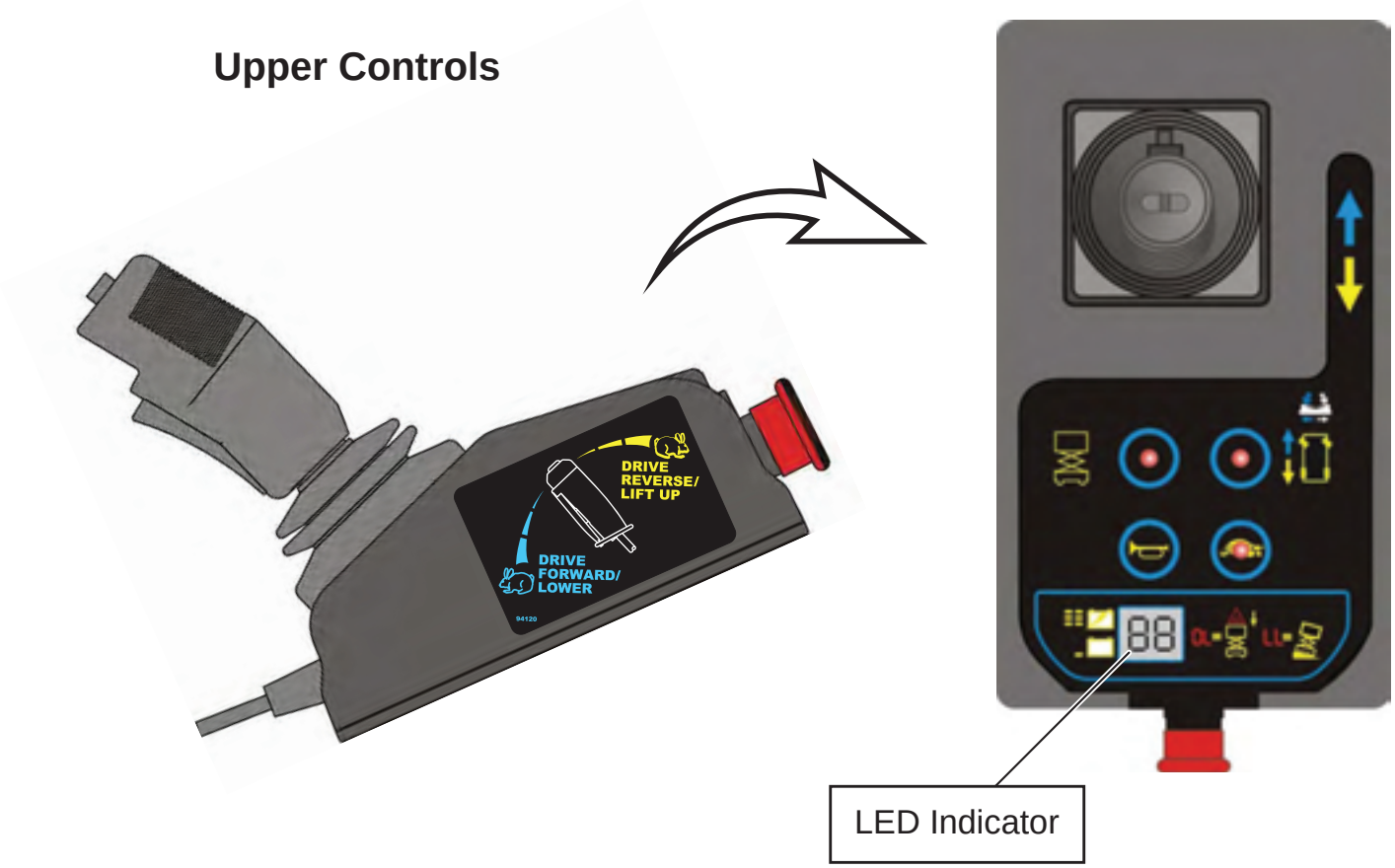
Fault Codes

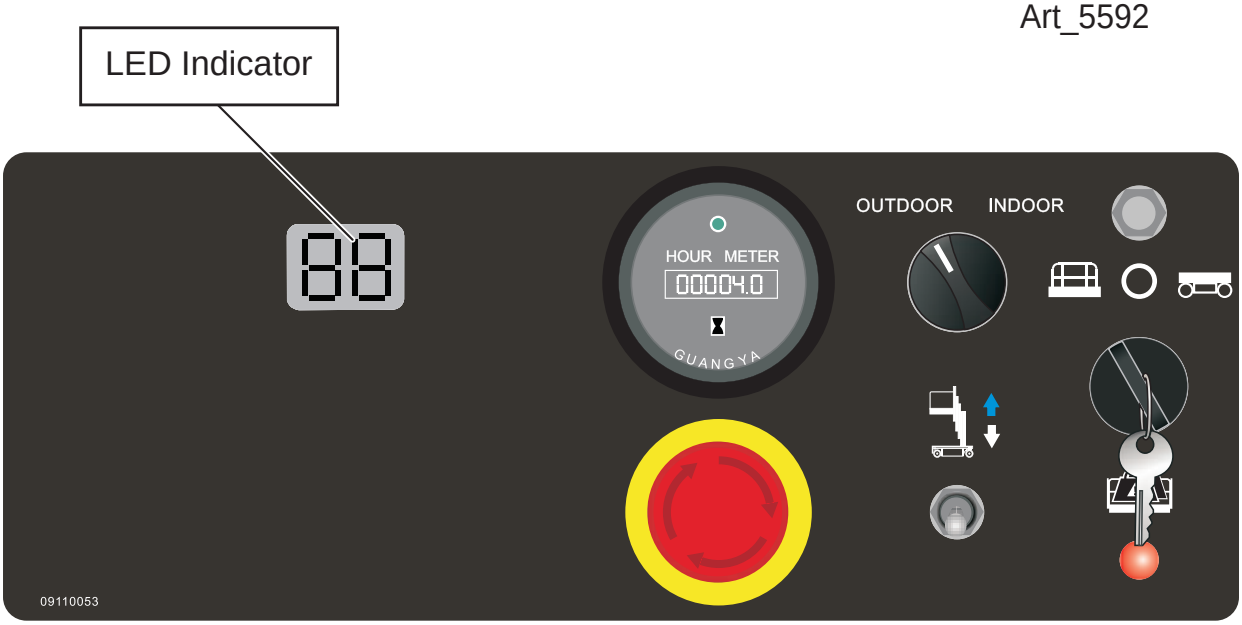
Fault Codes, when present, appear on the LED Indicator at the Upper Controls station and on the LED Screen at the Lower Controls station.

Upper Controls



Lower Controls

Art_5592



Error Indicator Readout

Art_5533

If the LED diagnostic readout displays an error code, such as LL, push in and turn the red Emergency Stop button to reset the system.

