



QUICK GUIDE

Diablo Shifter **(Part #s 620001, 620002, 620003, 620004,** **620001BL, 620002BL, 620003BL, 620004BL)**

Thank you for choosing TCI products. We are proud to be your manufacturer of choice. Please read this instruction sheet carefully before beginning installation, and also take a moment to review the included limited warranty information. Contact us toll free at 1.888.776.9824 or at www.tciauto.com under Tech Support with any questions.

WARNING: If your vehicle is equipped with a locking steering wheel, securing the steering wheel lock lever in the engine compartment in the full up position will allow the steering wheel to lock and unlock, but will allow the key to lock the steering wheel if the key is turned to "lock" while moving, or at any time. Securing the lock lever in any other position will prevent the steering wheel from locking at any time.

PRODUCT FEATURES:

- Shifter can be changed from a front exit cable to a rear exit cable
- Shifter is lightweight and extremely durable
- Shifter housing is brushed aluminum
- Easily replaced shift range indicator
- Easily changed from a three-speed forward pattern to three-speed reverse pattern
- Easily changed from a four-speed forward pattern to a four-speed reverse pattern
- Easily changed from a three-speed forward pattern to a Powerglide forward or reverse pattern
- Optional two-button shift handle
- Complete with park/neutral safety switch and backup light switch are installed on the shifter

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The TCI Diablo Shifter comes assembled as a front exit cable, three-speed forward pattern shifter but was designed to be configured into any of the following applications:

FRONT EXIT CABLE THREE SPEED FORWARD OR REVERSE SHIFT PATTERN

- TH350
- TH400
- C4
- C6
- AOD (Requires TCI installation kit 618016)
- 727
- 904

FRONT EXIT CABLE FOUR SPEED FORWARD OR REVERSE SHIFT PATTERN

- 700R4
- TCI6X
- 4L60E-4L70E
- 200-4R
- 4L80E-4L85E

FRONT EXIT CABLE FORWARD OR REVERSE SHIFT PATTERN

- Powerglide

REAR EXIT CABLE THREE SPEED FORWARD OR REVERSE SHIFT PATTERN

- TH350
- TH400
- C4
- C6
- 727
- 904

REAR EXIT CABLE FOUR SPEED FORWARD OR REVERSE SHIFT PATTERN

- 700R4
- 4L60E-4L70E
- 4L80E-4L85E
- TCI 6X
- 200-4R

REAR EXIT CABLE FORWARD OR REVERSE SHIFT PATTERN

- Powerglide

Installation Instructions

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Diablo Shifter Kit Parts List



1

100

1

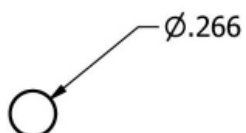


Diablo Shifter Hole Drilling Template

Use this template to drill the holes required for mounting the shifter.

The two holes on the left and any of the 3 pairs on the right will be sufficient for mounting the shifter.

Note: when printing this template you must print with a scale of 1:1, otherwise the holes will not be spaced properly. To verify the scale, hold the printed template against the shifter base and verify that the holes line up.





Rear Cable Exit Instructions

Converting the Front Exit Cable Shifter to a Rear Exit Cable Shifter

Step 1: Remove the reverse lockout lever. **(Figure 1)**

Remove the side panels.

Remove the reverse lockout lever spring. This is most easily done with a flathead screwdriver.

Remove the e-clip also with a flathead screwdriver.

Push the reverse lever shaft in until the reverse lockout lever can be removed. **(Figure 2)**



Figure 1

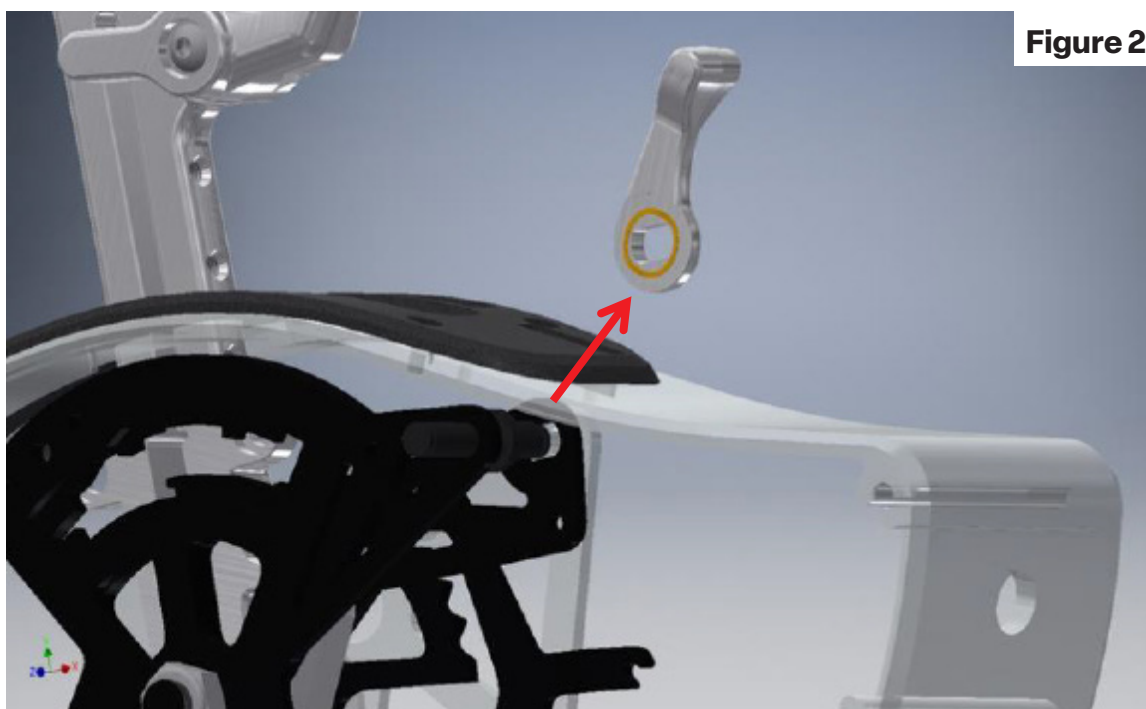


Figure 2

Step 2: Rotating the shifter mechanism to convert the shifter to the rear exit cable.

Remove four shift indicator cover screws with a 1/16" Allen wrench, but don't lift up the shift indicator cover at this time. **(Figure 3)**

Place the shift handle in the neutral position, then place the shifter housing on its side and remove three shifter mechanism screws with a 5/32" Allen wrench. **(Figure 4)**

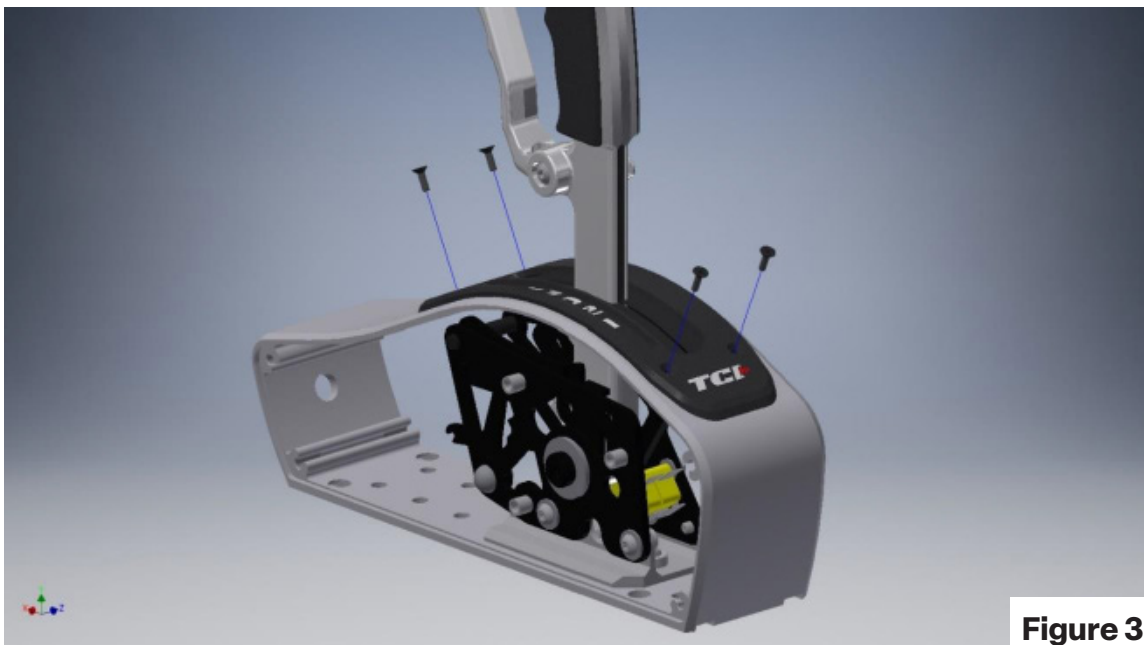


Figure 3

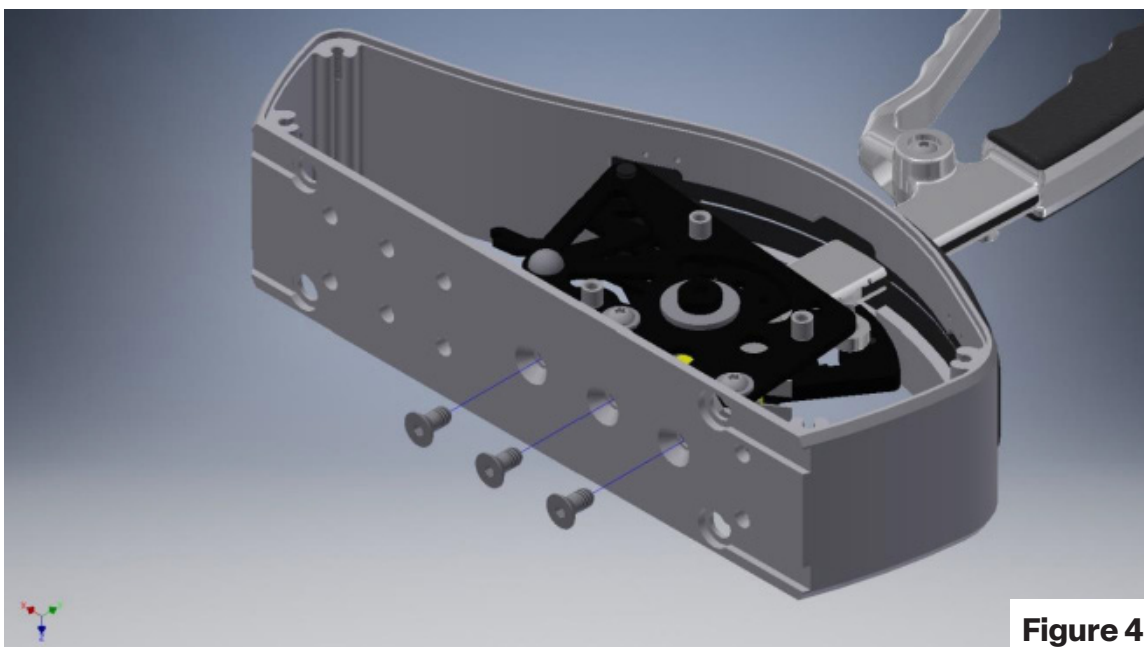


Figure 4

Lift up the shift indicator cover, shift indicator, and the shift handle wiper. **(Figure 5)**

Note: The shift handle wiper may stick to the shifter base. If so, using a thin blade feeler gauge, gently pry up the shifter handle wiper. Notice the wide slot in the shifter housing. Rotate the shifter mechanism and the shift handle wiper with the shift indicator cover.

