
SECTION 2D

REAR SUSPENSION

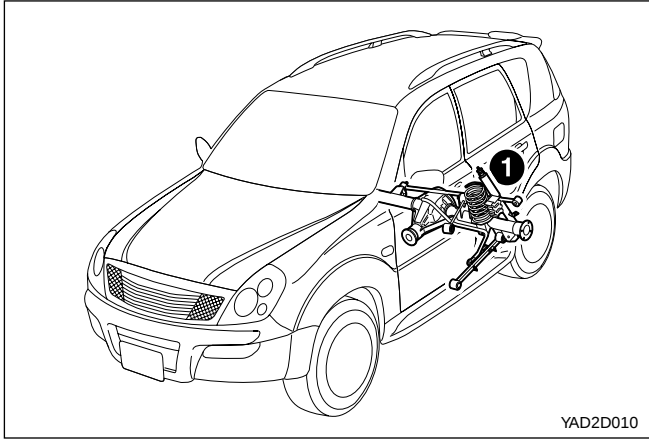
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DESCRIPTION AND OPERATION

REAR SUSPENSION

The rear suspension system is to keep the ride comfort or safety and this vehicle is applied to 5 link suspension system. This system consists of both coil spring, upper/lower arm, the lateral rod, stabilizer, connecting rod and bumper.



1. Stabilizer:

It enables to keep the balance on turning and to minimize the vehicle's slope when both right and left wheels move differently.

2. Lateral Rod:

It allows to control the load at the lateral direction.

3. Upper/Lower Arm:

It allows to control the load at the front/rear direction side.

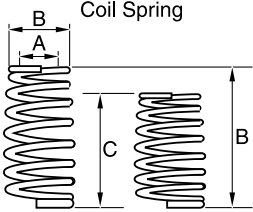
4. Shock Absorber:

It allows to absorb the vibration at the vertical direction in order to make ride comfort feel better and reduce the spring fatigue.

5. Coil Spring:

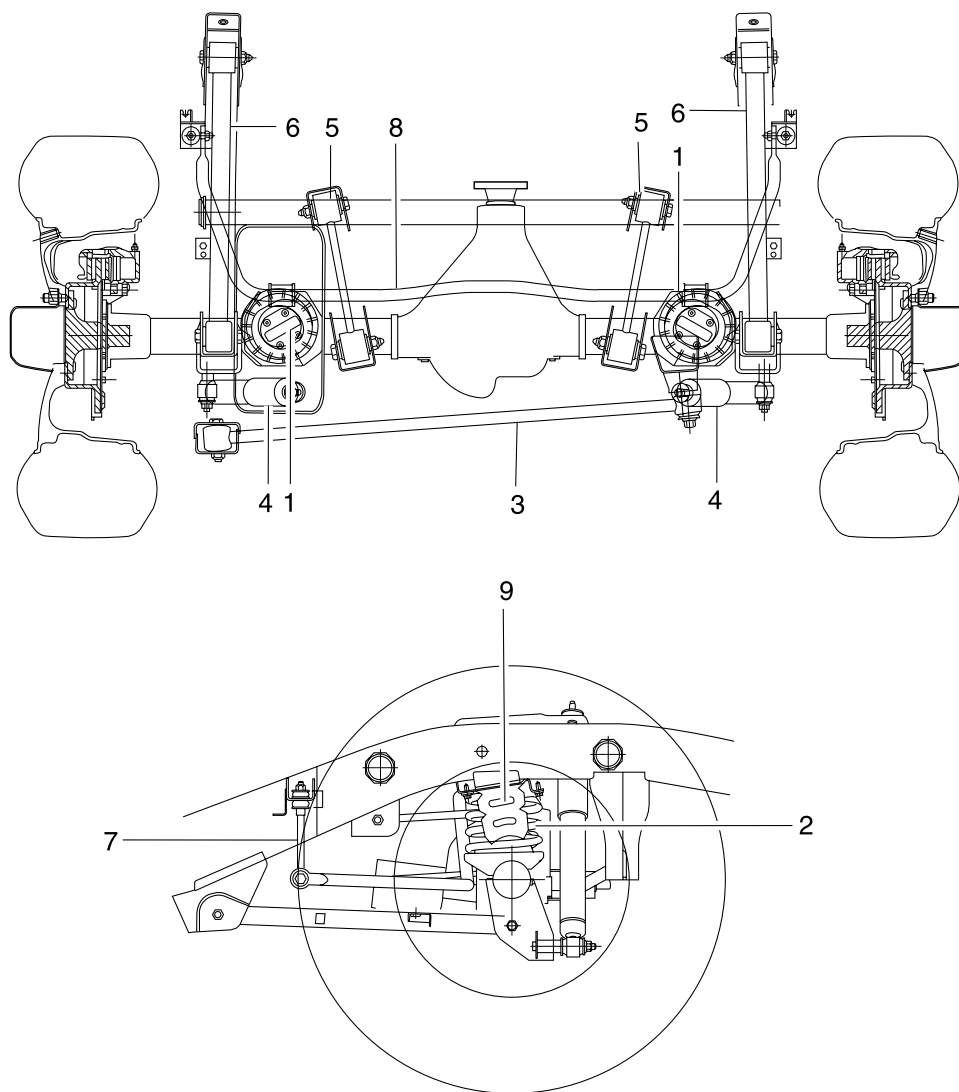
It is installed between the rear axle and body frame. This unit enables to release any shock or any vibration from tires in order to prevent its force from delivering to the body.

