
SECTION 2D

REAR SUSPENSION

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DESCRIPTION AND OPERATION

REAR SUSPENSION

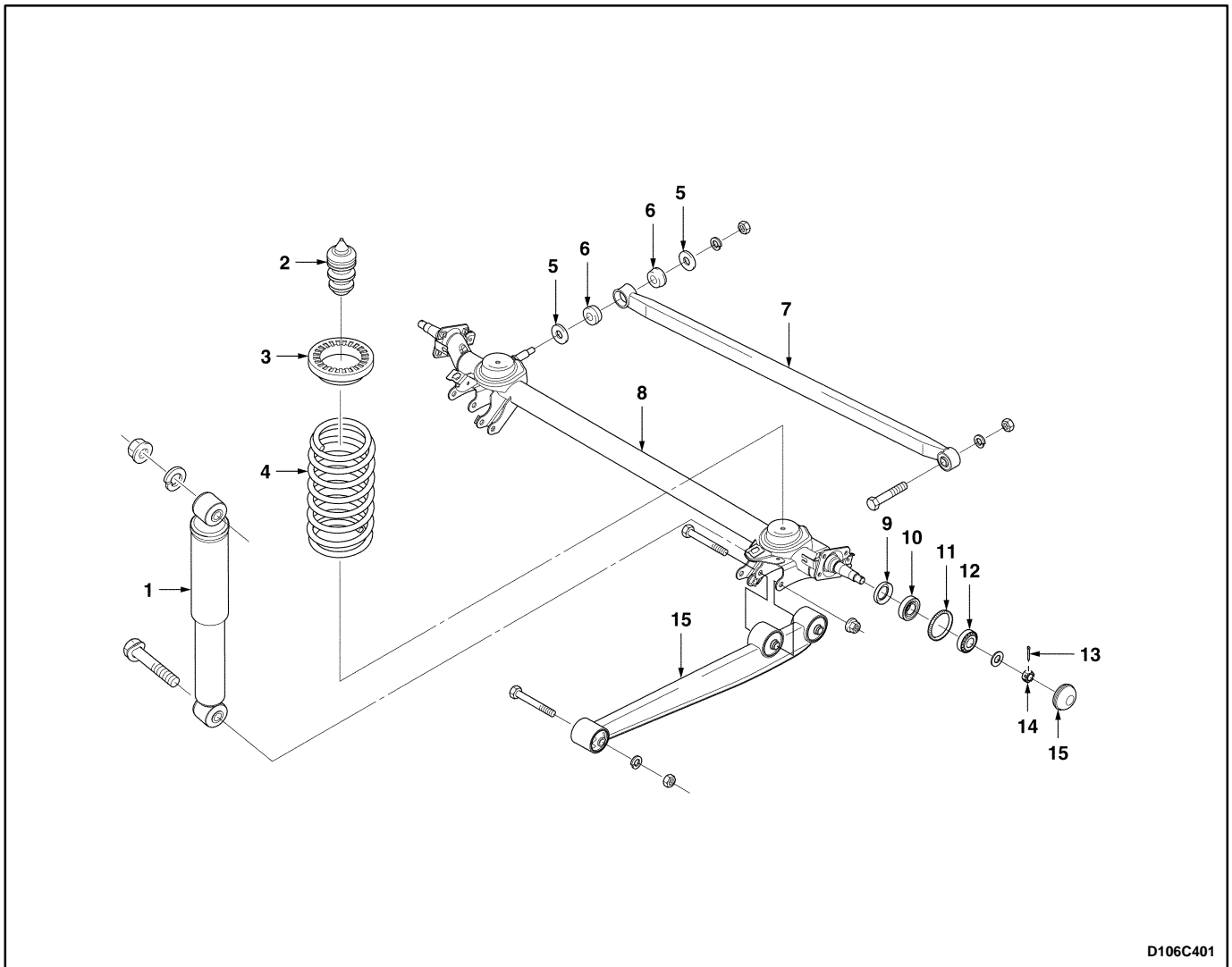
The rear suspension consists of an axle with trailing arms and a lateral rod, two coil springs, two shock absorbers, two upper spring seats, and two bump stop-

pers. The axle structure maintains the relationship of the wheels to the body.

Each coil spring is retained between a seat in the underbody and a seat welded to the top of the rear axle.

COMPONENT LOCATOR

REAR SUSPENSION



D106C401

1. Shock Absorber
2. Bumper Stopper
3. Coil Spring Upper Seat
4. Coil Spring
5. Washer
6. Bushing
7. Lateral Rod
8. Rear Axle

9. Oil Seal
10. Wheel Bearing Inner
11. ABS Wheel Speed Ring
12. Wheel Bearing Outer
13. Cotter Pin
14. Castellated Nut
15. Spindle Cap
16. Trailing Arm

