

# CARCO®

## INSTALLATION AND PARTS MANUAL

### MODEL 50B

### FOR

### JOHN DEERE 750C PS TRACTORS

**NOTE:** This manual covers winch installation and parts, specific to the tractor or tractors listed above. For all other common winch parts, refer to Carco Winch Parts Manual LIT2115.

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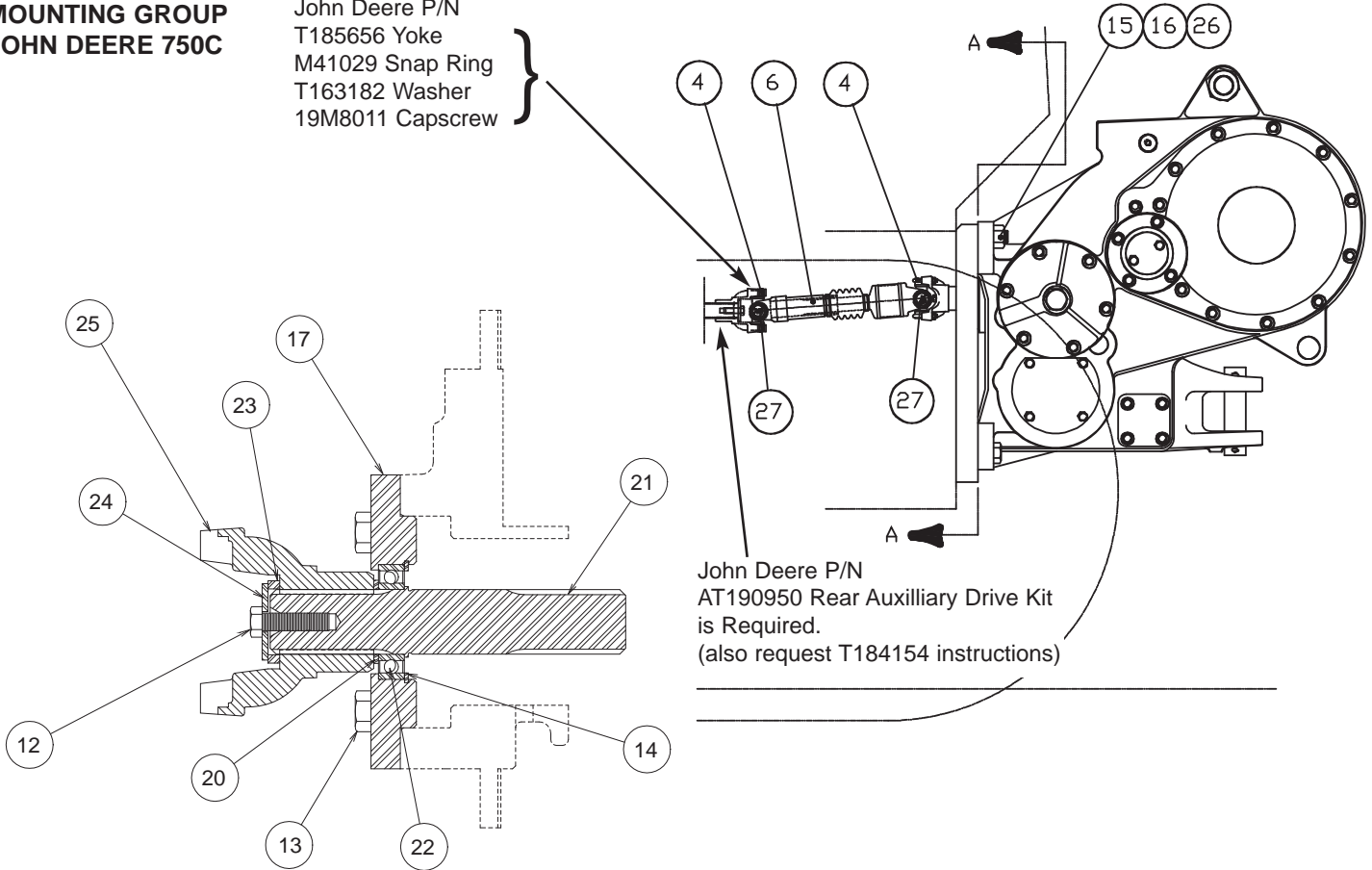
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#### MODEL NUMBER DESCRIPTION

