

**CLASSIC
PALLET MULE
PARTS MANUAL & PRICE LIST**

REVISED: APRIL, 2003

Important!

**Please Read Completely & Carefully Before Attempting to Operate
Always Give Model and Serial Number When Ordering Parts**

WESLEY INTERNATIONAL

P.O. BOX 905 • 3680 CHESTNUT STREET • SCOTTTDALE, GEORGIA 30079

(404) 292-7441 • FAX (404) 292-8469 • 1-800-241-2869

www.palletmule.com

GENERAL INFORMATION

Original oil installed in the standard pallet mule is automatic transmission fluid.

Original oil installed in the Pallet Mule corrosion resistant units is AMS/OIL, AMO5 10W-40 engine oil.

The hydraulic system holds approximately one pint of fluid and operates on approximately ½ pint of fluid.

The oil level and filler plug is middle-way up on the left-hand side of the pump housing.

To properly fill reservoir, lower forks, remove level-filler plug, squirt fluid from squirt-type oil can into hole until oil trickles out the bottom edge of the hole. This is the maximum amount of fluid to be used.

The seals around the top of the pump piston and lift ram are functionally wiper rings and need not be replaced unless they are damaged, as both the piston and ram can be removed directly from and reinstalled through their seals without their having to be removed.

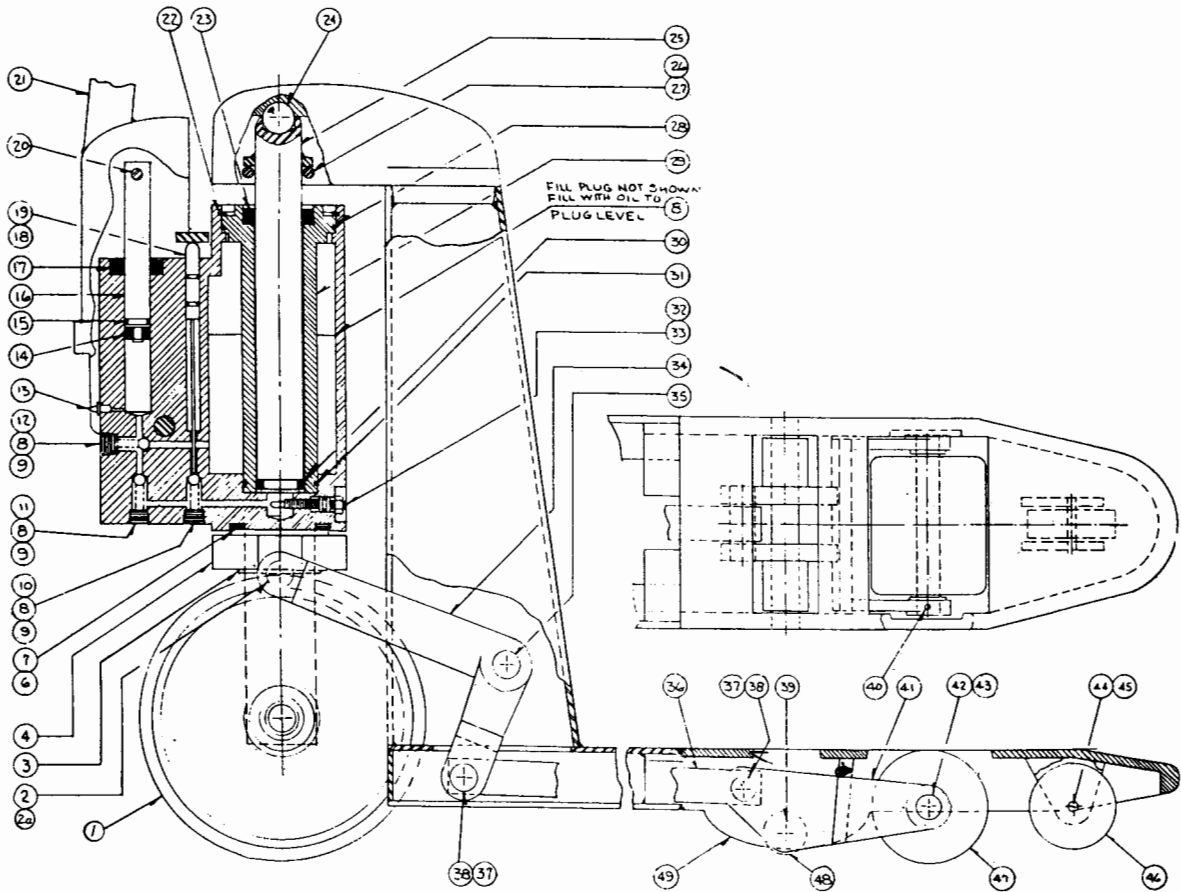
USE OF LOCTITE WHEN NECESSARY TO INSTALL:

