

Error Code	UI Title	UI Instructions	Error Name
1	Unknown Error	Restart the machine. If the issue continues, contact your supervisor.	RECOVERABLE_FROM_HOME_ERROR
101	Steering Error	Turn off the machine. Wait 15 seconds. Turn on the machine. If the issue continues, contact your supervisor.	WHEEL_SLIPPAGE
102	Steering Error	Turn off the machine. Wait 15 seconds. Turn on the machine. If the issue continues, contact your supervisor.	STEERING_PREDICTION_ERROR
103	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	STUCK_TIMEOUT
104	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	PATH_BLOCKED
105	Backward Movement Detected	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	DRIVING_BACKWARD
106	Machine is Off Path	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	FAILED_TO_FIND_PATH_DURING_RECOVERY
200	Recovery Tank Full	Drain the recovery tank.	DIRTY_WATER_FULL
201	Water Tank Empty	Inspect and fill the water tank.	CLEAN_WATER_EMPTY

202	Battery Low	Drive the machine to the charging station. Turn off the machine. Charge the batteries.	BATTERY_VERY_LOW
203	Traction Motor Error	Turn off the machine. Disconnect the battery cable for 15 seconds. Reconnect the cable and turn on the machine. If the issue continues, contact your supervisor.	TRACTION_MOTOR
204	Brush Error	Inspect the brush for damage or debris. Adjust or replace as needed. If the issue continues, contact your supervisor.	BRUSH_ERROR
205	Vacuum Error	Inspect the vacuum and hose for damage or debris. If the hose is broken, contact your supervisor.	VACUUM_ERROR
206	Squeegee Error	Inspect the squeegee for damage or debris. Adjust or replace as needed. If the issue continues, contact your supervisor.	SQUEEGEE_ERROR
207	Scrub Deck Error	Turn off the machine. Inspect the scrub deck for damage. Turn on the machine. If the issue continues or damage is detected, contact your supervisor.	BRUSH_DECK_ERROR
208	No Brush Detected	Make sure the brushes and pads are properly installed. If the issue continues, contact your supervisor.	NO_BRUSH_ERROR
209	Operator Presence Sensor Triggered	Make sure the seat is empty. To resume, press the Start/Pause button.	OPERATOR_PRESENCE_TRIGGERED

210	Processor Error	Restart the machine. If the issue continues, contact your supervisor.	N/A
211	Throttle Error	Inspect the throttle. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	THROTTLE_ERROR
212	Brake Pedal Error	Inspect the brake pedal. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	BRAKE_ERROR
215	Sensor Check in Progress	Drive the machine approximately 10-15 feet (3-5m) along the path. To resume, press the Start/Pause button. If issue persists, contact your supervisor.	CLIFF_DETECTOR_NOT_CONVERGED
216	Emergency Stop Button Pressed	Inspect the environment and the machine. Release the emergency stop button by rotating it clockwise.	FIRMWARE_ESTOP
217	Sensor Check in Progress	Drive the machine 10-15 feet (3-5m) along the route. To resume, press the Start/Pause button.	CLIFF_DETECTOR_NOT_CONVERGED
218	Steering Error	Turn off the machine. Wait 15 seconds. Turn on the machine. If the issue continues, contact your supervisor.	STEERING_MOTOR_ERROR
219	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	NONFATAL_FIRMWARE_FAULT
222	Pedal Pressed	Make sure the pedal is clear. To resume, press the Start/Pause button.	PEDAL_PRESSED

223	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FIRMWARE_PLANAR_LIDAR_TIMEOUT
224	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FIRMWARE_SLANTED_LIDAR_TIMEOUT
225	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FIRMWARE_BOTH_LIDARS_TIMEOUT
226	Left Sensor Not Responding	Clean the left sensors with a clean microfiber cloth. Inspect for damage. Restart the machine.	FIRMWARE_LEFT_IFM_TIMEOUT
227	Right Sensor Not Responding	Clean the right sensors with a clean microfiber cloth. Inspect for damage. Restart the machine.	FIRMWARE_RIGHT_IFM_TIMEOUT
228	Left Sensor Not Responding	Clean the left sensors with a clean microfiber cloth. Inspect for damage. Restart the machine.	FIRMWARE_LEFT_INVALID_FLOOR_HEIGHT
229	Right Sensor Not Responding	Clean the right sensors with a clean microfiber cloth. Inspect for damage. Restart the machine.	FIRMWARE_RIGHT_INVALID_FLOOR_HEIGHT
230	Left Side Obstacle Detected	Inspect the machine and the surrounding area. Drive past any obstacles. If clear, press the Start/Pause button to resume.	FIRMWARE_LEFT_IFM_OBSTACLE_TOO_CLOSE