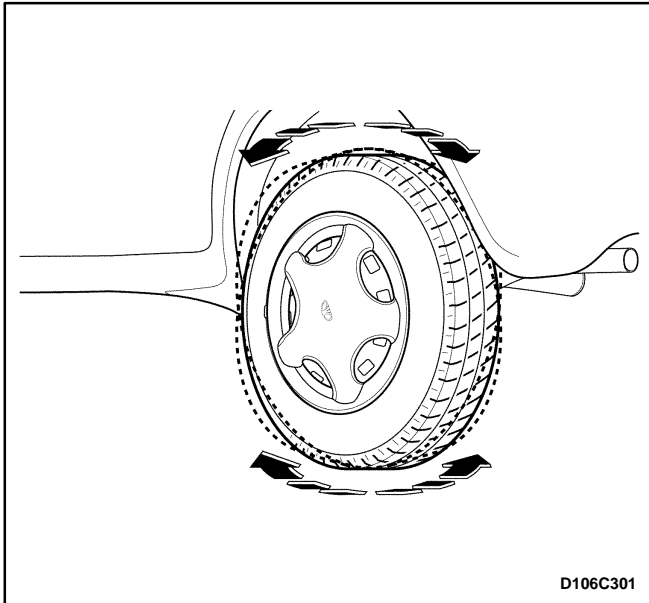
DIAGNOSTIC INFORMATION AND PROCEDURES

REAR SUSPENSION

Condition	Probable cause	Correction
Noise	● The loosened joints.	● Tighten the joints.
	● Wheel bearing is worn or damaged.	● Replace the wheel bearing.
	● Faulty shock absorber.	● Replace the shock absorber.
Uncomfortable	● Faulty shock absorber.	● Replace the shock absorber.
	● Faulty coil spring.	● Replace the coil spring.
	● Lateral rod bushing is worn or damaged.	● Replace the lateral rod bushing.
	● Trailing arm bushing is worn or damaged.	● Replace the trailing arm bushing.
Vehicle Leans Toward the Side	● Rear axle deformation.	● Replace the rear axle.
	● Lateral rod deformation.	● Replace the lateral rod.
	● Trailing arm deformation.	● Replace the trailing arm.
	● Faulty coil spring.	● Replace the coil spring.
	● Lateral rod bushing is worn or damaged.	● Replace the lateral rod bushing.
	● Trailing arm bushing is worn or damaged.	● Replace the trailing arm bushing.

CHECKING THE REAR WHEEL BEARING END PLAY

1. Release the parking brake.
2. Raise the vehicle.
3. Check the wheel bearing play by moving the top and the down of the tire in an in-and-out motion.



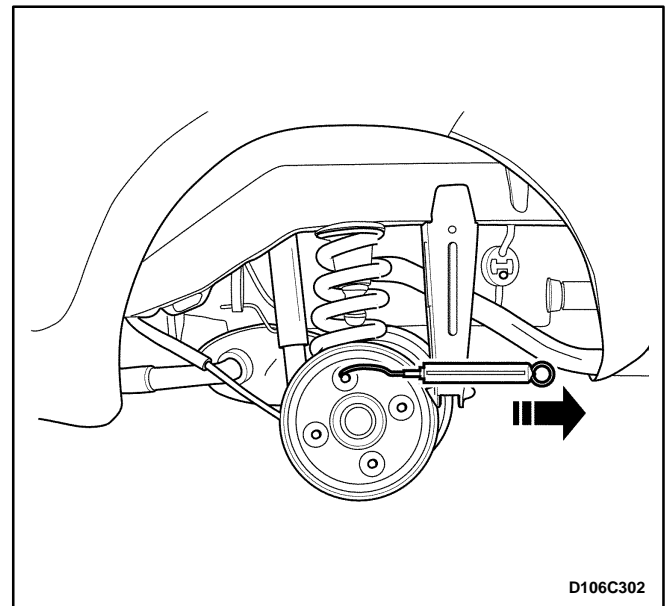
Rear Wheel Bearing Play	0 mm (0 in.)
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4. If the bearing play is high, tighten the castellated nut.
5. If the bearing play is high after tightening, replace the wheel bearing.

REAR WHEEL BEARING FREE LOAD

1. Release the parking brake.
2. Raise the vehicle and rotate the wheel.
3. Remove the wheels.
4. Check the torque when the hub moves by a spring scale.

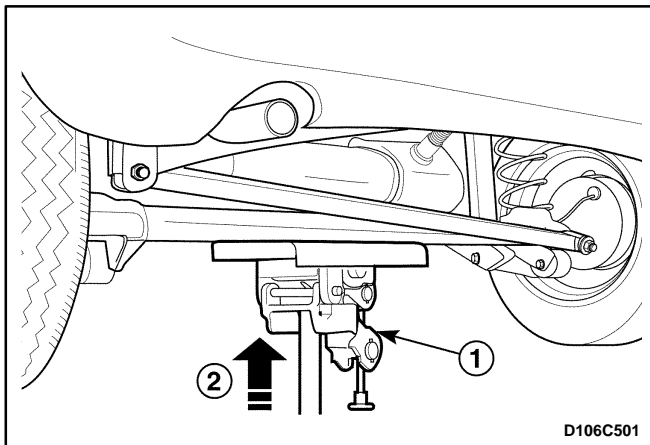
Standard (No Load)	0.137 – 0.422 N•m (0.9 – 3.7 lb-in)
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5. If the checked torque exceeds the specification, tighten the castellated nut.
6. If the checked torque exceeds the specification after tightening, replace the wheel bearing.

