

# Replacement Parts Guide

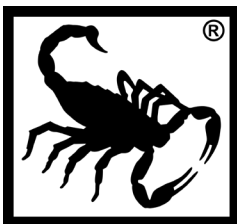
*For TraFFix MASH Scorpion II® METRO TMA*

**TraFFix**  
**Devices Inc.**   
*Engineered Products for Safer Highways*

# MASH ✓<sup>®</sup>

Manual for Assessing Safety Hardware

**TESTED, PASSED AND ELIGIBLE**



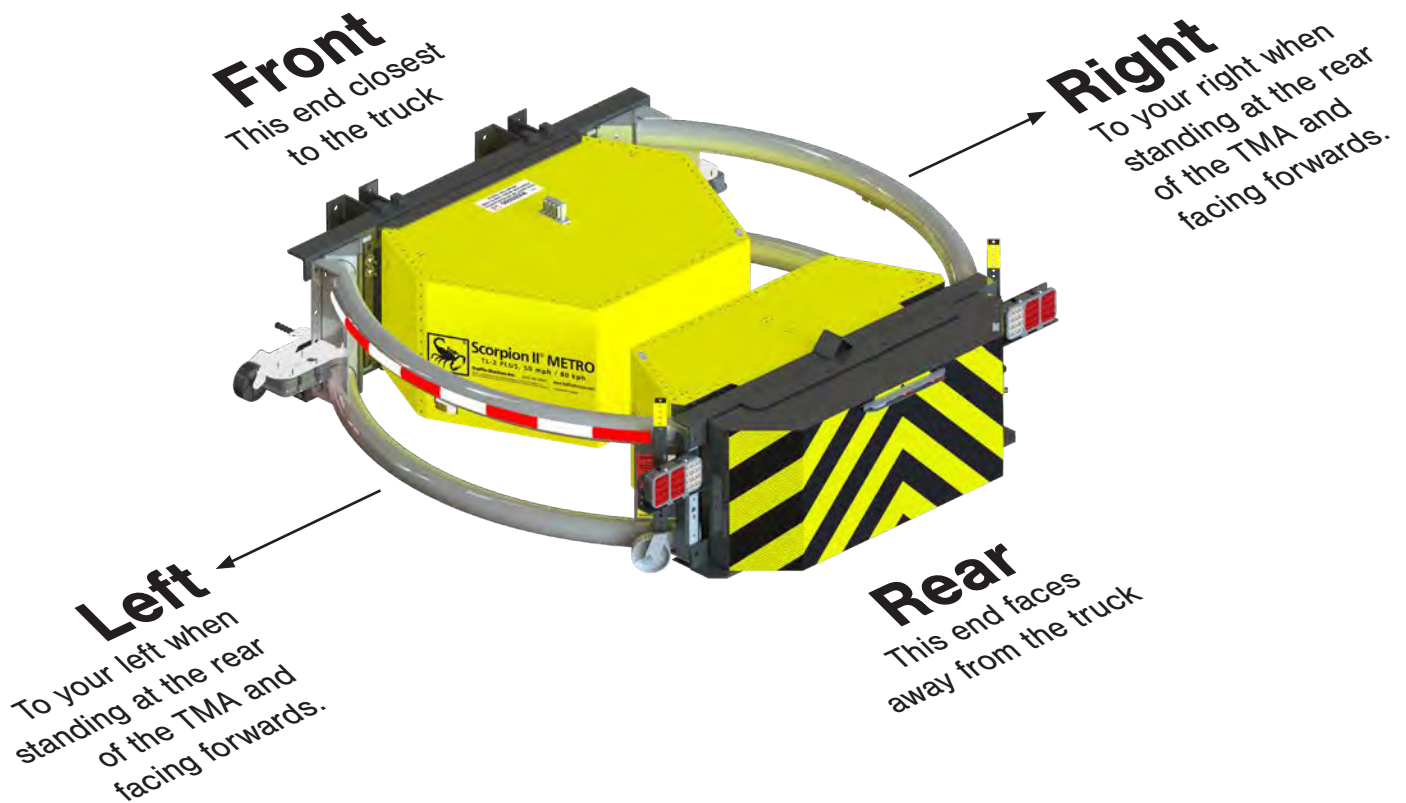
## Scorpion II<sup>®</sup> METRO

TL-2 PLUS, 50 mph / 80 kph

*High Pivot*

# Overview & Orientation

## *MASH Scorpion II<sup>®</sup> METRO Truck Mounted Attenuator*



# Table of Contents

## MASH Scorpion II METRO® TMA Replacement Parts Guide

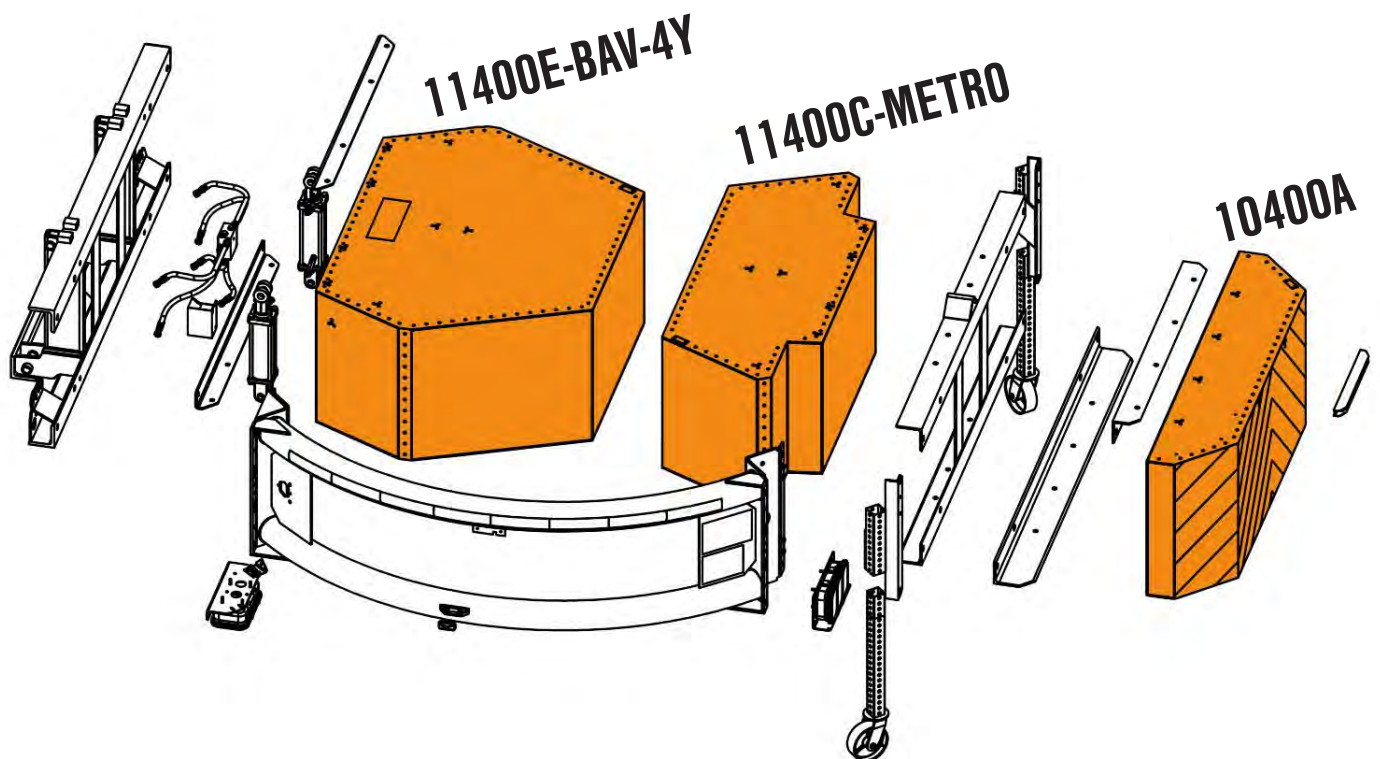
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# Energy-Absorbing Modules

