#### **OPERATOR'S MANUAL**

LATHE, BRAKE DRUM, FLOOR
MOUNTED, 60 INCH RATED SWING,
25 INCH MAXIMUM DRUM DIAMETER, W/GRINDING PROVISIONS,
1 HORSEPOWER DRIVE MOTOR,
1/2 HORSEPOWER GRINDING MOTOR,
115-VOLT, 60-CYCLE, SINGLE-PHASE
(STAR MACHINE AND TOOL COMPANY MODEL 1960) (4910-516-6192)

This reprint includes all changes in effect at the time of publication -Change 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY
MAY 1965

TM 9-4910-446-10 is published for the information and use of all concerned.

By Order of the Secretary of the Army:

HAROLD K. JOHNSON, General, United States Army, Chief of Staff.

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NG: State AG (2); United-Same as Active Army except allowance in one copy to each unit. USAR: None.

For explanation of abbreviations used, see AR 32-50.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 16 January 1973

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LATHE, BRAKE DRUM, FLOOR MOUNTED,
60 INCH RATED SWING, 25 INCH
MAXIMUM DRUM DIAMETER, W/GRINDING
PROVISIONS, 1 HORSEPOWER DRIVE MOTOR,
1/2 HORSEPOWER GRINDING MOTOR,
115-VOLT, 60-CYCLE, SINGLE-PHASE
(STAR MACHINE AND TOOL COMPANY
MODEL 1960) (4910-516-6192)

This change is current as of 6 December 1972

TM 9-4910-446-10, 19 May 1965, is changed as follows:

- 1. This change identifies the type of catalog maintenance action taken in connection with the updating of previously published data.
- 2. This change is separated by additions, deletions, and changes and is a list of items added, deleted, and/or changed since the last previously published data.
- 3. All Federal stock numbers and reference numbers, additions, deletions, and changes should be made to the indexes.
- 4. Parts included with end items and considered a component or part of the item configuration, are listed on the following tables. The part numbers listed are for Star Machine and Tool Company Model 1960.
- 5. The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commander, US Army Weapons Command, ATTN: AMSWE-MAS, Rock Island, IL 61201.

Part	Part No.	Part	Part No.
		CONE, TAPERED: 4-5/16 X 4-31/32 X 2	57127:R-365
ARBOR, DRUM: 1 in. dia, 1 in. thd	57127:R-740	bore	57407 D 000
ARBOR, DRUM: 1 in. dia, 11/16 thd	57127:R-640	CONE, TAPERED: 4-56/64 X 5-1/2 X 2 bore	57127:R-360
ANDON, DINOW. 1 III. dia, 11/10 tild	37 127 .IX-0 <del>4</del> 0	CONE, TAPERED: 5-25/64 X 6-1/32 X 2	57127:R-355
ARBOR, DRUM: 2 in. dia, 2 in. thd	57127:R-390	bore	
DANID DDAKE DDUM OU ENOING	57407 OD 40	CONE, TAPERED: 5-59/64 X 6-9/16 X 2	57127:R-350
BAND, BRAKE DRUM SILENCING: passenger car	57127:SB-10	bore CONE, TAPERED: 6-31/64 X 7-1/8 X 2	57127:R-345
BAND, BRAKE DRUM SILENCING:	57127:SB-20	bore	37 127 .IX-343
truck		CONE, TAPERED: 6-63/64 X 7-5/8 X 2	57127:R-340
BAR, DRAW: arbor holding	57127:R-405	bore	
1 bore	E7407.D C00	CONE, TAPERED: 7-17/64 X 8-11/61 X	57127:R-335
CONE, CENTERING: 1-15/32 X 2-3/8 X 1 bore	57127:R-680	2 bore HONE, SHARPENING: tool bit	57127:CB-75
CONE, CENTERING: 2-15/16 X 3-1/4 X	57127:R-665	NUT, ARBOR: 11/16 thd	57127:R-645
1 bore		,	
CONE, CENTERING: 3-1/16 X 4 X 4 X	57127:R-670	NUT, ARBOR: 1 in. thd	57127:R-745
1 bore CONE, RADII: 1-13/32 X 2-3/8 X 1 bore	57127:R-580	NUT, ARBOR: 2 in. thd	57127:R-395
CONE, NADII. 1-13/32 X 2-3/0 X 1 bole	37 127 .13-300	NOT, ARBOR. 2 III. IIId	37 127 .13-393
CONE, RADII: 1-1/2 X 1-45/64 X 1 bore	57127:R-550	PLATE, FACE: 1 in. bore	57127:R-655
CONE, RADII: 1-19/32 X 1-49/64 X 1 bore	57127:R-560	REDUCER: 1 in. od to 11/16 id, 1-3/8 lg	57127:R-501
CONE, RADII: 1-27/32 X 2-55/64 X 1	57127:R-620	REDUCER: 2 in. od to 1 in. id, 1-1/8 lg	57127:R-331
bore			
CONE, RADII: 1-61/64 X 2-13/64 X 1	57127:R-570	SPACER, ARBOR: 11/16 bore, 1 in. Ig	57127:R-530
bore CONE, RADII: 2-1/16 X 3-19/64 X 1	57127:R-630	SPACER, ARBOR: 1 in. bore, 1 in. Ig	57127:R-540
bore	37 127.N-030	SPACEN, ANDON. 1 III. BOTE, 1 III. Ig	37 127.K-340
CONE, RADII: 2-19/64 X 2-1/2 X 1 bore	57127:R-590	SPACER, ARBOR: 2 in. bore, 1 in. Ig	57127:R-330
CONE, RADII: 2-27/64 X 2-39/64 X 1	57127:R-600	SPACER, ARBOR: 2 in. bore, 2 in. Ig	57127:R-325
bore CONE, RADII: 2-35/64 X 2-25/64 X 1	57127:R-610	SPACER, ARBOR: 2 in. bore, 3 in. Ig	57127:R-320
bore	07 127 010	or reality, ratio of the bore, of the light	07 127.11 020
CONE, TAPERED: 3/4 X 1-1/2 X 11/16	57127:R-510	SPRING, COIL: 4 coil, 2-1/8 od	57127:R-315
bore	F7407-D F00		E7407.D 075
CONE, TAPERED: 1-1/16 X 1-3/4 X 1 bore	57127:R-520	SPRING, COIL: 4 coil, 2-3/8 id tapered to 1-1/2 id	57127:R-675
CONE, TAPERED: 2-15/64 X 3-3/8 X 2	57127:R-385	TOOL BIT: 5/8 sq, carbide tipped	57127:CB-35
bore		TOOL BIT: 5/8 sq HSS	57127:CB-36
CONE, TAPERED: 2-23/64 X 3-11/32 X	57127:R-380	WRENCH, OPEN END, FIXED: sgle-hd	57127:R-152
2 bore	E7107.D 075	type, 15 deg angle of hd, 7/16	
CONE, TAPERED: 3-17/64 X 3-52/64 X 2 bore	57127:R-375	wrench opng WRENCH, OPEN END, FIXED: sgle-hd	57127:R-410
CONE, TAPERED: 3-25/32 X 4-27/64 X	57127:R-370	type, 15 deg angle of hd, 3 wrench	2
2 bore		opng, 17 nom o/a Ig	

# Section II. BASIC ISSUE ITEMS LIST

(1) (2) Source,		(2)	(3)		(5)	(6	6)	
maint. and		Federal			Qty.	Illusti	ration	
	recov. cod I	e I	stock No.	Description	Unit	inc. in	(a)	(b)
(a)	(B)	(C)	NO.		of	unit	Fig.	Item
Source	Maint.	Recov.			issue	pack	No.	No.
				BASIC ISSUE ITEMS LIST-SECTION II BIIL is a list in alphabetical sequence of items which are furnished with, and which must be turned in with, the end item.				
С	0		5120-224-2504	KEY, SOCKET HEAD SCREW: hex type, L-hdl, 5/64 across fl, 1-7/8 nom lg arm lg	EA	1	1	50
С	0		5120-240-5292	KEY, SOCKET HEAD SCREW: hex type, L-hdl, 1/8 across fl, 2-1/4 nom lg arm lg	EA	1	1	49
С	0		5120-293-1266	WRENCH, BOX: stght sgle-hd type, hex shape wrench opng, 3/4 opng, 4-3/8 nom o/a lg	EA	1	1	45
С	0		5120-293-2124	WRENCH, OPEN END, FIXED, dble-hd type, 15 deg angle of hd, engineer style, 1-1/4 and 1-5/8 wrench opngs, 14 nom o/a lg, 9/16 thk of hd	EA	1	1	51
С	0		NA	WRENCH, OPEN END, FIXED: sgle-hd type, 15 deg angle of hd, 1/4 wrench opng, 3-1/2 nom o/a lg, 3/16 thk hd	EA	1	1	48
С	0		5120-277-1261	WRENCH, OPEN END, FIXED: sgle-hd type, 15 deg angle of hd, 3/8 wrench opng, 3-7/8 nom o/a lg, 17/64 thk hd	EA	1	1	47
				Federal stock numbers are being assigned for items marked NA and then numbers will be published at a later date.				

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TOE 55-465 (2)

NG: None.

USAR. None

For explanation of abbreviations used, see AR 310-50.

