



FL5-3-413 Civic Type R & Integra Type S Front BBK

Front BBK for the FK8/FL5 Civic Type R & the DE5 Integra Type S

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INTRODUCTION

In this installation guide we have provided step by step instructions to remove the OEM front brakes and install the 27WON Performance Big Brake Kit.

Advisory:

- Working under the vehicle requires a safe and sturdy location for the vehicle to sit on jackstands.
- The brake rotors can be hot after recent vehicle operation. Allow the vehicle to cool or use a fan to cool the brake rotors before working on the vehicle.



TOOLS:

- Hydraulic Jack (1)
- Jack Stand (2)
- 1/2" Torque Wrench (1)
- 1/2" Breaker Bar (1)
- 3/8" Ratchet (1)
- 6" Extension (1)
- Lug Nut Socket (1)
- 12mm Socket (1)
- 19mm Socket - Deep (1)
- 10mm Line Wrench (1)
- 17mm Box-End Wrench (1)
- 19mm Box-End Wrench (1)
- 10mm Allen Key Socket (1)
- 12mm Allen Key Socket (1)
- Flat Head Screwdriver - Large (1)
- Phillips Screwdriver - #3 (1)
- Brake Fluid - DOT4 (1)
- WD-40 Lubricant Spray (1)
- Loctite, Blue (1)
- Brake Clean Spray (1)
- 5mm Allen Wrench (1)
- 90 Degree Pick Tool (1)



PARTS:

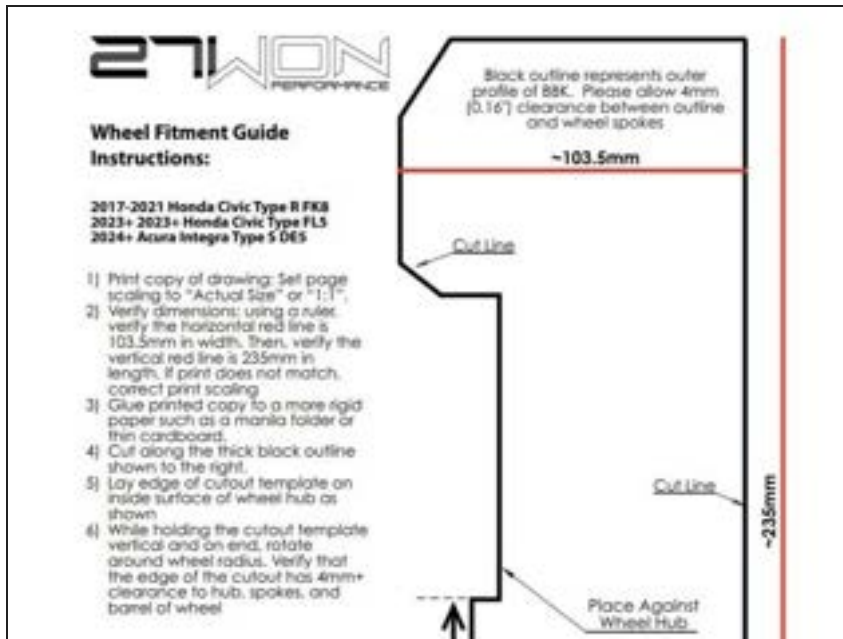
- BBK Caliper - LH (1)
- BBK Caliper - RH (1)
- 356mm Rotor - LH (1)
- 356mm Rotor - RH (1)
- Stainless Steel Brake Line (2)
- M10 Banjo Bolt (2)
- M10 Crush Washer (4)
- Caliper Mounting Bracket (2)
- Socket Cap Bolt - Short (4)
- Socket Cap Bolt - Long (4)

Step 1 — Getting Started



- First and foremost; **THANK YOU** for becoming a part of the 27WON Family. We hope to **REDEFINE** your experience of the aftermarket with the highest level Parts, Customer Service, Packaging, & Support
- ① Located at the end of these installation instructions is a **How-To Guide for Brake Pad Replacement**
- ⚠ Provided brake pads are for spirited street use. For track use we recommend different pads (separate purchase). See Step 29 for recommendations
- ① If you intend to swap out the provided Street pads during BBK install for a different pad we recommend first fully installing the BBK as delivered

Step 2 — Verify Wheel Fitment



① This 27WON BBK has been confirmed to fit OE wheels for FK8 and FL5 without wheel spacers

⚠ Some aftermarket wheels will require the use of a wheel spacer for proper clearance and operation

- Enkei RPF1 require wheel spacers and extended lug nuts
- Endless Forged 18x9.5" ET38 F01 do not require spacer
- Use this **Wheel Fitment Guide** link to check the BBK clearance for your wheels:
https://store.27won.com/_27Won/27Won-1-P...

