



# Product Services Information

## INSTALLATION INSTRUCTIONS

**JOHN DEERE**

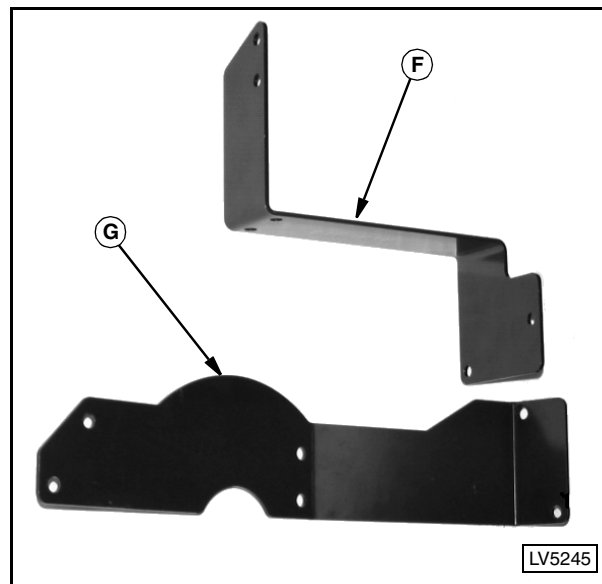
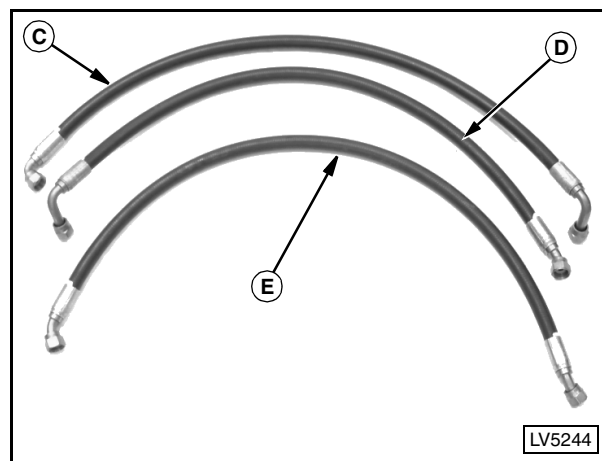
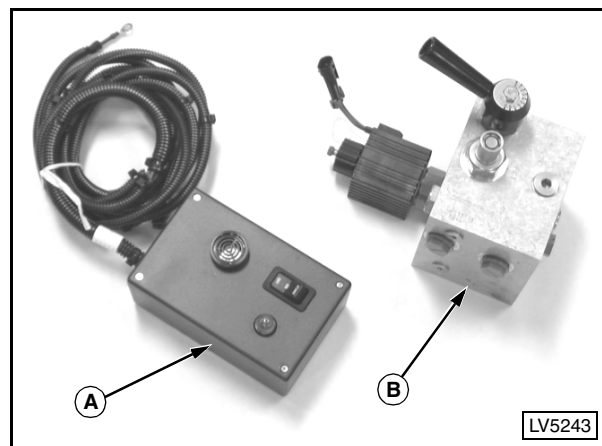
**LVB25128**

**POWER BEYOND KIT**

**5105 AND 5205 TRACTORS**

### PARTS IN KIT

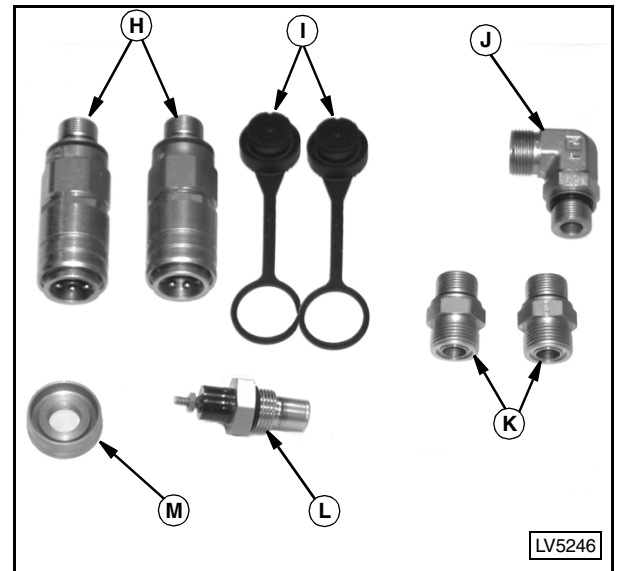
Qty.	Description
1	A - Control Box and Harness Assembly
1	B - Control Valve
1	C - Hydraulic Hose with Long 90° and Short 90° Ends
1	D - Hydraulic Hose with Long 90° and Short 45° Ends
1	E - Hydraulic Hose with Two Short 45° Ends
1	F - Control Valve Mounting Bracket
1	G - Control Valve Support Bracket



Parts list continued on next page.

## PARTS IN KIT

Qty.	Description
2	H - Quick Disconnect Coupler
2	I - Dust Plug
1	J - 90° Elbow Fitting
2	K - Straight Fitting
1	L - Temperature Switch
1	M - Adapter
4	N - Tie Wrap (Large)
6	O - Cap Screw (M10 x 25 mm)
2	P - Cap Screw (M10 x 20 mm)
2	Q - Nut (M10)
3	R - Straight Adapter 38 mm (1-1/2 in.) Long
6	S - Tie Wrap (Small)

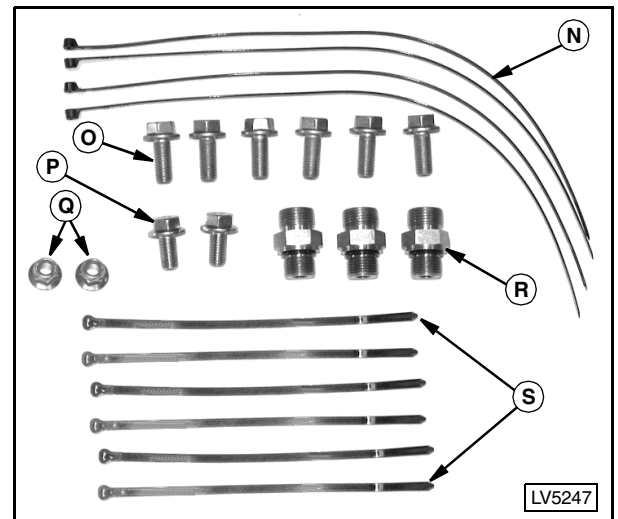


**NOTE: If installing this kit on early models or tractors NOT equipped with SCV(s), order parts below.**

- RE73581 End Cap (Qty 1).
- RE72387 Inlet Housing (Qty 1).
- 19M8162 (M10 x 40 mm) Cap Screws (Qty 2).

