Trouble Shooting Manual

Thor

ORIGINAL INSTRUCTION

Code:		Year:	2020	Rev.:	01

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8. TROUBLE SHOOTING

Error code	Error detected	Error description	Resolution of the problem
1	TIMERMG_TEST_FAILED	Timer operation test failure	Test failure means that the program on the MAB board has stopped working. Restart the program
2	EEPROM_COLOR_CIRC_PARAM_CRC_FAULT	Circuit parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the master/colorant circuit parameters onto the new MAB board
3	EEPROM_CALIB_CURVES_PARAM_CRC_FAULT	Calibration curve parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the calibration parameters onto the new MAB board
5	EEPROM_SLAVES_EN_PARAM_CRC_FAULT	Slave configuration CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the SLAVE configurations onto the new MAB board
8	EEPROM_HUM_20_PARAM_CRC_FAULT	Humidifier 2.0 parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load Humidifier 2.0 parameters onto the new MAB board
9	EEPROM_CIRCUIT_PUMP_TYPES_CRC_FAULT	For each circuit type pump CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the types of pumps onto the new MAB board
10	USER_INTERRUPT	Machine operation Software interruption	HALT has been pressed
11-18	TIMEOUT_COM_MAB_ACT B"X", where "X" = 1..8	"X" BASE slave communication time-out (detected on the MAB side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the "X" BASE slave board
19-34	TIMEOUT_COM_MAB_ACT C"Y", where "Y" = 1..16	Slave "Y" COLORANT communication time-out (detected on the MAB side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the "Y" COLORANT slave board

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51	AUTOCAP_IDX	Slave AUTOCAP communication time-out (detected on the MAB side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the AUTOCAP slave board
53	HUMIDIFIER_IDX	Slave HUMIDIFIER communication time-out (detected on the MAB side)	Check the HUTBRD power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the HUMIDIFIER slave board
54	TIMEOUT_COM_MAB_ACT_TINTING	TINTING slave communication time-out (detected on the MAB side)	Verify the MMT power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the TINTING Slave board
59	TIMEOUT_COM_MAB_MGB	MAB-MGB Communication time-out	Check MAB and MGB power supply wiring and replace it if damaged. Check the SERIAL communication connectors, and visually check the hardware of the 2 boards
61-68	B"X"_BASE_TOUT_ERROR, where "X" = 1..8	"X" BASE slave communication time-out (detected on the SLAVE side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the "X" BASE slave board
69-82	C"Y"_COLOR_TOUT_ERROR, where "Y" = 1..16	Slave "Y" COLORANT communication time-out (detected on the SLAVE side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the "Y" COLORANT slave board

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101	AUTOCAP_TOUT_ERROR	AUTOCAP slave communication time-out (detected on the SLAVE side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the AUTOCAP slave board
102	HUMIDIFIER_20_TOUT_ERROR	HUMIDIFIER slave communication time-out (detected on the SLAVE side)	Check the HUTBRD power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the HUMIDIFIER slave board
103	TINTING_TOUT_ERROR	TINTING slave communication time-out (detected on the SLAVE side)	Verify the MMT power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the TINTING Slave board
201	RESET_TIMEOUT	RESET process time-out	The RESET process was NOT completed within the maximum set time. Check for a mechanical jam in the dispenser and eliminate it if possible
202	TIMEOUT_SUPPLY_START	Time-out at Dispensing start	Dispensing did NOT start within the maximum set time. Check for a mechanical jam in the dispenser and eliminate it if possible
203	TIMEOUT_SUPPLY_FAILED	Dispensing duration time-out	Dispensing did not end within the maximum set time. The formula is too long, or check for a mechanical jam in the dispenser and eliminate it if possible

