

CATERPILLAR D6R

7AR / SEBP2663

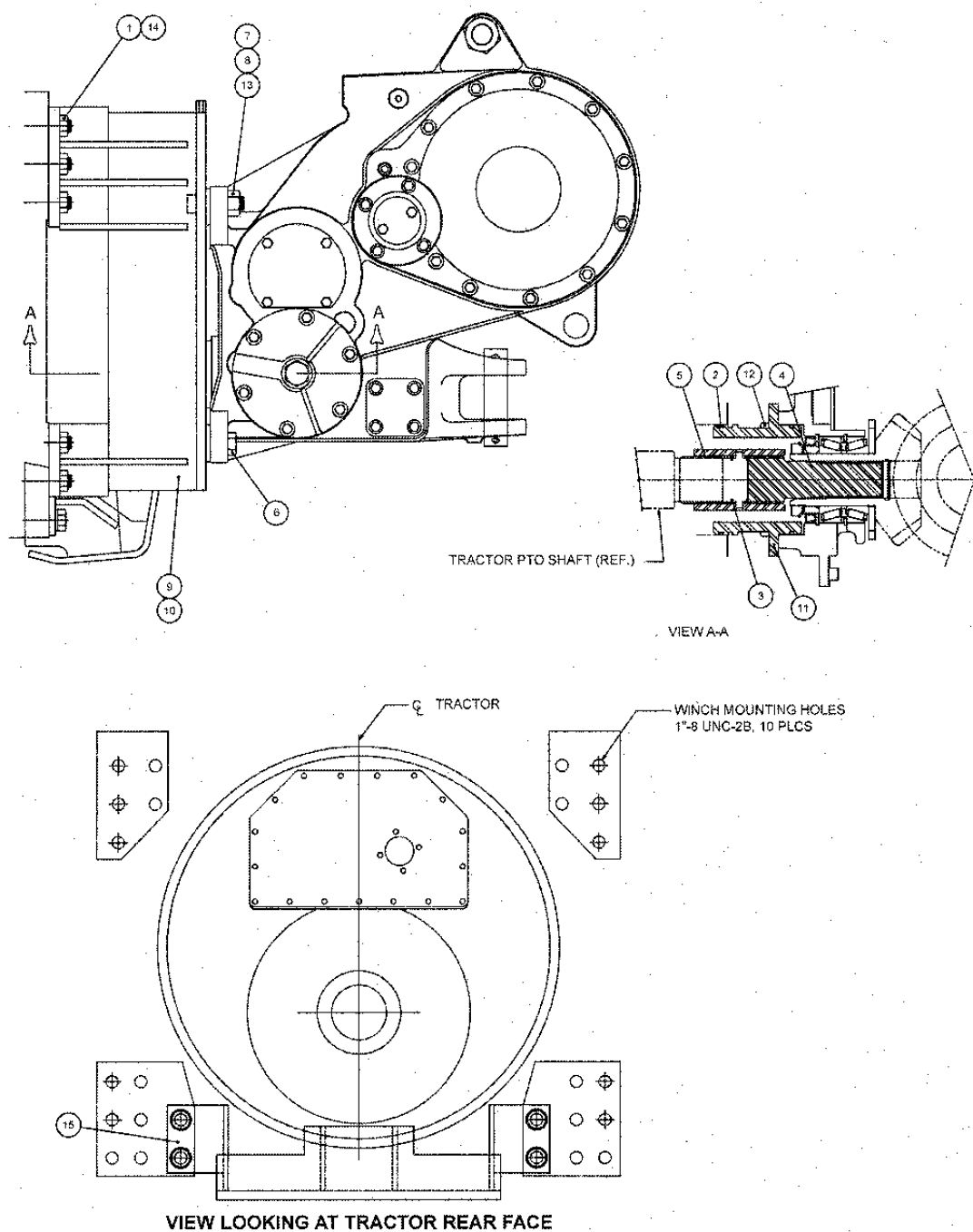
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MOUNTING GROUP

MOUNTING GROUP D6R PS

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MOUNTING GROUP (continued)

