10) AND (15) AS SHOWN AND TIGHTEN BOLTS (20) TO 100-150 POUND-INCHES (11.3-17.0 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 22-1 Page 3 Oct 05/2007





INTEGRATED DRIVE GENERATOR

F14927 S00041153897\_V2

Integrated Drive Generator Installation Figure 22-1 (Sheet 2)

**71-00-02**P/P BUILDUP FIGURE 22-1
Page 4
Feb 05/2008

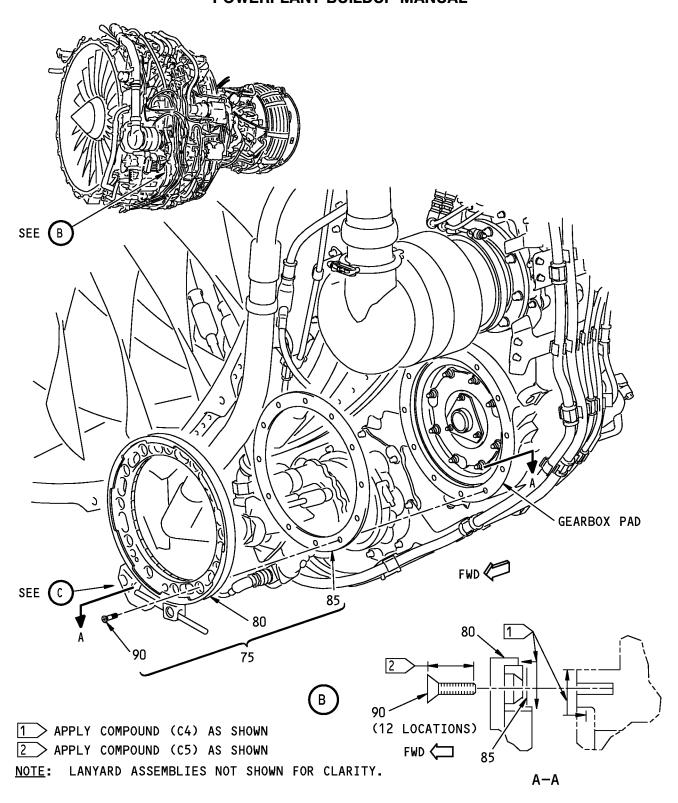


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 2)		
50 50 50	761574B 761574 S281A001-101	REMOVE BOLT FROM 12 O'CLOCK POSITION ON IDG (50) AND INSTALL LIFTING BOLT OR EQUIVALENT.  . IDG (V99167)  . IDG (V99167) (OPTIONAL TO 761574B)  . BOEING SPEC FOR 761574 OR 761574B	VEN OPT BOE	1 -
55	AS3209-216	LUBRICATE O-RING (55) WITH Syn-Tech NS-6074 lubricant, D00648 (C1) OR oil, D00109 (C2) OR oil, D00523 (C3) AND INSTALL ON INPUT SHAFT OF IDG (50).  . O-RING (SUPPLIED WITH IDG)	REF	
55 C1 C2 C3	M83248/1-216 D00648 D00109 D00523	. O-RING (SUPPLIED WITH IDG) . SYN-TECH NS-6074 LUBRICANT (SUPPLIED WITH IDG) . OIL (OPTIONAL) . OIL (OPTIONAL)	OPT CON CON	- AR AR AR
03	D00023	. OIL (OF HONAL)	CON	Alt

71-00-02

P/P BUILDUP FIGURE 22-1 Page 5 Oct 05/2008





Integrated Drive Generator Installation Figure 22-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 6 Oct 05/2007

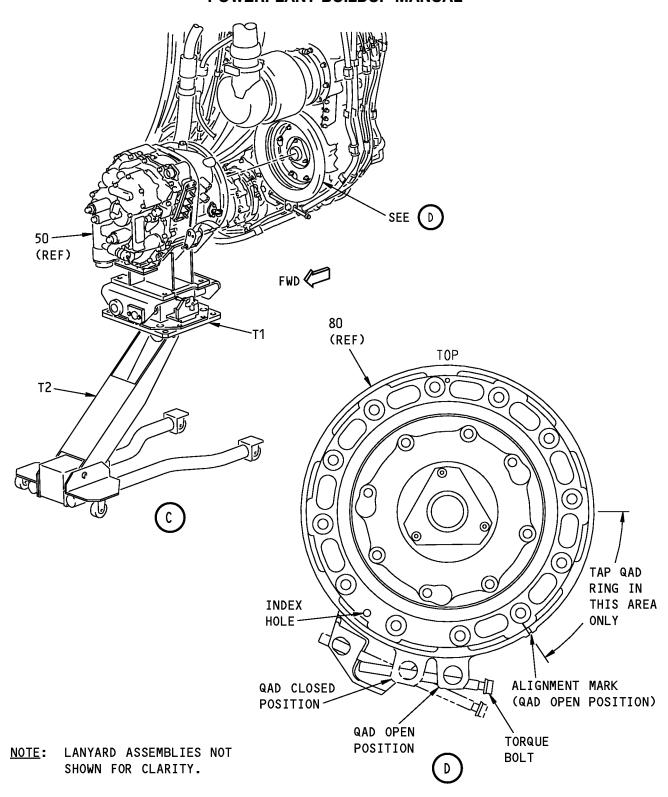


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 3)		
		CAUTION: KEEP GREASE OUT OF DOWEL PIN AND BOLT HOLES. GREASE IN HOLES CAN CAUSE DAMAGE TO GEARBOX DUE TO PRESSURE BUILD-UP WHEN SCREWS ARE INSTALLED. USE CARE TO KEEP FOREIGN MATERIAL OUT OF IDG.		
		APPLY A THIN COATING OF silicone compound, D00254 (C4) TO QAD RING FLANGE (80) AND GEARBOX PAD.		
C4 C5	D00254 D00006	APPLY A THIN COATING OF Never-Seez NSBT-8N compound, D00006 (C5) TO THE CONICAL SURFACE OF HEAD AND THREADS OF SCREWS (90).  . SILICONE COMPOUND  . NEVER-SEEZ NSBT-8N COMPOUND	CON CON	AR AR
•   03	D00000	ENSURE GASKET (85) IS IN POSITION ON AFT SIDE OF QAD RING (80).	OON	Air
		POSITION QAD RING (80) ON GEARBOX ALIGNING -TOP- MARKING ON QAD RING WITH -TOP- MARKING ON GEARBOX.		
		INSTALL WITH SCREWS (90) AND TIGHTEN TO 275-300 POUND-INCHES (31.1-33.9 NEWTON METERS).		
75 75 80 85 90	762246 S281A001-501 762075 731476 0646C624-18	. QAD ADAPTER KIT (V99167)  . BOEING SPEC FOR 762246  QAD RING (1 SUPPLIED WITH QAD KIT (75))  GASKET (1 SUPPLIED WITH QAD KIT (75))  SCREW (12 SUPPLIED WITH QAD KIT (75))	VEN BOE REF REF	1 - -
90	U040C024-10	SOREW (12 SUPPLIED WITH QAD KIT (79))	ner	

71-00-02

P/P BUILDUP FIGURE 22-1 Page 7 Oct 05/2008





Integrated Drive Generator Installation Figure 22-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 8 Oct 05/2007

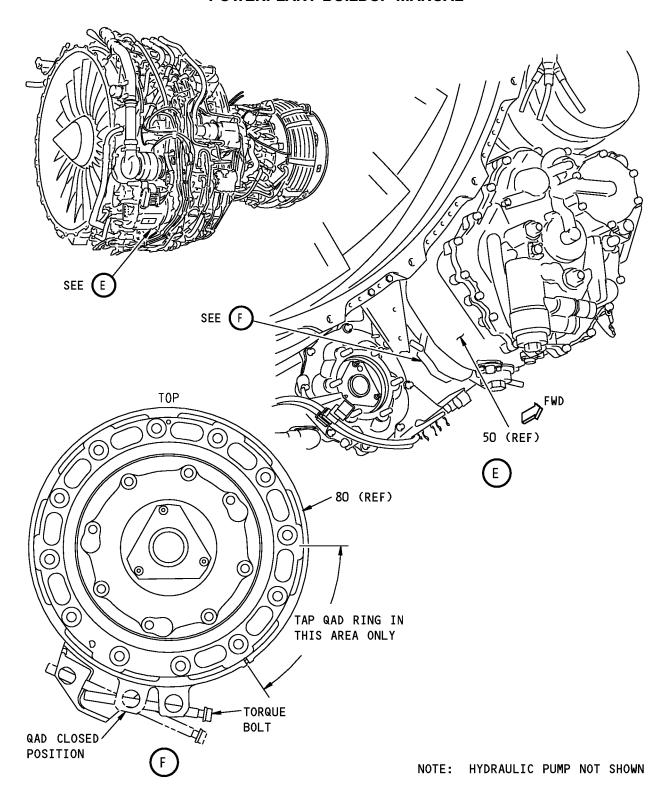


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 4)		
			CAUTION: DO NOT USE IDG DRIVE SHAFT FOR A HANDLE DURING INSTALLATION. USE PILOT FLANGE AREA FOR A HAND HOLD. SIDE LOADS ON DRIVE SHAFT CAN DAMAGE IDG CARBON SEALS.		
			MAKE SURE adapter, SPL-1634 (T1) IS INSTALLED ON low profile hydraulic jack, COM-1443 (T2).		
1	T1 T2	C24002 HW93718	SECURE IDG (50) TO JACK ADAPTER WITH STRAP ADAPTER, SPL-1634 . LOW PROFILE HYDRAULIC JACK, COM-1443 (OR EQUIVALENT)	TOL TOL	-
•	12	11000710	REMOVE LIFTING BOLT AND REINSTALL SUPPLIED FASTENER.	IOL	
			TIGHTEN FASTENER TO 100-120 POUND-INCHES (11.3-13.6 NEWTON METERS).		
			CAUTION: DO NOT ALLOW IDG TO HANG ON DRIVE SHAFT DURING INSTALLATION. FAILURE TO PROPERLY SUPPORT IDG MAY RESULT IN DAMAGE TO DRIVE SHAFT AND CARBON SEALS.		
			POSITION IDG (50) AT GEARBOX PAD.		
			ADJUST TORQUE BOLT ON QAD UNTIL OUTER RING OF QAD ROTATES TO THE OPEN POSITION.		
			ALIGN INDEX MARKS ON QAD RING (80) AND IDG (50).		
			MAKE SURE LUGS ON IDG FLANGE CAN ENTER THE QAD RING OPENINGS.		
			ENGAGE DRIVE SHAFT SPLINE FIRST, THEN INDEX PIN.		
			MAKE SURE INDEX PIN ON IDG ENGAGES INDEX HOLE ON QAD.		
			SUPPORT AFT END OF IDG FOR 360-DEGREE CONTACT BETWEEN MATING SURFACES OF QAD RING AND IDG.		
			ADJUST TORQUE BOLT UNTIL QAD RING ROTATES TO THE LOCKED POSITION.		

71-00-02

P/P BUILDUP FIGURE 22-1 Page 9 Oct 05/2008





Integrated Drive Generator Installation Figure 22-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 10 Oct 05/2007

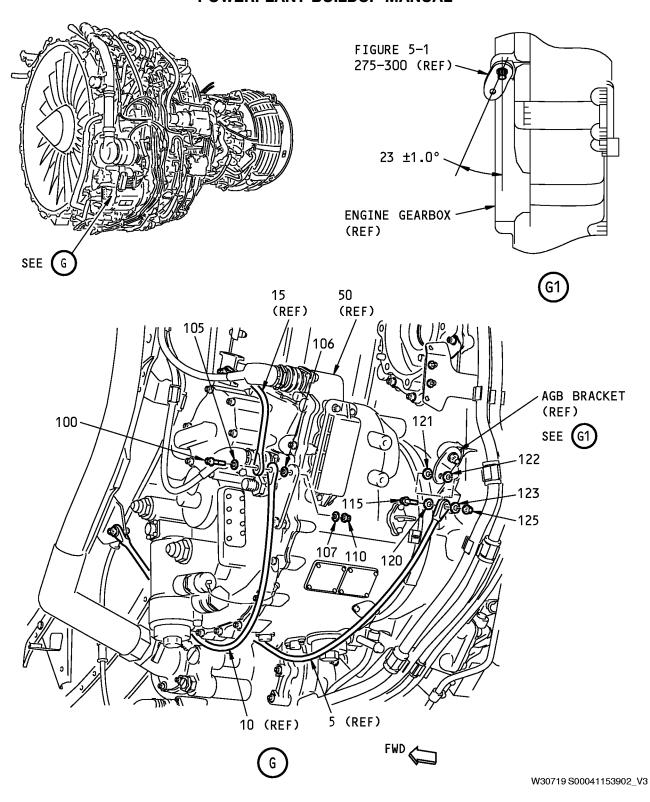


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 5)		
		CAUTION: OBSERVE ACTION ON QAD RING DURING TIGHTENING TO PREVENT BINDING OR SNAGGING.		
		TIGHTEN TORQUE BOLT SO THE QAD RING LUGS FULLY ENGAGE THE IDG FLANGE LUGS.		
		TIGHTEN TORQUE BOLT TO 240-264 POUND-INCHES (27.1-29.8 NEWTON METERS).		
		TAP QAD RING IN AREA SHOWN WITH SOFT MALLET OR BRASS DRIFT TO CENTER THE QAD RING AND PREVENT FALSE TORQUE READINGS.		
		CHECK TORQUE VALUE ON TORQUE BOLT.		
		IF THE TORQUE IS LESS THAN 180 POUND-INCHES (20.4 NEWTON METERS), TORQUE BOLT TO 240-264 POUND-INCHES (27.1-29.8 NEWTON METERS) AND REPEAT TAP-TORQUE PROCEDURE UNTIL THE TORQUE ON THE TORQUE BOLT DOES NOT DROP BELOW 180 POUND-INCHES (20.4 NEWTON METERS) AFTER TAPPING ON THE QAD RING.		
		TIGHTEN TORQUE BOLT TO 240-264 POUND-INCHES (27.1-29.8 NEWTON METERS).		
		IF THE FIRST TORQUE IS ABOVE 180 POUND-INCHES (20.4 NEWTON METERS), REPEAT TAPPING ON QAD RING AND CHECK TORQUE AGAIN.		
		IF SECOND TORQUE REMAINS ABOVE 180 POUND-INCHES (20.4 NEWTON METERS), LOOSEN TORQUE BOLT.		
		RETIGHTEN TORQUE BOLT TO 240-264 POUND-INCHES (27.1-29.8 NEWTON METERS).		
	0.500	INSTALL safety cable kit, G50375 (C6) OR lockwire, G01912 (C7) ON TORQUE BOLT.		
C6 C7	G50375 G01912	. SAFETY CABLE KIT . LOCKWIRE (OPT)	CON	1 AR
		REMOVE IDG JACK EQUIPMENT (T1 THRU T2) FROM IDG (50).		

71-00-02

P/P BUILDUP FIGURE 22-1 Page 11 Oct 05/2008





Integrated Drive Generator Installation Figure 22-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 12 Jun 05/2008

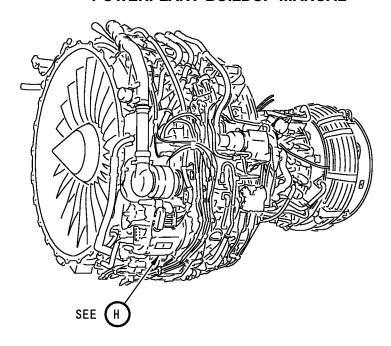


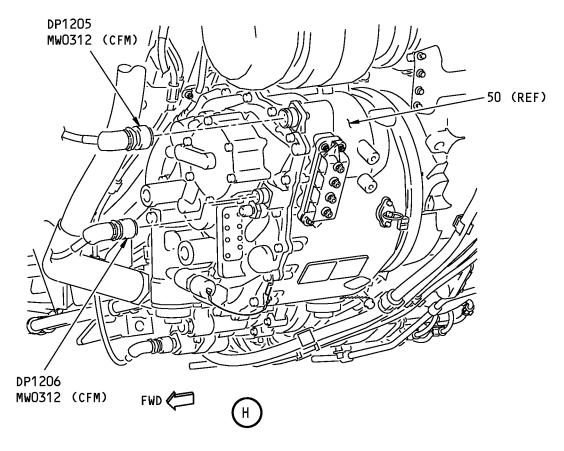
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 6)		
		ROUTE LANYARD ASSY (10) UNDER IDG (50) AND ROUTE LANYARD ASSY (15) OVER TOP OF IDG (50).		
100 105 105 106 107 110	BACB30LE5K14 BACW10BP5ACU BACW10BP5CD BACW10BP5APU NAS1149E0563R AS3485-11 BACN10HR5CS	LOOSELY ATTACH LANYARD ASSYS (10) AND (15) TO IDG BRACKET USING BOLT (100), WASHERS (105, 106) AND NUT (110).  BOLT  WASHER (CSK) (UNDER BOLT HEAD)  WASHER (CSK) (OPTIONAL TO BACW10BP5ACU)  WASHER (PLAIN) (BTWN (10) AND IDG BRACKET)  WASHER (UNDER NUT)  NUT  NUT  NUT (OPTIONAL TO AS3485-11)  ROUTE LANYARD (5) UNDER IDG (50) AND LOOSELY ATTACH TO AGB	OPT	1 1 - 1 1 1
		BRACKET USING BOLT (115), WASHERS (120 THRU 123) AND NUT (125).  NOTE: ORIENT BRACKET APPROXIMATELY AS SHOWN TO MAXIMIZE CLEARANCE TO THE IDG AND SORROUNDING HARDWARE. FAILURE TO PROPERLY ORIENT BRACKET CAN RESULT IN CHAFING BETWEEN IDG AND LANYARD (5).		
115	BACB30LE5K8	. BOLT		1
120	BACW10BP5ACU	. WASHER (CSK) (UNDER BOLT HEAD)		1
120 121	BACW10BP5CD NAS1149E0532P	. WASHER (CSK) (OPTIONAL TO BACW10BP5ACU) . WASHER (BETWEEN LANYARD CLEVIS AND AGB BRACKET) (BOLT SIDE)	OPT	1
122	NAS1149E0516P	. WASHER (BETWEEN LANYARD CLEVIS AND ENGINE BRKT) (NUT SIDE)		1
123	NAS1149E0563R	. WASHER (UNDER NUT)		1
125	AS3485-11	NUT	ODT	1
125	BACN10HR5CS	. NUT (OPTIONAL TO AS3485-11)  ORIENT LANYARD ASSYS (5), (10) AND (15) TO ACHIEVE MAXIMUM CLEARANCE WITH THE SURROUNDING EQUIPMENT.	OPT	-
		TIGHTEN BOLTS (20) TO 100-150 POUND-INCHES (11.3-17.0 NEWTON METERS).		
		TIGHTEN BOLTS (100) AND (115) TO 100-150 POUND-INCHES (11.3-17.0 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 22-1 Page 13 Jun 05/2008







Integrated Drive Generator Installation Figure 22-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 22-1 Page 14 Oct 05/2007



	<u> </u>	<u></u>		
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
22-1		INTEGRATED DRIVE GENERATOR INSTALLATION (FIGURE 22-1, SHEET 7)		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE WATER PUMP PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT MW0312 ELECTRICAL CONNECTOR, DP1205, TO TOP RECEPTACLE AND MW0312 ELECTRICAL CONNECTOR, DP1206, TO LOWER RECEPTACLE.		
		TURN KNURLED COUPLING RING WHILE WIGGLING THE BACKSHELL ASSEMBLY.		
		AFTER FULLY SEATING THE COUPLING RING, USE SOFT-JAWED PLIERS OR A STRAP WRENCH TO TIGHTEN THE COUPLING RING AN ADDITIONAL 1/8 TURN OR UNTIL PLIER SLIPPAGE OCCURS.		

71-00-02

P/P BUILDUP FIGURE 22-1 Page 15 Oct 05/2007



#### **FIGURE 23-1**

## **IDG AIR/OIL COOLER INSTALLATION**

**REF QEC TASK NO.: 23** 

**REF DWG: 332A2600** 

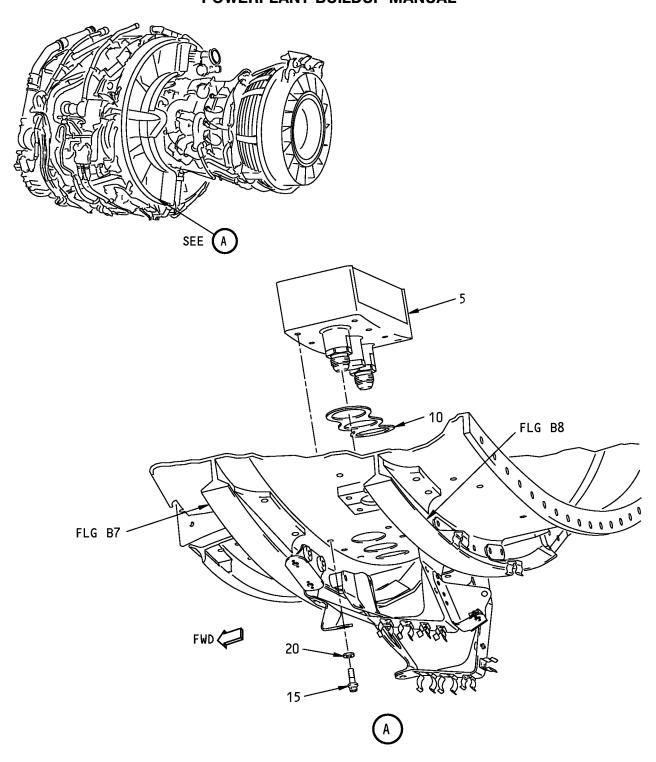
 ${\color{red}\underline{\textbf{NOTE}}}{:} \ \ \mathsf{ALL} \ \mathsf{STANDARDS} \ \mathsf{AND} \ \mathsf{ATTACHING} \ \mathsf{HARDWARE} \ \mathsf{FOR} \ \mathsf{THIS} \ \mathsf{FIGURE} \ \mathsf{WILL} \ \mathsf{BE} \ \mathsf{PACKAGED}$ 

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 23-1 Page 1 Oct 05/2007





NOTE: CFMI WIRE HARNESSES NOT SHOWN FOR CLARITY.

IDG Air/Oil Cooler Installation Figure 23-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 23-1 Page 2 Oct 05/2007



	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	23-1		IDG AIR/OIL COOLER INSTALLATION (FIGURE 23-1, SHEET 1)		
			REMOVE PROTECTIVE PLATE AND BOLTS, WASHERS AND NUTS FROM IDG COOLER PORT ON FAN CASE.		
	5 5 10 10	UA538551-3 S332A260-1 U542648 S332A260-4	INSTALL GASKET (10) ON IDG AIR/OIL COOLER (5) IDG AIR/OIL COOLER (V78943) . BOEING SPEC FOR UA538551-3 . GASKET (V78943) . BOEING SPEC FOR U542648	VEN BOE VEN BOE	1 - 1 -
			APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO IDG AIR/OIL COOLER (5) THREADED INSERTS (8 LOCATIONS).		
			POSITION IDG AIR/OIL COOLER (5) ON FAN CASE AT APPROXIMATELY THE 6:30 O'CLOCK POSITION BETWEEN FLGS B7 AND B8.		
I	15 20 C1	BACB30ZF4-10 NAS1149C0463R D00006	ATTACH IDG AIR/OIL COOLER TO FAN CASE WITH BOLTS (15) AND WASHERS (20) INSTALLED THROUGH FAN CASE EXTERIOR.  . BOLT  . WASHER  . NEVER SEEZ NSBT-8N COMPOUND	CON	8 8 AR
			TIGHTEN BOLTS (15) TO 70-80 POUND-INCHES (7.9-9.0 NEWTON METERS).  MAKE SURE PROTECTIVE CAPS ARE INSTALLED ON IDG AIR/OIL COOLER PORTS.		

71-00-02

P/P BUILDUP FIGURE 23-1 Page 3 Oct 05/2008



#### **FIGURE 24-1**

# **IDG PLUMBING INSTALLATION**

**REF QEC TASK NO.: 24** 

**REF DWG: 332A2100** 

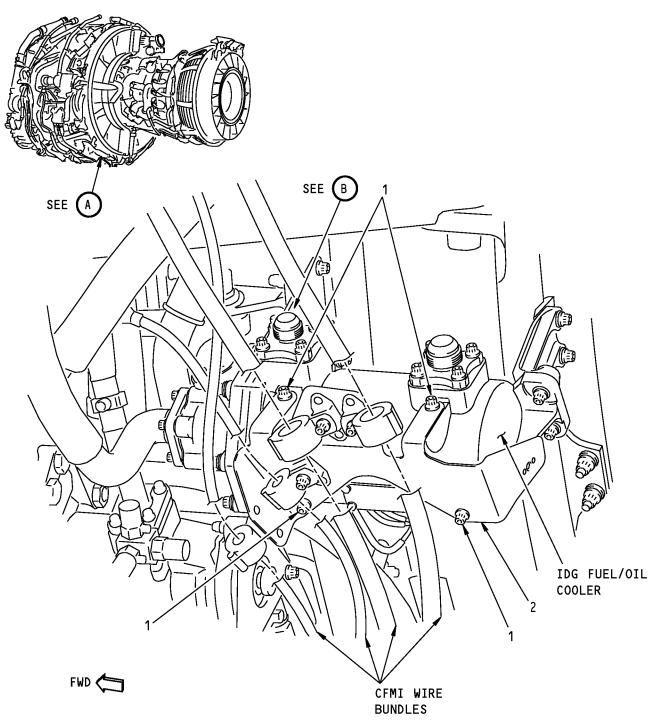
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 24-1 Page 1 Oct 05/2007





CFMI SHIP LOOSE HARDWARE



IDG Plumbing Installation Figure 24-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 2 Oct 05/2007

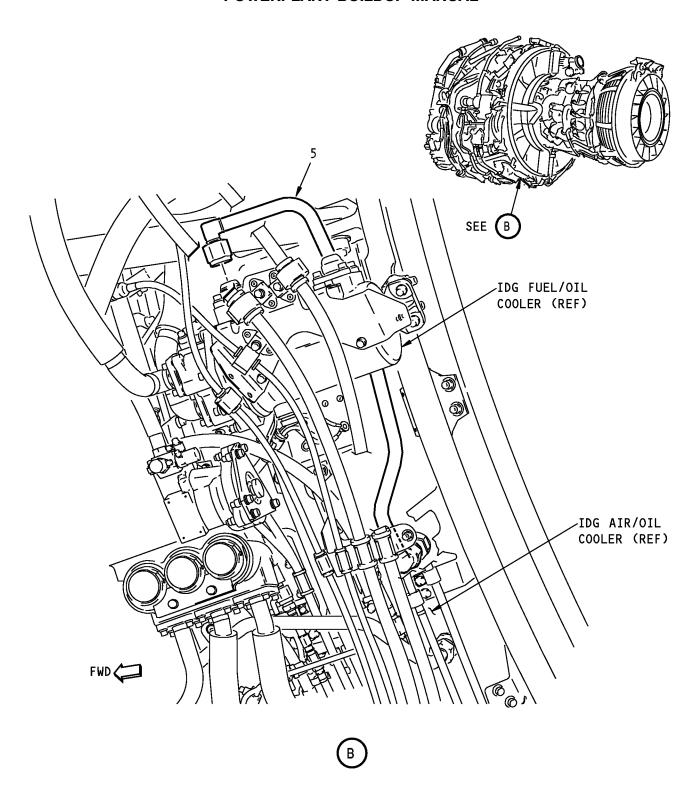


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 1)		
			IN THIS PROCEDURE, DO NOT TIGHTEN SCREWS AND TUBES OR ELBOW NUTS UNLESS INSTRUCTED OR INSTALL PARTS IN A DIFFERENT SEQUENCE.		
			CAUTION: IN THIS PROCEDURE WHEN TIGHTENING TUBE OR ELBOW NUTS, USE TWO WRENCHES; ONE TO HOLD THE SPANNER FLATS ON THE NIPPLE AND ONE TO TIGHTEN THE NUT.		
			CFMI SHIP LOOSE HARDWARE		
			(INSTALLED BY CFMI ON SOME ENGINES)		
			APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF		
	1	BACB30ZF4-08	BOLTS (1) . BOLT (4 REQD)*[1]	REF	_
I	C1	D00006	. NEVER SEEZ NSBT-8N COMPOUND	CON	AR
	2	340-087-904-0	ATTACH BRACKET ASSY (2) TO IDG FUEL/OIL COOLER WITH LUBRICATED BOLTS (1) BRACKET ASSY (1 REQD)*[1]	REF	-
			TIGHTEN BOLTS (1) TO 100-110 POUND-INCHES (11.3-12.4 NEWTON METERS).		
			NOTE: TO ALLOW BETTER ACCESS, DO NOT SECURE CFMI WIRE BUNDLES IN HINGE CLAMPS OF BRACKET ASSY AT THIS TIME. WIRE BUNDLES WILL BE SECURED AT THE END OF THE PROCEDURE.		
			*[1] PART NUMBERS ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE. REFER TO CFMI ILLUSTRATED PARTS CATALOG (IPC) 72-00-00-23 FOR LATEST PART NUMBER INFORMATION.		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 3 Oct 05/2008





IDG Plumbing Installation Figure 24-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 4 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 2)		
5	332A2240-10	LOOSELY INSTALL TUBE ASSY (5) TO FORWARD NIPPLE ON FUEL/ OIL COOLER AND OUTBOARD NIPPLE ON AIR/OIL COOLER. HAND TIGHTEN TUBE NUT ONLY TUBE ASSY		1

71-00-02

P/P BUILDUP FIGURE 24-1 Page 5 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

IDG Plumbing Installation Figure 24-1 (Sheet 3)

**71-00-02**P/P BUILDUP FIGURE 24-1
Page 6
Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCI ATURE	UC	QTY
NO. 24-1	PART NUMBER	NOMENCLATURE  IDG PLUMBING INSTALLATION	UC	QIY
2-1-1		(FIGURE 24-1, SHEET 3)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 7 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

IDG Plumbing Installation Figure 24-1 (Sheet 4)

