



Lock Out/Tag Out (LOTO) User Manual

Version 1.0

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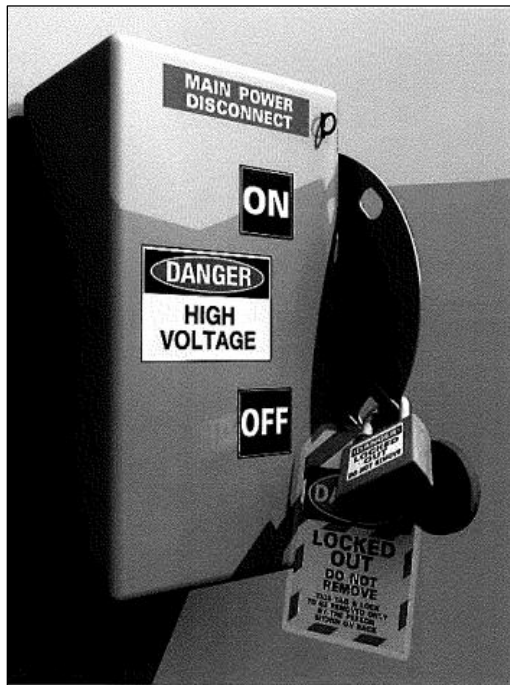
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What is the Kiewit LOTO App?

Lock Out, Tag Out (LOTO) is a safety measure used by industrial companies in physical locations to ensure the safety of personnel and the protection of equipment during maintenance or repair work. During a LOTO, potentially dangerous machines are powered down (*isolated*) and cannot be started up again while the work is ongoing.

Before work begins, a system of tags attached to locks is used to identify equipment being worked on and to prevent isolation from being removed while work is still being performed. Only the person who locked a machine out can remove the lock once work has finished.

LOTO creates a safe environment while working amongst hazardous equipment and is mandated by law in the United States and other countries.



The Kiewit LOTO app enhances, and in some instances replaces, the traditional paper system used to track equipment and collect signatures by incorporating technology into the manual processes. Using mobile devices, a Tagging Authority can safely perform the required Lock-Out/Tag Out procedures and obtain required signatures and information in real-time and in a more streamlined and effective way.

Personnel Involved in a LOTO

- **Initial Requestor**—makes a request for repair or maintenance work.
- **LOTO Holder**—safeguards all LOTO keys.
- **LOTO System Admin**—creates lists of [systems](#), [equipment](#), and all [locks](#) to be used in the LOTO process.

Steps in the LOTO Process

1. The [Initial Requestor](#) makes a request for repair or maintenance work.
2. The [Tagging Authority](#) determines the proper isolation necessary to safely perform the requested scope of work.
3. The [LOTO System Admin](#) creates lists of [systems](#), [equipment](#), and [locks](#) to be used in the LOTO process.
4. The Tagging Authority fills out the [Main Record Form](#) detailing system information, hazardous energy, and scope of work boundary isolation points. (The LOTO is In Progress.)
5. The Tagging Authority prints the [LOTO tags](#), performs a walk-down, and tags and locks equipment.
6. The Tagging Authority fills out the [Tagging Authority Verification section](#) of the Main Record Form and obtains a signature from the [LOTO Holder](#). The Tagging Authority places the keys to all locks into the [Main Lock Box](#). (The LOTO is Open.)
7. The maintenance/repair work is performed by workers who sign onto an open LOTO (in the [Personnel Sign-On](#) and/or [Satellite Sign-on](#) sections of the Main Record Form).
8. The Tagging Authority verifies that the work is complete and that all signatures, authorizations, and other pertinent details have been obtained (in the [Personnel Sign-off](#) and/or [Satellite Sign-off](#) sections of the Main Record Form).
9. All locks and tags are physically removed, and the Tagging Authority [closes the LOTO](#). (The LOTO is Closed.) In accordance with Kiewit's record retention policies, all relevant information is retained in a document repository database.

LOTO Statuses

A LOTO can have one of the following statuses:

In Progress—information pertaining to the LOTO is being gathered.



Open—equipment has been isolated with tags and locks. Personnel are signed-on and currently performing work on equipment where energy has been isolated.

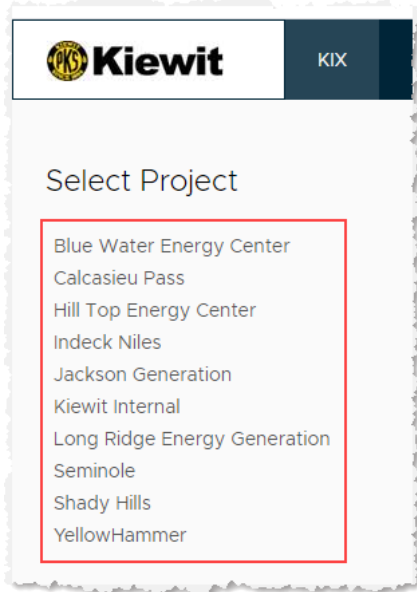


Closed—work has been completed and all forms have been signed off.

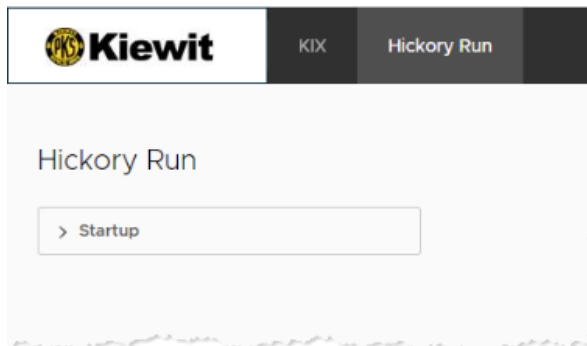
Open the Kiewit LOTO App

To open the Kiewit LOTO app:

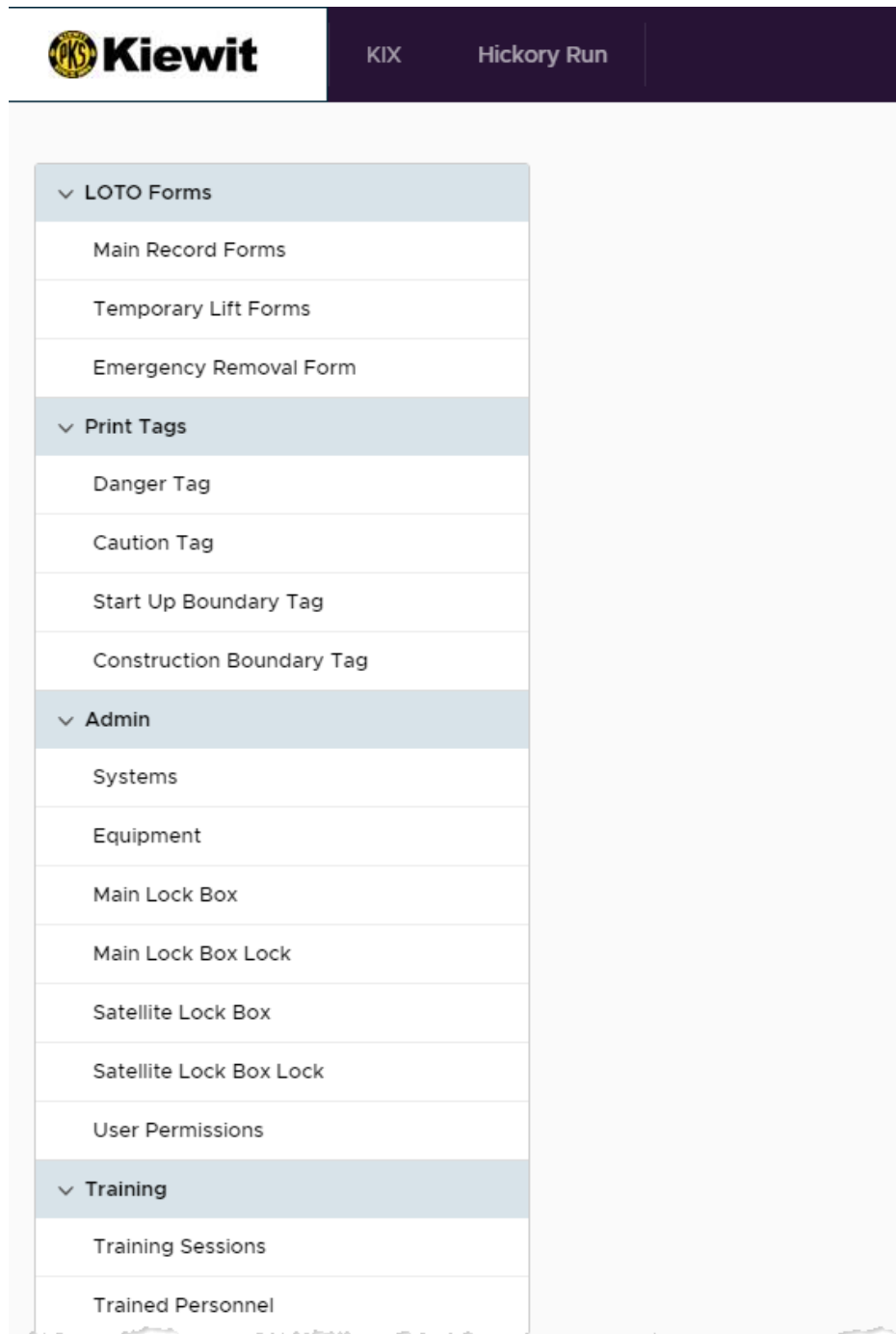
1. Navigate to the Kiewit Information Exchange (KIX) site. The KIX app opens, displaying a list of projects.



2. Select a project from the list. The project opens in a new tab:



3. Click **Startup**, then **LOTO**. The LOTO app opens:



4. Click an option in one of the following functional areas to begin working:
 - [LOTO Forms](#)
 - [Print Tags](#)
 - [Admin](#)
 - [Training](#)

Common Table Properties

Many of the Kiewit LOTO app pages display data in tables. These tables have common properties, which are described below.

Sort Columns

By default, search results are displayed in descending order of confidence.

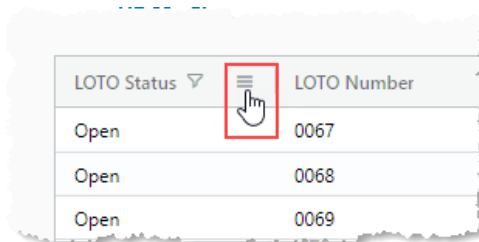
However, you can reorder the display by clicking a column header. As you click, the display cycles through the following order:

- **Ascending value** of the column you click
- **Descending value** of the column you click
- **Default value**

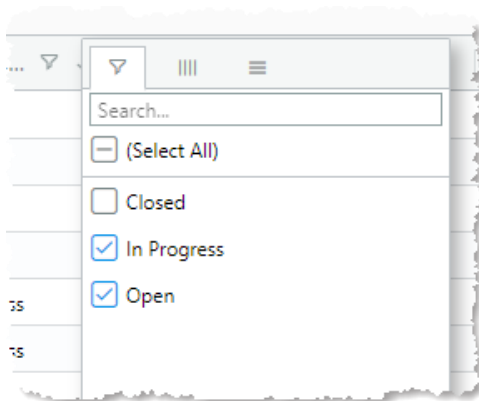
Column Options

Each column offers several sets of options that allow you to control the display of the table.

Click a column header, then click the menu icon that appears to its right:

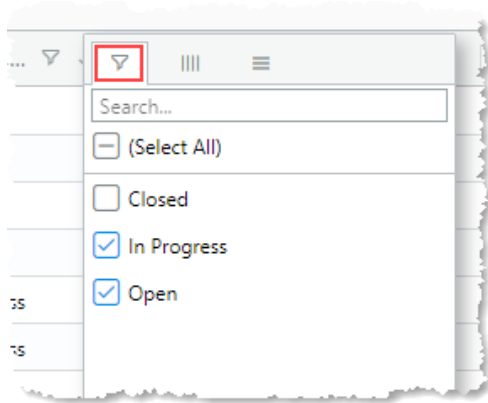


The column options drop-down appears:



Filter Table Values

Clicking the left-hand icon opens the Filter options:



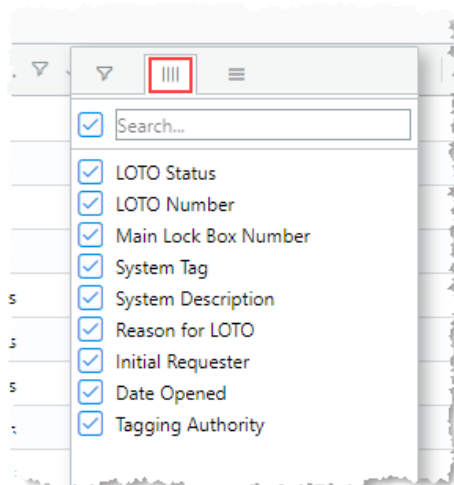
To filter out a value, uncheck the box to the left of its name. The unchecked item (or category and all items that belong to the category) are removed from the table display.

To add a value back, check the box to the left of its name. That item (or category and all items that belong to the category) are displayed in the table.

To search for a specific value, enter a search term in the Search field; results appear dynamically in a list as you type. You can then check/uncheck the item as above. Press Enter to display only the search results in the column.

Show/Hide Columns

Clicking the middle icon opens the Show/Hide Columns options:



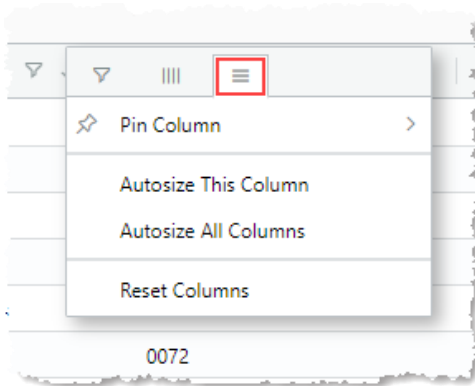
To hide a column, uncheck the box to the left of its name.

To show (*unhide*) a column, check the box to the left of its name.

To search for a specific value, enter a search term in the Search field; results appear dynamically in a list as you type. You can then check/uncheck the item as above.

Column Display

Clicking the right-hand icon opens the Column Display options:



Pin Column

Click this option to pin the current column to the left or right side of the screen; select **No Pin** to unpin the column.

Autosize This Column

Click this option to autosize the selected column to fit its contents.

Autosize All Columns

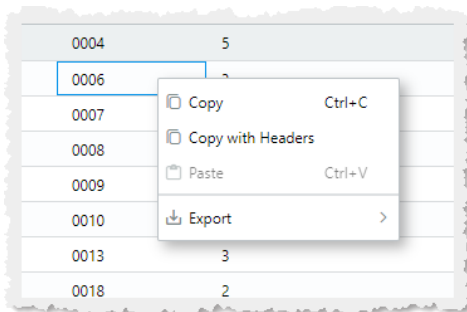
Click this option to autosize all columns to fit their contents.

Reset Columns

Click this option to reset column display to the default.

Right-Click Options

You can right-click cells and grab some options.



The following options are available:

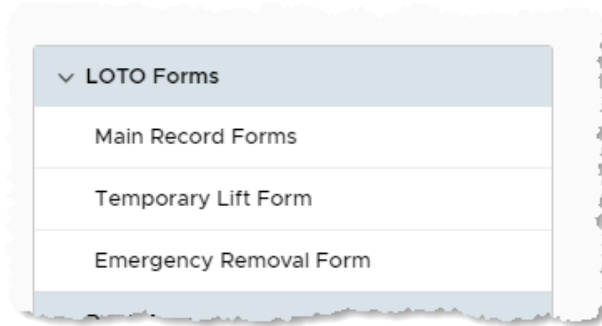
- **Copy**—copies the cell's contents.
- **Copy with Headers**—copies the cell's contents with the column header.
- **Paste**—pastes the Clipboard's contents.
- **Export**—exports the table in the format you select.

