Towtal View™

AIR LIFT® Since 1949

Installation Guide

LaneGuard Pro

Dual Sensor Blind Spot Detection System

Watch the video
Info on Table of Contents page

Kit 25342

Read and understand all warnings and instructions in this manual prior to use.
Failure to follow warnings and instructions could result in serious injury or death.

MN-1199 • Revision 012406 • ERN 10336

Protect your Air Lift Purchase by Completing your Warranty Registration

Thank you for purchasing an Air Lift towing solution product!

Take a photo of your sales receipt and then scan the QR code to complete your online warranty registration.

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* Subject to availability

Introduction

This guide has been crafted to simplify installing and maintaining the Air Lift Towtal View LaneGuard Pro (dual sensor) system. Every LaneGuard Pro kit features state-of-the-art design, ensuring reliable performance for various applications.

LaneGuard Pro features advanced technology, offering excellent blind spot detection (BSD), lane change alert (LCA), and rear cross traffic alert (RCTA) for countless hours of safe towing and hauling. Whether you're maneuvering your towable in reverse or changing lanes on the road, LaneGuard Pro offers an excellent solution for a wide range of scenarios.

With this step-by-step installation guide, you will be on the road quickly, hauling and towing safely and comfortably.

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation, which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this installation guide.

WARNING

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

CAUTION

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

NOTE *Used to help emphasize areas of procedural importance and provide helpful suggestions.*

TECH TIP *Used to provide helpful tips to ease the installation process.*

Important Safety Information

WARNING

LaneGuard Pro is an assistance device and not a substitute for alert and careful driving. Do not solely rely on device. Always use your mirrors and proper head-checks before changing lanes.

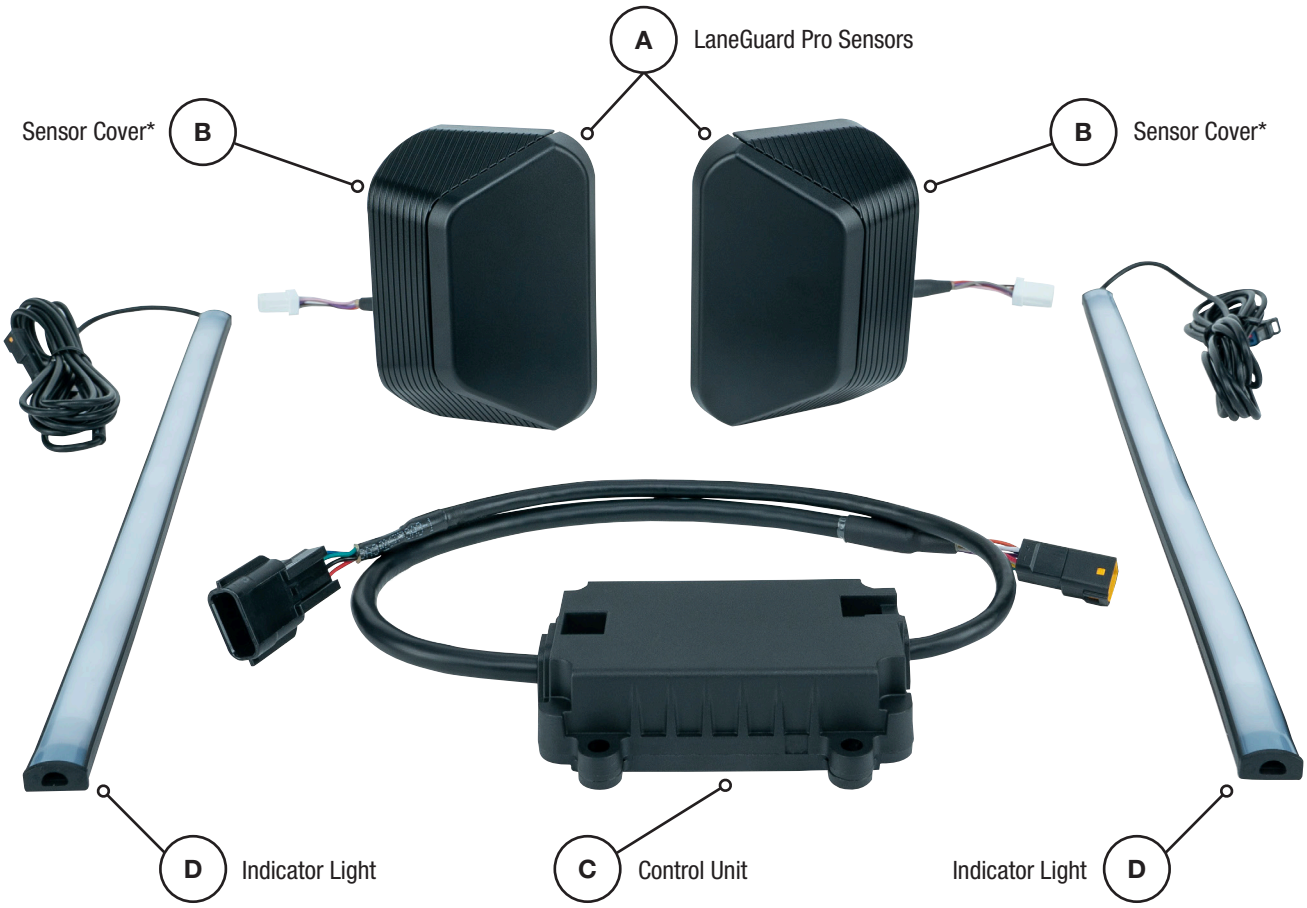
Device has limitations and may not function or function properly under certain conditions including:

