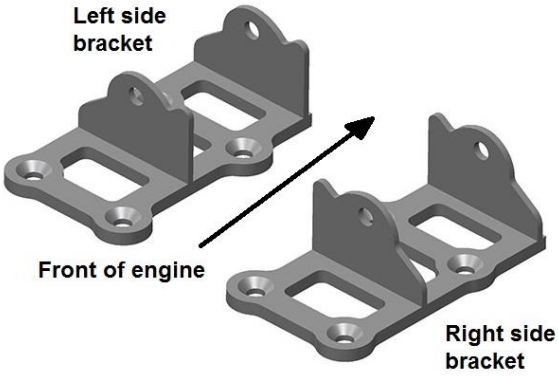
1978-87 GM G-Body LS Swap Engine Mounting Brackets
12643HKR
Installation Instructions 199R10708



Thank you for choosing to use HOOKER™ engine swap mounting brackets as part of your LS swap project. This mounting bracket kit is part of the most comprehensively engineered system of mounting components, headers and exhaust systems available for this application. The entire HOOKER™ swap system is designed to decrease your total swap installation effort and cost, while increasing the engineered quality of your vehicle and compatibility of these components with other popular aftermarket components. Please read these instructions thoroughly before attempting installation.

PRE-INSTALLATION CONSIDERATIONS:

Installation of these brackets requires the installation of new stock OE style clamshell engine mounts (Anchor/Westar 2292 mounts or aftermarket poly inserts), as installed on all 1978-87 G-body vehicles equipped with Chevrolet small block V-8 engines. Do not reuse old clamshell mounts as part of this installation.

When used with the related Hooker™ **12644HKR** transmission crossmember, this CAD designed engine swap mounting bracket kit will replicate the stock small block Chevy engine/transmission inclination angle in order to minimize the need to shim/adjust the rear pinion angle in stock to moderately lowered chassis applications.

Due to the unique design geometry of this engine swap mounting bracket kit, attempts to install it with headers and/or transmission crossmembers not developed by HOOKER™ for this application will more than likely not be successful.

An engine hoist will be required to position the engine/trans into the vehicle in the proper orientation. Use of an adjustable-angle engine sling will greatly ease the hoisting/loading operation and negate the possible need to reposition the lifting chains mid-operation. An automotive lift or a jack and jack stands will be required to safely raise and support the vehicle.

If you plan to retain the functionality of the stock A/C system, it is highly recommended that you install the engine and transmission into the vehicle separately to minimize the chance of damaging the evaporator case on the firewall when positioning the engine in the chassis. Due to the extremely large production tolerances across all year models of these vehicles, clearance between the right side valve cover and the evaporator case can range from 1/2” to 0 distance between these components. Some installations will provide a surplus of coil/coil bracket clearance while others will be tight and require the rear coil to be relocated away from the evaporator case for clearance.

CAUTION! WORK ONLY ON A LEVEL SURFACE. USE JACKS /JACK STANDS OF SUFFICIENT CAPACITY TO LIFT AND SUPPORT YOUR VEHICLE. NEVER WORK UNDER A VEHICLE SUPPORTED BY A FLOOR OR BUMPER JACK.

COMPATIBILITY INFORMATION:

These engine swap mounting brackets were specifically designed for bolt-in compatibility with the HOOKER™ transmission swap crossmember, cast iron LS exhaust manifolds, headers and exhaust systems also designed/validated for this application. Various other OE and Holley® brand LS components have also been validated and/or designed for use with this system of components as follows:

The engine/transmission position provided by this engine swap mounting bracket kit has been developed to be compatible with the Holley® **302-2** LS oil pan; other OE/aftermarket oil pans may also be compatible.

The stock GM 4th-gen F-body and GTO* engine accessory drive systems are both compatible with this LS swap engine bracket kit (excluding the A/C compressors) if installed into a vehicle equipped with the Saginaw quick-ratio 700 series power steering box (OE equipment on Monte Carlo SS and Buick Turbo Regal/Grand National vehicles). F-body and GTO accessory drive systems are not compatible with the Saginaw 605 power steering box installed as original equipment in a greater number of G-body vehicles. This fitment information is only valid when these engine mounting brackets are installed in conjunction with the Hooker **12644HKR** transmission crossmember developed for use with these mounting brackets.

*The tip of the GTO alternator pulley or steering box may require dressing/grinding to provide adequate operational clearance due to the wide production build tolerances found in these vehicles.

