



LS Conversion Installation Guide 1978-88 G-Body



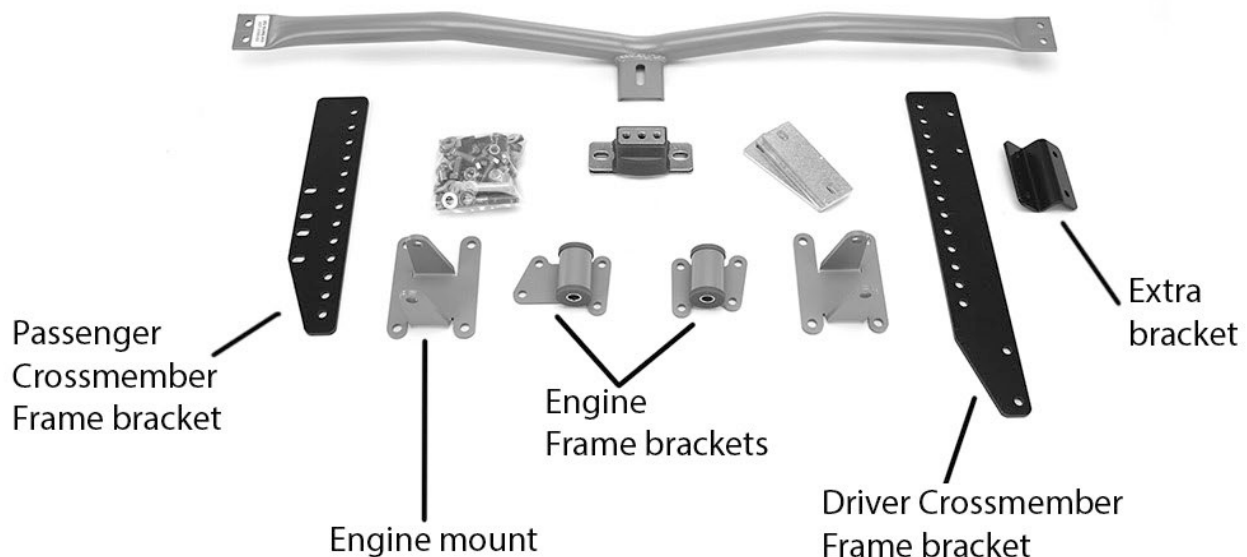
Hardware and Parts List

All motor mounts come with a lifetime warranty and free replacement upon return of any mount or bracket.

Quantity	Item
2	Frame Brackets
2	Motor Mounts
1	Transmission Crossmember
2	Crossmember brackets
1	Driver side support Z bracket
1	Polyurethane Transmission Mount and spacers
1	Hardware Pack

Installation Notes:

1. The Cadillac CTSV pan can be used on lowered cars for extra ground clearance.
2. All headers clear the G-body's factory OEM A/C box, power steering box, and power brakes.
3. Notching of the frame may be required when using the 98-02 Camaro/Firebird F-body low mount A/C compressor for AC line clearance.
4. No transmission tunnel modifications are required for automatics but a new shifter hole is required for the T-56.
5. Headers are designed around a floor shifter linkage, column shift linkage will require modifications.
6. Headers will fit with the following transmissions: T-56, 4L60E, 4L65E. 6L80, 6L90
7. When ordering, you must specify year, make, model, and which transmission is being used (T-56, 4L60E, or 4L65E) cross members are different.
8. LS kits and Headers for these cars are to be used with the GM LH-8 oil pan.
9. In some header installations the starter, valve cover, and/or spark plugs may need to be removed for installation of the new Muscle Rod headers.
10. Frame mounts bolt into existing holes in the frame, but with the short shelf frame the frame will need to be drilled for the extra transmission crossmember bracket.
11. Kits will not work with factory clutch z-bar and driveshaft length will change from original.
12. All of our kits are designed around factory suspension and steering components
13. Due to variations in body, body mounts & frames you might need to clearance the transmission tunnel or firewall.
14. Black bushings are standard contact us for red bushings.
15. Our mid-length headers have ball and socket type collectors and O2 bungs.



