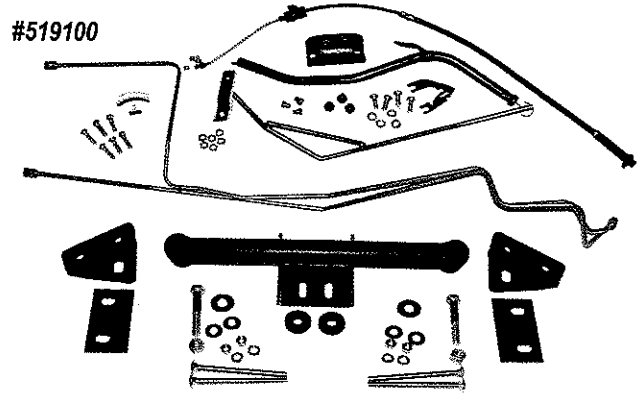


One of the most popular conversions is modernizing the transmission. Installing a TH350 into a 1958-1964 is not much of a problem. A little work on the stock transmission crossmember and the drive shaft will get you there—but the TH350 still only has the 1:1 ratio in third gear. After installing an engine into our '62 Impala frame we will convert the transmission to 700-R4 using our new 700-R4 transmission crossmember. With the 700-R4 transmission in fourth gear, engine RMPs will decrease by 700, which will improve fuel economy, reduce road noise and greatly reduce the wear and tear on the drive-train (an additional 200 RPM reduction can be achieved by using the lock up torque converter).

Get in gear, follow along—All of the guess work of the 700-R4 conversion has been eliminated and everything will fit into the car perfectly by using CCI's new bolt-in crossmember, TVI/detent cable, and dipstick and tube.

Our engine is back from the machine shop and we are ready to set it into the frame along with converting to a 700-R4 transmission. The flywheel, **part #19-30**, is bolted to the crankshaft with six 7/16" fine-thread bolts flywheel bolts, **part #19-62**. These bolts come with serrated washers, but for extra security, we recommend applying drop of thread locker to the threads. Torque each bolt to 65 lbs. (**photo #1a & 1b**). The rubber side engine mounts, **part #18-131**, bolt to the side of the engine with three 3/8"x1" bolts with lock washers (**photo #2**). The rubber side engine mounts will mate up to the brackets on the the front engine crossmember and are held in



Parts Needed:

- 519100 58-64 TH700-R4 transmission installation mega kit
Included: Crossmember & brackets, rear transmission mount, column shift linkage, installation hardware, cooling lines, dipstick & tube, TVI/detent cable, detent brackets, shift indicator lens.
- 519096 58-64 TH700-R4 transmission crossmember kit, bracket & hardware included
- 519097 58-64 700-R4 Pre-bent cooler lines
- 534182 58-64 700-R4 bolt kit
- 19-30 55-64 Fly wheel (internally balanced engine)
- 19-62 55-57 Automatic trans flywheel bolts (6)
- 18-131 55-72 Side engine rubber mounts for brackets #18-02, #18-134
- 19-18 55-72 Rear transmission mount /350, 700-4R
- 19-36 55-72 Yoke turbo/ 350, 700-4R
- 19-67 55-57 TH 700-4R dipstick and tube
- 19-64 55-57 700-4R TVI/detent cable
- 19-23 55-57 TVI/detent cable assembly bracket/350
- 19-66 55-57 TVI/detent cable carburetor pin
- 19-02 55-57 Speedo cable assembly
- 19-19 55-57 Shift linkage assembly for column shift (all turbos)

