



E46 Inline Hydraulic
Handbrake Guide
Passenger's Side ABS Block





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Overview

Mounting
Nut (4x)

Dog Ear
Clip (4x)



Hydraulic Line (2x)

Mounting
Stud (4x)

Block
Fitting

Bajno
Fitting

Banjo
Bolt

Crush
Washer (2x)



Base
Assembly



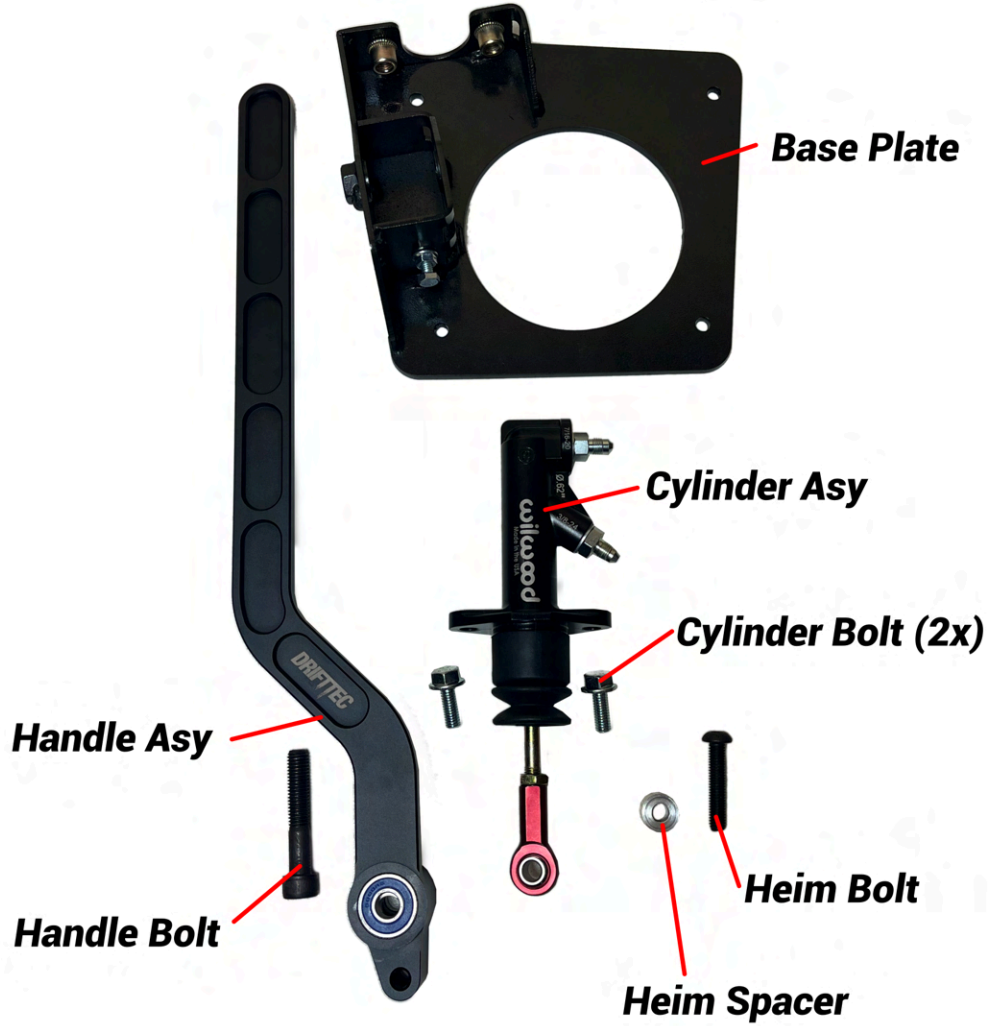
Switch Adapter



Grommet



Base Assembly





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Disclaimer & Safety

This handbrake kit is intended for off road use in controlled environments

This kit is intended to be installed by a qualified mechanic. If you or your mechanic have any questions please contact info@drifttec.co

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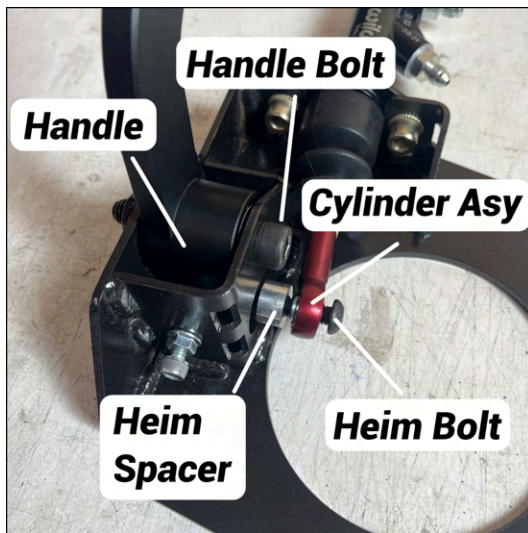
Preparation

Bench bleed the supplied master cylinder before installation.

Install the handle, and linkage assembly to the base. Do not mount the master cylinder to the base. It should be hanging loose attached to the handle.

*Handle Bolt - (55 ft*lb, 75 N*m)*

*Heim Bolt - (20 ft*lb, 27 N*m)*





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Pull up on the shift knob to remove.



Remove the shift boot by squeezing the sides.





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Remove the shifter bezel by removing the 2 screws towards the rear of the car. Disconnect the window switches.



Pull out the center storage cubby and remove the 4 screws in the panel. Disconnect the connectors behind the panel.