- (A) Preparation of the B-1-15 pump piston seal as involves installation in its oversize casting bore.
 - 1. The seal and its respective casting bore must be clean and free of oil.
 - 2. To clean: Spray casting bore surface, outer perimeter of pump piston seal with **Locquic Primer-Cleaner grade T**, and then wipe off with clean rag.
 - 3. Next: Spray casting bore surface, and outer perimeter of pump seal again with **Locquic Primer-Cleaner grade T**, this time allowing same to dry for 5 minutes.
 - 4. **Loctite Locquic Primer-Cleaner grade T** causes the **Loctite retaining compound** to harden quicker and insures best results. **MIL Spec. 22473.**
- (B) Application of **Loctite Retaining Compound** to the B-1-15 pump piston seal and its respective oversize casting bore. **MIL spec. R46082.**
 - 1. Apply a coating of retaining compound to the inside perimeter of the casting bore. Also apply a coating of retaining compound to the outside perimeter of seal.
 - 2. Insert seal in casting bore; allow one hour for hardening.
 - 3. It is of great importance that the clearances between the mating parts be completely filled in order to obtain a leak-proof seal; yet, by the same token, be sure to **wipe off any excess**; specifically, where the pump piston is involved, as **Loctite** is a material that hardens from a liquid state into a solid state when confined between mating parts without the presence of air.

The pump piston, lift ram and release plunger cylinders are all burnished to #10 finish. In conjunction with this fine finish we use simplified packing, consisting of polyurethane "O" rings and "U" cups. . . This packing is made of the same tough, resilient material that the wheels are coated with. This combination of polyurethane working against this fine finish means years of trouble free hydraulic operation.

If, after following corrective maintenance instructions as outlined in this manual, you are unable to get your hydraulic unit operating properly, call Customer Service, WATS No. 1-800-241-2869 (number good from any state in the continental USA).

NOTE: THE PART NUMBERS LISTED BELOW ARE GENERIC. THEREFORE, IT IS NECESSARY THAT YOU HAVE THE MODEL NUMBER AND SERIAL NUMBER TO ORDER PARTS.

