



INSTALLATION INSTRUCTIONS FORD POWERSTROKE PICKUPS MODEL YEARS 1994-2004

www.dieselturbolifesaver.com

Diesel Turbo Lifesaver is a computer controlled device that allows you to set an automatic engine idle sequence to properly cool your turbocharger before engine shutdown as required by Ford and Navistar. Failure to follow recommended turbo cooling procedures can lead to premature bearing failure that is NOT covered under the factory warranty.

Installing your Diesel Turbo Lifesaver is easily accomplished with common hand tools in a short period of time because our exclusive in line ignition harness eliminates wire cutting. No other product provides this feature and thus requires extensive wire cutting and probing that can damage electronics or void your factory warranty. In order to make your installation go as smoothly as possible, it is recommended that you read the instructions and plan your installation before starting.

PARTS LIST:

- 1 - Diesel Turbo Lifesaver With Ignition Harness
- 1 - 1 Amp AGC Fuse
- 1 - Red Scotchlok Connector
- 8 - Wire Ties (6 - 4 Inch, 2 - 6 Inch)
- 1 - #8 x 1/2 Sheet Metal Screw

TOOLS REQUIRED:

- 13 mm Wrench
- Socket Wrench with 7mm Socket
- Flat Screwdriver
- Wire Cutters
- Pliers
- Utility or X-Acto Knife
- Drill with 1/8 and 1/4 Inch Bits
- Optional - Soldering Iron, Solder & Electrical Tape

STEP 1: DISCONNECT NEGATIVE BATTERY CABLES

Figure Reference: None

Tools Required: 13mm Wrench

STEP 2: REMOVE UNDER DASH PANEL

If your vehicle is a 1999 - 2004 model, please continue with step 2.
If your vehicle is a 1994 - 1998 model, skip to step 2A.

Figure Reference: Figure 2

Tools Required: Flat Screwdriver

- ⇒ Turn 4 fasteners (indicated in Fig. 2) 90 degrees counterclockwise with flat screwdriver.
- ⇒ Drop dash panel free from dashboard.

STEP 2A: REMOVE UNDER DASH PANEL (1994 - 1998 TRUCKS)

Figure Reference: Figure 3

Tools Required: Socket wrench with 7mm socket, flat screwdriver

- ⇒ Remove two screws in positions shown in Fig. 3.
- ⇒ Remove dash panel by releasing hidden clips along top rear of panel (see Fig. 3 for locations of hidden clips). Some gentle prying may be required with flat screwdriver in order to get clips to release.

STEP 3: SEPARATE STOCK IGNITION PLUG - ALL YEARS

Figure reference: Figure 4

Tools Required: Socket Wrench with 7mm Socket

- ⇒ 2002 - 2004 VEHICLES ONLY - Remove 4 gold bolts that hold fusebox to dashboard. Swing fusebox down towards floor to allow access to stock ignition plugs.
- ⇒ Loosen 7mm bolt located in recess of stock ignition plug. Ignition plug is located on the left side of the steering column. When bolt is sufficiently loose, two halves of ignition plug will separate. Leave unplugged for later steps.

