Return to Instruction Sheet index

# TCI® 220000

## Torqueflite Trans-Scat® Kit

This kit can be installed in a few hours by carefully following directions. Read all instructions first to familiarize yourself with the parts and procedures. Work slowly and do not force any parts. Transmission components and valves are precision fit parts. Burrs and dirt are the number one enemies of an automatic transmission. Cleanliness is very important, so a clean work area or bench is necessary. We suggest a clean work bench top from which oil can easily be cleaned or a large piece of cardboard.

This kit contains all parts necessary to obtain 3 levels of performance depending on intended use:

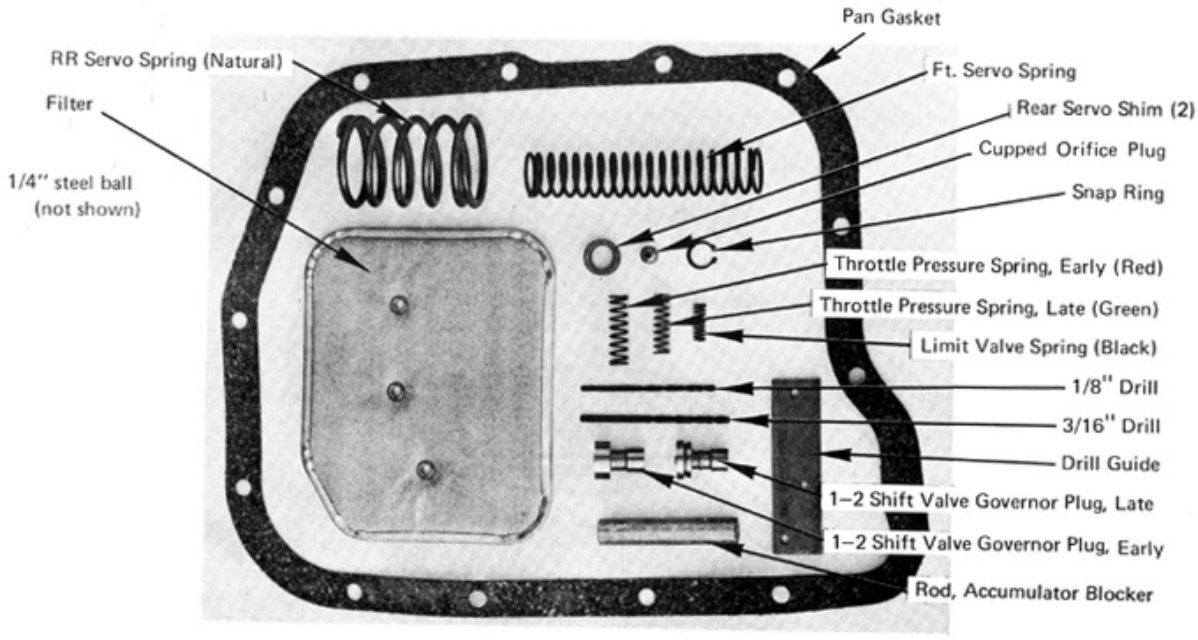
1. **Heavy Duty**: Towing, campers, motor homes, police, and taxi — firm shift feel without loss of driver comfort. Full manual control when desired, up shifting or down shifting.

2. **Street**: Street driven hi-performance cars, extra firm shift feel, minor loss of driver comfort. Full manual control when desired, up shifting and down shifting.

3. **Competition**: Race cars only, not to be driven on the street. Maximum shift feel intended for full performance racecars. Full manual control when desired or adjustable automatic shift points to 7000 rpm.

### TORQUEFLITE Trans-Scat® PARTS LIST

Inspect the contents of your Trans-Scat® kit carefully. If you are missing any of the parts shown below, do not proceed. Contact your TCI Automotive dealer.




### TOOLS REQUIRED FOR TORQUEFLITE Trans-Scat® INSTALLATION

| | |
|---|---|
| Speed Handle or Ratchet — 3/8" drive | 11/16" Wrench |
| 1/2" Socket—3/8" drive | 5/16" Allen Wrench |
| 7/16" Socket—3/8" drive | 6" Flat Blade Screwdriver |
| 3/8" 12—point Socket — 3/8" drive | Small Flat Blade Screwdriver |
| 3/4" Wrench | Phillips Blade Screwdriver |

3/8" Wrench

1/4" Drill Motor

Small File

Torque Wrench 0—250—in. lbs.

Snap Ring Pliers — Needle Tip — Expansion

**DISASSEMBLY**

Automatic transmissions operate at temperatures between 150° F and 250° F. It is suggested that the vehicle be allowed to cool for a few hours to avoid burns from hot oil and parts. The vehicle should be off the ground for ease of installation. Jack stand, wheel ramps, or a hoist will work fine. Make sure vehicle is firmly supported! Try to raise it 1-2 feet so you have plenty of room to work easily. Also, have a small box or pan handy to put bolts in so they won't be lost, and a drain pan to catch oil.

**STEP 1.** Drain oil pan. Some model Torqueflites have drain plugs. If yours has a drain plug, remove it and allow the fluid to drain, then install drain plug back into pan. If you do not have a drain plug you should consider installing a TCI drain plug kit, no. 27002, at this time. To drain oil remove each pan bolt one at a time, working toward the front of the transmission. Remove the last two bolts slowly and the pan will tilt down to allow the last of the fluid to drain. If the pan sticks to the old gasket, pry it down slightly with a screwdriver before removing the last two bolts to break the seal. After the last bolt is removed the pan can be lowered and set aside.

**STEP 2.** The valve body will now be exposed. (See Fig. 1.) It is held in place by ten, 1/4-20 bolts. Before the valve body can be removed, you must disconnect shift and throttle linkage. (See Fig. 2.) Throttle linkage is located on the left (driver) side of the case, just above the valve body. The lever is attached to the throttle shaft and held in place with a pinch bolt. Use a 7/16" wrench or socket and loosen the bolt but do not remove it. Use screwdriver to pry the lever up and off the shaft. You may have either of two styles of shift linkage:

A. Shift cable: '62-'65 Torqueflites are shifted by a cable, which enters the case on the left side and engages an adapter link on the valve body. Remove the clip or nut that holds the cable adapter to the manual lever of the valve body. This will disconnect the cable from the valve body. (See Fig. 3.)

