Stoneridge

Installation Guide
MKII System

PACCAR

06.28.23
Includes Updates
- Updated ECU location

MirrorEye®

PACCAR Trucks North America

Provides all steps necessary for preparation, installation, system calibration and activation

Table of Contents

PACCAR Trucks North America

Overview

Installation of MirrorEye® System Components

System Alignment/Calibration

MirrorEye® Activation Process

Getting Started

(Required)

The following provides the steps necessary to activate the MirrorEye® system with Cloud Services for GPS and Video Feeds. If not already in hand, begin by downloading/reviewing the BASIC PROCESS PDF, which can be accessed at:

https://www.stoneridge.app/en/help/how-to-cloud-activate-mirroreye-i-mk-ii

ALERT: Before starting the activation process, make sure to have the following information available before submitting an activation form. Capture a photo and write down the number of:

- The FleetArc FA470 Device ID #
- The VIN (or temporary VIN) of the Vehicle
- The Asset ID # or temporary internal ID # of the Vehicle
- The ECU # of any Monitor or Wing Camera (only one number needed)

STEP 1.

Make sure the truck is turned on, with enough gas for any additional time it may take to activate your MirrorEye® system.

NOTE: Activation should take approximately 15 to 20 minutes, however in some cases, due to part failure or installation error, expect up to 4 hours for troubleshooting and communication with a developer or engineer.

STEP 2.

Visit https://www.stoneridge.app/activate; enter truck information and device information and click “Submit.” Any additional information you submit is optional and may improve the processing speed of your ticket.

STEP 3.

Request Received

You should receive an email notification of your activation request, and the status of your ticket. If you have any questions or challenges, please reply to that email, or send a message to customersuccess@stoneridge.app or visit https://www.stoneridge.app/tickets to view the status of your tickets.

NOTE: If you do not have access to the portal to view tickets, you can request access here: https://www.stoneridge.app/access

STEP 4.

Request Processing

Your ticket will be submitted directly to a Stoneridge service agent who will review any details and contact you via email or phone to follow up with any questions or errors.

STEP 5.

Certification Approved

Stoneridge software developers and engineers are on call to ensure a successful installation and activation. When installation is successful you will receive an email with details of the successful activation.

HOW TO CONTACT YOUR SERVICE TEAM

Email
customersuccess@stoneridge.app

Visit Help Center
https://www.stoneridge.app/help

Online Chat
Click on the “Red Chat” button to contact Service Teams directly.

Reply to Emails
You can reply to any email you receive from the Service Team.

Activation

Frequently Asked Questions

How do I register for the MirrorEye activation portal?

To register for the MirrorEye activation portal, please visit www.stoneridge.app and click the "request access" button located on the home page. Or, visit https://www.stoneridge.app/access directly.

When should I expect a response to my activation request?

Typically, you will see a response to your activation request within 10 – 30 minutes of submitting the activation request form.

Can I submit my activation request when I first start the installation?

Currently, no. The activation request needs to be submitted after all components have been installed and the unit can be powered on.

What happens if I don't get a response for my activation ticket right away?

Working hours for the MirrorEye Activation team are typically between 6AM – 6PM. If you submit an activation request during these hours, you can expect a response.

What do I do if I know my activation request will be outside normal working hours?

If you anticipate your activation request to be outside of normal working hours, please send us a notice at incident@stoneridge.app

What happens if I do not submit an activation request?

If you fail to submit an activation request and complete the activation process, the MirrorEye system installed will not be able to send diagnostic alerts and will void the warranty of the MirrorEye system for your fleet customer.

What do I do in the unlikely event my MirrorEye kit is missing parts?

If you believe your MirrorEye installation kit is missing parts, please send a notice to incident@stoneridge.app and a member of the customer success team will promptly reply.

What do I do if I have questions during an installation?

If you have questions during an installation, please first refer to the MirrorEye installation guide, then reach out to incident@stoneridge.app and a member of the team will promptly help answer your question.

Do the order of the pictures I'm submitting matter?

Yes, in order to facilitate the most efficient activation process, please follow the prompts on the MirrorEye activation form.

Required Tool	Description	Quantity	Check-off
Drill Bit	3/8” Cobalt or Titanium Drill Bit	1	
Drill Bit	5/8” Cobalt or Titanium Drill Bit	1	
Drill Bit	1/4" Cobalt or Titanium Drill Bit	1	
Drill Bit	10mm Cobalt or Titanium Drill Bit	1	
Drill Bit	1/2" Cobalt or Titanium Drill Bit	1	
Step Bit	1-3/4” Step Bit	1	
Hole Saw	2-1/8” Hole Saw	1	
Hole Saw	1” Hole Saw	1	
Hole Saw	1-1/8” Hole Saw	1	
Hole Saw	1-1/4” Hole Saw	1	
Drill	Cordless 20v Drill	1	
Drill Battery	Extra 20v Drill Battery	1	
Rivet Nut Tool	Rivet Nut Securement Tool w/Impact Attachment	1	
Screwdriver	Phillips Head Screwdriver (size?)	1	
Screwdriver	Flathead Screwdriver (size?)	1	
Panel Removal Tool	Pry Tool for Removing Interior Panels	1	
Cutters	Flush Zip Tie Cutters	1	
Zip Ties	Zip Ties (6” to 12” in length)	30	
Pliers	Needle Nose Pliers	1	
Pliers	Groove Locking Pliers	1	
Electricians Torch	Butane Electricians Torch	1	
Rotary Tool	Dremel® or Similar Cutting Tool	1	
Cutting Blades	Cutting Blades for use with Rotary Tool	2	
Torque Bit Set	Torque Bit Set T15 – T60	1 set	
Bit Driver	12v Torque Driver (Impact Driver)	1	
Bit Adapter	Hex Bit Adapter for Torque Driver	1	
Wrench	Torque Wrench w/Adjustable Torque Settings	1	
Allen Wrench Set	Metric	1 set	
Allen Keys	#6, #5, #4, #3, #2.5, #2	1 of each	
Manual Wire Strippers	Wire Strippers w/Various Wire Sizes	1	
Cones or Buckets	Used to Mark Distances Behind Truck	6	
Ladder	6’ A-Frame Ladder	1	
Pin Removal Tool Set	Klein® Pin Extractor Set (or Equivalent)	1	
Terminal Crimpers	Klein® Terminal Crimpers (or Equivalent)	1	
Fuses	10 and 20 amp fuse (Required)	1	
Measurement Tool(s)	Measuring Tape, Measuring Wheel, Phone App. Capable of Measuring 80’	1	

Class V Monitor

Driver Side Monitor (12”)

Passenger Side Monitor (15”)

Electronic Control Module (ECU)

Driver Side Camera (Right)

Passenger Side Camera (Left)

Blind Shot Camera (Right)

Display Controller

MirrorEye® Cloth and Sticker

FleetArc Telematics Box Contents w/FA 470 Module

Driver Side Bracket with Monitor Base and Screw Kit

Passenger Side Bracket with Monitor Base and Screw Kit

Class V Monitor Bracket (Right)

Ram Kit for Class V Monitor (Central)

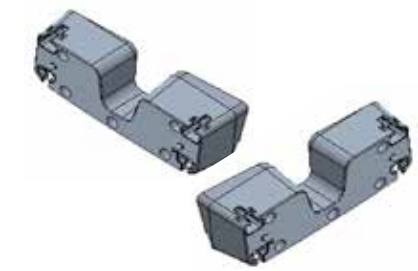
Main Brackets

Top/Bottom Cover Extensions (Driver Side)

Top/Bottom Cover Extensions (Passenger Side)

Backplate Bracket

Interface Brackets

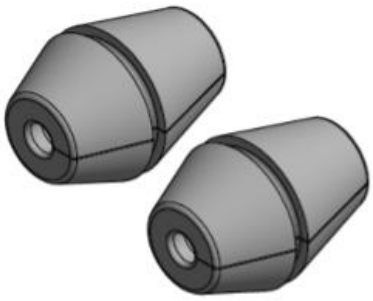


Extension Brackets

Vehicle Interface Fastener Set

FPO

Set Grommet MK II Harness



Driver Coax Cable

Passenger Coax Cable

Blind Spot Camera Coax

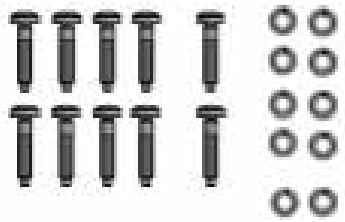
Wire Harness ME1 Adapter for RP1226 Blue Conn, DTNA

Controller Kit (Right)

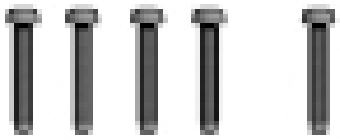
Screws Kit for Monitor Interface (Driver Side)

Screws Kit for Monitor Interface (Passenger Side)

Set Fasteners Camera Arm

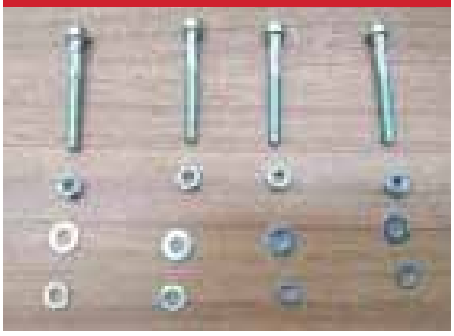


Set Fasteners Camera Bracket



Set Fasteners Monitor Interface Class V

Screws Kit for Connectivity Box



FA470 Cable

Main Harness

Wire Harness MK II CAN Termination

FPO

ECU - Bracket

ECU - Bracket Fastener Set

FPO

Set Fasteners Door Mirror Removal

Set Fasteners Hood Cover

DVR Bracket

Set Fasteners DVR Bracket

Ethernet Cable

USB

DVR Harness

DVR

Vehicle Interface Template

	MirrorEye® Install Task List	Check-off
1	Unpack and examine all materials in the MirrorEye Shipping box.	
2	Match Screw Kits with their stated components.	
3	Record the VIN and Serial #'s of the vehicle and the FA470 for the MirrorEye activation process. (page 59)	
4	Remove the relevant dash panels, a-pillar covers and headliner portions to prepare for the installation of the MirrorEye Components.	
5	Begin installation of the main MirrorEye ECU harness to the vehicle's accessory power source and CAN buss via the truck's Vehicle Power Distribution Module (VPDM)	
6	Install the MirrorEye Electronic Control Module (ECU) and connect the main MirrorEye ECU harness.	
7	Install the FA 470 according to the instruction in the box and connect it to the main ECU harness.	
8	Install the MirrorEye display controller on the dash panel within reach of the driver's seat.	
9	Connect the MirrorEye display controller to the ECU Harness.	
10	Confirm proper power connection via green light on controller and ensure connection to the VPDM. **NOTE:** the VDPM is operational when its affiliating fuse is installed (J5A5; if required, spare fuses can be found in the fuse box. Fuse installation is required.)	
11	Disconnect Power Source until installation has been completed.	
12	Carefully thread the main MirrorEye harness driver and passenger camera wing connector under/behind the dash up the driver's and passenger's side A-pillars to the forward headliner area. (Be careful not to kink the wires during the threading process)	
13	Connect the driver's and passenger's camera/monitor harnesses to the ECU and thread to the a-pillar monitor and Class V monitor locations and continue up to the camera wing locations at the headliner.	
14	Install the driver's and passenger's monitor interface brackets to the A-pillars.	
15	Install the Class V monitor to the headliner at the approximate center of the windshield.	
16	Install the driver's and passenger's exterior MirrorEye bracket wings above the doorframes.	
17	Position the passenger side blind spot camera (BSC) into the MirrorEye exterior bracket and thread the camera cable into the truck cabin.	
18	Thread the BSC cable to the MirrorEye ECU. (Be careful not to kink the cable during the threading process)	
19	Install the upper cover of the passenger side exterior arm and attach the passenger side MirrorEye Camera wings, carefully threading the cables through the bracket and into the truck cabin and connect to the appropriate camera/ monitor harness and main ECU harness. (Be careful not to kink the cable during the threading process)	
20	Using the location and size of the A-pillar interface bracket for reference cut out a section of the a-pillar cover to accommodate the bracket.	
21	With the passenger side monitor (15") in hand connect it to the camera/monitor harness at the a-pillar and mount the monitor to the interface bracket. (Be careful not to kink the wires/cable during the threading process)	
22	Install the upper cover of the driver side exterior arm and attach the driver side MirrorEye Camera wing carefully threading the cables through the bracket and into the truck cabin and connect to the appropriate camera/monitor harness and main ECU harness. (Be careful not to kink the cable during the threading process)	
23	Using the location and size of the A-pillar interface bracket for reference cut out a section of the a-pillar cover to accommodate the bracket.	
24	With the driver side monitor (12") in hand connect it to the camera/monitor harness at the a-pillar and mount the monitor to the interface bracket.	
25	Re-connect the vehicle power source and confirm that the system powers up properly and that all monitors are showing the correct feed for their respective cameras.	
26	Properly seat the harness and camera cables in the dash, A-pillar and headliner locations and reinstall the dash panels, A-pillar covers and headliner to their original configuration. (Be careful not to kink the wires/cable during this process)	
27	Begin system calibration and monitor adjustment (page 44)	
28	**Complete virtual checkout (page 59)**	

1

Photo Documentation is Essential

1 Prior to installation: take “before” pictures of the interior cab area(s) and exterior area above the door frame(s) – this helps ensure the truck is returned to its original condition

2 Make sure to take pictures noting any existing modifications or damage to the truck prior to beginning the install

3 At the end of the installation process, make sure to take pictures documenting the completed installation

2

Order of Installation

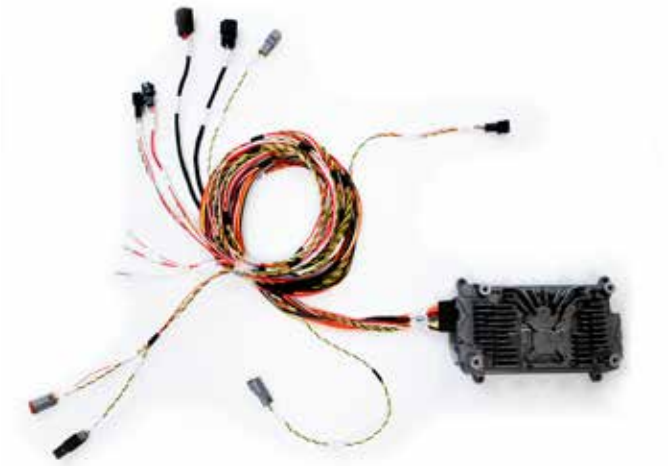
The task list (previous page) is ordered for the efficient installation of MirrorEye® components – however, installers should determine up front what order of installation works best for them.

