

SUSPENSION

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دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

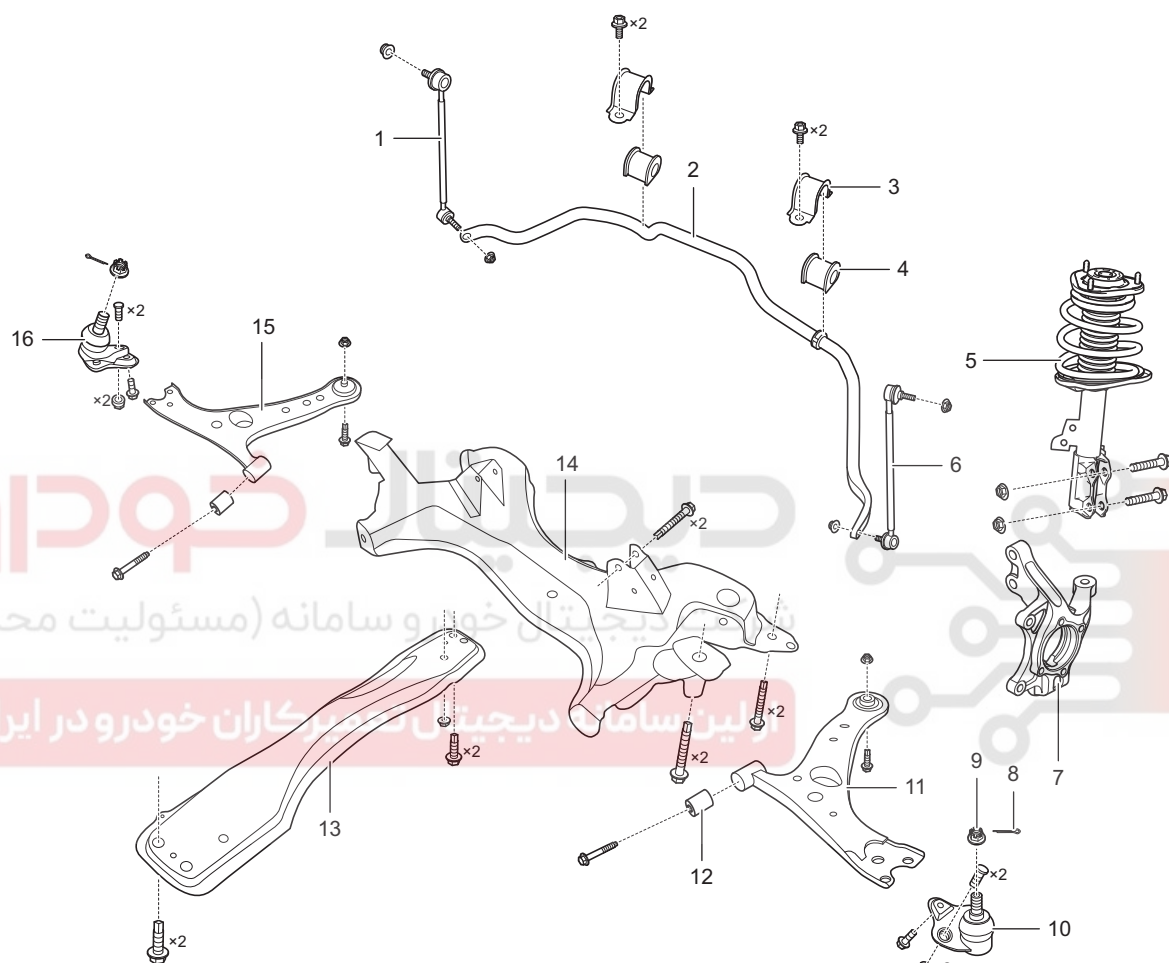


GENERAL INFORMATION

Description

Front Suspension (for 2.0L Model)

34



RT21230010

34 - SUSPENSION

1 - Front Right Link Assembly	2 - Front Stabilizer Bar
3 - Front Stabilizer Clamp	4 - Front Stabilizer Bar Rubber Support
5 - Front Shock Absorber Assembly	6 - Front Left Link Assembly
7 - Front Steering Knuckle	8 - Front Control Arm Ball Pin Assembly Lock Pin
9 - Front Control Arm Ball Pin Assembly Lock Nut	10 - Front Left Control Arm Ball Pin Assembly
11 - Front Left Control Arm Assembly	12 - Bush Rubber
13 - Side Rail Welding Assembly	14 - Front Sub Frame Welding Assembly
15 - Front Right Control Arm Assembly	16 - Front Right Control Arm Ball Pin Assembly

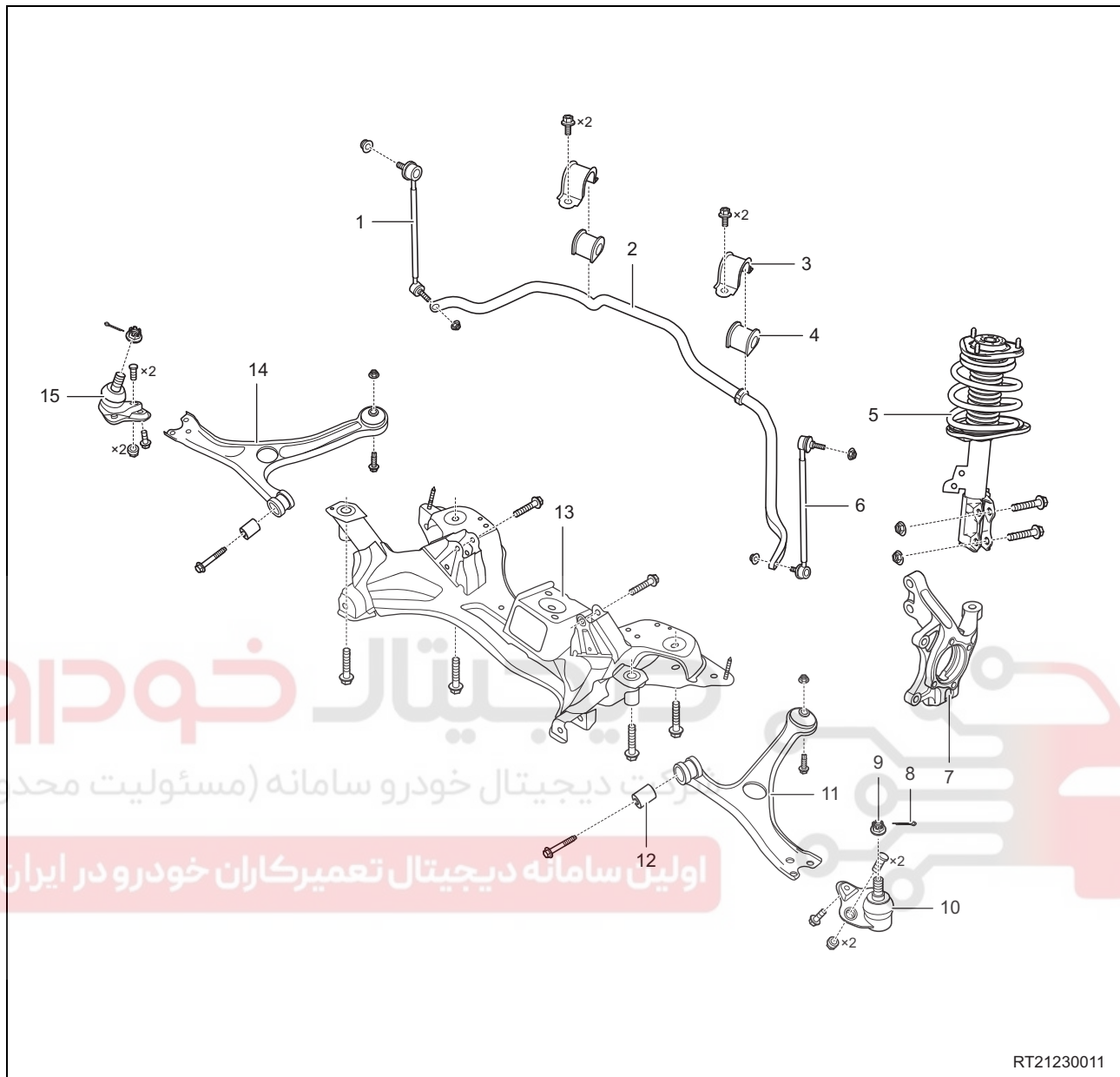
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Front Suspension (for 1.5L Model)



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RT21230011

1 - Front Right Link Assembly	2 - Front Stabilizer Bar
3 - Front Stabilizer Clamp	4 - Front Stabilizer Bar Rubber Support
5 - Front Shock Absorber Assembly	6 - Front Left Link Assembly
7 - Front Steering Knuckle	8 - Front Control Arm Ball Pin Assembly Lock Pin
9 - Front Control Arm Ball Pin Assembly Lock Nut	10 - Front Left Control Arm Ball Pin Assembly
11 - Front Left Control Arm Assembly	12 - Bush Rubber
13 - Front Sub Frame Welding Assembly	14 - Front Right Control Arm Assembly
15 - Front Right Control Arm Ball Pin Assembly	

34 - SUSPENSION

This model uses Macpherson independent suspension for front suspension, whose height is non-adjustable. It is equipped with cylindrical coil spring, double action telescopic shock absorber and lateral stabilizer. Front suspension has driving and steering functions. The upper end of suspension is connected to body, and the lower end is connected to front steering knuckle. Sub frame is connected to body with bolts, thus improving driving stability and safety.

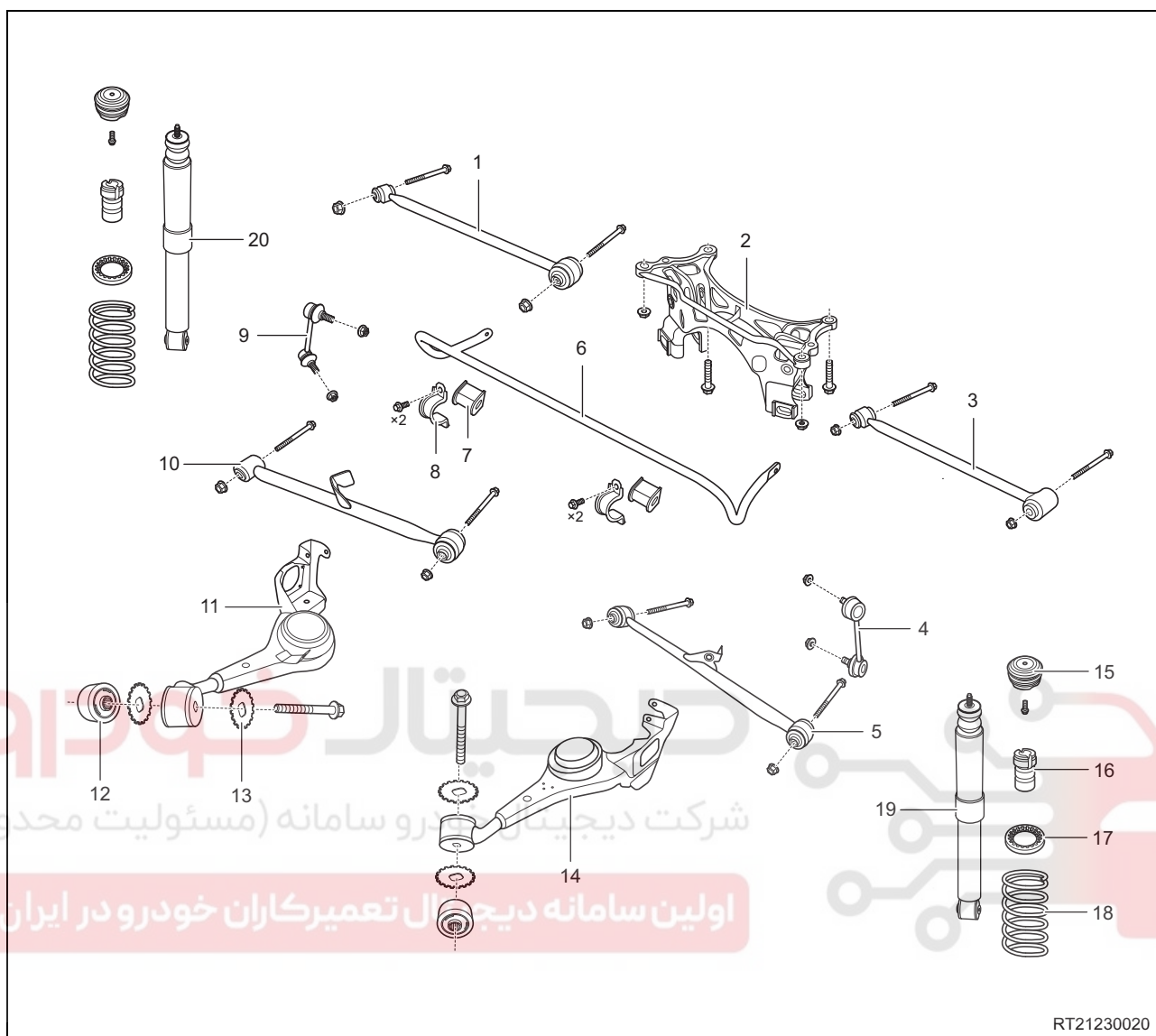
دیجیتال خودرو

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Rear Suspension



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1 - Rear Suspension Upper Right Swing Arm Assembly	2 - Rear Sub Frame Assembly
3 - Rear Suspension Upper Left Swing Arm Assembly	4 - Rear Left Stabilizer Link Assembly
5 - Rear Suspension Lower Left Swing Arm Assembly	6 - Rear Stabilizer Bar
7 - Rear Stabilizer Bar Rubber Support	8 - Rear Stabilizer Clamp
9 - Rear Right Stabilizer Link Assembly	10 - Rear Suspension Lower Right Swing Arm Assembly
11 - Rear Right Trailing Arm Assembly	12 - Bush Rubber
13 - Rubber Washer	14 - Rear Left Trailing Arm Assembly
15 - Rear Rubber Cushion Assembly	16 - Rear Buffer Block Assembly
17 - Rear Coil Spring Upper Cushion	18 - Rear Coil Spring
19 - Rear Left Shock Absorber Assembly	20 - Rear Right Shock Absorber Assembly

34 - SUSPENSION

This model uses trailing arm type independent suspension for rear suspension, whose height is non-adjustable. It is equipped with cylindrical coil spring, double action telescopic shock absorber and lateral stabilizer. This suspension features easy-removal and quick-installation, and driving stability and ride comfort have greatly improved.

