

# CATERPILLAR D8R

7XM / SEBP2954

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## MOUNTING GP

Mounting Gp

Drawing 1 of 2

### INSTRUCTIONS:

#### CAUTION

Cleanliness is of utmost importance when working on hydraulic equipment. Contamination may cause damage to close tolerances of the hydraulic components which may result in erratic operation and reduced service life.

NOTE: Refer to the appropriate Caterpillar service manuals for additional information regarding steps 1 & 2.

1. Drain hydraulic oil into a suitable container. Recycle or dispose of drain oil in an environmentally responsible manner. Securely install hydraulic reservoir drain plug after oil has drained.
2. Remove and discard the ripper hose junction block (if equipped) from the tapped mounting pad on the bottom of the fuel tank.
3. Clean all paint, oil, grease, rust and dirt from the mounting surfaces of the winch adapter brackets and tractor.
4. Apply Loc-tite 271 to the threads and install studs, item 5, into the top four locations on the rear face of the tractor. Install the winch adapters onto the

studs on the rear of the tractor. Install the motor union bracket (item 6 control group) onto the top RH studs, item 5. Install valve bracket (item 3 control group) onto top LH studs.

5. Apply Loc-tite 242 to the threads of the studs, item 5, and capscrews, item 4, then tighten to 1,100 lb·ft (1,490 N·m) torque.

#### WARNING

Winch weighs approximately 4,050 lb (1,890 kg). Use a hoist with sufficient capacity.

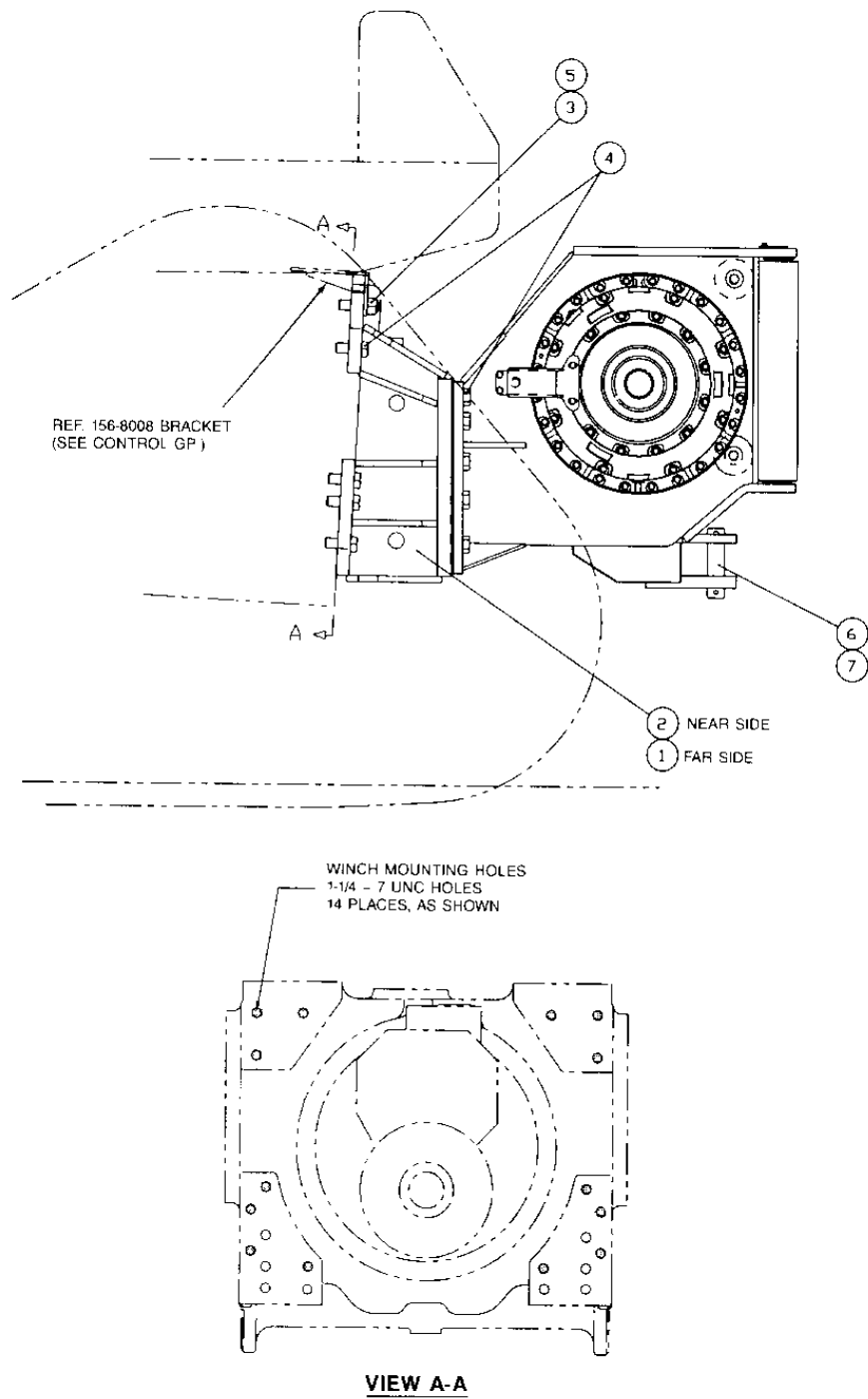
6. Install winch onto adapters. Apply Loc-tite 242 to threads of capscrews, item 4, then tighten to 1,100 lb·ft (1,490 N·m) torque.

