AFCO BRAKE LOCK INSTALLATION INSTRUCTIONS

INSTALLATION ON REAR WHEELS IS RECOMMENDED

The **AFCO BRAKE LOCK** is designed to prevent rolling or sliding of a truck, bus or car after it has come to a stop. For this purpose the locking of the rear wheels is as effective as locking all four wheels.

Rear wheel installation has these advantages over four wheel installation:

(1) Installation is simpler.
(2) Maintenance of brake system is reduced because pressure is held in only a fraction of the brake lines, and no pressure is held in the lines to the front wheels or by the wheel cylinder assemblies.
(3) The cushioning effect of pressure free lines to the front wheels relieves the master cylinder of unnecessary wear when applying or releasing the **AFCO BRAKE LOCK**.

The **AFCO BRAKE LOCK** can be installed anywhere in the hydraulic brake line between the master cylinder (or vacuum booster, if one is used), and the rear wheels, or between the master cylinder and the line outlets to all wheels if a four wheel lock is desirable.

We recommend that a location be found where an existing hole through the side of the frame is located close to the hydraulic line. Many vehicles have a line supported bracket located midway between the master cylinder and the rear wheels. This may be removed and **AFCO BRAKE LOCK** may be bolted in its place. The **AFCO BRAKE LOCK** will support the line.

After locating mounting hole, cut a 4-1/4 inch piece out of the brake line, cutting 2-1/8 inches from each side of the centre of the mounting hole.

Be sure that when connecting the brake lines to the brake lock that the brake line from the master cylinder or vacuum source is connected to the inlet end of **AFCO BRAKE LOCK**. The line from the wheels is connected to the outlet end. “Inlet” and “Outlet” are marked on both ends of the **AFCO BRAKE LOCK**.

Bleed rear wheel cylinders in conventional manner.

Check all connections for high pressure leaks.

Connect wire to terminal on pressure switch of **AFCO BRAKE LOCK** and run to dash of vehicle in the most protected means possible.

Drill 1/2 inch hole through dash to mount control switch and direction plate for Model T200 (Toggle Type Switch).

Drill 5/8 inch hole through dash to mount control switch and direction plate for Model P201 (Push Button Switch).

Connect wire from **AFCO BRAKE LOCK** to control switch and wire from “hot” terminal behind dash to control switch.

******ALWAYS PLACE A FUSE BETWEEN THE SOURCE & SWITCH******

OPERATING INSTRUCTIONS FOR MODEL “A”

To lock brakes - switch dash switch to “On”, step on brake pedal and release. Wheels are now locked. The **AFCO BRAKE LOCK** draws no current after pedal is released even though dash switch is left on.

To unlock brakes - switch dash switch to “Off”, step on brake pedal to release.

OPERATING INSTRUCTIONS FOR MODEL “B”

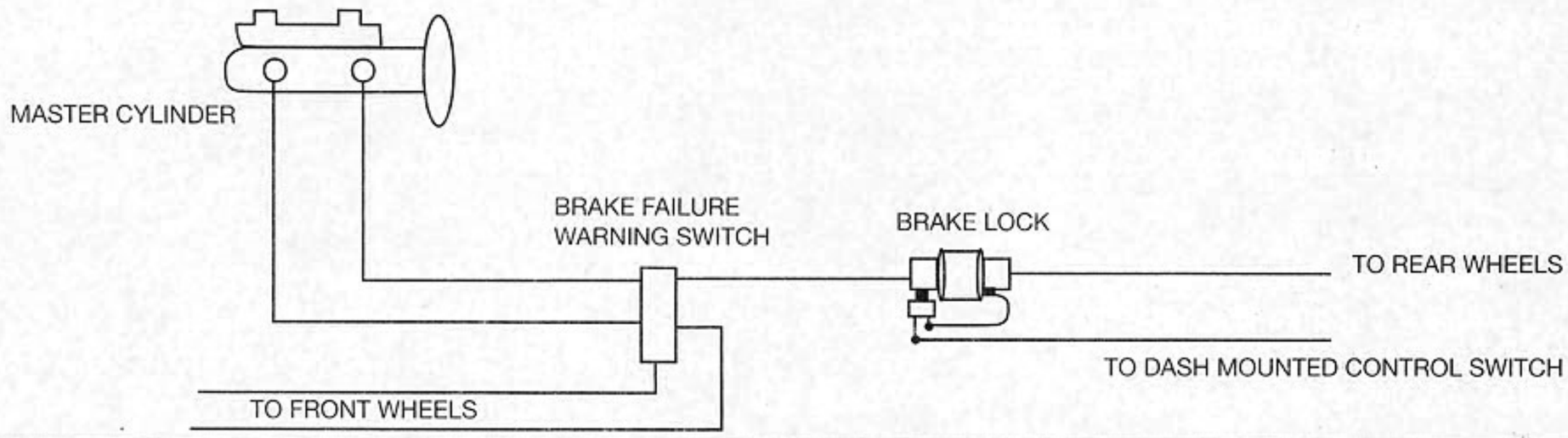
To lock brakes - push in on push button dash switch. Step on brake pedal and release brake pedal. Then release push button switch. To unlock brakes - step on brake pedal to release.

