

# FUEL INJECTOR CLEANER



# Fuel Injector Tool 47-8600



- 18-8601 Cleaning System Container
- 18-8602 Hose
- 18-8603 Small Fitting



- 18-8604 Large Fitting
- 18-8605 Carrying Case



# The Fuel Injector

- 3 little spray holes provide all the fuel to the engine
- Fuel will evaporate and crud will build up on the pentils of the injector
- This occurs more frequently in marine because engines sit for a longer period of time.
- Automotive cleans injectors every 30K miles
- If one gets plugged, it may wind up spraying a little longer than intended, as managed by the electronics of the engine
- Engine slowly keeps changing, until it starts running bad
- The Fuel Injector Cleaner is a preventative tool, and will not fix fuel injectors once they have become plugged
- Cleans the screens of the injectors



# Reasons for cleaning the Fuel Injector

- When an engine is running, the fuel injectors are kept cool and clean by fuel flowing through them. When the engine is turned off the temperature will rise and heat soaks the fuel injectors. During this process, the fuel is broken down into gum and varnish on the tips and inside the fuel injectors.
- In an automobile engine, the vehicle is usually driven for a substantial amount of time before being shut off while boat engine operation is different
- The worst time for marine fuel injectors is during the winter months when the engine is not started at all. The layers of gum and varnish harden deeply inside and outside the tip of the fuel injector.
- Fuel additives and gasoline alone cannot clean away layers of fuel deposits when the engine is running. The only proven method is by removing the “stale” fuel (the cause of the deposits) and using a fuel system cleaner periodically.
- By using the Sierra Fuel Injection Cleaning System regularly, will help maintain the injector’s cleanliness and performance throughout the life of the engine.



# Fuel Injector Tool-Benefits

- Most dealers remove injectors and send out for cleaning
  - System does not require the removal of injectors
  - Cleans entire system, including VST tank
  - PEA cleaner does not harm delicate nylon filters
- Tool will pay for itself-Make cleaning part of routine service
  - Normal cleaning charge roughly \$90-100
  - Customers boat will perform better and prevents more costly service at a later date
  - Works on all gasoline I/O, Inboard and Outboard fuel injected systems.



# Fuel Injector Tool

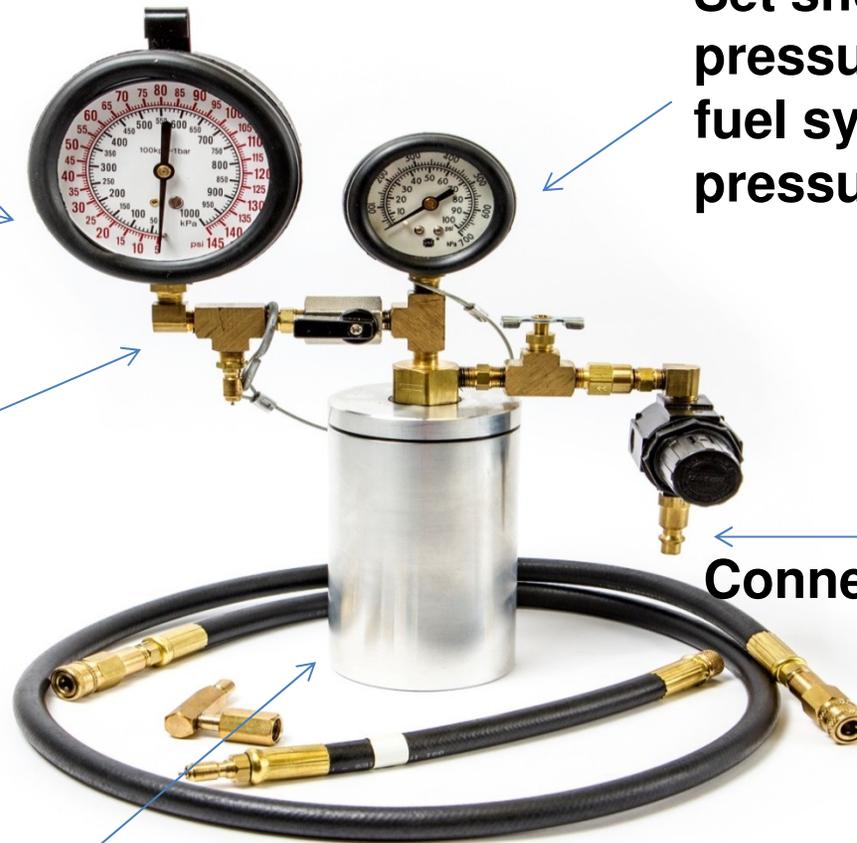
Can be used to check system pressure

Set shop air pressure to match fuel system pressure

Connects to Schrader Valve on Engine

Connects to Shop Air

18-8606 Ego Blast



# E GO! BLAST Fuel Injector Cleaner (#18-8606)



## BENEFITS:

- Immediate clean-up for all injector types
- Intake valve deposit clean-up
- Combustion chamber deposit clean-up
- Piston surface deposit clean-up
- Contains proprietary polyether amine (PEA) detergent technology
- Cleans better than traditional mineral-based or IB (Polyisobutenamine) cleaners
- Increases power and performance



# E GO! BLAST Fuel Injector Cleaner (#18-8606)



- Reduces emissions
- Improves fuel economy
- Saves money at the fuel pump
- Prevents rough idle, hesitation and stalling
- Helps with cold start-up problems
- Helps prevent premature spark plug fouling
- Reduces deposit-related engine knocking and pinging
- Helps prevent injector misfire codes



# Fuel Injector Tool Procedure



- Connect engine to hose or water source and run engine until it has reached operating temperature.
- For optimal performance, do not attempt to clean a cold engine.
- Locate the Schrader valve and connect the fuel injection cleaner with the appropriate adaptor. Valve can be found either on the fuel rail or the VST Tank
- Monitor the operating fuel pressure and record (30 psi)
- Disconnect the fuel pump electrical connection from the system. Some systems will require restricting fuel flow (pinching the fuel hose shut) to prevent solvent from backflowing to the fuel tank or overflowing via the vent tube.



# Fuel Injector Tool Procedure



- Fill the Sierra Fuel Injection Cleaning System canister with 1 can of E-Go! Blast Fuel System Cleaner (18-8606)
- Connect a source of shop air pressure to the cleaning system canister. Adjust air pressure until you reach the engine's operating fuel pressure (recorded in Step 2)
- Start the engine. Once the engine is running on the cleaning solvent increase engine RPMs several times and then allow the engine to drop back to idle. Continue until canister is empty (engine dies)
- Allow the engine to sit for 10-15 minutes to let the cleaner continue to work



# Fuel Injector Tool Procedure



- Reconnect the fuel pump electrical connector to the system (release the fuel hose if it was restricted in step 3 above, be sure to check for any hose damage or leaks) and start the engine
- Accelerate the RPMs several times and then let engine idle for a moment and shut off
- Add Sierra E-GO! BOOST (18-8607) into the fuel tank. One can treats up to 16 gallons of fuel to help prevent gum and varnish build-up on the equipment from forming in the future. It is recommended that this step be repeated every 50 hours engine run time.

**Optional:** Injection cleaner can be used in conjunction with STATS® (Sierra Touch and Test System) to check fuel injection pressure drop before and after.

