

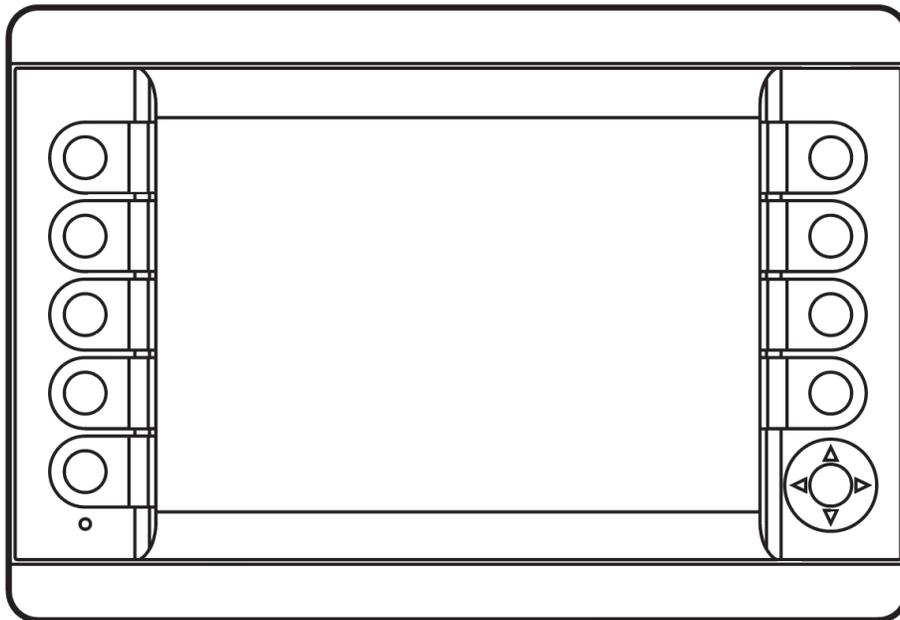


Heil InSight™ Integrated Display with 3rd Eye Cameras

SERVICE MANUAL SUPPLEMENT

ISSUED MAY 2018

TP1HP-SUP-0518



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WARNING

IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of Heil Co.'s products. Service procedures recommended by Heil are described in this service manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Heil could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each method. Consequently, Heil has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Heil must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

“Heil Environmental, as manufacturer of the equipment that is covered by this manual, is providing a product to the user who has acknowledged to have superior knowledge of the conditions of the use to which the product will be put. Heil Environmental relies upon the user’s superior knowledge in specifying any changes or modifications including, but not limited to, the inclusion or non inclusion of options that are required by the user and the Heil product, and for the particular application of the user relative to the Heil product.”

Heil InSight™ Integrated Display with 3rd Eye Cameras

TABLE OF CONTENTS

InSight Diagnostic Display

- Home Screen4
- Camera Screen and System (if Equipped)5
- Counters Screen8
- Service Screens8
- Calibration Screen9
- Maintenance Screen9
- Index**..... 11

Heil InSight™ Integrated Display with 3rd Eye Cameras

NOTES

Heil InSight™ Integrated Display with 3rd Eye Cameras

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2 **Heil InSight™ Integrated Display with 3rd Eye Cameras**
NOTES

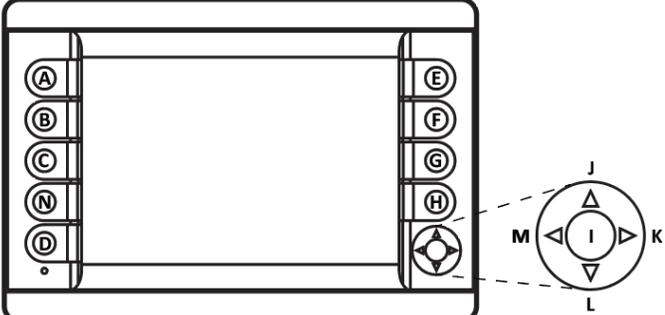
INSIGHT™ DIAGNOSTIC DISPLAY

The Heil InSight Display is the information center for the operator and troubleshooting tool for the service mechanic. The next few pages cover basic functionality. For additional information, see the Body Controller Software section of the Service Manual.

For the operator, it shows operation warnings and explains why the system may prevent a function so the operator can correct and operate in a safe and productive manner. For the service technician, it displays information regarding sensor failures, and with proper training, can be used to test sensors and other inputs and output functions.