REPAIR INSTRUCTIONS

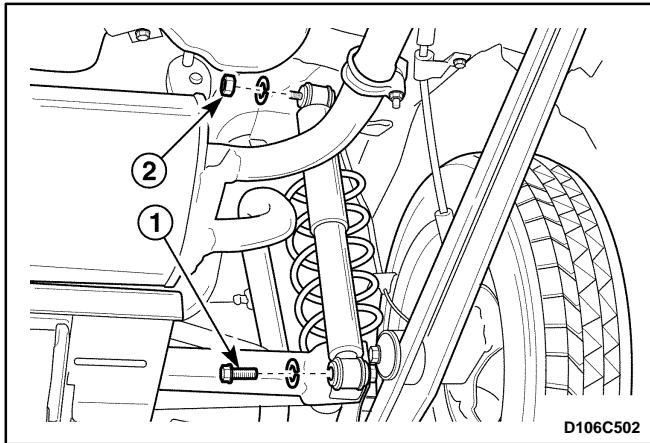
ON-VEHICLE SERVICE



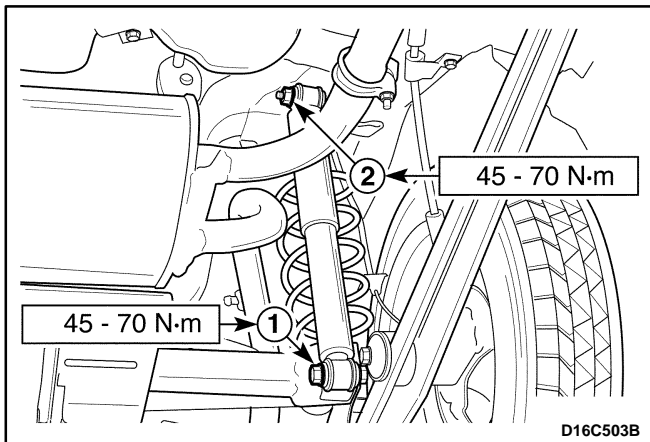
SHOCK ABSORBER

Removal Procedure

1. Support the rear axle with adjustable jack stands.
 - Raise the vehicle and support the rear axle assembly (1, 2).



2. Remove the shock absorber.
 - Remove the bolt (1).
 - Remove the nut (2).



Installation Procedure

1. Install the shock absorber.
 - Install the shock absorber-to-rear axle bolt (1).

Tighten

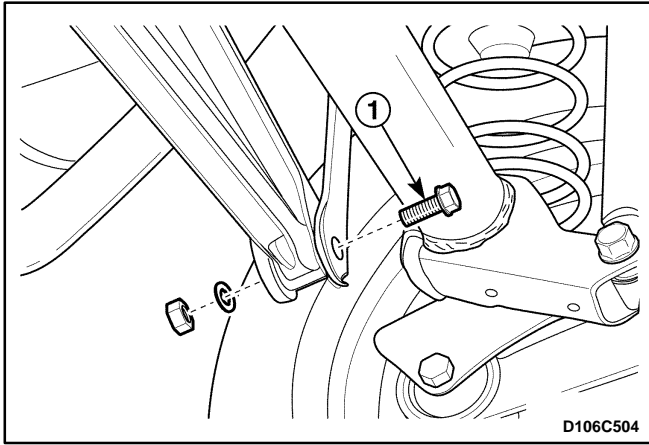
Tighten the bolt to 45–70 N•m (33–52 lb-ft).

- Install the shock absorber-to-body bracket nut (2).

Tighten

Tighten the shock absorber nut to 45–70 N•m (33–52 lb-ft).

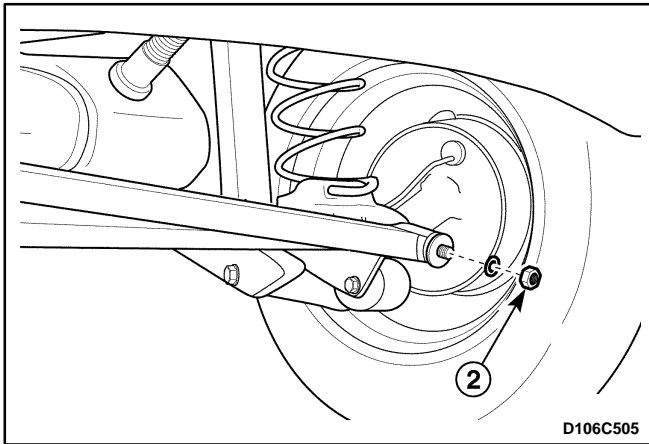
2. Remove the jack stand and lower the vehicle.



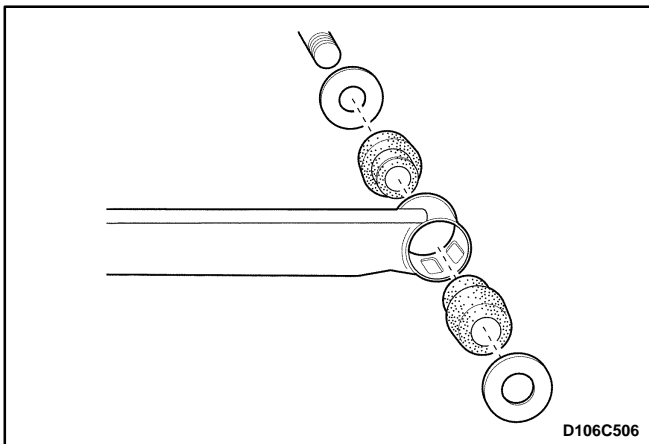
LATERAL ROD

Removal Procedure

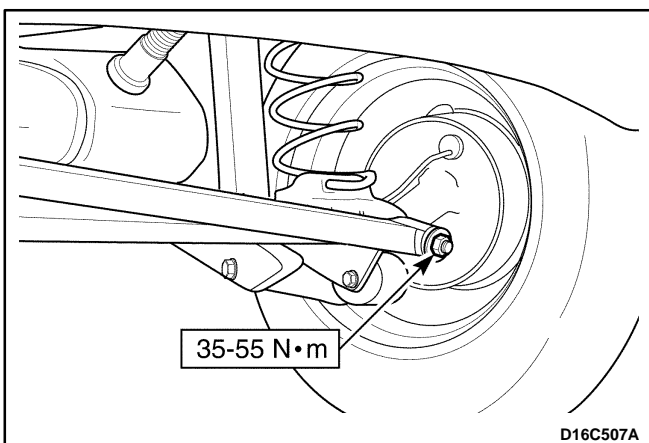
1. Raise and suitably support the vehicle.
2. Remove the lateral rod.
 - Remove the lateral rod-to-body bracket bolt (1).



