



LOAD MOMENT INDICATOR

DS 160



3 SYSTEM DESCRIPTION

The PAT Load Moment Indicator DS 160 consists of a central microprocessor unit, operating console, length/angle sensor, pressure transducers, and anti-two block switches.

The system operates on the principle of reference/real comparison. The real value, resulting from the load measurement is compared with the reference data, stored in the central processor memory and evaluated in the microprocessor. When limits are reached, an overload warning signal is generated at the operator's console. At the same time, the crane functions, such as hoist up and boom down, will be stopped.

The fixed data regarding the crane, such as capacity charts, boom weights, centers of gravity and dimensions are stored in memory chips in the central processor unit. This data is the reference information used to calculate the operating conditions.

The length/angle sensors inside the cable reel, which is mounted on the boom, measure the boom length and angle. The boom length is measured by the cable reel cable that also serves as an electrical conductor for the anti two-block switches.

The crane load is measured by pressure transducers attached to the piston and rod sides of the hoist cylinders.

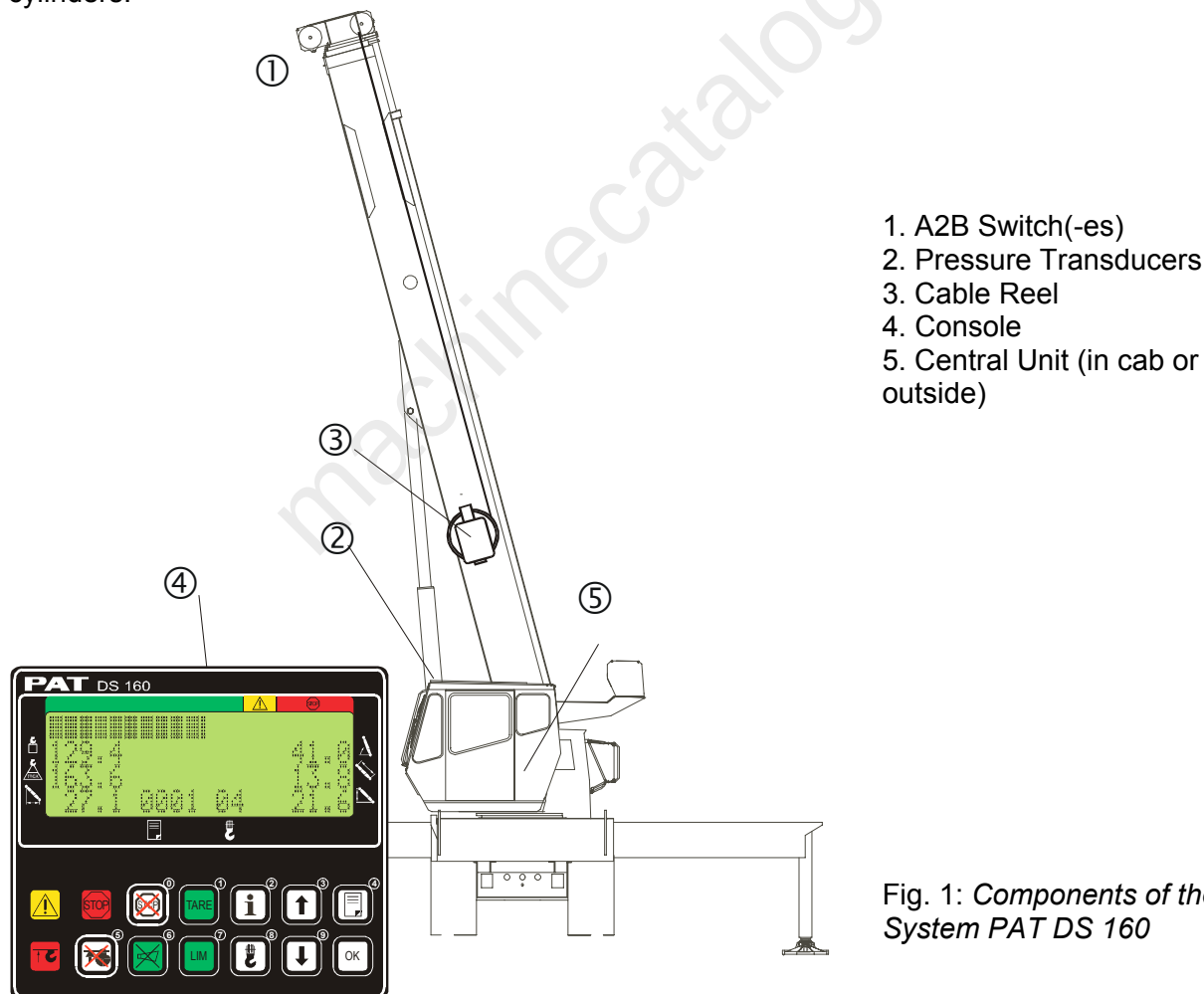
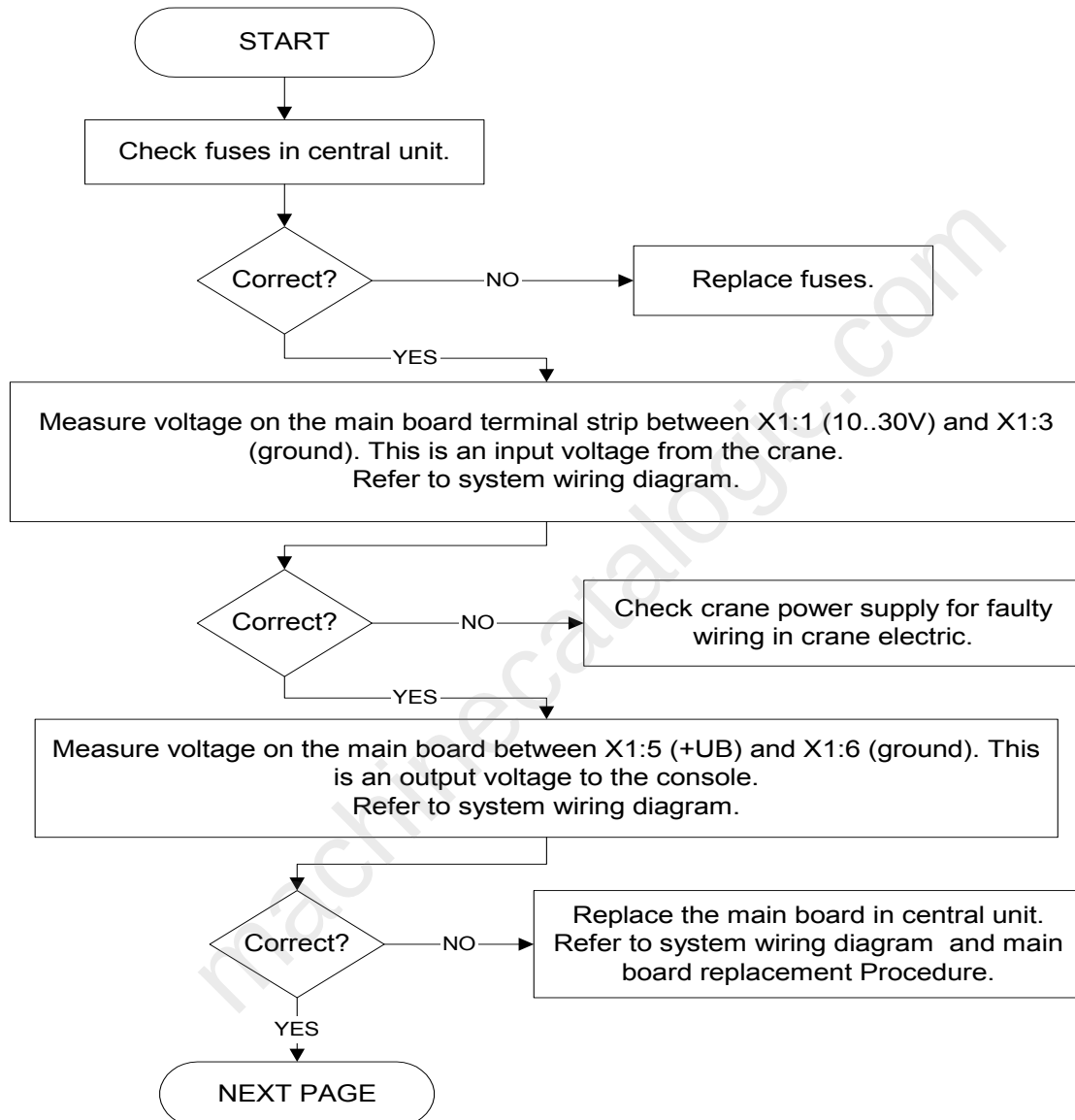