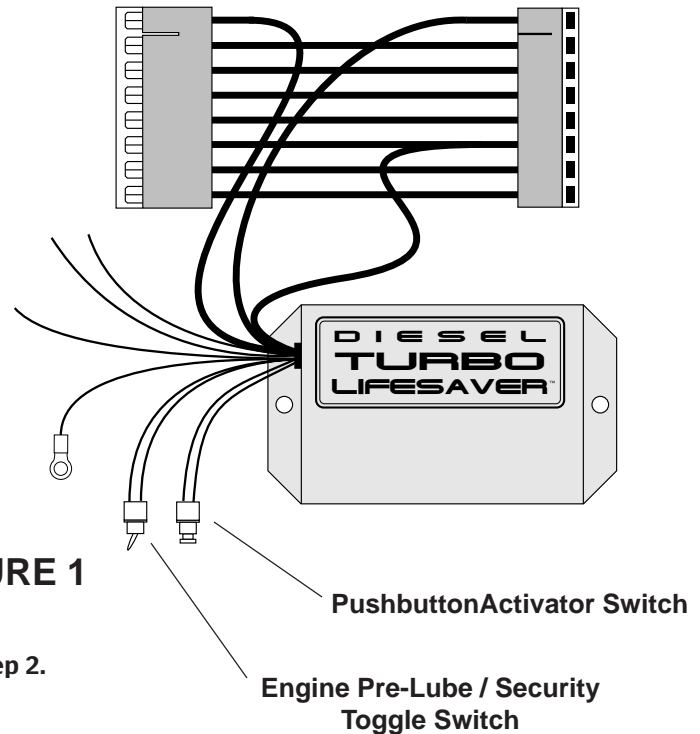
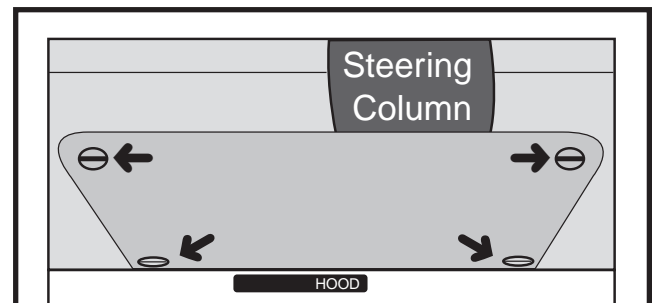
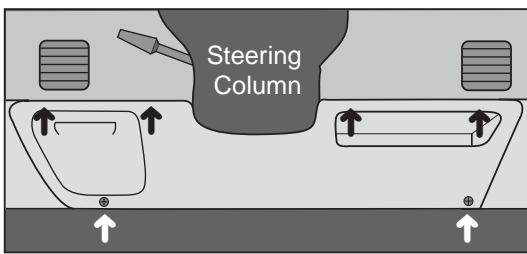


FIGURE 1



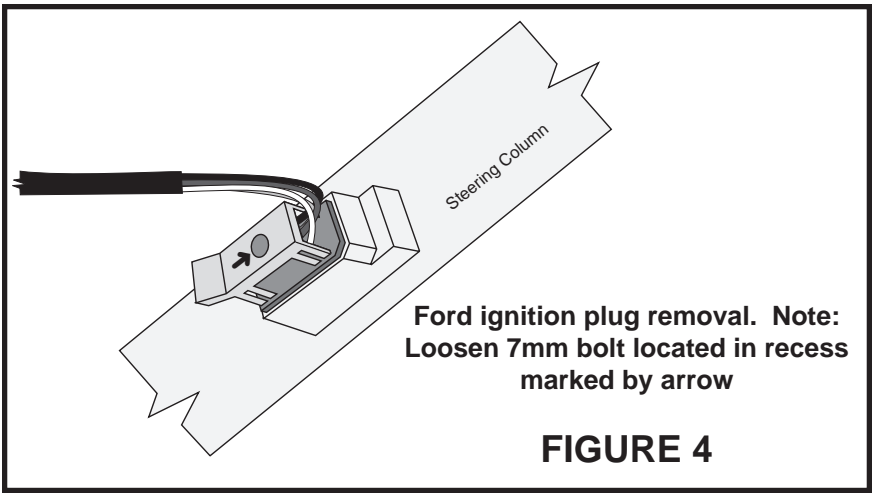
1999 - 2003 VEHICLES:
Underdash fuse panel removal. Turn 4 fasteners 1/4 turn counterclockwise to release panel.

FIGURE 2



1994 - 1998 VEHICLES:
 Remove 2 screws (white arrows) and release hidden clips (not visible - located BEHIND panel in locations indicated by black arrows).