#### CAUTION

Fill winch to proper level with recommended oil BEFORE operating. Component damage may occur if winch is operated without oil.

MOUNTING GP (continued)

Drawing 2 of 2



| Ref. | Part number | Description                 | Qty | Code | Group page |
|------|-------------|-----------------------------|-----|------|------------|
| 1    | 152-8371    | ADAPTER, RH                 | 1   |      |            |
| 2    | 152-8372    | ADAPTER, LH                 | 1   |      |            |
| 3    | 7X-0451     | NUT, HEX (1 1/4 - 7)        | 4   |      |            |
| 4    | 1J-5484     | BOLT (1 1/4 - 7 X 3 1/4 G8) | 20  |      |            |

MOUNTING GP (continued)

| Ref. | Part number | Description          | Qty | Code | Group page |
|------|-------------|----------------------|-----|------|------------|
| 5    | 135-1934    | STUD (1 1/4 - 7 X 5) | 4   |      |            |
| 6    | 126-0860    | DRAWBAR PIN          | 1   |      |            |
| 7    | 3B-5320     | COTTER PIN           | 2   |      |            |

# CONTROL GP-HYDRAULIC

## Control Gp-Hydraulic

Drawing 1 of 5

### MODEL PA58VS HYDRAULIC CONTROL GROUP

#### INSTRUCTIONS

#### CAUTION

**Cleanliness is of the utmost importance when working on hydraulic equipment. Contamination may cause damage to close tolerance hydraulic components which may result in erratic operation and reduced service life.**

NOTE: Refer to the appropriate Caterpillar service manuals for additional information regarding the tractor.