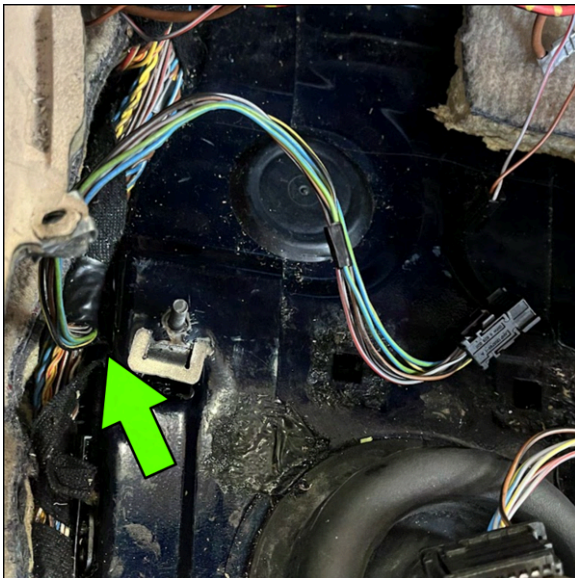
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Cut away carpet in the center console area following the diagram below. Take care to not cut any wires.

Note: Using sharp items poses a cut risk. You must use cut resistant gloves and sleeves to ensure safe working conditions.



De-loam the driver's side window switch. Apply electrical tape in place of removed tape.



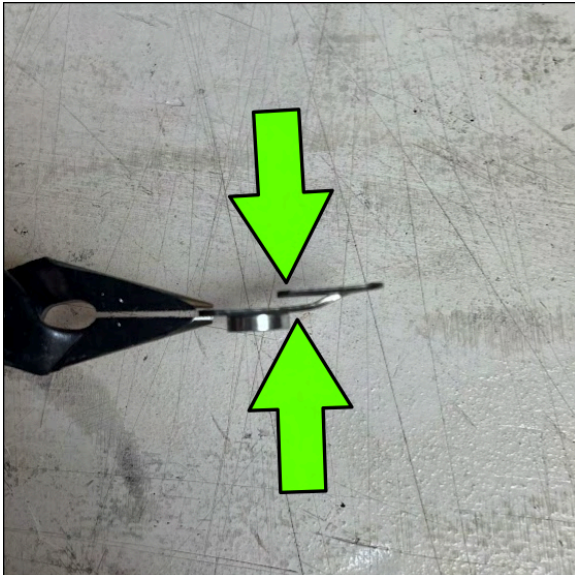


Base Installation

Insert the 4x dog ear clips into the transmission tunnel centering the threaded hole to the circular hole in the tunnel.



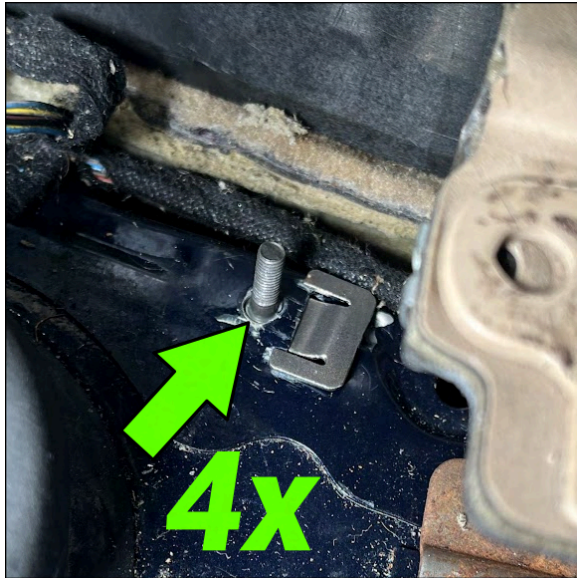
The clips should have a fair bit of resistance sliding into the chassis. If the clips are loose, bend the ears of the clip down until they are snug with the transmission tunnel.



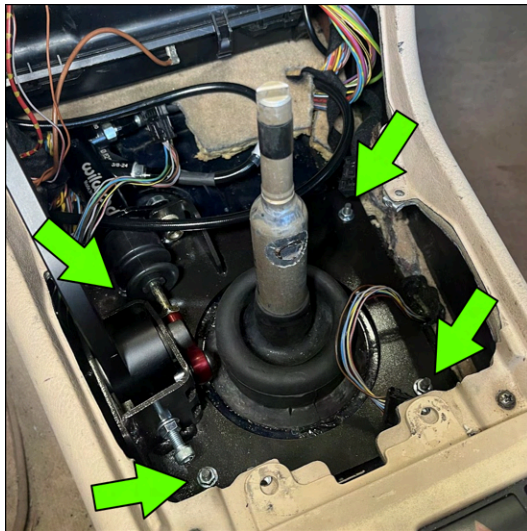


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Thread the studs through the transmission tunnel and into the clips.



