

iFLEX2 + iSCOUT expert compact

LMI system for
Grove RT / TM



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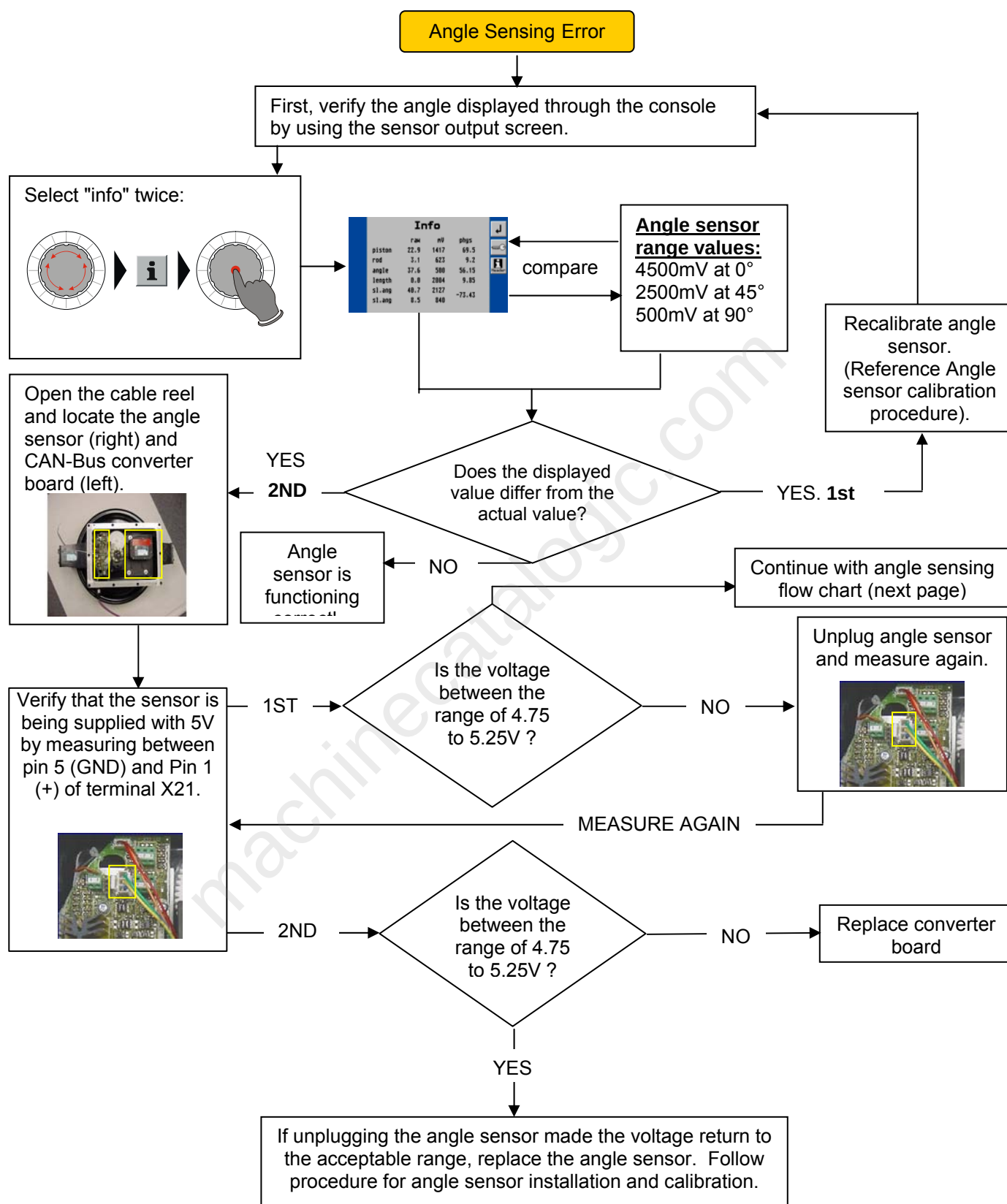
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Service Manual