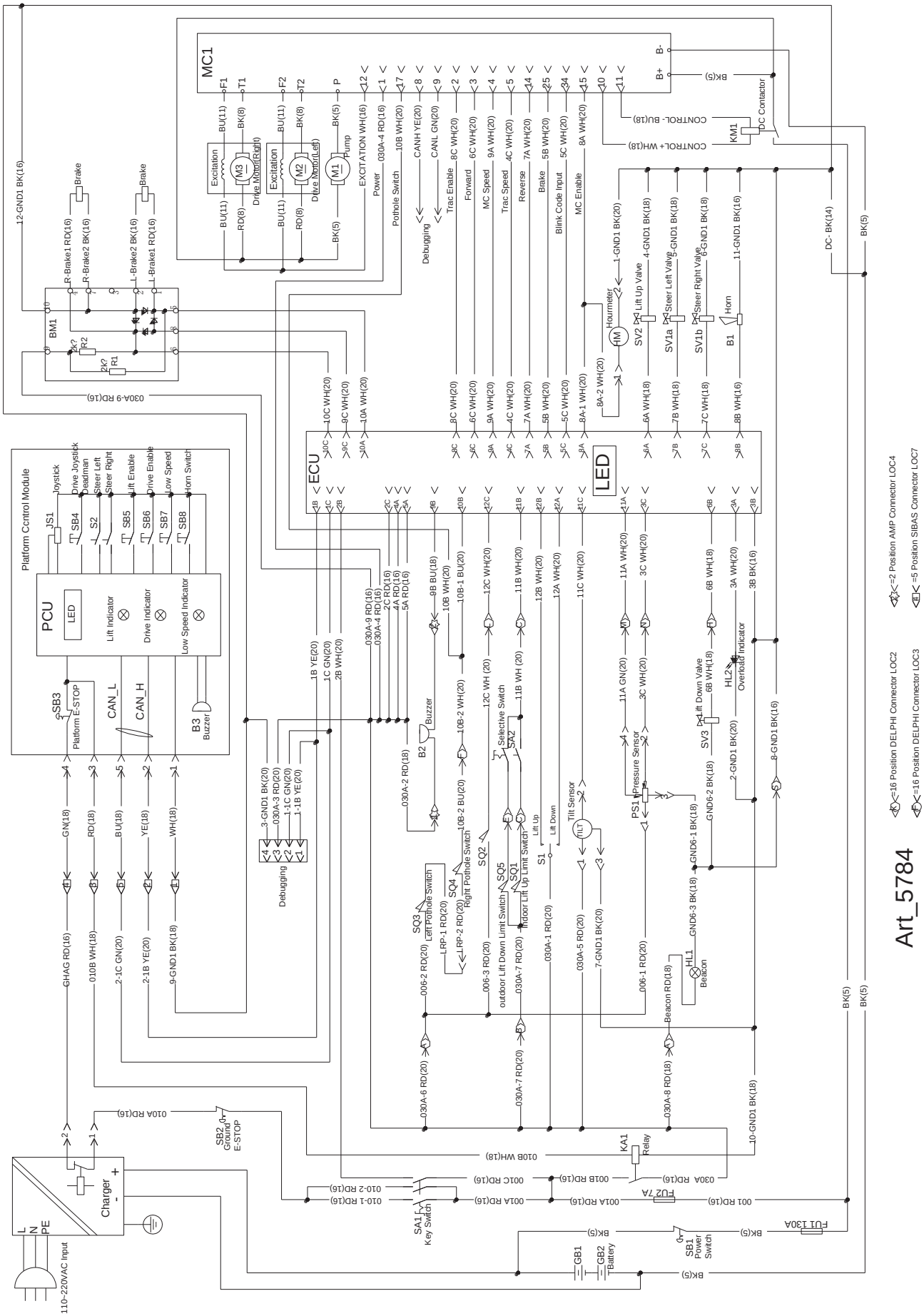
Fault	Description	Models	Solutions
01/10	System Initialization Fault	All Models	Check ECU
02/20	System Communication Fault	All Models	Check platform control box, check wiring to platform connector, check ECU, check battery voltage, check relay in lower cabinet
		Micro26®	Check height sensor, check pressure sensor
03	Invalid Option Setting	All Models	Reset option code
12	Chassis Up Or Down Switch ON At Power-Up	All Models	Check wiring to toggle switch, check toggle switch
18	Pothole Guard Fault	All Models	Check pothole limit switch, check pothole bar functionality, recalibrate height
30/35	No Functions	All Models	Remove telematics from hour meter
31	Pressure Sensor Fault	All Models	Check option code (older machines), check wiring to pressure sensor, check pressure sensor, recalibrate overload
32	Angle Sensor Fault	All Models	Check wiring to angle sensor (operating range 1.9-3.8V), check option code
36	Low Voltage Fault	All Models (Newer Machines)	Check battery voltage, check battery connections, load test batteries, replace batteries ONLY if necessary, charge machine
42	Left Turn Switch ON At Power-Up	All Models	Check joystick left steer button, check platform controller, replace joystick
43	Right Turn Switch ON At Power-Up	All Models	Check joystick right steer button, check platform controller, replace joystick
46	Joystick Enable Switch ON At Power-Up	All Models	Enable pushed before self-check finished, check dead-man switch, replace joystick
47	Joystick Not In Neutral At Power-Up	All Models	Check joystick for centering, replace joystick
52	Drive Forward Coil Fault	All Models	Check option code
53	Drive Reverse Coil Fault	All Models	Check option code
54	Up Coil Fault	All Models	Check lift coil for voltage, check resistance on coil, replace lift coil
55	Down Coil Fault	All Models	Check down coil for voltage, check resistance on coil, replace down coil
56	Right Steer Coil Fault	All Models	Check steer coil for voltage, check resistance on coil, replace steer coil
57	Left Steer Coil Fault	All Models	Check steer coil for voltage, check resistance on coil, replace steer coil
58	Brake Coil Fault • Brakes Are 46 Ohms	All Models	Check brake module and wiring, check brakes and wiring, check battery voltage
60	Motor Controller Fault	All Models	Cycle power to machine, replace motor controller

