

SERVICE BULLETIN

Removal of MEWP Return line Ball Valve (Option Z87)

Doc. No: SRB001

Rev No.:	Date:	Author:	Description:
-	13/10/2023	MDanks	Original Issue

Applicable Machines:	TL MEWP's SN 1663 – SN 1751 containing Option Z87
Criticality:	Highly recommend inspection and correction before the machine is operated again
Issue Date:	13 October 2023
Overview:	This procedure outlines the actions required to inspect and correct the locking mechanism on the return line ball valve. It also provides instructions to remove the ball valve completely.

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"> - Replacement Assembly RG P/N: 77-BALLVALVEEXT - Basic hand tools - Cable ties
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Please read and understand the following instructions prior to starting work.

1. Introduction

RG was recently informed of an incident which involved a TL MEWP extending the extension boom unexpectedly. The incident occurred when the MEWP was running, but in the stowed position (not in operation). The boom extended very slowly and gradually without any command from the operator. The issue was found to be a faulty ball valve located before the return filter on the top side of the hydraulic oil tank. Inspection of the EWP after the incident found that this ball valve was damaged; with the PTO engaged, a closed ball valve prevents hydraulic fluid from returning to the hydraulic tank and therefore will result in a buildup of system pressure. In this instance, hydraulic pressure has increased to the point where the fluid has reached the extension cylinder and caused it to actuate (path of least resistance). Operator recollection stated that the extension boom travelled up to $\frac{3}{4}$ of its normal distance before the ball valve structurally failed and began leaking; thus, relieving the rest of the system pressure. The truck in question was promptly fixed, checked and returned to service.

The inclusion of the Return line Ball Valve (isolating valve) was implemented in 2019 due to a specific customer request included within a Tender Document. The hydraulic implications of the ball valve were discussed at this time and it was decided to lock the valve open via a secondary physical means

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to ensure that incorrect shut off was unlikely; this was done by adding a large cable tie to secure the ball valve handle into the open position. This method was accepted by the customer.

In this instance, it was found that the nut attaching the lever to the body of the ball valve had become loose, which has allowed the ball valve to switch between the open and closed position. After this event, discussion with all relevant RG customers owning an EWP with this option has concluded with the unanimous decision to obsolete the ball valve option in question. It was decided that the potential safety risk to the operation of the machine greatly outweighed any benefits that the ball valve offered during system maintenance.

Any EWP containing this ball valve is safe to use as long as the ball valve is in good condition and mechanically locked in the open position; the following checks are highly recommended;

1. Valve handle securing nut is tight
2. Valve is in the open position (handle in line with body)
3. Locking mechanism is fitted and secured
4. If no locking mechanism is fitted, fit cable ties around the handle and the valve body.

RG recommends that this is checked on a regular basis. In order to eliminate this risk completely, RG has created a *Replacement Assembly* which allows the ball valve to be removed from the oil tank and replaced with straight hydraulic fittings. If any customer wishes to install this replacement, please contact RG Service. The installation instructions are given below.

2. Installation Instructions for Ball Valve Replacement Assembly

Please read and understand all instructions prior to commencing work.

1. Discharge all hydraulic power (turn truck ignition off)
2. Cut cable ties to free the electrical cable and loosen the hose clamp. See Figure 1 below.

