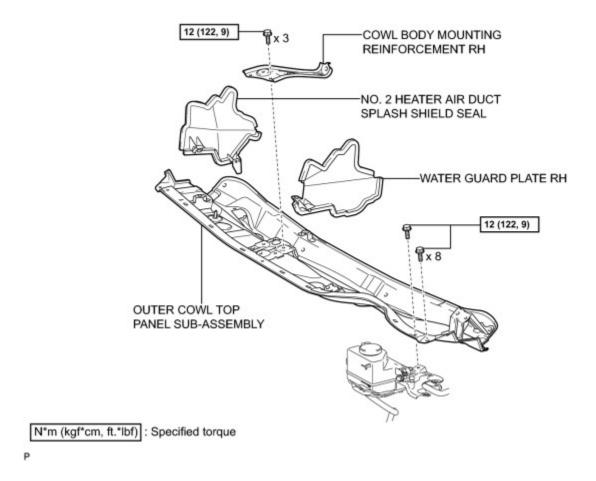
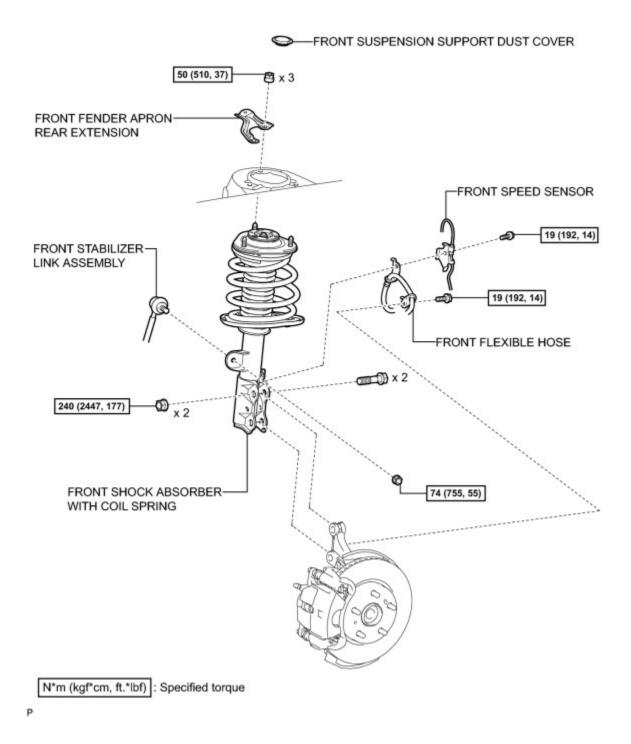
Last Modified: 10-5-2010	6.4 K	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000002PCD00ZX
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: COMPONENTS (2010 HS250H)		

COMPONENTS

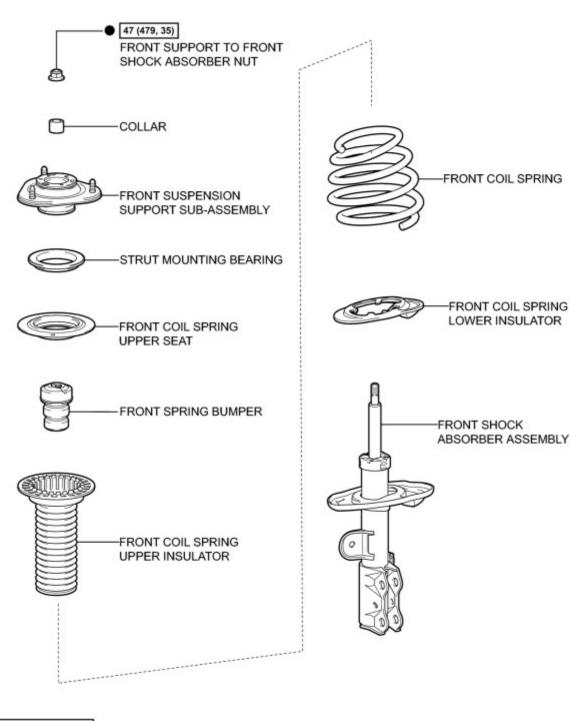
ILLUSTRATION



ILLUSTRATION



ILLUSTRATION



N*m (kgf*cm, ft.*lbf) : Specified torque

Non-reusable part



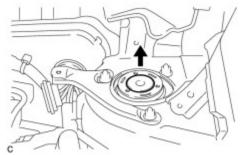
⊕TOYOTA

Last Modified: 10-5-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000003GY017X
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: REMOVAL (2010 HS250H)		

