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52050 INSTALLATION INSTRUCTIONS

7-23-2021 REV.B

PART #	DESCRIPTION
52050	TOYOTA REAR 8.0" U-BOLT KIT

COMPONENTS INCLUDED

N/A	
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HARDWARE INCLUDED

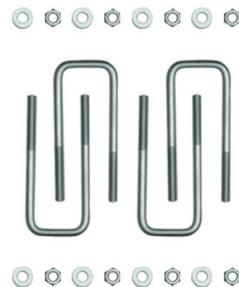
(4) 159689 8.0" SQ TOP U-BOLT 9/16-18 W/NUTS /WASHERS/TACO/TUNDRA/COLORADO	
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TOOLS REQUIRED

JACK JACK STANDS TORQUE WRENCH	7/8" SOCKET / WRENCH 19MM SOCKET / WRENCH
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TECH NOTES

N/A	
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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. Using a properly rated jack, raise the rear of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the rear wheels.
2. Remove the lower rear shock bolts using a 19mm socket/wrench.
3. Use a jack to support the axle then loosen and remove the driver side U-bolts using a 19mm socket/wrench. Make sure the axle is well supported or it could fall when the U-bolts are removed.
4. Slowly lower the axle away from the springs. Make desired changes to leaf spring. Refer to leaf spring install instructions.
5. Use a jack to raise the axle and guide the spring center pin into the hole on the top of the axle. Install supplied U-bolts washers and nuts using a 7/8" socket/wrench. [Torque to 90ft-lbs]
6. Repeat steps 2-5 on opposite side of the vehicle.
7. Reinstall shock to the factory lower shock mount using a 19mm socket/wrench. [Torque to factory spec]
8. Reinstall wheels and lower to the ground. [Torque to factory spec]

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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.

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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.



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PART #	DESCRIPTION
57823CP	07-21 TUNDRA RXT REAR 2.5 VS RR CDCV PAIR

COMPONENTS INCLUDED

(2) 154884RC-AL 07-21 TUNDRA RXT REAR 2.5 AL RR CDCV UPKG	(2) 611008 RXT STEM BUSHING KIT (1) 611051 #36 1.188-2.750 STAINLESS HOSE CLAMP KIT (4)
(2) 250003 10" RESERVOIR MOUNTING PLATE	

HARDWARE INCLUDED

(2) 605131 3/8" SPLIT LOCK WASHER	(2) 605144 3/8-12 X .750 SELF TAPPING BOLT
611008 RXT STEM BUSHING KIT	

(2) HEAVY DUTY 9/16" ID STEM BUSHING	(2) M12-1.25 JAM NUT
(2) HEAVY DUTY 9/16" ID STEM WASHER	

TOOLS REQUIRED

JACK JACK STANDS SANDER DRILL 11/32" DRILL BIT	TORQUE WRENCH 5/16" SOCKET / WRENCH 9/16" SOCKET / WRENCH 17MM SOCKET / WRENCH 19MM SOCKET / WRENCH
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TECH NOTES

1. FAILURE TO SAND LOWER SHOCK MOUNT WILL CAUSE DAMAGE TO THE RETAINING RING OF THE SHOCK.
2. IF PLANNING TO INSTALL THE HYDRAULIC BUMP STOP KIT IN THE FUTURE, ALLOW FOR A LITTLE EXTRA HOSE SLACK WHEN MOUNTING THE SHOCK RESERVOIR.
3. YOUR ICON SHOCK ASSEMBLIES COME FACTORY CHARGED TO 150 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.


WARNING!

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INSTALLATION

1. Using a properly rated jack, raise the rear of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the rear wheels.
2. Remove the factory shock using (2) 17mm.
3. The lower shock mount will need to be trimmed to allow for clearance on the RXT shock. [FIGURE 1 & 2]


FIG.1

FIG.2

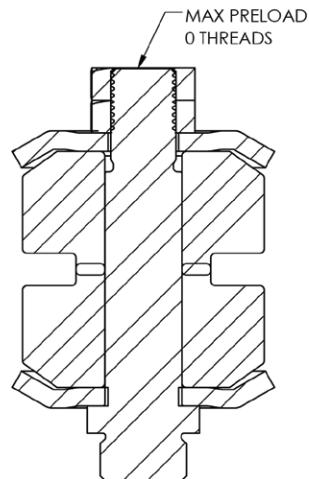
4. Paint any exposed metal to avoid corrosion.

