



Service Bulletin 011-7210

Relief valves prevent damage to wrist motor slip ring housing

Compliance:
Mandatory*

ISSUE DATE:

April 23, 2008

AFFECTED PRODUCTS

Rate-controlled Slave Arms (RigMaster, Conan 7R, Orion 4R and 7R models) and Hydraulic Pan & Tilt Units

AFFECTED COMPONENT

All Wrist Motor Assemblies

SERVICE ISSUE

Over pressurization of the Jaw Close 5B circuit/tilt circuit inside the wrist motor may cause the slip ring housing to fracture and allow hydraulic fluid to flow directly into the wrist case drain (hydraulic return). Properly installed over-pressure relief valves will prevent this from occurring.

Without relief valves, housing fractures may occur when the pressure in the cylinder exceeds 5000 psi. This typically occurs when the jaw or tilt assembly is involved in a collision and the piston is forced open. An typical fracture is shown at right (arrow).



Slip-ring housings manufactured after March 10, 2008 have been strengthened in the critical area, but relief valves are still recommended.

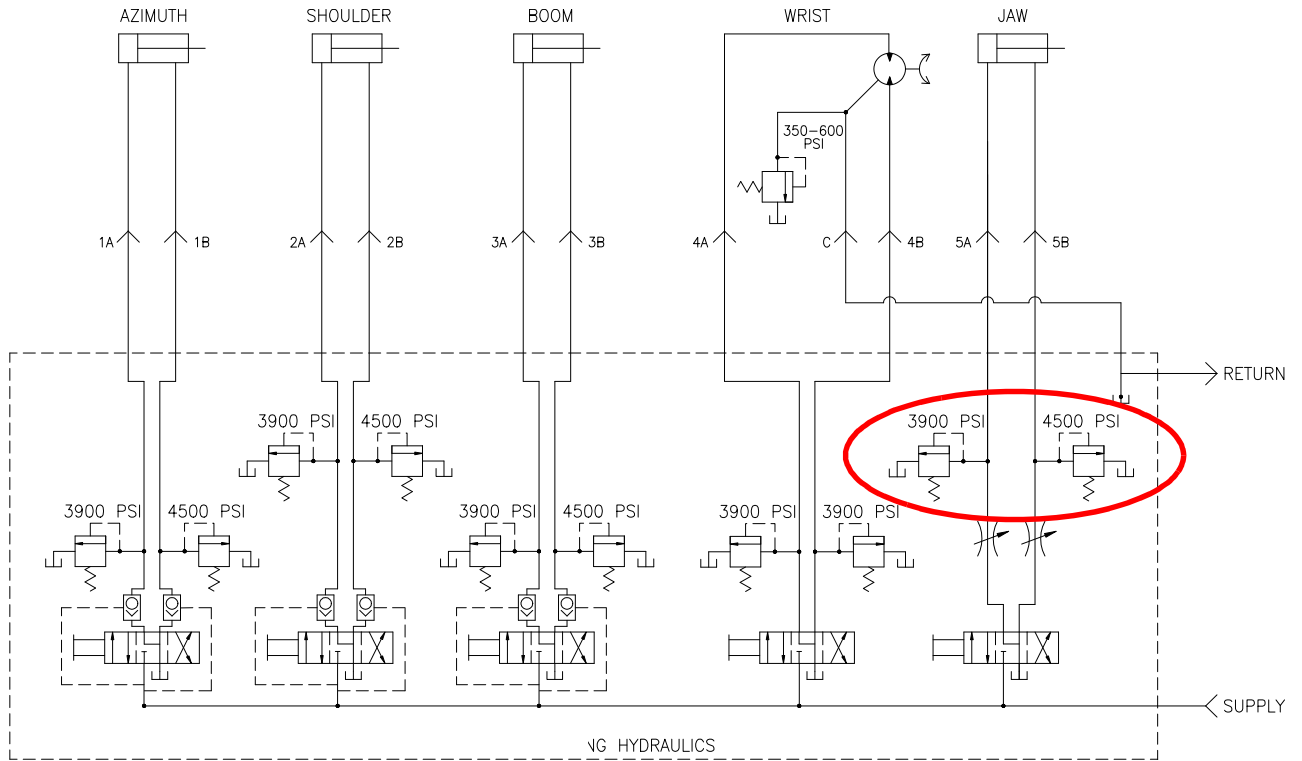
FIELD ACTION

To prevent an over-pressure event, a relief valve must be installed on each hydraulic circuit including the jaw/tilt function (see sample RigMaster and Pan & Tilt schematics on following page). Verify that all rate slave arms and pan & tilt units have properly positioned and adjusted over-pressure relief valves installed for all functions.

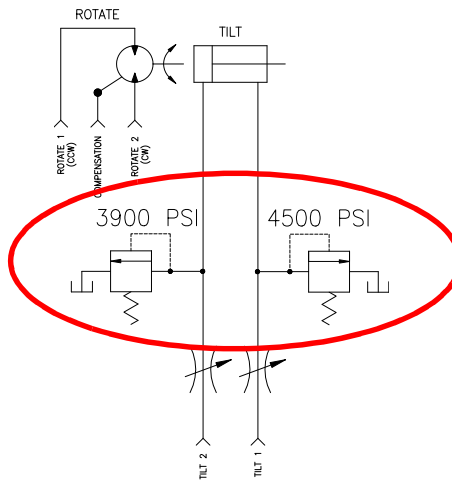
If a circuit has an adjustable flow control valve (throttle valve), as shown in the RigMaster jaw and Pan & Tilt tilt schematics, the relief valve must be located between the actuator and the flow control valve.

*BULLETIN COMPLIANCE LEVELS	
MANDATORY	Field action is MANDATORY to ensure personnel safety, equipment functionality, and/or continuation of warranty coverage.
RECOMMENDED	Field action is not required but is highly RECOMMENDED and will result in significantly increased levels of personnel safety and/or equipment functionality.
OPTIONAL	Field action may be useful under certain circumstances. Compliance is OPTIONAL and left to the discretion of the owner/operator.
ADVISORY	Bulletin contains advisory information to assist the owner/operator in more effective operation or service of the product. Compliance is not rated.

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RigMaster



Pan & Tilt

Figure 1 Placement and adjustment of over-pressure relief valves