

Specializing in Racing Transmissions and Valve Bodies

GRINER
ENGINEERING

P/N 12/22G20B
BILLET LOW BAND APPLY TRANSBRAKE for
CHYSLER 904-727

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••• **DISCLAIMER and WARNINGS** •••

Griner Engineering can assume no responsibility for workmanship or driving procedures that are out of our control. Read all the warnings below. Failure to comply may cause extreme damage, possible explosion of the transmission and / or possible injury or death to the driver.

••• **WARNING - 3 VERY IMPORTANT DRIVING TIPS TO ABIDE BY** •••

••• **Burnout procedures can KILL the rear sprag.** •••

Always start burnouts in 2nd gear and then shift to 3rd gear. **NEVER START A BURNOUT IN FIRST GEAR. A 1-2 SHIFT IN THE WATER WILL DESTROY THE SPRAG.** Lifting the throttle before the tires hook up will reduce wear on the converter sprag as well as transmission parts.

••• **Disruption of power through driveline** •••

Breaking a drive shaft, U-joint, ring and pinion or axle can send a shock wave back to the transmission with enough force to damage the rear sprag. A slick spot on the track (where the tires might hook, spin and re-hook while in low gear) can also damage a sprag. **IF ANY OF THESE DRIVELINE DISRUPTIONS OCCUR, IT IS ALWAYS A GOOD IDEA TO DISASSEMBLE THE TRANSMISSION AND INSPECT THE SPRAG COMPONENTS RATHER THAN TO BE SORRY LATER.**

••• **Never neutral any 3 speed transmission during shutdown** •••

Always ride the transmission down in high gear **UNLESS THE VALVE-BODY BEING USED IS SPECIALLY DESIGNED TO PERFORM SHUTDOWN NEUTRAL'S.**(see note below)

You could be entertaining a possible violent transmission explosion if any of the three above conditions are allowed to prevail. It is possible to overdrive the high gear drum at or beyond its burst speed (beyond 15,000 to 18,000 RPM).

••• **Trans Blankets and Shields have a purpose,** •••

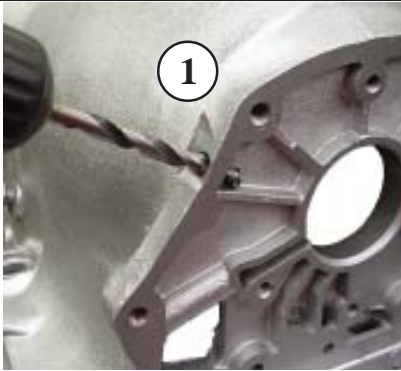
TO SAVE YOUR BUTT. Don't even think about running without one.

OPTIONAL (12/22G25SN) SAFE-NEUTRAL FEATURE (or shutdown neutral)

It can save your engine by providing a safe clean neutral without spinning up the internal transmission parts beyond their burst speed. This works because the shift sequence is changed to (**P N 1 2 3 N**). The first neutral shares reverse, to back up hold the transbrake button down. The transbrake works in the normal manner (1st gear only). Launch the car, 2nd, 3rd, through the traps then shift to the final neutral position. This allows the engine to idle while the high clutch stays engaged. Both clutch drums rotate safely with the engine without the fear of an explosion.

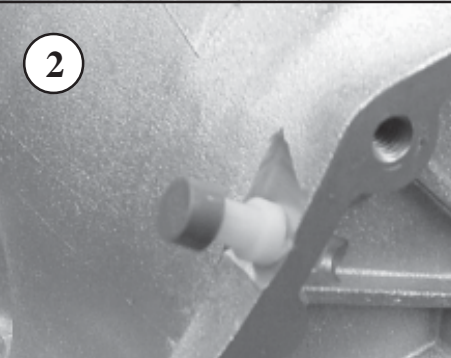
This page pertains to both 727 and 904 transmissions

