

# Frame Flange Relief Cut-out Templates with 105 millimeter Frame Flanges

M-700-001

## Valid for

Mack GU models

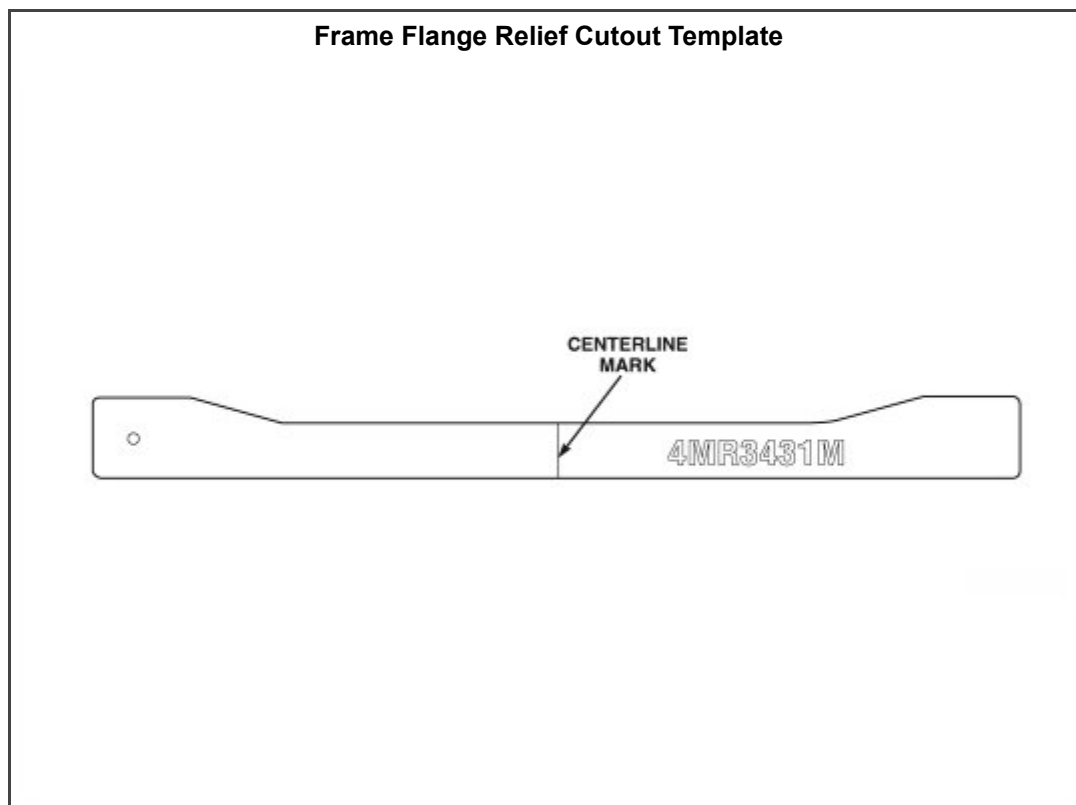
## Case description

On GU7, GU8, CT and CTP model chassis equipped with frame rails having 105 mm flanges, the lower flange may have relief cut outs to provide clearance for the suspension trunnion or the transverse torque rod mounting bracket. When wheelbase changes are made, reliefs must be cut in the lower flange at the new location for the trunnion and/or transverse torque rod bracket.

*Note: Does not apply to Mack Trucks Australia.*

## Repair

To ensure a dimensionally correct relief cutout, templates are available through the MACK Parts System. One template is used for the transverse torque rod mounting bracket, and three templates are unique to the specific suspension. Part numbers for the different templates are listed below.



| Part No.  | Application                                   |
|-----------|---|
| 4MR3431M  | Transverse torque rod relief cutout template  |
| 4MR3431M2 | MACK SS44/36 trunnion relief cut out template |
| 4MR3431M3 | Raydan AL460/AL520 relief cutout template     |