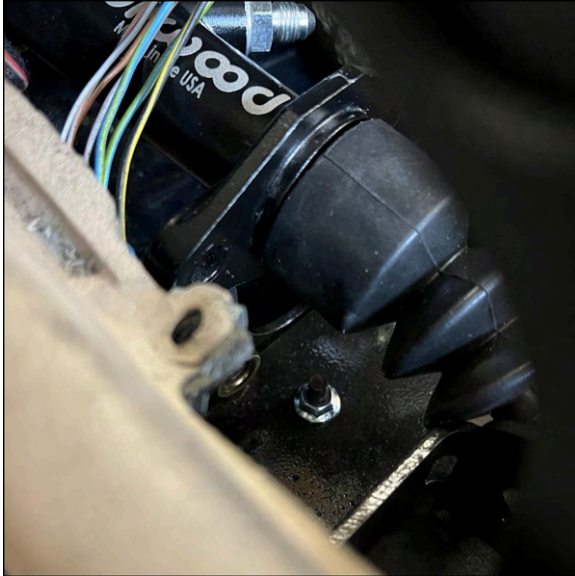
Slide the Handbrake mounting plate over the studs and install the 4x nuts onto the studs.
*Mounting Nut - (6.2 ft*lb, 8.5 N*m)*



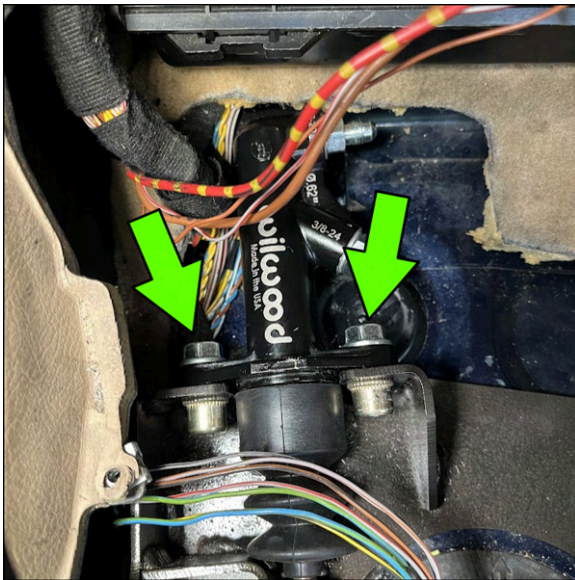


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Access is limited to the left front mounting stud. Lift the cylinder to access the stud below.

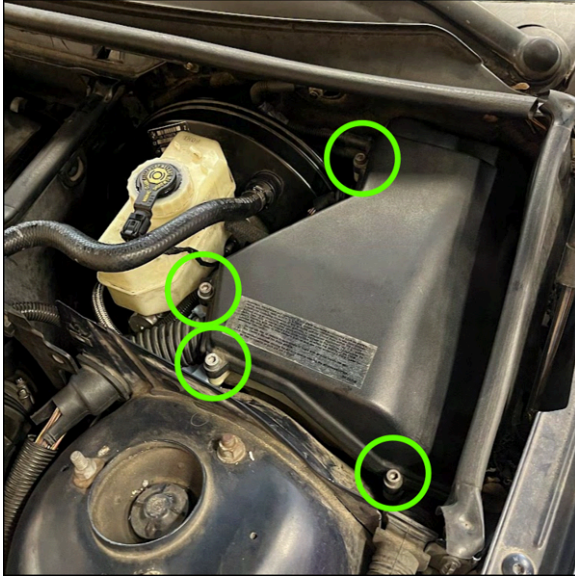


Install the cylinder bolts through the cylinder and into the base.
*Cylinder Bolt - (18 ft*lb, 25 N*m)*

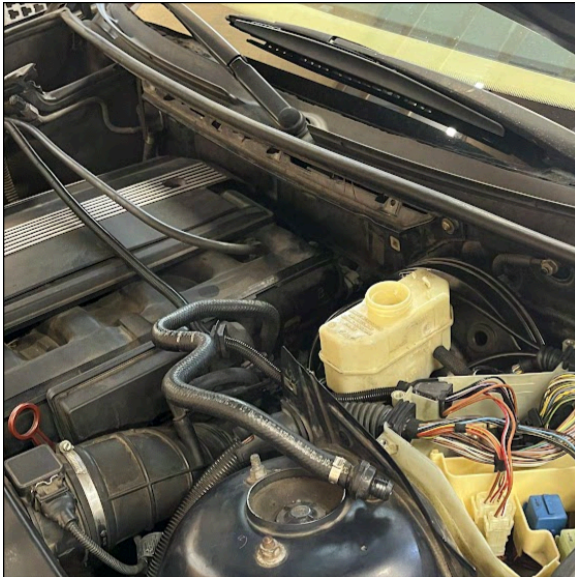


Lines

Remove the lid from the e-box.



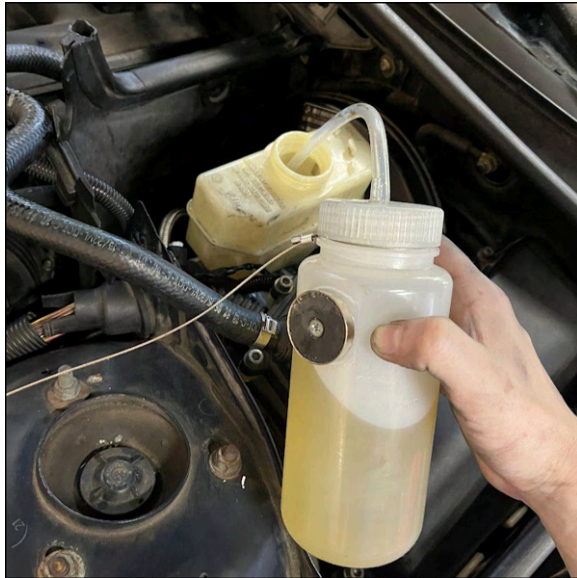
Remove the air filter panel, plastic guard, and brake booster vacuum hose.





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Remove the brake fluid from the master cylinder reservoir.