- **During certain weather conditions, including fog, wet conditions, or snowfall.**
- **When sensors are blocked by cargo, snow, ice, dirt or mud. Before each use, always ensure sensors are clear, unobstructed, and in line of sight to indicator lights.**
- **When the driver's view of the indicator lights is blocked by cargo, snow, ice, dirt, or mud: Before each use, always ensure the driver's view of the indicator lights is clear and unobstructed.**
- **Rear Cross-Traffic Alert may warn driver late or not at all depending on road, environmental conditions, or sensor obstruction.**
- **Rear Cross-Traffic Alert assists drivers but should never be solely relied upon.**
- **Rear Cross-Traffic Alert signals presence of moving vehicles larger than a motorcycle traveling from 1.8mph (3kph) – 18.6mph (30 kph). Device will not function if speed of approaching vehicle is too high, too low, or in excessive fog, wet conditions, or snowfall.**

INSTALLATION PRECAUTIONS

- **Before installing product, please read installation instructions and warnings carefully to ensure correct installation and disassembly of product, and ensure to use product safely.**
- **This installation guide is compiled for left-hand drive vehicles.**
- **Before installing system, please ensure vehicle body is parallel with axle, flat, and free of bumps.**
- **Wear proper protective gear**
- **Work with an assistant**

System Overview



Wire Harnesses and Cables

E Main Wire Harness

F Sensor Harness

G Extension Cable

System Specifications

No.	Description	Specification
1	Operating Temperature	-20°C ~ 60°C
2	Storage Temperature	-20°C ~ 60°C
3	Environmental Protection Level	LaneGuard Pro Sensor Unit IPx7 After installation P69K
4	Input Voltage Range	9V-16V
5	Current Consumption	940mA@13.5V
6	Alarm Level	Level I LED Solid Level II LED Flash
7	Specifications	IS0 16750
8	Radiation Regulations	FCC • ISED

H Indicator Light Harness (optional)

* This image shows the Sensor Cover (B) only.

Hardware and Tools

Hardware List

Item	Description	Qty
A	LaneGuard Pro Sensor	2
B	Sensor Cover	2
C	Control Unit	1
D	Indicator Light	2
E	Main Wire Harness	1
F	Sensor Harness	1
G	Extension Cable	1
H	Indicator Light Harness (optional)	2
I	Waterproof Crimp Connector	10
J	#10 Ring Terminal	5
K	Zip Ties	10
L	Mounting Screws (for Control Unit)	4
M	Mounting Screws (for LaneGuard Pro Sensors)	4
N	Alcohol Wipes	2

Tools Needed

Description	Qty
Electric drill	1
3/16" - 1 3/8" Step-Drill bit (for sensor harness routing)	1
3/8" Drill bit (for indicator lights)	1
1/16" Drill bit (to drill pilot holes for sensors)	1
Phillips head screwdriver	1
Longnose pliers	1
Cutting pliers	1
Tape measure	1
Level	1
Crimp tool	1
Punch/scribe	1
Wire strippers	1
Multi-meter	1
Silicone sealant (color match to surface)	1
Marker pen	1
Safety glasses	1

(x10)

I

(x5)

J

K

L

M

N

STOP! Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

Install LaneGuard Pro

Prepare LaneGuard Pro for installation by following these recommendations:

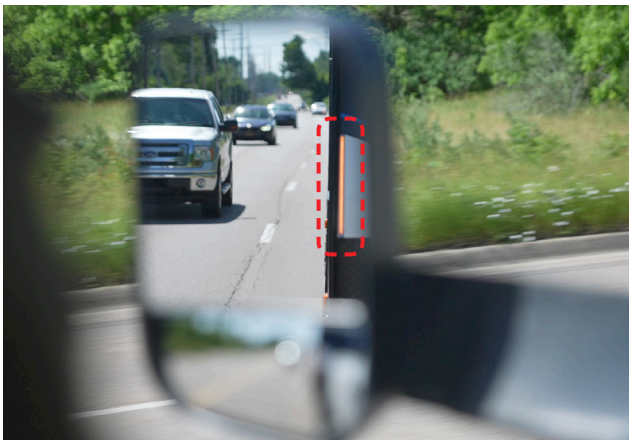
1. Gather all necessary tools and materials for installation, including screwdrivers, drills, and any components specified in this installation guide. See the *Hardware and Tools* section for the complete list.
2. Before starting the installation, read the installation guide carefully to understand all the requirements, recommended tools, and safety precautions.
3. Identify suitable mounting locations (Fig. 1) for the LaneGuard Pro Sensors (A), Indicator Lights (D) and Control Unit (C). Ensure they meet specified criteria, such as flat, clean surfaces and minimal obstructions.

Fig. 1

INSTALL THE INDICATOR LIGHTS

NOTE *Ensure the Indicator Light wires and Main Harness wires are routed for easy access.*

1. Select the proper locations for the right & left Indicator Lights (D) to be installed. Ensure they are within view of the tow vehicle's side-view mirrors while seated in the driver's seat (Fig. 2).
2. Use an Alcohol Wipe (N) to clean the surface where the Indicator Light will be adhered.



Indicator Light (circled in red) viewable from the left (driver's side) side-view mirror. *Fig. 2*

3. After determining the location to route the Indicator Light's wire, use a 3/8" drill bit to drill a hole for the wire (Fig. 3).

CAUTION

BE AWARE OF WHAT IS ON THE OTHER SIDE OF THE SURFACE BEING DRILLED. CONFIRM THERE IS ROOM TO ROUTE CABLES BEFORE DRILLING.

Fig. 3

4. Deburr the edges of the hole before inserting the Indicator Light's wire through the hole (Fig. 4).

Fig. 4

5. Route the Indicator Light's wire through the drilled hole (Fig. 5).

Fig. 5

6. Remove the adhesive release paper from the back of the Indicator Light and install it to the cleaned surface (Fig. 6).

