Plug & Play Two LED Light Strips Kit

CATALOG NUMBER

69644

LED Light Strips Installed on Roof Bows

PRODUCT FEATURES

Plug & Play Two LED Light Strips w/ Switches - High Roof

- **Included in this kit is two (2) LED Light Strips, voltage timer module, power harness, and roof bow harnesses #1 & #2.**
- **This product is ideal for the RAM ProMaster.**
- **There are no OEM options that are required for this product. OEM options LCP, LDB, and 22G are not compatible with this product.**
- **This kit is designed to provide LED lighting to the cargo area of the vehicle and can be controlled by switches.**

Model Year Validated:
2022

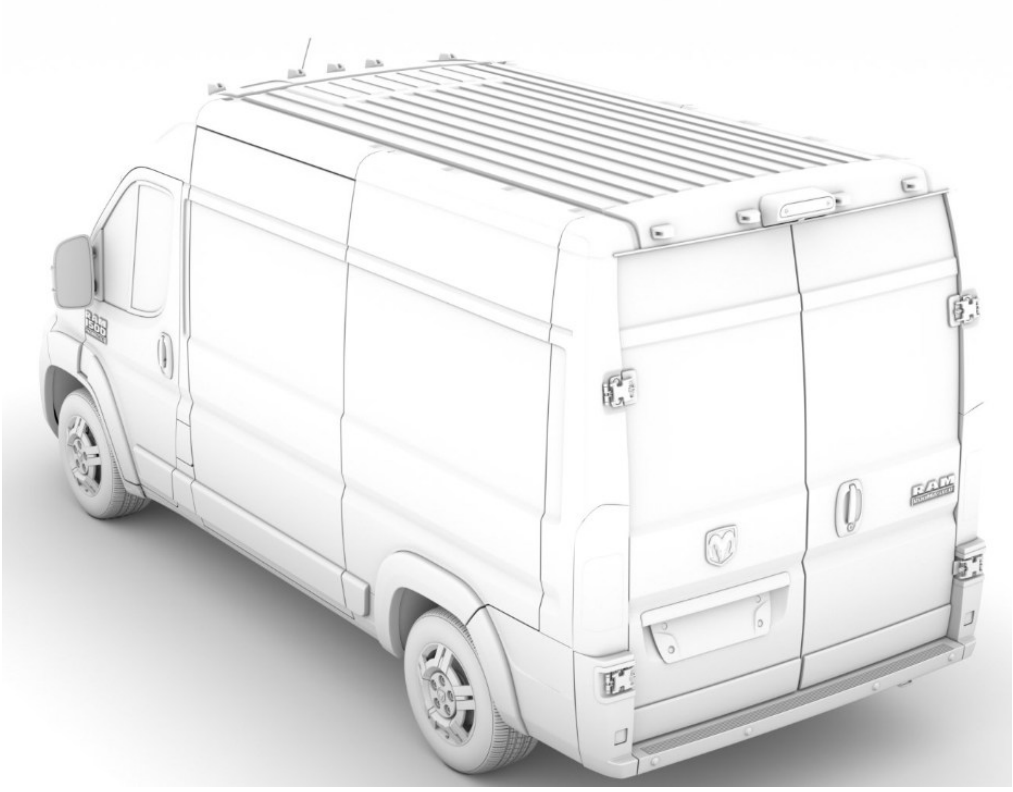
The information contained in this document is the sole property of ADRIAN STEEL COMPANY. ADRIAN STEEL COMPANY retains the right to modify and/or change the product of its design at any time without prior notification.

Introduction / Comments:

Install Instructions For Interior Plug & Play Lights For Promaster

Note:

Read all instructions prior to installation. Review the Adrian Steel **GENERAL PRECAUTIONS PAGES (56638**) before attempting installation. Only personnel familiar with using electrical best practices should perform this install. Reference **ELECTRICAL BEST PRACTICES MANUAL (54479)** before attempting installation.

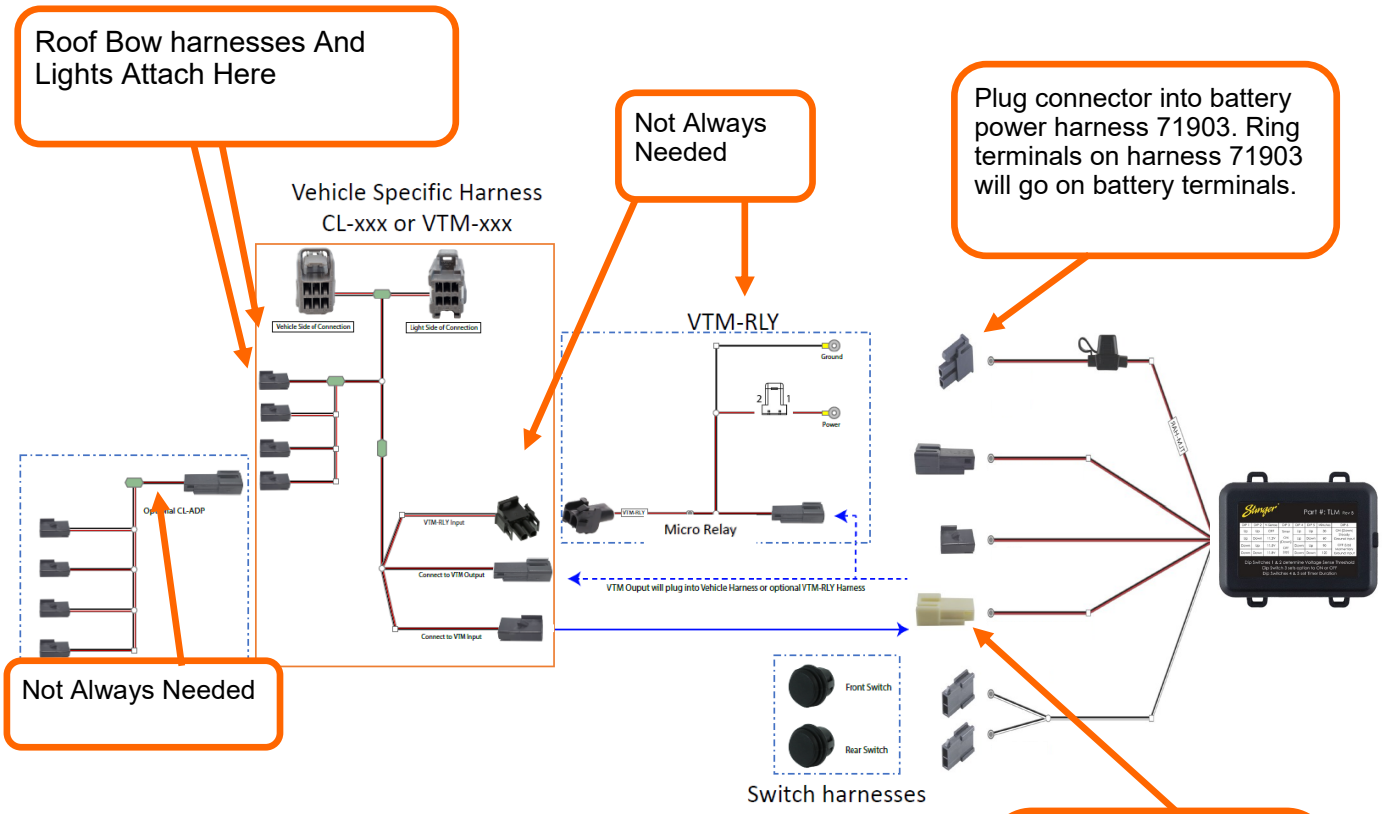


Installation Instructions For Interior Plug And Play Lights For Promaster

Please read statement below before moving forward

These plug and play kits are completely modular and can be configured in many different ways. Placement of lights will be determined by sales order drawings/customer ask. Therefore, these instructions are for the most standard configurations, and for reference only. The only harness that is specific to the transit vehicle are the power harnesses 65796. Routing will be very standard across all kits, but placement of lights and switches are subject to be different from these instructions if called out on the order drawing differently.

Overall Harness Diagram



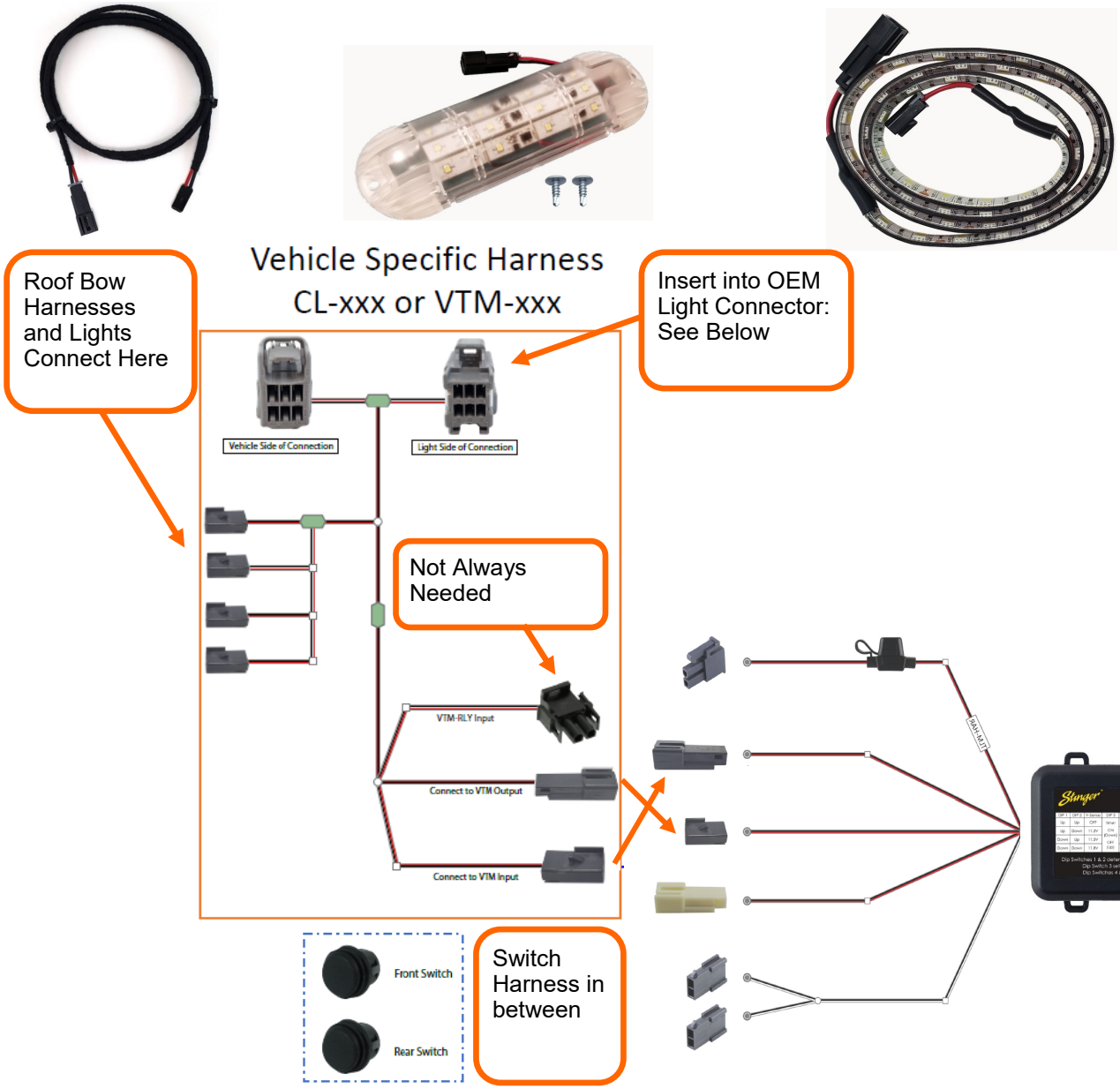
Tools required:

Crimpers

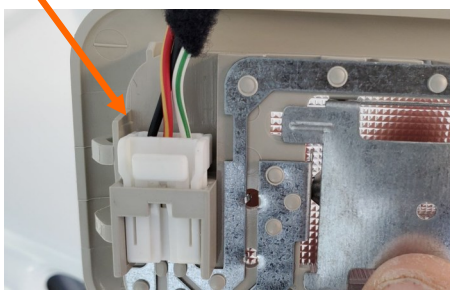
M8 Socket and/or wrench

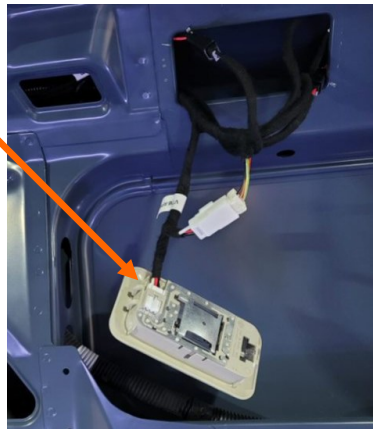
Power drill, 3/8” step drill bit, Philips head bit (if installing dome lights)

Specific Harness Diagram



OEM Light Connector located on the back of the OEM light: Remove the OEM light from the location

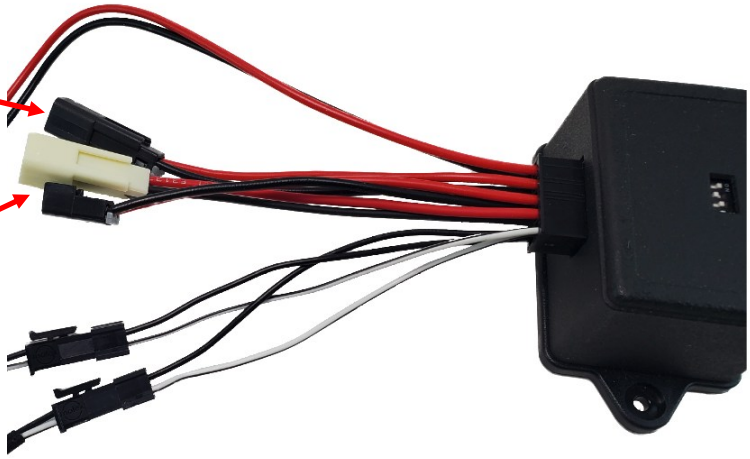




Timer / Low Voltage Module (TLM) Harness Reference

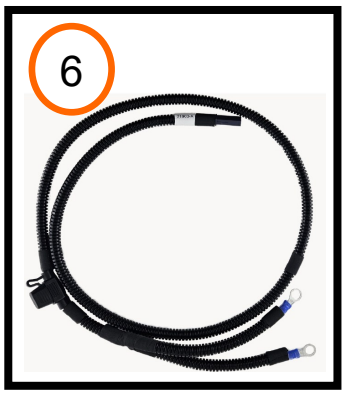
For all vehicles except RAM, the black input connector will be used to plug into the vehicle specific harness. The white connector will NOT be used.

For all RAM vehicles, the white connector will be used to plug into the vehicle specific harness. The black connector will NOT be used.

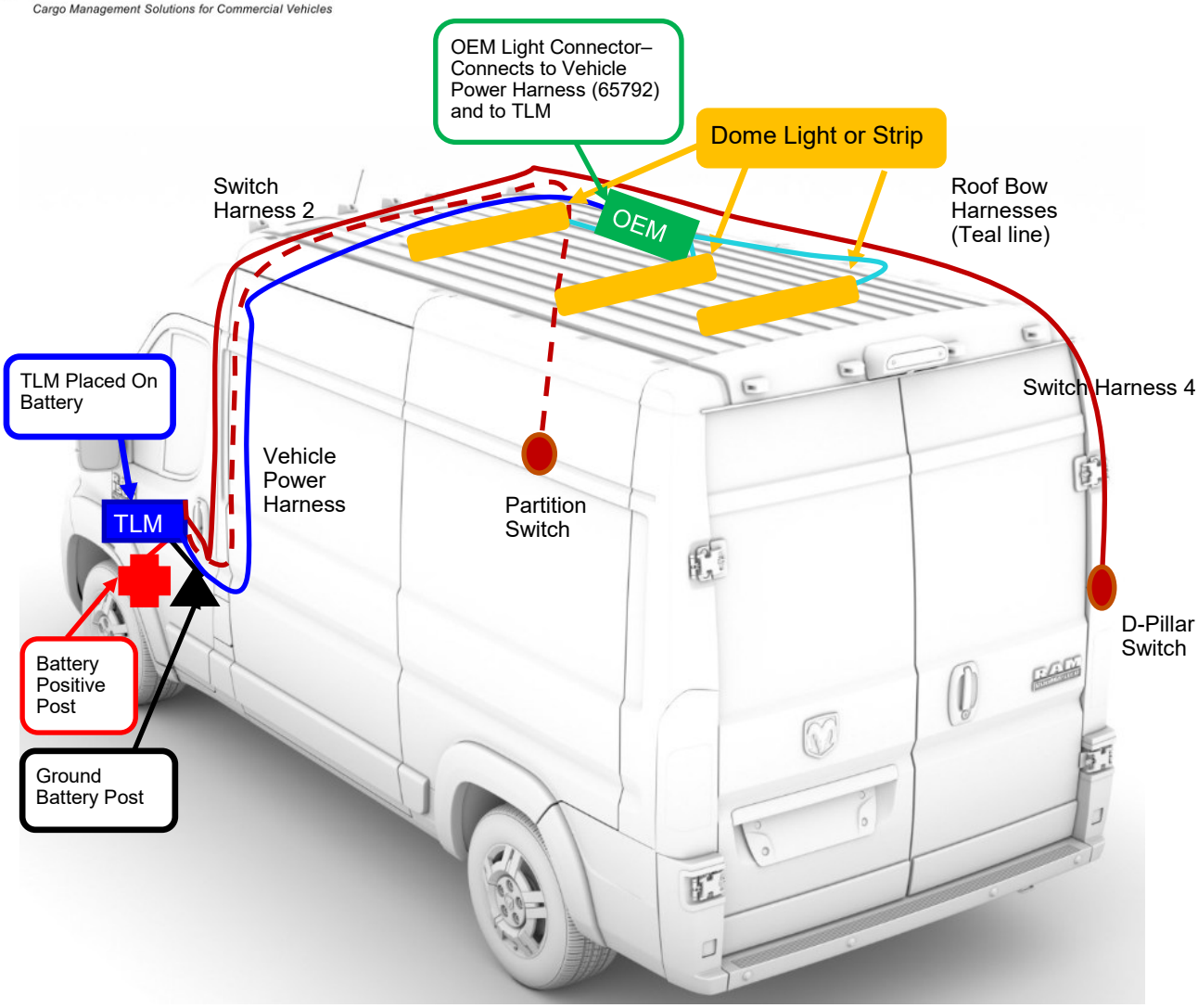


Harnesses Needed

	Part Number	Description
1	71902	Timer / Low Voltage Module (TLM)
2	63480 Or/And 64222, 65346, 65347, 65348	Dome Light Or/And Strip Lights
3	63481 Or/And 63842, 63483, 63484	Roof Bow Harnesses 1 through 4
4	65796	Power Harness
5	65787 Or/And 65788, 65789, 65790	Switch Harness 1 through 4 for TLM
6	71903	Battery Power Harness



Harness pictures are for reference only.