**NOTE: If installing this kit on a tractor equipped with Mid-Mount Control Valve, order parts below.**

- 38H5069 Tee Fitting (Qty 1) and T77857 O-ring (Qty 2).
- 38H1046 45° Elbow Fitting (Qty 1), R26375 O-ring (Qty 1) and T77857 O-ring (Qty 1).
- 38H1378 90° Elbow Fitting (Qty 1) and T77857 O-ring (Qty 2).



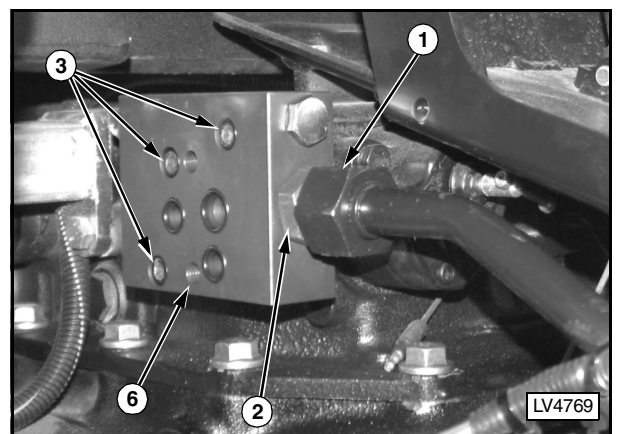
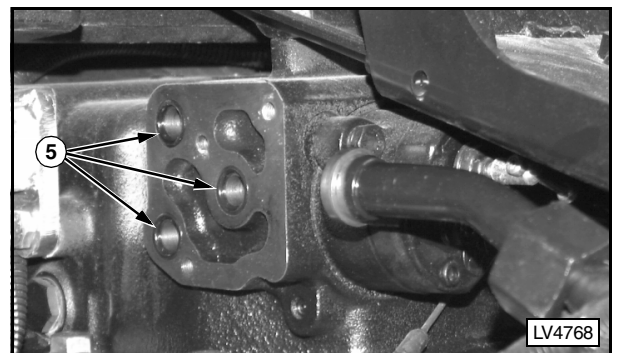
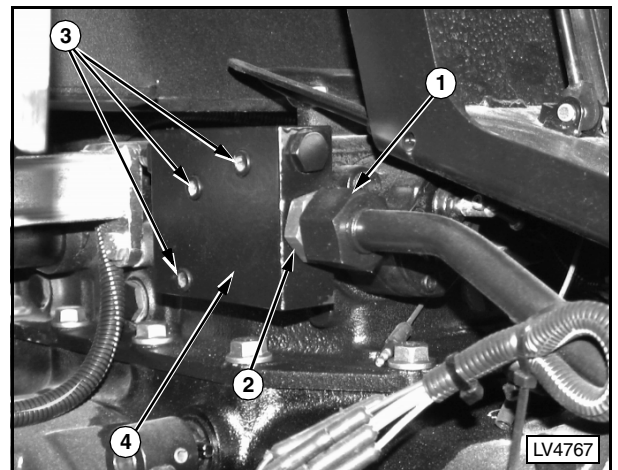
**IMPORTANT: Power Beyond connections must be used when operating any external hydraulic orbital motor with this tractor. Failure to comply with Power Beyond connections will overheat and possibly damage the tractor's hydraulic system.**

## PREPARE TRACTOR

1. Park tractor on level surface and lock park brake. Place wheel chocks or wood blocks in front of and behind left rear wheel.
2. With engine running, completely raise rockshaft.
3. With engine off, operate SCV lever(s), if equipped, forward and backward to release hydraulic pressure in the system.
4. Using a floor jack, remove right side rear wheel. Position a jackstand under right side axle housing and lower floor jack until tractor is supported on jackstand.
5. Remove right side rear fender.

## INSTALL INLET HOUSING AND END CAP – EARLY MODELS OR TRACTORS WITHOUT SCV(s) AND WITHOUT MID-MOUNT CONTROL VALVE

1. Disconnect inlet housing supply line (1).
  2. Remove and retain adapter fitting (2) from inlet housing.
  3. Remove and retain three socket head screws (3).
  4. Remove and discard inlet housing (4).
5. Clean mating surfaces of new inlet housing (RE72387), and right side of rockshaft. Inspect three O-rings (5) for wear or damage. Replace if necessary.
6. Apply medium strength thread lock to socket head screws (3) before installing.
7. Install inlet housing (6), using three socket head screws (3) removed earlier. Tighten screws (3) to 32 N•m (24 lb-ft).
8. Inspect two O-rings on adapter fitting (2), replace if necessary. Install adapter fitting (2) removed earlier. Tighten fitting (2) to 69 N•m (51 lb-ft).
- NOTE: Use a wrench to hold adapter fitting (2) in place when tightening inlet housing supply line (1).**
9. Connect inlet housing supply line (1). Hold adapter fitting (2) in place using a wrench and tighten supply line to 102 N•m (75 lb-ft).

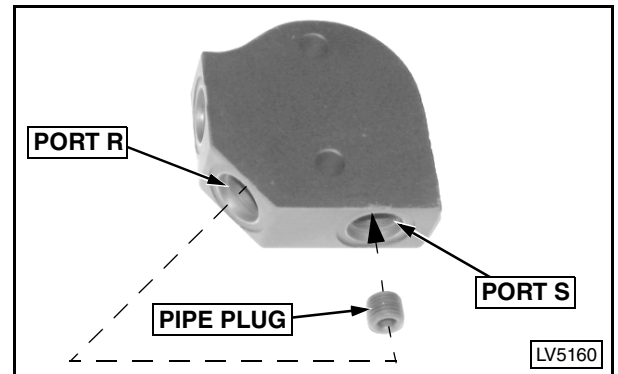
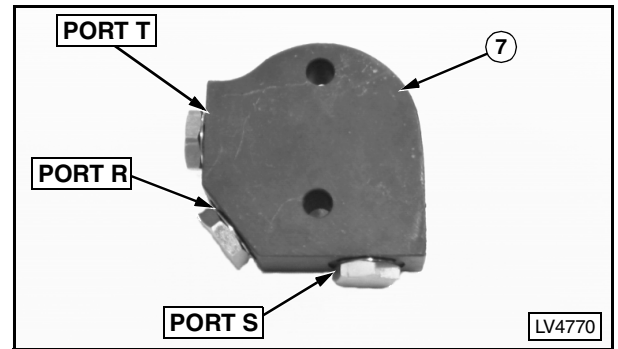


**10. Early model tractors without SCV(s) and without mid-mount control valve:**

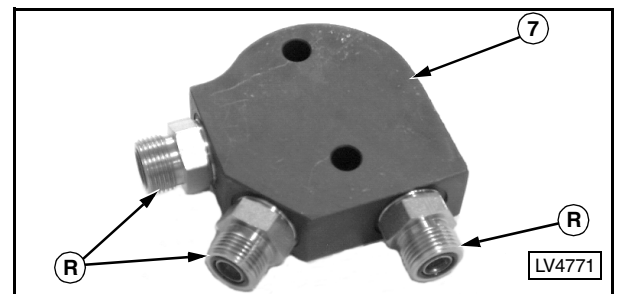
Remove and retain three M18 plugs from ports R, S and T on end cap (7) (RE73581).

