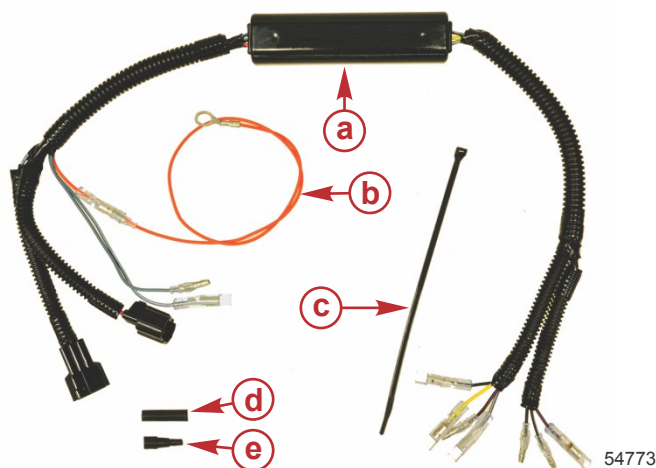# POWER TRIM SENSOR CONVERTER/TILT LIMIT MODULE KIT
75/80/90/100/115 EFI FOURSTROKE

IMPORTANT: This document guides our dealers, boatbuilders, and company service personnel in the proper installation or service of our products. If you have not been trained in the recommended servicing or installation procedures for these or similar Mercury Marine products, have the work performed by an authorized Mercury Marine dealer technician. Improper installation or servicing of the Mercury product could result in damage to the product or personal injury to those installing or operating the product.

NOTE: After completing installation, place these instructions with the product for the owner's future use.

Components Contained in Kit

54773

Ref.	Qty.	Description	Part Number
a	1	Power trim sensor converter/tilt limit module	NSS
b	1	Orange calibration wire (included with the module)	NSS
c	4	Cable tie	816311T
d	1	Cap	13540
e	1	Plug	13541

Power Trim Sensor Converter/Tilt Limit Module

The module provides two functions:
- Converts the analog signal from the trim position sensor to a digital signal required for the SmartCraft digital trim/tilt gauge.
- Provides a variable, user-defined tilt limit for the up/out travel of the outboard to minimize the potential interference with the motor well or other obstructions.

Power Trim Sensor Converter/Tilt Limit Module Installation

1. Remove the battery cables from the battery.

2. Remove the covers.

a - Front cover
b - Side cover

54774

3. Disconnect the trim position sensor's brown/white, black, and purple wire bullet connectors.
4. Remove the cap from the engine harness yellow wire bullet connector.
5. Disconnect the blue/white wire bullet connectors.
6. Disconnect the cowl-mounted trim switch 3-pin connectors.
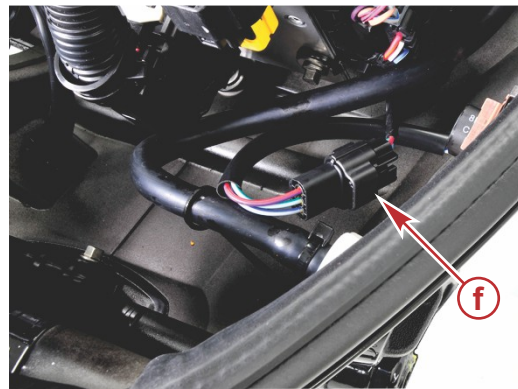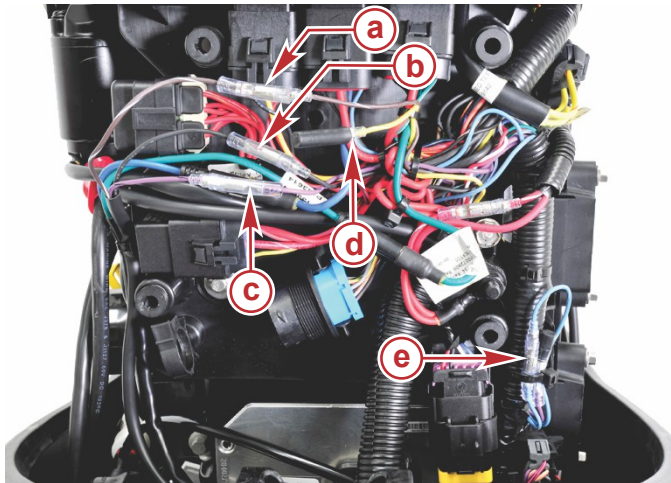
54775

a - Brown/white wire bullet connector
b - Black wire bullet connector
c - Purple wire bullet connector
d - Yellow engine harness wire bullet connector cap
e - Blue/white wire bullet connectors
**f -** Cowl-mounted trim switch 3-pin connectors