#### SECTION I USE AND MAINTENANCE

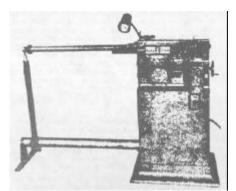


Fig. 1-1. Brake Drum Lathe

#### 1-1. INTRODUCTION

- 1-2. The Star Brake Drum Lathe, Model 1960 is designed to put a smooth, accurate finish on used or unfinished brake drums (see figure 1-1).
- 1-3. The Model 1960 wilt handle passenger car drums as well as being capable of turning the largest and heaviest truck drums.
- 1-4. The Model 1960 is designed to keep maintenance expenses at a minimum and operating efficiency at a maximum.
- 1-5. The following instructions and parts breakdown will help ensure many years of high quality, troublefree drum turning. Numbers in parentheses refer to item numbers (see figure 2-1).

#### 1-6. TABLE OF SPECIFICATIONS

	ia.)6" to 42"
Drum Cutting Depth (face	e)10"
Speeds, Number of Chan	gesInfinite
Speeds, Cutting Range	30 to 150 r.p.m.
Swing	60"
Motor	1 h.p., 115-230v., 60C.,
	Single Phase 1725 r.p.m.
Feed, Range	O to Rapid Traverse
Number of Feeds	Infinite
Weight	590 lbs.

#### 1-7. INSTALLATION

- 1-8. Remove machine and all accessories from shipping container.
- 1-9. Check all parts with packing slip to insure all items are included.
- 1-10. Clean the entire machine, adapters, and accessories with a good grease solvent to remove the protective coating on the machined surfaces,.
- 1-11. Place machine in desired position and securely bolt it to the floor. Make sure machine is level by using a level on the top plate of the cabinet.
- 1-12, Install the 2" Arbor, R-390, into the Spindle (28) and tighten until Arbor is drawn up tightly in Spindle (28).
- 1-14. Place the Vertical Tube (184) over the Horizontal Tube (197) and position the Horizontal Tube (197) over the plug which is welded to the base.

- 1-15. Fasten the Bottom Mounting Plate (198) to the base of the Horizontal Tube, (197).
- 1-16. By use of a plumb bob, level, and shims, permanently position the Bottom Mounting Plate (198) so that the Horizontal Tube (197) is directly beneath the Arbor and level to the floor. Tighten Cap Screw (200) at rear of Horizontal Tube (197).
- 1-17. Swing the Vertical Tube (184) into the upright position and slide it toward the Arbor. Raise the Adjusting Bushing (187) by hand until the Rod End Bearing (188) will slide over the end of Arbor and the Vertical Tube (184) is directly below Arbor. Fasten the Vertical Tube (184) to the Horizontal Tube (197) by tightening the Locking Screw Shaft (195). Place Cam Shaft (190) in the up position until Pin (194) hits Stop Pin (193). Rotate the Adjusting Bushing (187) until you feel it touch the Cam (191). This is done by slowly moving the Cam Shaft (190) while you are rotating the Adjusting Bushing (187) until you feel a slight drag on the Cam (1917). Tighten the Jam Nut (189). The outboard support is now permanently adjusted.
- 1-18. Place Tool Bit, CB-35, into Boring Bar (77) and fasten securely with the two Square Head Set Screws (78). The tool bit slot in the end of the Boring Bar (77) is deep enough to enable several degrees of adjustment of the tool bit angle. The groove running along the Boring Bar (77) should be lined up with the slit in the Compound Rest (73).
- 1-19. Position Lamp (121) over Lamp Bracket (122) and plug into Receptacle (85). Use standard bulb, 75 watts or less, moistening bulb neck before slipping it through silicone grommet at the base of reflector.

After screwing bulb into socket, make sure air space between shade and reflector is equal on all sides.

1-20. Plug machine into 115 volt outlet and the machine is now properly installed.

#### 1-21. OPERATIONAL PROCEDURES

- 1-22. Mount drum on arbor using one of the following methods which apply. Be sure that the Arbor is mounted in Spindle (28) before mounting hub and drum assembly.
- a.-Loose Drum Set-up. Select proper Tapered Cone to fit in center of drum. Place one Face Plate on Arbor followed by the Spring and Tapered Cone. Place drum on Arbor over Tapered Cone and push drum up to pads of Face Plate. Place other Face Plate on Arbor and push up to drum. Place additional Spacers on Arbor so that the two Face Plates can be tightened together when the Arbor Nut is put on the end of Arbor and tightened. Make sure that the face plate pads are riding on a smooth dean surface of the drum (see figure 1-2).
- b.-Tapered Hub. Select the proper Tapered Cones to fit in drum hub. On some drums the Tapered Cones go in about 1/4 of an inch. Place Tapered Cone for inside

- of tapered hub onto Arbor followed by the drum and outside Tapered Cone. Place additional Spacers onto Arbor so that when the Arbor Nut is tightened at the end of the Arbor, the two Tapered Cones are drawn up tightly against the tapered hub (see figure 1-3).
- c.-Ball Bearing Equipped Hub. Select the proper Radii Cone to fit into the inner and outer bearing cups. Radius of Radii Cone selected should seat in Center of bearing cup radius. Place Radii Cone for inner bearing cup onto Arbor followed by drum and Radii Cone for outer bearing cup. Place additional Spacers on Arbor so that when the Arbor Nut on the end of Arbor is tightened, the two Radii Cones are drown up securely to the bearing cups. Make sure bearing cups and Radii Cones are clean before mounting (see figure 1-4).
- d.-Tapered Bearing Equipped Hub. Select the proper Radii Cone to fit into the inner and outer bearing cups. Radius of Radii Cone selected should seat somewhere on cup bearing surface. In most cases, this will be approximately in the center of bearing cup. Place Radii Cone for inner bearing cup on Arbor, followed by hub and Radii Cone for outer bearing cup. Place additional Spacers on Arbor so that when the Arbor Nut is tightened on the end of the Arbor, the two Radii Cones will draw up securely to the bearing cups and Radii Cones are clean before mounting (see figure 1-5).
- e.-Tapered Bearing Hub. (Truck). Select the proper Tapered Cones to fit into the inner and outer bearing cups. The Tapered Cone should fit so that it is almost completely inside the bearing cup. There are conditions when the Tapered Cone will barely enter the cup or just about go through the cup. Place the Tapered Cone for the inner bearing cup on the Arbor, followed by the drum and Tapered Cone for outer bearing cup. Place additional Spacers on the Arbor so that when the Arbor Nut on the end of the Arbor is tightened, the two Tapered Cones are drawn securely against the bearing cups. Make sure that the Tapered Cones and bearing cups are clean (see figure 1-6).
- 1-23. Place Brake Drum Silencing Band, SB-10 or SB-20, around drum and apply enough tension so that the drum is snugly wrapped. On passenger drums, the Brake Drum Silencing Band, SB-10, should be positioned even with the edge of open side of drum. The Brake Drum Silencing Band should not be too tight or too loose on drum.
- 1-24. If drum is to be turned with wheels mounted, then the outboard support should always be used.
- 1-25. Before drum and wheel assembly is resting with full weight on the Arbor, make sure that the Vertical Tube (184) of the outboard support is in place and the Cam Shaft (190) is In the up position.
- 1-26. For best results, the outboard support should be used on all drum and wheel assemblies.
- 1-27. The Boring Bar (77), Compound Rest (73), Cross Slide (59) and Apron (45) should be adjusted so that the

- Tool Bit can be placed in the rear of the drum without interference. This adjustment depends on the diameter and depth of the drum. The Boring Bar (77) can be slid in and out of the Compound Rest (73) by loosening the Cap Screw (76). The Compound Rest (73) can be rotated by loosening Cap Screw (74) and Cap Screw (76) the Cross Slide (59) can be moved in or out by rotating Handle (71). 1-28. Turn machine on at Switch (112). Make sure Cut Off Switch (117) is also on.
- 1-29. If drum has a prominent ridge on outer or inner edge of braking surface, remove with rough cut before observing the following procedures.
- 1-30. Bring Tool Bit into rear of drum by moving Direction Lever (208) down and moving Speed Lever (207) down into the rapid traverse range.
- 1-31. As Tool Bit approaches rear of drum, raise up on Speed Lever (207) and move Direction Lever up to neutral position.
- 1-32. Bring Tool Bit to maximum depth of drum by rotating Large Handwheel (182).
- 1-33. Adjust Cut Off Rod (53) so that machine will shut off after Tool Bit has cleared drum. The Cut Off Rod (53) con be adjusted by merely pushing it. The drag on the Cut Off Rod (53) is set at the factory and should be such that the Cut Off Rod (53) will trip the Cut Off Switch (117) but not accidentally break it if the Apron (45) is hand cranked.
- 1-34. Advance Handle (71) until Tool Bit touches inside surface of drum. Each graduation on the Graduated Collar (68) represents .001" of travel of the Tool Bit. Advance Handle (71) an additional .10" into the drum. Lock Cross Slide (59) by tightening Thumb Screw (57).
- 1-35. Rotate Handwheel (99) counter clockwise in order that the drum will rotate in the lower r.p.m. range.
- 1-36. Move Direction Lever (208) up to move Tool Bit to the right.
- 1-37. Move Speed Lever (207) down into the rough cut range and lock into position by rotating Speed Lever (207) clockwise. If drum does not clean up, repeat above procedures.
- 1-38. When Tool Bit leaves drum, move Direction Lever (208) down to neutral position.
- 1-39. Remember Graduated Collar (68) reading, loosen Thumb Screw (57) and rotate Handle (71) back .015".
- 1-40. Move Direction Lever (208) down and unlock Speed Lever (207) and move it down to the rapid traverse range.
- 1-41. As Tool Bit approaches rear of drum, -raise Speed Lever (207) until Tool Bit stops moving.
- 1-42. Move Direction Lever (208) up to neutral position.
- 1-43. Bring Tool Bit to maximum depth of drum by rotating Large Handwheel (182).
- 1-44. Turn Handle (71) to rough cut reading plus an additional .002" and lock Cross Slide (59) by tightening Thumb Screw (57).

