



Model: See Affected Systems

Serial #: N/A

May 27, 2020

Product Bulletin # TDS-218

**Alert**



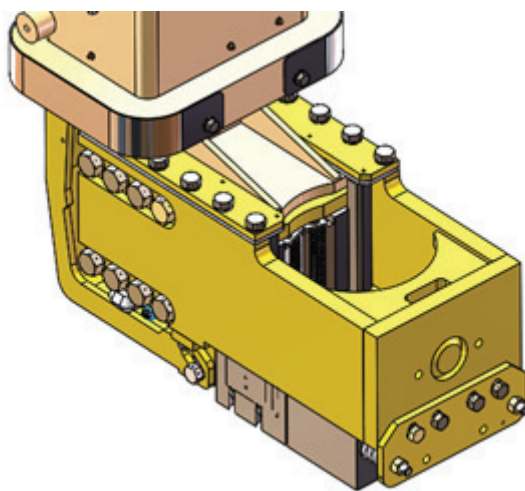
## Back-up Wrench Gripper Unintended Movement

### Issue

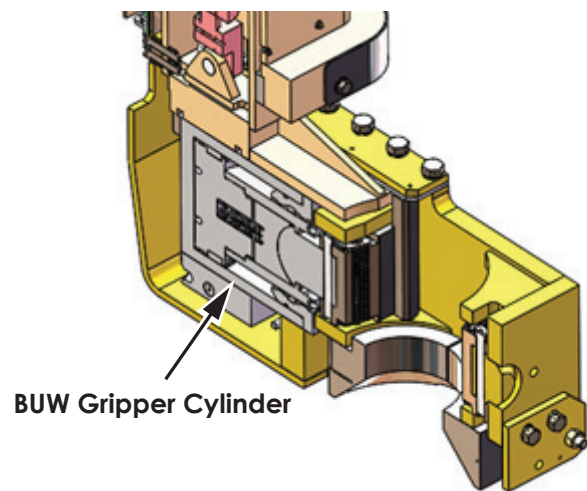
Canrig has been made aware of incidents involving the following unintended movement of the Back-up Wrench (BUW) gripper:

- Unintended closure of the BUW gripper due to back pressure in the hydraulic manifold when using other hydraulic function of top drive that use a large volume of hydraulic fluid such as Pipe handler, torque boost, etc.
- Premature closure of the BUW gripper due to a failed pressure reducing valve.
- Failure to release the gripper due to the low incorrect pressure setting in the pressure reducing valve.

The issues related to the pressure reducing valve only affect top drives with the CDS integration.



**BUW Gripper Assembly**



**BUW Gripper Assembly Section View**

Figure 1: BUW Gripper Assembly



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<b>Alert</b>	

## Affected Systems

Canrig top drives models C275 through C750.

## Recommendation

- If you have experienced this situation contact RIGLINE 24/7™.
- Until the recommended action has been taken, be mindful of this potential movement when using hydraulic functions that use a large volume of hydraulic fluid such as the link tilt, BUW positioner, hydraulic powered lube cooler, or torque boost.
- If the handler rotate lock is not engaged, an unintended extension of the BUW gripper could cause the elevator links to swing. Keep personnel clear of the elevator link swing radius.
- To prevent this situation, remove the pressure reducing valve on station "L" (BUW gripper) of the top drive hydraulic manifold and install the check valve. Contact RIGLINE 24/7™ to order the kit (Canrig P/N: AY25154) and refer to section below "Check Valve Installation" on page 5. See Figure 2 on page 3 for schematic included with check valve stack attached to top drive hydraulic manifold.
- If the kit (Canrig P/N: AY25154) is not being implemented per above, Canrig strongly recommends to remove the pressure reducing sandwich valve and install the BUW solenoid valve (DCV) back on manifold using socket head fasteners (Canrig P/N: SH-10-24-0200). See Figure 3 on page 4 for schematic.
- After removing the 750 psi pressure reducing sandwich valve, ensure the pressure reducing valve cartridge located at the 20L port on the hydraulic manifold is set to 2,000 psi.



