MERCURY
MARINER
MERCURY Sport Jet
FORCE Outboards

service information

☑ ADVISORY
☐ BULLETIN

No. 2000-11

Circulate to: ☐ Sales Manager ☐ Accounting ☑ Service Manager ☑ Technician ☑ Parts Manager

NOTICE

This is a revision of Outboard Advisory 2000-11. Destroy original Advisory 2000-11 July 2000 and insert the revised Advisory 2000-11 November 2000, changes underlined.

Analog Gauge Connections for Digital Optimax Models

Models Affected

2001 Model Year
135 thru 225 Optimax
S/N 0T178500 and Above

The 2001 Optimax engines are no longer built in Analog and Digital versions. The new models are primarily set up for Digital gauge connections. If analog gauge connections are required, use the following instructions.

Installing Standard Analog Tachometer to Digital Optimax Engines

This procedure allows a standard analog tachometer to be connected to the tachometer plug that is incorporated into the key switch harness.

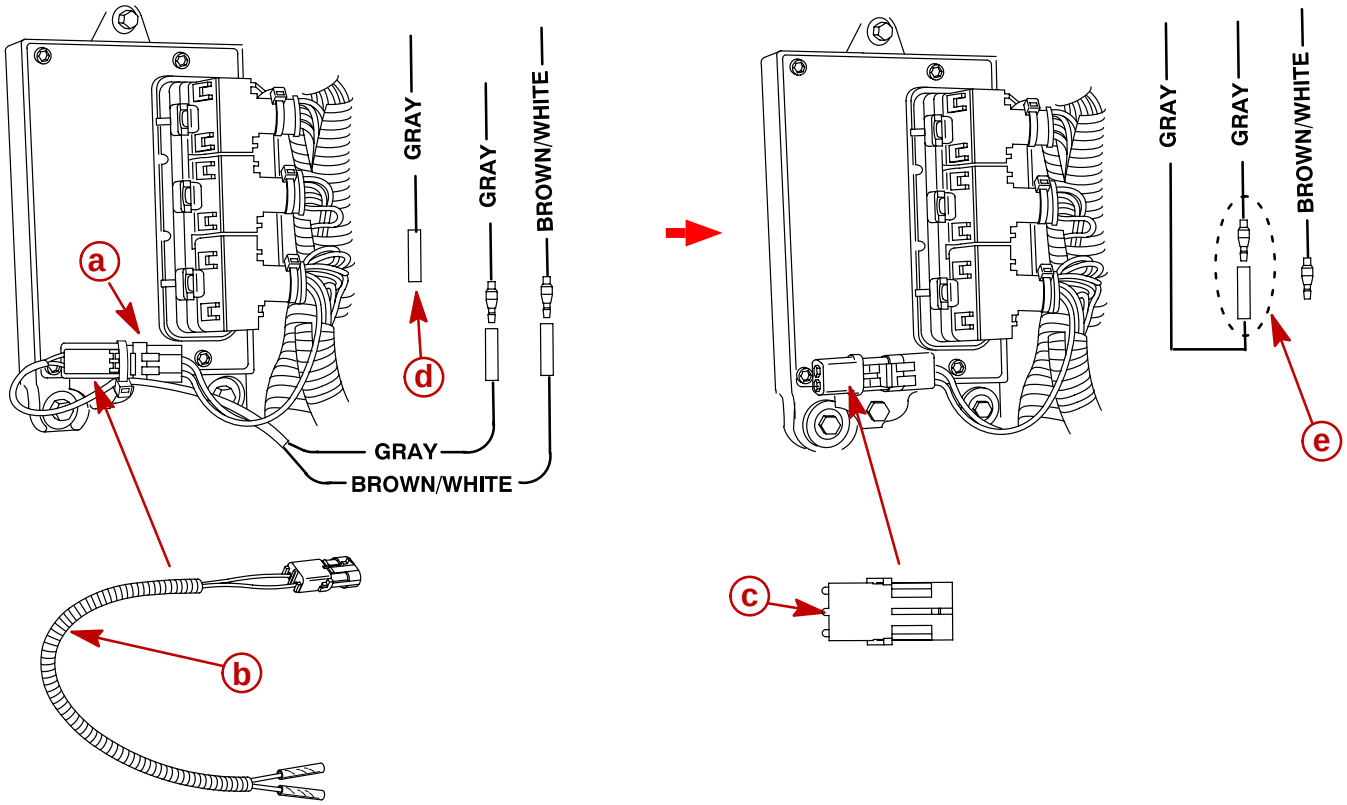
NOTE: *SmartCraft speedometer or tachometer communicate with the engine through the gray lead and the brown/white lead in the key switch harness. This procedure uses one of these leads to operate the tachometer and breaks the connection between the SmartCraft gauges and the engine. SmartCraft gauges will not function with an analog tachometer connected.*