LOTO Forms

The LOTO Forms menu contains pages where you can create the forms required for a LOTO.

Note: These forms depend on information that needs to be entered in the [Admin](#) sections before a LOTO can be implemented.

When you open the Kiewit LOTO app, the LOTO Forms menu appears as follows:



The following forms are available:

- [Main Record Form](#)
- [Temporary Lift Form](#)
- [Emergency Removal Form](#)

Main Record Forms

The Main Record Forms page displays a list of all Main Record forms. (Each LOTO requires a separate Main Record form.) The Main Record form collects information and signatures required for a LOTO.

Note: The default view of this table filters out closed LOTOs. To view closed LOTOs, display the column [filter](#) options in the LOTO Status column and check **Closed**.

Display the Main Record Forms List

To display the Main Record Forms list:

1. Open the Kiewit LOTO app.
2. Click **Main Record Forms** under LOTO Forms. The Main Record Forms page opens:

MAIN RECORD FORMS

[NEW LOTO](#)

LOTO Status ▾	LOTO Number	Main Lock Box Number	System Tag	System Description	Reason for LOTO	Initial Requester	Date Opened	Tagging Authority
Open	0067	0123	CEM153-0116	CEM153-0116				
Open	0068	0100	CEM153-0101	CEMS 1 - HRSG - A				
Open	0069	126	CEM153-0103	CEMS 3 - HRSG				
Open	0070	1001	CEM153-0104	CEMS 4 - HRSG				
In Progress	0071	0123	CEM153-0103	CEMS 3 - HRSG				
In Progress	0072	0100	CEM153-0104	CEMS 4 - HRSG				
In Progress	0073	0123	CHEM154-0101	CHEMICAL SYSTEM				
In Progress	0075	169	CEM153-0101	CEMS 1 - HRSG - A				
In Progress	0076	126	CEM153-0104	CEMS 4 - HRSG				

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Note: This table is display-only. The information in this table comes from the [Admin pages](#).

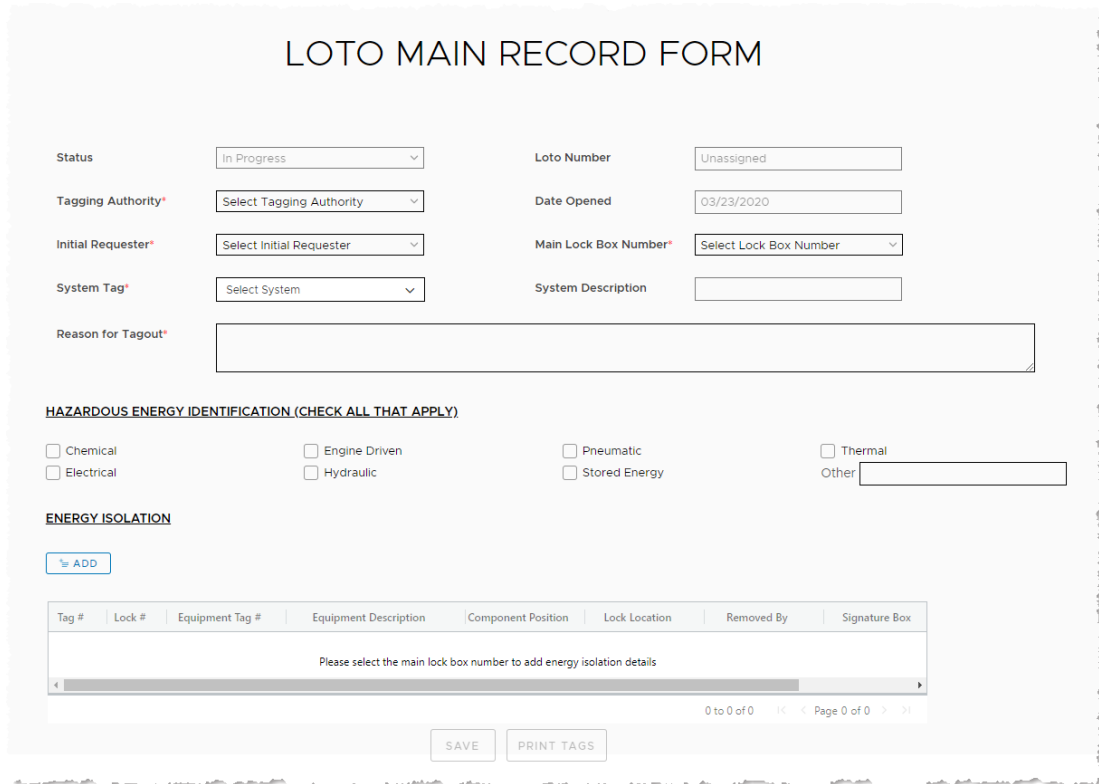
3. Double-click any cell in the table to open the Main Record Form in that row.
 - You can make modifications to the record, then click **Save** to save the form.
 - To print the report, click **Print**.

Create a New Main Record Form

The Tagging Authority creates a new LOTO Main Record by completing all required fields on the Main Record Form, including identifying all required system information and hazardous energy sources.

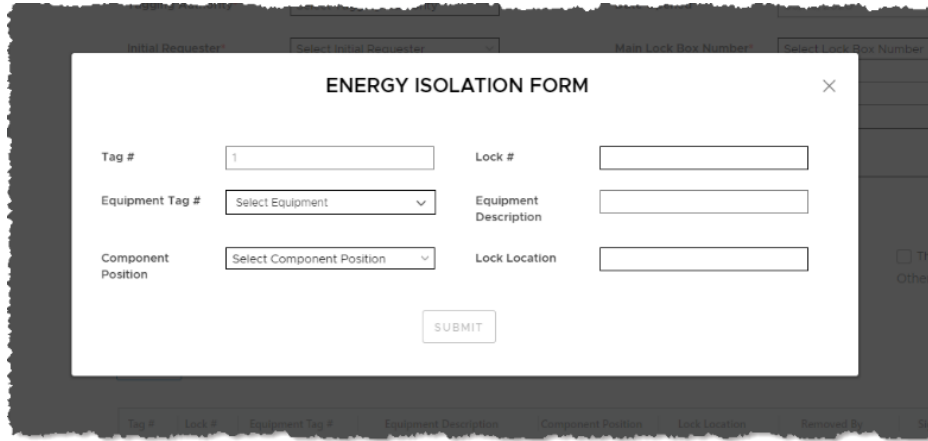
To create a new Main Record Form:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Click **New LOTO**. The LOTO Main Record Form page opens:



3. Enter all required information:
 - **Status** (display only)—displays the current [status](#) of the LOTO.
 - **Tagging Authority**—the person who is responsible for locking and tagging out a project and maintaining the LOTO equipment inventory.
 - **Initial Requestor**—the person who initiated the request for repair or maintenance work.
 - **System Tag**—tags attached to particular equipment to identify individual assets.
 - **Reason for Tagout**—enter the reason why the LOTO is required.
 - **LOTO Number** (display only)—displays the number of the LOTO associated with the Main Record form being created.
 - **Date Opened** (display only)—displays the date when the Main Record Form is created.
 - **Main Lock Box Number**—select the number of the main lock box used for the current LOTO.
 - **System Description**—enter a description of the system being locked out.

- Click **Add** under Energy Isolation. The Energy Isolation form opens:



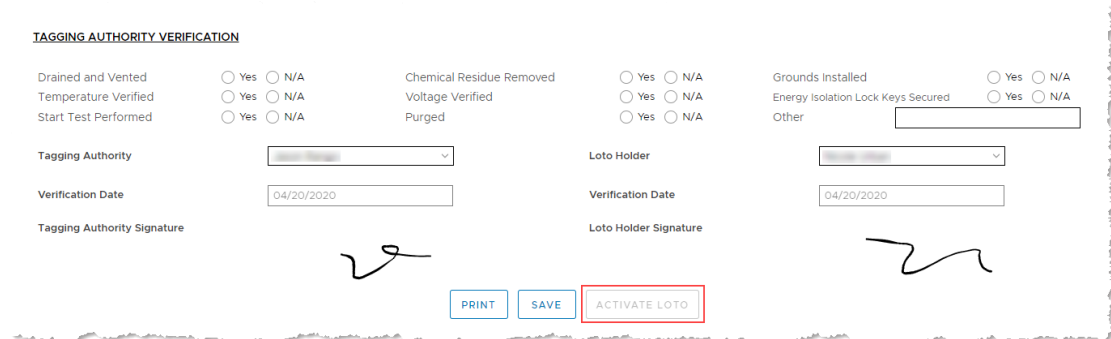
- Enter all required information, then click **Submit**. You return to the Main Record Form.
- Click **Save**. When you are ready, proceed to [printing tags](#), then [activate the LOTO](#).

Note: You can print tags from the Main Record Form by clicking **Print Tags**. For information on each of the tag types, see Print Tags.

Activate a LOTO

To activate a LOTO:

- Open the Kiewit LOTO app to the Main Record Forms page.
- Double-click the LOTO you want to open.
- Fill out the Tagging Authority Verification section and obtain a signature from the [LOTO Holder](#).



- Click **Activate LOTO**. The LOTO appears as Open in the Main Record Forms page.

Note: You can now assign [personnel sign-ons](#) and [satellite sign-ons](#).

Personnel Sign-On

To obtain personnel signatures to sign onto a LOTO:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Double-click the LOTO you want to open and scroll to the Personnel Sign-On section:

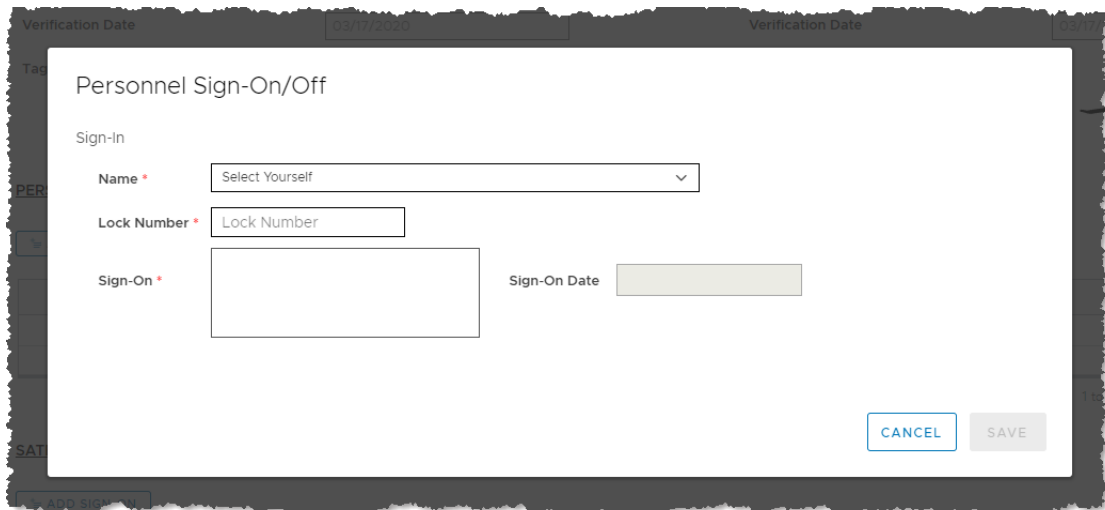
PERSONNEL SIGN-ON

[ADD SIGN-ON](#)

Lock #	Name	Sign-On	Sign-On Date	Sign-Off	Sign-Off Date
6	[Redacted]	Signed	03/17/2020	Signed	04/20/2020
0004	[Redacted]	Signed	04/20/2020		

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3. Click **Add Sign-On**. The Personnel Sign-On/Off dialog opens:



Personnel Sign-On/Off

Sign-In

Name *

Lock Number *

Sign-On *

Sign-On Date

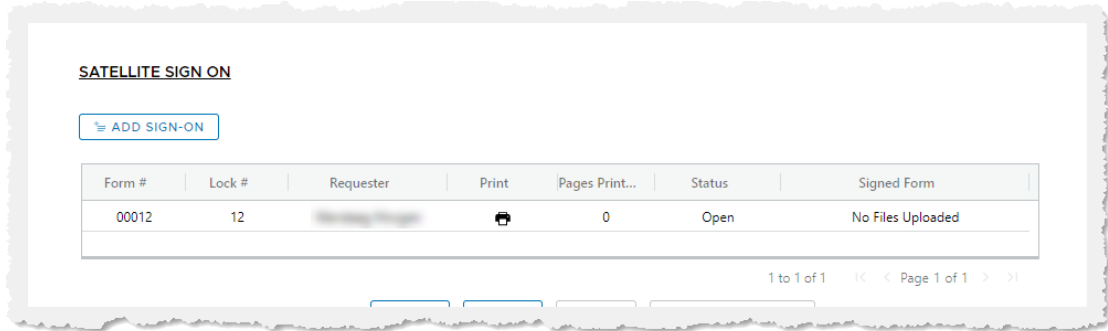
[CANCEL](#) [SAVE](#)

4. Enter the required information, obtain a signature in the Sign-On box, then click **Save**. You return to the Main Record Form. The workers who have signed on may now perform work.
 - The [Temporary Lift](#) function also becomes available at this point.

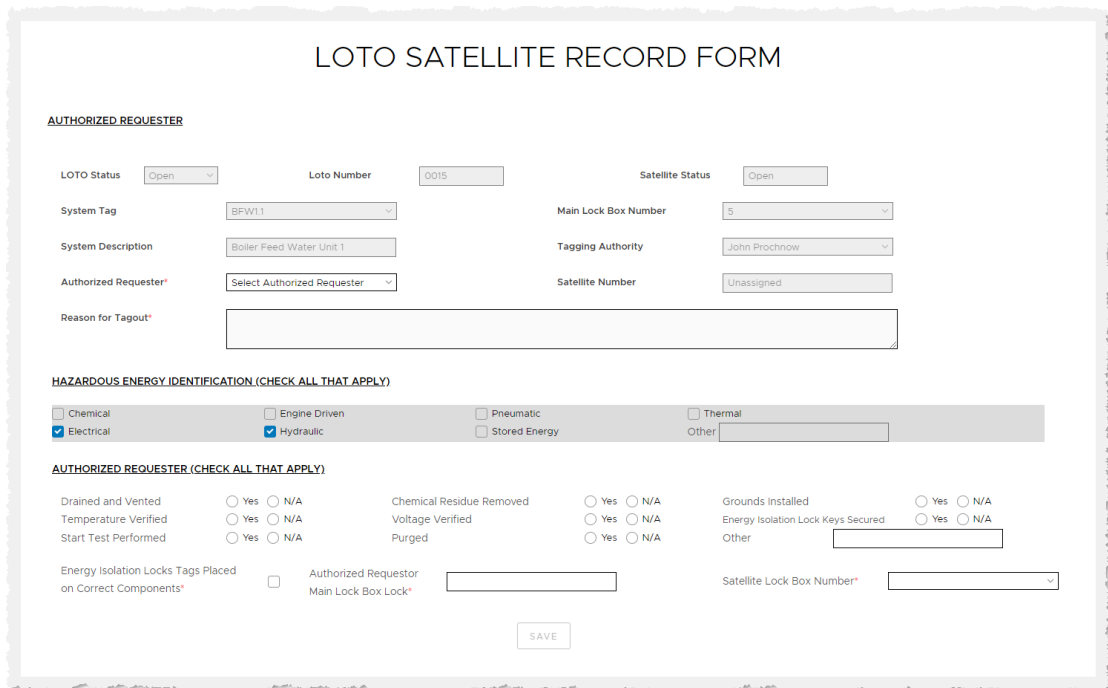
Satellite Sign-On

To obtain satellite (third-party worker) signatures:

