3.12.6.16 MENT-015 Register-link RX offset abnormal

Cause: The register-link RX offset is abnormal.

Remedy: Check the ME-NET system variable.

3.12.6.17 MENT-016 RX frame ID abnormal

Cause: The RX frame ID is abnormal.

Remedy: Check ME-NET's system variable.

3.12.6.18 MENT-017 Communication CPU no response

Cause: Even if 60 seconds passes, a logical link was not able to be joined.

Remedy: Check the ME-NET board

3.12.6.19 MENT-018 Frame length error

Cause: The construction of the media is defective

Remedy: Improve the construction of the media

3.12.6.20 MENT-019 Media defective

Cause: The construction of the media is defective

Remedy: Improve the construction of the media

3.12.7 MHND Alarm Code

3.12.7.1 MHND-001 Cannot resume program

Cause: Program cannot run because an error condition will not clear. When on the ALARM page, select this error and press HELP to see error detail.

Remedy: Fix the error condition, press reset,

3.12.7.2 MHND-002 Operator Panel E-stop ON

Cause: Program cannot run with operator panel E-STOP

Remedy: Release Operator panel E-stop, press reset and push cycle start to continue.

3.12.7.3 MHND-003 Teach pendant E-stop ON

Cause: Program cannot run with teach pendant E-STOP

Remedy: Release teach pendant E-stop, press reset and push cycle start to continue.

3.12.7.4 MHND-004 Teach pendant is enabled

Cause: Program cannot run with teach pendant enabled

Remedy: Disable teach pendant, press reset, and push cycle start to continue.

3.12.7.5 MHND-005 System still in fault state

Cause: An error condition exists such that the robot cannot be reset.

Remedy: Fix the error condition, press reset.

3.12.7.6 MHND-006 Program not selected

Cause: To run a .tp program in local you must first select the program.

Remedy: Press SELECT key and choose a program to run. If trying to run M.H. Shell, the key switch must be in REMOTE.

3.12.7.7 MHND-007 UOP Ignored. Wrong Start Mode

Cause: A UOP signal was detected, but the controller is not set up to start using UOPs.

Remedy: UOP must be set as the start device or the UOP signal will be ignored.

3.12.7.8 MHND-008 SOP Ignored. Wrong Start Mode

Cause: A SOP signal was detected, but the controller is not set up to start using SOPs.

Remedy: SOP must be set as the start device or the SOP signal will be ignored.

3.12.7.9 MHND-009 Could not run task %s

Cause: While M.H. Shell was internally trying to run another program in multi-tasking mode, an error occurred.

Remedy: ABORT ALL and retry.

3.12.7.10 MHND-010 Cycle power to change registers

Cause: An old smaller POSREG.VR file was loaded onto the controller. The number of position registers was changed to fewer than what the current version of M.H. Shell needs.

Remedy: M.H. Shell logic has automatically set the number of position registers to the necessary size again. But a cold start is needed to increase the position register table size. Do a cold start.

3.12.7.11 MHND-011 Cycle power to change macros

Cause: An old smaller SYSMACRO.SV file was loaded onto the controller. The number of macros was changed to fewer than what the current version of M.H. Shell needs.

Remedy: M.H. Shell logic has automatically set the number of macros to the necessary size again. But it needs a cold start in order for the macro table size to be increased. Do a cold start.

3.12.7.12 MHND-012 TEMP DRAM memory is low

Cause: Temporary memory is getting too low to download more files.

Remedy: Warning only. Delete any unneeded data before down-loading files.

3.12.7.13 MHND-013 Robot is not calibrated

Cause: The robot must be calibrated to run tp programs.

Remedy: Calibrate the robot.

3.12.7.14 MHND-014 Robot must be at home position

Cause: The At home check function is enabled but the robot is not at the home position when the start was received.

Remedy: Move the robot to the home position. Once the robot is at home, then you can re-issue the request.

3.12.7.15 MHND-015 HOME refpos not taught

Cause: The At home check function is enabled but the Home refpos has not been fully setup.

