TIRE LINC®
TIRE PRESSURE & TEMPERATURE MONITORING SYSTEM 2.0
OWNER'S MANUAL

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Introduction

Tire Linc® is a tire pressure and temperature monitoring system (TPMS). The TPMS issues an alert via the OneControl® app or the Alert Indicator when a trailer's tire(s) pressure or temperature falls out of the programmable range.

Additional information about this product can be obtained from lci1.com/support or by downloading the free LippertNOW app. The app is available on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.
Apple App Store®, iPhone®, and iPad® are registered trademarks of Apple Inc.
Google Play™ and Android™ are trademarks of Google Inc.

Key System Components

Refer to figure 1 for the following components:

Sensors - Stem Mount, 188 psi (129 kPa) maximum pressure reading, -58 to 401 °F (-50 to 205 °C) temperature measurement range with two ways to monitor tire conditions; OneControl app and Alert Indicator. Stem Sensor Working Range: 185 to -4 °F (85 to -20 °C).

Repeater - Receives sensor data, communicates with Alert Indicator and Phone App via Bluetooth Low Energy (BLE).

Repeater Dock - Provides power to repeater, which "docks" to this base.

Alert Indicator - Battery powered: Can be charged via USB Micro B connector; lights LED and beeps on tire faults, e.g., pressure high/low, temperature high/low, sensor battery.

OneControl App - Displays real-time tire pressures, temperatures and visual alerts for faults.

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Fig. 1

Callout	Description
A	Stem Sensor Tool; separate into top and bottom parts
B	Stem Sensors; quantity of Stem Sensors will depend on unit
C	Alert Indicator; battery powered but can be charged via USB Micro B connector
D	Repeater
E	Lock Nut Wrench; tool to install lock nuts for optional theft deterrent
F	Fastener Strips; optional to attach Alert Indicator
G	O-rings; replace existing Stem Sensor O-rings when replacing Stem Sensor batteries
H	Lock Nuts; optional; used if installing as theft deterrent
I	Charging cord for Alert Indicator
J	Repeater Dock; already installed in unit
K	Suction cup; optional for installing Alert Indicator

For information on the assembly or individual components of this product, please visit: https://support.lci1.com/tire-linc.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, e.g., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions,

⚠WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death, serious personal injury, severe product and/or property damage if not performed safely and within the parameters set forth in this manual.

⚠WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

⚠WARNING

Unit MUST be supported per manufacturer's recommendations before working underneath. Failure to do so may result in death or serious personal injury.

⚠CAUTION

Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

⚠CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the LCI limited warranty.

Preparation

Identify the location of the Repeater (Fig. 2A) and Repeater Dock (Fig. 2B), then gain access to the Repeater.

Pairing Alert Indicator to Repeater

1. Pair the Alert Indicator (Fig. 3) to the Repeater (Fig. 2A) by pressing and releasing the Alert Indicator button (Fig. 3A).
   - **A.** The Indicator will power up and its Status LED (Fig. 3B) will blink red once and then blue three times indicating the Alert Indicator is not linked to the Repeater.

NOTE: After 10 seconds, the Indicator will enter sleep mode.

2. Link the Alert Indicator to the Repeater by pressing and holding the Pair Mode button (Fig. 2D) on the Repeater for at least five seconds, until the Status LED blinks rapidly.
3. Release the Repeater's Pair Mode button.
4. Press the Alert Indicator's button (Fig. 3A) once to make sure the indicator is awake.

5. Within 10 seconds of waking the indicator, press and hold the Alert Indicator button.
   - **A.** Continue to hold the Alert Indicator button until its LED and buzzer sounds.
     - **I.** One beep will sound off and one green LED flash will be emitted. **Continue to hold the button**.
     - **II.** Two beeps will sound off and the LED will blink green twice. **Continue to hold the button**.
     - **III.** After the indicator beeps three times, release the button. The LED will blink green three times.
   - **B.** The Alert Indicator's LED will briefly blink blue and emit a "happy tone," indicating it has been linked to the Repeater.
6. The Alert Indicator is now linked to the Repeater.

NOTE: The Repeater's Status LED will indicate green, yellow or red to indicate certain conditions (see Step 7). The number of blinks of the LED, regardless of color, also indicates battery status (see Step 8).

7. Wait for the Repeater's Status LED to turn off, then press and release the Alert Indicator's button. The indicator's LED will flash as follows:
   - Green to indicate the Repeater is in range and monitoring; tires within pressure and temperature limits.
   - Yellow if there is no connection or out of range of the Repeater; cannot detect tire status.
   - Red to indicate a fault, either high/low pressure or temperature is out of range; Indicator will beep for 10 seconds when tire issue is seen for the first time. LED will continue to blink red until fault is corrected.
   - Red followed by blue notes Indicator is not linked to the Repeater.

