

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What are the types of suspensions and what are the names of their component parts?

2) When the driver turns the steering wheel, how is the motion transferred to the front wheels through a conventional steering gear?

3) How does a rack-and-pinion steer the front wheels?

4) What components are included in a typical steering column assembly?

5) Describe the lubrication of steering linkage joints.

Answer Key

Testname: INTRO_SHORT37

- 1) The types of suspensions include the coil spring, leaf spring and torsion bar type. An SLA type uses upper and lower control arms whereas a strut-type suspension uses a spring and shock absorber all in one assembly. A leaf spring-type suspension is used in the rear of many trucks and use shackles at the rear to allow the spring to move when a bump is hit.
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- 2) When the steering wheel is rotated by the driver, the worm gear inside the steering gear rotates and moves a sector gear. This sector gear is attached to and moves the pitman shaft which then moves the steering linkage.

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- 3) When the pinion gear rotates, the rack moves either one direction or the other based on the rotation of the pinion gear. The ends of the rack are connected with steering linkage to the front tires/ wheels.
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- 4) The parts include in a steering column include the steering shaft, universal joint and collapsible part that is designed to collapse in the event of a collision.
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- 5) Joints should be lubricated with chassis grease through a grease fitting, also called a zerk fitting or alemite fitting, named for a company that manufactures grease fittings, at least every six months or as per the vehicle manufacturer's specifications.
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