7. Connect the tilt limit module brown/white, black, and purple bullet connectors in line with the engine harness and the trim position sensor.
8. Connect the tilt limit module yellow wire bullet connector to the engine harness yellow wire.
9. Connect the tilt limit module blue and blue/white bullet connector in line with the engine harness blue/white bullet connectors.

10. Connect the tilt limit module trim switch connectors in line with the cowl-mounted tilt switch connectors.
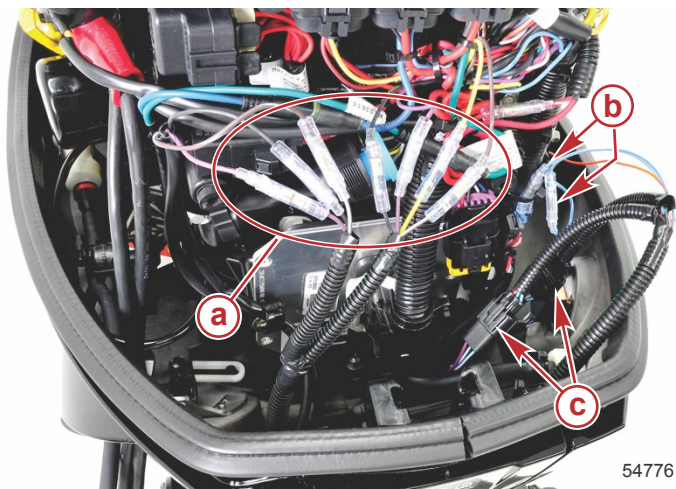
a - Brown/white, black, purple, and yellow wire bullet connectors
b - Blue and blue/white wire bullet connectors
c - 3-pin tilt switch connectors

54776

11. Connect the orange calibration wire ring terminal to the engine ground. Tighten the ground screw to the specified torque.
12. Disconnect the orange wire bullet connectors.
13. Apply Liquid Neoprene to the ring terminal and ground screw.
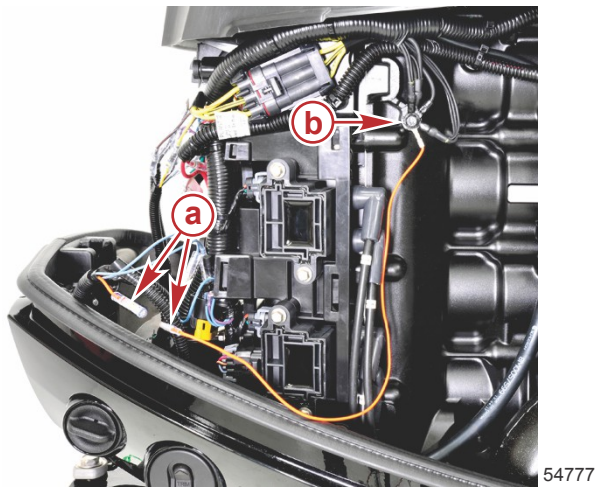
a - Orange wire bullet connectors
b - Orange calibration wire ring terminal and engine ground

54777

Description	Nm	lb-in.	lb-ft
Ground screw	6	53	–

Tube Ref No.	Description	Where Used	Part No.
25	Liquid Neoprene	Ring terminal and ground screw	92- 25711 3