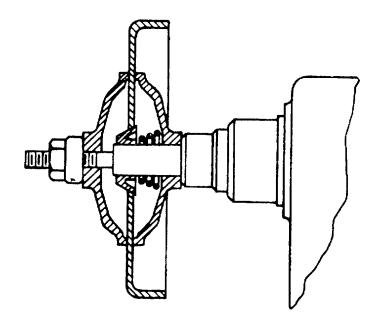


Fig. 1-2 - LOOSE DRUM SET-UP

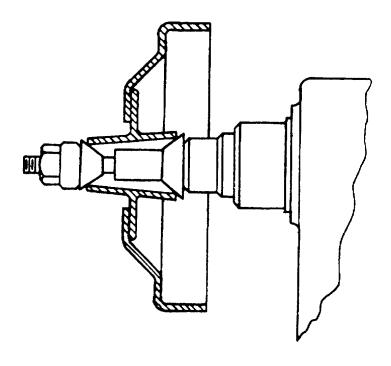


Fig. 1-3 - TAPERED HUB

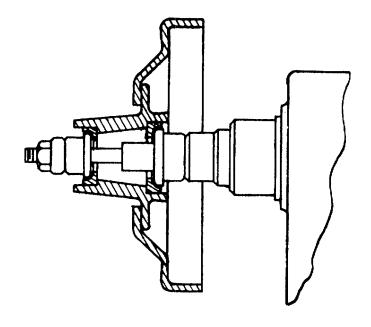


Fig. 1-4 - BALL BEARING EQUIPPED HUB

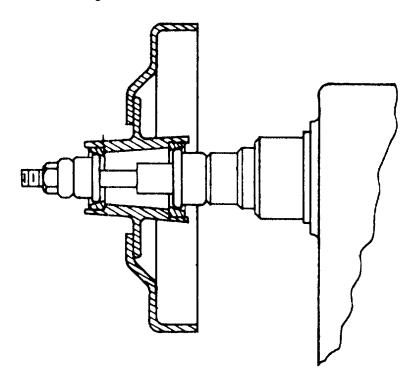


Fig. 1-5 - TAPERED BEARING EQUIPPED HUB

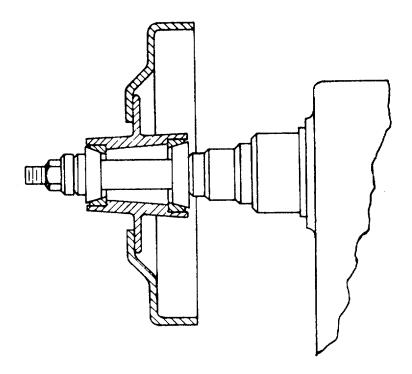


Fig. 1-6 - TAPERED BEARING HUB (TRUCK)

- 1-45. Rotate Handwheel (99) clockwise until drum is rotating in the high r.p.m. range.
- 1-46. Move Direction Lever (208) up and move Speed Lever (207) down into finish cut range and lock by rotating Speed Lever (207) clockwise.
- 1-47. When Tool Bit leaves the drum, the drum should have an accurate and smooth finish.
- 1-48. Move Direction Lever (208) down to the neutral position and raise Speed Lever (207) up to the up position.
- 1-49. Turn machine off at Switch (112) and remove drum from machine.
- 1-50. The above procedures are for instruction purposes and are not necessarily correct for all cases.

Drum condition determines the proper depth of cuts, carriage feed, and spindle r.p.m. As the operator gains experience with this machine, he will be able to make the proper settings for maximum performance, efficiency and accuracy.

#### 1-51. MAINTENANCE PROCEDURES

#### 1-52. Lubrication

- a.-Main Bearings (3 & 4). Apply a few drops of light machine oil (SAE #10) in both Head Oilers (5).
- b.-Lead Screw (42) and Lead Screw Nut (43). Apply a few drops of light machine oil (SAE #10) along length of Lead Screw (42) once a week.
- c.-Cross Slide (59). Apply a few drops of light machine oil (SAE #10) at Oiler (60) and between Graduated Collar (68) and End Plate (66).
- d.-Bearing (161) and Pillow Block Bearing (166). Apply a few drops of light machine oil (SAE #10) at both oil cups inside Guard (173) every 90 days.
- e.-Gear box. Maintain the oil level in the center of Oil Window (8) with gear oil (SAE #90 or MIL L 15019C, Grade 6135). Add oil by removing Vented Plug (6). Caution: Do not fill higher than the top of Oil Window (8).
- f.-Control Box (143). This box should be drained once each year or each 1500 hours of operation by removing Drain Plug (210). Twelve ounces of new oil (all purpose #80) or MIL L-2105) should be added at Vent Plug (209).
- g.-Variable Speed Pulley (201). Lubricate grease fitting in rear of machine with one shot of light needle bearing grease every 90 days.
- h.-Apron ways. Move Apron (45) to extreme front position, wipe away all dirt or cutting particles and apply several drops of light oil (SAE #10) to all exposed surfaces of the dovetail ways. Move Apron (45) in the, opposite direction and repeat above procedures. Perform weekly.
- i.-Cross slide ways. Back out Cross Slide (59) to extreme out position, wipe the dovetail surfaces clean and apply light oil (SAE #10) weekly.
- j.-Wipe machine free of dust and cutting particles with oil rag

#### 1-53. Trouble Shooting.

a.-Problem: Chatter.

Reason:

Wrong Cones and Adapters.

Face Plate, R-655, making poor contact due to excessive dirt between face plate pads and drum.

Dull Tool Bit.

Misaligned Boring Bar (77).

Failure to use Brake Drum Silencing Band, SB-10 or SB-20.

Improper mounting of Brake Drum Silencing Band, SB-10 or SB-20.

Spindle r.p.m. too slow or too fast for depth of cut.

Outboard support not bolted to floor.

The following areas should be checked for tightness:

- (1) Tool bit, CB-35 or CB-36.
- (2) Boring Bar (77).
- (3) Gib (61).
- (4) Gib (49).
- (5) Draw bar, R-405.
- (6) Arbor Nut, R-645, R-745 or R-395.
- (7) Drum on hub.
- (8) Bearing cup in hub.

Failure to tighten Cross Slide (59), Thumb Screw (57).

b.-Problem: Loss of power.

Reason.

Low voltage to motor.

Worn or loose drive belts.

Dull tool bit.

Failure to follow lubrication Instructions.

c.-Problem: Machine shuts off during operation.

Reason: Cut Off Rod (53) not adjusted properly.

Thermal overload switch (112) cuts off because machine is overworked.

d.-Problem: Machine will not start.

Reason: Cut Off Switch (117) Is in off position.

Thermal overload Switch (112) has not had time to cool.

#### 1-54. Calibration.

- a.-Gib (49) adjustment. Loosen Jam Nuts (51). Tighten Set Screws (50) until Apron (45) looseness is taken up. Tighten Jam Nuts (51).
- b.-Cross slide Gib (51) adjustment, Loosen Jam Nuts (63). Tighten Gib Screws (62) until Cross Slide (59) looseness is taken up. Tighten Jam Nuts (63).
- c.-Spindle (28). End play adjustment. Remove Guard (173) and Housing Cover (39). Loosen Lock Washer (35) from Nut (36). Tighten Nut (36) so that when you press hard at rear of Spindle (28) you can get a .003 feeler gauge between the Spindle (28) nose and the Front Main Bearing (3). Tighten Lock Washer (35) onto Nut (36) and replace Housing Cover (39) and Guard (173).
- d.-Worm (14) end play. Remove Guard (173), Large Pulley (25) and Bearing Retainer (19). Remove either .010" Shim, (23) or .005" Shim (24) depending on amount of take up. Replace Bearing Retainer (19), Large Pulley (25), and Guard (173).

#### 1-55. DISASSEMBLY.

- 1-56. Remove Arbor, R-390, R-640, or R-740 by loosening the Draw Bar, R-405, one turn and hitting end of Draw Bar with lead hammer until Arbor breaks free of Spindle (28).
- 1-57. Outboard support is removed by loosening two Cap Screws (199) and Cap Screw (200) and sliding Horizontal Tube (197) off of welded plug.

