N.25
Toro Secret

TFOD-518-500-618
Performance Shift Kit®

Fits: 1966-96 Chrysler Torqueflite and Loadflite rear drive and 4 wheel drive transmissions three speeds and 1988-98 four speeds. Including inline 6 cyl, V6, V8, V10 & Diesel; models 904, 998, 999, TC6 ,TF6, TF8, 727, 32RH, 500 and 518 42-44-45-46-47RH & RE.

Short, firm shifts with performance, durabilty and "CLASS".
Holds 1st, 2nd and 3rd to any RPM.
SHIFT COMMAND: Backshifts to ANY gear you want.

Small Pan Transmission Ratios:

"1st" 2.74 "2nd" 1.54 "3rd" 1.00 "4th" .69

Large Pan Transmission Ratios:

"1st" 2.45 "2nd" 1.45 "3rd" 1.00 "4th" .69

To find top gear ratio, multiply the axle ratio x .69 [Example 3.73 x .69 = 2.57]
Other ratios: Multiply axle ratio x trans ratio. [Example 3.73 x 2.45 = 9.14]

TRANSGO®
PERFORMANCE SHIFT KIT®

2621 Merced Ave El Monte, CA 91733-1997
Sales: (626) 443-4953 Tech: (626) 443-7451

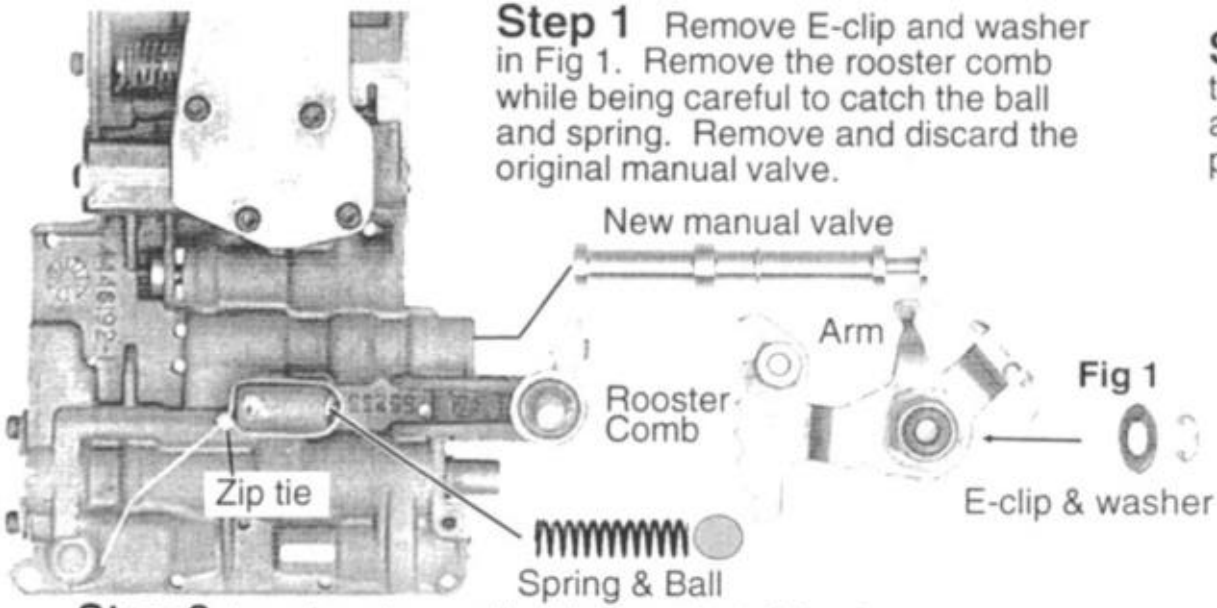


Fig 1

Step 1 Remove E-clip and washer in Fig 1. Remove the rooster comb while being careful to catch the ball and spring. Remove and discard the original manual valve.

Step 2 Turn valve body over. With the edge of a large file make a notch about half way thru the thickness of this partiton about 3/8" wide. Its not fussy.

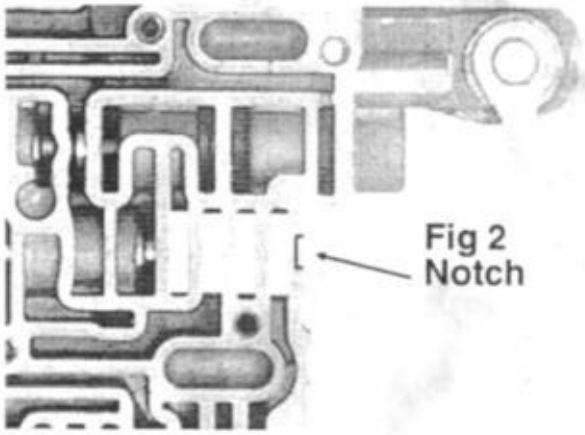


Fig 2

Step 3 Insert spring and ball into pocket. Use zip tie to hold them in. Install new manual valve and re-assemble rooster comb. Remove zip tie.

