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SERVICE BULLETIN

MEWP – Setting Main System Relief Valve

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-	12/10/2022	W. Ward	Original issue

Applicable Vehicles:	Redmond Gary Australia – TL series MEWPs – Manufactured before August 2022.
Criticality:	Highly recommended to be performed within 4 weeks of bulletin release date
Issue Date:	12 October 2022
Overview:	This procedure outlines the actions required to set the main system relief valve to 235bar.

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

Parts & Equipment Required:	<ul style="list-style-type: none"> - Relevant PPE - Standard tools to adjust cartridge relief valve: <ul style="list-style-type: none"> ○ Pressure Gauge (at least 0-250bar) ○ Spanner set (3/4” Spanner) ○ Allen Key set (1/4” Allen key) ○ Screwdriver set
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Please read and understand the following instructions prior to start work.

1 Introduction

Redmond Gary Australia has identified a rare scenario where the main system relief valve may not operate at the correct pressure due to the accumulation of tolerances within the system.

The PLC controls the system pressure by measuring the pressure at the base manifold and adjusting pump output accordingly. The relief valve is used as a separate safety device to limit the system pressure if incorrect operation occurs. In normal operation, the PLC controls the system pressure to an approximate maximum of 200bar and the relief valve is not active.

However, with the current relief valve setting of 215bar, it is possible that the relief valve poppet may not seat/reseat properly and can inadvertently start relieving at a lower setting than intended.

By increasing the relief valve setting to 235bar, a larger window between the PLC system pressure setting and the relief valve setting is created which will prevent any potential for conflicting issues between the two set points.

