Ford Mustang Brake Kits

Kit# R19010027 - 4 Piston Caliper & 14" Two Piece Rotor – Complete Kit
Kit# R19010048 - 6 Piston Caliper & 14" Two Piece Rotor – Complete Kit

Application: 2005 - 2011 Ford Mustang

Installation Instructions

Before installing your ROUSH Performance Product(s), read through the entire installation procedure and check to make sure all items are present. Contact ROUSH Customer Service at 1-800-59-ROUSH, weekdays from 9:00 AM to 5:00 PM EST, with any questions regarding fit, missing parts or instructions that are unclear to you.

Note: Use of these components will require 18" Wheels minimum. It is the responsibility of the customer to verify that their wheels will fit.

Note: The factory supplied Temporary Spare Tire will no longer fit the front of the vehicle with this kit. If you have a flat front tire, we recommend placing the mini spare on the back and transferring an 18 inch wheel to the front.

Packaging List for Front 4 Piston Brake Kit

Part Description	Part Number	Qty
Front 4 Piston Brake Kit - with 2 Piece Rotor	**R19010027**	**1**
14" Rotor- LH front (2 piece)	R19010028	1
14" Rotor- RH front (2 piece)	R19010029	1
4 Piston Caliper - Front LH	R19010021	1
4 Piston Caliper - Front RH	R19010022	1
Adapter Brackets - (4 Piston Caliper)	R19010014	2
Front Brake Pads (Installed on Calipers)	R19010023	1
Brake Dust Shields - Front Brakes	R19010017	2
Bolt - Anchor Plate Mounting	W710233-S439	4
Installation Instructions	R19010030	1
Hardware Kit – ROUSH Front Brakes	**R19010015**	**1**
Braided Brake Lines		2
LH Brake Line Bracket		1
RH Brake Line Bracket		1
Banjo Bolt		2
Cable Ties - High Temp		4
Rubber Tube Segments		4
Bolt - Brake Line Bracket		2
Adel P-Clamp		2
Washer - Copper Crush		4
Loctite 262		1
Nut - Caliper Mounting		4
Washer - Caliper Mounting		4
Cap - Rubber		2

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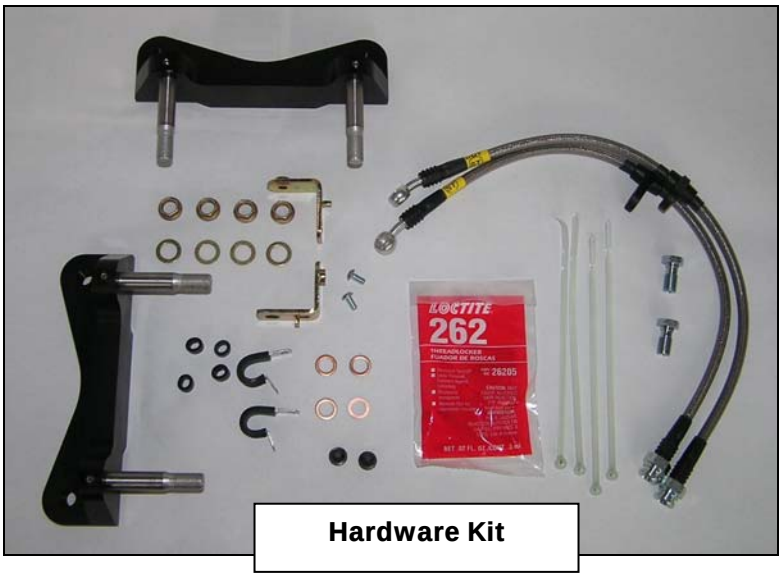
Packaging List for Front 6 Piston Brake Kit

Part Description	Part Number	Qty
Front 6 Piston Brake Kit - with 2 Piece Rotor	**R19010048**	**1**
14" Rotor- LH front (2 piece)	R19010028	1
14" Rotor- RH front (2 piece)	R19010029	1
6 Piston Caliper - Front LH	R19010050	1
6 Piston Caliper - Front RH	R19010051	1
Adapter Brackets (6 Piston Caliper)	R19010053	2
Front Brake Pads (Installed on Calipers)	R19010052	1
Brake Dust Shields - Front Brakes	R19010017	2
Bolt Anchor Plate Mounting	W710233-S439	4
Installation Instructions **	R19010030	1
Hardware Kit – ROUSH Front Brakes	**R19010015**	**1**
Same as a 4 Piston Hardware Kit		

Two Piece Rotors
Qty 2



Hardware Kit

Adapter Bracket Bolts

Brake Caliper
4 or 6 Piston
Qty 2

Brake Dust Shields
LH & RH

**** Installation Instructions not shown.**

Service Parts

R19010026 - 4 Piston Caliper Kit
R19010023 - 4 Piston Brake Pads
R19010049 - 6 Piston Caliper Kit
R19010052 - 6 Piston Brake Pads

For service parts, contact ROUSH Customer Service at 1-800-59-ROUSH, 9:00 AM to 5:00 PM weekdays

WARNING: Use of any other than approved DOT 3 motor vehicle brake fluid will cause permanent damage to brake components and will render the brakes inoperative. Failure to follow these instructions may result in personal injury.

WARNING: Brake fluid contains polyglycol ethers and polyglycols. Avoid contact with eyes. Wash hands thoroughly after handling. If brake fluid contacts eyes, flush eyes with running water for 15 minutes. Get medical attention if irritation persists. If swallowed, drink water and induce vomiting. Get medical attention immediately. Failure to follow these instructions may result in personal injury.

CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, immediately wash it with water.

CAUTION: If equipped with adhesive backed brake pads, do not allow the brake fluid to come in contact with the adhesive backing on the brake pads. If brake fluid is spilled onto the brake pads new pads must be installed.