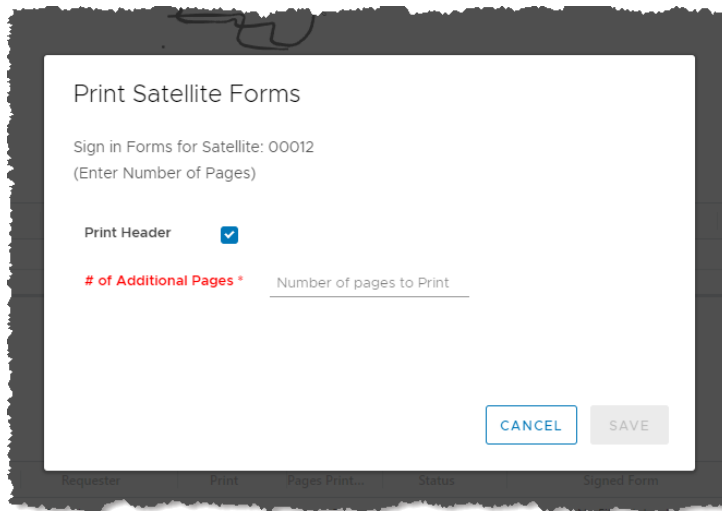
1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Double-click the LOTO you want to open and scroll to the Satellite Sign-On section:



3. Click **Add Sign-On**. The LOTO Satellite Record Form opens:



- Click the **Print** icon in the row of the form you want to print. The Print Satellite Forms dialog opens:



Print Satellite Forms

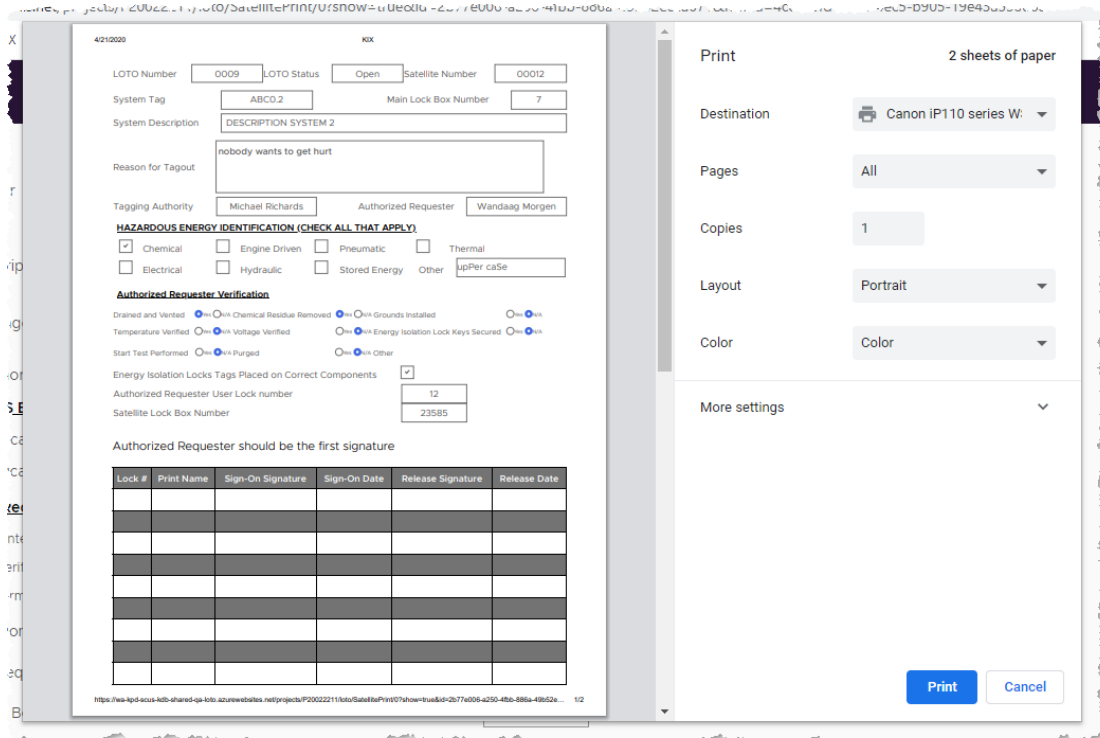
Sign in Forms for Satellite: 00012
(Enter Number of Pages)

Print Header

of Additional Pages * Number of pages to Print

- **# of Additional Pages**—allows you to add pages of blank lines for signatures.

- Complete the form, then click **Save**. The form appears in a new tab with a print preview and print options:



4/21/2020 KXX

LOTO Number LOTO Status Satellite Number

System Tag Main Lock Box Number

System Description

Reason for Tagout

Tagging Authority Authorized Requester

HAZARDOUS ENERGY IDENTIFICATION (CHECK ALL THAT APPLY)

Chemical Engine Driven Pneumatic Thermal
 Electrical Hydraulic Stored Energy Other

Authorized Requester Verification

Drained and Ventd Chemical Residue Removed Grounds Installed
 Temperature Verified Voltage Verified Energy Isolation Lock Keys Secured
 Start Test Performed Purged Other

Energy Isolation Locks Tags Placed on Correct Components

Authorized Requester User Lock number

Satellite Lock Box Number

Authorized Requester should be the first signature

Lock #	Print Name	Sign-On Signature	Sign-On Date	Release Signature	Release Date

Print 2 sheets of paper

Destination

Pages

Copies

Layout

Color

More settings

- Select your desired print settings, then click **Print**. The form prints to your selected printer.

LOTO Sign-Off & Removal Procedure

After the maintenance or repair work that necessitated the LOTO is completed, the LOTO can be closed. The process for safely closing out a LOTO is:

1. When work is complete, or at the end of a shift, all Authorized Persons sign off on the LOTO Satellite Record (in the [Personnel sign-off](#) or [Satellite sign-off](#) sections) and remove their user locks from the [Satellite Lock Box](#).
2. The [Authorized Requestor](#) returns the completed LOTO Satellite Records to the LOTO office and removes their user lock from the Satellite Lock Box.
3. The Authorized Requestor signs off the [LOTO Main Record](#) and removes their user lock from the LOTO Main Lock Box.
4. The [Tagging Authority](#) updates the logs/database and archives all LOTO documentation.
5. The Tagging Authority completes the LOTO Main Record [closeout section](#).
6. The Tagging Authority accesses the energy isolation lock keys and removes all energy isolation (i.e., [Danger](#)) locks and tags.
7. The Tagging Authority verifies that all personnel are signed off the LOTO and that all user locks are removed. The LOTO closeout process is complete.

Personnel Sign-Off

To obtain personnel (Kiewit employee) signatures to sign off a LOTO:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Double-click the LOTO you want to open and scroll to the Personnel Sign-On section:

PERSONNEL SIGN-ON

[ADD SIGN-ON](#)

Lock #	Name	Sign-On	Sign-On Date	Sign-Off	Sign-Off Date
6	[Redacted]	Signed	03/17/2020	Signed	04/20/2020
0004	[Redacted]	Signed	04/20/2020		

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3. Double-click in the cell in the Sign-Off column next to the worker's name. The Personnel Sign-On/Off dialog opens:

Personnel Sign-On/Off

Sign-Off

Name:

Lock Number:

Sign-On:  Sign-On Date:

Sign-Off: Sign-Off Date:

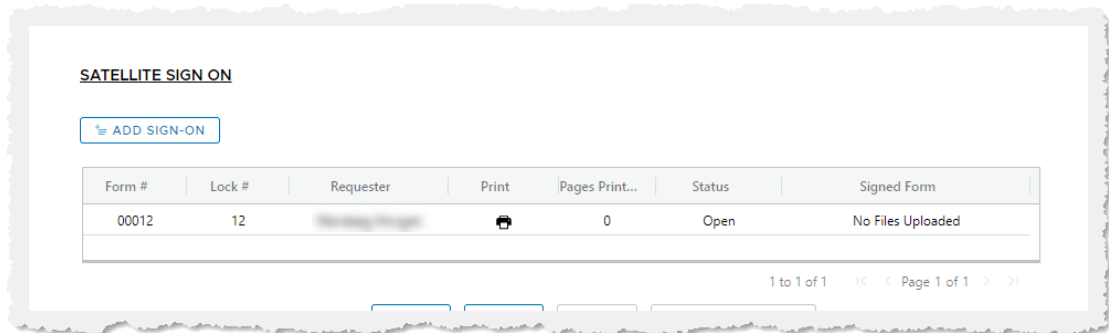
4. Obtain a signature in the Sign-Off box, then click **Save**. You return to the Main Record Form.

Satellite Sign-Off

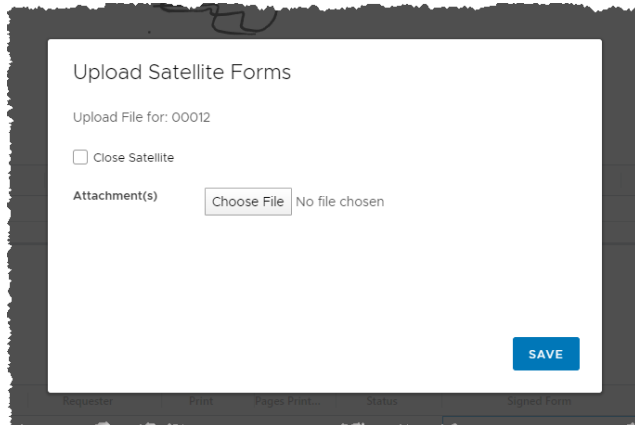
When work is completed, satellite workers must sign the printed (paper) [satellite form](#). The Tagging Authority should then scan or photograph the signed form and save it in PDF format.

To upload satellite signatures to sign off a LOTO:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Double-click the LOTO you want to open and scroll to the Satellite Sign-On section:



3. Click the cell in the Signed Form column in the row of the form you want to sign off. The Upload Satellite Forms dialog opens:



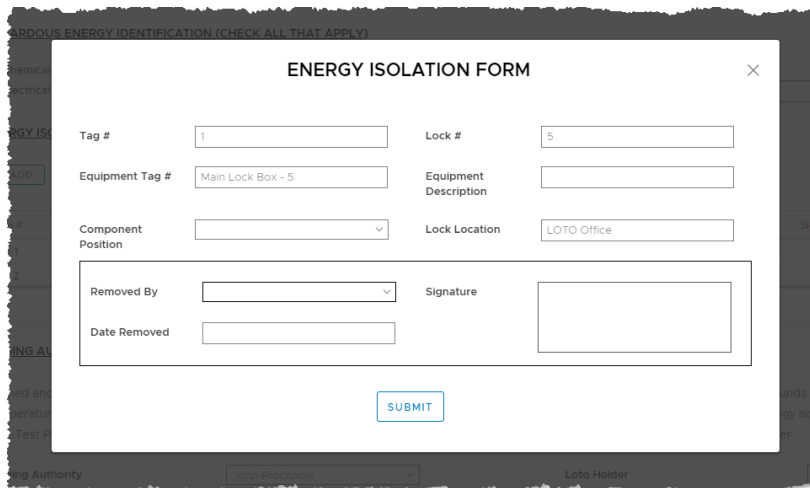
4. Select a file in PDF format to open, then click **Save**. The document is saved to the Main Record Form.
 - **Close Satellite**—when work has been completed and all signatures have been uploaded, click this option to close out the satellite form.

Close out a LOTO

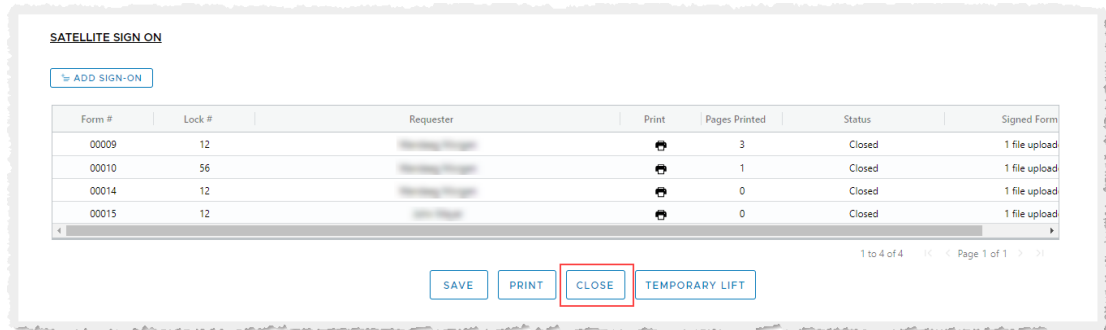
After everyone has signed out of the LOTO and the energy isolation tags have been removed, the Close button becomes available on the Main Record form.

To close out a LOTO:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Double-click the LOTO you want to close.
3. Obtain signatures from all workers:
 - Personnel sign off in the [Personnel Sign-On section](#).
 - Satellite workers sign off on physical paper, which is then [uploaded](#).
4. In the Energy Isolation section, double-click inside the Energy Isolation table. The Energy Isolation Form dialog opens:



5. Select the name of the person who removed the tag, obtain their signature, then click **Submit**.
6. At the bottom of the page, click **Close**. A confirmation appears, and you return to the Main Record Form page.



Form #	Lock #	Requester	Print	Pages Printed	Status	Signed Form
00009	12	[Redacted]		3	Closed	1 file upload
00010	56	[Redacted]		1	Closed	1 file upload
00014	12	[Redacted]		0	Closed	1 file upload
00015	12	[Redacted]		0	Closed	1 file upload

Note: The LOTO does not appear in the table unless you [change your filter options](#) to view Closed LOTOs.

Temporary Lift Form

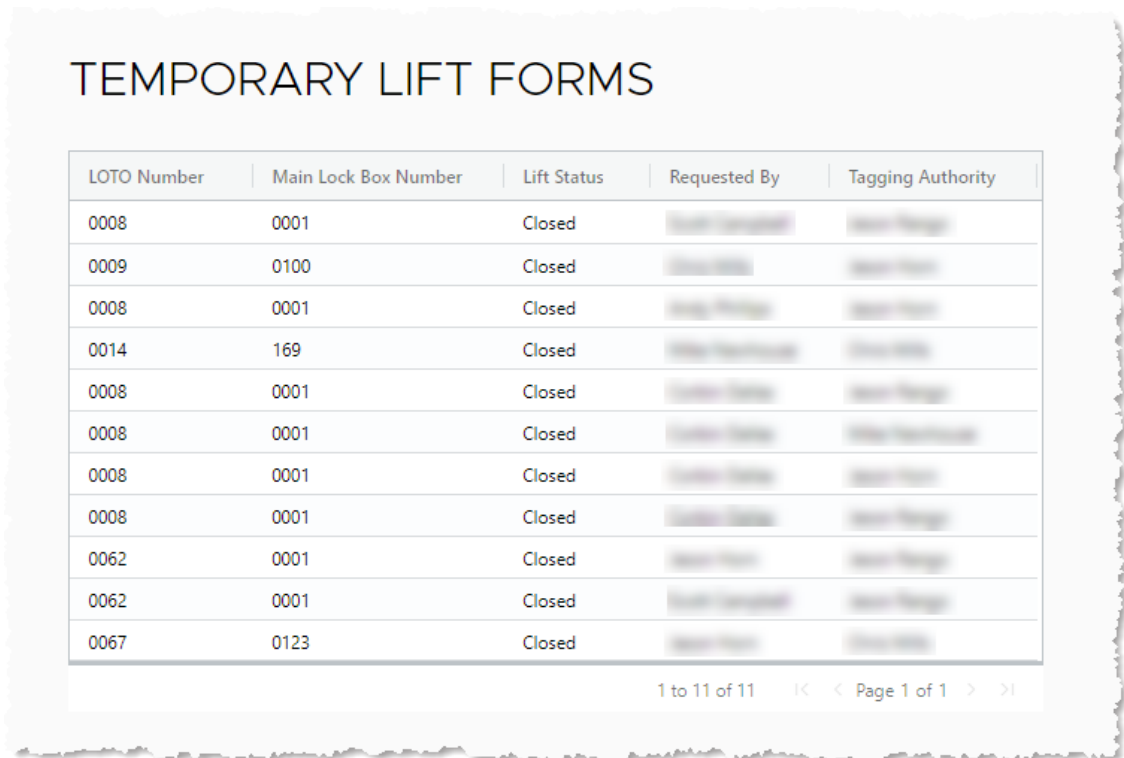
Before a LOTO is closed, a Startup Representative can temporarily remove Danger (i.e., energy isolation) locks from locked-out/tagged-out equipment in order to perform testing to expedite equipment commissioning. (This is called a Temporary Lift.)

