

Replacement Parts Guide

For TraFFix MASH Scorpion II[®] C-90 TMA

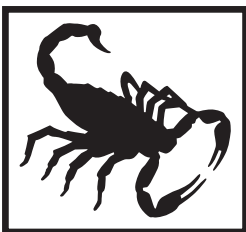
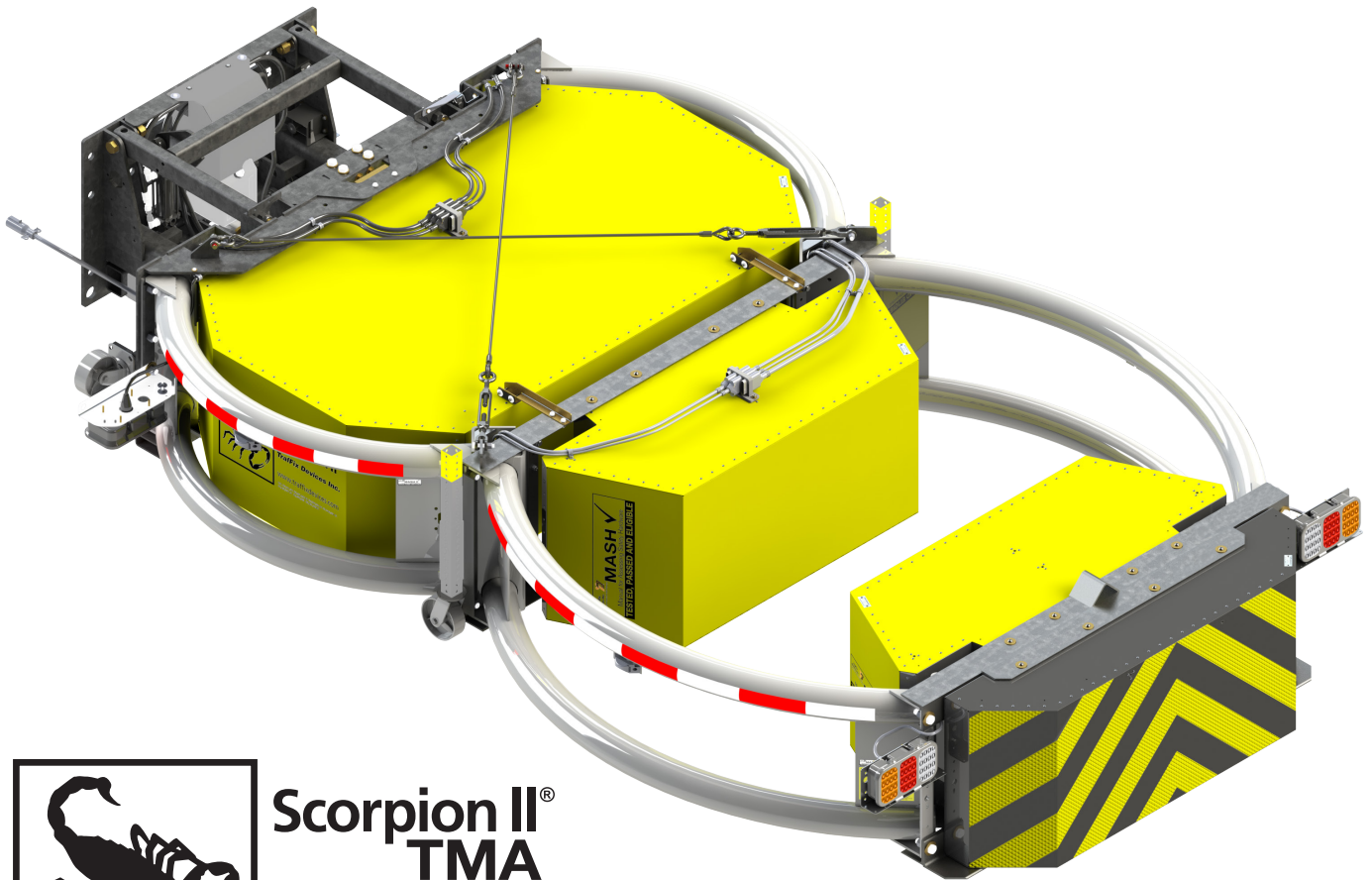
**TraFFix
Devices Inc.**
Engineered Products for Safer Highways



MASH ✓[®]

