FORM NO. 3316–569

TORO®

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MODEL NO. 33452–40001 & UP

INSTALLATION INSTRUCTIONS

REELMASTER® TRANSPORT FRAME
5 TO 7 UNIT CONVERSION KIT

Since this instruction sheet covers only a minimal amount of information necessary to maintain and operate your machine, we suggest that you keep this material with your Operator's Manual so that both may be referred to for instructions concerning safe operation and proper maintenance procedures.

INSTALL HYDRAULIC FITTINGS

1. Park machine on a level surface and lower cutting units to the ground.

2. Block wheels to assure frame is secure to work on.

3. Disconnect hydraulic hose quick couplers from tractor.

4. Relieve pressure in Transport Frame hydraulic system, by slowly cracking the connections between the hydraulic couplers and hydraulic hoses (Fig. 1). Use extreme caution, when cracking connections, so oil is not directed toward the skin or eyes. Wrap the connections with a rag to help catch any oil that may escape.

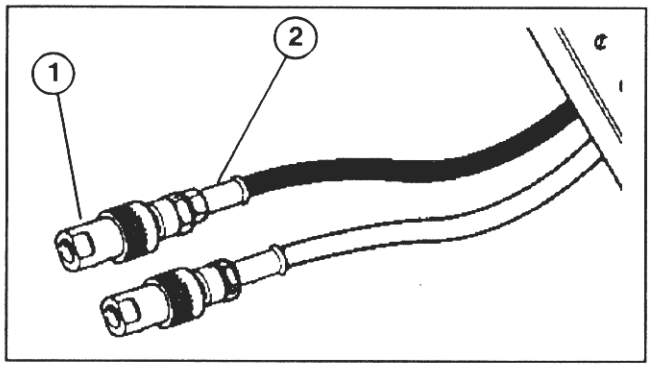


Figure 1
1. Hydraulic couplers
2. Hydraulic hoses

5. With couplings loose, cycle each valve section to relieve any pressure between valve section and hydraulic cylinder.

6. Carefully remove the (4) plugs from the top of the two outboard valve sections (Fig. 2).

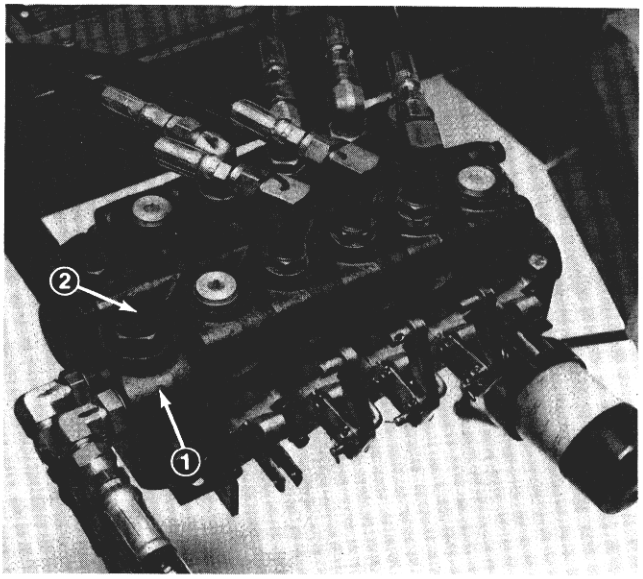


Figure 2
1. Valve Section
2. Plug

7. Lubricate O–ring seals, with oil, on new 90° fittings and install fittings in valve sections, positioning as shown in figure 3.

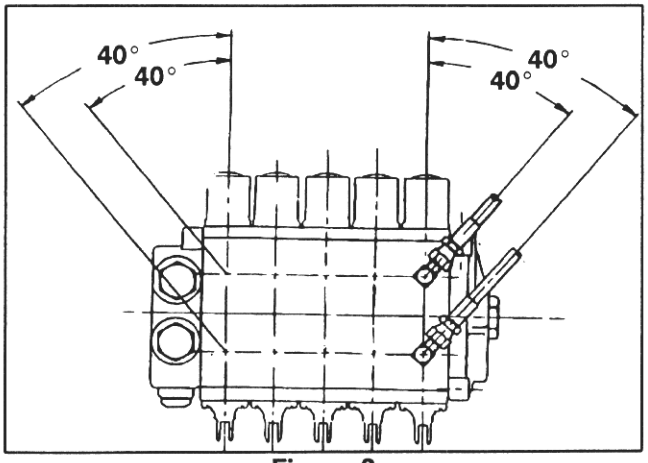


Figure 3

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MOUNT HYDRAULIC CYLINDERS

1. Mount a cylinder rest to underside of front cross channel with (2) 1/2–13 x 1–1/2" lg. capscrews, tapered washers and locknuts, as shown in figure 5.