For example, some installers choose to begin the process by conducting vehicle modifications first (e.g., measurements/drilling for varying brackets), followed by installation of components.

3

Before beginning installation, it is recommended that components are matched with their corresponding screw(s) kit. This will avoid the incorrect installation of screws, which can lead to permanent monitor damage.
NOTE: Red Loctite® is present on all monitor screws

4



Please take every measure to avoid kinking of wires when working with/handling the main MirrorEye® ECU wiring harness (Y-harness). Kinked lines can lead to communications interruptions between components and the system network.

1

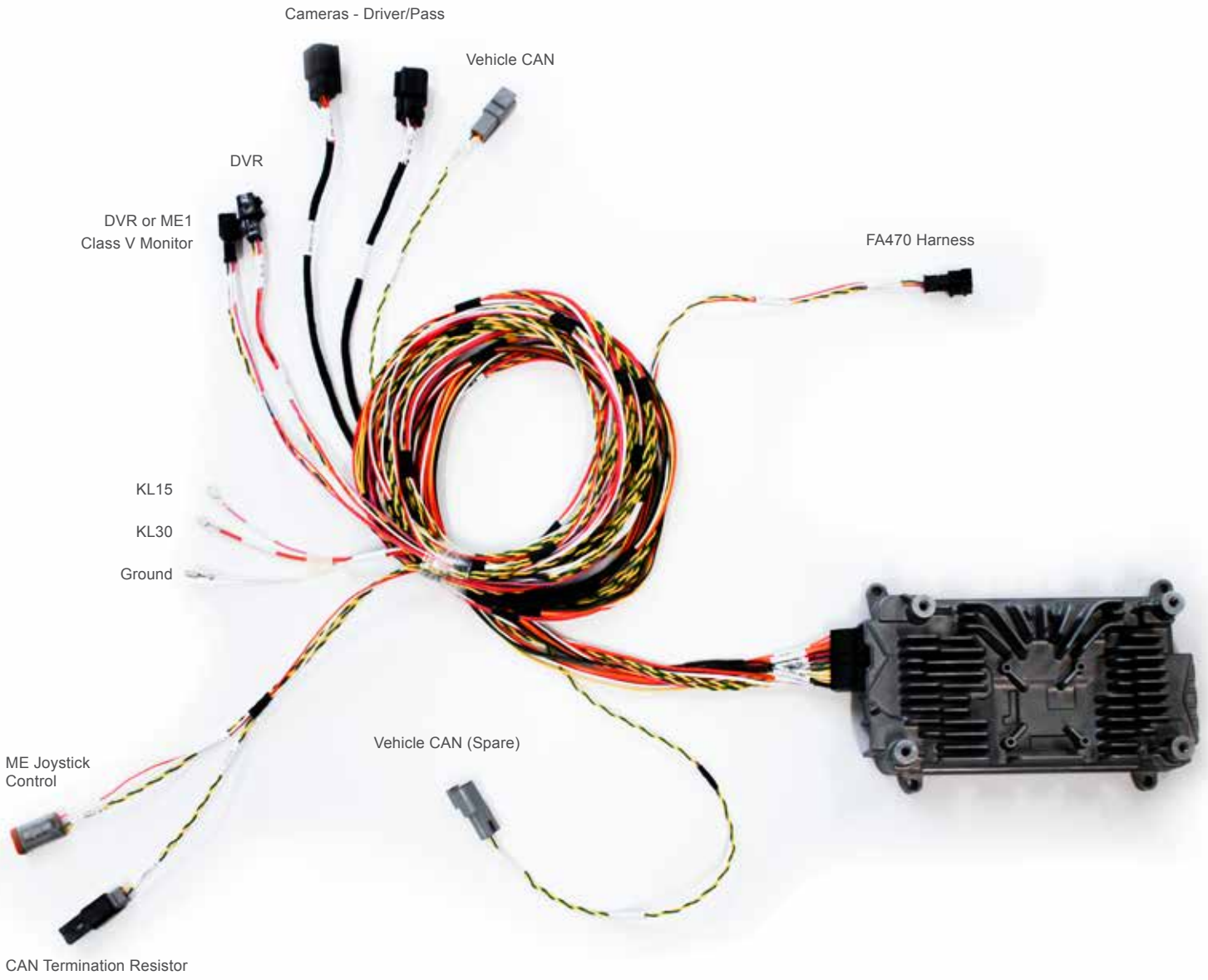
Prior to the installation of MirrorEye® system components, the A-pillar covers (1) center dash panel (2) should be removed and the headliner (3) should be adjusted to allow for access at the center windshield (4) XXX blind spot indicator removal XXXX.

2

NOTE: On A-pillars, begin with removal of grab handles

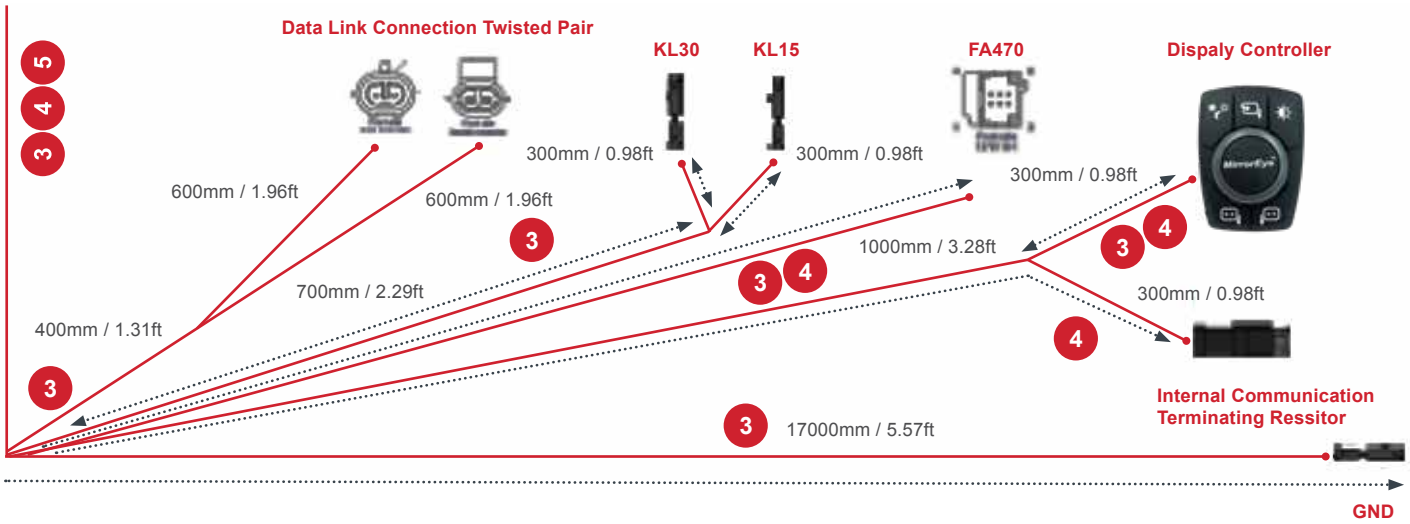
Installation

1



Become familiar with the main MirrorEye® ECU harness, it's orientation and any portion of the connection points
NOTE: Be sure to take every precaution to avoid kinking the main cable harness. Kinked lines can lead to communications interruptions between components and the system network.

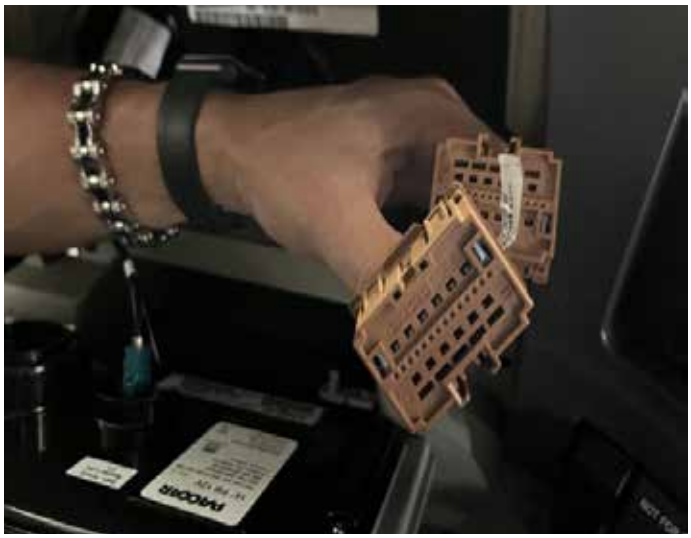
2



3

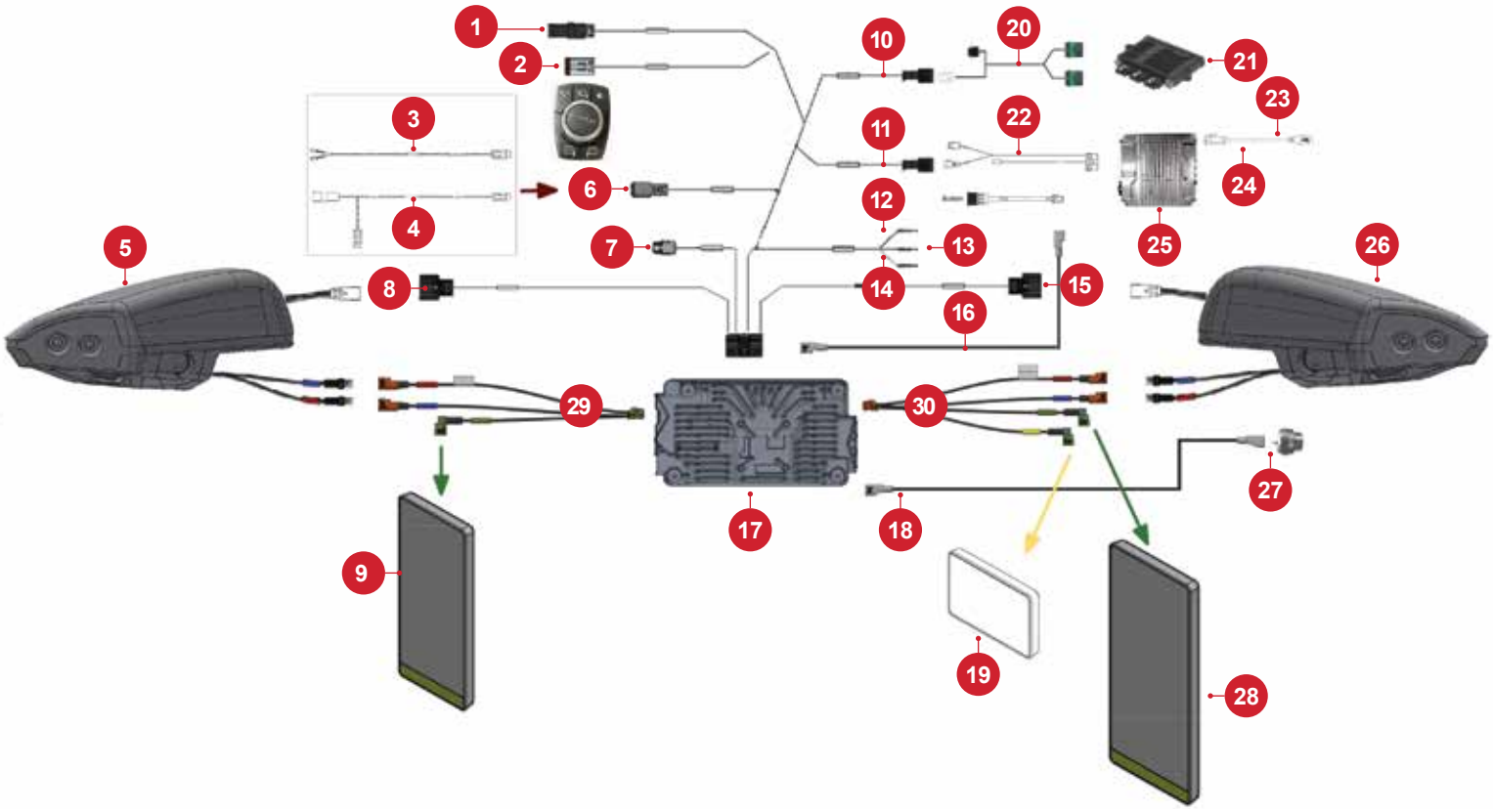
Main harness is routed through A-Pillar. Power ground and ignition are connected through factory ports. CAN-Connection is also connected behind cluster.

4



Power and ignition inputs are located behind driver cluster in dashboard.

