

CARCO H40R Installation Instructions

Caterpillar

D3K/D4K/D5K T4F With Ripper Controls



General Notes

- Follow all safety procedures per dozer and winch service manuals.
- Confirm all parts are received as noted in the bill of materials.
- Layout toggle switch location on console before removing arm rest and seat.
- Drain implement hydraulic reservoir before proceeding or pull a hard vacuum to prevent loss of oil during ripper removal and/or winch installation.
- Remove hydraulic implements from the rear of the tractor i.e. ripper and rear cover. Keep hydraulic hoses and bulkhead fittings.

65185 SHIP LOOSE >



65304 CONTROL GROUP

65305 MOUNTING GROUP

IF YOUR WINCH IS CONFIGURED WITH A
DRAWBAR THE FOLLOWING ITEMS WILL
ALSO BE INCLUDED:

- **111350 DRAWBAR PIN**
- **70148 COTTER PIN**

65304 – CONTROL GROUP

BILL OF MATERIALS

ITEM #	PART #	DESCRIPTION	QTY	NOTES
1	106796	HOSE -6 ORFS x 50"	1	
2	111658	CENTER COVER	1	
3	102273	TEE -6 ORFS (6R6LO-S)	1	
4	PA7N2353	TOGGLE SWITCH	1	
5	103863	CAP SCREW M24 x 70	4	
6	103685	WASHER M24 HARD Z	4	
7	111707	WIRING HARNESS	1	
8	111788	DECAL, CONTROL	1	

2-Speed Switch Mounting

- Remove the factory joystick cover as shown in Fig. 1.
- Drill a 0.50" hole in the plastic cover approximately in the location shown.
- Drill a 0.13" hole toward the outside of the tractor, 0.38" from the center of the 0.50" hole.

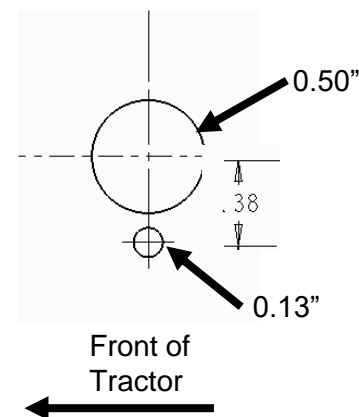
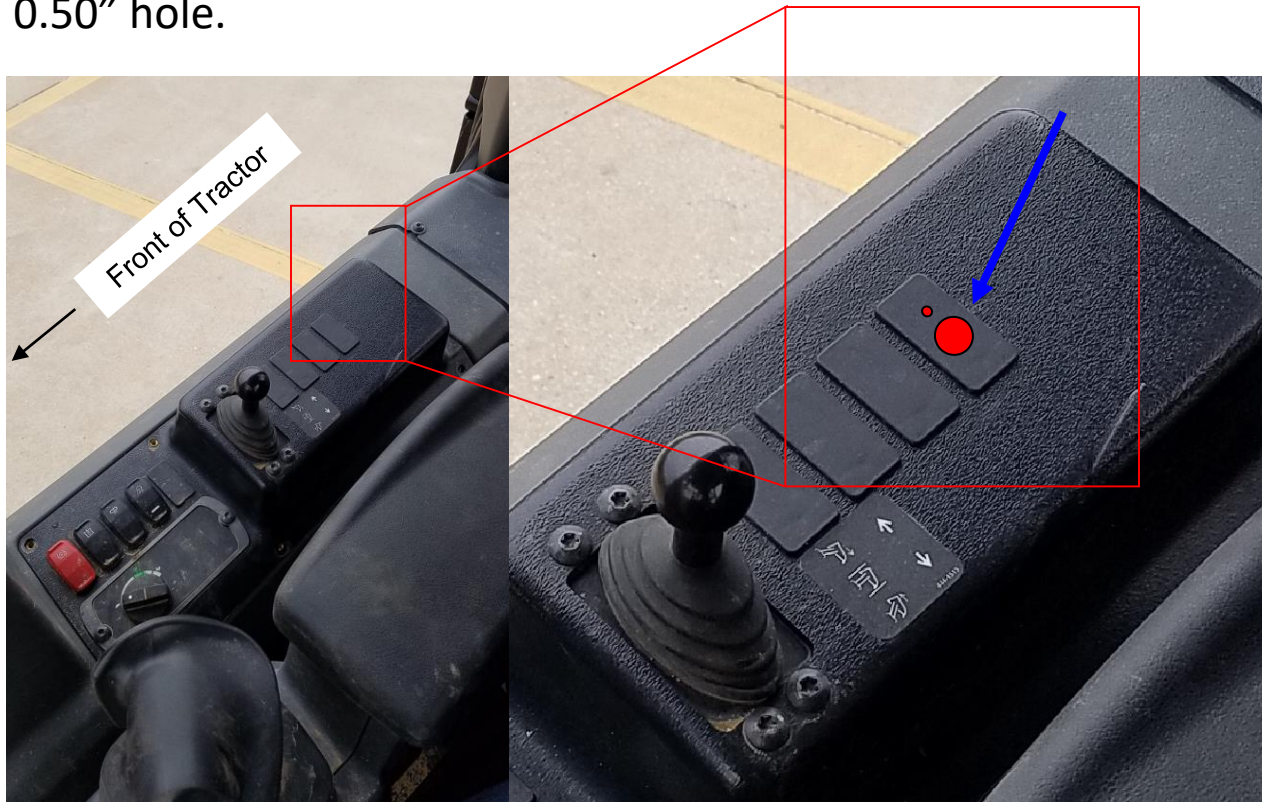


