R32 GTR subframe weld in reinforcement plates installation guide

1. Check if all p arts are present in the package:

- 2x camber arm bracket brace
- 2x traction arm bracket brace
- 2x lower control arm front bracket brace
- 2x lower control arm rear bracket brace
- 2x toe control arm bracket brace
- 1x differential carrier brace

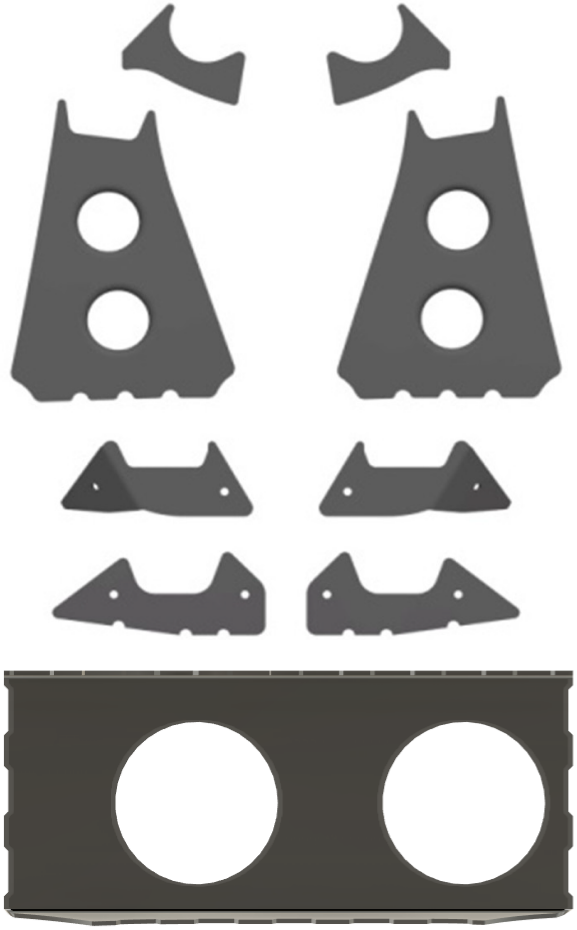

Image 1. R32 GTR subframe weld in reinforcement plates

The most ergonomic method for installing this product is to remove the rear suspension subframe from the car. This is required for installing the rear differential carrier brace as the top section cannot be accessed for welding with the subframe installed in the car.
Other plates can be welded with subframe in the car, however it is recommended to remove it for cleaning, damage inspection and painting after the parts have been welded in.

The weld-in plate material is low carbon high strength structural steel, pre-heating is not required. MIG/MAG and GTAW/TIG processes are most suitable. Stich welding is recommended to prevent warping and excessive stress. 3mm welding leg is suitable.

Installation of this product requires the following tools but is not limited to the following:

- MIG/MAG or GTAW/TIG welding machine
- Basic toolkit for removal and installation of subframe related components (subframe, suspension links, differential carrier) – mostly 17mm and 19mm hexagonal head bolts and nuts
- Torque wrench – recommended
- Welding primer - recommended
- Welding anti-spatter spray – recommended for MIG welding
- Welding clamps (locking C-clamps) – recommended during welding
- Sheet metal working hammer (adjusting parts during welding)
- Grinder or other suitable tool for cleaning subframe to bare metal around welding areas
- OEM arms for spacing the brackets during spot welding or other suitable spacers

2. Installing dif erential carrier brace

2.1. Clean the surface to bare metal under surfaces and edges where welds will be added (image 2). Use of welding primer is recommended

2.2. Mount the weld-in plate and locate it so the gaps are minimal

2.3. Add four spot welds center cutout and spot welds to all of the most outer corners and between corners of the weld-in plate

Image 2. Rear differential carrier's brace welding

3. Installing camber arm bracket brace

3.1. Test fit brace to check for interference between components and adjust to avoid it. Brace should be flat with the bracket on the subframe

3.2. Remove camber arm (rear upper control arm)

3.3. Clean the area where welds will be added (image 4)

3.4. Install camber arm/bushing insert or other suitable part to correctly space the suspension arm mounting tabs - bolt torque 90Nm / 65 ft-lb

3.5. Spot weld the corners of the weld in plate to the subframe (image 3)

3.6. Remove non-metal spacing parts - do not stich weld with non-metal (including rod ends/rose joint) parts installed as they will be damaged by the heat from welding

3.7. Add stich welds from inside to outside, equidistant 8-12mm (image 4)

3.8. Repeat on the other side

Image 3. Camber arm brace spot welds

Image 4. Camber arm brace stich welds

4. Installing traction arm bracket brace

4.1. Test fit brace to check for interference between components and adjust to avoid it

4.2. Remove traction arm (front upper link)

4.3. Clean the area where welds will be added (image 6)

4.4. Install traction arm/bushing insert or other suitable part to correctly space the suspension arm mounting tabs - bolt torque 90Nm / 65 ft-lb

4.5. Spot weld the corners of the weld in plate to the subframe (see image 5)

4.6. Remove non-metal spacing parts - do not stich weld with non-metal (including rod ends/rose joint) parts installed as they will be damaged by the heat from welding

4.7. Add stich welds from inside to outside, equidistant 10-15mm (image 6)

4.8. Repeat on the other side

Image 5. Traction arm brace spot welds

Image 6. Traction arm brace stich welds

5. Installing lower control arm rear bracket brace

5.1. Test fit brace to check for interference between components and adjust to avoid it.

5.2. Remove lower control arm

5.3. Clean the area where welds will be added (image 8)

5.4. Install lower control arm/bushing insert or other suitable part to correctly space the suspension arm mounting tabs - bolt torque 90Nm / 65 ft-lb

5.5. Plug weld the holes on the weld in plate to the subframe (image 7)

5.6. Remove non-metal spacing parts - do not stich weld with non-metal (including rod ends/rose joint) parts installed as they will be damaged by the heat from welding

5.7. Add stich welds from inside to outside, equidistant 8-12mm (image 8)

5.8. Add stich welds on the inside of the bracket, 10mm length from most outer edge (image 9)

5.9. Repeat on the other side

Image 7. Lower control arm rear bracket brace plug welds

Image 8. Lower control arm rear bracket brace stich welds

Image 9. Inner welds

6. Installing lower control arm front bracket brace

6.1. Test fit brace to check for interference between components and adjust to avoid it

6.2. Remove lower control arm

6.3. Clean the area where welds will be added (image 11)

6.4. Install lower control arm/bushing insert or other suitable part to correctly space the suspension arm mounting tabs - bolt torque 90Nm / 65 ft-lb

6.5. Plug weld the holes on the weld in plate to the subframe (see image 10)

6.6. Remove non-metal spacing parts - do not stich weld with non-metal (including rod ends/rose joint) parts installed as they will be damaged by the heat from welding

6.7. Plug weld the holes to the subframe (image 10)

6.8. Add stich welds from inside to outside, equidistant 8-12mm (image 11)

6.9. Add stich welds on the inside of the bracket, 10mm length from most outer edge (image 12)

6.10. Repeat on the other side

Image 10. Lower control arm front bracket brace plug welds

Image 11. Lower control arm front bracket brace stich welds

Image 12. Lower control arm front bracket brace inner stich welds