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| 4MR3431M4 | MACK SS52 trunnion relief cut out template |
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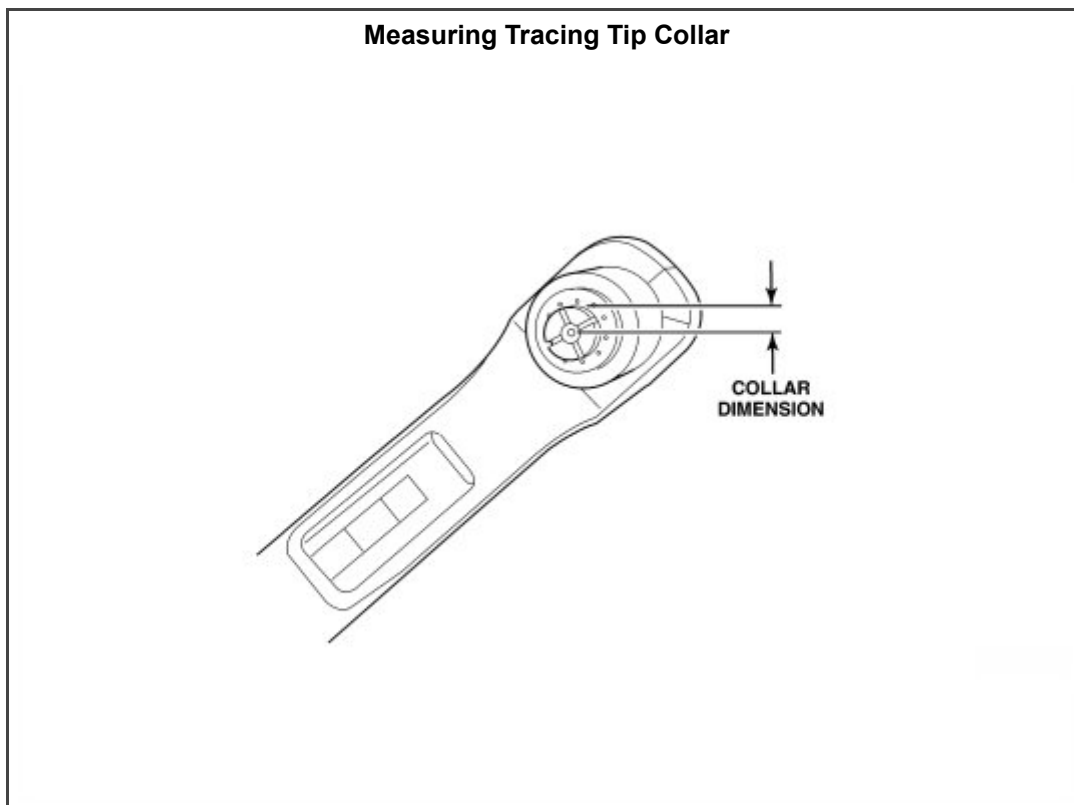
When cuts are made in the frame flange, a plasma cutter with a tracing tip must be used. The template will be clamped to the lower frame flange and used as a guide for the tracing tip.

**Caution**

A plasma cutter with a tracing tip is the only approved method for cutting the frame flange. Using a standard acetylene torch or some other means of mechanically cutting the frame (such as a Sawzall) can result in an unfavorable cut edge that may eventually lead to premature frame failure.

**Procedures for using the template to cut the relief cutouts in the frame flange are as follows:**

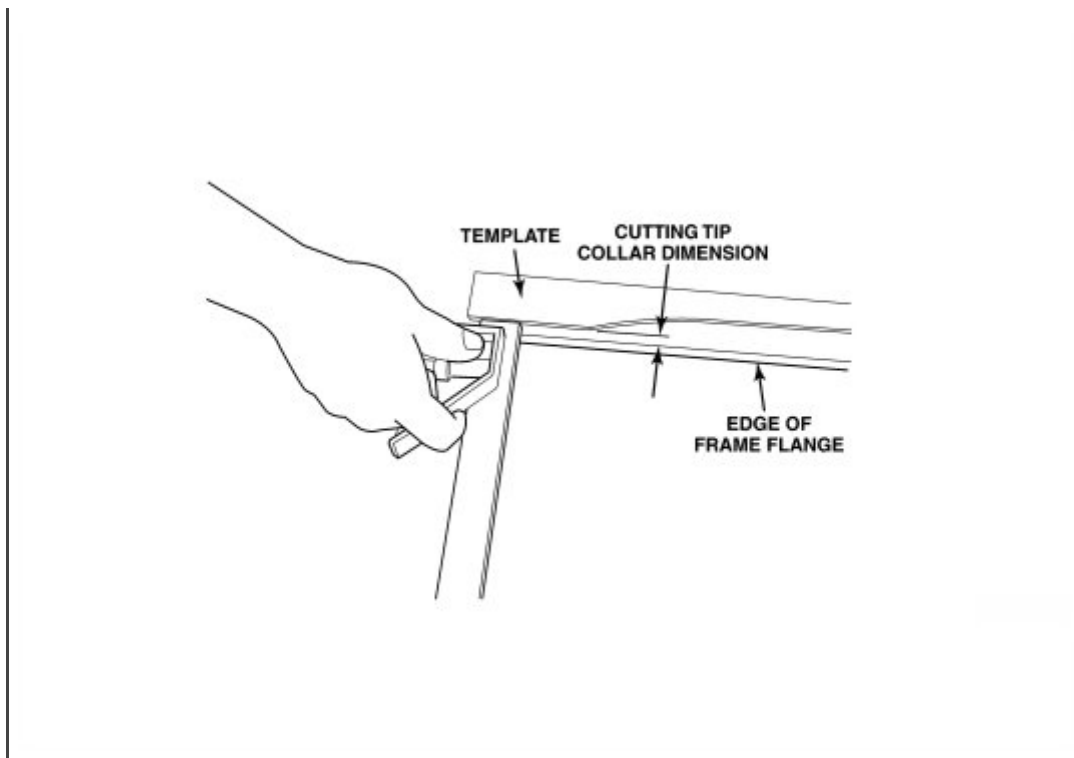
1. Mark the location on the lower frame flange that corresponds to the centerline of the new location of the suspension trunnion or transverse torque rod mounting bracket.
2. Align the centerline marking on the template with the centerline marked on the lower frame flange, and position the template with the flat edges at each end of the template flush with the edge of the frame.
3. Hold the template in place, and then scribe a line in the frame along the edge of the template to mark the location where the cut will be made.
4. Measure the thickness of the tracing tip collar.



