

Technical Bulletin

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Tesco Corporation
6204 – 6A Street SE
Calgary, AB. T2H 2B7
Phone: (403) 692 5700
www.tescocorp.com



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Description: 6 Ton Single Joint Elevator Load Latch Inspection and Repair

BACKGROUND INFORMATION:

The 6 ton single joint elevator uses a spring loaded load latch to lock the elevator from opening when hoisting. The load latch is engaged by the weight of the tubular being hoisted through contact with the bottom face of the casing coupler. Typically, the 6 ton single joint elevator is operated remotely with the TESCO Casing Drive System™ (CDS™).

In some cases, the load latch has been found to malfunction; either it does not fully engage or it does not fully disengage. This bulletin provides a procedure to identify this condition and repairs to alleviate it.

AFFECTED PRODUCT:

All 6 ton single joint elevators (TESCO part # 610091).

ACTION REQUIRED:

Problematic units will be identified by closing the elevator hydraulically and operating the load latch manually (note that it takes approximately 200 lbs to engage the load latch). Any elevator with a load latch that does not fully engage under load or does not fully disengage without being assisted should be addressed and repaired.

Burrs on the edge of the left body half have been found to impede proper function of the load latch. Visually inspect the edge of the body half for any burrs or minor damage; see Figure 1 for clarification. If burrs or minor damage are present, repair by blending them out with a flapper wheel. For any damage considered not minor, contact the local TESCO Sales and Service Representative before proceeding.

Another cause of this problem has been attributed to the protrusion of the load latch past the left body half near the main hinge pin as shown in Figure 2. When the elevator is closed, this results in an interference between the load latch and the right body half which impedes the free operation of the load latch. If this is the case, measure the amount of the protrusion as shown in Figure 3 by using a vernier depth gauge and as a repair, mill the protrusion distance plus 0.030" (0.76 mm) off of the face of the load latch. As an example, if the protrusion was measured to be 0.015" (0.38 mm), then 0.045" (1.14 mm) should be machined off of the load latch. Use Figure 4 to communicate the required repair. Contact the local TESCO Sales and Service Representative before proceeding if measured protrusion distance exceeds 0.120" (3.05 mm).

For all repairs, refer to drawing 610091 for elevator disassembly instructions.

If the load latch still fails to operate functionally after inspecting the trouble points listed above, contact the local TESCO Sales and Service Representative for further guidance.