The Temporary Lift Forms page displays all current Temporary Lift forms.

Display the Temporary Lift Forms Page

To display the Temporary Lift Forms page:

1. Open the Kiewit LOTO app.
2. Click **Temporary Lift Form** under LOTO Forms. The Temporary Lift Forms page opens:



LOTO Number	Main Lock Box Number	Lift Status	Requested By	Tagging Authority
0008	0001	Closed	[User Name]	[User Name]
0009	0100	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0014	169	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0008	0001	Closed	[User Name]	[User Name]
0062	0001	Closed	[User Name]	[User Name]
0062	0001	Closed	[User Name]	[User Name]
0067	0123	Closed	[User Name]	[User Name]

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Note: This table is display-only of information entered in the [Admin pages](#).

3. Double-click any cell in the table to open the report in that row.
 - You can modify some properties, then click **Submit**.

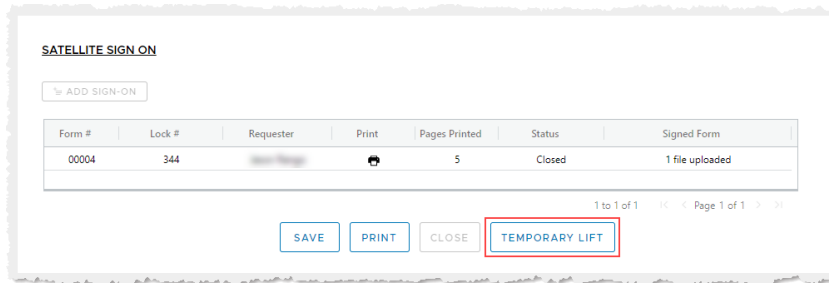
Create a New Temporary Lift

It is not possible to perform a temporary lift if any employee is signed onto a LOTO. (The process to remove a LOTO when a person is still signed on is the [Emergency LOTO Removal](#).)

Important! A temporary lift **does not** supersede any LOTO precautions.

To create a new temporary lift:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Open a LOTO Main Record and scroll to the bottom:



SATELLITE SIGN ON

ADD SIGN-ON

Form #	Lock #	Requester	Print	Pages Printed	Status	Signed Form
00004	344	[Redacted]	[Print Icon]	5	Closed	1 file uploaded

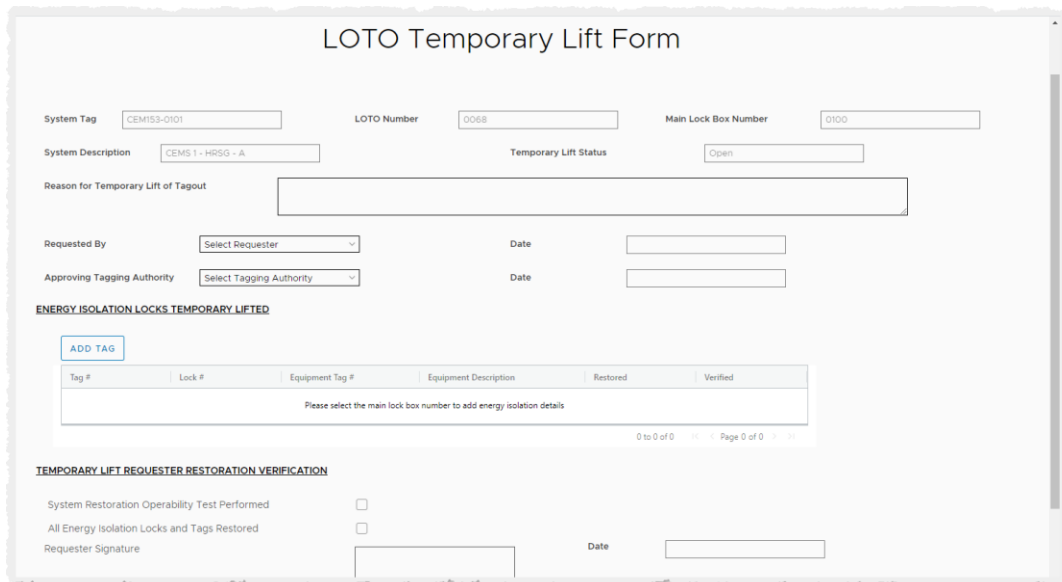
1 to 1 of 1 Page 1 of 1

SAVE PRINT CLOSE **TEMPORARY LIFT**

3. Click **Temporary Lift**.

Note: All personnel and satellite forms must be signed out before creating a temporary lift.

The LOTO Temporary Lift Form opens:



LOTO Temporary Lift Form

System Tag: CEM53-0101 LOTO Number: 0068 Main Lock Box Number: 0100

System Description: CEMS 1 - HSSG - A Temporary Lift Status: Open

Reason for Temporary Lift of Tagout: [Text Field]

Requested By: [Select Requester] Date: [Text Field]

Approving Tagging Authority: [Select Tagging Authority] Date: [Text Field]

ENERGY ISOLATION LOCKS TEMPORARILY LIFTED

ADD TAG

Tag #	Lock #	Equipment Tag #	Equipment Description	Restored	Verified
Please select the main lock box number to add energy isolation details					

0 to 0 of 0 Page 0 of 0

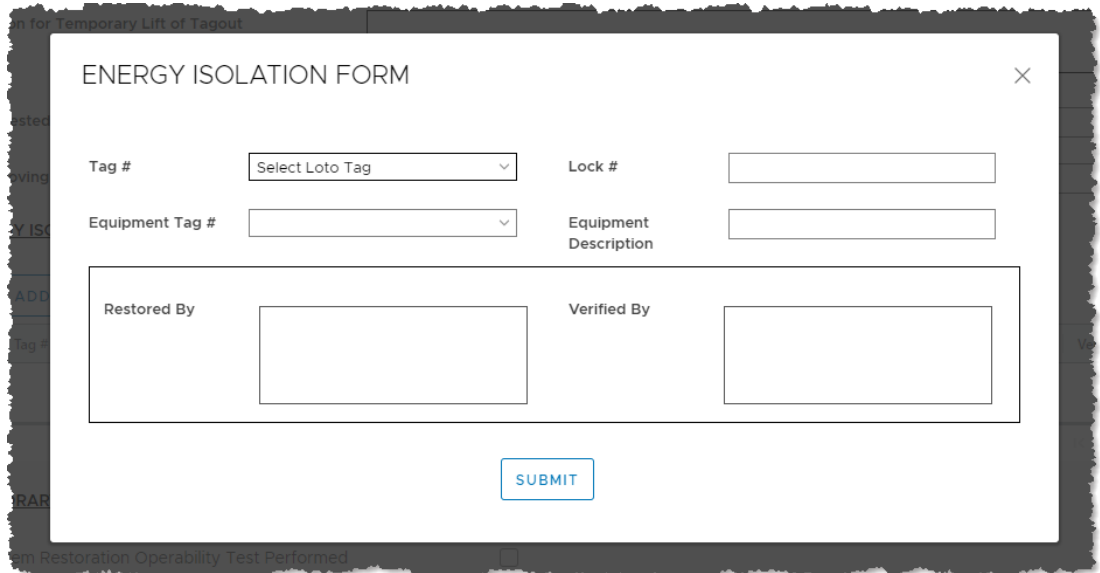
TEMPORARY LIFT REQUESTER RESTORATION VERIFICATION

System Restoration Operability Test Performed

All Energy Isolation Locks and Tags Restored

Requester Signature: [Text Field] Date: [Text Field]

4. Click **Add Tag**. The Energy Isolation Form opens:



The screenshot shows a web form titled "ENERGY ISOLATION FORM" with a close button (X) in the top right corner. The form contains the following fields:

- Tag #**: A dropdown menu with the text "Select Loto Tag".
- Lock #**: A text input field.
- Equipment Tag #**: A dropdown menu.
- Equipment Description**: A text input field.
- Restored By**: A large text input field for a signature.
- Verified By**: A large text input field for a signature.
- SUBMIT**: A blue button at the bottom center.

5. Select the number of the tag that you want to lift, enter all other necessary information, then click **Submit**. The form closes and appears in the Temporary Lift Forms list.

End a Temporary Lift

You can end a temporary lift in the Main Record form (not on the Temporary Lift Forms page).

To end a temporary lift:

1. Open the Kiewit LOTO app to the Main Record Forms page.
2. Open a LOTO.
3. Enter information and signatures as needed in the Temporary Lift Requester Restoration Verification and Tagging Authority Verification sections, then click **Submit**.

Note: The requestor must be the first person to sign back on.

Emergency Removal Form

Emergency Removal is the process to remove a LOTO when it is confirmed that a worker who is signed in has left the project site.

Emergency Removal Procedure

When an Emergency Removal is required, the procedure is as follows:

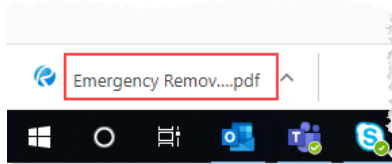
1. Every effort is made to contact the individual who placed the user lock or user signature that needs to be removed in person or by phone.
2. Once the individual has been contacted, or else confirmed as not being onsite, the Tagging Authority prints and fills out the LOTO Emergency Removal Form.
3. The Tagging Authority, the individual's direct supervisor, and the startup manager or project manager sign the form.
4. The Tagging Authority removes the energy isolation (i.e., Danger) locks and tags.

Note: The individual who did not sign off must sign the form before returning to work to acknowledge that they are no longer signed into the LOTO.

Print an Emergency LOTO Removal Form

To print an Emergency LOTO Removal form:

1. Open the Kiewit LOTO app, then click **Emergency Removal Form** under LOTO Forms.
2. Click **Download**. The LOTO Emergency Removal file downloads.



3. Click the downloaded file. The LOTO Emergency Removal forms opens in a browser.
4. Print the form using your preferred print options.

Print Tags

Kiewit LOTO provides all the tags you need to tag out equipment.



When you open the Kiewit LOTO app, the Print Tags menu appears as follows:



The following tags are available:

- [Danger Tag](#) (also called “Energy Isolation Tag”)
- [Caution Tag](#)
- [Start Up Boundary Tag](#)
- [Construction Boundary Tag](#)

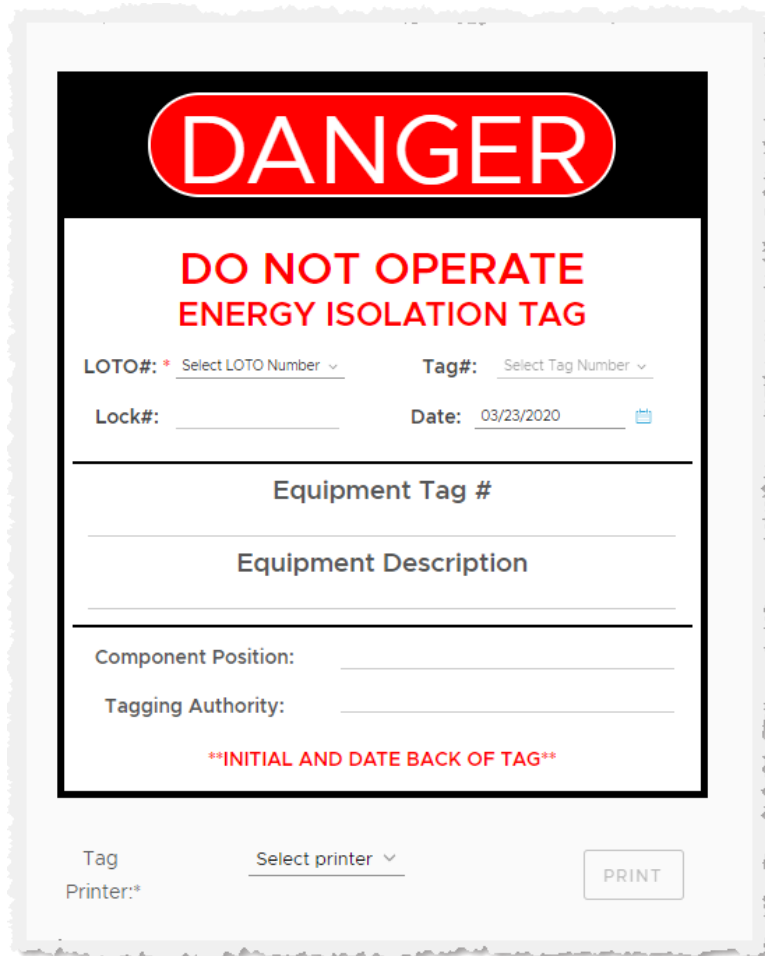
Danger (Energy Isolation) Tags

Danger tags are used to protect personnel and/or equipment during a LOTO. Whenever possible, energy isolation locks are used in conjunction with Danger tags as an additional precaution. When a lock cannot be physically installed on a system component, a Danger tag alone is secured to the equipment.

Important! Equipment secured by a Danger tag **may not be operated under any circumstances.**

To print a Danger tag:

1. Open the Kiewit LOTO app.
2. Click **Danger Tag** under Print Tags. The Print Danger Tag page opens:



DANGER

DO NOT OPERATE
ENERGY ISOLATION TAG

LOTO#: *
Tag#:

Lock#:
Date:

Equipment Tag #

Equipment Description

Component Position:

Tagging Authority:

INITIAL AND DATE BACK OF TAG

Tag
Printer:*

PRINT

3. Select or enter tag information as required:
 - **LOTO #**—select the number of the current LOTO from the list.
 - **Tag #**—select the energy isolation tag number from the list.
 - **Lock #**—displays the number of the selected tag.
 - **Date**—click the **Calendar** icon, then select the date the tag is put in place.
 - **Equipment Tag #**—(auto-generated) displays the energy isolation tag number used for the piece of equipment being tagged out.
 - **Equipment Description**—(auto-generated) displays the description of the piece of equipment being tagged out.
 - **Component Position**—(auto-generated) displays the position (e.g. open/closed, etc.) of the equipment.
 - **Tagging Authority**—(auto-generated) displays the name of the Tagging Authority placing the LOTO.
4. Select a printer, then click **Print**.

Caution Tag

Caution tags provide specific instructions for the operation of system components where plant safety is not affected and personal injury is not a risk. The only personnel allowed to operate equipment while under a Caution tag are those named on the tag or designated by the Caution tag holder to do so.

To print a Caution tag:

1. Open the Kiewit LOTO app.
2. Click **Caution Tag** under Print Tags. The Print Caution Tag page opens:



3. Select or enter tag information as required:
 - **Tag #**—enter the number of the desired tag.
 - **Date**—click the **Calendar** icon, then select the date the tag is installed.
 - **Equipment Tag #**—auto-generated display of the energy isolation tag number used for the piece of equipment being tagged out.
 - **Equipment Description**—auto-generated display of the description of the piece of equipment being tagged out.
 - **Special Precaution(s)**—enter any precautions that should be taken around the tagged out equipment.
 - **Responsible Person**—select the name of the person to contact about the LOTO from the drop-down.
4. Select a printer, then click **Print**.