The System Monitor, Speedometer and Tachometer communicate with the engine through a dedicated 10 pin connection on the engine. Using this procedure to install an analog tachometer will not effect the operation of the System Monitor, speedometer or tachometer.

1. Locate the diagnostic port plug mounted on the ECM. Remove and discard the diagnostic harness from the port plug.
2. Install cover P/N 832948A1 on the port plug.
3. Locate the gray (tachometer signal) wire in the engine wiring harness. and remove the rubber plug. Connect the gray wires together.

Printed in U.S.A. - © 2000, Mercury Marine
provided by http://www.crowleymarine.com

4. Connect tachometer to the tachometer plug using tachometer harness P/N 84-86396A8.



a - Diagnostic Port Plug
b - Diagnostic Harness
c - Port Plug Cover (P/N 832948A1)
d - Gray (Tachometer Signal) Wire
e - Connect Gray Wires Together

Installing Standard Analog Trim Indicator Gauge to Digital Optimax Engines

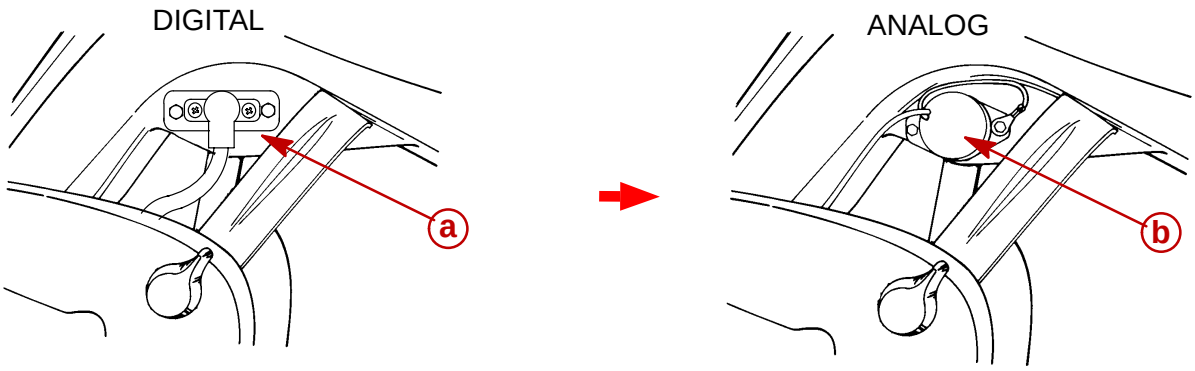
NOTE: *SmartCraft speedometer or tachometer communicate with the engine through the gray lead and the brown/white lead in the key switch harness. This procedure uses one of these leads to operate the Trim Gauge and breaks the connection between the SmartCraft Gauges and the engine. SmartCraft gauges will not function with an analog Trim Gauge connected.*

The System Monitor, Speedometer and Tachometer communicate with the engine through a dedicated 10 pin connection on the engine. Using this procedure to install an analog trim gauge will not interfere with the operation of the System Monitor, speedometer or tachometer. However, the digital trim sender must be removed to install the analog trim sender. The removal of the digital trim sender will eliminate any trim information from being displayed on System Monitor, speedometer or tachometer.