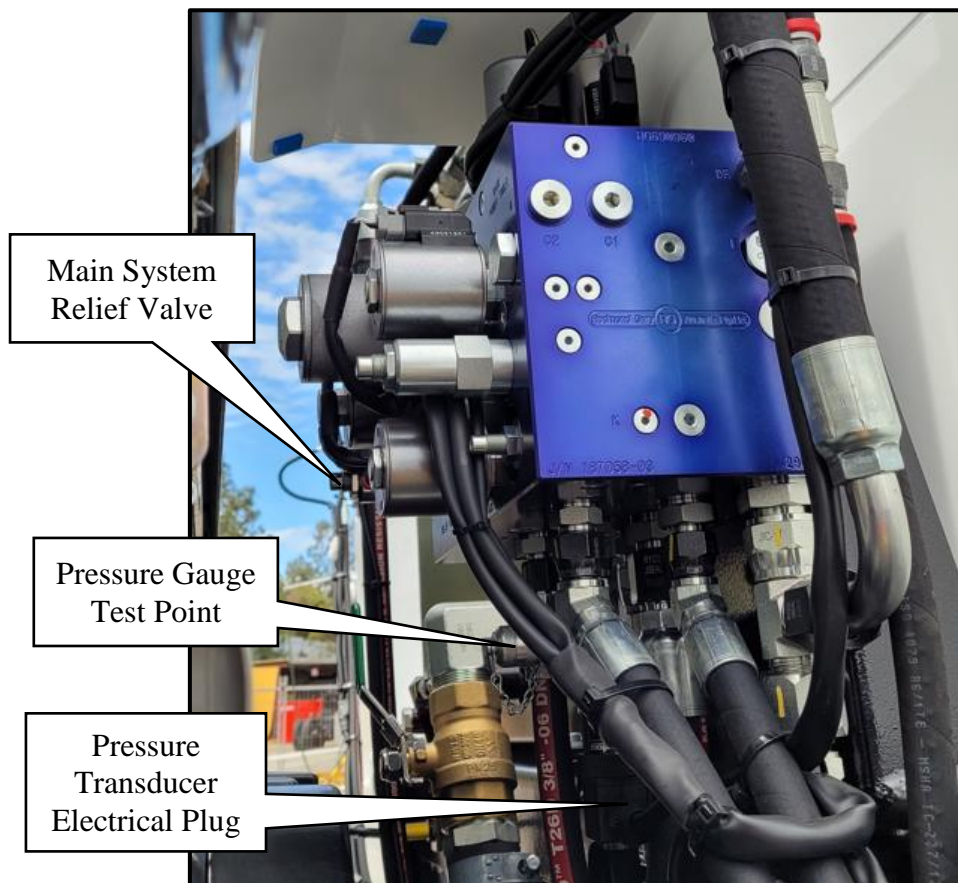


Figure 1: TL MEWP Base Manifold behind Truck Cab - Photo from Passenger Side

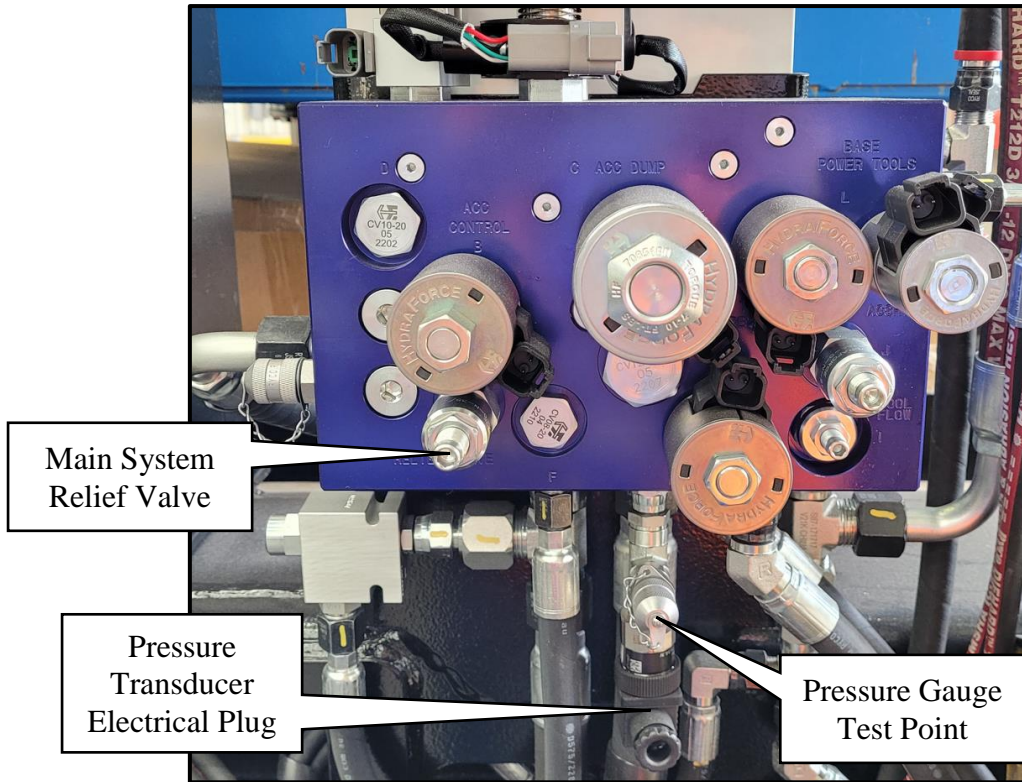


Figure 2: TL MEWP Base Manifold - Front Face View of Manifold

2 Procedure to adjust Main Relief Valve

1. Begin with the truck ignition key switched off
Disconnect the electrical plug from pressure transducer located just below the base manifold – refer Figure 1 and Figure 2.
2. Fit a pressure gauge (at least 0-250bar) onto the test point below the base manifold
3. Turn ignition on, engage the PTO, connect the radio transmitters and start the engine
4. While monitoring the pressure gauge, loosen off relief valve lock nut and adjust to 235bar.
Note that the engine will go back to idle after a few minutes due to the pressure transducer being disconnected. By acknowledging the fault via the HMI or by disengaging then re-engaging the PTO will allow the system to go back to full pressure.
5. Once relief valve is set to 235bar, retighten the lock nut, stop the engine with the radio transmitters, disengage the PTO and turn ignition off
6. Disconnect the pressure gauge
7. Reconnect the electrical plug for the pressure transducer
8. Test the MEWP accumulator charge cycles correctly by:
 - a. Start the truck and engage the PTO
 - b. As the accumulator charges, the truck engine should rev up to approximately 1100rpm
 - c. Once the accumulator is charged, the engine should go back to an idle speed of approximately 700rpm
 - d. Ensure the area is clear to operate the MEWP
 - e. Set the MEWP up as normal. Operate a boom function while continually listening to the truck engine. Check that the engine will rev up when charging the accumulator and goes back to idle when charged
 - f. Continue operating a boom function to cycle the accumulator at least 3 times
9. The system is working correctly if the truck goes back to idle once the accumulator is charged. Otherwise, repeat the procedure to readjust the relief valve and lock the setting if the engine revs continually stay high and does not go back idle.

Note:

1. *All production TL MEWPs will have the main system relief valve set to 235bar.*
2. *The main supply hose from the pump is rated to 215bar for continuous operation. This is considered safe as in normal operation the PLC controls system pressure to 200bar. Over-pressure scenarios are not considered continuous operation, and the hoses are fit for purpose.*

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