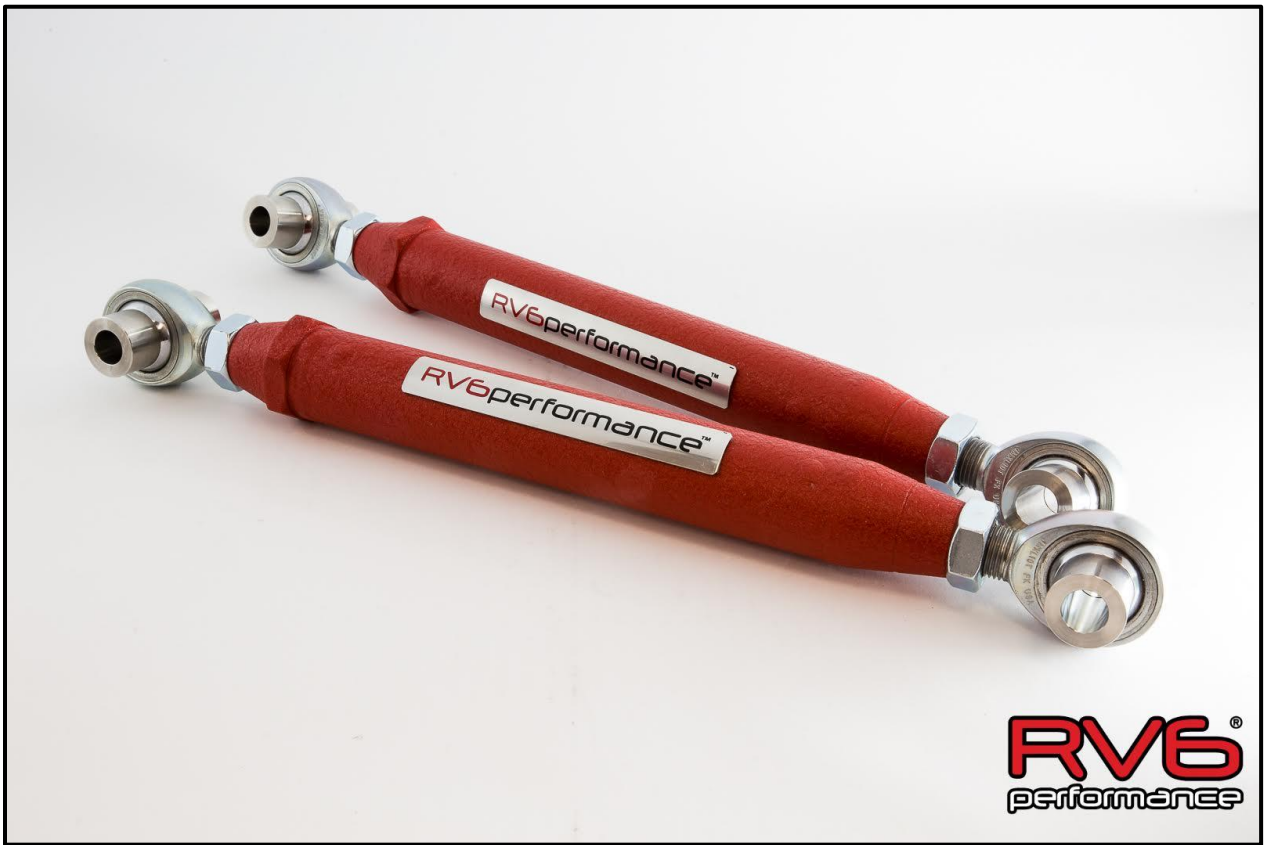
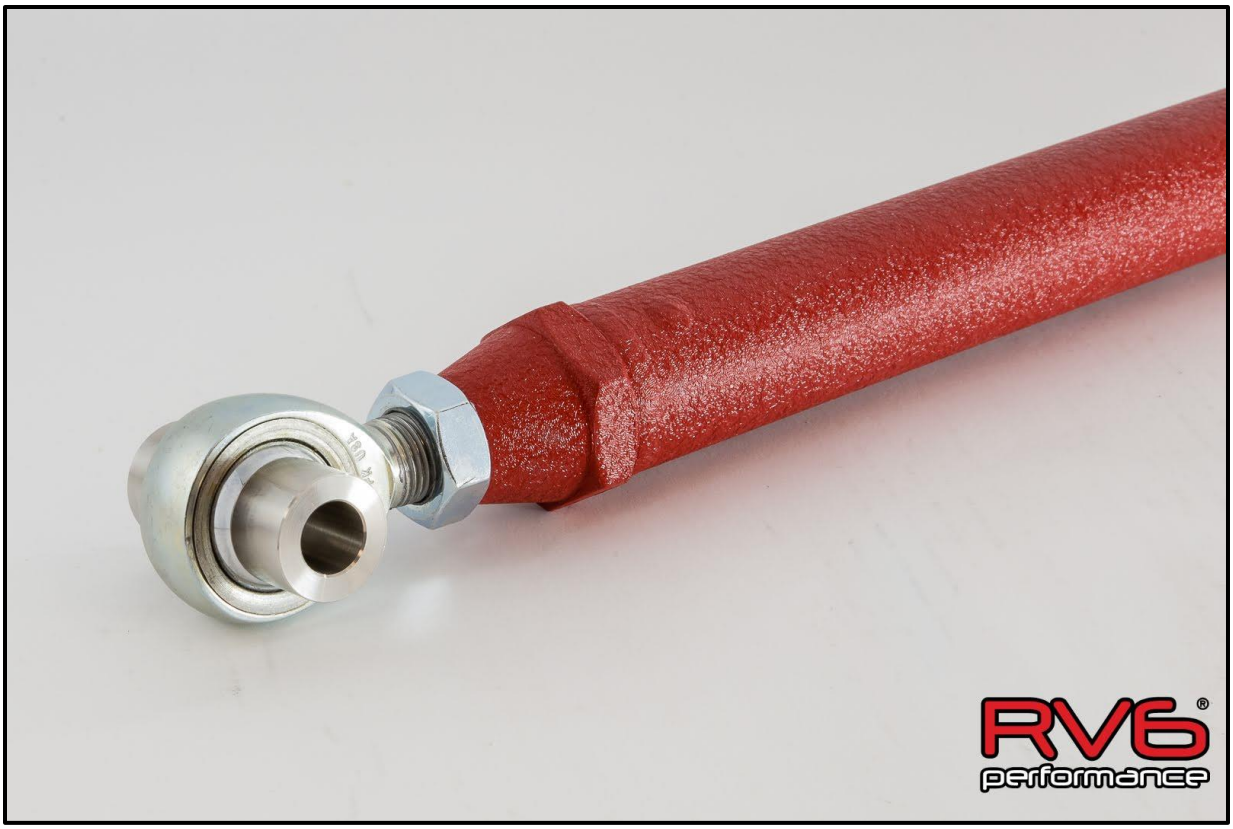
RV6 Performance Adjustable Rear Toe Links Install Guide For 10th Generation Civic Type R FK8

