

TECHNICAL MANUAL

DIRECT SUPPORT
AND GENERAL SUPPORT
MAINTENANCE MANUAL

PART 4
MAINTENANCE

TURRET
FOR
COMBAT ENGINEER VEHICLE,
M728
(2350-00-795-1797)

CHAPTERS 15 THRU 18	
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FOLDOUTS	
EQUIPMENT LOCATION DIAGRAMS	

This copy is a reprint which includes current pages from Changes 1 through 3.

Technical Manual
No. 9-2350 -222-34-2-4

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D. C., 10 October 1980

**Technical Manual
Direct Support and General Support
Maintenance Manual**

**Part 4
Maintenance**

**TURRET
FOR
COMBAT ENGINEER VEHICLE,
M728
{2350-00-795-1797}**

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 directly to:

Commander

U. S. Army Armament, Munitions and Chemical Command

ATTN: AMSMC-MAS

Rock Island, IL 61299-6000

A reply will be furnished to you.

*This manual in conjunction with TM 9-2350-222-34-2-1, TM 9-2350-222-34-2-2, TM 9-2350-222-34-2-3, and TM 9-2350-222 -34-2-5 supersedes so much of the DS/GS portion of TM 9-2300-378-35/2, January 1968, as pertains to the M728 CEV, so much of the DS/GS Portion of TM 9-2350-222-35/2, October 1965, as pertains to the M728 CEV, and so much of the DS/GS portion of TM 9-2300-378-35/1, January 1968, as pertains to the Slipring Assembly, Turret and Miscellaneous Components for the M728 CEV, including all changes.

