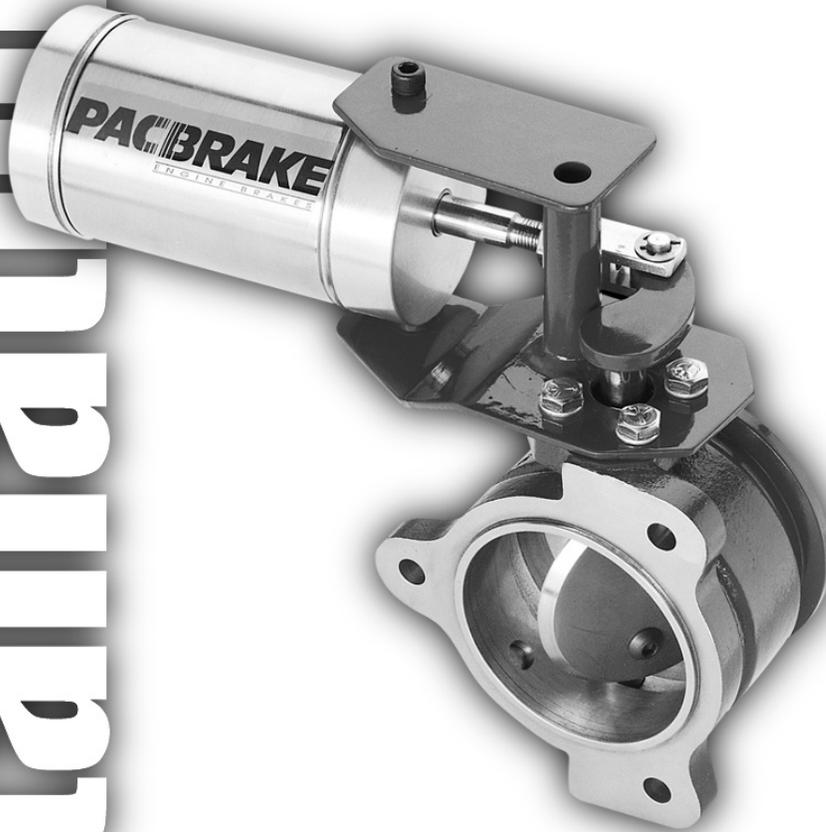


Installation



E150000

EXHAUST BRAKES

Application:

FORD® F-SERIES TRUCKS WITH 7.3L DIRECT INJECTION POWER STROKE® DIESEL ENGINE
1994 TO 1997 VEHICLES

PACBRAKE®
ENGINE BRAKES

PACBRAKE®

The market leader because...

#1 Exhaust Brake Manufacturer

PROVEN PERFORMANCE EXCELLENCE SINCE 1985.

Pacbrake is the only patented design that's approved, optional and standard equipment with more OE manufacturers than all other makes combined.

Why trust your safety AND your money to anyone else?

Maximum Retarding/Braking Power

Superior design and function provide maximum allowable retarding power for maximum peace of mind.

In a standardized test; we will exceed or match any competitive brake on the market.

Superior Design

PACBRAKE DIRECTMOUNT® design mounts on the turbocharger to provide:

- a) Instant retarding horse power (no time delay)
- b) Increased reliability
- c) Easiest installation of all exhaust brakes available.

Other brands require more parts, clamps, and installation time.

Arcor® Nitrided Housing & Components*

PACBRAKE's Industry exclusive coating process makes Pacbrake the toughest, most durable brake on the market.

- a) Reduces wear and increases corrosion resistance
- b) Adds strength and maintains flawless action.

* Available on most models.

Other brands are more susceptible to rusting, corrosion and seizing up in a harsh exhaust environment.

Free Flow Exhaust & Backpressure Limiter

PACBRAKE exhaust brakes offer an unrestricted exhaust flow design and provides maximum retarding power without reducing power output. The backpressure limiter guarantees engine safety.

Braking power when you need it - without sacrificing engine power.

Precision Exhaust Pipe Mounting Surface

PACBRAKE's contacting surfaces are precision machined – eliminating the need for a gasket.

A better fit with less parts.

