

Error Code Table

DS 50/30, DS 160 (G-Structure)

Date: 25.May.2005

System programs: G53T V 2.0A (25.05.2005) Parts list No.: 71 050 00 0165

Error Code	Error	Cause	Remedy
	Overload	<ul style="list-style-type: none"> cutoff due to overload 	<ul style="list-style-type: none"> reduce load moment
	prewarning		
	A2B switch	<ul style="list-style-type: none"> the A2B switch is activated 	<ul style="list-style-type: none"> lower the hook block
E01	Fallen below radius range or angle range exceeded	<ul style="list-style-type: none"> fallen below the minimum radius or gone past the maximum angle specified in the respective load chart due to luffing up the boom too far 	<ul style="list-style-type: none"> luff up the boom to a radius or angle specified in the load chart
E02	Radius range exceeded or fallen below angle range	gone past the maximum radius or fallen below the minimum angle specified in the respective load chart due to luffing up the boom too far	<ul style="list-style-type: none"> luff down the boom to a radius or angle specified in the load chart
E04	Operating mode not acknowledged or non permitted slewing zone	<ul style="list-style-type: none"> A non existing operating mode has been selected The boom is in a non-permitted slewing zone 	<ul style="list-style-type: none"> Set the correct operating mode for the operating state in question Slew the boom to a permitted area.

Error Code	Error	Cause	Remedy
E05	Forbidden length range of the main boom	<ul style="list-style-type: none"> • Boom has been extended too far or not enough, e.g. if operation is only admitted up to a certain boom length or for load charts of jibs with the boom having to be extended to a certain length. • The length sensor adjustment was modified, e.g. rope slid off the length sensor reel. • Clutch between length sensor pot and drive is defective • Failure of the +5V-supply for the analog part of the LMI-analog board. • Length potentiometer defective. 	<ul style="list-style-type: none"> • Retract or extend boom to the correct length. • Retract the boom. Check the prestress of the cable reel (the rope has to be under traction). Open the length sensor and carefully turn the length pot counterclockwise to the detent by use of a screwdriver. • Completely replace the clutch with the drive wheel and adjust length sensor pot • Check +5V-voltage. If there is no voltage or break down at a charge of 50 ohm approximately, exchange LMI board. • Replace length potentiometer.
E07	<p>Faulty acknowledgment by the overload relay of the LMI board.</p> <p>Relay should be energized but 2nd contact is indicated off, or the 2nd contact is indicated on while the relay should be deenergized.</p>	<ul style="list-style-type: none"> • Overload relay defective • LMI board defective 	<ul style="list-style-type: none"> • Replace LMI board
E08	No acknowledgement of the anti-two-block switch relay.	<ul style="list-style-type: none"> • cf. error E07 	<ul style="list-style-type: none"> • cf. error E07
E11	Fallen below limit for the measuring channel "Length main boom".	<ul style="list-style-type: none"> • .Length sensor pot defective. • Electronic board in the measuring channel defective. 	<ul style="list-style-type: none"> • Replace length sensor potentiometer. • Replace LMI board.

Electronic Control Systems

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E12	Fallen below the lower limit value in the measuring channel "pressure piston side"	<ul style="list-style-type: none"> • Cable between the central unit and sensor defective or water inside the plugs • Sensor is defective. • Electronic component in the measuring channel is defective. 	<ul style="list-style-type: none"> • Check cable as well as plugs, replace, if need be. • Replace sensor • Replace LMI main board or processor board.
E13	Fallen below lower limit value in the measuring channel "pressure rod side" or "Force2"	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12
E14	Fallen below lower limit value in the measuring channel "Force 1"	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12
E15	Fallen below lower limit value for the measuring channel "angle main boom".	<ul style="list-style-type: none"> • Angle sensor defective. • Electronic part in the measuring channel defective. 	<ul style="list-style-type: none"> • Replace angle sensor. • Replace LMI board.
E16	Fallen below lower limit value in the measuring channel "Angle 2"	<ul style="list-style-type: none"> • refer to E15 	<ul style="list-style-type: none"> • refer to E15
E17	Fallen below lower limit value in the measuring channel "Length 2"	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12
E19	Reference and/or supply voltage defective	<ul style="list-style-type: none"> • The supply voltage is falsified by one of the sensors (DAV, LWG) • Electronic component is defective • A/D converter of CPU 80C517 defective. 	<ul style="list-style-type: none"> • Check the voltages on the LMI main board (AGND = MP0). Check sensors, plugs and cable, replace, if need be. • Replace LMI board • Replace LMI board
E21	Upper limit value for measuring channel "length main boom" exceeded.	<ul style="list-style-type: none"> • Length sensor pot defective. • Electronic part in the measuring channel defective. 	<ul style="list-style-type: none"> • Replace length sensor potentiometer. • Replace LMI board.
E22	Upper limit value in measuring channel "pressure piston side" has been exceeded	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12
E23	Upper limit value in measuring channel "pressure rod side" or "Force 2" has been exceeded.	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12
E24	Upper limit value in measuring channel "Force 1" has been exceeded	<ul style="list-style-type: none"> • refer to E12 	<ul style="list-style-type: none"> • refer to E12