Specifications

Torque Specifications

Description	Torque (N·m)
Coupling Nut Between Front Stabilizer Link Assembly and Front Shock Absorber Assembly	47 ± 4
Coupling Bolt Between Front Shock Absorber Assembly and Front Steering Knuckle Assembly	180 ± 10
Coupling Nut Between Front Shock Absorber Assembly and Front Steering Knuckle Assembly	180 ± 10
Coupling Nut Between Front Shock Absorber Assembly and Body	60 ± 6
Front Shock Absorber Assembly Locking Nut	82 ± 5
Coupling Nut Between Front Control Arm Assembly Ball Pin and Front Steering Knuckle Assembly	120 ± 12
Coupling Bolt Between Front Part of Front Control Arm Assembly and Front Sub Frame Welding Assembly	180 ± 10
Coupling Bolt Between Rear Part of Front Control Arm Assembly and Front Sub Frame Welding Assembly	180 ± 10
Coupling Nut Between Front Control Arm Ball Pin Assembly and Front Control Arm Assembly	150 ± 10
Coupling Bolt Between Front Control Arm Ball Pin Assembly and Front Control Arm Assembly	150 ± 10
Coupling Nut Between Front Stabilizer Bar Assembly and Front Stabilizer Link Assembly	47 ± 4
Coupling Bolt Between Side Rail Welding Assembly and Rear Mounting Cushion Assembly	70 ± 5
Coupling Nut Between Side Rail Welding Assembly and Rear Mounting Cushion Assembly	70 ± 5
Coupling Bolt Between Front Sub Frame Welding Assembly and Steering Gear Assembly	120 ± 10
Coupling Bolt Between Upper Part of Front Sub Frame Welding Assembly and Body	180 ± 10

Description	Torque (N·m)
Coupling Bolt Between Rear Part of Front Sub Frame Welding Assembly and Body	180 ± 10
Coupling Bolt Between Front Stabilizer Bar Assembly and Front Sub Frame Welding Assembly	25 ± 3
Coupling Bolt Between Lower Part of Rear Shock Absorber Assembly and Rear Trailing Arm Assembly	45 ± 5
Coupling Nut Between Upper Part of Rear Shock Absorber Assembly and Body	45 ± 5
Coupling Nut Between Rear Stabilizer Link Assembly and Rear Suspension Lower Swing Arm Assembly	45 ± 5
Coupling Bolt Between Rear Shock Absorber Assembly Fixing Bracket and Rear Trailing Arm Assembly	80 ± 8
Coupling Bolt Between Rear Suspension Lower Swing Arm Assembly and Rear Trailing Arm Assembly	120 ± 10
Coupling Nut Between Rear Suspension Lower Swing Arm Assembly and Rear Trailing Arm Assembly	120 ± 10
Coupling Bolt Between Rear Suspension Upper Swing Arm Assembly and Rear Trailing Arm Assembly	120 ± 10
Coupling Nut Between Rear Suspension Upper Swing Arm Assembly and Rear Trailing Arm Assembly	120 ± 10
Coupling Bolt Between Rear Rubber Cushion Assembly and Body	25 ± 5
Coupling Bolt Between Rear Suspension Upper Swing Arm Assembly and Rear Sub Frame Assembly	120 ± 10
Coupling Nut Between Rear Suspension Upper Swing Arm Assembly and Rear Sub Frame Assembly	120 ± 10
Coupling Bolt Between Rear Suspension Lower Swing Arm Assembly and Rear Sub Frame Assembly	120 ± 10
Coupling Nut Between Rear Suspension Lower Swing Arm Assembly and Rear Sub Frame Assembly	120 ± 10

34 - SUSPENSION

Description	Torque (N·m)
Coupling Bolt Between Rear Wheel Speed Sensor Fixing Bracket and Rear Trailing Arm Assembly	23 ± 2
Coupling Bolt Between Parking Brake Cable Fixing Bracket and Rear Trailing Arm Assembly	23 ± 2
Coupling Bolt Between Rear Brake Line Fixing Bracket and Rear Trailing Arm Assembly	23 ± 2
Coupling Bolt Between Rear Trailing Arm Assembly and Mounting Bracket	120 ± 10
Coupling Nut Between Rear Trailing Arm Assembly and Mounting Bracket	120 ± 10
Coupling Nut Between Rear Stabilizer Link Assembly and Rear Stabilizer Bar Assembly	45 ± 5
Rear Brake Line Fixing Plug	16 ± 2
Coupling Bolt Between Rear Stabilizer Bar Assembly and Body	25 ± 3
Steering Tie Rod Locking Nut	55 ± 5
Steering Wheel Locking Nut	35 ± 5

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دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

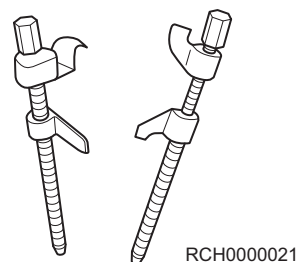
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Tools

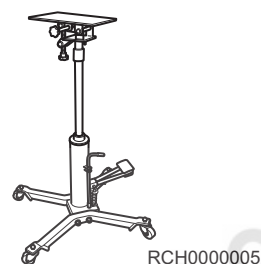
Special Tool

Spring Compressor

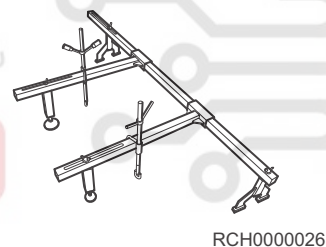


General Tools

Transmission Carrier



Engine Equalizer



DIAGNOSIS & TESTING

Problem Symptoms Table

HINT:

Use the table below to help determine the cause of the problem symptoms. Check each suspected area in sequence. Repair or replace the faulty components, or adjust as necessary.

Front Suspension

Symptom	Suspected Area	See page
Vehicle pulls	Front tire (worn or improperly inflated)	35-7
	Front wheel alignment (incorrect)	34-52
	Control arm ball pin assembly (loose)	34-24
	Steering tie rod (loose or worn)	40-21
	Front hub bearing (excessively worn)	33-10
	Front suspension components (excessively worn or deformed)	34-14
Droop	Vehicle (overloaded)	-
	Front coil spring (too soft)	34-17
	Front shock absorber assembly (worn or damaged)	34-14
	Front suspension components (excessively worn or deformed)	34-14
Sways/pitches	Front tire (worn or improperly inflated)	35-7
	Front stabilizer bar assembly (bent or broken)	34-26
	Front shock absorber assembly (worn or damaged)	34-14
Wheel shimmy	Front tire (worn or improperly inflated)	35-7
	Front wheel (out of balance)	35-9
	Front shock absorber assembly (worn or damaged)	34-14
	Front wheel alignment (incorrect)	34-52
	Control arm ball pin assembly (loose)	34-24
	Front hub bearing (excessively worn)	33-10
	Steering gear (misaligned or damaged)	40-23
Abnormal tire wear	Front tire (improperly inflated)	35-7
	Front wheel alignment (incorrect)	34-52
	Front shock absorber assembly (worn or deformed)	34-14
	Front suspension components (worn or deformed)	34-14

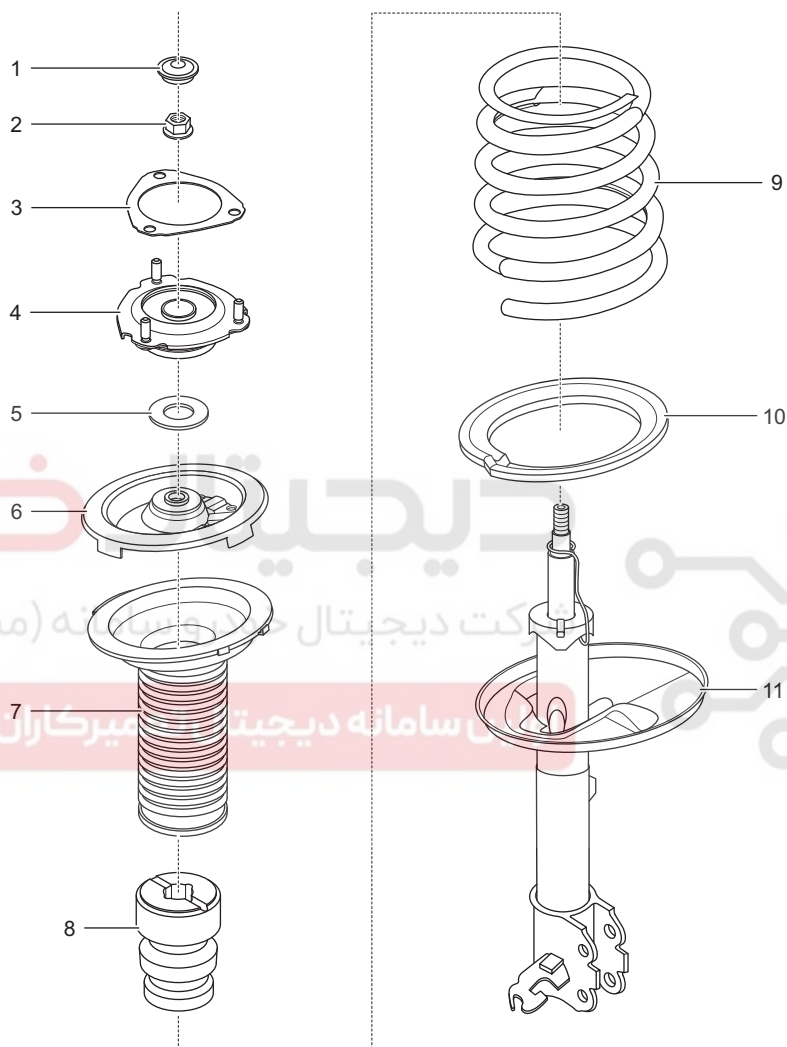
Rear Suspension

Symptom	Suspected Area	See page
Vehicle pulls	Rear tire (worn or improperly inflated)	35-7
	Rear wheel alignment (incorrect)	34-52
	Rear hub bearing (excessively worn)	33-22
	Rear suspension components (worn or deformed)	34-34
Droop	Vehicle (overloaded)	-
	Rear coil spring (too soft)	34-39
	Rear shock absorber assembly (worn or damaged)	34-34
	Rear suspension components (excessively worn or deformed)	34-34
Sways/pitches	Rear tire (worn or improperly inflated)	35-7
	Rear stabilizer bar (bent or broken)	34-48
	Rear shock absorber assembly (worn or deformed)	34-34
Wheel shimmy	Rear tire (worn or improperly inflated)	35-7
	Rear wheel (out of balance)	35-9
	Rear shock absorber assembly (worn or damaged)	34-34
	Rear wheel alignment (incorrect)	34-52
	Rear hub bearing (worn)	33-22
Abnormal tire wear	Rear tire (improperly inflated)	35-7
	Rear wheel alignment (incorrect)	34-52
	Rear shock absorber assembly (worn or deformed)	34-34
	Rear suspension components (worn or deformed)	34-34

ON-VEHICLE SERVICE

Front Shock Absorber Assembly

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RT21230030

1 - Front Shock Absorber Upper Cover	2 - Locking Nut
3 - Front Shock Absorber Cushion	4 - Connecting Bracket Assembly
5 - Bearing Washer	6 - Front Spring Upper Tray
7 - Dust Boot	8 - Front Buffer Block
9 - Front Coil Spring	10 - Front Spring Lower Cushion
11 - Front Shock Absorber Assembly Strut	

On-vehicle Inspection

1. Check the front shock absorber assembly.
 - a. Park vehicle on level ground, and bounce the vehicle up and down, then check if vehicle shakes up and down when body bounds. If vehicle shakes up and down consecutively, shock absorber assembly may be damaged and should be replaced.
2. Check the front shock absorber assembly for leakage.
 - a. As shock absorber assembly operates frequently while driving vehicle, shock absorber fluid temperature rises and oil gas is formed and adheres to dust boot. This is a normal phenomenon, and it is not necessary to replace the shock absorber assembly.
 - b. Shock absorber is designed with a thin layer of oil film on surface of piston rod. While the shock absorber is being compressed, the oil film will be scraped off by dust plate on shock absorber oil seal and a small amount of oil will remain on the upper part of oil seal. Due to high oil permeability, oil deposited on the upper part of oil seal spreads slowly from the upper part of shock absorber to lower part of shock absorber, thus forming a thin coat of oil film. When any of following conditions occurs:
 - Oil film is between dust boot and spring seat;
 - Oil traces in circumferential direction are even.
 - For above conditions, oil traces are formed through volatilization, so we can judge it as minor leaks. This is a normal phenomenon, and it is not necessary to replace the shock absorber assembly.
 - c. If following conditions occur:
 - Oil traces in circumferential direction are uneven;
 - Oil traces reach lower connecting positions.
 - Above conditions indicate that there may be leakage in shock absorber assembly, and it is necessary to replace the shock absorber assembly.
 - d. If it is difficult to accurately judge shock absorber assembly for leakage from appearance. Perform road test after wiping off oil on the surface of malfunctioning shock absorber. Under normal road conditions, drive vehicle for 5 to 10 minutes and perform inspection. If there are oil traces at the shock absorber assembly surface, it indicates oil leakage, and it is necessary to replace the shock absorber assembly.