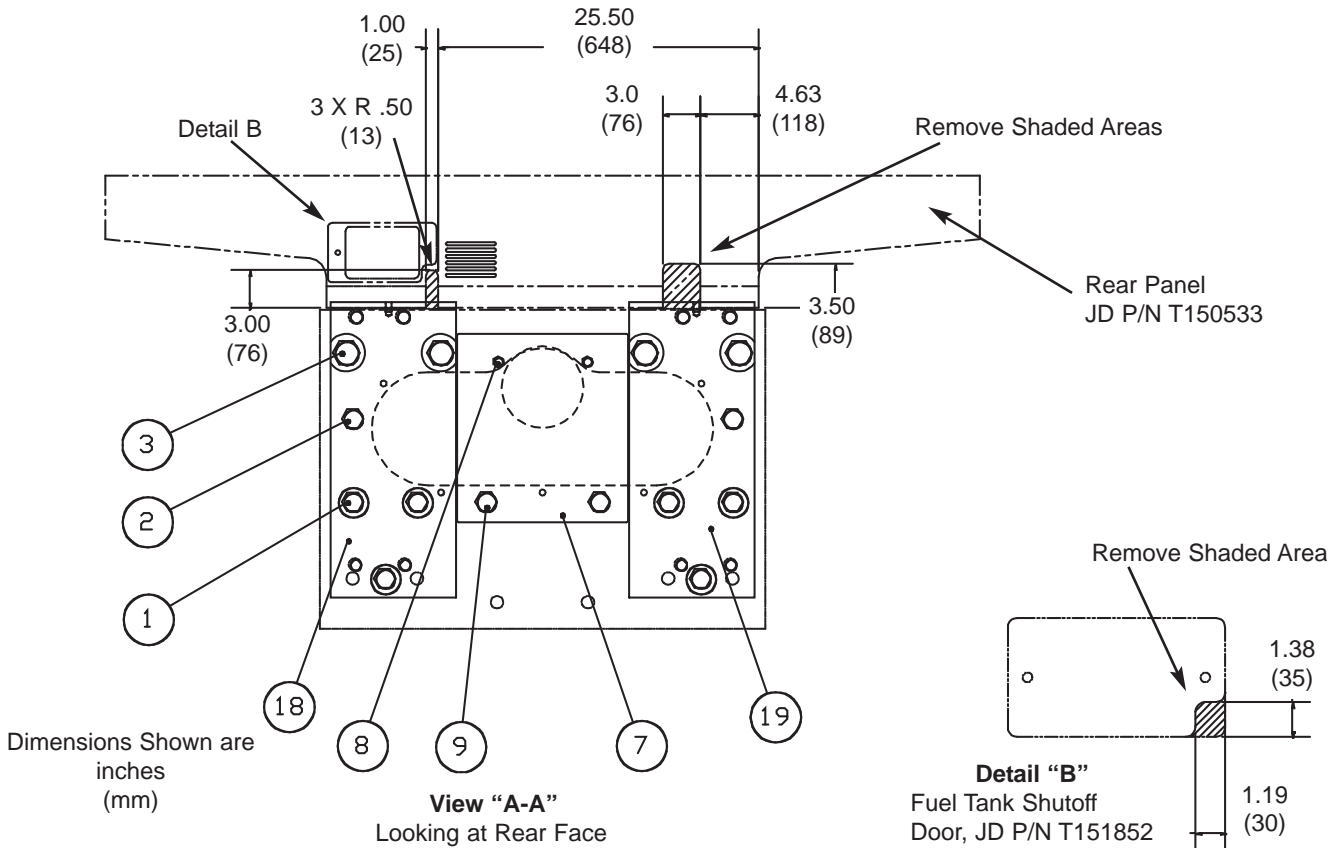
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|-------------------------|---|---------------------------|------------------|---|---|---|
| 50B                     | C   | 0                         | 0                | 0                                       | 0   | 0   |
| Basic<br>Winch<br>Model | Bevel<br>Gear Ratio<br>B-1.27:1<br>C-1.64:1<br>D-2.11:1<br>E-2.79:1 | 0-OVERWIND<br>1-UNDERWIND | 0-STANDARD BRAKE | 0-WITHOUT FREESPOOL<br>1-WITH FREESPOOL | 0-FOUR SHAFT WINCH<br>1-THREE SHAFT WINCH | 0-NO FAIRLEAD<br>3 - 3 ROLLER<br>4 - 4 ROLLER |

**MODEL 50B  
MOUNTING GROUP  
JOHN DEERE 750C**

John Deere P/N  
T185656 Yoke  
M41029 Snap Ring  
T163182 Washer  
19M8011 Capscrew



**Winch Input**



Dimensions Shown are  
inches  
(mm)

**View "A-A"**  
Looking at Rear Face

**INSTRUCTIONS:**

1. PTO rotation is counterclockwise (CCW) as viewed from the rear of the tractor.
2. Modify the tractor rear panel as shown in View A-A for clearance with the control cables. Modify the tractor fuel tank shut-off door as shown in Detail B for clearance with Freespool cable, if required.
3. Remove paint, rust, dirt, etc., from the mounting surfaces on the winch, winch adapters and tractor rear face.
4. Remove spacers, items 18 and 19, from winch and install to tractor rear face with fasteners, items 1, 2 and 3. Apply Loctite 271 or equivalent to clean, dry threads and torque as follows:
  - 1 - 8 UNC . . . . .680 lb•ft (920 N•m)
  - 1-¼ - 7 UNC . . . . .1360 lb•ft (1845 N•m)
5. Install driveshaft assembly, item 6, onto the winch input yoke, item 25, with the cap & bolt kit, item 4. Torque fasteners to 22 lb•ft (30 N•m).
6. Install dust shield, item 7, to the tractor rear face using fasteners, items 8 and 9. Apply Loctite 271 or equivalent to clean, dry threads and torque as follows:
  - 1 - 8 UNC . . . . .480 lb•ft (650 N•m)
  - M12 x 1.75 . . . . .80 lb•ft (110 N•m)
7. Tilt the tractor platform to gain access to the tractor auxiliary drive (PTO).
8. Install the rear auxiliary drive, Deere P/N AT190950, per Deere's instructions. (see J.D. P/N T184154)

**i NOTE:** A small amount of tractor hydraulic fluid will be lost during this procedure.

Attach yoke to rear auxiliary drive shaft using bolt and retainer washer. Torque bolt to 105 lb•ft (145 N•m).

