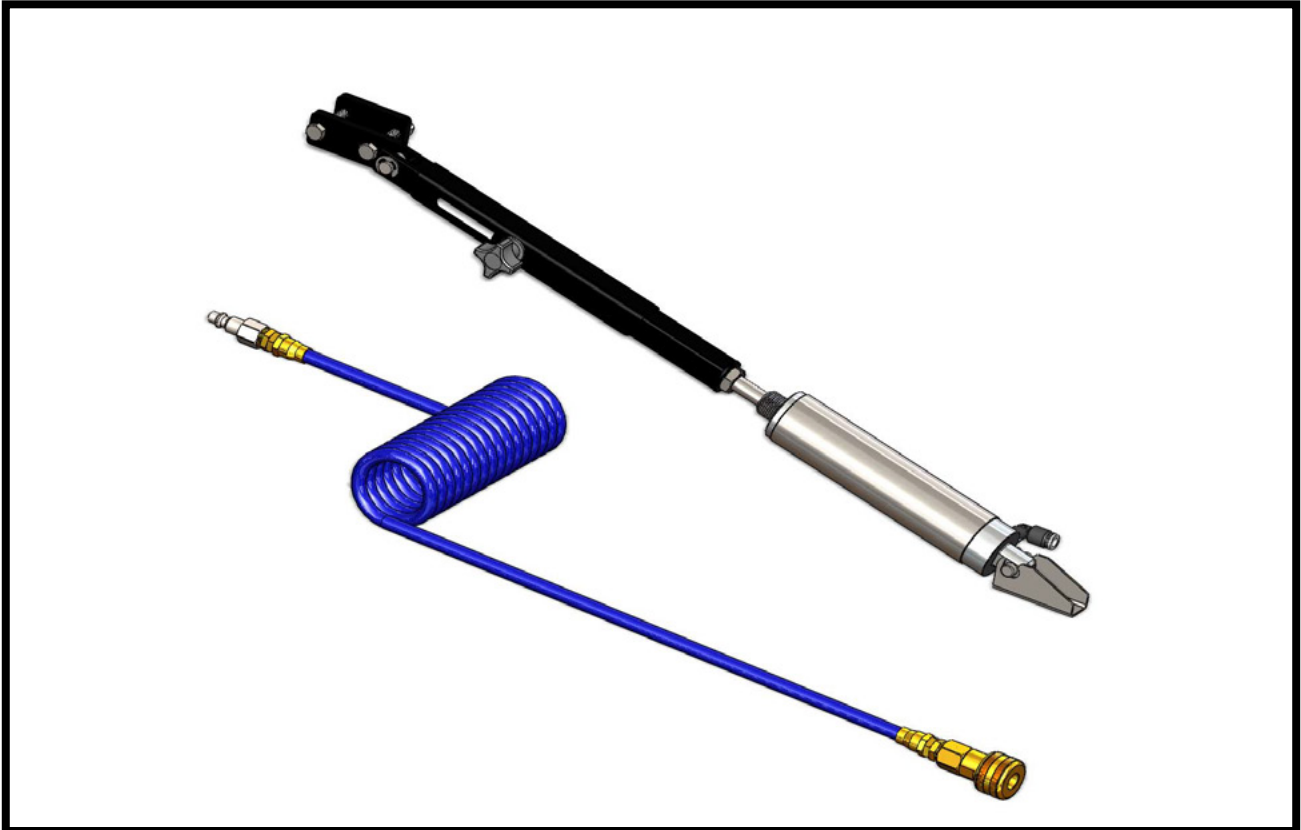




BRK4000
Push Cylinder BrakeSafe™
Installation Instructions

Serial Number



BRK4000
Push Cylinder BrakeSafe™

BRK4000

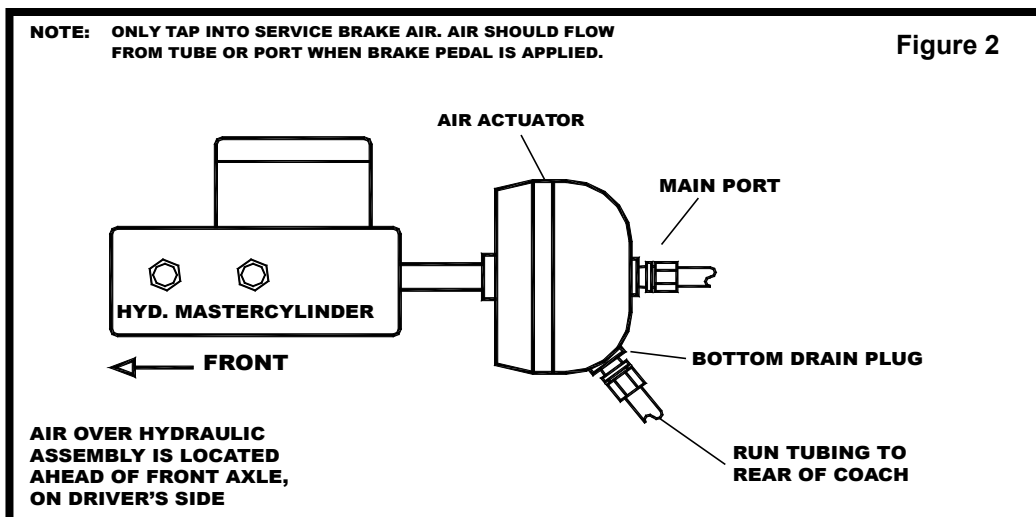
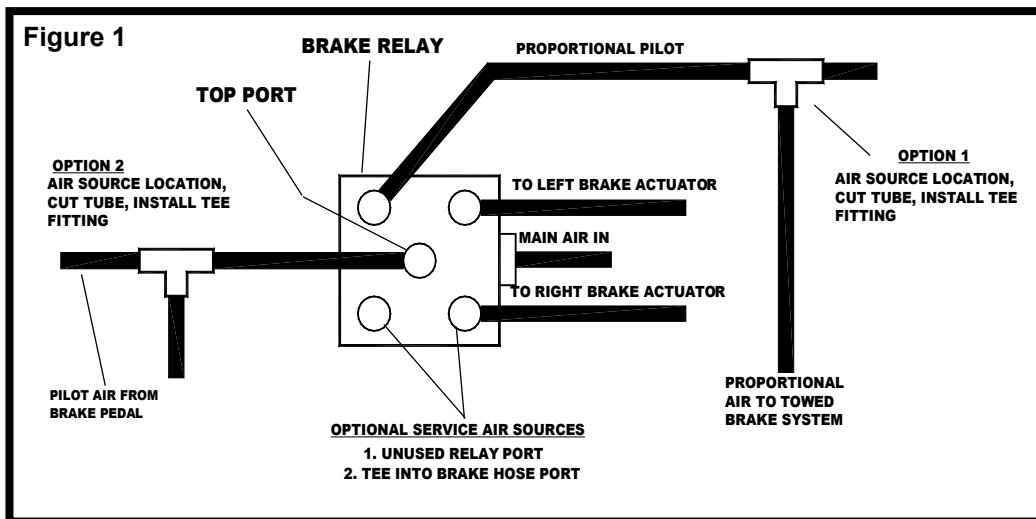
Push Cylinder BrakeSafe™

Installation Instructions

BrakeSafe™ is a proportional braking system that can be used on coaches with Total Air or Air Over Hydraulic braking systems. With a BrakeSafe™ you will use your coach's air brakes by tapping into the brake relay air source.

Locating Air Source On Coach

1. For coaches with **total air brake systems**, the brake relay is located ahead of the rear axle. This relay has four to five ports, some of which will be used. There is a right and left brake actuator hose coming from this relay, these hoses go to the brake actuators of each rear tire of coach. There is a 3/8" O.D. pilot tubing coming from one of the four ports coming from the brake relay. This is the **SERVICE** port that is the preferred place to connect into proportional air that receives pilot air from the coach's brake pedal. If this port has a 3/8" hose coming from it, use the furnished tee fitting. Cut the tubing and push the tubing into each side of the tee fitting, making sure the tubing is bottomed into the fitting. On the bottom of some relay valves there are four ports, three are used, the other has a 1/2" pipe plug. Remove this plug and install a 1/2" pipe to 3/8" tube fitting. There should be no pressure coming from the port, unless the brake pedal is pushed down. If there is, you need to look for another port. If your coach needs a fitting that is not supplied, most hardware stores have brass pipe fittings. (Figure 1)
2. For coaches with **air over hydraulic braking systems**, the air over hydraulic assembly is located in front of front axle on the driver's side. There is a drain plug on the bottom side of the air actuator, take this plug out and install a 3/8" tube connector. (Figure 2)



