Model: PC3000/ PC4000 Serial #: See Units Affected Section	December 14, 2012
Product Bulletin # 23	

PC3000/PC4000 Case Flush Relief Valve

The current hydraulic design for the PC3000/PC4000 Catwalk utilizes a vent-to-atmosphere relief valve on the winch motor case flush line in the event of motor seal failure. However, when the winch brake releases, this design allows the sudden flow of fluid to cause the oil to travel back through the motor case and out to atmosphere via the relief valve rather than back to tank via the return line. The following solution is recommended to prevent oil from venting during normal operation.

Recommended Action Overview

- To prevent venting to atmosphere, remove the relief valve and vent hose and seal the cavity with H10110 and H15-090109A-08. This will not affect the normal operation of the Catwalk. In the event that the seal integrity of the hydraulic motor needs to be tested, put a gauge on the flush line test port. If the pressure is 70 psi or greater, there may be a leak in the seal, causing power loss to the winch.
- To prevent the back flow of oil from the brake release through the case, but maintain a shared return line, install a check valve between the case flush port on the motor and the return line tee intersection.

Units Affected

PC3000	1040 through 1160
	300158 through 300360
PC4000	1001 through 1043
	400044 through 400059

Parts Kit

Order the parts required for the modification as kit AY50995. Refer to Figure 1-1. Contact RigLine 24/7™ Support to order the upgrade kit.

Table 1-1: Parts Kit AY50995

QTY	Part Number	Description
1	H11868	VLV, CHECK, MALE 3/4 ORB, MALE 3/4 JIC
1	H15-070433-12	TEE, FEM, SWV BRANCH, MALE 3/4 JIC
1	H10110	PLUG, CAVITY, T-10A, ALL PORTS OPEN
1	H15-090109A-08	PLUG, HEX HD, 1/2 ORB

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Installation

1. The catwalk ramp can be in the up or down position for installation, but the up position will provide easier access.
2. Ensure that the catwalk is completely powered down and locked out.
3. Prepare the area for any hydraulic oil that may spill during the component change.

Caution!

There is potential for the hydraulic oil between components to remain at pressure even when the unit has been turned off. This procedure should only be performed by a Canrig-certified Power catwalk Technician.

Note: Refer to the product manual included with the catwalk for product-specific schematics.

4. Remove the Adapter and Tee fitting. Refer to Figure 1 and Figure 5 on page 5.

Figure 1: Adapter and Tee Fitting

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5. Replace with check valve H11868 and tee fitting H15-070433-12. Refer to Figure 2 and Figure 5 on page 5.