TABLE 1 - BRAKE DRUM CHARACTERISTICS - MILITARY VEHICLES

SNL	MODEL	HUB NO.	DIA. X DEP.	ORD ENG STD	CONE	roc	ORD ENG STD	CUP NO	roc
G842	XM455 XM456	8719915	14.9 x 3.3	CAS X 5.1	712869		CAS X 6.1	712868	
G751	M119 M118 M118A1 M164E1	8343586	16.4 x 6	CAS X 7.1 - CAS X 6	706691 712120	NI TUÓ	CAS X 7.1 CAS X 6	712286 712119	NI OUT
G815	M349	8720968	16.5 x 6.7	CAS X 5 CAS X 4	706683 706671	IN OUT	CAS X 6 CAS X 4	705143 705116	NIOUT
G800	M197 M197A1	8327340 B747994	16.4 x 6	CAS X 7.1 CAS X 4 CAS X 7.1 CAS X 4	706691 706671 706691 706671	TUO TUO TUO	CAS X 7.1 CAS X 4 CAS X 7.1 CAS X 4	712286 705116 712286 705116	TUO TUO TUO
	M198	7409395		CAS X 7.1	706691		CAS X 7.1	705155	OUT
G816	M345	8710723	16.4 x 6	CAS X 7.1	706691	N OUT	CAS X 7.1 CAS X 7.1	712286 705155	IN OUT
G750	M126 M127 M126A1 M127A1 M128A1	7409395 8333869	16.4 x 6	CAS X 7.1 CAS X 7.1 CAS X 7.1	706691 706691 712286	ZI TUO	CAS X 7.1 CAS X 7.1 CAS X 7.1 CAS X 7.1	712286 705155 712286 705155	OUT OUT
G755	M131 M131A1 M131A2	7509395 8333869	16.4 x 6	CAS X 7.1	706691 706691		CAS X 7.1 CAS X 7.1 CAS X 7.1 CAS X 7.1	712286 705155 712286 705155	N OUT N OUT
G802	M269 M270	7979324	16.4 x 6	CAS X 7.1	706691		CAS X 7.1 CAS X 7.1	712286 705155	IN OUT
G797	M172 M172A1	8379664 8787067RT 8687068LH	12.2 x 6.6	CAS X 6 CAS X 5.1 CAS X 7 CAS X 5.1	706704 707081 706704 707081	700 700 700 700	CAS X 7 CAS X 6 CAS X 7 CAS X 6	705187 705167 705187 705167	IN OUT IN OUT
G811	M199	8720685	16.4 × 7.5	CAS X 6.1 CAS X 7	706707 706704	IN OUT	CAS X 7	705194 705187	IN OUT
G160	M15A1 M15A2	7348199	16 x 6	CAS X 7 CAS X 5.1	706704 706784	IN OUT	CAS X 7 CAS X 5.1	705187 705341	IN OUT

SNL G740 & G758	HUB ORD NO 7375142 7375144 Rear wheel hubs a	CUP MFG'S NO* 18520 re taper bore	LOC INF OUTF ed to fit tape	CONE MFG'S NO* 18590 red shaft	LOC INF OUTF	BRAKE DRUM DIA. IN 8.948	BRAKE DRUM DEPTH IN. 2 17/64
G741	8376840	28622	INF INR	28682	INF INR	14.155	2 11/32
		2924	OUTF OUTR	2984	OUTF OUTR		
G742	8357986	3920E	INF INR	3994	INF INR	14.995	3 11/16
		3920E	OUTF OUTR	392	OUTF OUTR		
G749	GM2280042	39520	INF INR	39590	INF INR	14.995	3 11/32
		39520	OUTF OUTR	39590	OUTF OUTR		
G744	7979324	592A 592A	INFR OUTRF	593A 596	INF OUTRF	16.495	6 1/16
G792	M34KM46 M12QJ451	5735 522 64700 854	INF OUTF INR OUTR	5760 528A 64450 861	INF OUTF INR OUTR	17.25	6 15/32

\*Timken IN-Inner OUT-Outer F--front R--rear

# SECTION II PARTS BREAKDOWN PARTS LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM

11	A = - !: ·		LIST FOR WIODEL 1900-G, LATHE, BRAKE DRUW	Oues	Ouer
Item	Ass'y.	Part		Quan.	Quan.
No.	No.	No.	Description	per	per
				Ass'y.	Mach.
1	100387		Main Housing Assembly		1
2		300083	Housing Main	1	1
3		150005	Bearing, Main, Front	1 1	1
				-	
4		150006	Bearing, Main, Rear	1	1
			END Main Housing Assembly		
5		230015	Oiler, Head	2	2
6		230016	Plug, Vented	1	1
7		990021	Plug	1	
8		990019	Window, Oil		!
9		990274	Plate, Name	1	1
10		990018	Plate, Name, Star	1	1
11			Screw, Drive, #2, 1/4" Long, Plated, Hardened	4	4
12	100036		Shaft Assembly		1
13	100000	600002	Shaft, Drive	1	1
14		500006	Worm	1	1
15		150007	Cone, Bearing	2	2
16		150012	Cup, Bearing	1	2
17		350003	Key, Shaft, Drive	1	1
		000000	END Shaft Assembly		
40	400000				4
18	100029		Bearing Retainer Assembly		1
19		300008	Retainer, Bearing	1	1
20		250002	Seal, Oil	1	1
21		150012	Cup, Bearing	1	2
			END Bearing Retainer Assembly		
22			Screw, Cap, Socket Head, 1/4-20 x 3/4"	4	10
		050000			
23		250029	Shim, .010	2	2
24		250030	Shim, .005	1	1
25		500133	Pulley, Large	1	1
26			Screw, Set, Socket, Nyloc, 5/16-18 NC x 5/16"	1	2
27		350002	Key, Pulley, Large	1	1 1
			, ,, ,,		
28		600086	Spindle		1
29		250056	Seal, Spindle	1	1
30			Screw, Machine, Round Hd. 6-32 x 3/4"	2	2
31		990024	Ring "O"	1	1
32		650006	Spacer, Spindle	1	1
33			Gear, Worm	1 1	
		500134		'	
34		350001	Key, Gear		1
35		990013	Washer, Lock	1	1
36		700005	Nut	1	
37		250001	Gasket, Cover	1	1
38	100389	200001	Cover Assembly		1
	100369	470407			1 '
39		170107	Cover, Housing	1	1
40		250003	Seal	1	1
			END Cover Assembly		
41			Screw, Cap, Socket Hd. 1/4-20 x 3/4"	6	10
42		700234	Screw, Lead	1	1
43		700234		1	1
		700241	Nut, Screw, Lead	1	
44			Nut, Hex, Jam, Finished, Plated, 1/2-13	1	1
45		300084	Apron	1	1
46		130216	Plate, Wiper	2	2
47		990286	Wiper	2	2
48			Screw, Machine, Round Hd, 10-24 x 1/2", Plated	6	6
		120204			
49		130381	Gib	1	2
50		700242	Screw, Set	3	3
51			Nut, Jam, Hex, Finished, 1/4-20	3	6
52	100391		Cut Off Rod Assembly		1
53		370114	Rod, Cut Off	1	1
54		650010	Retaining Ring	1 1	1
34		030010		<b>'</b>	'
			END Cut Off Rod Assembly		
55			Screw, Set, Socket, 1/4-20 x 3/8"	1	1
56		990140	Plug, Nylon	1	2
57			Screw, Thumb, Plated, 1/4-20 x 1-1/2"	1	1
58		990140	Plug, Nylon	1	2
59		300085	Cross Slide	1	1
				1	
60		230017	Oiler	1	1
61		130381	Gib	1	2
62		700199	Screw, Gib	3	3
63			Nut, Jam, Hex, Finished, 1/4-20	3	6
64		700235	Screw, Cross Slide	1	1
		7 55255		<u> </u>	<u> </u>
			8		
	[	1		1	I

Section II

PARTS LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM

Section II		PARIS	LIST FOR MODEL 1960-G, LATHE, BRAKE DRI		
Item	Ass'y.	Part		Quan.	Quan.
No.	No.	No.	Description	per	per
140.	140.	140.	Description	Ass'y.	Mach.
				7.00 ).	····ao····
65		990023	Washer, Bronze	1	1
66		130382	Plate, End	1	1
67			Screw, Cap, Socket Head, 5/16-18 x 1/2"	2	2
68		650250	Collar, Graduated	1	1
69		990144	Plug, Nylon, Collar,	1	1
70		000111	Screw, Set, Socket, 8-52 x 1/4"	1	1
		070445			1 :
71		370115	Handle	1	1
72		450039	Pin, Spring, Handle	1	1
73		300086	Compound Rest	1	1
74			Screw, Cap, Hex Head, 1/2-13 x 1-1/2	1	1
75			Washer, Flat, 17/32 I.D. x 1-1/16 O.D.	1 1	1
76			Screw, Cap, Hex Head, 1/2-13 x 3-1/2	1	1
77		900268	Boring Bar	1	1
78			Screw, Set, Sq. Hd. 3/8-16 x 5/8	2	2
79			Screw, Cap, Socket Hd, 3/8-16 x 1-1/4	4	4
80			Washer, Lock, 3/8" Med.	4	8
81		200062	Clip, Cord	1	1
82	100392		Cabinet Assembly		1
83		170108	Cover, Louvered	1	1
		170100			
84			Screw, Machine, Round Hd., 10-24 x 5/16"	8	8
85		200006	Receptacle	1	1
86			Screw, Machine, Round Hd., Plated, 10-24 x 7/16"	2	2
87	850164		Pulley Base Subassembly		1
88	333104	990296	Base, Pulley	1	1
89		650260	Collar, Base	2	2
90			Screw, Set, Socket, Nyloc, 1/4-20 x 1/4	2	4
91		150087	Bearing, Thrust	2	4
92		150088	Race, Thrust	4	8
93		400005	Sleeve, Connecting	1	1
94		450043	Pin, Spring	1	3
			END Pulley Base Subassembly		
95			Washer, Lock, 3/8" Med.	4	8
					4
96			Nut, Hex, Finished, Full, 3/8-16	4	
97		400006	Rod, Control	1	1
98		150078	Bushing, Flanged	1	1
99	100404		Handwheel Assembly		1
100		450358	Pin, Spring, Handwheel	1	2
101		200057	Motor	1	1
102		200058	Cord	1	1
103		200052	Plug, Cord	1	1
104		200050	Adapter	1	1
			Connector, Screw	1	1 1
105		200042			1 :
106		500137	Pulley, Motor	1	1
107		350013	Key, Pulley	1	1
108			Screw, Set, Socket, Nyloc, 5/16-18 x 7/16"	2	2
109			Screw, Cap, Hex Head, 5/16-18 x 3/4	4	4
				1	
110			Washer, Flat, 3/8 I.D. x 7/8 O.D.	4	6
111			Washer, Lock, 5/16" Med.	4	11
112		200053	Switch	1	1
113		200060	Heater Coil	1	1
114			Screw, Mach., Round Hd., 1/4-20 x 5/16"	2	2
115			Screw, Mach., Round Hd., Plated, 8-32 x 1/4	1	1
116		200061	Bushing, Snap	1	1
117		200003	Switch, Cut Off	1	1
118		990150	Ring, Off & On	1	1
119		200011	Nut, Switch	1 1	1 1
			·		1 4
120		990151	Seal, Nut	1	1
121		200004	Lamp	1	1
122		200036	Bracket, Lamp	1	1
123		130385	Plate, Mounting	1	1 1
	050400	100000		'	
124	850163		Plate Bearing Retainer Subassembly		1 !
125		650251	Retainer, Bearing, Plate	1	1
126		250058	Seal, Retainer	1	1
127		150087	Bearing, Thrust	1	4
128		150088	Race, Thrust	2	8
129		150090	Bearing, Needle, Collar	2	2
			END Plate Bearing Retainer Subassembly		
130		150087	Bearing, Thrust	1	4
131		150088	Race, Thrust	2	8
132		250022	Seal, Dust	1	1
		I	9		