5. Install the RXT shock using the factory lower bolt and a 17mm. Use a 19mm for the stem top. [FIGURE 3]



FIG.3

6. Install stem bushings and hardware as shown in the diagram: Install the first nut and fasten until there are enough exposed threads available to secure the second jam nut. Install jam nut until it is flush with the top of the stem (DO NOT OVERTIGHTEN) and torque to 50 ft-lbs while holding the lower nut with a 19mm wrench. Do not overtighten bushing assembly, as this can lead to shock stem failure. Failure caused by incorrect installation of stem bushings and hardware is NOT covered under ICON's warranty policy.



7. Mount the reservoir bracket to the reservoir using the supplied hose clamps and a 5/16".

8. Hold the reservoir against the frame and mark the hole location of the mounting hole from the reservoir bracket (Be sure to account for the added slack needed if installing the ICON Hydraulic Bump Stop System #56108). [FIGURE 4]



FIG.4

9. Remove the reservoir bracket from the reservoir.

10. Center punch the hole location previously marked. Drill an 17/32" hole in the frame. Take care to not damage any lines running in the frame channel. [FIGURE 5 & 6]

FIG.5



FIG.6



11. Thread the holes using the supplied 3/8" self tapping bolts and a 9/16".

12. Mount the reservoir bracket using the self tapping bolts 605144 & 605131 washers.

13. Mount the reservoir to the bracket using a 5/16" and the supplied hose clamps. [FIGURE 7]

FIG.7



14. Install wheels and lower the vehicle back to the ground. [Torque lugs to factory spec]

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/>



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PART #	DESCRIPTION
58560DJ	07-UP TUNDRA BILLET UCA DJ KIT

COMPONENTS INCLUDED

(1) 157615 07+ TUNDRA BILLET UCA (DRIVER) (1) 157616 07+ TUNDRA BILLET UCA (PASS)

HARDWARE INCLUDED

(2) 157517BJ DELTA JOINT (1) 605968 VIBRATITE BLUE 2ML BULLET

HEIM SPACER KIT

(4) 157510 HEIM SPACER JM12 X 16MM X 2.875 (4) 157509 HEIM SPACER JM12 X 16MM X 1.875

DUST COVER COMPONENTS HARDWARE KIT

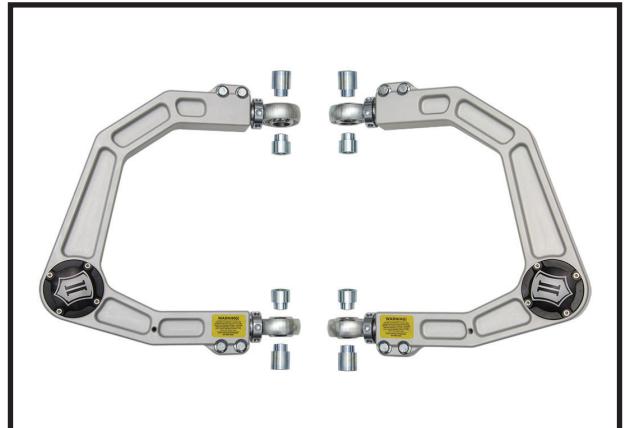
(2) 157507 BILLET UCA DUST COVER (8) 605002 6-32 X .50" SHCS 18-8 (2) 155110 -032 O-RING

TOOLS REQUIRED

JACK JACK STANDS LARGE HAMMER TORQUE WRENCH NEEDLE NOSE PLIERS ANTI-SEIZE (RECOMMENDED) 7/64" ALLEN WRENCH	10MM SOCKET / WRENCH 19MM SOCKET / WRENCH 21MM SOCKET / WRENCH 3/8" SOCKET / WRENCH 1/2" SOCKET / WRENCH 7/8" SOCKET / WRENCH
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TECH NOTES

1. DO NOT EXCEED 1.875" ADJUSTMENT FROM THE CENTER OF THE ROD END TO THE EDGE OF THE BILLET UPPER CONTROL ARM. FAILURE CAUSED BY EXCESSIVE ADJUSTMENT WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY. REFER TO TECH NOTE PHOTO #2.
2. ICON DELTA JOINTS ARE PRE-GREASED FROM THE FACTORY. ICON RECOMMENDS GREASING THE DELTA JOINT EVERY 3,000 MILES (OR EVERY OIL CHANGE). ADD NEW GREASE UNTIL ALL OF THE OLD GREASE IS EXPELLED FROM THE BOTTOM OF THE DELTA JOINT ASSEMBLY, WIPE AWAY EXCESS WITH A RAG OR SHOP TOWEL.
3. IN RARE CASES, DEPENDING ON WHAT LIFT HEIGHT THE TRUCK IS SET TO, THE TIE ROD ENDS MAY NEED TO BE SHORTENED UP TO 3/16" FOR PROPER TOE ADJUSTMENT. REFER TO FIGURE 2 - 4.