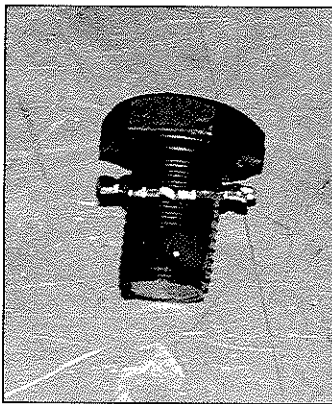


Photo #1a

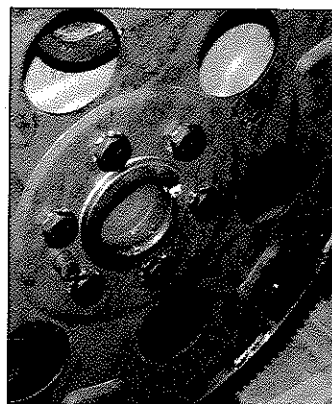


Photo #1b

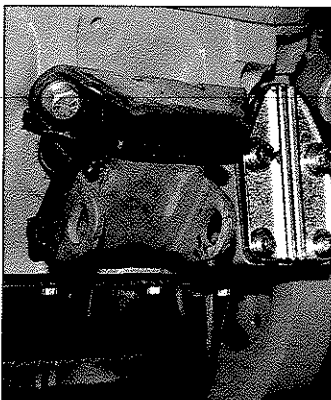


Photo #2

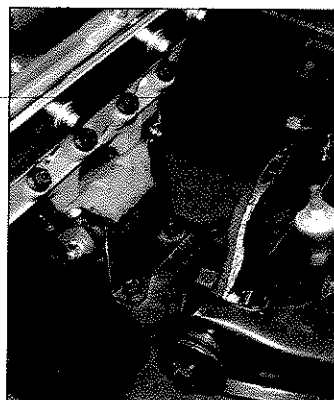


Photo #3

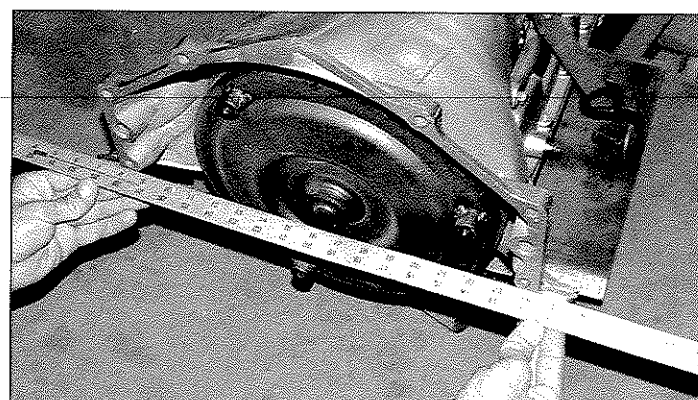


Photo #4

Time Frame:

8 Hours

Tools Needed:

- 9/16" Wrench
- 15mm Wrench
- 3/4" Wrench
- C-clamps
- Drill
- Cutters
- 3/8" Drill bit
- Thread locker

place with one 7/16"x 3" bolt with flat washers, a lock washer and nut (**photo #3**).

The torque converter is always installed in the transmission first, never bolt the converter to the flywheel and then slide the transmission up onto it. Make sure the converter is all the way into the transmission by holding a straight edge across the front face of the bellhousing. The snout of the converter should be about 1" away from the straight edge (**photo #4**). Now raise the transmission up into the frame. We found by dropping the E-brake lever assembly out of the way the installation of the transmission is much easier (**photo#5**). Using the six 3/8"x1" bolts and lock washers from the 700-R4 bolt kit, **part #534182**, bolt the transmission to the back of the engine. Now that transmission is bolted to the back of the engine, the engine hoist can be removed from the engine (**photo #6**). The 700-R4 bolt kit, **part #534182**, also includes the three metric torque converter bolts. These bolts pass through the flywheel and bolt into the converter. The bolts come with a small amount of thread locker to help secure them in place (**photo #7a & #7b**)

On most 700-R4 transmissions, the rear transmission mount, **part #19-18**, will mount to the main case just behind the pan, not on the tail shaft housing like a TH350 or TH400. The 700-R4 bolt kit, **part #534182**, also includes the two metric bolts and lock washers to hold the rear mount into place (**photo #8**). Next bolt the new tubular transmission crossmember for the