Equipment and Supplies Required

- 15mm Wrench or socket (1/2”drive suggested)
- 9/16” Wrench or socket
- 1/2” Flare Wrench
- 10mm & 12mm Wrench or socket
- 11mm Wrench
- 1/2” socket (3/8” drive suggested)
- 3mm & 5mm Allen (Hex) wrench
- Torque wrench capable of 10-85 lb-ft settings
- Small drip tray or several rags
- Small funnel or suitable means of filling master cylinder reservoir
- Brake bleed bottle
- 1 Pair of jack stands, ramps or other means of supporting vehicle
- Plastic or non-marring mallet
- DOT 3 or DOT 4 High Temp Brake fluid

Suggested Materials

- Aerosol Brake Parts Cleaner
- Anti-seize compound

LIMIT OF LIABILITY STATEMENT

The information contained in this publication was accurate and in effect at the time the publication was approved for printing and is subject to change without notice or liability. ROUSH Performance Products (RPP) reserves the right to revise the information presented herein or to discontinue the production of parts described at any time.

SAFETY REQUIREMENTS

STOP! READ IMPORTANT SAFETY CAUTIONS AND WARNINGS BEFORE PROCEEDING.

IMPORTANT SAFETY NOTICE

Appropriate disassembly, assembly methods and procedures are essential to ensure the personal safety of the individual performing the kit installation. Improper installation due to the failure to correctly follow these instructions could cause personal injury or death. Read each step of the installation manual carefully before starting the actual installation.

1. Always wear safety glasses for eye protection.
2. Place ignition switch in the OFF position.
3. Always apply the parking brake when working on a vehicle.
4. Block the front and rear tire surface to prevent unexpected vehicle movement.
5. If working without a lift, always consult vehicle manual for correct lifting specifications.
6. Operate the engine only in well-ventilated areas to avoid exposure to carbon monoxide.
7. Do not smoke or use flammable items near or around the fuel system.
8. Use chemicals and cleaners in well-ventilated areas.
9. Batteries produce explosive gases, which can cause personal injury. Therefore, do not allow flames, sparks or flammable substances to come near the battery.
10. Keeps hands and any other objects away from the radiator fan blades.
11. Keep yourself and your clothing away from moving parts when the engine is running.
12. Do not wear loose clothing or jewelry that can get caught in rotating parts or scratch surface finishes.
13. Allow the engine, cooling system, brakes and exhaust to cool before working on a vehicle.

WORK SAFELY!

Perform this installation on a good clean level surface for maximum safety and with the engine turned off.

Disassembly

Note: All photographs show the left hand side installation, unless noted (Right hand side is similar). All steps must be repeated for the right hand side.

Raise Vehicle, Remove Wheels

1. Locate a level, stable and clean surface, suitable for supporting the vehicle on jack-stands.
2. Apply parking brake and break loose front lug nuts.
3. Refer to the Owner's Manual to identify the correct location of the jack for raising the vehicle. Jack up the vehicle, and secure it on a pair of jack stands, again referring to the Owner's Manual for jack location points.

Warning: Never leave any vehicle supported by only a jack. Always use jack-stands. Serious injury and/or death may result.

4. After securing the vehicle at a convenient height, remove the front wheels.

Note: To ensure safety, the parking brake must be applied before removing the front wheels.

Disconnect Stock Brake Line

Warning: Brake fluid will damage most painted surfaces. Immediately clean spilled brake fluid from any painted surface. Also, be sure the cap is securely installed on the master cylinder. If the cap is loose or removed, it is likely that more fluid will drip during brake installation.

1. Remove the retaining clips that hold the ABS wheel speed sensor wiring to the brake hose from the ABS wire. Refer to Figure 1.

Figure 1

2. Place drip tray or several rags directly below the inboard brake line connections. If the area around the brake line connection to the chassis is dirty, clean it using brake cleaner or an appropriate cleaning agent. Loosen the hard line fitting from the stock brake line, using a 13mm flare wrench. Cap the end of the line using caps provided in the hardware kit. Refer to Figure 2.

Warning: Do not let the brake fluid drain until the master cylinder is emptied. If the Master cylinder does empty, the brake system will have to be bleed by a certified brake technician.

Figure 2

3. Remove the Hose Bracket from the body using a 10mm wrench or socket. Retain the bolt for later use. Refer to Figure 3.

Note: The bracket will remain on the stock brake line, and will not be reused.

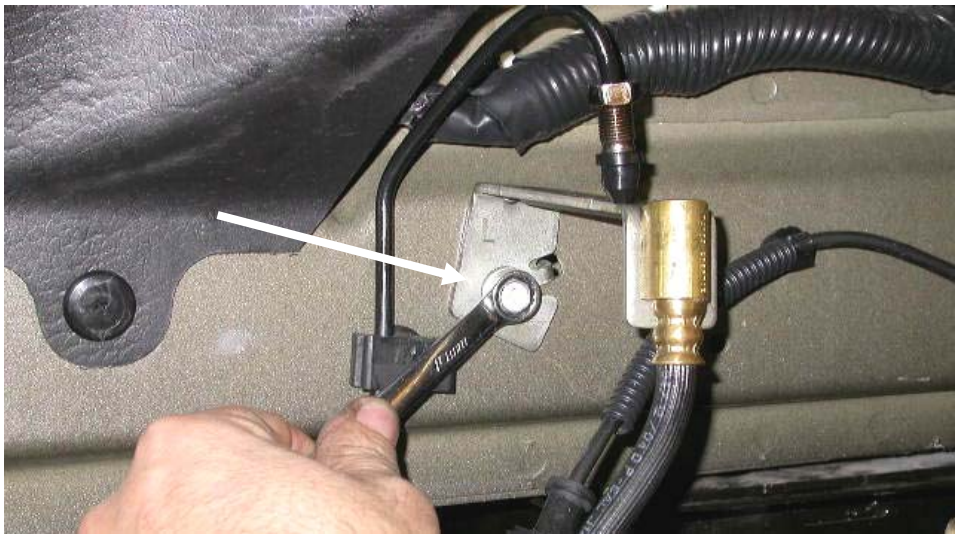


Figure 3

4. The middle section of the Mustang front wheel stock brake line is held in place by a line locator attached to a bracket on the strut. Remove the line locator bolt using a 10mm wrench or socket. Refer to Figure 4. Retain the bolt for later use.

Note: The line locator will remain on the stock brake line, and will not be reused.

