

Rigging Suzuki Mechanical Cable Engines with Gauge Interface Options

PAGE

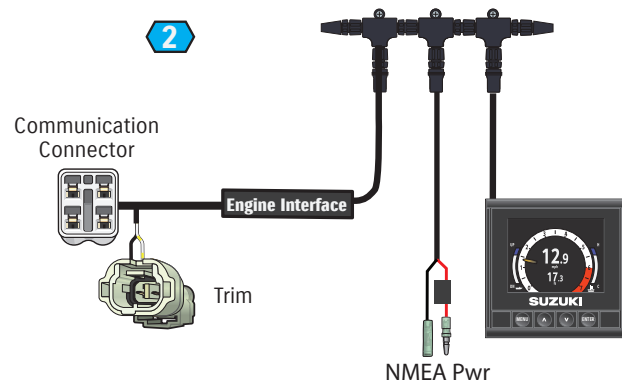
2	C10 Color Display with Engine Interface Cable
4	C10 Color Display with Simrad and Lowrance Multi Function Displays
6	Connect Gateway with Simrad and Lowrance Multi Function Displays
8	SMG4 Suzuki Multi-function Gauge
10	SMG4 as Gateway for Third Party Multi Function Displays
12	Suzuki Multi-function Display SMD with SMD Gateway
14	SMG4 Gauge on optional Mechanical Engine CAN Harness
16	NMEA 2000 backbone parts and C10 Color Display Kit with backbone starter kit
17	Analog Gauge Output to Digital Output Reconfiguration at Engine Harness

C10 Color Display with Engine Interface Cable

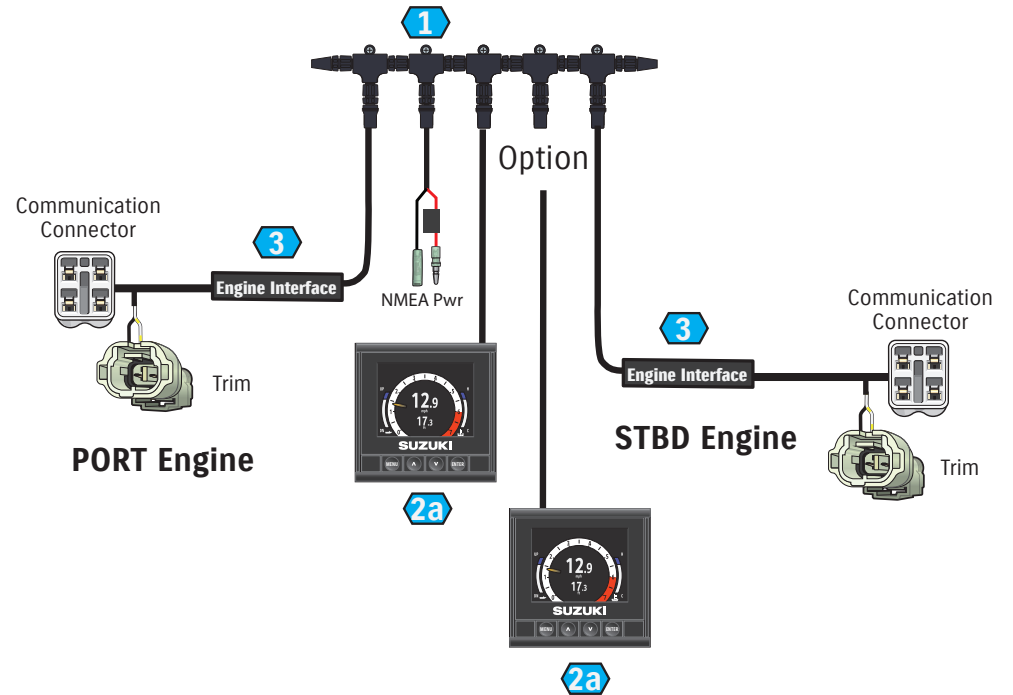
C10 easily displays two engines and is powered by the NMEA backbone.



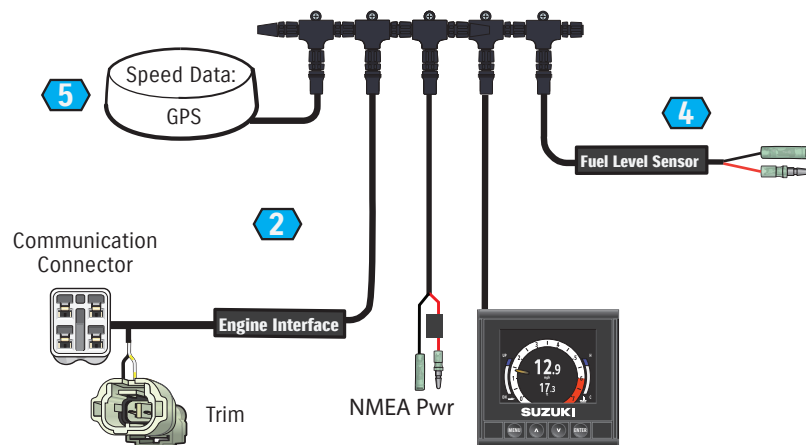
Single Engine - C10 Kit (includes NMEA 2000 Cable Kit)



Twin Engine - C10 using two Engine Interface Cables



C10 with GPS and Fluid Level options



Additional steps are required at the engine harness when using digital gauges. Refer to last page of this document.