*For TraFFix MASH Scorpion II® METRO TMA*

## *Module Placement*

---



*Components Removed for Clarity.*

# Energy-Absorbing Modules

*For TraFFix MASH Scorpion II® METRO TMA*



## **11400E-BAV-4Y**

### Module E

*Energy-Absorbing Module*

*Includes Scorpion Logo  
and 4" Yellow Sheeting*

*Includes Hardware*

*Scorpion II METRO Only*

*\*Other Sheeting Options  
Available upon Request*



## **11400C-METRO**

### Module C

*Energy absorbing Module*

*Includes Hardware*

*Scorpion II METRO Only*



## **10400A**

### Module A

*Energy absorbing Module*

*with 4" Yellow Sheeting*

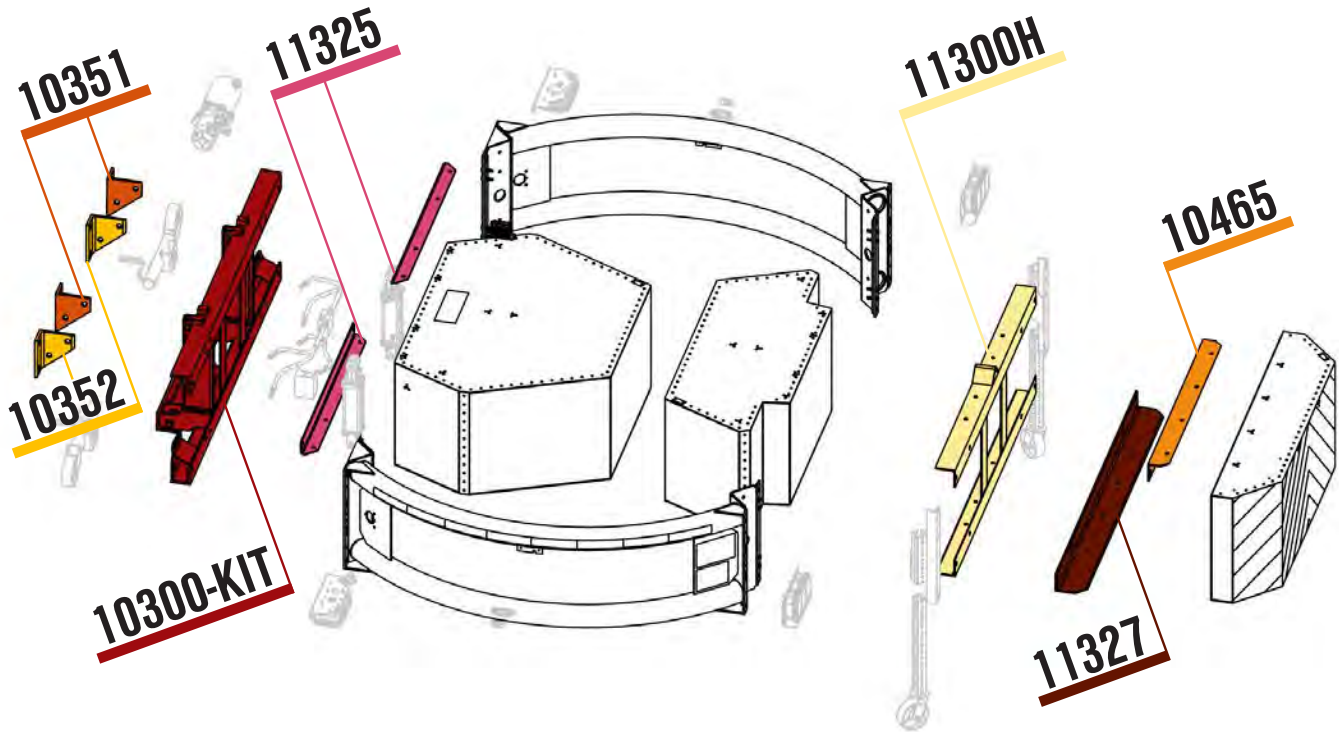
*Includes Hardware*

*\*Other Sheeting Options Available, see p28.*

# Diaphragms and Angles

For *TraFFix MASH Scorpion II® METRO TMA*

## Placement in METRO TMA



*Components Removed for Clarity.*

### TMA Mounting Brackets

*These attach the TMA to the host truck.*

**10352**

*Left*



**10351**

*Right*



**10300-KIT**

Backup Frame



*Includes 12017 and 12015-6.0 Pins.*



**11325**

Front Angle

*Attaches to Module E*



*Scorpion II METRO TMA Only*



**11300H**

Diaphragm

*Rear of Module C*



**10465**

Rear Top Angle

*Attaches to Module A*



**11327**

Rear Bottom Angle

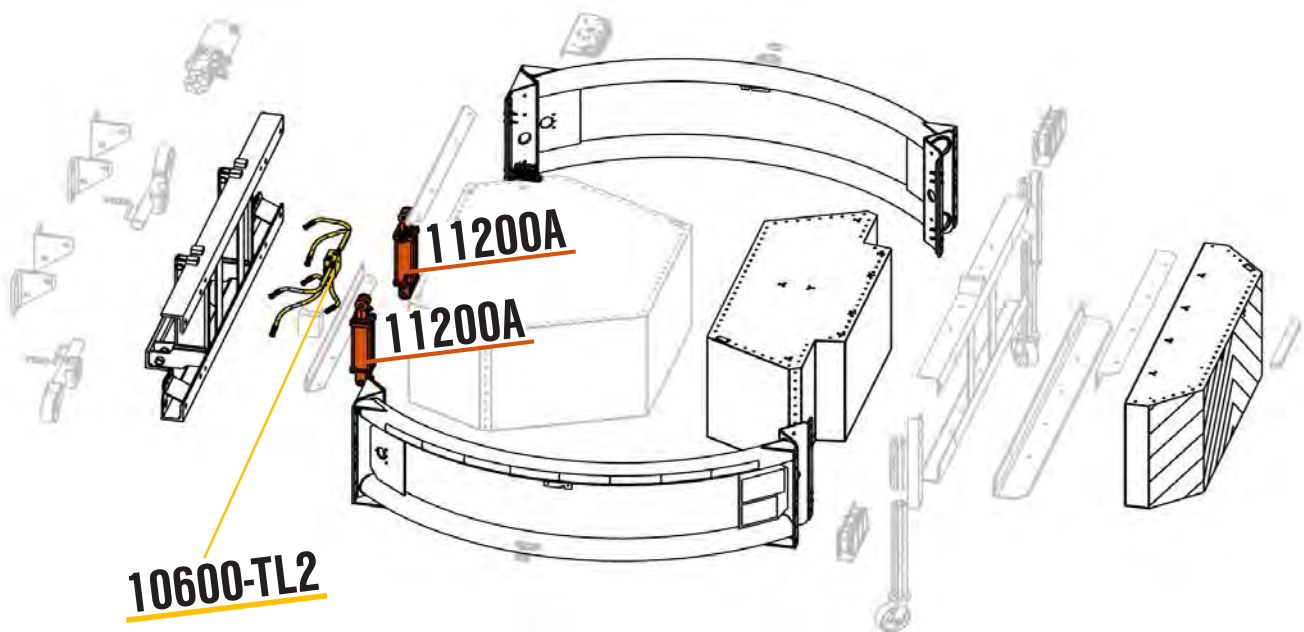
*Attaches to Module A*

# Hydraulics and Cylinder

*For TraFFix MASH Scorpion II® METRO TMA*

## *Cylinder Placement*

---



*Components Removed for Clarity.*

---

## **10600-TL2** Hydraulic Hose Kit





# **11200A**

Strut Cylinder - 3"



