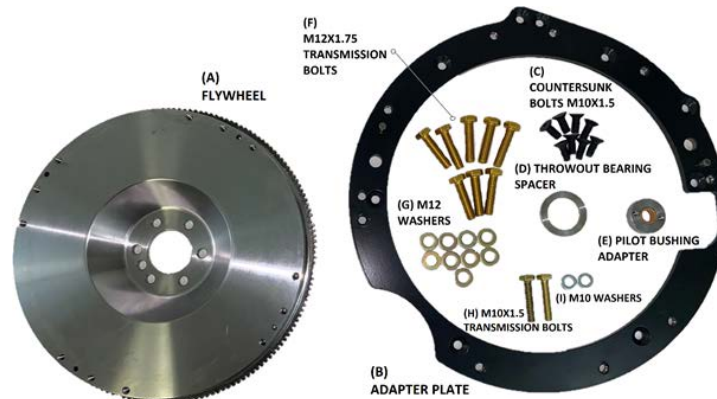


## Installation Instructions

Fits engines: Gen 3/Gen 4 LS engines

Fits Transmissions: 2005 + Nissan Frontier and Xterra 6 speed manual (2wd and 4x4)



### Kit Contents:

- A) 1 - Flywheel
- B) 1 - 3/8" steel Adapter Plate
- C) 8 - M10 x 1.5 x 25mm Flat Head Socket Cap Screws for countersunk adapter plate holes.
- D) 1 - Throwout bearing spacer
- E) 1 - Pilot bushing adapter
- F) 9 - M12 x 1.75 x 50mm bolts for transmission to adapter plate
- G) 9 - M12 flat washers
- H) 2 - M10 x 1.5 x 50mm bolts for transmission to adapter plate
- I) 2 - M10 flat washers

### Important Notes:

- The G Force LS to Frontier 6 speed manual transmission adapter works with transmissions originally behind the Nissan VQ40DE V6 engine.
- A slight modification is necessary to the transmission to allow clearance for starter.
- Uses High-torque "mini" starter for LS engines.
- Be sure to use manufacturer torque specs when tightening fasteners.



1. This spacer goes behind the Throwout, or Clutch Release, bearing to shim it closer to the flywheel. Remove cast iron clutch release assembly and remove old bearing. This would be a great time to replace your throwout bearing (SKF Part # N4000). This spacer has a slight press-fit. Using a press and or a vice and large socket, press the spacer onto the cast throwout assembly. Then press on clutch release bearing as shown on page 2.



2. In order to fit the starter, the transmission casting boss must be clearanced. Bolt the adapter plate to the transmission and use a permanent or paint marker to trace out where the adapter plate starter hole lands.



3. Remove the adapter plate and locate a grinder or cut-off wheel. Be sure to wear the appropriate PPE when operating grinders and other rotating/reciprocating tools. Cut off the marked material in about 2-3 inches as shown below. Reinstall the adapter and test fit the starter to make sure it clears



4. Remove original Flexplate or Flywheel from your LS engine. If your engine had a manual transmission, remove the stock pilot bearing.



5. Install the Pilot Bushing Adapter into the back of the crankshaft, as normal. Make sure you press it in STRAIGHT until it is flush with the outside of the crankshaft.

6. Install adapter plate to the engine using the flat head bolts into the countersunk holes on the plate.

7. Install flywheel.

8. Install Clutch and Pressure Plate onto the flywheel. Be sure to use a clutch disk alignment tool.



9. Finally, install your Nissan Frontier/Xterra 6 speed manual transmission to the adapter plate using the M12 and M10 bolts

