

MM Brake Line Kit for Fox-IRS Swap (MMBAK-21)



Thank you for purchasing the MMBAK-21 Brake Line Kit for a Fox-IRS Swap. This kit will make your life much easier when you're swapping a Mustang Cobra IRS into a Fox Mustang. It has the new brake hard lines to connect the stock solid-axle rear brake hard line to 1999-2004 Cobra IRS brake hoses. MM's direct-fit kit means no cutting or flaring of any brake lines!

Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

Required Tools

- Drill with 1/8", 3/16", and 1/4" bits
- Basic Hand Tools

Required Supplemental Items

- Requires IRS brake hose assemblies, either MMBK9R or stock Mustang Cobra.
- Requires two (2) OEM IRS brake hose assembly mounting screws or similar sized thread-forming sheet metal screws (these attach the bracket to the frame rail).

Installation Time

Shop: 0.5 Hours

Home Mechanic: 1 Hour

Supplemental Installation Notes

- Fits 1986-1995 V8 Mustangs originally equipped with 8.8" solid axle.
- Non-V8 1986-1993 Mustangs and all 1979-1985 Mustangs will require minor brake line re-routing and an additional short hard line extension because the original stock rear brake hose was not center-mounted.
- Rear axle assembly and center rear brake hose must be removed before proceeding. Before doing so drain the master cylinder, then drain the rear brake lines to avoid spilling brake fluid while installing this kit.
- IRS rear brake hoses should be installed at the same time as this kit to ensure all parts are positioned correctly, relative to each other.
- IRS brake hoses require either removal of the Fox Mustang bumpstop brackets that are spot-welded to the rear frame rails, or modification to the IRS hose assembly mounting brackets to clear the bumpstop brackets.

This Kit Contains

Description	Qty
Brake Line, Driver	1
Brake Line, Passenger	1
SAE-Metric Adapter	1
M10x1.0 ISO Tee Fitting	1
Brake Line Bracket	1
1/4" Rivet	2
Sheet Metal Screw	4
1/4-20 G5 Bolt	1
1/4-20 Washer	1
1/4-20 Nylock Nut	1
Cushion Clamp	2
Installation Instructions	1

Component Identification

MM T-fitting Bracket



1/4" Bolt



M10x1.0 ISO Tee



SAE-Metric Adapter



Cushion Clamp



1/4" Nylock Nut



1/4" Rivet



Sheet Metal Screw



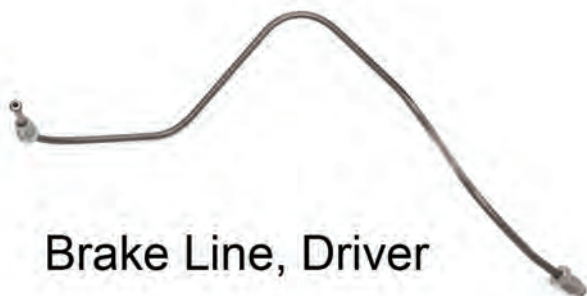
1/4" Washer



Brake Line, Passenger



Brake Line, Driver



Installation

Rear Brake Hose Bracket Removal

1. Disconnect the rear brake hard line on the chassis from the coupler fitting on the bracket.

NOTE: It usually helps to soak the fitting threads with a good penetrating oil before attempting to loosen the fitting.



NOTE: To avoid damaging the tube nut hex, use a flare nut wrench.

2. Remove the stock bracket by drilling the heads off the two pop rivets holding the bracket to the chassis.

NOTE: There is no need to remove the pop rivet shank, just the head. The two pop rivet shanks are used to locate the MM T-fitting bracket.

