

The installation of a four speed, late model five or six speed or even a non-factory three speed transmission has always presented a unique set of problems when coupled with a late model engine installation in a Classic. If you wish to use a late model engine with a block mounted starter, the original 5-6-7 cast iron bellhousing cannot be used unless it is ground on and notched for starter clearance. If you wish to use a later model GM aluminum bellhousing which will clear the starter properly (See Photo # 1.), you will soon discover that there is no provision for the inner crossshaft pivot on this type of bellhousing. The purpose of this article is to show you the best way to install a standard transmission in a Classic and provide you with the parts to complete the installation.

Following is a list of parts you may need to complete this installation:

Part # Description

- #08-04 Bushing and bolt assembly for cross shaft
- #08-10 Frame bracket w/stud (cross shaft support)
- #08-08 Cross shaft pivot stud
- #08-12 Clutch pedal kit
- #08-15 Clutch fork
- #08-16 Push rod/swivel and spring kit
- #08-34 Pedal rod (upper clutch pushrod)
- #08-32 Clutch cross shaft
- #08-21 Inner cross shaft pivot (for late model aluminum bellhousing)
- #18-02 Late model engine side mounts (2-pc frame)
- #18-134 Late model engine side mounts (1-pc frame)
- #18-131 Rubber for #18-02 or #18-134
- #19-03 Transmission crossmember
- #19-17 Crossmember brackets
- #19-20 Bolt kit (listed for Turbo 350 ,works with 4-speed, also)
- #19-26 Rear trans. mount for Four speed and Turbo 400
- #19-61 Stick shift flywheel bolts
- #207-05 Pressure plate bolts

1. In order to complete this installation, the small block engine must be side mounted in your Classic using **Part #18-02** or **#18-131** side mounts. Refer to March, 1991 *Classic Chevy World* or *The Tech Book* Vol 2, "Engine" pg 61 for engine side mount instructions. Once the engine is mounted, support it at the rear using a jack or block of wood. If the engine has no rear crankshaft pilot bushing, be certain to install and grease a pilot bushing at this point. There are several different types of flywheels to choose from. The most common flywheels accept a 10-inch, 10 1/2-inch or 11-inch clutch and pressure plate. Install the flywheel using bolts and star washers, **Part#19-61**. (See Photo #2.) Torque bolts to 55-65 foot lbs. Also install the starter at this point. Install the clutch disc and pressure plate using pressure plate bolts **Part #207-05**. Align the clutch disc using an alignment tool or old transmission output shaft before tightening the pressure plate bolts. Torque the pressure plate bolts to 25-30 foot lbs. (See Photo #3.)

2. Install the clutch fork, **Part #08-15**, in the aluminum bellhousing. Note the clutch fork and all other clutch items used in this installation are 1957 type, since these parts are still available new and will interchange with all three years. The bellhousing may be removed from any mid-'60s or newer GM V-8 standard shift vehicle. Install the bellhousing, clutch and