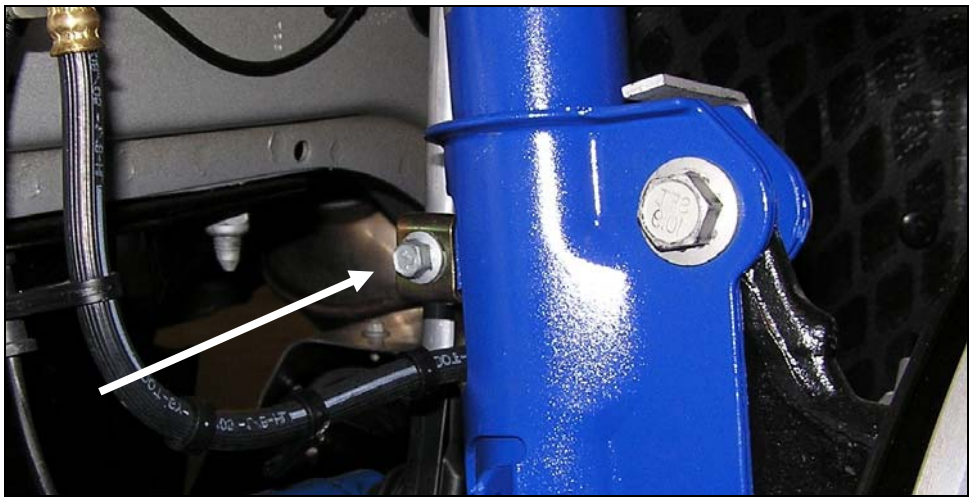


Figure 4

Remove Stock Caliper & Rotor

1. Remove the two stock caliper bolts, using a 15mm wrench or socket. Discard these bolts. Refer to Figure 5.

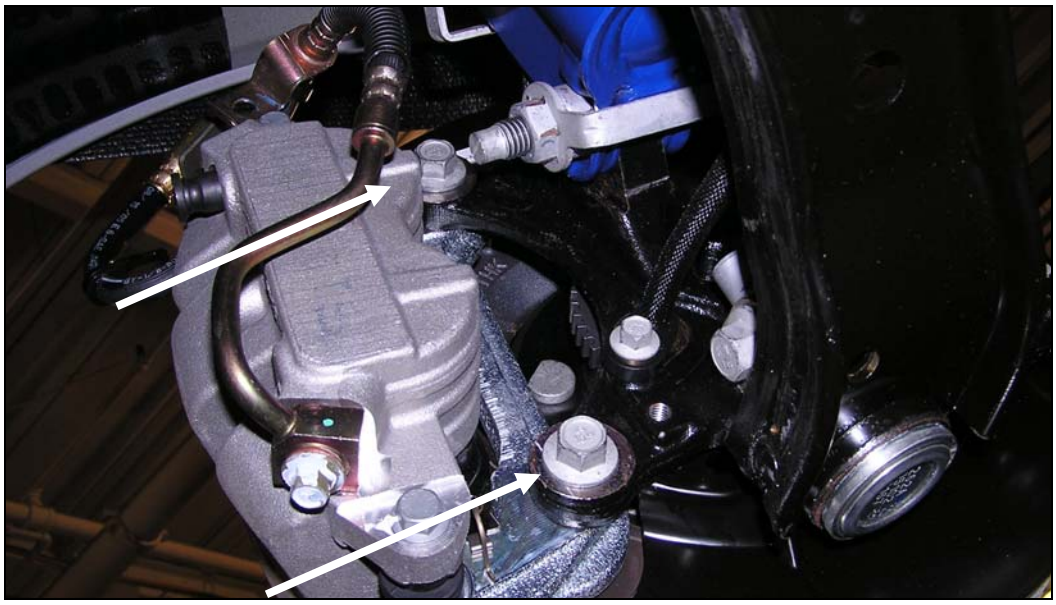


Figure 5

2. Remove the caliper with the stock brake line attached. Refer to Figure 6. There may be some leakage from the open end of the brake line.

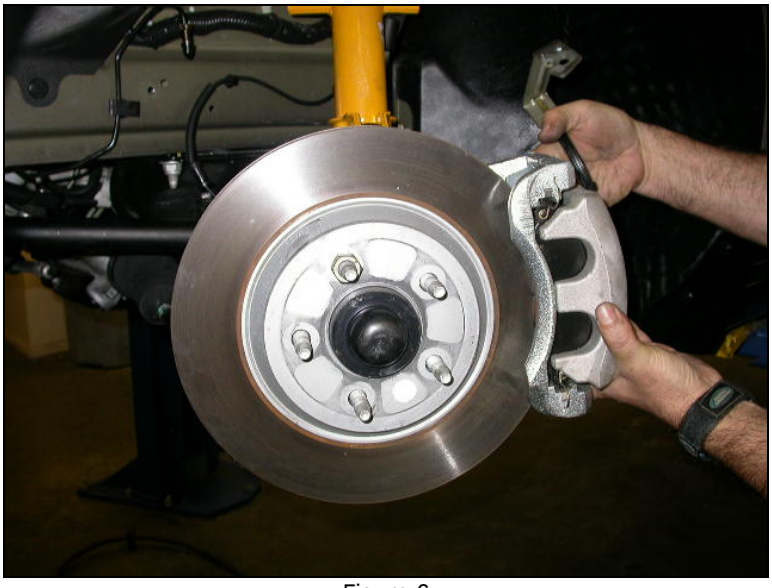


Figure 6

3. Remove the stock rotor. Refer to Figure 7.

Note: It may be necessary to strike the outer edge of the rotor with a non-marring mallet, if corrosion prevents the rotor from simply being pulled off. If so, loosely thread a wheel nut on one of the studs first, to prevent the rotor from falling when it comes free.

