

Product:	Cluster	Description:	Pin Connector and Troubleshooting Guide	Date	Jan 08
Type:	Electric				1

## Connector

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

(Harness side view)

## Electrical Pinout

Pin No.	Signal	Pin No.	Signal
1	Depth transducer signal	13	Depth transducer return
2	GND (depth)	14	Depth Shield
3	GND (signal)	15	Spare (TEST/PGM Signal Prototypes only)
4	GND (Power)	16	Seawater Temperature
5	Lighting Input	17	Check Engine Warning Switch (O/B only)
6	Trim Input	18	Oil Level Warning Switch (O/B only)
7	Serial TX	19	Mode Push-button
8	Serial RX	20	Adjust Push-button
9	Fuel Input	21	Speed sensor (+), 12v out
10	Oil Pressure Input (I/O) or, Oil Pressure Warning Switch (O/B)	22	Ignition (B+)
11	Engine Temperature Input (I/O) or, Engine Temp. Warning Switch (O/B)	23	Battery
12	Tach Input	24	Speed Input

- The module connector is an Amp Mate-N-Lok. # 770587-1
- The pin connectors are Amp # 770988-1
- The extractor tool for removing the pins is Amp # 455822-2

# Fault Finding Guide

Observed Problem	Field Procedure	Reference
No function with key on .	<ul style="list-style-type: none"> <li>- Check for voltage at pins 22 &amp; 23</li> <li>- Check for ground Connection between pin 4 &amp; Battery Neg.</li> </ul>	See "Volt Gauge"
Erratic function, Pointers flickering And horn chirping	- If Mercury OB check for Inductive spark plugs necessary on 50 70 90 & 120 HP models. This Plug eliminates Voltage spikes from the ignition coils. Module is protected.	-Call Mercury -See VDO Bulletin "7.10.99"
Speed & Depth stop working at high speed.	- Check for transducer positioning. Ducer is likely too low and cavitating. Ducer should be nearly flush with bottom if transom mount.	See Airmar install bulletin
Speedo not functioning, Depth OK	<ul style="list-style-type: none"> <li>-Check connections on 24 pin connector.</li> <li>- Check for voltage switching from 0-8v + between #24 and ground while turning paddle wheel one blade at a time.</li> </ul>	See VDO Bulletin "6.25.99"
Alarm horn sounds, Tank light on, Fuel level is ok.	- Check tank sending unit for Ohm values. Check Ground on sensor. Remember, open circuit is a fault.	See "Fuel Gauge"
Alarm horn "chirps" with key on, Boat is on trailer.	- The depth transducer will mimic a depth of about .7 ft when out of the water. Shallow Depth Alarm will sound if a depth alarm value is present. Reset to "O" depth alarm	See "Depth"
Trim Gauge will not go full down or Trim not moving.	<ul style="list-style-type: none"> <li>-Check OEM trim sensor for proper adjustment &amp; Range.</li> <li>-Check for a sensor. Some engines do not have them</li> </ul>	See engine manual
Depth and Clock settings reset to "O" with key off. Clock not working with key off.	Check for voltage on pin 23, this should be constant power to keep memory function.	