

TECHNICAL BULLETIN



Rear Suspension – Special Tools JD199 & JD199-1 – Repair Procedure

64-15

MODEL Sedan Range 1994 MY

DATE 8/94

From: VIN 696459

ISSUE:

New rear suspension design introduced on all Sedan Range vehicles from VIN 696459. The rear road springs are now mounted directly between the body and rear wishbone.

ACTION:

Rear suspension service requires new special tools.

Spring Compressor	JD199	2 per set
Shock Absorber Retaining Strap	JD199-1	2 per set

This design change affects the following primary repair operations.

64.20.01	Rear road spring - Renew
64.30.02	Rear shock absorber - Renew

NOTE: If repair requires removal of the rear road springs or shock absorbers, use the following information along with existing operations in the Service Manual.

Removing The Spring/Shock Absorber Assembly From The Vehicle:

1. Raise the vehicle until the wheels just clear the floor.
2. Remove the brake caliper and support from the A frame mounting bracket.
3. With a scribe, mark the position of the hub fulcrum bolt head on the wishbone (Illustration 1).

NOTE: If no major suspension components are changed, this should allow reassembly without readjusting rear wheel toe.

4. Remove the hub fulcrum bolt nut and drive out the bolt.

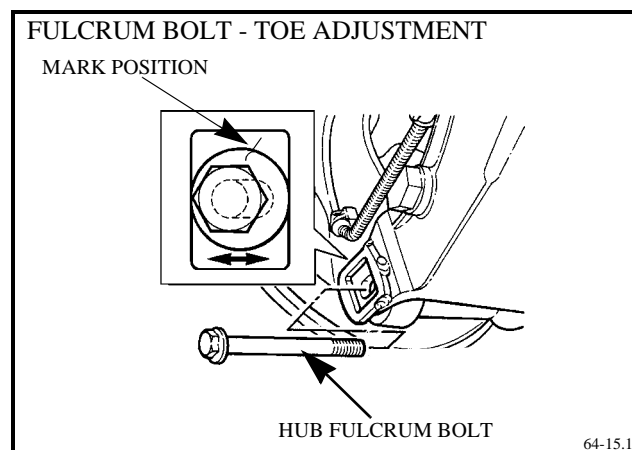


ILLUSTRATION 1

5. Move the hub to the rear of the vehicle and support the hub on an axle stand.

NOTE: As the hub separates from the wishbone, recover the bearing adjustment shims.

6. Install the first spring compressor JD 199, as shown in Illustration 2, in front of the wishbone, close to the hub fulcrum, and outboard of the spring.
7. The spring compressor jaws should be placed so that one free coil is between the jaws.

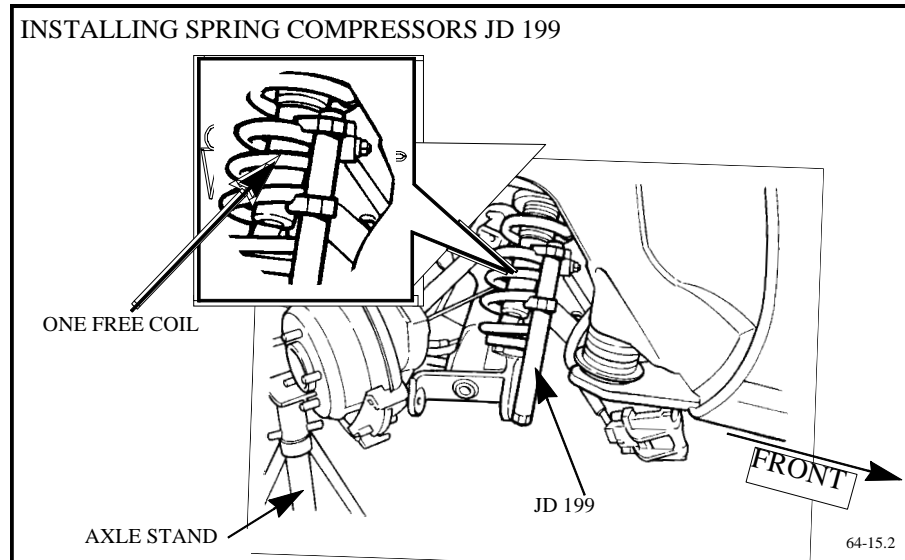


ILLUSTRATION 2

8. Tighten the spring compressor center bolt until there is slight tension on the spring.
9. Place the second spring compressor JD 199 against the front side of the wishbone, inboard of the spring.
10. Place the upper upper jaw of the second spring compressor first on the same coil as the upper jaw of the first compressor. The lower jaw of the second compressor should be placed so that there are two free coils between the jaws. Tighten the spring compressor center bolt until there is slight tension on the spring.
11. Compress the spring evenly by tightening each compressor two or three turns at a time, until the spring just separates from its seat on the wishbone. Then, compress the spring 1 inch (25 mm) more.