New manual valve reduces drainback, leak out the vent and side seal leak.

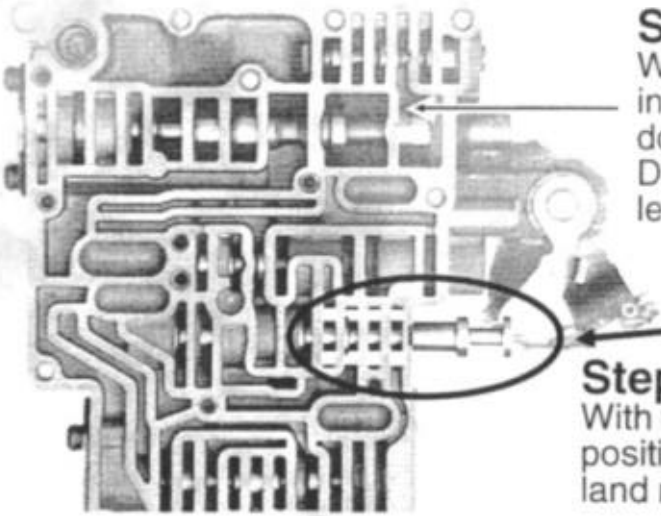


Fig 3

Step 4 Lube/converter flow
With center punch, make a dink in line with the arrow about 1/8" down into the passage.
Drill through the partition right to left with 3/64" drill [.042 to .047].

Step 5 Manual valve position
With valve all the way inboard (Park position) the *left edge* of the narrow land must just enter partition "A".

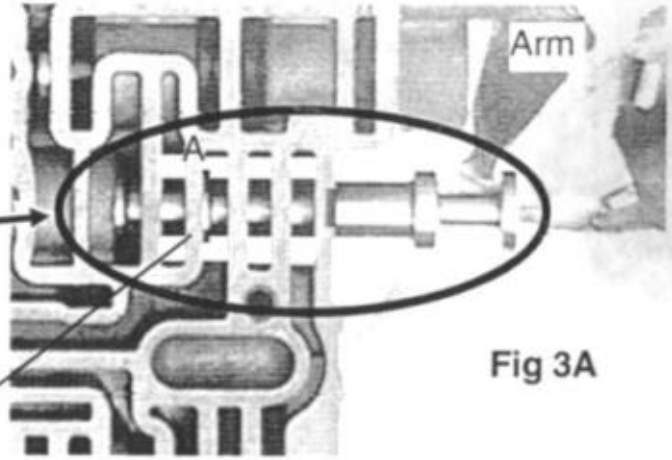
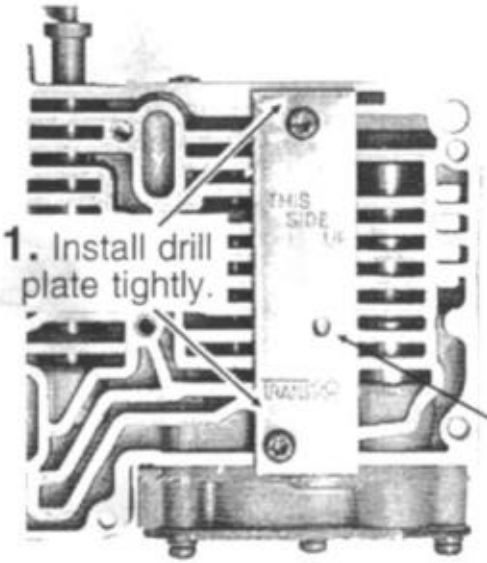


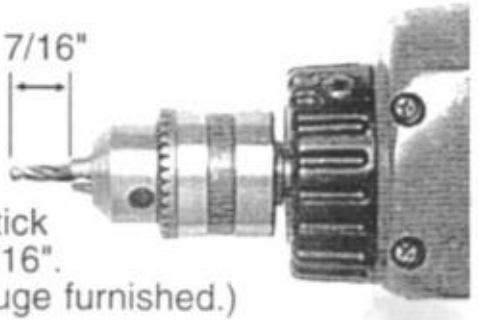
Fig 3A

If left edge of narrow land does not enter partition "A", bend the arm with big pliers until edge just enters partition "A".

