

The **SPILLSTOP** Overfill Prevention System



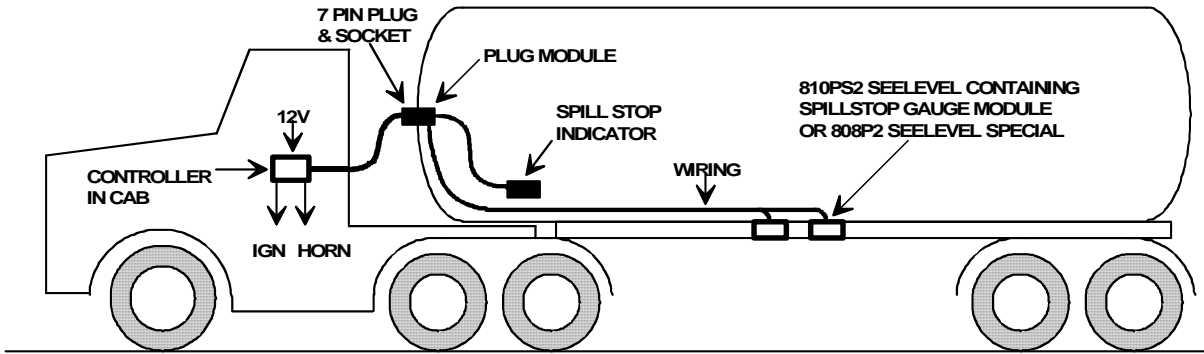
FEATURES:

- Companion instrument to the Garnet **SEELLEVEL** Truck Fluid Level Gauge
- Provides automated control of PTO pumps for spill prevention during loading
- Uses **SEELLEVEL** alarm points to provide a warning horn and an engine shutdown
- Bypass feature silences the warning horn and allows engine restart
- The bypass is automatically canceled during off loading to remove the human factor (the operator is not required to re-arm the system to maintain spill protection)
- Manual re-arm maintains spill protection for partial loads
- Cab mounted modular design monitors up to four compartments
- Independent compartment controls maintain spill protection for remaining compartments after the first one has been loaded and bypassed
- Panel indicators display each compartment's load status
- The tractor-trailer interconnect plug is monitored to detect plug swapping, faults, and disconnection
- The truck and trailer wiring is monitored to detect open and short circuits
- Designed for both body trucks and tractor trailer units
- Operation from -45°C to +60°C ambient temperature
- Easy installation and servicing
- One year limited warranty

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MODEL 815 **SPILLSTOP** OVERFILL PREVENTION SYSTEM DESCRIPTION



- The SpillStop consists of three main components: the controller in the cab of the truck, the plug module inside the 7 pin socket housing on the trailer, and the gauge module inside the SeeLevel truck gauge.
- The gauge module installs inside the SeeLevel gauge display, and converts the alarm signals from alarms 1, 2, and 3 in the gauge to a pulse signal which is sent along a single wire to the controller.
- The plug module monitors the signal between the gauge module and the controller and turns on the SpillStop indicator only if the 7 pin plug is connected and the signal is getting from the gauge to the controller. The module is only needed for tractor-trailers combinations where the signal must go through a plug and socket, it is not necessary for body trucks.
- The controller monitors and displays the alarm status of the gauge, and activates a horn if the fluid level in the truck tank is at the full point, and shuts off the vehicle engine if a spill is imminent. The standard controller can accommodate 2 compartments, and the extended controller can accommodate up to 4 compartments. Each compartment is treated independently and has its own controls, so full spill protection is maintained for each compartment even if another compartment has already been filled.
- The operation of the SpillStop during the loading operation is as follows: When the tank is empty, the green TANK EMPTY indicator is on, the horn is off, and the engine is allowed to run. As the fluid level rises, the empty indicator goes out. When the horn alarm point is reached, the yellow HORN ALARM indicator comes on and the horn is activated with a 0.5 second on, 0.5 second off cycle. Depressing the horn alarm BYPASS at this point will silence the horn. If the fluid level continues to rise and reaches the engine shutdown point, the red ENGINE SHUTDOWN indicator will come on and the truck engine will be shut off. Depressing the engine shutdown BYPASS at this point will allow the engine to be restarted. When a BYPASS switch is depressed, the alarm indicator stays on and the red bypass indicator comes on. As the tank is unloaded the alarm indicators will go out when the fluid level drops below the alarm points, and the bypasses will be cleared (the system is re-armed) when the TANK EMPTY indicator comes back on. There is no need for the operator to re-arm the system, removing the possible operator error of forgetting to re-arm. If the tank is not filled to the alarm point, the system can still be bypassed to prevent sloshing from shutting down the engine during driving. If a single tank is to be filled from more than one location, the alarms can be bypassed during driving between loading sites, and the system re-armed with the MANUAL RE-ARM switch to re-establish spill protection for the second load.
- Some of the other safety features of the system are as follows: When the tank is empty, the bypasses will not work, preventing accidental bypassing when the driver is leaving the cab to begin loading. Delays are incorporated into the system to prevent noise spikes or momentary bad connections from disrupting operation. A short circuit in the wiring to the gauge, or plugging the SpillStop plug into the trailer lighting socket, lights the red SHORT CIRCUIT indicator and shuts down the engine. An open circuit in the wiring to the gauge, or a disconnection of the plug to the trailer, lights the red UNPLUGGED indicator, sounds the horn, and shuts down the engine. These alarms can be bypassed to allow operating the tractor without the trailer connected. The pulse signal between the gauge and the controller cannot be corrupted by poor wiring connections or moisture in the wiring; if the signal is too badly degraded it defaults directly to an open or short circuit condition. A failure of the SeeLevel gauge defaults to the engine shutdown alarm condition. The gauge and plug modules cannot be damaged by short circuits or by plugging the trailer light plug into the SpillStop socket. The controller will operate at truck voltages from 10 to 16 volts, and allows drops to 8 volts during starting.
- Installation is straight forward, as indicated by the drawing. The only wiring required is a single wire from the socket to each gauge, a standard 7 wire cable from the tractor to the trailer, 12 volts to the controller, and controller connections to the electric horn and engine shutoff. The system draws less than 1/4 amp so it can operate from any convenient circuit.

 **GARNET INSTRUMENTS LTD.**

288 Kaska Road
Sherwood Park, Alberta, Canada T8A 4G7
Tel (780) 467-1010 Fax (780) 467-1567
Toll Free 1-800-617-7384
www.garnetinstruments.com