Error Code	Error	Cause	Remedy
E25	Upper limit value in measuring channel "angle main boom" exceeded	<ul style="list-style-type: none"> refer to E15 	<ul style="list-style-type: none"> refer to E15
E26	Upper limit value in measuring channel "angle 2" has been exceeded.	<ul style="list-style-type: none"> refer to E15 	<ul style="list-style-type: none"> refer to E15
E27	Upper limit value in measuring channel "Length 2" has been exceeded.	<ul style="list-style-type: none"> refer to E12 	<ul style="list-style-type: none"> refer to E12
E29	Reference and/or supply voltage defective	<ul style="list-style-type: none"> refer to E19 	<ul style="list-style-type: none"> refer to E19
E31	Error in the system program	<ul style="list-style-type: none"> The system program PROM is defective. 	<ul style="list-style-type: none"> Replace system program PROM (PROM No. 0)
E35	Jumper #3 mistakenly left on	<ul style="list-style-type: none"> After calibration of the sensors the jumper #3 has not been removed. 	<ul style="list-style-type: none"> Remove the jumper #3
E37	Error in the logic program course	<ul style="list-style-type: none"> The system program PROM is defective. Computer module 80C517 defective. LMI board defective 	<ul style="list-style-type: none"> Replace system program PROM (PROM No. 0) Replace computer module 80C517. Replace LMI board
E38	System program and data EPROM do not match.	<ul style="list-style-type: none"> The system program in the LMI does not match to the programming in the data EPROM 	<ul style="list-style-type: none"> Replace the system program PROM or the data EPROM (PROM No. 1)
E41	Error in the internal write/read memory (RAM) of the computer component 80C517	<ul style="list-style-type: none"> Computer component 80C517 defective CPU module defective LMI board defective. 	<ul style="list-style-type: none"> Replace computer component 80C517. Replace CPU module. Replace LMI board with CPU module.
E42	Error in the external write/read memory, 1st part (RAM)	<ul style="list-style-type: none"> Write/read memory (CMOS RAM) or LMI board defective. 	<ul style="list-style-type: none"> Replace LMI board
E43	Error in the external write/read memory, 2nd part (RAM)	<ul style="list-style-type: none"> refer to E42 	<ul style="list-style-type: none"> refer to E42
E48	Cyclic RAM test: error in the internal write/read memory (RAM) of the computer component 80C517	<ul style="list-style-type: none"> Computer component 80C517 defective LMI board defective. 	<ul style="list-style-type: none"> Replace computer component 80C517. Replace LMI board

Error Code	Error	Cause	Remedy
E51	Error in the crane data EPROM or EEPROM.	<ul style="list-style-type: none"> No valid data in the crane data EEPROM. Memory module wrongly bridged. Crane data EPROM defective 	<ul style="list-style-type: none"> Load crane data EEPROM containing valid data. Bridge memory module acc. to memory type Replace crane data EPROM
E55	Wrong central unit used	<ul style="list-style-type: none"> The used central unit (board 24 050 30 0030) is a standard-board and not a retrofit-board 	<ul style="list-style-type: none"> replace board with a retrofit-board
E56	Error in crane data EEPROM.	<ul style="list-style-type: none"> Memory module wrongly bridged. Crane data EEPROM defective 	<ul style="list-style-type: none"> Bridge memory module acc. to memory type Replace crane data EEPROM
E57	Error in serial crane data EEPROM.	<ul style="list-style-type: none"> Serial crane data EEPROM does not contain valid data. Memory module defective 	<ul style="list-style-type: none"> Write data on the serial crane data EEPROM (by means of test program or on-line function), then restart the LMI Replace memory module.
E58	Error in the serial analog data EEPROM.	<ul style="list-style-type: none"> No valid data in the serial analog data EEPROM. LMI main board defective. 	<ul style="list-style-type: none"> Write data on the serial analog data EEPROM by means of the test program, then, restart the LMI Replace LMI main board.
E78	Short circuit in the A2B switch circuit	<ul style="list-style-type: none"> Short circuit in the A2B switch Short circuit in the cable to the A2B switch 	<ul style="list-style-type: none"> Replace A2B switch Replace cable to the A2B switch
E91	No data transmission from the console to the central unit	<ul style="list-style-type: none"> 24 V supply of the console is interrupted Interruption or accidental ground in the line between console electronics and central unit Transmitter/receiver module in console or central unit is defective 	<ul style="list-style-type: none"> Check 24 V at terminal X1 of the console electronics Check the connection console electronics - central unit. In case of an accidental ground, the transmitter module of the console electronics might be damaged. Therefore, replaces the console electronics. Exchange console electronics or LMI main board resp.
E92	Error in the data transmission from console to central unit	<ul style="list-style-type: none"> Loose connection in the line between console electronics and central unit Transmitter/receiver module is defective 	<ul style="list-style-type: none"> Check the connection between console electronics and central unit Exchange console electronics or LMI main board resp.
E93	Error in the data transmission from the central unit to the console	<ul style="list-style-type: none"> refer to E92 	<ul style="list-style-type: none"> refer to E92

Error Code	Error	Cause	Remedy
E94	No data transmission from the central unit to the console	<ul style="list-style-type: none"> • Interruption or accidental ground in the line central unit - console • 5 V supply of the computer in the central unit is missing • 5 V supply is too low • Transmitter/receiver module is defective • Computer module is defective • Electro-magnetic interferences (e.g. when switching contactors or valves) 	<ul style="list-style-type: none"> • Check line to the console (in case of accidental ground, replace console electronics, too). • Check connection to the power unit • Exchange the LMI main board • Replace console electronics or LMI main board • Replace processor board. • Eliminate the source of interferences by inverse diodes or varistors.
E95	Error in the console EPROM	<ul style="list-style-type: none"> • The console EPROM is defective. 	<ul style="list-style-type: none"> • Replace the console EPROM
E96	Error in the internal RAM of the console.	<ul style="list-style-type: none"> • The CPU of the console is defective. • The console main board is defective. 	<ul style="list-style-type: none"> • Replace the CPU of the console • Replace the console main board.

Remark

If an error message is displayed that does not figure in this list, please contact the competent PAT service department as soon as possible.