Removal

⚠ WARNING

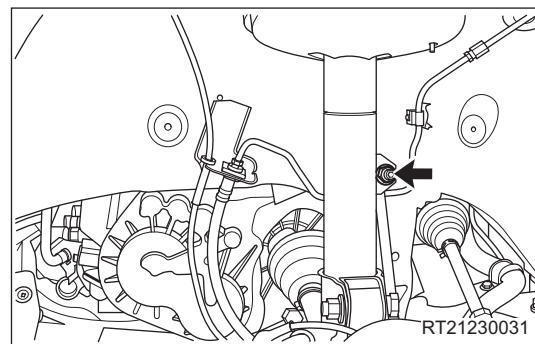
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts and guide parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.
- Operate carefully when removing and installing coil spring, preventing spring from jumping out and causing personal injury.

HINT:

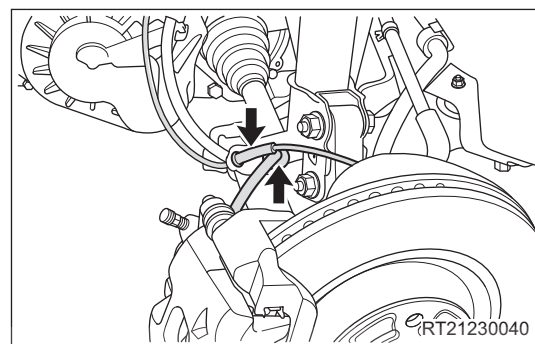
- Use the same procedures for the right side and left side.
 - Procedures listed below are for the left side.
1. Remove the front left wheel ([See page 35-9](#)).
 2. Remove the front left shock absorber assembly.

34 - SUSPENSION

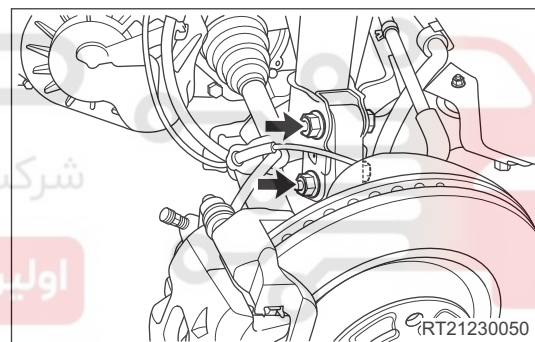
- a. Remove the coupling nut (arrow) between front left stabilizer link assembly and front left shock absorber assembly.
(Tightening torque: 47 ± 4 N·m)



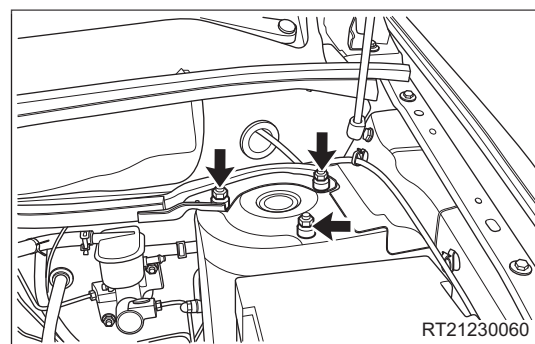
- b. Disengage the front left wheel speed sensor wire harness and front left brake hose assembly (arrow) from the front left shock absorber assembly.



- c. Remove 2 coupling bolts and nuts (arrow) between front left shock absorber assembly and front left steering knuckle assembly.
(Tightening torque: 180 ± 10 N·m)



- d. Remove 3 coupling nuts (arrow) between front left shock absorber assembly and body.
(Tightening torque: 60 ± 6 N·m)



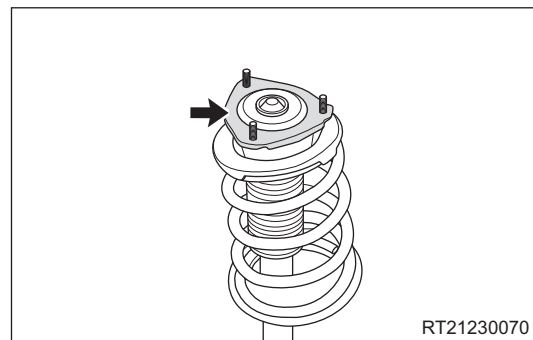
- e. Remove the front left shock absorber assembly with front coil spring.

Disassembly

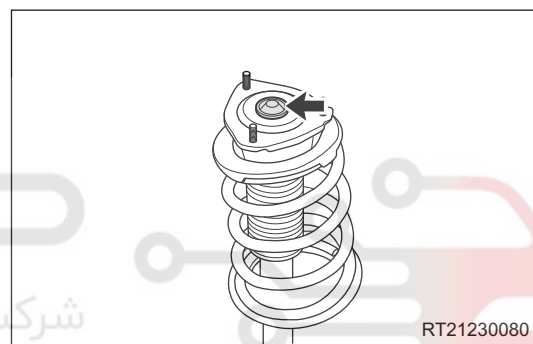
HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

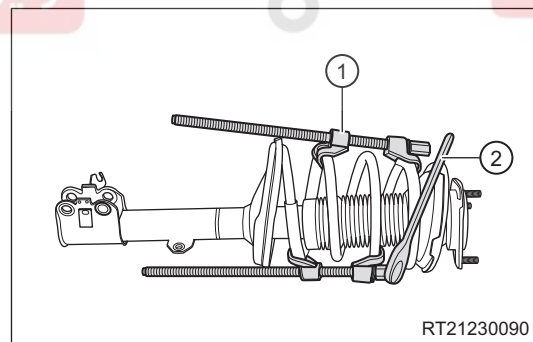
1. Remove the front shock absorber cushion.
 - a. Remove the front cushion (arrow) from front left shock absorber assembly.



2. Remove the front shock absorber upper cover.
 - a. Remove the front shock absorber upper cover (arrow) from front left shock absorber assembly.



3. Remove the locking nut from front shock absorber assembly.
 - a. Install the spring compressor (1), and tighten the end lever of spring compressor with a wrench (2) to compress the front coil spring.

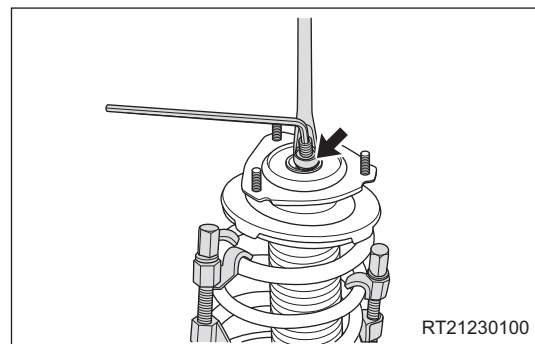


⚠ WARNING

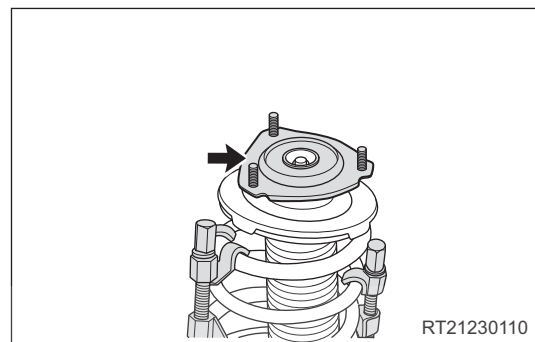
- When removing front coil spring, compress spring until locking nut can be rotated. DO NOT compress the coil spring more than necessary, avoid damaging the spring and personal injury.

34 - SUSPENSION

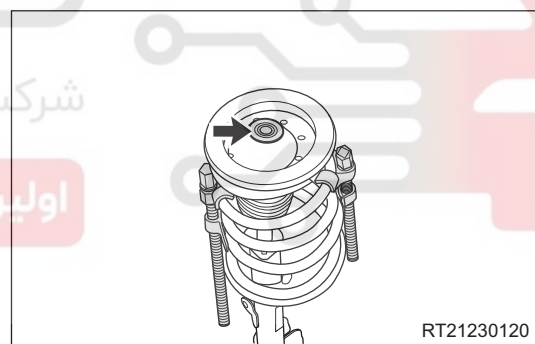
- b. Hold the end of front left shock absorber assembly lever with an inner hexagon wrench, and then remove the locking nut (arrow) from front left shock absorber assembly with a fixing wrench.
(Tightening torque: $82 \pm 5 \text{ N}\cdot\text{m}$)



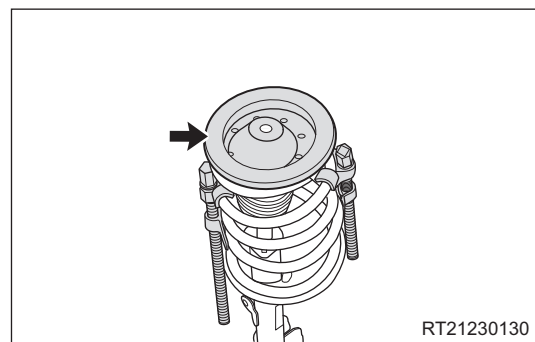
4. Remove the connecting bracket assembly.
a. Remove the connecting bracket assembly (arrow) from upper part of front left shock absorber assembly.



5. Remove the bearing washer.
a. Remove the bearing washer (arrow) from upper part of front left shock absorber assembly.

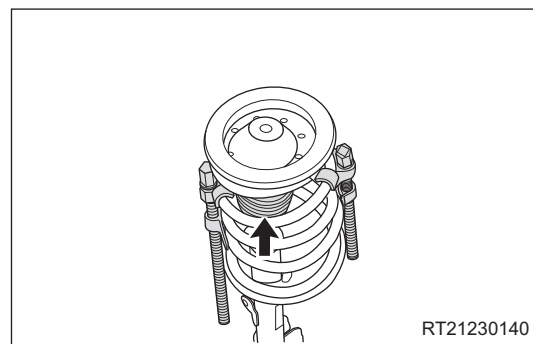


6. Remove the front spring upper tray.
a. Remove the front spring upper tray (arrow) from upper part of front left shock absorber assembly.



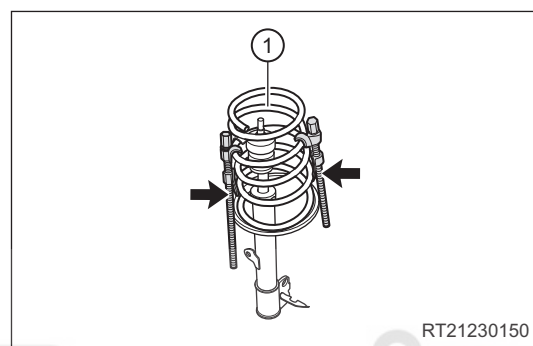
7. Remove the dust boot.

- a. Remove the dust boot (arrow) from upper part of front left shock absorber assembly.



8. Remove the front coil spring.

- a. Remove the front left coil spring (1) with spring compressor (arrow) from front left shock absorber assembly.

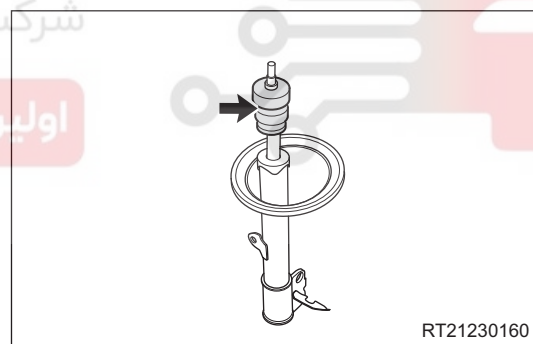


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- b. Slowly loosen the spring compressor, and carefully remove the front left coil spring.

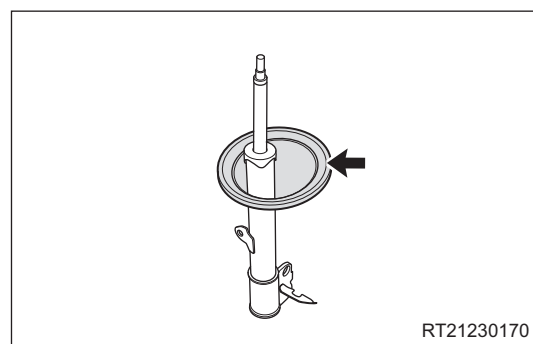
9. Remove the front buffer block.

- a. Detach and remove the front buffer block (arrow) from front left shock absorber assembly.



10. Remove the front spring lower cushion.

- a. Detach the front spring lower cushion (arrow) from positioning hole at the lower end of front left shock absorber assembly strut and remove it.



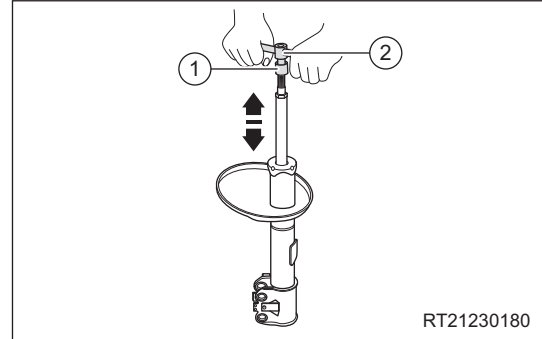
34 - SUSPENSION

Inspection

1. Check front shock absorber assembly.

Manual inspection:

- a. Install the locking nut (1) to the upper end of front shock absorber assembly strut, and then install the T-wrench (2) or equivalent.
- b. Compress and extend the front shock absorber assembly strut several times by hands in the direction of arrow as shown in the illustration. Check that there is no abnormal resistance or unusual sound during operation. If there is any abnormality, replace the front shock absorber assembly with a new one.



2. Check the other components of front shock absorber assembly.

- a. Check front shock absorber upper cover, front shock absorber cushion, bearing washer, dust boot, front buffer block and front spring lower cushion for cracks, wear or deformation. Replace as necessary.
- b. Check connecting bracket assembly and front spring upper tray for damage. Replace as necessary.
- c. Check front coil spring for wear, cracks or deformation. Replace as necessary.

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Assembly

Assembly is in the reverse order of disassembly.

