

DIGITAL NETWORK GAUGE APPLICATION

ROUND STYLE GAUGE APPLICATION

Similar shape design as conventional 6Y5 digital gauges.

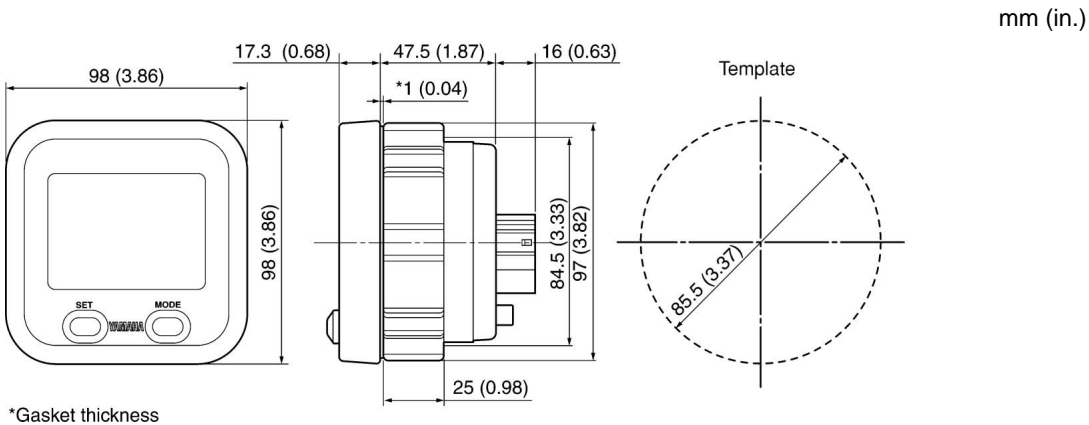


Ref. No.	Part name	Part No.	Remarks
1	Tachometer	6Y8-8350T-11	
2	Fuel mgt gauge w/ speedometer	6Y8-83500-11	Requires optional speed sensor, or NMEA compatible GPS