Lower Price AND Less Expensive Installation

PACBRAKE technology and quality are available to you at hundreds of dollars less than most competitors. Add to that fewer parts and easier installation (= less labor) and you benefit financially from purchase to installation to long term performance.

Other brakes cost you more upfront, more at installation and more down the road.

PACBRAKE Parts & Dealer Network

It's one thing to purchase an exhaust brake, but it's another to have parts and/or service available everywhere you go.

PACBRAKE's extensive parts and dealer network with more than 3000 outlets makes purchase and service easy.

Peace of Mind.

Unlimited Mileage Warranty

Limited Warranty: 2 years unlimited mileage on brake assembly and 1 year unlimited mileage on attaching and related components.

Pacbrake #1... for all the right reasons

800-663-0096

www.pacbrake.com

1

Before starting, check that the kit contains everything shown in photo.

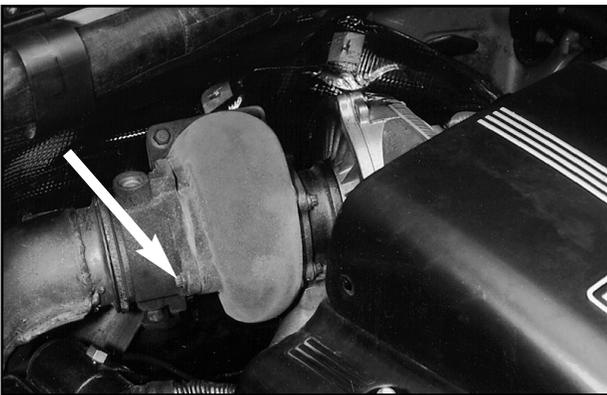


NOTE: An extra harness has been included in this kit for vehicles equipped with cruise control.

NOTE: F-450 models require Pacbrake kit - C15450 Vacuum Fitting Group, to supply vacuum for the Pacbrake system. Consult with dealer or Pacbrake for more information.

2

Remove the engine lifting eye located near the turbo outlet. Remove and save turbo outlet V-clamp. Using a 5/16", 12 pt. socket or wrench, remove the three capscrews which attach the outlet housing to the turbo. Disconnect the actuating rod attached to the bottom of the housing by sliding the ball joint cover back and releasing the arm. The rod will remain retracted and its removal is not necessary.



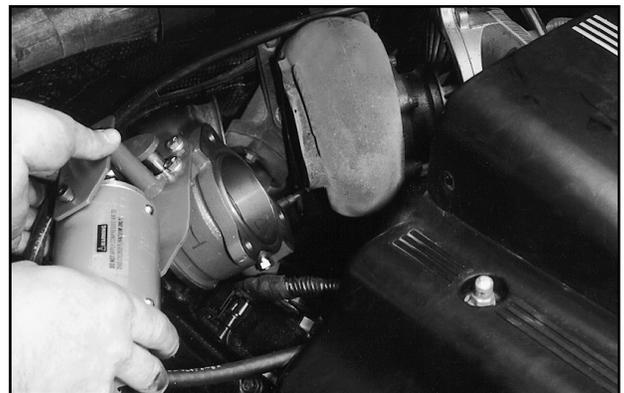
3

Using thread sealant, install the 90° cylinder fitting in the rear cylinder port and the straight fitting into the rod end cylinder port. Attach the lines to vacuum cylinder as shown using the push-on type hose. Moisten the fittings and firmly push the hose to the end of the barbed portion of the fitting. Install the hose clamps and firmly tighten using pliers.



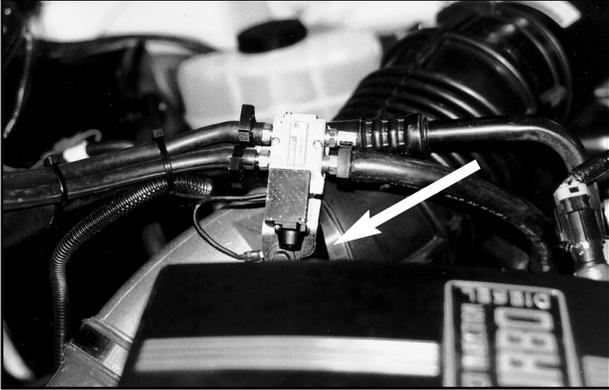
4

Inspect the sealing face of the turbo for carbon or other imperfections. If necessary, clean or repair to assure a good seal will be made. Install the Pacbrake to the turbo using the three capscrews removed during step 2. Torque evenly to **72 in.lbs. (8 N•m)**. Reattach the exhaust pipe using the original V-clamp and torque to **72 in.lbs. (8 N•m)**.