**IMPORTANT:** If at any time this Power Beyond kit is removed from tractor, the internal plug in port S must be installed back in port R, and install three M18 plugs removed in step above. This will prevent damage to hydraulic components.

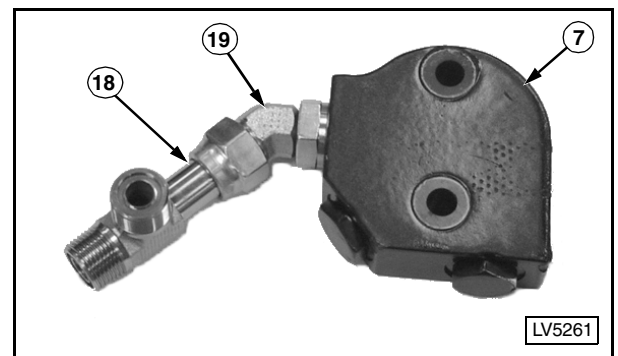
- Remove the internal plug from inside port R and install it in port S using a 6 mm hex key wrench.



- Install three 38 mm (1-1/2 in.) straight adapters (R) in end cap (7). Tighten straight adapters (R) to 50 N•m (37 lb-ft).

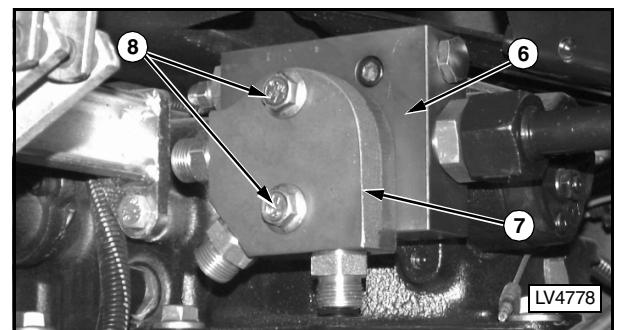


- If tractor is equipped with a mid-mount control valve, install 45° elbow fitting (19) (38H1046) and Tee fitting (18) (38H5069) in port T in end cap (7). Do not tighten at this time. Install two straight adapters (R) in remaining ports.



**NOTE:** Apply medium strength thread lock to cap screws (8) before installing.

- Install end cap (7) to inlet housing (6) using two M10 x 40 mm cap screws (8) (19M8162). Tighten cap screws (8) to 40 N•m (29 lb-ft).



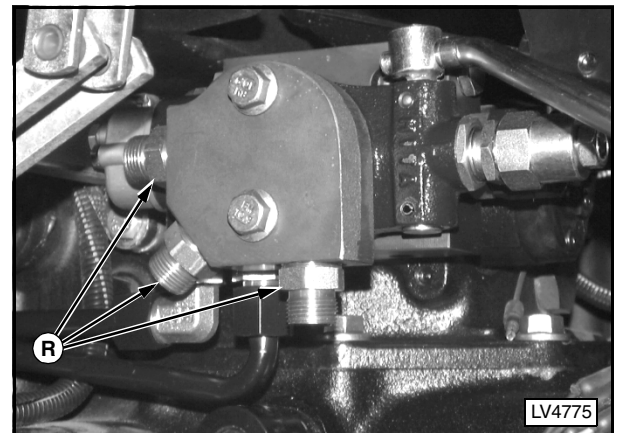
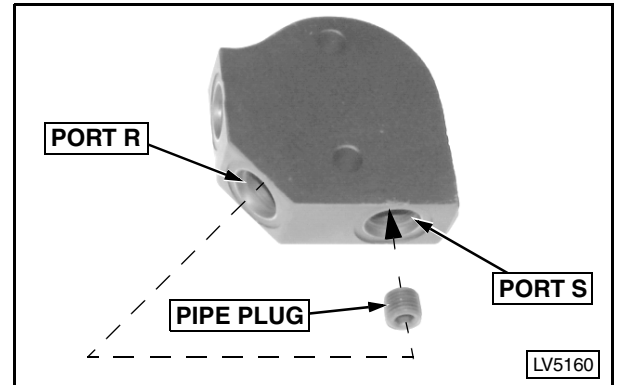
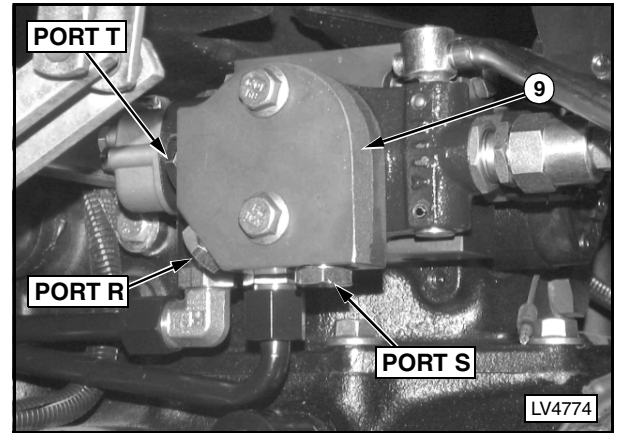
**11. Later models and tractors with or without SCV(s):**  
Remove and retain three M18 plugs from ports R, S and T on end cap (9).

**IMPORTANT:** If at any time this kit is removed from tractor, the internal plug in port S must be installed back in port R, and install three M18 plugs removed in step above. This will prevent damage to hydraulic components.