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CHAPTER 1 5

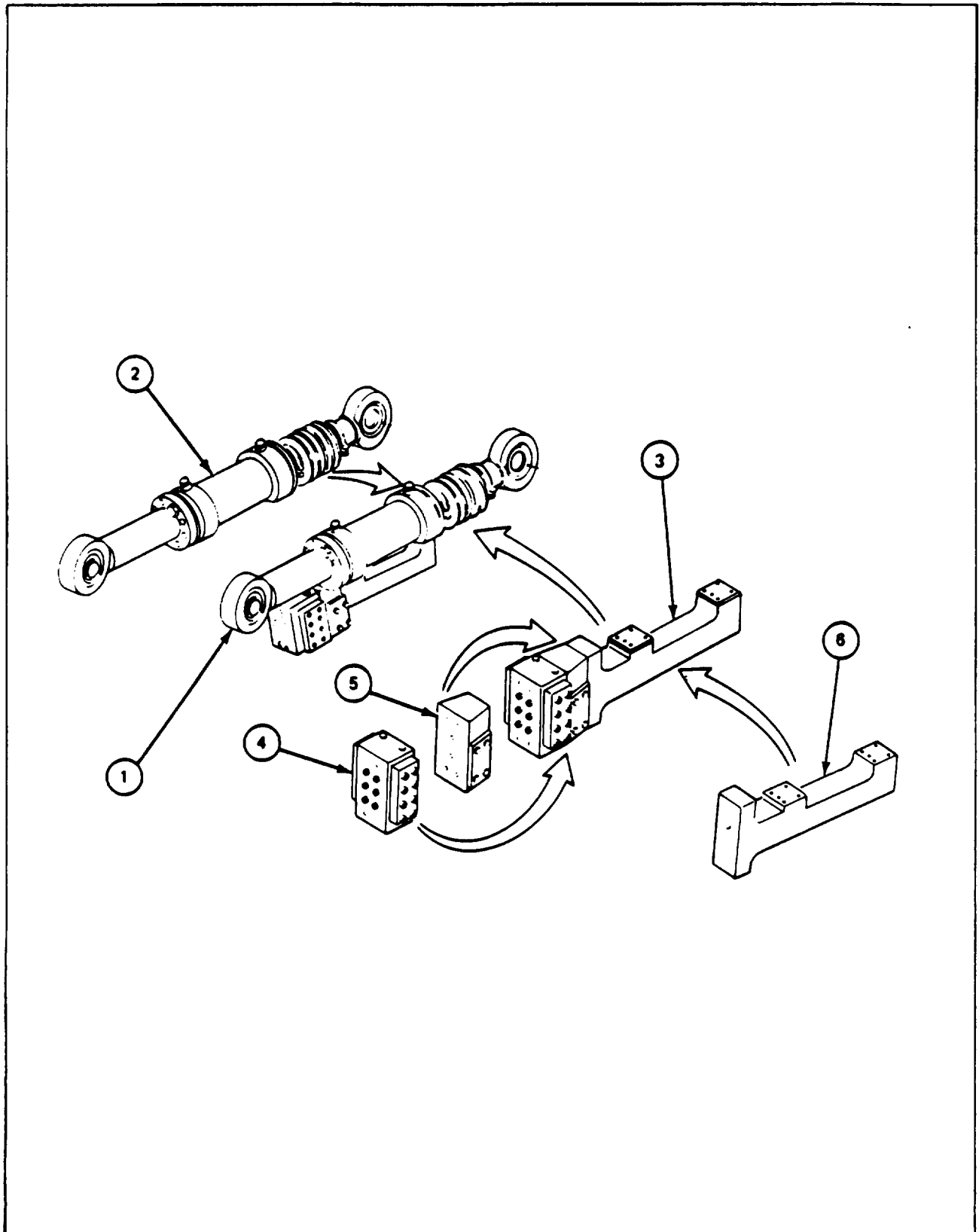
ELEVATING MECHANISM

15-1. MAINTENANCE PROCEDURES INDEX

Equipment Item	Tasks						
	Inspection	Repair	Test	Removal	Installation	Disassembly	Assembly
1. Elevating Mechanism	. . .	. . .	15-2	. . .	. . .	15-3	15-4
2. Elevating Cylinder	15-5	15-8	. . .	15-3	15-4	15-6	15-7
3. Elevation Valve	. . .	. . .	. . .	15-9	15-10	15-11	15-12
4. Lock Valve	15-13	. . .	. . .	15-14	15-15	15-16	15-17
5. Relief Valve	15-18	. . .	. . .	15-14	15-15	15-19	15-20
6. Manifold	. . .	. . .	. . .	15-11	15-12	. . .	. . .

Para 15-1

15-2



Para 15-1 Cont
15-3/ (15-4 blank)

15-2. ELEVATING MECHANISM TEST PROCEDURE

TEST EQUIPMENT: Hydraulic test kit (NSN 1015-01-151-6441) (9337932)
M3 oil pump (NSN 4933-00-449-7166) (7550134)
Watch with sweep second hand

TOOLS: 3/4 in. combination wrench
3/8 in. combination wrench

SUPPLIES: Rags (item 21, App. A)

PERSONNEL: One

REFERENCES: TM 9-2350-222-202-3 for procedure to remove elevating mechanism

EQUIPMENT CONDITION: Elevating mechanism removed (TM -20-2-3)

PRELIMINARY PROCEDURE: Assemble elevating mechanism (para 15-4)

GENERAL INSTRUCTIONS:

WARNING

Hydraulic fluid under pressure can hurt or kill you. This test is done with high pressure hydraulic fluid. Follow procedure carefully.