1



Wiring Diagram

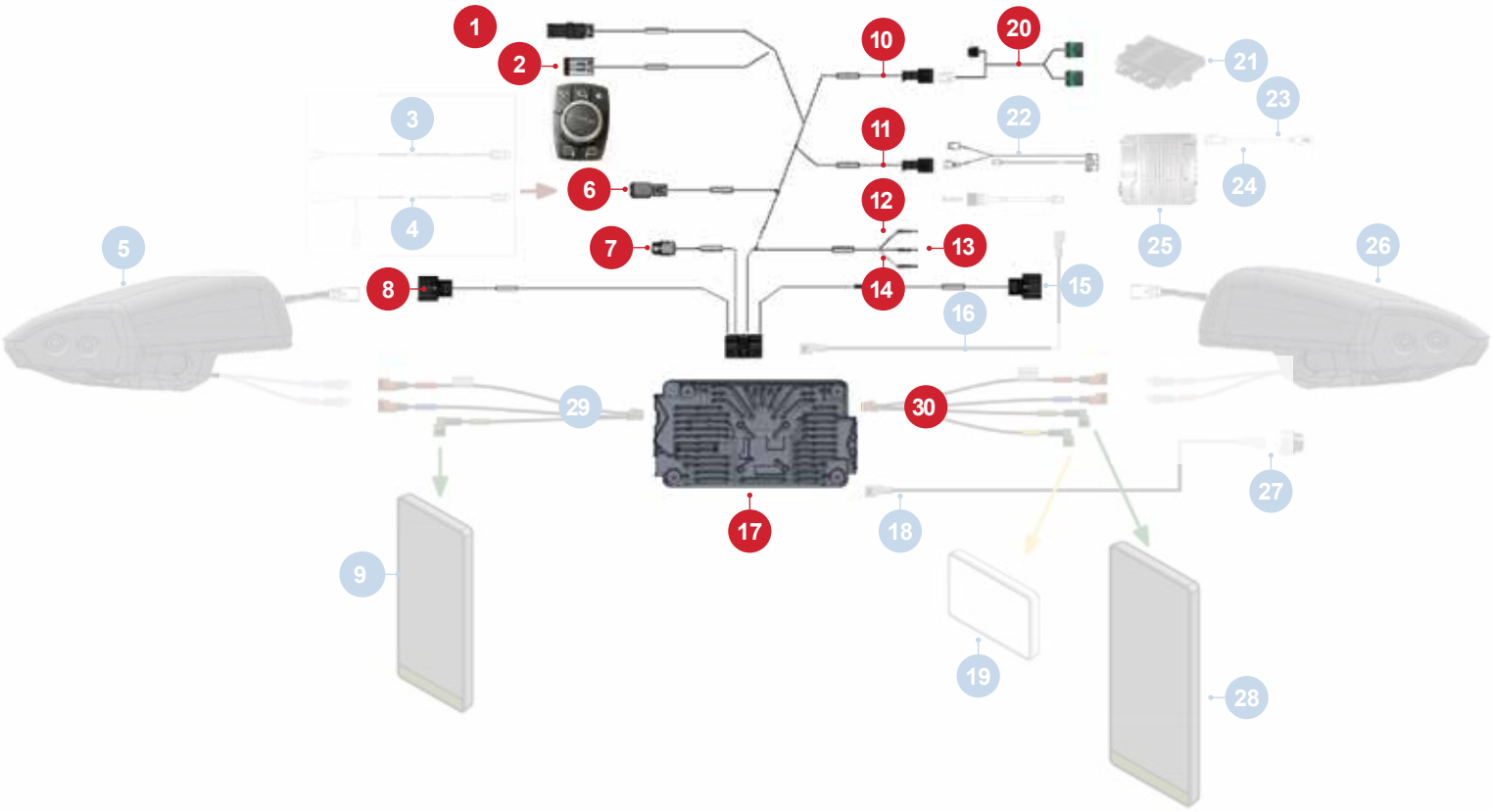
Option 1 - New Class V Monitor

NOTE: Note considered mechanical parts (brackets, etc)

1. CAN Termination Resistor
2. Controller
3. CAN Splicepack
4. CAN Breakout
5. Camera Wing (Driver Side)
6. Vehicle CAN
7. DVR or Class V Monitor
8. Camera Wing (Driver Side)
9. Driver Side Monitor (Left Side 12.3” Monitor)
10. FA470
11. To DVR Harness
12. KL30
13. Ground
14. KL15 (IGN)
15. Camera Wing (Passenger Side)
16. Ethernet
17. ECU
18. COAX Class V
19. Class V - 7” Monitor
20. FA470 Wire Harness
21. FA470
22. DVR Wire Harness
23. USB Cable for Flash Drive or USB Connectivity Dongle
24. DVR Output
25. DVR GEN1
26. Camera Wing (Passenger Side)
27. Class V Camera (Blind Spot)
28. Passenger Side Monitor (Right Side 15” Monitor)
29. Camera/Monitor Harness (Driver Side)
30. Camera/Monitor Harness (Passenger Side)

ECU views for reference

2



Main MirrorEye ECU Harness

Option 1 - New Class V Monitor

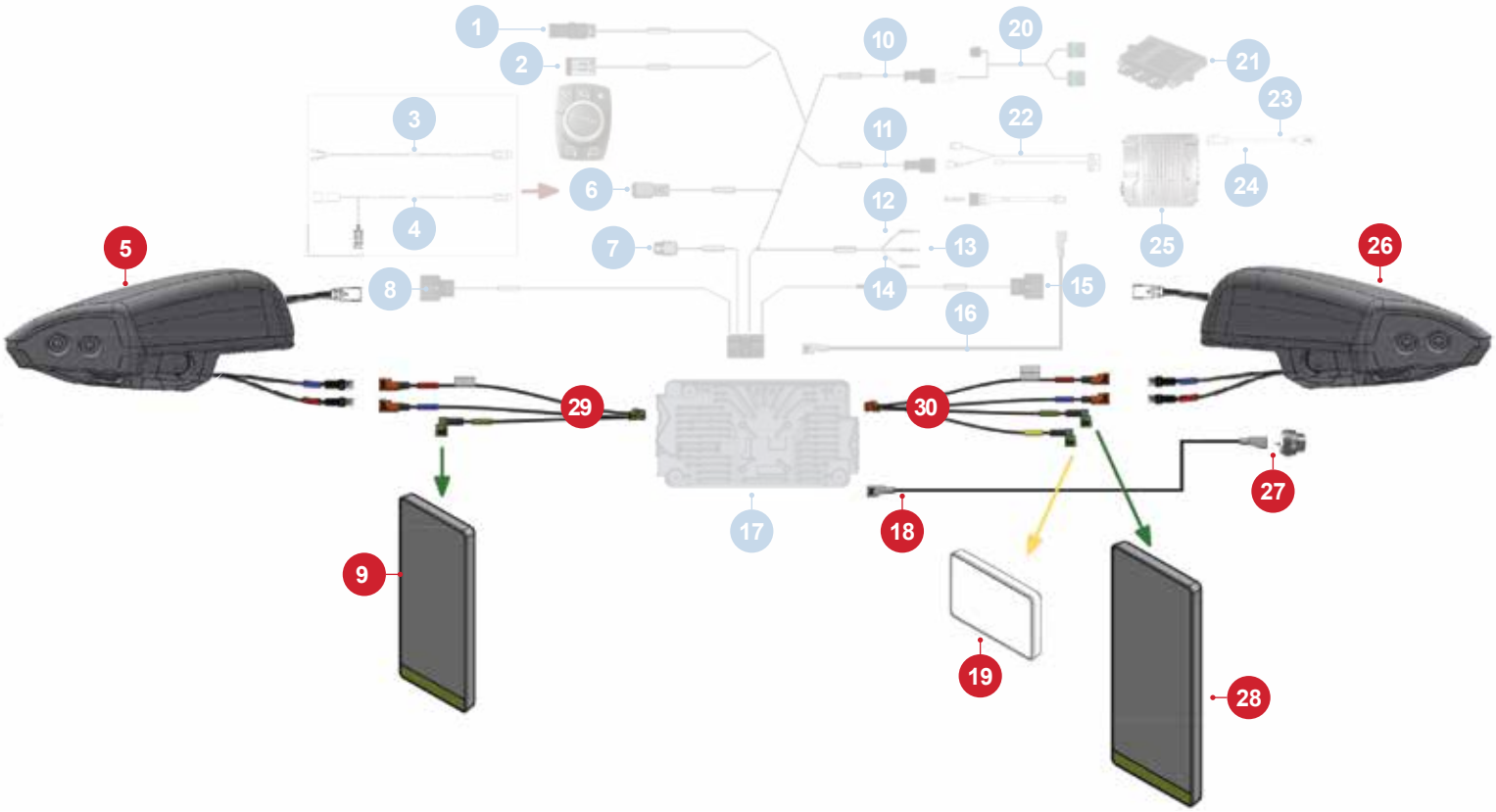
NOTE: Note considered mechanical parts (brackets, etc)

1. CAN Termination Resistor
2. Controller
3. CAN Splicepack
4. CAN Breakout
5. Camera Wing (Driver Side)
6. Vehicle CAN
7. DVR or Class V Monitor
8. Camera Wing (Driver Side)
9. Driver Side Monitor (Left Side 12.3" Monitor)
10. FA470
11. To DVR Harness
12. KL30
13. Ground
14. KL15 (IGN)
15. Camera Wing (Passenger Side)
16. Ethernet
17. ECU
18. COAX Class V
19. Class V - 7" Monitor
20. FA470 Wire Harness
21. FA470
22. DVR Wire Harness
23. USB Cable for Flash Drive or USB Connectivity Dongle
24. DVR Output
25. DVR GEN1
26. Camera Wing (Passenger Side)
27. Class V Camera (Blind Spot)
28. Passenger Side Monitor (Right Side 15" Monitor)
29. Camera/Monitor Harness (Driver Side)
30. Camera/Monitor Harness (Passenger Side)

NOTE: The MirrorEye system's OAT sensor is not applied on PACCAR vehicles

ECU views for reference

3



Camera/Monitor Harness Diagram

Option 1 - New Class V Monitor

NOTE: Note considered mechanical parts (brackets, etc)

1. CAN Termination Resistor
2. Controller
3. CAN Splicepack
4. CAN Breakout
5. Camera Wing (Driver Side)
6. Vehicle CAN
7. DVR or Class V Monitor
8. Camera Wing (Driver Side)
9. Driver Side Monitor (Left Side 12.3” Monitor)
10. FA470
11. To DVR Harness
12. KL30
13. Ground
14. KL15 (IGN)
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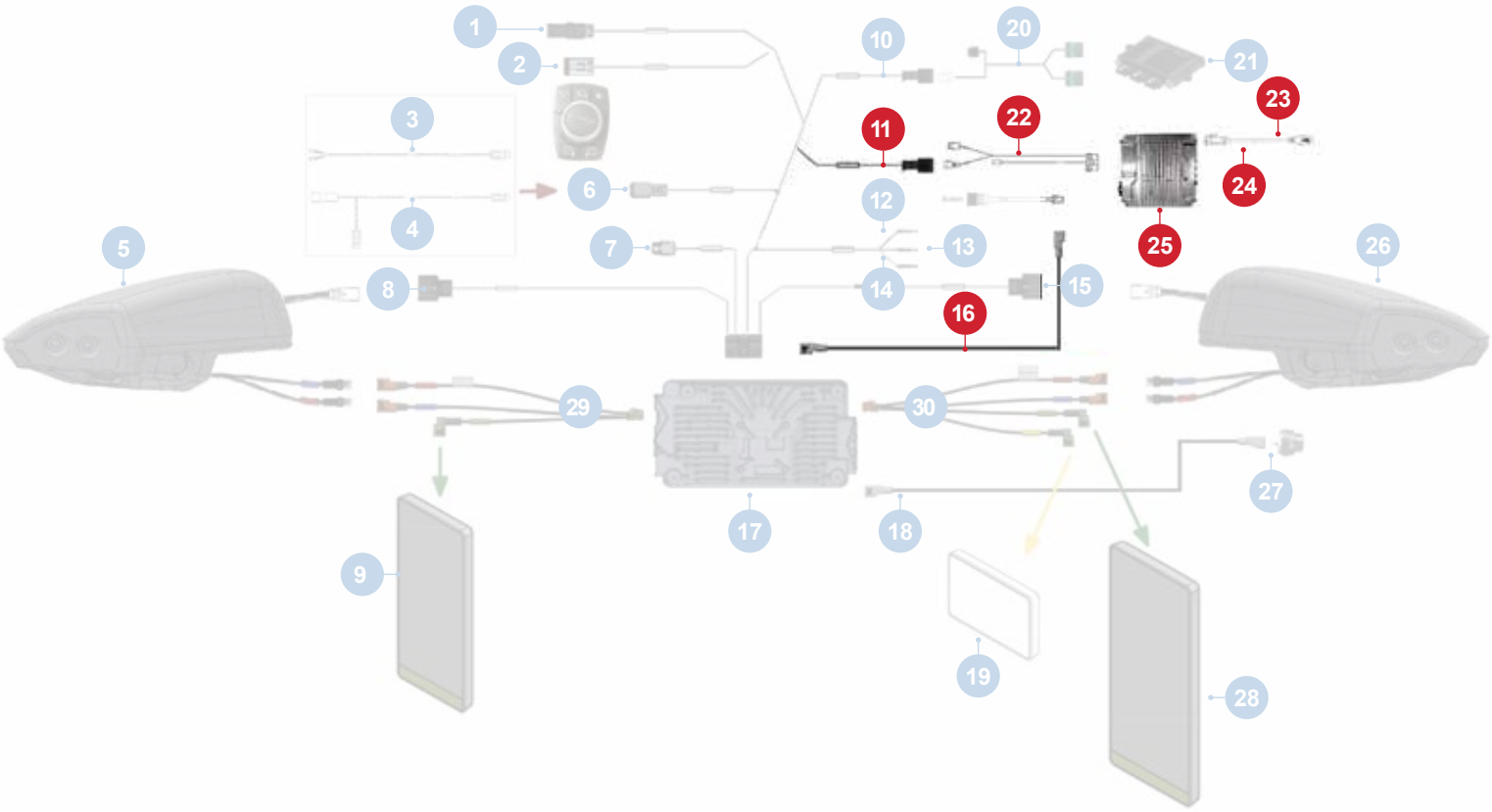
26. Camera Wing (Passenger Side)
27. Class V Camera (Blind Spot)
28. Passenger Side Monitor (Right Side 15” Monitor)
29. Camera/Monitor Harness (Driver Side)
30. Camera/Monitor Harness (Passenger Side)

ECU views for reference

4



Optional DVR

Option 1 - New Class V Monitor

NOTE: Note considered mechanical parts (brackets, etc)