Install the three shifter mechanism screws with a 5/16" Allen wrench and tighten. **(Figure 6)**

Step 3: If you are using the shifter in a three speed forward shift pattern application, proceed to align the shift handle wiper, shift indicator, and the shift indicator cover and install the four cover screws with a 1/16" Allen wrench and tighten.

If your intention is to use the shifter in a different configuration, install the appropriate shift indicator decal at this time.

CAUTION: Do not over tighten the cover screws.

Step 4: Depending on the transmission application, the appropriate bracket should be used from the Rear Cable Exit bracket kit (see Parts List link). Install the bracket on the transmission and then refer to the front cable exit instructions for all other installation steps.

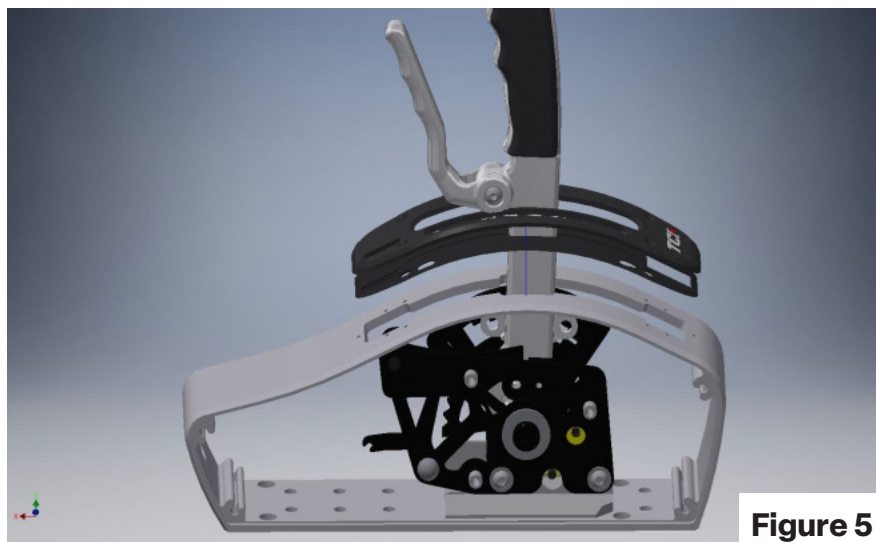


Figure 5

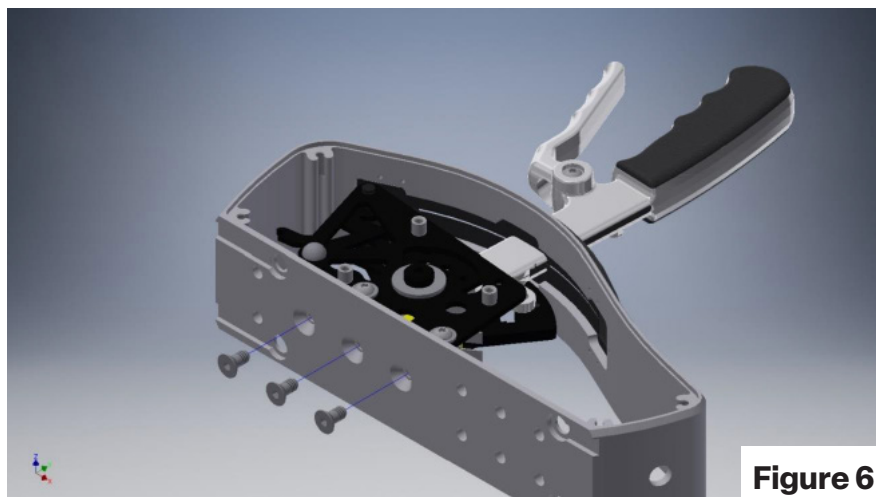


Figure 6



GM 3 Speed Forward Pattern

Three-Speed Reverse Shift Pattern Front Exit Cable Application GM 200, TH350, TH400

The vehicle should be raised to a convenient work height and place jack stands under the frame. **Never work under a vehicle that is supported only by a jack!**

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

NOTE: In order to utilize the reverse shift pattern configuration, your transmission must be equipped with a reverse shift pattern valve body.

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal, (PRND21) with (PRN12D). Tighten the four shift indicator cover screws. To complete the shifter installation, follow STEPS 1-8

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable.

Before mounting the shifter, remove both side covers as shown in **Figure 1**.

To change from a three-speed forward shift pattern to a three-speed reverse shift pattern front exit cable, remove the passenger side cover. Remove the screw in the gate plate with a 3/32" Allen wrench. Slide the gate plate selector so the threaded hole lines up with the front most hole in the gate plate. See **Figure 2**. Re-install the gate plate screw you previously removed.



Figure 1



Figure 2

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Mark the locations for the four mounting bolts as shown in Figure 3. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 4**. The park/neutral safety switch is located where shown in **Figure 5**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in **Figure 5**. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches.

Figure 3

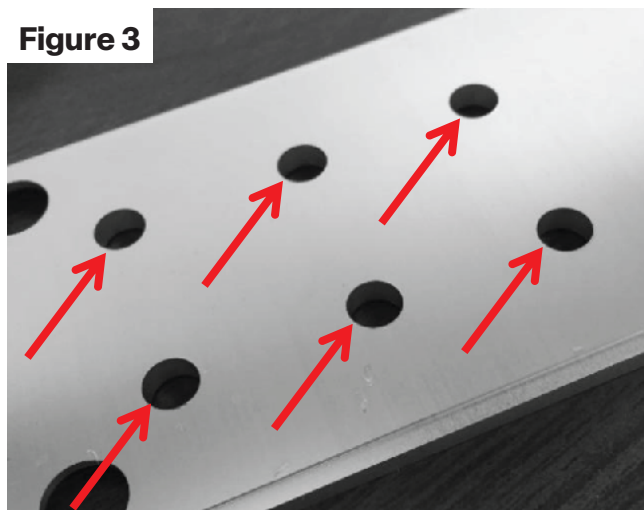


Figure 4

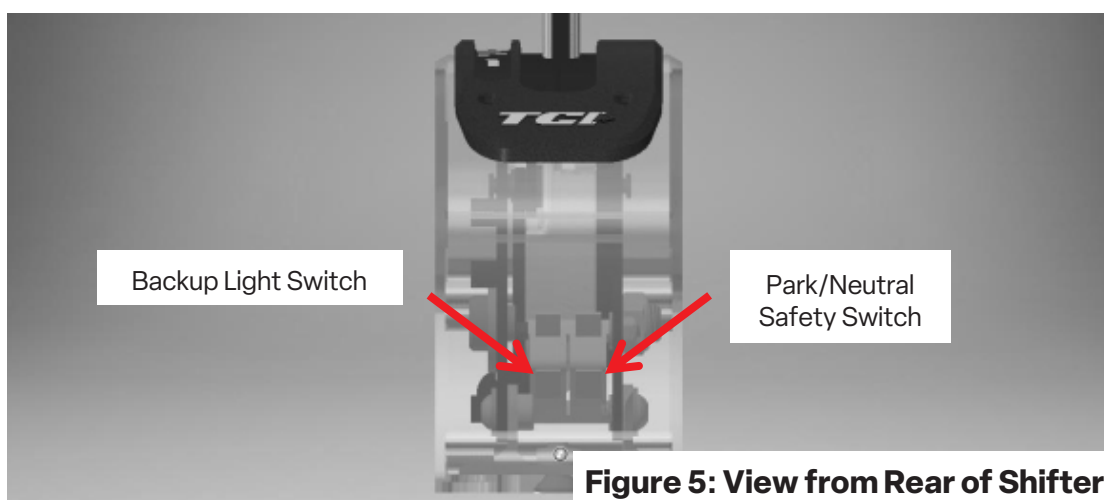
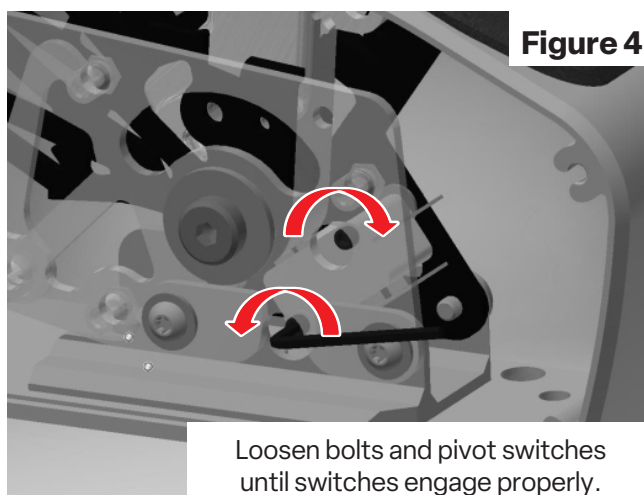


Figure 5: View from Rear of Shifter

***Note:** Only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 6**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.



Figure 6

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.

Step 5: If you have not already done so, remove the stock selector lever nut and lever from the transmission. Install the TCI selector lever using the stock selector lever nut or a metric or a SAE flanged nut which are provided. Only the TH350 and the TH400 came with either a metric nut or a SAE nut. It is important that you install the correct nut or you will damage the selector shaft. Only the Power Glide, TH350, and the TH400 use 5/16"-18 pan bolts. The other GM transmissions use M8X1.25mm bolts.

The pan bracket must be installed with two spacers between the pan and the pan bracket (See **Figure 7**). The use of the spacers requires two longer bolts, 5/16"-18 x1.25" which are included. On TH400 aluminum pans, the pan bracket may need to be modified.



Figure 7

Since you are using the front exit cable application, the selector lever must point down and use the front exit cable pan bracket (Letter B). See **Figure 8** for the correct hole to use in the selector lever and pan bracket depending on your application. Torque the pan bracket bolts to 12-13 ft-lbs.