Fig. 1 –Remove the screws to remove plastic console cover. Check for clearance to wiring before drilling holes

2-Speed Switch Mounting

- Locate the control decal and apply the individual stickers to visible and appropriate locations next to the two-speed switch and actuation lever inside the cab.

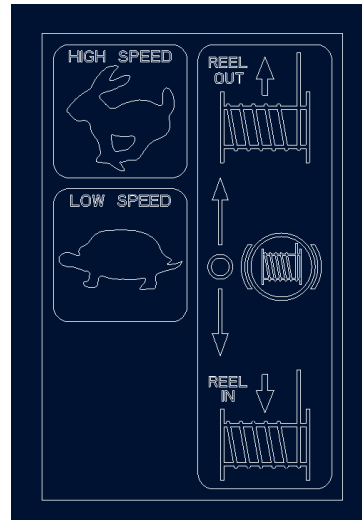
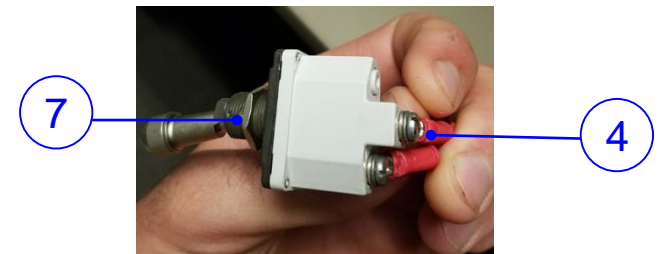
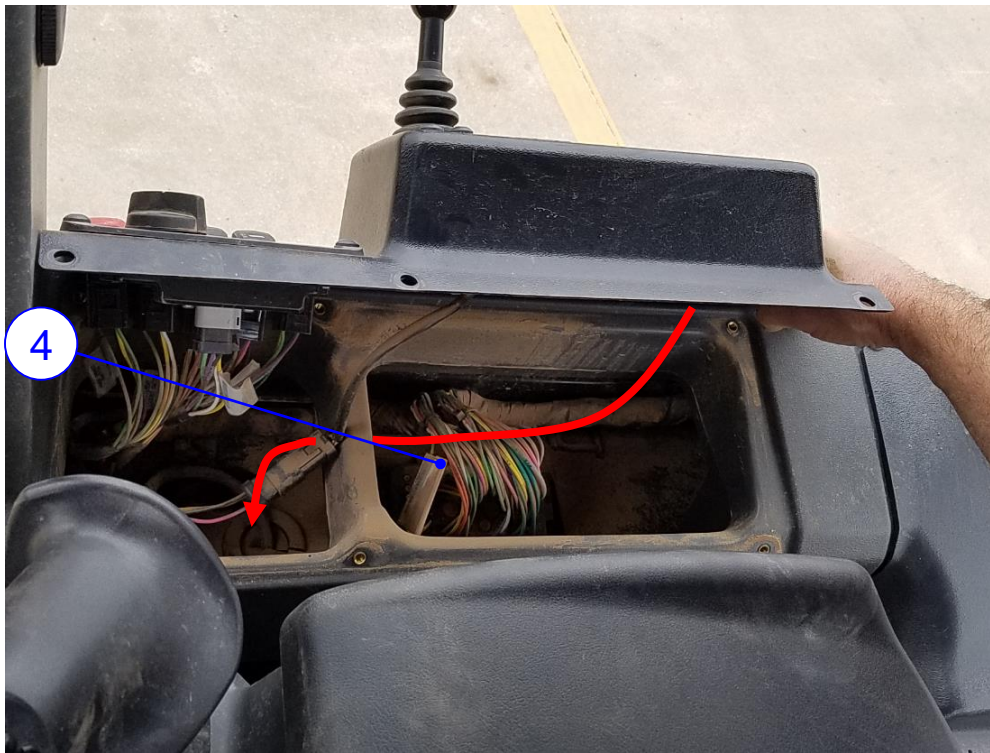