FIGURE 3



Ford ignition plug removal. Note: Loosen 7mm bolt located in recess marked by arrow

FIGURE 4

STEP 4: PLUG IN DIESEL TURBO LIFESAVER'S MALE IGNITION PLUG

Figure Reference: Figures 5 and 7

Tools Required: Socket Wrench with 7mm Socket

- ⇒ Plug male end of Diesel Turbo Lifesaver's harness into Ford's harness.
- ⇒ Wiggle harness ends as you plug them together to allow the electrical terminals to mate properly.
- ⇒ Secure harness plugs together by tightening 7mm bolt. **DO NOT OVERTIGHTEN!**
- IMPORTANT! Make sure plugs are fully seated. See Figure 7. Failure to seat plugs can result in loose wires that can cause vehicle functions to fail. You can tell plugs are fully seated when "bumps" on male plugs are approximately 1/16 inch from body of female plug.**

STEP 5: PLUG IN DIESEL TURBO LIFESAVER'S FEMALE IGNITION PLUG

Figure Reference: Figures 6 and 7

Tools Required: Socket Wrench with 7mm Socket

- ⇒ Plug Ford's Male ignition plug into female side of Diesel Turbo Lifesaver's harness.
- ⇒ Wiggle harness ends as you plug them together to allow the electrical terminals to mate properly.
- ⇒ Secure harness plugs together by tightening 7mm bolt. **DO NOT OVERTIGHTEN!**
- IMPORTANT! Make sure plugs are fully seated. See Figure 7. Failure to seat plugs can result in loose wires that can cause vehicle functions to fail. You can tell plugs are fully seated when "bumps" on male plugs are approximately 1/16 inch from body of female plug.**
- ⇒ 2002 - 2004 VEHICLES ONLY - Reinstall fuse box removed in Step 3.

STEP 6: ATTACH BLACK GROUND WIRE

Figure Reference: None

Tools Required: #2 Phillips Screwdriver or Socket Wrench With 7mm Socket.

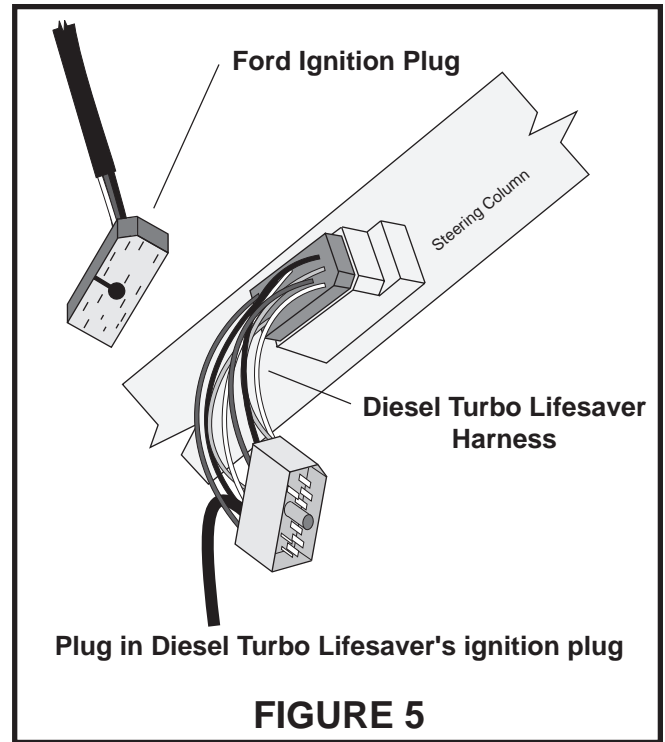
- ⇒ Attach black wire to solid ground. Many locations exist under dash to ground wire.

STEP 7: CONNECT WHITE WIRE (BRAKE VOLTAGE WIRE)