1. CAN Termination Resistor
2. Controller
3. CAN Splicepack
4. CAN Breakout
5. Camera Wing (Driver Side)
6. Vehicle CAN
7. DVR or Class V Monitor
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27. Class V Camera (Blind Spot)
28. Passenger Side Monitor (Right Side 15” Monitor)
29. Camera/Monitor Harness (Driver Side)
30. Camera/Monitor Harness (Passenger Side)

ECU views for reference

1

The ECU to be attached to its Bracket before mounting on the truck's overhead rigid body

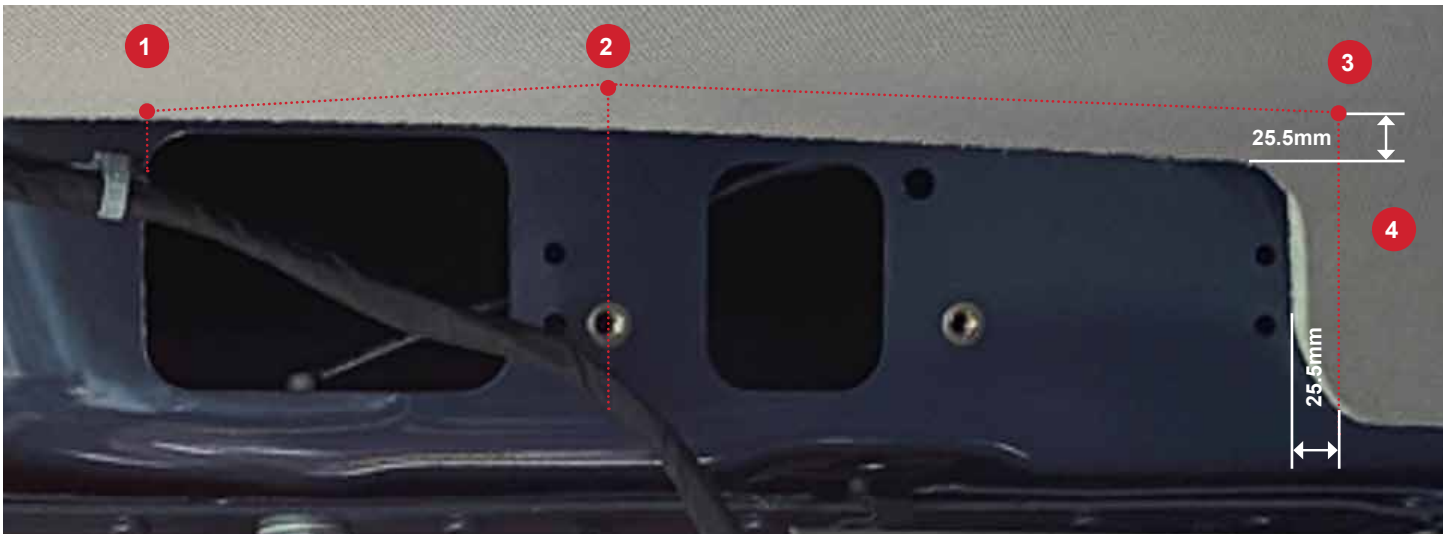
2

The Main Harness and Coax Cables to be connected to the ECU as a subassembly before being mounted to the overhead.

3

Once the door frame's trim (1) is uninstalled with its door's light, the existing M4 mounting features that are used to attach the door's ambient lamp, will be used to mount the ECU's Bracket (2) and another two existing holes at the right (3) to be used to apply M6 rivets and bolts. In total 4 fixing points for the ECU Bracket.

4

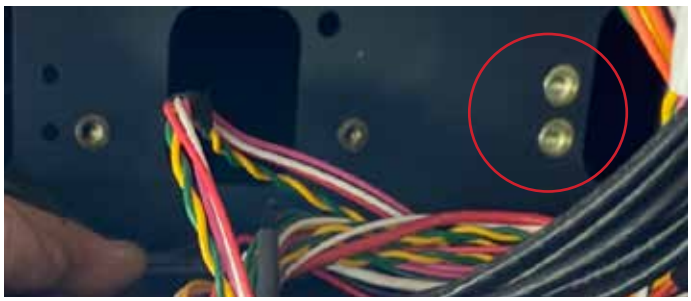


Once the door frame's trim is uninstalled with its door's light, a vertical line from the right edge of the interior's trim is draw by 25.5mm of space, and another horizontal line at 25.5mm as well from the interior's trim edge that intersects the vertical one, to the center of the existing mounting hole from the ambient lamp at the left. After it crosses the center line of that existing mounting hole, the line is draw to intersect the imaginary corner of the rectangle opening on the truck's rigid trim.

5

Before and after the interior's trim is cut based on the marking exercise

6



The preparation of the other two vertical exiting mounting holes starts so the ECU Assembly is mounted. Two M6 rivets are attached.

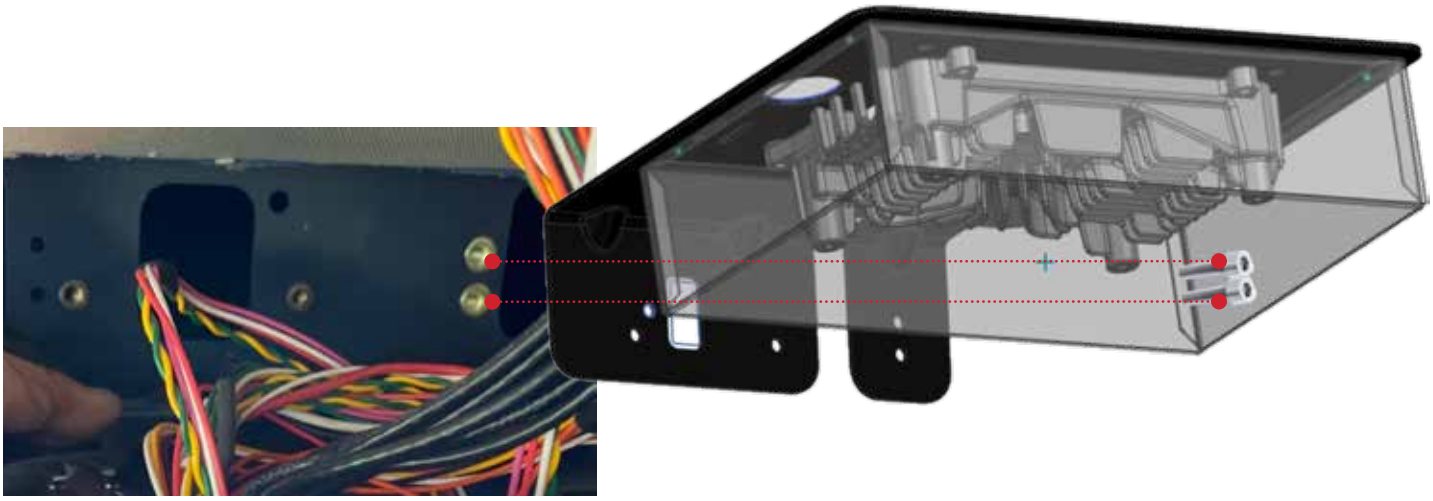
7

The ECU Assy is positioned to mark up the upper head-trim location's hole to be created for the harness and coax cables to pass through. After the crossed slits are done, the harness and cables get through it to continue and complete the routing from the ECU.

8

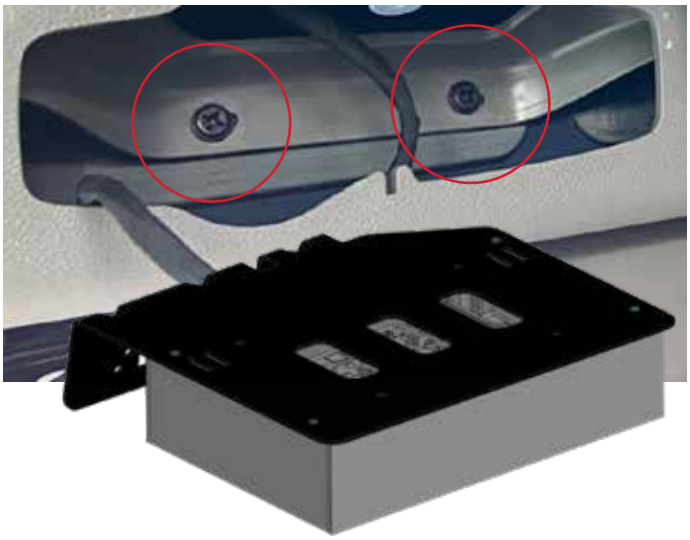
The crossed slitted opening to be by the top of the ECU Assy, so it is not visible after the ECU Assy is completed mounted

9



After the ECU Assy is accurately positioned, the two M6 screws aligned in vertical to be first attached to the cab

10



After the mounting the ECU Assy through the vertical two M6 screws, the ambient lamp trim is placed on assemblage position and the original horizontal pattern M6 screws are attached

11

Finalizing by mounting back the ambient light

1

Installation Location: Overhead Compartment
(1) ECU (2) DVR

2

Location Mockup
(1) ECU (2) DVR

3

ECU Fit in location with very little room to spare. Designed holes lined up correctly which allowed for a smooth installation.

4

Cut out netting and install close-out panel

5

Route relating cables behind A-pillars

6

XXX

7

XXX

1

Locate the telematics module (FA 470) in the FleetArc box

2

Assemble the connectors as depicted in the provided FA 470 schematic – note that the center shroud is for an additional connector (blind). Each module connector is numbered (CN 1,2,3).

3

Proceed with the telematics module (FA 470) connection to the main harness. **NOTE:** Incorrect connection of the telematics module will prevent certification during the cloud activation/virtual checkout (required)

4

Add Velcro® to FA 470 module base for mounting, as depicted.

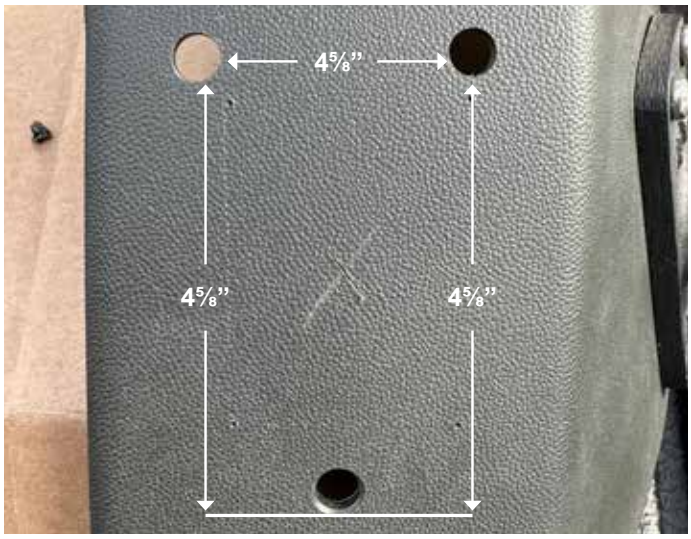
5

When mounting the FA 470 module, ensure that it lays flat (horizontally) to ensure optimal reception

1

The MirrorEye® controller/joystick is installed on the dash panel to the right of the driver (see image above). On CNG-equipped PACCAR trucks, the relating CNG gauge will need to relocated to the position depicted above (red circle)

2



Begin installation by making three holes with a ¼” drill at locations depicted

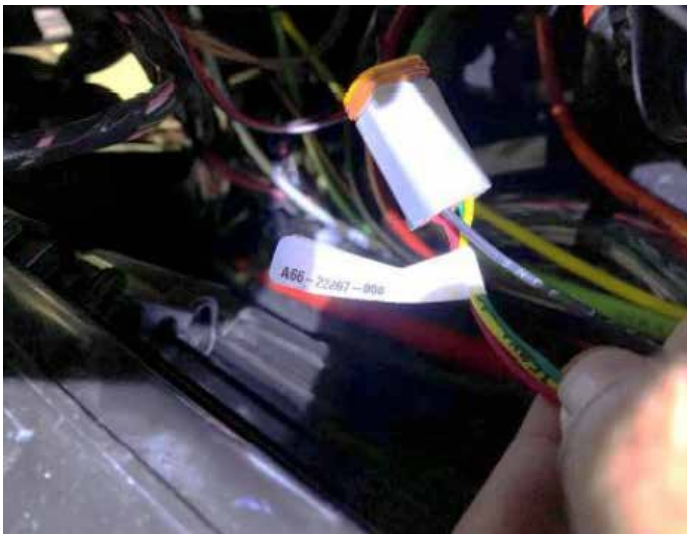
3

Create the cut-out hole using a 2⅛” tool at the location depicted.

