

# SECTION : 501-27 Front End Sheet Metal Repairs

VEHICLE APPLICATION : 2008.0 Falcon

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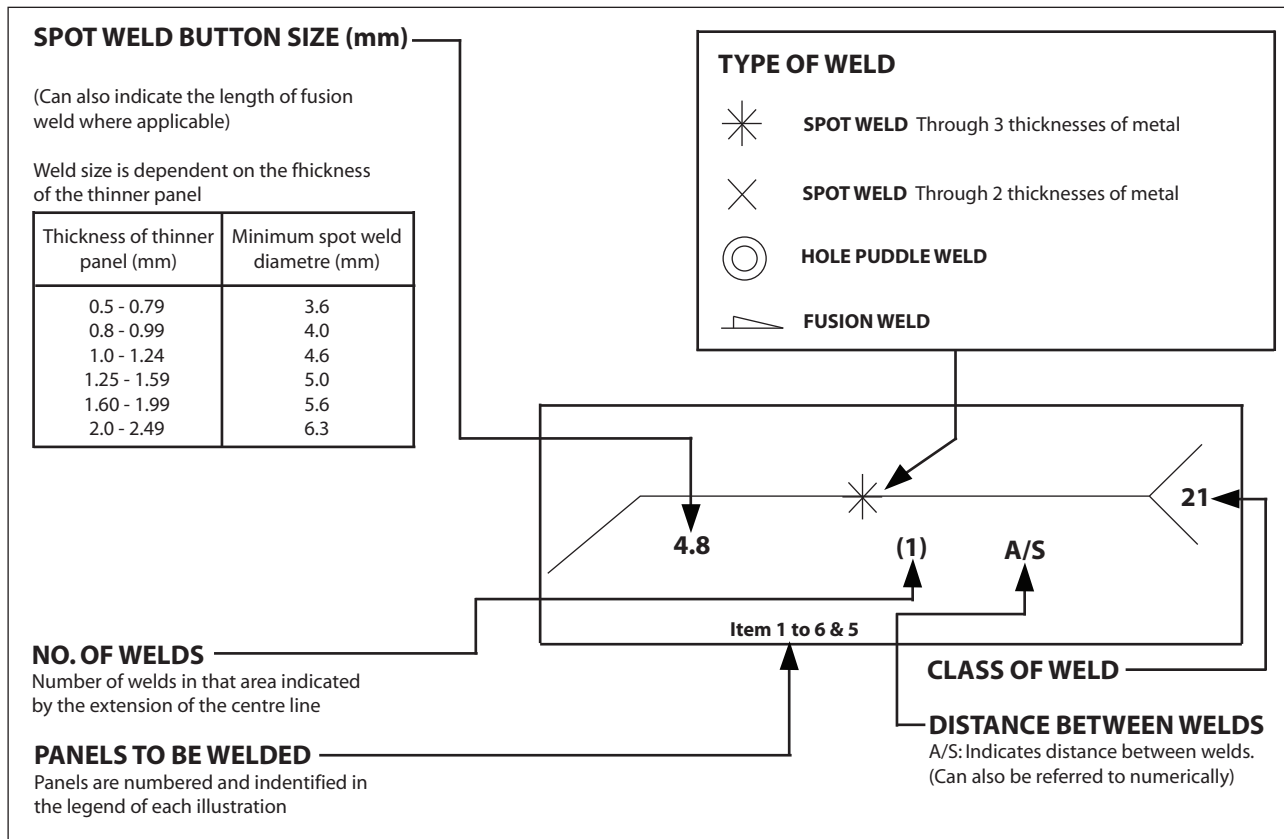