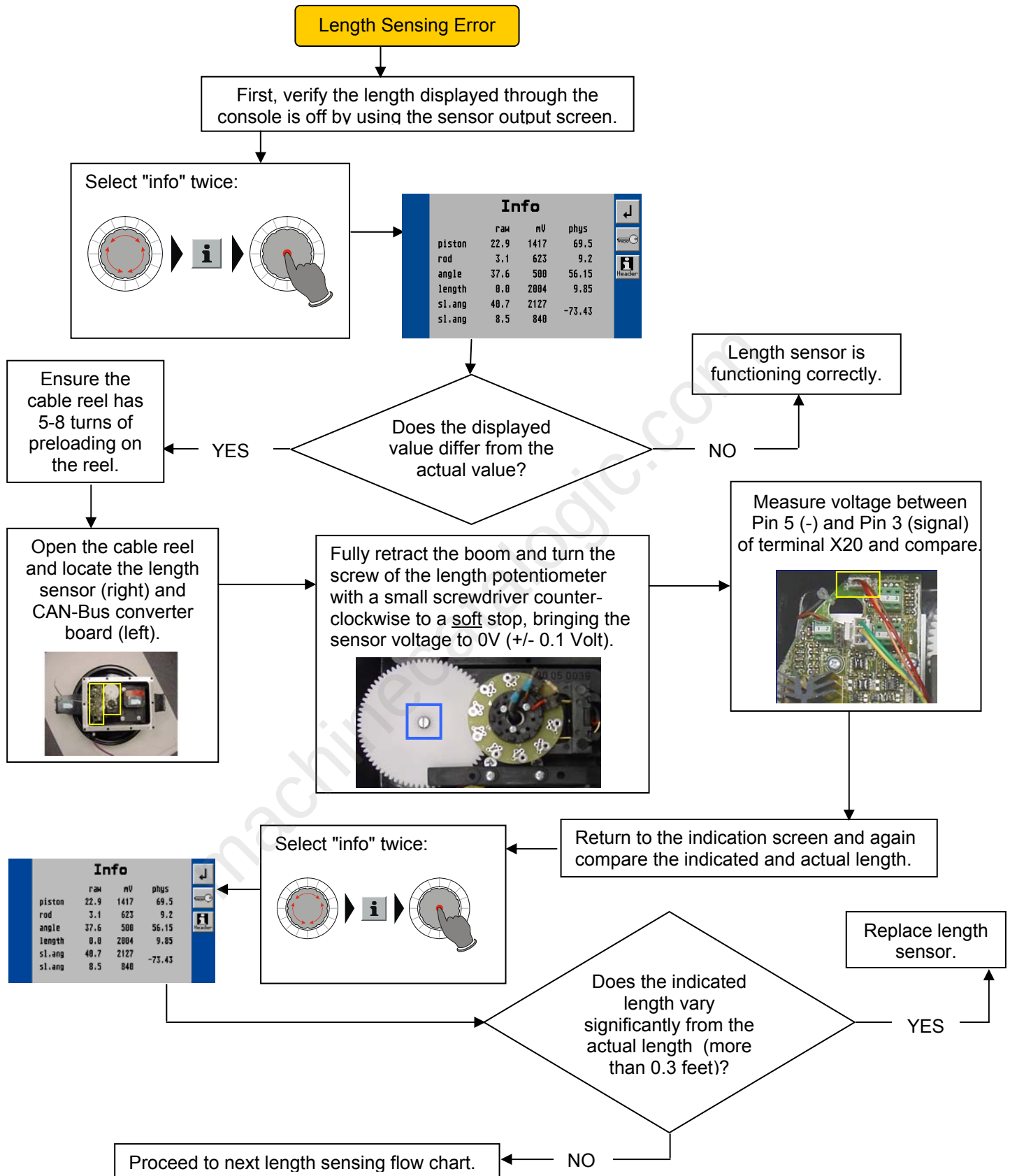
Issue 2/2008 Rev. C

This document is listed under Order No.
50 650 69 0101e (Grove RT-TM)

