



# SERVICE BULLETIN



SERVICE DEPARTMENT... CHRYSLER-PLYMOUTH DIVISION  
CHRYSLER MOTORS CORPORATION

TECHNICAL INFORMATION ON  IMPERIAL  CHRYSLER  PLYMOUTH  VALIANT

All Sure-Grip differential units built after November 1, 1962, have a revised clutch stack arrangement. See sketch on the back of this bulletin. The flat disc, Part No. 2070828 and the belleville disc, Part No. 2070826 have been interchanged on each side. The sketch on the reverse side of this bulletin shows both the 1962 and 1963 model arrangement.

This new arrangement does not affect the operation of the Sure-Grip differential, however, it helps to prevent accumulation of foreign material in this area.

The above individual part numbers are for identification only. They are available only in Package, Part No. 2070845, stock code class 'P'.

J. W. FARLEY  
Manager-Service  
CHRYSLER-PLYMOUTH DIVISION

(Over)

January 9, 1963

No. 63-52

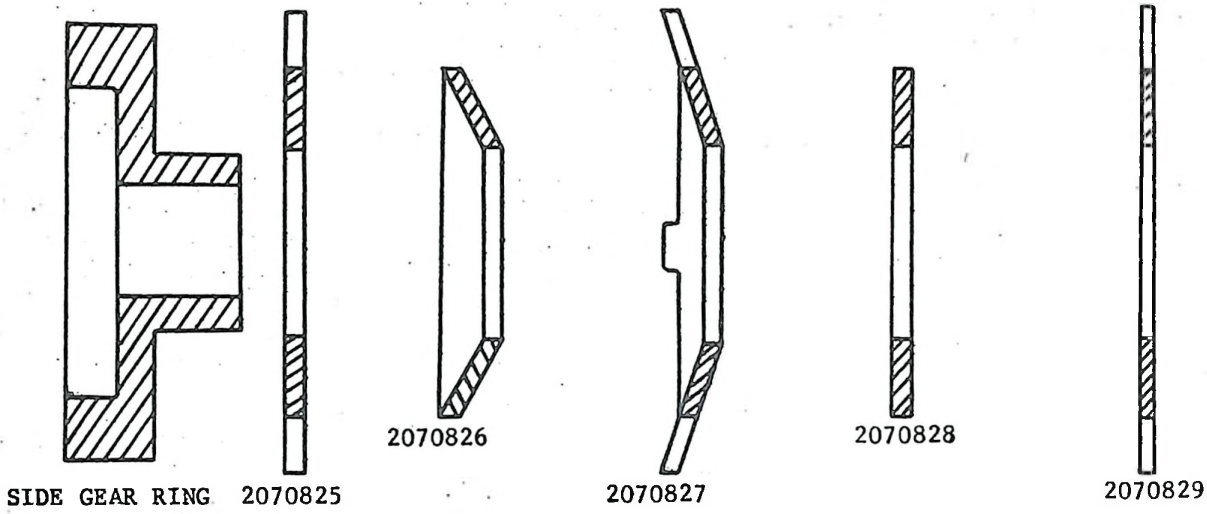
REAR AXLE

SURE-GRIP  
DIFFERENTIAL

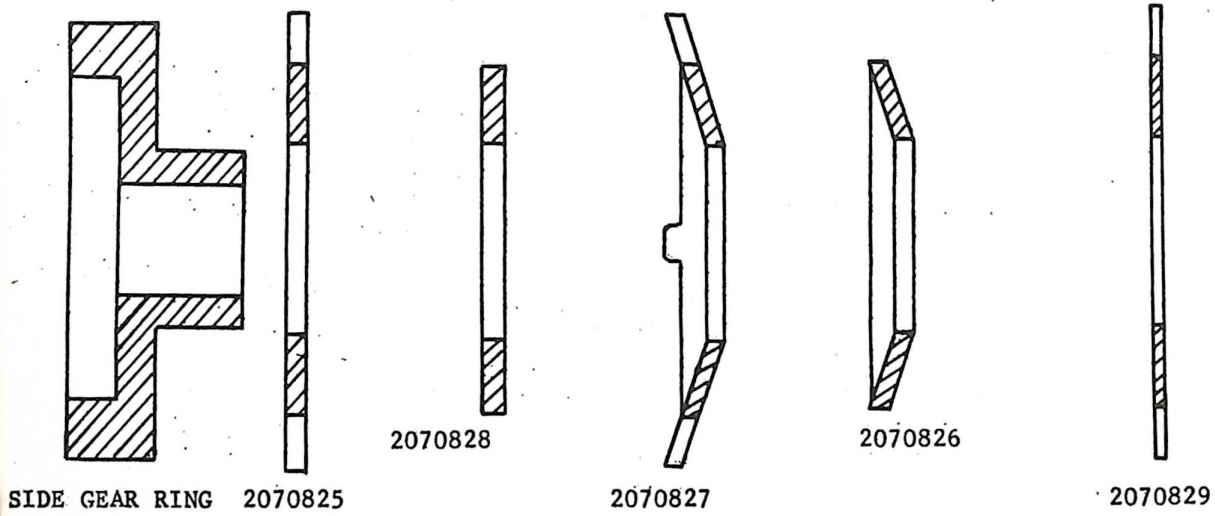
1963  
IMPERIAL,  
CHRYSLER  
AND  
PLYMOUTH  
MODELS

P-58-C

Service Mgr.	
Shop Foreman	
Technicians	
Parts Mgr.	
Partsmen	



1962 SURE-GRIP CLUTCH DISC AND PLATE ARRANGEMENT



1963 SURE-GRIP CLUTCH DISC AND PLATE ARRANGEMENT



# SERVICE BULLETIN



SERVICE DEPARTMENT... CHRYSLER-PLYMOUTH DIVISION  
CHRYSLER MOTORS CORPORATION

TECHNICAL INFORMATION ON  IMPERIAL  CHRYSLER  PLYMOUTH  VALIANT

May 17, 1963

No. 63-85

To provide adequate sealing in the rear axle shaft bearing area, two foam polyethylene gaskets, Part No. 2070933 instead of one (on each side), have been incorporated in production on all cars equipped with 11" and 10" brakes beginning March 20, 1963.