2. Mount butt cap end of hydraulic cylinder to front cross channels with a cylinder shaft, (2) tube spacers and (2) 3/16 x 1–3/4" lg. cotter pins, as shown in figure 5.

3. Apply #2 permatex to threads of new elbow fittings and install fittings to hydraulic cylinder. Position fittings toward center of machine.

4. Connect new short and long hydraulic hoses to fittings on control valve and cylinder, as shown in figure 4.

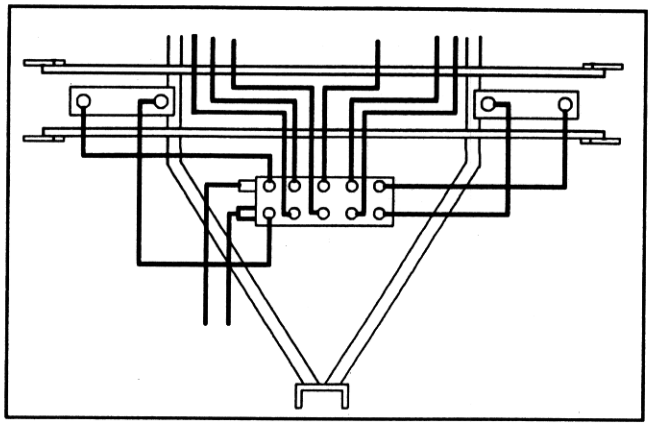


Figure 4

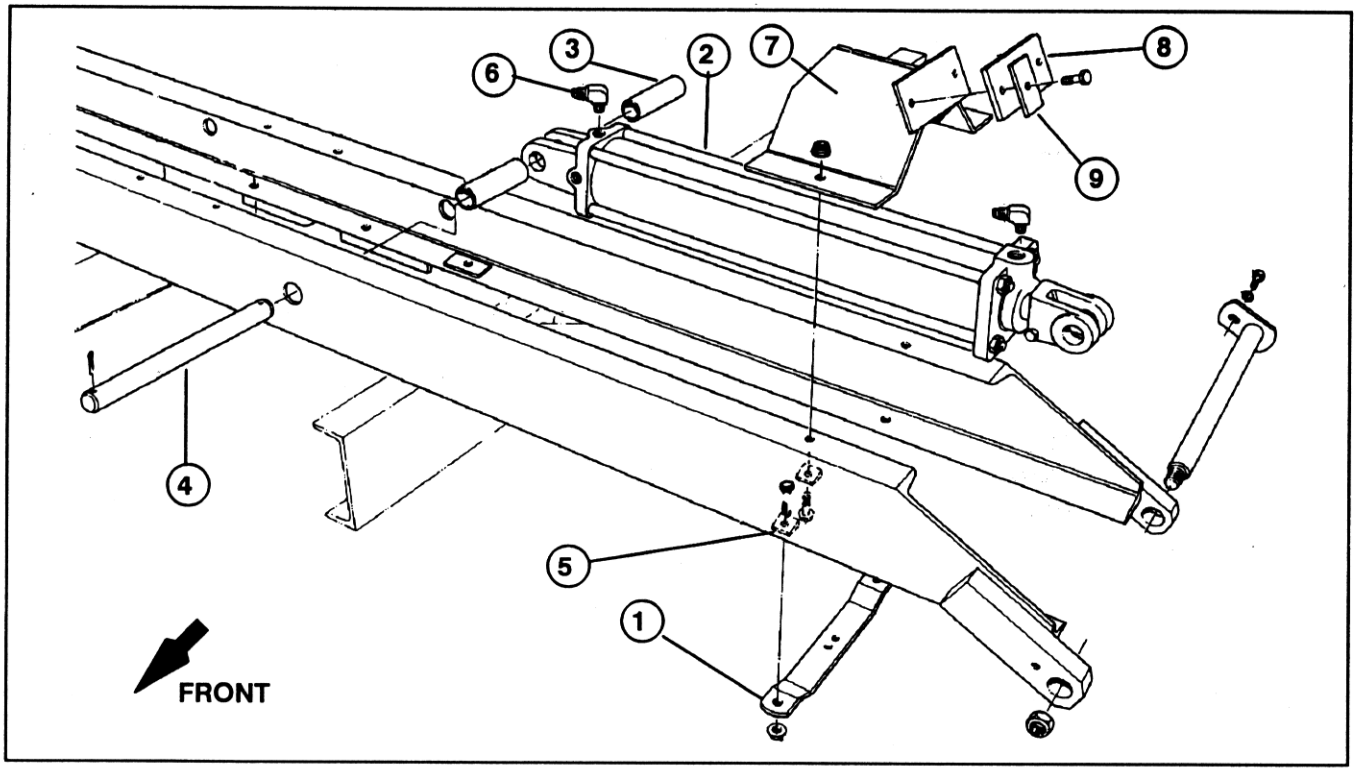


Figure 5

1. Cylinder rest
2. Hydraulic cylinder
3. Spacer tubes
4. Cylinder shaft
5. Tapered washer
6. Elbow fitting
7. Arm stop
8. Bumper pad
9. Bumper washers

MOUNT LIFT ARMS

1. Loosely mount appropriate lift arm (right or left) to front cross channel with lift bail pin and 3/4–16 lock nut, as shown in figure 6. Install lift bail pin in direction shown in figure.