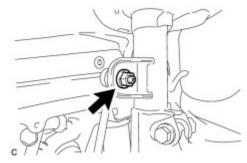
REMOVAL

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.
- 1. REMOVE FRONT WHEEL
- 2. REMOVE FRONT WIPER MOTOR AND LINK ASSEMBLY
- (a) Remove the front wiper motor and link assembly
- 3. REMOVE WATER GUARD PLATE RH_
- 4. REMOVE NO. 2 HEATER AIR DUCT SPLASH SHIELD SEAL
- 5. REMOVE COWL BODY MOUNTING REINFORCEMENT RH
- 6. REMOVE OUTER COWL TOP PANEL SUB-ASSEMBLY
- 7. REMOVE FRONT SUSPENSION SUPPORT DUST COVER



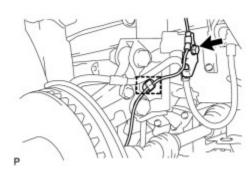
- (a) Remove the front suspension support dust cover.
- 8. SEPARATE FRONT STABILIZER LINK ASSEMBLY
 - (a) Remove the nut and separate the front stabilizer link assembly from the front shock absorber with coil spring.



HINT:

If the ball joint turns together with the nut, use a hexagon wrench to hold the stud bolt.

9. SEPARATE FRONT SPEED SENSOR

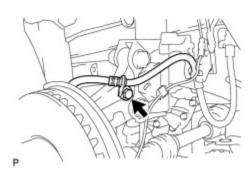


(a) Remove the bolt and clamp, and separate the front speed sensor and front flexible hose from the front shock absorber with coil spring.

NOTICE:

Be sure to completely disconnect the front speed sensor from the front shock absorber with coil spring.

10. SEPARATE FRONT FLEXIBLE HOSE

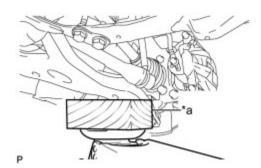


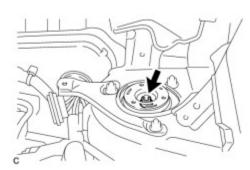
(a) Remove the bolt and separate the front flexible hose from the steering knuckle.

11. REMOVE FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Support the front axle using a jack and wooden block.

Text in Illustration	Wooden Block
*a	

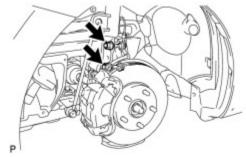




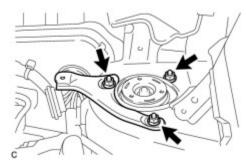
(b) Loosen the front support to front shock absorber nut of the front shock absorber.

NOTICE:

- Do not remove the front support to front shock absorber nut.
- Loosen the nut only when the front shock absorber with coil spring needs to be disassembled.



(c) Remove the 2 bolts and 2 nuts, and separate the front shock absorber with coil spring (lower side) from the steering knuckle.



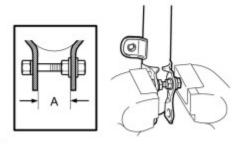
(d) Remove the 3 nuts, front fender apron rear extension and front shock absorber with coil spring (upper side).

NOTICE:

Make sure that the front speed sensor is completely separate from the front shock absorber with coil spring.

12. SECURE FRONT SHOCK ABSORBER WITH COIL SPRING

(a) Install a bolt and nut to the front shock absorber as shown in the illustration and secure the front shock absorber in a vise.



Standard length A:

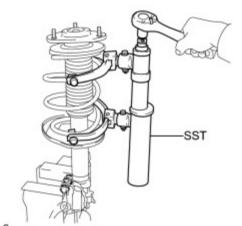
28 mm (1.102 in.)

U

13. REMOVE FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT

(a) Using SST, compress the front coil spring.

SST: 09727-30021



09727-00010

09727-00021

09727-00031

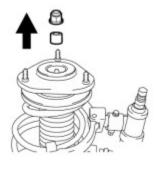
NOTICE:

Do not use an impact wrench. It will damage SST.