Step 1:

Locate the Driver's Side (LEFT) and Passenger's Side (RIGHT) motor mounts and loosely bolt them to the engine using the supplied 10mm allen head bolts, now loosely bolt the frame brackets to the engine mounts using the

supplied 1/2"-13 x 4" long bolts and nylon lock nuts. (the bolts will be tightened after the engine is set in place and everything is lined-up)



Detailed view of driver's side engine mount and frame bracket on engine



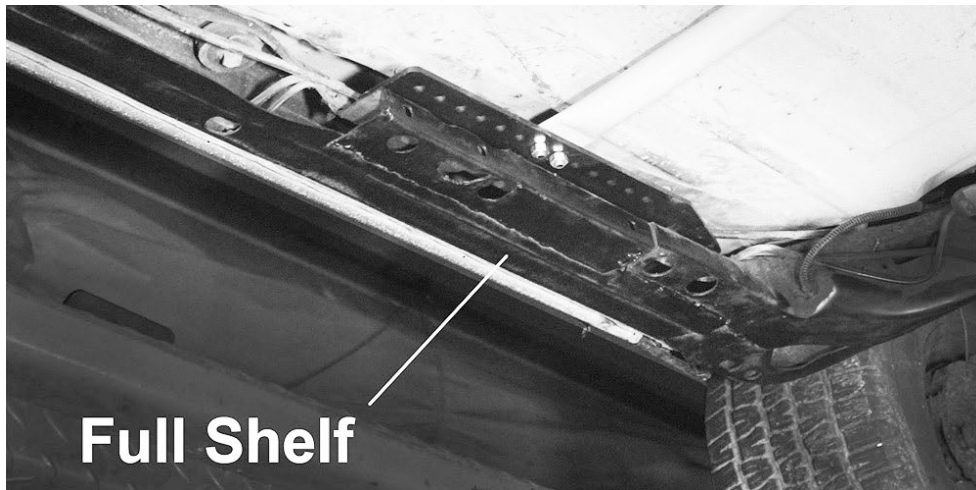
Detailed view of Passenger side engine mount and frame bracket on engine

Set the engine in place with each frame bracket loosely bolted to the frame

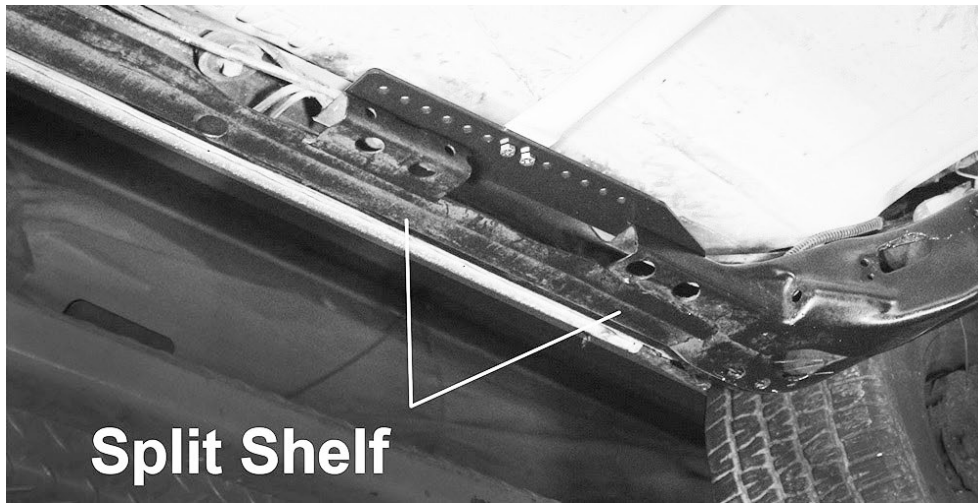


Step 2:

Loosely mount the crossmember frame brackets to the sides of the frame. There are different mounting positions for the different frames that were used under these cars. The difference is in the mounting shelf on the driver side of the car. This is due to the different generations of transmissions that were used over the years. We will refer to them as Full shelf, split shelf and short shelf. See photos below to determine your configuration.

