



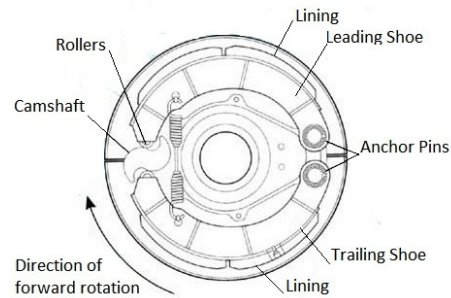
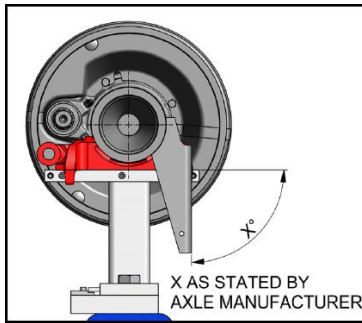
AXLE AND MECHANICAL SUSPENSION WELDING INSTRUCTIONS

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Axle Beam Welding

Extreme care must be taken when welding components to the axle beam. Ensure correct alignment and location of the components prior to welding.



THE AXLE BEAM MUST NOT BE WELDED FOR REPAIRING.

The beam should be replaced in this circumstance.

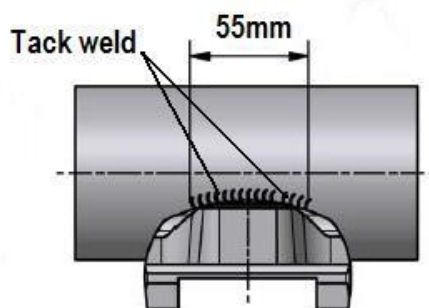
Axle Beam Welding

Before welding any components to the axle beam it must be preheated. Identify the area for the attachment of the suspension seats and heat the beam to 200 to 250° C in this area.

DO NOT TEST THE WELD ARC ON THE AXLE BEAM.

Tack weld the part in place. The tack welds should be 15mm in from each edge of the axle seat (4 tacks per saddle) making sure the tack welds are fully covered during the welding process.

With the beam to temperature then complete the welding as per attached information.

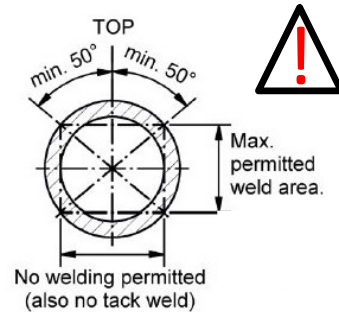


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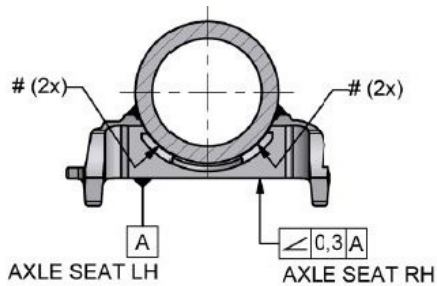


All axle seats must only be welded in the section showing as maximum permitted weld area.

TO PREVENT DAMAGE TO THE BEARINGS, NEVER CONNECT THE EARTCH CONNECTOR TO THE AXLE HUB OR WHEEL END.

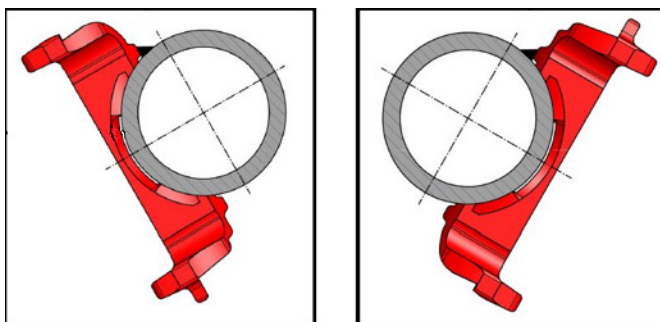
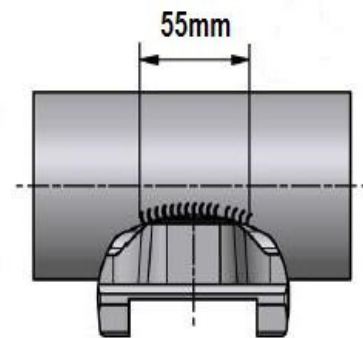


DO NOT WELD AXLE TO TRAILING ARM.



Ensure there is sufficient clamping force between axle beam and seat during tack welding. The weight of the axle beam will be sufficient. Do not use the U Bolt to clamp the seat as this may deform the seat.