The GM Vortec truck engine accessory drive system is compatible for use with the OE Saginaw 605 series power steering box, the Saginaw quick-ratio 700 series power steering box (OE equipment on Monte Carlo SS and Buick Turbo Regal/Grand National vehicles) and the Delphi 600 series power steering box. Use of the stock truck A/C compressor requires notching of both the engine crossmember and the stock cast aluminum compressor engine mounting bracket.

The OE Corvette/CTS-V accessory drives and the Holley accessory drive systems are not compatible with the fore/aft engine swap position required to install this swap bracket kit, with the exception of the Holley® **20-133** (GM R4) and **20-134** (Sanden SD508 or SD7) passenger's side top-mount A/C compressor brackets, which are recommended for use with stock or aftermarket type A/C systems as applicable.

Hooker™ LS swap manifolds **(8501HKR),** mid-length headers **(70201503HKR & 70201504HKR),** and long-tube headers **(70101305-RHKR/70101505HKR & 70101306-RHKR/70101506HKR)** are all compatible with the stock A/C evaporator case when installed with this engine mounting bracket kit and related Hooker **12644HKR** transmission crossmember.

More LS engine performance components, such as EFI fuel control systems, fuel filters, fuel pumps, plumbing hose/fittings and valve covers can be found at www.holley.com.

TIPS FOR A SUCCESSFUL ENGINE SWAP:

1. Check that the hardware package includes the following**:** (8) M10 x 1.5 x 30 Bolts.
   If these are missing, please contact Technical Service at 1-866-464-6553 or 270-781-9741.
2. Mark all hoses, wires, and vacuum lines, according to their function. Use masking tape and a pen for this.
3. Whenever possible, utilize the existing wiring and lines.
4. Get a wiring diagram of your vehicle and one for the vehicle from which the new motor was removed. Make photocopies of both systems. Add your modifications to these copies, so you will have accurate records for future reference.
5. Think carefully before removing or defeating any emissions device. A legal engine swap requires the emissions components to be intact, especially when you try to sell the vehicle.
6. Save as much hardware that is removed from the donor engine as possible. You may need some of these items later.
7. Taking the time to do it right is cheaper than taking short cuts and having to do it again. Make sure you pay close attention to critical areas like fuel systems and brake lines. Neglecting to double-check your work could have life or death consequences.
8. Do not overstress components that are designed for stock four or six cylinder engine torque by over-abusing a motor of greater horsepower.
9. Don't forget to upgrade your radiator, fan(s), and hoses to accommodate the cooling requirements of your LS engine.

VEHICLE PREP:

1. Remove the hood from the vehicle.
2. Disconnect the battery and fuel lines.
3. Remove the existing wiring harness and set aside for later re-use of connectors, as needed, to complete electrical connections to the swap engine harness.
4. Drain all coolant and remove the radiator/hoses from vehicle.
5. Remove the driveshaft, engine, transmission/crossmember and existing engine mounts from the vehicle.

SWAP ENGINE/TRANS PREP:

1. Carefully remove the following components from the engine: spark plug wires exhaust manifolds/O2 sensors, wiring harness/computer, MAF sensor, starter motor/plate and dust covers, A/C compressor and bracket, the oil dipstick/tube, and engine mounts/brackets.

2. Clean and paint parts to be re-used, if desired.

3. Secure engine/trans assembly to lifting sling and engine hoist.

4. Attach the left and right side Hooker engine brackets to the engine using the supplied M10 flat head screws.

ENGINE/TRANS INSTALL:

1. Install a new set of clamshell engine mounts (2292 Anchor or Westar brand mounts or equivalent) onto the vehicle chassis as shown in **Figures 1**, **2 and 3** below.