231	Right Side Obstacle Detected	Inspect the machine and the surrounding area. Drive past any obstacles. If clear, press the Start/Pause button to resume.	FIRMWARE_RIGHT_IFM_OBSTACLE_TOO_CLOSE
232	Potential Hazard Detected	Inspect the machine. Make sure the path of the machine is clear or drive past any obstacles. If the path is clear, press the Start/Pause button to resume.	FIRMWARE_PLANAR_OBSTACLE_TOO_CLOSE
233	Cliff Detected	Make sure the machine is not operating near stairs or escalators. To resume, press the Start/Pause button.	FIRMWARE_CLIFF_TOO_CLOSE
234	Machine Error	Turn off and inspect machine. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	PLANAR_MARKER_NOT_FOUND
235	Machine Error	Turn off and inspect machine. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	SLANTED_MARKER_NOT_FOUND
236	Machine Error	Turn off and inspect machine. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	SOAP_VALVE_ERROR
237	Machine Error	Turn off and inspect machine. If no issues are found, press the Start/Pause button to resume. If the issue continues, contact your supervisor.	WATER_VALVE_ERROR
238	N/A	N/A	FAST_STOP_SAFETY_ZONE

239	Lower lidar sensor excessive fast stops	Inspect and clean lower lidar sensor with a clean microfiber cloth (use polycarbonate lens safe cleaning solution if extra dirty). Clean sensors regularly if running in dirty environment and at each dump and fill. To resume, press the Start/Pause button. If issue persists contact support.	EXCESSIVE_FAST_STOP_SAFETY_ZONE
240	N/A	N/A	FAST_STOP_LEFT_SIDE_SAFETY
241	N/A	N/A	FAST_STOP_RIGHT_SIDE_SAFETY
242	Left 3d Camera excessive fast stops	Inspect and clean left 3d camera with a clean microfiber cloth. Clean sensors regularly if running in dirty environment and at each dump and fill. To resume, press the Start/Pause button. If issue persists contact support.	EXCESSIVE_FAST_STOP_LEFT_SIDE_SAFETY
243	Right 3d Camera excessive fast stops	Inspect and clean right 3d camera with a clean microfiber cloth. Clean sensors regularly if running in dirty environment and at each dump and fill. To resume, press the Start/Pause button. If issue persists contact support.	EXCESSIVE_FAST_STOP_RIGHT_SIDE_SAFETY
250	Right Side Footprint Violation	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	FW_FOOTPRINT_VIOLATION_RIGHT_SIDE_SAFETY
251	Left Side Footprint Violation	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	FW_FOOTPRINT_VIOLATION_LEFT_SIDE_SAFETY

252	Error	Restart the machine. If the issue continues, contact your supervisor.	ROS_COMMUNICATION_ERROR
255	Machine is Off Path	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	OFF_PATH
257	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SENSOR_ERROR
258	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	MACHINE_ERROR
300	Machine is Off Path	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	LOCAL_DWA_PATH_TOO_FAR
301	Machine is Off Path	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	LOCAL_DWA_PATH_IS_EMPTY
302	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_NO_VALID_MOVE
303	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_ALL_PATHS_WILL_STUCK
304	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_START_POSE_COLLIDING

305	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_PATH_TOO_CLOSE
306	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_TOO_DANGEROUS
307	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_TOUCHING_OBSTACLE
308	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_DECISION_LOOP
309	Path is Blocked	Make sure the path is clear. Drive past any obstacles. To resume, press the Start/Pause button.	LOCAL_DWA_PATH_IS_BEHIND
401	Unknown Error	Restart the machine. If the issue continues, contact your supervisor.	LOWSHEEN_LOOP_EXCEPTION
500	Emergency Stop Button Pressed	Inspect the environment and the machine. Release the emergency stop button by rotating it clockwise.	ESTOP
501	Gyro Error	Turn off the machine. Disconnect the battery cable for 15 seconds. Reconnect the cable and turn on the machine. If the issue continues, contact your supervisor.	CALIBRATION_GYRO_STUCK
502	Home Marker Scan Error	Return to the Home Marker. Scan the Home Marker again. Do not move the machine until the scan is complete. If the issue continues, contact your supervisor.	CALIBRATION_NOISY_GYRO

