

NISSAN 300ZX AIR CONDITIONING COMPRESSOR TO GEN III/IV CHEVROLET SMALL BLOCK



INSTALLATION INSTRUCTIONS

Rev - Aug 2019

!!NOTICE!!

LOJ CONVERSIONS CORP HAS PREPARED THESE INSTRUCTIONS TO MAKE YOUR PRODUCT INSTALLATION AS SIMPLE AND HASSLE-FREE AS POSSIBLE. INSTALLATION ISSUES EXPERIENCED AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS ARE THE SOLE RESPONSIBILITY OF THE USER.

!!WARNING!!

THE USER OF THIS PRODUCT ASSUMES ALL LIABILITY FOR ANY DAMAGES TO PERSONAL OR PUBLIC PROPERTY RESULTING FROM THE USE OR MISUSE OF THIS PRODUCT. ANY INJURIES SUSTAINED BY THE USER AND/OR ANY OTHER INDIVIDUALS ARE ALSO THE SOLE RESPONSIBILITY OF THE USER. MOTORSPORTS ACTIVITIES ARE INHERINTLY DANGEROUS AND LOJ CONVERSIONS CORP CAN NOT BE HELD RESPONSIBLE FOR ANY INCIDENTS RESULTING FROM THE USE OR MISUSE OF THIS PRODUCT.

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BEFORE YOU BEGIN:

Please ensure that all of the components required for your installation have been included in your package. The AC Bracket should include the following components:



<p>“A” – AC Base Bracket</p>	<p>(Qty 1) – Base Bracket, Two Versions Available, Short Version for Iron Block and Tall Version for AL Block. <i>Short Version Shown</i></p>
<p>“B” – AC Mounting Arm</p>	<p>(Qty 1) – Billet AL Mounting Arm</p>
<p>“C” – Tensioner Arm</p>	<p>(Qty 1) – Stainless Tensioner Arm</p>
<p>“D” – Belt**</p>	<p>(Qty 1) – Belt, 38.2” For Iron Block, 39” for AL Block</p>
<p>“E” – Drill Bit</p>	<p>(Qty 1) – 10.0mm Diameter Drill Bit</p>
<p>“F” – Long Bolt</p>	<p>(Qty 1) – M10x1.5 100mm Long Bolt, Flat Washer, Lock Washer</p>
<p>“G” – Other Hardware</p>	<p>(Qty 2) – M8x1.25 25mm Flange Head Bolts, (Qty 3) – M10x1.5 20mm Serrated Head Flange Bolts, (Qty 3) – M8x1.25 20mm Low Profile Socket Head Bolts</p>
<p>“H” – Shoulder Bolt</p>	<p>(Qty 1) – M8x1.25 Shoulder Bolt</p>

****If you run an underdrive pulley, the supplied belt will not work! You are responsible for determining correct belt length!**

IMPORTANT – This AC bracket is intended to be used with the LOJ Conversions Z32 LS Swap Accessory Package and is NOT COMPATIBLE with ANY factory GM PS Pump and Alternator Accessory Layout!!!

Correct Balancers (Crank Pulleys):

For Gen 3 engines with Rear of Block Mounted CAS
Use Harmonic Balancer – Dorman P/N – 594115 or GM P/N – 12560115

For some Gen 3 and all Gen 4 engines with Timing Cover Mounted CAS
Use Harmonic Balancer – Dorman P/N – 594361 or GM P/N – 12635652

IMPORTANT – THERE ARE TWO VERSIONS OF THIS AC BRACKET. ONE FOR IRON BLOCK ENGINES, ONE FOR ALUMINUM BLOCK ENGINES. THE ALUMINUM BLOCK ENGINE VARIANT WILL REQUIRE MODIFICATIONS TO THE FRONT SUBFRAME FOR INSTALLATION!!! THESE MODIFICATIONS ARE COVERED AT THE END OF THESE INSTRUCTIONS AND MUST BE COMPLETED PRIOR TO INSTALLATION!!!

INSTALLATION PROCEDURE:

- 1) Remove your existing accessories and balancer, unless your engine is from a vehicle with Corvette offset accessories, then you can leave your balancer in place.
- 2) Remove all brackets and other hardware mounted to the lower LH side of the engine. NOTE – LH Refers to left hand side while SITTING IN THE VEHICLE. See Figure 1

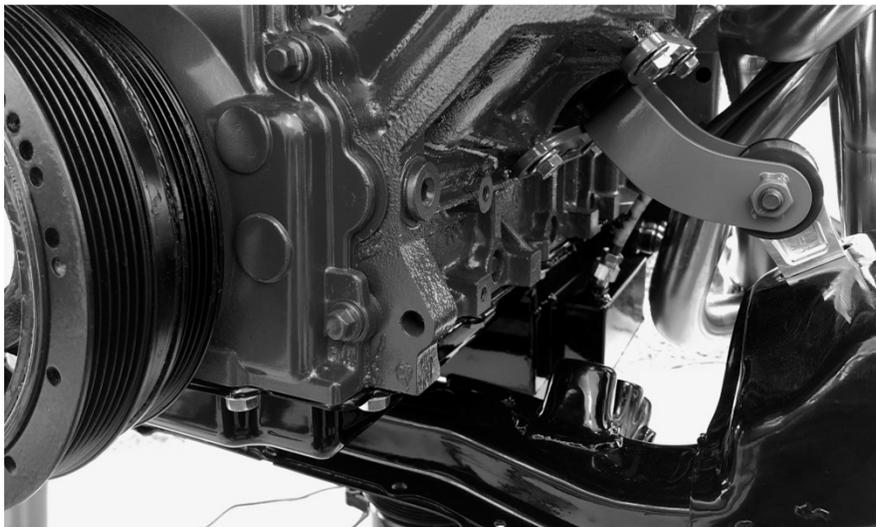


FIGURE 1

- 3) There is one threaded bolt hole on the engine that must be drilled out with the supplied 10.0mm drill bit. See Figure 2.