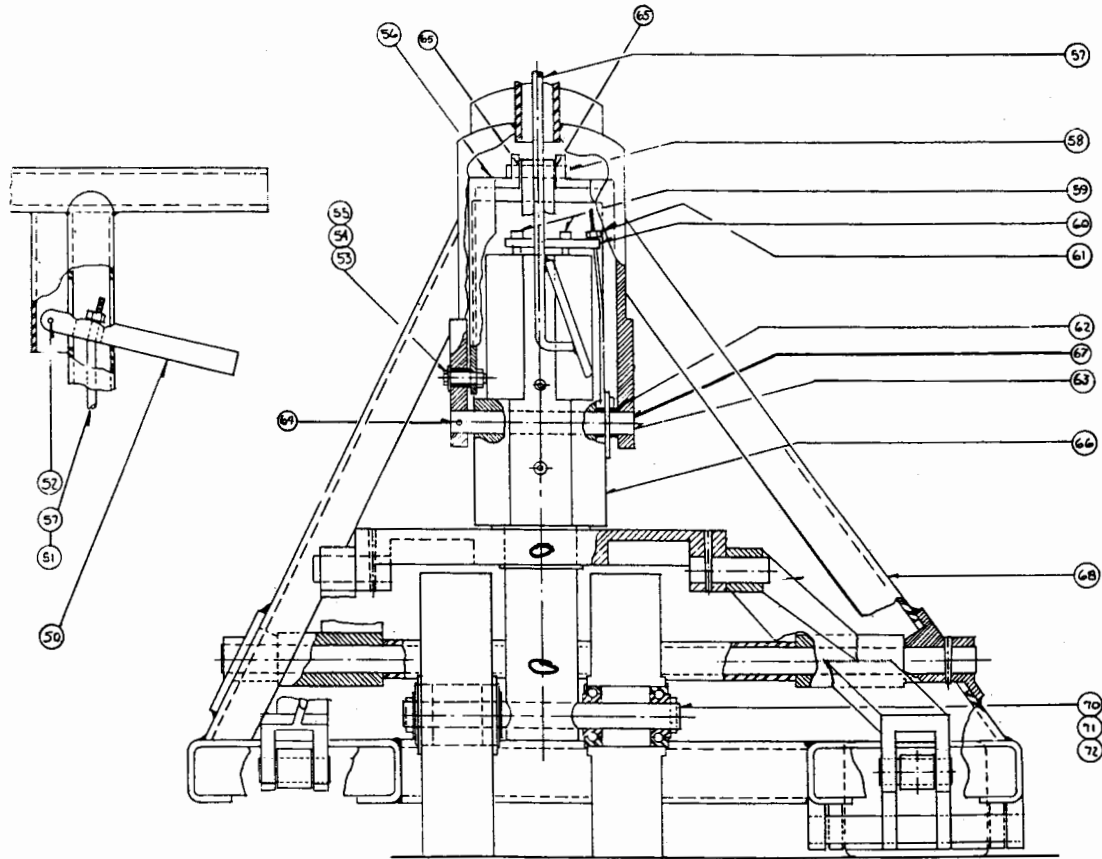


For MODEL NO.s 2500, 3000 and 4000, use PART NO. B1-30: 3/4 Hydraulic Repair Kit

For MODEL NO.s 4500, 5000, 5500, 6000 and 6500 use PART NO. B1-50: 5/8 Hydraulic Repair Kit

NO.	PART NUMBER	REQD	DESCRIPTION	NO.	PART NUMBER	REQD	DESCRIPTION
1	A 8X2 P W/B	2	Steer Wheel	26	B1-34	2	Stripper Bolt
2	B1-03C	2	Load Arm Pivot Bolt	27	B1-34B	2	Nut
2a	B1-03C FN	2	1/2 Flange Nut	28	B1-29	1	"O" Ring - Cylinder Top
3	B1-08B	1	Load Arm Snap Ring	29	B1-01C STD	1	Center Cylinder
4	B1-03	1	Load Arm	30	B1-32	1	Lift Ram "U" Cup
6	B1-23	1	Thrust Bearing-Nylon	31	B1-06	1	"O" Ring Bottom Ctr. Cyl.
7	B1-22	2	Thrust Bearing Race	32	B1-38	1	Restrictor
8	B1-20	4	Hydraulic Pipe Plug	33	B1-38B	1	Restrictor "O" Ring
9	B1-16	3	Valve Ball	34	B3-01L7	1	Bell Crank - Left
10	B1-35	1	Lowering Valve Spring	34	B3-01R7	1	Bell Crank - Right
11	B1-33	1	High Pressure Spring	35	B3-02	1	Bell Crank Axle
12	B1-31	1	Low Pressure Spring	36	B5-01	2	Push Rod
13	B1-11	1	Bleeder Valve	37	B6-02B LONG	4	Push Rod Fork End
14	B1-18	1	Pump Piston "U" Cup	38	B6-02A SHORT	2	Load Wheel Fork Axle
15	B1-36	1	Air Seal	39	B4-02	2	Load Wheel Fork Axle
16	B1-17	1	Pump Piston	40	B4-03CP 1 1/4	3	Cotter Pin
17	B1-15	1	Pump Piston Seal	41	B4-01	2	Load Wheel Fork
18	B1-13	1	Release Plunger	42	B4-04	2	Load Wheel Axle
19	B1-14	2	Rel. Plunger "O" Ring	43	B4-07	4	Load Wheel Bearing
20	B1-41	1	Pump Pivot	44	B2-11	2	Entry Wheel Axle
21	B5-COMplete	1	Handle Assembly	45	B2-11B	2	Entry Wheel Axle Nut
22	B1-28	1	Cylinder Snap Ring	46	B2-12 ALUM	2	Entry Wheel
23	B1-27	1	Lift Ram Seal	47	A 3X4-P W/B	2	Load Wheel
24	B1-25	1	Load Pivot Ball	48	B4-05	2	Exit Roller
25	B1-26	1	Lift Ram	49	B1-40	2	Roll Pin - 2" Long