2. Secure end of lift bail pin to side of front cross channel with a 3/16–18 x 3/4" lg. capscrew and 3/16 lockwasher, as shown in figure 6. Tighten lift bail nut.

3. Mount a arm stop to top of front cross channel with (2) 1/2–13 x 1–1/2" lg. capscrews, tapered washers and locknuts, as shown in figure 5.

4. Mount a bumper pad and (2) bumper washers to arm stop with (2) 3/16–18 x 1–1/4" lg. capscrews, as shown in figure 5.

5. Secure end of link to bottom of lift arm with a shaft, (2) flatwashers, 3/8 lockwashers and 3/8–24 x 1" lg. capscrews. Link to be positioned with cross member toward frame, as shown in figure 6.

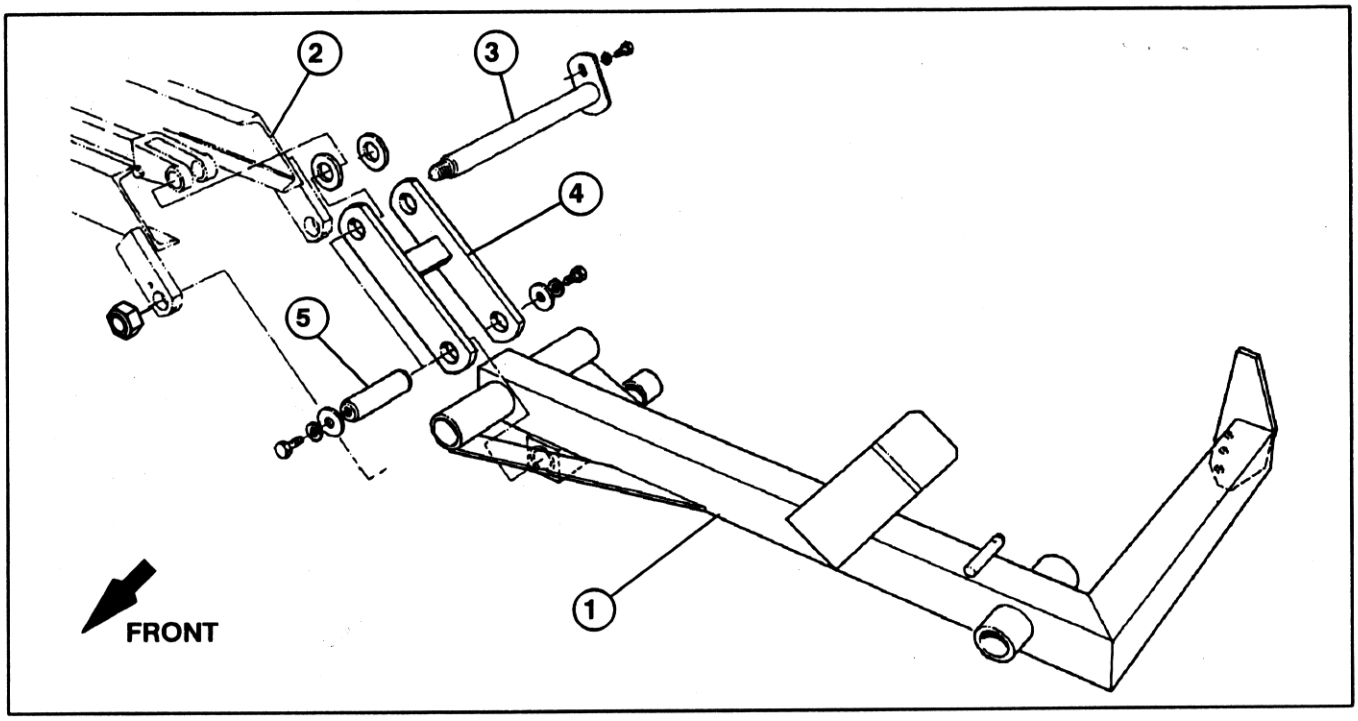


Figure 6

1. Lift arm
2. Front cross channel
3. Lift bail pin
4. Link
5. Shaft

6. Mount other end of link to hydraulic cylinder with (2) larger flatwashers, flatwashers, 3/8 lockwashers and 3/8–24 x 1" lg. capscrews, as shown in figure 6. Larger flatwashers to be positioned between link and hydraulic cylinder end.