Modified Four-Speed Standard Shift Installation

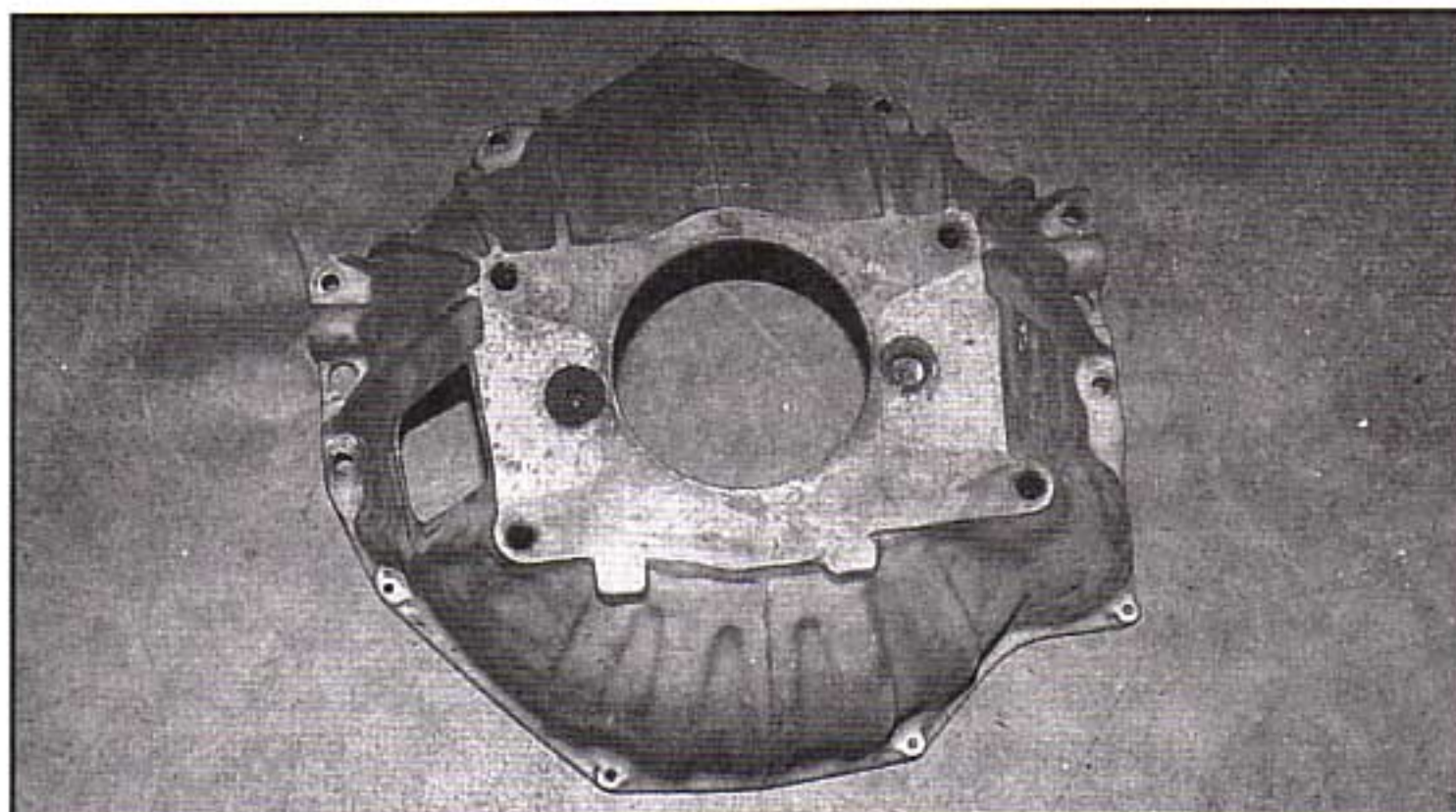


Photo #1

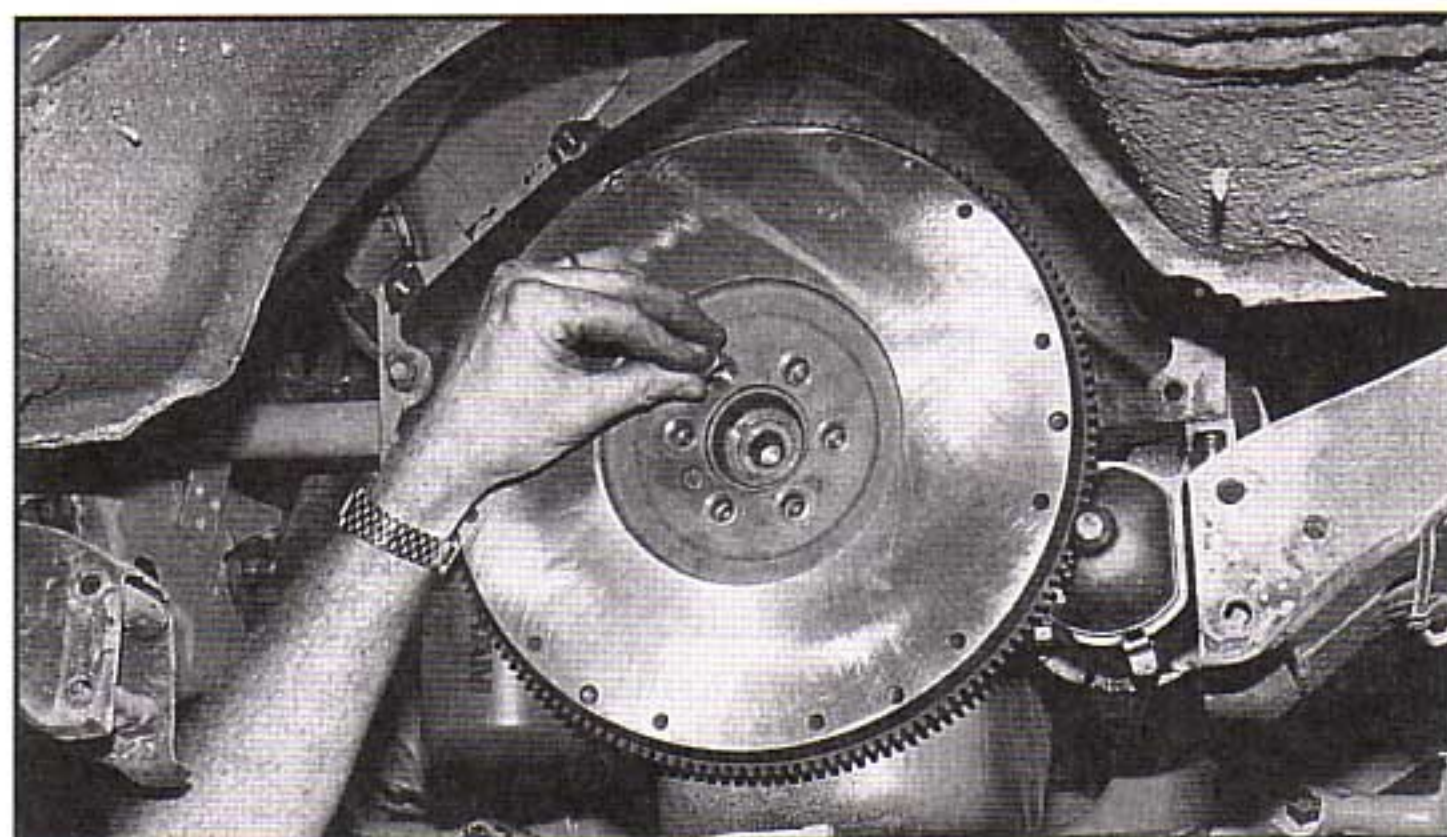


Photo #2

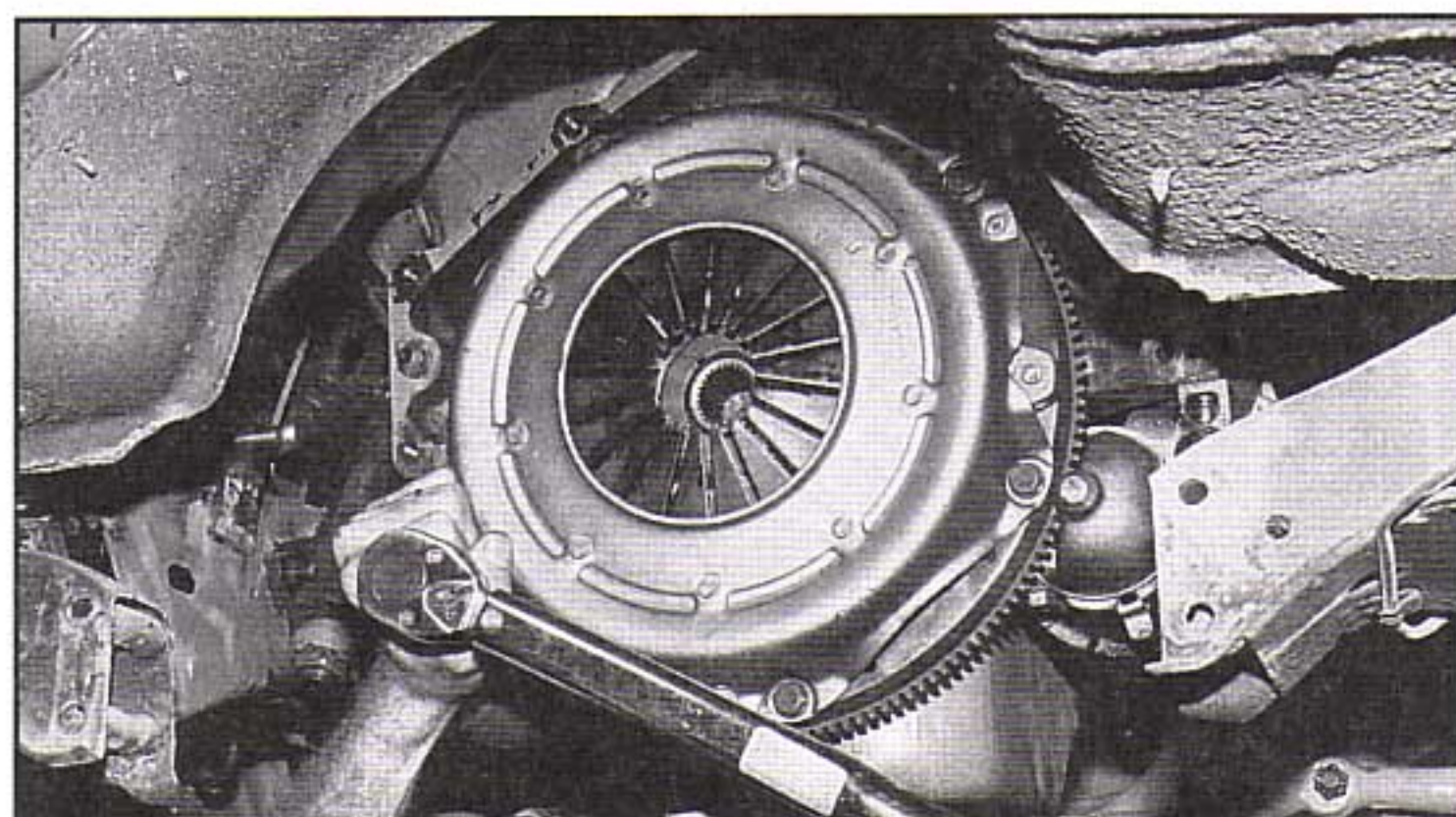


Photo #3

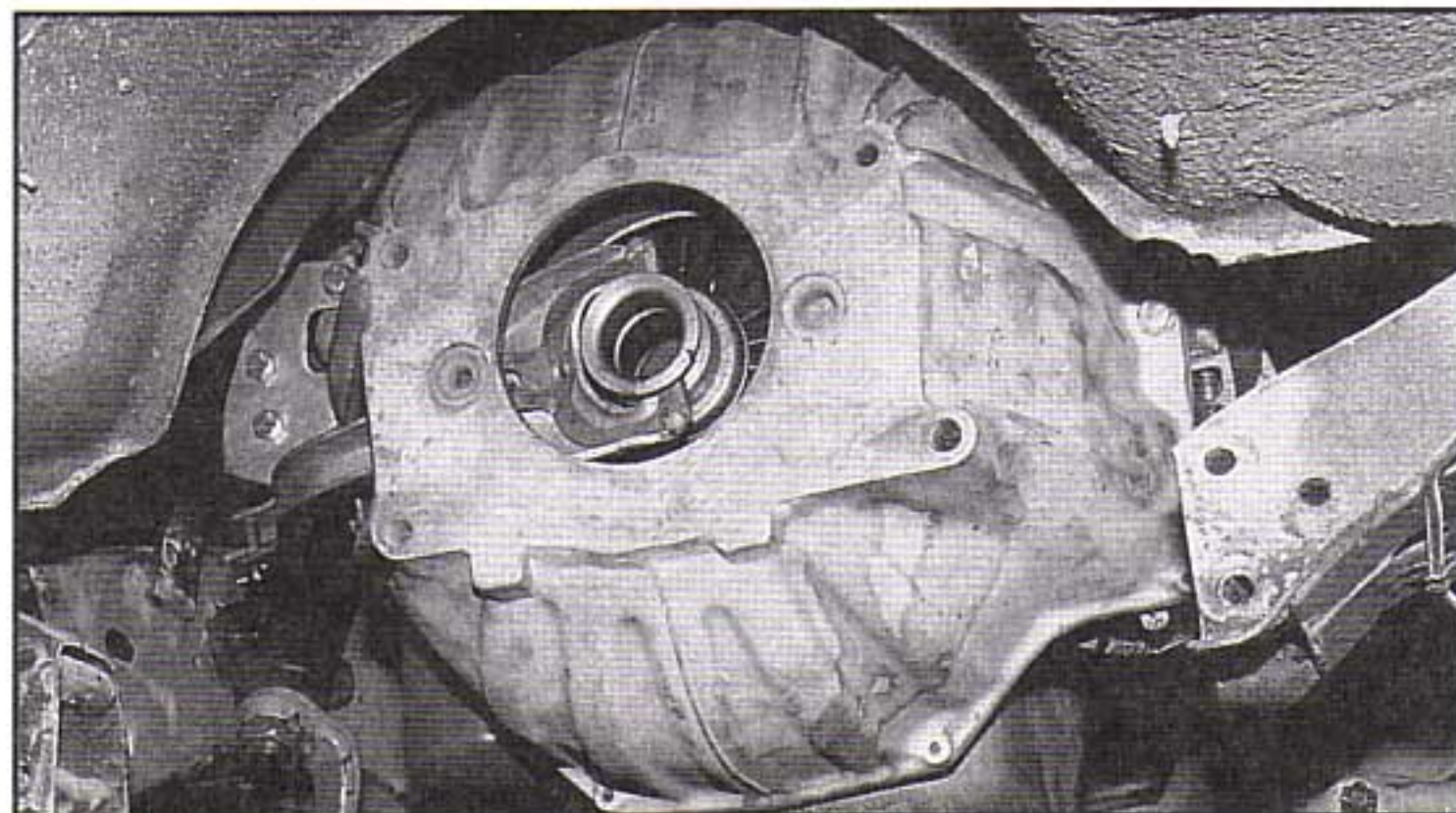


Photo #4

throwout bearing assembly using the bolts included in kit, **Part# 19-20**. (See Photo #4.) With the rear of the engine still supported, install the transmission using four 1/2-inch coarse bolts and lockwashers. (See Photo #5.) Install the rear transmission mount, **Part #19-26**, using bolts from the hardware kit. (See Photo #6.)

