BUICK PROPELLER SHAFT ALIGNMENT

Buick, All Models (Except Skyhawk & Riviera)

DESCRIPTION

Measurement of front and rear universal joints is accomplished by means of an inclinometer. Readings must be taken with car at curb height and with a full tank of gasoline. Bounce car up and down to assure curb height

CHECKING & ADJUSTING

CHECKING

Angle at Rear Universal Joint (Single Joint) – 1) Place inclinometer on rear propeller shaft bearing cup. Center bubble in sight glass and record measurement. Bearing cup must be straight up and down and free of dirt.

2) Rotate propeller shaft 90° and place inclinometer on rear drive yoke bearing cup. Center bubble in sight glass and record measurement. Subtract figures to obtain existing rear joint angle.

Angle at Front Universal Joint (Single Joint) – 1) Place inclinometer on front propeller shaft bearing cup. Center bubble in sight glass and record measurement.

2) Rotate propeller shaft 90° and place inclinometer on front slip spline yoke bearing cup. Center bubble in sight glass and record measurement. Subtract figures to obtain existing front universal joint angle.

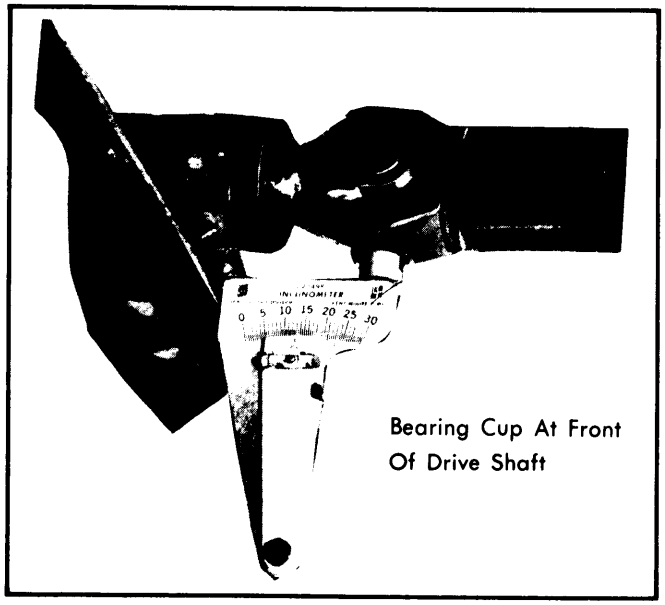

Fig. 1 Measuring Angle at Front of Propeller Shaft

ADJUSTMENT

Front Universal Joint Angle – To correct angle between engine/transmission centerline and propeller shaft, add or remove shims between transmission rear bearing retainer and transmission mount. Adding one shim will decrease front joint angle by ½° and increase differential joint angle by ¼°.

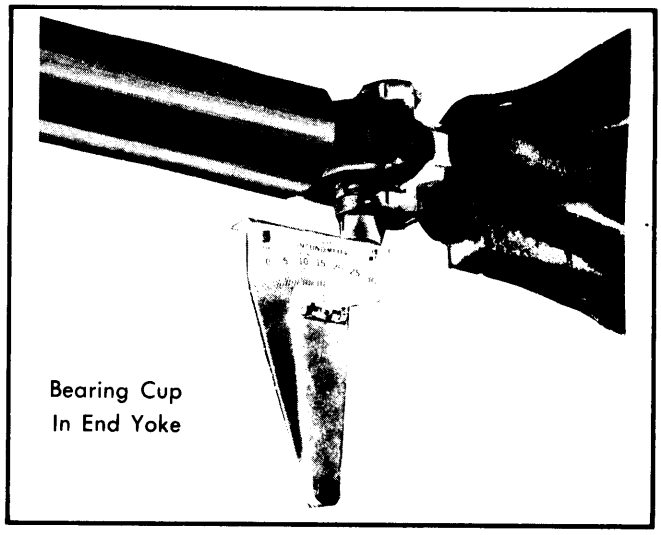

Fig. 2 Measuring Angle at Rear of Propeller Shaft

Rear Universal Joint Angle Adjustment – Corrections of ±1° can be made by loosening all of the rear suspension control arm bolts and repositioning pinion nose up or down. Rear Upper Control Arms may be changed to further adjust universal joint angles. *See Chart Below.*

Universal Joint Angle Change with Rear Upper Control Arm

Application and Arm Type	Front Angle Change	Rear Angle Change
Century & Regal		
+Arm	+1/3°	+1¾°
−Arm	−1/10°	−1¼°
Electra, Estate Wagon, LeSabre		
+Arm	+1/3°	+2°
−Arm	−1/3°	−2°

Correct Universal Joint Angle①

Application	Height②	Front Joint	Rear Joint
Century & Regal			
Coupe	5"	½°	1°
Sedan	4¾"	½°	1°
Wagon	5⅝"	¼°	1°
Estate Wagon & LeSabre			
With 7½" Axle	6¼"	1¾°	2½°
With 8½" Axle	6⅛"	1¾°	2°
With 8¾" Axle	4⅞"	2°	3°
Electra	6⅛"	2°	1¾°
Skylark		1°	2½°

① – Angles may be ±½°.
② – Axle tube to frame height ±¼".