4

Mount controller on panel using corresponding screw set

5



Connect the controller to the main wiring harness, then mount in place

6

Installed controller (including relocation of CNG gauge)

7

NOTE: Take note of the light indicators — if green lights do not turn on, there is a misconnection within the system. If the mis-connect cannot be identified, make contact with Stoneridge representative(s)

1

Using the corresponding screw set, attach the DVR module to its bracket

2

Locate the DVR harness (depicted) and connect to the DVR module

3

Connect relating USB cable to the DVR, as depicted

4

Using correlating screw set, mount DVR/bracket combination in upper console location

1

Refer to the image above for determining hole locations on the passenger side A-pillar for bracket mounting

2

Use the monitor bracket as a template to measure hole locations on the passenger side pillar. Make two (2) holes with 10mm drill bit and insert the Riv-Nuts using Riv-Nut puller tool

3

Assemble bracket with corresponding screw set

4

Install RAM® base to the monitor with relating kit set screws (NOTE: Red Loctite® should be on screws; passenger-side monitor is 15”)

5

Mount the passenger side monitor joining RAM® base and relating bracket

6

Ensure connections between the monitor, main wiring harness and relating passenger side coax cables; route cables within A-pillar

1

Refer to the image above for determining hole locations on driver side A-pillar for bracket mounting

2

Use the monitor bracket as a template to measure hole locations on the passenger side pillar. Make two (2) holes with 3/8” drill bit and insert the Riv-Nuts using Riv-Nut puller tool

3

Assemble bracket with corresponding screw set (Allen wrench)

4

Install RAM® base to the monitor with relating kit set screws (NOTE: Red Loctite® should be on screws; passenger-side monitor is 15”)

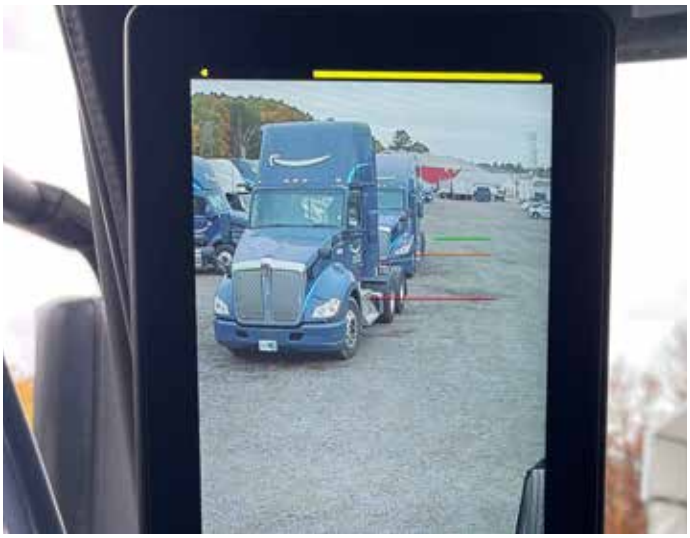
5

Mount the driver side monitor joining RAM® base and relating bracket

6

Ensure connections between the monitor, main wiring harness and relating driver side coax cables; route cables within A-pillar

7



Installed, operational driver’s side monitor

1

Uninstall point screws from upper console to install the Class V monitor bracket

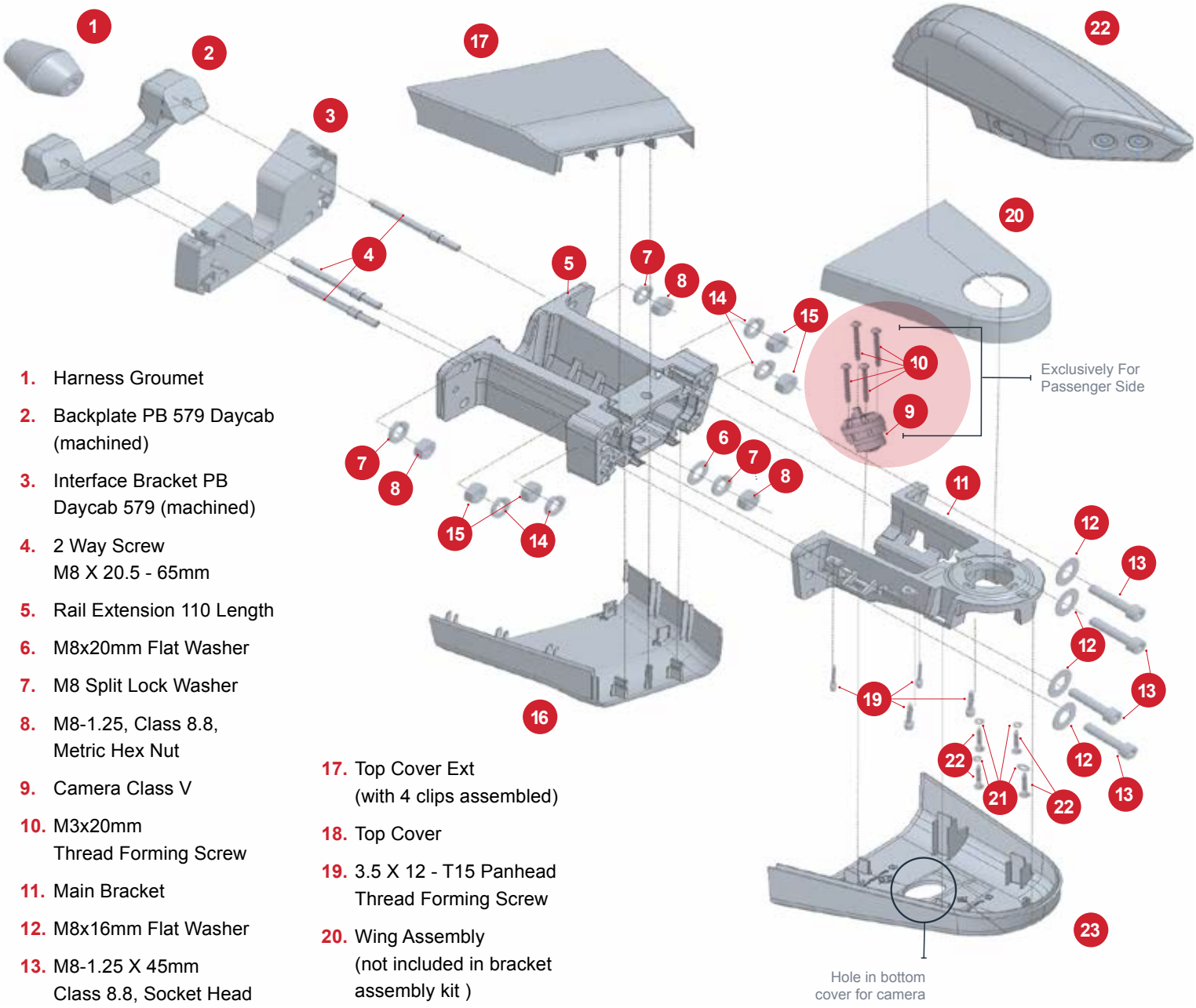
2

Assemble the monitor bracket and kit screws for Class V monitor interface

3

Assemble the central bracket and RAM® base, adjusting with an impact driver. Install monitor with the screws that are indicated in the kit to assemble the bracket; USE SHORT SCREWS with red Loctite® visible

1



1. Harness Groumet
2. Backplate PB 579 Daycab (machined)
3. Interface Bracket PB Daycab 579 (machined)
4. 2 Way Screw M8 X 20.5 - 65mm
5. Rail Extension 110 Length
6. M8x20mm Flat Washer
7. M8 Split Lock Washer
8. M8-1.25, Class 8.8, Metric Hex Nut
9. Camera Class V
10. M3x20mm Thread Forming Screw
11. Main Bracket
12. M8x16mm Flat Washer
13. M8-1.25 X 45mm Class 8.8, Socket Head Cap Screw
14. M8 Split Lock Washer
15. M8-1.25, Class 8.8, Metric Hex Nut
16. Bottom Cover Ext (with 4 clips assembled)
17. Top Cover Ext (with 4 clips assembled)
18. Top Cover
19. 3.5 X 12 - T15 Panhead Thread Forming Screw
20. Wing Assembly (not included in bracket assembly kit)
21. M4 Split Lock Washer
22. M4x0.7 Pilot Screw 18mm
23. Bottom Cover (with 4 clips assembled)

Identify and review relating components

2

Use template provided to identify mounting M8 mounting hole locations (3), and center-located 1” cable pass-through hole

3

The passenger side camera/arm assembly consists of four components: (1) Backplate Bracket (interior side) (2) Interface Bracket (exterior side) (3) Extension Bracket (4) Main Bracket/Arm

4

Identify the Backplate Bracket, then affix from interior of passenger side (depicted) with corresponding M8 two-way screw set

5

Place relating exterior gasket and center-hole grommet in place, then align the Interface Bracket by with the M8 two-way screw set

6

Align and attach the Extension Bracket with corresponding nuts/M8 two-way screw set

7

Route the relating passenger side harness and coax cables relating to Wing Camera and Class V (blind spot) camera through cable pass-through hole

8

Attach the Main Bracket/Arm with corresponding screw set and route affiliated cables/connections

9

Affix upper and lower Extension Covers

10

Install the Class V (blind spot) camera in the center position of the Main Bracket/Arm (as depicted), while being careful to not scratch/damage the lens

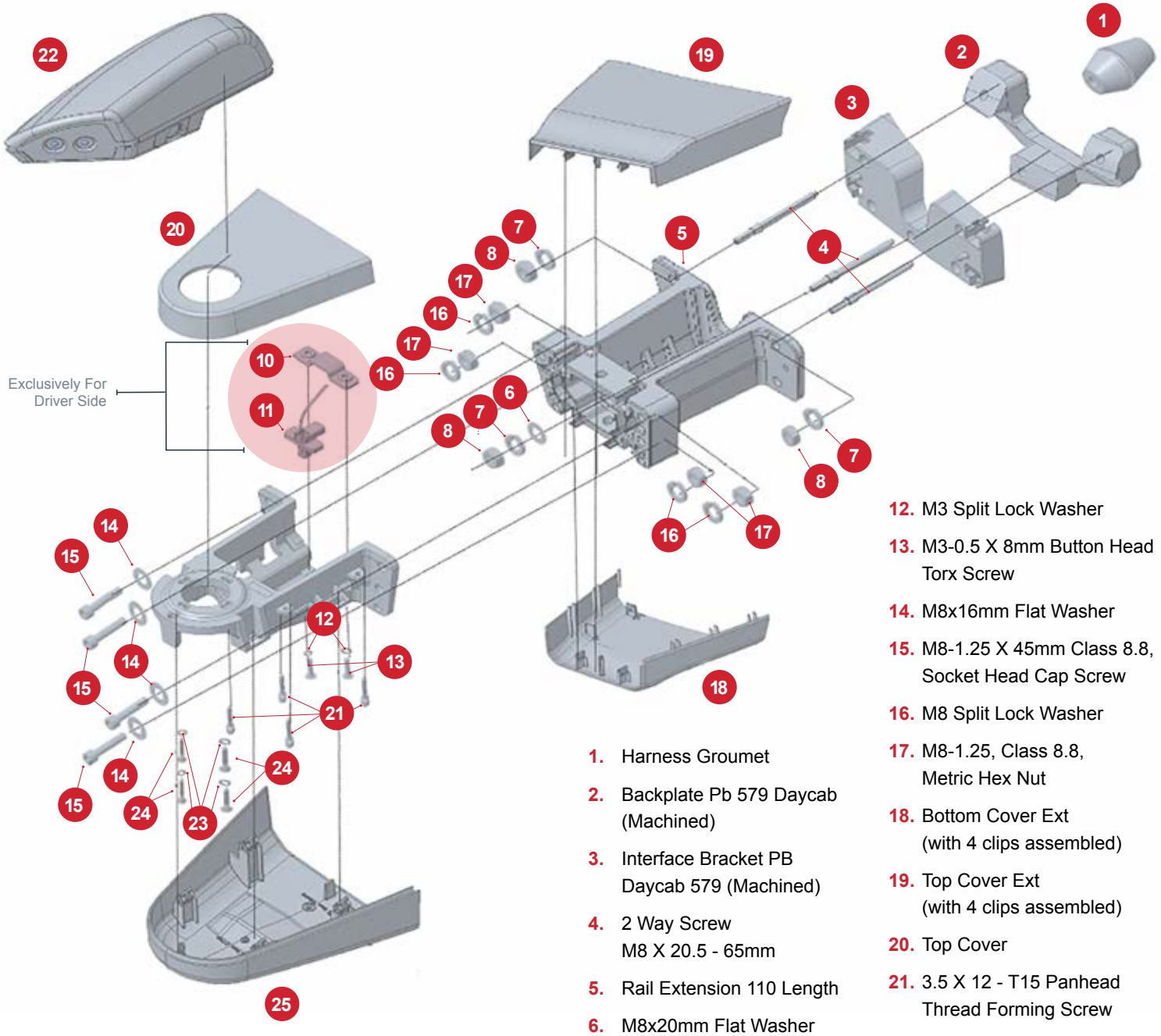
11

Using the corresponding fastener set, install upper and lower covers to the Main Bracket/Arm

12

Install passenger side camera wing to Main Bracket/Arm (completed passenger side arm/camera, assembly depicted)

1



Identify and review relating components

1. Harness Groumet
2. Backplate Pb 579 Daycab (Machined)
3. Interface Bracket PB Daycab 579 (Machined)
4. 2 Way Screw M8 X 20.5 - 65mm
5. Rail Extension 110 Length
6. M8x20mm Flat Washer
7. M8 Split Lock Washer
8. M8-1.25, Class 8.8, Metric Hex Nut
9. Main Bracket
10. Bracket OAT Sensor
11. OAT Sensor
12. M3 Split Lock Washer
13. M3-0.5 X 8mm Button Head Torx Screw
14. M8x16mm Flat Washer
15. M8-1.25 X 45mm Class 8.8, Socket Head Cap Screw
16. M8 Split Lock Washer
17. M8-1.25, Class 8.8, Metric Hex Nut
18. Bottom Cover Ext (with 4 clips assembled)
19. Top Cover Ext (with 4 clips assembled)
20. Top Cover
21. 3.5 X 12 - T15 Panhead Thread Forming Screw
22. Wing Assembly (not included in bracket assembly kit)
23. M4 Split Lock Washer
24. M4x0.7 Pilot Screw 18mm
25. Bottom Cover (with 4 clips assembled)

2

Use template provided to identify mounting M8 mounting hole locations (3), and center-located 1” cable pass-through hole

3

The driver side camera/arm assembly consists of four components: (1) Backplate Bracket (interior side) (2) Interface Bracket (exterior side) (3) Extension Bracket (4) Main Bracket/Arm

4

Identify Backplate Bracket, then affix from interior of driver side (depicted) with corresponding M8 two-way screw set

5

Place relating exterior gasket and center-hole grommet in place, then align the Interface Bracket by with the M8 two-way screw set

6

Align and attach the Extension Bracket with corresponding nuts/M8 two-way screw set

7

Ensure the relating driver side harness and coax cables is routed through cable pass-through hole and mounted brackets

8

Attach the Main Bracket/Arm with corresponding screw set and route affiliated cables/connections. Affix upper and lower Extension Covers

9

Using the corresponding fastener set, install upper cover to the Main Bracket/Arm

10

Before affixing lower cover, ensure the assembly of the Main Bracket/Arm (depicted) and all connections are secure and unkinked