B. Shift lever: '66 and later Torqueflites are shifted by a rod and lever similar to the throttle pressure lever only larger. Place transmission shift lever in low gear. Loosen the pinch bolt and pry the lever off.

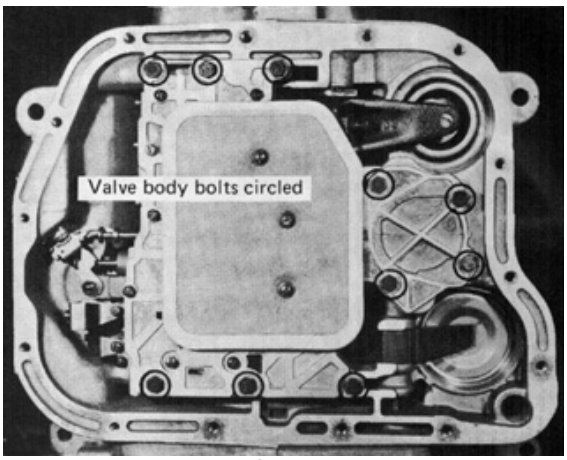


**FIGURE 1**

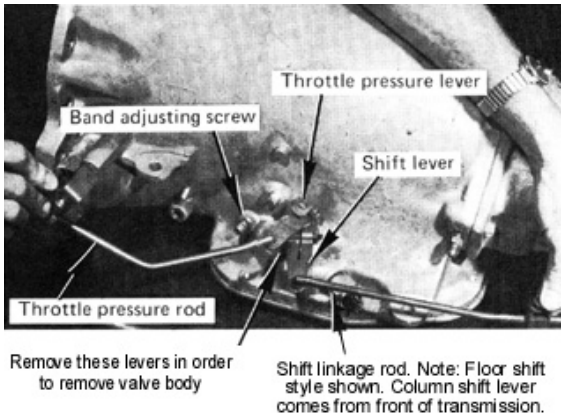


**FIGURE 2**

**STEP 3.** Now remove the valve body by removing the 10 bolts with a 7/16" wrench or socket. There is a spring between the valve body and the case so remove the last bolt slowly. This will also reduce the amount of oil splatter as the valve body is removed. *For '62-'65 units*: Pull valve body straight down, disconnect cable adapter from valve body. *For '66 and later*: Pull valve the body down and forward to disengage park rod from back of case. It may be necessary to rotate driveshaft slightly to remove rod. There will be a spring (1-2 accumulator spring) between the valve body and case (see Fig. 4), remove it also. Place valve body and spring in oil pan and set them on work bench. Discard 1-2 accumulator spring.

**STEP 4.** Front band and servo. (See Fig. 5.) Loosen the band adjusting screw located on the front driver's side of the case just above the cooler line fitting. Back the adjusting screw out until you can remove the band apply linkage. This will allow the band apply lever to rotate down and gain access to the front servo. Inspect the servo face to determine which type you have.

**Type 1:**

A-904 — 6-cyl., 273 and some 318 Chrysler, 6-cyl. American Motors — '72 and later. A-998 — 304 V-B American Motors — '72 and later.

Servo cover on above is 2" in diameter — Push up on cover and remove snap ring with a screwdriver. (See Fig. 6.) Remove cover carefully. There will be a small amount of oil behind the cover, remove cover slowly to prevent being splattered. If your transmission has two servo return springs (an inner and an outer), remove the outer spring and reassemble the servo. If your transmission has only one servo return spring, install it as removed. Install cover carefully to prevent damage to sealing ring. Install snap ring as removed, making sure snap ring is fully seated in groove.

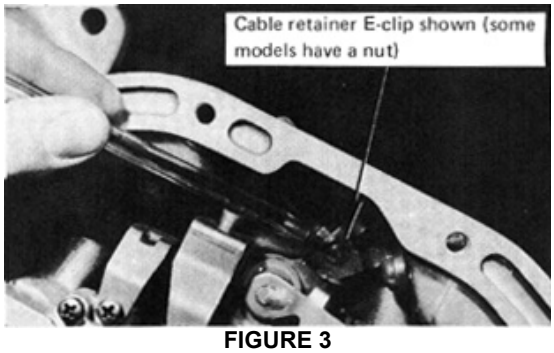


FIGURE 3

**Type 2:**

A-727 — 318 and larger Chrysler V-B's 360 and 401 American Motors V-B's.

Servo cover is 2-3/4" in diameter: — Inspect band apply rod in center of cover. If you have a '71 and later vehicle and the apply rod is 5/8" in diameter, do not disassemble your servo. Proceed to step 5.

If your servo cover has a 5/16" apply rod, push up on the servo cover and remove the snap ring. (See Fig. 6). Remove the servo cover slowly to prevent oil splatter and remove the servo return springs. Install long servo spring supplied with the TCI kit. Carefully install servo cover to prevent damage to seal ring. Install snap ring making sure it is fully seated into its groove.

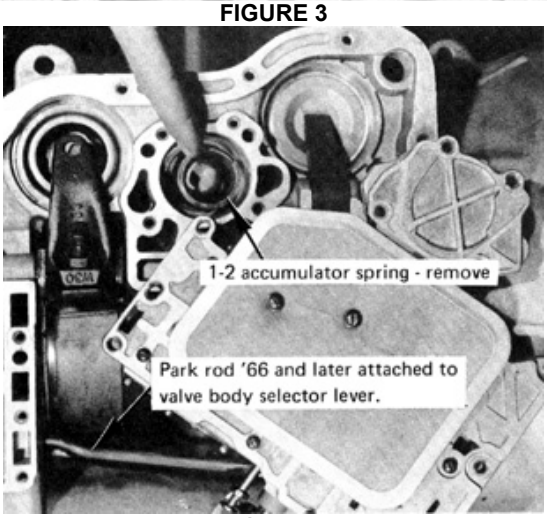


FIGURE 4

**STEP 5.** Install band apply linkage as removed. Run band adjusting screw down to engage anchor and adjust as follows: Tighten band adjusting screw to 72-inch lbs. (snug). Then back off adjusting screw 2 full turns. Hold band adjusting screw and tighten 3/4" jam nut securely.