NOTE: The shock absorber and spring are removed as an assembly. Because gas pressure will force the shock absorber to extend, it must be partially compressed and retained before removal.

12. Remove the lower shock absorber nut. Remove the three shock absorber upper mounting plate nuts. Pull the plate upper mounting plate down until it is clear of the studs.

13. Thread each of the two shock absorber retaining strap JD 199-1 through an upper retaining plate hole and around an upper spring coil as shown in Illustration 3. Tighten and secure each strap.

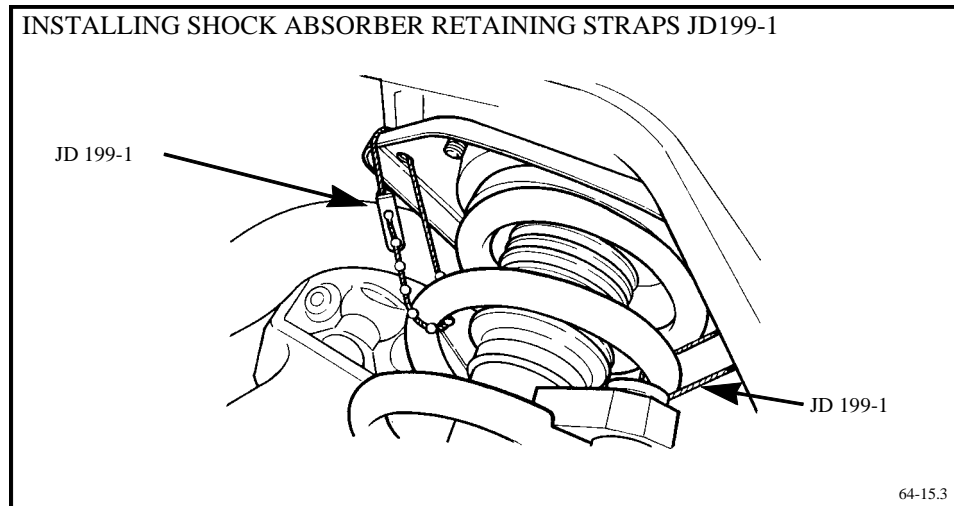


ILLUSTRATION 3

14. Using a hydraulic jack under the lower shock absorber eye, compress the shock absorber until a bar can be run through the shock absorber eye and spring.

NOTE: A spacer may be necessary to reach the lower eye of the shock absorber. Cut a "V" notch in the spacer to locate it on the shock absorber eye.

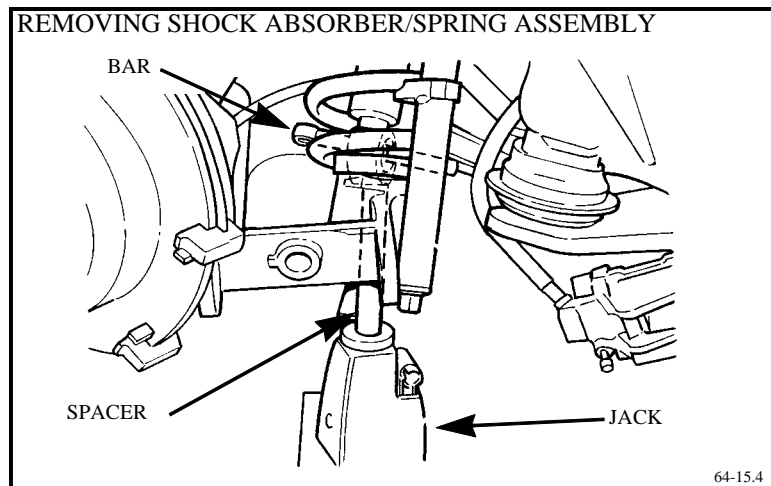


ILLUSTRATION 4

15. Slowly lower the jack until the shock absorber is securely held in the spring assembly at the top by the retaining straps and at the bottom by the bar.

WARNING: Be sure shock absorber and spring are firmly held by the compressors, straps and bar. The spring and shock absorber are under compression. If suddenly released they could cause injury or damage. Carefully remove the shock absorber spring assembly from the vehicle to avoid dislodging the spring compressors.

