



INSTALLATION INSTRUCTIONS

Ultimate Steering Response System (USRS)

P/N ISFXLCA001



Thank you for purchasing the RR Racing Ultimate Steering Response System (USRS). The purpose of the USRS is to inhibit unwanted dynamic suspension alignment changes that result in uneven tire wear, vague steering response/feel, understeer. We are confident that this product will significantly improve the handling performance of your Lexus.

Please read the step-by-step instructions carefully.

You do not need to remove the wheels from the car to install the USRS. Installation is best performed on a drive-on 4 post lift or conventional lift. If using a jack, please make sure to use all appropriate safety equipment such as jack stands and wheel chucks.

Required tools: Torque wrench, hex wrench, pry bar, lift or other suitable lifting device such as a lift, ramps, or jack stands.

WARNING

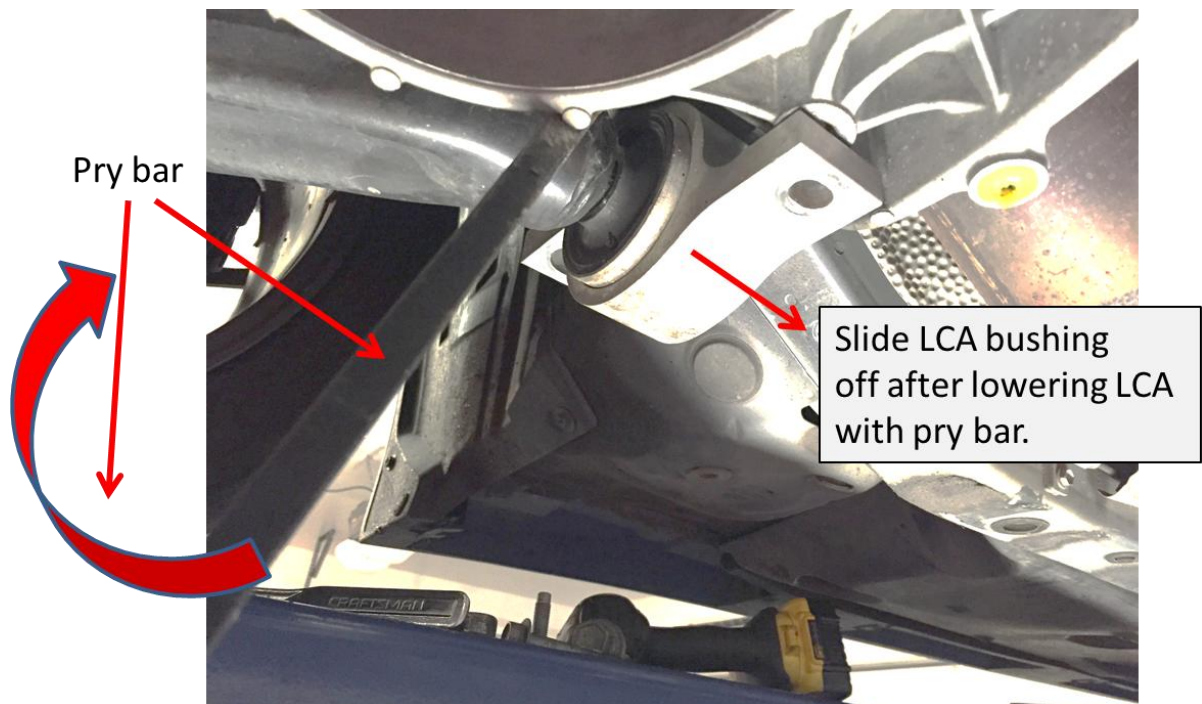
It is the responsibility of the person installing this component or kit to determine the suitability of the component or kit for that application. If you are not sure how to safely use this component, you should not install or use it. Do not assume anything. Improperly installed or maintained suspension components can be dangerous. If you are not sure how to install this product, please get help. You may obtain help by emailing us or calling us, but we cannot understand or foresee all possible issues that may arise in your installation, so it is your responsibility, or the person who installs this product, to know how to properly use this product.

This product was developed for competition & racing use. Like all racing equipment, it must be maintained and inspected regularly for damage, fatigue, and wear.

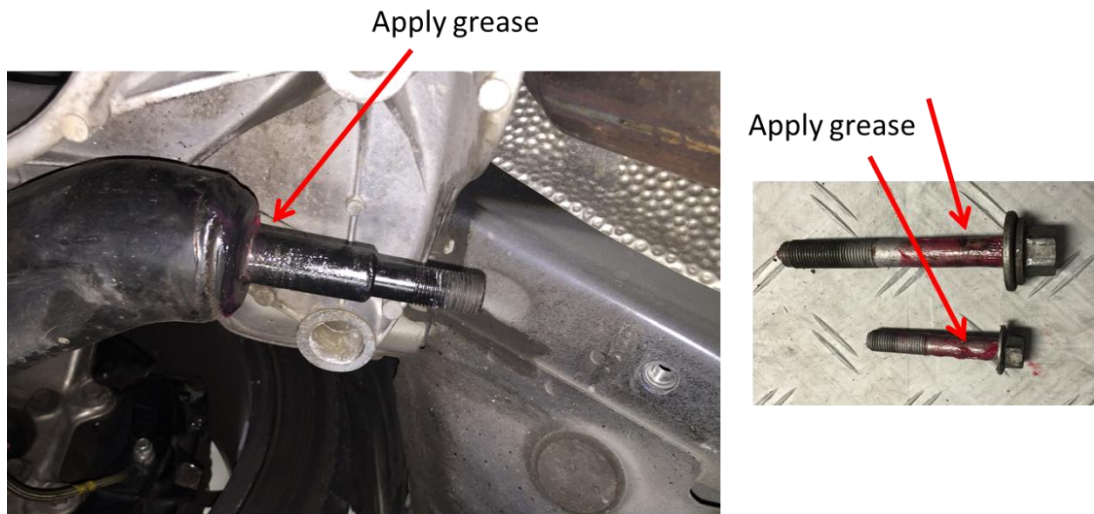
STOP: Installation of this kit should only be performed by experienced mechanics.