Fig: 3B – Item 11 Control Decal

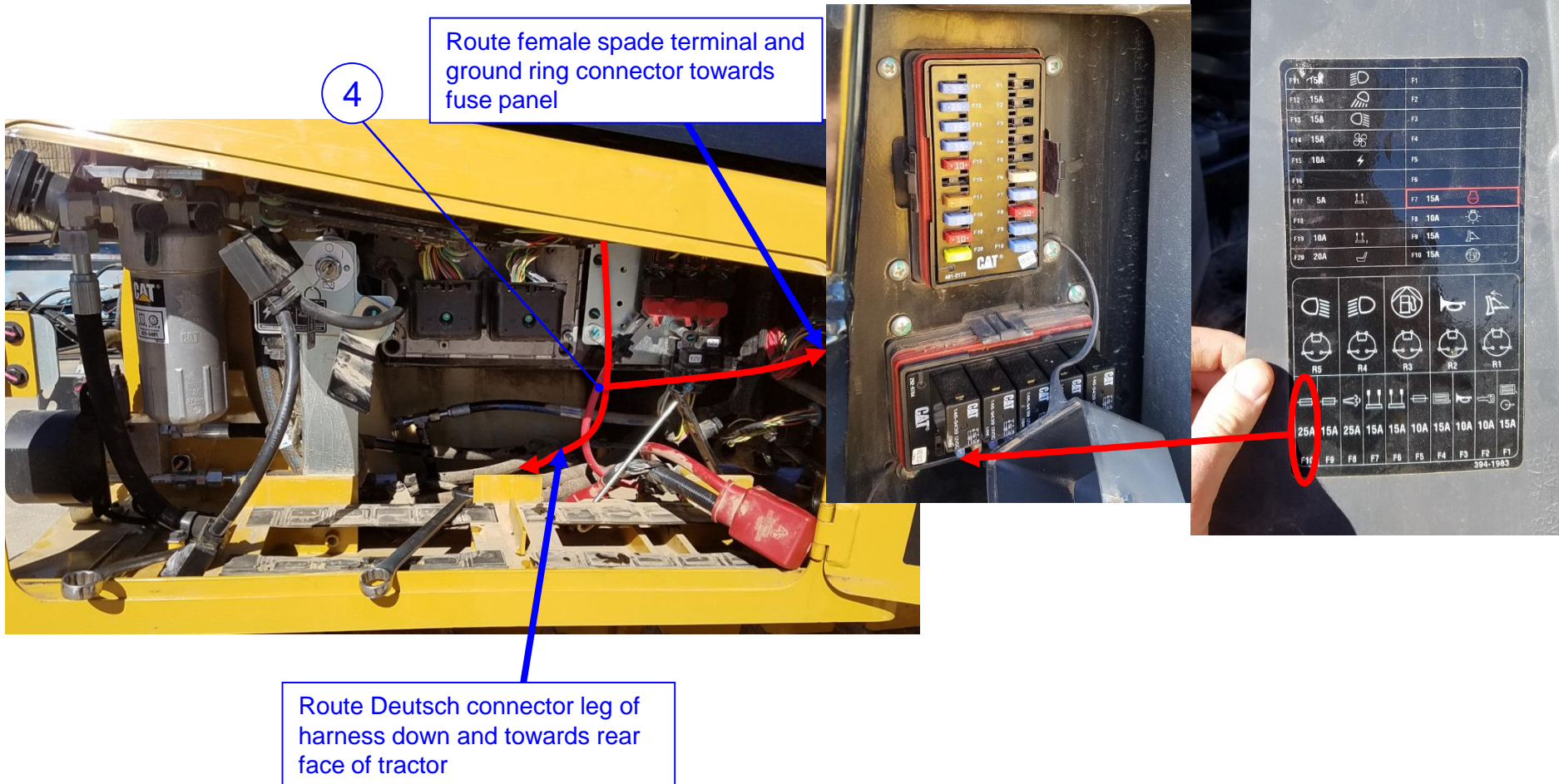
- Install switch (Item 4) into console cover aligning the retaining tab through the 0.13 hole. Connect small ring terminals of the harness (Item 7) to the switch, and route the harness down into the RH console through the grommet.



