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## SERVICE BULLETIN

### TL MEWPs – Main Lift Cylinder Relief Valve

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<b>Applicable Vehicles:</b>	Redmond Gary TL14M, TL14MSL and TL17M MEWPs
<b>Issue Date:</b>	06 March 2020
<b>Overview:</b>	This procedure outlines the actions required to correctly fix the HAWE installed relief valve on the lift cylinder section where it will limit the maximum boom up pressure to 100bar.

*Ensure all of this work is carried out in a safe working environment. All work is to be carried out by a competent tradesperson.*

<b>Parts &amp; Equipment Required:</b>	Safety Glasses & relevant PPE Standard hydraulic fitter's tools: <ul style="list-style-type: none"> <li>- Spanner set</li> <li>- Allen Key set</li> <li>- Small bucket or container</li> <li>- Rags</li> <li>- Torch (if required)</li> <li>- Side cutters (if required)</li> <li>- Zip-ties, etc. (if required)</li> </ul>
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*Please read and understand the following instructions prior to start work.*

### 1 Introduction

The relief (shock) valve block fitted to the main lift cylinder section of the HAWE valve has been supplied with it installed incorrectly. The relief valve should allow full 200bar pressure on the Boom Up function and limit the pressure on the Boom Down function to 100bar. Due to the way it is fitted, the pressure on boom up is restricted to 100bar, effectively limiting the maximum load capable of being lifted when using this cylinder. Typically, this is only noticeable in specific scenarios when operating with the booms at full extension.

## 2 Identifying relief valve block fitment

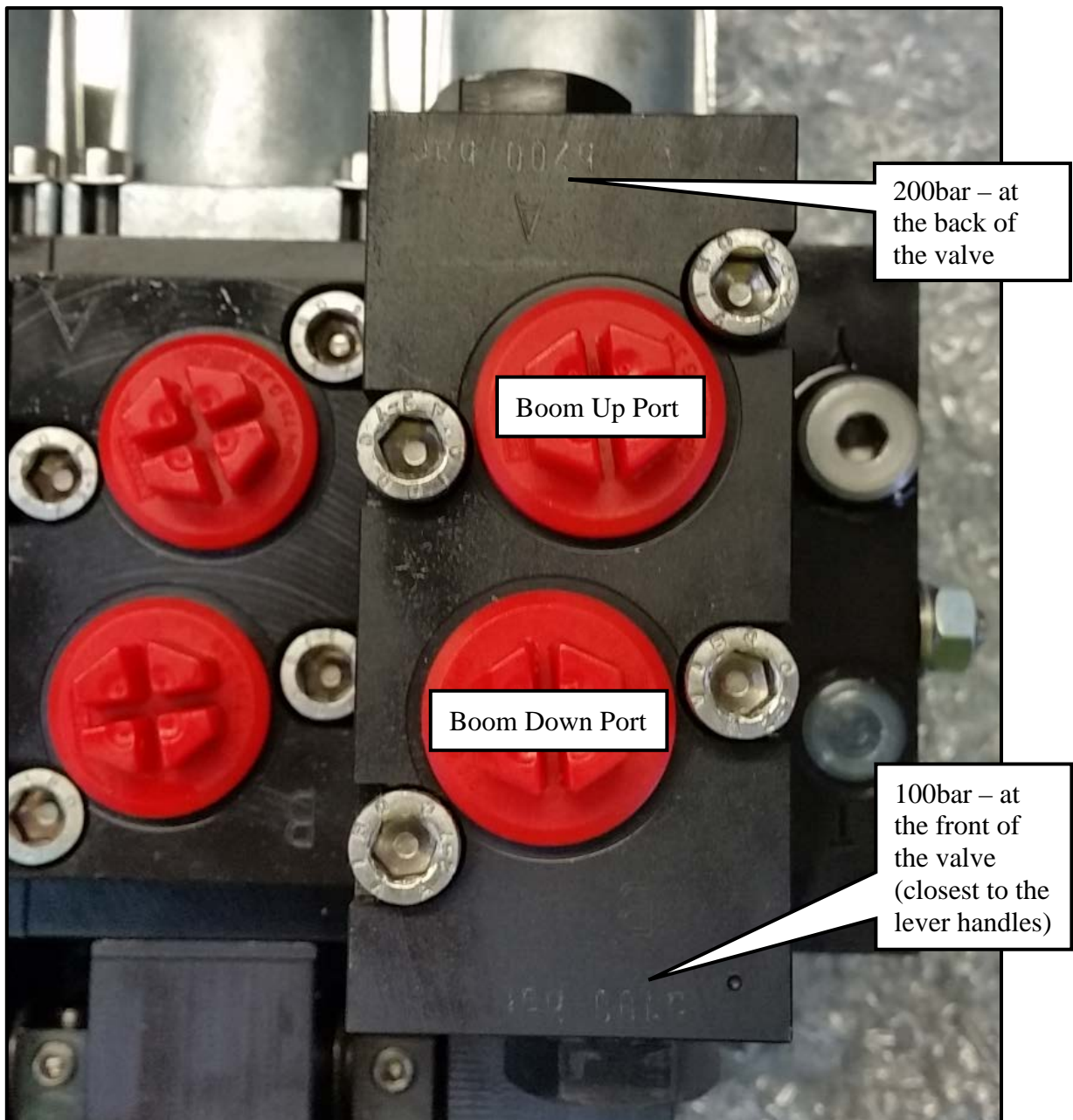


Figure 1: Turret Manual Controls station on MEWP deck



Figure 2: Location of HAWE 5-section valve bank, with relief valve block highlighted

The HAWE valve bank is located in the turret behind the Manual Controls cover – see Figure 1. The relief valve block is fitted on the left section of the 5-section valve, as highlighted in Figure 2. The two hoses for the lift cylinder (Boom Up/Down functions) connect to the bottom of the relief valve block.