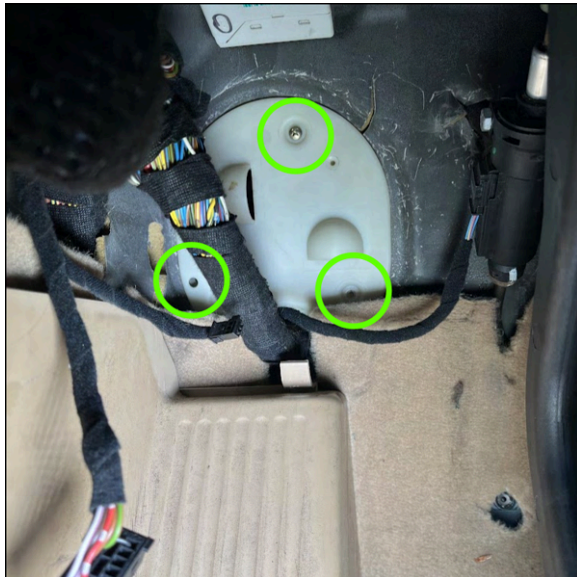
Remove the under dash panel.



Unplug the OBD port and under dash light connectors.



Remove the firewall plate from the e-box.



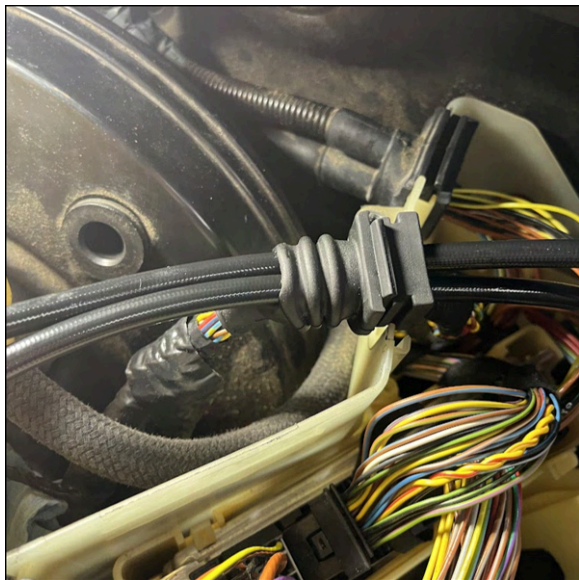


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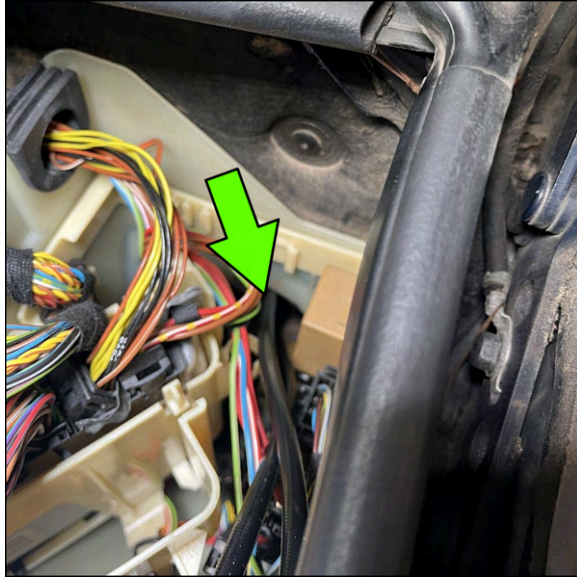
Cut a slit into the ABS wire loom grommet with care to not cut any wires.



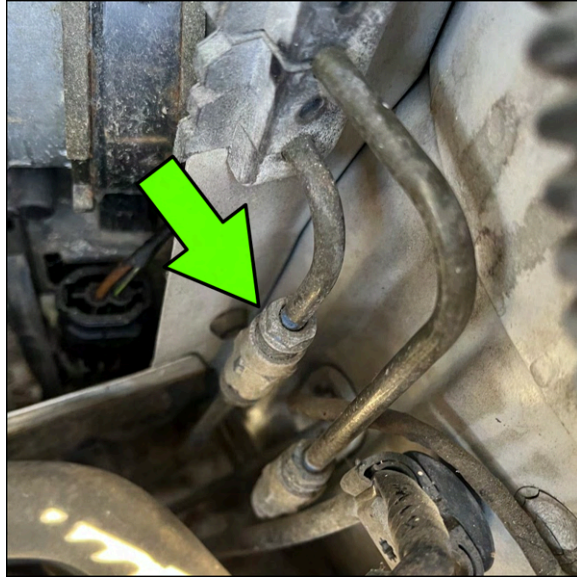
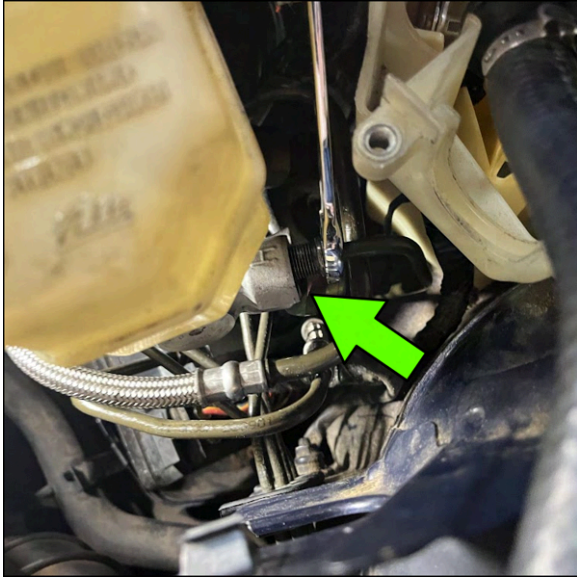
Pass the 2x brake lines through the wire loom grommet hole.
The 90 degree fitting on the line labeled "return" stays on the engine bay side.
The straight fitting on the line labeled "return" goes into the passenger compartment (next step).



