

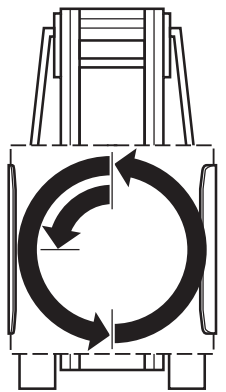
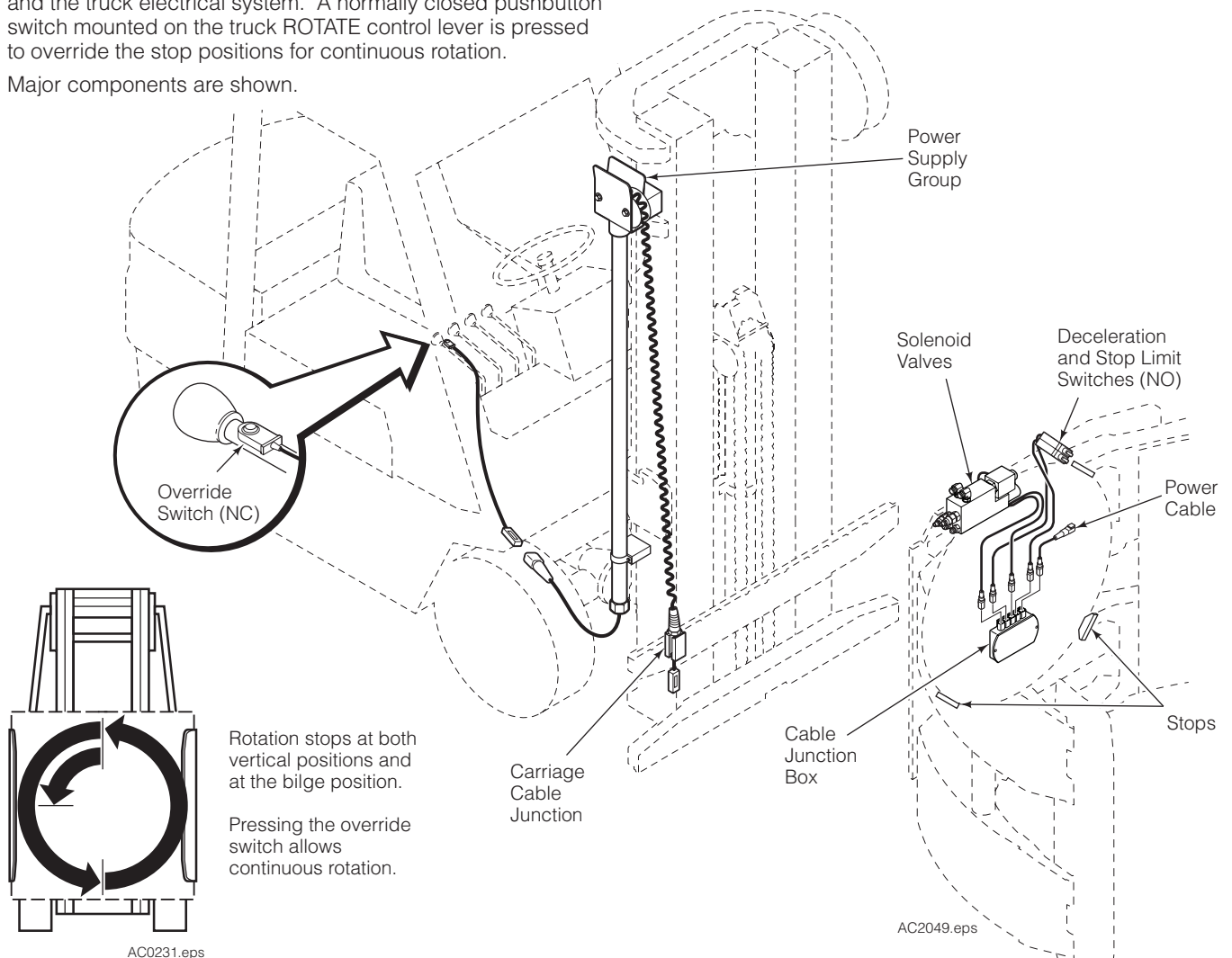


Installation Instructions

Electronic Rotational Control Group — 18H Roll Clamp

This manual provides installation instructions for Cascade Electronic Rotational Control (ERC) Kits for 18H Roll Clamps. Rotational Control provides accurate stops during rotation to position the attachment arms at true vertical or bilge position to reduce product damage from misclamped loads. An electrical supply circuit using a cable reel (Cascade Power Supply recommended) is required to provide an electrical connection between the Electrical Rotational Control on the attachment and the truck electrical system. A normally closed pushbutton switch mounted on the truck ROTATE control lever is pressed to override the stop positions for continuous rotation.

Major components are shown.



Rotation stops at both vertical positions and at the bilge position.

Pressing the override switch allows continuous rotation.