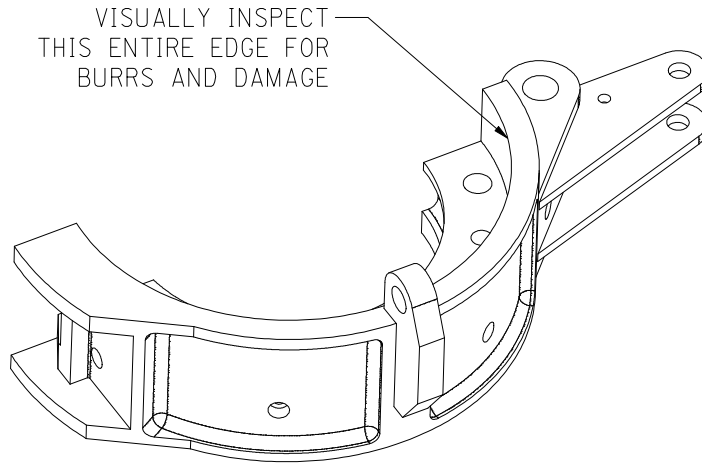


Figure 1, Left Body Half Inspection

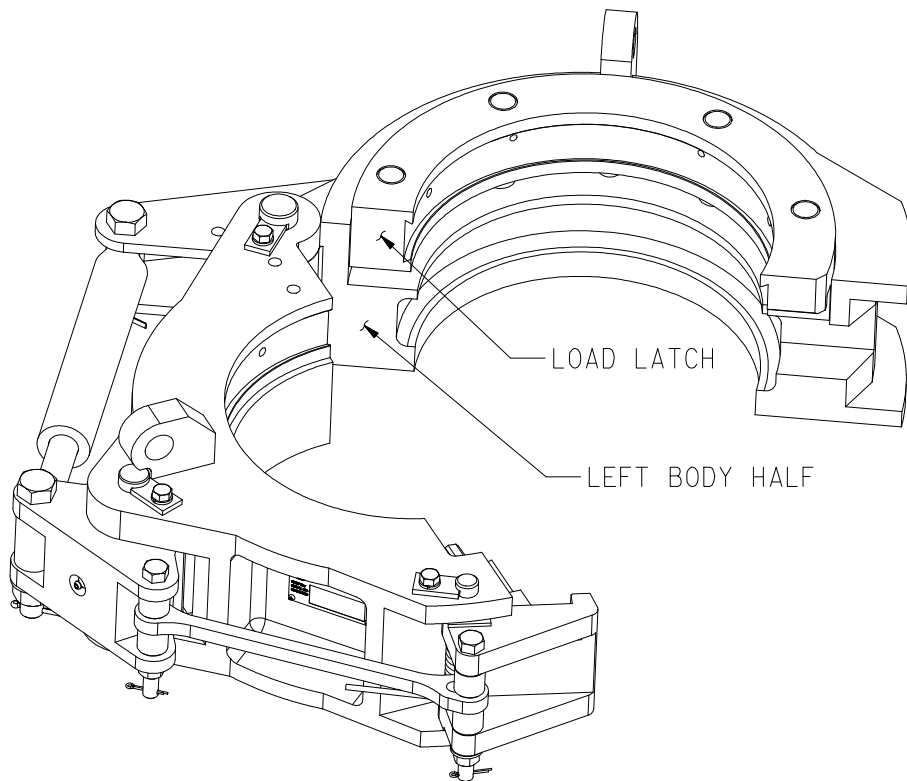


Figure 2. Load Latch and Left Body Half Identification

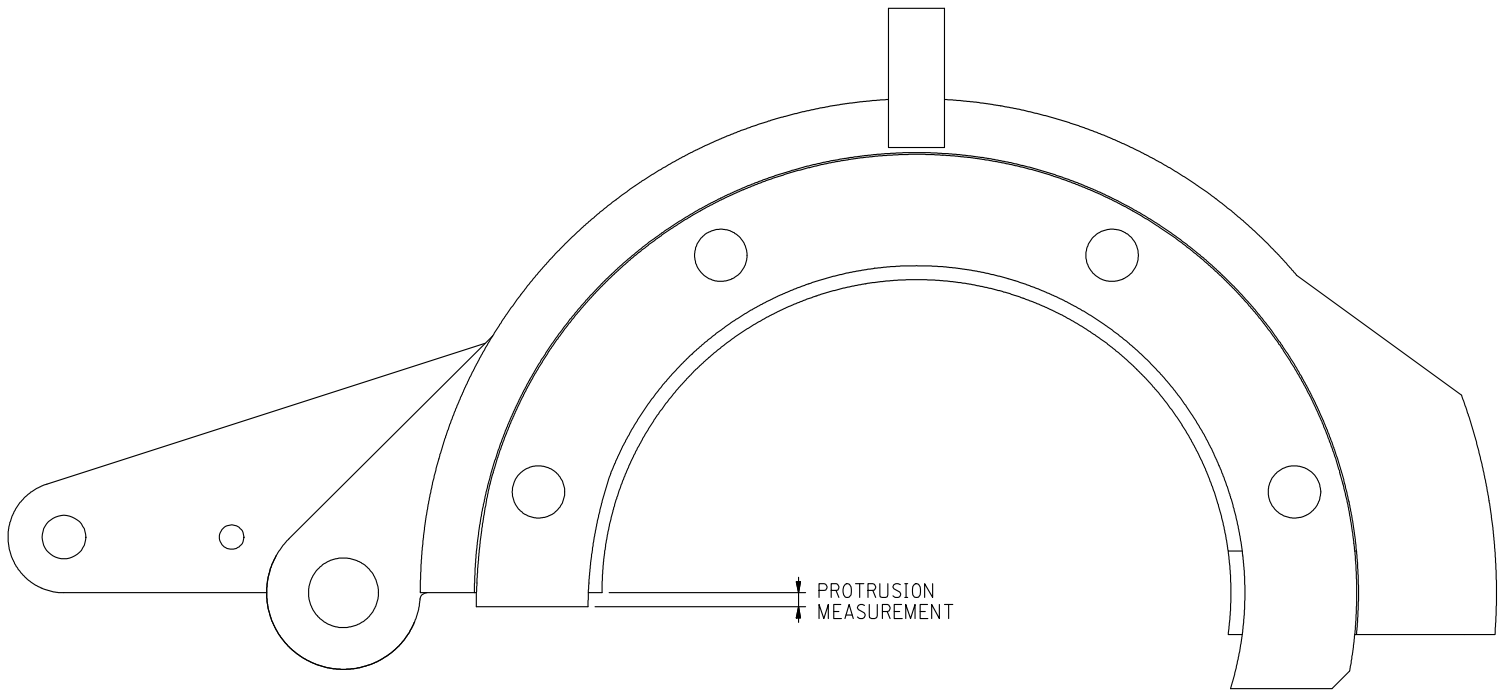


Figure 3, Load Latch Protrusion Measurement (Exaggerated)