The tracing tip collar dimension will be used to position the template on the frame flange so that the relief cut will be made at the correct location.

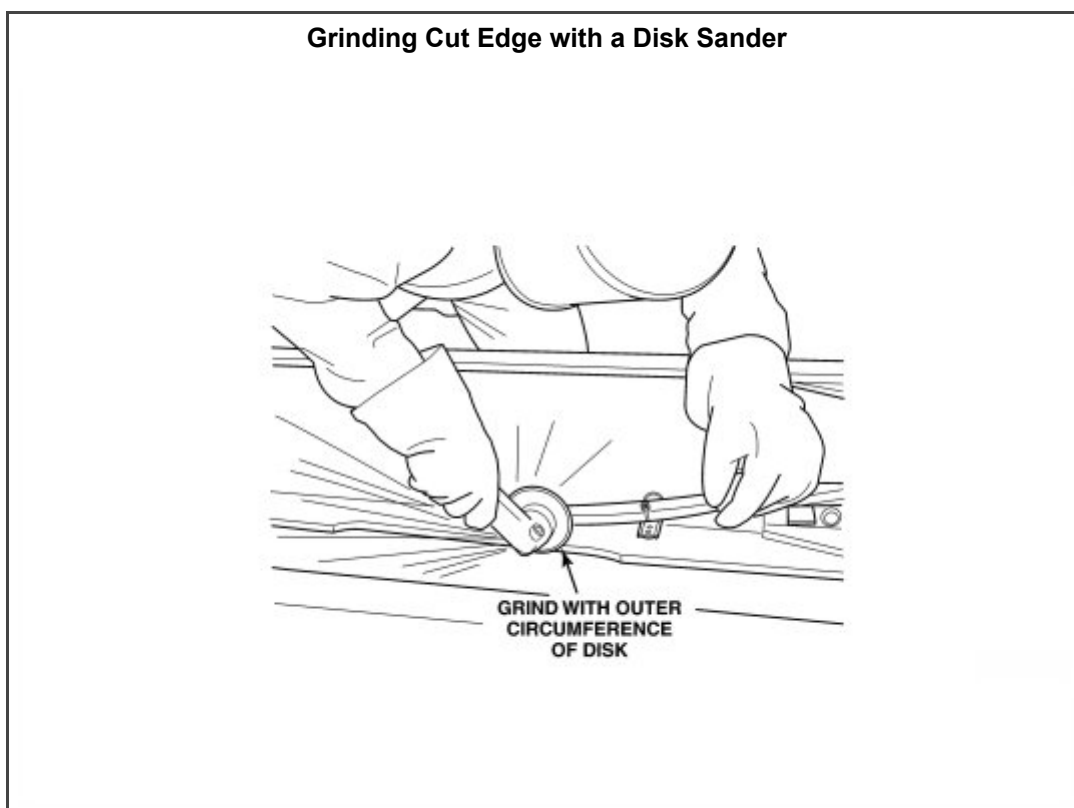
6. Move the template back from the edge of the flange (toward the web) a distance equal to the thickness of the tracing tip collar. This will properly locate the template so that the tracing tip will cut along the line scribed on the flange.

