

# INSTALLATION GUIDE

## Automatic Transmission Crossmember for LS Engine Swap into '67-69 Camaro/Firebird or '68-74 Nova, Chevy II

(compatible with 4L60, 4L65, 4L70 & 4L75 transmissions)

### PART # 6418

#### READ ENTIRE INSTALLATION GUIDE BEFORE BEGINNING THIS INSTALLATION

This transmission crossmember is specifically designed to assist in the installation of a 4L series (4L60-75) transmission into 1967-69 Chevy Camaros and Firebirds and 1968-74 Chevy II and Nova vehicles powered by an LS platform engine. It was developed for use with Trans-Dapt's LS swap engine mount kit #4201, and Hedman Hedders #68710 series of Camaro/LS headers. To ensure a drivetrain/pinion angle that is within recommended factory specification, it is strongly recommended that this crossmember be used in conjunction with Trans-Dapt's #4201 engine mount kit only. Trans-Dapt Performance Products cannot guarantee a proper pinion angle if installed with any other LS/Gen 1 F-Body engine mounts.

This is a complex engine swap project that may require cutting, drilling or other modification to the vehicle. There are many installation factors to consider when performing this engine swap and exact steps may vary from model to model. This installation guide offers general instructions for the proper installation of the transmission crossmember only. For further details regarding any other aspect of the engine swap, we recommend the use of a published how-to guide, dedicated to the engine swap project you are about to perform. This is an advanced user project. If you're uncomfortable with any aspect of it, we suggest you consult with a certified mechanic.

The crossmember and bracket are shipped with a temporary black finish to protect the components from corrosion while awaiting installation. This finish is not intended to be the final finish. Thoroughly clean these components to the bare metal before applying any final finish.

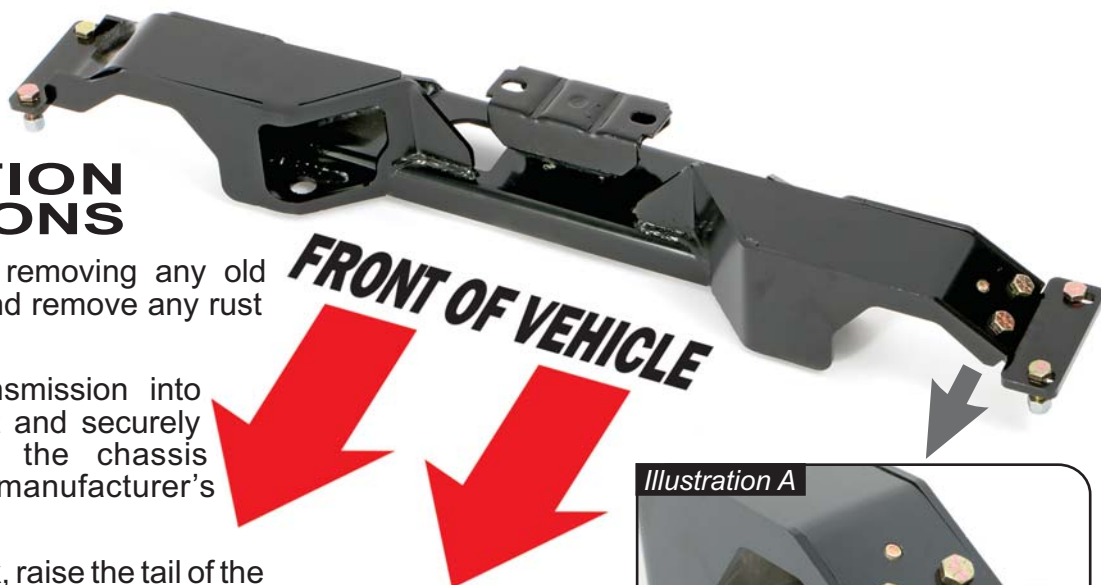
#### THIS KIT CONTAINS

1pc. Transmission Crossmember
1pc. Frame Bracket
1pc. Rubber Transmission Isolator
1pc. Transmission Isolator Spacer
1pc. 3/8"-16 x 3/4" Hex Head Bolts
6pc. 3/8"-16 x 1" Hex Head Bolts
6pc. 3/8"-16 Nylon Insert Locknuts
3pc. 7/16"-14 x 1" Hex Head Bolts
3pc. 7/16" Split Lock Washers

## INSTALLATION INSTRUCTIONS

1. Prepare frame rails by removing any old hardware or brackets, and remove any rust or debris.
2. Lower engine and transmission into position as a single unit and securely mount the engine to the chassis following the mount manufacturer's instructions.
3. Using a transmission jack, raise the tail of the transmission housing to allow room for crossmember installation.
4. Raise the new transmission crossmember into position by first placing the right (passenger) side crossmember flange onto the framerail. Place the T-shaped framerail connector plate over the left (driver) side framerail, but under the Trans-Dapt crossmember, interlocking the crossmember and frame bracket. Using a 3/8"-16x3/4" bolt (*apply removable threadlocker*), two 3/8"-16x1" hex bolts and 3/8"-16 locknuts, securely fasten the framerail connector plate to the crossmember. The 3/8"-16x3/4" bolt goes through the upper bolt on the connector bracket, and threaded into the tapped hole on the crossmember (*See ill. B*). Securely tighten these three fasteners, and allow the crossmember to rest on framerails.

(Continued On Reverse Side)



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5. Fasten the rubber transmission isolator pad to the transmission housing (bolts not included). With the crossmember moved rearward for clearance, slowly lower the rear of the transmission down until the rear passenger side corner of the transmission pan can be inserted into the clearance cavity built into the crossmember. Do not rest the transmission on the crossmember at this time.
6. Position the crossmember back into its proper location on the framerails, and loosely bolt the crossmember to the framerails using two 3/8"-16x1" hex bolts and locknuts per side.
7. Determine the center point between the framerails (i.e.  $32" \div 2 = 16"$ ). Utilizing the slotted holes on either end of the crossmember to adjust it, position the crossmember so the center isolator pad mounting hole is precisely centered between the two framerails.
8. Once centered, securely tighten the four framerail bolts/nuts and three frame connector plate bolts.
9. Position the supplied isolator spacer plate between the rubber isolator pad (included with this kit) and crossmember, then loosely fasten the pad to the crossmember using two 7/16-14x1" Hex bolts and lock washers in the two outer isolator bolt slots in the crossmember (**See ill. B**). The center slot is not used for this installation. Carefully lower the transmission down onto the crossmember, and tighten the two bolts connecting the transmission isolator to the crossmember.

**IMPORTANT-** To ensure that the recommended driveline pinion angle of 3°-5° is achieved, only use the rubber isolator pad included in this kit (Trans-Dapt pad #9225), or Trans-Dapt's high-performance polyurethane isolator pad (Trans-Dapt #4237), along with the isolator spacer included in this kit. to install your transmission. Combining this crossmember with any other isolator pad, or failure to install the isolator spacer, may result in an improperly angled drivetrain.

10. Re-check that all fasteners are properly tightened, including the three framerail connector plate bolts, four framerail to crossmember bolts/locknuts, two crossmember to isolator connecting bolts, and two isolator pad to transmission housing bolts.
11. The installation of your Trans-Dapt Performance Products Transmission crossmember is complete.