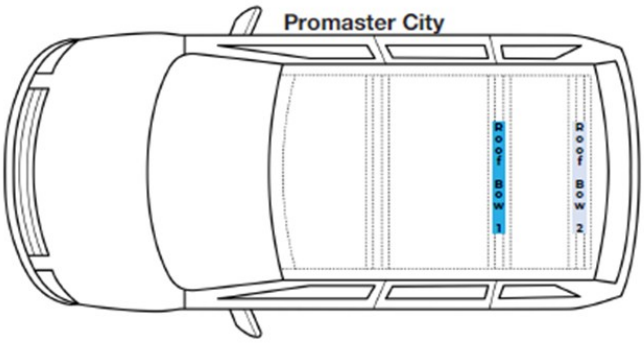
Color	Key - Items
Blue	TLM/Harness
Green	Vehicle Specific Power Harness
Black	Ground Location
Red	12V location
Redish/Brown	Switch Harnesses
Yellow	Dome or Strip Lights
Teal	Roof Bow Harnesses

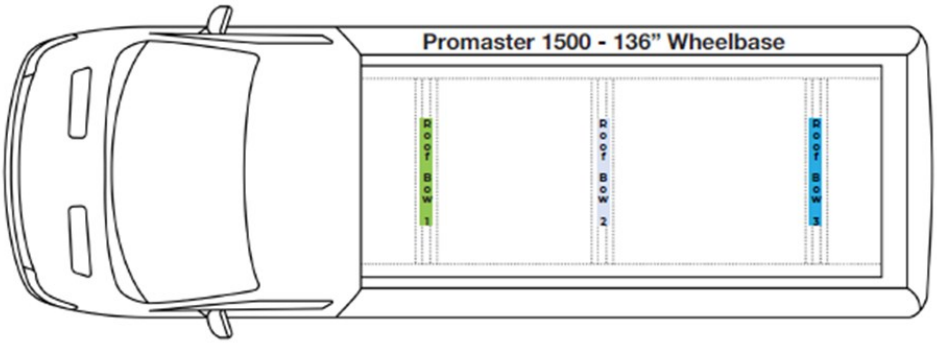
The purpose of plug and play lighting is to be completely modular. Due to this feature, refer to the order drawing for all exact lighting placements. These installation instructions are for most cases and for reference.

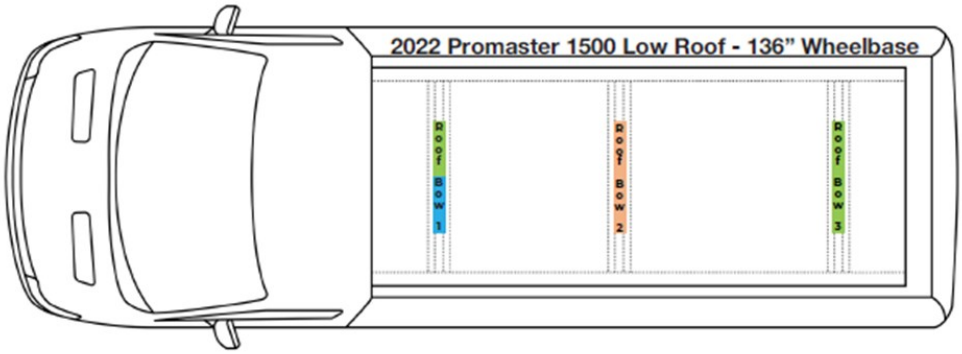
Roof Bow Harnesses And Light Placements: Refer To Ordering Drawing For Light Placements

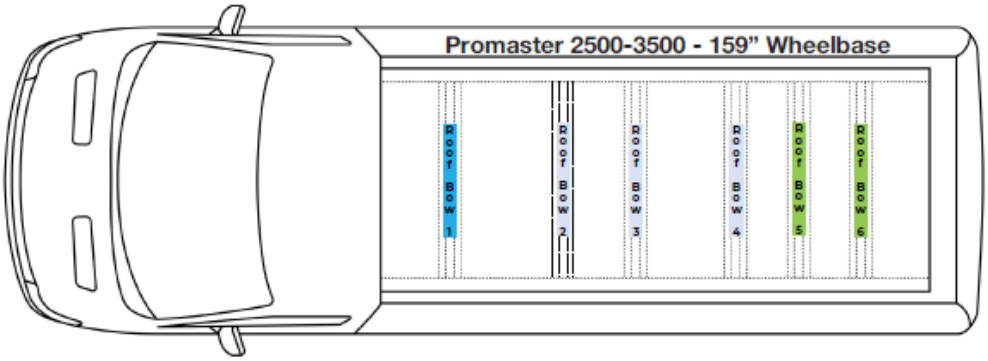
ECHOMASTER FLEET SOLUTIONS

Vehicle	Roof Bow 1	Roof Bow 2	Roof Bow 3	Roof Bow 4	Roof Bow 5	Roof Bow 6
Promaster City	P-HARRB2	P-HARRB1	N/A	N/A	N/A	N/A
Promaster 1500 136" WB	P-HARRB3	P-HARRB1	P-HARRB2	N/A	N/A	N/A
Promaster 1500 136" WB (2022)	P-HARRB3 + P-HARRB2	P-HARRB4	P-HARRB3			
Promaster 2500-3500 159" WB	P-HARRB2	P-HARRB1	P-HARRB1	P-HARRB1	P-HARRB3	P-HARRB3







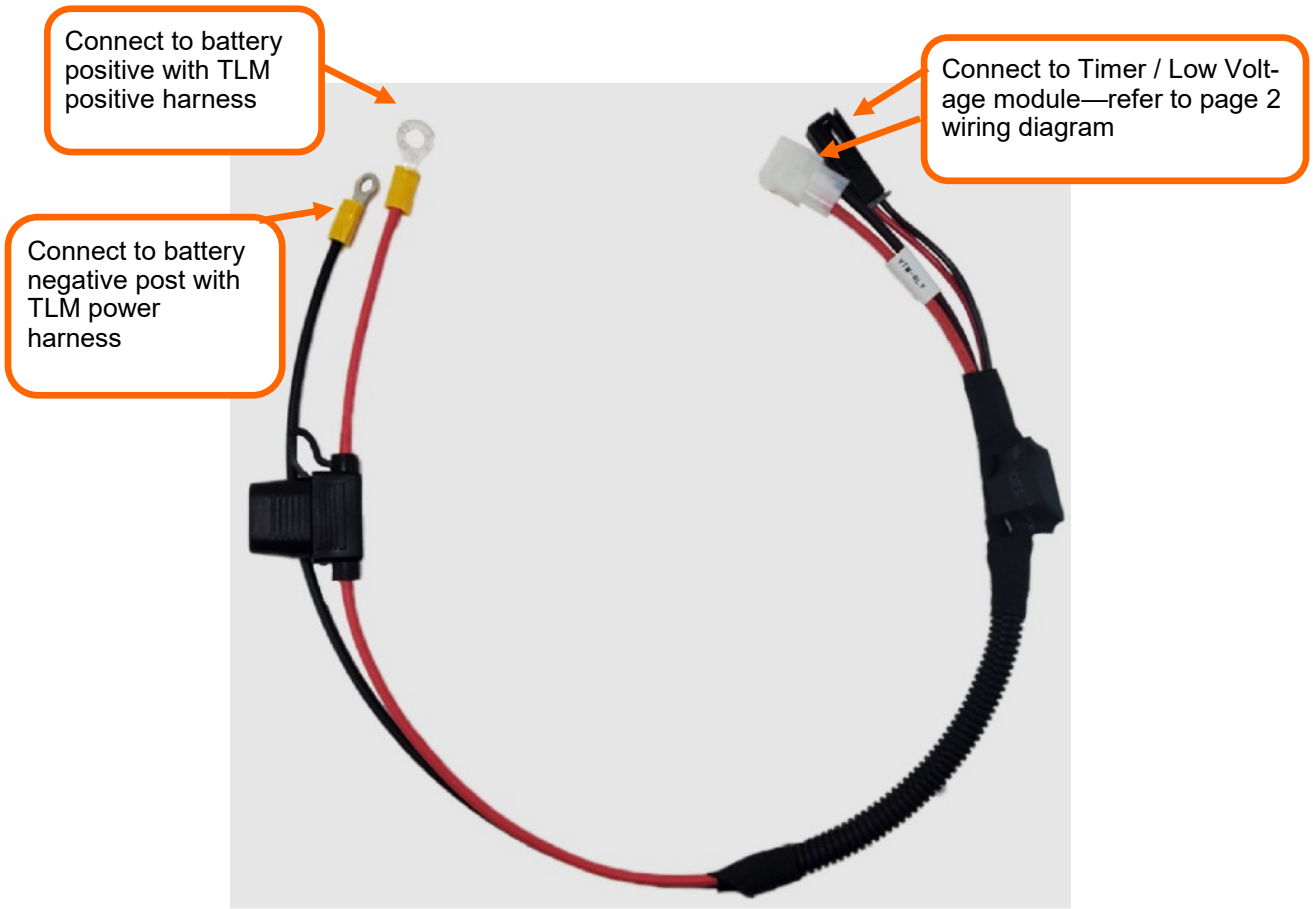


Optional Required Harnesses:

64244: This adapter harness allows for extra extensions to be added (if needed).

Be sure not to overload the OEM circuit by putting too many lights on the circuit. Consult ASCO Electrical Engineering team for application advice if using more than 4 lights.

Add Relay Harness 65791 for extra amperage. (Not always needed)



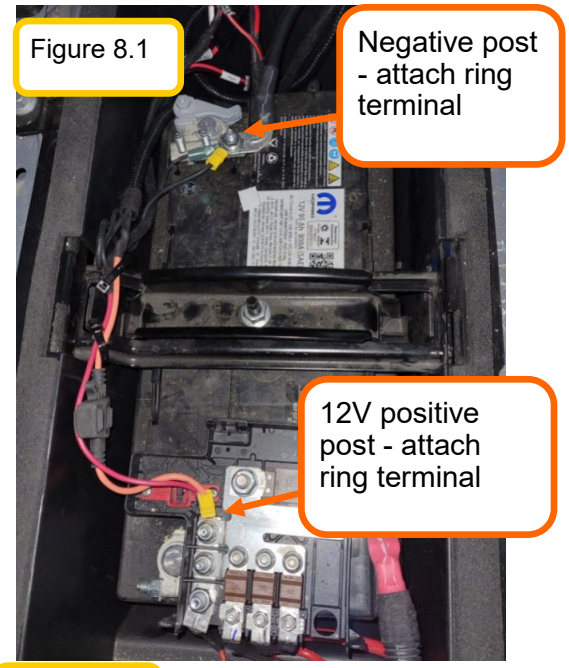


Figure 8.1

Step 1: Locate the TLM harness #71902
Plug the harness connector into the timer / low voltage module.

Locate the power harness #71903 and plug that into the TLM harness.

Step 2: Locate the OEM battery under the foot well of the driver's seat.

Attach the positive (red) wire to the 12V positive post outlined in figure 8.1. Secure with the OEM nut.

Attach the ground ring terminal (black) to the negative post. Secure with the OEM nut. See Figure 8.1.

Step 3:
Refer to the bottom picture for dip switch settings. If the customer would like a different amount time other than 90 minutes, use the dip switches to set the time.

Figure 8.2

Apply the VHB tape the back of the TLM (voltage timer module). See figure 8.2.

Stick the TLM to the top of the negative side of the battery and secure with zip ties. See figure 8.3.

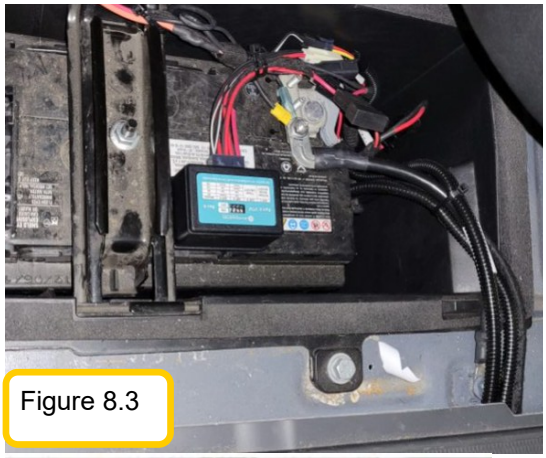


Figure 8.3

Plug the switch harnesses (65788 & 65790) into the TLM harness. See pages 2 & 3 for reference.

Route the harness bundle under the floor mat like shown in figure 8.4. Continue routing the bundle between the seats, rearward to the B-pillar, then up and behind the partition. Reference page 5 for overall wiring.

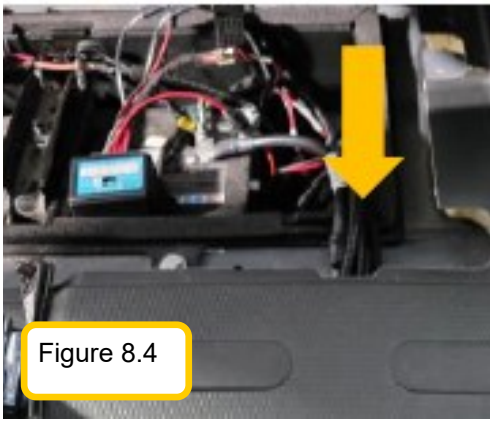


Figure 8.4

1	2	V-Sense	3	4	5	6
Down	Down	11.8	Down	Down	Up	Down

Stinger Part #: TLM Rev B

DIP 1	DIP 2	V-Sense	DIP 3	DIP 4	DIP 5	Minutes	DIP 6
Up	Up	OFF	Timer ON (Down) OFF (Up)	Up	Up	30	ON (Down) Steady Ground Input OFF (Up) Momentary Ground Input
Up	Down	11.2V		Up	Down	60	
Down	Up	11.5V		Down	Up	90	
Down	Down	11.8V		Down	Down	120	

Dip Switches 1 & 2 determine Voltage Sense Threshold
Dip Switch 3 sets option to ON or OFF
Dip Switches 4 & 5 set Timer Duration

TLM Dip Switch Settings

Figure 9.1

Figure 9.2

Figure 9.3

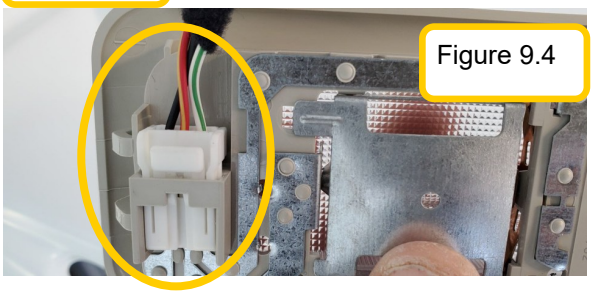


Figure 9.4

Figure 9.5

Figure 9.6

Step 4: For High roof vehicles:
Locate the OEM cargo light on the passenger side of the roof. Figure 9.1.

For Low Roof Vehicles:
Locate the rear OEM cargo light above the back doors. Figure 9.2.

Carefully remove the OEM light with a trim tool. Figure 9.3.

Unplug the OEM connector from the back of the light. Figure 9.4.

Plug the vehicle specific power harness (65796) into the OEM connector:

You no longer need the OEM light. You can dispose of it how you would like.

Route the power harness down the partition to the TLM module, and plug it in. Be sure to use the white colored TLM input connector referenced on page 4. The black connector will NOT be used for this install.

Step 5:
Connect the roof bow harnesses (63481 Or/And 63842, 63483, 63484 all that are applicable) to the power harness and route them to their desired light locations. (Light locations on the roof bows). Figure 9.6.

Refer to page 6 for which harnesses to use for the roof bows.

Use zip ties/fir trees to secure all wiring.

Figure 10.1

Step 6:
Before mounting any lights, prep the surface where the light will be placed with the supplied alcohol pad. Let dry for a few minutes, then mount the light.

Be sure the surface is clean before applying the VHB tape. Read the supplied instructions in the lighting boxes.

Mount the strip/dome lights to their desired locations: Refer to the order drawing.

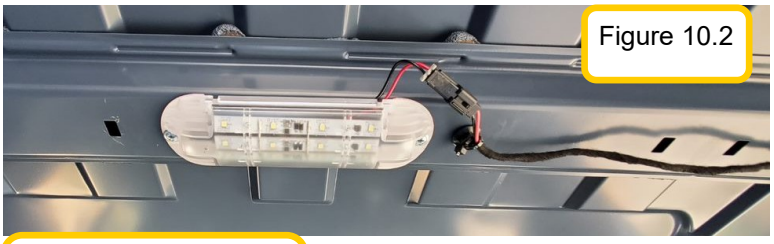


Figure 10.2

For dome lights, use the VHB tape already on the back of the light, and also secure with the supplied tek screws.

Dome lights are to be placed as close to the center of the roof bow as possible. Figure 10.1 and10.2.

