



# INSTALLATION INSTRUCTIONS

## FactionFab Lowering Springs

FFA1.10113.5 – 2013+ TOYOTA FR-S/86 AND SUBARU BRZ



BILL OF MATERIALS		
Item #	Description	QTY
1	REAR BUMP STOPS	2
2	FRONT BUMP STOPS	2
3	REAR DUST BOOTS	2
4	FRONT LOWERING SPRINGS	2
5	REAR LOWERING SPRINGS	2

REQUIRED TOOL LIST
RATCHET / BREAKER BAR
12mm, 14mm, 17mm, 19mm SOCKET / OPEN END WRENCH
PASS-THROUGH 14mm, 17mm SOCKET
5mm, 6mm HEX KEY
NEEDLE NOSE PLIERS
SPRING COMPRESSORS
TORQUE WRENCH
RECOMMENDED
ANTI-SEIZE LUBRICANT

**DISCLAIMER:** PLEASE READ AND MAKE SURE YOU FULLY UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO INSTALLING FACTION FAB PRODUCTS AND ACCESSORIES. FAILURE TO INSTALL THE PRODUCT CORRECTLY CAN AND WILL RESULT IN IRREVERSIBLE VEHICLE DAMAGE AND OR PERSONAL HARM. IF YOU DO NOT FEEL COMFORTABLE WITH ANY OF THE REQUIRED STEPS, WE HIGHLY SUGGEST TAKING THE VEHICLE TO A QUALIFIED AND EXPERIENCED TECHNICIAN. FAILURE TO UNDERSTAND THE INSTRUCTIONS WHICH RESULTS IN DAMAGE AND OR INJURY IS THE SOLE RESPONSIBILITY OF THE INSTALLER AND ALL FAULT LIES WITH THAT PARTY AND OR INDIVIDUAL AND IS NOT IN ANY WAY, SHAPE OR FORM THE RESPONSIBILITY OF FACTION FAB.

FACTION FAB PRODUCTS ARE SOLD FOR "OFF-ROAD" USE ONLY AND MAY NOT MEET LEGAL REQUIREMENTS FOR OPERATIONS ON PUBLIC ROADS AND HIGHWAYS. WE PUT THE RESPONSIBILITY SOLELY ON THE END CONSUMER/CUSTOMER TO VERIFY THAT THE PRODUCTS DO NOT AFFECT THE VEHICLES ELIGIBILITY TO BE DRIVEN ON PUBLIC ROADS AND HIGHWAYS. INSTALLATION OF FACTION FAB PRODUCTS MAY VOID FACTORY OR AFTERMARKET WARRANTIES.

USE OF PRODUCT IN A NON-CONFIRMED APPLICATION, DISASSEMBLY OF THE PRODUCT, MODIFICATION OF THE PRODUCT, EXPOSING PRODUCT TO CORROSIVE OR PETROLIUM BASED CHEMICANS WILL VOID ANY AND ALL WARRANTY.

**1**

RAISE THE VEHICLE AND REMOVE WHEELS. ALWAYS ENSURE PROPER SAFETY PROCEDURE IS FOLLOWED WHEN WORKING UNDERNEATH YOUR CAR, INCLUDING THE USE OF JACK STANDS OR OTHER EQUIPMENT.



**2**

FRONT: REMOVE BRAKE LINE WITH 12mm AND BOTH ABS WIRE CLIPS WITH PLIERS.



**3**

REMOVE TOP END LINK NUT WITH 17mm AND 6mm HEX.



**4**

REMOVE BOTH LOWER MOUNT BOLTS WITH A 19mm SOCKET AND WRENCH.



**5**

REMOVE UPPER TOP HAT NUTS WITH 12mm. MAKE SURE TO HOLD THE STRUT WHEN THE LAST NUT IS REMOVED.



**6**

PULL STRUT FROM VEHICLE. REMOVE CAP FROM TOP HAT.



**7**

INSTALL SPRING COMPRESSORS, MAKING SURE THEY ARE SNUG ON THE SPRING.



**8**

REMOVE TOP HAT NUT WITH 17mm PASS THROUGH AND 6mm HEX KEY. THERE STILL MAY BE SOME PRESSURE, REMOVE WITH CARE. AN OPEN ENDED 17mm WRENCH CAN ALSO WORK HERE.



**9**

REMOVE TOP HAT, SPRING PERCH, AND SPRING. CLEAN OUT THE LOWER SPRING PERCH ON THE STRUT.



**10**

REMOVE STOCK BUMP STOP BY PULLING OFF THE SHAFT. INSTALL NEW BUMP STOP WITH THE TOP SEATED EVEN WITH THE THICKEST PART OF THE SHAFT.



**11**

INSTALL THE FACTIONFAB SPRING WITH THE END OF THE COIL AT THE LOWEST POINT OF THE LOWER PERCH. INSTALL STOCK DUST BOOT, THEN COMPRESS SPRING WITH THE SPRING COMPRESORS.



**12**

THE STRUT SHAFT HAS TWO DIFFERENT DIAMETERS. THE SPRING PERCH SHOULD SEAT ON THE THICKER, LOWER PORTION WITH THE TOP HAT ONLY ON THE THREADED PORTION.



