

FRONT DAMPER AND SPRING INSTALLATION

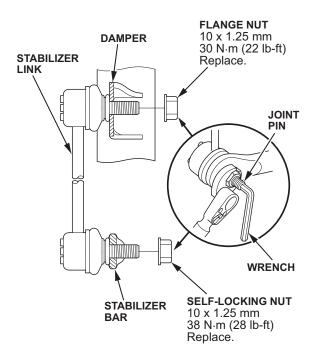
Customer Information: The information in this installation instruction is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely add equipment to your vehicle. These procedures should not be attempted by "do-it-yourselfers."

1. With the vehicle on a lift, remove all four wheels.

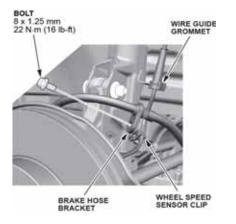
2. Remove the wheel speed sensor from the knuckle. Do not disconnect the wheel sensor 2P connector.



3. Remove the stabilizer link self-locking nut while holding the respective joint pin with a Allen wrench, then remove the stabilizer link.



4. Remove the wheel speed sensor clip, the wire guide grommet, and the brake hose bracket from the damper. Do not disconnect the wheel speed sensor 2P connector.

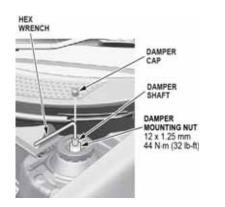


 Remove the damper pinch bolts and the self-locking nuts from the damper.
NOTE: Do not allow the knuckle to rotate too far

outward. This may allow the driveshaft inboard joint to come apart.



6. Remove the damper cap from the top of the damper.



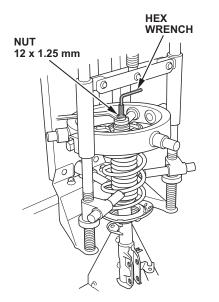
- 7. Hold the damper shaft using an Allen wrench, and loosen the damper mounting nut.
- 8. Remove the damper mounting nut and the wave washer, then remove the damper mounting base from the top of the damper.



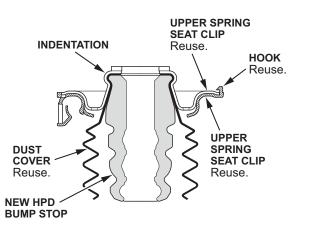
Remove the damper/spring assembly and the damper rubber mount.
NOTE: Be careful not to damage the body.



10. Using a strut spring compressor, compress the spring to relieve the tension on the upper spring seat, then remove the nut while holding the damper shaft with an Allen wrench.



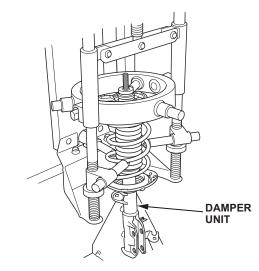
11. Remove the bump stop and the dust cover from the upper spring seat.



12. Install the HPD bump stop and the dust cover into the upper spring seat. Push the HPD bump stop and the dust cover into the indentation in the upper spring seat securely. 13. Install the HPD spring on the upper spring seat clip by aligning the upper end of the spring with the ledge portion of the upper spring seat clip.

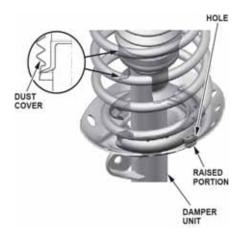


- 14. Install the spring seat cushion on the HPD spring.
- 15. Install all the parts except the nut and the damper bearing onto the damper. Refer to the *Illustration of the HPD Front Damper*.

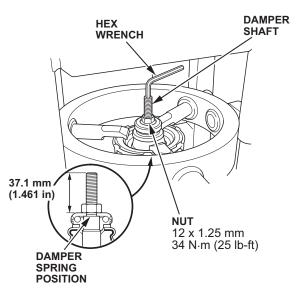


16. Compress the HPD damper spring.

17. Align the raised portion of the spring seat cushion with the hole of the lower spring seat on the damper. NOTE: After reassembling the damper/spring, install the dust cover onto the damper as shown.



- 18. Install the damper bearing onto the HPD damper shaft.
- Compress the spring until the top of the HPD damper shaft comes in contact with the damper bearing. NOTE: Make sure the distance of the rod is 37.1 mm (1.461 in) from the upper surface of the bearing.