Step 3 — Warning & Advisory



① These instructions reference the separate sides of the vehicle as "Left Hand" & "Right Hand". Left Hand & Right Hand is always defined from the driver seat viewpoint

⚠ Brake fluid is corrosive to paint. Do not let brake fluid sit on painted surfaces for extended periods of time

Step 4 — Access the Brake System & Identify Components



- Raise the vehicle and support with jackstands in the OE recommended locations and remove the front wheels/tires
- ① The following instructions show the **right-hand side** complete removal of OE components and installation of 27WON BBK. The left-hand side is completed with the same steps
- ① These instructions are done on an FL5 Type R. The process is identical on the FK8 Type R and the Integra Type S
- Brake Rotor, see red arrow
- Brake Caliper, see orange box
- Brake Line attachment point to Chassis is shown with yellow circle

Step 5 — Disconnect Brake Line from Strut



- Use a 12mm socket and a 3/8" drive ratchet to remove the bolt circled in orange
- Moving to directly behind the rotor use your fingers to pull the ABS sensor wire free from the brake line bracket. You may need to wiggle it back and forth to get it free
- Use a 12mm socket, a 6 inch extension, and a 3/8" drive ratchet to remove the bolt circled in green

Step 6 — Disconnect Brake Line from Brake Caliper



- ⚠ It is critical to use a **Line Wrench** (one is shown in Step 20) to loosen the brake line connection. Using the open end of a standard wrench may round over the corners
- Moving to the back side of the brake caliper, use a 10mm line wrench to remove the brake hardline fitting from the caliper
 - You can use caps and plugs like the ones pictured here, if you have them, to stop the brake line and caliper from leaking. This saves brake fluid and helps not make a mess!
 - Gently pull the brake line out from behind the rotor and let it dangle off to the side as shown. This whole assembly will be removed later

Step 7 — Remove Brake Caliper



- Use a 19mm socket and breaker bar to remove the two caliper bolts circled in orange
 - With the bolts removed, slide the brake caliper off the rotor in the direction of the yellow arrows
- ⓘ If the rotor is heavily worn, you may need to spread the brake pads apart to gain clearance

Step 8 — Remove Brake Rotor



- Use a #3 Phillips screwdriver to remove the rotor retention screw
 - ⚠ You may need to let this soak with a small amount of WD-40 or equivalent spray
- With retention screw removed, slide the rotor outward off the wheel studs

Step 9 — Locate & Identify Caliper Brackets & Cap Bolts



- Caliper Brackets
- Mounting holes to vehicle
- Mounting holes to BBK Caliper
- Short M14 Socket Cap Bolts

Step 10 — Install Caliper Bracket



- Apply small amount of blue Loc-tite to threads as shown on two of the short socket cap bolts
- Install provided caliper bracket as shown
 - The flat face of the bracket should be facing out for proper rotor clearance
- Hand thread the short socket cap bolts
- Use a 12mm Allen key socket and torque wrench to **torque to 103 ft-lbs**

Step 11 — Identify Brake Rotors



- ① The 27WON BBK has directional brake rotors - therefore it is critical that the correct rotor is installed on the correct side of the vehicle
- ① The direction of the angled slots allows you to identify if the rotor is LH or RH
- **Left Hand Rotor (LH)** - This rotor will go on the Left Hand side of the vehicle
 - ① For North American cars this is the driver side
- **Right Hand Rotor (RH)** - This rotor will go on the Right Hand side of the vehicle. This is the rotor being installed first
- ⚠ **Rotors come with machine oil on them to resist corrosion - clean both rotors with brake cleaner spray and clean rag**

Step 12 — Install Brake Rotor



- Right Hand side of vehicle shown - locate the right hand rotor for install

⚠ This is the passenger side in the USA

- Install the rotor over the wheel studs
- Align one of the chamfer holes in the brake rotor with the rotor retention screw hole.
- Install the OE rotor retention screw removed in an earlier step. Tighten with #3 Phillips screwdriver
- ① At this point you may notice some contact between the rotor and the dust shield behind it. This is not damaging the rotor. See next step