Only weld 55mm length to the front and back of the seat as shown in the drawing.



Rotate axle beam for inverted welding.

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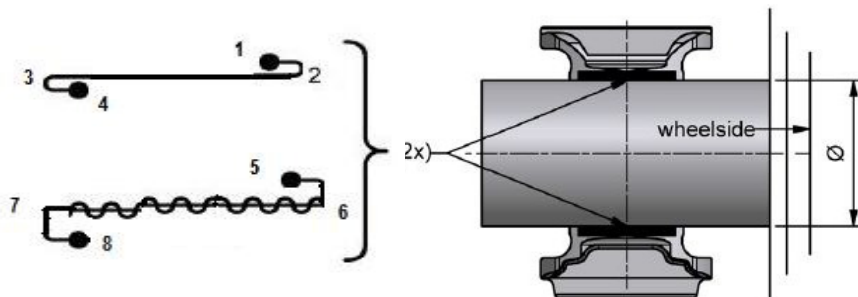


Build up two layers of the weld with initiation and termination as shown below.

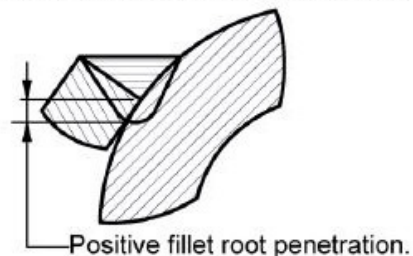
1st layer. Commence weld from 1 and return through 180 degrees (2) and continue to 3 and again return through 180 degrees and finish at 4.

2nd layer. Commence weld from 5 and return through 180 degrees (6) and continue to 7 in a wave action and again return through 180 degrees and finish at 8.

NO WELD SHOULD START OR STOP AT THE EDGE OF THE SADDLE.



Rotate axle beam for inverted welding.



Ensure good penetration but avoid undercutting at the edges of the weld.

AXLE AND MECHANICAL SUSPENSION WELDING INSTRUCTIONS



Hanger Positioning

Refer to the drawing of the suspension you are installing. Fig 1 is for reference only.

Position the hangers in the correct order and orientation along your chassis in the position you wish to locate your suspension. Check the centre measurements between hangers are according to the drawing and ensure all spacing is in line with the drawing requirements (Fig 1 is an example). You will now need to measure across the chassis to ensure your suspension centers are correct. If you are confident you have placed all hangers to drawing requirements they can be tack welded into position.

Ensure the hangers are correctly in position against the drawing requirements. Check that the hangers have not moved when tacking and that they are lying flat on the chassis. A diagonal check of hangers should be done to ensure correct positioning of the hangers. A tolerance of +/- 3mm should be maintained on the method of checking.

Once all dimensions are checked and within 1.5mm of the drawing dimensions they can be fully welded into position. All hanger edges need to be welded to the chassis.

