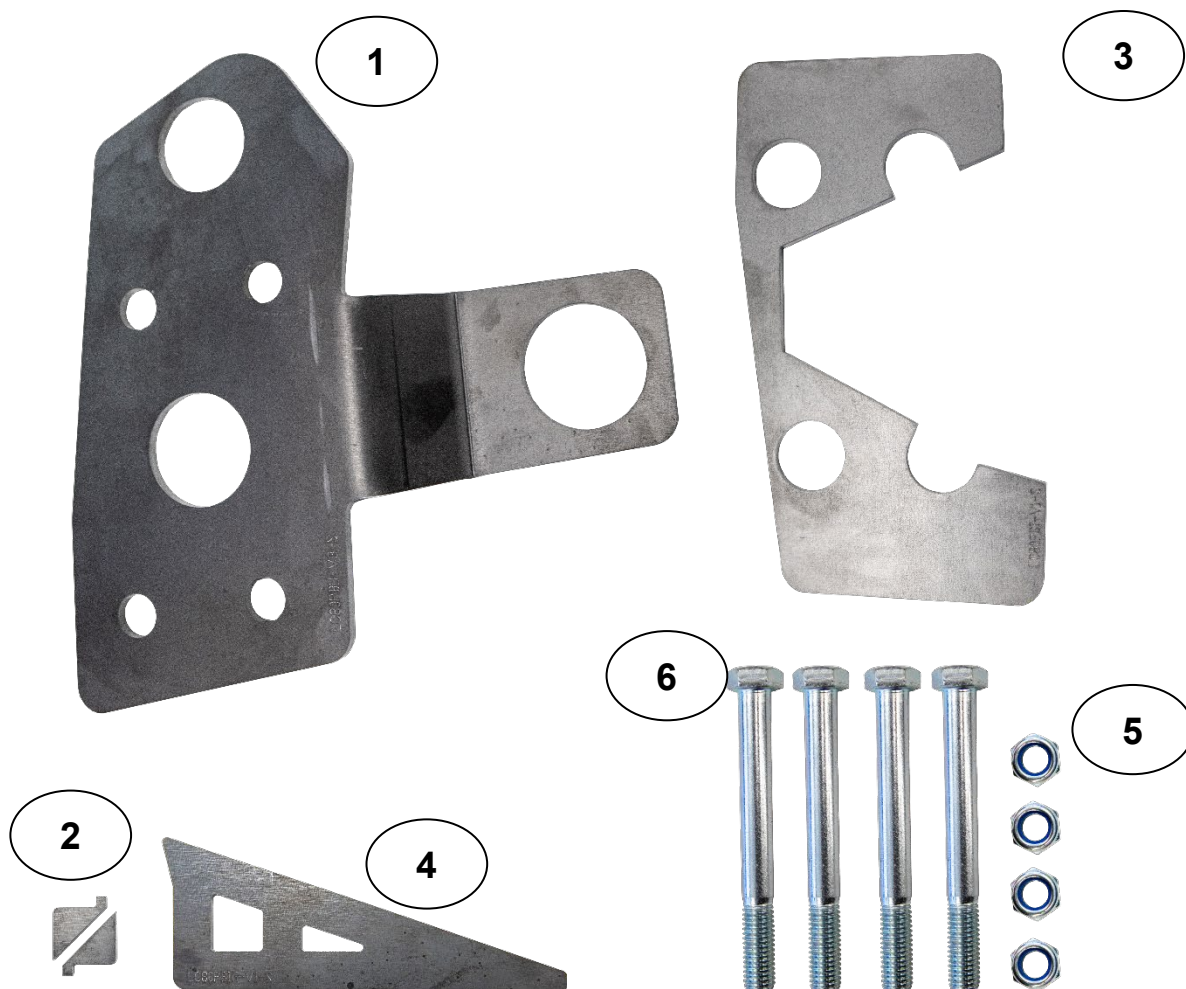


INSTALLATION INSTRUCTIONS

PART DESCRIPTION: Superior Weld-On Front Panhard Brace Suitable for Toyota LandCruiser 80/105 Series			
PART LISTING			
ITEM#	CHECK LIST	QUANTITY	DESCRIPTION
1		1	LAND CRUISER 80/105 PANHARD BRACE OUTER
2		2	LAND CRUISER 80/105 PANHARD BRACE OUTER GUSSET
3		1	LAND CRUISER 80/105 PANHARD BRACE INNER
4		1	LAND CRUISER 80/105 PANHARD BRACE INNER GUSSET
5		4	M12 x 1.25 NYLOC NUT – ZINC
6		4	M12 x 1.25 HEX HEAD BOLT 10.9 – ZINC



