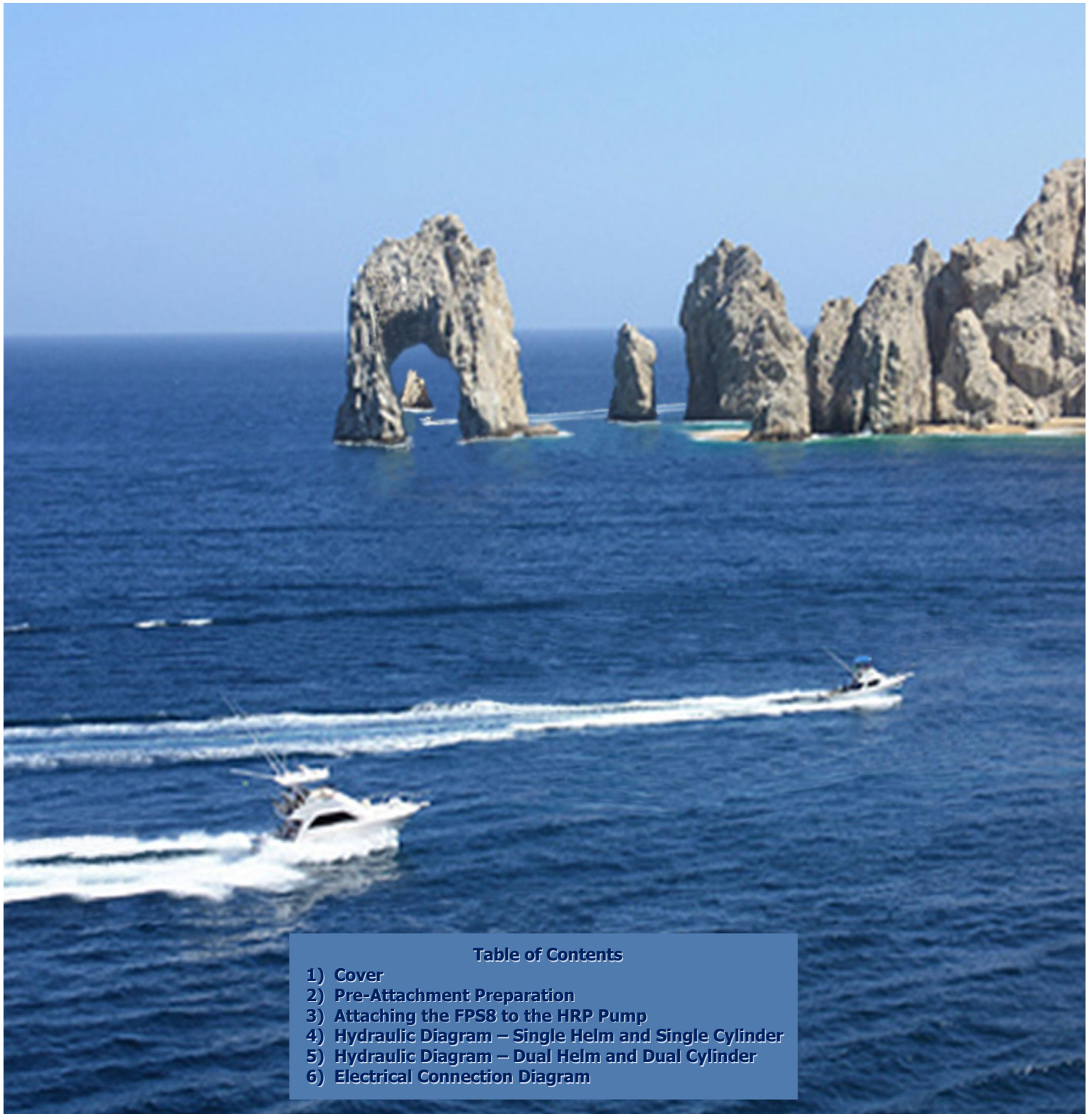**FURUNO**

FPS8 Power Steering Module for the NavPilot 700 711 720 Autopilot Installation Information

Compatible with the following pump models: PUMPHRP05-12, PUMPHRP05-24, PUMPHRP11-12, PUMPHRP11-24, PUMPHRP17-12, PUMPHRP17-24

Pre-Attachment Preparation

WARNING!!!
It is critical that this conversion only be performed on a **VERY CLEAN** work surface!
DIRT, DUST AND/OR OTHER CONTAMINANTS WILL DAMAGE THE PUMP AND
CAUSE IT TO FAIL!!!

