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****Disclaimer.** We are not responsible for any damages or injury that is incurred during installation and use of this product. It is understood that the installer is a professional (with applicable ASE certifications) and abides with standard safety protocols while working on automobiles. Any warranty does not cover installer errors. If the installer has any questions they are welcome to call or email. For a complete list of our policies please visit www.iemotorsport.com/policies

Thank you for purchasing our.....

2002 Front IE/Wilwood Big Brake Kit

****WARNING:** This kit should only be installed in conjunction with a larger rear braking system.

****WARNING:** Installation of this kit should be done only by a professional. Incorrect installation can lead to serious injury and death. If you are unsure how to safely use this kit you should not install or use it. Do not assume anything. You may receive additional information and technical support by calling Ireland Engineering during our business hours. Use of support does not guarantee proper installation. It is not possible to diagnose or foresee all issues that may arise in your installation. Proper bleeding and break-in is mandatory (see link in instructions).



Parts included:

x2 Wilwood calipers
x2 Wilwood performance pads
x2 IE 2-piece rotors (11.75"x.81")
x2 IE Mounting brackets
x1 Mounting hardware and washers

x2 E21-style hubs
x2 Wheel bearing kits
x2 IE Stainless flex lines
x2 Hub dust caps
x8 Thread-in 12x57mm studs

Prep work:

Disassemble the front 2002 strut assembly (remove the brake calipers, rotors, dust shields, and strut-mounted hardlines along with the stock hubs).

E21 Hub assembly:

For this procedure you will need to install new bearings races into the hub. For a simple installation have a driver set on hand (Harbor-freight sells a decent one [item#95853]).

-Clean the inside of the hub very well and wipe down with brake cleaner. Place the hub face down and hammer in the new race using a correctly sized driver. Criss-crossing hammer strikes will ensure a smooth install. Hammer the race until it is FULLY seated in the hub, flip the hub over and repeat with the front race.

-Using an Allen-head wrench (or doubled-up 12x1.5 nuts) thread in the new studs. You can use a small amount of lock-tite on each stud.

-Pack the bearings with grease (Mobile-1 Synthetic works well) and place them in against their races. Fill the void in the hub with a good amount of grease as well.

-When installing the rear seal rub a very thin layer of good gasket sealer on the OD (we like Dirko) and tap the seal flush with the lip of the hub.

-Now on the strut housing, clean the spindle thoroughly (use some fine steel wool on stubborn deposits). Look for anything indicating an issue. Clean the threads with some degreaser and a wire brush. Clean out the pin holes. This is also a great time to use a 12x1.5 tap and chase out the mounting bolt holes.

-Slide on your new hub assembly with the special washer and castle nut. Snug up the castle nut until the hub will not rotate more than an eighth of a turn without assistance. Back the castle nut off just enough to then slide the cotter pin through the spindle holes and bend them into place.

-Lastly for this part tap on the dust cap with a small hammer. For easiest installation, chamfer the edges (with a disk sander or something) and find a socket that fits on the lip of the cap.



Rotor and Caliper Installation:

-Bolt the adapter bracket to the leading side of the strut housing with the 12x35mm hex-head bolts. Hand tighten, do not fully torque the bolt yet.

-Slide the rotor on and thread on a couple lug nuts to keep it in place.

****Drilled and slotted rotor orientation:** when spinning the rotor in a counter-clockwise fashion the center-most part of the slot should cross the pad first and progress outwards as it rotates through.

-Bolt the caliper to the adapter bracket. Looking from the top of the caliper make sure it is centered over the rotor. This spacing will vary slightly from car to car. If it is not centered you can use the supplied 12mm thin shims placed in between the mounting bracket and the strut housing ears to space the caliper back slightly.

-Once you have finalized the caliper spacing, torque the hex-head mounting bolts to 60 ft/lbs

-Undo the top pad clip and slide in the pads, reinsert clip



Brake Line Setup:

Hardlines: These calipers utilize a single hardline to each caliper while the stock 2002/tii use dual line calipers. You will need to convert from a dual front-line system to a single line system. For the cleanest installation use an E21 brake master cylinder (which provides for single-line front calipers). If you want to retain a dual-line brake master cylinder then “T” each caliper's hardlines together close to the master cylinder or plug the extra holes.

Using the provided stainless steel flex lines thread the NPT male fitting into the back of the caliper using Teflon tape (do NOT use teflon tape anywhere else in the braking system). Attached the other end to the hardline that pokes just inside the inner fender.

If you see the line might interfere with your swaybar, feel free to zip-tie it to the strut housing.

Repeat process on the other side.



Brake Bleeding

Use standard DOT4 brake fluid. We recommend ATE SL.6 brake fluid.

Follow the common, “me and a friend” method starting at the passenger (right) rear. This procedure is well documented on the internet. When bleeding always use the highest possible bleeder screw so as to get rid of any air pockets in the caliper. In this case, use the bleeder at the top of the caliper.

<http://www.wilwood.com/m/techtip/TechFaqAnswer.aspx?id=10&no=1>

Break-in procedure.

Follow the outlined provided by Wilwood

<http://www.wilwood.com/TechTip/TechPadBedTip.aspx>

****In addition, after 20 miles of driving take off the front dust caps and snug up the castle nut. Keep checking/adjusting the front castle nuts with every oil change. Failure to do this can mean premature bearing failure.**



Enjoy your new rear brakes! If you have any questions you may email us at orderdesk@iemotorsport.com. PDF-versions of instructions are also available upon request.