**! WARNING !**

Winch weighs approximately 2100 lb (953 kg) without oil, cable or tractor adapters. Make certain lifting equipment has adequate capacity to eliminate the possibility of damage or injury. Attempting to lift the winch with inadequate equipment may result in personal injury or property damage.

9. Carefully guide the winch into position on the tractor rear face while aligning the U-joint bearings with the tractor yoke and attach using fasteners, items 2, 15, 16 and 17. Apply Loctite 271 or equivalent to clean, dry threads and install the winch mounting bolts to the winch adapters, and torque as follows:
  - 1 - 8 UNC . . . . .680 lb•ft (920 N•m)
  - 1 1/8 - 7 UNC . . . . .960 lb•ft (1300 N•m)
10. Attach the tractor end of the driveshaft assembly to the end yoke using the cap and bolt kit, item 4. Apply Loctite 271 or equivalent to clean, dry threads and torque to 55 lb•ft (75 N•m).
11. The tractor hydrostatic pump hoses may need to be repositioned to allow clearance with the winch driveline. If needed, reposition the smaller hoses to provide clearance and support with clamps or wire ties.

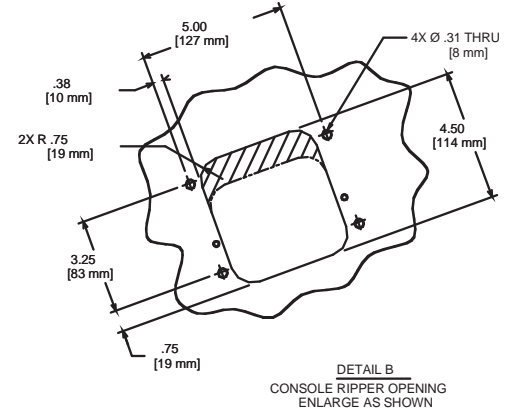
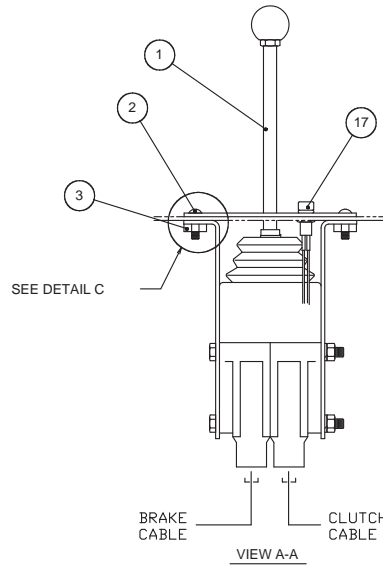
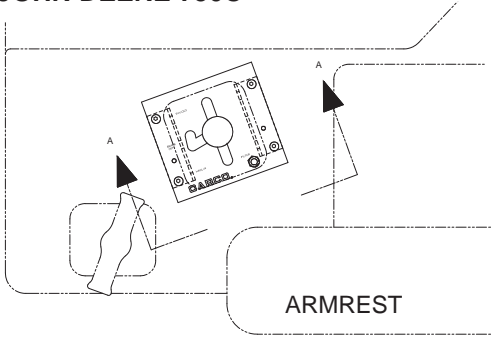
**! WARNING !**

Fill the winch to the proper level with the recommended oil BEFORE starting the tractor engine. Bearing and gear damage may result if the tractor and winch is run without oil.