1. To prepare the tractor for service, lower the blade to the ground. Turn the engine off and remove trapped oil pressure in the blade circuits by cycling the blade control lever in all directions. Relieve trapped oil pressure in the hydraulic reservoir by opening the fill cap. Turn the tractor master electrical switch off.
2. Remove the operator's seat and cab floor plate, and RH console top and side cover plates to gain access to hydraulic plumbing.
3. If required, perform the tractor conversion updates as described on page 5.
4. Preassemble fittings to logic valve assembly, item 2, as shown on page 10.
5. Mount the logic valve assembly to the logic valve mounting bracket, item 3 (already installed to tractor rear face), utilizing fasteners, items 4 and 5. Torque the capscrews to 33 lb•ft (45 N•m). Assembly may be aided by removing the bracket from the tractor before installing the valve assembly.
6. Attach the manifold, item 7, to the mounting bracket, item 6 (already installed on tractor rear face), utilizing fasteners, items 8 and 9. Torque the capscrews to 75 lb•ft (100 N•m).
7. Install MOTOR SHIFT hose, item 28, to -4 elbow in "X" port on the forward side of the winch motor. Install the opposite end to "X" port on the logic valve.
8. Install MOTOR DRAIN hose, item 30, to -8 elbow on the winch motor. Install the opposite end to one of the -8 "T" ports on the logic valve.
9. Remove and discard the shipping cover and capscrews from the top motor port. Install REEL-OUT hose, item 18, to this port and to the inboard port on the manifold. Fasten to each end utilizing split flange halves, item 11, D-ring, item 12, and fasteners, items 13, 14 and 15. Torque the capscrews to 50 lb•ft (70 N•m).
10. Install REEL-IN hose, item 16, to port in brake valve on bottom motor port, utilizing adapter, item 17. Attach the opposite end to the outboard manifold port utilizing split flange halves, item 11, D-ring, item 12, and fasteners, items 13 and 15. Torque the capscrews to 50 lb•ft (70 N•m).
11. Attach REEL-IN hose, item 20, and REEL-OUT hose, item 19, to the forward face of the manifold utilizing split flange halves, item 63, O-ring, item 56, and fasteners, items 66 and 5. The REEL-IN hose should be attached to the outboard port. Torque capscrews to 50 lb•ft (70 N•m).
12. Install an elbow, item 57, to the upper port of the winch section of the tractor stack valve utilizing O-ring, item 56, and fasteners, items 59 and 5. Torque capscrews to 50 lb•ft (70 N•m).
13. Install an elbow, item 57, to the lower port of the winch valve section utilizing (2) O-rings, item 56, flange, item 65, and fasteners, items 58 and 5. Torque capscrews to 50 lb•ft (70 N•m).
14. Attach the forward ends of the REEL-IN and REEL-OUT hoses to the winch valve section – REEL-IN to the lower port, utilizing split flange halves, item 63, O-rings, item 56, and fasteners, items 66 and 5. If split flanges exist on the stack valve, reuse those components, replacing only the O-rings. Torque capscrews to 50 lb•ft (70 N•m).
15. Preassemble fittings to control adapter assembly, item 1, as shown on page 10.
16. Attach REEL-IN pilot hose, item 21, to the upper wet end cap on the winch valve section utilizing the elbow, item 24. Orient the elbow such that it provides the maximum available clearance with the dozer control linkages. Attach the opposite end to port 1 on the joystick assembly.
17. Attach REEL-OUT pilot hose, item 26, to the lower wet end cap on the winch valve section, utilizing the elbow, item 24. Attach the opposite end to port 3 on the joystick assembly.
18. Attach PRESSURE hose, item 26, between logic valve "J" port and port "P" on the joystick assembly.
19. Attach RETURN hose, item 26, between logic valve "T" (-6 size) port and port "T" on the joystick assembly.
20. Attach DRUM CLUTCH RELEASE hose, item 27, between the elbow located on the RH side of the winch case and port 4 on the joystick assembly.
21. Install elbow, item 33, into a plugged port located in the hydraulic reservoir below the hydraulic oil filter.

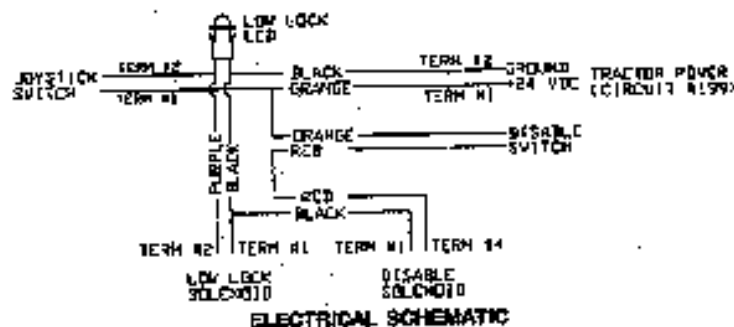
## CONTROL GP-HYDRAULIC (continued)