Drilling & Tapping



Drill New Vent Location

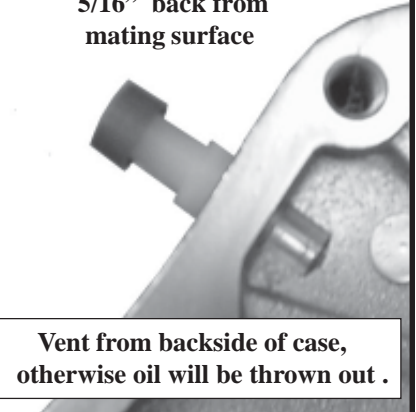
Just under upper lefthand rear extension housing bolt. Drill 11/32" hole 5/16" forward of the extension housing mating surface.



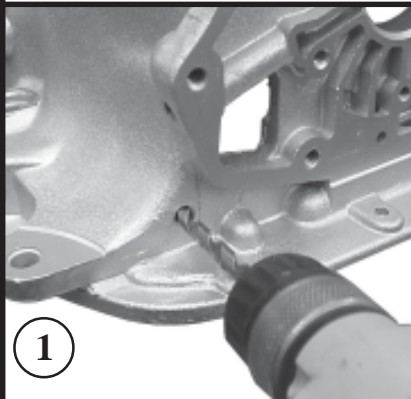
Relieve & chamfer hole, hammer in vent as shown.

Drilling Tip; Measure...

1" down from bolt hole
5/16" back from mating surface



Vent from backside of case, otherwise oil will be thrown out .



Drill For Case Connector Using a 11/32" drill.



Tap the drilled connector hole with a 1/8" pipe tap.



Install the connector as shown.

Packing List

- 1 - Valve Body
- 1 - Case Connector
- 1 - Case Vent
- 1 - Assorted Shim Pac
(5 rear servo - 5 front servo)
- 1 - TF727 Teflon Ring Set
- 1 - TF904 Teflon Ring Set
- 1 - Instruction Set
- 1 - 1/8" Pipe Plug



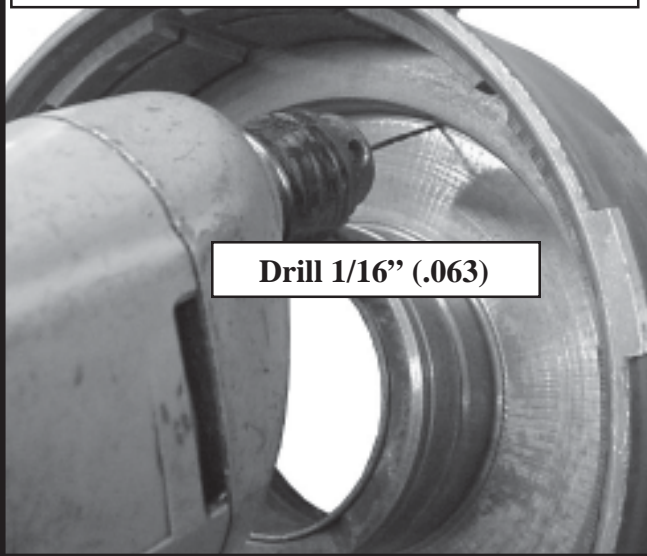
Plug The Old Vent
By drilling the pump casting with a 11/32" drill and tapping the hole with a 1/8" pipe tap.



Install plug in old vent location as shown.

727 HIGH DRUM SECTION

Use only 1971-up 4 clutch wide bushing drum.



Drill 1/16" (.063)

Drill 1/16" Bleed Hole In High Gear Drum
(use only 1971 up 4 clutch wide bushing drum)
A .063" (1/16") inch bleed hole is drilled through the drum in the area behind the piston. Drill from the inside-out placing the hole as close to the sealing surface as possible. Don't nick the seal surface. (Drill at an angle for more drilling room)

Use only 1971-Up piston with 15 spring towers
(fill all towers with 15 late springs, 1971-up)
The late spring can be determined by its length.

late spring	- 1.400" in length	GOOD
early spring	- 1.600" in length	NO



Stock 15 spring tower piston.