11

Install driver side camera wing to Main Bracket/Arm (completed driver side arm/camera assembly depicted)

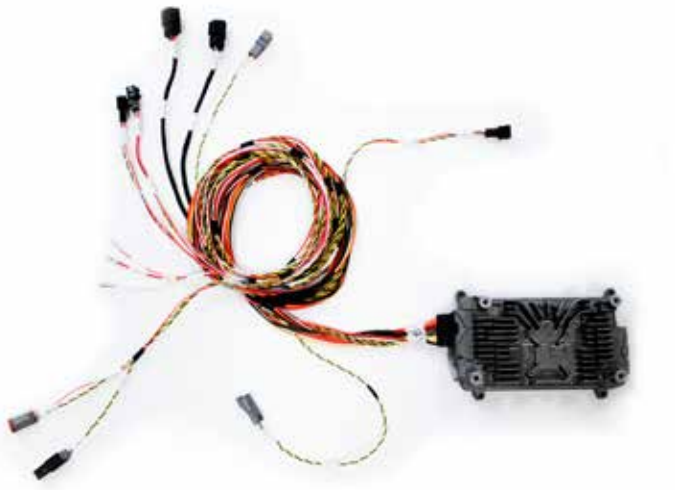
1

Using the location and size of the A-pillar interface bracket for reference, cut a rectangular hole in the relating side (driver/passenger) A-pillar cover removed during pre-installation. With the relating monitor (driver/passenger side) in hand, thread the cables through the A-pillar cover; make connections to the MirrorEye® harness connector and camera cable. Relating images depict process to finished bracket/A-pillar assembly

1

Confirm the system powers up properly and that all monitors are showing the correct feed from their respective cameras

2



Make sure the main harness and relating cables/ connections are properly seated in the dash, A-pillar(s), console or headliner locations

3

Re-install all panels, upper console, covers and headliner to their original configuration(s). Be mindful of harness/ cable placement to avoid kinking during re-installation

System Alignment/ Calibration

Alignment of Cameras

This step may require temporary removal of the camera wing cover in order to adjust camera angle and field of view

1

Verify field of view for all three cameras

2

The Class V camera should show as parallel to the truck's body and should be positioned to maximize the outward view

3

For the driver side camera view make sure that the horizon is parallel to the top of the monitor screen. Align the inside edge of the camera view to be parallel with the fairing

4

Repeat the previous step (3) on the passenger side ensuring a similar field of view in both the driver side and passenger side monitors

Calibration of Distance Lines

This step must be completed without a driver present

1

At the time of installation, the vehicle's distance lines **must** be calibrated in the MirrorEye® system …

2

To do so, first bring up the Driver Menu by long-pushing (e.g., "push and hold") the lower-left button on the MirrorEye® Controller …

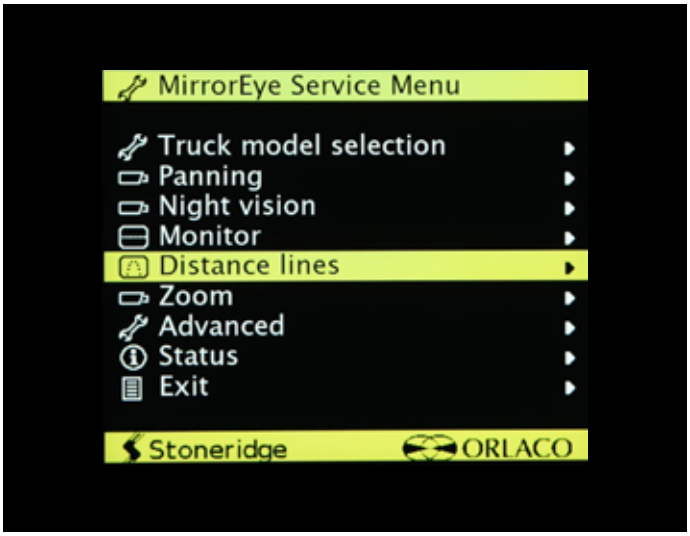
3

Using the controller's dial knob, scroll down to the Exit selection, and **long-push the Driver Side Manual Panning button and Controller Knob simultaneously** … this will bring access to advanced settings …

4

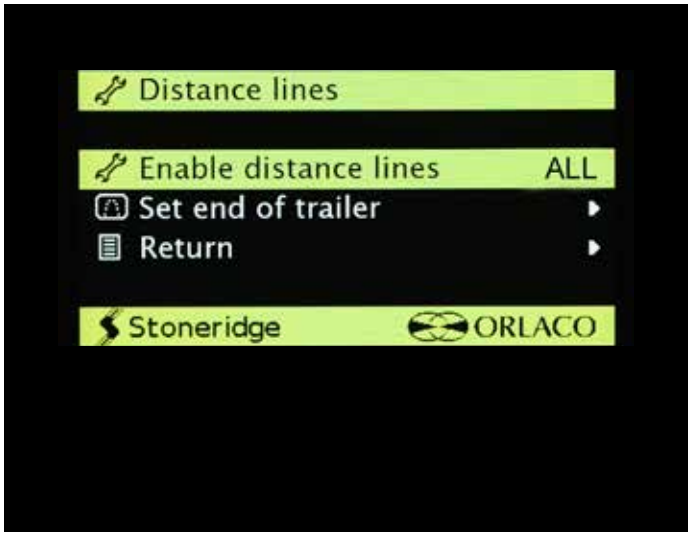
Warning message will appear… on the same page, "Access service menu" is default-selected, press the Controller Knob …

5



On the MirrorEye® Service Menu, dial-scroll to Distance Lines, then press the Controller Knob …

6

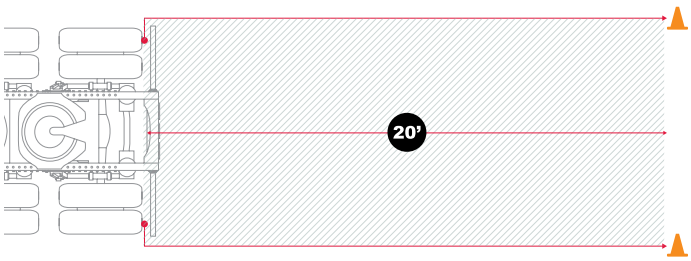


MirrorEye® installation technicians need to set the End of Trailer – or EOT – distance to calibrate the vehicle's distance lines …

7

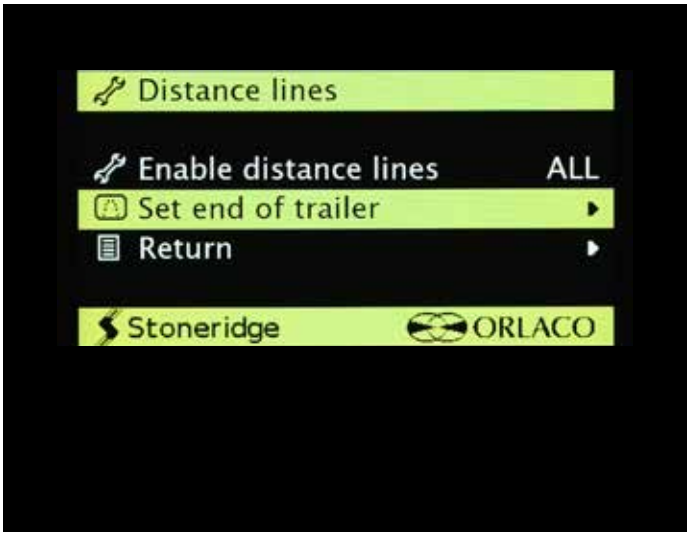
Before doing so, first place cones at the end of the trailer on both the driver and passenger sides of the truck …

8



If a trailer isn't attached, measure 20-ft. from the first rear axle rearward and place a cone at that location on both sides of the vehicle (passenger and driver sides)

9



Back in the cab, dial-scroll to the “Set End of Trailer” selection and push the Controller Knob …

10

Match the red line on the monitor with the cone at the end of the trailer on the Driver Side using the Dial Knob … when it’s aligned, push the Controller Knob …

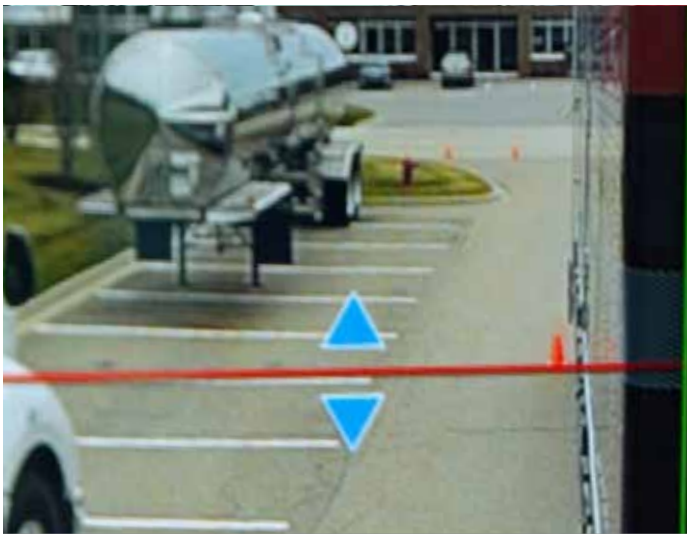
11

Once set, the correct driver-side distance lines are adjusted and displayed on the monitor …

12

To match Passenger Side distance lines with those of the driver side, push and hold the lower-right button on the MirrorEye® Controller …

13

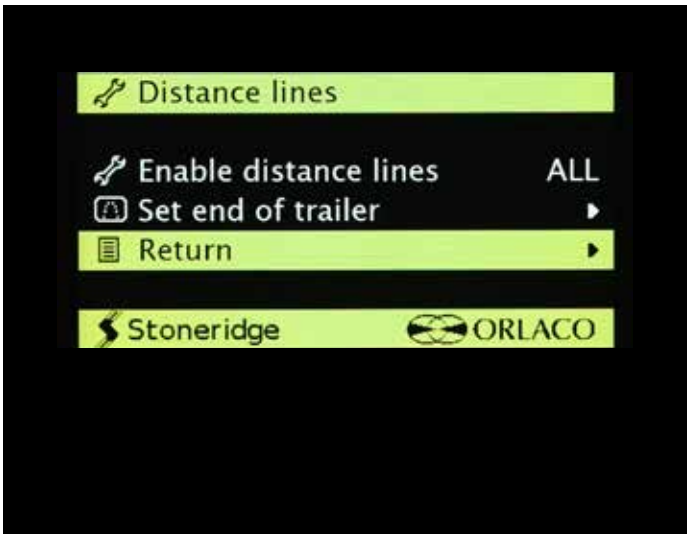


Match the red line on the monitor with the cone at the end of the trailer on the Passenger Side using the Dial Knob … when it's aligned, push the Controller Knob …

14

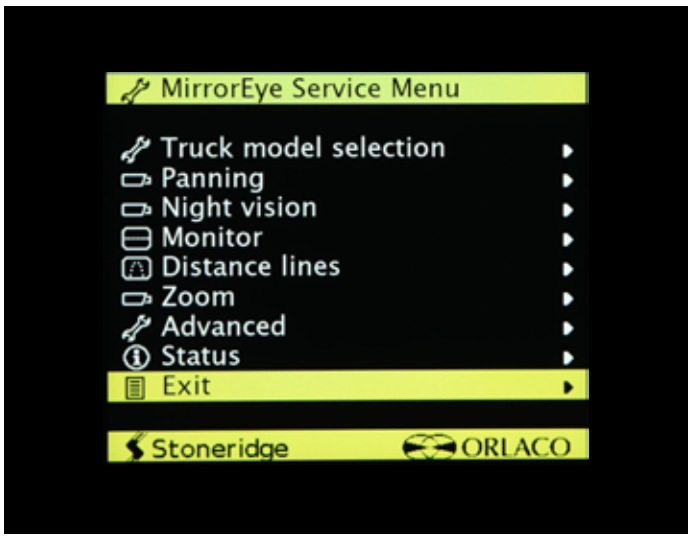
At this point, all distance lines for both sides of the truck are displayed and color-identified in red, yellow and green …

15



To exit Distance Lines in the Service Menu, dial-scroll to Return and push on the Controller Knob …

