

***Evinrude E-TEC G2* Rigging & Setup Guide**

Evinrude E-TEC G2 Rigging & Setup Guide

BRP US Inc.
Technical Publications
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<i>S.A.F.E.</i> ™	
<i>SystemCheck</i> ™	

Original Instructions

March 2017

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Safety Information

This publication is written for qualified, factory-trained technicians who are already familiar with the use of *Evinrude* Special Tools. The included information is not a substitute for work experience. It is an organized guide for reference, repair, and/or maintenance.

The following symbols and/or signal words may be used in this document:

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE

Indicates an instruction which, if not followed, could severely damage engine components or other property.

These safety alert signal words mean:

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

IMPORTANT: Identifies information that controls correct assembly and operation of the product.

ENVIRONMENTAL NOTE:

A note which provides tips and behaviors related to protecting the environment.

DO NOT perform any work until you have read and understood these instructions completely.

Always follow torque wrench tightening specifications.

Should removal of any locking fastener (lock tabs, locknuts, or patch screws) be required, replace with a new one if the locking feature is damaged or not functional.

When replacement parts are required, use *Evinrude Genuine Parts* or parts with equivalent characteristics, including type, strength and material. Use of substandard parts could result in injury or product malfunction.

Always wear EYE PROTECTION AND APPROPRIATE GLOVES when using power tools.

Unless otherwise specified, engine must be OFF when performing this work.

Always be aware of parts that can move, such as flywheels, propellers, etc.

Some components may be HOT. Always wait for engine to cool down before performing work.

If you use procedures or service tools that are not

DANGER

Contact with a rotating propeller is likely to result in serious injury or death. Assure the engine and prop area is clear of people and objects before starting engine or operating boat. Do not allow anyone near a propeller, even when the engine is off. Blades can be sharp and the propeller can continue to turn even after the engine is off. Remove propeller before servicing and when running the outboard on a flushing device.

DO NOT run the engine indoors or without adequate ventilation or permit exhaust fumes to accumulate in confined areas. Engine exhaust contains carbon monoxide which, if inhaled, can cause serious brain damage or death.

⚠ WARNING

Wear safety glasses to avoid personal injury, and set compressed air to less than 25 psi (172 kPa).

The motor cover and flywheel cover are machinery guards. Use caution when conducting tests on running outboards. **DO NOT** wear jewelry or loose clothing. Keep hair, hands, and clothing away from rotating parts.

During service, the outboard may drop unexpectedly. Avoid personal injury; always support the outboard's weight with a suitable hoist or the tilt support bracket during service.

To prevent accidental starting while servicing, disconnect the battery cables at the battery. Twist and remove all spark plug leads.

The electrical system presents a serious shock hazard. **DO NOT** handle primary or secondary ignition components while outboard is running or flywheel is turning.

Gasoline is extremely flammable and highly explosive under certain conditions. Use caution when working on any part of the fuel system.

Protect against hazardous fuel spray. Before starting any fuel system service, carefully relieve fuel system pressure.

Do not smoke, or allow open flames or sparks, or use electrical devices such as cellular phones in the vicinity of a fuel leak or while fueling.

Keep all electrical connections clean, tight, and insulated to prevent shorting or arcing and causing an explosion.

Always work in a well ventilated area.

Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to tightening must be felt when reusing a locking fastener. If replacement is indicated, use only authorized replacement or equivalent.

Abbreviations

Units of Measurement

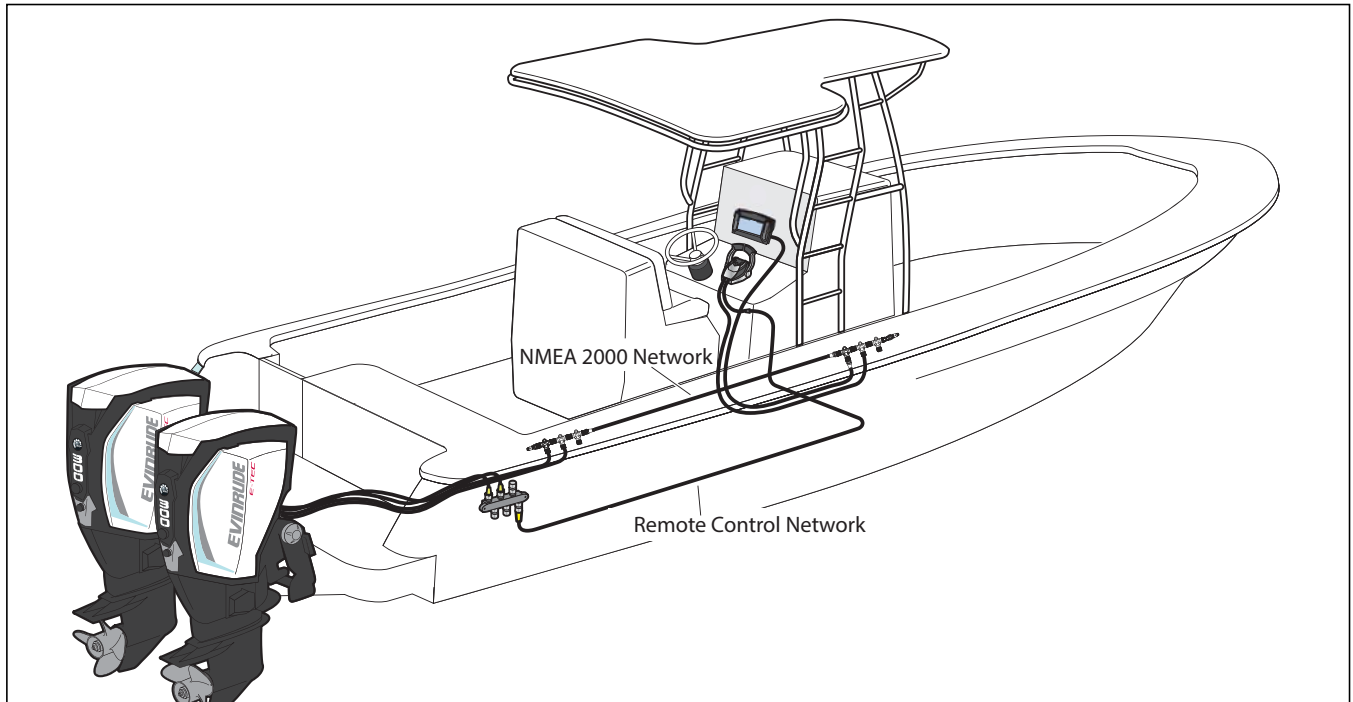
A	Amperes
amp-hr	Ampere hour
fl. oz.	fluid ounce
ft. lbs.	foot pounds
HP	horsepower
in.	inch
in. Hg	inches of mercury
in. lbs.	inch pounds
kPa	kilopascals
ml	milliliter
mm	millimeter
N·m	Newton meter
P/N	part number
psi	pounds per square inch
RPM	revolutions per minute
°C	degrees Celsius
°F	degrees Fahrenheit
ms	milliseconds
μs	microseconds
Ω	Ohms
V	Volts
VAC	Volts Alternating Current
VDC	Volts Direct Current

List of Abbreviations

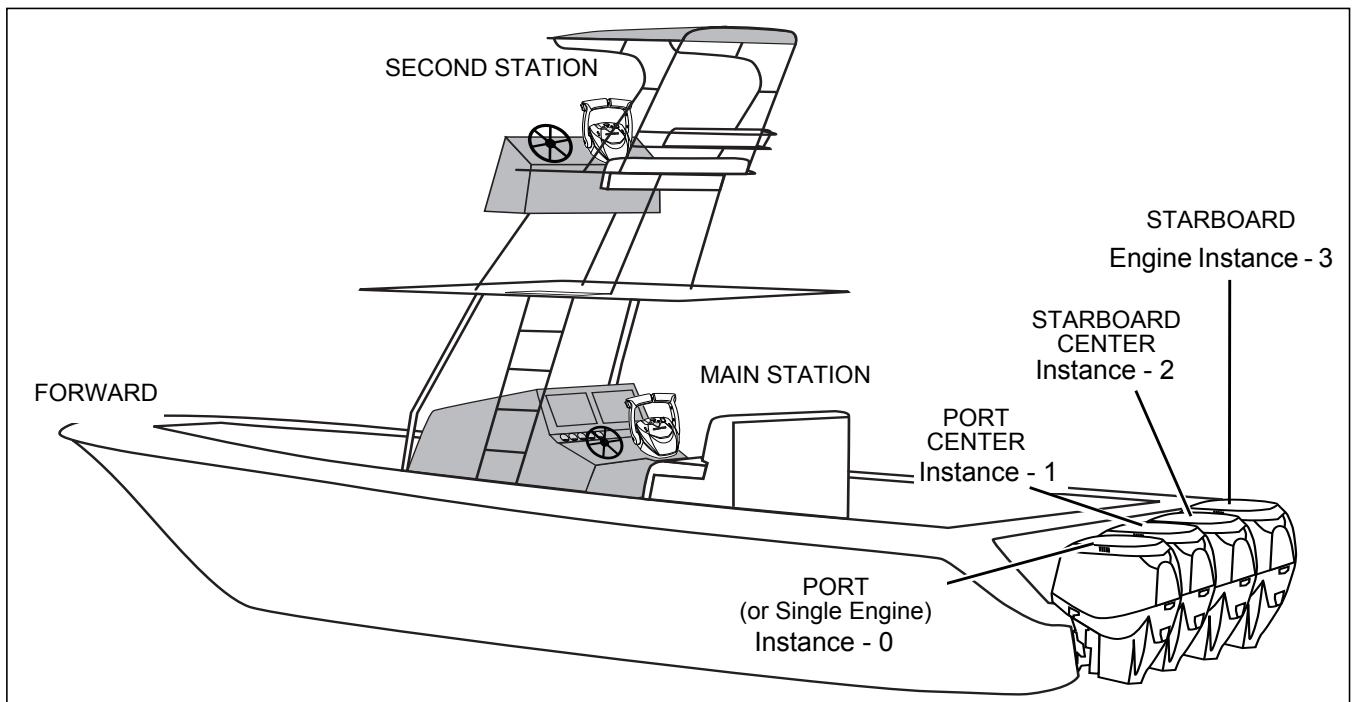
ABYC	American Boat & Yacht Council
ATDC	after top dead center
AT	air temperature sensor
BPS	barometric pressure sensor
BTDC	before top dead center
CCA	cold cranking amps
CFR	Code of Federal Regulations
CPS	crankshaft position sensor
CSM	Concealed side mount
DAC	Digital to Analog Converter
DTM	Dual Top Mount
EMM	Engine Management Module
EPA	Environmental Protection Agency
ICOMIA	International Council of Marine Industry Associations
ID	Inside dimension
MCA	marine cranking amps
MWS	modular wiring system
NMEA	National Marine Electronics Assoc.
ROM	read only memory
S.A.F.E.	speed adjusting failsafe electronics
SAC	start assist circuit
SAE	Society of Automotive Engineers
STM	Single Top Mount
SYNC	synchronization
TDC	top dead center
TPS	throttle position sensor
USCG	United States Coast Guard
WOT	wide open throttle
WTS	water temperature sensor

ICON G2 Remote Control Systems

ICON G2 Remote Control Systems use a NMEA 2000 Network (public CANbus network) and a Remote Control Network (private CANbus network) to share information with the electronic devices on the networks.

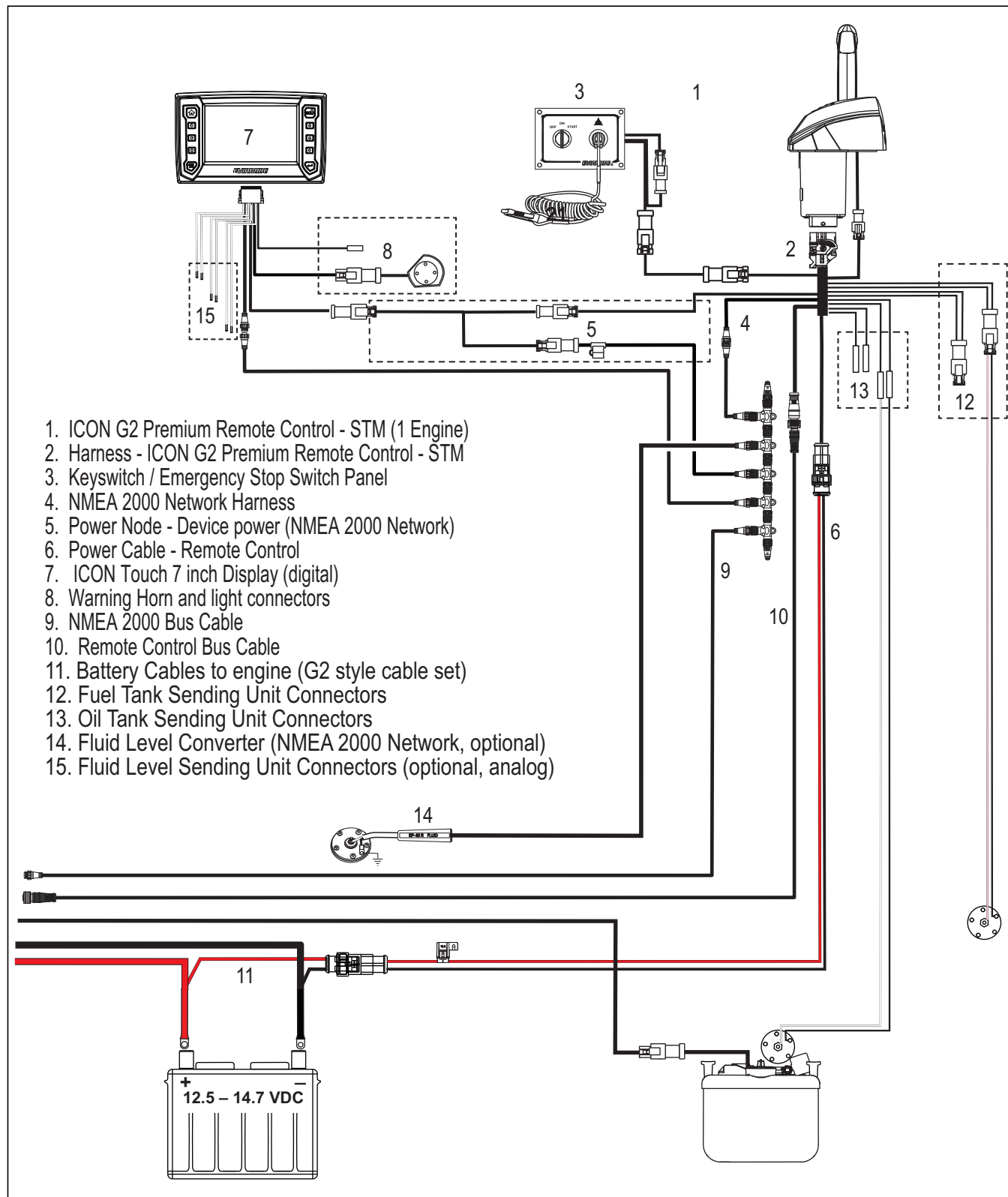


Correct station set-up and engine instance settings are required on all multi-engine installations. All engines come from factory set to Instance 0 or PORT.



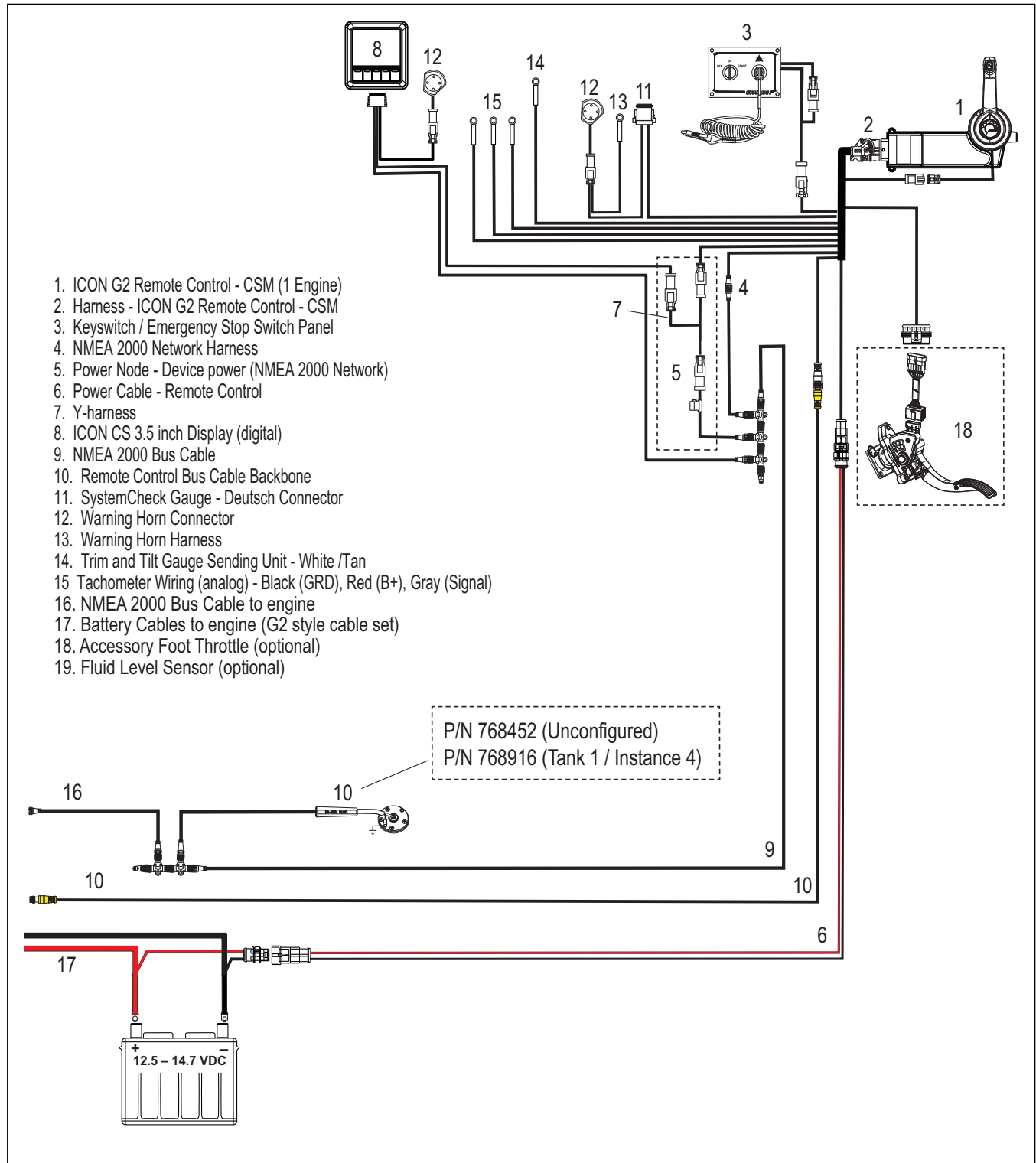
ICON G2 Premium Remote Control System Network Diagram (Sample)

The *ICON G2* Premium Remote Control system allows easy installation with *ICON* digital displays. Use *ICON Touch* or *ICON Pro* digital displays for fuel management or fluid level management.



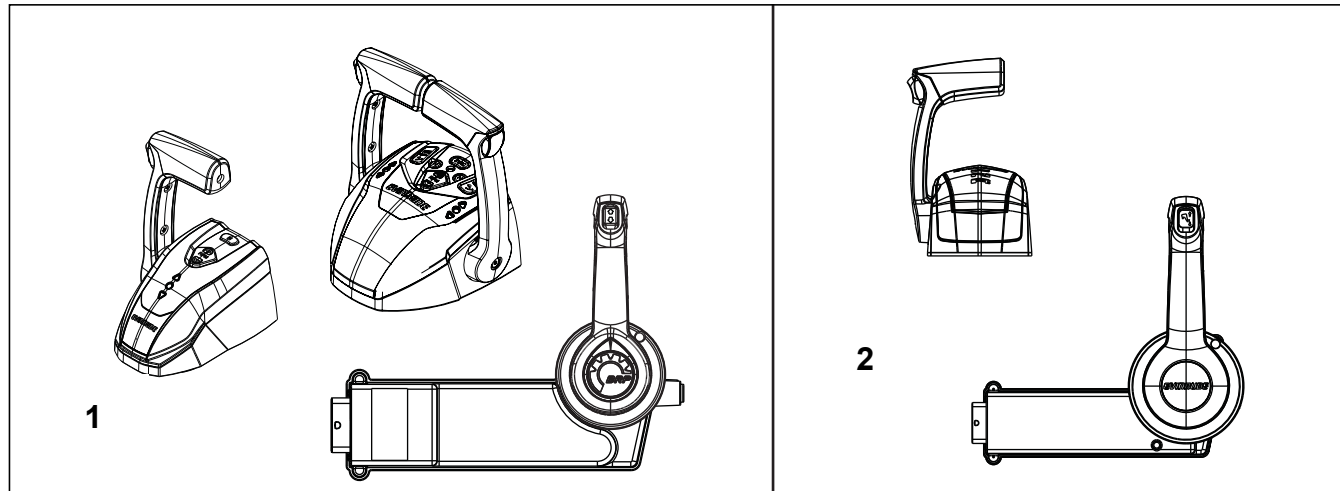
ICON G2 Remote Control System Network Diagram (Sample)

The *ICON G2* Remote Control system allows easy installation with a **SystemCheck** analog gauge. Add *ICON Pro*, *ICON 3.5*, or *ICON Touch* digital displays and fluid level sensors for fuel management or fluid level management. Add an optional accessory foot throttle for increased control and install an *ICON Pro*, *ICON 3.5*, or *ICON Touch* digital displays to switch the remote control from hand control to foot control.



Remote Control Selection

ICON G2 Remote Control Systems are used with Evinrude E-TEC G2 outboards. These electronic shift and throttle remote control systems manage all engine control functions through a low-voltage, digital network (CANbus).



ICON G2 Remote Controls

1. ICON G2 Premium Remote Controls
2. ICON G2 Remote Controls

Control Type	Quantity of Outboards Supported	Display / Gauge Type Supported				
		7.0 CTS	4.3 CTS	3.5 CS	ICON Pro	System Check
CSM (Single Station Only)	1	YES	YES	YES	YES	YES
CSM Premium (Single Station Only)	1	YES	YES	YES	YES	YES
STM (Single Station only)	1	YES	YES	YES	YES	YES
STM Premium Single Station	1	YES	YES	YES	YES	YES
STM Premium with Second Station	1	YES	YES	YES	YES	NO
DTM PREMIUM	2	YES	YES	NO	YES	YES
DTM Premium with Second Station	2	YES	YES	NO	YES	NO
DTM PREMIUM	3	YES	NO	NO	YES	NO
DTM Premium with Second Station	3	YES	NO	NO	YES	NO
DTM PREMIUM	4	YES	NO	NO	YES	NO
DTM Premium with Second Station	4	YES	NO	NO	YES	NO

⚠ WARNING

Remote controls must have start-in-gear prevention. This feature can prevent injuries resulting from unexpected boat movement when the outboard starts.

Always install and recommend use of an engine cut-off switch. Doing so will reduce the risk of personal injury or death should the operator fall away from the controls or out of the boat.

ICON G2 Remote Control Systems provide the operator with these key functions:

- Starting and stopping of the engine(s)
- Shifting the engine(s) between FORWARD, NEUTRAL, or REVERSE gear positions
- Adjusting engine speed, and providing throttle control
- Changing the power tilt and trim angle of the outboard

All remote controls must include the following features:

- Start-in-gear prevention
- Emergency stop switch with tether cord
- Connections for engine monitor warning system

Refer to the latest *Evinrude Genuine Parts and Accessories Catalog* or the e-rig configurator on BOSS-Web for listings for electronic and mechanical remote controls.

NOTE: *ICON G2* rigging kits built prior to October of 2016 were offered with a combination key switch / emergency stop switch assembly. Refer to the latest *Evinrude Genuine Parts and Accessories Catalog*.

For additional rigging information refer to:

- The instructions provided with *ICON G2* rigging kits
- Instruction sheets included with remote control kits and switch kits
- The *ICON G2* assembly diagrams included with this guide
- The latest *Evinrude E-TEC G2 Installation and Predelivery Guide*

Remote Control Requirements: Single Station

A SINGLE ENGINE / SINGLE STATION Remote Control System requires the following components:

- One **ICON G2 Premium** Remote Control (STM / CSM) or **ICON G2** Remote Control (STM / CSM)
- One ignition switch - key switch OFF/ON/START
- One emergency stop switch assembly w/lanyard
- One Remote Control Network backbone buss cable
- One NMEA 2000 Network backbone buss cable
- Tee Connector(s), Y-Harnesses (as needed / see installation diagrams)

A DUAL (Two) ENGINE / SINGLE STATION Remote Control System requires the following components:

- One **ICON G2 Premium** Remote Control (DTM)
- One Ignition switch - key switch OFF/ON
- One emergency stop switch assembly w/lanyard
- One *ICON G2* 6-port hub
- START/STOP switch for each engine
- One Remote Control Network backbone buss cable to connect the hub
- One backbone NMEA 2000 Network (Pubic CANbus)
- *NMEA 2000* bus cables and Remote Control bus cables (as needed, see installation diagrams)
- Tee Connector(s), Y-Harnesses (as needed, see installation diagrams)

A MULTIPLE (Three or Four) ENGINE / SINGLE STATION Remote Control System requires the following components:

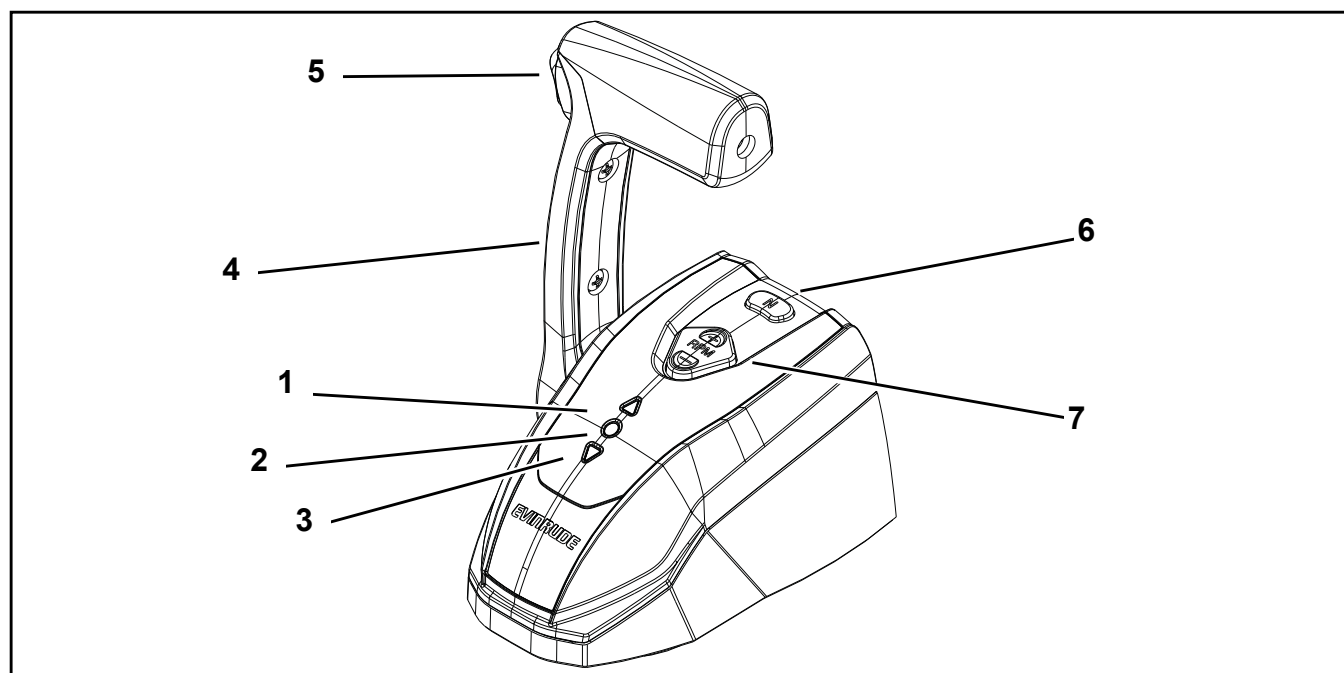
- One **ICON G2 Premium** Remote Control (DTM)
- One Ignition switch - key switch OFF/ON
- One emergency stop switch assembly w/lanyard
- One *ICON G2* 6-port hubs
- START/STOP switch for each engine on multiple engine installations
- One trim switch panel (3 or 4 engine installations only)
- One Remote Control Network backbone buss cable to connect the hubs
- One NMEA 2000 Network backbone buss cable
- *NMEA 2000* bus cables and Remote Control bus cables (as needed, see installation diagrams)
- Tee Connector(s), Y-Harnesses (as needed, see installation diagrams)

Remote Control Requirements: Second Station

Optional SECOND STATIONS require the following additional components:

- One **ICON G2 Premium** Remote Control (Premium STM / Premium DTM)
- One emergency stop switch
- START/STOP switch for each engine
- **ICON G2** 6-port hub (as needed / see installation diagrams)
- One trim switch panel (Three or Four engine installations only)
- **NMEA 2000** bus cables and Remote Control bus cables (as needed, see installation diagrams)
- Tee Connector(s), Y-Harnesses (as needed, / see installation diagrams)

ICON G2 Premium Single Top Mount Remote Control



	Features (Premium STM)	Function
1	FORWARD Gear Indicator LED	Turns BLUE when control lever is shifted into FORWARD gear.
2	NEUTRAL Indicator LED	Turns GREEN when control lever is shifted into NEUTRAL position.
3	REVERSE Gear Indicator LED	Turns BLUE when control lever is shifted into REVERSE gear.
4	Control Lever	Controls shift and throttle function (FORWARD, NEUTRAL, REVERSE).
5	Master Trim and Tilt Switch	Press to adjust trim setting of outboard.
6	N Neutral Throttle Switch	Press to disengage shift function. Allows for throttle only function.
7	RPM Switch	Press + or – to make slight adjustments to engine speed.

The **ICON G2 Premium Single Top Mount Remote Control (STM)** supports multiple station installations.

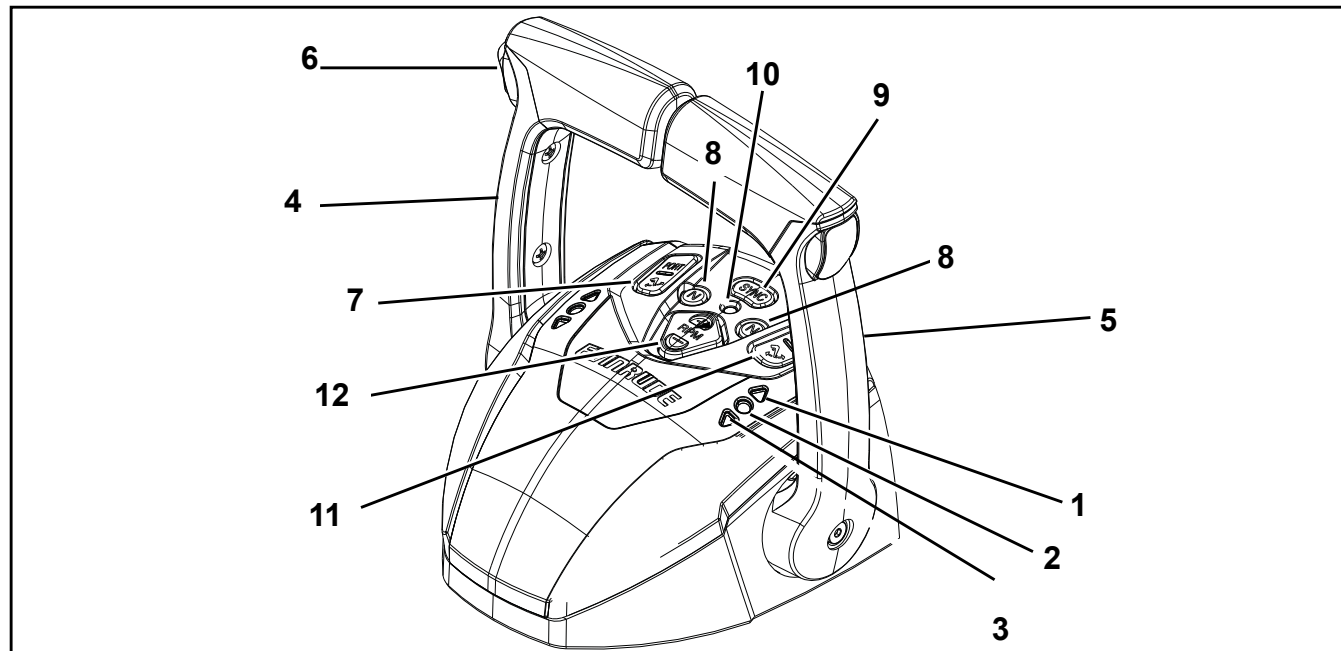
Additional features **ICON G2 Premium Single Top Mount (STM)** remote controls include:

- Analog sender connections for fuel tank(s) and auxiliary oil tank(s)

- Illuminated gear position indicator and RPM switch

Part Number (service replacement)	Application
766563	Single Engine / Single Station or Dual Station Use <i>Evinrude Diagnostics 6</i> for updating remote control firmware and for <i>ICON G2</i> system setup.

ICON G2 Premium Dual Top Mount Remote Control



	Features (Premium DTM)	Function
1	FORWARD Gear Indicator LED	Turns BLUE when control lever is shifted into FORWARD gear.
2	NEUTRAL Indicator LED	Turns GREEN when control lever is shifted into NEUTRAL position.
3	REVERSE Gear Indicator LED	Turns BLUE when control lever is shifted into REVERSE gear.
4	Port Control Lever	Controls shift and throttle function for port and center outboards. Functions as a “master” control lever when SYNC is engaged.
5	Starboard Control Lever	Controls shift and throttle function for starboard outboards.
6	Master Trim and Tilt Switch	Press to adjust trim setting of all outboards.
7	PORT Trim Switch	Press to trim or tilt the port outboard.
8	N (NEUTRAL Throttle Switch)	Press to disengage shift function. Allows for throttle only function.
9	SYNC Switch	Press to control 2 to 4 outboards with port control lever.
10	SYNC Indicator LED	Turns red when SYNC is active.
11	STBD Trim and Tilt Switch	Press to trim or tilt the starboard outboard.
12	RPM Switch	Press + or – to make slight adjustments to engine speed.

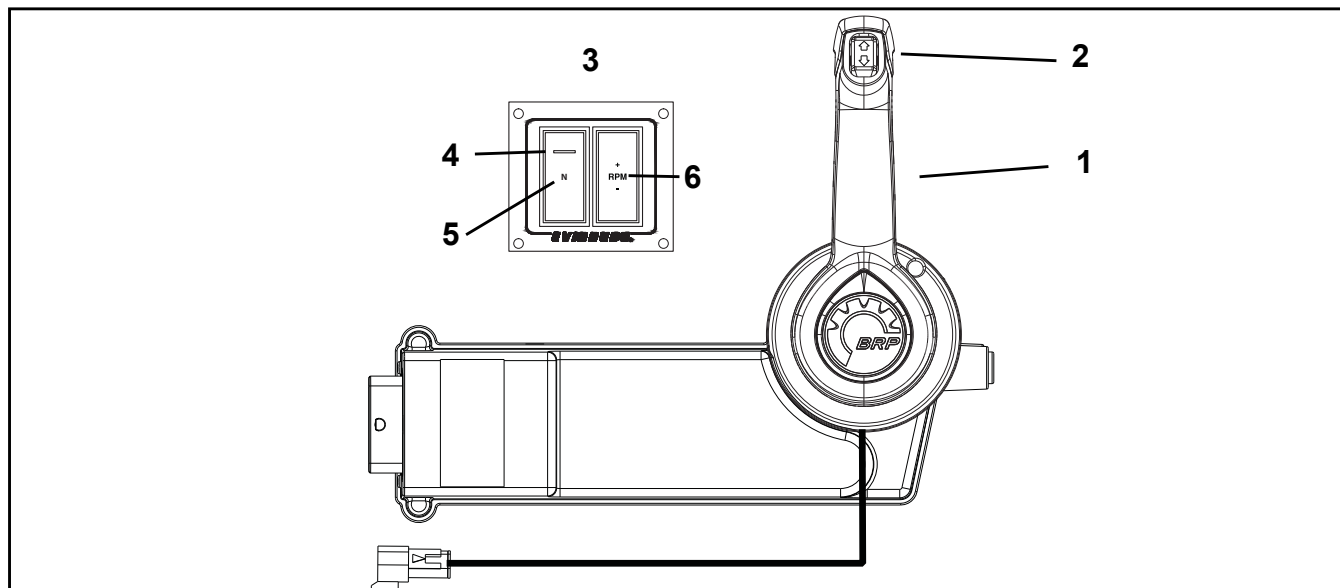
The **ICON G2 Premium Dual Top Mount Remote Control (DTM)** supports multiple station installations.

Additional features **ICON G2** Premium Dual Top Mount (DTM) remote controls include:

- Analog sending unit connections for fuel tank(s) and auxiliary oil tank(s)
- Illuminated gear position indicator and RPM tune switch

Part Number (service replacement)	Application
766564	Multiple Engine (two, three, four engines) Single Station or Dual Station Use Evinrude Diagnostics 6 for updating remote control firmware and for ICON G2 system setup.

ICON G2 Premium Concealed Side Mount Remote Control



	Features (Premium CSM)	Function
1	Control Lever	Controls shift and throttle function for outboard.
2	Master Trim Switch	Press to adjust trim setting of all outboards.
3	NEUTRAL / RPM Panel (optional)	NEUTRAL indicator LED, NEUTRAL and RPM switches.
4	NEUTRAL Indicator LED	Turns yellow when control lever is shifted into NEUTRAL position and flashes when NEUTRAL WARM-UP up is active.
5	NEUTRAL Switch (optional)	Press one time and advance lever for NEUTRAL warm-up and return lever to NEUTRAL position and press to deactivate.
6	RPM Switch (optional)	Press + or - to make slight adjustments to engine speed.

The **ICON G2 Premium Concealed Side Mount Remote Control** (CSM) supports single engine - single station installations and can **ONLY** be installed on the STARBOARD (right) side of gunwale.

Additional features **ICON G2** Premium Concealed Side Mount (CSM) remote controls include:

- Analog sending unit connections for fuel tank(s) and auxiliary oil tank(s)
- Foot Throttle connection (connects to accessory foot throttle kit)
- Mode and RPM switch connection (connects to optional switch panel)

Part Number (service replacement)	Application - STARBOARD Gunwale Mount ONLY
766565	Premium CSM Remote Control - Supports Single Engine / Single Station Use Evinrude Diagnostics 6 for updating remote control firmware and for ICON G2 system setup.
766282	Optional NEUTRAL and RPM Switch Panel adds “Neutral Fast Idle” and “RPM Tune”

ICON G2 Premium Remote Controls: Rigging Kits

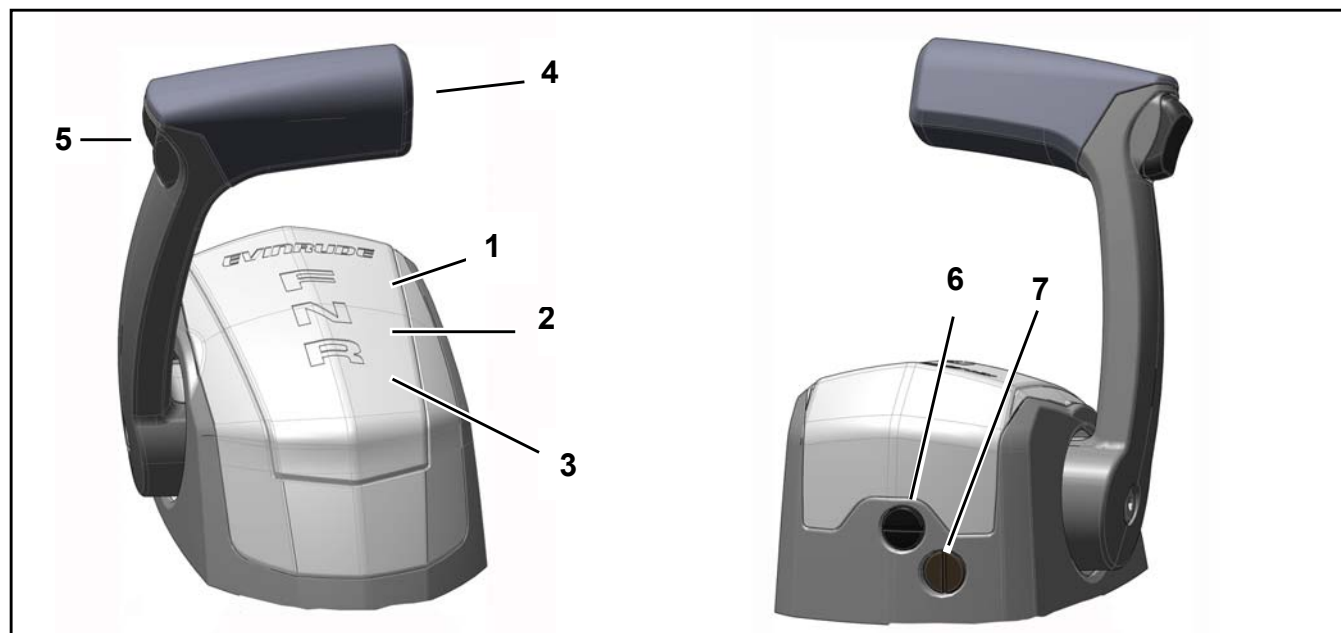
Step 1: Select number of engines to be installed on boat.	1		2	3	4
Step 2: Select the appropriate ICON G2 Premium Remote Control .	Concealed Side Mount (CSM)	Single Top Mount (STM) Binnacle	Dual Top Mount (DTM) Binnacle	Dual Top Mount (DTM) Binnacle	Dual Top Mount (DTM) Binnacle
Step 3: Select and Order P/N for main or single station rigging kit.	Rigging Kit P/N 768750	Rigging Kit P/N 768752	Rigging Kit P/N 768754	Rigging Kit P/N 768756	Rigging Kit P/N 768758
Main Station Rigging Kits include:					
ICON G2 Remote Control Assembly	766553	766563	766564	766564	766564
Remote Control wire harness	587224	587168	587225	587227	587227
Power Cable - Remote Control P/N 587184, 15 ft. (4.5 m)	587184	587184	587184	587184	587184
Power Extension Cable - Remote Control P/N 587185, 5 ft. (1.5 m)	—	—	587185	587185	587185
Network Tee Connector, P/N 764151 (quantity)	764151 (2)	764151 (2)	764151 (3)	764151 (4)	764151 (5)
Network Terminator Kit, P/N 764155	764155	764155	764155	764155	764155
ICON G2 6 port Hub, P/N 587172	—	—	—	587172	587172
NMEA 2000 Power Node and Tee, P/N 767433	767433	767433	767433	767433	767433
Engine Start / Stop Switch (2 Engine)	—	—	5010021	—	—
Engine Start / Stop Module (3 Engine / 4 Engine Module)	—	—	—	766559	766561
Trim Switch Panel (3 Engine / 4 Engine Module)	—	—	—	766583	766584
Private Network Backbone Cable: P/N 587174 20 ft. (6.1 m), P/N 587175 25 ft. (7.6 m)	587174	587175	587175	587175	587175
Private Network Extension Cable, P/N 587180 15 ft. (4.57 m)	—	—	—	587180	587180
Public Network Backbone Cable 25ft (7.4 m), P/N 764163	764163	764163	764163	764163	764163
Public Network Extension Cable, P/N 769948 10ft (3 m), P/N 764162 15 ft. (4.5 m)	769948	769948	764162	764162	764162
Public Network Cable Extension, P/N 765132 2ft (0.6 m),	765132	765132	765132	765132	765132
ICON// Remote Control User's Guide	356585	357738	356583	356583	356583
ICON// Remote Control Installation Instructions	356584	356582	356582	356582	356582
Step 4: Select / Order Ignition Switch and Emergency Stop Switch Kit(s) As Required					
Ignition Switch and Stop Lanyard Panel - Vertical	768841	768841	768846	768842	768842
Ignition Switch and Stop Lanyard Panel - Horizontal	768746	768746	768748	768747	768747
Ignition Switch Panel and Stop Lanyard Panel - Square	768844	768844	768866	768845	768845
Ignition Switch and Stop Lanyard - No Panel	768843	768843	—	—	—
Step 5: Select Battery Cables by Length					
Battery Cables Assembly G2: 10 ft., 15 ft., 20 ft.	587205 10 ft. 4 gauge 587301 15 ft. 2 gauge 587302 20 ft. 2 gauge				
Step 6: Select TBX Propeller Hub Kit					
TBX Propeller Hub Kit.	767683	767683	767683	767683	767683

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ICON G2 Premium Remote Controls: Rigging Kits

Step 7: Order Displays & Gauges	1 Engine	1 Engine	2 Engines	3 Engines	4 Engines
ICON 3.5 inch (CS digital display)	Accessory Option	Accessory Option	–	–	–
ICON Touch 4.3 inch (CTS digital display)	Accessory Option	Accessory Option	Accessory Option	–	–
ICON Touch 7 inch (CTS digital display)	Accessory Option	Accessory Option	Accessory Option	Accessory Option	Accessory Option
ICON PRO (digital display)	Accessory Option	Accessory Option	Accessory Option	Accessory Option	Accessory Option
SystemCheck (analog gauge) Requires the use of accessory Analog to Digital Converter, P/N 766287 PORT engine, and P/N 766611 for STARBOARD engine.	Accessory Option	Accessory Option	Accessory Option	–	–
Step 8 (Second Station option): Order P/N for second station rigging kit.	–	1 Engine	2 Engines	3 Engines	4 Engines
Second Station Rigging Kits Include:	CSM Rigging Kit Not Available	STM Rigging Kit P/N 767983	DTM Rigging Kit P/N 767985	DTM Rigging Kit P/N 767987	DTM Rigging Kit P/N 767989
ICON// Remote Control, P/N	–	766563	766564	766564	766564
Remote Control wire harness	–	587168	587225	587227	587227
ICON 6 port Hub, P/N 587172	–	587172	587172	587172	587172
Battery Harness Adapter	–	766596	766596	766596	766596
Power Cable - Remote Control P/N 587184, 15 ft (4.57 m)	–	587184	587184	587184	587184
Private Network extension cable: P/N 587180 15 ft (4.57 m), P/N 587181 20 ft (6.1 m)	–	587180	587180	587181	587181
Public Network extension cable P/N 764162 15 ft. (4.57 m)	–	764162	764162 (2)	764162 (3)	764162 (4)
Network Tee Connector, P/N 764151 (quantity 1)	–	764151 (1)	764151 (1)	764151 (1)	764151 (1)
Step 9 (Second Station option): Select / Order Ignition Switch and Emergency Stop Switch Kit(s) As Required	–	1 Engine	2 Engines	3 Engines	4 Engines
Engine Start Switch and Emergency Stop Switch	–	766555	766558	–	–
Emergency Stop Switch Panel, P/N	–	766560	766560	766560	766560
Engine Start Switch Panel, P/N	–	–	–	766559	766561
Trim Switch Panel, P/N	–	–	–	766583	766584
Step 10 (Second Station option): Order Displays / Gauges for second station	–	1 Engine	2 Engines	3 Engines	4 Engines
ICON 3.5 inch (CS digital display)	–	Accessory Option	–	–	–
ICON Touch 4.3 inch (CTS digital display)	–	Accessory Option	Accessory Option	–	–
ICON Touch 7 inch (CTS digital display)	–	Accessory Option	Accessory Option	Accessory Option	Accessory Option
ICON PRO (digital display)	Accessory Option	Accessory Option	Accessory Option	Accessory Option	Accessory Option
SystemCheck (analog gauge) Order <i>ICON G2</i> to SystemCheck Gauge Converter Kit, P/N 766287 PORT engine; and P/N 766611 for STARBOARD engine.	Accessory Option	Accessory Option	Accessory Option	–	–
NOTE: All of the accessories connected to the Accessory Power Output harness of remote control harness should not exceed 5 amps in total . Use the <i>NMEA 2000</i> Power Node Kit and Y-harness to provide power to accessories connected to the <i>NMEA 2000</i> Network.					

ICON G2 Single Top Mount Remote Control Features



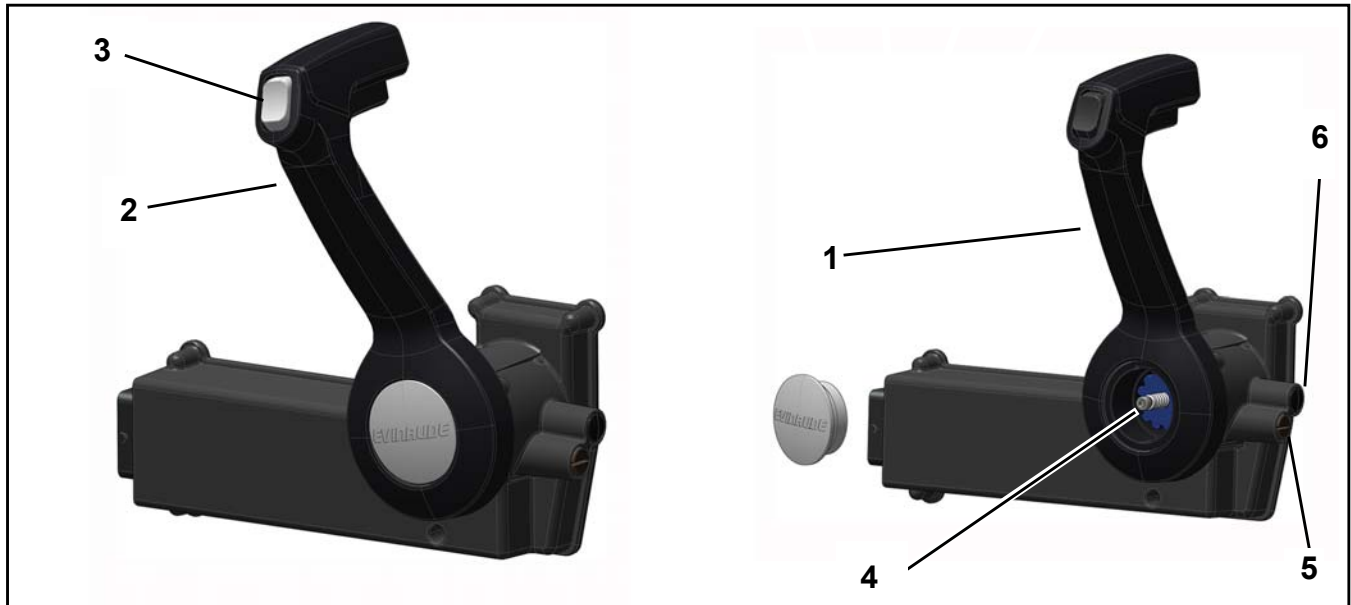
	Features (STM)	Function
1	FORWARD label	Control lever is shifted into FORWARD gear.
2	NEUTRAL label	Control lever is shifted into NEUTRAL position.
3	REVERSE label	Control lever is shifted into REVERSE gear.
4	Control Lever	Controls shift and throttle function.
5	Power Trim and Tilt Switch	Press to adjust power trim and tilt setting of outboard.
6	Shift Detent adjustment	Turn clockwise to increase friction and counter clock wise to reduce friction.
7	Throttle Friction adjustment	Turn clockwise to increase friction and counter clock wise to reduce friction.

The **ICON G2 Single Top Mount Remote Control (STM)** supports **single engine - single station** installations; and provides gauge and wiring connections for an analog tachometer and trim gauge. To install with an analog fuel level sending unit or an analog oil level sending unit (for a auxiliary oil tank), use fluid level sensor(s), P/N 768916. Configure converter to support fuel or oil level display on digital displays on the **NMEA 2000** network. This **ICON II** remote control includes wiring:

- 8 pin connector for connection to a SystemCheck 3.5 inch tachometer or *SystemCheck* 2 inch gauge.
- Universal Tachometer wiring
- Analog trim and tilt gauge sending unit wiring

Part Number (service replacement)	Application
5010253	Single Engine / Single Station: Use Evinrude Diagnostics 6 for updating remote control firmware and for ICON G2 system setup.

ICON G2 Concealed Side Mount Remote Control



	Features (CSM)	Function
1	NEUTRAL	Control lever in NEUTRAL position.
2	Control Lever	Controls shift and throttle function for outboard.
3	Power Trim and Tilt Switch	Press to adjust trim setting of all outboards.
4	Control Lever Friction adjustments	Turn one quarter of a turn at a time by hand to prevent over tightening. Turn clockwise to increase friction and counter clock wise to reduce friction.
5	Throttle Friction adjustment	Turn clockwise to increase friction and counter clock wise to reduce friction.
6	Shift Detent adjustment	Turn clockwise to increase friction and counter clock wise to reduce friction.

The **ICON G2 Concealed Side Mount Remote Control (CSM)** supports **single engine - single station** installations and can **ONLY** be installed on the STARBOARD (right) side of gunwale. It provides gauge and wiring connections for an analog tachometer and trim gauge; and a connection for an optional foot throttle. To install with an analog fuel level sending unit or an analog oil level sending unit (for a auxiliary oil tank), use fluid level sensor(s), P/N 768916. Configure converter to support fuel or oil level display on digital displays on the NMEA 2000 network. This **ICON G2** remote control Includes wiring:

- 8 pin connector for connection to a SystemCheck 3.5 inch tachometer or SystemCheck 2 inch gauge.
- Universal Tachometer wiring
- Analog trim and tilt gauge sending unit wiring
- Foot Throttle connector (connects to accessory foot throttle kit)

NOTE: Does not support the use of an accessory NEUTRAL and RPM Switch Kit.

Part Number (service replacement)	Application
5010252	Single Engine / Single Station: Use Evinrude Diagnostics 6 for updating remote control firmware and for ICON G2 system setup.

Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Remote Control Rigging Kits

ICON G2 Remote Control Rigging Kits

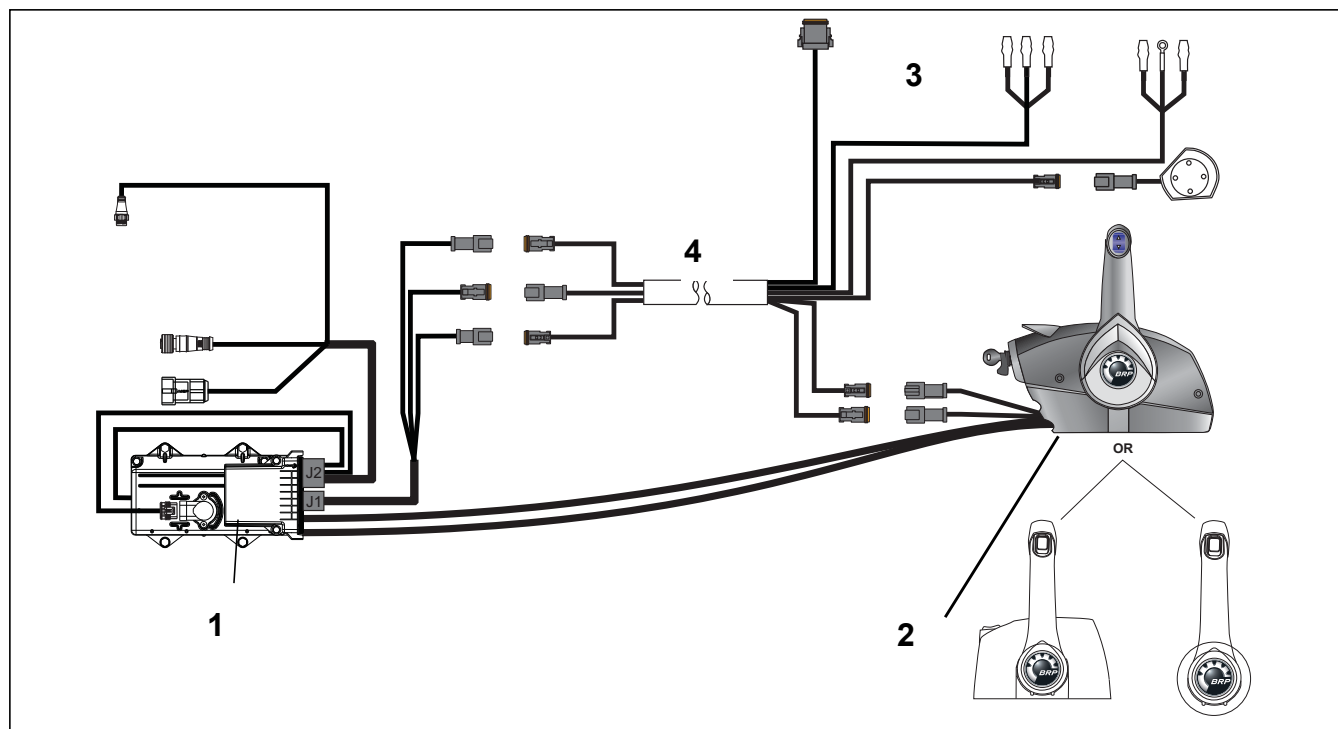
Step 1: Supports installation of ONE (1) engine	1	
Step 2: Select the appropriate ICON G2 Remote Control - STM, CSM	Concealed Side Mount (CSM)	Single Top Mount (STM) Binnacle
Step 3: Select and Order Part Number (P/N) for main or single station rigging kit.	Rigging Kit P/N 769011	Rigging Kit P/N 769010
Main Station Rigging Kits include:		
<i>ICON G2</i> Remote Control Assembly	5010252	5010253
Remote Control wire harness	587344	587375
Power Cable - Remote Control, P/N 587184 15 ft. (4.57 m)	587184	587184
Power Extension Cable - Remote Control, P/N 587185 5 ft. (1.5 m)	—	—
Network Tee Connector, P/N 764151 (order as needed)	764151 (2)	764151 (2)
Network Terminator Kit, P/N 764155	764155	764155
<i>ICON G2</i> port Hub, P/N 587172	—	—
<i>NMEA 2000</i> Power Node Kit, P/N 767433	767433	767433
Private Network Backbone Cable: P/N 587174 20 ft. (6.1 m), P/N 587175 25 ft. (7.6 m)	587174	587175
Private Network Extension Cable 15 ft. (4.57 m), P/N 587180	—	—
Public Network Backbone Cable 25 ft. (7.4 m), P/N 764163	764163	764163
Public Network Extension Cable, P/N 769984 10 ft. (3 m) included in kit	769948	769948
Public Network Cable Extension, P/N 765132 2 ft. (0.6 m)	765132	765132
<i>ICON G2</i> Remote Control User's Guide, P/N	359148	359148
Installation Instructions Included, P/N	359147	359147
Step 4: Select & Order Ignition Switch and Emergency Stop Switch Kit(s)		
Ignition Switch and Stop Lanyard Panel - Vertical	768841	768841
Ignition Switch and Stop Lanyard Panel - Horizontal	768746	768746
Ignition Switch Panel and Stop Lanyard Panel - Square	768844	768844
Ignition Switch and Stop Lanyard - No Panel	768843	768843
Step 5: Select Battery Cables by Length		
Battery Cables Assembly - E-TEC G2: 10 ft (3 m), 15 ft. (4.57 m), 20 ft (6.1 m)	587205 10 ft. 4 gauge 587301 15 ft. 2 gauge 587302 20 ft. 2 gauge	
Step 6: Select TBX Propeller Hub Kit		
TBX Propeller Hub Kit.	767683	767683
Step 7: Order Displays & Gauges		
SystemCheck (analog gauge)	Accessory Option	Accessory Option
ICON 3.5 inch (CS digital display)	Accessory Option	Accessory Option
ICON Touch: 4.3 inch (CST digital display)	Accessory Option	Accessory Option
ICON Touch: 7 inch (CST digital display)	Accessory Option	Accessory Option
ICON PRO (digital display)	Accessory Option	Accessory Option
NOTE: All of the accessories connected to the Accessory Power Output harness of remote control harness should not exceed 5 amps in total . Use the <i>NMEA 2000</i> Power Node Kit and Y-harness to provide power to accessories connected to the <i>NMEA 2000</i> Network.		