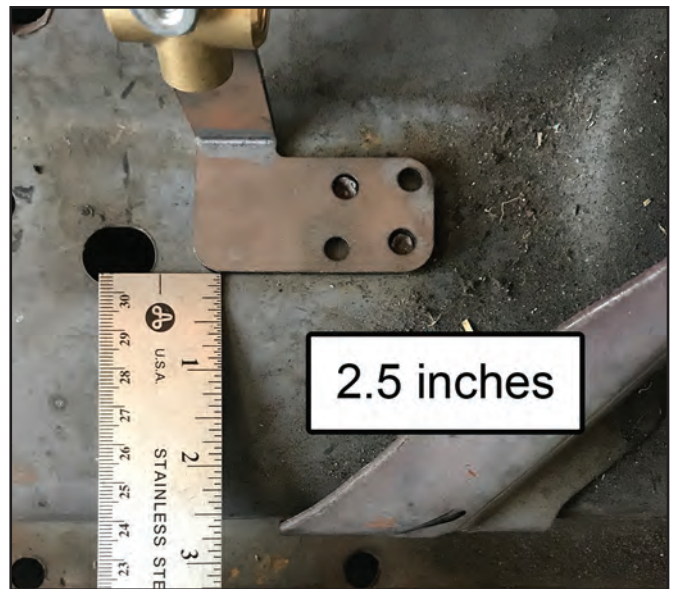


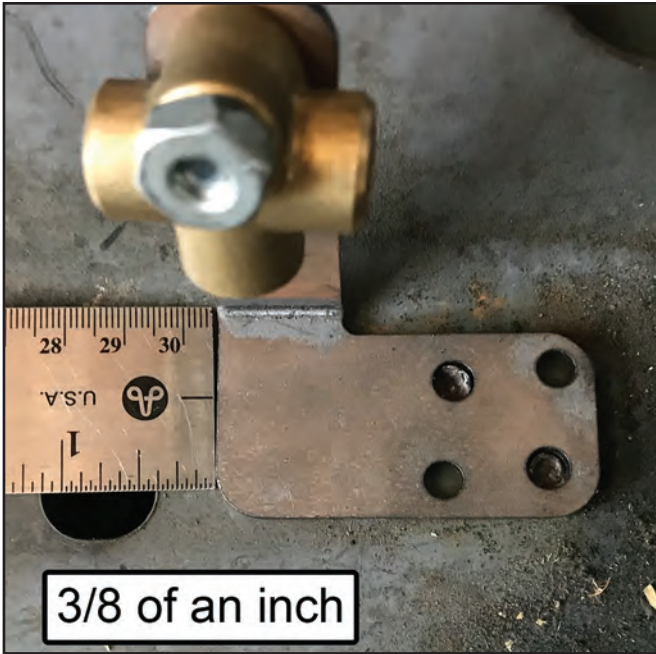
Installing the MM T-fitting Bracket

NOTE: The four holes in the MM T-fitting bracket are of two different sizes. The two larger diameter holes fit the pop rivet shanks left behind when the stock coupler fitting bracket was removed. These locate the bracket on the chassis. The two smaller holes are used to attach the MM T-fitting bracket to the chassis with either sheet metal screws or pop rivets (both supplied in this kit).

3. Locate the two holes in the chassis (Most cars have these holes).
4. Align the two larger holes in the T-fitting bracket with the holes in the chassis.

NOTE: If your Mustang doesn't have the holes you'll need to position the bracket yourself. The following photos show how to position the T-fitting bracket. It is mounted just inboard of the driver side upper control arm mount. The hole near the end of the bracket, for securing the T-fitting, must be offset slightly toward the driver side from the rear seat belt bolt. The offset position prevents the end of the 1/4" bolt from hitting the end of the seat belt retaining bolt.





5. Once the bracket is in position, mark the location of the two smaller holes on the chassis.



6. Pre-drill the two holes using a 1/8" drill bit.



7. Attach the MM T-fitting bracket to the chassis using either the rivets or screws.

NOTE: Use either the two supplied sheet metal screws or the two supplied pop rivets. The pop rivets are a more secure attachment, but not everyone has a rivet gun.

NOTE: If using the sheet metal screws, drill the holes out to 3/16 of an inch.

NOTE: If using the pop rivets, drill the holes out to 1/4 of an inch.