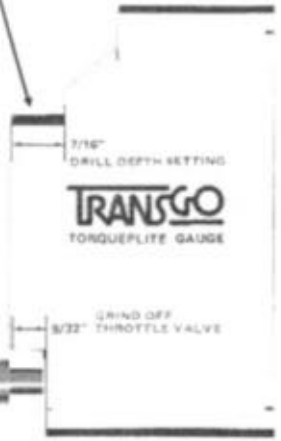


1. Install drill plate tightly.

3. Drill straight down until drill chuck hits the plate.

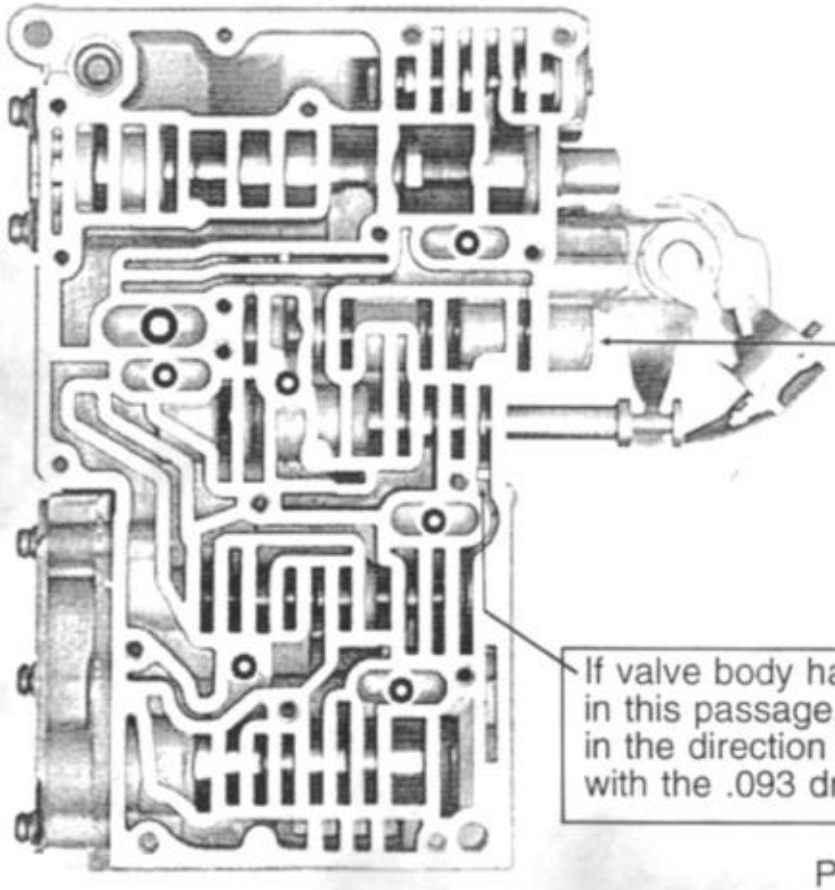


2. Adjust drill to stick out of chuck 7/16". (Use notch in gauge furnished.)

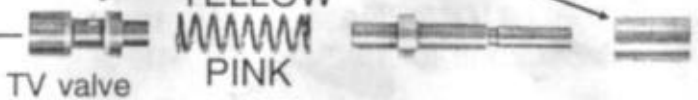


GAUGE

4. Grind the stem end of TV valve shorter to fit gauge as shown.



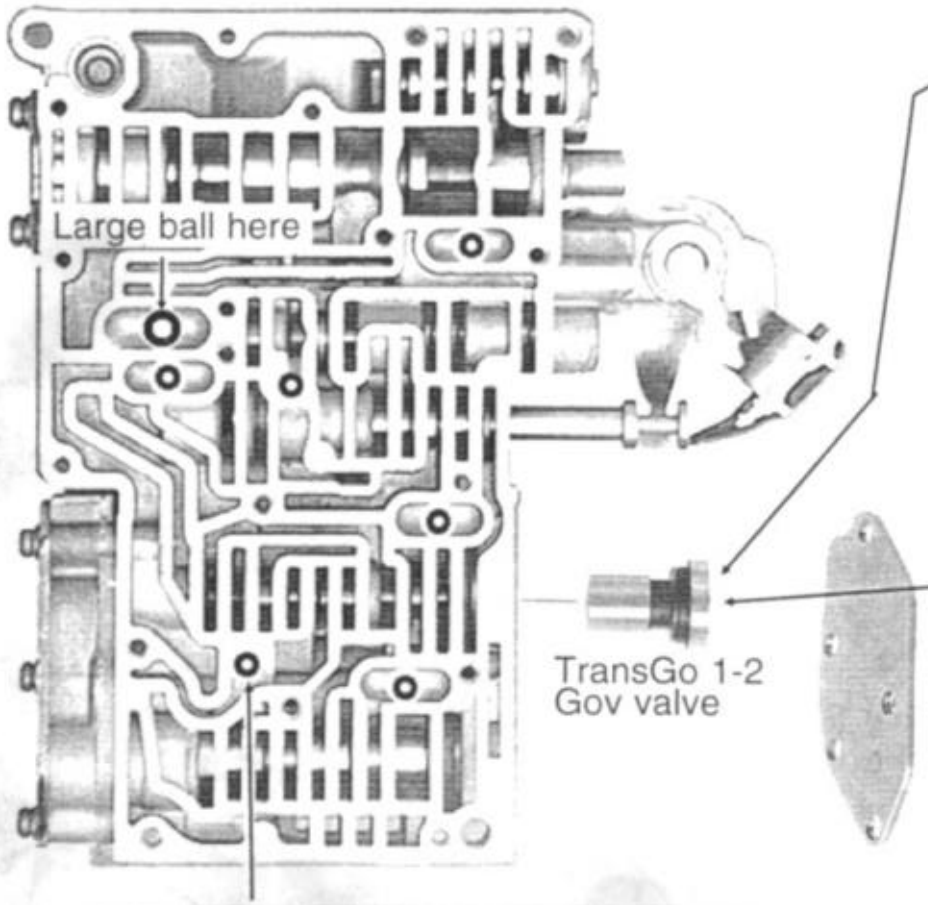
If valve body has restrictor in this passage, drill thru it in the direction of arrow with the .093 drill.