61	Motor Controller Sensor Fault	All Models	Check drive motor and wiring, check motor controller wiring, change option code, replace motor controller
62	Motor Controller Hardware Fail Safe Fault	All Models	Cycle power, check brake switch functionality and wiring, tighten drive motor connections, replace motor controller
63	Motor Controller Output Fault	All Models	Cycle power, tighten drive motor connections, replace motor controller
64	Motor Controller Fault	All Models	Replace motor controller
65	Motor Controller Throttle Fault	All Models	Check wiring to controller, replace motor controller
66	Motor Controller Reverse Fault	All Models	Replace motor controller
67	Motor Controller HPD Fault	All Models	Check contactor, change option code, replace ECU, replace motor controller
68	Low Voltage Fault	All Models	Check battery voltage, check battery connection, load test batteries, replace batteries ONLY if necessary, charge machine
69	High Neutral Current Fault	All Models	Motor controller thinks the brakes are on and the motors are still running (this message comes just before other faults, should be ignored in those cases), replace motor controller
70	Steer Input Out Of Range	All Models	Check for loose connection at motor controller, replace motor controller
71	Motor Controller Main Contactor Fault	All Models	Check wiring to contactor (check white & black for connection & voltage), check drive motor and wiring, check motor controller wiring
72	Motor Controller Over Voltage Fault	All Models	Check battery voltage (battery charger must NOT be connected), cycle power to machine, replace motor controller
73	Motor Controller	All Models	Drive or lift motor may be overheating (let the lift cool down), cycle power to machine, replace motor controller
74	Motor Controller Motor Fault	All Models	Check connections to motors, check wiring to motors, cycle power to the lift, replace motor controller
75	Motor Controller Pump Motor Fault	All Models	Check connections on pump motor, tap on pump motor (brushes possibly stuck), cycle power to machine, replace pump, replace motor controller
76	Motor Controller Left Drive Motor Fault	All Models	Check drive motor terminals, cycle power to the lift, replace motor controller
77	Motor Controller Right Drive Motor Fault	All Models	Check drive motor terminals, cycle power to the lift, replace motor controller
78	Pump Motor Short Fault • Should Be 0.8 To 1.4 Ohms	All Models	Check connections on pump motor, tap on pump motor (brushes possibly stuck), cycle power to machine, replace motor controller
79	Left Drive Motor Short • Should Be 0.5 To 2.0 Ohms For Micro19	1930SE ONLY	Check left drive motor terminal, check motor controller wiring
		Micro19®	Swap drive motor wires (if code changes trace wiring, if it does not replace motor controller), tighten drive motor terminals