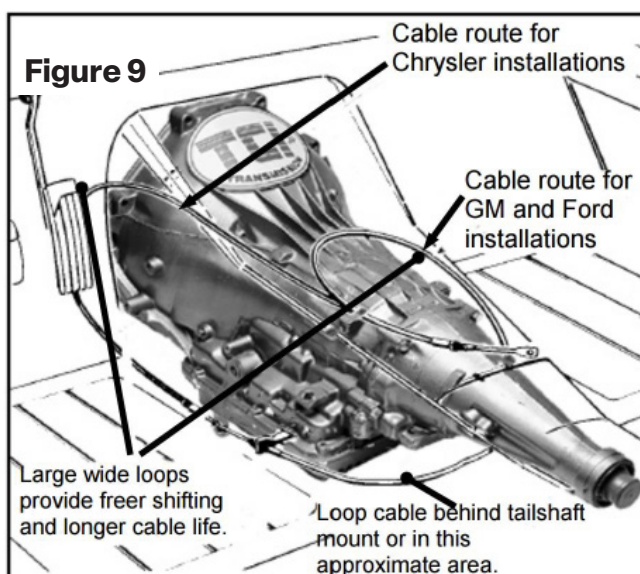
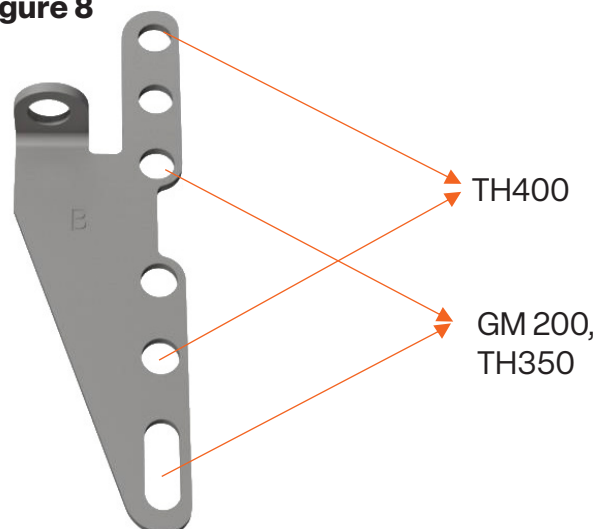
Step 6: Route the shifter cable according to **Figure 9**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 7: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and recheck that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

Step 8: On GM vehicles, the park/neutral safety switch may be located on the steering column, console shifter, or it may be a mechanical interlock in the steering column that prevents the key turning to the start position unless the shifter is either in park or neutral. Identify the park/neutral system you have. With either system, disconnect the battery ground cable to prevent accidental shorts. If you have a neutral safety switch, disconnect and extend both wires from the GM switch to the park/neutral switch on the shifter. If you have a mechanical interlock system, cut the wire that goes from the start position on the ignition switch to the starter, normally a 1214 gauge purple wire. Using (12-14) gauge wire, strip the insulation from one end of each wire and crimp butt connectors onto the wires. If your vehicle does not have a park/neutral safety switch, locate the wire which goes to the (S) terminal on the starter. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.

Figure 8





GM 3 Speed Reverse Pattern

Three-Speed Forward Shift Pattern Front Exit Cable Application GM 200, TH350, TH400

The vehicle should be raised to a convenient work height and place jack stands under the frame.
Never work under a vehicle that is supported only by a jack!

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable.

Before mounting the shifter, remove both side covers as shown in **Figure 1**.

Mark the locations for the four mounting bolts as shown in **Figure 2**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.



Figure 1

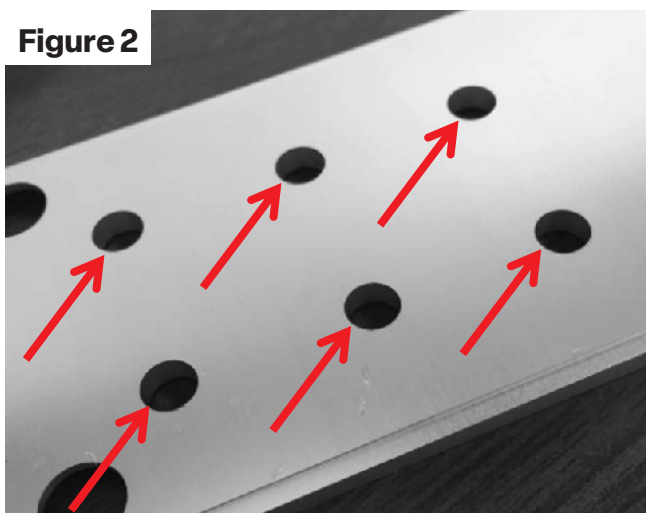


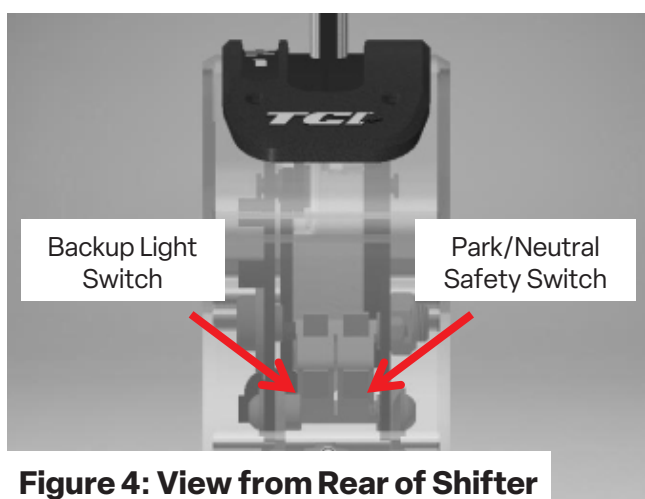
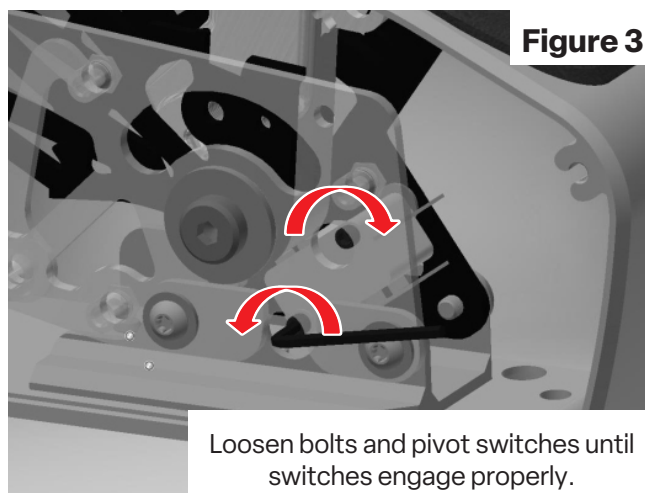
Figure 2

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 3**. The park/neutral safety switch is located where shown in **Figure 4**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in Figure 4. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches.

***Note:** only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 5**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.



Step 5: If you have not already done so, remove the stock selector lever nut and lever from the transmission. Install the TCI selector lever using the stock selector lever nut or a metric or a SAE flanged nut which are provided. Only the TH350 and the TH400 came with either a metric nut or a SAE nut. It is important that you install the correct nut or you will damage the selector shaft. Only the Power Glide, TH350, and the TH400 use 5/16"-18 pan bolts. The other GM transmissions use M8X1.25mm bolts.

The pan bracket must be installed with two spacers between the pan and the pan bracket (See **Figure 6**). The use of the spacers requires two longer bolts, 5/16"-18 x1.25" which are included. On TH400 aluminum pans, the pan bracket may need to be modified.

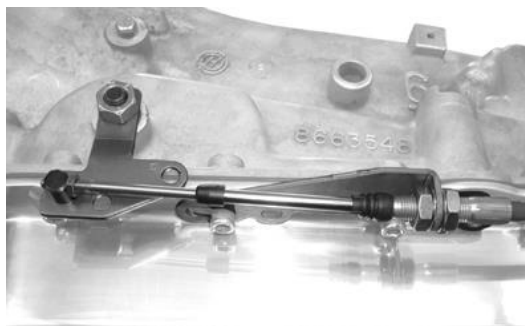


Figure 6

Since you are using the front exit cable application, the selector lever must point down and use the front exit cable pan bracket (Letter B). See **Figure 7** for the correct hole to use in the selector lever and pan bracket, depending on your application. Torque the pan bracket bolts to 12-13 ft-lbs.

Step 6: Route the shifter cable according to **Figure 8**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 7: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, DO NOT FORCE THE SHIFTER; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

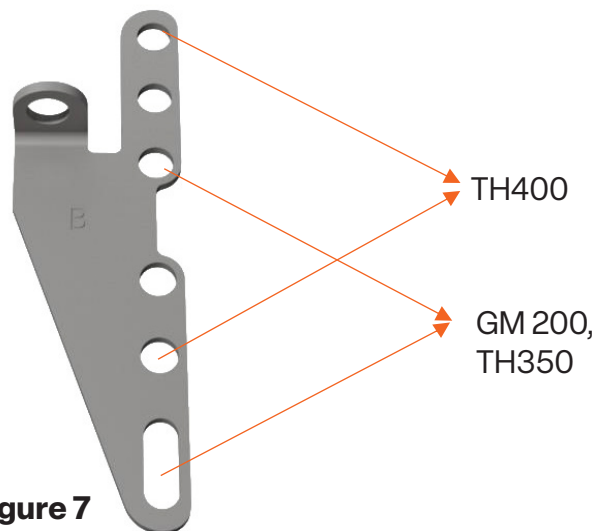


Figure 7

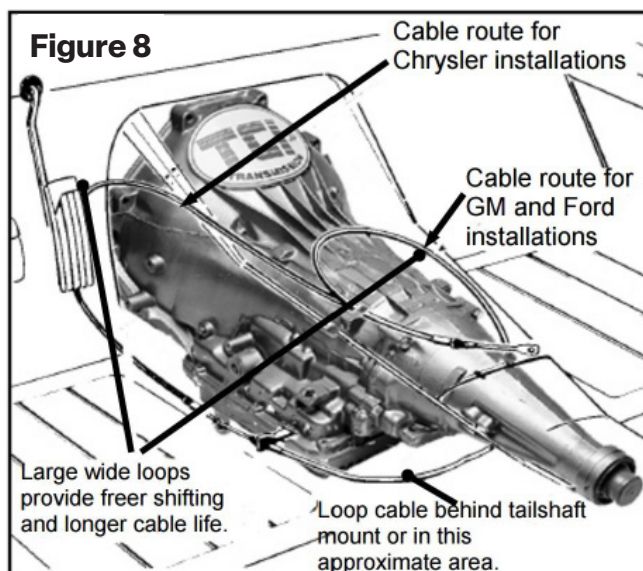


Figure 8

Step 8: On GM vehicles, the park/neutral safety switch may be located on the steering column, console shifter, or it may be a mechanical interlock in the steering column that prevents the key turning to the start position unless the shifter is either in park or neutral. Identify the park/neutral system you have. With either system, disconnect the battery ground cable to prevent accidental shorts. If you have a neutral safety switch, disconnect and extend both wires from the GM switch to the park/neutral switch on the shifter. If you have a mechanical interlock system, cut the wire that goes from the start position on the ignition switch to the starter, normally a 12-14 gauge purple wire.