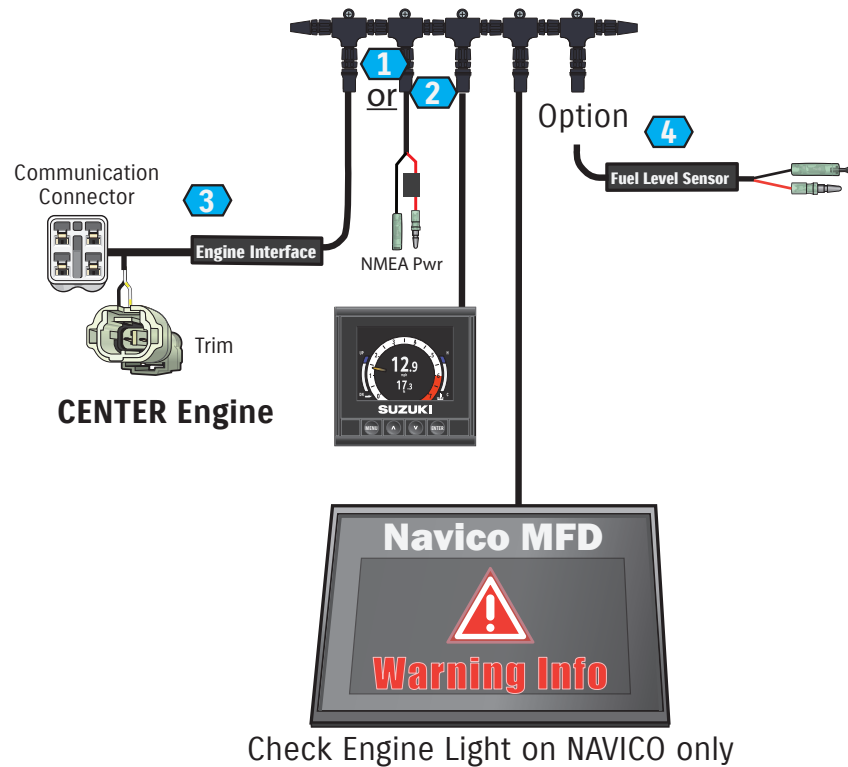
C10 Color Display with Engine Interface Cable						
New		No.	Part No.	Part Name	Qty	
	Backbone only	1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA 2000 backbone parts)	1	Choose backbone kit or C10 kit with backbone set
C10 Plus	With or without NMEA 2000 basic backbone parts	2	990C0-04C10-KIT	C10 Display with Interface Cable and NMEA parts*		
		2a	990C0-04C10	C10 Display (w/ only "T" and drop cable)		Add to backbone
v3.57	Verson 3.57	3	34923-96L13	Engine Interface Cable	1	
		4	990C0-88217	Fluid Level Sensor	Opt.	Note A
		5	990C0-88122	GPS Antenna with Compass (w/ "T")	Opt.	Note B
<p>* C10 Color Display Kit includes the NMEA Cable Kit and Engine Interface Cable. All parts are available separately. See second to last page for backbone parts.</p> <p>Note A - Fluid Level Sensor defaults to single tank. If another tank will be monitored, a C10 is used to set its Tank Name. Change C10 fuel setting from "Rate" to "Level".</p> <p>Note B - GPS Antenna with Compass is needed to provide speed and distance data if no Multi-Function Display with GPS is enabled on the network.</p>						

C10 Color Display with Simrad and Lowrance Multi Function Displays

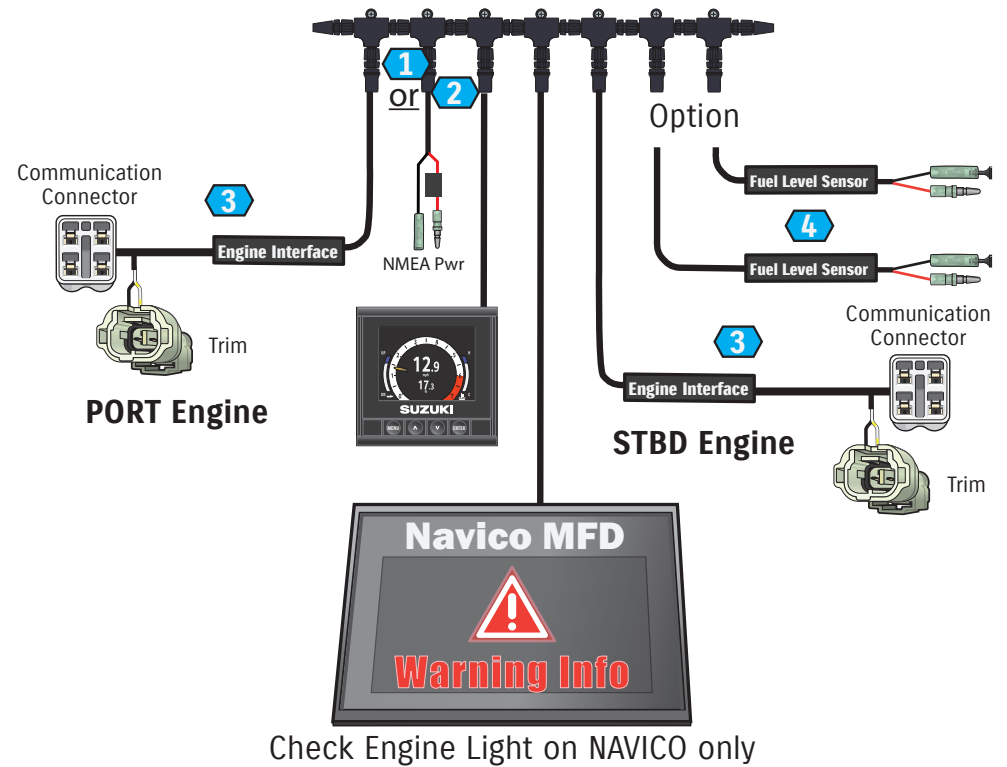
C10 enables “Check Engine” warnings to display on Navico products.



Single Engine - C10 with Navico MFD Option



Twin Engine - Navico MFD with C10



Additional steps are required at the engine harness when using digital gauges. Refer to last page of this document.