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**Note:** Removing the pressure reducing valve will hinder the use of the integrated CDS tool. An additional kit is required to use the CDS tool. Refer to the Canrig product bulletin CDS-001 for further information on the kit required and installation procedure for using integrated CDS tool.

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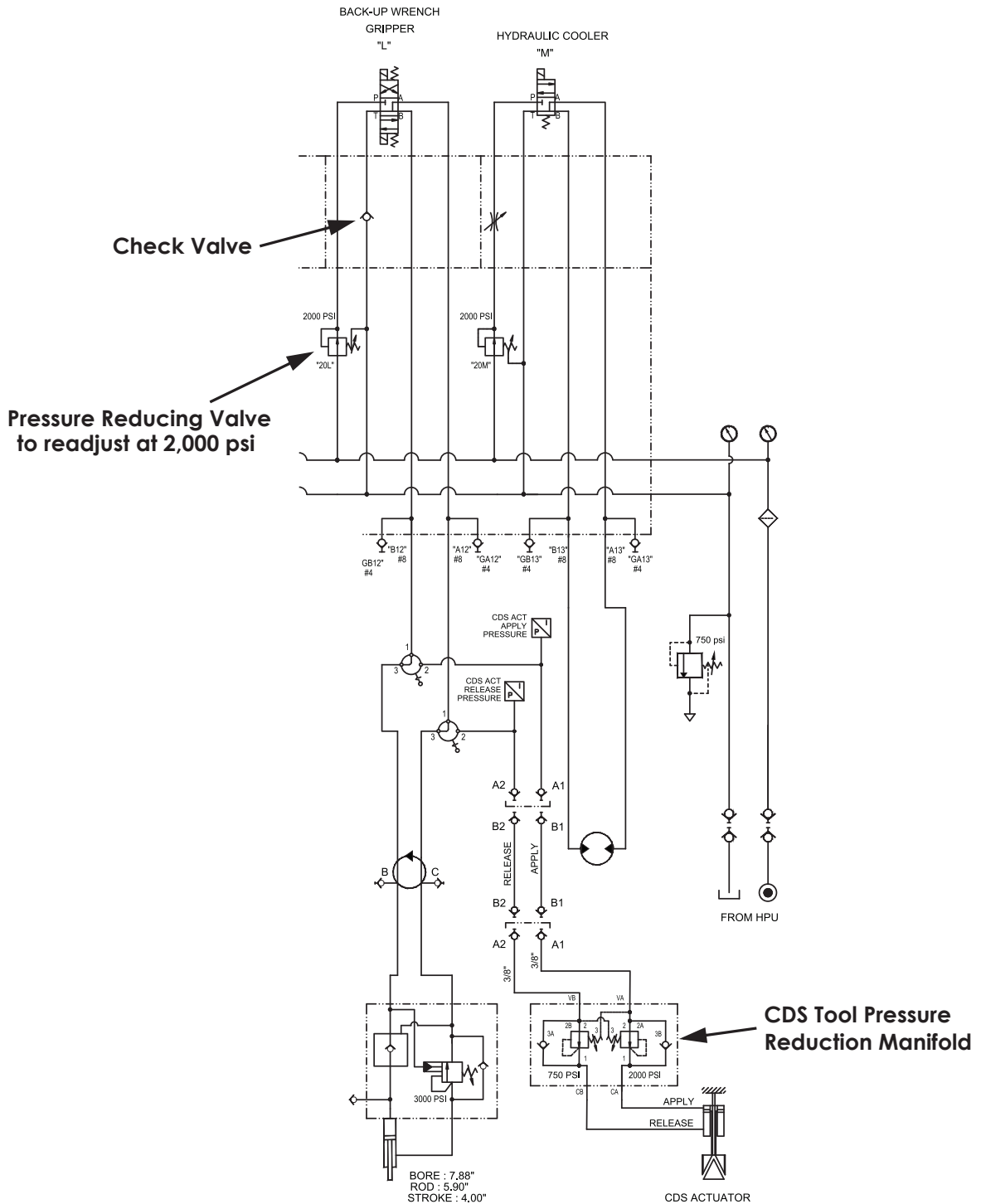