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MOUNTING GROUP INSTRUCTIONS

1. PTO rotation is counterclockwise (CCW) as viewed from the rear of the tractor.
2. Remove and discard the tractor PTO cover.
3. Remove paint, dirt, rust and grease from mounting surfaces of tractor, winch and winch adapters.
4. Coat splines of PTO shaft (4), with multi-purpose grease and install into bevel pinion gear of winch.
5. Install retaining rings (3), in coupling (5). Place coupling over PTO shaft with bevel end away from winch.
6. Install O-rings (2), onto PTO pilot (11).
NOTE: As the same PTO pilot may be used on several adaptations, usually only one O-ring groove will engage and seal in the tractor PTO opening.
7. Remove winch top cover to gain access to the bevel gears.

⚠ WARNING ⚠

Winch weighs approximately 2500 lb (1134 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.

8. Apply Loctite 271, 277 or equivalent to threads and install studs (8) into winch adapter to a height of 2-1/2 in. (64 mm).
9. Apply Loctite 271, 277 or equivalent to threads and install studs (1) into rear face of tractor to a height of 1.80 in. (46 mm).

10. Apply Loctite 242, 243 or equivalent to the threads of capscrews (6), and studs (8), then install the winch adapter brackets onto the winch. At this time, only tighten the capscrews (6), and nuts (7), to approximately 50 lb•ft (68 N•m).
11. Apply general purpose grease to the PTO pilot o-ring. Lift winch into position and install onto rear of tractor taking care to guide the PTO shaft/coupling onto the tractor PTO shaft. It may be necessary to rotate the winch bevel pinion gear to align the winch shaft with the tractor shaft. Keep the winch in a level position to avoid binding of the PTO shafts.
12. Apply Loctite 242, 243 or equivalent to studs (8) and tighten nuts (7) to 600 lb•ft. (815 N•m) torque. Tighten capscrews (6) to 680 lb•ft (920 N•m) torque. If torque wrench adapters are not available for tightening the nuts (7), they may be tightened as follows: Tighten nut with a hand wrench to approximately 100 lb•ft. (136 N•m) torque to remove all looseness from assembly. Mark the position of a wrench flat on each nut, then tighten each nut one (1) additional wrench flat. Tighten nuts (14) to 660 lb•ft. (900 N•m) torque.

⚠ WARNING ⚠

DO NOT start the tractor engine until the winch has been filled to the proper level with the recommended oil. Bearing and gear damage may result if the tractor is run without oil in the winch.

MOUNTING GROUP PA56 WITH ELECTRONIC CONTROLS ON D6R

Ref.	Part number	Description	Qty	Code	Group page
1	119-0171	STUD (1-8X3-1/4 G8)	10		
2	8S-5654	O-RING	2		
3	002-3455	RETAINING RING	2		
4	118-6595	PTO SHAFT	1		
5	118-5863	COUPLING	1		
6	7X-0405	CAPSCREW (HEX HEAD) (1-8X2-3/4 G8 Z)	4		
7	4J-5977	NUT (HEX) (1 1/8-7)	4		
8	133-9224	STUD (1-1/8-7X4-3/4)	4		
9	118-6929	ADAPTER (RH)	1		
10	118-6930	ADAPTER (LH)	1		
11	118-6537	PILOT (PTO)	1		
12	5P-2228	CAPSCREW (HEX HEAD) (1/2-13X1 G8 Z)			

MOUNTING GROUP (continued)

Ref.	Part number	Description	Qty	Code	Group page
13	119-1551	WASHER (HARDENED) (1-1/8)	4		
14	6V-8190	NUT (HEX) (1-8)	10		
15	3W-1356	ECOLOGY DRAIN GROUP (INCLUDES ITEMS 15A, B AND C)	1		
15A	3W-1357	GUARD	1		
15B	8T-5361	WASHER (HARDENED) (1)	4		
15C	7X-0400	CAPSCREW (HEX HEAD) (1-8X1-1/2 G8 Z)	4		