## WELD INFORMATION

### Interpretation of Weld Symbols

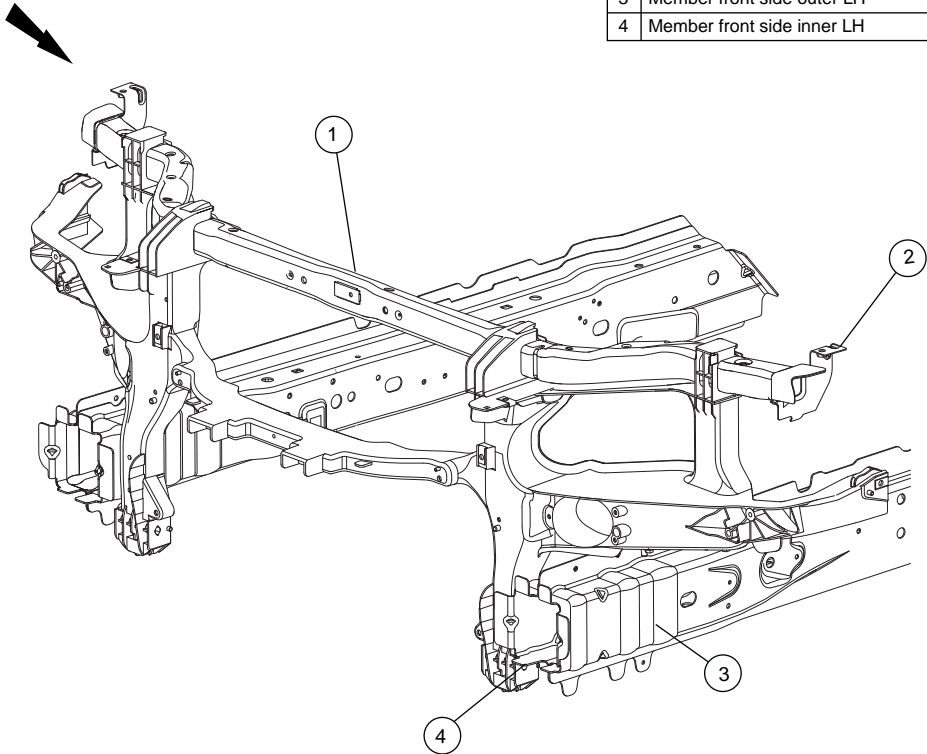
The weld drawings in this section are provided to identify the type, size and sequence of the weld.

This illustration below shows the interpretation of the labelling used in the weld drawings.



Radiator Cross Member 1

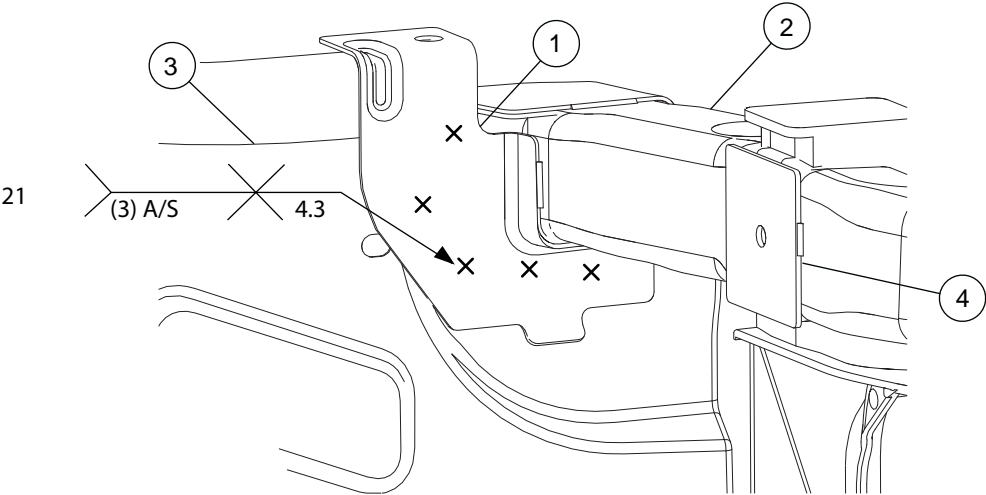
View A



|   |  |
|---|--|
| 1 | RGOR (Reinforced Grille Opening Reinforcement) |
| 2 | Fender Support LH                              |
| 3 | Member front side outer LH                     |
| 4 | Member front side inner LH                     |