This is an installation guide written for the RV6 Performance adjustable rear toe links for the 10th generation 2017+ FK8 Civic Type R. This kit replaces both rear lower arms on the vehicle that connect the left and right rear knuckles to the rear sub frame. These adjustable links are designed to allow complete control over the toe angle at the rear wheels. The stock lower arms that control the rear tire toe angle are not adjustable from the factory. Altering the vehicle toe angle may be desired due to user preference, or it may be required due to changes in the suspension geometry that occur when the vehicle is lowered with springs or coilovers. The RV6 Performance adjustable rear toe links are essential to set and fine tune the toe angle at the rear wheels in order to maximize traction.

Included in this kit are 2 adjustable toe links with the appropriately sized heim joints on both ends to assemble into factory or factory like mounting points.





Preface:

This guide details the installation of this adjustable rear toe link kit on a 2017 Type R, #00561. Prior to assembly this vehicle had modifications to the rear suspension in the form of an aftermarket rear sway bar and the addition of a subframe rigid collar kit. Despite these changes the installation steps covered in this document will be identical to the process of working with fully stock components. The process detailed will be the same even if other suspension modifications such as lowering springs, coilovers, camber kits or alternative rear sway bars have been installed.

Note that any time suspension components are installed or altered a vehicle alignment should be performed to ensure the optimum settings are achieved. Also note that in general when moving from compliant OEM style rubber bushings to solid bearings some increase in NVH can be expected.

To maximize the suspension response and the user control over rear tire alignment settings it is recommended to install the RV6 Performance lower camber arms, adjustable rear toe links, rear sway bar and the solid rear suspension bearings as an entire package.

For this document all directions mentioned are the same as if you are seated in the vehicle (IE forward means towards the front of the vehicle.) Also, for this document the terms "bushing" and "bearing" are used interchangeably. The term "heim joint" refers to the spherical bearing and housing used to allow freedom of motion at specific component connections. The OEM component replaced by the RV6 Performance toe links is referred to as "Lower Arm A" in the parts catalogue and as such when referring to the OEM components, they will be called an arm instead of a link. Unless specifically mentioned when referencing hardware in the document below the size listed is for the tool size required, not the size of the hardware itself.