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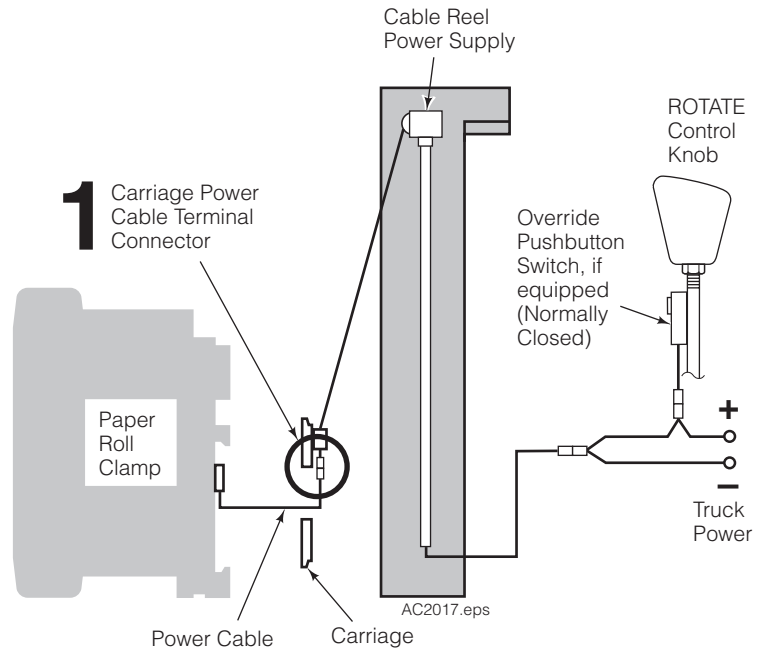
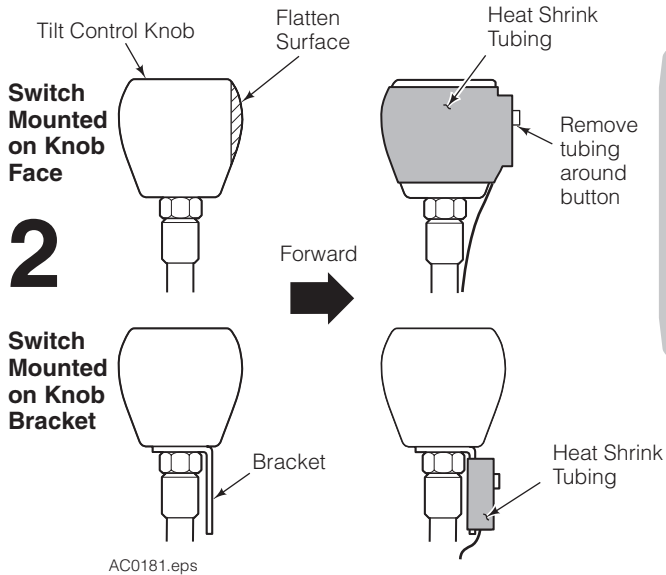
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Cable and Switch Installation

- 1 Connect the power cable from the electronic rotational control (ERC) enclosure on the back of the attachment to the power supply cable end at the truck carriage.
- 2 Install pushbutton switch on ROTATE control lever.

NOTE: The installation shows connection to Cascade Power Supply/Communication Kit 228719 or 6001137 which includes components for over-the-mast electrical supply from the power cable to the carriage cable connection. Refer to Installation Manual 228179.

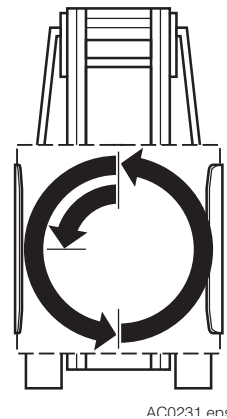


Operation and Adjustment

- 1 Test the installation before putting the truck in service. When rotating, attachment travel should stop at the vertical and bilge handling positions. Wait 3 seconds to rotate after stopping **OR** press the rotate override button to continue rotating.
 - If rotation **stops** at the vertical or bilge position, continue with step 2.
 - If rotation **stops momentarily and then continues** at the vertical or bilge positions:
 - A** Reduce the hydraulic input pressure for the rotate function.

OR

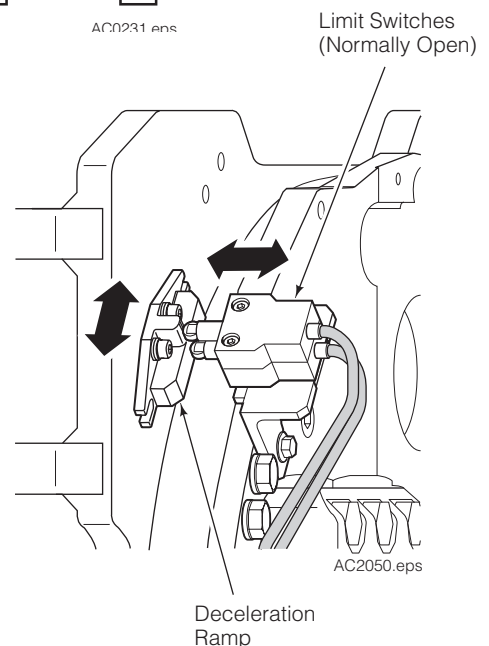
 - B** Adjust both counterbalance cartridges CCW in 1/2 turn increments until rotation stop at the vertical and bilge position.
 - If rotation **does not stop** at the vertical or bilge positions:
 - A** Inspect the wiring installation. Look for loose connections or pinched cables.
 - B** The limit switch end rollers are not fully engaging the deceleration ramp and stop capscrew (if equipped) at the vertical or bilge position. Adjust the limit switch actuators to engage the ramp and stop capscrew (if equipped). The ramp and stop (if equipped) can also be adjusted for precision of the stop position. The stop capscrew height is also adjustable (if equipped).
- 2 To continue rotation, wait 3 seconds after stopping or the rotate override button must be pressed to continue rotation. To rotate without stopping, press the override button.