Manual for Assessing Safety Hardware

TESTED, PASSED AND ELIGIBLE



**Scorpion II[®]
TMA**

*Truck Mounted
Attenuator*

Overview & Orientation

of *TrafFix MASH Scorpion II® C-90 TMA*

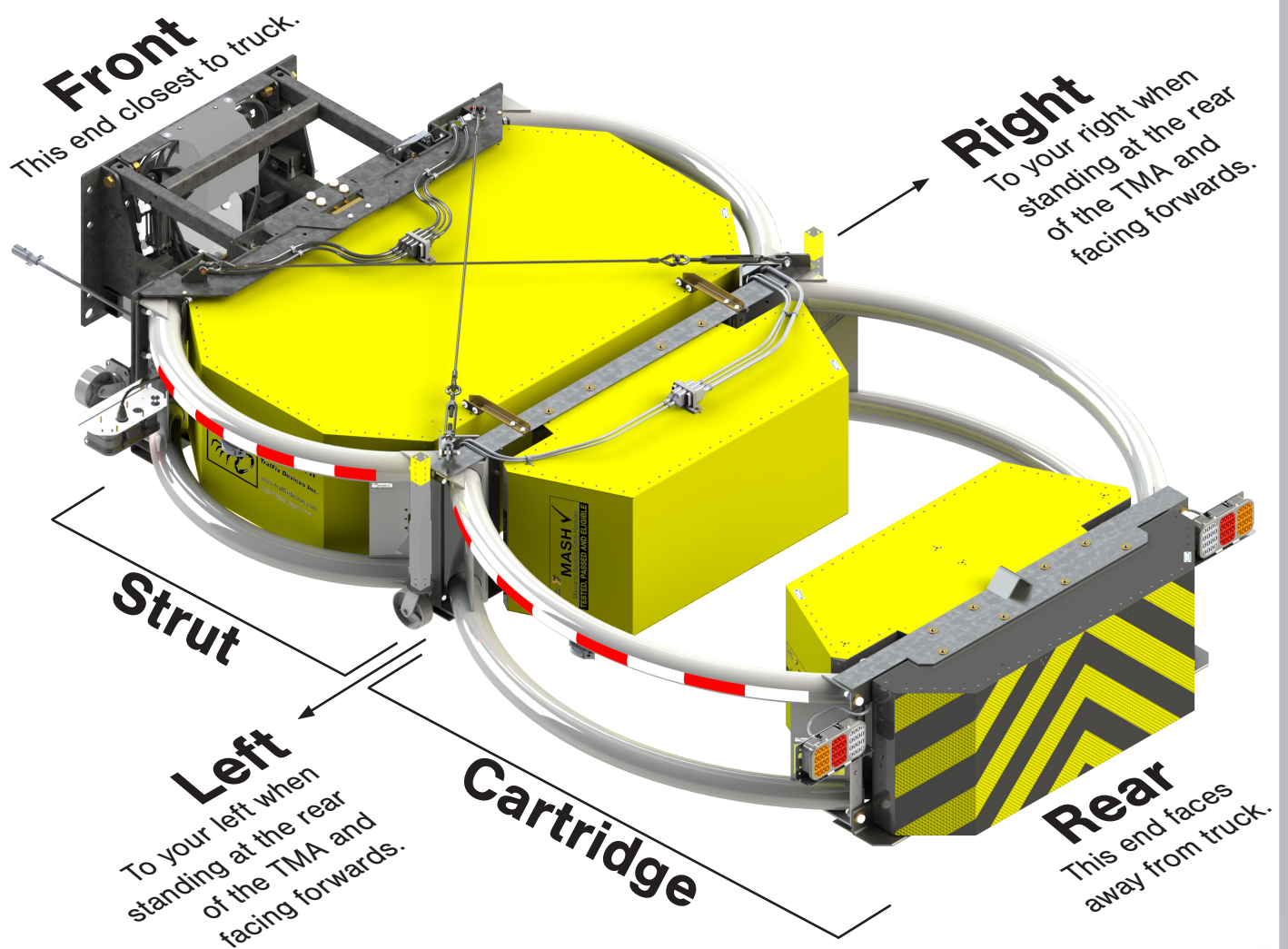
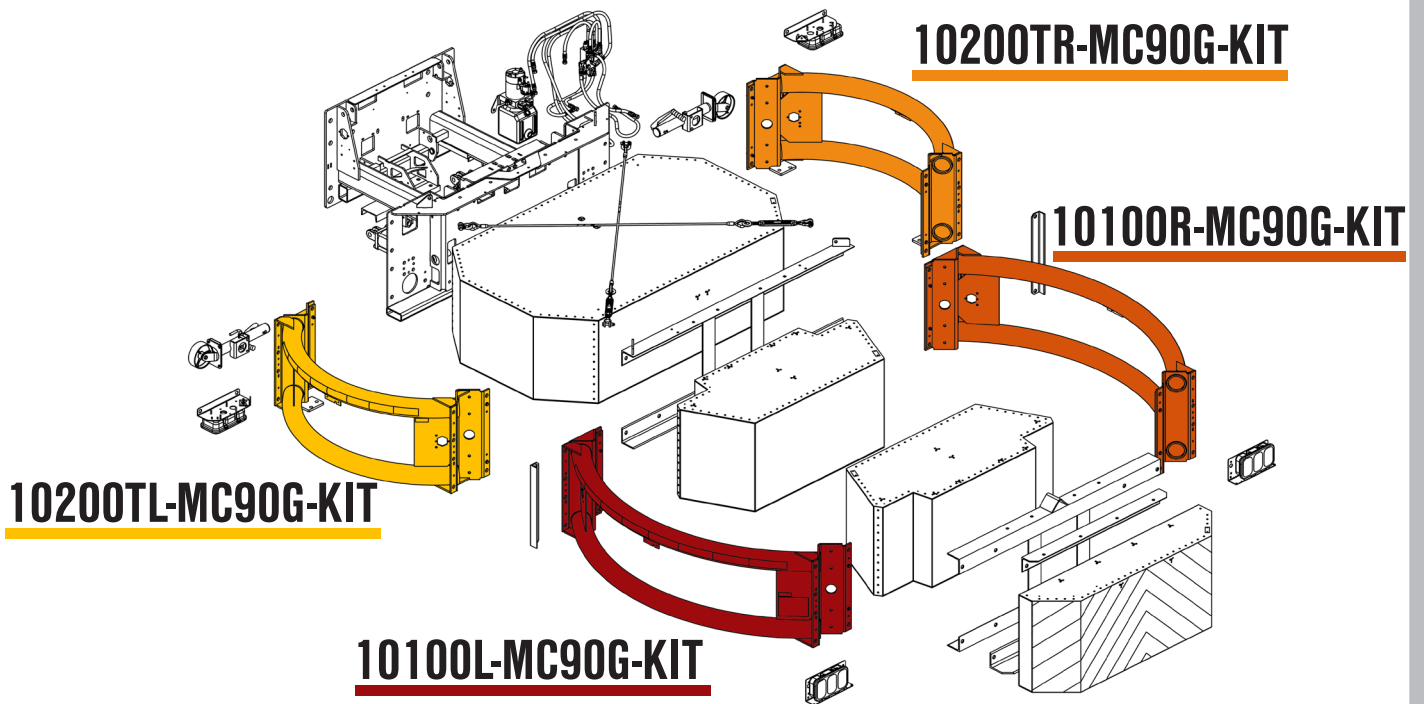


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Replacement Tubes

For *TraFFix MASH Scorpion II[®] C-90 TMA*



Components Removed for Clarity.