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 For MODEL NO.s 4500, 5000, 5500, 6000 and 6500 use PART NO. B1-50: 5/8 Hydraulic Repair Kit

NO.	PART NUMBER	REQD	DESCRIPTION
50	B5-A	1	Hand Release Handle
51	B5-B	1	Nut
52	B1-03B	1	Screw Post-Release Handle
53	B1-04B	2	Cap Screw
54	B1-04W	2	Fender Washer
55	B1-05	2	Bushing - Bronze
56	B1-04 R/L	1	Pump Link Assy. - Complete
57	B5-04A	1	Long Link Assembly
58	B1-41N	1	Lock Nut
59	B1-42	2	Release Bar Guide
60	B1-43	1	Release Bar
61	B1-44A	1	Short Link Adjust. Nut
62	B1-39	1	Release Linkage Spacer
63	B4-04 XD	1	Handle Pivot
64	B1-40R	1	Roll Pin - 3/16" X 1 1/2" Long
65	B1-41W	2	Washer
66	B1-01	1	Hydraulic Unit
67	B1-39W	1	Washer
68	B2-	1	Frame
70	B1-09	1	Axle Steering Wheel
71	B6-04	2	Steer Wheel Axle Roll Pin
72	B1-07	4	Steer Wheel Bearings



PALLET MULE HYDRAULIC SYSTEM

Schematic No. 1 showing pump filling from reservoir:

Normal Action: On the up stroke of the main handle we have the intake stroke, which draws oil from the reservoir into the pump piston cylinder. Ball # 1 is pulled off its seat allowing oil from the reservoir to be pulled up under the piston, balls #2 and #3 are seated by spring pressure.

TROUBLE SHOOTING:

EFFECT: - Air, instead of oil, is pulled into the pump piston on the intake stroke, resulting in a loss of pumping effort on the subsequent pump stroke.