Rotation stops at both vertical position and at the bilge position.

Pressing the override switch allows continuous rotation.

Wait 3 seconds or press override button to continue rotating.

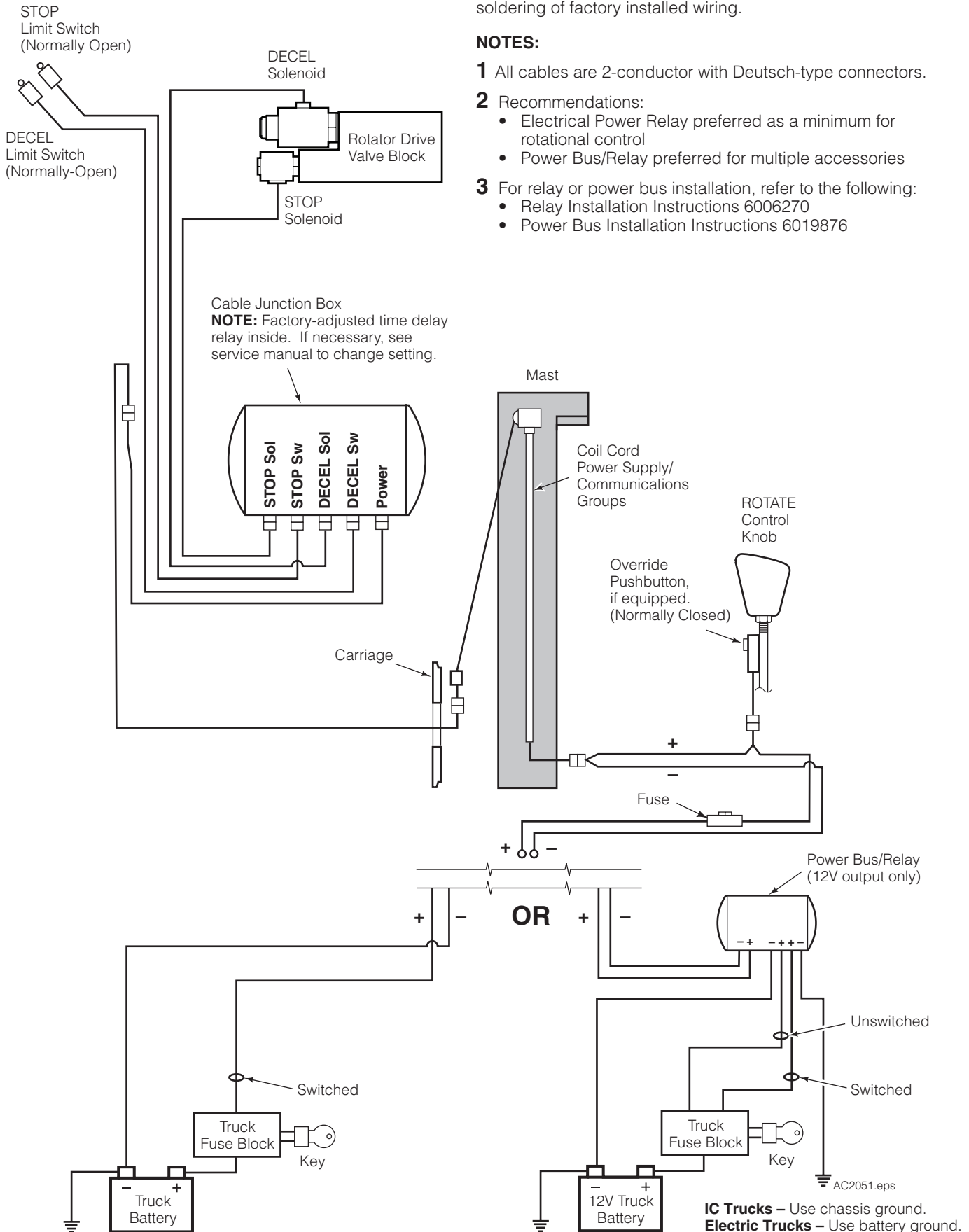


Rotational Control Electrical Hookup

NOTE: UL Classified Kits require installation by qualified personnel only without major disturbance, cutting, splicing for soldering of factory installed wiring.