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INSTALLATION

1. Using a properly rated jack, raise the front of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove front wheels.
2. Using a jack, slightly lift the lower control arm to prevent the suspension from being at full droop.
3. Disconnect the upper ball joint: remove the cotter pin securing the upper ball joint nut. Using a 19mm socket/wrench, loosen the nut to the end of the shank but do not remove entirely so that the nut protects the threads. Dislodge the taper by either using a ball joint separator or by striking the spindle on the outside of the taper with a large hammer or hand sledge.
4. Support the spindle so that it does not over extend the CV joints when detached.
5. Remove the ball joint nut and disconnect the upper arm from the spindle. Using a 10mm socket/wrench, disconnect the ABS line that is routed down the top of the arm.
6. Using a 21mm socket/wrench, remove the large upper control arm pivot bolt. This hardware will be reused, note direction and order of components. Remove the nut and washer from the rear side of the long pivot bolt. Carefully feed the bolt forward until it clears the front of the A-arm. Remove the stock upper control arm.
7. Install the new billet upper control arm into the chassis: Note the side and orientation of the arms, the Delta Joint should be oriented to the back of the vehicle and the 4 small holes for the dust cove should be pointing up. Carefully feed the pivot bolt through the pivots of the arm and through the pivot tube in the chassis and secure with the factory hardware. [Torque to factory spec]
8. Pivot the Delta Joint stem so that it is approximately inline with the taper bore in the spindle. The new Delta Joint will be very stiff the first time you move it.
9. Rotate the upper control arm downward and install the stem through the spindle taper. Install the supplied flanged nut on the taper pin. [Torque to 75 ft-lbs]
10. Using a 10mm socket/wrench reattach the ABS line to the threaded hole in the arm with the factory bolt.
11. ICON billet upper control arms utilize heim joints at each pivot to allow alignment using the adjusters on the upper control arms as well as cam adjusters on the lower control arms. The heims can be extended or contracted by turning the collar. Make sure that the slit in the collar lines up with the slit in the housing and then tighten the pinch bolts in an opposing pattern at least 3 times. [Torque to 35 ft-lbs]

12. Install wheels and lower vehicle back to the ground. [Torque to factory spec]

13. Install the dust cover: Make sure that the o-ring is seated in the groove in the cap and apply anti-seize to the (4) allen head screws. DO NOT over tighten.

14. Have the vehicle professionally aligned.

15. Once aligned, apply BLUE thread locker to the outer pinch bolts located on the sides of the arm. Tighten the pinch bolts in an opposing pattern at least 3 times. [Torque to 35 ft-lbs]

ALIGNMENT NOTE

ICON SHIPS THE BILLET UPPER CONTROL ARM AT THE MOST COMMON ALIGNMENT SETTING. ONE OF THE MAJOR PERFORMANCE ADVANTAGES OF AN ICON BILLET ADJUSTABLE UPPER CONTROL ARM IS THE ABILITY TO IMPROVE WHEEL POSITION. IMPROVING WHEEL POSITION IMPROVES FIREWALL CLEARANCE ALLOWING FOR LARGER TIRES AS THE SUSPENSION CYCLES. IN ORDER TO TAKE ADVANTAGE OF THIS FEATURE, DISCUSS WITH YOUR PROFESSIONAL ALIGNMENT SHOP THAT YOU WOULD LIKE TO CAM THE LOWER CONTROL ARM TO MAXIMIZE WHEEL POSITION FORWARD AND THEN ADJUST CAMBER AND CASTER WITH THE UPPER THREADED ADJUSTERS.