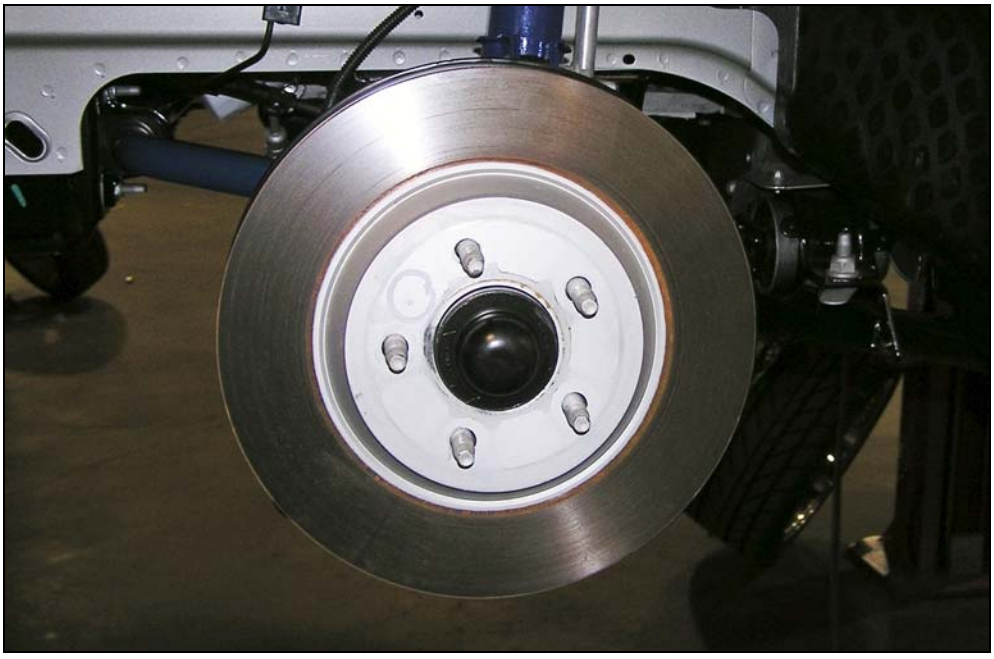


Figure 7

4. Remove the three retaining bolts holding the dust shield in place, using a 10mm wrench or socket. Set aside bolts for later use. Refer to Figure 8.

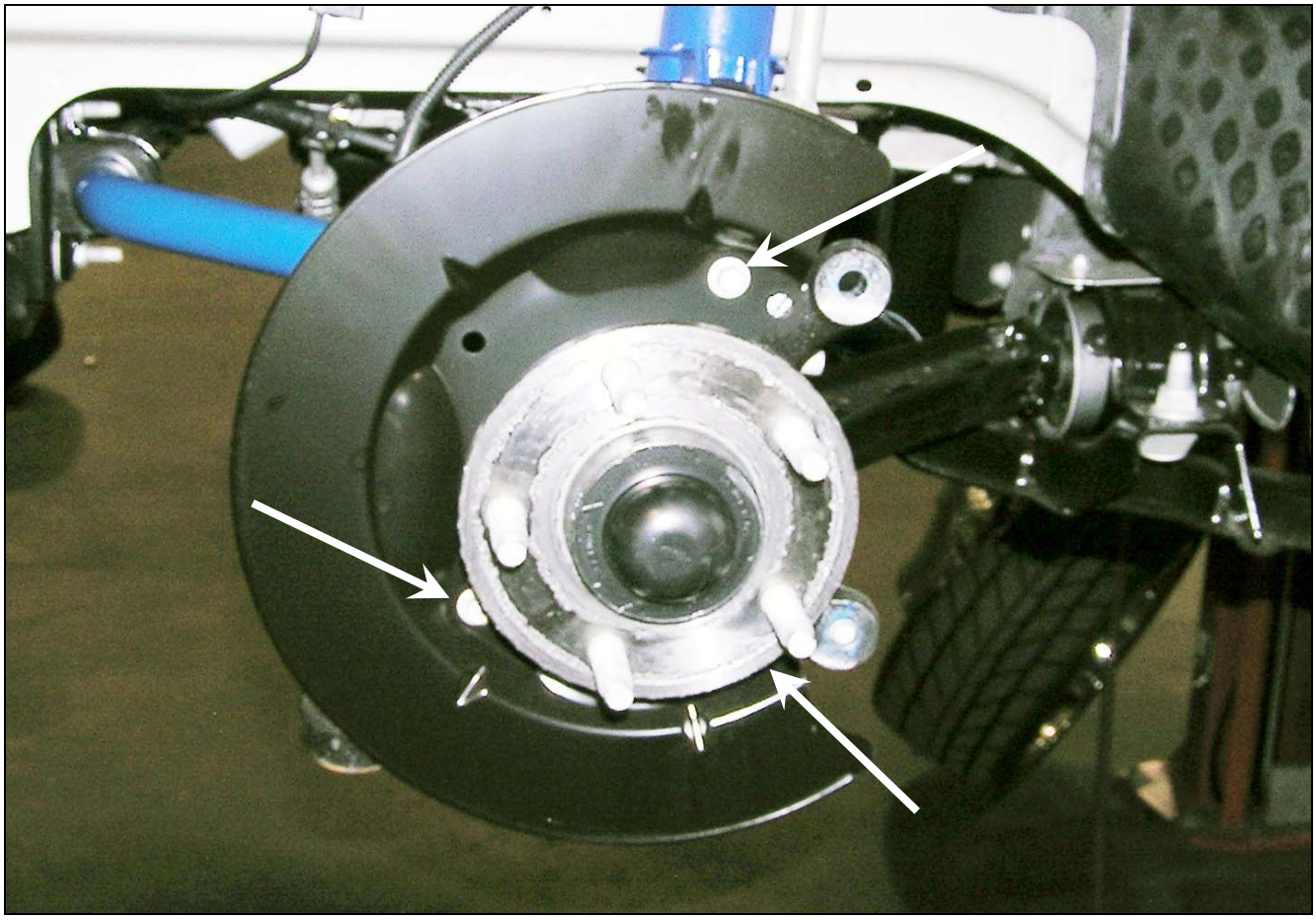


Figure 8

Assembly

1. Place the ROUSH Dust Shield into place over the hub with the cut-out portion to the rear side of the hub and the pockets for the tie rod end facing out. Refer to Figure 9. Secure with the bolts removed from the factory dust shield. Torque the bolts to 10 Nm (89 lb-in).