1. Tilt the outboard up and engage the tilt support lever.
2. Remove the digital trim sender assembly. Retain screws for reassembly.

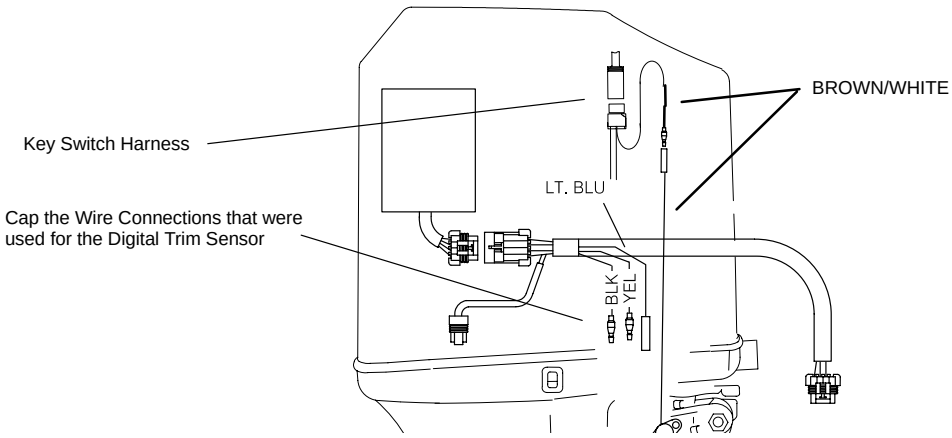
provided by http://www.crowleymarine.com

3. Install analog trim sender P/N 821180A6 as shown. Route and fasten the wiring harness at the same locations as the old harness.



a - Digital Trim Sender
b - Analog Trim Sender

4. Connect the Brown/White wire from the trim sender to the brown/white wire extending from the key switch harness.
5. Cap the digital trim sender wires that remain in the engine harness. Use 2 female bullet caps P/N 13540 and 1 male bullet cap P/N 13541.
6. Connect trim indicator gauge to the tachometer plug on the key switch harness using tachometer harness P/N 84-86396A8.



NOTE: *If none of the digital sensors (oil level, fuel level, paddle wheel, speedo, and trim) are used, digital harness P/N 84-859244T1 could be removed from the engine. The 8-pin connection on the engine should then be capped with P/N 877613A1.*