**71-00-02**P/P BUILDUP FIGURE 24-1
Page 8
Oct 05/2007

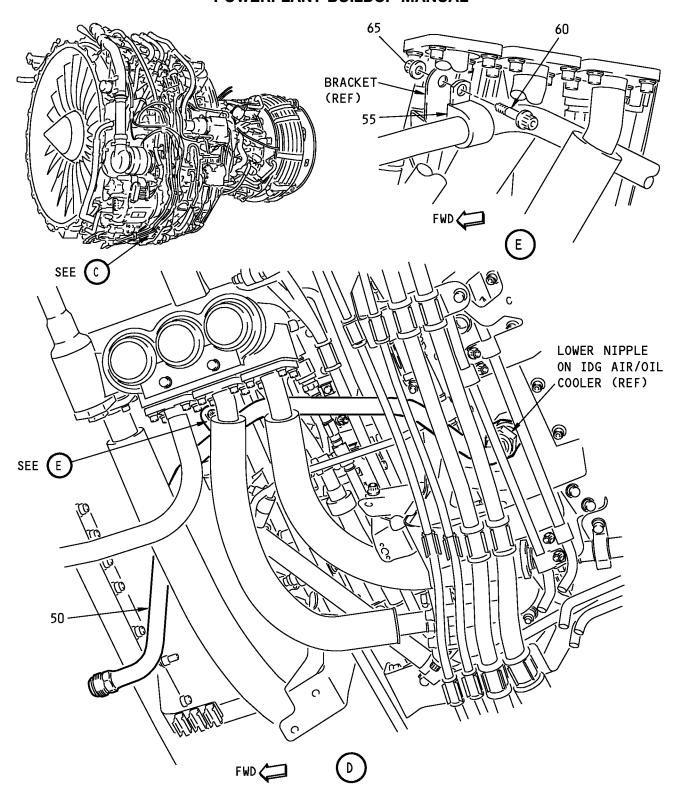


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 4)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 9 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 10 Oct 05/2007

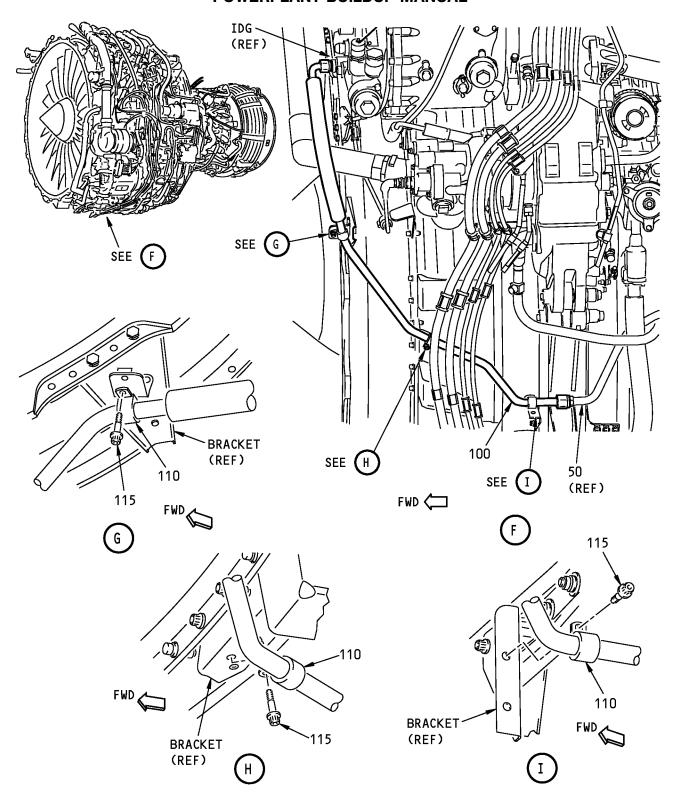


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 5)		
		REMOVE PROTECTIVE COVER FROM LOWER NIPPLE ON IDG AIR/OIL COOLER.		
50	332A2240-1	POSITION TUBE ASSY (50) UNDER OIL SCAVENGE TUBES AND CFMI WIRE BUNDLES AND LOOSELY CONNECT TUBE NUT TO NIPPLE ON IDG AIR/OIL COOLER.  . TUBE ASSY		1
55	J1221G10	ATTACH TUBE ASSY (50) TO ENGINE BRACKET NEXT TO MCD HOUSING. USE CLAMP (55), BOLT (60) AND NUT (65).  . CLAMP		1
60 65	BACB30ZF4-07 AS3485-10	. BOLT . NUT		1 1
		TIGHTEN BOLT (60) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 11 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 12 Oct 05/2007

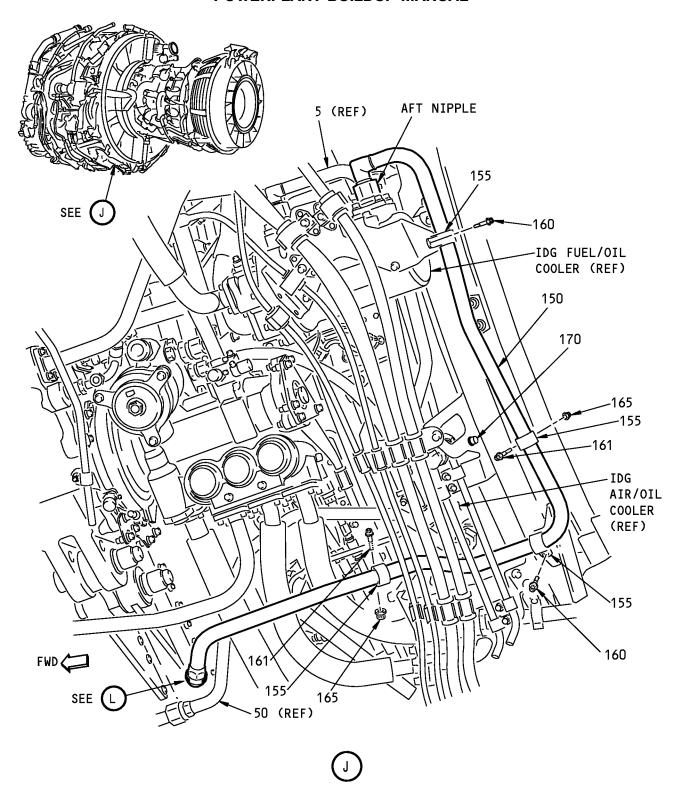


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1	PART NUMBER	IDG PLUMBING INSTALLATION	UC	QII
24-1		(FIGURE 24-1, SHEET 6)		
100 100	115096-4 S332A240-4	LOOSELY ATTACH HOSE/TUBE ASSY (100) TO TUBE ASSY (50) AND TO OIL-OUT NIPPLE (INBOARD LOCATION) ON IDG. HAND TIGHTEN TUBE NUTS ONLY.  . IDG HOSE/TUBE ASSY (V78570)  . BOEING SPEC FOR 115096-4	VEN BOE	1 -
		AT THREE LOCATIONS, LOOSELY ATTACH HOSE/TUBE ASSY (100) TO ENGINE BRACKETS WITH CLAMPS (110) AND BOLTS (115).		
110 115	J1221G10 BACB30ZF4-06	. CLAMP . BOLT		3

71-00-02

P/P BUILDUP FIGURE 24-1 Page 13 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 14 Oct 05/2007



ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 7)		
		REMOVE PROTECTIVE COVER FROM AFT NIPPLE OF FUEL/OIL COOLER.		
150	332A2240-11	LOOSELY ATTACH TUBE ASSY (150) TO AFT NIPPLE ON IDG FUEL/OIL COOLER. HAND TIGHTEN TUBE NUT.  . TUBE ASSY		1
		AT FOUR LOCATIONS, LOOSELY ATTACH TUBE ASSY (150) TO ENGINE BRACKETS USING CLAMPS (155), BOLTS (160) (161) AND NUTS (165).		
155	J1221G12	. CLAMP		4
160	BACB30ZF4-06	. BOLT		2
161	BACB30ZF4-08	. BOLT		2
165	AS3485-10	. NUT		2
170	BACB30ZF4-07	. BOLT		2

71-00-02

P/P BUILDUP FIGURE 24-1 Page 15 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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IDG Plumbing Installation Figure 24-1 (Sheet 8)

**71-00-02**P/P BUILDUP FIGURE 24-1
Page 16
Oct 05/2007

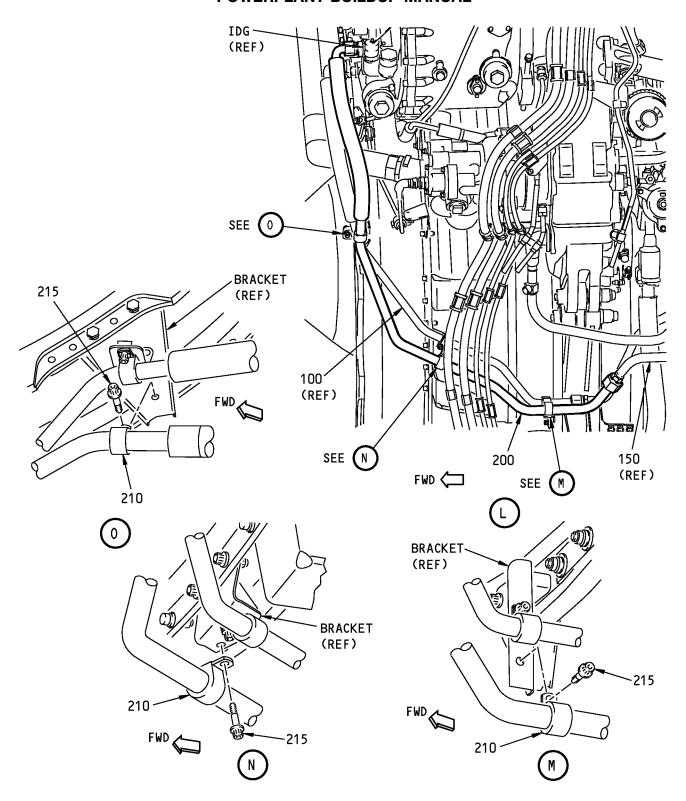


ITEM NO.	PART NUMBER	NOMENCI ATURE	UC	QTY
NO. 24-1	PART NUMBER	NOMENCLATURE  IDG PLUMBING INSTALLATION	UC	QIY
2-1-1		(FIGURE 24-1, SHEET 8)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 17 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 18 Oct 05/2007

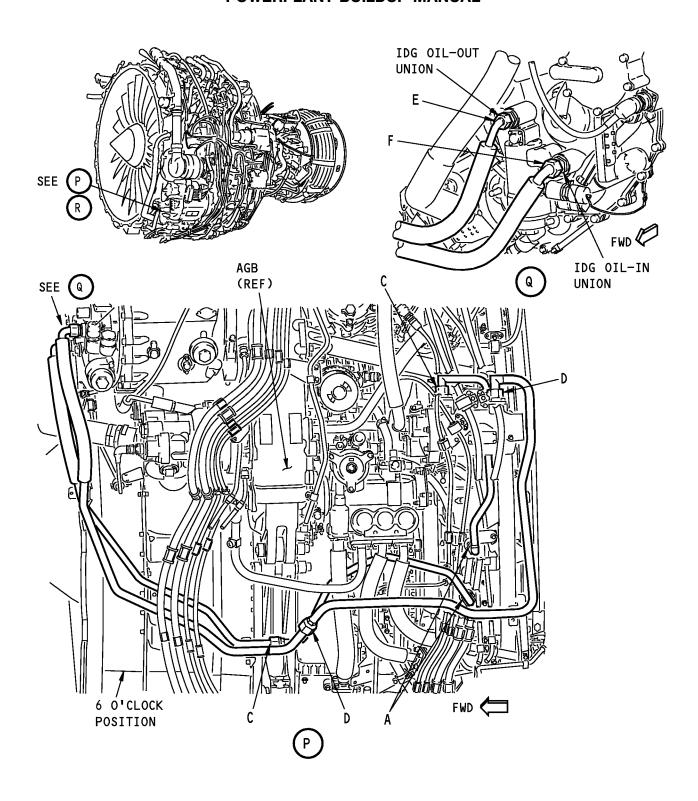


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 9)		<b>4</b>
200 200	115096-2 S332A240-2	LOOSELY ATTACH HOSE/TUBE ASSEMBLY (200) TO TUBE ASSY (150) AND TO OIL-IN NIPPLE (OUTBOARD LOCATION) ON IDG. HAND TIGHTEN TUBE NUTS ONLY IDG HOSE/TUBE ASSY (V78570) . BOEING SPEC FOR 115096-2	VEN BOE	1 -
210 215	J1221G12 BACB30ZF4-06	AT THREE LOCATIONS, LOOSELY ATTACH HOSE/TUBE ASSY (200) TO ENGINE BRACKETS WITH CLAMPS (210) AND BOLTS (215).  CLAMP BOLT		3

71-00-02

P/P BUILDUP FIGURE 24-1 Page 19 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 20 Oct 05/2007

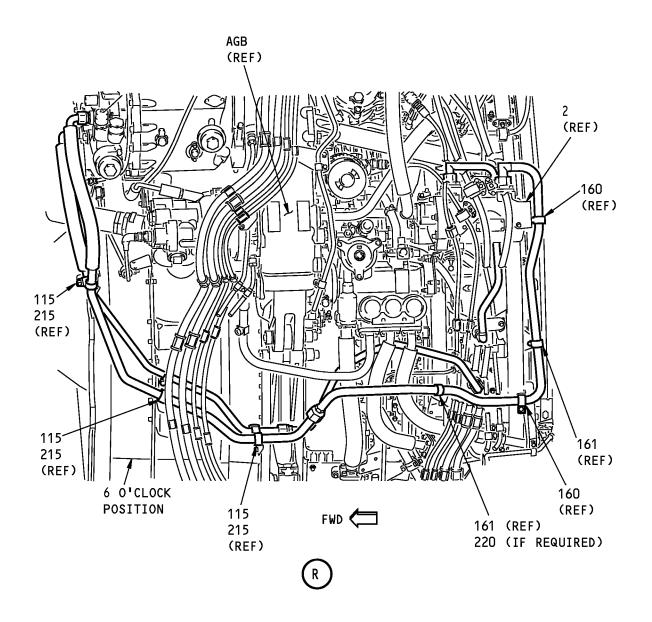


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 10)		
		ADJUST ALL TUBES TO BEST POSITION TO MAKE SURE NO PRELOAD FORCE ON TUBES OR VALVE ARE PRESENT.		
		TIGHTEN ALL CONNECTIONS AS FOLLOWS. USE THE LOCATION SHOWN ON THE VIEWS TO TELL YOU WHAT TORQUE VALUE TO APPLY.		
		LOCATION A:		
		TIGHTEN TUBE NUT TO 342-378 POUND-INCHES (38.6-42.7 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		LOCATION C:		
		TIGHTEN TUBE NUT TO 665-735 POUND-INCHES (75.1-83.0 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		LOCATION D:		
		TIGHTEN TUBE NUT TO 855-945 POUND-INCHES 96.6-106.8 NEWTON METERS). BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		LOCATION E:		
		TIGHTEN TUBE NUT TO 475-525 POUND-INCHES 53.7-59.3 NEWTON METERS). USE BACKUP WRENCH ON IDG UNION TO PREVENT TORQUE TRANSFER. BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		
		LOCATION F:		
		TIGHTEN TUBE NUT TO 665-735 POUND-INCHES 75.1-83.0 NEWTON METERS). USE BACKUP WRENCH ON IDG UNION TO PREVENT TORQUE TRANSFER. BACK OFF NUT TO RELAX TORQUE, THEN RETIGHTEN.		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 21 Oct 05/2007





IDG Plumbing Installation Figure 24-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 24-1 Page 22 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
24-1		IDG PLUMBING INSTALLATION (FIGURE 24-1, SHEET 11)		
220	332W1910-9	ADJUST ALL CLAMPS TO BEST POSITION TO MAKE SURE NO PRELOAD FORCES EXIST ON TUBES OR VALVES. IF REQUIRED, INSTALL UP TO 3 SPACERS (220) UNDER CLAMP FOOT AT LOCATION SHOWN TO ELIMINATE PRELOAD.  . SPACER (3 MAX ALLOWED)	AR	3
		TIGHTEN BOLTS (25), (115), (160), (161) AND (215) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		SECURE CFMI WIRE BUNDLES IN HINGED CLAMPS OF BRACKET (2).		

71-00-02

P/P BUILDUP FIGURE 24-1 Page 23 Oct 05/2008



#### **FIGURE 25-1**

## STARTER VALVE AND DUCT INSTALLATION

**REF QEC TASK NO.: 25** 

**REF DWG: 332A2300** 

**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 25-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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Starter Valve and Duct Installation Figure 25-1 (Sheet 1)

**71-00-02**P/P BUILDUP FIGURE 25-1
Page 2
Oct 05/2007

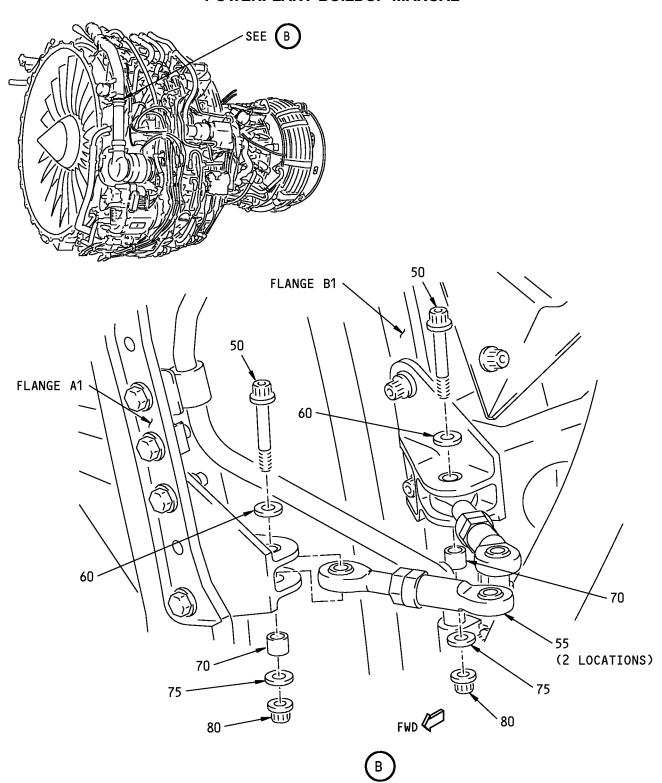


ITEM	2427			071
NO. 25-1	PART NUMBER	NOMENCLATURE STARTER VALVE AND DUCT INSTALLATION	UC	QTY
25-1		(FIGURE 25-1, SHEET 1)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 25-1 Page 3 Oct 05/2007





Starter Valve and Duct Installation Figure 25-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 4 Oct 05/2007

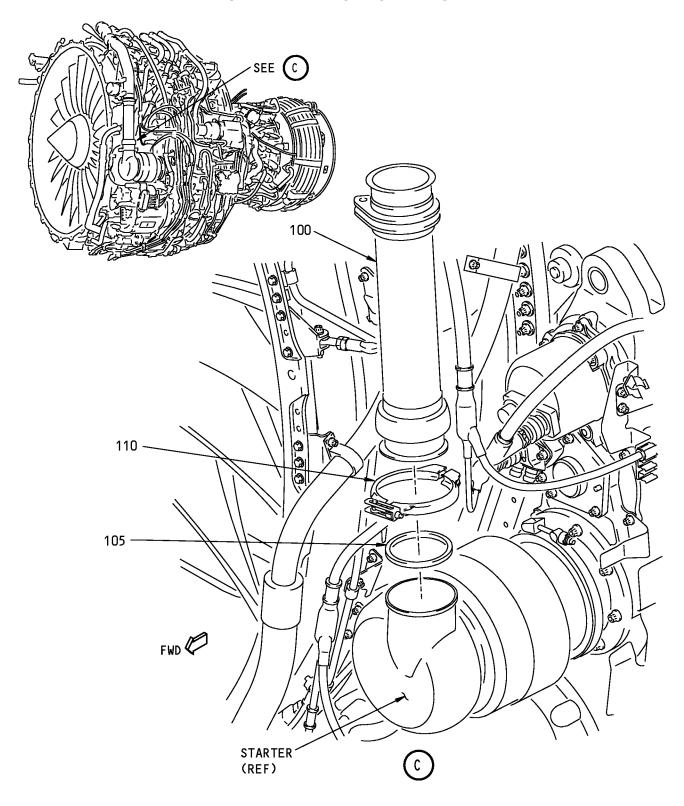


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	25-1		STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 2)		
1	50 C1	BACB30PN4-14 D00006	LUBRICATE THREADS AND SHANK OF BOLTS (50) WITH Never-Seez NSBT-8N compound, D00006 (C1).  BOLT  NEVER SEEZ NSBT-8N COMPOUND	CON	2 AR
			LOOSEN JAMNUTS OF LINK ASSEMBLIES (55) TO FREE ROD ENDS. ADJUST LINKS TO 3.00 INCHES (7.62 CM) MEASURED FROM THE CENTERLINE OF SPHERICAL BEARINGS. RETIGHTEN JAMNUTS.		
	55 60 70 75 80	322U2338-2 BACW10BP4ACU BACB28AK04-030 NAS1149C0432R AS3485-10	ATTACH LINK ASSEMBLIES (55) TO ENGINE BRACKETS AT 10:30 O'CLOCK POSITIONS ON FLGS A1 AND B1 WITH LUBRICATED BOLTS (50), WASHERS (60) AND (75), BUSHINGS (70) AND NUTS (80).  LINK ASSY  . WASHER (CSK) (UNDER BOLTHEAD)  . BUSHING  . WASHER (UNDER NUT)  . NUT		2 2 2 2 2
	80	A33405-10	<u>CAUTION</u> : BEFORE TIGHTENING NUT, MAKE SURE BUSHING IS FULLY ENGAGED.		2
			TIGHTEN BOLTS (50) TO 50-75 POUND-INCHES (5.6-8.5 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 25-1 Page 5 Oct 05/2008





Starter Valve and Duct Installation Figure 25-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 6 Oct 05/2007

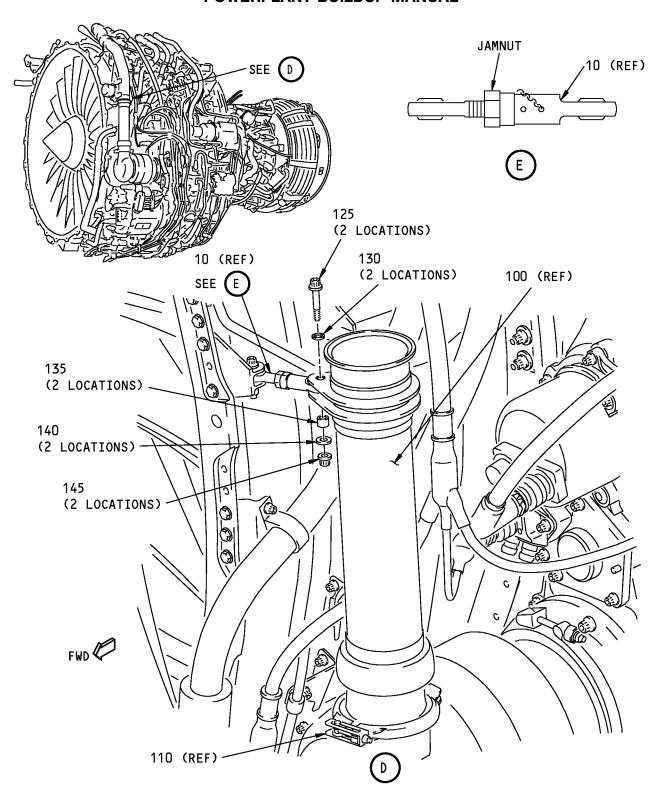


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
25-1		STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 3)		
		INSTALL SEAL (105) IN BOTTOM END OF DUCT ASSY (100). POSITION DUCT (100) ON TOP PORT OF STARTER ALIGNING KEY-SLOT IN DUCT WITH KEY ON STARTER AND LOOSELY SECURE WITH COUPLING (110).		
		NOTE: DO NOT TIGHTEN COUPLING AT THIS TIME.		
		NOTE: EARLIER STARTERS MAY NOT HAVE KEY.		
100 105 110	332A2313-1 AS1895-7-325 AS1895-4-325	. DUCT ASSY . SEAL . COUPLING		1 1 1
110	A3 1093-4-323	. COOPLING		'

71-00-02

P/P BUILDUP FIGURE 25-1 Page 7 Oct 05/2007





Starter Valve and Duct Installation Figure 25-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 8 Oct 05/2007

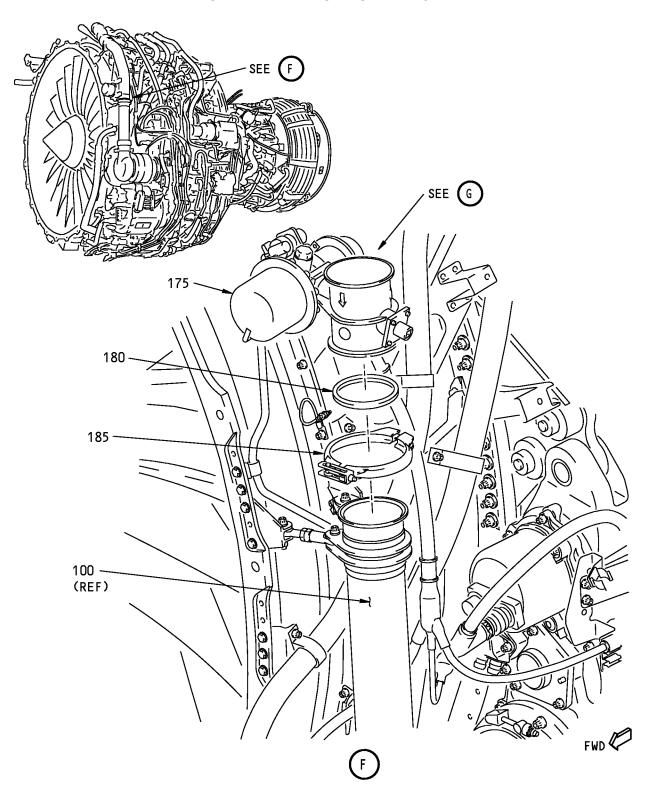


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	25-1		STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 4)		
I	125 C1	BACB30PN4-14 D00006	LUBRICATE THREADS AND SHANK OF BOLTS (125) WITH Never-Seez NSBT-8N compound, D00006 (C1). . BOLT . NEVER SEEZ NSBT-8N COMPOUND	CON	2 AR
			SECURE LINKS (10) TO DUCT ASSY (100) WITH BOLTS (125), WASHERS (130) AND (140), BUSHINGS (135) AND NUTS (145).		
			NOTE: MAKE SURE LINK(S) DO NOT APPLY PRELOAD TO ADJACENT DUCT OR SUPPORT HARDWARE. IF NECESSARY, ADJUST LINK(S) BY LOOSENING JAMNUT ON EACH LINK TO FREE ROD END. ADJUST AS NECESSARY AND RETIGHTEN JAMNUT.		
	130 135 140	BACW10BP4ACU BACB28AK04-030 NAS1149C0432R	. WASHER (CSK) (UNDER BOLTHEAD) . BUSHING . WASHER (UNDER NUT)		2 2 2
	145	AS3485-10	. NUT  CAUTION: BEFORE TIGHTENING NUT, MAKE SURE BUSHING IS FULLY ENGAGED.		2
			TIGHTEN BOLTS (125) TO 50-75 POUND-INCHES (5.6-8.5 NEWTON METERS).		
1	C2 C3	G01912 G50375	APPLY lockwire, G01912 (C2) OR safety cable kit, G50375 (C3) BETWEEN JAMNUT AND FEMALE SIDE OF LINKS (10).  LOCKWIRE SAFETY CABLE KIT ORIENT HEAD OF COUPLING (110) UNTIL LATCH FACES FORWARD. TIGHTEN COUPLING (110) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING (110) WITH NON-METALLIC MALLET. RETIGHTEN COUPLING (110) TO TORQUE GIVEN ON PART.	CON CON	AR 2

71-00-02

P/P BUILDUP FIGURE 25-1 Page 9 Oct 05/2008





Starter Valve and Duct Installation Figure 25-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 10 Oct 05/2007

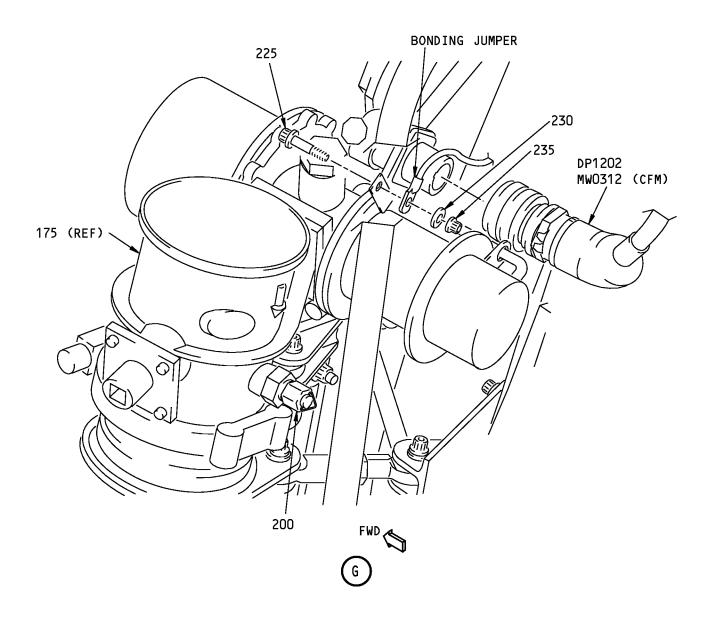


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	3289630-2 S332A002-2 AS1895-7-300 30645-300 VR1030-300	NOMENCLATURE  STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 5)  ATTACH SEAL (180) ON BOTTOM PORT OF START VALVE (175) AND INSTALL VALVE ON DUCT ASSY (100). MAKE SURE KEY-SLOT IN VALVE FLANGE MATES WITH KEY ON DUCT FLANGE.  CAUTION: DO NOT TORQUE COUPLING TO MORE THAN THAT SPECIFIED ON THE PART. OVERTORQUING OF THE COUPLING CAN CAUSE DAMAGE TO START VALVE.  SECURE START VALVE (175) TO DUCT ASSY (100) WITH COUPLING (185). TIGHTEN COUPLING (185) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING (185) WITH NON-METALLIC MALLET. RETIGHTEN COUPLING (185) TO TORQUE GIVEN ON PART.  . START VALVE (V59364)  . BOEING SPEC FOR 3289630-2  . SEAL  . COUPLING  . COUPLING (OPTIONAL TO 30645-300)		QTY  1 - 1 1 -

71-00-02

P/P BUILDUP FIGURE 25-1 Page 11 Oct 05/2007





Starter Valve and Duct Installation Figure 25-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 12 Oct 05/2007

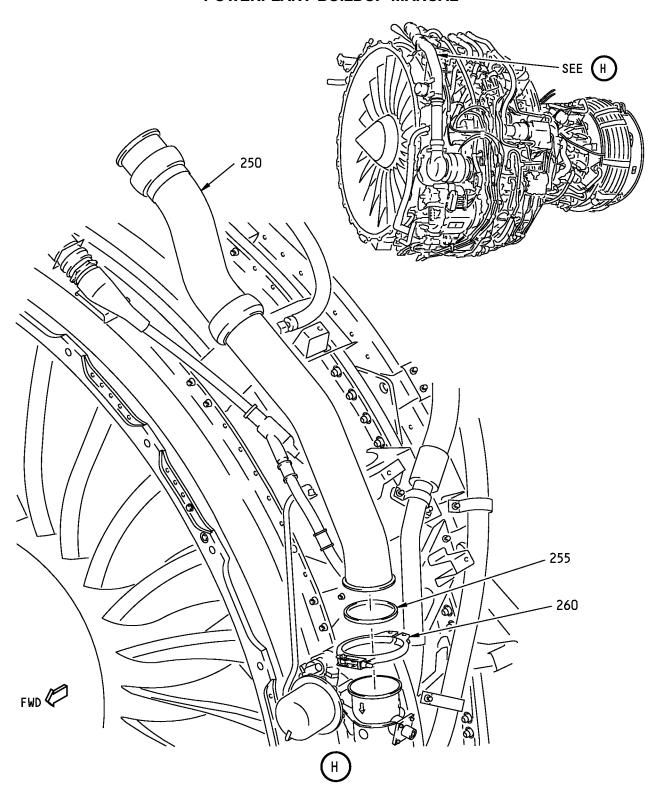


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
25-1		STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 6)		
200 200	MS21914-4J BACC14AD04J	MAKE SURE PRESSURE CAP IS INSTALLED ON DOWNSTREAM SENSE CONNECTION OF START VALVE. IF CAP IS MISSING, INSTALL ITEM (200).  . PRESSURE CAP (1 REQD)  . PRESSURE CAP (OPTIONAL TO MS21914-4J)	REF OPT	-
		ATTACH BONDING JUMPER (REFERENCED INBRACKET INSTALLATION - UPPER LEFT FAN CASE/Figure 4-1) FROM FLG B1 TO START VALVE (175) WITH ITEMS (225) THRU (235).		
225 230 235	BACB30ZF3-06 NAS1149C0316R AS3485-09	. BOLT . WASHER (UNDER NUT) . NUT		1 1 1
		TIGHTEN BOLT (225) TO 50-56 POUNDS-INCHES (5.6-6.3 NEWTON METERS).		
		CHECK RESISTANCE BETWEEN START VALVE HOUSING AND ENGINE BRACKET. MAX RESISTANCE IS 0.008 OHMS.		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE WATER PUMP PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT MW0312 ELECTRICAL CONNECTOR, DP1202, TO START VALVE. TURN KNURLED COUPLING RING WHILE WIGGLING BACKSHELL ASSEMBLY. AFTER FULLY SEATING COUPLING RING, USE SOFT-JAWED PLIERS OR STRAP WRENCH TO TIGHTEN COUPLING RING AN ADDITIONAL 1/8 TURN OR UNTIL PLIER SLIPPAGE OCCURS.		