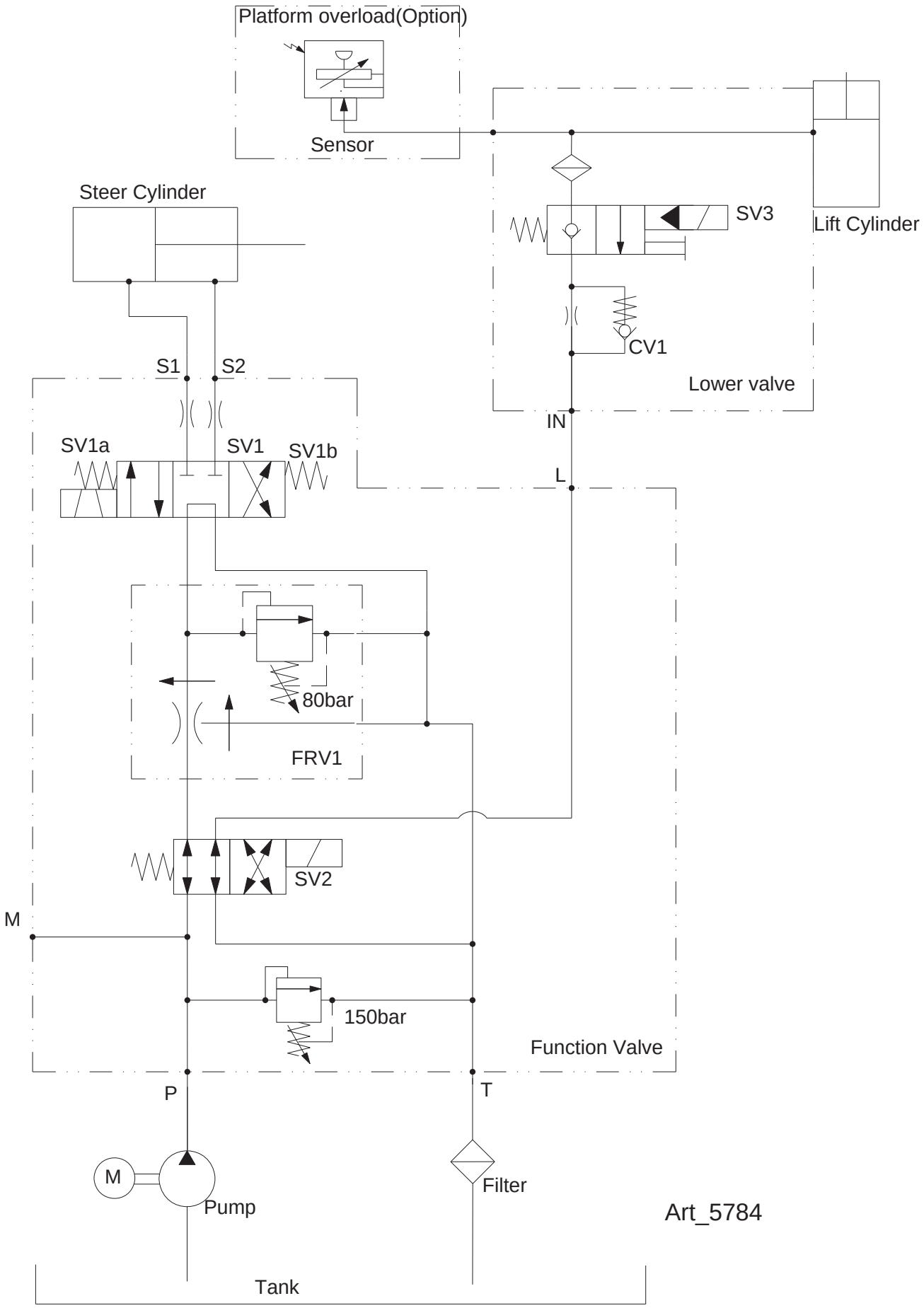
80	Over 80% Load Warning	All Models	Platform capacity close to limit of weight (consider not adding more load)
81	Right Drive Motor Short	1930SE/Micro19®	Check right drive motor and wiring, check motor controller and wiring
82	Right Brake Coil • Brakes Should Be 46 Ohms On Micro19 And 26 Ohms For All Others	All Models	Check battery voltage, check right brake terminals, check brake module and wiring, check contactor, check option code, check fuse near motor controller, replace ECU
83	Left Brake Coil	All Models	Check battery voltage, check left brake terminals, check brake module wiring, check contactor
		1930SE/Micro19®	Check drive motor terminals, check fuse connected to motor controller, replace motor controller
85	Brake Release Switch Closed	1930SE/Micro19® ONLY	Turn brake release switch off
86	Raised Brake Release Fault	1930SE ONLY	Brake release switch engaged when elevated
87	Brake Release Switch Fault	1930SE ONLY	Brake release switch is open
89	Drive Motor Field Open Fault	All Models	Check wiring on motors, check wiring to motor controller
90	Over 90% Load Warning	All Models	Platform getting close to weight capacity
91	Left Drive Motor Short	All Models	Check wiring to motor, check wiring to motor controller
92	Right Drive Motor Short	All Models	Check wiring to motor, check wiring to motor controller
99	Over 99% Load Warning	All Models	Platform has reached load capacity.
OL	Platform Overloaded	All Models	Remove excess load
LL	Tilted	All Models	Check wiring to tilt sensor, recalibrate tilt
H9	Height Not Calibrated	All Models	Calibrate height
CH	Not A Fault Code	All Models	Machine is in chassis controls

Option Code For Machines		
Model	**Older**	**With Overload (Yellow Gate)**
MICRO19®	To Serial #16900460 58 From Serial #16900461 62	E2
MICRO19XD®	N/A	E3
MICRO26®	N/A	27
1930SE	58	--
2632SE, 3346SE, 4046SE, 4555SE	30,26	A7
MME20, MME25	N/A	A7