3. Bolt the crossmember, **Part #19-03**, to the rear transmission mount with the crossmember mounting tab oriented toward the front of the car. Also bolt the crossmember brackets, **Part #19-17**, to the ends of the crossmember. Adjust the tailshaft of the transmission so the center is 5 1/2 to 6-inches above the bottom edge of the frame rails and exactly centered between them. (See Photo #7.) Mark the locations of the four bolt holes that must be drilled in the side frame rails once the crossmember is positioned properly. Remove the crossmember and drill the four 3/8-inch holes inside and outside the frame rails so the 4-inch long carriage bolts may be installed. Install the crossmember and secure to the frame using the long carriage bolts, lockwashers and nuts provided in the hardware kit, **Part #19-20**. Reattach the crossmember to the rear engine mount so the crossmember installation is complete. (See Photo #8.)

4. If you are working on a 1955 that was originally equipped with a standard shift, it will be necessary to remove the original frame cross shaft pivot stud and replace it with a new stud, **Part# 08-08**. (See Photo #9.) Photo #10 shows the inner cross shaft pivot (for late model installation), **Part #08-21**. Install the clutch cross shaft, **Part #08-32**, on the frame pivot stud with the longer arm up and closest to the frame rail. Next install the inner cross shaft pivot by engaging the inner end of the cross shaft with the

