

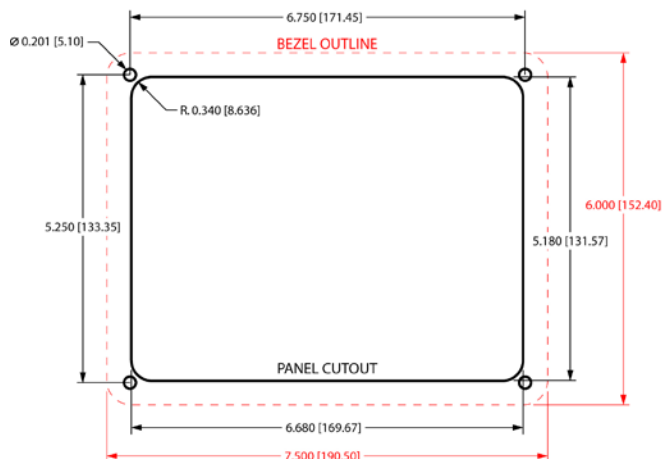
# Class 1

## Total Pressure Governor Plus (TPG+) OEM Quick Manual

TPG+ OEM Quick Manual P/N 118712  
REV A  
05-16-2018

### INSTALLATION

Mount the TPG+ on the operator's panel with four #10 screws. The dimensions in the detail below are in inches [millimeters].



### DISCHARGE PRESSURE TRANSDUCER INSTALLATION

Install the 300 psi (2068 kPa, 20 bar) discharge pressure transducer (p/n 113557) on the discharge side of the pump. The pressure connection is a 1/4-18 NPT male port. A 'T' fitting can be used to share the pressure gauge outlet on the discharge manifold.

### INTAKE PRESSURE TRANSDUCER INSTALLATION

Install the 300 psi (2068 kPa, 20 bar) intake pressure transducer (p/n 113557) on the intake side of the pump. The pressure connection is a 1/4-18 NPT male port.

### VERIFY ENGINE RPM

Verify proper J1939 CAN connection to the engine's ECM by monitoring the RPM display of the TPG+ while the engine is running. The display should show accurate RPM information.



### VERIFY INTERLOCKS

The TPG+ requires OEM provided interlocks THROTTLE READY and PUMP ENGAGED for proper operation. The TPG+ utilizes backlit text to indicate interlock status. The interlock status indicators are located directly beneath the switch panel.

Activate the throttle ready interlock. (Apply system power to pin 2 of connector C4). Verify the **THROTTLE READY** text illuminates.

- The TPG+ will operate in RPM mode only and cannot be changed to pressure mode.

Activate the pump engaged interlock. (Apply system power to pin 10 of connector C4). Verify the **PUMP ENGAGED** text illuminates.

- The TPG+ will not operate in any mode without the THROTTLE READY interlock.

Activate the throttle ready and pump engaged interlocks. (Apply system power to pins 2 and 10 of connector C4).

Verify the **PUMP ENGAGED**, **OKAY TO PUMP**, and **THROTTLE READY** text illuminates.

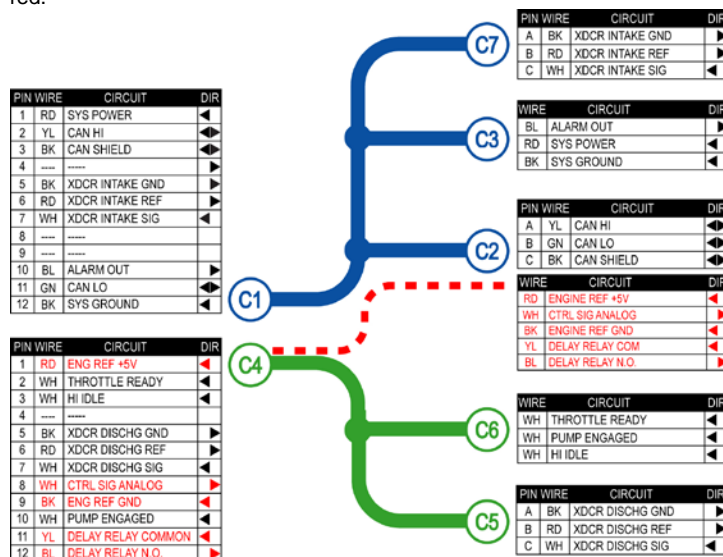
- The TPG+ will operate in either mode.

### WIRING HARNESS

The main system harness (p/n 118453) is comprised of a pair of harnesses: the power/communication harness (depicted below in blue) and the signals harness (depicted below in green).



For the analog control option, add harness wires (p/n 118454) depicted in red.