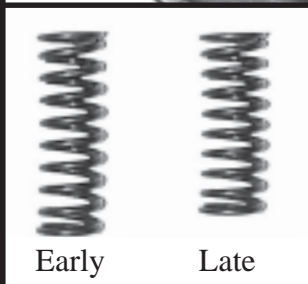
Machine Operation On Reaction Support
(to un-restrict the 1971-up reaction support)
Rigid inspection of the reaction support is essential, (especially for wear in the ring groove area). The trick here is to open up the oil feed hole by removing metal between the two sealing rings.

••• Bridgeport Method •••

Point the 3/16" oil feed hole straight up and clamp in a vise. Using a 7/32" end mill, cut with a multiple pattern (.050-.075 deep per pass), in one side and out the other until the 1/4" cross feed hole is fully exposed.

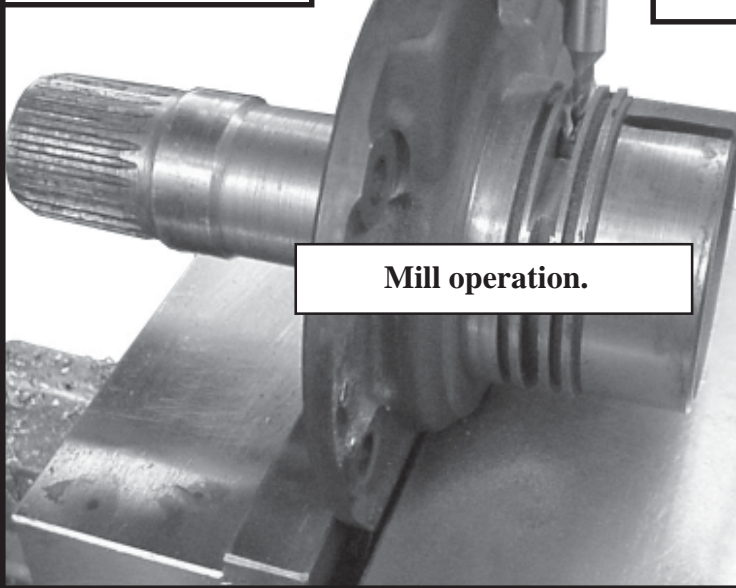
••• Hand Grinder On Reaction Support ••• *(not recommended)*

A right angle grinder with a 1/8" wheel can be used edgewise in the groove to achieve rough but similar results.