Fig. 2

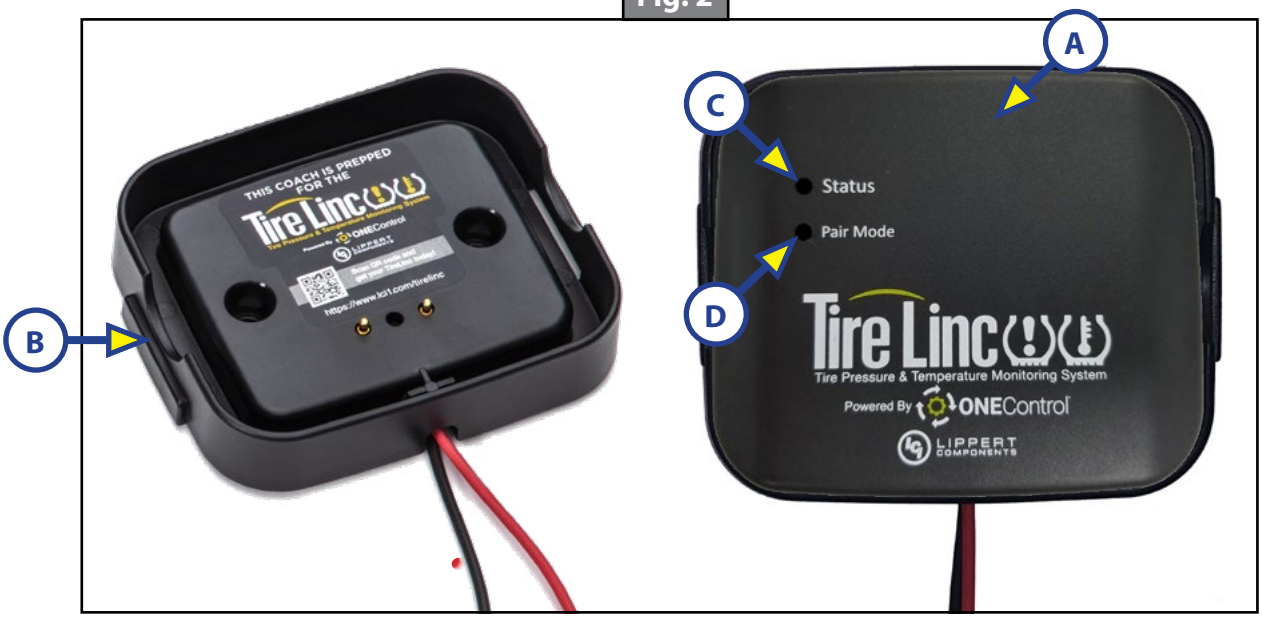
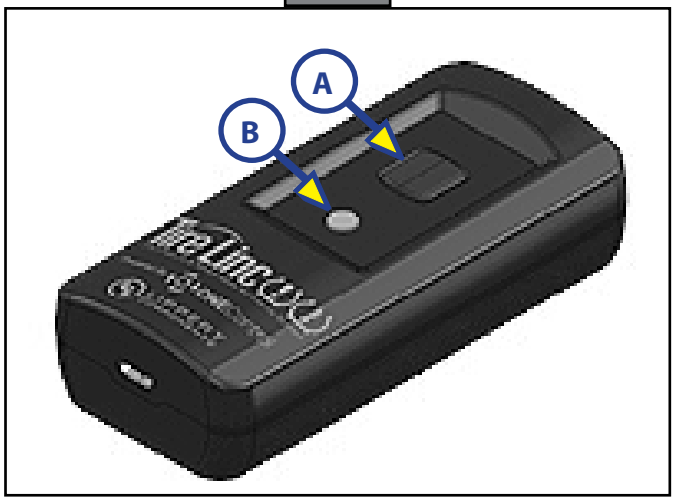