**NOTE:** End cap shown off tractor for clarity of photo.

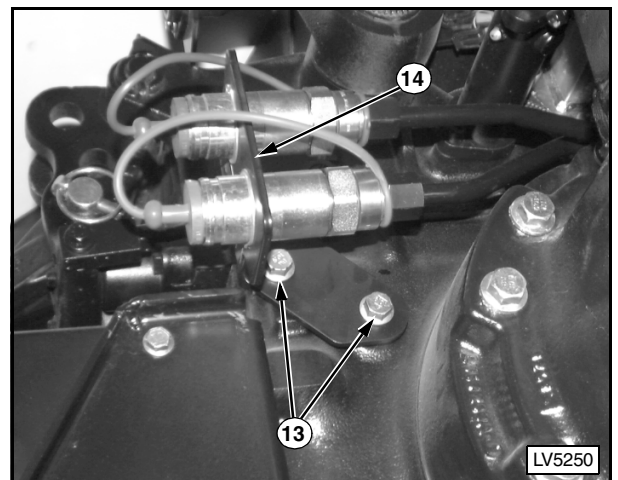
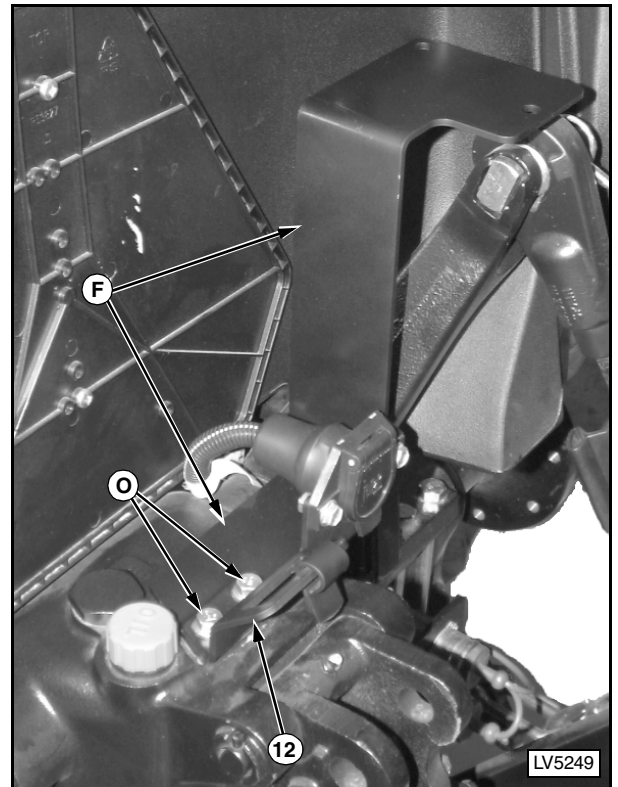
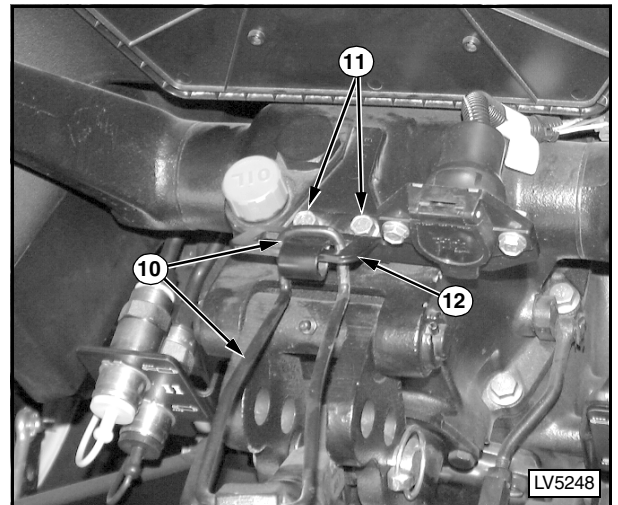
- Remove the internal plug from inside port R and install it in port S using a 6 mm hex key wrench.

- Install three 38 mm (1-1/2 in.) long straight adapters (R) in end cap (9). Tighten straight adapters (R) to 50 N•m (37 lb-ft).

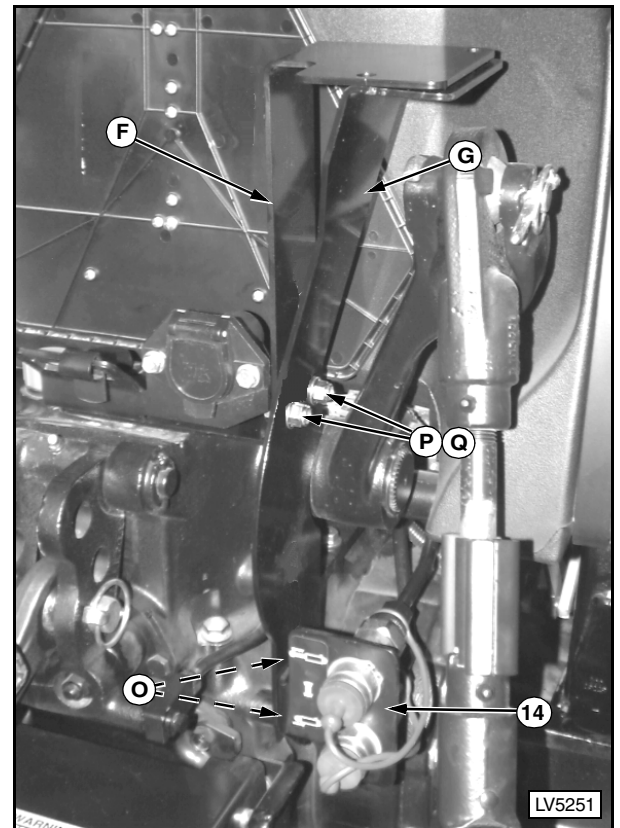


## INSTALL POWER BEYOND MOUNTING AND SUPPORT BRACKETS

1. Release center link lock (10) from bracket (12).
  2. Remove and discard two cap screws (11).
  3. Remove and retain bracket (12).
- 
4. Position control valve mounting bracket (F) on top of rockshaft housing over center link bracket mounting holes.
  5. Position center link bracket (12) on top of control valve mounting bracket (F) and install two new M10 x 25 mm cap screws (O). Tighten cap screws to 80 N•m (59 lb-ft).
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6. Remove and discard two cap screws (13) retaining quick disconnect coupler mounting bracket (14), if equipped on right rear side of differential housing.

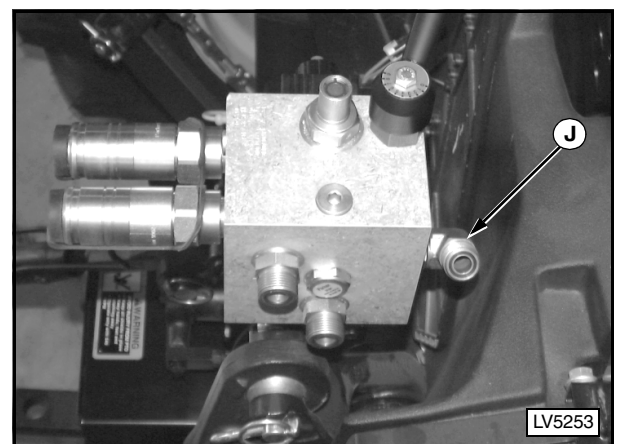
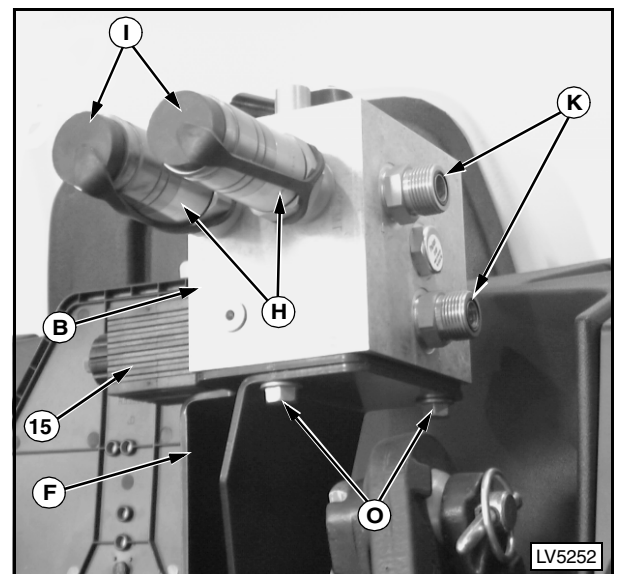