Route both lines to the cabin through the firewall hole and then through the e-box panel.



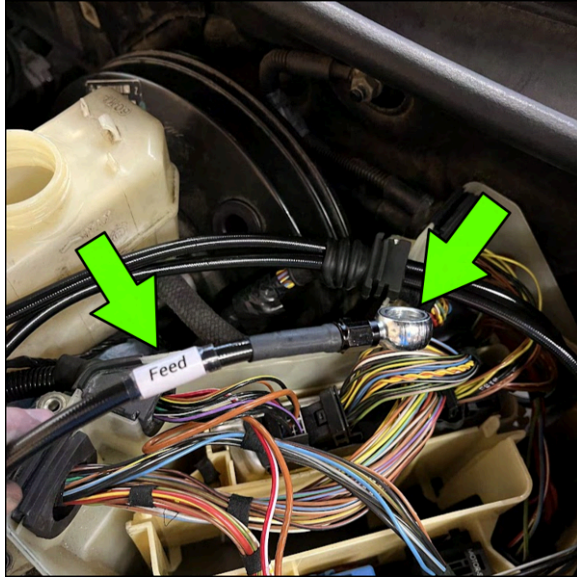
Remove the line between the rear master cylinder port to the ABS block line.



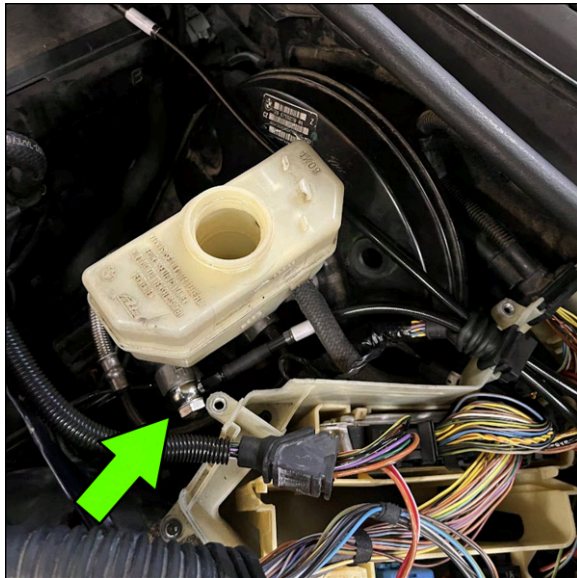


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Attach banjo fitting assembly to the line labeled "feed".
Banjo fitting - (8.3 Ft*lb, 11.3 N*m)



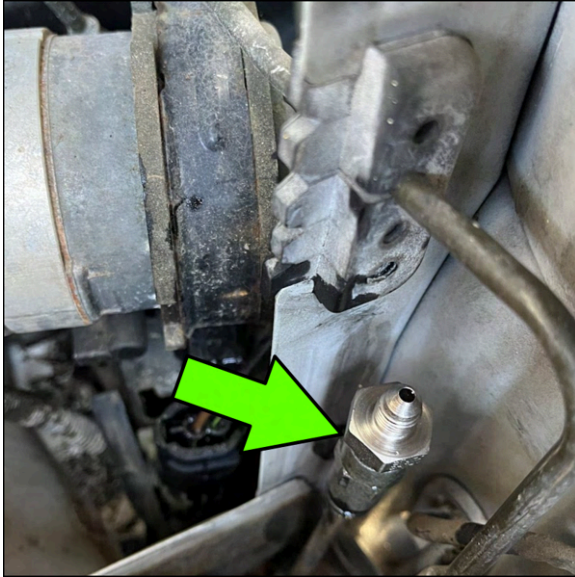
Attach banjo fitting and 2X crush washers to the master cylinder.
Banjo bolt - (20 Ft*lb, 27 N*m)



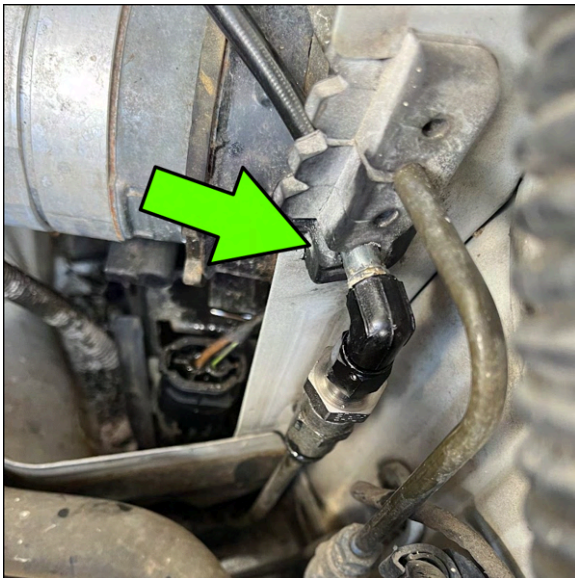


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Attach block fitting to the ABS line
*Block fitting - (13 Ft*lb, 18 N*m)*