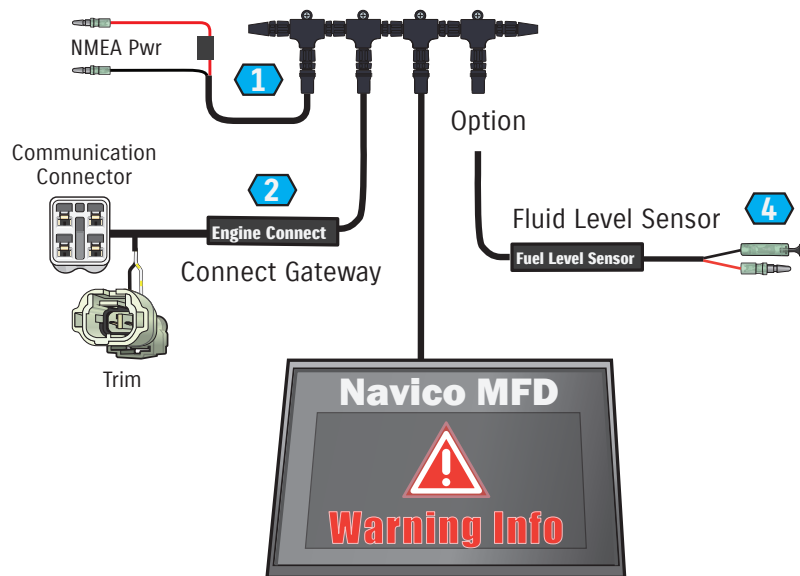
C10 Color Display with Simrad and Lowrance Multi Function Displays						
New		No.	Part No.	Part Name	Qty	
	Backbone only	1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA backbone parts)	1	Choose backbone kit or C10 kit with backbone set
C10 Plus	With or without NMEA 2000 basic backbone parts	2	990C0-04C10-KIT	C10 Display with Interface Cable and NMEA parts*		
		2a	990C0-04C10	C10 Display (w/ only "T" and drop cable)		Add to backbone
v3.57	Verson 3.57	3	34923-96L13	Engine Interface Cable	1	Note A
		4	990C0-88217	Fluid Level Sensor	1	Note B
			990C0-88122	GPS Antenna with Compass	Opt.	Note C
<p>* C10 Color Display Kit includes the NMEA 2000 Backbone Cable Kit and Engine Interface Cable. All parts are available separately. See NMEA 2000 page for descriptions.</p> <p>Note A - Engine Interface Cable will display Check Engine Warning Info only on Navico Multi Function Display (MFD).</p> <p>Note B - Fluid Level Sensor defaults to single tank. If another tank will be monitored, a C10 is used to set its tank name. Change C10 fuel setting from "Rate" to "Level".</p> <p>Note C - GPS Antenna with Compass is needed to provide speed and distance data if no Multi-Function Display with GPS signal is enabled on the network.</p>						

Connect Gateway with Simrad and Lowrance Multi Function Displays

Engine Connect Gateway enables “Check Engine” warnings to display on Navico MFDs.

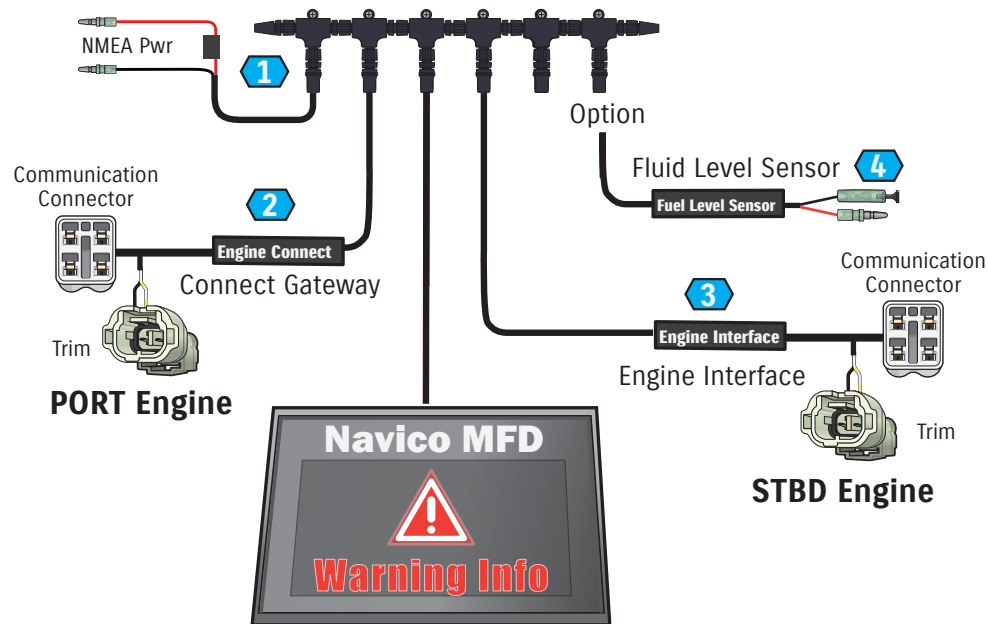


Single Engine Basic Install



Twin Engine With Connect Gateway and Engine Interface

One Connect Gateway per vessel, additional engines use Engine Interfaces



Additional steps are required at the engine harness when using digital gauges. Refer to last page of this document.

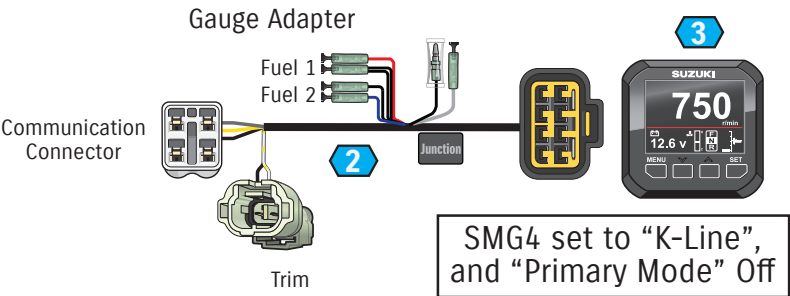


A C10 must be used as a set up tool when more than the one interface is used for all multi-engine applications. A C10 must be used as a set up tool when more than the one fuel level sensor is installed. After fluid level sensors or interfaces are configured, the C10 can be removed from the boat's network.