FIGURE 2

- 4) Loosely attach the billet base bracket to the engine block using the two M8x1.25 25mm Flange Head Bolts and the supplied shoulder screw. Leave ALL hardware loose! See Figure 3.

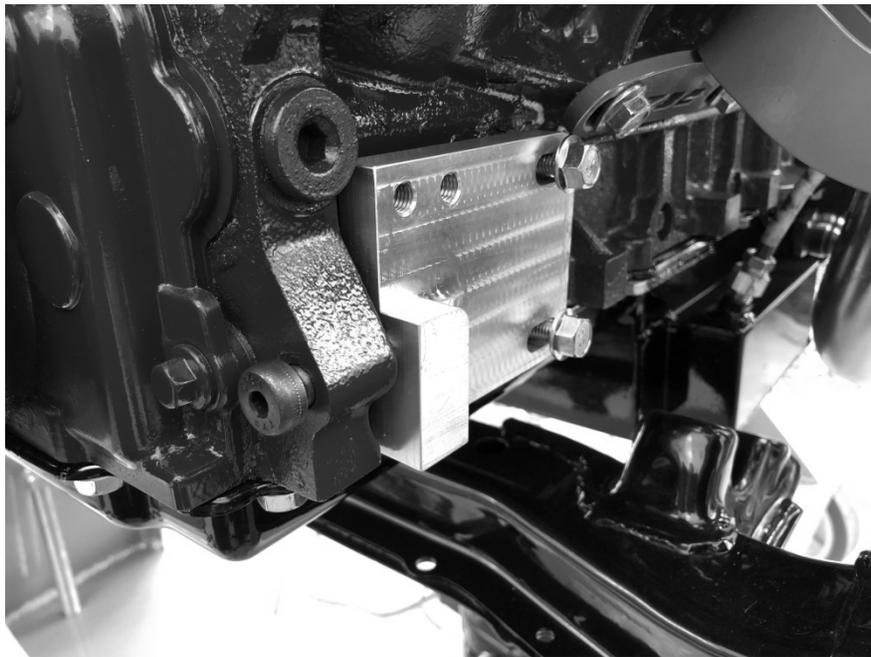


FIGURE 3

- 5) Attach the compressor bracket to the base bracket using the supplied M8x1.25 Low Profile Socket Head Screws. See Figure 4.



FIGURE 4

- 6) Hang the AC compressor from the bracket using the supplied M10x1.5 100MM Long Bolt, Lock Washer, and Flat Washer. Leave this bolt slightly loose. Install Tensioner Arm to the bottom of the compressor and bracket using the supplied M10x1.5 20mm serrated head bolts. Leave the bolt in the slotted hole loose. See Figures 5 and 6.



FIGURES 5 AND 6

- 7) Using a straightedge, slide the complete AC bracket and compressor assembly forward and rearward until the AC compressor pulley is aligned with the crank pulley. Then tighten the two M8 Flange Head Bolts that install into the side of the engine block. Then tighten down the shoulder head screw, but **DO NOT** over tighten!!! Depending on alignment, this bolt may or may not tighten down flush against the face of the engine block. **THIS IS OK!**

IMPORTANT!! – Proper alignment is critical to preventing belt failures! It is also critically important to not overtighten the shoulder screw, as this can damage the bracket or pull the compressor out of alignment. LOJ recommends removing and reinstalling this bolt using Blue Loctite after alignment is complete.

- 8) Install the belt onto the crank pulley first, and actually place the belt between the crank pulley and timing cover. Then install the belt onto the AC compressor pulley. Last, walk the belt onto the crank pulley from behind. The AC compressor has a large shoulder on each side of the belt making installation difficult.
- 9) Using a pry bar or large flathead screwdriver between the AC compressor and the AC compressor bracket, pry the compressor away from the engine to add belt tension. Lock the tension in place by tightening the flange head bolt in the slotted hole in the tensioner arm. Once belt tension is set, tighten the M10 bolt passing through the pivot on the compressor.

Installation is Complete!



SUBFRAME MODIFICATIONS REQUIRED FOR ALUMINUM BLOCK ENGINES

NOTICE– Aluminum block LS engines have an additional casting boss that requires the AC compressor to be mounted further from the engine than the iron block versions do. Moving the compressor away from the engine causes an interference issue with the front subframe. Modification to the subframe is required to gain required clearance. The required clearance can be gained by simply heating and denting the subframe, cutting the subframe, or sectioning and welding the subframe. LOJ sections and welds the subframe on all in-house installations, and these instructions cover this method.

- 1) Remove the front subframe from the vehicle. This can be done with it in the car, but it is MUCH easier on a bench.
- 2) Mark the subframe where it needs to be cut, see the images below.



- 3) Cut this section out of the subframe, but SAVE the piece you removed!



- 4) This piece can be trimmed and flipped over, then welded back into the same location it was cut out of.



- 5) This will gain the required clearance to clear the bottom of the compressor when installed.