Universal Control Module Conversion Kit

A Universal Control Module (UCM) Conversion Kit is required to allow the use of a mechanical remote control on *Evinrude E-TEC G2* model outboards. Refer to the installation instructions provided with the UCM Kit for detailed instructions.

Features:

- The Universal Control Module (UCM) Conversion Kit is designed for single station installations
- Supports **analog** *SystemCheck* tachometers and trim gauges
- Boat mounted module must be located within reach of control cables and the Modular Wiring System (MWS) harness. Must use MWS harness, non-Evinrude wire harnesses can not be used.
- Redundant network connections to the outboard (private network and public network connections)



1. Universal Control Module, P/N 5008963
2. Mechanical Remote Control
3. Analog Gauge Connections
4. Modular Wiring System harness

This Universal Control Module (UCM) Conversion Kit supports single station installations and provides connections for an analog tachometer, and power trim and trim gauge (digital to analog conversion.) If a NON-BRP mechanical remote control is used, the shift stroke must be 1.125 to 1.330 in. (28.6 to 33.8 mm) between NEUTRAL and FORWARD and the throttle stroke must PUSH for opening the throttle.

Installation of this “UCM” remote control conversion kit with an analog fuel level sender or an analog oil level sender for a remote oil tank; requires the installation of a fluid level converter(s), P/N 768452; and proper converter configuration to support the display of fuel or oil levels on the digital gauges connected to the NMEA 2000 network. UCM Conversion Kit includes:

- 8 pin SystemCheck tachometer connector
- Universal Tachometer wiring
- Analog trim gauge sender wire
- Warning Horn

Network Specifications

The following tables list the specifications for the *NMEA 2000* and the *ICON II* Remote Control System:

Supply Voltage (Boat System- 12 volt)	9 to 18 VDC
Fuse, Remote Control Power Cable (12 volt)	10 Amp, ATO Type, P/N 967545
Remote Control Network Operating Voltage (Private CANbus)	5 VDC
Engine Control	1, 2, 3, or 4 outboards
Reverse Polarity Protection	Continuous
Network Interface	Proprietary
Operating Temperature Range	-13° to 167° F (-25° to 75° C)
Maximum Current Draw - key switch OFF	10µA
Maximum number of devices on the Remote Control Network (Private CANbus)	10
Maximum number of devices on the <i>NMEA 2000</i> Network (Public CANbus)	50
Maximum <i>NMEA 2000</i> Network Bus Length	328 ft. (100 m)
<i>NMEA 2000</i> Network individual device cable length	19 ft. (6 m) maximum
Total <i>NMEA 2000</i> Network device cable length	256 ft. (78 m)

Load Equivalency

NMEA 2000 Network must have the correct balance of power in the network. A unit of one load equivalency number (LEN) is equal to 50mA or less of power consumed from the network. A device that consumes 0.051 ampere has a load equivalency number (LEN) of 2 (LEN = 2).

Maximum *NMEA 2000* Network voltage drop formula:

Cable resistance (ohm) X total network distance (meters) X LEN (load) x 0.1 = **less than 3.0 VDC**

The table below lists load equivalency number (LEN) for accessory devices.

Device	Load Equivalency Number (LEN)
<i>Evinrude E-TEC</i> G2 Engine Management Module (EMM)	1
<i>ICON Touch</i> displays	1
<i>ICON Pro</i> gauge	1
<i>ICON G2</i> Remote Control	2
<i>ICON G2</i> Premium Remote Control	4
<i>Evinrude E-Link</i>	7
Navico EP Sensors (fluid level, temperature, pressure)	1
Navico LMF-200 (<i>Evinrude I-Command</i> display)	4
Navico LMF-400 (<i>Evinrude I-Command</i> display)	4
Navico (Lowrance) HDS series	1

Navico (Lowrance) GPS Antenna	1
Raymarine multi-function displays (see manufacturer's specification)	1
Simrad multi-function displays (see manufacturer's specification)	1

Compass Safe Distance

The table below lists the minimum distance a compass should be installed from certain *ICON* network devices.

Device	1 Degree Deflection	0.3 Degree Deflection
<i>ICON</i> G2 Concealed Side Mount Remote Control	8 in. (200 mm)	12 in. (300 mm)
<i>ICON</i> G2 Single Lever Binnacle Mount Remote Control	8 in. (200 mm)	12 in. (300 mm)
<i>ICON</i> G2 Dual Lever Binnacle Mount Remote Control	12 in (300 mm)	16 in. (400 mm)

Bus Wiring and Cable Requirements

The following table lists the wiring specifications for *NMEA 2000* Network and *ICON* G2 Remote Control System:

NMEA 2000 Cable (Light/Micro Bus)	Specification
Maximum Current	3 Amps
Resistance - Power Wire(s)	5.40 Ω per 100 M
Power Wire Size	22 AWG
Data Wire Size	24 AWG
NMEA 2000 Wire Designation	Color
Power supply (+VDC)	Red
Ground (–VDC)	Black
Shield (Drain)	Bare
Data HI (Signal)	White
Data LOW (Signal)	Blue
ICON Wire Designation	Color
Power supply (+VDC)	Red
Ground (–VDC)	Black
Data HI (Signal)	White
Data LOW (Signal)	Blue
Stop Circuit	Black/Yellow
Stop Circuit (Return)	Black/White

Power Supply and Ground Connections

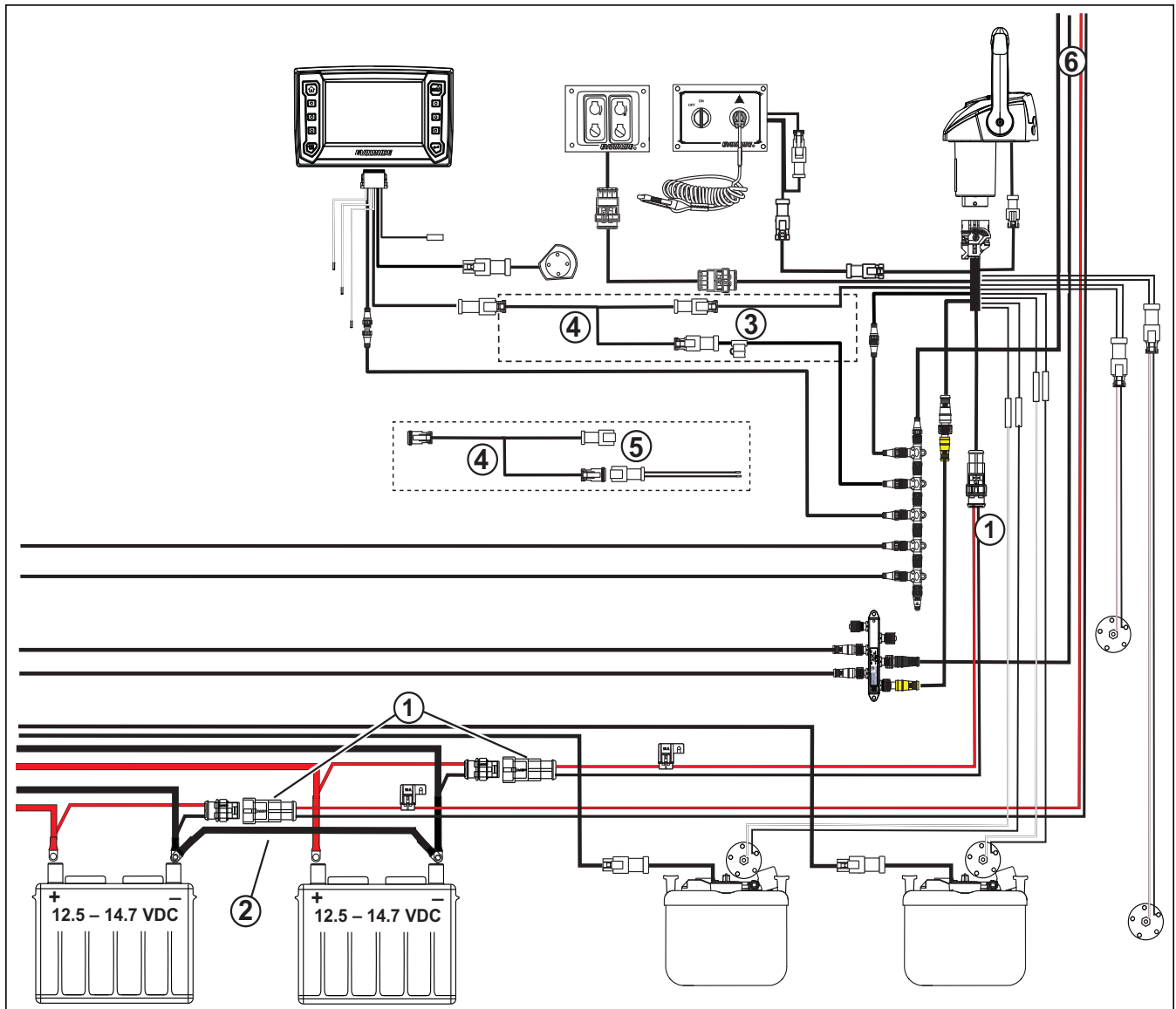
Each *ICON* G2 Remote Control must be grounded at a SINGLE location. Connect the Remote Control power cable for each remote control directly to the engine battery as shown in rigging diagrams.

All of the accessories connected to the Accessory Power Output harness (switched 12 volts) of remote control harness should not exceed **5 amps in total**. Use the *NMEA 2000* power node kit and addition Y-harnesses to provide power to accessories connected to the *NMEA 2000* Network.

DO NOT make “community” ground connections for devices on the *ICON* G2 Remote Control System. Devices connected to the *ICON* G2 Remote Control must connect to the connectors on the *ICON* G2 remote control harness and must connect through the *NMEA 2000* Power Node Kit. Making separate digital ground connections on the system can create “ground loops” which can compromise the performance of the system.

Connect the negative terminals of the engine batteries together using high quality battery cables. Installing this cable(s) between the engine batteries provides a key element of the grounding for the remote

controls, the engines, and the electrical system of the boat. Make all power connections using correctly sized wiring and connectors and seal all connections to prevent corrosion or water intrusion.

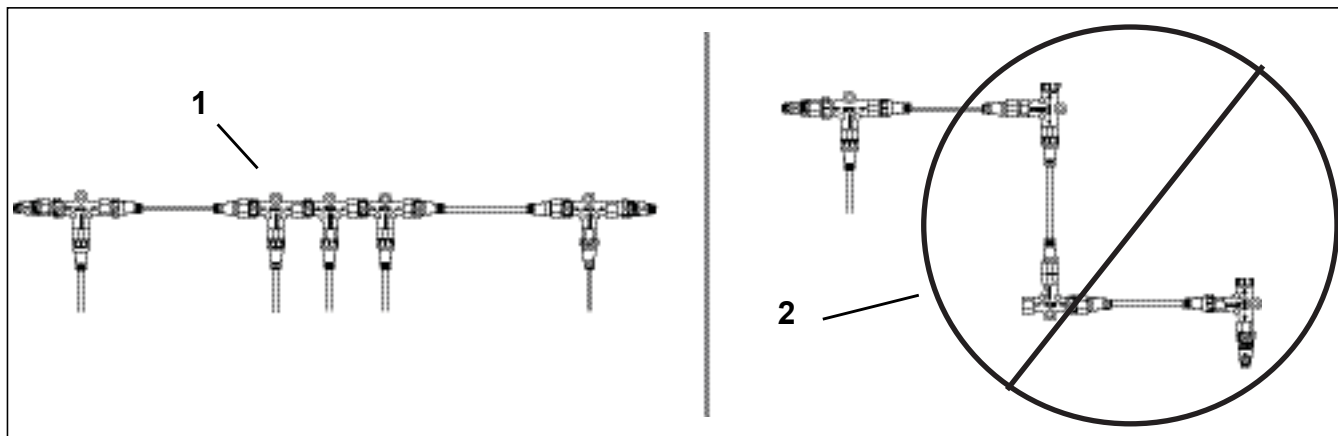


Power Cables and Ground Connections

1. Remote Control Power Cables
2. Negative Battery Cable Connections (use with multiple battery installations)
3. NMEA 2000 Power Node Kit (Accessory Power Output harness switched 12 volts)
4. Y-harness, P/N 587230
5. Device Harness (use to power NMEA 2000 Network approved accessories)
6. Cables to second station remote control

NMEA 2000 Network Assembly

Assemble the *NMEA 2000* Network in a line using a “linear architecture.” Maintain the linear architecture whenever a tee connector, bus cable, or device is added.

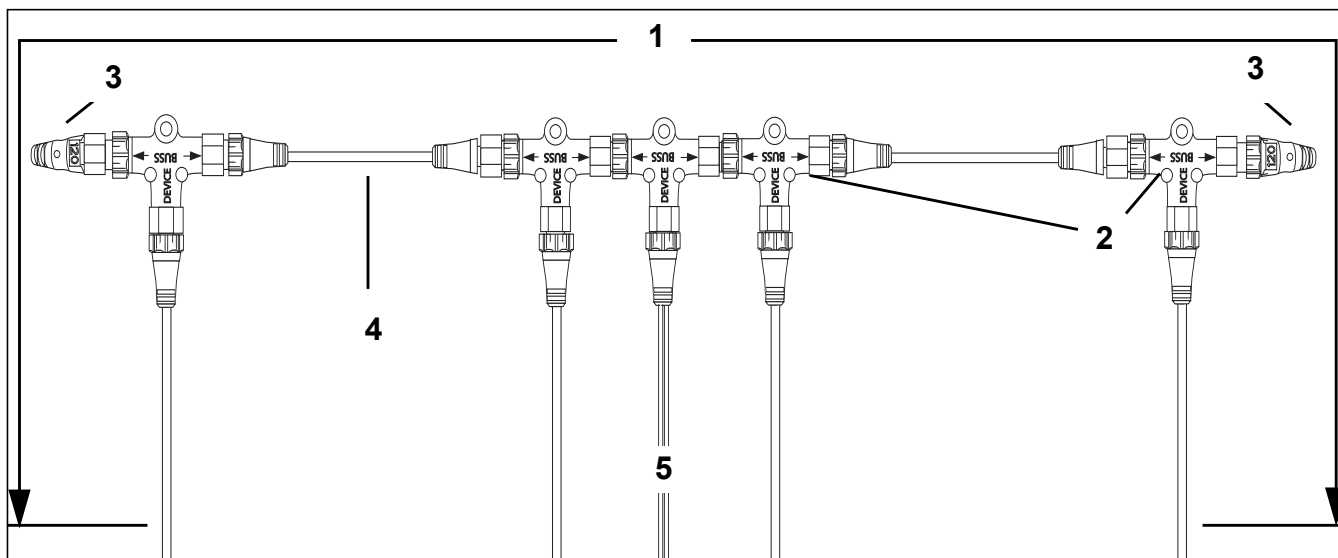


NMEA 2000 Network - Linear Architecture

008634

1. Linear architecture
2. Incorrect Tee connector assembly

NMEA 2000 Network components consist of: Tee connectors, Terminators (Male / Female), Bus Cables, Power supply cables, device connectors.

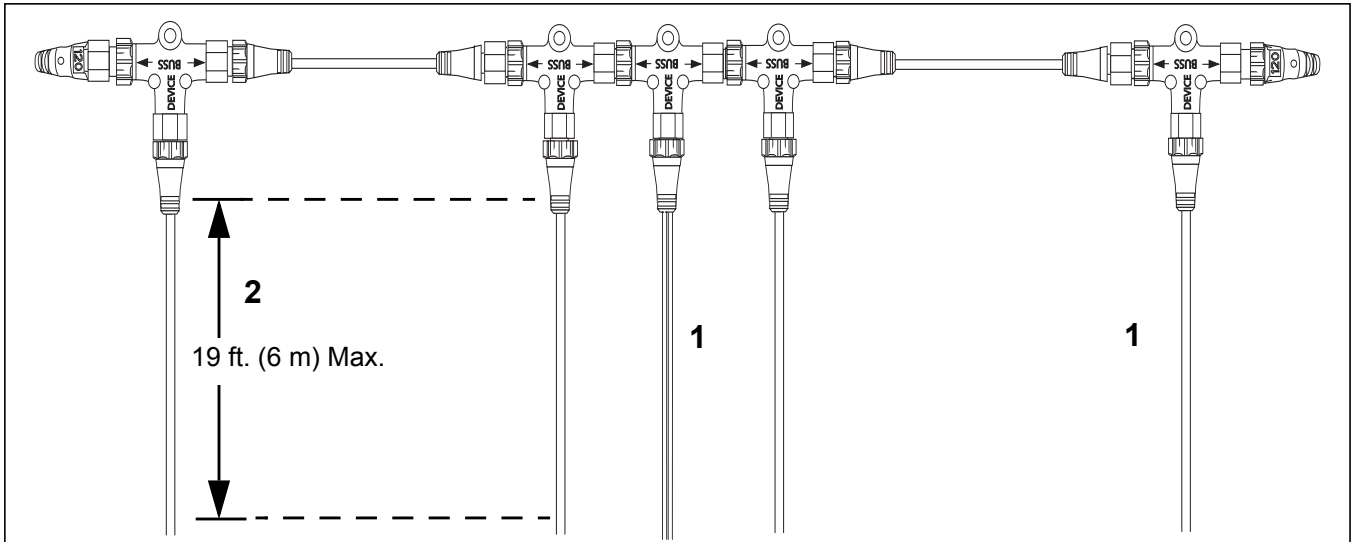


NMEA 2000 Network Diagram - Components

008635

1. Maximum Length - 328 ft (100 m)
2. Tee Connector(s)
3. Terminators (Male / Female)
4. Bus Cable
5. Power Supply Cable

NMEA 2000 Network device cable lengths must not exceed 6 meters (19 ft.) for single device cable lengths and must not exceed 78 meters (256 ft.) for total device cable lengths.



NMEA 2000 Network Diagram - Device cables

008635

1. Device cables
2. Maximum Length - 19 ft (6 m)

Open Device Connectors

When installing a *ICON G2* Remote Control System:

- Install a terminator at each end of the *NMEA 2000* Network. A terminator kit, P/N 764155, provides the required parts.
- Remove or seal unused network tee connectors.
- Install protective covers on “open” or unused *ICON G2* 6- port hub connectors.

Engine Monitoring

All *Evinrude E-TEC G2* outboards installed with remote controls must be equipped with engine monitoring to alert the operator of conditions that could damage the outboard.

IMPORTANT: Operating the outboard without an engine monitoring will void the warranty for failures related to monitored functions.

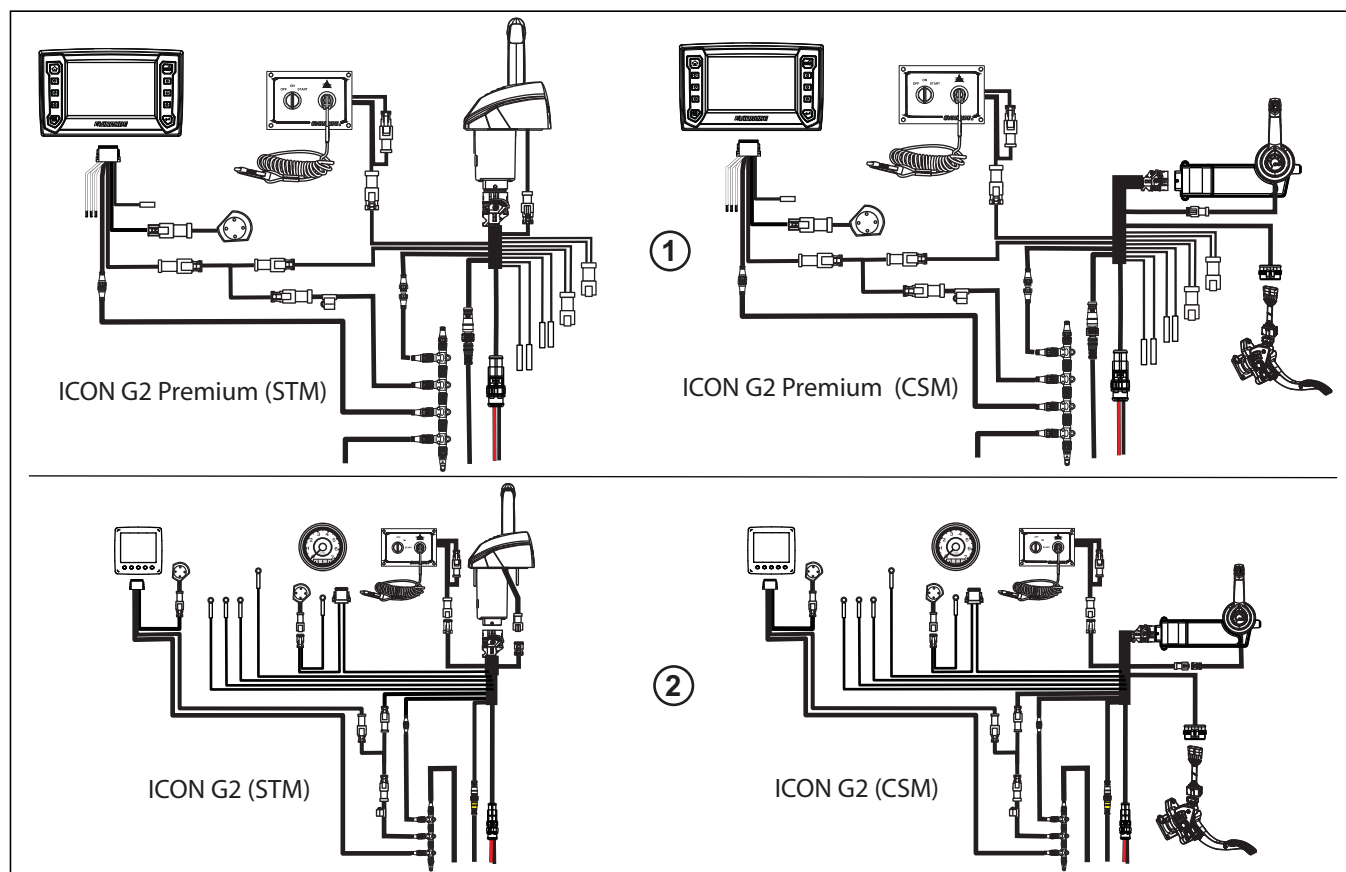
The engine monitoring includes:

- A dash-mounted display, warning horn and related network wiring
- The engine's Engine Management Module (*EMM*); and sensors on the engine and the oil tank.

The outboard's *EMM* sends information about monitored functions to:

- *ICON G2 Premium Remote Control* and digital displays
- *ICON G2 Premium Remote Controls* and *SystemCheck* gauge installed with a digital to analog converter.
- *ICON G2 Remote Control Series* installed with a *SystemCheck* gauge. This provides analog to digital conversion for the *SystemCheck* gauge.
- *ICON G2 Remote Control* installed with *ICON* digital display.

ICON G2 Remote Controls and *Universal Control Module (UCM) Conversion Kits* have digital to analog converters built into their electronic modules and include wiring connectors which allow installation with a *SystemCheck* gauge; or can be used with *ICON G2* digital display.



Engine Monitoring

1. *ICON G2 Premium Remote Controls*

2. *ICON G2 Remote Control - SystemCheck gauge or digital display*

Displays and Gauges

Evinrude ICON digital displays are designed specifically for *Evinrude E-TEC G2* outboards. These multiple functional digital displays provide access to information on the CANbus networks. Refer to the User's Guides provided with display for addition installation and setup information.

Evinrude ICON digital displays can be used with a *ICON G2 Remote Control System*; or a *Universal Control Module (UCM) Conversion Kit* which is connected to a mechanical remote control system.

***ICON* Digital Displays - 3.5 inch CS, 4.3 inch CTS, and 7 inch CTS**

ICON displays provide easy to access information.

Features	Functions
Homepage	General cruising and performance information including RPM, trim level, engine water temperature, fuel economy MPG, and boat speed.
Multi-language	English, French, Italian, German, Spanish.
Fuel Level and Fluids Page	Precise readouts of fuel levels up to 4 tanks, engine oil levels and water tanks (up to 3 types).
Engine Page	In-depth monitoring of engine operating conditions
Vessel Page	Accurate readouts of battery voltage, boat speed, and fuel economy.
Trip Logs	Offers detailed information regarding trip distance, fuel economy, average speed and more.
ECOVIEW Page	Fuel management information allows the user to optimize engine throttle and trim adjustment for instant changes and the most efficient operation.
Mode Control	Adjustments to power steering, trim assist and for concealed side mount, switching between hand and foot throttle operation.
Accessories	Engine water pressure, depth, Speed over Water (SOW) and water temperatures of seawater, livewell and bait well.
Fault Code	Descriptive text for engine fault codes and procedures.



ICON 3.5 inch CS, ICON Touch 4.3 inch CTS and 7.0. inch CTS Displays

Evinrude E-TEC G2 Rigging & Setup Guide

Displays and Gauges

ICON Digital Displays - Connection Diagram

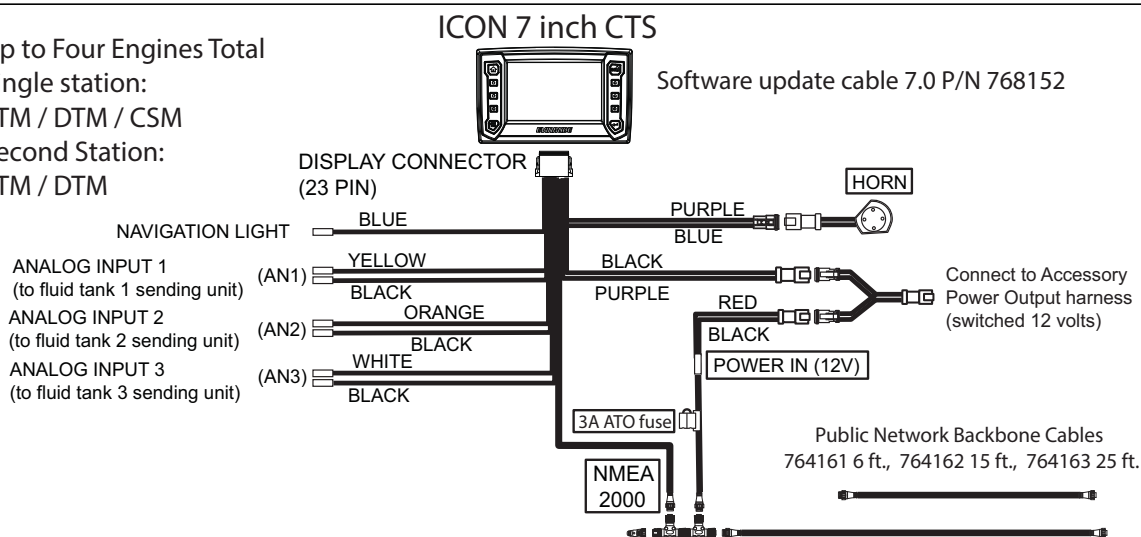
Up to Four Engines Total

Single station:

STM / DTM / CSM

Second Station:

STM / DTM



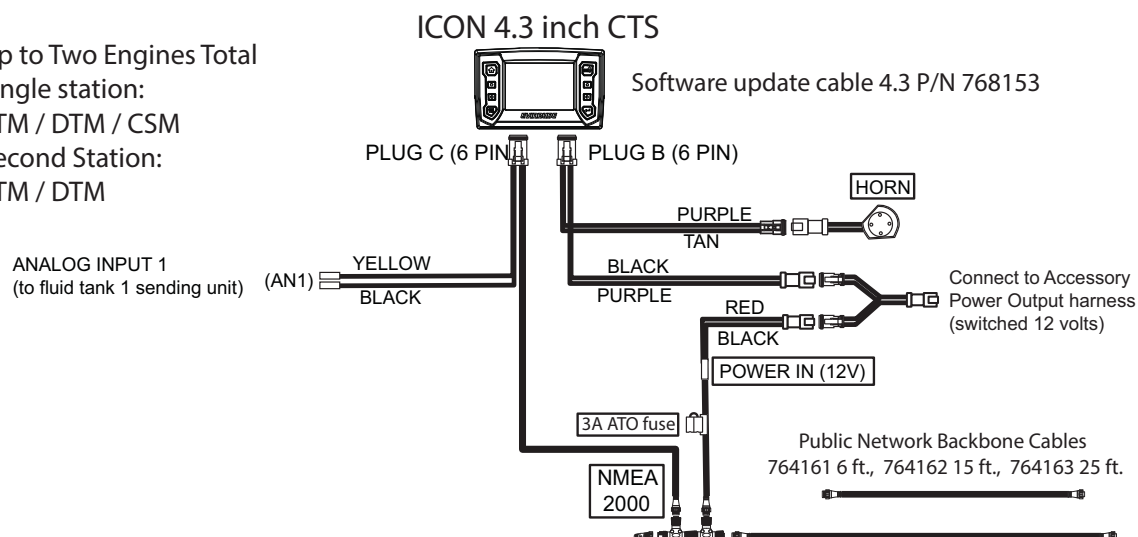
Up to Two Engines Total

Single station:

STM / DTM / CSM

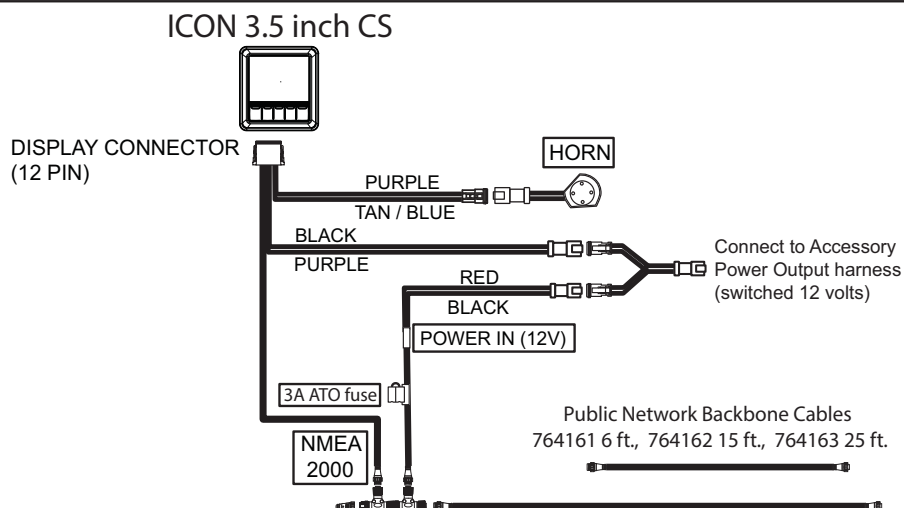
Second Station:

STM / DTM



Single Engine

STM / CSM



Reference diagram for ICON Displays (ICON 3.5 inch CS, ICON Touch 4.3 inch CTS and 7.0. inch CTS)

ICON PRO Gauges

The *ICON Pro* series of gauges offer an LCD display with an analog appearance. Functions including GPS speed, fuel management, fuel economy, trip logs and connects directly into the existing *NMEA 2000* network. These gauges can be used on Evinrude E-TEC G2 (and Evinrude E-TEC 40 hp through 300 hp outboards); supports up to 4 engines and up to 4 fuel tanks; and displays engine fault codes.

NOTE: *ICON Pro* gauges do NOT support Evinrude E-TEC G2 foot throttle transfer.



ICON Pro Display

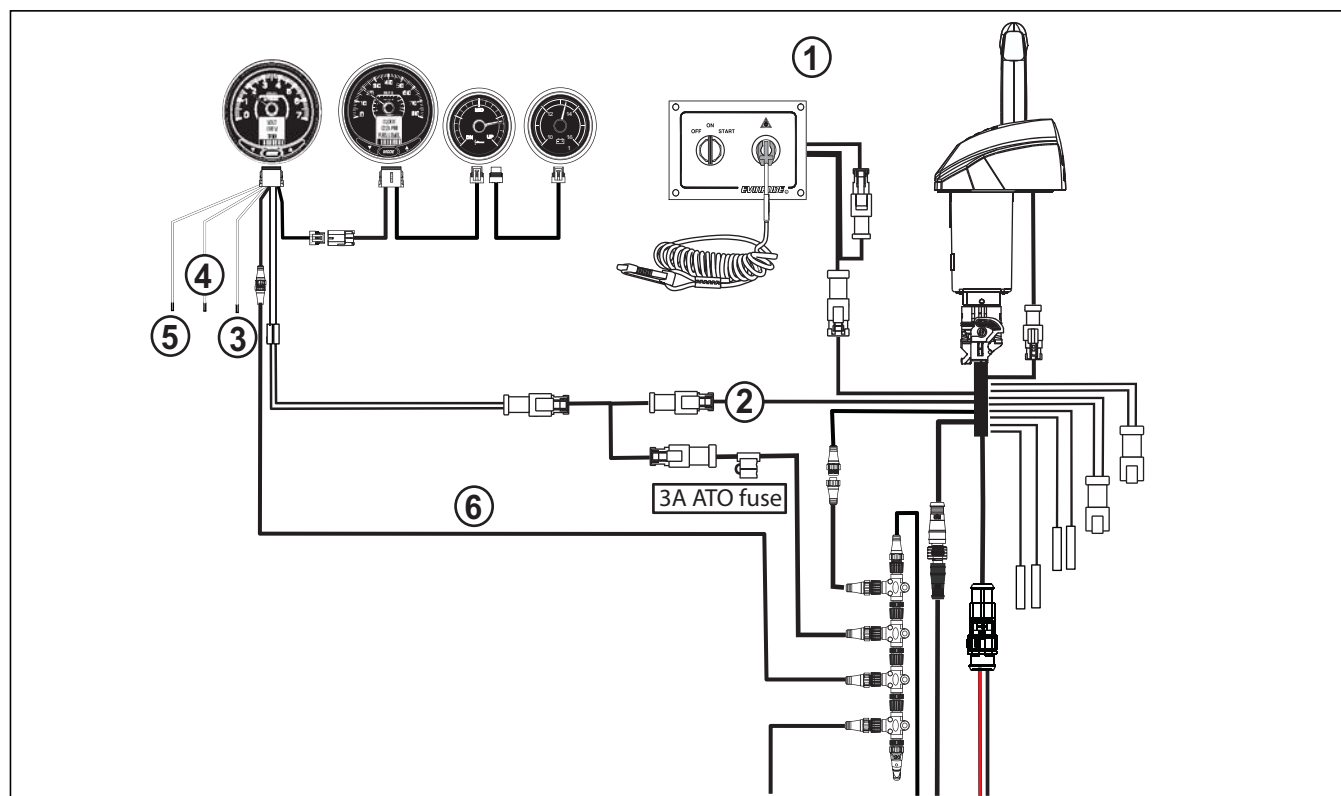
Evinrude E-TEC G2 Rigging & Setup Guide

Displays and Gauges

ICON Pro Gauges - *ICON G2 Premium Single Top Mount Remote Control (STM)* Connections Diagram

This sample diagram shows the connections of *ICON Pro* gauges to a *ICON G2 Premium Single Top Mount Remote Control (STM)*.

- The accessory power output connection provides the switched 12 volt power supply.
- White Analog IN 1 wire (pin #6) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 2 wire (pin #7) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 3 wire (pin #8) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.

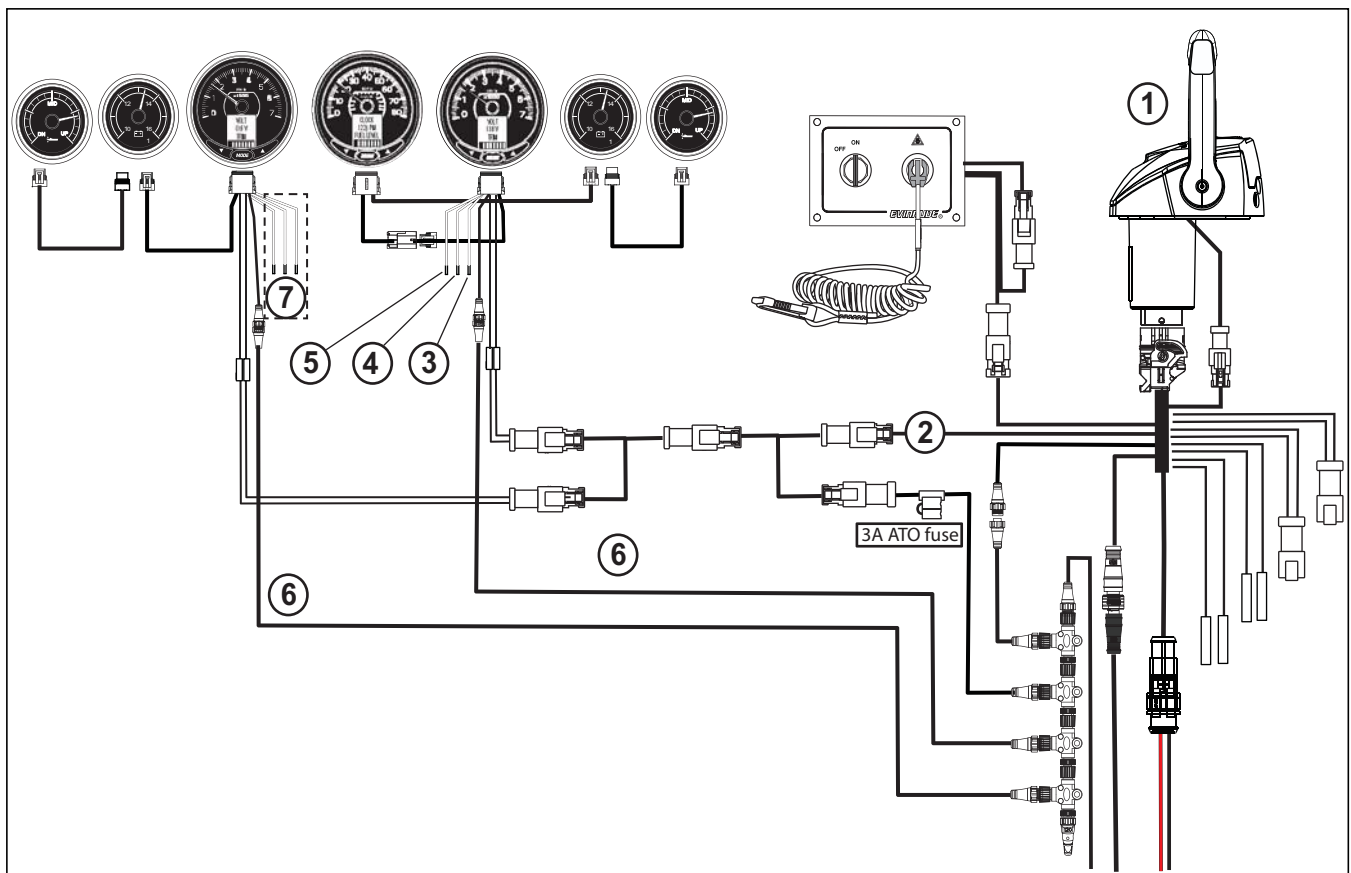


1. *ICON G2 Premium Single Top Mount Remote Control (STM)*
2. *Accessory Power Output*
3. *White Analog IN 1 wire (pin # 6)*
4. *White Analog IN 2 wire (pin # 7)*
5. *White Analog IN 3 wire (pin # 8)*
6. *NMEA 2000 Network connection*

ICON Pro Gauges - *ICON G2 Premium Dual Top Mount Remote Control (DTM)* Connections Diagram

This sample diagram shows the connections of *ICON Pro* gauges to a *ICON G2 Premium Dual Top Mount Remote Control (DTM)*.

- The accessory power output connection provides the switched 12 volt power supply.
- White Analog IN 1 wire (pin #6) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 2 wire (pin #7) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 3 wire (pin #8) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN wiring not used on Tachometer for 2, 3, or 4 engines



1. *ICON G2 Premium Dual Top Mount Remote Control (DTM)*
2. Accessory Power Output
3. White Analog IN 1 wire (pin # 6)
4. White Analog IN 2 wire (pin # 7)
5. White Analog IN 3 wire (pin # 8)
6. NMEA 2000 Network connection
7. NOT used, White Analog IN wiring

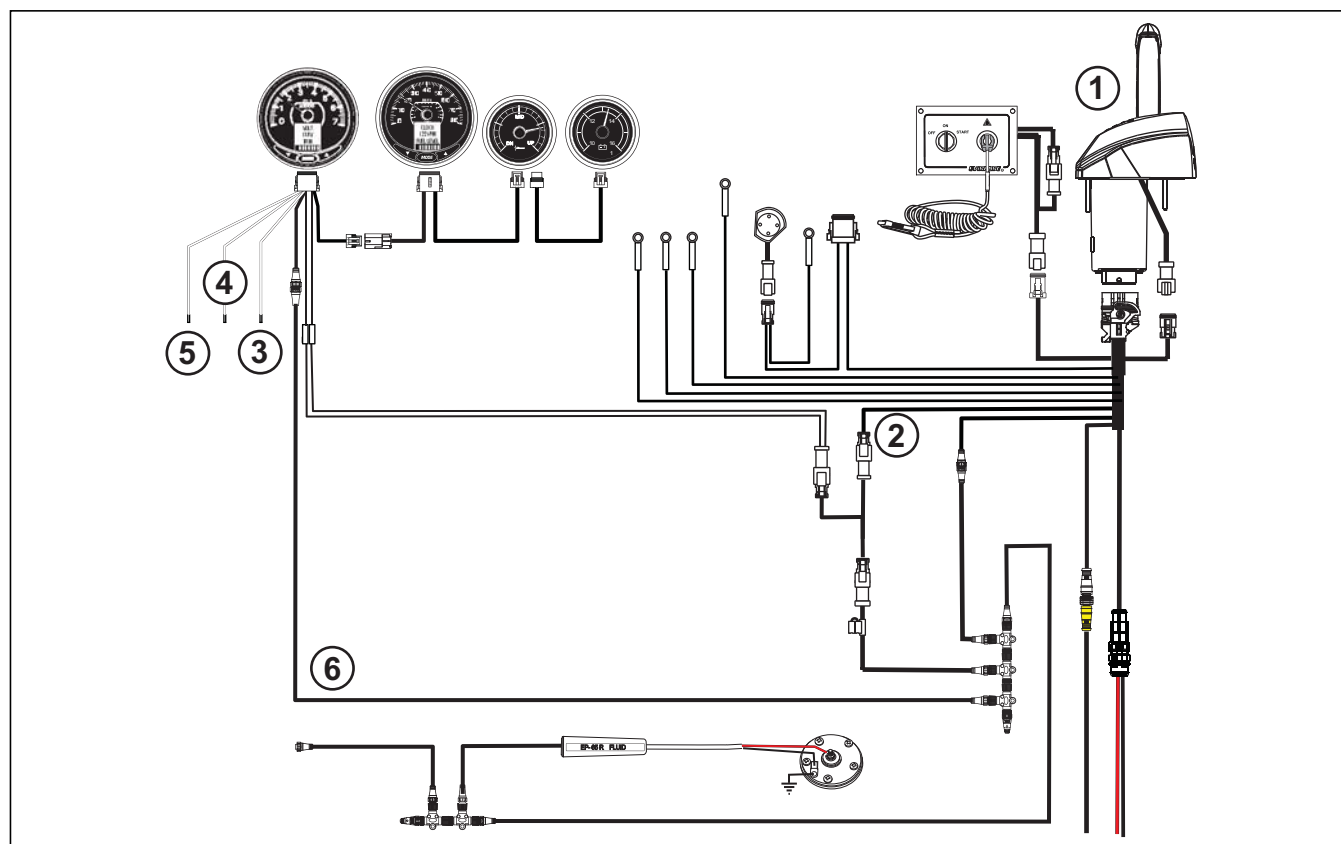
Evinrude E-TEC G2 Rigging & Setup Guide

Displays and Gauges

ICON Pro Gauges - *ICON G2* Single Top Mount Remote Control (STM) Connections Diagram

This sample diagram shows the connections of *ICON Pro* gauges to a *ICON G2* Single Top Mount Remote Control (STM).

- The accessory power output connection provides the switched 12 volt power supply.
- White Analog IN 1 wire (pin #6) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 2 wire (pin #7) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 3 wire (pin #8) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.

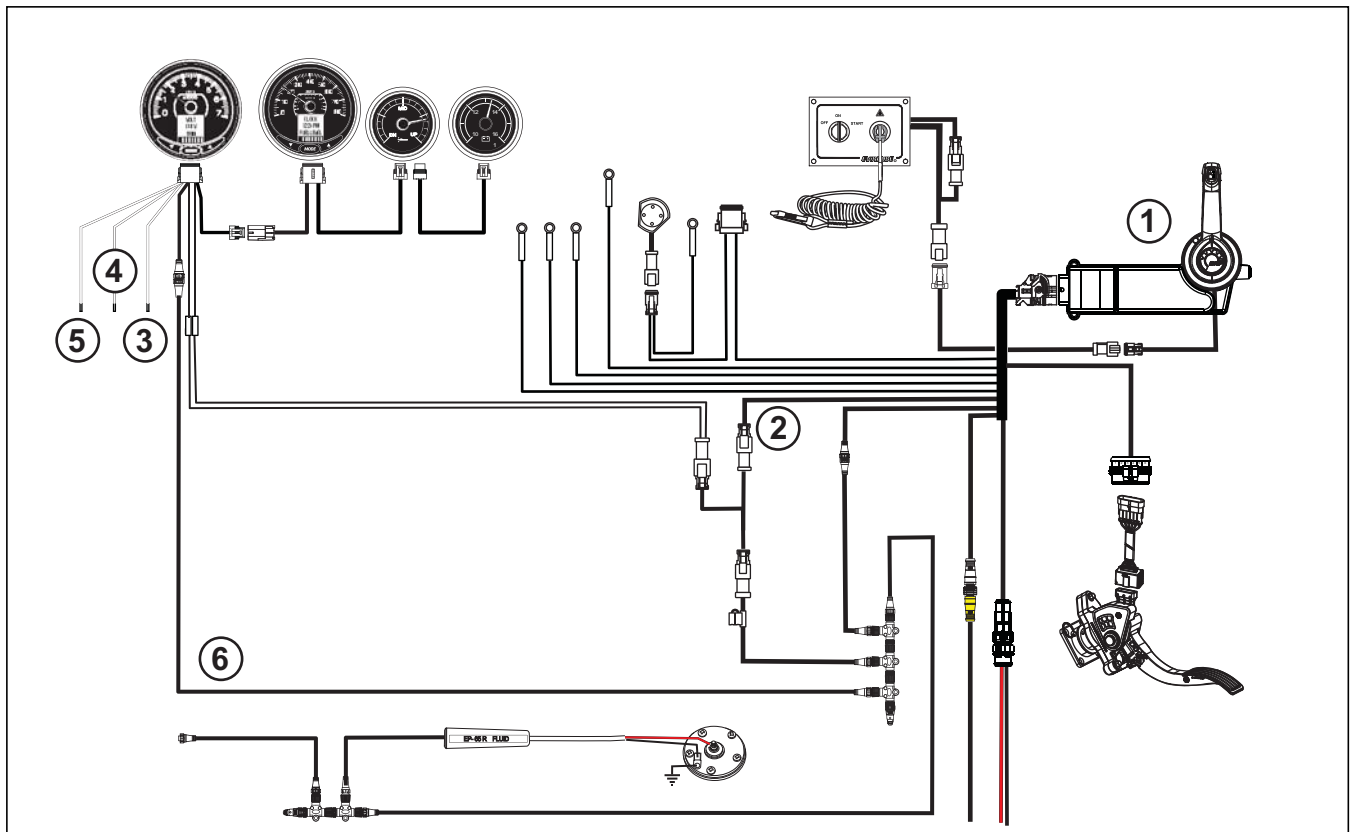


1. *ICON G2* Single Top Mount Remote Control (STM)
2. Accessory Power Output
3. White Analog IN 1 wire (pin # 6)
4. White Analog IN 2 wire (pin # 7)
5. White Analog IN 3 wire (pin # 8)
6. NMEA 2000 Network connection

ICON Pro Gauges - *ICON G2* Concealed Side Mount Remote Control (CSM) Connections Diagram

This sample diagram shows the connections of *ICON Pro* gauges to a *ICON G2* Concealed Side Mount Remote Control (CSM).

- The accessory power output connection provides the switched 12 volt power supply.
- White Analog IN 1 wire (pin #6) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 2 wire (pin #7) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.
- White Analog IN 3 wire (pin #8) to analog device signal wire connects to: Ballast, Baitwell, Fresh Water, Gray Water, Black Water and Rudder.



1. *ICON G2* Concealed Side Mount Remote Control (CSM)
2. Accessory Power Output
3. White Analog IN 1 wire (pin # 6)
4. White Analog IN 2 wire (pin # 7)
5. White Analog IN 3 wire (pin # 8)
6. NMEA 2000 Network connection

Evinrude E-TEC G2 Rigging & Setup Guide

Displays and Gauges

ICON Basic Series Gauges (2 inch, 3.5 inch and 5 inch)

ICON Basic Series of gauges offer a traditional analog dial look. Data is sent via the *NMEA 2000* communications standard and is packaged in a high value, lower cost gauge with no buttons to push and no setup is required. This series of gauges supports up to 2 engines and up to 2 fuel tanks; and includes engine fault warning lights. Gauges include required wiring connections for connection between the tachometer and accessory gauges.



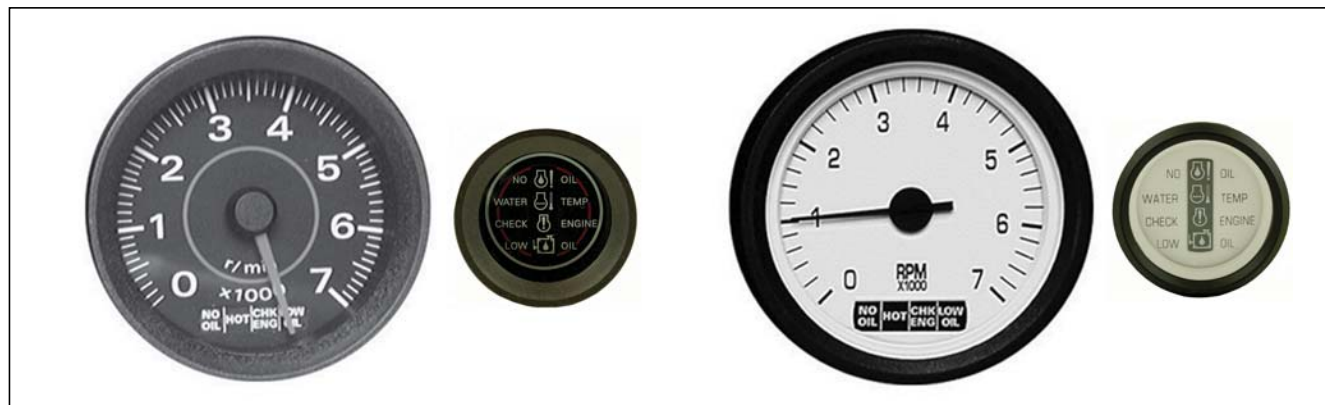
ICON Basic Gauge

SystemCheck and Analog Gauges

SystemCheck gauges can be used with *ICON II* Basic Remote Controls and Universal Control Module (UCM) Conversion Kits which include digital to analog converters built into their electronic modules and include connectors which allow installation with a *SystemCheck* gauge

SystemCheck gauges deliver basic engine information with simplicity and accuracy. Major functions include: Analog functionality, Solid state electronics, Temperature resistant plastics and scratch resistant glass lenses, and perimeter lighting for nighttime reading. Tachometers and speedometers fit standard 3 3/8 inch dashboard holes. Smaller gauges for engine trim level, engine water pressure, fuel level, and battery volts all fit a standard 2 1/8 inch hole.

Note: A digital to analog converter (DAC) is required for use with *ICON G2 Premium* Remote Controls. The *NMEA 2000* network transmits monitored information to the digital to analog converter, which supplies the converted signal to the *SystemCheck* gauge.

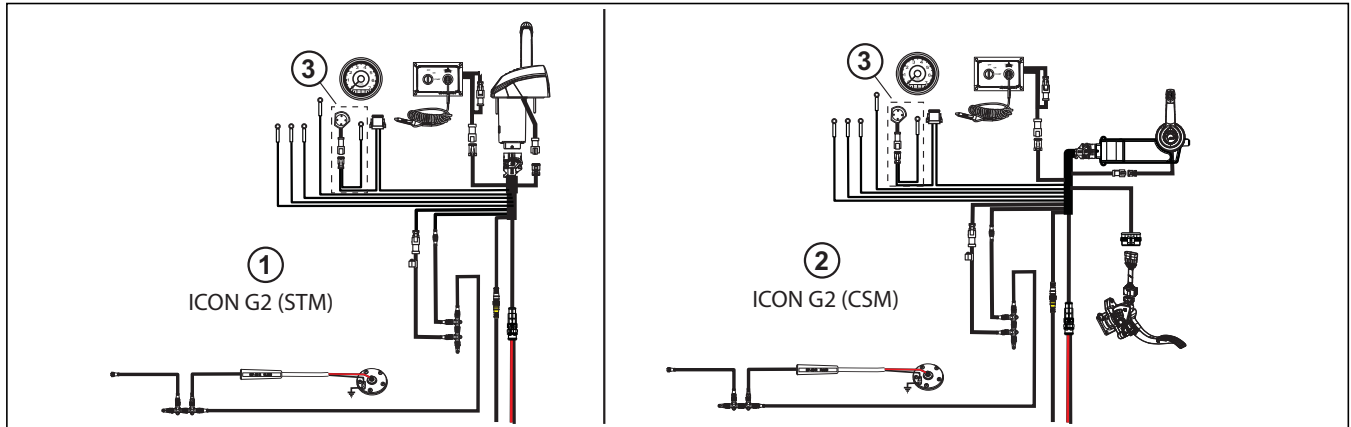


SystemCheck Gauges

SystemCheck Gauges - *ICON G2* Remote Control Connection Diagram

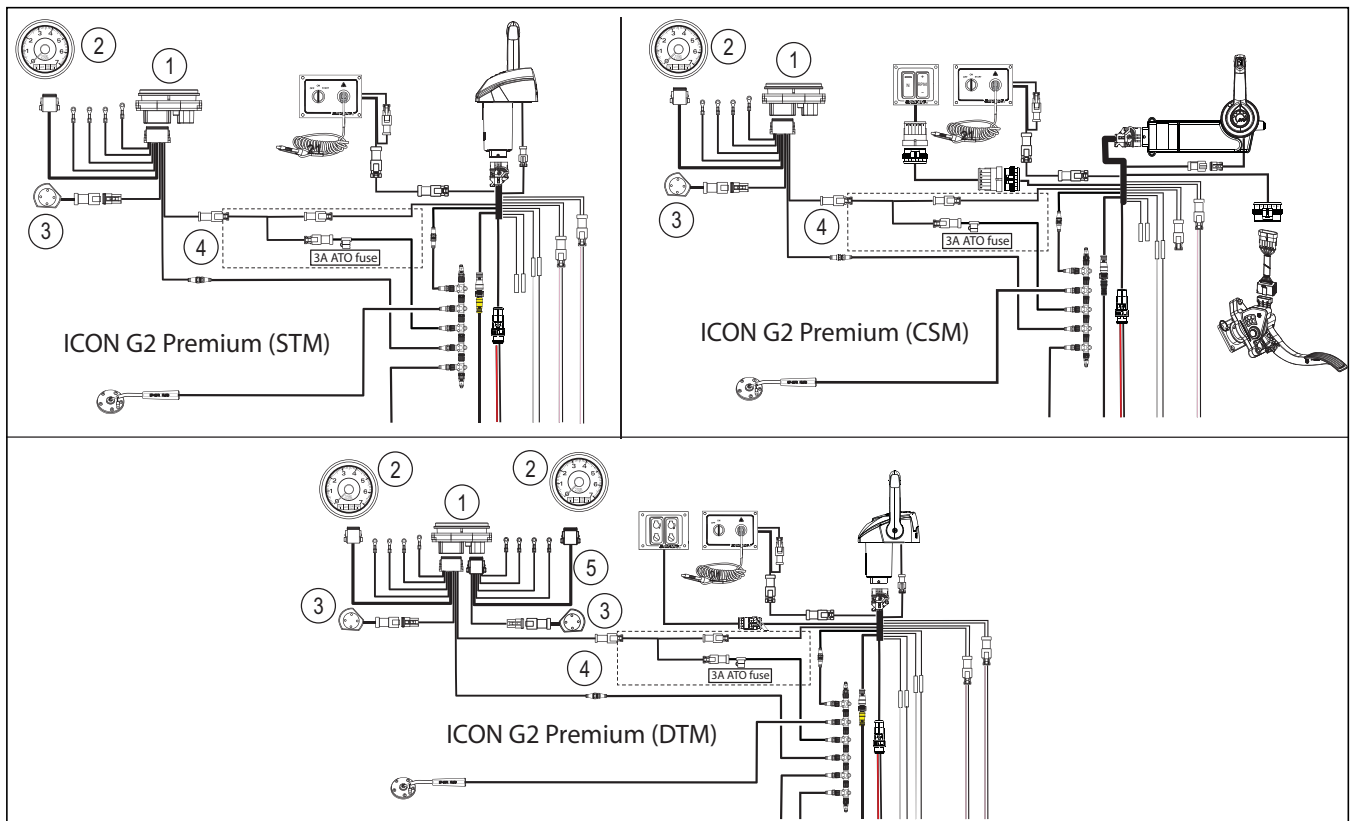
These diagrams shows the connections of *SystemCheck* gauges to a *ICON G2* Remote Control.

Installation with analog gauge (*SystemCheck*) must include the installation of a warning horn.