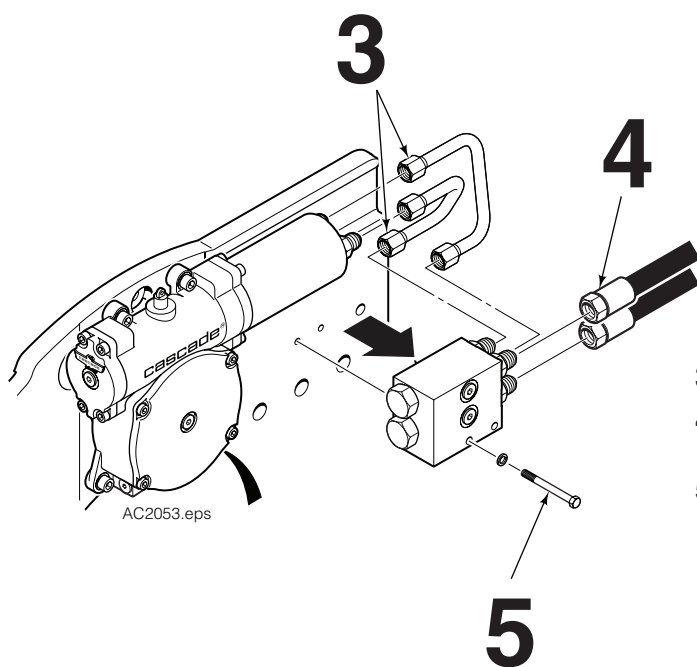
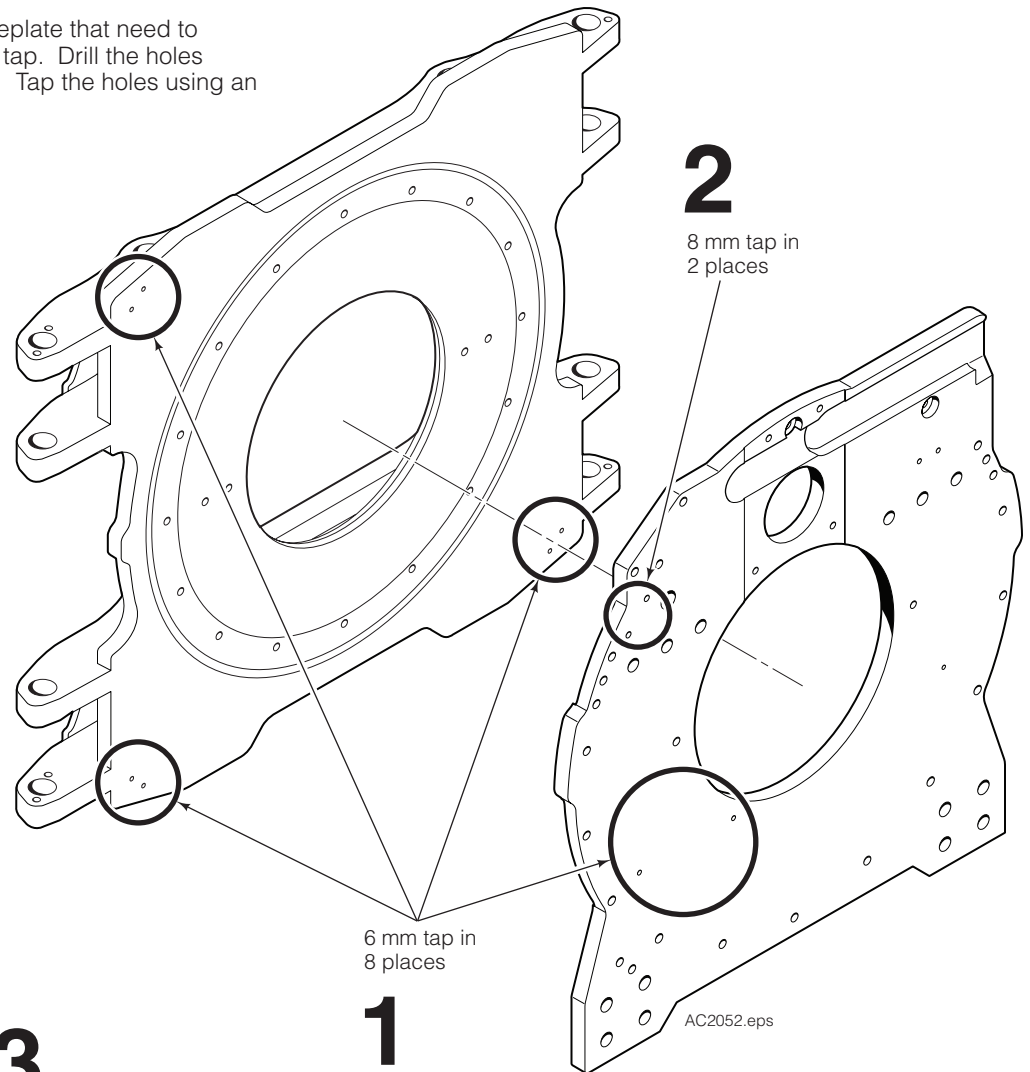
NOTES:

- 1** All cables are 2-conductor with Deutsch-type connectors.
- 2** Recommendations:
 - Electrical Power Relay preferred as a minimum for rotational control
 - Power Bus/Relay preferred for multiple accessories
- 3** For relay or power bus installation, refer to the following:
 - Relay Installation Instructions 6006270
 - Power Bus Installation Instructions 6019876



Installation (if required)