NOTE *When applying the Indicator Light, hold for 20 seconds to ensure a strong hold to the cleaned surface.*

Fig. 6

7. Create a watertight seal by applying a like-color silicone sealant to the drilled hole (Fig. 7).

8. Repeat the same installation steps above for the other Indicator Light.

Fig. 7

SENSOR MOUNTING DETAILS

1. The LaneGuard Pro Sensors (A) are marked with R and L labels (Fig. 8). The R indicates the right side (U.S. passenger's side) of vehicle zone detection, and the L is for the left side (U.S. driver's side) of vehicle zone detection.

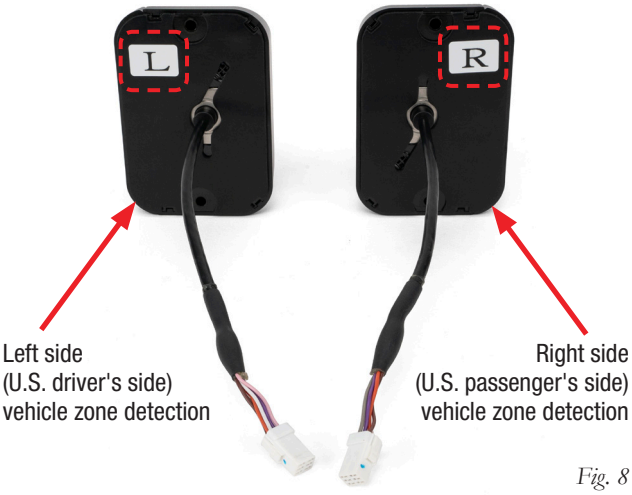


Fig. 8

2. Before beginning installation, ensure the vehicle and trailer are parked on a flat/level area (Fig. 9).
3. Ensure that the installation surface is perpendicular to the ground and as flat as possible. Avoid mounting the sensor over any protrusions, such as weatherstripping and trim pieces.

Fig. 9

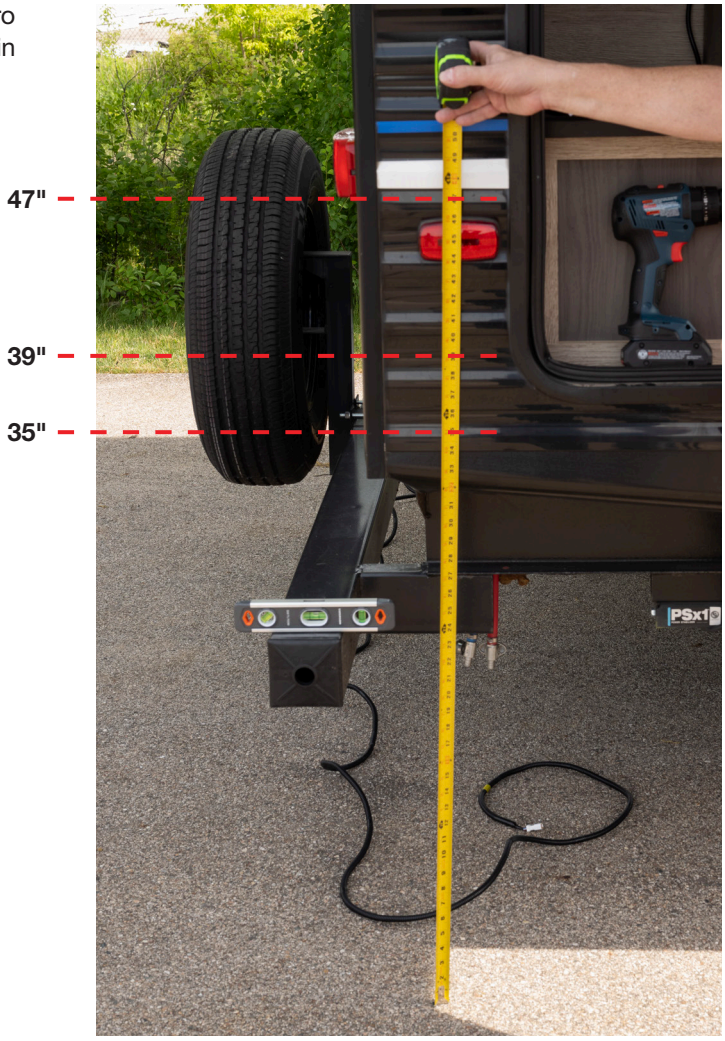
4. The LaneGuard Pro Sensors (left and right) will be installed on the sides of the vehicle as far rearward as possible, accounting for ease of harness routing and avoidance of other trailer components as shown in Figure 10.
5. Before installing, confirm the area behind the walls where the LaneGuard Pro Sensors are to be mounted has space for routing wires/cables.

Fig. 10

6. The trailer's leveling legs should be stowed for the purposes of measuring sensor height and leveling (Fig. 11).

Stow trailer leveling legs before measuring for sensor height and leveling *Fig. 11*

7. Locate an installation area for the LaneGuard Pro Sensor between 35 – 47 inches (preferably within 35 – 39 inches) from the ground and mark the height line with painter's tape (Fig. 12).



