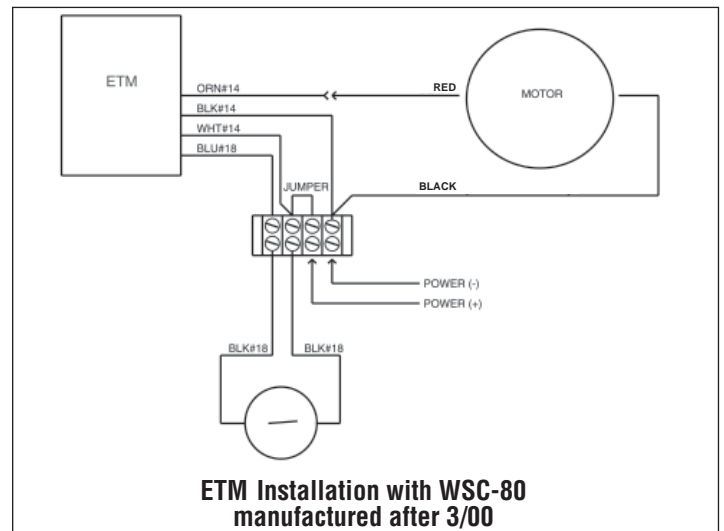
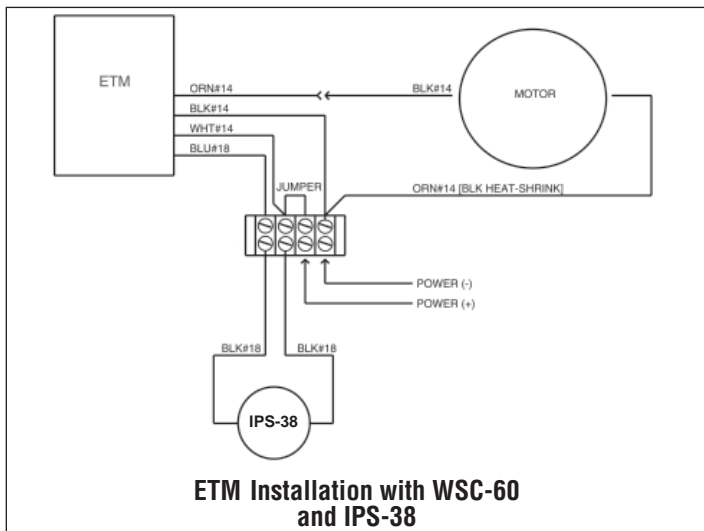
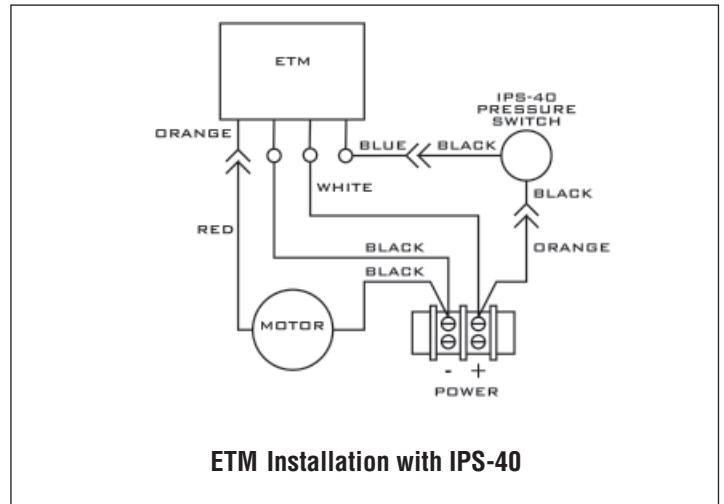
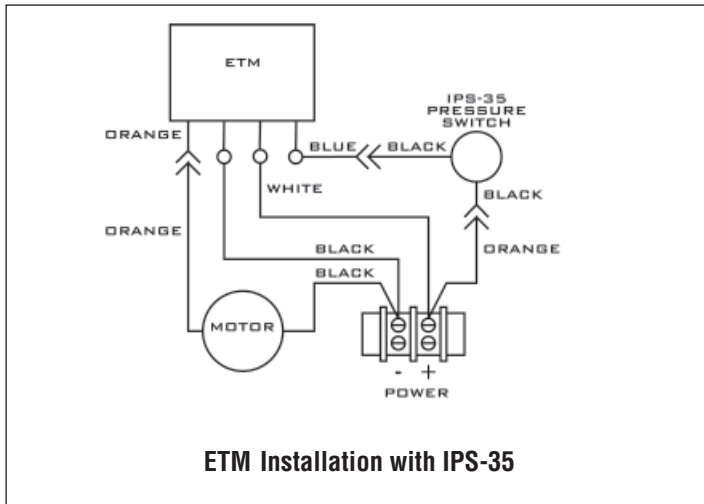
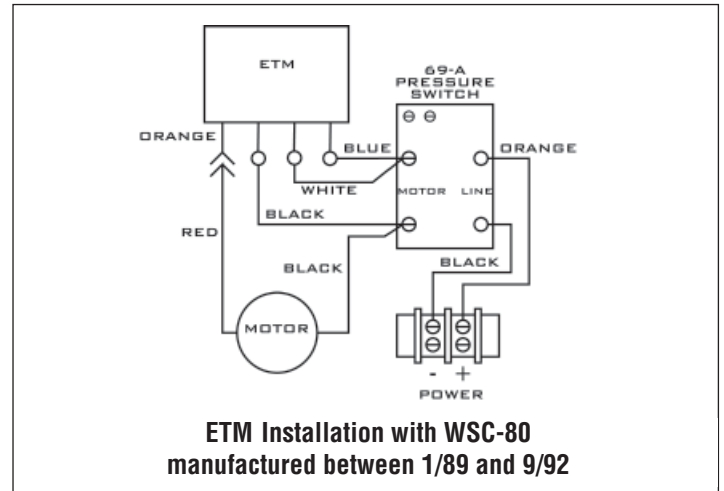
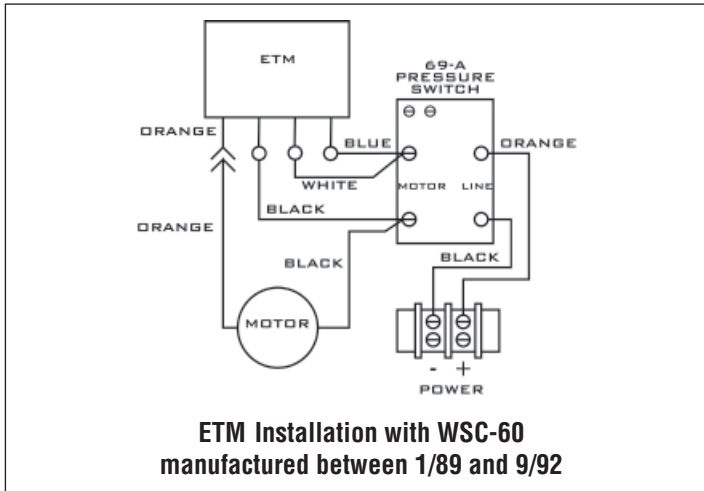