HINT:

If the front coil spring is compressed at an angle, using 2 SST will make the work easier.

(b) Check that the front coil spring is sufficiently compressed.



(c) Remove the front support to front shock absorber nut and collar.

p

14. REMOVE FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

- 15. REMOVE STRUT MOUNTING BEARING
- 16. REMOVE FRONT COIL SPRING UPPER SEAT
- 17. REMOVE FRONT COIL SPRING UPPER INSULATOR
- 18. REMOVE FRONT COIL SPRING
- 19. REMOVE FRONT SPRING BUMPER
- 20. REMOVE FRONT COIL SPRING LOWER INSULATOR
- 21. REMOVE FRONT SHOCK ABSORBER ASSEMBLY





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Model Year: 2010	Model: HS250H	Doc ID: RM000002YJ500WX
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: INSPECTION (2010 HS250H)		

INSPECTION

1. INSPECT FRONT SHOCK ABSORBER ASSEMBLY

(a) Compress and extend the shock absorber rod 4 or more times and check the operating sound and resistance.

Standard:

The operating sound and resistance are normal.

If there is any abnormality, replace the front shock absorber assembly with a new one.





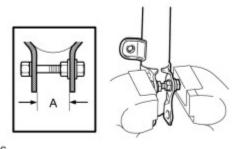
Last Modified: 10-5-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000003GX017X
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: INSTALLATION (2010 HS250H)		

INSTALLATION

HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

1. SECURE FRONT SHOCK ABSORBER ASSEMBLY



(a) Install a bolt and nut to the front shock absorber as shown in the illustration and secure the front shock absorber in a vise.

Standard length A:

28 mm (1.102 in.)

C

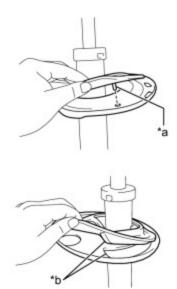
2. INSTALL FRONT COIL SPRING LOWER INSULATOR

(a) Install the front coil spring lower insulator to the front shock absorber assembly.

Text in Illustration	Positioning Pin
*a	
*b	Depression

NOTICE:

When installing the insulator, fit the insulator to the depression of the spring seat and align the positioning pin into the hole.



3. INSTALL FRONT SPRING BUMPER

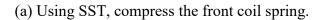


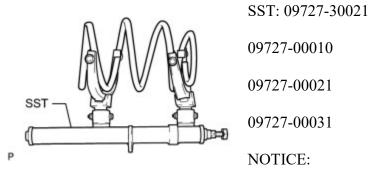
(a) Install the front spring bumper to the front shock absorber assembly.

NOTICE:

Face the smaller diameter end of the front spring bumper downward.

4. INSTALL FRONT COIL SPRING





09727-00010

09727-00021

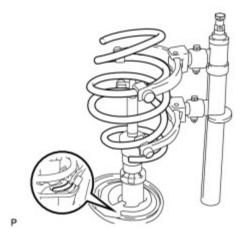
09727-00031

NOTICE:

Do not use an impact wrench. It will damage SST.

HINT:

If the front coil spring is compressed at an angle, using 2 SST will make the work easier.

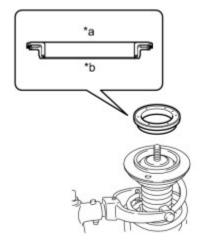


(b) Install the front coil spring.

NOTICE:

Make sure that the end of the front coil spring is positioned in the depression of the lower spring seat.

- 5. INSTALL FRONT COIL SPRING UPPER INSULATOR
- 6. INSTALL FRONT COIL SPRING UPPER SEAT
- 7. INSTALL STRUT MOUNTING BEARING



(a) Install the strut mounting bearing.

Text in Illustration	Upper Side
*a	
*b	Lower Side

NOTICE:

Do not install the bearing upside down.

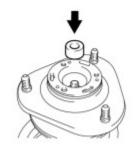
8. INSTALL FRONT SUSPENSION SUPPORT SUB-ASSEMBLY

(a) Install the front suspension support sub-assembly to the front shock absorber assembly.

NOTICE:

When installing, align the cutout on the front suspension support sub-assembly and the shock absorber piston rod end.