16

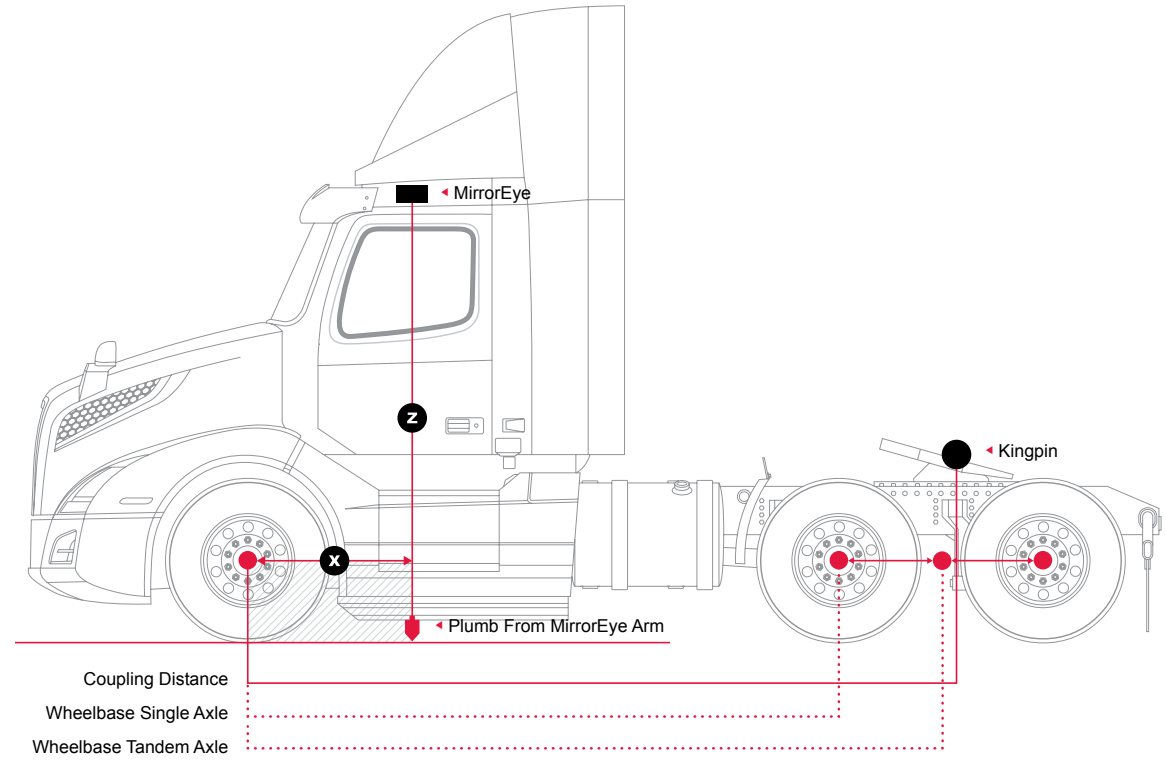


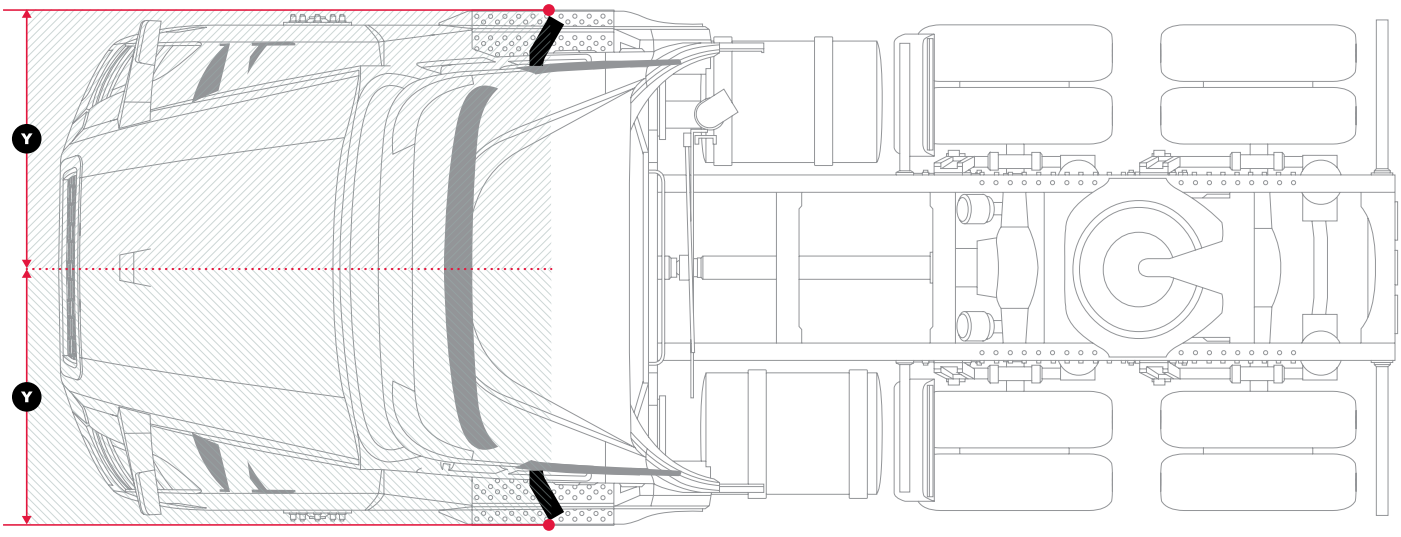
To exit the Service Menu, scroll down to Exit and press the Controller Knob again …

Entering Critical Values

At the time of installation, key and critical vehicle measurements **must** be entered into the MirrorEye® system

1





At the time of installation, key and critical values/measurements relating to the vehicle's **wheelbase, steering ratio, coupling position and camera positions (X,Y and Z)** must be entered into the MirrorEye® system.

2

To do so, first bring up the Driver Menu by pushing and holding the lower-left button on the MirrorEye® Controller …

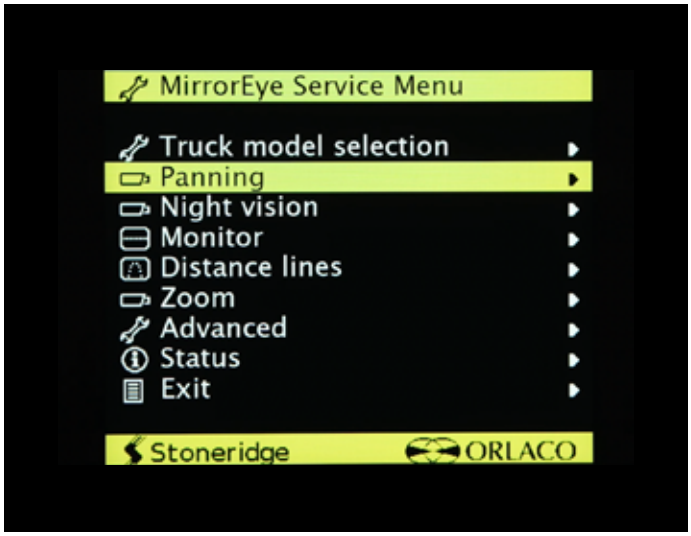
3

Using the controller's Dial Knob, scroll down to the Exit selection, then **push and hold the Driver Side Manual Panning button and Controller Knob simultaneously** … this will bring access to advanced settings …

4

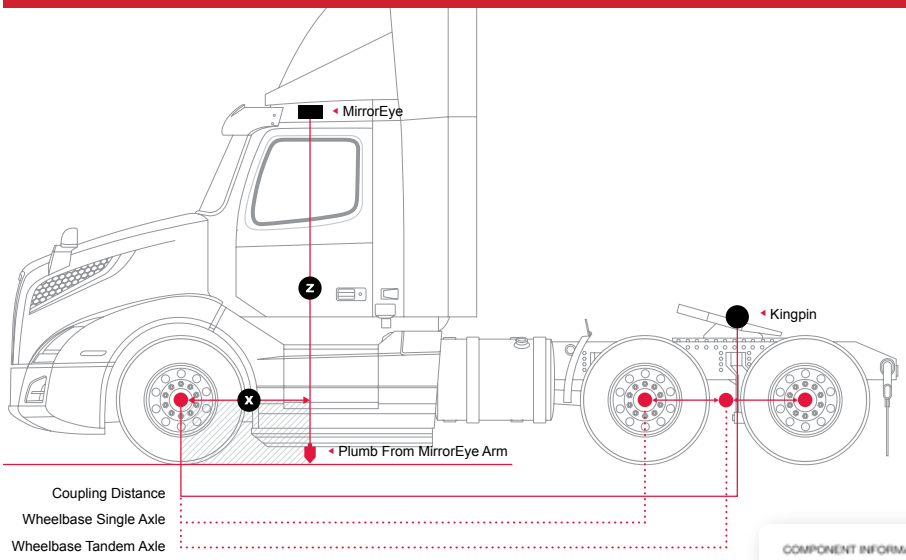
A Warning message will appear … on the same page, "Access service menu" is default-selected, press the Controller Knob …

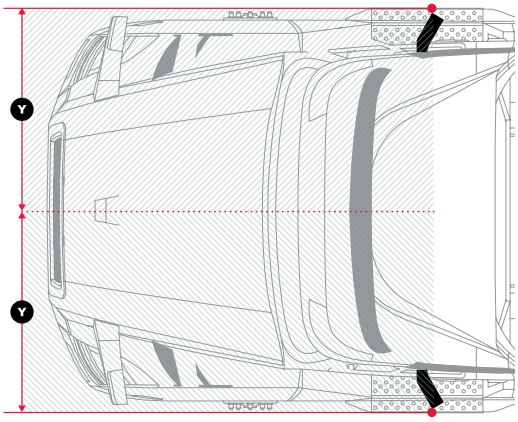
5



On the MirrorEye® Service Menu, dial-scroll to Panning, then press the Controller Knob …

6





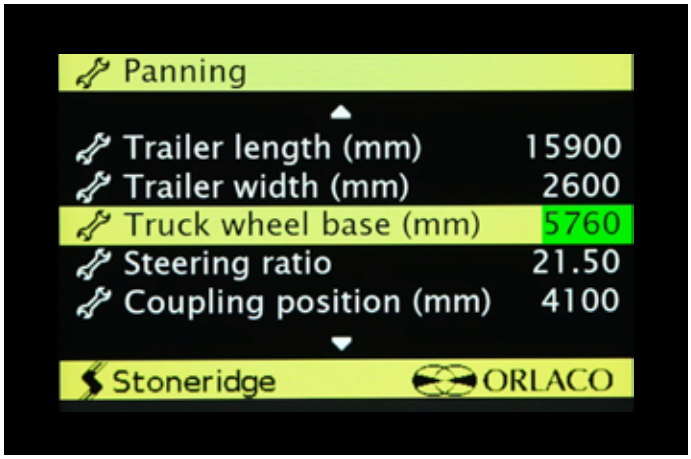
In the Panning service menu, the values/measurements relating to the vehicle's **wheelbase, steering ratio, coupling position and camera positions (X,Y and Z)** are accessed. All must be determined and entered into the MirrorEye® system at the time of installation.

Sample Door Jamb Label

7

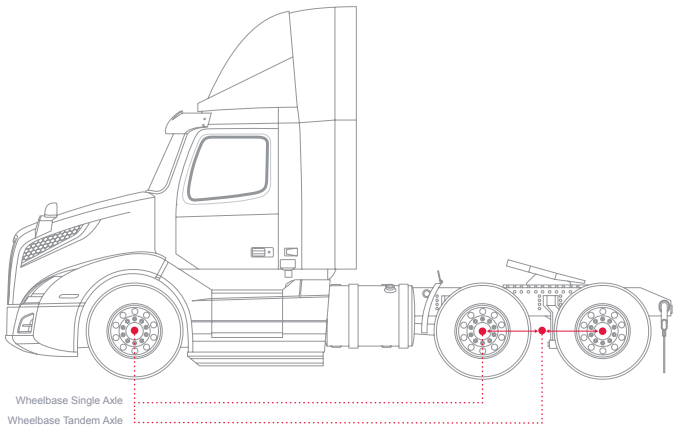
To adjust the **Wheelbase**, scroll to the selection in the Panning menu and press the Controller Knob …

8



Most trucks will have an OEM decal in the door jamb that carries the wheelbase value, and usually in standard measurements (e.g., "inches"). **Be aware that all standard measurements for the wheelbase and other values will need to be converted to metric (e.g., "mm") before being entering into the MirrorEye® system**. Conversion tables are readily available online.

9



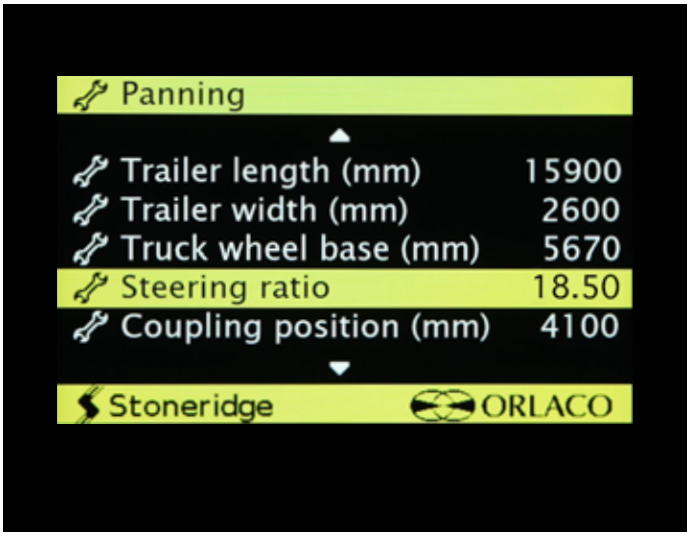
The wheelbase is measured from the center of the front axle to the center of the rear axle group

10

Use the Dial Knob to adjust the millimeter value in the green box until the proper value is found, then press the Controller Knob …

… to lock the value in, press the Controller Knob again …

11



To adjust the **Steering Ratio**, scroll to the selection in the Panning menu and press the Controller Knob …

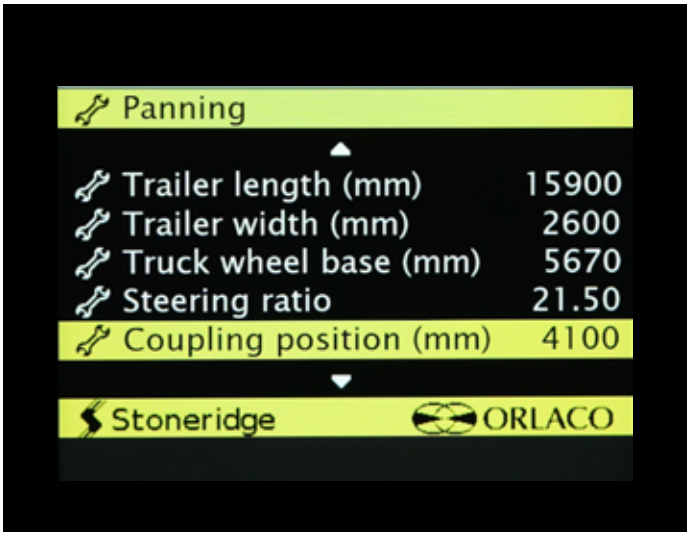
12

Be aware that the steering wheel ratio for all trucks – regardless of make or model – **should be set to 18.50**

Use the Dial Knob to adjust the steering ratio to 18.50, then press the Controller Knob…