Photo #7a

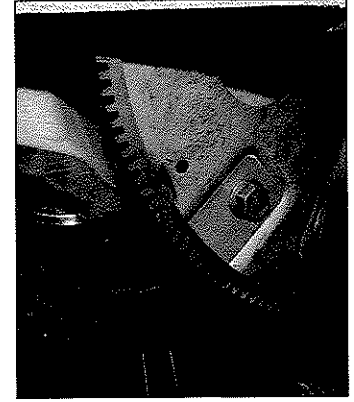


Photo #7b

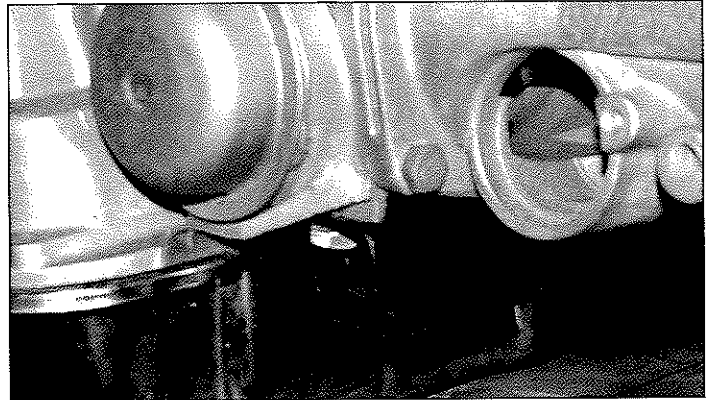


Photo #8

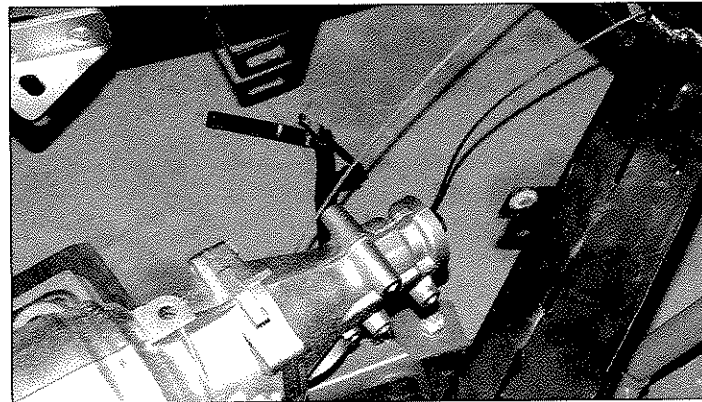


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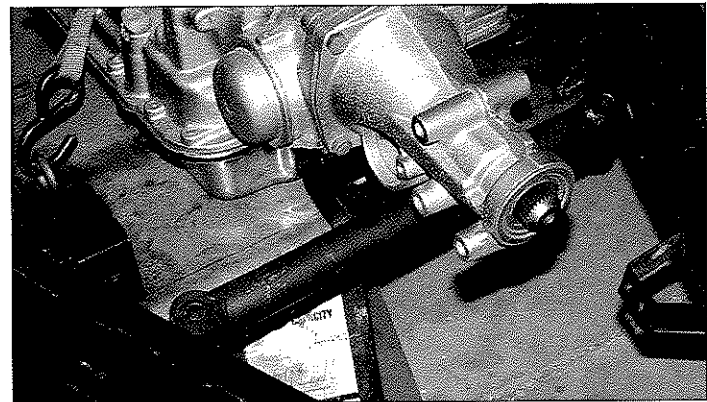