AUS02698A

Radiator Cross Member 1A

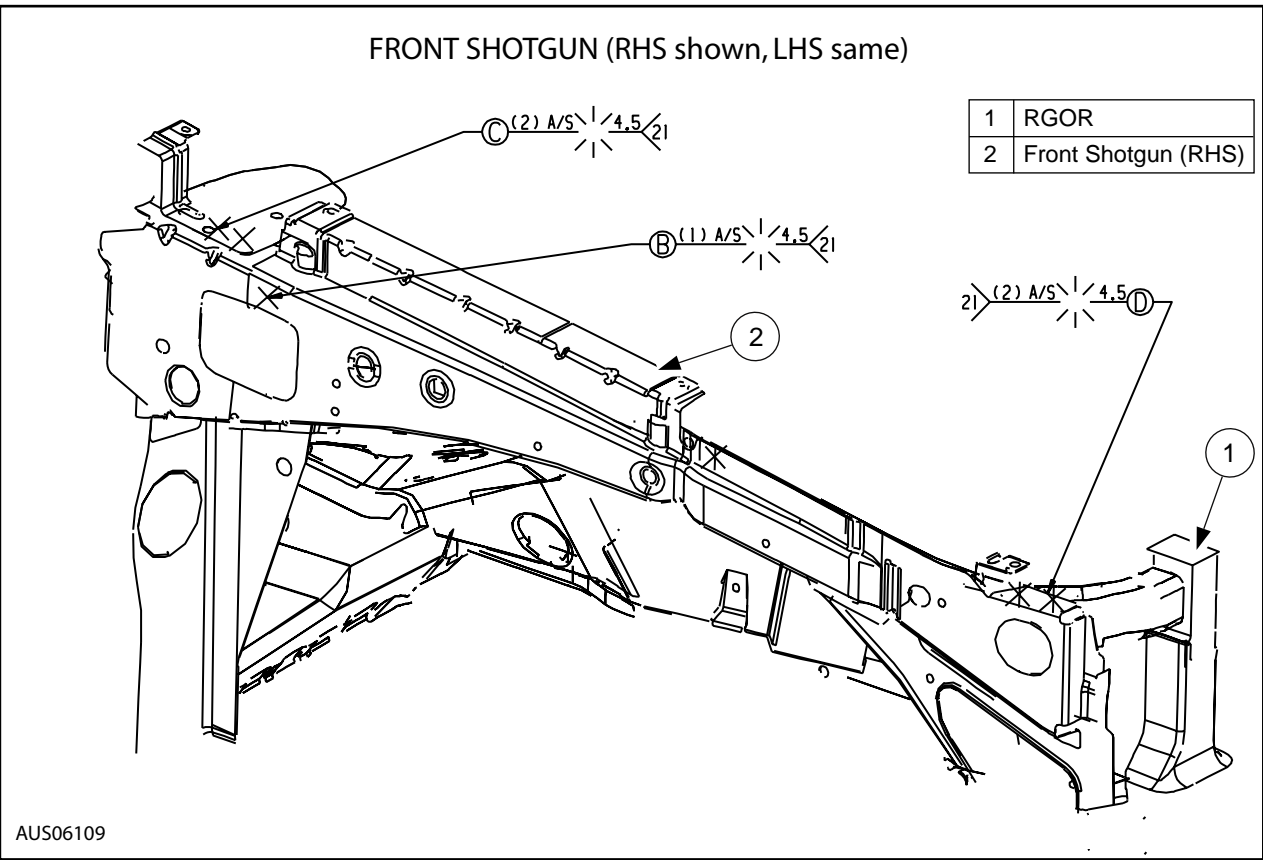