Connect ring terminal ends of the harness (item 7) as shown.

Note: Removal of the batteries from the RH access cover is required for the next two steps. Remove them per CAT instructions

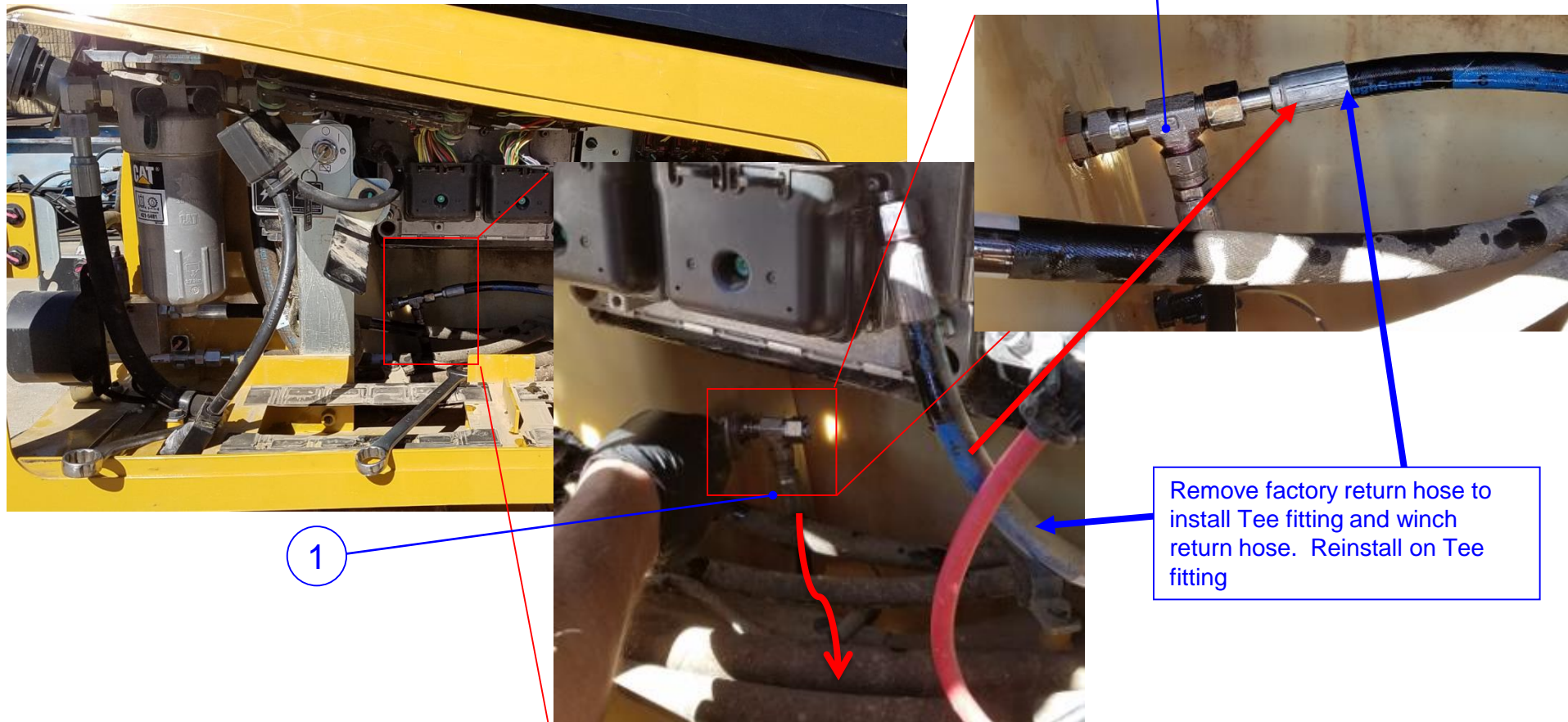
1. Route Deutsch connector of harness down and to the back of the tractor.
2. Connect female spade terminal (Metripack 280) of harness to the back of the lower fuse block, (ACC fuse F10)
Connect ring terminal to ground stud located near fuse panel