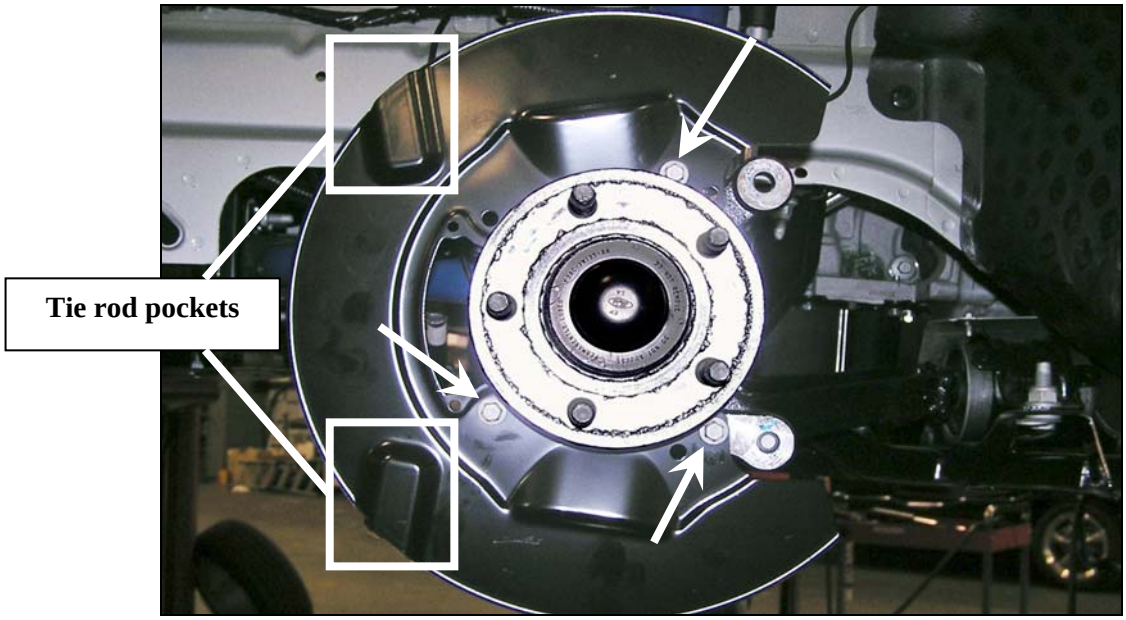


Figure 9

2. Install a caliper mounting bracket to each spindle using the new caliper bolts. Refer to Figure 10. Torque the bolts to 115 Nm (85 lb-ft).

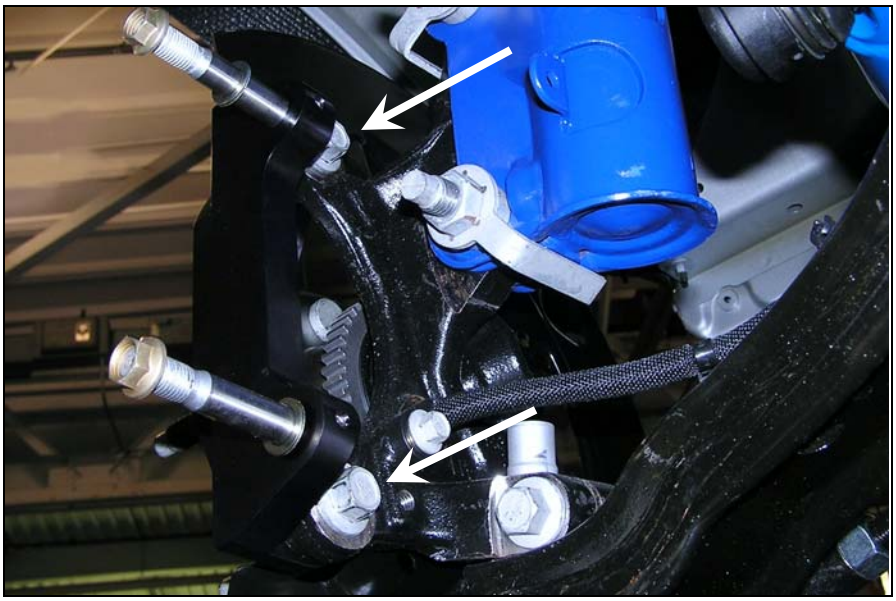


Figure 10

Install Rotor and Caliper

1. Slide the Rotor over the wheel studs and onto the hub. Refer to Figure 11.

Note: The rotors are specific for each side of the vehicle. The rotors are labeled 'L' and 'R' with orange decals. Installing the rotors on the wrong side of the vehicle will greatly reduce the cooling capacity of the system.

Hint: Applying a small amount of Anti-seize compound to the outer ring of the center of the hub may aid in removal of the rotor in the future.

Figure 11

2. Thread 3 lug nuts onto the wheel studs and snug. Check the rotor and backing plate for interference. Adjust for clearance by bending the backing plate away from the rotor if/where they touch.

3. Remove the lug nuts from the wheel studs.

4. Obtain the left side caliper. The calipers have small orange stickers with 'R' and 'L' for their perspective sides. Remove the Styrofoam shipping blocks from inside the calipers and slide the caliper over the rotor and the Caliper Bracket studs. Refer to Figure 12.

Note: When installed on the correct sides, the bleeder screws will be on the top side of the caliper and the crossover pipe will be on the bottom.