Figure Reference: Figure 8

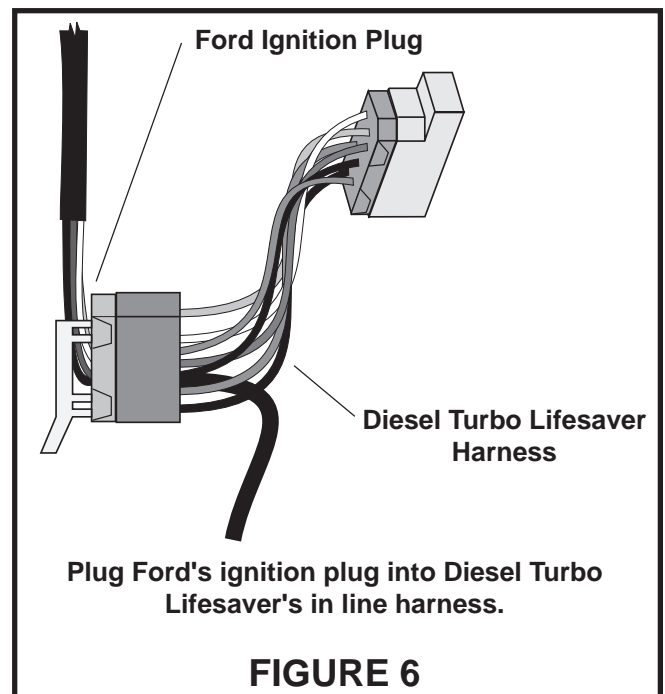
Tools Required: Utility Knife, Pliers. Optional - Soldering Iron, Solder & Electrical Tape

- ⇒ Brake light switch and harness on all vehicles can be found attached to the upper part of the brake pedal arm.
- ⇒ Connect white wire to solid green wire in brake light switch harness. The green wire should only show voltage when the brake pedal is depressed. You may have to use your knife to cut some electrical tape from Ford's harness in order to create enough slack to connect wires together. Solder wires together and insulate (preferred) or use supplied scotchlok connector.



Plug in Diesel Turbo Lifesaver's ignition plug

FIGURE 5



Plug Ford's ignition plug into Diesel Turbo Lifesaver's in line harness.

FIGURE 6

STEP 8: TEST FOR PROPER OPERATION

Figure reference: None

Tools required: 13mm Wrench

⇒ Reattach negative battery cables and insert 1 Amp AGC fuse into Diesel Turbo Lifesaver. Make sure vehicle is parked where there is adequate ventilation and that security switch of Diesel Turbo Lifesaver is in the OFF position. Read operating instructions and test for proper operation.

NOTE: If unit DOES NOT operate properly, check fuse, ground wire, and brake input wire connections. IF WHITE WIRE IS RECEIVING CONSTANT +12 VOLTAGE NO TURBO COOLING CYCLES CAN BE SET. RECONNECT WHITE WIRE TO FORD WIRE THAT RECEIVES VOLTAGE ONLY WHEN BRAKE PEDAL IS DEPRESSED. If unit is still not operating properly, call our technical services department at (970) 879-4201 Monday – Friday 9:00AM to 4:00PM MST.

STEP 9: MOUNT DIESEL TURBO LIFESAVER ENCLOSURE

Figure reference: None

Tool Required: Wire Cutters

⇒ Use supplied 8 inch wire ties to tie Diesel Turbo Lifesaver's enclosure to an existing wire harness under the dash. Loop the wire ties through the mounting feet on the enclosure and around an existing wiring harness. BE ABSOLUTELY SURE THERE IS NO WAY THE ENCLOSURE OF DIESEL TURBO LIFESAVER CAN FALL (OR SAG) AND INTERFERE WITH THE OPERATION OF THE PEDALS – ESPECIALLY THE BRAKE PEDAL! Clip excess ends off cable ties.

STEP 10: MOUNT SECURITY AND ACTIVATOR SWITCHES

Figure reference: None

Tools Required: #2 Philips Screwdriver, Socket Wrench with 7mm Socket and Drill with 1/8 and 1/4 inch bits.

⇒ When selecting a location for switches, find a location where the switches will not be kicked when you enter and exit the vehicle.
⇒ Mount activator switch and bracket in a location that can be reached when dash panel is reattached. Activator switch works well if it is mounted so that the red button faces the floor of the vehicle. Drill 1/8 inch hole and mount bracket with supplied sheet metal screw or mount bracket under a factory screw.
⇒ Find a location for security switch. You can either mount or hide the security switch – it's up to you. Others have hidden the switch (underneath carpets) without mounting it, and others prefer to mount it (requires 1/4 inch hole). In order to make it difficult for thieves, we have no preferred location – be as creative as you like.