A MAJOR PERFORMANCE ADVANTAGE OF ALL ICON UPPER CONTROL ARMS IS INCREASED CASTER OVER STOCK. DISCUSS WITH A PROFESSIONAL ALIGNMENT SHOP THAT YOU WANT THE VEHICLE ALIGNED WITH THE CASTER AT THE MAX OF THE FACTORY RECOMMENDED SETTINGS IF YOU WANT TO TAKE ADVANTAGE OF THE DYNAMIC EFFECTS OF INCREASED CASTER.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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



[TECH NOTE #2]



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58755 INSTALLATION INSTRUCTIONS

4-20-2017 REV.B

PART #	DESCRIPTION
58755	07-UP TUNDRA 3.0 VS RR CDCV COILOVER KIT

COMPONENTS INCLUDED

(1) 154970RCD 07+ TUNDRA 3.0 RR CDCV (DRVR) (1) 154970RCP 07+ TUNDRA 3.0 RR CDCV (PASS)

HARDWARE INCLUDED

58755H HARDWARE KIT

(2) 154006 07+ TUNDRA RESI MOUNT	(2) 605847 M14-2.0 JAM NUT
(4) 159013 SLEEVE .750 X .563 X .125	(2) 605848 M14-2.0 X 50MM SOCKET SCREW
(4) 159014 SLEEVE .750 X .563 X .375	(4) 605926 ZIP TIE
(2) 295525 JM14MT PTFE MALE ROD END	(2) 605936 ADEL CLAMP VINYL COATED .400"
(2) 295526 JF14MT PTFE FEMALE ROD END	(2) 605937 PINCH CLAMP 15/16 - 11/16
(2) 605144 3/8-12 X .750 FLANGED SELF TAP	(1) 611025 07+ TUNDRA CO HARDWARE KIT PAIR
(2) 605812 M14-2.00 NYLOCK NUT	(1) 611051 STAINLESS STEEL HOSE CLAMP KIT

611025 COILOVER HARDWARE KIT

(8) 605101 3/8-16 X 1.000 HHCS	(8) 605131 3/8" SPLIT LOCK WASHER
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611051 HOSE CLAMP HARDWARE KIT

(4) 605931 1/2 X 2 1/16 - 3 #40 SS HOSE CLAMP

TOOLS REQUIRED

JACK	ANGLE GRINDER W/ CUTOFF WHEEL
JACK STANDS	5/16" SOCKET / WRENCH
TORQUE WRENCH	9/16" SOCKET / WRENCH
DRILL	12MM SOCKET / WRENCH
MARKER	17MM SOCKET / WRENCH
11/32" DRILL BIT	19MM SOCKET / WRENCH
11MM ALLEN WRENCH	22MM SOCKET / WRENCH
BLACK SPRAY PAINT	24MM SOCKET / WRENCH

TECH NOTES

1. YOUR ICON COILOVER ASSEMBLIES COME FACTORY CHARGED TO 150 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. YOUR ICON COILOVER ASSEMBLIES COME SHIPPED AT ICON'S RECOMMENDED RIDE HEIGHT. REDUCING DROOP TRAVEL WILL REDUCE RIDE QUALITY. DO NOT PRELOAD THE COIL BEYOND 1.25" OF EXPOSED THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE COIL ADJUSTER NUT. ADJUSTING PRELOAD BEYOND THIS SETTING WILL CAUSE THE COIL TO BIND AND DAMAGE WILL OCCUR TO COILOVER AND/OR VEHICLE.

3. THIS 3.0 COILOVER KIT MUST BE USED WITH AN ICON UPPER CONTROL ARM KIT. BILLET (58560) OR TUBULAR (58460).

4. FAILURE TO TRIM SWAYBAR ENDS WILL RESULT IN SHOCK DAMAGE NOT COVERED UNDER ICON'S WARRANTY POLICY.

5. FAILURE TO TRIM BUMPSTOP MOUNT WILL RESULT IN SHOCK DAMAGE NOT COVERED UNDER ICON'S WARRANTY POLICY.



WARNING!

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INSTALLATION

1. While the truck is still on the ground, remove the sway bar links using a 19mm.
2. Using a properly rated jack, raise the front of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the front wheels.
3. Remove the factory skid plate using a 12mm. [FIGURE 1]



FIG.1



FIG.2

4. Remove the sway bar using a 17mm. [FIGURE 2]

5. Mark the ends of the sway bar as shown. Cut the ends of the sway bar as marked. [FIGURE 3 & 4]



FIG.3



FIG.4

6. Paint exposed metal to prevent rust.

7. Disconnect the tie rod from the spindle using a 24mm.

8. Disconnect the upper control arm from the spindle. Be careful to not over extend the CV joints by letting the spindle tilt away from the frame.