These gaskets are located one on each side of the axle shaft end play shim pack. In the case where tolerance stackup calls for no shim pack at a housing end, one gasket at that end is satisfactory. The end play tolerance of .013" to .023" remains unchanged.

If it becomes necessary to remove rear axle shaft bearings on a 1963 Imperial, Chrysler or a 1963 or 1962 Plymouth car built before March 20, 1963, two Rear Brake Support Plate Gaskets, Part No. 2070933 should be used on the shim pack on each side of the car.

The part listed in this bulletin is stock code class 'P'.

POLICY: INFORMATION ONLY

J. W. FARLEY  
Manager-Service  
CHRYSLER-PLYMOUTH DIVISION

REAR AXLE

AXLE SHAFT  
BEARINGS

1963  
IMPERIAL  
AND  
CHRYSLER  
AND  
1963 AND 1962  
PLYMOUTH  
MODELS

P-1985-C

Service Mgr.	
Shop Foreman	
Technicians	
Parts Mgr.	
Partsmen	



# SERVICE BULLETIN



SERVICE DEPARTMENT... CHRYSLER-PLYMOUTH DIVISION  
CHRYSLER MOTORS CORPORATION

TECHNICAL INFORMATION ON  IMPERIAL  CHRYSLER  PLYMOUTH  VALIANT

An improved assembly procedure has been developed to facilitate the build-up and correct adjustment of Valiant rear axles.

This new procedure provides a more accurate and faster buildup by eliminating some of the trial and error selection of spacers.

Install the drive pinion as outlined in the 1963 Plymouth-Valiant Service Manual Section 3, paragraphs 23, 24 and 25. Assemble the drive gear to the differential case as outlined in Section 3, paragraph 21. Then proceed as follows:

### DRIVE GEAR AND PINION BACKLASH

After the pinion has been installed, select preload spacer Part No. 2070082 (.254").