Always perform auto work in a safe manner. Never work underneath a vehicle without appropriate retention devices (jack stands or a lift.) Always wear proper protective equipment. Safety glasses and gloves are recommended. Other tools may be substituted based on availability or personal preference from the list provided below.

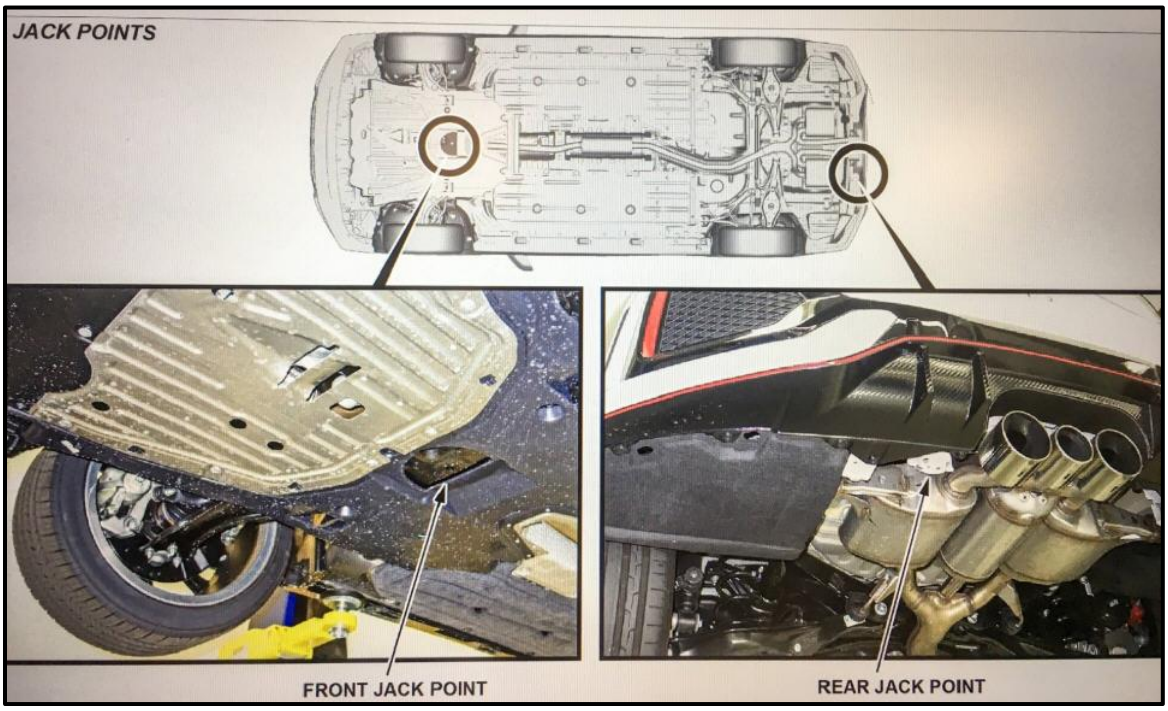
Tools Recommended:

- 3/8" or 1/2" Socket Wrench / Breaker Bar / Impact Gun
  - 17mm Socket
  - Various Extensions
- Open Ended Wrenches
  - 17mm
- 3/8" or 1/2" Torque Wrench
- Pry Bars
- Flat Head Screwdriver
- Floor Jack(s) or Lift
- Jack Stands (2-4x)
- PB Blaster (Or Similar Penetrating Liquid)

Installation Steps:

Step 1: Raise Vehicle, Install Jack Stands and Remove Rear Wheels

- 1.1: Utilize the rear central jack location shown below to raise the rear of the vehicle and install jack stands under both the left and right rear retention points. Although not necessary, the front of the vehicle may also be lifted to maximize working space. If desired, utilize the front center jack location to raise the vehicle and install jack stands under both left and right front retention points.