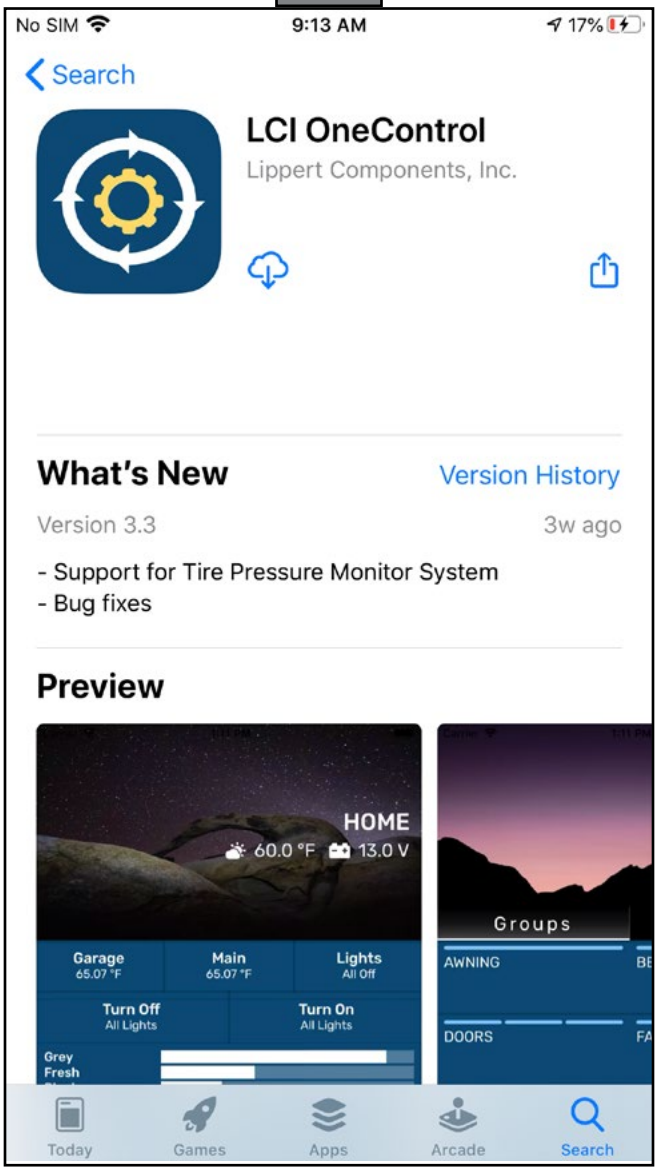
Fig. 3



8. Battery state indicators are as follows (regardless of LED color in step 7):

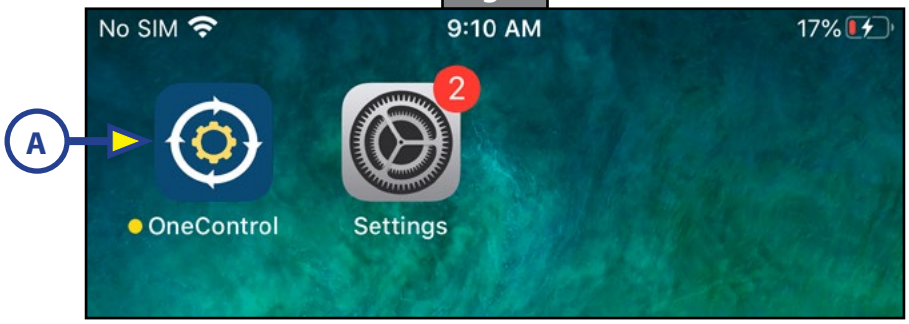
- 3 blinks - Good, full charge

Fig. 4



- 2 blinks - Low, not full charge
- 1 blink - Critical, needs charging

Fig. 5



Download on the App Store

GET IT ON Google play

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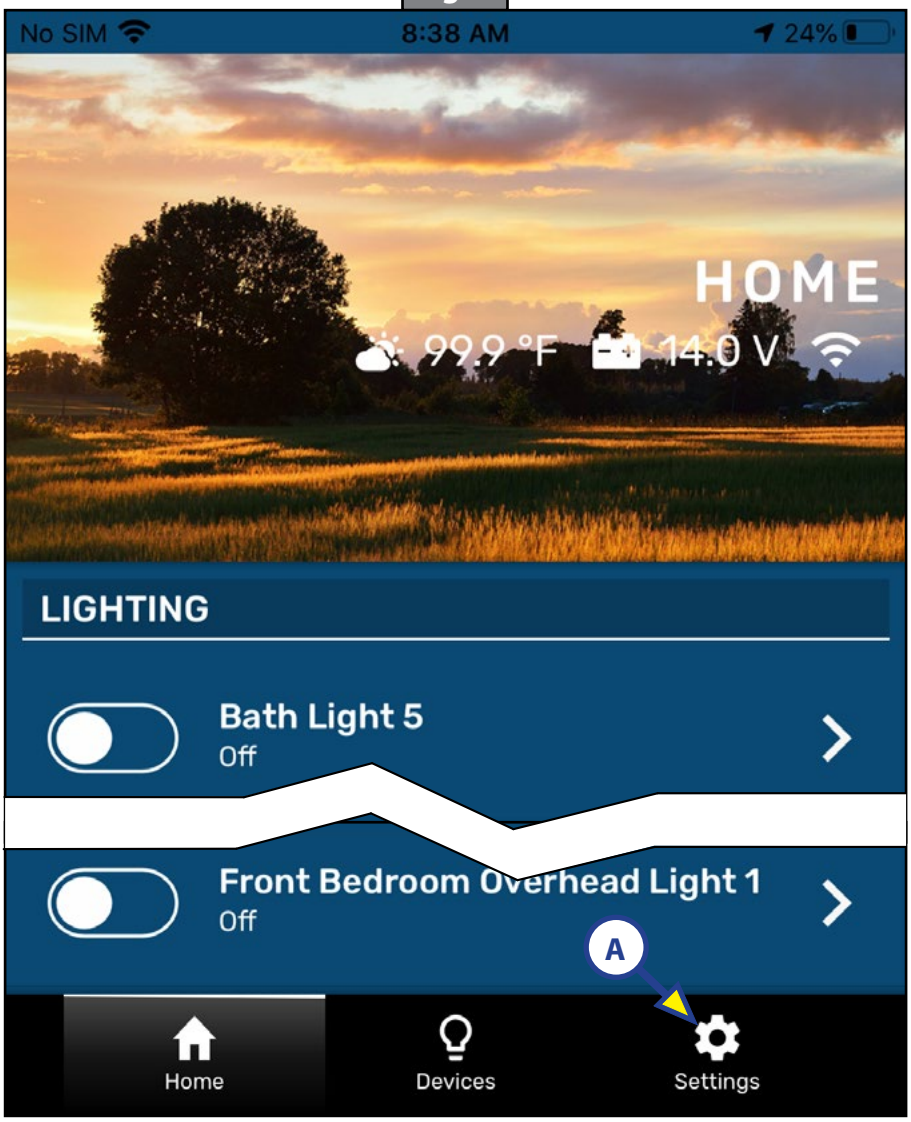
Connect OneControl App to Repeater

1. Download the LCI OneControl app (Fig. 4) for either an iOS or Android smart phone.
2. After the LCI OneControl app has been downloaded, tap the OneControl icon (Fig. 5A) to launch the app.

Fig. 6



3. Follow the app's installation prompts to configure the OneControl app.

NOTE: Optionally, press the Pair Mode button (Fig. 2D) on the Repeater and look for TireLinc in the app's listing.

4. Tap the Settings button (Fig. 6A) at the bottom of the OneControl page.
5. Tap the "Add an accessory" button (Fig. 7A).
6. When the "scan for devices" window appears, look for TireLinc in the list. Select the one with the lowest RSSI value (Fig. 8A). For instance:
   - **A.** -60 is greater than -70; select -60 because it is the number closest to zero.
   - **B.** 20 is greater than 10; select 20 because it is the stronger number.
7. Then select a vehicle class and tap CONTINUE (Fig. 9).
8. Select a vehicle and tap FINISH (Fig. 10).