SPECIFICATIONS

Suspension Type	5 Links (Two Upper Arm, Two Lower Arm, One Lateral Rod)		
Spring Type	Coil Spring		
Stabilizer Type	Torsion Bar Type		
Shock Absorber	Type	Telescopic Double Tube Type	
	Max. Length	495 mm	
	Min. Length	308 mm	
 Coil Spring YAD2D020	Engine Type	GSL 3.2, DSL(A/T)	DSL(M/T)
	Coil O.D.	13.1 mm	13.0 mm
	Coil I.D(A)	Ø 114 mm	Ø114 mm
	Free-load Height(B)	405.7 mm	386.8 mm
	Compression Height(C)	260.0 mm	250.0 mm
	O.D(D)	Ø127.1 mm	Ø127.0 mm
	Constant	2.45 ± 5%	2.45 ± 5%

COMPONENT LOCATOR

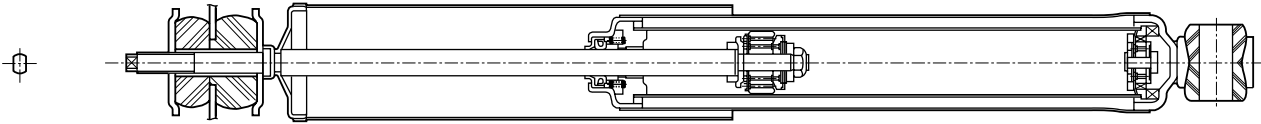
REAR SUSPENSION ASSEMBLY



YAD2D030

- | | |
|---------------------------|--------------------|
| 1 Coil Spring Seat(upper) | 6 Lower Arm (link) |
| 2 Coil Spring | 7 Stabilizer Link |
| 3 Lateral Rod | 8 Stabilizer |
| 4 Shock Absorber | 9 Pump Stopper |
| 5 Upper arm(link) | |

SHOCK ABSORBER

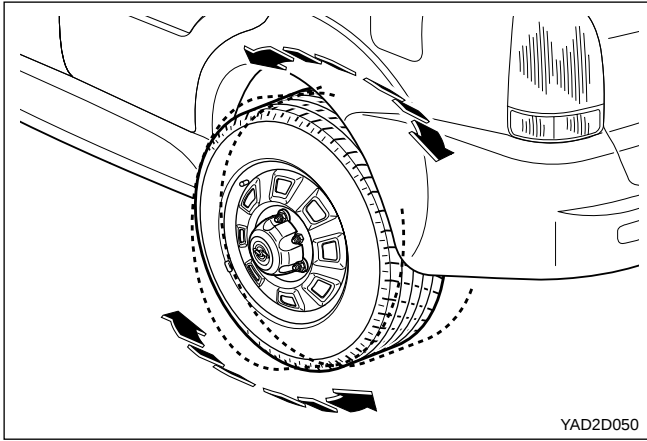


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DIAGNOSTIC INFORMATION AND PROCEDURES

REAR SUSPENSION

Symptom	Possible Cause	Action
Vehicle Rolling.	Broken Stabilizer Bar	Replace
	Faulty Shock Absorber	Replace
Abnormal Noises	Loosening Mountings	Re-Tighten
	Damaged or Worn Wheel Bearing	Replace
	Damaged Shock Absorber	Replace
	Damaged Tire	Replace
Poor Riding	Over Inflated Tire	Pressure Adjust
	Faulty Shock Absorber	Replace
	Loosened Wheel Nut	Tighten as specified torque
	Bent or Broken Coil Spring	Replace
	Damaged Tire	Replace
	Worn Bushing	Replace
Vehicle Pulls to Right or Left	Deformed Arm Assembly	Replace
	Worn Bushing	Replace
	Bent or Broken Coil Spring	Replace
Hard Steering	Excessive Resistance of Lower Arm Ball Joint	Replace
	Insufficient Tire Pressure	Replace
	Faulty Power Steering	Adjust
Steering Instability	Worn or Loosened Lower Arm Bushing	Re-Tighten or Replace
Vehicle Bottoming	Worn or Broken Coil Spring	Replace

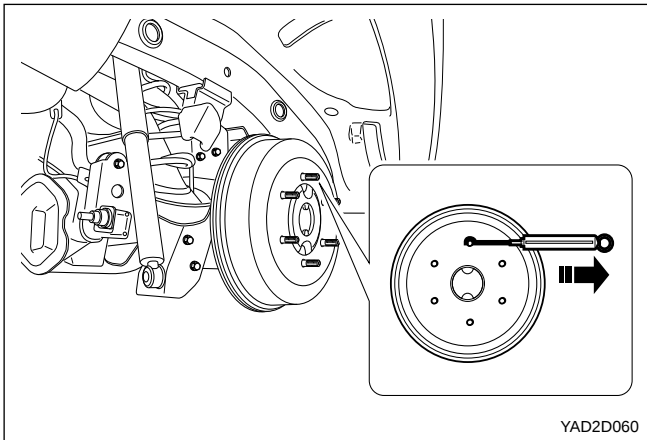


WHEEL BEARING END PLAY

1. Release the parking brake.
2. Raise rear tires.
3. Inspect the wheel bearing end play by shaking the tire up & down.

Rear wheel bearing end play	0 mm
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4. If the wheel bearing end play is excessive, retighten the castle nut.
5. If the wheel bearing end play continues to be excessive, replace the wheel bearing.