Electrical Schematic



Hydraulic Schematic

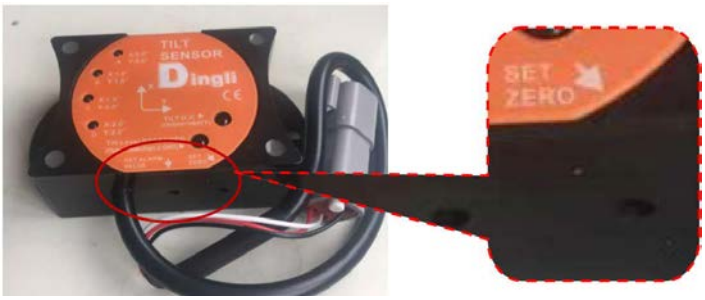


Calibration Instructions

The Platform Overload Sensing System may require calibration in the event of a malfunction or after the replacement of an Overload System component. Proper and correct calibration of the Overload system is critical for normal and trouble-free machine operation. Read and understand the instructions before beginning the calibration process.

Calibrate Tilt Sensor

1. Park the machine on flat level surface.
   Note: Calibrating the level sensor requires that the machine be perfectly level on both the X and Y axis. An inclinometer should be used when ensuring level. Machine power must be on.
2. Using the diagram below, locate the “SET ZERO” button located on the side of the sensor. Press and hold the “SET ZERO” button until the LEDs alternate red and green flashes. Release the button.
3. Press the “SET ZERO” button three times. The LEDs will turn off then only the green LED will illuminate, calibration is complete.



Calibrate Overload System

Note: The platform **<u>will lift automatically</u>** once the calibration has been initiated. Be sure that there are **<u>no overhead obstructions</u>** when choosing a location on which to calibrate the overload system.

Note: If a safety concern arises anytime during the automated lift/lower sequence, press the Emergency Stop switch immediately. The procedure can be restarted once it is safe to do so.

Empty Platform Sequence

1. Park the machine on flat level surface. Machine power must be on. Ensure that the platform is completely empty and there are no ‘extra’ items attached to the platform or guard rails that may add weight to the platform beyond that of an empty platform.
2. Turn the key switch to the Platform position. This will prevent the platform from lifting during the next step.
3. Using the lower Lift Switch (located on the lower control panel) perform the following sequence of up and down movement of the toggle switch. Do not operate the switch so slowly as to hold the switch more than 2.5 seconds or the sequence will be terminated.
   a. Down 5 times
   b. Up 1 time
   c. Down 5 times
   d. Up 1 time

e. Down 1 time
f. Up 1 time
g. Down 3 times

4. The process will be complete when the platform returns to the fully lowered and the horn stops sounding. Cycle Emergency Stop power and continue to the Loaded calibration steps.

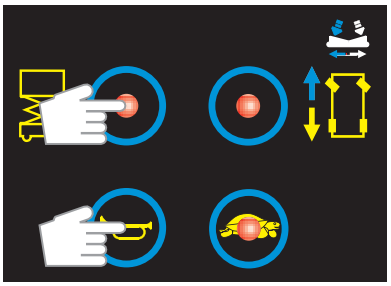
Loaded Platform Sequence

1. Park the machine on flat level surface. Machine power must be on. Ensure that the platform is completely empty and there are no ‘extra’ items attached to the platform or guard rails that may add weight to the platform beyond that of an empty platform.
2. Place weight in the center of the platform equal to rated platform capacity (500 LBS).
3. Turn the key switch to the Platform position. This will prevent the platform from lifting during the next step.
4. Using the lower Lift Switch (located on the lower control panel) perform the following sequence of up and down movement of the toggle switch. Do not operate the switch so slowly as to hold the switch more than 2.5 seconds or the sequence will be terminated.
   a. Down 5 times
   b. Up 1 time
   c. Down 5 times
   d. Up 1 time
   e. Down 5 time
5. The process will be complete when the platform returns to the fully lowered and the horn stops sounding. Once the Empty and the Loaded sequences are complete, the Platform Overload Calibration is complete. Remove weight from platform.