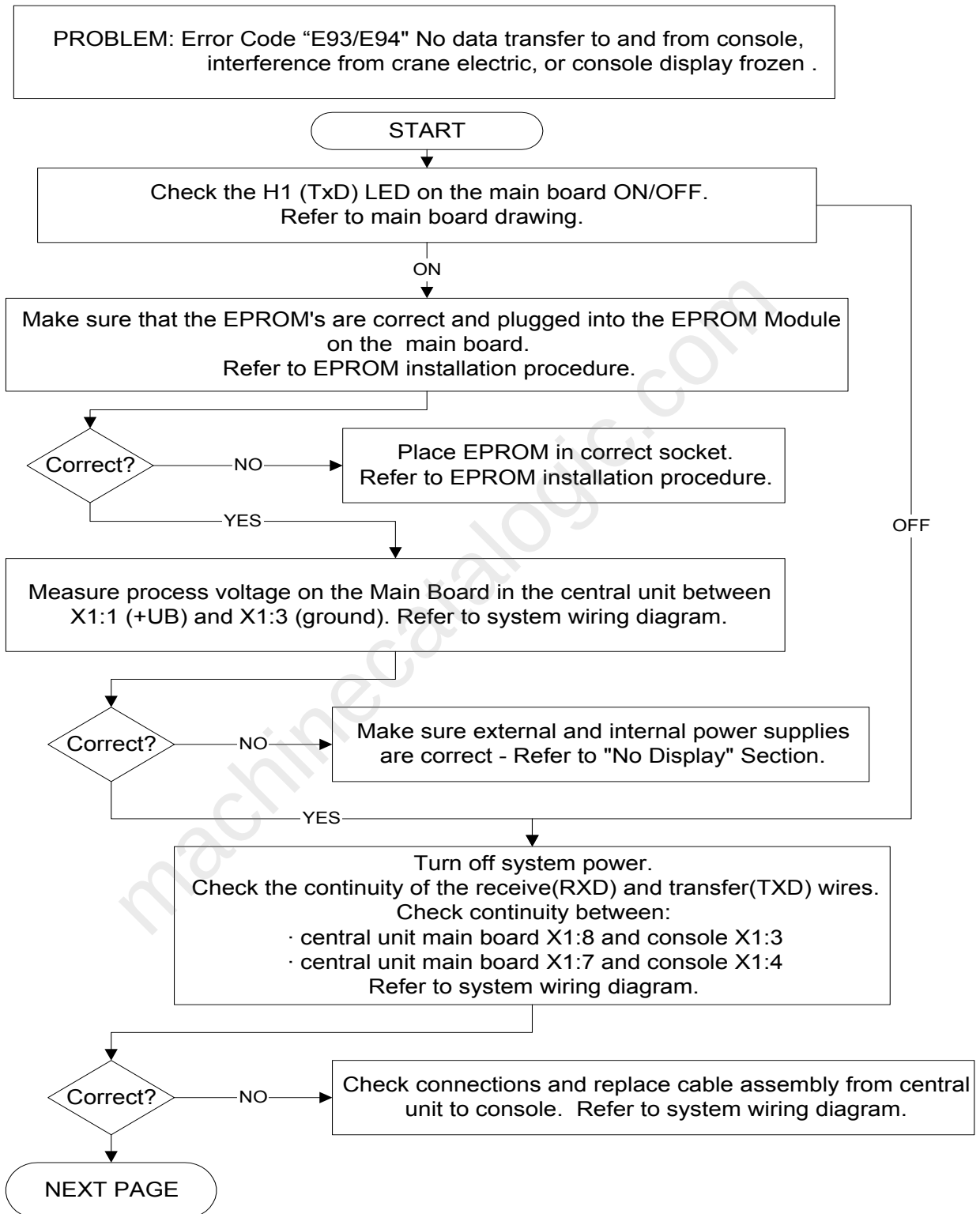
Fig. 1: Components of the LMI System PAT DS 160

7 NO DISPLAY

PROBLEM: Blank console display with no warning light shown. All crane moments have been stopped.



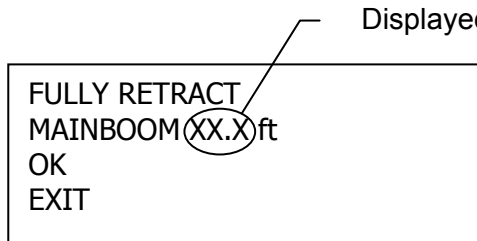
12 DATA TRANSFER CENTRAL UNIT <--> CONSOLE



14.3.2 Length Sensor Calibration Procedure

After selecting 'LEN' in steps 1 through 4 at the beginning of this section complete the following procedure.