STEP 1

Use either a 19mm or 3/4" wrench to remove the 3 hydraulic fittings from the top of the HRP Pump and discard. Five new fittings are provided with the hardware kit.

See compatible pump models listed above
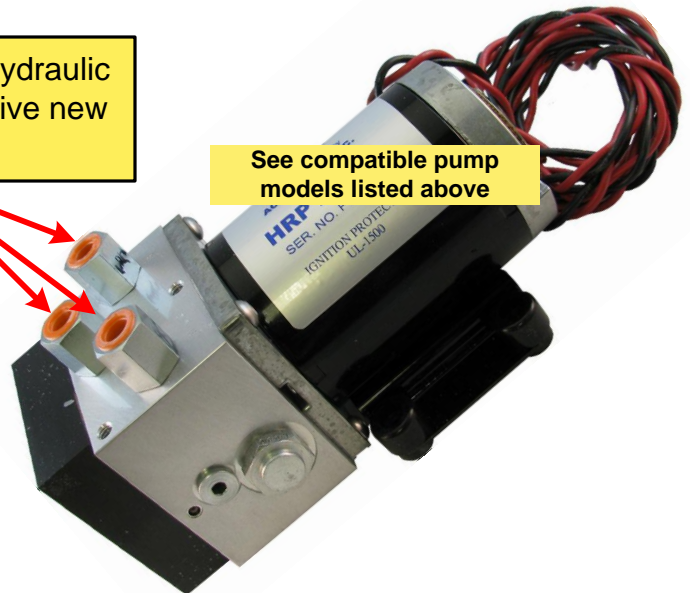
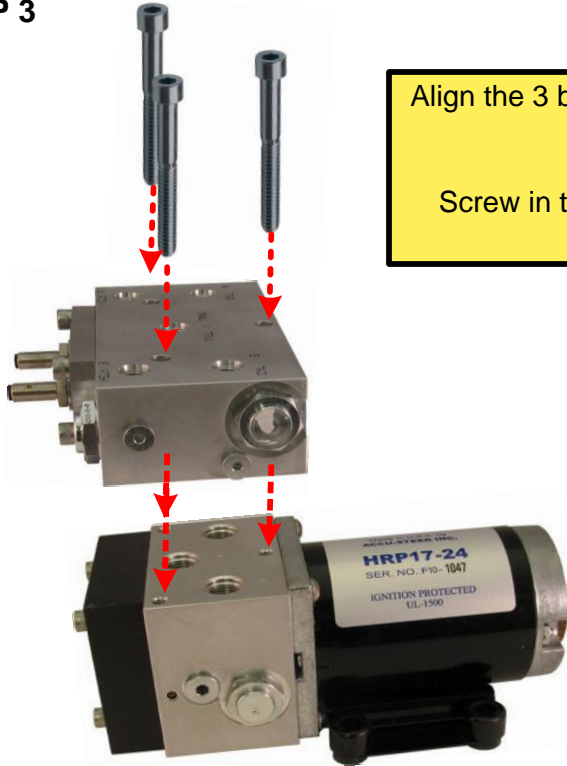## STEP 2

Insert the 3 "O" rings from the hardware kit into the round recesses in the bottom of the FPS-8 Power Steering Module. Apply a small amount of hydraulic fluid to the "O" rings to hold them in place. Carefully assemble and tighten allen screws evenly, ensuring that the o-rings are not pinched!!

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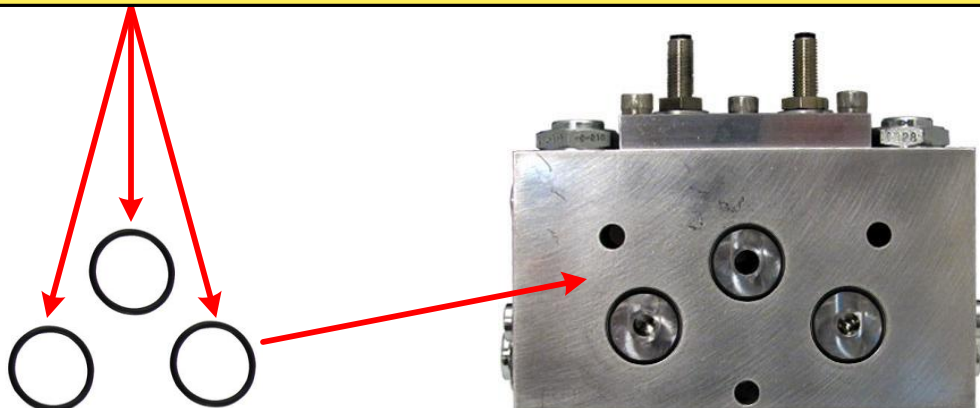
Attaching the FPS8 to the HRP Pump