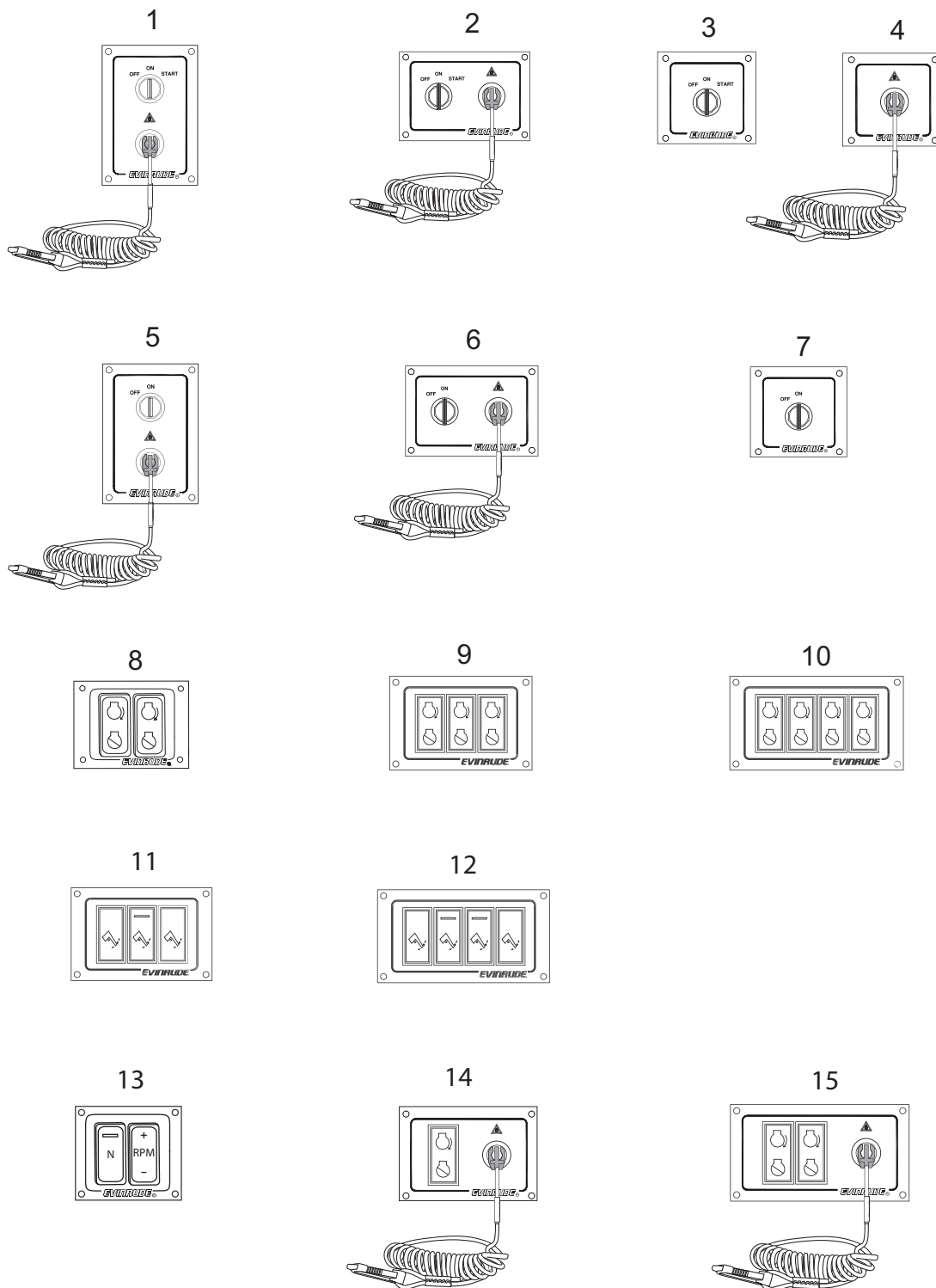
1. *ICON G2* Single Top Mount (STM) Remote Control
2. *ICON G2* Concealed Side Mount (CSM) Remote Control
3. Warning horn kit, P/N 5010438

Installation with analog gauge (*SystemCheck*) requires installation of a Analog to Digital Converter and must include the installation of a warning horn.



1. Analog to Digital Converter, P/N 766287 (single engine)
2. *SystemCheck* Gauge
3. Warning horn kit, P/N 5010438
4. B+ and Network Connections
5. Analog to Digital Converter Harness, P/N 766611 (second engine)

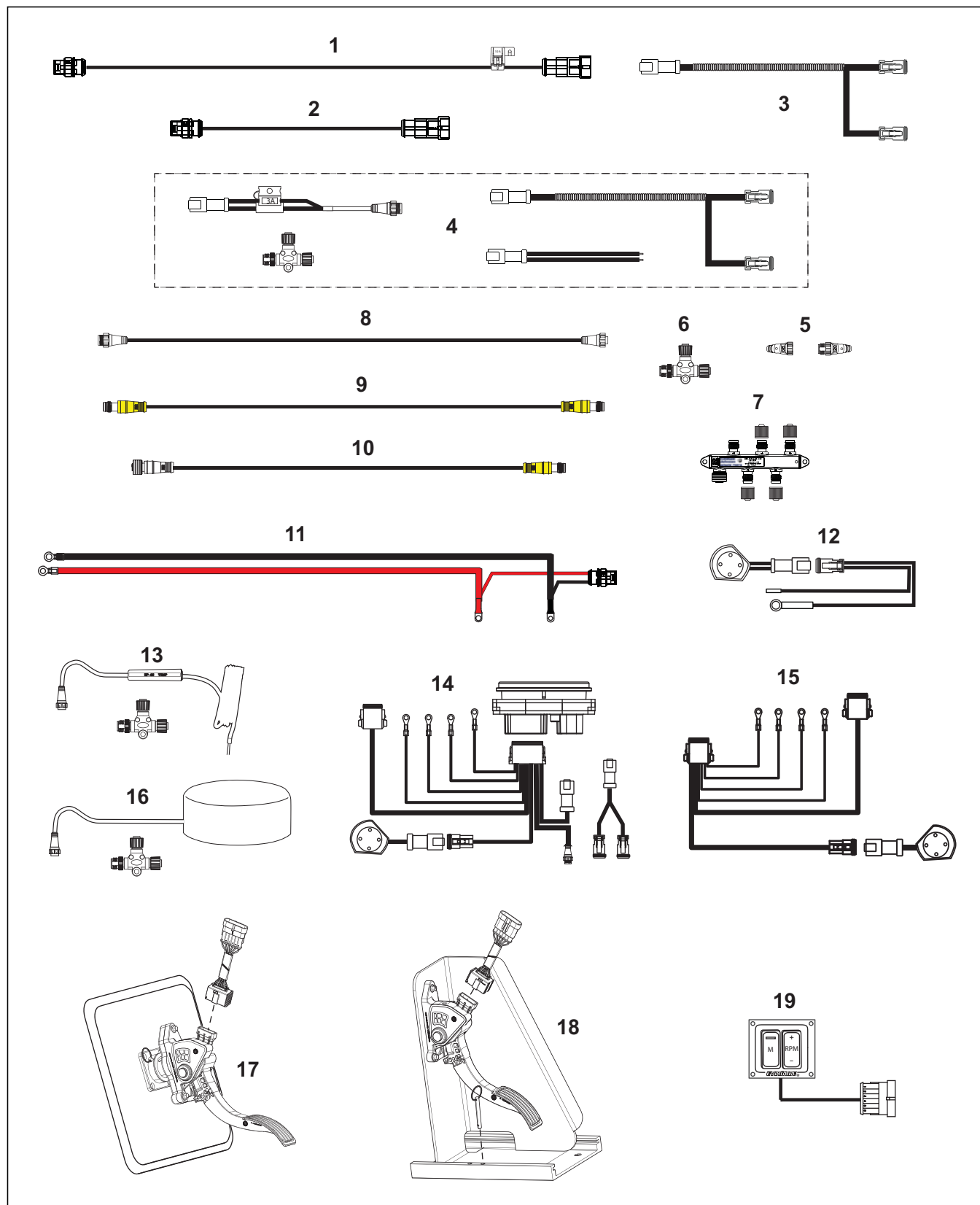
ICON G2 Switch Panel Kits



ICON G2 Switch Panel Kit Part Number List

No.	Description	P/N	
		Switch Panel Kit (ICON II)	Switch Assembly (Service use)
	Single Engine Key Switch Kits (OFF - ON - START)		
1	Key Switch w/emergency shut-off switch and lanyard - Vertical Panel	768841	—
2	Key Switch w/emergency shut-off switch and lanyard - Horizontal Panel	768746	—
	Single Engine Key Switch Kit (OFF - ON - START)		
3	Key Switch Panel	5010161	5010164
	Emergency Stop Switch Kit		
4	Emergency Stop Switch Panel	5010166	5010165
	Multiple Engine Key Switch Kits (OFF - ON)		
5	Key Switch w/Emergency Stop switch and lanyard - Vertical Panel	5010169	—
6	Key Switch w/Emergency Stop switch and lanyard - Horizontal Panel	5010020	—
	Multiple Engine Key Switch Kit (OFF - ON)		
7	Key Switch Panel	5010162	5010164
	Single Station - Multiple Engine Start - Stop Switch Panels		
8	Dual Engine Start - Stop Switch Panel	5010021	—
9	Triple Engine Start - Stop Switch Panel	764927	765375
10	Quad Engine Start - Stop Switch Panel	764928	765376
	Power Trim and Tilt Switch Panels		
11	Triple Engine Power Trim and Tilt Switch Panel	766583	—
12	Quad Engine Power Trim and Tilt Switch Panel	766584	—
	Concealed Side Mount Switch Kit		
13	Neutral and RPM Switch Panel	764930	—
	Second Station Start and Emergency Stop Switch Panel		
14	Single Engine - Start Switch and Emergency Stop Switch Panel	766555	—
15	Dual Engine - Start Switch and Emergency Stop Switch Panel	766558	—

ICON G2 System Components



ICON G2 System Components List

No.	Description	P/N							
1	Remote Control Power Cable - 10 amp fuse (15 ft. / 4.5 m)	766592							
	Remote Control Power Cable - 10 amp fuse (25 ft. / 7.6 m)	587183							
2	Remote Control Power Cable Extension (5 ft./ 1.5 m)	587185							
	Remote Control Power Cable Extension (10 ft./ 3.0 m)	587186							
3	Y-Harness	587230							
4	<i>NMEA 2000</i> Power Node Kit - includes power cable (3 Amp ATO type fuse), Y-Harness (P/N 587230), and Tee connector	767433							
5	Terminator Kit	764155							
6	Tee connector, single	764151							
7	6-Port Hub (<i>ICON G2</i> Remote Control System)	587172							
		P/N							
	Bus Cable Lengths	1 ft. (0.3 m)	2 ft. (0.6 m)	4 ft. (1.2 m)	6 ft. (1.8 m)	10 ft. (3.0 m)	15 ft. (4.5 m)	20 ft. (6.1 m)	25 ft. (7.6 m)
8	<i>NMEA 2000</i> Backbone Bus Cable	–	765132	–	764161	–	764162	–	764163
9	Backbone Bus Cable (Remote Control)	–	–	–	–	–	587173	587174	587175
10	Backbone Bus Cable Extension (Remote Control)	587176	587177	587178	–	587179	587180	587181	587182
	Accessories								P/N
11	Battery cables, 4 gauge, 10 ft. (3.0 m)								587205
	Battery cables, 2 gauge, 15 ft. (4.5 m)								587301
	Battery cables, 2 gauge, 20 ft. (6.0 m)								587302
12	Warning Horn Kit (optional - use with analog gauges)								5010438
13	Fluid level Converter Kit (fluid level converter programmed for fuel level / Instance 4)								768916
14	<i>ICON G2</i> to SystemCheck Gauge Converter Kit (Digital to Analog Converter) PORT or single engine, <i>ICON G2</i> Premium and <i>ICON G2</i> CSM only)								766287
15	<i>ICON G2</i> to SystemCheck Gauge Converter Kit (Digital to Analog Converter) (STARBOARD or second engine, <i>ICON G2</i> Premium and <i>ICON G2</i> CSM only)								766611
16	GPS Antenna (<i>NMEA 2000</i>)								767488
17	Foot Throttle - bulkhead mount								767747
18	Foot Throttle - floor mount								766567
19	RPM Tune Kit								766282

Remote Control Installation

Disconnect the battery cables at the battery. Test operation after installation is complete.

⚠ WARNING

Failure to properly install and test remote control operation may result in remote control malfunction and the loss of boat control.

Remote controls must have start-in-gear prevention. This feature can prevent injuries resulting from unexpected boat movement when the outboard starts.

Always install and recommend use of an engine cut-off switch. Doing so will reduce the risk of personal injury or death should the operator fall away from the controls or out of the boat.

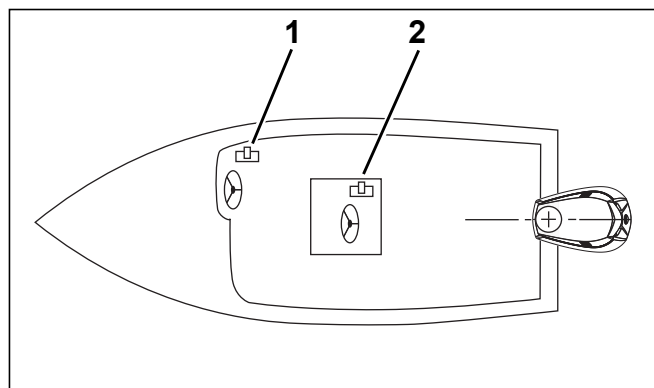
Remote Control trim plates are available for *ICON G2* remote controls. Refer to the latest **Evinrude Genuine Parts and Accessories** catalog. Use these trim plates to cover existing mounting holes and to provide pre-drilled mounting for installing new *ICON G2* remote controls.

ICON G2 Binnacle Mount Remote Controls

IMPORTANT: Confirm the part number of single top mount or dual top mount remote controls before installing. *ICON G2 Premium* Single Top Mount (STM) and *ICON G2* Single Top Mount (STM) models are offered with different features and Dual Top Mount (DTM) uses unique programming based on the number of engines installed.

Mounting Location (STM, DTM)

Select an appropriate location based on the boat configuration.



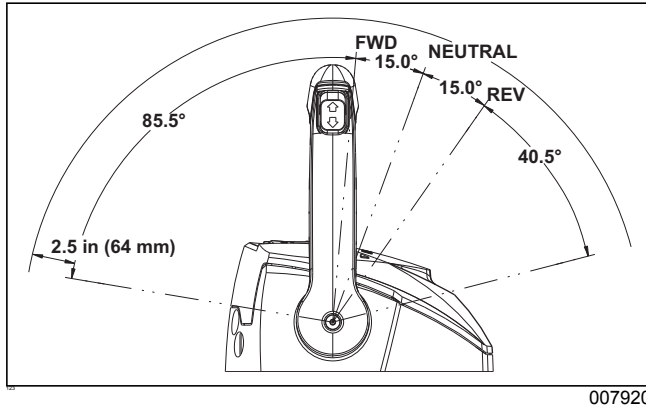
- 1. Side console
- 2. Center console

005471

IMPORTANT: The mounting location must be a flat surface and must be strong enough to provide rigid support. Strengthen mounting surface as necessary.

Place remote control at proposed location and check clearance around remote control lever at full throttle in FORWARD and then at full throttle in REVERSE.

- Clearance between the handle and any part of the boat throughout the control lever travel must be at least 2.5 in. (64 mm).
- Clearance below the control for the housing and cable routing must be at least 5 in. (127 mm).



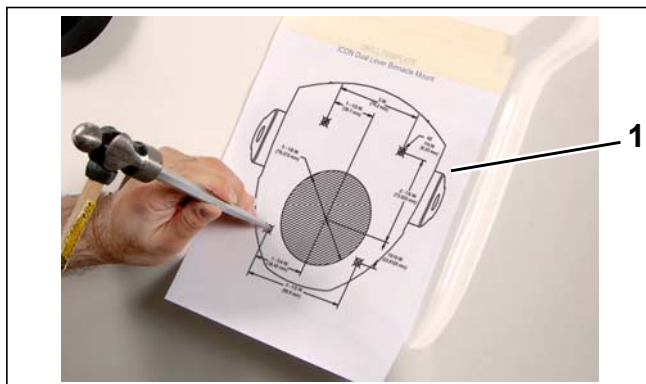
Mounting the Remote Control (STM, DTM)

IMPORTANT: Make sure the mounting location has all of the required clearances before drilling or cutting.

Use the specific drill template to cut mounting holes:

- *ICON G2 Premium* Single Top Mount
- *ICON G2* Single Top Mount
- *ICON G2 Premium* Dual Top Mount

Protect mounting surfaces from damage while drilling by applying tape or shielding to dashboard surfaces. Position the correct drill template. Use center punch to mark the centers of drill locations.



1. Template

Single Top Mount (STM) Remote Controls

Drill three (3) 1/4 in. (6.3 mm) holes at the three mounting stud locations. Use a 3 in (76 mm) hole saw to cut out for the control base.

Install the remote control on to the console. From under console, install washers and #10 locknuts on studs of control. Tighten locknuts to a torque of 24 to 36 in. lbs. (2.7 to 4 N·m).

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Remote Control Installation

Dual Top Mount (DTM) Controls

Drill four (4) 1/4 in. (6.3 mm) holes at the four mounting stud locations. Use a 3-1/8 in (79 mm) hole saw to cut out for the control base.

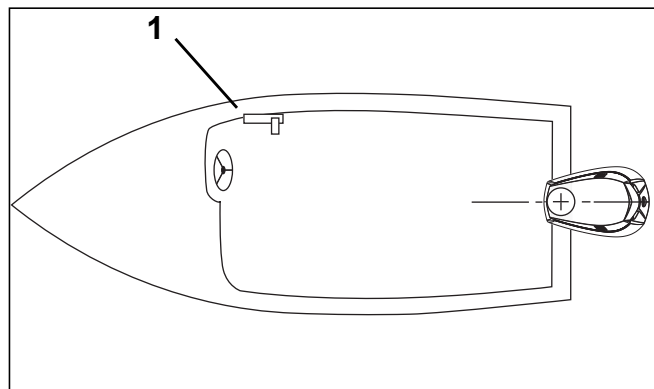
Install the remote control on to the console. From under console, install washers and #10 locknuts on studs of control. Tighten locknuts to a torque of 24 to 36 in. lbs. (2.7 to 4 N·m).

ICON II Concealed Side Mount Remote Control

IMPORTANT: Confirm the part number of mount remote controls before installing. **ICON G2 Premium Single Top Mount (CSM)** and **ICON G2 Single Top Mount (CSM)** remote controls support **single engine - single station** installations and can **ONLY** be installed on the **STARBOARD** (right) side of gunwale.

Mounting Location (CSM)

Select an appropriate location based on the boat configuration.

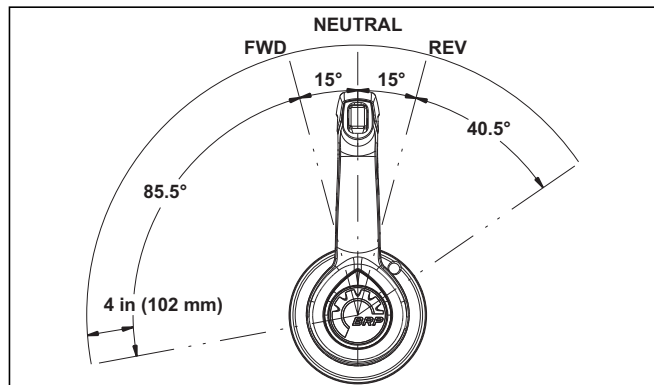


1. Installed on the STARBOARD side of gunwale 006152RevB

The mounting location must be a flat surface and must be strong enough to provide a rigid support. Strengthen mounting surface as necessary. **Remote control cannot be installed if thickness of mounting surface exceeds 1-3/16 in. (30 mm).**

Place remote control at proposed location and check clearance around remote control handle at full throttle in FORWARD and then at full throttle in REVERSE.

- Clearance between the handle and any part of the boat throughout the control lever travel must be at least 4 in. (102 mm)
- Clearance behind the control for the housing and cable routing must be at least 5 in. (127 mm).



007973

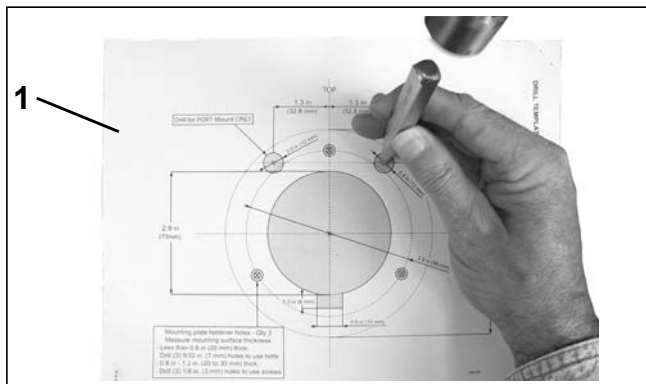
Mounting the Remote Control (CSM)

IMPORTANT: Make sure the mounting location has all of the required clearances before drilling or cutting.

Use the specific drill template to cut mounting holes:

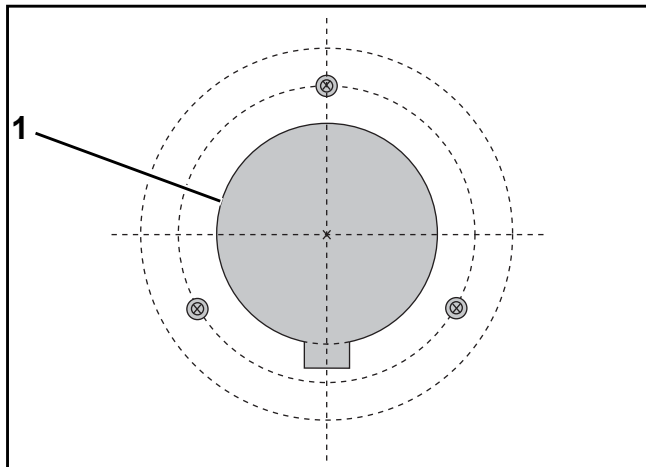
- *ICON G2 Premium* Concealed Side Mount
- *ICON G2* Concealed Side Mount

Position the correct drill template. Use center punch and mark the centers of drill locations. Cut along the outer line of shaded area. Use appropriate cutting tools. A 2 7/8 in.(73mm) hole saw can be used for main through hole. Notch bottom of hole for trim and tilt wiring.



1. Drill template

006338



1. Drill template

006303

Select proper fasteners and drill bit size. Determine thickness of mounting surface.

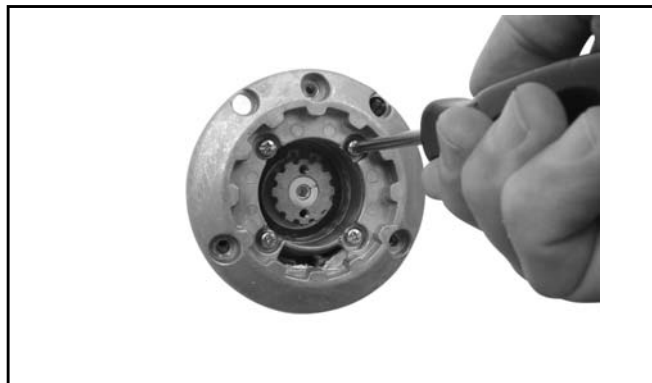
- Less than 13/16 in. (20 mm) thickness: Drill three (3) 9/32 in. (7 mm) diameter holes to use 8 mm bolts and nuts and washers provided.
- 13/16 in. to 1-3/16 in. (20 - 30mm) thickness: Drill three (3) 1/8 in. (3 mm) holes to use screws provided.

Drill three holes at mounting hole locations.

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Remote Control Installation

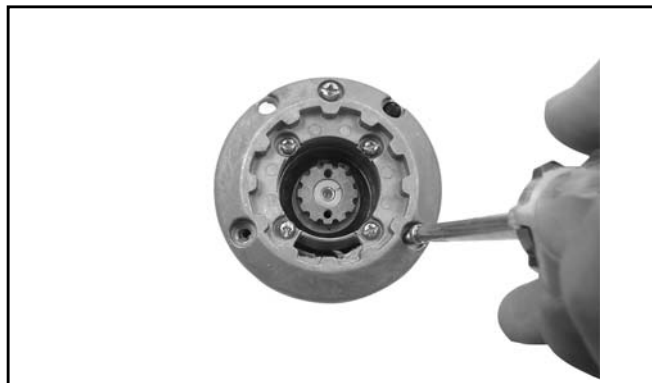
Position remote control behind mounting surface. Align mounting plate with remote control. Install four washers and screws and tighten screws to 35 in./lbs.(4 N·m).



006340

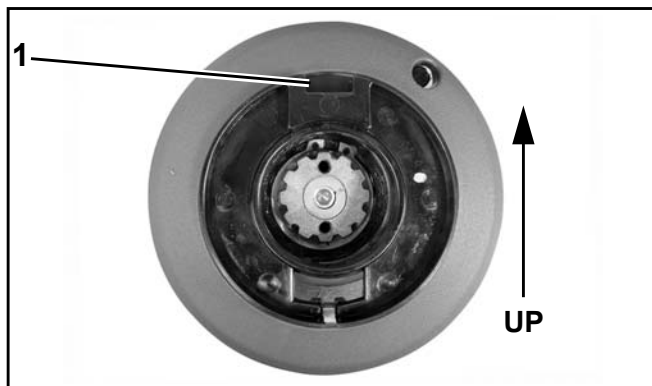
Align mounting plate with holes and secure to mounting surface. Use bolts and nuts if surface thickness is less than 13/16 in. (20mm) thick and screws for surface thicknesses between 13/16 (20mm) and 1-3/16 in. (30mm) thick. Tighten screws or bolts and nuts to 53-71 in./lbs.(6-8 N·m).

IMPORTANT: Make sure remote control assembly is secure and does not move during operation.



006341

Position lock ring in mounting plate. Orient notch for neutral lock lever UP as shown.



1. Notch, lock ring

006374

Route trim/tilt switch wiring. Make two (2) loops of trim wire around lever as shown.



006349

Position remote control lever on splines of remote control. Install retaining washer and screws and washers to secure lever to output shaft of remote control.



006351

Install cover.



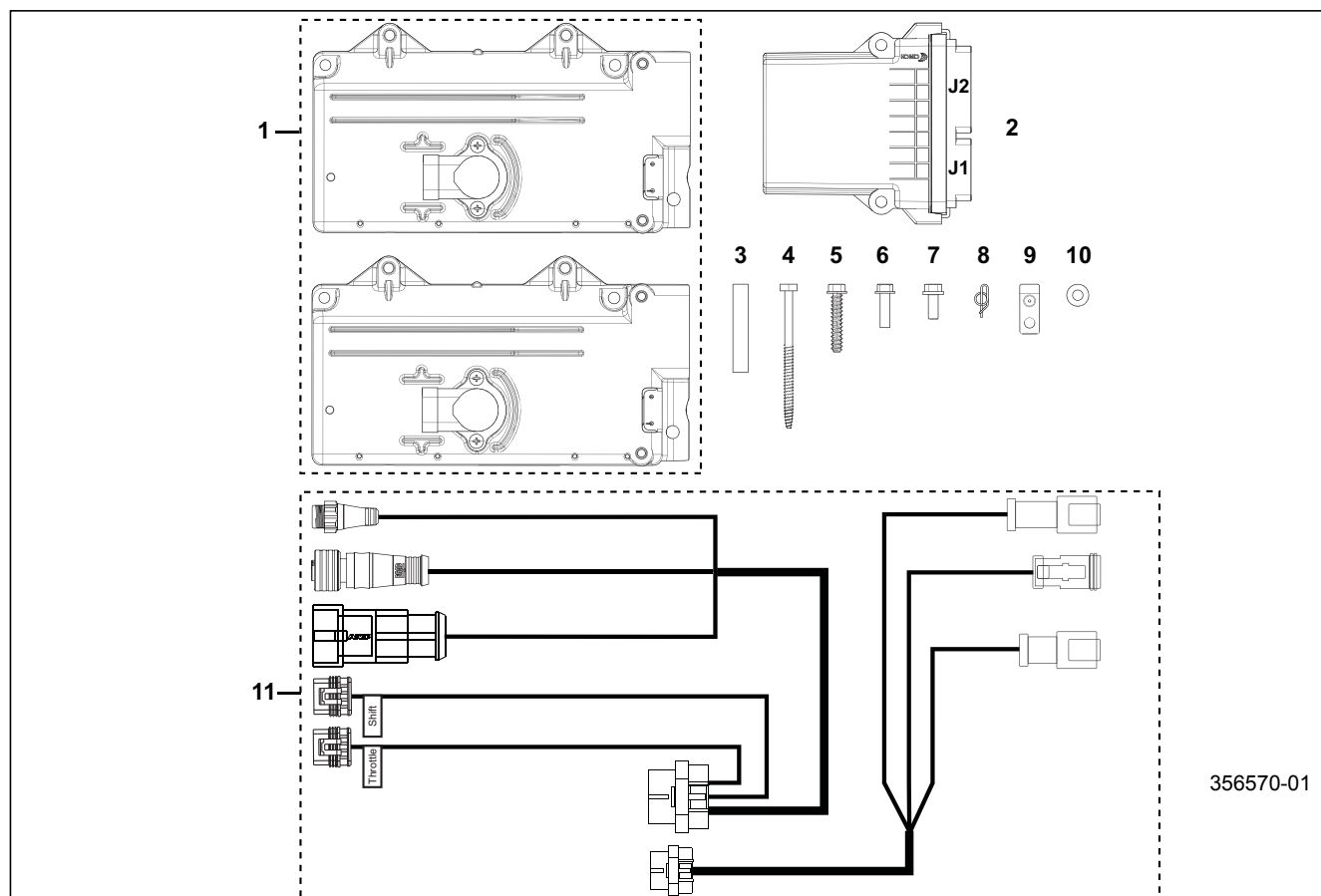
006352

Universal Control Module Conversion Kit (UCM)

This Universal Control Module Conversion Kit (UCM) to install a mechanical remote control on Evinrude E-TEC G2 outboards (3.4 L, 74°V6 and 2.7 L, 66°V6.)

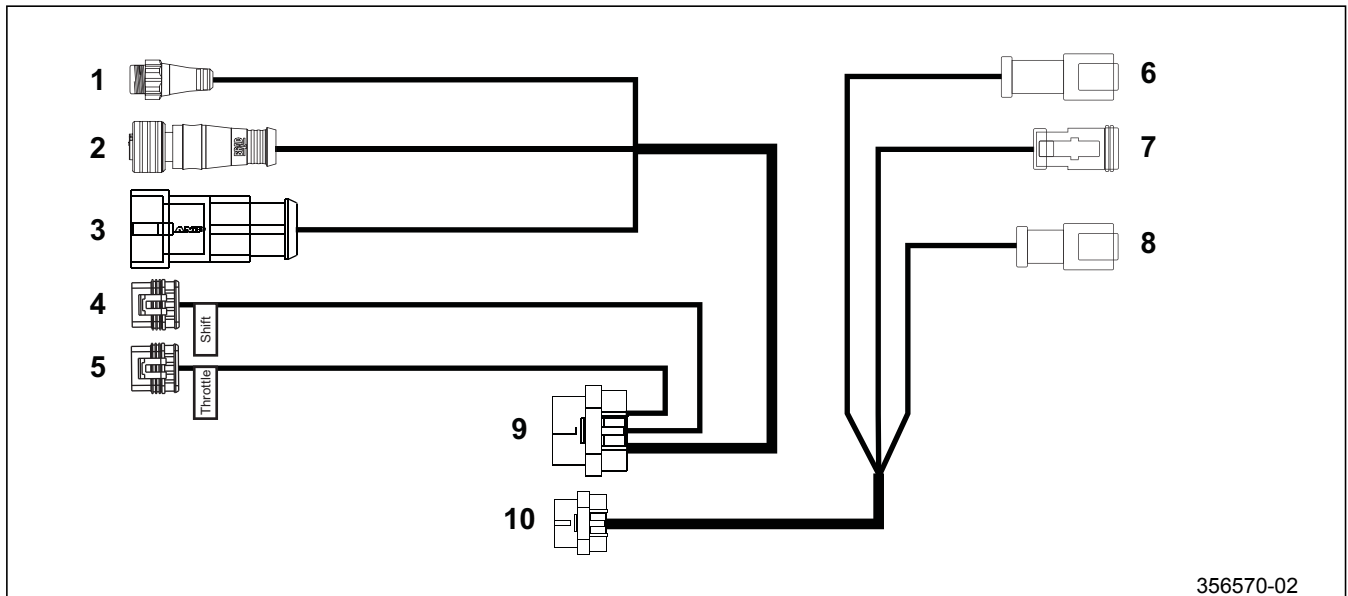
Features and Parts List - UCM:

- Designed for single station installations
- Supports *SystemCheck*® tachometers and trim gauges
- Mount conversion kit anywhere within reach of the mechanical remote control cables and the *MWS* harness.
- Redundant network connections to the outboard



Ref	P/N	Name of Part	Qty
—	5008963	MECHANICAL CONTROL MODULE CONVERSION KIT	1
1	5008959	*HOUSING AY, Shift and Throttle	1
2	587237	*CONVERTER AY, Shift and Throttle	1
3	356766	*SPACER	4
4	356767	*SCREW, Shift and Throttle Housing Mounting	4
5	356793	*SCREW, Converter Module Mounting	2
6	323228	*SCREW, Converter Module to Shift and Throttle Housing	4
7	329217	*SCREW, Retainer	2
8	333774	*CLIP, Control Cable Retainer	2
9	351928	*RETAINER, Control Cable Trunnion	2
10	328702	*WASHER, Control Cable Retainer	2
11	587246	*CABLE AY, Shift and Throttle	1

UCM Cable Assembly



1	Public CAN Connector – 5-pin (to center point of t-connector)	6	SystemCheck Connector (to MWS harness SystemCheck connector)
2	Private CAN Connector – 6-pin (to private network backbone cable)	7	Key Switch Signal Connector (to MWS harness key switch connector)
3	Accessory Power IN Connector (to accessory power supply cable)	8	Trim Switch Connector (to MWS harness trim switch connector)
4	Shift Signal Connector (to shift potentiometer)	9	Converter Connector – J2 (to converter module J2 port)
5	Throttle Signal Connector (to throttle potentiometer)	10	Converter Connector – J1 (to converter module J1 port)

Mounting the Universal Control Module (UCM)

Select an appropriate mounting location that allows the MWS harness and remote control cables to connect to the universal control module assembly.

The mounting location must provide:

- protection from the weather
- access for cable connections and wiring
- a flat surface which is rigid

Ignition Switch and Emergency Stop Switch

Select an appropriate installation location based on the boat's configuration.

IMPORTANT: The mounting location must be a flat surface and must be strong enough to provide rigid support. Strengthen or reinforce the mounting surface as necessary.

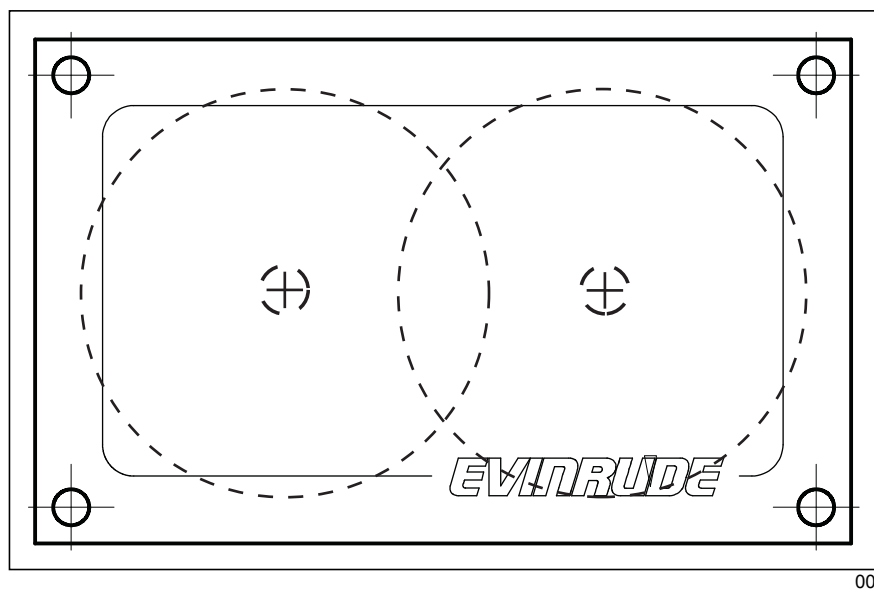
Position the switch panel in a location that allows proper access to the switches. Check the clearances around the switches. There must be adequate space behind the switch panels for wire and cable routing; and to make switch connections.

ICON G2 key switch kits should be mounted:

- Within 30 in. (76 cm) of remote control - limited wire harness length
- Close to the emergency stop switch kit
- Close to the start switches kit on multi engine installations

Mounting Holes

Select the correct drill template to cut mounting holes for the switch panel. Drill templates are included in the instruction sheets of the switch kits.



IMPORTANT: Make sure the switch panel location has all of the required clearances before drilling or cutting. Protect mounting surfaces from damage while drilling by applying tape or shielding to dashboard surfaces.

Position the template for the switch panel. Use center punch to mark the drill locations.

Use a hole saw or reciprocating saw to cut out for the hole for the switch panel.

Install the switch panel on console.

Drill four (4) 3/32 in. (2.4 mm) holes to mount the switch panel. Secure the switch panel with four screws. Tighten screws securely.

Make sure switch panel is secured to the console and does not move during operation. Use tie straps to secure key switch, emergency stop switch, and start switch wiring.

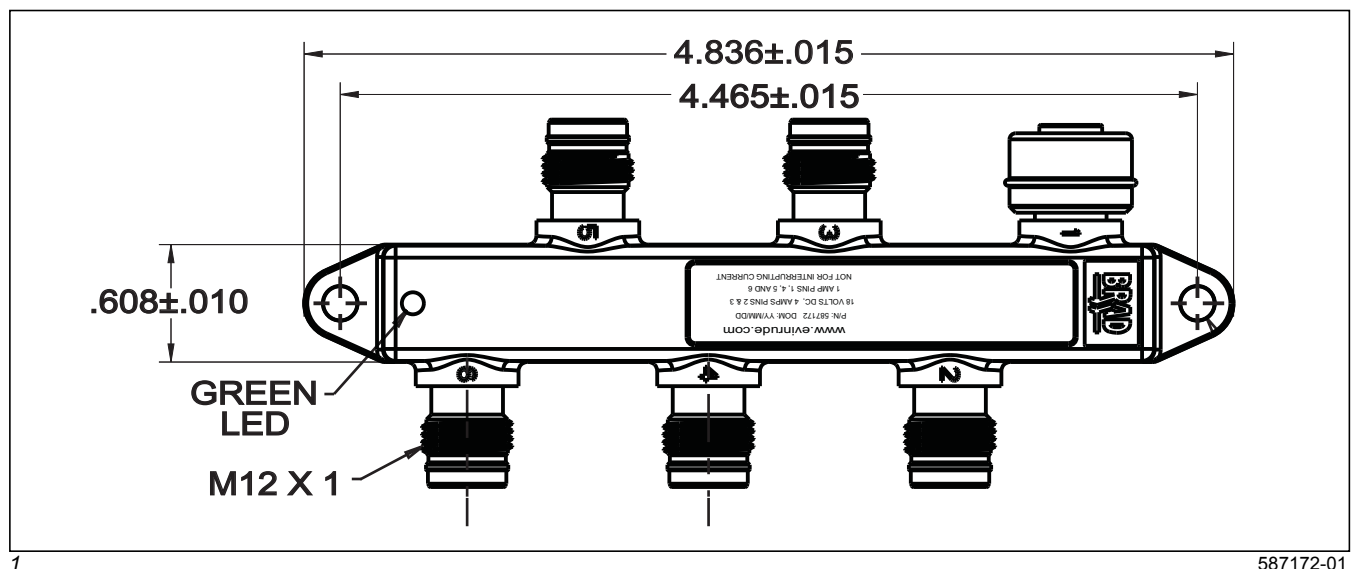
6-Port Hubs (ICON G2)

ICON G2 6-Port hubs are used to connect remote controls to the remote control network on multi-engine installations.

Install one *ICON G2* 6-port hub on two (2), three (3), and four (4) engine installations and use one additional *ICON G2* 6-Port hub on second-station installations.

- One engine with one remote control: no 6-port hub used
- One engine with two remote controls: one 6-port hub used
- Two engines with one remote control: one 6-port hub used
- Two engines with two remote controls: two 6-port hubs used
- Three engines with one remote controls: one 6-port hub used
- Three engines with two remote controls: two 6-port hubs used
- Four engines with one remote controls: one 6-port hub used
- Four engines with two remote controls: two 6-port hubs used

IMPORTANT: Install protective covers on unused connections on the 6-port hub to prevent water intrusion and damage to the electronic component.



Select the appropriate location for mounting each *ICON G2* hub. The mounting locations must provide:

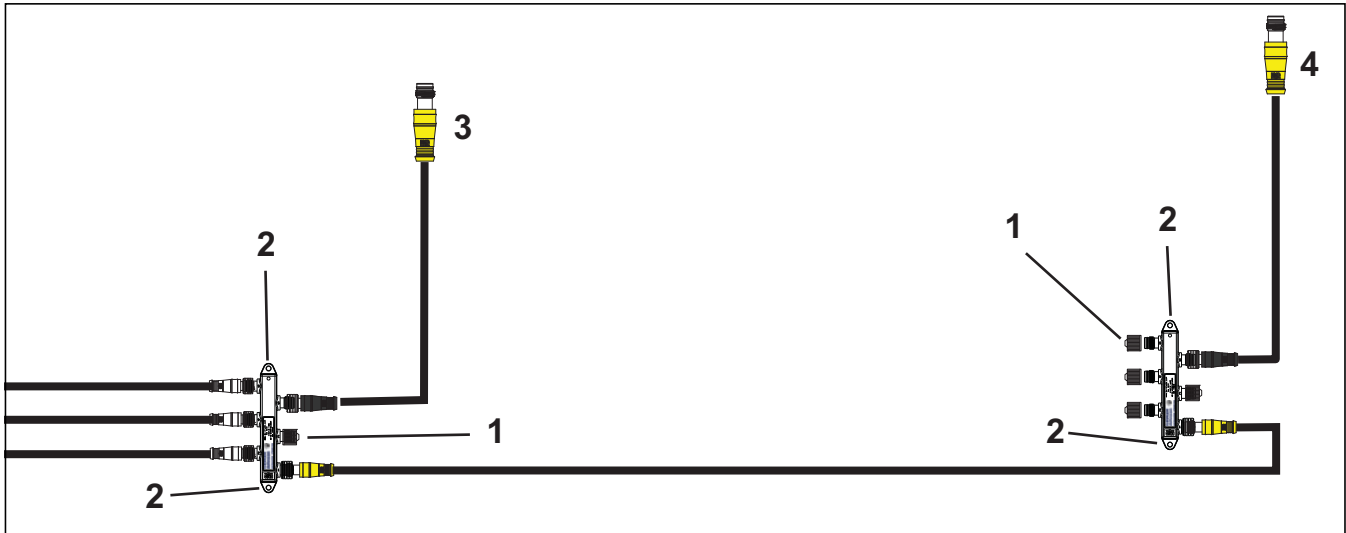
- Access for cable connections and wiring
- Protection from water and weather
- Above any boat bilge areas to prevent the hub from being damaged by water.

Position the hub. Mark mounting tabs to install hub. Drill two 9/64 in. (3.57 mm) holes to mount hub.

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6-Port Hubs (ICON G2)

Connect *ICON* G2 bus cables to hub before fastening hub to mounting location. Install hub and secure with two #10 screws. Tighten screws securely.



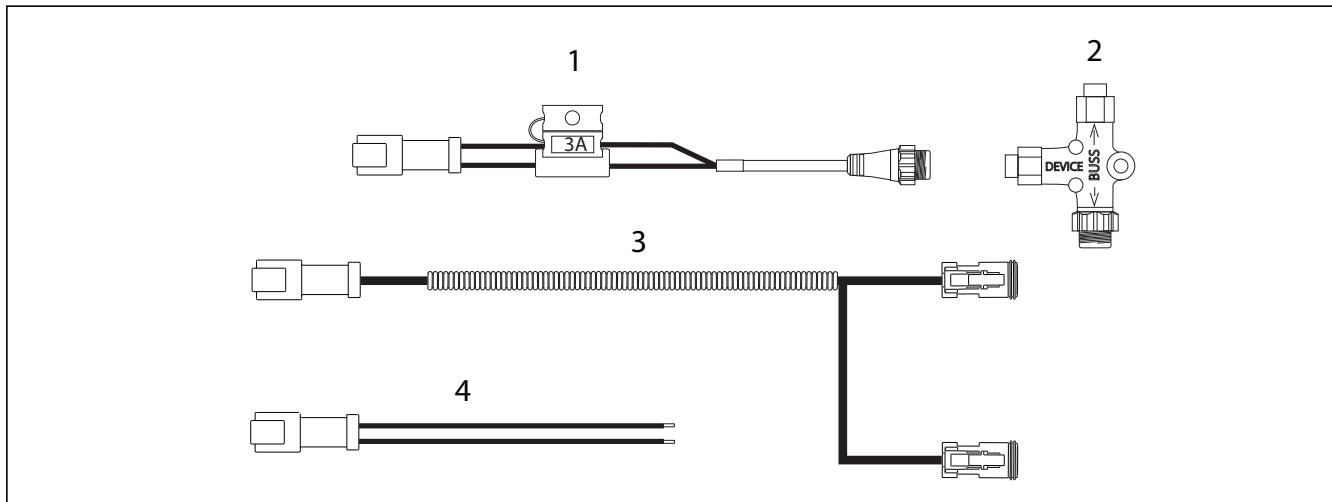
1. Protective covers
2. Mounting tab
3. Lower Station, Remote Control
4. Second Station, Remote Control

587172-02

Power Node Kit (NMEA 2000)

IMPORTANT: DO NOT connect network accessories to the “A” terminal of the key switch. This can cause erratic operation of the *ICON* G2 Remote Control System.

The Power Node Kit, P/N 767433, is used to provide 12 volt power to accessory devices and the *NMEA 2000* Network.



Ref	P/N	Name of Part	Qty
–	767433	POWER NODE KIT	1
1	767432	*POWER NODE	1
2	764151	*TEE CONNECTOR, Single	1
3	587230	*Y-HARNESS (optional - use based on network configuration)	1
4	587206	*CABLE, Accessory Power (optional - use based on network configuration)	1

Power Node and Accessory Power Connections

The *ICON* G2 Remote Control System is protect by a 10 Amp ATO type fuse located in the Remote Control Power Cable; and the *NMEA 2000* Network is protected by a 3 Amp ATO type fuse located in the *NMEA 2000* Power Node.

All of the accessories connected to the Accessory Power Output harness of remote control harness should not exceed **5 amps in total**. Use the *NMEA 2000* Power Node Kit and addition Y-harnesses to provide power to accessories connected to the *NMEA 2000* Network.

Accessories connected to the Accessory Power Output connector of the Remote Control Power Cable (and additional accessories connected with Y-harnesses) **MUST** be installed with fuse protection. Use of waterproof connectors is recommended.

Use of one or more of Y-harness, P/N 587230, allows additional devices to be powered by the 12 volt Remote Control Power Cable.

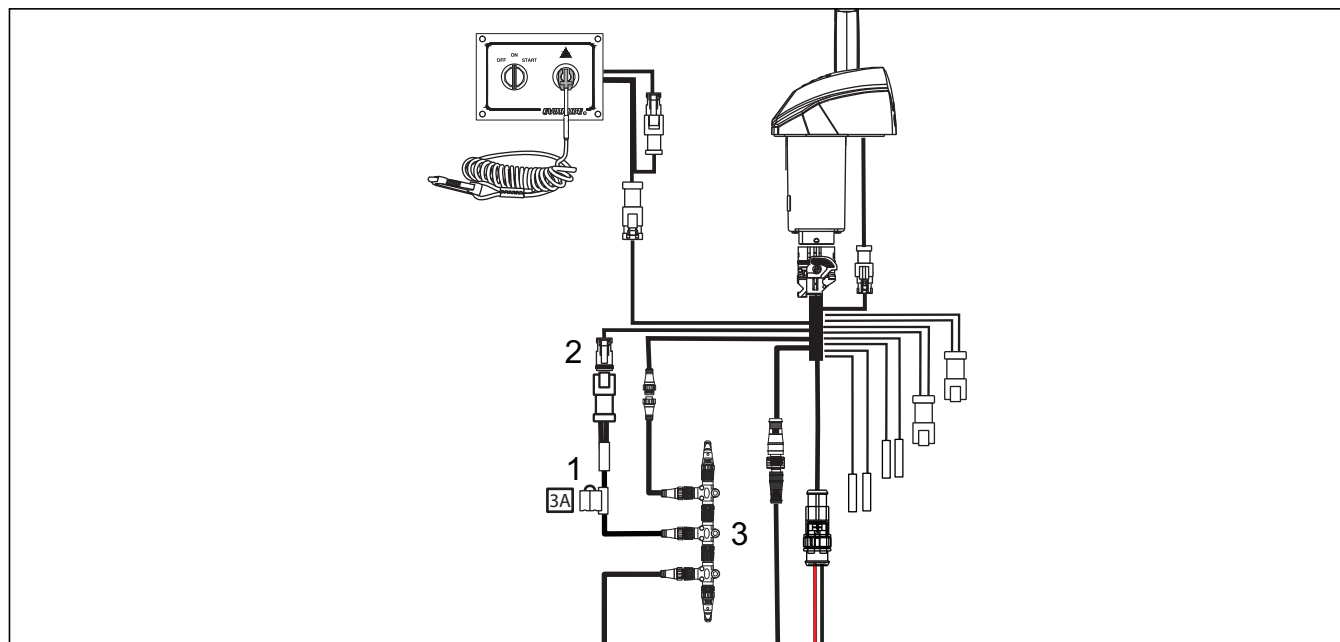
Refer to *ICON* G2 Remote Control System diagrams to view examples of accessory power connections.

IMPORTANT: Prior to assembly, apply a light coat of *Electrical Grease* on the seal of each *Deutsch* connector.

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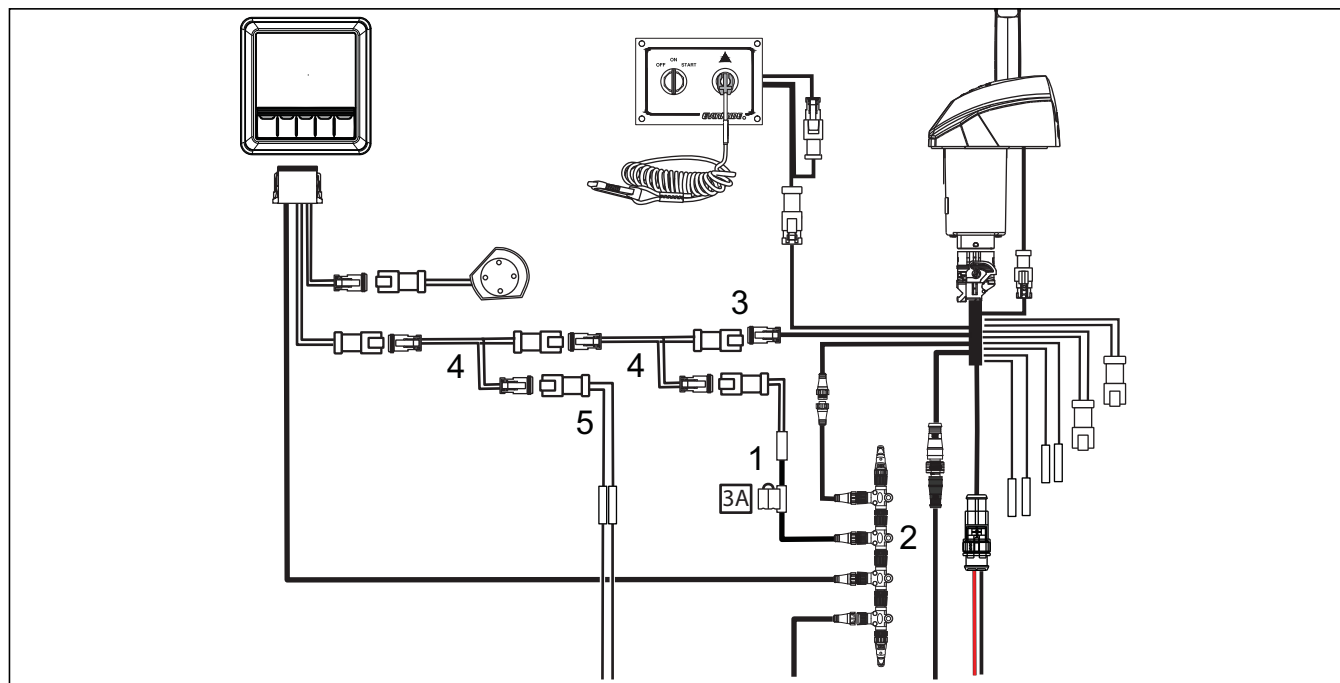
Power Node Kit (NMEA 2000)

Install the *NMEA 2000* Power Node between the Accessory Power Output connector of the *ICON G2* remote control harness and a tee connector in the *NMEA 2000* Network. Make sure the *Deutsch* connector latches.



1. NMEA 2000 Power Node (includes 3 Amp ATO fuse)
2. Accessory Power Output connector
3. Tee connector, NMEA 2000 Network

Use one (or more) Y-harnesses to connect to the accessory power output connector for each accessory. Use an optional accessory connector for connecting an accessory device to a Y-harness.



1. NMEA 2000 Power Node, 3 Amp ATO fuse (NMEA 2000 Network)
2. Tee connector (NMEA 2000 Network)
3. Accessory power output connector (12 volts from remote control power cable)
4. Y-harness (optional connection for accessory device - 12 volts)
5. Accessory connector (optional connection for accessory device - 12 volts)

Bus Cables - *ICON* G2 Remote Controls

Two types of bus cables are available for use with *ICON* G2 Remote Controls.

Bus cable backbone extensions use opposite gender (male and female) connectors. Bus cable extension connectors have black covers. Use bus cable extensions to connect devices to the *ICON* G2 Remote Control System.

Bus cable backbones use the same gender (male) connectors on both ends. Backbone bus connectors have yellow covers.

In single engine applications:

- Connect the engine harness to remote control harness using a backbone bus cable.

In multi-engine applications (using one 6-port hub):

- Connect the 6-port hub to the remote control harness using a backbone bus cable.
- Connect the 6-port hub to the second station remote control harness using a backbone bus cable extension.
- Connect the engine harnesses to 6-port hub using backbone bus cable extensions.

In multi-engine applications with second stations (using two 6-port hubs):

- Connect the two 6-port hubs (one front and one rear) using a backbone bus cable.
- Connect the front 6-port hub to the remote controls harness using backbone bus cable extensions.
- Connect the rear 6-port hub to the engine harnesses using backbone bus cable extensions.



1. Backbone Bus Cable Extension
2. Female connector
3. Male connector
4. Black cover
5. Backbone Bus Cable
6. Yellow cover

IMPORTANT: Use no more than one bus cable extension. Use the shortest bus cable extension possible.

Bus cable lengths:

- Bus cable backbones are available in 20 ft. (6.1 m) and 25 ft. (7.6 m) lengths
- The bus cable backbone can be extended to a maximum length of 50 ft. (5.24 m) with one bus cable extension
- Bus cable extensions are available in lengths of 1 ft. (0.3 m), 2 ft. (0.61 m), 4 ft. (1.22 m), 10 ft. (3.05 m), 15 ft. (4.57 m), 20 ft. (6.1 m) and 25 ft. (7.62 m).

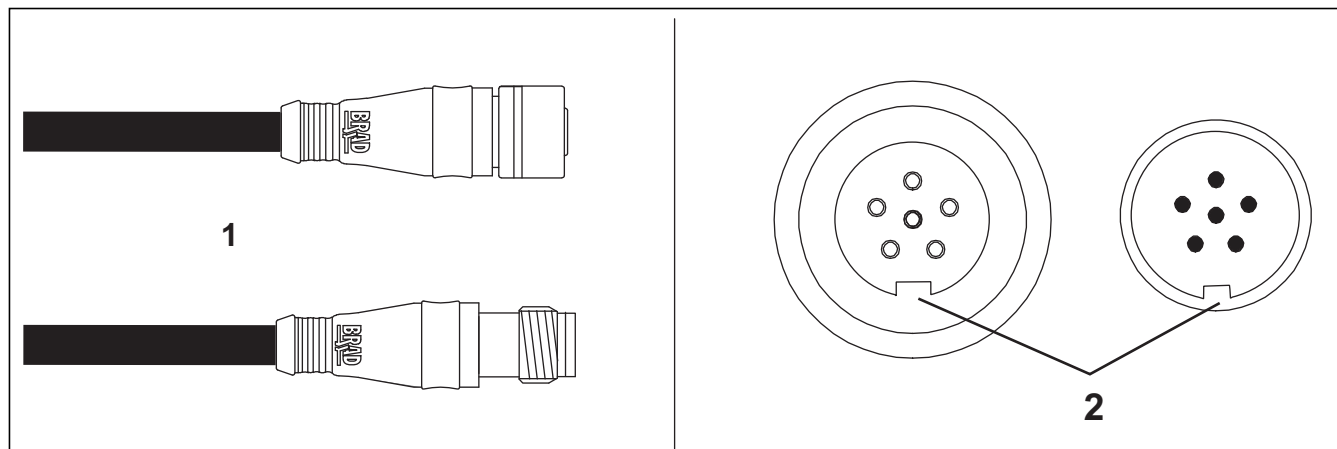
Evinrude E-TEC G2 Rigging & Setup Guide

NMEA 2000 Bus Cables

Do not use *Electrical Grease* on bus cable connectors.

To assemble the bus cable connectors:

- Look at the tabs to ensure connector alignment prior to making the connection.
- Use the tabs carefully align bus cable connectors.
- Carefully align pins and sockets of connectors.
- Push male connector into the female connector until it locks. You can hear a click sound as the connectors lock together.



1. ICON G2 Bus Cable connectors
2. Tabs

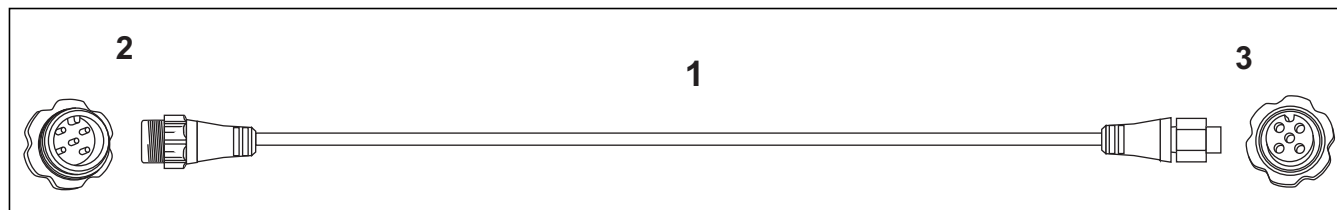
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NMEA 2000 Bus Cables

Different length bus cable are available for use with *ICON G2* Remote Control Systems. *NMEA 2000* bus cables use the different gender (male / female) connectors on the ends of the cables. Do not use *Electrical Grease* on bus cable connectors.

Bus cable lengths:

- Bus cable backbones are available in: 25 ft. (7.6 m), 15 ft. (4.5 m), 6 ft.(1.8 m), 2 ft. (0.6 m) lengths



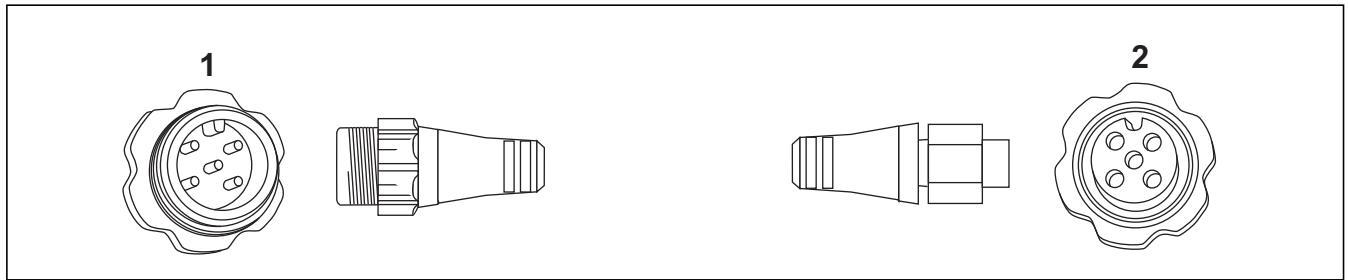
1. NMEA 2000 Bus cable
2. Male Connector
3. Female Connector

0

To assemble the bus cable connectors:

- Look at the tabs to ensure connector alignment prior to making the connection.
- Use the tabs and carefully align bus cable connectors.
- Carefully align pins and sockets of the connectors and push connector housings together.

