

PART #	DESCRIPTION
48601	21-UP BRONCO HOSS 1.0 PKG 2.5 EXP FRONT COILOVER

COMPONENTS INCLUDED	
144934 21-UP BRONCO FRONT C/O 2.5 EXP IR UNPKG	
HARDWARE INCLUDED	
(1) 140004 2.5 EXP BEAUTY PLATE (1) 158010 22 TUNDRA URETHANE COIL SEAT (1) 294060 EXP COIL MOUNT KIT	(1) 605360 1/2-20 FLANGED NYLOCK NUT GR8 (1) 611080 FORD CO HARDWARE KIT SINGLE
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH RATCHET EXTENSIONS SPRING COMPRESSOR PRY BAR FLAT BLADE SCREWDRIVER EXTERNAL SNAP RING PLIERS	DRILL 1/2" DRILL BIT 5/8" SOCKET / WRENCH 3/4" SOCKET / WRENCH 8MM SOCKET / WRENCH 15MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 24MM SOCKET / WRENCH
TECH NOTES	
1. SPRING PERCH LEVEL PER MODEL/TRIM, SASQUATCH, NON-SAS, OUTBANKS, ETC. 2. IF RUNNING 37" TIRES, USE PART# 611082. 3. ESTIMATED INSTALL TIME: 3 HOURS	



WARNING!

**** READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED SEVERE FRAME, SUSPENSION AND TIRE DAMAGE MAY RESULT TO THE VEHICLE!**

**** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.**

**** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLATION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.**

INSTALLATION

1. Lift vehicle and securely place heavy duty jack stands under the manufacturer recommended lifting locations for the front of the vehicle. Take care when lifting the vehicle, and allow 3-4" of ground clearance from the tire. Remove front tires. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the wheels.

2. Disconnect sway bar from both lower control arms using a 6mm and 21mm wrench. Rotate sway bar and links up away from the lower arm. [FIGURE 1]



FIG.1

3. Remove the sway bar skid plate to gain access to the sway bar brackets (4 x 15mm bolts). [FIGURE 2]

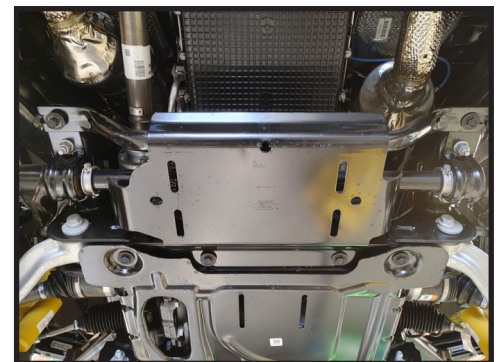
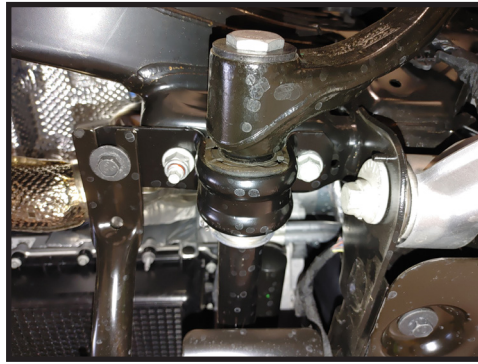


FIG.2

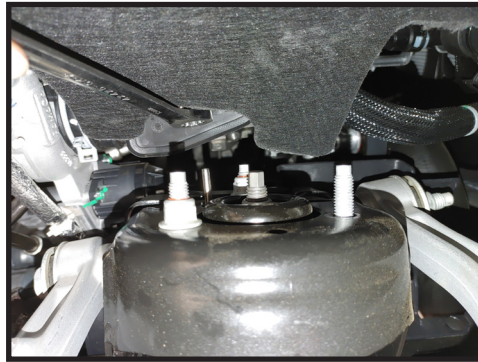
4. Remove one side of the sway bar from the frame to gain access to the lower control arm bolts (18mm). **[FIGURE 3]**

FIG.3



5. Support the lower control arm and remove the bolts from the frame. Remove the 15mm nuts from the top of the coilover. **[FIGURE 4]**

FIG.4



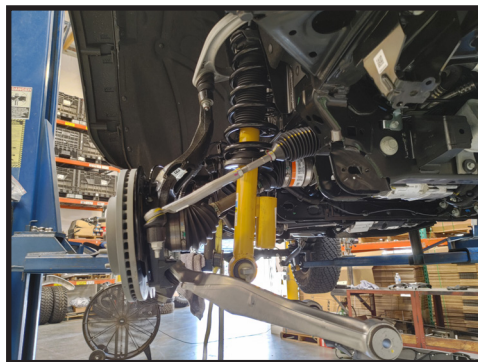
6. Remove the 18mm nuts from the bottom of the coilover. **[FIGURE 5]**