STEP 3

Align the 3 bolt holes in FPS-8 Power Steering Module with the 3 threaded holes in the HRP Pump housing.
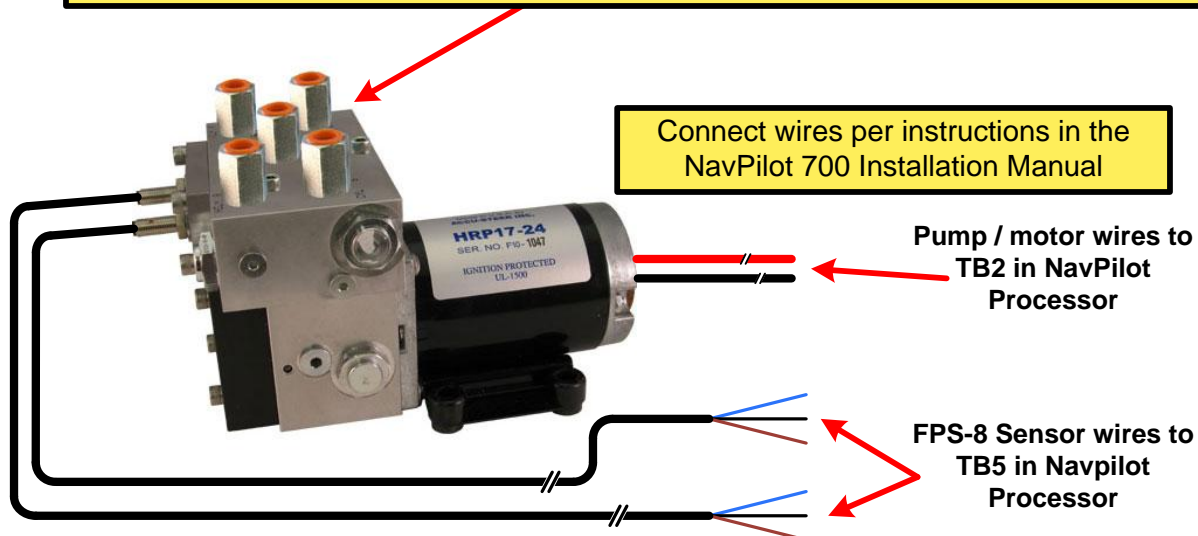
Screw in the 3 Allen-head bolts from the hardware pack. Tighten them evenly with a 3/16" Allen wrench.

Make sure the "O" rings remain in place and do not fall out or get pinched during assembly.