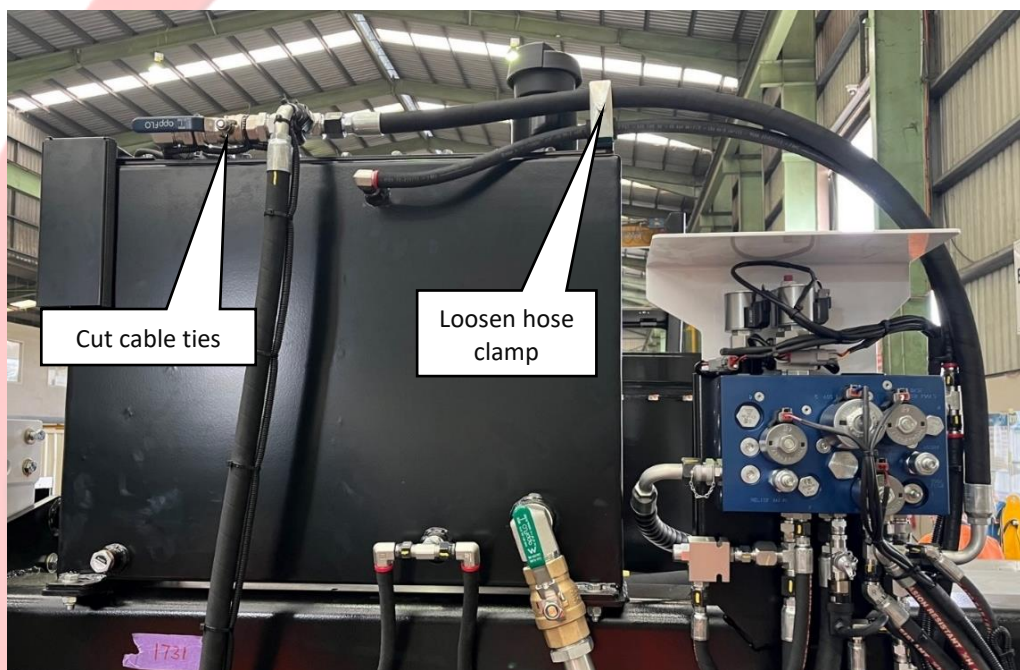


Figure 1 - Removing Cable Ties and Hose Clamp

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3. Remove the hydraulic hose from the ball valve. NOTE: Some residual hydraulic oil may be present.
4. Remove the ball valve from elbow fitting. See Figure 2 below.

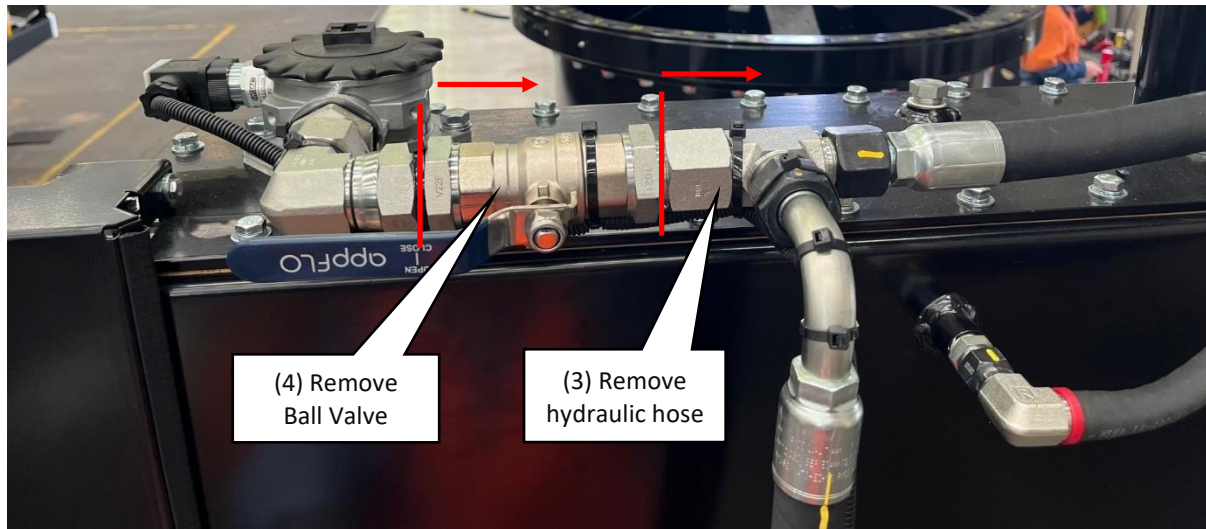


Figure 2 - Removing Ball Valve

5. The RG supplied *Replacement Assembly* is needed for the next step; see Figure 3 below.



Figure 3 - Replacement Assembly P/N: 77-BALLVALVEEXT

6. Remove the dust cap and fit one side of the *Replacement Assembly* into the elbow fitting.
7. Remove the second dust cap and re-fit the hydraulic hose onto the other end of the *Replacement Assembly*. See Figure 4 below.

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Figure 4 - Installing Replacement Assembly

8. Re-tighten the hose clamp and replace the cable ties.
9. Re-start the machine and ensure it is operating correctly and there are no leaks.

Please contact Redmond Gary Australia if you are unsure of any instruction.