7. Position control valve support bracket (G) against mounting bracket (F) and between quick disconnect coupler mounting bracket (14) and differential housing. If tractor is not equipped with coupler bracket (14) position bracket (G) against bracket (F) and differential housing.
8. Install two M10 x 20 mm cap screws (P), M10 nuts (Q) and M10 x 25 mm cap screws (O). Tighten hardware (O, P and Q) to 80 N•m (59 lb-ft).

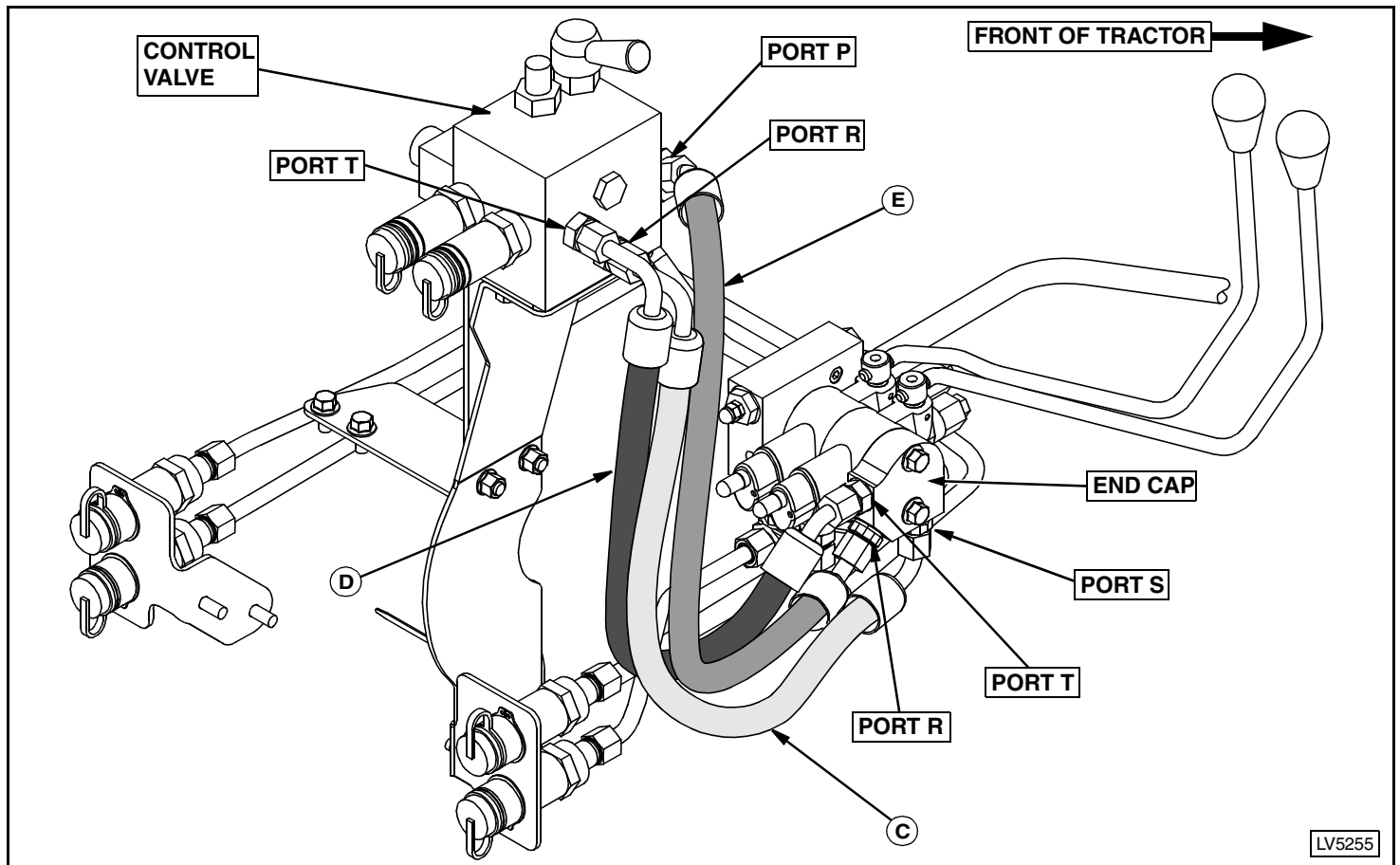


## INSTALL CONTROL VALVE

1. Position control valve (B) on top of control valve mounting bracket (F) with valve solenoid (15) facing left side of tractor.
2. Install two M10 x 25 mm cap screws (O). Tighten cap screws to 40 N•m (30 lb-ft).
3. Remove and discard five plastic plugs from control valve (B).
4. Install two quick disconnect couplers (H) and dust plugs (I) in valve ports stamped MP and MT. Tighten couplers (H) to 28 N•m (21 lb-ft).
5. Install two straight fittings (K) in valve ports stamped R and T on right side of control valve (B). Tighten fittings to 28 N•m (21 lb-ft).
6. Install 90° elbow fitting (J) upward at a 45° angle in valve port stamped P. Tighten fitting to 28 N•m (21 lb-ft).



## CONNECTING HYDRAULIC HOSES



**NOTE:** Tractor with SCV(s) shown. The hydraulic hose connection procedure is the same for tractors not equipped with SCV(s). If tractor is equipped with a Mid-Mount Control Valve, see connection procedures on page 10.

1. Route all hoses along right fuel tank strap, under rockshaft control levers and between right side ROPS post and rockshaft housing.
2. Connect hoses (C, D and E) to end cap and control valve using table below.