71-00-02

P/P BUILDUP FIGURE 25-1 Page 13 Oct 05/2008





Starter Valve and Duct Installation Figure 25-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 25-1 Page 14 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
25-1	PART NUMBER	STARTER VALVE AND DUCT INSTALLATION	UC	QIT
250 255	332A2310-4 AS1895-7-300	(FIGURE 25-1, SHEET 7)  INSTALL SEAL (255) IN BOTTOM END OF DUCT ASSY (250). POSITION DUCT (250) ON TOP PORT OF START VALVE AND LOOSELY SECURE WITH COUPLING (260).  NOTE: DO NOT TIGHTEN COUPLING AT THIS TIME.  DUCT ASSY . SEAL		1 1
260	30645-300	. COUPLING		1
260	VR1030-300	. COUPLING (OPTIONAL TO 30645-300)	OPT	

71-00-02

P/P BUILDUP FIGURE 25-1 Page 15 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



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Starter Valve and Duct Installation Figure 25-1 (Sheet 8)

**71-00-02**P/P BUILDUP FIGURE 25-1
Page 16
Oct 05/2007

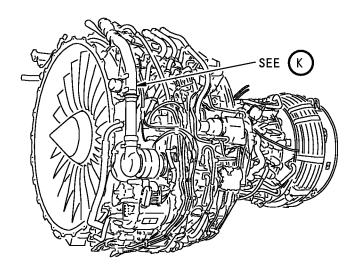


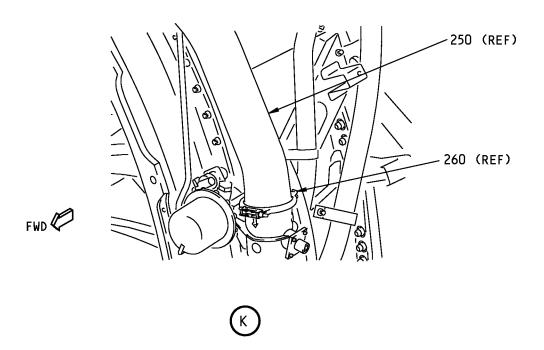
ITEM	2427	NONENO ATURE		071
NO. 25-1	PART NUMBER	NOMENCLATURE STARTER VALVE AND DUCT INSTALLATION	UC	QTY
25-1		(FIGURE 25-1, SHEET 8)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 25-1 Page 17 Oct 05/2007







Starter Valve and Duct Installation Figure 25-1 (Sheet 9)

**71-00-02**P/P BUILDUP FIGURE 25-1
Page 18

Oct 05/2007

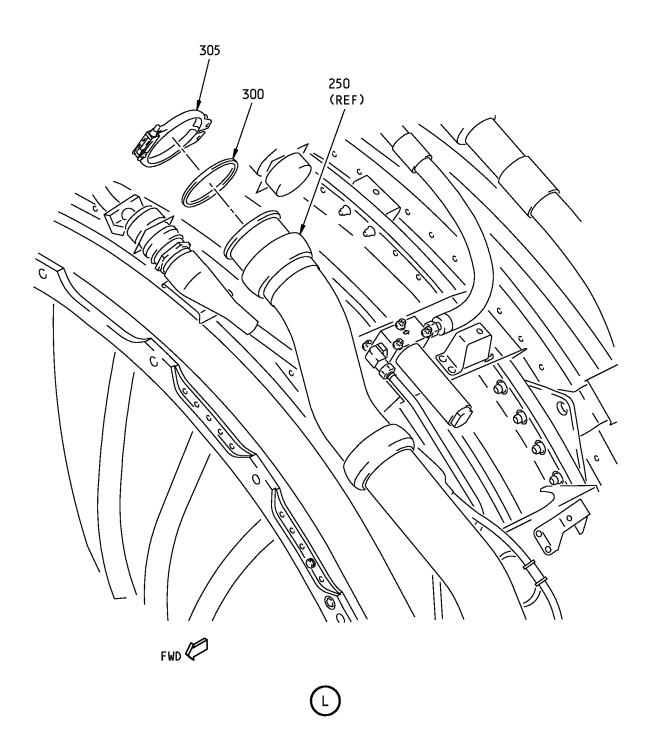


NO.	PART NUMBER	NOMENCLATURE	UC	QTY
1TEM NO. 25-1	PART NUMBER	NOMENCLATURE  STARTER VALVE AND DUCT INSTALLATION (FIGURE 25-1, SHEET 9)  CAUTION: DO NOT TORQUE COUPLING TO MORE THAN THAT SPECIFIED ON THE PART. OVERTORQUING OF THE COUPLING CAN CAUSE DAMAGE TO START VALVE.  ORIENT HEAD OF COUPLING (260) UNTIL LATCH FACES FORWARD. TIGHTEN COUPLING (260) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING (260) WITH NON-METALLIC MALLET. RETIGHTEN COUPLING (260) TO TORQUE GIVEN ON PART.	UC	QTY

71-00-02

P/P BUILDUP FIGURE 25-1 Page 19 Oct 05/2007





Starter Valve and Duct Installation Figure 25-1 (Sheet 10)

**71-00-02**P/P BUILDUP FIGURE 25-1

JILDUP FIGURE 25-1 Page 20 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
25-1	. 7	STARTER VALVE AND DUCT INSTALLATION		<u> </u>
		(FIGURE 25-1, SHEET 10)		
		PUT ITEMS (300) AND (305) IN A BAG AND SECURE TO DUCT ASSY (250).		
300	AS1895-7-300	. SEAL		1
305 305	30645-300 VR1030-300	. COUPLING . COUPLING (OPTIONAL TO 30645-300)	OPT	1
303	V111030-300	. OOG EING (OF HONAL TO SUGAS-SUU)		

71-00-02

P/P BUILDUP FIGURE 25-1 Page 21 Oct 05/2007



#### **FIGURE 26-1**

# THIS FIGURE NOT USED

71-00-02

P/P BUILDUP FIGURE 26-1 Page 1 Oct 05/2007 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

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THIS SHEET NOT USED Figure 26-1 (Sheet 1)

**71-00-02**P/P BUILDUP FIGURE 26-1
Page 2

Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
26-1	.,	THIS SHEET NOT USED		<u> </u>
		(FIGURE 26-1, SHEET 1) THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 26-1 Page 3 Oct 05/2007



#### **FIGURE 27-1**

## **INLET COWL TAI SYSTEM INSTALLATION**

**REF QEC TASK NO.: 27** 

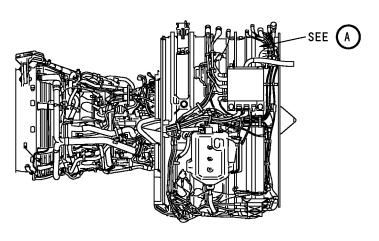
**REF DWG: 332A2300** 

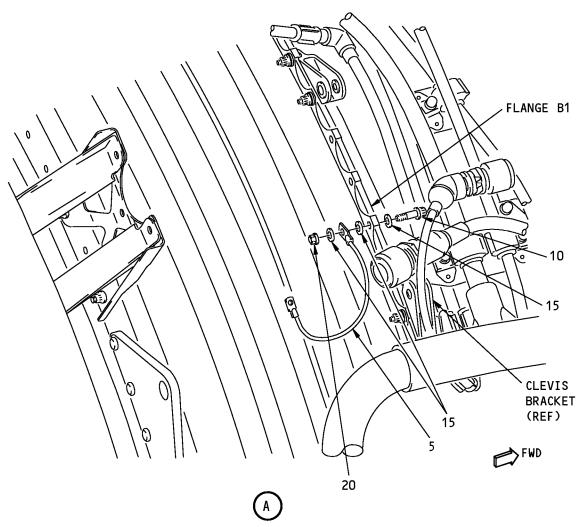
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 27-1 Page 1 Oct 05/2007







Inlet Cowl TAI System Installation Figure 27-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 2 Oct 05/2007

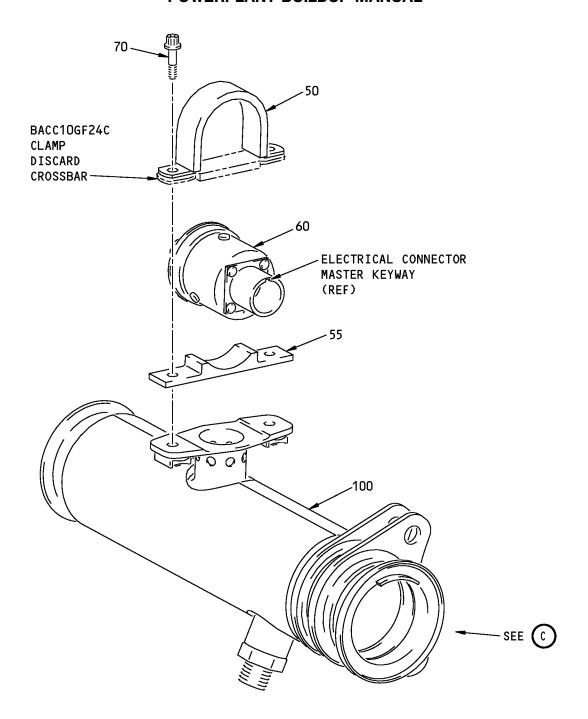


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 1)		
I			LOCATE 2ND HOLE UP FROM LOWER CLEVIS BRACKET ON FLANGE B1. USE abrasive mat, G00251 (C1) TO REMOVE ANODIZED COATING AROUND HOLE. CONTINUE UNTIL BRIGHT ALUMINUM BONDING SURFACE IS VISIBLE. AFTER COATING HAS BEEN REMOVED, CLEAN SURFACE OF FLANGE AND MATING SURFACE OF BONDING JUMPER (5) WITH alcohol, B00130 (C2).		
			NOTE: REMOVE ONLY A MINIMUM AMOUNT OF ALUMINUM.		
	5 C1 C2	BACJ40AC54-9 G00251 B00130	. BONDING JUMPER . ABRASIVE MAT . ALCOHOL SECURE BONDING JUMPER (5) TO HOLE. USE BOLT (10), WASHERS (15) AND NUT (20).	CON CON	1 AR AR
			NOTE: INSTALL A WASHER UNDER THE BOLT HEAD, UNDER THE BONDING JUMPER AND UNDER THE NUT.		
	10 15 20	BACB30ZF4-10 NAS1149D0416H BACN10YR4CD	. BOLT (BOLT HEAD FWD) . WASHER . NUT (AFT SIDE)		1 3 1
			TIGHTEN BOLT (10) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
	00	200044	APPLY A FILLET SEAL OF sealant, A00803 (C4) OR sealant, A50096 (C5) OR adhesive, A00027 (C6) AROUND BONDING JUMPER (5) AND BOLT (10). IF sealant, A00803 (C4) IS USED, APPLY Dapco No. 1-100 primer, C00944 (C3) BEFORE SEALANT APPLICATION.	001	4.5
I	C3 C4	C00944 A00803	. DAPCO NO. 1-100 PRIMER . SEALANT	CON	AR AR
Ī	C5	A50096	. SEALANT	CON	AR
I	C6	A00027	. ADHESIVE	CON	AR

71-00-02

P/P BUILDUP FIGURE 27-1 Page 3 Oct 05/2008





PREFERRED CONFIGURATION



Inlet Cowl TAI System Installation Figure 27-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 4 Oct 05/2007

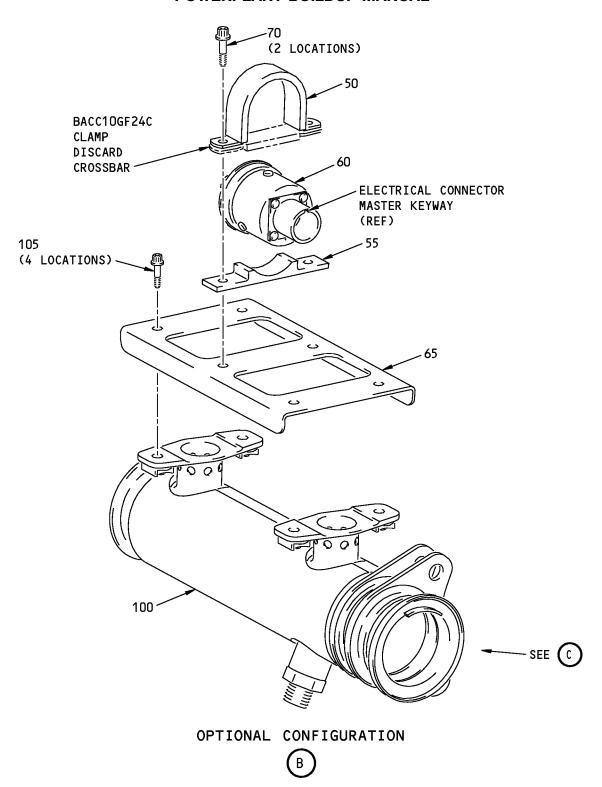


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 2)		
		PREFERRED CONFIGURATION		
50	BACC10GF24CT	REMOVE CROSSBAR FROM ATTACHMENT FOOT OF CLAMP (50) AND DISCARD. IF CROSSBAR IS ATTACHED BY A RIVET, REMOVE RIVET BY SQUEEZING RIVET RING WITH PLIERS.  . CLAMP		1
		ATTACH PRESSURE SWITCH (60) TO DUCT ASSY (100) USING CLAMP (50), BRACKET SADDLE (55) AND BOLTS (70). IF RIVET WAS REMOVED FROM OPT CLAMP (50), INSTALL WASHERS (75) UNDER BOLTS (70).		
		NOTE: INSTALL PRESSURE SWITCH SUCH THAT ELECTRICAL CONNECTOR MASTER KEYWAY IS FARTHEST FROM DUCT.		
55	332A1325-1	. BRACKET SADDLE		1
60	21SN41-52	. PRESSURE SWITCH		1
70 75	BACB30ZF3-08 NAS1149C0363R	. BOLT . WASHER (2 REQD)*[1]	OPT	2
100	332A2390-48	. DUCT ASSY	<b>.</b>	1
		TIGHTEN BOLTS (70) TO 28-32 POUND-INCHES (3.16-3.62 NEWTON METERS).		
		*[1] ITEM NOT ILLUSTRATED		

71-00-02

P/P BUILDUP FIGURE 27-1 Page 5 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 6 Oct 05/2007

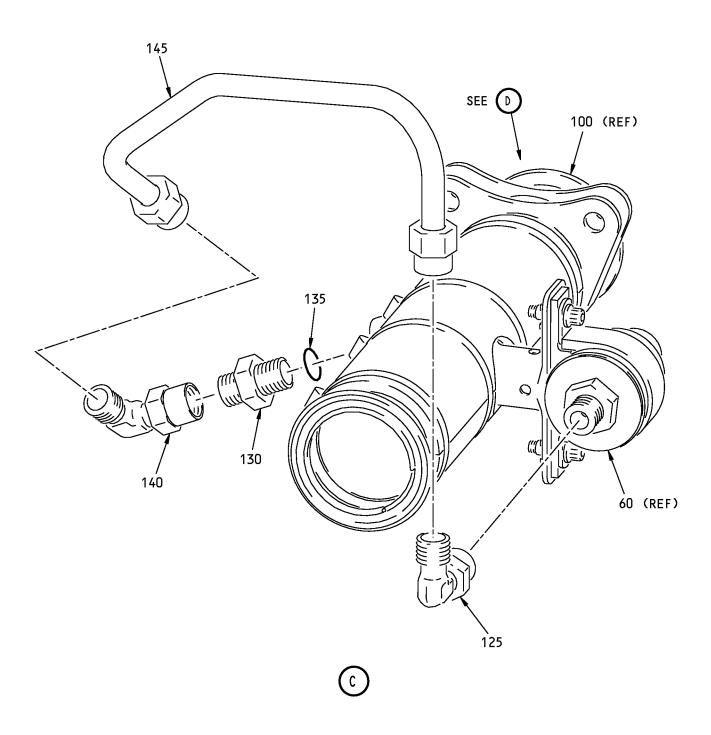


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 3)		
		OPTIONAL CONFIGURATION		
50	BACC10GF24CT	REMOVE CROSSBAR FROM ATTACHMENT FOOT OF CLAMP (50) AND DISCARD. IF CROSSBAR IS ATTACHED BY A RIVET, REMOVE RIVET BY SQUEEZING RIVET RING WITH PLIERS.		1
		POSITION BRACKET SADDLE (55) AND PRESSURE SWITCH (60) ON BRACKET (65) AND SECURE WITH CLAMP (50) AND BOLTS (70). IF RIVET WAS REMOVED FROM OPT CLAMP (50), INSTALL WASHERS (75) UNDER BOLTS (70).		
		NOTE: INSTALL PRESSURE SWITCH SUCH THAT ELECTRICAL CONNECTOR MASTER KEYWAY IS FARTHEST FROM BRACKET.		
55	332A1325-1	. BRACKET SADDLE (QTY 1)	OPT	-
60	21SN41-52	. PRESSURE SWITCH (QTY 1)	OPT	-
65 70	332A2910-1 BACB30ZF3-08	. BRACKET (QTY 1) . BOLT (QTY 2)	OPT OPT	-
75	NAS1149C0363R	. WASHER (QTY 2)*[1]	OPT	_
		TIGHTEN BOLTS (70) TO 28-32 POUND-INCHES (3.16-3.62 NEWTON METERS).		
		ATTACH BRACKET AND ATTACHING PARTS TO DUCT (100) WITH BOLTS (105).		
100 105	332A2390-3 BACB30ZF4-08	DUCT ASSY (QTY 1) . BOLT (QTY 4)	OPT OPT	  -  -
		TIGHTEN BOLTS (105) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
		*[1] ITEM NOT ILLUSTRATED		

71-00-02

P/P BUILDUP FIGURE 27-1 Page 7 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 8 Oct 05/2007

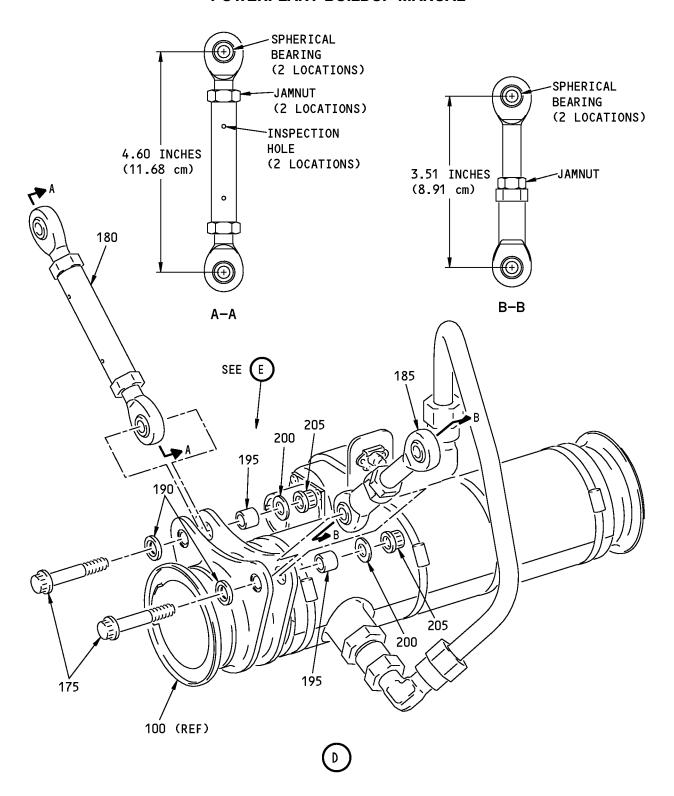


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 4)		
125	BACE21BT0606JN	INSTALL ELBOW (125) FINGER-TIGHT ON PRESSURE SWITCH (60) ELBOW		1
130 135 140	MS21902J6 801A50-0006A BACE21BT0606JN 332A2350-1	INSTALL O-RING (135) ON UNION (130) AND INSTALL UNION (130) ON DUCT (100). INSTALL ELBOW (140) ON UNION (130) FINGER-TIGHT.  . UNION  . O-RING (V15284)  . ELBOW  CONNECT TUBE (145) BETWEEN ELBOWS (125) AND (140).  . TUBE ASSY	VEN	1 1 1
		TIGHTEN UNION (130), ELBOWS (125) AND (140) AND TUBE (145) TO 257-283 POUND-INCHES (29-32 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 27-1 Page 9 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 10 Oct 05/2007

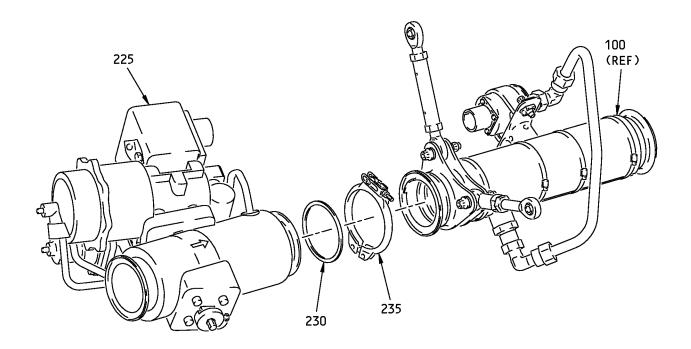


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 5)		
C7 175	D00006 BACB30PN4-14	APPLY Never-Seez NSBT-8N compound, D00006 (C7) TO THREADS AND SHANK OF BOLTS (175).  . NEVER-SEEZ NSBT-8N COMPOUND  . BOLT	CON	AR 2
		LOOSEN JAMNUT OF LINK ASSY (180) TO FREE ROD END. ADJUST LINK ASSY TO 4.60 INCHES (11.68 CM) FROM CENTERLINE OF SPHERICAL BEARINGS. RETIGHTEN JAMNUT.		
		NOTE: MAKE SURE THEADS ARE VISIBLE THROUGH BOTH INSPECTION HOLES.		
		LOOSEN JAMNUT OF LINK ASSY (185) TO FREE ROD END. ADJUST LINK TO 3.51 INCHES (8.91 CM) FROM CENTERLINE OF SPHERICAL BEARINGS. RETIGHTEN JAMNUT.		
		ATTACH LINK ASSEMBLY (180) TO BOTTOM ATTACH POINT OF DUCT (100) (BOTTOM OF DUCT HAS TWO BOSSES) AND ATTACH LINK ASSEMBLY (185) TO TOP ATTACH POINT OF DUCT. USE ITEMS (175) AND (190) THRU (205).		
		NOTE: MAKE SURE BOLT HEAD FACES FORWARD.		
180 185 190 190 195 200 205	332A2341-3 332A2341-2 BACW10BP4ACU BACW10BP4CD BACB28AK04-030 NAS1149C0432R AS3485-10	LINK ASSY LINK ASSY WASHER (CSK) (UNDER BOLT) WASHER (OPTIONAL TO BACW10BP4ACU) BUSHING WASHER (UNDER NUT) NUT TIGHTEN BOLTS (175) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).	OPT	1 1 2 - 2 2 2

71-00-02

P/P BUILDUP FIGURE 27-1 Page 11 Oct 05/2008







Inlet Cowl TAI System Installation Figure 27-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 12 Oct 05/2007

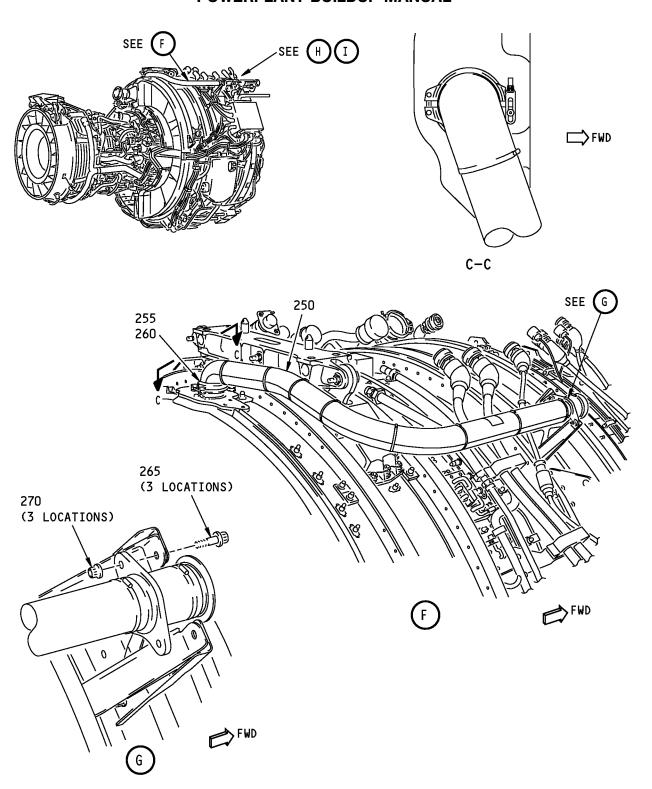


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 6)		
		INSTALL SEAL (230) IN AFT FLANGE OF DUCT ASSY (100). ATTACH VALVE ASSEMBLY (225) TO DUCT ASSY (100) WITH COUPLING (235) FINGER TIGHT.		
		NOTE: MAKE SURE TO ALIGN THE CLOCKING FEATURE BETWEEN THE VALVE AND THE DUCT.  ORIENT COUPLING TO MAXIMIZE CLEARANCE WITH ADJACENT EQUIPMENT.		
225 225	3215618-4	. VALVE ASSEMBLY (V59364) . BOEING SPEC FOR 3215618-4	VEN BOE	1
230 235	S332A239-4 AS1895-7-200 AS1895-4-200	. SEAL . COUPLING	BUE	1
		TIGHTEN COUPLING (235) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING WITH A NON-METALLIC MALLET. RETIGHTEN COUPLING TO TORQUE SPECIFIED ON PART.		

71-00-02

P/P BUILDUP FIGURE 27-1 Page 13 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 14 Oct 05/2007

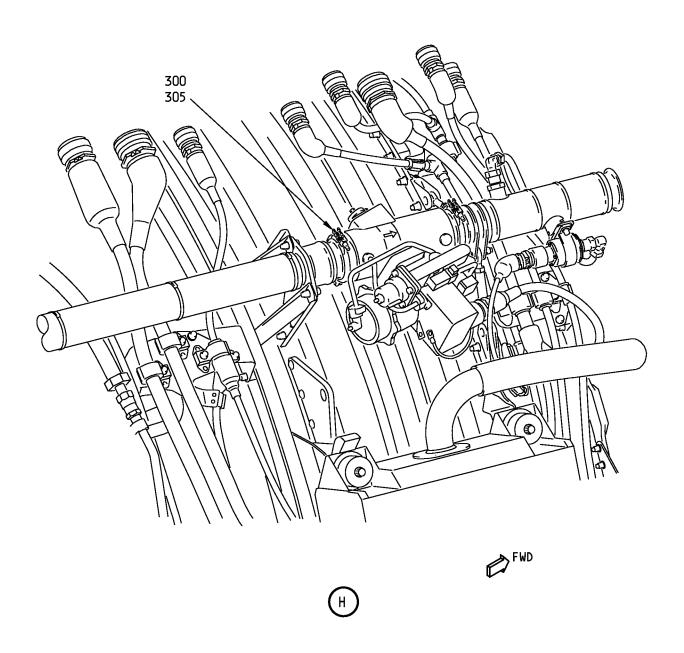


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1 250 255	332A2390-12 AS1895-7-175	NOMENCLATURE  INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 7)  CAUTION: COUPLING MUST BE INSTALLED WITH NUT FACING FORWARD ON LEFT SIDE OF ENGINE. DAMAGE TO EQUIPMENT CAN OCCUR.  POSITION DUCT ASSY (250) ON ENGINE FAN CASE. SECURE AFT END OF DUCT TO EXISTING TAI BIFUR UPR DUCT FLANGE WITH SEAL (255) AND COUPLING (260). SECURE FWD END OF DUCT TO ENGINE FAN CASE BRACKETS WITH BOLTS (265) AND NUTS (270).  NOTE: MAKE SURE COUPLING NUT IS ON LEFT SIDE (EITHER FORWARD OR AFT OF DUCT).  . DUCT ASSY . SEAL	UC	<b>QTY</b> 1 1
260 265 270	AS1895-4-175 BACB30ZF4-10 AS3485-10	. COUPLING . BOLT . NUT TIGHTEN COUPLING (260) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING WITH A NON-METALLIC MALLET. RETIGHTEN COUPLING TO TORQUE SPECIFIED ON PART. TIGHTEN BOLTS (265) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		1 3 3

71-00-02

P/P BUILDUP FIGURE 27-1 Page 15 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 16 Oct 05/2007

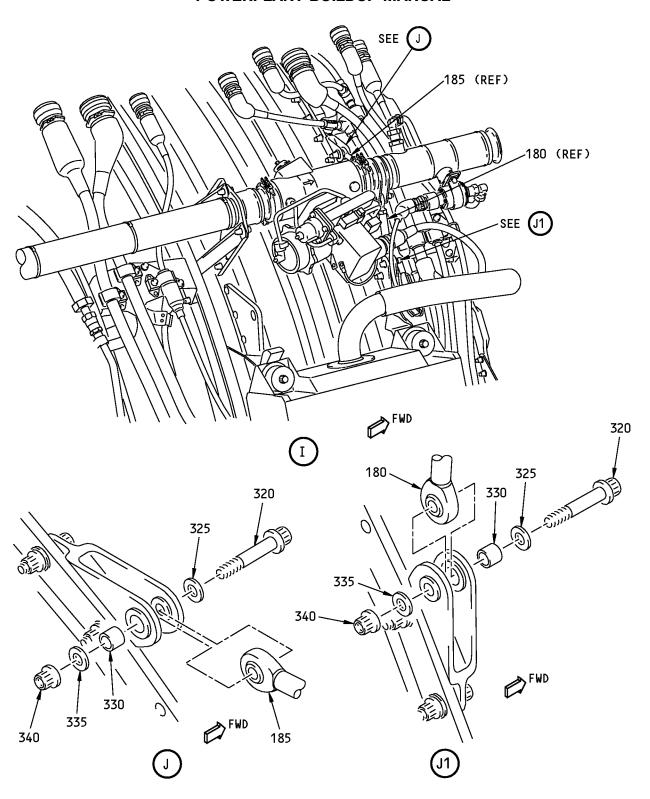


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 8)		
300 305	AS1895-7-200 AS1895-4-200	INSTALL SEAL (300) ON AFT FLANGE OF VALVE (225). POSITION VALVE (225)/DUCT ASSY (100) TO ENGINE FAN CASE AND LOOSELY SECURE TO AFT DUCT (250) WITH COUPLING (305).  . SEAL  . COUPLING		1 1
305	AS 1695-4-200	ORIENT COUPLING (305) TO MAXIMIZE CLEARANCE WITH ADJACENT EQUIPMENT. TIGHTEN COUPLING (305) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING WITH NON-METALLIC MALLET. RETIGHTEN COUPLING TO TORQUE SPECIFIED ON PART.		