**13**

INSTALL TOP HAT NUT WITH 17mm and 6mm HEX. THE TOP HAT NUT SHOULD SEAT WITH AT LEAST 5mm OF THREAD SHOWING ON TOP IF ALL COMPONENTS ARE LINED UP CORRECTLY. TORQUE TO **40.6 ft·lbs**. INSTALL CAP.



**14**

INSTALL STRUT IN VEHICLE, STARTING WITH TOP HAT, END LINK, THEN LOWER MOUNT BOLTS, BRAKE LINE, AND ABS LINE.



**15**

FRONT SUSPENSION BOLTS TORQUE SPECS:

TOP HAT NUTS: 14.5 ft·lbs

END LINK NUT: 45 ft·lbs

LOWER MOUNT NUTS: 115 ft·lbs

BRAKE LINE BRACKET: 23.6 ft·lbs

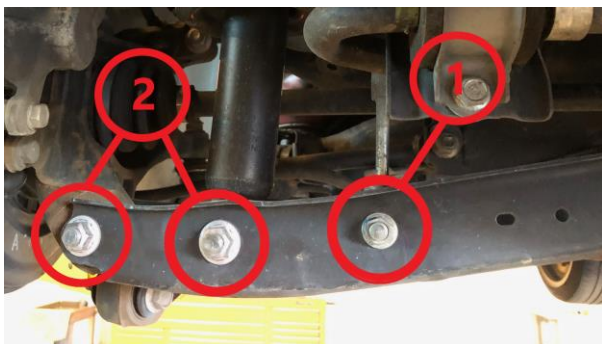
**16**

REMOVE TRUNK MAT TO GAIN ACCESS TO STRUT MOUNT. REMOVE NUTS WITH 14mm.



**17**

REMOVE LOWER END LINK BOLT WITH 14mm (1), LOWER STRUT BOLT AND OUTER CONTROL ARM BOLT WITH 17mm (2).



**18**

PIVOT THE CONTROL ARM DOWN AND REMOVE STRUT FROM THE CONTROL ARM AND BODY.



**19**

REMOVE REAR TOP HAT NUT AND TOP HAT WITH SPRING COMPRESSORS FOLLOWING SAME PROCEDURE AS FRONT WITH 14mm PASS THROUGH AND 5mm HEX. DISASSEMBLE STRUT.



**20**

INSTALL PROVIDED DUST BOOT ON THE REAR BUMP STOP. WE USED A LARGE SOCKET TO APPLY PRESSURE TO THE BUMP STOP FROM THE INSIDE OF THE BOOT AND PULLED ON THE BOOT. THE NARROWER HOLE SIDE OF THE BUMPSTOP SHOULD BE FACING OUT.



**21**

INSTALL BUMP STOP AND DUST BOOT ON THE SHAFT WITH THE TOP OF THE DUST BOOT FLUSH TO THE TOP OF THE THICK PART OF THE SHAFT.



**22**

CLEAN LOWER PERCH, COMPRESS FATIIONFAB SPRING AND INSTALL WITH THE TIGHTER COILS AT THE TOP, LINING UP THE BOTTOM COIL END WITH THE LOWER PERCH.



**23**

LINE UP THE TOP HAT STUDS TO BE PARALLEL WITH THE LOWER MOUNT, THEN INSTALL THE TOP HAT NUT. TORQUE TO **22.4 ft·lbs**.



**24**

INSTALL STRUT BACK IN VEHICLE STARTING WITH THE LOWER CONTROL ARM. REINSTALL BOLTS FOR THE LOWER STRUT AND LOWER END LINK, THEN LINE UP TOP HAT WITH CHASSIS AND THREAD THE NUTS IN THE TRUNK. FINALLY FINISH THE BOLT ON THE OUTER CONTROL ARM TO THE KNUCKLE. WE FIND THIS TO BE THE EASIEST ORDER SINCE THE KNUCKLE HAS THE MOST PLAY TO LINE UP WITH THE ARM AFTER IT IS CONNECTED.

**25**

BOLTS SHOULD GO IN FROM THE FRONT AND POINT TOWARDS THE REAR OF THE CAR. THREAD NUTS ON THE BOLTS.



**26**

TORQUE REAR SUSPENSION BOLTS TO THE FOLLOWING SPECS:

TOP HAT NUTS: 22.1 ft-lbs

LOWER END LINK NUT: 33.2 ft-lbs

LOWER STRUT NUT: 88.5 ft-lbs

OUTER CONTROL ARM NUT: 88.5 ft-lbs

**27**

INSTALL WHEELS BACK ON THE CAR AND LOWER VEHICLE. CHECK CLEARANCE OF ALL AREAS AROUND THE SUSPENSION, INCLUDING AXLES, WHEELS, FENDERS, FENDER LINERS, ETC.

**THE CAR WILL NOW REQUIRE AN ALIGNMENT TO BE DONE BY A PROFESSIONAL. FAILURE TO DO SO COULD DRASTICALLY AFFECT HANDLING CHARACTERISTICS AND RESULT IN DAMAGE TO WHEELS, TIRES, OR OTHER SUSPENSION COMPONENTS.**