Remedy: Select SETUP, [TYPE], Ref Position. Make sure the selected Refpos is taught and enabled. Select SETUP, [TYPE], Shell config. Make sure the Which ReFpos is HOME position is setup under the Special Positions DETAILS. Then ABORT and retry.

3.12.7.16 MHND-016 REMOTE switch must be REMOTE

Cause: The REMOTE keyswitch is on LOCAL, and needs to be set to REMOTE.

Remedy: Turn the REMOTE keyswitch to REMOTE.

3.12.7.17 MHND-017 UOP is not the master device

Cause: The UOP is not the master device, which prevents the run request from executing.

Remedy: Go the the Variables menu under SYSTEM, and set $RMT_MASTER=0.

3.12.7.18 MHND-018 Program %s not loaded

Cause: The program that you tried to run is not loaded on the controller.

Remedy: Load or create the program. If the program name shown in the error code is wrong, then check that the MENU, SETUP, Shell Config TP program ID method and DETAILS are correct

3.12.7.19 MHND-019 Robot mode must be MANUAL

Cause: The robot mode is not MANUAL, so the operation requested cannot be performed.

Remedy: The manual mode din from the PLC is set OFF. It must be ON for manual mode operations.

3.12.7.20 MHND-020 Robot must be in AUTO mode

Cause: The robot must be in full automatic mode with the PLC before production operation can occur.

Remedy: The manual mode din from the PLC is set ON. It must be OFF for automatic control of production.

3.12.7.21 MHND-021 Robot is in MANUAL mode

Cause: On manual mode entry - Manual mode input from the PLC just turned ON. All PLC manual mode input functions are enabled.

Remedy: Status message only.

3.12.7.22 MHND-022 Robot is in AUTO mode

Cause: On manual mode exit - Manual mode input from the PLC just turned OFF. All PLC manual mode input functions are disabled. Normal auto mode execution is allowed.

Remedy: Status message only.

3.12.7.23 MHND-023 Robot is busy. Mode change pending.

Cause: Robot mode is being changed while the robot is busy

Remedy: When the robot is idle, change the manual mode bit again to the desired state. NOTE: The system is watching for a change in input setting to change the robot mode.

3.12.7.24 MHND-024 Step mode must be disabled

Cause: Step mode is enabled, which prevents the run request from executing.

Remedy: Press the STEP hardkey to disable step mode.

3.12.7.25 MHND-025 UOP CYCLE START can only resume

Cause: A UOP CYCLE START input was detected but no paused program exists.

Remedy: None available. This error is only generated if your Cell interface has been specified using $shell_cfg.$cont_only=TRUE. If this is the case, then for safety reasons UOP CYCLE START is only used for resuming paused programs.

3.12.7.26 MHND-026 Illegal DIN program select received

Cause: A DIN program select was detected but either the keyswitch is not in remote or the selected program does not exist.

Remedy: Check the keyswitch settings. Check the program selected.

3.12.7.27 MHND-027 %s program select signal received

Cause: A program select was detected.

Remedy: Status message only.

3.12.7.28 MHND-028 Illegal PNS program select received

Cause: A PNS program select was detected but either the keyswitch is not in remote or the selected program does not exist.

Remedy: Check the keyswitch settings. Check the program selected.

3.12.7.29 MHND-029 Illegal GIN program select received

Cause: A GIN program select was detected but either the keyswitch is not in remote or the selected program does not exist.

Remedy: Check the keyswitch settings. Check the program selected.

3.12.7.30 MHND-030 Illegal RSR program select received

Cause: A RSR program select was detected but either the keyswitch is not in remote or the selected program does not exist.

Remedy: Check the keyswitch settings. Check the program selected.

3.12.7.31 MHND-031 Cycle interrupt disabled

Cause: The cycle interrupt option has been disabled.

Remedy: This is a status message only.

3.12.7.32 MHND-032 Cycle interrupt enabled

Cause: The cycle interrupt option has been enabled.

Remedy: This is a status message only.

3.12.7.33 MHND-033 DIN Ignored. Wrong Start Mode

Cause: A DIN signal was detected, but the controller is not set up to start using DINs.