FIG.5



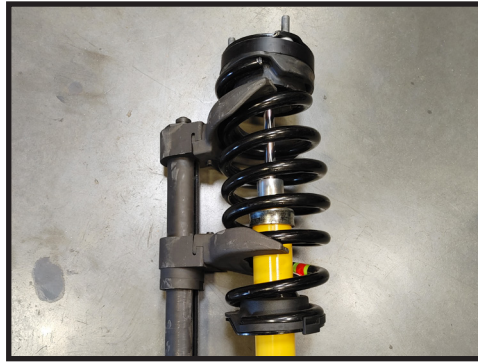
7. Remove the lower control arm pivot bolts using a 24 and 21mm. Lower the arm down so the coilover can be removed. Mark the coil if the tag has been removed. The tag/mark should be facing the frame. You may need to pry on the arm/coilover to get the lower studs out of the arm **[FIGURE 6]**

FIG.6



8. With the stock coilover removed, use a spring compressor and 18mm socket to remove the spring. If the threads on the top of the shaft are rusted, apply a little WD-40 or similar lubricant to help with the nut removal. Make note of the orientation of the upper mount and the locating pin. [FIGURE 7]

FIG.7



9. Set the factory coilover aside. Grab the new Icon EXP coilover and install the spring perch snap ring, spring perch and spring isolator. Refer to page 7 for the groove options for your particular Bronco and trim level. [FIGURE 8, 9, 10, 11]

FIG.8



FIG.9



FIG.10



FIG.11



10. If running 37" tires tall tires, remove the spacer on top of the foam bump stop and install part# 611082. [FIGURE 12 & 13]

FIG.12

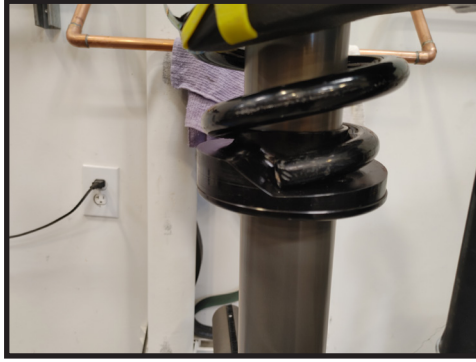


FIG.13



11. Install the factory coil spring onto the body in the same direction as factory. The tag/mark on the coil should be facing the frame when installed on the truck. Make sure the spring is sitting correctly on the spring isolator. The front of the Icon EXP can be determined by the lower barpin, the short end faces the front, the longer end faces the rear. [FIGURE 14]

FIG.14



12. Take the factory upper mount and drill out the center hole to 1/2". [FIGURE 15]

FIG.15



13. With the spring on the shock, compress it down until the threads of the shaft are visible and the upper mount can be installed. [FIGURE 16]

FIG.16



14. Install the upper mount onto the shaft and make sure the orientation is correct and the same as factory. Also be sure the isolator is positioned correctly with the spring. [FIGURE 17]

FIG.17



15. Install and tighten the 1/2-20 flanged nylock nut to 40 ft-lbs. An 8mm wrench can be used to keep the shaft from spinning.

16. Remove the spring compressor.

17. Install the Icon EXP, positioning the upper mount first and lining up the 3 studs and one locating pin, loosely install the 3 nuts. Then position the lower bar-pin into place, making sure the longer part of the bar-pin is facing the rear of the vehicle. Install the 7/16" hardware as shown. [Torque to 50 ft-lbs]. [FIGURE 18, 19, 19a]