CAUTION

- Make sure to align protrusion of front spring lower cushion and positioning hole at the lower end of front shock absorber assembly strut during installation.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Check wheel alignment after installation is completed. Adjust the wheel alignment to standard range as necessary.

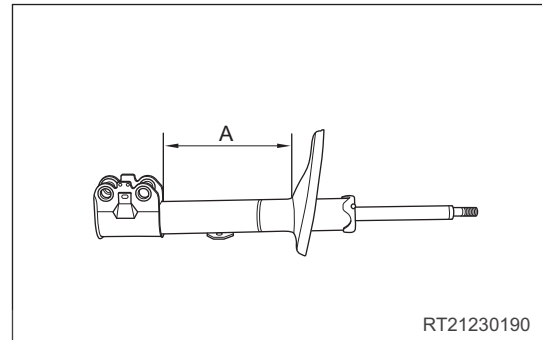
Disposal

WARNING

- Shock absorber assembly contains nitrogen and oil, which are under negative pressure. Before handling, be sure to wear goggles and release pressure inside the shock absorber assembly to avoid personal injury.

1. Disposal of the front shock absorber assembly.

- Extend the front shock absorber assembly strut fully, and clamp it in a vise at an angle.
- Using a drill or equivalent, make a hole slowly at area A shown in the illustration to discharge the gas in the front shock absorber assembly.



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CAUTION

- Gas discharged from shock absorber is colorless and harmless. Be careful when drilling, because metal chips may fly out.

- Handle the front shock absorber assembly properly after discharging the gas.

ENVIRONMENTAL PROTECTION

- Recycle disposed front shock absorber assembly according to local environmental regulations.

Front Control Arm Assembly

Removal

CAUTION

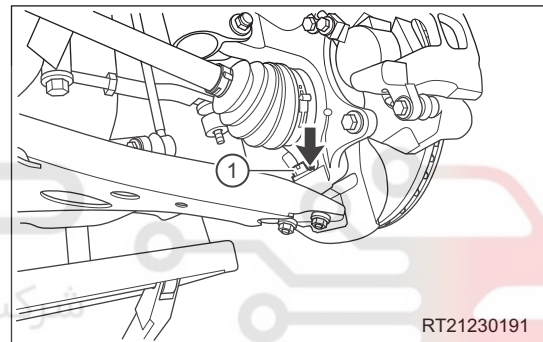
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts and guide parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

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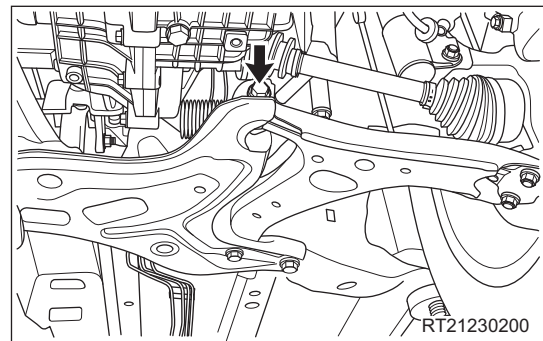
1. Remove the front left wheel ([See page 35-9](#)).
2. Remove the front left control arm assembly.
 - a. Remove the locking pin (arrow) and coupling nut (1) between front left control arm assembly ball pin and front left steering knuckle.
(Tightening torque: $120 \pm 12 \text{ N}\cdot\text{m}$)



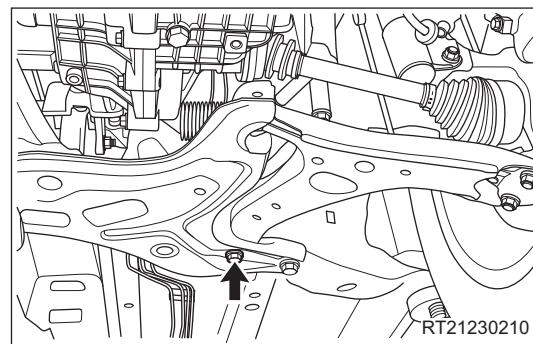
CAUTION

- If it is difficult to remove control arm ball pin end from steering knuckle, disengage the ball pin by striking the end of steering knuckle uniformly and slightly with a hammer or equivalent.

- b. Remove the coupling bolt (arrow) between front part of front left control arm assembly and front sub frame welding assembly.
(Tightening torque: $180 \pm 10 \text{ N}\cdot\text{m}$)



- c. Remove the coupling bolt (arrow) between rear part of front left control arm assembly and front sub frame welding assembly.
(Tightening torque: $180 \pm 10 \text{ N}\cdot\text{m}$)



- d. Remove the front left control arm assembly with ball pin.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Make sure that ball pin rotates smoothly and is not stuck after installation.
- Check wheel alignment after installation is completed. Adjust the wheel alignment to standard range as necessary.

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Front Control Arm Ball Pin Assembly

Removal

CAUTION

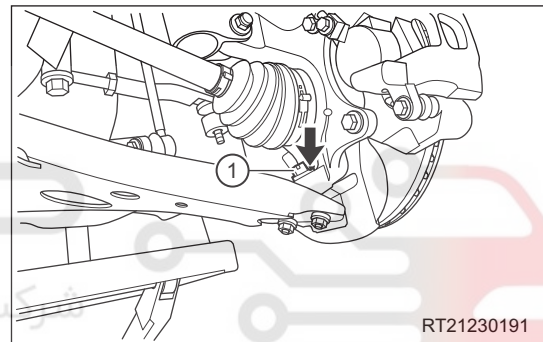
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts and guide parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

34

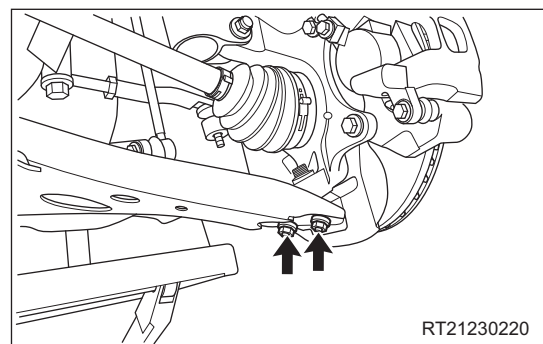
1. Remove the front left wheel ([See page 35-9](#)).
2. Remove the front left control arm ball pin assembly.
 - a. Remove the locking pin (arrow) and coupling nut (1) between front left control arm assembly ball pin and front left steering knuckle.
(Tightening torque: 120 ± 12 N·m)



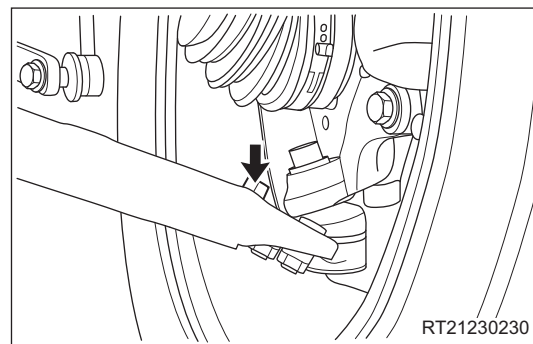
CAUTION

- If it is difficult to remove control arm ball pin end from steering knuckle, disengage the ball pin by striking the end of steering knuckle uniformly and slightly with a hammer or equivalent.

- b. Remove 2 coupling nuts (arrow) between front left control arm ball pin assembly and front left control arm assembly.



- c. Remove the coupling bolt (arrow) between front left control arm ball pin assembly and front left control arm assembly.
(Tightening torque: $150 \pm 10 \text{ N}\cdot\text{m}$)



- d. Remove the front left control arm ball pin assembly.

Inspection

1. Check control arm ball pin assembly.
 - a. Check control arm assembly ball pin boot for wear, cracks, deformation, damage or grease leakage. Replace as necessary.
 - b. Check if control arm assembly ball pin rotates smoothly. Replace as necessary.

34

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Make sure that ball pin rotates smoothly and is not stuck after installation.
- Check wheel alignment after installation is completed. Adjust the wheel alignment to standard range as necessary.

Front Stabilizer Bar Assembly

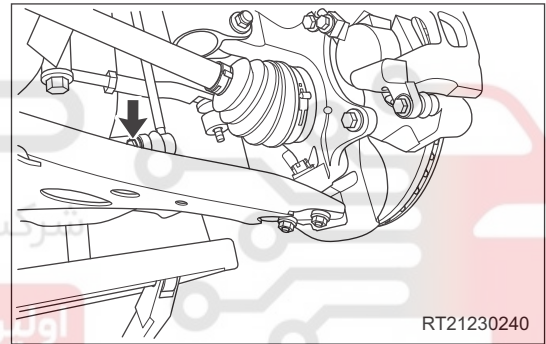
Removal (for 2.0L Model)

CAUTION

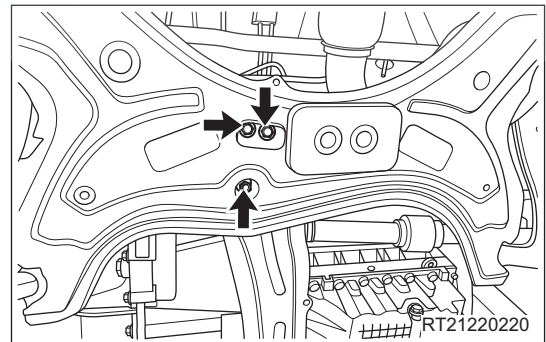
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.
- When lowering front sub frame welding assembly, it needs to support engine and transmission assembly securely with a engine equalizer to avoid damage.

34

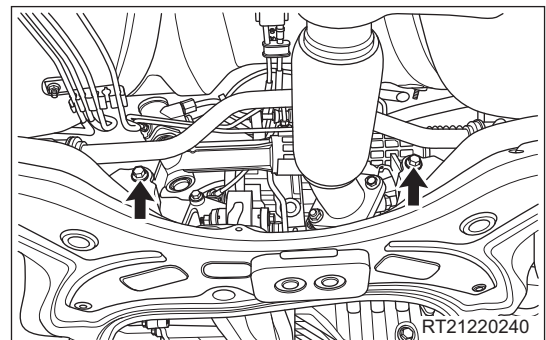
1. Remove the front wheel (See page 35-9).
2. Remove the precatalytic converter assembly (See page 17-17).
3. Remove the front control arm assembly (See page 34-22).
4. Remove the front stabilizer bar assembly.
 - a. Support the engine and transmission assembly securely with a engine equalizer.
 - b. Hold the lower end of front link assembly with an inner hexagon wrench, remove the coupling nut (arrow) between front stabilizer bar and front link assembly with a fixing wrench and disengage the front link assembly.
(Tightening torque: $47 \pm 4 \text{ N}\cdot\text{m}$)



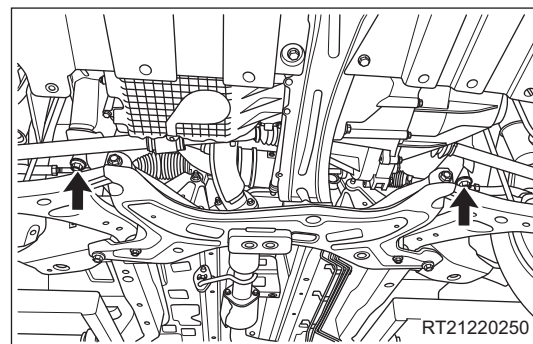
- c. Remove 2 coupling bolts and nut (arrow) between side rail welding assembly and rear mounting cushion assembly.
(Tightening torque: $70 \pm 5 \text{ N}\cdot\text{m}$)



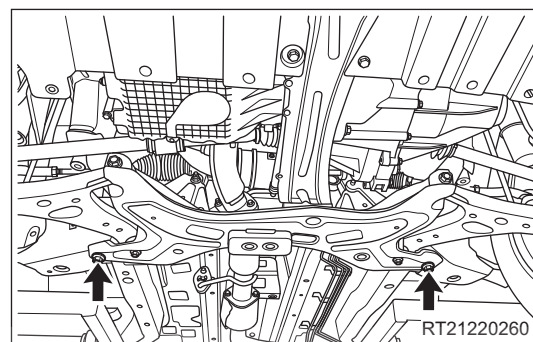
- d. Remove 2 coupling bolts (arrow) between front sub frame welding assembly and steering gear assembly.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)



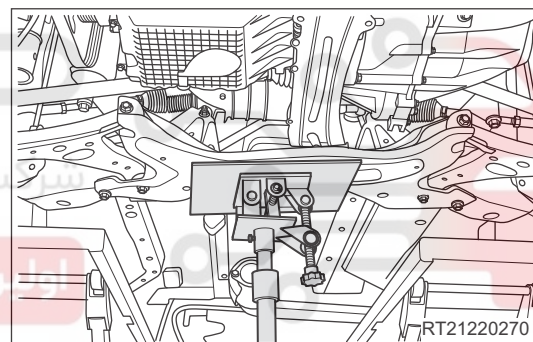
- e. Remove 2 coupling bolts (arrow) between upper part of front sub frame welding assembly and body.
(Tightening torque: $180 \pm 10 \text{ N}\cdot\text{m}$)



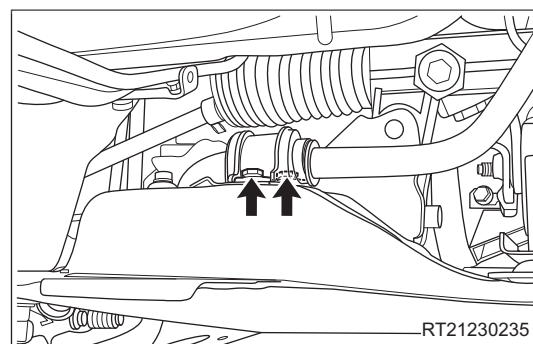
- f. Remove 2 coupling bolts (arrow) between rear part of front sub frame welding assembly and body.
(Tightening torque: $180 \pm 10 \text{ N}\cdot\text{m}$)



- g. Support the front sub frame welding assembly with front stabilizer bar assembly with a transmission carrier, and lower it carefully.