Fig. 7

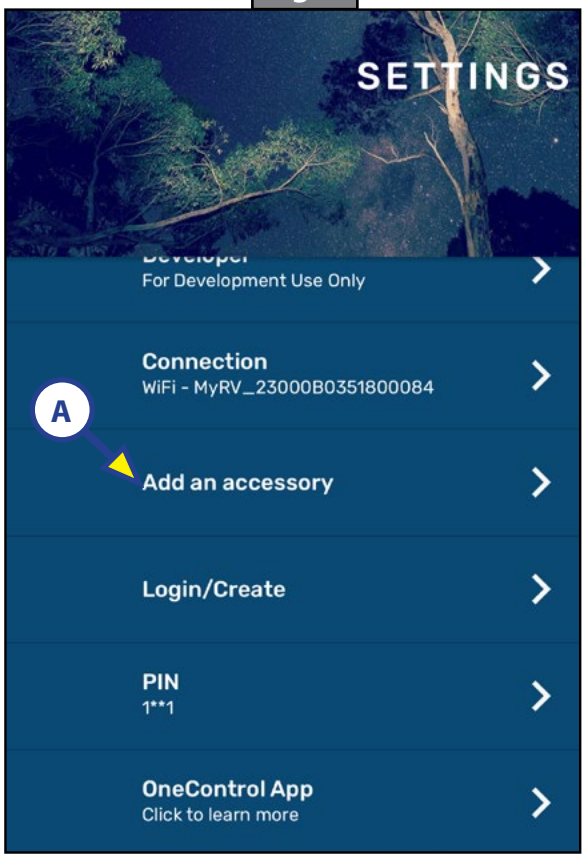


Fig. 8

Fig. 9

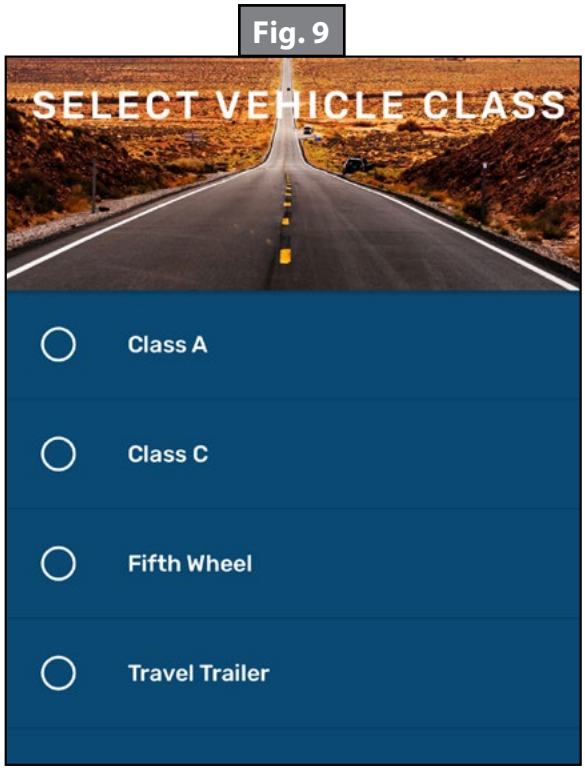


Fig. 10

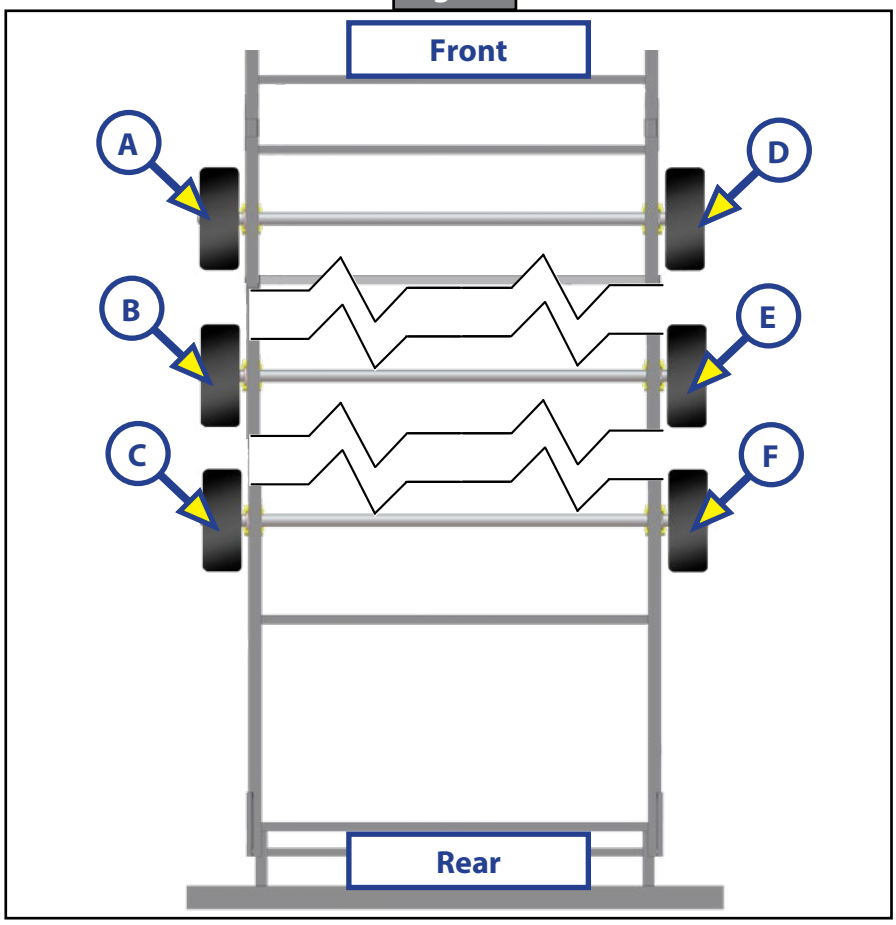
Stem Sensor Pairing Sequence

The pairing sequence for Stem Sensors (Fig. 11) is as follows:

1. **SINGLE AXLE:** Stem Sensors for a single axle trailer **MUST** be paired in the following order: Left Front (Fig.12A) and Right Front (Fig.12D).
2. **DOUBLE AXLE:** Stem Sensors for a double axle trailer **MUST** be paired in the following order: Left Front (Fig.12A), Left Rear (Fig.12B), Right Front (Fig.12D) and Right Rear (Fig.12E).
3. **TRIPLE AXLE:** Stem Sensors for a triple axle trailer **MUST** be paired in the following order: Left Front (Fig.12A), Left Middle (Fig.12B), Left Rear (Fig.12C), Right Front (Fig.12D), Right Middle (Fig.12E) and Right Rear (Fig.12F).

Fig. 11

Fig. 12



Pairing Stem Sensors to Repeater Via Smart Phone

If no smart phone is available, go to section on Pairing Stem Sensors to Repeater via Alert Indicator.
If a wrong trailer type is chosen or there is a new trailer configuration, see Troubleshooting section for factory reset.

1. The OneControl app on the smart phone will indicate in specific order which tire the stem sensor cap should be installed on: Front Left, Rear Left, Front Right, Rear Right, etc.
2. Have stem sensors available to install on the tires.
3. Remove any existing stem caps from the tires.

NOTE: If installing the lock nuts as a theft deterrent, add the lock nuts to the tire stems while making sure there is room to add the sensors. Lock nuts will be tightened at a later stage. The lock nuts are optional and are not required to be installed.

4. Pair stem sensors to the repeater as follows:
   A. Tap the Learn Sensors button (Fig.13A) in the TIRE PRESSURE app screen. The app will display a list of tires with instructions to screw the first stem sensor onto the Front Left tire stem (Fig.14).

B. Install a stem sensor onto the tire stem in the proper sequence (Fig. 14) and wait for the smart phone to indicate the sensor was found (Fig.15A).

NOTE: It may take up to 30 seconds for the sensor to wake and be found.

C. If the sensor is not seen within 30 seconds, unscrew the sensor from the tire stem, wait approximately 10 seconds and then reinstall the sensor. Do not proceed to install any other sensors until the app shows the sensor is found.