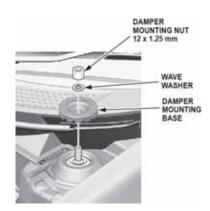
- 20. Install the nut.
- 21. Hold the damper shaft with an Allen wrench, and torque the nut to 34 N•m (25 lb-ft).
- 22. Remove the damper from the strut spring compressor.

23. Install the damper/spring and the damper rubber mount.

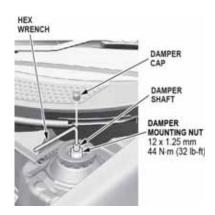
NOTE: Be careful not to damage the body.



24. Install the damper mounting nut, the wave washer, and the mounting base.



 Hold the HPD damper shaft using an Allen wrench, and torque the damper mounting nut to 44 N•m (32 lb-ft).

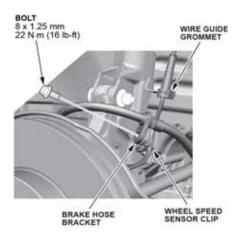


26. Install the damper cap to the top of the damper.

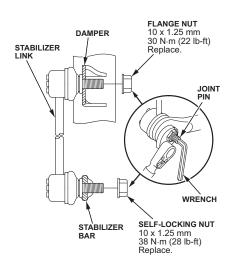
27. Install the damper pinch bolts and the self-locking nuts and torque to 90 N•m (68 lb-ft).



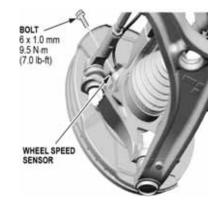
 Install the wheel speed sensor clip, the wire guide grommet, the brake hose bracket and the bolt. Torque the bolt to 22 N•m (16 lb-ft).



29. Install the stabilizer link self-locking nut and torque to 38 N•m (28 lb-ft) while holding the respective joint pin with an Allen wrench, then install stabilizer link self-locking nut and torque to 30 N•m (22 lb-ft) while holding the respective joint pin with an Allen wrench.



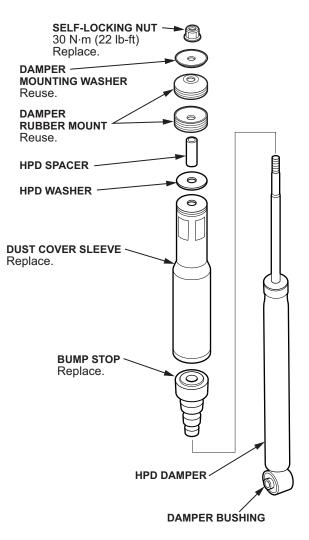
30. Install the wheel sensor (A) on the knuckle, and torque the bolt to 9.5 N•m (7.0 lb-ft).



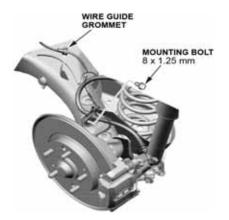
- 31. Clean the mating surfaces between the brake disc and the inside of the wheel, then install the front wheel.
- 32. Repeat the steps 2-31 to install the other HPD front damper and spring.

REAR DAMPER AND SPRING INSTALLATION

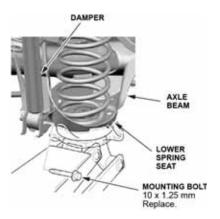
Illustration of the HPD Rear Damper



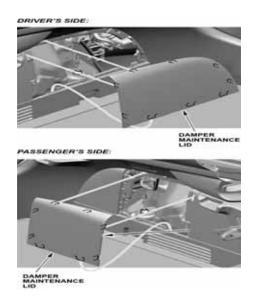
33. Remove the wire guide grommet and the brake hose mounting bolt from the axle beam.



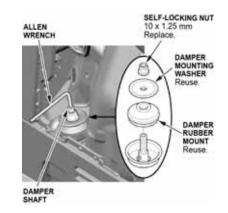
34. Position a floor jack under lower spring seat on the axle beam. Raise the floor jack until the spring begins to compress.



- 35. Remove the damper mounting bolt that connects the axle beam and the damper.
- 36. Remove the damper maintenance lid from the cargo area side trim.



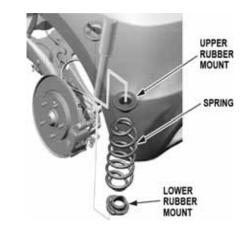
37. Remove the self-locking nut while holding the damper shaft with an Allen wrench.