71-00-02

P/P BUILDUP FIGURE 27-1 Page 17 Oct 05/2007





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 18 Oct 05/2007

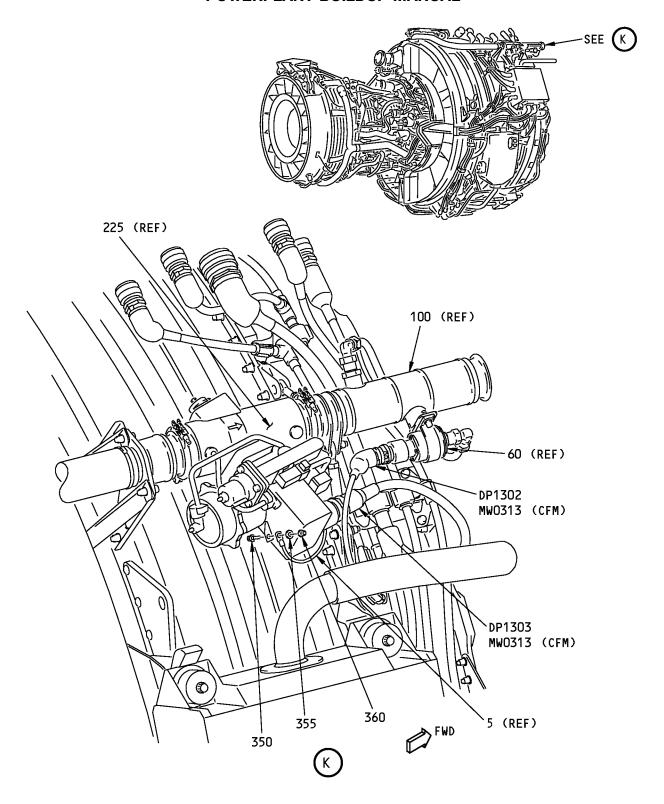


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 9)		
I	C7 320	D00006 BACB30PN4-14	APPLY Never-Seez NSBT-8N compound, D00006 (C7) TO THREADS AND SHANK OF BOLTS (320).  . NEVER-SEEZ NSBT-8N COMPOUND  . BOLT	CON	AR 2
			SECURE LINKS (180) AND (185) TO ENGINE FAN CASE BRACKETS WITH ITEMS (320) THRU (340).		
			NOTE: MAKE SURE NO PRELOAD FORCE EXISTS BETWEEN THE VALVE, DUCT AND ENGINE BRACKET. IF A PRELOAD FORCE EXISTS, FIRST MAKE SURE ALL COMPONENTS ARE INSTALLED CORRECTLY. THEN ADJUST LINKS (180) AND (185) LENGTHS (Ref Figure 27-1 (Sheet 5)PPBU-FIGURE).		
	325 330 335 340	BACW10BP4ACU BACB28AK04-030 NAS1149C0432R AS3485-10	. WASHER (CSK) (UNDER BOLT) . BUSHING . WASHER (UNDER NUT) . NUT		2 2 2 2
	010	7.00 100 10	TIGHTEN BOLTS (320) TO 50-80 POUND-INCHES (5.6-9.0 NEWTON METERS).		_
	C8 C9	G01912 G50375	APPLY lockwire, G01912 (C8) OR safety cable kit, G50375 (C9) BETWEEN JAMNUT AND FEMALE SIDE OF LINK (180) AND LINK (185). LOCKWIRE SAFETY CABLE KIT	CON CON	AR 2

71-00-02

P/P BUILDUP FIGURE 27-1 Page 19 Oct 05/2008





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 20 Oct 05/2007

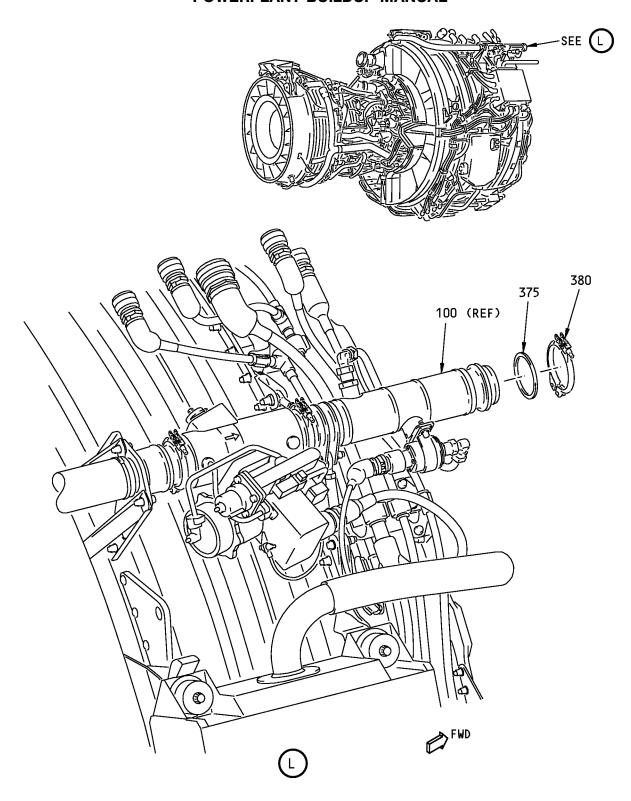


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 10)		
Ī	C2	B00130	CLEAN BONDING JUMPER TAB ON VALVE (225) WITH alcohol, B00130 (C2).  . ALCOHOL	CON	AR
	C2 350 355 360	BACB30ZF3-06 NAS1149C0316R AS3485-09	(C2).	CON	AR 1 1 1

71-00-02

P/P BUILDUP FIGURE 27-1 Page 21 Oct 05/2008





Inlet Cowl TAI System Installation Figure 27-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 27-1 Page 22 Oct 05/2007



ITEM	DART NUMBER	NOMENOLATURE		OTV
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
27-1		INLET COWL TAI SYSTEM INSTALLATION (FIGURE 27-1, SHEET 11)		
		PUT ITEMS (375 AND 380) IN A BAG AND SECURE TO DUCT ASSY (100).		
		NOTE: ITEMS (375) AND (380) WILL BE INSTALLED DURING INLET COWL INSTALLATION (Figure 33-1).		
375 380	AS1895-7-200 AS1895-4-200	. SEAL . COUPLING		1 1
300	A31093-4-200	. GOOF LING		'

71-00-02

P/P BUILDUP FIGURE 27-1 Page 23 Oct 05/2007



#### **FIGURE 28-1**

# FIRE/OVERHEAT DETECTOR INSTALLATION

**REF QEC TASK NO.: 28** 

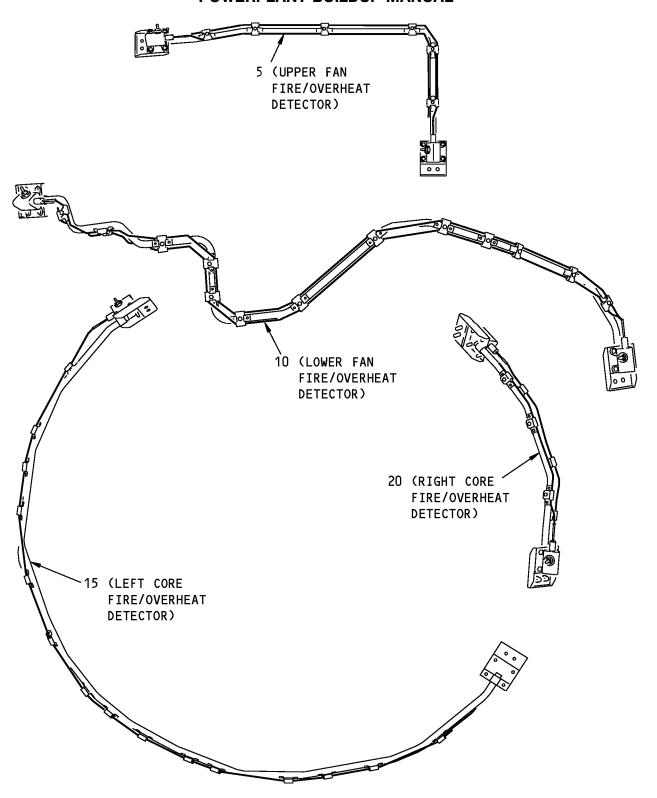
**REF DWG: 332A2500** 

**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 28-1 Page 1 Oct 05/2007





Fire/Overheat Detector Installation Figure 28-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 2 Oct 05/2007

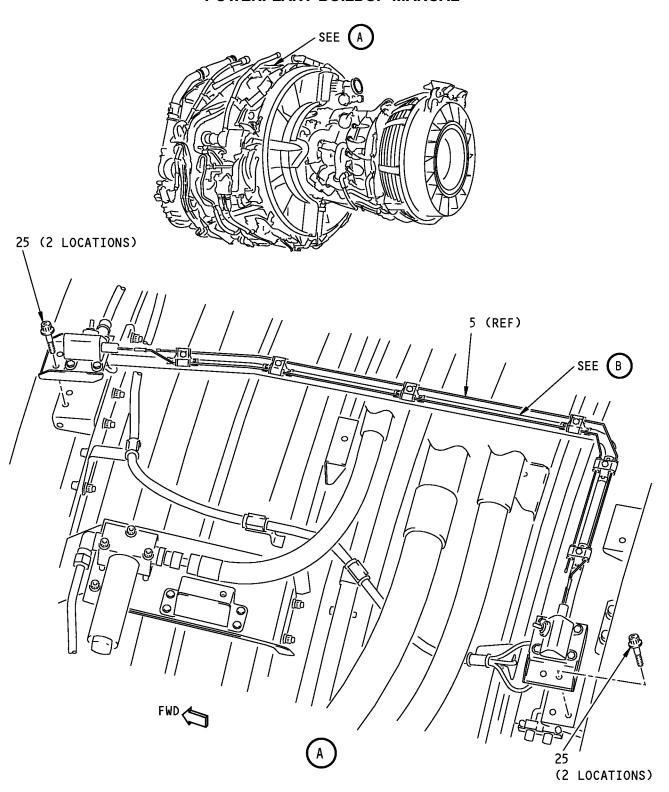


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 1)		
		BENCH TEST RESISTANCE OF DETECTORS (5), (10), (15) AND (20) FROM THE DETECTOR STUD TO THE MOUNTING BRACKET.		
		MAKE SURE RESISTANCE IS BETWEEN THE FOLLOWING RANGES:		
		DETECTOR (5) BETWEEN 5624 - 6218 (OHMS)		
		DETECTOR (10) BETWEEN 3734 - 4128 (OHMS)		
		DETECTOR (15) BETWEEN 2860 - 3162 (OHMS)		
5 5 10 10 15 15 20 20	902864 S332T100-44 902016-01 S332T100-30 902862 S332T100-43 902018-01 S332T100-38	DETECTOR (20) BETWEEN 2347 - 2595 (OHMS)  FIRE DETECTOR, UPPER FAN (V25693)  BOEING SPEC FOR 902864  FIRE DETECTOR, LOWER FAN (V25693)  BOEING SPEC FOR 902016-01  FIRE DETECTOR, LEFT CORE (V25693)  BOEING SPEC FOR 902862  FIRE DETECTOR, RIGHT CORE (V25693)  BOEING SPEC FOR 902018-01  IF DETECTOR DOES NOT TEST WITHIN SPECIFIED RANGE, REPLACE DETECTOR.	VEN BOE VEN BOE VEN BOE	1 - 1 - 1 - 1 - 1 - 1

71-00-02

P/P BUILDUP FIGURE 28-1 Page 3 Oct 05/2007





Fire/Overheat Detector Installation Figure 28-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 4 Oct 05/2007

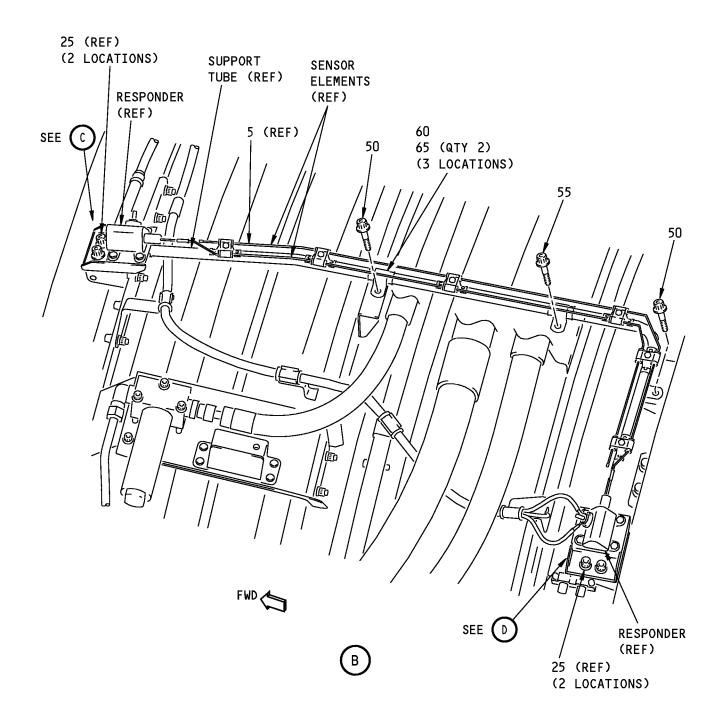


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 2)		
1	C1	B00083	USE solvent, B00083 (C1) TO CLEAN FAY SURFACES OF BOTH ELECTRICAL DETECTOR BRACKETS ON FIRE DETECTOR (5) AND FAY SURFACES OF ENGINE BRACKETS AT 11:00 AND 11:30 O'CLOCK POSITIONS ON TOP OF FAN CASE.  . SOLVENT	CON	AR
			POSITION FIRE DETECTOR (5) ON ENGINE BRACKETS ON TOP OF ENGINE FAN CASE. MAKE SURE SUPPORT TUBE ALIGNS NEXT TO HOLES IN BRACKETS.		
	25	BACB30ZF4-06	LOOSELY ATTACH DETECTOR BRACKETS TO ENGINE BRACKETS WITH BOLTS (25). . BOLT		4

71-00-02

P/P BUILDUP FIGURE 28-1 Page 5 Oct 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 6 Oct 05/2007

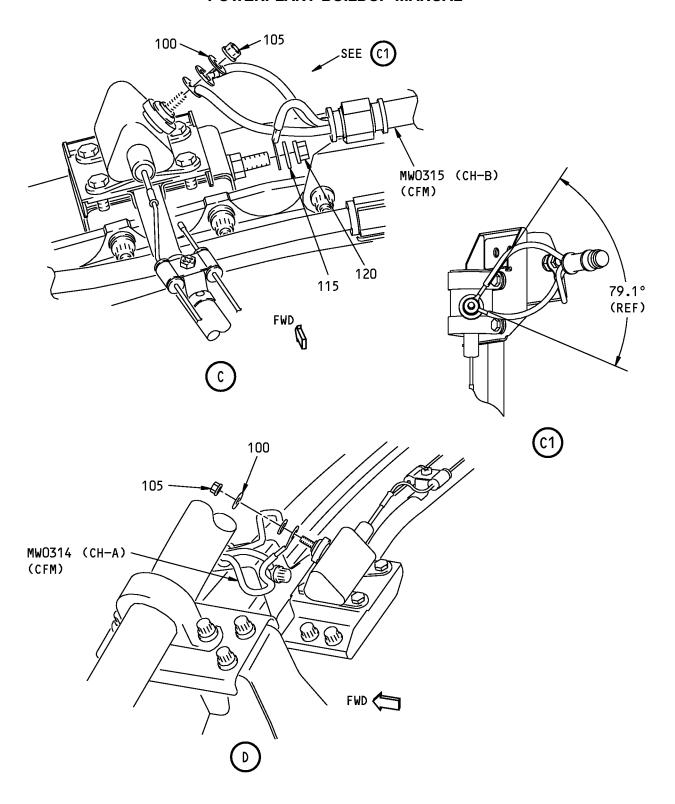


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 3)		
50 55 C2	BACB30ZF4-06 BACB30ZF4-06 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C2) UNDER HEAD OF BOLTS (50 AND 55) TO PREVENT DISTORTION AND TWISTING OF CLAMP DURING TORQUING.  . BOLT . BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 1 AR
60	11777-08	LOOSELY ATTACH SUPPORT TUBE OF DETECTOR (5) TO ENGINE BRACKETS WITH LOOP CLAMPS (60), CLAMPSHELLS (65) AND BOLTS (50).  LOOP CLAMP		3
65 65	9352M41P04 BACC10GT2-08	. CLAMPSHELL . CLAMPSHELL (OPTIONAL TO 9352M41P04)	OPT	6
		MAKE SURE PRELOAD BETWEEN DETECTOR ASSY AND ATTACH POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS). TIGHTEN BOLTS (25), THEN BOLTS (50) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS). TIGHTEN BOLTS (55) TO 73-77 POUND-INCHES (8.25-8.70 NEWTON METERS).		
		CHECK THAT RESISTANCE BETWEEN RESPONDER AND ENGINE CASE IS 0.010 OHMS MAXIMUM.		
		CHECK THAT GAP BETWEEN SENSOR ELEMENTS AND SUPPORT TUBE IS NOT LESS THAN 0.12 INCH (3.0 MM).		
		AFTER TIGHTENING, MINIMUM CLEARANCE OF 0.15 INCH (3.8 MM) BETWEEN FIRE DETECTOR AND FAN COWL SUPPORT BEAM INSULATION BLANKET IS PERMITTED.		

71-00-02

P/P BUILDUP FIGURE 28-1 Page 7 Oct 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 8 Oct 05/2007

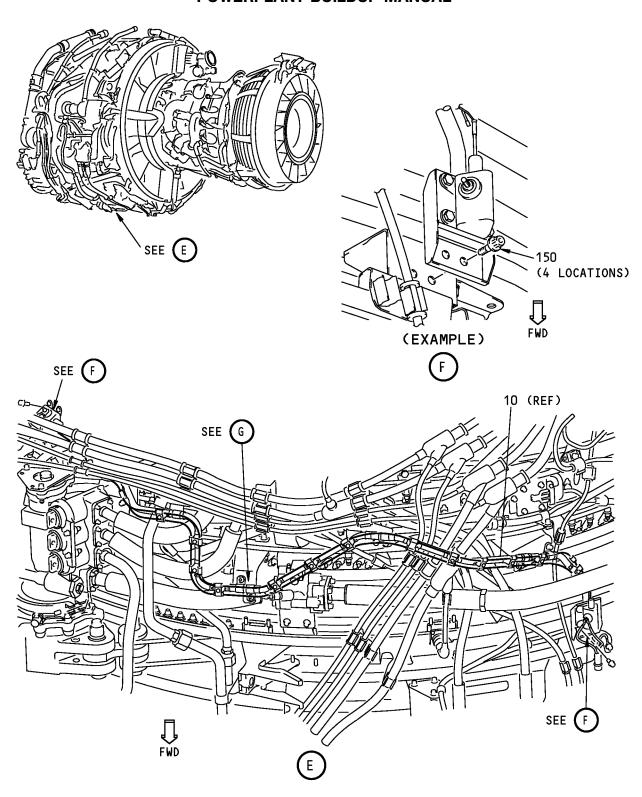


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 4)		
		ATTACH W/B MW0315 (CFM) TO UPPER RESPONDER AND ATTACH W/B MW0314 (CFM) TO LOWER RESPONDER. PUT BOTH W/B LEADS ON EACH RESPONDER STUD AND SECURE WITH WASHER (100) AND NUT (105). POSITION W/B MW0315 (CFM) LEADS APPROXIMATELY AS SHOWN AND TIE WRAP WIRES AS REQUIRED TO MAINTAIN THIS POSITION. TIGHTEN NUT TO 25-35 POUND-INCHES (2.8-4.0 NEWTON METERS). MINIMUM STUD THREAD PROTRUSION MUST BE FLUSH WITH TOP OF NUT.		
100 100	NAS1149C0316R NAS1149C0332R	. WASHER . WASHER (OPTIONAL TO NAS1149C0316R) (2 REQD)	OPT	2
105	BACN10JC3C	. NUT (SUPPLIED WITH F/O DETECTOR)	REF	-
105	BACN10YR3C	. NUT (OPTIONAL TO BACN10JC3C) (2 REQD)	OPT	-
		ATTACH W/B MW0315 (CFM) GROUNDING WIRE TO UPPER RESPONDER BRACKET. SECURE WITH WASHER (115) AND NUT (120) AND TIGHTEN TO 90-105 POUND-INCHES (10.2-11.9 NEWTON METERS).		
115	NAS1149C0432R	. WASHER		1
120	BACN10YR4CM	. NUT		1

71-00-02

P/P BUILDUP FIGURE 28-1 Page 9 Oct 05/2007





Fire/Overheat Detector Installation Figure 28-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 10 Oct 05/2007

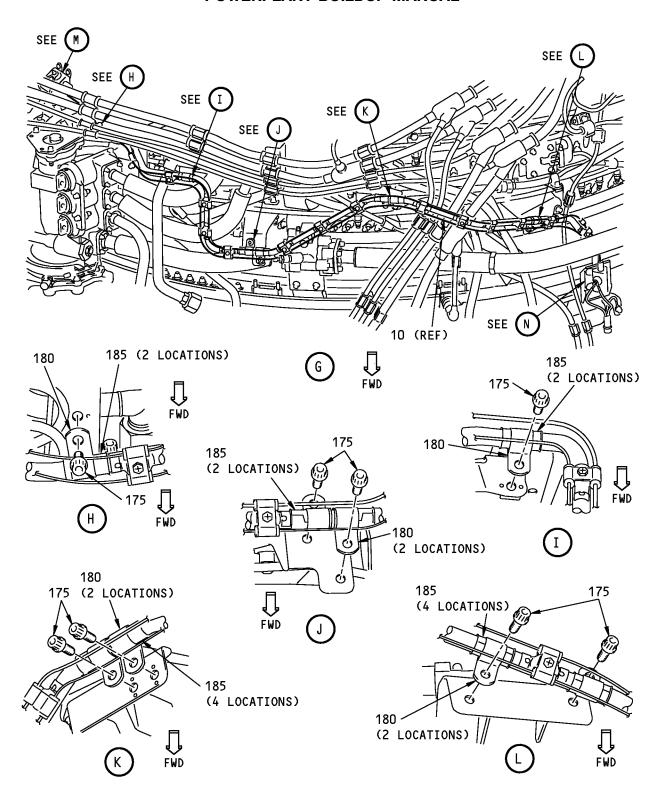


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 5)		
1	C1	B00083	USE solvent, B00083 (C1) TO CLEAN FAY SURFACES OF BOTH ELECTRICAL DETECTOR BRACKETS ON FIRE DETECTOR (10) AND FAY SURFACES OF ENGINE BRACKETS AT 3:00 THRU 7:00 O'CLOCK POSITIONS ON FAN CASE.  . SOLVENT	CON	AR
			POSITION FIRE DETECTOR (10) ON ENGINE BRACKETS ON ENGINE FAN CASE. MAKE SURE SUPPORT TUBE ALIGNS NEXT TO HOLES IN BRACKETS.		
	150	BACB30ZF4-06	LOOSELY ATTACH DETECTOR BRACKETS TO ENGINE BRACKETS WITH BOLTS (150) BOLT		4

71-00-02

P/P BUILDUP FIGURE 28-1 Page 11 Oct 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 12 Oct 05/2007

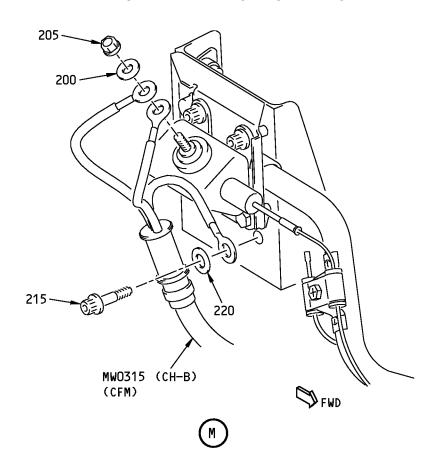


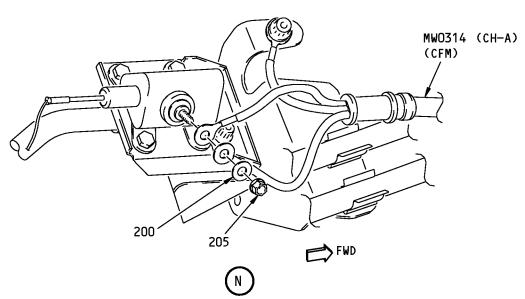
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 6)		<b>4.</b> 11
175 C2	BACB30ZF4-06 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C2) UNDER HEAD OF BOLTS (175) TO PREVENT DISTORTION AND TWISTING OF CLAMP DURING TORQUING.  . BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	8 AR
		LOOSELY ATTACH SUPPORT TUBE OF DETECTOR (10) TO ENGINE BRACKETS AT 8 LOCATIONS WITH LOOP CLAMPS (180), CLAMPSHELLS (185) AND BOLTS (175).		
		NOTE: IN LOCATIONS WITH 2 ADJACENT CLAMPS, CLAMPSHELL-TO-CLAMPSHELL CLEARANCE IS LESS THAN 0.005 INCH (0.13 MM). IN THESE LOCATIONS, THE CLAMP MAY RIDE THE RADIUS OF THE CLAMPSHELL.		
180 185 185	11777-08 9352M41P04 BACC10GT2-08	. LOOP CLAMP . CLAMPSHELL . CLAMPSHELL (OPTIONAL TO 9352M41P04)	ОРТ	8 16
	5,16611641236	MAKE SURE PRELOAD BETWEEN DETECTOR ASSY AND ATTACH POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS). TIGHTEN BOLTS (150) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS). TIGHTEN BOLTS (175) TO 73-77 POUND-INCHES (8.25-8.70 NEWTON METERS).		
		CHECK THAT RESISTANCE BETWEEN RESPONDER AND ENGINE CASE IS 0.010 OHMS MAXIMUM.		
		CHECK THAT GAP BETWEEN SENSOR ELEMENTS AND SUPPORT TUBE IS NOT LESS THAN 0.12 INCH (3.0 MM).		