Tank Return line

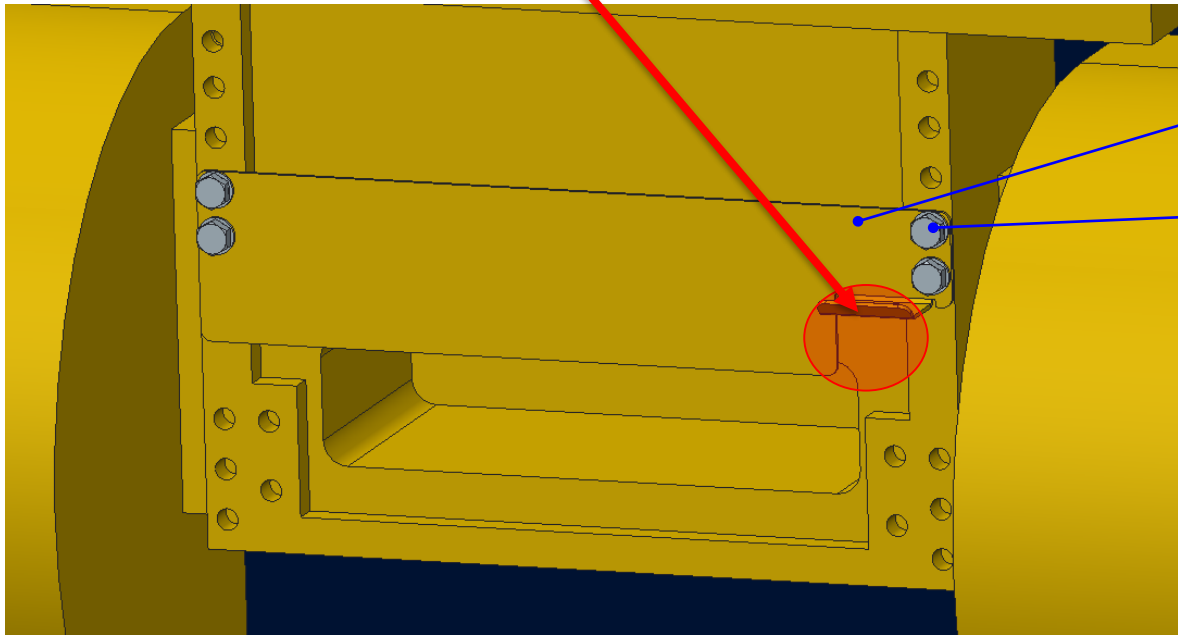
NOTE: It may be necessary to drain the hydraulic tank for this step to avoid spilling oil

1. Route hose (item 1) down and toward the back of the tractor.
2. Loosen and remove the factory return hose located behind the batteries in the RH access panel
3. Install Run Tee fitting (Item 3) between the tank and the factory return hose
4. Install tank return hose (Item 1) to fitting as shown and install factory return hose as shown



Rear Face Winch Prep

Route Deutsche connector end of wire harness (Item 7) and tank return hose (Item 1) to the rear face ,near the middle-RH side of the tractor.