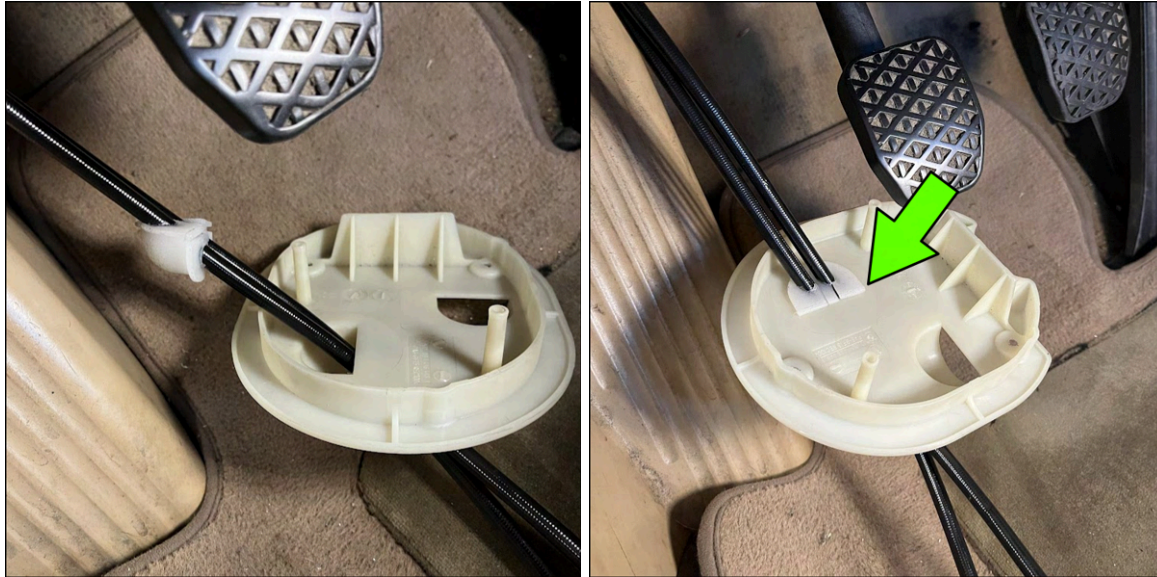
Attach line labeled “return” through the strut tower grommet and to the fitting on the ABS line.
Be sure that the return line is not contacting the braided line.
*Return Line - (8.3 Ft*lb, 11.3 N*m)*



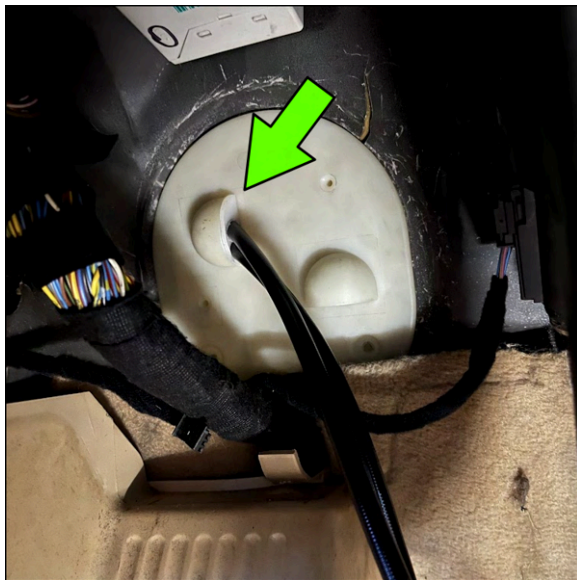


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In the cabin, install the rubber grommet around the lines and slide the grommet into the e-box panel. Be sure that the flanges are fully seated.



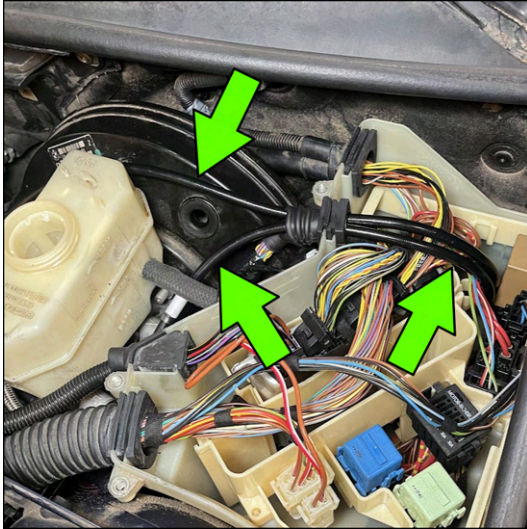
Slide the e-box panel into position.





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Pull slack from the lines by carefully pulling the lines from the interior.



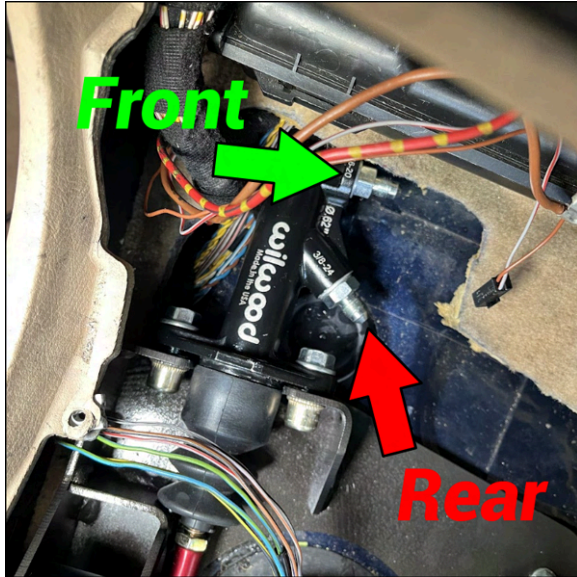
Route the lines along the dash below the steering column and to the center console area.