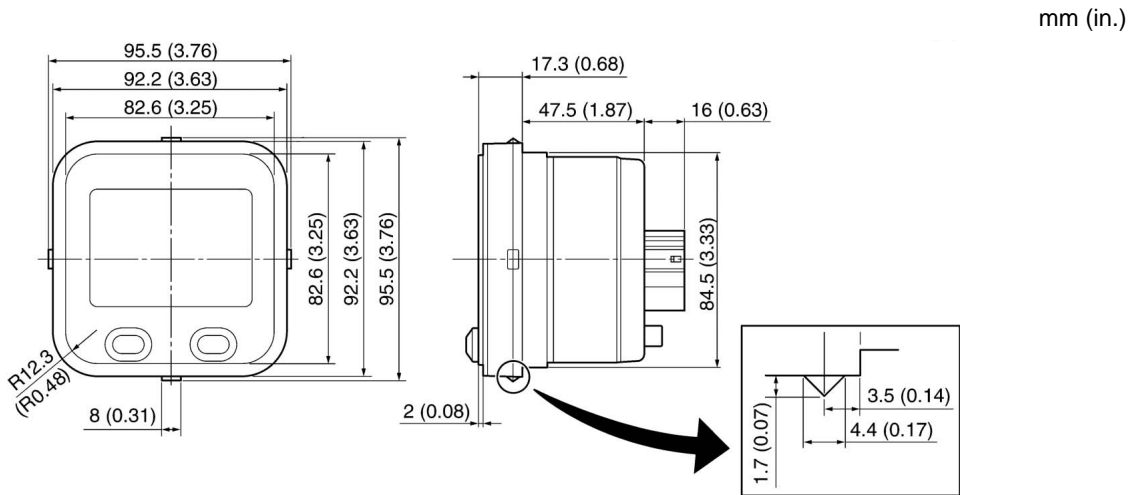
DIGITAL NETWORK GAUGE DIMENSIONS

SQUARE STYLE GAUGE DIMENSIONS

SURFACE MOUNT



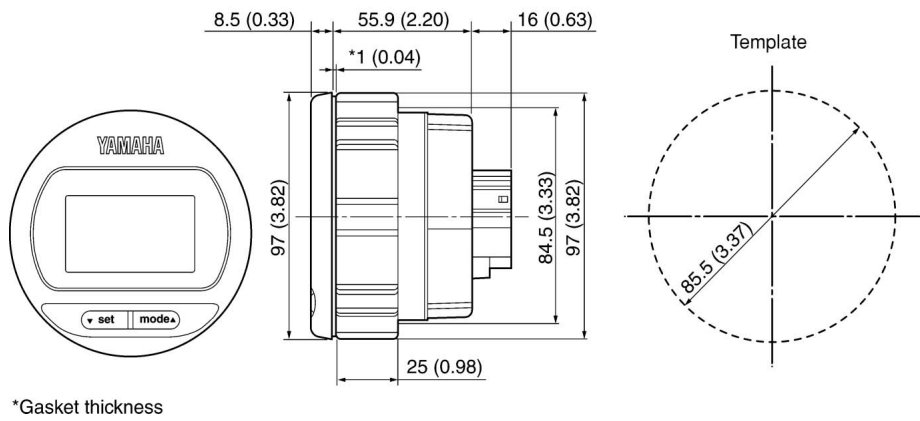
FLUSH MOUNT



DIGITAL NETWORK GAUGE DIMENSIONS

ROUND STYLE GAUGE DIMENSIONS

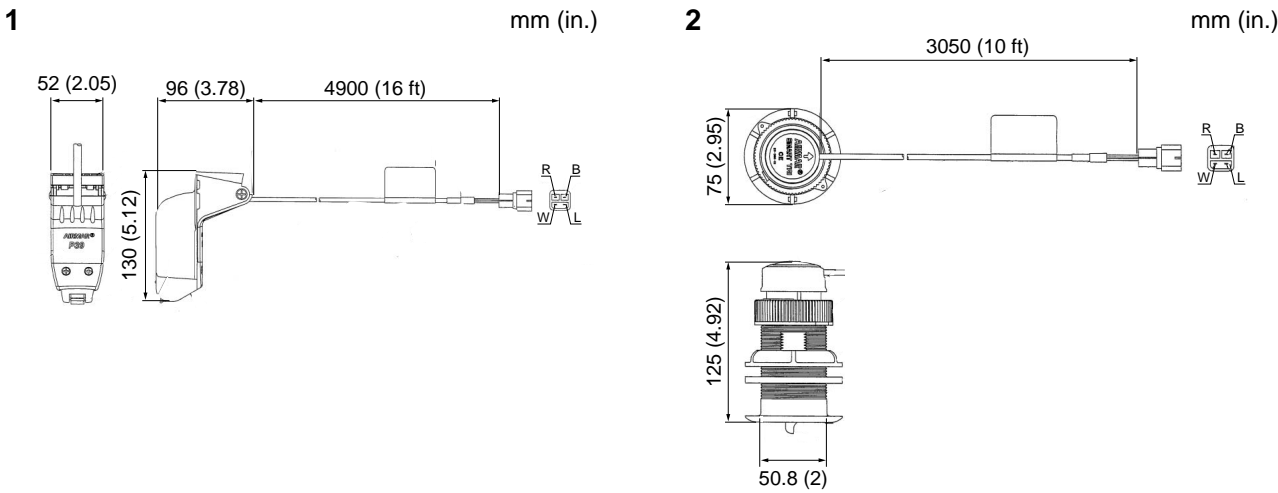
mm (in.)