- Remove the lateral rod-to-rear axle nut (2).



2. Remove the lateral rod axle side bushing and washer from the lateral rod.

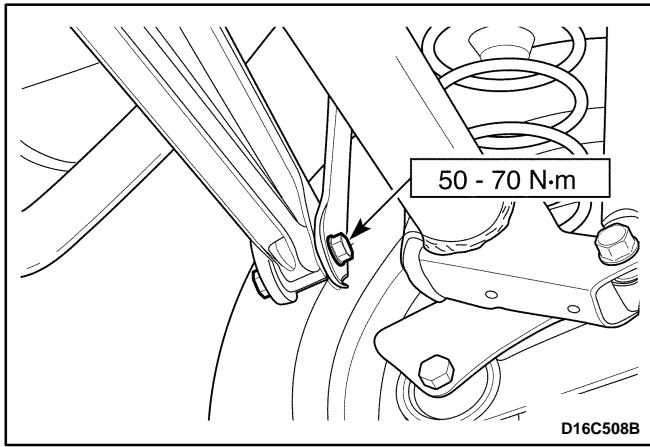


Installation Procedure

1. Install in the reverse order of removal.
2. Install the lateral rod-to-rear axle side nut.

Tighten

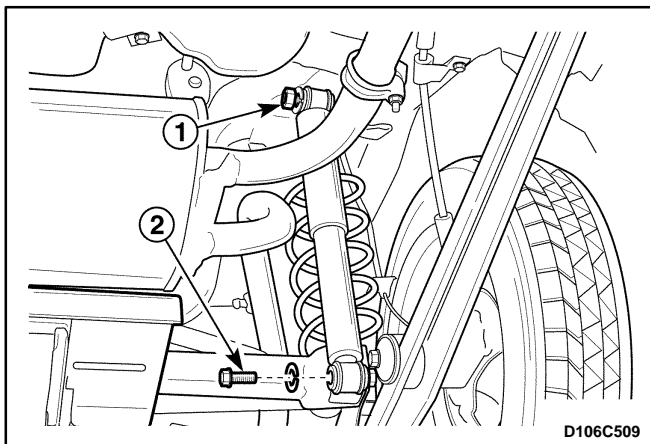
Tighten the lateral rod axle side nut to 35-55 N·m (25-41 lb-ft).



3. Install the lateral rod-to-body bracket bolt.

Tighten

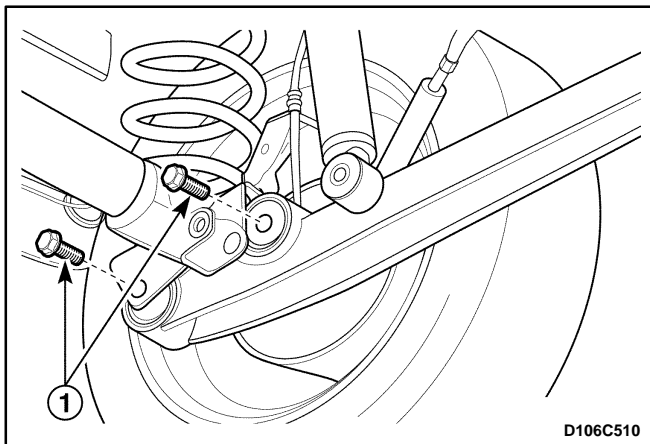
Tighten the lateral rod-to-body bracket bolt to 50-70 N•m (37-52 lb-ft).



TRAILING ARM

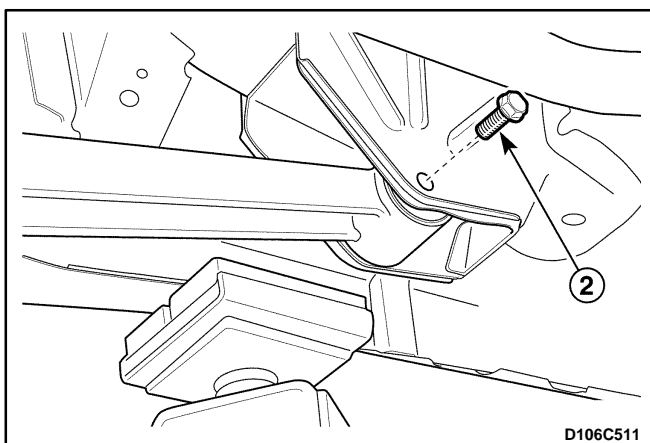
Removal Procedure

1. Raise and suitably support the vehicle.
2. Support the rear axle with adjustable jack stands.
3. Separate the rear shock absorber from the rear axle assembly.
 - Loosen the shock absorber-to-body bracket nut (1).
 - Remove the shock absorber-to-rear axle bolt (2).

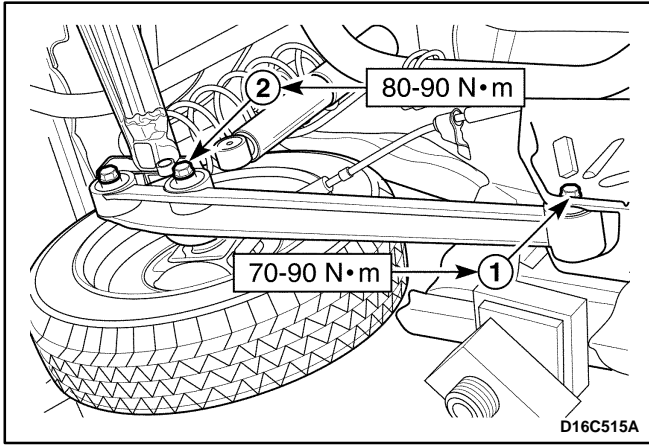


4. Remove the trailing arm.

- Remove the trailing arm-to-rear axle bolts (1).



