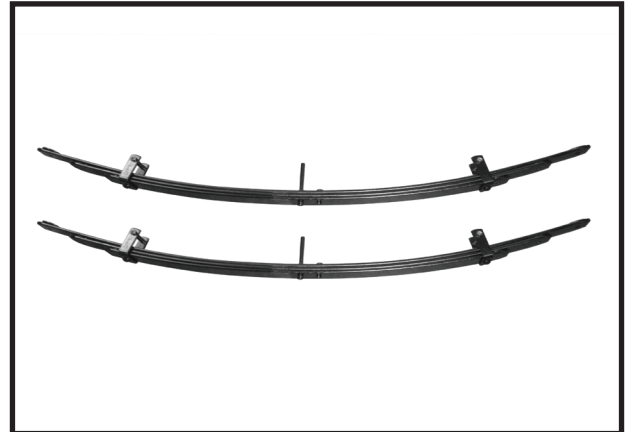


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Phone: 951.689.ICON | Fax: 951.689.1016

PART #	DESCRIPTION
51200	07-UP TUNDRA 1.5" LIFT EXPANSION LEAF SPRING PACK

COMPONENTS INCLUDED	
(2) 158510 07+ TUNDRA EXPANSION PACK	(1) 52050 TOYOTA REAR 8" U-BOLT KIT (1) 705166 TUNDRA EXPANSION PACK
HARDWARE INCLUDED	
N/A	
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH HAMMER	C - CLAMPS PRY BAR TORQUE WRENCH
TECH NOTES	
1. ICON RECOMMENDS REMOVING THE ENTIRE LEAF PACK FROM THE VEHICLE PRIOR TO INSTALLING THE (51200) EXPANSION LEAF SPRING PACK.	



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

- 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.
- Remove the lower rear shock bolts.
- With a floor jack under the rear end loosen and remove the U-bolts. Make sure the axle is well supported or it could fall when the U-bolts are removed
- Slowly and carefully lower the axle away from the springs and remove the factory centering pin and factory over-load spring.  
**NOTE:** You may want to use C-Clamps to secure the pack before you completely remove the center pin.
- With the new ICON (51200) pack on the ground, C-clamp the leaves together and remove the nuts on the guide pins to expand the pack.
- Separate the OEM secondary springs from the main leaf spring using a pry bar carefully un-folding each of the collars/spring clips. Remove the (2) OEM secondary leaf springs that are shown. [FIGURE 1 & 2]

FIG.1



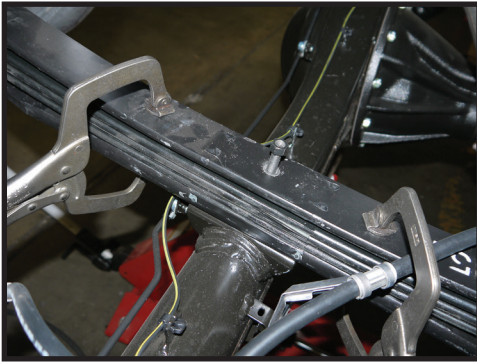
FIG.2



- The reinstallation order should be as follows: OEM main spring, ICON (51200) expansion pack, thick OEM overload.

**8.** Slip in the new spring pack in between the OEM main Spring and the OEM thick overload. The leaf springs will have to be clamped together in order to get the locating pin to slide through and be tightened. [FIGURE 3 AND 4]

**FIG.3**



**FIG.4**



**9.** Tighten one side of the C-Clamps and threaded locating pins slightly, then the other side, back and forth till the springs are fully clamped together.

**10.** Raise the axle (reinstall the leaf pack if you chose to remove the full spring assembly) and guide the spring center pin in to the hole on the top of the axle.

**11.** Install new U-bolts, washers and nuts. [Torque to 90ft-lbs]

**12.** Install shocks onto lower factory mount: Compress shock and insert bolt into the factory shock mount. [Torque to factory spec]

**13.** Repeat steps 2-12 for the other side of the vehicle.

**14.** Install wheels and lower vehicle to the ground [Torque lugs to factory spec]. Check U-bolt torque with the vehicle on the ground.