Photo #9

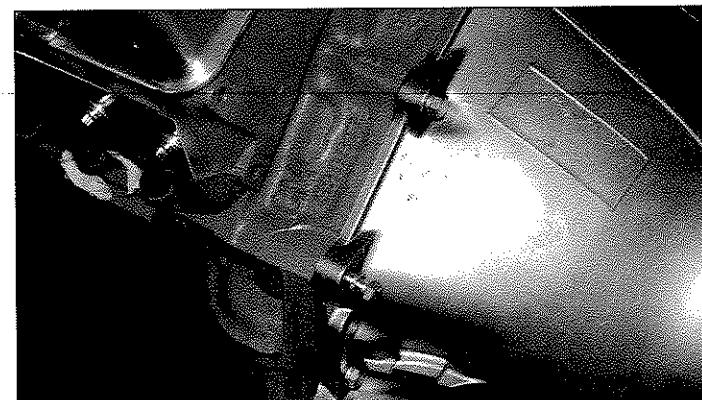


Photo #6

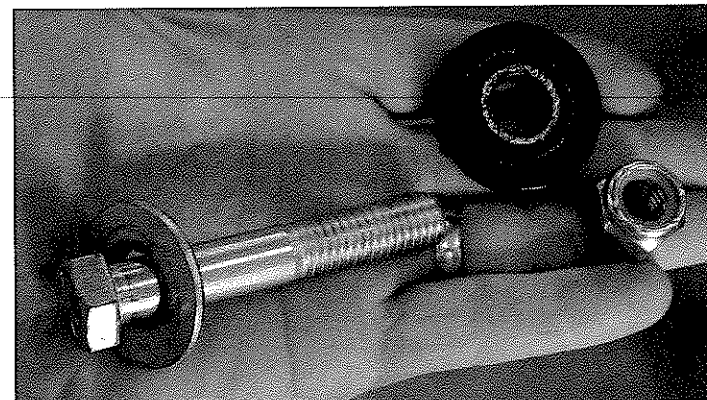


Photo #10a

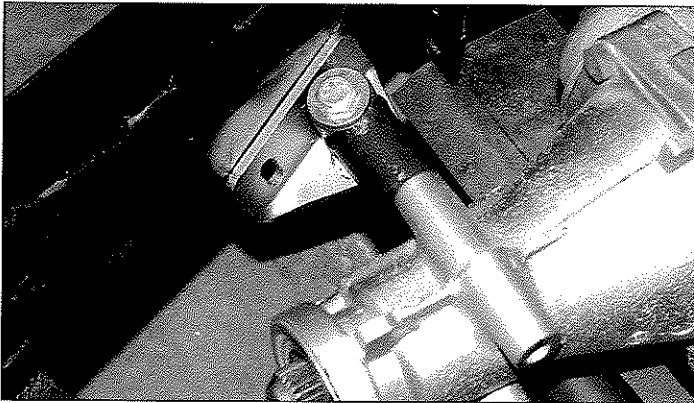


Photo #10b

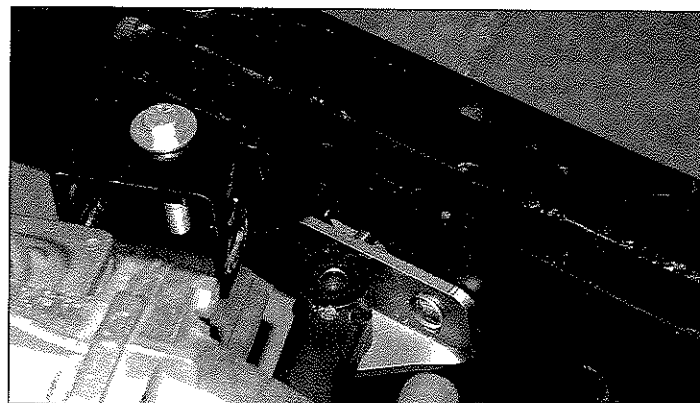


Photo #13

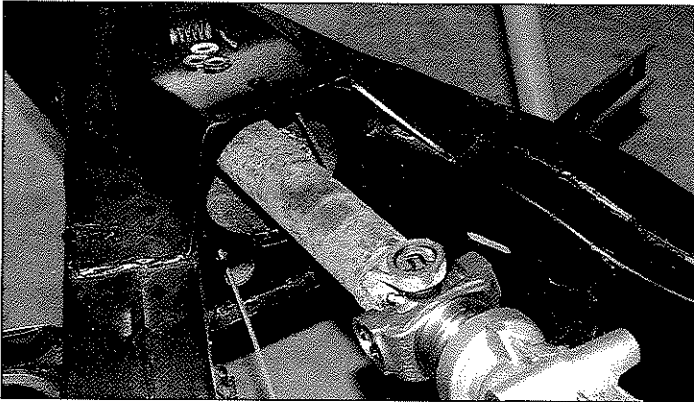


Photo #11

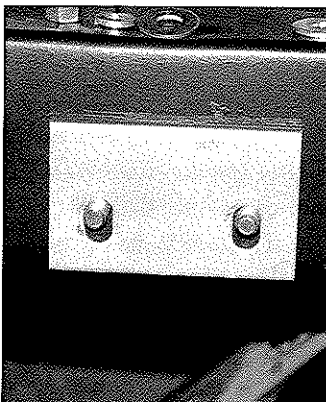


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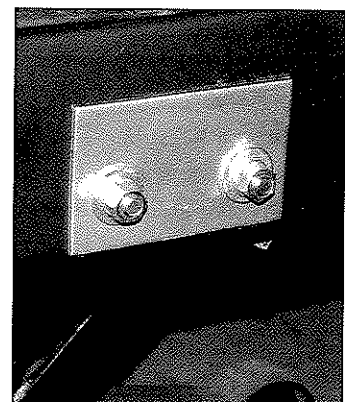


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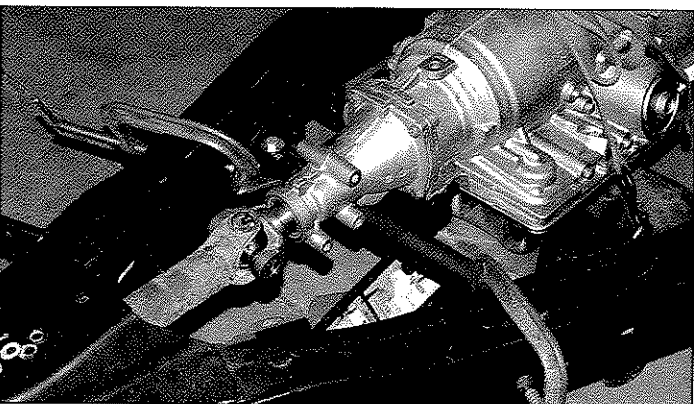


Photo #12a

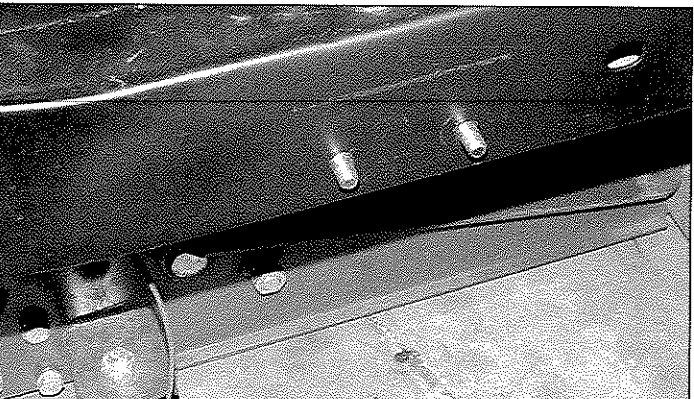


Photo #12b

700-R4, **part #519096**, to the transmission mount using the two 7/16"x1" bolts and lock washers supplied the bolt kit (**photo #9**). There are left and right elbow brackets (included in the crossmember kit) that will bolt to each end of the crossmember that will then mount to the frame. The elbow brackets act as a shelves for the crossmember and have slots for lateral adjustments because of variations in frames. The brackets are held to the crossmember with a 1/2"x 3" bolt that has thin flat washer on the top and a 1/4" thick washer and lock nut on the bottom (**photo #10a & #10b**).

A new front yoke, **part #19-36**, needs to be installed onto the drive shaft. The FRONT drive shaft will need to be shortened to allow for the longer transmission. Slide the new yoke into the rear of the transmission. Using a transmission jack, raise or lower the transmission until the drive shaft is dead in the center of the large hole in the front of the frame "X" (**photo #11**).

With the drive shaft centered in the hole in the "X" of the frame, clamp the elbow brackets in to place. Using the holes in the elbow brackets as a guide, mark the frame and drill two holes through the inner and then the outer wall of the frame (**photo #12a & 12b**). Two 3/8"x5" carriage will hold the elbow brackets to the frame, the bolts will pass through the frame from the inside (**photo #13**). There are plates that are used on the out side of the frame to support the frame where the

carriage bolts pass through (photo #14). The plate is held in place with flat washers, lock washers and nuts (photo #15). Now with the transmission in place the emergency brake assembly can be reinstalled onto the frame. The front emergency brake cable will run over the top of the new transmission crossmember (photo #16). The dip stick and tube for the 700-R4, part #19-67, fits right behind valve cover (on the the passenger's side). The tab on the dipstick tube bolts to the upper bell housing bolt (photo #17).