**Installation Instructions for ETM Timer
 for WSC Series and WSG Series Water Pressure Systems**

Note: ETM replaces ETM-A on WSC-60 and WSC-80 systems manufactured after 3/00. Refer to the instructions on the reverse side for operating instructions.

Service Note: IPS-40 pressure switch must not be used with a 3-wire ETM. If you have a 3-wire ETM and want to replace the pressure switch with IPS-40 you must also replace ETM. Alternately, 69-A pressure switch (not "Ignition Protected") may be used with 3-wire ETM.



© 1999 GROCO MECHANICAL LABORATORIES, INC. ALL RIGHTS RESERVED.

The Concept: ETM is designed for use as dry-tank protection for pressure pumps, and is standard equipment on GROCO Paragon Junior (Models PJR, PJR-A and 401-0004), WSC Series and WSG Series water pressure systems. ETM will stop the connected motor if it runs non-stop for more than 10-minutes (previously 6-minutes).

If the pump is properly matched to vessel size and water usage habits, it will "cycle" by building up system pressure and shutting off, even if you are drawing water continuously. For example, Paragon Junior delivers up to 7 GPM to the system, so its output will exceed the 2 to 4 GPM that is normally drawn from a single faucet or shower. PJR will build pressure and shut off before the timer "times out". The timer is reset each time the pump reaches pressure and shuts off.