5. Install new throttle valve spring, (YELLOW or PINK) that has the same diameter as the old spring.

Seven checkballs
Six 1/4" [.250]
One 11/32" [.344]

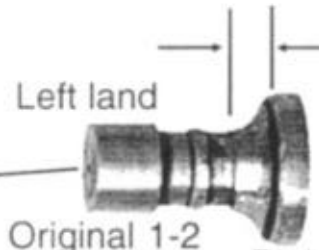
SHIFT COMMAND: *If you don't want feature of manual lever backshift to 1st at any speed, skip steps 1,2 & 3.*



Step 1 Remove the original gov valve. Insert the TransGo 1-2 gov valve into valve body, don't force it, and reinstall the cover.

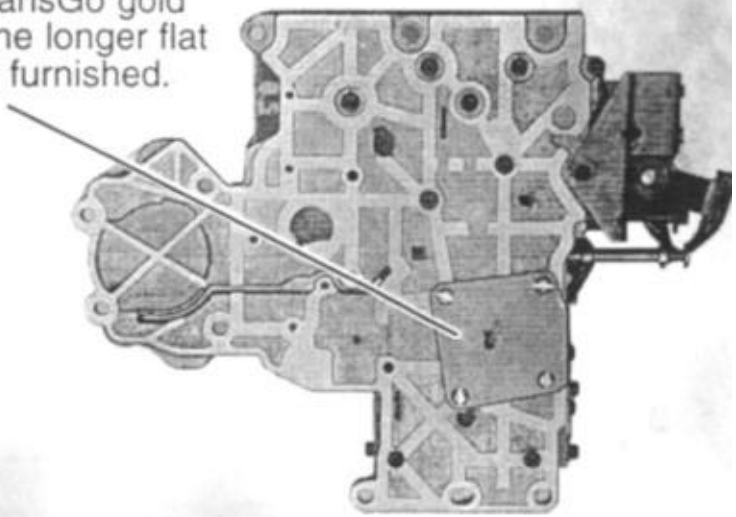
If TransGo valve does not fit easily into valve body and the trans is a 3 speed, do step 2 & 3.

Step 2 3 speed only: Grind the part of valve between the lines until it is nearly the same size as left land. It's OK to grind a third of the way into right land.



It's OK to grind into the left side of the right land. But, the right half of the right land must be left full size. ***Don't grind it all the way across.***