IMPORTANT

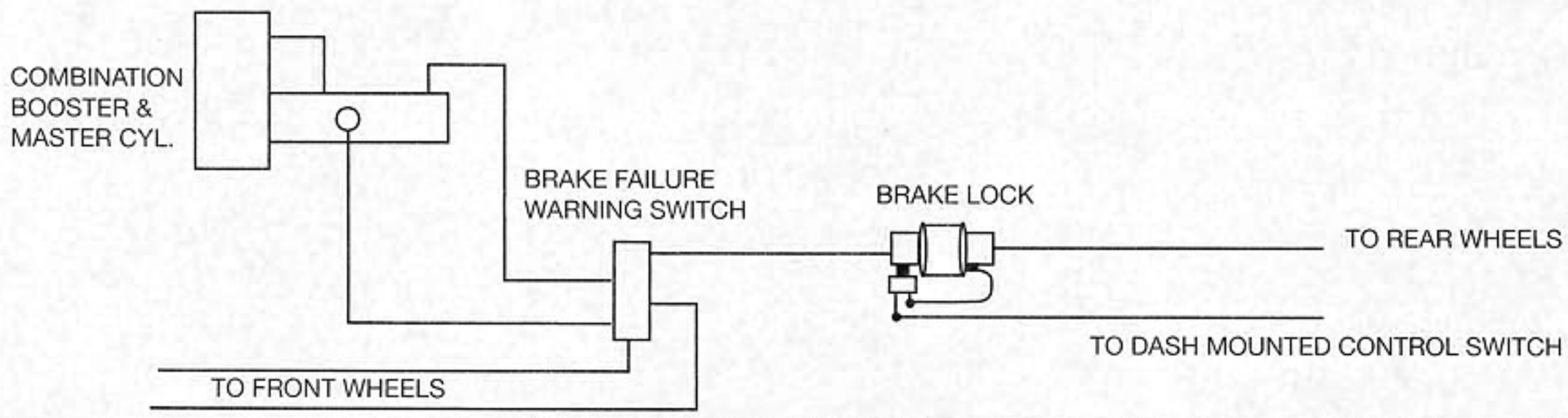
When installing fittings in lock be sure to hold lock on hex nut nearest fitting being tightened. Do not hold at opposite end. Disregarding this procedure could result in a valve body fracture not covered by warranty.

CONNECTING THE BRAKE LINES

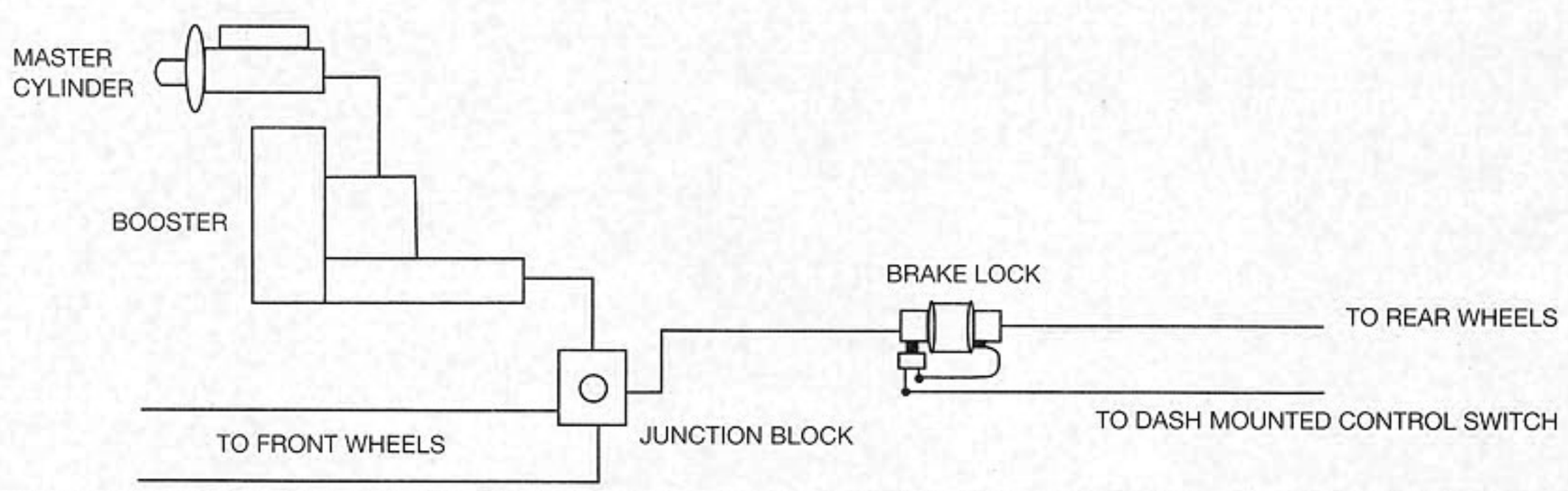
Vehicle Without Booster - Split Brake System Fig. I