OPTIONAL EQUIPMENTS

MULTI-SENSOR APPLICATION

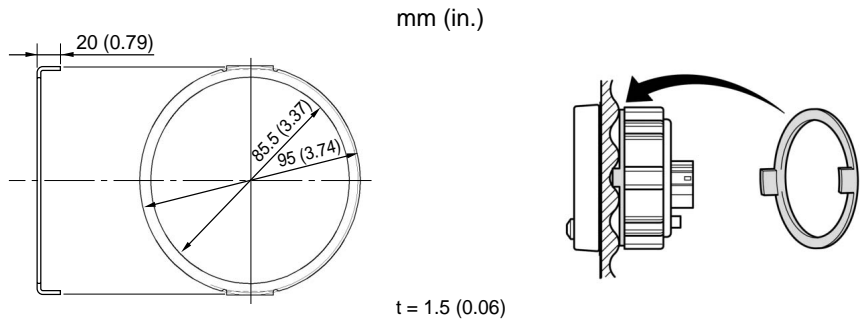
Boat speed, water depth and water surface temperature can be obtained.
For installation, see the instruction which is accompanied with the sensor.



Ref. No.	Part name	Part No.	Remarks
1	Transom multi-sensor	6Y8-83688-01	
2	Thru-hull multi-sensor 1	6Y8-83688-11	Plastic body
	Thru-hull multi-sensor 2	6Y8-83688-20	Bronze body

FITTING PLATE

If the fitting surface is rough, insert the plate between a board and the ring nut of gauge.



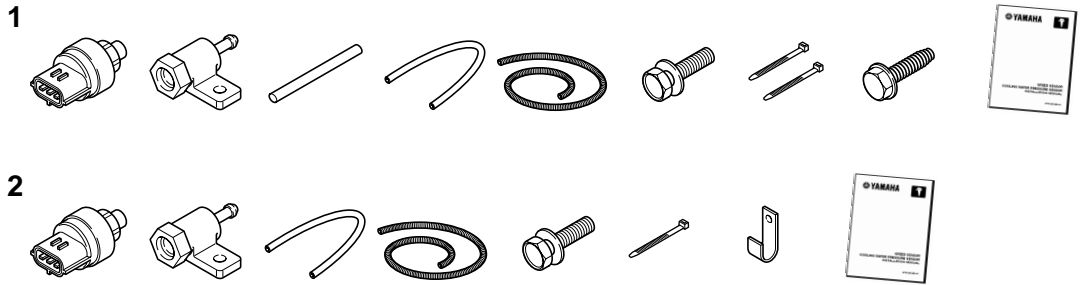
Part No.	Remarks
6Y8-83514-00	

OPTIONAL EQUIPMENTS

SPEED SENSOR KIT

Uses to pick up the pitot tube pressure for water speed. For installation and connection, see the instruction in the kit.

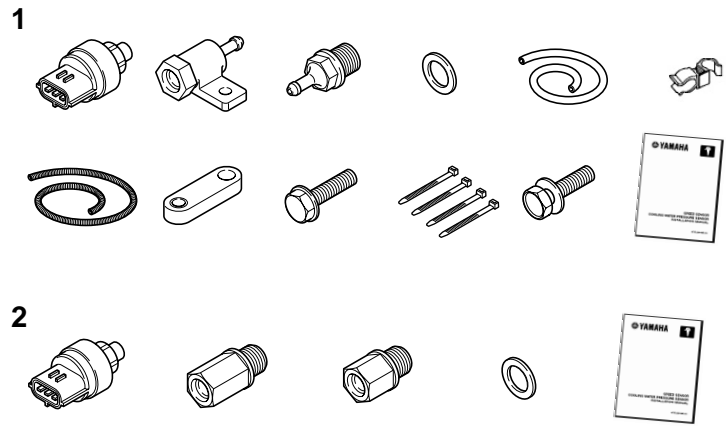
The speed sensor kit may include in the rigging kit.



