



Give Them®
A BRAKE

SAFEDRIVE HOME™ INSTALLATION INSTRUCTIONS

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READ ALL INSTRUCTIONS - OBSERVE ALL WARNINGS

If you are not familiar with installation of mechanical components and/or use of the Tools Needed for this installation, refer this installation to someone qualified.

THIS SYSTEM IS DESIGNED FOR USE IN VEHICLES WITH POWER ASSIST BRAKES ONLY

NOTE: DO NOT USE THIS SYSTEM FOR CARS WITH MANUAL BRAKES

Instructions:

Read these instructions completely before beginning installation. Failure to follow these instructions can result in a system malfunction.

Inspect Parts:

Check the Materials Supplied for possible damage in shipping. If any parts are damaged, report any defects for replacement parts.

Check Installation Location:

Some components require the installation of mounting screws into the firewall and floorboard of your vehicle. Check the underside of the vehicle for possible obstructions such as brake lines, electrical lines, or fuel lines. Use the Flexbar to alter the location of screw installations for the PulleyMount as necessary to ensure clearance for any screws and optimal installation.

System Testing / Practice:

After installation and prior to use, test the system thoroughly. Become familiar with the feel and input strength needed to stop the vehicle before instructional training.

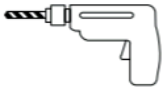
System Maintenance:

Prior to every training session, examine components for any wear and tear. Always perform a brake test before entering the roadway to ensure proper operation.

Brake Sensitivity:

It is important to practice using the system before training begins to get a feel for it. Your leg and foot are considerably stronger than your arm. Depending on the quality and sensitivity of your vehicle's brake, it may take little or a lot of pull to stop the car.

Tools Needed:



Drill and 5/32nd's bit or smaller



Socket wrench set or socket screwdriver set (5/16ths)



Adjustable wrench (2)

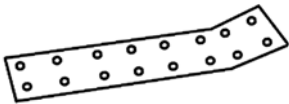


Phillips head screwdriver

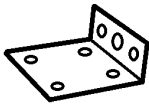


WARNING: The installation kit is supplied with six self-tapping screws. Some vehicles have firewalls and foot wells that are too thick for the self-tapping screws to drill through. It is recommended to pre-drill holes. Do not exceed a drill bit size of 5/32nd inch to pre-drill holes.

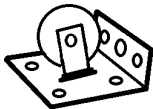
Materials Supplied:



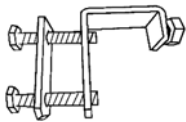
1 FlexBar



2 FlexMount



1 PulleyMount



1 BrakeClamp*



1 Conduit and Cable with T-Handle Grip



6 Hex Head Screws

6 Phillips Head Screws

6 Hex Lock Nuts with Nylon Inserts

* Behind the nut and washer there is a small hole to thread the cable and secure it. The cable goes through the hole, then the washer goes on, and then the nut is tightened down to secure the cable.

Overview:

It is with sincere hope that this system helps create a stress-free and safer driving instruction environment for you and your student. The system has been designed from the ground up with simplicity and flexibility in mind. Installation will take about one hour depending on the vehicle.

While the instructions are very detailed, the installer should have familiarity with the use of tools required in an automotive setting. If you are unfamiliar with such installations, bring the system to a qualified mechanic for professional installation.

The system uses the vehicle's brake to stop the car. When the instructor (passenger) pulls on the T-Handle installed on the passenger's side, the brake pedal is pulled down by a cable passing through a pulley installed behind the brake. It is essentially like stepping on the brake so no vehicle warranty or brake system components are modified. Depending on the sensitivity of the vehicle's brake system, stopping the car may require minimal effort, or a very firm pull on the cable. After installation and before beginning any instruction, the operator should test the system to become familiar with the amount of force required to stop the vehicle. After a few test pulls, the operator will have a good feel for the amount of force required to bring the vehicle to a graceful or rapid stop.

Vehicles have significant differences in the angle of the firewall (the area behind the vehicle's brake), the amount of carpeting, sound insulation, thickness of metals and plastics, and the locations for screws and fasteners. Proper operation of the system requires the PulleyMount and BrakeClamp be aligned so the cable running between the two is not on an angle. In some cases, installing the PulleyMount directly to the firewall is not possible due to obstructions in the firewall. In such an event, attaching the PulleyMount to the Flexbar will work around these obstructions. The multiple mounting points on the FlexBar for both the PulleyMount and screws ensures the PulleyMount retains the correct alignment for the cable.