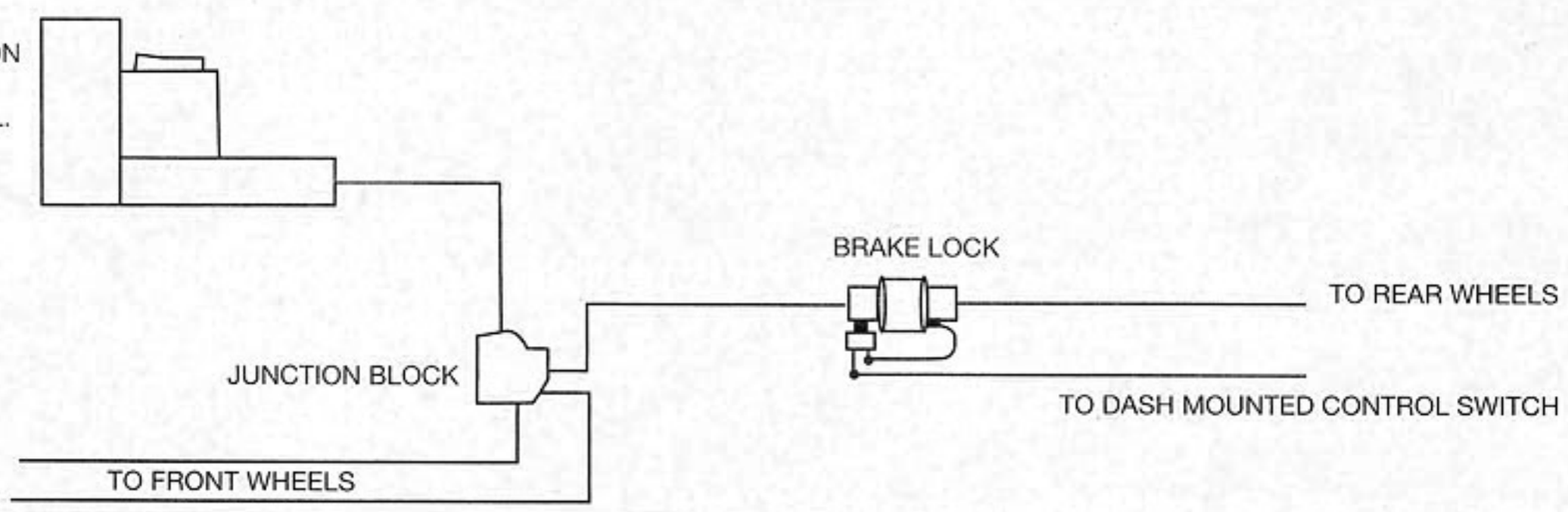
Combination Booster - Split Brake System Fig. 2



Booster Equipped Vehicles Fig. 3



Combination Booster Fig. 4



COMMON INSTALLATION CONCERNS

1) **ELECTRIC LOCK BURN-OUT**. YOU ONLY NEED POWER TO ACTIVATE AND DE-ACTIVATE THE SOLENOID. MAKE YOUR POWER CONNECTION FROM THE STOP LIGHT CIRCUIT (STOP LIGHT SWITCH).

2) MORE PRESSURE TO THE LOCK DOES NOT MEAN BETTER HOLD POWER. **DON'T USE BOTH FEET TO ACTIVATE THE SYSTEM**. APPLY REGULAR BRAKE PEDDLE PRESSURE.