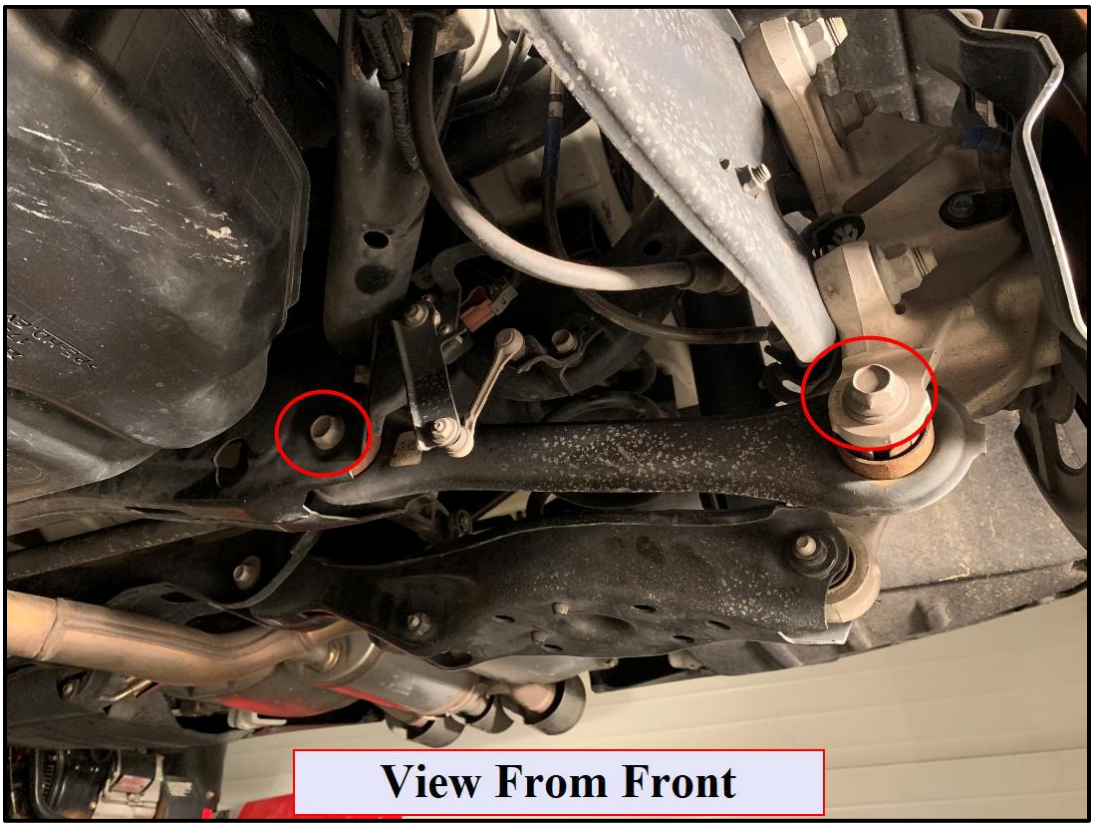


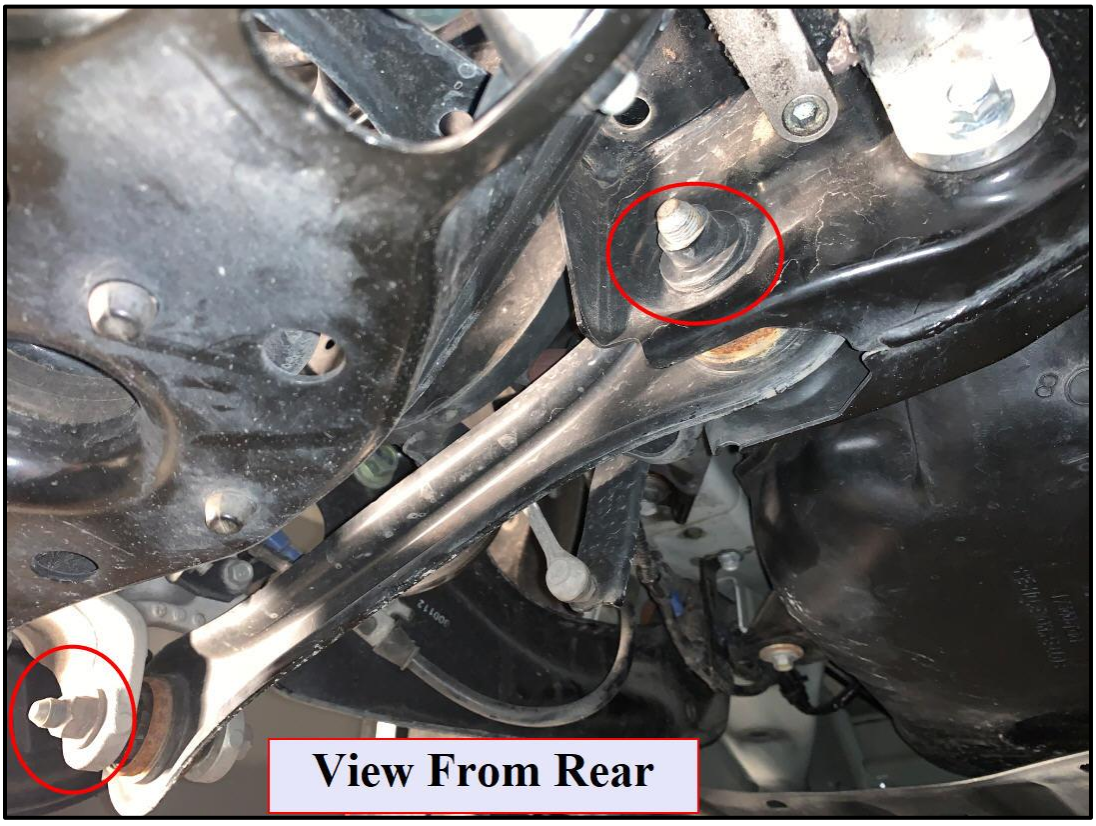
Note: Due to difficulty accessing the front central lifting location a smaller secondary jack may be used to partially raise the vehicle at the front lower retrieval hook (underneath the engine) or at one side jack stand location. Raise the vehicle enough to position the primary floor jack under the central lift location and proceed with raising the vehicle from there. Alternatively, vehicle ramps, low profile car jacks or full lift systems may be used. Install jack stands when enough clearance is obtained underneath the vehicle if not working on a lift system.