| ITEM NO. | PART NO. | DESCRIPTION                                       | QTY. |
|----------|----------|---|------|
| 1        | 70838    | CAPSCREW, HEX HD (1 - 8 X 2, GD8)                 | 6    |
| 2        | 70689    | CAPSCREW, HEX HD (1 - 8 X 3, GD8)                 | 2    |
| 3        | 31039    | CAPSCREW, HEX HD (1-1/4 - 7 X 3-1/4, GD 8)        | 4    |
| 4        | 101838   | CAP & BOLT KIT (S.N below 0201025 use only 1)*    | 2    |
| 6        | 103422   | DRIVESHAFT ASSEMBLY                               | 1    |
| 7        | 100396   | DUST SHIELD                                       | 1    |
| 8        | 26216    | CAPSCREW, METRIC HEX HD (M12 - 1.75 X 30 mm, GD5) | 2    |
| 9        | 102883   | CAPSCREW, HEX HD (1 - 8 X 1-1/2, GD5)             | 2    |
| 10       | 29424    | FERRULE (3/4) (NOT SHOWN)                         | 1    |
| 11       | 70198    | EDGE-GUARD TRIM (SOLD BY 12 in.(305 mm) LENGTHS)  | AR   |
| 12       | 104132   | CAPSCREW, HEX HD (3/8 - 16 X 1-1/4, GD8)          | 1    |
| 13       | 13938    | CAPSCREW, HEX HD (1/2 - 13 X 1-1/4, GD5)          | 4    |
| 14       | 32104    | RETAINING RING                                    | 1    |
| 15       | 70768    | HEX NUT (1-1/8 - 7, GD8)                          | 4    |
| 16       | 27802    | STUD (1-1/8 - 7 X 4-1/4, GD8)                     | 4    |
| 17       | 69410    | BEARING CARRIER                                   | 1    |
| 18       | 27767    | SPACER, LH  | 1    |
| 19       | 27766    | SPACER, RH  | 1    |
| 20       | 69530    | WASHER, .098 in. (2.5 mm) THICK                   | 1    |
| 21       | 69548    | PTO SHAFT   | 1    |
| 22       | 69549    | BALL BEARING                                      | 1    |
| 23       | 69550    | SPACER, .25 in. (6.4 mm) THICK                    | 1    |
| 24       | 69551    | WASHER, YOKE RETAINER                             | 1    |
| 25       | 103784   | END YOKE, SPLINED (S.N 0201025 and higher)*       | 1    |
| 26       | 27803    | WASHER, HARD (1-1/8)                              | 4    |
| 27       | 102399   | U-JOINT ASSEMBLY                                  | 2    |

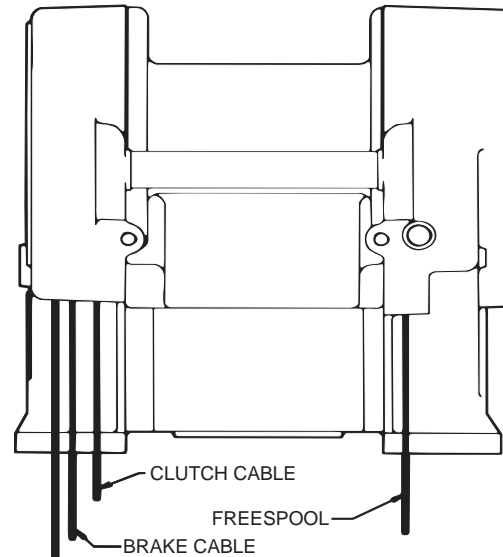
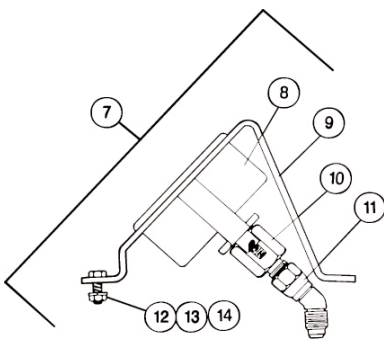
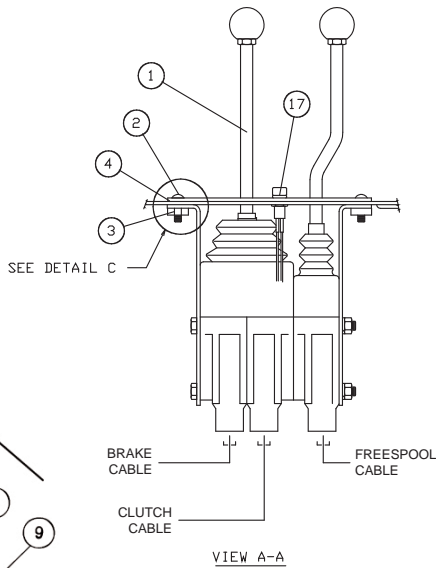
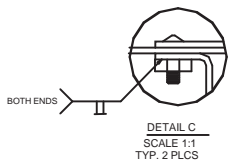
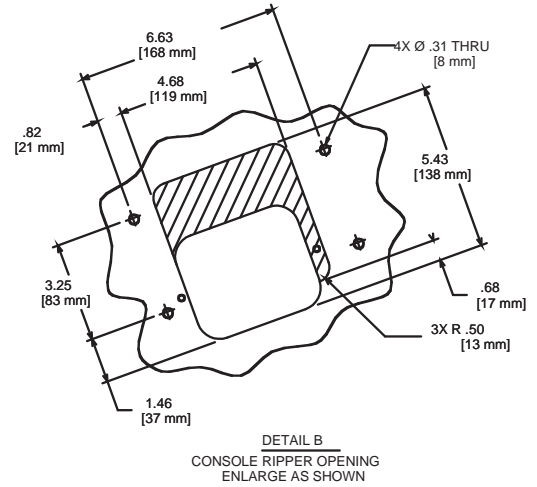
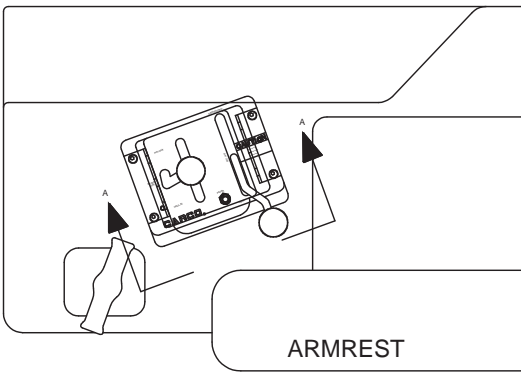
\* **NOTE:** 50B winches prior to Serial Number 0201025 require: qty 1, Item 25, Yoke, P.N. 69031; and qty 1, U-Bolt Kit, P.N. 69030 for winch end drive shaft installation.