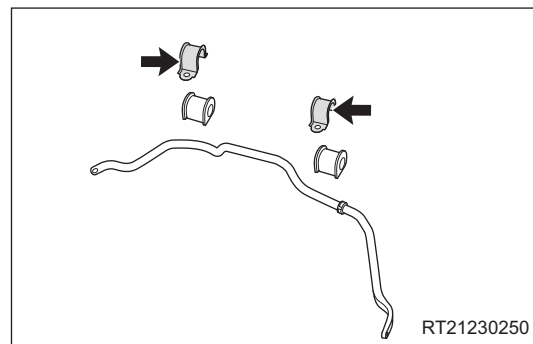


- h. Remove the coupling bolts (arrow) between front stabilizer bar assembly and front sub frame welding assembly, and separate them.
(Tightening torque: $25 \pm 3 \text{ N}\cdot\text{m}$)

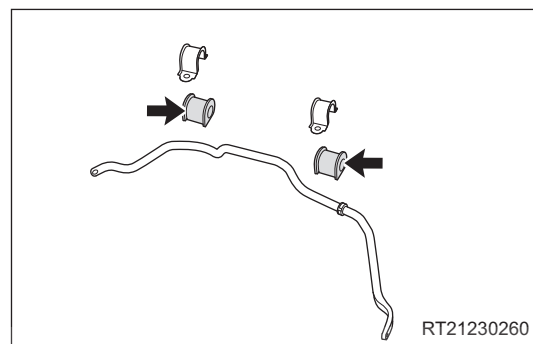


34 - SUSPENSION

- i. Detach the left and right fixing clamps (arrow) from front stabilizer bar assembly.



- j. Detach the left and right rubber supports (arrow) from front stabilizer bar assembly.



34

Inspection

1. Check front stabilizer bar assembly.
 - a. Check front stabilizer bar assembly fixing clamps for wear, cracks, deformation or damage. Replace as necessary.
 - b. Check front stabilizer bar assembly rubber supports for dirt, wear, cracks, deformation or damage. Replace as necessary.

Installation اولین سامانه دیجیتال تعمیرکاران خود

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.

Removal (for 1.5L Model)

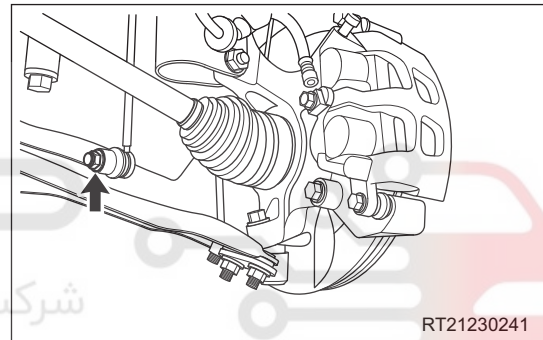
 CAUTION

- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.
- When lowering front sub frame welding assembly, it needs to support engine and transmission assembly securely with a engine equalizer to avoid damage.

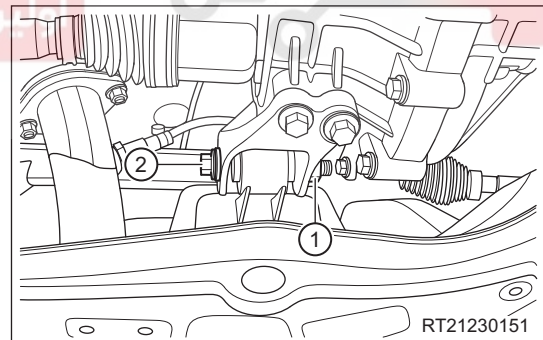
1. Remove the front wheel (See page 35-9).
2. Remove the precatalytic converter assembly (See page 17-17).
3. Remove the front control arm assembly (See page 34-22).
4. Remove the front stabilizer bar assembly.
 - a. Support the engine and transmission assembly securely with a engine equalizer.

- b. Hold the lower end of front link assembly with an inner hexagon wrench, remove the coupling nut (arrow) between front stabilizer bar and front link assembly with a fixing wrench and disengage the front link assembly.

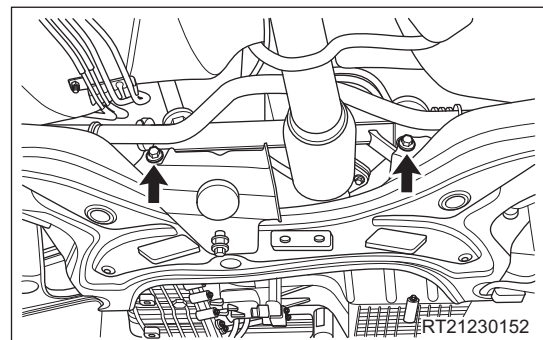
(Tightening torque: $47 \pm 4 \text{ N}\cdot\text{m}$)



- c. Remove connecting nut (1) between engine rear mounting bracket and sub frame, and remove bolt (2). (Tightening torque: $70 \pm 5 \text{ N}\cdot\text{m}$)

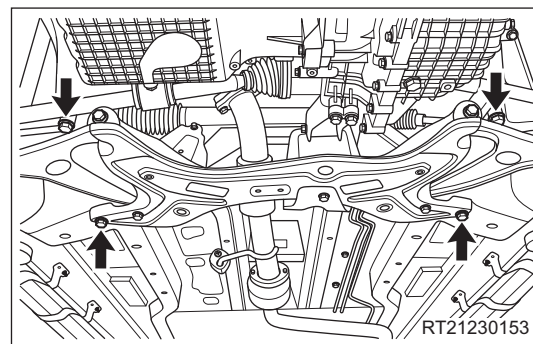


- d. Remove 2 coupling bolts (arrow) between front sub frame welding assembly and steering gear assembly. (Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)

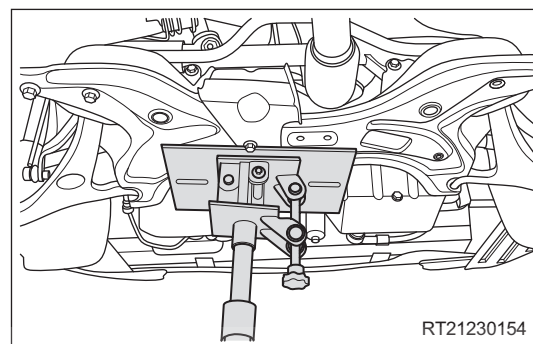


34 - SUSPENSION

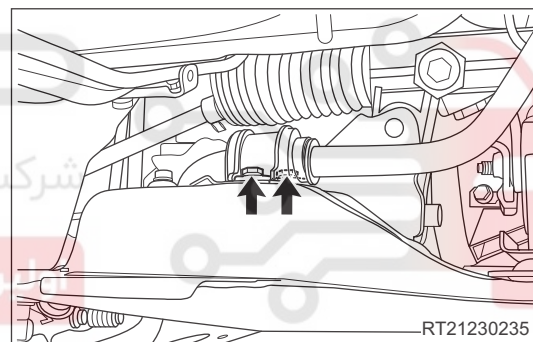
- e. Remove 4 fixing bolts (arrow) between sub frame and body.
(Tightening torque: $180 \pm 10 \text{ N}\cdot\text{m}$)



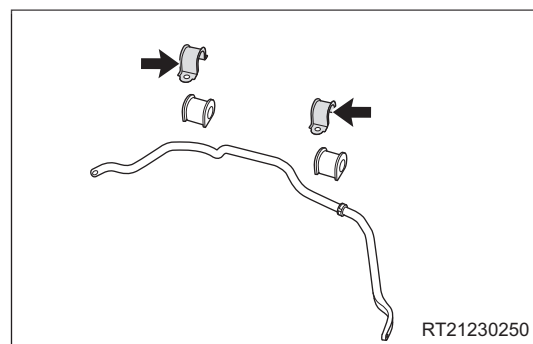
- f. Support the front sub frame welding assembly with front stabilizer bar assembly with a transmission carrier, and lower it carefully.



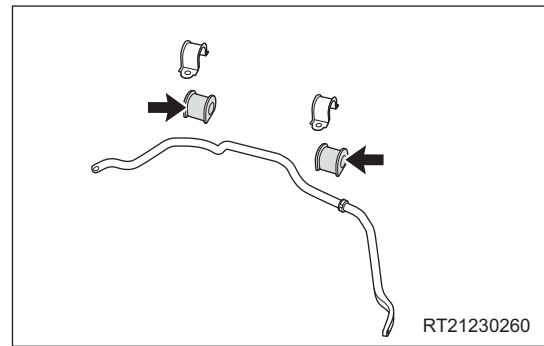
- g. Remove the coupling bolts (arrow) between front stabilizer bar assembly and front sub frame welding assembly, and separate them.
(Tightening torque: $25 \pm 3 \text{ N}\cdot\text{m}$)



- h. Detach the left and right fixing clamps (arrow) from front stabilizer bar assembly.



- i. Detach the left and right rubber supports (arrow) from front stabilizer bar assembly.



Inspection

1. Check front stabilizer bar assembly.
 - a. Check front stabilizer bar assembly fixing clamps for wear, cracks, deformation or damage. Replace as necessary.
 - b. Check front stabilizer bar assembly rubber supports for dirt, wear, cracks, deformation or damage. Replace as necessary.

34

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.

شرکت دیجیتال خودرو (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

Front Stabilizer Link Assembly

Removal

CAUTION

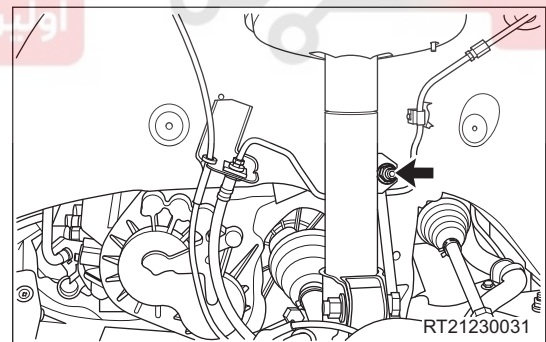
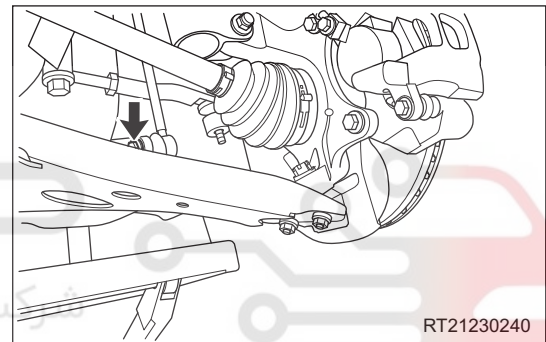
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

34

1. Remove the front left wheel (See page 35-9).
2. Remove the front left stabilizer link assembly.
 - a. Hold the lower end of front left stabilizer link assembly with an inner hexagon wrench, and remove the coupling nut (arrow) between front left stabilizer bar assembly and front left stabilizer link assembly with a fixing wrench.
(Tightening torque: $47 \pm 4 \text{ N}\cdot\text{m}$)
 - b. Hold the upper end of front left stabilizer link assembly with an inner hexagon wrench, and remove the coupling nut (arrow) between front left stabilizer link assembly and front left shock absorber assembly with a fixing wrench.
(Tightening torque: $47 \pm 4 \text{ N}\cdot\text{m}$)



- c. Remove the front left stabilizer link assembly.

Inspection

1. Check front stabilizer link assembly.
 - a. Check front stabilizer link assembly bushes for wear, cracks, deformation, damage or grease leakage. Replace as necessary.
 - b. Check if the end of front stabilizer link assembly rotates smoothly. Replace as necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Be sure to tighten coupling nuts to specified torque.
- Make sure that the end of front stabilizer link assembly rotates smoothly and is not stuck after installation.

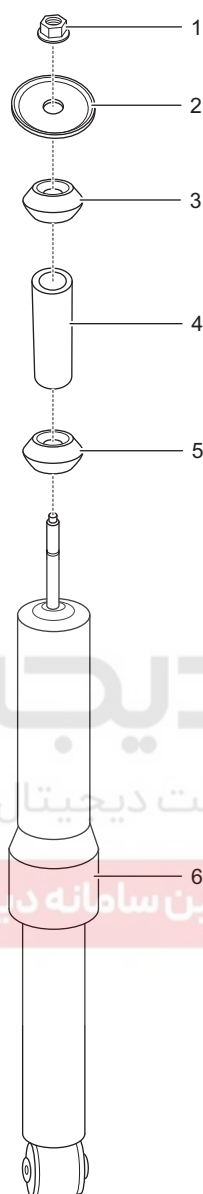
دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Rear Shock Absorber Assembly



RT21230270

1 - Rear Shock Absorber Assembly Fixing Nut

2 - Rear Shock Absorber Insulator Shim

3 - Rear Shock Absorber Upper Insulator

4 - Rear Shock Absorber Insulator Sleeve

5 - Rear Shock Absorber Lower Insulator

6 - Rear Shock Absorber Assembly

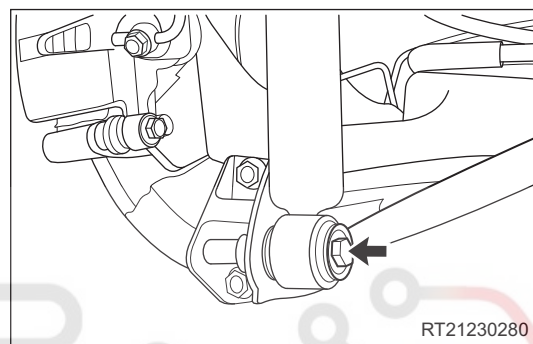
Removal

CAUTION

- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

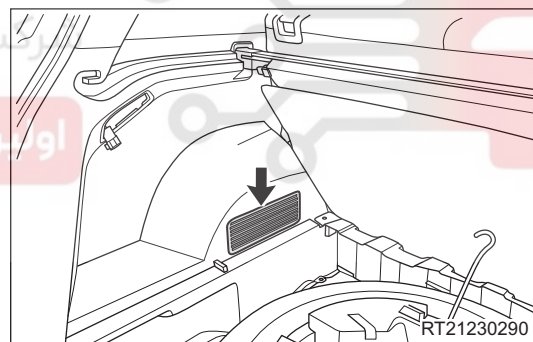
HINT:

- Use the same procedures for the right side and left side.
 - Procedures listed below are for the left side.
1. Remove the rear left shock absorber assembly.
 - a. Remove the coupling bolt and washer (arrow) between lower part of rear left shock absorber assembly and rear left trailing arm Assembly. (Tightening torque: 45 ± 5 N·m)

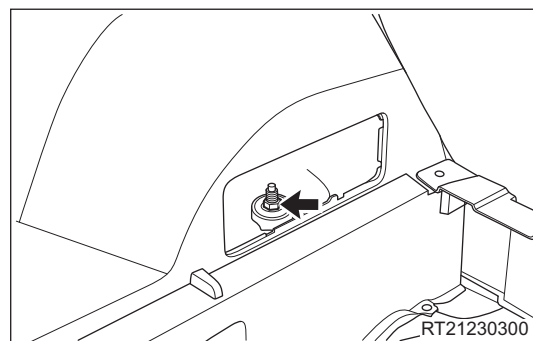


34

- b. Lift up the rear floor carpet, remove the rear left shock absorber assembly service hole cover.