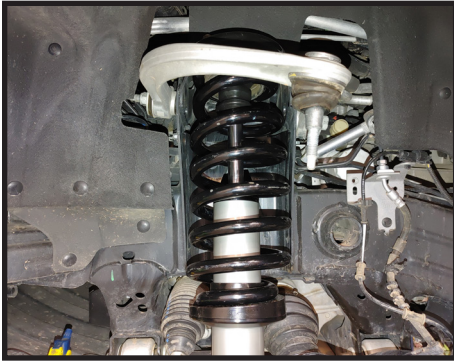


FIG.18

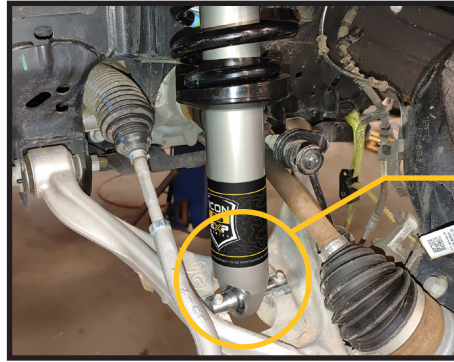


FIG.19

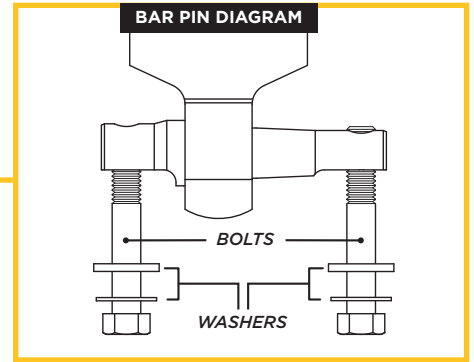


FIG.19a

18. Reconnect the lower control pivots into the frame. Snug the bolts up, they will need to be tightened once the vehicle is back on its own weight.

19. With the lower arm back in place, remove the nuts on the upper mount, and install the beauty plate as shown. Tighten the 15mm nuts to factory spec. [FIGURE 20 & 21]



FIG.20



FIG.21

20. If the tie rod was removed, reconnect it now with a 21mm.

21. If the upper control arm was removed, reconnect it with a 18mm. If an Icon UCA was purchased, refer to those instructions now for proper install.

22. Reconnect the swaybar in reverse order of removal. [FIGURE 22]



FIG.22

23. Repeat process on passenger side.

24. Get vehicle professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

2.5 VS SERIES SHOCK & COILOVER TECHNICAL INFORMATION

MAINTENANCE

ICON shock absorbers are a high quality rebuildable race style shock absorber designed for optimal performance. With a unit of this caliber on your vehicle, routine maintenance is required to keep them looking and operating in like new condition. Residual oil and assembly lube may be present at all seal paths from the factory out of the box and is considered normal. Pooling of oil however is not acceptable at any time and one should contact the ICON dealer where purchased.

BELOW ARE GUIDELINES BASED ON HOW YOU USE YOUR VEHICLE BUT YOUR MILEAGE MAY VARY:

STREET USE:

- Send in for factory servicing every 40,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Remove any buildup of road salt, mud, or debris from shocks and coil springs anytime accrued
- Clean with mild soap and water with each oil change or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure yearly. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- DO NOT apply any type of lube to the upper and lower bearings.

STREET/DIRT:

- Send in for factory servicing every 15,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Clean with mild soap and water with each oil change, offroad trip, or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure each dirt outing. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- DO NOT apply any type of lube to the upper and lower bearings.

DIRT USE:

- Send in for factory servicing every 1,000 miles.
- Check nitrogen pressure each outing. (252004 charge needle assembly available at any ICON distributor)
- Remove any buildup of mud or debris from shocks and coil springs after every outing.

SELF-SERVICE:

- Contact ICON for service kits & tools at (951) 689-4266.

PRODUCT REGISTRATION

Please visit: <http://www.iconvehicledynamics.com/tech-support/registration/> to register your product.

ICON VEHICLE DYNAMICS SHOCK ABSORBER WARRANTY

This shock absorber has a 1 year warranty against any manufacturer's defects. If a shock fails within the initial year of ownership, the shock must be shipped to ICON Vehicle Dynamics for inspection and service. If a shock is inspected and it has been determined the shock failed due to neglect, damage caused by improper installation or any other reason besides "normal wear and tear", the owner of said shock is responsible for all service costs. This includes labor, parts, and shipping.

ICON Vehicle Dynamics warrants to the original retail purchaser who owns the vehicle on which the product was originally installed. ICON Vehicle Dynamics does not warrant the product for finish, alterations, modifications and/or installation contrary to ICON Vehicle Dynamics instructions. ICON Vehicle Dynamics products are not designed, nor are they intended to be installed on vehicles used in race applications, for racing purposes or for similar activities. (A "race" is defined as any contest between two or more vehicles, or a contest of one or more vehicles against the clock, whether or not such contest is for a prize). This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warranty are sales outside of the United States of America and Canada.

ICON Vehicle Dynamics' obligation under this warranty is limited to the repair or replacement, at ICON Vehicle Dynamics' discretion, of the defective product. Any and all costs of removal, installation or re-installation, freight charges and incidental or consequential damages are expressly excluded from this warranty. Items that are subject to wear are not considered defective when worn and are not covered.

ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.

To send a shock in for warranty please visit our website <http://www.iconvehicledynamics.com/tech-support/shock-service/>



ICON VEHICLE DYNAMICS®
PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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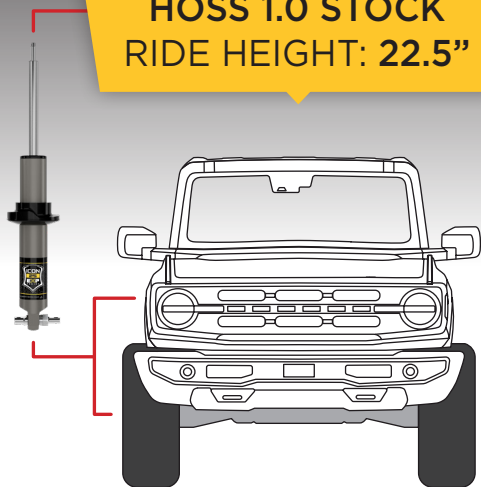


ICON BRONCO FRONT EXP GROOVE SPECS

FENDER TO HUB MEASUREMENT

(FENDER FLARE REMOVED)

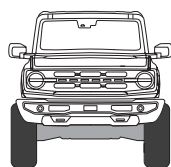
HOSS 1.0 STOCK
RIDE HEIGHT: 22.5"



HOSS 2.0 STOCK
RIDE HEIGHT: 23.5"



GROOVE 1:
HOSS 1.0



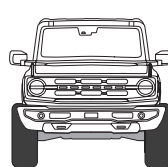
1.375" LIFT

GROOVE 2:
HOSS 1.0



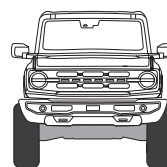
3" LIFT

GROOVE 3:
HOSS 2.0



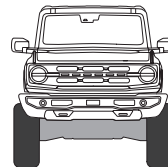
Stock Height

GROOVE 4:
HOSS 2.0



1.375" LIFT

GROOVE 5:
HOSS 2.0



2" LIFT

GROOVE 1 & 2
ARE FOR HOSS 1.0
SPRINGS ONLY

IF YOU USE ANY OTHER
GROOVE, THE FACTORY
SPRING CAN BE DAMAGED.

GROOVE 3-5
ARE FOR HOSS 2.0
SPRINGS ONLY

IF YOU USE ANY OTHER
GROOVE, THE FACTORY
SPRING CAN BE DAMAGED.



PART #	DESCRIPTION
48611	21-UP BRONCO HOSS 1.0 PKG 2.5 REAR EXP COILOVER

COMPONENTS INCLUDED

(1) 144935 21-UP BRONCO REAR C/O 2.5 EXP IR UNPKG

HARDWARE INCLUDED

(1) 158010 22 TUNDRA URETHANE COIL SEAT
(1) 294060 EXP COIL MOUNT KIT

(1) 605360 1/2-20 FLANGED NYLOCK NUT GR8

TOOLS REQUIRED

JACK
JACK STANDS
RATCHET, EXTENSIONS
TORQUE WRENCH
PHILLIPS SCREWDRIVER
BODY PANEL CLIP REMOVAL TOOL
SPRING COMPRESSOR

DRILL
1/2" DRILL BIT
EXTERNAL RETAINING RING PLIERS
3/4" SOCKET / WRENCH
8MM SOCKET / WRENCH
15MM SOCKET / WRENCH
27MM SOCKET / WRENCH

TECH NOTES

1. YOUR ICON COILOVER ASSEMBLIES COME FACTORY CHARGED TO 250 PSI. RELEASING NITROGEN PRESSURE MAY LEAD TO SHOCK MALFUNCTION AND REDUCED RIDE QUALITY. FAILURE CAUSED BY LOW NITROGEN PRESSURE IS NOT COVERED UNDER ICON'S WARRANTY POLICY.

2. SEE PAGE 6 FOR EXP SHOCK GROOVE SPECS.



WARNING!

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**** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.**

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INSTALLATION

1. Lift vehicle and securely place heavy duty jack stands under the manufacturer recommended lifting locations for the front of the vehicle. Take care when lifting the vehicle, and allow 3-4" of ground clearance from the tire. Remove front tires. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the wheels.

2. Remove Fender flare. Turn the 1/4 turn fasteners counter clockwise to release the flare. Then pull on flare and it will pop off the vehicle.