WHEEL BEARING FREE LOAD

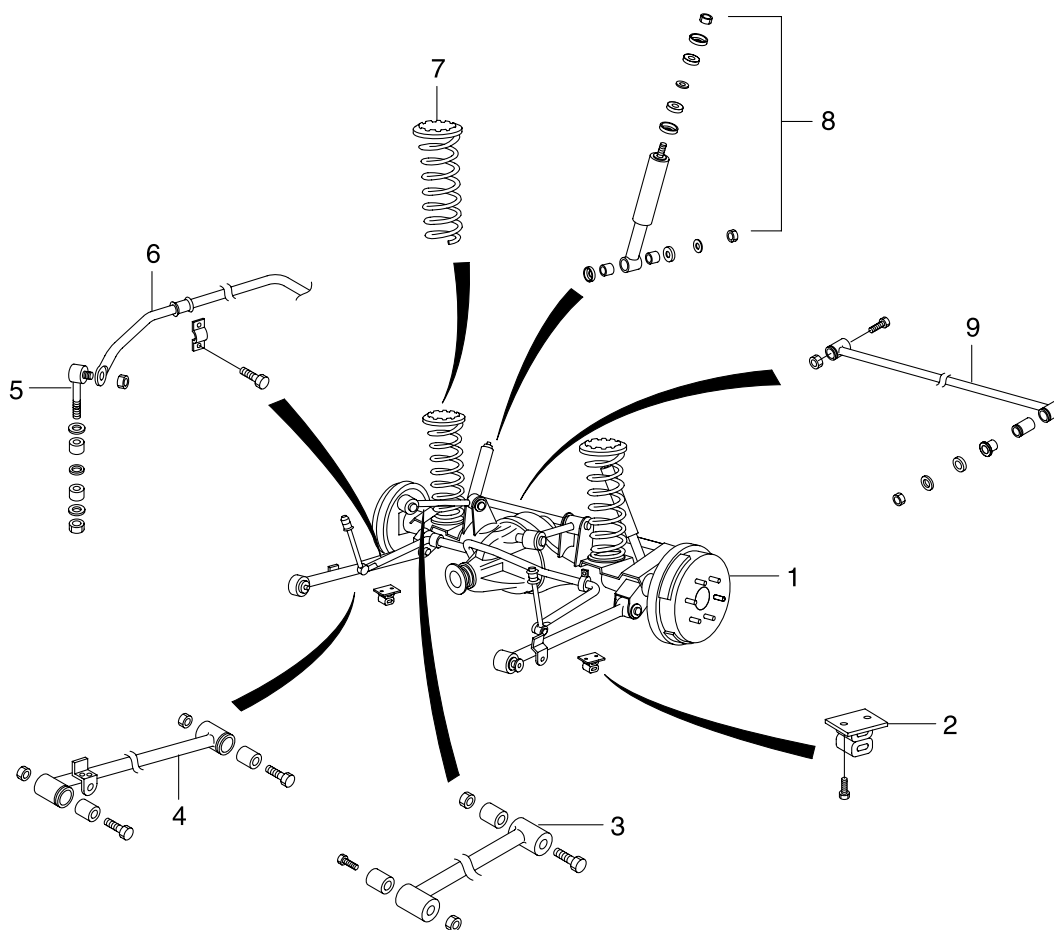
1. Release the parking brake.
2. Raise rear tires and rotate the tire repeatedly.
3. Remove the tire.
4. Hang the measuring tool to the hub bolt and measure the free load at the drum starts to rotate.
5. Check the free load of the rear wheel bearing within the specified value.

Specified free load	1.4 ~ 4.3 kg.cm
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6. Retighten the castle nut as specified torque when the measured value is not within the specified value.
7. Replace the wheel bearing as needed.