- 1.2: Remove the two rear wheels in order to gain more access to the rear knuckles.

Step 2: Remove OEM Lower Arm

- 2.1: Remove 2x 17mm head bolts from each end of both the left and right rear lower arm, 4x bolts total. 1x bolt secures each arm to the rear knuckles on the outboard side and 1x bolt secures each arm to the rear sub frame (left side arm and hardware shown in Red Circles below.) The outboard bolt will require a 17mm open ended wrench to hold the nut on the rear edge of the bolted joint. The inboard bolt threads into an integrated nut in the sub frame and as such no back up wrench is needed.





The bearings in the lower arms are a tight fit to the knuckle and subframe and as such may not be able to be removed by hand. A pry bar or screwdriver can be used to leverage against the rear knuckle or sub frame to help remove the arm from the vehicle. The image below shows this being done at the outboard connection to the rear knuckle. Take care not to damage the brake lines or electrical wires when prying against the rear knuckles.

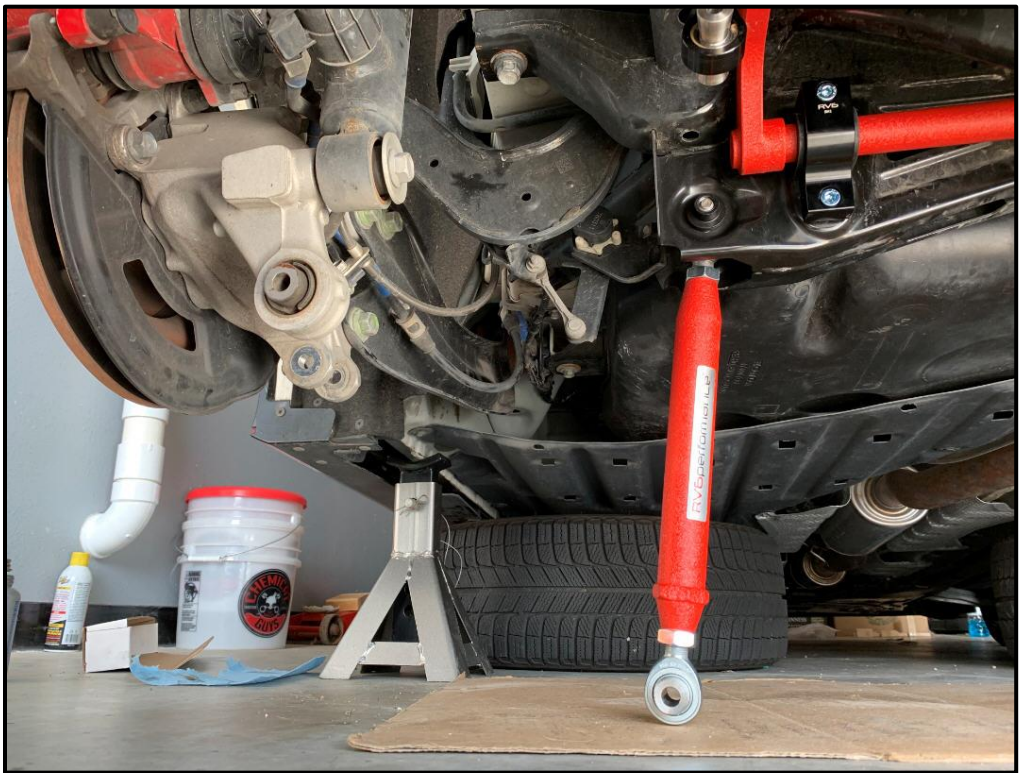
- 2.2: Remove the bars from the vehicle once they are detached from the mounting locations.