The TVI/detent cable, part #19-64, will attach to the bent wire in the transmission and is held to the case with one 6mm bolt (photo #18a & #18b).

The TVI/detent cable bracket, part #19-23, is bolted to the two rear intake bolts on the drivers side of the engine (photo #19). The cable will clip into the bracket (photo #20). Next install the TVI/detent cable pin, part #19-66, to the carburetor arm (photo #21). The TVI/detent cable has a plastic hook that attaches to the new pin on the carburetor (photo #22). With the engine OFF, hold the throttle wide open and pull the cable tight. There is a barrel lock with a set screw, slide the barrel lock up to the plastic clip and tighten the set screw. The TVI/detent will control the shift points on the transmission, a cable that is not tight will shift the transmission at a lower speed and a tighter cable will shift the transmission at a higher speed (photo #23).



Photo #19

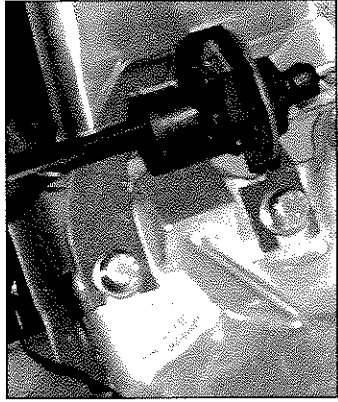


Photo #20

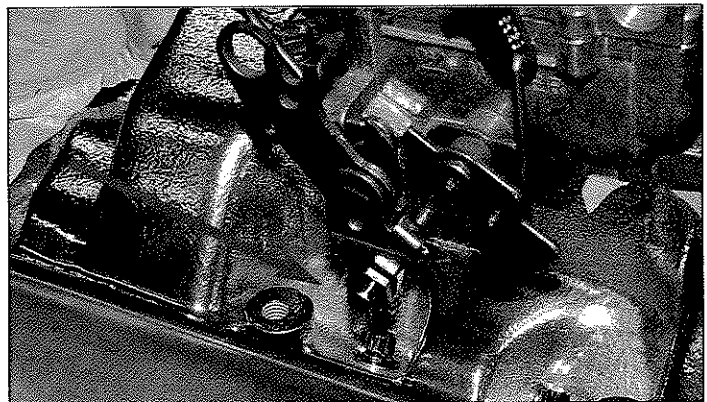


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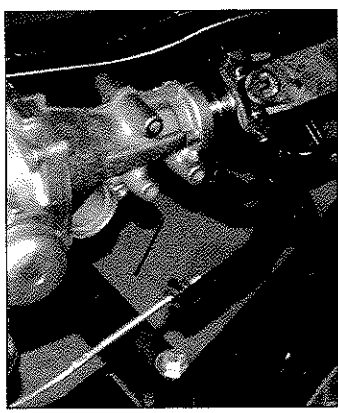


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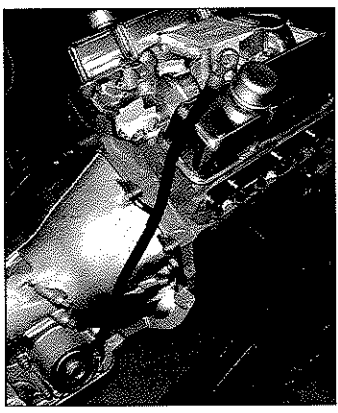


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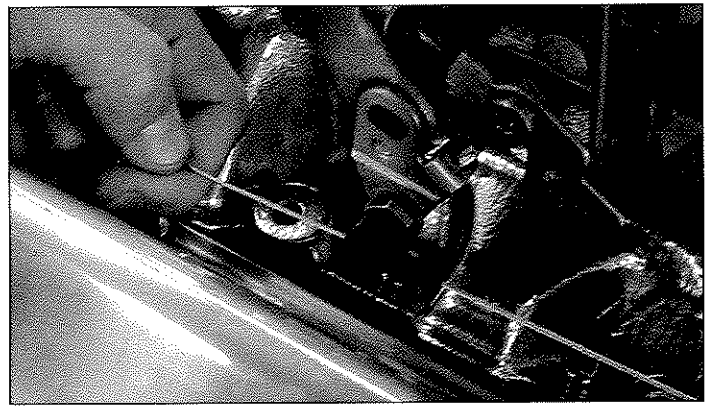