503	Home Marker Scan Error	Return to the Home Marker. Scan the Home Marker again. Do not move the machine until the scan is complete.	CALIBRATION_MOVED_TOO_MUCH
504	Gyro Error	Gyro error. Please restart the machine.	CALIBRATION_IMU_TIMEOUT
508	Path is Blocked	Restart the machine. If the issue continues, contact your supervisor.	FULLSTACK_TIMEOUT
509	Flash Firmware Error	Restart the machine. If the issue continues, contact your supervisor.	FLASH_FIRMWARE_FAULT
510	Path Following Error	Restart the machine. If the issue continues, contact your supervisor.	MANUAL_FOLLOWING_RESULT_INVALID
511	Path Following Error	Restart the machine. If the issue continues, contact your supervisor.	MOTION_POSE_INVALID
512	Path Following Error	Restart the machine. If the issue continues, contact your supervisor.	MOTION_CONTROL_INVALID
513	Path Following Error	Restart the machine. If the issue continues, contact your supervisor.	PERCEPTS_INVALID
514	Path Following Error	Restart the machine. If the issue continues, contact your supervisor.	PERCEPTION_POSE_INVALID
610	Firmware Error	Restart the machine. If the issue continues, contact your supervisor.	FATAL_FIRMWARE_FAULT
701	App Communication Error	Restart the machine. If the issue continues, contact your supervisor.	N/A
900	Scanner LIDAR Triggered	Inspect tower for damage or obstructions. To resume, press the Start/Pause button.	TOWER_LIDAR_CURTAIN_TRIGGERED
6000	Lower Sensor Dirty	Inspect and clean the bottom sensor. Reboot the machine. If the issue continues, contact your supervisor.	FIRMWARE_PLANAR_LIDAR_DIRTY

6000-6	Lower Sensor Dirty	Inspect and clean the bottom sensor. Reboot the machine. If the issue continues, contact your supervisor.	PLANAR_LIDAR_DIRTY
6001	Upper Sensor Dirty	Inspect and clean the upper sensor. Reboot the machine. If the issue continues, contact your supervisor.	FIRMWARE_SLANTED_LIDAR_DIRTY
6001-6	Upper Sensor Dirty	Inspect and clean the upper sensor. Reboot the machine. If the issue continues, contact your supervisor.	SLANTED_LIDAR_DIRTY
6003-6	Front Camera Dirty	Inspect and clean the sensors. Reboot the machine. If the issue continues, contact your supervisor.	FRONT_DEPTH_CAMERA_DIRTY
6004-6	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_DIRTY
6005-6	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_DIRTY
8100	Lower Sensor Error	Restart the machine. If the issue continues, contact your supervisor.	PLANAR_LIDAR_UNCALIBRATED
8100-1	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_DISCONNECTED

8100-2	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_DELAY
8100-3	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_NEGATIVE_DELAY
8100-4	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_RATE
8100-5	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_BAD_TIMESTAMP_DIRECTION
8100-7	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	PLANAR_LIDAR_MONITOR_EXCEPTION
8200	Upper Sensor Error	Restart the machine. If the issue continues, contact your supervisor.	SLANTED_LIDAR_UNCALIBRATED
8200-1	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_DISCONNECTED

8200-2	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_DELAY
8200-3	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_NEGATIVE_DELAY
8200-4	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_RATE
8200-5	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_BAD_TIMESTAMP_DIRECTION
8200-7	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	SLANTED_LIDAR_MONITOR_EXCEPTION
8300	Front Depth Sensor Error	Restart the machine. If the issue continues, contact your supervisor.	FRONT_DEPTH_CAMERA_UNCALIBRATED
8300-1	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_DISCONNECTED

8300-2	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_DELAY
8300-3	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_NEGATIVE_DELAY
8300-4	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_RATE
8300-5	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_BAD_TIMESTAMP_DIRECTION
8300-7	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	FRONT_DEPTH_CAMERA_MONITOR_EXCEPTION
8400	Left Depth Sensor Error	Restart the machine. If the issue continues, contact your supervisor.	LEFT_DEPTH_CAMERA_UNCALIBRATED
8400-1	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_DISCONNECTED