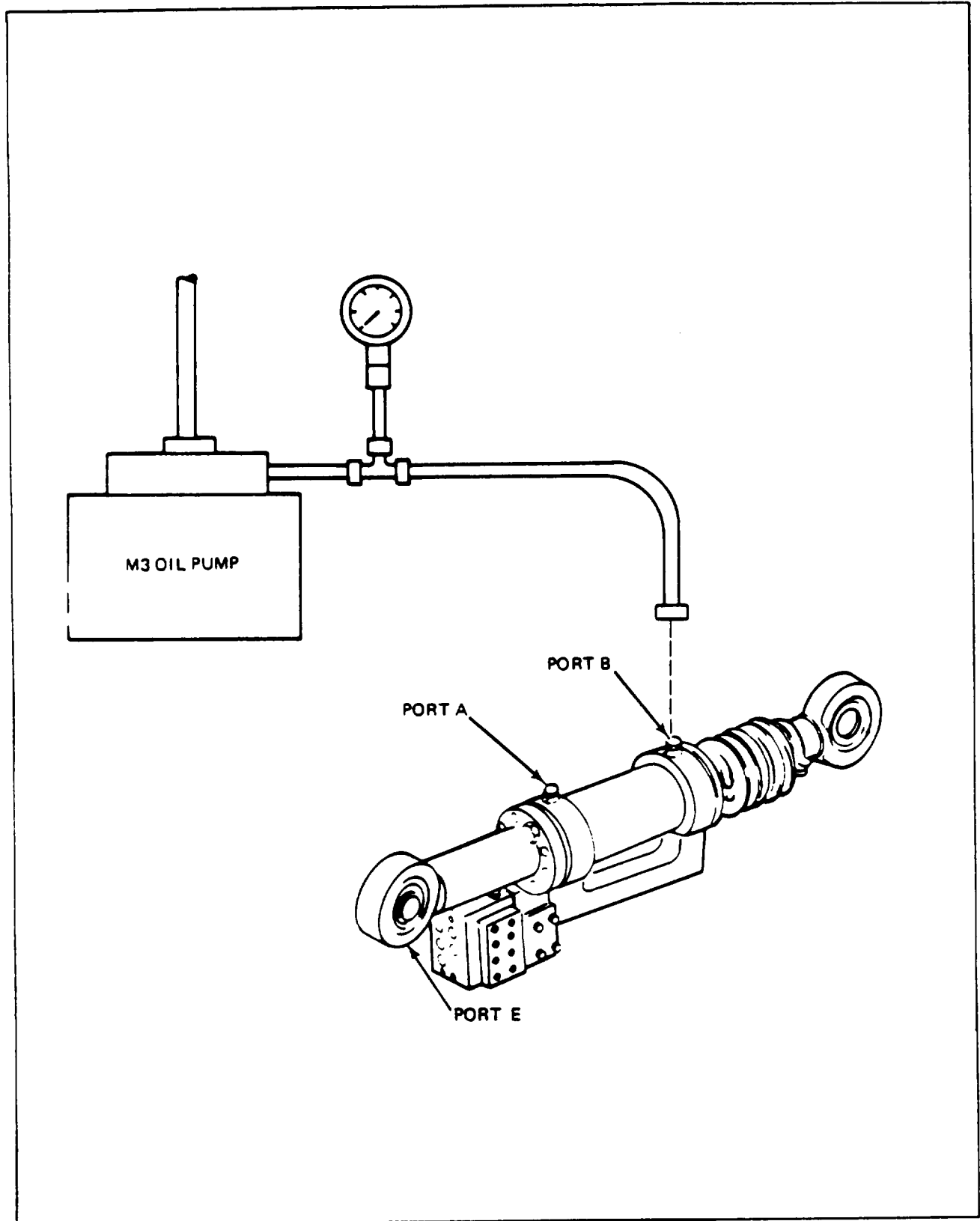
NOTE

Suitable fittings, lines, and tools should be used to connect test equipment to parts being tested.

If normal indication is not obtained, elevating mechanism is bad. Disassemble bad elevating mechanism (para 15-3).