Replacement Tubes

For TrafiX MASH Scorpion II[®] C-90 TMA

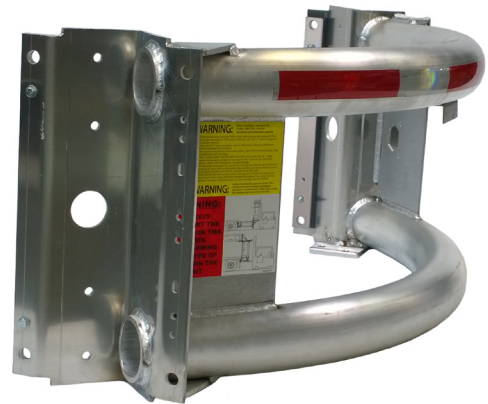
10200TL-MC90G-KIT

C-90 Strut Tube, Front Left



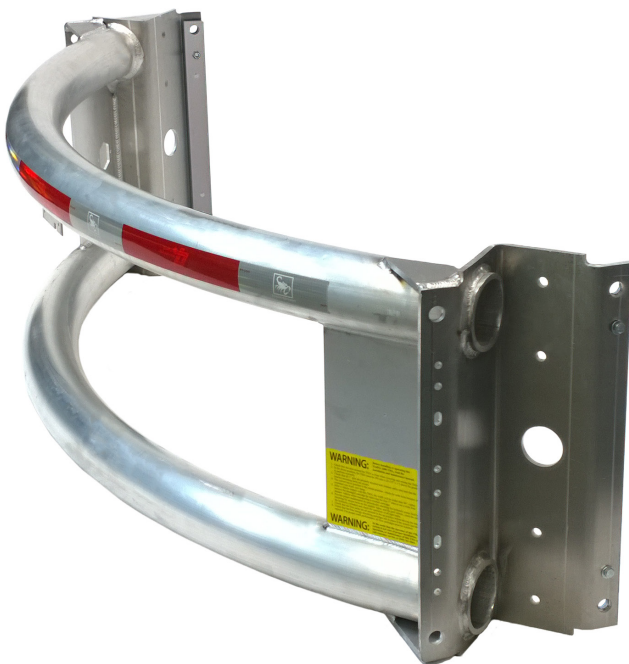
10200TR-MC90G-KIT

C-90 Strut Tube, Front Right



10100L-MC90G-KIT

C-90 Cartridge Tube, Rear Left



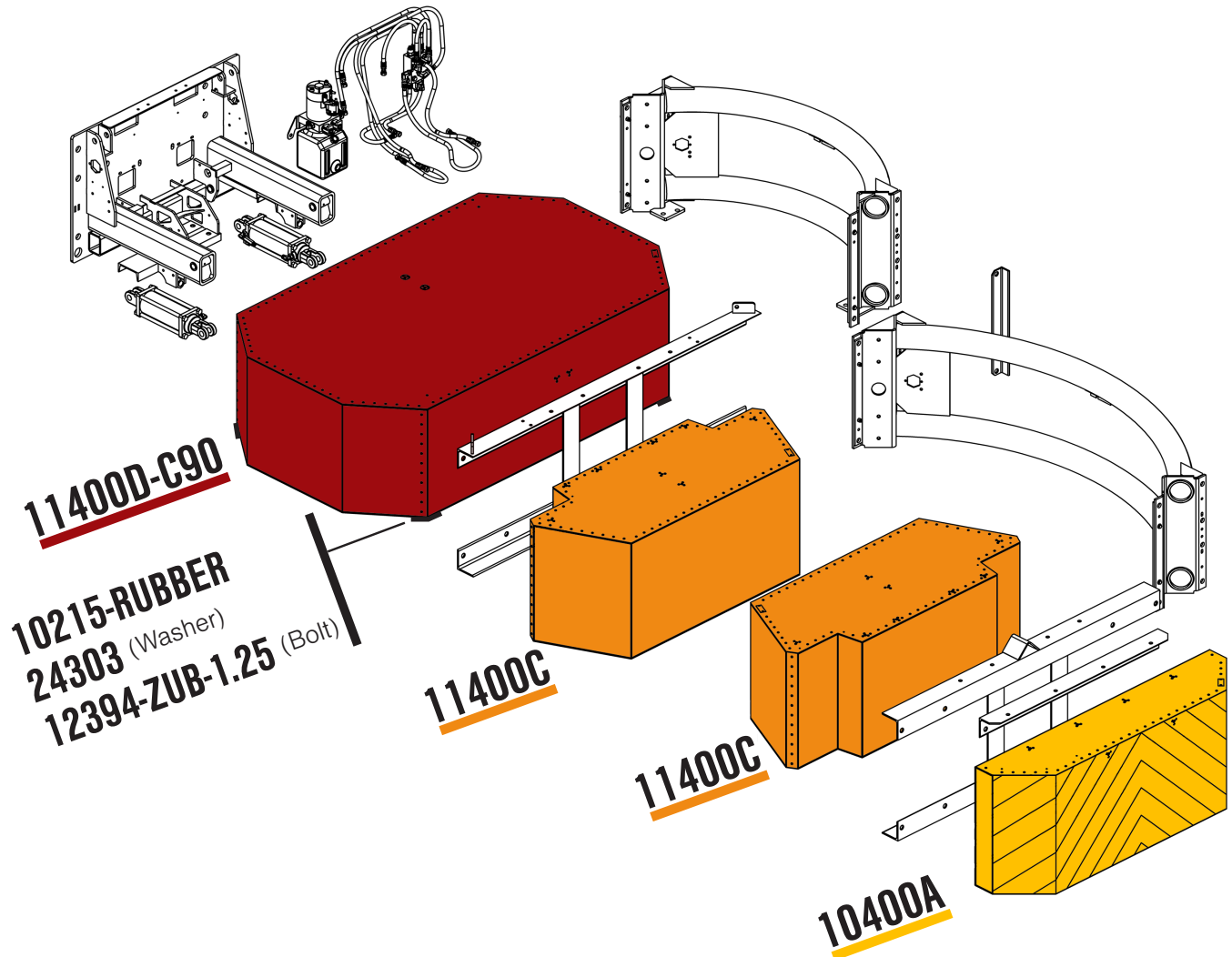
10100R-MC90G-KIT

C-90 Cartridge Tube, Rear Right

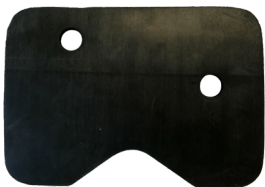


Energy-Absorbing Modules

For TrafFix MASH Scorpion II® C-90 TMA



Components Removed for Clarity.