FIG.1

3. Remove inner fender liner. There are 10 plastic phillip head screw clips. 3 small phillip screws, 1 (driver side), 2 (passenger side) wing nuts to remove. [FIGURE 1 & 2]



FIG.2

- 4.** Support the rear axle. Remove upper shock mount nuts (15mm). [FIGURE 3]

FIG.3



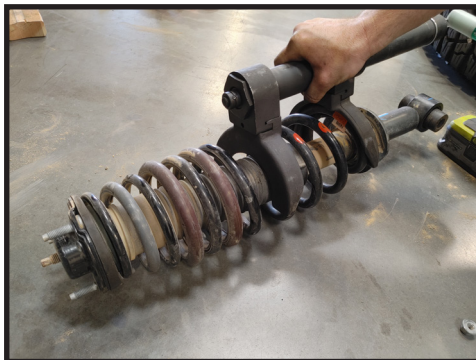
- 5.** Remove lower shock bolt and nut using a 27mm and remove the factory coilover. [FIGURE 4]

FIG.4



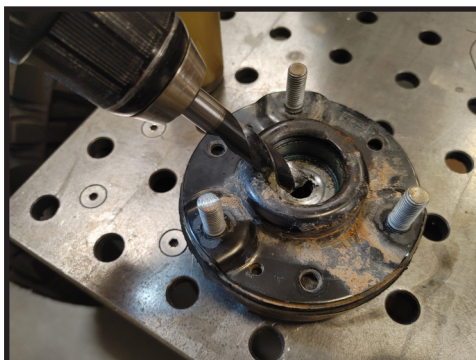
- 6.** Use a suitable spring compressor to compress the spring enough to remove the shaft nut inside the upper mount, using a 18mm. (The spring compressor pictured can be found on amazon.) mark the front of the upper mount, so it can be reinstalled the correct way. [FIGURE 5]

FIG.5



- 7.** With the upper mount removed, use the drill and 1/2" drill bit to open up the center hole to fit onto the Icon EXP. [FIGURE 6]

FIG.6



8. Take the Icon EXP shock and install the supplied snap ring onto the body in the preferred groove (Refer to page 6 for the groove options for your particular Bronco trim/Hoss package). Slide the supplied aluminum spring perch over the body as shown. Then slide the urethane coil seat onto the perch. [FIGURE 7, 8, 9, 10]

FIG.7



FIG.8



FIG.9



FIG.10



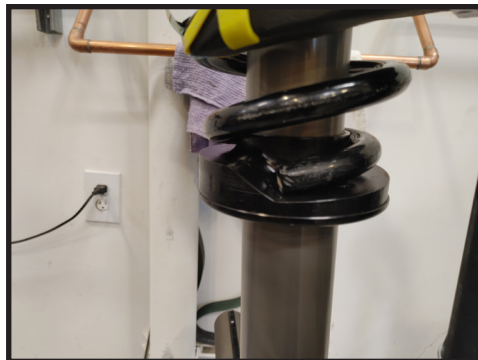
9. Install the supplied foam bumpstop with the tapered side facing the body, as shown. [FIGURE 11]

FIG.11



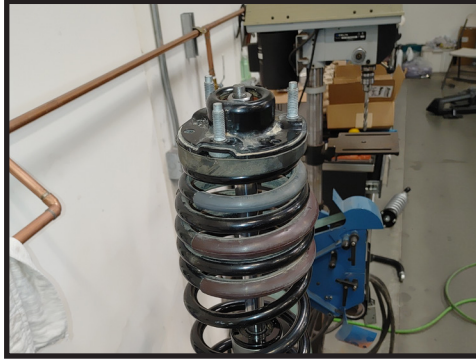
10. Install the factory spring onto the body, making sure the mark on the spring is facing the front of the shock. (The rear can be determined by the brass charge port.) Make sure the coil seat and end of the coil are correctly oriented. [FIGURE 12]

FIG.12



11. Compress the spring and install the factory upper mount, and tighten the supplied 1/2" flanged nylock nut with a 3/4" wrench/socket and an 8mm wrench to keep the shaft from spinning. Torque to 40-ft lbs. Make sure the mark on the upper mount is facing the front and the coil seat is matching up to the coil correctly. [FIGURE 13]

FIG.13



12. Remove the spring compressor and install the shock onto the truck, upper mount into the frame, and loosely install the 3 factory nuts. [FIGURE 14 & 15]