- Remove the trailing arm-to-body bracket bolt (2).



Installation Procedure

1. Install the trailing arm.
 - Install the trailing arm-to-body bracket bolt (1).

Tighten

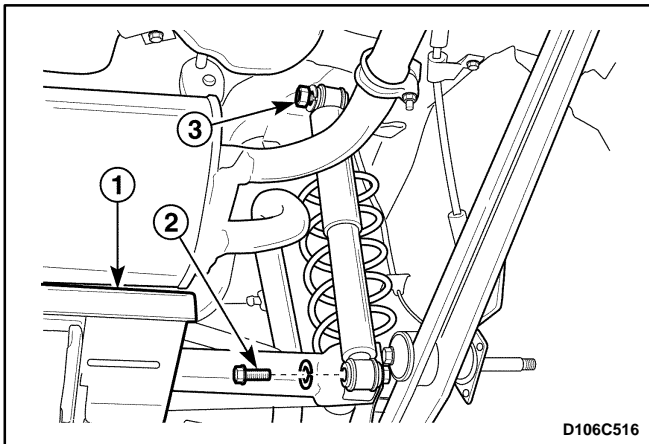
Tighten the trailing arm-to-body bracket bolt to 70-90 N·m (55-66 lb-ft).

- Install the trailing arm-to-rear axle bolts (2).

Tighten

Tighten the trailing arm-to-rear axle bolts to 80-90 N·m (59-66 lb-ft).

2. Install the rear shock absorber. Refer to "Shock Absorber" in this section.

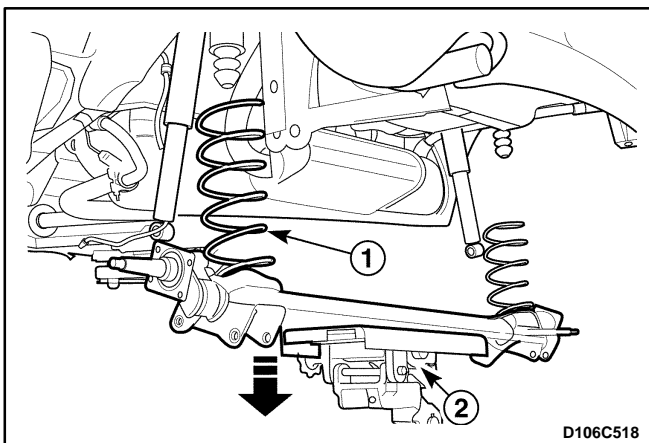
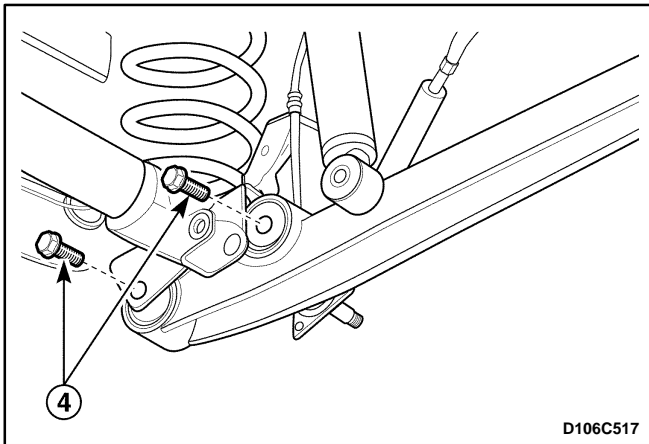


REAR AXLE ASSEMBLY (INCLUDING COIL SPRING)

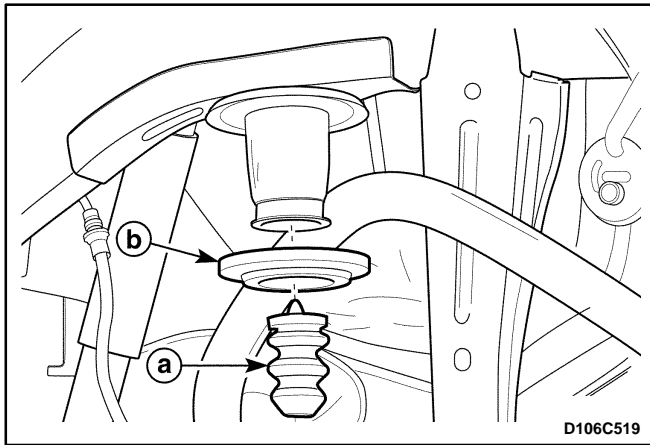
Removal Procedure

1. Remove the rear brake drum, shoe and brake plate. Refer to Section 4E, Rear Drum Brakes.
2. Remove the lateral rod. Refer to "Lateral Rod" in this section.
3. Disconnect the rear axle and the trailing arm.
 - Support the rear axle with adjustable jack stands (1).
 - Remove the shock absorber-to-rear axle bolt (2).
 - Loosen the shock absorber-to-body bracket nut (3).
 - Remove the trailing arm-to-rear axle bolt (4).