Step 13 — Verify Brake Rotor to Dust Shield Clearance



- Check the clearance between the rotor and the dust shield
- ⚠ Inspect clearance around the entire circumference of the rotor
- If there is less than 1/4" of clearance then bend the dust shield away from the rotor to gain clearance

Step 14 — Identify Calipers & Long Cap Bolts



- ① 27WON BBK has directional brake calipers - therefore it is critical that the correct caliper is installed on the correct side of the vehicle
- **Left Hand Caliper** - This caliper will go on the Left Hand side of the vehicle
 - ① For North American cars this is the driver side
- **Right Hand Caliper** - This caliper will go on the Right Hand side of the vehicle. This is the caliper being installed first
- Long Socket Cap Bolts
- Included with the hardware is a pack of very thin washers. These are used as spacers for the rare case that the position of the caliper needs to be adjusted

Step 15 — Install Brake Caliper



⚠ Rotor installation may have put dirt/grease on rotor faces - clean rotor with brake clean spray and clean rag

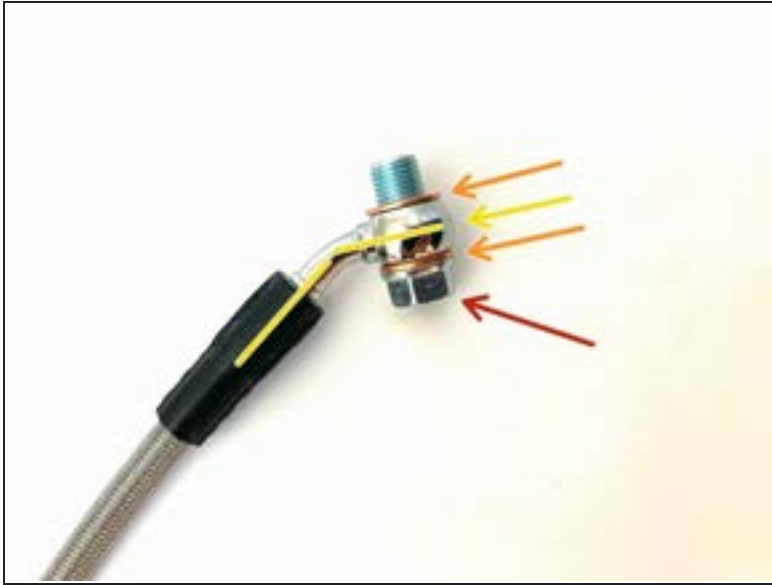
- Locate the Right Hand Caliper - Right Hand Caliper Shown
 - Mounting Holes, oriented as shown
 - Top of Caliper - Bleed Screws on Top, oriented as shown
- Apply small amount of blue Loc-tite to threads as shown on two of the long socket cap bolts
- Install the caliper over the rotor - the rotor will go between the brake pads as shown
- Hand thread the long socket cap bolts
- Using the 10mm Allen key socket and torque wrench, **torque to 64-71 ft-lbs**

Step 16 — Locate and Identify Brake Lines & Hardware



- Locate the provided stainless steel braided brake lines
 - Caliper side of brake line with plastic dust cover
 - Chassis side of brake line
 - Rubber Strut Mount Isolators
- Locate the provided Banjo Bolts
- Locate the provided 10mm Crush Washers
- Once components are inspected, remove the plastic caps off the 27WON brake lines

Step 17 — Assembly Banjo Hardware and Install Line to Caliper



- Assemble the hardware as shown
 - Banjo Bolt
 - Crush Washer
 - Brake line - Notice the angle of the brake line, verify the head of the banjo bolt is on this side as shown
 - ⚠ Installation of brake line to caliper on opposite angle may cause a crush washer leak
 - Crush Washer
- Install the brake line onto the caliper as shown - hand tighten the banjo bolt with the brake line routed upward
- Using a 12mm socket and torque wrench - **torque to 8-12 ft-lbs**

Step 18 — Route Brake Line



- Route the brake line behind the hub and over the CV axle as shown
 - Slide the rubber strut mount isolator along the brake line then press the isolator into the strut bracket as shown
- ⚠ Verify that the brake line is not contacting any part of the vehicle - adjust the brake line routing if contact is found