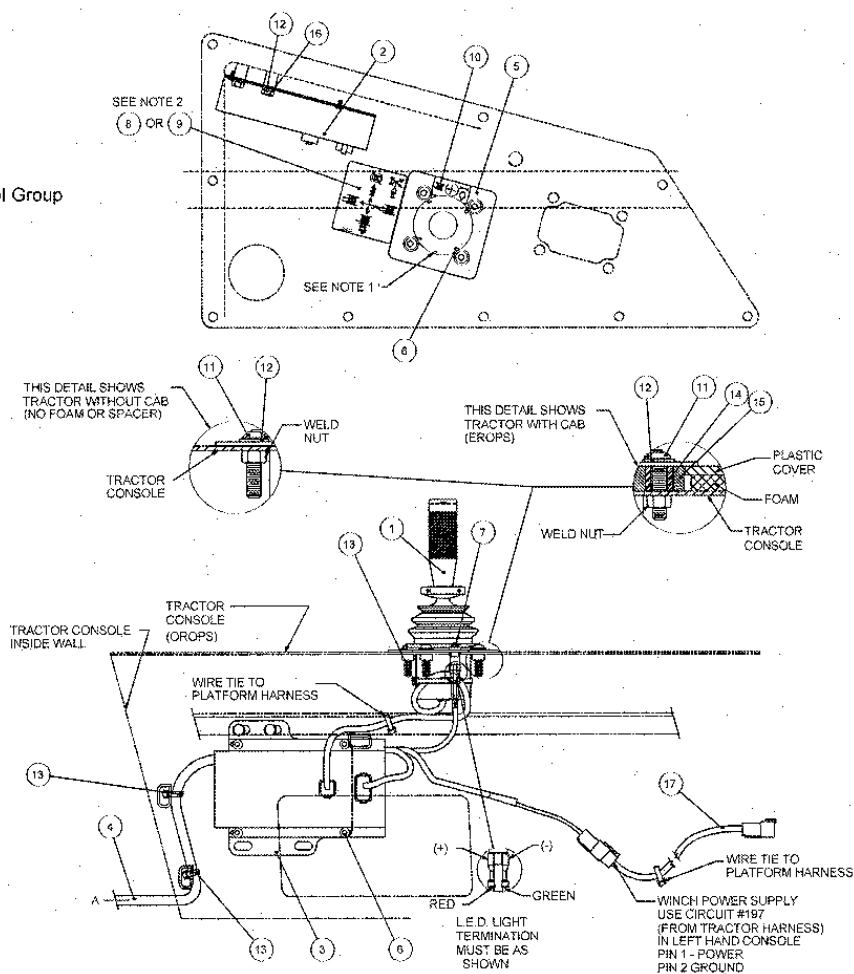
CONTROL GROUP

CONTROL GROUP D6R PS

Drawing 1 of 3

D6R PS

D6R Series II Control Group
on Page 7.



NOTES:

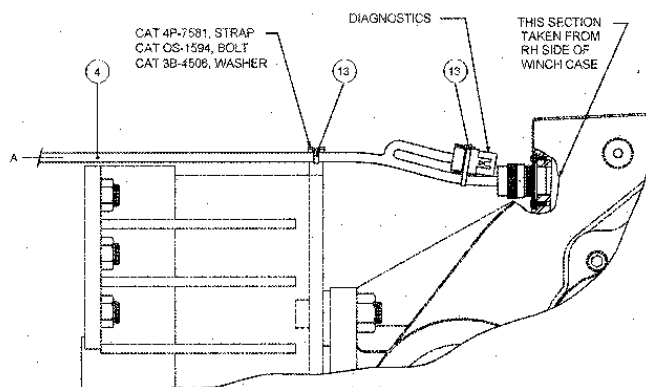
1. DRILL POINT IN DUAL AXIS
CONTROLLER (ITEM 1) **MUST**
BE LOCATED AS SHOWN.

2. CONTROL DECAL (ITEM 8)
USAGE AS FOLLOWS:

WINCH WITHOUT FREESPOOL
USES DECAL P/N 138-2454

WINCH WITH FREESPOOL USES
DECAL P/N 138-2435

REFER TO WINCH MODEL CODE
AND OPERATOR'S MANUAL FOR
DETERMINATION OF SPECIFIC
WINCH ASSEMBLY.