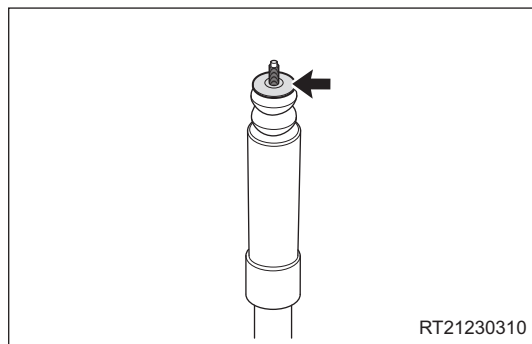


- c. Remove the coupling nut (arrow) between upper part of rear left shock absorber assembly and body. (Tightening torque: 45 ± 5 N·m)

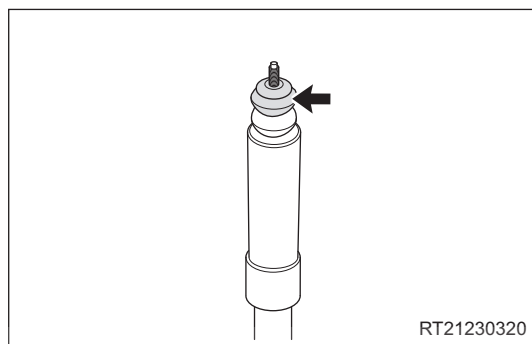


34 - SUSPENSION

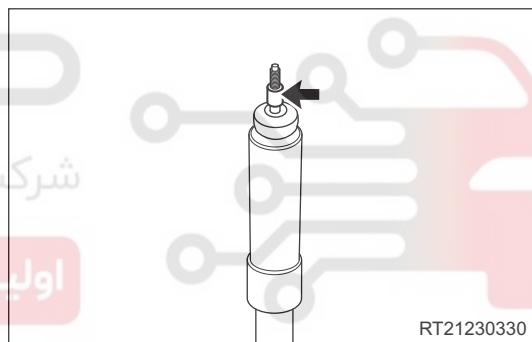
- d. Remove the rear left shock absorber insulator shim (arrow).



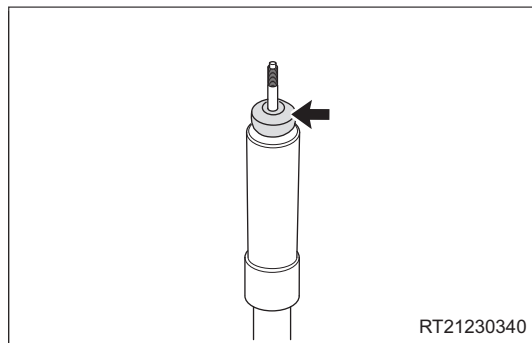
- e. Remove the rear left shock absorber upper insulator (arrow).



- f. Remove the rear left shock absorber insulator sleeve (arrow).



- g. Remove the rear left shock absorber lower insulator (arrow).

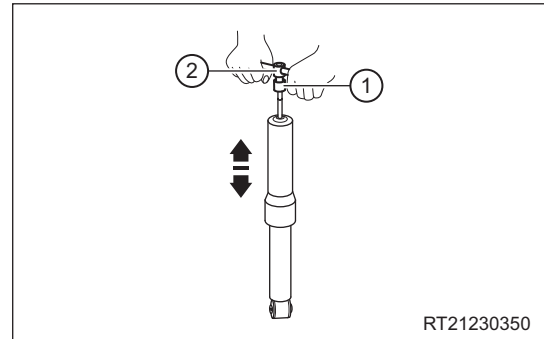


Inspection

1. Check rear shock absorber assembly.

Manual inspection:

- a. Install the nut (1) to the upper end of rear shock absorber assembly strut, and then install the T-wrench (2) or equivalent.
- b. Compress and extend the rear shock absorber assembly strut several times by hands in the direction of arrow as shown in the illustration. Check that there is no abnormal resistance or unusual sound during operation. If there is any abnormality, replace the rear shock absorber assembly with a new one.



2. Check the other components of rear shock absorber assembly.

- a. Check rear shock absorber upper insulator and lower insulator for cracks, wear or deformation. Replace as necessary.
- b. Check rear shock absorber insulator shim, rear shock absorber insulator sleeve for damage. Replace as necessary.

Installation

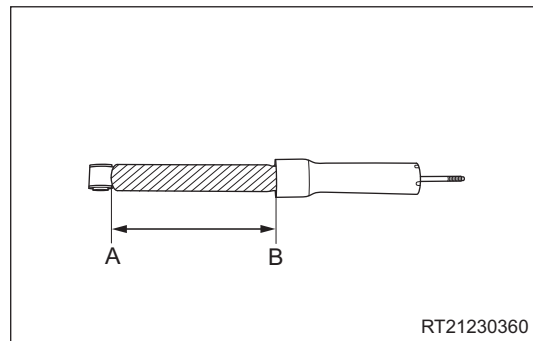
Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Bounce vehicle up and down several times to stabilize rear suspension after installation.

Disposal

1. Disposal of the rear shock absorber assembly.
 - a. Extend the rear shock absorber assembly strut fully.
 - b. Using a drill, make a hole between A and B in the strut as shown in the illustration to discharge the gas inside the rear shock absorber assembly.



CAUTION

- Be careful when drilling, because metal chips may fly about. Always perform operations with proper safety equipment to avoid personal injury.
- The gas is colorless, odorless and nonpoisonous.

- c. After discharging the gas inside the rear shock absorber assembly, handle the rear shock absorber assembly properly.



ENVIRONMENTAL PROTECTION

- Recycle disposed rear shock absorber assembly according to local environmental regulations.

Rear Coil Spring

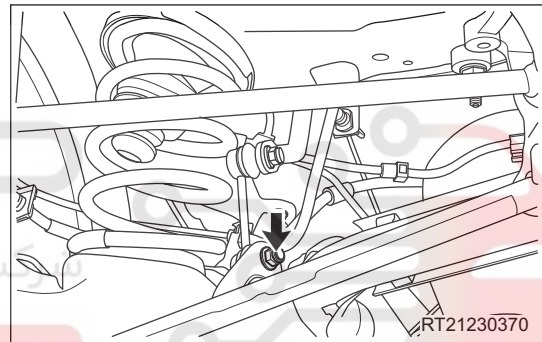
Removal

CAUTION

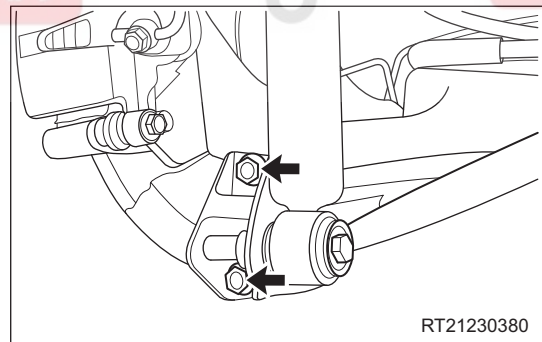
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

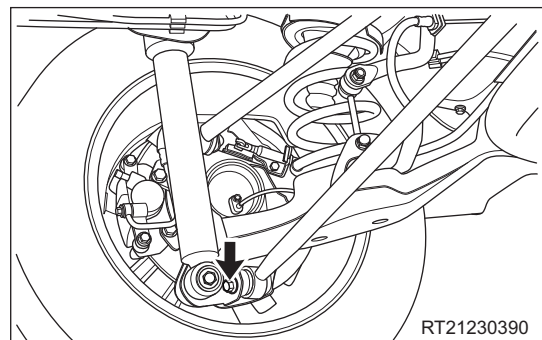
- Use the same procedures for the right side and left side.
 - Procedures listed below are for the left side.
1. Remove the rear left wheel (See page 35-9).
 2. Remove the rear left coil spring.
 - a. Support the rear left suspension with a transmission carrier securely.
 - b. Remove the coupling nut (arrow) between lower part of rear left stabilizer link assembly and rear suspension lower left swing arm assembly.
(Tightening torque: $45 \pm 5 \text{ N}\cdot\text{m}$)



- c. Remove 2 coupling bolts (arrow) between rear left shock absorber assembly fixing bracket and rear left trailing arm assembly.
(Tightening torque: $80 \pm 8 \text{ N}\cdot\text{m}$)

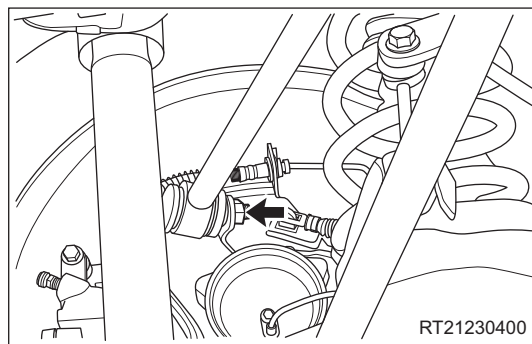


- d. Remove the coupling bolt and nut (arrow) between lower part of rear suspension lower left swing arm assembly and rear left trailing arm assembly.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)

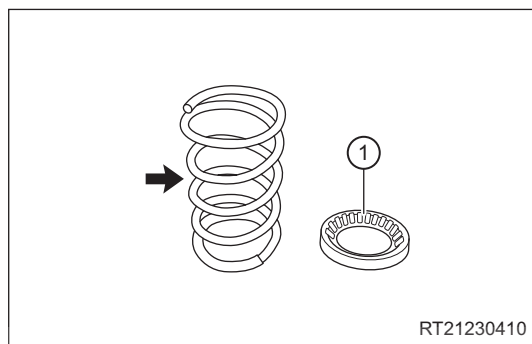


34 - SUSPENSION

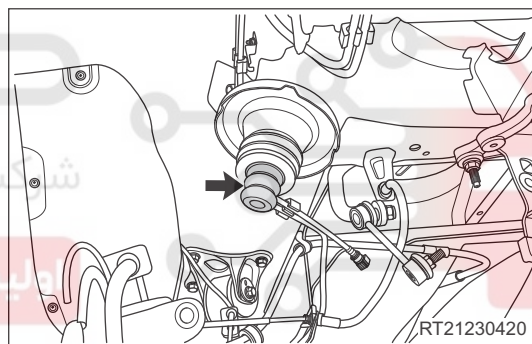
- e. Remove the coupling bolt and nut (arrow) between lower part of rear suspension upper left swing arm assembly and rear left trailing arm assembly.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)



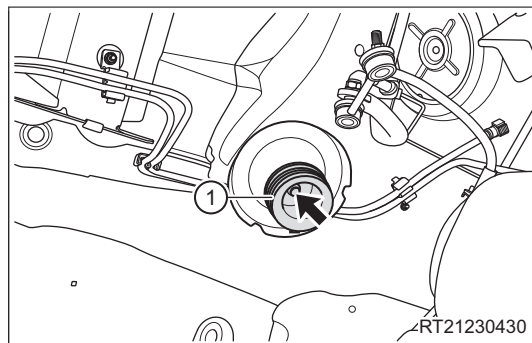
- f. Lower the transmission carrier slowly to the appropriate height and take off the rear coil spring (arrow) and rear spring upper cushion (1) carefully.



- g. Detach the rear buffer block (arrow) from the body.



- h. Remove the fixing bolt (arrow) and detach the rear rubber cushion assembly (1) from body.
(Tightening torque: $25 \pm 5 \text{ N}\cdot\text{m}$)



Inspection

1. Check rear coil spring assembly.
 - a. Check rear coil spring for wear, cracks and permanent deformation due to excessive use. Replace as necessary.
 - b. Check rear coil spring upper cushion, rear cushion and rear rubber cushion assembly for dirt, wear, cracks, deformation or damage. Replace as necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- After installation is completed, lower vehicle and bounce it up and down several times to stabilize the suspension.