Figure 2: Schematic for the BUW after removing the pressure reducing valve with check valve

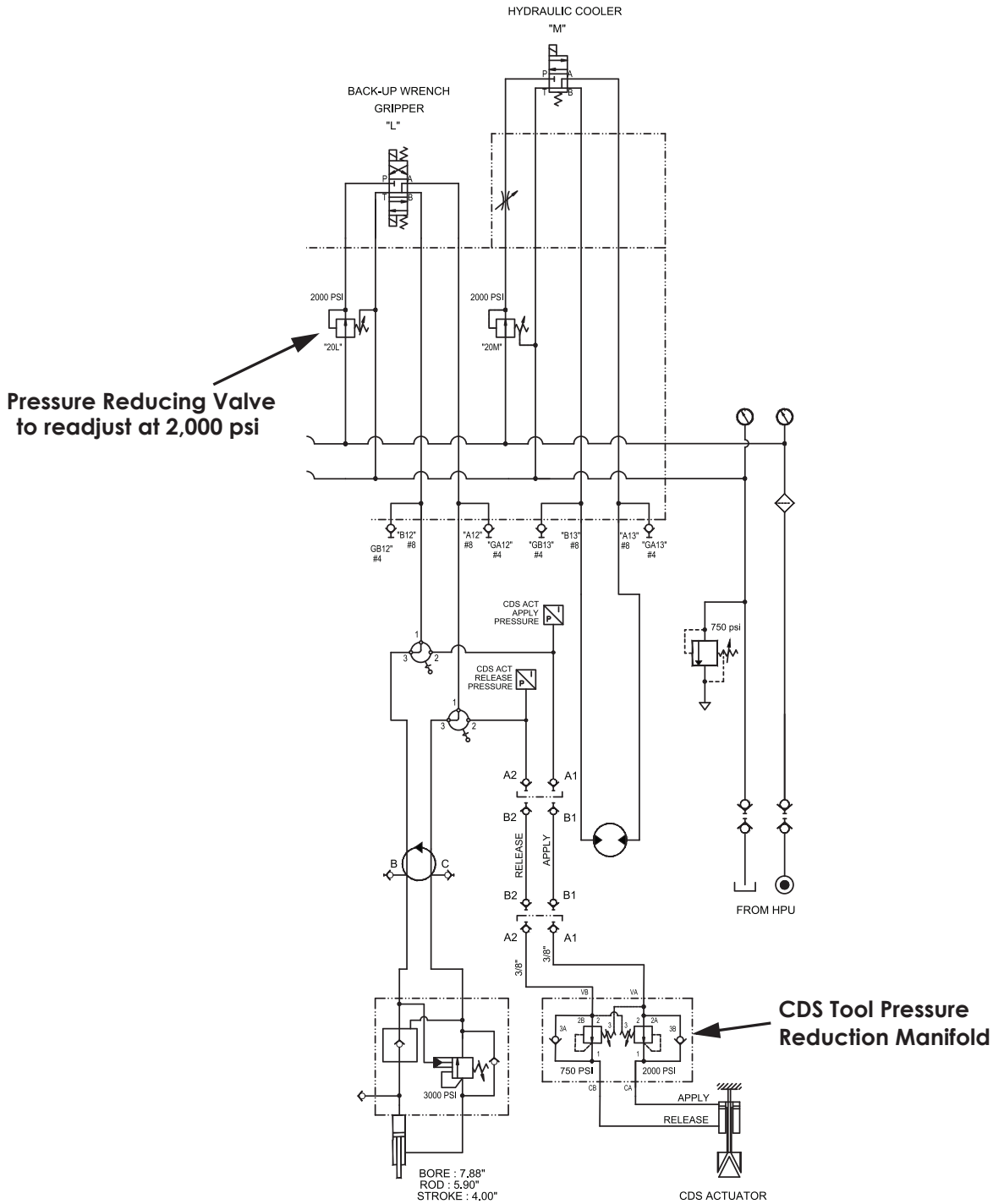


Figure 3: Schematic for the BUW after removing the pressure reducing valve without check valve