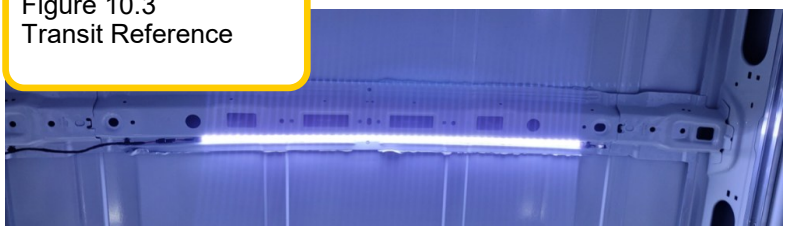


Figure 10.3
Transit Reference

For the strip lights, use the VHB tape supplied on the back of the lights, and use the little square sticky backs with zip ties that are supplied in the box.

Figure 10.4
GM Express
Reference

Strip lights are to be placed as close to the center as possible of the roof bows. See reference pictures of the Chevy Express and Transit vans below. Use best judgement for the strip light placements, just be sure to do the same for all the needed roof bows. Figure 10.3 and 10.4 for references.

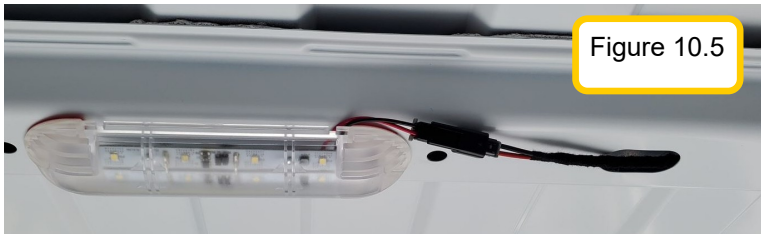


Figure 10.5

Route the roof bow harnesses to the lights and connect them. When applicable route the harness inside the roof channel. When not, use zip ties and fir trees to secure the wiring. Figures 10.5 and 10.6.

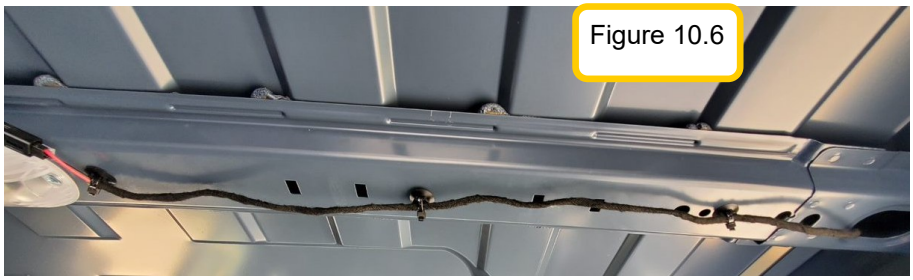


Figure 10.6

Figure 11.1

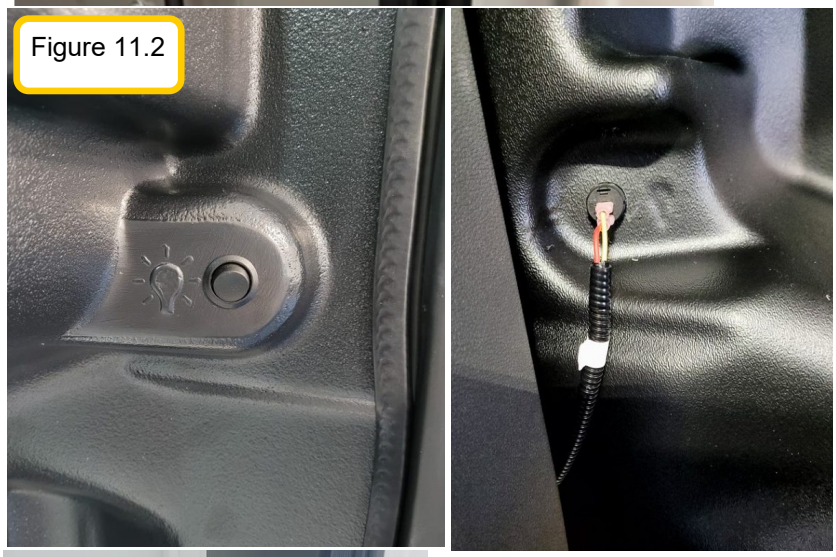


Figure 11.2

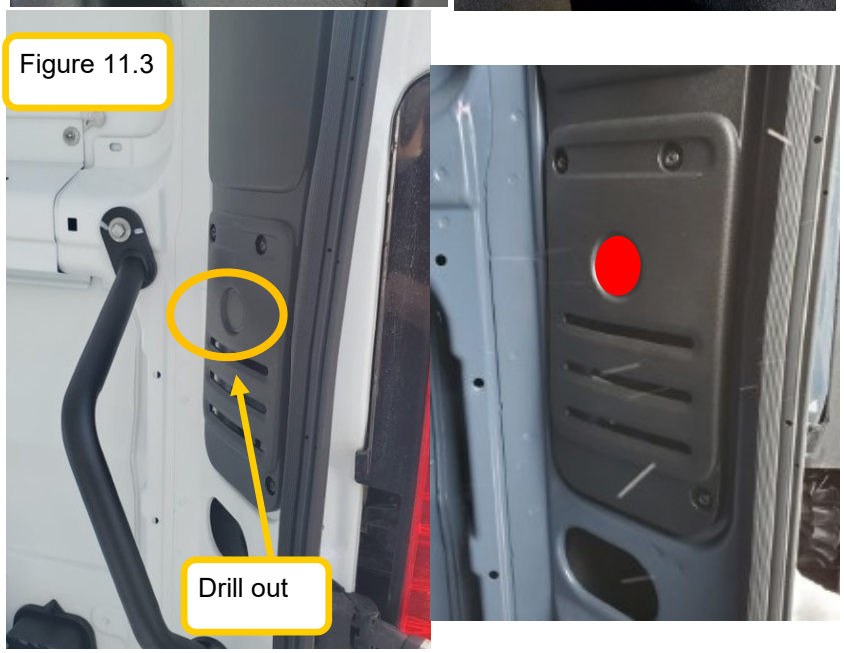


Figure 11.3

Partition Switch Locations:
Switch hole in steel partition behind the passenger's seat (figure 11.1) or drill out switch hole in composite partition (figure 11.2).

This location will require harness #65788

Rear Switch Location:
Passenger side rear D-pillar.

Drill out the circle divot on the rear D-pillar trim panel. Reference figure 11.3.

This location will require harness #65790

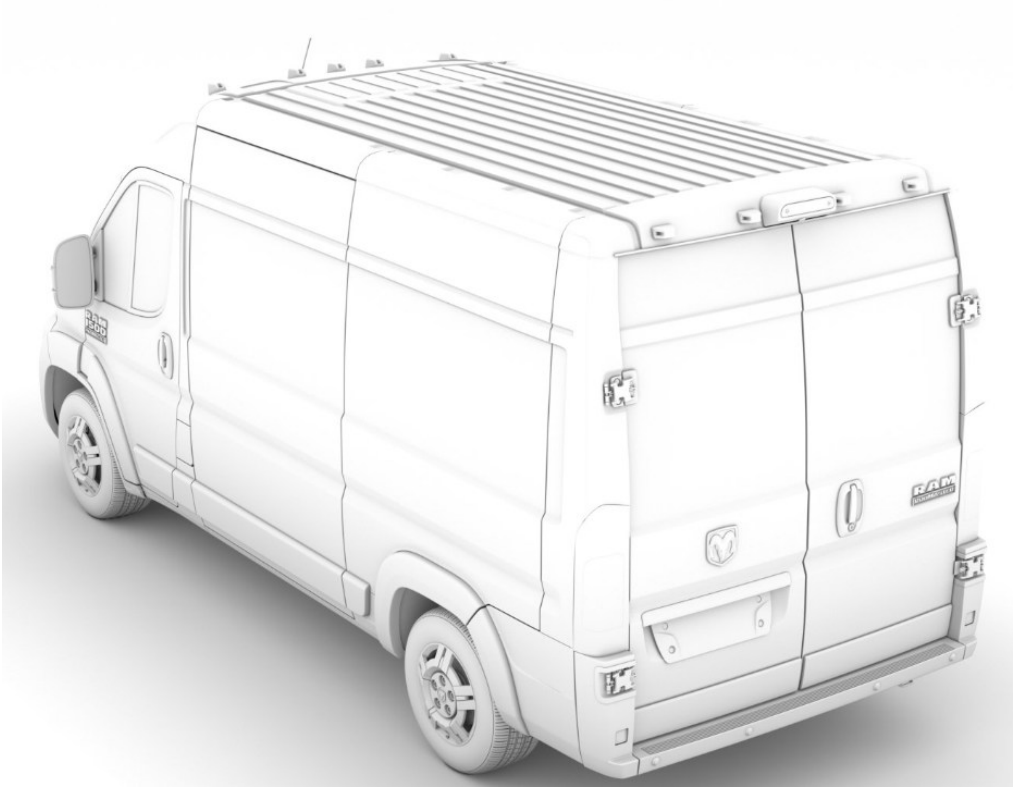
Step 7:
Route the 65788 harness from the TLM harness location to the partition switch location.

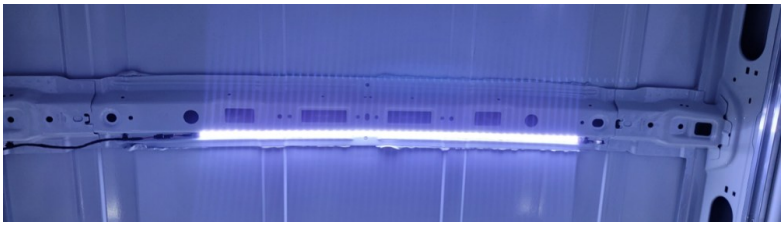
Do the same with harness 65790 to the D-pillar switch location.

Use Zip ties to secure wiring.

Drill needed holes for the switches in rear D pillar panel, and composite partition (if applicable).

Insert the switches into the holes with the “1” in the 12:00 position, connect the harness (the connection orientation does not matter).



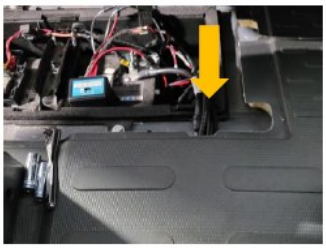


Insert the fuse into the inline-fuse holder on the power harness. The install is now complete. Secure all wiring with zip ties. Re-attach all trim. Double check the functionality of the lights and switches.

Promaster basic install photos

ower and
specific bolts on
rness, and wire
bracketry

VTM and VTM relay will be placed on the top negative side of the battery and wiring tucked away



VTM and switch harnesses ran under floormat between seats, behind front passenger seat, up passenger B pillar, and along curbside roof line to rear D pillar, then drop down.

Parts List

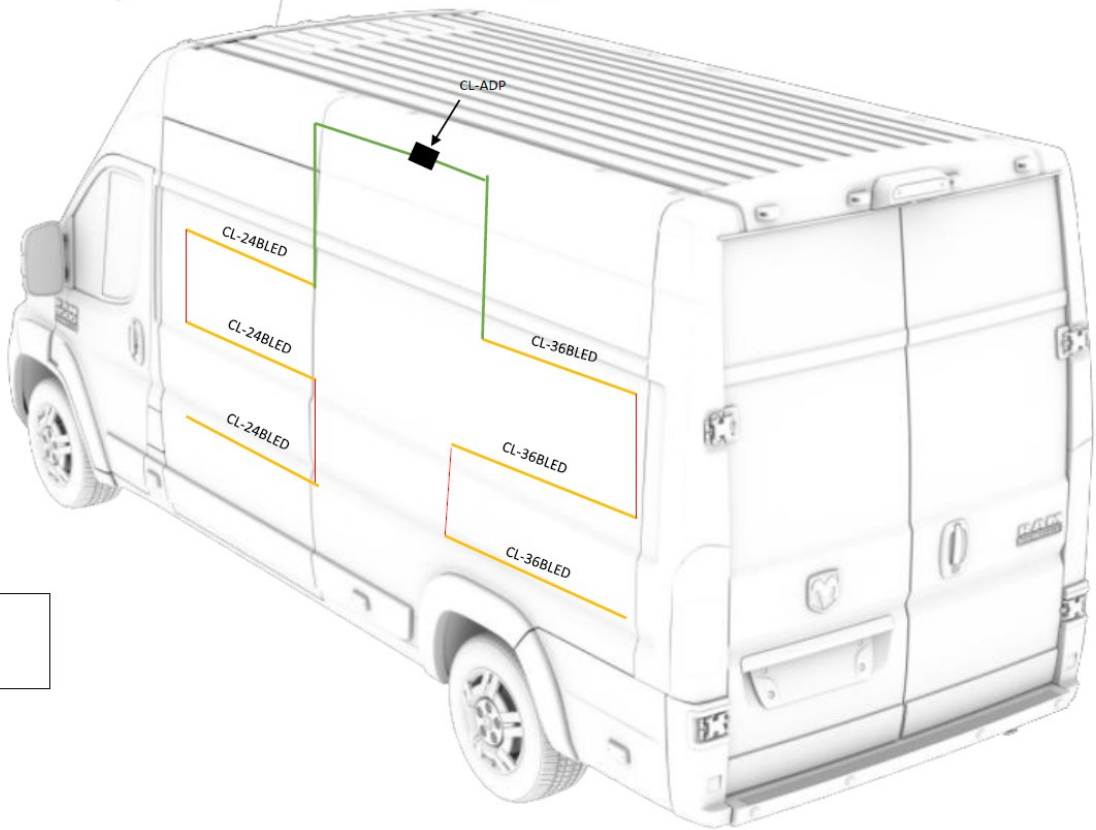
- Timer module (6578
- VTM relay and vehicle s (65791) and (6579
- 3 – CL-24BLED (6534
- 3 – CL-36BLED (6543
- 2 - CL-48BLED (6543
- 3 – STL-40489-2 (6348
- 2 – CL-ADP (6424
- 6 – P-HARRB1 (6348
- 3 – P-HARRB2 (6348
- 3 – P-HARRB3 (6348

489-2 lights
roof bows 2, 4
B pillar is roof

CL-ADP at 4th roof bow on street side of vehicle

Curb side dome light junction point and CL-ADP above and to the right of sliding door

Promaster line diagram cont.



Legend:

P-HARRB1
P-HARRB2

PART NUMBER
13905-0

ITEM DESCRIPTION: WIRE TIE, NYLON 40Lb, 8.5” BLACK

MANUFACTURER: WAYTEK, INC. or equivalent
MANUFACTURERS PART NUMBER: 21093M or 21093C

SPECIFICATIONS: STANDARD CABLE TIE
BLACK, NYLON
8-1/2” LONG
TENSILE STRENGTH: 40.0 LBS
21093M = 1,000 quanity
21093C = 100 quanity

SPECIAL NOTES: PART NUMBER IS BLACK.

SUPPLIED BY: THIS ITEM IS ADRIAN AVAILABLE!

PURCHASED PRODUCT DATA SHEET (PPDS)

THIS DRAWING/INFORMATION IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER THAT IS DETRIMENTAL TO THE INTEREST OF ADRIAN STEEL. COPYRIGHTS AND OR PATENTS THAT MAY BE THE PROPERTY OF APPLICABLE OWNERS MAY PROTECT INFORMATION AND/OR DRAWINGS OF SUPPLIED PRODUCTS.

ADRIAN STEEL®
VAN AND PICKUP EQUIPMENT

906 JAMES STREET
ADRIAN, MI 49221
517-265-6194
WWW.ADRIANSTEEL.COM

⚠ CAUTION ⚠

WHEN INSTALLING EQUIPMENT IN OR ON VEHICLES CHECK FOR FUEL TANKS, FUEL LINES, CONTROL LINES AND ELECTRICAL WIRING BEFORE DRILLING! ALWAYS USE DRILL BITS WITH INTEGRAL STOPS WHENEVER POSSIBLE!

DRAWN BY: MDG	DATE DRAWN: 10/26/2006
ECN NUMBER: 18021	ECN DATE: 11/13/2015
PART WEIGHT: 0.01 LBS.	REV. LEVEL: D
PART NUMBER: 13905-0	

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

Base is a 0.975 inch square

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

N/A

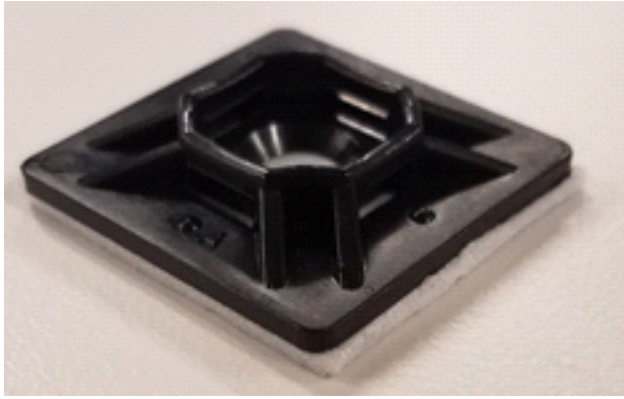
PACKAGING REQUIREMENT

N/A

OTHER REQUIREMENTS

Black adhesive wire tie mounting base.