Ref. No.	Part No.	Remarks
1	60V-8A4L1-11	Fuel injected F50-F250, HPDI
2	6AW-8A4L1-01	F350/F300, additional transom pitot tube (688-83556-01) and pressure tube (688-83557-00) required.

COOLANT PRESSURE SENSOR KIT

Uses to pick up the coolant pressure of engine. For installation and connection, see the instruction in the kit.



Ref. No.	Part No.	Remarks
1	60V-8A4L0-11	Fuel injected F50-F115, HPDI
2	69J-8A4L0-11	F150-F250

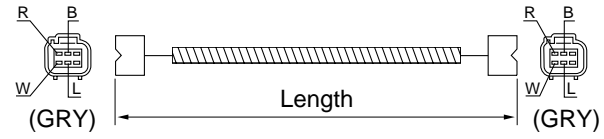
* For F350/F300, standard installed from factory.

WIRE HARNESS

MAIN BUS WIRE

Uses to connect between the hub and hub.

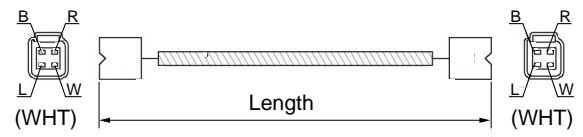
Part No.	Length	Remarks
6Y8-82553-41	30 ft, 9.1 m	
6Y8-82553-31	25 ft, 7.6 m	
6Y8-82553-21	20 ft, 6.1 m	
6Y8-82553-11	15 ft, 4.6 m	
6Y8-82553-50	10 ft, 3.0 m	
6Y8-82553-01	1 ft, 0.3 m	



PIGTAIL BUS WIRE

Uses to connect between the hub and gauge and/or between the engine and the hub.

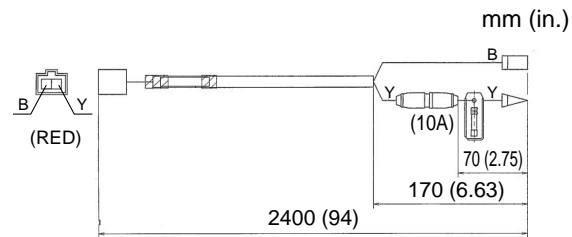
Part No.	Length	Remarks
6Y8-82521-51	12 ft, 3.6 m	
6Y8-82521-41	9 ft, 2.7 m	
6Y8-82521-31	6 ft, 1.8 m	
6Y8-82521-21	3 ft, 0.9 m	
6Y8-82521-11	2 ft, 0.6 m	
6Y8-82521-01	1 ft, 0.3 m	



POWER SUPPLY WIRE

Uses to connect between the switch panel and the hub, and supply the electric power to the system.