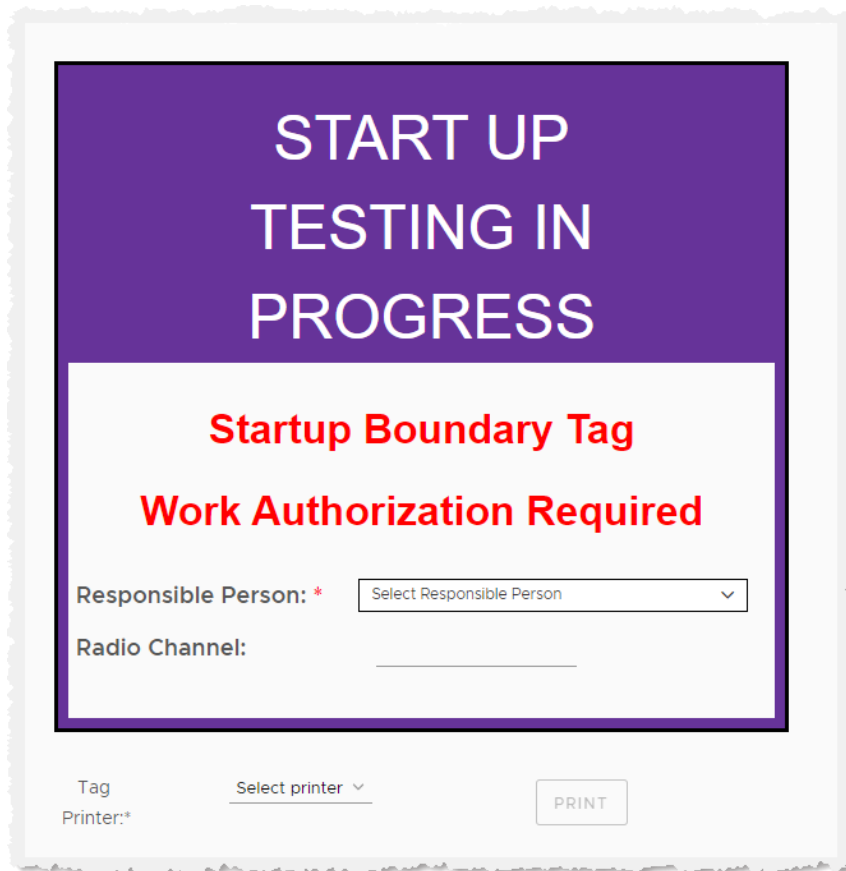
Start Up Boundary Tag

Start Up Boundary tags are used to indicate a system or component is under Startup jurisdiction. Tags are hung immediately after the system is officially transferred from Construction to Startup, and locks are used to restrict access for custody reasons. (Startup Jurisdiction refers to any system or equipment that has been turned over to Startup but has not been turned over to the owner.)

Note: Start Up Boundary tags are **not** used for personnel safety or equipment protection.

To print a Start Up Boundary tag:

1. Open the Kiewit LOTO app.
2. Click **Start Up Boundary Tag** under Print Tags. The Print Start Up Boundary Tag page opens:



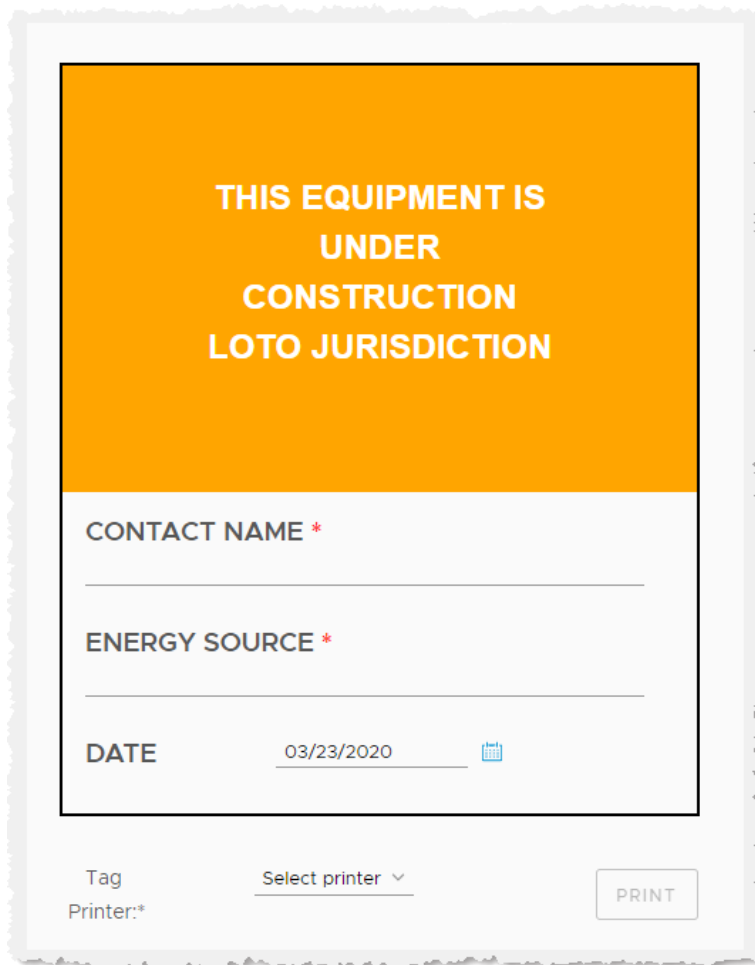
3. Select or enter tag information as required:
 - **Responsible Person**—select the name of the person who can be contacted about the LOTO from the drop-down.
 - **Radio Channel**—enter the radio channel on which the responsible person can be contacted.
4. Select a printer, then click **Print**.

Construction Boundary Tag

Construction Boundary tags are used by Construction to distinguish items in Construction Jurisdiction that are energized by temporary power prior to system turnover. These tags are placed on any item that poses a potential hazardous energy source while in Construction Jurisdiction.

To print a Construction Boundary tag:

1. Open the Kiewit LOTO app.
2. Click **Construction Boundary Tag** under Print Tags. The Print Construction Boundary Tag page opens:



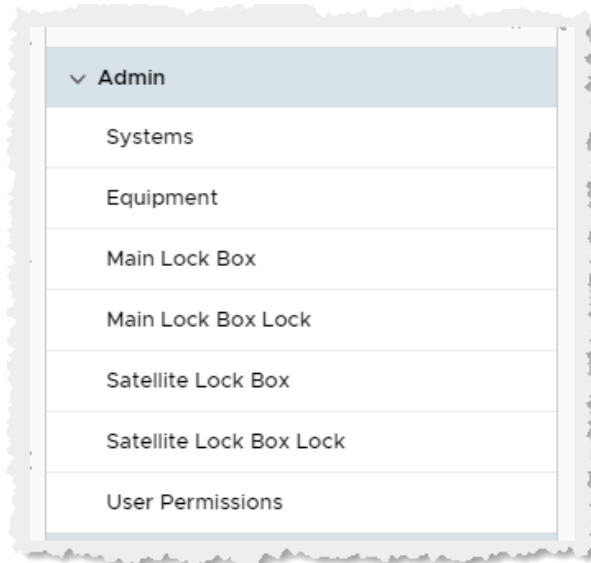
The screenshot shows a mobile application interface for printing a Construction Boundary Tag. The top section is a solid orange rectangle with the text "THIS EQUIPMENT IS UNDER CONSTRUCTION LOTO JURISDICTION" in white, bold, uppercase letters. Below this is a white form with three input fields: "CONTACT NAME *" with a red asterisk, "ENERGY SOURCE *" with a red asterisk, and "DATE" with a calendar icon. The date field is pre-filled with "03/23/2020". At the bottom of the form, there is a "Tag" label, a "Printer:*" label, a "Select printer" dropdown menu, and a "PRINT" button.

3. Select or enter tag information as required:
 - **Contact Name**—enter the name of the person who can be contacted about the LOTO.
 - **Energy Source**—enter the type/source of energy that falls under the jurisdiction of this piece of equipment.
 - **Date**—click the **Calendar** icon, then select the date the tag is installed.
4. Select a printer, then click **Print**.

Admin

The Admin menu contains pages where you enter all the information required by a Main Record Form.

When you open the Kiewit LOTO app, the Admin menu appears as follows:



The following Admin pages are available:

- [Systems](#)
- [Equipment](#)
- [Main Lock Box](#)
- [Main Lock Box Lock](#)
- [Satellite Lock Box](#)
- [Satellite Lock Box Lock](#)
- [User Permissions](#)

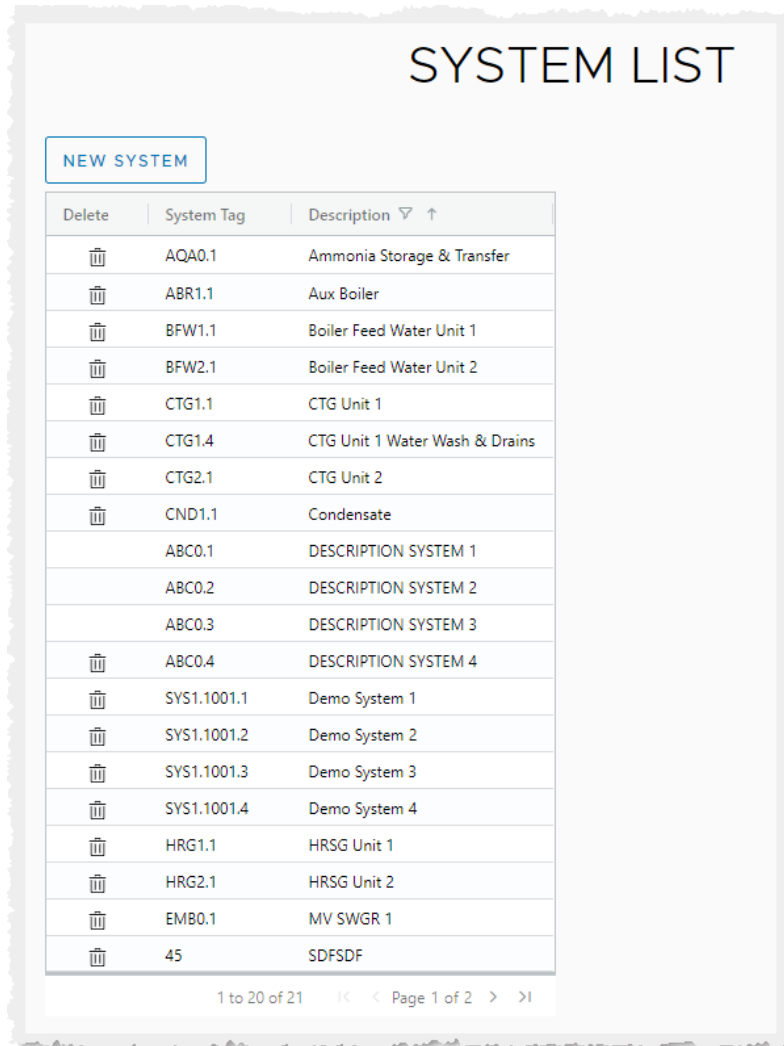
Systems

A system is a collection of pieces of equipment that are locked out together during a LOTO.

Display the System List Page

To display the System List page:

1. Open the Kiewit LOTO app.
2. Click **Systems** under Admin. The System List page opens:

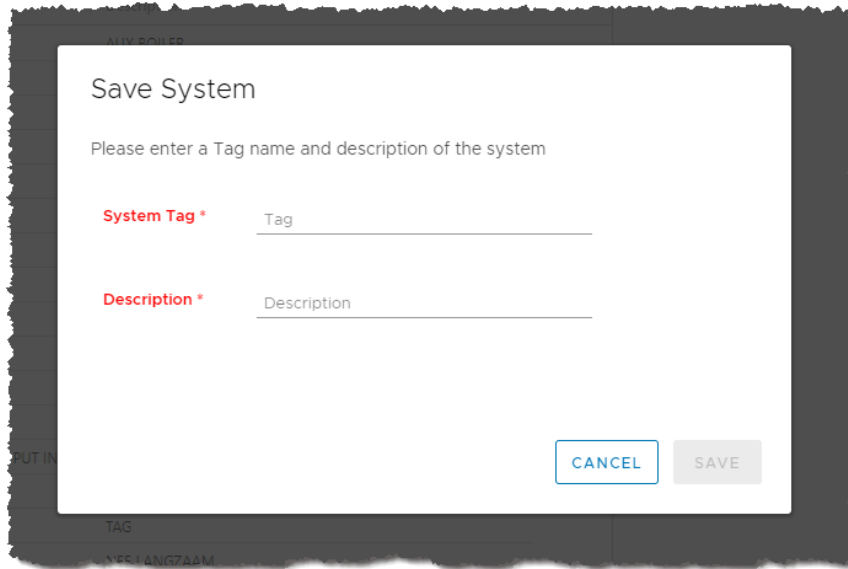


3. You can perform the following actions:
 - [Create a new system](#)
 - Double-click a cell in the table, then modify its contents. (Only available if there is no LOTO assigned to it.)
 - [Change a system tag name/description](#)
 - [Delete a system](#)

Create a New System

To create a new system:

1. Open the Kiewit LOTO app to the Systems page.
2. Click **New System**. The Save System dialog opens.



Save System

Please enter a Tag name and description of the system

System Tag *

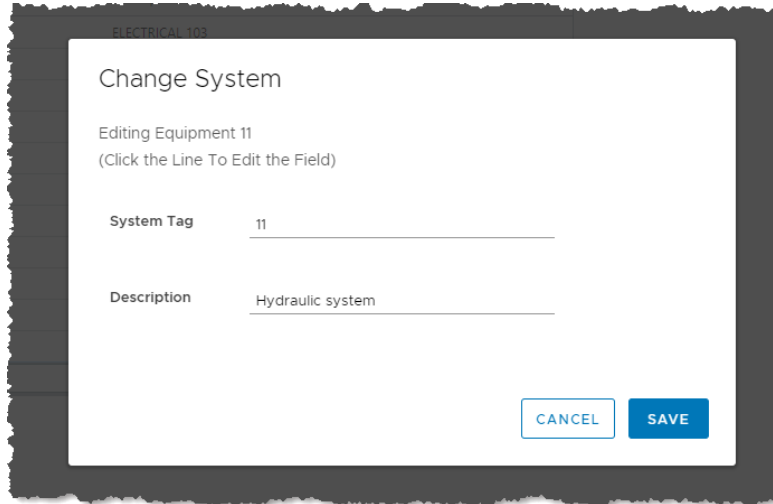
Description *

3. Enter a System Tag name and a description, then click **Save**. The system appears in the main System list.

Change a System Name/Description

To change a name and/or description:

1. Double-click the system name in the table. The Change System dialog opens:



2. Enter a new name and/or description, then click **Save**. The system appears in the main System list.

Delete a System

To delete a system:

1. Open the Kiewit LOTO app to the Systems page.
2. Click the **Trash Can** icon in the same row as the system you want to delete. A confirmation dialog opens.

Note: If there is an open LOTO associated with the system, then it is unavailable for editing or deletion (e.g., there is no **Trash Can** icon).