**10663**  
90° Fitting

**10661**  
Velocity Fuse

**10662**  
90° Fitting

## Hardware for 11200A

*Not Included*  
*Must be ordered separately*



**12012**  
Locknut



**12011**  
Bolt, 5-1/2"



**10640-01**  
Seal Kit, TH, 3"

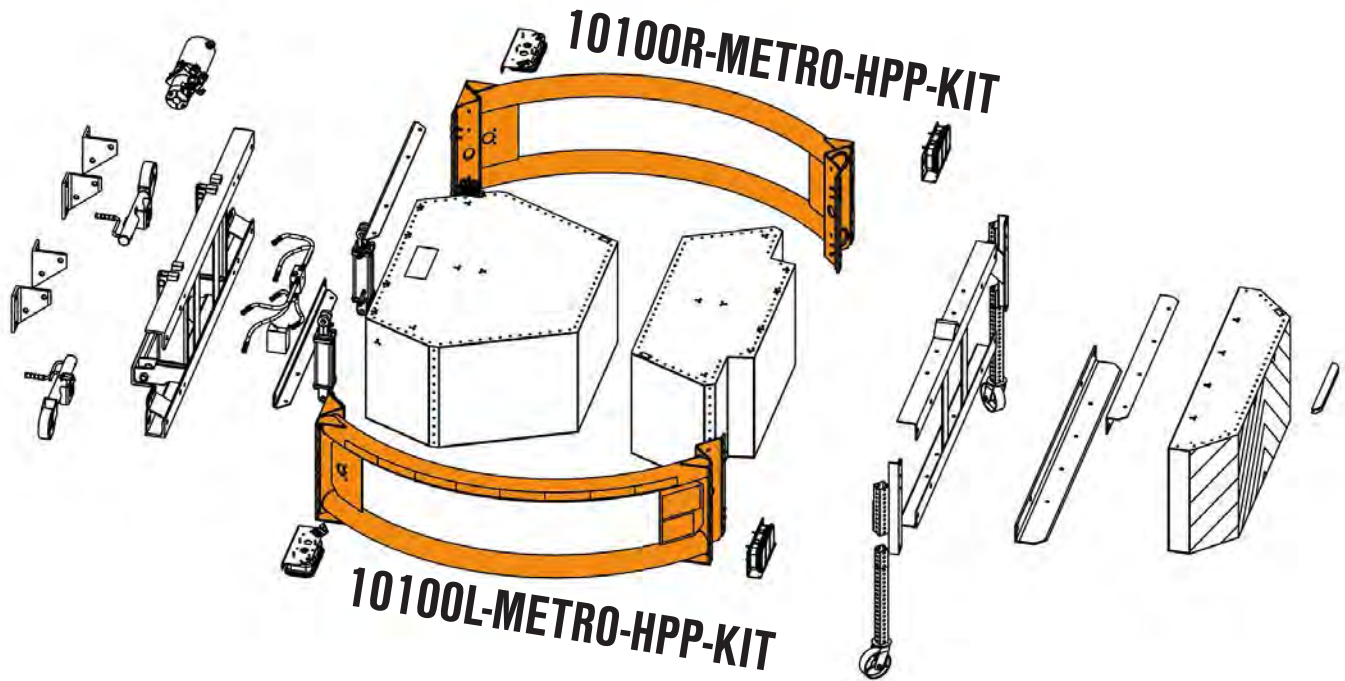
**12017**  
Hairpin



**12015-6.0**  
Clevis Pin, 6"

# Replacement Tubes

*For TraFFix MASH Scorpion II® METRO TMA*



*Components Removed for Clarity.*

## 10100L-METRO-HPP-KIT

*METRO Left Tube*



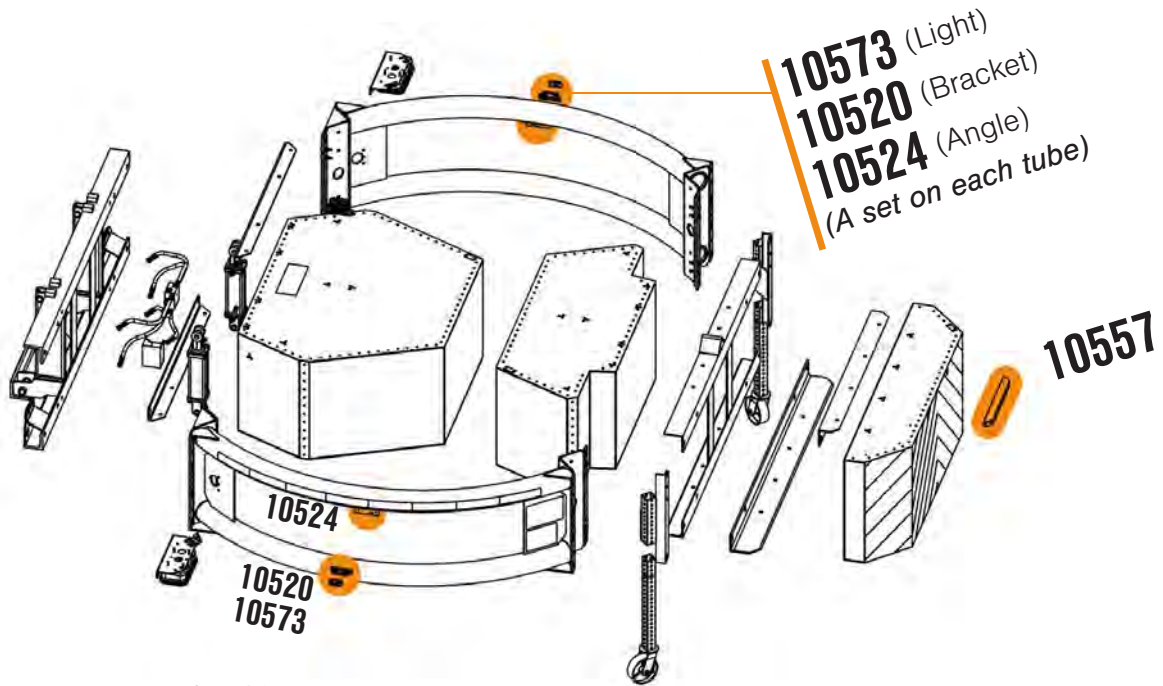
## 10100R-METRO-HPP-KIT

*METRO Right Tube*



# Visibility Lights

*For TraFFix MASH Scorpion II® METRO TMA*



*Components Removed for Clarity.*

## 10524

*Angle, Side Marker Light*



## 10520

*Bracket, Side Marker Light*



## 10573

*Side Marker Light, Amber, LED, Multivolt*



## 10557

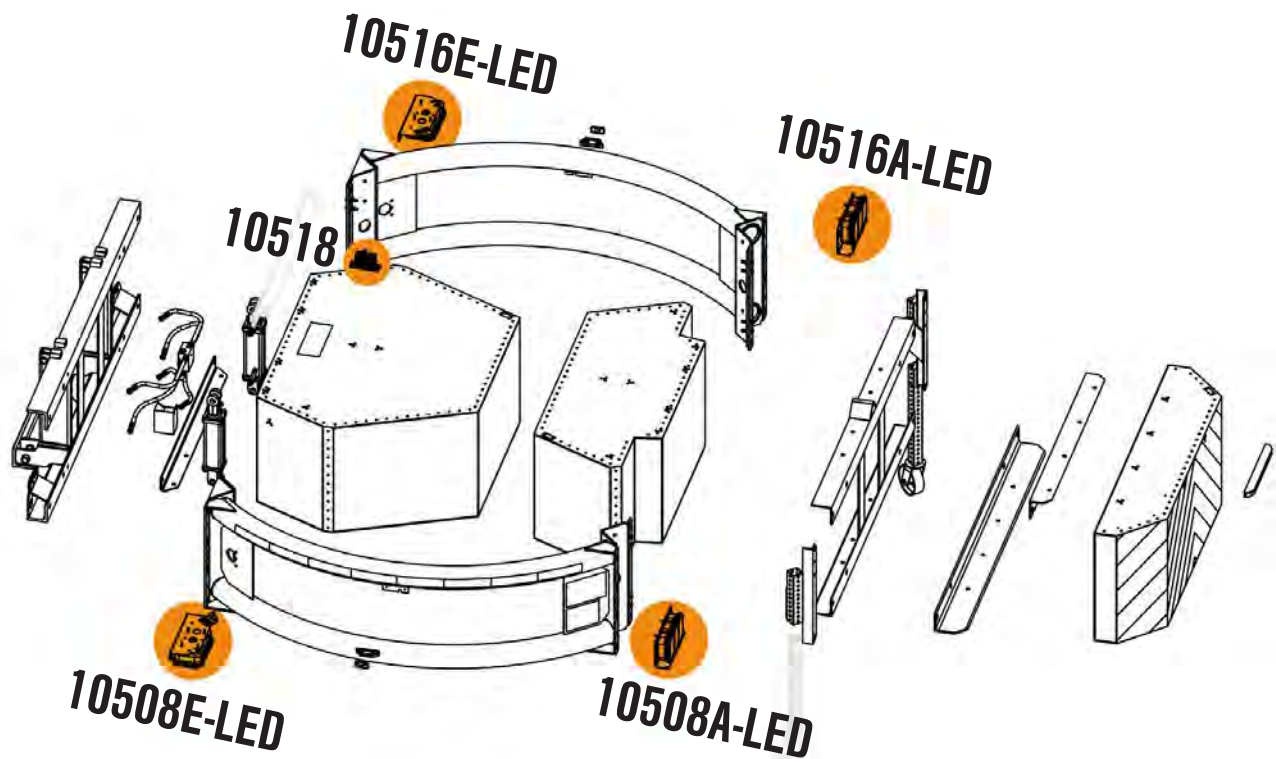
*ICC Bar Light, LED, 12 Volt Only*



# Tail Lights and Junction

For *TraFFix MASH Scorpion II® METRO TMA*

## Tail Light and Junction Placement

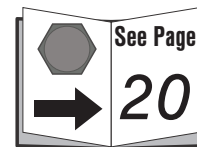


*Components Removed for Clarity.*

### **10518** Junction Box



For cables, see  
*Light Wiring*  
on Page 20.



# Tail Lights

**For TraFix MASH Scorpion II® METRO TMA**

## **10508E-LED**

*Left Tail Light,  
For Stored Position*



## **10516E-LED**

*Right Tail Light,  
For Stored Position*



## **10508A-LED**

*Left Tail Light,  
For Deployed Position*

## **10516A-LED**

*Right Tail Light,  
For Deployed Position*



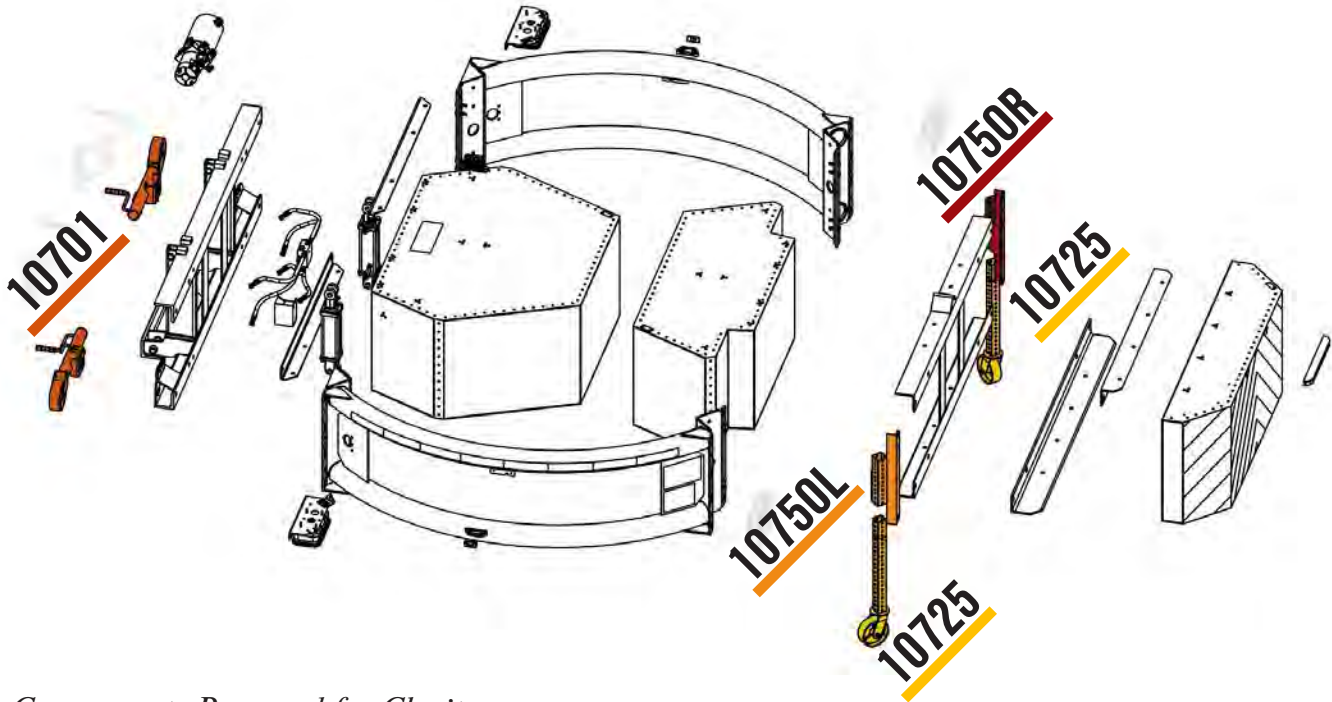
*For Tail Light Hardware,  
see pages 22-25.*