Photo #22

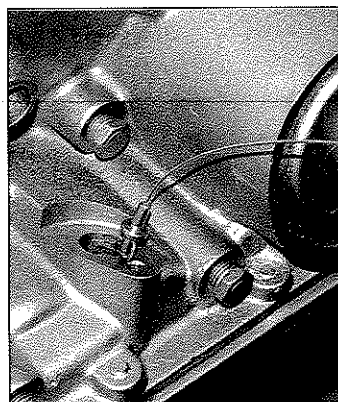


Photo #18a



Photo #18b

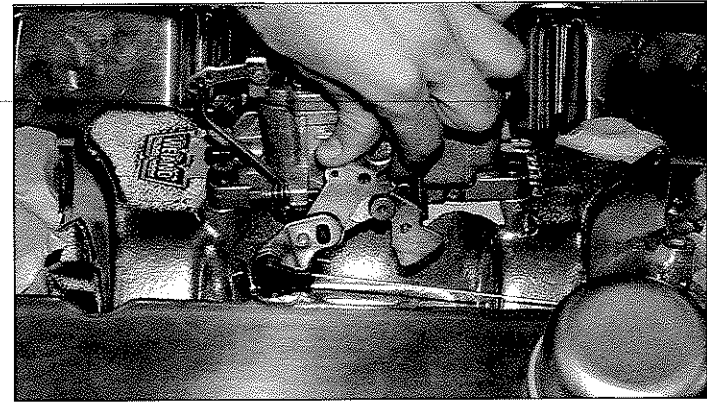


Photo #23

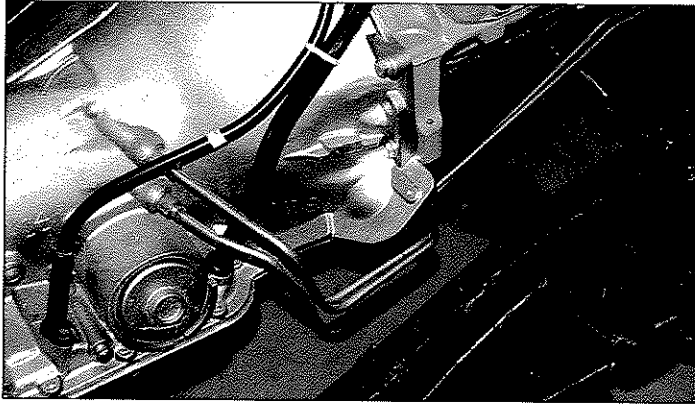


Photo #24a

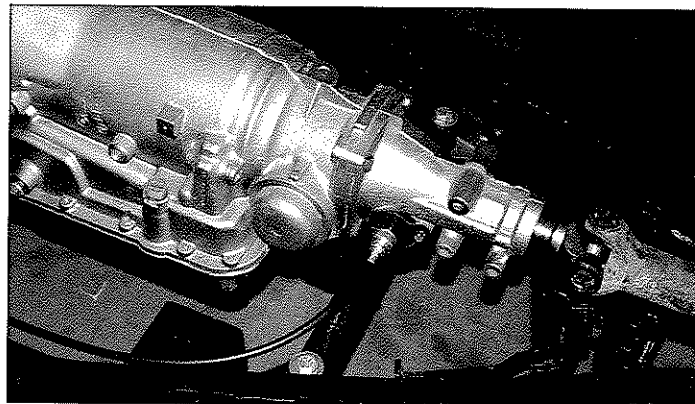


Photo #25

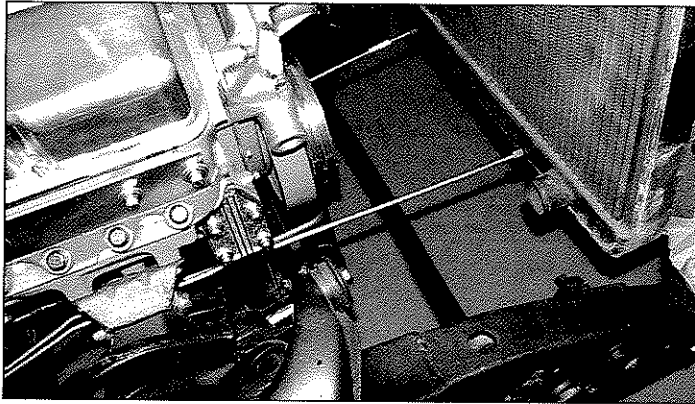


Photo #24b

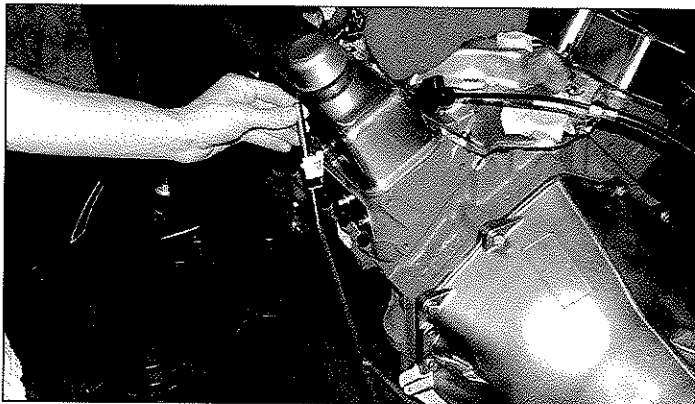



Photo #26

The prebent cooler lines, **part #519097**, will save you all the aggravation of bending a set of lines. The lines will attach to the transmission on the passenger's side and to the stock fittings on the radiator (**photo #24a & 24b**). The speedometer cable, **part #19-02**, will attach to the rear of the transmission on the drivers side and the instrument cluster at the dash board (**photo #25**).

