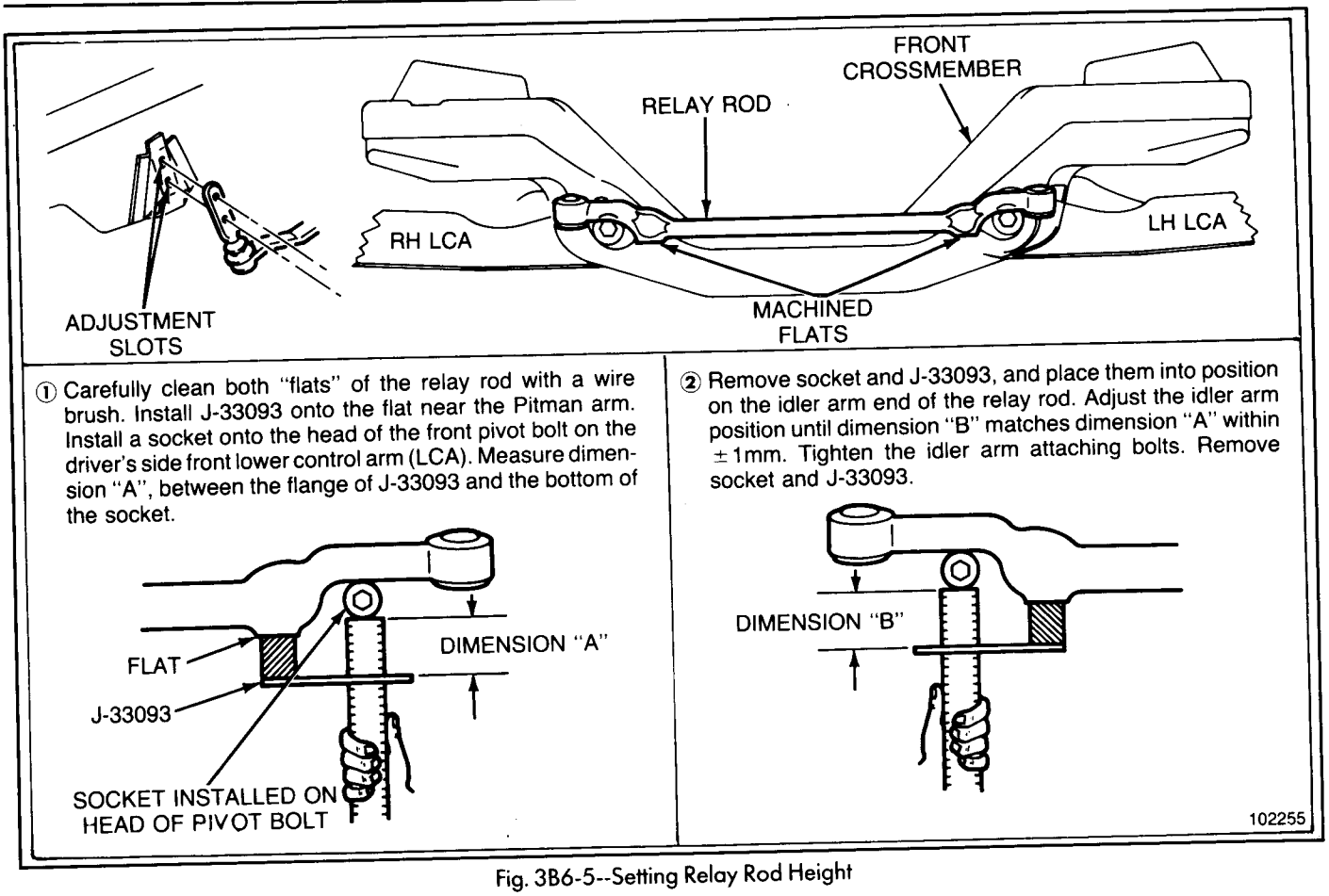

Fig. 3B6-5--Setting Relay Rod Height

pitman arm.

4. Detach relay rod from pitman arm by using tool such as J-24319-01. Shift steering linkage as required to free pitman arm from relay rod.
5. Remove nut from idler arm and remove relay rod from idler arm.

Installation

NOTICE: See NOTICE on page 1 of this section regarding the fasteners referred to in steps 1, 2, 3 and 4.