STEP 11: SECURE WIRES WITH WIRE TIES

Figure Reference: None

Tools Required: Wire Cutters

⇒ Use supplied wire ties to secure all wires in a neat and tidy manner. Make sure wires are not touching any sharp metal edges that can wear through insulation over time and cause short circuits. Clip excess ends off wire ties.

STEP 12: REINSTALL UNDER DASH PANEL

Figure Reference: Figures 2 & 3

Tools Required: 1999 – 2004 Vehicles – Flat Screwdriver

1994 – 1998 Vehicles – Socket Wrench with 7mm Socket

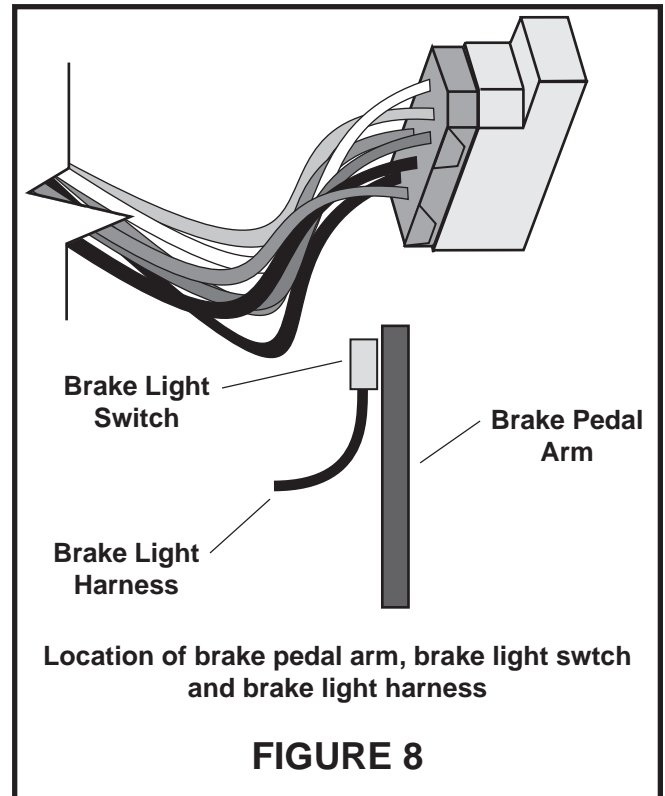
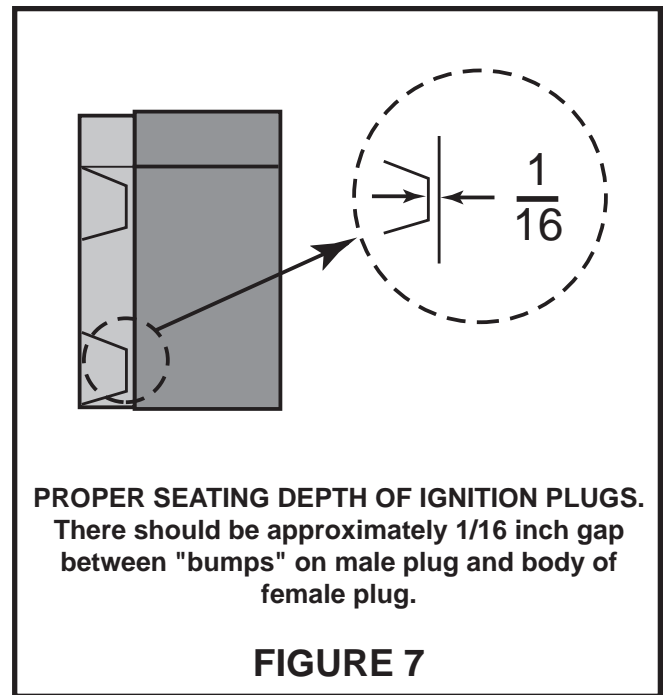
⇒ Reinstall under dash panel by reversing steps 2 and 2A.