provided by http://www.crowleymarine.com

Installing Standard Analog Temperature Gauge to Digital Optimax Engines

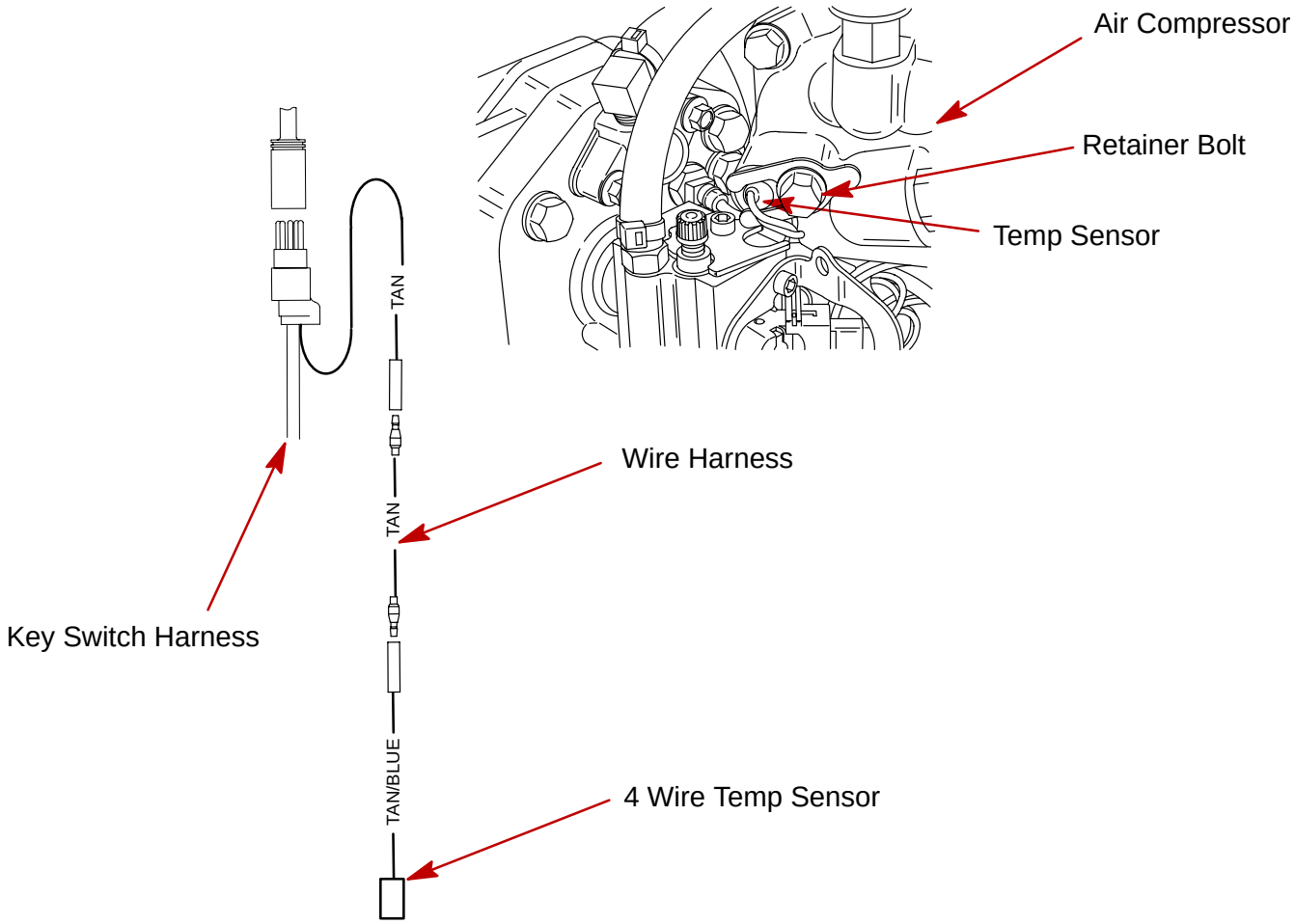
1. Remove the 2 wire temp sender from the air compressor and install 4 wire temp sender P/N 13536A14.
2. Install wire harness P/N 84-88824A4 between the 4 wire temp sender (tan/blue) wire and the tan wire extending from the key switch harness.
3. The ground wire (Black) on the 4 wire temp sender should be installed under the temp sender retainer bolt.

NOTE: *Harness P/N 84-88824A4 is the single Tan wire which is normally supplied with the gauge. The eyelet connector will need to be removed, wire cut to length and a bullet connector installed at one end. Available later this year will be harness P/N 84-11149A50 which has a single tan wire with a bullet connectors at both ends.*

Using this procedure to install an analog temperature gauge will not effect the operation of the System Monitor or any of the SmartCraft speedometer or tachometer functions.

NOTE: *Starting with the serial numbers listed below, the 4-wire temp. sender, and TAN wire have been installed on the outboard at the factory. Replacement of the temp. sender and addition of the TAN wire are NOT required, to connect analog temp gauge.*