STEP 4
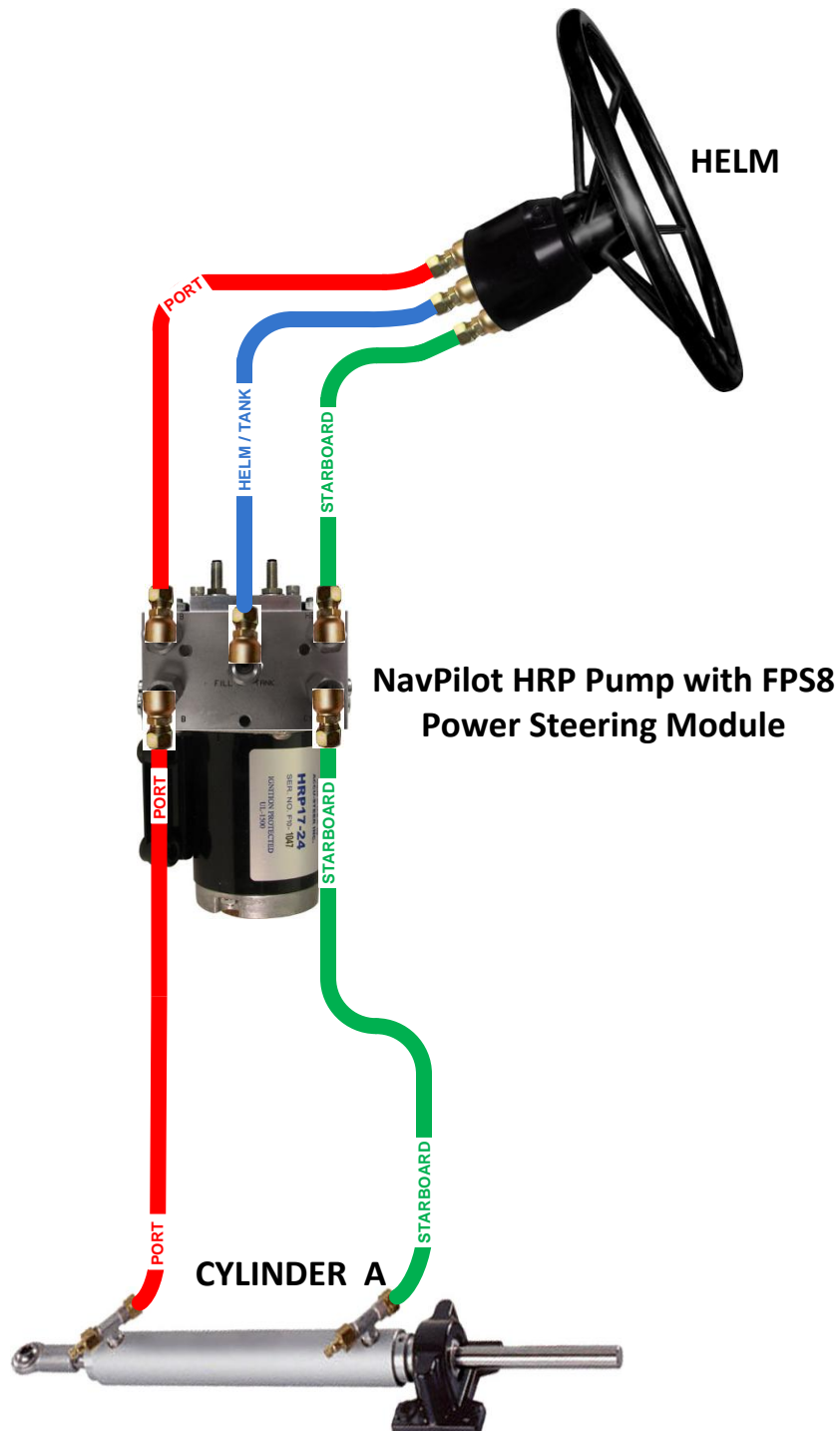
Insert the 5 hydraulic fittings from the hardware pack into the 5 threaded holes in the FPS-8 Power Steering Module.

Please see the FPS-8 Installation Manual for more information regarding the hydraulic connections.

Connect wires per instructions in the NavPilot 700 Installation Manual

Pump / motor wires to TB2 in NavPilot Processor

FPS-8 Sensor wires to TB5 in Navpilot Processor

Hydraulic Diagram - Single Helm & Single Ram

HELM

PORT

HELM / TANK

STARBOARD

**NavPilot HRP Pump with FPS8
Power Steering Module**

PORT

STARBOARD

HRP17-24

PORT

STARBOARD

CYLINDER A

Hydraulic Diagram - Dual Helm & Dual Cylinder

**HELM B
UPPER**

Upper Helm Station must have a vented fill plug.

Lower Helm Station must have a non-vented fill plug.

**HELM A
LOWER**

PORT

HELM / TANK

STARBOARD

PORT

HELM / TANK

STARBOARD

PORT

STARBOARD

HELM / TANK

PORT

STARBOARD

**NavPilot HRP Pump with FPS8
Power Steering Module**

PORT

STARBOARD

HRP17-24

PORT

STARBOARD

PORT

STARBOARD

CYLINDER B

PORT

STARBOARD

CYLINDER A

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Electrical Connection Diagram

NavPilot 700 / 711 / 720
Processor (FAP-7002)