9. Remove the (4) nuts securing the upper coil seat to the coil bucket. Do not loosen or remove the larger center nut securing the spring seat to the shock shaft. [FIGURE 5]



FIG.5



FIG.6

10. Support the lower control arm with a jack and remove the bolt holding the shock eye to the lower control arm. Note orientation, this bolt will be reused. [FIGURE 6]

11. Lower the jack and remove the stock coilover assembly. Due to rubber bushing stiffness you may need to push down on the suspension. To make it easier you can use a pry bar over the top of the upper control arm and under the pivot bolt for additional leverage. Be careful not to damage any brake lines or wires that may be routed down the control arm.

12. Trim the bumpstop and bumpstop mount as shown. [FIGURE 7]



FIG.7

13. Install new ICON coilover assembly: there are 7 threaded holes in the top of the upper shock mount, you will be using 4 of them.

14. Using a 9/16" socket/wrench, install upper mount with the hose pointing outward and towards the front using (4) of the supplied (605101) bolts and (605131) lock washers. [Torque to 33 ft-lbs]

15. Install shock bolt in the lower control arm: The lower shock mount has (1) long and (1) short spacer. Make sure the short spacer is oriented toward the rear of the vehicle. This will space the shock further rearward in the pocket to ensure adequate clearance for the shock rod end. [Torque to factory spec] [FIGURE 8]

FIG.8



16. Connect the upper control arm to the spindle. [Torque to spec]

17. Connect the tie rod to the spindle using a 24mm. [Torque to factory spec]

18. Mount the Sway bar using factory bolts and a 17mm. [Torque to factory spec]

19. Mount the skid plate using the factory bolts and a 12mm. [Torque to factory spec]

20. Remove plastic caps from the frame as shown. Drill the holes out to an 11/32". Using the supplied 3/8" Self-tappers, run the bolt in to form the threads, and then remove the bolt. [FIGURE 9]

FIG.9



21. Mount the reservoir bracket with the front bolt only. Place the supplied adel clamp on the reservoir hose as shown. The rear bolt goes through the adel clamp, and reservoir bracket. This requires you to hold the reservoir in position while putting the bolt in the bracket. [FIGURE 10 & 11]

FIG.10



FIG.11



22. With the adel clamp in place, and the reservoir positioned on the reservoir bracket, mount the reservoir to the bracket using the supplied hose clamps and a 5/16".

23. Install wheels and lower vehicle to the ground [Torque to factory spec].

24. Assemble sway bar links as shown and adjust length to 4.0" as a starting point. Depending on alignment specifications, you may need to adjust the sway bar links to a shorter length to gain adequate coil cup clearance. Cycle the suspension to ensure no contact.

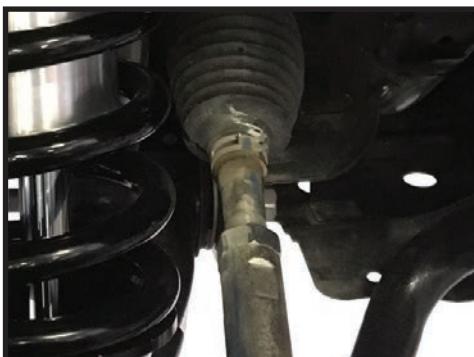
25. Connect the supplied sway bar links using the wide spacers (159014) and factory bolt in lower control arm [Torque to factory spec]. Use the supplied narrow spacers (159013), 14mm bolt (605848), and supplied nut (605812) connecting the sway bar to link. Fasten with an 11mm allen and a 19mm socket/wrench. [Torque to 100 ft-lbs] [FIGURE 12]

FIG.12



26. Remove the factory pinch clamps on the outer end of the tie rod boots on both the driver and passenger side. Slide the tie rod boots approximately 1" inward and fasten using the supplied (605937) pinch clamps. Cycle the steering to make sure that the boots do not contact the shocks at full lock. Failure to check steering clearances may result in steering and/or shock damage. [FIGURE 13]

FIG.13



27. Have the vehicle professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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



3.0 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

7929 Lincoln Ave. Riverside, CA 92504 Phone: 951.689.ICON Fax: 951.689.1016
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158509 INSTALLATION INSTRUCTIONS