**MODEL 50B  
CONTROL GROUP  
JOHN DEERE 750C**



**CONTROL GROUP WITHOUT  
FREESPOOL**

**CONTROL GROUP WITH  
FREESPOOL**



PRESSURE GAUGE HOSE

**TOP VIEW OF WINCH**

**CONTROL INSTALLATION INSTRUCTIONS:**

**i** **NOTE:** For tractors with standard control systems. If equipped with optional auxiliary hydraulic controls, refer to instructions on page 6 of this manual.

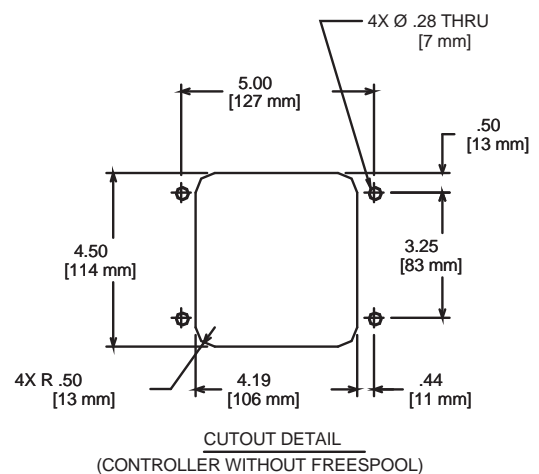
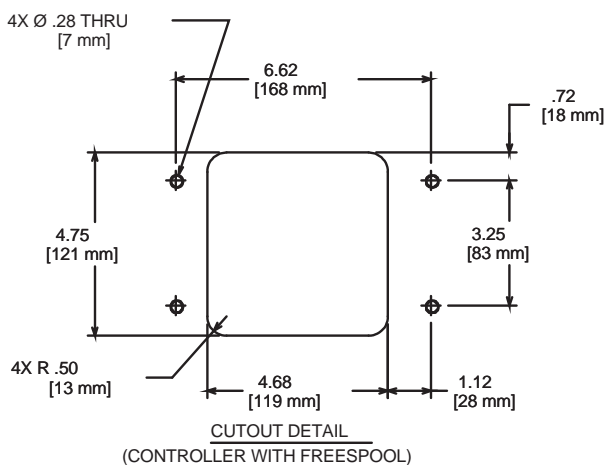
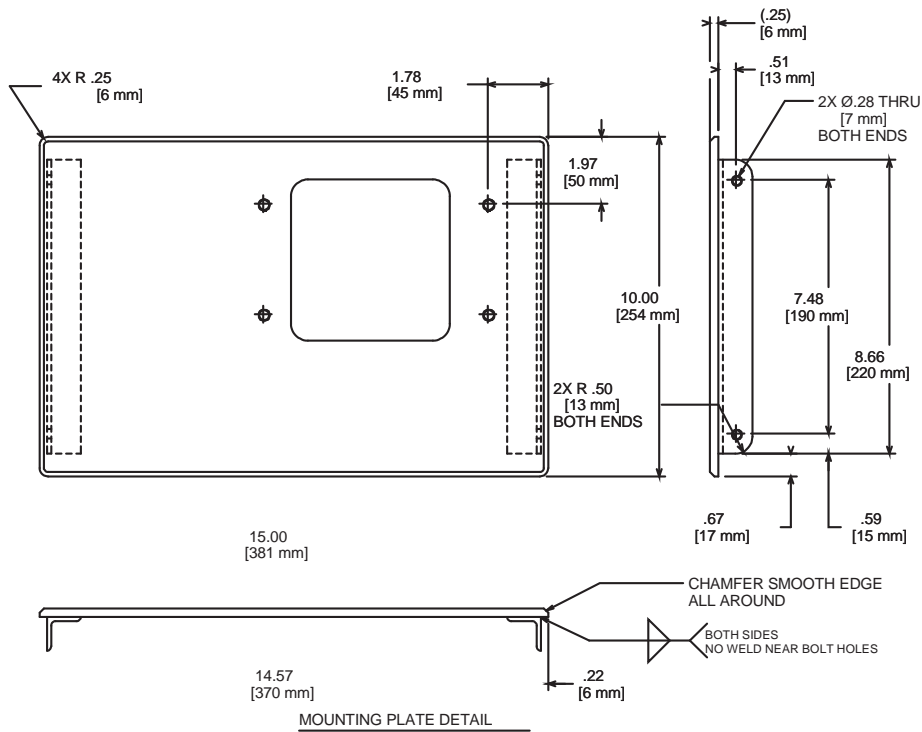
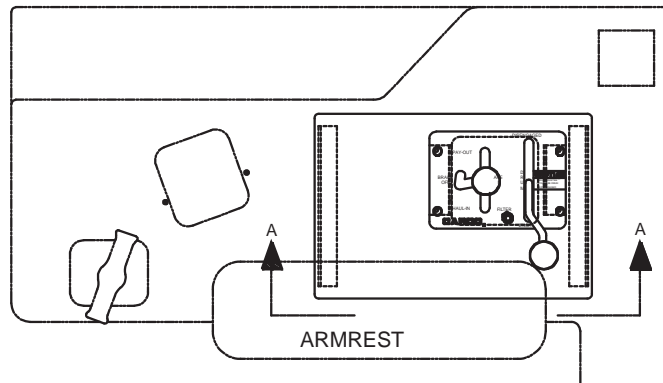
1. Modify the ripper control handle opening in the RH console as shown in Detail B.
2. Disassemble the control stand, item 1. Weld the tap blocks, item 3, to the bottom of the control stand angle brackets per Detail C. Reassemble the control stand, being careful to keep the dual-axis controller properly oriented with the freespool controller. When assembled correctly, only the outer plunger of the dual-axis controller should move downward when the control handle is placed in the Brake-Off position.
3. Route the control cables under the cab platform and up to the bottom of the console. Install the control cables into the control stand. Follow the cable installation instructions found in the "Service Manual", publication PC-137.
4. Install the control stand, with cables attached, from the bottom of the control console. Modify the control stand angle brackets as required to provide clearance for the dozer linkage.
5. Install the spacer plate, item 4, if equipped with freespool control group, and gate plate, on top of the console. Secure the gate plate and spacer plate to the control stand with the four button head capscrews, item 2.
6. Install the filter bypass indicator light, item 17, if equipped, into the gate plate. Follow the installation instructions found in the "Service Manual", publication PC-137.
7. Install the pressure gauge kit, item 7, if equipped, in clear view of the operator.
8. Verify proper control cable and operating pressure adjustment by following the procedures found in the "Operator's Manual", publication PC-104, and the "Service Manual", publication PC-137.