Remedy: DIN must be set as the start device or the DIN signal will be ignored.

3.12.7.34 MHND-034 %s Job select setup error

Cause: The job selection setup was not completed properly. Selected I/O does not exist.

Remedy: Go to the MENU, SETUP, Shell Config menu and make sure the TP program ID method and details are setup correctly.

3.12.7.35 MHND-035 Start Ignored. Already running

Cause: A start signal was received but a TP program is already running. A second TP program will not be started at this time.

Remedy: Informative message only.

3.12.7.36 MHND-037 START Ignored. Menu Testing.

Cause: The menu test screen is displayed on the TP. A TP program cannot be started until a different screen is displayed.

Remedy: Display a different menu on the TP and give another start signal.

3.12.7.37 MHND-038 %s is not running.

Cause: MULTIIO.TP is not running. It will be restarted.

Remedy: If MULTIIO.TP does not automatically restart, check alarm log for errors.

3.12.7.38 MHND-039 Cycle power to change user alarms

Cause: The new number of user alarms will not take effect until after a cold start.

Remedy: Informative message only.

3.12.7.39 MHND-040 Cycle power to change no of tasks

Cause: The new number of tasks will not take effect until after a cold start.

Remedy: Informative message only.

3.12.7.40 MHND-041 Perm memory is low

Cause: CMOS memory is getting too low to create more variable files.

Remedy: Warning only. Delete any unneeded data.

3.12.7.41 MHND-100 %s

Cause: A customized pause error was detected.

Remedy: Follow instructions given.

3.12.7.42 MHND-101 Reg %s could not be set

Cause: Register operation failed

Remedy: Check if the register is defined, if it is between 1-64 and if it has the right value. Must ABORT ALL and retry

3.12.7.43 MHND-102 %s

Cause: General status messages.

Remedy: None required.

3.12.7.44 MHND-103 Register not defined %s

Cause: This is just a debug message

Remedy: None required.

3.12.7.45 MHND-104 %s

Cause: General status messages.

Remedy: None required.

3.12.7.46 MHND-105 %s

Cause: General status messages.

Remedy: None required.

3.12.7.47 MHND-106 Controller has no UOPs assigned.

Cause: The controller has no UOPs installed. So you cannot select UOPs for job selection control.

Remedy: Check Hardware installation.

3.12.7.48 MHND-107 Macro Table is too small for menu option

Cause: The MACRO table must have at least 100 elements for the MENU UTILITY option to be installed properly.

Remedy: Increase the MACRO table size.

3.12.7.49 MHND-108 Aborting TP program

Cause: An error occurred in the TP program.

Remedy: Check the TP program.

3.12.7.50 MHND-120 Loading error - %s

Cause: There was a problem loading the specified file.

Remedy: Check the communication line and make sure that the file exists on the floppy

3.12.7.51 MHND-121 %s exists. Not loaded

Cause: The specified file already exists on the controller.

Remedy: Delete the file from the controller before reloading.

3.12.7.52 MHND-122 CREATE_VAR failed %s

Cause: Data in a setup menu could not be created

Remedy: Cold start the controller and retry.

3.12.7.53 MHND-123 File not loaded or created: %s

Cause: File does not exist in the controller RAM.

Remedy: This is a warning message.

3.12.7.54 MHND-124 GET_VAR failed %s

Cause: Data in a setup menu could not be set

Remedy: Cold start the controller and retry.

3.12.7.55 MHND-125 SET_VAR failed %s

Cause: Data in a setup menu could not be set

Remedy: Cold start the controller and retry.

3.12.7.56 MHND-127 IO_STATUS error occurred

Cause: An I/O error occurred during data transfer

Remedy: Cold start the controller and retry.

3.12.7.57 MHND-128 Could not save .VR file %s

Cause: Error occurred while saving a .VR file

Remedy: Cold start the controller and retry.

3.12.7.58 MHND-129 Could not load file %s

Cause: Error occurred while loading a .VR file

Remedy: Cold start the controller and retry if you know you should be able to read the .vr file into M.H. Shell.