Step 3: Assemble RV6 Performance Toe Links into the Vehicle

The RV6 Performance adjustable rear toe links are set to the same length as the OEM lower arms prior to shipping. As such there should not be any need to adjust the length of the toe links prior to assembling into the vehicle and having the required alignment performed. Note that both toe links have a set of longer spacers at one heim joint (51 mm) and a shorter set of spacers at the opposite heim joint (47 mm.) As such the link can only be installed on the vehicle one way - do not try to force the link to assemble in the reverse orientation. See the image below.

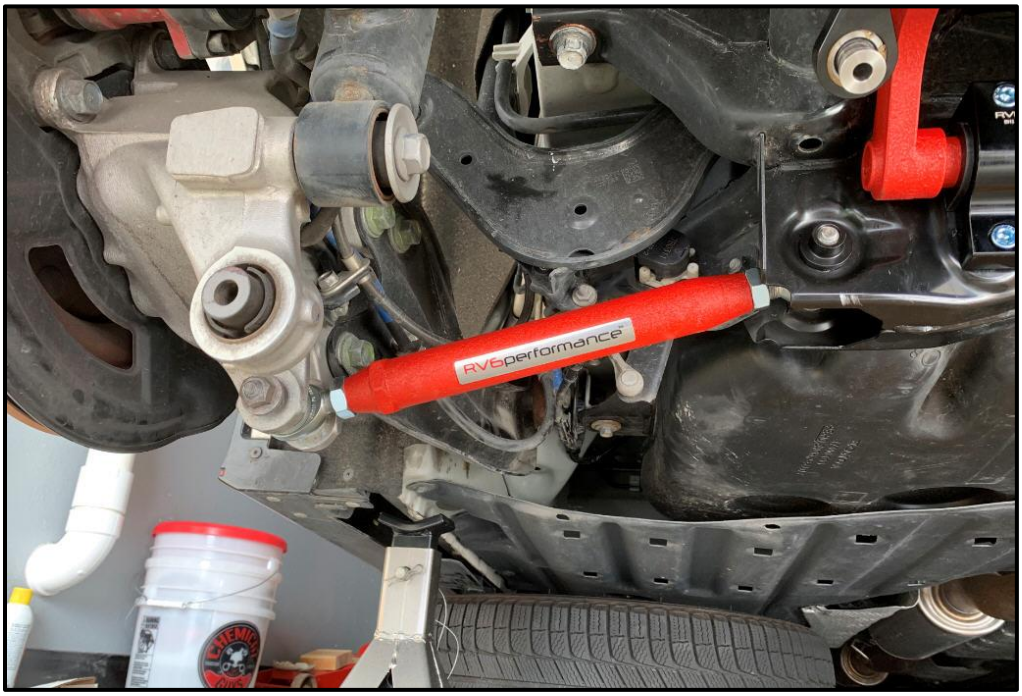
Also note that in the photos included below the rear lower control arms have been removed to provide better line of sight for the installation photos. It is NOT required to remove the lower control arms for this assembly.

- 3.1: Re-use the original bolts to assemble the RV6 Performance toe links into the vehicle starting with the inboard, sub frame connection. This is the end with the 51mm wide spacers at the heim joint and is at the opposite end of the link from the integrated hex pattern. Hand tighten 1x bolt to the sub frame on both left and right components, 2x bolts total. Note that the spacers installed in the heim joints may create a snug fit to the rear sub frame. Ensure the heim joints are in line with the mounting surfaces in the sub frame to ease instillation.



- 3.2: Pivot the toe links toward the rear knuckles and assemble the heim joint to the mounting locations using the original vehicle hardware. Hand tighten 1x bolt to the rear knuckle on both