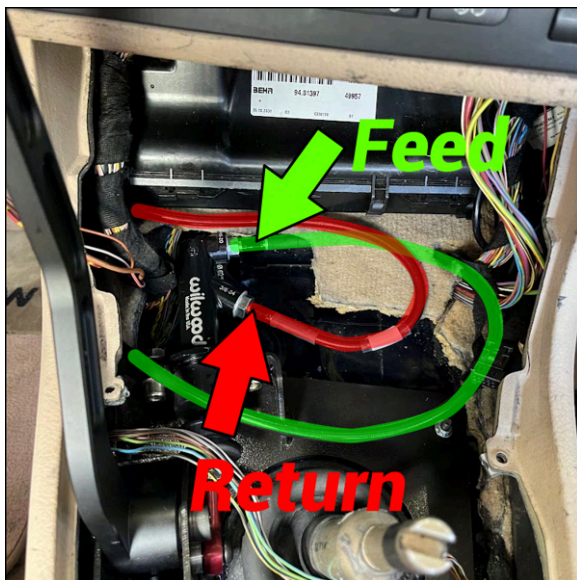


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Torque the fittings on the master cylinder.
*Fitting close to front of the car - (20 Ft*lb, 27 N*m)*
*Fitting close to rear of the car - (13 Ft*lb, 17 N*m)*



Attach line labeled "feed" to the handbrake fitting closer to the front of the car.
Attach line labeled "return" to the handbrake fitting closer to the rear of the car.
*Feed Line - (8.3 Ft*lb, 11.3 N*m)*
*Return Line - (8.3 Ft*lb, 11.3 N*m)*

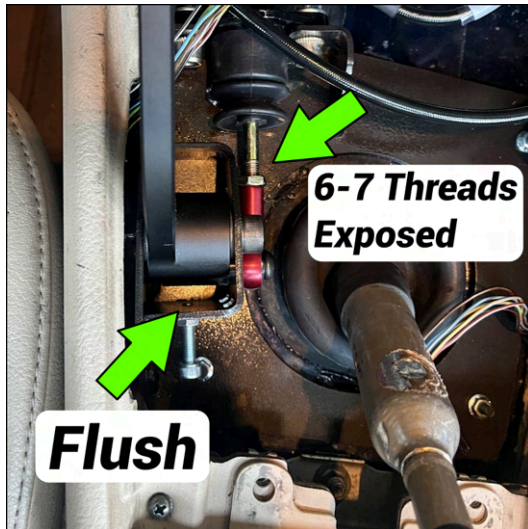




Bleeding

Bleeding an inline hydraulic handbrake can be tedious. It does take some time, but you will get it when following these instructions.

The handle position adjuster screw should be flush to the base and the handle free play adjustment linkage should have 6-7 threads showing.



1. Bleed all 4 calipers on the car following the standard procedure for the car.
2. Bleed the rear Calipers again following the 2 person method.
Person 1 will be opening and closing the rear bleeder screws.
Person 2 will be in the car operating the footbrake pedal and handbrake lever.
 - a. Person 1 - Start at the passenger side caliper. Attach a clear tube to the brake bleeder to monitor for bubbles.
 - b. Person 2 - Pump brake pedal 3 times.
 - c. Person 2 - Hold pressure on the brake pedal
 - d. Person 1 - Open bleeder screw
 - e. Person 2 - The pedal will start to drop. When the brake pedal gets to the end of travel, continue holding pressure on the foot pedal and pull the handbrake slowly to full travel.
 - f. Person 1 - Close bleeder screw
 - g. Person 2 - Return the foot brake to the top position and then return the handbrake handle to the forward position.
 - h. Repeat a-g until there are no air bubbles coming from the brake caliper