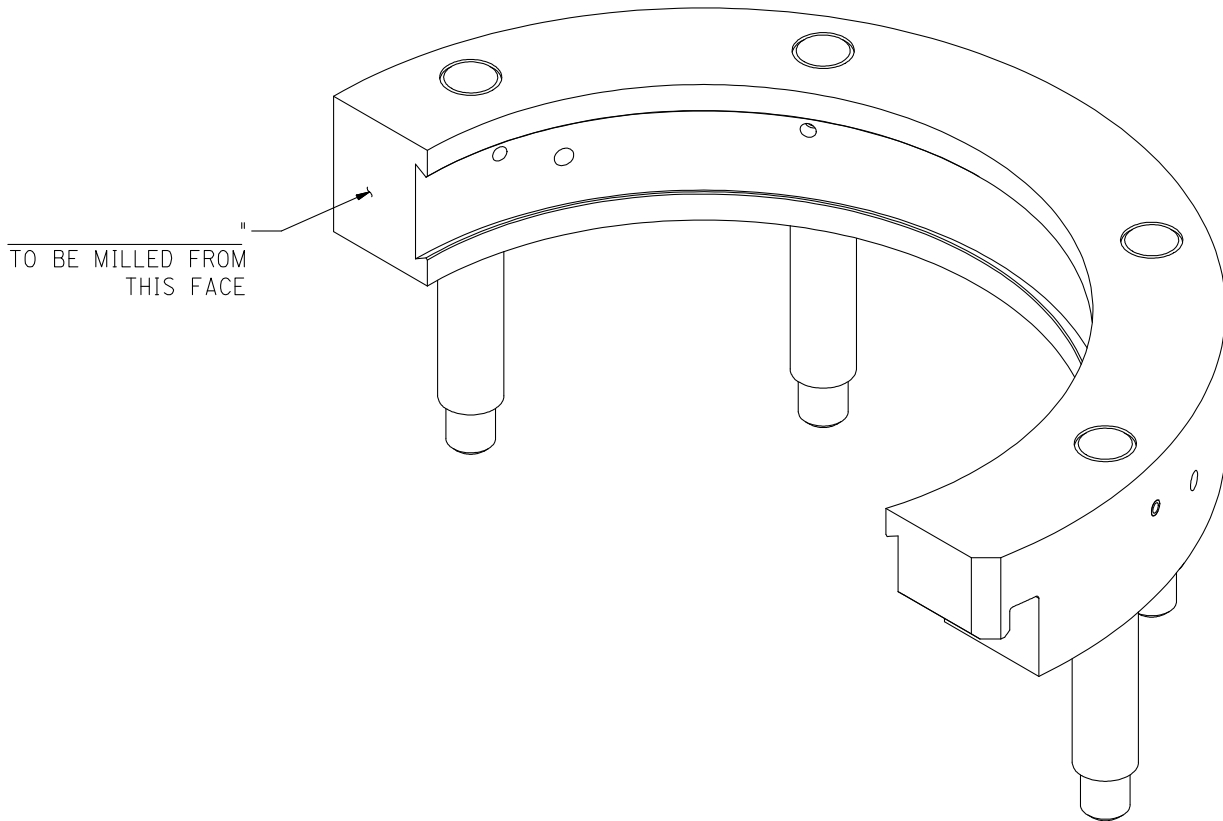


Figure 4, Generic Machining Instruction For Load Latch

Contact your local TESCO Parts and Service Center for further information regarding this bulletin and or supply of affected components noted above.