Install rear cover (Item 2) using bolts and washers (Items 5 and 6) in the location shown

Fasten hose and wire harness to the tab using zip-ties

At this point the rear face is ready for the winch to be mounted

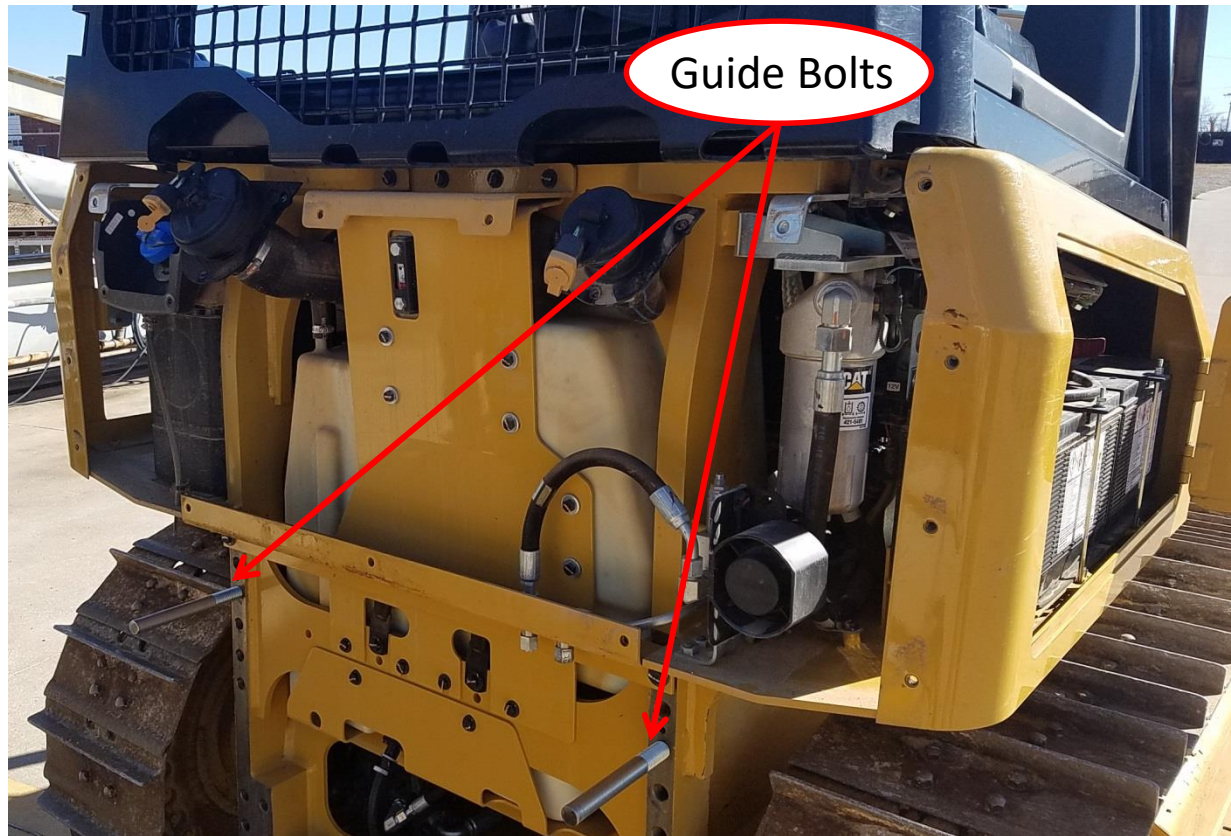
Fig. 7 -
Views from access compartment for harness routing.

