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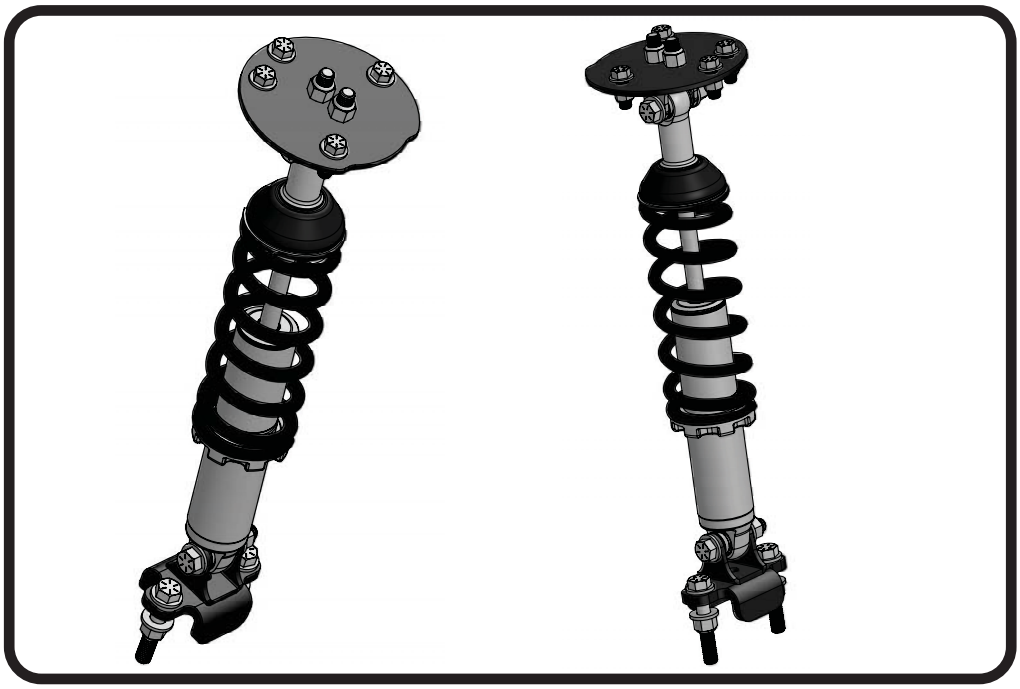
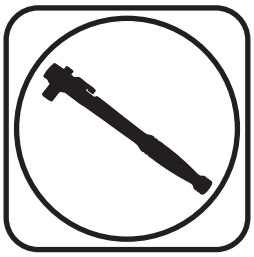
Installation Instructions

Part # 12293110/12293115 - 2015-2022 Ford F150 2WD/4WD HQ Front CoilOvers



Recommended Tools



2015-2022 Ford F150 2WD/4WD Front CoilOvers

Installation Instructions

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THIS KIT IS DESIGNED TO REPLACE THE OEM SHOCK/SPRING SETUP.