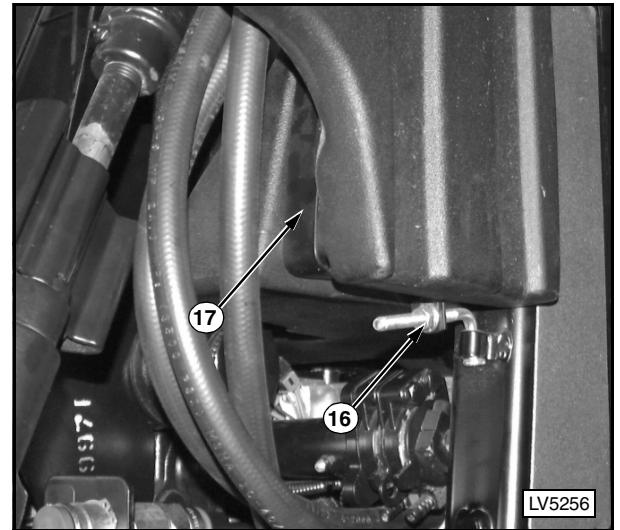
### End Cap-To-Control Valve Connections

End Cap Ports	Hose	Control Valve Ports
Port T	Hose (D)	Port T
Port R	Hose (E)	Port P
Port S	Hose (C)	Port R

3. Tighten all hose connections at end cap and control valve to 50 N•m (37 lb-ft). use a back-up wrench to hold fittings in control valve and end cap when tightening all hoses.



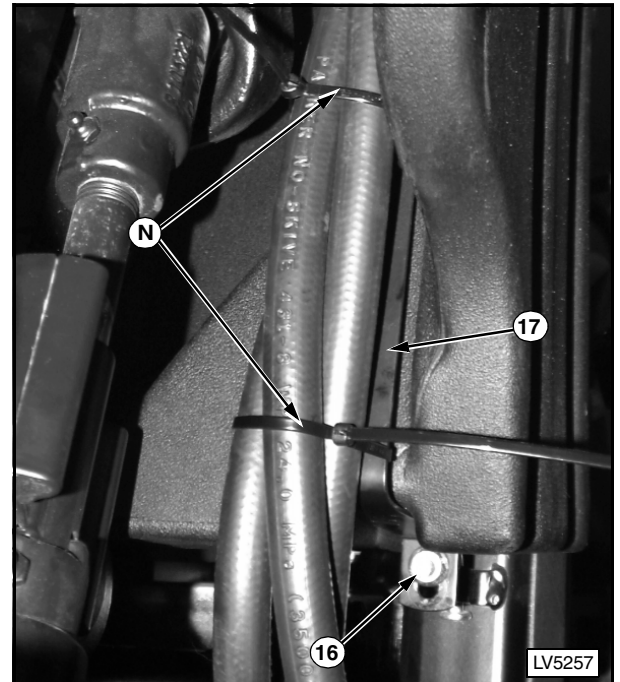
4. Loosen nut (16) and pull right side fuel tank strap (17) away from fuel tank.



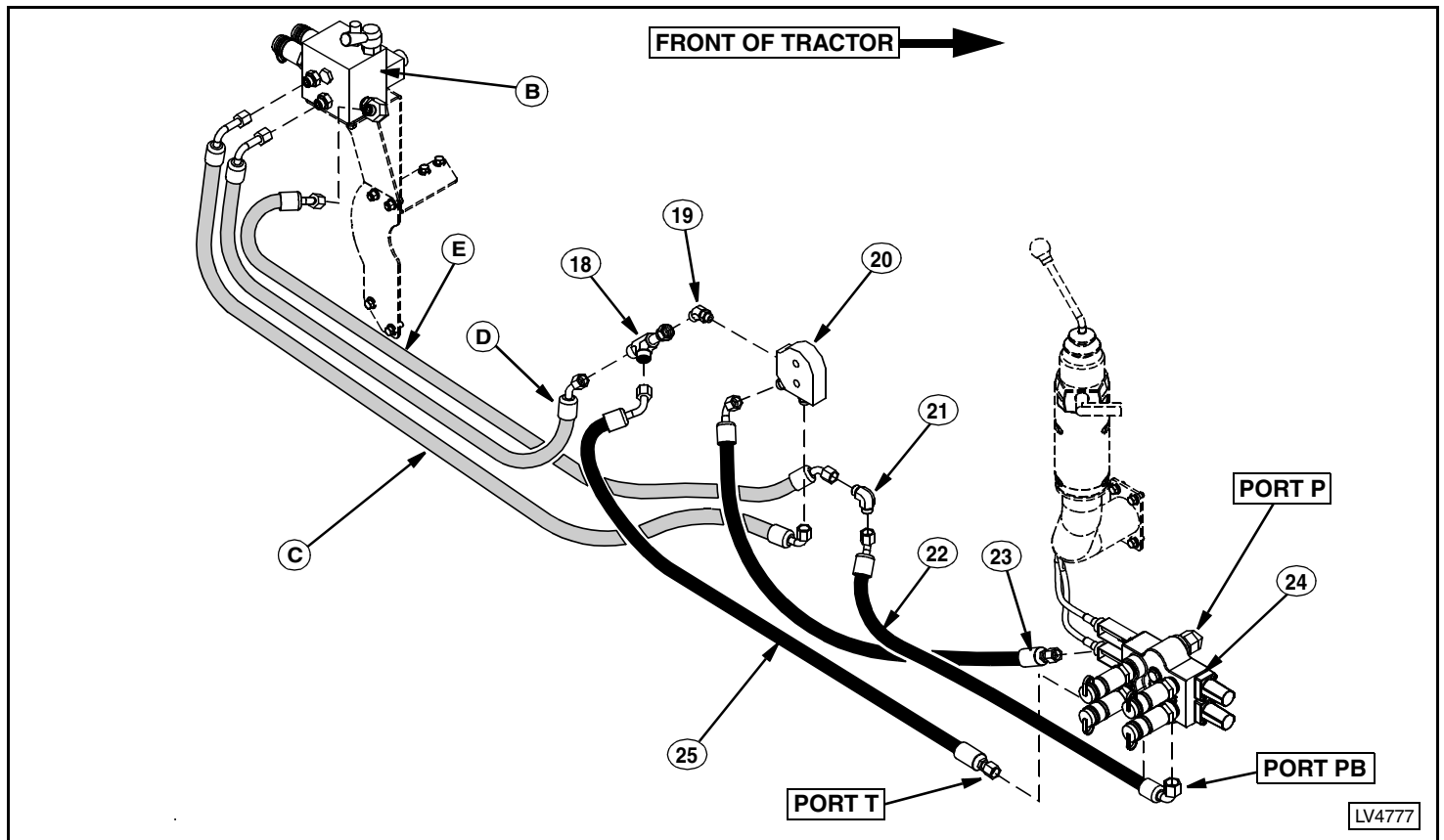
5. Secure Power Beyond hydraulic hoses to fuel tank strap (17) using two large tie wraps (N).

6. Tighten nut (16) securely.

7. Make sure Power Beyond hydraulic hoses do not interfere with any control lever or moving components. Secure hoses using tie wraps as necessary.



