Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

Time on Task:\_\_\_\_\_\_\_\_\_\_\_\_\_

Make/Model/Year:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VIN:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluation (Enter number from 4, 3, 2, 1) :\_\_\_\_\_\_\_\_\_

**Meets ASE Task: :** (A4-B-8) P-1 Inspect, replace, and/or adjust tie rod ends (sockets), tie rod sleeves, and clamps (non-rack and pinion).

**Tie-Rod End Inspection and Replacement**

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[ ]  1. Verify that the tie-rod end(s) requires replacement. Check all that apply.

 [ ]  Torn boot

 [ ]  Joint has side-to-side movement

 [ ]  Physically damaged

 [ ]  Other (specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  2. Hoist the vehicle safely.

[ ]  3. Compare the replacement tie-rod end with the original to be sure that the new end is

 correct.

[ ]  4. Remove the retaining nut and use a tie-rod puller to separate the tie-rod end from the

 steering knuckle and/or center link.

HINT: Often a hammer can be used to jar loose the tie-rod end especially if a downward force is exerted on the tie-rod while an assistant taps on the steering knuckle at the tie-rod end.

[ ]  5. Measure the distance between the center of the tie-rod end and the adjusting sleeve

 and record this distance so the replacement tie-rod end can be installed in

 approximately the same location so that the wheel alignment (toe setting) will be close

 to being correct.

[ ]  6. Unscrew the old tie-rod end and discard.

[ ]  7. Install the replacement tie-rod end and adjust to the same distance as measured and

 recorded in #5.

[ ]  8. Install the tie-rod end onto the steering knuckle and torque the retaining nut to factory

 specifications.

 Torque specifications for the tie-rod retaining nut = \_\_\_\_\_\_\_\_\_\_\_

[ ]  9. Lower the vehicle and align the vehicle before returning it to the customer.