Note: To toggle from Camera Mode to Home Screen: Hold right top button for 5 seconds. To toggle from Home Screen to Camera Mode: Hold left top button for 5 seconds (or power cycle truck ignition). While in Camera Mode, you can temporarily view any message on the display by holding down the right arrow on the display. See **Camera System** ⁵¹.

HEIL INSIGHT™ DIAGNOSTIC DISPLAY FUNCTIONS



A = HOME

1. RETURNS TO HOME SCREEN
2. TURNS ON CAMERA INPUT (IF OFF) - PRESS AND HOLD 5 SECONDS

B = COUNTERS

1. DISPLAYS COUNTERS/HOURS FOR CERTAIN FUNCTIONS WHILE IN SERVICE SCREEN
2. ACTIVATES CAN SHAKE FEATURE IF IN SERVICE SCREEN

C = CAMERA CONFIG

DISPLAYS CAMERA CONFIGURATION SCREEN

D = BRIGHTNESS

CHANGES BRIGHTNESS OF DISPLAY FOR NIGHT/DAY OPERATION

E = OPTIONS

1. DISPLAYS OPTIONS SCREEN TO CONFIGURE UNIT OPTIONS
2. TURNS OFF CAMERA INPUT (IF ON) - PRESS AND HOLD 5 SECONDS

F = SERVICE

DISPLAYS SERVICE SCREEN TO VIEW INPUTS/OUTPUTS FOR TROUBLESHOOTING

G = CALIBRATION

DISPLAYS CALIBRATION SCREEN TO CALIBRATE UNIT SETPOINTS

H = MAINTENANCE

1. DISPLAYS MAINTENANCE SCREEN TO ACTIVE SERVICE MODE
2. DEPRESSURIZES CUROTTO HYDRAULICS

I = OK

SELECTS ITEMS ON THE DISPLAY

J = UP ARROW

SCROLLS UP WHILE IN MENU SCREEN

K = RIGHT ARROW

MOMENTARILY TOGGLES TO DISPLAY CONTROLS SCREEN WHILE CAMERA VIEW IS ACTIVE

L = DOWN ARROW

SCROLLS DOWN WHILE IN MENU SCREEN

M = LEFT ARROW

BACKSPACE WHILE IN PASSWORD SCREEN

N = COUNTERS RESET

RESETS ALL COUNTERS IN MAINTENANCE SCREEN

212-3456

Heil InSight™ Diagnostic Display Functions Decal, Located in the Cab

4 Heil InSight™ Integrated Display with 3rd Eye Cameras

HOME SCREEN

When the truck key switch is on (for trucks without an integrated camera system) or after you toggle from Camera Mode to Home Screen (for trucks with an integrated camera system), the home screen will be displayed. This screen will show the operator button menu icons, diagnostic display messages and various cab control conditions, including if:

- Pump is on/off,
- Side Door is closed,
- Tailgate is closed,
- Tailgate is locked,
- Select O Pack on/off
- Forks Tucked
- Hydraulic Oil Low/OK,
- Filter Pressure OK.

When a fault occurs, the In-Cab Alarm will sound and a diagnostic message will be displayed with the status of respective Input / Output in the Insight display unit. See the figure below.

See **Body Controller Software Section** for display screen shots of potential diagnostic messages, listed disabled functions and instructions for fault reset.



DIAGNOSTIC DISPLAY MESSAGES

When a fault occurs, the In-Cab Alarm will sound and a Diagnostic Message will be displayed.

CAMERA SCREEN AND SYSTEM (IF EQUIPPED)

Depending on unit option configuration, your unit can be equipped with multiple cameras that are viewable on the InSight™ Diagnostic Display.

Toggle Camera / Home Screen Modes

For trucks equipped with a camera system, when the truck key switch is first tuned ON, the camera views will be shown on the display. You can temporarily view any message on the display by holding down the right arrow on the display. Release the right arrow to return to the camera view. You can also toggle from Camera Mode to the Heil Home Screen by following the instructions below.

1. 2018 models with 109-0309-20180509 revision of display code or later:
 - Toggle from Camera Mode to Home Screen: Hold right top button for 5 seconds.
 - Toggle from Home Screen to Camera Mode: Hold left top button for 5 seconds (or power cycle truck ignition).
2. 2018 models with 109-0309-20180416 revision of display code:
 - Toggle from Camera Mode to Home Screen: Hold OK button + right top button for 5 seconds.
 - Toggle from Home Screen to Camera Mode: Hold OK button + left top button for 5 seconds (or power cycle truck ignition).