D. After the sensor has been found, the app will indicate the next tire sensor to be paired (Fig.15B).

E. Repeat step 4B, 4C and 4D until all sensors are learned (Fig.15).

5. Tap the Finished button (Fig.16A) to exit **TIRE PRESSURE** Sensor Configuration mode.

Tapping Finished exits configuration mode and redisplays the **TIRE PRESSURE** screen. Do **NOT** tap the Learn Sensors button. Doing so resets Tire Linc into configuration mode, which requires uninstalling the Stem Sensors.

NOTE: When learning has been completed, the low and high pressure limits of the tires are estimated at +/- 20% of the last received sensor data. Make sure sensors are not removed during the learning process or the pressure limit values will be incorrectly estimated. Pressure and temperature limits can be set through the app after learning has been completed.

NOTE: If installing the optional lock nuts as a theft deterrent, loosen stem sensor slightly and hand tighten lock nut against the sensor. Using the wrench provided in kit, hold lock nut in position and hand tighten stem sensor against lock nut.

Fig. 13

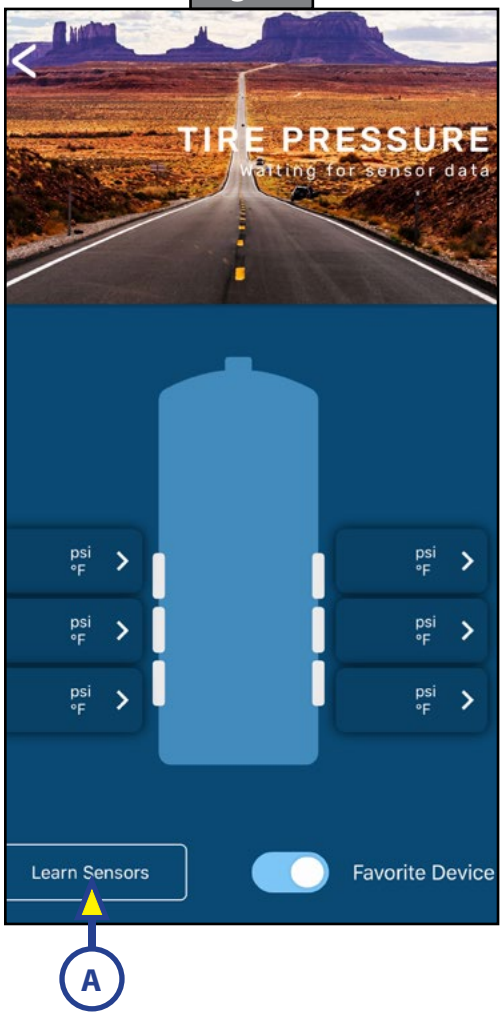


Fig. 14

Fig. 15

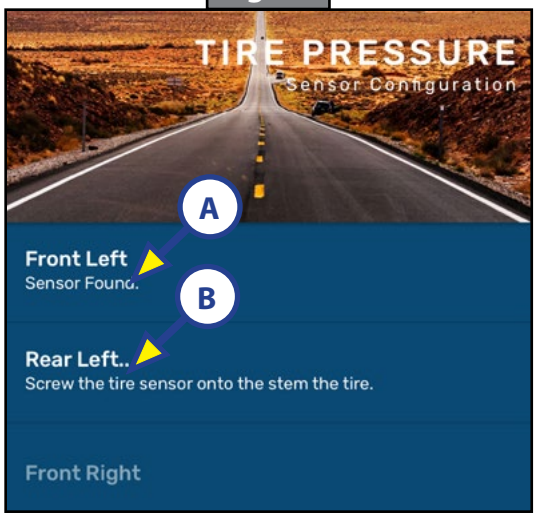
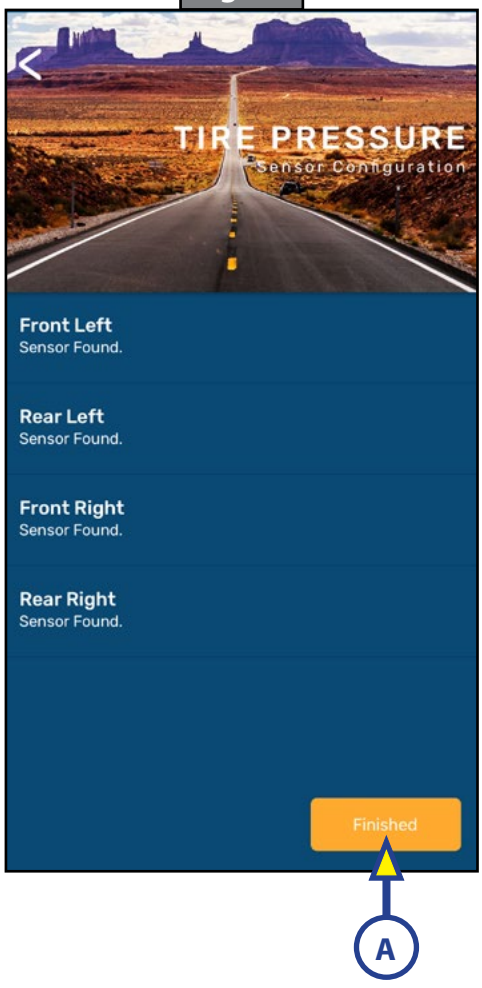


Fig. 16



Pairing Stem Sensors to Repeater Via Alert Indicator

NOTE: Use this procedure if Stem Sensors have not previously been paired using a smart phone or if a smart phone is not available.

1. Use the Alert Indicator to pair the Stem Sensors (Fig. 11) to the Repeater.

A. Remove any existing stem caps from the tires.

NOTE: If using the lock nuts as a theft deterrent, add the lock nuts to the tire stems while making sure there is room to add the sensors. Lock nuts will be tightened at a later stage. The lock nuts are optional and are not required to be installed.

B. To begin pairing the Stem Sensors to the Repeater, push the Alert Indicator button (Fig. 3A) once to make sure the indicator is awake. Within 10 seconds, press and hold the Alert Indicator button.

NOTE: To cancel learning, press and hold the Alert Indicator button for more than four seconds. Learning is canceled and sensors will not be remembered.