Section II

PARTS LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM

No.   No.   No.   No.   Description   Description   Part   Assy.   Part   No.   No.   Description   Part   Part   Assy.   Milech   Milech   Part   Part   Milech   Part   Part   Milech   Part   Part	Section II		1 711101	LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM		
No.   No.   No.   Description   per   per   Assy.   Misch.	ltem	Δος'ν	Part		Quan	Quan
133				<b>5</b>		
133	No.	No.	No.	Description		
Screw, Cap., Soc. Hd., 14-20 x 1-12*   3   3   3   3   3   3   3   3   3					Ass'y.	Mach.
Screw, Cap., Soc. Hd., 14-20 x 1-12*   3   3   3   3   3   3   3   3   3						
134	400		450050	Die Daviel		
135   450356   Pin, Dowel   2   6   6			450356			
Screw, Cap, Hex Head, 516-18 x 56"   3   3   3   3   3   3   3   3   3	134			Screw, Cap, Soc. Hd., 1/4-20 x 1-1/2"	3	3
Screw, Cap, Hex Head, 5/16-18 x 5/6*   3   3   3   3   3   3   3   3   3	135		450356	Pin. Dowel	2	6
137						
138						
139	137			Washer, Lock, 5/16" Med.	3	11
139	138		650252	Spacer	1	1
140					1	1
141						· ·
142	140		500135		1	1
142	141		450359	Pin, Spring, Gear	1	1
143 100394 990287 Control Box Overload Coupling Assembly 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					1	1
144   100394   990298   390299   Adapter, Coupling, Overload Cupling, Overload   1   1   1   1   1   1   1   1   1			000007			
145   990298   900298   Coupling, Overload   1   1   1   1   1   1   1   1   1			990297		1	1
145   990298   900298   Coupling, Overload   1   1   1   1   1   1   1   1   1	144	100394		Overload Coupling Assembly		1
146	145		990298	Coupling Overload	1	1
147						;
148			990299		1	'
149	147	850155		Pinion Gear Subassembly		1
149	148		500138	Gear Pinion	1	1
Screw, Set, Socket, Nyloc, 10-24 x 1/4"   4   4   4						· ·
END Pinion Gear Subassembly			150002			
END Overload Coupling Assembly     2   6   6   1502   152   153   154   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   156   157   157   157   158   158   159	150			Screw, Set, Socket, Nyloc, 10-24 x 1/4"	4	4
END Overload Coupling Assembly     2   6   6   1502   152   153   154   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   155   156   157   157   157   158   158   159						
151						
Boit, Oven Head, 1/4-20 x 1/2"   4   4   4   4   4   5   5   5   5   6   6   6   6   6   6				1 0 7	1 _	_
Boit, Oven Head, 1/4-20 x 1/2"   4   4   4   4   4   5   5   5   5   6   6   6   6   6   6	151		450356	Pin, Dowel	2	6
153						
154						
155						
155	154		990300	Coupling	1	1
156					2	2
157			000007			
158						
169	157		500139		2	2
159	158			Screw, Set. Socket, Nyloc, 5/16-18 x 3/8"	2	2
160			650050			
161			650255	·		
162	160			Screw, Set, Socket, Nyloc, 1/4-20 x 1/4"	2	4
162	161		150091	Bearing	1	1
163						
164			650254			
165	163			Screw, Cap, Hex Head, 5/16-18 x 2-3/4	2	2
165	164			Washer Flat 3/8 LD x 7/8 OD	2	6
166						
167						
Screw, Cap, Hex Head, 5/16-18 x 7/8   2   2   2   169   Washer, Lock, 5/16" Med.   2   11   170   171   500141   Belt, "V", "57"   1   1   1   1   1   1   1   1   1	166		150092	Bearing, Pillow Block	1	1
Screw, Cap, Hex Head, 5/16-18 x 7/8   2   2   2   169   Washer, Lock, 5/16" Med.   2   11   170   171   500141   Belt, "V", "57"   1   1   1   1   1   1   1   1   1	167		600088	Shaft Short	1	1
169						
170						
171	169			Washer, Lock, 5/16" Med.	2	11
171	170		500140	Belt "V" 57"	1	1
172					- I	· ·
173						· ·
173	172		500142	Belt, "V", 58"	1	1
174	173		170109		1	1
Screw, Machine, Round Head, 10-24 x 1/4   5   5   5   5   5   5   5   5   5						
176			∠50060			
176	175			Screw, Machine, Round Head, 10-24 x 1/4		5
1777         700076         Screw, Cover         2         2           178         990318         Decal         1         1           179         990319         Decal, Spindle Speed Selector         1         1         1           180         990320         Decal, Oil         1         1         1           181         990321         Decal, Carriage Speed Control         1         1         1           182         100385         Large Handwheel Assembly         1         1         2           183         450358         Pin, Spring, Handwheel         1         2         2         1           184         100396         450358         Pin, Spring, Handwheel         1         2         2         2         2         1         1         2         2         2         1         1         2         1						2
178         990318         Decal         1 <t< td=""><td></td><td></td><td>700070</td><td></td><td></td><td></td></t<>			700070			
179         990319         Decal, Spindle Speed Selector         1						
179         990319         Decal, Spindle Speed Selector         1	178		990318	Decal	1	1
180         990320         Decal, Oil         1						1 1
181       990321       Decal, Carriage Speed Control       1					- I	
182     100385     Large Handwheel Assembly     1       183     450358     Pin, Spring, Handwheel     1     2       184     100396     Vertical Tube Assembly     1       185     650256     Retaining Ring     2     2       186     150093     Bushing     1     1       187     100399     Adjusting Bushing Assembly     1     1       188     150094     Bearing, Rod End     1     1     1       189     100398     Cam Shaft Assembly     1     1       191     370119     Cam Shaft Assembly     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1						1
182     100385     Large Handwheel Assembly     1       183     450358     Pin, Spring, Handwheel     1     2       184     100396     Vertical Tube Assembly     1       185     650256     Retaining Ring     2     2       186     150093     Bushing     1     1       187     100399     Adjusting Bushing Assembly     1     1       188     150094     Bearing, Rod End     1     1     1       189     100398     Cam Shaft Assembly     1     1       191     370119     Cam Shaft Assembly     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1	181		990321		1	1
183       450358       Pin, Spring, Handwheel       1       2         184       100396       650256       Retaining Ring       2       2         186       150093       Bushing       1       1         187       100399       1       1       1         188       150094       Bearing, Rod End       1       1       1         189       100398       Bearing, Rod End       1       1       1         190       100398       Cam Shaft Assembly       1       1       1         191       370119       Cam       1 <t< td=""><td>182</td><td>100385</td><td> </td><td>Large Handwheel Assembly</td><td></td><td>1</td></t<>	182	100385		Large Handwheel Assembly		1
184     100396     Vertical Tube Assembly     1       185     650256     Retaining Ring     2     2       186     150093     Bushing     1     1       187     100399     Adjusting Bushing Assembly     1       188     150094     Bearing, Rod End     1     1       189     Nut, Jam, Hex, Finished, Plated, 5/8-18     1     1       190     100398     Cam Shaft Assembly     1       191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       197     100395     Ball     1     2       198     130386     Plate, Mounting, Bottom     1     1		.00000	4E02E0		4	
185     650256     Retaining Ring     2     2       186     150093     Bushing     1     1       187     100399     Adjusting Bushing Assembly     1     1       188     150094     Bearing, Rod End     1     1       189     Nut, Jam, Hex, Finished, Plated, 5/8-18     1     1       190     100398     Cam Shaft Assembly     1     1       191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       197     100395     Ball     1     2       198     130386     Plate, Mounting, Bottom     1     1			430336		'	
186       150093       Bushing       1       1         187       100399       Adjusting Bushing Assembly       1         188       150094       Bearing, Rod End       1       1         189       Nut, Jam, Hex, Finished, Plated, 5/8-18       1       1         190       100398       Cam Shaft Assembly       1       1         191       370119       Cam       1       1       1         192       700243       Screw, Set, Socket       1       1       1       1         193       450355       Pin, Spring, Stop       1       1       1       1       1         194       450043       Pin, Spring       1       3       1       3       1       3       1       3       1       3       1       1       2       1       1       1       1       1       2       1       1       1       2       1       1       1       2       1	184	100396		Vertical Tube Assembly		1
186       150093       Bushing       1       1         187       100399       Adjusting Bushing Assembly       1         188       150094       Bearing, Rod End       1       1         189       Nut, Jam, Hex, Finished, Plated, 5/8-18       1       1         190       100398       Cam Shaft Assembly       1       1         191       370119       Cam       1       1       1         192       700243       Screw, Set, Socket       1       1       1       1         193       450355       Pin, Spring, Stop       1       1       1       1       1         194       450043       Pin, Spring       1       3       1       3       1       3       1       3       1       3       1       3       1       3       1       1       2       1       1       1       2       1       1       1       2       1       1       1       2       1       1       1       2       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1			650256		2	2
187     100399     Adjusting Bushing Assembly     1       188     150094     Bearing, Rod End     1     1       189     Nut, Jam, Hex, Finished, Plated, 5/8-18     1     1       190     100398     1     1     1       191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     3       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1						
188       150094       Bearing, Rod End       1       1         189       Nut, Jam, Hex, Finished, Plated, 5/8-18       1       1         190       100398       Cam Shaft Assembly       1         191       370119       Cam       1         192       700243       Screw, Set, Socket       1       1         193       450355       Pin, Spring, Stop       1       1         194       450043       Pin, Spring       1       3         195       100397       Locking Screw Shaft Assembly       1       1         196       330081       Ball       1       2         197       100395       Horizontal Tube Assembly       1       1         198       130386       Plate, Mounting, Bottom       1       1		4000	100093		1	
188       150094       Bearing, Rod End       1       1         189       Nut, Jam, Hex, Finished, Plated, 5/8-18       1       1         190       100398       Cam Shaft Assembly       1         191       370119       Cam       1         192       700243       Screw, Set, Socket       1       1         193       450355       Pin, Spring, Stop       1       1         194       450043       Pin, Spring       1       3         195       100397       Locking Screw Shaft Assembly       1       1         196       330081       Ball       1       2         197       100395       Horizontal Tube Assembly       1       1         198       130386       Plate, Mounting, Bottom       1       1	187	100399				1
189     Nut, Jam, Hex, Finished, Plated, 5/8-18     1     1       190     100398     370119     Cam Shaft Assembly     1       191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       197     100395     Ball     1     2       Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1	188		150094		1	1
190     100398     Cam Shaft Assembly     1       191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     3       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1						'
191     370119     Cam     1     1       192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     3       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1					'	'
192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1	190	100398		Cam Shatt Assembly		1
192     700243     Screw, Set, Socket     1     1       193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     2       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1	191		370119	Cam	1	1
193     450355     Pin, Spring, Stop     1     1       194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1     1       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1						1
194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1						
194     450043     Pin, Spring     1     3       195     100397     Locking Screw Shaft Assembly     1       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1     1       198     130386     Plate, Mounting, Bottom     1     1	193		450355	Pın, Spring, Stop	1	
195     100397     Locking Screw Shaft Assembly     1       196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1       198     130386     Plate, Mounting, Bottom     1     1			450043		1	3
196     330081     Ball     1     2       197     100395     Horizontal Tube Assembly     1       198     130386     Plate, Mounting, Bottom     1     1		100307	.500.0	Locking Scrow Shaft Assambly		
197         100395         Horizontal Tube Assembly         1           198         130386         Plate, Mounting, Bottom         1         1		100391				
197         100395         Horizontal Tube Assembly         1           198         130386         Plate, Mounting, Bottom         1         1	196		330081	Ball	1	2
198 130386 Plate, Mounting, Bottom 1 1		100395		Horizontal Tube Assembly		1
		.00000	120206		4	
199     Screw Can Hex Head 1/2-13 x 1"Long   2   2			130300			
	100			Screw, Cap, Hex Head, 1/2-13 x 1" Long	2	2
200 Screw, Cap, Hex Head, 1/2-13 x 5/8" Long 1 I						
10				Screw, Cap, Hex Head. 1/2-13 x 5/8" Long	11	

