

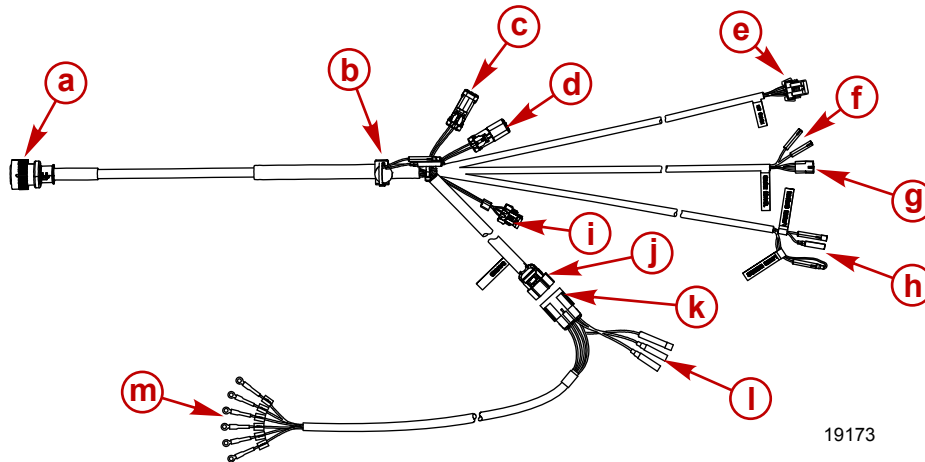
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## New 14 Pin Key/Choke and Engine Harness Features (non-DTS)

### Situation

For the 2006 model year, Mercury Marine introduced a new 14 pin key/choke and engine harness. The following information outlines many of the features of the new harnesses. The new key/choke harnesses are available in various lengths from 2 to 40 feet.

**NOTE:** The two foot version makes an ideal service tool for troubleshooting boat harness problems.



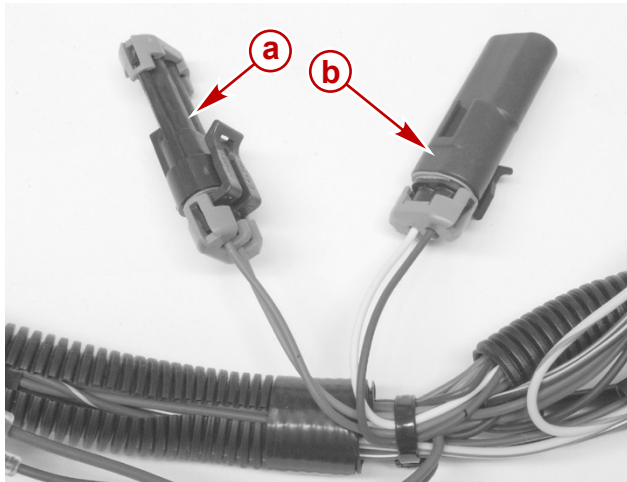
- a - 14 pin connector
- b - Warning horn, part of the key/choke harness assembly
- c - CAN 3 connector with weather cap
- d - CAN 1 connector with blue terminator resistor
- e - 6 pin key switch connector (3 position key switch included with the key/choke harness)
- f - Wires with bullet connector for the neutral switch in the control box
- g - Flat 3 pin connector for the power trim switches in the control box
- h - Lanyard switch wires normally closed and open circuits
- i - Connector for the accessory power relay
- j - Gauge connection analog and SmartCraft
- k - Connector for the analog adapter harness
- l - CAN 1 and 12 volt wires are not used at this time
- m - Connections for the analog gauges with ring terminals

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**New 14 Pin Key/Choke and Engine Harness Features (non-DTS)**