- Tighten the nuts of the cable connectors until secure.



1. Pins
2. Sockets

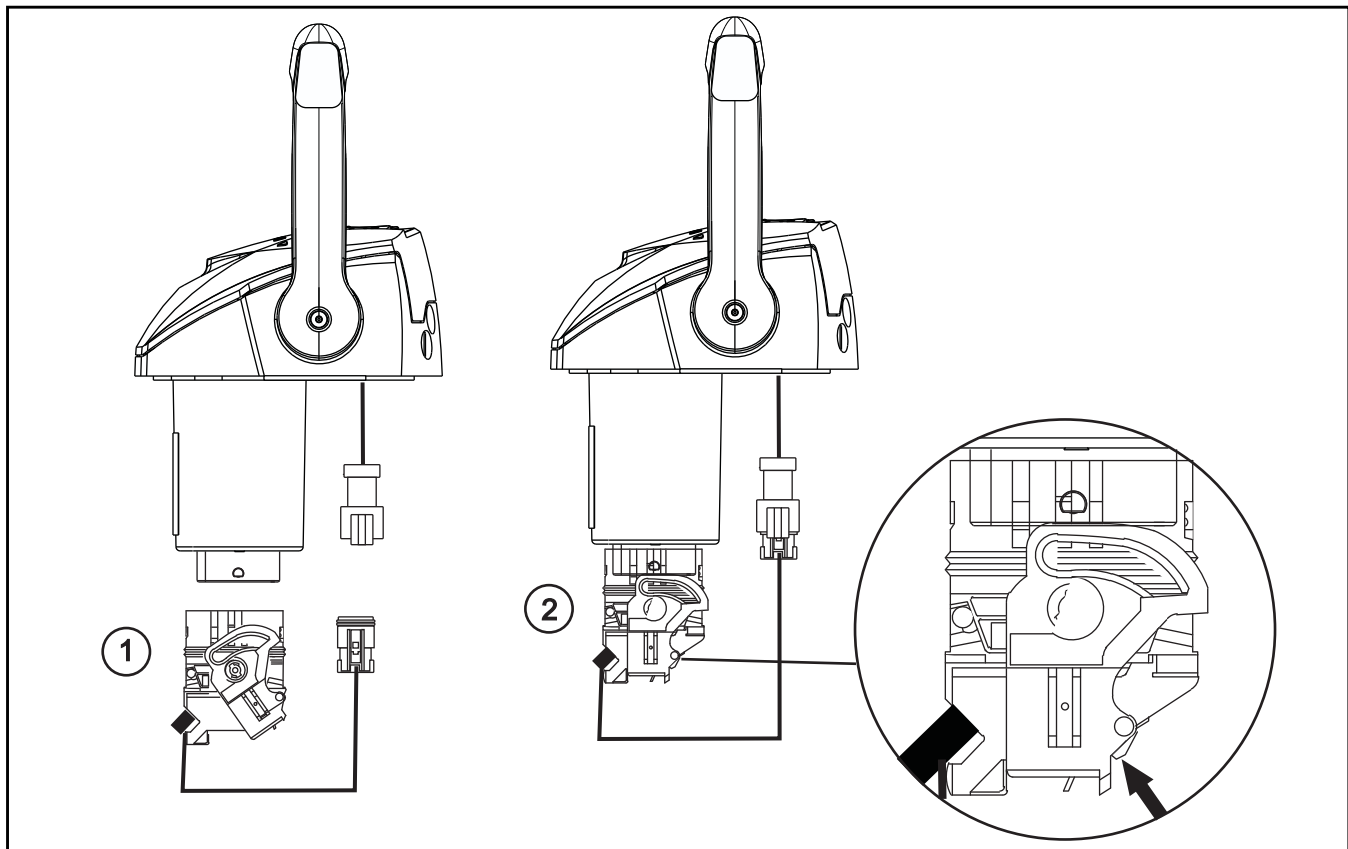
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ICON G2 Remote Control and Switch Connections

Prior to assembly, apply a light coat of *Electrical Grease* on the seal of each *Deutsch* connector.

Remote Control Harness - 48 Pin Receptacle

Install remote control harness on to 48 pin receptacle of the remote control. Position the latch in the locked position.



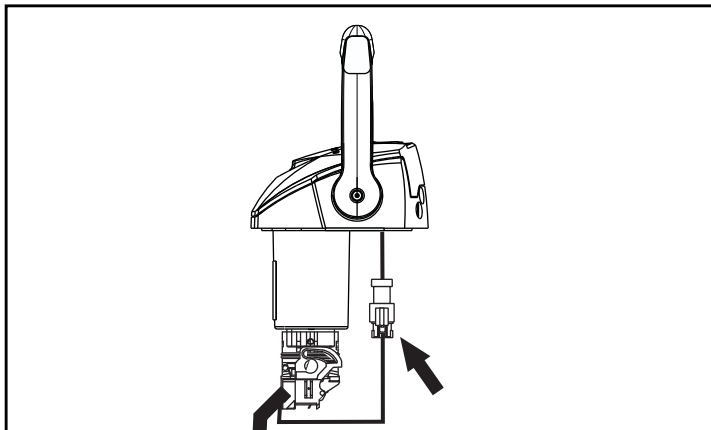
1. Receptacle latch - not locked
2. Receptacle latch - locked position

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Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Remote Control and Switch Connections

Assembly power trim and tilt switch connectors. Push connectors together until latched.

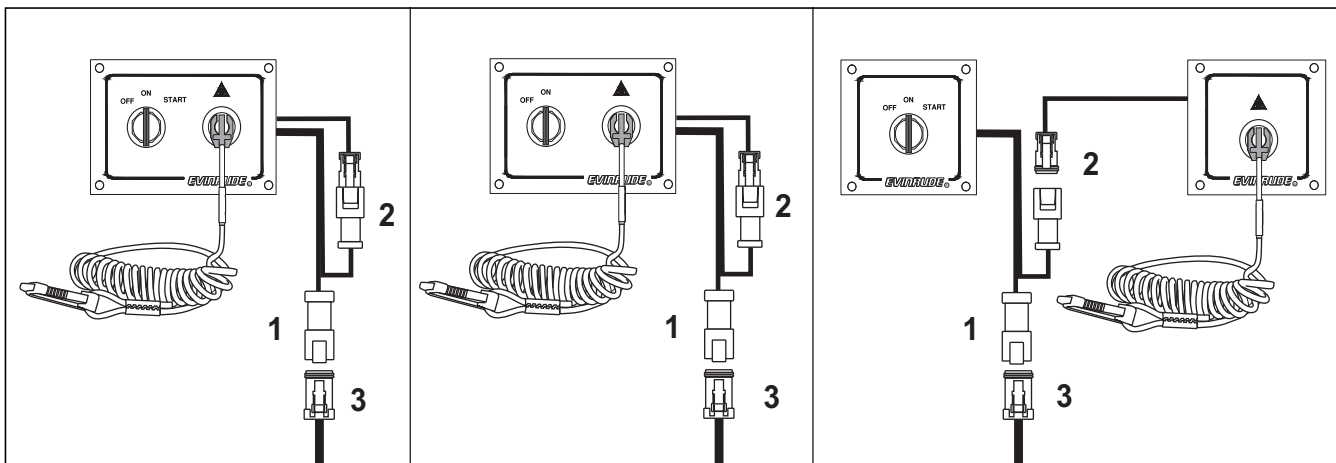


1. Power trim and tilt switch connector latched

00

Keyswitch and Emergency Stop Switch Connectors

Connect the key switch and emergency stop switch connectors to the ignition connector of remote control harness assembly. Push connectors together until latched.



1. Connector, Key Switch and Emergency Stop Switch (OFF / ON / START or ON / OFF)

2. Connector, Emergency Stop Switch Panel

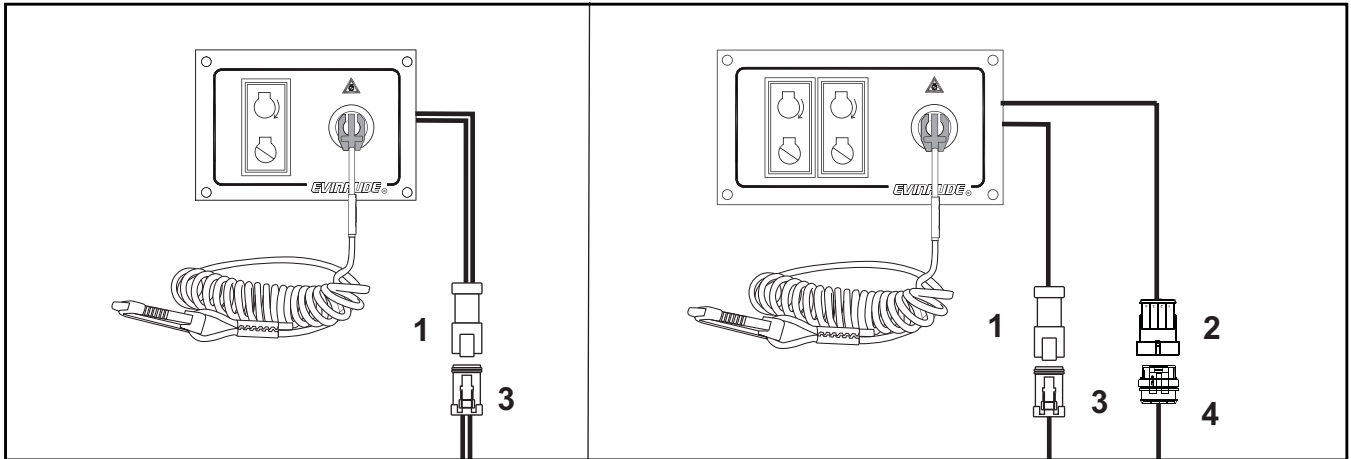
3. Connector, Ignition harness (Remote Control harness assembly)

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After all switch and cable connections are complete and the installation is completed, connect the battery cables. Always connect the positive cable first and the ground cable last. Test operation of key switch and emergency stop switch.

Start / Stop Switch and Emergency Stop Switch Panel

Connect the start stop switch connector to the ignition switch connector of the remote control harness assembly. Push connectors together until latched.

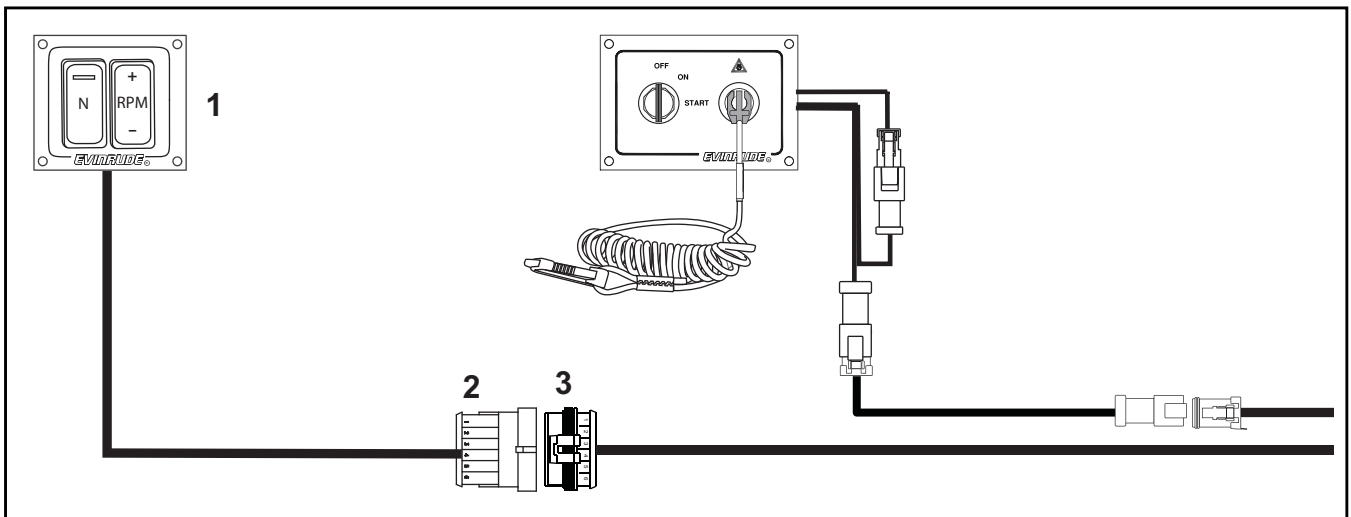


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1. Connector, Start / Stop Switch
2. Connector, Start / Stop Switch (multi-engine)
3. Connector, Ignition harness (Remote Control harness assembly)
4. Connector, Start / Stop Switch harness (Remote Control harness assembly)

RPM Tune Switch Kit - Concealed Side Mount Remote Control

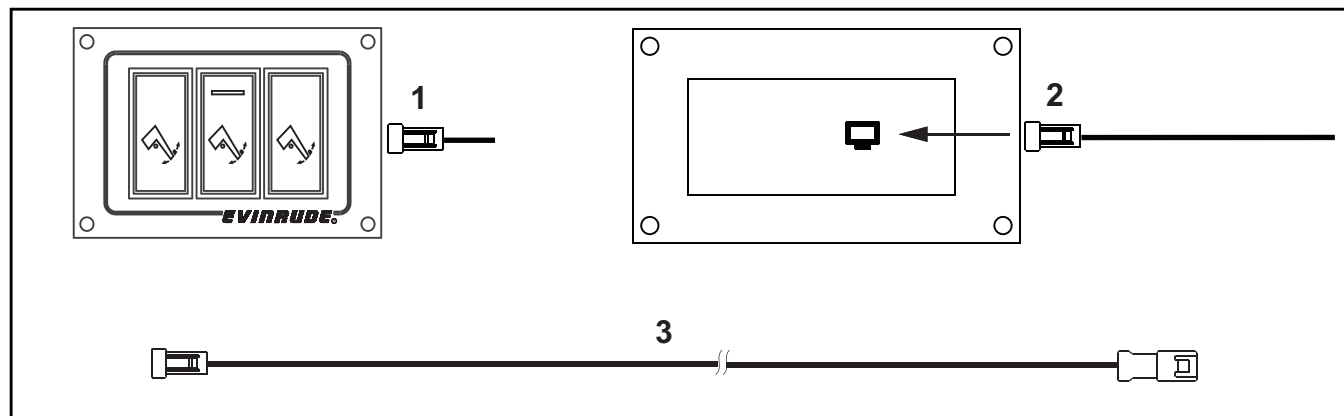
Install the connector from the RPM Tune Kit into the connector of the remote control harness assembly. Push connectors together until latched.



1. ICON G2 RPM Tune Switch Panel
2. Connector, RPM Tune Kit
3. Connector, CSM Remote Control harness

Multiple Engine Trim and Tilt Switch (3 or 4 engines)

Install the trim and tilt switch connector from the remote control harness assembly into the trim and tilt switch panel assembly. Push connectors together until latched.

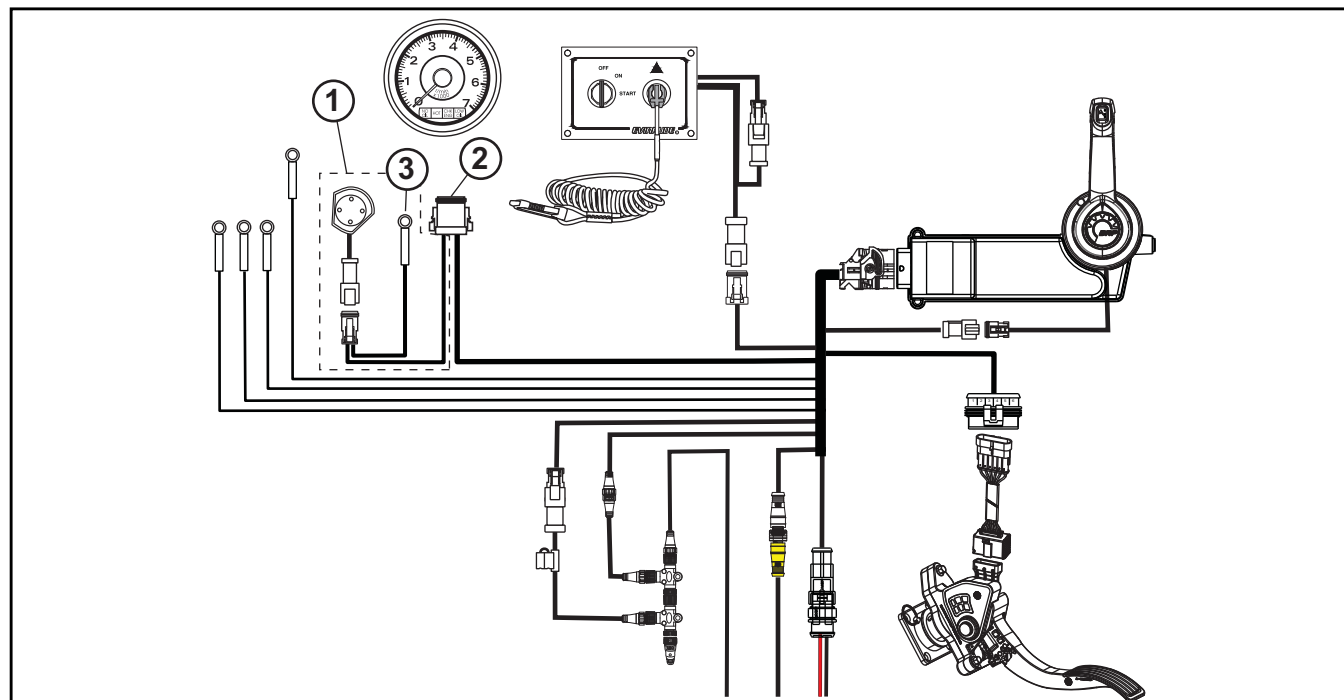


1. Connector, remote control harness to Trim and Tilt switch (3 or 4 engines)
2. Rear view of connector, remote control harness to Trim and Tilt Switch (3 or 4 engines)
3. Extension harness, Trim and Tilt switch, 36 inch (914 mm) P/N 766591

Warning Horn Kit (Accessory)

Install the warning horn kit, P/N 5010438, by installing tan wire into pin number 8 of the 8 position *Deutsch* connector prior to installing the connector into the *SystemCheck* gauge.

Connect the ring terminal of the purple wire to the switched B+ (12 volt) terminal of gauge wiring. Push all *Deutsch* connectors together until latched.



1. Warning horn kit, P/N 5010438
2. Connector, SystemCheck gauge
3. Purple wire to switched positive 12 volt terminal.

NMEA 2000 Network Device Connections

Various fluid level devices can be installed and integrated into the *ICON II Remote Control System*. The following sections provide connection information.

Fluid Level Device Chart

The instance numbers listed in the Fluid Level Device Chart are reserved and should not be used for other devices when setting up fluid level devices on the *NMEA 2000* network.

ICON G2 Premium Remote Controls provide connections for analog fuel and oil level sending units.

ICON Touch digital display provides connections for monitoring the level of fuel, oil, fresh water, gray water, or black water.

ICON G2 Remote Controls require the use of optional fluid level sensors for connecting analog fuel level and oil level sending units to the *NMEA 2000* Network (Public Network).

Fluid Level Device Chart																
	Instance Number															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Engine Mounted Oil Tank - Set by EMM (1 to 4 Engines)	X	X	X	X												
ICON II Premium Remote Controls Use remote control harness connections labeled: Fluid Level 0, 1, 2, 3 and then use <i>Evinrude Diagnostics 6</i> to set up Fluid Channels 0, 1, 2, 3.					X	X	X	X								
ICON Touch Digital Displays Use ICON Touch displays to configure and to monitor: fuel level, oil level, fresh water level, gray water level, black water level									X	X	X					
Navico Devices Use EVD6 or Navico HDS Emulator software to configure Fluid Level Converters (EP-65R)												X	X	X	X	X

Fluid Level Converter

A fluid level converter is an analog to digital converter (ADC) used to convert the output signal from an analog fluid level sending unit to a digital input signal for the *NMEA 2000* Network.

Use fluid level converters for fluid sending units installed on fuel tanks, oil tanks, and water tanks.

The fluid level converter is compatible with both the American and the European versions of the fluid level sending units (analog):

- The American sending unit resistance is 240 ohms EMPTY and 33 ohms FULL.
- The European sending unit resistance is 10 ohms EMPTY and 180 ohms FULL.

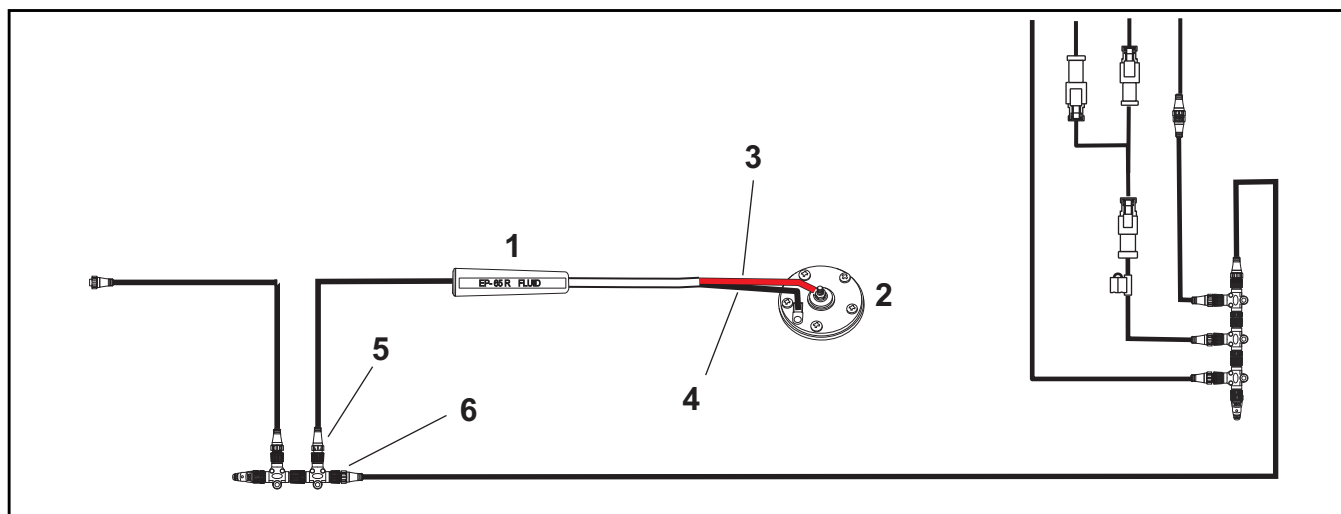
Connect the red wire from the converter harness to the positive (+) terminal of the sending unit and connect the black wire from the sensor harness to the negative (–) terminal of the sending unit.

Note: Do NOT connect the ground of the fluid level converter to a common (community) ground. This can result in an inaccurate display of the fluid level.

Connect the network connector for the fluid level converter to the center connector of the tee connector.

IMPORTANT: The fluid level converter MUST be setup and calibrated to provide a correct digital signal to the *NMEA 2000* Network.

Use *Evinrude Diagnostic 6* software to setup and to verify that the converter is configured for the correct tank (fuel, oil, or water) and the correct instance. Then use the *ICON G2* display setup procedure for calibrating fuel sending units for a 1, 3, or 5 point calibration.



1. Fluid Level Converter, P/N 768916 (Instance 4)
2. Sending Unit
3. RED wire, Positive
4. BLACK wire, Negative
5. Device connector
6. Tee connector

Use waterproof connectors or heat shrink style butt connectors for wiring. Secure harness and cables with tie straps or clamps once the installation of all components is complete.

Fluid Level Sending Unit Connection - *ICON G2 Premium Remote Controls*

ICON G2 Premium Remote Controls provide analog fluid level sending unit connections for the *NMEA 2000 Network*. Fuel and oil sending unit wires on the remote control harness are labeled for specific tank connections. Connect wires labeled “Tank 1” to main (or single) fuel tank sending unit wires. Correct wires labeled Tanks 2, Tank 3, and Tank 4 to additional tank sending unit wires based on boat configuration.

American and the European versions of the fluid level sending units (analog) are available:

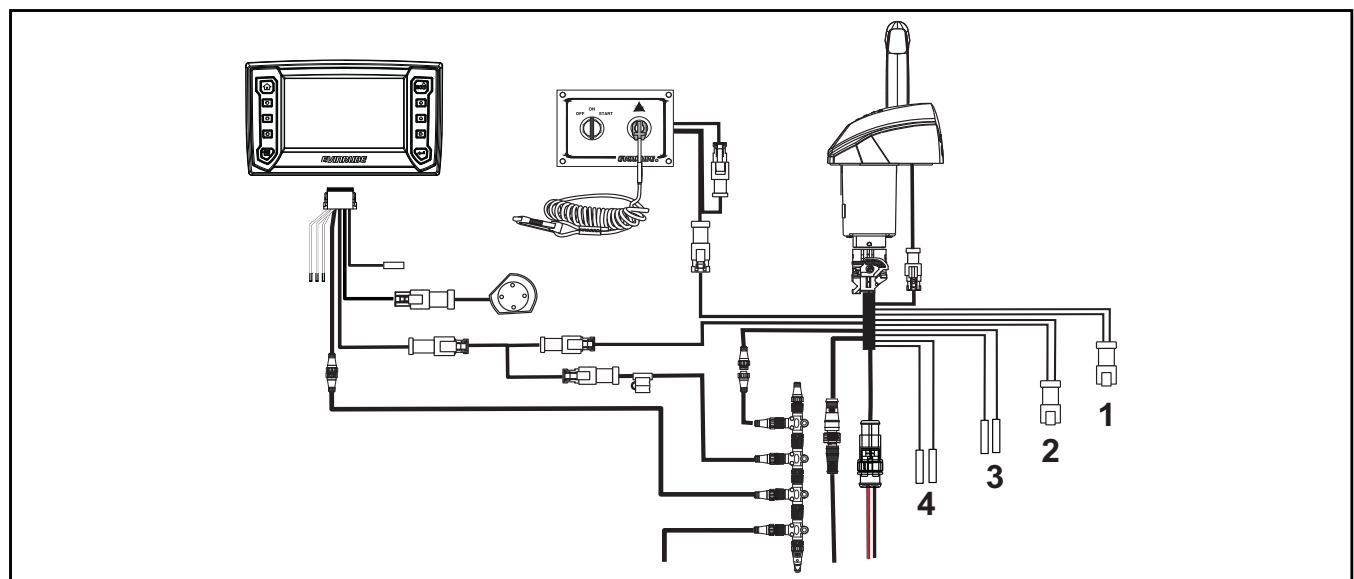
- The American sending unit resistance is 240 ohms EMPTY and 33 ohms FULL.
- The European sending unit resistance is 10 ohms EMPTY and 180 ohms FULL.

Connect the red wire from the remote control harness to the positive (+) terminal of the sending unit and connect the black wire from the remote control harness to the negative (–) terminal of the sending unit. Use waterproof connectors or heat shrink style butt connectors for wiring. Secure harness and cables with tie straps or clamps once the installation of all components is complete

IMPORTANT: The fluid level sensor **MUST** be setup and calibrated to provide a correct digital signal to the *NMEA 2000 Network*.

Use *Evinrude Diagnostic 6* software to setup and to verify that the convertor is configured for the correct tank (fuel or oil) and the correct instance. Then use the *ICON G2* display setup procedure for calibrating fuel sending units for a 1, 3, or 5 point calibration.

Fluid Level Instance	Tank Description	Sending Unit Wire Connection
4	Tank 1 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
5	Tank 2 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
6	Tank 3 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
7	Tank 4 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)



1. Fluid Level Instance 4
2. Fluid Level Instance 5
3. Fluid Level Instance 6
4. Fluid Level Instance 7

Fluid Level Connections - *ICON G2* Remote Controls STM / CSM

ICON G2 Remote Controls require separate **fluid level converter** for connecting to **analog fluid sending units**. Fluid level sensors are installed and configured on the *NMEA 2000* Network using *Evinrude Diagnostic 6* software.

American and the European versions of the fluid level sending units (analog) are available:

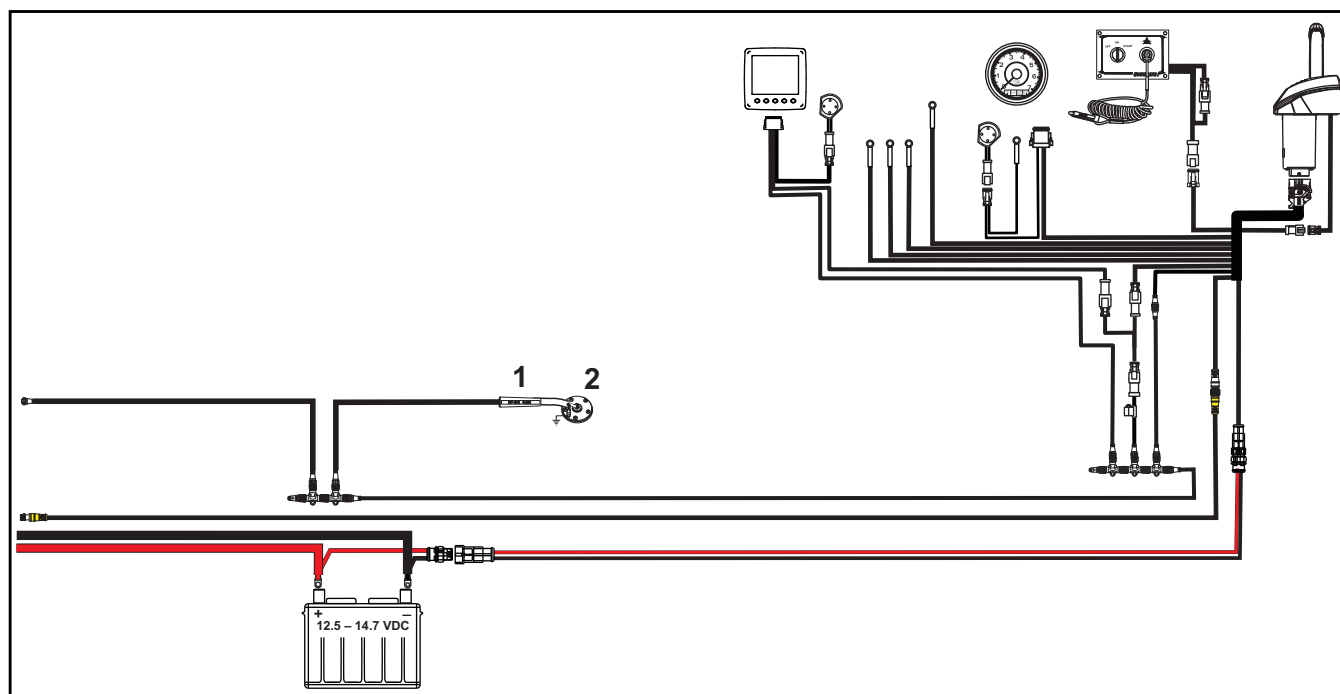
- The American sending unit resistance is 240 ohms EMPTY and 33 ohms FULL.
- The European sending unit resistance is 10 ohms EMPTY and 180 ohms FULL.

Connect the red wire from the remote control harness to the positive (+) terminal of the sending unit and connect the black wire from the remote control harness to the negative (–) terminal of the sending unit. Use waterproof connectors or heat shrink style butt connectors for wiring. Secure harness and cables with tie straps or clamps once the installation of all components is complete.

IMPORTANT: The fluid level sensor **MUST** be setup and calibrated to provide a correct digital signal to the *NMEA 2000* Network.

Use *Evinrude Diagnostic 6* software to setup and to verify that the sensor is configured for the correct tank (fuel or oil) and the correct instance. Use the *ICON G2* display setup procedure for calibrating fuel sending units for a 1, 3, or 5 point calibration.

Fluid Level Instance	Tank Description	Sending Unit Wire Connection
0	Tank 1 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
1	Tank 2 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
2	Tank 3 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)
3	Tank 4 (See Channels listed in EVD6)	Red (Positive +), Black (Negative –)



1. Fluid Level Converter, Instance 4
2. Analog Fluid Sending Unit

Digital Display Connections (*NMEA 2000* Network)

Various *Evinrude ICON G2* digital displays can be installed and integrated into the *ICON G2 Remote Control System*.

NOTE: *ICON G2* Premium Remote Controls require the installation of an analog to digital converter kit to connect a SystemCheck gauge to the *NMEA 2000* network.

Refer to the connection diagrams for additional details.

ICON 3.5 Display (Single Engine Application only)

Recommended for use with *ICON G2* Premium Remote Controls and *ICON G2* Remote Controls

4.3 inch ICON Touch (1 - 2 Engine Application only)

Recommended for use with *ICON G2* Premium Remote Controls and *ICON G2* Remote Controls

7 inch ICON Touch (1 - 4 Engine Application only)

Recommended for use with *ICON G2* Premium Remote Controls and *ICON G2* Remote Controls

ICON Pro / ICON Basic (1 - 4 Engine Application only)

Recommended for use with *ICON G2* Premium Remote Controls and *ICON G2* Remote Controls

SystemCheck and Analog Gauge Connections (1 - 2 Engine Application only)

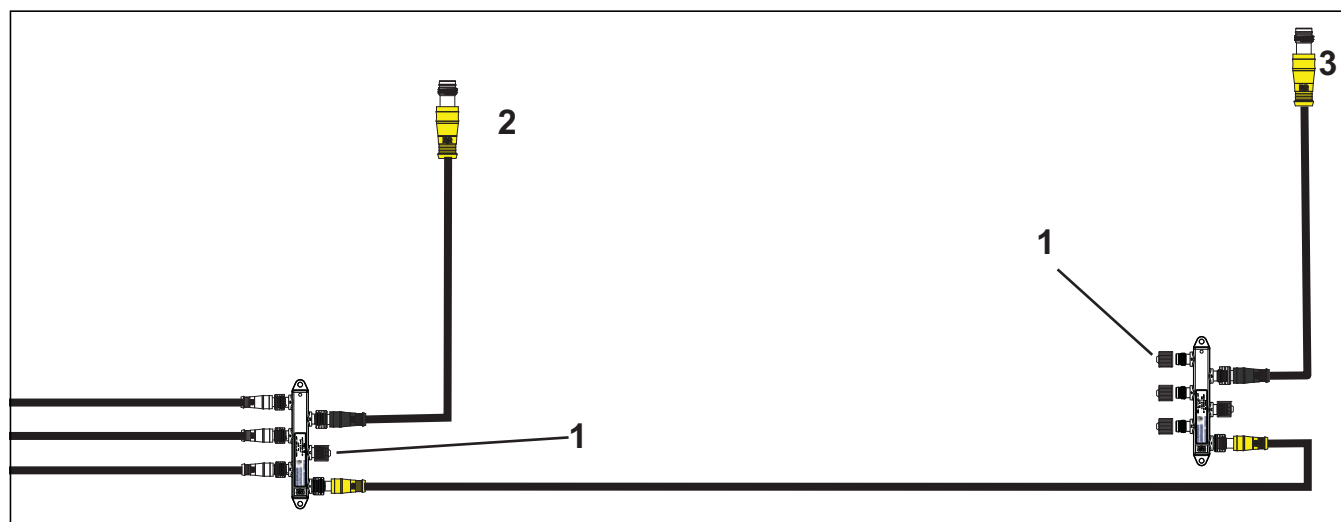
Recommended for use with *ICON G2* Remote Controls

6-Port Hub (ICON G2) Connections

Route bus cable from remote control to 6-Port hub. Connect bus cable.

Route bus cable extension connector from 6-Port hub to second hub or engine bus connector.

Push male connector into the female connector until it locks. You can hear a click sound as the connectors lock together. Install protective covers on unused hub connections.

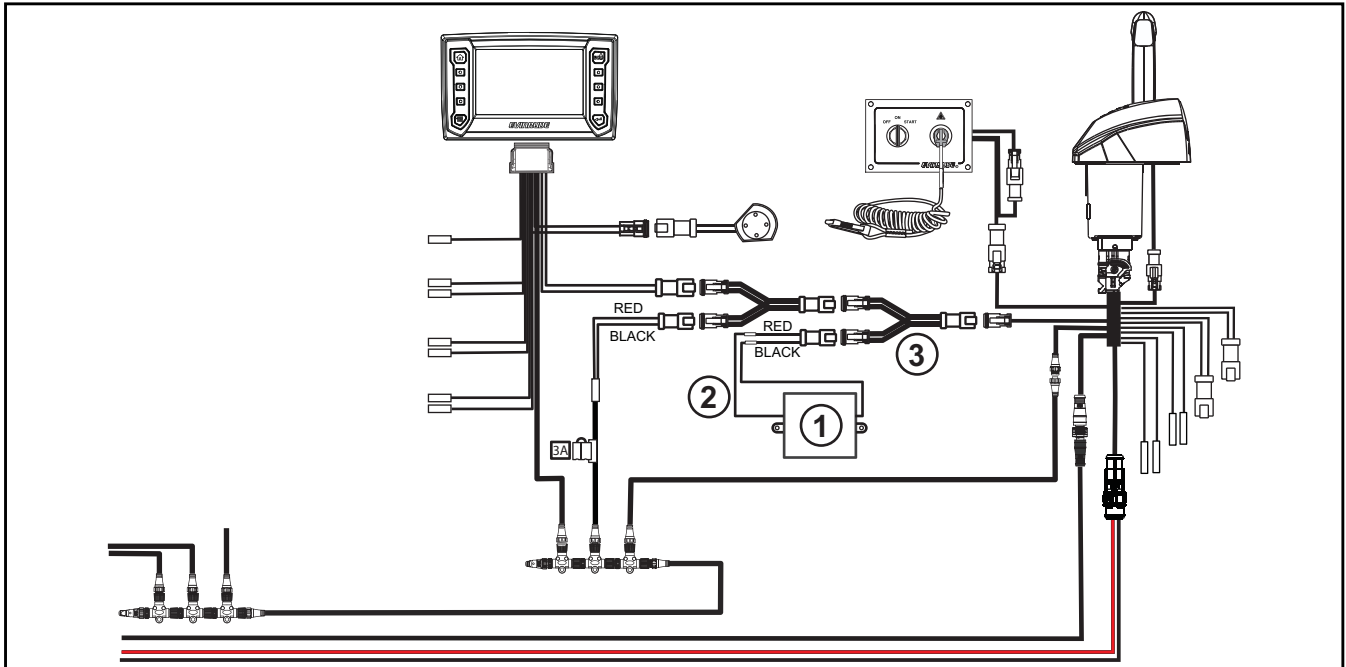


1. Protective covers
2. Lower Station, Remote Control
3. Second Station, Remote Control

587172-02

Trim Tab Connections (*NMEA 2000* Network)

Auto retract trim tabs (*NMEA 2000*) require a network power connection.



1. Trim Tab Auto Re-track Module
2. Orange power wire
3. NMEA 2000 Power Node and Y-harness

Network and Engine Setup

To correctly setup an *Evinrude E-TEC G2* outboard, the use of a laptop computer is required.

Use a Laptop to Setup all Evinrude E-TEC G2 Outboard

Use a laptop (IBM-compatible PC type) to setup all *Evinrude E-TEC G2* outboards. Install *Evinrude Diagnostic 6* software program on the laptop.

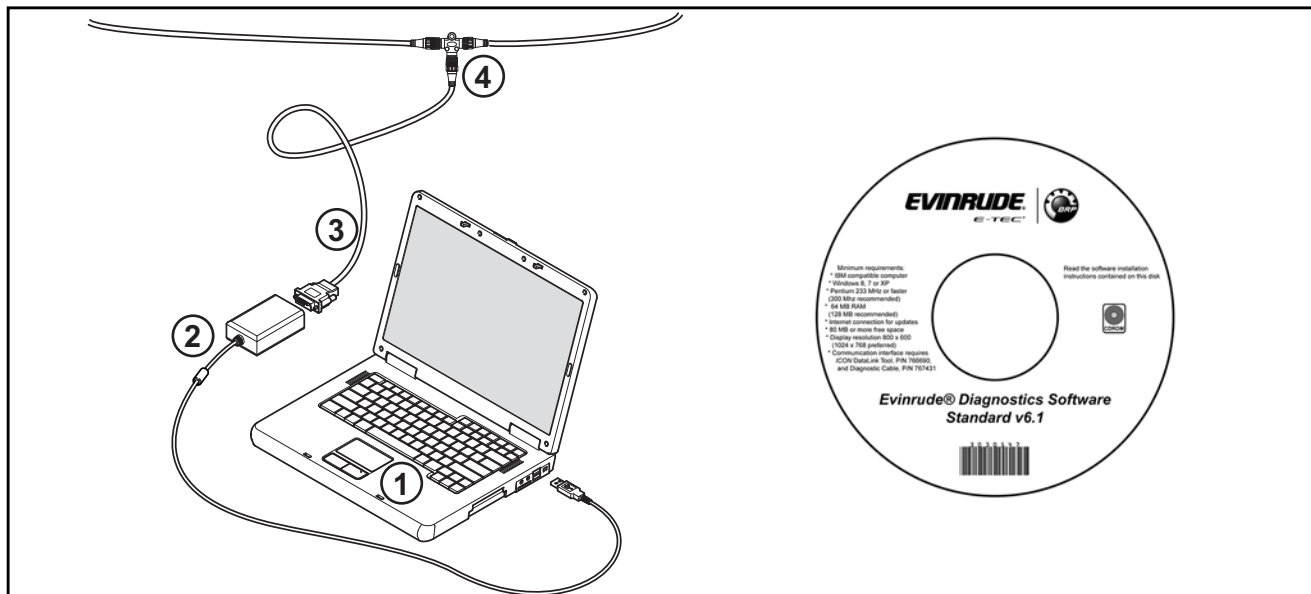
Connect the laptop to the outboard's *NMEA 2000* Network using:

- One *ICON DataLink Tool*, P/N 766690 (includes MPI-3 adaptor, P/N 767994)
- One Diagnostic Cable, P/N 767431

Evinrude E-TEC G2 Rigging & Setup Guide

Network and Engine Setup

- And a Tee connector, P/N 764151.



1. Laptop with Evinrude Diagnostics 6 software, P/N 5009631, installed
2. ICON DataLink Kit, P/N 766690 (includes MPI-3 Adaptor)
3. Diagnostic Cable, P/N 767431 (MPI-3 to NMEA 2000 Network)
4. Tee Connector, P/N 764151

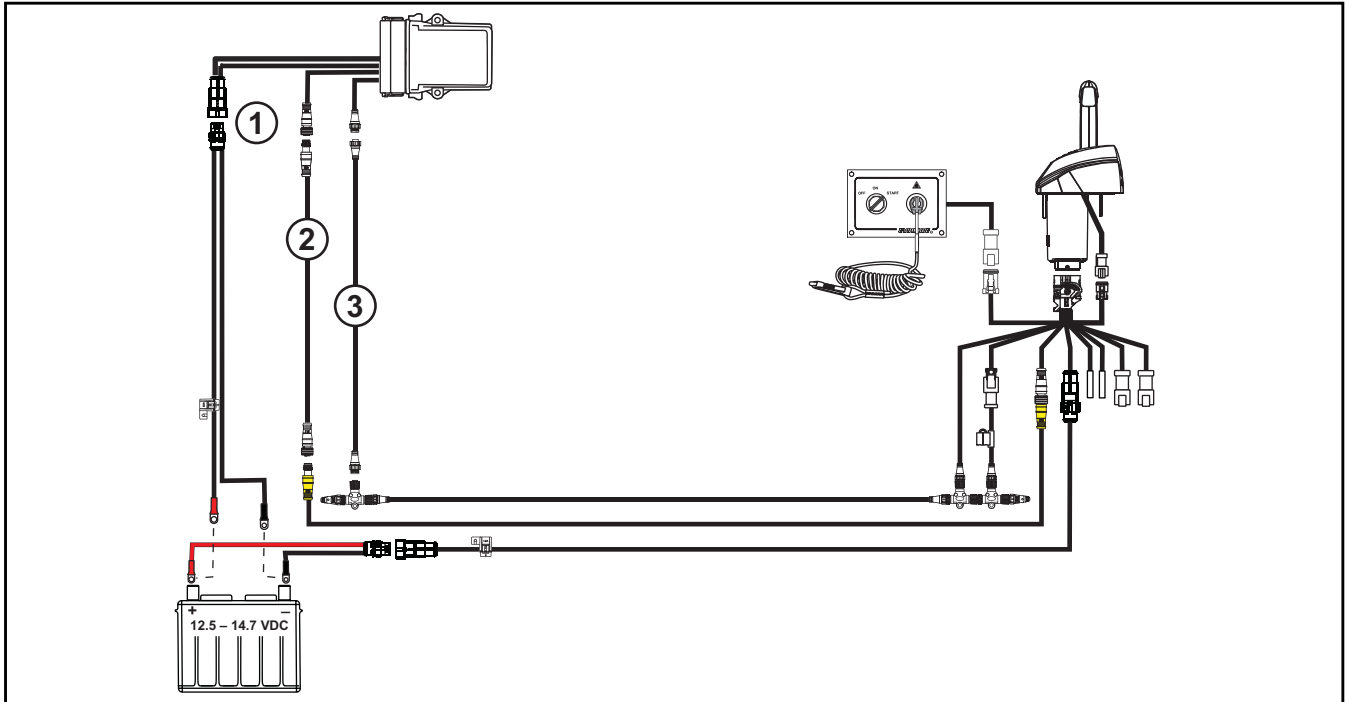
If needed, order the *Evinrude Diagnostics 6* software CDROM disk, P/N 5009631, when installing *Evinrude Diagnostic 6* software on a computer (PC) for the first time. Once installed, use the laptop to log-in to *BOSSWeb* to update the software. Refer to Service Bulletin 2016-01(S) on the BRP *BOSSWeb* website for addition details.

G2 Network Test Kit

Use the G2 Network Test Kit, P/N 5010157, to test re-rigged boats prior to installing the engines.



Temporarily connect battery cables, the Remote Control bus backbone extension cable and the *NMEA 2000* bus cable as shown. Refer to instruction sheet, P/N 359724, which is included with G2 Network Test Kit.



1. Battery cables, G2 Network Test Kit
2. Remote Control bus backbone extension cable
3. NMEA 2000 bus cable

Engine Setup

Use *Evinrude Diagnostics 6* software to setup *Evinrude E-TEC G2* outboards.

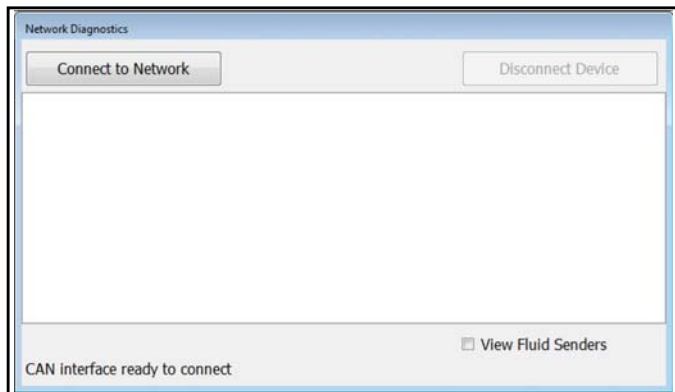
Required settings include:

- Single engine installations use the factory setting of - PORT / Instance 0. For multi-engine installations, set engine "Instance" (engine position on the transom) for multi-engine installations.
- Calibrate the trim gauge sending unit and tilt limit for each outboard
- Setup water pressure transducer (if equipped) for each outboard
- Setup Remote Control station protect (dual station only)
- Set "Engine Configuration" information for each outboard
- Steering system setup for multi-engine installation

Evinrude E-TEC G2 Rigging & Setup Guide

Network and Engine Setup

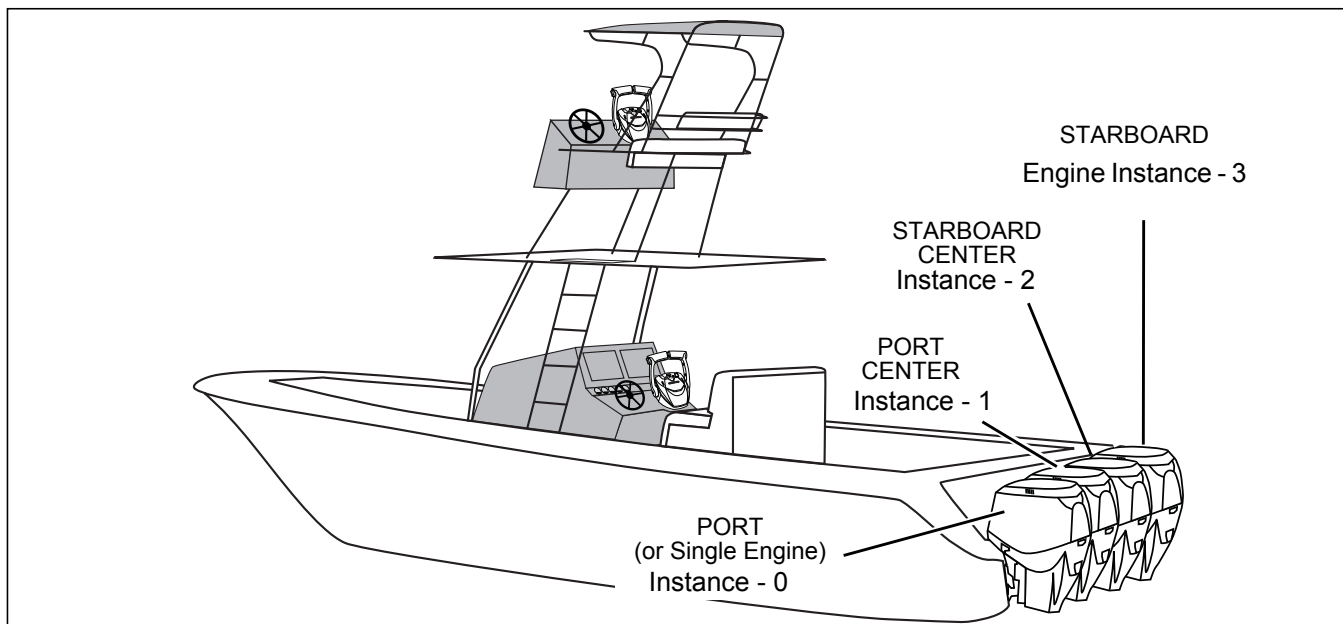
Click on the “Connect to Network”.



Engine Instance

Outboards are identified as Instance 0 through 3, from port to starboard, up to four engines. All engines come from the factory set to Instance 0 or PORT engine.

Multi-engine applications require the transom position of the outboard be identified on the *ICON G2* Remote Control System.



If the outboard is a single engine or the port engine in a multi-engine application, no changes are required. If duplicate engine identity numbers are detected, the affected outboard's NEUTRAL indicator LED will flash rapidly.

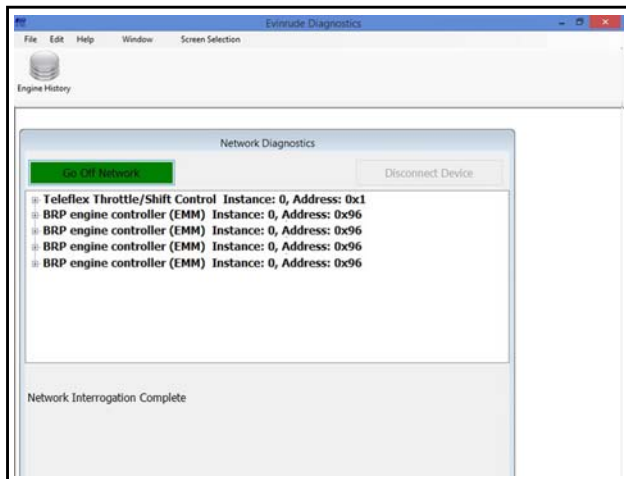
Use *Evinrude Diagnostics 6* software to adjust the instance number the outboard's position on the transom.

NOTE: Once the engine instance is changed, the EMM must be “rebooted (turned OFF and then ON again) to retain the new instance setting.

Number of Engines	Engine position / Instance Numbers				
	Port	Port Center	Center	Starboard Center	Starboard
1 (original factory setting)	0	—	—	—	—
2	0	—	—	—	1
3	0	—	1	—	2
4	0	1	—	2	3

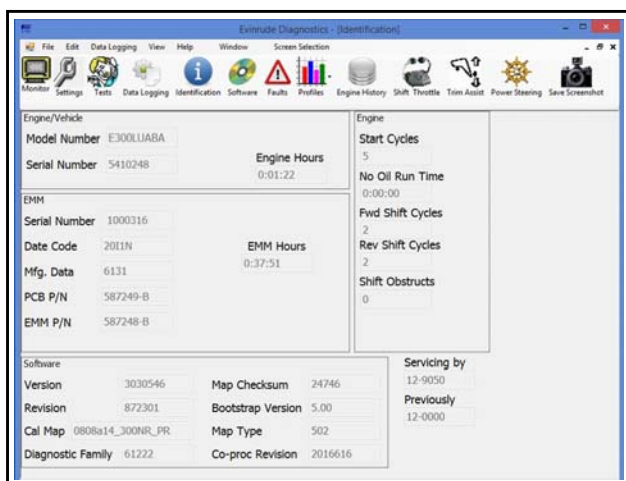
Do NOT switch *EMMs* between outboards. Severe engine damage can result from improper replacement of *EMM*.

Look at *Device List* and select a specific “EMM” to setup instance and the configuration for that engine.



9161

Verify the model and the serial number of engine selected in the *Identification* screen.

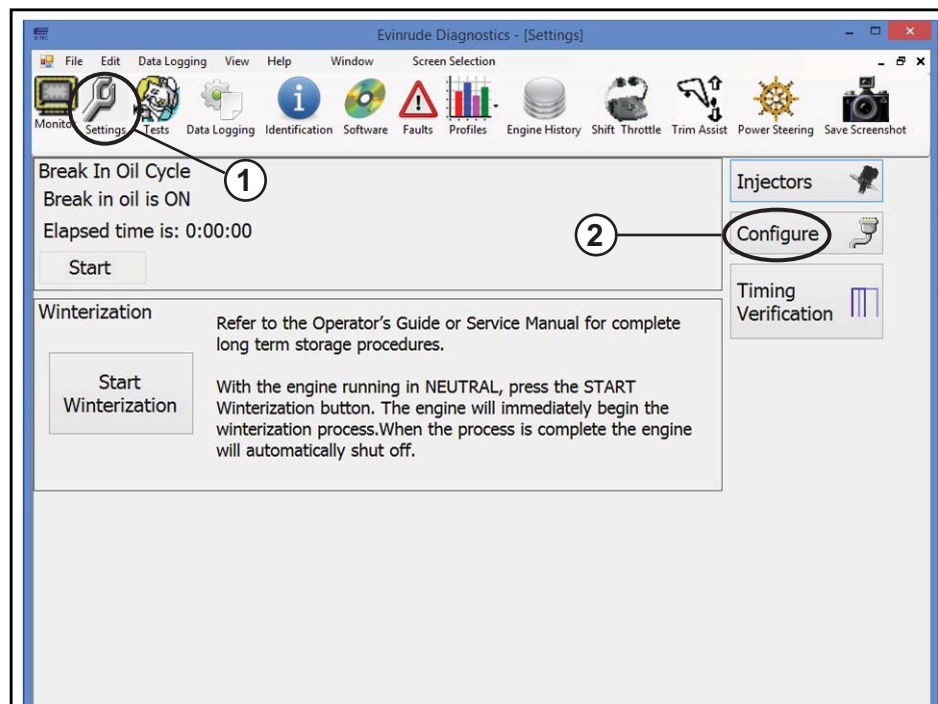


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Evinrude E-TEC G2 Rigging & Setup Guide

Network and Engine Setup

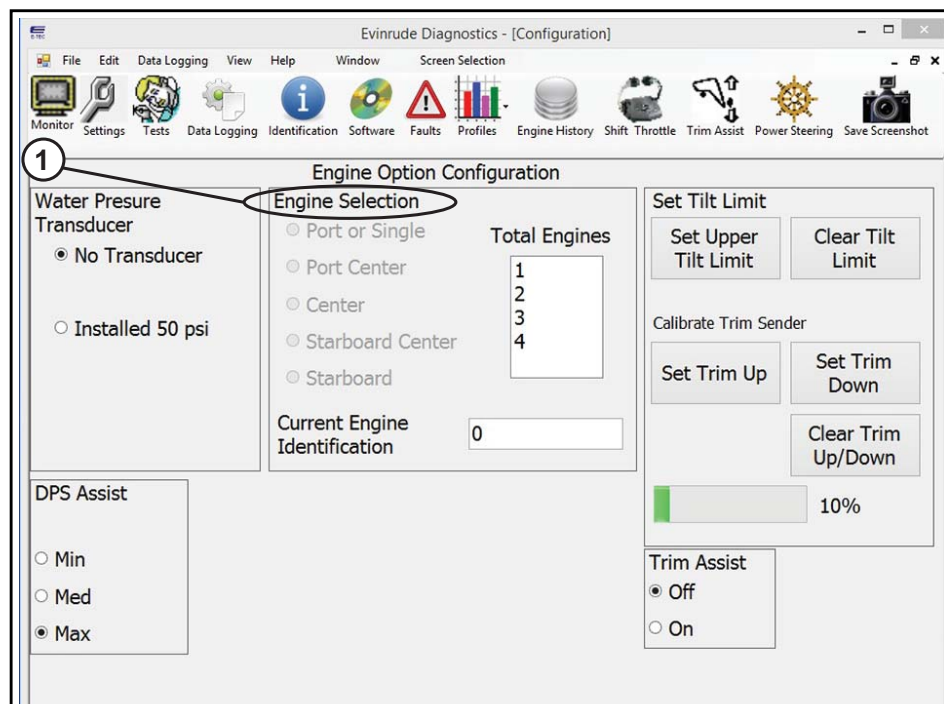
Click on *Settings* and then the *Configure* button to access the *Engine Option Configuration* screen.



1. *Settings*
2. *Configure*

9243

Select the number of engines installed and use the *Engine Selection* list to select position of the engine on the transom.

