

Description

In this session you will:

- Access, via hands-on disassembly, key components of the Ultterra Motor.
- Learn the names and terminology associated with key components
- Learn the function of main board components
 - Position Sensors
 - Network Port
 - Steering Assembly Connections
 - Steering Motor
 - Trim Module Power
 - Position sensor input
 - Motor Output
- Learn Aspects Of Wireless communication with the Trim Module
- Learn basic interactions with i-Pilot Link and i-Pilot and use of i-Pilot Link and i-Pilot as a diagnostic tool.



Notes: (Tasks and Concepts on back of page)

Hands-on Tasks:

- Do and reverse an “Emergency Stow”
- Remove and reinstall the main control board
 - Test the amp draw of the steering housing
 - Learn the trim module to the Main Board
 - Examine the interactions with the Plunger Sensor, Cam/Pin Sensor, and Tilt Bracket Sensor.
 - Perform a trim count reset
- Remove and reinstall the lift belt (includes all steps necessary to replace a trim housing)
 - Remove the trim housing from the motor
 - Remove the belt from the trim housing
 - Remove the cover, Remove the trim belt, and turn the worm gear until the belt is free.
 - Re-install the belt.
 - Trim Count Reset.
- Take note of the remaining steps to access:
 - Steering Housing
 - i-Pilot/i-Pilot Link Controller
 - Motor/Shaft
 - Various Mount Components

Key Concepts:

- Independently testing steering functions via i-Pilot/i-Pilot Link and/or via known good foot pedal quickly identifies whether a lack of steering is the main Control Board issue or Input issue.
- i-Pilot/i-Pilot Link operations (i.e. Spotlock) are overridden by any foot pedal command, even unintentional foot pedal commands.
- Steering Amp Draw, when direct tested at 12 volts, should be less than 1 at all times and be a very consistent number. High amp draw from a steering housing will damage the main control board.
- All functions are input voltage-dependent, the value of load testing batteries and verifying good connections all the way to the motor are critical.
- External Sensors (Tilt Bracket, Plunger, Cam/Pin) are prone to sticking, damage during installation, and corrosion. Less common at this point is magnets falling out. Be aware of the different generations of actuators and know the function of each sensor to narrow down malfunctions.
- Be aware of different generations of trim module design.
- 2024 the brushed lower unit motor version of Ulterra will only be available for freshwater with the longest shaft length being 60”.