*For Tail Light Configurations,  
see page 27.*

# Replacement Jacks

*For TrafFix MASH Scorpion II® METRO TMA*

## Jack Placement



*Components Removed for Clarity.*

## Drop Jack Mounting Brackets

*These attach the drop jacks to the TMA.*



**10750L**

*Left Bracket,  
Drop Jack*

**10750R**

*Right Bracket,  
Drop Jack*



## Swivel Jack

Choose from either *Light Duty* or *Heavy Duty*.

Both are universal (suitable for left or right placement).

### 10701

*Light Duty Swivel Jack*  
(Standard)



### 10701MNJ

*Heavy Duty Swivel Jack*  
Required for TMAs with Extension Frames.



OR

### 10702

*Snap Ring*  
for Swivel Jack



*Lock Pin,*  
*Square Retainer*

**90005-LP**

## Drop Jack

Universal (suitable for left or right placement).

### 10725



# Motor and Electronics

*For TrafFix MASH Scorpion II® METRO TMA*



*Motor Assembly*

**11010** (12 Volt)

**11011** (24 Volt)

*(Includes Valves, Solenoid, and Cap)*

**10507C**

*Motion Alarm*



**11026**

*2 Button  
Controller,  
Orange*

*with 30 ft. Cable  
and Plug Connector*

**10919**

*Heavy Duty 4-Pin  
Plug Connector*



## Fuses

**12049**

*12 Volt, 250 Amp*



**12089**

*24 Volt, 150 Amp*



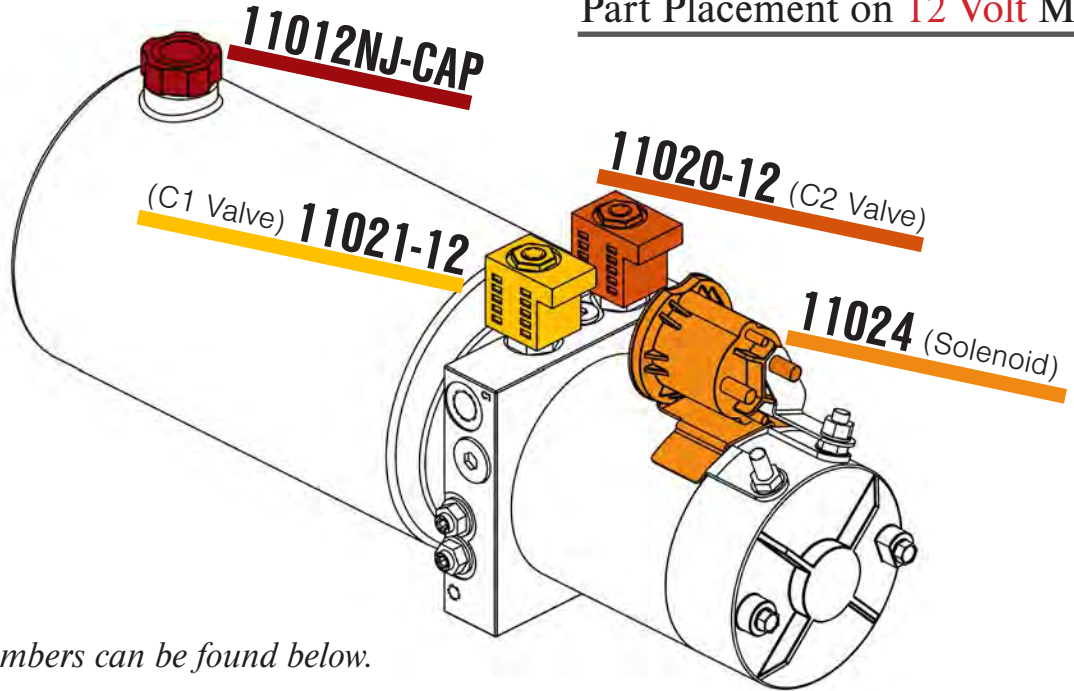
**10920**

*Heavy Duty 4-Pin  
Socket Connector*





Part Placement on **12 Volt** Motor



24 Volt Part Numbers can be found below.

**11012NJ-CAP**



Cap



11012NJ-CAP-DS

(Optional)  
Measurement Cap



Solenoid

**11024** (12 Volt)

**11025** (24 Volt)

**Valves**

**11020-12** (12 Volt)

**11020-24** (24 Volt)

C2 Valve Kit. Includes:



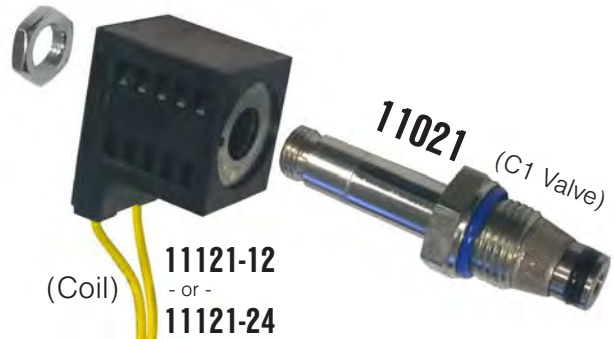
(Coil) 11121-12  
- or -  
11121-24

11020 (C2 Valve)

**11021-12** (12 Volt)

**11021-24** (24 Volt)

C1 Valve Kit. Includes:



(Coil) 11121-12  
- or -  
11121-24

11021 (C1 Valve)