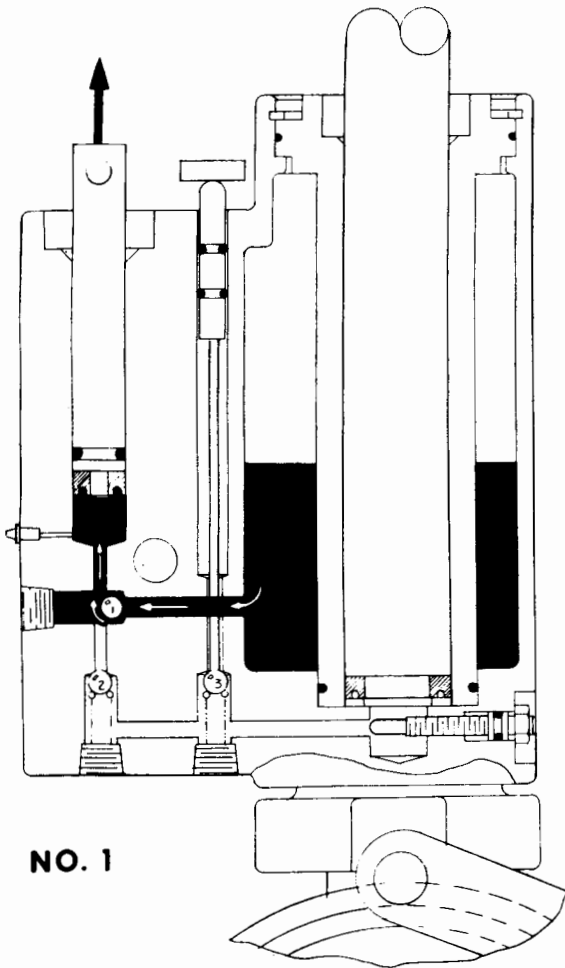
CAUSE: - Truck may have been turned upside down allowing air to be pulled into system.

CORRECTION: - Bleed system as follows:

1. Place handle in near upright position, allowing room for your hand to manipulate wrench.
2. Open bleeder screw P/N B-1-11 with ¼ inch box end wrench.
3. Push handle rest of the way down fast.
4. Close bleeder screw snugly - don't jam.
5. Repeat if necessary. You should now have a full handle stroke.

CAUSE: - Release plunger "O" rings and/or pump piston "O" ring are worn and allow air to be pulled into system.

CORRECTION: - Replace release plunger "O" ring and/or pump piston "O" ring.



NO. 1

PALLET MULE HYDRAULIC SYSTEM

Schematic No. 2 showing pump pressure stroke.

NORMAL ACTION: - On the downstroke of the main handle, oil accumulated from the upstroke of the main handle is forced from the pump cylinder by the pump piston to the lift ram cylinder causing the lift ram to raise, which in turn causes the frame and/or load to raise. Ball #2 is forced off its seat by the oil pressure. Balls #1 and #3 are seated by spring pressure.

TROUBLE SHOOTING:

EFFECT: - On the downstroke of the main handle the lift ram raises, but drops back down when the main handle is raised. If there is a load on the forks, you will not only see the lift ram drop back down, but will feel back-pressure on the handle.

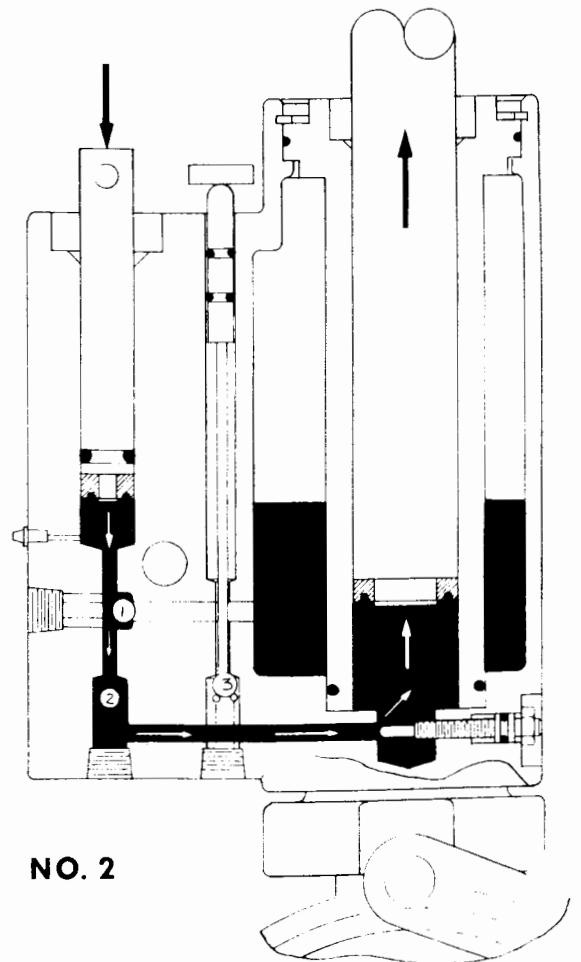
CAUSE: - Ball #2 is not seating properly.