## CONNECTING HYDRAULIC HOSES - TRACTORS WITH MID-MOUNT CONTROL VALVE



1. Install one R26375 O-ring and one T77857 O-ring on 45° elbow fitting (19) (38H1046), not supplied in kit. Install 45° elbow fitting (19) in port T on end cap (20). Position fitting downward and tighten to 50 N•m (37 lb-ft).
2. Install two T77857 O-rings on tee fitting (18) (38H5069), not supplied in kit. Install tee fitting (18) on end of 45° elbow fitting (19). Position tee fitting (18) forward and tighten to 50 N•m (37 lb-ft).
3. Connect hydraulic hose (23) from port P on control valve (24) to port R on end cap (20). Tighten hose connection to 50 N•m (37 lb-ft).
4. Connect hydraulic hose (C) from port R on Power Beyond valve (B) to port S on end cap (20).
5. Connect hydraulic hose (D) from port T on Power Beyond valve (B) to the end of tee fitting (18) in port T on end cap (20). Connect hydraulic hose (25) from port T on control valve (24) to the remaining end of tee fitting (18) in port T on end cap (20).
6. Install two T77857 O-rings on 90° elbow fitting (21) (38H1378), not supplied in kit. Install 90° elbow fitting (21), to hydraulic hose (E) from port P on Power Beyond valve (B) and connect remaining hydraulic hose (22) from port PB on control valve (24) to opposite end of 90° elbow fitting (21). Tighten all connections to 50 N•m (37 lb-ft).

## INSTALL ADAPTER AND TEMPERATURE SWITCH

**NOTE: Approximate capacity of transmission is 33 L (8.7 U.S. gal).**

1. Drain transmission/hydraulic oil.
2. Remove hydraulic oil filter/manifold. See procedure in TM1792 (section 70, group 05.)

**IMPORTANT: Make sure not to damage inside bore of manifold when removing plug (26). Damage to bore will result in leakage and hydraulic pump cavitation.**

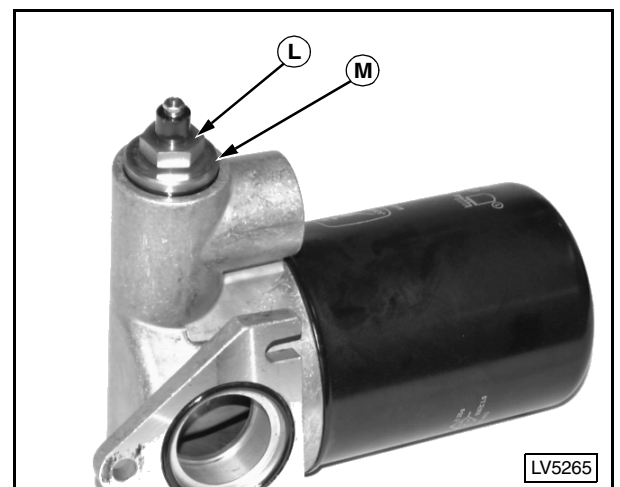
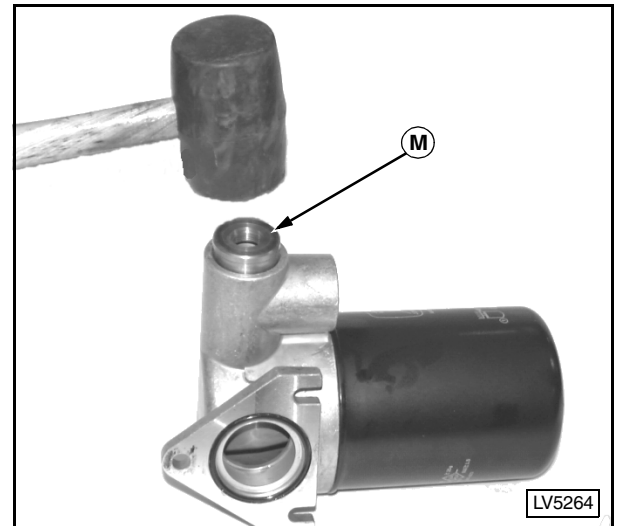
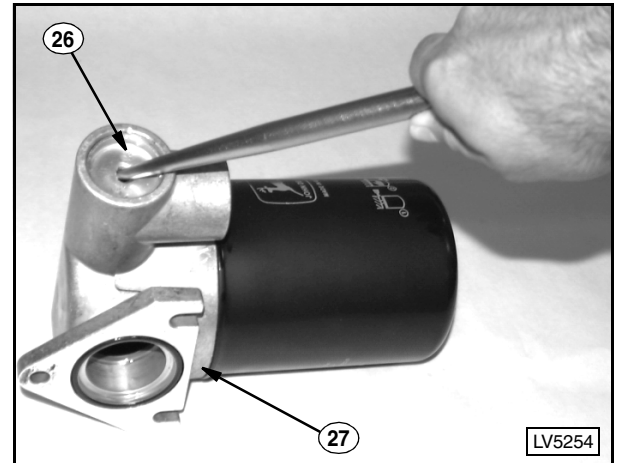
3. Drill a 1/4 in hole in center of welch plug (26) on bottom of hydraulic oil filter manifold (27).
4. Remove and discard plug (26) from manifold using a pry bar as shown.

**NOTE: Adapter (M) is a press fit in hydraulic oil filter manifold.**

5. Clean oil and debris from bore in manifold and outside diameter of adapter (M).
6. Apply maximum strength retaining compound to outside diameter of adapter (M).
7. Position adapter (M) with tapered end in bore where welch plug (26) was removed earlier.
8. Install adapter (M) into bore of manifold until seated using a soft faced hammer.

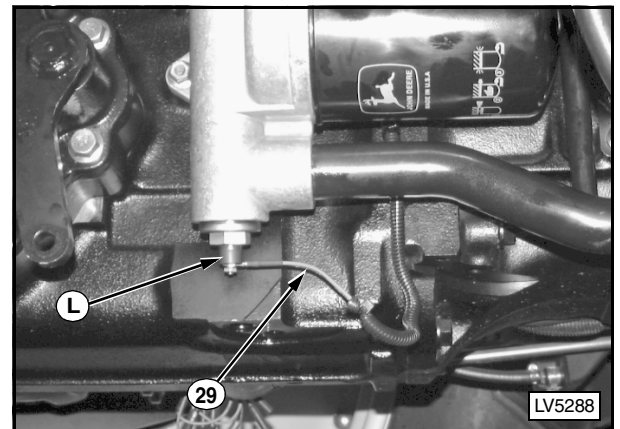
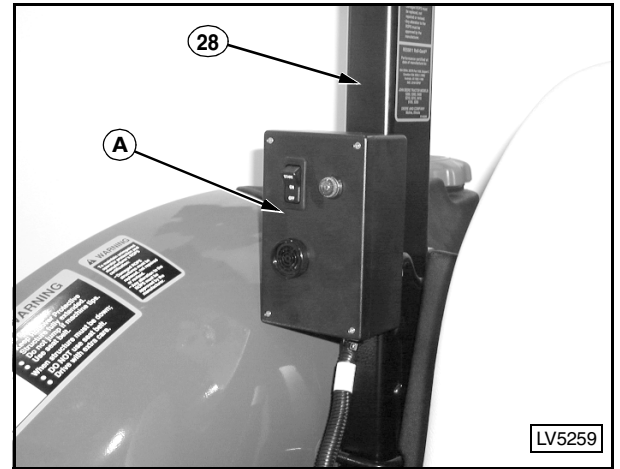
9. Install temperature switch (L) in adapter (M) and tighten securely.