65305 –MOUNTING GROUP

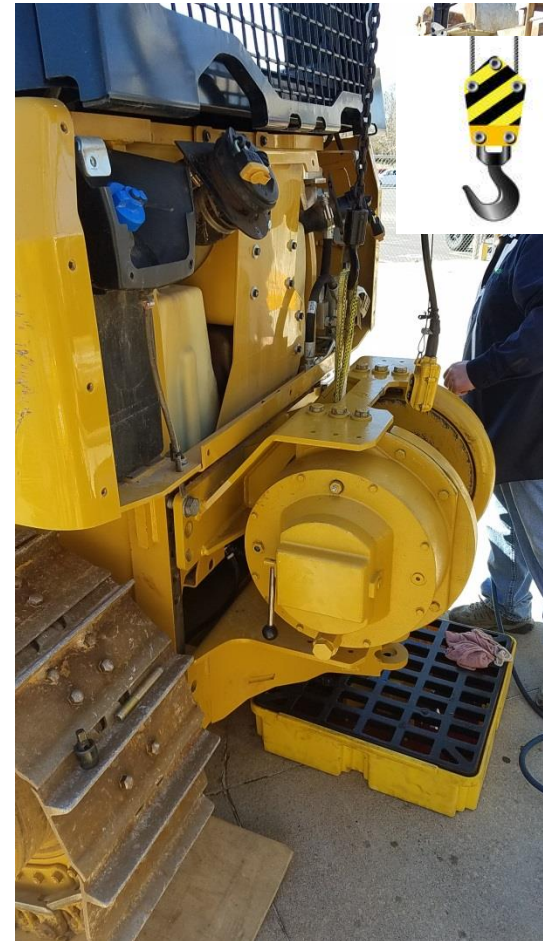
BILL OF MATERIALS

ITEM #	PART #	DESCRIPTION	QTY	NOTES
1	103863	BOLT M24X70	12	
2	103685	WASHER CM24 HARD Z	12	
3	29422	FERRULE	1	
4	107662	HOSE, -8 ORFS X 19.0	2	
5	26868	REDUCER STR THD ADAPT	1	
6	10074	RELIEF VALVE	1	
7	101385	PLUG, ORB -10 FLUSH	2	

- Remove hydraulic implements and cover from the rear of the tractor.
- The use of guide bolts to mount the winch are helpful during alignment but not required (guide bolts not included).



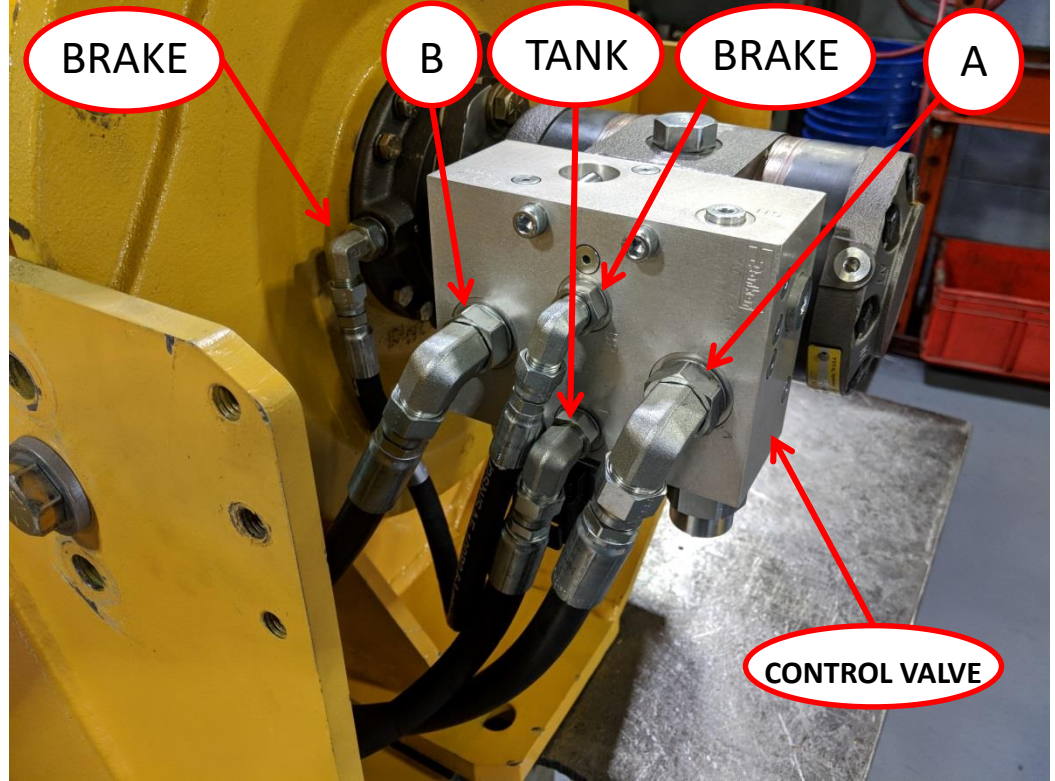
- Remove the motor cover from the winch.
- Mount the winch to the tractor using items 1 & 2 (cap-screws and washers). The weight of the winch is just above 1,000 lbs.
- Torque the cap-screws to 650 N-M (500 LB-FT).