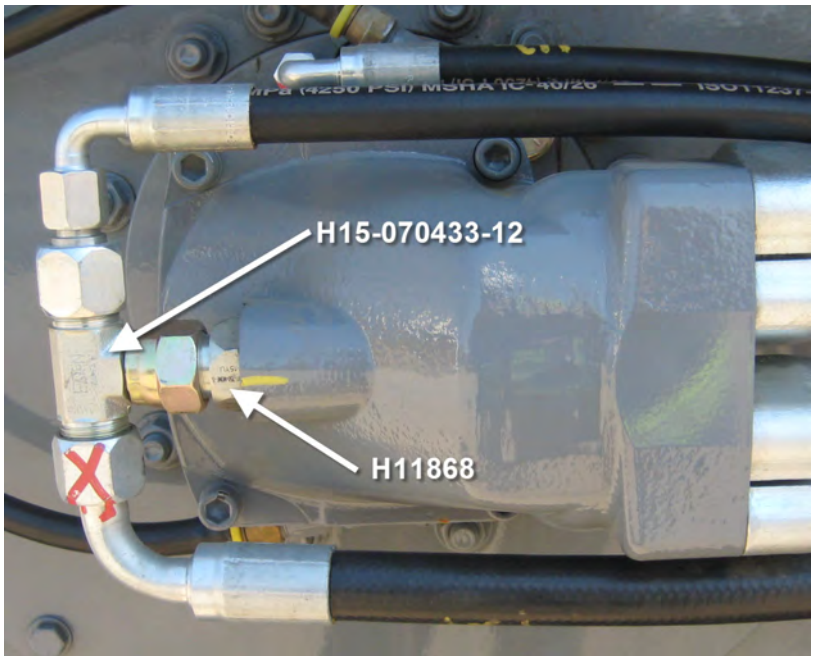

Figure 2: Check Valve and Tee Fitting

6. Remove the relief valve from the manifold and replace it with a plug (part # H10110). Refer to Figure 3 on page 4, Figure 4 on page 4, and Figure 5 on page 5.
7. Remove the vent-to-atmosphere hose and its adapter from the manifold and replace it with a plug (part # H15-090109A-08). Refer to Figure 3 on page 4, Figure 4 on page 4, and Figure 5 on page 5.
8. After the modification has been completed, reconnect power, establish pressure in the system and check for leaks.
9. Manually test each function to ensure proper installation.

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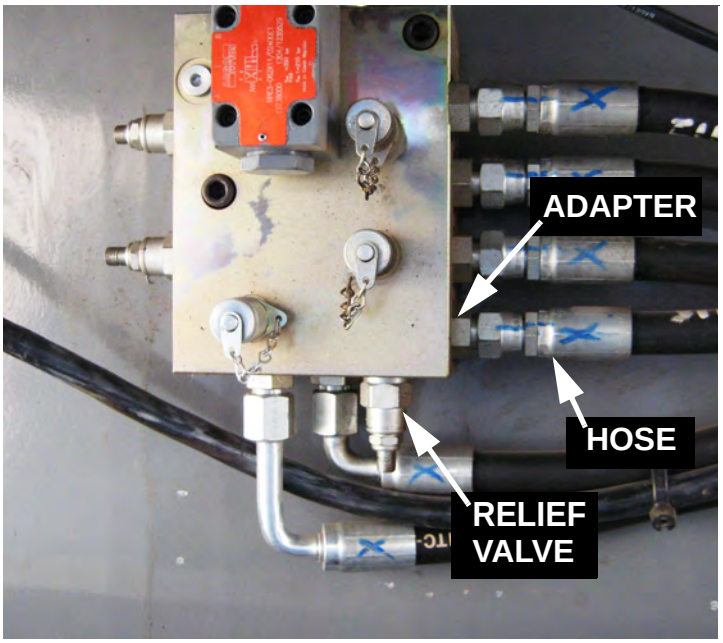