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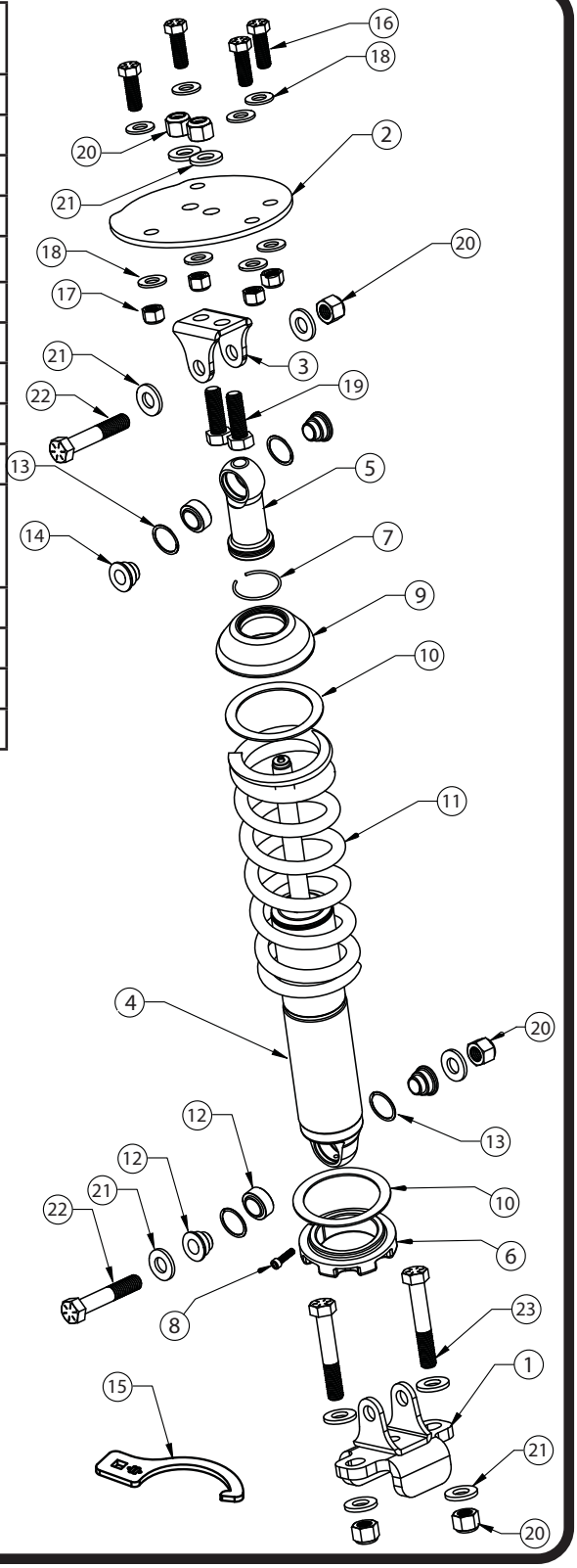
Installation Instructions

Major CoilOver Components .....In the box

Item #	Part #	Description	QTY
1	90003270	Lower CoilOver Mount	2
2	90003271	Upper CoilOver Mounting Plate	2
3	90002158	Upper CoilOver Mounting Bracket	2
4	982-10-805	5.2" Stroke HQ Series Shock	2
5	90002025	2.7" Shock Eyelet Assembly	2
6	234-15-200	Lower Spring Adjuster Nut	2
7	038-01-006-A	CoilSpring Plate Retaining Ring	2
8	99050001	Adjuster Nut Locking Screw	2
9	90002070	Dropped CoilSpring Cap	2
10	70010828	Delrin Spring Washer	4
11	59100650 (2WD) or 59100750 (4WD)	Coilspring 10" (2WD) 650lb - 2WD or Coilspring 10" (4WD) 650lb - 4WD	2 or 2
12	90001994	5/8" ID Shock Bearing	4
13	90001995	Shock Bearing Snap Ring	8
14	90002043	. 500 x .365 Shock Bearing Spacers	8
15	85000000	Spanner Wrench	1



HARDWARE LIST - Kit # 99010168

Item #	Part #	Description	QTY
UPPER MOUNT TO STRUT TOWER			
16	99431021	7/16"-14 x 1 1/4" Hex Bolt	8
17	99432010	7/16"-14 Nylok Nut	8
18	99433005	7/16" SAE Flat Washer	16
UPPER COILOVER MOUNT TO BRACKET			
19	99501053	1/2"-13 x 1 1/2" Hex Bolt	4
20	99502009	1/2"-13 Nylok Nut	4
21	99503014	1/2" SAE Flat Washer	4
SHOCK TO SHOCK MOUNT			
20	99502009	1/2"-13 Nylok Nut	4
21	99503014	1/2" SAE Flat Washer	8
22	99501064	1/2"-13 x 2 3/4" Hex Bolt	4
LOWER MOUNT TO CONTROL ARM			
20	99502009	1/2"-13 Nylok Nut	4
21	99503014	1/2" SAE Flat Washer	8
23	99501004	1/2"-13 x 3" Hex Bolt	4

Disassembly

This CoilOver System is Designed to replace the factory Shocks and Springs.

The front OEM Shock and Spring assemblies will need to be removed from the front of the truck. **DO NOT DISASSEMBLE THE SHOCK/SPRING ASSEMBLY, THE COILSPRING IS UNDER COMPRESSION AND COULD CAUSE BODILY INJURY!**

1. Raise the vehicle and support it by the frame, allowing the suspension to hang freely. Remove the wheels.

2. Remove the shock/spring assembly from both sides of the truck. **DO NOT DISASSEMBLE THE SHOCK/SPRING ASSEMBLY, THE COILSPRING IS UNDER COMPRESSION AND COULD CAUSE BODILY INJURY!**

3. Disconnect the sway bar from the control arms. This allows the lower control arm to move easier during the CoilOver installation.