12 / 24 VDC INPUT
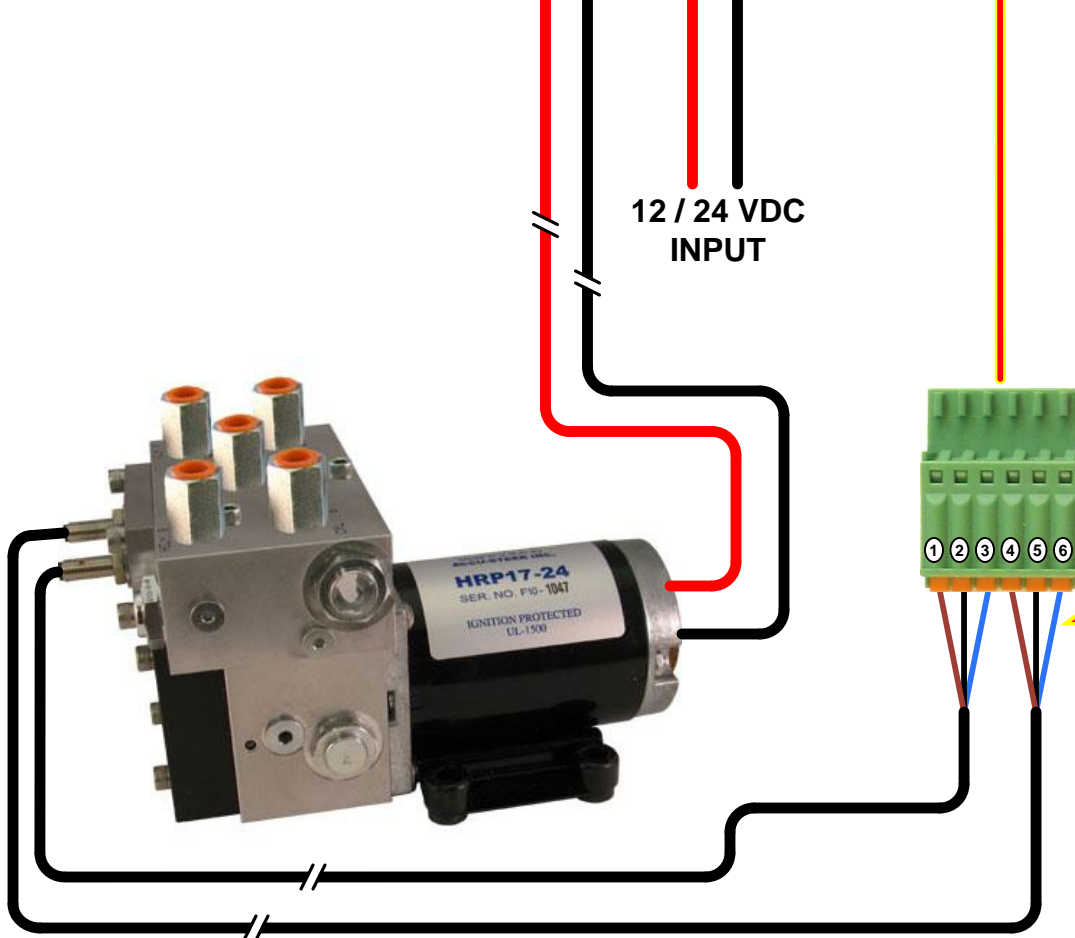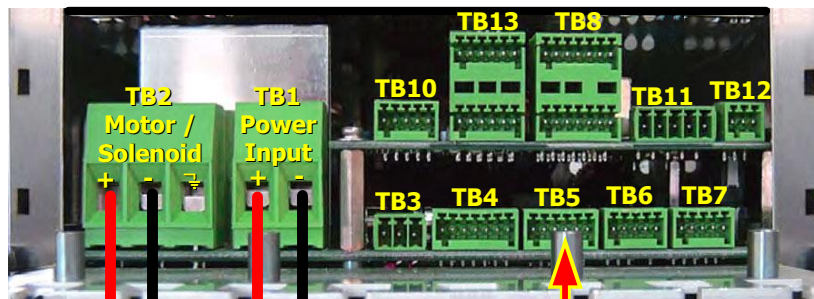
Each of the sensor cables has the same 3 wires. It does not matter which set of 3 go to pins 1, 2 & 3 or 4, 5 & 6. It only matters that the order of the wires are as follows:

To TB5

Pin 1 = SW1 Brown
Pin 2 = SW1 Black
Pin 3 = SW1 Blue
Pin 4 = SW2 Brown
Pin 5 = SW2 Black
Pin 6 = SW2 Blue