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Rear Suspension Upper Swing Arm Assembly

Removal

CAUTION

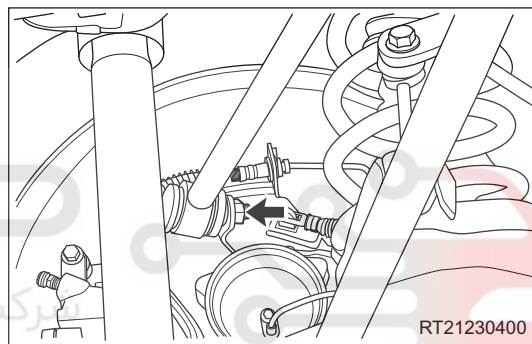
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

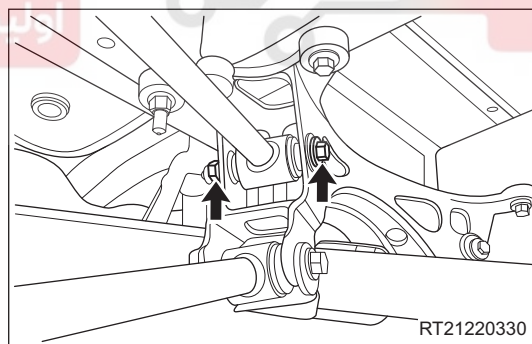
- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

34

1. Remove the rear left wheel (See page 35-9).
2. Remove the rear suspension upper left swing arm assembly.
 - a. Remove the coupling bolt and nut (arrow) between lower part of rear suspension upper left swing arm assembly and rear left trailing arm assembly. (Tightening torque: 120 ± 10 N·m)



- b. Remove the coupling bolt and nut (arrow) between upper part of rear suspension upper left swing arm assembly and rear sub frame assembly. (Tightening torque: 120 ± 10 N·m)



- c. Remove the rear suspension upper left swing arm assembly.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.

Rear Suspension Lower Swing Arm Assembly

Removal

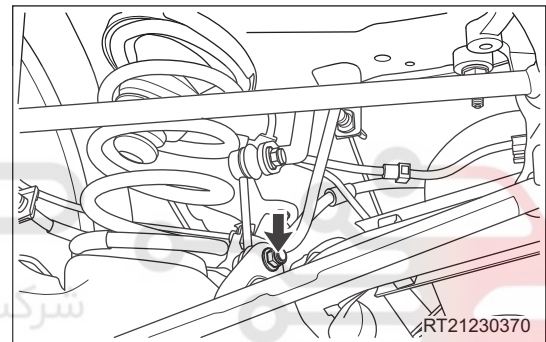
CAUTION

- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and the rusted nuts for safety.

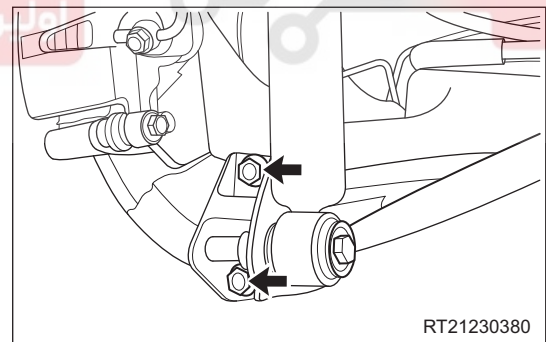
HINT:

- Use the same procedures for the right side and left side.
 - Procedures listed below are for the left side.
1. Remove the rear left wheel (See page 35-9).
 2. Remove the rear suspension lower left swing arm assembly.

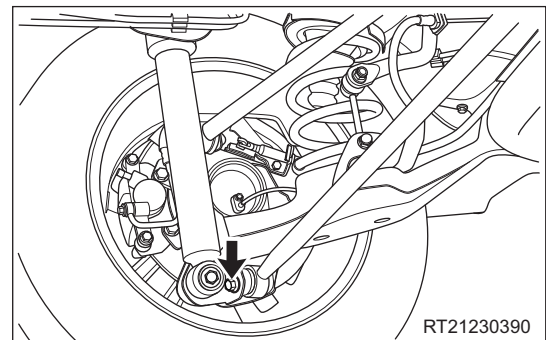
- a. Remove the coupling nut (arrow) between lower part of rear left stabilizer link assembly and rear suspension lower left swing arm assembly.
(Tightening torque: 45 ± 5 N·m)



- b. Remove 2 coupling bolts (arrow) between rear left shock absorber assembly fixing bracket and rear left trailing arm assembly.
(Tightening torque: 80 ± 8 N·m)

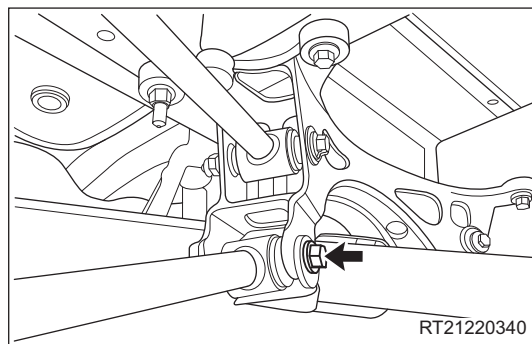


- c. Remove the coupling bolt and nut (arrow) between lower part of rear suspension lower left swing arm assembly and rear left trailing arm assembly.
(Tightening torque: 120 ± 10 N·m)



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- d. Remove the coupling bolt and nut (arrow) between upper part of rear suspension upper left swing arm assembly and rear sub frame assembly.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)



- e. Remove the rear suspension lower left swing arm assembly.

Installation

Installation is in the reverse order of removal.

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CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Check and adjust wheel alignment after installation.

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Rear Trailing Arm Assembly

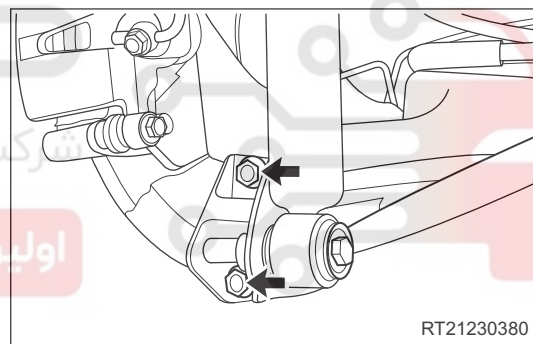
Removal

CAUTION

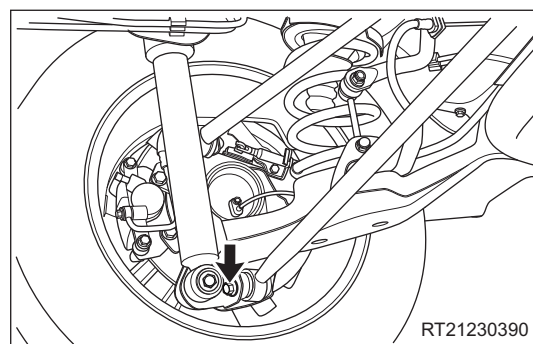
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

- Use the same procedures for the right side and left side.
 - Procedures listed below are for the left side.
1. Remove the rear left wheel (See page 35-9).
 2. Remove the rear left brake caliper assembly (See page 37-44).
 3. Remove the rear left brake disc (See page 37-44).
 4. Remove the rear left axle hub bearing unit (See page 33-22).
 5. Remove the rear left brake assembly (See page 38-16).
 6. Remove the rear left trailing arm assembly.
 - a. Remove 2 coupling bolts (arrow) between rear left shock absorber assembly fixing bracket and rear left trailing arm assembly.
(Tightening torque: 80 ± 8 N·m)

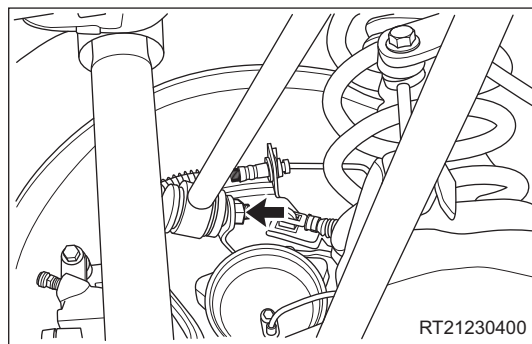


- b. Remove the coupling bolt and nut (arrow) between lower part of rear suspension lower left swing arm assembly and rear left trailing arm assembly.
(Tightening torque: 120 ± 10 N·m)

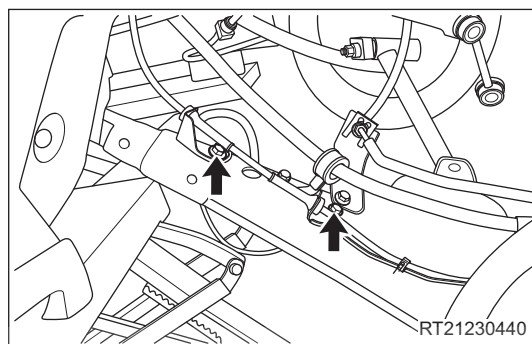


34 - SUSPENSION

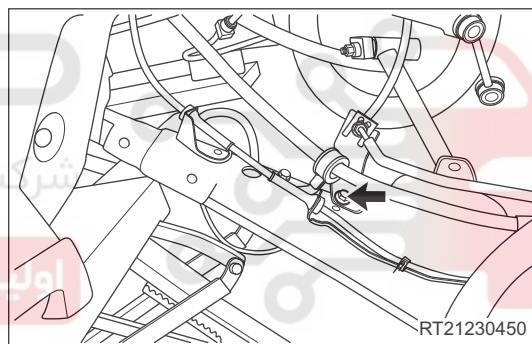
- c. Remove the coupling bolt and nut (arrow) between lower part of rear suspension upper left swing arm assembly and rear left trailing arm assembly.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)



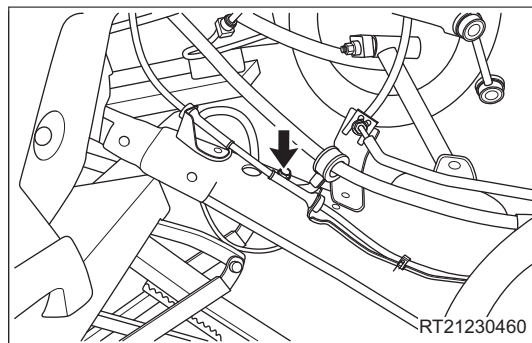
- d. Remove 2 coupling bolts (arrow) between rear left wheel speed sensor fixing bracket and rear left trailing arm assembly.
(Tightening torque: $23 \pm 2 \text{ N}\cdot\text{m}$)



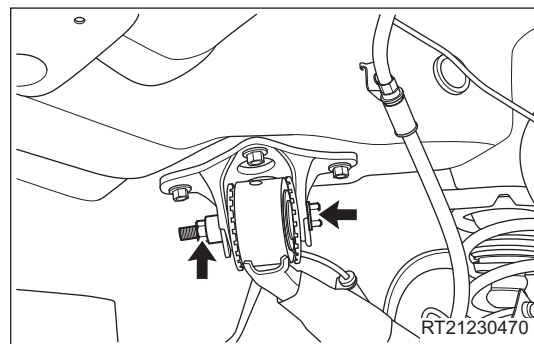
- e. Remove the coupling bolt (arrow) between parking brake cable fixing bracket and rear left trailing arm assembly.
(Tightening torque: $23 \pm 2 \text{ N}\cdot\text{m}$)



- f. Remove the coupling bolt (arrow) between rear left brake line fixing bracket and rear left trailing arm assembly.
(Tightening torque: $23 \pm 2 \text{ N}\cdot\text{m}$)



- g. Remove the coupling bolt and nut (arrow) between front part of rear left trailing arm assembly and mounting bracket.
(Tightening torque: $120 \pm 10 \text{ N}\cdot\text{m}$)



- h. Remove the rear left trailing arm assembly.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.
- Check and adjust wheel alignment after installation.

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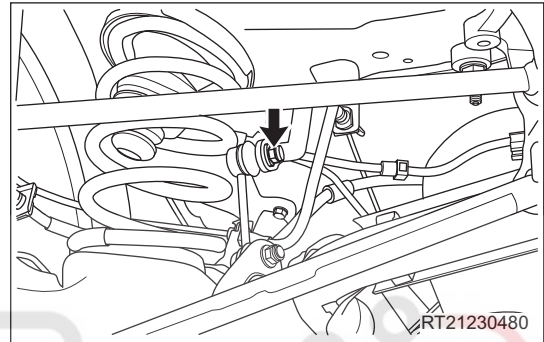
Rear Stabilizer Bar Assembly

Removal

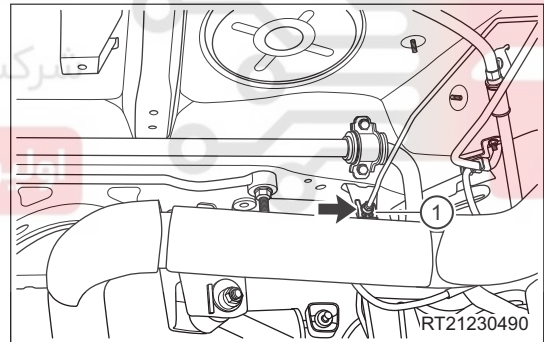
CAUTION

- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

1. Remove the rear stabilizer bar assembly.
 - a. Remove the coupling nut (arrow) between upper part of rear left stabilizer link assembly and rear stabilizer bar assembly. Use the same removal procedure for the right side.
(Tightening torque: $45 \pm 5 \text{ N}\cdot\text{m}$)



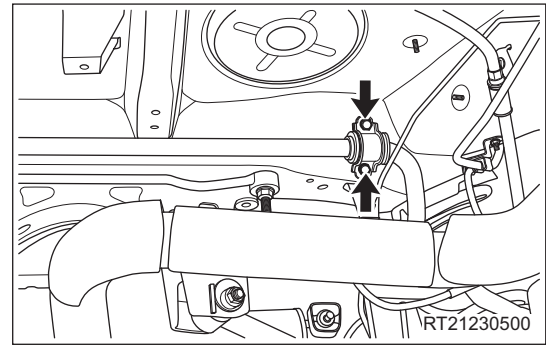
- b. Remove the fixing clamp (arrow) from rear left brake line and disconnect the brake pipe fixing plug (1). Use the same removal procedure for the right side.
(Tightening torque: $16 \pm 2 \text{ N}\cdot\text{m}$)



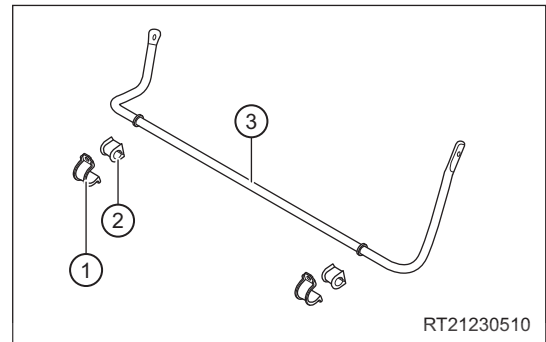
CAUTION

- DO NOT bend or damage brake tube.
- DO NOT allow any foreign matter such as dirt and dust to enter brake tube from the connecting parts.
- After removing brake line, take seal measures to prevent foreign matter from entering.