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## Check Valve Installation

**Table 1: Check Valve Installation Kit (P/N: AY25154)**

Canrig P/N	Description
H07-1010-030	VLV, HYD, CHECK, SANDWICH, D03, CARTRIDGE
SH-10-24-0375	CAPSCR, HEX SOC HD, #10-24UNC x 3.75

1. See Figure 4 to locate the BUW gripper valve bank (station L) on the top drive hydraulic manifold.

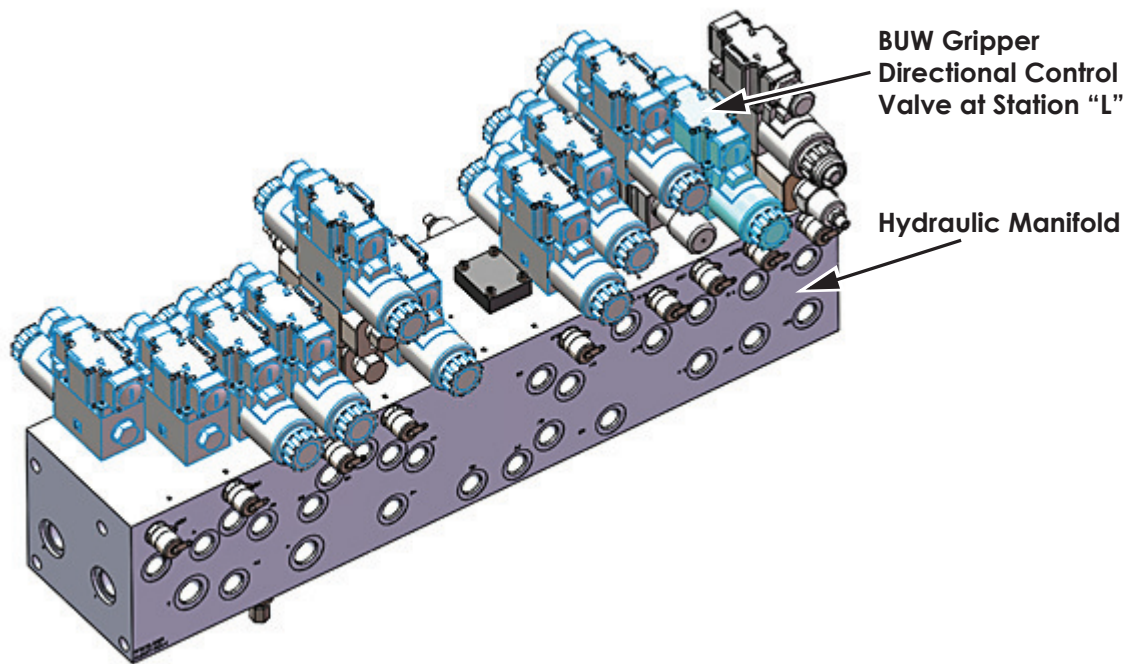


Figure 4: Hydraulic manifold

<b>Alert</b>
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- Unscrew the fasteners to remove the pressure reducing valve (PRV) as shown in Figure 5. If the check valve is not available then install the BUW valve bank using the socket head fasteners (Carrig P/N: SH-10-24-0200).