3.12.7.59 MHND-130 Could not access files

Cause: Error occurred while accessing the floppy disk

Remedy: Make sure the communication is correct and retry

3.12.7.60 MHND-133 Error using CLEAR built-in

Cause: An error occurred while clearing a variable file.

Remedy: Reset controller and try again.

3.12.7.61 MHND-134 File is in use by robot. Cannot transfer

Cause: The file you requested to transfer is being used by the robot. It is being used in production or is being edited using SETUP

Remedy: First stop the robot. Then ABORT ALL. Then attempt to transfer

3.12.7.62 MHND-135 Could not read %s

Cause: Could not read the .dt file - Data error.

Remedy: Check the communication status.

3.12.7.63 MHND-136 Could not clear file

Cause: If the file is being used in production it cannot be cleared.

Remedy: Wait until production is aborted and clear the file.

3.12.7.64 MHND-137 .VR file has not been created

Cause: During the transfer of data from the PC, the .VR data file could not be created.

Remedy: Check the available memory. If RAM is full, clear unneeded data and try again.

3.12.7.65 MHND-138 Could not create .vr file

Cause: An error occurred while creating the file

Remedy: Cold start the controller and retry.

3.12.7.66 MHND-139 Error creating new variables

Cause: An error occurred while creating a new file.

Remedy: Check the available memory. If RAM is full, clear unneeded data and try again. Cold start the controller and retry.

3.12.7.67 MHND-160 Robot in use-Cannot TEST menu.

Cause: You cannot TEST a menu when the robot is executing a TP program.

Remedy: All menu changes should be made when the robot is idle. TEST the menu when the robot is idle.

3.12.7.68 MHND-161 Error: tp program not running

Cause: The List menu test attempted to run a tp program.

Remedy: Reset the controller and try again.

3.12.7.69 MHND-162 doing unpause in prompt box

Cause: Status debug message only.

Remedy: None required.

3.12.7.70 MHND-163 doing continue in prompt box

Cause: Status debug message only.

Remedy: None required.

3.12.7.71 MHND-164 %s Illegal type

Cause: A MACRO was called with a parameter that is illegal. The parameter has the wrong data type.

Remedy: Check the MACRO call in the TP program.

3.12.7.72 MHND-165 %s missing

Cause: A MACRO was called without a parameter that must be entered.

Remedy: Check the MACRO call in the TP program.

3.12.7.73 MHND-166 Status Menu does not exist

Cause: A Status Macro used a string name for a menu that does not exist.

Remedy: Check the MACRO call in the TP program.

3.12.7.74 MHND-200 PLC not reading alarm outputs

Cause: The PLC is not handshaking with the robot to send alarms to the PLC.

Remedy: Check PLC status. Clear the PLC alarms.

3.12.7.75 MHND-201 Error:too many entries in alarm table

Cause: At most 100 alarms can be entered into the PLC alarm table. Other alarms will be ignored.

Remedy: Extra alarms are ignored.

3.12.7.76 MHND-230 FAULT must be reset

Cause: A fault has ocurred, so the operation requested cannot be performed.

Remedy: Clear the source of the fault, and press FAULT RESET.

3.12.7.77 MHND-231 Program already running or paused

Cause: A program is already running, so the operation requested cannot be performed.

Remedy: Re-issue the request when the current program is paused or aborted.

3.12.7.78 MHND-232 Teach pendant must be enabled

Cause: The teach pendant must be enabled when accessing this teach pendant hardkey.

Remedy: Enable the teach pendant.

3.12.7.79 MHND-233 TP hardkey macros are in use

Cause: One of the MH gripper macros is already in use. Only one macro can be used at a time

Remedy: Wait until the current macro is finished.

3.12.7.80 MHND-234 Valve %s: Manual grip part

Cause: Information message only

Remedy: None required.

3.12.7.81 MHND-235 Valve %s: Manual release

Cause: Information message only

Remedy: None required.

3.12.7.82 MHND-236 Error: Valve is not setup.

Cause: The valve signal number (S#) can not be zero.

Remedy: Select MENU, I/O, MH Valves to setup the gripper signals.

3.12.7.83 MHND-237 Error: Clamp is not setup.

Cause: The clamp signal number (S#) can not be zero.