- (1) Install the differential with bearing cups and a .254" spacer on the left side into the carrier. Be sure the assembly is properly seated in carrier. Do not install bearing caps.
- (2) Select and install a spacer on the right side that will leave some end play.
- (3) To measure end play, use two sets of feeler gages. Push the differential to the left side of the carrier. Insert a feeler gage between spacer and casting on the right side above the centerline of the case (Figure 1). Then insert the same thickness feeler blades of another set of blades between the spacer and casting below the centerline of the case. When both feeler gages produce a hard drag feel, rotate the differential several times in each direction to seat the bearing rollers. When the rollers are seated it may be possible to insert thicker feeler blades. Add the feeler gage thickness to the right side spacer for correct side spacer thickness to give zero end play.
- (4) Measure drive gear backlash at zero end play condition and refer to chart on page 4 for proper space selections to give the required drive gear backlash and differential bearing preload.

(Over)

June 5, 1963

No. 63-90

### REAR AXLE

REVISED  
ASSEMBLY  
PROCEDURE

1962  
AND  
1963  
VALIANT  
MODELS

P-2308-C

Service Mgr.	
Shop Foreman	
Technicians	
Parts Mgr.	
Partsmen	

- (5) Remove the differential from the carrier. Select the proper spacers for left and right sides as specified by chart.
- (6) Attach spreader Tool C-3721 to the housing but do not spread the housing at this time.
- (7) Attach dial indicator Tool C-3339 to one side of the housing, as near the centerline of the housing tubes as possible, with the indicator plunger in contact with opposite side of carrier opening.
- (8) Read the dial indicator while tightening the spreader tool to spread the carrier enough to install the differential assembly. Usually a spread of .010-.015 inch is sufficient. NEVER SPREAD THE CARRIER MORE THAN .020 INCH.
- (9) Remove the dial indicator.
- (10) Hold the bearing cups and selected preload spacers on the bearing cones and carefully guide the differential assembly into position in the carrier. Be sure the assembly is properly seated in carrier.
- (11) Release tension on the spreader tool.
- (12) Install the bearing caps and tighten the bolts to 40 foot-pounds torque.
- (13) Attach a dial indicator to the carrier, bringing the indicator tangent to the drive gear rotation and in contact with one tooth.
- (14) Determine the amount of backlash and mark this tooth.
- (15) To find the position of least backlash, take readings on three other teeth, approximately 90 degrees apart.
- (16) When the minimum backlash position is located, use the dial indicator at that position only. The proper backlash at this position must be .004 to .007 inch. If not, obtain proper backlash by using different thickness spacers on both sides. It is essential that a change in one spacer be compensated for by a similar change in the opposite spacer. The total thickness of both spacers must be the same after backlash adjustment as before in order to maintain correct preload. When adjustments have been properly made, the tooth contact pattern will be very similar to the upper pattern, shown in Figure 54 in the Service Manual.
- (17) Make a gear tooth pattern test using red lead.
- (18) Install the cover with a new gasket and tighten the bolts to 20 foot-pounds torque.

As an alternate method for measuring the zero spread spacer requirements, the following procedure is recommended to replace Steps (2) and (3).

By modifying standard spacers per Figure 1, a set of gages can be made by any service garage.