Unit = inches

Fig. 12

NOTE *When positioning the Sensor, ensure that the bevel is facing outward and towards the rear of the trailer (Fig. 13).*

Right LaneGuard Pro Sensor shown

Fig. 13

LANEGUARD PRO WIRING DIAGRAM

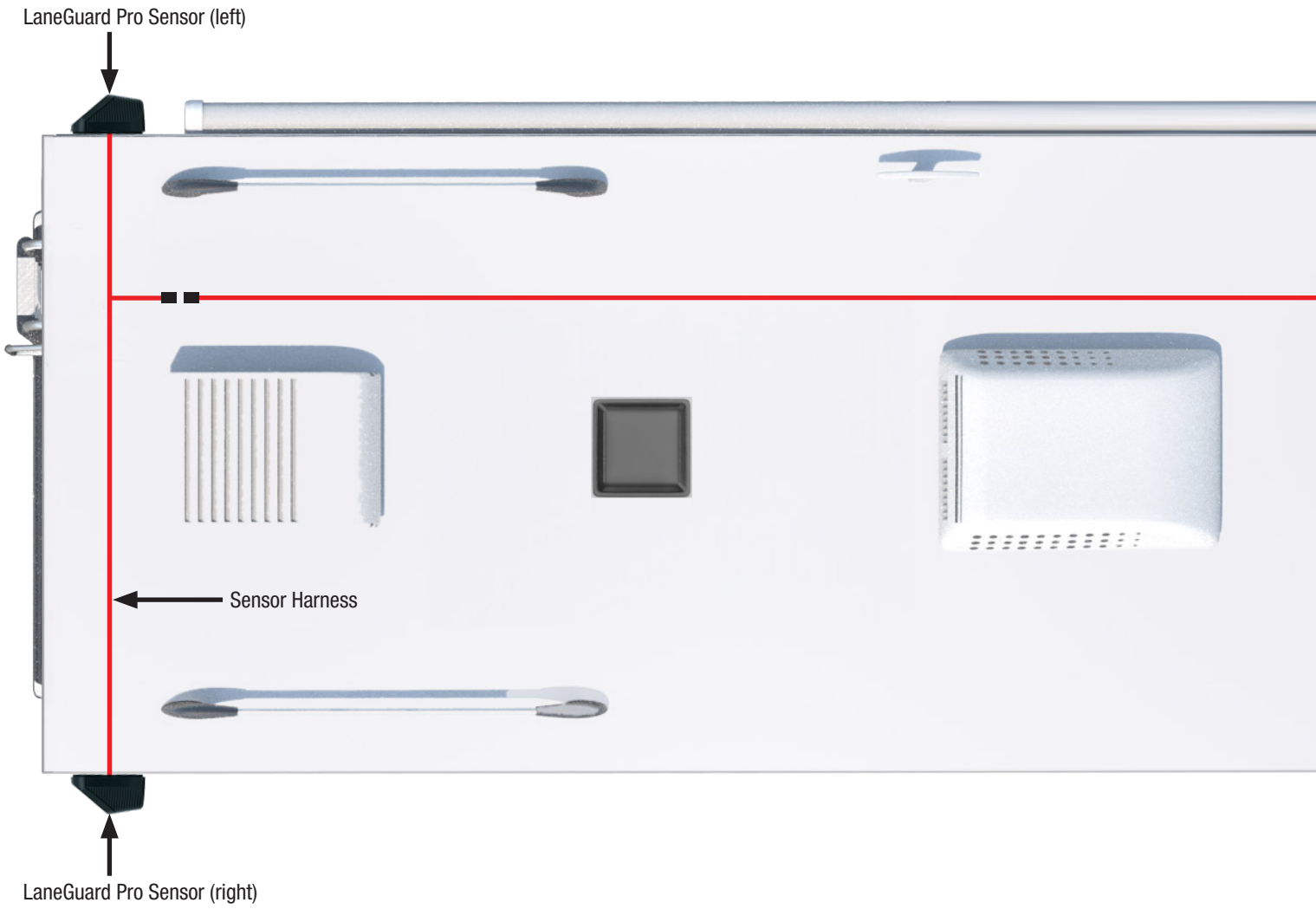
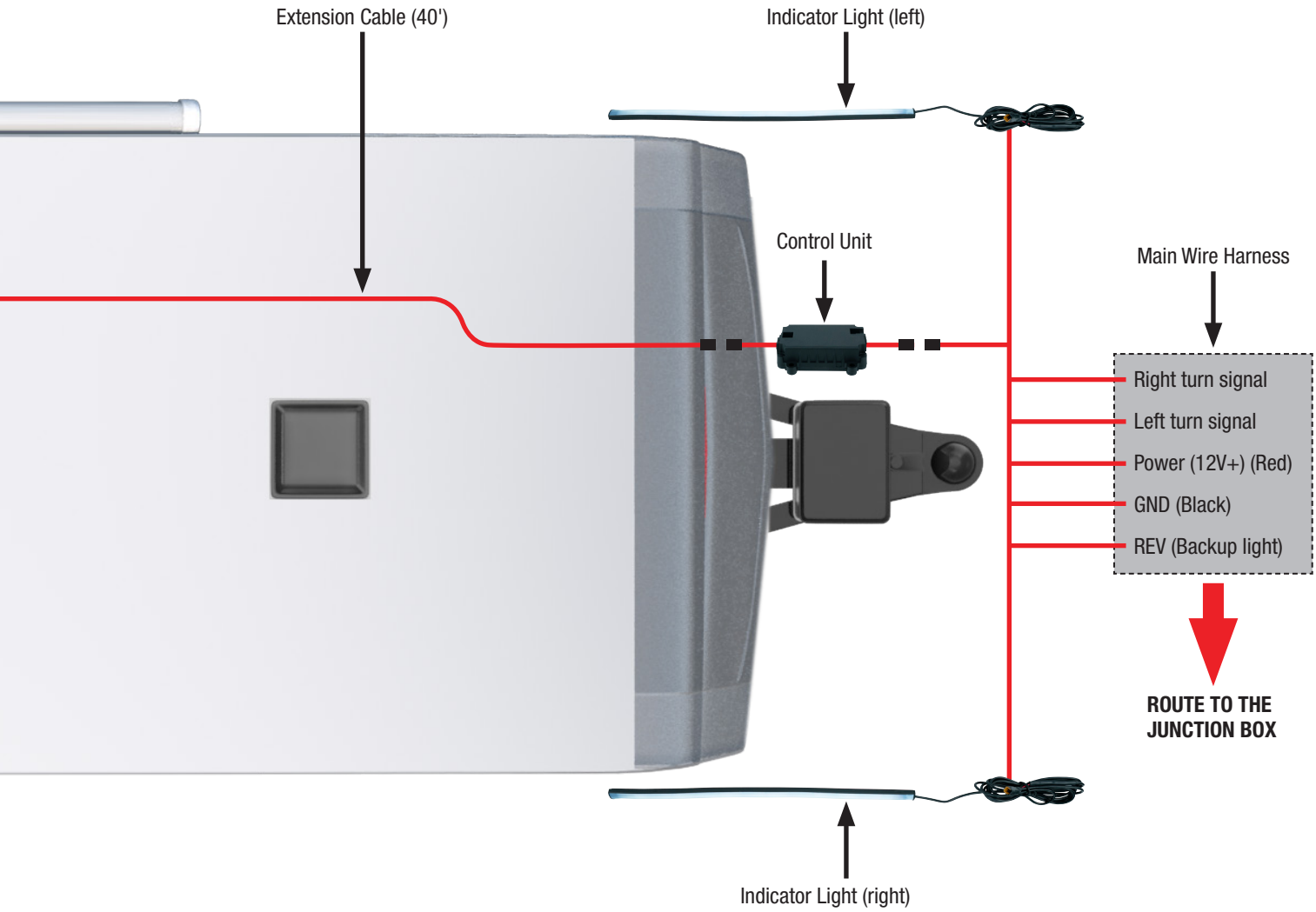