**STEP 6.** A-727 only. For A-904 or A-998 proceed directly to Step 9. Rear Band and Servo: Loosen rear band adjusting screw and back it out all the way. Use a long thin screwdriver off band adjusting screw fully to push in on the rear band. (See Fig. 7.) This will allow the band apply strut to drop out of place for removal. After the strut has been removed, the band apply lever can rotate down to gain access to the rear servo. (See Fig. 8.) Remove the rear servo retainer snap ring with a screwdriver. Hold the retainer in place with your other hand so the spring does not jump out and cause lost parts or injury. Remove the retainer, servo return spring and servo piston. Discard servo return spring. Remove the piston slowly to avoid splattering oil. Inspect your servo to determine which model you have:

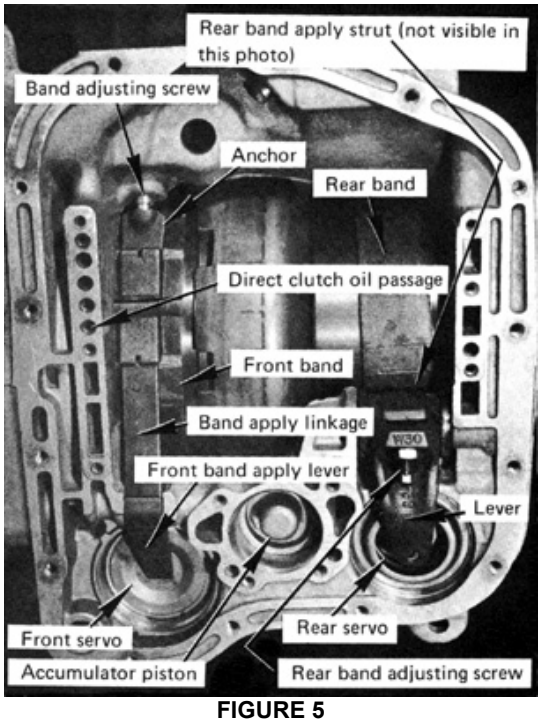


FIGURE 5

**See Fig. 9.** '62 '66— Aluminum Piston assembly with an aluminum inner piston. Depress inner piston, pry spring clip out with a screwdriver and remove small inner spring. Reinstall inner piston as removed and install spring clip back into its groove. Discard small inner spring.

**See Fig. 10**. '67 and later — Flat aluminum piston with a large external spring visible. Place piston assembly in a vise and compress spring slightly so snap ring can be removed with a pair of snap ring pliers. (See Fig. 11.) Discard old snap ring.

Remove servo from vise carefully and separate halves.

**Heavy Duty** — Install 1 servo shim supplied over servo shaft.

**Street and Competition** — Install 2 servo shims over servo shaft.

Assemble servo and place in vise to compress spring. Install new snap ring in groove on end of shaft. Do not spread snap ring any more than is necessary.

**STEP 7.** Install rear servo piston back into case as removed, being careful not to nick the rubber lip seal. Install special rear servo spring supplied with the TCI kit. Install servo spring retainer and snap ring. Make sure snap ring is fully seated into its groove.

**STEP 8.** Rotate band apply lever up and hold in position. Insert rear band apply strut into place. This is the reverse of the method used to remove the strut originally. (See Fig. 7.)

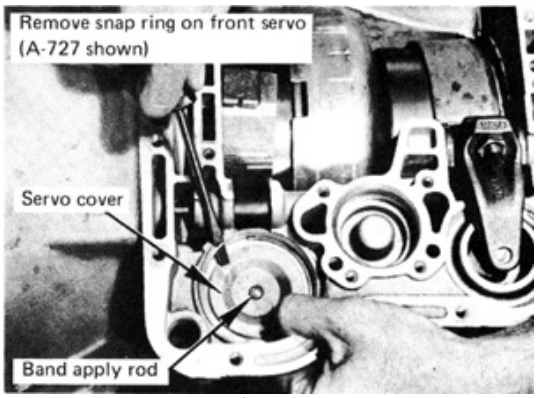


**FIGURE 6**

**STEP 9.** Rear band adjustment:

A-727 — all — Tighten band adjusting screw to 72-inch lbs. and back off 2-1/2 turns. Tighten jam nut securely.

A-904 — with single wrap band (one solid strap band visible) tighten band adjusting screw to 72-inch lbs. and back off 3-1/4 turns. Tighten jam nut securely.

A-904 and 998 with Double wrap band (three solid strap bands visible) — Tighten band adjusting screw to 72-inch lbs. and back off 4 turns. Tighten jam nut securely.

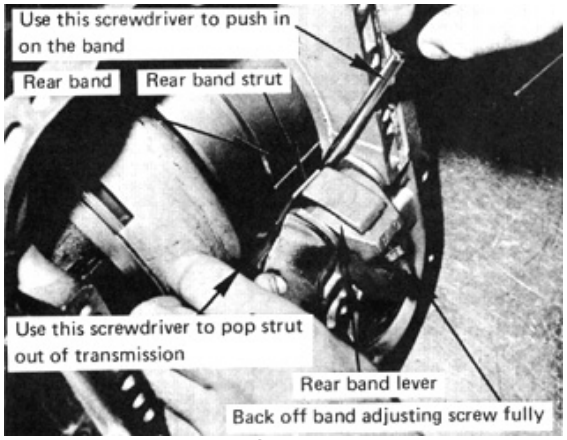


**FIGURE 7**

**STEP 10.** Accumulator Piston: The accumulator piston is located in the case between the front and rear servos. (See Fig. 5.) Remove the piston by pulling straight down. There will be a small amount of oil behind the piston, so be careful you don't get splattered. If there is a spring behind the accumulator piston, remove and discard it.

**H/D and Street** — Install piston as removed. Be careful not to damage the seal rings.

**Competition** — Install special accumulator blocker rod into back of accumulator piston before installation. (See Fig.12.) Install piston into bore being careful not to damage seal rings. Push up on piston until it stops.