REPAIR INSTRUCTIONS

ON-VEHICLE SERVICE



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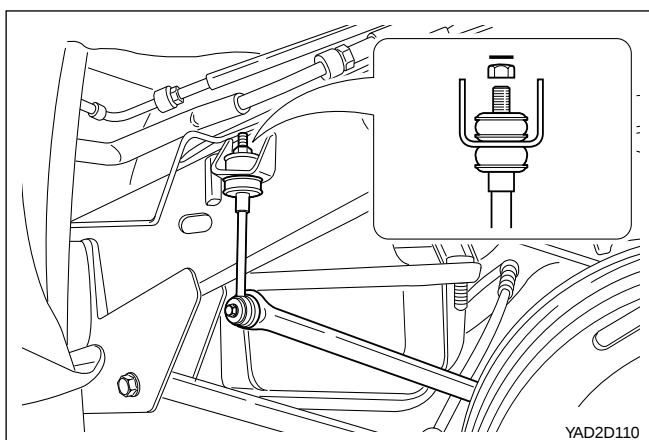
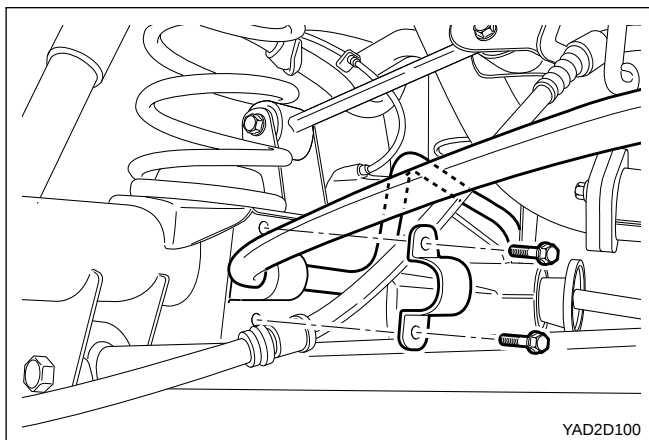
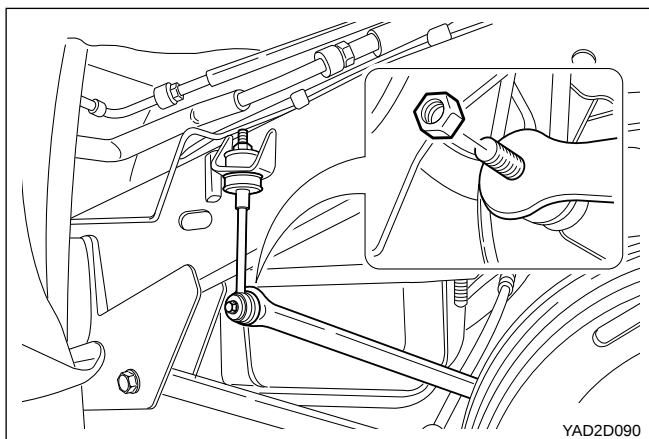
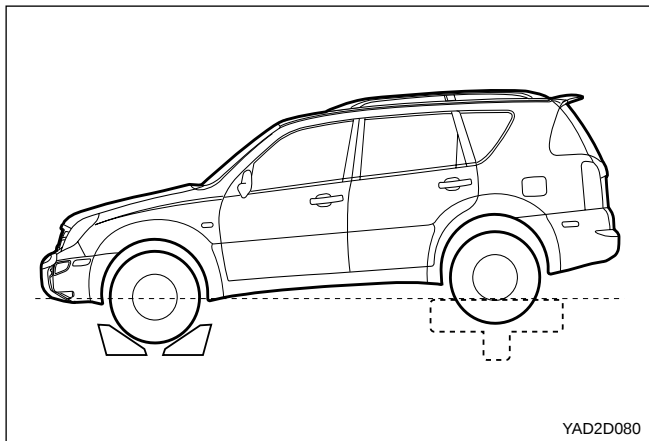
- 1 Rear Suspension Assembly
- 2 Rubber
- 3 Upper Arm
- 4 Lower Arm
- 5 Stabilizer Link

- 6 Stabilizer
- 7 Coil Spring
- 8 Shock Absorber
- 9 Lateral Rod

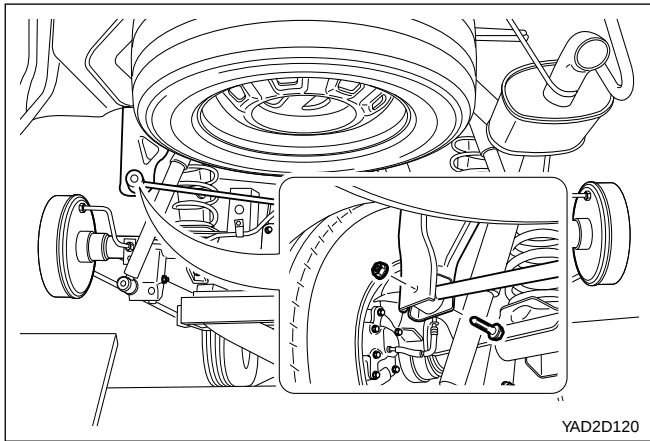
REAR SUSPENSION ASSEMBLY

Removal Procedure

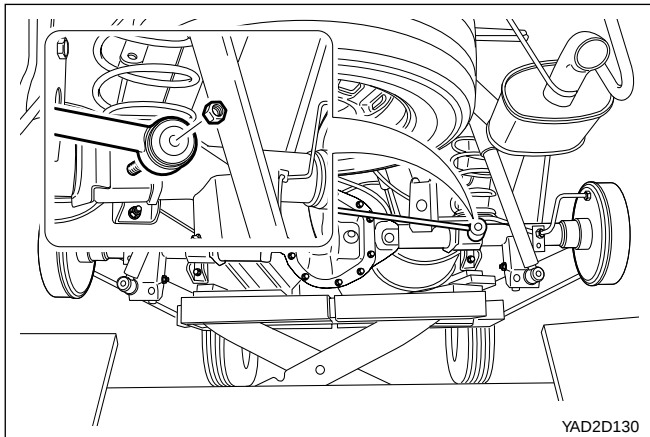
1. Support the rear axle housing bottom safely using the jack and fix the front wheel as shown.
2. Remove the mounting nut of the lower link connected the stabilizer bar and separate the stabilizer bar.
3. Remove the mounting cap bolt retaining both end of the stabilizer bar and remove the stabilizer bar, the mounting cap and the bushing.
4. Remove the upper mounting nut of the link with the stabilizer bar removed and remove the link.