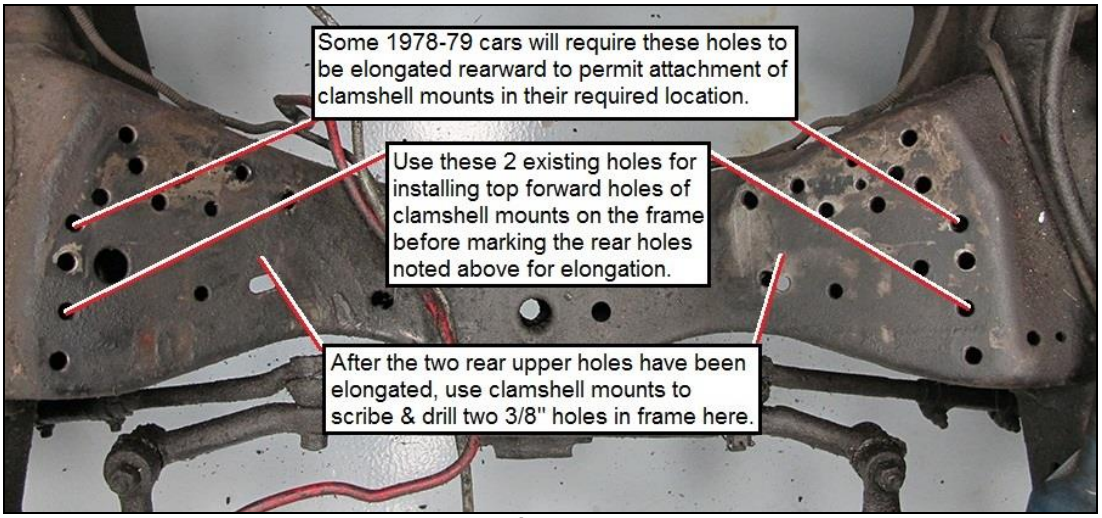


Figure 1



Figure 2

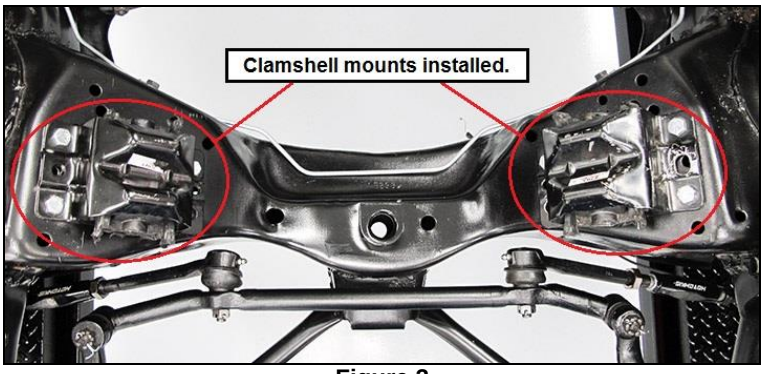


Figure 3

2. Raise engine or engine/transmission assembly on engine hoist high enough to clear the vehicle body. Then, carefully lower it/them down onto the clamshell mounts and install the engine mount through-bolts/nuts. If you are installing the engine and transmission together as an assembly, the use of an adjustable-angle engine sling is highly beneficial as it can ease the difficulty of getting the engine into proper position over the mounts and can greatly reduce the possibility of damage to vehicle components (i.e. the A/C evaporator case).

3. Install the transmission from under the vehicle, or position a floor jack under the transmission tail shaft and raise it up if you have installed the engine and transmission as an assembly.

4. To complete the installation of the engine/transmission assembly in your vehicle, install the Hooker **12644HKR** crossmember per the instructions included with its packaging.

LIMITATION OF LIABILITY – DISCLAIMER:

The regulation of emissions production, noise levels, and safety standards is undertaken by the federal government, each of the fifty state legislatures, and by many local municipalities, towns, and counties.

HOOKER™ makes no warranties of merchantability, of fitness for particular purpose, or that its products are approved for general use, or that its products comply with laws, regulations, or ordinances in the state where they may be sold to the ultimate purchaser, the consumer.

Unless expressly stated to the contrary in the catalog, instruction sheet; or price list, the entire risk as to the conformity of any company product in any such state and as to repair should the product prove to be defective or non-conforming, is on the retail purchaser, the buyer, the ultimate consumer, of such product and it is not upon the seller, distributor, or manufacturer.

In this connection, the retail purchaser, the buyer, the ultimate consumer assumes the burden of the entire cost of any and all necessary service, alterations, or repair.

THE FOREGOING STATEMENT LIMITS THE LIABILITY OF THE MANUFACTURER.

California vehicle code, sections 27156 and 38391, prohibits the advertising, offering for sale, or installation of any device, which modifies a vehicle's emission control system, unless exempted, unless otherwise noted. HOOKER™ Headers that have not received an Executive Order (E.O.) exemption from these code sections are not legal for sale or use in California on vehicles originally equipped with catalytic converters, except for racing vehicles, which may never be driven upon a highway. Check with your local authorities to determine if these headers are legal for use in your particular area.

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