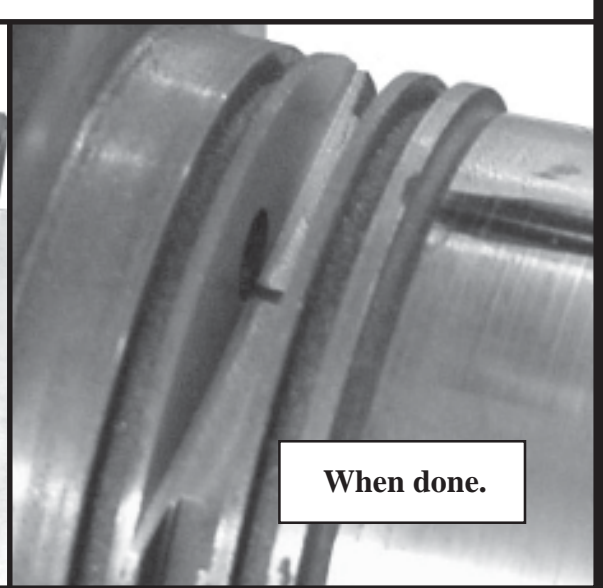


Early

Late



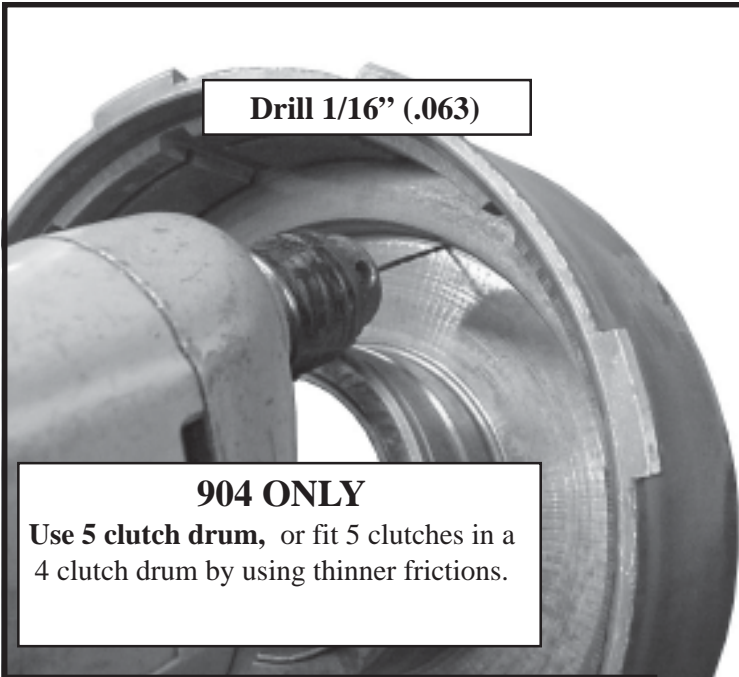
Mill operation.



When done.

904 HIGH DRUM SECTION

Drill 1/16" (.063)



904 ONLY

Use 5 clutch drum, or fit 5 clutches in a 4 clutch drum by using thinner frictions.

Drill 1/16" Bleed Hole In High Gear Drum

(only use a 5 clutch drum if possible)

A .063" (1/16") inch bleed hole is drilled through the drum in the area behind the piston. Drill from the inside-out placing the hole as close to the sealing surface as possible. Don't nick the seal surface.

Drill at an angle for more drilling room.

The 904 uses one large single coil spring to return the high clutch piston. This coil spring has a problem. As the drum spins up, the centrifugal force causes the spring to expand enough to rub against its neighboring parts. Machining in extra clearance helps some, but is not a sure cure. We make an aftermarket spring pack that ends this problem.



High Clutch Pack Clearance 727 - 904

.010 - .012 Per Clutch

Use Waffle Or Grooved (soft) Type Clutch
(Raybestos, Borg-Warner, Alto or OEM.)

Rear Clutch Pack Clearance 727 - 904

.008 - .010 Per Clutch

Use Green Mostly Smooth (harder) Type Clutch
(Raybestos, Borg-Warner, Alto or OEM.)

Kickdown Band 727 - 904

Must be of a soft material.

(OEM type brown or tan paper, aftermarket red is OK. Flex or hardback bands are OK)

Filter 727 - 904

Use a large (fuzzy) dacron type filter

End Play 727 - 904

.010 - .025

Oil Pan 727 - 904

Oil pan must not be dented in against the oil filter

Carelessly using a jack can bend the oil pan against the transmission filter which will obstruct oil pickup and damage the transmission.

Throw away cushion spring and make assembly solid with shims.



Rear servo on both 727 - 904 must be made solid. Dissassemble the assembly, remove and throw away the cushion spring. Install the thick (.125) washer first.