**CAUTION**

Avoid routing the control cables near moving shafts or linkages which may cause damage to the cable, or restrict movement of tractor components.

| ITEM NO. | PART NO. | DESCRIPTION                               | QTY.           |                   |
|----------|----------|---|----------------|-------------------|
|          |          |   | WITH FREESPOOL | WITHOUT FREESPOOL |
| 1        | 69667    | CONTROL STAND ASSEMBLY                    | 1              | -                 |
|          | 81965    | CONTROL STAND ASSEMBLY                    | -              | 1                 |
| 2        | 40240    | CAPSCREW, BUTTON HD (1/4 - 20 X 1)        | 4              | 4                 |
| 3        | 100473   | TAP BLOCK                                 | 2              | 2                 |
| 4        | 100472   | SPACER PLATE                              | 1              | -                 |
| 5        | 69800    | CONTROL CABLE - 90 in. (2286 mm)          | 2              | 2                 |
| 6        | 69798    | CONTROL CABLE - 102 in. (2590 mm)         | 1              | -                 |
| 7        | 62058    | PRESSURE GAUGE KIT (ITEMS 8-16)           | 1              | 1                 |
| 8        | 27673    | PRESSURE GAUGE                            | 1              | 1                 |
| 9        | 27651    | BRACKET                                   | 1              | 1                 |
| 10       | 27652    | ADAPTER (1/4 NPT / -4 JIC)                | 1              | 1                 |
| 11       | 70122    | UNION, 45° (-4 JIC)                       | 1              | 1                 |
| 12       | 27683    | CAPSCREW, HEX HD (5/16 - 18 X 1 1/4, GD5) | 2              | 2                 |
| 13       | 69640    | LOCKWASHER (5/16)                         | 2              | 2                 |
| 14       | 69644    | HEX NUT (5/16 - 18)                       | 2              | 2                 |
| 15       | 34196    | HOSE ASSY, -4 X 96 in. (2438 mm)          | 1              | 1                 |
| 16       | 25864    | ADAPTER (-4 JIC / -4 ORB) - NOT SHOWN     | 1              | 1                 |
| 17       | 61914    | INDICATOR LIGHT WIRING ASSEMBLY           | 1              | 1                 |

