

TECHNICAL MANUAL

DIRECT SUPPORT AND

GENERAL SUPPORT MAINTENANCE

CONCRETE-MOBILE[®] MIXER BODY

M919, MODEL 8CM-24/F

NSN 3895-01-028-4391

**This copy is a reprint which includes current
pages from Changes 1.**

HEADQUARTERS, DEPARTMENT OF THE ARMY
SEPTEMBER 1980

Technical Manual
No. 5-3895-372-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D C, 20 September 1980

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

FOR

M919 CONCRETE-MOBILE MIXER[®] BODY
DAFFIN MOBILE PRODUCTS DIVISION OF BARBER-GREENE COMPANY
(MODEL 8CM-24/F)
NSN 3895-01-028-4391

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

			Paragraph	Page
CHAPTER 1		INTRODUCTION.....		1-1
Section	I	General	1-1 - 1-6	1-1
	II	Description and Data	1-7 - 1-8	1-1
CHAPTER 2		DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS.....		2-1
Section	I	Repair Parts, Special Tools, and Equipment.....	2-1 - 2-3	2-1
	II	Troubleshooting	2-4, 2-5	2-3
	III	General Maintenance	2-6 - 2-11	2-12
	IV	Removal and Installation of Major Components.....	2-12 - 2-17	2-17
CHAPTER 3		REPAIR OF HYDRAULIC SYSTEM.....		3-1
Section	I	General Instructions	3-1 - 3-3	3-1
	II	Repair of Hydraulic Oil Pump	3-4 - 3-8	3-2
	III	Repair of Relief Valve.....	3-9 - 3-12	3-4
	IV	Repair of Control Valve	3-13 - 3-16	3-6
	V	Repair of Hydraulic Motor	3-17 - 3-20	3-8

*This manual supersedes draft TM 5-3895-372-34, 14 December 1979.

			Paragraph	Page
CHAPTER 4		REPAIR OF ELECTRIC WINCH ASSEMBLY		4-1
	Section I	Repair of Winch	4-1 - 4-7	4-1
	II	Repair of Motor and Gear Box	4-8 - 4-9	4-3
CHAPTER 5		REPAIR OF SAND AND STONE BINS.....		5-1
CHAPTER 6		REPAIR OF MAIN DRIVE ASSEMBLY.....		6-1
	Section I	Repair of Angle Drive Gear Box.....	6-1 - 6-10	6-1
	II	Repair of Reversing Gear Box	6-11 - 6-15	6-7
	III	Repair of Main Clutch	6-16 - 6-21	6-10
CHAPTER 7		REPAIR OF CEMENT BIN ASSEMBLY		7-1
	Section I	Repair of Cement Bin.....	7-1, 7-2	7-1
	II	Repair of Cement Feeder.....	7-3 - 7-5	7-4
CHAPTER 8		MAINTENANCE OF AUXILIARY EQUIPMENT		8-1
APPENDIX A		REFERENCES.....		A-1
APPENDIX B		EXPENDABLE SUPPLIES AND MATERIALS LIST		B-1
	Section I	Introduction	B-1, B-2	B-1
	II	Expendable Supplies and Materials List.....		B-2
INDEX		ALPHABETICAL		Index-1

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

a. This technical manual contains instructions for Direct Support and General Support Maintenance of the M919 Concrete-Mobile®Mixer Body.

b. Appendix A contains a list of current references, including supply manuals, forms, technical manuals, and other available publications applicable to the Concrete-Mobile.®

1-2. Maintenance Forms, Records, and Reports. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by DA Pam 738-750.

1-3. Quality Assurance/Quality Control (QA/QC).

a. No particular quality assurance or quality control technical manuals pertain specifically to the M919 Concrete-Mobile®Mixer Body. Use standard QA/QC procedures.

b. Defective material received through the supply system should be reported on a Quality Deficiency Report (QDR), SF 368. The prepared QDR's should be mailed direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MVB, Warren, Michigan 48397-5000. A reply will be furnished direct to you.