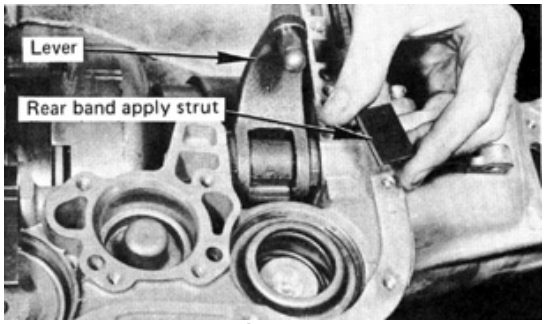


**FIGURE 8**

Install furnished cupped orifice plug into direct clutch oil passage in front of case. (See Fig. 5.) Tap plug in place with a punch until it is below the case surface.

You have now made all the modifications necessary to the case and transmission. You can now move to the work bench and work on the valve body.

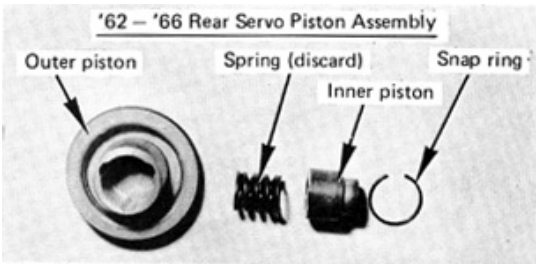


**FIGURE 9**

**STEP 11.** Your workbench should be clean as stressed in the beginning of the instructions. Place the valve body on the bench with the filter side up. Remove the three filter screws and remove the filter. The filter may be discarded at this time. Set the screws aside in a small tray, so they won't be lost. As you disassemble the valve body, when removing a valve and a spring, keep them together.

Now remove the pressure regulator spring retainer located next to the selector lever. (See Fig. 13.)

'62-'74 (small cage) — Remove three short screws.

'71-later (with large cage) — Remove throttle pressure adjustment screw first. Then remove screws that hold the retainer in place.

**CAUTION:** Hold your hand against the retainer while removing the screw (see Fig. 13) so the large pressure regulator spring does not fly out. Remove the retainer and adjustment plate, pressure regulator spring and converter valve spring and set them aside. Remove the regulator valve and converter valve and lay them next to their respective springs.

**STEP 12.** Set the valve body on the bench with the filter side up with the selector lever assembly in the top left corner. The valve body consists of: (1) a thick casting containing the valve bores and will be referred to as the **casting**; (2) a thin stamped steel plate with numerous different shaped holes called a **separator plate**, and; (3) a thin aluminum casting that looks like a maze called a **transfer plate**.

**STEP 13.** Valve Body Disassembly: (See Fig. 14)

'62-'65—Remove two short Phillips screws at the top center portion of valve body that retains the reverse blocker plate. Slowly remove plate, reverse blocker piston and reverse blocker spring. Set these parts aside so the spring won't be confused.

'66 and later — These years do not have a reverse blocker.

'78 and later with lock up converter — valve body will have a tube and lock up valve housing as shown in picture on page 12. Remove housing and tube but do not disassemble housing. Reinstall as removed when assembling valve body.

**STEP 14.** Remove valve body screws from transfer plate. (See Fig. 14.) There will be 14 of them with either Phillips or slot heads. Hold the casting and **transfer plate** together with one hand while removing the last screw so you won't lose any internal parts. Carefully lift the **transfer plate** assembly off the casting to expose the oil passages. Turn the **transfer plate** assembly over so the **separator plate** is facing up and set it to your right. Inspect your **casting** for the following: (See Fig. 15.)

'62-'65 — Small check valve and weak spring in lower left corner. Valve is a thin stamped metal disc about 1/2" diameter. Remove and place in tray.

'66-'68 — No check valve

'69-'76 — Large steel ball on a stiff spring underneath. Remove the ball and spring and set it aside so it won't be confused with other parts.

'66 — '68 and '77 and later do not have any check valve

All valve bodies — There will also be five 1/4" diameter steel check balls and one 11/32" diameter steel check ball in the casting (see Fig. 15). Remove these and place them in the tray. '78 and later will have an additional 1/4" ball.

**STEP 15.** Shift Valve End Plate: Remove the three screws that hold the shift valve end plate in place. There are three possible combinations you may encounter. (See Fig. 16.)

1. '62-'70 (727) — A flat plate that is held in place with three short Phillips screws. Remove the plate to expose the 1-2 shift valve and spring and the 2-3 shift valve and spring. Remove each valve and spring and set them aside.

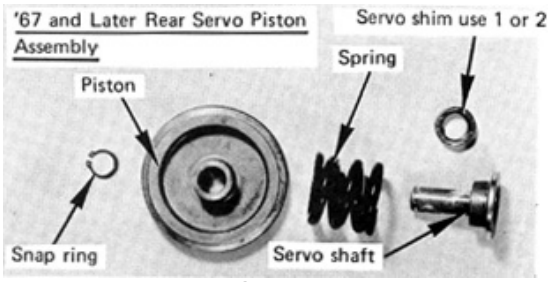


**FIGURE 10**

**FIGURE 11**

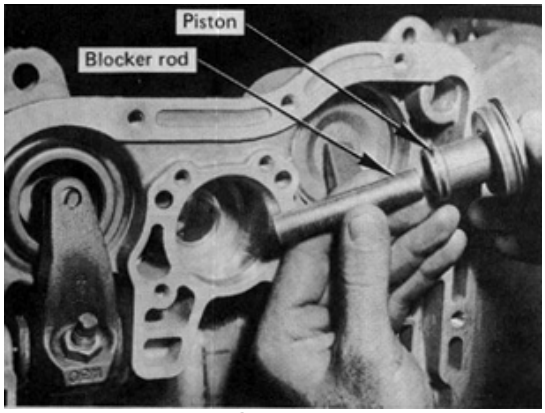


**FIGURE 12**

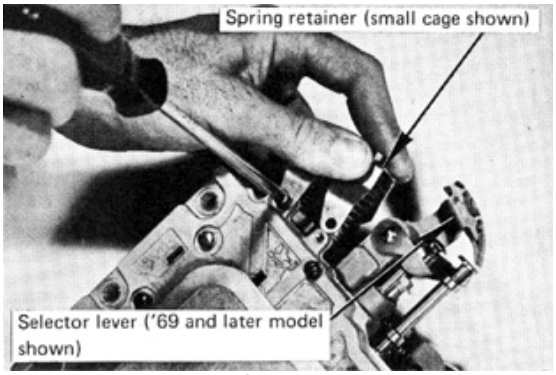


**FIGURE 13**

2. '62-'74 (904) — Some of these models have a throttle plug housing which is an aluminum casting containing a valve called a throttle plug. Remove the two short and long Phillips screws to remove the housing. This will expose the 1-2 shift valve and spring and the 2-3 shift valve round spring. Remove each valve and spring and set them aside.