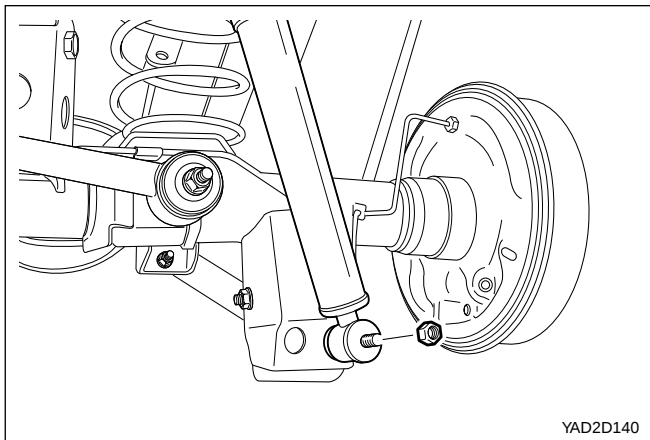
2D-10 REAR SUSPENSION



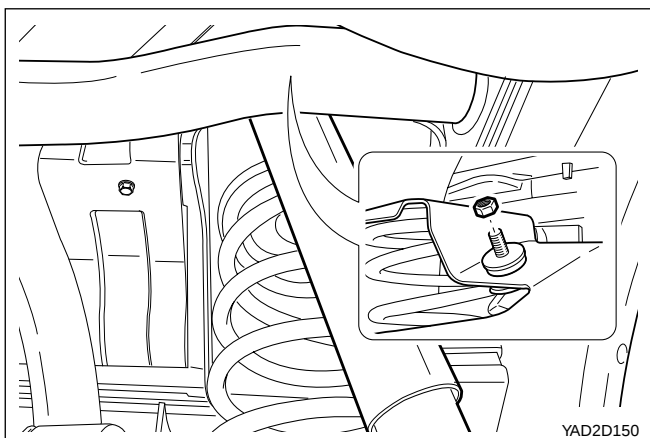
5. Remove the lateral rod mounting nut by retaining the frame.



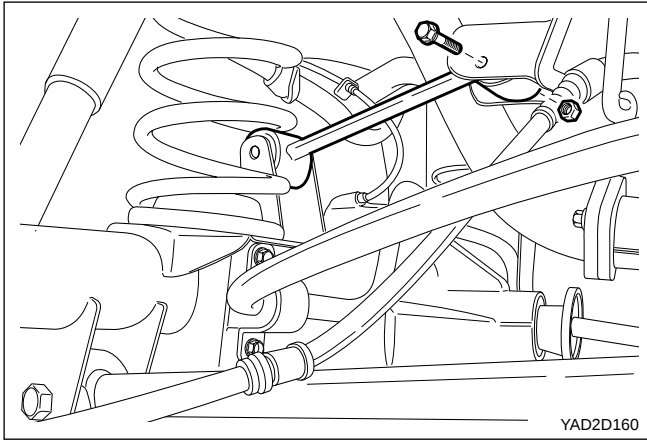
6. Remove the lateral rod mounting nut by retaining the axle and remove the lateral rod assembly.



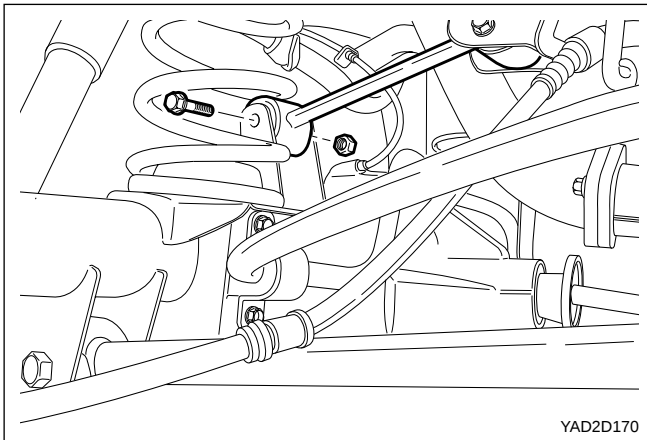
7. Remove the lower nut of the shock absorber.



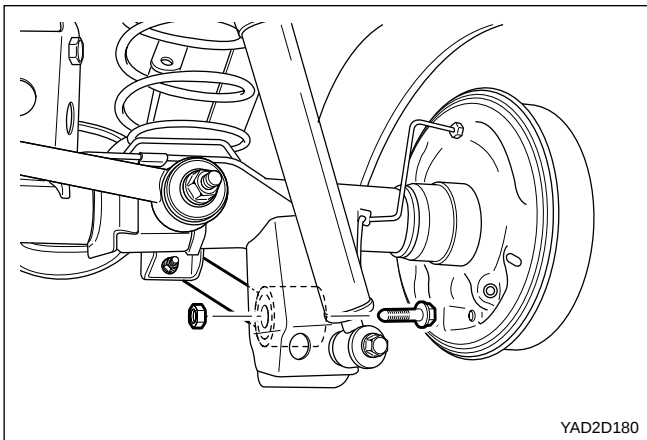
8. Remove the upper nut and remove the shock absorber