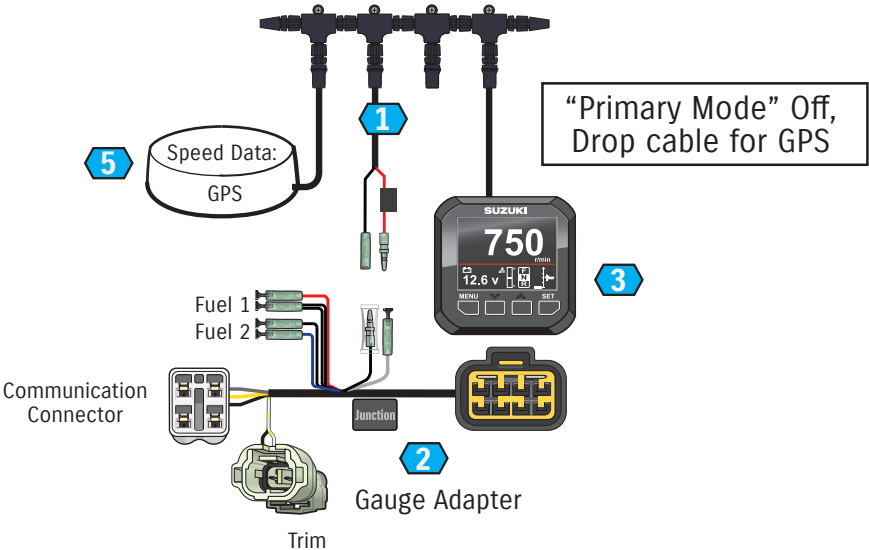
Connect Gateway with Simrad and Lowrance Multi Function Displays						
New		No.	Part No.	Part Name	Qty	
		1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA backbone parts)	1	
		2	990C0-88171	Engine Connect Gateway	1	Note A
v3.57		3	990C0-88149-357	Engine Interface Cable		Twin engine
		4	990C0-88217	Fluid Level Sensor	1	Note B
<p>Note A - Engine Connect Gateway will display Check Engine Warning Info only on Simrad and Lowrance Multi Function Displays (MFD). Use only ONE Connect Gateway per vessel with an Engine Interface Cable for additional engine. A C10 Display will conflict with Connect Gateway.</p> <p>Note B - Fluid Level Sensor defaults to single tank. If another tank will be monitored, a C10 is used to set its tank name. Change C10 fuel setting from "Rate" to "Level". Remove the C10 Display from the network before running the vessel.</p>						

Note C - If you have a mechanically-controlled engine (not fly-by-wire) AND have or want to have analog gauges also: There are two 4-pin connectors on the engine's ECU. One is SDS connector (DIGITAL technician's connector) and one is for analog gauges (ANALOG gauge connector). You will need to also purchase adapter cable, 990C0-88136, to properly orient the SDS connector wires for use with the Engine Connect Gateway and/or Engine Interface Cable. Make sure to orient the 990C0-88136 cable so the connector with the black wire near clip is connected to the interface, and the connector with red+black wires near the clip is connected to the engine.

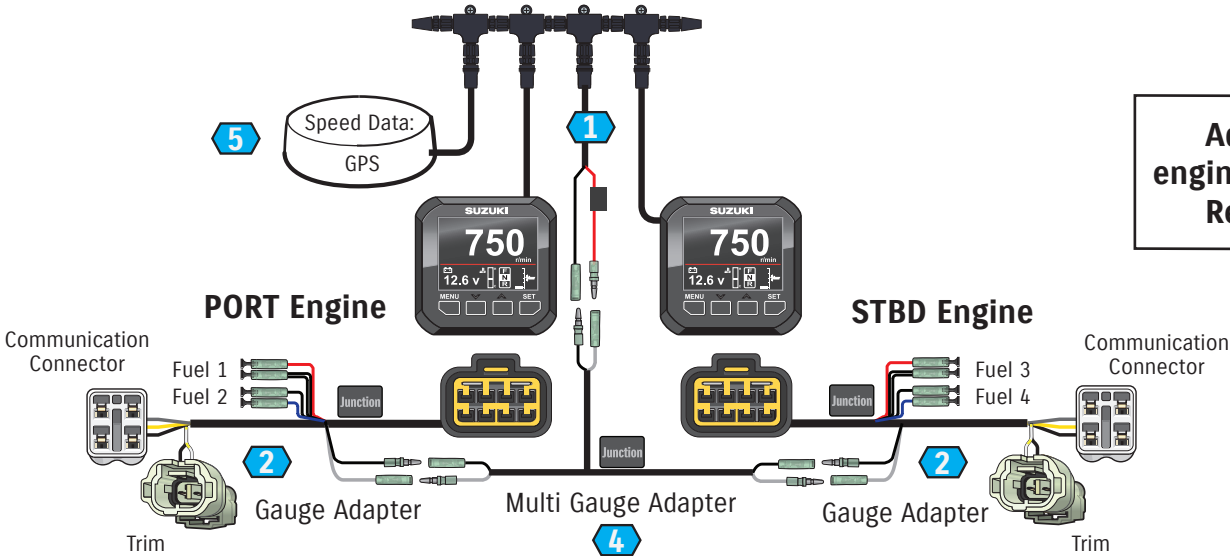
Single Engine Basic Install



Single Engine SMG4 with GPS



Twin Engine with SMG4 Gauges



Additional steps are required at the engine harness when using digital gauges. Refer to last page of this document.