3) **ANTI-LOCK BRAKE SYSTEMS (ABS)**. INSTALL THE LOCK UNIT BETWEEN THE ABS UNIT AND THE WHEEL. **DO NOT USE SILICONE BRAKE FLUID**.

SERVICE INSTRUCTIONS

BRAKE LOCK WILL NOT HOLD

1. Push dash control into "ON" position and test incoming terminal on Brake Lock with test lamp. If lamp does not light, fault is in dash control switch or in the wiring circuit to Brake Lock.

2. After test (1) shows no fault, push dash control into "ON" position and test other terminal (BC-184) on Brake Lock with test lamp. If lamp does not light when brake pedal is depressed, fault is in pressure switch (BC-105). If pressure switch is at fault, replace it with any heavy duty pressure switch having the same kind of terminals.

3. After tests (1) and (2) show no fault, and with dash control in "ON" position, short across pressure switch terminals. If there is no clicking sound, either the valve (BC-40) is stuck or the solenoid (BC-51) is inoperative. The valve (BC-40) may be stuck because of foreign matter or a swollen rubber seal (BC-41). To examine, it is recommended that the Brake Lock be removed from vehicle. Then unscrew 1" hex outlet plug (BC-20). When doing this, be sure to hold body of Brake Lock at no other place except at blue hex portion, next to outlet plug. Examine rubber valve seal (BC-41) on valve (BC-40) and if swollen, either replace valve assembly (BC-42) or entire Brake Lock. If entire Brake Lock is not replaced, wash parts with alcohol, put new or washed valve assembly into place, checking to see that it moves freely in solenoid (BC-51). Reassemble unit, apply current to wire lead side of pressure switch (BC-105) and around unit. If valve seats with clicking sound, reinstall Brake Lock. If, however, current does not seat valve (BC-40) solenoid (BC-51) is defective and entire Brake Lock should be replaced. If the rubber valve seal (BC-41) was swollen this was caused by improper or contaminated Brake fluid. Such fluid will also cause gummy deposits and softening and swelling of other rubber seals i the entire brake system. Such a condition should be corrected immediately before reinstalling Brake Lock.

IT SHOULD BE NOTED THAT NONE OF THE ABOVE FAULTS AFFECT RELEASE AFTER APPLICATION. THE BRAKE LOCK CANNOT BE APPLIED IF THESE FAULTS OCCUR.

BRAKE LOCK WILL NOT RELEASE

4. Trouble may be somewhere other than the Brake Lock. To establish this, disconnect the line at the INLET side of the Brake Lock. If the brakes release, the cause of the failure is not in the Brake Lock but the trouble is in the master cylinder or booster. If disconnecting line at inlet side of Brake Lock does not release brakes, then disconnect at outlet end of Brake Lock. If brakes release, trouble is in Brake Lock.

5. Be sure that Brake Lock has not been installed between the master cylinder and a brake booster.

6. Foreign material or a swollen rubber valve seal (BC-41) can cause valve (BC-40) to stick. See (3) above for corrective measures.

7. Check dash switch to see that it is in "OFF" position. If switch appears to be "OFF" or if push button switch is used, disconnect wire lead at switch and reapply brake pedal. If brakes release switch is internally shorted or sticking.

