



@MTSOFFROAD

TECH SUPPORT: (602) 272-5009 (602) 272-5009 INFO@MTSOFFROAD.COM



MODEL

SHOCK TYPE

2018 +

TURBO S

2

VELOCITY

DISASSEMBLY

FRONT SHOCK & SPRING REMOVAL

- 1. Jack up the front of the car until arms are at full droop (fully extended)
- 2. Loosen the top shock bolt 18 mm. Shocks are corner specific, be sure to label them for removal.
- Loosen the bottom shock bolt 18 mm. Save all factory hardware It will be reused later during the install process
- Repeat steps 2 and 3 for the opposite side
- Remove shocks from car (make sure jack is secured)
- Compress front springs for removal

Tech Tip: Use the flat blade of a screwdriver to pry down foam bump stop. It is important to not damage or scratch the shock shaft during this process

- 7. Remove factory spring perch and all springs. Keep all spring perches together
- 8. Remove and discard the factory spring divider. This is the plastic piece separating the springs and it will be replaced with a new MTS Off-Road Spring Divider that has been provided in your Spring Kit
- 9. Repeat steps 5 8 for the opposite side

REAR SHOCK & SPRING REMOVAL

- 10. Jack up the rear of the car until arms are at full droop (fully extended)
- 11. Loosen all 4 rear shock bolts 18 mm. Shocks are corner specific, be sure to label them for removal. Save all factory hardware - It will be reused later during the install process
- 12. Compress rear springs for removal

Tech Tip: Use the flat blade of a screwdriver to pry down foam bump stop. It is important to not damage or scratch the shock shaft during this process

- 13. Remove factory spring perch and all springs. Keep all spring perches together
- 14. Remove and discard the factory spring divider. This is the plastic piece separating the springs and it will be replaced with a new MTS Off-Road Spring Divider that has been provided in your Spring Kit. Repeat steps 12 - 14 for the opposite side





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EAR

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VELOCITY

SET ADJUSTMENTS

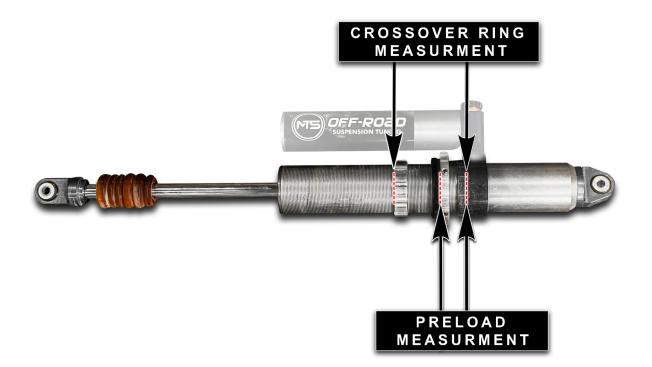
PRELOAD & CROSSOVER MEASUREMENTS

- 15. Put provided plastic adapter on rear preload nut before installing crossover
- 16. Set the preload for all front and rear shocks by measuring from shock end cap to spring contact point
- 17. Set the crossover ring measurement for all the front shocks by measuring the shock end cap to crossover ring contact point
- 18. Tighten crossover ring screws 7/64"

PRELOAD 3 1/4" **FRONT** REAR

CROSSOVER

FRONT 5 ½" 4 3/4"







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INSTALLATION

FRONT SPRING ASSEMBLY

- 19. Assemble the front shock with new tender spring on first
- 20. Install new spring dividers that is provided in your Spring Kit with the shorter end closest to the cross over ring (top of shock)
- 21. Install new main spring by rotating (clocking) the spring ends 180 degrees so they are on the opposite sides of the spring divider
- 22. Compress spring assembly and install spring perch
- 23. Release spring tension from spring assembly
- 24. Repeat steps 19 23 for the opposite side

FRONT SHOCK INSTALL

25. Reinstall the front shocks using your factory hardware that was saved from the disassembly. Do not tighten factory bolts yet - the shocks may have to come off of the car for later adjustments. Your reservoir should be facing towards the rear of the car. Keep washer and nylock nuts together for final adjustments

REAR SPRING ASSEMBLY

- 26. Assemble the rear shock with new tender spring on top
- 27. Install new spring dividers that are provided in your Spring Kit with the LONGER END closest to the cross over ring (top of shock)
- 28. Install new main spring by rotating (clocking) the spring ends 180 degrees so they are on the opposite sides of the spring divider. Put the second plastic spring adapter on the mainspring before spring perch
- 29. Compress spring assembly then install spring perch
- 30. Release spring tension from spring assembly
- 31. Repeat steps 26 30 for the opposite side

REAR SHOCK INSTALL

32. Reinstall the rear shocks using your factory hardware that was saved from the disassembly. Do not tighten factory bolts yet, the shocks may have to come off of the car for later adjustments







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VELOCITY

FINAL ADJUSTMENTS

- 33. Settle the car by driving it in reverse and then forward at least 15 feet, so the suspension can be settled into place
- 34. Find the axle angle using an angle finder

Tech Tip: Use your smartphone to measure the axle angle with the free easy to use mobile app called "Measure". If you own an Android - you will need to download the "Measure" app.

If you own an iPhone - the "Measure" app should already be installed onto your mobile device







35. Your front and rear axles should measure to 14 degrees (+ or - 1 degree). If your axle angle is less than 14 degrees then increase the preload, if it is more than 14 degrees then decrease the preload

WARNING: If your measurements do not meet the target axle angle, then your car will not perform properly

- 36. After the target axle angle has been met, tighten bolts utilizing factory hardware. You should not have any extra hardware left over at this point
- 37. Double check your work and enjoy the ride