Cure Time:	Bond 15 Min., Max Adhesion 1 Hr.
Max. Operating Temp. F:	158
Max. Operating Temp. C:	70
Min. Installation Temp. F:	65



THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **17429**

CURRENT ECN: **22185**

ECN DESCRIPTION:

Size of the base changed with a change in supplier

REVISED BY: **D. LaCroix**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
Midstate

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
49401

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
YES

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **B**

MAT'L USED:

DESIGNED BY: **RJB**

DESCRIPTION: **Adhesive wire tie base**

WEIGHT (Lbs.): **0.05**

SEGMENT CODE: **HDW**

PART NUMBER: **49401**

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

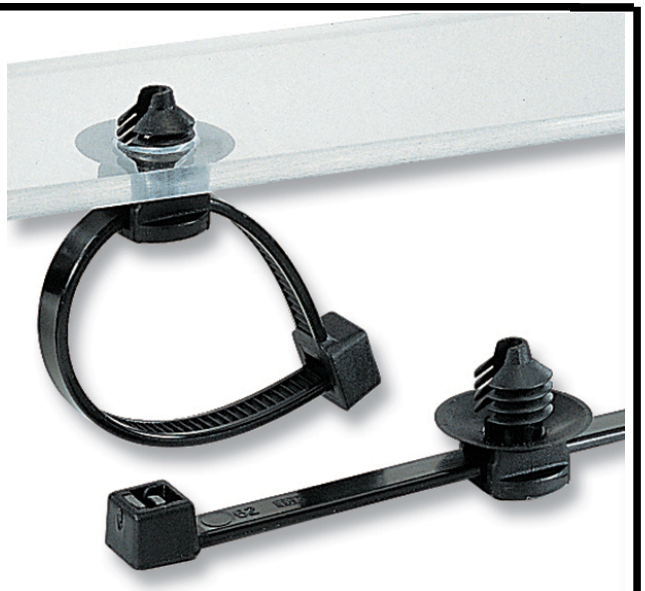
N/A

PACKAGING REQUIREMENT

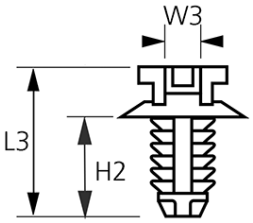
N/A

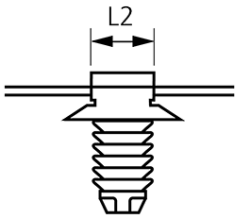
OTHER REQUIREMENTS

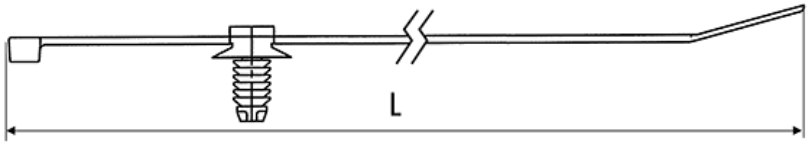
- **Roof Bow #1** ***(Cargo area, first Roof bow after partition)***
- ***(5x) WIRE TIE W/CHRISTMAS TREE***
- ***1100mm Length***



(5x)







THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **24359**

CURRENT ECN: **24359**

ECN DESCRIPTION:

QE8539 RELEASE MODULAR DOME LIGHTING

REVISED BY: **MJF**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
ECHOMASTER FLEET SOLUTIONS

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
P-HARRB1

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE) (NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
YES

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **MJF**

DESCRIPTION: **ROOF BOW HARNESS #1**

WEIGHT (Lbs.): **.50**

SEGMENT CODE: **EAU**

PART NUMBER: **63481**

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

N/A

PACKAGING REQUIREMENT

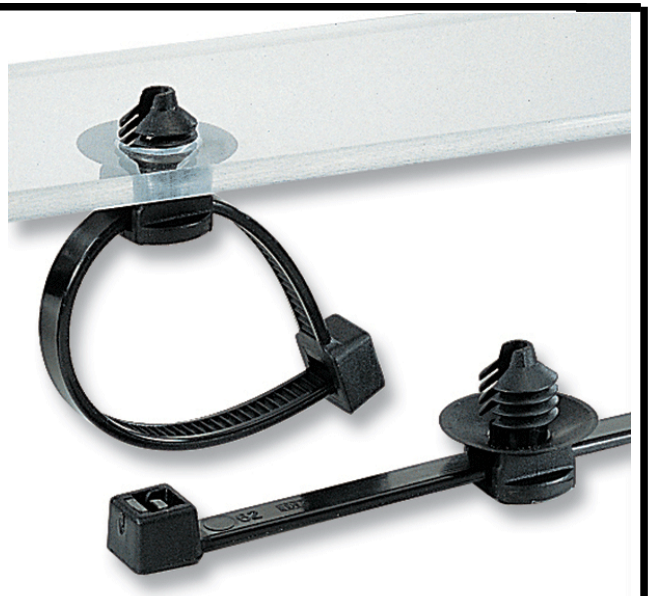
N/A

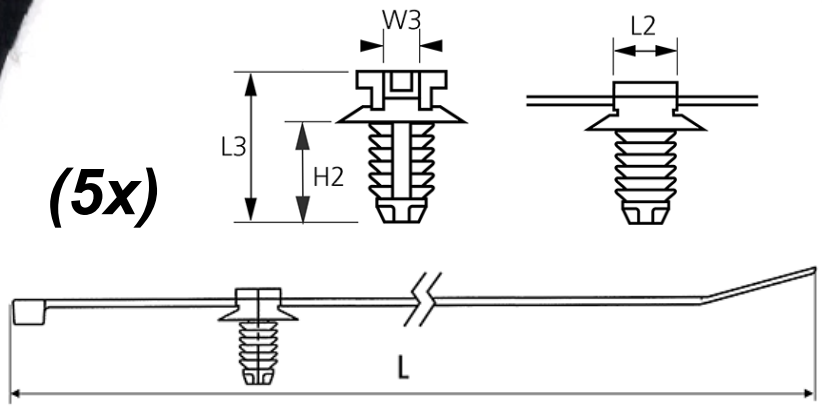
OTHER REQUIREMENTS

- **Roof Bow #2**
- **(5x) WIRE TIE W/CHRISTMAS TREE**
- **1570mm Length**

P-HARRB2

(5x)





THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **24359**

CURRENT ECN: **24359**

ECN DESCRIPTION:

QE8539 RELEASE MODULAR DOME LIGHTING

REVISED BY: **MJF**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
ECHOMASTER FLEET SOLUTIONS

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
P-HARRB2

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE) (NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
YES

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **MJF**

DESCRIPTION: **ROOF BOW HARNESS #2**

WEIGHT (Lbs.): **.50**

SEGMENT CODE: **EAU**

PART NUMBER: **63482**

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

N/A

PACKAGING REQUIREMENT

N/A

OTHER REQUIREMENTS

Note:

Connector / Terminal Configuration:

- **MALE 2 PIN ON ONE END**
- **FEMALE 2 PIN ON THE OPPOSITE END.**

BOM:

Item	Qty.	Description
1	1	36" WHITE LED STRIP LIGHT W/ADHESIVE
2	2	4" ZIP TIE
3	2	CABLE TIE MOUNT
4	1	ALCOHOL PAD

THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **24697**

CURRENT ECN: **25778**

ECN DESCRIPTION:

Revise Modular Lights With New 3M Adhesive

REVISED BY: **JLT**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
CL-36BLED rev.B

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
YES

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **B**

MAT'L USED:

DESIGNED BY: **J. TYNER**

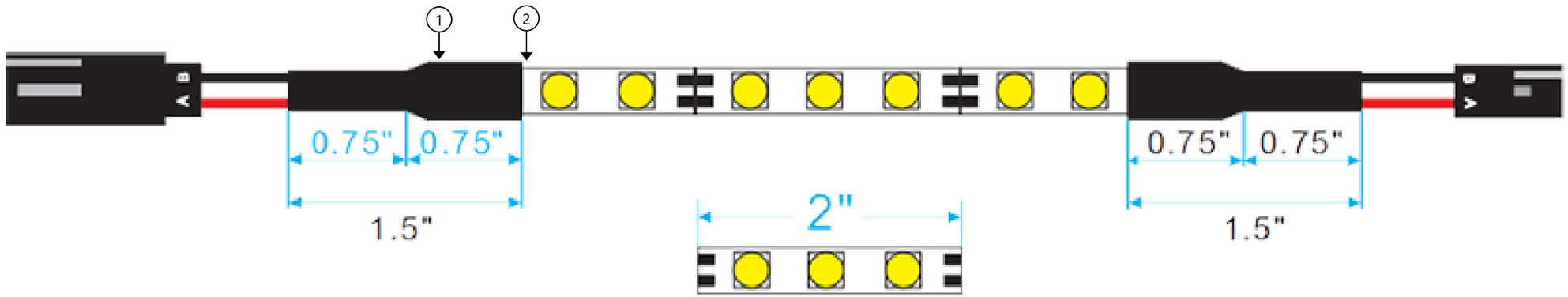
DESCRIPTION: **MODULE DOME LED STRIP 36"**

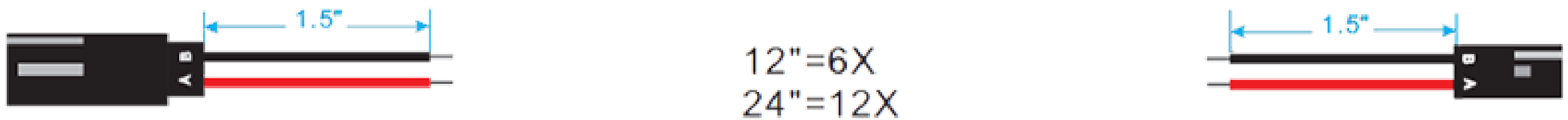
WEIGHT (Lbs.): **0.3**

SEGMENT CODE: **EAU**

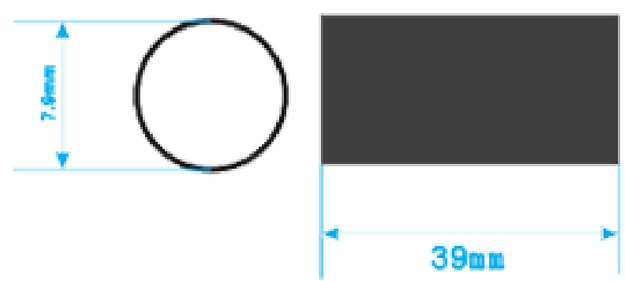
PART NUMBER: **65347**

Notes	
1	3:1 Adhesive Heat Shrink to be placed over LED Solder Joints
2	5925 Adhesive Liner Edges to be exposed next to heat shrink





12"=6X
24"=12X
36"=18X
48"=24X



Revisions			
Rev.	Date	Author	Description
A	11/1/21	Bennet Fisher	Initial Drawing
B	7/27/2022	Bennet Fisher	Adhesive changed to VHB 5925

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

	Name	Date
Designed By	Bennet Fisher	11/1/21
Engineering Approval		
Manufacturing Approval		
Revision Approval		
Quality Assurance		

AAMP
ADVANCING VEHICLE TECHNOLOGY

Part Number: CL-36BLED	Revision: B
Description: 36" LED Strip	Sheet: 1

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS
DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING) **N/A**
LOAD/RATING REQUIREMENT **N/A**
MATERIAL REQUIREMENT **N/A**
PACKAGING REQUIREMENT **N/A**
OTHER REQUIREMENTS

THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: 25377

CURRENT ECN: 25377

ECN DESCRIPTION:

RELEASE FOR PRODUCTION

REVISED BY:

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP GLOBAL

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
VTM-SW2 OR 65788

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **SWITCH 2 HARNESS FOR VTM**

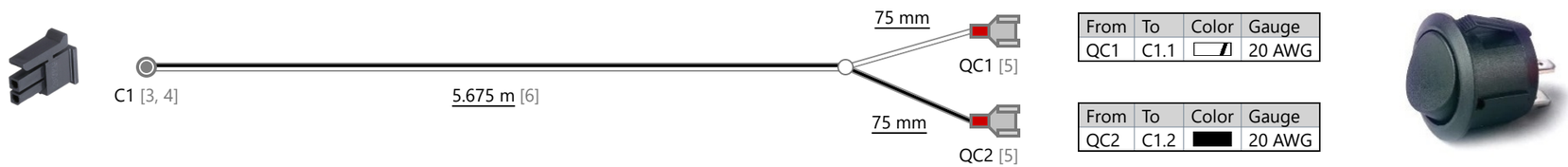
WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **65788**

Coverings	
Id	Assembly
[6]	

From	To	Color	Gauge
C1.1	QC1		20 AWG
C1.2	QC2		20 AWG



From	To	Color	Gauge
QC1	C1.1		20 AWG

From	To	Color	Gauge
QC2	C1.2		20 AWG

Revisions			
Rev.	Date	Author	Description
1	6/10/21	Bennet Fisher	Initial Drawing

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

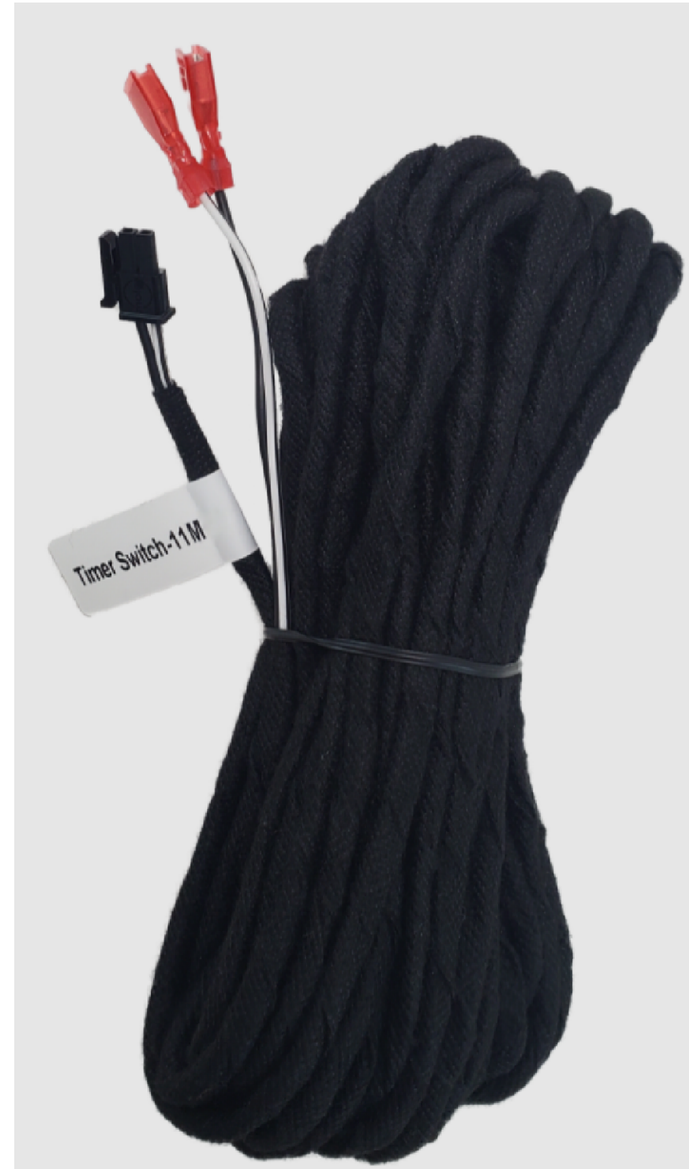
	Name	Date
Designed By	Bennet Fisher	6/10/2021
Engineering Approval		
Manufacturing Approval		
Revision Approval		
Quality Assurance		

AAMP
ADVANCING VEHICLE TECHNOLOGY

Part Number: VTM-SW2	Revision: 1
Description: 5.675 Meter Switch Harness	Sheet: ----

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS
DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING) **N/A**
LOAD/RATING REQUIREMENT **N/A**
MATERIAL REQUIREMENT **N/A**
PACKAGING REQUIREMENT **N/A**
OTHER REQUIREMENTS



THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **25377**

CURRENT ECN: **25377**

ECN DESCRIPTION:

RELEASE FOR PRODUCTION

REVISED BY:

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP GLOBAL

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
VTM-SW4 OR 65790

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **SWITCH 4 HARNESS FOR VTM**

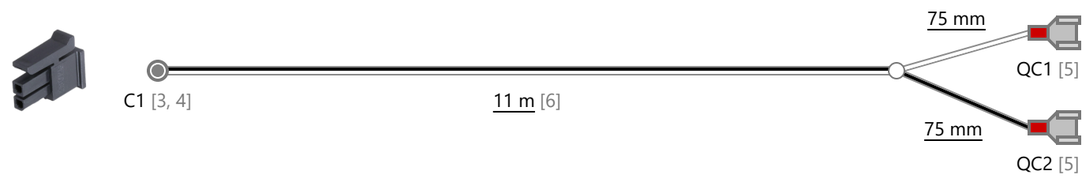
WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **65790**

Coverings	
Id	Assembly
[6]	

From	To	Color	Gauge
C1.1	QC1		20 AWG
C1.2	QC2		20 AWG



From	To	Color	Gauge
QC1	C1.1		20 AWG

From	To	Color	Gauge
QC2	C1.2		20 AWG

Revisions			
Rev.	Date	Author	Description
1	6/10/21	Bennet Fisher	Initial Drawing

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

	Name	Date
Designed By	Bennet Fisher	6/10/2021
Engineering Approval		
Manufacturing Approval		
Revision Approval		
Quality Assurance		

AAMP
ADVANCING VEHICLE TECHNOLOGY

Part Number: VTM-SW4	Revision: 1
Description: 11 Meter Switch Harness	Sheet: ----