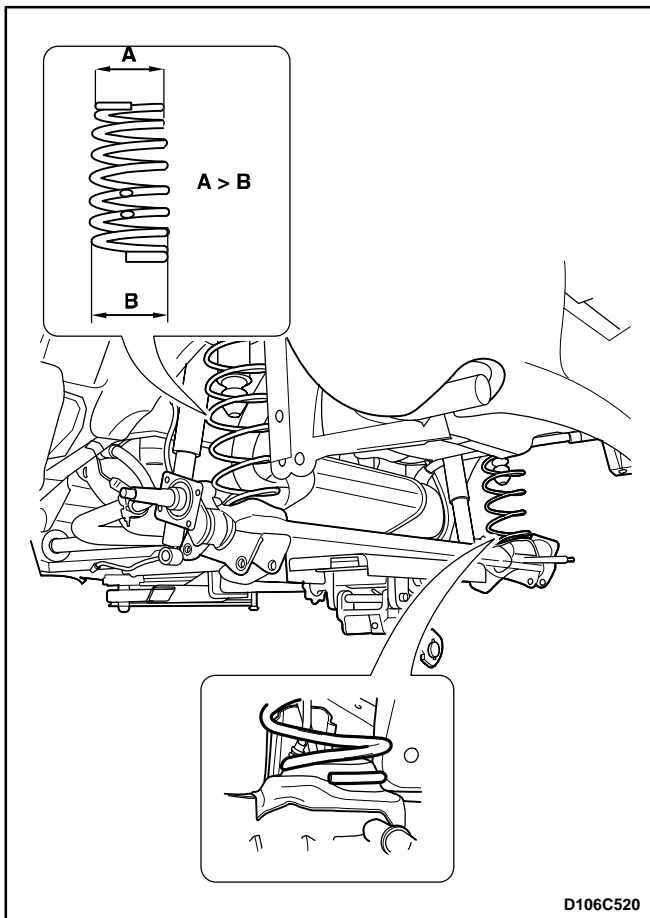
Caution: When disconnecting the rear axle and the trailing arm, coil spring tension may cause the adjustable jack stand to slip from the rear axle. This may result in personal injury. Carry out the operation with co-worker.



4. Remove the rear axle from the vehicle.
 - Remove the coil spring by lowering the jack stand slowly (1).
 - Lower the support jack and remove the rear axle (2).



5. Remove the rear bumper stopper and rear spring upper seat.
 - a. Rear bumper stopper.
 - b. Rear spring upper seat.

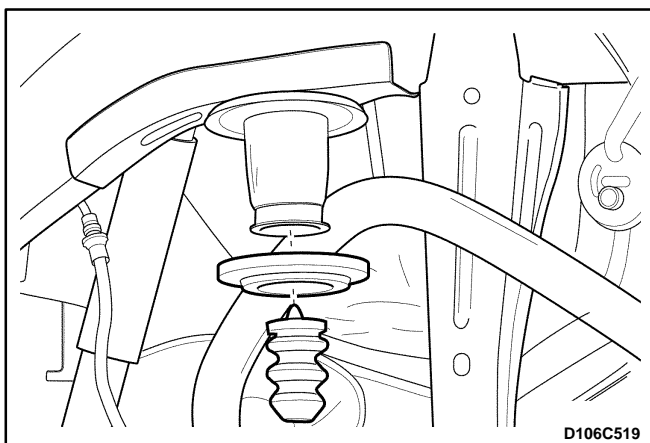


Installation Procedure

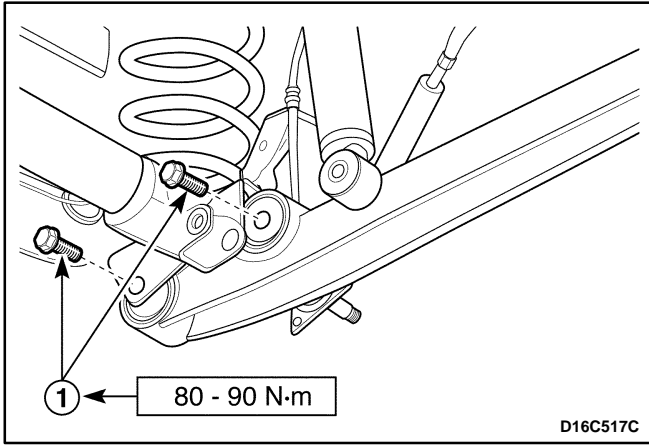
1. Install in the reverse order of removal.

Important: Make sure the spring diameter prior to installing the spring. Upper spring diameter is smaller than lower spring diameter.

Caution: Support the jack stand to the rear axle securely until installing the trailing arm bolts.



2. Install the rear bumper stopper and rear spring upper seat.

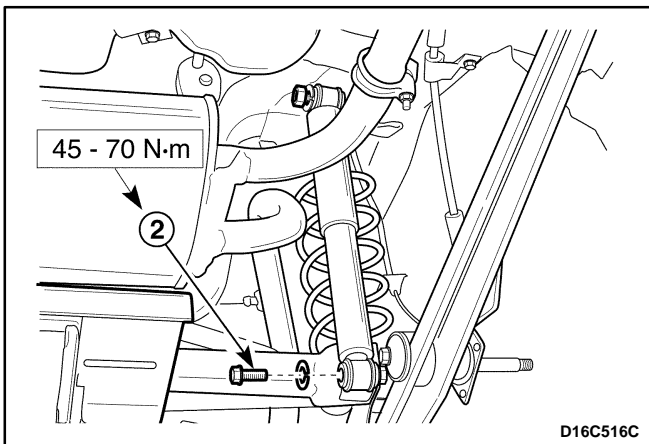


3. Install the trailing arm and the shock absorber to the rear axle.

- Install the trailing arm-to-rear axle bolt (1).

Tighten

Tighten the trailing arm-to-rear axle bolt to 80-90 N•m (59-66 lb-ft).



- Install the shock absorber-to-rear axle bolt (2).