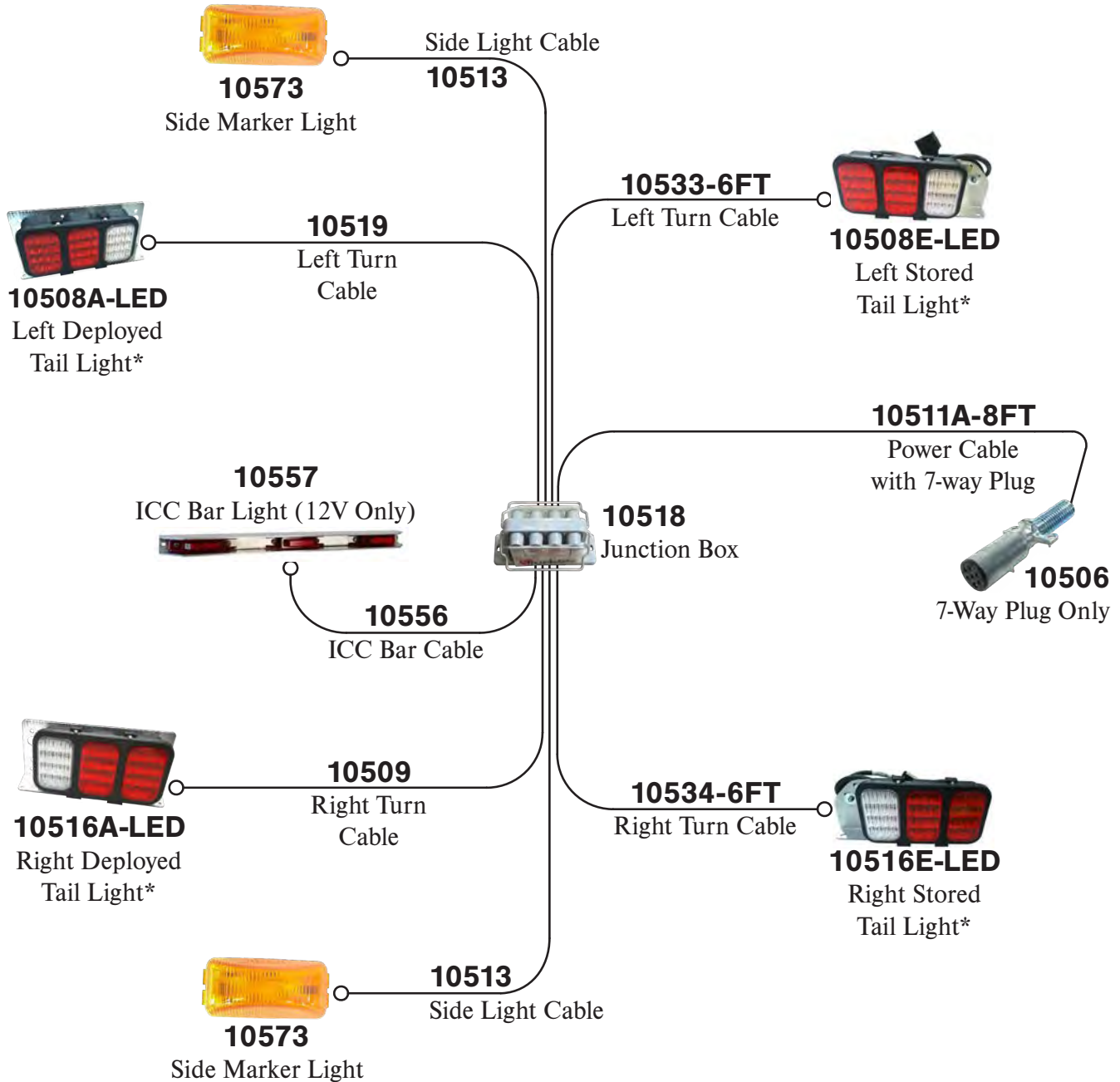


# **Appendix A**

## ***Drawings & Hardware***

# Light Wiring

## For TraFFix MASH Scorpion II® METRO TMA

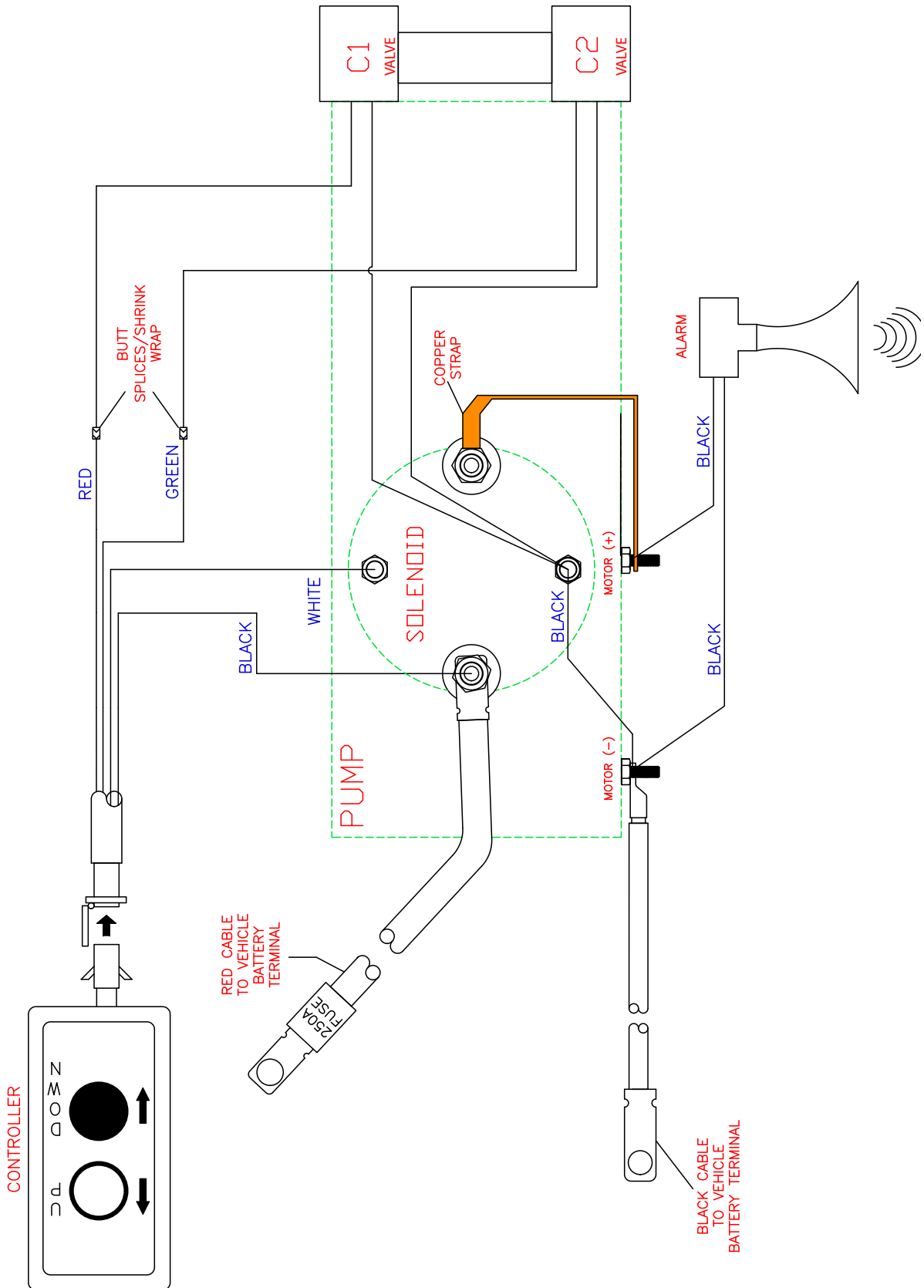


\* Tail Lights include the appropriate Power Cable

White	Ground
Black	Open Circuit
Yellow	Left Turn
Red	Stop
Green	Right Turn
Brown	Running/Clearance
Blue	Reverse

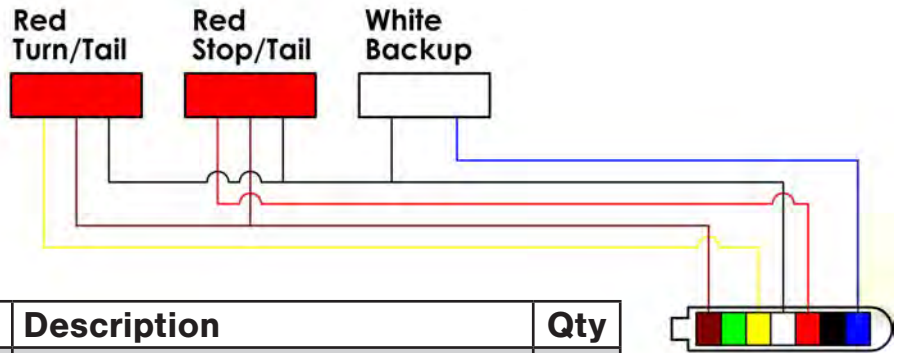
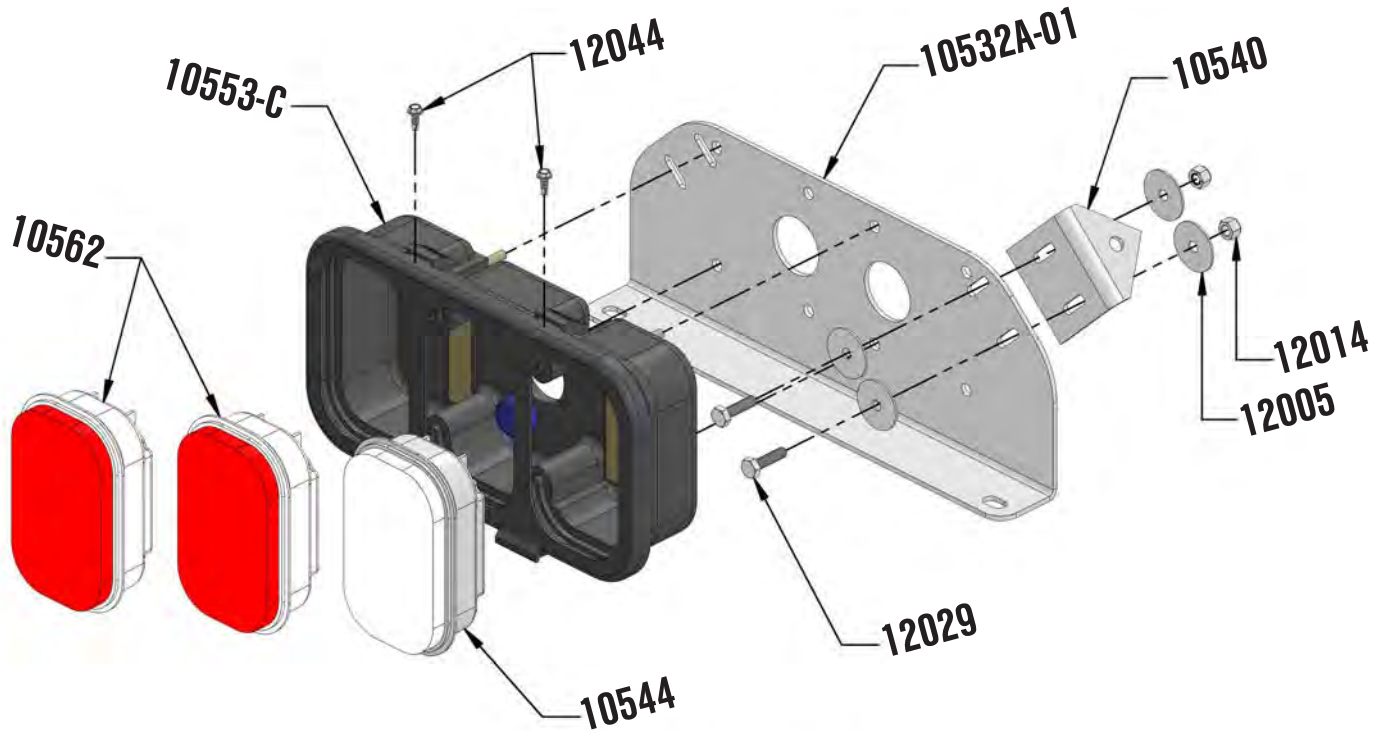
# Motor and Electronics Wiring