3. '71 and later (727) — Some of these models have a 3-2 downshift and limit valve assembly and end plate. Remove three long screws and remove end plate and housing to expose 1-2 shift valve and spring, 2-3 shift valve and spring and 1-2 shift control valve and spring. Remove each valve and spring and set them aside.

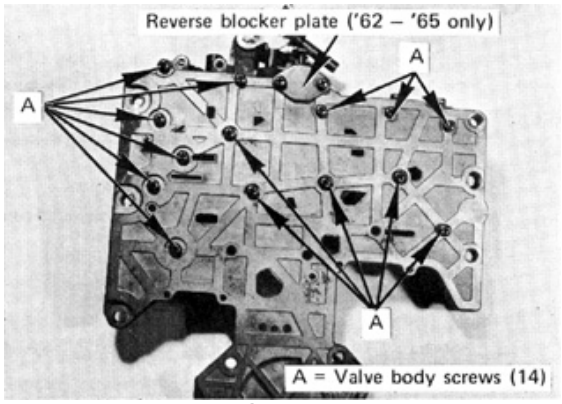


**FIGURE 14**

**CAUTION:** All valves in the valve body ideally should fall out by turning the casting on its side. Some valves may require gentle tapping or careful removal with a screwdriver. Do not use excessive force! Damaged castings or burred, nicked valves will create problems later and cause erratic shifts.

**STEP 16.** Governor Plug End Plate: (See Fig.17.) Remove five short screws that hold the governor plug end plate in place. This will allow you to remove the 1-2 shift valve governor plug, 2-3 shift valve governor plug, shuttle valve throttle plug and shuttle valve spring. Set these valves aside and keep the spring with the shuttle valve throttle plug so it won't be confused. Do not rotate selector lever (see Fig. 13) and lose detent ball and spring. Turn casting over and remove four or six retaining screws holding top plate. Remove top plate for ease of cleaning casting following drilling operation.