***** NOTE *****
this washer has chamfer to acomidate radius on stem.

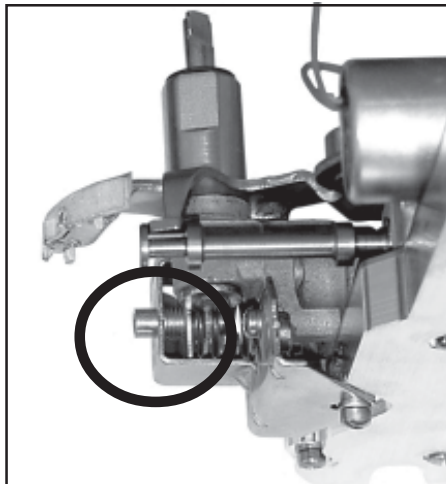
Then arrange the other washers in what ever order it takes to remove all the movement (play) possible and still freely get the snap ring on.

••• NOTE •••
 May not use all the washers.

PRESSURE REGULATOR

This is the high pressure setup. it has a range of about 140 to 220 PSI. Pressure and can be adjusted about 8 PSI per turn.

••• NOTE •••
To increase line pressure
TURN ALLEN HEAD
COUNTER-CLOCKWISE



Initial settings are different for the 904 and 727. Count the exposed threads on the pressure adjustment screw.

set at
727 - 5 threads
904 - 7 threads

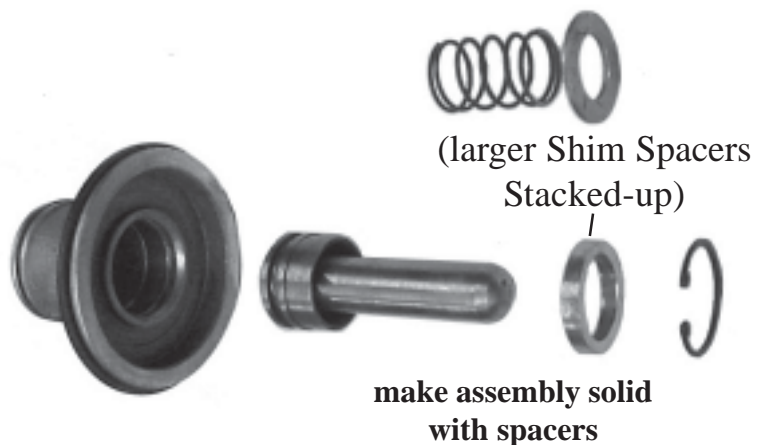
This is only a start and works good on most applications, but can be changed.

FRONT SERVO
727 ONLY

Replace servo cushion spring and washer with aluminum spacer provided in kit. The o-ring must be retained and the snap ring re-installed.

••• NOTE •••
This modification only helps
2nd gear and has nothing to
do with the operation of the
transbrake.

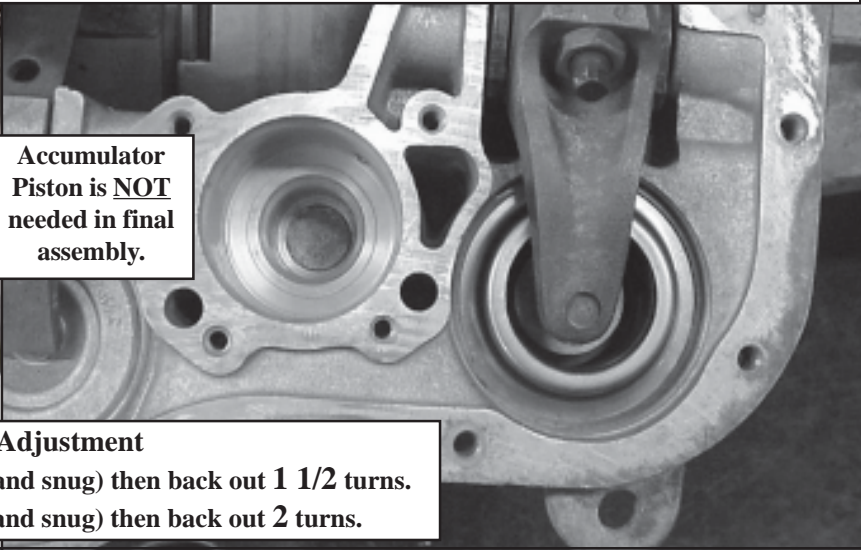
Throw away cushion spring and





Rear Band Adjustment

Rear 727 • Tighten to 72 Inch lbs. (hand snug) then back out 2 turns.
 Rear 904 • Tighten to 72 Inch lbs. (hand snug) then back out 3 1/4 turns.



