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## Models Affected

This instruction describes how to install the 100839-HEI on the following Genie machines only:

GS-1530/1532/1930/1932     (before S.N. 75000)

GS-2032/2632     (before S.N. 75000)

GS-2046/2646/3246     (before S.N. 75000)

GR-12/15/20     (after GR05-4999)

## Suitability for Application

The end-user alone knows the specific needs of their application. Therefore, the end-user of this product is responsible to make decisions regarding the suitability of use with regard to their intended application. The customer is also responsible to ensure that products installed will conform to all applicable laws and regulations established by nation, state, locality, and regulating body.

## Important:

The procedure outlined in these instructions may only be performed by personnel who can identify risks and potential hazards and have been qualified to work with the specific equipment concerned.

Read this entire procedure before beginning. Follow instructions when performing the procedure. Shortcuts may cause expose you and others to potentially dangerous conditions.

| ⚠ | CAUTION |
|---|---|

Use all safety procedures recommended by your equipment's manufacturer when servicing your machine.

## Trademarks

The Genie brand name and model numbers are copyrighted by and trademarks of the Terex Corporation.

## Required to Perform Procedure:

#2 Slotted screwdriver

11/32 inch combination wrenches

7/16 inch combination wrenches

Dielectric grease

**Installation Instructions for:**
```
105295-HEI Kit
Gen1 to Gen5
Control System
```

## INSTALLATION PROCEDURES

## Components of Kits 105289 and 105290:

Screw – HHC, 1/4-20 x x0.75 inch
    P/N Z0186              Qty. 4

Washer – Lock ¼ inch
    P/N Z0188              Qty. 4

Controls  - Platform, Gen 5
    P/N 100840-HEI        Qty.1

Mount – Platform Controls
    P/N 105990            Qty.1

Bumper – Rubber
    P/N 43392              Qty.2

Screw – RHM, 8-32 x 0.5 inch
    P/N Z075               Qty.1

Washer – Flat, #8
    P/N 90126A512      Qty.1

Nut – Nylock, 8-32
    P/N 90675A009      Qty. 1

## Procedure

1. Tag and disconnect the platform controls wire harness from the control cable at the platform main deck.

2. **Models with foot switch**: Tag and disconnect the platform controls wire harness from the foot switch.

    **Models with security latch:**

3. Release the latch and remove the platform controls from the machine.

4. Remove the catch bracket, used to secure the platform controls to the platform, from the side of

    the platform controls mount bracket. Set the catch to the side. Discard the fasteners.

5. Using the provided 8-32 screw, washer and nut (P/N Z075, 90126A512, and 90675A009). Install the catch bracket, removed in step 4 onto the provided platform controls mount (P/N 105990) in approximately the same location it was installed previously. Securely tighten the fasteners. Do not over tighten.

6. Remove and discard the three joystick mount buttons from the platform railing.

    **All models:**

7. Using the provided 1/40-20 fasteners (P/N  Z0186 and Z0188), install the provided platform controls (P/N 100840-HEI) onto the mount from step 5.

8. If required and working from the inside of the platform, install the provided rubber bumpers (P/N 43392) in to the two holes in the platform support on the railing.

Install the platform controls onto the platform railing. Secure the latch on to the catch bracket (if equipped).

9. Using dielectric grease in the connectors, securely connect the platform controls wire harness to the control cable at the platform main deck.

10. **Models with foot switch:** Using dielectric grease in the connectors, securely connect the platform controls wire harness to the foot switch.

## Components of Kits 105291 and 105293:

Screw – HHC, 1/4-20 x 0.75 inch
   P/N  Z0186               Qty. 4

Washer – Lock, ¼ inch
   P/N Z0188               Qty. 4

Controls - Platform, Gen 5
   P/N 100840-HEI          Qty. 1

Mount – Platform Controls
   P/N 105990              Qty. 1

## Procedure

1. Tag and disconnect the platform controls wire harness from the control cable at the platform main deck.

2. **Models with foot switch**: Tag and disconnect the platform controls wire harness from the foot switch.

3. Remove the platform controls from the machine.

4. Using the provided 1/4-20 fasteners (P/N Z0186 and Z0188), install the provided platform controls ( P/N 100840-HEI) onto the provided platform controls mount (P/N 105990).