5

Install the solenoid and bracket on the upper air intake bolt as shown in the photo. Ensure that the ground terminal is between the solenoid bracket and the air intake bracket.



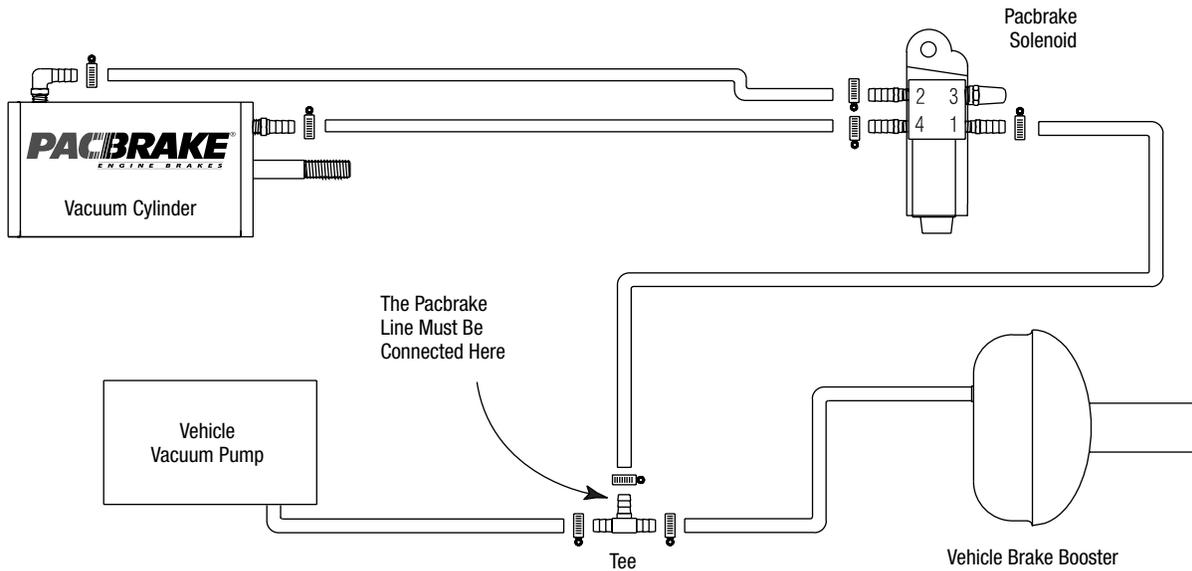
6

Install the tee fitting in vacuum line where the main vacuum line comes off the vacuum pump. **CAUTION: The tee has been designed to protect the vehicles brake system and MUST be installed exactly as shown.** Following solenoid port numbers and the cylinder fitting locations on the schematic, attach the vacuum hoses to the Pacbrake solenoid and secure with the clamps provided.



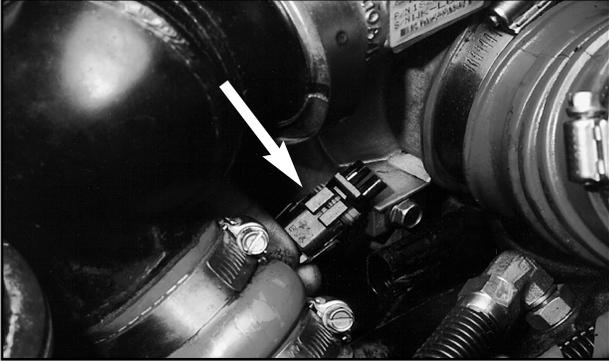
IMPORTANT: Double check all fittings, clamps and connections, including the main vacuum connection. Ensure the hoses at the vacuum cylinder have been secured as far away from the exhaust components as possible. Leaks could cause partial loss of braking.