3rd Eye Remote

- Red Power Button: turns power on/off to the video box.
- The “JUMP” Button: cycles through the different input configurations for the camera view, i.e. you can select whether you want to see 1,2,3 or 4 different cameras at one time.
- The “SOURCE” Button: cycles through the different camera views, i.e. once you have the input configuration selected using the “JUMP” button, the “SOURCE” button determines what camera view you see.
- The “MIRROR” Button: changes the camera view to a mirrored image of the previous view.

Camera Boot Up Process

If the video box gets turned off, the following steps need to be performed:

- Make sure the key switch is ON for the unit.
- On the 3rd Eye Remote, press the red power button on the top right.
- Turn the key switch OFF and then turn the key switch back ON (i.e. power cycle truck ignition).

You should now have the camera box turned on and the camera views (if configured) will be visible on the display.

6 Heil InSight™ Integrated Display with 3rd Eye Cameras

CAMERA SCREEN AND SYSTEM (IF EQUIPPED)

Camera System Configuration

The camera system will be configured in the InSight™ Diagnostic Display when you receive the Heil unit. However, if you install or uninstall cameras or install a new display on the unit, follow these steps to turn the cameras installed on your unit ON or OFF.

1. Select the Camera Config button (3rd button from the top on the left of the display). See the image below.



2. Type in the Camera Configuration password. Contact Heil Technical Service at 866-310-4345 to get the password.
3. Check the unit sales order to find what cameras are to be installed on the unit. On the camera configuration screen, scroll and select using the “OK” button the corresponding cameras per the sales order. ONLY CONFIGURE THE CAMERAS LISTED ON THE SALES ORDER. See the image below.



4. Cycle the power to the display and the cameras will be correctly configured.

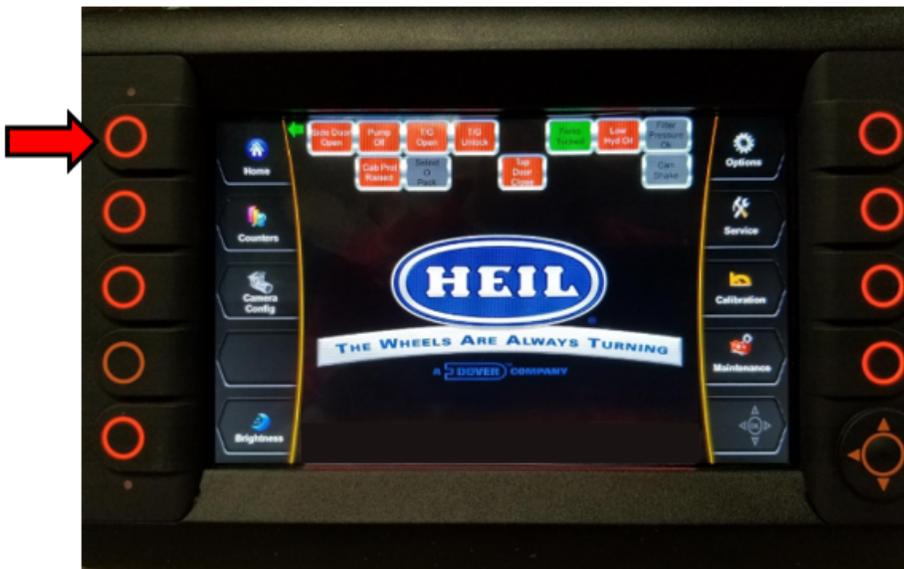
CAMERA SCREEN AND SYSTEM (IF EQUIPPED)

Camera System Configuration (Continued)

5. In the event that you need to turn off the camera view and go back to the control screen, press and hold the top right button on the display for 5 seconds. If a trigger is active (Reverse, L Turn, or R Turn), you will not be able to turn off the camera view. See the image below.



6. To turn the cameras back on, press and hold the top left button on the display for 5 seconds OR cycle the power to the display. See the image below.



8 Heil InSight™ Integrated Display with 3rd Eye Cameras

COUNTERS SCREEN

The Counters Screen allows you to monitor daily and total arm cycles, daily and total pack cycles, maintenance hours, pump hours and filter bypass hours.

SERVICE SCREENS

By pressing the service button you can toggle through several different screens in the display. These screens can be viewed anytime the key switch is on or the truck is running. Nothing on these screens can be adjusted and are view only. Input and Output Screens have several components. To see them all, you may need to press the down directional button to scroll down the list. See the Service Manual for more information.