10215-RUBBER

Gasket, Bottom Bracket

For Module D



24303

Washer

For Modules



12394-ZUB-1.25

Bolt

For Modules

Energy-Absorbing Modules

For Traffix MASH Scorpion II® C-90 TMA

Hardware Included for all Modules



11400D-C90

Module D

*Energy-Absorbing Module
Includes Scorpion Logo*



11400C

Module C

Energy absorbing Module



10400A

Module A

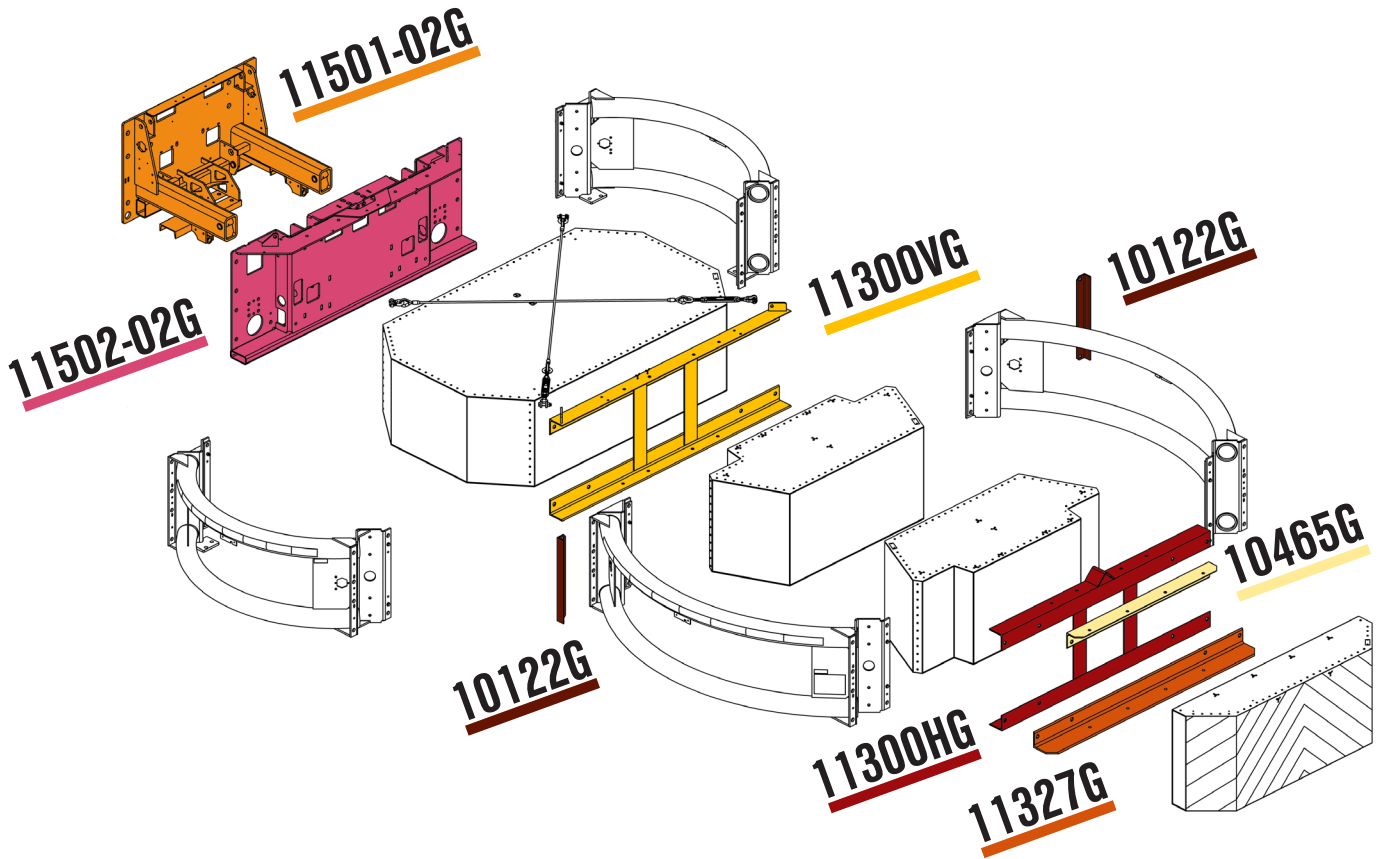
*Energy absorbing Module
4" Yellow Sheeting*



**Other Sheeting Options Available,
see page 32.*

Frames, Diaphragms and Angles

For TraFix MASH Scorpion II® C-90 TMA



Components Removed for Clarity.