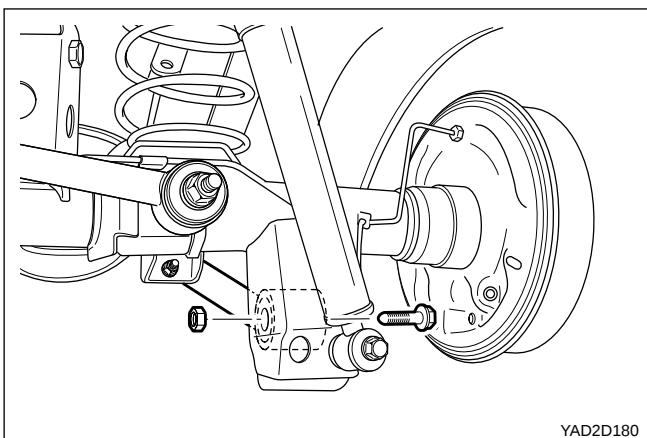
9. Remove the bolt and nut retaining the frame.



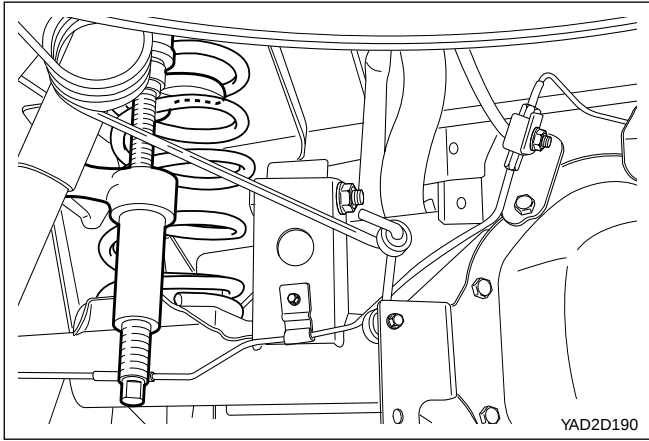
10. Remove the upper bolt and nut retaining the axle and remove the upper arm.



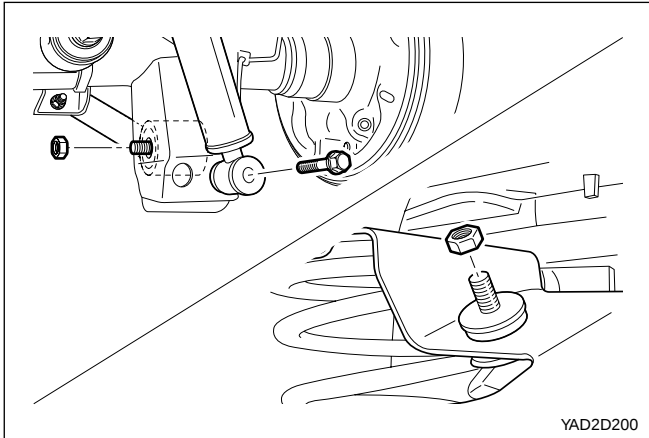
11. Remove the lower arm mounting the frame.



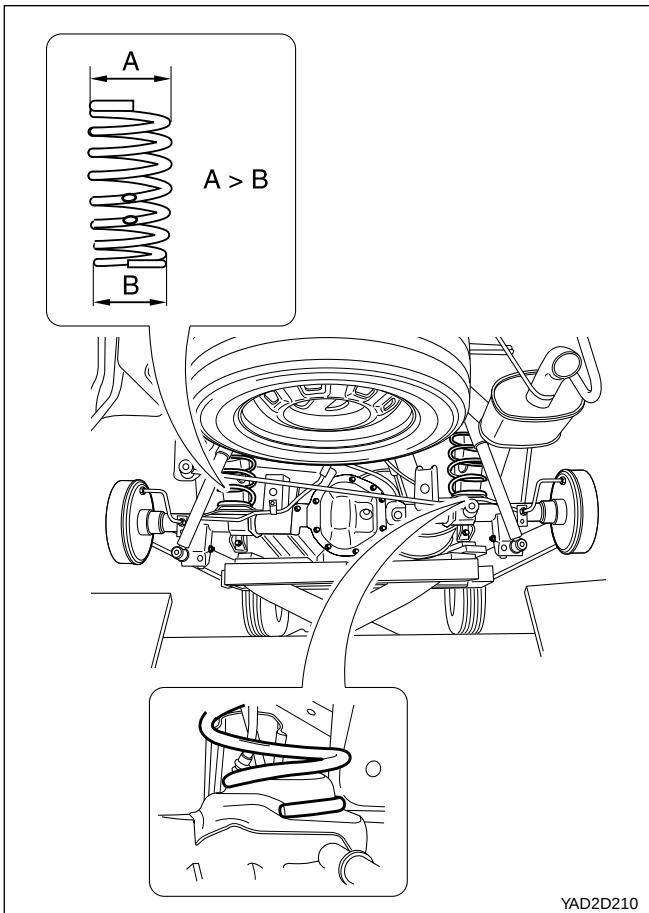
12. Remove the lower arm mounting bolt & nut retaining the axle and then remove the lower arm.