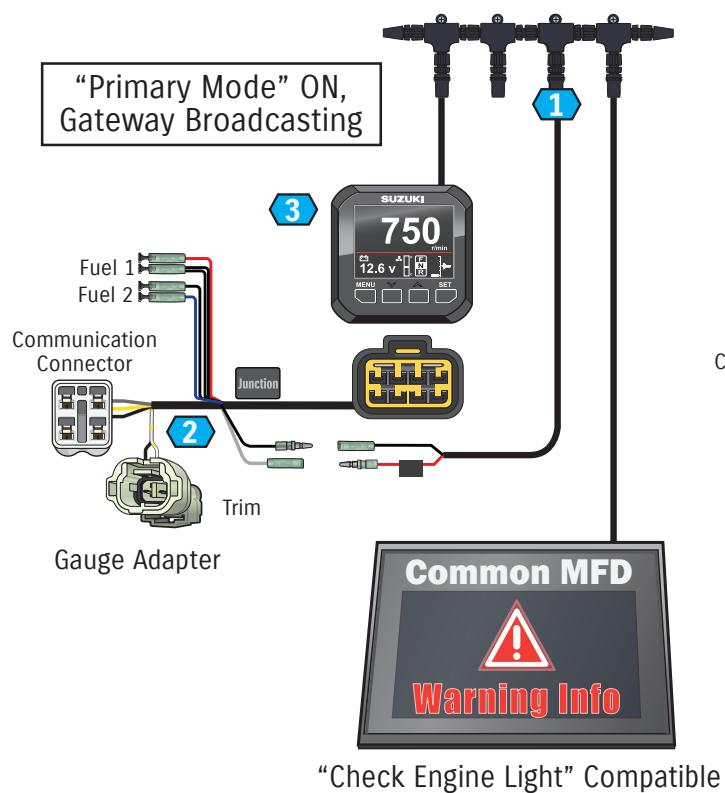
SMG4 Suzuki Multi-Function Gauge						
New		No.	Part No.	Part Name	Qty	
		1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA 2000 backbone parts)	1	
		2	36661-96L30	Gauge Adapter, Mechanical	each engine	
		3	34011-96L44	Single Multi-Function Gauge	each engine	Note A
		4	36665-87L10	Multi Gauge Adapter, Mechanical	1	Twin Engine
		5	990C0-88122	GPS Antenna with Compass	Opt.	Note B
<p>Note A - Gateway version 3.101 software is required to broadcast data over a NMEA 2000 network.</p> <p>Note B - GPS Antenna with Compass is needed to provide speed and distance data if no Multi-Function Display with GPS signal is enabled on the network.</p>						

SMG4 Gauge as Gateway for Third Party Multi Function Displays

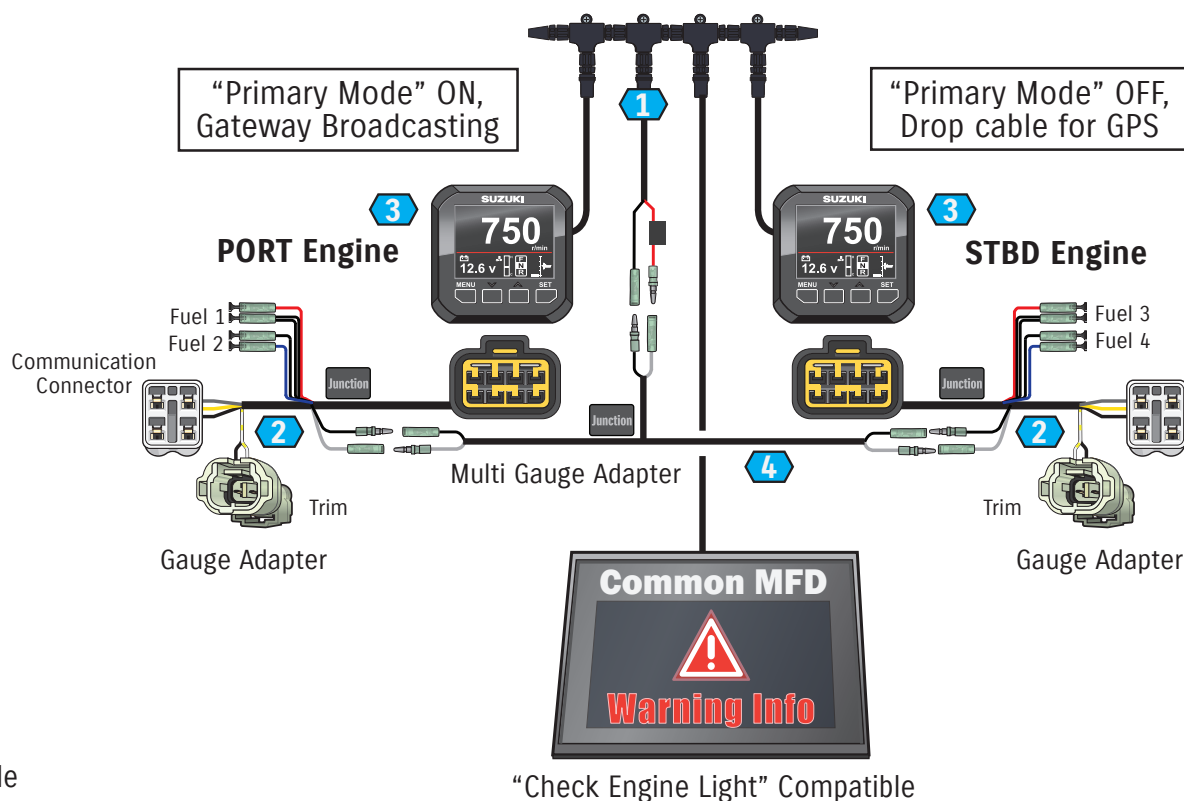
SMG4 with 3.101 Gateway Version broadcasting on a NMEA 2000 public network