1-4. Calibration Procedures. There are no calibration requirements applicable to the Direct Support and General Support maintenance level.

1-5. Reporting Equipment Improvement Recommendations (EIR). If your mixer needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MP, Warren, MI 48397-5000. We'll send you a reply.

1-6. Destruction of Army Materiel to Prevent Enemy Use. Procedures outlined in TM 750-244-6 (Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use) are applicable to this equipment.

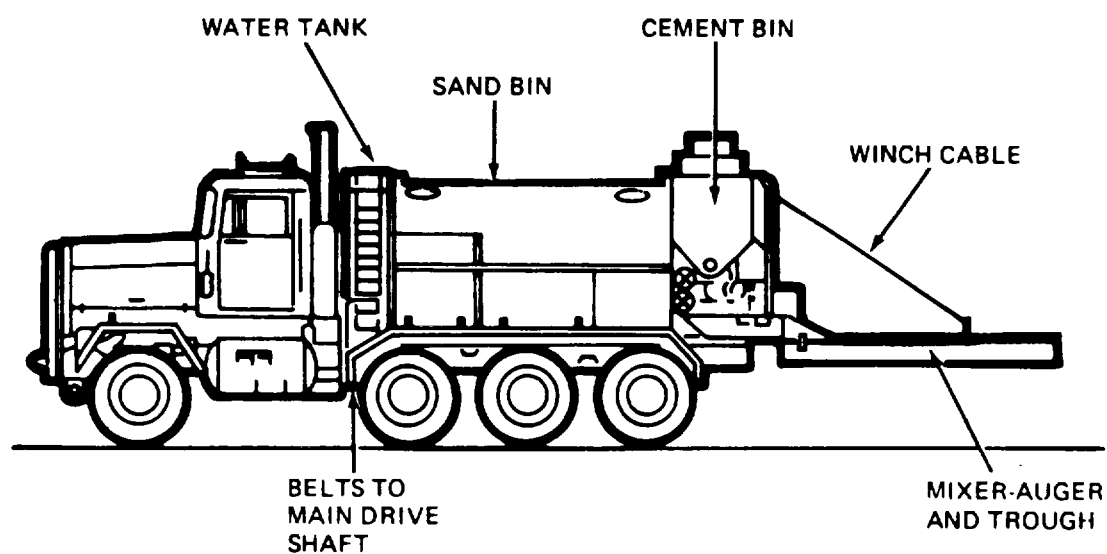
Section II. DESCRIPTION AND DATA

1-7. Description. The M919 Concrete-Mobile®Mixer Body (hereafter referred to as the mixer body) is a chassis-mounted concrete mixing unit. Ingredients are stored in separate bins and tanks, to be mixed into concrete at the job site. The mixer body carries enough material to produce 6-8 yards of concrete with a discharge time of 150-200 seconds per yard (depending on the mix design).

Change 1 1-1

Major components of the mixer body are shown in figures 1-1 thru 1-3. The maintenance paragraphs of this manual contain detailed descriptions of these components.

If you need a detailed description of any component of the mixer body, ask your supervisor to see TM 5-3895-372-20.



TA 076104

Figure 1-1. Mixer Body, Left Side.