Parameter Adjustment

Speed Adjust State

1. Press and hold HORN and LIFT buttons while pulling the PCU's E-Stop (Out) to enter Speed Adjust State.

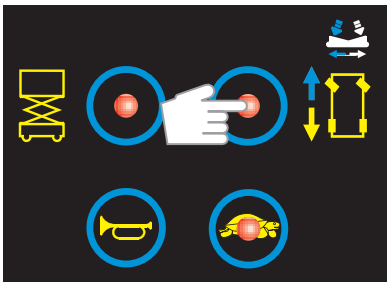

ART_5785C

2. "PS" and current Lift Speed are alternately flashing on the display. Release LIFT and HORN buttons.

ART_5785D

Drive High Speed with Platform Stowed

1. Press DRIVE button. The DRIVE LED indicates this mode is active. Adjust the speed using the RIGHT TURN (Increase) or LEFT TURN (Decrease) button on the top of the Joystick.

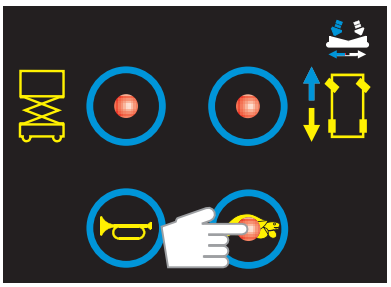

ART_5785E

2. The value can be changed from 00 to 100 (displays 9˙9) with the buttons on top of the Joystick.

ART_5785F

Drive Low Speed

1. Press DRIVE button. Press and hold the LOW SPEED button to select Drive Low Speed adjustment. Keep it held while adjusting the speed. The display indicates present set value. Adjust using the RIGHT TURN (Increase) or LEFT TURN (Decrease) button on top of the Joystick.


ART_5785G

2. The value can be changed from 00 to 100 (displays 9˙9) with the buttons on top of the Joystick.

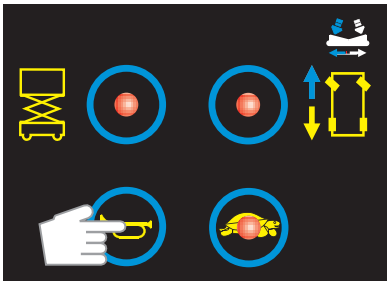
ART_5785F

Drive Elevated Speed

WARNING

Elevated Drive Speed is an important safety parameter set at the factory. Changing this parameter should only be conducted with express instructions from MEC Product Support Department.

1. Press DRIVE button. Press and hold the HORN button to select Drive Elevated Speed adjustment. Keep it held while adjusting the speed. The display will indicate the present set value. Adjust the speed using the RIGHT TURN (Increase) or LEFT TURN (decrease) button on top of the Joystick.


ART_5785H

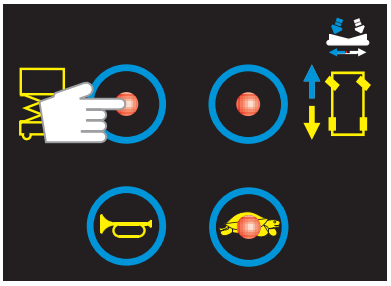
2. The value can be changed from 00 to Max Speed (see table below) with the buttons on top of the Joystick.

ART_5785I

Position	Drive Speed
Stowed	3.7 ft/sec (1.11 m/sec)
Raised	1.03 ft/sec (0.31 m/sec)

Lift Speed

1. Press LIFT button. The LIFT LED indicates this mode is active. Adjust the speed using the RIGHT TURN (Increase) or LEFT TURN (Decrease) button on top of the Joystick.

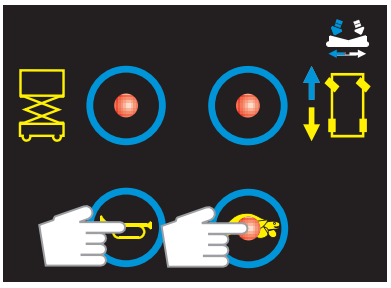

ART_5785J

2. The value can be changed from 00 to 100 (displays 9˙9) with the buttons on top of the Joystick.

ART_5785F

Steering Speed

1. Press DRIVE button. Press and hold the HORN and LOW SPEED buttons to select. Drive Steering Speed adjustment. Hold these buttons while adjusting the speed. Display indicates the present set value. Adjust the speed using the RIGHT TURN (Increase) or LEFT TURN (Decrease) button on top of the Joystick.