9. TEMPORARILY TIGHTEN FRONT SUPPORT TO FRONT SHOCK ABSORBER NUT



(a) Install the collar to the front shock absorber assembly.



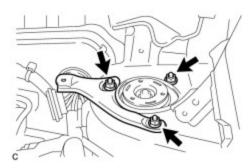
(b) Temporarily tighten a new front support to front shock absorber nut.

(c) Remove SST from the front coil spring.

NOTICE:

Do not use an impact wrench. It will damage SST.

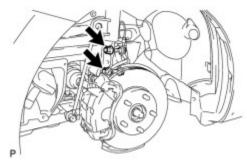
10. INSTALL FRONT SHOCK ABSORBER WITH COIL SPRING



(a) Install the front shock absorber with coil spring (upper side) and front fender apron rear extension with the 3 nuts.

Torque: 50 N·m (510 kgf·cm, 37ft·lbf)

(b) Install the front shock absorber with coil spring (lower

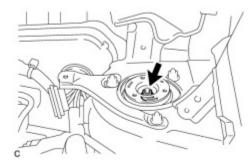


side) to the steering knuckle with the 2 bolts and 2 nuts.

Torque: 240 N·m (2447 kgf·cm, 177ft·lbf)

NOTICE:

While keeping the bolts from rotating, tighten the nuts.



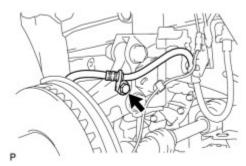
(c) Fully tighten the front support to front shock absorber

Torque: 47 N·m (479 kgf·cm, 35ft·lbf)

11. INSTALL FRONT SUSPENSION SUPPORT DUST COVER

(a) Install the front suspension support dust cover.

12. CONNECT FRONT FLEXIBLE HOSE



(a) Connect the front flexible hose to the steering knuckle with the bolt.

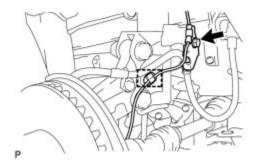
Torque: 19 N·m (192 kgf·cm, 14ft·lbf)

13. INSTALL FRONT SPEED SENSOR

(a) Install the front speed sensor and front flexible hose to the front shock absorber with coil spring with the bolt and clamp.

Torque: 19 N·m (192 kgf·cm, 14ft·lbf)

NOTICE:

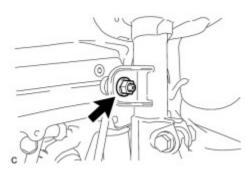


Do not twist the front speed sensor when installing it.

HINT:

Install the front flexible hose first and then the speed sensor wire harness bracket.

14. INSTALL FRONT STABILIZER LINK ASSEMBLY



(a) Install the front stabilizer link assembly to the front shock absorber with coil spring with the nut.

Torque: 74 N·m (755 kgf·cm, 55ft·lbf)

HINT:

If the ball joint turns together with the nut, use a hexagon wrench to hold the stud bolt.

15. INSTALL FRONT WHEEL

Torque: 103 N·m (1050 kgf·cm, 76ft·lbf)

- 16. INSTALL OUTER COWL TOP PANEL SUB-ASSEMBLY
- 17. INSTALL COWL BODY MOUNTING REINFORCEMENT RH
- 18. INSTALL NO. 2 HEATER AIR DUCT SPLASH SHIELD SEAL
- 19. INSTALL WATER GUARD PLATE RH
- 20. INSTALL WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY
- 21. STABILIZE SUSPENSION NFO
- 22. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT
- (a) Inspect and adjust the front wheel alignment ...

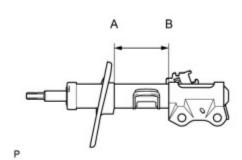




Last Modified: 10-5-2010	6.4 N	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000003GW014X
Title: FRONT SUSPENSION: FRONT SHOCK ABSORBER: DISPOSAL (2010 HS250H)		

DISPOSAL

1. DISPOSE OF FRONT SHOCK ABSORBER ASSEMBLY



(a) Position the front shock absorber assembly level with the piston rod fully extended. Using a drill, make a hole in the cylinder between A and B shown in the illustration to discharge the gas inside.

CAUTION:

Always use proper safety equipment and be careful when drilling because shards of metal fly about.

HINT:

The gas is colorless, odorless and non-poisonous.