For TraFix MASH Scorpion II<sup>®</sup> METRO TMA



# Left Stored Tail Light Hardware 10508E-LED

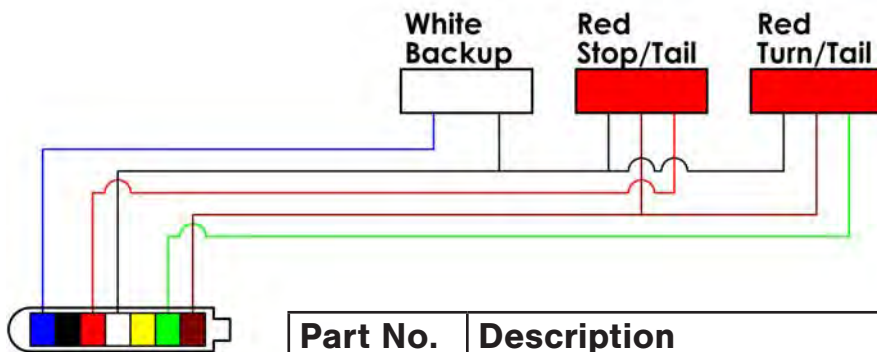
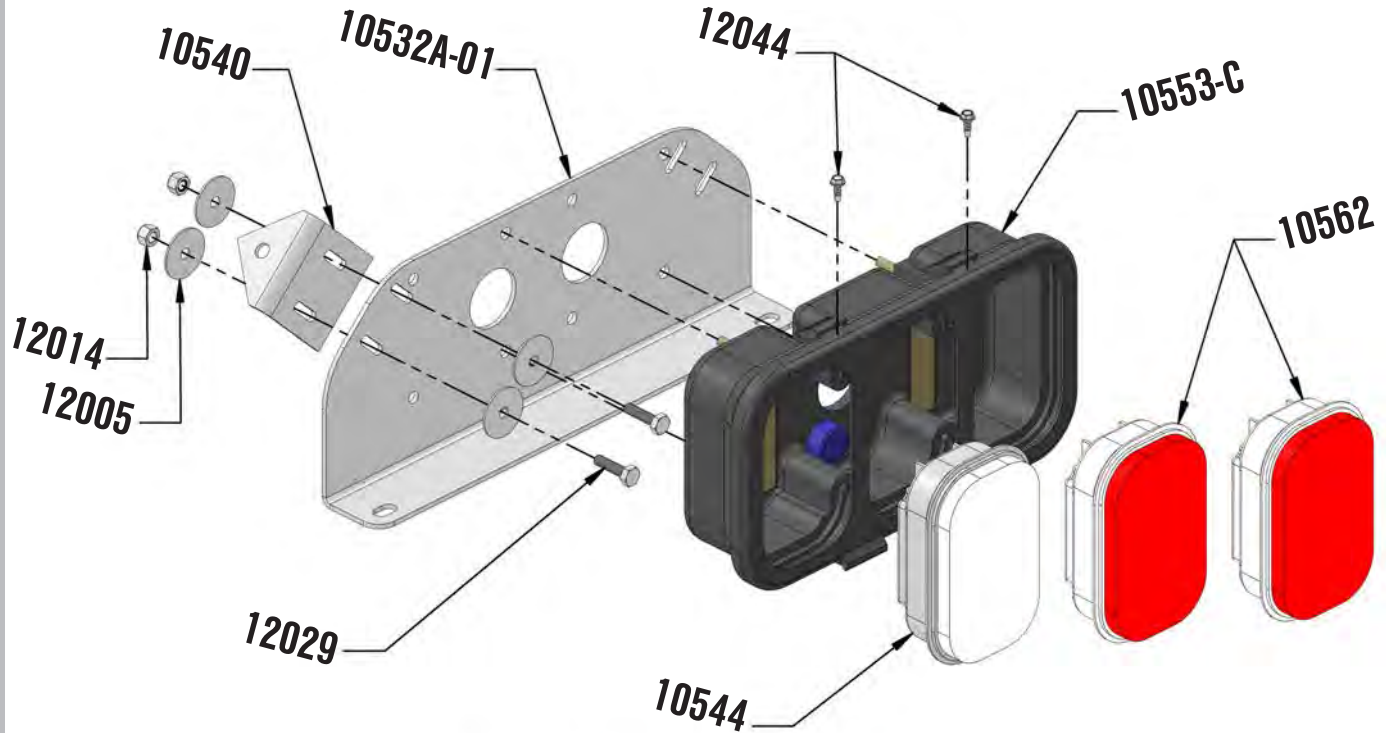
*For TraFFix MASH Scorpion II® METRO TMA*



Part No.	Description	Qty
10532A-01	Bracket, Universal	1
10540	Adjustment Angle	1
10553-C	Light Housing, Rubber	1
10562	LED Light, Red, Stop-Turn-Tail	2
10544	LED Light, White, Backup	1
10565	LED Light, Yellow, Turn	0
10533-6FT	Strut Tail Light Cable, Left, 6FT	1
12029	Bolt. HHCS, 1/4"-20 x 1"	2
12005	Fender Washer, 1/4"	4
12014	Locknut, 1/4"-20	2
12044	Screw, #8 x 1/2", Self Drilling, Hex Head	2

# Right Stored Tail Light Hardware 10516E-LED

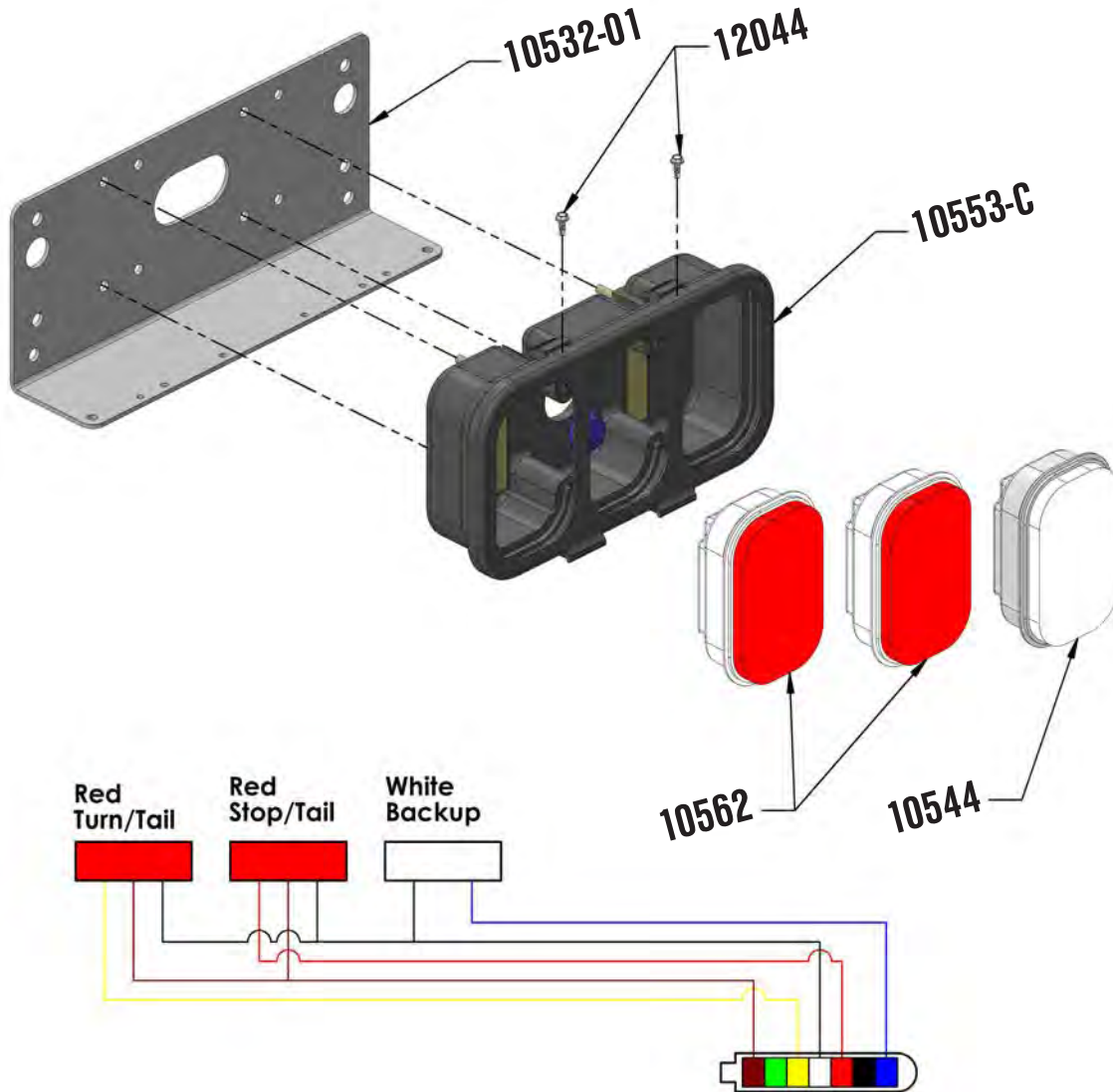
*For TraFFix MASH Scorpion II® METRO TMA*



Part No.	Description	Qty
10532A-01	Bracket, Universal	1
10540	Adjustment Angle	1
10553-C	Light Housing, Rubber	1
10562	LED Light, Red, Stop-Turn-Tail	2
10544	LED Light, White, Backup	1
10565	LED Light, Yellow, Turn	0
10534-6FT	Strut Tail Light Cable, Right, 6FT	1
12029	Bolt. HHCS, 1/4"-20 x 1"	2
12005	Fender Washer, 1/4"	4
12014	Locknut, 1/4"-20	2
12044	Screw, #8 x 1/2", Self Drilling, Hex Head	2