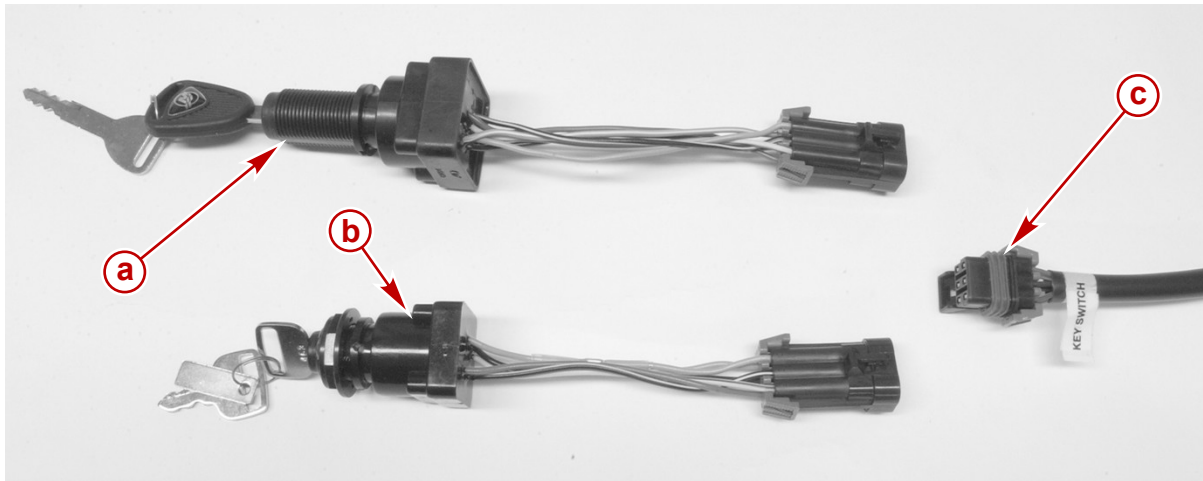
**CAN 1 and CAN 3 connections:** The CAN 1 and 3 wires are included within the key/choke harness. A separate blue SmartCraft harness is not required when connected to SmartCraft compatible 2006 model year engines equipped with the 14 pin engine harness.



- a** - CAN 3 connector (orange and green wires) with a weather cap
- b** - CAN 1 connector (blue and white wires) with a terminator resistor

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**Key switch connection:** The key switch connection now has a 6 pin quick disconnect style. The key/choke harnesses come standard with a 3 position (OFF, RUN, and START) key switch. An optional 4 position key switch is also available. Mercury Marine recommends changing to the 4 position switch when using an accessory relay kit.



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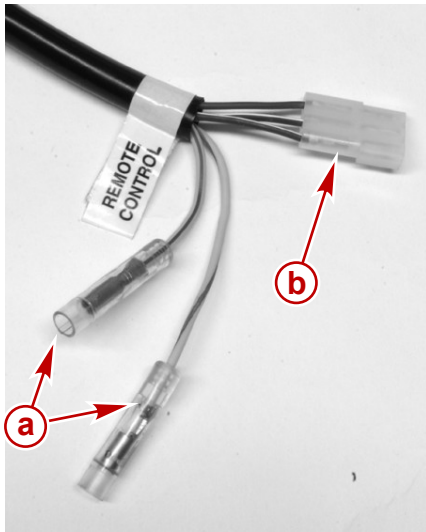
- a** - Optional 4 position key switch
- b** - 3 position key switch is standard with the key/choke harness
- c** - 6 pin key switch connection on the key/choke harness

Description	Part Number
3 Position Key Switch	87-897716
4 Position Key Switch	87-893353A03

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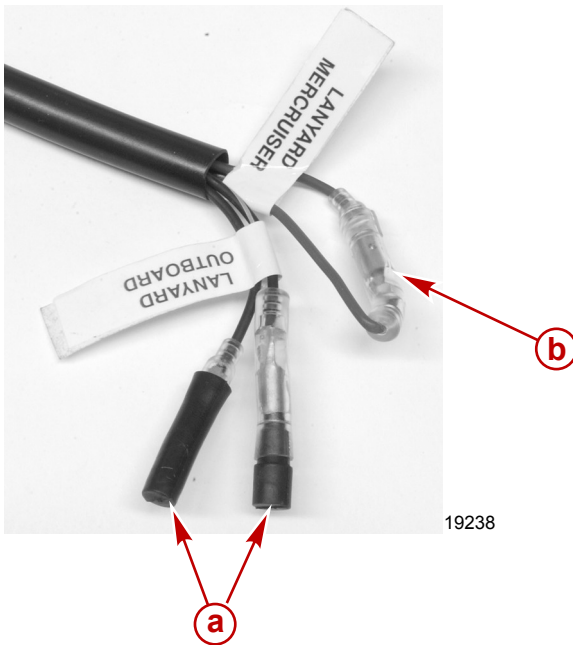
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**Control box connections:** The connections to the control box for the neutral switch are the standard yellow/red wires with bullet connectors. The power trim connector is the flat 3 pin connector which connects to most current Mercury controls.



- a - Neutral switch female bullet connectors (2). Later version harnesses will have one male and one female bullet connector.
- b - Flat 3 pin connector for the power trim switch

**Lanyard switch connection:** The lanyard switch wires (4) can be used to make connections to normally closed or normally open ignition circuits.