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INSTALLATION INSTRUCTIONS

IMPORTANT: Please read and understand these installation instructions before beginning the installation process. Retain these installation instructions for future reference. It is recommended that this item be installed by a qualified person(s) with sound knowledge of 4x4 Steering & Suspension Geometry and/or 4x4 Accessories.

WARNING

- Approximate installation time: 4-6 Hours (Depending condition of the Chassis)
- The following steps are the installer's responsibility.
- This product may need to be certified/approved by a certified technician in the state of your vehicle registration.
- Ensure all parts have been received correctly and are suitable for the intended vehicle before undertaking any installation.
- Make sure all fasteners are tightened to the advised torque settings and 262 Loctite is used on all threads unless otherwise specified.
- Recheck all fasteners within 500Kms of installation, and at every service interval thereafter.
- This product must be installed as per these instructions, only using the hardware supplied by Superior Engineering unless given prior written consent from Superior Engineering.
- Recommended minimum welding procedure of AS 1554.
- This product is not to be fitted differently or modified in any way other than specified by Superior Engineering.
- This product is not to be used on any other vehicle than those specified by Superior Engineering.
- Once the product has been installed ensure all OE and Aftermarket components within proximity of the installed Superior Engineering component clear through the full range of your vehicles Steering & Suspension movement.

Size	Torque (Nm)	Torque (lbft)
M12	85	64

CAUTION

Please ensure all bolts are tightened to correct torque setting with 262 Loctite. Recheck in 500km and regular service intervals

Important: Due to the engine mount location for the 3F-E, the INNER BRACE (3) plate is not required for vehicles fitted with this engine variant.

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Page 2 of

INSTALLATION INSTRUCTIONS

1. Park vehicle on flat/level ground, and chock the rear wheels if not using a hoist. (Using a two-post hoist is recommended as this allows the suspension to extend, increasing ease of access to the area).
2. Remove any Underbody Guards that may interfere with installation.
3. Unbolt the Power Steering box and move away from the chassis. Refer Figure 1 & 2. It may be easier to have the front right wheel off the ground, or off the vehicle entirely.
4. Using the original bolts as a locator, place the BRACE OUTER (1) and the BRACE INNER (3) onto the chassis. Refer Figures 3 & 4. Note: the BRACE INNER (3) will not fit a vehicle fitted with the 3F-E engine. ***For vehicles with the 3F-E engine, the BRACE INNER (3) will not fit due to the engine mount location, and is not required.***
5. Trace around the BRACE OUTER (1) and BRACE INNER (3) to mark an offset line onto the chassis, and remove the plates for the next step. Refer Image 5, 6 & 7
6. Clean up surface behind the power steering box, ensure it's free from any rust, paint or debris to prepare for welding.

WARNING

DO NOT use any form of grinding disc or cutting disc as these are too abrasive and may take too much of the structural steel away.

7. Clean the inner side of the Chassis rail, around the elevated fastener surfaces, as well as the cross brace, ensuring the surface is free from rust, paint or debris. This maybe significantly easier if the lower radiator hose is removed.
8. Coat the prepped area with a weld through primer to protect from corrosion. Coat the Plates that you're fitting as well. Refer Figure 8 & 9.
9. Using the original bolts to locate the plate correctly, weld the BRACE OUTER (1) plate in place. Using a full weld along the top, sides and bottom, and along the bottom and sides of the smaller section. Additionally Weld around the inside of the large holes in the plate.