3. Click **Delete**. The system is deleted.

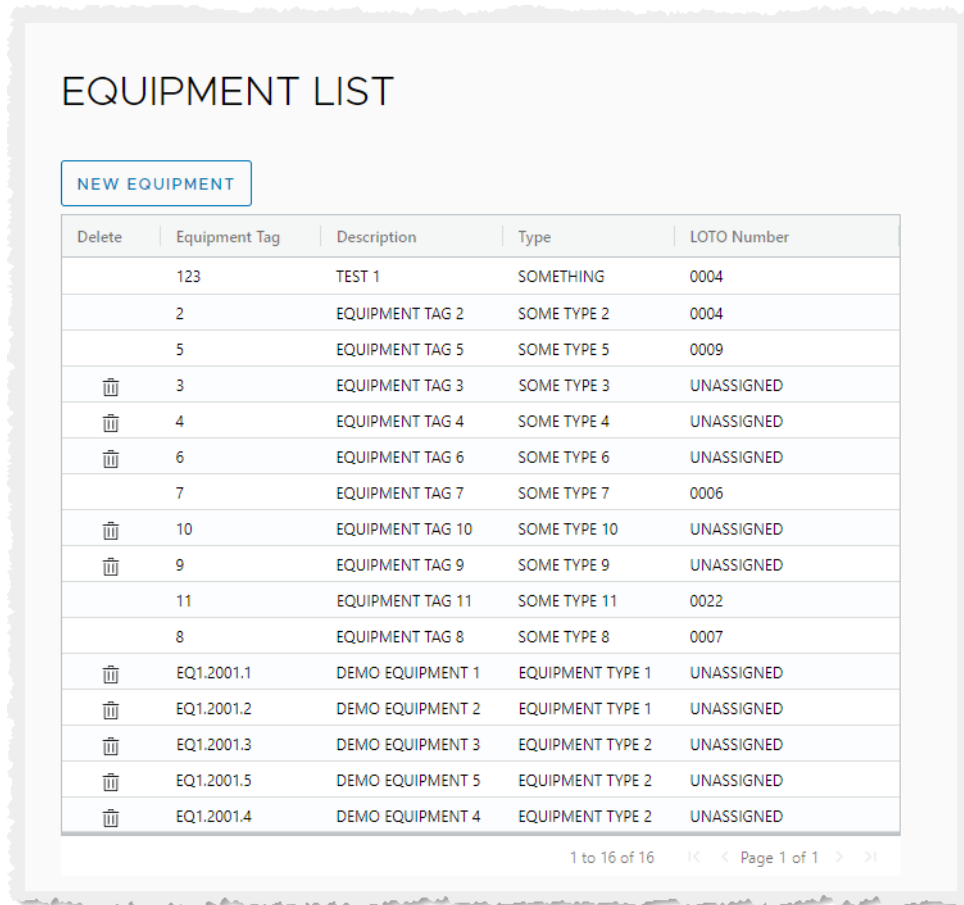
Equipment

Equipment denotes individual pieces of machinery to be locked down in a LOTO.

Display the Equipment List Page

To display the Equipment List page:

1. Open the Kiewit LOTO app.
2. Click **Equipment** under Admin. The Equipment List page opens:



Delete	Equipment Tag	Description	Type	LOTO Number
	123	TEST 1	SOMETHING	0004
	2	EQUIPMENT TAG 2	SOME TYPE 2	0004
	5	EQUIPMENT TAG 5	SOME TYPE 5	0009
	3	EQUIPMENT TAG 3	SOME TYPE 3	UNASSIGNED
	4	EQUIPMENT TAG 4	SOME TYPE 4	UNASSIGNED
	6	EQUIPMENT TAG 6	SOME TYPE 6	UNASSIGNED
	7	EQUIPMENT TAG 7	SOME TYPE 7	0006
	10	EQUIPMENT TAG 10	SOME TYPE 10	UNASSIGNED
	9	EQUIPMENT TAG 9	SOME TYPE 9	UNASSIGNED
	11	EQUIPMENT TAG 11	SOME TYPE 11	0022
	8	EQUIPMENT TAG 8	SOME TYPE 8	0007
	EQ1.2001.1	DEMO EQUIPMENT 1	EQUIPMENT TYPE 1	UNASSIGNED
	EQ1.2001.2	DEMO EQUIPMENT 2	EQUIPMENT TYPE 1	UNASSIGNED
	EQ1.2001.3	DEMO EQUIPMENT 3	EQUIPMENT TYPE 2	UNASSIGNED
	EQ1.2001.5	DEMO EQUIPMENT 5	EQUIPMENT TYPE 2	UNASSIGNED
	EQ1.2001.4	DEMO EQUIPMENT 4	EQUIPMENT TYPE 2	UNASSIGNED

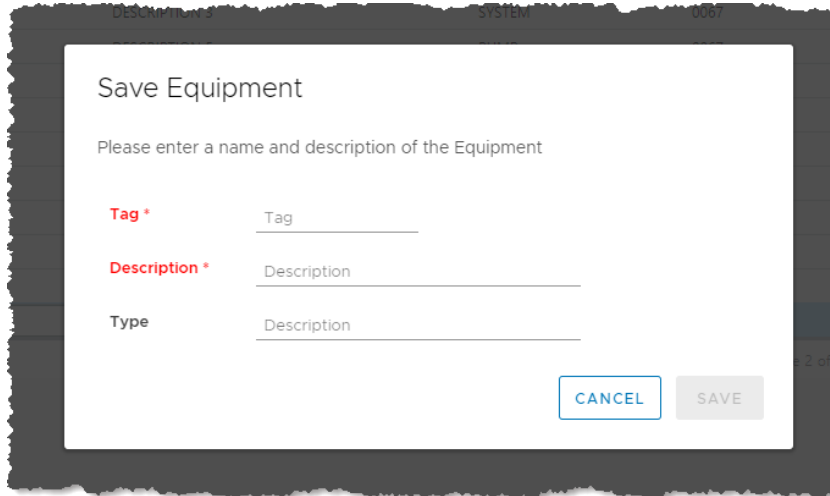
1 to 16 of 16 | < < Page 1 of 1 > >

3. You can perform the following actions:
 - [Create new Equipment](#)
 - Double-click a cell in the table, then modify its contents. (Only available if there is no LOTO assigned to it.)
 - [Change equipment properties.](#)
 - [Delete equipment.](#)

Create New Equipment

To create new equipment:

1. Open the Kiewit LOTO app to the Equipment page.
2. Click **New Equipment**. The Save Equipment dialog opens:



Save Equipment

Please enter a name and description of the Equipment

Tag *

Description *

Type

3. Enter a Tag name and a description (and optionally, a type), then click **Save**. The new equipment appears in the main Equipment list.

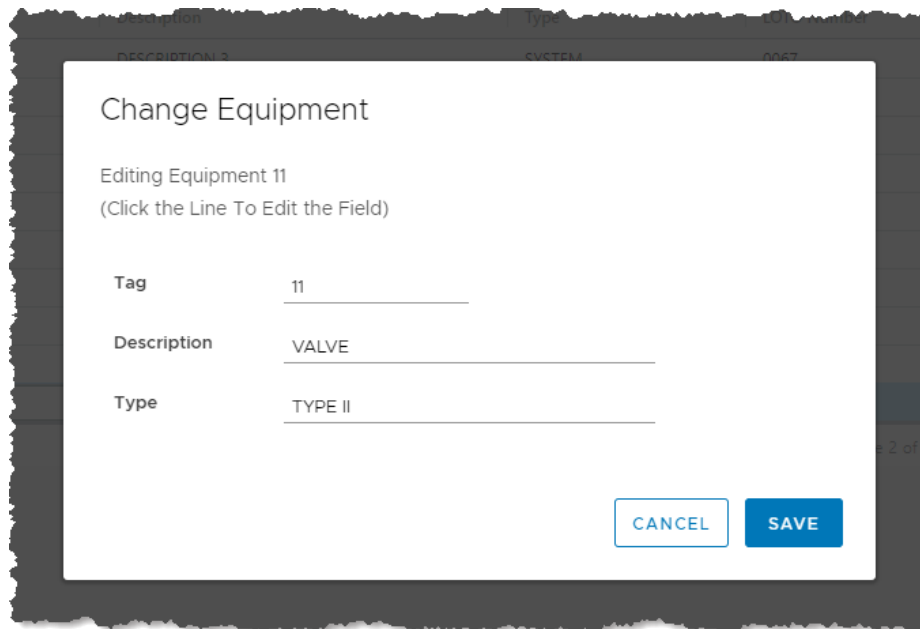
Change Equipment Properties

To change equipment properties:

1. Open the Kiewit LOTO app to the Equipment page.
2. Double-click the equipment name in the table.

Note: You can only change the properties of equipment that is available for editing or deletion (e.g., a **Trash Can** icon appears in the same row).

The Change Equipment dialog opens:



Change Equipment

Editing Equipment 11
(Click the Line To Edit the Field)

Tag	11
Description	VALVE
Type	TYPE II

CANCEL SAVE

3. Enter a new tag name, description, and/or type, then click **Save**. The equipment appears in the main Equipment list.

Delete Equipment

To delete equipment:

1. Open the Kiewit LOTO app to the Equipment page.
2. Click the **Trash Can** icon in the same row as the equipment you want to delete. A confirmation dialog opens.

Note: If there is an open LOTO associated with the equipment, then it is unavailable for editing or deletion (e.g., there is no **Trash Can** icon).

3. Click **Delete**. The equipment is deleted.

Main Lock Box

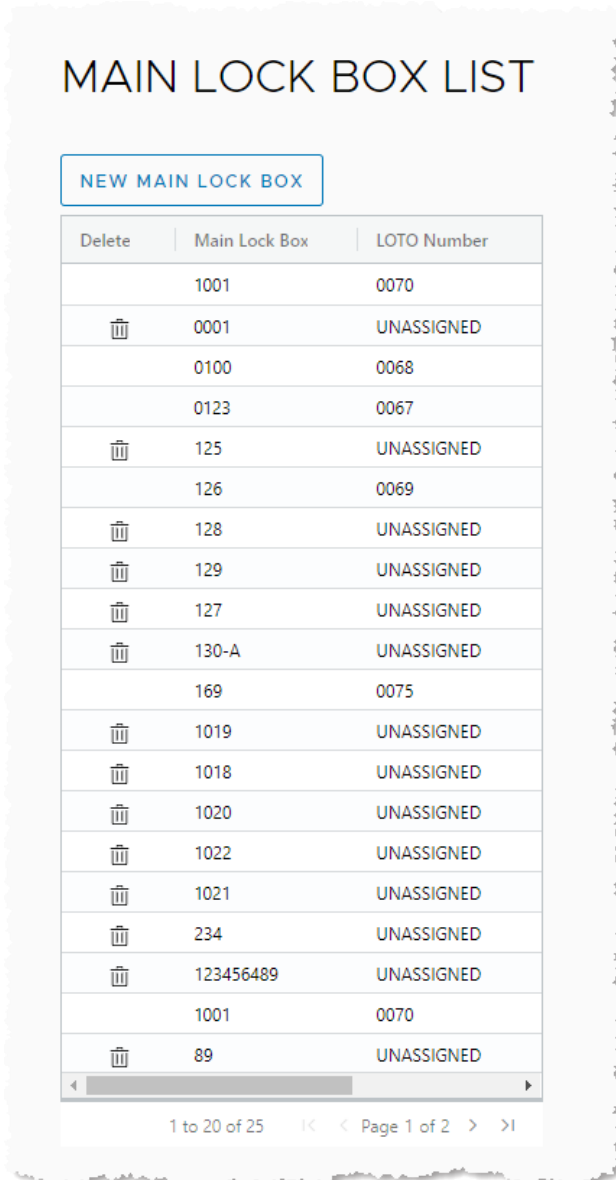
This is the lock box located in the LOTO office where the Tagging Authority keeps all isolation keys. It is protected by an isolation control lock (Main Lock Box Lock) and tag to secure Danger (energy isolation) lock keys during a LOTO.



Display the Main Lock Box List

To display the Main Lock Box List:

1. Open the Kiewit LOTO app.
2. Click **Main Lock Box** under Admin. The Main Lock Box List appears:

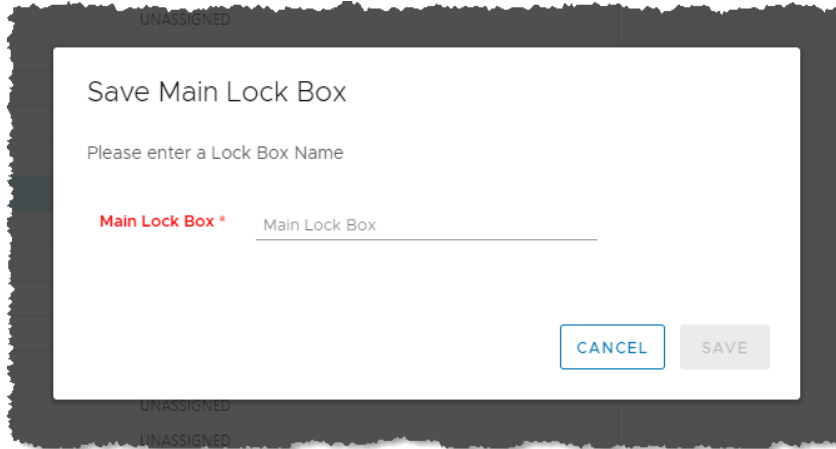


3. You can perform the following actions:
 - [Create a new Main Lock Box](#)
 - Double-click a cell in the table, then modify its contents. (Only available if there is no LOTO assigned to it.)
 - [Change the Main Lock Box name.](#)
 - [Delete a Main Lock Box.](#)

Create a New Main Lock Box

To create a new Main Lock Box:

1. Open the Kiewit LOTO app to the Main Lock Box List page.
2. Click **New Main Lock Box**. The Save Main Lock Box dialog opens.



3. Enter a name, then click **Save**. The new Main Lock Box appears in the Main Lock Box list.

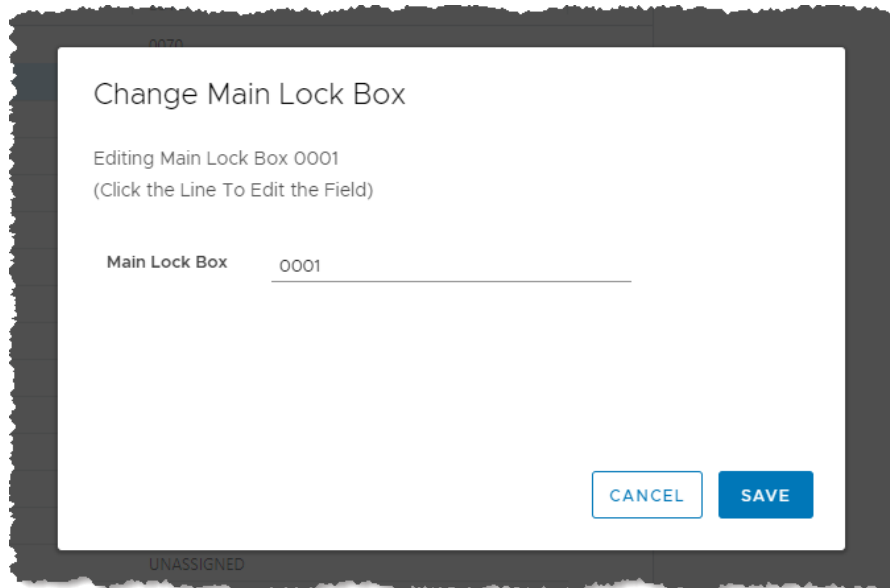
Note: Each lock box name must be unique.

Change a Main Lock Box Name

To change a Main Lock Box name:

Note: If a Main Lock Box list is unavailable for editing or deletion (e.g., there is no **Trash Can** icon), you can simply double-click the Main Lock Box name cell and enter a new name.

1. Open the Kiewit LOTO app to the Main Lock Box List page.
2. Double-click the lock box name in the table. The Change Main Lock Box dialog opens:



3. Enter a new name, then click **Save**. The modified lock box appears in the Main Lock Box list.

Delete a Main Lock Box

To delete a Main Lock Box:

1. Open the Kiewit LOTO app to the Main Lock Box List page.
2. Click the **Trash Can** icon in the same row as the box you want to delete. A confirmation dialog opens.

Note: If there is an open LOTO associated with the Main Lock Box, then it is unavailable for editing or deletion (e.g., there is no **Trash Can** icon).

3. Click **Delete**. The box is deleted.

Main Lock Box Lock

The Main Lock Box Lock is the lock that secures the Main Lock Box. The key to the Main Lock Box Lock is placed in a Master key cabinet located in the LOTO trailer accessible only by the Tagging Authority.