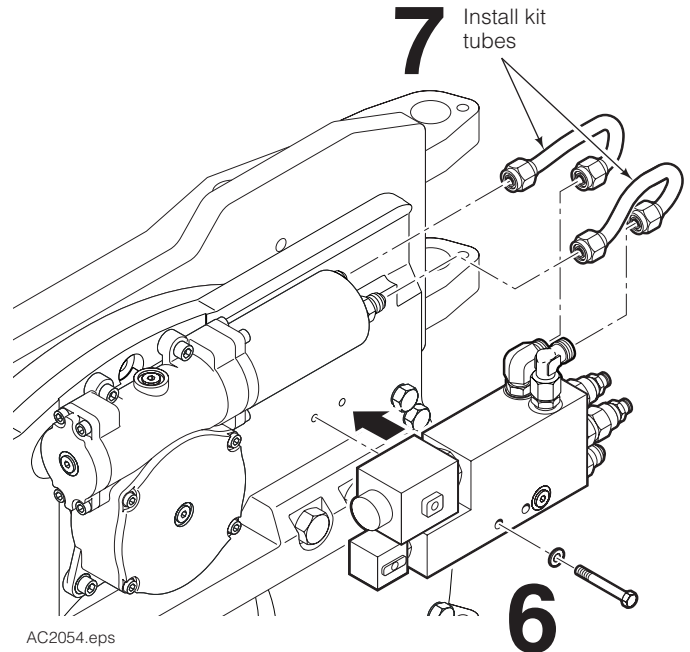
- 1 Locate the eight holes that need to be tapped with a 6 x 1.0 mm tap. Six holes are located in the faceplate and two holes are located in the baseplate. Drill the holes through using a 5.0 mm drill bit. Tap the holes using a 6 x 1.0 mm tap.
- 2 Locate the two holes in the baseplate that need to be tapped with an 8 x 1.25 mm tap. Drill the holes through using a 6.8 mm drill bit. Tap the holes using an 8 x 1.25 mm tap.



- 3 Disconnect the tubes that connect the motor to the valve.
- 4 Disconnect hydraulic hoses from the valve. Tag the hoses for reassembly.
- 5 Remove the two capscrews and washers fastening the check valve to the baseplate.

6 Install the new solenoid valve to the baseplate. Install the two capscrews and tighten to 6 ft.-lbs (8 Nm).

7 Install kit tubes, connecting the drive group to the solenoid valve.

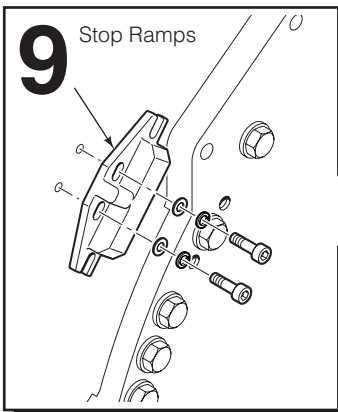
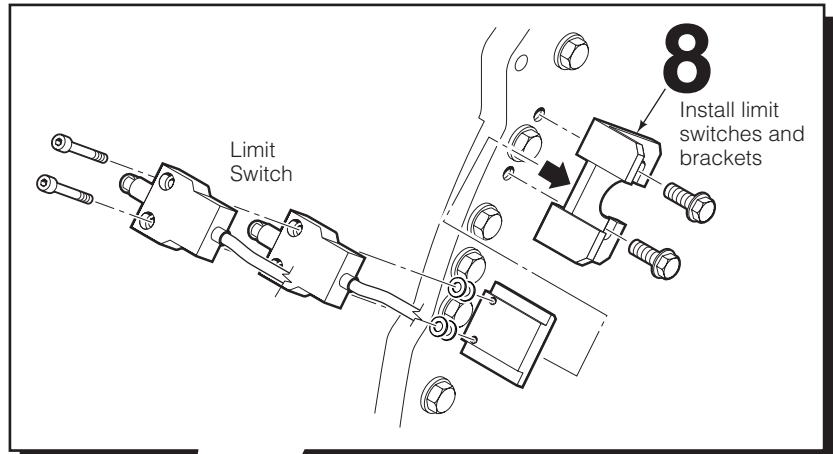


8 Install the limit switches and brackets to the baseplate. Apply loctite 242 (blue) to baseplate capscrews and tighten to 14 ft.-lbs. (19 Nm). Tighten limit switch capscrews to 3 ft.-lbs. (4 Nm).

NOTE: Center bracket with baseplate tapped holes.

9 Install the stop ramps to the faceplate. Apply loctite 242 (blue) to stop ramp capscrews and tighten to 3 ft.-bs. (4 Nm).