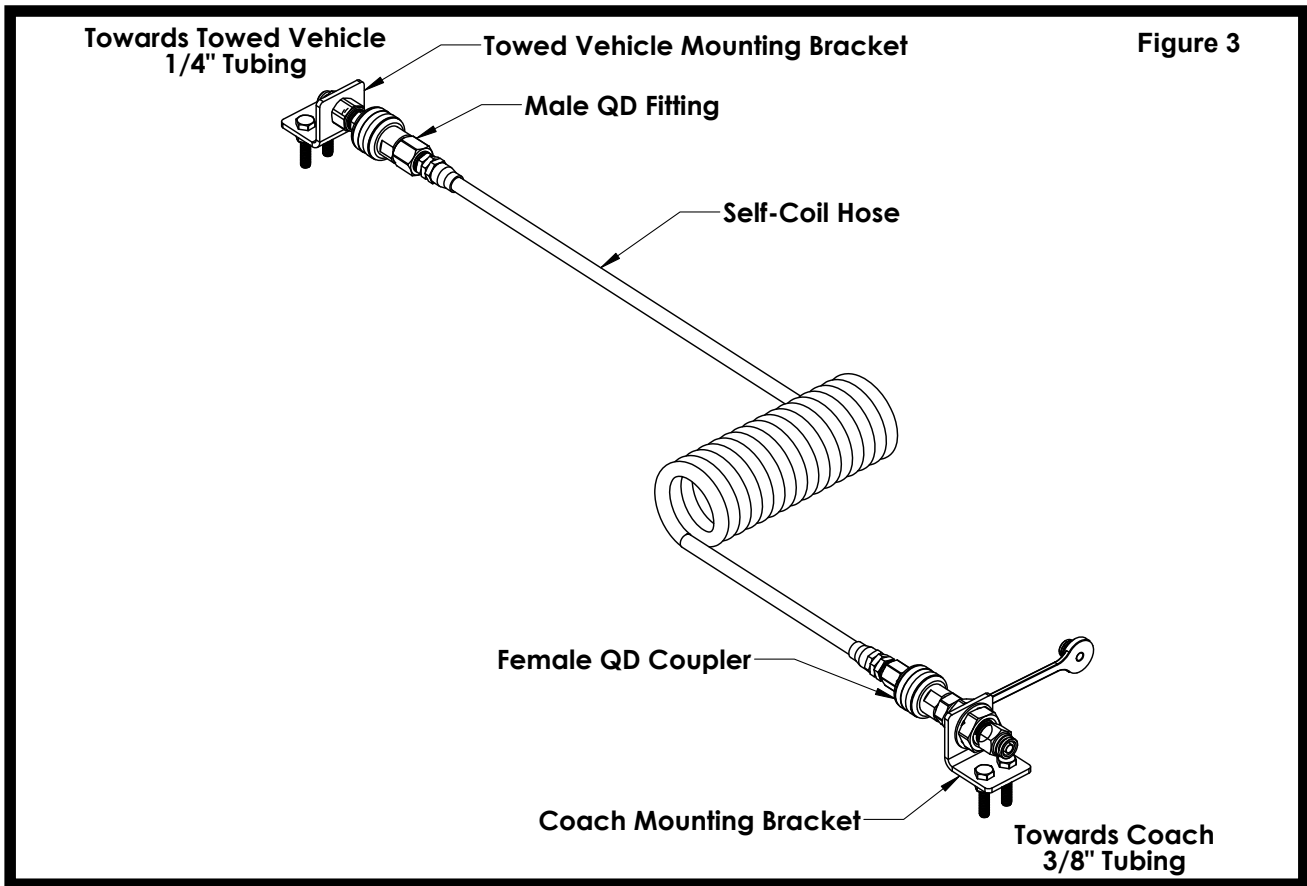
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3/8" Tubing Installation On Coach

3. Push the supplied 3/8" DOT tubing into the tee fitting or the pipe to tube fitting making sure it is bottomed into the port. Route and secure the 3/8" DOT tubing making sure to route away from hot parts. Once you get to the rear of the coach with the tubing, secure the Coach Mounting Bracket with 1/4"-20 x 1-1/4" bolts and 1/4"-20 lock nuts in a convenient location on the bumper. Then mount the bulkhead fitting, 3/8 tube fitting, and QD coupler to this mount bracket as shown in Figure 3. Cut the extra 3/8" DOT tubing off and then push into the pipe to tube fitting.