Single Engine SMG4 Gateway for MFD



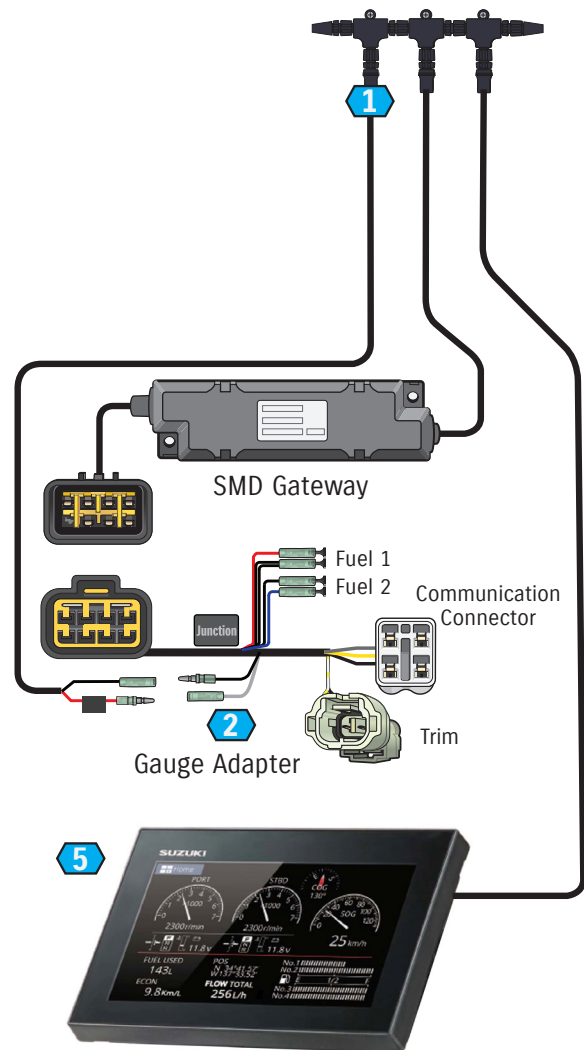
Twin Engine With SMG4s, Port SMG4 Gateway On for MFD



Additional steps are required at the
engine harness when using digital gauges.
Refer to last page of this document.

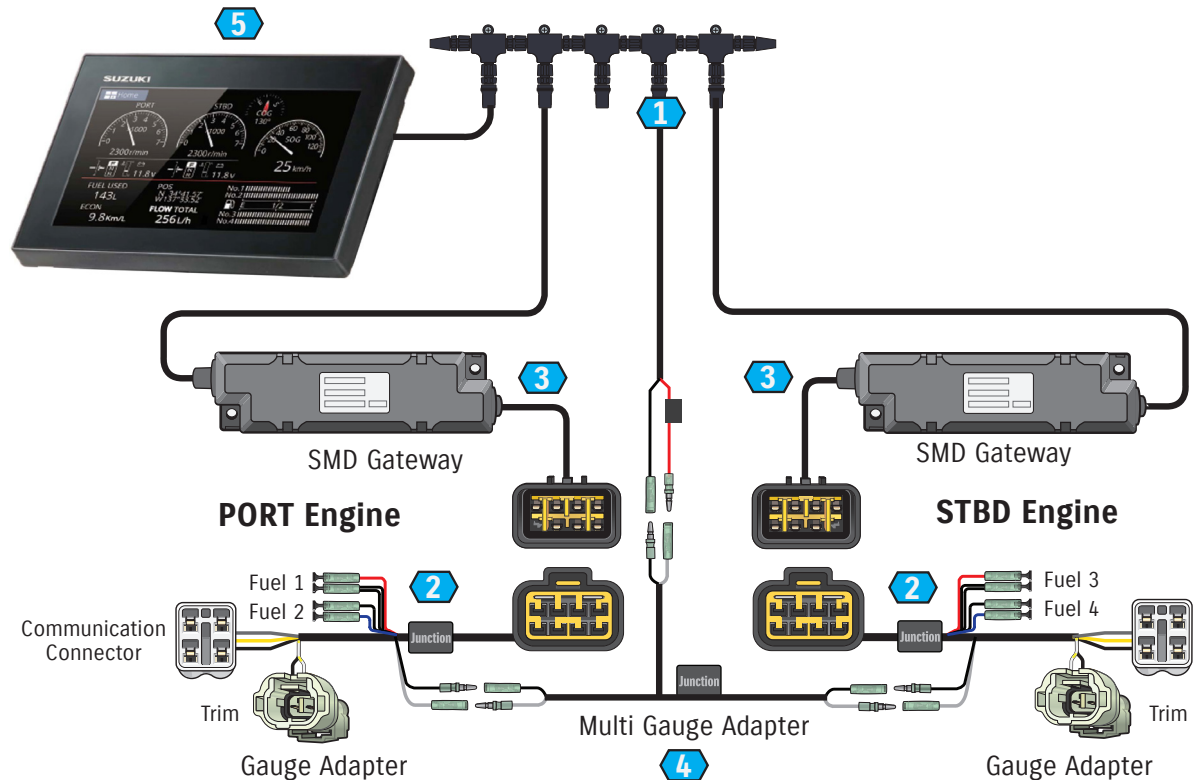
SMG4 Gauge as Gateway for Third Party Multi Function Displays						
New		No.	Part No.	Part Name	Qty	
		1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA 2000 backbone parts)	1	
		2	36661-96L30	Gauge Adapter, Mechanical	each engine	
		3	34011-96L44	Single Multi-Function Gauge	each engine	Note A
		4	36665-87L10	Multi Gauge Adapter, Mechanical	1	Twin Engine
<p>Note A - Gateway version software is required to broadcast data over a NMEA 2000 network.</p> <p>Note B - GPS Antenna with Compass is needed to provide speed and distance data if no Multi-Function Display with GPS signal is enabled on the network.</p>						

Single Engine With SMD Gateway



SMD Suzuki Multi-function Display

Twin Engine With SMD Gateway



Additional steps are required at the engine harness when using digital gauges. Refer to last page of this document.