⇒ 1994 – 1998 vehicles: Make sure hidden clips of dash panel are seated by pushing firmly on front of panel.

ALARM INTERFACING

Diesel Turbo Lifesaver provides you with two auxiliary outputs (purple wires) to allow it to interface with alarm systems. Interfacing with alarm systems may be required if: 1) Alarm will not arm when turbo is cooling off OR 2) Alarm arms but false alarms (due to motor vibrations) when turbo is cooling off.

Due to the variables in alarm systems, how they operate, and differences in installation techniques, it is recommended that you have your alarm installer perform any interfacing that may be required. If you installed your own alarm system, please obtain alarm's wiring schematic and call our tech line for assistance.



Output Specifications For Interface Wires

Output Type: NEGATIVE

Maximum current draw (each) – 500 Milliamps

DO NOT, UNDER ANY CIRCUMSTANCES, APPLY 12 VOLTS TO INTERFACE WIRES. DOING SO MAY CAUSE DAMAGE TO THE UNIT THAT IS NOT COVERED UNDER WARRANTY.

DIESEL TURBO LIFESAVER

Is Manufactured By:

Baker Auto Accessories

2955 Village Dr. #5/ Box 880707

Steamboat Springs, CO 80488

TECHNICAL Mon – Fri 9:00 AM to 5:00 PM MST: (970) 879-4201

(970) 879-6097 FAX

**DIESEL TURBO LIFESAVER IS ALSO AVAILABLE FOR:
DODGE CUMMINS TRUCKS
GM DURAMAX TRUCKS
MOTORHOMES AND
OTHER DIESEL EQUIPMENT**

DIESEL TURBO LIFESAVER LIMITED WARRANTY

Baker Auto Accessories (B.A.A.) warrants Diesel Turbo Lifesaver to be free from manufacturing defects under normal use and conditions for three years from date of original user purchase.

Baker Auto Accessories, at its sole discretion, will either repair the product or replace the product, provided the manufacturing defect is verified along with proof of purchase. To obtain warrant service call 1-970-879-4201.

This warranty is void if the product is:

- A) Damaged through negligence, misuse, abuse or accident.
- B) Modified, repaired, or tampered with by anyone other than B.A.A.
- C) Units on which the serial number has been defaced, modified or removed.

This warranty does not cover:

- A) Damage due to improper installation.
- B) Water, smoke, or heat damage.
- C) Damage or improper operation of unit caused by customer abuse, misuse, negligence, or failure to follow correct installation procedures as provided with product.
- D) Costs of shipping of the product to and from B.A.A.

This warranty is non-transferable and applies only to the original purchaser and does not extend to subsequent owners of the product. Any applicable implied warranties, including the warranty of merchantability, are limited in duration to a period of the expressed warranty as provided herein beginning with the date of original purchase at retail and no warranties, whether expressed or implied, shall apply to the product thereafter. Baker Auto Accessories makes no warranty as to the fitness of the product for any particular purpose or use.

The extent of Baker Auto Accessories' liability under this limited warranty is the repair or replacement provided above and, in no event, shall Baker Auto Accessories' liability exceed the purchase price paid by the purchaser of the product. Under no circumstances shall Baker Auto Accessories be liable for any loss, direct, indirect, incidental, special, or consequential damage arising out of or in connection with the use of this product.

Baker Auto Accessories
P.O. Box 880707
Steamboat Springs, CO 80488
(970) 879-4201

STEP 1 : Set Parking Brake

1. While engine is running, depress and HOLD brake pedal.
2. Set parking brake FIRMLY.
3. Vehicles with automatic transmission: Put transmission in PARK.
3A. Vehicles with manual transmission: Put transmission in NEUTRAL.
4. Release brake pedal and make sure vehicle DOES NOT roll or creep. If vehicle rolls or creeps, reapply parking brake. **IF PARKING BRAKE CANNOT PREVENT VEHICLE FROM ROLLING, DO NOT USE DIESEL TURBO LIFESAVER UNTIL YOU HAVE A QUALIFIED MECHANIC ADJUST YOUR PARKING BRAKE.**