1/4" Tubing Installation On Towed

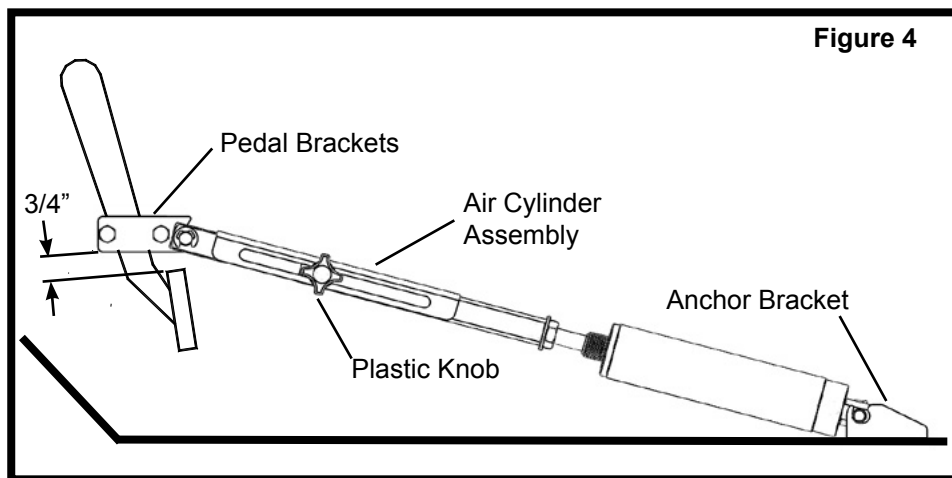
4. Mount the Towed Vehicle Bracket with the 1/4"-20 x 1-1/4" bolts and 1/4"-20 lock nuts to the towed vehicle in a convenient and secure location. Then mount the QD plug and 1/4" bulkhead to this bracket. Route the 1/4" tubing thru the driver side engine compartment making sure not to run tubing along hot parts. Push tubing thru an existing grommet in the firewall. If there isn't a hole, drill a new hole and install a grommet. Continue routing the tubing behind driver side kick panel, then under the door sill molding. End the routing under the driver seat, making sure to leave enough to hook-up to the push cylinder. Cut any excess off.



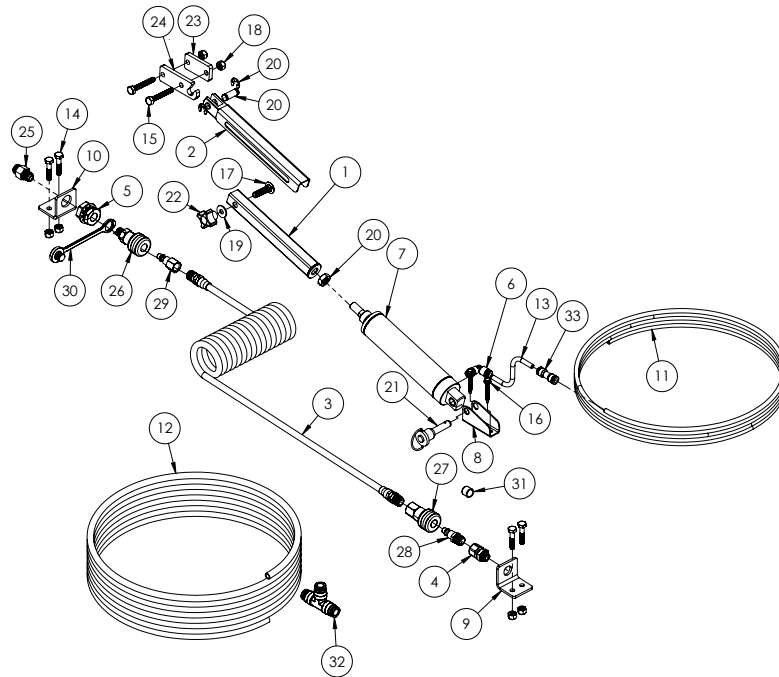
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Push-Cylinder Installation

5. Install the brake pedal brackets 3/4" above the brake pedal using the 1/4"-20 x 1-3/4" hex bolts and 1/4"-20 lock nuts. Select a suitable location for the Anchor Bracket, preferably as close to the drivers seat as you can go, still being able to reach the brake pedal. The bracket also needs to be in line with the brake pedal. Remove the air cylinder assembly from the anchor bracket by pulling the quick release pin and screw the bracket to the floor with the #10 screws supplied. Reinstall the air cylinder assembly back into the anchor bracket. Loosen the 5/16" plastic knob and adjust the length of the assembly until the pin on the end of the assembly hooks onto the pedal brackets. Retighten the plastic knob on the assembly.