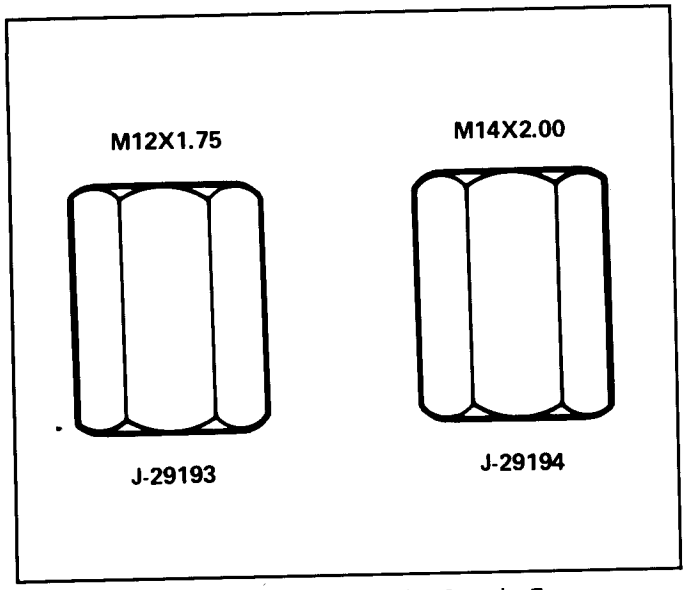

Fig. 3B6-6--Special Tools Used to Seat the Tapers

1. Install relay rod to idler arm, making certain idler stud seal is in place. Use J-29193 or J-29194 as shown in Fig. 3B6-6 to seat the tapers. A torque of 20 N·m is required. With the tapers seated, remove the tool, then install a prevailing torque nut, and tighten to 48 N·m (35 ft. lbs.).
2. Raise end of rod and install on pitman arm. Use J-29193 or J-29194 as shown in Fig. 3B6-6 to seat the tapers. A torque of 20 N·m is required. With the tapers seated, remove the tool, then install a prevailing torque nut, and tighten to 48 N·m (35 ft. lbs.).
3. Install tie rod ends to relay rod as previously described under Tie Rods. Lubricate tie rod ends.
4. Install damper if equipped and torque to specifications.
5. Refer to 3B6-5 for setting relay rod height.
6. Lower vehicle to floor.
7. Adjust toe-in (see Section 3A) and align steering wheel as described in Section 3B4 under Steering Wheel Alignment and High Point Centering.

IDLER ARM

Use of the proper diagnosis and checking procedure is essential to prevent needless replacement of good idler arms.

The proper checking procedure is as follows:

1. Raise the vehicle in such a manner as to allow the front wheels to rotate freely and the steering mechanism freedom to turn. Position the wheels in the straight ahead position.

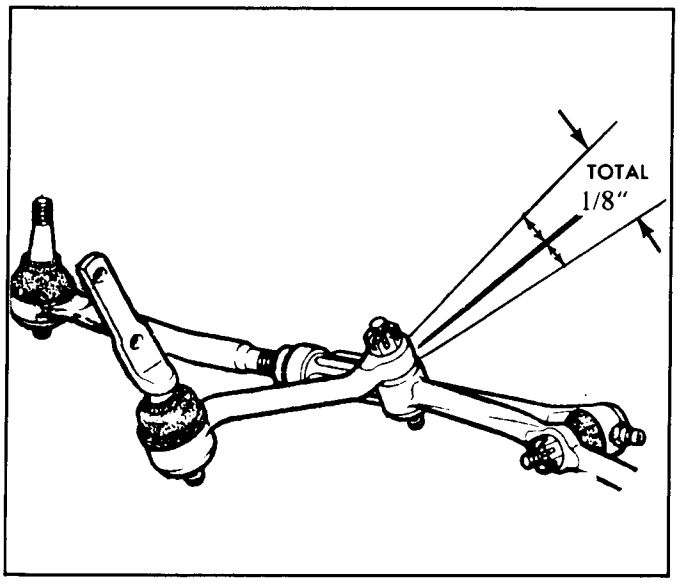

Fig. 3B6-7--Checking Idler Movement

2. As near the relay rod end of the idler arm as possible, exert a 110 Newton (25 pound) force upward and then downward while noticing the total distance the end of the arm moves. This distance should not exceed a total acceptable movement of 1/8 inch (Fig. 3B6-7). It is necessary to ensure that the correct load is applied to the arm since it will move more when higher loads are applied. It is also necessary that a scale or ruler be rested against the frame and used to determine the amount of movement because the actual movement can be over-estimated when a scale is not used. The idler arm should always be replaced if it fails this test.