7. If Transport frame is to be used on a public road, the overall width of frame and mowers may not exceed 8 feet. Clevis on end of hydraulic cylinders and arm stops may be adjusted to attain desired width shown in figure 7.

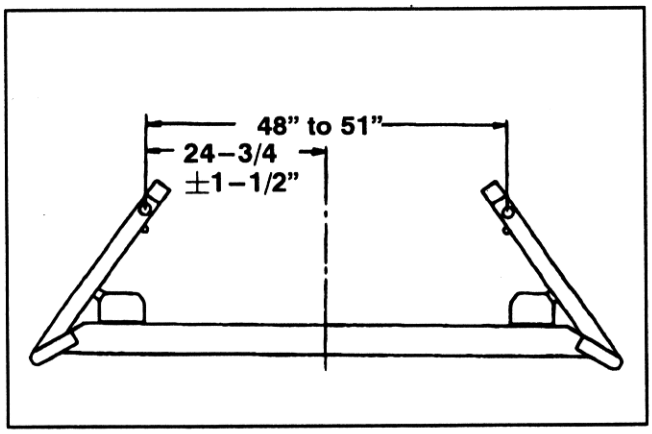


Figure 7

INSTALL LIFT BAIL

1. Secure lift bail housing to lift bail with a thrust washer and 3/4–16 locknut . Position lift bail as shown in Figure 8.

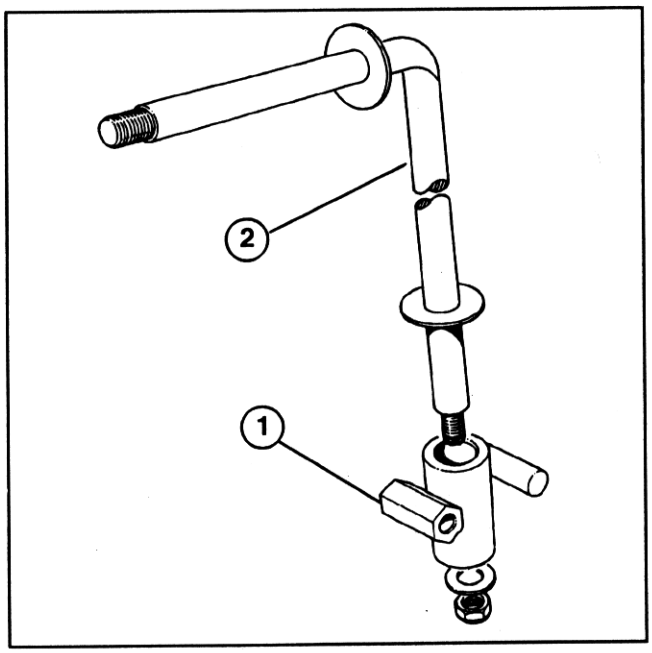


Figure 8

1. Lift bail housing
2. Lift bail

2. Insert lift bail thru holes in lift arm and secure with a thrust washer and 3/4–16 locknut (Fig. 9).

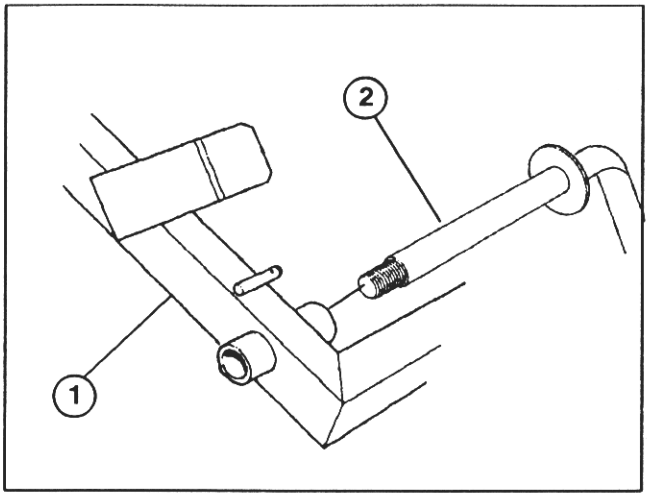


Figure 9
1. Lift arm
2. Lift bail

INSTALL DRAWBAR

1. Align mounting holes in drawbar with mounting hole in lift bail housing. When installing drawbar, offset hole in drawbar should be positioned up and lift bail stop should be on top of drawbar (Fig. 10 & inset).