71-00-02

P/P BUILDUP FIGURE 28-1 Page 13 Oct 05/2008







Fire/Overheat Detector Installation Figure 28-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 14 Oct 05/2007

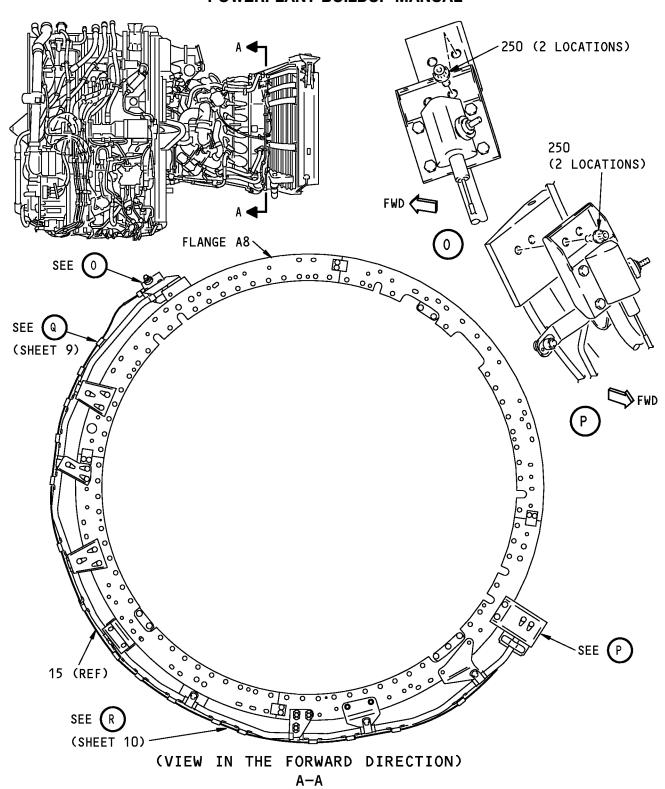


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 7)		
200	NAS1149C0316R	ATTACH W/B MW0315 (CFM) TO LEFT RESPONDER AND ATTACH W/B MW0314 (CFM) TO RIGHT RESPONDER. PUT BOTH W/B LEADS ON EACH RESPONDER STUD AND SECURE WITH WASHER (200) AND NUT (205). TIGHTEN NUT TO 25-35 POUND-INCHES (2.8-4.0 NEWTON METERS). MINIMUM STUD THREAD PROTRUSION MUST BE FLUSH WITH TOP ON NUT.		2
200 205 205	NAS1149C0332R BACN10JC3C BACN10YR3C	. WASHER (OPTIONAL TO NAS1149C0316R) (2 REQD) . NUT (SUPPLIED WITH F/O DETECTOR) . NUT (OPTIONAL TO BACN10JC3C) (2 REQD)	OPT REF OPT	- - -
		ATTACH W/B MW0315 (CFM) GROUNDING WIRE TO LEFT RESPONDER BRACKET. SECURE WITH BOLT (215) AND WASHER (220) AND TIGHTEN TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
215 220	BACB30ZF4-07 NAS1149C0432R	. BOLT . WASHER		1

71-00-02

P/P BUILDUP FIGURE 28-1 Page 15 Oct 05/2007





Fire/Overheat Detector Installation Figure 28-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 16 Oct 05/2007

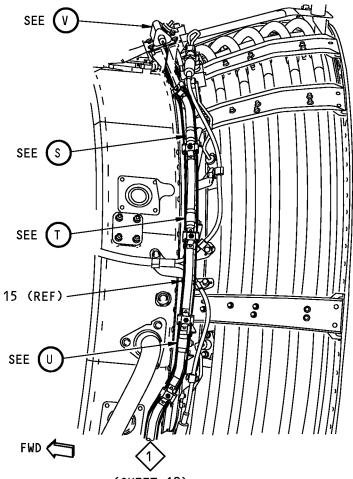


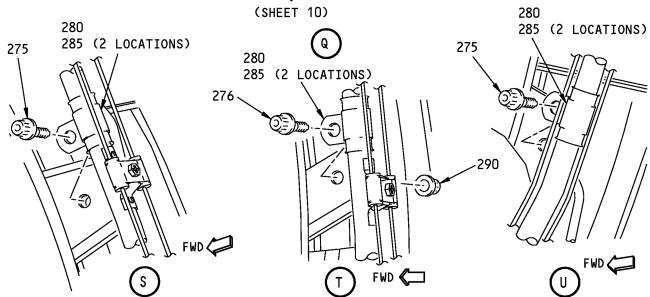
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 8)		
C1 B	В00083	USE solvent, B00083 (C1) TO CLEAN FAY SURFACES OF BOTH ELECTRICAL DETECTOR BRACKETS ON FIRE DETECTOR (15) AND FAY SURFACES OF ENGINE BRACKETS AT 10:30 AND 4:00 O'CLOCK POSITIONS ON ENGINE CORE FLANGE A8.  . SOLVENT	CON	AR
		POSITION FIRE DETECTOR (15) ON ENGINE BRACKETS. MAKE SURE SUPPORT TUBE ALIGNS NEXT TO HOLES IN BRACKETS.		
050	DA OD00754 07	LOOSELY ATTACH DETECTOR BRACKETS TO ENGINE BRACKETS WITH BOLTS (250).		4
250	BACB30ZF4-07	. BOLT		4

71-00-02

P/P BUILDUP FIGURE 28-1 Page 17 Oct 05/2008







Fire/Overheat Detector Installation Figure 28-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 18 Oct 05/2007

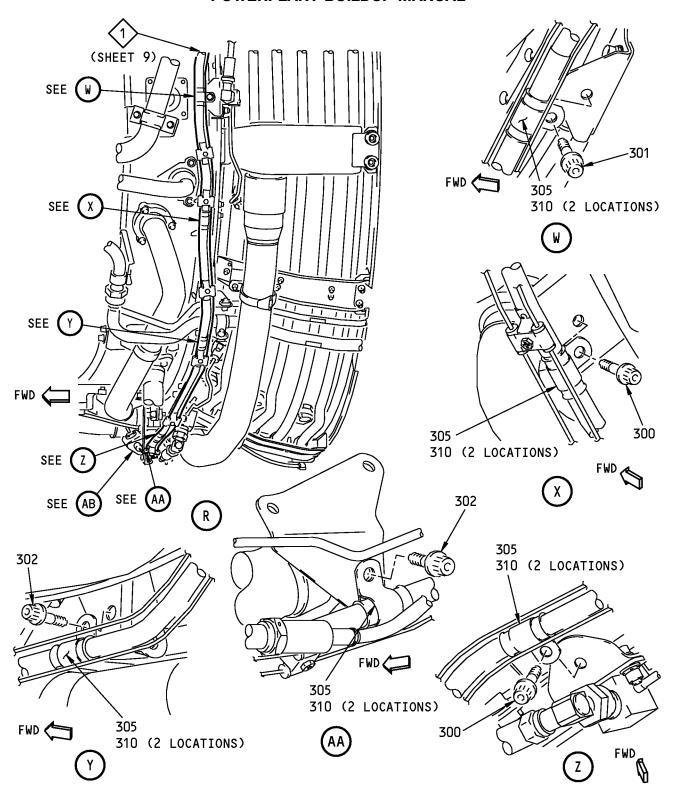


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 9)		
275 276 C2	BACB30ZF4-06 BACB30ZF4-08 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C2) UNDER HEAD OF BOLTS (275) AND BOLT (276) TO PREVENT DISTORTION AND TWISTING OF CLAMP DURING TORQUING.  BOLT  NEVER-SEEZ NSBT-8N COMPOUND	CON	2 1 AR
280 285 285 290	11777-08 9352M41P04 BACC10GT2-08 AS3485-10	LOOSELY ATTACH SUPPORT TUBE OF DETECTOR (15) TO ENGINE BRACKETS AT 3 LOCATIONS WITH LOOP CLAMPS (280), CLAMPSHELLS (285), BOLTS (275) (2 LOCATIONS), BOLT (276) (1 LOCATION) AND NUT (290).  . LOOP CLAMP  . CLAMPSHELL  . CLAMPSHELL (OPTIONAL TO 9352M41P04)  . NUT	ОРТ	3 6 - 1

71-00-02

P/P BUILDUP FIGURE 28-1 Page 19 Oct 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 20 Oct 05/2007

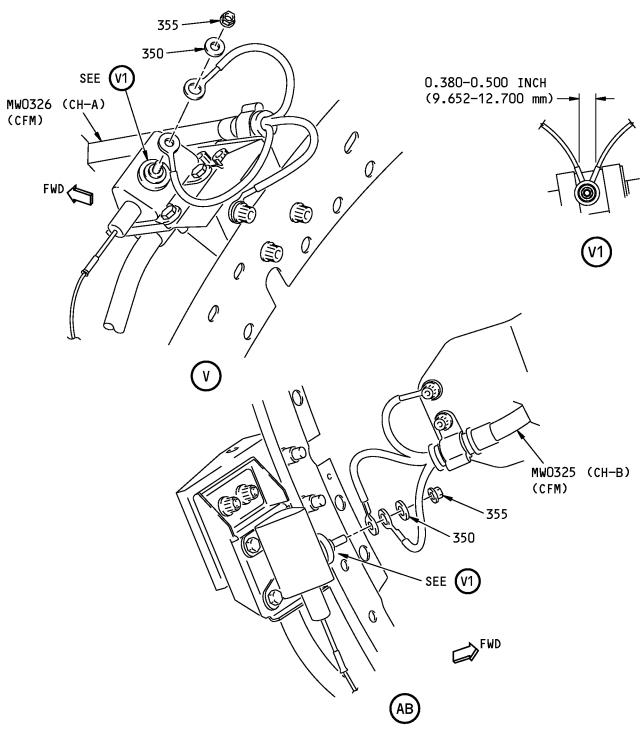


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 10)		
-	300 301 302 C2	BACB30ZF4-06 BACB30ZF4-08 BACB30ZF4-06 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C2) UNDER HEAD OF BOLTS (300, 301 AND 302) TO PREVENT DISTORTION AND TWISTING OF CLAMP DURING TORQUING.  . BOLT  . BOLT  . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 1 2 AR
	305 310	11777-08 9352M41P04	LOOSELY ATTACH SUPPORT TUBE OF DETECTOR (15) TO ENGINE BRACKETS AT 5 LOCATIONS WITH LOOP CLAMPS (305), CLAMPSHELLS (310), BOLTS (300, 301 AND 302).  LOOP CLAMP . CLAMPSHELL		5 10
	310	BACC10GT2-08	. CLAMPSHELL (OPTIONAL TO 9352M41P04)  MAKE SURE PRELOAD BETWEEN DETECTOR ASSY AND ATTACH POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS). TIGHTEN BOLTS (250), THEN BOLTS (301 AND 302) TO 73-77 POUND-INCHES (8.25-8.70 NEWTON METERS). TIGHTEN BOLTS (275 AND 300) TO 110-	OPT	-
			120 POUND-INCHES (12.4-13.6 NEWTON METERS).  CHECK THAT RESISTANCE BETWEEN RESPONDER AND ENGINE CASE IS 0.010 OHMS MAXIMUM.		
			CHECK THAT GAP BETWEEN SENSOR ELEMENTS AND SUPPORT TUBE IS NOT LESS THAN 0.12 INCH (3.0 MM).		

71-00-02

P/P BUILDUP FIGURE 28-1 Page 21 Oct 05/2008





ENGINES WITH MW0325 & MW0326 HARNESSES WITH GROUND LUG AND WIRE (PRE-SB CFM56-7B-72-0258) K06122 S00041153976\_V3

Fire/Overheat Detector Installation Figure 28-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 22 Feb 05/2008

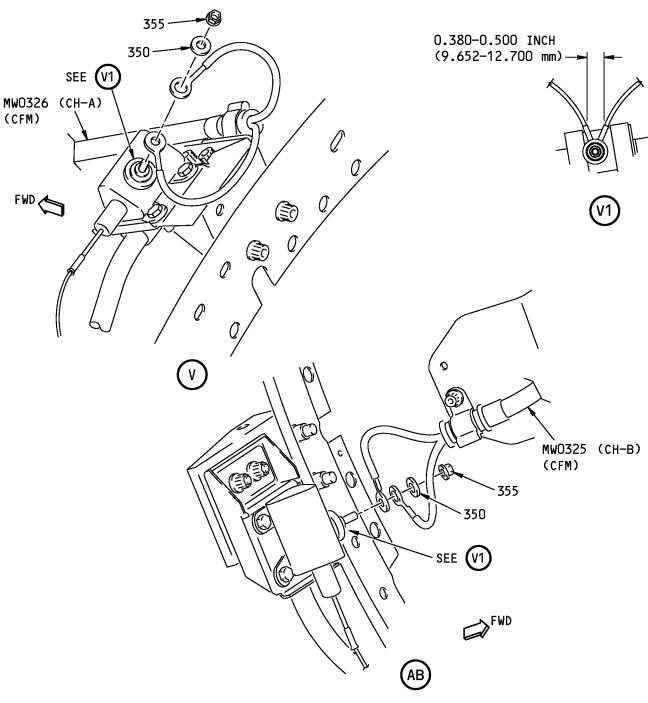


ITEM	DADT NUMBER	NOMENCI ATURE	110	ОТУ
	PART NUMBER		UC	QIY
350 350 355 355	NAS1149C0316R NAS1149C0332R BACN10JC3C BACN10YR3C	FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 11)  ENGINES WITH MW0325 AND MW0326 HARNESSES WITH GROUNG LUG AND WIRE (PRE SB):  CAUTION: DO NOT BEND THE WIRE LUG. INCORRECT INSTALLATION CAN CAUSE WIRE LUG DAMAGE AND DETECTOR LOOP FAULTS.  ATTACH W/B MW0325 (CFM) TO UPPER RESPONDER AND ATTACH W/B MW0325 (CFM) TO LOWER RESPONDER. PUT BOTH W/B LEADS ON EACH RESPONDER STUD AND SECURE WITH WASHER (350) AND DIUT (355). TIGHTEN NUT TO 25-35 POUND-INCHES (2.8-4.0 NEWTON METERS). MINIMUM STUD THREAD PROTRUSION MUST BE FLUSH WITH TOP OF NUT WASHER . WASHER (OPTIONAL TO NAS1149C0316R) (2 REQD) . NUT (SUPPLIED WITH F/O DETECTOR) . NUT (OPTIONAL TO BACN10JC3C) (2 REQD)	OPT REF OPT	2 - -

71-00-02

P/P BUILDUP FIGURE 28-1 Page 23 Jun 05/2008





ENGINES WITH MW0325 & MW0326 HARNESSES WITHOUT GROUND LUG AND WIRE (POST-SB CFM56-7B-72-0258)

1477399 S0000268836\_V1

Fire/Overheat Detector Installation Figure 28-1 (Sheet 12)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 24 Feb 05/2008

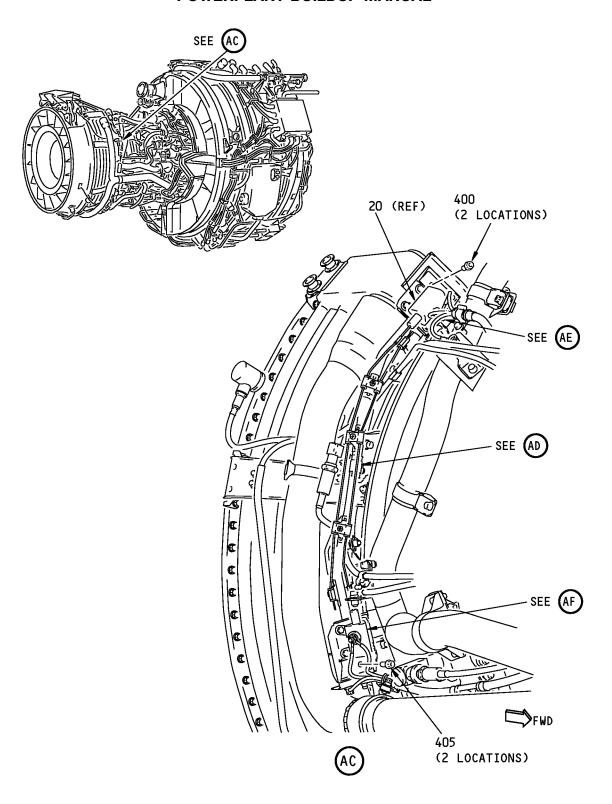


ITEM	DART MIMBER	NOMENOLATURE		OTV.
-	PART NUMBER		UC	QTY
350 350 355 355	NAS1149C0316R NAS1149C0332R BACN10JC3C BACN10YR3C	FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 12)  ENGINES WITH MW0325 AND MW0326 HARNESSES WITHOUT GROUNG LUG AND WIRE (POST SB):  CAUTION: DO NOT BEND THE WIRE LUG. INCORRECT INSTALLATION CAN CAUSE WIRE LUG DAMAGE AND DETECTOR LOOP FAULTS.  ATTACH W/B MW0325 (CFM) TO UPPER RESPONDER AND ATTACH W/B MW0325 (CFM) TO LOWER RESPONDER. PUT BOTH W/B LEADS ON EACH RESPONDER STUD AND SECURE WITH WASHER (350) AND NUT (355). TIGHTEN NUT TO 25-35 POUND-INCHES (2.8-4.0 NEWTON METERS). MINIMUM STUD THREAD PROTRUSION MUST BE FLUSH WITH TOP OF NUT WASHER . WASHER (OPTIONAL TO NAS1149C0316R) (2 REQD) . NUT (SUPPLIED WITH F/O DETECTOR) . NUT (OPTIONAL TO BACN10JC3C) (2 REQD)	OPT REF OPT	2 - -

71-00-02

P/P BUILDUP FIGURE 28-1 Page 25 Feb 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 13)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 26 Feb 05/2008

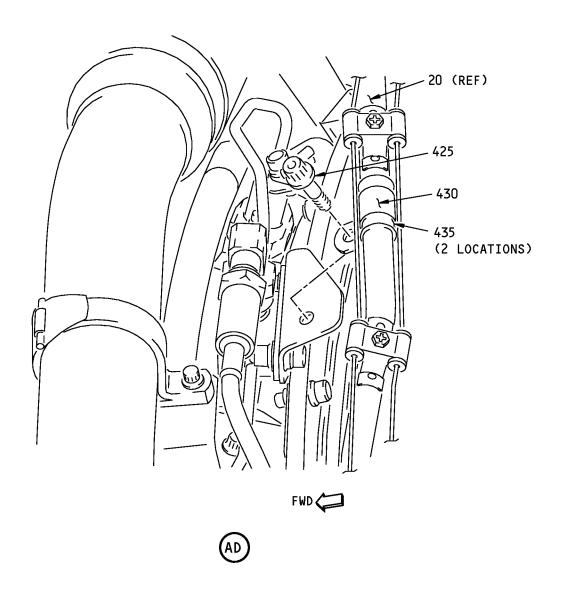


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 13)		
•	C1	B00083	USE solvent, B00083 (C1) TO CLEAN FAY SURFACES OF BOTH ELECTRICAL DETECTOR BRACKETS ON FIRE DETECTOR (20) AND FAY SURFACES OF ENGINE BRACKETS AT 1:00 AND 3:00 O'CLOCK POSITIONS ON ENGINE CORE FLANGE A8.  . SOLVENT	CON	AR
			POSITION FIRE DETECTOR (20) ON ENGINE BRACKETS. MAKE SURE SUPPORT TUBE ALIGNS NEXT TO HOLES IN BRACKETS.		
	400	DA CD00754 00	LOOSELY ATTACH DETECTOR BRACKET TO UPPER ENGINE BRACKET WITH BOLTS (400) AND LOWER ENGINE BRACKET WITH BOLTS (405).		0
	400 405	BACB30ZF4-06 BACB30ZF4-07	. BOLT . BOLT		2

71-00-02

P/P BUILDUP FIGURE 28-1 Page 27 Oct 05/2008





Fire/Overheat Detector Installation Figure 28-1 (Sheet 14)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 28 Feb 05/2008

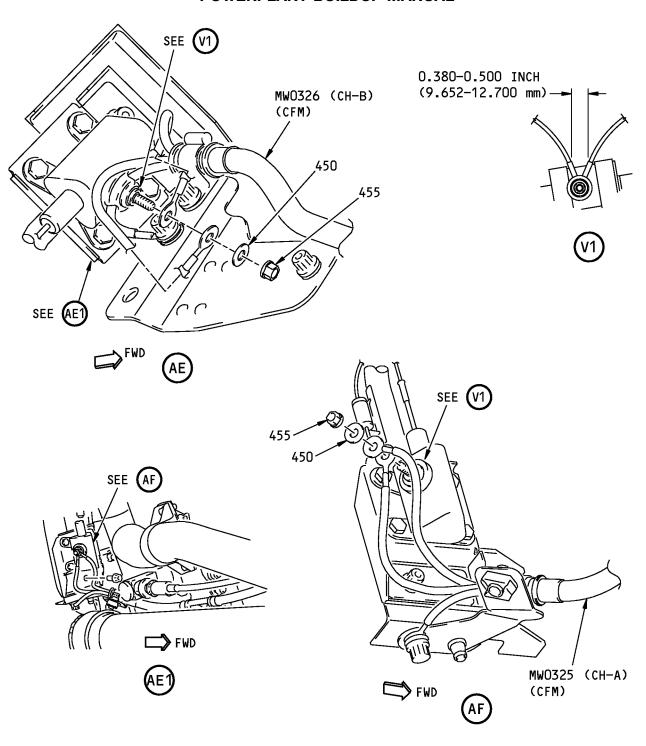


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 14)		<b>4</b>
-	425 C2	BACB30ZF4-06 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C2) UNDER HEAD OF BOLT (425) TO PREVENT DISTORTION AND TWISTING OF CLAMP DURING TORQUING.  . BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
			LOOSELY ATTACH SUPPORT TUBE OF DETECTOR (20) TO ENGINE BRACKET WITH LOOP CLAMP (430), CLAMPSHELLS (435) AND BOLT (425).		
	430 435 435	11777-08 9352M41P04 BACC10GT2-08	. LOOP CLAMP . CLAMPSHELL . CLAMPSHELL (OPTIONAL TO 9352M41P04)	ОРТ	1 2 -
			MAKE SURE PRELOAD BETWEEN DETECTOR ASSY AND ATTACH POINTS IS NOT MORE THAN 10 POUNDS (44.5 NEWTONS). TIGHTEN BOLTS (400), THEN BOLT (425) TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		
			CHECK THAT RESISTANCE BETWEEN RESPONDER AND ENGINE CASE IS 0.010 OHMS MAXIMUM.		
			CHECK THAT GAP BETWEEN SENSOR ELEMENTS AND SUPPORT TUBE IS NOT LESS THAN 0.12 INCH (3.0 MM).		

71-00-02

P/P BUILDUP FIGURE 28-1 Page 29 Oct 05/2008





ENGINES WITH MW0325 & MW0326 HARNESSES WITH GROUND LUG AND WIRE (PRE-SB CFM56-7B-72-0258)

K56869 S00041153980\_V3

Fire/Overheat Detector Installation Figure 28-1 (Sheet 15)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 30 Feb 05/2008

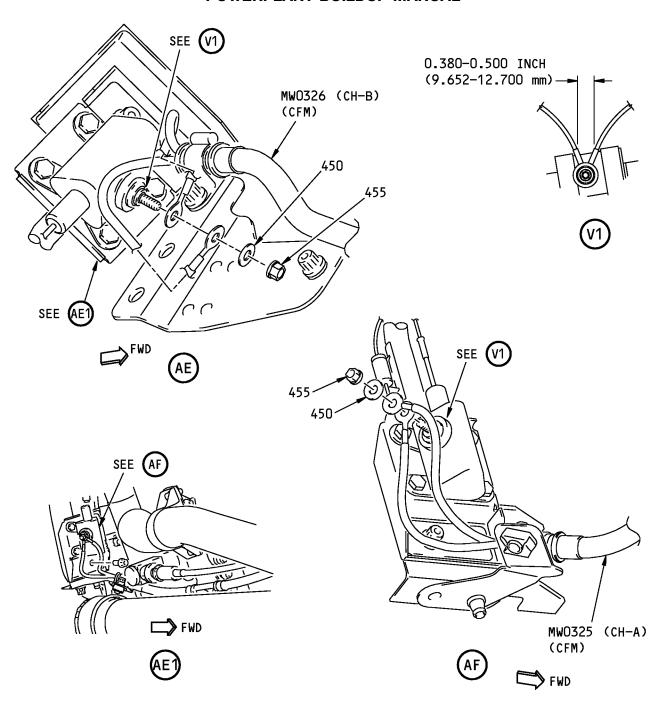


ITEM NO. PART NUMBER NOMENCLATURE UC QTY
PIRE/OVERHEAT DETECTOR INSTALLATION

71-00-02

P/P BUILDUP FIGURE 28-1 Page 31 Jun 05/2008





ENGINES WITH MW0325 & MW0326 HARNESSES WITHOUT GROUND LUG AND WIRE (POST-SB CFM56-7B-72-0258)

1477479 S0000269031\_V1

Fire/Overheat Detector Installation Figure 28-1 (Sheet 16)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 32 Feb 05/2008

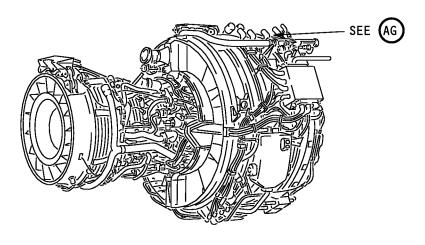


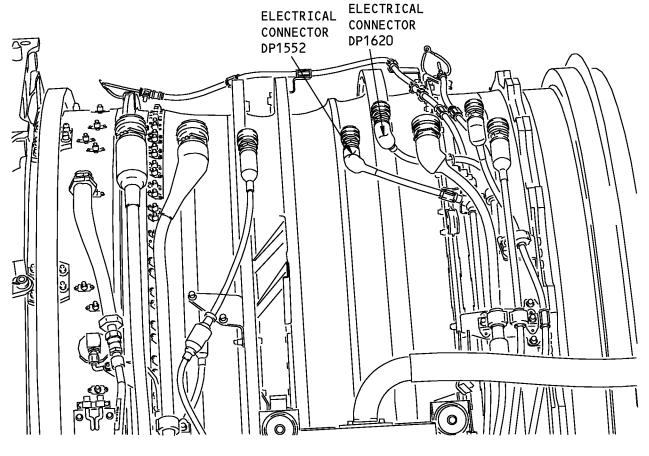
ITEM	DADT NUMBER	NOMENOLATUDE		OTV
	PART NUMBER		UC	QIY
450 450 455 455	NAS1149C0316R NAS1149C0332R BACN10JC3C BACN10YR3C	FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 16)  ENGINES WITH MW0325 AND MW0326 HARNESSES WITHOUT GROUND LUG AND WIRE (POST SB):  CAUTION: DO NOT BEND THE WIRE LUG. INCORRECT INSTALLATION CAN CAUSE WIRE LUG DAMAGE AND DETECTOR LOOP FAULTS.  ATTACH W/B MW0326 (CFM) TO UPPER RESPONDER AND ATTACH W/B MW0325 (CFM) TO LOWER RESPONDER. PUT BOTH W/B LEADS ON EACH RESPONDER STUD AND SECURE WITH WASHER (450) AND NUT (455). TIGHTEN NUT TO 25-35 POUND-INCHES (2.8-4.0 NEWTON WITH TOP ON NUT.  WASHER WASHER (OPTIONAL TO NAS1149C0316R) (2 REQD)  NUT (SUPPLIED WITH F/O DETECTOR)  NUT (OPTIONAL TO BACN10JC3C) (2 REQD)	OPT REF OPT	2

71-00-02

P/P BUILDUP FIGURE 28-1 Page 33 Feb 05/2008







NOTE: SOME COMPONENTS NOT SHOWN FOR CLARITY.

(AG)

**□**FWD

Fire/Overheat Detector Installation Figure 28-1 (Sheet 17)

71-00-02

P/P BUILDUP FIGURE 28-1 Page 34 Feb 05/2008



NO.	PART NUMBER	NOMENCLATURE	UC	QTY
28-1		FIRE/OVERHEAT DETECTOR INSTALLATION (FIGURE 28-1, SHEET 17)		
		DO A RESISTANCE TEST OF LOOP A OF THE FIRE/OVERHEAT DETECTORS AS FOLLOWS:		
		<ol> <li>ON THE TOP OF THE RIGHT FAN CASE, LOCATE THE CONNECTORS DP1552 (CFM).</li> </ol>		
		CHECK THE RESISTANCE BETWEEN PIN 1 ON CONNECTOR DP1552 AND GROUND.		
		3. MAKE SURE THE RESISTANCE IS BETWEEN 822-902 OHMS.		
		DO A RESISTANCE TEST OF LOOP B OF THE FIRE/OVERHEAT DETECTORS AS FOLLOWS:		
		<ol> <li>ON THE TOP OF THE RIGHT FAN CASE, LOCATE THE CONNECTORS DP1620 (CFM).</li> </ol>		
		CHECK THE RESISTANCE BETWEEN PIN 3 ON CONNECTOR DP1620 AND GROUND.		
		3. MAKE SURE THE RESISTANCE IS BETWEEN 822-902 OHMS.		

71-00-02

P/P BUILDUP FIGURE 28-1 Page 35 Feb 05/2008



#### **FIGURE 29-1**

# **W1062 WIRE BUNDLE INSTALLATION**

**REF QEC TASK NO.: 29** 

**REF DWG: 332A2200** 

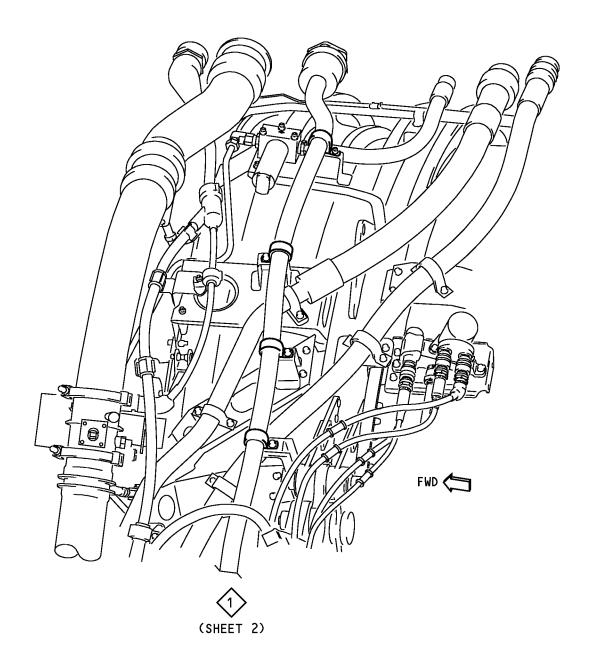
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 29-1 Page 1 Oct 05/2007





#### EXAMPLE OF WIRE BUNDLE INSTALLATION



DIAMOND WITH NUMBER INDICATES A CONTINUATION TO A DIAMOND WITH THE SAME NUMBER IN ANOTHER SHEET OR ILLUSTRATION.

W1062 Wire Bundle Installation Figure 29-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 29-1 Page 2 Oct 05/2007

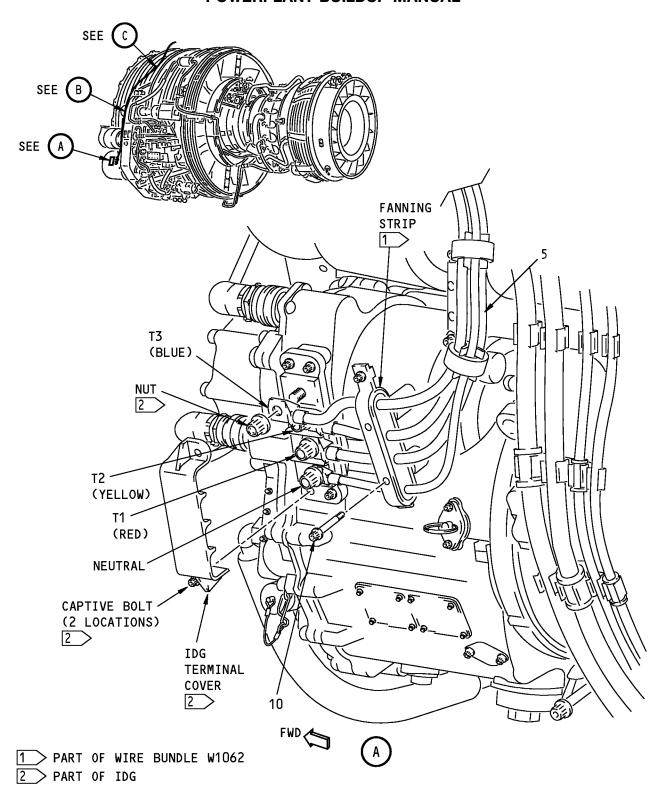


ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
29-1		W1062 WIRE BUNDLE INSTALLATION (FIGURE 29-1, SHEET 1)		
		NOTE: THIS SHEET IS PROVIDED FOR INFORMATION PURPOSES ONLY.		
		REVIEW ELECTRICAL HARNESS STANDARD PRACTICES (INTRODUCTION) BEFORE BEGINNING PROCEDURE.		
		SYMBOLS TO AID IN THE USE OF THESE ILLUSTRATIONS ARE SHOWN ON THE PRECEDING PAGE.		