Step 19 — Locate Chassis Side Brake Line Connection



- Locate the chassis side brake line connection
- ⚠ The next step will disconnect the brake line. This will allow brake fluid to leak from the hard brake line mounted to the chassis and the rubber brake line. Use a rag to catch drips

Step 20 — Disconnect OE Brake Line from Chassis



- ⚠ It is critical to use a **Line Wrench** to loosen the brake line connection. Using the open end of a standard wrench may round over the corners
- Use a 10mm line wrench to loosen the threaded brake line connection (shown with orange box) then pull chassis side brake line from the connection
 - Use a large flat head screwdriver to pry the retention tab out as shown with the arrow
 - Pull the retention tab outward, directly towards you
 - Use a 12mm socket and 3/8" drive ratchet to remove the bracket mounting bolt
 - Pull the OE rubber brake line down and out of the mounting bracket
 - With the brake line disconnected, remove the OE brake line

Step 21 — Connect Chassis Side 27WON Brake Line

- Remove the large 19mm nut from the brake line
- Route the brake line through the chassis mounting bracket in the direction indicated by yellow arrow
- Re-install the large 19mm nut onto the brake line hand tight
- Hand thread the hard brake line fitting into the brake line
- Hold the lower hex with a 17mm wrench, then tighten the upper nut (green arrow) with a 19mm wrench - tighten until very snug
- Using the 10mm Line Wrench, tighten the hard brake line fitting until very snug
- Re-install the bolt using a 12mm socket and 3/8" drive ratchet

Step 22 — Complete Left Hand Side Installation



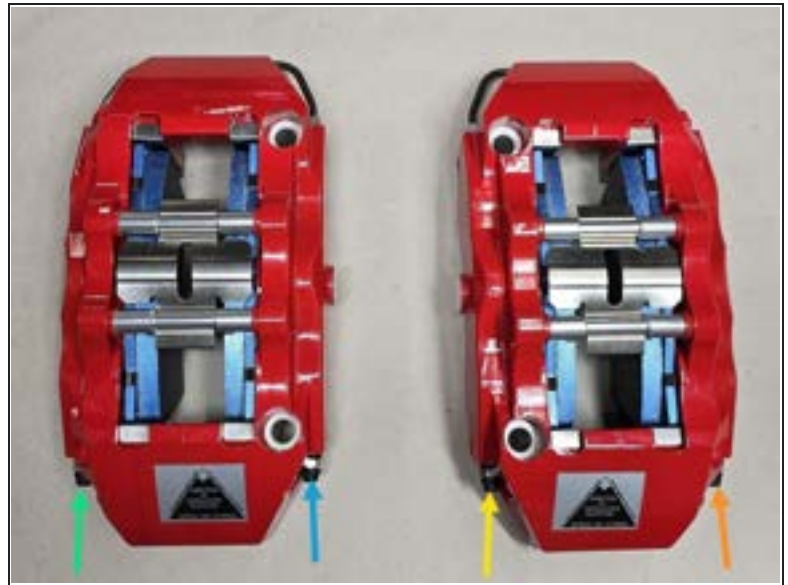
- ① This completes the BBK installation for the right hand side of the vehicle. The left hand installation process is the same
- Complete the left hand installation process starting on Step 4

Step 23 — BBK Parts Installation Complete!



- ① This completes the installation of the BBK physical parts - The following steps provide instruction for Brake Bleeding and Brake Pad Bedding
- ✦ Located at the end of the installation instructions is a **How-To Guide for Brake Pad Changes**

Step 24 — Brake Bleeding Setup & Supplies



⚠ Both Left Hand and Right Hand BBK Systems must be installed completely before proceeding to the Brake Bleeding Procedure

- ① Clean all brake line connections at chassis and caliper with brake clean spray and clean rag
- ① Tools - You will need a fresh container of Dot 4 Brake Fluid, bleeder bottle and hose as shown (the hose should fit tight on the bleeder screw), 10mm box-end wrench, and a friend to help with the process
- For best results, always start with the bleed screw located the furthest away from the master cylinder and work your way closer. There are two bleed screws for each caliper. Follow the order below
 - First Bleed Screw - RH Outside
 - Second Bleed Screw - RH Inside
 - Third Bleed Screw - LH Outside
 - Last Bleed Screw - LH Inside

