

Figure 22

Dearborn Heavy Duty Loader with Hydraulic Bucket Control, Model 19-23

The Dearborn Heavy Duty Loader with Hydraulic Bucket Control, Model 19-23, is shipped knocked-down in five bundles: The main frame with the equalizer "U" pipe, high pressure pipe and the two pipes for the hydraulic line to the bucket wired to it; the lift arm assembly, the bumper assembly, a carton of small parts and the bucket (Model 19-31), manure fork (Model 19-32), or the crane attachment (Model 19-33). These three units are optional and are sold at additional cost.

This loader is operated by its own hydraulic pump which is driven by a splined shaft and adaptor sheave attached to the front end of the tractor engine crankshaft.

ASSEMBLY PROCEDURE

1. Attach the loader rear mounting brackets and install the sheave adaptor assembly as explained in Steps 1 and 2, pages 8 and 9.

2. Proceed as explained in Steps 3, 4, 5, 6, 7 and 8 on pages 9, 10 and 11.
3. Attach the loader lift arm assembly and the hydraulic cylinders as explained in Steps 6 and 7, page 4.
4. Attach the two levers to the control valve as shown in Figure 23. The small parts used in making this attachment are in the small bag in the carton in which the control valve is shipped.
5. Attach the control valve to the equalizer pipe as follows: See Figure 24.
 - a. Turn the $\frac{3}{4}$ x 5 inch nipple (5) into the base of the valve.

NOTE: Coat all threads with plumber's compound and tighten all pipe joints securely.

- b. Bolt the support plate (2) to the valve with the two $\frac{5}{16}$ x 2 $\frac{1}{2}$ bolts (4) and (7), lock washers and nuts.

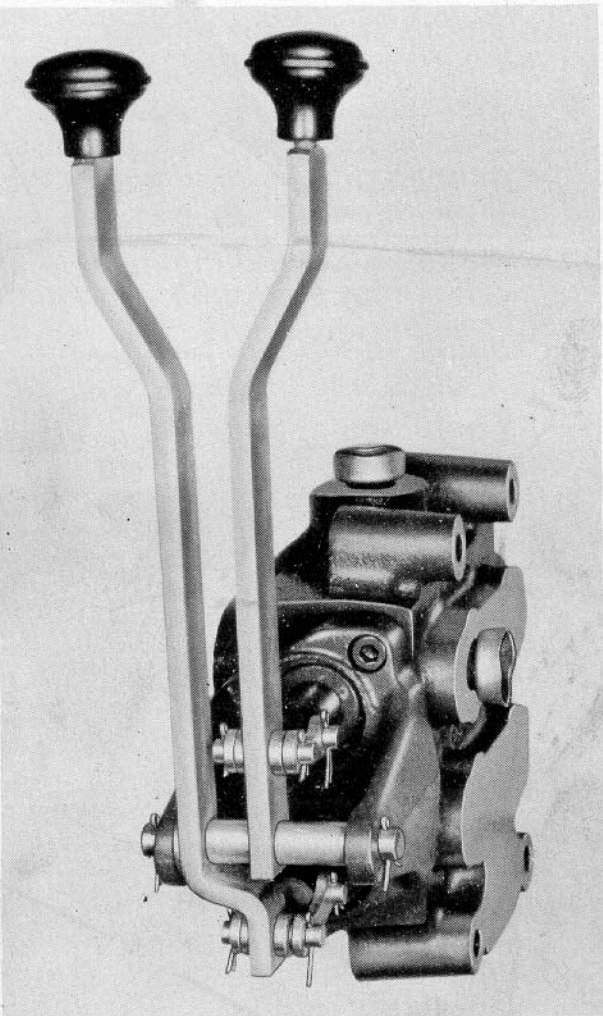


Figure 23

Levers Attached to the Control Valve

- c. Turn the close nipple (8) securely into the control valve. This close nipple has a restrictor orifice inside of it. Be sure the end of the nipple in which the small orifice is located (the small hole) goes into the valve.
- d. Turn the tee (3) onto the equalizer pipe (1) and then turn the $\frac{3}{8} \times 8\frac{3}{4}$ inch nipple (6) into the tee as shown in Figure 24.
- e. Lay the control valve on its side, fit the tee (3) on the close nipple (8) and turn the entire equalizer pipe assembly around

until the close nipple is secure in the tee. This joint must be tight.