**Locating Template on Frame Rail**



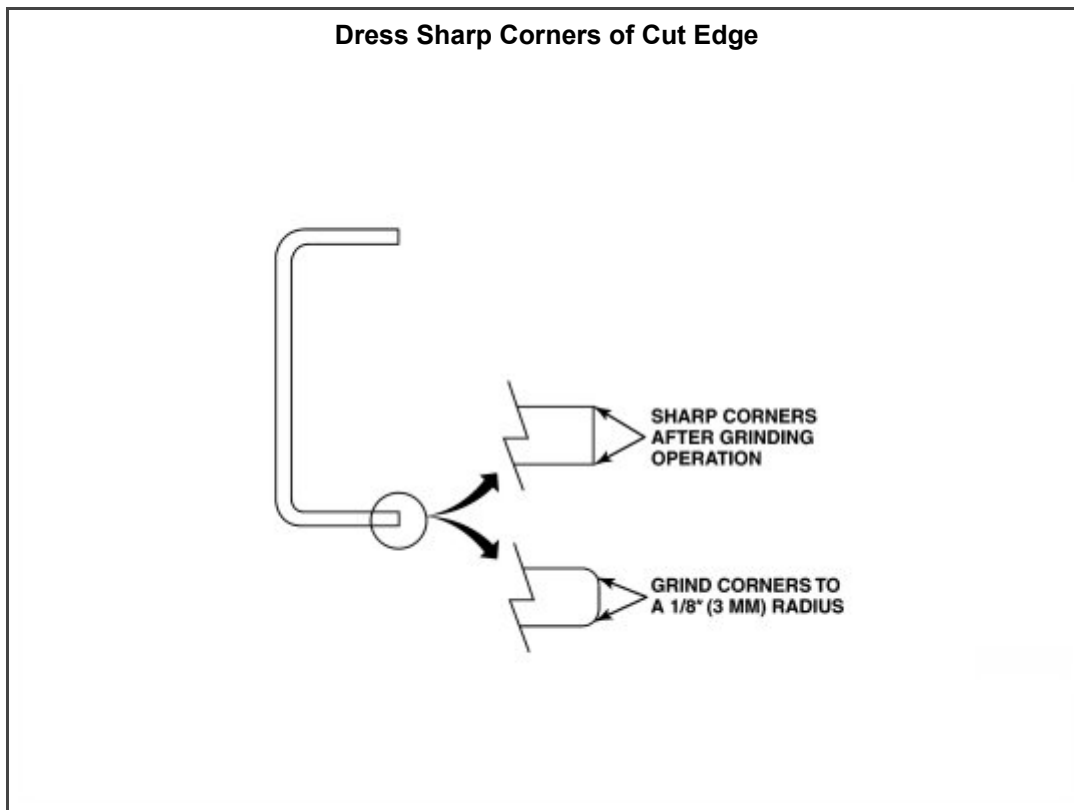
7. Clamp the template in place, and then ensure that the template is properly positioned on the frame flange so that the tracing tip will cut along the line that was previously scribed on the flange.
8. With the template securely clamped in place, use the plasma cutter to make the cut by carefully moving the tracing tip along the edge of the template.
9. After completing the cut, remove the template, and then chip the slag from the edge of the flange.
10. Using either a belt or disk sander, grind the cut edge smooth. When performing the grinding operation, avoid creating vertical marks in the cut edge. A belt sander is preferred, and it should be held against the frame edge so that the direction of belt travel is on the horizontal plane of the frame. Holding the sander with the direction of belt travel perpendicular to the frame will create vertical marks on the cut edge.

If a disk sander is used, hold the sander so that only the outer circumference of the disk is in contact with the cut edge. Vertical marks will be created if the contact area between the sanding disk and the cut end is too close to the center of the disk.



*Note: DO NOT leave any sharp or jagged edges in the cut area of the frame flange, or in the radius area of the cut where the relief transitions to the original flange width.*

11. After the cut edge has been ground smooth, dress the cut by grinding the square edges of the cut (both top and bottom) to a radius. This eliminates any stress risers that would eventually lead to frame cracks.



12. Paint the exposed bare metal on the cut edge with an approved chassis paint.

## Issued by

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