Remedy: Select MENU, I/O, MH Valves to setup the gripper signals.

3.12.7.84 MHND-238 Error: PartPres is not setup.

Cause: The part present signal number (S#) can not be zero.

Remedy: Select MENU, I/O, MH Valves to setup the gripper signals.

3.12.7.85 MHND-239 Error: Vacuum Made is not setup.

Cause: The vacuum made signal number (S#) can not be zero.

Remedy: Select MENU, I/O, MH Valves to setup the gripper signals.

3.12.7.86 MHND-240 %s missing

Cause: A MACRO was called without a parameter that must be entered.

Remedy: Check the MACRO call in the TP program.

3.12.7.87 MHND-241 %s Illegal type

Cause: A MACRO was called with a parameter that is illegal. The parameter has the wrong data type.

Remedy: Check the MACRO call in the TP program.

3.12.7.88 MHND-242 Parameter %s error

Cause: Send PC Macro data error.

Remedy: Check other alarm log errors for more details.

3.12.7.89 MHND-243 %s I/O error

Cause: I/O data error.

Remedy: Check other alarm log errors for more details.

3.12.7.90 MHND-244 Parameter %s ignored

Cause: A MACRO was called with too many parameters.

Remedy: Check the MACRO call in the TP program.

3.12.7.91 MHND-245 Valve %s is not a vacuum gripper

Cause: This MACRO requires a vacuum gripper.

Remedy: Check the MACRO call in the TP program.

3.12.7.92 MHND-246 Valve %s is not a clamp gripper

Cause: This MACRO required a clamp gripper.

Remedy: Check the MACRO call in the TP program.

3.12.7.93 MHND-247 Parm %s is not between 1-2

Cause: Parameter passed to MH macro is not between 1 and 2. The valve referenced must be a vacuum valve.

Remedy: Change parameter to an integer between 1 and 2

3.12.7.94 MHND-248 TRYOUT MODE: %s reading part

Cause: In TRYOUT mode: The part present input does detect the signal

Remedy: There must be no part present in tryout mode.

3.12.7.95 MHND-249 Must press SHIFT key too

Cause: The shift key must be pressed when accessing this teach pendant hardkey.

Remedy: Press the shift key.

3.12.7.96 MHND-250 Parm %s is not an integer

Cause: Parameter passed to MH macro is not an integer

Remedy: Change parameter to an integer

3.12.7.97 MHND-251 Parm %s is not between 1-16

Cause: Parameter passed to MH macro is not between 1 and 9

Remedy: Change parameter to an integer between 1 and 9

3.12.7.98 MHND-252 Valve %s is not setup

Cause: Valve selected by paramter has not been setup

Remedy: Enter appropriate information through user screens

3.12.7.99 MHND-253 No parameters passed to routine

Cause: No parameters have been passed to the routine

Remedy: Place parameter in the list following the macro call

3.12.7.100 MHND-254 %s not sensing part

Cause: The part present input does not detect the signal

Remedy: Check if part is in range of the switch

3.12.7.101 MHND-255 %s still reading part

Cause: The part present input sees the signal after dropoff

Remedy: Ensure robot has dropped off the part

3.12.7.102 MHND-256 Clamp %s state error

Cause: The specified clamp open signal failed.

Remedy: Check if all the clamp has is obstructed or the cylindicator is working properly.

3.12.7.103 MHND-257 Clamp %s state error

Cause: The specified clamp closed signal failed.

Remedy: Check if all the clamp has is obstructed or the cylindicator is working properly.

3.12.7.104 MHND-258 %s did not make vacuum

Cause: The vacuum switch is not detecting vacuum.

Remedy: Check all of the vacuum cups for a complete seal.

3.12.7.105 MHND-259 %s vacuum is not off

Cause: The vacuum switch is still detecting vacuum.

Remedy: Check if all the clamps have completely closed.

3.12.7.106 MHND-260 Parm %s is not between 1-12

Cause: Parameter passed to MH macro is not between 1 and 10

Remedy: Change parameter to an integer between 1 and 10