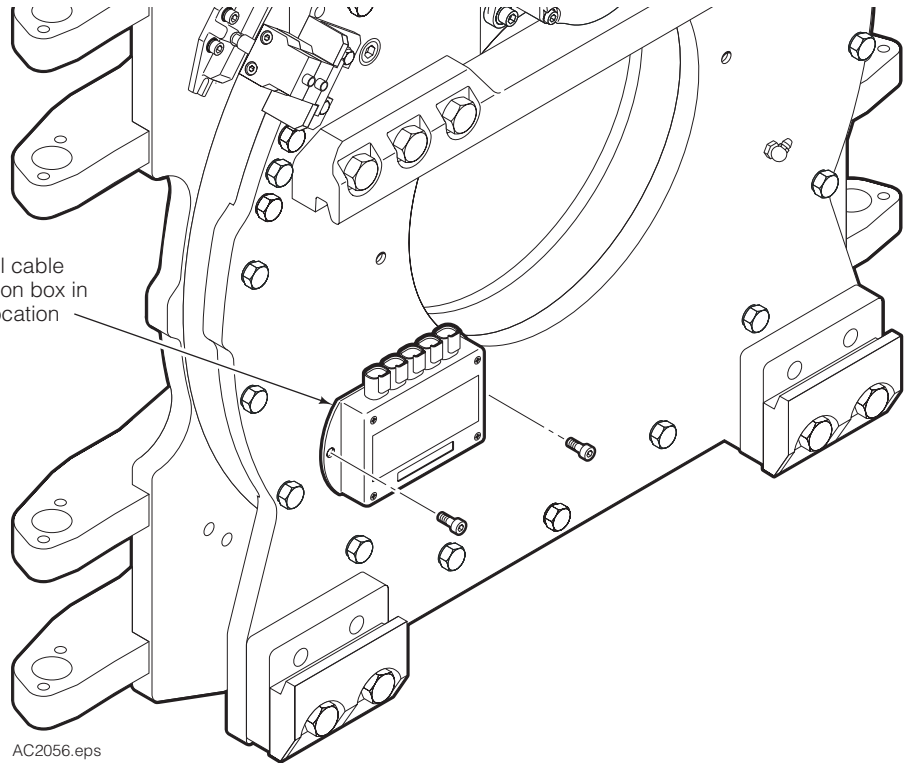
NOTE: Center ramp between capscrews.



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- 10** Install the cable junction box to baseplate. Apply Loctite 242 (blue) to capscrews and tighten to 3 ft.-lbs (4 Nm).

10 Install cable junction box in the location

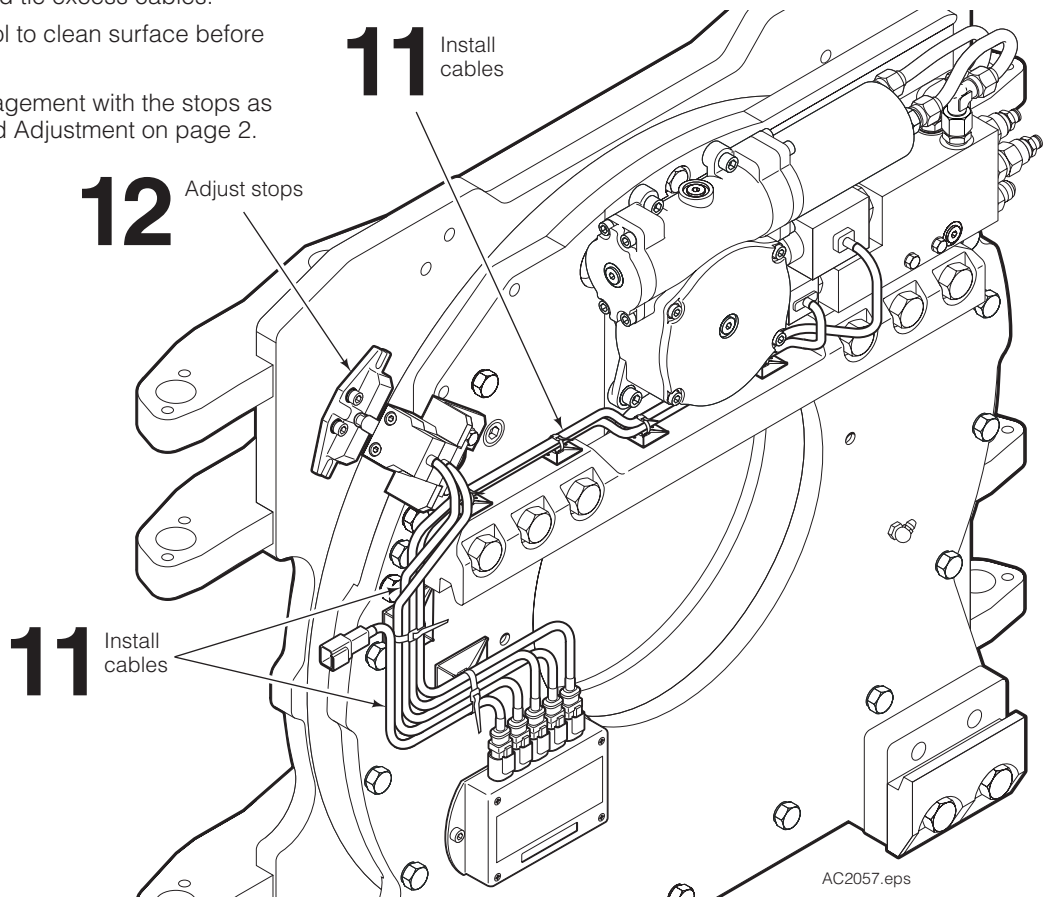


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- 11** Install the cables. Use extension cables (part no. 228720) as needed. Use the adhesive anchors and cable ties to secure the cabling. Coil and tie excess cables.