10465G

Top Angle
Cartridge Rear
Galvanized



10122G

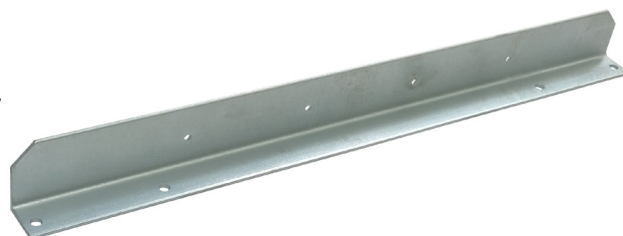
Vertical
Support
Angle
Cartridge
Tube

Galvanized



11327G

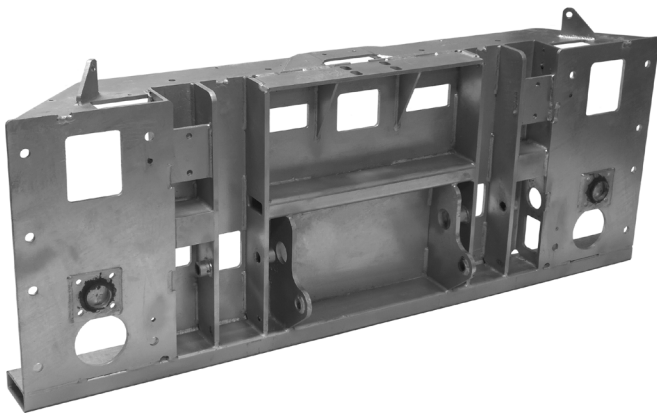
Bottom Angle
Cartridge Rear
Galvanized





11501-02G

Truck-Side Frame
Attaches to Truck Rear
Galvanized

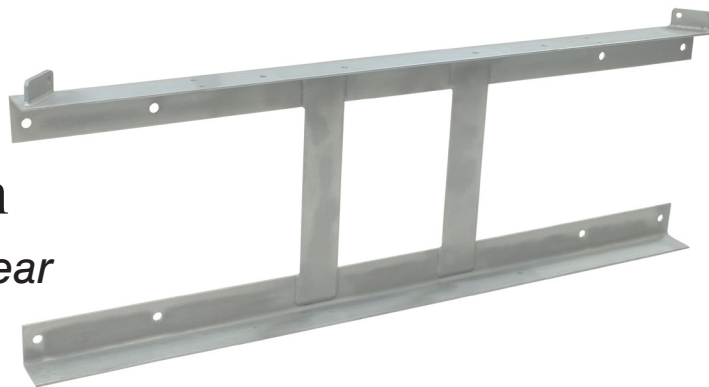


11502-02G

Backup Frame
Attaches TMA to Truck Side Frame
Galvanized

11300VG

Middle Diaphragm
Cartridge Front/Strut Rear
Galvanized



11300HG

Rear Diaphragm
Cartridge Rear
Galvanized

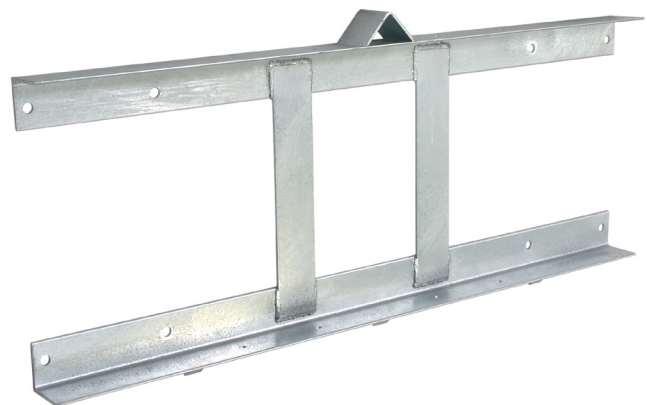
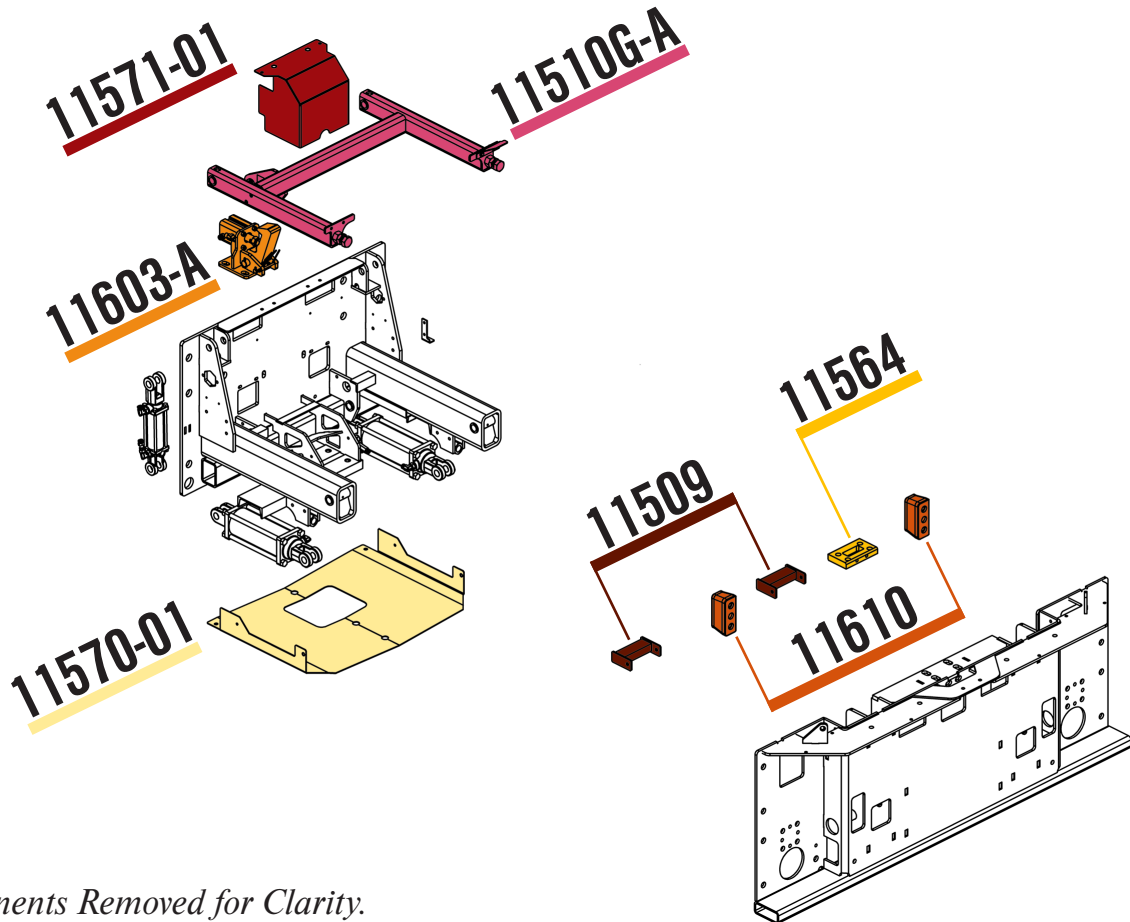
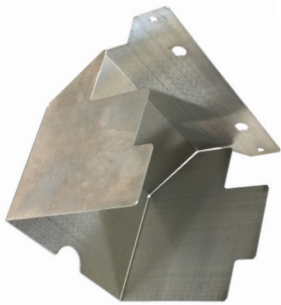


Plate and Enclosure

For **TrafFix MASH Scorpion II® C-90 TMA**

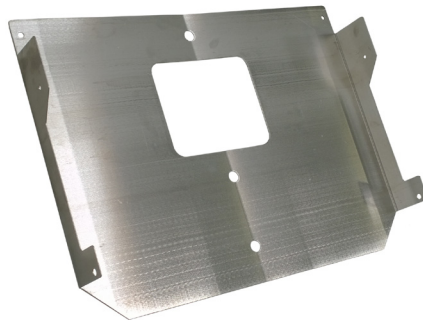


Components Removed for Clarity.



11571-01

Pump Enclosure



11570-01

Skid Plate

12144-C90-KIT

Pivot Pin Kit



*(Includes (2) Pivot Pins,
(2)Bolts, (2) Locknuts,
(2) Cotter Pins, (4) Washers,
and (4) Washers).*