Figure 3: Manifold with Relief Valve and Vent Hose

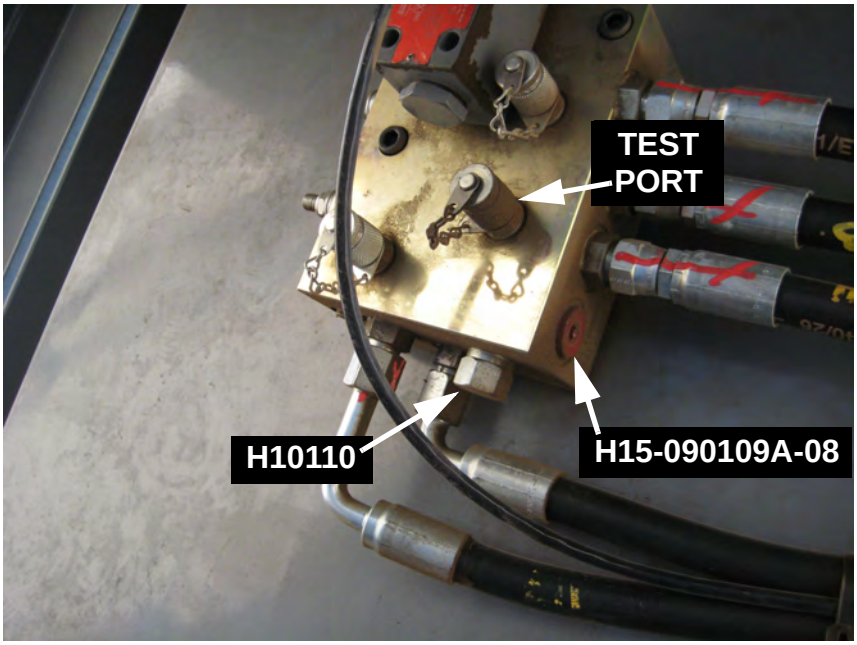

Figure 4: Manifold with Plugs Installed

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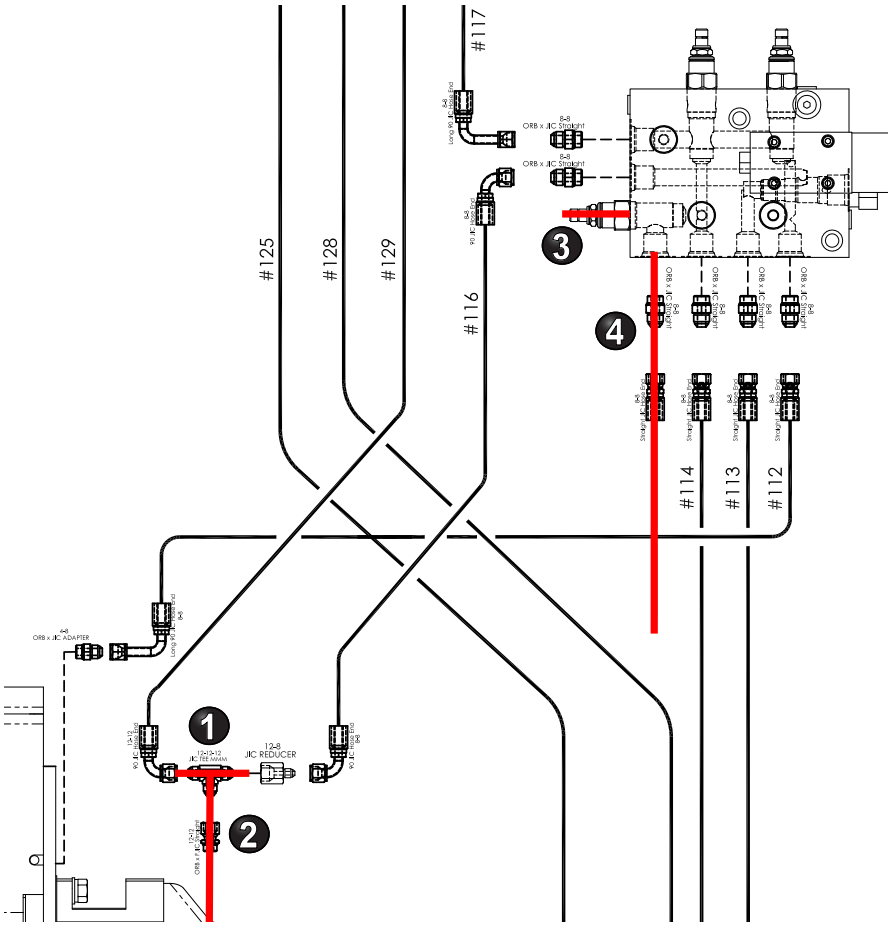
Schematic

The following is a detail view of the affected area on Ramp Plumbing Schematic 183100003. (Refer to 183100009 for the PC4000 schematic.)



Item	Original	Replacement
1.	Tee	Tee (H15-070433-12)
2.	Fitting	Check Valve (H11868)
3.	Relief Valve	Plug (H10110)
4.	Vent Connector and Hose	Plug (H15-090109A-08)

Figure 5: Hydraulic Schematic Section.

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