Our project car is going to have a console with a floor shifter, but if the stock column shift is going to be used, **part #19-19**, is the one piece linkage that will attach from the column to the transmission (**photo #26**).

With the 4th gear in the 700-R4 you have now gained a 700 RPM drop in high gear. If you want to put the icing on the cake and hook up the lock-up torque converter (**diagram #1**).

Now fill the transmission up with fluid and start the engine, check for leaks. With rear tires raised from the ground, run the transmission through the gears, then check the fluid again and fill if necessary. Next take the car for a test drive and make any adjustments to the TVI/detent cable.

Enjoy your updated Classic, now equipped with a modern four-speed overdrive! 

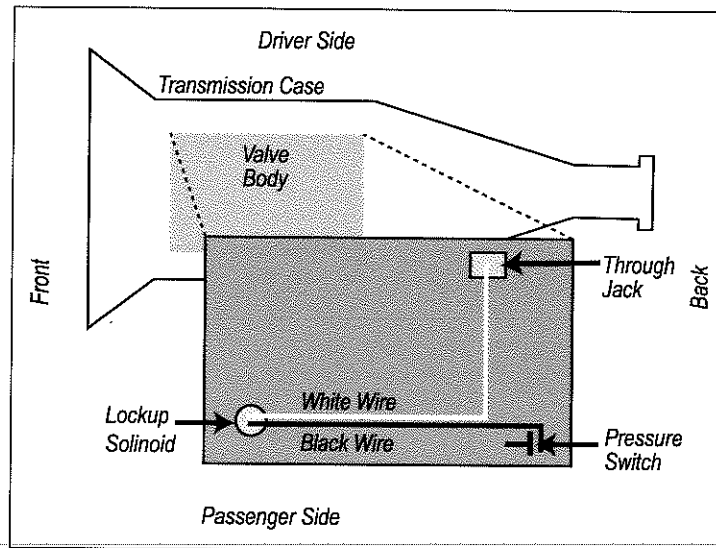


Diagram #1- Transmission Valve Body
(bottom view with pan removed)