FIG.14



FIG.15

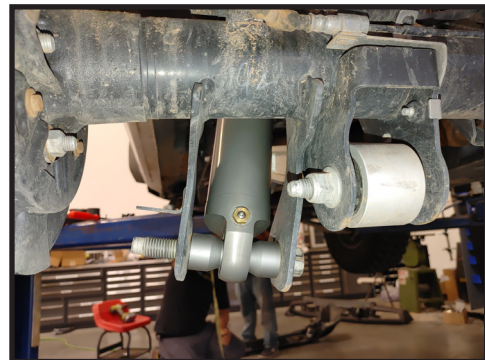


13. Install the lower spacers into the shock and line up the mount to slide the bolt into place. Torque bolt to factory spec with a 27mm. [FIGURE 16 & 17]

FIG.16



FIG.17



14. Torque the 3 upper mount nuts to factory spec with a 15mm. [FIGURE 18]

FIG.18



15. Reinstall the fender liner in reverse order as removal.

16. Repeat steps on passenger side.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.
RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

2.5 VS SERIES SHOCK & COILOVER TECHNICAL INFORMATION

MAINTENANCE

ICON shock absorbers are a high quality rebuildable race style shock absorber designed for optimal performance. With a unit of this caliber on your vehicle, routine maintenance is required to keep them looking and operating in like new condition. Residual oil and assembly lube may be present at all seal paths from the factory out of the box and is considered normal. Pooling of oil however is not acceptable at any time and one should contact the ICON dealer where purchased.

BELOW ARE GUIDELINES BASED ON HOW YOU USE YOUR VEHICLE BUT YOUR MILEAGE MAY VARY:

STREET USE:

- Send in for factory servicing every 40,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Remove any buildup of road salt, mud, or debris from shocks and coil springs anytime accrued
- Clean with mild soap and water with each oil change or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure yearly. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- DO NOT apply any type of lube to the upper and lower bearings.

STREET/DIRT:

- Send in for factory servicing every 15,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Clean with mild soap and water with each oil change, offroad trip, or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure each dirt outing. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- DO NOT apply any type of lube to the upper and lower bearings.

DIRT USE:

- Send in for factory servicing every 1,000 miles.
- Check nitrogen pressure each outing. (252004 charge needle assembly available at any ICON distributor)
- Remove any buildup of mud or debris from shocks and coil springs after every outing.

SELF-SERVICE:

- Contact ICON for service kits & tools at (951) 689-4266.

PRODUCT REGISTRATION

Please visit: <http://www.iconvehicledynamics.com/tech-support/registration/> to register your product.

ICON VEHICLE DYNAMICS SHOCK ABSORBER WARRANTY

This shock absorber has a 1 year warranty against any manufacturer's defects. If a shock fails within the initial year of ownership, the shock must be shipped to ICON Vehicle Dynamics for inspection and service. If a shock is inspected and it has been determined the shock failed due to neglect, damage caused by improper installation or any other reason besides "normal wear and tear", the owner of said shock is responsible for all service costs. This includes labor, parts, and shipping.

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ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.

To send a shock in for warranty please visit our website <http://www.iconvehicledynamics.com/tech-support/shock-service/>



ICON VEHICLE DYNAMICS®
PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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ICON BRONCO REAR EXP GROOVE SPECS

FENDER TO HUB MEASUREMENT

(FENDER FLARE REMOVED)

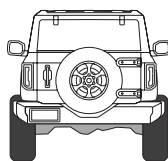
HOSS 1.0 STOCK
RIDE HEIGHT: 23.75"



HOSS 2.0 STOCK
RIDE HEIGHT: 25"



GROOVE 1:
HOSS 1.0



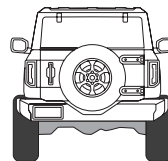
1.5" LIFT

GROOVE 2:
HOSS 1.0



2.25" LIFT

GROOVE 2:
HOSS 2.0



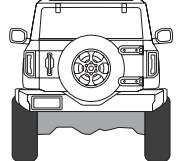
Stock Height

GROOVE 3:
HOSS 2.0



1.375" LIFT

GROOVE 4:
HOSS 2.0



1.75" LIFT

GROOVE 1 & 2
ARE FOR HOSS 1.0
SPRINGS ONLY

IF YOU USE ANY OTHER
GROOVE, THE FACTORY
SPRING CAN BE DAMAGED.

GROOVE 2-4
ARE FOR HOSS 2.0
SPRINGS ONLY

IF YOU USE ANY OTHER
GROOVE, THE FACTORY
SPRING CAN BE DAMAGED.