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22. Attach RETURN hose, item 31, between hydraulic reservoir fitting, item 33, and "T" port elbow, item 55, on logic valve.
23. Remove the tractor pressure test fitting at the stack valve "HA" port, install the tee, item 73, into the "HA" port. Install the provided test fitting, item 35, to the opposite end of the tee fitting.
24. Install the PRESSURE hose, item 59, between the tee, item 73, and "P" port on the logic valve.
25. Attach the wiring harness, item 36, to the toggle switch, indicator light and joystick, and to circuit #109 of the tractor harness, located below the tractor's RH console. See electrical schematic below.
26. Route and bundle hoses appropriately as shown, and tie down utilizing straps and fasteners as specified.
27. Route the wiring harness, item 36, along the lower rear edge of the platform, following the main tractor harness. Tie down connectors to the ladder clip on back of the logic valve, and at various points along the platform edge, utilizing the straps, item 62.
28. Install the control adapter assembly, item 1, up through the bottom of the tractor console cover plate, item 106. Fasten with cap screws, item 10, and washers, item 5.
29. Attach the console cover plate to the tractor console using the existing tractor hardware. Re-attach the dozer blade controller to the cover plate using the existing hardware. Re-attach all removed covers, plates, etc., and the operator's seat.
30. Carefully install the control pedal, item 43, to the console cover plate. Locate the pedal adjacent to the control stand, as shown in View B-B, page 7.
31. Turn on the tractor master switch. Turn the starter key switch - DO NOT START ENGINE. Pressing the rocker switch on the winch controller should cause the indicator lamp and solenoid valve to activate. Pull the toggle switch upward and move to enable hydraulics to the winch. Disable solenoid should activate in the "enabled" mode. Leave the switch in the disable position when the winch is not in use.
32. Check all hydraulic connections for tightness. Make certain all hoses and wires are routed and secured to prevent chafing.
33. Fill the tractor hydraulic reservoir to the proper level. Refer to the Caterpillar oil specs for proper type and quantity.
34. Start the engine and operate at low idle to purge air from the lines. Operate the winch in all functions, then refill the hydraulic reservoir as required. Check for leaks and correct as required. If winch REEL-IN and REEL-OUT functions at joystick do not match drum rotation, reverse hoses at joystick ports 1 and 3.
35. Record winch and tractor serial numbers on the delivery report form(s). Conduct winch operator training as required.