71-00-02

P/P BUILDUP FIGURE 29-1 Page 3 Oct 05/2007





W1062 Wire Bundle Installation Figure 29-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 29-1 Page 4 Oct 05/2007

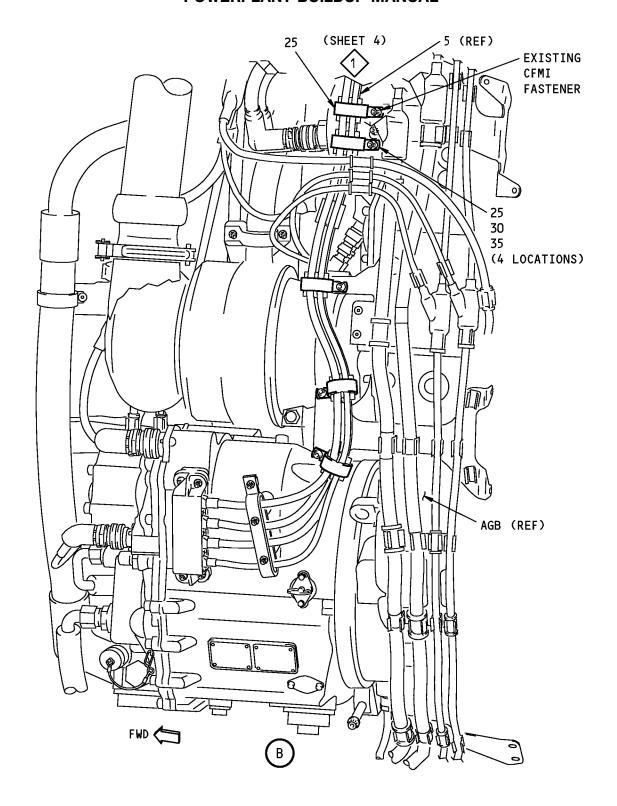


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	29-1		W1062 WIRE BUNDLE INSTALLATION (FIGURE 29-1, SHEET 2)		
	5 5	286A1062-002 286A1062	POSITION WIRE BUNDLE (5) ON LEFT SIDE OF FAN CASE WITH TERMINAL ENDS NEAR IDG STUDS WIRE BUNDLE ASSEMBLY (W1062) . WIRE BUNDLE ASSEMBLY (REPLACED BY 286A1062-002) (W1062)	LTD	1 -
			REMOVE AND RETAIN IDG TERMINAL COVER AND CAPTIVE VENDOR BOLTS.		
			INSTALL W/B W1062 (5) WIRE LUGS TO IDG TERMINAL BLOCK USING VENDOR NUTS. HOLD LEADS TO PREVENT ROTATION AND TIGHTEN VENDOR NUTS TO 144-168 POUND-INCHES (16.3-19.0 NEWTON METERS).		
			INSTALL IDG TERMINAL COVER USING CAPTIVE VENDOR BOLTS. TIGHTEN BOLTS TO 20-22 POUND-INCHES (2.3-2.5 NEWTON METERS).		
			APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF BOLTS (10). POSITION WIRE BUNDLE FANNING STRIP ON IDG AND SECURE WITH LUBRICATED BOLTS (10). TIGHTEN BOLTS (10) TO 50-75 POUND-INCHES (5.6-8.5) NEWTON METERS).		
I	10 C1	BACB30ZF4-24 D00006	. BOLT . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 AR

71-00-02

P/P BUILDUP FIGURE 29-1 Page 5 Oct 05/2008





W1062 Wire Bundle Installation Figure 29-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 29-1 Page 6 Oct 05/2007

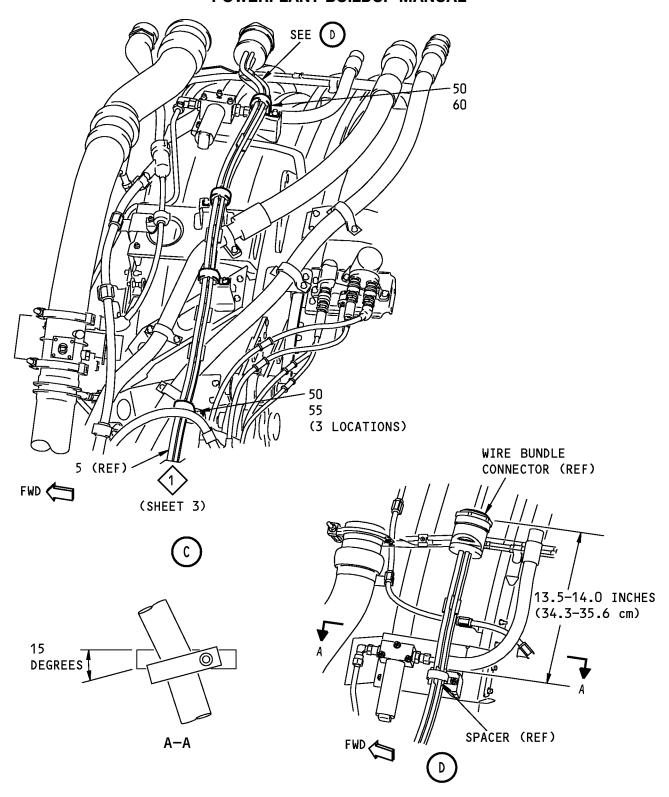


ITEM NO.	DADT NUMBER	NOMENCI ATURE	UC	QTY
	PART NUMBER	NOMENCLATURE	UC	QIY
29-1		W1062 WIRE BUNDLE INSTALLATION (FIGURE 29-1, SHEET 3)  AT FIVE LOCATIONS, CENTER CLAMPS (25) ON WIRE BUNDLE SPACERS AND LOOSELY ATTACH TO AGB BRACKETS USING BOLTS (30), NUTS (35) AND EXISTING CFMI FASTENER.  NOTE: DO NOT TIGHTEN BOLTS AT THIS TIME.		
25 30 35	TA025146-15 BACB30ZF4-08 AS3485-10	. CLAMP (V84971) . BOLT . NUT	VEN	5 4 4

71-00-02

P/P BUILDUP FIGURE 29-1 Page 7 Oct 05/2007





W1062 Wire Bundle Installation Figure 29-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 29-1 Page 8 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
29-1		W1062 WIRE BUNDLE INSTALLATION (FIGURE 29-1, SHEET 4)		
		AT FOUR LOCATIONS, CENTER CLAMPS (50) ON WIRE BUNDLE SPACERS AND LOOSELY ATTACH TO BRACKETS ON LEFT FAN CASE USING BOLTS (55 AND 60).		
		NOTE: DO NOT TIGHTEN BOLTS AT THIS TIME.		
50 55 60	TA025146-15 BACB30ZF4-06 BACB30ZF4-07	. CLAMP (V84971) . BOLT . BOLT	VEN	4 3 1
		MAKE SURE WIRE BUNDLE (5) SPACER IS CENTERED IN UPPER CLAMP (50) AND MAKE SURE TOP CLAMP IS ORIENTED AS SHOWN. TIGHTEN BOLTS (55 AND 60). MEASURE DISTANCE BETWEEN TOP OF WIRE BUNDLE CONNECTOR AND SPACER WITH WIRE BUNDLE STRAIGHT. MEASUREMENT MUST BE 13.5-14.0 INCHES (34.3-35.6 CENTIMETERS). REPOSITION SPACER AS NECESSARY.		
		ADJUST WIRE BUNDLE TO BEST POSITION AND TIGHTEN BOLTS (30, 55 AND 60) AND EXISTING CFMI FASTENER TO 110-120 POUND-INCHES (12.4-13.6 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 29-1 Page 9 Oct 05/2007



#### **FIGURE 30-1**

# **MARKERS INSTALLATION**

**REF QEC TASK NO.: 30** 

**REF DWG: 330A2010** 

330A2011

NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

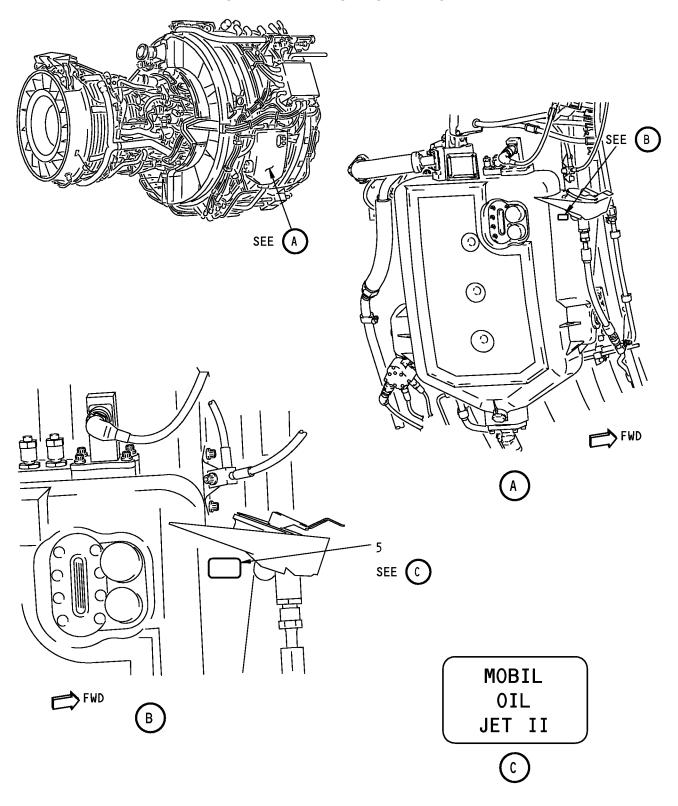
71-00-02

P/P BUILDUP FIGURE 30-1 Page 1 Oct 05/2007

#### CFM56 ENGINES (CFM56-7)



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL



Markers Installation Figure 30-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 30-1 Page 2 Oct 05/2007

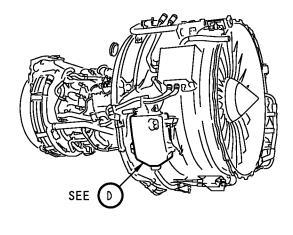


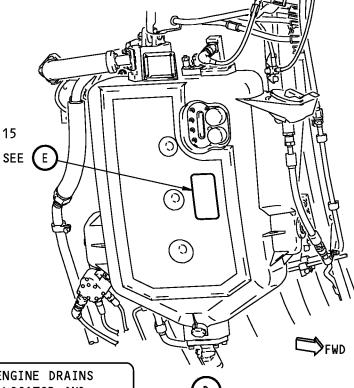
ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
30-1		MARKERS INSTALLATION (FIGURE 30-1, SHEET 1)		
		CAUTION: APPROPRIATE OIL USAGE MARKERS MUST BE INSTALLED TO IDENTIFY THE BRAND USED BY OPERATOR. MIXING OF OIL BRANDS MAY CAUSE DAMAGE TO ENGINE AND ACCESSORIES AND VOID WARRANTIES.		
C1	B00083	CLEAN DESIGNATED SURFACE WITH solvent, B00083 (C1) AND WIPE DRY PRIOR TO MARKER INSTALLATION SOLVENT	CON	AR
5	BACM10L1EBZ	INSTALL MARKER (5) ON OIL TANK SCUPPER DRAIN. . ALUMINUM FOIL MARKER		1

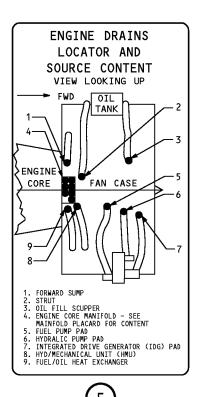
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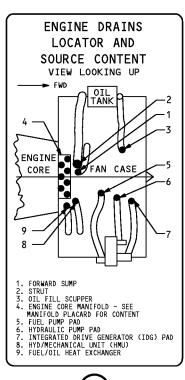
P/P BUILDUP FIGURE 30-1 Page 3 Oct 05/2008











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Markers Installation Figure 30-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 30-1 Page 4 Oct 05/2007

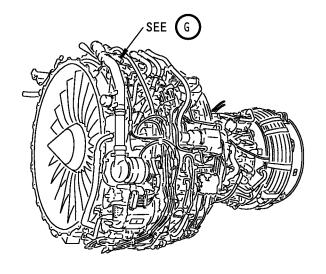


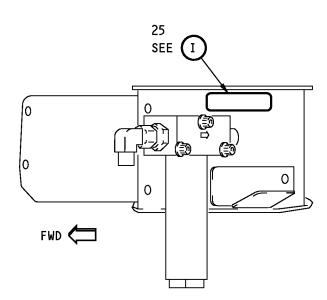
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
30-1		MARKERS INSTALLATION (FIGURE 30-1, SHEET 2)		
C1	B00083	CLEAN DESIGNATED SURFACE WITH solvent, B00083 (C1) AND WIPE DRY PRIOR TO MARKER INSTALLATION.  . SOLVENT	CON	AR
		INSTALL MARKER (15) ON OIL TANK BELOW OIL LEVEL SIGHT GLASS.		
15 15	BAC27DPP470 BAC27DPP466	. ALUMINUM FOIL MARKER, DRAIN LOCATOR . ALUMINUM FOIL MARKER, DRAIN LOCATOR (OPTIONAL)	OPT	1 -

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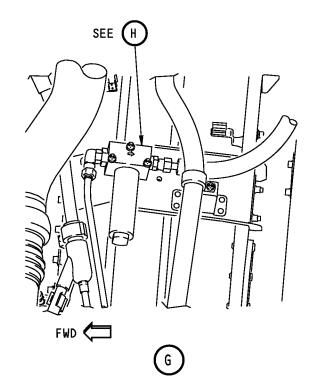
P/P BUILDUP FIGURE 30-1 Page 5 Oct 05/2008







H



CASE DRAIN FILTER

CHECK VALVE

- FLOW DIRECTION -

Markers Installation Figure 30-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 30-1 Page 6 Oct 05/2007

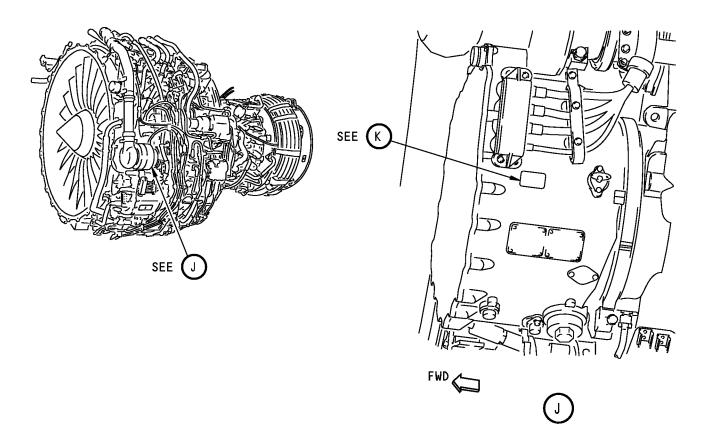


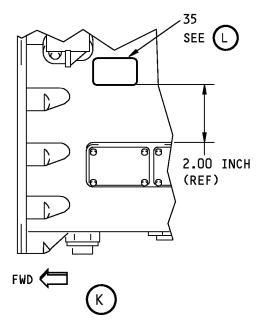
	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	30-1		MARKERS INSTALLATION (FIGURE 30-1, SHEET 3)		
I	C1	В00083	CLEAN DESIGNATED SURFACE WITH solvent, B00083 (C1) AND WIPE DRY PRIOR TO MARKER INSTALLATION SOLVENT	CON	AR
	25	BAC27DHY0337	INSTALL MARKER (25) ON BRACKET ABOVE HYDRAULIC CASE DRAIN FILTER. . ALUMINUM FOIL MARKER, CASE DRAIN FILTER		1
	25	BAC2/ DE 1033/	. ALUMINUM FOIL MARKEN, CASE DRAIN FILTER		1

71-00-02

P/P BUILDUP FIGURE 30-1 Page 7 Oct 05/2008







MOBIL OIL JET II

Markers Installation Figure 30-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 30-1 Page 8 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
30-1	PART NUMBER	MARKERS INSTALLATION	UC	QII
30-1		(FIGURE 30-1, SHEET 4)		
		CAUTION: APPROPRIATE OIL USAGE MARKERS MUST BE INSTALLED TO IDENTIFY THE BRAND USED BY OPERATOR. MIXING OF OIL BRANDS MAY CAUSE DAMAGE TO ENGINE AND ACCESSORIES AND VOID WARRANTIES.		
		CLEAN DESIGNATED SURFACE WITH solvent, B00083 (C1) AND WIPE DRY PRIOR TO MARKER INSTALLATION.		
C1	B00083	. SOLVENT	CON	AR
		INSTALL MARKER (35) ON IDG.		
35	BACM10L1EBZ	. ALUMINUM FOIL MARKER		1

71-00-02

P/P BUILDUP FIGURE 30-1 Page 9 Oct 05/2008 **CFM56 ENGINES (CFM56-7)** 



## 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

THIS SHEET NOT USED

Markers Installation Figure 30-1 (Sheet 5)

**71-00-02**P/P BUILDUP FIGURE 30-1
Page 10
Oct 05/2007

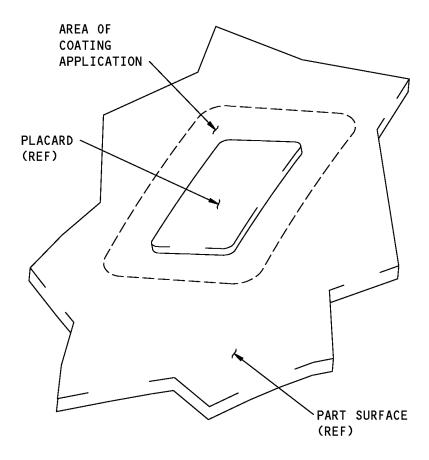


ITEM NO.	DART NUMBER	NOMENCI ATURE	UC	OTV
30-1	PART NUMBER	NOMENCLATURE MARKERS INSTALLATION	UC	QTY
		(FIGURE 30-1, SHEET 5)		
		THIS SHEET NOT USED		

71-00-02

P/P BUILDUP FIGURE 30-1 Page 11 Oct 05/2007





Markers Installation Figure 30-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 30-1 Page 12 Oct 05/2007



30-1	PART NUMBER	NOMENCLATURE	UC	QTY
00-1		MARKERS INSTALLATION (FIGURE 30-1, SHEET 6)		
C1	B00083	CLEAN MARKERS (5), (15), (25) AND (35) AND ADJACENT SURFACE WITH solvent, B00083 (C1).  . SOLVENT	CON	AR
		MIX THE COATING AS FOLLOWS:		
		1. MIX 2 PARTS BASE 683-3-20 WITH 1 PART CATALYST X-310A.		
ļ		NOTE: POT LIFE IS 30 MINUTES AT 70°F.		
		2. APPLY coating, B00571 (C2) TO EDGE OF MARKERS WITH BRUSH TO A DEPTH OF 0.001-0.002 INCHES (0.025-0.051 MM).		
ļ		3. LET THE COATING AIR DRY FOR 30 MINUTES.		
ļ		NOTE: MINIMUM CURE BEFORE OUTDOOR EXPOSURE IS 30 MINUTES. FULL CURE IS 14 DAYS.		
C2	B00571	. COATING	CON	AR
	683-3-20	BASE (PART OF B00571)	REF	-
ļ	X-310A	CATALYST (PART OF B00571)	REF	-
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71-00-02

P/P BUILDUP FIGURE 30-1 Page 13 Oct 05/2008



#### **FIGURE 31-1**

# THRUST LINK INSTALLATION

**REF QEC TASK NO.: 31** 

**REF DWG: 310A2040** 

301A2092

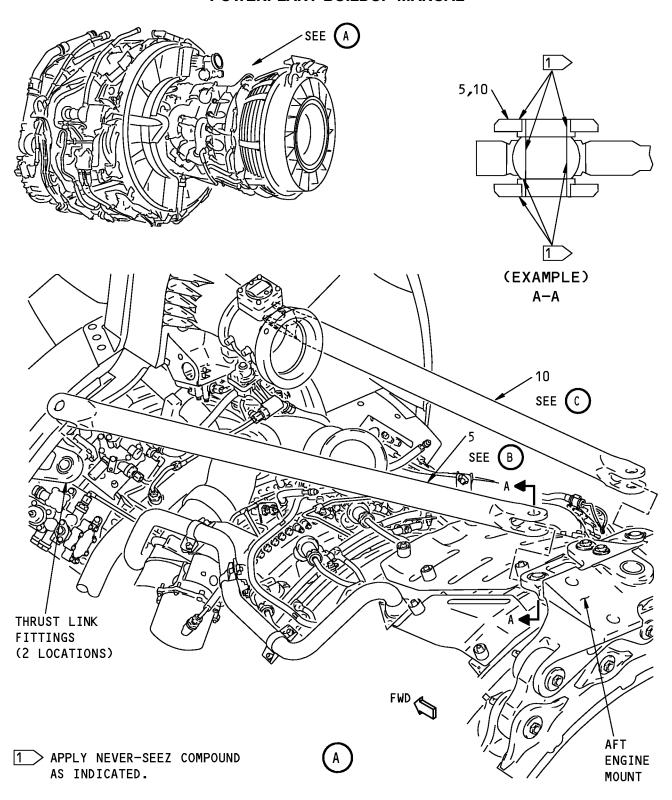
**NOTE**: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 31-1 Page 1 Oct 05/2007





Thrust Link Installation Figure 31-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 31-1 Page 2 Oct 05/2007

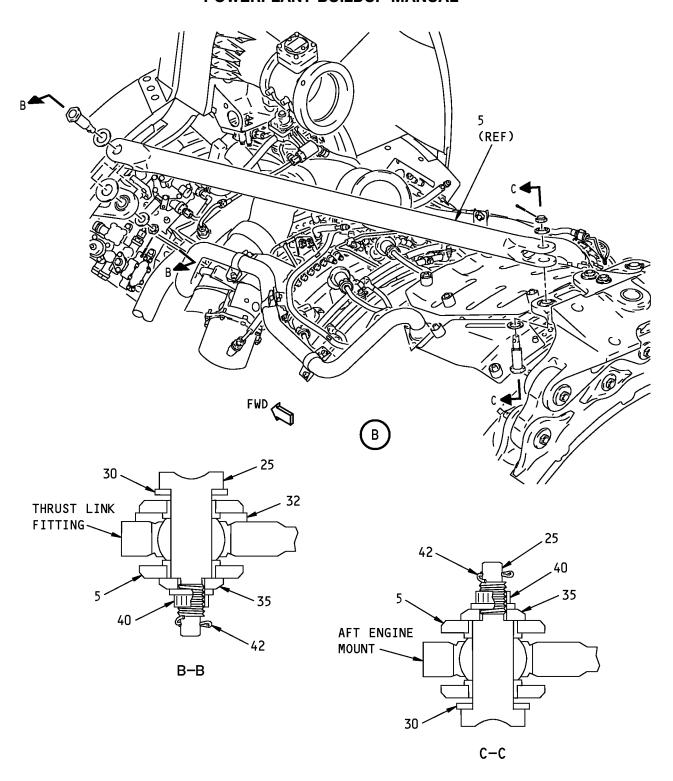


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
31-1		THRUST LINK INSTALLATION (FIGURE 31-1, SHEET 1)		
		APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO SPHERICAL BEARING BORES AND BALL FLAT SURFACES OF THRUST LINK FITTINGS ON ENGINE FAN FRAME AND AFT ENGINE MOUNT ATTACH POINTS.		
5	310A2041-9	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO BUSHING BORES AND FLANGE FACES AT EACH END OF TWO THRUST LINKS (5) AND (10).  . THRUST LINK ASSY, LEFT		1
10 C1	310A2041-10 D00006	. THRUST LINK ASSY, RIGHT . NEVER-SEEZ NSBT-8N COMPOUND	CON	1 AR
		*[1] REQUIRED WITH AFT MOUNT 310A2030-4 Figure 3-1		

71-00-02

P/P BUILDUP FIGURE 31-1 Page 3 Oct 05/2008





Thrust Link Installation Figure 31-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 31-1 Page 4 Oct 05/2007

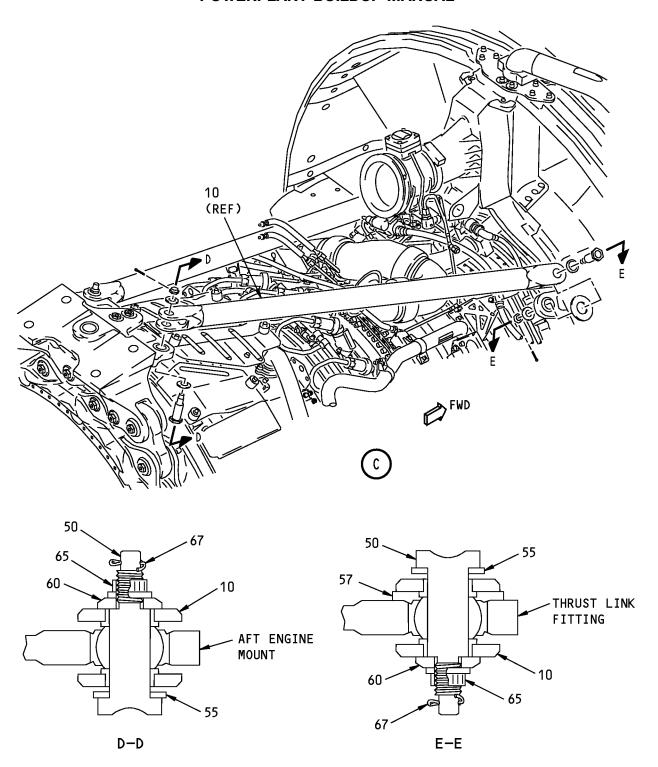


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	31-1		THRUST LINK INSTALLATION (FIGURE 31-1, SHEET 2)		
I	25 C1	310A2042-3 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS, SHANK AND UNDERNEATH HEAD OF PINS (25) THRUST LINK PIN . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 AR
			INSTALL LEFT THRUST LINK ASSY (5) BETWEEN FAN CASE FITTING AND AFT ENGINE MOUNT ATTACH FITTINGS. USE LUBRICATED THRUST LINK PINS (25), WASHERS (30), WASHER (32), END CAPS (35) AND NUTS (40).		
	30 32 35 40	BACW10BP12ACU 310A2040-7 310A2043-1 BACN10JC8CM	. WASHER (CSK) . WASHER (CSK TOWARDS SPHERICAL BEARING) . END CAP (FLAT SIDE TOWARDS PIN SHOULDER) . NUT		2 1 2 2
			TIGHTEN NUTS (40) TO 290-510 POUND-INCHES (32.8-57.6 NEWTON METERS). APPLY TORQUE TO EITHER NUT OR PIN HEAD.		
	42 42 42	BACP18BC03B06P BACP18BC03B07P BACP18BC03B08P	INSTALL COTTER PINS (42) COTTER PIN . COTTER PIN (OPTIONAL TO BACP18BC03B06P) . COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT OPT	2 -

71-00-02

P/P BUILDUP FIGURE 31-1 Page 5 Oct 05/2008





Thrust Link Installation Figure 31-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 31-1 Page 6 Oct 05/2007



ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
31-1		THRUST LINK INSTALLATION (FIGURE 31-1, SHEET 3)		
50 C1	310A2042-3 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS, SHANK AND UNDERNEATH HEAD OF PINS (50) THRUST LINK PIN . NEVER-SEEZ NSBT-8N COMPOUND	CON	2 AR
		INSTALL RIGHT THRUST LINK ASSY (10) BETWEEN FAN CASE FITTING AND AFT ENGINE MOUNT ATTACH FITTINGS. USE LUBRICATED PINS (50), WASHERS (55), WASHER (57), END CAPS (60) AND NUTS (65).		
55 57 60 65	BACW10BP12ACU 310A2040-7 310A2043-1 BACN10JC8CM	. WASHER (CSK) . WASHER (CSK TOWARDS SPHERICAL BEARING) . END CAP (FLAT SIDE TOWARDS PIN SHOULDER) . NUT		2 1 2 2
		TIGHTEN NUTS (65) TO 290-510 POUND-INCHES (32.8-57.6 NEWTON METERS). APPLY TORQUE TO EITHER NUT OR PIN HEAD.		
67 67 67	BACP18BC03B06P BACP18BC03B07P BACP18BC03B08P	INSTALL COTTER PINS (67).  COTTER PIN  COTTER PIN (OPTIONAL TO BACP18BC03B06P)  COTTER PIN (OPTIONAL TO BACP18BC03B06P)	OPT OPT	2 -
		REMOVE PROTECTIVE PAD FROM AFT ENGINE MOUNT (INSTALLED IN Figure 3-1).		