6. Mount the equalizer pipe and control valve on the loader main frame as shown in Figure 25.
 - a. Position the assembly in place as shown and attach the control valve support plate to the loader frame with the U-bolt (5). Leave the nuts finger tight at this time.
 - b. Place the clamps (1), (2) and (4) in position on the loader frame and on the equalizer pipe and tighten the clamps just enough to hold the assembly in place.
 - c. Next, install the two hose sections (3) and (6) as shown and tighten the joints securely. Turn the hose fitting into the cylinders first.
7. Mount the bucket control hydraulic cylinder on the loader lift arm assembly as follows: See Figure 26.
 - a. Turn the reducer (2) onto the pipe (1) and then turn the pipe (1) into the end of the cylinder (3) as shown.
 - b. Turn the street ell (4) into the cylinder.

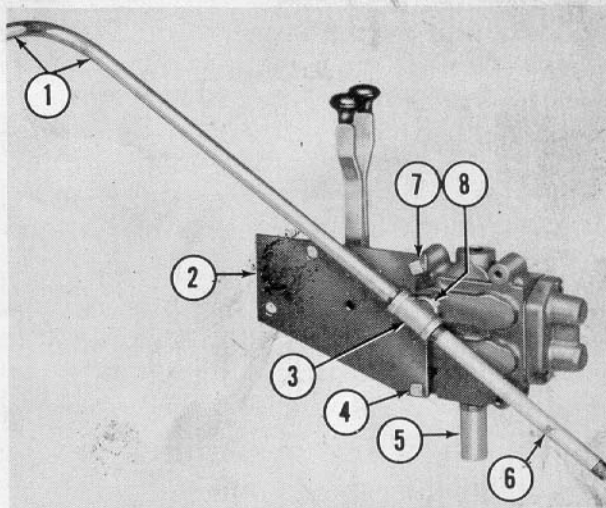


Figure 24

Equalizer Pipe and Control Valve Assembled

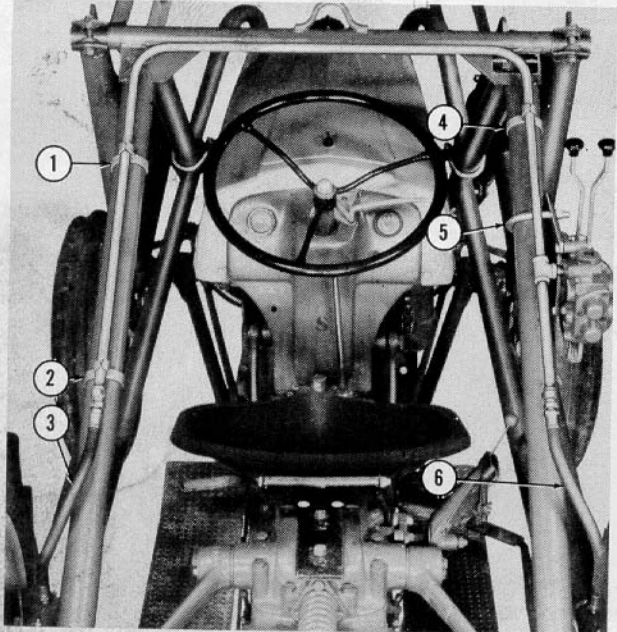


Figure 25

Equalizer Pipe and Control Valve Attached

- c. Turn the two $\frac{3}{8}$ inch street ells (6) and (7) into the control valve.
- d. Take the coupling (4) apart and turn the lower part into the control valve and the upper part onto the end of the high pressure pipe (3).
- e. Place the high pressure pipe (3) in its approximate position and support it with the clamp (11), Figure 27, and (5), Figure 28. Tighten the clamps just enough to hold the pipe.
- f. Assemble the coupling as shown at (4), Figure 27.
- g. Turn the two pipes (5), Figure 27, into the street ells (6) and (7) as shown.
- h. Turn the two couplings (2) on the end of the two pipes (13), Figure 27, and mount the two pipes (13) in place. Support them with the two clamps (12), Figure 27, and (7), Figure 28.
- i. Attach the two hose sections (1), Figure 27, as shown and secure the two pipes (5) in place with the clamp (8).