5. Install the platform controls onto the platform railing.

6. Using dielectric grease in the connectors, securely connect the platform controls wire harness to the control cable at the platform main deck.

7. **Models with foot switch**:  Using dielectric grease in the connectors, securely connect the platform controls wire harness to the foot switch.

PROCEDURES

## Components of Kit 105295:

Kit – ECM, Gen 5
P/N 100839-HEI                     Qty. 1

Screw – HHC, 1/4-20 x x0.75 inch
P/N Z0186                          Qty. 4

Washer – Lock ¼ inch
P/N Z0188                          Qty. 4

Controls  - Platform, Gen 5
P/N 100840-HEI                     Qty.1

Mount – Platform Controls
P/N 105990                         Qty.1

Screw – RHM, 8-32 x 0.5 inch
P/N Z075                           Qty.1

Washer – Flat, #8
P/N 90126A512                      Qty.1

Nut – Nylock, 8-32
P/N 90675A009                      Qty. 1

Decal – Platform Controls Location
P/N 82557                          Qty. 1

Adapter – Harness
P/N 96019                          Qty. 1

## Procedure

1. Install the provided Gen 5 ECM Kit (P/N 100839-HEI) onto the machine. Refer to and follow the installation instructions included with the unit.

2. Tag and disconnect the platform controls wire harness from the control cable at the platform main deck.

3. Release the latch and remove the platform controls from the machine.

4. Remove the catch bracket, used to secure the platform controls to the platform, from the side of the platform controls mount bracket. Set the catch to the side. Discard the fasteners.

5. Using the provided 8-32 screw, washer and nut (P/N Z075, 90126A512, and 90675A009), install the catch bracket, removed in step 4, onto the provided platform controls mount (P/N 105990) in approximately the same location it was installed previously. Securely tighten the fasteners. Do not over tighten.

6. Using the provided 1/4-20 fasteners (P/N Z0186 and Z0188), install the provided  platform controls ( P/N 100840-HEI) onto the mount from step 5.

7. Remove and discard the three joystick mount buttons  from the platform railing.

8. Install the provided decal (P/N 82557) onto the platform railing at the location the platform controls will be placed. The surface must be clean and dry before installation.

9. Install the platform controls onto the platform railing. Secure the latch into the catch bracket.

10. Using dielectric grease in the connectors, securely connect the provided harness adapter (P/N 96019) to the platform control cable at the platform main deck.

11. Using dielectric grease in the connectors, securely connect the platform controls wire harness to the platform control cable with adapter at the platform main deck.

## Changing the Software Configuration

| IMPORTANT |
|:---:|
| Perform this procedure on a solid level surface with the platform in the stowed position. |

1. Pull out the red Emergency Stop button to the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to platform control.

4. At the platform controls, press and hold the lift function select and speed select buttons, and pull out the red Emergency Stop button to the on position.

> Outcome: The diagnostic display at the platform controls and the ECM, will show "SC".

5. Release the lift function select and speed select buttons.

> Outcome: The diagnostic display will show the current configuration.
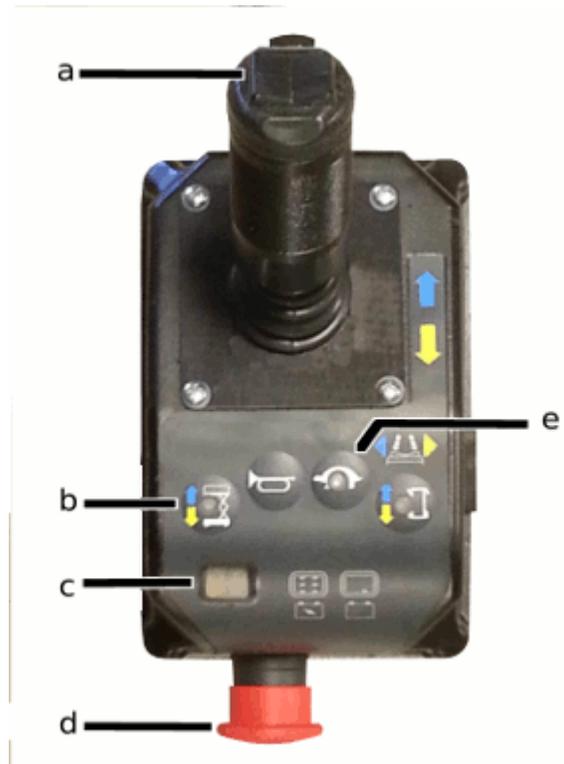
6. Press the lift function select button.