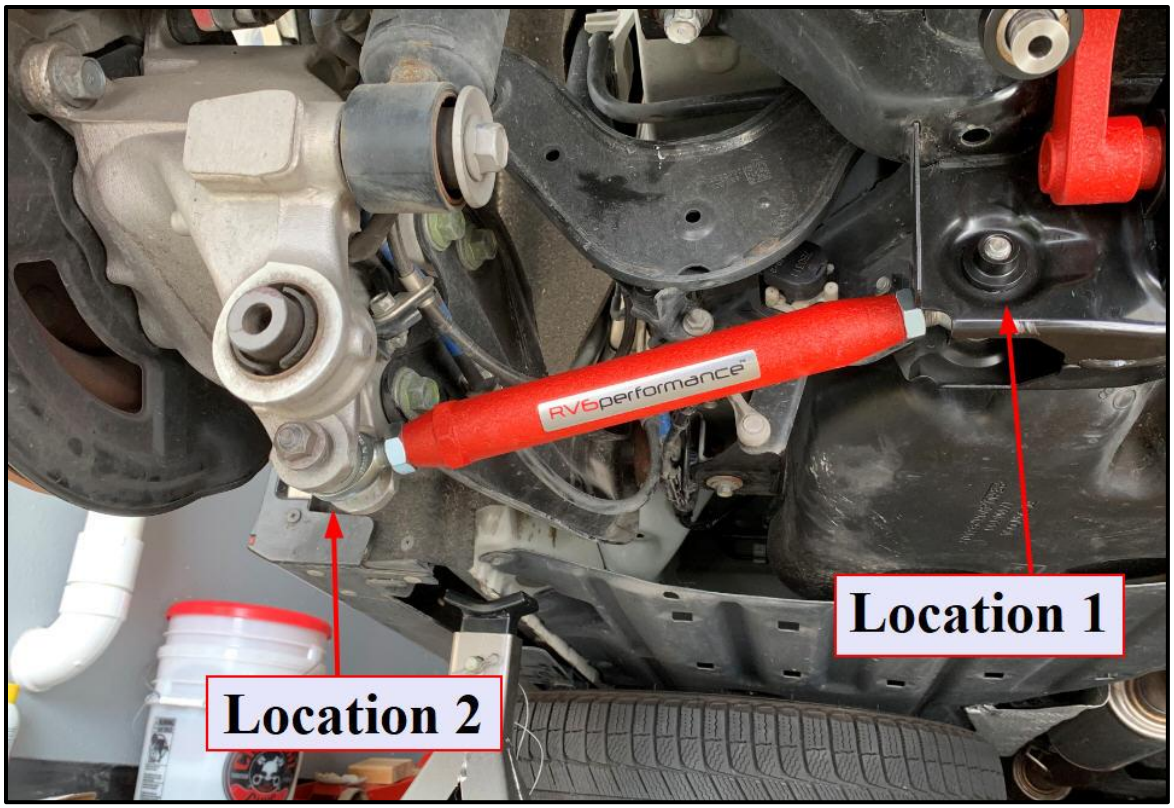
left and right components, 2x bolts total. Note that the spacers installed in the heim joint may create a snug fit to the rear knuckle.



It is very important to ensure the end surfaces of the heim joints are exactly parallel with the mounting surfaces in the rear knuckles. If there is any misalignment between the two components the heim joint spacers will bind with the rear knuckles and not assemble. Attempting to force the links into place if binding is occurring could lead to damage in the rear knuckles or heim joints. If needed insert a screwdriver through the heim joint and rotate the bearing until alignment is achieved. The link should slide into place with minimal effort once the components are in the proper positions.

Step 4: Apply Final Torques

- 4.1: Reference the below image for the locations requiring specific torques during re-assembly. The image below only shows one assembled toe link - the opposite side of the vehicle will have identical locations to torque. The torques to apply are as follows:
    - Location 1 (Toe Link to Sub Frame / Inboard Connection - 2x bolts total): 56 ft*lbf
    - Location 2 (Toe Link to Rear Knuckle / Outboard Connection - 2x bolts total): 60 ft*lbf



Step 5: Wrap Up the Installation

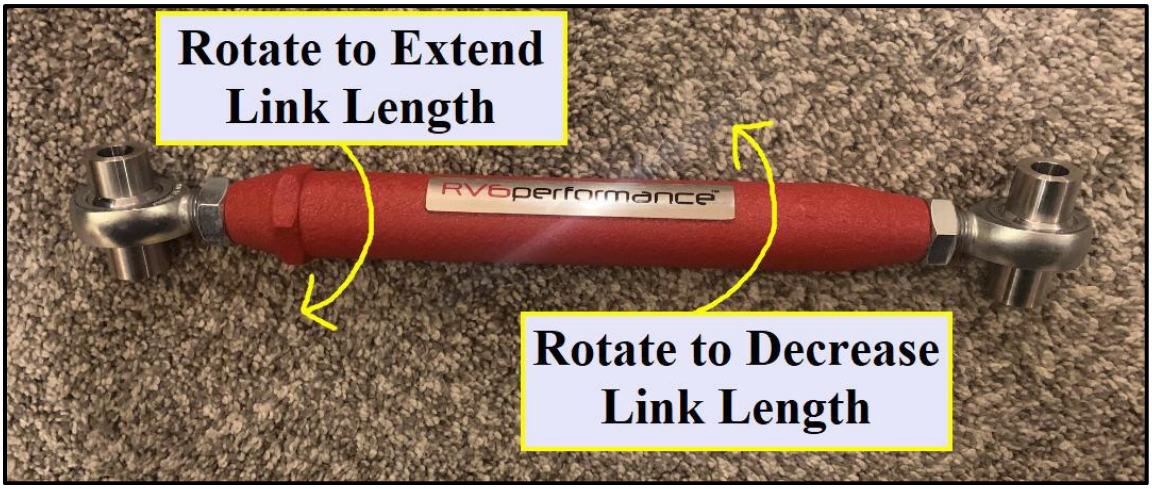
- 5.1: Re-install the rear wheels onto the respective hubs.
- 5.2: Lower the vehicle to the ground after removing the retention method used to keep it elevated.
- 5.3: Ensure proper torques are set at each lug nut. Stock lug nuts must be torqued to 94 ft*lbf.