CORRECTION: - Remove B-1-33 spring and ball #2, wipe ball clean and probe ball seat with a magnetic pencil. Reinstall spring and ball.

EFFECT: - On the downstroke or pump stroke of the main handle the lift ram does not raise.

CAUSE: - Ball #3 is not seating because of a particle under the ball or perhaps the release plunger is out of adjustment or hanging up so as to hold ball #3 off its seat, allowing the oil to by-pass and simply recirculate back through the reservoir and pump instead of applying pressure under the lift ram.

CORRECTION: - Remove B-1-35 spring and ball #3. Wipe ball clean and probe ball seat with a magnetic pencil. Reinstall spring and ball.



NO. 2

PALLET MULE HYDRAULIC SYSTEM

Schematic No. 3 showing load release and lowering speed restrictor operation.

RELEASE OPERATION:

NORMAL ACTION: - Hand actuation of the hand release lever located adjacent to the main handle activates the release plunger and rod, which in turn pushes ball #3 off its seat, allowing the oil that is holding the lift ram in a raised position to flow back into the reservoir with the resultant lowering of the lift ram and/or load. Ball #1 and #2 are seated by spring pressure.

TROUBLE SHOOTING:

EFFECT: - The load will not release when the hand release lever is actuated.

CORRECTION: - The hand release adjustment nut needs to be adjusted downward on the short link (P/N B-1-44A).

EFFECT: - When a loaded truck is being pushed with the main handle in a vertical position, the load lowers.

CORRECTION: - The hand release adjustment nut needs to be adjusted upward on the short link (P/N B 1-44A).

RESTRICTOR OPERATION:

The restrictor is a simple screw, this screw is located at the rear lower portion of the hydraulic housing and is designed to enable the easy adjustment of load lowering from extremely slow lowering to fast lowering, depending on the handling requirements of the user.

EFFECT: - Load lowers too slowly.

CORRECTION: - Turn screw counter-clockwise. This action backs off screw and allows for faster release of oil from under lift ram.

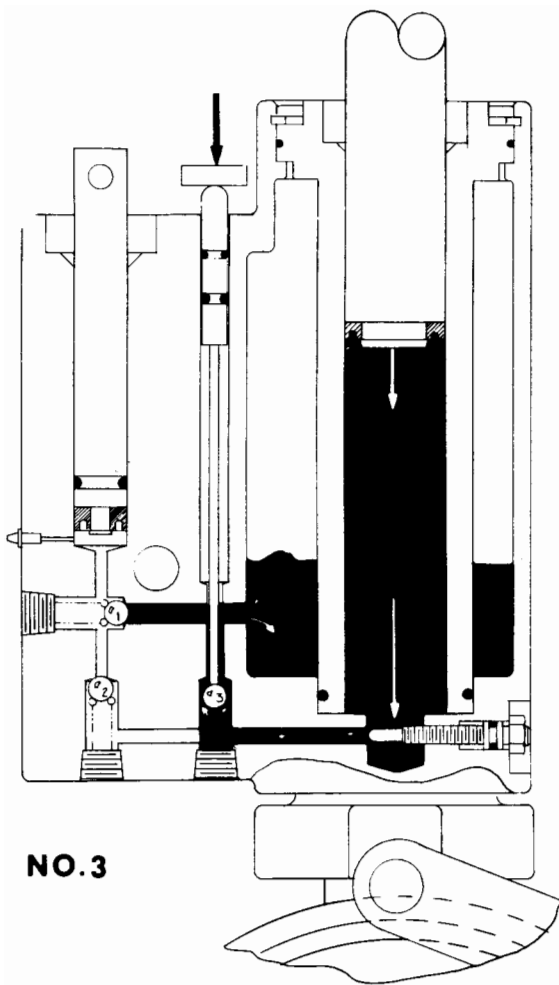
EFFECT: - Load lowers too rapidly.