> Outcome: The "tens" digit setting will be activated and the current "tens" setting will flash in the diagnostic display. Use the steering thumb rocker switch on the joystick to increase or decrease the value. Refer to the Configuration Code Chart for configuration settings.

7. Press and hold the lift function select button for a minimum of 3 seconds to set the "tens" value.

8. Press the speed select button.

> Outcome: The "ones" digit setting will be activated and the current "ones" setting will flash in the diagnostic display. Use the steering thumb rocker switch on the joystick to increase or decrease the value. Refer to the Configuration Code Chart for configuration settings.

9. Press and hold the speed select button for a minimum of 3 seconds to set the "ones" value.

10. Turn the key switch to the off position to allow the settings take effect.

11. Perform the function tests. Refer to the operator's manual for your machine.

12. The procedure is complete.



a    Joystick Controller with Thumb Steering Rocker

b    Lift Function Select Button

c    Diagnostic Display

d    Red Emergency Stop Button

e    Speed Select Button

## Machine Configurations

Configuration Code Chart for.................................
GS-1530, GS-1532, GS-1930, and GS-932 Models before serial numbers GS3005-75000

A mark in the five right columns indicates that the configuration code, at left, includes this option.

| Diagnostic Display Code | DIP Switch Code | Motion Beacon | Motion Alarm | Lift Drive Cutout | Overload Cutout | Descent Delay |
|---|---|---|---|---|---|---|
| 00 | 00000000 | | | | | |
| 01 | 00000100 | | | | | X |
| 02 | 00001000 | | | | X | |
| 03 | 00010000 | | | X | | |
| 04 | 00100000 | | X | | | |
| 05 | 01000000 | X | | | | |
| 06 | 00001100 | | | | X | X |
| 07 | 00010100 | | | X | | X |
| 08 | 00100100 | | X | | | X |
| 09 | 01000100 | X | | | | X |
| 10 | 00011100 | | | X | X | X |
| 11 | 00101100 | | X | | X | X |
| 12 | 01001100 | X | | | X | X |
| 13 | 00110100 | | X | X | | X |
| 14 | 01010100 | X | | X | | X |
| 15 | 01100100 | X | X | | | X |
| 16 | 00111100 | | X | X | X | X |
| 17 | 01011100 | X | | X | X | X |
| 18 | 01101100 | X | X | | X | X |
| 19 | 01110100 | X | X | X | | X |
| 20 | 01111100 | X | X | X | X | X |
| 21 | 00011000 | | | X | X | |
| 22 | 00101000 | | X | | X | |
| 23 | 01001000 | X | | | X | |
| 24 | 00111000 | | X | X | X | |
| 25 | 01011000 | X | | X | X | |
| 26 | 01101000 | X | X | | X | |
| 27 | 01111000 | X | X | X | X | |
| 28 | 00110000 | | X | X | | |
| 29 | 01010000 | X | | X | | |
| 30 | 01110000 | X | X | X | | |
| 31 | 01100000 | X | X | | | |

## Options Defined

GS-1530, GS-1532, GS-1930, and GS-1932 Models before serial numbers GS3005-75000

**Motion Beacon**: The motion beacon option flashes only when operating a function.

**Motion Alarm:** The motion alarm will sound when operating any function.

**Lift/Drive Cut Out**: This cuts out lift and drive functions when the machine exceeds the rating on the serial plates. Configured on all machines.

**Platform Overload**: This cuts out all functions when the pressure sensor is overloaded. The additional weight must be removed from the platform before any function can be resumed. Required for CE models.

**Descent Delay:** This option halts descent at approximately 7 feet ( 2.1 m). All controls must be released for 4 to 6 seconds before descent is re-enabled. Required for CE models.

