

# FRC



## PRESSURE GOVERNOR INTUITIVE - SMART - DEPENDABLE



SAFE  FLEET

Driving Safety Forward™



# PUMPBOSS™ MAX

A pressure governor has never been so easy to use. Take advantage of the large high, resolution Vivid Impact™ display for effortless navigation. High tactile buttons and a two inch control knob are designed to make gloved operation easier than ever. With it's bright display and rugged design, the PumpBoss Max LCD display is highly visible under sunlight and engineered to perform in extreme temperatures.

New LCD display and custom Graphic User Interface delivers real-time, detailed pump and engine information. Intuitive icons provide key operational status at a glance.

## PUMPBOSS MAX CONSTANTLY MONITORS DISCHARGE PRESSURE

The PumpBoss Max pressure governor uses state-of-the-art programmable microprocessor technology which operates in one of two modes, pressure or RPM. It maintains a steady pump discharge pressure within system capabilities by controlling the engine speed or holding a selected engine RPM.

PumpBoss Max can monitor both the pump intake and discharge pressure, providing improved defense against pump cavitations.

The large, impact resistant 3.5" (89 mm) LCD screen displays engine RPM and provides a constant display of engine oil pressure, engine coolant temperature, transmission temperature, and battery voltage. A message display shows the pressure or RPM setting during normal operations and fault warning alarms as they occur. When selected by the operator it will show monitored information, stored data, and programed options.

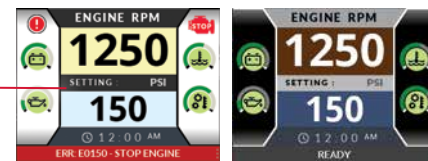
- Displays and LEDs automatically adjust for day or night operation
- Interlock - OK to Pump and Throttle Ready indicators
- Large Idle button
- Dual 600 psi (40 BAR) discharge and intake mounted pressure sensors
- No pressure or RPM variation when changing modes
- Always starts in Pressure Mode at idle RPM
- High idle input via external switch for remote activation



- Large, impact resistant 3.5" (89 mm) LCD screen for unmatched durability and high resolution Vivid Impact™ display, high visibility under sunlight



- High tactile keypad buttons make gloved operation easy
- Info center menu button - Parameter value read-out (replaces governor setting display when activated)
- Red IDLE button - brings the engine to idle RPM quickly

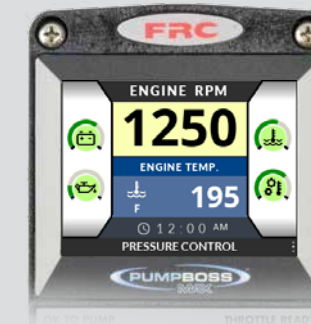
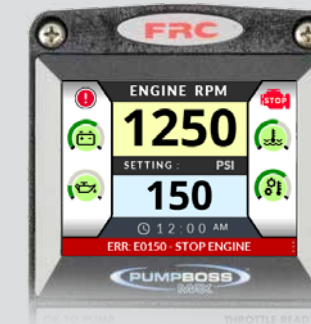


Automatic daytime and nighttime screen modes

- Independent Pressure and RPM mode buttons
- Large control knob - makes gloved operation easy
- Audible Alarm Off button

Space saving design at 3.65" (93 mm) wide 7.42" (188 mm) tall

## EVEN MORE REASONS TO GO MAX



- More intuitive
- Check Engine, Stop Engine, Warning and Alarm icons on display
- Message bar displays error or warning information
- Recognition of no water condition with automatic response
- Limits increase of pressure when in RPM mode

- Easy to navigate
- Menu for setup
- Programmable preset settings
- Display brightness – able to set threshold/trigger for daytime/nighttime mode
- Ability to sync daytime and night mode with another Safe Fleet device on pump panel
- Adjust vehicle related parameters, calibrations, warning and alarm values
- Choice of psi, kPa or BAR
- Knob rotation programmable for clockwise (default) or counter-clockwise
- Engine type programmable
- Adjustable engine ramp rate and stability setting
- On-screen diagnostic and troubleshooting
- Software is updated via USB

PumpBoss Max is available in two pressure sensor (transducer) configurations.

Model Number	Discharge	Intake
PBA500-A00	600 psi (40 BAR)	600 psi (40 BAR)
PBA500-A10	600 psi (40 BAR)	—





# Still the boss – leading with safety

## AUTOMATED PROTECTION MODES

### Running Away from Water

If pressure drops and an increase in RPM does not bring the pressure back up, the governor recognizes this as a running away from water condition. When this condition occurs the governor switches to the RPM LIMIT MODE, LOW WATER CYCLE or NO SUPPLY WATER, alerts the operator and controls the engine RPM accordingly.

### RPM Limit Mode

If the discharge pressure stays above 45 psi (3 BAR), the governor behaves like a manual throttle and the operator can raise or lower the engine RPM. If the RPM is manually lowered to a point where the pump is not running away from water and pressure is stable, the RPM limit mode is canceled. When the pressure comes back to the selected pressure setting, the RPM limit mode is canceled and the governor switches to normal operation.

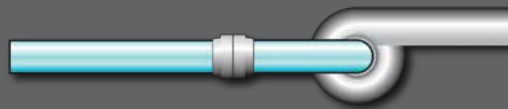
### Low Water Cycle

If the discharge pressure is between 15 psi (1 BAR) and 45 psi (3 BAR), the engine is set at 1100 RPM. If the pressure does not rise above 45 psi (3 BAR) in 7 seconds, the governor sets the engine RPM at idle. The governor repeats the low water cycle as long as the discharge pressure is between 15 psi (1 BAR) and 45 psi (3 BAR). When the pressure rises above 45 psi (3 BAR) the governor resumes normal operation.

### No Supply Water

If the discharge pressure is below 15 psi (1 BAR), the engine RPM is set at idle and the message display flashes NO WATER. If, within 3 minutes, the discharge pressure rises above 15 psi (1 BAR) the governor enters the low water cycle. If the discharge pressure does not rise above 15 psi (1 BAR) within 3 minutes, the governor switches to idle mode and cancels the pressure setting.

PROPER OPERATING PRESSURE

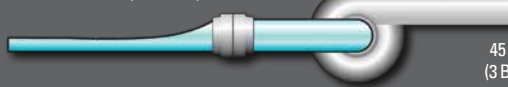


PRESSURE IS ABOVE 45 PSI (3 BAR) WITH INCONSISTENT FLOW OR AIR IN THE LINE



RPM LIMIT MODE  
Pressure above  
45 psi (3 BAR)

PRESSURE IS BETWEEN 15 PSI (1 BAR) AND 45 PSI (3 BAR)



LOW WATER CYCLE  
Engine Limited to  
1100 RPM

PRESSURE IS LOWER THAN 15 PSI (1 BAR)



NO WATER MODE  
Engine Goes to IDLE



www.fireresearch.com  
+1 631.724.8888  
sales@fireresearch.com

03-2022

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