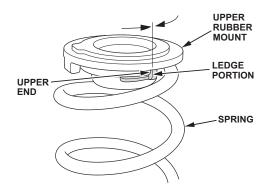
- 38. Remove the damper mounting washer and the damper rubber mount from the top of the damper.
- Compress the damper assembly by hand, and remove it from the vehicle.
 NOTE: Be careful not to damage the body.



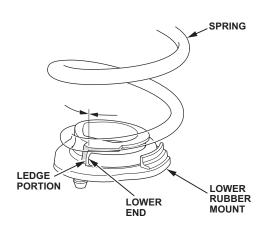
40. Lower the floor jack gradually. Remove the spring, the upper rubber mount, and the lower rubber mount.



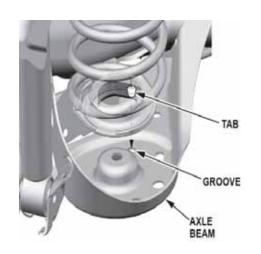
41. Install the upper rubber mount on the HPD rear spring by aligning the upper end of the rear spring with the ledge portion of the upper rubber mount.



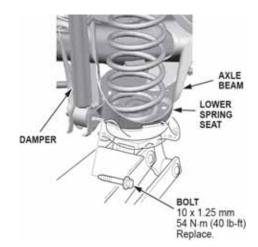
42. Install the lower rubber mount on the HPD rear spring by aligning the lower end of the rear spring with the ledge portion of the lower mount.



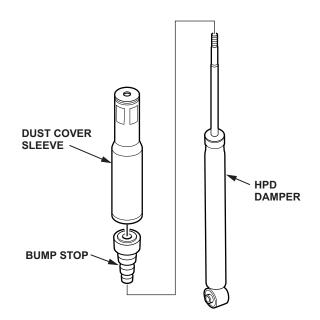
43. Install the tab of the lower rubber mount into the groove of the lower spring seat. NOTE: Make sure that the tab of the lower rubber mount is properly installed into the axle beam.



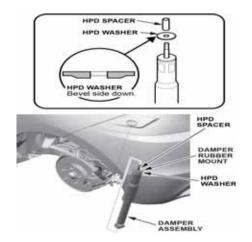
44. Position the floor jack under the lower spring seat on the axle beam.



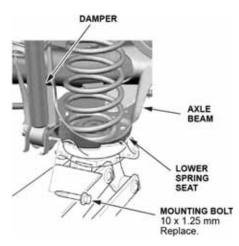
45. Install the HPD rear bump stop and the HPD rear dust cover on the HPD rear damper.



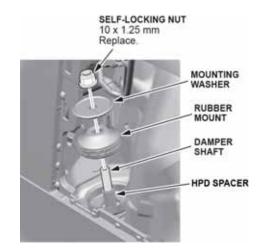
46. Install the HPD washer bevelside down, then the HPD spacer, and the damper rubber mount onto the HPD damper unit. Position the damper assembly between the body and the axle beam. NOTE: Be careful not to damage the body.



47. Slowly raise the jack until you can align the bolt hole with the holes in the axle beam and the damper, then loosely tighten the damper mounting bolt.



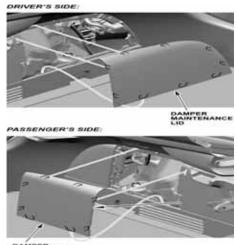
 Raise the rear suspension with the jack until the vehicle just lifts off of the lift, then tighten the damper mounting bolts and torque to 54 N•m (40 lb-ft). 49. Install the damper rubber mount, the damper mounting washer, and the self-locking nut on the HPD damper shaft.



50. Torque the self-locking nut to 30 N•m (22 lb-ft) while holding the HPD damper shaft with an Allen wrench.

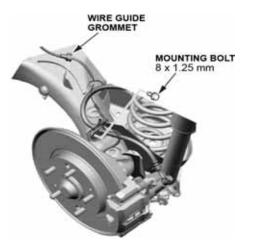


51. Install the damper maintenance lids on the cargo area side trim.



DAMPER

 Install the wire guide grommet and the brake hose mounting bolt on the axle beam and torque to 22 N•m (16 lb-ft).



- 53. Clean the mating surfaces between the brake disc and the inside of the wheel, then install the rear wheel.
- 54. Repeat the steps 33-53 to install the other HPD rear damper and spring.
- 55. Check the wheel alignment
- 56. Return the used parts to the customer.