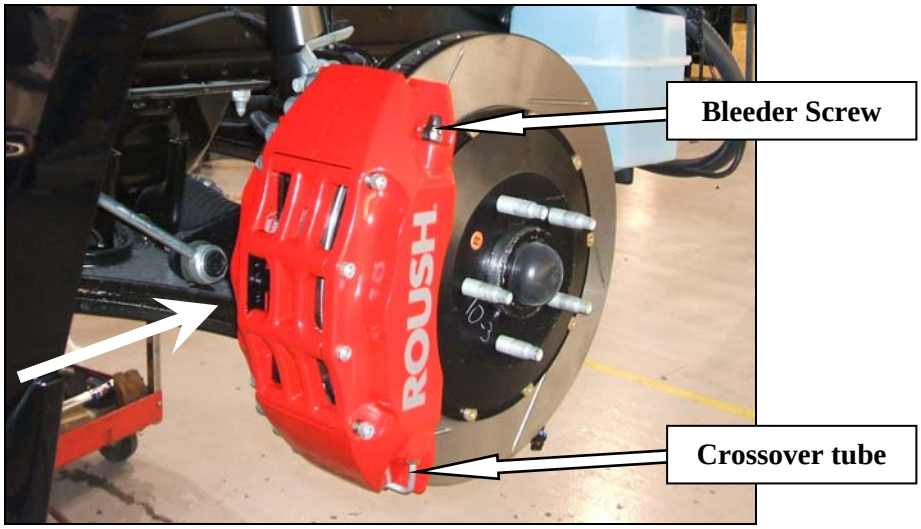


Figure 12

5. Loosen the top and bottom Bridge Bolts and install the 12mm washers and Jet Nuts onto the caliper bracket studs. Torque the Jet Nuts to 55 Nm (41 lb-ft). Retighten the loosened Bridge Bolts to 12 Nm (106 lb-in). Refer to Figure 13.

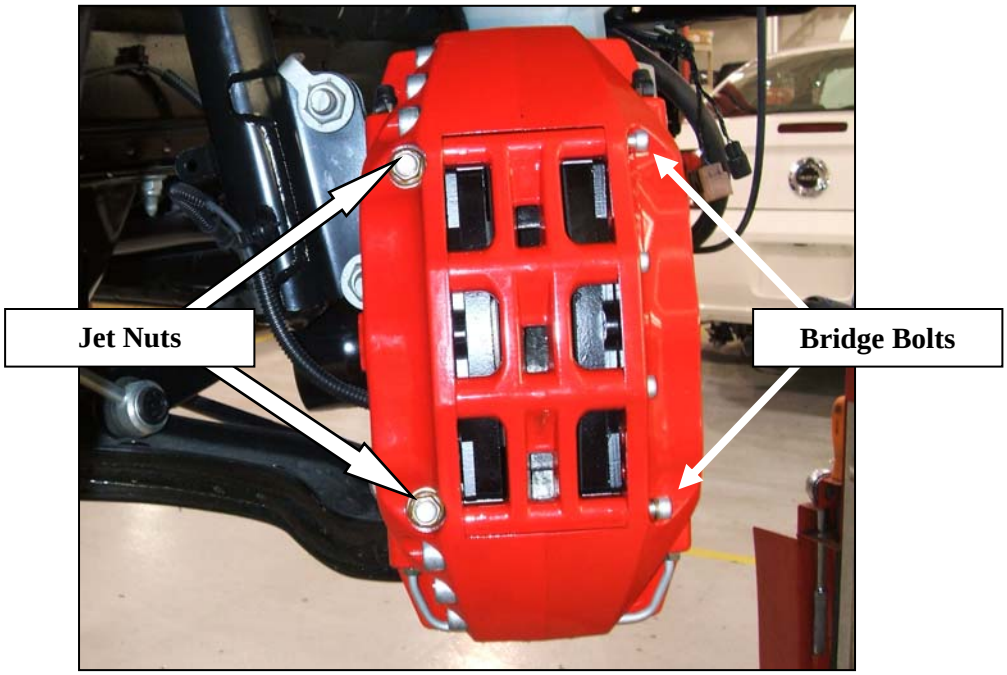


Figure 13

Install Brake Hose

1. Loosely attach the Brake Hose to the caliper with the Banjo Bolt and Copper Crush Washers on each sides of the hose end as shown in Figure 14.

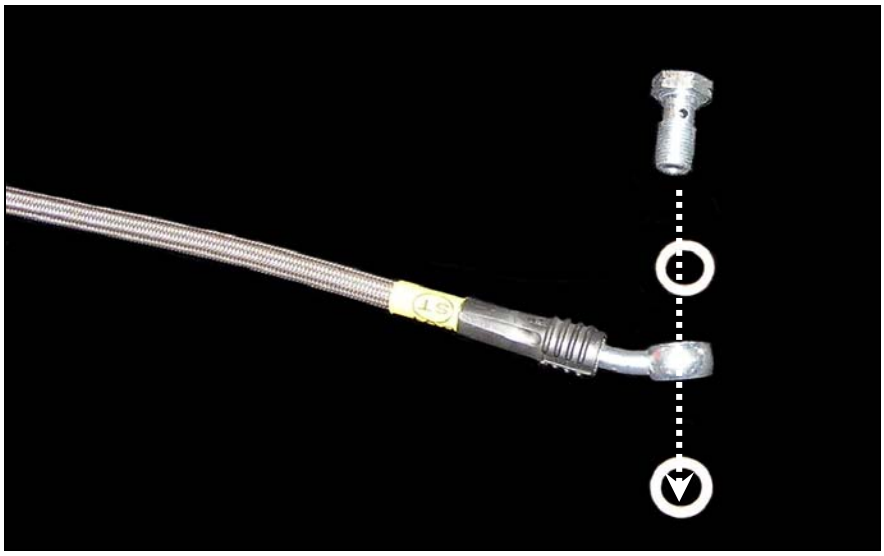


Figure 14

2. Attach the hose mid mount to the strut using the original strut bolt. Position the hose mount perpendicular to the strut and torque the bolt to 20 Nm (177 lb-in). Refer to Figure 15.