**Battery Drain Alarm:** When the machine is turned on and no function is activated for 10 minutes, the alarm will sound once every 3 seconds. To activate this option, refer to: "How to Activate the Battery Drain Alarm Option".

## Configuration Code Chart and Machine Option Definitions for GS-1530, GS-1532, GS-1930, and GS-932 Models

**(after serial numbers GS3005-74999)**

All configuration, programming and speed tuning information can be found in the Service Manual. Refer to the Service Manual for your machine.

## How to Activate the Battery Drain Alarm Option

1. Pull out the red Emergency Stop button the the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to p;platform control.

4. At the platform controls, press and hold the lift function select and speed select buttons, and pull out the red Emergency Stop button to the on position.

> Outcome: The diagnostic display, at the platform controls and the EMC will show "SC".

5. Release the lift finction select and speed select buttons.

> Outcome: The disganostic display will show the current configuration.

6. Press the speed select button.

> Outcome: The "ones" digit setting will be activated and the current "ones" setting will flash in the diagnostic display.

7. Press the horn button.

> Outcome: A dot, located at the lower right of the diagnostic display window, will become illuminated. This indicates that the battery drain alarm option has been activated.

8. Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

Note: To deactivate the battery drain alarm option on a machine which has the option activated, repeat this procedure. When the ECM is in the "SC" mode and the option is deactivated , there will not be an illuminated dot in the diagnostic display window.

**Installation Instructions for:**
```
105295-HEI Kit
Gen1 to Gen5
Control System
```

## Configuration Code Chart
### GS-2032/2632 and
### GS-2046/2646/3246 Models

**(before serial number GS3205-75000 and before serial number GS4605-75000)**

A mark in the five right columns indicates that the configuration code, at left, includes this option

| Diagnostic Display Code | DIP Switch Code | Motion Beacon | Motion Alarm | Lift Drive Cutout | Overload Cutout | Descent Delay |
|---|---|---|---|---|---|---|
| 32 | 10000000 | | | | | |
| 33 | 10000100 | | | | | X |
| 34 | 10001000 | | | | X | |
| 35 | 10010000 | | | X | | |
| 36 | 10100000 | | X | | | |
| 37 | 11000000 | X | | | | |
| 38 | 10001100 | | | | X | X |
| 39 | 10010100 | | | X | | X |
| 40 | 10100100 | | X | | | X |
| 41 | 11000100 | X | | | | X |
| 42 | 10011100 | | | X | X | X |
| 43 | 10101100 | | X | | X | X |
| 44 | 11001100 | X | | | X | X |
| 45 | 10110100 | | X | X | | X |
| 46 | 11010100 | X | | X | | X |
| 47 | 11100100 | X | X | | | X |
| 48 | 10111100 | | X | X | X | X |
| 49 | 11011100 | X | | X | X | X |
| 50 | 11101100 | X | X | | X | X |
| 51 | 11110100 | X | X | X | | X |
| 52 | 11111100 | X | X | X | X | X |
| 53 | 10011000 | | | X | X | |
| 54 | 10101000 | | X | | X | |
| 55 | 11001000 | X | | | X | |
| 56 | 10111000 | | X | X | X | |
| 57 | 11011000 | X | | X | X | |
| 58 | 11101000 | X | X | | X | |
| 59 | 11111000 | X | X | X | X | |
| 60 | 10110000 | | X | X | | |
| 61 | 11010000 | X | | | X | |
| 62 | 11110000 | X | X | X | | |
| 63 | 11100000 | X | X | | | |

## Options Defined

GS-2032/2362 and GS-2046/2646/3246 Models before serial number GS32005-75000 and before serial number GS4605-75000.

**Motion Beacon**: The motion beacon option flashes only when operating a function.

**Motion Alarm:** The motion alarm will sound when operating any function.

**Lift/Drive Cut Out**: This cuts out lift and drive functions when the machine exceeds the rating on the serial plates. Configured on all machines.

**Platform Overload**: This cuts out all functions when the pressure sensor is overloaded. The additional weight must be removed from the platform before any function can be resumed. Required for CE models.