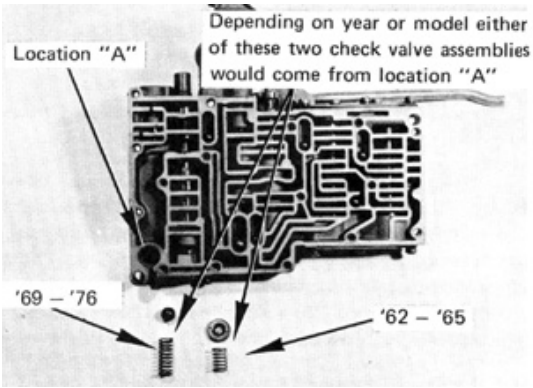


**FIGURE 15**

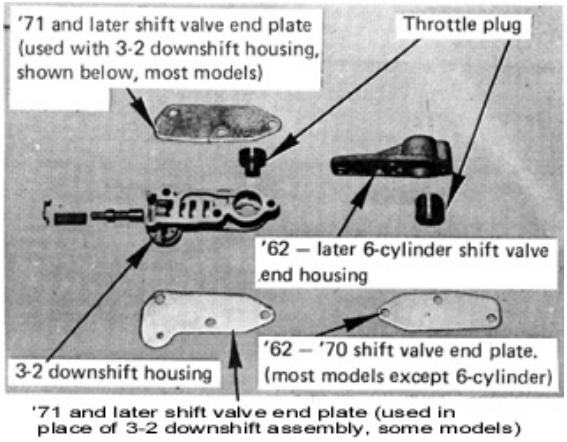


**FIGURE 16**

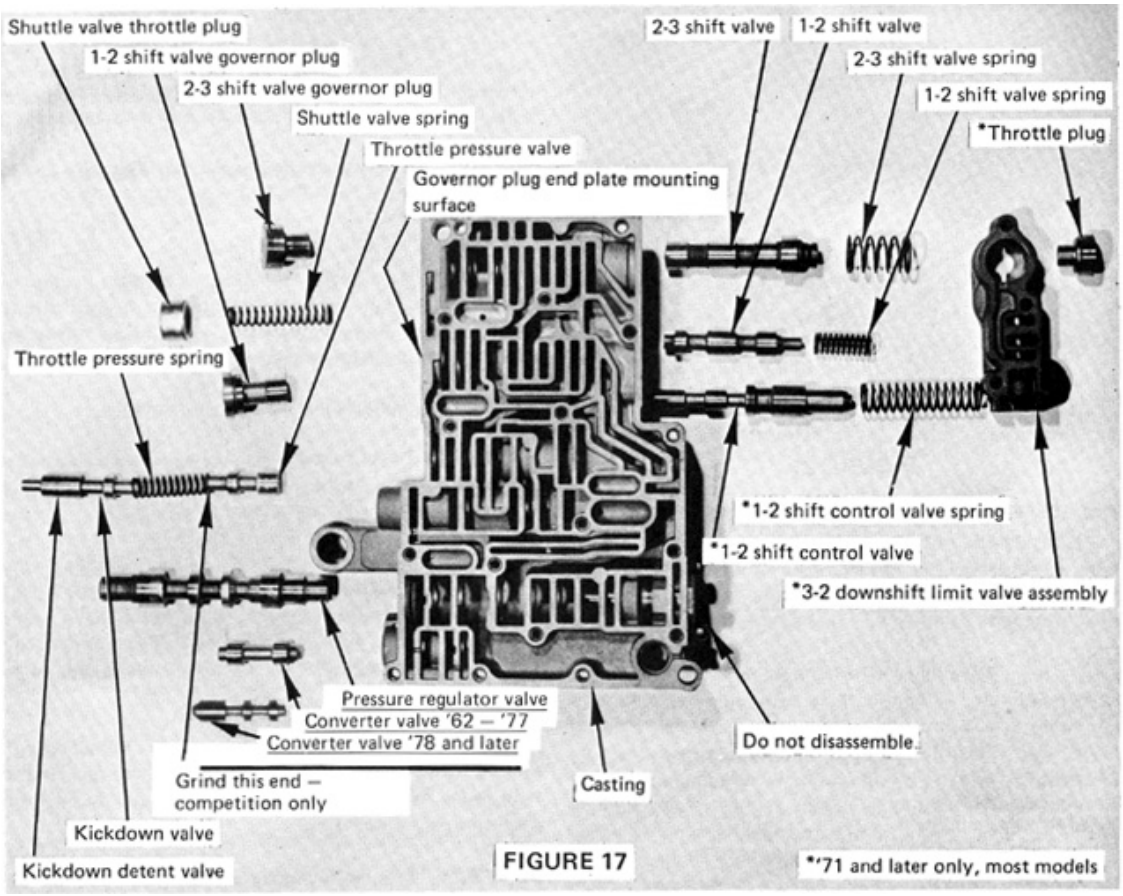



FIGURE 17

**STEP 17. Drilling** Main Casting: Install the special drill guide supplied with the kit in place on the casting as shown. (See Fig. 18.) Use two short screws to hold it in place in the end holes with the arrow pointing to you. The center hole is a drill guide to remove a section of the casting wall below it. Use a 3/16" drill supplied in the kit and wrap several layers of tape around the drill bit to act as a stop. You want 1/2" from the edge of the tape to the end of the drill. Use the gage to wrap-the tape properly. (See Fig. 19.) Use a high speed drill motor and slowly drill down into the casting wall until the tape just touches the face of the drill guide. Drilling further will cause damage. Remove the drill guide to see if you have removed the wall separating two channels. The drill should have penetrated almost to the floor of the casting. Use solvent or gasoline to clean the casting and remove all chips that were created by drilling. If your casting has an orifice as shown in Figure 20, drill orifice out with furnished 1/8" drill. Be careful to drill out only the orifice and not rest of casting.

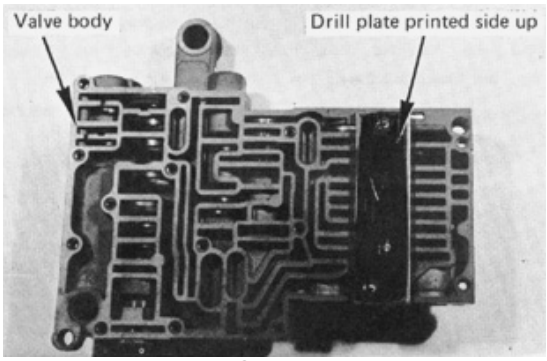



**FIGURE 18**

**STEP 18. Limit Valve** Spring: Some '71 and later 727 units have a part throttle kick-down assembly located in the end plate and housing previously removed to expose the shift valves. (See Fig. 21.) By installing the special black spring supplied with the kit, you can limit the operation of the valve to below 35-40 mph. This is recommended for all camper type vehicles, police and taxi use. Remove retainer and stock spring. Install black spring and retainer as removed.

**STEP 19. Assembly** — Shift Valves: (See Fig. 17.) Install 1-2 shift valve and spring into its proper bore, install 2-3 shift valve and spring into its bore. '72 and later: Install 1-2 shift control valve and spring. Install 1/4" diameter steel ball supplied with kit inside 1-2 shift control valve spring against 1-2 shift control valve. Install end plate, or throttle plug housing and throttle plug, or 3-2 downshift assembly and end plate, depending on your model valve body (see Fig. 16) and hold in place with your thumb. Thumb pressure is all that should be necessary to hold end plate assembly in place and flush with casting. If plates do not fit flat determine the problem

and repair it now. Install proper retaining screws and tighten finger tight.

**STEP 20.** Governor plug valves: (See Fig. 17.) Install 2-3 shift valve governor plug. The valve should install almost flush with surface of casting and move freely with a spring loaded action.

A special 1-2 shift valve governor plug has been supplied with the kit. Installing this plug will allow you to downshift into low at **any** speed. If you desire this capability, choose the valve with the correct diameters to fit your model valve body and proceed. Using the stock valve does not allow 2-1 downshift above 15-20 mph. Most 1978 and later use a valve that does not match the diameters of either valve supplied. You must re-use your original valve.

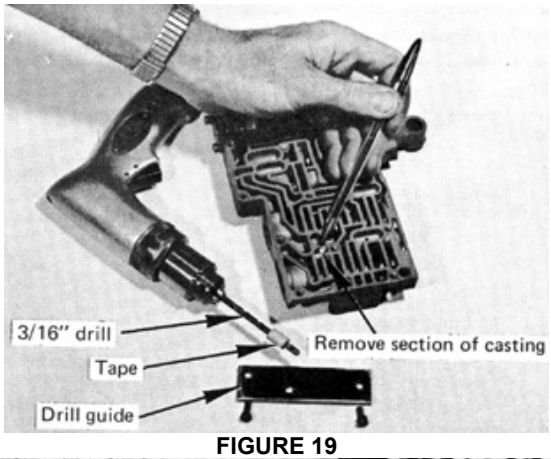


**FIGURE 19**

Install 1-2 shift valve governor plug desired. The valve should install almost flush with the surface of the casting and move freely with a spring loaded action. Finally; install the shuttle valve spring and shuttle valve throttle plug. Hold governor end plate in place with your thumb and install five screws finger tight. You should be able to hold the end plate in place with thumb pressure only. If the plate does not fit flush with the casting, determine the problem and repair it now. Install top plate and four or six screws.

**STEP 21.** Throttle pressure valve assembly:

> **Heavy Duty and Street:** No modification is necessary for this application. Install stock throttle pressure valve (small diameter facing out) and spring.
>
> **Competition:** Grind the end of the small diameter of the throttle pressure valve to a dimension of 9/32". (See Fig. 17.) Use the gage supplied for reference. Install valve into its bore with small diameter facing out. Install either red or green spring supplied with kit, whichever is the correct diameter.