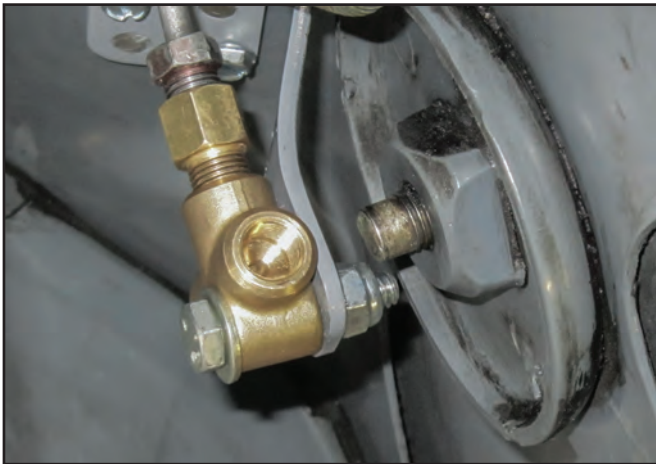
8. Thread the supplied SAE-metric adapter fitting into the middle port of the T-fitting, and tighten securely. Use two wrenches, or place the T-fitting in a vise while tightening the adapter fitting.

NOTE: Clean the tube nut on the Mustang's rear brake line. Make sure to remove any remaining penetrating oil with Brakleen. Inspect the threads and repair with a thread file if damaged.

9. Thread the SAE-metric adapter and T-fitting onto the factory line tube nut. Do not fully tighten the tube nut yet.

10. Attach the T-fitting to the T-fitting bracket with the supplied 1/4" hardware. Place the flat washer under the head of the bolt, then insert the bolt through the hole in the T-fitting, and on through the hole in the T-fitting bracket. Orient the fitting assembly vertically with the bracket, as shown. Secure with the supplied 1/4" lock nut. Do not over-tighten. The torque spec is only 8 lb-ft (96 lb-in).

NOTE: The end of the 1/4" bolt will be close to the chassis.



11. Finish tightening the tube nut of the Mustang's rear brake line to the SAE-metric adapter fitting. Keep the SAE-metric adapter fitting from moving with one wrench while tightening the tube nut with another wrench. Do not overtighten.



Installing the Brake Hard Lines

12. Attach the rear IRS brake hose brackets to each frame rail.

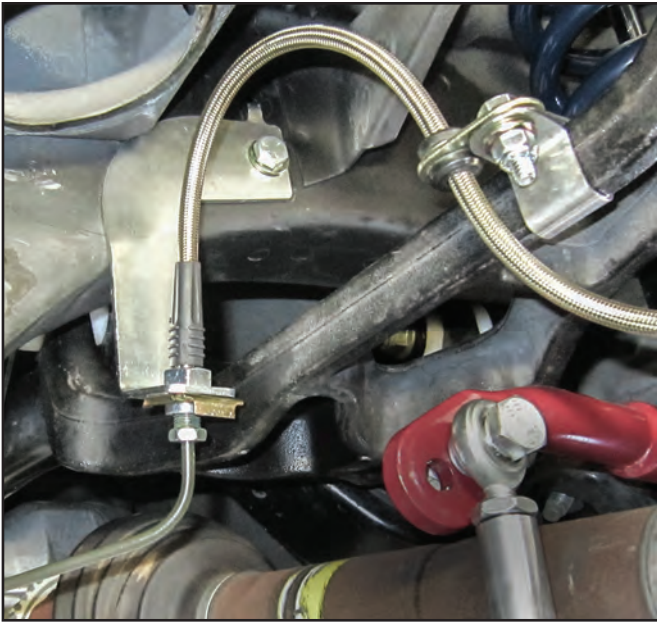
NOTE: It's easier to install the new MM hard lines if the hose is not attached to the bracket. It's possible with the MMBK9R kit, but not with stock IRS brake hoses.

NOTE: In the following photos, the bump stop brackets that are spot welded to the frame rails have been completely removed with a spot weld drill bit. This is highly recommended to simplify installation of the brake lines.

NOTE: To ensure the IRS brake hose brackets are located properly and clear the upper control arms, temporarily install the IRS subframe and upper control arms. Only the upper control arms need to be attached to the IRS subframe; no other parts are necessary for this step.

- The bend in the bracket aligns with the bottom edge of the frame rail.
- The bracket is located slightly in front of the upper control arm.
- The bracket is not so far forward that the hose will contact a spring in the stock location.