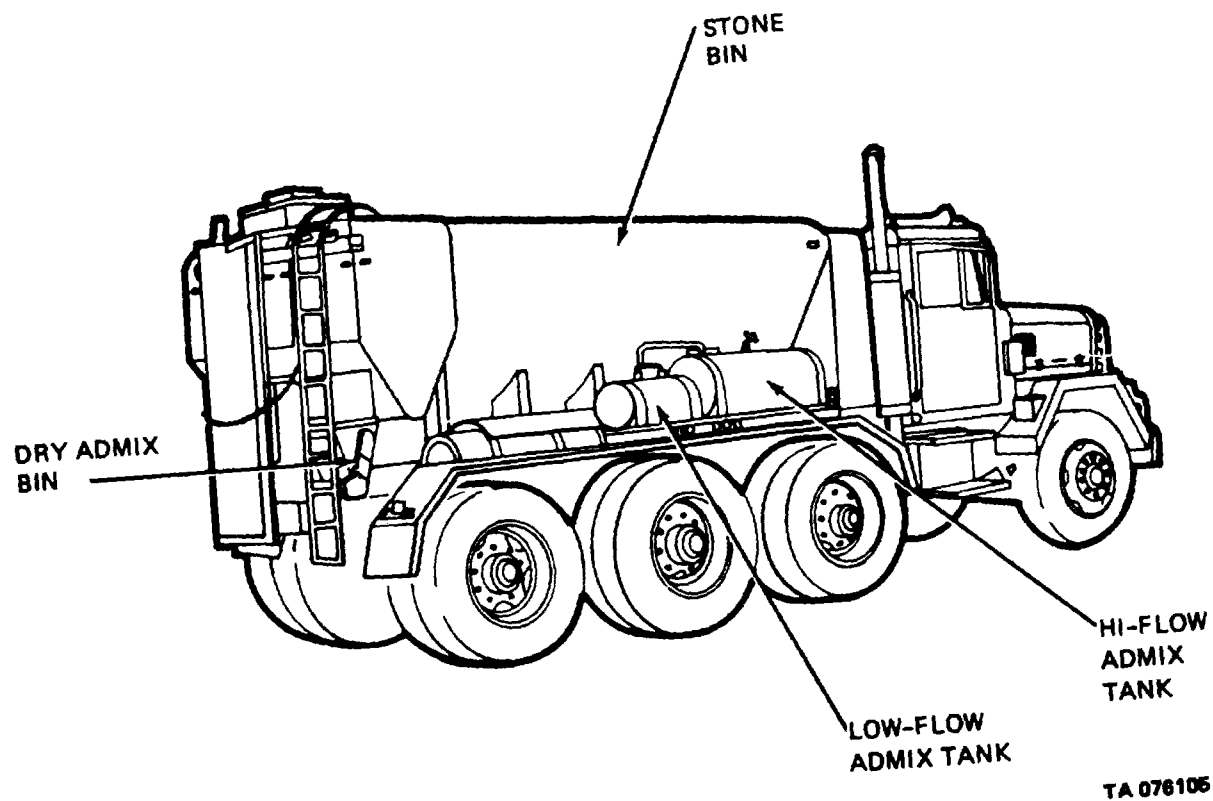
