

PROPELLER SHAFT

REMOVAL & INSTALLATION

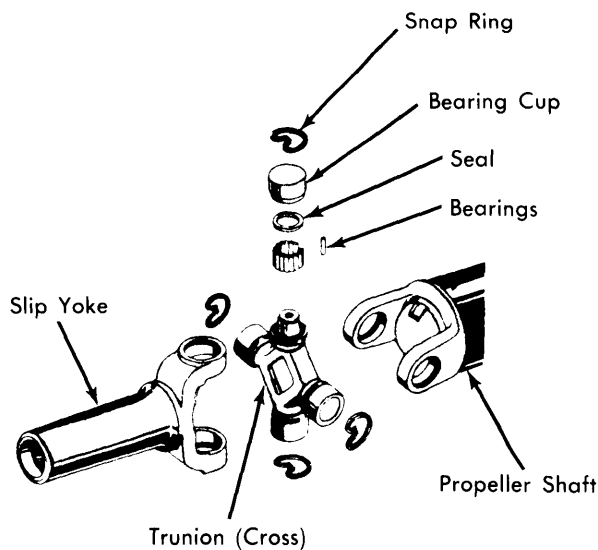
Raise vehicle, with front end slightly lower to prevent loss of transmission fluid. Mark shaft and differential companion flange to aid in reassembly. Remove trunion bearing straps or flange bolts, then slide propeller shaft with slip yoke from transmission output shaft. **CAUTION** — Do not use pry bar or heavy tool to hold propeller shaft while removing strap bolts or flange bolts, as damage to bearing seals may result. In addition, do not allow one end of shaft to hang free or bend at a sharp angle. To install, clean sliding yoke splines and outside diameter machined surface of nicks, scratches, or foreign material, then apply suitable lubricant to splines and outside surface of yoke. Install yoke onto transmission output shaft, then align shaft with companion flange and connect exposed bearing cups to companion flange with straps and bolts (single joint), or connect propeller shaft flange to companion flange with bolts (constant velocity joint).

CROSS & ROLLER TYPE JOINT

DISASSEMBLY & REASSEMBLY

NOTE — Two different retaining methods are used: Snap rings (positioned against bearing cap flat surface in groove of yoke ear near outer edge), and "C" type locks (positioned on bearing cup between inside surface of yoke ear and cross).

Remove bearing cup retainers, then press out bearing cups using suitable arbor press or vise and supporting tools. Remove cross assembly from yoke. Do not remove seal retainers from cross. To install, hold cross between ears of propeller shaft flange, and partially install two bearing cups. Align cross with cups, then using arbor press or vise, press cups into yoke until locks can be inserted. Install locks or snap rings.



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CROSS & ROLLER UNIVERSAL JOINT (TYPICAL)

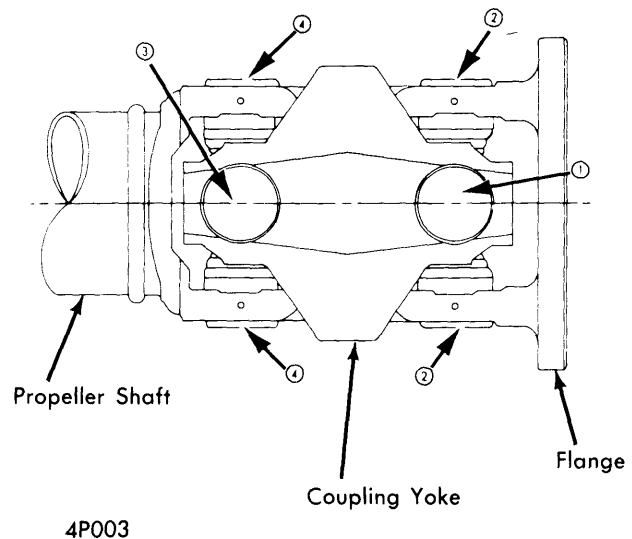
CONSTANT VELOCITY TYPE JOINT

CAUTION — Care must be taken when moving shaft horizontally; shaft must be supported at both ends or damage could result to center ball. Shaft may be carried in vertical position without resulting damage.

DISASSEMBLY

Disassembly procedure is similar to cross and roller type joint, except bearing cups must be removed in sequence (see illustration). Mark all parts for reassembly into proper position.

Centering Ball Replacement (Saginaw) — Using suitable tool (J 23996), place inner part of tool under ball, then place outer cylinder of tool over ball, thread nut on tool and draw off ball. Place replacement ball on stud, then using tool, drive ball onto stud until ball seats firmly against shoulder at base of stud. Lubricate all parts and insert into ball seat cavity in following order: Spring, washer (smallest OD), ball seats (with largest opening outward to receive ball), washer (largest OD), and seal. Lubricate seal lip and press seal flush with suitable tool (J 23694). Fill cavity with grease, then install flange yoke to centering ball, aligning marks. Install cross and bearing cups.

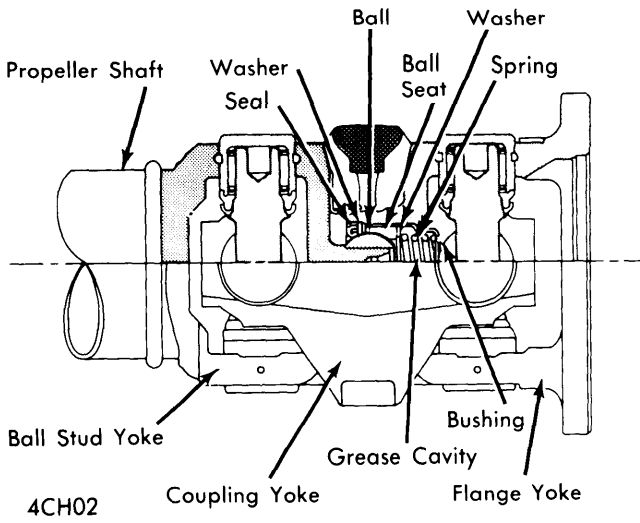


BEARING CAP REMOVAL SEQUENCE

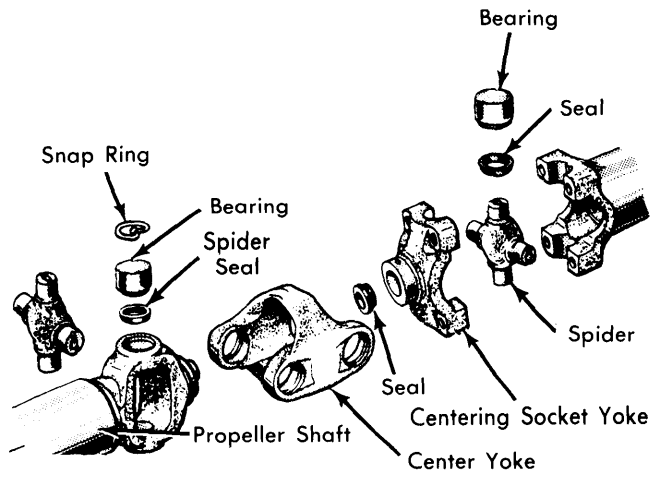
REASSEMBLY

Pack all bearing cups with grease and reverse disassembly procedure, ensuring crosses and yokes are in original positions. Check for free movement of joint. If bind exists, seat bearings with a sharp rap on yokes with a brass hammer. **CAUTION** — Do not rap on bearings.

Universal Joints



**SECTIONAL VIEW OF CONSTANT VELOCITY JOINT
(SAGINAW)**



**CONSTANT VELOCITY JOINT
(DANA)**