1. Fully retract the main boom and adjust length pot in cable reel define in the Cable Reel LWG308/0001 Adjustment Procedure in this manual.

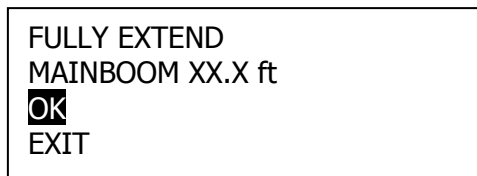


Note: the displayed length indication is noted by XX.X in following steps.

2. Verify the boom retracted boom length is correct. If incorrect, adjust length pot in cable reel define in the Cable Reel LWG308/0001 Adjustment Procedure.

Note: The retracted main boom length may not be indicating correctly until after the calibration procedure step 2. The display length is not the load chart length. The correct display length can be found in the LMI section of the crane operator's manual. If the indication is more than 0.2 feet incorrect, recheck step 1.

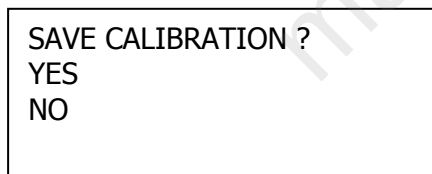
3. Press the 'OK' button.



4. Fully extend the main boom.

Press the 'OK' button.

After 'OK' the system request the length sensor calibration is saved.



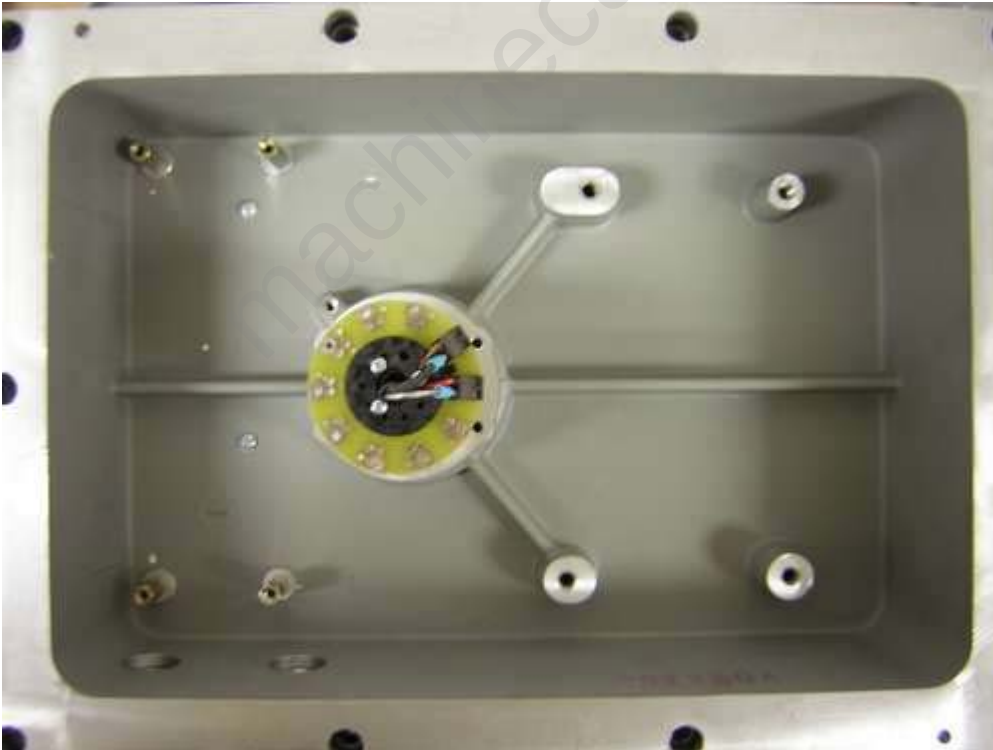
Use the 'UP' and 'DOWN' arrow buttons to select 'YES', which should be flashing then press 'OK' to confirm calibration.

Press **EXIT** to leave calibration or select the 'CALIBRATE SENSORS' to calibrate another sensor.

9. Locate the 8 Philips screws that secure the main board to the cable reel housing and carefully remove the screws.



10. Carefully remove the main board.



Full Version Available

PAT DS 50 Load Moment Indicator Service Manual

PAT DS 50 load moment indicator service manual with error codes, troubleshooting and procedures for DS 50 and DS 160. Instant PDF download.

VIEW THE FULL MANUAL

<https://machinecatalogic.com/pat-ds-50-load-moment-indicator-service-manual/>

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