**Descent Delay:** This option halts descent at approximately 7 feet ( 2.1 m). All controls must be released for 4 to 6 seconds before descent is re-enabled. Required for CE models.

**Battery Drain Alarm:** When the machine is turned on and no function is activated for 10 minutes, the alarm will sound once every 3 seconds. To activate this option, refer to:
"How to Activate the Battery Drain Alarm Option".

## Configuration Code Chart
### GS-2032/2632 and
### GS-2046/2646/3246 Models

**(after serial number GS3205-74999 and after serial number GS4605-74999)**

All configuration, programming and speed tuning information can be found in the Service Manual. Refer to the Service Manual for your machine.

## How to Activate the Battery Drain Alarm Option

1. Pull out the red Emergency Stop button the the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to p;platform control.

4. At the platform controls, press and hold the lift function select and speed select buttons, and pull out the red Emergency Stop button to the on position.

> Outcome: The diagnostic display, at the platform controls and the EMC will show "SC".

5. Release the lift finction select and speed select buttons.

> Outcome: The disganostic display will show the current configuration.

6. Press the speed select button.

> Outcome: The "ones" digit setting will be activated and the current "ones" setting will flash in the diagnostic display.

7. Press the horn button.

> Outcome: A dot, located at the lower right of the diagnostic display window, will become illuminated. This indicates that the battery drain alarm option has been activated.

8. Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.

Note: To deactivate the battery drain alarm option on a machine which has the option activated, repeat this procedure. When the ECM is in the "SC" mode and the option is deactivated , there will not be an illuminated dot in the diagnostic display window.

## Configuration Code Chart and
##    Machine Option Definitions

### GR-12, GR-15 and GR-20 Models

All configuration, programming, and speed tuning information can be found in the Service Manual. Refer to the Service Manual for your machine.

## SPEED TUNING

### How to Adjust the Lift Speed

| ⚠ | DANGER |
|---|---|

Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

| ⚠ | DANGER |
|---|---|

Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

1. Pull out the red Emergency Stop button to the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to platform controls.

4. At the platform controls, press and hold the lift function select and horn buttons and pull out the red Emergency Stop button to the on position.

> Outcome: The diagnostic display will show "PS".

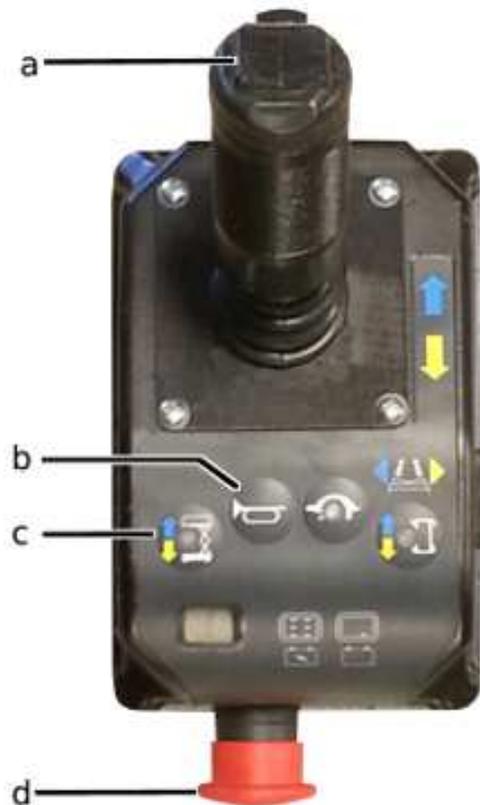5. Release the lift function select and horn buttons.

> Outcome: The diagnostic display, at the platform controls and the ECM, will show the maximum lift speed percentage.

6. Press the lift function select button.

7. Use the steering thumb rocker switch on the joystick to increase or decrease the maximum lift speed percentage. Refer to Section 2, Specifications, in the appropriate Service Manual for function speeds.