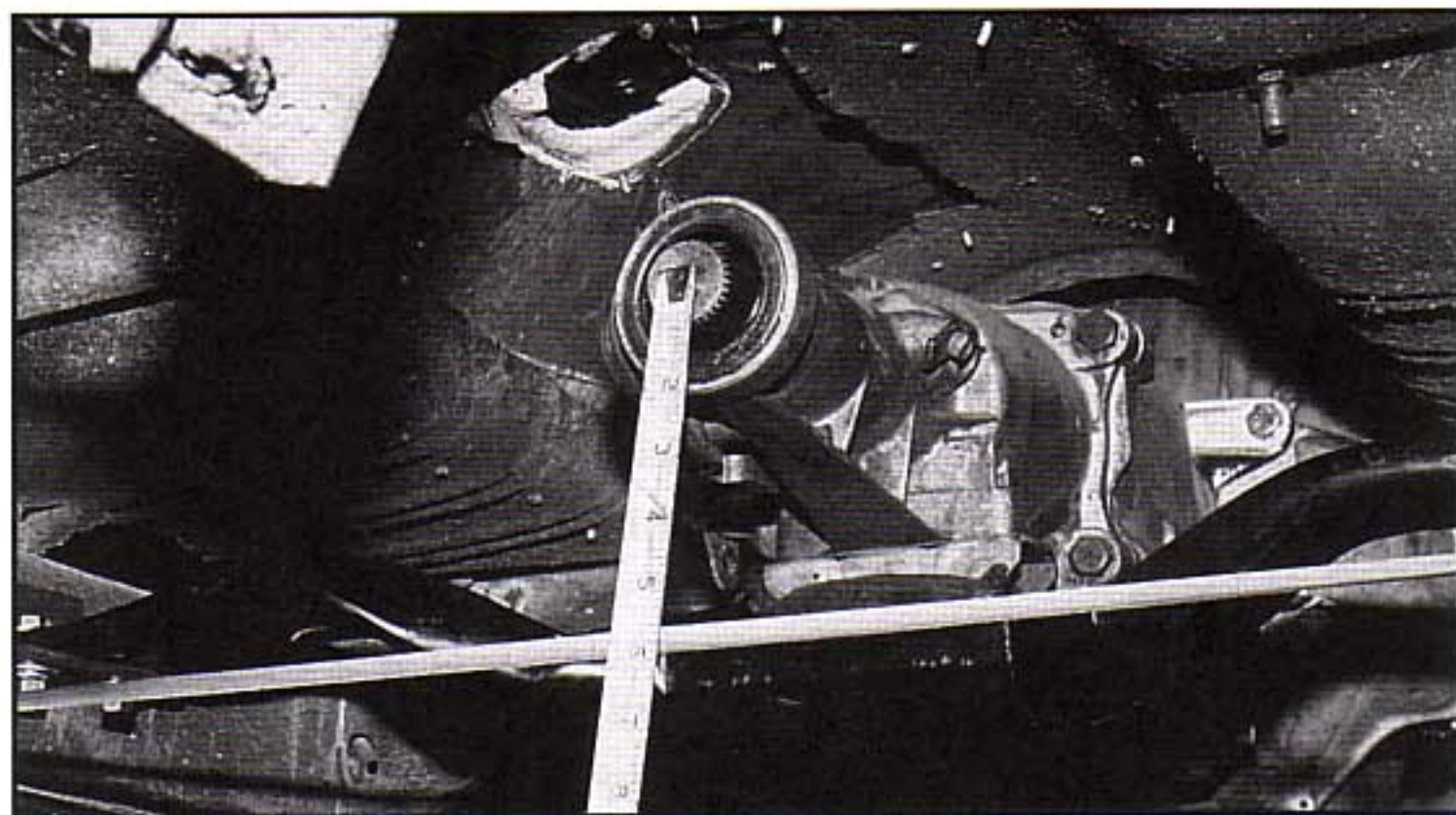


Photo #7

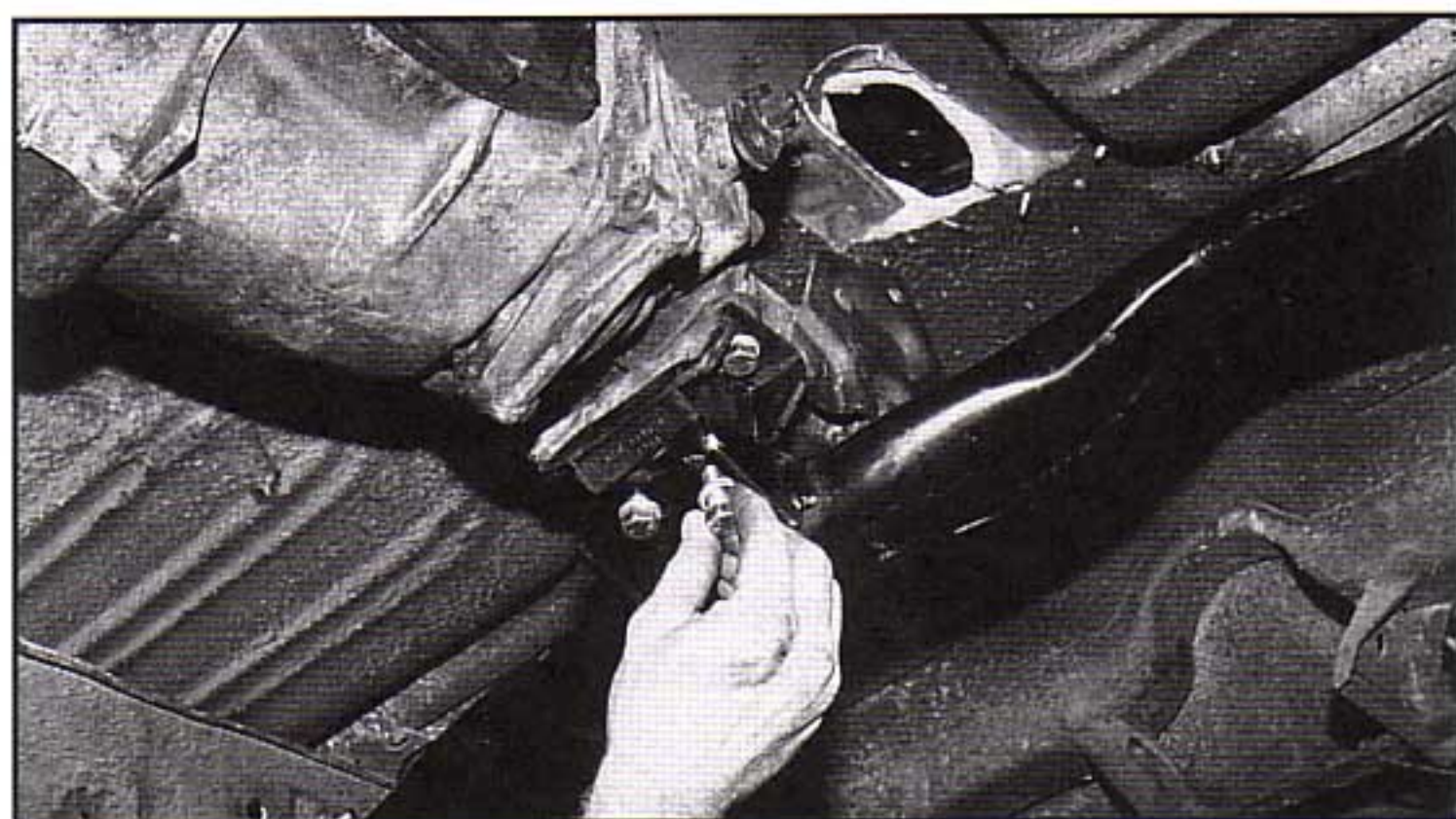


Photo #8

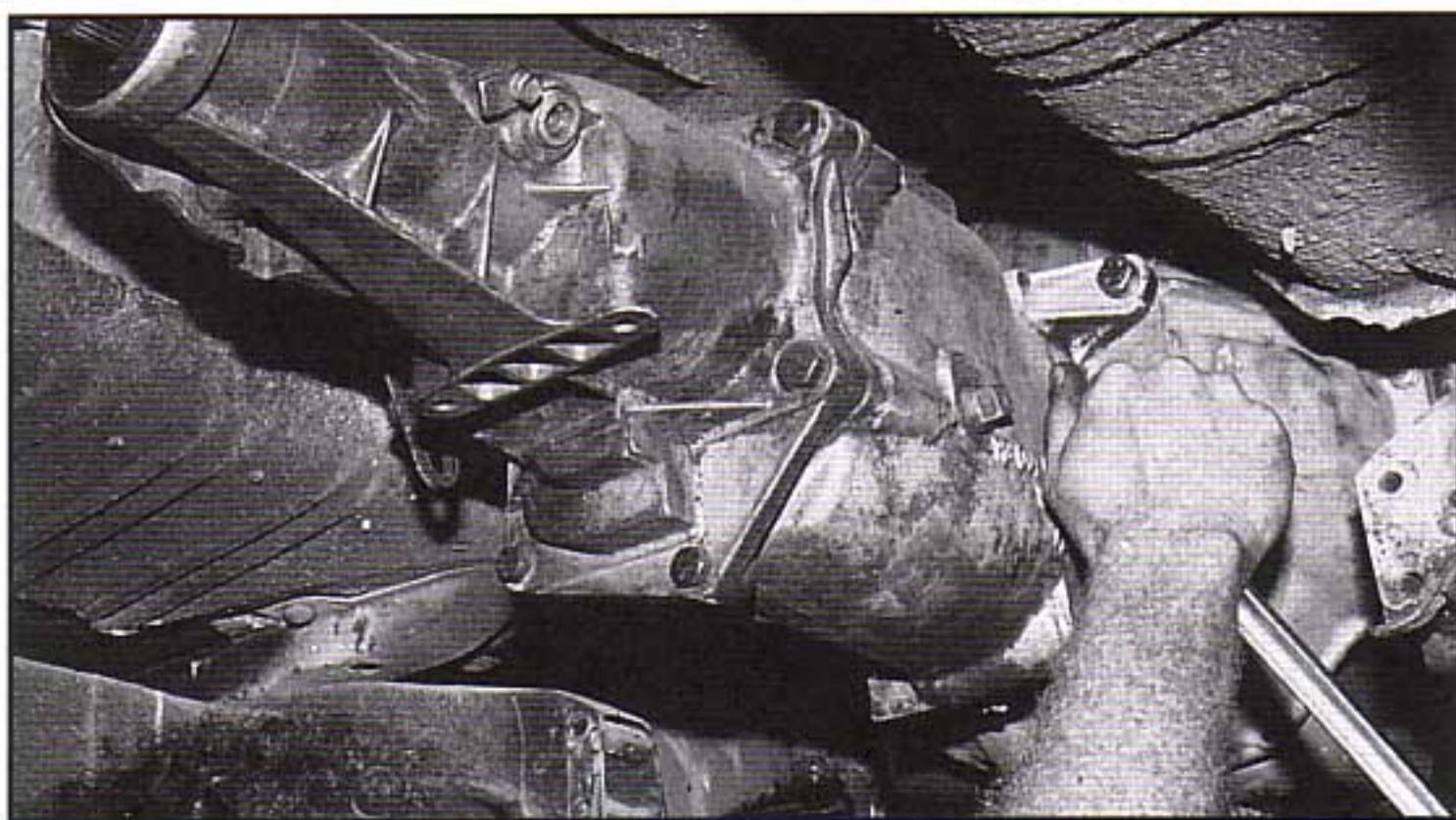


Photo #5

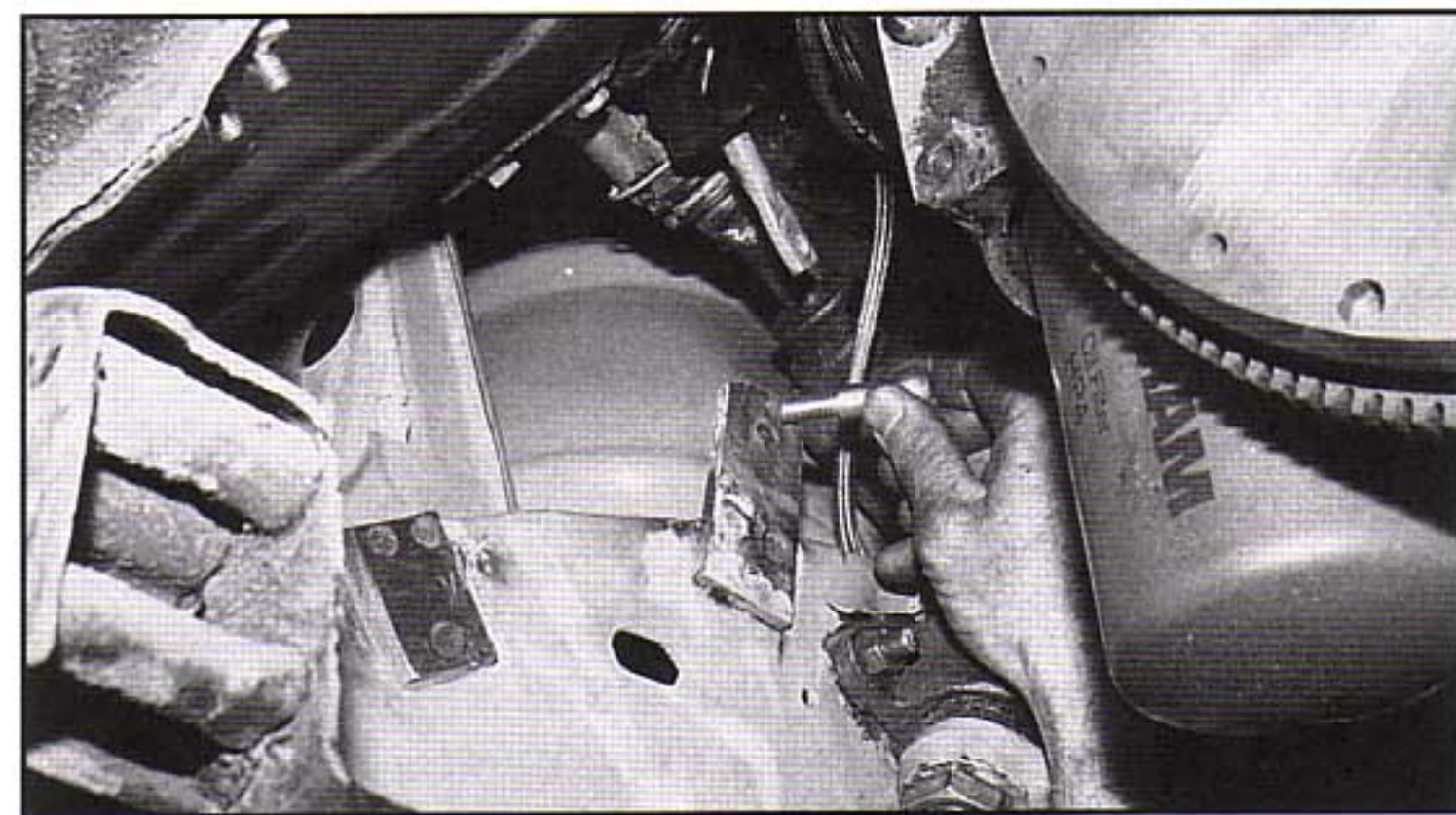


Photo #9

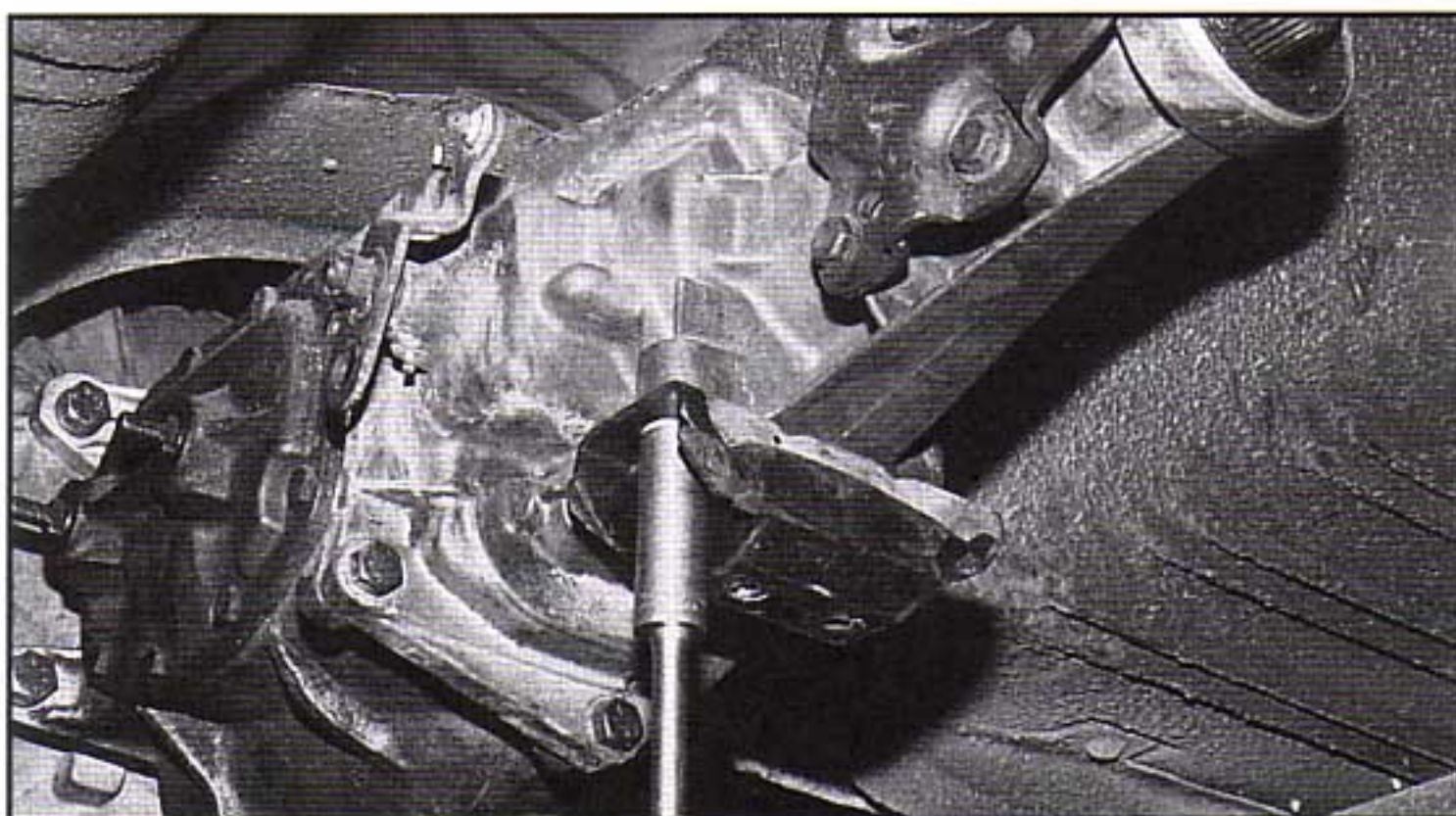


Photo #6