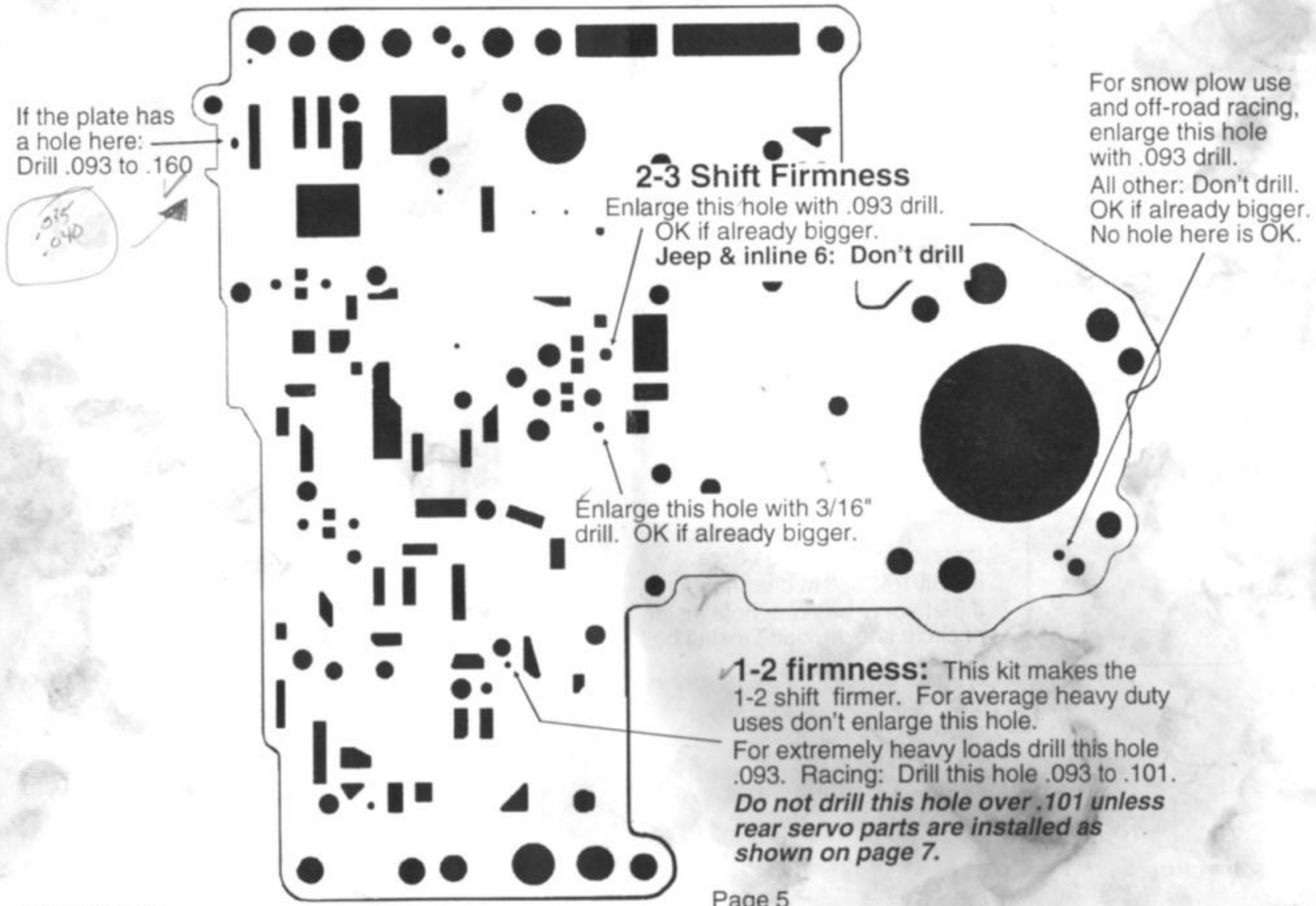
Step 3 3 speed only: Install the TransGo gold plate using the longer flat head screws furnished.



Listen up: Please don't remove this checkball for heavy duty, street, or off-road use.

For the firmest 1-2 shift possible, remove the checkball. With the ball removed the rear servo parts, shown on page 8, must be installed to obtain a fast and clean manual 1-2 shift.

Separator Plate



If the plate has a hole here: Drill .093 to .160

.035
.040

2-3 Shift Firmness
Enlarge this hole with .093 drill. OK if already bigger.
Jeep & inline 6: Don't drill

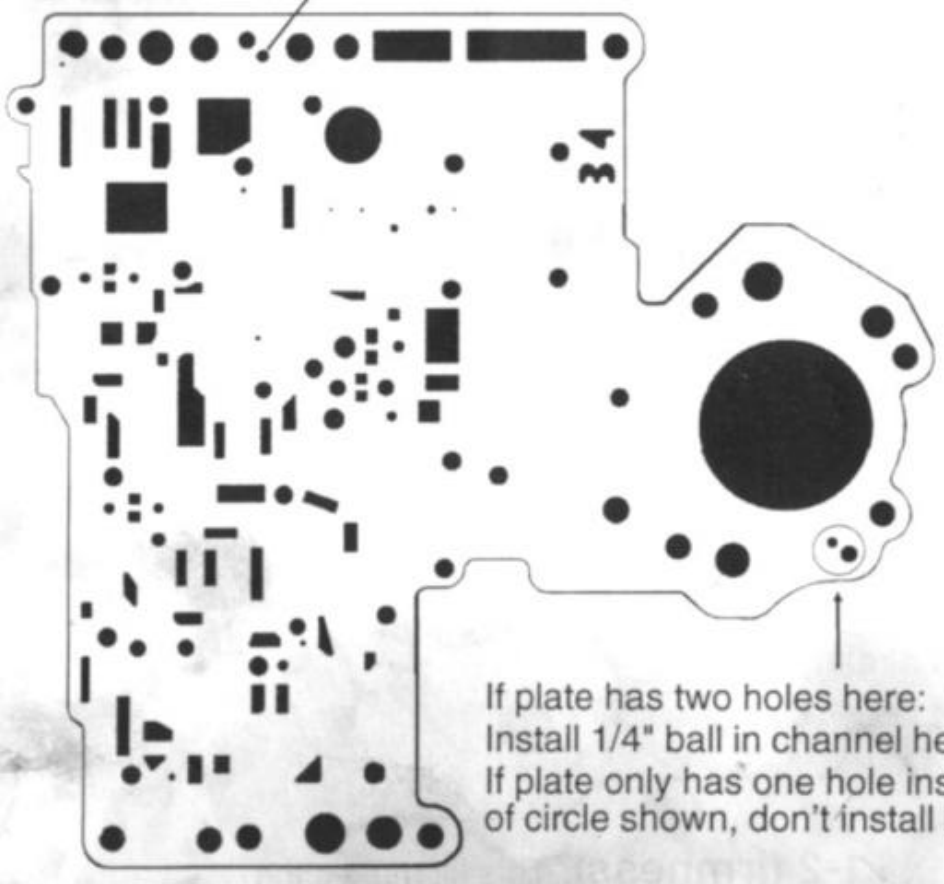
For snow plow use and off-road racing, enlarge this hole with .093 drill.
All other: Don't drill. OK if already bigger. No hole here is OK.