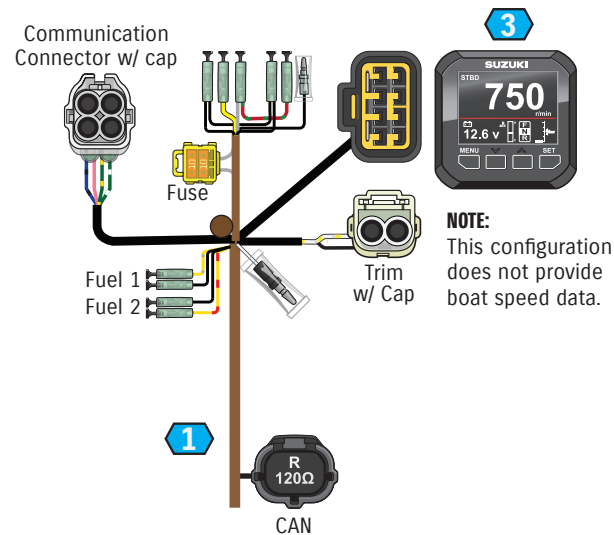
Suzuki Multi-function Display SMD with SMD Gateway						
New		No.	Part No.	Part Name	Qty	
		1	990C0-88L00-KIT	"SMG Cable Kit" (NMEA 2000 backbone parts)	1	
		2	36661-96L30	Gauge Adapter, Mechanical	each engine	
		3	34923-96L02	SMD Gateway Unit	each engine	
		4	36665-87L01	Multi Gauge Adapter, Mechanical	1	Twin Engine
		5	990C0-34901-007	Suzuki Multi-Function Display kit (7")	1	
			990C0-34901-009	Suzuki Multi-Function Display kit (9")		

SMG4 Gauge on Optional Mechanical Engine CAN Harness

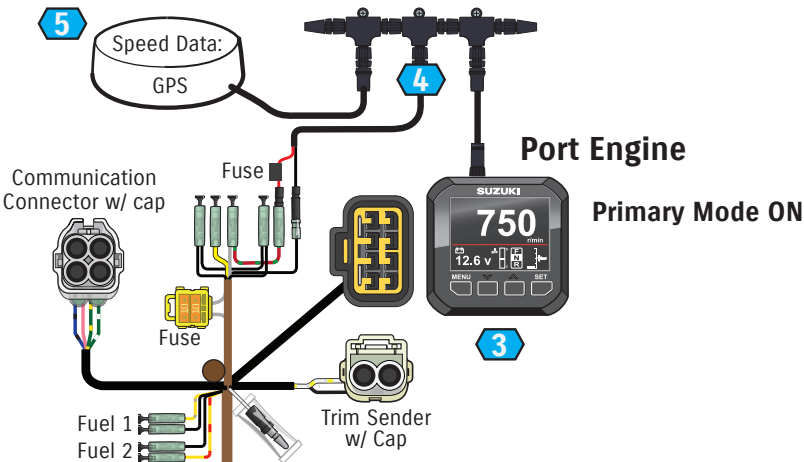


When using an SMG4 with the new CAN harness, the SMG4 must be set to “CAN2”