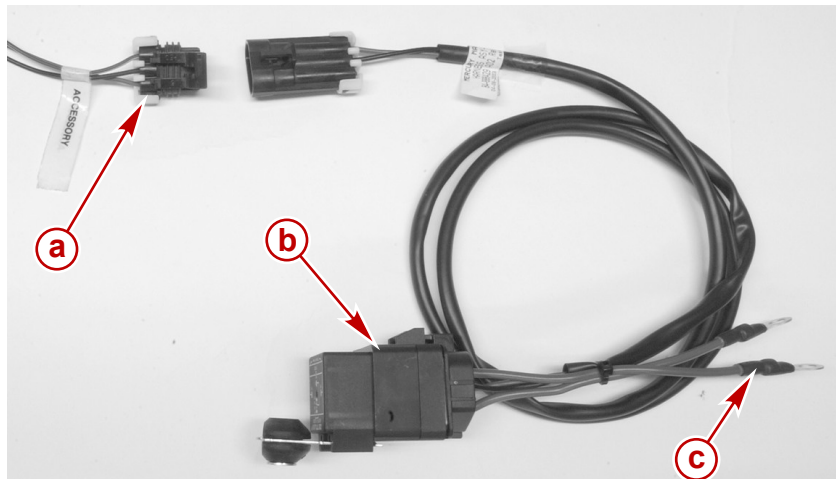
- a - Lanyard wires for normally open circuits (Outboard)
- b - Lanyard wires for normally closed circuits (Mercury MerCruiser) must remain closed when harness is used with an outboard

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**Accessory power relay:** The new key/choke harness has a connection for an accessory power relay. This is the same type of accessory relay used on Digital Throttle and Shift (DTS) engines. The relay provides accessory power to auxiliary loads when the key switch is in the run or accessory positions.

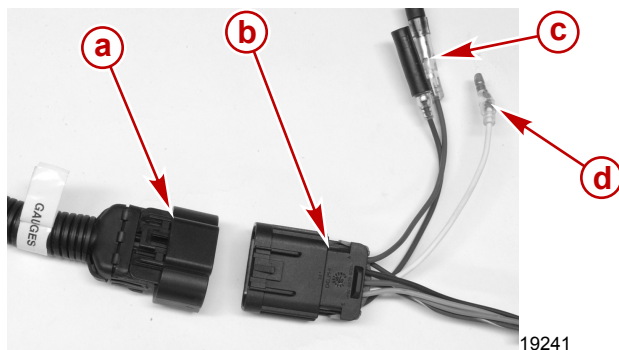


- a** - Relay connector on the key/choke harness
- b** - Relay and harness assembly
- c** - Power wire for the auxiliary loads, connect to the terminal block

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Description	Part Number
Relay	888429K01
Relay with 30 foot harness	84-889611K01
Relay with 15 foot harness	84-889611K04

**Analog gauge connection:** The key/choke harness has a 10 pin connector labeled "GAUGES". If an analog gauge operation is required, order the analog adapter harness. The adapter harness connects directly to the 10 pin connector labeled "GAUGES". **The analog adapter harness is NOT included with the key/choke harness.**



- a** - Gauge connection on the key/choke harness
- b** - Gauge connection on the analog adapter harness
- c** - Extra CAN 1 blue wire, not used at this time
- d** - Extra CAN 1 white wire, not used for SmartCraft at this time, is used for the choke circuit on older product

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The adapter harness includes the following:

- Switch 12 volts (purple)
- Ground (black)
- Trim gauge (brown/white)
- Tachometer (gray)
- Water temperature (tan)
- Oil level/pressure (blue)

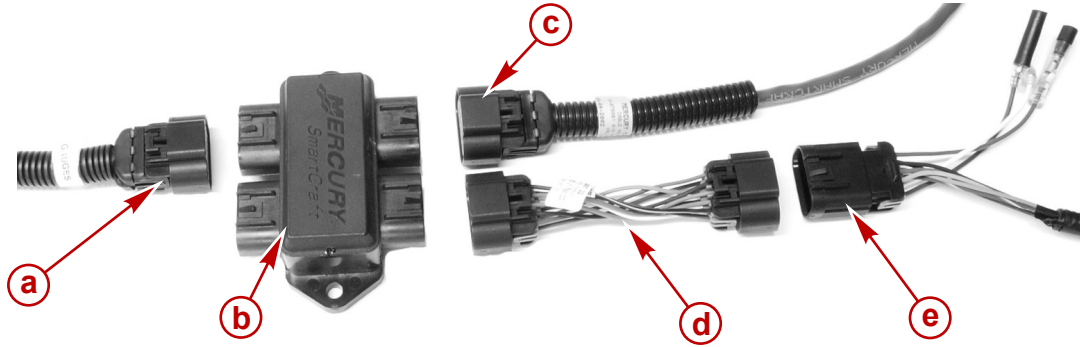
Description	Part Number
Analog Adapter Harness	84-892990T01