The mounting system for the T-Handle Grip was also designed to ensure a flexible installation for the passenger's comfort. The T-Handle Grip is installed using one or both of the FlexMounts depending on the location of installation. Typically, one FlexMount is used if the T-Handle Grip is mounted on the sidewall between the passenger and driver and both are used if mounting it to the floor of the passenger's side. By leaving some slack in the cable, the operator can comfortably keep hold of the T-Handle at all times regardless of where it is installed.

Always give the system a quick test to be sure everything is working as expected before instruction.

Feel free to call or email our support department and be sure to include a photo along with a detailed description for any installation questions.

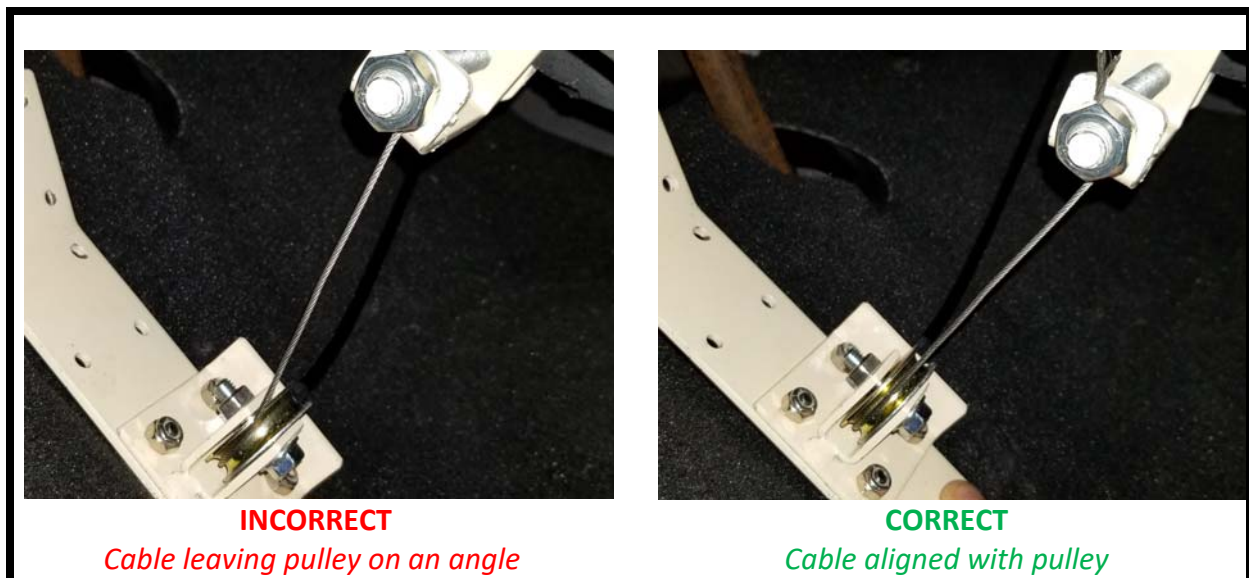
Step by Step Installation Instructions:

⚠ WARNING – Power Adjustable Pedals:

If the vehicle has a brake pedal that is adjustable, the system must be disabled or set in a fixed setting. If the brake pedal height is changed after installation, it could cause the brakes to become engaged, create unwanted slack in the system, or change the Cable Alignment.

⚠ WARNING – Cable Alignment:

The path of the cable going between the pulley wheel on the PulleyMount and the cable mount hole on the BrakeClamp, must be straight. Adjust the location of the PulleyMount as well as the location of the BrakeClamp in order to achieve proper alignment. The FlexBar can be used as shown here to optimally locate the PulleyMount and help achieve the proper angle. The FlexBar was made with metal thin enough to bend to shape, but not so thin that it would bend under load. If required, bend the FlexBar a little to achieve the proper installation angle.



*To enhance contrast for these instructions, the system components were painted white.
The system parts in the kit are painted black.*

Step 1: Reveal Firewall

Parts needed: None



Pull the carpet back to reveal the area of the firewall beneath the brake and accelerator pedal. Revealing this area will help identify usable installation locations for the PulleyMount that are not obstructed by other components. If there are no obstructions the FlexArm is not needed.

Step 2: Install BrakeClamp

Parts needed: BrakeClamp



Loosely install the BrakeClamp by unscrewing one of the two long bolts and sandwiching the vehicle's brake pedal arm between the two plates.

Install the BrakeClamp as close as possible to the vehicle's brake pedal as shown here. This will maximize the leverage gained to apply the brake when pulling on the T-Handle.

Hand tighten the bolts as the BrakeClamp may need further adjustment during alignment.

Step 3: Position PulleyMount

Parts needed: PulleyMount



Identify the cable installation hole located under the nut of the BrakeClamp.