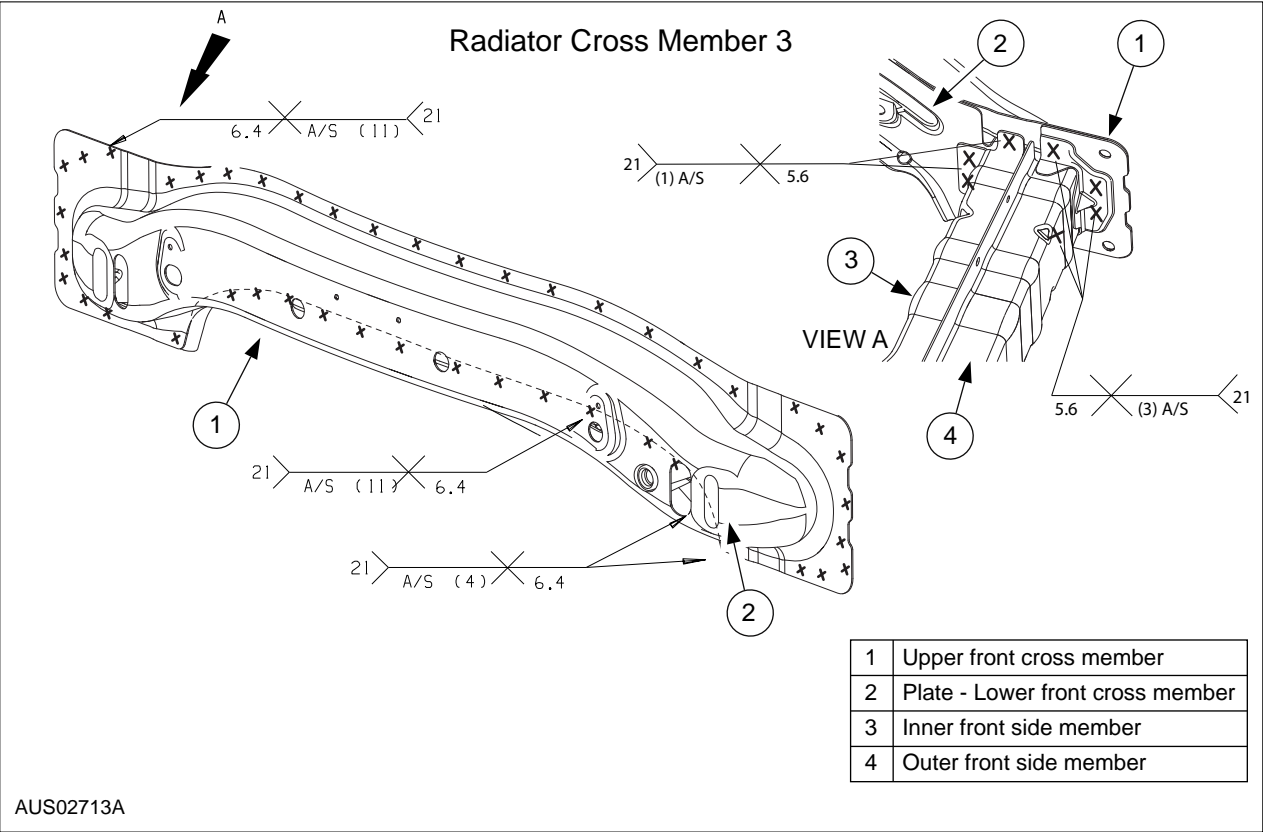