Using 12-14 gauge wire, strip the insulation from one end of each wire and crimp butt connectors onto the wires. If your vehicle does not have a park/neutral safety switch, locate the wire which goes to the (S) terminal on the starter. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.



GM 4 Speed Forward/Reverse Pattern

Four-Speed Forward And Reverse Shift Pattern Front Exit Cable Application GM 200-4R, 700R4, 4L60E-4L70E, 4L80E-4L85E, TCI 6X

The vehicle should be raised to a convenient work height and place jack stands under the frame.
Never work under a vehicle that is supported only by a jack!

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal with PRND321 or PRN123D. Tighten the four shift indicator cover screws.

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable. Before mounting the shifter, remove both side covers as shown in **Figure 1**.

To change from a three-speed forward shift pattern to a three-speed reverse shift pattern front exit cable, remove the passenger side cover. Remove the screw in the gate plate with a 3/32" Allen wrench. Slide the gate plate selector so the threaded hole lines up with the front most hole in the gate plate. See **Figure 2**. Re-install the gate plate screw you previously removed.



Figure 1



Figure 2

Mark the locations for the four mounting bolts as shown in **Figure 3**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 4**. The park/neutral safety switch is located where shown in **Figure 5**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in Figure 4. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches.

***Note:** Only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet

Figure 3

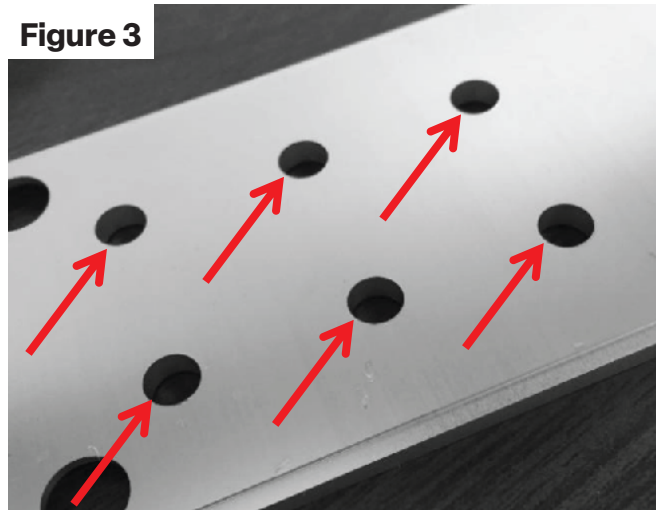


Figure 4

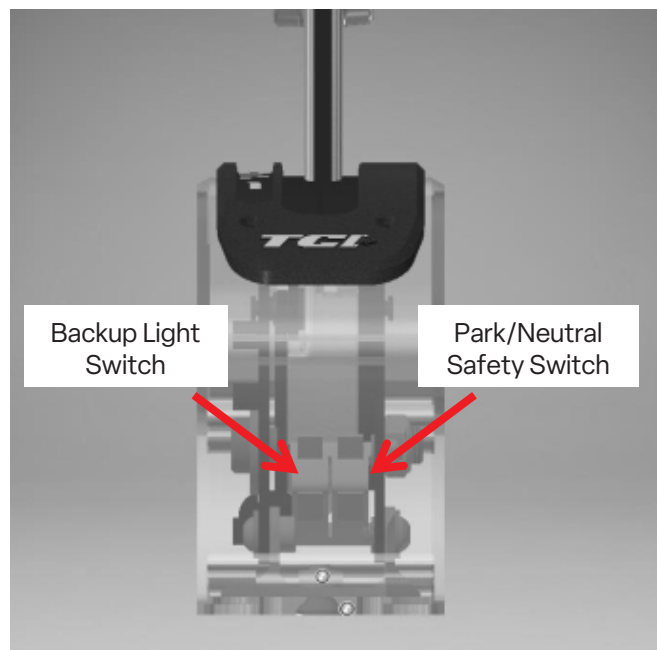
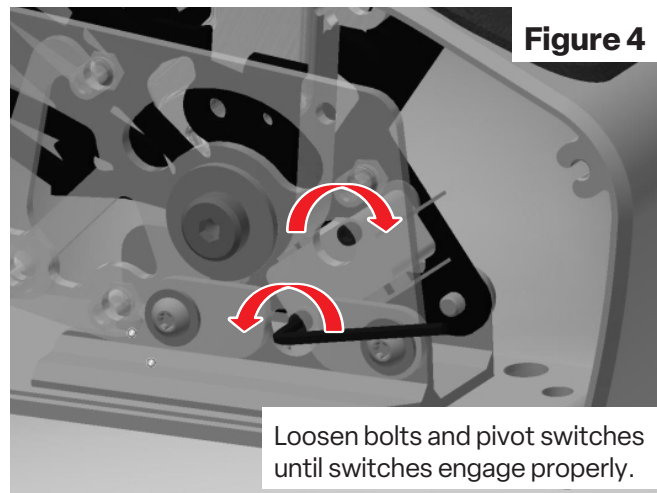


Figure 5: View from Rear of Shifter

lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 6**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.

Step 5: If you have not already done so, remove the stock selector lever nut and lever from the transmission. Install the TCI selector lever using the stock selector lever nut or a metric or a SAE flanged nut which are provided (in this case, the nut used will be metric). It is important that



you install the correct nut or you will damage the selector shaft. M8X1.25 bolts are provided to attach the pan bracket to the transmission. The pan bracket must be installed with two spacers between the pan and the pan bracket (See **Figure 7**). The use of the spacers requires two longer bolts, M8X1.25, which are included.

Since you are using the front exit cable application, the selector lever must point down and use the front exit cable pan bracket (Letter A for 4L60-E/4L80-E/TCI 6X) or cable pan bracket (Letter B for 700R4/2004R).

See **Figure 8** for the correct hole to use in the selector lever and pan bracket depending on your application. Torque the pan bracket bolts to 12-13 ftlbs. **Note:** Some brackets may have 4 holes instead of 3.



Figure 6



Figure 7

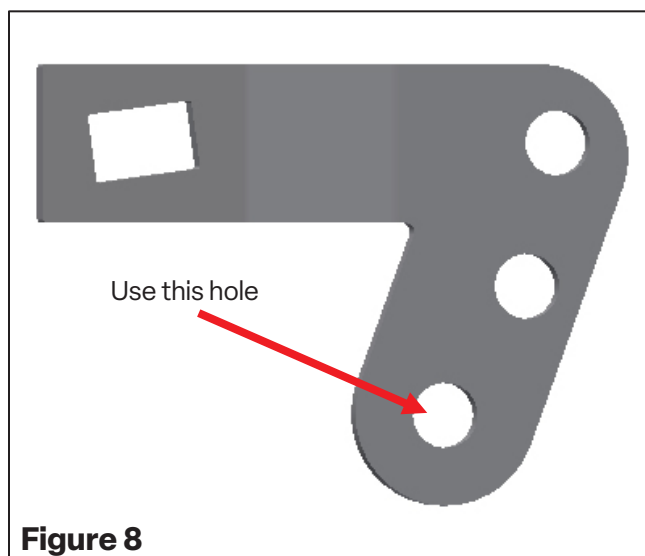


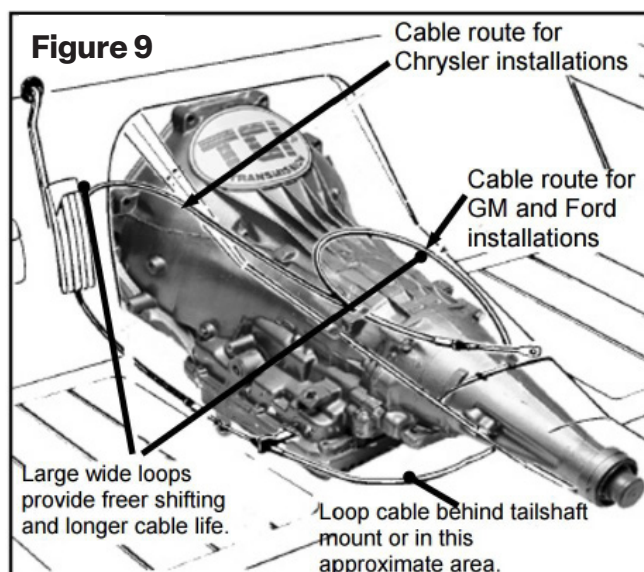
Figure 8

Step 6: Route the shifter cable according to **Figure 9**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 7: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

Step 8: On GM vehicles, the park/neutral safety switch may be located on the steering column, console shifter, or it may be a mechanical interlock in the steering column that prevents the key turning to the start position unless the shifter is either in park or neutral. Identify the park/neutral system you have. With either system, disconnect the battery ground cable to prevent accidental shorts. If you have a neutral safety switch, disconnect and extend both wires from the GM switch to the park/neutral switch on the shifter. If you have a mechanical interlock system, cut the wire that goes from the start position on the ignition switch to the starter, normally a 12-14 gauge purple wire. Using 12-14 gauge wire, strip the insulation from one end of each wire and crimp butt connectors onto the wires. If your vehicle does not have a park/neutral safety switch, locate the wire which goes to the (S) terminal on the starter. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.





Powerglide 2 Speed/Forward/Reverse Pattern

Powerglide Forward or Reverse Shift Pattern Front Exit Cable Application

The vehicle should be raised to a convenient work height and place jack stands under the frame. **Never work under a vehicle that is supported only by a jack!**

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

NOTE: In order to utilize the reverse shift pattern configuration, your transmission must be equipped with a reverse shift pattern valve body.

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator molded cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal PRND21 with PRN21 for forward shift pattern or PRN12 for reverse shift pattern. Tighten the four shift indicator cover screws.

This POWERGLIDE shifter is designed to be used only with manual shift valve bodies.

Remove the transmission drain plug if so equipped and dispose of the fluid in a responsible manner. If your pan does not have a drain plug, remove the bolts one at a time working towards the front. As you loosen the last few bolts at the front of the pan the oil pan should tilt down allowing the fluid to drain. Note: If your oil pan sticks to the gasket, pry it down with a screwdriver and allow the transmission fluid to drain. Remove the last of the bolts and set the transmission pan aside.

Scrape all gasket material from the pan and the case. If your pan is not equipped with a drain plug, you may want to install a TCI Drain Plug Kit # 805800.

Remove the manual valve guide plate by removing the two bolts circled in **Figure 1**.