# Left Deployed Tail Light Hardware 10508A-LED

*For TraFFix MASH Scorpion II® METRO TMA*

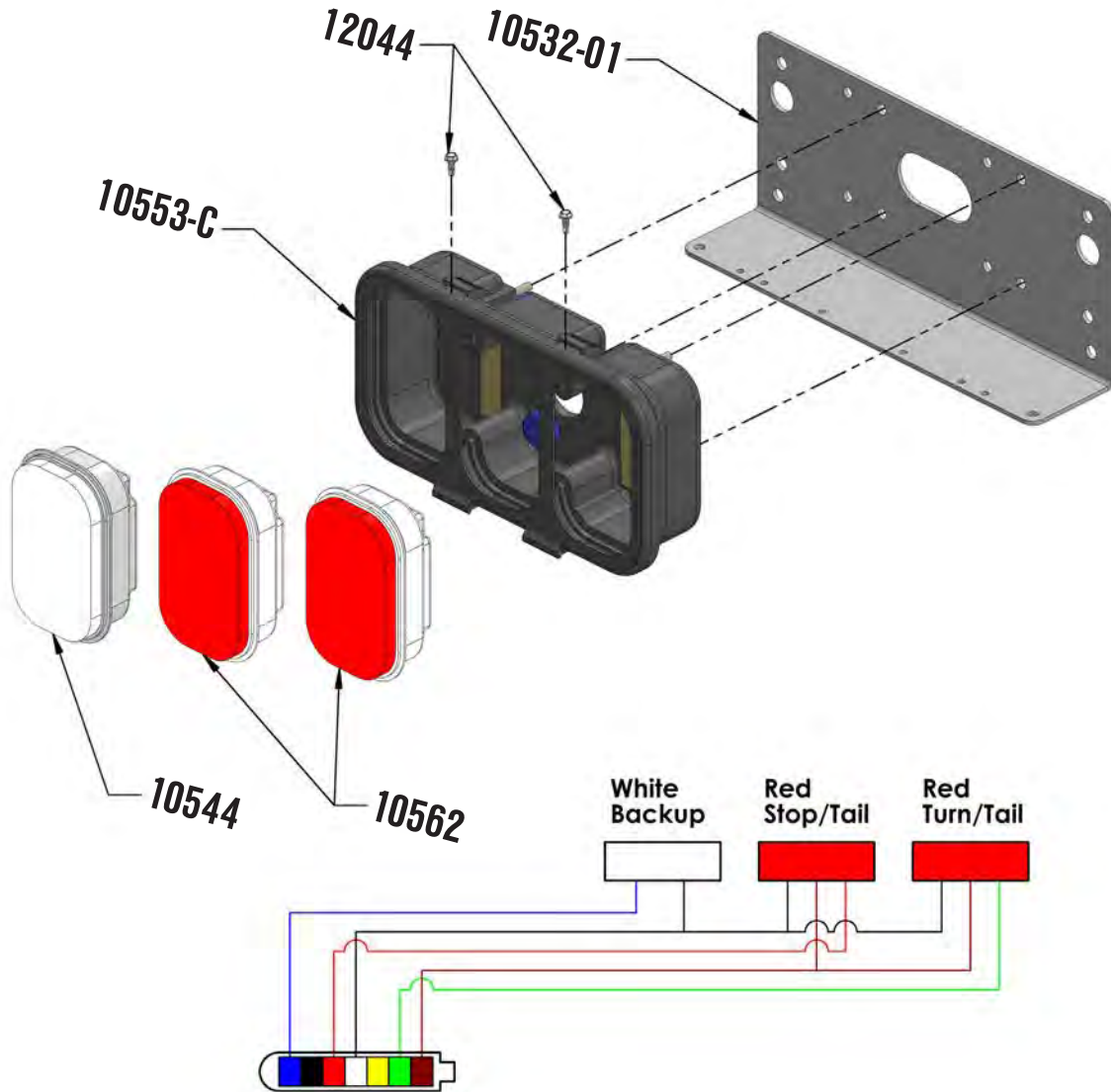


Part No.	Description	Qty
10532-01	Bracket, Universal	1
10553-C	Light Housing, Rubber	1
10562	LED Light, Red, Stop-Turn-Tail	2
10544	LED Light, White, Backup	1
10565	LED Light, Yellow, Turn	0
10519	Cartridge Tail Light Cable, Left, 120 Inch	1
12044	Screw, #8 x 1/2", Self Drilling, Hex Head	2



# Right Deployed Tail Light Hardware 10516A-LED

*For TraFFix MASH Scorpion II® METRO TMA*



Part No.	Description	Qty
10532-01	Bracket, Universal	1
10553-C	Light Housing, Rubber	1
10562	LED Light, Red, Stop-Turn -Tail	2
10544	LED Light, White, Backup	1
10565	LED Light, Yellow, Turn	0
10509	Cartridge Tail Light Cable, Right, 120 Inch	1
12044	Screw, #8 x 1 / 2", Self Drilling, Hex Head	2








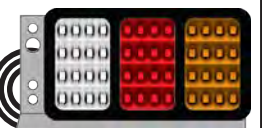






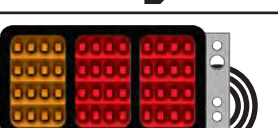


# **Appendix B**

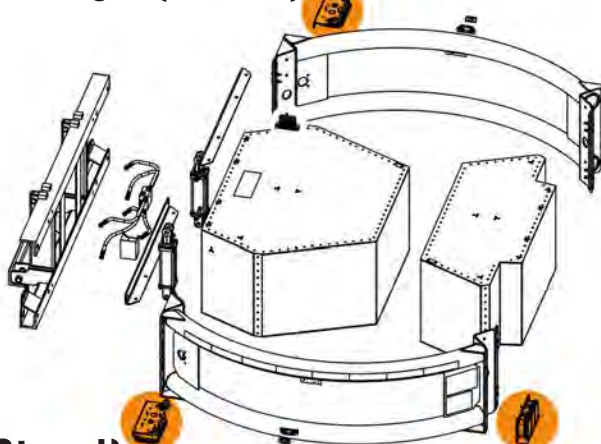
## ***Alternate Configurations***

# International Light Assemblies

*For TraFFix MASH Scorpion II® METRO TMA*

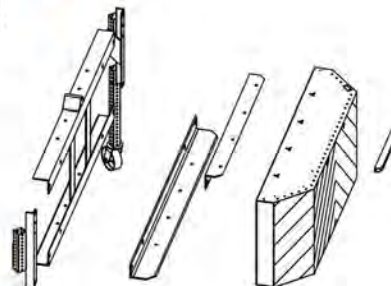
Color Pattern	Visible when Stored	Visible when Deployed
<b>RYW</b> 	<b>Right, METRO Front</b> 10505E-LED-RYW 	<b>Right, METRO Rear</b> 10505A-LED-RYW 
	 <b>Left, METRO Front</b> 10504E-LED-RYW	 <b>Left, METRO Rear</b> 10504A-LED-RYW
<b>YRW</b> 	<b>Right, METRO Front</b> 10505E-LED-YRW 	<b>Right, METRO Rear</b> 10505A-LED-YRW 
	 <b>Left, METRO Front</b> 10504E-LED-YRW	 <b>Left, METRO Rear</b> 10504A-LED-YRW
<b>YRR</b> 	<b>Right, METRO Front</b> 10505E-LED-YRR-01 	<b>Right, METRO Rear</b> 10505A-LED-YRR-01 
	 <b>Left, METRO Front</b> 10504E-LED-YRR-01	 <b>Left, METRO Rear</b> 10504A-LED-YRR-01

**Front Right (Stored)**



**Front Left (Stored)**

**Rear Right (Deployed)**



**Rear Left (Deployed)**

# Reflective Sheeting

*Includes Module A with One Color of Reflective Sheeting*

---

## **10400A**

4" Yellow Sheeting on Black Module  
*Avery MVP Sheeting*



## **10400A-B1AV-6Y**

6" Yellow Sheeting on Black Module  
*Avery Hi-Intensity Prismatic Sheeting*



## **10400A-B1DG-6O**

6" Orange Sheeting on Black Module  
*3M Diamond Grade Sheeting*



## **10400A-B1DG-8O**

8" Orange Sheeting on Black Module  
*3M Diamond Grade Sheeting*



## **10400A-W1AV-6R**

6" Red Sheeting on White Module-Front  
*Avery Hi-Intensity Prismatic Sheeting*



## **10400A-W1DG-4O**

4" Orange Sheeting on White Module-Front  
*3M Diamond Grade Sheeting*



*One Color: Foreground color is reflective sheeting, non-reflective module as background color.*