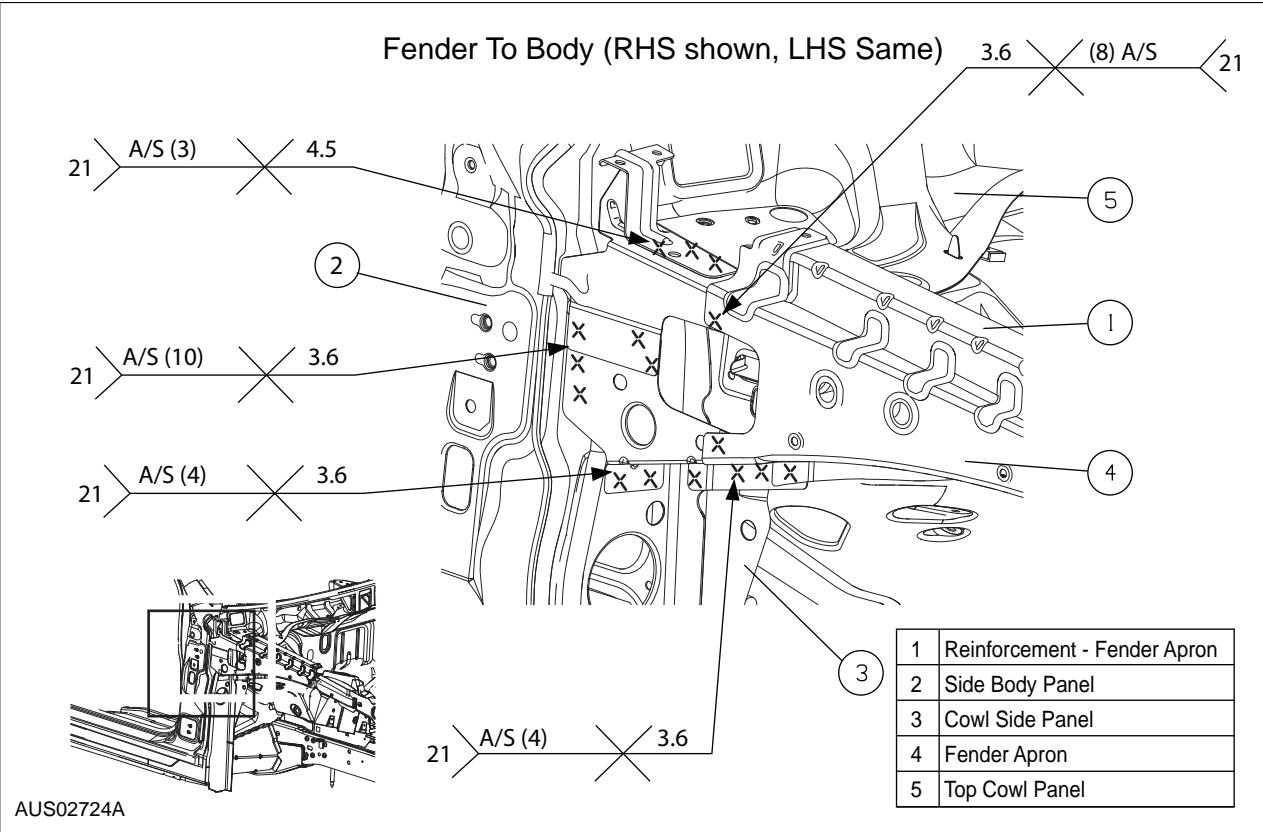
VIEW A

|   |  |
|---|--|
| 1 | Fender Support Apron                   |
| 2 | Upper Front Cross Member               |
| 3 | Front Fender Reinforcement             |
| 4 | Reinforcement Upper Front Cross Member |

AUS02712A







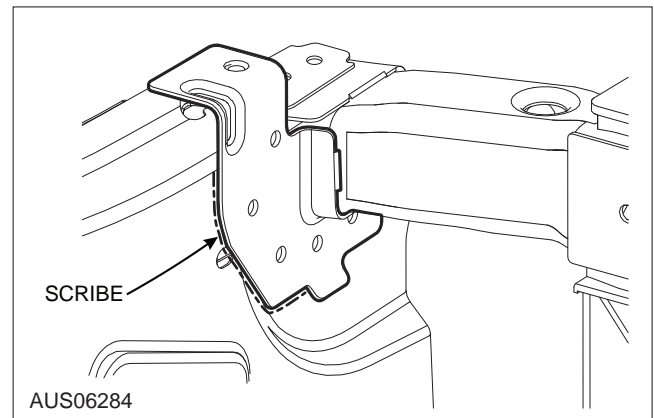
## GENERAL PROCEDURES

### Reinforced Grille Opening Reinforcement Removal

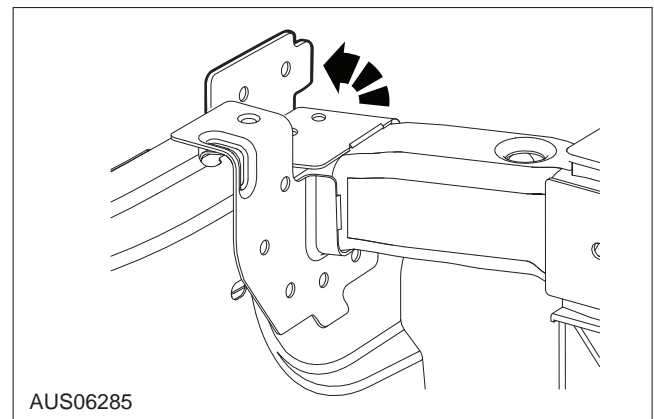
**WARNING:** ⚠ The RGOR (Reinforced Grille Opening Reinforcement) must be replaced if damaged. It **MUST NOT** be straightened or panel beaten.