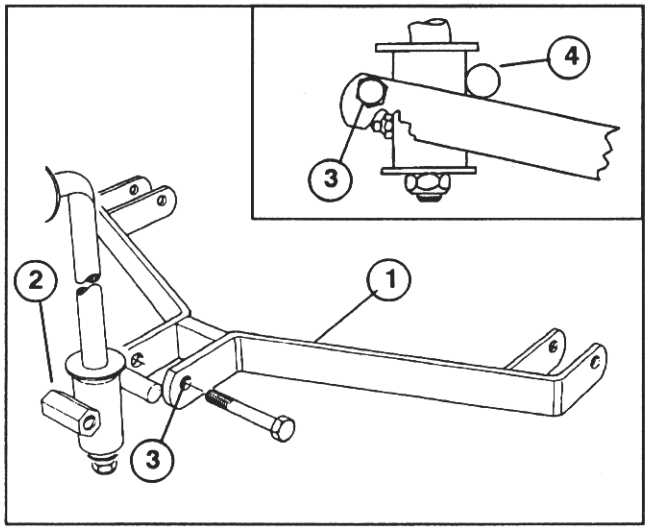


Figure 10
1. Drawbar
2. Lift bail housing
3. Offset hole in drawbar–UP
4. Lift bail stop

2. Secure drawbar to lift bail with 1/2–13 x 4" lg. capscrew and 1/2–13 locknut.

INSTALL MOWER (Reelmaster mower)

1. Align holes in drawbar with brackets on mower cross–tubes. Secure each side with 1/2–13 x 3–1/2" lg. capscrew, spacer tube and 1/2–13 locknut (Fig. 11).

Note: The head of the capscrew should be positioned inboard.

Note: If Spartan mowers are to be attached, drawbar clamps, Part No. 5–1090 and mounting fasteners will be required to mount drawbar to front cross tube of mower. Contact your local Authorized Toro Distributor for assistance.

2. If 18" wheels are installed on mowers, Toro Conversion Kit, Part No. 51–3060 will be required to allow the mowers to be raised to the transport position. Contact your local Authorized Toro Distributor for assistance.

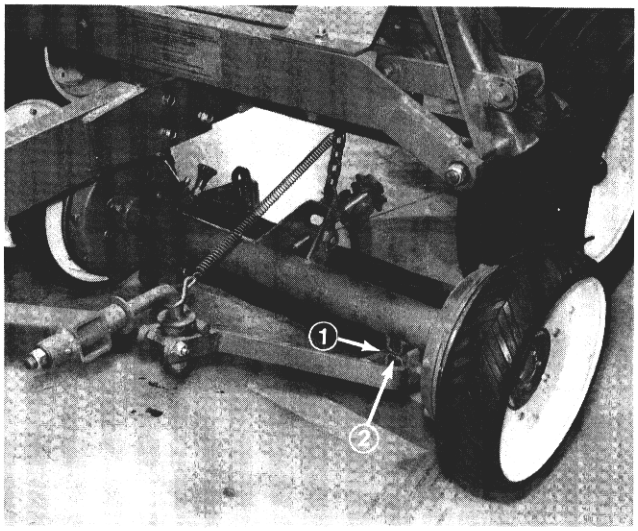


Figure 11
1. Capscrew, spacer tube & locknut
2. Mounting bracket

3. Secure lift chain to lift arm and mower mounting bracket with long shackles, clevis pins and cotter pins (Fig. 12). Secure to outer hole in lift arm bracket.

Note: Make sure there are no kinks or twists in chain.

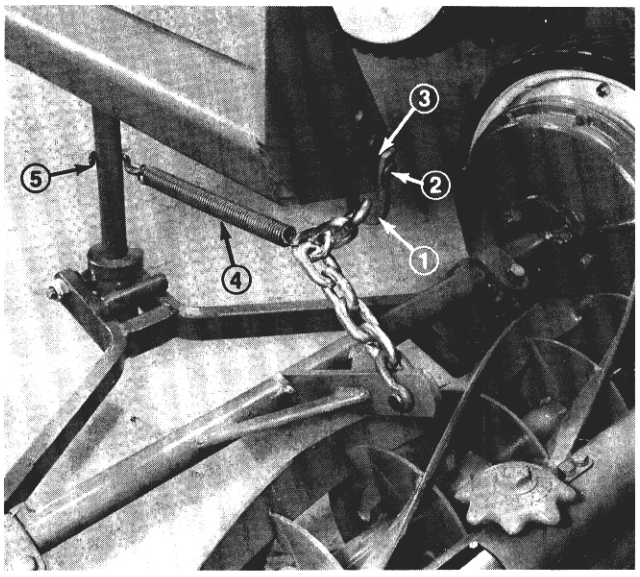


Figure 12
1. Long shackle
2. Clevis pin & cotter pin
3. Outer mounting hole
4. Spring
5. S–hook