13. Mark the location of the holes needed for the attachment screw and the locating tab, then drill the holes and attach the brackets securely on each side of the car.
14. Install the driver side rear MM hard line as shown.

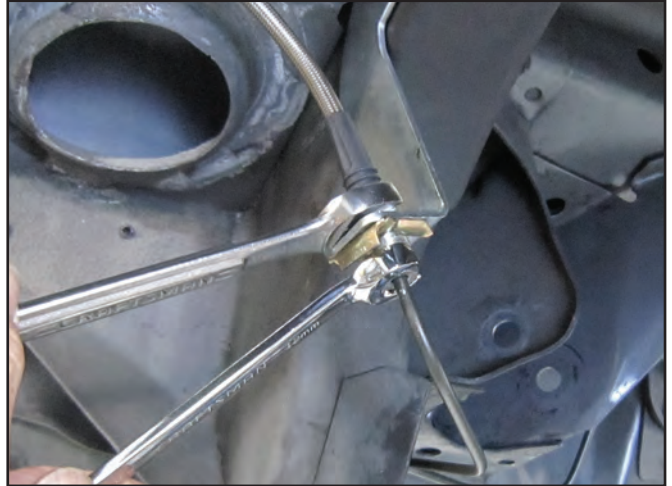


15. Thread the inboard tube nut into the T-fitting, but do not fully tighten yet.
16. Position the outboard tube nut inside the hole of the brake hose bracket.

NOTE: It may be necessary to adjust the outer tube nut position by gently bending the hard line. Hard lines can be bent or straightened easily by hand; just take care to not kink the line.

NOTE: If using a stock IRS brake hose thread the outboard tube nut of the MM hard line into the fitting on the end of the stock hose at this time. Do not fully tighten it.
17. Install the MM brake hose; insert the hose end into the mounting bracket while carefully threading the MM hard line tube nut into the end of the hose.

18. Secure the hose to the bracket with the U-clip. Do not fully tighten the tube nut yet.
19. While both tube nuts are still slightly loose, position the middle part of the MM hard line up close to the bottom of the sheet metal upper torque box.
20. Tighten the outer tube nut to the hose fitting.



21. Tighten the inner tube nut to the T-fitting. While doing so hold the T-fitting in place with pliers to prevent the T-fitting bracket from bending or twisting.



22. Install the passenger side rear MM hard line as shown.

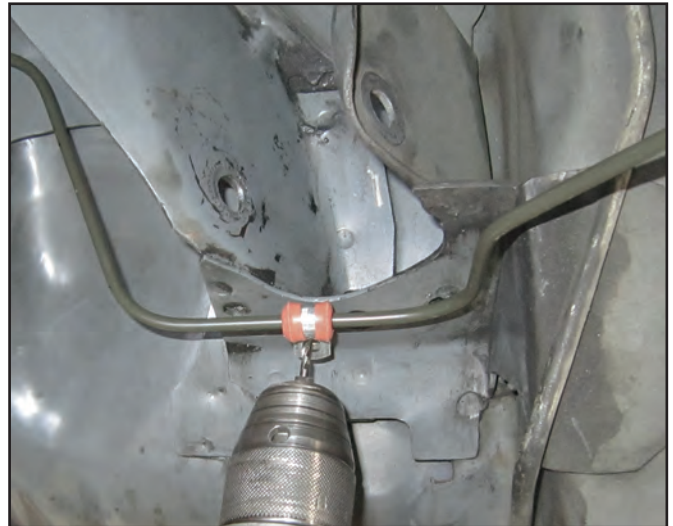
NOTE: Notice the inner end of the brake line is rearward of the stock brake line, forward of the two fuel system lines, and rearward of the outboard vent hose.



23. Repeat Steps 15 through 21 on the passenger side.

24. Place a cushion clamp on the passenger side MM hardline.

25. Drill a 3/16" hole in the bottom of the upper control arm torque box to secure the cushion clamp.



26. Attach the cushion clamp with a supplied sheet metal screw.



27. Repeat Steps 24 through 26 on the driver side.

Completed Installation