Part No.	Remarks
6Y8-83553-01	With 10 amps fuse

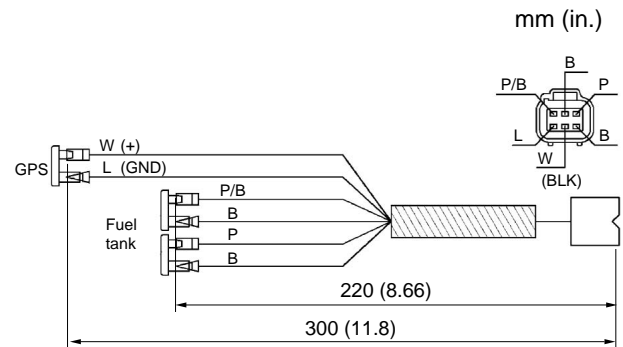


WIRE HARNESS

FUEL TANK / GPS WIRE

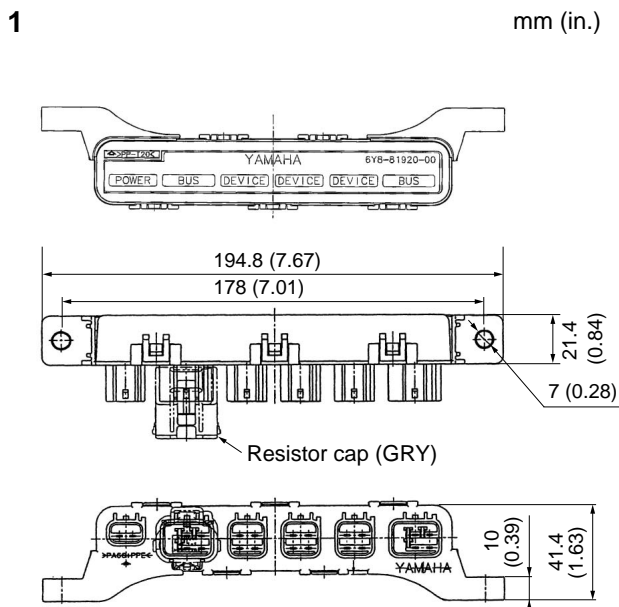
Uses to connect between a fuel tank level sensor and/or a MNEA0183 compatible GPS and the speedometer (with fuel mgt gauge).

Part No.	Remarks
6Y8-8356N-01	Twin fuel tanks acceptable

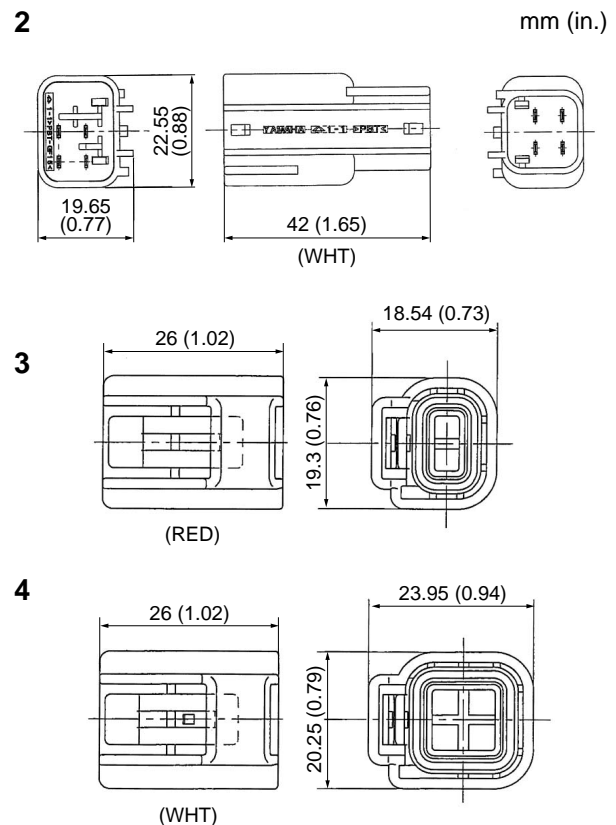


HUB

Uses to distribute the digital signal and electric power to the gauges and the other hubs.