Accumulator
Piston is **NOT**
needed in final
assembly.

Front Band Adjustment

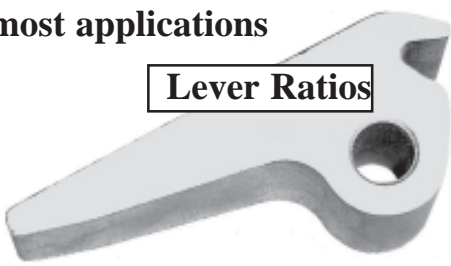
Front 727 • Tighten to 72 Inch lbs. (hand snug) then back out 1 1/2 turns.
 Front 904 • Tighten to 72 Inch lbs. (hand snug) then back out 2 turns.

727

Start with a 3.8 ratio for most applications

- 3.2 ratio - for a small motor
- 4.2 ratio - extreme H.P.
rarely a 2.9
- never a 5.0

Lever Ratios



904

Start with a 4.2 ratio

5.0 for extreme H.P.

... **Important note** ...
 It is better to increase line pressure
 rather than increasing lever ratio.

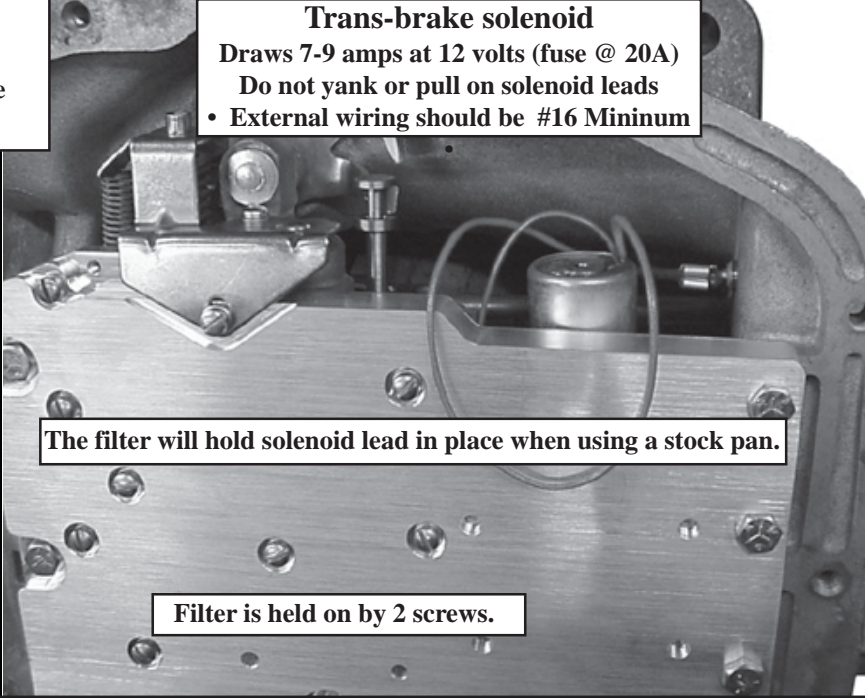
Teflon rings work great

- Hand form ring
- Fill groove with assembly grease
- Press rings into groove



Trans-brake solenoid

- Draws 7-9 amps at 12 volts (fuse @ 20A)
- Do not yank or pull on solenoid leads
- External wiring should be #16 Minimum



The filter will hold solenoid lead in place when using a stock pan.

Filter is held on by 2 screws.