STEP 2: Set Turbo Cooling Cycle

NOTE: For safety reasons, Diesel Turbo Lifesaver WILL NOT allow you to set a turbo cool down time when the brake pedal is depressed. **THE BRAKE PEDAL (NOT PARKING BRAKE) MUST BE RELEASED IN ORDER TO INSURE THAT THE VEHICLE DOES NOT ROLL OR CREEP. SEE STEP 1!**

1A: TO SET COOL DOWN CYCLES BETWEEN 1 – 10 MINUTES:

With engine running, set idle time by depressing and holding the activator switch in while counting the "beeps" emitted by Diesel Turbo Lifesaver. Release activator to set run time. Example . . . Press button, "beep", "beep", "beep", release button equals three minutes of run time.

1B: TO SET 20 – 250 MINUTES OF RUN TIME (IN TEN MINUTE INTERVALS):

Follow steps in 1A, but continue to hold activator switch in after the 10th "beep". Each subsequent "high pitched" beep will add ten minutes of run time to the original 10 minutes programmed in step 1A.

2. Remove ignition key – if you want to activate security feature, turn security switch to on position.
3. Exit vehicle, engine will idle to cool turbo and automatically shut off when time you set elapses. If security function was activated, the engine will now be disabled.

NOTE: You will hear a short "beep" from Diesel Turbo Lifesaver once every ten seconds when it is idling your engine. Ten seconds before your engine shuts off, you will hear a series of rapid "beeps".

**D I E S E L
TURBO
LIFESAVER™**

**FORD POWERSTROKE
Extended Run Time
OPERATING INSTRUCTIONS**

OTHER FEATURES OF DIESEL TURBO LIFESAVER:

EMERGENCY ENGINE STOP OR CANCEL COOLING CYCLE

Diesel Turbo Lifesaver allows you to stop your engine at any time when a run cycle is engaged. To stop your engine, depress BRAKE PEDAL or ACTIVATOR SWITCH.

ANTI THEFT FUNCTION

When security switch is on, your vehicle cannot be started . . . Even if the thief has a key! To set security function, move security switch lever to the on position. **NOTE:** Security switch has on and off stamped into the side of switch body.

ENGINE PRE LUBE FUNCTION (NOT FUNCTIONAL ON 2003-2007 6.0 LITER TRUCKS DUE TO CHANGES MADE BY FORD)

Prolong engine life by eliminating dry starts after oil changes or long periods of inactivity. To pre lube your engine, turn security switch ON and crank engine (with key) for 5 – 10 seconds (engine will crank, but will not start). Turn security switch off and start vehicle. Observe how quickly oil pressure builds when engine starts.

Diesel Turbo Lifesaver

Is designed and manufactured in the USA by:

Baker Auto Accessories

970.879.4201

www.dieselturbolifesaver.com

HOW LONG SHOULD I COOL MY TURBOCHARGER?

Turbo temperature is dependent on these variables:

- What is the air temperature?
- How "hard" are you working your engine?
- Are you driving in hills or mountains?
- Is there a headwind?
- Are you towing a load? How large?
- Has your engine been modified for higher performance?

As a rule of thumb, increasing any of these variables will cause turbo temperatures to rise. The higher the turbo temperature, the longer the turbo should be cooled down. Generally speaking, match these cool down times to your driving conditions:

1–4 Minutes: Light throttle, non towing situations at moderate speeds in cold to moderate temperatures. Example: City driving.

5–7 Minutes: Medium throttle, non towing situations or when towing moderate loads. Medium to high speed driving with moderate headwind or hills in all temperatures. Example City or interstate driving.

8–15 Minutes: Driving conditions with any of the following: Heavy loads, heavy throttle, long or steep hill climbs or high headwinds.

If ever in doubt, set an extra minute or two of cool down time. Diesels use very little fuel when idling, and a few pennies in fuel can save a turbocharger worth thousands of dollars and prevent you from being stranded with an inoperative turbo!