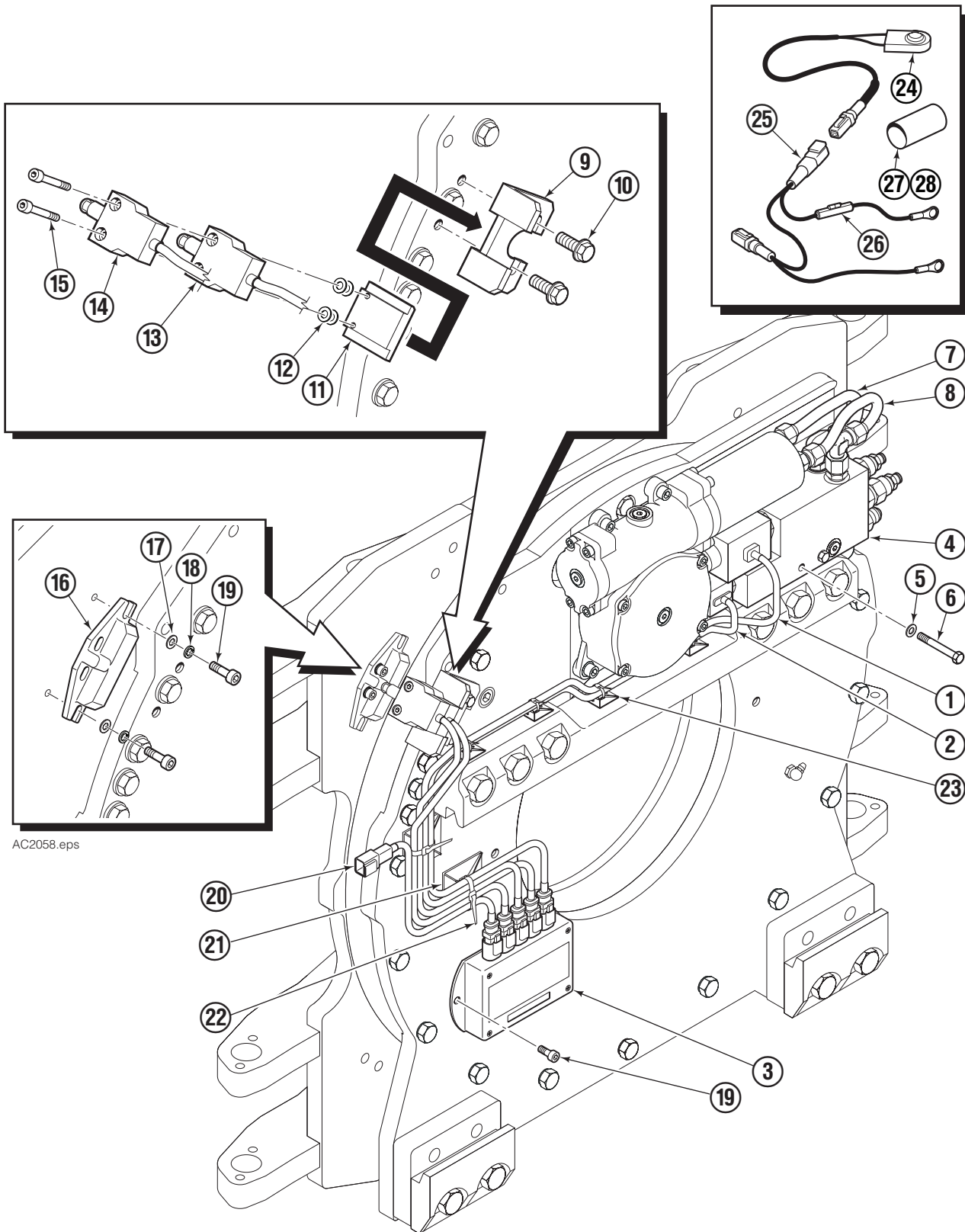
NOTE: Use rubbing alcohol to clean surface before applying anchor.

- 12** Adjust the limit switch engagement with the stops as described in Operation and Adjustment on page 2.



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Rotational Control Assembly



Rotational Control Assembly

REF	QTY	12V PART NO.	24V PART NO.	36V PART NO.	48V PART NO.	DESCRIPTION
		6812662	6812694	6812695	6812696	Rotational Control
1	1	6003161	6003162	6003163	6003164	Solenoid/Cable Assembly
2	1	6003169	6003170	6003171	6003172	Solenoid/Cable Assembly
3	1	227888	227890	227892	227894	Cable Junction Box

Common Components

REF	QTY	PART NO.	DESCRIPTION
4	1	6810783	Valve Assembly without Coils
5	2	206323	Washer, M6 ◆
6	2	768518	Capscrew, M6 x 65 ◆
7	1	6811025	Tube
8	1	6811027	Tube
9	1	222021	Switch Mounting Bracket
10	2	6002668	Capscrew, M8 x 20
11	1	6812366	Switch Mounting Plate
12	1	222024	Switch/ Cable Assembly
13	1	222256	Switch/ Cable Assembly
14	2	768784	Capscrew, M5 x 20
15	4	6406223	Washer, M5
16	3	6812325	ERC Ramp
17	6	202346	Washer, M6
18	6	206323	Lockwasher, M6
19	8	761170	Capscrew, M6 x 20
20	1	222023	Power Wire Harness
21	2	6002451	Cable Tie Anchor
22	6	6002479	Cable Tie
23	2	6002501	Cable Tie Anchor
24	1	6001663	Switch Assembly
25	1	6001647	Wire Harness, 12V
	1	6811468	Wire Harness, 24V and up
26	1	6806708	Fuse, 5A ■
	1	6806701	Fuse, 2A ●
27	1	6001641	Shrink Tubing, 25 mm dia.
28	1	221728	Shrink Tubing, 50 mm dia.
▲	2	228720	Extension Cable

◆ Not included in kits.