S/N 0T280001 3.0 Litre
S/N 0T275885 2.5 Litre



provided by http://www.crowleymarine.com

Installing Standard Speedometer Gauge to Digital Optimax Engines

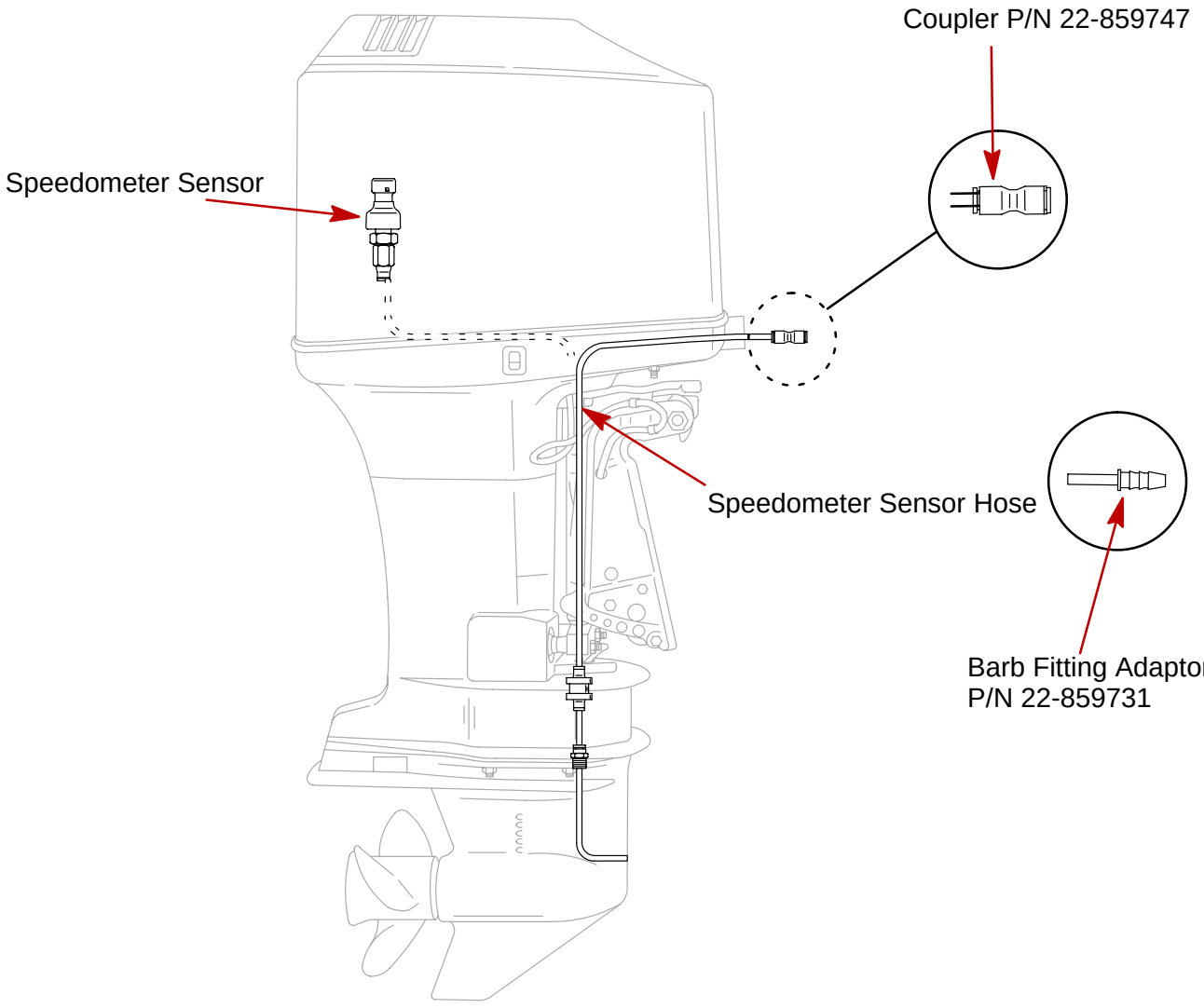
NOTE: *The digital speedometer sensor must be disconnected to connect the analog speedometer. The removal of the digital speedometer sensor will eliminate speed information from being displayed on System Monitor and the SmartCraft speedometer or tachometer gauges.*

1. Remove the speedometer pressure hose (black) from the speedometer sensor.

NOTE: *Coupler connection will be inside the cowl on 200/225 Hp models.*

2. Install coupler P/N 22-859747 on the end of the speedometer hose, this will allow a direct connection of later style Mercury speedometer.