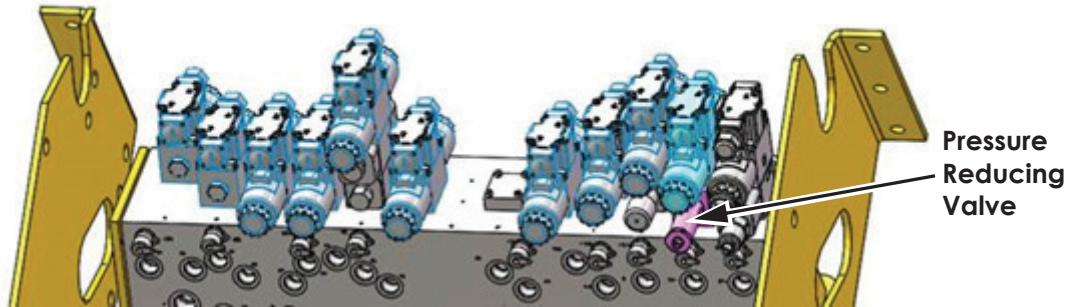


Figure 5: Pressure reducing valve

- Using the fasteners from the kit, install the check valve assembly (P/N: H07-1010-030) between the BUW gripper DCV and the hydraulic manifold as shown in Figure 6. Torque the fasteners to 6.5 ft-lbs using Loctite<sup>®</sup> 242.

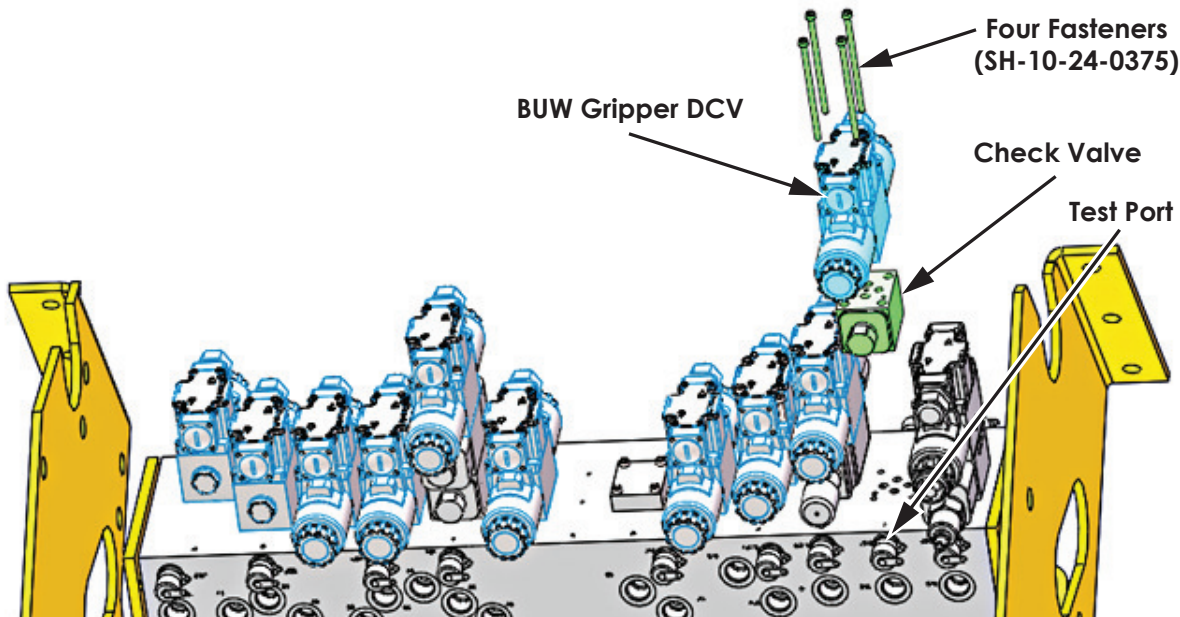


Figure 6: Installing check valve



**Warning!** Check valve knob must be oriented toward the hydraulic manifold test port as shown in Figure 5.