14. Bundle the bullet connectors and tilt limit module harness to the start solenoid cable with two cable ties.

15. Bundle the tilt limit module and blue/white wire to the engine harness with two cable ties.

54790
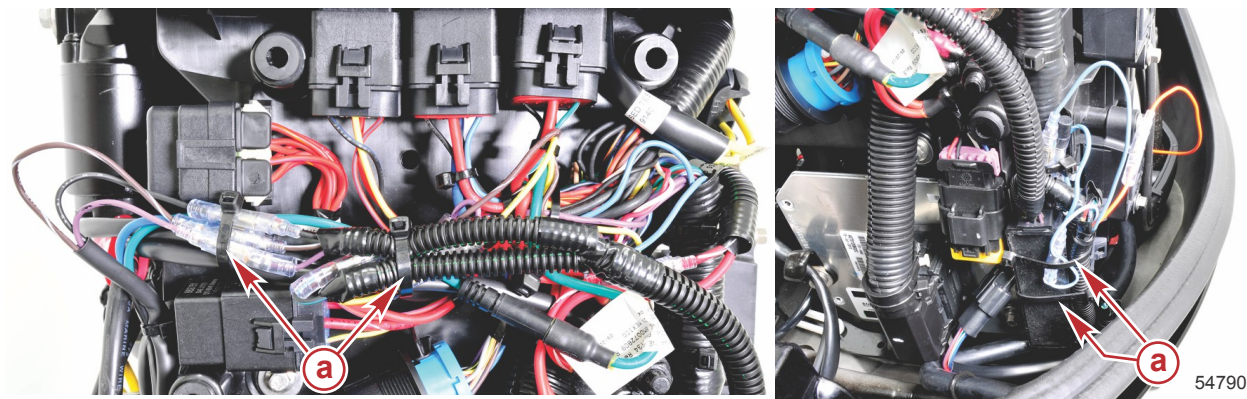
a - Cable tie

# Calibration Instructions for the Tilt Limit Module

IMPORTANT: The calibration instructions must be followed exactly for the tilt limit module interface to function correctly and accurately.

IMPORTANT: There should be several inches between the engine cowl and the motor well (or other obstructions) in the full tilt position. The tilt limit module tolerance is ± 5° from the calibrated set point.

1. Ensure that the orange calibration wire is not connected to the tilt limit module orange wire.
2. Turn the ignition key switch to the "ON" position.
3. Tilt the engine to the full tucked-in position.
4. Connect the orange calibration wire bullet connector to the tilt limit module orange wire.
5. Tilt the engine up to the desired tilt limit position.

   NOTE: If the tilt limit feature is not required, calibrate the module so that the upper tilt limit is at the full up tilt position.

6. Disconnect the orange calibration wire bullet connector.
7. The tilt limit is now a memorized set point.
8. Tilt the engine below the memorized set point.
9. Tilt the engine up to confirm the tilt limit set point is memorized.
10. Cap and plug the orange wire bullet connectors with the components in the kit.
11. Turn the ignition key switch to the "OFF" position.
12. Install the covers. Ensure that the tilt limit module does not interfere with the front cover.

a - Front cover
b - Side cover

54774
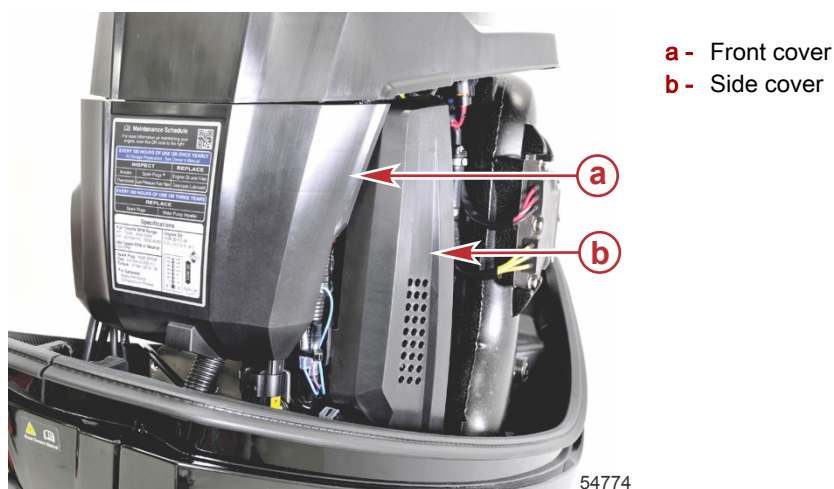
NOTE: After calibrating the tilt limit module, the SmartCraft gauges displaying trim/tilt position must be recalibrated.

Products of Mercury Marine
W6250 Pioneer Road
Fond du Lac, WI 54936-1939