BRK4000 Push Cylinder BrakeSafe™ Installation Instructions



Item No.	Part No.	Description	Qty.
1.....	61-7125	BRK4000 Inner Adjustment	1
2.....	61-7126	BRK4000 Outer Adjustment	1
3.....	293-1318	Self-Coil Air Hose, 10ft	1
4.....	293-1319	1/4" T Bulkhead Adapter	1
5.....	293-1320	3/8" P Bulkhead Adapter.....	1
6.....	293-1344	1/4" N2U Pipe Elbow	1
7.....	293-1511.....	Air Cylinder, 1-1/2" Bore x 3" Stroke	1
8.....	101-8306	BRK4000 Anchor Bracket.....	1
9.....	105-1479	Towed Vehicle Mount.....	1
10.....	105-1480	Coach Mount	1
11.....	153-0085	1/4" Nylon Tubing, 15'.....	1
12.....	153-0112.....	3/8" DOT Nylon Tubing, 25'	1
13.....	153-0113.....	1/4" Nylon Tubing x 6"L.....	1
14.....	201-0204	1/4"-20 x 1-1/4" Hex Head Bolt, Grade 5, ZP	4
15.....	201-0367	1/4"-20 x 1-3/4" Hex Head Bolt.....	2
16.....	201-0708	#10-16 x 1-1/2" Self Drilling Screw	2
17.....	201-0947	5/16"-18 x 1-1/2" Carriage Bolt	1
18.....	202-0102	1/4"-20 Hex Nylon Lock Nut, ZP	6
19.....	203-0001	1/4" Flat Washer, ZP.....	1
20.....	229-0679	Fitting Adapter Set	1
21.....	229-0945	3/8" x 1" Quick Release Pin	1
22.....	290-0411	5/16"-18 Plastic Knob	1
23.....	293-1266	Pedal Bracket, Small	1
24.....	293-1267	Pedal Bracket, Long	1
25.....	293-1321	3/8" x 1/4" Tube Fitting.....	1
26.....	293-1322	QD Coupler.....	1
27.....	293-1323	QD Coupler.....	1
28.....	293-1324	QD Plug	1
29.....	293-1325	QD Plug	1
30.....	293-1330	Rubber Dust Plug	1
31.....	293-1331	Dust Cap.....	1
32.....	293-1341	3/8" Tube Tee.....	1
33.....	293-1510	Hose Union, Straight, 1/4" to 1/4"	1

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BRAKESAFE™
START-UP CHECKLIST

1. CONNECT TOWED VEHICLE TO THE COACH IN THE NORMAL WAY. IF BREAK-AWAY SYSTEM IS USED, CONNECT LANYARD WIRE BETWEEN COACH AND TOWED VEHICLE.
2. CONNECT THE SELF-COILING AIR LINE TO THE COACH AND TOWED VEHICLE. MAKE SURE THE SLEEVE CLICKS FORWARD ON THE QD COUPLER, THIS WILL ENSURE THE PLUG AND COUPLER ARE LOCKED.
3. MAKE SURE ALL HOSES ARE PLUGGED IN, AND BOTTOMED INTO FITTINGS.
4. WITH THE TOWED ENGINE OFF, PUMP THE BRAKE PEDAL SEVERAL TIMES TO DEplete VACUUM OR POWER BOOST IN THE TOWED'S POWER BRAKES. THIS IS VERY IMPORTANT, AS OVER BRAKING WILL OCCUR IF NOT COMPLETELY DEPLETED!!
5. START THE COACH ENGINE AND BRING THE AIR PRESSURE UP TO PRESSURE SWITCH SETTING. APPLY THE COACH BRAKES SEVERAL TIMES AND WITNESS THE BRAKE PEDAL MOVEMENT IN THE TOWED VEHICLE.
6. TURN IGNITION OF THE TOWED VEHICLE TO THE ACCESSORY POSITION, TO UNLOCK STEERING WHEEL.

DISCONNECT CHECK LIST

1. DISCONNECT SELF-COILING HOSE AND TOW BAR FROM THE TOWED VEHICLE AND COACH. INSTALL PLUG AND CAP ON THE AIR DISCONNECTS, TO KEEP WATER AND DIRT OUT OF THE SYSTEM.
2. DISCONNECT THE PUSH CYLINDER FROM THE BRAKE PEDAL. THE TOWED VEHICLE IS NOW READY TO DRIVE AWAY.

CUSTOMER SERVICE COMMITMENT

Blue Ox® is committed to providing you with exceptional customer care throughout your lifetime with our products. Our team is here to assist you with any questions you may have regarding the performance of your product. Simply call (402) 385-3051 and you can speak with our customer care team.

Additionally, please visit our website to see which rallies our Destination America team will be attending. For a nominal fee, our service technician will service your towing system to ensure it's in proper working condition. Also, as a commitment to our customers, should you visit our factory, you can stay at our full service Blue Ox® campground at no charge along with enjoying a factory tour.

Again, thank you for being our customer and for the confidence you have shown in the performance of our products. It is because of customers like you we enjoy the success we have today.

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