Start the car and push the brake pedal down. Align the PulleyMount with the BrakeClamp as described in Cable Alignment on Page 4. Align the hole for the cable with the pulley.

If the vehicle's brake or the BrakeClamp is hitting the PulleyMount when the vehicle's brake is depressed, move the PulleyMount to the left or right.

Step 4: Mark PulleyMount Location **Parts Needed: PulleyMount**



Draw a line onto the firewall under the PulleyMount to mark the installation location, or mark the inside of the four screw holes.

Tighten the two bolts on the BrakeClamp to firmly secure it to the vehicle's brake.

⚠ Warning – Although there may be a clear installation point on the firewall for the PulleyMount, check the area behind the firewall for hoses or electrical lines. If there are obstructions, use the FlexBar/PulleyMount option for installation of the PulleyMount (Step 6a).

Step 5: Pre-drill PulleyMount Holes **Parts Needed: None**



It is best to pre-drill holes directly into the firewall than through the carpet. If drilling through carpet, cut a small "X" into the carpet and wind tape around the drill bit to avoid pulling carpet pile around the drill bit.

Tip: Place the PulleyMount over a piece of duct tape and mark the hole locations. Then use the duct tape as a template to drill the holes through the firewall and/or cut through the carpet.

⚠ Warning – Do not exceed a drill bit size of 5/32nd inch to pre-drill holes

Step 6: Install PulleyMount **Parts needed: PulleyMount, four Hex Screws**



Replace the carpet and align the PulleyMount over the pre-drilled holes. Using a hex wrench, screw in the PulleyMount through the carpet into the pre-drilled holes using four Hex Head screws. Use caution not to overtighten the screws and strip the threads.

Note: It may not be possible to secure the PulleyMount with all four Hex Head screws due to obstructions. *At a minimum, three screws are needed to secure the PulleyMount.*

Step 6a: FlexBar/PulleyMount Option

Parts Needed: Pulley Mount and FlexBar



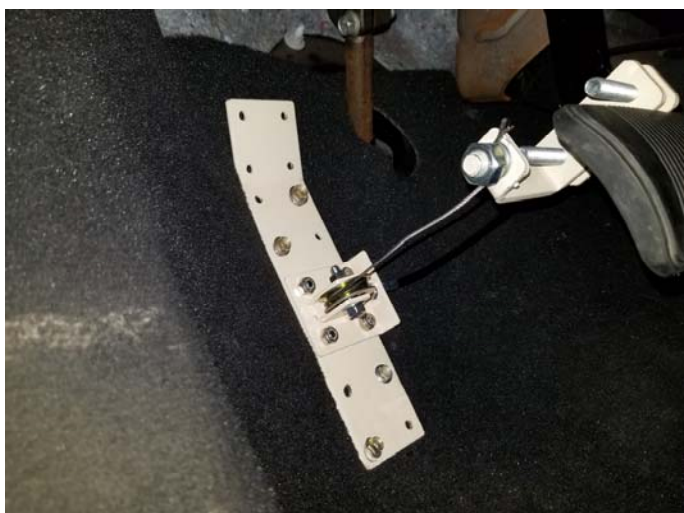
Use the FlexBar when there are obstructions to screwing the PulleyMount directly into the firewall.

The PulleyMount is mounted to the FlexBar using four of the Phillips head screws and nuts. It can be installed anywhere along the length of the FlexBar and the FlexBar can be screwed into the firewall anywhere along its length.

Position the PulleyMount into the correct location and drill holes as necessary to mount the FlexBar to the firewall.



Upon completion, it should look similar to the photo to the left. Note in this example, the Hex Screws are screwed into the bottom holes of the FlexBar. Any of the holes in the FlexBar could have been used to screw it into the firewall so long as screws are evenly distributed on both sides.



Here is another example using the Flexbar to maintain alignment between the PulleyMount and BrakeClamp. In this case, the PulleyMount is installed in the middle of the FlexBar which is mounted vertically. The FlexBar can also be mounted horizontally. Make sure the FlexBar's angled section does not interfere with the cable if horizontally mounted.