8400-2	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_DELAY
8400-3	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_NEGATIVE_DELAY
8400-4	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_RATE
8400-5	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_BAD_TIMESTAMP_DIRECTION
8400-7	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	LEFT_DEPTH_CAMERA_MONITOR_EXCEPTION
8500	Right Depth Sensor Error	Restart the machine. If the issue continues, contact your supervisor.	RIGHT_DEPTH_CAMERA_UNCALIBRATED
8500-1	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_DISCONNECTED

8500-2	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_DELAY
8500-3	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_NEGATIVE_DELAY
8500-4	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_RATE
8500-5	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_BAD_TIMESTAMP_DIRECTION
8500-7	Sensor Error	Clean all the sensors with a clean microfiber cloth. Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume.	RIGHT_DEPTH_CAMERA_MONITOR_EXCEPTION
9001	Impact Detected	Inspect the machine and the surrounding area. Drive past any obstacles. If clear, press the Start/Pause button to resume.	IMPACT_DETECTED
9010	Left Side Obstacle Detected	Inspect the machine and the surrounding area. Drive past any obstacles. If clear, press the Start/Pause button to resume.	LEFT_BACKFACING_SAFETY_TRIGGERED

9011	Right Side Obstacle Detected	Inspect the machine and the surrounding area. Drive past any obstacles. If clear, press the Start/Pause button to resume.	RIGHT_BACKFACING_SAFETY_TRIGGERED
10000	Route Lost	Drive the machine to the Home Marker. Restart the route.	DELOCALIZED
10000-1	Machine is Off Path	Follow the arrow and drive the machine to the highlighted path. Make sure the path is clear. To resume, press the Start/Pause button.	FAILED_TO_RESUME
20000	Route Error	Retrain the route, starting and ending at the same Home Marker.	MAPPING_NOT_STARTED
20001	Route Error	Retrain the route, starting and ending at the same Home Marker.	DEPRECATED__ROUTE_CLOSURE_FAILED
20002	Route Error	Retrain the route to be at least two minutes long.	ROUTE_TOO_SHORT
20003	Gyro Error	Turn off the machine. Disconnect the battery cable for 15 seconds. Reconnect the cable and turn on the machine. If the issue continues, contact your supervisor.	MAPPING_IMU_ERROR
20004	Route Error	Retrain the route. Do not drive backwards while training.	ROUTE_IS_BACKWARDS
20005	Sensor Error	Clean the lower sensor with a clean microfiber cloth. Inspect for damage or obstructions. If the issue continues, contact your supervisor.	MAPPING_LIDAR_DELAY
20007	Route Failed to Save	Teach the route again, starting and ending at the same Home Marker.	ROUTE_FAILED
20008	Route Error	Retrain the route, starting and ending at the same Home Marker.	ROUTE_ENDPOINTS_EMPTY

20009	Gyro Error	Turn off the machine. Disconnect the battery cable for 15 seconds. Reconnect the cable and turn on the machine. If the issue continues, contact your supervisor.	MAPPING_IMU_ZERO
20011	Route Error	Retrain the route, starting and ending at the same Home Marker.	MAPPING_UNKNOWN
20012	Sensor Error	Clean the lower sensor with a clean microfiber cloth. Inspect for damage or obstructions. If the issue continues, contact your supervisor.	MAPPING_LIDAR_PITCHED_DOWN
30001	Error	Failed to load route data. Please try again.	GET_ROUTE_ERROR
40003	USB Connection Error	Restart the machine. If the issue continues, contact your supervisor.	USB_CONNECTION
40004	Gyro Error	Turn off and inspect the machine. Restart the machine. If the issue continues, contact your supervisor.	GYRO_MISMATCH
40005	Controller Error	Restart the machine. If the issue continues, contact your supervisor.	MACHINE_CONTROLLER_ERROR
40006	Steering Error	Turn off the machine. Wait 15 seconds. Turn on the machine. If the issue continues, contact your supervisor.	STEERING_ENCODER_ERROR

40007	Steering Calibration Adjustment Needed	Drive the machine back to the charging station. Turn off the machine. Notify your supervisor of this issue and include the error code number. This machine will need to be recalibrated.	STEERING_OUT_OF_RANGE
40008	Traction Encoder Error	Restart the machine. If the issue continues, contact your supervisor.	BROKEN_TRACTION_ENCODER_ERROR
40009	Vehicle Controller Interruption	Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume. If the issue continues, restart the machine.	VCU_RESET
40010	Vehicle Controller Error	Restart the machine. If the issue continues, contact your supervisor.	VCU_DISCONNECTED
50001	Potential Hazard Detected	Inspect the area for ramps, escalators, or potential drops. Drive the machine further along the path. To resume, press the Start/Pause button.	ESCALATOR_DETECTED
60000	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP
60018	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_FAULT_HANDLER_CALLED
60019	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_POST_FAULT_HANDLER
60020	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_POST_FAULT_HANDLER_MULTIPLE
60021	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_FAIL_SAFE_POR