4. Hook spring to fifth link in chain from mower and secure other end of spring to lift bail with S–hook (Fig. 12).

5. Repeat procedures on opposite side of machine.

TRANSPORT STRAP STORAGE

1. Place transport strap onto pins, located on center frame channel, and secure with (2) hair pin cotters (Fig. 13).

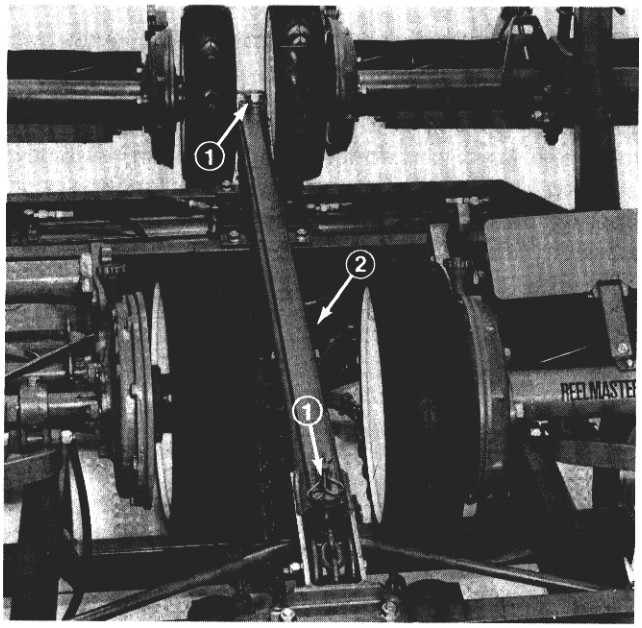


Figure 13
1. Hairpin cotters
2. Transport straps

MOUNT CONTROL LINKAGE AND LEVERS

1. Mount valve control lever to valve spool bracket with a link pin and connecting link, as shown in figure 14.

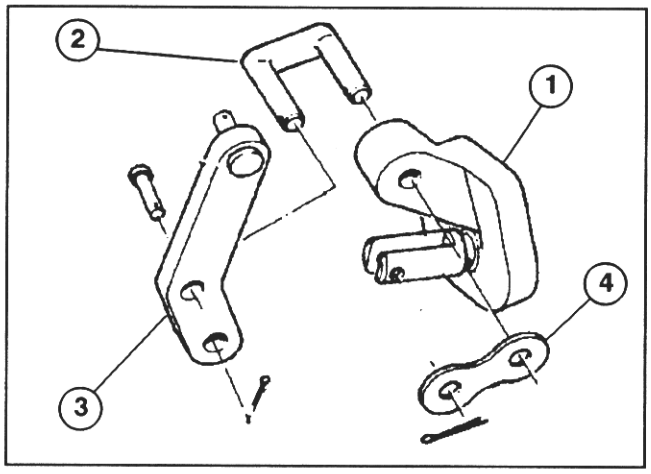


Figure 14
1. Valve spool bracket
2. Link pin
3. Control lever
4. Connecting link

2. Mount bottom of valve control lever to valve spool with a clevis pin and cotter pin, as shown in figure 14. Repeat procedure on other valve section. Coat pins with #2 grease.

3. Remove (4) capscrews securing control panel cover to control tower and remove cover (Fig. 15).



Figure 15
1. Control panel cover
2. Control levers
3. Mounting capscrews

4. Remove locknut and pivot pin securing pivot block levers to control tower (Fig. 16).

5. Install new pivot block levers onto pivot pin while reinstalling pin and existing blocks in control tower (Fig. 16). Secure with locknut. Coat pins with #2 grease.

6. Secure upper control linkage tubes to pivot blocks with clevis pins and cotter pins (Fig. 16). Coat pins with #2 grease.

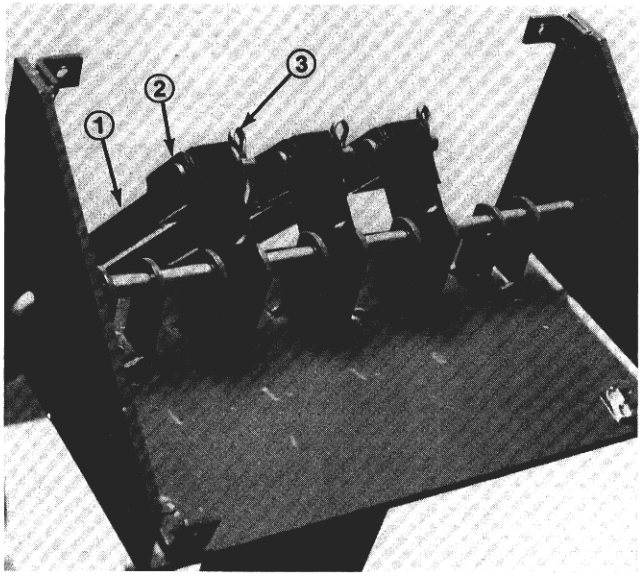


Figure 16
1. Upper control linkage tubes
2. Clevis pins
3. Cotter pins

7. Reinstall control panel cover to control tower with (4) capscrews (Fig. 15).

8. Screw control levers into pivot blocks (Fig. 15).

9. Check to make sure valve spool levers (Fig. 17) are in neutral (middle position) by pivoting levers in toward valve, or pulling them out to find mid position.