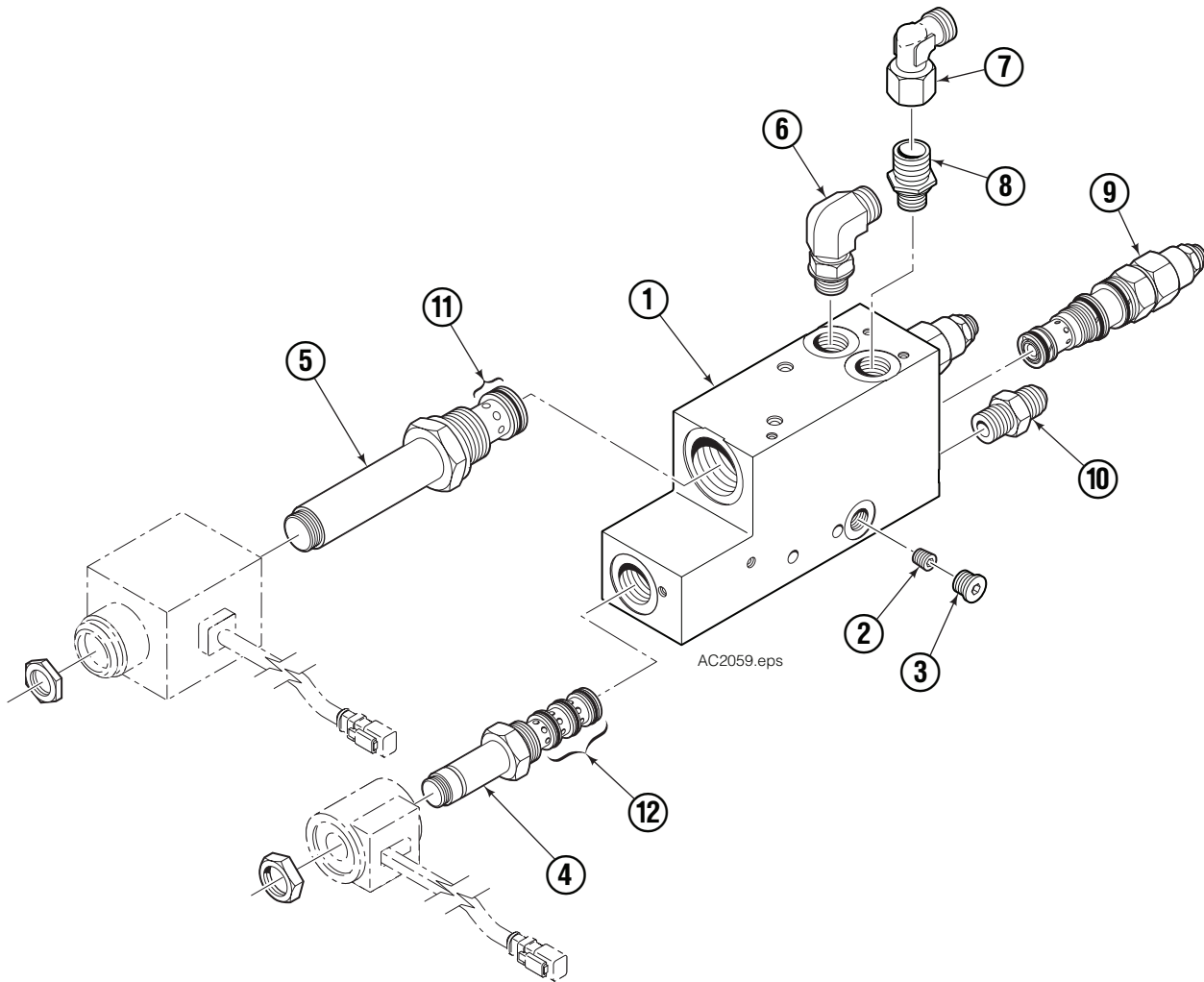
■ Included with Wire Harness 6001647.

● Included with Wire Harness 6811468.

▲ Not shown.

Reference: Common Components Group 6812663, 6001012, 6811471.

Valve Assembly



REF	QTY	PART NO.	DESCRIPTION
		6810783	Valve Assembly
1	1	6810782	Valve Body
2	1	220641	Orifice, .065
3	1	663694	Plug
4	1	220627	Solenoid Valve
5	1	221722	Solenoid Valve
6	1	6091175	Fitting, M10 In Series
7	1	6036744	Fitting, E0-2 #10
8	1	778100	Fitting, 6 SAE - M10 L Series
9	2	6033173	Cartridge
10	2	604511	Fitting, 6
11	1	6031791	Service Kit
12	1	221049	Service Kit