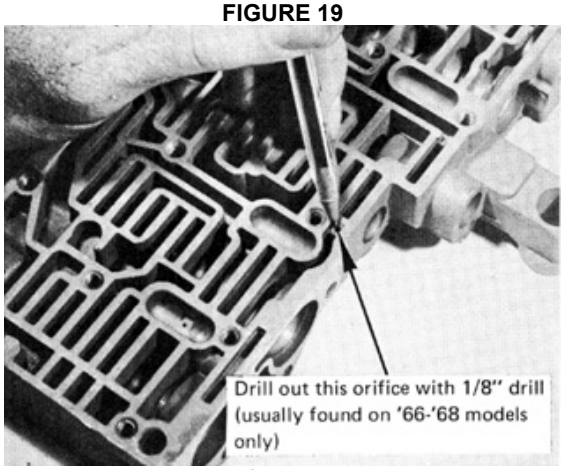


**FIGURE 20**

Install kickdown valve with the short length of small diameter inserted first. Install the kickdown detent valve last with the small inside diameter facing **out**. Finally install throttle stop screw assembly finger tight.

**STEP 22.** Pressure Regulator and Converter Valves: (See Fig. 17.) Install pressure regulator valve into its bore. Install converter valve into its bore. Both valves should move freely and easily. Remove any burrs that may cause stickiness or binding. Set **casting** aside.

**STEP 23.** Place **transfer plate** and **separator plate** assembly in front of you. The thin metal **separator plate** will be held on with 4-6 short screws. Note how your stiffener plate is positioned. Remove the retaining screws and lift the **separator plate** off. ('62-'65 and '78 and later models will have a check valve and spring under the plate in the position shown. Do not lose it.) Refer to Fig. 22 and drill out all indicated holes, using drills supplied. Deburr holes when through drilling using a fine file, deburring stone or sandpaper.

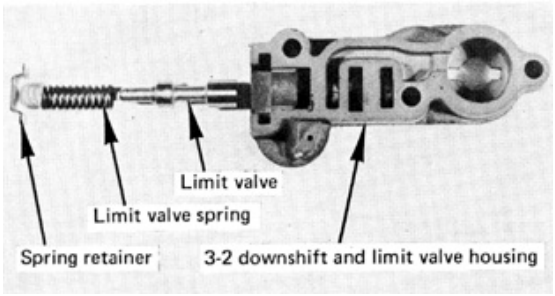


**FIGURE 21**

Wash the **transfer plate** in solvent or gasoline to remove any dirt and rinse the **separator plate** to remove any chips. Lay the **transfer plate** down on the bench with the passages facing up. ('62-'65 models, install check valve and spring as removed.) **Lay separator plate on** top of **transfer plate** and align the holes. Install stiffener plate and retaining screws and tighten screws finger tight.

**STEP 24.** Lay the **casting** in front of you and install steel check balls as follows: (See Fig. 23.)

> **Heavy Duty** — Five 1/4" steel balls in locations one thru five.
>
> **Street and Competition** — Four 1/4" steel balls in locations

one thru four.

All models — One 11/32" steel ball in location six.

‘62-’65 — Install check valve and spring in corner. (Location Seven)

‘69-’76 — Install one 3/8" diameter check ball and spring in corner. (Location Seven)

(Note this check ball is larger than the one you installed in Location Six.)

‘78 and later — Install additional 1/4" ball shown.

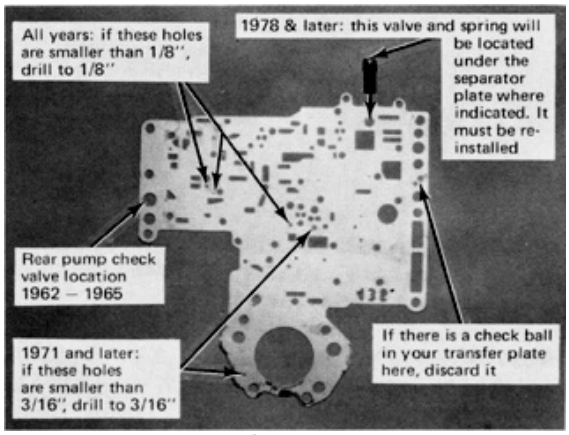



**FIGURE 22**

Align transfer plate assembly over casting and hold the two halves together with your hand. Install 14 screws in place finger tight. (Note: Three long screws are for the filter.) Install pressure regulator spring and converter valve spring in place. (See Fig. 17.) Insert pressure regulator adjusting plate into place in retaining cage so Allen head adjusting end extends through hole in retaining cage. Adjusting plate is a close fit when properly installed inside the retaining cage. Engage pressure regulator spring with adjusting plate and engage converter valve spring with retaining prong in cage. Hold cage against valve body, align screw holes and install 3 short screws finger tight. (See Fig. 13.)

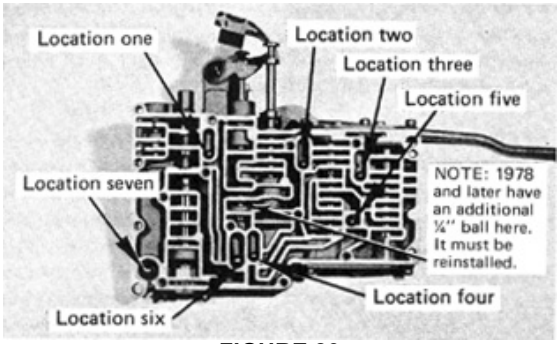



**FIGURE 23**

**STEP 25.** Tighten 14 screws attaching **transfer plate** to **casting** on the bottom of the valve body to 35-inch lbs. Tighten all end plate screws to 35-inch lbs. Adjust pressure regulator spring retainer cage from side to side until the distance from the manual valve to the adjusting screw is 1-7/8". Use the gauge supplied to check this measurement. (See Fig. 24.) Tighten three short retaining screws to 35-inch lbs. At this point all screws should be tight. ‘62-’65 — Install reverse blocker valve spring and valve with seal up. (See Fig. 14.) Rotate valve to engage **separator plate** properly. Install end plate and two short screws. Tighten to 35-inch lbs.

**STEP 26.** Throttle pressure adjustment: (See Fig. 24.) Place the valve body on bench and hold it on end so the throttle pressure assembly points up. Insert the 1/8" drill between the kick-down valve and the throttle pressure cam and adjust the throttle stop screw until it just touches the cam. Tighten jam nut. securely. (Note: Large cage models have no jam nut.)

