

NISSAN RB & KA ENGINES (RB20/RB25/RB26/RB30/KA24) TO NISSAN 350Z VQ35DE TRANSMISSION ADAPTER



INSTALLATION INSTRUCTIONS

Rev A – DEC 2021

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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 Basic Adapter Kit should include the following components:



A - (Qty 1) – Adapter Plate with Offset Dowel Spacer	E - (Qty 2) – M8x1.25 30mm Socket Head Screws and Lock Washers
B - (Qty 1) – Flywheel and Torque Plate	F - (Qty 4) – M10x1.5 25mm Low-Profile Socket Head Screws
C – (Qty 5) – M10x1.5 55mm Hex Head Bolts and Large Flat Washers	G - (Qty 4) – M10x1.5 20mm Flange Head Bolts
D – (Qty 4) – M10x1.5 35mm Flange Head Bolts	H - (Qty 2) – M10x1.5 43mm Studs NOT SHOWN (Qty 2) – M10x1.5 62mm Studs
I – (Qty 2) – M10x1.5 Flange Head Nuts	

Other parts that you will need, some available separately from LOJ Conversions:

(Qty 2) – 350Z Transmission to Engine Block Alignment Dowels

(Qty 2) – RB/KA Engine Block to Transmission Alignment Dowels

(Qty 1) – RB/KA Engine Block to Transmission Plate

(Qty 6) – RB/KA Flywheel Bolts

(Qty 9) – 350Z Pressure Plate Bolts or LOJ ARP Pressure Plate Bolts



INSTALLATION PROCEDURE:

- 1) If your Engine has a flywheel or flexplate installed, remove it and discard. If your engine has a pilot bushing installed, now would be a good time to replace it. A standard RB or 350Z pilot bushing can be used.

IMPORTANT – Install the Pilot Bushing until it is flush with the end of the pilot flange on the crankshaft. **DO NOT Over-Drive the bushing past this point. Driving the pilot until it is flush with the end of the pilot flange will ensure maximum support of the 350Z input shaft.**

- 2) The first thing you will want to do is clearance the bellhousing on the 350Z transmission to clear the RB/KA starter snout. To do this, install the LOJ Adapter onto the 350Z bellhousing using two 350Z transmission alignment dowels and two of the M10x1.5 55mm long hex head bolts and large washers.
- 3) Install the two 43mm long studs (for RB) or 62mm long studs (for KA) into the back of the adapter plate into the holes that the RB/KA starter will bolt to.
- 4) Remove the Engine Plate from the back of your RB/KA engine and place it onto the back of the Adapter Plate.
- 5) Attempt to install your RB/KA starter onto the studs, you will see where the snout of the starter interferes with the 350Z bellhousing. Mark the bellhousing and remove material until there is sufficient clearance for the RB/KA starter to install flush with the adapter plate.



- 6) Remove the adapter and engine plate from the transmission and install them onto the RB/KA engine. The adapter plate is secured to the engine block using the four supplied M10x1.5 25mm long low-profile socket head bolts. Make sure your hollow RB/KA engine alignment dowel is driven far enough into the block to allow the bolt to fully tighten (see images). Additionally, make sure the RED alignment dowel retainer is in the correct position for your intended engine as shown below.



FOR RB ENGINE



FOR KA ENGINE

- 7) ***Four M10x1.5 20mm flange head bolts are also included to attach the RB/KA lower braces to the adapter plate if you have them. Also included are extra flat washers to shim these bolts so that they do not extend past the face of the adapter plate. This is critical, if the bolts extend past the face of the adapter plate they will prevent the transmission from fully seating on the adapter.***
- 8) Install the LOJ swap flywheel onto the RB/KA engine following the OEM installation procedure.
- 9) Install your clutch onto the flywheel. The flywheel will accept any single disk 350Z clutch (250mm) or single disk RB clutch (240mm). LOJ ARP pressure plate bolts are longer than stock bolts ensuring better thread engagement. If stock bolts are used, turn in each bolt one turn at a time until the pressure plate is fully seated. This will prevent damaging the threads in the flywheel.

Note: *No special clutch release parts are required. Use the stock 350Z clutch fork, clutch pivot ball, release bearing, and release bearing sleeve. If you choose to use an RB clutch, you will need to source a 350Z release bearing.*

10) Install the transmission onto the adapter plate. You will use five M10x1.5 55mm long hex head bolts and large washers around the top of the transmission. Use of the washers is critical to ensure the bolts do not protrude past the back of the adapter plate. Two M10x1.5 35mm long flange head bolts are used on the RH side of the transmission below the starter. Two M8x1.25 30mm long socket head screws and flat washers are used in the bottom two bolt holes. See images below.



11) Your installation is complete, enjoy!!!