SCHEMATIC - VACUUM SYSTEM



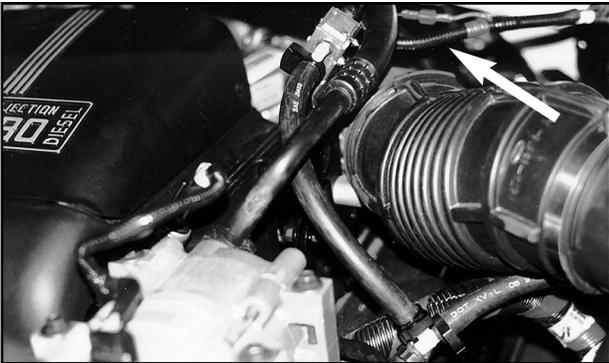
7

Remove the plastic engine top cover (labelled - Direct Injection Turbo Diesel) and locate the two wire Weather Pack connector going to the Exhaust Pressure Regulator. Part this connector and re-connect it to the Pacbrake harness.



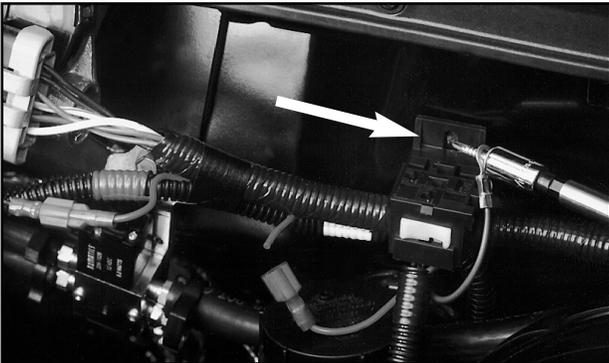
8

Connect the blue wire in the harness to the Pacbrake solenoid.



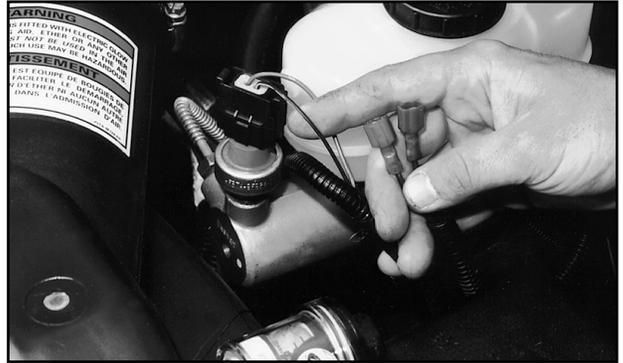
9

For vehicles **without** cruise control, omit steps 9 -10. Remove the relay and mount the receptacle of the C11971 harness to the firewall, including the **green** ground wire, with the screw supplied. Replace the relay. Connect both harnesses together using the remaining **red** wire.



10

"Ford" installs a Brake Pressure Applied Switch on the **TOP** of their master cylinder. Open the convoluted conduit leading to this switch and pull out the **black with yellow stripe** wire. Cut this wire and crimp on the two red terminals supplied. Finally, connect these to the mating terminals of the two remaining **blue** wires coming from the relay. Replace the engine top cover and neatly secure all wiring with the plastic ties.



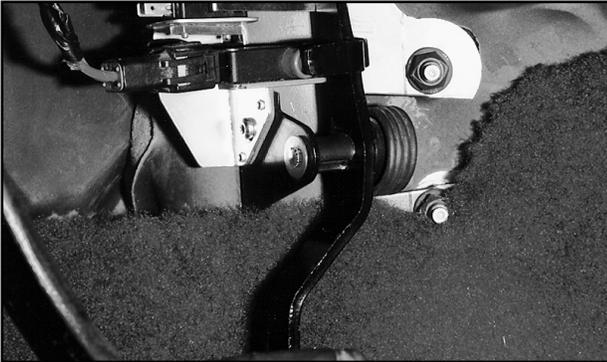
11

Drill a 1/2" hole through the firewall, above the throttle switch and below the clutch master cylinder or blanking plate (auto trans.). Feed the switch terminal end of the harness through this hole into the cab compartment.