Step 25 — Setup for Brake Bleeding



- ① A different caliper is shown here but the process is the same
- Remove the cap from the bleed screw as shown
- Place the box end of the wrench over the bleed screw hex as shown
- Put one end of the hose on the bleed screw as shown
- Hang bottle from wheel studs as shown or set on ground
- ① Have yourself or your friend setup in the driver's seat so that they can press the brake pedal firmly
- ① Have the other person setup at the brake caliper so they can open/close the bleed screw
- ⚠ To open/close the bleed screw - you only need to turn the wrench ~1/4 turn

Step 26 — Brake Bleeding Procedure



- Have the person in the driver's seat press the brake pedal 3-5 times until there is sufficient pedal pressure. Then, have them hold the brake pedal firmly as the bleed screw is loosened. The pedal will go to the floor while fluid and air will enter the bottle. Make sure your friend holds the pedal down as you retighten the bleed screw
 - ① The brake pedal will go to the floor while fluid and air will be pushed through the open bleed screw
 - ① Continue holding the brake pedal down until the bleed screw is re-tightened/closed
- Repeat the above procedure around 3-5 times per bleed screw, or until you are confident there is no air in the system. Check that your brake fluid level is at “full” after each bleed screw.
 - ① After each bleed screw is completed, check that your brake fluid level is at “full”. Refill as needed
 - ① Move to the next bleed screw as listed in Step 24 until all four bleed screws have been completed
- ⚠ Once brake bleeding is complete, inspect all brakeline connections at chassis and caliper to verify there are no leaks

Step 27 — Brake Pedal Feel



- ① If the brakes are properly bleed the brake pedal should have distinct "feel" to it
 - Brake pedal should have minimal down travel before pressure/force is felt
 - Brake pedal should feel firm after a small amount of down travel - it should not feel "spongy" or loose pressure over a quick amount of time
- ① If your brake pedal does not correlate with the above, then go through the brake bleeding procedure again
 - Once the brakes are bled then reinstall the wheels and put the car on the ground. It's time to break in the BBK

Step 28 — Brake Pad Bedding Procedure



- ① Brake pad bedding is an essential process to the life and durability of the brake pads and rotors - for optimal BBK performance please follow the steps below
- ⚠ Proper pad bedding slowly heats and cools the rotors & pads - do not hard brake during initial driving until after complete bedding procedure is complete
- Find an open road and accelerate to 30mph - Brake evenly and smoothly at ~50% effort until the vehicle is almost stopped, then accelerate to 30mph again
 - Repeat above step 8-10 times
- Find an open road and accelerate to 50mph - Brake evenly and smoothly at ~80% effort until the vehicle is almost stopped, then accelerate to 50mph again
 - Repeat above step 2-3 times
- Allow ~15min for brakes to cool - You can now use the brakes for normal driving

Step 29 — Brake Pad Options & Considerations



- ① All braking systems are a compromise of Performance, Dust, and Noise. These factors are all highly dependent on the brake pad material used
- ① The 27WON BBK arrives to your door with a brake pad material we found to be a good compromise of the above three factors. The pad material is considered a "street sport" setup that will provide a low amount of dust, nearly zero noise (some noise if very cold), and good performance for most street driven applications
- ① The 27WON BBK is designed around a very common pad size and shape. If desired you may seek out a brake pad compound that better suits your driving style and application
- Brake Pad Options by Manufacturer - There are many more options available than shown
 - 27WON - Gen-3-415-10 Street Pads:
<https://store.27won.com/performance-rear...> Race pads are available. Give us a call at 571-271-0271
 - Hawk - HB109
 - Pagid - 8018