**Figure 3: Relief valve block pressure setting stampings – (incorrect orientation)**

Look underneath the relief valve block to see the pressure setting stampings, as per Figure 3. If the stamped pressure setting closest to front of the valve (lever side) is 100bar and towards the back of the valve is stamped 200bar, then the relief valves are not correctly orientated. Note that the stampings on the block itself can be quite feint. Use a torch for extra light, or use a phone/camera to take photo of the stamped settings.

*If the relief valve block shows 200bar at the front and 100bar at the rear, then it is installed correctly. No further action is required in this case.*



### 3 Procedure to correct relief valve block orientation

1. Slew turret to position where there is clear and easy access to the turret Manual Control station on the MEWP deck. Take care when operating MEWP.
2. Turn PTO off and also switch off truck ignition key switch
3. Remove the Manual Control cover to access the HAWE main control valve bank
4. Place a small bucket or container underneath the hoses connected to the relief valve block. See Figure 2 for location on HAWE valve.
5. Mark these two hoses to be able to identify them later. Boom Down hose is closest to the front, and Boom Up hose is towards the rear.
6. Disconnect one hose and let the oil in the hoses drain out into the container. Disconnect the second hose afterwards. If required, cut zip-ties holding any wires to the Boom Up/Down hose fittings.
7. Unbolt the 4 socket head bolts holding the relief valve block to the main valve bank.
8. Rotate the relief valve block so that the 200bar stamping is closest to the lever handles at the front of the valve and the 100bar stamping is now towards the rear and then bolt in place.

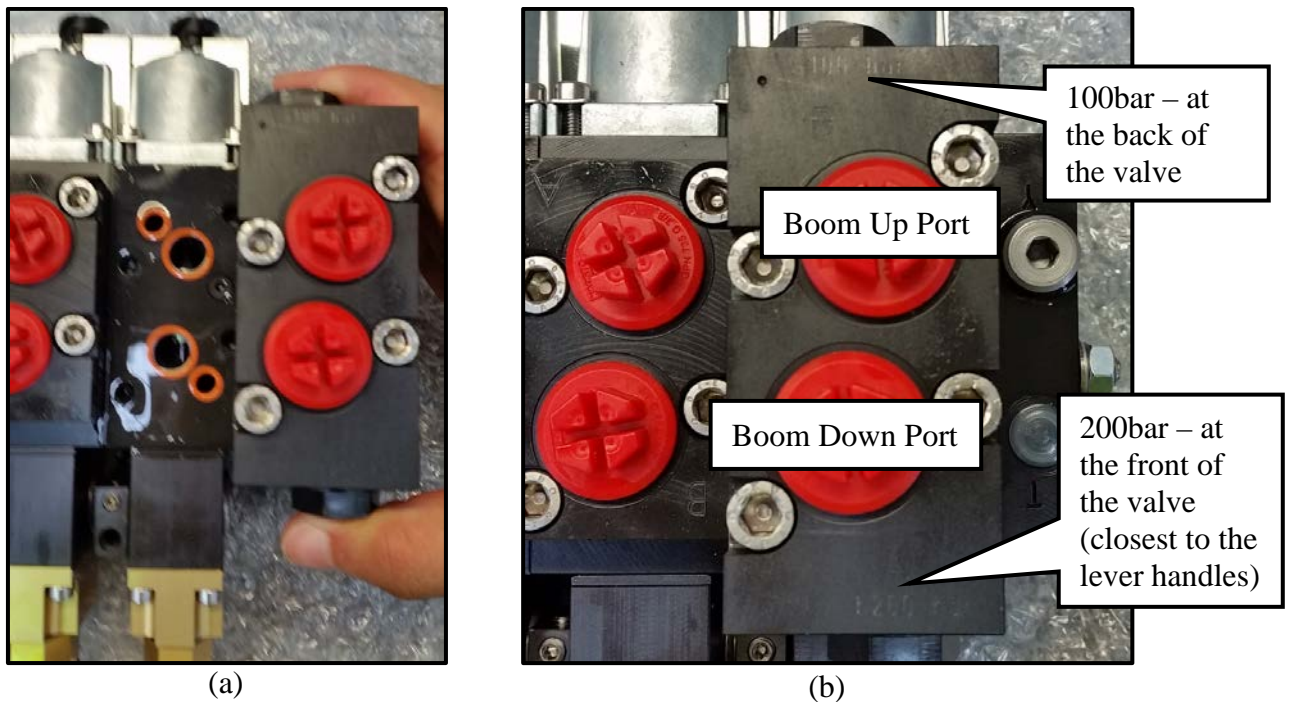


Figure 4: (a) Unbolt relief valve block and rotate around, (b) Correct orientation of relief valve block

9. Correctly refit hoses – Boom Down closest to the front and Boom Up towards the rear
10. Zip-tie any loose wiring if they were previous tied up
11. Clean Manual Controls station, and refit the Manual Controls cover
12. Start MEWP and test functionality. Boom Up/Down direction should be the same as labelled on the Radio Remotes as well as the turret Manual Control levers. Boom Up function should now be able to correctly lift 400kg in the basket while booms are at full extension.

**Please contact Redmond Gary if you are unsure on any instruction.**