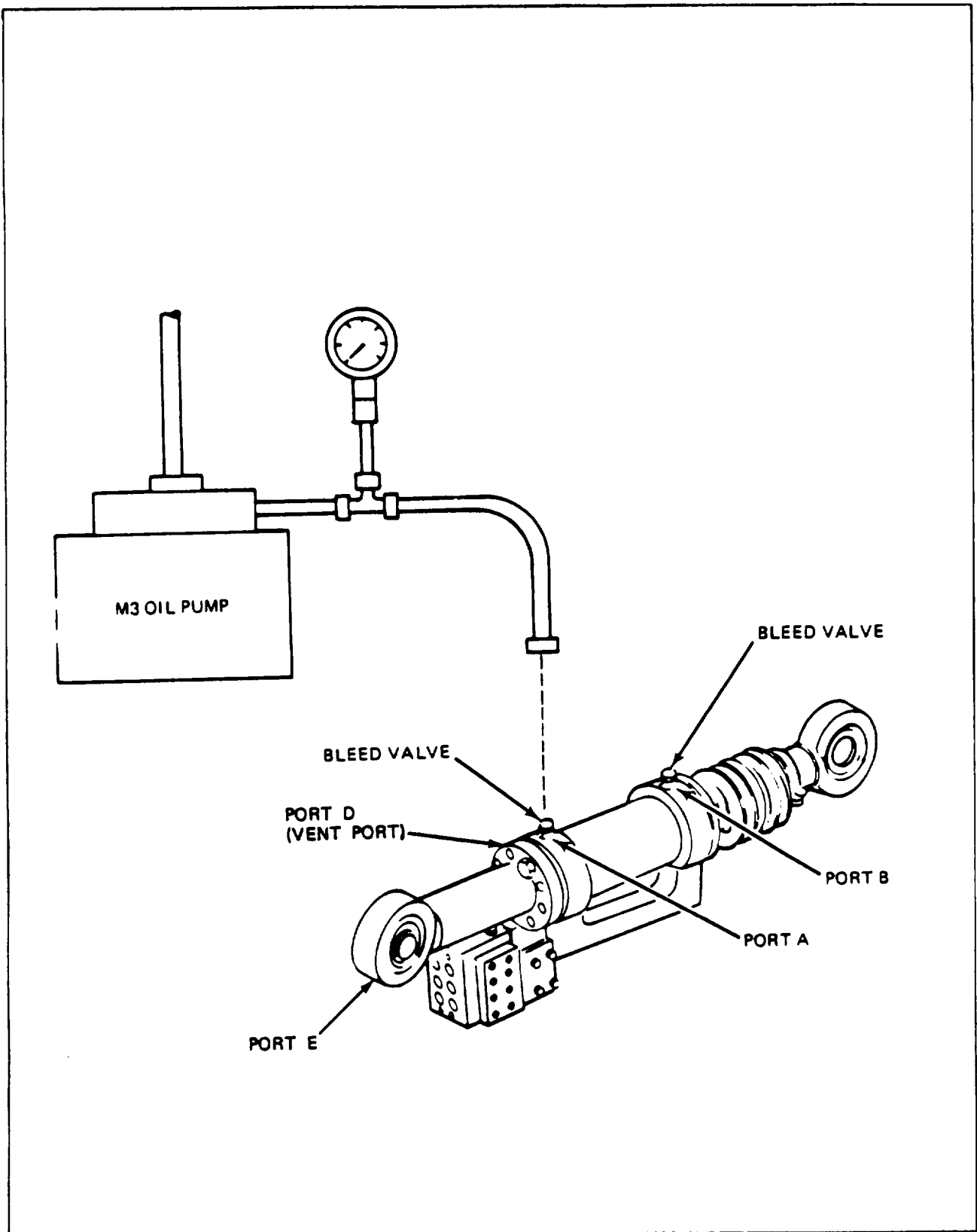
15-2. ELEVATING MECHANISM TEST PROCEDURE (CONT)**FRAME 1**

Step	Procedure
1.	Plug all ports except Port E. Close bleed valves at ports A and B.
2.	Using 3/4" wrench, remove bleed valve from port B.
3.	Assemble M3 oil pump with pressure gauge.
4.	Connect M3 oil pump to port B.
5.	Using M3 oil pump, pump oil in elevating mechanism until pressure gauge indicates about 50 psi.
6.	Using M3 oil pump, reduce pressure to 0 psi.
7.	Disconnect M3 oil pump from port B.
8.	Using 3/4" wrench, put bleed valve in port B .
9.	Using 3/4" wrench, remove bleed valve from port A.
10.	Connect M3 oil pump to port A.
11.	Using M3 oil pump, pump oil in elevating mechanism until pressure gauge indicates about 200 psi.
	GO TO FRAME 2