5.1 ANGLE SENSING ERROR - FLOW CHART

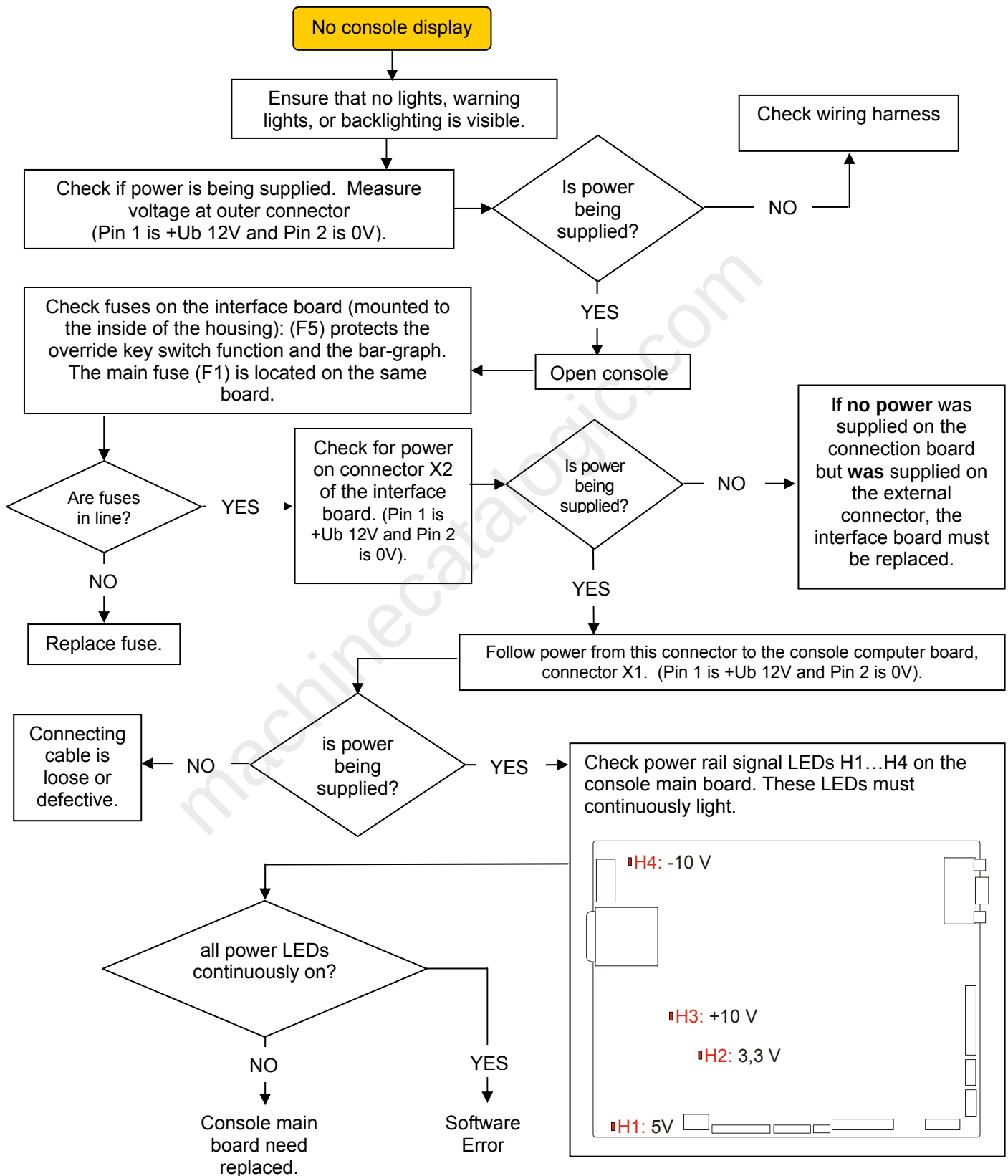


6.1 LENGTH SENSING ERROR - FLOW CHART

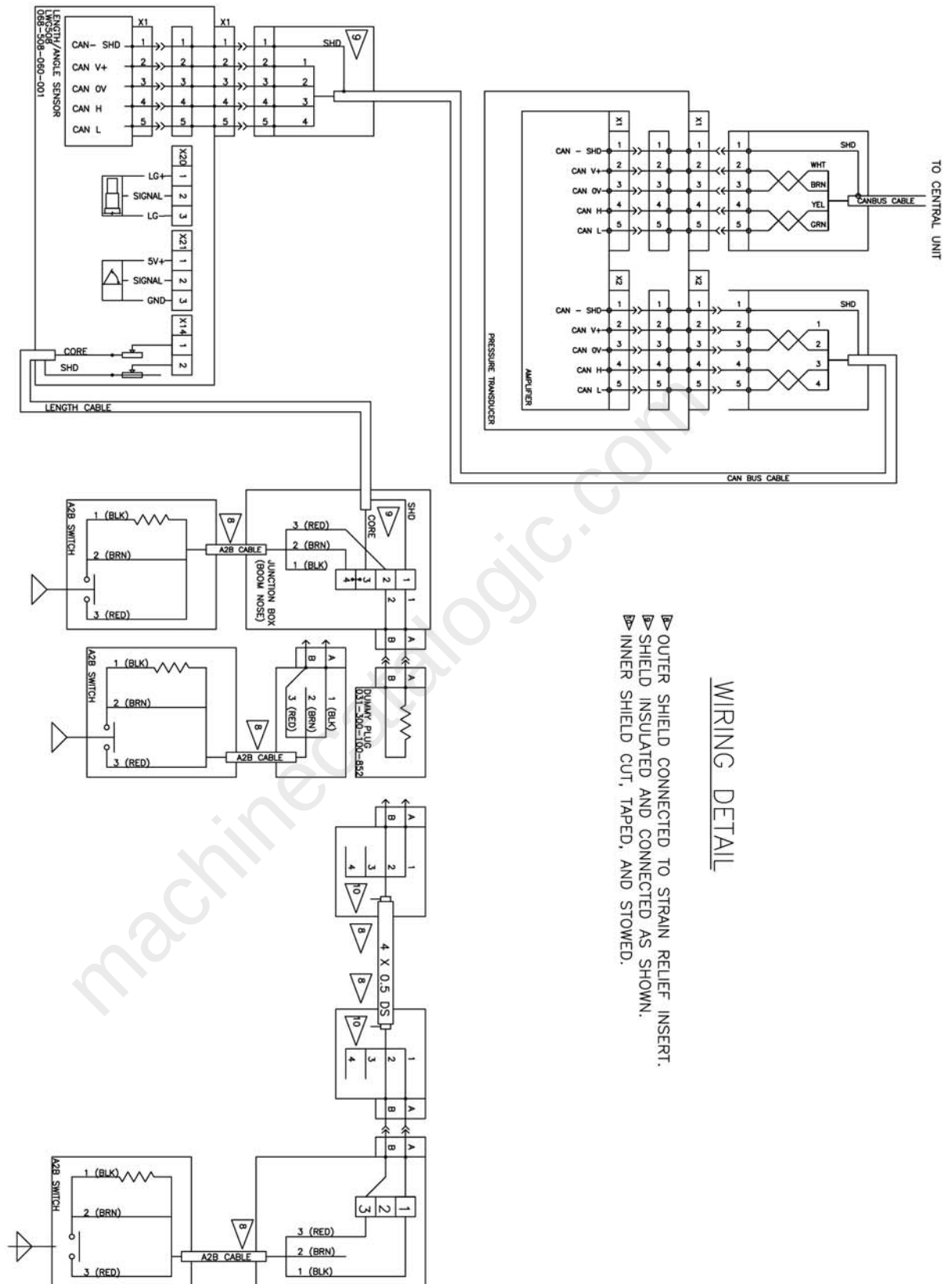


10 NO CONSOLE DISPLAY

If the console is not showing any lights, such as warning lights, backlighting, etc. it is most likely missing power. Start with the following:

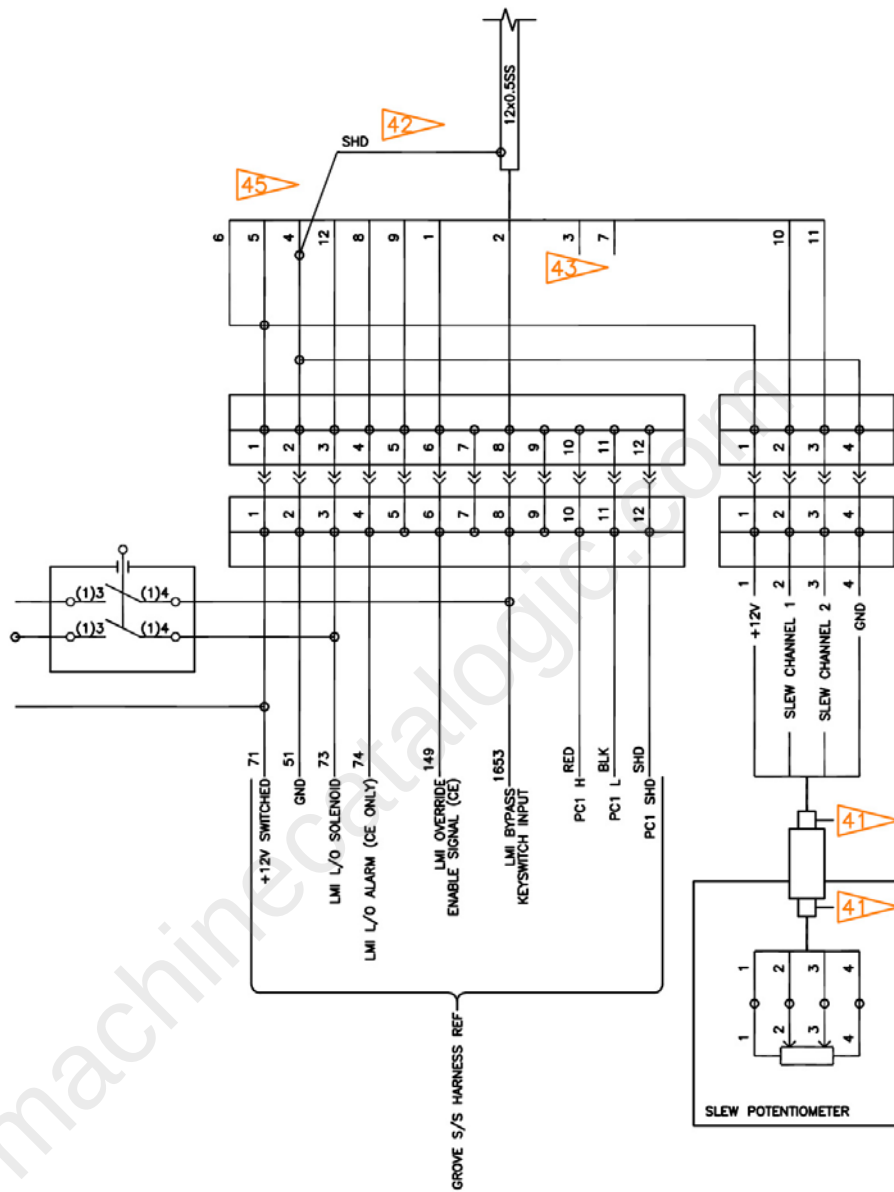


14.3.4 Sensors Wiring (page 2)



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14.3.8 Crane Interface TM500E-2 (page 4)



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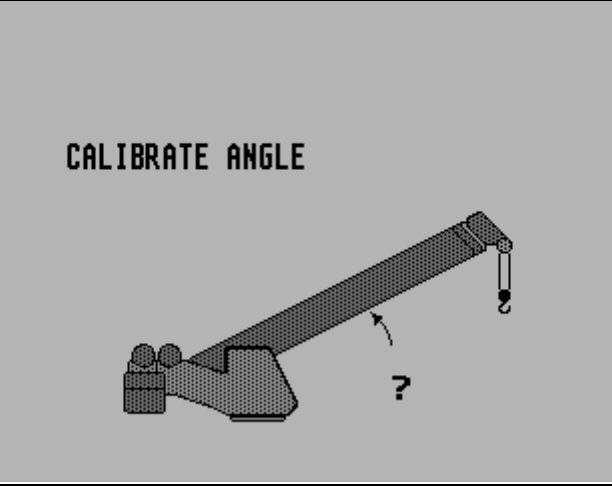
15.5 ANGLE SENSOR CALIBRATION PROCEDURE