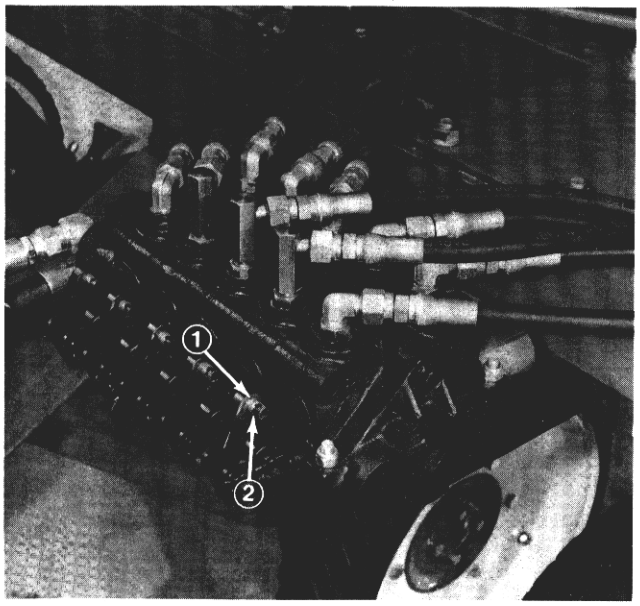


Figure 17
1. Spool valve levers
2. Mounting pin

10. Thread 7/16–14 hex nuts onto lower control rods. Partially thread lower control rods into upper control tubes (Fig. 18). Coat threads with #2 gun grease.

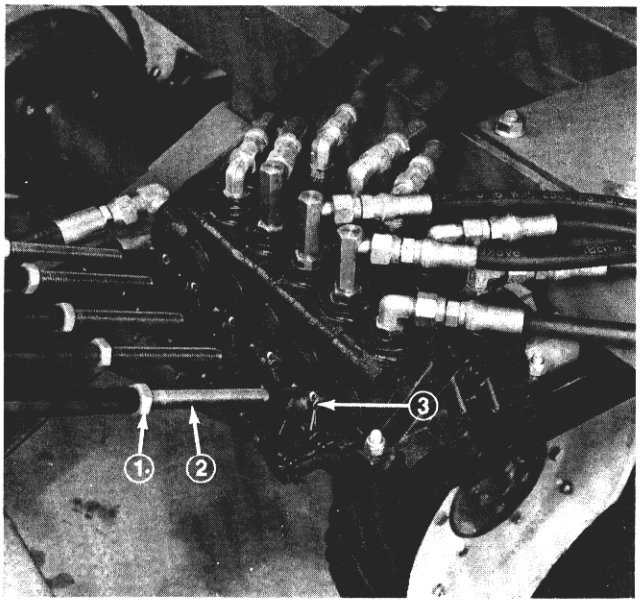


Figure 18
1. Hex nut
2. Lower control rod
3. Cotter pins

11. Align hole on end of lower control rod (Fig. 18) with mounting pin in control valve lever (Fig. 17). Lever on control tower should be in center of slot (neutral position) if adjusted correctly (Fig. 19). Thread lower rod into or out of upper control tube to adjust. After each lever is adjusted, check to make sure all levers are aligned with each other. Readjust if necessary.

12. Secure control rods to control valve levers with cotter pins (Fig. 18).

13. Check control lever operation by moving levers to raise and lower positions. Hold lever(s) in respective position until cycle is completed. All levers should operate freely with no binding and should be well lubricated Readjust control tube linkages if necessary.

14. When adjusted correctly, tighten jam nuts on lower control rods (Fig. 18).

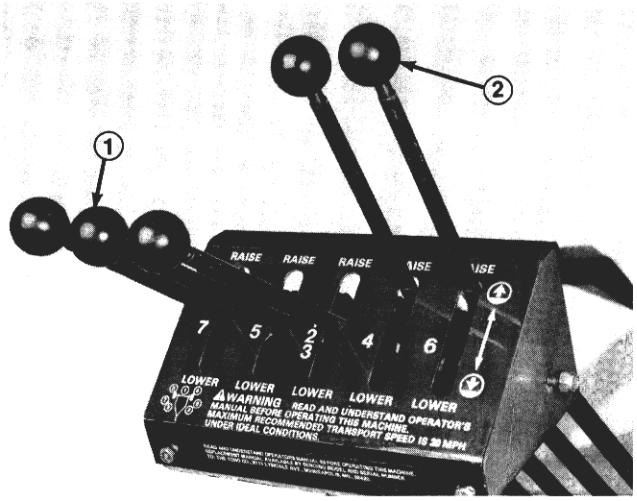


Figure 19
1. Lever in neutral position
2. Lever in raise position

15. Lubricate all grease fittings.

16. Attach hydraulic hose couplers to tow vehicle and operate the hydraulic system. The Transport frame will be removing oil from the tow vehicle hydraulic reservoir. Do not allow reservoir oil level to be depleted so that cavitation occurs. Refill reservoir with oil recommended for tow vehicle or use ISO 68 or oil similar to Mobil oil 424.