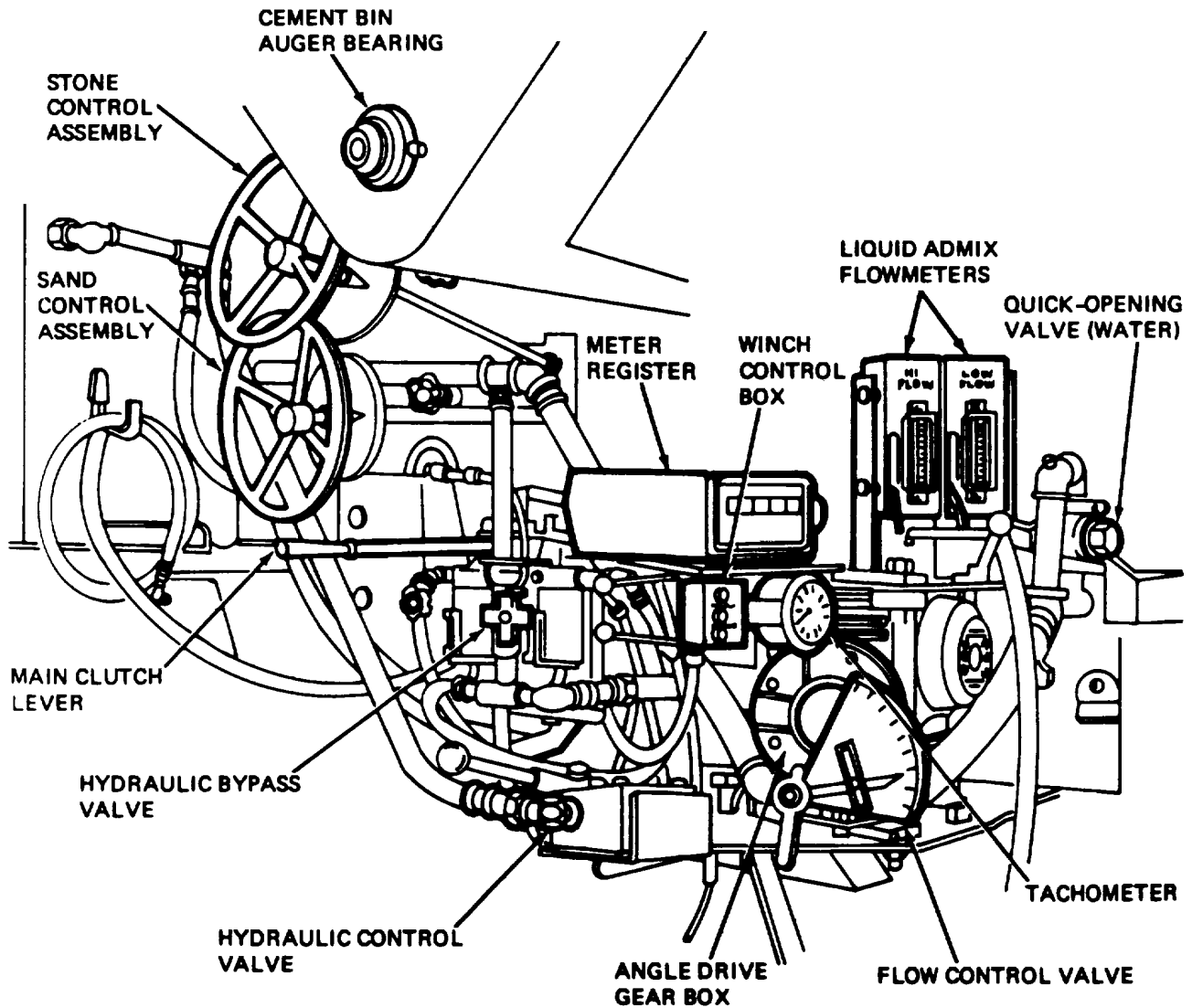