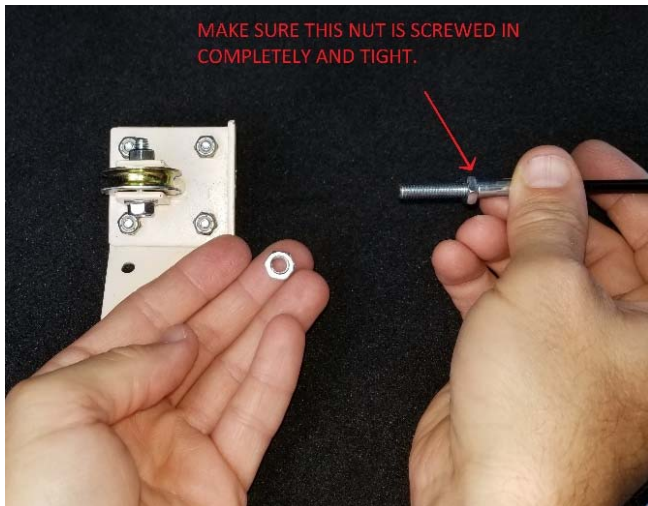
Step 7: Route Cable**Parts Needed: Cable**

Remove the cable from inside the cable conduit. Be careful not to damage the tip of the cable.

Route the cable conduit between the passenger compartment and the driver compartment under the dashboard.

Avoid making sharp bends and turns in the cable when routing it.

⚠ WARNING: Make sure the conduit is routed under the gas pedal and not on top of it. Secure it down to ensure it will not slide atop the gas pedal.

Step 8: Attach Cable to PulleyMount**Parts Needed: Cable**

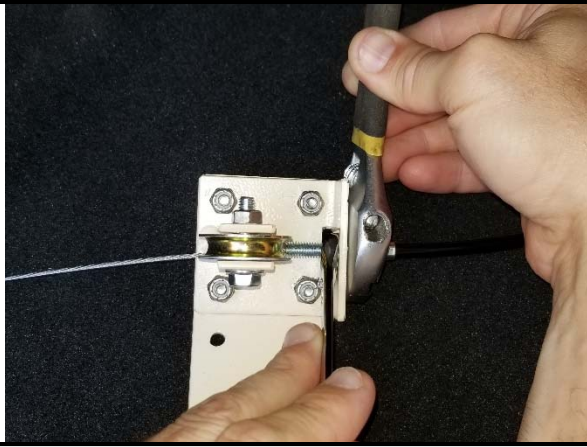
Attach the cable to the PulleyMount by routing it through the center hole aligned with the pulley wheel.

Remove the outside nut as show and make sure the other nut is fully screwed down on the threaded rod of the cable conduit. The threaded rod length is specifically designed to come to rest very close to the pulley wheel to keep the cable aligned with the pulley.



Insert the threaded rod into the center hole on the PulleyMount and screw the nut down into place.

Notice that the PulleyMount and the FlexMount are very similar in design. In Step 9 of the installation, the other end of the cable is installed onto the FlexMount the same way.

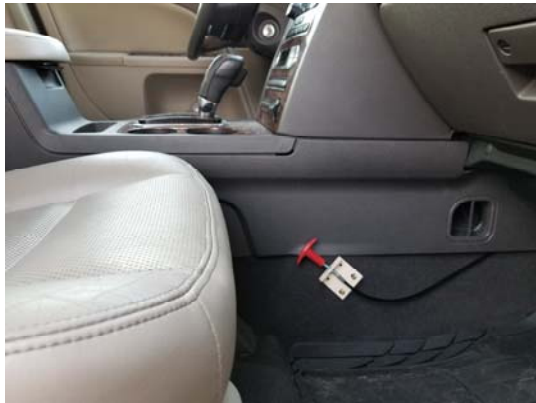


Use a wrench to firmly tighten down the nut and secure the cable to the PulleyMount. Only one wrench is needed to attach the cable to the PulleyMount.

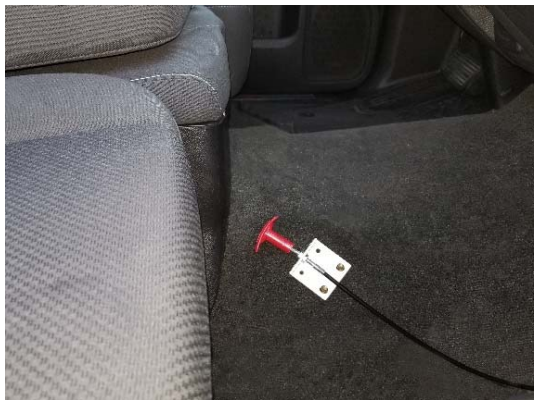
Tip: When installing the cable to the FlexMount, the threaded rod does not need to be fully seated into the FlexMount. Shown here is how to secure the connection using two wrenches working together as shown here.

Step 9: Single FlexMount Install Option

Parts Needed: FlexMount, two Hex Screws



The FlexMount holds the T-Handle Grip in place and the location for installation will vary based on individual preferences and the design of the interior of the vehicle. To the left are three examples of how the FlexMount can be installed to position the T-Handle Grip for the passenger.