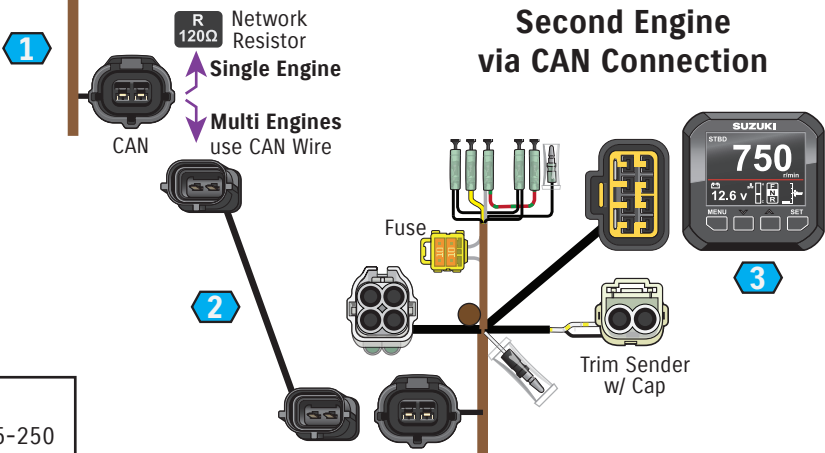
SMG4 Suzuki Multi-function Gauge



SMG4 with NMEA Network



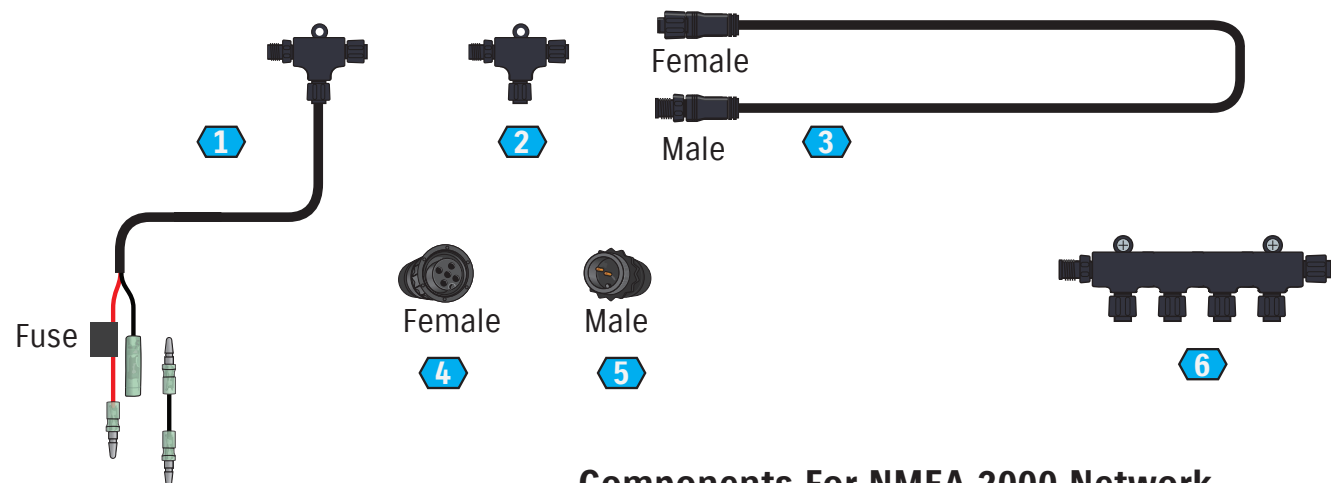
Second Engine via CAN Connection



Functions available using CAN Harness on 340001+ Mechanical Engines					
	DF40A-60A	DF75A-90B	DF115B-140B	DF150A-200A	DF225-250
CAN Connection	Yes	Yes	Yes	Yes	-
Automatic Trim	-	-	Yes	Yes	-
Keyless Start	-	Yes	Yes	Yes	-

NOTE: Dual engine configuration with the new CAN harness requires engine instancing. Refer to engines Set-up Manual.

SMG4 Gauge on Optional Mechanical Engine CAN Harness						
New		No.	Part No.	Part Name	Qty	
		1	36620-93JB0	CAN Main Harness 16 ft.	each engine	
			36620-93JA0	CAN Main Harness 21 ft.		
			36620-93JC0	CAN Main Harness 26 ft.		
		2	36661-96L40	CAN Harness (network connector cable)		Twin Engine
		3	34011-96L44	SMG4 Suzuki Multi-Function Gauge	each engine	
		4	990C0-88L00-KIT	"SMG Cable Kit" (NMEA 2000 backbone parts)	1	
		5	990C0-88122	GPS Antenna with Compass	Opt.	Note A
Note A - GPS Antenna with Compass is needed to provide speed and distance data if no Multi-Function Display with GPS is enabled on the network.						



Components For NMEA 2000 Network

These 5 items are available separately or as part of starter kit:
“SMG Cable Kit” (NMEA 2000)
990C0-88L00-KIT

- | | | |
|---|-------------|----------------------------|
| 1 | 990C0-88112 | Power Cable + one “T” |
| 2 | 990C0-88110 | NMEA Network “T” Connector |
| 3 | 990C0-88104 | 2’ N2K Drop Cable |
| 4 | 990C0-88113 | Female Terminator 120 ohms |
| 5 | 990C0-88114 | Male Terminator 120 ohms |

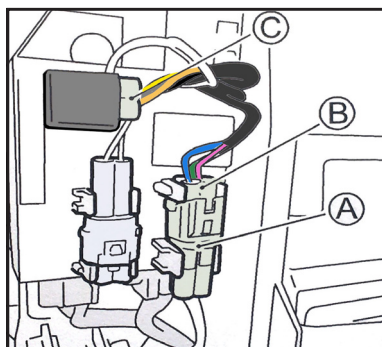


C10 Color Display

990C0-04C10-KIT
includes a backbone
NMEA 2000 Cable Kit
(above) and Interface

- | | | |
|---|-------------|------------------------------|
| 6 | 990C0-88109 | NMEA “Quad-T” Connector |
| | 990C0-88115 | Network Power Isolator “T” |
| | 990C0-88104 | 2’ Backbone Extension Cable |
| | 990C0-88105 | 6’ Backbone Extension Cable |
| | 990C0-88107 | 15’ Backbone Extension Cable |
| | 990C0-88108 | 25’ Backbone Extension Cable |

Reconfiguring Mechanical with Analog Engine Harness Output from Analog K-Line to Digital CAN Data



Reconfiguration of Engine Harness near ECM is required only when using digital gauges on analog harnesses. Connectors may be under the ECM.

Disconnect 4-pin gauge connector “A” from gauge connector “B” then connect “A” to connector “C” that is located in the rubber cap. Finish by putting rubber cap on connector “B” and securing it in place.

Connector B - Blue w/ Black, Green w/ White, Pink w/ White (analog)
Connector C - Black, Gray, Orange w/ Yellow, Yellow (digital output)

CAN equipped Mechanical Engines may use either CAN capable or Analog harnesses

SMG4 Communication	Serial Number Range		
Mechanical Control Engine Model	<149999	240001 - 249999	340001+
DF9.9B - DF30A	K-Line	K-Line	K-Line
DF40A - DF200A	K-Line	K-Line	CAN
DF200/225/250 V6	K-Line	K-Line	K-Line

36620-93JB0	CAN Main Harness 16 ft.
36620-93JA0	CAN Main Harness 21 ft.
36620-93JC0	CAN Main Harness 26 ft.
36620-93J80	Analog Main Harness 16 ft.
36620-93J70	Analog Main Harness 21 ft.
36620-93J90	Analog Main Harness 26 ft.

Functions available using CAN Harness on #340001+ Mechanical Engines						
	DF40A 50A 60A	DF75A 90B	DF115B 140B	DF150A 175A 200A	DF225 250	
CAN Connection	Yes	Yes	Yes	Yes	-	
Automatic Trim	-	-	Yes	Yes	-	
Keyless Start	-	Yes	Yes	Yes	-	