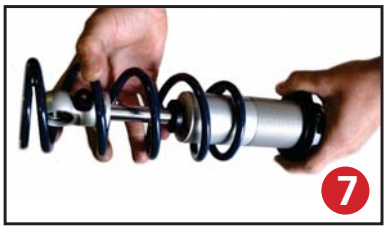
4. If replacing the OEM upper control arms, replace them in conjunction with the CoilOvers.

Getting Started.....

5. The CoilOvers need to be assembled before putting the shocks in the mounts. Assemble the shocks and springs using the instructions below.

CoilOver Assembly...

First, using the supplied lower adjuster nut (803-00-199) thread the nut onto the shock from the bottom side as seen in figure 6. Remove the plastic pellet that is in the split of the adjuster nut.



Next, install a delrin washer then coil spring over the top of the shock as seen in figure 7.

Before the upper spring mount can be installed screw the adjuster knob on the upper eye mount to the firmest setting (clockwise) as seen in figure 8. Then remove the Knob by holding it while removing the center screw.

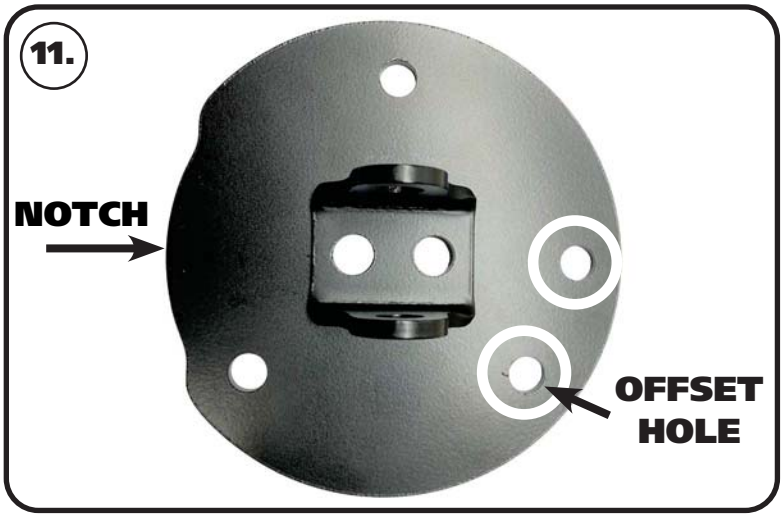
Once the knob is removed slide a Delrin washer over the eyelet. Next, slide the upper spring mount (803-00-199) over eyelet as seen in figure 9.

Install upper spring mount retainer clip (803-00-199) into the groove on the upper eyelet as seen in figure 10. Then, reinstall adjuster to complete assembly.

Install the locking screw in the adjuster nut before setting spring preload, but DO NOT tighten until the spring preload has been set. Set the spring preload after the CoilOver has been installed.

NOTE: Remember to adjust the shock valving before driving, the shock is currently set to full stiff.

Assembling Upper Mount



11. Line up the 2 mounting holes in the upper mounting flange with the 2 holes of the mounting bracket. The location of the offset hole is critical. Make sure it is located the same as **Image 11**. The front hole is a locating hole.

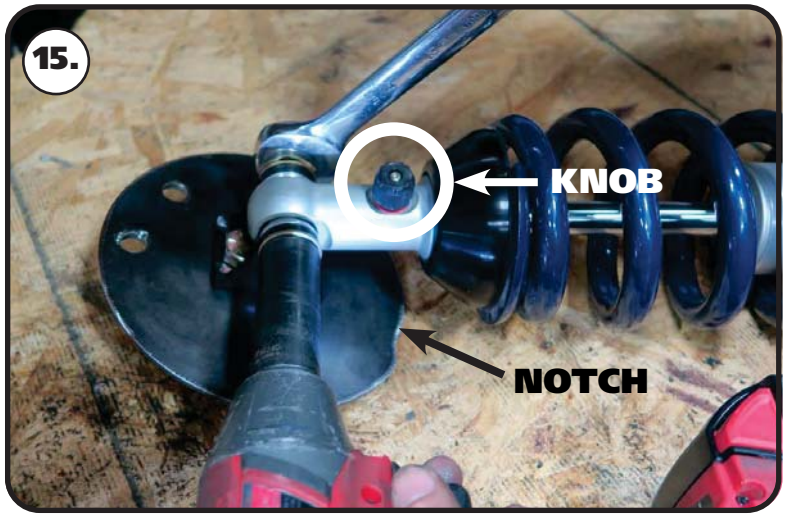
NOTE: The Upper Mounts are not side specific so they are the same for both sides of the truck.