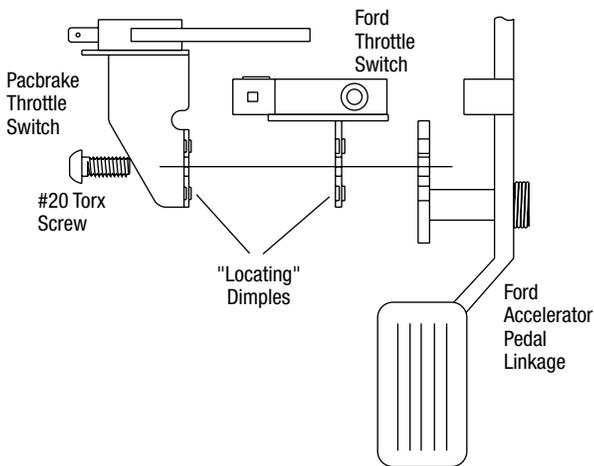
12

The Pacbrake throttle switch assembly mounts on the outside of the existing Ford switch located above the accelerator pedal, as shown in the schematic. Using a #20 Torx driver, remove the screw which attaches the existing switch and install the Pacbrake switch assembly. Align the two small bracket dimples with the depressions in the mounting bracket. Adjust the switch by bending the switch arm to obtain a “click” each time the throttle returns to idle. The Ford switch will also click at this time.



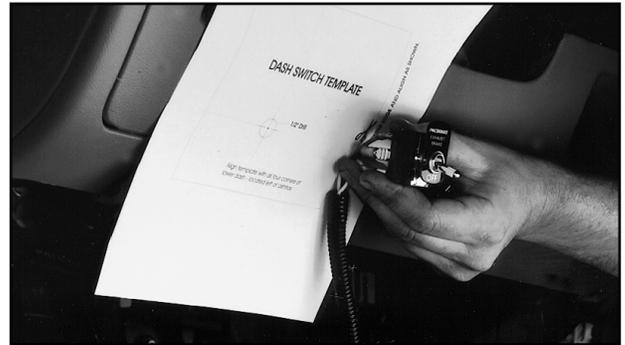
NOTE: Should the “locating” dimples not be realigned, poor throttle response will result.

SCHEMATIC - THROTTLE SWITCH



13

Remove the lower instrument panel, and using the template supplied, drill a 1/2" hole left of the steering column and install the Pacbrake on/off switch. Connect the two wiring harnesses to this switch, observing the correct wire and terminal locations as shown in the wiring schematic.



14

Locate the one 16 gauge **grey with yellow stripe** wire in the harness directly below the steering column (see pointer). Attach the blue “T-tap” connector to this wire which should be 12V+, ignition switched. There are also two more thick wires of the same colour, but **do not use** these—they are too thick for our connector to penetrate. Plug the **black** fused wire into this connector, attach fuse holder in an accessible location and replace panel. Continue the harness to the previously installed throttle switch, and connect the **green** and **black** wires to the terminal on the side of the switch and the one on the end adjacent to it. See schematic. Replace panel.



YOU ARE READY TO CHECK OPERATION.

Start engine and turn Pacbrake on (engine will idle with Pacbrake engaged). Advance the throttle from idle to approximately 1200 RPM and back to idle several times, ensuring that the Pacbrake applies and releases each time.

NOTE: With the Pacbrake switch in the warm-up mode, the exhaust brake will cycle during cold engine warm-up.

Check for exhaust leaks at all connections. Shut engine down and do a final check of all clamps, fittings, wiring and plastic ties.