16. Carefully remove the spring, shock absorber and spring compressor assembly from the vehicle.
17. Have an assistant hold the complete assembly on a bench with the upper end of the shock absorber against the base of a vise.

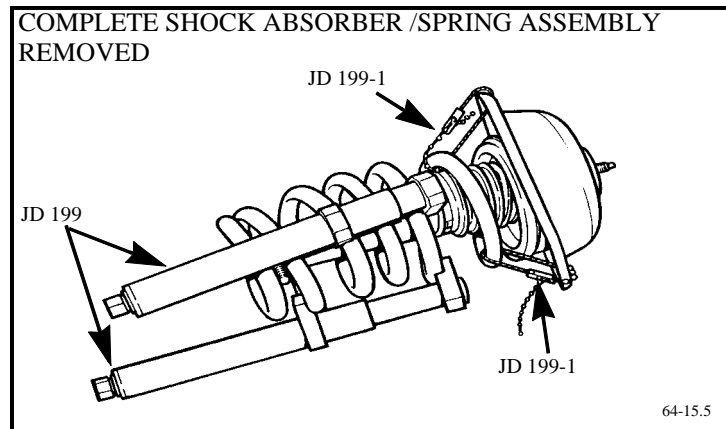


ILLUSTRATION 5

18. Push firmly against the lower end of the shock absorber. Remove the bar and allow the shock absorber to slowly extend.
19. Remove the two JD 199-1 retaining straps. Remove the compressed spring, with the two JD 199 spring compressors still attached, from the shock absorber assembly.

Replacing The Shock Absorber:

1. Remove the shock absorber from the upper retaining plate. Note the position of the washers below the retaining plate.
2. Reassemble with the washers in their original positions.

Replacing The Road Spring.

1. Tape the spring coils to mark the spring compressor jaw positions. Loosen each JD 199 spring compressor evenly, two or three turns at a time until the spring is free.

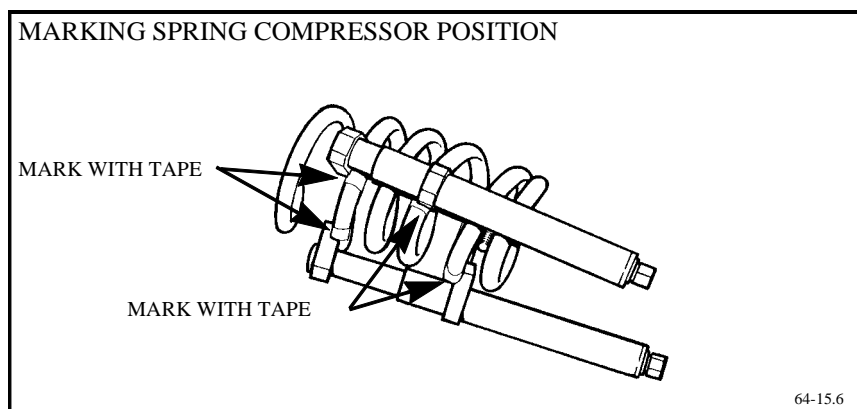


ILLUSTRATION 6

2. Lay the new spring beside the old, tape marked spring. Install the spring compressor jaws in the same positions on the new spring as they were on the old spring.

3. Carefully and evenly compress the new spring by tightening each compressor two or three turns at a time.
4. Place the compressed spring on the upper retaining plate/shock absorber assembly. Secure the upper retaining plate to the spring with two shock absorber retaining straps JD199-1, as explained in step 13 of “Removing The Spring/Shock Absorber Assembly From The Vehicle.”
5. Compress the shock absorber by hand and slide a bar between the spring coils and through the shock absorber lower eye to retain the shock absorber.

Installing The Spring/Shock Absorber Assembly:

1. Reverse the removal steps.
2. Before releasing the spring compressors be sure that the upper and lower mountings are aligned and all spacers are centered.
3. Carefully and evenly loosen the spring compressors making sure that all components remain aligned.

WARRANTY INFORMATION:

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME ALLOWANCE</u>
5KF	64.20.01	Rear road spring-Renew	1.25 hrs.
5KF	64.20.02	Rear road spring-Vehicle set-Renew	2.35 hrs.
5KA	64.30.01	Rear Shock absorber absorber-Vehicle set-Renew	2.35 hrs.
5KA	64.30.02	Rear Shock absorber absorber-Renew	1.25 hrs.