12. Insert a 1/2"-13 x 1 1/2" bolt through each hole of the flange/mount. The bolts need to be installed with the bolt head in the upper bracket. Refer to **Images 12 & 13**.

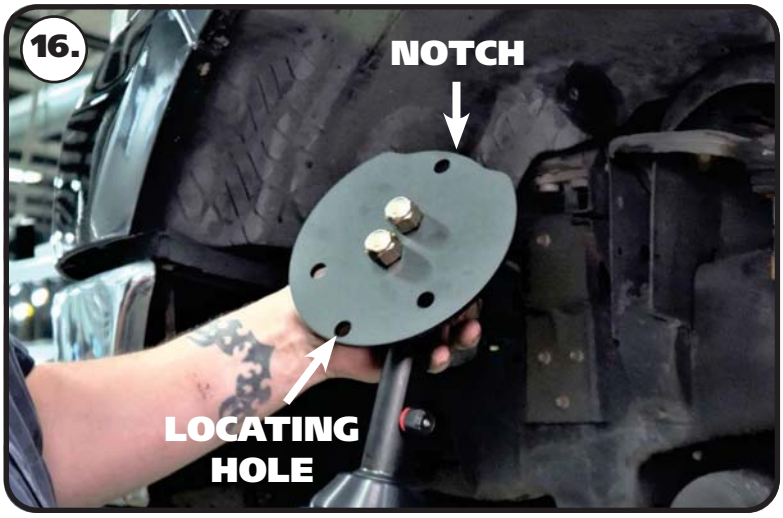
13. Install a 1/2" SAE flat washer & 1/2"-13 nylok nut on the threads of each bolt that is sticking through the mount. Torque to 75 ftlbs.

Assembling CoilOver

14. Install the 1/2" I.D. bearing spacers into the bearing in the shock eyelet. These spacers have a through hole that is 1/2" diameter. The small diameter of the spacers will insert into the shock bearing.

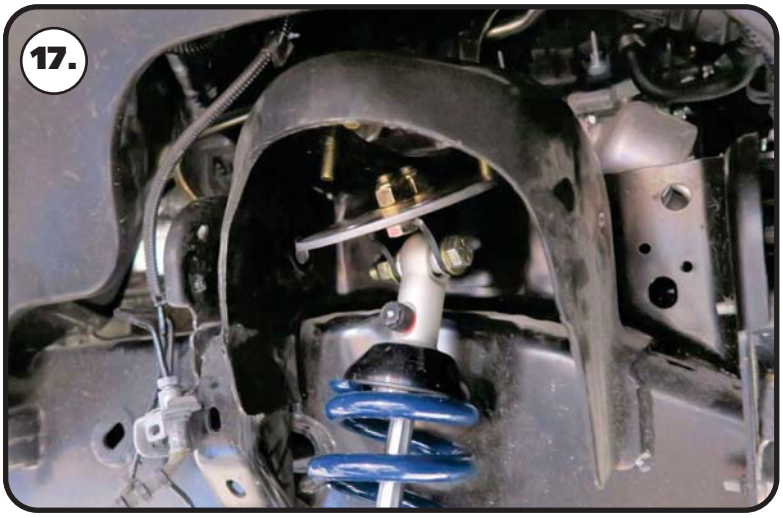


15. Insert the shock eyelet into the upper mount. **Install each CoilOver in the upper mount with the Adjusting Knob facing the opposite side as the notch in the upper plate**. Line up the shock bearing/spacers hole with the mounting holes of the upper mount. Install a 1/2" flat washer on a 1/2"-13 x 2 3/4" bolt. Insert a bolt/washer through the mount/shock. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt that are sticking through the mount. Torque the upper mounting hardware to 75 ftlbs.



16. The upper mount has 4 holes in the perimeter of the flange. The flange is also notched out on one side. The upper mount needs to be installed in the truck with the notch to the frame.