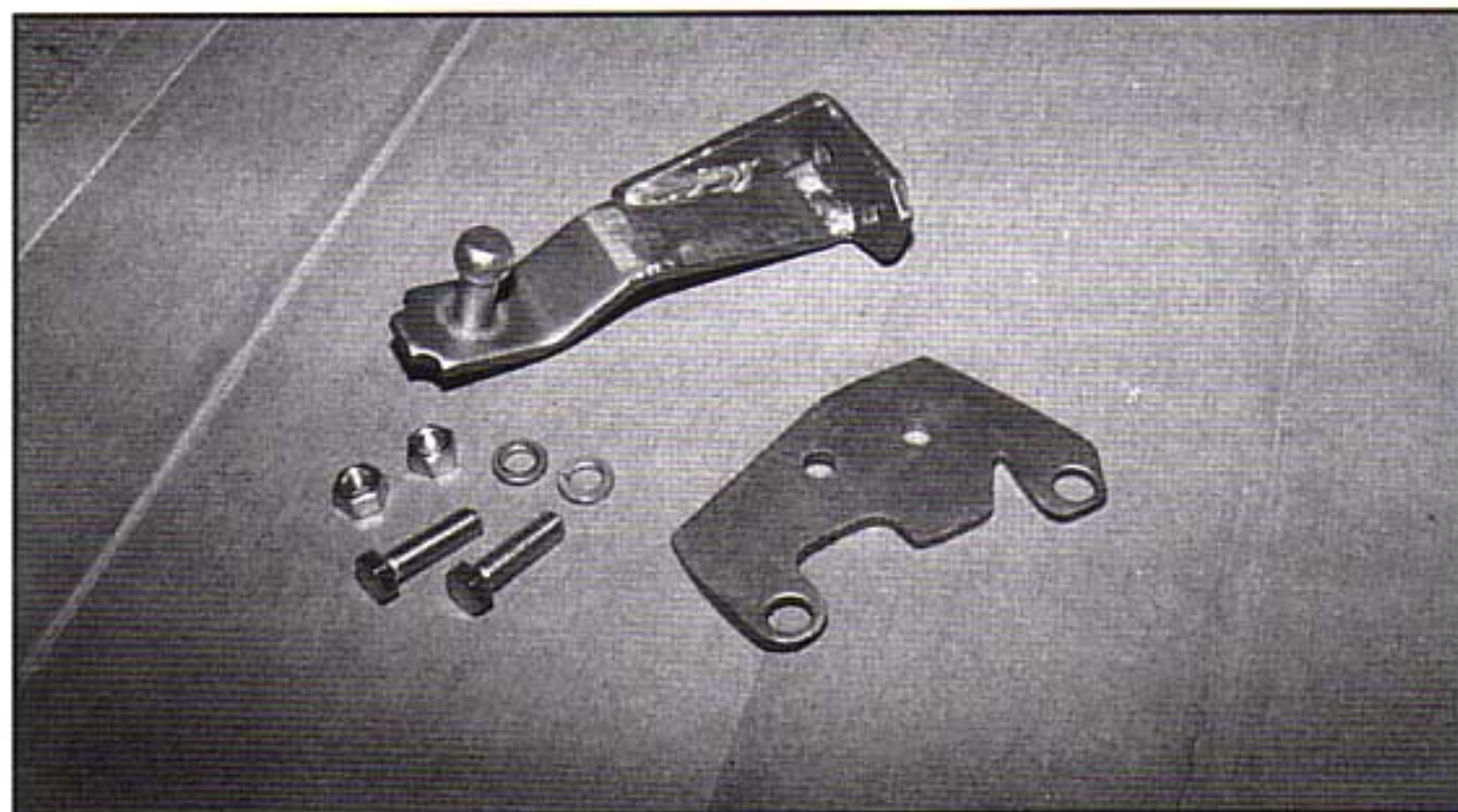


Photo #10

pivot stud. (See Photo #11.) If your car was never equipped with a standard transmission, the frame bracket with stud, **Part #08-10**, must be welded into place on the left hand frame rail. Determine the location of this bracket by first installing the inner bracket, **Part #08-21**, the cross shaft and then **Part #08-10**. Hold the cross shaft level and straight between the frame rails and then tack weld the **Part #08-10** bracket to the frame rail. Check for proper position and then solid weld in to place.