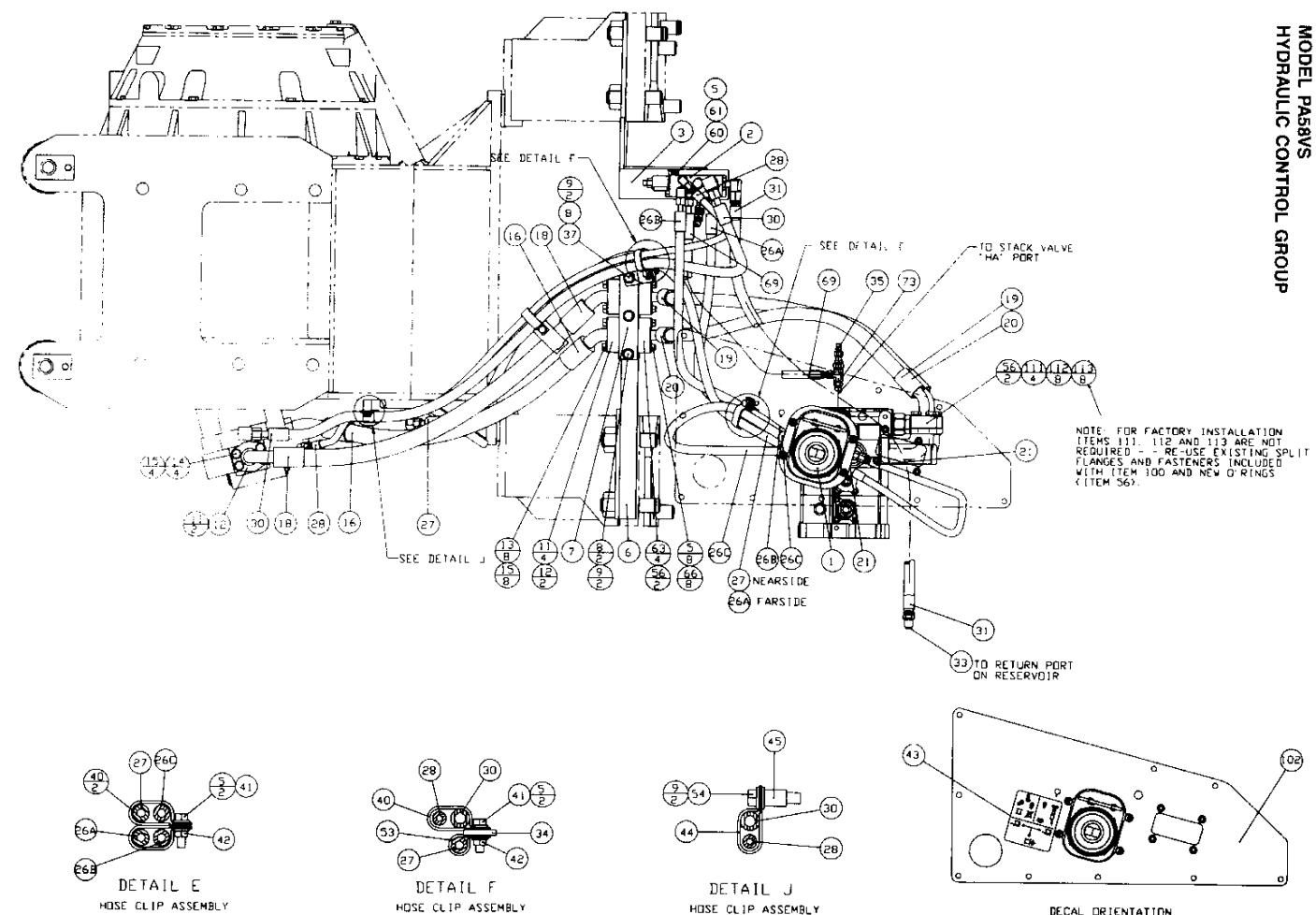
### TRACTOR CONVERSION INSTRUCTIONS - D8R

1. Make sure the tractor hydraulics are locked out.
2. If the tractor is equipped with a ripper section in the stack valve, replace the ripper valve section with the new winch valve section, item 100.
3. If the tractor is not equipped with a ripper section in the implement stack valve, disassemble the valve one section at a time. Replace the tie bolts with new bolts, item 107. Reassemble the valve section by section. Add the new winch valve section, item 100, as the last section in the stack.
4. Remove the existing drive screw and L.D. plate from the valve assembly. Attach the new L.D. plate, item 103, using the drive screw, item 108.