71-00-02

P/P BUILDUP FIGURE 31-1 Page 7 Oct 05/2008



#### **FIGURE 32-1**

# PRIMARY EXHAUST INSTALLATION

**REF QEC TASK NO.: 32** 

**REF DWG: 333A2100** 

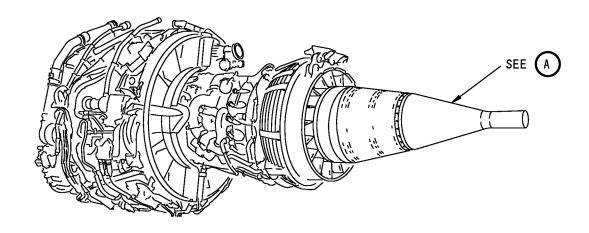
 ${\color{red}\underline{\textbf{NOTE}}}{:} \ \ \mathsf{ALL} \ \mathsf{STANDARDS} \ \mathsf{AND} \ \mathsf{ATTACHING} \ \mathsf{HARDWARE} \ \mathsf{FOR} \ \mathsf{THIS} \ \mathsf{FIGURE} \ \mathsf{WILL} \ \mathsf{BE} \ \mathsf{PACKAGED}$ 

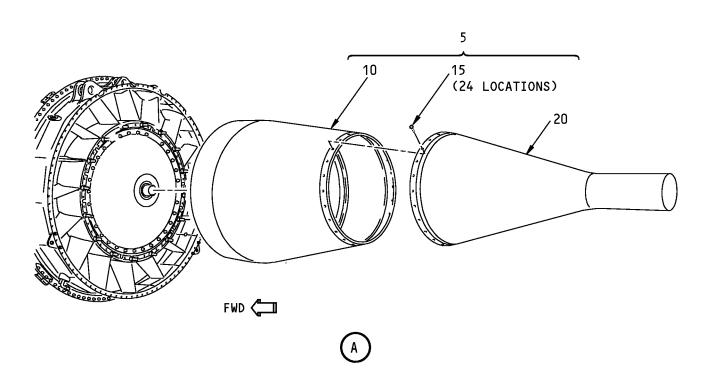
IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 32-1 Page 1 Oct 05/2007







Primary Exhaust Installation Figure 32-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 2 Oct 05/2007

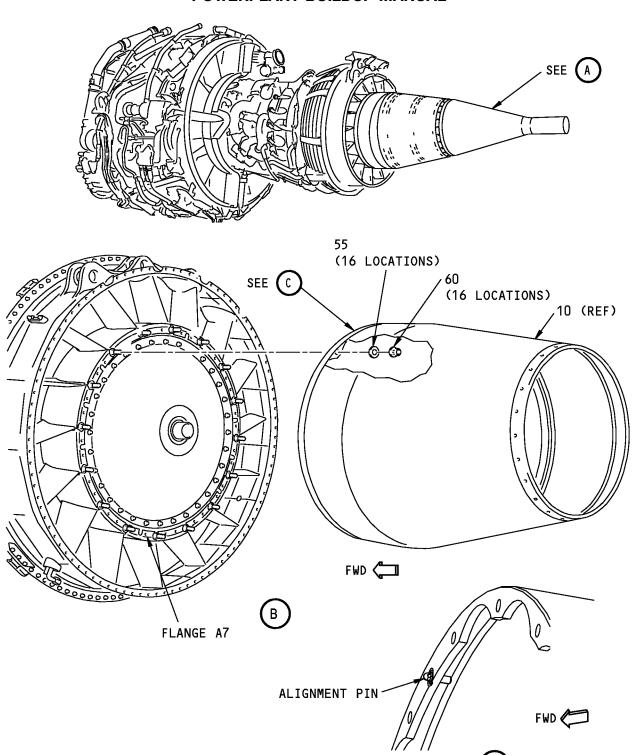


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	PART NUMBER		00	QII
32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 1) REMOVE BOLTS (15) THAT ATTACH FWD (10) AND AFT (20) PLUG ASSEMBLIES. SEPARATE THE FWD AND AFT PLUG ASSEMBLIES.		
5 10 15 20	314A2620-1 314A2620-2 BACB30LK4U1 314A2620-5	KEEP BOLTS (15) FOR LATER INSTALLATION.  PRIMARY PLUG ASSEMBLY  FWD PLUG ASSEMBLY (PART OF 314A2620-1)  BOLT (PART OF 314A2620-1)  AFT PLUG ASSEMBLY (PART OF 314A2620-1)	REF REF REF	1 - -

71-00-02

P/P BUILDUP FIGURE 32-1 Page 3 Oct 05/2007





Primary Exhaust Installation Figure 32-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 4 Oct 05/2007

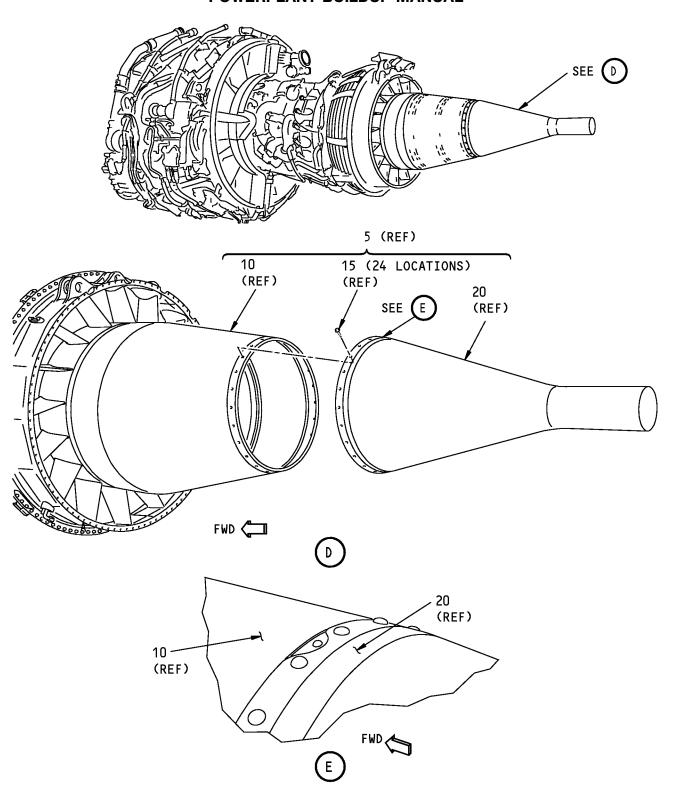


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	32-1	TAIT NOMBER	PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 2)	- 00	Q. I
I	C1	D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF STUDS ON ENGINE FLANGE A7.  . NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			WARNING: FORWARD PLUG ASSY WEIGHS APPROXIMATELY 40 POUNDS (18 KG). USE CAUTION TO PREVENT INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.		
	55	BACW10BP8APU	POSITION FWD PLUG ASSY (10) ON FLANGE A7. MAKE SURE ALIGNMENT PIN IS ALIGNED WITH HOLE IN FWD PLUG ASSY FLANGE. LOOSELY ATTACH FWD PLUG ASSY (10) TO FLANGE A7 WITH WASHERS (55) AND NUTS (60).  . WASHER		16
	60	BACN10HR8C	. NUT		16
			SNUG FIT NUTS (60) IN THE FOLLOWING SEQUENCE: 3:00 O'CLOCK, 9:00 O'CLOCK, 6:00 O'CLOCK AND 12:00 O'CLOCK POSITIONS. SNUG FIT REMAINING NUTS. TIGHTEN NUTS AT 3:00, 9:00, 6:00 AND 12:00 O'CLOCK POSITIONS TO THE FINAL TORQUE VALUE NOTED BELOW. SEQUENTIALLY TIGHTEN THE REMAINING NUTS. CHECK TORQUE AT FIRST NUT TORQUED. IF NUT IS NOT WITHIN THE SPECIFIED RANGE, RE-TORQUE AND SEQUENTIALLY CHECK REMAINING NUTS. RETORQUE IF REQUIRED.		
			FINAL TORQUE VALUE: 500-650 POUND-INCHES (56.5-73.4 NEWTON METERS)		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 5 Oct 05/2008





Primary Exhaust Installation Figure 32-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 6 Oct 05/2007

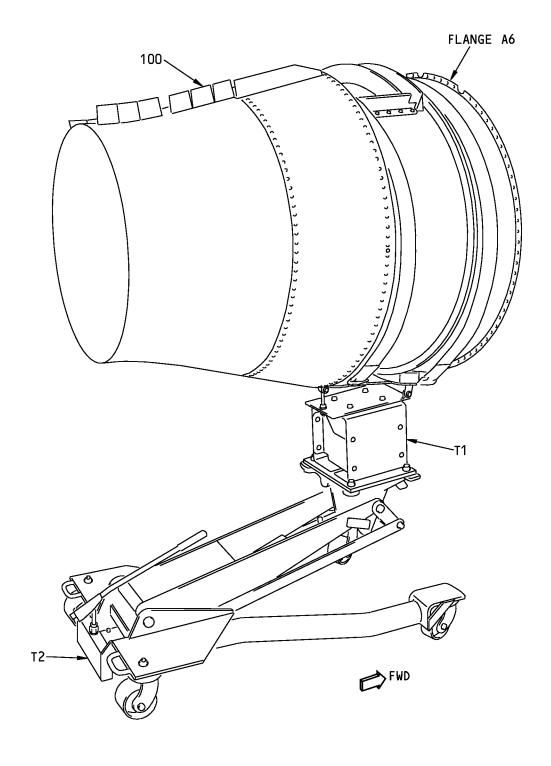


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 3)		
1	15 C1	BACB30LK4U1 D00006	APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF BOLTS (15).  . BOLT (PART OF 314A2620-1) . NEVER-SEEZ NSBT-8N COMPOUND	REF CON	- AR
			WARNING: AFT PLUG WEIGHS APPROXIMATELY 14 POUNDS (6.4 KG). USE CAUTION TO PREVENT INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.		
	5	314A2620-1	POSITION AFT PLUG (20) ON FWD PLUG ASSY (10). AT 12 O'CLOCK POSITION ALIGN CUTOUT IN AFT PLUG WITH INDEXING RIVET OF FWD PLUG ASSY. AT 24 LOCATIONS, ATTACH WITH LUBRICATED BOLTS (15).  . PRIMARY PLUG ASSEMBLY	REF	
	10	314A2620-1	. FWD PLUG ASSEMBLY (PART OF 314A2620-1)	REF	-
	20	314A2620-5	AFT PLUG (PART OF 314A2620-1)	REF	-
			CROSS-TIGHTEN BOLTS (15) TO 68-82 POUND-INCHES (7.7-9.3 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 7 Oct 05/2008





Primary Exhaust Installation Figure 32-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 8 Oct 05/2007

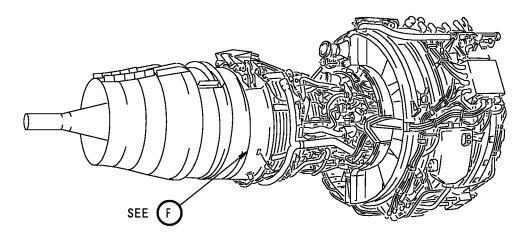


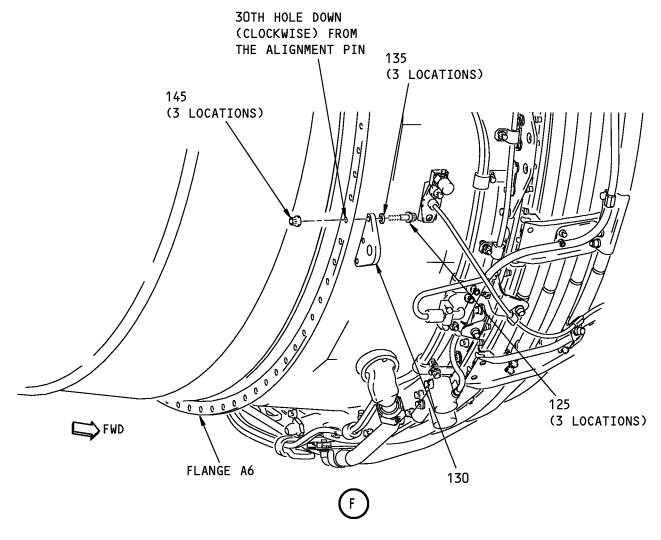
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 4)		
		WARNING: PRIMARY NOZZLE ASSY WEIGHS APPROXIMATELY 108 POUNDS (49 KG). USE CAUTION TO PREVENT INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.		
100 100 T1 T2	314A2610-62 314A2610-1 C78009 HW93718	ATTACH PRIMARY NOZZLE ASSY (100) TO equipment, SPL-2419 (T1) AND PLACE ONTO low profile hydraulic jack, COM-1568 (T2).  PRIMARY NOZZLE ASSY PRIMARY NOZZLE ASSY (OPTIONAL TO 314A2610–62) <sup>[1]</sup> EQUIPMENT, SPL-2419 LOW PROFILE HYDRAULIC JACK, COM-1568 (OR EQUIVALENT)	OPT TOL TOL	1 - -
		POSITION PRIMARY NOZZLE ASSY (100)/equipment, SPL-2419 (T1) BEHIND ENGINE. RAISE PRIMARY NOZZLE WITH low profile hydraulic jack, COM-1568(T2) UNTIL CENTERLINE IS ALIGNED WITH ENGINE CENTERLINE.		
		MOVE PRIMARY NOZZLE ASSY (100) FORWARD UNTIL NOZZLE IS APPROXIMATELY 2 INCHES (5 MM) AFT OF ENGINE FLANGE A6. MAKE SURE ALIGNMENT PIN ON ENGINE FLANGE IS ALIGNED WITH HOLE IN AFT FLANGE OF NOZZLE. IF NECESSARY, MOVE NOZZLE REARWARD AND READJUST POSITION OF NOZZLE ON TOOL. MOVE NOZZLE FORWARD UNTIL ALIGNMENT PIN ENGAGES HOLE IN PRIMARY NOZZLE ASSY.		
		[1] REFER TO 737-SL-78-060 FOR DETAILED INFORMATION.		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 9 Oct 05/2008







Primary Exhaust Installation Figure 32-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 10 Oct 05/2007

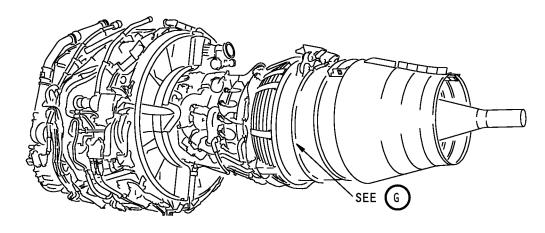


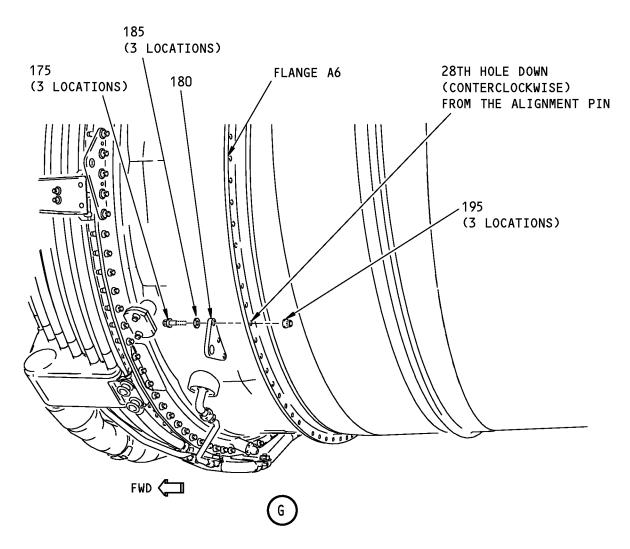
	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
i	32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 5)		
			AT 30TH, 31ST, AND 32ND HOLES DOWN (CLOCKWISE) FROM ALIGNMENT PIN, LOOSELY ATTACH GSE BRACKET (130) ON FWD SIDE OF FLANGE A6 WITH BOLTS (125), WASHERS (135) AND NUTS (145).		
			NOTE: IF BOLTS (125) HAVE BEEN PREVIOUSLY INSTALLED: APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF BOLTS (125) OR REPLACE NUTS (145).		
	125	BACB30PN4-10	. BOLT		3
	125	BACB30US4-10	. BOLT (OPTIONAL TO BACB30PN4-10)	OPT	-
	130	333A2020-5	. GSE BRACKET		1
	135 145	BACW10BP4ACU BACN10HR4C	. WASHER (CSK) (UNDER BOLT HEAD) . NUT		3
ı	C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			NOTE: DO NOT TIGHTEN NUTS (145) OR BOLTS (125) AT THIS TIME.		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 11 Oct 05/2008







Primary Exhaust Installation Figure 32-1 (Sheet 6)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 12 Oct 05/2007

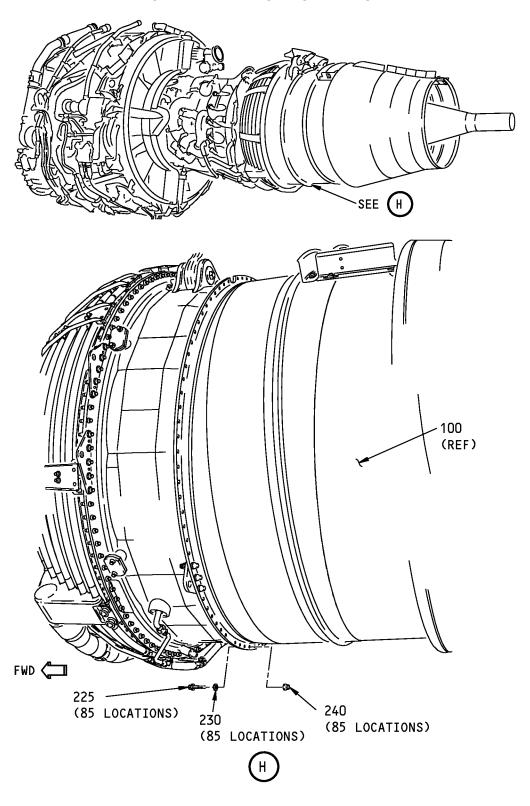


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 6)		
			AT 28TH, 29TH, AND 30TH HOLES DOWN (COUNTERCLOCKWISE) FROM ALIGNMENT PIN, LOOSELY ATTACH GSE BRACKET (180) ON FWD SIDE OF FLANGE A6 WITH BOLTS (175), WASHERS (185) AND NUTS (195).		
			NOTE: IF BOLTS (175) HAVE BEEN PREVIOUSLY INSTALLED: APPLY Never-Seez NSBT-8N compound, D00006 (C1) TO THREADS OF BOLTS (175) OR REPLACE NUTS (195).		
	175	BACB30PN4-10	. BOLT		3
	175 180	BACB30US4-10 333A2020-5	. BOLT (OPTIONAL TO BACB30PN4-10) . GSE BRACKET	OPT	1
	185 195	BACW10BP4ACU BACN10HR4C	. WASHER (CSK) (UNDER BOLT HEAD) . NUT		3 3
I	C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			NOTE: DO NOT TIGHTEN NUTS (195) OR BOLTS (175) AT THIS TIME.		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 13 Oct 05/2008





Primary Exhaust Installation Figure 32-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 14 Oct 05/2007

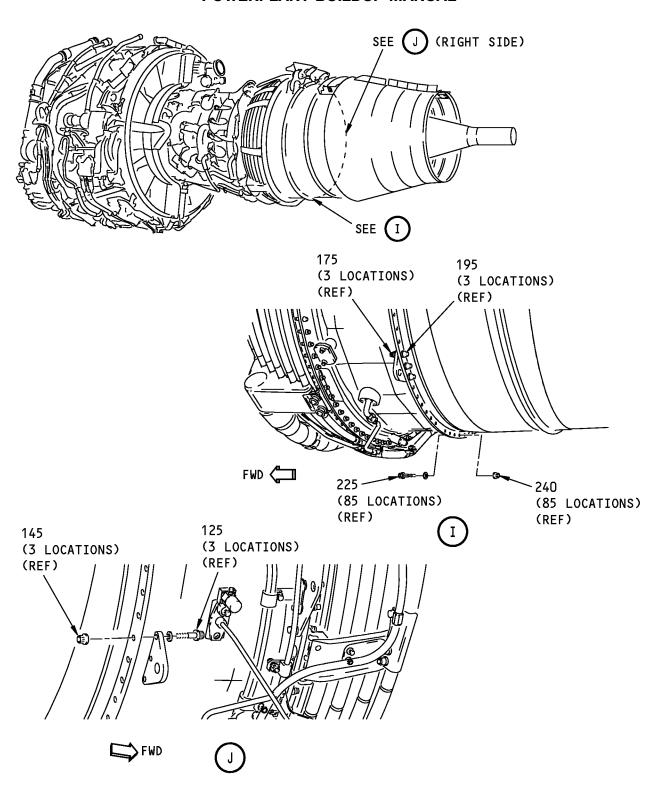


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 7)		
			AT REMAINING 85 LOCATIONS ON PRIMARY NOZZLE ASSY FLANGE, LOOSELY INSTALL BOLTS (225), WASHERS (230) AND NUTS (240).		
			NOTE: IF BOLTS (225) HAVE BEEN PREVIOUSLY INSTALLED: LUBRICATE BOLTS (225) WITH Never-Seez NSBT-8N compound, D00006 (C1) OR REPLACE NUTS (240).		
	225 225	BACB30PN4-6 BACB30US4-6	. BOLT . BOLT (OPTIONAL TO BACB30PN4-6)	OPT	85 -
	230 240	BACW10BP4ACU BACN10HR4C	. WASHER (CSK) (UNDER BOLT HEAD) . NUT	0	85 85
I	C1	D00006	. NEVER-SEEZ NSBT-8N COMPOUND	CON	AR
			SNUG FIT NUTS (240, 145 AND 195) OR BOLTS (225, 125 AND 175) IN THE FOLLOWING SEQUENCE: 3:00 O'CLOCK, 9:00 O'CLOCK, 6:00 O'CLOCK AND 12:00 O'CLOCK POSITIONS. SNUG FIT REMAINING NUTS OR BOLTS. TIGHTEN NUTS OR BOLTS AT 3:00, 9:00, 6:00 THEN 12:00 O'CLOCK POSITIONS TO THE FINAL TORQUE VALUE NOTED ON NEXT PAGE. SEQUENTIALLY TIGHTEN THE REMAINING NUTS OR BOLTS. CHECK TORQUE AT FIRST NUT OR BOLT TORQUED. IF NUT OR BOLT IS NOT WITHIN THE SPECIFIED RANGE, RE-TORQUE AND SEQUENTIALLY CHECK REMAINING NUTS OR BOLTS. RE-TORQUE IF REQUIRED.		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 15 Oct 05/2008





Primary Exhaust Installation Figure 32-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 32-1 Page 16 Oct 05/2007



ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
32-1		PRIMARY EXHAUST INSTALLATION (FIGURE 32-1, SHEET 8)		
		DRY NUTS/BOLTS:		
		FINAL TORQUE VALUE FOR BACB30PN BOLT:		
		NUT (240, 145 AND 195) 65-100 POUND-INCHES (7.3-11.3 NEWTON METERS)		
		BOLT (225, 125 AND 175) 90-110 POUND-INCHES (10.2-12.1 NEWTON METERS)		
		FINAL TORQUE VALUE FOR OPT BACB30US BOLT:		
		NUT (240, 145 AND 195) 90-125 POUND-INCHES (10.2-14.1 NEWTON METERS)		
		BOLT (225, 125 AND 175) 113-138 POUND-INCHES (12.8-15.6 NEWTON METERS)		
		LUBRICATED NUTS/BOLTS:		
		FINAL TORQUE VALUE FOR BACB30PN BOLT:		
		NUT (240, 145 AND 195) 50-75 POUND-INCHES (5.65-8.47 NEWTON METERS)		
		BOLT (225, 125 AND 175) 67.5-82.5 POUND-INCHES (7.63-9.32 NEWTON METERS)		
		FINAL TORQUE VALUE FOR OPT BACB30US BOLT:		
		NUT (240, 145 AND 195) 70-80 POUND-INCHES (7.91-9.04 NEWTON METERS)		
		BOLT (225, 125 AND 175) 72-88 POUND-INCHES (8.13-9.94 NEWTON METERS)		

71-00-02

P/P BUILDUP FIGURE 32-1 Page 17 Oct 05/2007



#### **FIGURE 33-1**

# **INLET COWL INSTALLATION**

**REF QEC TASK NO.: TBD** 

**REF DWG: 334A2000** 

301A2094

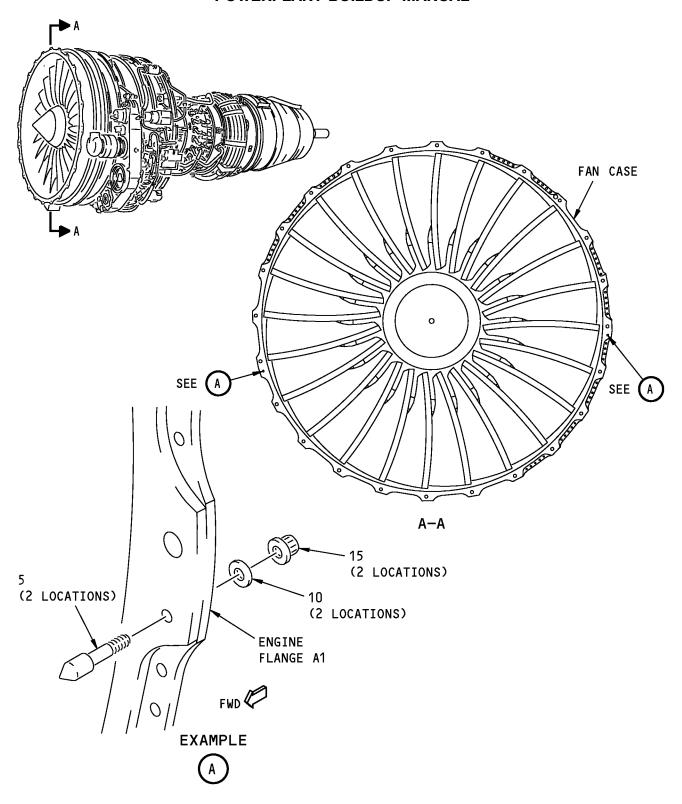
NOTE: ALL STANDARDS AND ATTACHING HARDWARE FOR THIS FIGURE WILL BE PACKAGED

IN QEC TASK NO. 110.

71-00-02

P/P BUILDUP FIGURE 33-1 Page 1 Oct 05/2007





Inlet Cowl Installation Figure 33-1 (Sheet 1)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 2 Oct 05/2007

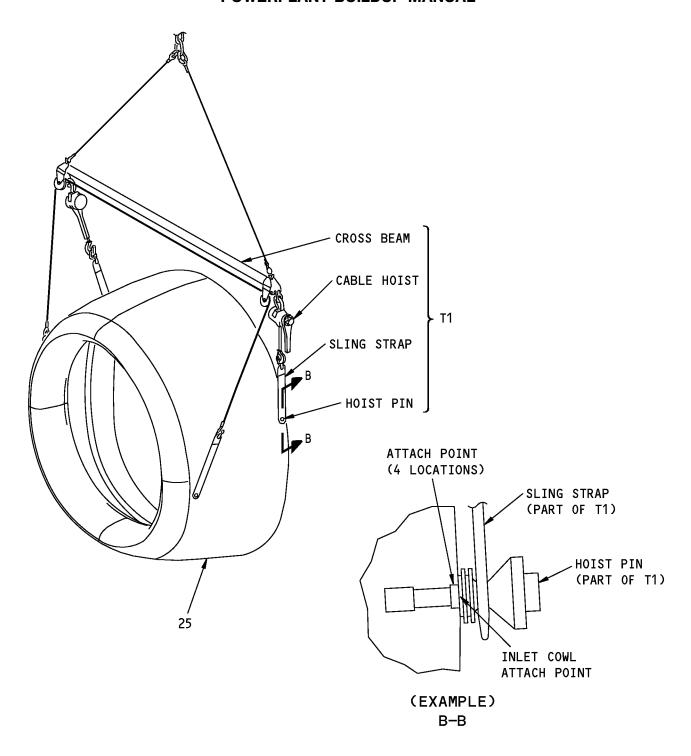


ITEM NO.	DADT NUMBED	NOMENCI ATLIDE	UC	QTY
<b>-</b>	PART NUMBER	NOMENCLATURE  INLET COWL INSTALLATION	UC	QIY
10	314T3019-3 NAS1149E0432P	INLET COWL INSTALLATION (FIGURE 33-1, SHEET 1)  NOTE: INLET COWL IS INTERCHANGEABLE BETWEEN AIRPLANE ENGINE POSITIONS. NO. 1 (LEFT) ENGINE INLET IS THE SAME AS THE NO. 2 (RIGHT) ENGINE INLET.  INSTALL SHEAR PINS (5) ON ENGINE FLANGE A1 IN HOLES JUST BELOW 3 AND 9 O'CLOCK POSITIONS WITH PINS FACING FWD. USE WASHERS (10) AND NUTS (15).  . SHEAR PIN  . WASHER		2 2
	BACN10YR4CM	NUT TIGHTEN NUTS (15) TO 50-80 POUND-INCHES (5.7-9.0 NEWTON METERS).		2 2

71-00-02

P/P BUILDUP FIGURE 33-1 Page 3 Oct 05/2007





INLET COWL INSTALLATION WITH INLET COWL SLING

Inlet Cowl Installation Figure 33-1 (Sheet 2)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 4 Oct 05/2007

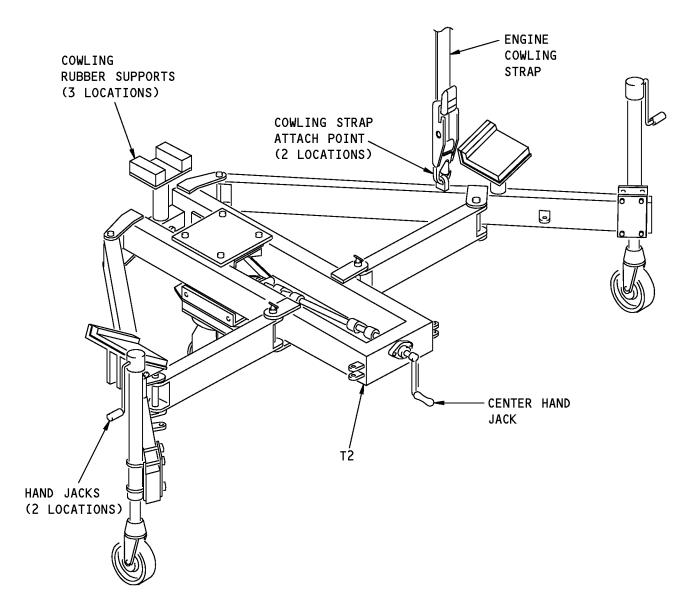


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 2)		
		INLET COWL INSTALLATION WITH INLET COWL SLING		
		(PREFERRED METHOD)		
25 25 25 25 25 T1	314-2100-3 S314A210-21 314-2100-2 S314A210-5 B71040	AT FOUR LOCATIONS, ATTACH inlet cowl sling, SPL-2062 (T1) TO INLET COWL (25) USING HOIST PINS AND SLING STRAPS.  INLET ASSY (V51563)  BOEING SPEC FOR 314-2100-3  INLET ASSY (V51563) (OPTIONAL TO 314-2100-3)  BOEING SPEC FOR 314-2100-2  INLET COWL SLING, SPL-2062	VEN BOE OPT BOE TOL	1 - - -
		LIFT INLET COWL OFF GROUND PALLET AND USE BOTH LEVER HOISTS TO ROTATE INLET COWL (25) UNTIL INLET ATTACHMENT FLANGE IS VERTICAL.		
		NOTE: TO TURN INLET COWL, DECREASE LENGTH OF LEVER HOIST CHAIN.		
		REMOVE PROTECTIVE COVERS FROM CTAI DUCT AND EEC COOLING HOSE ON BOTH ENGINE AND INLET COWL (25).		

