

## Description

In this session you will:

- Access, remove, and reinstall the Motor Inverter Board
- Access, remove and reinstall the Sonar End (both DSC and MSI should be viewed)
- Properly Install and remove a Shaft Assembly.



## Hands-on Tasks:

- Remove the 4 bolts retaining the Sonar/Plain End of the motor assembly to access the Transducer and Inverter Board.
- Remove and reinstall the inverter board, note that this is possible to service without removing the motor shaft.
- Note that Transducer Replacement does require shaft removal.
- Install the Shaft on the Motor, then remove the shaft from the motor.
  - Apply Proper Torque to the bolts using a torque Wrench
  - Simulate Loctite use.

## Key Concepts:

- Access to the inverter is relatively easy
- Direct testing of the Lower Unit is not possible, it must be connected to a functioning control board supplying power to the inverter and an inverter com signal.
  - Inverter replacement based on error code
- Transducer replacement does require removing the shaft to unroute the wire
- Even torque on the screws securing the locking collar is critical to maintaining a seal.
- Ulterra/Instinct gets a different locking collar than Terrova and Ultrex.
- Shaft can be shipped separate of the lower unit.