- c. Attach the cylinder support plates (6) and (7) to the loader lift arm as shown. Leave the bolts loose at this time. Bolt (8) has no nut. It turns into a threaded boss on the inside of the support plate (6).
- d. Position the cylinder as shown and secure it with the two pivot pins and cotter pins. See (5), Figure 26.
- e. Tighten all the bolts in the support plates.
8. Attach the bucket to the lift arms with the pins and cotter pins as shown at (10) and (11), Figure 26.
9. Attach the cylinder ram to the bucket with the pivot pin and cap screw as shown at (9), Figure 26.
10. Attach the hydraulic lines to the control valve as follows: See Figure 27.
 - a. Turn the $\frac{3}{4}$ x 5 inch nipple (10) into the outlet in the loader frame.
 - b. Fit the hose section (9) and clamps in place and tighten the clamps.

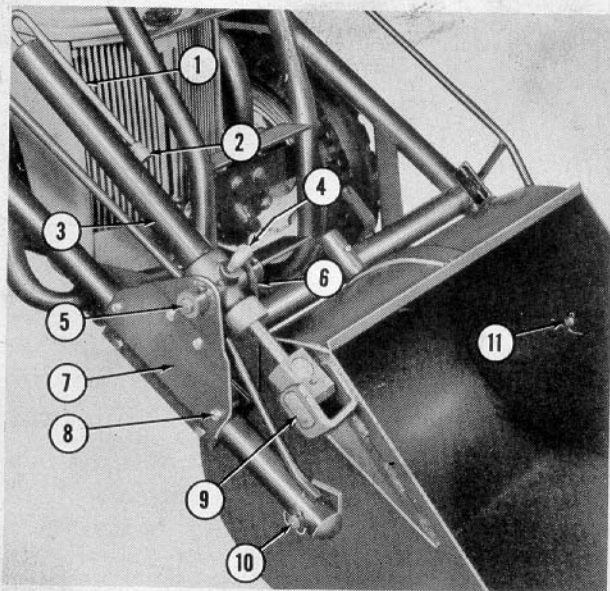


Figure 26

Bucket Control Cylinder and Bucket Attached

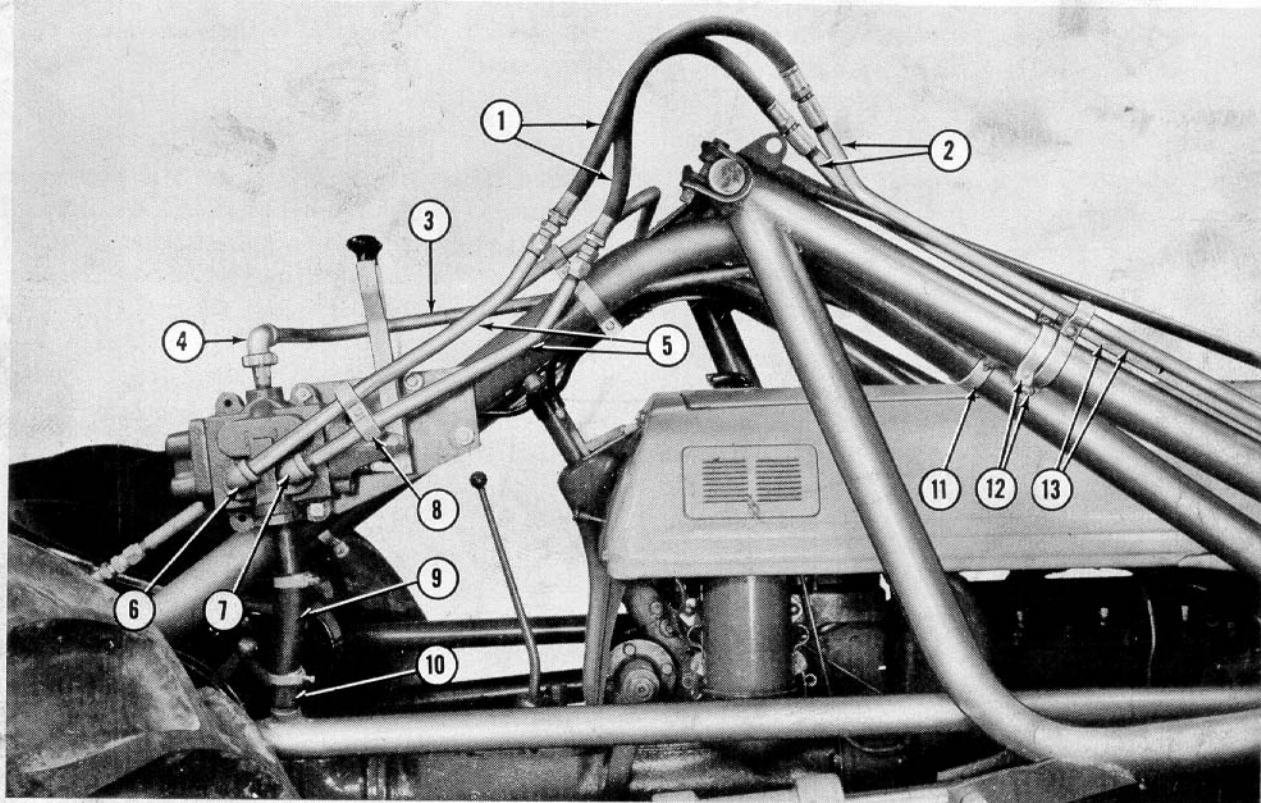


Figure 27
Hydraulic Lines Attached to Control Valve

11. Attach the hydraulic lines to the bucket control cylinder and pump as follows: See Figure 28.
 - a. Attach the pipe clamp (2) and the hose sections (3) and (4) to the pipes (1) as shown.
 - b. Attach the hose section (8) to the hydraulic pump as shown at (9) and to the high pressure pipe (6), as shown.
12. Tighten all pipe clamps securely.
13. Attach the tractor fenders and the drawbar and stay braces as explained in Steps 21 and 22, page 13.