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230	AUTOCAP_HOME_POS_ERROR	Loss of steps: deviation upon the detection of slave AUTOCAP HOME position	Verify the cleanliness of the mechanical parts and sensors, and remove any residues if necessary. Verify the integrity of the motor and replace it if deterioration is encountered. If any mechanical parts are damaged or jammed, remove or change the mechanical parts in question. Verify the electrical connections and change them if damaged. Check the photocell sensors and reposition them or change them if damaged.
301-308	B"X"_BASE_RESET_ERROR, where "X" = 1..8	"X" BASE slave reset procedure duration time-out	Verify the cleanliness and positioning of the photocell mounted on the "X" BASE, then clean or reattach the sensor. Verify the integrity of the "flag", the pusher, the motor, and the connectors, and replace the parts or the entire unit if any mechanical wear or damage is found. If the communication is present but an electronic type problem remains, replace the SCCB board.
342	AUTOCAP_HOMING_ERROR	Loss of steps: deviation upon the detection of slave AUTOCAP HOME position	Verify the cleanliness of the mechanical parts and sensors, and remove any residues if necessary. Verify the integrity of the motor and replace it if deterioration is encountered. If any mechanical parts are damaged or jammed, remove or change the mechanical parts in question. Verify the electrical connections and change them if damaged. Check the photocell sensors and reposition them or change them if damaged.
346	TINTING_PUMP_RESET_ERROR	Tinting Pump reset procedure duration time-out	Verify the integrity of the Pump motor, of connectors, the connection on the MMT board
347	TINTING_VALVE_RESET_ERROR	Tinting Valve reset procedure duration time-out	Verify the integrity of the Valve motor, of connectors, the connection on the MMT board

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348	TINTING_TABLE_RESET_ERROR	Tinting Table reset procedure duration time-out	Verify the integrity of the Table motor, of connectors, the connection on the MMT board
351-358	B"X"_DATA_SUPPLY_FAILED, where "X" = 1..8	Invalid table parameters	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
359-374	C"X"_DATA_SUPPLY_FAILED, where "X" = 1..16	Invalid table parameters	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
401-408	B"X"_SUPPLY_CALC_ERROR, where "X" = 1..8	In CONTINUOUS dispensing the Number of steps of the "X" BASE to carry out is NOT a multiple of a whole stroke	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
409-424	C"X"_SUPPLY_CALC_ERROR, where "X" = 1..16	In CONTINUOUS dispensing the Number of steps of the "X" COLORANT to carry out is NOT a multiple of a whole stroke	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
451-475	DISABLED_REQUIRED_CIRCUIT_"X"_ERROR, where "X" = 0..24	"X" Slave must dispense but is erroneously Disabled	Load the Slave configurations onto the new MAB board.
501-508	B"X"_COLOR_HOME_POS_ERROR, where "X"=1..8	Error in the HOMING procedure of the "X" BASE	Check the correct operation of the photocell and the correct movement of the "X" BASE stepper
534	TINTING_VALVE_HOME_POS_ERROR	Error in the HOMING procedure of the Tinting Valve	Verify the correct operation of the 2 photocells and the correct movement of the stepper
535	TINTING_TABLE_HOME_POS_ERROR	Error in the HOMING procedure of the Tinting Turning Table	Verify the correct operation of the photocell, that there is at least one flag on the table and the correct movement of the stepper
551-558	B"X"_COLOR_HOME_BACK_ERROR, where "X" = 1..8	Loss of steps error in "X" BASE Dispensing	Decrease the dispensing speed
601-608	B"X"_COLOR_POS0_READ_LIGHT_ERROR, where "X" = 1..8	At the end of the movement from HOME position to POS0 the photocell is NOT engaged in the "X" BASE	Check photocell and stepper operation

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633	TINTING_PUMP_POS0_READ_LIGHT_ERROR	Tinting Pump Home photocell NOT engaged at the end of pump step movement, or never engaged within an undefined time or number of steps, or NOT engaged during Tinting Table movement	Check Home photocell and Stepper operation
634	TINTING_VALVE_POS0_READ_LIGHT_ERROR	No. 2 Valve photocells NOT engaged during Tinting Table movement or at the end of Homing procedure, or CLOSED valve during Dispensing	Verify operation of the 2 photocells and stepper
651-658	B"X"_COLOR_END_STROKE_READ_DARK_ERROR, where "X" = 1..8	At the end of the dosing stroke the photocell is engaged in "X" BASE	Check photocell and stepper operation
701-708	B_"X"_OVERCURRENT_ERROR, where "X" = 1..8	"X" BASE stepper motor overcurrent	Check wirings, stepper operation
733	TINTING_PUMP_OVERCURRENT_ERROR	Overcurrent on a Tinting Pump stepper motor driver jumper	Verify wirings and operation of Pump L6482H driver on MMT board
734	TINTING_VALVE_OVERCURRENT_ERROR	Overcurrent on a Tinting Valve stepper motor driver jumper	Verify wirings and operation of Valve L6482H driver on MMT board
735	TINTING_TABLE_OVERCURRENT_ERROR	Overcurrent on a Tinting Table stepper motor driver jumper	Verify wirings and operation of Table L6482H driver on MMT board
751-758	B"X"_SOFTWARE_ERROR, where "X" = 1..8	Logic error in the process statuses on "X" BASE	Replace electronic board, if the problem persists request a Firmware update
759-774	C"X"_SOFTWARE_ERROR, where "X" = 1..16	Logic error in the process statuses on "X" COLORANT	Replace electronic board, if the problem persists request a Firmware update
791	AUTOCAP_SOFTWARE_ERROR	Logic error in the process statuses on AUTOCAP	Replace electronic board, if the problem persists request a Firmware update
792	TINTING_PUMP_SOFTWARE_ERROR	Logic error in the Tinting Pump process statuses (including the Valve)	Replace the MMT electronic board, if the problem persists request a Tinting Firmware update
793	TINTING_TABLE_SOFTWARE_ERROR	Logic error in the Tinting Table process statuses	Replace the MMT electronic board, if the problem persists request a Tinting Firmware update
801-808	B"X_COLOR_DRV_OVER_CURR_TEMP_ERROR, where "X" = 1..8	"X" BASE Stepper motor overtemperature	Check wirings, stepper operation
841	AUTOCAP_DRV_OVER_CURR_TEMP_ERR	AUTOCAP Stepper motor overtemperature	Check wirings, stepper operation