6-30-2023 REV.D

PART #	DESCRIPTION
158509	07-21 TUNDRA MULTI RATE RXT LEAF PACK W/ ADD IN LEAF

COMPONENTS INCLUDED

(1) 158509 07-21 TUNDRA MULTI RATE RXT LEAF PACK W/ ADD IN LEAF

HARDWARE INCLUDED

158509H HARDWARE KIT

(1) LEAF SPRING LINER
(1) LEAF SPRING CENTER PIN W/ NUT

(1) LEAF SPRING U-CLIP

TOOLS REQUIRED

JACK
JACK STANDS
TORQUE WRENCH
9/16" SOCKET / WRENCH

7/8" SOCKET / WRENCH
12MM SOCKET / WRENCH
17MM SOCKET / WRENCH
19MM SOCKET / WRENCH

TECH NOTES

1. ICON MULTI-RATE LEAF SPRING KIT REQUIRES TOYOTA U-BOLT KIT (52050) FOR INSTALLATION.

2. THE ICON MULTI RATE LEAF SPRING IS MODULAR, MEANING THAT YOU CAN CONFIGURE THE SPRING PACK TO YOUR DESIRED SETTING FROM THESE AVAILABLE OPTIONS:

OPTION #1 - THE SPRING IS SHIPPED AT THIS SETTING (LIGHTEST SPRING RATE).

OPTION #2 - REPLACE THE 3RD SPRING (COUNTING FROM THE TOP DOWN) WITH THE ADDITIONAL LEAF.

OPTION #3 - PLACE THE ADDITIONAL LEAF BETWEEN THE 3RD AND 4TH SPRING (COUNTING FROM THE TOP DOWN). DO NOT REMOVE LEAF FROM SPRING PACK.

ICON'S MEASURED SPECS FROM THE TEST TRUCK (2016 4WD CREW CAB TUNDRA):

OPTION #1 - LIFT HEIGHT OVER STOCK: + 1.75" (UNLOADED)
(RECOMMENDED FOR CONSTANT LOAD UP TO 250 LBS)

OPTION #2 - LIFT HEIGHT OVER STOCK + 3.00" (UNLOADED)
(RECOMMENDED FOR CONSTANT LOAD OF 250-500 LBS)

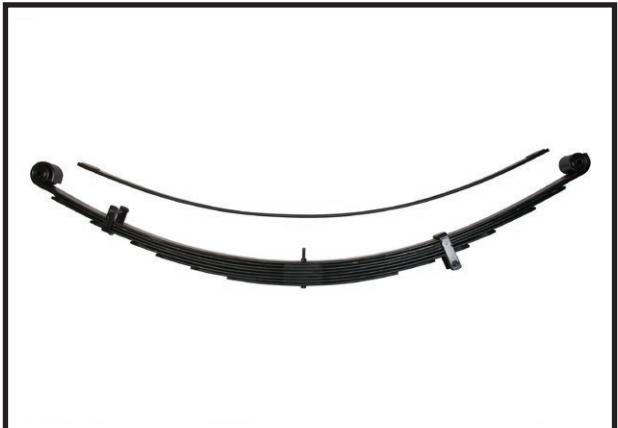
OPTION #3 - LIFT HEIGHT OVER STOCK: + 4.00" (UNLOADED)
(RECOMMENDED FOR CONSTANT LOAD OF 500-750 LBS)

Note: Location of weight in rear of vehicle will also have an effect on rear ride height. For example, weight mounted in bumper/tailgate area will have greater reduction in rear ride height than the same amount of weight mounted toward front of bed area.

Note: Level stance with 3" front-end lift may not be achievable with rear lift heights above 1.75" over stock. Consider desired vehicle stance, available front-end lift range, as well as constant rear weight and its location when determining spring pack configuration.

INSTALLATION

1. Using a properly rated jack, raise the rear of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the rear wheels.
2. Remove the lower shock bolt using (2) 19mm.
3. Disconnect the parking brake bracket from the axle using a 12mm.
4. Support the axle using the floor jack. Remove the U-bolts from one side of the truck using a 19mm.
5. Slowly lower the axle being careful to not overextend brake lines or ABS wires.



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.