10

Section II

PARTS LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM

Section II		PARIS	LIST FOR MODEL 1960-G, LATHE, BRAKE DRUM		
Item	Ass'y.	Part		Quan.	Quan.
			December them		
No.	No.	No.	Description	per	per
				Ass'y.	Mach.
			l		I .
201		500136	Pulley, Variable Speed	1	1
202		150089	Bearing, Needle	2	2
203		250057	Seal, Pulley	2	2
204		650261	Collar, Pulley	1	1
205			Screw, Set, Socket, Nyloc, 5/16-18 x 5/16"	1	2
206		450043		1	3
		450045	Pin, Spring	!	3
207			Lever, Speed		
208			Lever, Direction		
209			Plug, Vent		
210			Plug, Drain		
			ACCESSORIES		
		R-315	Spring		1
		R-320	Spacer, 3" Long x 2" Bore		4
		R-325	Spacer, 2" Long x 2" Bore		1
		R-330	Spacer, 1" long x 2" Bore		1
		R-331	Reducer, 2" Dia. x 1" Bore x 1-1/8" Long		2
		R-335	Tapered Cone, 7-17/32" x 8-11/64" x 2" Bore		1
		R-340	Tapered Cone, 6-63/64" x 7-5/8" x 2" Bore		1
			Tapered Cone, 6-31/64" x 7-1/8" x 2" Bore		1
		R-345			
		R-350	Tapered Cone, 5-59/64" x 6-9/16" x 2" Bore		1
		R-355	Tapered Cone, 5-25/64" x 6-1/32" x 2" Bore		2
		R-360	Tapered Cone, 4-55/64" x 5-1/2" x 2" Bore		2
		R-365	Tapered Cone, 4-5/16" x 4-31/32" x 2" Bore		2
		R-370	Tapered Cone, 3-25/32" x 4-27/64" x 2" Bore		2
		R-375	Tapered Cone, 3-17/64" x 3-57/64" x 2" Bore		1
		R-380	Tapered Cone, 2-23/32" x 3-11/32" x 2" Bore		1
		R-385	Tapered Cone, 2-15/64" x 3-3/8" x 2" Bore		1
		R-390	Arbor, 2" Diameter		1
		R-395	Arbor Nut, 2"		1
		R-405	Draw Bar		1
		R-501	Reducer, 1" to 11/16" Diameter x 1-3/8" Long		1
					1
		R-510	Tapered Cone, 3/4" x 1-1/2" x 11/16" Bore		
		R-520	Tapered Cone, 1-1/16" x 1-3/4" x 1" Bore		1
		R-530	Spacer, 1" Long x 11/16" Bore		2
		R-540	Spacer, 1" Long x 1" Bore		2
		R-550	Radii Cone, 1-1/2" x 1-45/64" x 1" Bore		1
		R-560	Radii Cone, 1-19/32" x 1-49/64" x 1" Bore		1
		R-570	Radii Cone, 1-61/64" x 2-13/64" x 1" Bore		1
		R-580	Radii Cone, 1-13/32" x 2-3/8" x 1" Bore		1
		R-590	Radii Cone, 2-19/64" x 2-1/2" x 1" Bore		1
		R-600	Radii Cone, 2-27/64" x 2-39/64" x 1" Bore		1
		R-610	Radii Cone, 2-35/64" x 2-25/32" x 1" Bore		1
					!
		R-620	Radii Cone, 1-27/32" x 2-55/64" x 1" Bore		1
		R-630	Radii Cone, 2-1/16" x 3-19/64" x 1" Bore		1
		R-640	Arbor, 1" x 11/16"		1
			l '		
		R-645	Arbor Nut, 11/16"		1
		R-655	Face Plate, 1" Bore		2
		R-665	Centering Cone, 2-5/16" x 3-1/4" x 1" Bore		1
			Centering Cone, 3-1/16" x 4" x 1" Bore		1 4
		R-670			1 !
		R-675	Spring		1
		R-680	Centering Cone, 1-15/32" x 2-3/8" x 1" Bore		1
		R-740	Arbor, 1"		1
		R-745	Arbor Nut, 1"		1
		SB-10	Broke Drum Silencing Band, Passenger		1
		SB-20	Brake Drum Silencing Band, Truck		1
		32 23	SPARE PARTS' & TOOLS		1
		83	Allen Wrench, No. 8 Screw		1
		119	Allen Wrench, 1/4" Screw		1
		500140	"V" Belt, 3/8" x 57"		1
		500141	"V" Belt, 1/2" x 42"		1
		500142	"V" Belt, 1/2" x 58"		1
		CB-35	5/8" Solid Carbide-Tipped Tool Bit		2
		CB-36	5/8" High Speed Steel Tool Bit		2
		CB-75	Hone		1
		R-148	3/8" Open End Wrench		1
					1
		R-149	3/4" Box Wrench		
		R-152	7/16" Open End Wrench		1
		R-153	1/4" Open End Wrench		1
		R-154	Open End Wrench, 1-1/4" x 1-5/8"		1
		R-410	Open End Wrench, 3"		1
_			11		
			11		
	I	1		1	1

#### **APPENDIX**

#### **BASIC ISSUE ITEMS LIST**

#### Section I. INTRODUCTION

#### 1. General

This appendix is a list of basic issue items. It is composed of those items which make up the major end item of equipment and the operator's tools and equipment that are issued with the equipment and are required for stockage.