Unhook and remove the detent roller spring. Allow the detent roller to pivot out of the way. Note how the pin on the manual valve selector engages the groove in the manual valve.

If your transmission has a throttle valve lever on the outside of the shift lever, loosen the inner pinch bolt on the throttle lever. Slide the throttle lever shaft out of the transmission. Discard the throttle lever assembly.

Loosen the pinch bolt on the selector lever. This can be either an Allen-head bolt or a 12-point-head bolt. Do not remove the pinch bolt. Slightly pry the manual valve lever and remove the selector shaft from the transmission. Discard the selector shaft.

Install the shift lever into the transmission with the lever pointing down. While holding the stock selector lever in position in the case, engage the pin on the selector lever with the manual valve and rotate shaft until the flat on the shaft engages the serrations on the lever. Push the

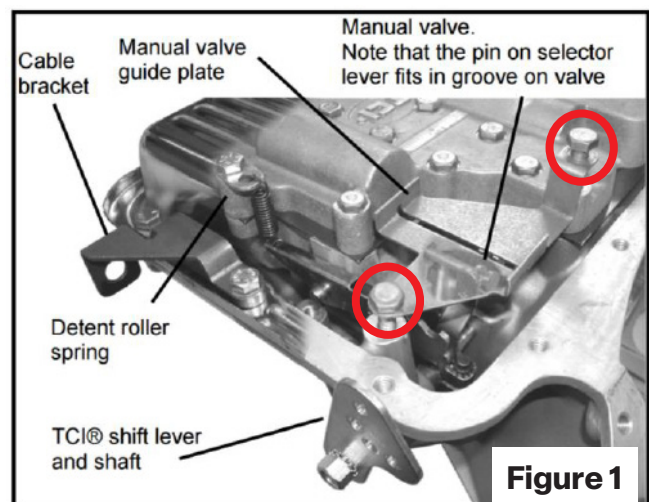


Figure 1

shaft firmly into the transmission, making sure that the selector lever bottoms on the shoulder of the shaft. Tighten the pinch bolt securely, but be careful not to over-tighten the bolt or the selector may crack.

Install the manual valve guide plate in place. (Make sure that the pin on the selector lever is engaged with the manual valve). Install the two bolts and tighten to 15 ft-lbs. Install the detent roller spring. The selector lever must travel freely and smoothly from front to back with a positive click in each gear position.

Install a new pan gasket and filter kit, 628500. Start all pan bolts except the two bolts which hold the pan bracket on. Install the correct pan bracket (LETTER E).

When installing the cable, refer to **Figure 2** for proper hole selection.

To complete the shifter installation, follow STEPS 1-9



Figure 2

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable.

Before mounting the shifter, remove both side covers as shown in **Figure 3**.

When using the shifter as a 2-speed forward or reverse pattern, you will need to install the shift travel limit plate shown in **Figure 4**.

These parts will be installed on the left-hand side of the shifter (**Figure 5**).



Figure 3



Figure 4



Figure 5

Mark the locations for the four mounting bolts as shown in **Figure 6**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting, see **Figure 7**. The park/neutral safety switch is located where shown in **Figure 8**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in **Figure 8**. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches. ***Note:** only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet

Figure 6

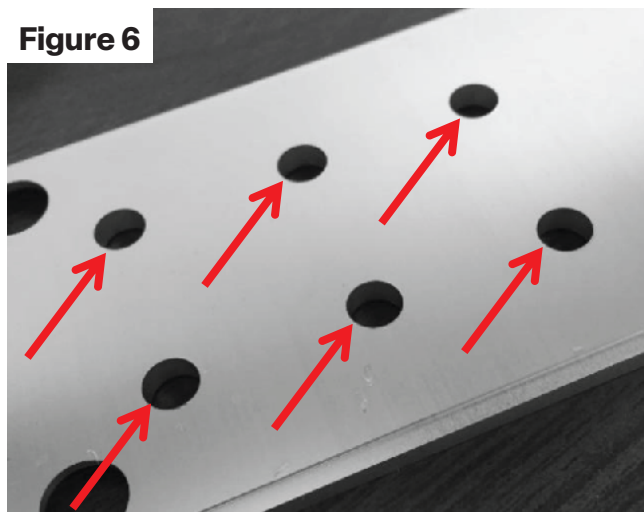


Figure 7

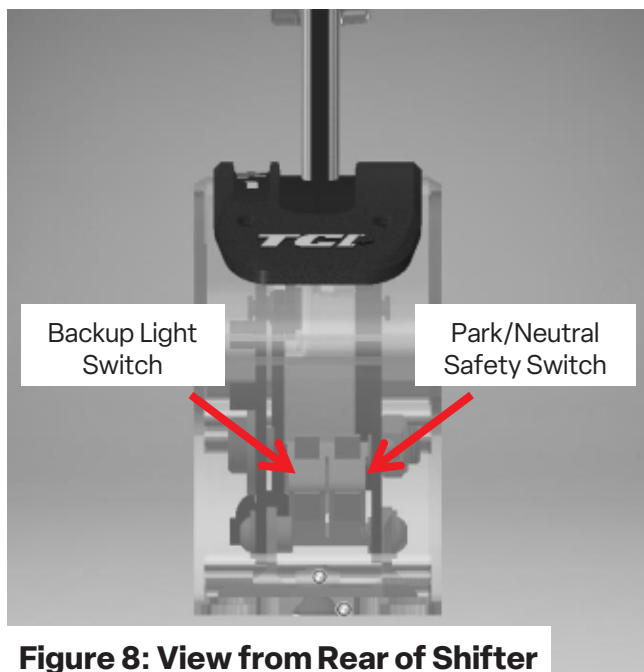
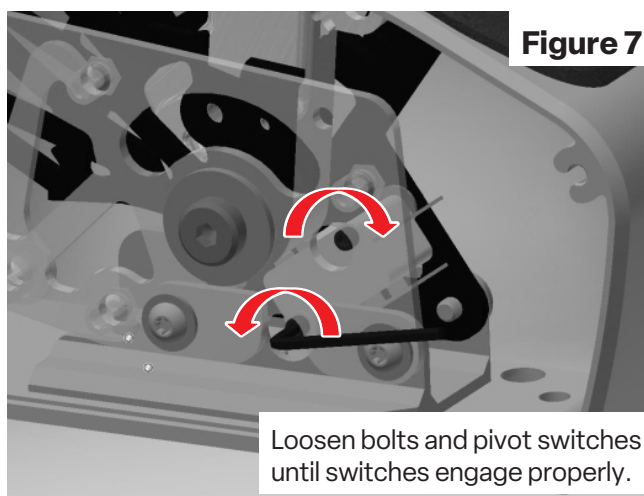


Figure 8: View from Rear of Shifter

lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 9**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.

Step 5: If you have not already done so, remove the stock selector lever nut and lever from the transmission. Install the TCI selector lever using the stock selector lever nut or an SAE flanged nut which is provided. Use 5/16"-18 pan bolts for installing the pan bracket on the Powerglide.

The use of the spacers requires two longer bolts, 5/16"-18 x1.25" which are also included.

Figure 10.

Since you are using the front exit cable application, the selector lever must point down and use the front exit cable pan bracket (Letter E). See Figure 2 for the correct hole to use in the selector lever and pan bracket depending on your application. Torque the pan bracket bolts to 12-13 ft-lbs.

Step 6: Route the shifter cable according to **Figure 11**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 7: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.



Figure 9

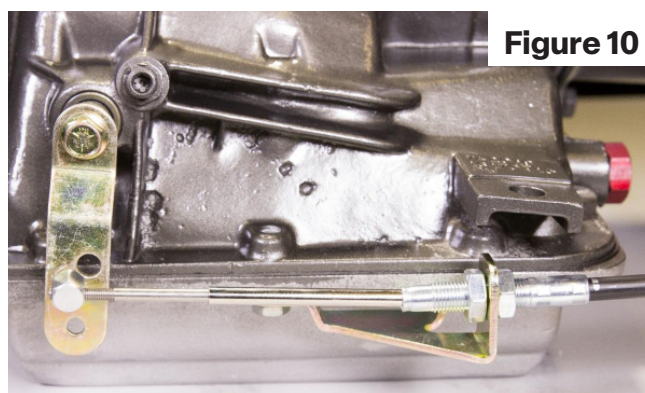


Figure 10

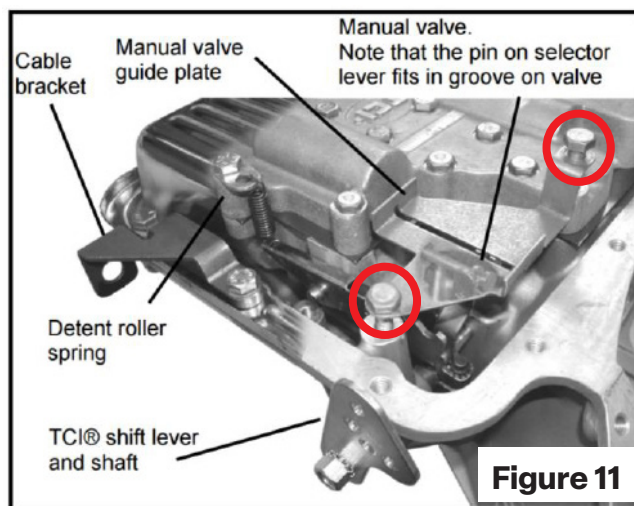


Figure 11

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position, remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

Step 8: On GM vehicles, the park/neutral safety switch may be located on the steering column, console shifter, or it may be a mechanical interlock in the steering column that prevents the key turning to the start position unless the shifter is either in park or neutral. Identify the park/neutral system you have. With either system, disconnect the battery ground cable to prevent accidental shorts. If you have a neutral safety switch, disconnect and extend both wires from the GM switch to the park/neutral switch on the shifter. If you have a mechanical interlock system, cut the wire that goes from the start position on the ignition switch to the starter, normally a 12-14 gauge purple wire. Using (12-14) gauge wire, strip the insulation from one end of each wire and crimp butt connectors onto the wires. If your vehicle does not have a park/neutral safety switch, locate the wire which goes to the (S) terminal on the starter. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position.

The starter must engage only when the shifter is in park or neutral. If everything is operating correctly, re-install the shifter side covers.

Step 9: Fill the transmission with four quarts of transmission fluid, start engine in park, with brake applied, shift the transmission through all gear ranges, place the shifter in park, check the fluid level and add as necessary. Caution: Do not overfill the transmission. Fluid recommended, is TCI Max Shift transmission fluid 950641 (one quart bottles) or TCI 950640 (case of twelve one quart bottles).