15-2. ELEVATING MECHANISM TEST PROCEDURE (CONT)

FRAME 2	
Step	Procedure
1.	Using 3/8" wrench, open bleed valve at port B until oil flows without air and then close bleed valve at port B.
2.	Using rags, wipe all oil from outside of elevating mechanism.
3.	Using M3 oil pump, pressurize elevating mechanism until pressure gauge indicates between 2500 and 2550 psi (JPG).
NOTE	
No oil should leak out of elevating mechanism.	
4.	Using watch, check elevating mechanism for leaks for three minutes.
5.	Using M3 oil pump, reduce pressure in elevating mechanism to 0 psi (JPG).
6.	Disconnect M3 oil pump from port A .
7.	Using 3/4" wrench, put bleed valve in port A .
8.	Open all ports.
9.	Connect M3 oil pump to port E .
10.	Using M3 oil pump, pressurize elevating mechanism through port E until pressure gauge indicates between 2500 and 2550 psi (JPG).
11.	Using watch, check port D for leaks for three minutes. No leakage allowed.
12.	Using M3 oil pump, reduce pressure in elevating mechanism to 0 psi (JPG).
13.	Disassemble M3 oil pump and pressure gauge.
NOTE	
If normal indication was obtained in frames 1 and 2, elevating mechanism is good.	
END OF TASK	



15-3. ELEVATING CYLINDER REMOVAL AND ELEVATING MECHANISM DISASSEMBLY PROCEDURE

TOOLS: 3/8" **combination** wrench
Vise with brass caps

SUPPLIES: Small container (two)
Rags (item 21, App. A)

PERSONNEL: One

REFERENCES: TM 9-2350-222 -20-2-3 for procedure to remove elevating mechanism

EQUIPMENT CONDITION: Elevating mechanism removed (TM-20-2-3)

GENERAL INSTRUCTIONS:

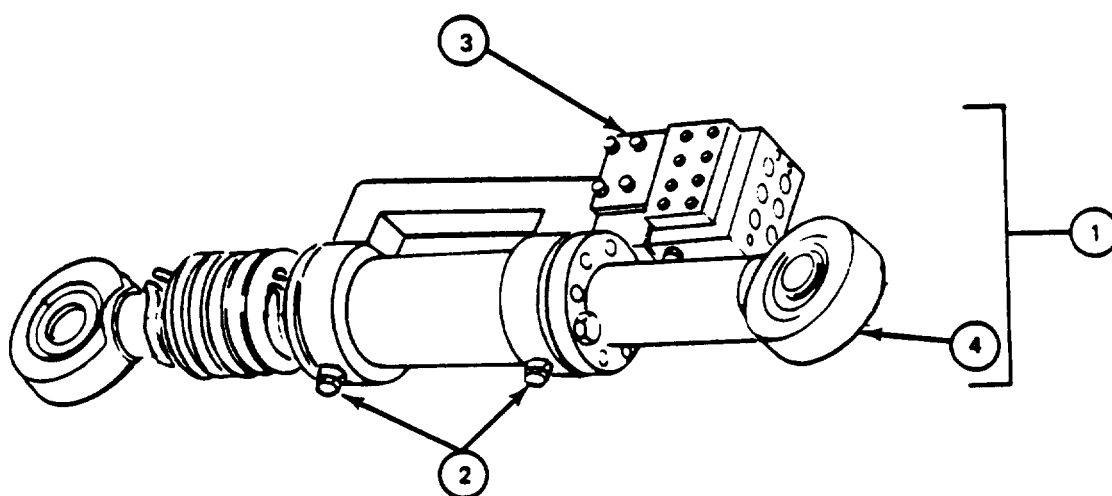
CAUTION

Keep dirt from getting in parts. Dirt **can** damage equipment

NOTE

Use rags to clean up spilled hydraulic fluid.