TRANSPORT OPERATION

1. Make sure that all mowers are in full transport position before moving to the next mowing area.

2. Remove hairpin cotters securing transport straps to center frame channel and lift off straps (Fig. 13).

3. Mount transport straps to mounting pins on lift arms and secure with hair pin cotters (Fig. 20).

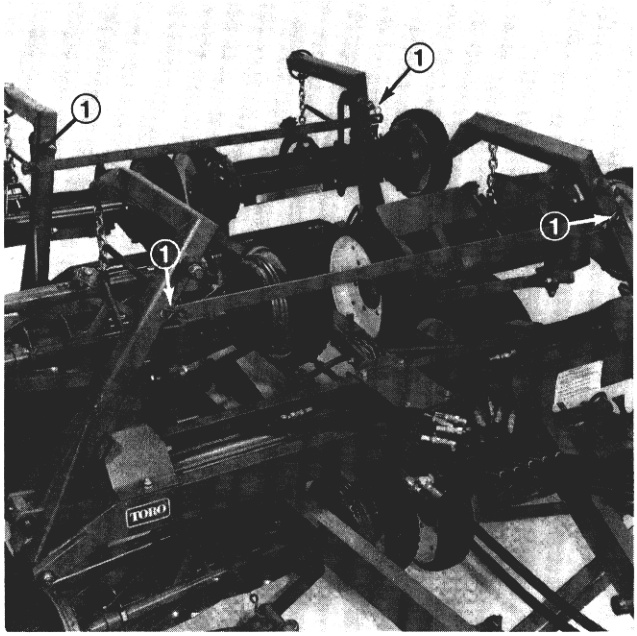
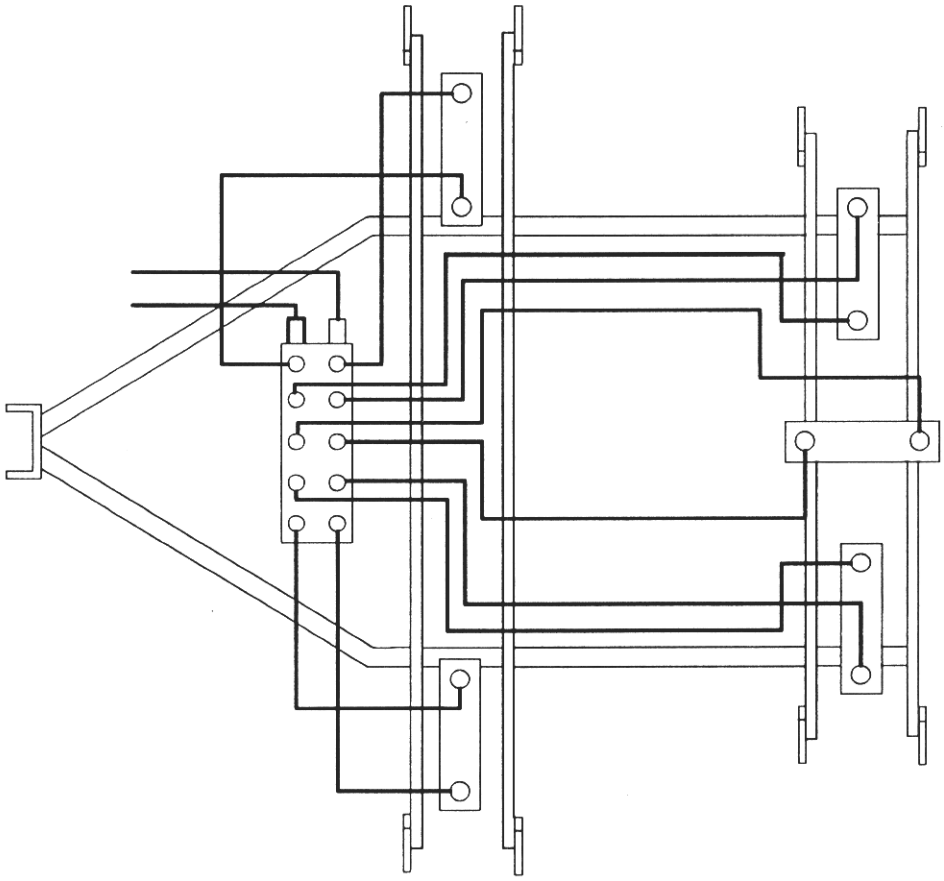


Figure 20
1. Mounting pins on lift arms

HYDRAULIC SCHEMATIC



V44-745


TORO®