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851-858	B"X_COLOR_OPEN_LOAD_ERROR, where "X" = 1..8	Load missing in "X" BASE Stepper	Check wirings, stepper operation
891	AUTOCAP_OPEN_LOAD_ERR	Load missing in AUTOCAP Stepper	Check wirings, stepper operation
895	TOO_LOW_WATER_LEVEL	Insufficient Water level in Humidifier tank	Refill Water in the tank. If the problem persists, check connection of the level sensor to the board that manages it
896	HUMIDIFIER_20_PARAM_ERROR	Error in Humidifier 2.0 parameters reception	Check the correctness of parameters sent. The duration of Pump and Heater activation must NEVER be greater than Period
898	TEMPERATURE_ERROR	Error in Temperature measurement	Check connection of T/H Sensor housing board with HUTBRD board. Check that T/H sensor is not wet. If the problem persists, replace the board and/or the connection cable
899	TEMPERATURE_TOO_LOW	Temperature on board the machine too Low	Check Heater operation
907	TINTING_TIMEOUT_TABLE_MOVE_ERROR	Timeout expired during Tinting Table Homing, or in positioning to one circuit	Verify Tinting Table stepper motor wirings, the Table characteristic parameters sent to the Tinting and operation of Table photocell
908	TINTING_TABLE_SEARCH_POSITION_REFERENCE_ERROR	The reference mark found in the Tinting Table Homing differs from the theoretical value set by a quantity in steps greater than the tolerance set	Verify that there is a reference mark on the Tinting Table, that the Table characteristic parameters sent to the Tinting are correct and operation of Table photocell
909	TINTING_LACK_OF_CIRCUITS_POSITION_ERROR	Absence of the circuit positional table at the beginning of a Tinting Table positioning	The self-learning procedure has not been completed correctly, or has never been carried out
911	TINTING_SELF_LEARNING_PROCEDURE_ERROR	Error in the Self-learning procedure of the Tilting Table: at the start the Table is not on the Reference mark, or the Table photocell is not engaged, or the number of circuits found is > 16, or the number of circuits found in one rotation direction is different from the other	A Reset must be successfully completed before performing Self Learning. Check Tinting Table photocell operation

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912	TINTING_BAD_PUMP_PARAM_ERROR	No response within the timeout set when the Pump parameter setting command is sent to Tinting, or when the Tinting Pump characteristic parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Pump parameters again
913	TINTING_BAD_TABLE_PARAM_ERROR	No response within the timeout set when the Table parameter setting command is sent to Tinting, or when the Tinting Table characteristic parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Table parameters again
914	EEPROM_PUMP_PARAM_CRC_FAULT	Tinting Pump parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the Tinting Pump parameters onto the new MAB board
915	EEPROM_TABLE_PARAM_CRC_FAULT	Tinting table parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load Tinting Turning Table parameters onto the new MAB board
916	TINTING_BAD_PERIPH_PARAM_ERROR	No response within the timeout set when the Peripheral units setting command is sent to Tinting, or when the command parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Peripheral units again
918	TINTING_PUMP_PHOTO_HOME_READ_DARK_ERROR_ST	The Tinting Pump Home photocell is engaged while it should not be engaged	Verify pump home photocell and Tinting stepper operation
919	TINTING_PUMP_PHOTO_INGR_READ_LIGHT_ERROR	Tinting Pump Coupling photocell is in a wrong state: engaged while it should not be engaged or vice-versa.	Verify Pump and Tinting Stepper coupling photocell operation. Verify the Pump characteristic parameters sent to the Tinting