- c. Remove 2 coupling bolts (arrow) between left side of rear stabilizer bar assembly and body. Use the same removal procedure for the right side.
(Tightening torque: 25 ± 3 N·m)



- d. Remove the rear stabilizer bar fixing clamp (1), rear stabilizer bar rubber support (2) and rear stabilizer bar assembly (3).



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Inspection

1. Check rear stabilizer bar assembly.
 - a. Check rear stabilizer bar assembly fixing clamps for wear, cracks, deformation or damage. Replace as necessary.
 - b. Check rear stabilizer bar assembly rubber supports for dirt, wear, cracks, deformation or damage. Replace as necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Always tighten coupling bolts and nuts to the specified torque.

Rear Stabilizer Link Assembly

Removal

CAUTION

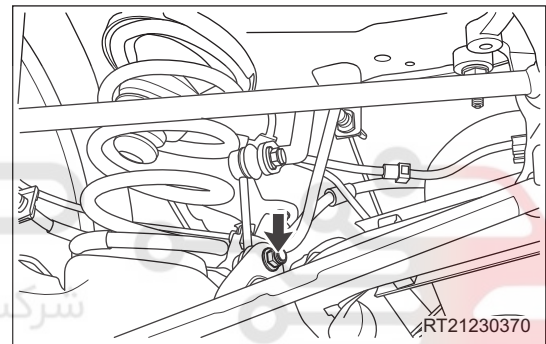
- Be sure to wear necessary safety equipment to prevent accidents.
- Make sure that safety lock of lifter has been locked when removing and installing chassis parts.
- It is not permitted to weld or modify suspension bearing parts.
- When removing and installing chassis parts, replace self-locking nuts and rusted nuts for safety.

HINT:

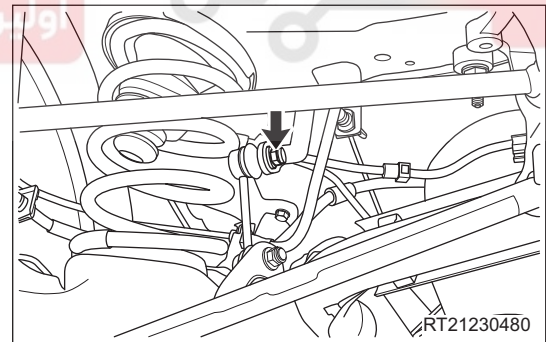
- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

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1. Remove the rear left wheel (See page 35-9).
2. Remove the rear left stabilizer link assembly.
 - a. Remove the coupling nut (arrow) between lower part of rear left stabilizer link assembly and rear suspension lower left swing arm assembly. (Tightening torque: 45 ± 5 N·m)



- b. Remove the coupling nut (arrow) between upper part of rear left stabilizer link assembly and rear stabilizer bar assembly. (Tightening torque: 45 ± 5 N·m)



- c. Remove the rear left stabilizer link assembly.

Inspection

1. Check rear stabilizer link assembly.
 - a. Check rear stabilizer link assembly bushes for wear, cracks, deformation, damage or grease leakage. Replace as necessary.
 - b. Check if the end of rear stabilizer link assembly rotates smoothly. Replace as necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Be sure to tighten coupling nuts to specified torque.
- Make sure that the end of rear stabilizer link assembly rotates smoothly and is not stuck after installation.

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WHEEL ALIGNMENT

Description

CAUTION

- Be sure to perform wheel alignment procedure according to operating instructions of four-wheel alignment device.
- Periodic maintenance and service for four-wheel alignment device should be performed.

In general, the wheel alignment has following 6 parameters:

1. Check front wheel camber
2. Check front wheel toe-in
3. Check kingpin caster
4. Check kingpin inclination
5. Check rear wheel camber
6. Check rear wheel toe-in

If following components have been removed, installed or replaced, check and perform wheel alignment procedures:

- Front control arm assembly
- Front control arm ball pin assembly
- Front steering knuckle
- Front shock absorber assembly
- Steering gear and steering tie rod
- Drive shaft
- Front sub frame welding assembly
- Rear suspension lower swing arm assembly
- Rear sub frame assembly
- Rear trailing arm assembly

Specifications

Specifications (parameters standard for four-wheel alignment)

Item		Specified Value
Front Wheel	Front Wheel Camber	$-10' \pm 45'$
	Front Wheel Toe-in	$5' \pm 5'$
	Kingpin Inclination	$11^{\circ}30' \pm 60'$
	Kingpin Caster	$2^{\circ}50' \pm 60'$
Rear Wheel	Rear Wheel Camber	$-12' \pm 30'$
	Rear Wheel Toe-in	$10' \pm 10'$
Sideways Sliding		$\leq 3 \text{ m/km}$

Problem Symptoms Table

HINT:

Use the table below to help determine the cause of the problem symptoms. Check each suspected area in sequence. Repair or replace the faulty components, or adjust them as necessary.

Symptom	Suspected Area	See page
Vehicle pulls	Front wheel alignment (incorrect)	34-52
	Rear wheel alignment (incorrect)	34-52
Wheel shimmy	Front wheel alignment (incorrect)	34-52
	Rear wheel alignment (incorrect)	34-52
Abnormal tire wear	Tire (worn or improperly inflated)	35-11
	Front wheel alignment (incorrect)	34-52
	Rear wheel alignment (incorrect)	34-52

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Inspection before Wheel Alignment

- Vehicle is in unloaded state.
- Use a lifter to support and raise vehicle to proper height.
- Check hub bearing for excessive clearance, and replace hub bearing as necessary.
- Check suspension components, steering tie rod and ball pin for wear, deformation or damage. Replace the malfunctioning part as necessary.
- Check if shock absorber assembly operates normally.
- Check if tire pressure is within the specified range and adjust it to specified pressure as necessary.

Standard Inflation Pressure of Cold Tire (kPa)

Item	Front Wheel	Rear Wheel	Spare Tire
Tire (Unloaded)	230	230	250

- Check the rim and tire.
 - Visually check rim and tire for scratches, wear or damage.
 - Perform wheel dynamic balance procedures ([See page 35-10](#)).

Front Wheel Toe-in

Incorrect front wheel toe-in will cause wheel pull and abnormal tire wear. Check and adjust front wheel toe-in as necessary.

Adjust the length of steering tie rod to the specified value if front wheel toe-in is not within the tolerance due to other reasons.

Specified Value for Front Wheel Toe-in

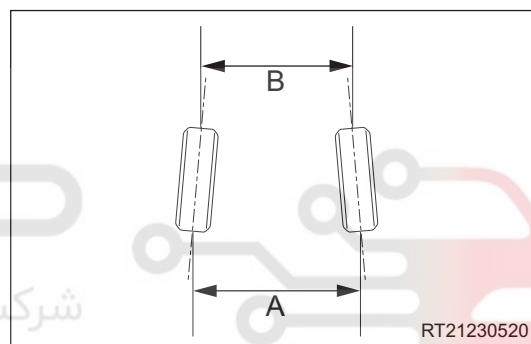
Item	Specified Value
Front Wheel Toe-in	$5' \pm 5'$

Inspection

1. Perform inspection with four-wheel alignment device (perform inspection procedures referring to operating instructions for four-wheel alignment device).

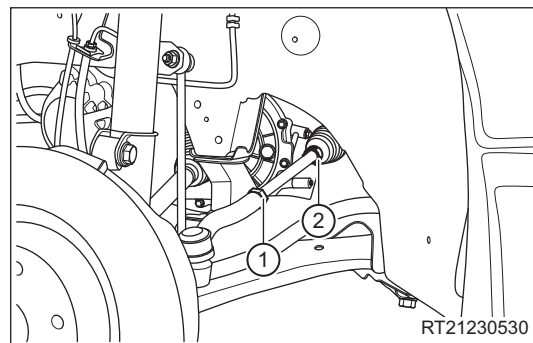
2. Manual check:

- Park vehicle on level ground, check if front tire pressure is within the specified range and adjust it to specified value as necessary.
- Place marks on the center position in front of front wheels, and measure distance A between marks with a tape measure.
- Push vehicle to rotate wheels 180°, and measure distance B between marks with tape measure when the marks are turned to the rear of wheels.
- Calculation method: front wheel toe-in = $A - B \leq 1 \text{ mm}$



Adjustment

1. Make adjusting preparation for wheel alignment according to the requirement of tester.
2. Loosen the steering tie rod locking nut (1) and elastic jacket snap ring (2), and turn the tie rod to adjust length according to the requirement until front wheel toe-in reaches the specified value.



3. Tighten the steering tie rod locking nut, reinstall the elastic jacket snap ring. Check if locking nut is tightened in place and if jacket position is correct.
(Tightening torque: 55 ± 5 N·m)

CAUTION

- If elasticity of elastic jacket snap ring is not enough, replace it.

4. After adjusting front wheel toe-in, check the steering wheel for eccentricity. If necessary, loosen the steering wheel locking nut and adjust the steering wheel to horizontal position, and then tighten the steering wheel locking nut to the specified torque.
(Tightening torque: 35 ± 5 N·m)

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Front Wheel Camber, Kingpin Caster & Kingpin Inclination

1. Front wheel camber, kingpin caster and kingpin inclination can only be checked by using four-wheel alignment device.
2. Front wheel camber, kingpin caster and kingpin inclination are assured by design structure and cannot be adjusted. If measured value is not within the specified range, check if other components that connect to steering knuckle are deformed or damaged. Also, check if connected part of steering knuckle is deformed or damaged. If it is, replace the corresponding components.

Item	Specified Value
Front Wheel Camber	$-10' \pm 45'$
Kingpin Caster	$2^{\circ}50' \pm 60'$
Kingpin Inclination	$11^{\circ}30' \pm 60'$

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Rear Wheel Camber

Incorrect rear wheel camber will cause wheel pull and abnormal tire wear. Check and adjust rear wheel camber as necessary.

If rear wheel camber is not within the tolerance due to other reasons, adjust the eccentric adjusting sleeve and eccentric adjusting nut of coupling bolt between rear suspension lower swing arm assembly and rear sub frame assembly to the specified value.

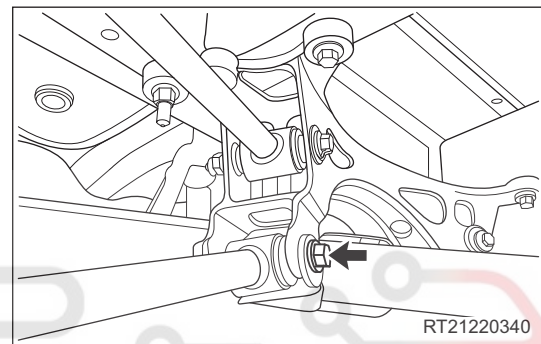
If rear wheel camber is not as specified, check if rear suspension and wheels are damaged or deformed. Replace the damaged or deformed components as necessary.

Item	Specified Value
Rear Wheel Camber	$-12' \pm 30'$

Adjustment

1. Make adjusting preparation for wheel alignment according to the requirement of tester.

2. Loosen the coupling bolt (arrow) between rear suspension lower swing arm assembly and rear sub frame assembly, be careful that eccentric adjusting sleeve and eccentric adjusting nut do not detach from groove.



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3. Rotate the eccentric adjusting sleeve and eccentric adjusting nut to adjust rear wheel camber to the specified value.

4. Tighten the coupling bolt between rear suspension lower swing arm assembly and rear sub frame assembly to specified torque (adjusting method of left and right wheels is the same).
(Tightening torque: $90 \pm 10 \text{ N}\cdot\text{m}$)

Rear Wheel Toe-in

Incorrect rear wheel toe-in will cause wheel pull and abnormal tire wear. Check and adjust rear wheel toe-in as necessary.

If rear wheel toe-in is not within the tolerance due to other reasons, adjust the eccentric adjusting sleeve and eccentric adjusting nut of coupling bolt between rear trailing arm assembly and fixing bracket assembly to the specified value.

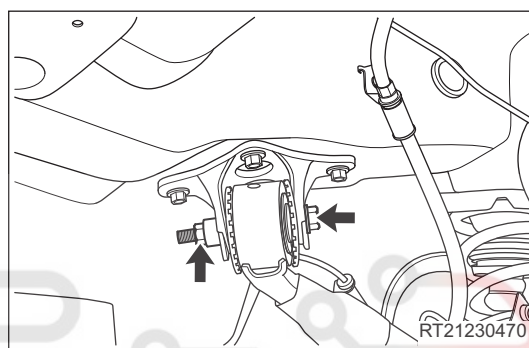
If rear wheel toe-in is not as specified, check if rear suspension and wheels are damaged or deformed. Replace the damaged or deformed components as necessary.

Item	Specified Value
Rear Wheel Toe-in	$10' \pm 10'$

Adjustment

1. Make adjusting preparation for wheel alignment according to the requirement of tester.

2. Loosen the coupling bolts (arrow) between rear trailing arm assembly and fixing bracket assembly, be careful that eccentric adjusting sleeve and eccentric adjusting nut do not detach from groove.



3. Rotate the eccentric adjusting sleeve and eccentric adjusting nut to adjust rear wheel toe-in to the specified value.

4. Tighten the coupling bolt between rear trailing arm assembly and fixing bracket assembly to the specified torque (adjusting method of left and right wheels is the same).
(Tightening torque: $150 \pm 10 \text{ N} \cdot \text{m}$)