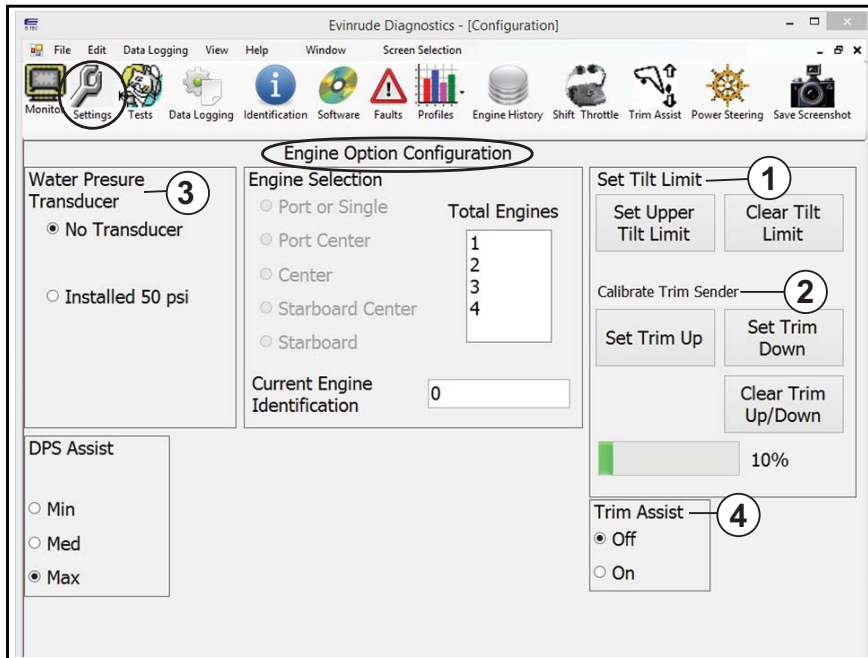


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Engine Configure

Use the *Engine Option Configuration* screen of *Evinrude Diagnostics 6* software to:

- Perform Set Tilt Limit
- Perform Calibrate Trim Sender
- Activate Water Pressure Transducer (optional: 50 PSI Water Pressure Transducer Kit, P/N 5008640)
- Activate Trim Assist (iTrim)



Settings > Configure > Engine Option Configuration

1. *Set Tilt Limit*
2. *Calibrate Trim Sender*
3. *Water Pressure Transducer*
4. *Trim Assist*

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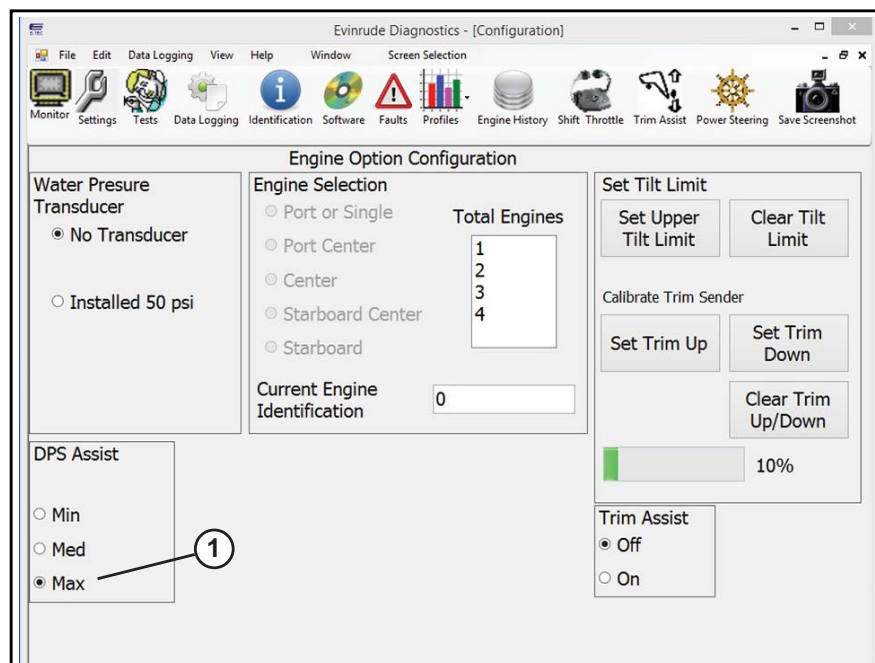
Network and Engine Setup

Steering System Setup

Use *Evinrude Diagnostics 6* software for steering system setup.

DPS Assist

Click on “Settings” and then use the “Configuration” screen of Evinrude Diagnostics software to set the “DPS Assist” level to: MINIMUM, or MEDIUM, or MAXIMUM.



Settings > Configure > Engine Option Configuration

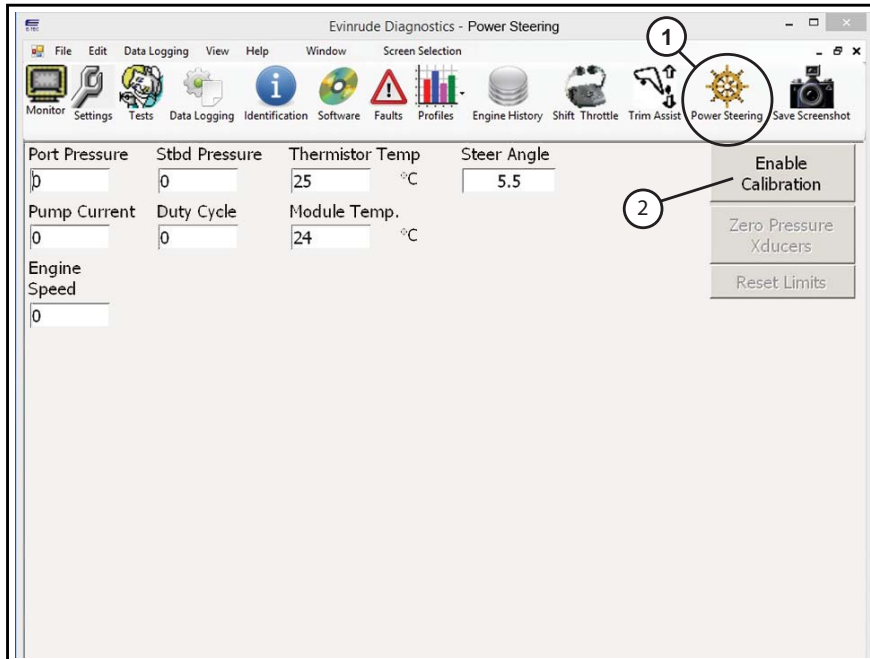
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1. DPS Assist; Min, Med, Max

Multi Engine Steering Setup

Set Endpoints

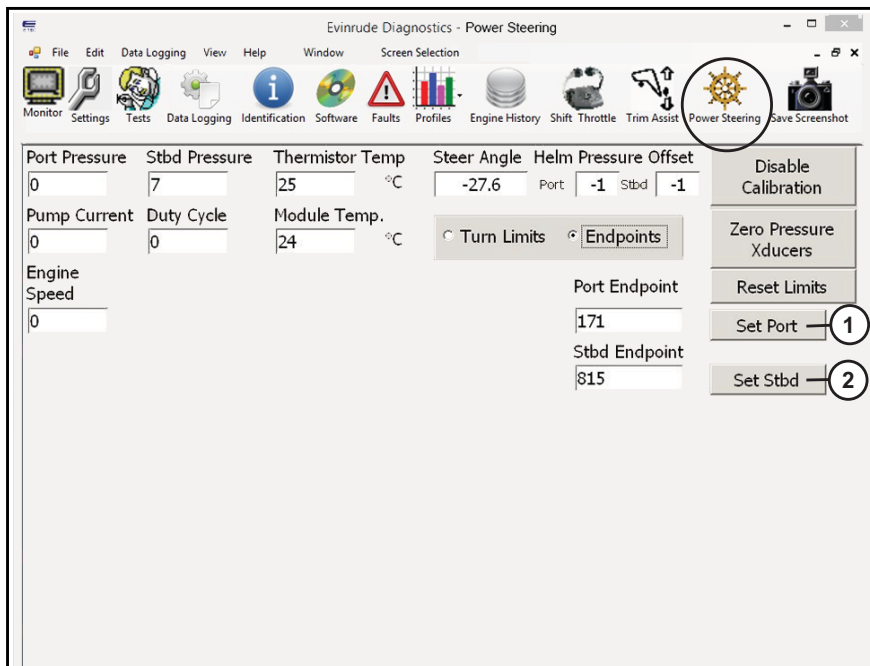
Select Power Steering and then select Enable Calibration.



1. Power Steering
2. Enable Calibration

009397

Set the PORT Endpoint and set the STARBOARD Endpoint.



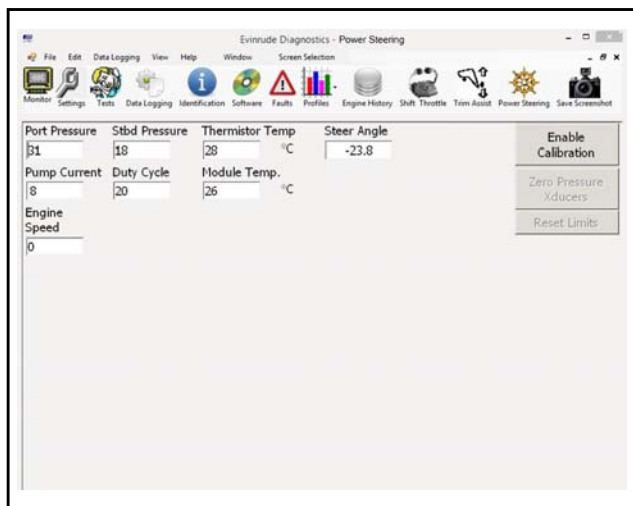
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Evinrude E-TEC G2 Rigging & Setup Guide

Network and Engine Setup

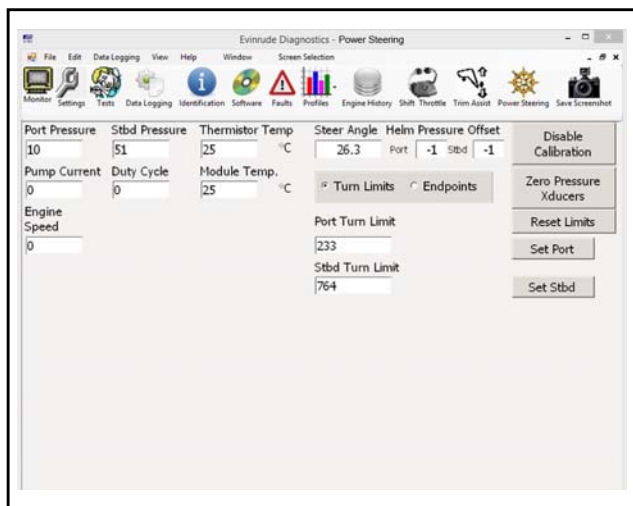
Set Turn Limits

Select Enable Calibration.



009400

Set the PORT Turn Limit and set the STARBOARD Turn Limit.



009401

Shift and Throttle Calibration

Outboards with *ICON* G2 Remote Controls do not require calibration.

For outboards with an *ICON* G2 UCM conversion kit installed, refer to the installation instructions provided with the conversion kit for the appropriate shift and throttle calibration procedure.

Fuel Tank Setup for *Evinrude E-TEC* G2 Engines

Use *Evinrude Diagnostics 6* Software and *Data Link* Tool set Engine and Fuel Tank Configuration.

1. Connect a laptop equipped with *Evinrude Diagnostic 6* to the diagnostic port of the outboard.
2. Open *Evinrude Diagnostics 6* and connect to the network.
3. Select the Throttle/Shift Control option.

4. Click on the Fluid Levels box at the top of the screen. This will bring up the fluid level configuration box where the instances for each tank will need to be configured.
5. Select Fuel or Oil for each tank within the proper Fluid Channel box.

NOTE: Channels 0 and 1 are set to fuel by default while channels 2 and 3 are set to oil by default.

6. Set the capacity of each tank by entering the value into the proper capacity box.

Use heat shrink butt connectors, P/N 502526, install connectors onto wiring. Heat butt connectors to provide water-resistant seal to connect pink and black wires from fuel level sender(s) to red and black wires the remote control sender. Fuel sender wires on remote control harness assembly are labeled for connection to specific fuel tanks.

Connect fuel level sender wires labeled “1” to main (or single) fuel tank wires. Connect remaining fuel level sender wires to other fuel tank(s) wires in numerical order.

Use tie straps to secure harnesses and cables once installation of all components is complete.

7. Perform Tank Level Calibration for 2, 3, or 5 point calibration.

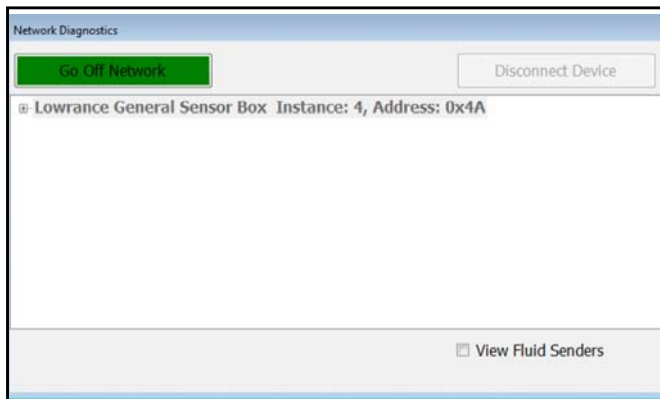
Bus Devices

View network devices.

Review and setup an un-configured devices...check for proper identification and setup.

Select the appropriate “Lowrance General Sensor Box” from the device tree view.

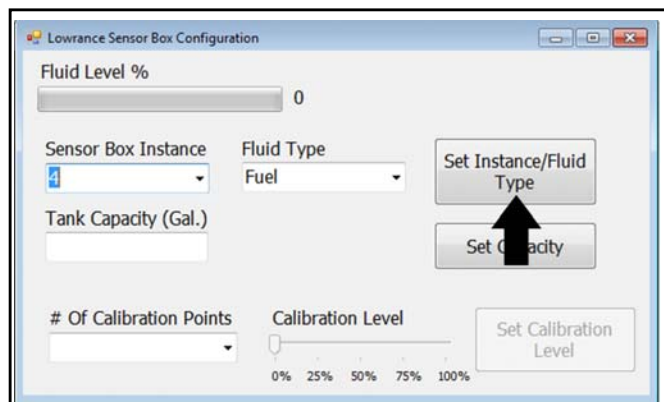
Note: If there is more than one Fluid Level Sensor on the network, more than one Lowrance General Sensor Box will be listed in the device tree view.



Evinrude E-TEC G2 Rigging & Setup Guide

Operational Tests

Enter the Instance Number and Fluid Type for the fluid level converter being configured.



IMPORTANT: A GPS antenna must be installed to track seasonal fuel, trip fuel, fuel range, and economy.

Setup / Change Measurement Units

Enter MENU. Select option.

Station Protect

In a dual station installation, the “Station Protect” feature limits use of control stations. When Station Protect is turned ON, a unique key sequence must be entered to activate a station and start, run and control all outboards.

Use *Evinrude Diagnostics 6* to enable Station Protect.

Press the “Settings” button. Press the “Save Settings” button.

Operational Tests

After all switch and cable connections are complete and the installation is completed, connect the battery cables. Always connect the positive cable first and the ground cable last. Test operation of key switch and emergency stop switch.

After operational tests are complete, turn the master power/key switch to the OFF position.

DO NOT run outboard without water being supplied to the outboards cooling system. Cooling system and/or engine could occur. Be sure the water intake screens are below the water surface.

Key Switch

The key switch turns power ON and OFF to the:

- *Private network and EMM(s)*
- *ICON II Remote Control*
- *NMEA 2000 Network (Remote Control Network)*
- *Displays and gauges (connected to NMEA 2000 Network)*
- *Boat accessories (connected to NMEA 2000 Network)*

Turn the key switch to the ON position. All devices connected to the *ICON* G2 remote control system, display and gauge network and accessory power by public network turn on.

Turn the key switch to the OFF position. All devices connected to the *ICON* G2 remote control system, gauge network and accessory power by public network turn off.

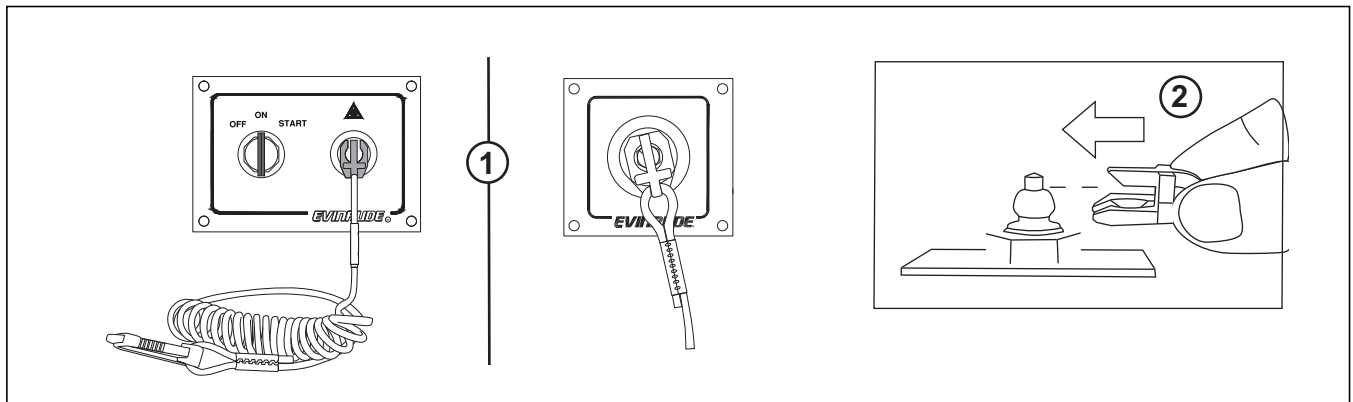
IMPORTANT: Turning the key switch to the OFF position also stops all outboards and turns off power to all stations.

Emergency Stop Test

NOTE: If the levers are not in NEUTRAL at both stations the inactive station gear LEDs will flash five times per second.

IMPORTANT: If boat is equipped with an optional second or remote station, an emergency stop lanyard must be installed on the emergency stop switch of the second station. Engine(s) will not start without emergency stop clip in place. Refer to Second or Remote Station.

Check emergency stop function. Push clip of emergency stop lanyard onto the emergency stop switch and carefully connect the lanyard clip to the operator's vest or clothing.



1. Emergency stop switch
2. Emergency stop clip

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Press the RPM+ button to activate station.

Start the outboard(s).

With outboard(s) running, remove emergency stop lanyard. Outboard(s) must STOP. If outboard does not stop, check key switch and emergency stop switch wiring. Repair as needed.

Reinstall clip on the emergency stop switch.

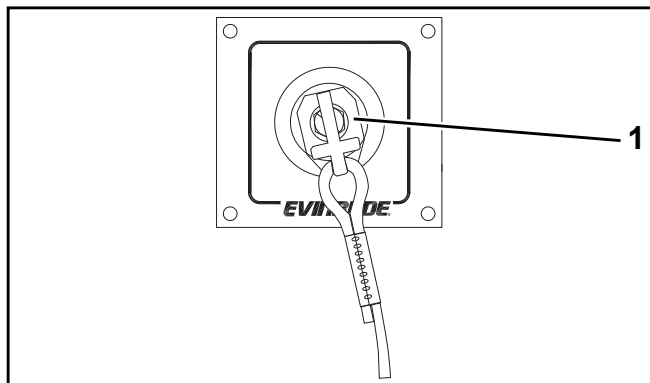
Second or Remote Station

Press the (+) side of the station button to activate the station.

Evinrude E-TEC G2 Rigging & Setup Guide

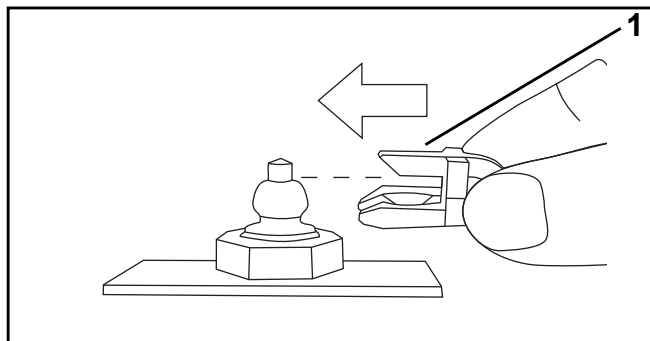
Operational Tests

Push clip of emergency stop lanyard onto emergency stop switch and carefully connect the lanyard clip to the operator's vest or clothing.



1. Emergency stop clip

007897



1. Emergency stop clip

007898

Station Select

Press the RPM+ button activate station.

With outboard(s) running remove emergency stop lanyard from second station emergency stop switch. Outboard(s) must STOP. If outboard does not stop, check emergency stop switch and wiring. Repair as needed.

Station Protect

This feature limits the use of the Station Transfer function. The Station Transfer function will not activate when Station Protect is ON.

Turning Station Protect ON

Use *Evinrude Diagnostics 6* software to turn Station Protect ON - see your authorized dealer.

Turn the key switch to the ON position.

Turning Station Protect OFF

Shift to NEUTRAL and align the levers.

In dual station installations, the operator must select a station:

- Go to the master station or the remote or second station in the boat.
- Press any switch on the remote control, or press the START symbol of the START/STOP to activate the station.

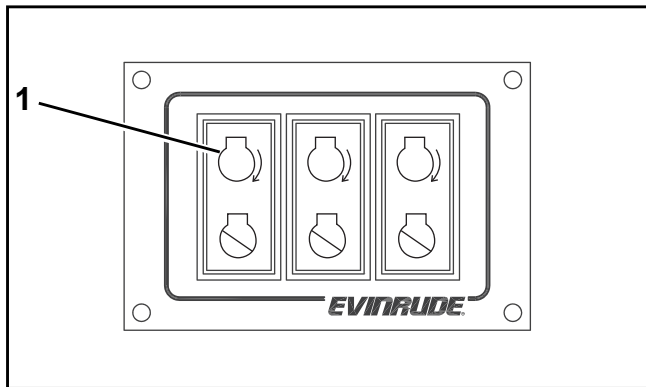
Position control lever(s) in the NEUTRAL position to start or stop outboard. NEUTRAL indicator Light Emitting Diodes (LEDs) turn ON.

Engine START/STOP Switches

The starter motor can be damaged if operated continuously for more than 20 seconds.

One START/STOP switch is used for each engine. START/STOP switches are used at each operator station.

Turn the master power/key switch to the RUN position. Press the START symbol of switch to start the outboard. Crank the engine no longer than 20 seconds.

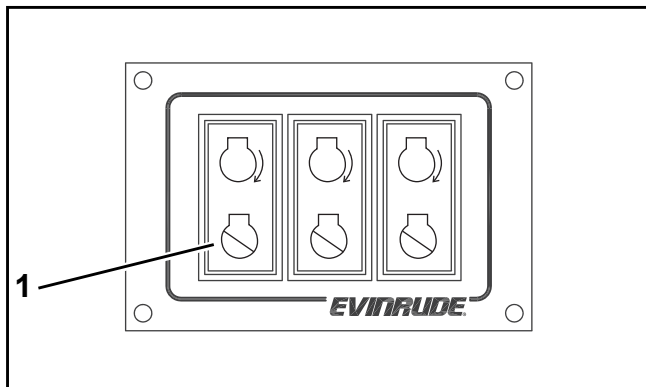


1. START symbol

007899

Upon start-up, release the switch.

Press and release the STOP symbol of switch to stop the outboard.



1. STOP symbol

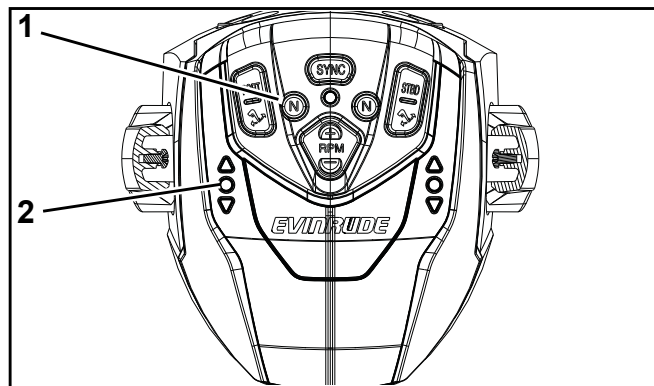
007899

RPM Tune Switch Panel

A RPM Tune Switch Kit is an optional accessory for /CON G2 PREMIUM Concealed Side Mount (CSM) remote controls.

NEUTRAL Warm Up

Press the **N** switch. The NEUTRAL indicator LED flashes. Advance the control lever to increase engine speed.



ICON G2 Dual Top Mount Remote Control Housing

356583-N

1. NEUTRAL throttle switch
2. NEUTRAL indicator LED

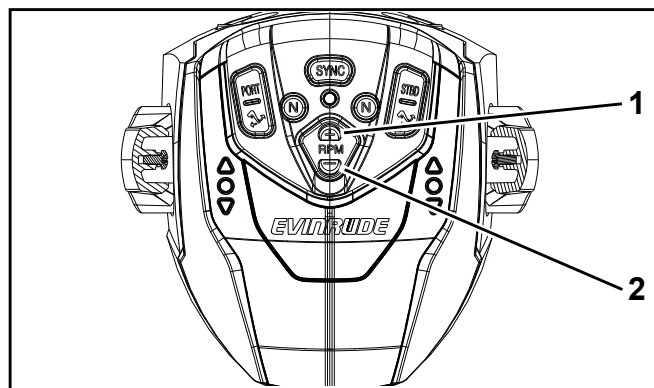
RPM Tune Switch Panel

The **RPM** adjustment switch allows the operator to gradually adjust engine RPM.

RPM adjustment range is limited to 5% of the throttle setting. Each press of the RPM switch changes throttle setting 1%. The adjustment range is approximately 100 to 200 RPM depending on engine speed.

IMPORTANT: To use the RPM adjustment feature, the control lever MUST be in FORWARD gear and engine speed must be above 500 RPM.

Press the **+** side of the **RPM** switch to increase engine speed. Press the **-** side of the **RPM** switch to decrease engine speed.



1. "+" side of RPM switch
2. "-" side of RPM switch

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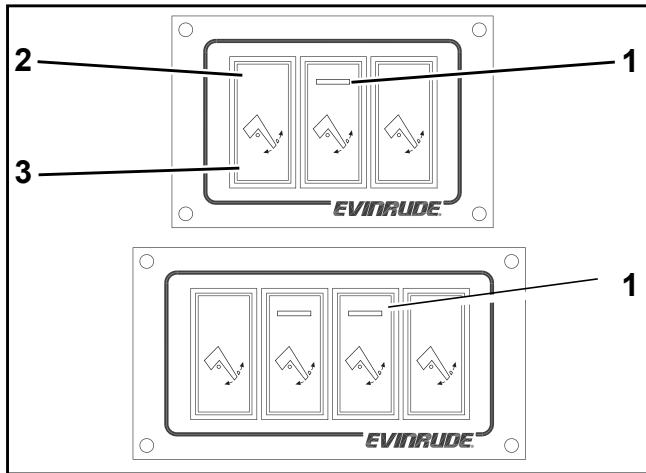
To cancel the RPM adjustment switch setting move the control lever to a faster or slower position.

Trim and Tilt Switches

Installations of three or four outboards use a dashboard mounted trim and tilt switch panel to adjust trim on individual outboards. Indicator LEDs will turn ON when outboard is in NEUTRAL.

Press the upper part of the trim and tilt switch to trim/tilt the outboard up.

Press the lower part of the trim and tilt switch to trim/tilt the outboard down.



1. Indicator LEDs
2. Press to trim or tilt UP
3. Press to trim or tilt DOWN

007901-01

Check Start in Gear Protection

⚠ WARNING

Make certain starter will not operate when the outboard is in gear. The start-in-gear prevention feature is required by the United States Coast Guard to help prevent injuries.

Refer to the **ICON User's Guide** or outboard's operator's guide for start procedure and remote control operation.

Start the outboard and shift into FORWARD gear.

Turn outboard OFF while remote control is in FORWARD.

Try to restart the outboard. Outboard should not start.

Shift into NEUTRAL and restart outboard.

Shift into REVERSE gear. Turn outboard OFF while remote control is in REVERSE.

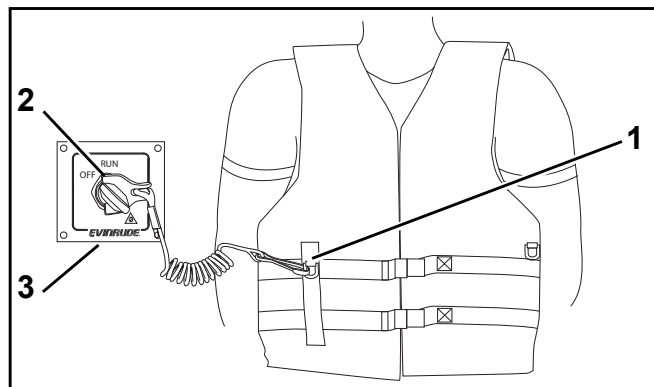
Try to restart the outboard. Outboard should not start.

Shift into NEUTRAL and restart outboard.

On Water Test

Secure boat to dock to prevent motion. Snap the emergency stop lanyard to a **secure** place on the operators clothing or life vest – not where it might tear away instead of activating the stop switch.

Push clip of emergency stop lanyard onto master power switch.



- 1. Lanyard
- 2. Clip
- 3. Master power switch

005499A

⚠ WARNING

Emergency stop lanyard MUST be securely attached to operator, and clip MUST be installed on master power switch. DO NOT operate outboard with clip removed from switch, except in an emergency.

Control lever(s) must be in the NEUTRAL position to start or stop outboard.

Turn master power/key switch to RUN position.

Press START symbol of Start/Stop switch. Release switch as soon as outboard starts.

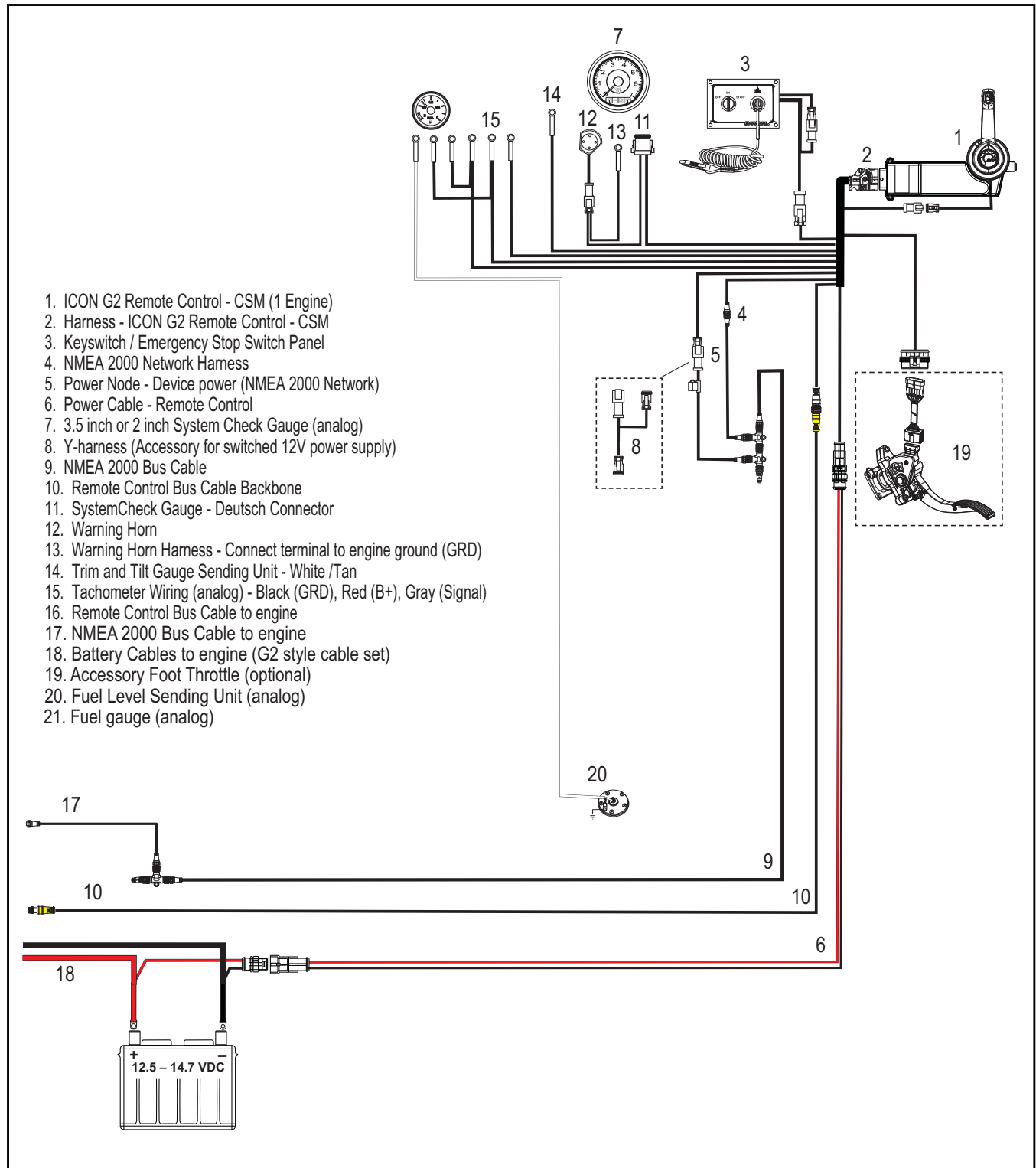
Check shift operation. Check that outboard shifts into FORWARD gear when control is shifted to FORWARD, and shifts to REVERSE gear when control is shifted to REVERSE.

Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Concealed Side Mount Remote Control (CSM) Connection Diagrams

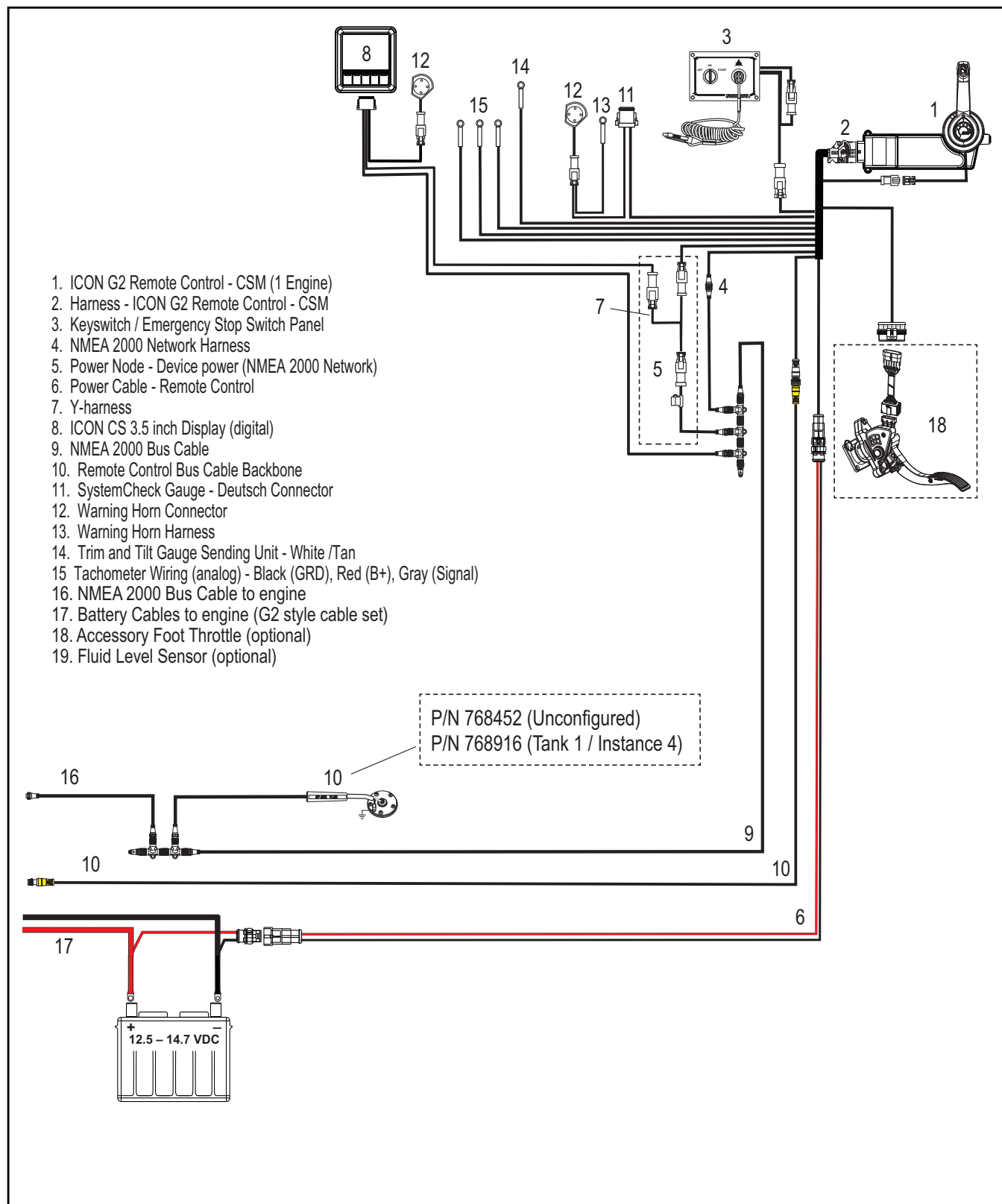
ICON G2 Concealed Side Mount Remote Control (CSM): One Engine, One Station, SystemCheck Gauge



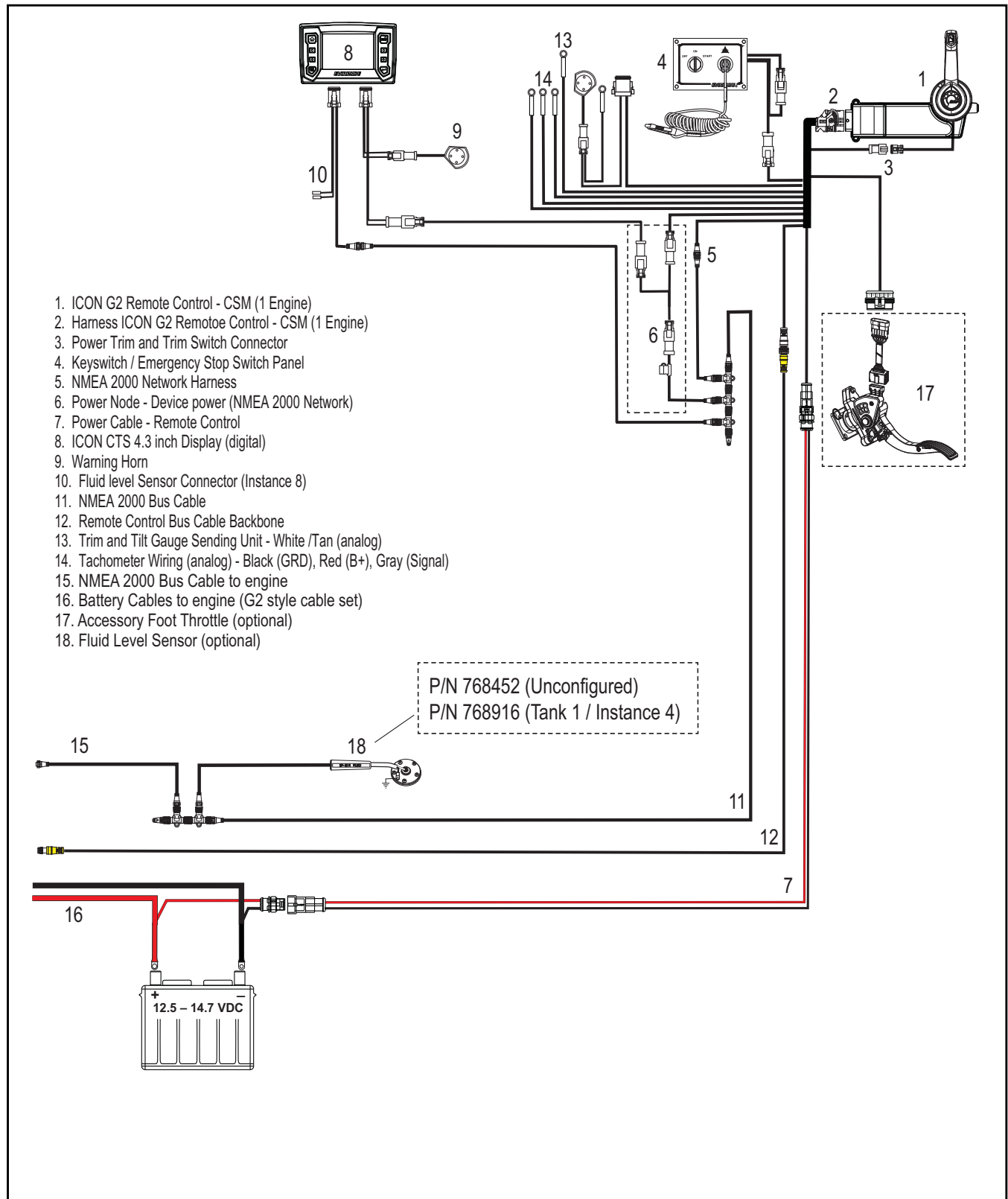
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Concealed Side Mount Remote Control (CSM): One Engine, One Station, ICON CS 3.5 inch display



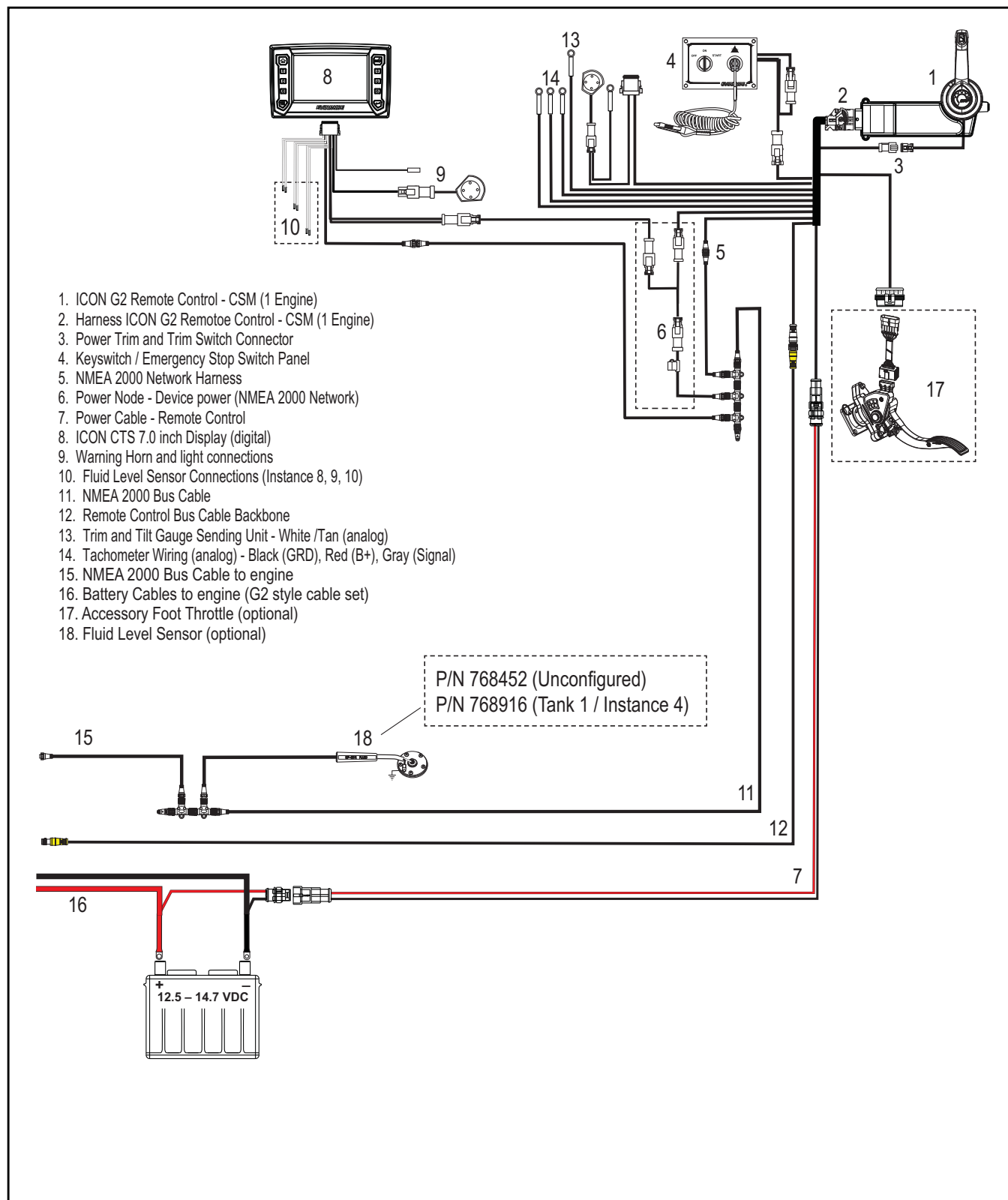
ICON G2 Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON CTS 4.3 inch display



Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Concealed Side Mount Remote Control (CSM) Connection Diagrams

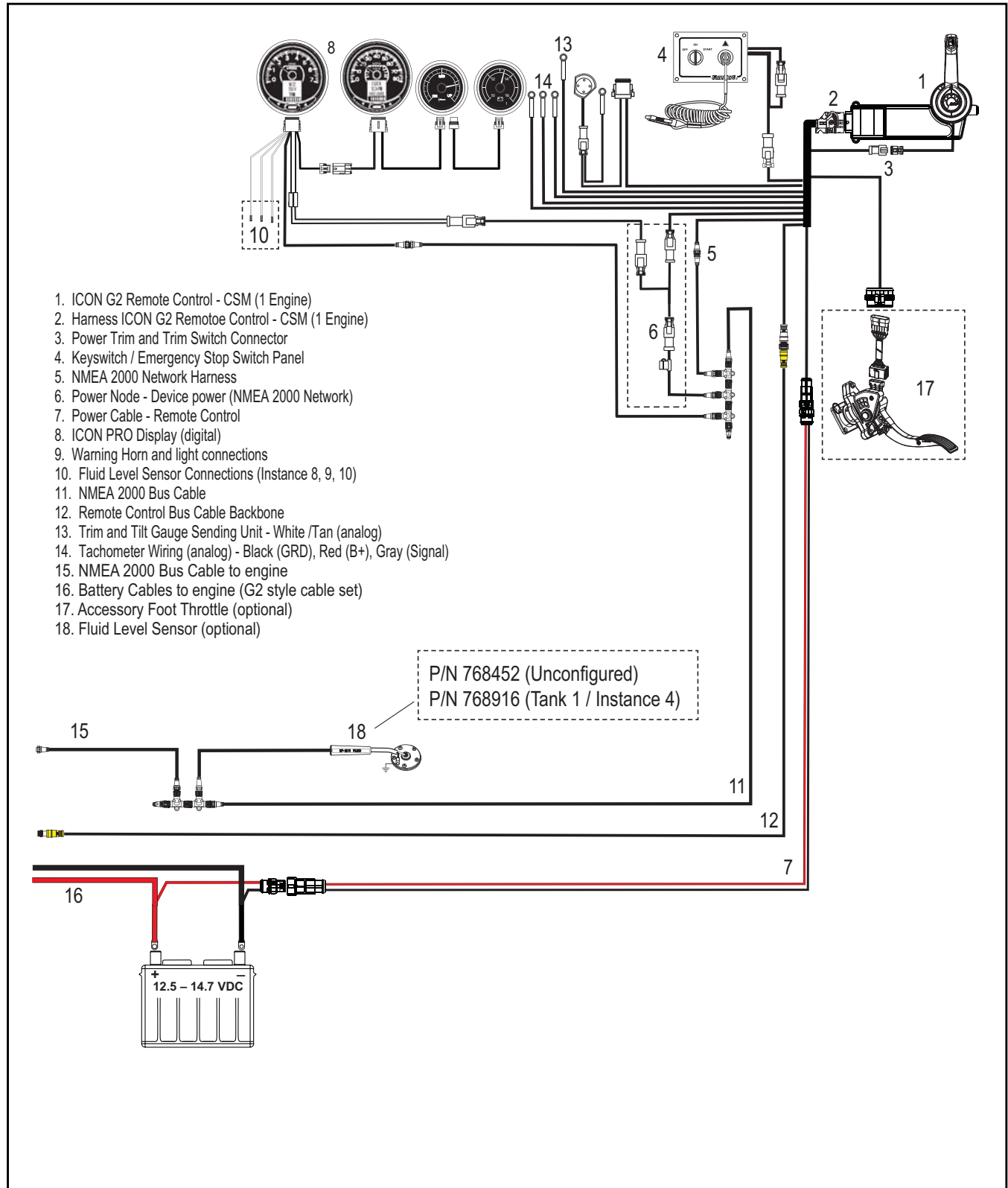
ICON G2 Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON CTS 7.0 inch Display



Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON Pro Gauges



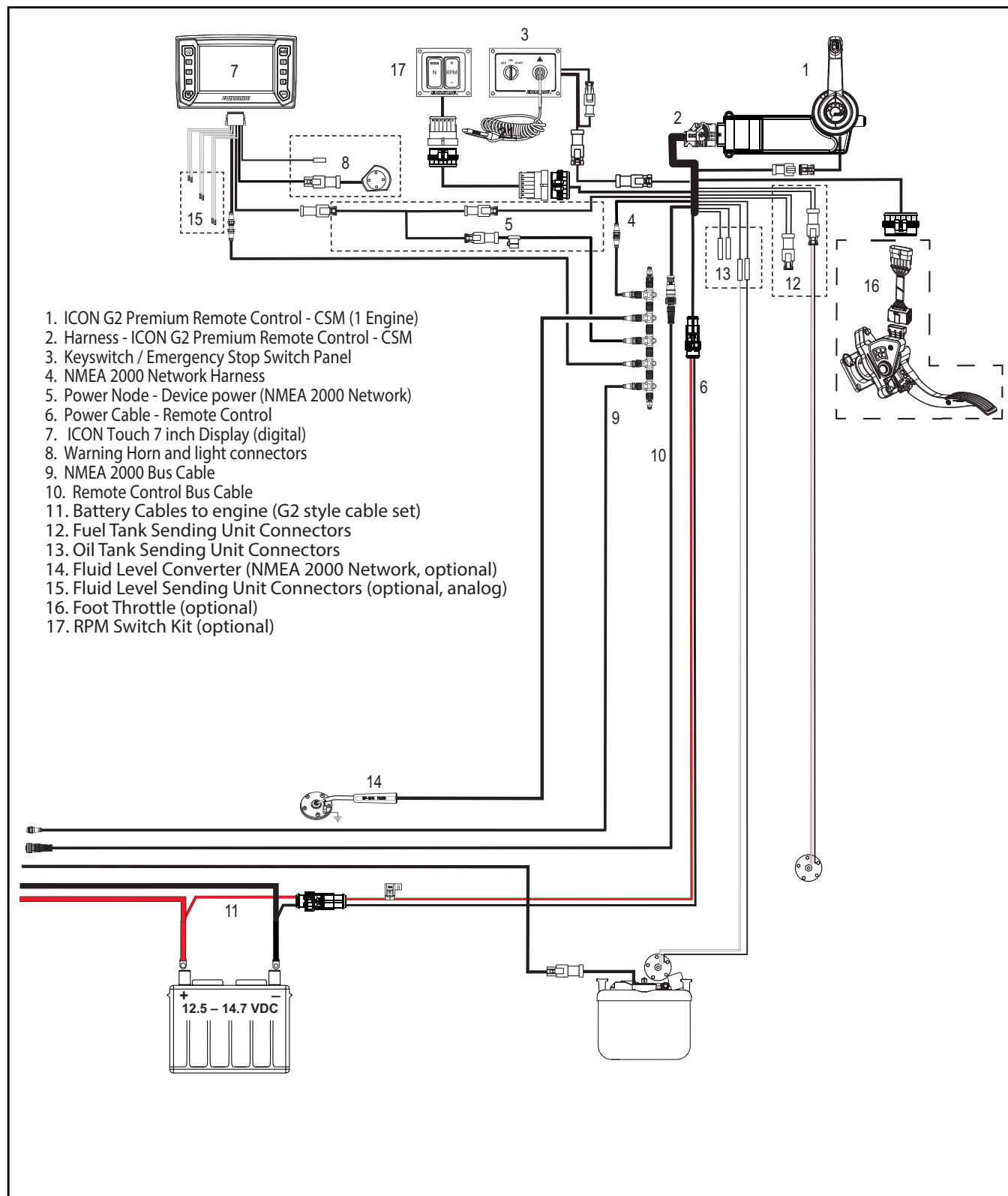
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Concealed Side Mount Remote Control (CSM) Connection Diagrams

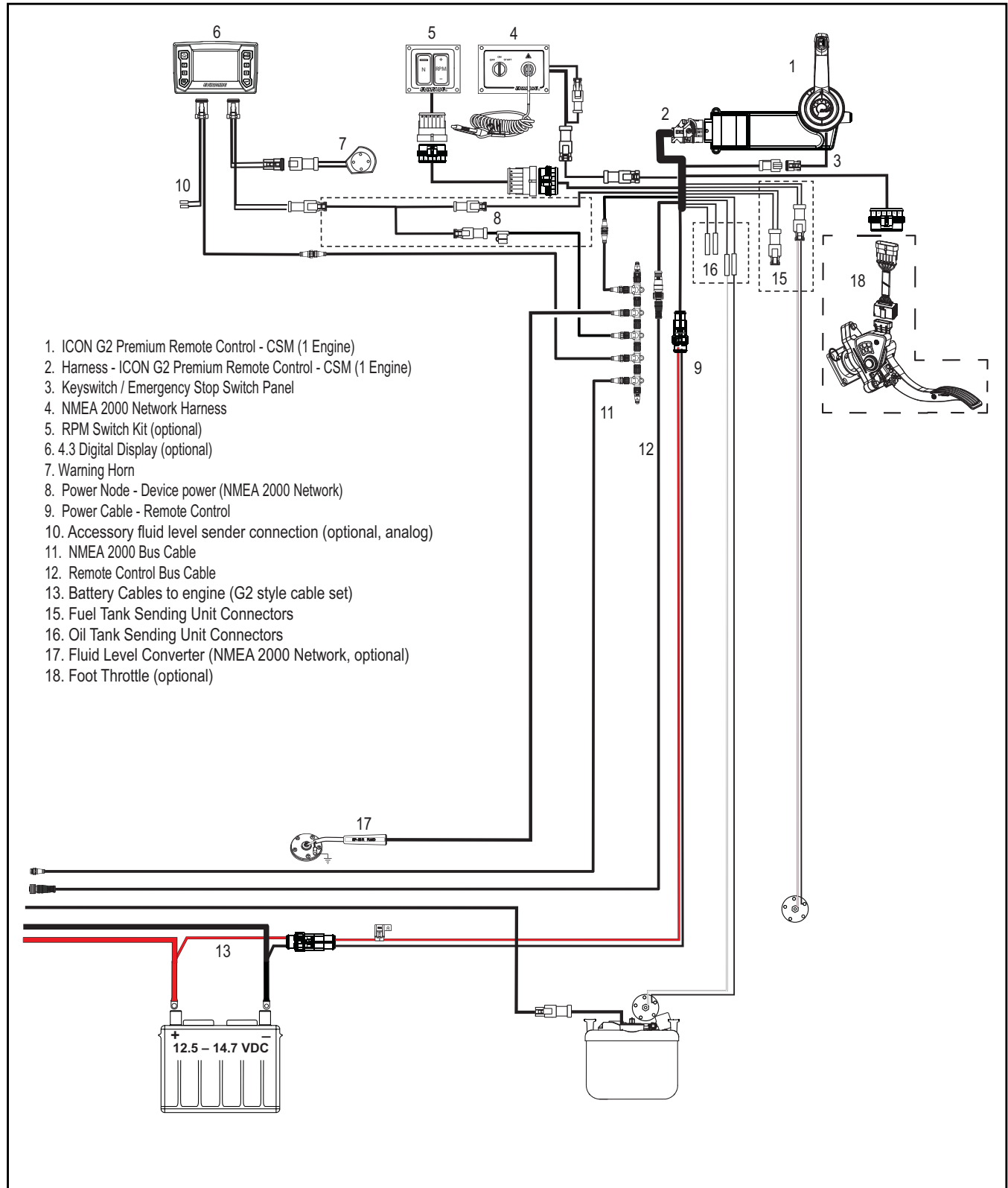
ICON G2 Premium Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Premium Concealed Side Mount Remote Control (CSM):

One Engine, One Station – ICON CTS 7.0 inch display



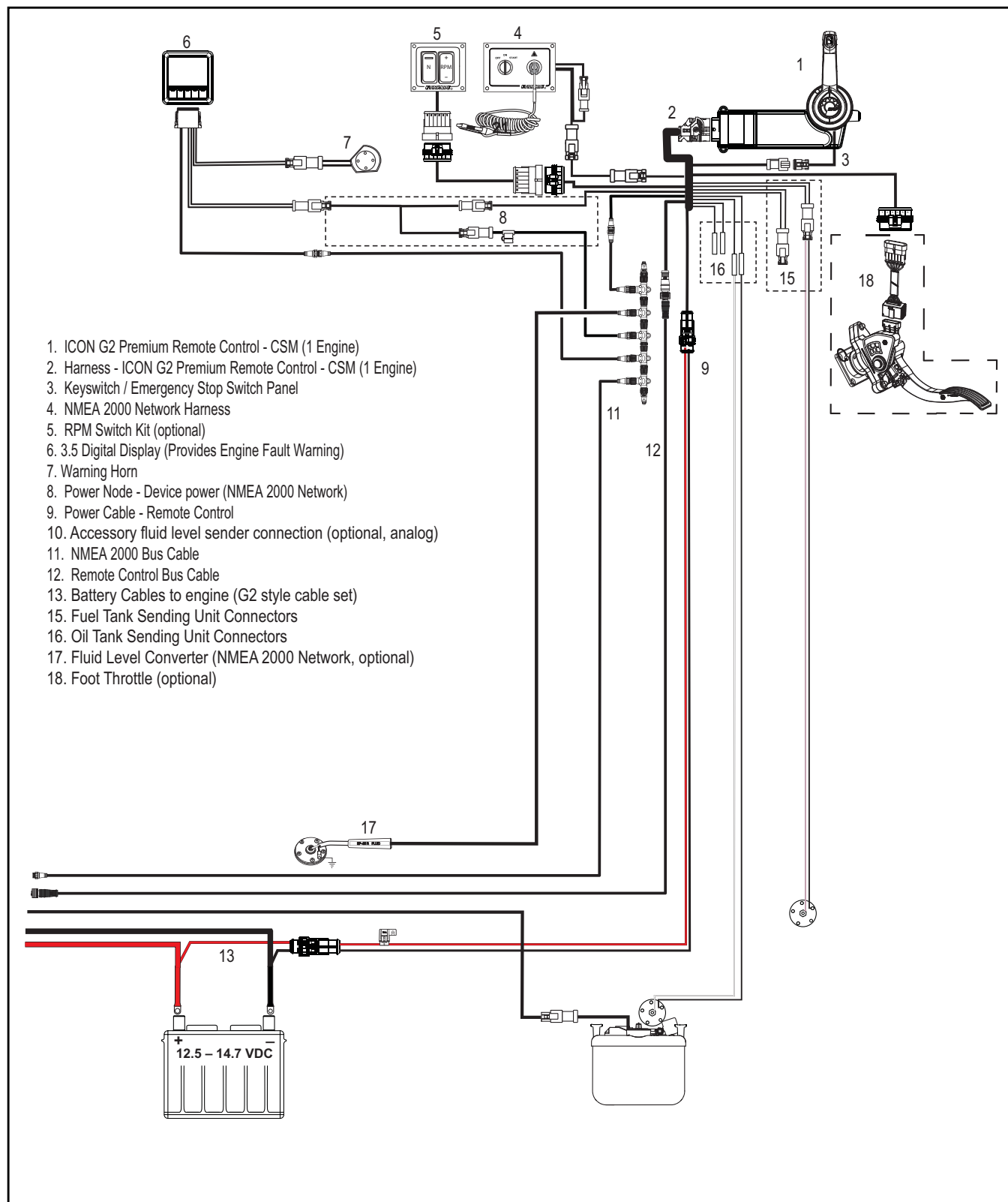
ICON G2 Premium Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON CTS 4.3 inch display