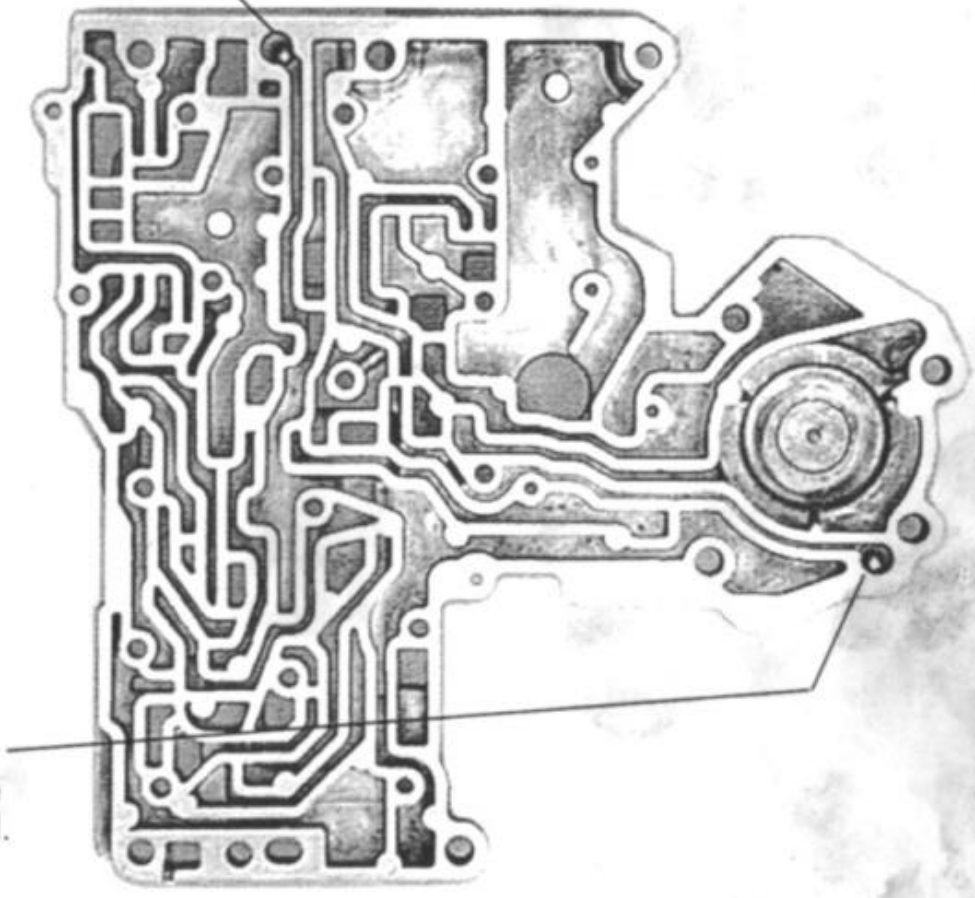
Enlarge this hole with 3/16" drill. OK if already bigger.

1-2 firmness: This kit makes the 1-2 shift firmer. For average heavy duty uses don't enlarge this hole.
For extremely heavy loads drill this hole .093. Racing: Drill this hole .093 to .101.
Do not drill this hole over .101 unless rear servo parts are installed as shown on page 7.