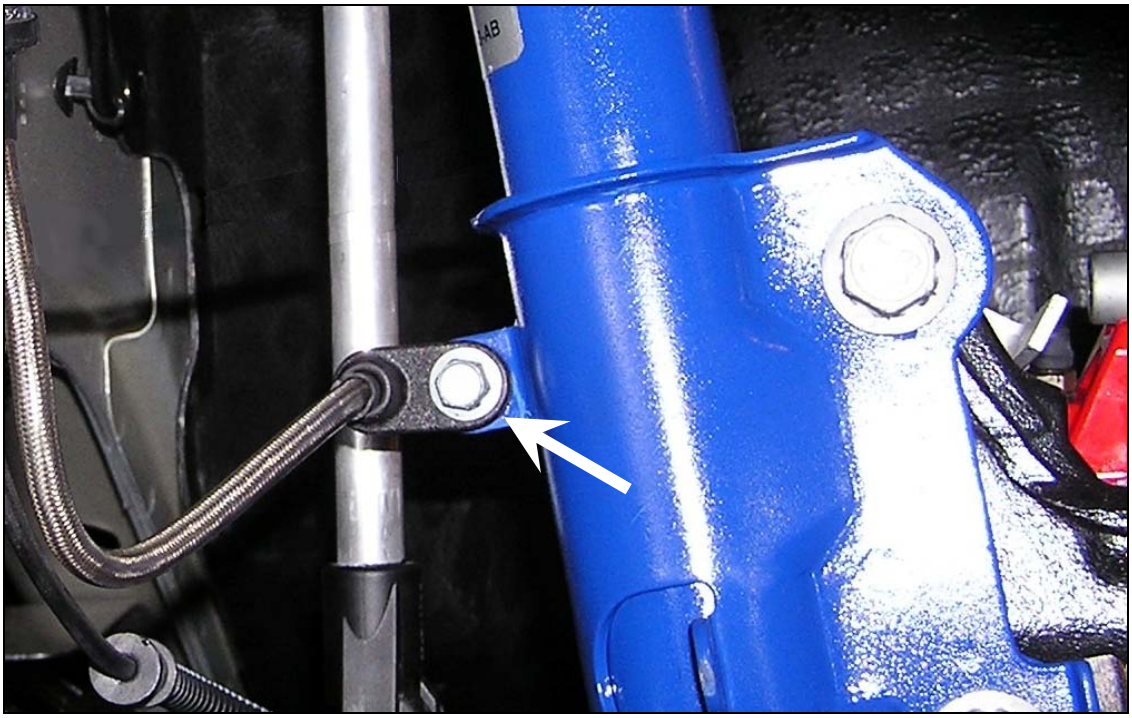


Figure 15

3. Fasten the Brake Hose Bracket to the body using the bolt from the OEM brake hose bracket. Refer to Figure 16. Torque the bolt to 20 Nm (177 lb-in).

Figure 16

4. Place the Adel Clamp over the Braided Brake Hose so that the offset is to the rear the car and the retainer holes are inboard when the hose is held vertical. Refer to Figure 17.

Hint: It may be helpful to place the hose and the clamp against the bracket and mark the clamp in relation to the hose. Then, use pliers to squeeze the clamp around the hose and start the Brake Line Bracket Bolt through the clamp.

Figure 17

5. Bolt the hose to the hose bracket with a Brake Line Bracket Bolt. Refer to Figure 18. Tighten using a 3mm driver to 2.5 Nm (22 lb-in).

Important! – The brake hose must not be twisted into place when it is installed on the bracket. If the hose is twisted, it WILL NOT be able adequately move with the suspension and will possibly fail.

Figure 18

6. Remove the rubber cap from the brake line and connect the brake line to the brake hose. Use wrenches to hold both the brake line and the brake hose ends as you tighten them. Refer to Figure 19. Torque to 17 Nm (150 lb-in).

Figure 19

7. Position the caliper end of the brake hose so that it is approximately 45 degrees from vertical, tilted toward the center of the rotor. Refer to Figure 20. Torque the banjo bolt fitting to 19 Nm (168 lb-in).

Figure 20

Secure the ABS Wiring

1. Run one High Temp Cable Tie through one Rubber Tube Segment. Loop the cable tie around the protective rubber sleeve portion of the ABS wire and back through the tube segment. Refer to Figure 21.

Figure 21

2. Engage the wire tie ends around the Braided Brake Hose and pull tight. Cut off the excess wire tie. Repeat for the second ABS protective rubber sleeve. Refer to Figure 22.

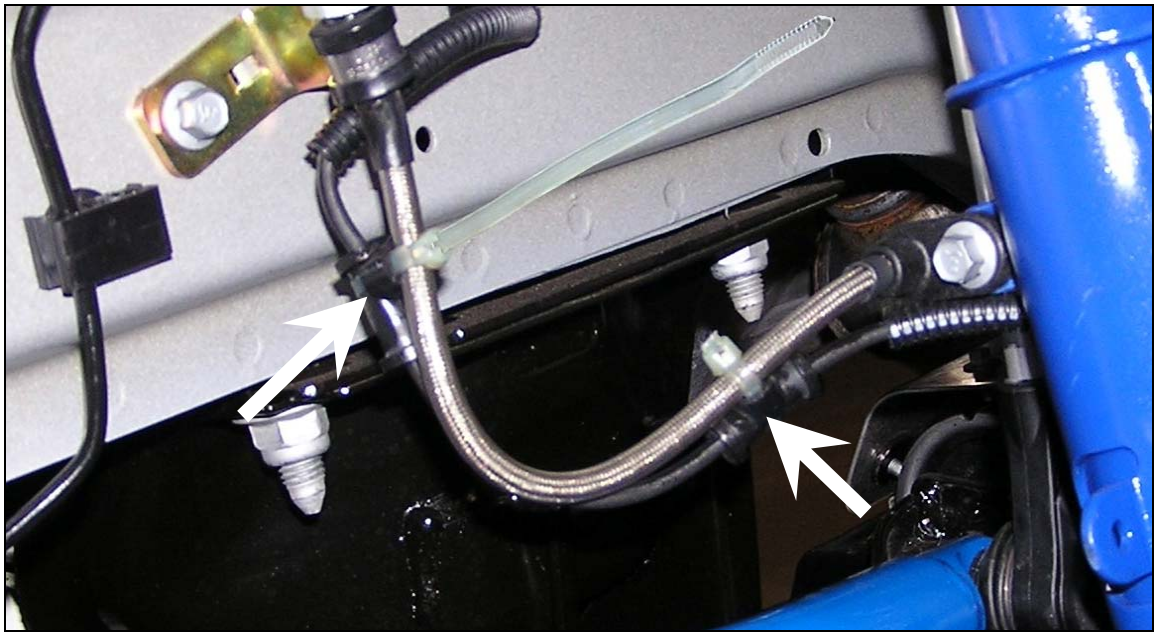


Figure 22

Bleed Brakes

Warning: Do not let the brake fluid drain until the Master Cylinder is emptied. If the Master Cylinder does empty, the brake system will have to be bleed by a certified brake technician. Do not turn the ignition on until brake bleeding is fully complete.