Low-Pivot Mechanism

For TrafFix MASH Scorpion II® C-90 TMA

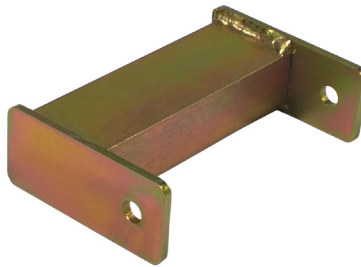
11610

Rubber Bumper



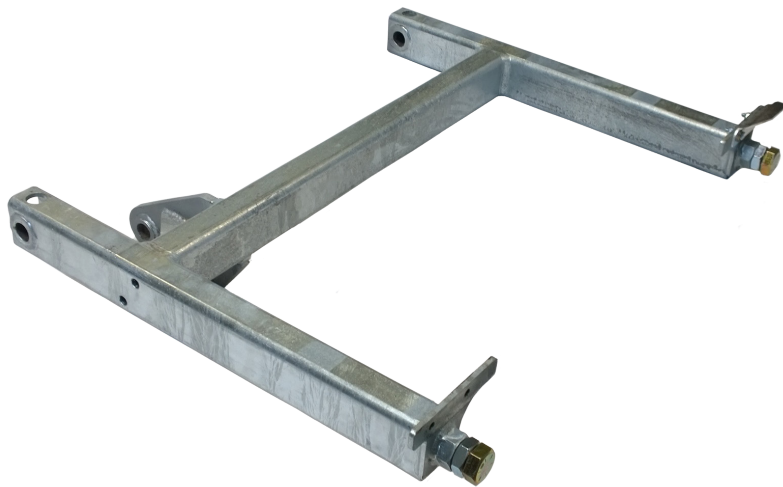
11509

Stop Bar



11564

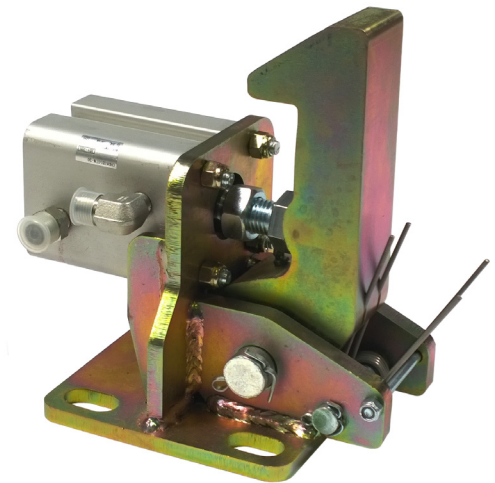
Latch Plate



11510G-A

Lockout Frame

Galvanized



11603-A

Locking Mechanism

Motor and Electronics

For TrafFix MASH Scorpion II® C-90 TMA



Motor Assembly

11604-12-B (12 Volt)

11604-24-B (24 Volt)

(Includes Valves, Solenoid, and Cap)

11615
Two Button Controller with Indicator Light includes 30 ft. Cable with 6-Pin Plug



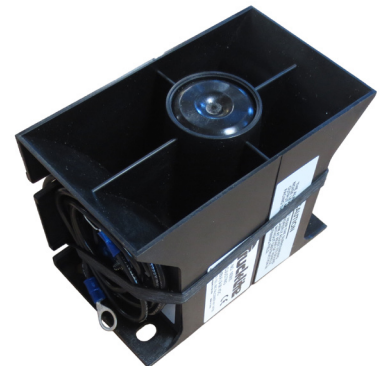
10506IN
Heavy Duty 6-Pin Plug Connector



10506TS-IN
Heavy Duty 6-Pin Socket Connector



10507C
Motion Alarm



Fuses

12049

12 Volt, 250 Amp

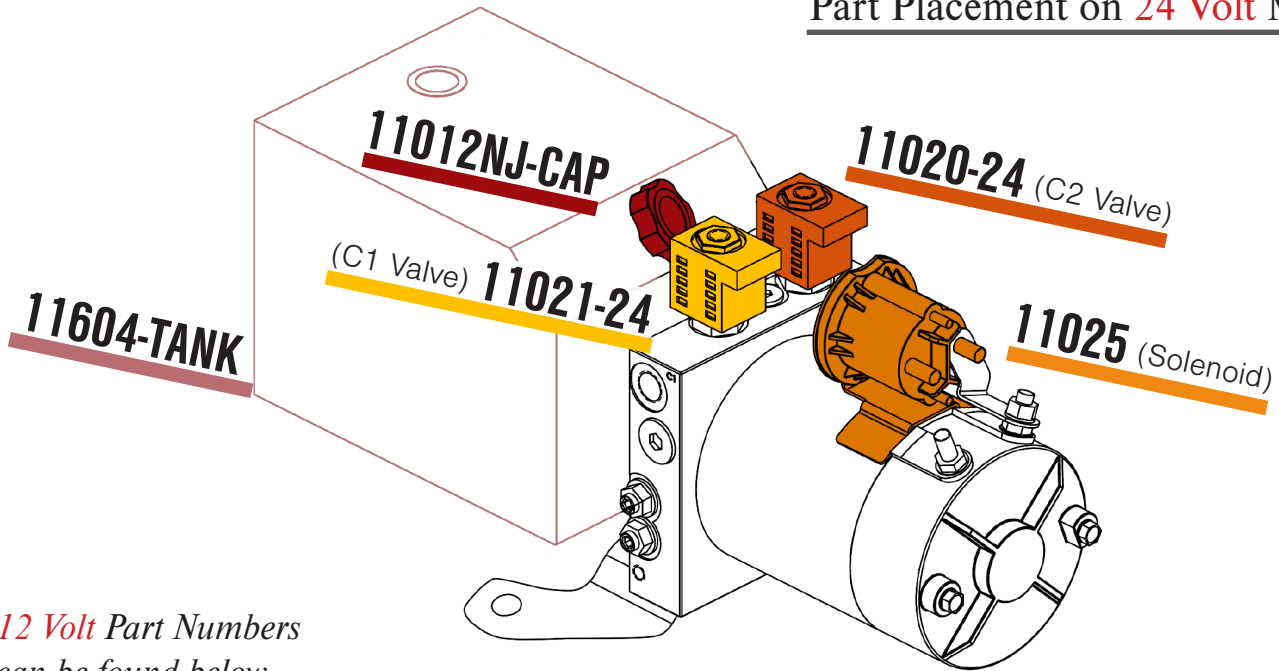


12089

24 Volt, 150 Amp



Part Placement on **24 Volt** Motor



12 Volt Part Numbers can be found below.

11012NJ-CAP



Cap



Solenoid

11024 (12 Volt)

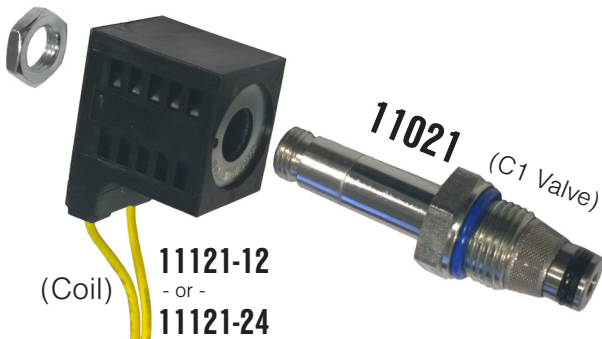
11025 (24 Volt)

Valves

11021-12 (12 Volt)

11021-24 (24 Volt)

C1 Valve Kit. Includes:



11020-12 (12 Volt)