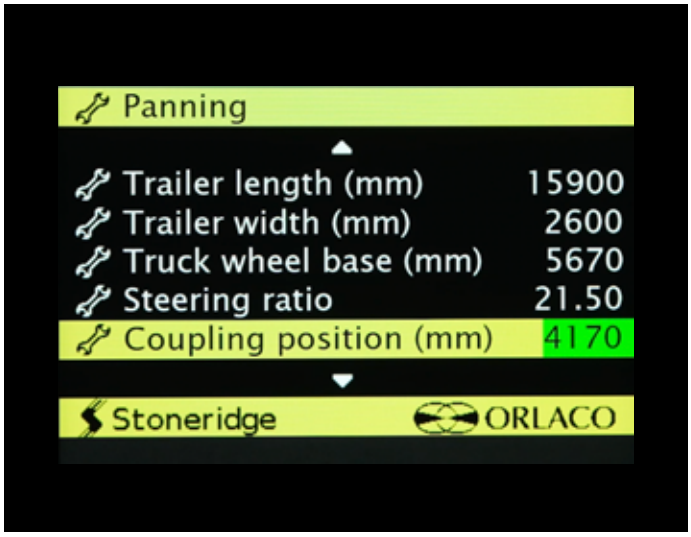
… to lock the value in, press the Controller Knob again …

13



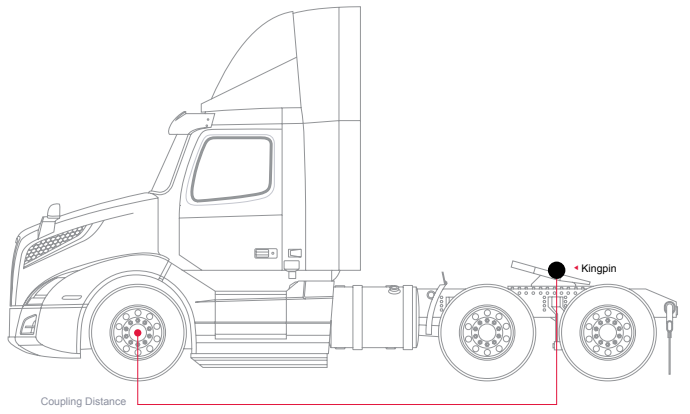
To adjust the **Coupling Position**, scroll to the selection in the Panning menu and press the Controller Knob …

14



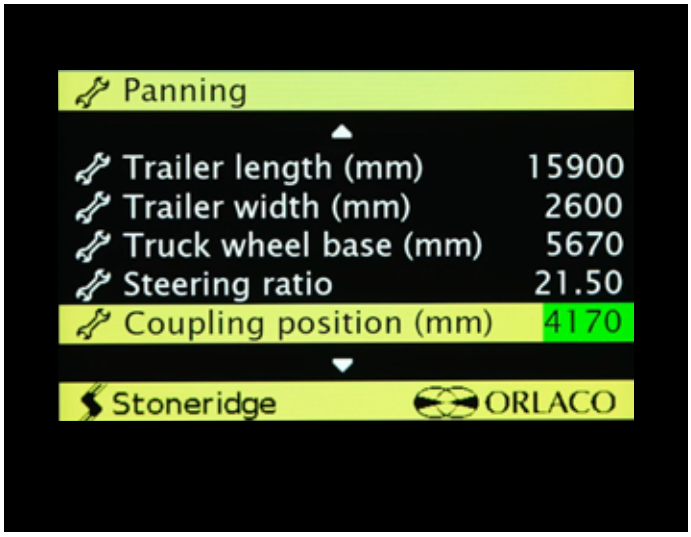
Be aware that the Coupling Position value needs to be entered in millimeters. All standard measurements (e.g. “in inches”) will need to be converted before entering values into the system. Conversion tables are readily available online.

15



The Coupling Position is measured from the center of the front axle of the truck to the King Pin position on the fifth wheel …

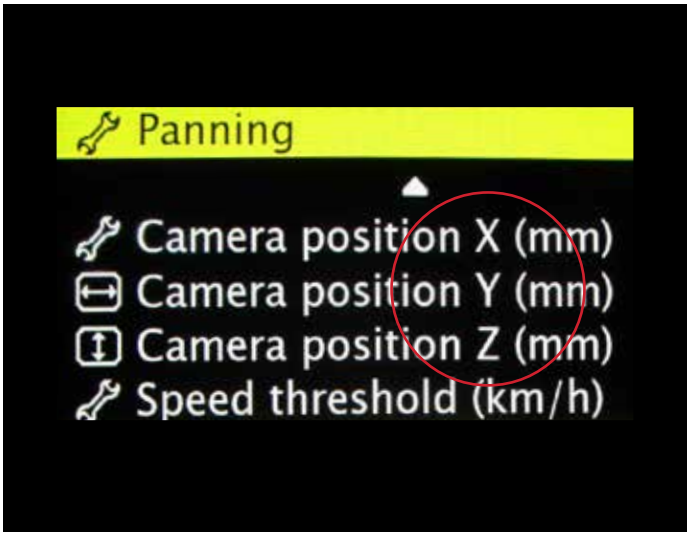
16



Use the Dial Knob to adjust the millimeter value in the green box until the proper value is found, then press the Controller Knob …

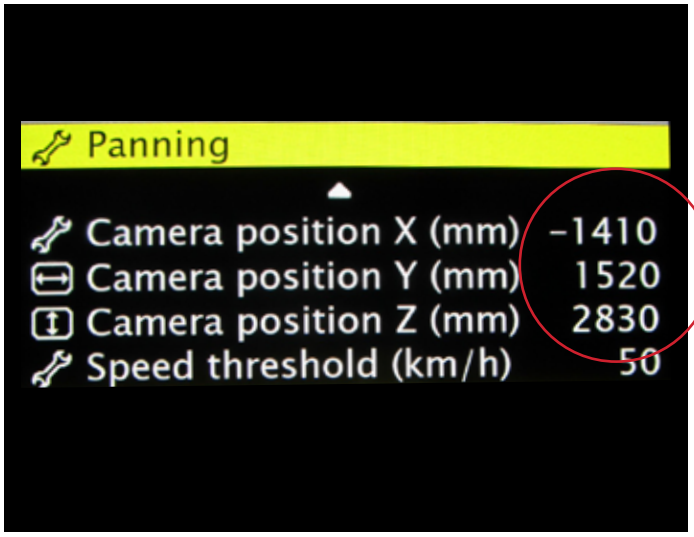
… to lock the value in, press the Controller Knob again …

17



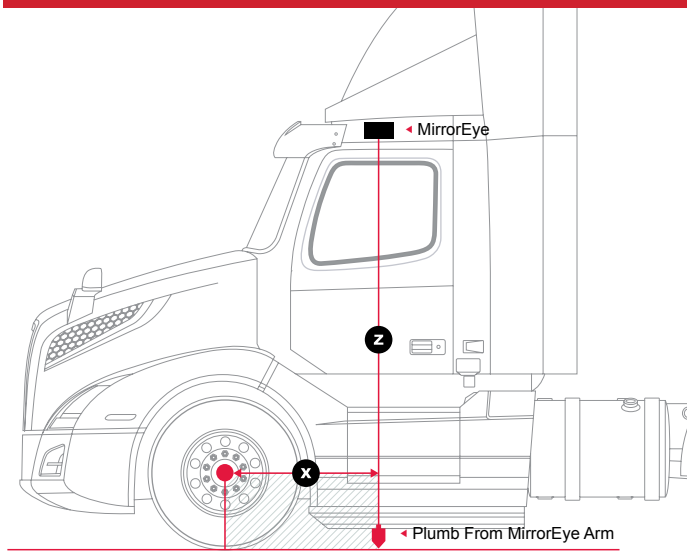
To adjust the **camera position values – X, Y, or Z** – scroll to the relating position in the Panning menu and press the Controller Knob …

18



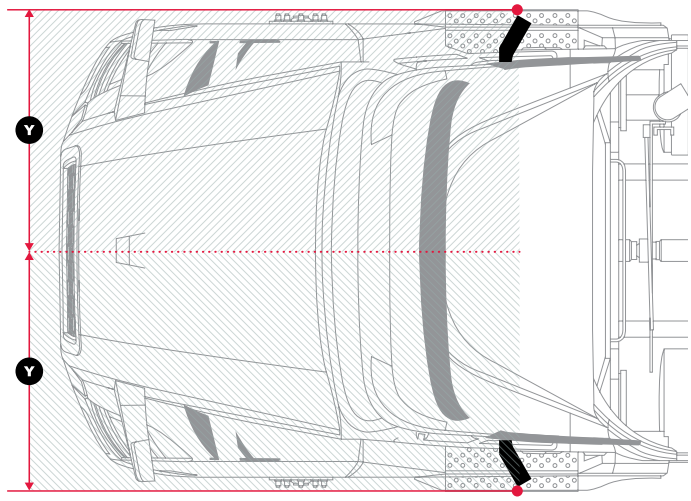
Be aware that all camera position values need to be entered in millimeters. All standard measurements (e.g. “in inches”) will need to be converted before entering values into the system. Conversion tables are readily available online.

19



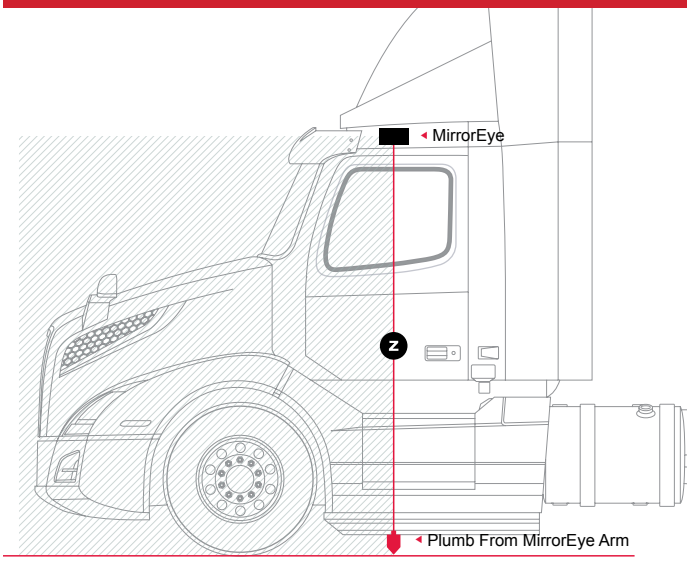
The camera position X value is the distance from the **Center Line of Front Axle to the Camera Lens** (plumb bob from camera lens to ground)

20



The camera position Y value is the distance from the **Center Line of the Truck to the Camera Lens** (plumb bob from camera lens to ground)

21



The camera position Z value is the distance from the **Ground to Camera Lens** (plumb bob from camera lens to ground)

22

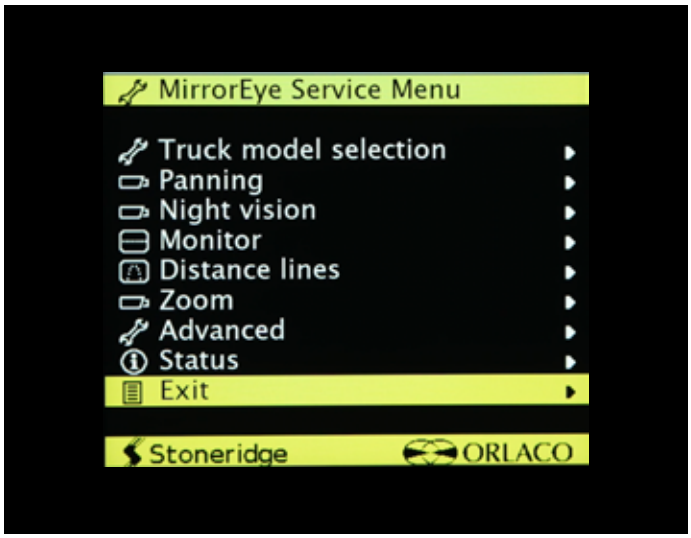
Use the Dial Knob to adjust any of the camera position X, Y or Z values, then press the Controller Knob …

…. to lock the value in, press the Controller Knob again …

23

To exit Panning in the Service Menu, dial-scroll to Return and push on the Controller Knob …

24



To exit the Service Menu, scroll down to Return and press the Controller Knob again …

MirrorEye® Activation Process

How to Activate MirrorEye®

(Required)

The following provides the steps necessary to activate the MirrorEye® system with Cloud Services for GPS and Video Feeds. If not already in hand, begin by downloading/reviewing the BASIC PROCESS PDF, which can be accessed at:

https://www.stoneridge.app/en/help/how-to-cloud-activate-mirroreye-i-mk-ii

ALERT: Before starting the activation process, make sure to have the following information available before submitting an activation form. Capture a photo and write down the number of:

- The FleetArc FA470 Device ID #
- The VIN (or temporary VIN) of the Vehicle
- The Asset ID # or temporary internal ID # of the Vehicle
- The ECU # of any Monitor or Wing Camera (only one number needed)

STEP 1.

Make sure the truck is turned on, with enough gas for any additional time it may take to activate your MirrorEye® system.

NOTE: Activation should take approximately 15 to 20 minutes, however in some cases, due to part failure or installation error, expect up to 4 hours for troubleshooting and communication with a developer or engineer.

STEP 2.

Visit https://www.stoneridge.app/activate; enter truck information and device information and click “Submit.” Any additional information you submit is optional and may improve the processing speed of your ticket.

STEP 3.

Request Received

You should receive an email notification of your activation request, and the status of your ticket. If you have any questions or challenges, please reply to that email, or send a message to customersuccess@stoneridge.app or visit https://www.stoneridge.app/tickets to view the status of your tickets.

NOTE: If you do not have access to the portal to view tickets, you can request access here: https://www.stoneridge.app/access

STEP 4.

Request Processing

Your ticket will be submitted directly to a Stoneridge service agent who will review any details and contact you via email or phone to follow up with any questions or errors.

STEP 5.

Certification Approved

Stoneridge software developers and engineers are on call to ensure a successful installation and activation. When installation is successful you will receive an email with details of the successful activation.

HOW TO CONTACT YOUR SERVICE TEAM

Email
customersuccess@stoneridge.app

Visit Help Center
https://www.stoneridge.app/help

Online Chat
Click on the “Red Chat” button to contact Service Teams directly.

Reply to Emails
You can reply to any email you receive from the Service Team.

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