Ford 3 Speed Forward/Reverse Pattern

Ford Three-Speed Forward Shift Pattern Front Exit Cable Application C4, C5, C6

The vehicle should be raised to a convenient work height and place jack stands under the frame. **Never work under a vehicle that is supported only by a jack!**

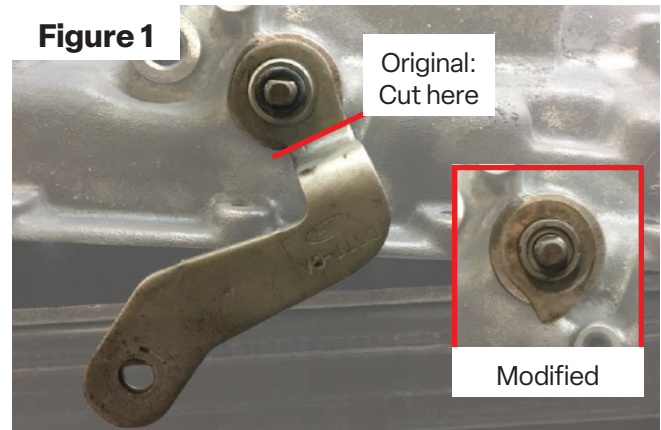
TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

Remove the nut and lock washer holding the downshifting linkage onto the downshift or throttle lever shaft. Pull the lever off the shaft and allow to hang freely. Remove and discard the stock linkage rods. Some C4, C5 and C6 transmissions have a park/neutral safety/backup light switch on the transmission shift lever. If your transmission is so equipped, remove the two bolts holding the switch to the case and slide it off the shift shaft. Disconnect the switch from the factory plug and discard it.

The stock shift lever will need to be modified for the installation of the new shift lever. See **Figure 1** for what needs to be removed from the stock shift lever. Place the transmission in the neutral position and install the new shift lever facing straight down with the complete side to the outside of the transmission. Install the 1/4"-20 x 1.5" pinch bolt and nut. Tighten the pinch bolt and nut securely. The lever should travel smoothly from front to back with a positive click in each gear position.

Shifter installation: Follow STEPS 1-4

Figure 1



Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable. Before mounting the shifter, remove both side covers as shown in **Figure 2**.



Figure 2

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Mark the locations for the four mounting bolts as shown in **Figure 3**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 4**. The park/neutral safety switch is located where shown in **Figure 5**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in **Figure 5**. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches. ***Note:** Only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 10-32 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until

Figure 3

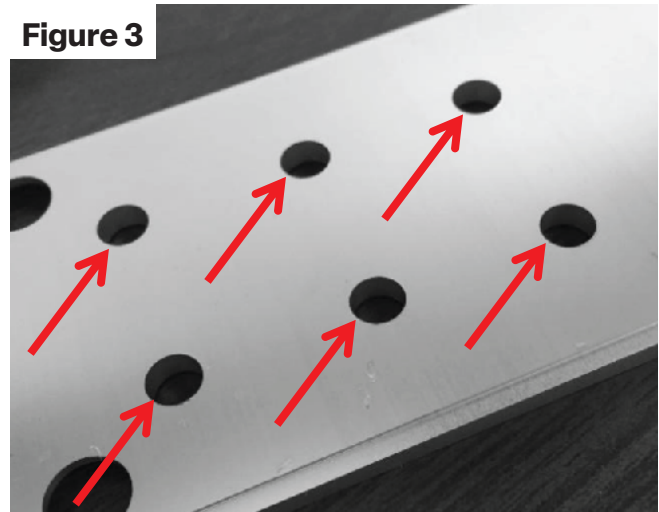


Figure 4

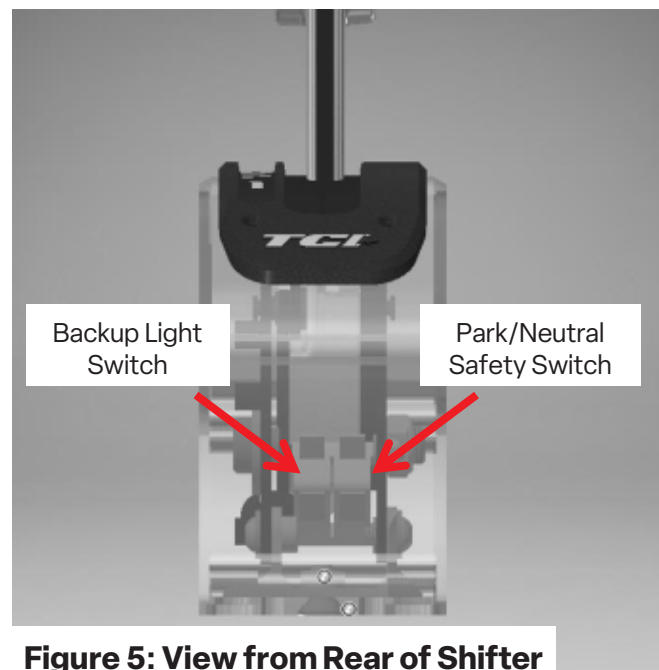
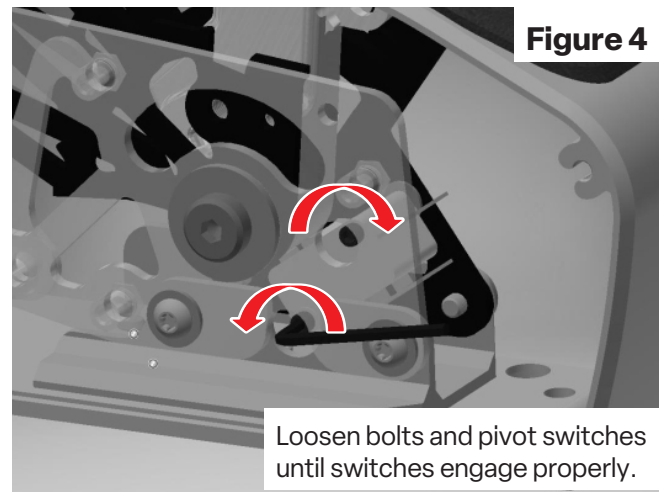


Figure 5: View from Rear of Shifter

the eyelet bottoms out. A slight adjustment may be needed so the eyelet lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 6**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.

C4 and C5 transmissions use the cable bracket (Letter D) for this application. Mount the cable bracket as shown in **Figure 7**. Tighten the bolts to 12-13 ft-lbs.

C6 transmissions use pan bracket (Letter C). When installing the pan bracket, two spacers and two longer 5/16"-18 x 1.25" bolts must be used. Tighten bolts to 12-13 ft-lbs.

If the shift lever needs to be adjusted, loosen the pinch bolt and adjust the lever until the cable eyelet will easily side in and out of the shift lever, then install the cotter pin. Tighten the shift lever bolt securely.

Make sure the downshift/TV lever seal (most times an O-ring) is in place on the shaft. Install the downshift/TV lever lock washer and nut. Tighten securely.

Move the shifter to the park position as far forward as the shifter will go without forcing the shifter. The shifter has further travel that is used on GM transmissions that is not used on the Ford transmissions. Forcing the shifter further than necessary to obtain park will damage the cable.

Locate and identify the park/neutral safety switch wires. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.



Figure 6

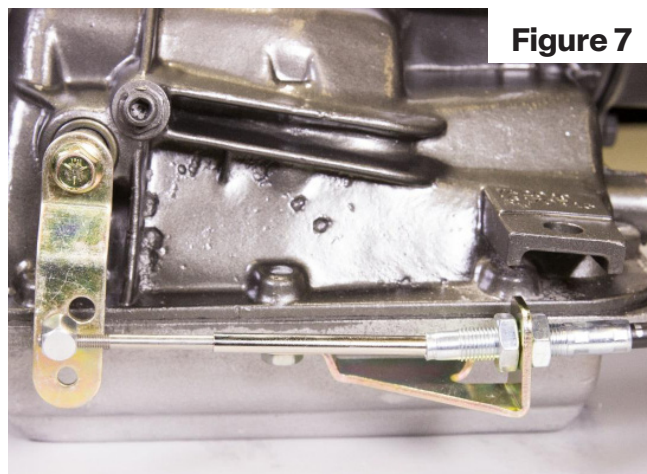
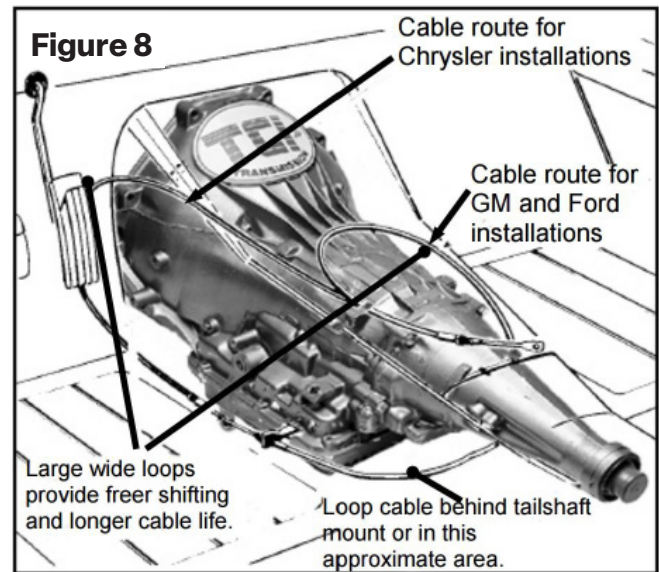


Figure 7

Step 5: Route the shifter cable according to **Figure 8**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 6: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.



Ford Three-Speed Forward Shift Pattern Front Exit Cable Application C4, C5, C6

Note: In order to utilize the reverse shift pattern configuration, your transmission must be equipped with a reverse shift pattern valve body.

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator molded cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal, (PRND21) with (PRND21). Do not tighten the screws at this time. Place the shifter handle in any gear position, make sure the shift indicator decal lines up with the shifter handle. Now tighten the four screws with the 1/16" Allen wrench. Follow Steps: 1-7



Ford 4 Speed Forward Pattern

Ford Four-Speed Forward Shift Pattern Front Exit Cable Application AOD

The vehicle should be raised to a convenient work height and place jack stands under the frame. **Never work under a vehicle that is supported only by a jack!**

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

THIS APPLICATION REQUIRES THE USE OF TCI PART # 618016 INSTALLATION KIT

Even though the AOD transmission is a four-speed automatic transmission, it only has three forward gear positions on the shifter. No changes to the shifter gate plate are necessary.

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Remove the nut and lock washer holding the downshifting linkage onto the downshift or throttle lever shaft. Pull the lever off the shaft and allow to hang freely.

Remove the transmission drain plug, if so equipped, and dispose of the fluid in a responsible manner. If your pan does not have a drain plug, remove the bolts one at a time, working towards the front. As you loosen the last few bolts at the front of the pan, the oil pan should tilt down, allowing the fluid to drain. **Note:** If your oil pan sticks to the gasket, pry it down with a screwdriver and allow the transmission fluid to drain. Remove the last of the bolts and set the transmission pan aside.