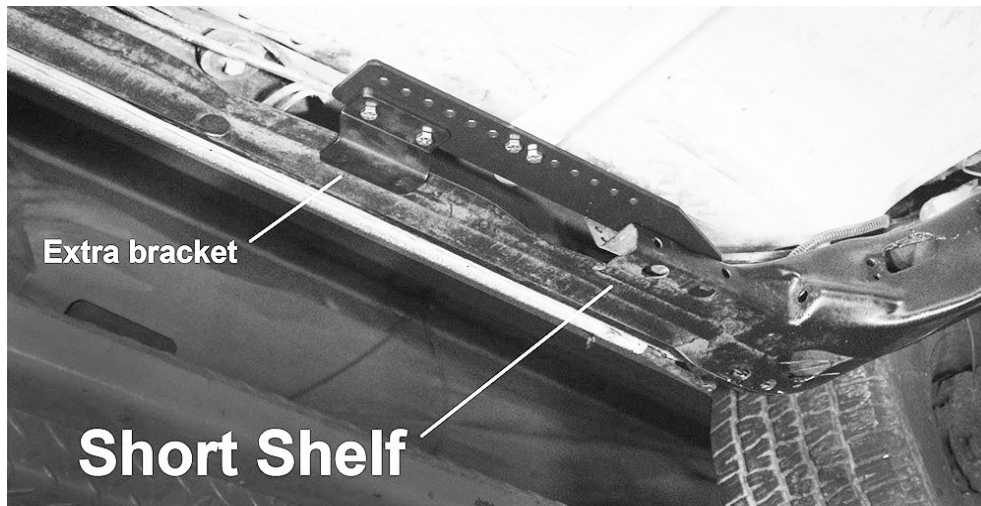


Full shelf has two mounting locations on one long shelf for the crossmember bracket to mount in.



Split Shelf

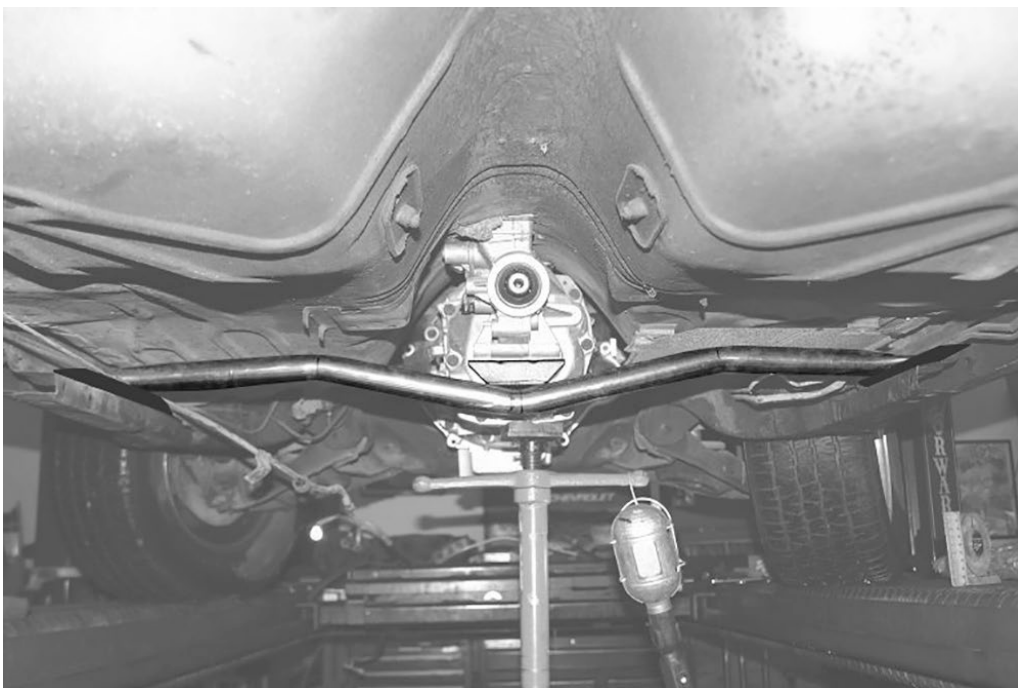
Split shelf has two smaller shelves with mounting locations for the crossmember bracket to mount in.