Installation: ETM is supplied with (3) ring terminals and (1) bullet terminal. Several combinations of pressure switch, terminal block and ETM have been manufactured

since 1982. Identify the schematic that matches your components, and replace ring terminals with bullet terminals (supplied) as needed. Paragon Junior wiring schematics are shown below. Refer to the reverse side for WSC series wiring schematics.

Nuisance ETM Shut-downs are caused by:

- Pump capacity being too low in relation to the boat size and/or normal water demand.
- Pressure storage tank size is too large in relation to pump capacity; the pump runs more than 6-minutes during pressure build-up. Use only GROCO PST-1 when ETM is installed.

Operation: If ETM shuts off the pump, first check and fill water supply tank(s) if necessary. To reset ETM interrupt power by turning the circuit breaker off for 1-minute. The pump will run when the breaker is switched back on.

Service Note: IPS-40 pressure switch must not be used with a 3-wire ETM. If you have a 3-wire ETM and want to replace the pressure switch with IPS-40 you must also replace ETM.

Alternately 69-A pressure switch (not "Ignition Protected") may be used with 3-wire ETM.

Service Note: PJR pumps can be upgraded for control of On/Off operation and dry-tank protection. Before S/N 020901 PJR pumps were controlled by pressure switch and timer. To upgrade the means of control you must also upgrade the control module:

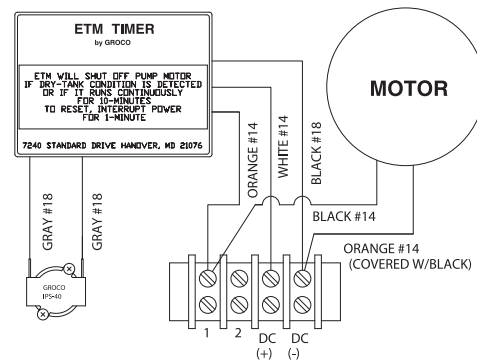
Note: There are no user serviceable parts inside. Do not break the seal or open the enclosure.

On-Off Control	Dry-Tank	Control Module
P-switch	10-min. timer	ETM
P-switch	NOFLO	ETM-D

Use this Drawing When Upgrading Existing Pump Control to ETM

- * REMOVE AND DISCARD JUMPER FROM TERMINAL BLOCK
- * CUT FEMALE BULLET FROM BLACK MOTOR WIRE
- * CRIMP RING TERMINAL SUPPLIED TO BLACK MOTOR WIRE
- * REMOVE AND DISCARD BLACK WIRES BETWEEN PRESURE SWITCH AND TERMINAL BLOCK
- * CONNECT 2 GRAY ETM WIRES TO PRESSURE SWITCH
- * CONNECT MOTOR BLACK AND ETM ORANGE WIRES TO TERMINAL BLOCK POSITION 1
- * REMOVE OLD WIRE LABEL FROM TERMINAL BLOCK AND AFFIX NEW LABEL

ETM INSTALLATION (FOR PUMPS CONTROLLED BY A PRESSURE SWITCH)



Use this Drawing When Upgrading Existing Pump Controls to ETM-D, NoFlo and Pressure Switch

- * REMOVE AND DISCARD JUMPER FROM TERMINAL BLOCK
- * CUT FEMALE BULLET FROM BLACK MOTOR WIRE
- * CRIMP RING TERMINAL SUPPLIED TO BLACK MOTOR WIRE
- * REMOVE AND DISCARD BLACK WIRES BETWEEN PRESURE SWITCH AND TERMINAL BLOCK
- * CONNECT 2 GRAY ETM WIRES TO PRESSURE SWITCH
- * CONNECT 2 BROWN ETM WIRES TO NOFLO SENSOR
- * CONNECT MOTOR BLACK AND ETM ORANGE WIRES TO TERMINAL BLOCK POSITION 1
- * REMOVE OLD WIRE LABEL FROM TERMINAL BLOCK AND AFFIX NEW LABEL

ETM-D INSTALLATION (FOR PUMPS CONTROLLED BY A PRESSURE SWITCH AND NOFLO)

