# OPEN FIRST! Installation Instructions 8.3140 Rear Control Arm Bushing Set 01-05 LEXUS IS 300



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It is recommended that if you are unfamiliar with this work that you refer to a qualified service center specializing in this type of work. It is also recommended that if you choose to do this work yourself that a service manual be obtained for the proper procedures pertaining to removal, replacement and proper torque specifications for your vehicle. This instruction set is intended as a guideline for the safe installation of Energy Suspension's polyurethane bushings, once you have removed the factory components from your vehicle. Wheel alignment is disturbed when suspension components are removed or replaced. It is recommended that you have the alignment checked on your vehicle at a qualified alignment shop. Energy Suspension recommends that you read over all the installation instructions and check all P/N's and quantities in the parts list before you start. Call customer service at 949-361-3935 if the parts in your kit do not match this parts list. Prior to installation, make sure that your vehicle is in top mechanical condition and that there are no suspension or steering related problems. These parts have been designed to work only with a factory original suspension components on a vehicle that is in good state of repair. No matter how carefully we design our parts, we have no control over and cannot be held responsible for vehicle condition.



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### Parts List:

2 EA 02P02974 Axle Carrier Front Position 2 EA 02P02975 Axle Carrier Front Position T/W 2 EA 02P02976 Toe Control Link 2 EA 02P02977 Toe Control Link T/W 4 EA 02P02978 No. 1 Control Arm 4 EA 02P02979 Upper Control Arm Front Position 4 EA 02P02980 Upper Control Arm Rear Position 2 EA 03P03655 No. 2 Control Arm 2 EA 03P03656 No. 2 Control Arm T/W 4 EA 15P0315339 Cap Washer 2 EA 15.10.126.39 Sleeve (.750" x .480" x 2.125") 4 EA 15.10.137.39 Sleeve (.750" x .480" x 1.570") 2 EA 15.10.168.39 Sleeve (.875" x .563" x 2.150") 2 EA 15.10.476.39 Sleeve (.750" x .480" x 1.730") 2 EA 15P1075939 Sleeve (.875" x .563" x 2.300") 3 EA 9.11107 Grease 1 EA 17P17737 Instructions

### FASTENER TIGHTENING SPECIFICATIONS

ABS Speed Sensor to Axle Carrier 71 lbs-in (8.0Nm) ABS Speed Sensor Wire to Toe Control Link 44 lbs-in (5.0 Nm)

Axle Carrier to Upper Control Arm 80 lbs-ft (108 Nm) Axle Shaft to Axle Hub Nut 213 lbs-ft (289 Nm) Axle Shaft to Differential Side Gear Shaft 50 lbs-ft (68 Nm) Brake Caliper to Axle Carrier 77 lbs-ft (104 Nm)

Center Exhaust Pipe to Tailpipe 32 lbs-ft (43 Nm) Drive shaft Center Support Bearing Set Bolt 36 lbs-ft (49 Nm)

Drive Shaft Assembly to Rear Differential 54 lbs-ft (74 Nm) Front Differential Mounting Bolt 71 lbs-ft (95 Nm)

Front Exhaust Pipe to Exhaust Pipe Assembly 46 lbs-ft (62 Nm)

Height Control Sensor to Control Arm Bracket 48 lbs-in (5.4 Nm)

- No. 1 Lower Control Arm to Axle Carrier 55 lbs-ft (75 Nm)
- No. 1 Lower Control Arm to Sub Frame 55 lbs-ft (75 Nm) No. 2 Lower Control Arm to Axle Carrier 81 lbs-ft (110 Nm)

No. 2 Lower Control Arm to Shock Absorber 81 lbs-ft (110 Nm)

No. 2 Lower Control Arm to Stabilizer End Link 22 lbs-ft (30 Nm)

No. 2 Lower Control Arm to Sub Frame 81 lbs-ft (110 Nm) Parking Brake Cable to Backing Plate 69 lbs-in (7.8 Nm) Parking Brake Cable to Body 69 lbs-in (7.8 Nm) Piston Rod to Upper Shock Mount 21 lbs-ft (28 Nm) Rear Differential Mounting Bolt 105 lbs-ft (142 Nm) Rear Sub Frame Brace Set Bolt 37 lbs-ft (50 Nm) Stabilizer Bar Bracket to Sub Frame 13 lbs-ft (18 Nm) Stabilizer Bar to Stabilizer End Link 33 lbs-ft (44 Nm) Sub Frame to Body 94 lbs-ft (127 Nm)

Sub Frame Lower Brace to Body 14 lbs-ft (19 Nm) Toe Control Link to Axle Carrier 36 lbs-ft (49 Nm) Toe Control Link to Sub Frame 36 lbs-ft (49 Nm) Upper Control Arm to Sub Frame Front Side 65 lbs-ft (88 Nm)

Upper Control Arm to Sub Frame Rear Side 55 lbs-ft (74 Nm)

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Upper Shock Mount to Body Lower Side 13 lbs-ft (18 Nm) Upper Shock Mount to Body Upper Side 47 lbs-ft (64 Nm) NOTE: Recheck Torque after 500 miles.