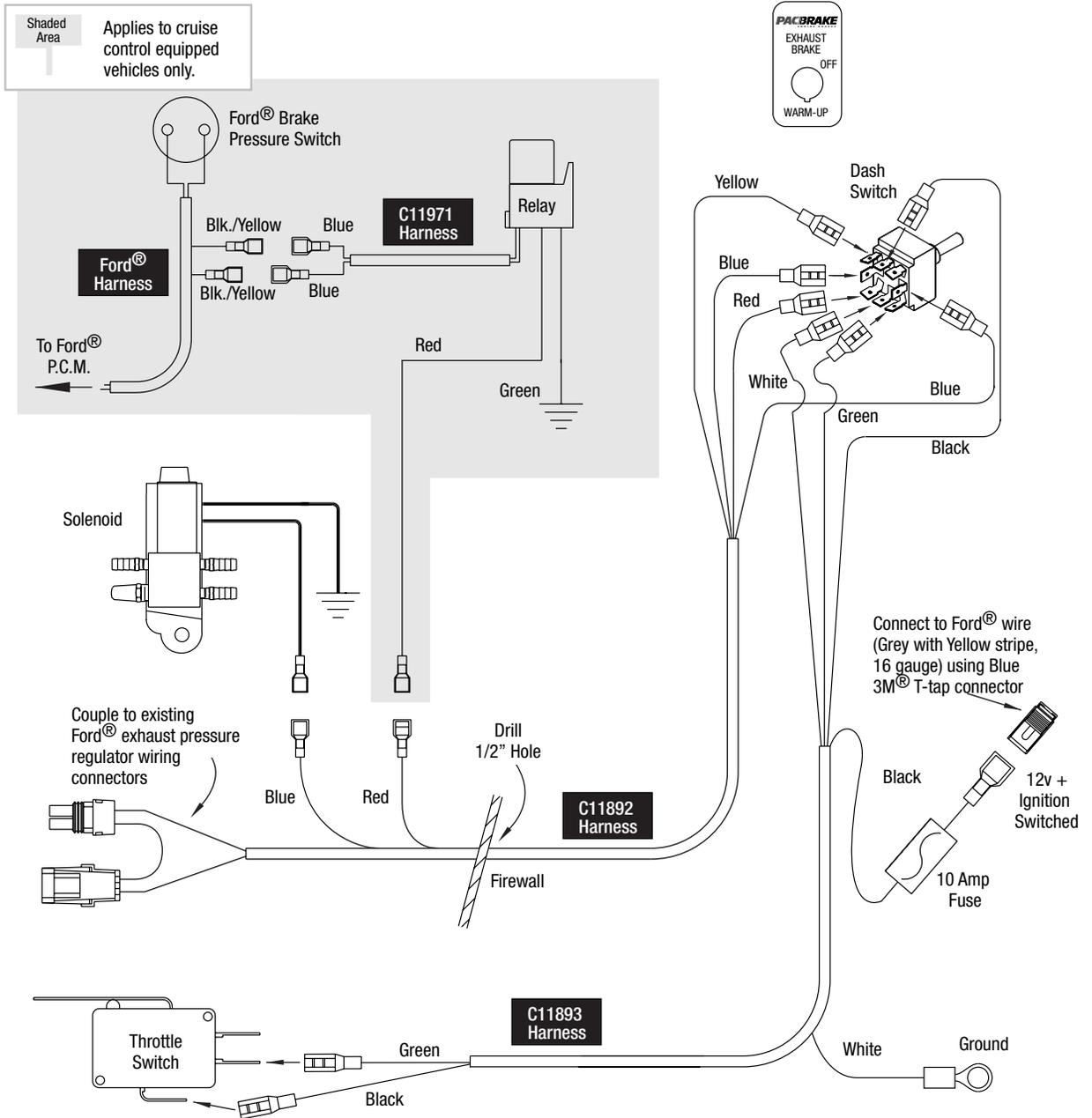
Road test vehicle, and with cruise control activated, turn Pacbrake switch on. With throttle in idle position, cruise control should cancel immediately. **NOTE:** Whenever the Pacbrake switch is on and throttle at idle, cruise control cannot be engaged.

NOTE: Re-torque turbo clamp and flange bolts after 100 miles (engine should be cold).

Retarding Performance: 250 rhp @ 3,400 rpm. Dynamometer recorded @ the rear wheels (automatic transmission model only).