**STEP 27.** Pressure Regulator Adjustment — Use the gauge to adjust the distance from the casting face to the inside edge of the pressure regulator spring adjusting plate. (See Fig. 24.) Use a 5/16" Allen wrench to adjust the plate to dimensions shown.

| | Dim "A" |
|---|---|
| **Heavy Duty** | 1-1/4" |
| **Street** | 1-3/16" |
| **Competition** | 1-1/8" |

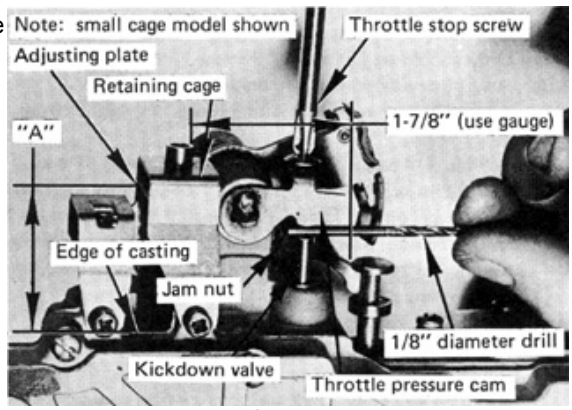



**FIGURE 24**

Use the three long screws to attach the new filter supplied with kit. Tighten screws to 25-inch lbs.

**REASSEMBLY**

**STEP 28.** Guide the valve body up into the transmission. ‘66 and later models: Insert the park rod into the hole in the rear of the case and rotate drive shaft until the rod engages the pawl. (See Fig. 25.) Align valve body with case and install valve body against case. (Be careful not to damage neutral safety switch. A small screwdriver can be used to retract the switch

out of the way during installation.)

Install ten valve body-attaching bolts and tighten finger tight. Valve body should sit flat against the case with only hand pressure. Any obstructions that are holding it away from the case must be corrected now. Tighten bolts to 100-inch lbs.

A. '62-'65 — Attach cable adapter to manual lever and install E-clip or nut. Make sure throttle pressure shaft seal is in place on top of case and install throttle pressure lever. Tighten pinch bolt. Check shifter adjustment by placing shifter in all gear positions and check position of the manual lever.

B. '62-'65 cable shifter adjustment — Place shifter into Reverse (push-button) or Park (console-column), remove adjusting wheel lock bolt and rotate wheel counter clockwise to end of threads. Push in on cable to load manual lever slightly and rotate adjustment wheel clockwise until it just touches the case. Line up nearest lock bolt hole in case. Now turn wheel clockwise 5 adjustment holes. Install lock bolt and tighten to 100-inch lbs.

C. '66 and later — Install shift lever over manual lever shaft and tighten pinch bolt. Install throttle pressure lever over throttle pressure shaft and tighten pinch bolt securely.

D. '66 and later shifter adjustment — Place shifter in park position. Loosen the pinch bolt on the shifter rod (which is located on the end of the rod away from the transmission) and let the rod seek its own position. Tighten the pinch bolt and check the feel of the shifter. The detent position should be close enough to the gate stops in neutral and drive so that the shift selector lever will not remain out of detent position when placed against gate and released.

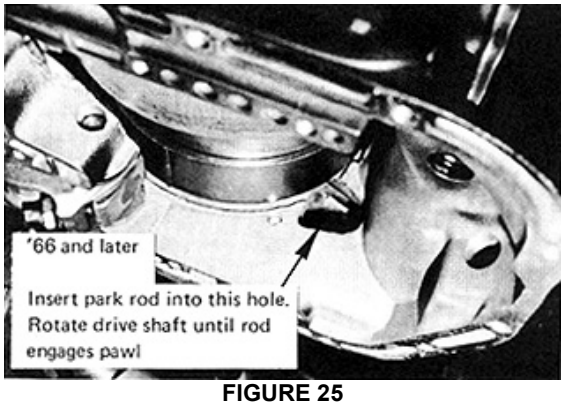


**FIGURE 25**

**STEP 29.** Clean oil pan and install in place with new gasket supplied with kit. (904 gasket not supplied). Install 14 pan bolts and tighten to 150-inch lbs. Check your drain plug if you have one and make sure it is tight!

**STEP 30.** Throttle Pressure Adjustment: Make sure carburetor is off fast idle cam so throttle is in normal idle position. (Hot idle position). Have someone push the throttle lever on the transmission all the way forward. Adjust the throttle pressure rod so there is no back lash between the operating stud on the carburetor and the back of the slot on the throttle pressure linkage. Lower the vehicle but keep the rear wheels off the ground if possible. Pour four quarts of TCI Racing Transmission Fluid into the transmission. Start the engine and allow it to idle in neutral. Check the fluid level and fill to the "add" mark. Shift the transmission through all gear positions. If the rear wheels are off the ground, allow the transmission to shift through all three gears several times. Check the oil level and make sure it is at least at the "add" mark. Drive the vehicle for one or two miles to thoroughly warm the fluid. Minor adjustments in shift points can be made at this time. Shortening the rod will lower shift points, lengthening the rod will raise shift points. Note: All vehicles must have throttle pressure linkage regardless of intended use. Running this transmission without throttle pressure linkage will damage it.

Check fluid level with engine running and shifter in neutral and make sure the level is between the "add" and "full" marks. Do not overfill! This will cause foaming and overheating.

**TORQUEFLITE TROUBLE SHOOTING GUIDE**

| Malfunction | Probable Cause |
|---|---|
| Slips | • Low fluid level |
| Overheating, foaming oil at dipstick or breather | • High fluid level<br>• Clogged or blocked cooler |
| Erratic shifting | • Throttle pressure link sloppy, loose or misadjusted Shifter |

| | |
|---|---|
| | misadjusted<br>• Low fluid level<br>• High fluid level<br>• Valve body bolts or end plate screws loose |
| Early shifts | • Throttle pressure linkage misadjusted |
| Late shifts | • Throttle pressure linkage misadjusted |
| Leaks | • Clean transmission first and observe, check pan gasket and bolt torque |
| Will not up shift | • Throttle pressure linkage too high<br>• Shift valves burred and sticking, loose bolts |
| Soft shifts under power | • Throttle pressure linkage too low<br>• Low fluid level<br>• High fluid level causing foaming<br>• Pressure regulator |
| Engine revs on 2—3 shift | • Check band adjustment<br>• Remove cupped orifice plug |

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Back to Top