In the top two example photos to the left, the pull handle is installed onto the side-wall between the driver and passenger for easy access.

In the example photo on the bottom, it is installed to the front left side of the seat mount on the passenger's side.



Installation of the FlexMount and connecting the cable is similar to the installation of the PulleyMount but only requires two Hex Screws to secure it down.

Regardless of the installation location decided upon, the cable conduit exiting the FlexMount needs to point in the direction of pull. When pulling on the T-Grip Handle, the cable should have as straight a path as possible between the passenger's pulling hand and the FlexMount. The straighter the path, the easier it is to pull. Pulling on a severe angle can bend the cable making it difficult to retract and more difficult to pull.

Step 9a: Duel-FlexMount Install Option

Parts needed: FlexMounts, two Hex Screws, two Phillips Head Screws and two Lock Nuts



By connecting both FlexMounts as shown to the left, the FlexMount can be mounted to the floor of the passenger's side. The FlexMount is stood upright and two Hex Screws are used to attach it to the floor.



Sit in the passenger's seat and look for a good location to install the FlexMount to the floor, typically between the passenger's feet.

Much like installing the PulleyMount, understand that there may be obstructions that may limit installation locations. Some vehicles have ventilation ductwork running under the passenger's foot area.

Check to ensure the installation location does not interfere with movement of the passenger's seat.



Once installed, the floor mount option will look similar to the two photos on the bottom left. This is a good option to use if possible. Leave slack in the cable prior to Step 11 to allow the T-Handle Grip to be held in the hand and not be tight against the FlexMount.

Feel free to be creative with placement and simulate usage prior to drilling the FlexMount(s) into place.

Step 10: Attach Cable to BrakeClamp

Parts Needed: Cable



Thread the cable into the cable conduit. Carefully push it through the conduit. It should route under the pulley when it exits the other end.

Be very careful not to damage the tip of the cable. Damaging the tip could unwind the cable tip.

Remove the nut and washer from the BrakeClamp. Insert the cable through the small hole on the threads and pull it completely through leaving slack as needed to position the T-Handle comfortably on the passenger's side. Replace the washer and then tighten the nut down securely.

Step 11: System Test

Parts Needed: None



Start the car, leave it in park.

- 1) From the passenger's side, pull on the T-Handle and observe that the vehicle's brake is pulled down.
- 2) Check that the cable is gliding freely through the pulley and is straight.
- 3) Let go of the T-Handle, ensure the brake retracts to the normal rest position.
- 4) Sit in the driver's seat and fully depress the brake pedal with your foot. Make sure the brake pedals movement is not obstructed. Relocate the PulleyMount to the left or right if the brakes full movement is obstructed. (See Step 3, Position PulleyMount)
- 5) Check that the vehicle's brake lights turn off after applying the brake. See Tricks and Tips if the brake lights do not turn off.

⚠ Remember to disengage Power Adjustable Pedals if the vehicle has that option. Adjust the brake pedal to its lowest setting (as far away from the driver as possible) and repeat step 2 and 4 above. Be sure that even if the brake moved closer to the floor, the brake can be fully applied without stopping against system components.

Tricks and Tips:

- The vehicle's brake lights may stay on after pulling the T-Handle to apply the brake. The system relies on the spring action of the vehicle's brake to retract the cable. If the spring action is weak, it may not have sufficient energy to retract the cable. Check for severe bends or kinks in the cable route that could cause resistance. If the problem persists, use a small spring, rubber-band, or elastic shock cord and secure it to the BrakeClamp. Attach the other end forward of the brake, to something under the dashboard to recover the brake into its normal rest position.
- The T-Handle does not need to be tight against the FlexMount. In the photo for Step 11, the cable has not yet been pulled. When not in use, the T-Handle Grip is simply left under the seat or to the side, out of the way. Prior to tightening the cable down in Step 10, have someone sit in the passenger's seat holding the T-Handle Grip at a comfortable length. Then tighten down the nut on the BrakeClamp to secure the cable.
- Do not cut the cable to length! Leave excess cable wrapped as shown in Step 10 and secure it so it does not dangle freely. If the cable is cut, slack can't be added
- Remember to disengage the vehicle's Power Adjustable Pedals if that option is turned on. If disengagement is not possible, setup the system for the student drivers brake preference and only use that setting when driving.

NOTES:

If you have an idea to share that could improve the system, send an email to our support email address. If you're the first to submit the idea and we include your idea in a future product release, we'll ship you a new system with your enhancement idea for free!

Best wishes on your success!

Give Them a Brake, LLC

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