- AP Racing - CP5070D51 & CP5070D54

Step 30 — I Dare You to REDEFINE



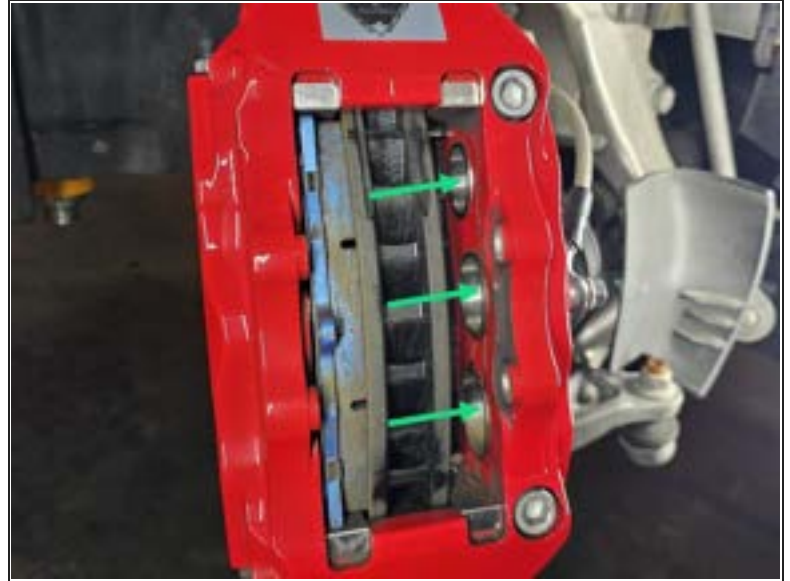
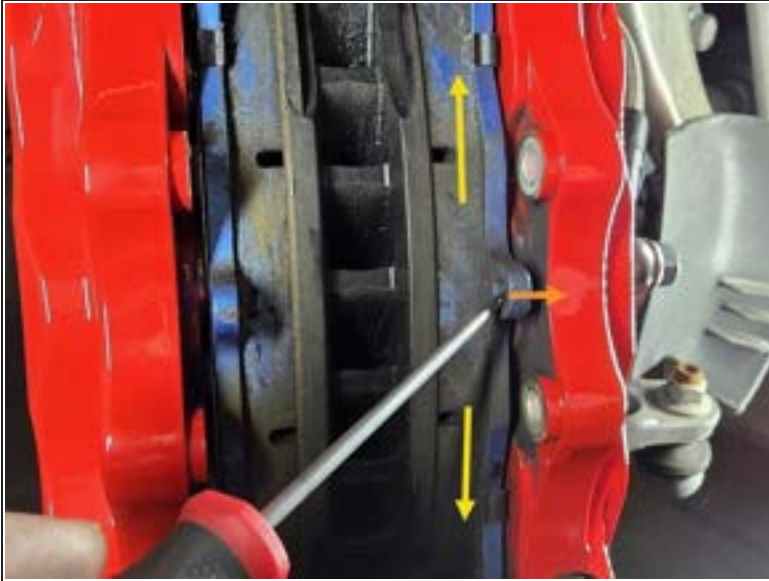
- This completes the installation & setup of your 27WON Performance Front Big Brake Kit
- We hope you were impressed with your 27WON experience and love your new BBK for years to come. Email us at sales@27won.com or call us at 571-271-0271 with any questions or concerns
- Please Leave a review here: <https://store.27won.com/2017honda-civic-...>
- Share your experience using #27WON on Instagram and Facebook
- Proceed to the next step for the **How-To Guide for Brake Pad Replacement**

Step 31 — Brake Pad Removal - Part A



- Using a 5mm Allen wrench, remove the two caliper bridge bolts
 - ① This is easiest if you completely remove one first to ease the tension on the second
- While loosening the bolt, push the top and bottom of the spring clip towards the rotor then remove the bolt
 - Remove bridge spacer and spring clip
- Using a flathead screwdriver, push the brake pad away from the rotor as shown to provide clearance
 - Typically the brake pad backer plate has a small edge that can be pushed against
- Locate the 90 degree pick tool for the next step

Step 32 — Brake Pad Removal - Part B



- Using a 90deg pick tool, hook the pick on the removal ring of the brake pad and pull it straight out of the caliper
- If you are feeling resistance, wiggle the pad up and down to slowly work it out of the caliper
- With the brake pad removed you can now access the caliper pistons directly - you will need to fully press the pistons into the caliper to provide clearance for new brake pads
- ① Sometimes while pressing one piston in, another piston will push out. If necessary, hold the other pistons in place while pressing a piston into the caliper

Step 33 — Brake Pad Installation



- Install the new brake pad into the caliper as shown
 - ⚠ Verify the brake pad material surface is towards the rotor face and the backer plate is towards the pistons
- Repeat Step 30 & 31 for the remaining used brake pad
- Re-install the brake pad spring clip and the caliper bridge spacers - hand thread the caliper bridge bolts to hold everything in place
 - ① This is easiest if you fully thread either the top or bottom caliper bridge bolt before moving to the other
- Use a 5mm Allen head socket and torque wrench to **torque to 8-10 ft-lbs**
- ① **Complete the Brake Pad Bedding Procedure in Step 28**