## 2. Requisition Notes

- a. Repair Part Identified by Federal Stock Number.
  - (1) If the exact item requisitioned is not furnished, or if other action is necessary, the exact nature of the action taken by the commodity command will be indicated by standard symbols on prescribed forms.
  - (2) When requisitioning an item, the requesting agency will order the listed item. However, the commodity command will take necessary action to issue the exhaust stock item until stock is exhausted, whether it be an individual item, kit, set, or assembly.
- b. Part to Which FSN Has Not Been Assigned. When requisitioning a C source (local procurement) item identified only by a manufacturer's part number, it is mandatory that the following information be furnished the supply officer:
  - (1) Manufacturer's code number (5-digit number preceding the colon in the descriptive column).
  - (2) Manufacturer's part number (the number, and sometimes letters, following the colon, ((1) above). Dashes, commas, or other marks must be included exactly as listed.(3) Nomenclature exactly as listed herein, including dimensions if necessary (4) Name of manufacturer of end item (from cover of TM or manufacturer's name plate).
  - (5) Federal stock number of end item (from TM).
  - (6) Manufacturer's model number (from TM or name/data plate, preferably name/data plate).
  - (7) Manufacturer's serial number (from name/data plate).

- (8) Any other information such as type, frame number, and electrical characteristics, if applicable.
- (9) If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and remarks field, in accordance with AR 725-50. Complete form as follows:
  - (a) In blocks 4, 5, and 6, list manufacturer's code and manufacturer's part number (as listed in description column).
  - (b) In remarks field, list noun name (repair part), end item application (FSN of end item), manufacturer, model number (end item), serial number (end item), and any other pertinent information such as frame number, type, etc.

#### 3. Explanation of Columns

Code

- a. Source, Maintenance, and Recoverability Code (col 1).
- (1) Materiel numerical codes (col 1a). Not required.
- (2) Source (col lb). This column indicates the selection status and source for the listed item. Source code used in this list is-

C.......Obtain through local procurement.

If not obtainable from local procurement, requisition through normal supply channels with a supporting statement of

procurement.
(3) Maintenance level (col 1c). This column

from

Explanation

indicates the category of maintenance authorized to install the listed item. Maintenance level code used in this list is-

nonavailability

Code Explanation

O ......Organizational maintenance.

(4) Recoverability (col 1d). This column indicates whether unserviceable items should be returned for recovery or salvage. When no code is indicated, the item will be considered expendable. Recoverability code used in this list is-

Code	Explanation
R	ltems which are economically
	repairable at direct and general
	support maintenance activities
	and are normally furnished by
	supply on an exchange basis.

- b. Federal Stock Number (col 2). This column indicates the Federal stock number has been assigned by the Cataloging Division, Defense Logistics Services Center.
- c. Description (col 3). This column indicates the Federal item name (shown in capital letters) and any additional description required for supply operations. The manufacturer's code and part number are also included for reference.

Code	E	Explanation			
57127	Star	Machine	&	Tool	
Company.					

- d. Unit of Issue (col 4). This column indicates the quantity to be requisitioned.
- e. Quantity Authorized (col 5). This column indicates the quantity of the listed item authorized for stockage to constitute the prescribed load.

#### 4. Abbreviations and Symbols

#### a. Abbreviations.

Abbreviations	Explanation
C	cycle(s)
cire	circumference
deg	degree(s)
fl	flat

Abbreviations	Explanation
hdl	headhigh speed steelminimummountedoverallsingle phasevolt(s)wide, width
Symbols x	Explanation by(2 x 4)

#### 5. Suggestions and Recommendations

The direct reporting by the individual user, of errors, omissions, and recommendations for improving this manual, is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding General, Headquarters, U.S. Army Weapons Command, ATTN: AMSWE-SMM-P, Rock Island Arsenal, Rock Island, Ill. 61202. One information copy will be provided to the individual's immediate supervisor (e.g., officer, noncommissioned officer, supervisor, etc.).

**TAGO 8756-A** 

# Section II. BASIC ISSUE ITEMS LIST

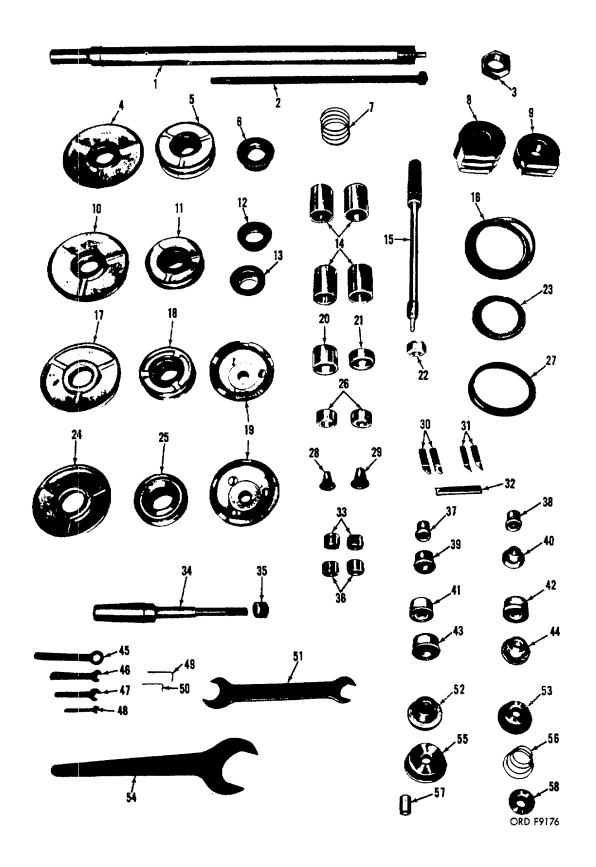
(1) Source,		(2)	(3)	(4)	(5)	(	6)	
maint. and			Federal	Description			Illust	ration
(a) (b	(a) (b) (c) (d) Mat. Sour. Maint Recov.		stock No.	Description	Unit of issue	Qty auth	(a) Fig. No.	(b) Item No.
			4910-516-6192	MAJOR COMBINATION The following item is to be requisitioned for initial use only. LATHE,BRAKE DRUM: floor mtd, 60 in. rated swing, 25 in. max drum dia, 9 in. min drum dia, w/grinding provisions, 1 hp drive motor, 1/2 hp grinding motor, 115-v, 60 c, sgle-ph (57127:1960). COMPONENTS OF MAJOR COMBINATION	ea			
				None authorized.				
				SPARE PARTS				
				None authorized.				
				REPAIR PARTS				
С	0			BELT, V: rubberized fabric, 57 outside circ, 3/8 top w (57127:500140).	ea	1	1	16
С	0			BELT, V: rubberized fabric, 42 outside circ, 1/2 top w (57127:500141).	ea	1	1	23
С	0			BELT, V: rubberized fabric, 58 outside circ, 1/2 top w (57127:500142).	ea	1	1	27
				TOOLS AND EQUIPMENT FOR:				
				LATHE, BRAKE DRUM: (57127:1960)				
С	0			ARBOR, DRUM: 1 in. dia, 1 in. thd (57127:R-760).	ea	1	1	15
С	0			ARBOR, DRUM: 1 in. dia, 11/16 thd (57127:R-640).	ea	1	1	34
С	0			ARBOR, DRUM: 2 in. dia, 2 in. thd (57127:R-390).	ea	1	1	1
С	0			BAND, BRAKE DRUM SILENCING: passenger car (57127:SB-10).	ea	1	1	9
С	0		(57127:SB-20).	BAND, BRAKE DRUM SILENCING: truck	ea	1	1	8
C	0		(57127:R-680).	BAR, DRAW: arbor holding (57127:R-405) CONE, CENTERING: 1 15/32 x 2 3/8 x 1 bore	ea ea	1	1 1	2 58
С	0			CONE, CENTERING: 2 15/16 x 3 1/4 x 1 bore	ea	1	1	53
С	0		(57127:R-665).	CONE, CENTERING: 3 1/16 x 4 x 1 bore (57127: R-470).	ea	1	1	55