**Gauge connection (Analog and SmartCraft):** The 10 pin gauge connection mentioned above can support both SmartCraft and analog gauge operation at the same time. Example: The customer may want analog gauges but also want a SmartCraft system monitor. The gauge connector has CAN 1 wires (blue and white) to operate SmartCraft gauges and can be connected directly to a junction box.

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Connect the gauge connection on the key/choke harness to a junction box. The SmartCraft gauges can then be connected directly to the junction box. To connect the analog gauge adapter harness to the junction box, use an adapter.



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- a** - Gauge connection from the key/choke harness
- b** - Junction box
- c** - Harness to the SmartCraft gauges
- d** - Adapter harness
- e** - Analog adapter harness

Description	Part Number
Analog Adapter Harness	84-892990T01
Adapter Harness	84-892453A01

## Engine Harness (14 Pin)

The 2006 model year SmartCraft compatible engines that use the 14 pin engine harness have some additional changes that may affect rigging.

- On 2005 and prior SmartCraft compatible engines, the SmartCraft boat sensor harness used an intermediate harness that connected to an 8 pin connection on the engine. This intermediate harness had connections for the digital trim and pitot sensors. The other end of the intermediate harness had a 6 pin male connector that connected to the boat sensor harness (tanks and paddle wheel).

On 2006 model year engines equipped with 14 pin engine harnesses, the digital trim and pitot connections are built into the engine harness. The intermediate harness is no longer required. The new boat sensor harness can be connected directly to a 6 pin female connector on the engine.

If the boat is already rigged with the previous style boat sensor harness, which has a 6 pin female connector, and a 2006 model year engine is being installed, you must install an adapter harness. This adapter has 6 pin male connections on both ends and is about 5 feet long.



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**Adapter Harness 84-883459A1**

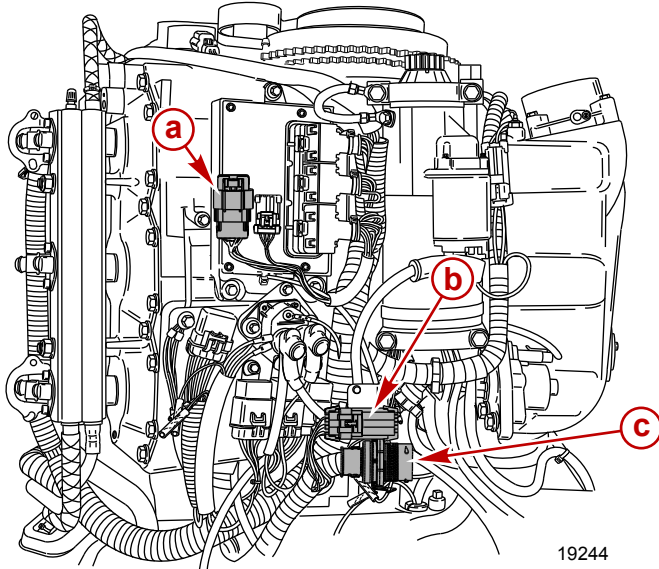
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## New 14 Pin Key/Choke and Engine Harness Features (non-DTS)

Description	Part Number
New Boat Sensor Harness	84-859743T03
Adapter Harness	84-883459A1

- The SmartCraft compatible engines with 14 pin harnesses have a 10 pin connection for SmartCraft (if required). The connection comes from the factory with a CAN 1 (yellow) terminator resistor installed. If a 2006 model year engine is matched up with the new 14 pin key/choke harness, this resistor stays in place because the CAN 1 (blue and white) wires are built into the new key/choke harness, and a blue SmartCraft harness is not required.



- a** - 10 pin CAN 1 connection with yellow terminator resistor. Remove and connect the blue CAN harness if required.
- b** - 6 pin SmartCraft boat sensor harness connection
- c** - 14 pin engine harness connection

If installing a 2006 model year engine on a boat with the previous style, 8 pin key/choke harness, remove the resistor from on the engine and install a blue SmartCraft harness with a terminator resistor at the engine end of the harness.

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