13. Loosen the brake & hose and remove the spring by pushing to incline the rear axle.



14. Remove the mounting nut of the shock absorber bottom and the upper arm. And then remove the spring.

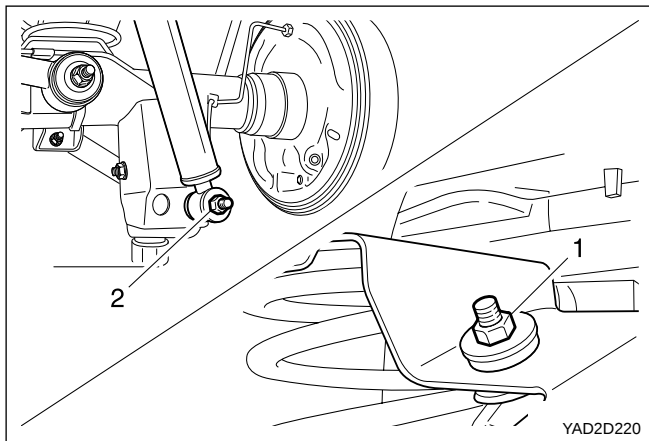


Installation Procedure

1. Installation should follow the removal procedure in the reverse order.
2. Be careful to the installation direction of the coil spring to install the spring correctly.

Notice:

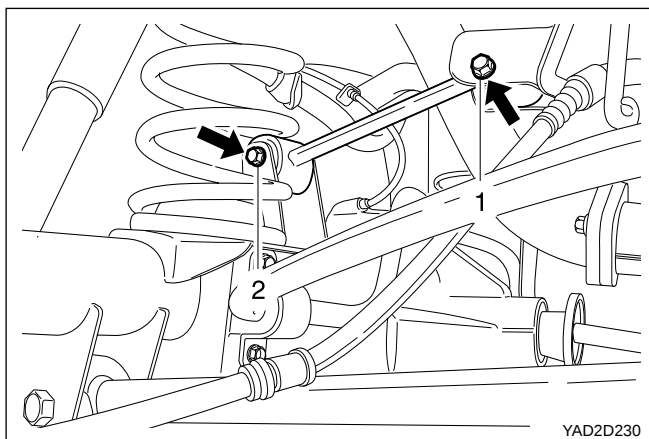
1. Be careful that the diameter of the upper coil spring is longer than that of the lower's.
2. Verify that the coil spring should be installed onto the spring seat of the axle and body (frame) correctly.



- Insert the upper side of the shock absorber to the frame and tighten nuts manually. And then install the lower side's to the axle and tighten nuts as specified torque.

Installation Notice

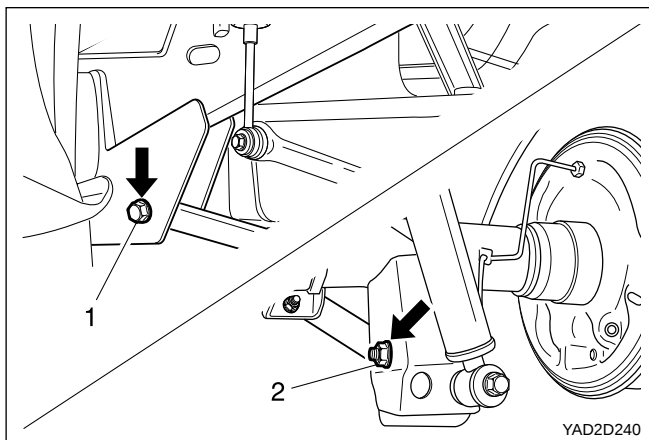
Upper side (1)	Tightening Torque : 30 - 45 N•m (22 - 33 lb-ft)
	Tightening Length : 6 - 9 mm
Lower side (2)	Tightening Torque : 50 - 65 N•m (37 - 48 lb-ft)



- Install the upper arm to the frame bracket and the axle. And then tighten bolts as specified torque.

Installation Notice

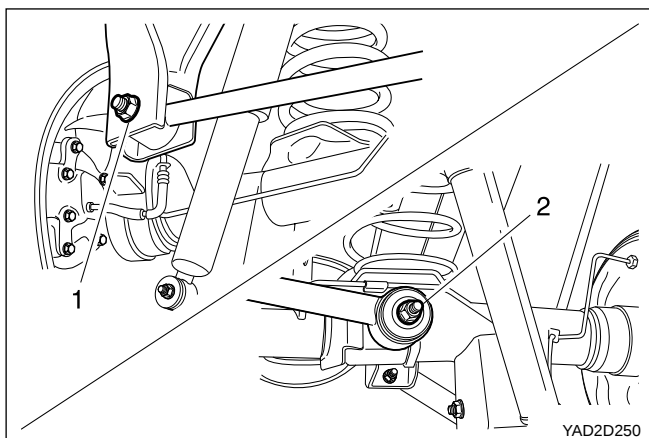
Tightening Torque(frame(1))	165 N•m
Tightening Torque(axle(2))	165 N•m



- Install the lower arm to the frame bracket and the axle. And then tighten bolts as specified torque.