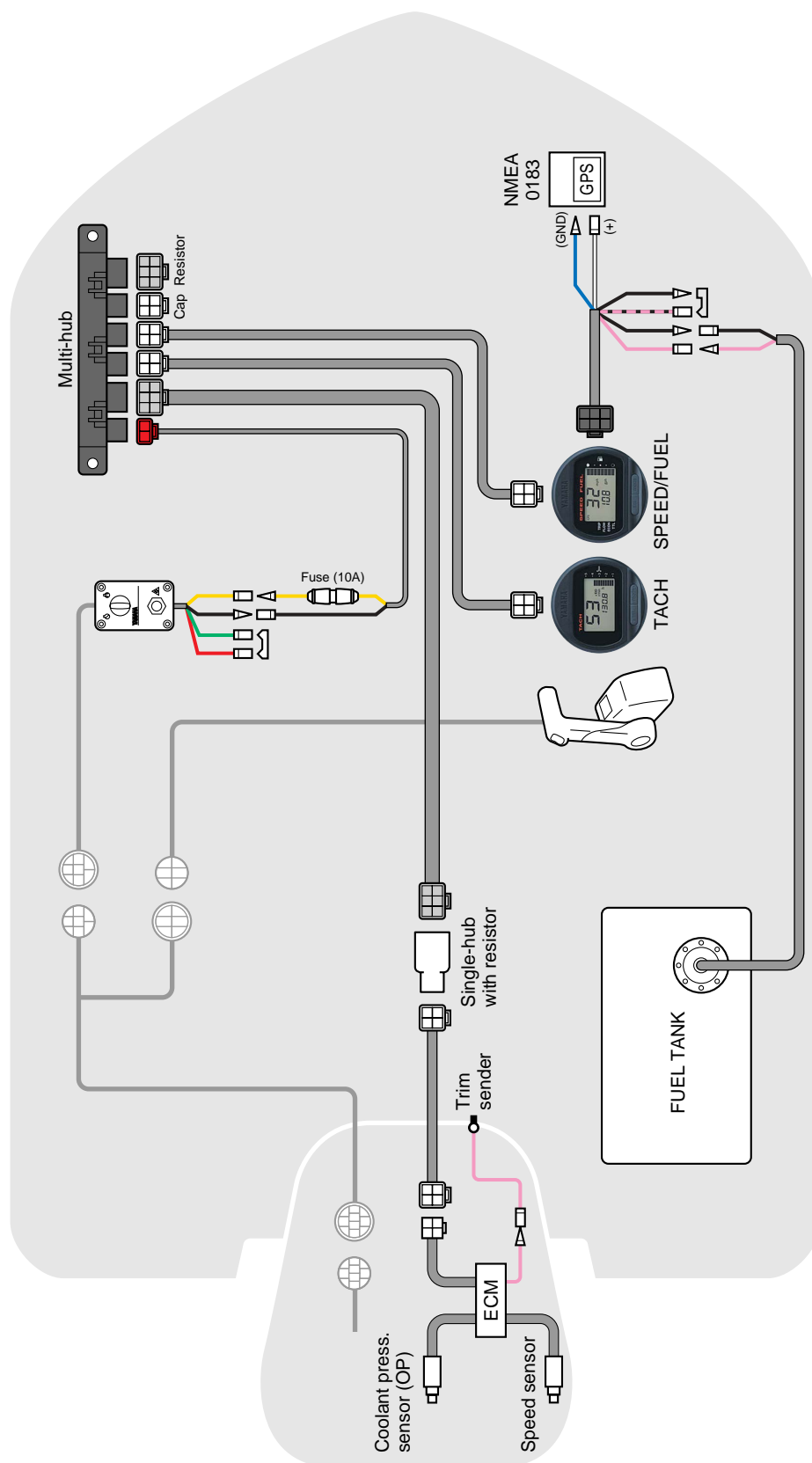
* Face the connectors downward for installation.



Ref. No.	Part name	Part No.	Remarks
1	Multi-hub	6Y8-81920-01	With ending resistor cap (P/N: 6Y8-85371-01)
2	Single hub	6Y8-81920-11	Included ending resistor
3	2-pin waterproof cap	6Y8-82582-01	
4	4-pin waterproof cap	6Y8-82582-11	Same as bus wire cap of engine wire harness

WIRING DIAGRAMS

FUEL INJECTED F50-F250 [Mechanical RC] & HPDI ENGINES SINGLE ENGINE



TROUBLESHOOTING

The following table shows the main presumed troubles if the system or gauge is incorrectly set up, incorrectly operated, or malfunctioned.

For detail information, see the applicable installation manual and/or the troubleshooting guide.