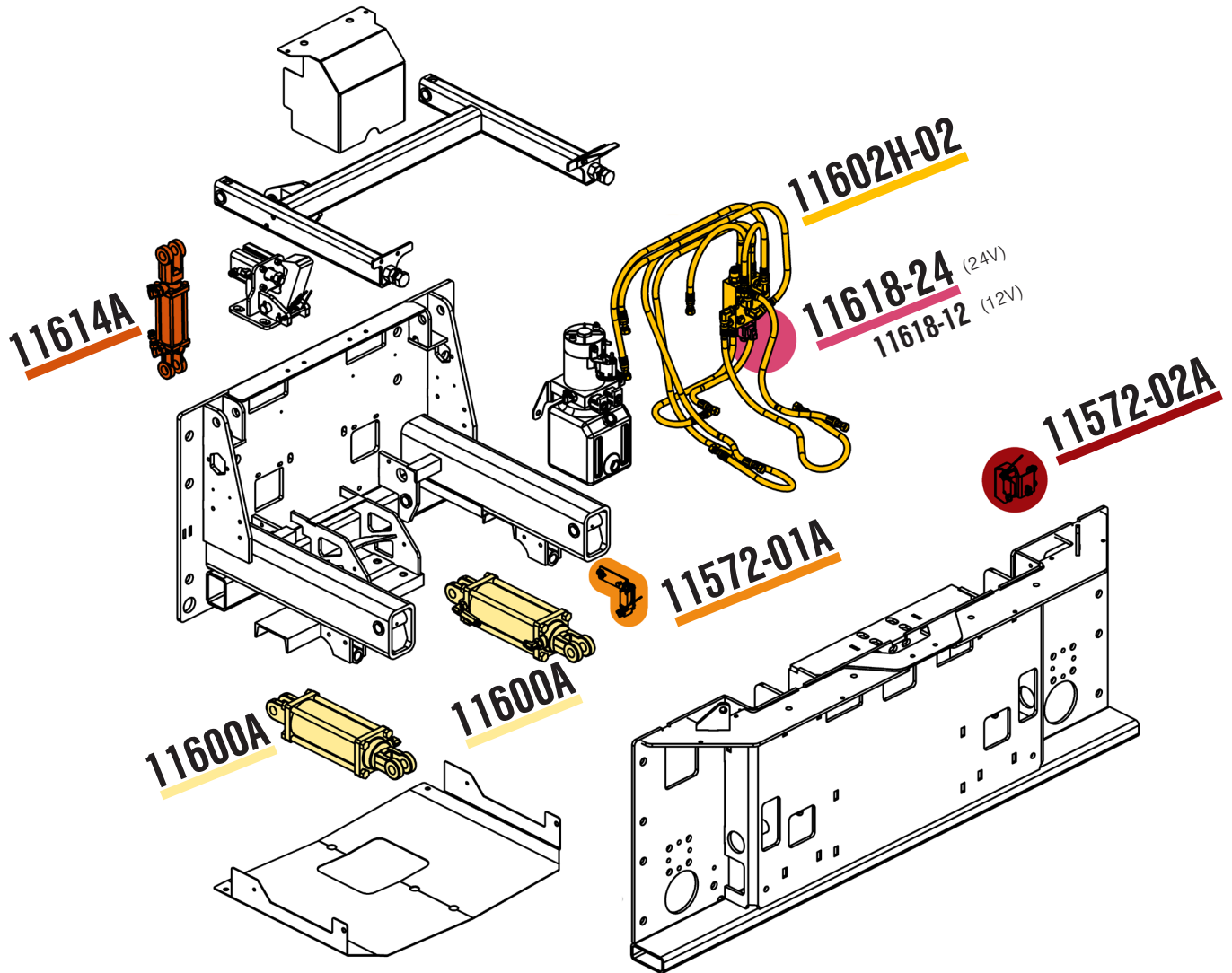
11020-24 (24 Volt)

C2 Valve Kit. Includes:



Hydraulic Cylinders

For **TrafFix MASH Scorpion II® C-90 TMA**



Components Removed for Clarity.

11600A

Lifting Cylinder, 3.5"



11614A

Lockout Frame Cylinder, 2"



Hose Kit and Switches

For TrafFix MASH Scorpion II® C-90 TMA



11602H-02

Hydraulic
Hose Kit



11572-02A

Upper Limit Switch
Controls Indicator Light

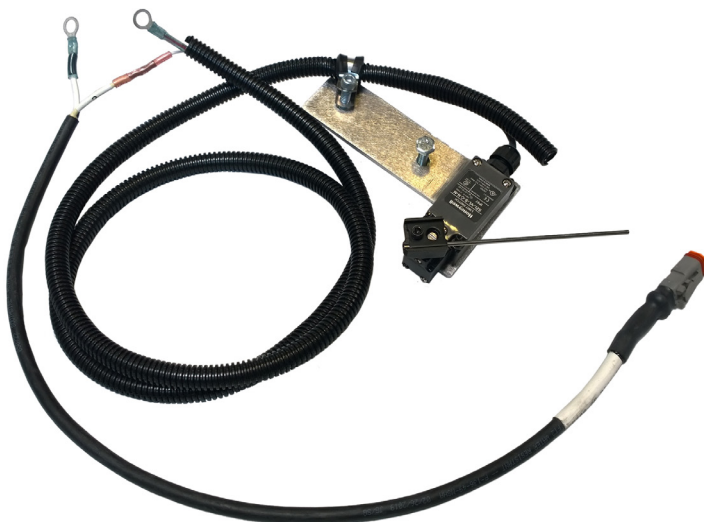
11618-12

12V Valve Coil



11618-24

24V Valve Coil



11572-01A

Lower Limit Switch
Controls Solenoid Valve

11600A

Cylinder - 3.5"



10663
90° Fitting

10661
Velocity Fuse

10662
90° Fitting

Hardware for 11600A

*Not Included
Must be ordered separately*

12083
Washer

12015-3.375
Clevis Pin, 3-3/8"

12083
Washer



12033-01
Cotter Pin, Zn
(2 required)



10649-01
Seal Kit, TH, 3.5"

12017
Hairpin

12033-01
Cotter Pin, Zn



12001
Washer

12015-3.375
Clevis Pin, 3-3/8"

11614A

Lockout Frame Cylinder - 2"



10663
90° Fitting

11616
Straight Fitting

10663
90° Fitting

Hardware for 11614A

*Not Included
Must be ordered separately*

12001
Washer

12015-3.375
Clevis Pin, 3-3/8"

12001
Washer



12033-01
Cotter Pin, Zn
(2 required)



10638-01
Seal Kit, TH, 2"