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

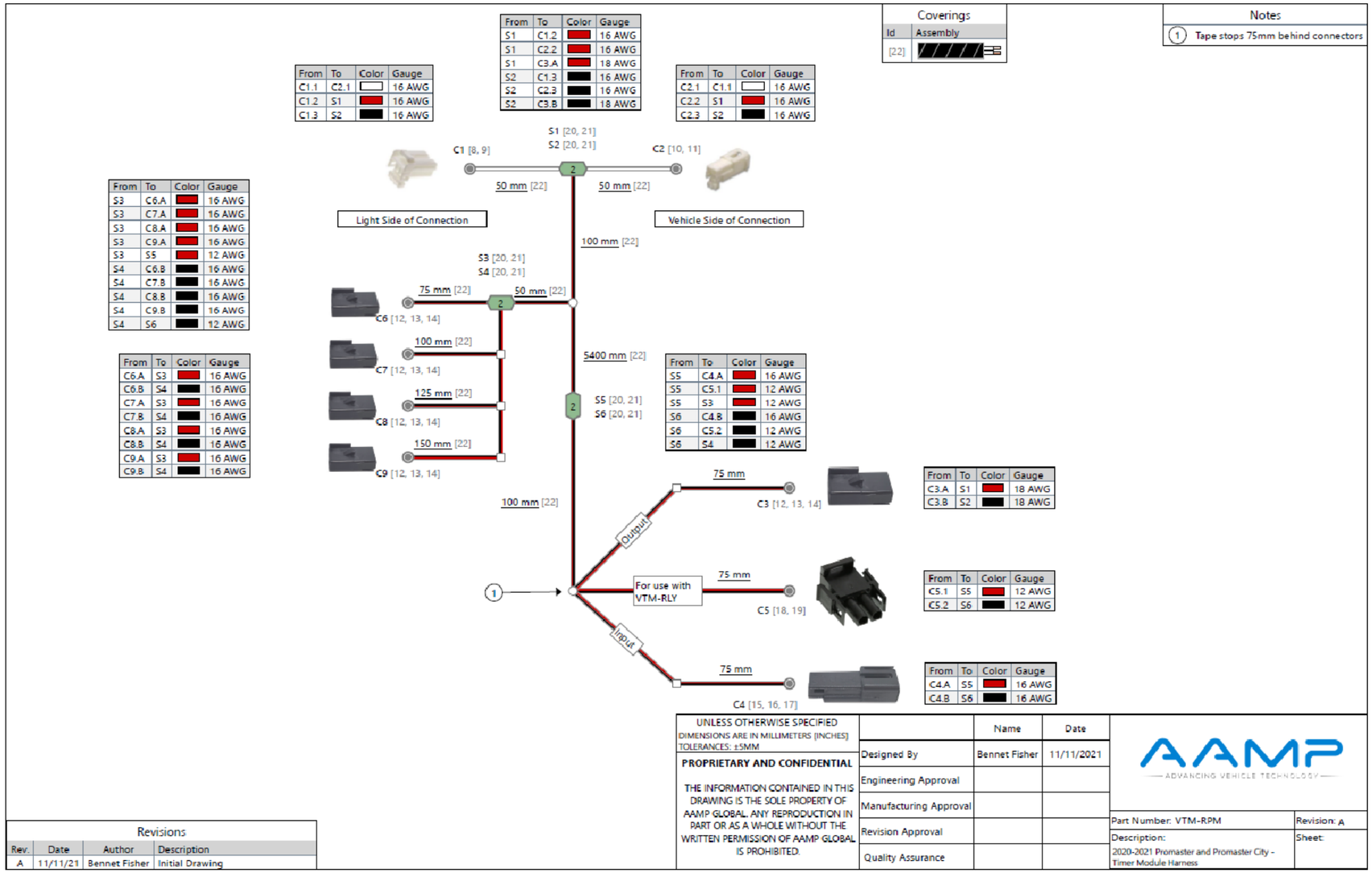
MATERIAL REQUIREMENT

N/A

PACKAGING REQUIREMENT

N/A

OTHER REQUIREMENTS



From	To	Color	Gauge
C1.1	C2.1		16 AWG
C1.2	S1		16 AWG
C1.3	S2		16 AWG

From	To	Color	Gauge
S1	C1.2		16 AWG
S1	C2.2		16 AWG
S1	C3.A		18 AWG
S2	C1.3		16 AWG
S2	C2.3		16 AWG
S2	C3.B		18 AWG

From	To	Color	Gauge
C2.1	C1.1		16 AWG
C2.2	S1		16 AWG
C2.3	S2		16 AWG

From	To	Color	Gauge
S3	C6.A		16 AWG
S3	C7.A		16 AWG
S3	C8.A		16 AWG
S3	C9.A		16 AWG
S3	S5		12 AWG
S4	C6.B		16 AWG
S4	C7.B		16 AWG
S4	C8.B		16 AWG
S4	C9.B		16 AWG
S4	S6		12 AWG

From	To	Color	Gauge
C6.A	S3		16 AWG
C6.B	S4		16 AWG
C7.A	S3		16 AWG
C7.B	S4		16 AWG
C8.A	S3		16 AWG
C8.B	S4		16 AWG
C9.A	S3		16 AWG
C9.B	S4		16 AWG

From	To	Color	Gauge
S5	C4.A		16 AWG
S5	C5.1		12 AWG
S5	S3		12 AWG
S6	C4.B		16 AWG
S6	C5.2		12 AWG
S6	S4		12 AWG

From	To	Color	Gauge
C3.A	S1		18 AWG
C3.B	S2		18 AWG

From	To	Color	Gauge
C5.1	S5		12 AWG
C5.2	S6		12 AWG

From	To	Color	Gauge
C4.A	S5		16 AWG
C4.B	S6		16 AWG

Coverings

Id	Assembly
[22]	

Notes

1. Tape stops 75mm behind connectors

Revisions

Rev.	Date	Author	Description
A	11/11/21	Bennet Fisher	Initial Drawing

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

	Name	Date
Designed By	Bennet Fisher	11/11/2021
Engineering Approval		
Manufacturing Approval		
Revision Approval		
Quality Assurance		

AAMP — ADVANCING VEHICLE TECHNOLOGY

Part Number: VTM-RPM
Revision: A
Description: 2020-2021 Promaster and Promaster City - Timer Module Harness
Sheet:

THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

Sheet 1 of 1

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **25377**

CURRENT ECN: **27060**

ECN DESCRIPTION:

PPDS Change: Manuf# and Description

REVISED BY: **MLH**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP GLOBAL

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
VTM-RPM

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **HARN, POWER VTM-RPM**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

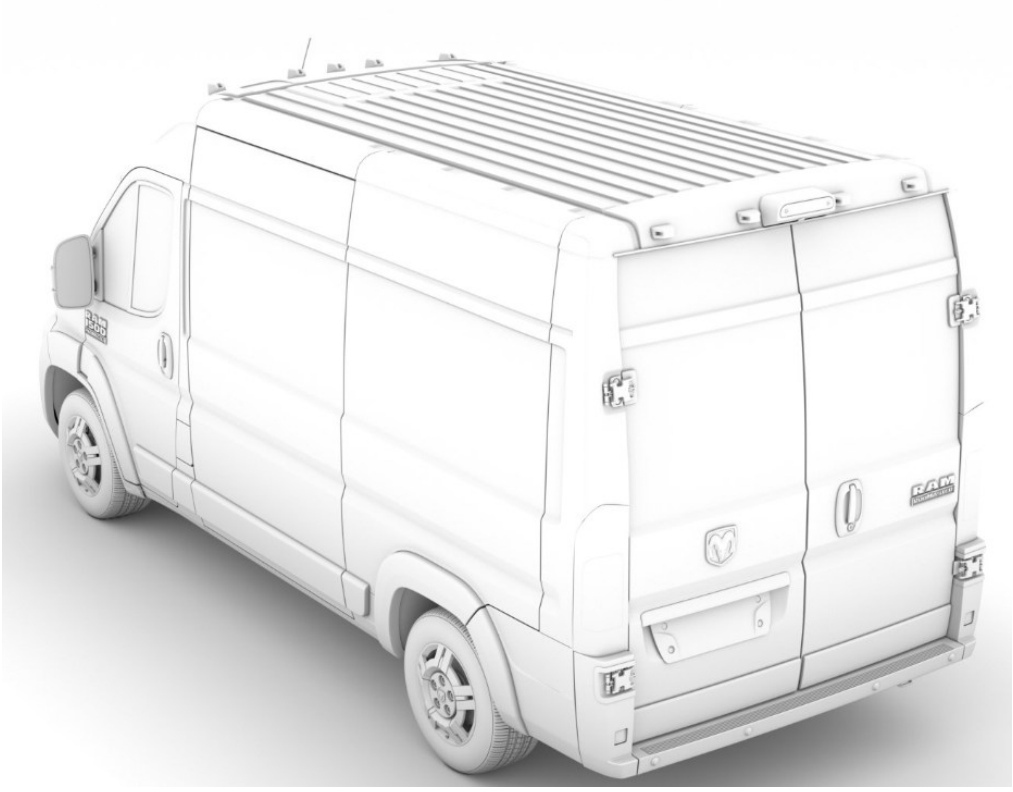
PART NUMBER: **65796**

Introduction / Comments:

Install Instructions For Interior Plug & Play Lights For Promaster

Note:

Read all instructions prior to installation. Review the Adrian Steel **GENERAL PRECAUTIONS PAGES (56638**) before attempting installation. Only personnel familiar with using electrical best practices should perform this install. Reference **ELECTRICAL BEST PRACTICES MANUAL (54479)** before attempting installation.

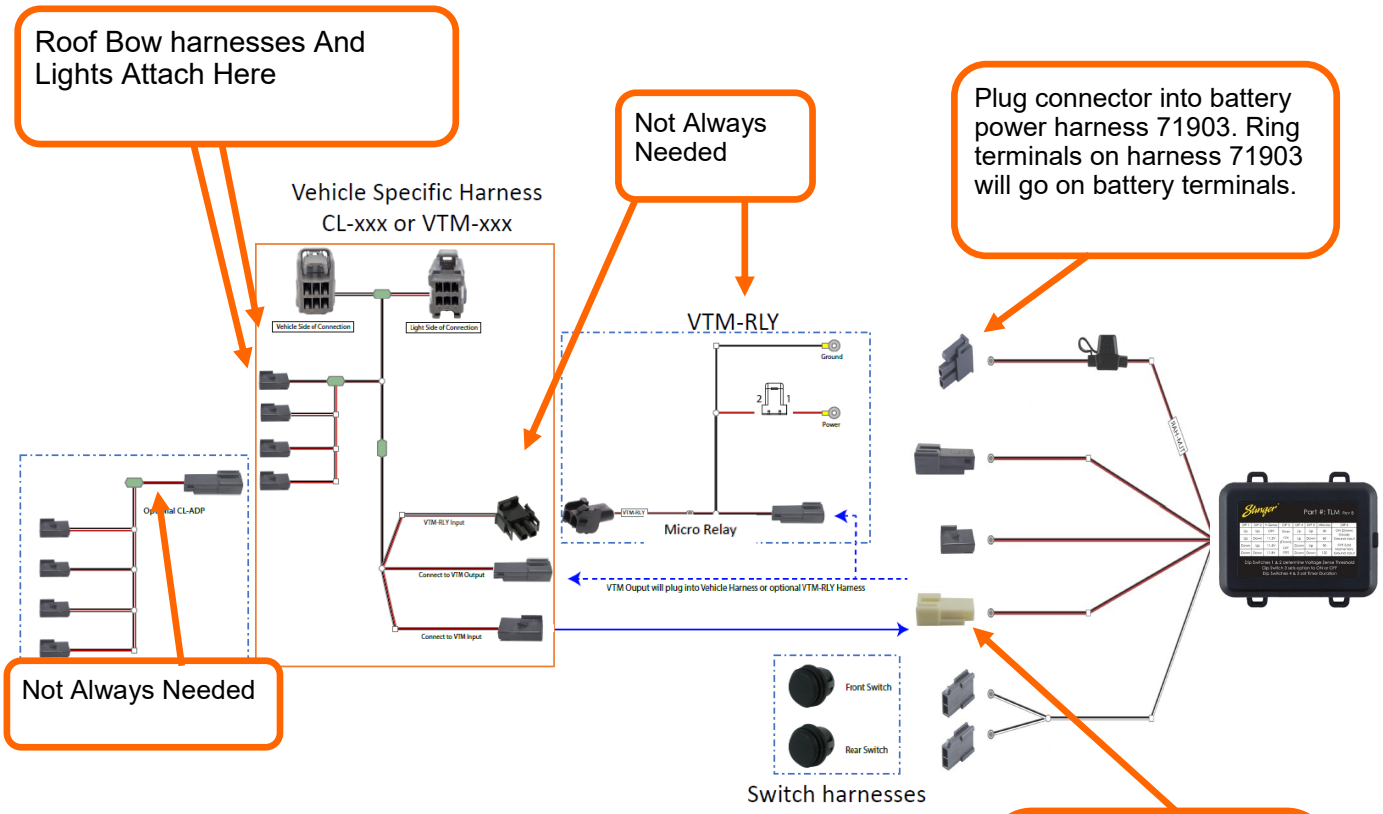


Installation Instructions For Interior Plug And Play Lights For Promaster

Please read statement below before moving forward

These plug and play kits are completely modular and can be configured in many different ways. Placement of lights will be determined by sales order drawings/customer ask. Therefore, these instructions are for the most standard configurations, and for reference only. The only harness that is specific to the transit vehicle are the power harnesses 65796. Routing will be very standard across all kits, but placement of lights and switches are subject to be different from these instructions if called out on the order drawing differently.

Overall Harness Diagram



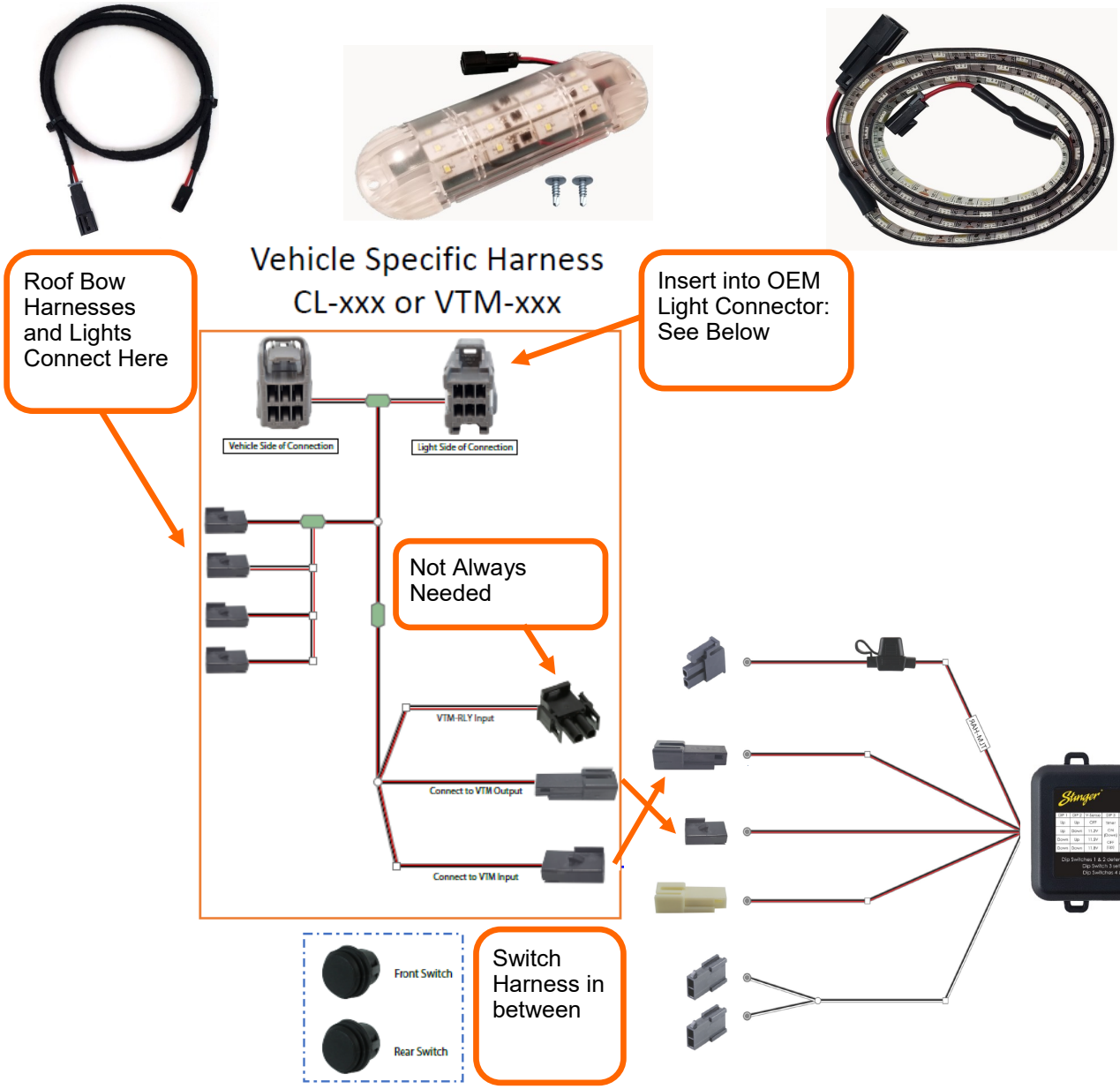
Tools required:

Crimpers

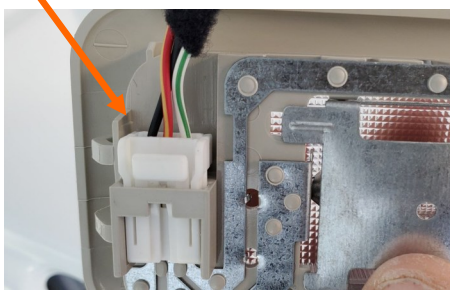
M8 Socket and/or wrench

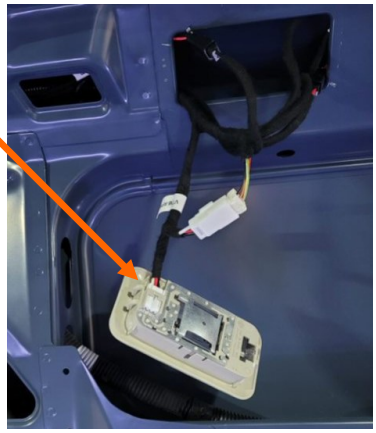
Power drill, 3/8” step drill bit, Philips head bit (if installing dome lights)

Specific Harness Diagram



OEM Light Connector located on the back of the OEM light: Remove the OEM light from the location

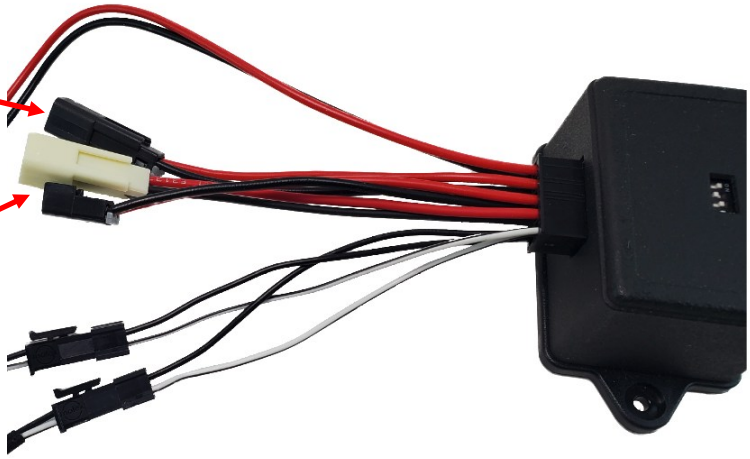




Timer / Low Voltage Module (TLM) Harness Reference

For all vehicles except RAM, the black input connector will be used to plug into the vehicle specific harness. The white connector will NOT be used.