10. Install hydraulic oil filter/manifold. See procedure in TM1792 (section 70, group 05.)

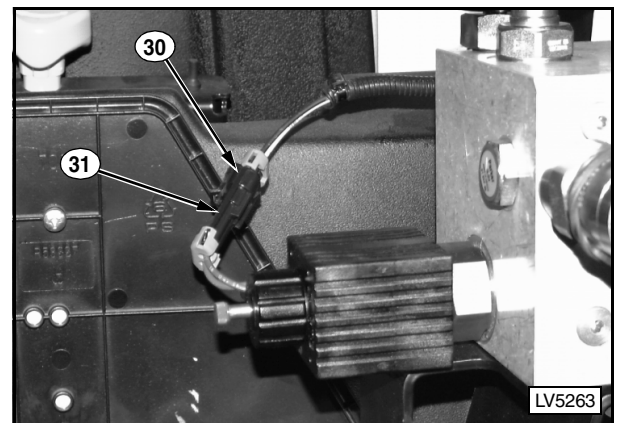


## INSTALL CONTROL BOX AND HARNESS

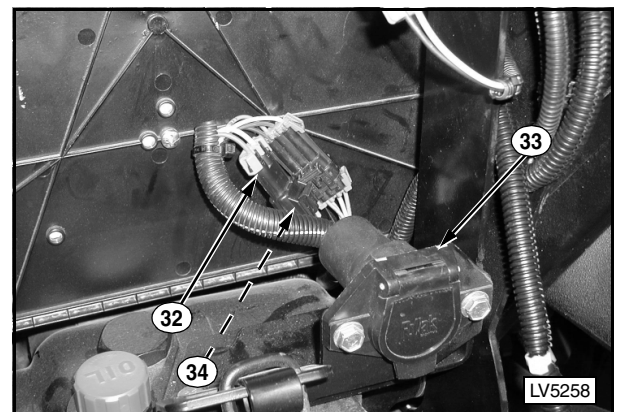
1. Loosely install right side fender to aid during positioning of control box (A).
2. Remove backing on adhesive pad on back of control box (A).
3. Position and install control box (A) against front surface of right side ROPS post (28) as shown. Make sure control box (A) does not contacted fender.
4. Remove right side fender after control box has been installed to aid during harness routing.
5. Disconnect battery, negative (-) cable first then positive (+) cable.
6. Route and connect the green wire lead #305 with ring terminal (29) from the control box harness to the terminal post on temperature switch (L).
7. Route remaining wire connectors from control harness between fuel tank and rockshaft control lever support on left side to rear of tractor.



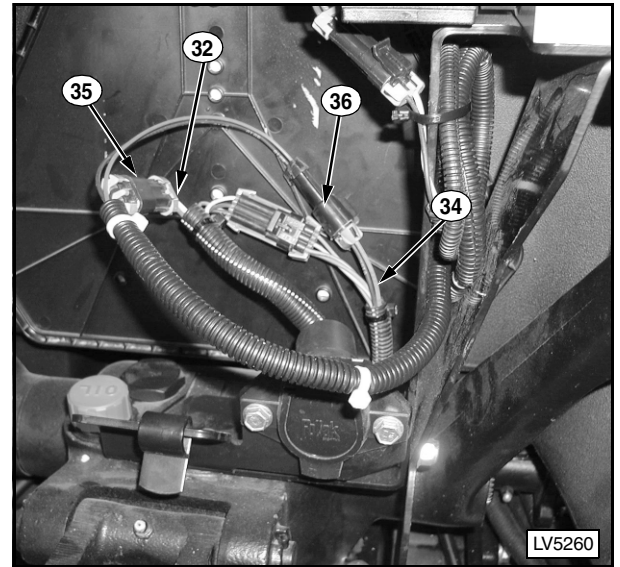
8. Connect the male weather pack connector with one yellow and black wiring leads (30) on control box harness to the valve solenoid mating connector (31) at rear of tractor.
9. Secure all wire leads from control box using tie wrap supplied in kit as necessary. Make sure control box harness is away from all moving parts.



10. At rear of tractor disconnect only the two-wire weather pack connector (32) from the 7-pin trailer receptacle (33) and the rear tractor harness connector (34).



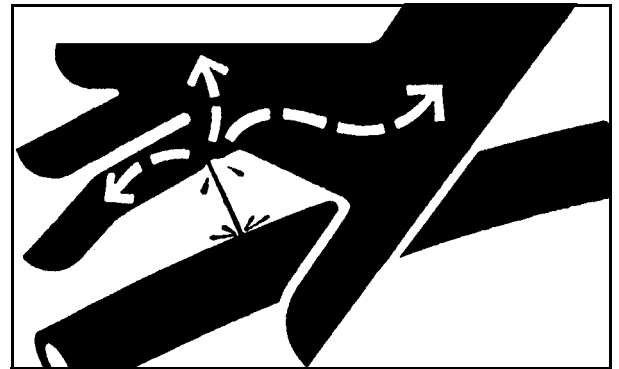
11. Connect the male weather pack connector (35) from control box harness to the mating connector (32) from the 7-pin trailer receptacle.
12. Connect the female weather pack connector (36) from control box harness to the mating connector (34) from the 7-pin trailer receptacle.
13. Secure all wire leads from control box using tie wrap supplied in kit as necessary. Make sure control box harness is away from all moving parts.



**NOTE: Approximate capacity of transmission is 33 L (8.7 U.S. gal).**

14. Fill transmission/differential with proper hydraulic oil. Check level and adjust as necessary.
15. Connect battery, positive (+) cable first then negative (-) cable.

**IMPORTANT: DO NOT use hands to check for leaks with fluid under pressure. Escaping fluid under pressure can penetrate the skin causing serious injury. If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.**



16. Start tractor and check for leaks. Tighten connections as necessary.
17. Install right side fender and wheel. Tighten wheel cap screws to 176 N•m (130 lb-ft).