Fig. 14



NOTE *Use a multi-meter for identifying wires in the junction box if they are not labeled.*

NOTE *If there is no junction box, check the connections to identify turn signals and other 7-way wiring such as brake lights, ground, 12V charging, etc.*

MOUNT THE LANEGUARD PRO SENSORS

CAUTION

BE AWARE OF WHAT IS ON THE OTHER SIDE OF THE SURFACE BEING DRILLED. CONFIRM THERE IS ROOM TO ROUTE CABLES BEFORE DRILLING

1. Use a 3/16"-1 3/8" step-drill bit to bore a hole at the mark for the LaneGuard Pro Sensor wire (Fig. 15).

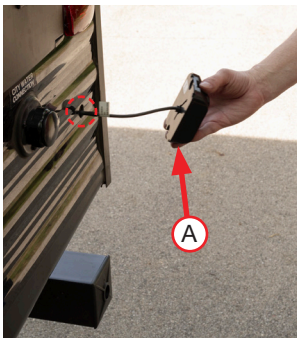
Fig. 15

2. Mark and pre-drill 1/16" pilot holes for the self-tapping screws Size 10 (M) using the Sensor housing as a template (Fig. 16). Use a punch/scribe to mark the holes in the trailer siding (Fig. 17).

Fig. 16

Fig. 17

3. Feed the Sensor wire through the drilled hole and place the Sensor (A) at the marked position (Fig. 18).
4. Begin mounting the Sensor at the top marked position using a self-tapping screw (Fig. 19). Leave the self-tapping screw slightly loose for the next steps.



Left side shown here *Fig. 18*

Left side shown here *Fig. 19*

5. Ensure that the Sensor is parallel to the ground with a level (Fig. 20).

Fig. 20

6. Once level, tighten the self-tapping screws to mount the Sensor firmly in place (Fig. 21).

Fig. 21

7. Create a watertight seal by applying a like-color silicone sealant around the perimeter of the Sensor (Fig. 22).

Fig. 22

8. Remove the adhesive release paper from the Sensor (Fig. 23) and install the Sensor Cover (B) (Fig. 24). The Sensor Cover will snap into place with an audible click.