**TACO 8756A** 

	(1)		(2)	(3)		(5)	(6)		
	Source, maint. and		Federal				Illustration		
(a) Mat. code	(b) Sour.	v. code (c) Maint	(d) Recov.	stock No.	Description	Unit of issu e	Qty auth.	(a) Fig. No.	(b) Item No.
					TOOLS AND EQUIPMENT FOR-Cont. LATHE, BRAKE DRUM: (57127:1960)-Cont.				
	С	0			CONE, RADII: 1 13/32 x 2 3/8 x 1 bore (57127:R-580).	ea	1	1	37
	С	0			CONE, RADII: 1 1/2 x 1 45/64 x 1 bore (57127:R-550).	ea	1	1	38
	С	0			CONE, RADII: 1 19/32 x 1 49/64 x 1 bore (57127:R- 560).	ea	1	1	39
	С	0			CONE, RADII: 1 27/32 x 2 55/64 x 1 bore (52727:R-620).	ea	1	1	41
	С	0			CONÉ, RADII: 1 61/64 x 2 13/64 x 1 bore (57127:R	- ea	1	1	42
	С	0			570). CONE, RADII: 2 1/16 x 3 19/64 x 1 bore (57127:R-	ea	1	1	43
	С	0			630). CONE, RADII: 2 19/64 x 2 1/2 x 1 bore (57127:R-	ea	1	1	40
	С	0			590). CONE, RADII: 2 27/64 x 2 39/64 x 1 bore (57127:R-	ea	1	1	44
	С	0			600). CONE, RADII: 2 35/64 x 2 25/64 x 1 bore (57127:R	- ea	1	1	52
	С	0			610). CONE, TAPERED: 3/4 x 1 1/2 x 1 bore (57127:	ea	1	1	28
	С	0			R-510). CONE, TAPERED: 1 1/16 x 1 3/4 x 1 bore (57127:	ea	1	1	29
	С	0			R-520). CONE, TAPERED: 2 15/64; x 3 3/8 x 2 bore(57127)	ea	1	1	13
	C 12	0			R-385). CONE, TAPERED: 2 23/64 x 3 11/32 x 2 bore(5712	7:	ea	1	1
	С	0			R-380). CONE, TAPERED: 3 17/64x 3 52/64x 2 bore (5712) R-375).	7: ea	1	1	6
	C 25	0			CONE, TAPERED: 3 25/32 x 4 27/64x 2 bore (5712	7:	ea	2	1
	С	0			R-370). CONE, TAPERED: 4 5/16 x 4 31/32x 2 bore (57127 R-365).	: ea	2	1	18
	С	0			CONE, TAPERED: 4 55/64 x 5½ x 2 bore (57127: R-360).	ea	2	1	11
	С	0			CONE, TAPERED: 5 25/64 x 6 9/16 x 2 bore (5712) R-355).	7: ea	2	1	5
	С	0			CONE, TAPERED: 5 59/64 x 6 9/16 x 2 bore(57127 R-350).	: ea	1	1	24
	С	0			CONE, TAPERED: 6 31/64 x 7 1/8x 2 bore (57127: R-345).	ea	1	1	17
	С	0			CONE, TAPERED: 6 63/64 x 7 5/8x 2 bore (57127: R-340).	ea	1	1	10
	С	0			CONE, TAPERED: 7 17/64 x 8 11/61 x 2 bore (57-127: R-335).	ea	1	1	4
	С	0			HONE, SHARPENING: tool bit (57127:CB-75)_	ea	1	1	32
	С	0		5120-224-2504	KEY, SOCKET HEAD SCREW: hex type, L-hdl, 5/64 across fl, 1 7/8 nom lg arm lg.	ea	1	1	50
	С	0		5120-240-5292	KEY, SOCKET HEAD SCREW: hex type, L-hdl, 1/8 across fl, 2 1/4 nom lg arm lg.	ea	1	1	49

(1) Source, maint. and		(2)	(3)	(4)	(5)	(	6)		
		Federal				Illust	ration		
	recov	v. code		stock No.	Description				
(a)	(b)	(c)	(d)			Unit	Qty	(a)	(b)
Mat.	Sour.	Maint	Recov.			of	auth	Èiģ.	Iter
code						issue		No.	No
					TOOLS AND EQUIPMENT FOR-Cont.				
					LATHE, BRAKE DRUM: (57127:1960)-Cont.				
	_							_	
	C C C	Ō			NUT, ARBOR: 11/16 thd (57127:R-645)	ea	1	1	35
	С	0			NUT, ARBOR: 1 in. thd (57127:R-745)	. ea	1	1	22
	С	О			NUT, ARBOR: 2 in. thd (57127:R-395)	. ea	1	1	3
	С	О			PLATE, FACE: 1 in. bore (57127:R-655)	ea	2	1	19
	С	0			REDUCER: 1 in. od to 11/16 id, 1 3/8 lg (57127:R	- ea	1	1	57
	Ŭ				501).	- Ju		•	0.
	С	0			REDUCER: 2 in. od to 1 in. id, 1 1/8 lg (57127:R-	ea	2	1	26
					,	331).			
	С	0			SPACER, ARBOR: 11/16 bore, 1 in. Ig (57127:R-	ea	2	1	33
					530).				
	С	0			SPACER, ARBOR: 1 in, bore, 1 in. lg (57127:R-	ea	2	1	36
					540).				
	С	0			SPACER, ARBOR: 2 in. bore, 1 in. Ig (57127:R-	ea	1	1	21
					330).				
	С	0			SPACER, ARBOR: 2 in. bore, 2 in. Ig (57127:R-	ea	1	1	20
	_				325).		-	•	
	С	0			SPACER, ARBOR: 2 in. bore, 3 in. Ig (57127:R-	ea	4	1	14
	O				320).	ou	.	•	''
	С	0			SPRING, COIL: 4 coil, 2 3/8 od (57127:R-315)	ea	1	1	7
	Č	ŏ			SPRING, COIL: 4 coil, 2 3/8 id tapered to 1½ id		1	1	56
	C	0			(57127:R-675).	ea	'	I	30
	_						2	4	20
	C C C	0			TOOL BIT: 5/8 sq, carbide tipped (57127:CB-35).	ea	2	1	30
	C	0			TOOL BIT: 5/8 sq HSS (57127:CB-36)	ea	2	1	31
	С	0		5120-293-1266	WRENCH, BOX: stght, sgle-hd type, hex shape	ea	1	1	45
					wrench opng, 3/4 opng, 4 3/8 nom o/a lg (57127	:			
					R-149).				
	С	0		5120-293-2124	WRENCH, OPEN END, FIXED: dble-hd	ea	1	1	51
					type, 15 deg angle of hd, engineer style, 1 1/4				
					and 1 5/8 wrench opngs, 14 nom o/a lg, 9/16 the	:			
					of hd (57127:R-154).	`			
	С	0		5120-293-1840	WRENCH, OPEN END, FIXED: sgle-hd type,	00	4	4	48
	C	О		3120-293-1040		ea	1	1	40
					15 deg angle of hd, 1/4 wrench opng, 3½ nom				
	_				o/a Ig, 3/16 thk hd (57127:R-153).		.		
	С	O		5120-277-1261	WRENCH, OPEN END, FIXED: sgle-hd type,	ea	1	1	47
					15 deg angle of hd, 3/8 wrench opng, 3 7/8 nom				
					o/a lg, 17/64 thk hd (57127:R-148).				
	С	0			WRENCH, OPEN END, FIXED: sgle-hd type,	ea	1	1	46
					15 aeg angle of hd, 7/16 wrench opng (57127:				
					R-152).				
	С	0			WRENCH, OPEN END, FIXED: sgle-hd type,	ea	1	1	54
					15 deg angle of hd, 3 wrench opng, 17 nom				
					o/a Ig (57127:R-410).				

**TAGO 8756-A** 



TAGO 8756-A

Figure 1. Tools and equipment.

TAGO 8756-A

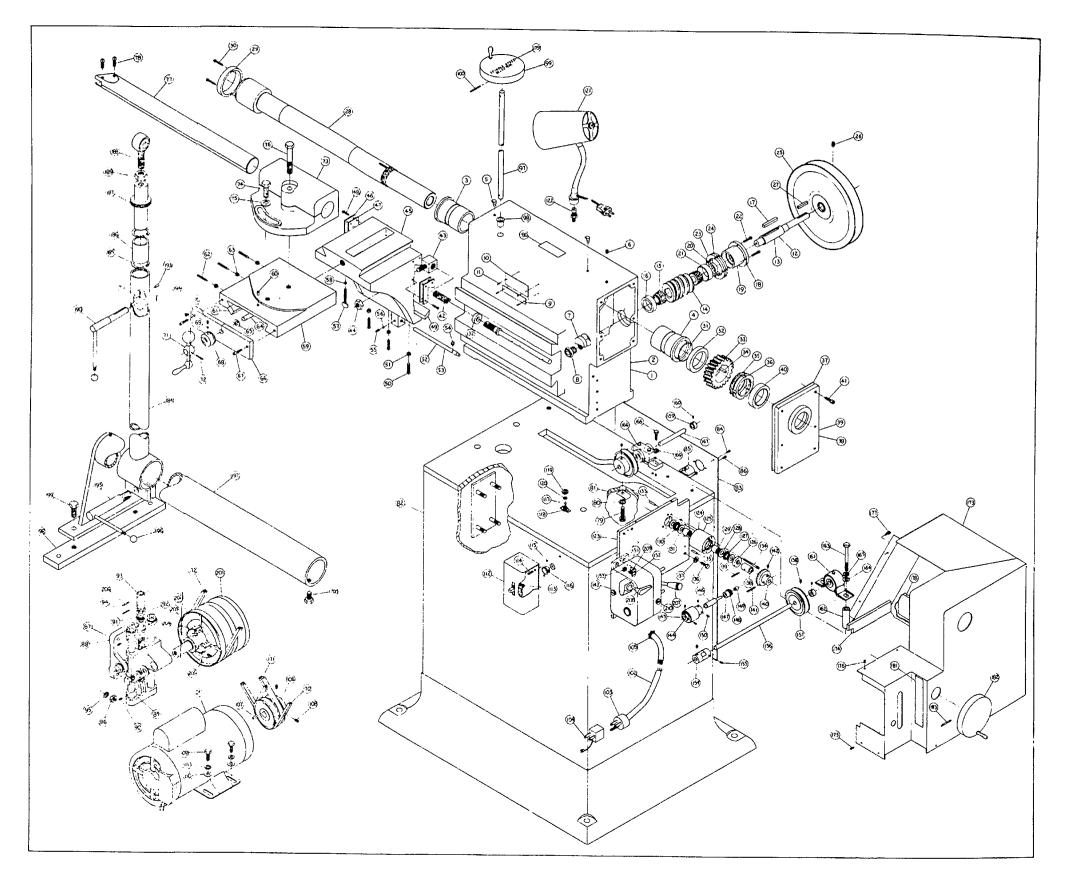


FIG. 2-1. PARTS BREAKDOWN MODEL 1960 13

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