AMERICAN MOTORS

All Models

DESCRIPTION

Measurement of front and rear universal joint angle is accomplished by means of an inclinometer (tool J-22910) with the vehicle at usual load and curb height. Angles formed by the intersection of the centerlines of the crankshaft, propeller shaft and drive pinion must fall below the propeller shaft centerline. Angles formed above the centerline are negative and must be avoided.

CHECKING & ADJUSTING ANGLES

CHECKING

CAUTION – *No NEGATIVE angle is permitted.*

1) Shift transmission into neutral and raise vehicle on axle tubes or rear springs. Wheels must rotate freely. Clean yoke bearing caps. Install inclinometer magnet with tool parallel to propeller shaft. Record readings (both front and rear propeller shafts of Eagle) as follows:

- Rear Axle Yoke Bearing Cap
- Propeller Shaft Yoke Bearing Caps
- Front Slip Yoke Bearing Cap

2) Align inclinometer frame parallel to propeller shaft centerline. Rotate shaft to zero top bubble on inclinometer. Zero pendulum bubble with thumbscrew; read scale at base of inclinometer frame. Reading is indicated by vertical hairline mark of pendulum.

NOTE – *Inclinometer frame must face the same direction for all readings.*

3) Difference between angles measured at rear axle yoke bearing and propeller shaft bearing is rear universal joint angle. Rear "U" joint angle is 3°±½° on Eagle and 2½°±½° on all other models.

4) Difference between angles measured at front propeller shaft yoke bearing and slip yoke bearing (transfer case yoke on Eagle) is front universal joint angle. Angle is 2½°±½° on Eagle. No NEGATIVE reading is allowed on all other models.

NOTE – *Eagle front propeller shaft angles are both 3¾°±½°.*

ADJUSTMENT

If front universal joint angle is negative, adjust front angle first; then check and adjust rear universal joint angle. If front universal joint angle is positive, adjust rear angle first and check and adjust front angle.

Rear Propeller Shaft Universal Joint Angles – Front and rear angles are adjusted by installing wedge-shaped shims. To increase angle, install shim so thick end faces rearward. To decrease angle, install shim so thick end faces forward. If front universal joint angle is adjusted, transmission gearshift linkage must also be adjusted (except Eagle).

Front Propeller Shaft Universal Joint Angles (Eagle) – Front propeller shaft angles are not adjustable other than replacing worn, loose or defective engine/front axle mounting components.

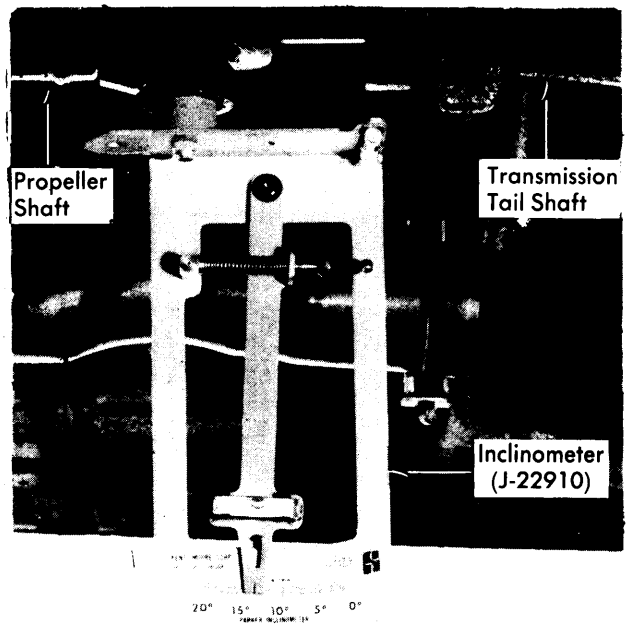

Fig. 2 Measuring Front Universal Joint Angle

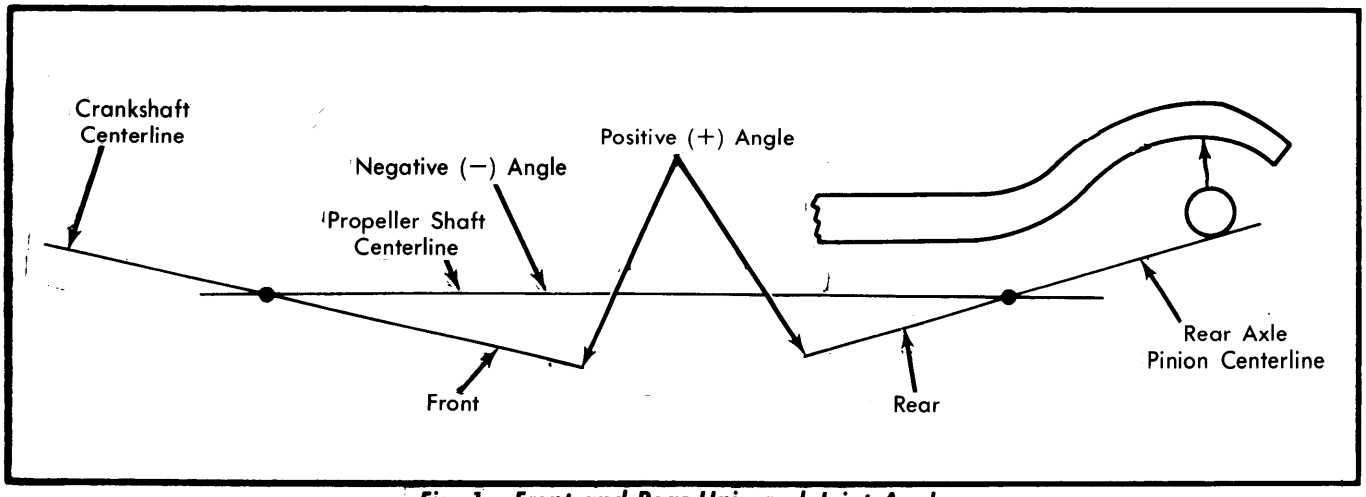

Fig. 1 Front and Rear Universal Joint Angles