Figure 1-2. Mixer Body, Right Side.



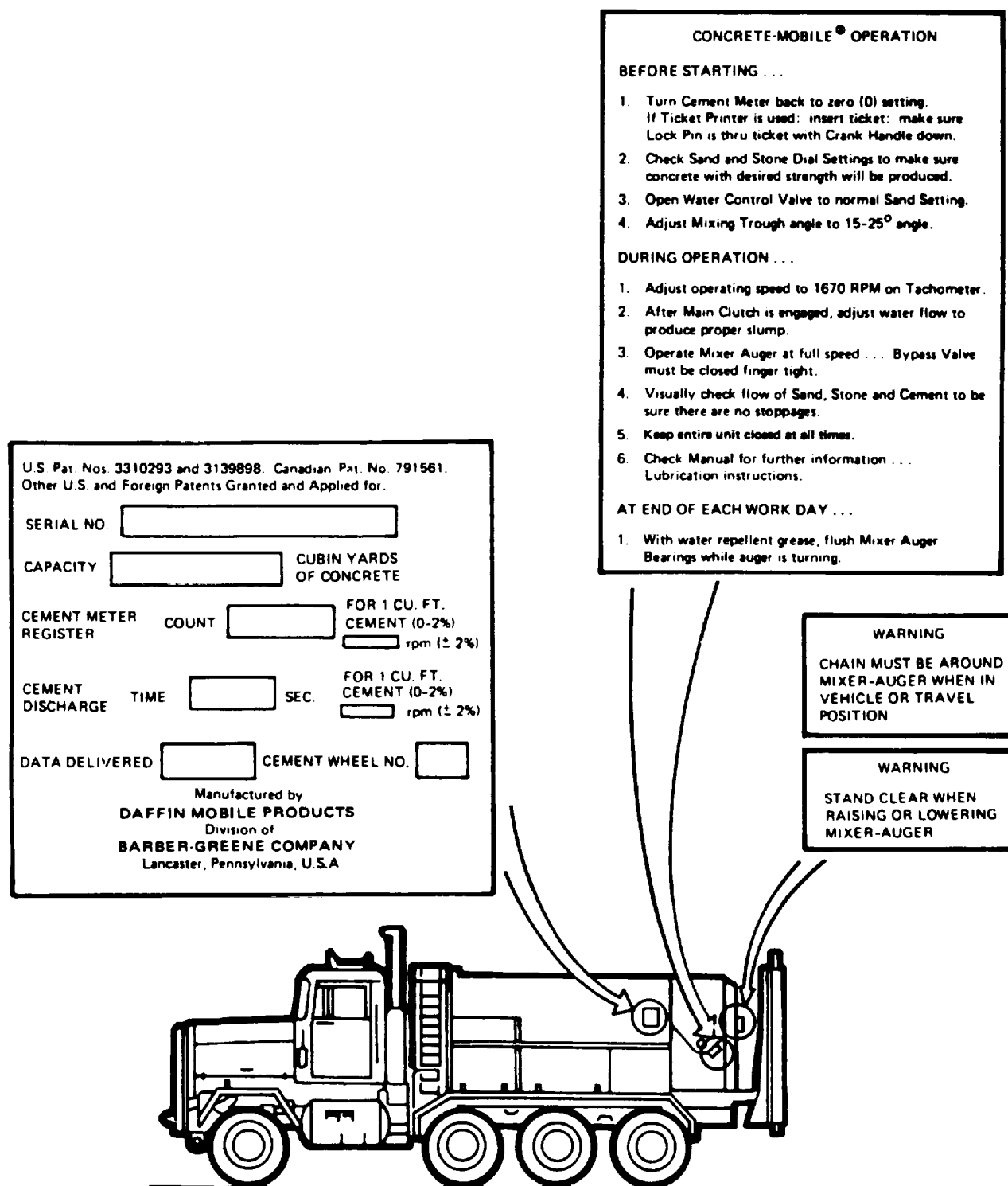
TA 078108

Figure 1-3. Mixer Body, Control Area.

Table 1-1. Equipment Data

Manufacturer	Daffin Mobile Products Division of Barber-Greene Company
Model	8CM-24/F
Dimensions:	
Length	374.4 in. (9.510 m)
Width	98 in. (2.489 m)
Height	142 in. (3.607 m)
Capacities:	
Sand Bin	128 cu ft (3.58 m ³)
Stone Bin	182 cu ft (5.10 m ³)
Cement Bin	63 cu ft (1.76 m ³)
Water Tank	400 gal (1514 l)
Hi-Flow Liquid Admix Tank	42 gal (159 l)
Low-Flow Liquid Admix Tank	12 gal (45 l)
Dry Admix Bin	3.35 cu ft (0.0938 m ³)
Auxiliary Cement Bin	27 cu ft (0.76 m ³)
Weights:	
Empty (w/Chassis)	34,813 lb (15805 kg)
Loaded (w/Chassis)	71,633 lb (32521 kg)
Empty (Mixer Body Only)	9,200 lb (4177 kg)
Center of Gravity Location (Mixer Body Only)	
Vertical (Distance from Frame):	
Empty	32 in. (81 cm)
Loaded	46 in. (117 cm)
Horizontal (Distance from Front of Sand and Stone Bin):	
Empty	88 in. (224 cm)
Loaded	72 in. (183 cm)
Hydraulic System:	
Capacity	32 gal (121 l)
Hydraulic Pump	Single Vane
Pump Speed (Normal)	1470-1870 rpm
Pressure (Normal)	1900-1950 psi (13100-13450 kPa)
Hydraulic Motor	25 hp and 10 gal at 1500 rpm
Water System:	
Pump	Centrifugal
Pressure (Normal)	50-60 psi (345-414 kPa)

1-8. Data and Instruction Plates. Figure 1-4 identifies mixer body data and instruction plates.