Installation Notice

Tightening Torque(frame(1))	165 N•m
Tightening Torque(axle(2))	165 N•m

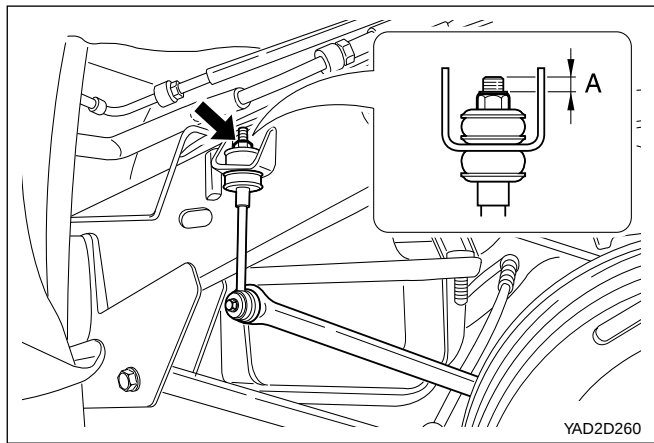


- Install the lateral rod to both the frame and axle side.

Installation Notice

Tightening Torque(frame(1))	165 N•m
Tightening Torque(axle(2))	165 N•m

2D-14 REAR SUSPENSION

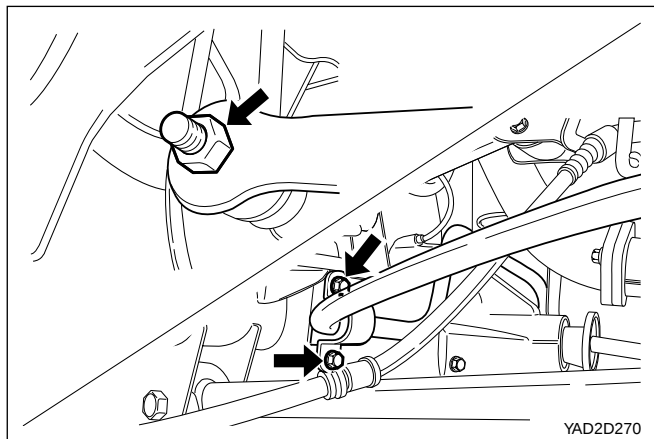


7. Install the connecting rod to the frame bracket.

Notice: Follow the tightening length for installing the nut.

Installation Notice

Tightening Torque	38 N•m (28 lb-ft)
Tightening Length(A)	7 - 12 mm



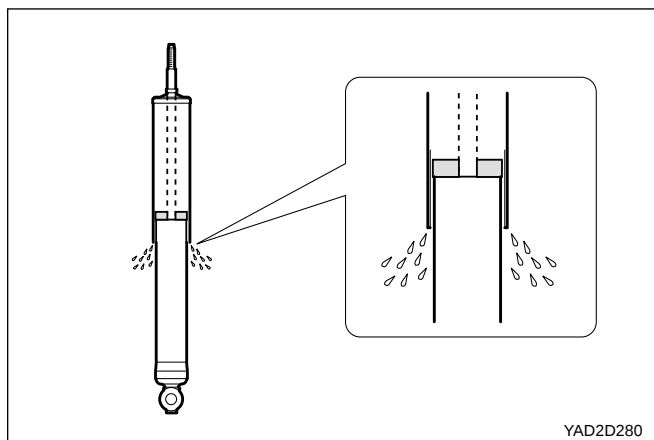
8. Install the stabilizer bar to the axle bracket with the mounting cap and connect the bar with the connecting rod. And then tighten the mounting cap bolt and nut as specified torque.

Installation Notice

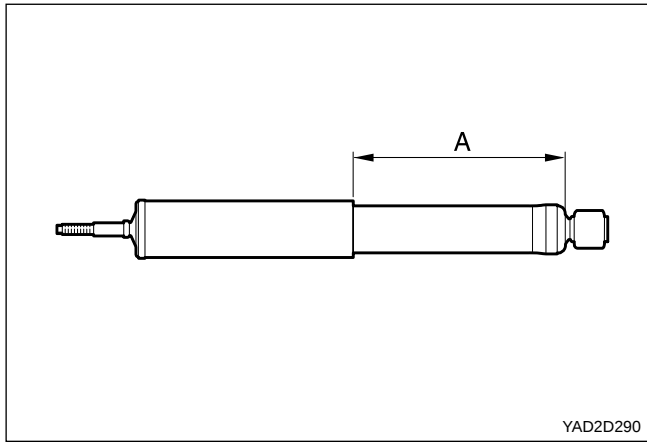
Tightening Torque	30 - 45 N•m (22 - 33 lb-ft)
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9. The rubbers installation should follow the connecting order of the link rubber(packing).

Notice: Always replace a new part when there is any wear or damage in the lever.



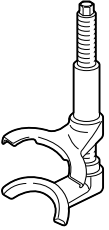
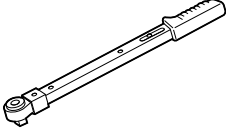
10. Check the shock absorber for any damage, oil leakage or abnormal noise.



Notice: For scrapping the gas shock absorber, drill the hole in the “A” section with the shock absorber full expansion and discharge the gas.

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS TABLE

 YAD2D300	661 589 12 33 00 Rear spring compressor	 YAD2D310	Torque Wrench
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