INSTALLATION INSTRUCTIONS

10. Weld the BRACE INNER (3) plate in place along the top, sides and bottom, as well as around the elevated fastener surfaces, ensuring the weld doesn't impede the tightening of the four bolts. *Note: The petrol variant with the 3F-E engine, will not be able to use this plate.*
11. On the top of the cross brace, weld the BRACE INNER GUSSET (4) along the side and bottom. Refer Figure 10.
12. *Optional:* Weld the two BRACE OUTER GUSSET's (2) to fill the gap on the outer brace. Ensure a water tight seal to prevent corrosion. Refer Figure 11.
13. Repaint the chassis and the brace plates to prolong life span preventing rust. It is strongly recommended to apply Cavity Wax internally to the Chassis to prevent corrosion as a result of the welding.
14. Using the supplied bolts, replace the power steering box, and tighten all four bolts using Loctite 262 to 85Nm/64lbft. See Figure 12 & 13.

NOTE
It is strongly recommended to have a wheel alignment done after installation of this product to correct the steering wheel position.

INSTALLATION INSTRUCTIONS

PHOTOS FOR REFERENCE



FIGURE 1: Inner Side of Chassis, Bolts to be removed to allow power steering box to move.

INSTALLATION INSTRUCTIONS



FIGURE 2: Outer Side of Chassis, Bolts to be removed to allow power steering box to move.



FIGURE 3: Location and placement of Outer Plate

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INSTALLATION INSTRUCTIONS



Figure 4 & 5: Location and placement of Inner plate, Trace around plate to mark area to remove paint and clean.



FIGURE 6 & 7: Trace around plate to mark area to remove paint and clean.

INSTALLATION INSTRUCTIONS



FIGURE 8 & 9: Cleaned area prepped with weld through primer.

INSTALLATION INSTRUCTIONS



FIGURE 10: Location and placement of large Inner gusset.

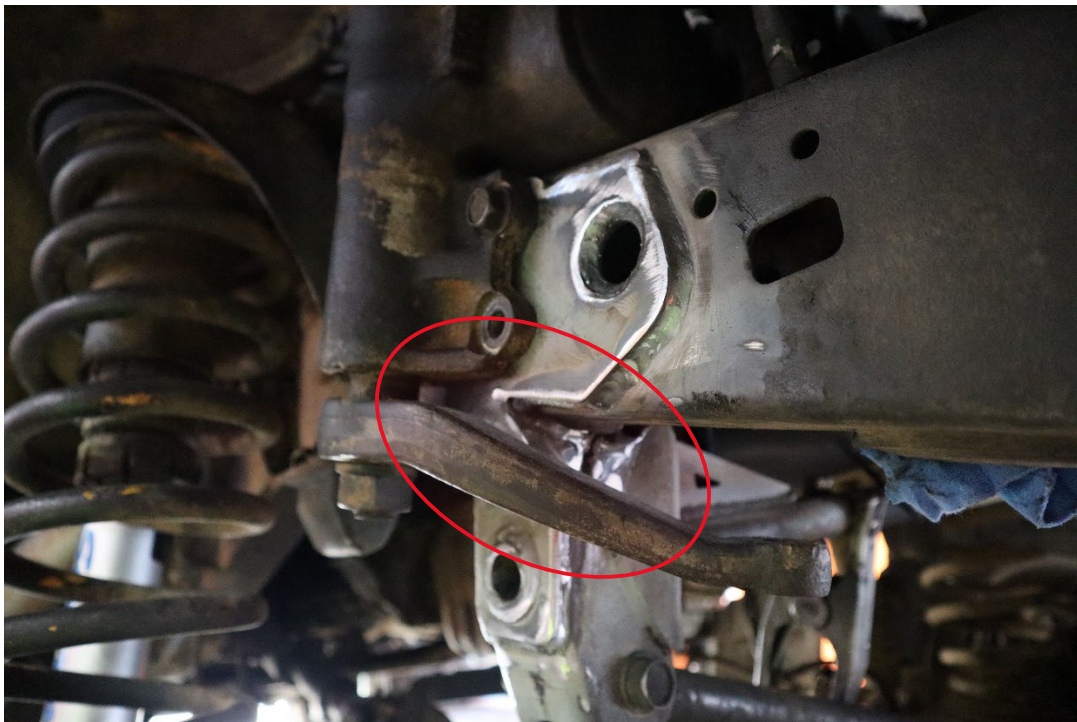


FIGURE 11: Location for small outer gusset. Small square tag to point up to fill in gap.