CONTROL GROUP (continued)

Drawing 2 of 3

CONTROL INSTALLATION INSTRUCTIONS

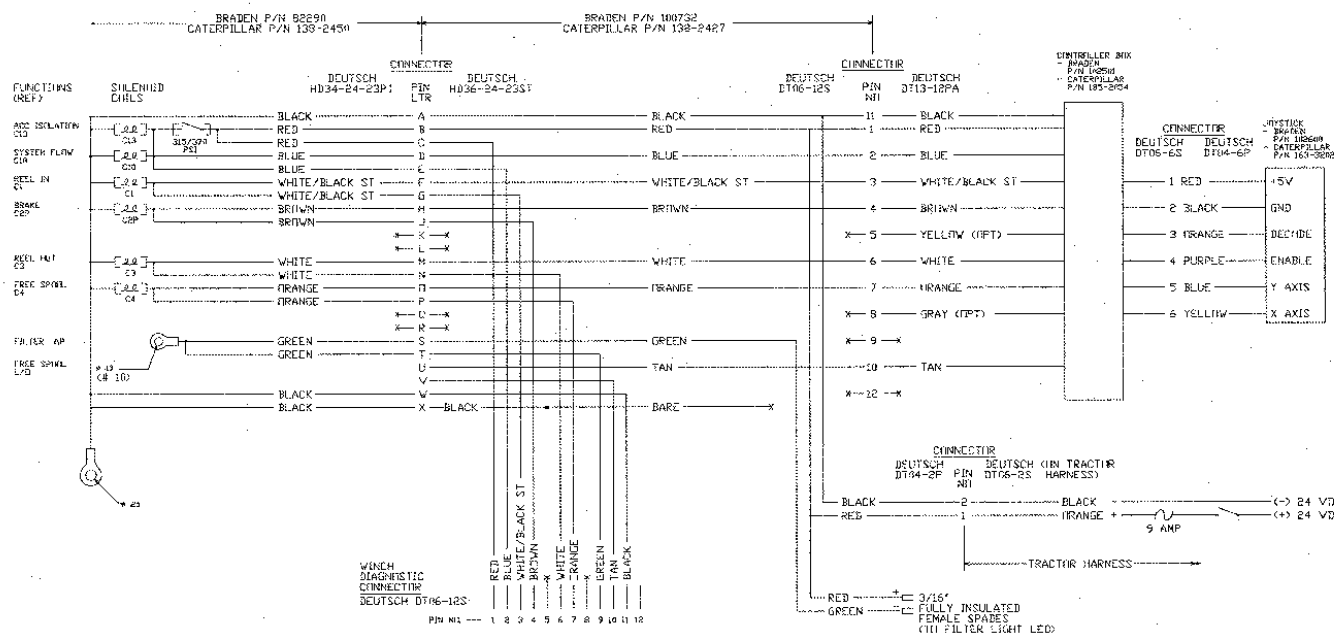


Avoid routing the control cables near moving shafts or linkages, which may cause damage to the cables or restrict free movement of tractor components.

1. Attach dual axis controller (1), to controller mounting plate (5), with button head capscrews (6).
2. Remove RH tractor console.
3. Install control module (2), onto mounting plate (3), utilizing fasteners (6).
4. Install the control module and mounting plate on the RH console wall as shown, utilizing fasteners (12 and 16).
5. Install harness (4), in tractor as shown. Connect winch and control module ends of harness. Secure winch end of harness with strap, bolt, washer and wire tie strap (13), as shown. Secure harness at console wall with wire tie straps (13), as shown.
6. Install tractor console cover.
7. Attach dual axis controller and mounting plate to console cover with fasteners (11, 12 and 14). Note that spacer (14), is used only on cab equipped tractors.
8. Install decal (10), and indicator light (7), onto mounting plate.
9. Connect controller to control module and secure harness with wire tie straps (13).
10. Connect harness spade connectors to indicator light. Red wire must be connected to positive terminal of indicator light.
11. Insure tractor power is off. Connect harness to tractor power supply circuit 197.
12. Install correct decal (8 or 9) onto console cover.
13. Fill the winch to the proper level with recommended oil. Refer to the specifications found in the Operation and Preventive Maintenance Manual, publication SEBU7048 or Service Manual, publication SENR8463.
14. Start the tractor and operate the engine at low RPM for several minutes to allow the winch control system pressure to stabilize. Operate the winch in all functions as instructed in the Operation and Preventive Maintenance Manual, publication SEBU7048.