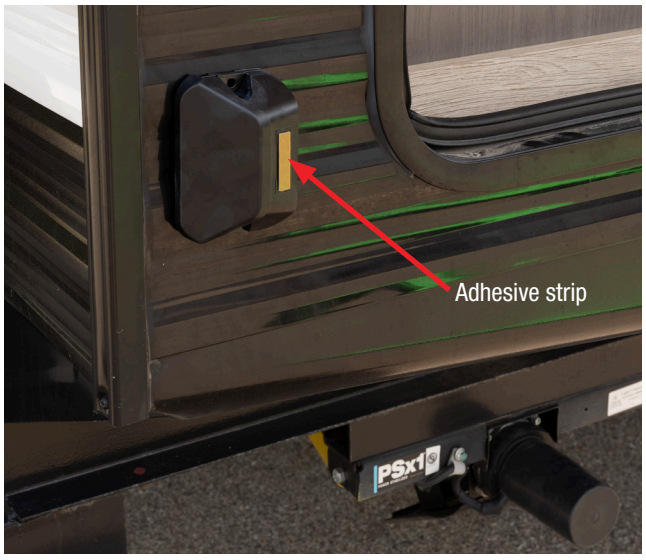


Fig. 23

Fig. 24

9. Repeat the same installation steps above for the other Sensor.

ROUTE THE SENSOR HARNESS

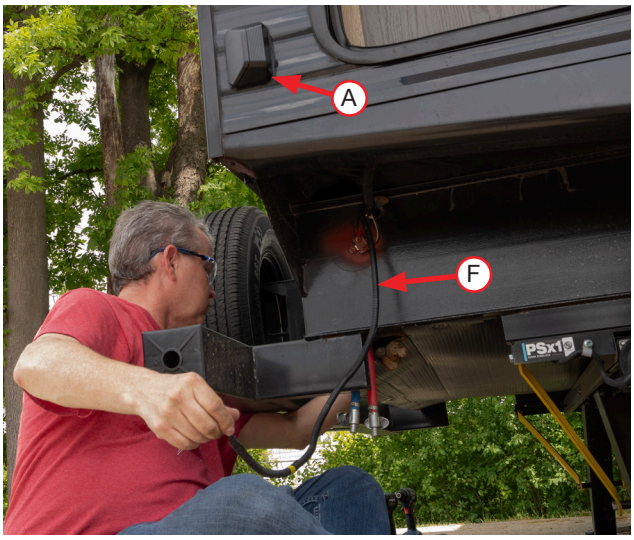
NOTE

Please keep in mind that each installation will be unique. The primary objective when routing the Sensor Harness is to ensure it is as unobtrusive as possible while still allowing for easy access.

1. Lay out the Sensor Harness (F) and determine the optimal routing option for reaching each LaneGuard Pro Sensor (A) (Fig. 25).

CAUTION

AVOID PINCH POINTS, SLIDE-OUTS, SKIRTS, JACK SYSTEMS, ETC. WHEN ROUTING THE LANEGUARD PRO SENSOR HARNESS OR DAMAGE MAY occur.



Right side harness routing shown in this section. *Fig. 25*

2. Route the Sensor Harness to each Sensor through a cavity wall (remove cavity wall hardware if needed); or drill outlet holes if drilling is required for your particular installation (Fig. 26). Use an appropriately sized drill bit for drilling the outlet holes.

CAUTION

BE AWARE OF WHAT IS ON THE OTHER SIDE OF THE SURFACE BEING DRILLED. CONFIRM THERE IS ROOM TO ROUTE CABLES BEFORE DRILLING.

Example of a drilled outlet hole. *Fig. 26*

3. Deburr the edges of the holes before inserting the Sensor Harness (Fig. 27).

Fig. 27

4. Connect the LaneGuard Pro Sensors (installed in the previous section) to the Sensor Harness (Fig. 28).

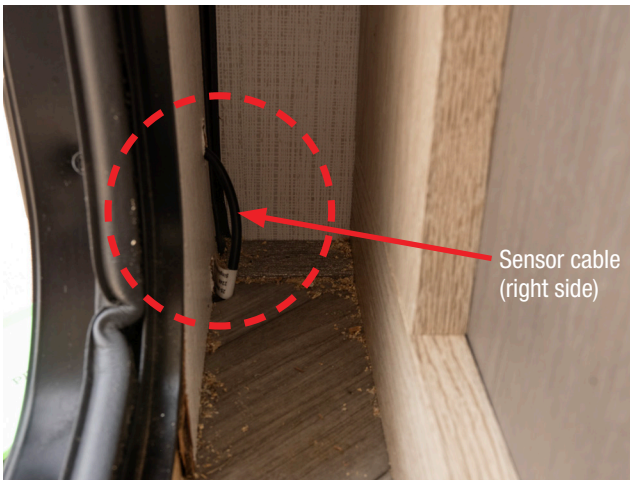
Fig. 28

5. Secure the Sensor Harness inside a cavity wall (Figs. 29 & 30).

TECH TIP

Follow the routing of existing wiring in the trailer as a guide when installing LaneGuard Pro (Fig. 30).

6. If routing on the exterior is required, use Zip Ties (K) to secure the Sensor Harness to the underside of the trailer.



Example of interior routing method used for maximizing accessibility to the Sensor cable (right side shown).

Fig. 29

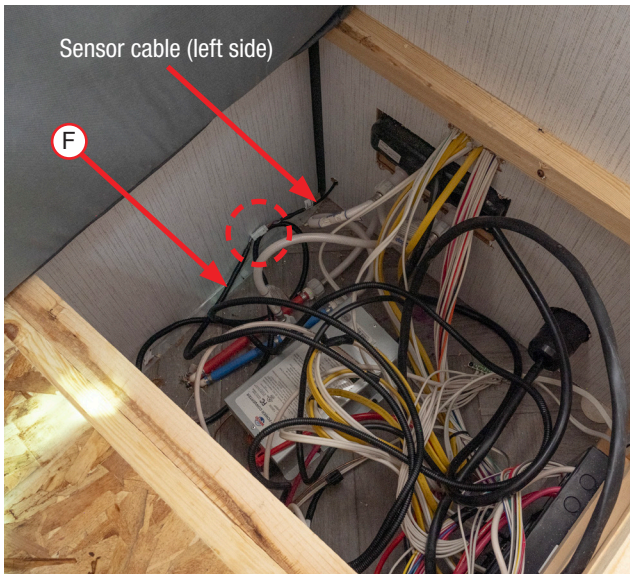


Fig. 30

ROUTE THE EXTENSION CABLE

NOTE *Please keep in mind that each installation will be unique. The primary objective when routing the Extension Cable is to ensure it is as unobtrusive as possible while still allowing for easy access.*

1. Determine the best cable routing option to the front of the trailer for connecting the Sensor Harness to the Control Unit via the 40 ft. Extension Cable.

NOTE *Utilize cutouts and pass-throughs already present on the trailer to ease installation (Figs. 31, 32 & 33).*

CAUTION

AVOID PINCH POINTS, SLIDE-OUTS, SKIRTS, JACK SYSTEMS, ETC. WHEN ROUTING THE LANEGUARD PRO EXTENSION CABLE OR DAMAGE MAY OCCUR.