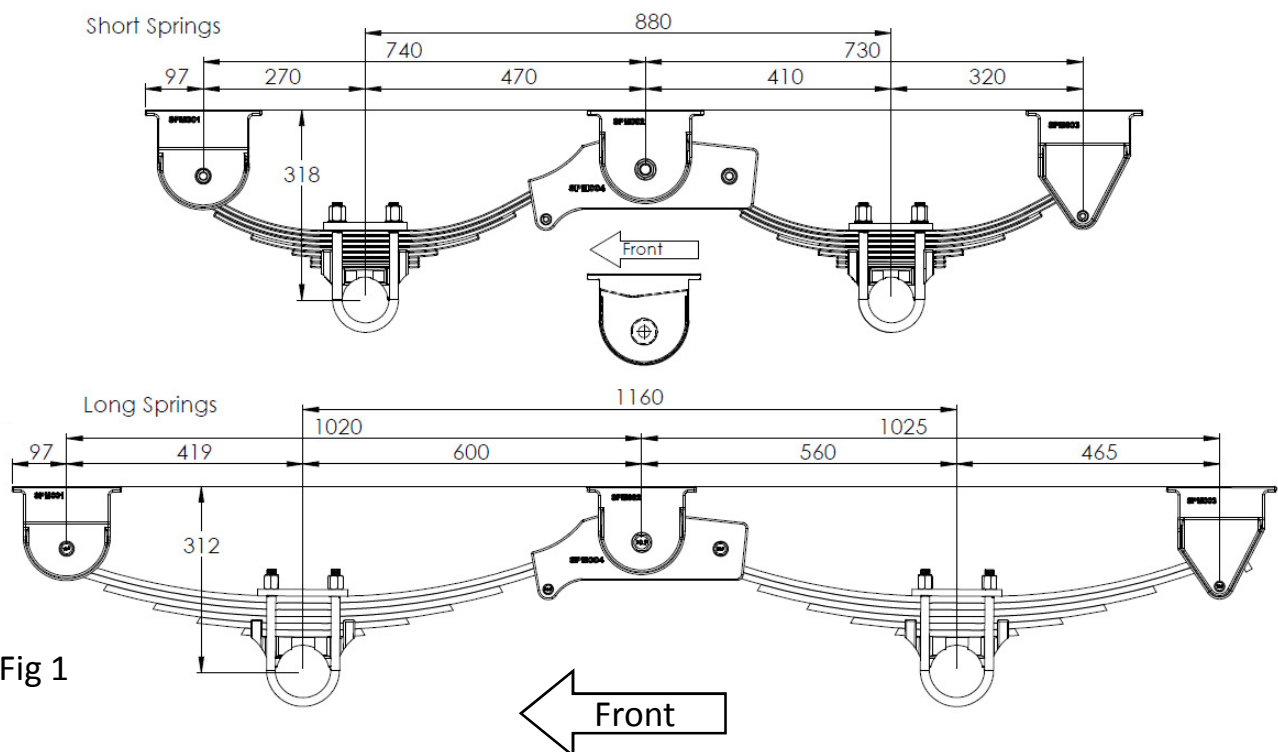


Fig 1

AXLE AND MECHANICAL SUSPENSION WELDING INSTRUCTIONS



Welding

Once all dimensional checks have been made and you are satisfied all hangers are in the correct position and sitting correctly a full weld can be made. Weld all edges with a 8-10mm fillet weld. Where possible ensure a continuous weld is used.

Suspension Assembly

Assemble suspension from front to rear. Do not fully tension until all components are installed. Nip all fasters up but do not tension. Tighten U bolts using a diagonal method (Fig 2) keeping approximately the same thread protrusion from all nuts

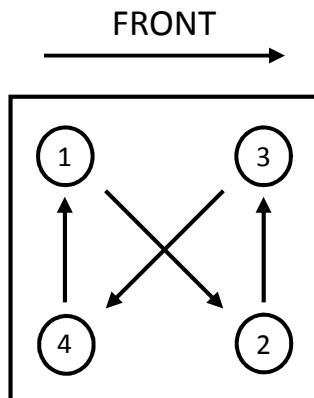


Fig 2.

Axle Seats

Refer to TEA Welding Instructions for Axle seat to Axle welding method. If you do not have a copy please contact TEA directly to secure your copy. Incorrect axle welding may cause axle failure and void your warranty.

AXLE AND MECHANICAL SUSPENSION WELDING INSTRUCTIONS



Alignment

All suspensions require some form of alignment. Various methods can be used to achieve proper alignment with the following method acceptable should you not have access to laser alignment.

Release all brakes and pull trailer forward in a straight line. This should free the trailer from binding. Ensure the ground is level and smooth.

For the best results use a suitable optical device. In the event this is not available measurements taken as per Fig 3 can be made with care and a suitable manual method. Adjustment can be made by sliding the axle seat forward or back on the axle spring. The front axle needs to be aligned to a tolerance of +/- 3mm or better. Axle to axle tolerance is +/- 1.5mm. Once alignment has been achieved tension all U bolts, bush pivot bolts and hanger catch bolts. Refer to attachment 1 for recommended torque settings.

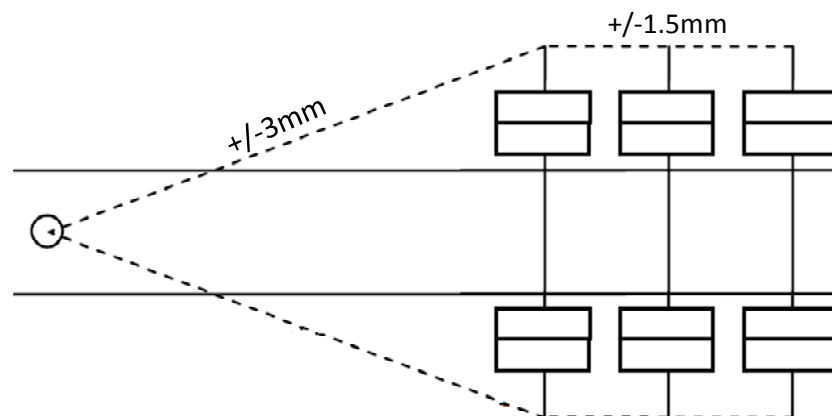


Fig 3.

After an initial run in period of up to 1500km all alignments, U bolts and remaining fasteners need to be checked and retention if required.