NOTE: *If older Mercury or after market speedometer is used, barb fitting adapter P/N 22-859731 must be installed into the coupler.*



Optional Parts

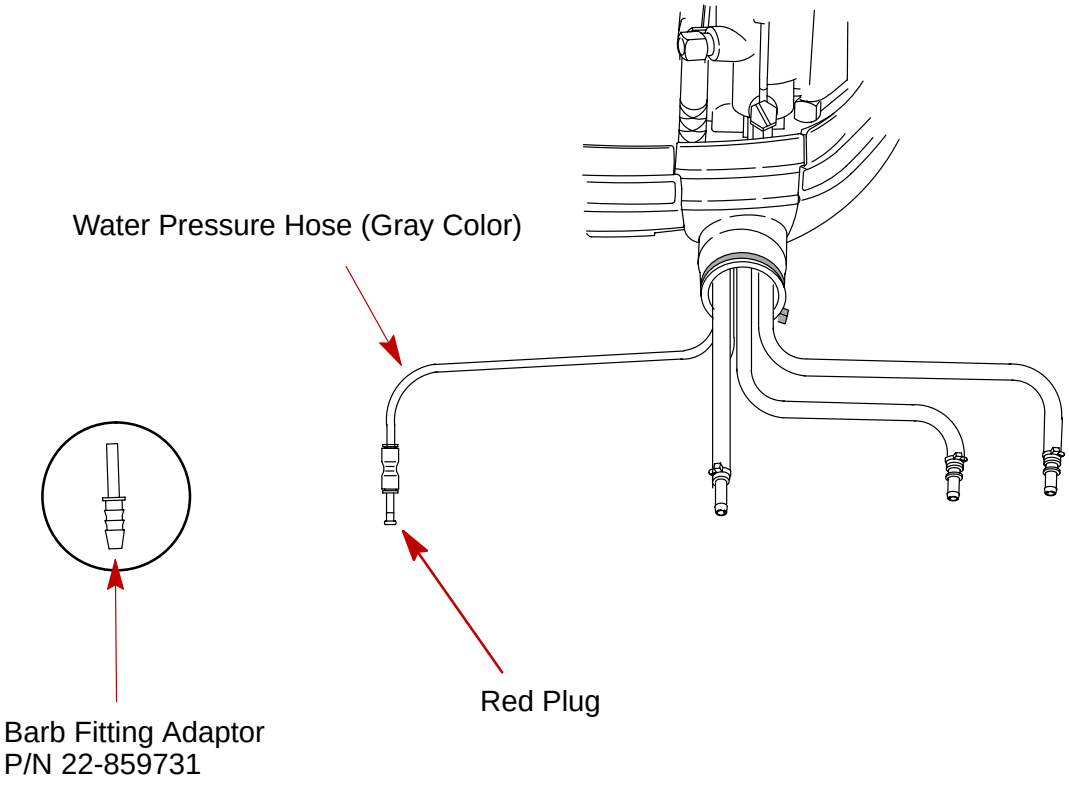
Rigging kit P/N 881120A1 includes all the parts outlined in this Advisory to connect analog gauges to the engine, except the 4 wire temperature sensor P/N 13536A14 and the TAN temperature sensor connector wire P/N 84-88824A_4.

provided by http://www.crowleymarine.com

Installing Standard Water Pressure Gauge to Digital Optimax Engines

1. Remove the RED plug P/N 22-859732 from the connector at the end of the water pressure hose (gray color). This will allow a direct connection of later style Mercury water pressure gauge.

NOTE: *If older Mercury or after market water pressure gauge is used, barb fitting adapter P/N 22-859731 must be installed into the coupler.*



provided by http://www.crowleymarine.com