Extra bracket

Short Shelf

Short shelf only has the front mounting location and requires the extra bracket to be bolted to the frame.

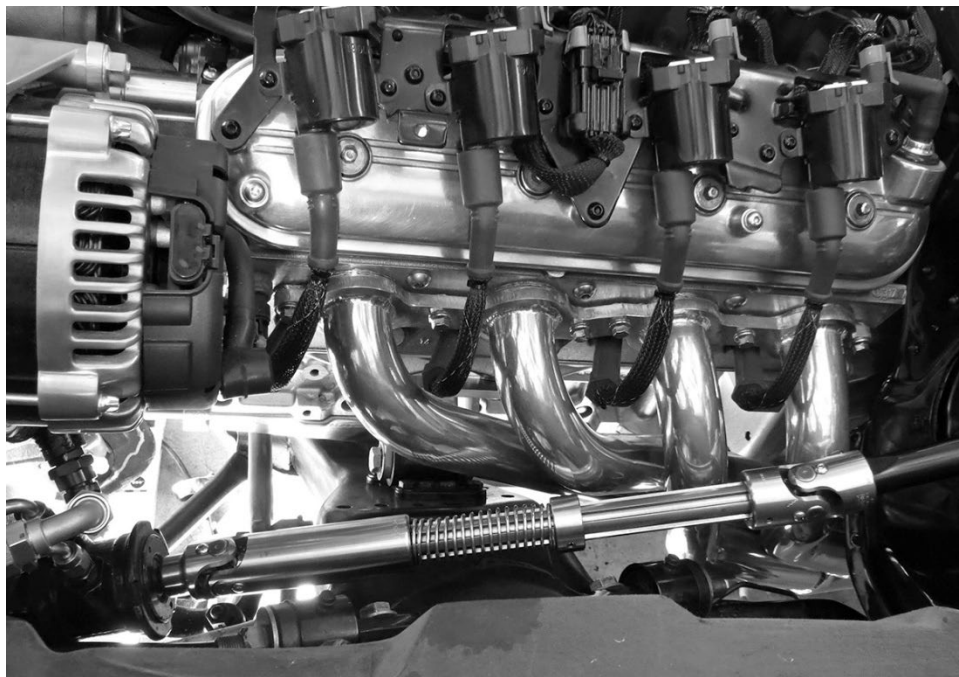


Step 3:

Lift the rear of the transmission using a floor jack. Install the polyurethane transmission mount on the transmission, making sure that you install any spacer plates and the provided preload plate between the mount and the transmission (this preloads the polyurethane mount). Slide the transmission crossmember onto the crossmember brackets and bolt the mount loosely to the crossmember using the 7/16"-13 x 1" bolt and the 7/16" flat washer.



SHORT SHELF only - When using the extra bracket you will need to drill the mounting holes in the frame with a 25/64" drill bit. Install the 3/8"-16 x 1" bolts, flat washers and the 3/8"-16 nylon lock nuts.



Step 4:

Once you have checked to make sure that everything is installed correctly and lined up go back and tighten the engine mount to block bolts, engine mount to frame bracket bolts, frame bracket to frame bolts, transmission mount to transmission bolts, transmission mount to crossmember bolts, transmission crossmember to bracket bolts and brackets to frame bolts.

Finished -

Road test your vehicle and familiarize yourself with it's new LS power. After the first test drive recheck all bolts to make sure they are tight. Contact us if you need any help with anything.

Thank you for purchasing MuscleRods products proudly made in the USA!

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