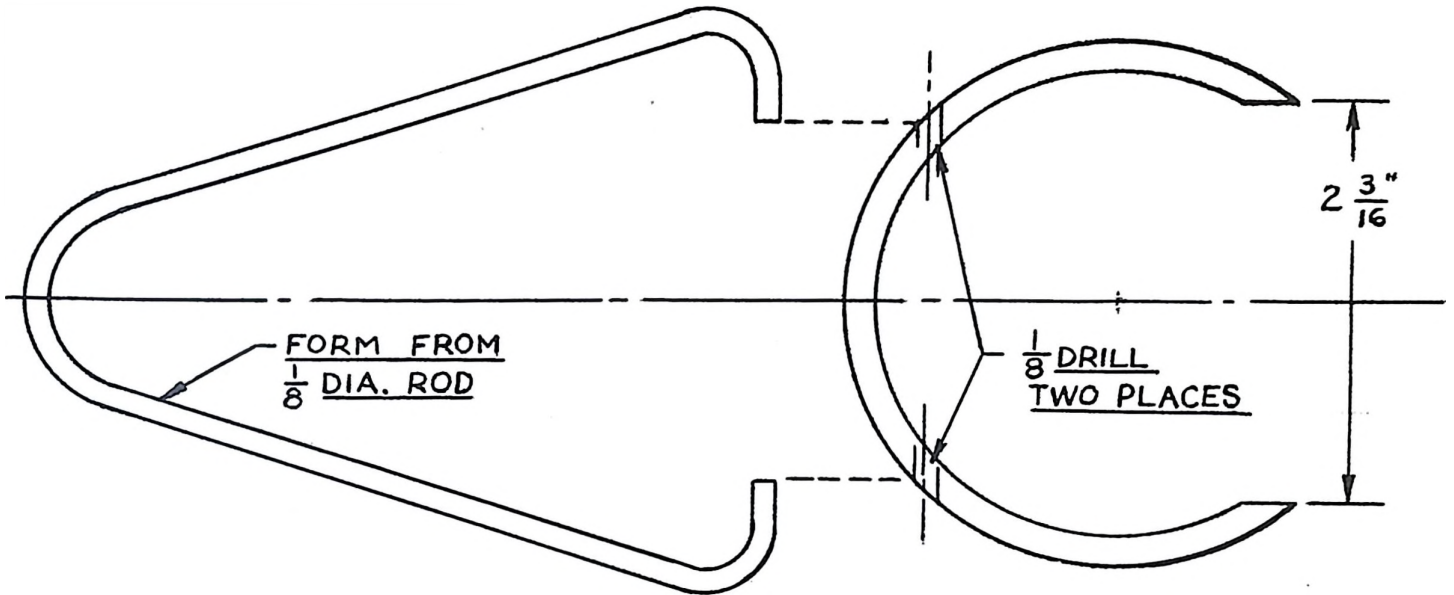


Figure 1

Revised step (2-3). To determine correct zero end play spacer thickness, insert split spacer gage described in Figure 1 until proper thickness has been determined. Rotate differential back and forth to seat bearing rollers while inserting spacer gage. Correct zero end play spacer thickness will be obtained when the next larger spacer cannot be inserted by hand. Do not drive in.

Example:

	<u>Left</u>	<u>Right</u>
1. Zero spread spacer- - - - -	.254	.278
2. Measured backlash - - - - -	.015	
3. Change spacer thickness per chart - - - - -	+.020	-.010
4. Final spacer thickness - - - -	.274	.268
5. Measured backlash - - - - -	.006	

DIFFERENTIAL PRELOAD SPACER SELECTION CHART

<u>Backlash at Zero End Play</u>	<u>Change Left Spacer Thickness by:</u>	<u>Change Right Spacer Thickness by:</u>
.020	+.026	-.016
.019	+.024	-.014
.018	+.022	-.012
.017	+.022	-.012
.016	+.020	-.010
.015	+.020	-.010
.014	+.018	-.008
.013	+.016	-.006
.012	+.014	-.004
.011	+.014	-.004
.010	+.012	-.002
.009	+.010	-.000
.008	+.008	+.002
.007	+.008	+.002
.006	+.006	+.004
.005	+.004	+.006
.004	+.002	+.008
.003	+.002	+.008
.002	+.000	+.010
.001	+.000	+.012

Should the zero end play backlash measure more than .020 (Maximum chart figure) increase the thickness of the left spacer from the specified .254" to a thickness great enough to reduce the zero end play backlash within the chart limits; then follow the recommended procedure.

Part number listed in this bulletin is stock class code 'P'.



J. W. FARLEY  
Manager-Service  
CHRYSLER-PLYMOUTH DIVISION