Jerking the right wheel and tire assembly back and forth, thus causing an up and down movement of the idler arm, is NOT an acceptable method of checking because there is no control on the amount of force being applied.

Caution should be used in assuming shimmy complaints are caused by loose idler arms. Before suspecting suspension or steering components, technicians should eliminate shimmy excitation factors, such as dynmamic imbalance, runout or force variation of wheel and tire assemblies and road surface irregularities.

Removal

Refer to procedure for RELAY ROD REMOVAL, and to Fig. 3B6-5 before removing idler arm.

1. Raise vehicle on hoist.
2. Remove idler arm to frame nuts, washers, and bolts.
3. Remove nut from idler arm to relay rod ball stud.
4. Remove relay rod from idler arm by using J-24319-01 or similar puller.
5. Remove idler arm.

Installation

NOTICE: See NOTICE on page 1 of this section regarding the fasteners referred to in steps 1 and 2.

1. Position idler arm on frame and LOOSELY install mounting bolts, washers and nuts.
2. Install relay rod to idler arm, making certain seal is on stud. Use J-29193 or J-29194 as shown in Fig. 3B6-6 to seat the tapers. A torque of 20 N·m is required. With the tapers seated, remove the tool, then install a prevailing torque nut, and tighten to 48 N·m (35 ft. lbs.).
3. Follow the procedure in Fig. 3B6-5 to set the relay rod height. Torque the idler arm-to-frame mounting nuts to specifications.
4. Lower vehicle to floor.

PITMAN ARM

Refer to procedure for RELAY ROD REMOVAL, and to Fig. 3B6-5 before removing pitman arm.

Removal

1. Raise vehicle on hoist.
2. Remove nut from pitman arm ball stud.
3. Remove relay rod from pitman arm by using a tool such as J-24319-01. Pull down on relay rod to remove from stud.
4. Remove pitman arm nut from pitman shaft and mark relation of arm position to shaft.
5. Remove pitman arm with Tool J-5504 or Tool J-6632, as seen in Fig. 3B6-8. DO NOT HAMMER ON PULLER.

Installation

NOTICE: See NOTICE on page 1 of this section regarding the fasteners referred to in steps 2 and 3.

1. Install pitman arm on pitman shaft, lining up the marks made upon removal.
2. Install pitman shaft nut and torque to specifications.
3. Position relay rod on pitman arm. Use J-29193 or J-29194 as shown in Fig. 3B6-6 to seat the tapers. A torque of 20 N·m is required. With the tapers seated, remove the tool, then install a prevailing torque nut, and tighten to 48 N·m (35 ft. lbs.).
4. Follow the procedure in Fig. 3B6-5 to set the relay rod height. Torque the idler arm-to-frame mounting bolts to specifications.
5. Lower vehicle to floor.

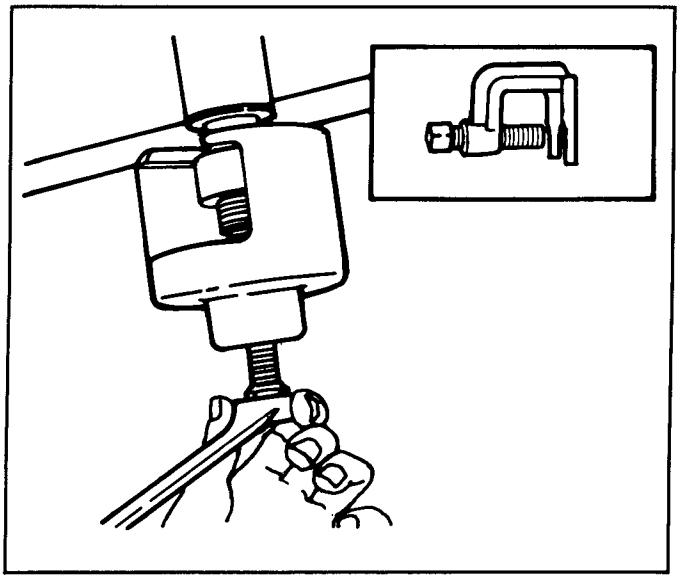

Fig. 3B6-8--Removing Pitman Arm