1. Disconnect the battery.
2. Remove the battery. For additional information, refer to Section 414-01 of the FG Falcon Workshop Manual.
3. Remove the battery shroud. For additional information, refer to Section 414-01 of the FG Falcon Workshop Manual.
4. Remove the radiator grille. For additional information, refer to Section 501-08 in the FG Falcon Workshop Manual.
5. Remove the front bumper. For additional information, refer to Section 501-19 in this supplement.
6. Remove the hood. For additional information, refer to hood/hood hinge procedure in this section.
7. Remove the headlamps. For additional information, refer to Section 417-01 of the FG Falcon Workshop Manual.
8. Remove the fenders. For additional information, refer to Section 501-02 in this supplement.
9. Remove the windscreen washer reservoir. For additional information, refer to section 501-16 of the FG Falcon Workshop Manual.
10. Remove the horn. For additional information, refer to Section 413-06 of the FG Falcon Workshop Manual.
11. Remove the hood latch. For additional information, refer to Section 501-14 of the FG Falcon Workshop Manual.
12. Remove the radiator if required. For additional information, refer to Section 303-03 of the FG Falcon Workshop Manual.
13. Remove the condensor assembly. For additional information, refer to Section 412-03 of the FG Falcon Workshop Manual.
14. Remove the charge air cooler (intercooler). For additional information, refer to Section 303-04B of the FG Falcon Workshop Manual.
15. Scribe the RGOR (Reinforced Grille Opening Reinforcement) end bracket to provide a guide for replacement. The scribed line should be used to locate the RGOR in the X, Y and Z positions.

16. Using a 8.0mm drill, drill out all the RGOR retaining spot welds.



17. Using a hammer and chisel, raise the flange of the shotgun brace to the vertical position. Repeat for the opposite side.



18. Remove the RGOR from the vehicle.

### Installation

1. Position the new RGOR to the vehicle using the scribed line for position.
2. Prepare the new RGOR by drilling from the outboard side 2.0mm pilot holes to replicate original spotweld pattern on the vertical face on inner flange. Repeat for opposite side.
3. Remove the RGOR from the vehicle.
4. Drill the holes to 8.0mm in preparation for puddle welding.
5. Refit the RGOR to the vehicle.
6. Restore the shotgun flanges to the original position.
7. Buff the edge of the RGOR end brackets for puddle weld application.



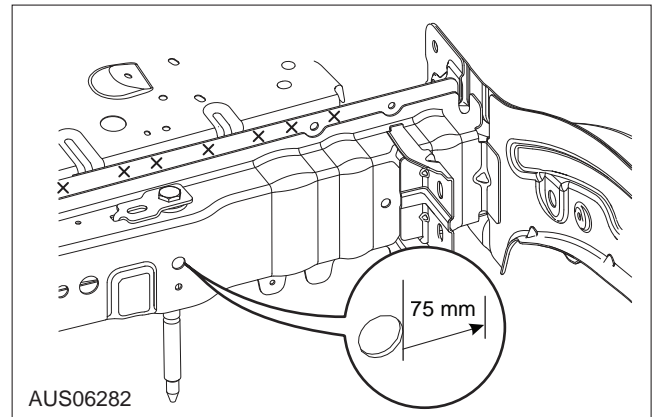
## GENERAL PROCEDURES (Continued)

8. Puddle weld the RGOR end brackets.
9. Drill out the RGOR through the top 2 holes of the shotgun flange. Repeat of opposite side.
10. Puddle weld the 2 top holes of the RGOR to the shotgun flange.
11. Metal finish all puddle welds as required.
12. Install the charge air cooler (intercooler). For additional information, refer to Section 303-04B of the FG Falcon Workshop Manual.
13. Install the condensor assembly. For additional information, refer to Section 412-03 of the FG Falcon Workshop Manual.
14. Install the radiator if required. For additional information, refer to Section 303-03 of the FG Falcon Workshop Manual.
15. Install the hood latch. For additional information, refer to Section 501-14 of the FG Falcon Workshop Manual.
16. Install the horn. For additional information, refer to Section 413-06 of the FG Falcon Workshop Manual.
17. Install the windscreen washer reservoir. For additional information, refer to section 501-16 of the FG Falcon Workshop Manual.
18. Install the fenders. For additional information, refer to Section 501-02 in this supplement.
19. Install the headlamps. For additional information, refer to Section 417-01 of the FG Falcon Workshop Manual.
20. Install the hood. For additional information, refer to hood/hood hinge procedure in this section.
21. Install the front bumper. For additional information, refer to Section 501-19 in this supplement.
22. Install the radiator grille. For additional information, refer to Section 501-08 in the FG Falcon Workshop Manual.
23. Install the battery shroud. For additional information, refer to Section 414-01 of the FG Falcon Workshop Manual.
24. Install the battery. For additional information, refer to Section 414-01 of the FG Falcon Workshop Manual.
25. Reconnect the battery.