6. Remove the pivot bolt from the front frame mount using (2) 19mm. [FIGURE 1]

7. Remove the upper and lower nut from the spring shackle using a 19mm.



FIG.1

8. Remove the shackle plate from the nut side of the shackle. [FIGURE 2]



FIG.2

9. Remove the shackle from the inside of the frame rail. This may require removal of the spare tire.

10. Lift the factory spring out being careful to not damage brake lines, hoses, and ABS wires. Two people are recommended, as leaf springs are very heavy.

If adjusting the MULTI RATE spring configuration:

A. Remove the front clip bolts and rear clip using a 9/16". [FIGURE A]



FIG.A



FIG.B

B. Clamp the pack on both sides of the center pin. [FIGURE B]

C. Use locking pliers to hold the head of the center pin and remove the nut using a 9/16".

D. Carefully release the clamps from the spring pack. Use caution, as the pack may still have tension upon release.

E. Remove the top two leafs from the spring pack. [FIGURE C]



FIG.C

F. Configure the spring pack as desired from the available options.

G. You can either replace the 3rd leaf (counting from the leaf down) with the additional leaf, or add the additional leaf between spring #3 and #4.

Option #1: Standard (as shipped) = 30% reduced ride rate from stock. (+1.75" over stock unloaded)

Option #2: Additional leaf #3 = 20% over standard ICON configuration. (+3.00" over stock unloaded)

Option #3: Standard + Additional leaf = 40% over standard ICON configuration. (+4.00" over stock unloaded)

Option #1: Recommended for constant loads up to 250lbs.

Option #2: Recommended for constant loads from 250-500lbs. (+250lbs = 2.00" lift | +500lbs = 1.35" lift)

Option #3: Recommended for constant loads from 500-750lbs. (+750lbs = 1.50" lift)

H. Be sure there is a liner between each leaf.

I. Slide the center pin through the pack and clamp together using clamps on both sides of the center pin. Once the center pin is through the whole pack, start the nut. [Torque to 15 ft-lbs]

J. Install the appropriate clips for the configuration. Longer clips are provided for additional pack thickness.

11. Lift the MULTI RATE spring pack into place. Loosely install the shackle, shackle plate, and nuts. Do not tighten.

12. Mount the spring in the front frame pocket using the factory bolt and nut. Do not tighten. Lift the axle and guide the center pin into the location hole in the spring pad on the axle tube.

13. Place the factory bump stop or ICON striker plate on top of the spring. The center pin may need to be trimmed. [FIGURE 3]



FIG.3



FIG.4

14. Install the U-bolts and tighten. [FIGURE 4]

15. Connect the parking brake brackets to the axle using a 12mm and the factory bolt.

16. If the rubber brake lines are too tight at full droop, the brake line bracket (on top of the rear differential) can be hand formed upwards for some extra clearance.

17. Install shocks and wheels and set the vehicle on the ground.

18. Torque shackle nuts and front spring bolt to factory spec. [FIGURE 5 & 6]



FIG.5



FIG.6

19. Torque U-bolts to 90ft-lbs.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

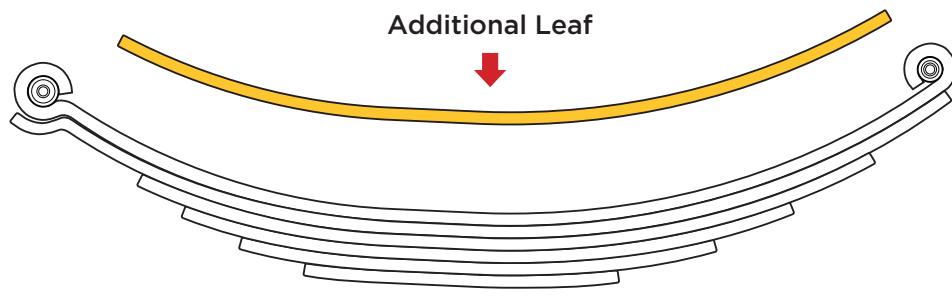
RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

MULTI-RATE LEAF SPRING RATE CHANGE OPTIONS

(General application for all models. Refer to these instructions for specific rates)