14. Fill the loader hydraulic reservoir as explained in Step 23, page 13.
15. Start the tractor engine and let it run at idle speed a few minutes to circulate the oil into the hydraulic lines. Then raise the loader lift arms by pulling back on the inside lever

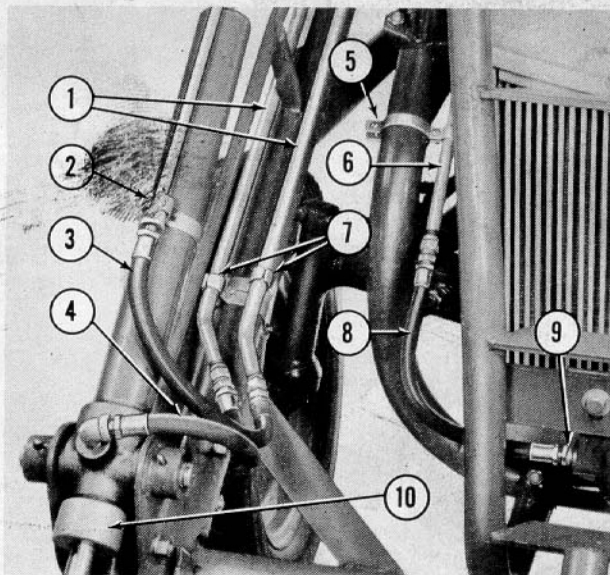


Figure 28
Hydraulic Lines Attached to Control Cylinder

on the control valve. Then dump and re-set the bucket by pulling back and pushing forward on the outside lever. Repeat this operation several times to be sure the loader is operating properly and to force the air out of the hydraulic lines.

16. Tighten the oil filler and air vent plug.
17. Check all joints and unions for tightness.

LUBRICATION

There are six grease fittings on this loader: One on each end of the loader cylinders, one on the cross member at the top of the main frame and one on the head of the bucket control cylinder.

Lubricate thoroughly when the loader is new and every eight hours of operation. Also oil the two pins which support the bucket control cylinder. See (5), Figure 26.

TRANSPORTING

When transporting the loader with the bucket (or manure fork) loaded or empty, the lift arms should be raised to where the bucket or fork is just above the level of the tractor hood.

ADJUSTMENTS

Keep the cap (9), Figure 7, on each cylinder tightened hand tight, and the cap (10), Figure 28, on the bucket control cylinder.