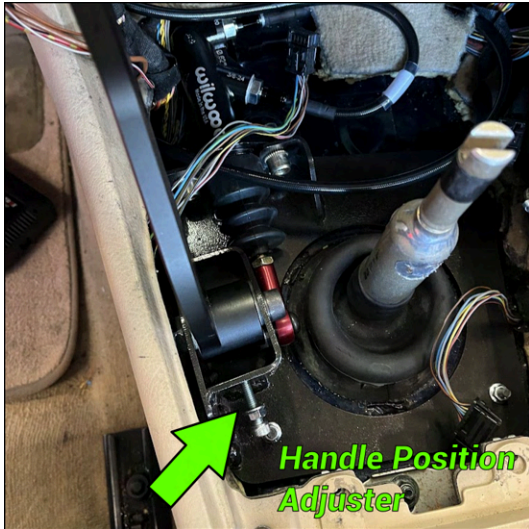


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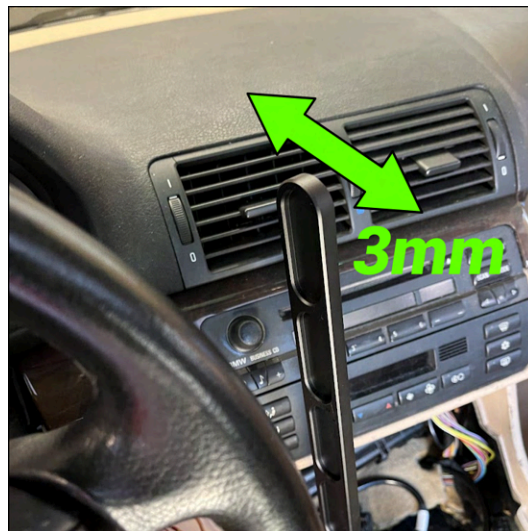
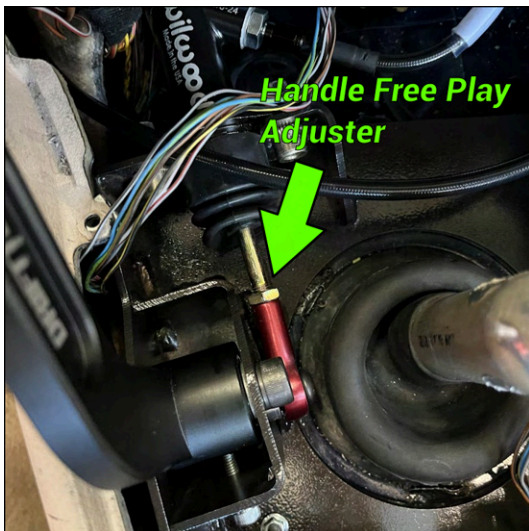
- i. Repeat a-h with Person 1 alternating from driver to passenger side at least 5 times and until no air bubbles come from the brake bleeders.

Adjustment

1. Adjust the handle position adjuster screw until the handle is in the desired forward resting position and tighten locking nut



2. Adjust the handle free play adjuster until there is 3mm of free play at the top of the handle.





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3. Lock the handle free play linkage by fastening the jam nut.
4. Test functionality, do the following a,b,c steps in order:
 - a. Observe the force it takes to pull the handbrake lever.
 - b. Step on footbrake with heavy pressure. With pressure still on the brake pedal, pull the handbrake. Release foot brake pressure. Release handbrake.
 - c. Observe the force it takes to pull back the handbrake lever.
5. After doing step 4b, if the lever force in 4c is much greater than 4a the lever is not adjusted properly. Try shortening the handle free play linkage shorter (step 2) and re-test step 4.
6. Once the pressure in 4a and 4c feel equal in step 4, the adjustment is complete.



Reassembly

Reinstall the air filter panel, plastic guard, and brake booster vacuum hose.

Reinstall e-box top.

Using the provided cable ties, fasten the lines to the bottom of the dash.



Remove the metal clip from the location shown below.



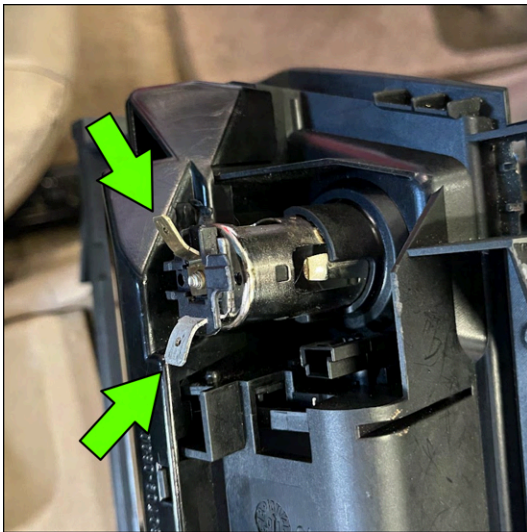


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Reinstall under dash panel. You will not use the screw associated with the above clip.



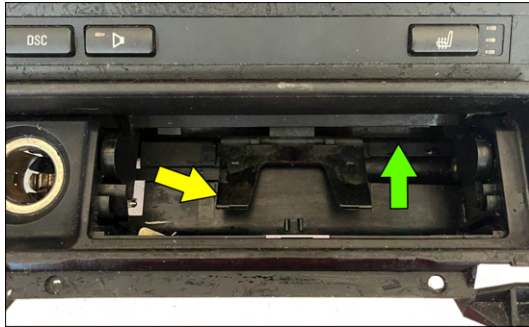
Bend the tabs on the 12v plug to clear the handbrake cylinder.





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Remove the ashtray tab by twisting upward.



Clearance the center console panel using the supplied template.
Match the corner cutout with the center console protrusion.





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Wrap the handbrake to protect it from scratches.

Push the top of the center console panel into the dash, and plug in the rear console connectors.



Pull the handle back and pivot the center console panel down into position.





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Install the drivers side window switch into the window switch adapter.



Install the switch and adapter into the center console panel.



Re-attach the electrical connections to the driver's side window switch.

Install the shifter bezel with the handbrake handle passing through the hole for the driver's side window switch. Connect the passenger's side window switch connector.



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Reinstall the shift boot and push on the shift knob.





Troubleshooting

Symptom	Possible Cause	Solution
Rear brakes not locking	<ul style="list-style-type: none">- Worn/insufficient Pads- Worn or glazed rotors- Air in lines- Caliper binding	<ul style="list-style-type: none">- Recommended pads: OEM/Moderate Grip: OEM grade semi-metallic pads High Grip: Hawk HP+ or EBC yellows- Replace rotors- Bleed system- Check and lube slide pins
Handle feels spongy	<ul style="list-style-type: none">- Air in system	<ul style="list-style-type: none">- Bleed system- Check for leaks
Handle is stuck and pads are dragging	<ul style="list-style-type: none">- Pressure not being relieved from the handbrake cylinder.	<ul style="list-style-type: none">- Adjust handle stop. Refer to the "adjustment" section

Other issues? We're here to help!

If there are any questions that can not be solved by the above table, contact us at info@driftec.co with a brief description along with your contact information.