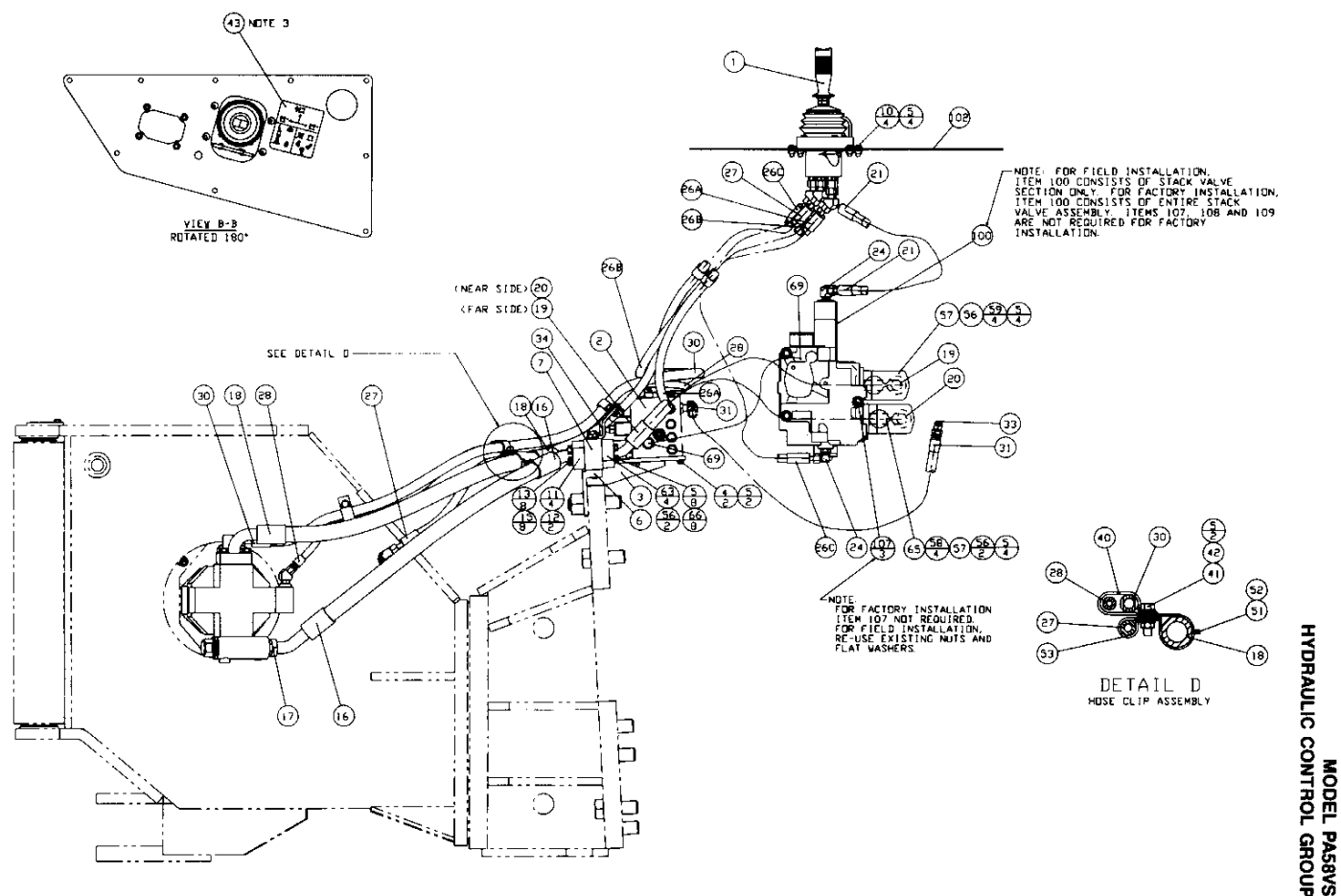
# CONTROL GP-HYDRAULIC (continued)