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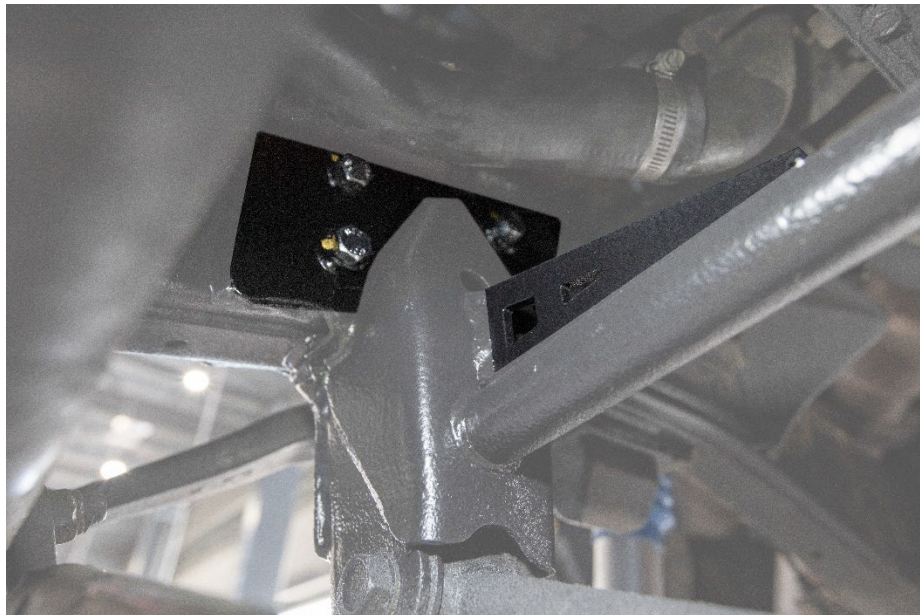
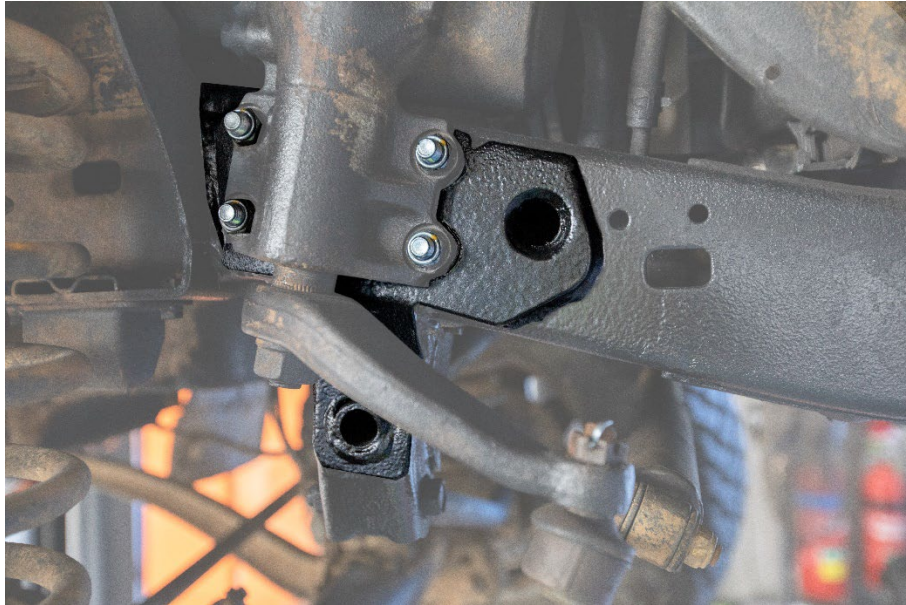


FIGURE 12 & 13: Final Fitment of plates welded and painted.