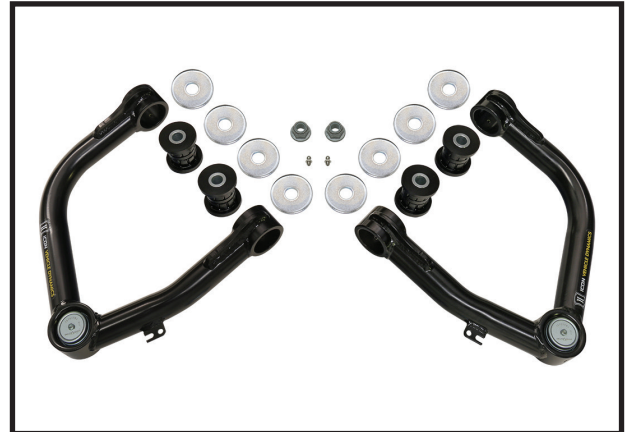
***VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.***

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

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PART #	DESCRIPTION
58460DJ	07-UP TUNDRA TUBULAR UCA DJ KIT

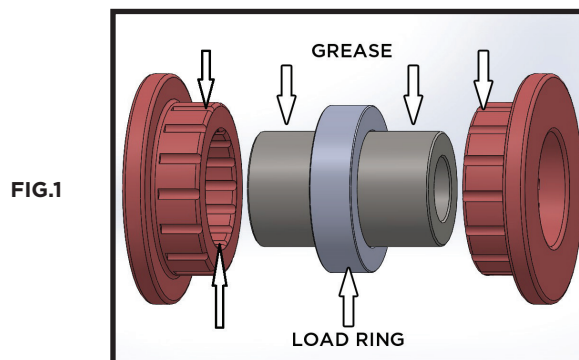
COMPONENTS INCLUDED	
(1) 154102 07+ TUNDRA TUBULAR UCA (DRIVER)	(1) 154103 07+ TUNDRA TUBULAR UCA (PASS)
HARDWARE INCLUDED	
(8) 150026 WASHER 2.125 X .630 X .188 (2) 157517BJ DELTA JOINT (4) 159208 SLEEVE 1.000 X 16MM X 2.060	(4) 297042 POLY RING 1.590 X 1.005 X .250 (8) 297034 HAT BUSHING 1.625 X 1.000 X .850 (4) 605903 1/4-28 X 90 DEG STEEL ZERK FIT (2) 605950 WHT-200 SPIRAL RET RING
TOOLS REQUIRED	
JACK JACK STANDS LARGE HAMMER TORQUE WRENCH NEEDLE NOSE PLIERS	10MM SOCKET / WRENCH 19MM SOCKET / WRENCH 21MM SOCKET / WRENCH 3/8" SOCKET / WRENCH 1/2" SOCKET / WRENCH 7/8" SOCKET / WRENCH
TECH NOTES	
<p>1. 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.</p> <p>2. ICON RECOMMENDS OPTIONAL BILLET DUST COVER SET (191011) TO PREVENT DEBRIS FROM PACKING UP AROUND THE ZERK FITTING.</p> <p>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.</p> <p>4. ALL ICON UPPER CONTROL ARMS HAVE BEEN ENGINEERED TO ALLOW FOR THE MOST POSSIBLE CASTER, WHILE STILL ALLOWING THE VEHICLE TO BE PROPERLY ALIGNED. NOTIFY YOUR PROFESSIONAL ALIGNMENT SHOP OF THIS INFORMATION SO THAT MAXIMUM RIDE QUALITY CAN BE ACHIEVED.</p>	



WARNING!
<p>** 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!</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.</p> <p>**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.</p>

## INSTALLATION

- 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.
- Using a jack, slightly lift the lower control arm to prevent the suspension from being at full droop.
- 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.
- Support the spindle so that it does not overextend the CV joints when detached.
- 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.
- 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 control arm. Remove the stock upper control arm.
- Before installing your new upper control arms, care must be taken to grease the bushings (liberally) prior to installing assembly. Failure to grease properly will cause premature bushing wear and increased noise. [FIGURE 1]