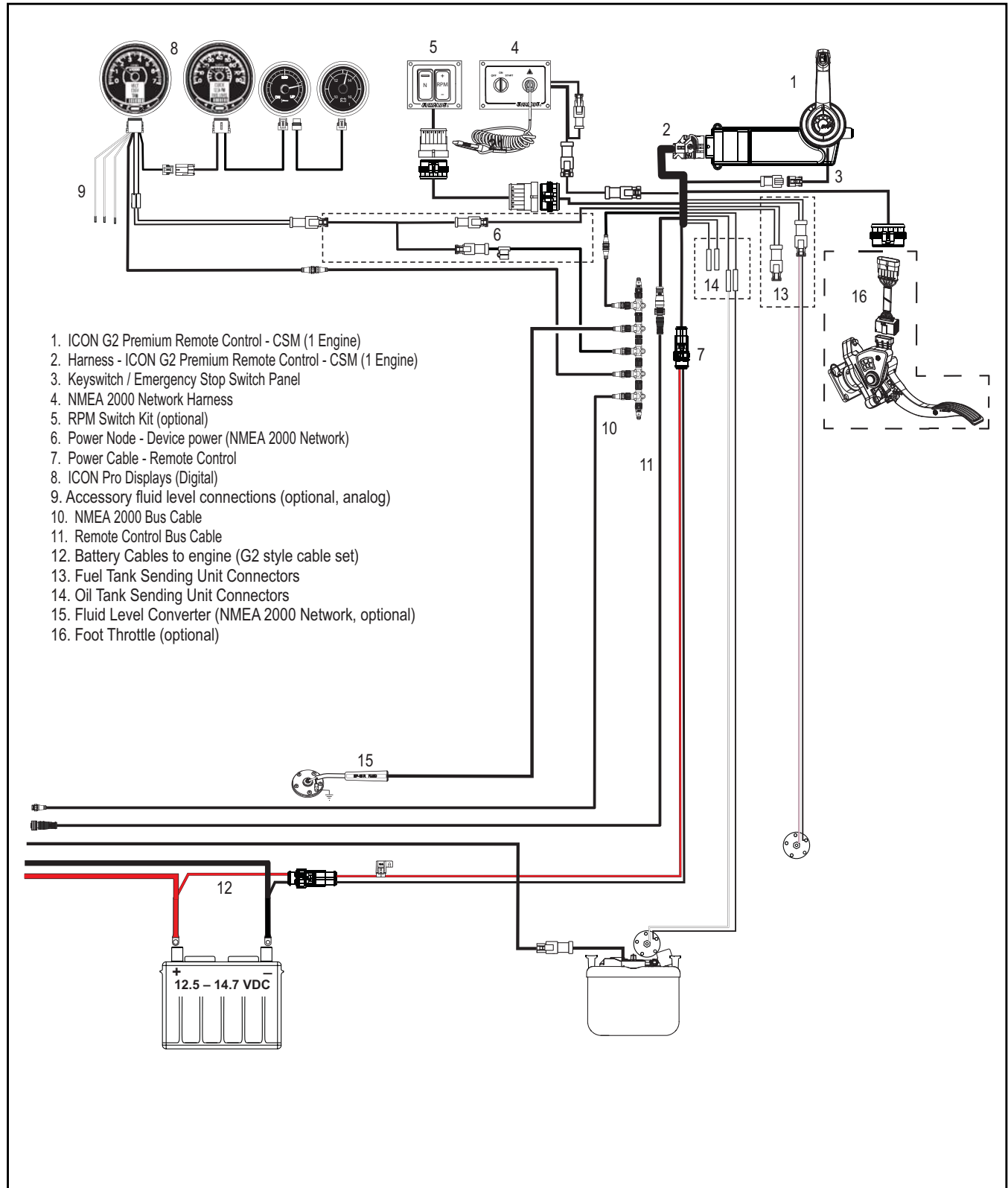
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Premium Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON CS 3.5 inch display



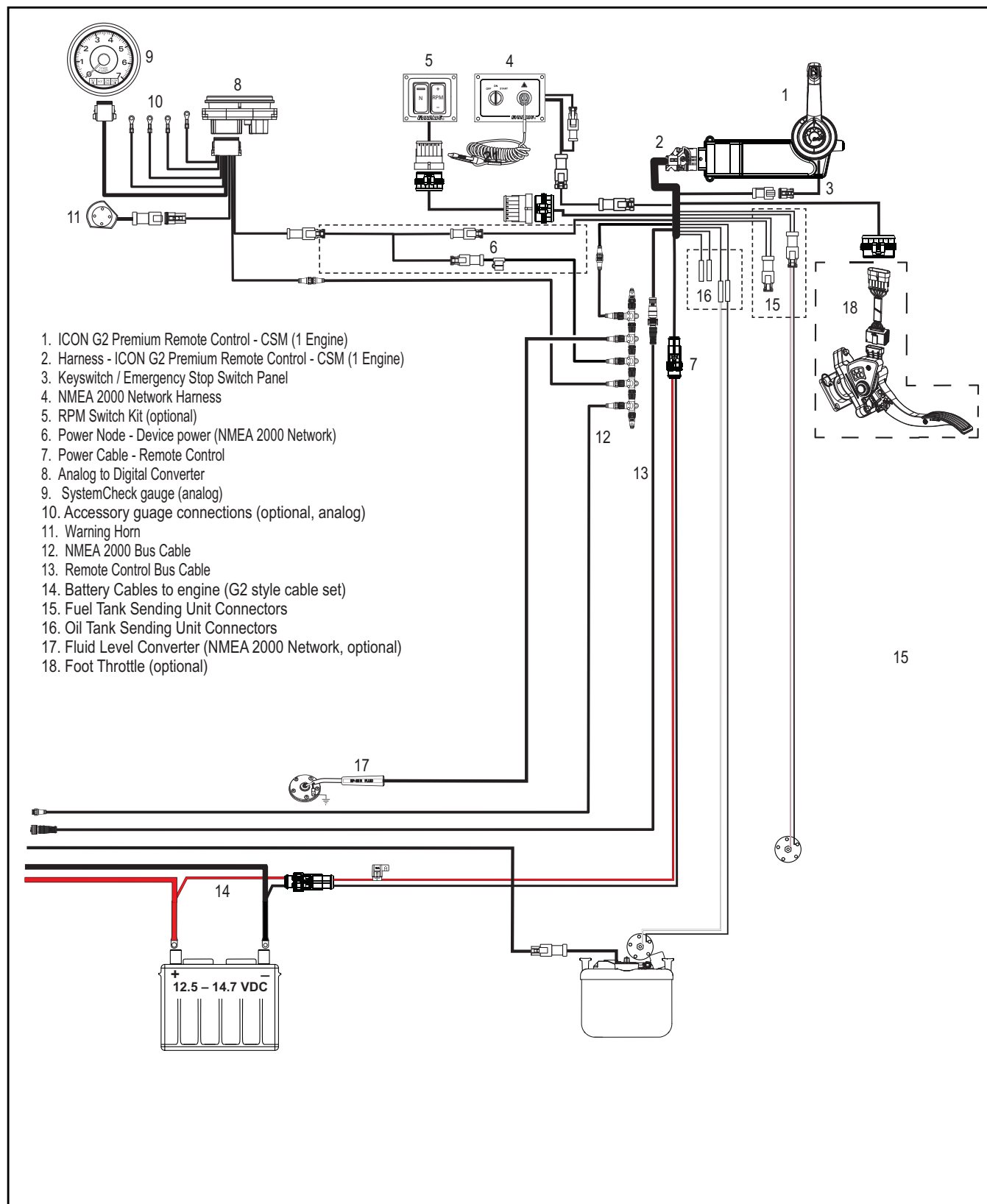
ICON G2 Premium Concealed Side Mount Remote Control (CSM): One Engine, One Station – ICON Pro gauges



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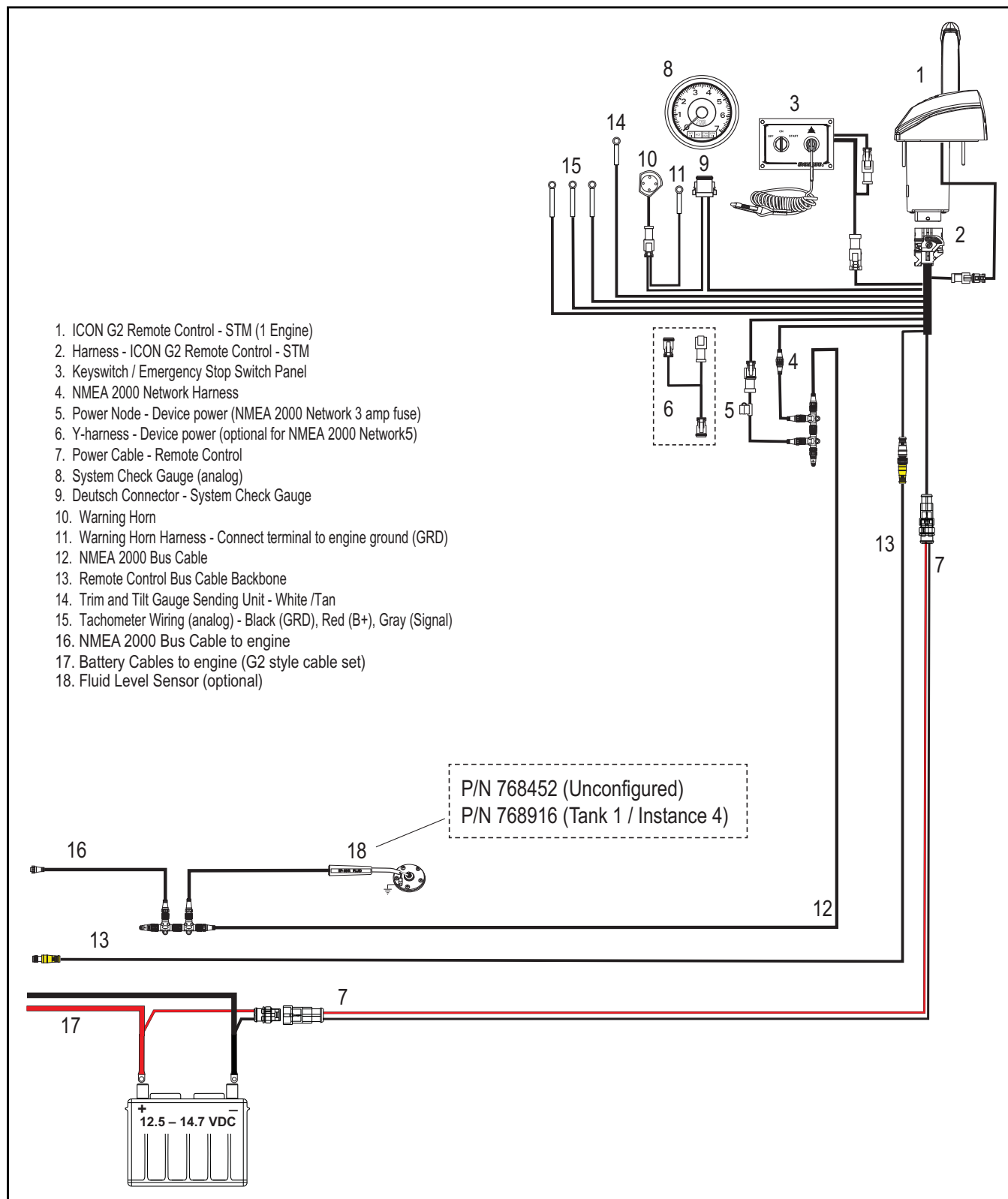
ICON G2 Premium Concealed Side Mount Remote Control (CSM) Connection Diagrams

ICON G2 Premium Concealed Side Mount Remote Control (CSM): One Engine, One Station – SystemCheck Gauge using an Analog to Digital Converter



ICON G2 Single Top Mount Remote Control (STM) Connection Diagrams

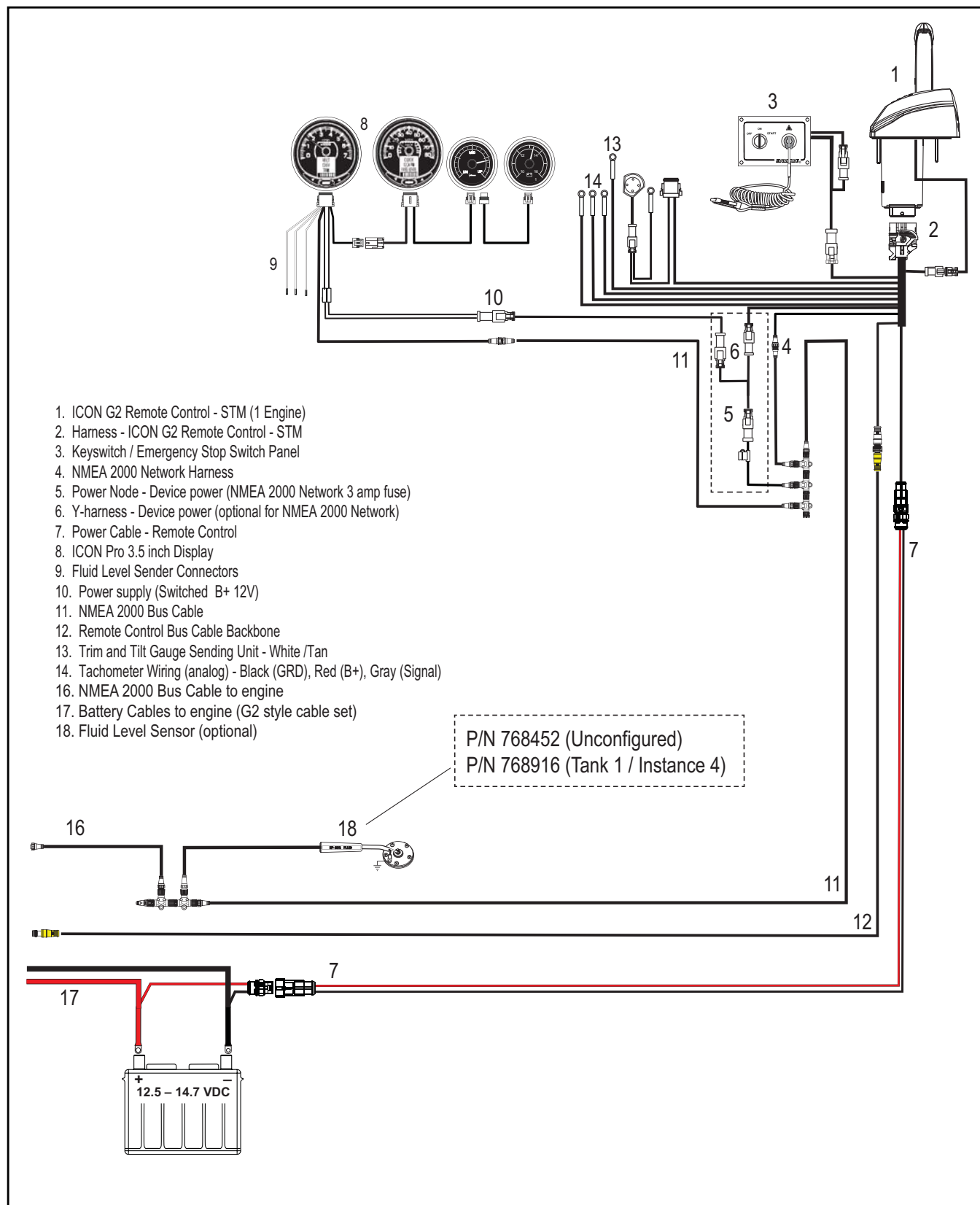
ICON G2 Single Top Mount Remote Control (STM): One Engine, One Station – SystemCheck Gauge



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ICON G2 Single Top Mount Remote Control (STM) Connection Diagrams

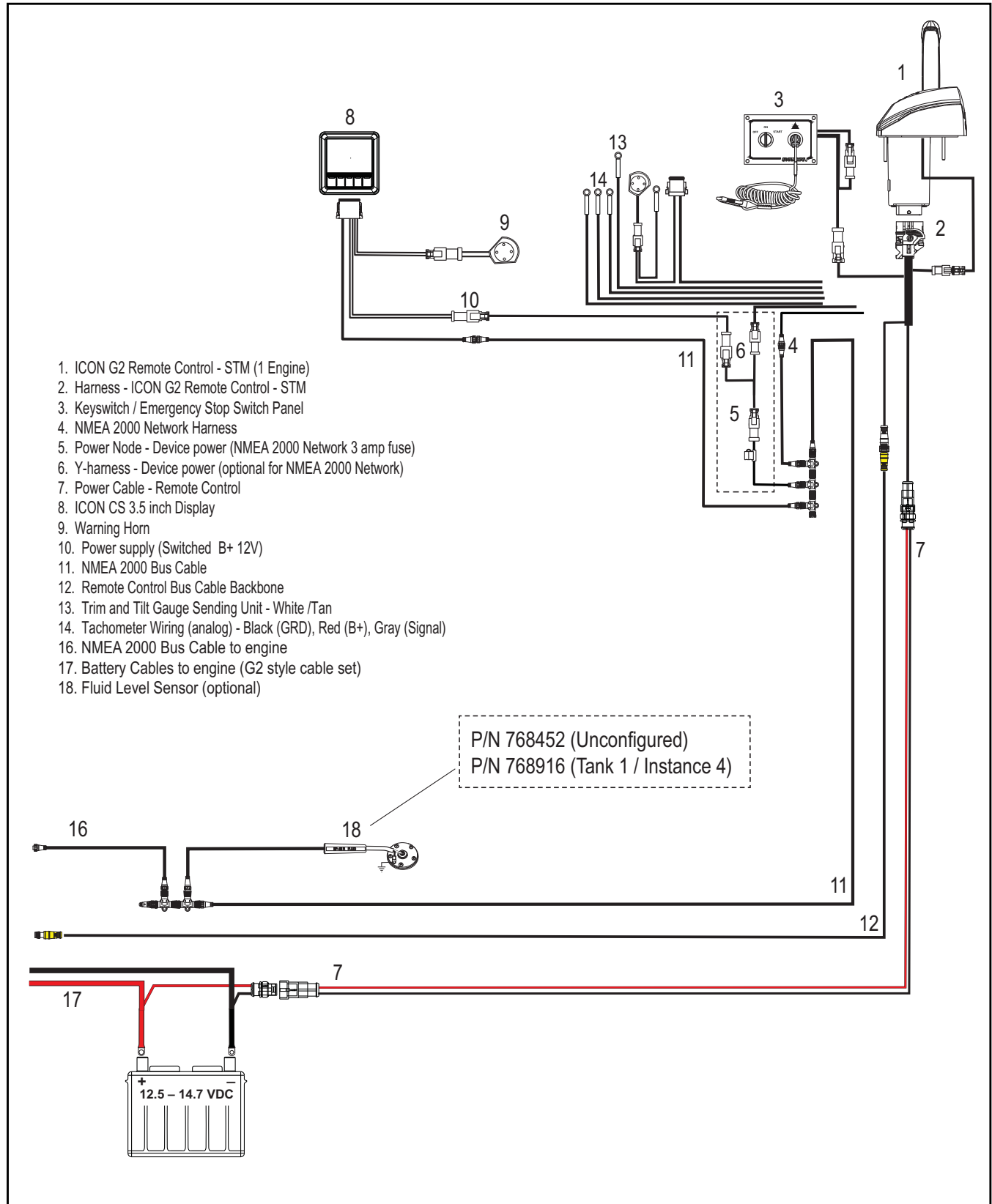
ICON G2 Single Top Mount Remote Control (STM): One Engine, One Station – ICON Pro 3.5 inch display



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ICON G2 Single Top Mount Remote Control (STM) Connection Diagrams

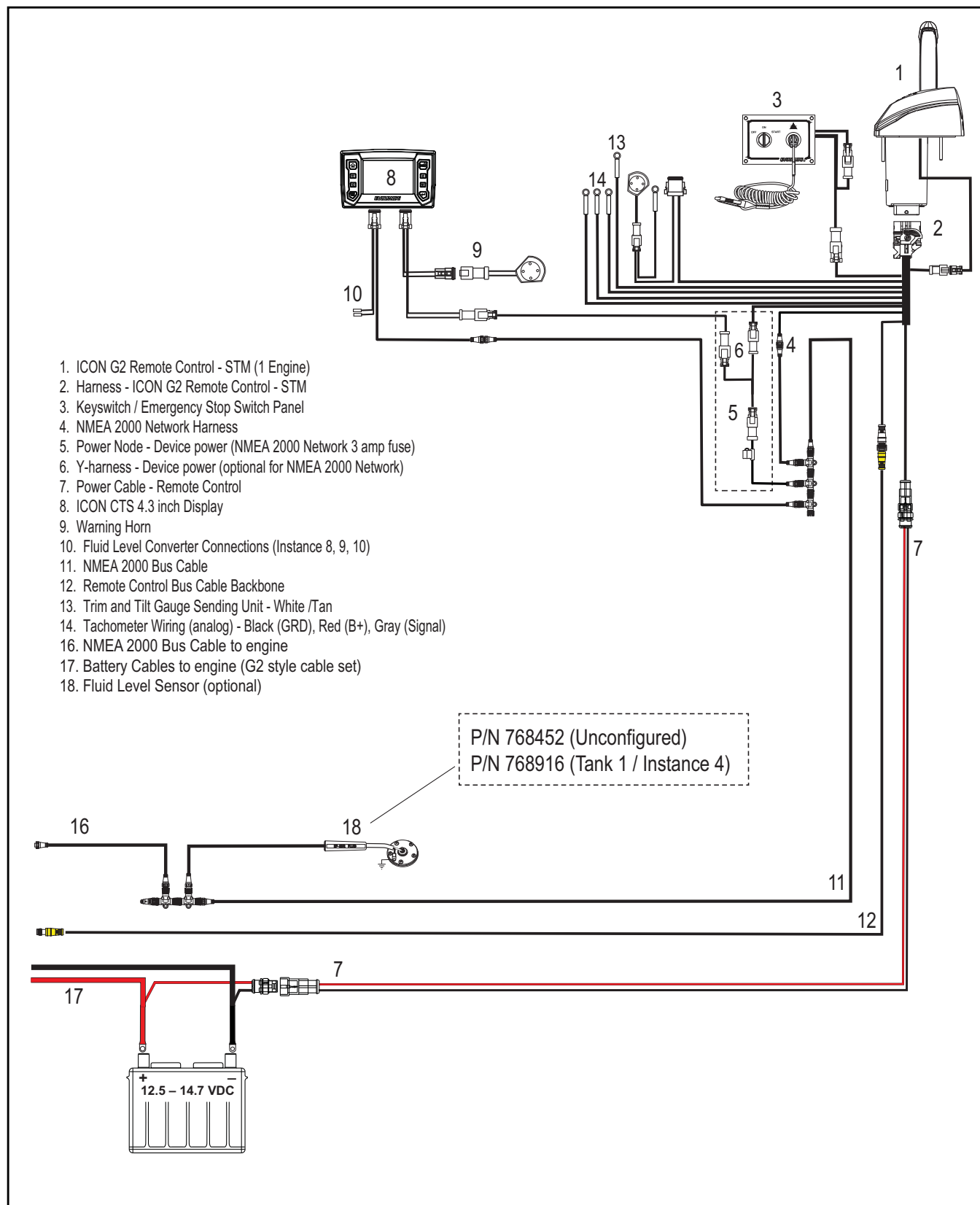
ICON G2 Single Top Mount Remote Control (STM): One Engine, One Station – ICON CS 3.5 inch display



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ICON G2 Single Top Mount Remote Control (STM) Connection Diagrams

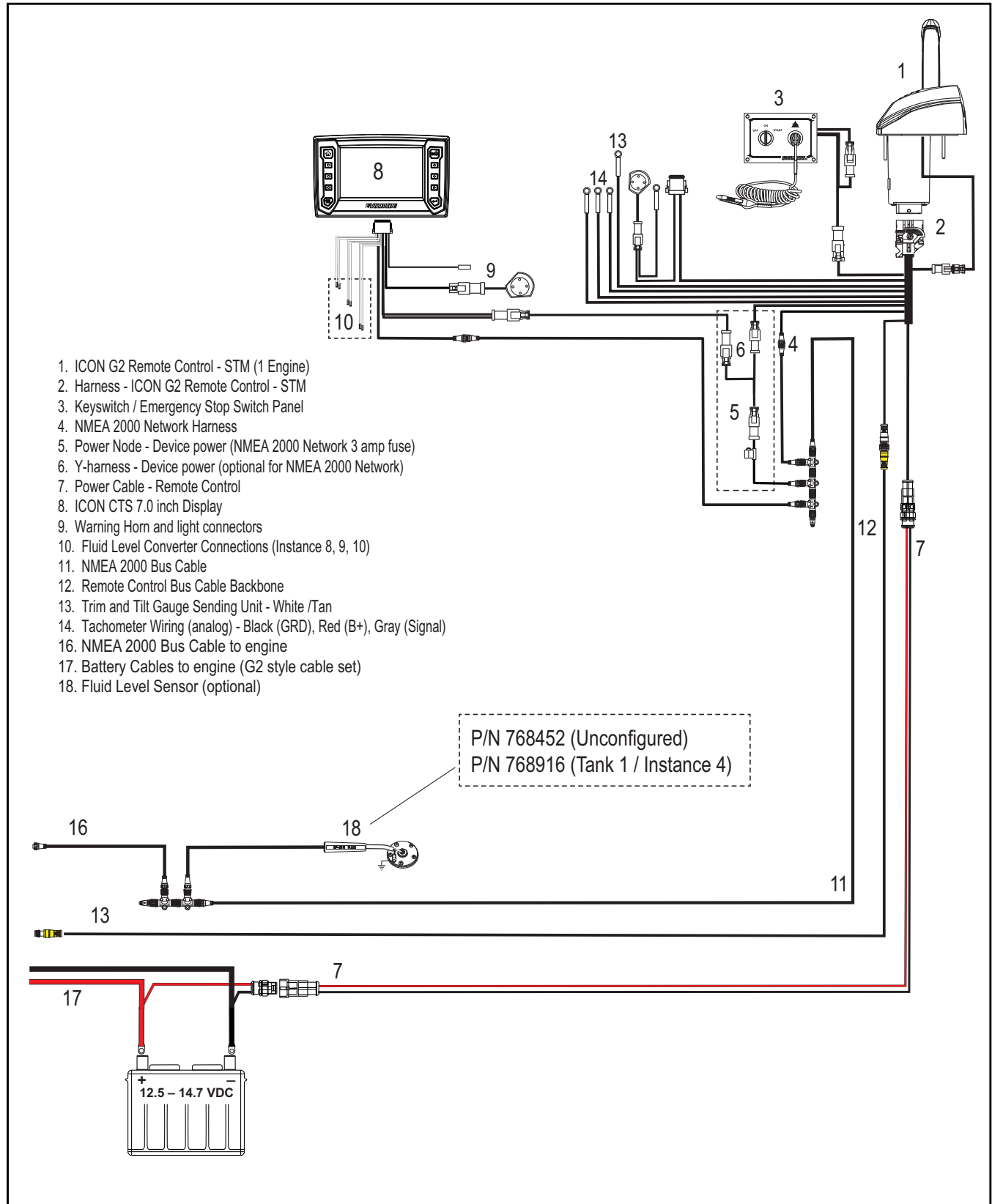
ICON G2 Single Top Mount Remote Control (STM): One Engine, One Station – ICON CTS 4.3 inch display



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ICON G2 Single Top Mount Remote Control (STM) Connection Diagrams

ICON G2 Single Top Mount Remote Control (STM): One Engine, One Station – ICON CTS 7.0 inch display



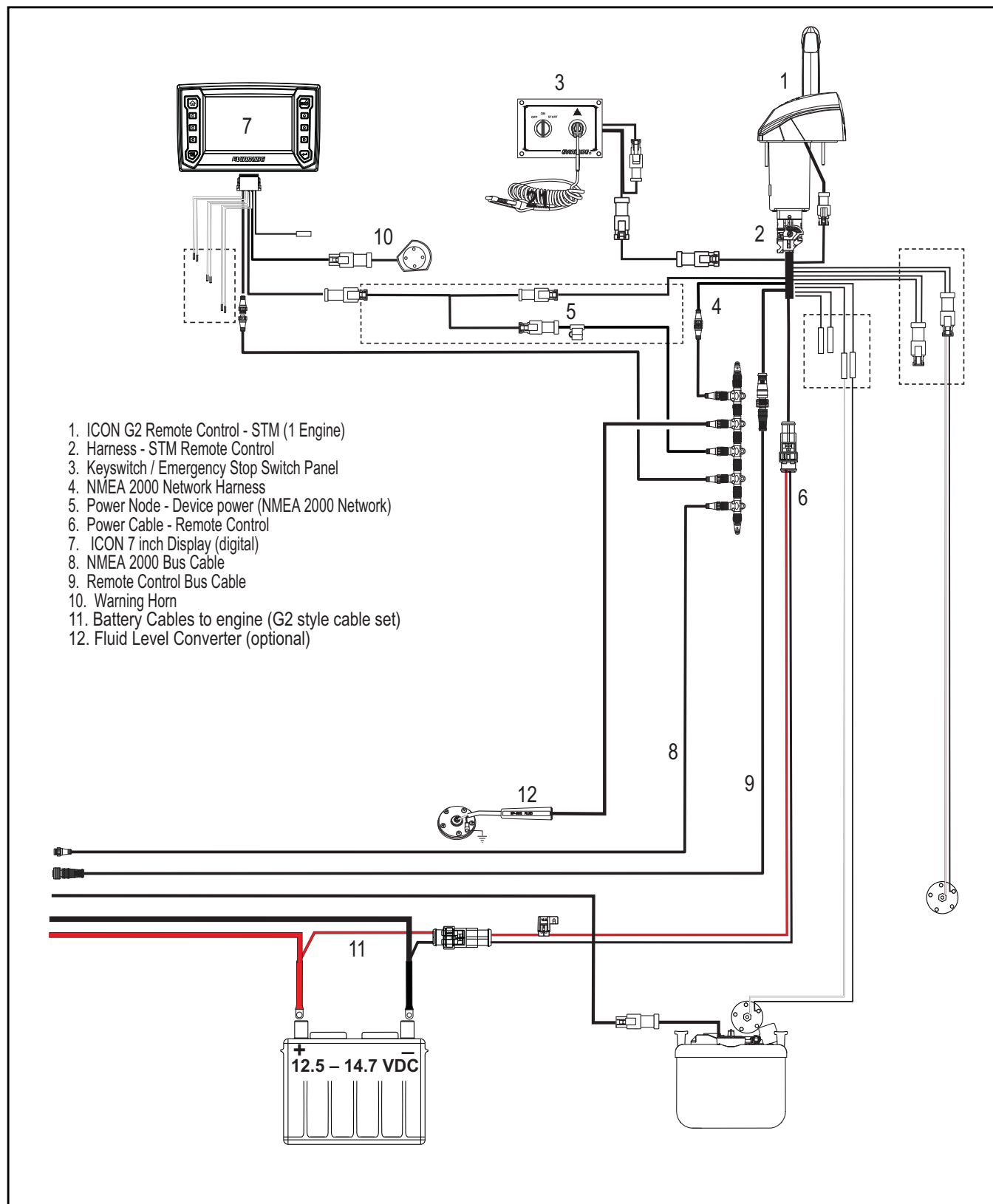
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Single Top Mount Remote Control (STM) Connection Diagrams

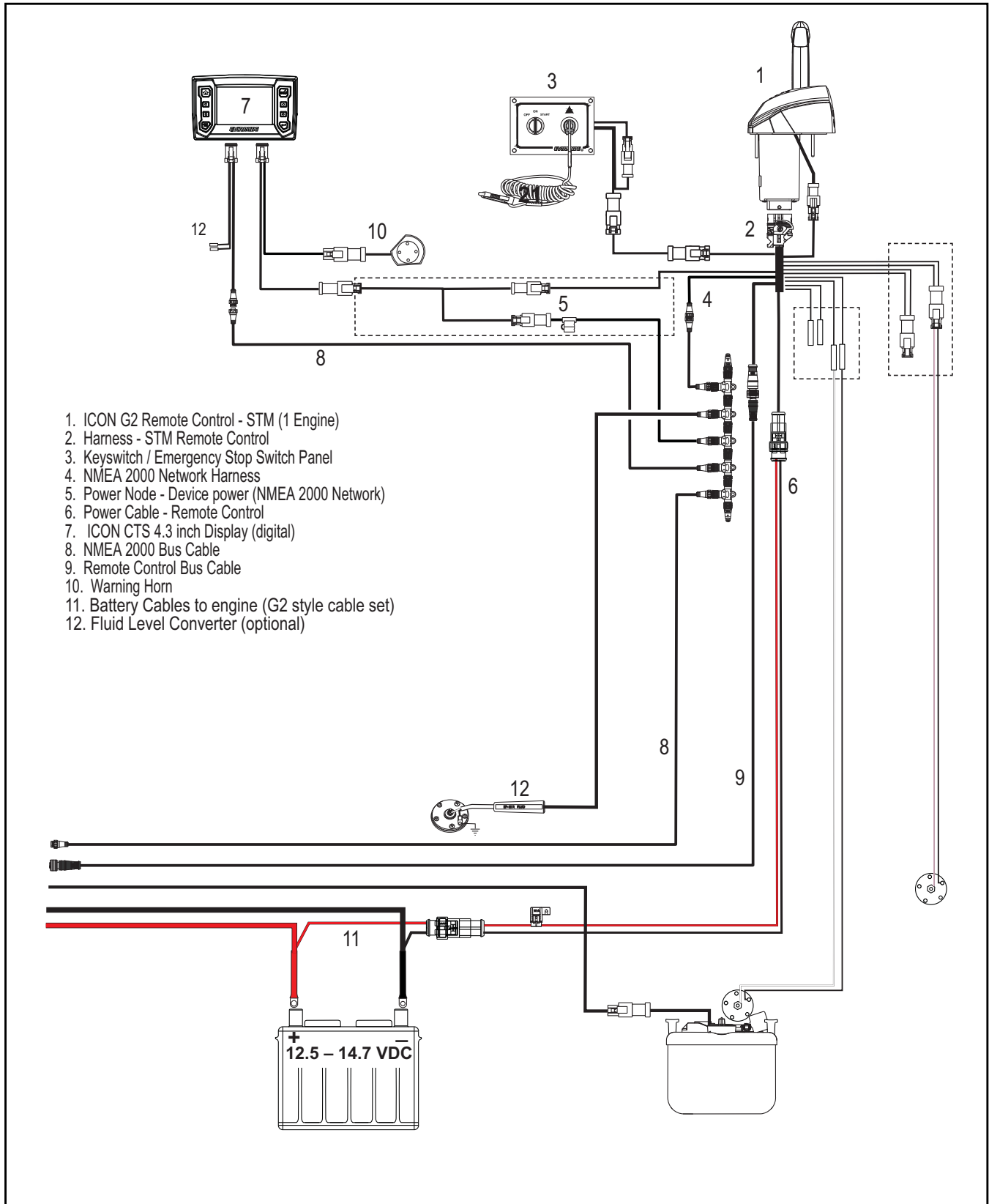
ICON G2 Premium Single Top Mount Remote Control (STM) Connection Diagrams

ICON G2 Premium Single Top Mount Remote Control (STM):

One Engine, One Station – ICON CTS 7.0 inch display



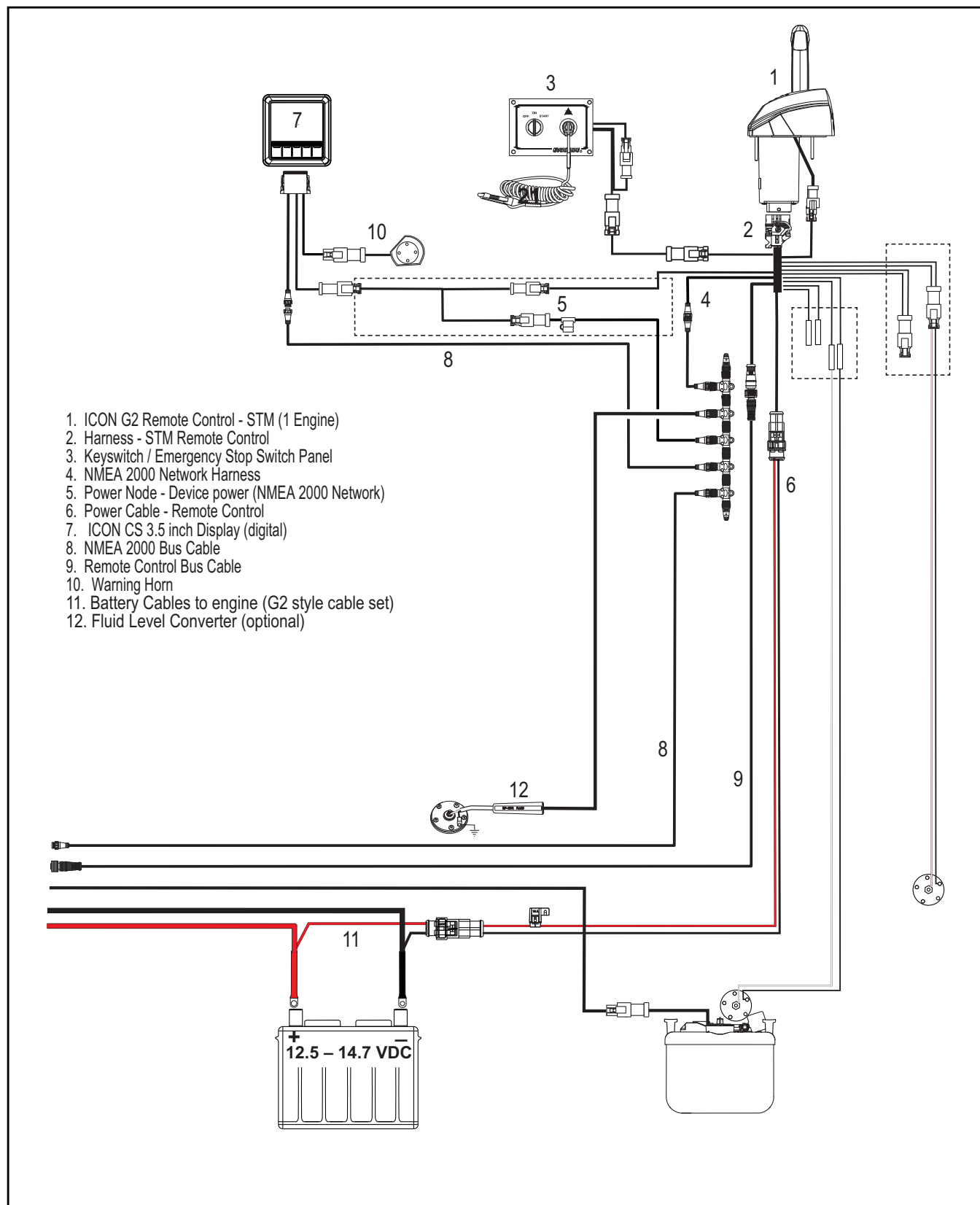
ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, One Station – ICON CTS 4.3 inch display



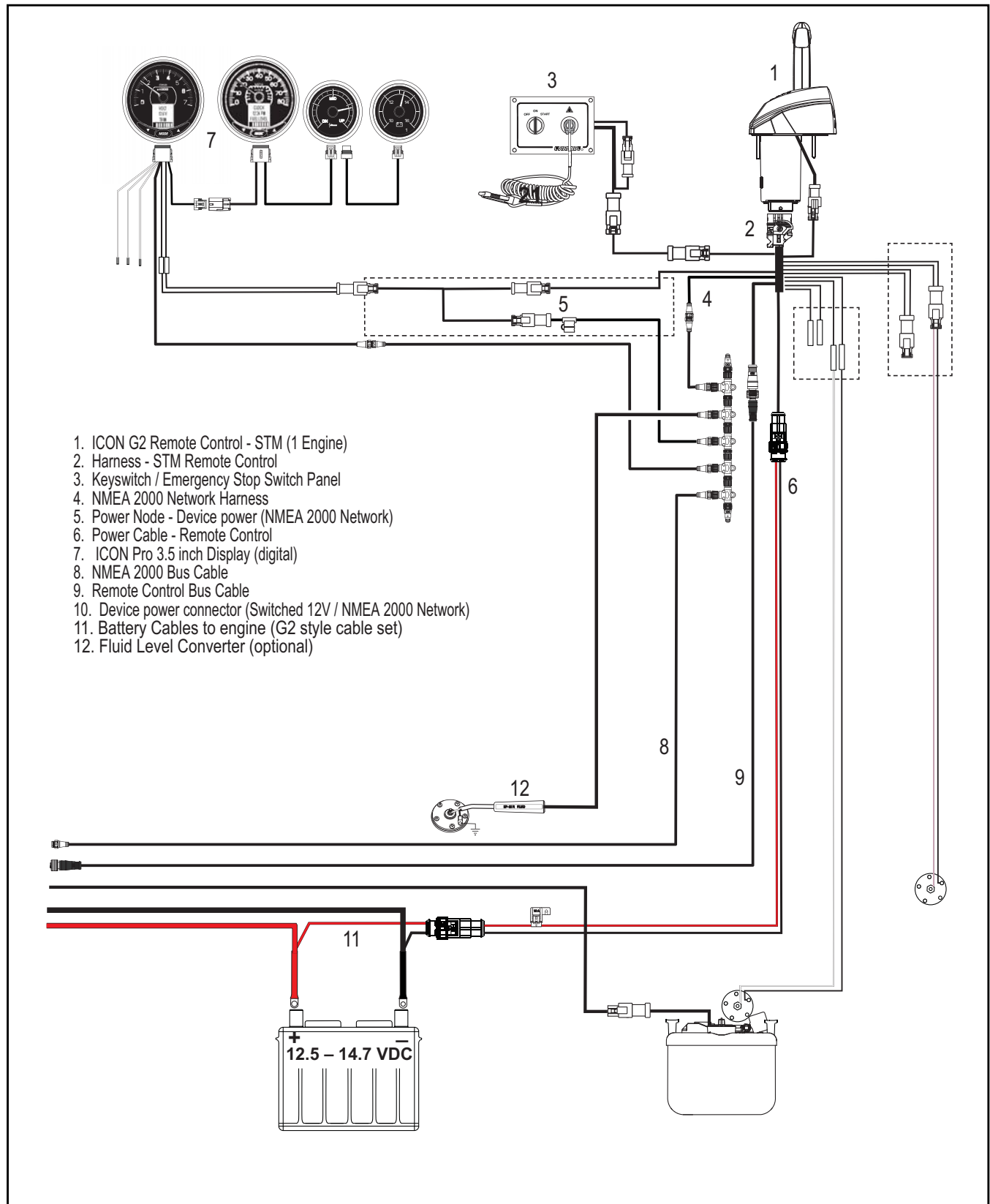
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Single Top Mount Remote Control (STM) Connection Diagrams

ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, One Station – ICON CS 3.5 inch display



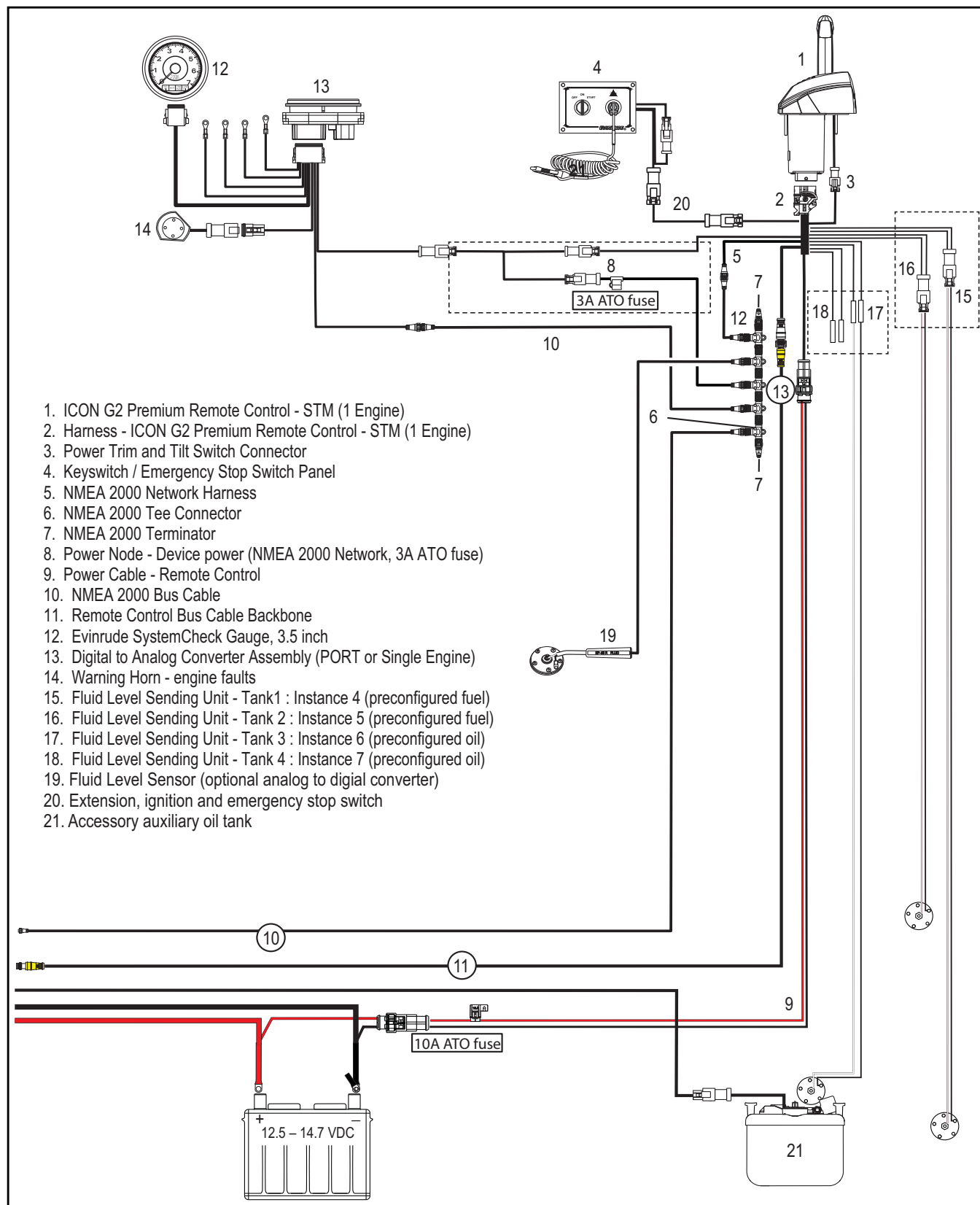
ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, One Station – ICON Pro Gauges



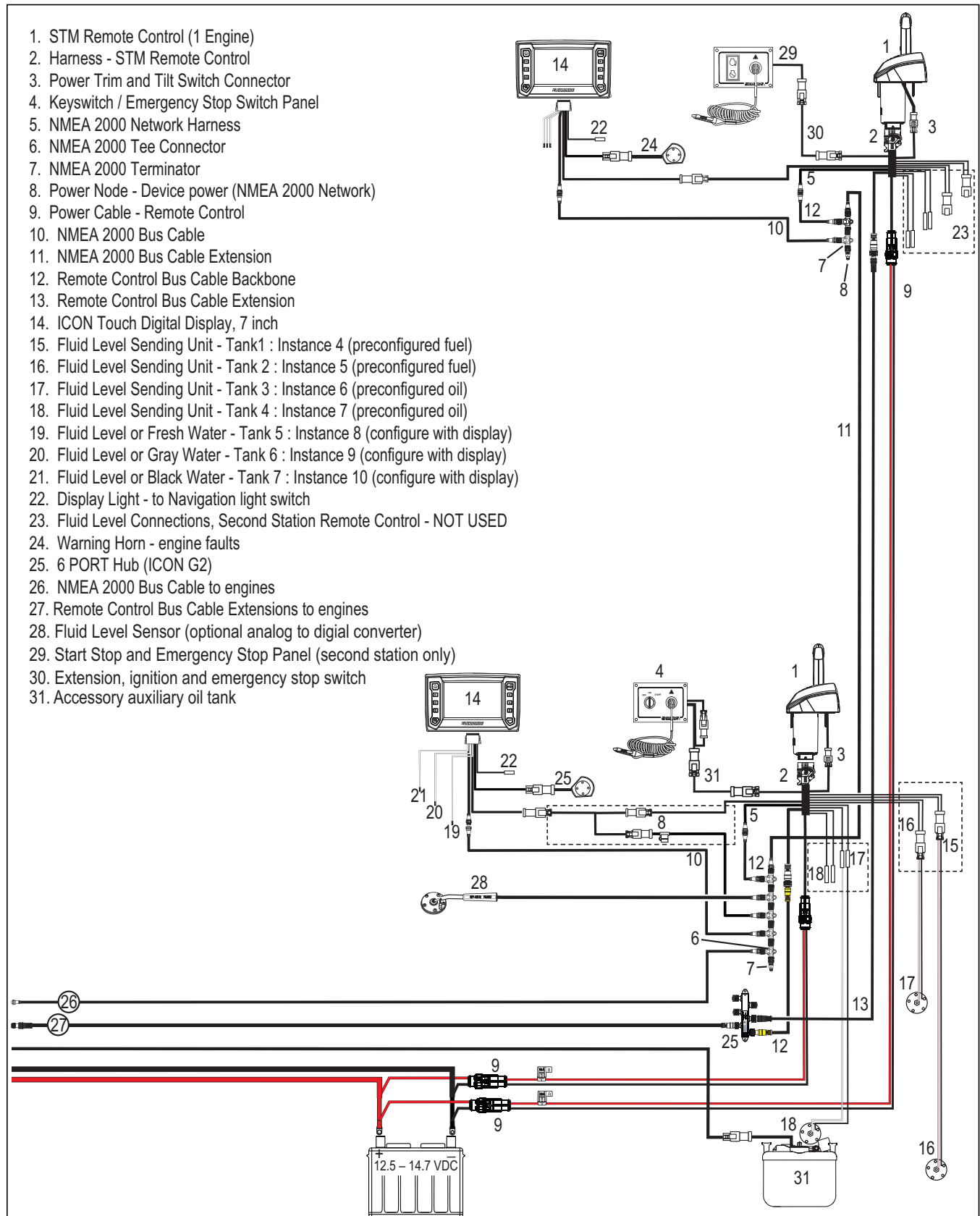
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Single Top Mount Remote Control (STM) Connection Diagrams

ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, One Station – SystemCheck Gauge



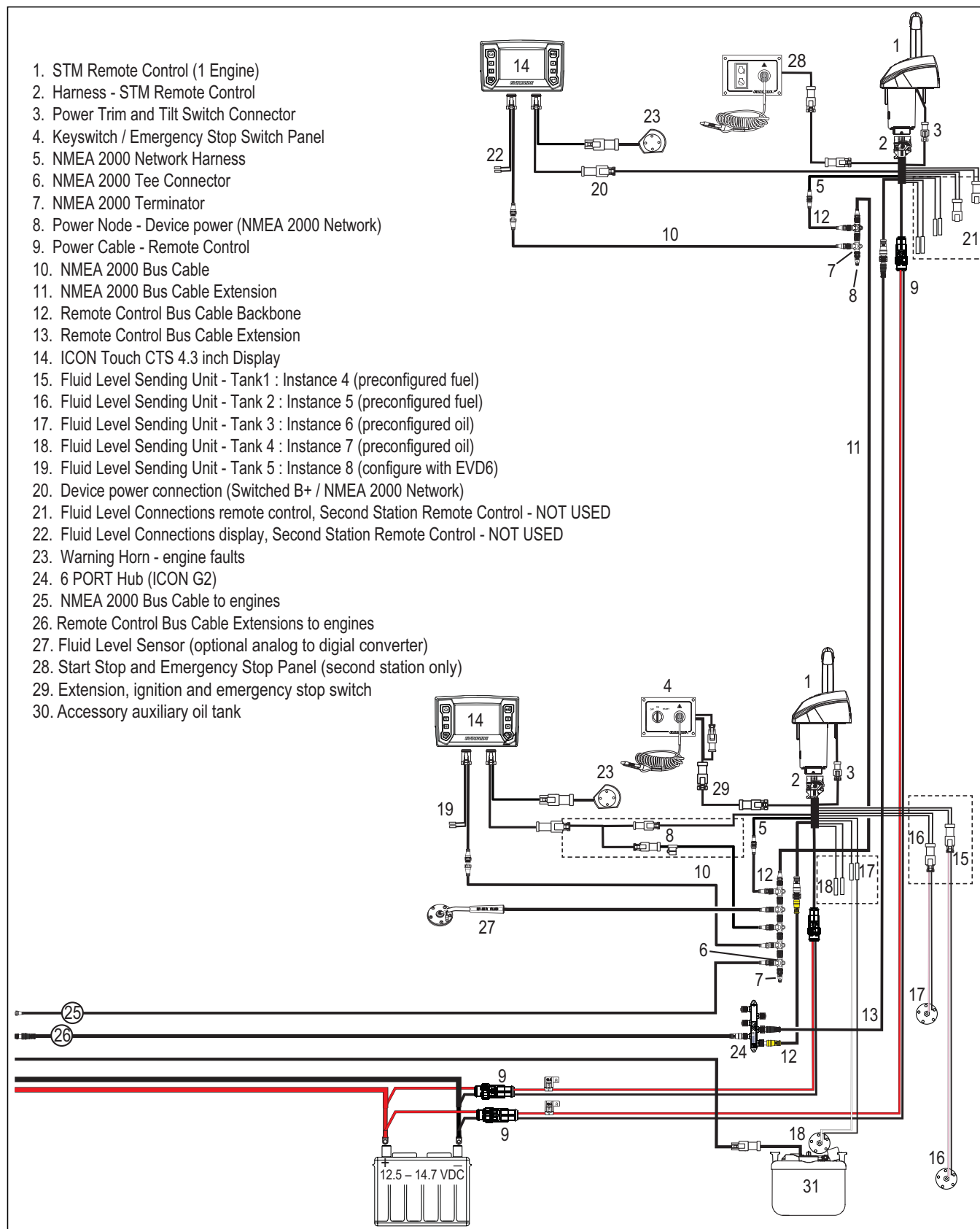
ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, Two Stations – ICON CTS 7.0 inch displays



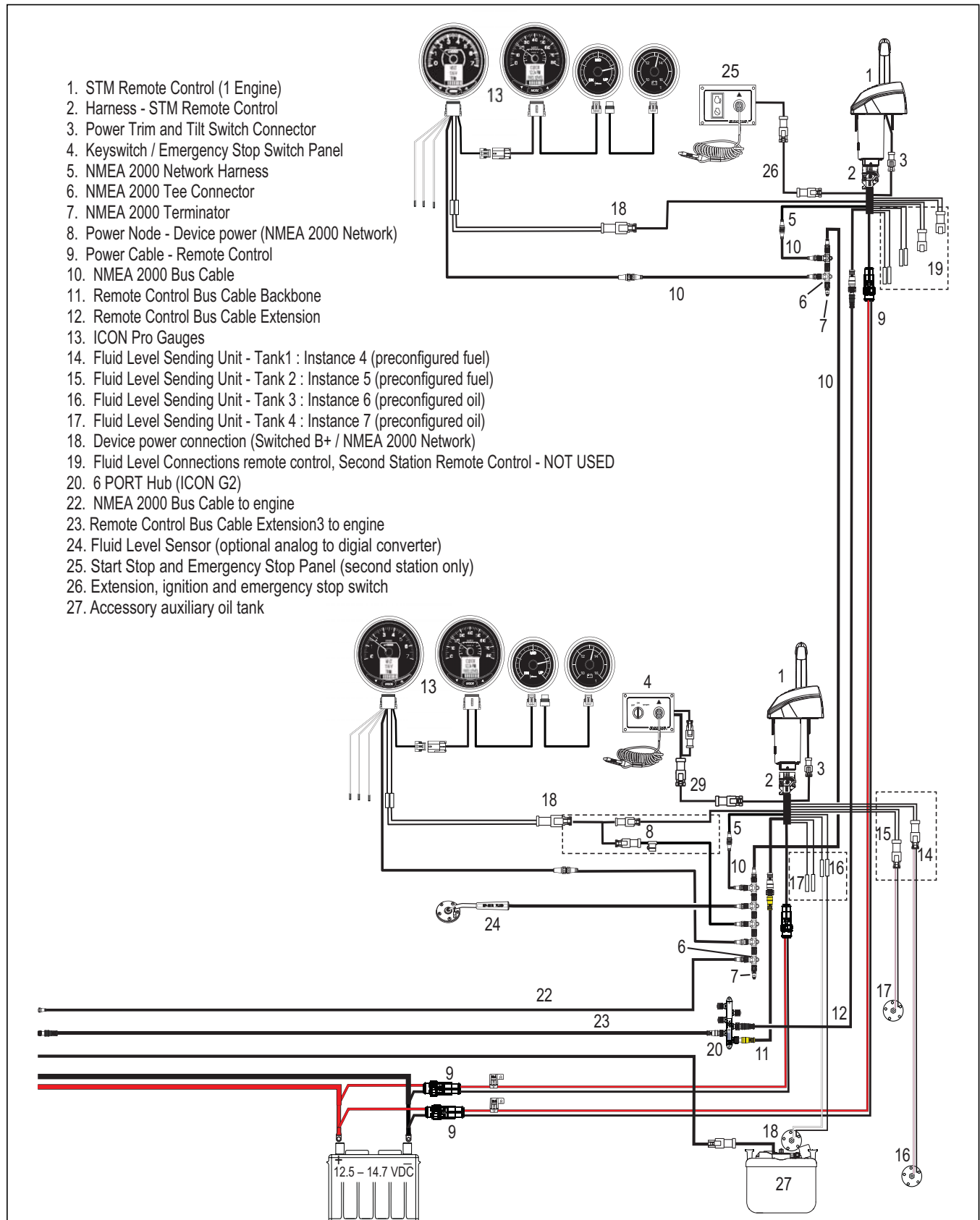
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Single Top Mount Remote Control (STM) Connection Diagrams

ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, Two Stations – ICON CTS 4.3 inch displays



ICON G2 Premium Single Top Mount Remote Control (STM): One Engine, Two Stations – ICON Pro Gauges



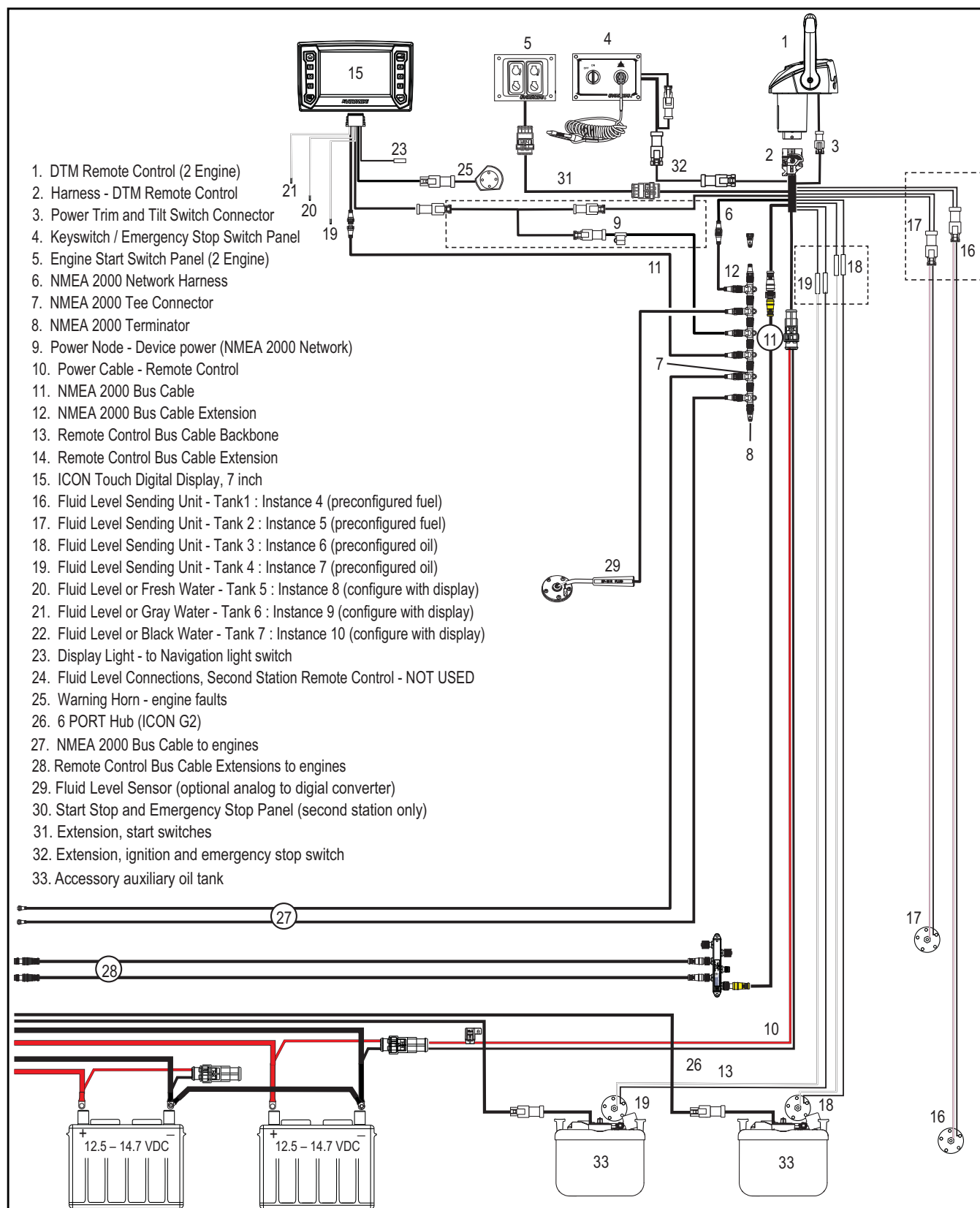
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