- Inputs
- Inputs Ext
- Multiplex Inputs
- Remote Inputs
- Setpoints
- Outputs
- Outputs Ext
- Remote Outputs
- Control Power



SERVICE
Press to view Inputs,
Outputs, Setpoints and
Power screens

CALIBRATION SCREEN

The Calibration Screen allows you to calibrate various sensors dependent on how the unit is configured. See the Service Manual for Calibration instructions.

MAINTENANCE SCREEN

The unit has a Maintenance Mode within its Cortex Controller™ programming initiated on the InSight™ Diagnostic Display. Maintenance Mode is to be used ONLY by authorized service personnel in the event of a Cylinder or Packer Sensor failure on route to recover to a safe arms and forks position. Maintenance Mode can also be used to move the functions while servicing a failed Cylinder Sensor.



MAINTENANCE

Press to enter Maintenance Mode, then hold the OK button down for 5 seconds and release

NOTICE

Maintenance Mode is to be used ONLY by authorized service personnel. Unauthorized use of Maintenance Mode can result in extensive damage to the unit.

NOTICE

The arms, forks and packer will move very, very slowly due to the unit being in Service Mode.

1. Place the unit in **Maintenance Mode**.
 - a. On the InSight™ Diagnostic Display, enter Maintenance Mode and then hold the OK button down for 5 seconds and release.
 - b. The password screen will appear on the display.
 - c. Enter the service password **4 3 2 1** and press OK.
 - d. The bottom option should be Service Mode. Select it with the arrows and then press OK making sure that option changes from OFF to ON.
 - e. Press ESC to exit.
2. When service is complete, go back to the maintenance screen and turn off Service Mode. See Step 1 above. Service Mode also resets if power to the unit is cycled.

10 Heil InSight™ Integrated Display with 3rd Eye Cameras

Heil InSight™ Integrated Display with 3rd Eye Cameras

INDEX

C

cab control conditions 4

D

diagnostic display messages 4

I

InSight Diagnostic Display

3rd Eye remote 5

calibration screen 9

camera boot up process 5

camera screen and system 5

camera system configuration 5

counters screen 8

home screen 4

maintenance screen 9

service screens 8

toggle camera/home screen modes 3, 5

M

maintenance mode 9

Heil InSight™ Integrated Display with 3rd Eye Cameras



HEIL ENVIRONMENTAL WARRANTY STATEMENT

The Heil Co. d/b/a Heil Environmental ("Heil") warrants its solid waste collection equipment to be free from defects in material and workmanship under normal use for a period of one (1) year or 2000 hours of operation (whichever comes first) from the date of equipment In-Service or during the period of coverage offered by an extended warranty program, when proper service and maintenance as described in Heil Service Bulletins and Parts & Service Manuals are performed. The standard or extended equipment warranty is not transferable except for sales demonstration units.

This warranty is expressly limited to the repair or replacement of any component or part thereof, of any such refuse or recycling collection body manufactured by Heil that is proven to Heil's satisfaction to have been defective in material or workmanship. Such components or parts shall be repaired or replaced at Heil's option without cost to the standard purchaser for parts and labor provided such unit is returned to an authorized Heil Distributor for replacement or repair. The repair or replacement must be made during the standard or extended warranty coverage period. Before any warranty can be allowed on new equipment, a validated warranty registration form must be on file with Heil's Customer Service Department within sixty (60) days of the equipment's In-Service date. Wear items are excluded from warranty coverage.

All OEM service parts sold by Heil have a six (6) month warranty from the date of purchase. Aftermarket parts purchased from Heil are supported by a 90-day warranty. The parts warranty covers parts only, providing that factory inspection reveals a defect in material or workmanship. Labor, troubleshooting, equipment downtime, etc. is not covered under the parts warranty policy.

HEIL MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. HEIL DOES NOT ASSUME ANY LIABILITY OR ACCEPT CLAIMS FOR LOSS OF PROFITS, PRODUCT DOWN TIME OR ANY OTHER DIRECT, INCIDENTAL OR INDIRECT CONSEQUENTIAL LOSSES, COSTS, DAMAGES OR DELAYS.

Any improper use, operation beyond rated equipment or component capacity, substitution of parts that are not Heil-approved, or any alteration or repair by others in such a manner as in Heil's sole judgment affect the product operation or integrity shall void the warranty.

Other than the extension of the standard warranty period purchased under a supplemental Heil Extended Warranty Program, no employee or representative is authorized to modify this warranty in any way nor shall any other warranties be granted. No dealer-supplied warranty program is endorsed or supported by Heil.

Heil retains the right to modify its factory warranty program prospectively at any time.



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