Scrape all gasket material from the pan and the case. If your pan is not equipped with a drain plug, you may want to install a TCI Drain Plug Kit # 805800.

Use a pair of diagonal cutters to remove the shift lever retaining pin from the case. **(Figure 1)**

Loosen the 20mm nut on the inner end of the shift lever and slide the shift lever out. Leave the throttle lever shaft and inner selector lever in place.

Apply a small amount of transmission fluid or petroleum jelly to the seal inside the shift lever. Slide the new shift lever into the case over the throttle lever and shaft. Engage the new shift lever with the inner selector lever and install the nut. Install the shift lever retaining pin back into its hole in the case and tap it in. Tighten the shift lever nut. Check that the inner throttle lever is properly located and that the spring is in place. Check that the park operating rod is in place.

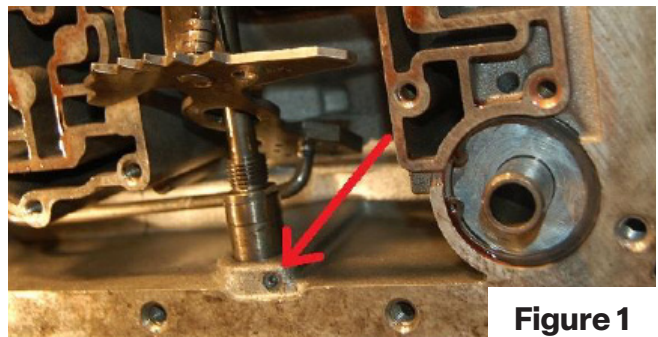


Figure 1

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Install the throttle linkage lever onto its shaft and install the lock washer, nut, and tighten the nut. Check that the throttle lever moves freely and that it pushes in the throttle valve on the valve body. Check that the shift lever moves through all gear ranges and that park operating rod moves with it. Install the three bolts you removed and tighten. Replace the transmission pan gasket and filter with TCI 438500 and install the three bolts you removed and tighten. Install all but two of the original pan bolts which will hold the cable bracket onto the pan. It is installed with the two supplied longer bolts 1.25mm x 1" and spacers which go between the pan bracket and the pan. Tighten the pan bolts 12-13 ft-lbs.

If you are using the original park/neutral safety switch on the transmission, disregard the wiring instructions of the park/neutral switch on the shifter.

Locate and identify the park/neutral safety switch wires. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable. Before mounting the shifter, remove both side covers as shown in **Figure 2**.

Mark the locations for the four mounting bolts as shown in **Figure 3**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.



Figure 2

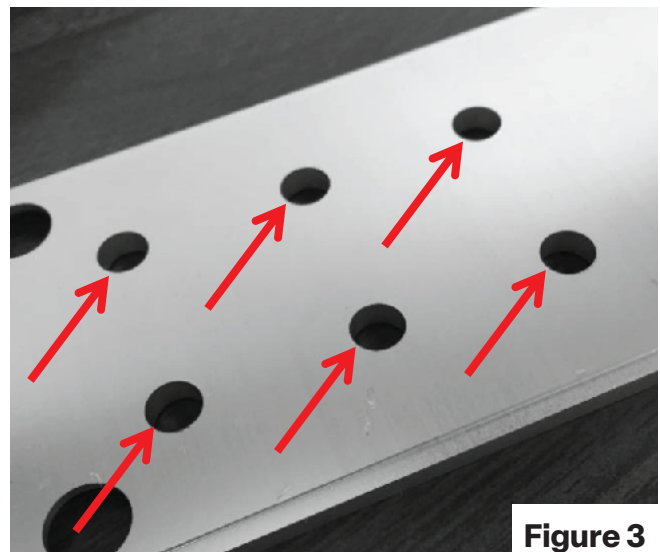
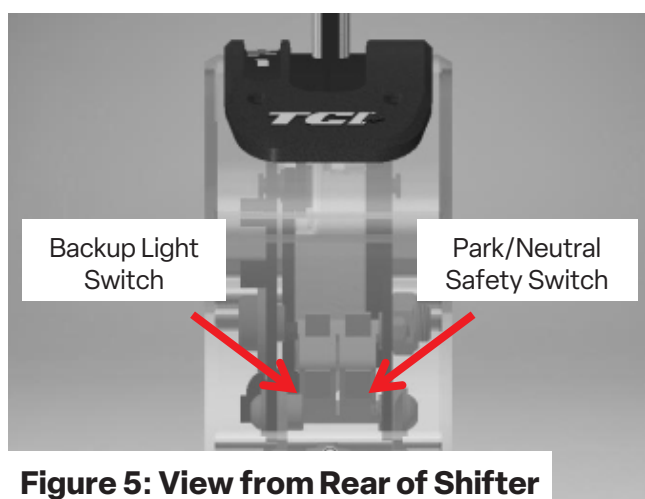
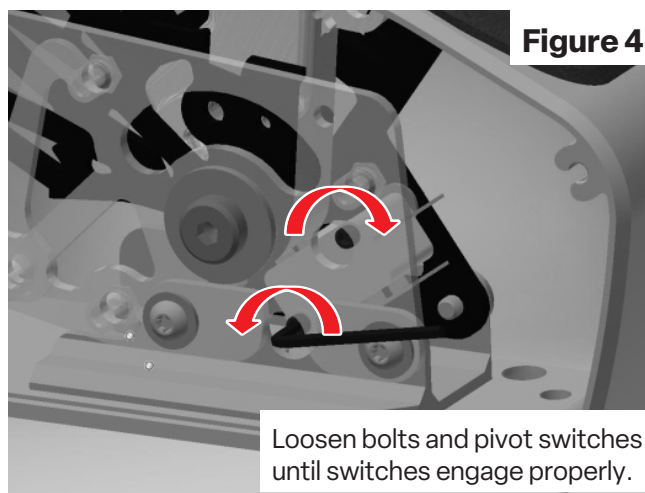


Figure 3

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 4**. The park/neutral safety switch is located where shown in Figure 5. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in **Figure 5**. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches. ***Note:** Only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 6**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter. The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.



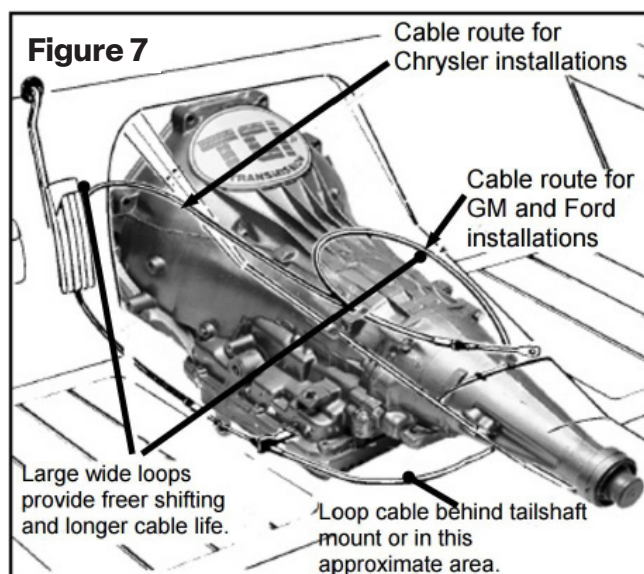
Step 5: Route the shifter cable according to **Figure 7**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.

Step 6: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal PRND21 with PRNODD1. Do not tighten the screws at this time. Place the shifter handle in any gear position, make sure the shift indicator decal lines up with the shifter handle. Now tighten the four screws with the 1/16" Allen wrench.

Move the shifter to the park position as far forward as the shifter will go without forcing the shifter. The shifter has further travel that is used on GM transmissions that is not used on the Ford transmissions. Forcing the shifter further than necessary to obtain park will damage the cable.





Chrysler 3 Speed Forward/Reverse Pattern

Three-Speed Forward Shift Pattern Front Exit Cable Application Chrysler 727, 904

The vehicle should be raised to a convenient work height and place jack stands under the frame.
Never work under a vehicle that is supported only by a jack!

TCI recommends Max Shift® transmission fluid, part number 950641 (one quart bottles), or TCI 950640 (case of 12 one-quart bottles).

NOTE: In order to utilize the reverse shift pattern configuration, your transmission must be equipped with a reverse shift pattern valve body.

Front Exit Cable Instructions

Step 1: Remove the stock linkage.

Column Shifters: Remove all rods, levers or cables from the column and the transmission. Place the column shifter in the park position. Remove the roll pin holding the shift lever to the column and remove the shift lever assembly.

Console Shifters: Remove the shifter mechanism from the console. Disconnect and remove the rod or cable from the transmission. Note: shifter installation may require console modification or complete console removal.

Step 2: If the vehicle is equipped with carpet, the carpet must be cut out where the shifter will be mounted or have a long slot cut for the shifter and shifter cable.

Before mounting the shifter, remove both side covers as shown in **Figure 1**.

Mark the locations for the four mounting bolts as shown in **Figure 2**. Use a 9/32" size drill and drill the mounting hole locations (**Note:** 6 holes are available, but only 4 are needed). Use printable hole template in instructions link.

Note: Some floor pans are extremely thin and will not adequately support the shifter when mounted to the floor, resulting in excessive shifter wobble. For these vehicles, we recommend fabricating a stiffener plate for additional support which is crucial for proper operation of the shifter and longevity of the shift cable. Determine where the shift cable will pass through the floorboard and using a hole saw, cut at least a one-inch diameter hole. TCI recommends installing a rubber grommet (not included) to protect the shift cable.