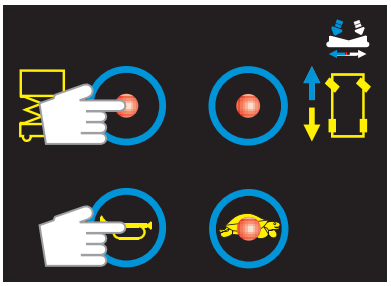

ART_5785K

2. The value can be changed from 00 to 100 (displays 9˙9) with the buttons on top of the Joystick.

ART_5785F

Machine Options State - Selecting Machine Options

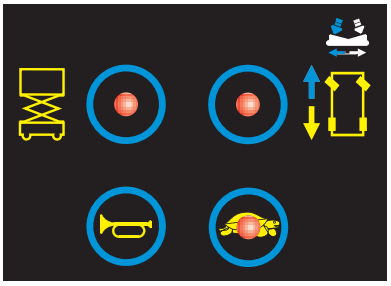
1. Press and hold the LIFT and HORN buttons while pulling the PCU's E-Stop out to select Machine Options adjustment.


ART_5785Q

2. "PS" and Elevated Speed value will alternatively flash on the display.

ART_5785D

3. Release LIFT and HORN buttons.

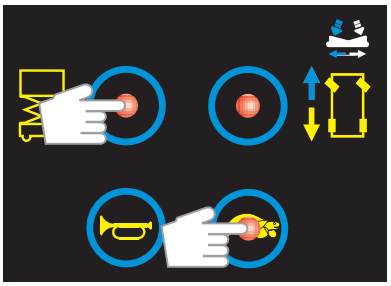

ART_5785L

4. "PS" will change to Lift Speed.

ART_5785F

Getting To The Machine Option Selection Mode

1. Press and hold the LIFT and LOW SPEED buttons for 3 seconds to enter the Machine Option selection mode.

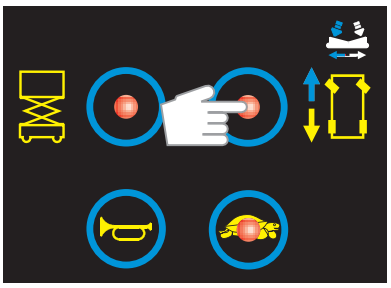

ART_5785M

2. "SC" is displayed when in Machine Option selection mode.

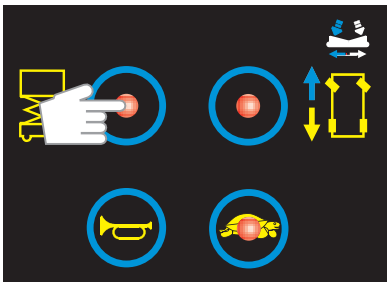
ART_5785N

Entering The Machine Option Selection Mode

1. Momentarily press DRIVE button to edit the right digit. The digit will be flashing.


ART_5785E

2. Then press LIFT button to edit the left digit. The Left digit will now be flashing.

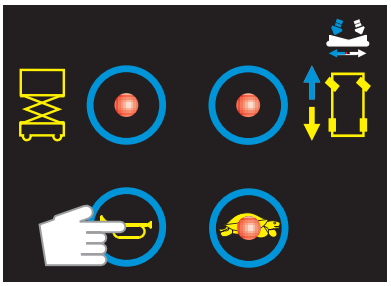


ART_5785J

3. The buttons on the top of the Joystick increase (LEFT TURN button) or decrease (RIGHT TURN button) the flashing digit.

ART_5785O

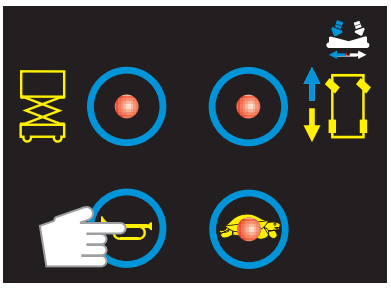
4. Press the HORN button, the dot will disappear.



ART_5785H

Save The New Values

1. Press the HORN button for 3 seconds to save changes.
2. Turn OFF power and ON to operate the machine with the new values.



ART_5785P