- Locate the hydraulic load control valve assembly at the rear of the tractor.
- Remove both cartridge valves from the valve body and replace with item 7, -10 ORB plugs.
- Bag both cartridge valves and keep them with the tractor for future use if the ripper assembly is re-attached.



- Install items 4, A & B hydraulic oil pressure hoses as shown in the figure below. Verify if the adapter elbows are closely oriented as in the picture below. Torque hoses to 55 N-m (40 lb-ft).
- Connect the previously installed hydraulic oil tank return line to the “Tank” port located on the control valve. Torque to 40 N-m (30 lb-ft).
- Connect the wiring harness to the control valve.



- Locate the air vent and thread adapter parts items 8 & 9 as shown in the figures below.
- Remove the shipping plug and install the air vent assembly. The air vent should be mounted at the 12 o'clock position on the cover.

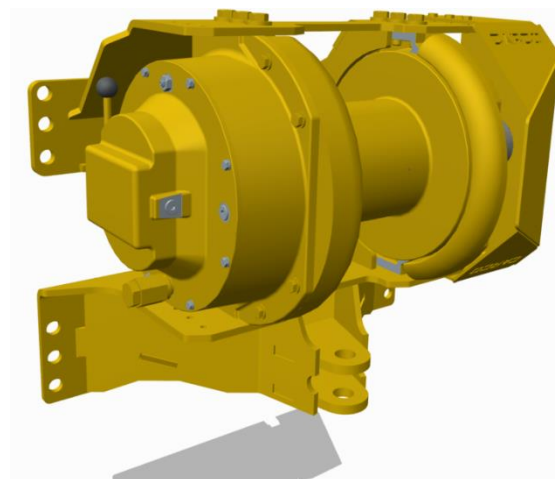
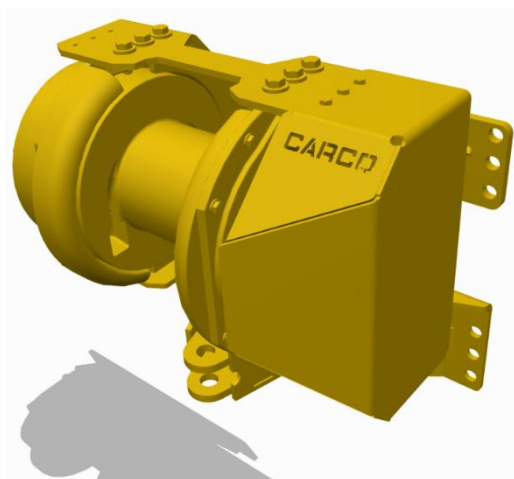


**REMOVE SHIPPING PLUG
AND INSTALL THE AIR VENT**

Final Assembly Steps

- Re-fill the hydraulic reservoir or remove the vacuum from the tractor tank.
- Check the oil level of the winch. The oil level should be at or above the sight glass.
- Replace the dozer batteries and perform electrical checks.
- Before reinstalling the motor cover:
 - Operate the winch in reel-in and out using both high and low speeds.
 - Check the functioning of the free-spool lever for disengagement and re-engagement. The lever will most always return only half way, this is normal. Do not force the lever. Rotate the drum or pull on the wire rope to allow the lever to re-engage automatically the rest of the way.
 - Check all of the hoses and port connections for leaks.
- If the winch has a draw bar, install the supplied draw bar pin using the supplied cotter pins.

H40R



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