# Reflective Sheeting

*Includes Module A with Two Colors of Reflective Sheeting*

## **10400A-B1HI-6OW**

6" Orange and White Sheeting  
*3M Hi-Intensity Prismatic Sheeting*



## **10400A-B1AV-6RW**

6" Red and White Sheeting  
*Avery Hi-Intensity Prismatic Sheeting*



## **10400A-B1AV-8RW**

8" Red and White Sheeting  
*Avery Hi-Intensity Prismatic Sheeting*



## **10400A-B1AV-6RY**

6" Red and Yellow Sheeting  
*Avery Hi-Intensity Prismatic Sheeting*



## **10400A-B1OR-6RL**

6" Red and Lime Sheeting  
*Oralite V98 Sheeting*



## **10400A-B1DG-8OL**

8" Orange and Lime Sheeting  
*3M Diamond Grade Sheeting*



*Two Colors: Foreground and background sheeting colors are both reflective.*

# **Appendix C**

## ***Mounting***

# TMA Mounting Options

*These attach the TMA to your truck's frame rails.*

---

## 10350 Standard Mount

*Semi-permanent  
Mount for TMAs.*



## Fast-Trak Mounting System

*For easier attachment,  
removal, or swapping  
of TMAs.*



---

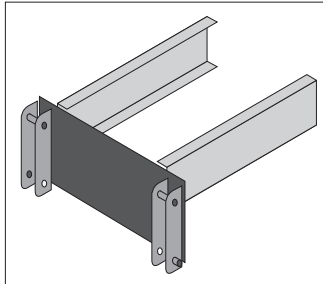
*See the following pages for more info  
about Fast-Trak Configurations. →*

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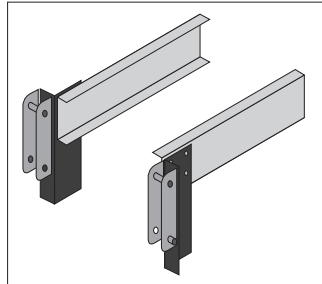
# Fast-Trak Mounting

## *Truck-Side Trak Mounting Configurations*

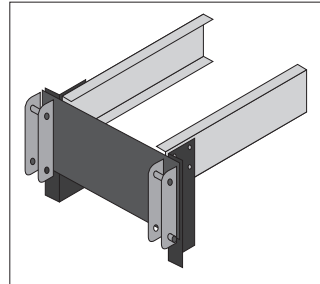
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**Plate Mounting**  
*with Traks*



**Angle Mounting**  
*with Traks*



**Plate & Angle  
Mounting\*\***  
*with Traks*



**Traks-Only  
Mounting\*\*\***

---

## Which type of mounting do you need?

You will probably need a plate or a set of angles to mount the Traks on your truck frame rails. *Plate Mounting* is the most common. However, if something is blocking the installation of a plate, you may want to opt for *Angle Mounting*. See the next two Extension pages to order Extensions with Mounting, or see the hardware page to order Mounting by itself.

**\*\* Plate and Angle:**

Order an *Extension with Angle Mounting*.

Add *Mounting Plate* (11141-01) as a line item.

**\*\*\*** The *Extension Frame with Traks* and *Extension Frame only* options are for those who already have mounting partially or fully installed. A truck must have a set of Traks installed in order to support a Fast-Trak connection.



# Fast-Trak Extension Lengths

**18" and above are Arrowboard Lift Compatible**



**Short (6-12")**

## **Extension Frame**

*Cannot incorporate  
Arrowboard Vertical Lift*



**Long (18-36")**

## **Extension Frame**

*Includes Mounting Tubes  
for Arrowboard Vertical Lift  
Arrowboard Vertical Lift  
is sold separately.*



**11160A**

*Arrowboard Vertical Lift  
(AVL) for Fast-Trak  
Connects to Fast-Trak  
Arrowboard Mounting Tubes.*

## Standard Configurations

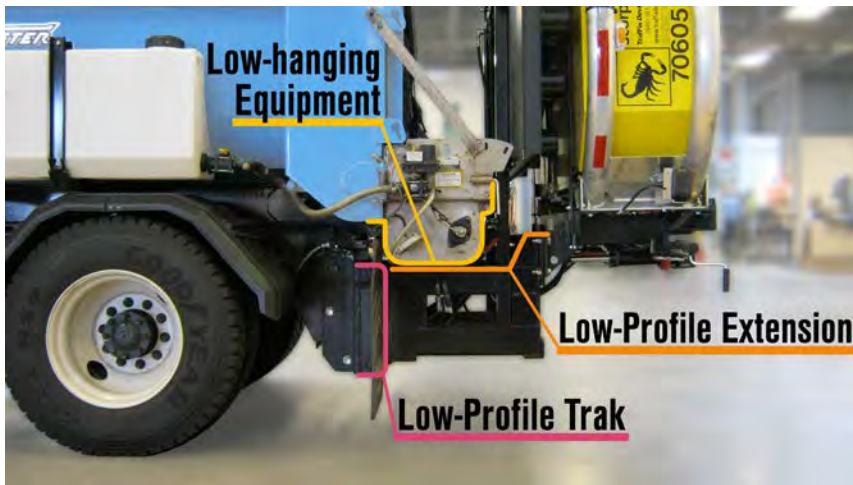
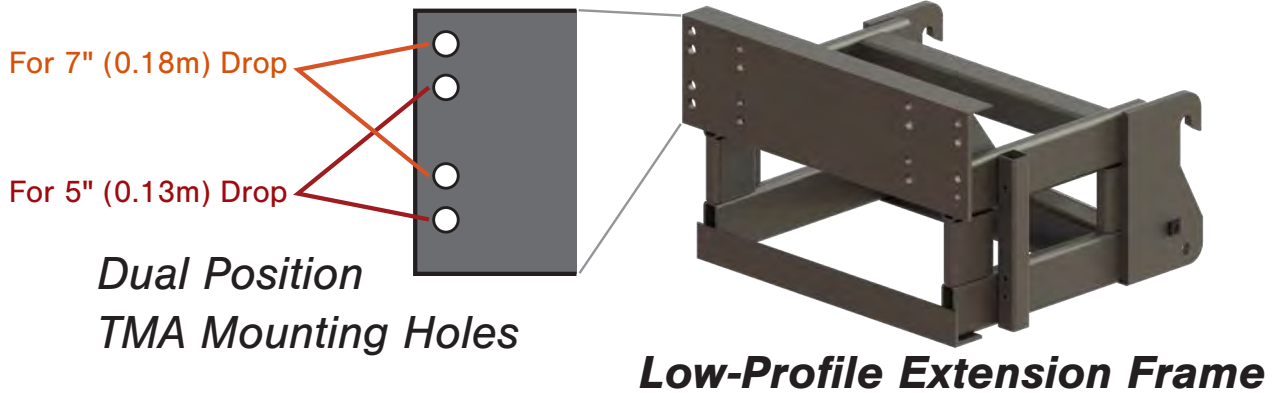
*Mounting Type Included with Extension Frame:*

	<b>Frame with Plate &amp; Traks</b>	<b>Frame with Angles &amp; Traks</b>	<b>Frame with Traks Only</b>	<b>Frame Only</b>	
<b>Length</b>	<b>6" *</b>	11140-06	11145-06	11135-06	11142-06
	<b>12" *</b>	11140-12	11145-12	11135-12	11142-12
	<b>18"</b>	11150-18	11155-18	11160-18	11152-18
	<b>24"</b>	11150-24	11155-24	11160-24	11152-24
	<b>30"</b>	11150-30	11155-30	11160-30	11152-30
	<b>36"</b>	11150-36	11155-36	11160-36	11152-36

*\* Cannot incorporate Arrowboard Vertical Lift*

# Low Profile Extension Frame

*For trucks with low-hanging equipment*



## Do you need Low-Profile?

If you have a truck with equipment on the back that hangs down lower than the truck bed, you probably need a Low-Profile Extension Frame.

## Low-Profile Configurations

*Mounting Type Included with Low-Profile Extension Frame:*

	Frame with Plate & Traks	Frame with Angles & Traks	Frame with Traks Only	Frame Only	
<i>Length</i>	<b>12"</b>	11170-12	11175-12	11180-12	11171-12
	<b>18"</b>	11170-18	11175-18	11180-18	11171-18
	<b>24"</b>	11170-24	11175-24	11180-24	11171-24
	<b>30"</b>	11170-30	11175-30	11180-30	11171-30
	<b>36"</b>	11170-36	11175-36	11180-36	11171-36

18-36" Extensions include Mounting Tubes for Arrowboard Vertical Lift. AVL sold separately.

# Fast-Trak Hardware

## *and Individual Components*



	Low-Profile Extensions
12"	11171-12
18"	11171-18
24"	11171-24
30"	11171-30
36"	11171-36

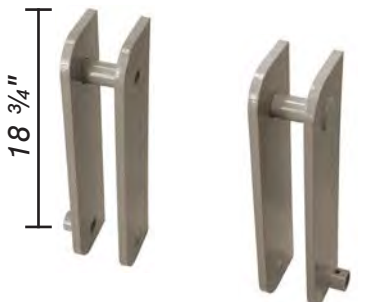


	Long Extensions
18"	11152-18
24"	11152-24
30"	11152-30
36"	11152-36

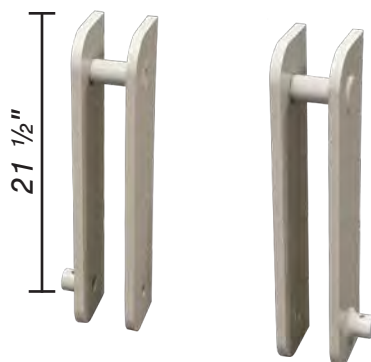


	Short Extensions
6"	11142-06
12"	11142-12

### Low-Profile Traks\*



### Standard Traks\*



**T-Pin**  
10934-FTSC

### Locking Pin



12058

*\*Standard and Low-Profile Traks are not interchangeable!*

### Mounting Plate

11141-01



**Bolt**  
12129



**Nut**  
12012

### Mounting Angles

10355      10354



Left



Right

**TraFFix  
Devices Inc.**



*Engineered Products for Safer Highways*

ScorpionHelp@traffixdevices.com

(949) 361-5663

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