#### **TOE ADJUST LINK & No. 1 CONTROL ARM** Inside of No. 1 Control Arm is Ø1 375"

Inside of No. 1 Control Arm is Ø1.375"



Before removing the Toe Adjust Link, place matchmarks on the front and rear of the adjusting cam bolts. You will need to use these matchmarks to reinstall the track arm back in the same position after the new polyurethane bushings are installed.



Using a hydraulic press, properly support the Toe Adjust Link or No. 1 Control Arm and carefully press out the rubber bushings with bonded outer metal shell.



Grease the inside of Toe Adjust Link, inside & outside of bushing 02P02976, 02P02977T/W and outside of sleeve 15.10.476.39. Press in bushing 02P02976 then set 02P02977T/W under and then press in the inner metal sleeve 15.10.476.39.

### UPPER CONTROL ARM



Using a hydraulic press, properly support control arm and carefully press out the rubber bushing with bonded outer metal shell.



02P02980

The upper control arm front position has 2 bushings pressed together into the eye. Clamp the control arm in a vice securely. With a flat face punch and hammer, evenly work around the flange until the metal shell is removed. Rotate the control arm 180 degrees in the vice and repeat the removal process for the second bushing.

Grease the inside of control arm, inside & outside of bushing 02P02980 and outside of sleeve 15.10.126.39. Press in bushings 02P02980 first then sleeve 15.10.126.39.

— 15.10.126.39 Sleeve

Grease the inside of control arm, inside & outside of bushing 02P02979 and outside of sleeve 15P1075939. Press in bushings 02P02979 first then sleeve 15P1075939. Cap washers go on both ends of sleeve. 15P1075939 Sleeve 02P02079 Cap Washer 15P1075939 Sleeve Cap Washer 15P0315339

## No. 2 CONTROL ARM



Before removing No. 2 control arm, place match marks on the front and rear of the adjusting cam bolts. You will need to use these match marks to reinstall the No. 2 control arm back in the same position after the new polyurethane bushings are installed.

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Note: Do not remove outer metal shell from No. 2 control arm, re-use it. Use **caution** and common sense when removing bushings. Be in a well ventilated area. Have a friend standby with a fire extinguisher and you must satisfy yourself thoroughly that neither personal safety nor vehicle safety will be jeopardized. Using a propane or mapp gas torch and, with a fairly hot flame, slowly heat evenly around the outside of the outer metal shell just enough to break the bond with the rubber. See fig.10. Be sure to keep the flame moving and don't hold it in one spot for too long. When you hear a sizzling and see light smoke coming from the sides of the bushing the bond should be broken. See fig.11. At no time should there be any flames coming from the rubber, if there are any flames, you need to reduce the heat. Push the old rubber and inner metal sleeve out with pliers or a screwdriver. Let the outer metal shell and control arm cool off before cleaning the inside. See fig. 12. Once cool use a wire brush to remove any remaining rubber and remove any burrs and sharp edges with a file and emery paper as preparation for new bushing. The edges are to be as smooth and rounded as possible to ease installation and prevent cutting the bushing. Also spray paint any exposed raw metal to prevent rust. Do not spray paint inside of metal shell.



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Heat slowly all around the outer metal shell on the inside of the control arm. Do not put the flame directly on any exposed rubber.



Rubber separating from metal shell

When you see the rubber separating from the metal shell the bond is broken. Move the torch around until the bond is broken all around shell.



Push the old rubber out and let it cool before cleaning the inside of the metal shell.



Grease the inside of metal shell, inside & outside of bushing 03P03655 and outside of sleeve 15.10.168.39 Put control arm on top of 03P03656 with flange of metal shell up. Press in bushing 03P03655 first then sleeve 15.10.126.39.

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Grease all sides of the bushing that will contact metal. Tighten all fasteners to factory specs. After installation is complete, Energy Suspension recommends an alignment be performed at a qualified alignment shop. Check all fasteners after 100, 200 and 500 miles and tighten to factory specs.