2. Lay out the Extension Cable (G).

3. Route the Extension Cable to the Sensor Harness (F) through a cavity wall. Remove cavity wall hardware if needed to gain access; or drill an outlet hole if required for your particular installation using a 3/16"-1 3/8" step-drill bit.

NOTE *Select an optimal location underneath and centered at the back end of the trailer, similar to what is shown in Figure 31.*

CAUTION

BE AWARE OF WHAT IS ON THE OTHER SIDE OF THE SURFACE BEING DRILLED. CONFIRM THERE IS ROOM TO ROUTE CABLES BEFORE DRILLING.

4. Pass the Extension Cable up through the cavity wall or outlet hole (circled in red) and connect it to the Sensor Harness (Fig. 31).

5. Utilize cutouts and pass-throughs already present on the trailer to ease installation (Fig. 32).

6. Route the Extension Cable to the front of the trailer for connecting to the Control Unit. Use Zip Ties (K) to attach the Extension Cable to the underside of the trailer, as shown in Figure 33.

7. Once the system installation is complete, reattach the cavity wall (if removed) using the existing hardware from an earlier step (Fig. 34).

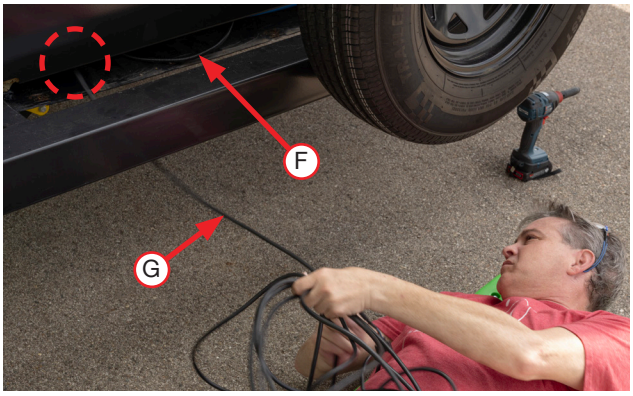


Fig. 31

Fig. 32

Fig. 33

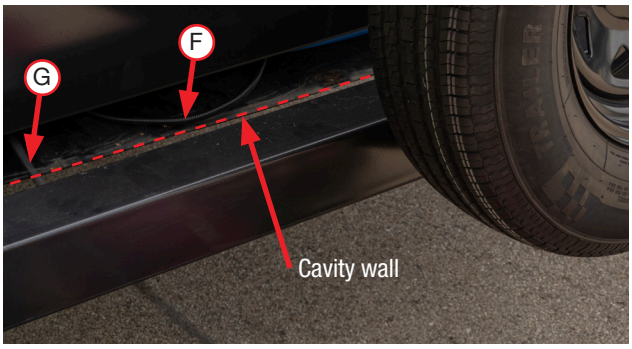


Fig. 34

INSTALL THE CONTROL UNIT AND MAIN WIRE HARNESS

NOTE *Before connecting the Control Unit, please ensure once again that the wire harnesses are connected correctly.*

1. Connect the Extension Cable (G) to the Control Unit (C) (Fig. 35).

Fig. 35

2. Mount the Control Unit to the exterior of the trailer or tuck it into a cavity wall as shown in Figure 36. Remove cavity wall hardware to access (if needed).

NOTE *The Control Unit has already been calibrated, therefore, ease of access to the device is not critical for the installation.*

NOTE *The Control Unit is completely waterproof so it is safe to install on the exterior of the trailer if that is a necessary requirement of the installation.*

Fig. 36

3. Connect the Indicator Lights (left and right) to the Main Wire Harness (E), then tuck the wires into a cavity wall (Fig. 37).

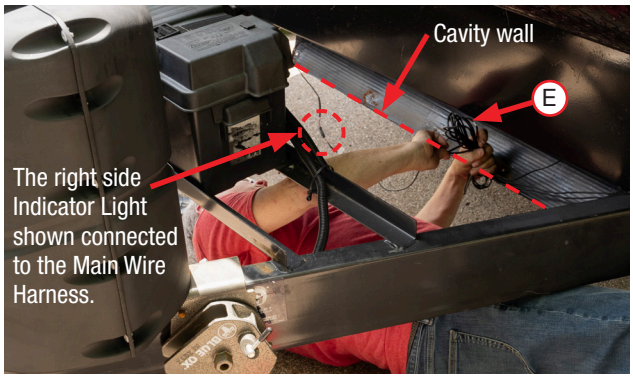


Fig. 37

4. Connect the Control Unit to the Main Wire Harness (Figs. 14 & 38).

5. Once the system installation is complete, reattach the cavity wall (if removed) using the existing hardware from an earlier step (Fig. 37).

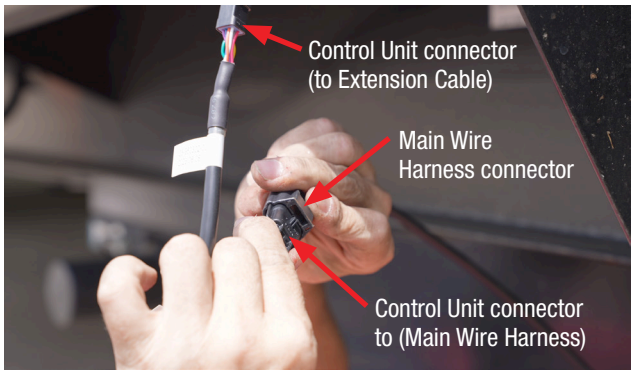


Fig. 38

7-WAY WIRING ELECTRICAL CONNECTIONS

1. Remove the cover to the junction box which is typically under the front of the trailer (Fig. 39).

NOTE

If there is no junction box, check the connections to identify turn signals and other 7-way wiring such as brake lights, ground, 12V charging, etc.