8. Turn the key switch to the off position.

   *Note: Any change in software settings will not take effect until the key switch is turned to the off position.*



| a | Joystick Controller with Thumb Steering Rocker |
|---|---|
| b | Horn Button |
| c | Lift Function Select Button |
| d | Red Emergency Stop Button |

SPEED TUNING

## How to Adjust the
## Stowed Drive Speed

| ⚠ | **DANGER** |
|---|---|

Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip  over resulting in death or serious injury.

| ⚠ | **DANGER** |
|---|---|

Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

1.  Pull out the red Emergency Stop button to the on position at the ground controls.

2.  Push in the red Emergency Stop button to the off position at the platform controls.

3.  Turn the key switch to platform controls.

4.  At the platform controls, press and hold the lift function select and horn buttons and pull out the red Emergency Stop button to the on position.

Outcome: The diagnostic display will show "PS".

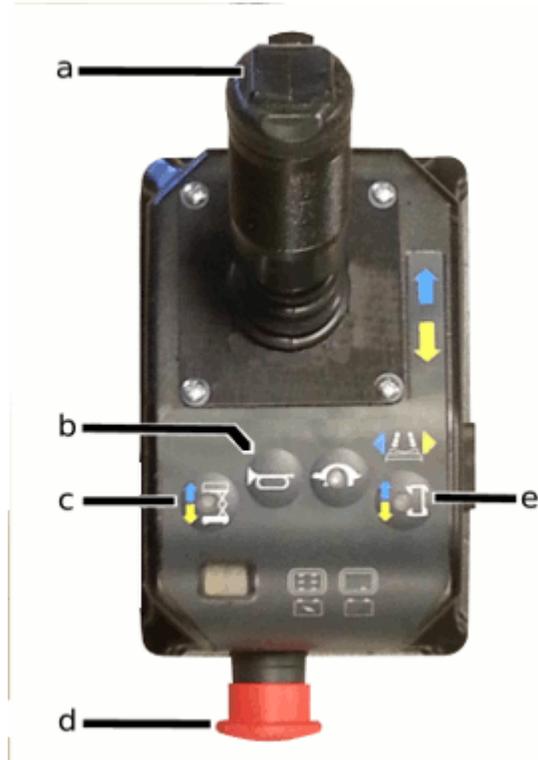5.  Release the lift function select and horn buttons.

Outcome: The diagnostic display, at the platform controls and the ECM, will show the maximum lift speed percentage.

6.  Press the drive function select button.

Outcome: The diagnostic display will show the stowed drive speed percentage.

7.  Use the steering thumb rocker switch on the joystick to increase or decrease the stowed drive speed percentage. Refer to Section 2, Specifications, in the appropriate Service Manual for function speeds.

8.  Turn the key switch to the off position.

    *Note: Any change in software settings will not take effect until the key switch is turned to the off position.*



a     Joystick Controller with Thumb  Steering Rocker

b     Horn Button

c     Lift Function Select Button

d     Red Emergency Stop Button

e     Drive Function Select Button

SPEED TUNING

## How to Adjust the Raised Drive Speed

| ⚠ | DANGER |
|---|---|

Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

| ⚠ | DANGER |
|---|---|

Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

1. Pull out the red Emergency Stop button to the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to platform controls.

4. At the platform controls, press and hold the lift function select and horn buttons and pull out the red Emergency Stop button to the on position.

   Outcome: The diagnostic display will show "PS".

5. Release the lift function select and horn buttons.

   Outcome: The diagnostic display, at the platform controls and the ECM, will show the maximum lift speed percentage.

6. Press and release the drive button.

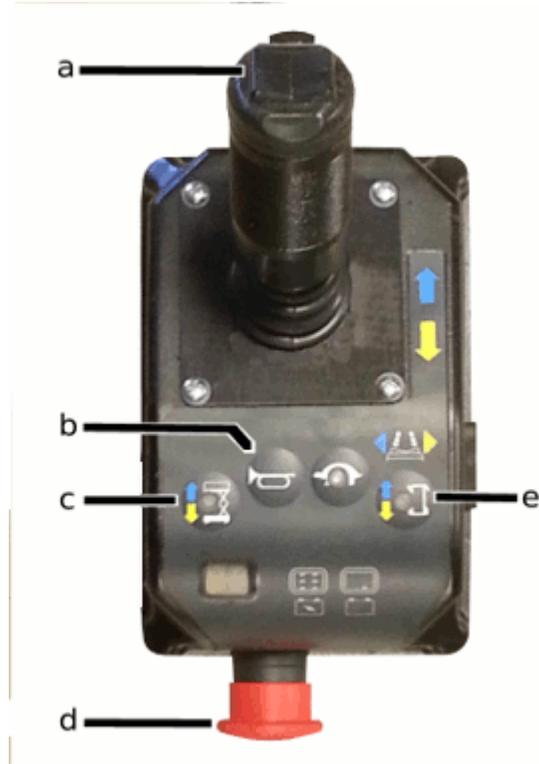   Outcome: The drive function button should be lit.