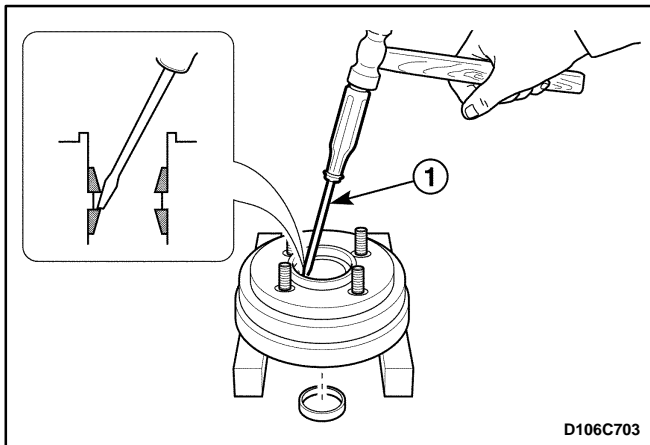
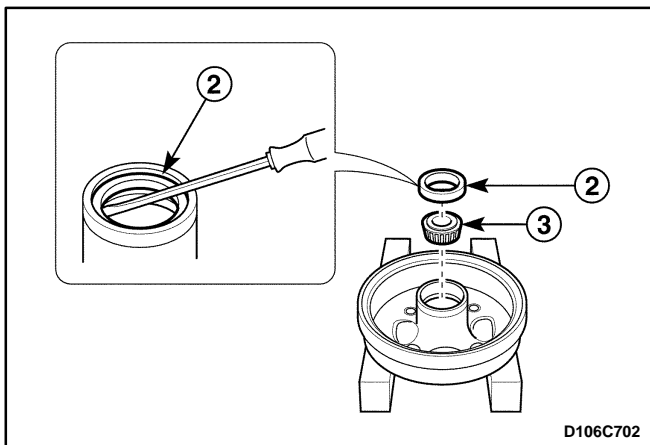
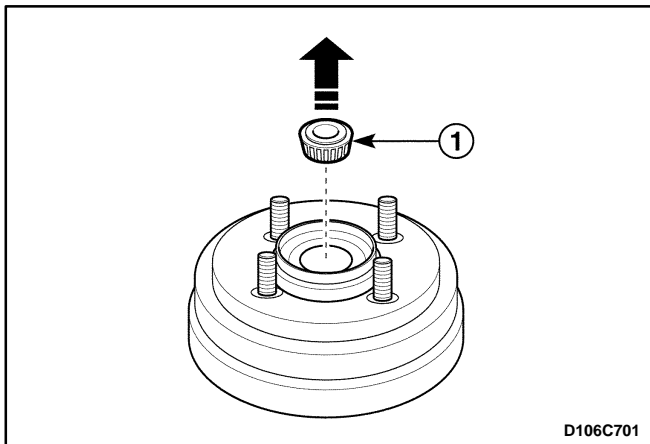
Tighten

Tighten the shock absorber-to-rear axle bolt to 45-70 N•m (33-52 lb-ft).

4. Install the lateral rod. Refer to "Lateral Rod" in this section.

5. Install the rear brake drum, shoe and brake plate. Refer to *Section 4E, Rear Drum Brake*.

UNIT REPAIR



HUB AND BEARING ASSEMBLY

Tools Required

DW 340-010 Front Wheel Hub Remover

DW 350-030 Rear Wheel Bearing Race Installer

Disassembly Procedure

1. Remove the rear brake drum. Refer to *Section 4E, Rear Drum Brakes*.

2. Remove the rear wheel bearing.

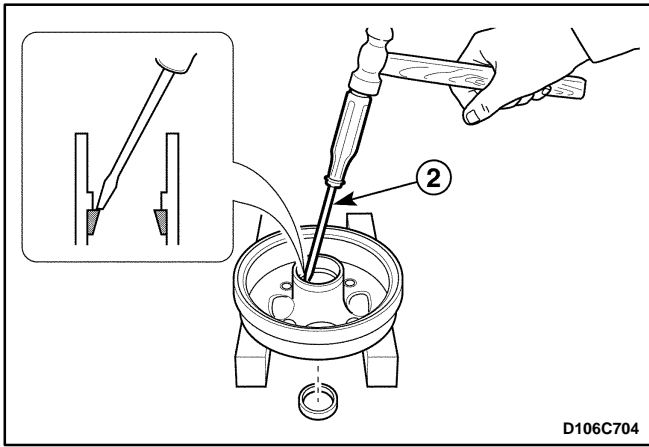
- Remove the outer tapered roller bearing (1).

- Remove the oil seal (2).

- Remove the inner tapered roller bearing (3).

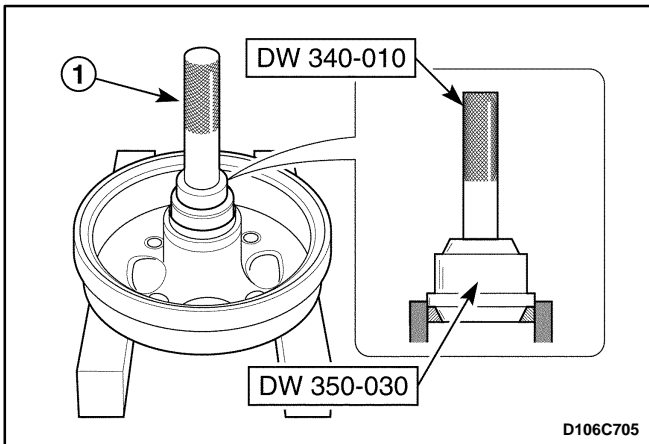
3. Remove the bearing races from the brake drum.