TA 076107

Figure 1-4. Data and Instruction Plates.

CHAPTER 2

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, AND EQUIPMENT

- 2-1. Special Tools and Equipment.** Special tools, and test and support equipment are listed in the Repair Parts and Special Tools List covering Direct Support and General Support maintenance for this equipment (TM 5-3895-372-34P).
- 2-2. Repair Parts.** Repair parts for the mixer body are listed in the Repair Parts and Special Tools List for Direct Support and General Support maintenance (TM 5-3895-372-34P).
- 2-3. Fabricated Tools and Equipment.** The specially designed tools and equipment illustrated in figures 2-1, 2-2, and 2-3, listed in table 2-1, are for Direct Support and General Support Maintenance personnel performing maintenance on the mixer body. The tools and equipment listed in table 2-1 are not available for issue, but must be fabricated by qualified Direct Support and General Support maintenance personnel.

Table 2-1. Fabricated Tools and Equipment

Item	NSN	References		Use
		Fig	Para	
Seal installation thimble	*9510-00-228-6257 (FSCM 81346)	2-1	3-19	Installation of seals in hydraulic motor
Seal installation sleeve	*9510-00-228-6257 (FSCM 81346)	2-2	3-19	Installation of seals in hydraulic motor
Shaft seal driver	*9510-0&228-6257 (FSCM 81346)	2-3	3-8	Installation of shaft seal in hydraulic pump
*1.75 inch cold roll bar stock; C-1018; 18-20 feet long. Do not harden after tool is fabricated.				

Change 1 2-1

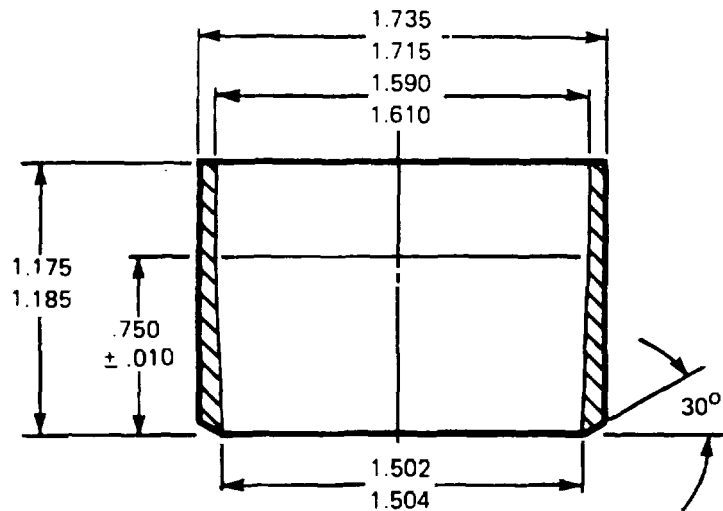
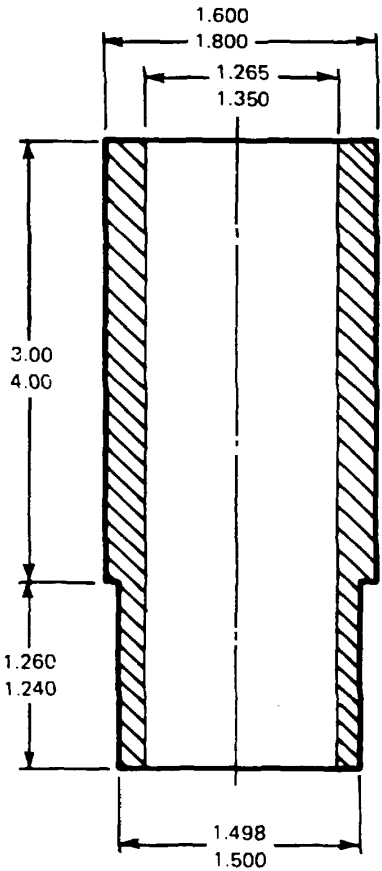


Figure 2-1. Seal Installation Thimble.



TA076109

Figure 2-2. Seal Installation Sleeve.