C. After one beep has sounded and one green LED flashes, continue to hold the Alert Indicator's button.

D. After two beeps sound off, release the Alert Indicator's button. The Alert Indicator's LED will blink green twice.

2. The Alert Indicator will connect to the Repeater and emit a "happy tone" if the connection is successful.

3. The Alert indicator LED will blink purple, then green one time to indicate that the first sensor (Left Front) is ready for pairing to the Repeater.

A. Screw a Stem Sensor on the proper sequence tire, wait 10 seconds, then press and release the Alert Indicator button.

B. The Indicator will beep and its LED will blink purple indicating that the Repeater is scanning for the sensor.

C. Within five seconds, if the sensor is found, a beep will sound off and the LED will blink purple followed by two green flashes, indicating the Alert Indicator is ready to scan for the second sensor.

I. If more than five seconds elapse, press and release the Alert Indicator button again; this will extend the scan time.

II. If a sensor is not found, two beeps will sound and the LED will blink green once, indicating the Alert Indicator still needs to learn the first sensor.

4. Repeat steps 3A–3C to pair the remaining sensors in order.

5. Stem Sensors take time to wake from deep sleep, so step 3A may need to be repeated twice. Do not proceed to install any other sensors until the current sensor is found.

6. After all sensors have been paired to the Alert Indicator, the Alert Indicator's LED will blink purple then green five times.

7. Press and hold the Alert Indicator button for about two seconds until a single beep is heard, then release the button.

This ends learning and the repeater will remember all sensors. The Alert Indicator will now be in monitor mode.

NOTE: When learning has completed, the low and high pressure limits of the tires are estimated at +/- 20% of the last received sensor data. Make sure sensors are not removed during the learning process or the pressure limit values will be incorrectly estimated.

NOTE: If installing the optional lock nuts as a theft deterrent, loosen stem sensor slightly and hand tighten lock nut against the sensor. Using the wrench provided in kit, hold lock nut in position and hand tighten stem sensor against lock nut.

Operation

When Stem Sensors are under pressure, data is transmitted to the Repeater, when tires are:

- moving/rotating, every one minute;
- not moving/not rotating, every 15 minutes.

Alert Indicator

The Alert Indicator will continually scan for tire events from the Repeater when it is plugged into a USB cable connected to a powered USB port. This configuration is best because it will be the most responsive to tire events.

When not plugged into a powered USB port, e.g. running on internal battery, the Alert Indicator periodically scans for data sent to the Repeater, when tires are:

- moving/rotating every minute;
- not moving/not rotating, scanning time increments in 1, 2, 4, 8 and 15 minutes (maximum), with the Indicator entering sleep between scans.

Make sure the Repeater's Status LED is off, then press and release the Alert Indicator's button. The indicator's LED will flash as follows:

- Green to indicate the Repeater is in range and monitoring; tires within pressure and temperature limits.
- Yellow if there is no connection or out of range of the Repeater; cannot detect tire status.
- Red to indicate a fault, either high/low pressure or temperature is out of range; Indicator will beep for 10 seconds when tire issue is seen for the first time. LED will continue to blink red until fault is corrected.
- Red followed by blue notes; Indicator is not linked to the Repeater.

OneControl App

1. If using the LCI OneControl app for either an iOS or Android smart phone, do as follows:

Fig. 17

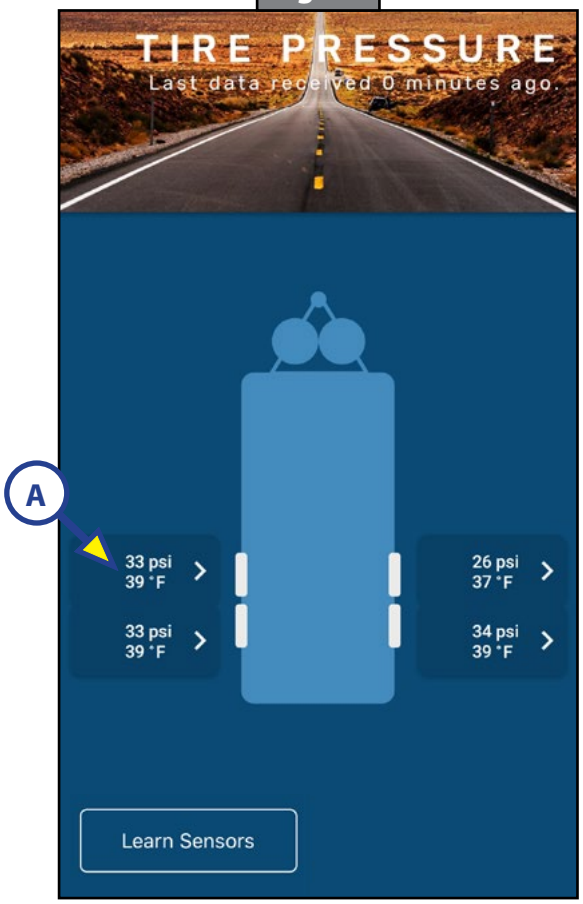
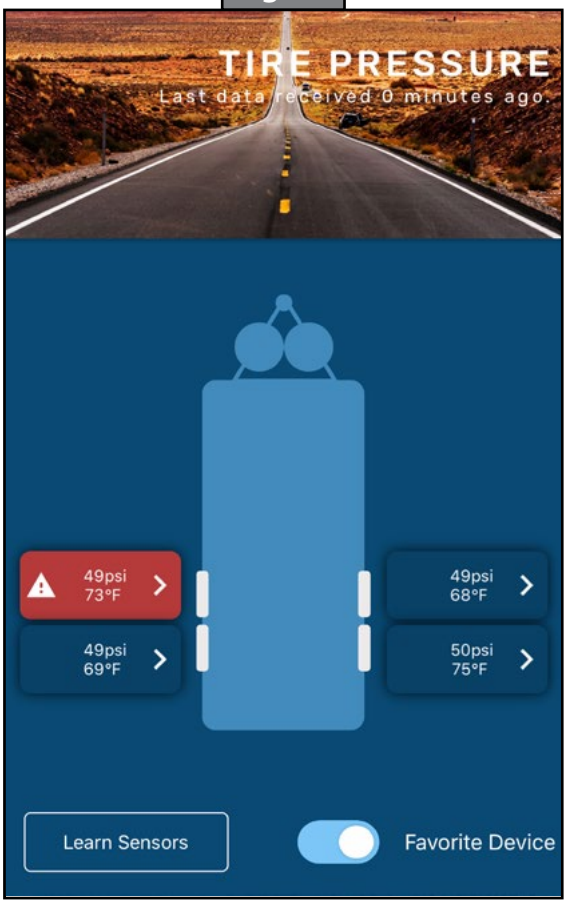


Fig. 18



A. Tap the OneControl icon (Fig. 5A) to launch the app.
B. The app will automatically detect the Tire Linc system.

NOTE: If necessary, follow the online prompts to set up Tire Linc within the OneControl app.