Display the Main Lock Box Lock List

To display the Main Lock Box Lock List:

1. Open the Kiewit LOTO app.
2. Click **Main Lock Box Lock** under Admin. The Main Lock Box Lock List appears:

MAIN LOCK BOX LOCK LIST

Lock Number	Main Lock Box	LOTO Number
12	5	0004
1	3	0006
12	7	0007
12	3	0008
89	7	0009
89	1234	0010
12	3	0013
3214568988888888	2	0018
89	101	0019
444446	5	0021
444446	3	0022
677	219	0023
999999999	11111111111111111111	0024

1 to 13 of 13 << >> Page 1 of 1

Note: This table is display-only. You cannot modify any of its contents or create a new Main Lock Box Lock. You create the link between the Lock number in the Energy Isolation form and the Main Lock Box Number in the MRF.

Satellite Lock Box

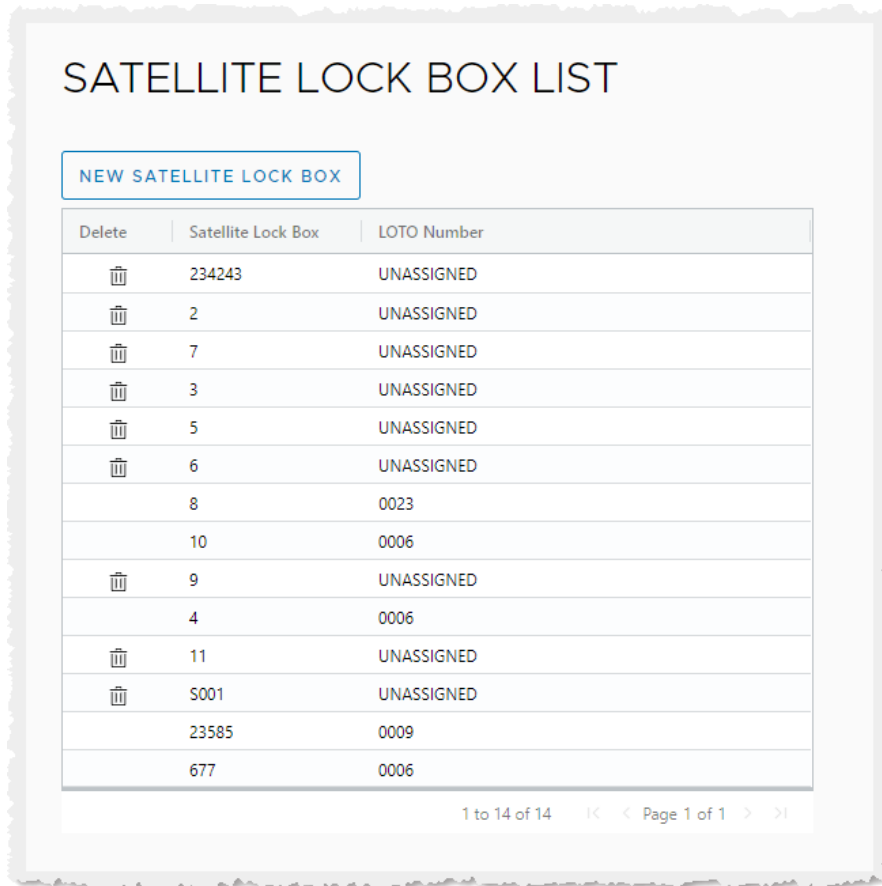
The Satellite Lock Box secures the Authorized Requestor’s key to their user lock placed on the corresponding Main Lock Box. User locks and tags are placed on the Satellite Lock Box by each task performer to ensure the energy isolation lock keys are not removed while they are working on the equipment.

This lock box is intended to go to the field where the Authorized Requestor’s crew is working.

Display the Satellite Lock Box List

To display the Satellite Lock Box List:

1. Open the Kiewit LOTO app.
2. Click **Satellite Lock Box** under Admin. The Satellite Lock Box List appears:

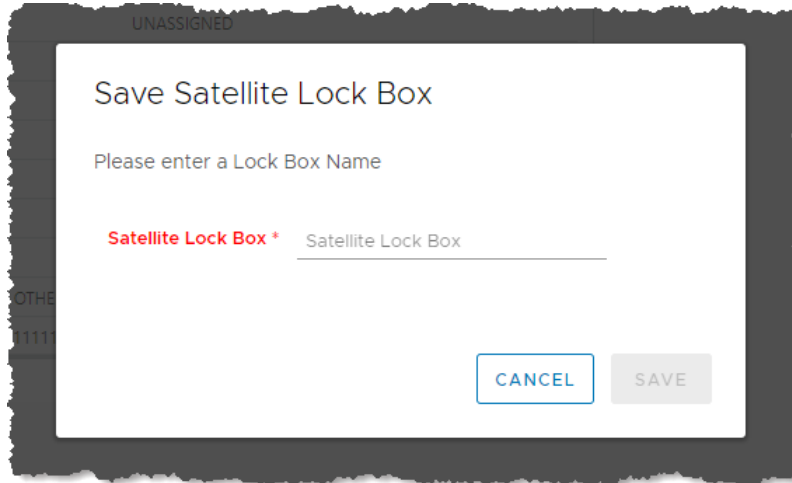


3. From the main page, you can:
 - [Create a new Satellite Lock Box.](#)
 - Double-click a cell in the table, then modify its contents. (Only available if there is no LOTO assigned to it.)
 - [Change a Satellite Lock Box name.](#)
 - [Delete a Satellite Lock Box.](#)

Create a New Satellite Lock Box

To create a new Satellite Lock Box:

1. Open the Kiewit LOTO app to the Satellite Lock Box List page.
2. Click **New Satellite Lock Box**. The Save Satellite Lock Box dialog opens:

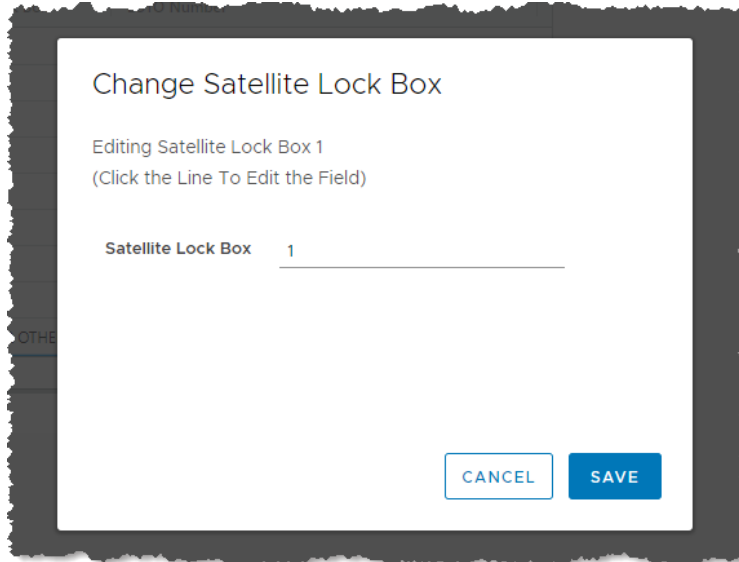


3. Enter a name in the Satellite Lock Box field, then click **Save**. The new Satellite Lock Box appears in the main Satellite Lock Box list.

Change a Satellite Lock Box Name

To change a Satellite Lock Box name:

1. Open the Kiewit LOTO app to the Satellite Lock Box List page.
2. Double-click the Satellite Lock Box name in the table. The Change Satellite Lock Box dialog opens:



3. Enter a new name, then click **Save**. The modified box appears in the main Satellite Lock Box list.

Delete a Satellite Lock Box

To delete a Satellite Lock Box:

1. Open the Kiewit LOTO app to the Satellite Lock Box List page.
2. Click the **Trash Can** icon in the same row as the box you want to delete. A confirmation dialog opens.
3. Click **Delete**. The box is deleted.

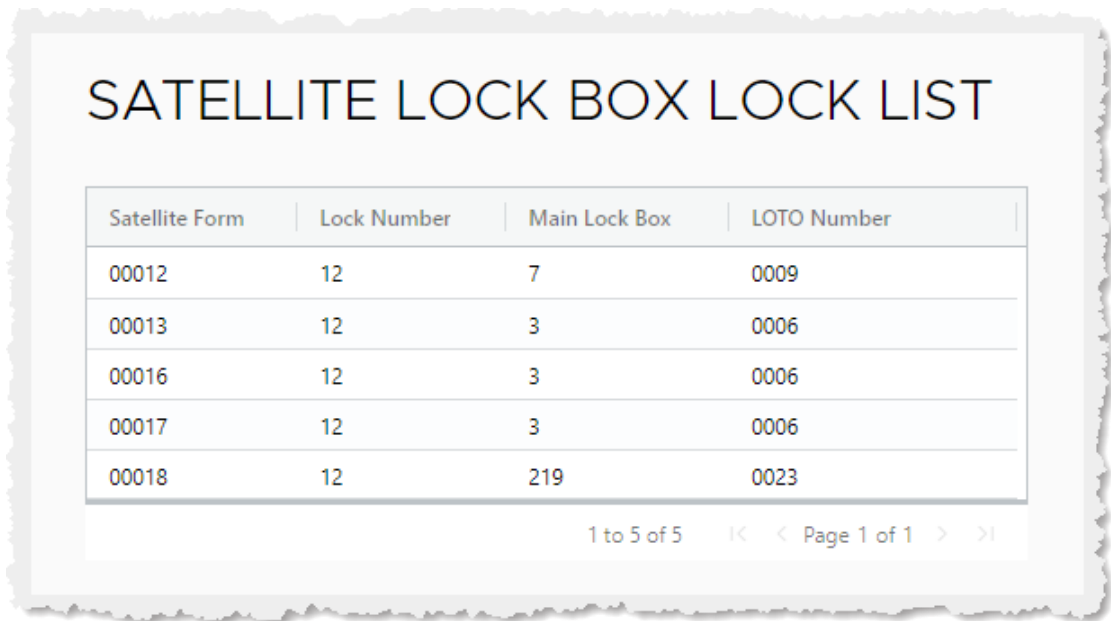
Satellite Lock Box Lock

The Authorized Requester places their key inside the Satellite Lock Box, then places their User Lock on the Satellite Box and retains their key to prevent exposure to their Main Lock Box key that is in the Satellite Box. Workers also place locks on the Satellite Lock Box and retain their own keys.

Display the Satellite Lock Box Lock List

To display the Satellite Lock Box Lock List:

1. Open the Kiewit LOTO app.
2. Click **Satellite Lock Box Lock** under Admin. The Satellite Lock Box Lock List appears:



Satellite Form	Lock Number	Main Lock Box	LOTO Number
00012	12	7	0009
00013	12	3	0006
00016	12	3	0006
00017	12	3	0006
00018	12	219	0023

1 to 5 of 5 < < Page 1 of 1 > >

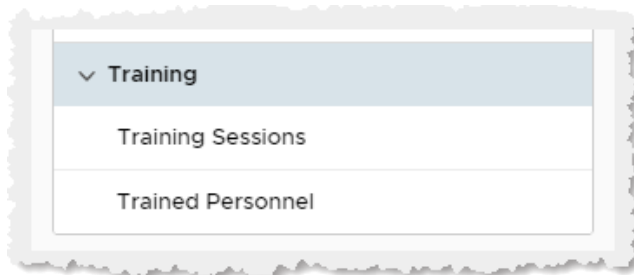
Note: This table is display-only. You cannot modify any of its contents or create a new Main Lock Box Lock. You create the link between the Lock number in the Energy Isolation form and the Main Lock Box Number in the MRF.

Training

All employees who are affected by a LOTO (Levels 1–4) must get LOTO training. All trained personnel (Levels 1–3) wear an identifier (e.g. hard hat sticker, hard hat, safety vest of a unique color, etc.) indicating they have received LOTO training.



When you open the Kiewit LOTO app, the Training menu appears as follows:



The following sections are available:

- [Training Sessions](#)
- [Trained Personnel](#)

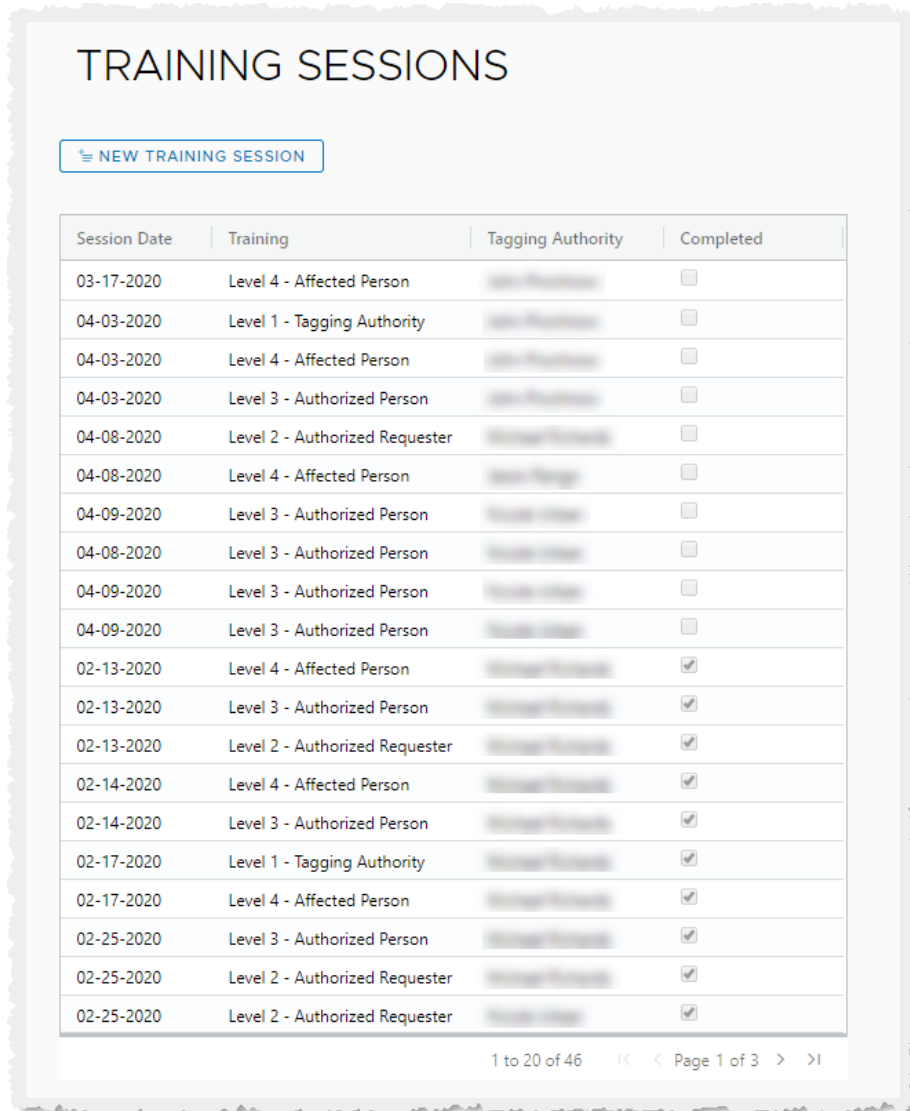
Training Sessions

The Training Sessions page displays scheduled training sessions in a list.