PIN	WIRE	CIRCUIT	DIR
1	RD	SYS POWER	▶
2	YL	CAN HI	▶
3	BK	CAN SHIELD	▶
4	---	---	---
5	BK	XDCR INTAKE GND	▶
6	RD	XDCR INTAKE REF	▶
7	WH	XDCR INTAKE SIG	▶
8	---	---	---
9	---	---	---
10	BL	ALARM OUT	▶
11	GN	CAN LO	▶
12	BK	SYS GROUND	▶

PIN	WIRE	CIRCUIT	DIR
1	RD	ENG REF +5V	▶
2	WH	THROTTLE READY	▶
3	WH	HI IDLE	▶
4	---	---	---
5	BK	XDCR DISCHG GND	▶
6	RD	XDCR DISCHG REF	▶
7	WH	XDCR DISCHG SIG	▶
8	WH	CTRL SIG ANALOG	▶
9	BK	ENG REF GND	▶
10	WH	PUMP ENGAGED	▶
11	YL	DELAY RELAY COMMON	▶
12	BL	DELAY RELAY N.O.	▶

PIN	WIRE	CIRCUIT	DIR
A	BK	XDCR INTAKE GND	▶
B	RD	XDCR INTAKE REF	▶
C	WH	XDCR INTAKE SIG	▶

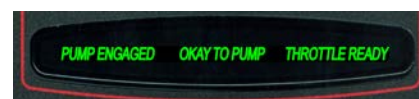
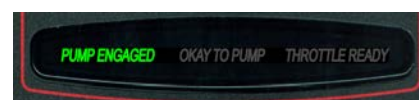
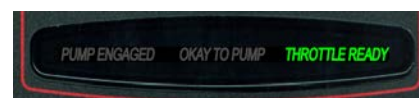
WIRE	CIRCUIT	DIR
BL	ALARM OUT	▶
RD	SYS POWER	▶
BK	SYS GROUND	▶

PIN	WIRE	CIRCUIT	DIR
A	YL	CAN HI	▶
B	GN	CAN LO	▶
C	BK	CAN SHIELD	▶

WIRE	CIRCUIT	DIR
RD	ENGINE REF +5V	▶
WH	CTRL SIG ANALOG	▶
BK	ENGINE REF GND	▶
YL	DELAY RELAY COM	▶
BL	DELAY RELAY N.O.	▶

WIRE	CIRCUIT	DIR
WH	THROTTLE READY	▶
WH	PUMP ENGAGED	▶
WH	HI IDLE	▶

PIN	WIRE	CIRCUIT	DIR
A	BK	XDCR DISCHG GND	▶
B	RD	XDCR DISCHG REF	▶
C	WH	XDCR DISCHG SIG	▶



## ZERO CALIBRATE THE DISCHARGE PRESSURE TRANSDUCER

The pressure indicated by the TPG+ may not show '0' when the pump discharge pressure is actually zero due to ambient pressure and altitude at your locale.



+



The INFO CENTER display shows **MENU 04 SECS** and begins counting down. Continue holding IDLE and MENU until the display shows **\*SETUP MENU\*** (4 seconds) and then **MENU LEVEL 2** (2 seconds).



**3 TIMES**

The INFO CENTER display shows the menu item: **-SENSOR CAL-**.



**ONCE**

Press the INC switch once. The INFO CENTER display shows **INT:ZERO=XXX**.



**+ HOLD**

Press the INC switch and hold. The INFO CENTER display shows **DIS:LIVE=XXX**. Verify the value is between 130 and 155. Release the INC switch. The INFO CENTER display will show **DIS:ZERO=XXX**.



**ONCE**

Press the PRESET switch once. The INFO CENTER display shows **NEW ZERO=XXX**. Verify the value is between 130 and 155.



**ONCE**

Press the IDLE switch once. The INFO CENTER display shows **—EXITMENU—** and then restarts normal operation.

## VERIFY ENGINE CONTROL

Activate the throttle ready and pump engaged interlocks. (Apply system power to pins 2 and 10 of connector C4).

Verify the **PUMP ENGAGED**, **OKAY TO PUMP**, and **THROTTLE READY** text illuminates.



**ONCE**

Press the MODE switch once. The INFO CENTER display shows **GOV=PRESSURE**. The PSI indicator is illuminated YELLOW.



**ONCE**

Press the MODE switch once. The INFO CENTER display shows **GOV=THROTTLE**. The RPM indicator is illuminated BLUE.



**OR**



Engine RPM will change when pressing either the INC or DEC switches.



**ONCE**

Press the IDLE switch once. The INFO CENTER display shows **IDLE** and the engine RPM will reduce to the idle RPM. The INFO CENTER display then shows **RPM XXXX**.

### Attention Ford F-Series Customers

**While pumping or operating in split shaft/PTO mode, do not press the accelerator pedal or brake pedal. If the accelerator pedal or brake pedal is pressed while in split shaft/PTO mode, the engine will return to curb idle and control of the remote throttle or governor will be lost. This will cause the pump to be reduced to idle and water pressure will be reduced.**

For complete details please reference service bulletin SB-143 at [www.haleproducts.com](http://www.haleproducts.com)

For detailed operation and troubleshooting consult the full manual (p/n 118711) available from the Class 1 web site

[www.Class1.com](http://www.Class1.com)

**Class 1**

Unit of IDEX Corporation  
607 NW 27th Avenue  
Ocala, FL 34475 U.S.A

Phone: 1.800.533.3569 • 352.629.5020  
Fax: 1.800.520.3473 • 352.629.2902  
[www.class1.com](http://www.class1.com)