**8.** Install the new ICON tubular upper control arm into the chassis: Note the side and orientation of the arms, the Delta Joint should be oriented towards the back of the vehicle. Make sure that there is a washer placed on each side of the bushings then carefully feed the pivot bolt through the pivots of the arm and through the pivot tube in the chassis. Grease the zerk fittings until you can see that the grease has worked itself all the way into the bushings and then tighten pivot bolt using a 21mm socket/wrench. [Torque to factory spec]

**9.** Pivot the Delta Joint stem it is inline with the taper bore in the spindle. The new Delta Joint will be very stiff the first time you move it.

**10.** 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]

**11.** Using a 10mm socket/wrench reattach the ABS line to the threaded hole in the arm with the factory bolt.

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

**13.** Repeat steps on opposite side.

**14.** 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.***

**IMAGES FOR TECH NOTE #3**

**FIG.2**



**FIG.3**



**FIG.4**



## **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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PART #	DESCRIPTION
58750C	07-UP TUNDRA 2.5 VS RR CDCV COILOVER KIT

COMPONENTS INCLUDED	
(1) 154956C 07+ TUNDRA CO RR CDCV (DRVR) (1) 154956C 07+ TUNDRA CO RR CDCV (PASS)	(2) 154006 07+ TUNDRA RESI MOUNT (1) 611025 TUNDRA CO HARDWARE KIT (PAIR) (1) 611051 #40 2 1/16-3" HOSE CLAMP KIT
HARDWARE INCLUDED	
(4) 605144 3/8-12 X .750 FLANGED SELF TAP BOLT	
611025 COILOVER HARDWARE KIT	
(8) 605101 3/8-16 X 1.000 HHCS GR8 YZINC	(8) 605131 3/8 SPLIT LOCK WASHER GR8 YZINC
611051 HOSE CLAMP HARDWARE KIT	
(4) 605931 1/2 X 2 1/16 - 3 #40 SS HOSE CLAMP	
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH DRILL 11/32" DRILL BIT	5/16" SOCKET / WRENCH 9/16" SOCKET / WRENCH 18MM SOCKET / WRENCH 22MM SOCKET / WRENCH 24MM SOCKET / WRENCH
TECH NOTES	
<p>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.</p> <p>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 2.00" 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.</p>	



WARNING!
<p>** 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!</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLTION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.</p>

## INSTALLATION

- 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.
- To make room for the coilover to be removed you will need to separate the lower ball joint from the spindle. It is also easier to move the lower control arm if you loosen the inner-lower control arm pivots so you don't have to fight the bushing stiffness. Note the position of the alignment cams. (FIGURE 1 AND 2)

FIG.1



FIG.2



**3.** 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. This would result in the stock coil assembly to come apart violently causing damage to components and possible injury. (FIGURE 3)

FIG.3



FIG.4



**4.** Support the lower control arm with a jack and remove the bolt holding the shock eye to the lower lower control arm. Note orientation, this bolt will be reused. (FIGURE 4)

**5.** 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.

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

**7.** Install shock mount to 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 place the shock further toward the rear of the arm to ensure adequate clearance of the shock rod end. Install the factory lower shock bolt. [Torque to factory spec]

**8.** Remove plastic caps for the frame cover. drill the hole out to an 11/32". Using the supplied 3/8" Self-tappers, start each side of the reservoir bracket allowing the bracket to be centered, then securely tighten down the hardware. (FIGURE 5)

FIG.5



FIG.6



**9.** Mount reservoir. The lower hose clamp goes through the slot in the bracket and the upper registers in the notches at the top of the bracket. Position the reservoir so the clamp bands are in the recessed groove on the can and secure. (FIGURE 6)

**10.** Reattach the lower control arm to the spindle. [Torque to factory spec]

**11.** Install wheels and lower vehicle back to the ground [Torque to factory spec]. **NOTE:** If the inner-lower control arm pivots were loosened in step 2, re-tighten them now with the vehicle on the ground. [Torque to factory spec]

**12.** 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.**

## 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.

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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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