**MODEL 50B  
CONTROL GROUP  
JOHN DEERE 750C**



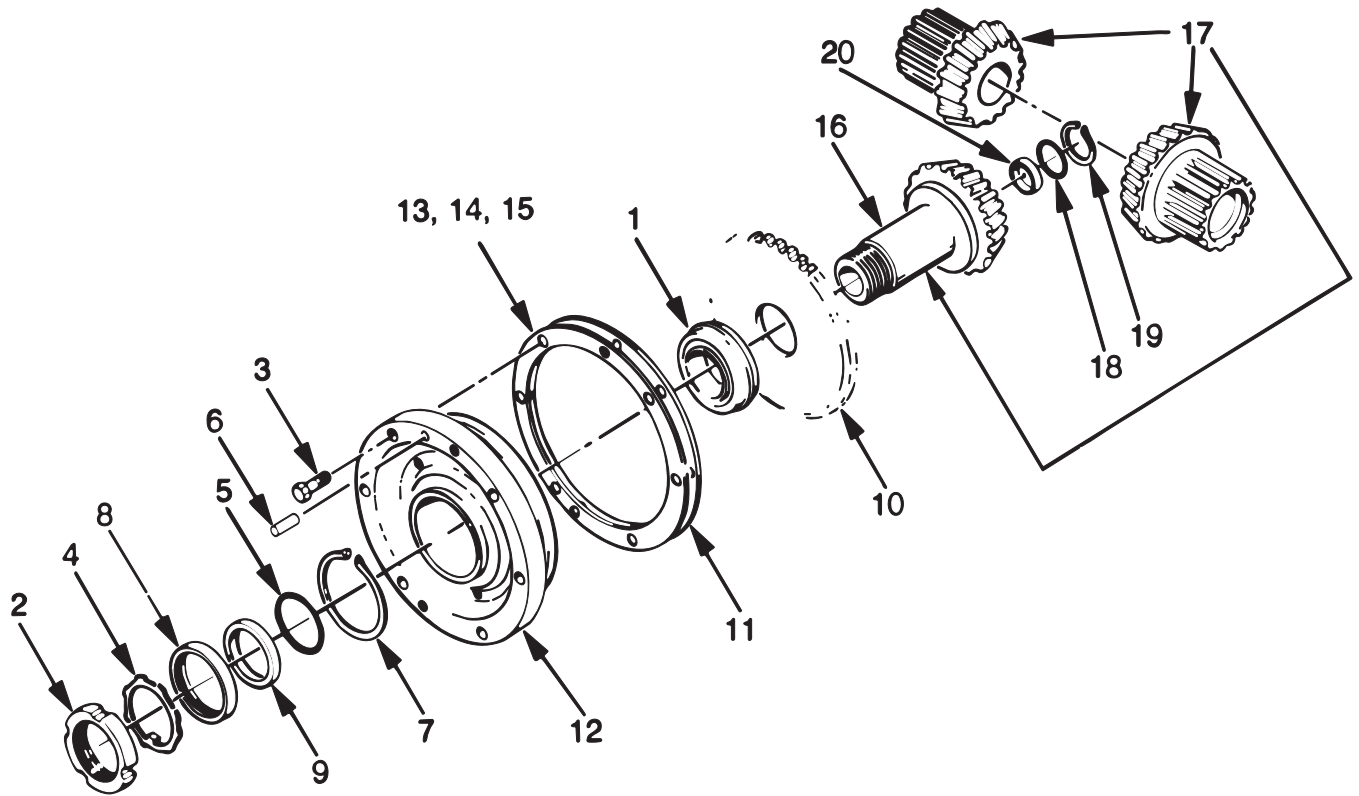
**CONTROL INSTALLATION INSTRUCTIONS:**

**i NOTE:** For tractors equipped with optional auxiliary hydraulic controls.

1. Remove the lunch box tray from the console and fabricate the mounting plate assembly as shown.

2. Install the new mounting plate into the console, then install the control stand into the mounting plate, following the same procedures outlined on pages 4 and 5 of this manual.
3. The spacer plate, P/N 100472, is not required with this installation.

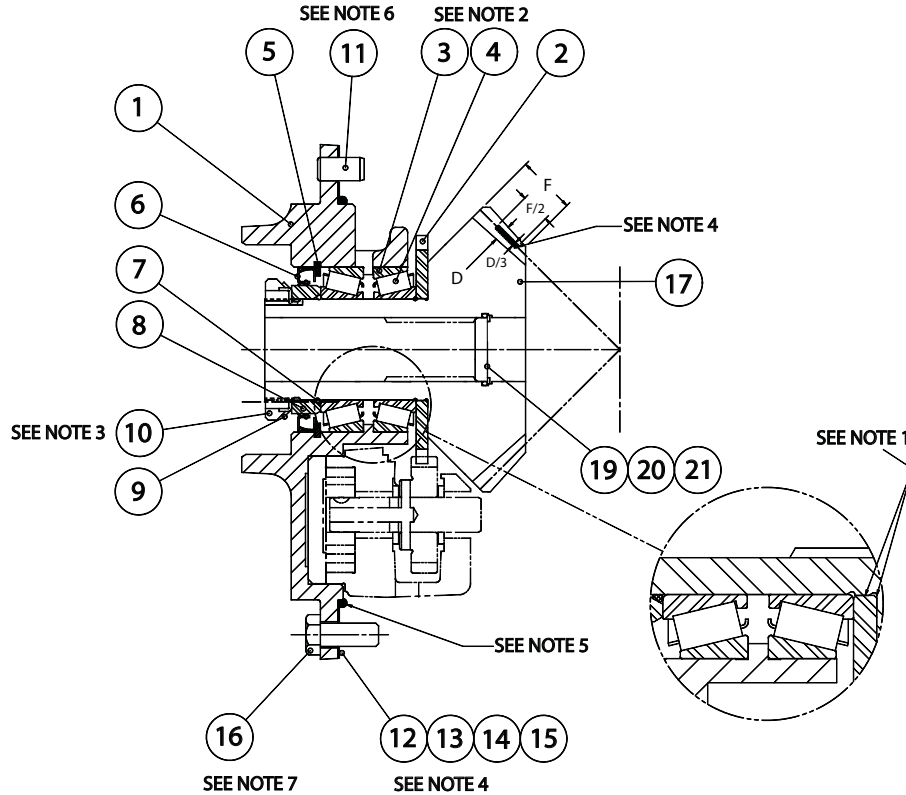
MODEL 50B  
 BEVEL GEAR GROUP  
 JOHN DEERE 750C  
 (S/N 0704589 AND BELOW)