CONTROL GROUP PA56 WITH ELECTRONIC CONTROLS ON D6R

Drawing 3 of 3



Ref.	Part number	Description	Qty	Code	Group page
1	163-3205	DUAL AXIS CONTROLLER	1		
2	174-6251	CONTROL MODULE (EARLY DESIGN)	1		
	185-2054	CONTROL MODULE (CURRENT DESIGN)	1		
3	138-2426	MOUNTING PLATE	1		
4	138-2427	WIRING HARNESS	1		
5	147-2721	CONTROL MOUNTING PLATE	1		
6	8T-9394	CAPSCREW (BUTTON HEAD) (10-24X1/2)	8		
7	138-2434	INDICATOR LIGHT	1		
8	138-2435	DECAL (CONTROL WITH FREESPOOL) (SELECT ONLY ONE CONTROL DECAL)	1		
9	138-2454	DECAL (CONTROL WITHOUT FREESPOOL) (SELECT ONLY ONE CONTROL DECAL)	1		
10	138-2441	DECAL (FILTER INDICATOR LIGHT)	1		
11	3E-8042	CAPSCREW (BUTTON HEAD) (3/8-16X1-1/2)			
12	8T-4896	WASHER (NARROW) (3/8)	6		
13	7K-1181	WIRE TIE STRAP	10		
14	147-2722	SPACER (USED WITH CAB OPTION)	4		

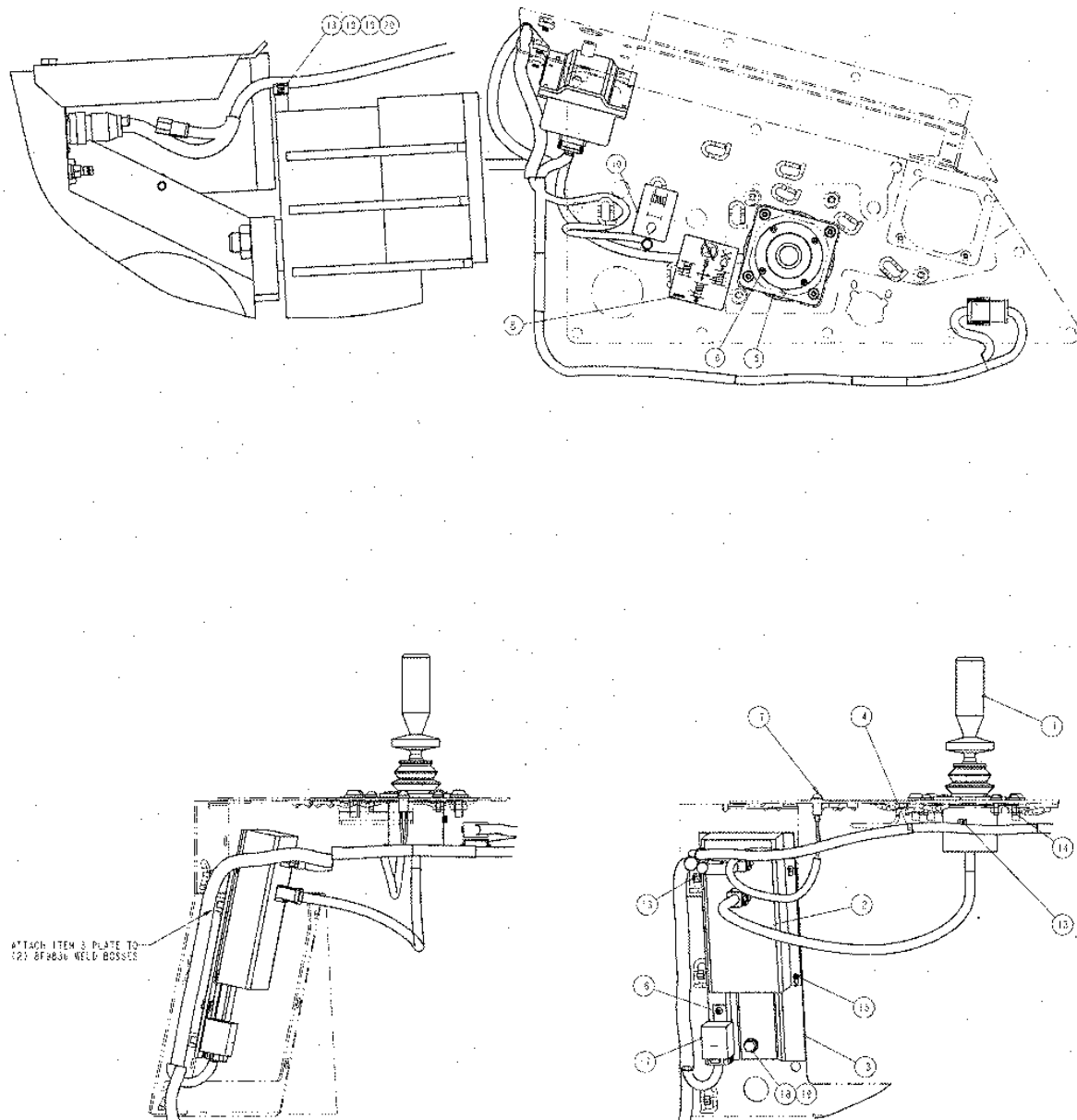
CONTROL GROUP (continued)