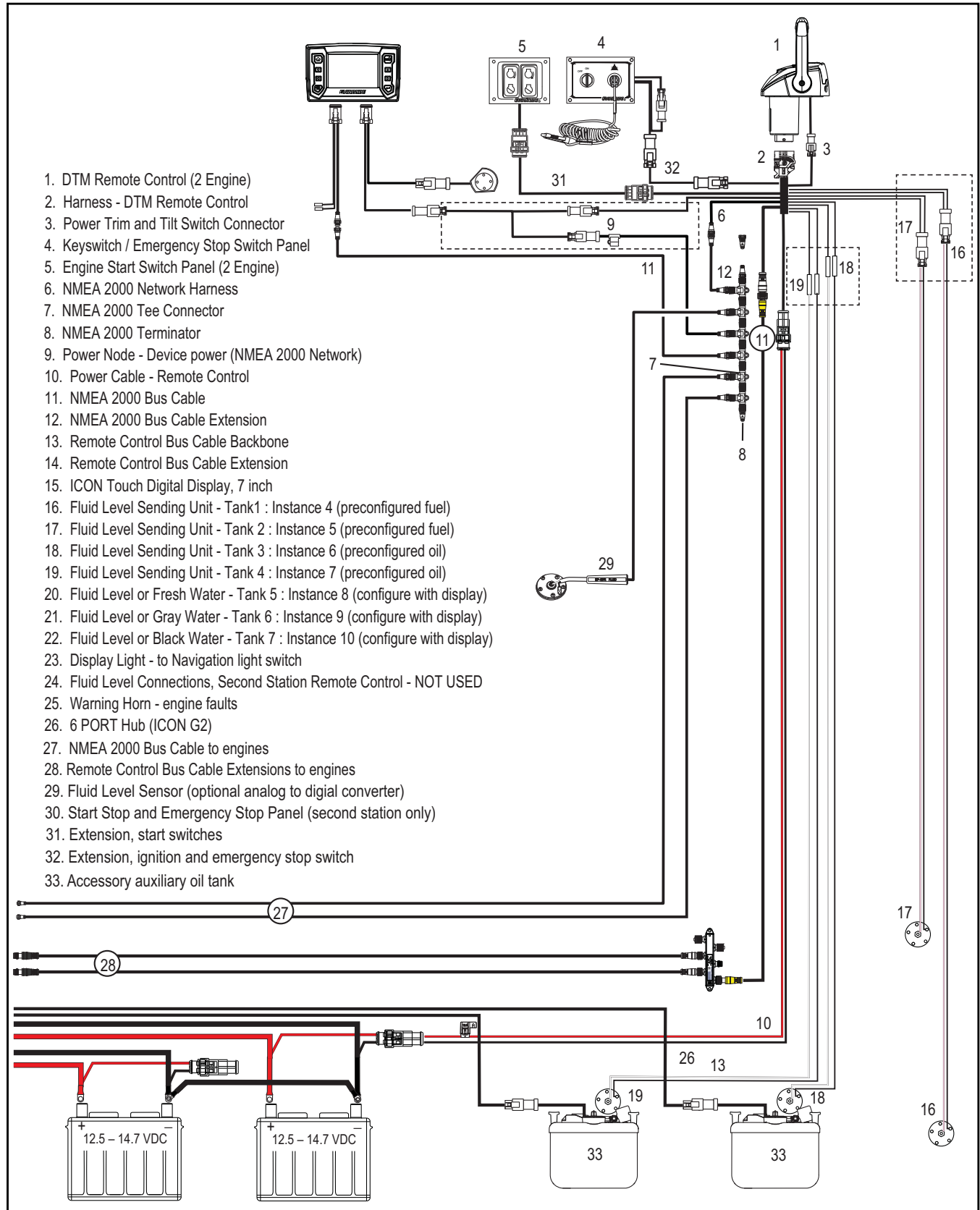
ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON G2 Premium Dual Top Mount Remote Control (DTM):

Two Engines, One Station – ICON CTS 7.0 inch display



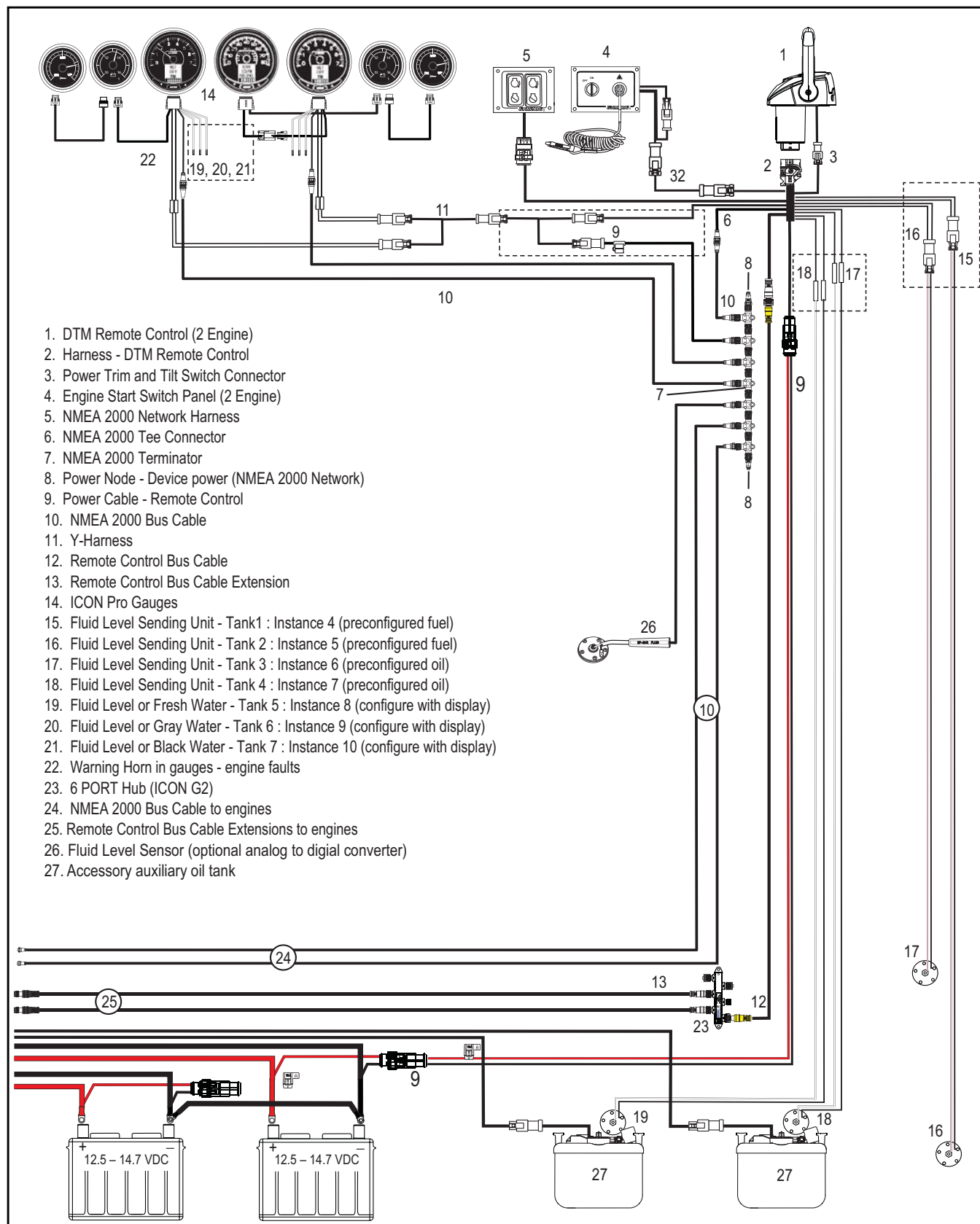
ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, One Station – ICON CTS 4.3 inch display



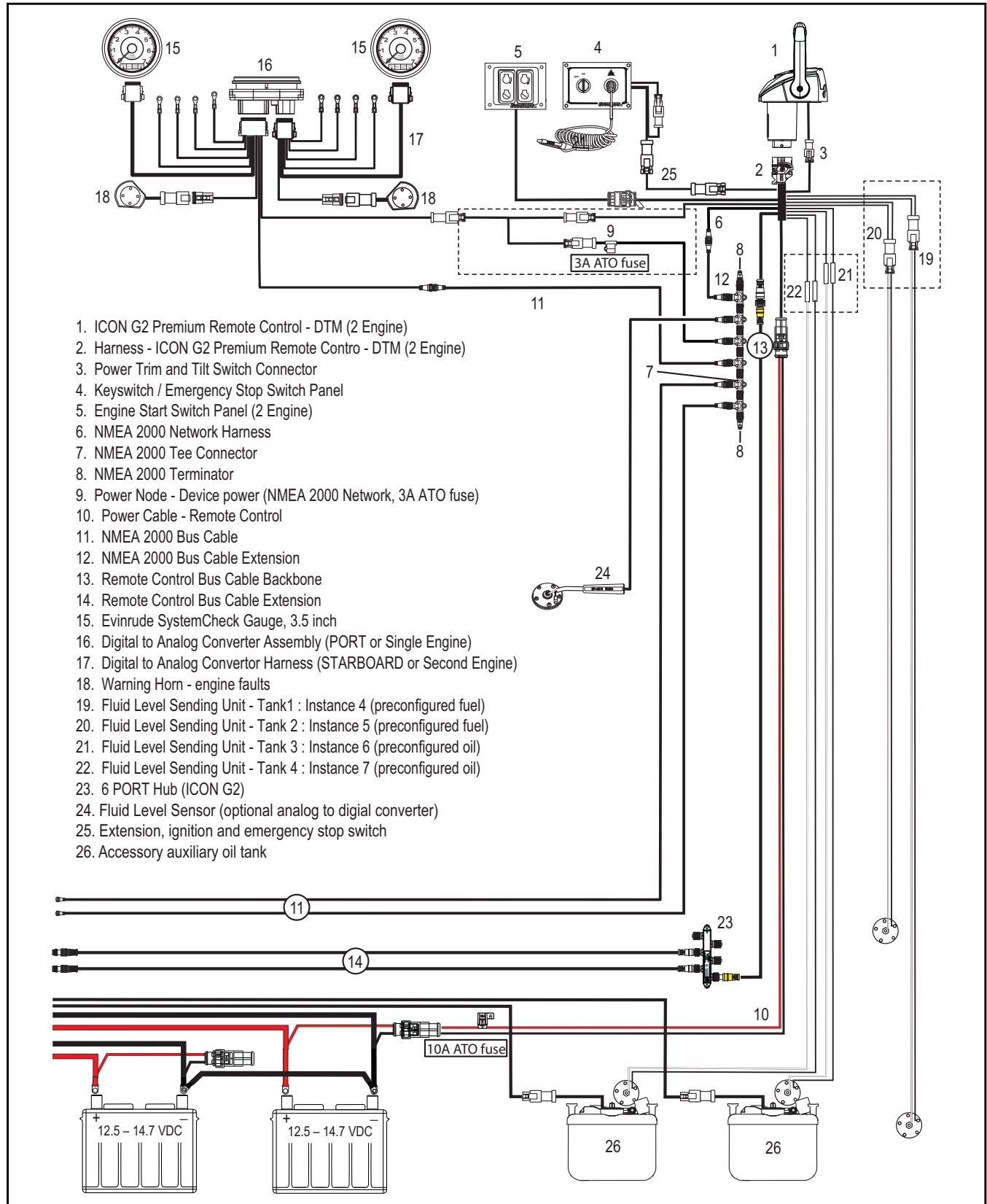
Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, One Station – ICON Pro Gauges



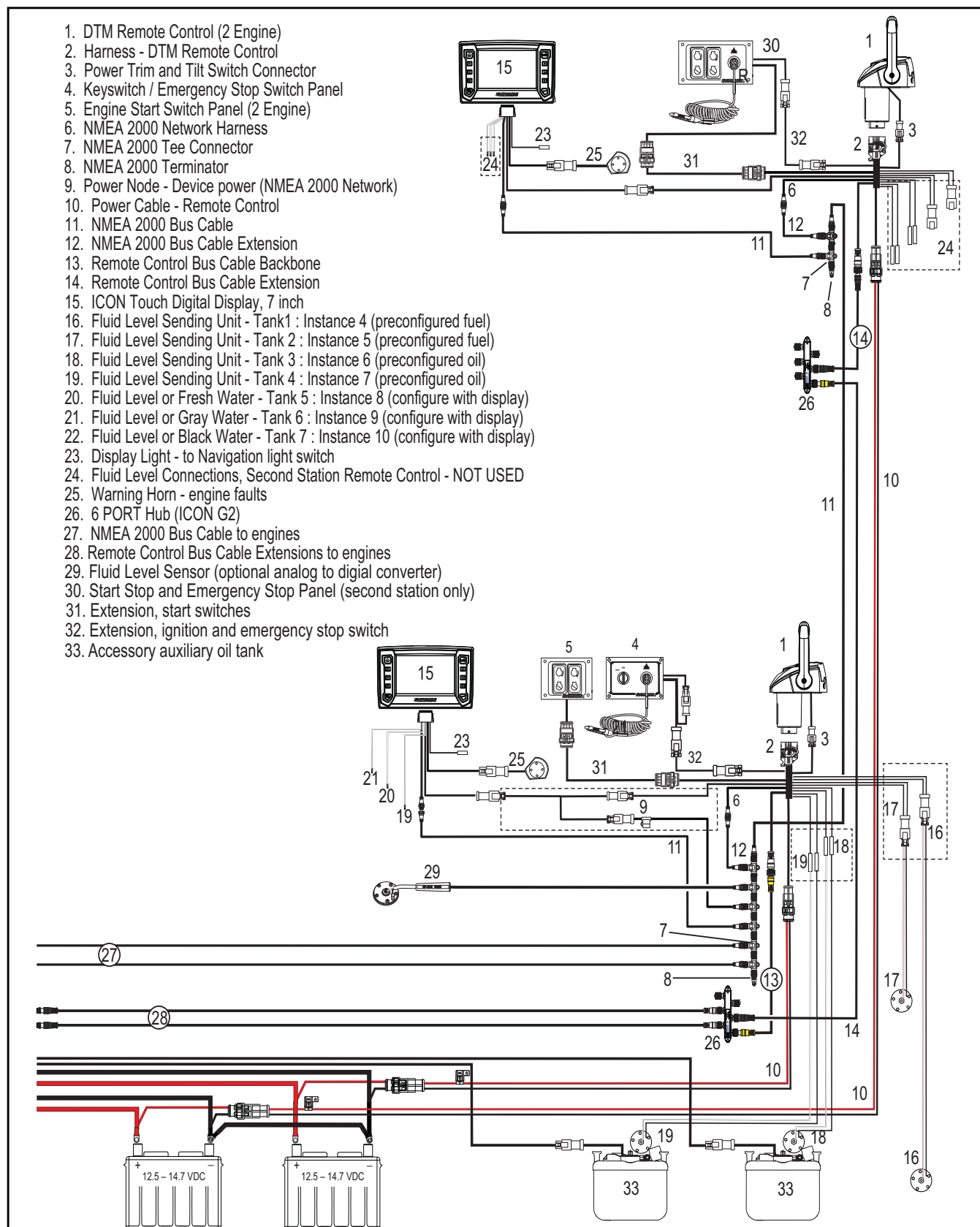
ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, One Station – SystemCheck Gauges



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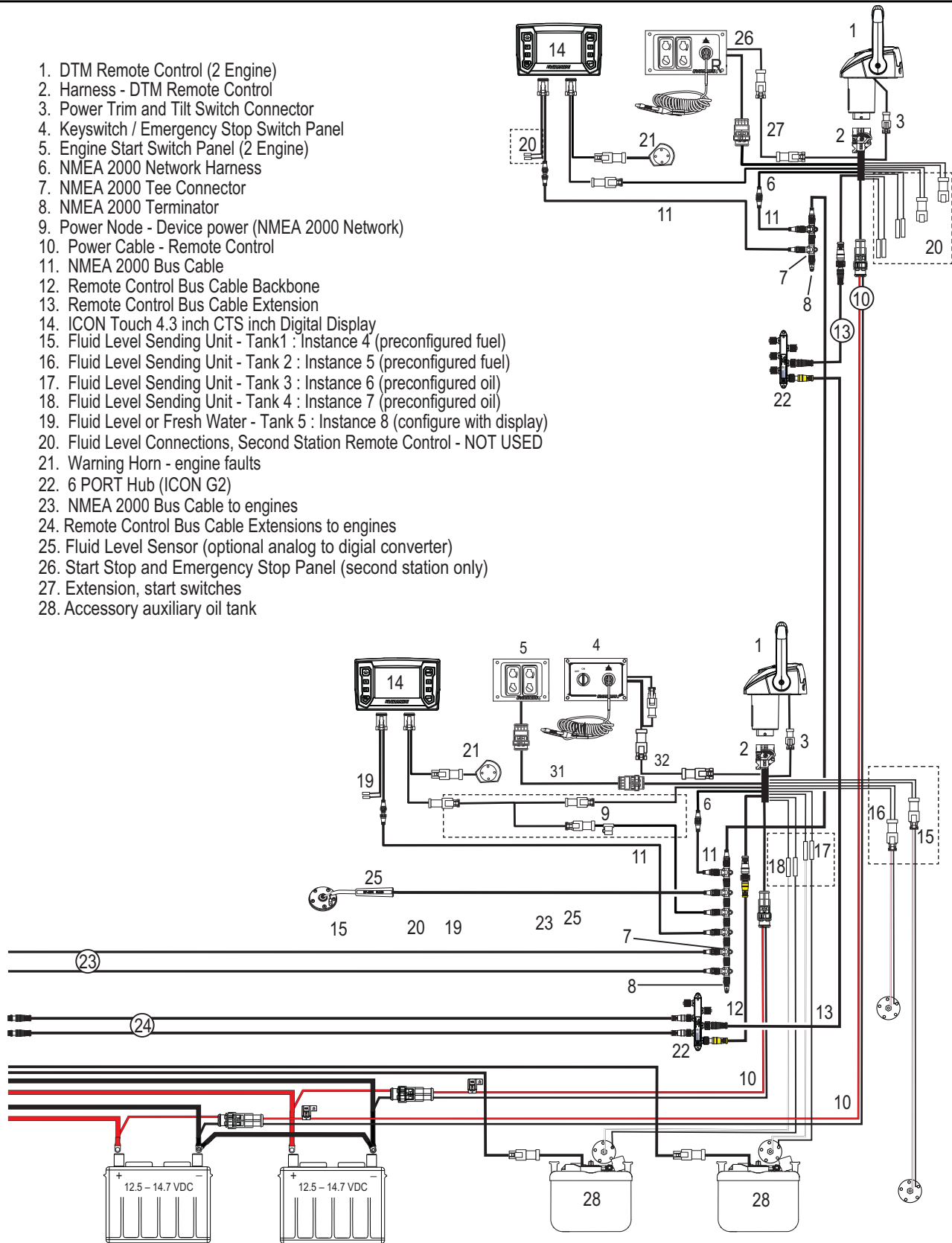
ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, Two Stations – ICON CTS 7.0 inch displays



ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, Two Stations – ICON CTS 4.3 inch displays

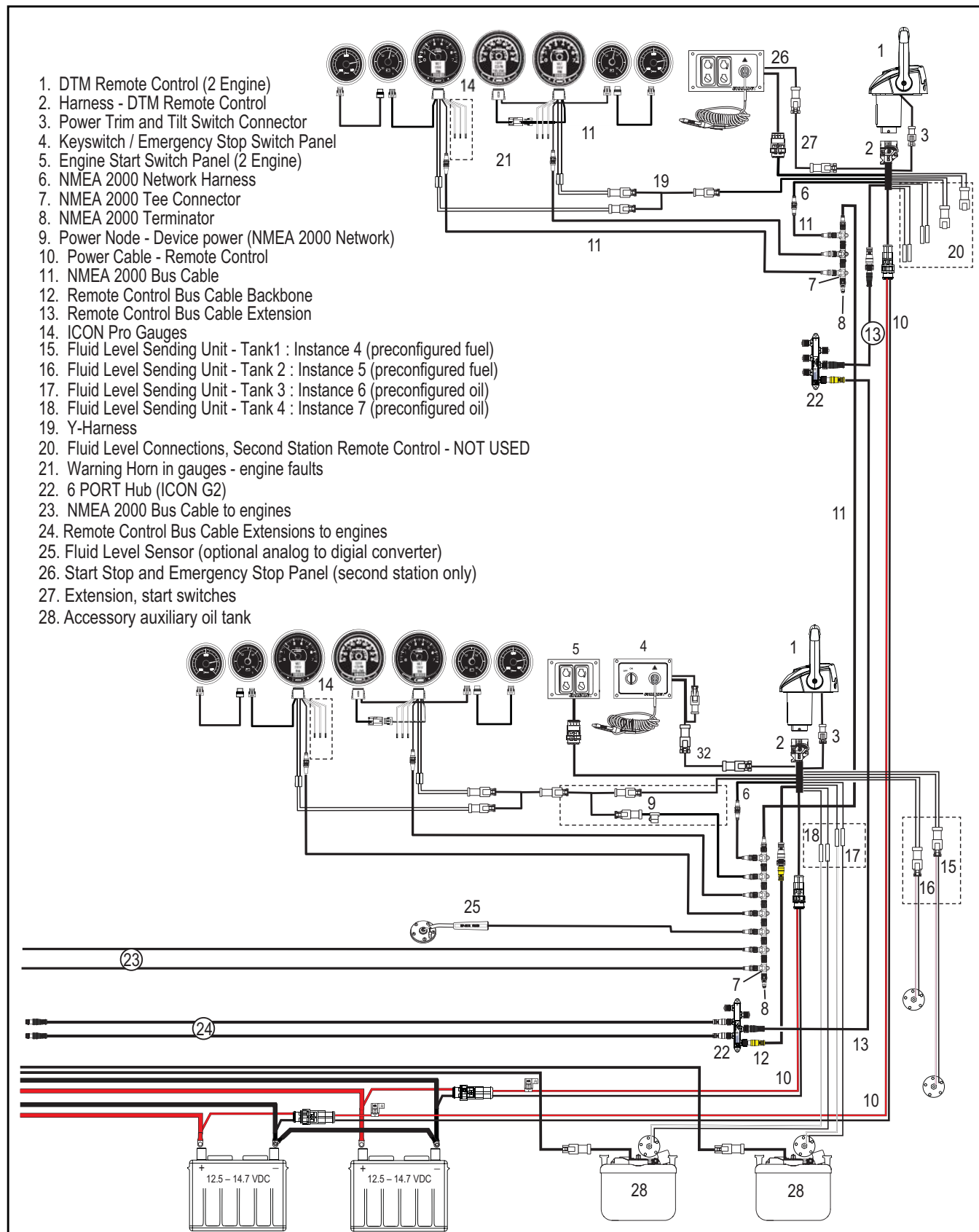
1. DTM Remote Control (2 Engine)
2. Harness - DTM Remote Control
3. Power Trim and Tilt Switch Connector
4. Keyswitch / Emergency Stop Switch Panel
5. Engine Start Switch Panel (2 Engine)
6. NMEA 2000 Network Harness
7. NMEA 2000 Tee Connector
8. NMEA 2000 Terminator
9. Power Node - Device power (NMEA 2000 Network)
10. Power Cable - Remote Control
11. NMEA 2000 Bus Cable
12. Remote Control Bus Cable Backbone
13. Remote Control Bus Cable Extension
14. ICON Touch 4.3 inch CTS inch Digital Display
15. Fluid Level Sending Unit - Tank 1 : Instance 4 (preconfigured fuel)
16. Fluid Level Sending Unit - Tank 2 : Instance 5 (preconfigured fuel)
17. Fluid Level Sending Unit - Tank 3 : Instance 6 (preconfigured oil)
18. Fluid Level Sending Unit - Tank 4 : Instance 7 (preconfigured oil)
19. Fluid Level or Fresh Water - Tank 5 : Instance 8 (configure with display)
20. Fluid Level Connections, Second Station Remote Control - NOT USED
21. Warning Horn - engine faults
22. 6 PORT Hub (ICON G2)
23. NMEA 2000 Bus Cable to engines
24. Remote Control Bus Cable Extensions to engines
25. Fluid Level Sensor (optional analog to digital converter)
26. Start Stop and Emergency Stop Panel (second station only)
27. Extension, start switches
28. Accessory auxiliary oil tank



Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON G2 Premium Dual Top Mount Remote Control (DTM): Two Engines, Two Stations – ICON Pro Gauges

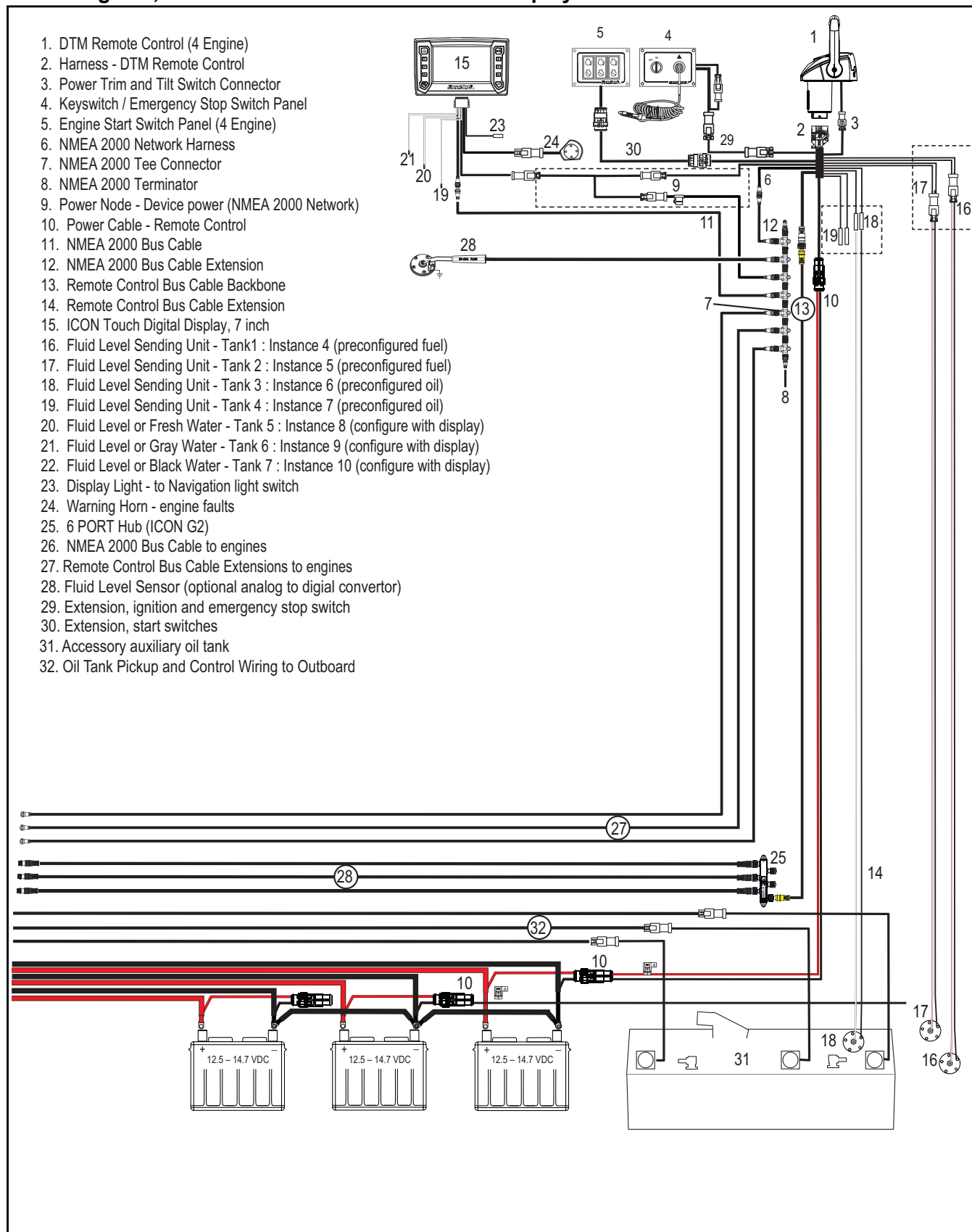


Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

1

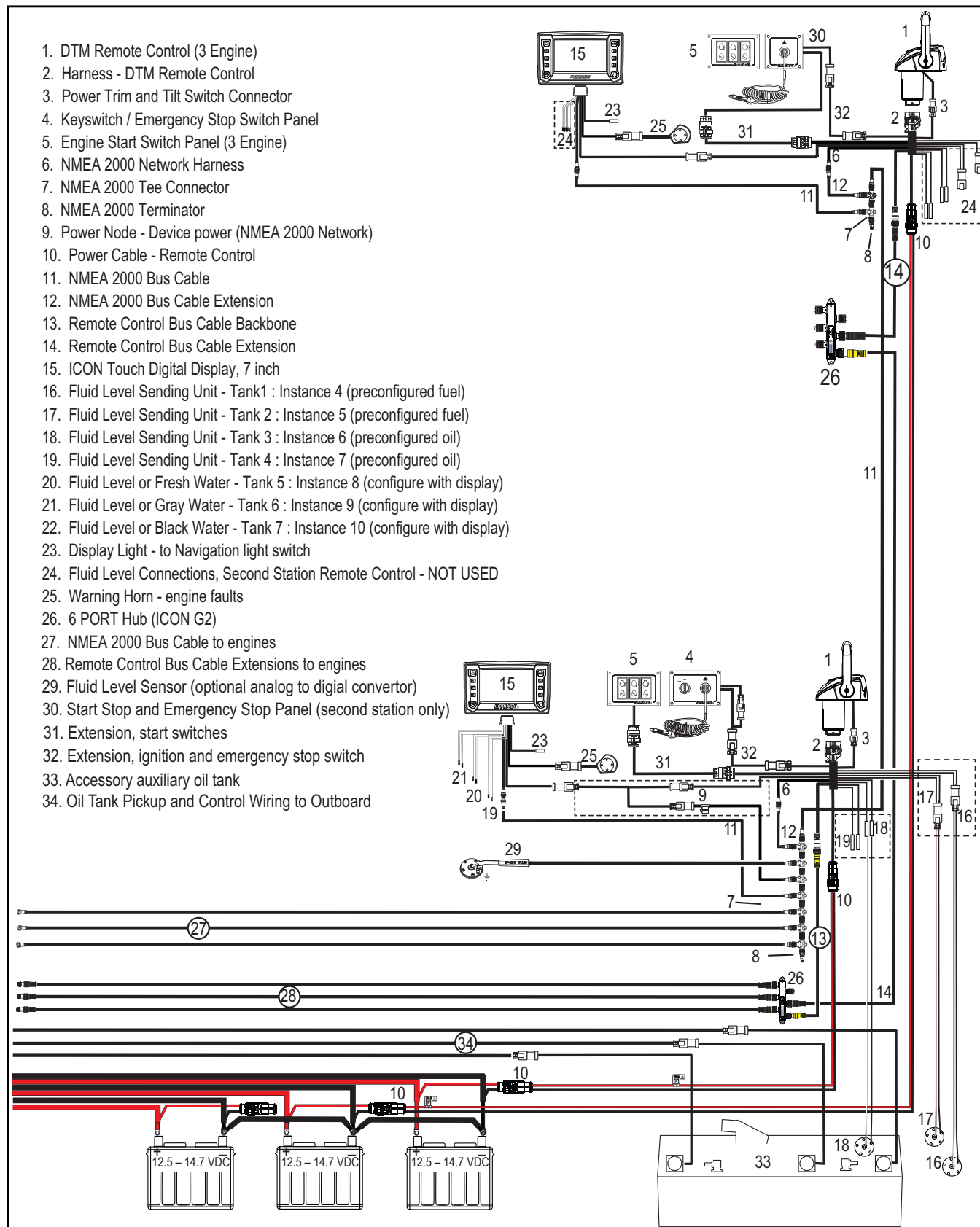
ICON G2 Premium Dual Top Mount Remote Control: Three Engines, One Station – ICON CTS 7.0 inch display



Evinrude E-TEC G2 Rigging & Setup Guide

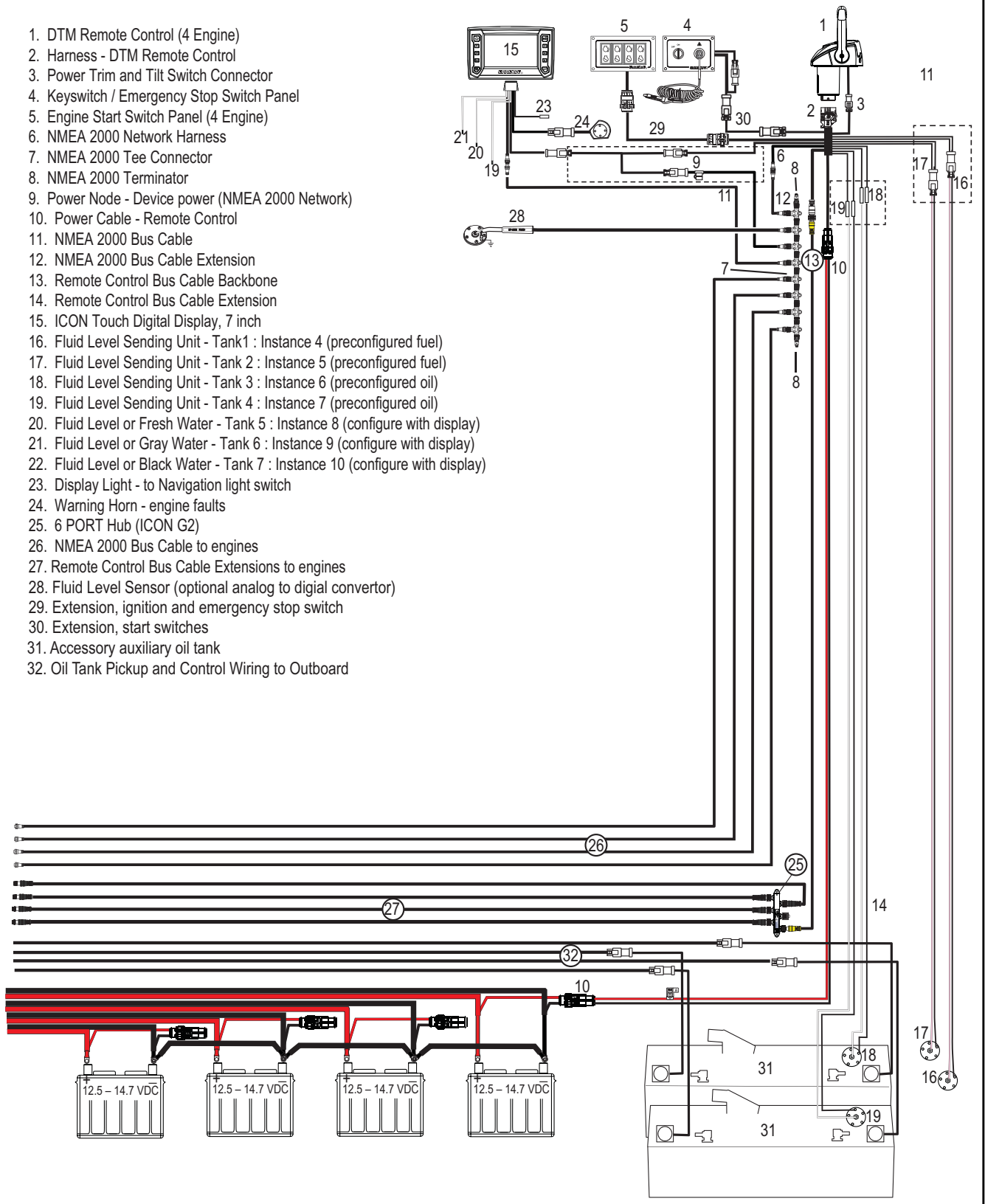
ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON II Premium Dual Top Mount Remote Control: Three Engines, Two Station – ICON CTS 7.0 inch displays



ICON // Premium Dual Top Mount Remote Control: Four Engines, One Station – ICON CTS 7.0 inch display

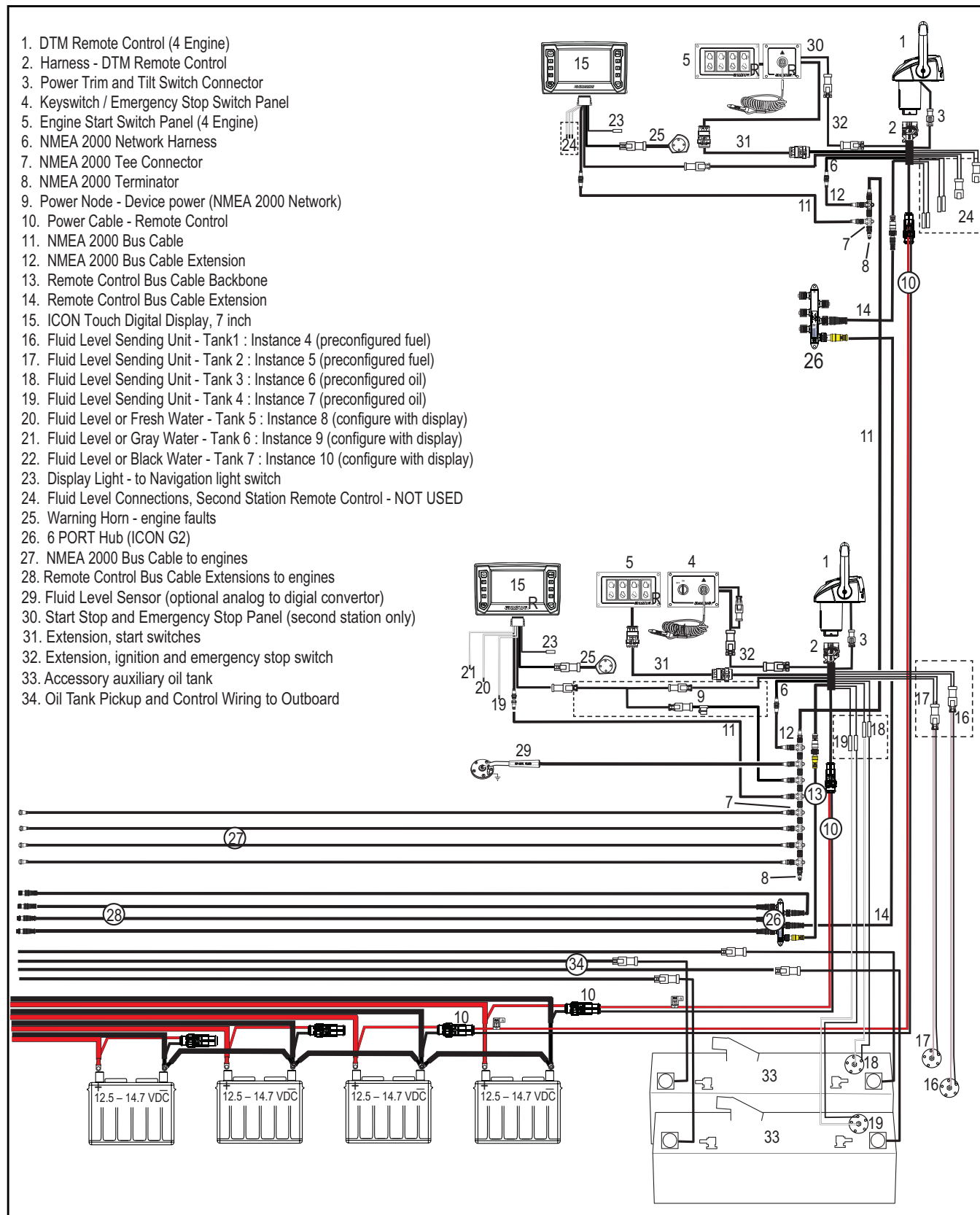
1. DTM Remote Control (4 Engine)
2. Harness - DTM Remote Control
3. Power Trim and Tilt Switch Connector
4. Keyswitch / Emergency Stop Switch Panel
5. Engine Start Switch Panel (4 Engine)
6. NMEA 2000 Network Harness
7. NMEA 2000 Tee Connector
8. NMEA 2000 Terminator
9. Power Node - Device power (NMEA 2000 Network)
10. Power Cable - Remote Control
11. NMEA 2000 Bus Cable
12. NMEA 2000 Bus Cable Extension
13. Remote Control Bus Cable Backbone
14. Remote Control Bus Cable Extension
15. ICON Touch Digital Display, 7 inch
16. Fluid Level Sending Unit - Tank1 : Instance 4 (preconfigured fuel)
17. Fluid Level Sending Unit - Tank 2 : Instance 5 (preconfigured fuel)
18. Fluid Level Sending Unit - Tank 3 : Instance 6 (preconfigured oil)
19. Fluid Level Sending Unit - Tank 4 : Instance 7 (preconfigured oil)
20. Fluid Level or Fresh Water - Tank 5 : Instance 8 (configure with display)
21. Fluid Level or Gray Water - Tank 6 : Instance 9 (configure with display)
22. Fluid Level or Black Water - Tank 7 : Instance 10 (configure with display)
23. Display Light - to Navigation light switch
24. Warning Horn - engine faults
25. 6 PORT Hub (ICON G2)
26. NMEA 2000 Bus Cable to engines
27. Remote Control Bus Cable Extensions to engines
28. Fluid Level Sensor (optional analog to digital convertor)
29. Extension, ignition and emergency stop switch
30. Extension, start switches
31. Accessory auxiliary oil tank
32. Oil Tank Pickup and Control Wiring to Outboard



Evinrude E-TEC G2 Rigging & Setup Guide

ICON G2 Premium Dual Top Mount Remote Control (DTM) Connection Diagrams

ICON // Premium Dual Top Mount Remote Control: Four Engines, Two Station – ICON CTS 7.0 inch displays



ICON G2 Remote Control Troubleshooting Chart

DESCRIPTION	POSSIBLE CAUSE / PROCEDURE
ICON G2 System does not work	Check Remote Control Power Supply Harness and switched B+ from Accessory Power Output harness (switched 12 volts). Check all fuse(s) and connections.
NMEA 2000 Power Node harness has blown 3A fuse	NMEA 2000 Network current draw is exceeding 3A. Check accessories on network. Check all connections and wiring. Disconnect accessory connections to network. Isolate possible overloads or shorted accessory or display.
ICON instrument display is erratic	Check for installation of two terminators in system. Check network bus cable and device connections.
No speed display	Requires input from NMEA 2000 speed transducer and/or GPS receiver.
Fuel tank level does not display	Requires fuel level sensor and setup.
No "Fuel Manager"	Requires setup of the ICON display.
No "Fuel Economy" display for Fuel Management	Requires input from NMEA 2000 GPS receiver.
Oil tank level does not display	Requires oil tank sender/sensor and setup.
Engine water pressure does not display	Requires input from water pressure transducer and EMM switch activation using Evinrude Diagnostic 6 Software.
Water pressure related fault codes observed after initial setup	Check for incorrect water pressure transducer connections at engine.
"----" displayed on LCD	Check engine position setting for both the display and outboard. Use Evinrude Diagnostics 6 software for outboard setting (multi-engine applications). Check EMM cable connections to network and to outboard.
Remote Control Code Chart	Refer to the Remote Control Code Chart contained in the Evinrude E-TEC G2 Service Manual

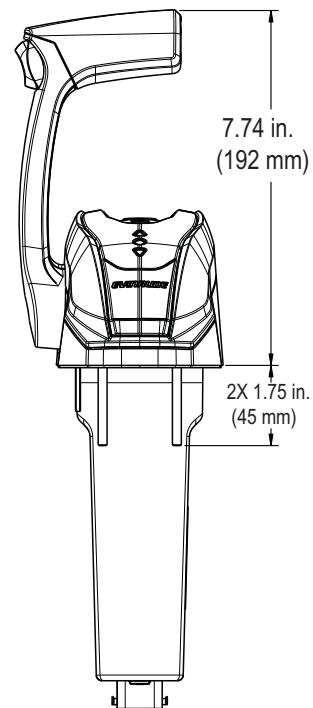
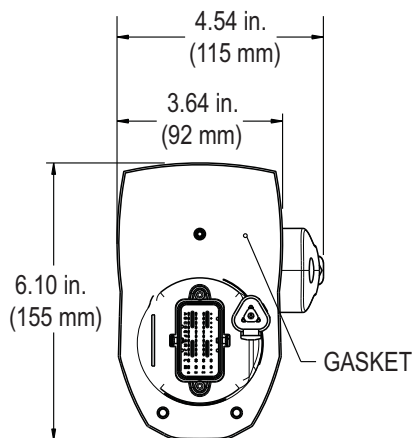
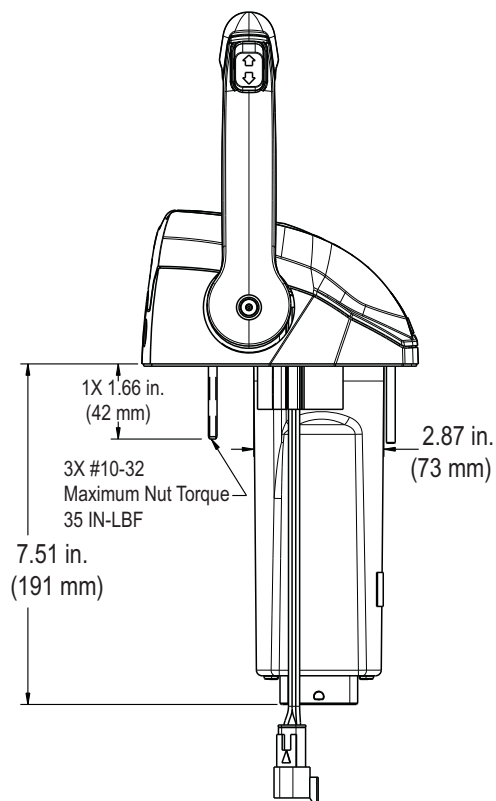
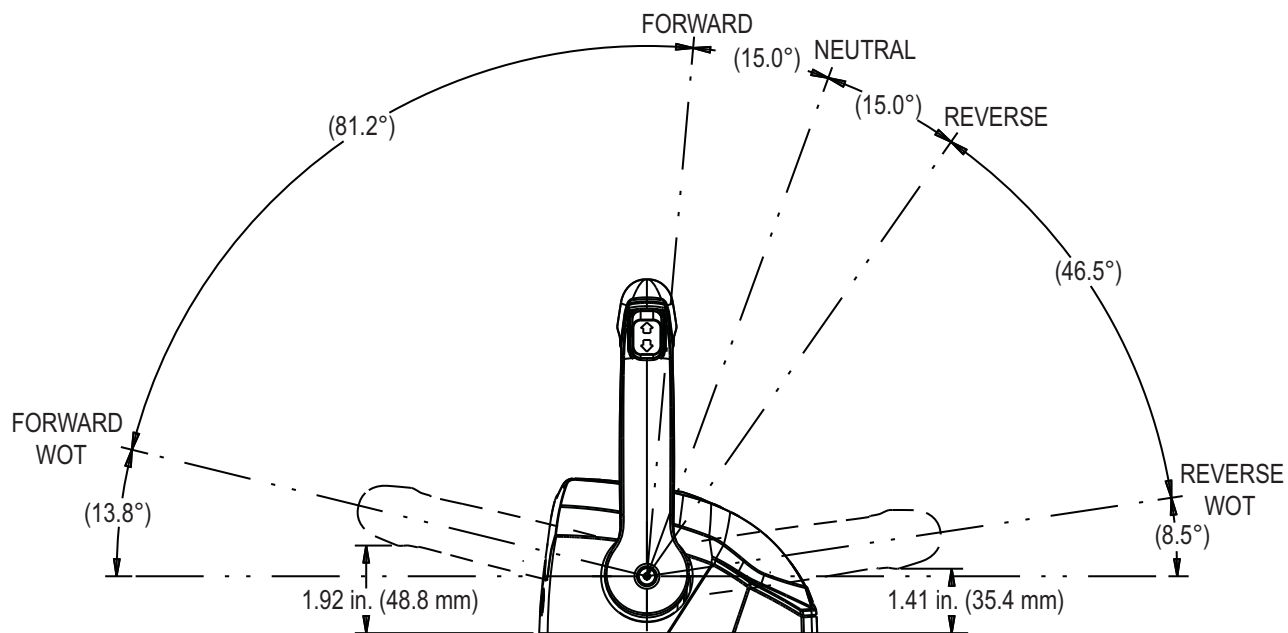
ICON G2 Remote Controls - Profile Drawings

EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE

ICON G2 II PREMIUM SINGLE LEVER TOP MOUNT REMOTE CONTROL PROFILE

ICON G2 II Premium Single Lever Top Mount Remote Control Profile

Drawing NOT to scale

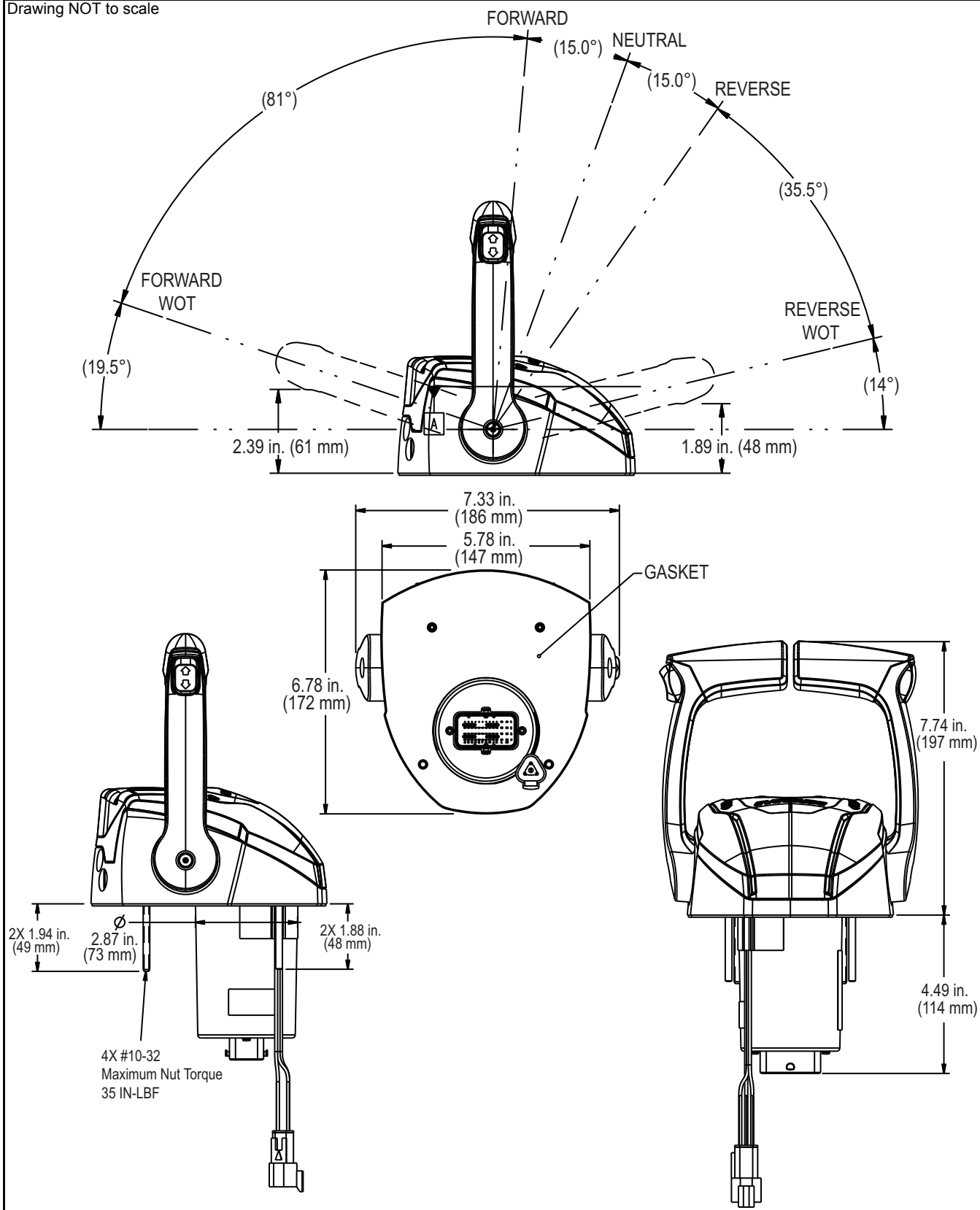


EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE

ICON G2 PREMIUM DUAL LEVER TOP MOUNT (DTM) REMOTE CONTROL PROFILE

ICON G2 Premium Dual Lever Top Mount (DTM) Remote Control Profile

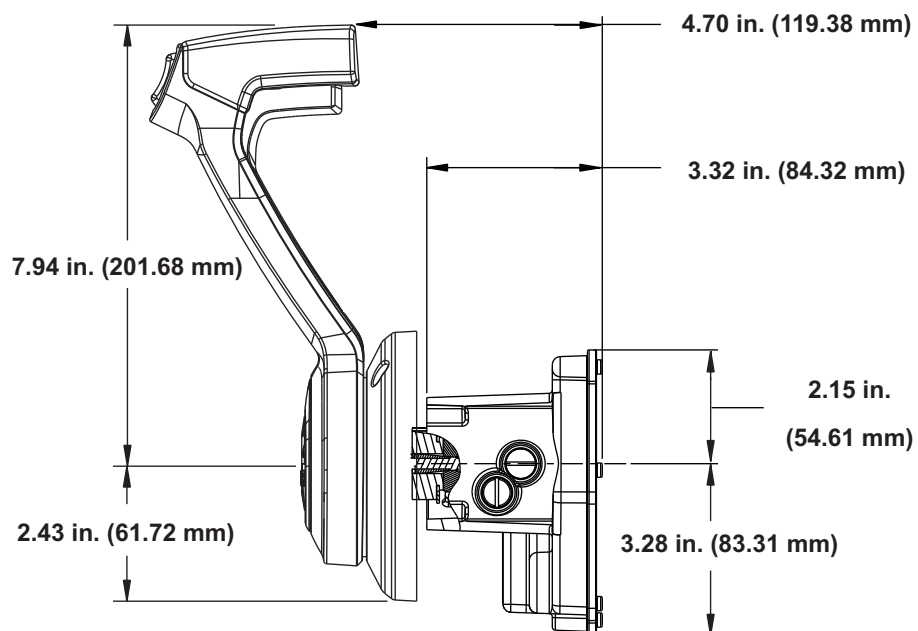
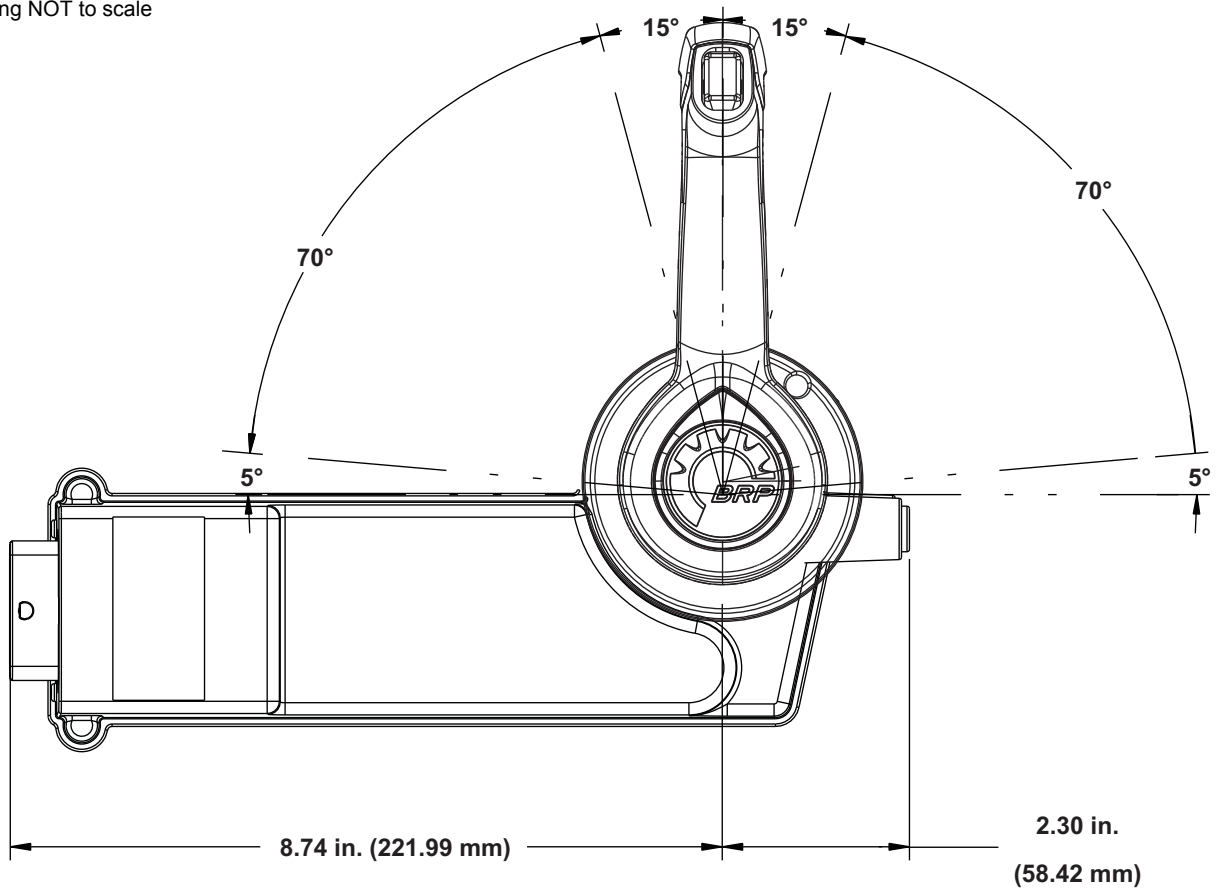
Drawing NOT to scale



EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE
ICON G2 PREMIUM CONCEALED SIDE MOUNT (CSM) REMOTE CONTROL PROFILE