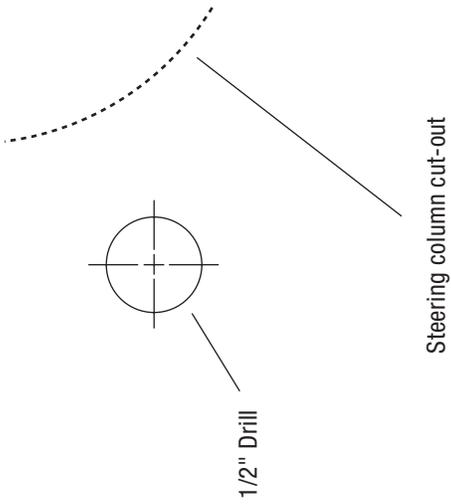
If you have any questions or comments, please don't hesitate to give us call at 1-800-663-0096.

SCHEMATIC - WIRING SYSTEM

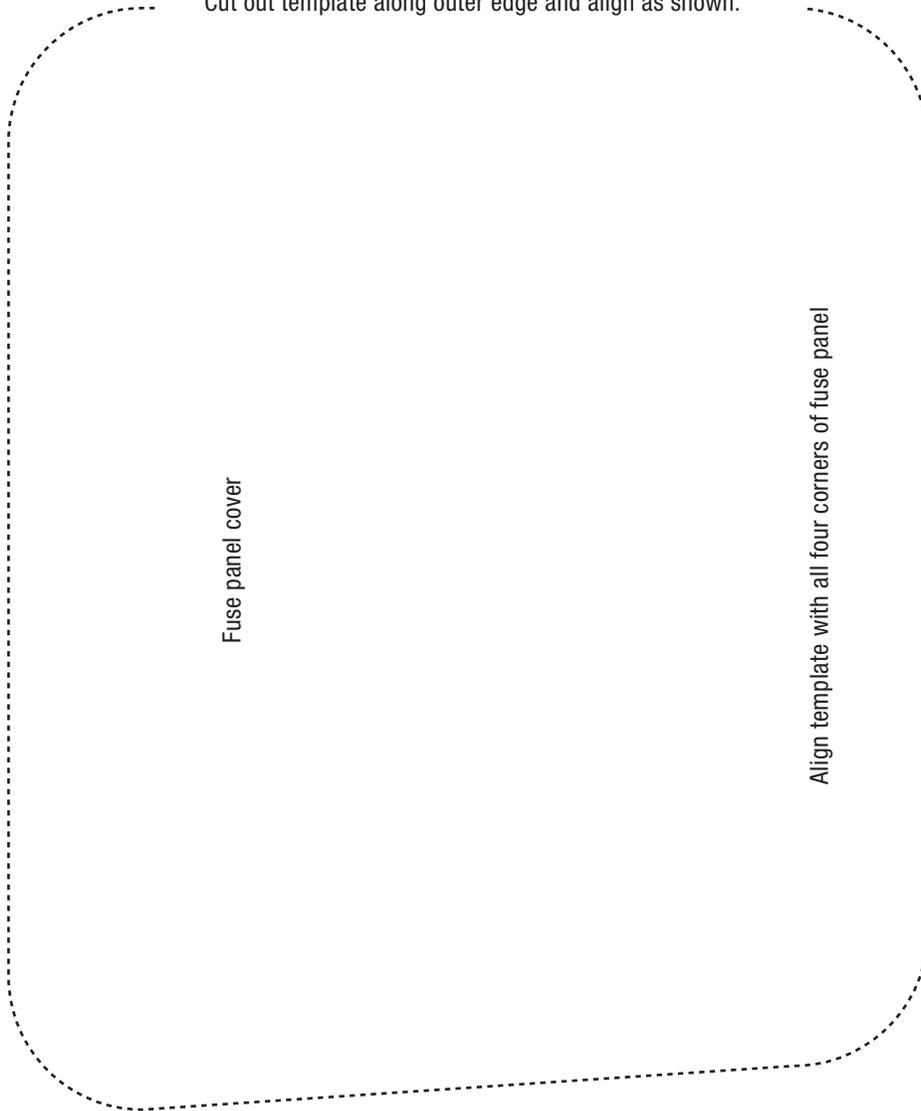


NOTE:

- Information for this schematic was derived from vehicle systems at the date of this printing.
- Updates or variations by vehicle manufacturers constituting changes will not be the responsibility of Pacbrake.



Cut out template along outer edge and align as shown.



FORD F SERIES DASH SWITCH TEMPLATE

NEED TO KNOW MORE ... 800-663-0096

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