NOTE: If unable to download the OneControl app, or when not running the app, the Alert Indicator is provided to send simple audio and visual alerts of a tire pressure or temperature event. No additional programming of the indicator is required.

2. The smart phone will connect to the repeater and the app will display a trailer image with tire pressures and temperatures (Fig. 17).

NOTE: Figure 17 shows tire pressures and temperatures within the tires' specification ranges, while figure 18 shows a tire outside of its specifications.

3. With the OneControl app running, real-time tire event notifications will be sent to the smart phone.
4. Tap the notification to be taken to the TPMS screen in OneControl to see which tire(s) is/are experiencing an event.
5. Tap the readout button (Fig. 17A) of a tire to launch its properties window (Fig. 19). Within the selected tire's properties window, various tire and sensor specifications can be observed and altered.
A. **Last data received** — posts the date and time the app last received tire monitoring system information.
B. **Pressure** — posts the currently sensed pressure of the selected tire.
C. **Temperature** — posts the currently sensed temperature of the selected tire.
D. **Battery Level** — posts the current battery voltage of the sensor's battery.

⚠CAUTION

Tires that have high or low air pressure can cause unforeseen detrimental effects on tires and the unit, including undesirable tread wear. Tires should always be pressurized to within the manufacturer's recommendations.

E. **Low/High Pressure Threshold** — posts the currently programmed low and high pressure limit for the selected tire.
F. **High Temperature Threshold** — posts the currently programmed high temperature limit for the selected tire.
G. **Maximum Temperature Change Limit** — posts the currently programmed maximum +/- temperature change limit for the selected tire.

Tire Limits Example

Programmable tire limits have a "next" arrow (>) that, when tapped, opens that feature's scrollable window of available settings. Scroll through the limits window to find the desired setting, select it, then tap the "back" arrow (<) located above the tire's name at the top of the window's heading.

The following example illustrates the interaction between the various tire settings and how the resulting information is relayed by the monitoring system for display in the app.

NOTE: The Alert Indicator uses LED flashes and audible (beep) tones to deliver tire event notifications.

1. Select a tire by tapping its information button (Fig. 17A) to launch its settings window—**FRONT LEFT TIRE** (Fig. 19).
A. In this example, the reported current tire **Pressure** is listed as 30 psi (Fig. 19A).

NOTE: Stem Sensor Pressure Reading Tolerance: +/-1.5 psi (+/-10.3 kPa).
For example—because of differences in accuracy and conversion between a Stem Sensor and a tire gauge—actual tire pressure at 38 psi (262 kPa) may be reported by the Stem Sensor as 36 psi (248.2 kPa) while the tire gauge may report 40 psi (275.8 kPa).

B. Compare the tire's low/high pressure range (20–80 psi) against the reported tire pressure (30 psi). Always make sure tire pressures are within recommended limits.

2. If the **High Pressure Threshold** requires adjusting, tap the next arrow to launch its settings window (Fig. 20). Scroll through the window until the current setting is found, then scroll to a new limit and select it.
3. If the **Low Pressure Threshold** requires adjusting, tap the next arrow to launch its settings window (Fig. 21). Scroll through the window until the current setting is found, then scroll to a desired limit and select it.
4. The **High Temperature Threshold** (Fig. 22) and the **Maximum Temperature Change Limit** (Fig. 23) can also be adjusted in similar fashion.

NOTE: Stem Sensor Temperature Reading Tolerance: +/-5.4 °F (+/-3 °C).
For example, if a Stem Sensor reports tire temperature at 85 °F (29 °C), actual tire temperature may be 90.4–79.6 °F (32–26 °C).

NOTE: Stem Sensor Working Range: 185 to -4 °F (85 to -20 °C).

