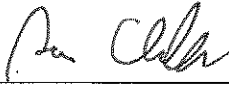

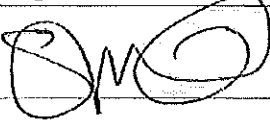


**Field Service Spares Replacement Procedure – Pol Aux Relay Kit,
XX97, XX97A, XX97B, XX00, XX00B**

Approval:

Approving Authority	Signature	Date
Doc Control:	Ron Chaffee / Signature on file. 	11-1-11
Assistant Service Manager, Global	John Vanderjagt / Signature on file. 	11-7
Author:	Stuart Broadfield / Signature on file. 	11-01-11

Revision History

Rev.	ECO	Description of Change	Date
X1	8870	Initial release	08-18-2011
A	9059	Clerical revisions	10-30-2011

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Field Service Procedure - Pol Aux Relay Kit, XX97, XX97A, XX97B, XX00, XX00B

1. Brief Summary:

Troubleshooting document for diagnosing a fault with and replacing the pol aux relay on the XX97, XX97A, XX97B, XX00 and XX00B series antennas.

2. Checklist:

- Test Motor Drive
- Verify Harness

3. Theory of Operation:

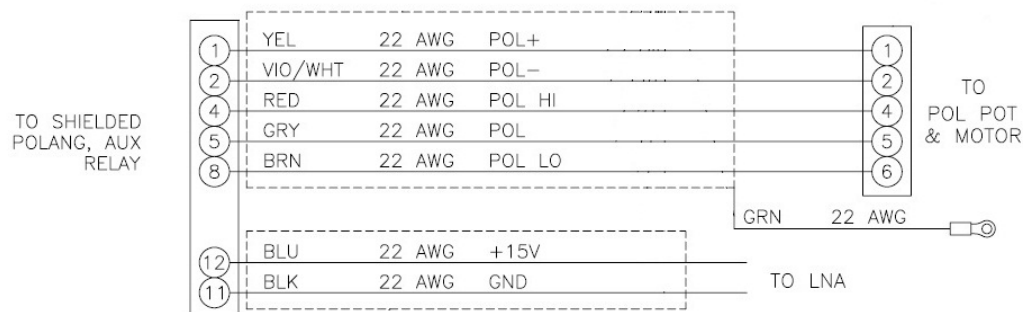
The pol aux relay sets the pol scale of the feed assembly and acts as a driver for the pol motor. The DAC calculates the pol position based on the vessels GPS location for targeting commands, changes in GPS position and operator inputs. The DAC then sends the command to the PCU, which in turn sends the command to the pol aux relay which outputs 24VDC to drive the pol motor. The motor then drives the feed assembly which turns the pol pot, once the DAC receives the desired feedback from the pot the feed will be in the correct reception position (provided it's calibrated and functioning correctly) and the pol motor drive will stop.

4. Troubleshooting:

If pol drive is being issued on the DAC but the motor isn't moving measure the voltage on the Motors IDC connector. If no voltage is issued whilst drive is being applied the 24VDC isn't being issued from the POL Aux relay. (If the voltage is present but the motor isn't driving the motor is defective).

5. Verify the Harness:

Next check continuity on the harness pins to verify it's not damaged. If the harness is good then the pol aux relay isn't outputting the voltage to drive the motor and needs replacing.



As long as the pol range is within the pot limits the DAC will issue the pol drive command to the PCU motherboard, based on the antenna targeting, a change in the vessels GPS position or operator inputs. The PCU motherboard will then issue the command to switch the pol aux relay to drive the pol motor. The motor will then drive the feed until the correct output from the pot has been received, at which point the feed will be in the correct reception position (providing the system is functioning and calibrated correctly). Therefore there is also the possibility for a pol drive fault to be caused by the PCU motherboard.

Field Service Procedure - Pol Aux Relay Kit, XX97, XX97A, XX97B, XX00, XX00B

6. Replacing the Pol Aux Relay Assembly:

6.1. Tools.

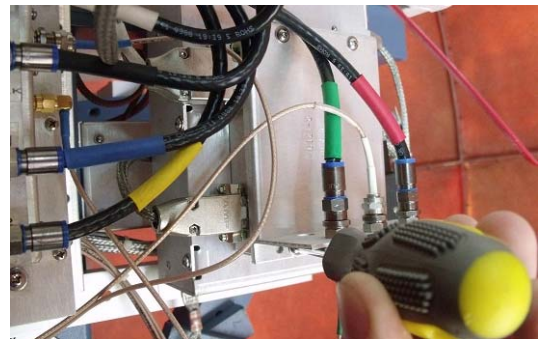
- #1 Phillips Screwdriver
- 2mm Flat Blade Screwdriver
- Loctite 242

6.2. Procedure.

Procedure for replacing the pol aux relay on the XX97, XX97A, XX97B, XX00 and XX00B, Sea Tel kit part number: 135387 (pol aux relay assembly part number: 116024-3).

***CAUTION:** Power down the pedestal before following this procedure.

1. Using a #1 Phillips screwdriver remove the two screws securing the coax bracket to the pol aux relay (if applicable), or remove the two lower screws securing the pol relay to the power supply.

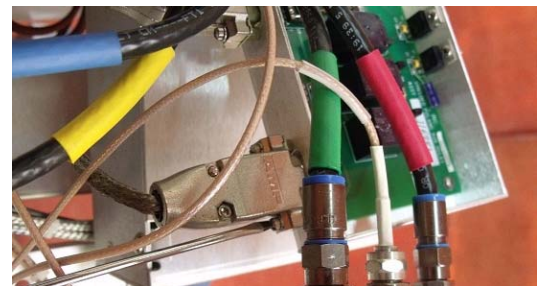


2. Remove the two upper screws securing the pol aux relay to the power supply.

***Note:** At this point the pol aux relay and pol aux relay cover will fall off.

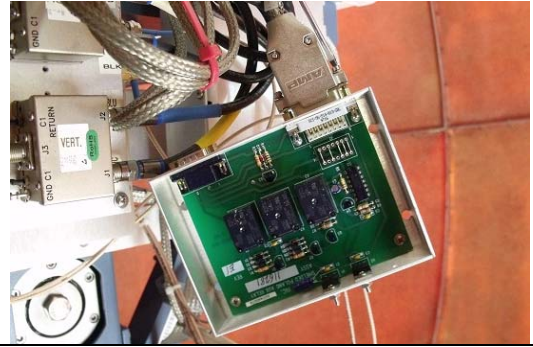


3. Now that clearance is available remove the D-sub connectors from the servo amplifier using a 2mm flat blade screwdriver.



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4. Install the D-sub connectors to the replacement servo amplifier.



5. Reinstall the four screws securing the pol aux relay and coax bracket (if applicable) to the power supply, apply Loctite 242 to the threads.