Ref.	Part number	Description	Qty	Code	Group page
15	147-2726	SPACER (USED WITH CAB OPTION)	1		
16	5M-3062	CAPSCREW (HEX HEAD)	2		
17	125-2000	WIRE HARNESS	1		

CONTROL GROUP

CONTROL GROUP D6R SERIES II PS

Drawing 1 of 3



CONTROL GROUP (continued)

Drawing 2 of 3

These control installation instructions are provided as a general guide. Tractor options, application requirements or local regulations may require deviation from these recommendations. Stop engine, turn key switch and master power switch off.

1. Remove the right hand console cover as directed in the tractor service manual.

Install module mounting plate (3) onto inner wall of right hand console using capscrews and washers (18, 19). Install the control module (2) onto the mount plate (3) using screws (15). Install control relay (17) to mount plate with button head capscrew (6).

2. Install the winch controller (1) into the controller mounting plate (5) using button head capscrews (6). The small indentation made by a drill point found on the mounting flange of the controller must be installed at the twelve o'clock position, away from the operator. Install the controller sub-assembly into the console using the original button head capscrews supplied in Caterpillar group 167-1170. Install the operation decal (8) onto the console next to the controller.

3. Install the filter by-pass indicator light (7) into the tractor control console as shown. Install the filter indicator light decal (10) next to the indicator light.

Note: Make certain all wiring harness connector pins, plugs and sockets are clean. Pins must be straight to align with the respective socket. Dirty connectors and bent pins will prevent reliable operation of the winch.

4. Route the wiring harness (4) under the console and attach the spade connectors to the filter bypass indicator light (7) that has been installed in the control

console cover. The indicator light terminals are not polarity sensitive. Install the 12-pin Y connector of the winch harness into the tractor console wiring harness as shown. Install the 12-pin harness connection into the control module. Plug the harness into the control relay under the control module. Install the controller harness into the control module. Pass the harness back toward the winch. Secure the harness to appropriate tractor tie-offs (chain links) with wire ties (13). Install the harness into the winch receptacle. Secure the harness to the winch mounting bracket with wire tie (13) onto clip and fasteners (18, 19, 20).

CAUTION

Bundle and restrain loose wires to prevent abrasion, short circuits and interference with tractor controls. Failure to properly route the harness may result in damage to the winch control system and tractor components. This damage may result in unreliable winch and tractor operation that may cause property damage, injury or death.

5. Install the tractor console cover onto the console.
6. Fill the winch to the proper level with recommended oil. Refer to the specifications found in the Operation and Preventive Maintenance Manual, publication SEBU7048 or Service Manual, publication SENR8463.
7. Start the tractor and operate the engine at low RPM for several minutes to allow the winch control system pressure to stabilize. Operate the winch in all functions as instructed in the Operation and Preventive Maintenance Manual, publication SEBU7048.

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