Installation of CoilOver Assembly



17. Position the mount/coilover in the truck. It will be placed in the OEM location. Line up the locating hole and 3 mounting holes.

18. Install a 7/16" flat washer on each of (4) 7/16"-14 x 1 1/4" hex bolts. Install the bolt/washer in the frame/mount from the top side with the threads pointing down. Install a 7/16" flat washer and 7/16"-14 nylok nut on the threads of each bolt sticking through the frame. Torque the hardware to 50 ftlbs. Repeat steps 11-18 on the remaining side.

19. The lower shock mount bolts to the lower control arm in the same location as the OEM shock. Sit the mount on the lower control arm, aligning the mounting holes with the shock mounting holes

Installation of CoilOver Assembly

20. . Install a 1/2" flat washer on each of (2) 1/2"13 x 3" hex bolts. Insert a bolt/washer in each mounting hole.

21. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of each bolt sticking through the control arm. Torque the hardware to 75 ftlbs.

22. Install the 1/2" I.D. bearing spacers into bearing in the shock body. These spacers have a through hole that is 1/2" diameter. The small diameter of the spacers will insert into the shock bearing.

Installation of CoilOver Assembly

23. Insert the shock into the lower mount. Line up the shock bearing/spacers hole with the mounting holes of the lower mount. Insert a 1/2"-13 x 2 3/4" bolt through the mount/shock.

24. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt that are sticking through the mount.

25. Repeat steps 19-24 on the other side of the truck.

26. Reattach the sway bar linkage. The lower sway bar linkage nut is torqued to 60 ft-lbs. The upper linkage nut is torqued 50-55 ft-lbs.

27. Verify all the hardware is tight before continuing to coilspring adjustment.

CoilSpring Adjustment

28. Preload the springs of the CoilOver 3/4" to start. **Steps 28a - 28e** will assist you with preloading the coilspring. You may need to adjust the amount of preload in the spring, but this will be determined after the truck has been sat on the ground.

28a. Verify the adjuster nut locking screw is installed in the adjuster nut, but not tight.

28b. Screw the spring adjuster nut up the shock body until it is snug against the spring. You should NOT be able to move the spring up and down on the shock (0 preload). Verify the dropped upper coilspring cap is seated correctly on the upper shock eyelet.

28c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

28d. Using a spanner wrench, thread the adjuster up the shock an additional 3/4" (from the measurement you took in step 2) to preload the spring.

28e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

29. Reinstall the front wheels and tires and set the front of the truck back on the ground.

30. After entire weight of truck is on the wheels, jounce the suspension and roll the truck forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

31. If you determine you need to adjust the ride height of the front suspension after getting the truck on the ground, **Steps 31a - 31e** will assist you in adjusting the ride height.

31a. Raise the vehicle and support it by the frame, allowing the suspension to hang freely. You do NOT need to remove the front wheels, but you may want to turn the steering wheel to gain better access to the CoilOver.

31b. Loosen the locking screw in the adjuster nut, but do not remove the locking screw.

31c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

31d. Using a spanner wrench, thread the adjuster up or down the shock to obtain the correct ride height. One complete revolution of the adjuster nut is approximately 1/8" at the wheel. Threading the adjuster nut up the shock will raise the ride height, threading it down will lower the ride height.

31e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

32. Turn the steering wheel until the front wheels are straight and set the front of the truck back on the ground.

33. After entire weight of truck is on the wheels, jounce the suspension and roll the truck forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

34. Recheck your ride height. If you need to readjust, repeat **Steps 31-33**.

Alignment

35. Any time you replace front suspension components, you should have the alignment checked.

Suggested Alignment Specs:

Camber:	-.5 degrees
Caster:	+3.0 to + 5.0 degrees
Toe:	1/16" to 1/8" toe in

Shock Adjustment 101- Single Adjustable

Rebound Adjustment:
How to adjust your new shocks.
The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.
You must first begin at the ZERO setting, then set the shock to a medium setting of 12.

-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.

-Now turn the rebound adjuster knob counter clock wise 12 clicks. This sets the shock at 12. (settings 21-24 are typically too soft for street use).

Take the vehicle for a test drive.

-if you are satisfied with the ride quality, do not do anything, you are set!

-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

Take the vehicle for another test drive.

-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

Note:
One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.