Symptom	Cause	Measure	Note
Tachometer shows incorrect engine RPM.	Engine recognition is wrong. (for multi-applications)	Push SET for 10 seconds to default the engine number. Memorize each engine number again.	See Custom Mode for procedure to set the engine number.
Speedometer or Comb. Speedometer & Fuel mgt gauge shows incorrect fuel level.	Fuel sensor selection is wrong.	Setup the fuel sensor to correctly resistance.	ABYC sensor: 33-240 Ω (Default) Europe sensor: 0-180 Ω YAMAHA sensor: 5-105 Ω
Fuel mgt gauge shows incorrect remaining fuel	Fuel capacity setting is wrong. (for SQR Fuel mgt Gauge)	Fill the tank with fuel, and set fuel tank capacity.	Default setting is 50 gallons.
Fuel mgt gauge shows incorrect fuel consumption	Engine recognition is wrong. (for multi-applications)	Default the engine number, and turn the key switch on in order from portside engine to memorize each engine number.	See Custom Mode of Tachometer for procedure to setup the engine number.
Gauge display does not wakeup.	Electric power is not supplied. Gauge is damaged.	Replace fuse. Connect the couplers securely. Replace the damaged wire or hub. Replace the gauge.	Be sure to use 10 amps fuse.
Illumination does not light.	Electric power is not supplied. Gauge is damaged.	Replace fuse. Connect the couplers securely. Replace the damaged wire or hub. Replace the gauge.	Be sure to use 10 amps fuse.
Gauge shows "----".	Digital signal is not received.	Connect the couplers securely. Replace the damaged bus wire or hub.	Verify the system with the optional checker.
Gauge unstably operates.	Resistor is not connected to the ending hubs.	Connect the gray 6-pin cap to the ending multi-hubs.	Single hub is included resistor.
Gauge response is poor or down.	Market obtainable unit connected to the system is failed. Signal volume has exceeded 50% of the capacity.	Replace the unit. Remove the heavy signal output unit.	Verify the system with the optional checker.
Trim gauge always shows fully tilted up position.	Trim sender signal is not received.	Connect pink lead connectors each other.	See the installation manual.
Trim gauge shows incorrect position.	Initial position setting is wrong. Trim sender is damaged.	Put the motor in the fully trimmed-in position, and reset the initial (zero) trim angle. Replace the trim sender.	See Custom Mode for procedure to set the fully trimmed-in angle.
Boat speed and/or Coolant pressure gauge does not show.	Optional sensor has not installed.	Install the optional sensor.	See the instruction supplied with the sensor kit.
	Monitor display of tachometer remains in the default setting.	Select the coolant pressure display.	See Custom Mode for procedure to select the display.
Oil pressure is not shown.	Engine does not have the oil pressure sender.	NA	F50-F100 cannot show the oil pressure.
	Tachometer does not setup to show the oil pressure.	Select the oil press. display.	See Custom Mode to setup display.

BASIC REQUIREMENTS

The following basic conditions are required for the digital network gauge system to install its components onto a boat.

Item	Conditions	Symptom	Note
Total amount quantity of unit for connecting to the system	50 units or less (Including market obtainable units, exclusive gauges and engine ECUs).	Gauge unstably shows. Gauge response is poor.	Check the system with the optional checker. Verify the conditions of system.
Total amount length of the main bus wires.	50 meter (164 feet) or less		
Acceptable volume of digital communication signals	50% or less of overall signal capacity		
Bus wires distance from electrical noise equipments (Antenna cable, Generator, Radio, etc.)	30 cm (1 ft) and more		
Temperature for performing bus wires and hubs	80°C (176°F) or less		

NMEA0183 COMPATIBLE EQUIPMENTS CONNECTION

The digital network gauge system accepts the signal of NMEA0183 version 2.0, 2.1, or 3.01 with following sentence.

Date	Sentence
Speed and Time	RMC
Water depth	DBT
Water surface temp.	MTW

* If the signal sentence is not shown on an electric unit or its instruction, ask to the manufacturer.