Fig. 19

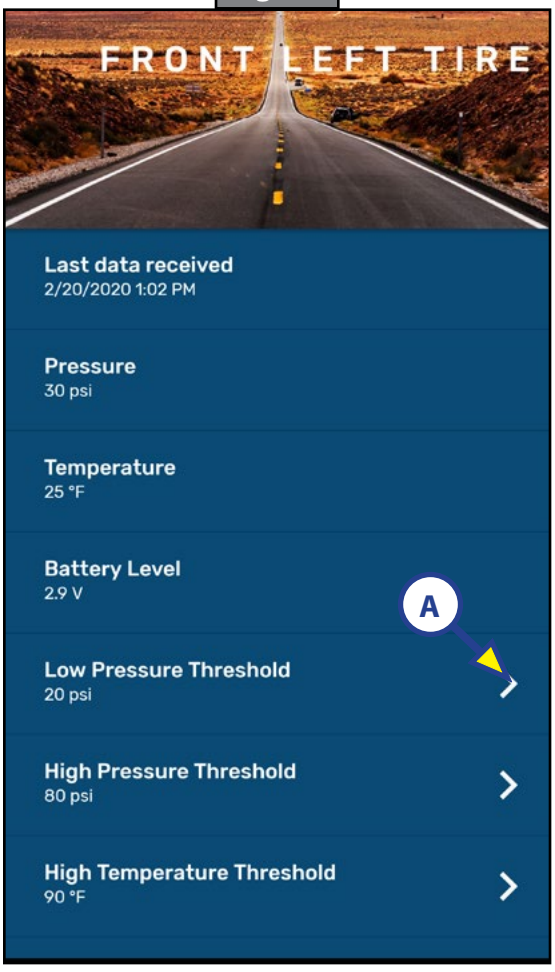


Fig. 20

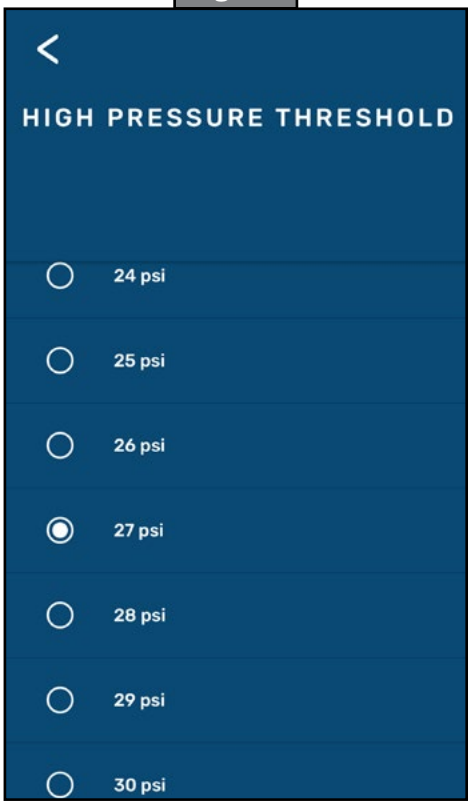


Fig. 21

Fig. 22

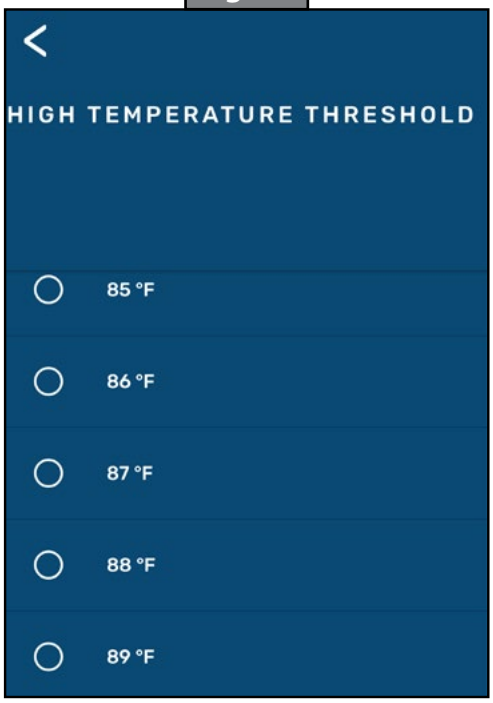
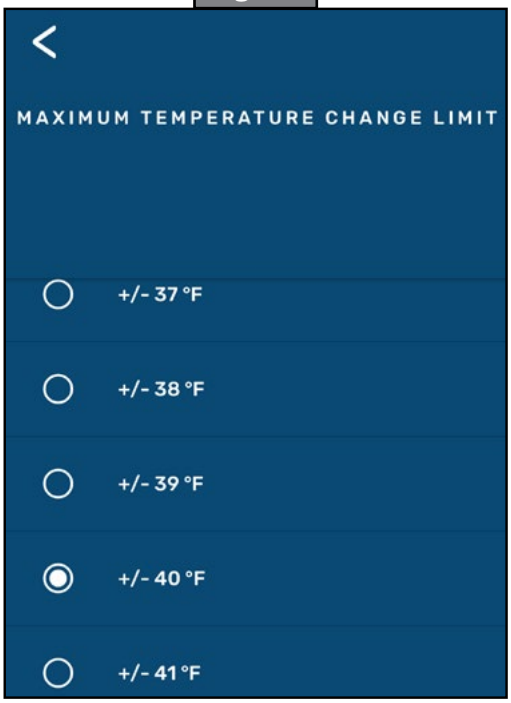


Fig. 23



Changing Units of Measure

To change the units of measure—to/from Imperial/Metric—go to the **HOME** screen:

1. Tap the Settings icon (gear) (Fig. 6A).
2. From the **SETTINGS** screens, tap the Units option.

NOTE: The **SETTINGS** screen will display the current units of measure.

3. Tap the arrow right of the Units setting.
4. On the **TEMPERATURE SCALE** window, tap the desired unit of measure—°F–Fahrenheit or °C–Celsius.

NOTE: Unit of measure for temperature and pressure (psi/kPa) will change according to the selection made.

5. Tap the back arrow above the screen title to return to the **SETTINGS** screen.

NOTE: Displayed units of measure will change to match the newly selected units.

6. Tap the back arrow above the screen title to return to the **HOME** screen.

Troubleshooting

Remove Stem Sensor to Change Battery

Removal of the Stem Sensor battery can be completed with the included Stem Sensor tool. The Stem Sensor tool, which is taken apart to utilize, is comprised of two pieces molded to match the tops and bottoms of the Stem Sensors. Slightly rotate the pieces opposite of each other and then carefully pry them apart to separate. One piece is used on top of the Stem Sensor and one piece of the tool is used on the bottom.

If the Stem Sensor batteries fail, do as follows to replace them:

1. Remove Stem Sensor from tire stem.

NOTE: If using the optional lock nuts as a theft deterrent, use the supplied wrench to hold the lock nut while unscrewing the sensor from the tire stem.

2. Using the Stem Sensor tool with a piece on top and a piece on the bottom of the Stem Sensor, unscrew the top cap of the Stem Sensor to expose the battery.
3. Replace battery with CR1632 3V lithium coin battery.

NOTE: Replacement batteries are not included.

4. Replace supplied Stem Sensor O-ring when replacing battery.

Missing Stem Sensor

If a Stem Sensor becomes loose or is missing from a tire, the readout button (Fig. 17A) will be grayed out. Tighten the loose sensor or replace with new.

Factory Reset

In the event a wrong trailer type is chosen or if there is a new trailer configuration, the settings can be reset.

1. Press and hold the Pair Mode button on the repeater for approximately 10 seconds.
2. Continue holding the button until there is one long red blink followed by four red blinks.
3. Release button.

No Power

If system is not working, check the in-line fuse to the Repeater Dock to ensure the dock has power.

Learn Sensors Procedure Resets System

Do **NOT** press the Learn Sensors button. Doing so resets Tire Linc into configuration mode, which requires uninstalling the stem sensors.

Notes

Please recycle all obsolete materials.

For all concerns or questions, please contact
Lippert Components, Inc.
Ph: 432-LIPPERT (432-547-7378) | Web: lippert.com | Email: customerservice@lci1.com