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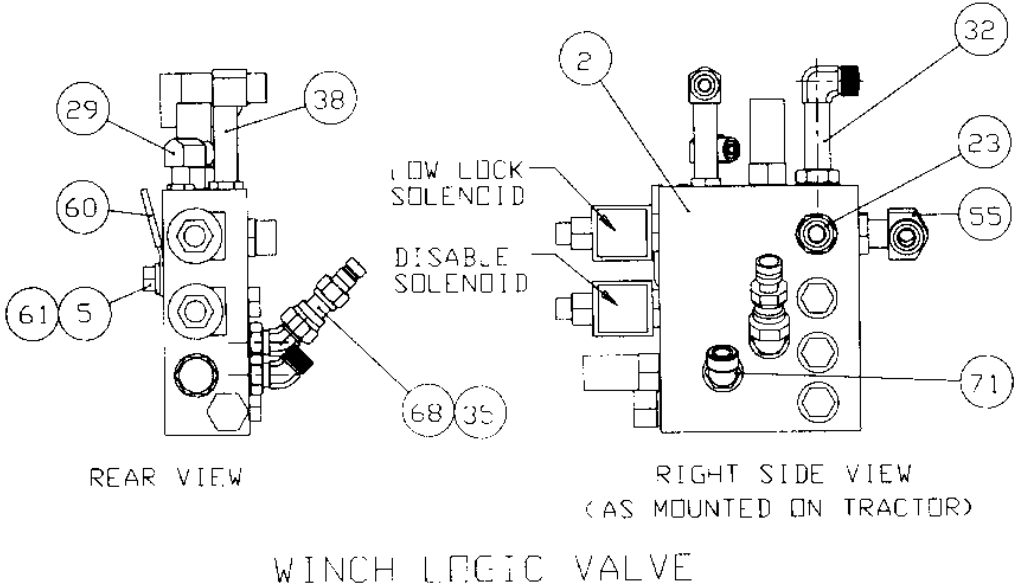
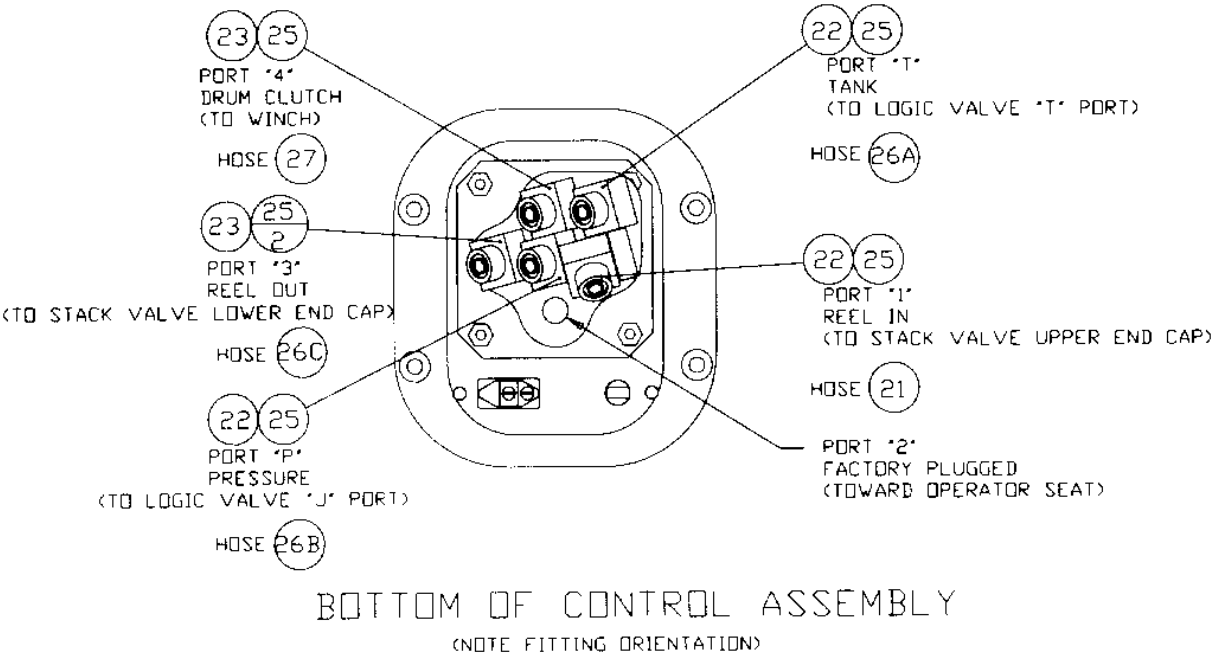
# CONTROL GP-HYDRAULIC (continued)

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CONTROL GP-HYDRAULIC (continued)

Drawing 5 of 5



| Ref. | Part number | Description          | Qty | Code | Group page |
|------|-------------|----------------------|-----|------|------------|
| 1    | 152-8375    | CONTROL ADAPTER AS.  | 1   |      |            |
| 2    | 152-8377    | LOGIC VALVE AS.      | 1   |      |            |
| 3    | 156-8008    | BRACKET, LOGIC VALVE | 1   |      |            |
| 4    | 4L-6454     | BOLT, 3/8 NC X 1.00  | 2   |      |            |
| 5    | 8T-4896     | WASHER, HARD, 3/8"   | 31  |      |            |
| 6    | 152-9098    | BRACKET, MANIFOLD    | 1   |      |            |