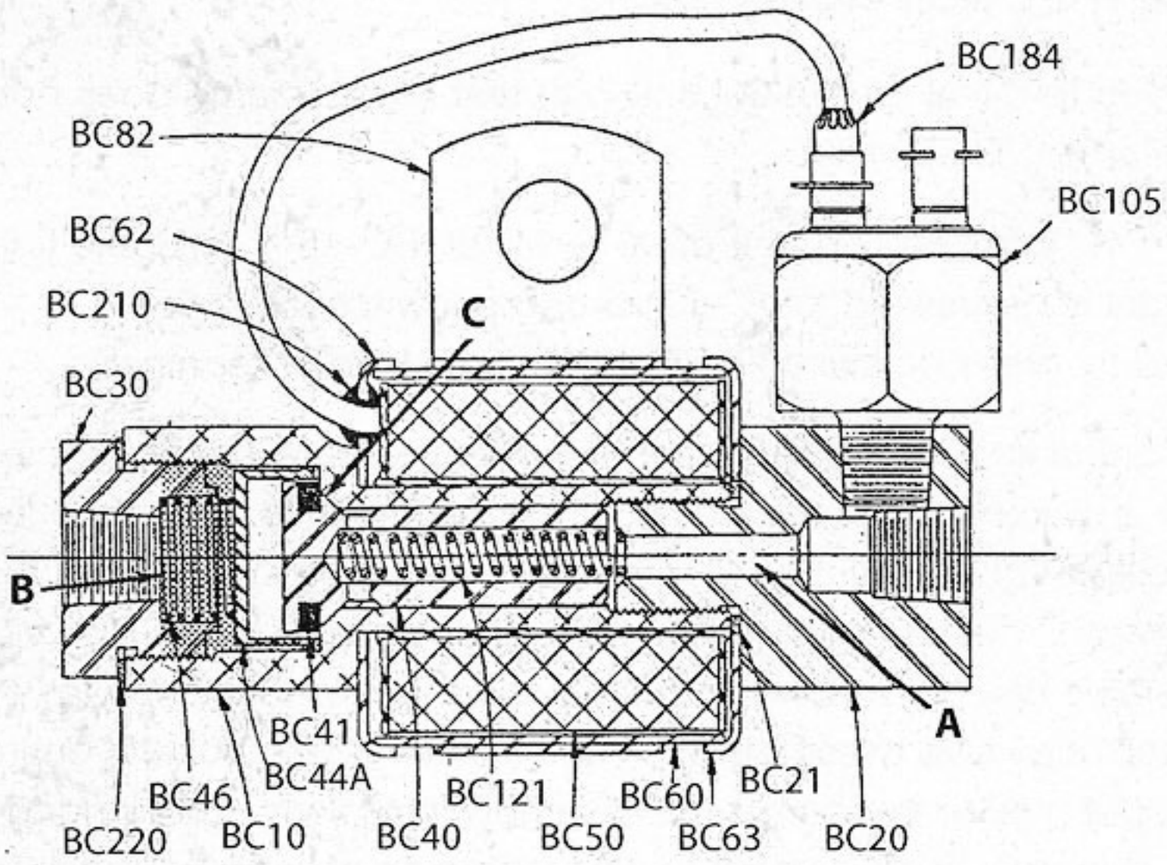
GENERAL INSTRUCTIONS

8. Check entire system for hydraulic leaks. Any leaks should be corrected at once, as a dangerous brake failure as well as undependable Brake Lock performance will result. Leaks in Brake Lock assembly itself may be corrected by tightening hex sections (BC-30 and BC-20) or replacing copper gaskets (BC-21 and BC-220) at either or both ends. If the pressure switch (BC-105) should leak at junction of plastic to metal, replace the switch.

9. Install to lock four wheels only if truck has vacuum booster.

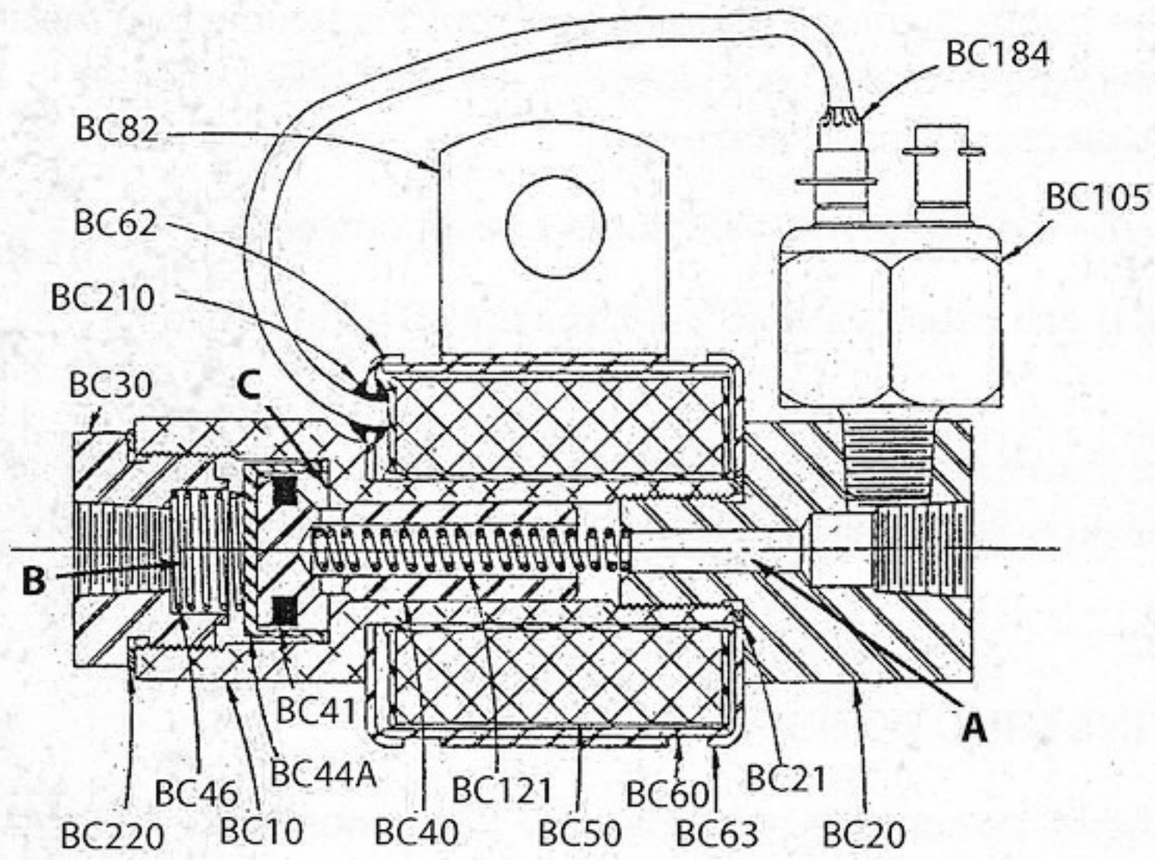
10. To test for a stuck pressure switch (BC-105) if system is equipped with toggle dash switch, put toggle switch in "ON" position and if, after five minutes, Brake Lock gets hot, replace pressure switch (BC-105). This test is not necessary when a push button dash switch is used because a stuck pressure switching such a case is not harmful.