71-00-02

P/P BUILDUP FIGURE 33-1 Page 5 Oct 05/2008





INLET COWL INSTALLATION INLET COWL DOLLY

Inlet Cowl Installation Figure 33-1 (Sheet 3)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 6 Oct 05/2007

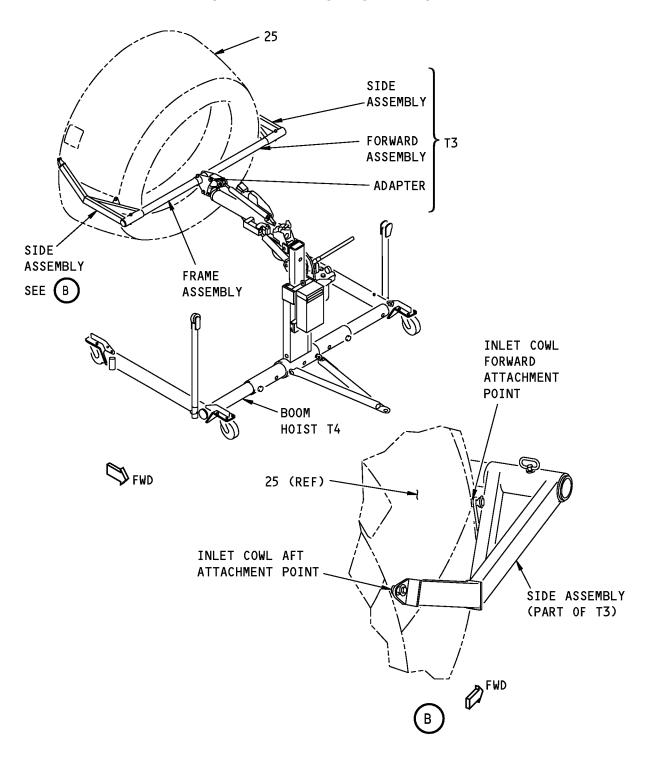


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
1		PART NUMBER  AM-1940-400	INLET COWL INSTALLATION (FIGURE 33-1, SHEET 3)  INLET COWL INSTALLATION WITH INLET COWL DOLLY (OPTIONAL METHOD)  CAUTION: APPLY ONLY THE FORCE NECESSARY TO THE ENGINE COWLING STRAP TO HOLD THE INLET COWL TO THE DOLLY. MORE FORCE CAN CAUSE DAMAGE TO THE INLET COWL.  dolly, COM-2060 (T2) CAN BE USED TO TRANSFER AN INLET COWL FROM AN ON-WING ENGINE OR FOR A INLET COWL STORED ON THE DOLLY.  NOTE: THE INLET COWL DOLLY IS NOT DESIGNED TO LIFT THE INLET COWL DIRECTLY FROM A GROUND PALLET.  . DOLLY, COM-2060  REMOVE PROTECTIVE COVERS FROM CTAI DUCT AND EEC COOLING HOSE ON BOTH ENGINE AND INLET COWL (25).	TOL	QTY

71-00-02

P/P BUILDUP FIGURE 33-1 Page 7 Oct 05/2008





INLET COWL INSTALLATION WITH BOOM HOIST

Inlet Cowl Installation Figure 33-1 (Sheet 4)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 8 Oct 05/2007

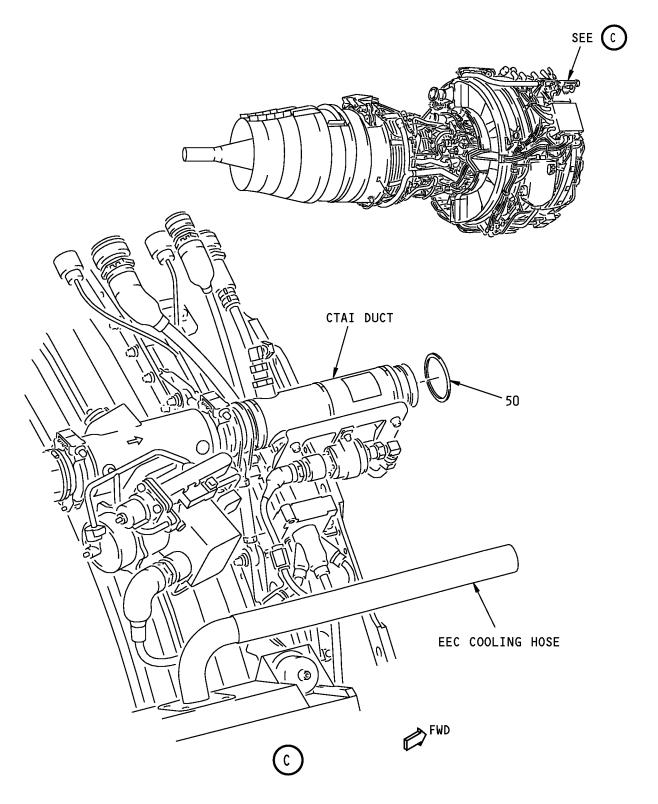


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 4)		
			INLET COWL INSTALLATION WITH BOOM HOIST		
			(OPTIONAL METHOD)		
ı	Т3	C71027	AT FOUR LOCATIONS, ATTACH installation/removal frame equipment, SPL-2165 (T3) TO INLET COWL (25).  . INSTALLATION/REMOVAL FRAME EQUIPMENT, SPL-2165	TOL	-
			USING boom hoist, SPL-2430 (T4), LIFT INLET COWL OFF GROUND PALLET AND ROTATE INLET COWL (25) UNTIL INLET ATTACHMENT FLANGE IS VERTICAL.		
I	T4	C78026	. BOOM HOIST, SPL-2430	TOL	-
			REMOVE PROTECTIVE COVERS FROM CTAI DUCT AND EEC COOLING HOSE ON BOTH ENGINE AND INLET COWL (25).		

71-00-02

P/P BUILDUP FIGURE 33-1 Page 9 Oct 05/2008





Inlet Cowl Installation Figure 33-1 (Sheet 5)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 10 Oct 05/2007

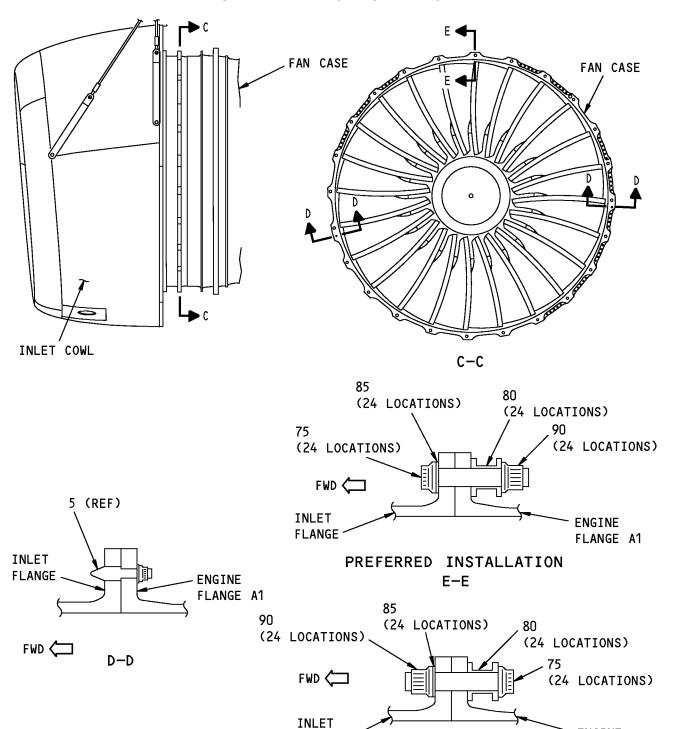


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 5)		
		MAKE SURE FLANGES ON CTAI AND EEC COOLING DUCTS ARE FREE OF SCRATCHES, CUTS, PITS, CREASES, AND UNWANTED MATERIAL.		
50	A C 1005 7 000	REMOVE ITEM (50) FROM BAG ATTACHED TO FORWARD CTAI DUCT AND INSTALL ON CTAI DUCT FLANGE.	REF	
50	AS1895-7-200	. SEAL (PART OF CTAI DUCT INSTL - Figure 27-1 )	KEF	-

71-00-02

P/P BUILDUP FIGURE 33-1 Page 11 Oct 05/2007





Inlet Cowl Installation Figure 33-1 (Sheet 6)

ALTERNATE INSTALLATION E-E

**FLANGE** 

# 71-00-02

**ENGINE** 

FLANGE A1

P/P BUILDUP FIGURE 33-1 Page 12 Oct 05/2007

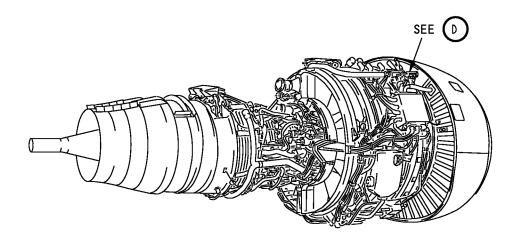


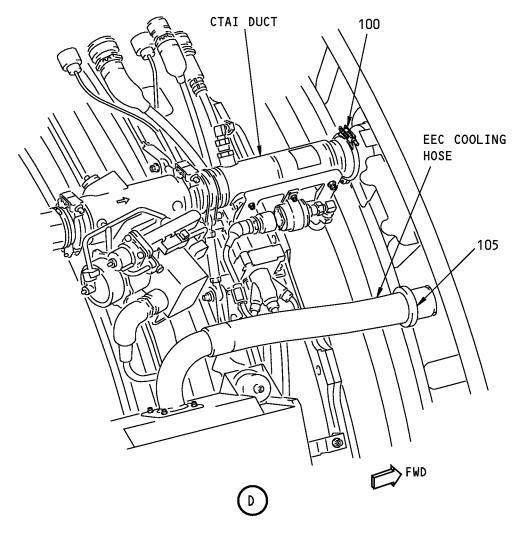
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
NO. 33-1	PART NUMBER  BACB30US8K29	NOMENCLATURE  INLET COWL INSTALLATION (FIGURE 33-1, SHEET 6)  POSITION INLET COWL (25) ON ENGINE ENSURING SHEAR PIN HOLES IN INLET ALIGN WITH SHEAR PINS ON ENGINE FLANGE A1.  NOTE: MAKE SURE CTAI DUCT AND EEC COOLING HOSE ARE ALIGNED AND SEATED CORRECTLY.  LOOSELY ATTACH INLET COWL (25) TO ENGINE FLANGE A1 WITH BOLTS (75), SPACERS (80), WASHERS (85) AND NUTS (90).  NOTE: THE PREFERRED INSTALLATION HAS THE BOLT HEADS FACING FORWARD. AS AN ALTERNATE INSTALLATION, THE BOLT HEADS CAN FACE AFT. HOWEVER, IN BOTH CASES, THE WASHERS MUST BE ON THE FORWARD SIDE OF THE FLANGE AND THE SPACER MUST BE ON THE AFT SIDE OF THE FLANGE.	UC	<b>QTY</b>
80 85 90	334A2010-1 BACW10BP8ACU BACN10HR8CS	SPACER (AFT SIDE OF FLANGE)  WASHER (FWD SIDE OF FLANGE)  NUT  SNUG FIT BOLTS (75) OR NUTS (90) IN THE FOLLOWING SEQUENCE: 3 O'CLOCK, 9 O'CLOCK, 6 O'CLOCK AND 12 O'CLOCK POSITIONS. SNUG FIT REMAINING BOLTS OR NUTS. TIGHTEN BOLTS OR NUTS AT 3, 9, 6 AND 12 O'CLOCK POSITIONS TO THE FINAL TORQUE VALUE NOTED BELOW. SEQUENTIALLY TIGHTEN THE REMAINING BOLTS OR NUTS. CHECK TORQUE AT FIRST BOLT OR NUT TORQUED. IF BOLT OR NUT IS NOT WITHIN THE SPECIFIED RANGE, RE-TORQUE AND SEQUENTIALLY CHECK REMAINING FASTENERS. RE-TORQUE IF REQUIRED.  FINAL TORQUE VALUE: BOLTS (75) 585-715 POUND INCHES (66.1-80.8 NEWTON METERS); NUTS (90) 500-650 POUND INCHES (56.5-73.4 NEWTON METERS).  REMOVE inlet cowl sling, SPL-2062 (T1) OR dolly, COM-2060 (T2) OR installation/removal frame equipment, SPL-2165 (T3) AND boom hoist, SPL-2430 (T4) EQUIPMENT.		24 24 24 24

71-00-02

P/P BUILDUP FIGURE 33-1 Page 13 Jun 05/2008







Inlet Cowl Installation Figure 33-1 (Sheet 7)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 14 Oct 05/2007

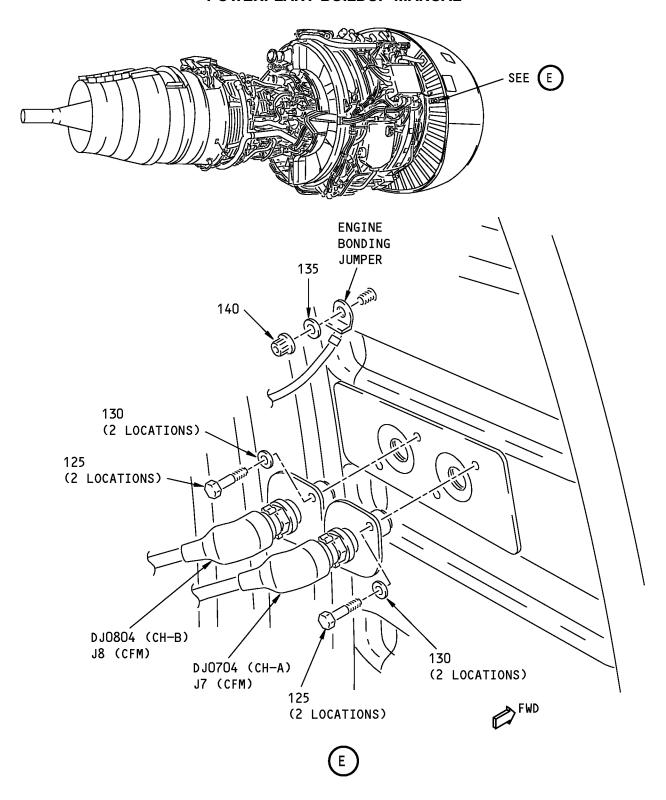


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1	. , , , , , , , , , , , , , , , , , , ,	INLET COWL INSTALLATION		<u> </u>
		(FIGURE 33-1, SHEET 7)  REMOVE ITEM (100) FROM BAG ATTACHED TO FORWARD CTAI DUCT.		
100	AS1895-4-200	COUPLING (PART OF CTAI DUCT INSTL - Figure 27-1)  POSITION COUPLING (100) ON CTAI DUCT, ENSURING NO PRELOAD EXISTS ON CTAI DUCT ON ENGINE OR INLET COWL. IF PRELOAD EXISTS, REMOVE COUPLING (100) AND ADJUST THE CTAI DUCT FLANGE AS FOLLOWS. LOOSEN BOLTS ON INLET COWL BULKHEAD TO FREE AFT INLET SEAL HOUSING. RE-ATTACH UPSTREAM DUCT WITH COUPLING (100). TAP ON ALUMINUM OR NON-METALLIC SPACER HELD AGAINST UPSTREAM CTAI FLANGE. FOR AFT ADJUSTMENT, APPLY A CONSTANT AFT FORCE TO SAME AFT FLANGE AND AT THE SAME TIME TAP ON PERIPHERY WITH A NON-METALLIC MALLET.  TIGHTEN COUPLING (100) TO TORQUE SPECIFIED ON PART. LIGHTLY TAP OUTER SURFACE OF COUPLING WITH NON-METALLIC MALLET. RETIGHTEN COUPLING TO TORQUE GIVEN ON PART.	REF	
105	BACC10JB034C064	ATTACH EEC COOLING HOSE ON ENGINE TO HOSE FLANGE ON INLET COWL WITH HOSE CLAMP (105).  . HOSE CLAMP  TIGHTEN HOSE CLAMP (105) TO 26-30 POUND-INCHES (2.9-3.4 NEWTON METERS).		1

71-00-02

P/P BUILDUP FIGURE 33-1 Page 15 Oct 05/2007





Inlet Cowl Installation Figure 33-1 (Sheet 8)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 16 Oct 05/2007

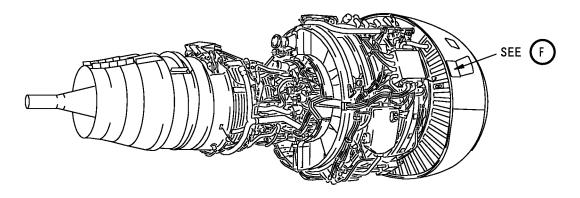


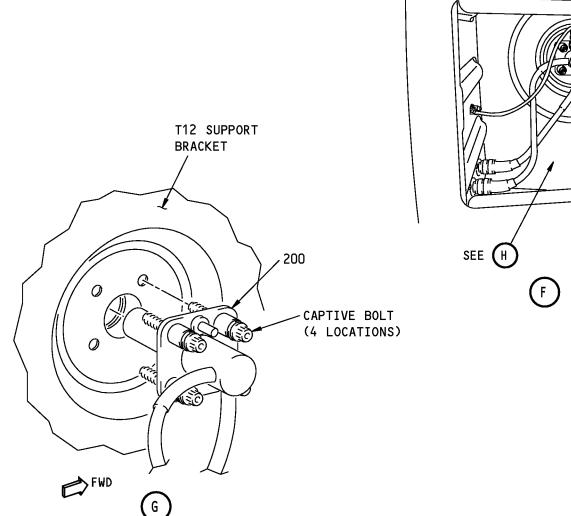
ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 8)		
		DISCONNECT T12 SENSOR FROM ENGINE FAN CASE.		
		CONNECT J8 ELECTRICAL HARNESS, DJ0804 (CH-B), TO INBOARD HOLE LOCATION AND CONNECT J7 ELECTRICAL HARNESS, DJ0704 (CH-A), TO OUTBOARD HOLE LOCATION ON INLET COWL AFT BULKHEAD. SECURE BOTH ELECTRICAL HARNESSES WITH BOLTS (125) AND WASHERS (130).		
125 130	BACB30ZF4-08 NAS1149E0432R	. BOLT . WASHER		4
		TIGHTEN BOLTS (125) TO 55-70 POUND-INCHES (6.3-7.9 NEWTON METERS).		
		ATTACH ENGINE BONDING JUMPER TO TERMINAL LUG AND SECURE WITH WASHER (135) AND NUT (140).		
135	NAS1149E0432R	. WASHER		1
140	AS3485-10	. NUT		1
		TIGHTEN NUT (140) TO 65-70 POUND-INCHES (7.3-7.9 NEWTON METERS).		

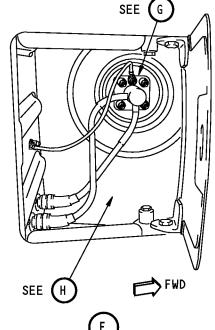
71-00-02

P/P BUILDUP FIGURE 33-1 Page 17 Oct 05/2007









**Inlet Cowl Installation** Figure 33-1 (Sheet 9)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 18 Oct 05/2007

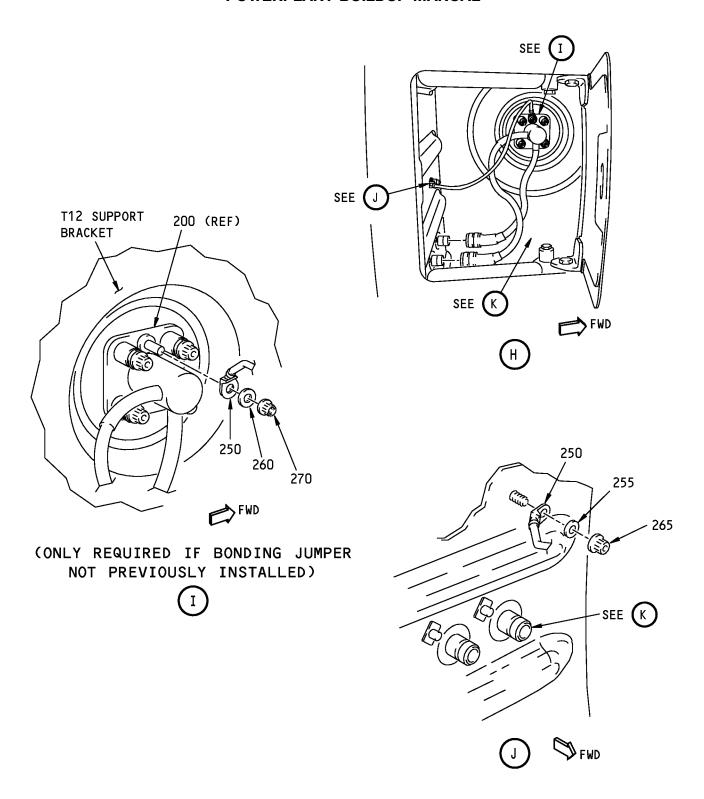


ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1		INLET COWL INSTALLATION		
200 C1	RP235-00 D00601	(FIGURE 33-1, SHEET 9)  OPEN T12 ACCESS DOOR ON UPPER RIGHT SIDE OF INLET COWL. LUBRICATE THREADS OF SENSOR (200) CAPTIVE BOLTS WITH grease, D00601 [CP2101] (C1). POSITION T12 SENSOR (200) ON INLET COWL AND SECURE WITH CAPTIVE BOLTS T12 SENSOR (SUPPLIED WITH ENGINE) . GREASE (CP2101)	REF CON	- AR
		TIGHTEN BOLTS TO 110-120 POUND-INCHES (12.5-13.5 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 33-1 Page 19 Oct 05/2008





Inlet Cowl Installation Figure 33-1 (Sheet 10)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 20 Oct 05/2007

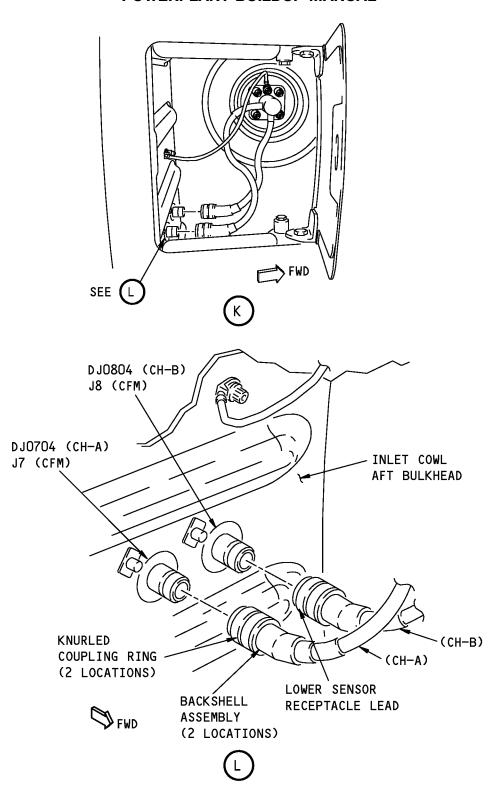


	ITEM NO.	PART NUMBER	NOMENCLATURE	UC	QTY
	33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 10)		
			ATTACH BONDING JUMPER (250) TO TERMINAL STUDS ON INLET COWL BULKHEAD AND SECURE WITH WASHER (255) AND NUT (265).		
	250	69A94	IF BONDING JUMPER IS NOT INSTALLED ON T12 SENSOR, USE Brisal OX grease, D00625 [CP2338] (C1) TO LUBRICATE BONDING JUMPER (250), WASHER (260) AND NUT (270). ATTACH BONDING JUMPER TO TERMINAL LUG AND SECURE WITH WASHER (260) AND NUT (270).  BONDING JUMPER (SUPPLIED WITH ENGINE)	REF	_
	255	NAS1149E0432R	. WASHER		1
	260 265	649-341-011-0 AS3485-10	. WASHER (SUPPLIED WITH ENGINE) (1 REQD) . NUT	REF	- 1
	270	649-304-004-0	. NUT (SUPPLIED WITH ENGINE) (1 REQD)	REF	-
1	C1	D00625	. BRISAL OX GREASE (CP2338)	CON	AR
			TIGHTEN NUT (265) TO 65-70 POUND-INCHES (7.3-7.9 NEWTON METERS) AND, IF NECESSARY, TIGHTEN NUT (270) TO 95-110 POUND-INCHES (11-12.5 NEWTON METERS).		

71-00-02

P/P BUILDUP FIGURE 33-1 Page 21 Oct 05/2008





Inlet Cowl Installation Figure 33-1 (Sheet 11)

71-00-02

P/P BUILDUP FIGURE 33-1 Page 22 Oct 05/2007



ITEM				
NO.	PART NUMBER	NOMENCLATURE	UC	QTY
33-1		INLET COWL INSTALLATION (FIGURE 33-1, SHEET 11)		
		CAUTION: DO NOT OVERTIGHTEN THE PLUG COUPLING RING. DO NOT USE WATER PUMP PLIERS, PIPE WRENCHES OR VISE GRIPS TO TIGHTEN THE COUPLING RING OR DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.		
		CONNECT J8 ELECTRICAL CONNECTOR, DJ0804 (CH-B), TO INBOARD RECEPTABLE AND J7 ELECTRICAL CONNECTOR, DJ0704 (CH-A) TO OUTBOARD RECEPTACLE. TURN KNURLED COUPLING RING WHILE WIGGLING THE BACKSHELL ASSEMBLY. AFTER FULLY SEATING THE COUPLING RING, USE SOFT-JAWED PLIERS OR A STRAP WRENCH TO TIGHTEN THE COUPLING RING AN ADDITIONAL 1/8 TURN OR UNTIL PLIER SLIPPAGE OCCURS.		
		CHECK THAT RESISTANCE ON ENGINE JUMPER AT INLET COWL AFT BULKHEAD AND T12 BONDING JUMPER AT INLET COWL FORWARD BULKHEAD IS NOT MORE THAN 0.001 OHMS.		
		CHECK THAT RESISTANCE BETWEEN T12 BONDING JUMPER AT T12 SENSOR IS NOT MORE THAN 0.0025 OHMS.		
		CLOSE T12 ACCESS DOOR ON INLET COWL.		

71-00-02

P/P BUILDUP FIGURE 33-1 Page 23 Oct 05/2007



#### **QEC System Tests**

#### 1. General

A. QEC system tests provided in this section are optional and duplicate tests normally performed after engine installation on an airplane.

#### 2. IDG Cooling Lines Flushing Procedure

#### A. General

CAUTION: DO NOT FLUSH THE IDG WHEN YOU DO THIS PROCEDURE. MAKE SURE THE OIL-IN AND OIL-OUT HOSES ARE DISCONNECTED FROM THE IDG. IF THIS STEP IS NOT OBEYED, DAMAGE TO THE IDG CAN OCCUR.

(1) This flushing procedure is done on the external IDG cooling lines only. The oil-in and oil-out lines must be disconnected from the IDG before you start this procedure.

#### B. Equipment

- (1) Flushing cart, capable of 14 GPM flow capacity and a maximum pressure of 250 psi, or; Flushing cart, Boeing Flush Cart F/D 1206-00.29 or equivalent.
- (2) 5-gallon container to collect cleansing oil or solvent.
- (3) Patch filter, 40 micron

#### C. Consumable Materials

- (1) solvent, B00074 (Optional Type 1)
- (2) Nitrogen, minimum of 3.5 lbs (a pressure drop of 500-1000 psig) from a 230 cubic foot nitrogen tank (atmospheric 2200 psig).

#### D. Procedure

- (1) Disconnect the oil-in and oil-out hoses from the IDG.
- (2) Connect the patch filter to the IDG oil-out hose.
- (3) Connect the flushing cart to the oil-in hose and the patch filter.

**NOTE**: Flushing direction should be in the direction of normal oil flow.

- (4) Start the flushing procedure with a new patch filter and with the patch filter in the BY-PASS position.
- (5) Permit the system to flush for a minimum of 10 minutes.
- (6) After 10 minutes, visually examine all tube fittings to make sure no leakage has occurred.
- (7) Continue to flush the external oil system for an additional 5 minutes.
- (8) Turn the patch filter selector valve to either "PATCH FILTER A" or "PATCH FILTER B" position and continue to flush the IDG external oil system for an additional 1 minute.
- (9) Turn the patch filter selector valve to the other patch filter and check the used patch filter as follows:
  - (a) Examine the patch filter for signs of visible metallic particles
    - 1) All metallic particles are not permitted.
  - (b) Light discoloration of the patch filter is permitted.

71-00-03

QEC SYSTEM TESTS FIGURE 1
Page 1
Oct 05/2007



- (10) If the patch filter is acceptable, continue on to the next step. If the patch filter is not acceptable, replace the filter and do the above steps again.
  - **NOTE**: Before you do the above steps again, make sure you clean the flush sample port to remove all previous contamination.
- (11) Take a 200 ml solvent sample downstream of the oil system and do a check for contamination using the criteria given in the Sundstrand Bulletin 627, or use one of the inspections methods given below:
  - (a) Particle Count Method
    - 1) Analyze the sample you took and use the particle limits given below for different sizes to determine if the contamination is within permitted levels:
      - a) 5 to 15 microns in size 1,024,000 particles are permitted
      - b) 15-25 microns in size 182,400 particles are permitted
      - c) 25-50 microns in size 32,400 particles are permitted
      - d) 50-100 microns in size 5,760 particles are permitted
      - e) More than 100 microns in size 1,024 particles are permitted.
    - 2) Particle Weight Method
      - a) The total weight of the particles in the oil sample can not be more than 2.0 mg for each 100 ml.
- (12) If the contamination is more than the limits, do the flushing procedure again. If it is not, then do the next step.
- (13) Use nitrogen gas to purge the flushing cart hoses and to dry the IDG oil cooling circuit.
- (14) Disconnect the flushing cart from the oil-in hose and the patch filter.
- (15) Disconnect the patch filter from the oil-out hose.
- (16) Connect the oil-in and oil-out hoses to the IDG.
  - (a) Use the torques given in Figure 24-1.

71-00-03



#### **QEC INSPECTION/CHECK**

#### 1. General

- A. The following procedure provides general inspection limits you can use when you install new or used QEC components on the engine. This procedure should not be used by itself to determine the serviceability of a part. Rather, this procedure should be used together with your airline's existing standard practices to determine serviceability.
- B. This section is optional but may be operator policy.
- C. This inspection is applicable to Boeing QEC parts only. For parts owned by the engine manufacturer, refer to the applicable procedures in the Airplane Maintenance Manual (AMM) or Engine Shop Manual (ESM).

#### 2. Inspection

- A. Procedure
  - (1) Use the guidelines below when you must make an inspection of the parts in the QEC kit:
    - (a) Bolts/screws, washers, spacers, couplings, clamps, clampshells:
      - 1) Damage is not permitted.
    - (b) Nuts:
      - 1) Damage is not permitted.
      - 2) For self-locking nuts, do a check of the self locking feature. Refer to AMM PAGEBLOCK 70-20-01/201.
    - (c) O-rings:
      - 1) O-rings should not be used again.
    - (d) Brackets:
      - 1) Cracks:
        - a) Not permitted.
      - 2) Scratches, nicks, pits, scoring:
        - a) Permitted up to 5% of the original thickness. Blend smoothly to 63Ra finish.
      - 3) Deformation:
        - a) Not permitted.
    - (e) Pneumatic ducts:
      - 1) Refer to CMM 36-10-03 for inspection and repair information.
    - (f) Hoses:
      - 1) Hoses that include fire shielding (hydraulic hoses):
        - a) Visually examine the hose for damage. If damage is found, refer to AMM PAGEBLOCK 20-10-52/801 for inspection and repair information.
        - b) Damage to the fire protection shielding is not permitted.
      - 2) Hoses that do not include fire shielding (IDG oil cooling hoses and pneumatic hoses):
        - a) Visually examine the hose for damage. If damage is found, refer to AMM PAGEBLOCK 20-10-52/401 for inspection and repair information.
    - (g) Tubes:

71-00-04

QEC INSPECTION/CHECK FIGURE 1
Page 1
Oct 05/2007

#### **CFM56 ENGINES (CFM56-7)**



#### 737-600/700/800/900 POWERPLANT BUILDUP MANUAL

- 1) Refer to AMM PAGEBLOCK 20-10-51/801 for inspection and repair information.
- (h) Line Replaceable Units (LRU)(IDG, hydraulic pump, bleed air regulator, fire detectors, etc.):
  - 1) Refer to the applicable CMM for inspection and repair information.
- (i) Structural parts (forward and aft engine mounts, thrust links):
  - 1) Refer to the applicable CMM for inspection and repair information.
- (i) Wire Harnesses:
  - 1) For vendor wire harnesses (such as those owned by the engine manufacturer), refer to the applicable vendor CMM for inspection and repair information.
  - 2) For Boeing harnesses, refer to the Standard Wiring Practices Manual for inspection and repair information.
- (k) Aluminum foil markers:
  - 1) Refer to AMM PAGEBLOCK 20-10-21/401 for inspection and replacement information.

71-00-04