The angle sensor can be calibrated for its zero point and with steep boom

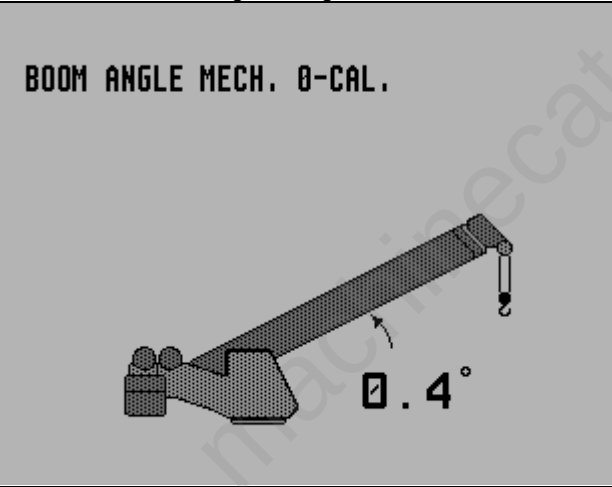
Material required: calibrated inclinometer

- Select Angle sensor calibration menu and start procedure by pressing "OK"

▼ Calibration screen (boom angle)

		skip calibration step
		start angle calibration procedure
		cancel and return to LMI screen

▼ Start calibration for "zero degree" angle

		skip calibration step
		calibrate next angle
		cancel and return to LMI screen

17 TROUBLESHOOTING MOISTURE

The PAT iFLEX LMI contains electronic components in various locations, such as central unit, sensors, junction boxes etc. These internal components cannot be designed to withstand exposure to moisture over a longer period of time. For this reason, the housings of the components are water protected according to IP 65. If you find water or moisture inside any of the housings, the source for the water ingress has to be detected and corrected to ensure proper operation.

There are two major possibilities for the occurrence of excessive moisture inside an enclosure:

- Water ingress
- Condensation

This outline gives instructions for detecting the cause for excessive moisture by using simple troubleshooting methods and how to prevent the moisture ingress from happening again.

17.1 WATER INGRESS

There are different possibilities for water ingress. It is possible to find out the source of water ingress by going through the following steps and ruling out one possibility after the other until the cause is identified:

1) Spray Cleaning

The enclosures used for the PAT LMI system are water protected to IP 65. This means protection against the environment, such as rain. However, through the use of spray cleaner at short distances, it is possible to force water through the gasket or strain relieves. For this reason, avoid spraying any components from short distances with spray cleaners. Convey this fact to any member of a maintenance crew.

2) Missing / Loose Screws

All screws have to be present and to be equally tight to ensure water protection of the enclosure. If there are screws missing, replace them. If no screw is missing, check the tightness. If any were loose, then open all screws and then re-tighten them equally.

3) Bent Lid

An enclosure will only seal correctly if the lid is not bent. To check this, loosen all screws of the lid, take the lid off the box and visually inspect it for deflection. If the lid is bent or damaged, it needs to be replaced. Try to determine what has caused the lid to be bent and eliminate the reason for that. Order a new lid through your PAT representative.

4) Defective Gasket

The gasket underneath the lid seals the unit. The gasket needs to be in good condition in order to seal correctly. If the gasket is torn, brittle or severely bent, it needs to be replaced. Order a new gasket through your PAT representative.

5) Loose Strain Relieves

The strain relieves allow cabling to enter the box without allowing water to enter it. The strain relieves have to be correctly tightened in order to do this. Check the tightness by taking the external cable into one hand and carefully trying to turn it. If the internal wires turn with the outer cable, the strain relief is loose. Get a new grommet (insert) through your PAT representative and replace the existing one with the new one. Tighten the strain relief correctly. Note: Whenever a strain relief is opened, i.e. to replace a cable, a new grommet needs to be used. Never re-use any grommet or the strain relief will not seal properly!

6) Water Entry Through External Cabling

Even with a tight strain relief, water may still enter the box through the inside of the cable. In this case, you have to find out why and where water enters the cable. Look for damages to the cable itself and inspect the opposite side of the cable. In example, if the cable comes from a connector that is full of water, the water will run through the inside of the cable and fill up the central unit, too.

Full Version Available

PAT iFLEX2 Load Moment Indicator Service Manual

PAT iFLEX2 load moment indicator service manual with troubleshooting, sensor calibration and error codes for Grove RT/TM cranes. Instant PDF download.

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