BRAKE LOCK ON



When brake lock dash control switch is in "ON" position and brake pedal is applied, hydraulic pressure in Area A closes Pressure Switch, BC-105, which activates Solenoid, BC-50, which draws Valve, BC-40, against seat C. Brake fluid becomes trapped in Area B. Pressure in Area B will depend on degree of effort applied on brake pedal and will hold brakes accordingly. When brake pedal is released, pressure in Area B remains but pressure drops in Area A. Pressure Switch, BC-105, opens and current flow through Solenoid, BC-50, stops.

BRAKE LOCK OFF



When Brake Lock dash control Switch is restored to "OFF" position and effort is applied to brake pedal, fluid pressure in Area A pushes Valve, BC-40, off seat and, since Solenoid, BC-50, is not activated because Switch is in "OFF" position, Valve Spring, BC-121, holds Valve, BC-40, off seat so that, when effort on brake pedal is release, previously held fluid in Area B is permitted to flow through Area A into reservoir, releasing brakes.

AFCO BRAKE LOCK

BILL OF MATERIALS

Part No.	Description	No. Req.
BC10	Body	1
BC20	End Plug	1
BC21	Gasket	1
BC30	End Cap	1
BC40	Valve	1
BC41	Valve Seal	1
BC42	Valve Assembly	1
BC44A	Cage	1
BC46	Cage Spring	1
BC50	Coil	1
BC51	Coil Assembly	1
BC60	Housing	1
BC62	End Cover	1
BC63	End Cover	1
BC82	Clamp	1
BC105	Pressure Switch	1
BC121	Valve Spring	1
BC184	Terminal	1
BC210	Grommet	1
BC220	Gasket	1

WARNING!
READ INSTRUCTIONS BEFORE INSTALLING

WARNING!
ADJUST BRAKES BEFORE INSTALLING

WARNING

Read operating instructions before using Brake Lock.

The Brake Lock is a supplemental safety device. It is not to be used in place of the original equipment parking brake.

Always set parking brake and use wheel chocks and outriggers with Brake Lock.

Release Brake Lock before moving vehicle.

Do not use Brake Lock for overnight or prolonged parking.

FLUSH FLUID SYSTEMS BEFORE INSTALLATION

VEHICLE POWER FLUCTUATION

CAUTION

THIS UNIT MIGHT NOT OPERATE PROPERLY ON VEHICLES THAT EXPERIENCE LOW VOLTAGE FLUCTUATIONS CAUSED BY HIGH CURRENT DRAW WHEN MANIFOLD HEATERS OR GLOW PLUGS ENGAGE.

THE LOW VOLTAGE FLUCTUATION MAY CAUSE PREMATURE SOLENOID FAILURE IF THE BRAKE LOCK IS APPLIED WHEN EITHER OF THESE ARE ENGAGED