CORRECTION: - Turn screw clockwise. This action further blocks passage and allows for slower release of oil from under lift ram.

EFFECT: - Main handle locks up, cannot be pulled downward in pumping stroke.

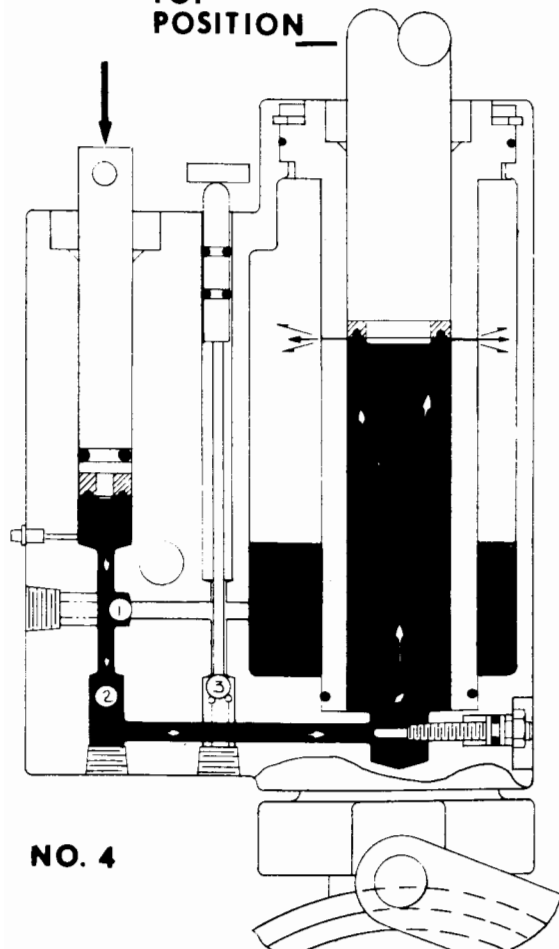
CAUSE: - Restrictor has been screwed all the way into the outlet port under the ram blocking the flow of oil through the entire system.

CORRECTION: - Back off on restrictor screw.



NO. 3

TOP
POSITION



NO. 4

PALLET MULE HYDRAULIC SYSTEM

Schematic No. 4 showing lift ram at top position with oil by-pass.

NORMAL OPERATION: - When the load is fully raised the lift ram is at its top position, which is controlled by the by-pass which allows all additional oil pumped into the lift ram cylinder to flow back into the reservoir.

TROUBLE SHOOTING:

EFFECT: - Ram drifts down, does not hold position.

CAUSE: - No. 1 B-1-32 "U" cup that seals the lift cylinder has been cut by oil bypass.

No. 2 - B-1-6 "O" ring that seals the center cylinder into the tapered bore in the base of the pump housing has been nicked or chipped, allowing oil from under the ram to by-pass back into the reservoir.

CORRECTION: - No. 1 - Replace B-1-32 lift ram "U" cup.

No. 2 - Replace B-1-6 "O" ring on bottom of center cylinder.

NOTE: To remove center cylinder: remove B-1-28 center cylinder snap ring. Be sure oil is in the reservoir. Raise the B-1-26 lift ram a couple of inches so that it is not bottomed out. Then strike top of lift ram firmly with a leather or rubber mallet. The back-pressure will jar the center cylinder loose where it can be hand removed.

Warranty:

- 12 MONTHS PUMP ASSEMBLIES (PARTS ONLY)
- 6 MONTHS PARTS AND LABOR ON COMPLETE UNIT
- WARRANTY PERIOD BEGINS 2 DAYS AFTER DEALER SHIP DATE TO CUSTOMER