Figure 1

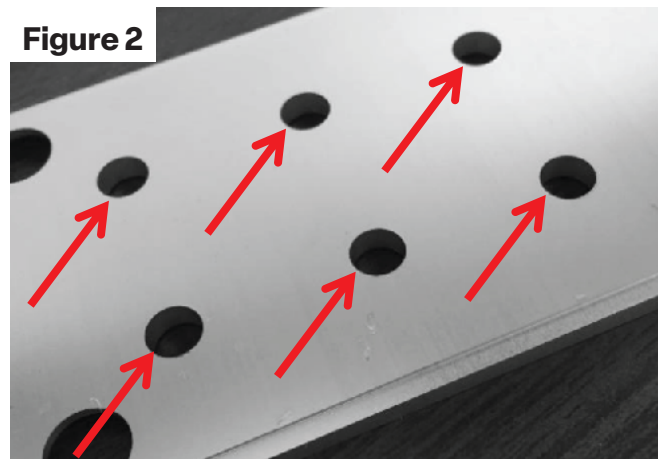
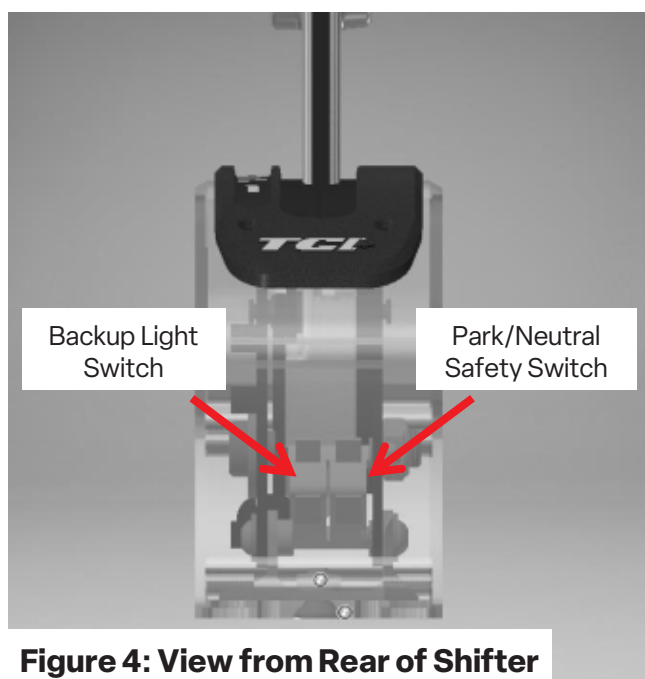
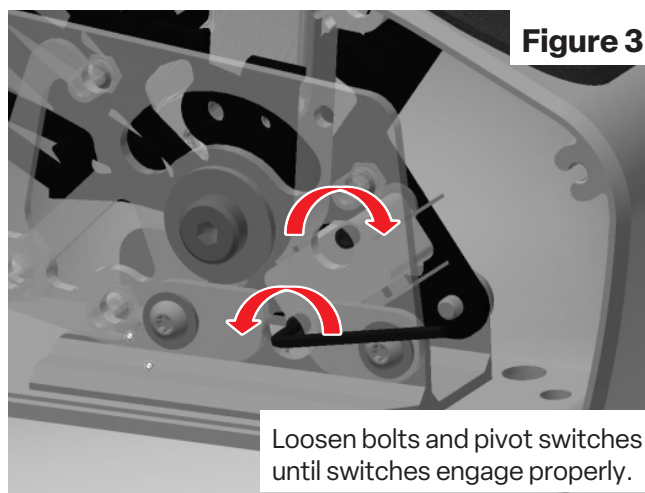


Figure 2

Before mounting the shifter, it is a good idea to check the park/neutral safety switch and the backup light switch are functioning properly. If the switches need adjusting see **Figure 3**. The park/neutral safety switch is located where shown in **Figure 4**. Check it with an ohm meter to be sure you have continuity in the circuit when the shifter is placed in both park and neutral. The backup light switch is also shown in **Figure 4**. Place the shifter in the reverse position and check the backup light switch using the same method as the park/neutral safety switch. Rubber grommets are installed in the shifter housing to accommodate wire routing. Terminals are included in the kit for use with these switches. ***Note:** Only shifter part numbers 620001 and 620004 feature buttons in the handle.

Step 3: Install the cable onto the shifter. Both ends of the cable are the same. Begin by removing the 1032 jam nut and two rubber dust sleeves from one end of the cable. Also remove one 7/16" jam nut and washer. The remaining 7/16" jam nut should be threaded until it stops on the shift cable. Insert the cable through the shifter housing, re-install the jam nut washer and the 7/16" jam nut. Do not tighten at this time. Re-install the two rubber dust sleeves and the 10-32 jam nut. Thread the cable eyelet onto the end of the cable until the eyelet bottoms out. A slight adjustment may be needed so the eyelet lines up with the attachment point on the shifter handle. Tighten the 10-32 jam nut against the eyelet and then install the eyelet onto the shifter and install E-clip as shown in **Figure 5**. Adjust the cable where it passes through the shifter housing so that there isn't any slack in the cable. Tighten the cable jam nuts using two wrenches.

Step 4: Install the shifter into the vehicle. Slide the shifter cable through the cable hole. Install the park/neutral safety switch and back up light switch wires and route through the rubber grommets. It is recommended that a piece of electrical tape be used to secure the wires in the grooves to prevent the wires from being crushed during the mounting of the shifter.



The shifter should be level before securing to the floorboard. Install the four 1/4"-20x1-1/2" bolts, washers, and nuts (supplied) through the shifter and the floor board and tighten securely. Seal the cable hole securely to prevent entry of exhaust fumes.

Loosen the pinch bolt on the throttle lever. These two levers have a flat side and will only install in one way. Pry the lever off with a screwdriver and allow the linkage to hang free. Loosen the pinch bolt holding the stock shift lever to the manual shaft. Pry off the stock shift lever, replace the shift lever with the one included in the Chrysler 727/904 Kit. Re-install the throttle lever and tighten the pinch bolt.

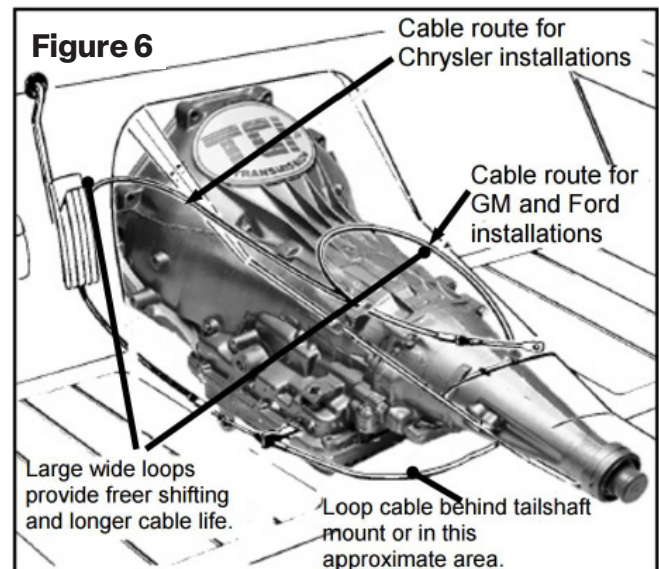


Figure 6

Remove the two transmission pan bolts directly below the shift lever. Install cable bracket (Letter F) onto the transmission. **(Figure 6)**

Using the two longer 5/16"-18 bolts and spacers between the pan bracket and the case. Tighten the pan bolts to 12-13 ft-lbs.

Step 5: Route the shifter cable according to **Figure 7**. Avoid kinks and sharp bends and route the cable away from exhaust parts. Remove the two rubber dust sleeves, one 7/16" nut, and lock washer from the threaded end of the cable. Slide the end into the cable bracket. Install the lock washer, 7/16" nut, two rubber dust sleeves, 10-32 jam nut, and cable eyelet. The cable eyelet must extend at least two threads past the end of the eyelet.



Step 6: Place the shifter and the transmission in the neutral position, adjust the cable and eyelet until the eyelet slides easily in and out of the shift lever, and insert the cotter pin. (Make sure you are using the correct hole in the shift lever). Tighten the cable jam nuts using two wrenches.

Shift the transmission through all gear positions. If you have a hard time moving the shifter handle, **DO NOT FORCE THE SHIFTER**; this will damage the shifter cable. Re-check all shifter adjustments before proceeding. With the shifter in park, make sure the output shaft will not turn. Place the shifter back into the neutral position and remove the cotter pin and re-check that the eyelet will slide easily in and out of the shift lever. Install the eyelet and cotter pin, then tighten the eyelet jam nut.

Move the shifter to the park position as far forward as the shifter will go without forcing the shifter. The shifter has further travel that is used on GM transmissions that is not used on the Chrysler transmissions. Forcing the shifter further than necessary to obtain park will damage the cable.

Check the operation of the throttle linkage again. The linkage must operate smoothly with no bind. All transmissions using automatic shifting valve bodies must have the throttle linkage connected and operating or transmission damage will occur.

The park/neutral safety switch on 66-68 vehicles will continue to function normally. It will not be necessary to hook up the park/neutral safety switch on the shifter.

Disconnect the negative battery cable before wiring up the backup light switch. Locate the original backup light switch on the steering column or console shifter and connect the circuit to the shifter's reverse light switch. Reconnect the negative battery cable and check the backup lights for proper operation.

If the park/neutral and the backup light switch are located on the transmission, they will continue to function normally. It will not be necessary to connect any wires to the shifter.

Step 7: If you have a mechanical interlock system, cut the wire that goes from the start position on the ignition switch to the starter, normally a 12-14 gauge purple wire. Using 12-14 gauge wire, strip the insulation from one end of each wire and crimp butt connectors onto the wires. If your vehicle does not have a park/neutral safety switch, locate the wire which goes to the (S) terminal on the starter. Cut this wire and using butt connectors, splice into the park/neutral safety wires on the shifter. Disconnect the coil wire and reconnect the battery ground wire. Check the switch operation by attempting to start the engine in each shifter position. **The starter must engage only when the shifter is in park or neutral.** If everything is operating correctly, re-install the shifter side covers.

Three-Speed Reverse Shift Pattern Front Exit Cable Application Chrysler 727,904

Note: In order to utilize the reverse shift pattern configuration, your transmission must be equipped with a reverse shift pattern valve body.

To change the shift indicator decal, loosen or remove the four screws holding the shift indicator molded cover plate with a 1/16" Allen wrench. Lift up the shift indicator cover and replace the shift indicator decal, (PRND21) with (PRND21). Do not tighten the screws at this time. Place the shifter handle in any gear position, make sure the shift indicator decal lines up with the shifter handle. Now tighten the four screws with the 1/16" Allen wrench. Follow Steps 1-7 above.



Limited Warranty

Limited Warranty

TCI Automotive warrants that all of its products are free from defects in material and workmanship for a period of (1) one year from the date of purchase. This limited warranty shall cover the original purchaser.

TCI Automotive's obligation under this warranty is limited to the repair or replacement of its product. To make a warranty claim, the part must be returned within (1) one year of purchase to the address listed below, freight prepaid. Items covered under warranty will be returned to you freight collect. It is the responsibility of the installer to ensure that all of the components are correct before installation. We assume no liability for any errors made in tolerances, component selection or installation.

There is absolutely no warranty on the following:

- **Any parts used in racing applications.**
- **Any product that has been physically altered, improperly installed or maintained.**
- **Any product used in improper applications, abused or not used in conjunction with the proper parts.**
- **Damage due to excessive manifold pressure, e.g. nitrous backfires, engine misfire, etc.**

There are no implied warranties of merchantability or fitness for a particular purpose. There are no warranties which extend beyond the description of the face hereof. TCI Automotive will not be responsible for incidental and consequential damages, property damage or personal injury damages to the extent permitted by law. Where required by law, implied warranties or merchantability and fitness are limited to a term of 1 year from the date of original purchase.

This warranty gives you specific legal rights and you may also have other legal rights, which vary from state to state.

CALIFORNIA PROPOSITION 65 WARNING

This product may contain one or more substances or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.