For all RAM vehicles, the white connector will be used to plug into the vehicle specific harness. The black connector will NOT be used.



Harnesses Needed

	Part Number	Description
1	71902	Timer / Low Voltage Module (TLM)
2	63480 Or/And 64222, 65346, 65347, 65348	Dome Light Or/And Strip Lights
3	63481 Or/And 63842, 63483, 63484	Roof Bow Harnesses 1 through 4
4	65796	Power Harness
5	65787 Or/And 65788, 65789, 65790	Switch Harness 1 through 4 for TLM
6	71903	Battery Power Harness

1

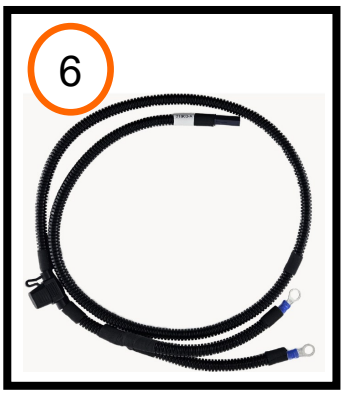
2

3

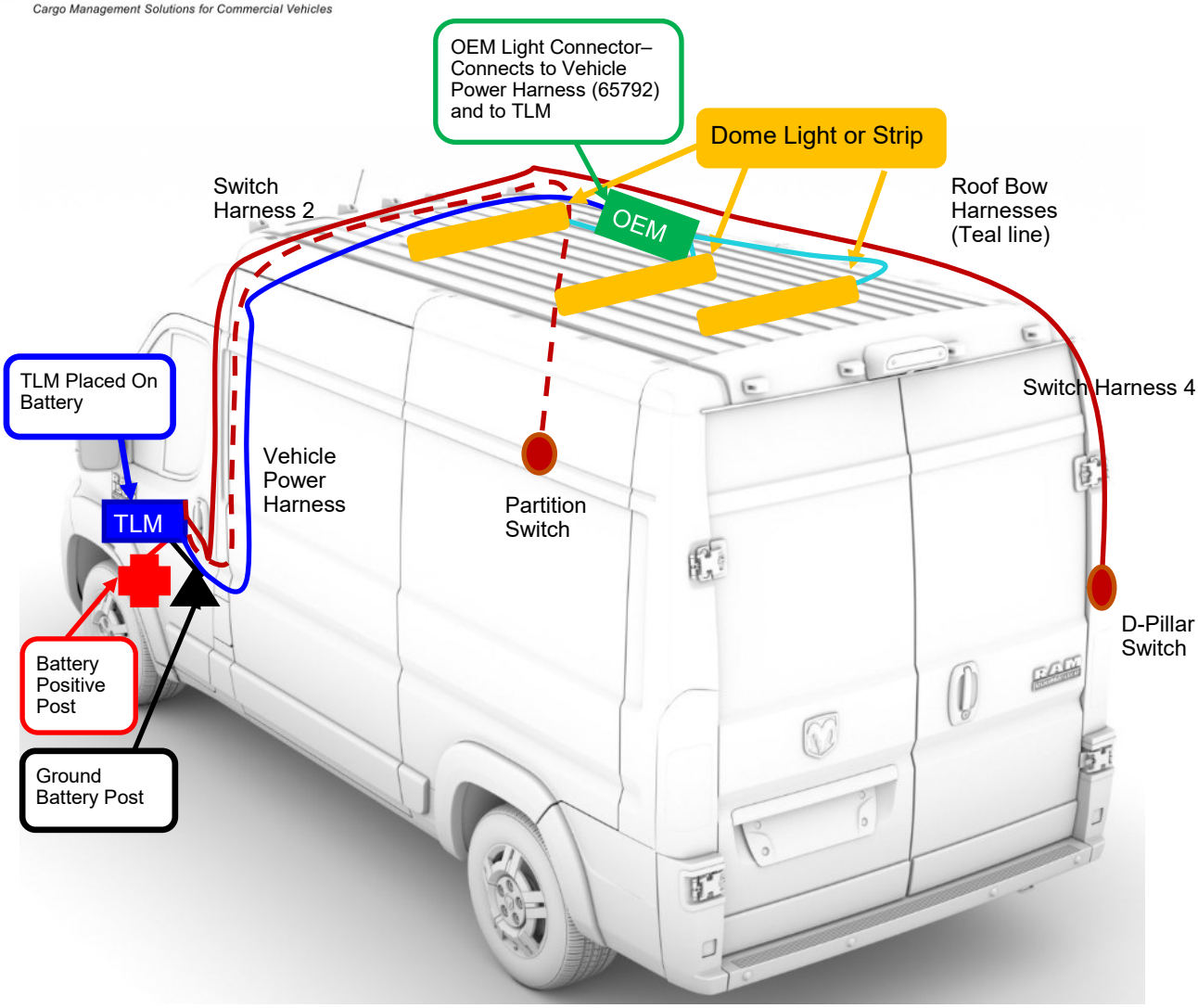
4

5

6



Harness pictures are for reference only.



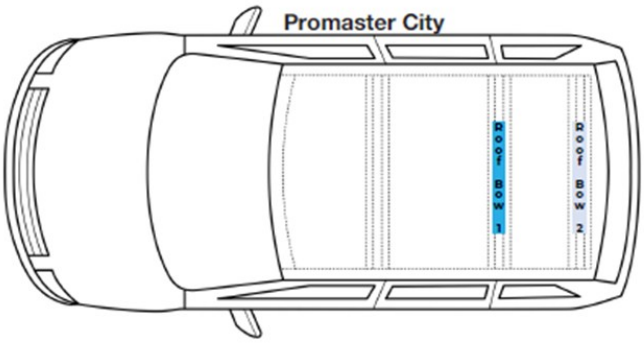
Color	Key - Items
Blue	TLM/Harness
Green	Vehicle Specific Power Harness
Black	Ground Location
Red	12V location
Redish/Brown	Switch Harnesses
Yellow	Dome or Strip Lights
Teal	Roof Bow Harnesses

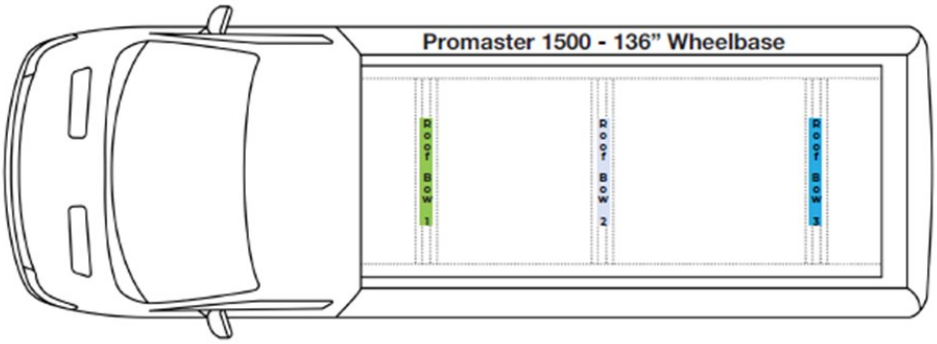
The purpose of plug and play lighting is to be completely modular. Due to this feature, refer to the order drawing for all exact lighting placements. These installation instructions are for most cases and for reference.

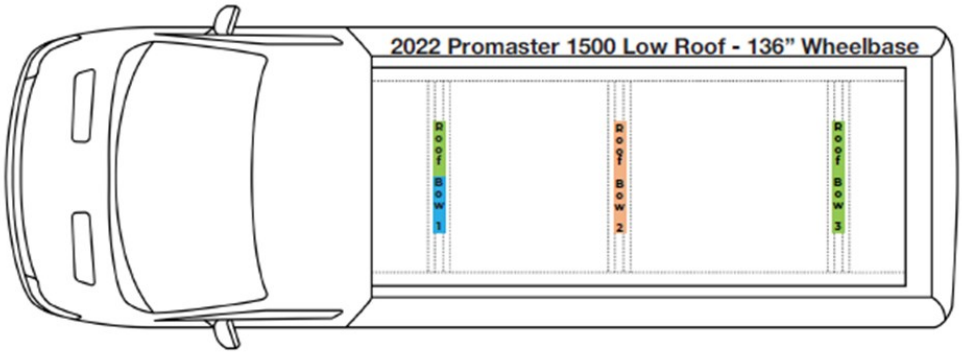
Roof Bow Harnesses And Light Placements: Refer To Ordering Drawing For Light Placements

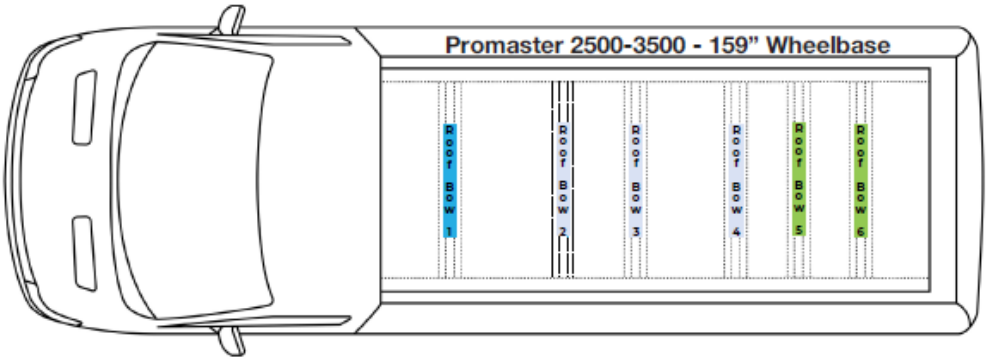
ECHOMASTER FLEET SOLUTIONS

Vehicle	Roof Bow 1	Roof Bow 2	Roof Bow 3	Roof Bow 4	Roof Bow 5	Roof Bow 6
Promaster City	P-HARRB2	P-HARRB1	N/A	N/A	N/A	N/A
Promaster 1500 136" WB	P-HARRB3	P-HARRB1	P-HARRB2	N/A	N/A	N/A
Promaster 1500 136" WB (2022)	P-HARRB3 + P-HARRB2	P-HARRB4	P-HARRB3			
Promaster 2500-3500 159" WB	P-HARRB2	P-HARRB1	P-HARRB1	P-HARRB1	P-HARRB3	P-HARRB3







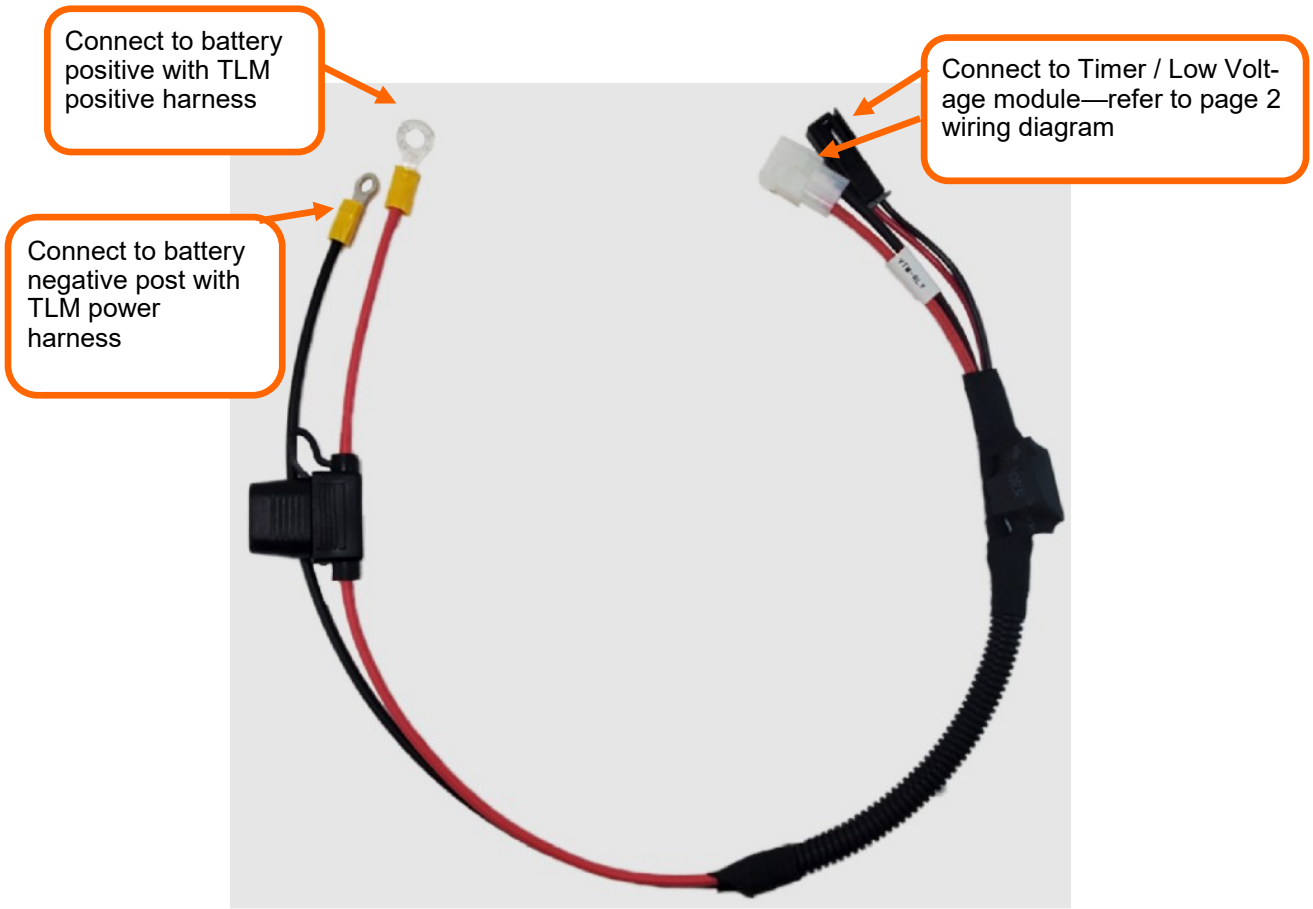


Optional Required Harnesses:

64244: This adapter harness allows for extra extensions to be added (if needed).

Be sure not to overload the OEM circuit by putting too many lights on the circuit. Consult ASCO Electrical Engineering team for application advice if using more than 4 lights.

Add Relay Harness 65791 for extra amperage. (Not always needed)



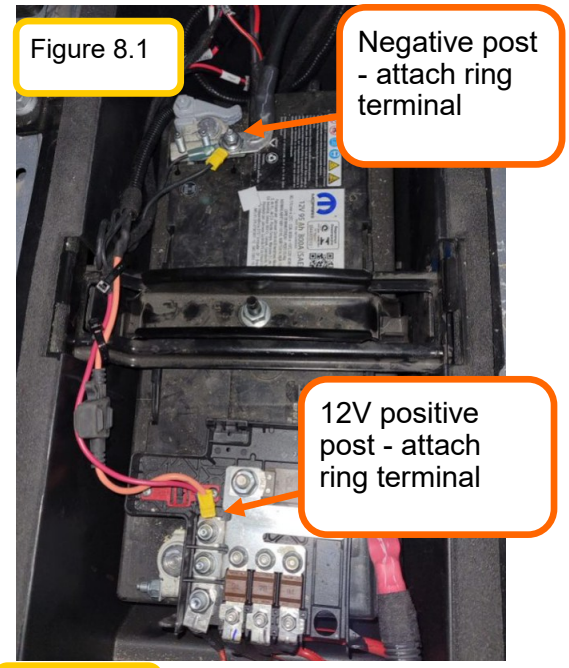


Figure 8.1

Step 1: Locate the TLM harness #71902
Plug the harness connector into the timer / low voltage module.

Locate the power harness #71903 and plug that into the TLM harness.

Step 2: Locate the OEM battery under the foot well of the driver's seat.

Attach the positive (red) wire to the 12V positive post outlined in figure 8.1. Secure with the OEM nut.

Attach the ground ring terminal (black) to the negative post. Secure with the OEM nut. See Figure 8.1.

Step 3:
Refer to the bottom picture for dip switch settings. If the customer would like a different amount time other than 90 minutes, use the dip switches to set the time.

Figure 8.2

Apply the VHB tape the back of the TLM (voltage timer module). See figure 8.2.

Stick the TLM to the top of the negative side of the battery and secure with zip ties. See figure 8.3.

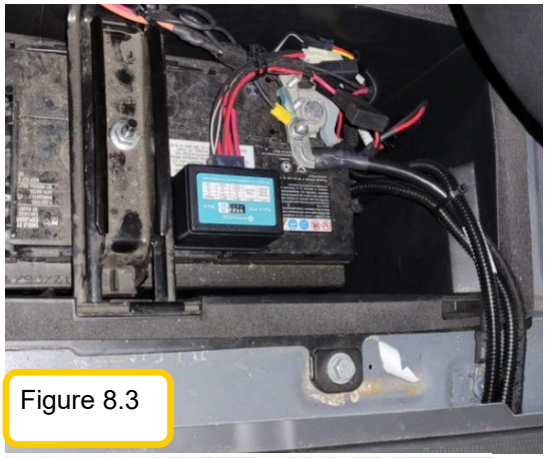


Figure 8.3

Plug the switch harnesses (65788 & 65790) into the TLM harness. See pages 2 & 3 for reference.

Route the harness bundle under the floor mat like shown in figure 8.4. Continue routing the bundle between the seats, rearward to the B-pillar, then up and behind the partition. Reference page 5 for overall wiring.