## CONTROL GP-HYDRAULIC (continued)

| Ref. | Part number | Description                        | Qty | Code | Group page |
|------|-------------|------------------------------------|-----|------|------------|
| 7    | 152-9099    | UNION                              | 1   |      |            |
| 8    | 6V-4432     | BOLT, 1/2 NC X 4.00                | 3   |      |            |
| 9    | 8T-4223     | WASHER, HARD, 1/2"                 | 6   |      |            |
| 10   | 6J-0488     | CAPSCREW, BUTTON HD., 3/8 NC X .88 | 4   |      |            |
| 11   | 1P-5766     | SPLIT FLANGE HALF, -16 (CAT)       | 6   |      |            |
| 12   | 1P-3703     | D-RING, -16 (CAT)                  | 3   |      |            |
| 13   | 8C-6877     | BOLT, 7/16 NC X 1.75               | 8   |      |            |
| 14   | 7X-0313     | BOLT, 7/16 NC X 2.75               | 4   |      |            |
| 15   | 8T-5360     | WASHER, HARD, 7/16"                | 12  |      |            |
| 16   | 152-9100    | HOSE AS., -16 X 38.12              | 1   |      |            |
| 17   | 148-8317    | ADAPTER, -12 ORB / -16 ORFS        | 1   |      |            |
| 18   | 152-9101    | HOSE AS., -16 X 38.0               | 1   |      |            |
| 19   | 156-8009    | HOSE AS., -16 X 36.13              | 1   |      |            |
| 20   | 156-8010    | HOSE AS., -16 X 31.13              | 1   |      |            |
| 21   | 158-6521    | HOSE AS., -6 X 16.0                | 1   |      |            |
| 22   | 148-8338    | ADAPTER, -6 ORB / ORFS X-LONG      | 3   |      |            |
| 23   | 148-8336    | ADAPTER, -6 ORB / ORFS LONG        | 3   |      |            |
| 24   | 6V-8724     | ELBOW, 90, -6 ORB / ORFS           | 2   |      |            |
| 25   | 148-8371    | ELBOW, 45, -6 ORFS FM SWIVEL       | 6   |      |            |
| 26   | 152-8360    | HOSE AS., -6 X 36.0                | 3   |      |            |
| 27   | 156-8011    | HOSE AS., -6 X 65.0                | 1   |      |            |
| 28   | 152-9108    | HOSE AS., -4 X 53.0                | 1   |      |            |
| 29   | 148-8369    | ELBOW, 90, -4 ORB / ORFS           | 1   |      |            |
| 30   | 158-6529    | HOSE AS., -8 X 60.0                | 1   |      |            |
| 31   | 156-8014    | HOSE AS., -8 X 40.0                | 1   |      |            |
| 32   | 148-8346    | ELBOW, 90, -8 ORB / ORFS           | 1   |      |            |
| 33   | 148-8354    | ELBOW, 45, -8 ORB / ORFS           | 1   |      |            |
| 34   | 152-9113    | BRACKET                            | 1   |      |            |
| 35   | 126-0814    | TEST FITTING, -6 ORFS              | 2   |      |            |
| 36   | 152-9114    | WIRING HARNESS                     | 1   |      |            |
| 37   | 6V-8188     | NUT, HEX, 1/2 NC                   | 1   |      |            |
| 38   | 150-7036    | ELBOW, 90 LONG, -6 ORB / ORFS      | 1   |      |            |
| 40   | 6D-4247     | CLIP, HOSE                         | 4   |      |            |
| 41   | 9B-7237     | BOLT, 3/8 NC X 1.25                | 3   |      |            |
| 42   | 6V-8801     | NUT, HEX, 3/8 NC                   | 3   |      |            |
| 43   | 152-9120    | DECAL, CONTROL                     | 1   |      |            |

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