- Remove the inner bearing race (1).



- Remove the outer bearing race (2).

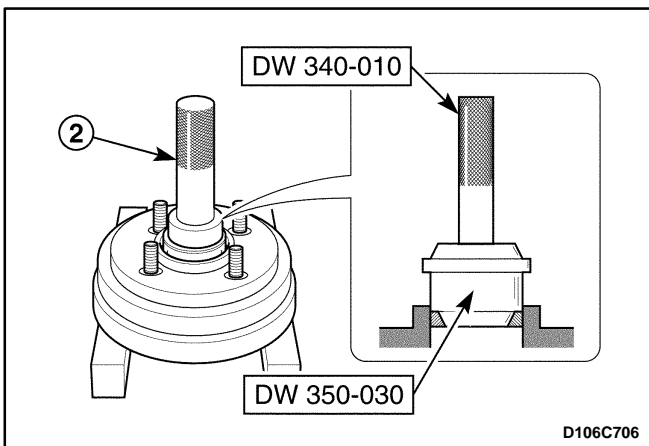
Important: Use only new bearing race.



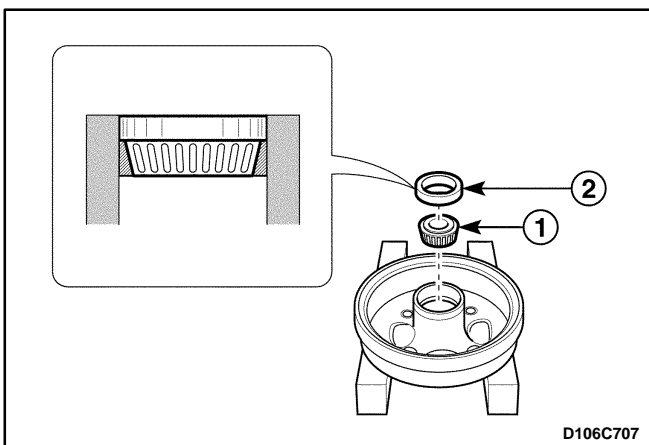
Assembly Procedure

1. Press the bearing race into the break drum using the front wheel hub remover DW 340-010 and the rear wheel bearing race installer DW 350-030.

- Press the inner bearing race (1).



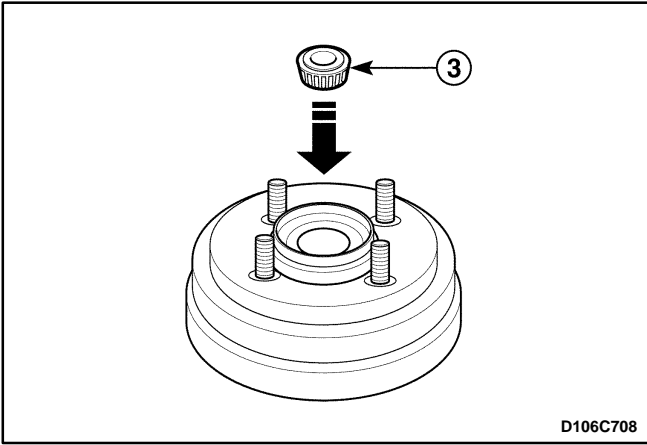
- Press the outer bearing race (2).



2. Install the wheel bearing and oil seal into the brake drum.

Important: Coat or fill all the hollow spaces of both wheel bearing, the ring seal lip and the brake drum with antifriction grease.

- Install the inner bearing (1).
- Install the oil seal (2).



- Install the outer bearing (3).
3. Install the brake drum. Refer to *Section 4E, Rear Drum Brakes*.
 4. Adjust the end play and free load of the bearing. Refer to "Check and Adjustments" in this section.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Application		Unit	Description
Suspension Type		-	Isolated Trailing Link
Shock Absorber	Maximum Length	mm (in.)	394.5 ± 3 (15.53 ± 0.12)
	Minimum Length	mm (in.)	257.5 ± 3 (10.14 ± 0.12)
	Stroke	mm (in.)	137 (5.39)
Rear Wheel Bearing	Clearance	mm (in.)	0
	No Load	N•m (lb-in.)	0.137 – 0.422 (0.9 – 3.7)
Coil Spring Height (No Load)		mm (in.)	291 (11.46)
Grease Type (Rear Wheel Bearing and Hub)		-	M-8143 ANTIF BRG GREASE


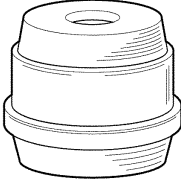
FASTENER TIGHTENING SPECIFICATIONS

Application	N•m	Lb-Ft	Lb-In
Shock Absorber-to-Body Bracket Nut	45 – 70	33 – 52	-
Shock Absorber-to-Rear Axle Bolt	45 – 70	33 – 52	-
Trailing Arm-to-Rear Axle Bolt	80 – 90	59 – 66	-
Trailing Arm-to-Body Bracket Bolt	70 – 90	55 – 66	-
Lateral Rod-to-Body Bracket Bolt	50 – 70	37 – 52	-
Lateral Rod-to-Rear Axle Nut	35 – 55	25 – 41	-
Rear Axle Castellated Nut*	-	-	-
ABS Rear Speed Sensor Retaining Bolt	9 – 13	-	80 – 115

* Rear Axle Castellated Nut : Refer to *Section 4E, Rear Drum Brakes*

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS TABLE

 <p>D16B101A</p>	<p>DW 340-010 Front Wheel Hub Remover</p>	 <p>D106C101</p>	<p>DW 350-030 Rear Wheel Bearing Race Installer</p>
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