1. Complete the installation of both sides before bleeding the system.

2. Refer to the factory service manual for basic brake bleeding instructions.

3. Bleed the brakes, using an 11mm wrench to loosen the bleed screws, in the following sequence:

    1) Right outboard bleed screw
    2) Right inboard breed screw
    3) Left outboard bleed screw
    4) Left inboard bleed screw

4. Bleed brakes until there is positively no air left in the system. Gently tapping on the calipers with a soft, non-marring hammer can help to unseat trapped air.

5. Torque bleed screws to 14 Nm (124 lb-in).

Test Brakes

1. Verify normal pedal travel. Pedal may take several pumps to reach its normal position. If travel is excessive, the problem will usually be trapped air or leaks.

2. With firm pressure applied to the brake pedal, check all lines, hoses, and connections for leaks.

3. Check for adequate caliper clearance to wheels. Be sure to check that wheel balance weights will not interfere either. Re-install wheels and lower vehicle.

4. Carefully test drive vehicle in a safe area at low speeds to insure all components are working correct. If the vehicle operates in any way that is suspect, stop the vehicle immediately and inspect/repair.

Important! -- If anything seems unusual when operating the vehicle, stop the vehicle immediately and repair as necessary.

Bed-in Brakes

FAILURE TO READ, UNDERSTAND AND FOLLOW THESE PROCEDURES WILL CAUSE PERMANENT DAMAGE TO YOUR BRAKE ROTORS, AND WILL KEEP THE SYSTEM FROM WORKING AT ITS FULL CAPABILITY.

The majority of brake system problems are due to improper installation and/or bed-in of the rotors and pads. By reading and understanding the following, you will avoid the most common causes of poor brake performance and vibration. Failure to read, understand and follow these procedures will cause permanent damage to your new rotors.

Bed-in or rotors and pads is critical to the optimum performance of your new brakes. When bedding-in new parts, you are not only heat-cycling the pads, you a depositing a layer of material onto the rotor face. If not bedded-in properly, an uneven layer of pad material will be deposited onto the rotor, causing vibration. ***Virtually every instance of a "warped" rotor is attributed to uneven pad deposition.***

Note: Bedding-in pads should not be done in poor weather conditions, nor on wet roads.

Note: ROUSH brake rotors are CAD plated. Plated rotors must be driven with gentle braking until the CAD plating is warn off BEFORE starting the bed-in procedure. Do not use brakes aggressively until the plating is worn off, typically after several miles of driving.

Typically, a heavy braking street driver will experience approximately 1 to 1.1G's of deceleration. At this rate, the ABS will be activated on such equipped vehicles. A moderate braking effort is needed to properly bed-in rotors and pads. If ABS intervention or lock-up were represented as 100% brake effort, a stopping force of 70-80%, just short of ABS intervention or lock-up is a general estimate of the pedal effort you are trying to achieve.

After completing the installation and driving the vehicle gently to remove the CAD plating from the rotors, make a series of 10 stops from 60 to 5-10 MPH. At the end of each stop, immediately accelerate to 60 MPH, then begin braking. It is not necessary to watch the speedometer. Keep your eyes on the road and approximate your speed at the end of the stop. DO NOT COME TO A COMPLETE STOP WHILE LEAVING YOUR FOOT ON THE BRAKE PEDAL, AS YOU MAY IMPRINT PAD MATERIAL ONTO THE ROTOR, CAUSING A VIBRATION.

After the final stop of the cycle, drive as much as possible to without using the brakes, to cool off the system. Ideally, the brakes should be allowed to completely cool to ambient temperature before using them again.

There are several indicators to look for while bedding-in the system.

On the 8th or 9th stop, there should be a distinct smell from the brakes. Smoke may also be evident after several stops.

Also on the 8th or 9th stop, some friction materials will experience "green fade." This is a slight fading of the brakes and will stabilize, but not completely go away, until the brakes have cooled.

After the bed in cycle is finished, there will be a blue tint on the rotors and a light gray film on the rotor face. The blue tint indicates that the rotor has reached the proper bed-in temperature, and the gray film is pad material starting to transfer onto the rotor face. This is normal!

WHILE PERFORMING THE BEDDING-IN PROCEDURE, DO NOT COME TO A COMPLETE STOP WHILE LEAVING YOUR FOOT ON THE BRAKE PEDAL, AS YOU MAY IMPRINT PAD MATERIAL ONTO THE ROTOR, CAUSING A VIBRATION.

After the first bed-in cycle shown above, the brakes will still not be operating at their best capacity. A second or third bed-in cycle is typically necessary before the brakes really start to "come in." A "cycle" is a series of stops followed by a cool down.

ROUSH Performance Products does not endorse exceeding the posted speed limit.

Note: If items are missing or for any questions regarding the installation of this kit, please contact ROUSH Performance toll free at 1-800-59-ROUSH.

Congratulations!!! You have completed the installation of the ROUSH Performance Products, Mustang Brake Upgrade Kit. It is recommended that you save all parts removed from your vehicle during the installation of this kit.

WARRANTY

All retail parts carry a 90-day warranty from the date of purchase. This warranty covers defects in materials or workmanship, and does not include (i) normal wear and tear, environmental conditions, improper installation; (ii) road hazards, misuse, abuse, neglect, accidents, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle; (iii) misusing the vehicle, such as driving over curbs, overloading, racing, or using the vehicle as a stationary power source; (iv) altering, disassembling or modifying the parts; (v) defects caused or induced by failures, breakdowns, or damage by other parts, components or the vehicle; (vi) subjecting the parts to excessive moisture or water or any motor vehicle fluids (e.g.: oil, anti-freeze, battery acid, brake fluid, etc.); (vii) acts of God, natural disasters and other similar causes beyond the reasonable control of ROUSH; or (viii) application of chemicals that affect the parts. This Limited Warranty does not cover surface deterioration of paint, trim, and appearance items that result from use and/or exposure to the elements, such as stone chips, scratches, bird droppings, lightning, hail, windstorm, dings, dents, earthquake, road salt, tree sap, water or flood.

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