4. Install the upper clutch pushrod, **Part #08-34**, and attach to the cross shaft using the bushing and bolt assembly, **Part #08-04**. (See Photo #12.) If your car is not equipped with a standard shift clutch pedal, order and install **Part #08-12** clutch pedal kit in order to convert your car. Install the push rod/ swivel and spring kit, **Part #08-16** and adjust as shown in Photo #13. Test the clutch pedal for proper travel and adjust the swivel as needed.

5. If you are installing four speed, the following is a list of the appropriate parts to complete the shifter installation:

For factory bench seat cars:

Shifter: **Part #208-01** Hurst Competition Plus 4 speed shifter.
Installation kits: **Part # 208-02** Shifter installation kit for BW T-10 transmissions.
Part # 208-03 Shifter installation kit for Saginaw transmissions.
Part # 208-04 Shifter installation kit for Muncie transmissions.

For bucket seat cars:

Shifter: **Part #208-05** Hurst Street Super shifter
Installation kit: **Part # 208-06** For all transmission types

Shifter boot: **Part #208-09** Shift boot


6. Install the appropriate installation kit as shown in Photo #14. After determining where the shifter hole must be cut in the floor, cut a small (3 x 4 - inch max) hole in the floor for the shifter. Install the shifter and linkage rods from the bottom as shown in Photo #15. Complete the installation by installing the shift boot from the top side. Install the driveshaft and secure the U-joint at the rear. Start the car and check for proper adjustment of the clutch and shifter before driving. Good luck and happy shifting! 



Photo #12



Photo #13



Photo #14

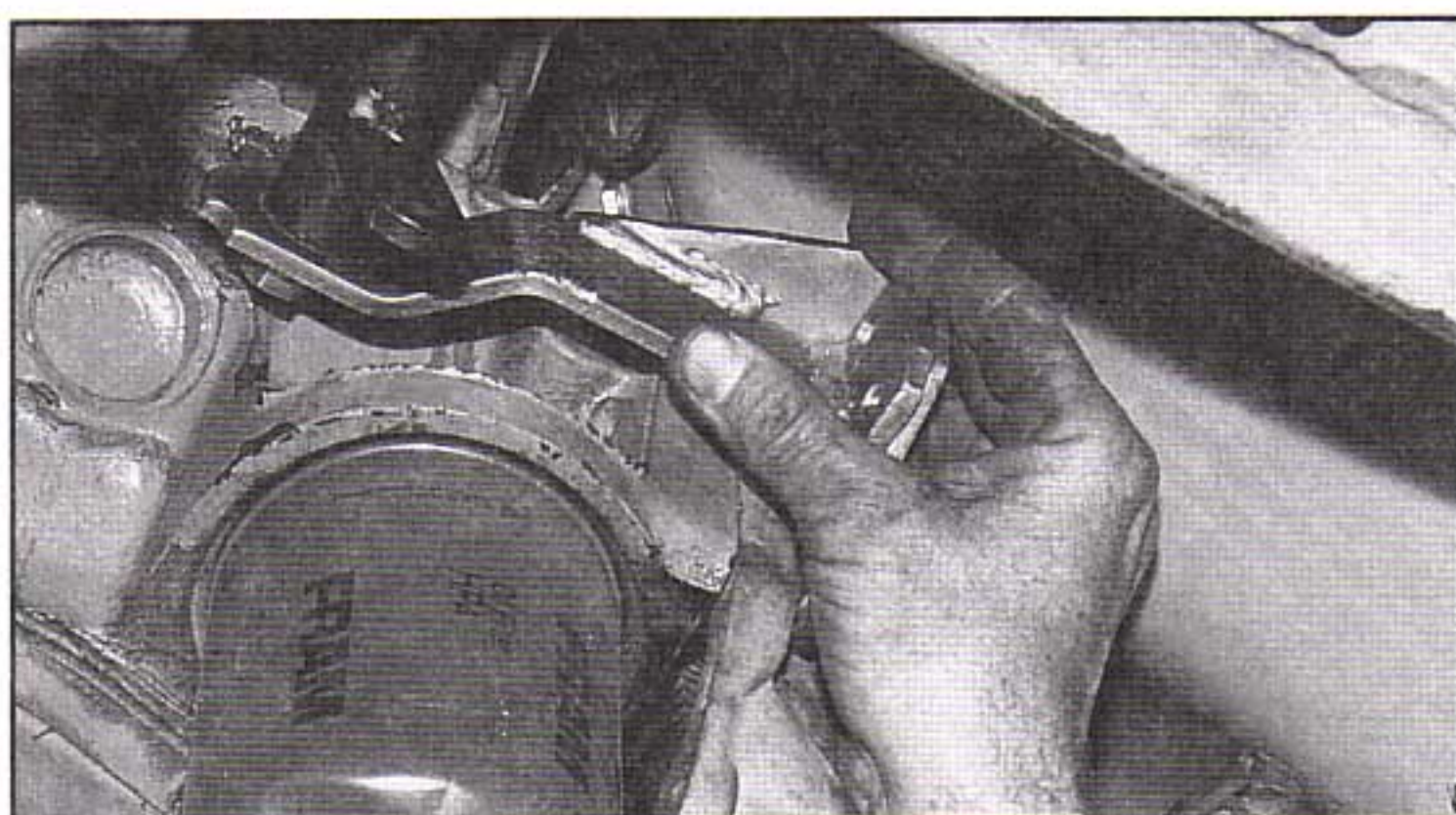


Photo #11



Photo #15