60023	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_EXIT_CALLED
60024	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_STACK_CHECK_FAILED
60025	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_RAISE_CALLED
60026	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_ASSERT_CALLED
60027	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_KILL_CALLED
60028	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_UNALIGNED_MEMORY
60029	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_FLOATING_POINT
60040	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_IMU_MALFUNCTION
60081	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_INVALID_STEERING_COMMAND
60161	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_ESTOP_PULSE_TEST_FAILED
60173	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_CAN_SEND_FAILURE
60363	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_CORRUPT_CLIFF_DATA
60390	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_WD_PST_INIT

60400	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_GYRO_STEERING_MISMATCH
60421	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_MOVEMENT_MISMATCH_BACKWARD
60461	Calibration Error	Drive the machine back to the charging station. Turn off the machine. Notify your supervisor of this issue and include the error code number. This machine will need to be recalibrated.	FIRMWARE_ESTOP_SAFETY_ZONES_STEERING_OFFSET
60422	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_MOVEMENT_MISMATCH_STOPPED
60423	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_MOVEMENT_MISMATCH_MANUAL
60424	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_NO_MOVEMENT
60431	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_WDG_ASSERT
60432	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_WDG_END
60441	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_MR_ESTOP_ASSERT
60442	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_MR_VCU_DOWN
60443	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_MR_END
60444	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_SAFETY_TEST_MR_VCU_UP

60450	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_CONTROLLER_BAD_SAFETY_PARAMS
60451	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_CONTROLLER_WRONG_CUST_ID
60452	Firmware E-Stop Error	Restart the machine. If the issue continues, contact your supervisor.	FIRMWARE_ESTOP_CONTROLLER_FIRMWARE_VER
60500	Lithium Battery System Fault	Restart the machine. If the issue continues, contact customer service.	FIRMWARE_ESTOP_BMS_NO_KEEP_ALIVE
60501	Lithium Battery System Fault	Restart the machine. If the issue continues, contact customer service.	FIRMWARE_ESTOP_BMS_NO_STATE_OF_CHARGE
60502	Lithium Battery System Fault	Restart the machine. If the issue continues, contact customer service.	FIRMWARE_ESTOP_BMS_ERROR_FLAGS
60503	Lithium Battery System Fault	Restart the machine. If the issue continues, contact customer service.	FIRMWARE_ESTOP_BMS_MISSING_ENTRIES
70002	Error	Failed to load route data. Please try again.	ROUTE_LOADING_ERROR
70003	Route Failed to Save	Teach the route again, starting and ending at the same Home Marker.	ROUTE_SAVE_ERROR
90001	Controller Error	Restart the machine. If the issue continues, contact your supervisor.	CONTROLLER_FATAL
90002	Controller Error		CONTROLLER_NONFATAL
90003	Vehicle Controller Interruption	Inspect for damage or obstructions. If no issues are found, press the Start/Pause button to resume. If the issue continues, restart the machine.	CONTROLLER_BAD_SAFETY_PARAMS

N/A	Potential Hazard Detected	Inspect the machine. Make sure the path of the machine is clear or drive past any obstacles. If the path is clear, press the Start/Pause button to resume.	N/A
N/A	Water the Batteries	Check each battery level indicator. If low, use pump to add distilled water.	N/A
N/A		Restart the machine. If the issue continues, contact your supervisor.	N/A
N/A	Autonomy Disabled Error	Restart the machine. If the issue continues, contact your supervisor.	N/A
N/A	Invalid App State Error	Restart the machine. If the issue continues, contact your supervisor.	N/A
N/A	UI Error	Restart the machine. If the issue continues, contact your supervisor.	N/A
N/A	Home Marker Scan Error	Return to the Home Marker. Scan the Home Marker again. Do not move the machine until the scan is complete. If the issue continues, contact your supervisor.	N/A
N/A	Route Error	Retrain the route, starting and ending at the same Home Marker.	N/A
N/A	System Error	Restart the machine. If the issue continues, contact your supervisor.	N/A