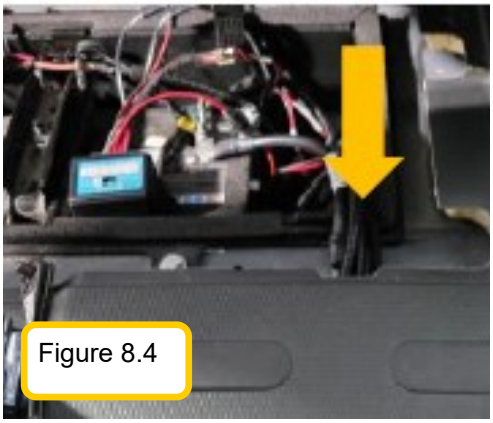


Figure 8.4

1	2	V-Sense	3	4	5	6
Down	Down	11.8	Down	Down	Up	Up

Stinger Part #: TLM Rev B

DIP 1	DIP 2	V-Sense	DIP 3	DIP 4	DIP 5	Minutes	DIP 6
Up	Up	OFF	Timer ON (Down) OFF (Up)	Up	Up	30	ON (Down) Steady Ground Input OFF (Up) Momentary Ground Input
Up	Down	11.2V		Up	Down	60	
Down	Up	11.5V		Down	Up	90	
Down	Down	11.8V		Down	Down	120	

Dip Switches 1 & 2 determine Voltage Sense Threshold
Dip Switch 3 sets option to ON or OFF
Dip Switches 4 & 5 set Timer Duration

TLM Dip Switch Settings

Figure 9.1

Figure 9.2

Figure 9.3

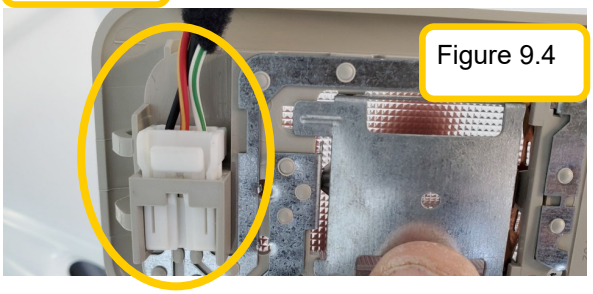


Figure 9.4

Figure 9.5

Figure 9.6

Step 4: For High roof vehicles:
Locate the OEM cargo light on the passenger side of the roof. Figure 9.1.

For Low Roof Vehicles:
Locate the rear OEM cargo light above the back doors. Figure 9.2.

Carefully remove the OEM light with a trim tool. Figure 9.3.

Unplug the OEM connector from the back of the light. Figure 9.4.

Plug the vehicle specific power harness (65796) into the OEM connector:

You no longer need the OEM light. You can dispose of it how you would like.

Route the power harness down the partition to the TLM module, and plug it in. Be sure to use the white colored TLM input connector referenced on page 4. The black connector will NOT be used for this install.

Step 5:
Connect the roof bow harnesses (63481 Or/And 63842, 63483, 63484 all that are applicable) to the power harness and route them to their desired light locations. (Light locations on the roof bows). Figure 9.6.

Refer to page 6 for which harnesses to use for the roof bows.

Use zip ties/fir trees to secure all wiring.

Figure 10.1

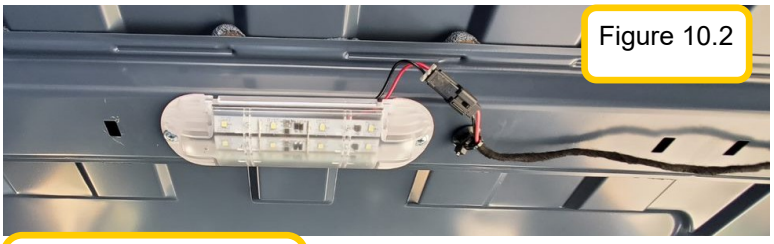


Figure 10.2

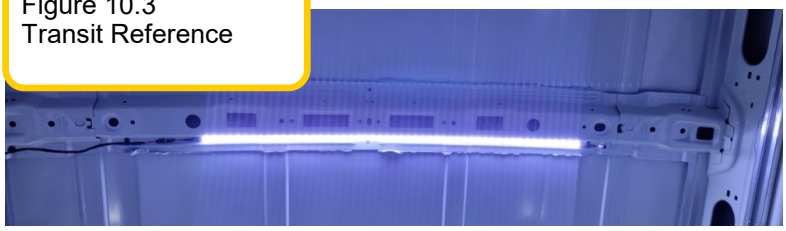


Figure 10.3
Transit Reference

Figure 10.4
GM Express
Reference

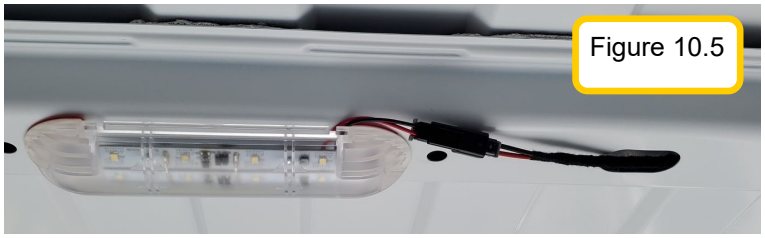


Figure 10.5

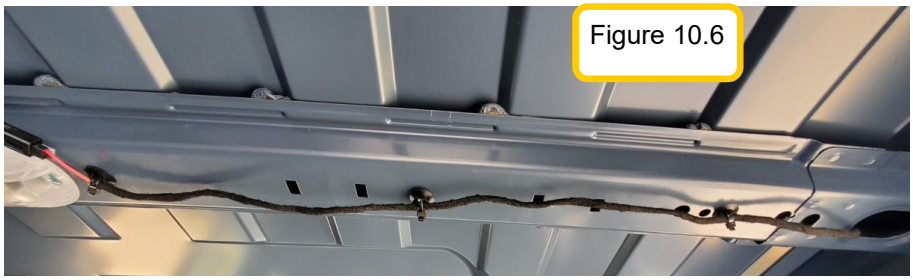


Figure 10.6

Step 6:
Before mounting any lights, prep the surface where the light will be placed with the supplied alcohol pad. Let dry for a few minutes, then mount the light.

Be sure the surface is clean before applying the VHB tape. Read the supplied instructions in the lighting boxes.

Mount the strip/dome lights to their desired locations: Refer to the order drawing.

For dome lights, use the VHB tape already on the back of the light, and also secure with the supplied tek screws.

Dome lights are to be placed as close to the center of the roof bow as possible. Figure 10.1 and10.2.

For the strip lights, use the VHB tape supplied on the back of the lights, and use the little square sticky backs with zip ties that are supplied in the box.

Strip lights are to be placed as close to the center as possible of the roof bows. See reference pictures of the Chevy Express and Transit vans below. Use best judgement for the strip light placements, just be sure to do the same for all the needed roof bows. Figure 10.3 and 10.4 for references.

Route the roof bow harnesses to the lights and connect them. When applicable route the harness inside the roof channel. When not, use zip ties and fir trees to secure the wiring. Figures 10.5 and 10.6.

Figure 11.1

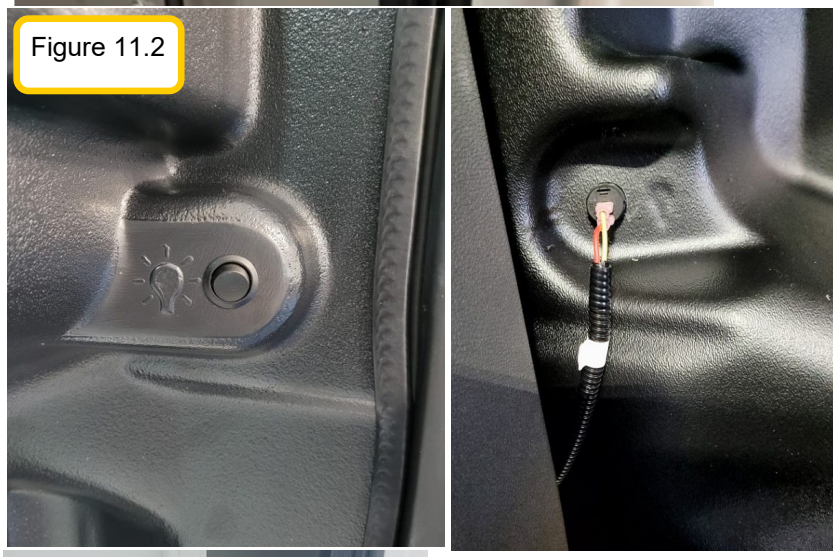


Figure 11.2

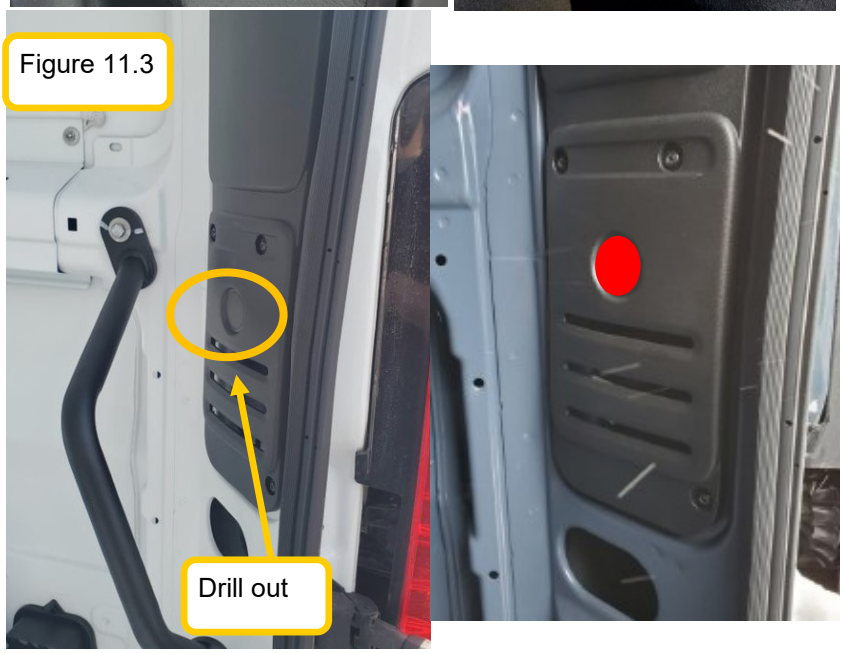


Figure 11.3

Partition Switch Locations:
Switch hole in steel partition behind the passenger's seat (figure 11.1) or drill out switch hole in composite partition (figure 11.2).

This location will require harness #65788

Rear Switch Location:
Passenger side rear D-pillar.

Drill out the circle divot on the rear D-pillar trim panel. Reference figure 11.3.

This location will require harness #65790

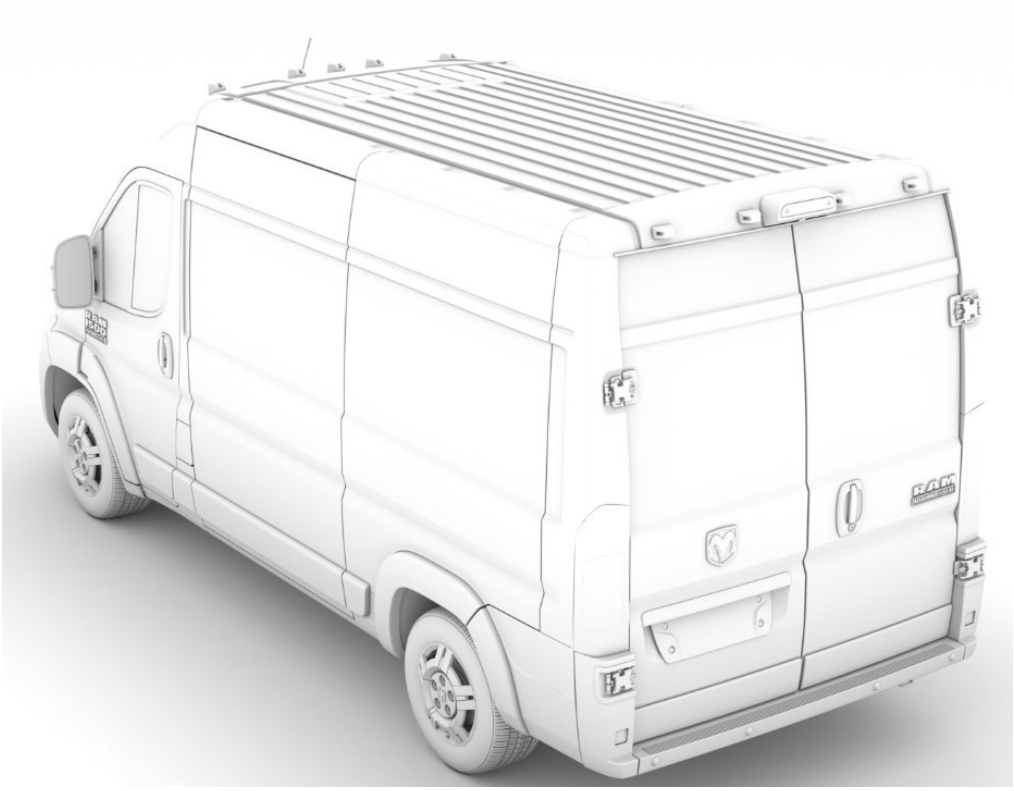
Step 7:
Route the 65788 harness from the TLM harness location to the partition switch location.

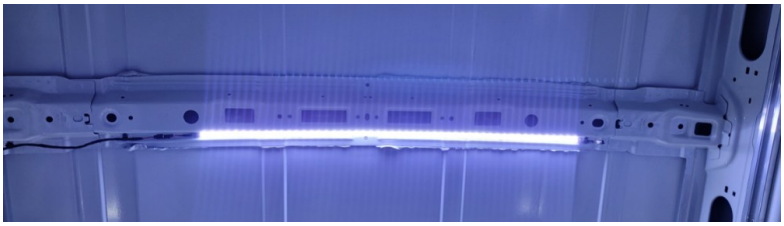
Do the same with harness 65790 to the D-pillar switch location.

Use Zip ties to secure wiring.

Drill needed holes for the switches in rear D pillar panel, and composite partition (if applicable).

Insert the switches into the holes with the “1” in the 12:00 position, connect the harness (the connection orientation does not matter).



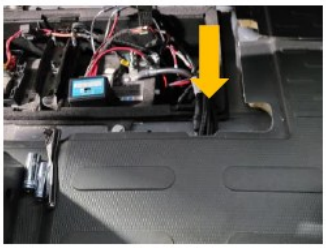


Insert the fuse into the inline-fuse holder on the power harness. The install is now complete. Secure all wiring with zip ties. Re-attach all trim. Double check the functionality of the lights and switches.

Promaster basic install photos

ower and
specific bolts on
rness, and wire
bracketry

VTM and VTM relay will be placed on the top negative side of the battery and wiring tucked away



VTM and switch harnesses ran under floormat between seats, behind front passenger seat, up passenger B pillar, and along curbside roof line to rear D pillar, then drop down.

Parts List

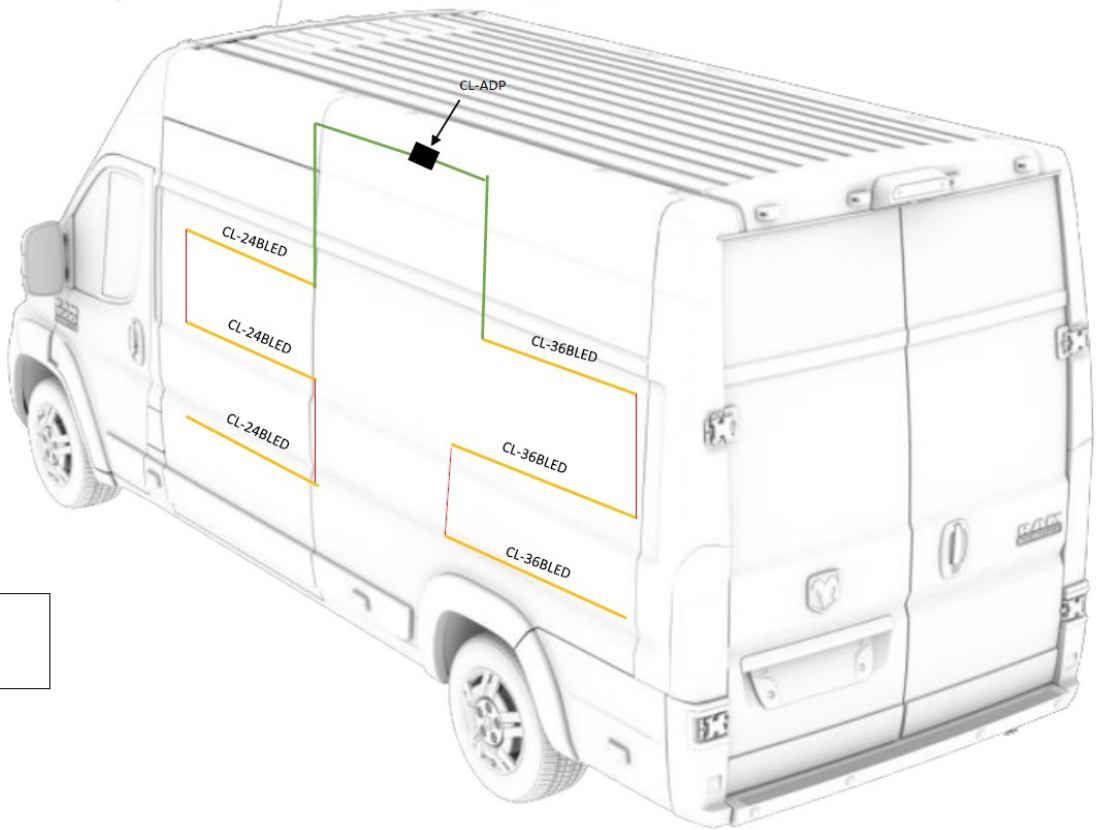
- Timer module (6578
- VTM relay and vehicle s (65791) and (6579
- 3 – CL-24BLED (6534
- 3 – CL-36BLED (6543
- 2 - CL-48BLED (6543
- 3 – STL-40489-2 (6348
- 2 – CL-ADP (6424
- 6 – P-HARRB1 (6348
- 3 – P-HARRB2 (6348
- 3 – P-HARRB3 (6348

489-2 lights
roof bows 2, 4
B pillar is roof

CL-ADP at 4th roof bow on street side of vehicle

Curb side dome light junction point and CL-ADP above and to the right of sliding door

Promaster line diagram cont.