Channel Casting Checkballs

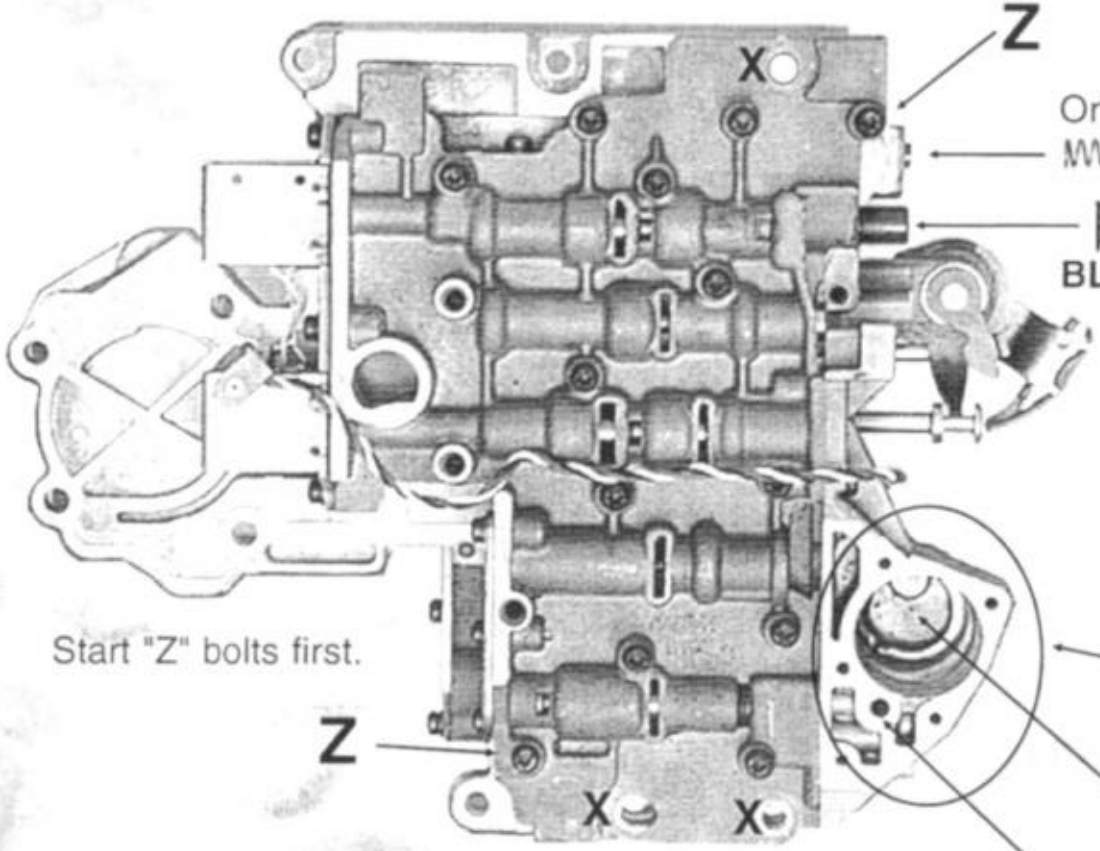
If plate has this hole, install 1/4" checkball here.



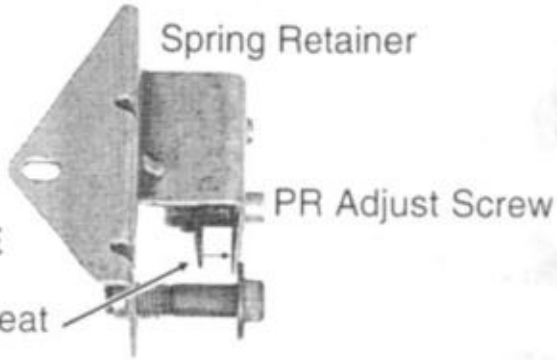


If plate has two holes here:
Install 1/4" ball in channel here.
If plate only has one hole inside
of circle shown, don't install ball.

Valve Body Assembly



Step 1 With 3/16" allen wrench, turn PR adjust screw clockwise until spring seat is just flush against the inside edge of retainer.



Step 2 Diesel and all HD gas:
Install WHITE PR spring.
High Performance: Install BLUE spring.
Competition ONLY: Turn PR adjust screw 6 turns counterclockwise.

Only 4 speeds have this accumulator system.

4th Accumulator Piston

Step 3 Install tapered bushing into hole. Use long valve body bolt to drive the bushing down into the hole about 1". Its not fussy.

Tapered Bushing

Step 4
Install YELLOW spring.

Assembly: The three filter screws are longer and have washers.

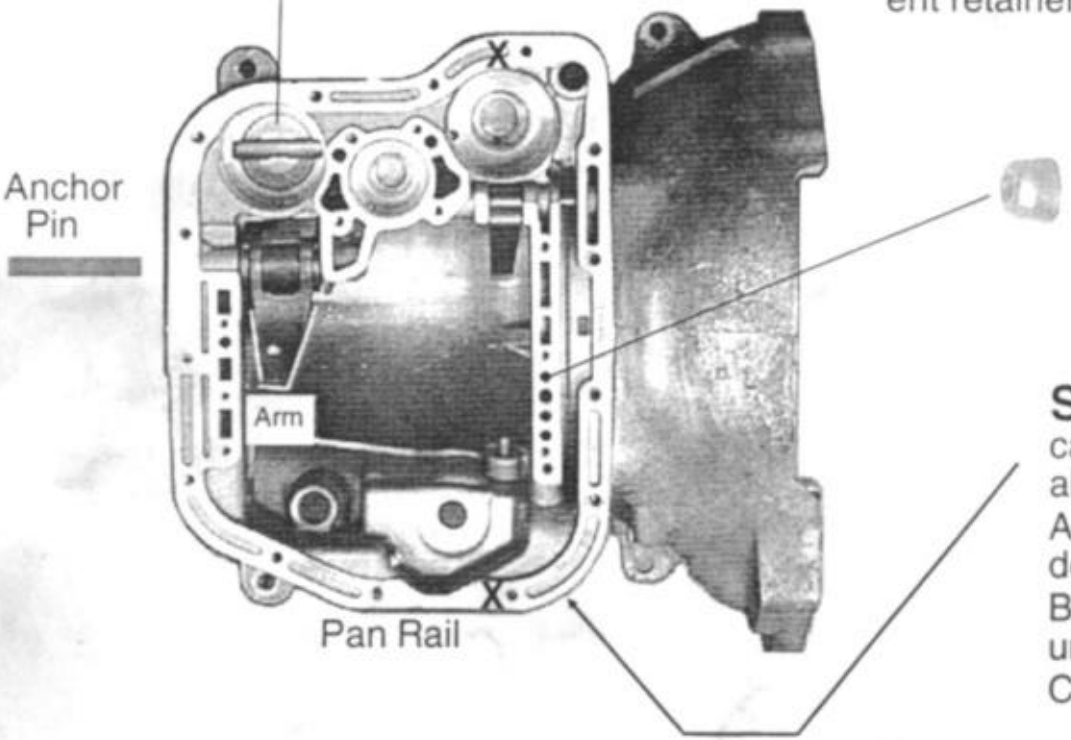
Valve body to case bolts:
There are three long bolts and seven short bolts. The three long bolts install at "X".