Fig. 39

2. Confirm that the signal wires from the junction box all come from the correct sources. Use a multi-meter for identifying wires in the junction box if they are not labeled (Figs. 39 & 40).

Fig. 40

3. The trailer connector 7-way pin-out diagram* (male connector, female pins) is shown in Figure 41.

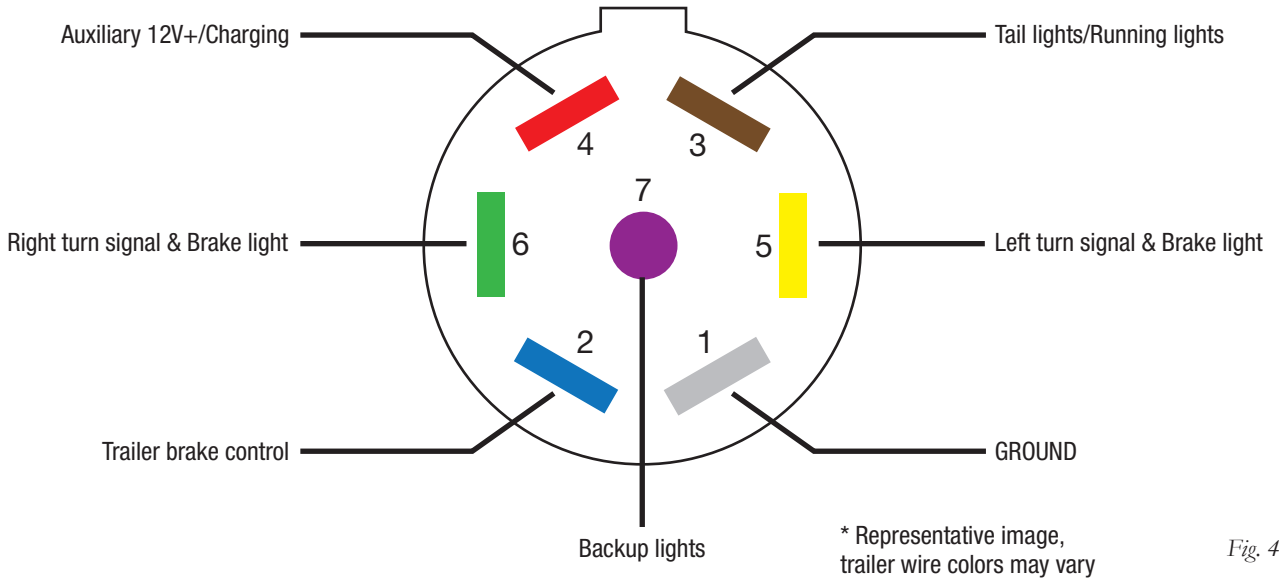


Fig. 41

4. Connect the 7-way connector from the trailer (Fig. 41) to the towing vehicle to confirm appropriate connections are being made during the installation.

5. Connect each of the labeled Main Harness wires to the appropriate wires in the junction box using the provided hardware, Waterproof Crimp Connectors (I) and #10 Ring Terminals (J). Wiring connections include the left turn signal, right turn signal, reverse, power and ground, testing each as they are completed (Fig. 42).

Fig. 42

6. Replace the junction box cover when finished (Fig. 43).

Fig. 43

NOTE *Please refer to the included User Guide (Fig. 44) for complete details on using the system after installation.*

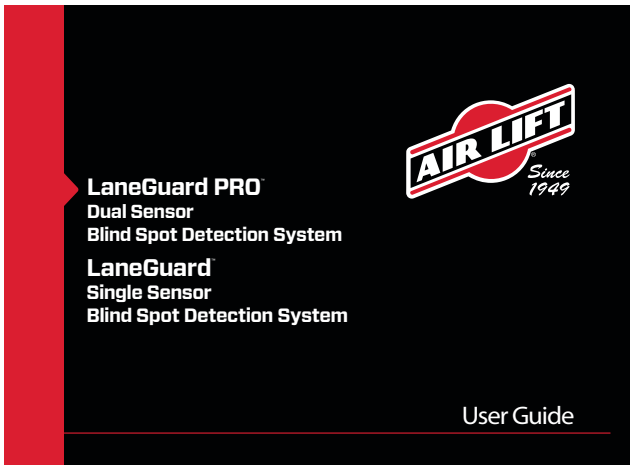


Fig. 44

Statements

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and the human body.

ISED STATEMENT

This device contains license-exempt transmitter(s) that comply with Innovation, science and economic development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference,

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur exempt de licence contenu dans le présent appareil est conforme aux cnr d'innovation, sciences et développement économique canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;

(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IMPORTANT NOTE: IC RADIATION EXPOSURE STATEMENT

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipe¬ment doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

Limited Warranty and Return Policy

Air Lift Company provides a 2-Year Limited Warranty* to the original purchaser of the LaneGuard Pro system, from the date of original purchase, that the products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy.

Warranty coverage does not apply to any damage caused to the LaneGuard Pro system due to incorrect installation, use or weather conditions affecting the mounting surface of any of the installation options.

*Full Limited Warranty and Return Policy are available at https://www.airliftcompany.com/support/warranty/ and are subject to change.

WARRANTY REGISTRATION & CLAIMS

- To register your warranty, please visit https://www.airliftcompany.com/support/warranty/register/
- To submit a warranty claim, please visit https://www.airliftcompany.com/support/warranty/submit-claim/

Thank you for purchasing Air Lift Products!

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Contact Air Lift Company Customer Service at (800) 248-0892 or email service@airliftcompany.com.

For calls outside the U.S. or Canada, dial +1 (517) 322-2144.

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