Step 6: Complete a Vehicle Alignment

- 6.1: After the installation has been completed have a 4 wheel vehicle alignment performed by your preferred auto service shop to ensure the proper wheel settings are obtained. It is recommended to have an alignment completed immediately after installing these components. No issues should arise from driving short distances without an alignment (such as driving to the location performing the service) but care should be taken to not drive in an aggressive manner. Driving the vehicle aggressively prior to having an alignment completed could result in abnormal or excessive component and tire wear.

  The adjustment process for the rear toe links is as follows:
  - Use a 1-5/16" open ended wrench to hold the main links stationary at the integrated hex patterns.

- Use a 15/16" open ended wrench to loosen the silver lock nuts at each end of the toe links while the main link bodies are held stationary. Note that the nuts used at the end of the toe links opposite of the integrated hex pattern utilize left hand threads and need to have normal tightening / loosening directions reversed.
- After all nuts have been loosened the 1-5/16" wrench can then be used to turn the main toe link body to increase or decrease the overall toe link lengths. If looking down the length of the links from the ends that have the hex pattern, turning the bar clockwise will result in increasing the overall length and counterclockwise will result in decreasing the overall link length. See the image below for more clarification



- Once the desired toe angles are achieved tighten the silver lock nuts against the main link bodies on both left and right side toe links. If an open-ended torque wrench is available torque the silver lock nuts to 83 ft*lbf, otherwise a firm hand tight torque is sufficient.
- Note these steps are written assuming the toe links are installed on the vehicle. When adjusting the links on the vehicle the heim joints are held in place and not allowed to rotate due to the connections at the sub frame and the rear knuckles. If it is desired to adjust the link lengths when not installed on a vehicle the process is the same, but measures must be taken to prevent the heim joints from rotating when turning the main link body.

Tips and Tricks:

- Unless specifically mentioned the order of the instructions to remove the above components is arbitrary. The parts discussed in this document can be removed in any order.
- PB Blaster or a similar penetrating liquid can help reduce the effort required to initially loosen bolted joints that may have seized over time and reduce the risk of shearing hardware during removal. Spray a small amount on the joints to be removed and let sit for at least 15 minutes before attempting to break hardware loose.
- When initially breaking hardware loose in a given joint by hand exercise a smooth and steady application of torque to minimize hardware failure. Avoid sudden bursts of force applied to the socket wrench (no "jerking" motions.) Alternatively, use of an impact gun is an effective way to remove stubborn hardware due to the hammering style of rotary torque the tool generates.
- If using an impact gun, ensure that you are utilizing impact grade sockets and extensions. These generally have a black finish instead of chrome. Damage to non-impact grade hardware is likely if used with an impact gun. This is especially relevant regarding universal (flex) socket joints.
- To minimize the risk of lost hardware it is recommended to loosely re-install any bolts or nuts in their respective housings or studs once the components are disconnected.
- Anti-seize compound may be applied to any hardware to prevent the threads from becoming seized and aid with future disassembly. If chosen, take note that this lubricates the bolted joint and less torque is required to obtain the same bolt clamping force. The above dry torque values should be reduced by roughly 15-20% when utilizing anti-seize.
- When re-torqueing joints that utilize a pattern of bolts (3 or more) apply the torque evenly across all bolts. To ensure proper joint clamping it is not recommended to fully torque one connection then move on to the next, but rather to gradually torque all connections in an alternating pattern until the full torque is achieved at each connection.
- For purchasing and additional details on the above described kit please visit RV6 Performance's website at:
    - https://www.rv6-p.com/rv6-17-civic-type-r-2-0t-fk8-rear-toe-arm.html

Rev	Description	Date	Writer
A	Initial Release	02/18/2020	B. Shatto
B	Added link to product website, minor formatting updates.	02/25/2020	B. Shatto
C	Revised torque spec for "Toe Link to Rear Knuckle" to 60 ft*lbf	01/03/2022	B. Shatto
D			