FRAME 1	
Step	Procedure
1.	Put elevating mechanism (1) in vise with drain cocks (2) down.
2.	Using wrench and two small containers to catch hydraulic fluid, open two drain cocks (2). Close two drain cocks when fluid stops draining.
3.	Remove elevation valve (3) (para 15-9).
4.	Remove elevating cylinder (4) from vise.
5.	Disassemble elevating cylinder (4) (para 15-6).
6.	Disassemble elevation valve (3) (para 15- 11).
	END OF TASK



15-4. ELEVATING CYLINDER INSTALLATION AND ELEVATING MECHANISM ASSEMBLY PROCEDURE

SUPPLIES: Rags (item 21, App. A)

PERSONNEL: One

GENERAL INSTRUCTIONS:

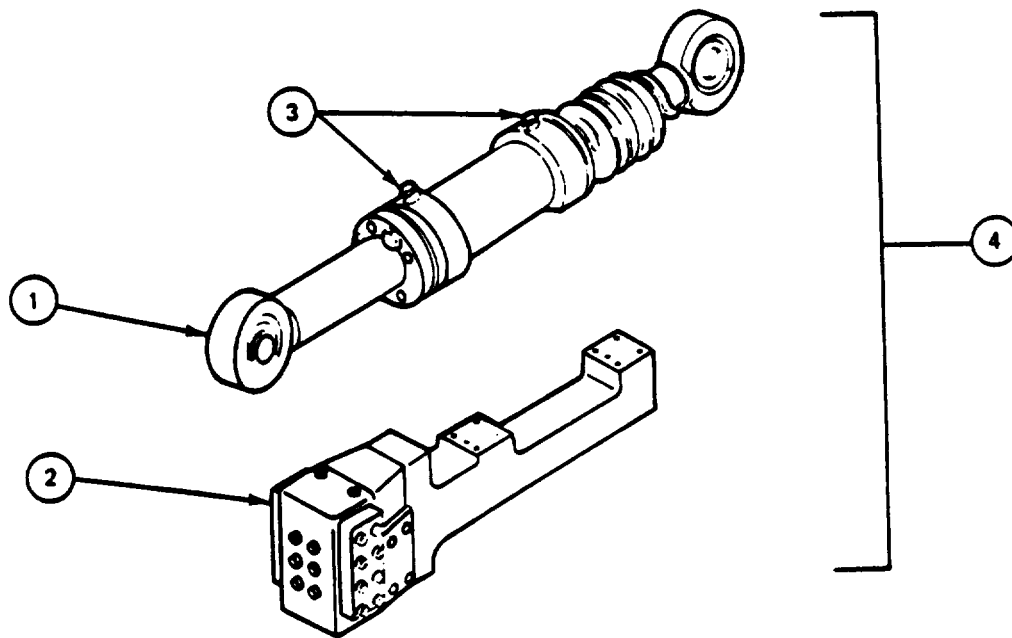
CAUTION

Keep dirt from getting in parts. Dirt can damage equipment.

NOTE

Use rags to **clean** up spilled hydraulic fluid.

FRAME 1	
Step	Procedure
1.	Assemble elevating cylinder (1) (para 15-7).
2.	Assemble elevation valve (2) (para 15-12).
3.	Put elevating cylinder (1) in vise with drain cocks (3) down.
4.	Install elevation valve (2) (para 15- 10).
5.	Remove elevating mechanism (4) from vise.
	END OF TASK



15-5. ELEVATING CYLINDER INSPECTION PROCEDURE

PERSONNEL: One

PRELIMINARY PROCEDURES: Disassemble elevating cylinder (para 15-6)

GENERAL INSTRUCTIONS:

NOTE

If part is bad, order repair part or next higher assembly as required.