## Chassis Rail - Front Section Repair

### Removal

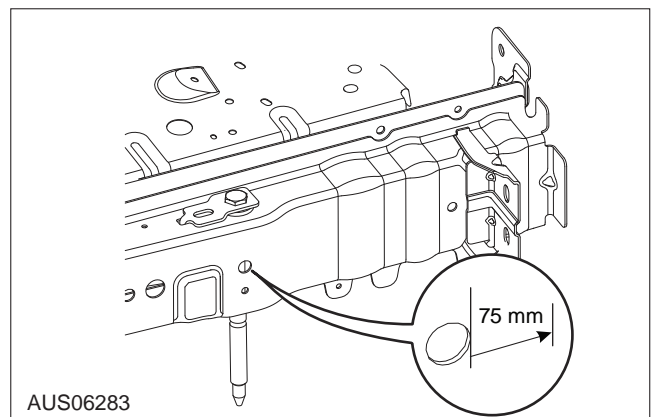
1. Remove the RGOR. For additional information, refer to Reinforced Grille Opening Reinforcement procedure in this section.
2. Measure 75mm forward from the chassis rail reference hole on the damaged front chassis rail.



3. Drill out any spot welds that are connected to the chassis rails forward and slightly back from the 75mm mark, and move the sheet metal away.
4. Cut around the chassis rail on the 75mm mark ensuring the damaged chassis rail have a clean square cut.
5. Remove the cut section of the chassis rail from the vehicle.

### Installation

1. On the new chassis rail bumper beam section, mark 75mm forward from the chassis rail reference hole and cut squarely through the rail.



2. Tack the new chassis rail section to the vehicle.



## GENERAL PROCEDURES (Continued)

3. Check for alignment, squareness and check dimensions. For additional information, refer to Section 501-26 in this supplement.
4. Mount the new RGOR to the front of the vehicle to check for alignment, adjust the RGOR as needed.

**WARNING:** ⚠️ **Welding repairs must be carried out by a certified and experienced welder using the correct procedures including those that can be found in Section 501-31 of this supplement.**

5. Weld the chassis rail sections completely around.
6. Install the RGOR. For additional information, refer to radiator grille opening reinforcement procedure in this section.

### Installation

1. Place the new rivnut flush into the hole in the hydrotube. Crimp the rivnut into the hole.
2. Place upper radiator bracket over the rivnut.
3. Torque new screw into rivnut hole. Tighten to specification.
4. Install the modesty panel. For additional information, refer to Section 501-02 in this supplement.
5. Close the hood.

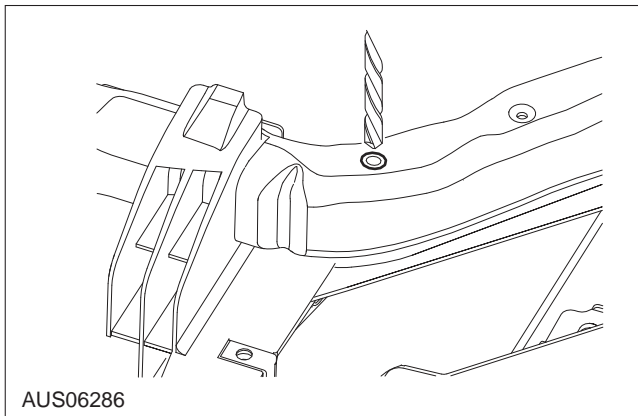
## RGOR Upper Radiator Rivnut

### Removal

1. Open the hood.
2. Remove the modesty panel. For additional information, refer to Section 501-02 in this supplement.

**NOTE:** LH shown, RH similar

3. Remove the loose screw from the rivnut hole.
4. Remove the upper radiator bracket.
5. Using a 8mm drill bit, partially drill out the top of the damaged rivnut. DO NOT push the rivnut through.



6. Bend wire, insert through damaged rivnut and out through open hole in hydroform tube.
7. Tie both ends of the wire together.
8. Using a punch and hammer, push damaged rivnut into the hydroform tube. DO NOT cut the wire.
9. Pull the wire and damaged rivnut out of the hydroform tube.