| ITEM | PART NO. | DESCRIPTION   | QTY. |
|------|----------|---|------|
| 1    | 70077    | BEARING ASSEMBLY  | 1    |
| 2    | 24816    | BEARING LOCKNUT   | 1    |
| 3    | 104320   | CAPSCREW, HEX HEAD (1/2 - 13 X 1)                       | 6    |
| 4    | 11418    | BEARING LOCKWASHER                                      | 1    |
| 5    | 74992    | O-RING  | 1    |
| 6    | 10318    | DOWEL PIN   | 1    |
| 7    | 70163    | RETAINING RING  | 1    |
| 8    | 107298   | OIL SEAL  | 1    |
| 9    | 70382    | SEAL SPACER SLEEVE                                      | 1    |
| 10   | 69947    | PUMP DRIVE PINION                                       | 1    |
| 11   | 69946    | SHIM GASKET   | 1    |
| 12   | 69961    | BEVEL PINION CARRIER                                    | 1    |
| 13   | 69945    | SHIM .005 in. (.13 mm)                                  | 2-AR |
| 14   | 69827    | SHIM .007 in. (.18 mm)                                  | 2-AR |
| 15   | 69826    | SHIM .020 in. (.51 mm)                                  | 2-AR |
| 16   | 70355    | BEVEL PINION - 14T                                      | 1    |
| 17   | 29073    | BEVEL GEAR SET - 14/39T - 2 BEVEL GEARS, 1 BEVEL PINION | 1    |
| 18   | 70133    | O-RING  | 1    |
| 19   | 70161    | RETAINING RING  | 1    |
| 20   | 70357    | BEVEL PINION PLUG                                       | 1    |

AR - AS REQUIRED

**MODEL 50B  
BEVEL GEAR GROUP  
JOHN DEERE 750C  
(S/N 0704590 AND UP)**



**NOTES:**

1. Clean bevel and pump pinions with Loctite solvent. Verify press fit before assembly. Apply Loctite 609 or equal to surfaces indicated in Detail A. Press pump drive pinion, item 2, onto bevel pinion and seat securely against shoulder. Allow proper cure time for Loctite before usage.
2. Apply a thin coat of multi-purpose grease to rollers. Do not pack solid.
3. Tighten nut to ensure parts are fully seated. Loosen nut to set the rolling torque of 10 lb-in (1.1 N-m). Pinion must turn smoothly by hand.
4. Shim as required for tooth contact pattern as shown. The pattern height should

- be about 1/3 the whole depth, located midway between tip and root. It should be about 1/2 the face width shifted toward the toe. Set the backlash to .004 to .012 in. (.10 - .30 mm).
5. Apply approximately 3/16" (5 mm) bead of silastic sealant (RTV 732) to pilot diameter as indicated.
6. Clean with Loctite solvent and apply Loctite 242 to dowel pin and insert into winch case.
7. Clean with Loctite solvent and apply Loctite 242 to threads. Torque to 75 to 83 ft-lb (102 - 113 N-m).

| ITEM NO. | PART NO. | DESCRIPTION                                    | QTY. |
|----------|----------|--|------|
| 1        | 106864   | BEVEL PINION CARRIER                           | 1    |
| 2        | 69947    | PUMP PINION                                    | 1    |
| 3        | 70080    | BEARING CUP                                    | 2    |
| 4        | 70081    | BEARING CONE                                   | 2    |
| 5        | 70163    | RETAINING RING                                 | 1    |
| 6        | 107298   | OIL SEAL                                       | 1    |
| 7        | 74992    | O-RING   | 1    |
| 8        | 70382    | SEAL SPACER                                    | 1    |
| 9        | 11418    | BEARING LOCKWASHER                             | 1    |
| 10       | 24816    | BEARING LOCKNUT                                | 1    |
| 11       | 10318    | DOWEL PIN                                      | 1    |
| 12       | 69946    | SHIM GASKET                                    | 1    |
| 13       | 69945    | SHIM, .005 in. (.13 mm)                        | 2-AR |
| 14       | 69827    | SHIM, .007 in. (.18 mm)                        | 2-AR |
| 15       | 69826    | SHIM, .020 in. (.51 mm)                        | 2-AR |
| 16       | 104174   | CAPSCREW, HEX HD ( 1/2 - 13 X 1 1/4 in. G8, Z) | 6    |
| 17       | 70355    | BEVEL PINION - 14T                             | 1    |
| 18       | 29073    | BEVEL GEAR SET - 14/39T * (NOT SHOWN)          | 1    |
| 19       | 70133    | O-RING   | 1    |
| 20       | 70161    | RETAINING RING                                 | 1    |
| 21       | 70357    | BEVEL PINION PLUG                              | 1    |

\* Bevel Gear Set includes one Bevel Pinion and two Bevel Gears