Legend:

P-HARRB1
P-HARRB2

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

N/A

PACKAGING REQUIREMENT

N/A

OTHER REQUIREMENTS

TIMER LIGHTING MODULE FOR INTERIOR PLUG AND PLAY LIGHTING ON TOPPERS

THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **26830**

CURRENT ECN: **27950**

ECN DESCRIPTION:

Update to REV B

REVISED BY: **JJC**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
Stinger

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
71902

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **B**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **TIMER LIGHTING MODULE**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **71902**

TLM

Timer/Low Voltage Module

INSTALLATION MANUAL

Thank you for purchasing the

TLM

WHAT'S INCLUDED:

- Timer/Low Voltage Module
- Module Harness
- Cable Ties

COMPATIBLE ACCESSORIES:

- Vehicle-specific harness (P-VTM-xxx)
- Switch harness (VTM-SWx)
- High current harness (VTM-RLY)

FEATURES:

- Selectable timer durations - 30, 60, 90, and 120 minutes
- Selectable Low Voltage Sense shut off - 11.8V, 11.5V, and 11.2V
- Timer and Low Voltage sense work independently of each other
- Inputs for 2 momentary switches or a steady ground input
- 10A max current output

OPERATING INSTRUCTIONS:

DIP 1	DIP 2	V-Sense	DIP 3	DIP 4	DIP 5	Minutes	DIP 6
Up	Up	OFF	Timer ON (Down) OFF (Up)	Up	Up	30	ON (Down) Steady Ground Input
Up	Down	11.2V		Up	Down	60	
Down	Up	11.5V		Down	Up	90	OFF (Up) Momentary Ground Input
Down	Down	11.8V		Down	Down	120	

DIP 1-2
If Voltage Sense feature is turned ON, low voltage shut down will occur when the input voltage to the TLM module drops below the V-Sense setting. To eliminate false triggers, there is a 20 second delay before shut down.
If Voltage Sense is turned OFF, input voltage level will not be monitored.

NOTE: Voltage Sense takes precedence over Timer.

DIP 3
If the Timer feature is turned ON and switch input is activated, output voltage will be provided for specified timer duration.

DIP 4-5
Switch settings will determine how long output will be active after the switch input is activated.

NOTE: If an invalid time is selected (e.g. Up, Up, Up or Down, Down, Down) the output will turn off 10 seconds after the switch input is activated.

DIP 6
Steady Ground Input Applications:
Applying ground to the switch input will activate the output, removing ground from switch input will disable the output. If ground is applied once again, the output will be re-activated, and the timer will reset/start over.

Momentary Ground Input Applications:
Applying a pulsed ground to the switch input will activate the output, a seond pulsed ground to the switch input will disable the output. If a pulsed ground is applied once again, the output will be re-activated, and the timer will reset/start over.

Steady Ground Input Applications

Trigger Input	Switch Input	Output	Voltage Sense (ON)	Timer (ON)
Active	N/A	ON	Monitoring Input Voltage	N/A
Not Active	N/A	OFF	N/A	N/A
Not Active	Activated (Input Grounded)	ON	Monitoring Input Voltage	Timer Starts
Not Active	Deactivated (Ground Removed)	OFF	N/A	Timer Off
Not Active	Activated (Input Grounded)	ON	Monitoring Input Voltage	Timer Starts

Momentary Ground Input Applications

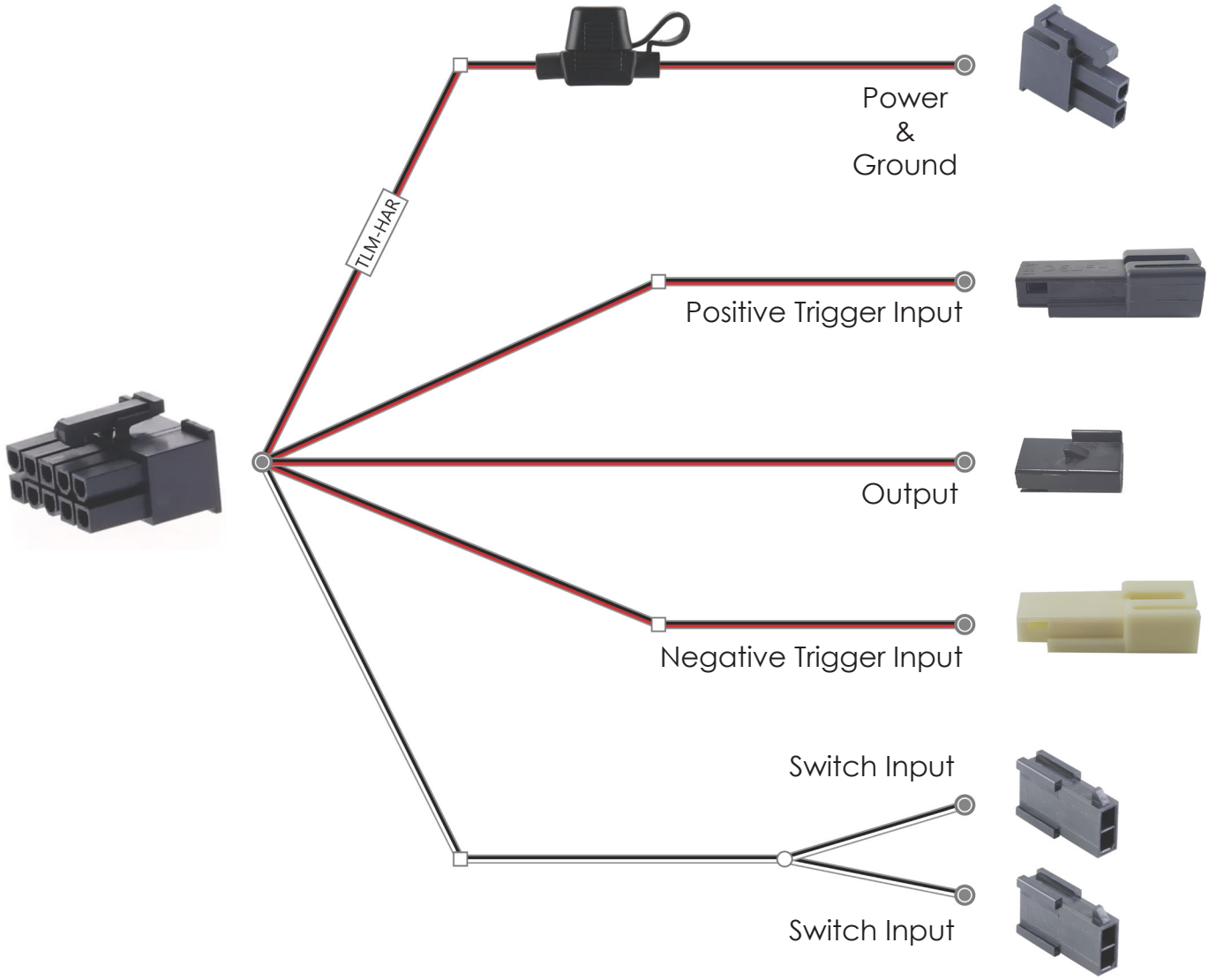
Trigger Input	Switch Input	Output	Voltage Sense (ON)	Timer (ON)
Active	N/A	ON	Monitoring Input Voltage	N/A
Not Active	N/A	OFF	N/A	N/A
Not Active	Activated (Pulsed)	ON	Monitoring Input Voltage	Timer Starts
Not Active	Activated (Pulsed)	OFF	N/A	Timer Off
Not Active	Activated (Pulsed)	ON	Monitoring Input Voltage	Timer Starts

In the tables above "Trigger Input" refers to the Positive Trigger Input and Negative Trigger Input of the module.

If a Trigger Input is active, its function takes precedence. Attempting to activate the Switch Input while a Trigger Input is active will have no effect on the modules output.

WIRING DIAGRAMS:

TLM Harness

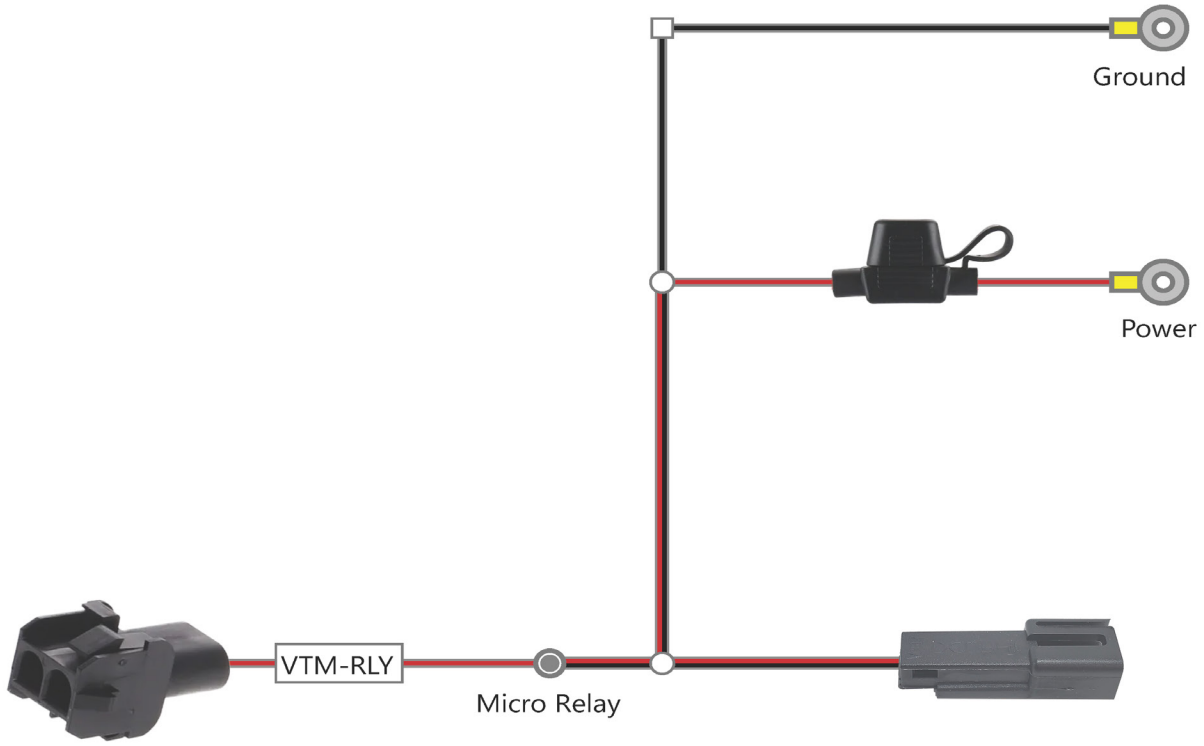


<u>If necessary, connectors may be removed for hardwire applications.</u>

Positive Trigger Input: Applying 12V to Red wire will activate output
Negative Trigger Input: Applying ground to Black wire will activate output
Switch Input: Closing loop between switch input wire leads will activate output

VTM-RLY (Optional Harness)

For larger current demands, use the optional VTM-RLY and connect to power and ground, along with the TLM harness. VTM-RLY supports up to 15A.



VTM-RLY Output connects to P-VTMxxx harness for vehicle lighting

VTM-RLY Input connects to the output from the TLM harness

Troubleshooting Table:

Output does not activate when Positive or Negative Trigger Input is activated	Check fuse on TLM harness	Replace fuse if it is bad
	Check power and ground connections	Fix loose or bad wire connection
	Confirm module has power and ground at its input	Replace module or damaged harness if necessary
Output does not activate when Switch Input is activated	Confirm DIP 6 on module matches switch type being used	Change DIP 6 setting to match switch type
	Confirm switch being used is not defective	Replace bad switch if necessary
Switch Input - Irregular behavior	Output does not turn off with switch	Check DIP 6 and confirm it matches switch type
		Confirm switch is not damaged or defective; replace if necessary
	Output activates for 5 seconds then turns off	Input voltage to module is below Voltage Sense setting

Phone – 866-931-8021 (option 3)

E-Mail – support@stingersolutions.com

StingerSolutions.com

REV. B

PURCHASED COMPONENT KEY FEATURES

DESCRIPTION OF REQUIREMENTS

DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)

N/A

LOAD/RATING REQUIREMENT

N/A

MATERIAL REQUIREMENT

N/A

PACKAGING REQUIREMENT

N/A

OTHER REQUIREMENTS

PLUG AND PLAY POWER HARNESS FOR TOPPER SILVERADO AND RAM KITS

POWER FROM BATTERY TO TLM MODULE

THIS DRAWING IS THE PROPERTY OF ADRIAN STEEL COMPANY AND IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF ADRIAN STEEL COMPANY

PRINTED DOCUMENT IS UNCONTROLLED

TOLERANCES & INSPECTION

UNLESS OTHERWISE SPECIFIED

ALL BEND ANGLES ARE 90 DEGREES

ALL DIMENSIONS ARE IN INCHES.

REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION

FEATURES	HOLES/SLOTS	ANGLES
0.0 = ± .125	0.0 = ± .062	0° = ± 2°
0.00 = ± .062	0.00 = ± .031	0.0° = ± 1°
0.000 = ± .031	0.000 = ± .015	

Material Thickness: per ASTM Std.
Weld Callouts per AWS

RELEASE & REVISIONS

INITIAL ECN: **26830**

CURRENT ECN: **26830**

ECN DESCRIPTION:

RELEASE FOR MARKET FILL

REVISED BY: **EMB**

PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
71903

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE) (NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **HARN,POWER TLM BATTERY 4'**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **71903**

Bill of Materials

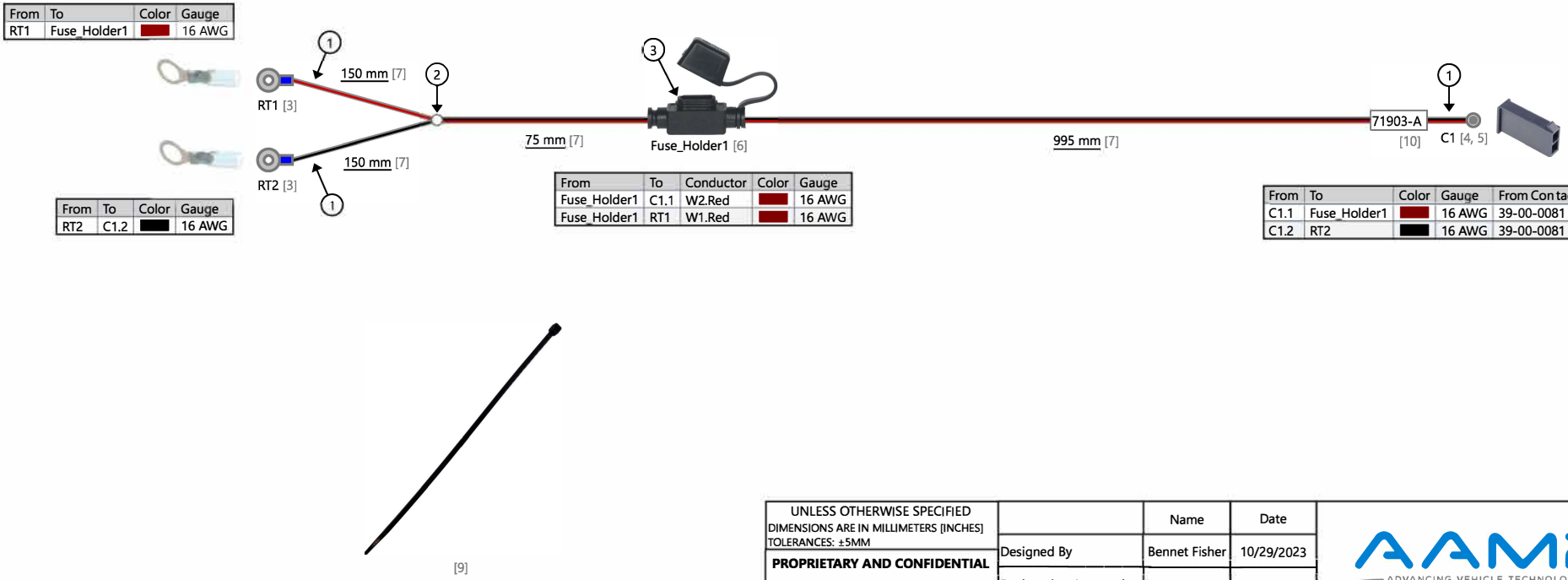
Id	Type	Manufacturer	Part Number	Quantity
1	Wire		16 AWG Red GXL	1220 mm
2	Wire		16 AWG Black GXL	1220 mm
3	Ring Terminal	Molex	19164-0027	2
4	Connector	Molex	46993-0211	1
5	Contact	Molex	39-00-0081	2
6	Splice		ATM Fuse Holder	1
7	Corrugated Tubing		0.25" Nylon Split Wall	1370 mm
8	Fuse	Littelfuse	297010.WXNV	1
9	Cable Tie	Hellermann Tyton	T30LL0M4	5
10	Label		Heat Shrink Style Label	1

Coverings

Id	Assembly
[7]	

Notes

1. Lock tape loom behind connector with Tesa 51036
2. Tape knuckle with Tesa 51036
3. Install 10A Mini Fuse



From	To	Color	Gauge
RT1	Fuse_Holder1		16 AWG

From	To	Color	Gauge
RT2	C1.2		16 AWG

From	To	Conductor	Color	Gauge
Fuse_Holder1	C1.1	W2.Red		16 AWG
Fuse_Holder1	RT1	W1.Red		16 AWG

From	To	Color	Gauge	From Contact PN
C1.1	Fuse_Holder1		16 AWG	39-00-0081
C1.2	RT2		16 AWG	39-00-0081

Revisions

Rev.	Date	Author	Description
A	10/29/2023	Bennet Fisher	Initial Drawing

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

	Name	Date
Designed By	Bennet Fisher	10/29/2023
Engineering Approval		
Manufacturing Approval		
Revision Approval		
Quality Assurance		

AAMP
ADVANCING VEHICLE TECHNOLOGY

Part Number: 71903-A
Revision: A
Description: HARN, PWR TLM BATTERY 4'
Sheet: 1