ICON G2 Premium Concealed Side Mount (CSM) Remote Control Profile

Drawing NOT to scale

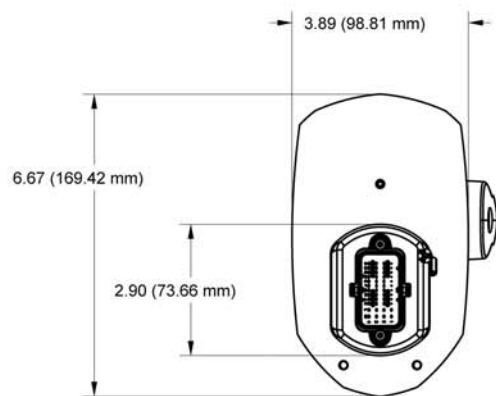
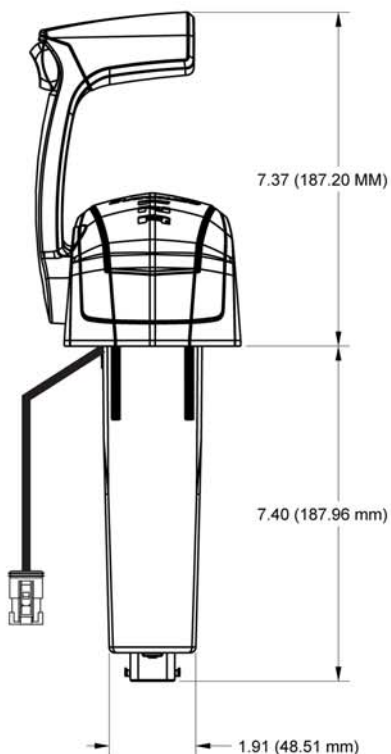
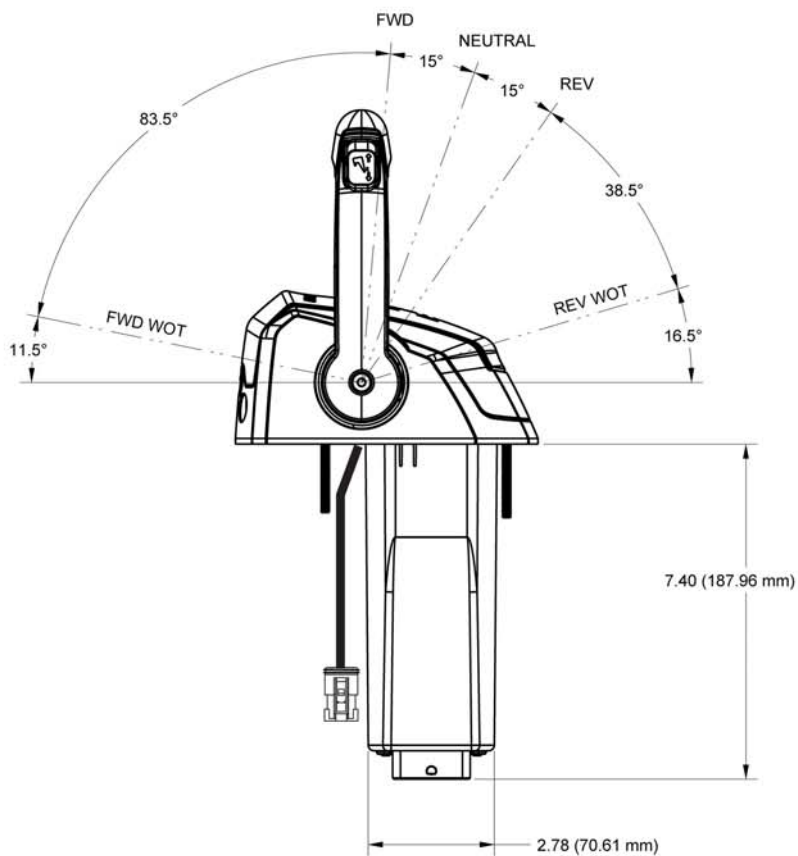


EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE

ICON G2 SINGLE LEVER BINNACLE MOUNT REMOTE CONTROL PROFILE

ICON G2 Single Lever Binnacle Mount Remote Control Profile

Drawing NOT to scale

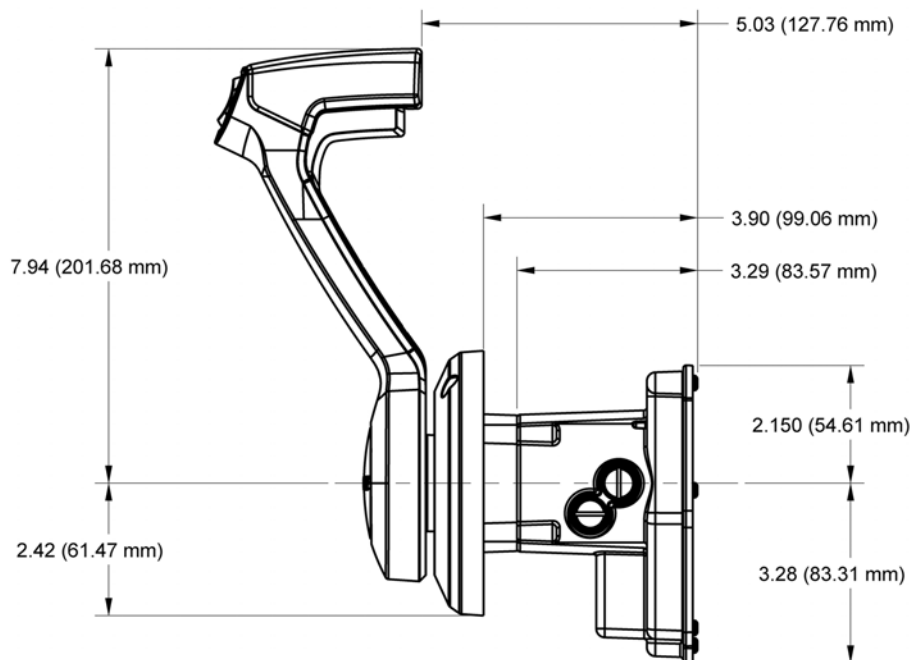
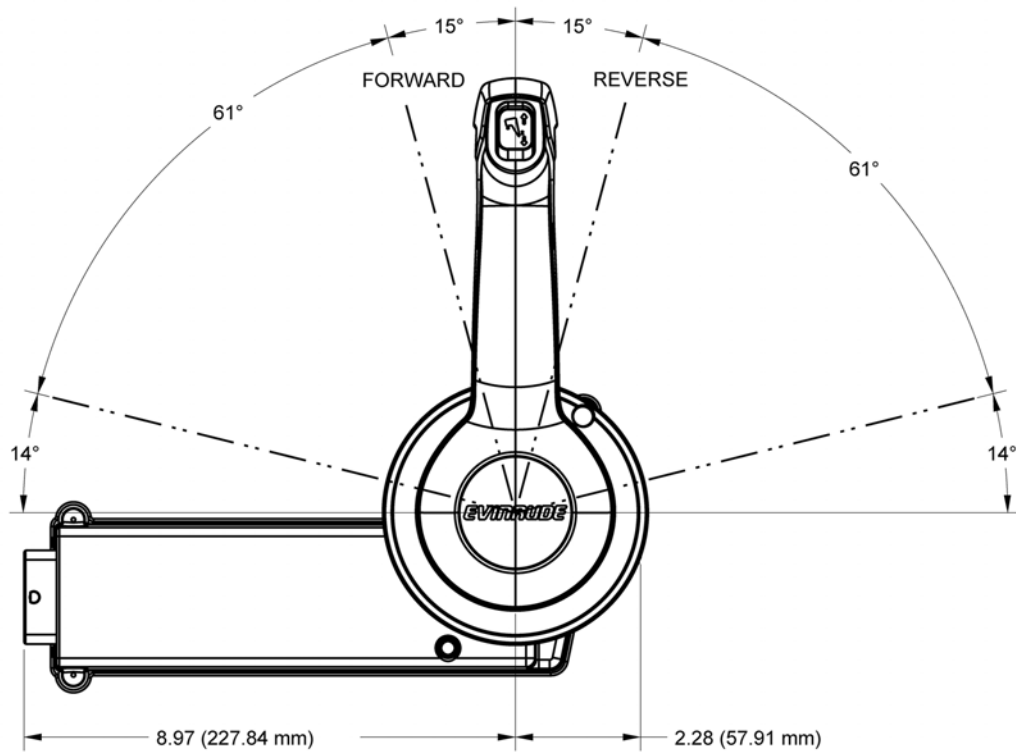


EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE

ICON G2 CONCEALED SIDE MOUNT REMOTE CONTROL PROFILE

ICON G2 Concealed Side Mount Remote Control Profile

Drawing NOT to scale



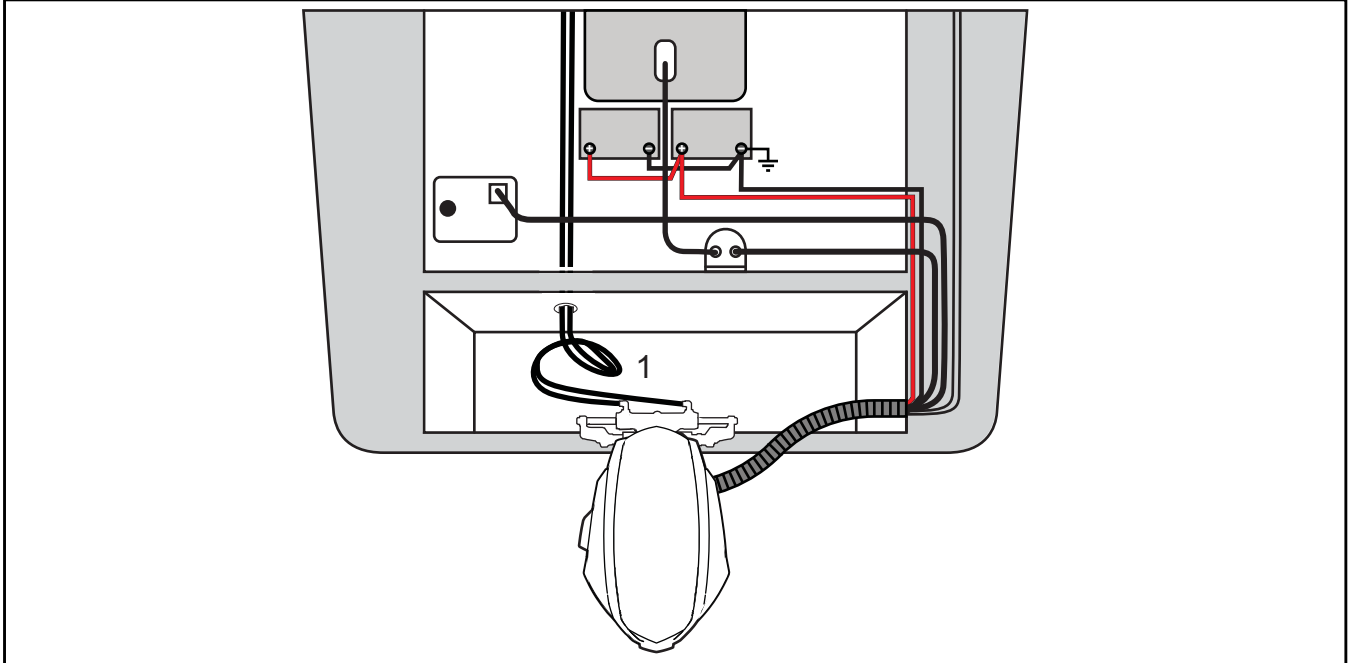
Cable Routing Diagrams

G2 Cable Routing Diagrams List

G2 with TRAC+ Midsection (2.7 L / 3.4 L)	131
G2 with IHS / DPS Midsection (2.7 L / 3.4 L)	133

TRAC+ Midsection - Hydraulic Steering Hoses Routed Separately

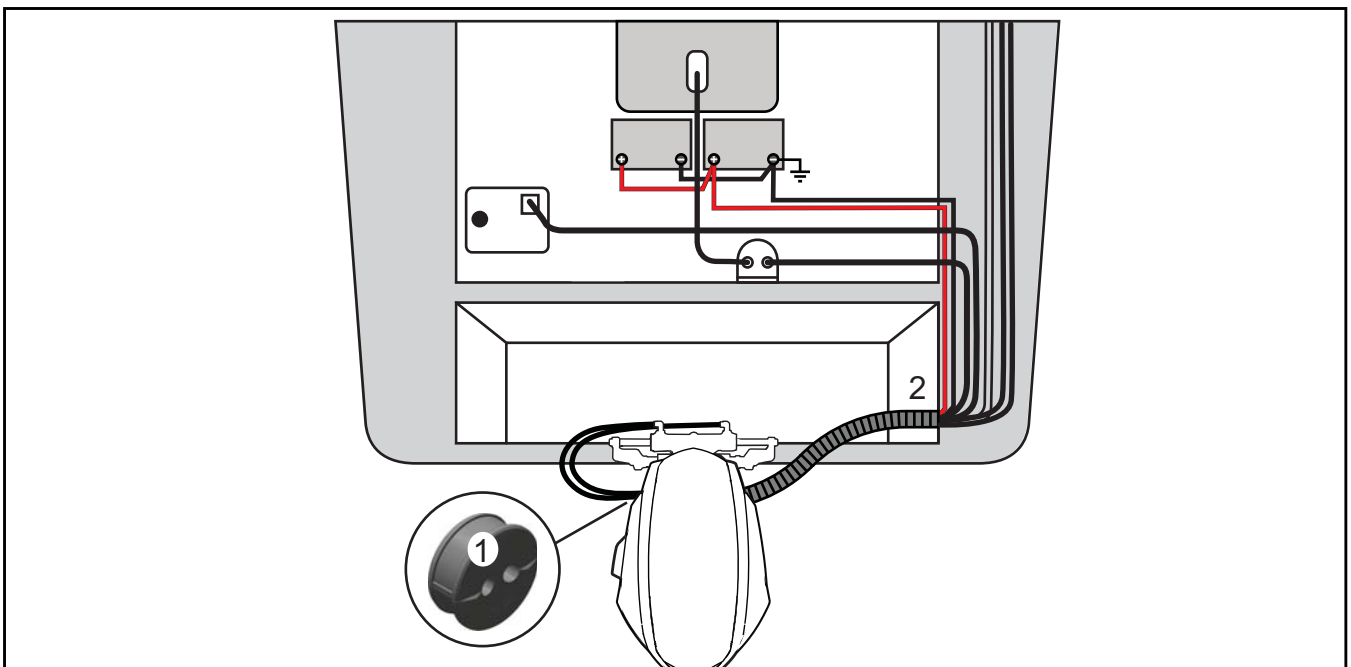
TRAC+ midsection use external steering cylinders. Hydraulic steering hoses can be routed separate from the fuel and electrical cables.



1. Hydraulic Steering Hoses Routed Separately

TRAC+ Midsection - Hydraulic Steering Hoses Routed with Cables

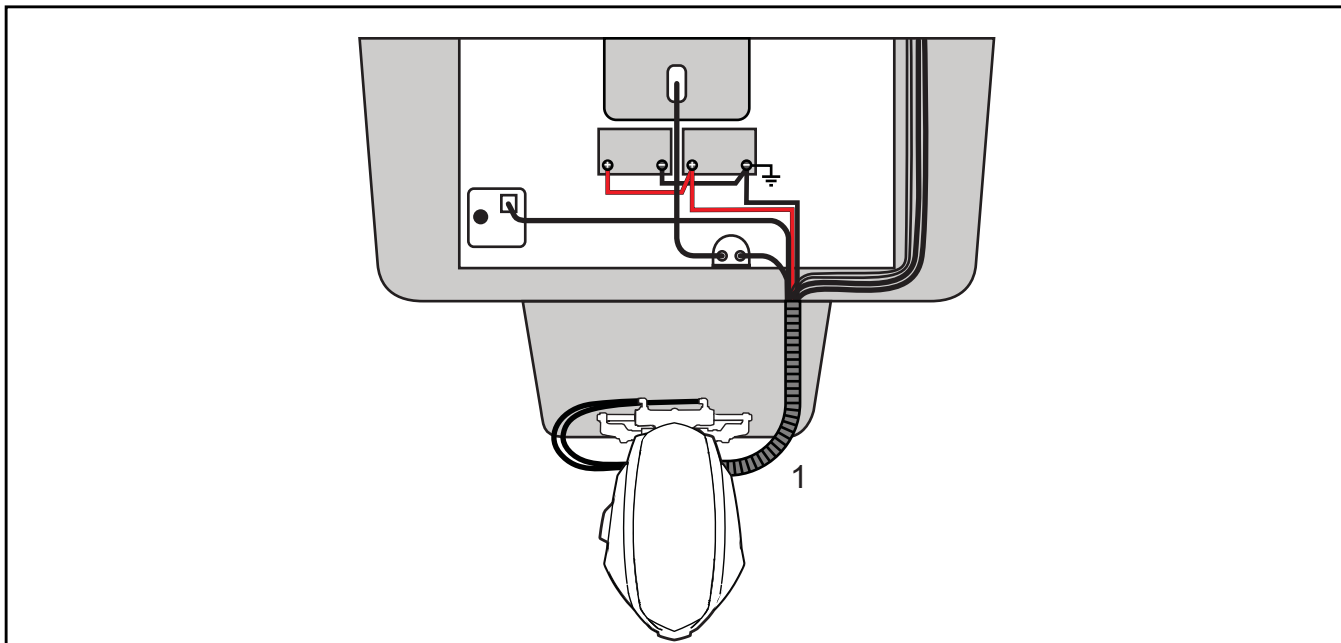
TRAC+ midsection use external steering cylinders. Install the hose retainer, P/N 359711 over hoses and thread into the rigging bracket. Hydraulic steering hoses are routed with fuel and electrical cables.



1. Hose retainer, P/N 359711
2. Hydraulic Steering Hoses Routed with fuel and electrical cables

TRAC+ Midsection - Hydraulic Steering Hoses Routed Over Engine Bracket

TRAC+ midsection use external steering cylinders. Install the hose retainer, P/N 359711 over hoses and thread into the rigging bracket. Hydraulic steering hoses are routed with fuel and electrical cables.



1. Over engine bracket

***ICON G2 Remote Control and Switch Panel
Drill Templates***

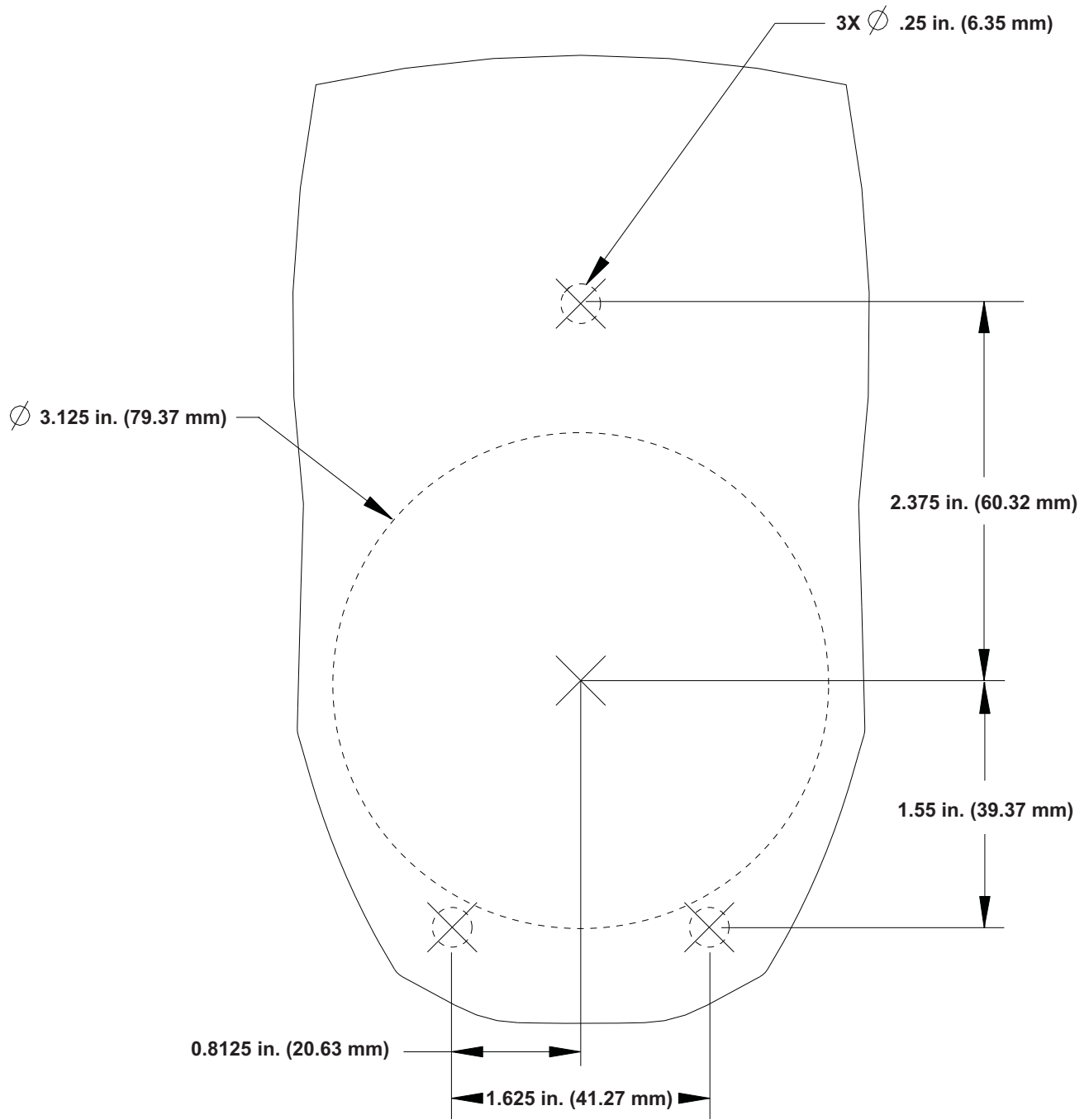
EVINRUDE E-TEC G2 RIGGING & SETUP GUIDE

ICON G2 REMOTE CONTROL AND SWITCH PANEL DRILL TEMPLATES

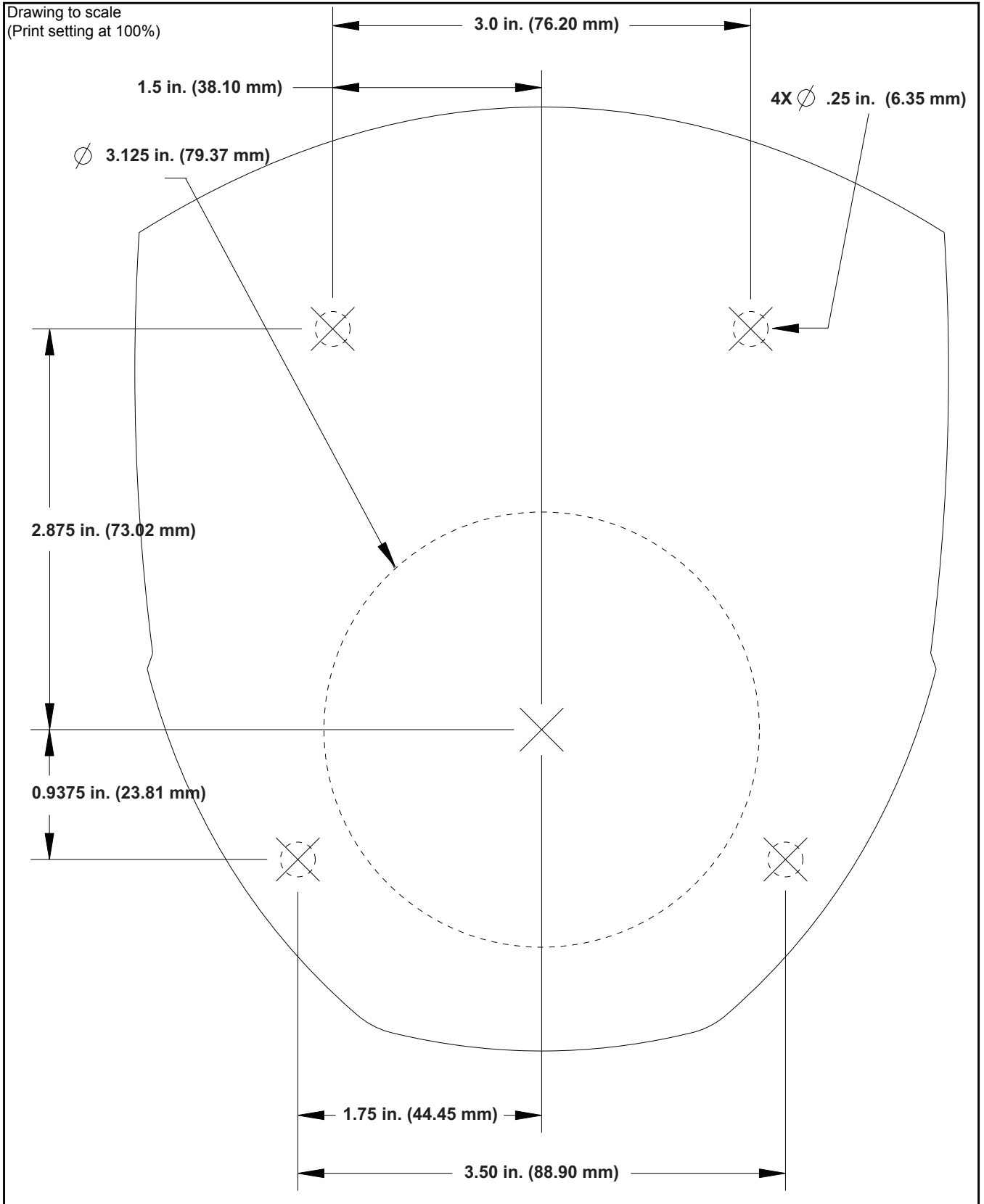
ICON G2 Remote Controls - Drill Templates

ICON G2 Premium Single Lever Top Mount Remote Control Drill Template

Drawing to scale
(Print setting at 100%)

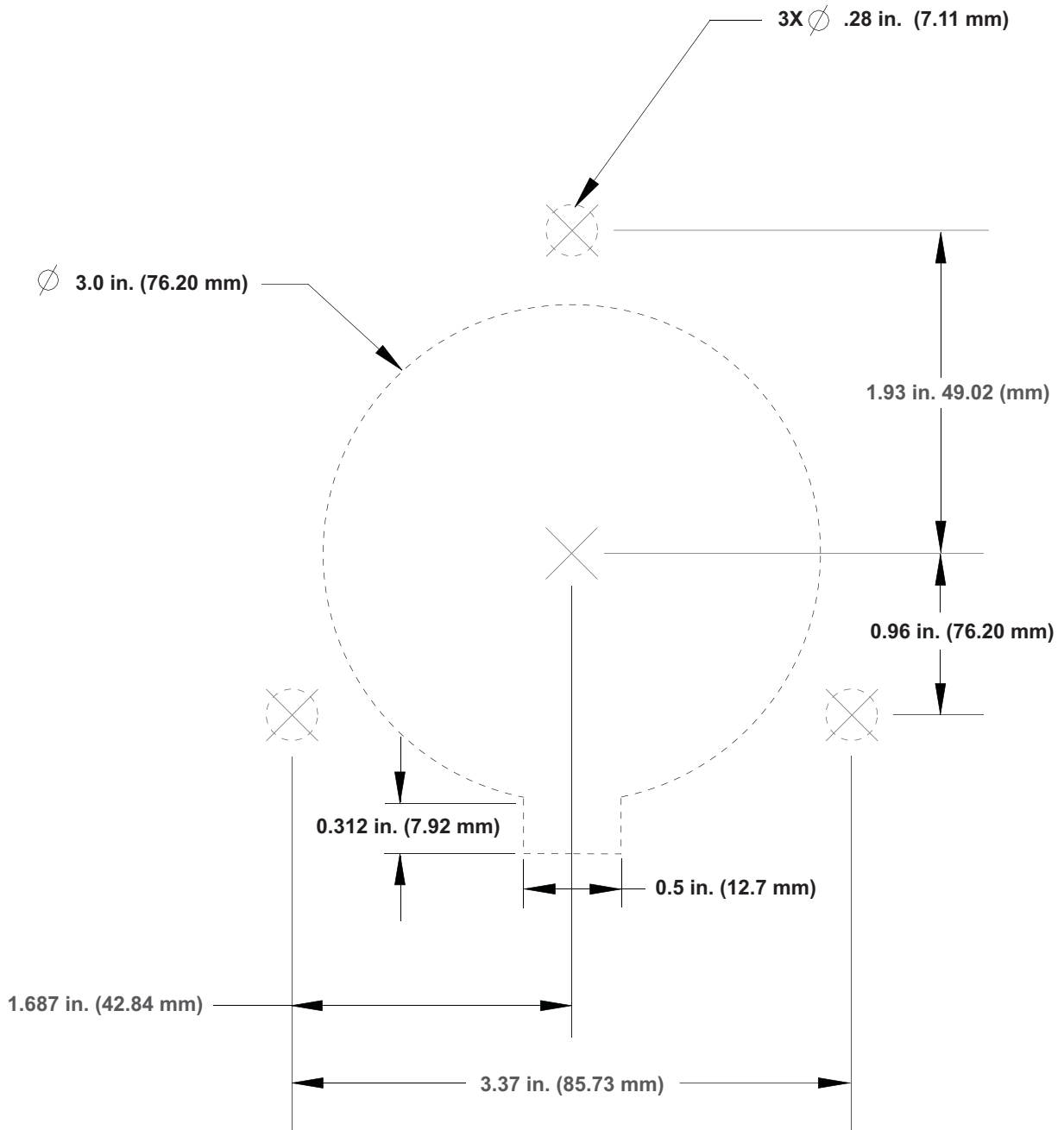


ICON G2 Premium Dual Lever Top Mount Remote Control Drill Template



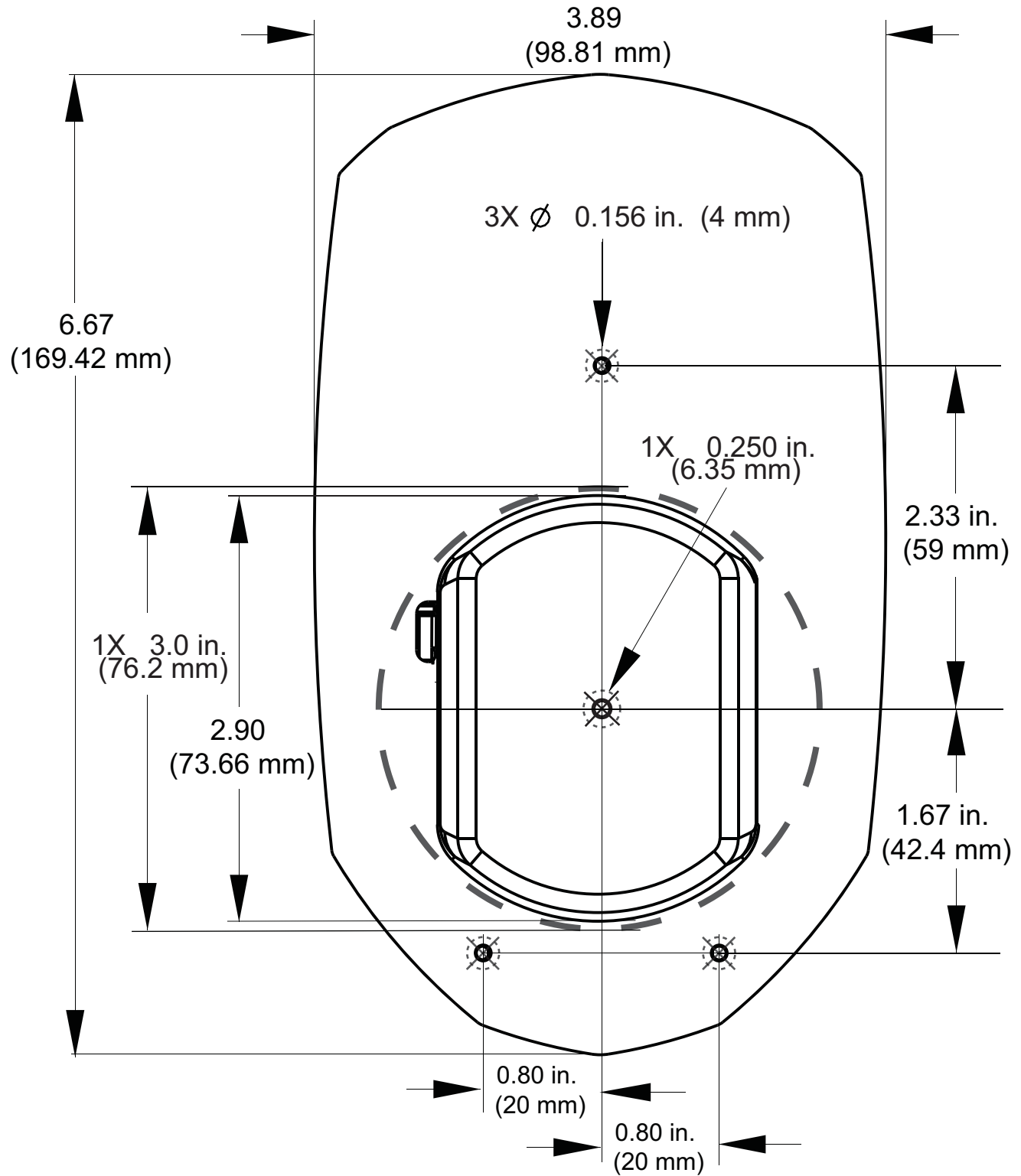
ICON G2 Premium Concealed Side Mount Remote Control Drill Template

Drawing to scale
(Print setting at 100%)



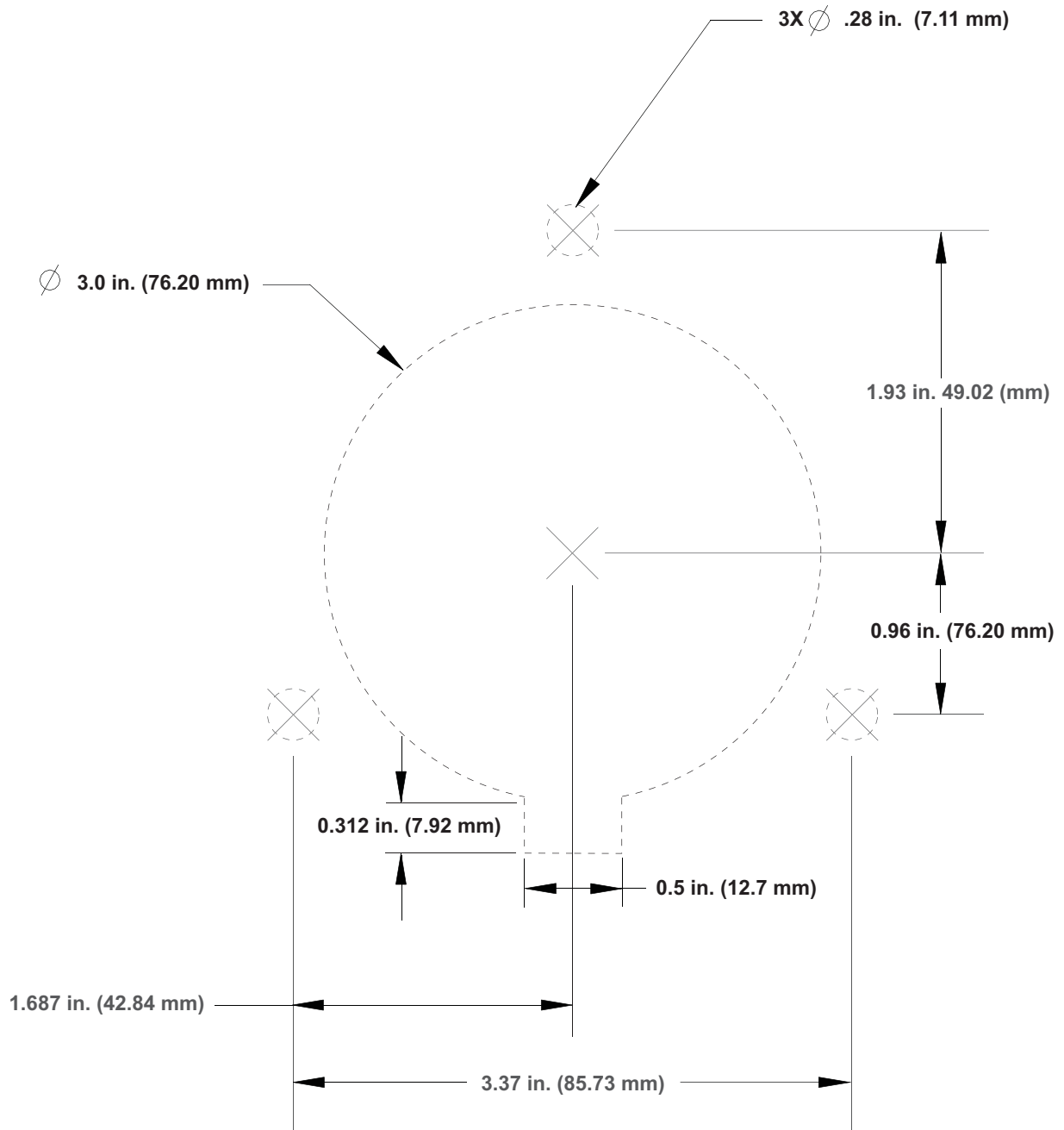
ICON G2 - Single Lever Top Mount Remote Control Drill Template

Drawing to scale
(Print setting at 100%)



ICON G2 Concealed Side Mount Remote Control Drill Template

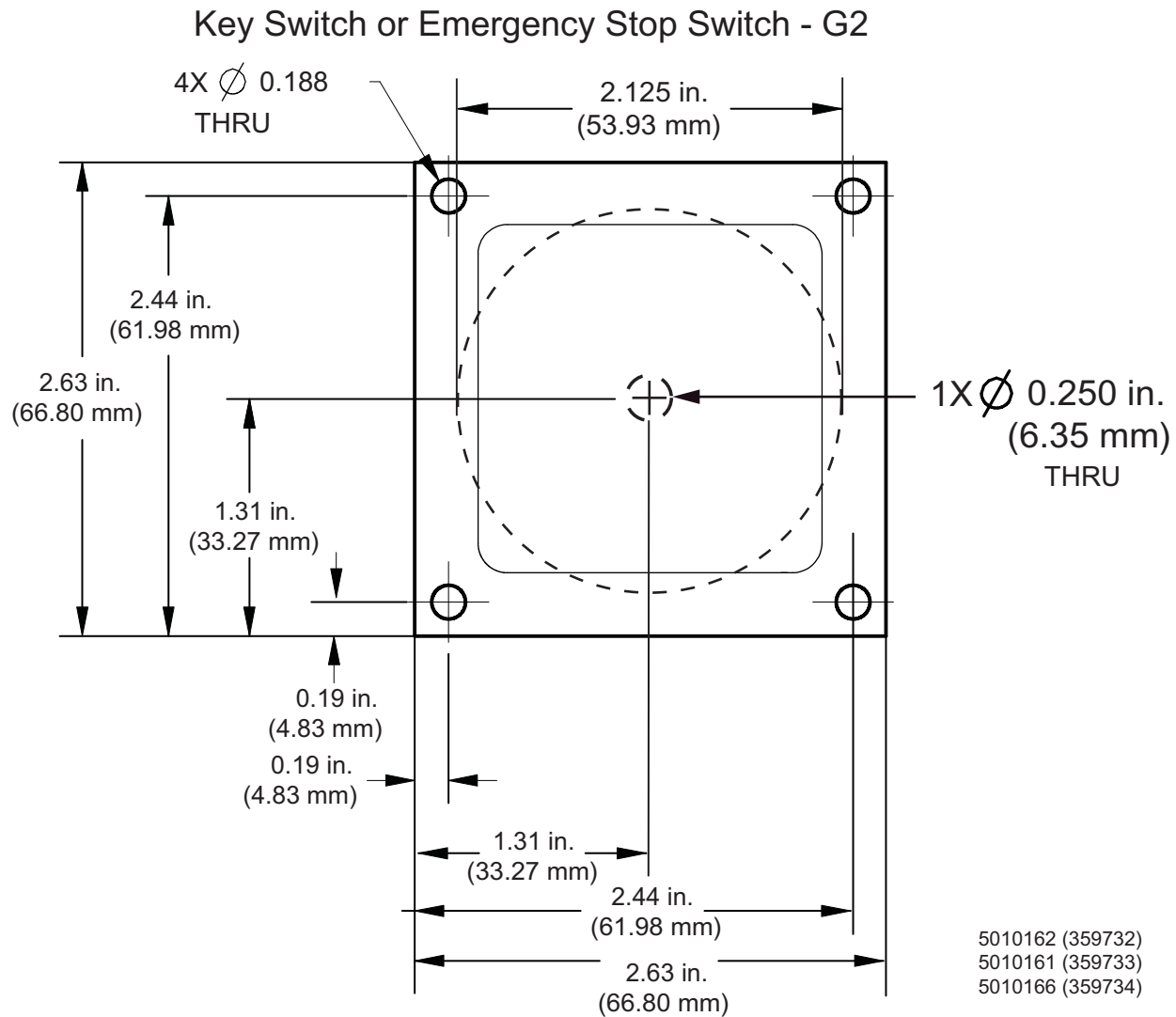
Drawing to scale
(Print setting at 100%)



ICON G2 Switches - Drill Templates

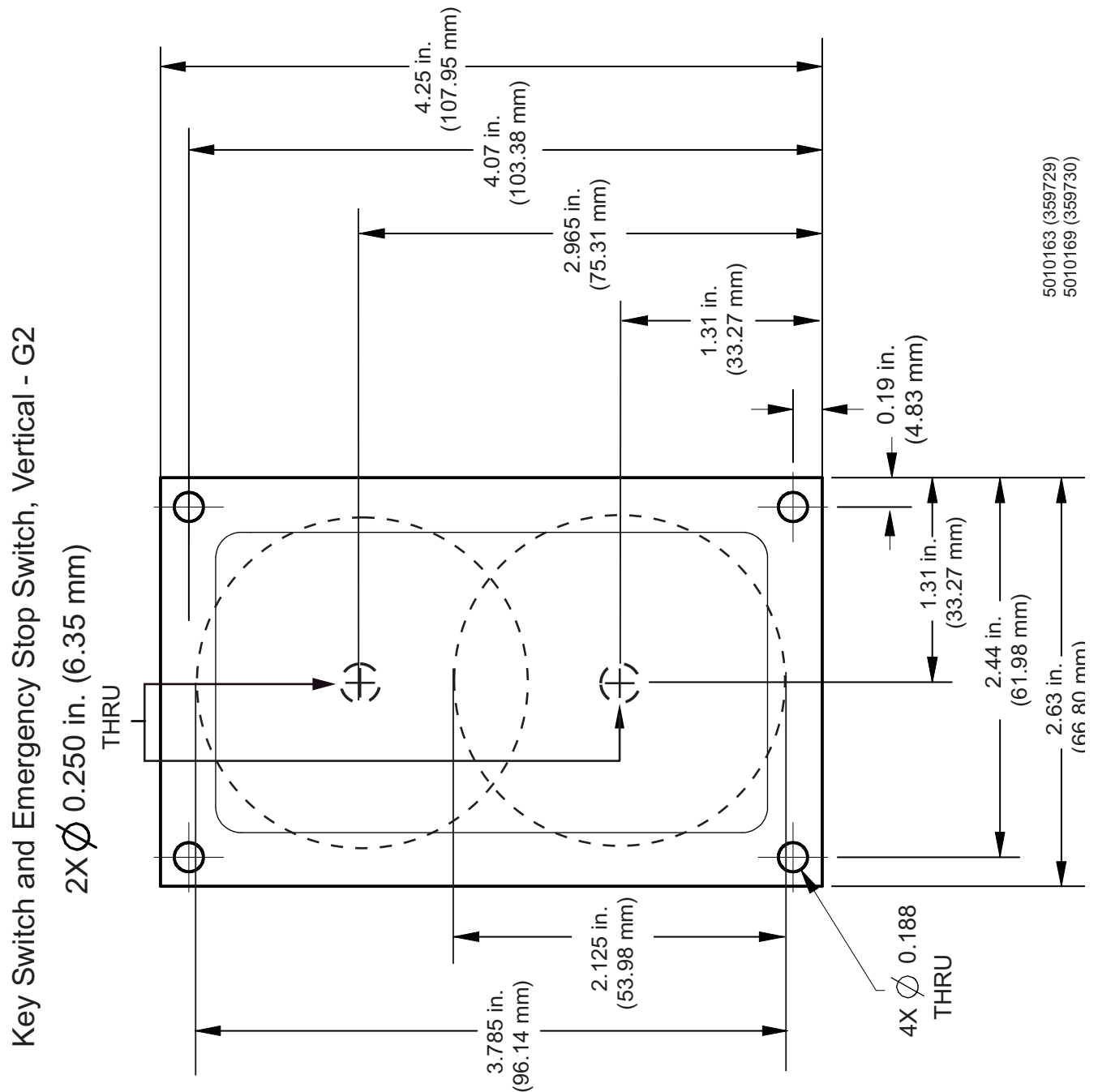
Key Switch or Emergency Stop Switch

Drawing to scale (Print setting at 100%)



Key Switch and Emergency Stop Switch, Vertical

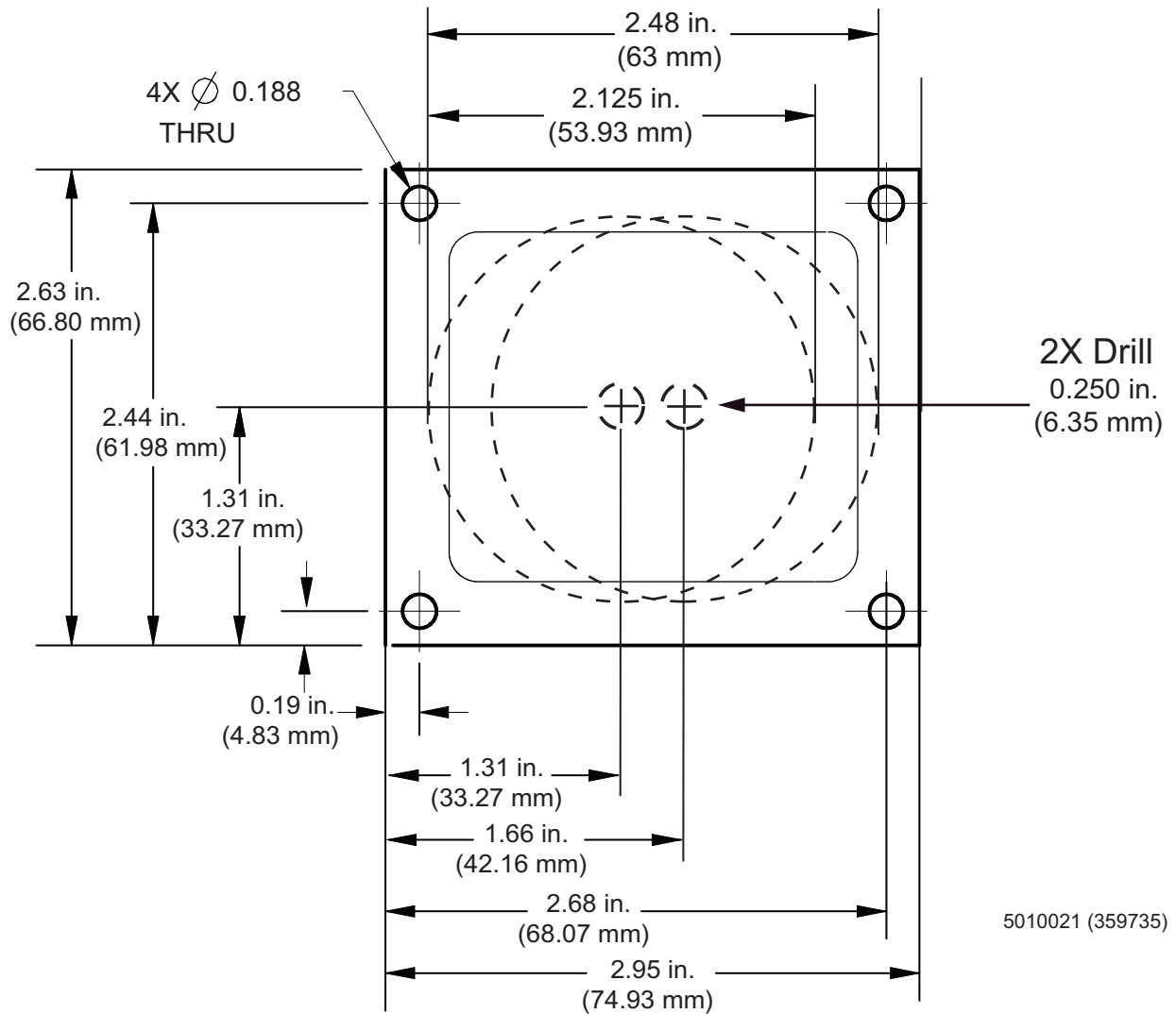
Drawing to scale (Print setting at 100%)



Dual Start Switch / Neutral and RPM Switch

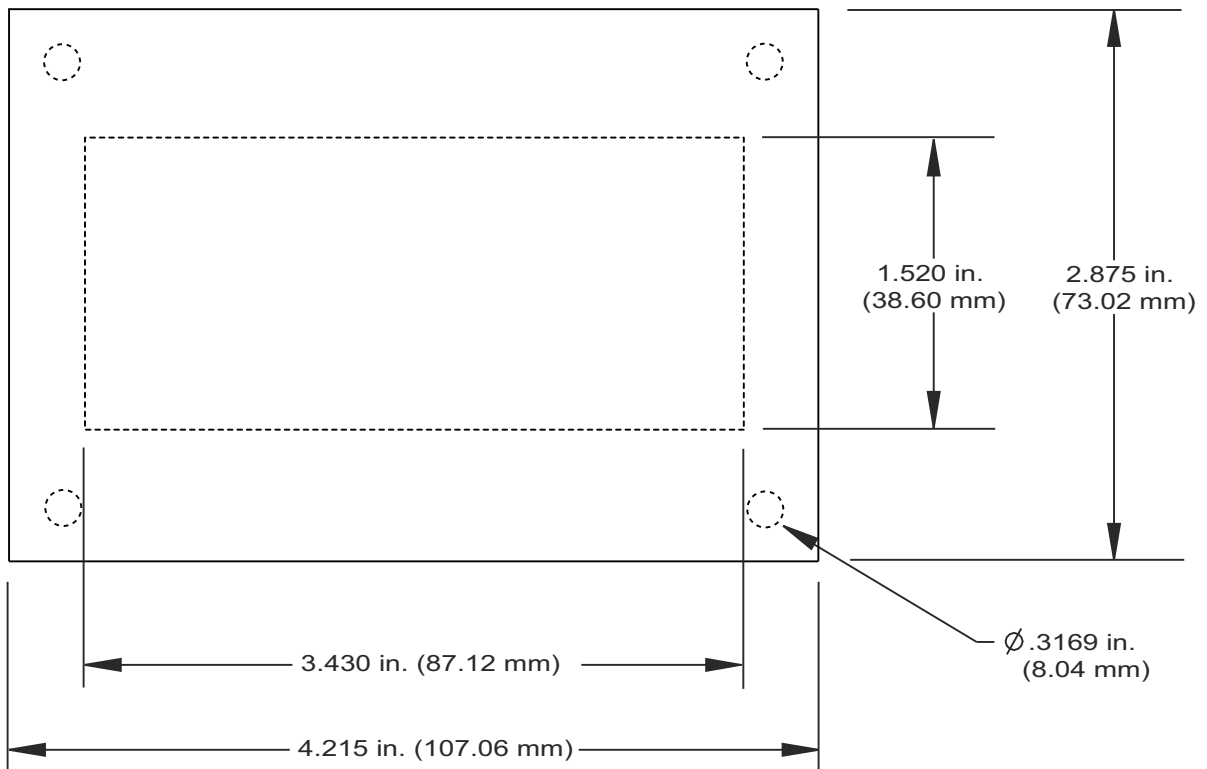
Drawing to scale (Print setting at 100%)

Dual Start Switch - G2



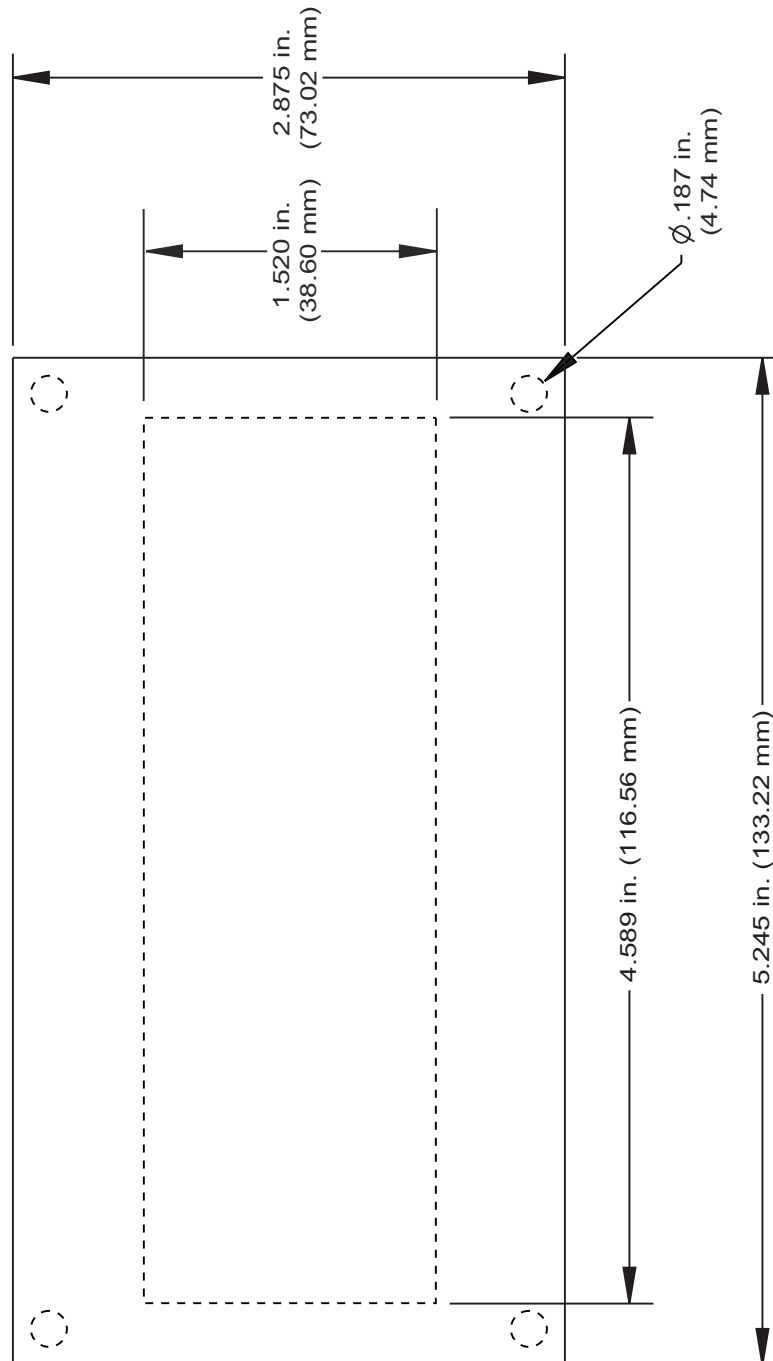
Start/Stop Switch, 3 engine
Trim and Tilt Switch, 3 engine

Drawing to scale (Print setting at 100%)



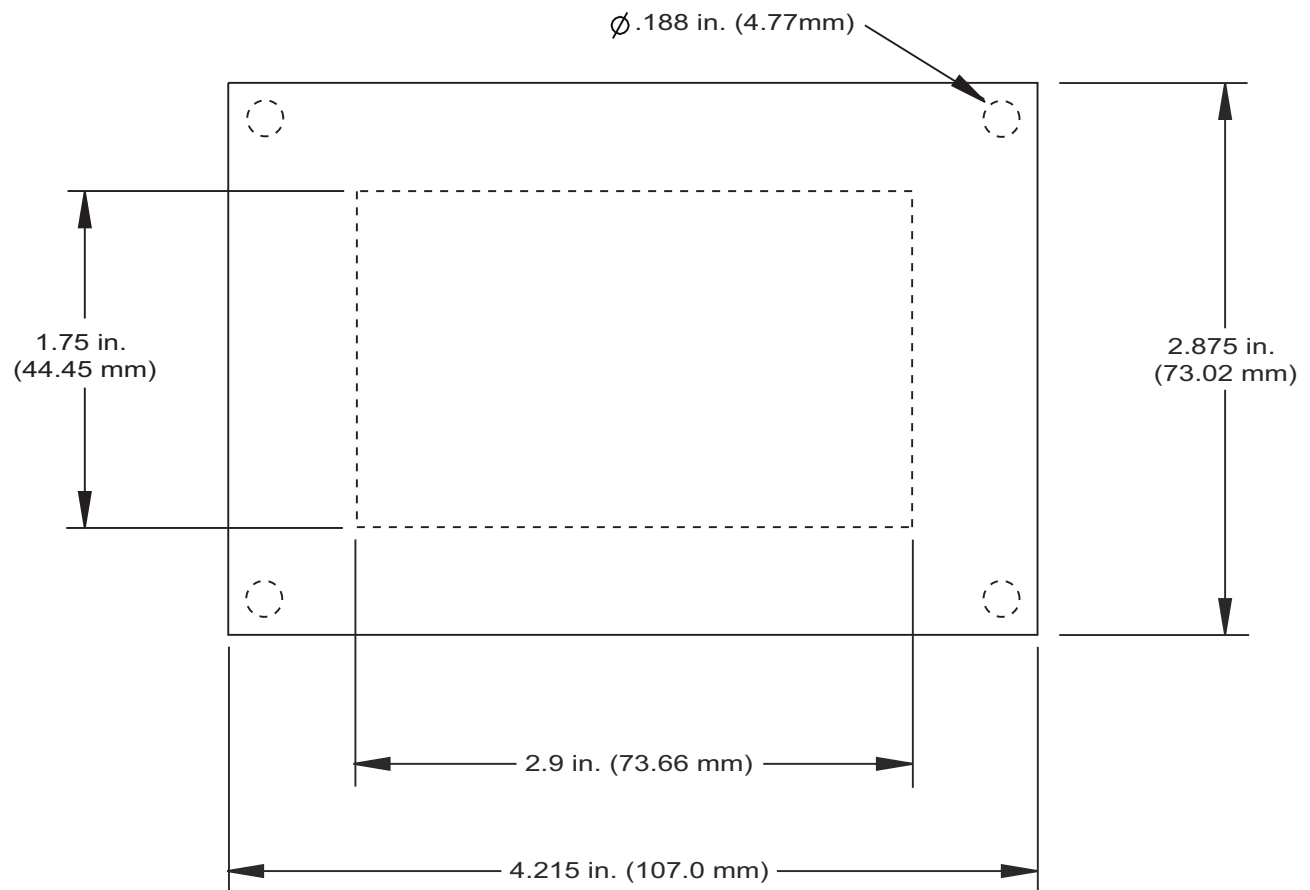
Start/Stop Switch, 4 engine
Trim and Tilt Switch, 4 engine

Drawing to scale (Print setting at 100%)



Start/Stop Switch, 1 Engine Second Station

Drawing to scale (Print setting at 100%)



Start/Stop Switch, 2 Engine Second Station

Drawing to scale (Print setting at 100%)