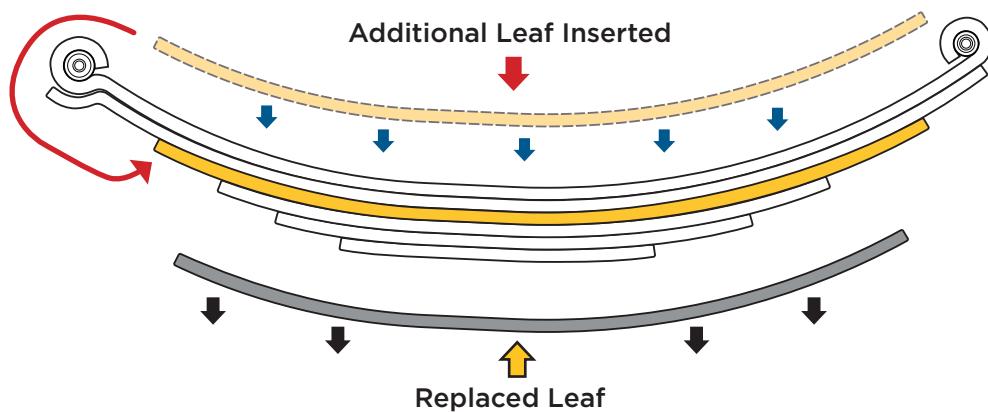
OPTION 1

ADDITIONAL
LEAF
NOT USED



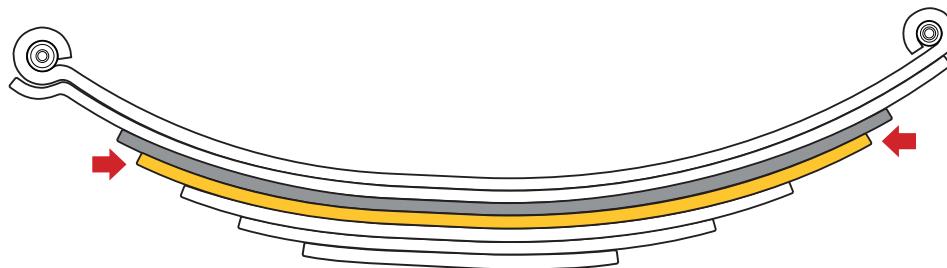
OPTION 2

ADDITIONAL
LEAF
REPLACES
LEAF



OPTION 3

ADDITIONAL
LEAF ADDED
TO PACK





ICON
VEHICLE DYNAMICS®

2007-2017 TOYOTA TUNDRA RXT MULTI-RATE LEAF SPRING

OPTION 1

*INSTALL SPRING IN ORIGINAL
CONFIGURATION, LEAVING
ADDITIONAL LEAF OUT*

LIFT HEIGHT OVER STOCK:
1.75"
(UNLOADED)

IMAGE SHOWN WITH NO WEIGHT IN BED

AS SHIPPED



OPTION 2

*REPLACE THE 3RD SPRING IN THE
PACK WITH THE ADDITIONAL LEAF
PROVIDED IN KIT*

LIFT HEIGHT OVER STOCK:
3.00"
(UNLOADED)

2.00"
(250LB LOAD)

IMAGE SHOWN WITH 250LB LOAD IN BED

LEAF REPLACEMENT



OPTION 3

*ADD THE ADDITIONAL LEAF
PROVIDED TO THE PACK, IN
BETWEEN THE 3RD
AND 4TH SPRING*

LIFT HEIGHT OVER STOCK:
4.00"
(UNLOADED)

1.50"
(750LB LOAD)

IMAGE SHOWN WITH 750LB LOAD IN BED

LEAF ADDITION



ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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.

ICON VEHICLE DYNAMICS LIABILITY DISCLAIMER

ICON does not make any representations or warranties regarding the fitness of any ICON product for a particular installation or conformance of any ICON product with a particular vehicle application. Installation of any ICON suspension system is at the sole discretion of the end user and in making a purchase of any ICON suspension system, the purchaser assumes the responsibility and liability for any and all damage or injury, of any kind or nature whatsoever, caused by, resulting from, arising out of, or occurring in connection with the use or installation of any ICON suspension system. ICON is not liable for and specifically disavows any installation that is not in conformance with original equipment manufacturer's recommendations or instructions. Purchaser agrees that in the event of any claim or lawsuit arising out of the installation or use of an ICON suspension system, purchaser shall indemnify and hold harmless ICON, its agents, employees, officers and owners from and against any and all loss, expense, damage or injury that ICON may sustain as the result of such claim. [If applicable, ICON defers to and recommends recalibration of any/all vehicle stability systems after suspension installation.]



ICON VEHICLE DYNAMICS®

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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