Installation Instructions:

- (1) Removal of the Original Equipment (OE) bushing. Using a 22mm & 17mm socket, remove the 2 bolts that attach the lower control arm (LCA) bushing housing to the sub-frame. Using a 14mm socket, remove the 4 bolts that attach the 2 sub-frame reinforcement brackets.
- (2) Using a 22mm socket, remove the nut located at the end of the LCA spindle.
- (3) Once the bushing/housing assembly is loose, it can be removed by using a pry bar to press down on the trailing end of the LCA as shown in the picture below. This will give enough clearance to slide the OE bushing/housing off of the LCA spindle.

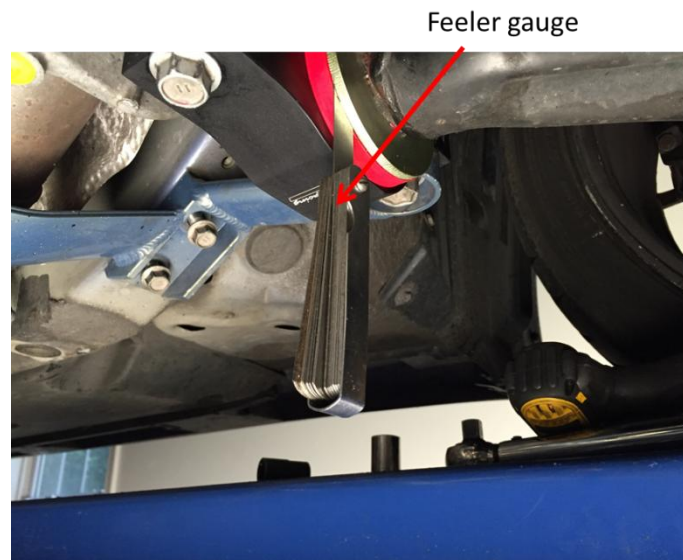


(4) Lubricate the spindle and bolts with grease, as shown below:



(5) Slide the USRS onto the spindle. Install the brace, and loosely tighten all bolts to 10 ft-lbs of torque.

(6) Clearance check: you should be able to insert a 0.020" feeler gauge between the thrust washer and the red poly bushing, as shown below:



(7) The USRS has two pre-load adjustment bolts. Carefully and loosely tighten bolt pre-load bolts until they come to a stop.

(8) Apply an additional $\frac{1}{4}$ turn to each preload adjustment bolt.

- (9) Check to make sure that you **cannot** easily insert the 0.020” feeler gauge between the thrust washer and the poly bushing. If the gauge can be inserted, apply an additional small incremental turn to the preload adjustment bolt.
- (10) Apply the final torque to the USRS-to-subframe bolts and spindle nut, per chart below:

	Torque Specification (ft-lbs)
22mm socket bolt	150
17mm socket bolt	63
14mm socket bolts	37
Spindle nut	83

FAQ

Q: Do I need an alignment after installing the USRS?

A: Generally speaking, if your alignment was in order before installing the USRS, then it should be fine after installation, but it is always a good idea to verify your alignment and/or check for uneven tire wear.

Q: Can I use the pre-load adjustment bolts as a means of adjusting caster?

A: No, that is not really the intended purpose, although pre-loading the bushing with the adjustment screws does increase caster, we have already dialed in additional caster with the revised housing.

Q: How often do I need to service the bushing?

A: The bushing is made from very hard and durable cast 95A durometer polyurethane meant to last the lifetime of your car. We recommend visually inspecting the bushing every 1-2 years and lubricating as necessary. The best grease for these bushings is known as the Energy Suspension “Formula 5

prelube.” If Formula 5 lube not readily available, heavy grade waterproof marine grease is acceptable, but not as good as Formula 5 lube.

Q: After setting pre-load, or after driving for a while, I see some grease coming out of the bushing, is that normal?

A: Yes, totally normal. When assembling, we use much more grease than is required. Only a very thin internal layer is required to maintain the bushing.

Q: Do you offer a warranty with this product?

A: Yes, we guarantee the bushing to last the lifetime of the car, to the original owner.

Q: Do you need to check the pre-load adjustment?

A: We recommend checking the preload periodically, after initial break in period of 500 miles, or after intense track duty. Generally speaking, you should not have to reset the preload.

Q: Should I feel vibration in my steering wheel after installing the USRS?

A: The USRS results in added steering feel. You will have much better feel of the road surface and grip behavior of the front tires. However, if you feel a steady vibration at certain speeds, it is likely a wheel balance issue. The stock bushing is much less sensitive to wheel imbalance because it is soft and absorbs some of the imbalance, but that does not mean the imbalance is not there. Wheel imbalance should always be corrected as a safety measure and also to reduce tire and bearing wear.

Additional questions?

Please call us at 484-756-1777 or email at Service@RR-Racing.com