Display the Training Sessions List

To display the Training Sessions list:

1. Open the Kiewit LOTO app.
2. Click **Training Sessions** under Training. The Training Sessions list appears:



Session Date	Training	Tagging Authority	Completed
03-17-2020	Level 4 - Affected Person	[blurred]	<input type="checkbox"/>
04-03-2020	Level 1 - Tagging Authority	[blurred]	<input type="checkbox"/>
04-03-2020	Level 4 - Affected Person	[blurred]	<input type="checkbox"/>
04-03-2020	Level 3 - Authorized Person	[blurred]	<input type="checkbox"/>
04-08-2020	Level 2 - Authorized Requester	[blurred]	<input type="checkbox"/>
04-08-2020	Level 4 - Affected Person	[blurred]	<input type="checkbox"/>
04-09-2020	Level 3 - Authorized Person	[blurred]	<input type="checkbox"/>
04-08-2020	Level 3 - Authorized Person	[blurred]	<input type="checkbox"/>
04-09-2020	Level 3 - Authorized Person	[blurred]	<input type="checkbox"/>
04-09-2020	Level 3 - Authorized Person	[blurred]	<input type="checkbox"/>
02-13-2020	Level 4 - Affected Person	[blurred]	<input checked="" type="checkbox"/>
02-13-2020	Level 3 - Authorized Person	[blurred]	<input checked="" type="checkbox"/>
02-13-2020	Level 2 - Authorized Requester	[blurred]	<input checked="" type="checkbox"/>
02-14-2020	Level 4 - Affected Person	[blurred]	<input checked="" type="checkbox"/>
02-14-2020	Level 3 - Authorized Person	[blurred]	<input checked="" type="checkbox"/>
02-17-2020	Level 1 - Tagging Authority	[blurred]	<input checked="" type="checkbox"/>
02-17-2020	Level 4 - Affected Person	[blurred]	<input checked="" type="checkbox"/>
02-25-2020	Level 3 - Authorized Person	[blurred]	<input checked="" type="checkbox"/>
02-25-2020	Level 2 - Authorized Requester	[blurred]	<input checked="" type="checkbox"/>
02-25-2020	Level 2 - Authorized Requester	[blurred]	<input checked="" type="checkbox"/>

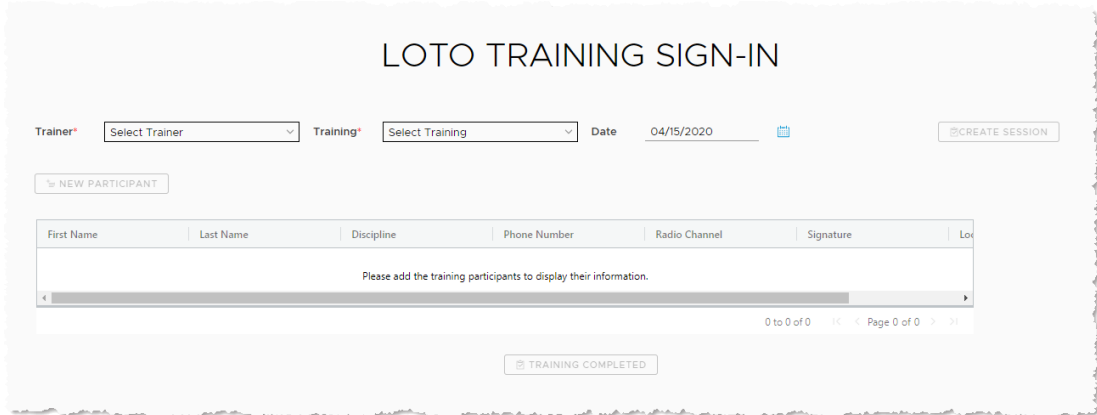
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3. From the main window, you can:
 - [Create a new training session.](#)
 - [Add participants to a training session.](#)
 - [Mark a training session as completed.](#)

Create a New Training Session

To create a new training session:

1. Open the Kiewit LOTO app to the Training Sessions page.
2. Click **New Training Session**. The LOTO Training Sign-In page appears:

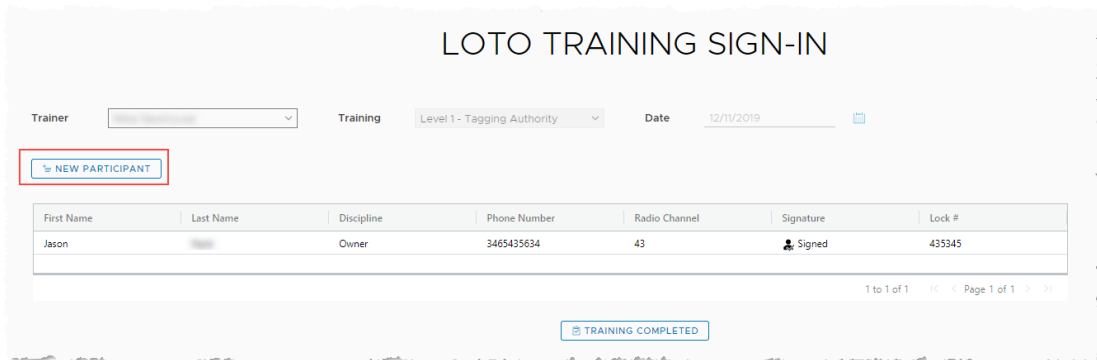


3. Select a trainer, training type, and date, then click **Create Session**. The new session appears in the Training Sessions list.

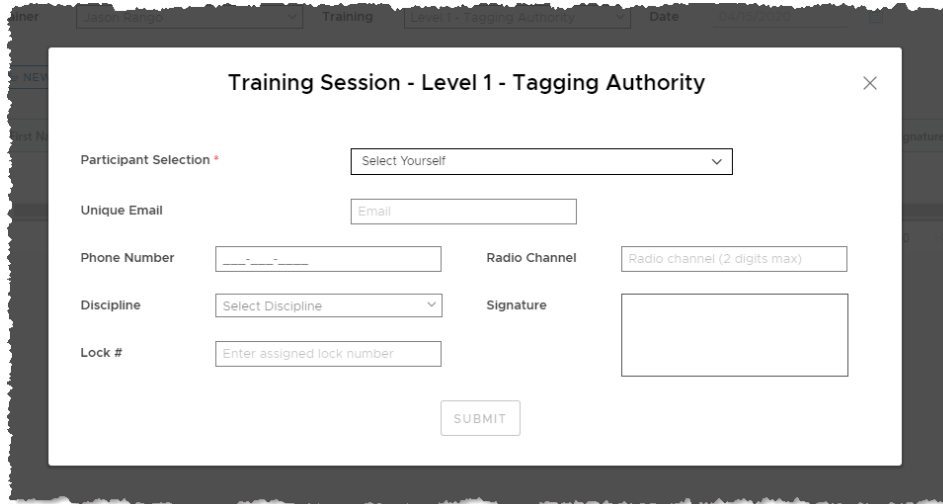
Add Participants to a Training Session

To add participants to a training session:

1. Open the Kiewit LOTO app to the Training Sessions page.
2. Double-click the training session. The LOTO Training Sign-In page opens:



3. Click **Add Participant**. The training session dialog opens:

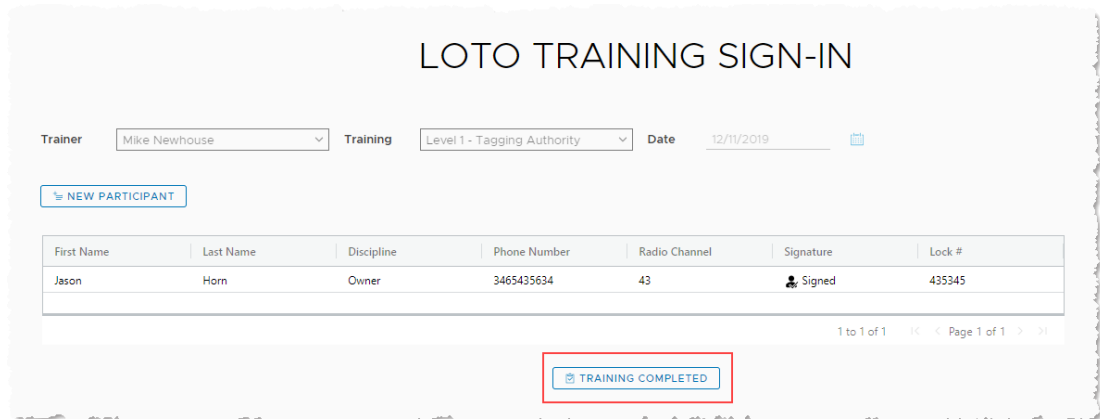


4. Select a name in the Participant Selection drop-down.
5. Obtain the participant's signature, then click **Submit**. The new session appears in the Training Sessions list.

Mark a Training Session as Completed

To mark a training session as Completed:

1. Open the Kiewit LOTO app to the Training Sessions page.
2. Double-click the training session in the list. The LOTO Training Sign-In page opens:



First Name	Last Name	Discipline	Phone Number	Radio Channel	Signature	Lock #
Jason	Horn	Owner	3465435634	43	Signed	435345

3. Click **Training Completed**. The session is deleted.

Trained Personnel

All employees who work under a LOTO must be trained in LOTO procedures. The Kiewit LOTO app provides a list of personnel to allow management to keep track of employee training levels.

Levels of Trained Personnel

Kiewit LOTO contains different levels of training, depending on the authority and responsibilities of different employees.

Note: All trained personnel (Levels 1–3) wear an identifier (e.g. hard hat sticker, hard hat, safety vest of a unique color, etc.) indicating they have received LOTO training.

Tagging Authority (Level 1)

This role is responsible for locking and tagging out a project and maintaining the LOTO equipment inventory, LOTO program records, and drawings to track hazardous energy boundary status. This person reviews Work Authorization Requests to determine if sufficient information has been provided to determine proper isolation points if a LOTO is required.

This person, designated by the Project Manager, is the only person who has access to the LOTO system.

Note: All LOTO questions or issues should be directed to the Tagging Authority.

Authorized Requestor (Level 2)

This role Understands and executes the process to verify system isolation and properly sign onto a LOTO document.

Submits Work Authorization Requests for LOTO.

Assist designated Authorized Persons with LOTO procedure implementation.

Authorized Person (Level 3)

This role works on systems with potential presence of Hazardous Energy. (Includes: Craft personnel, Subcontractors, Vendors, and Client personnel.)

Apply their lock to a LOTO Satellite Lock Box and sign onto a LOTO Satellite Record after verifying isolation points.

Must understand the system they are to work on and the boundaries of that system.

Affected Person (Level 4)

Affected Persons are personnel who are NOT authorized to work under a LOTO, but should be aware of the procedure, which may affect their own work. Affected Persons should receive training by the safety staff or their designee during project orientation.

Display the Trained Personnel Page

To display the Trained Personnel page:

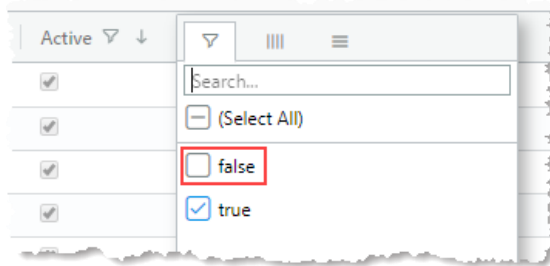
1. Open the Kiewit LOTO app.
2. Click **Trained Personnel** under Training. The Trained Personnel page appears:

TRAINED PERSONNEL

First Name	Last Name	Unique Id	Discipline	Phone Number	Lock #	Radio Channel	Active	Training	PRNR
Michael			Vendor		34	00	<input checked="" type="checkbox"/>	Level 1 - Tagging Authority	12345678
Wem			Insulation		12	12	<input checked="" type="checkbox"/>	Level 2 - Authorized Requester	46546546
Wandaag			Electrical		2	12	<input checked="" type="checkbox"/>	Level 2 - Authorized Requester	12333
Bob			Civil		9	3	<input checked="" type="checkbox"/>	Level 1 - Tagging Authority	99887
Kijkt			Boilermaker		2	99	<input checked="" type="checkbox"/>	Level 3 - Authorized Person	111112
Jason			Ironworker		12	11	<input checked="" type="checkbox"/>	Level 1 - Tagging Authority	0440442
Corbin			Cement Mason		12	sd	<input checked="" type="checkbox"/>	Level 3 - Authorized Person	022323
Nicole			Subcontractor		453	98	<input checked="" type="checkbox"/>	Level 1 - Tagging Authority	00044156
Level			Electrical		67	87	<input checked="" type="checkbox"/>	Level 3 - Authorized Person	55454545
John			Cement Mason		1	12	<input checked="" type="checkbox"/>	Level 1 - Tagging Authority	
Ervin			Vendor		2		<input checked="" type="checkbox"/>	Level 3 - Authorized Person	
John			DCS		11		<input checked="" type="checkbox"/>	Level 3 - Authorized Person	12349877
John			Laborer		16		<input checked="" type="checkbox"/>	Level 2 - Authorized Requester	78723224

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Note: By default, the Trained Personnel list automatically filters out inactive users. To show all users (including inactive users), [filter](#) the values in the Active column to include all values:

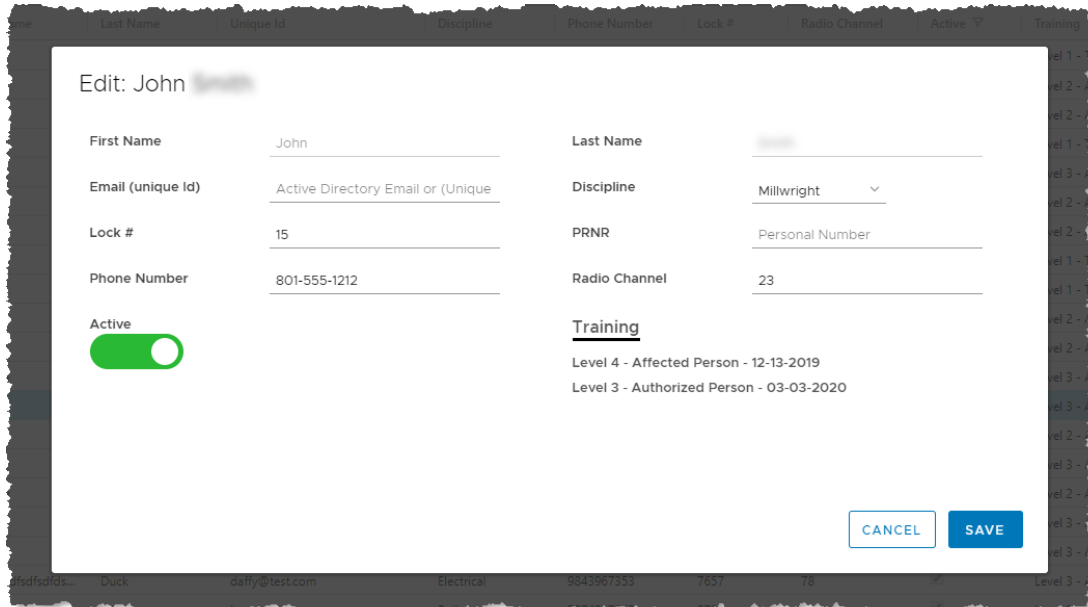


3. From the main list, you can:
 - [Edit personnel properties.](#)
 - [Activate/Deactivate a trainee.](#)

Edit Personnel Properties

To Edit Personnel properties:

1. Open the Kiewit LOTO app to the Trained Personnel page.
2. Double-click a cell in the row that contains the employee whose properties you want to modify. The Edit [employee name] dialog opens:



Dialog box titled "Edit: John" with the following fields:

First Name	John	Last Name	
Email (unique Id)	Active Directory Email or (Unique	Discipline	Millwright
Lock #	15	PRNR	Personal Number
Phone Number	801-555-1212	Radio Channel	23

Active:

Training
Level 4 - Affected Person - 12-13-2019
Level 3 - Authorized Person - 03-03-2020

CANCEL SAVE

3. Make the required modifications, then click **Save**. The modified personnel record appears in the main Trained Personnel List.

Activate/Deactivate a Trainee

To activate/deactivate a trainee:

1. Open the Kiewit LOTO app to the Trained Personnel page.
2. Double-click a cell in the row that contains the employee whose properties you want to modify. The Edit [employee name] dialog opens.
3. Click the Active slider to activate/deactivate the employee:
 - Click left to **deactivate**. (The slider turns red.)
 - Click right to **activate**. (The slider turns green.)
4. Click **Save**. The modified personnel record appears in the main Trained Personnel List.