7. Press and hold the horn button.

   Outcome: The diagnostic display will show the raised drive speed percentage.

8. Use the steering thumb rocker switch on the joystick to increase or decrease the raised drive speed percentage. Refer to Section 2, Specifications, in the appropriate Service Manual for function speeds.

9. Turn the key switch to the off position.

   Note: Any change in software settings will not take effect until the key switch is turned to the off position.



| a | Joystick Controller with Thumb Steering Rocker |
|---|---|
| b | Horn Button |
| c | Lift Function Select Button |
| d | Red Emergency Stop Button |
| e | Drive Function Select Button |

SPEED TUNING

## How to Adjust the
## Slow Drive Speed – GR Models

| ⚠ | **DANGER** |
|---|---|

Tip-over hazard. Do not adjust the lift and/or drive speed higher than specified in this procedure. Setting the function speeds greater than specifications could cause the machine to tip over resulting in death or serious injury.

| ⚠ | **DANGER** |
|---|---|

Tip-over hazard. This procedure must only be performed by a trained service professional. Attempting this procedure without the necessary skills will result in death or serious injury.

1. Pull out the red Emergency Stop button to the on position at the ground controls.

2. Push in the red Emergency Stop button to the off position at the platform controls.

3. Turn the key switch to platform controls.

4. At the platform controls, press and hold the lift function select and horn buttons and pull out the red Emergency Stop button to the on position.

Outcome: The diagnostic display will show "PS".

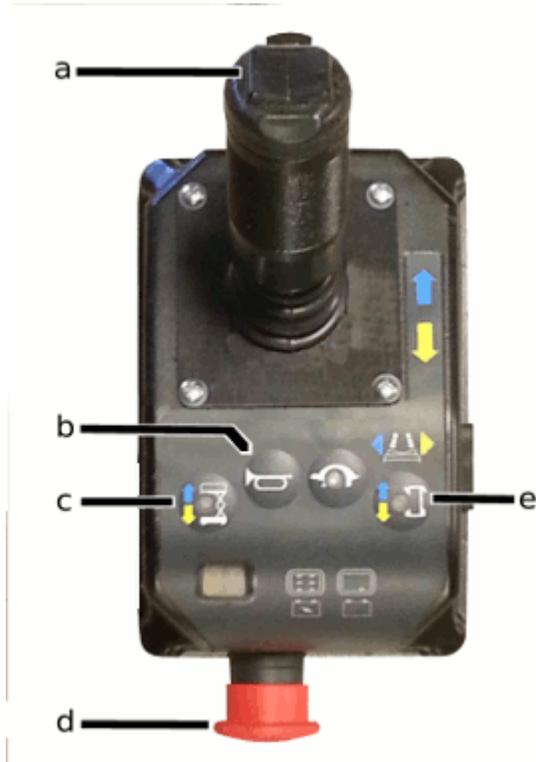5. Release the lift function select and horn buttons.

Outcome: The diagnostic display, at the platform controls and the ECM, will show the maximum lift speed percentage.

6. Press and hold the slow speed select button.

Outcome: The diagnostic display will show the slow drive speed percentage.

7. Use the steering thumb rocker switch on the joystick to increase or decrease the slow drive speed percentage. Refer to Section 2, Specifications, in the appropriate Service Manual for function speeds.

8. Turn the key switch to the off position.

Note: Any change in software settings will not take effect until the key switch is turned to the off position.



a    Joystick Controller with Thumb Steering Rocker

b    Horn Button

c    Lift Function Select Button

d    Red Emergency Stop Button

e    Drive Function Select Button

✧