If trans is apart install the Step 3 servo parts. Then a very firm 1-2 shift can be obtained by removing the checkball shown on page 4.

Step 3 is a job for a professional trans mechanic. The rear servo parts can be installed without total trans removal. Unbolt the overdrive housing and slide it back far enough to remove the anchor pin and rear servo arm.

Step 3 Rear Servo

Install new spacer and reassemble piston. Two return springs are furnished. If neither one fits because of different retainer or piston, reuse the original return spring.



Step 2 Measure distance between the two pan holes marked "X". If the distance is about 14-1/2", install orifice cup plug furnished into hole shown with flat nose punch.

Step 1 The front band adjustment screw is located on drivers side of trans, towards the front; about three inches in and above the pan rail.

A. Loosen the 3/4" locknut with box wrench or deep socket.

B. Tighten screw with short 5/16" end wrench until just barely snug with light finger pressure.

C. Loosen screw 1-1/2 turns. Tighten lock nut

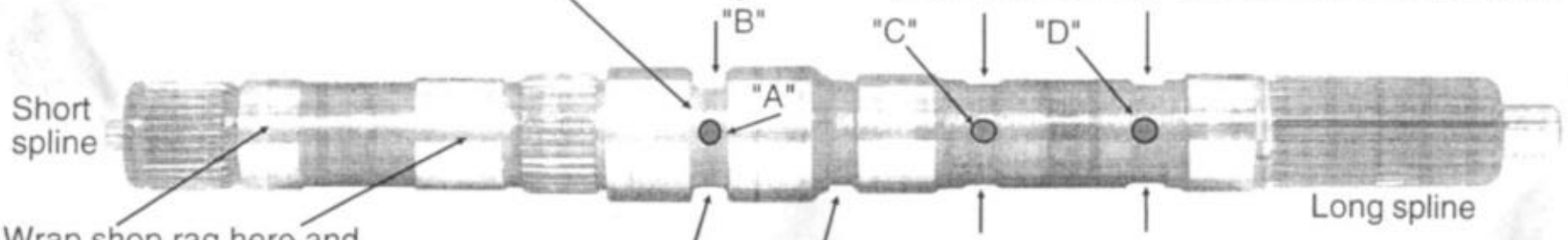
If trans is apart: Reducing OD Planet Failure

This shaft is case hardened:
Grind through the hard skin before drilling any hole.

Step 1
Grind this groove deeper

Step 2 Locate hole "A" as shown. Drill .187 to .200 hole at "B". Then rotate shaft 1/2 turn and drill it again.

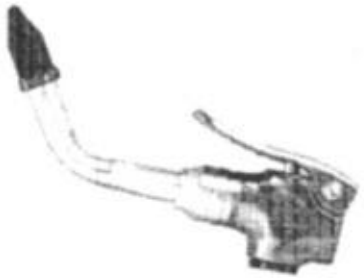
Step 3 Grind thru the surface hardening about 1/16" deep and 3/8" wide above and below hole "C" and "D". [Even if the shaft has no hole "D".] Then drill four .187 to .200 holes into the shaft.



Step 4 Dunk shaft in solvent and drain with short spline end downward to exit any chips. Blow through all the holes to clear out any chips.

If the OD planet is damaged replace it with the heavy duty straight cut OD planet assembly.
We've found it quiet and reliable.

4761011 Carrier
4461127 Sun gear
4746348 Annulus



To reduce OD planet failure use synthetic oil. If cost is a big deal then put in 8 quarts of synthetic and fill the rest of the way with dexon. We've had great success using Mobil #1 synthetic engine oil.