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920	TINTING_TABLE_TEST_ERROR	Tinting Table test failed: the starting position is NOT on the reference mark, or no circuit has been detected, or the number of detected circuits is > 16, or the position of at least one detected circuit in one direction differs from that in the opposite direction by a quantity in steps > of the set threshold, or the position of at least one detected circuit differs from that obtained in the Self Learning of a quantity > of the set threshold, or the map of detected circuits differs from that configured by software	Perform a Reset and try the Table Test again, verify the operation of the Tinting Table photocell, check the consistency between the circuits present on the Table and those configured in the software, try again to perform Self Learning, increase the tolerance on the positions of the Table by sending the Table Parameter configuration command again
922	TINTING_BASES_CARRIAGE_ERROR	Base carriage off-position when the machine is NOT in Diagnostic mode	Replace the carriage into its position. Verify carriage microswitch wiring on Tinting board
923	TINTING_PANEL_TABLE_ERROR	Open panel for Refill on the Tinting Table when the machine is NOT in Diagnostic mode, or it is in Diagnostic mode and you want to activate operations involving the movement of something that is NOT the Rotation of the Tinting Table	Close the panel. Verify the Tinting board panel microswitch wiring
926	TINTING_HEATER_OPEN_LOAD_ERROR	No load at CN4 output reserved to water heating Resistance on MMT board	Verify the connections and wiring of the Heating Resistance on the MMT board
927	TINTING_HEATER_OVERCURRENT_THERMAL_ERROR	Current circulating in the water heating resistance is higher than the threshold set in the MMT board driver, or overtemperature detected on the driver	Verify the connections and wiring of the Heating Resistance on the MMT board
934	TINTING_PUMP_MOTOR_THERMAL_SHUTDOWN_ERROR	Tinting Pump stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Pump stepper motor. If the problem persists, replace the MMT board

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935	TINTING_VALVE_MOTOR_THERMAL_ SHUTDOWN_ERROR	Tinting Valve stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Valve stepper motor. If the problem persists, replace the MMT board
936	TINTING_TABLE_MOTOR_THERMAL_SH UTDOWN_ERROR	Tinting Table stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Table stepper motor. If the problem persists, replace the MMT board
937	TINTING_PUMP_MOTOR_UNDER_VOLT AGE_ERROR	Tinting Pump stepper motor controller gate control voltage too low	Verify the electric connections with the Pump stepper motor. If the problem persists, replace the MMT board
938	TINTING_VALVE_MOTOR_UNDER_VOL TAGE_ERROR	Tinting Valve stepper motor controller gate control voltage too low	Verify the electric connections with the Valve stepper motor. If the problem persists, replace the MMT board
939	TINTING_TABLE_MOTOR_UNDER_VOLT AGE_ERROR	Tinting Table stepper motor controller gate control voltage too low	Verify the electric connections with the Table stepper motor. If the problem persists, replace the MMT board
940	EEPROM_TINTING_COLORANTS_STEP S_POSITION_CRC_FAULT	CRC fault of positional table of the circuits on the Tinting Table stored on the MMT board EEPROM	Perform Tinting Table Self-Learning. If the problem persists, replace the MMT board

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984-1007	C"X"_TURN_TABLE_MISCMATCH_POSITION_ERROR, where "X" = 1..24	The circuits detected at the end of the Tinting Table Homing do not coincide with those found by the Self-Learning and stored in the MMT board EEPROM, or the positional tables of at least one circuit found in the two directions by the Self-Learning differ by a quantity in steps > of the tolerance set in the Table parameter configuration command, or the positional table of at least one circuit found by the Self-Learning differs from the theoretical value of a quantity in steps > of the tolerance set in the Table parameter configuration command, or incorrect matching between the positional table found in the Self-Learning and the colorant configuration set in the software	Verify Tinting Table photocell operation. Repeat Self-Learning, verify that the circuits physically present on the Table coincide with those set in the software configuration page, increase the Tolerance on the positions of the circuits and postpone the Tinting Table parameter setting command
1000	SCALE NOT RESPONDING	The scale is not connected to the machine	Connect a scale to calibrate it, or disable the scale Device within machine configuration in Admin mode

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