12017
Hairpin

12033-01
Cotter Pin, Zn

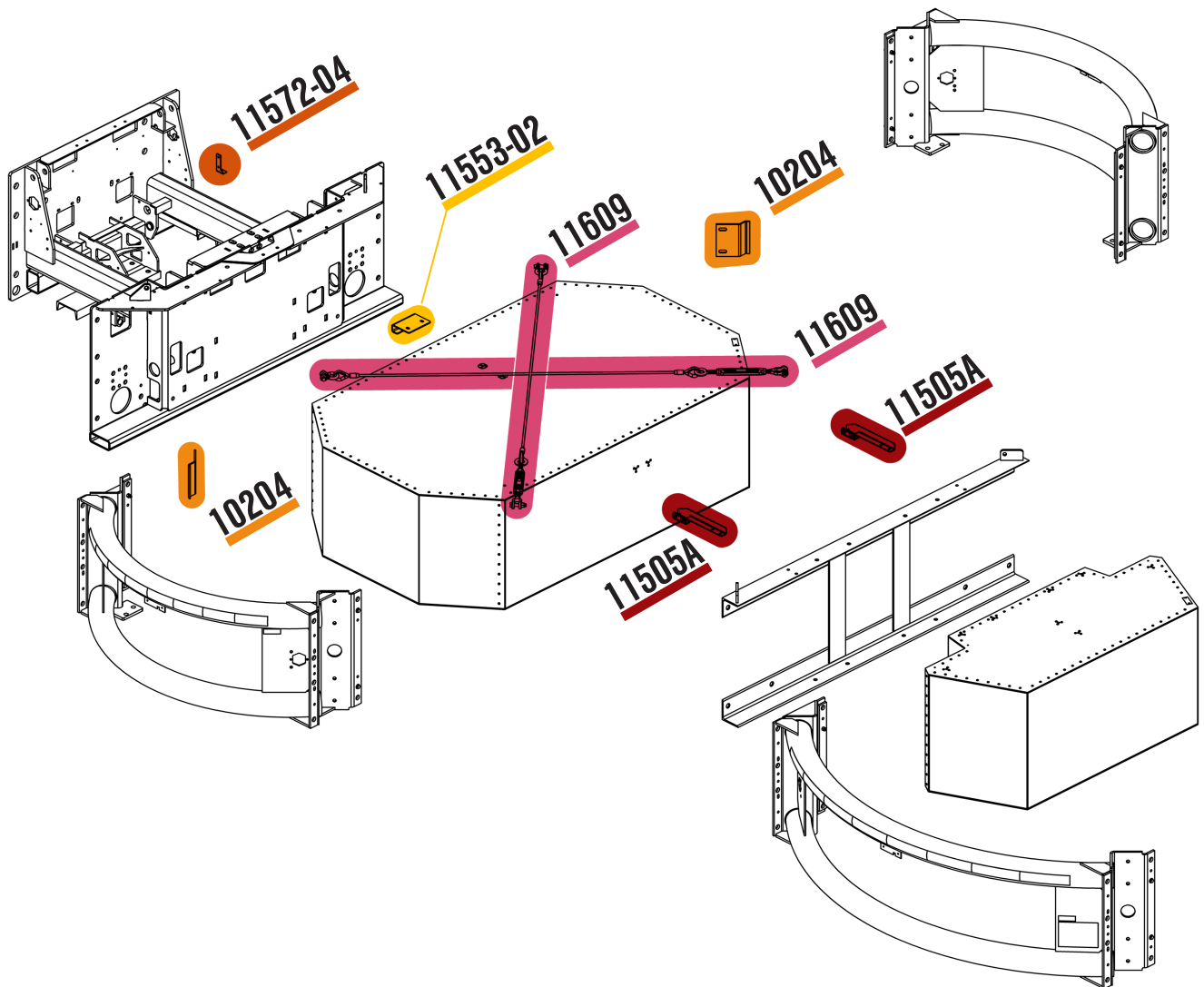


12001
Washer

12015-3.375
Clevis Pin, 3-3/8"

Misc. Components

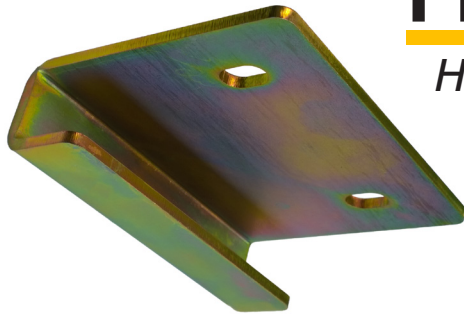
For *TraFFix MASH Scorpion II® C-90 TMA*



Components Removed for Clarity.

Misc. Components

For TrafFix MASH Scorpion II® C-90 TMA



11553-02

Holding Plate

Energy-Absorbing Bracket

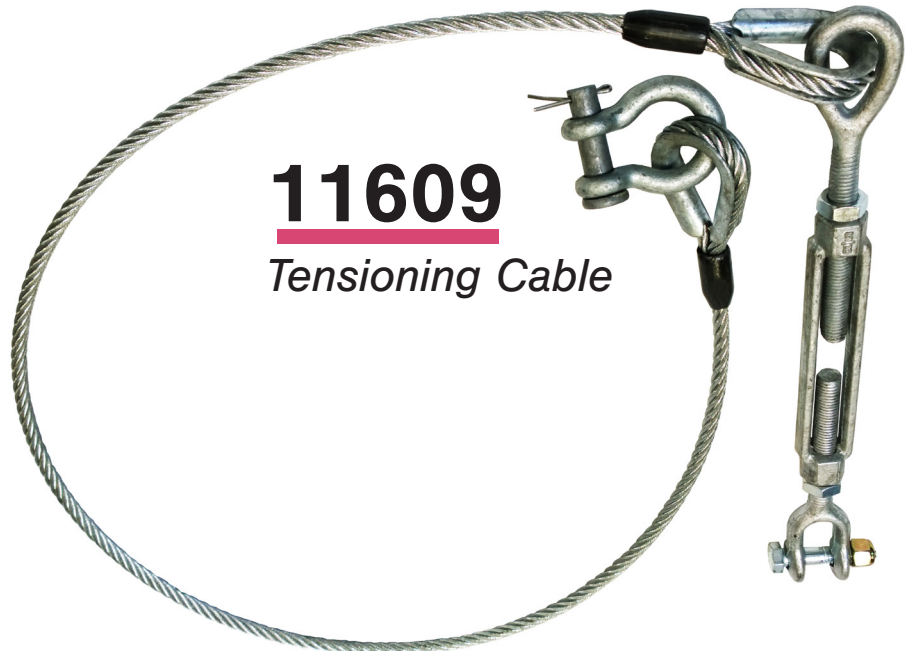
10204



11572-04

Trigger Plate

*Indicates TMA
is stowed*

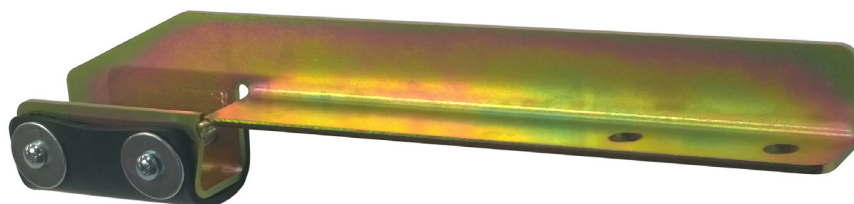


11609

Tensioning Cable

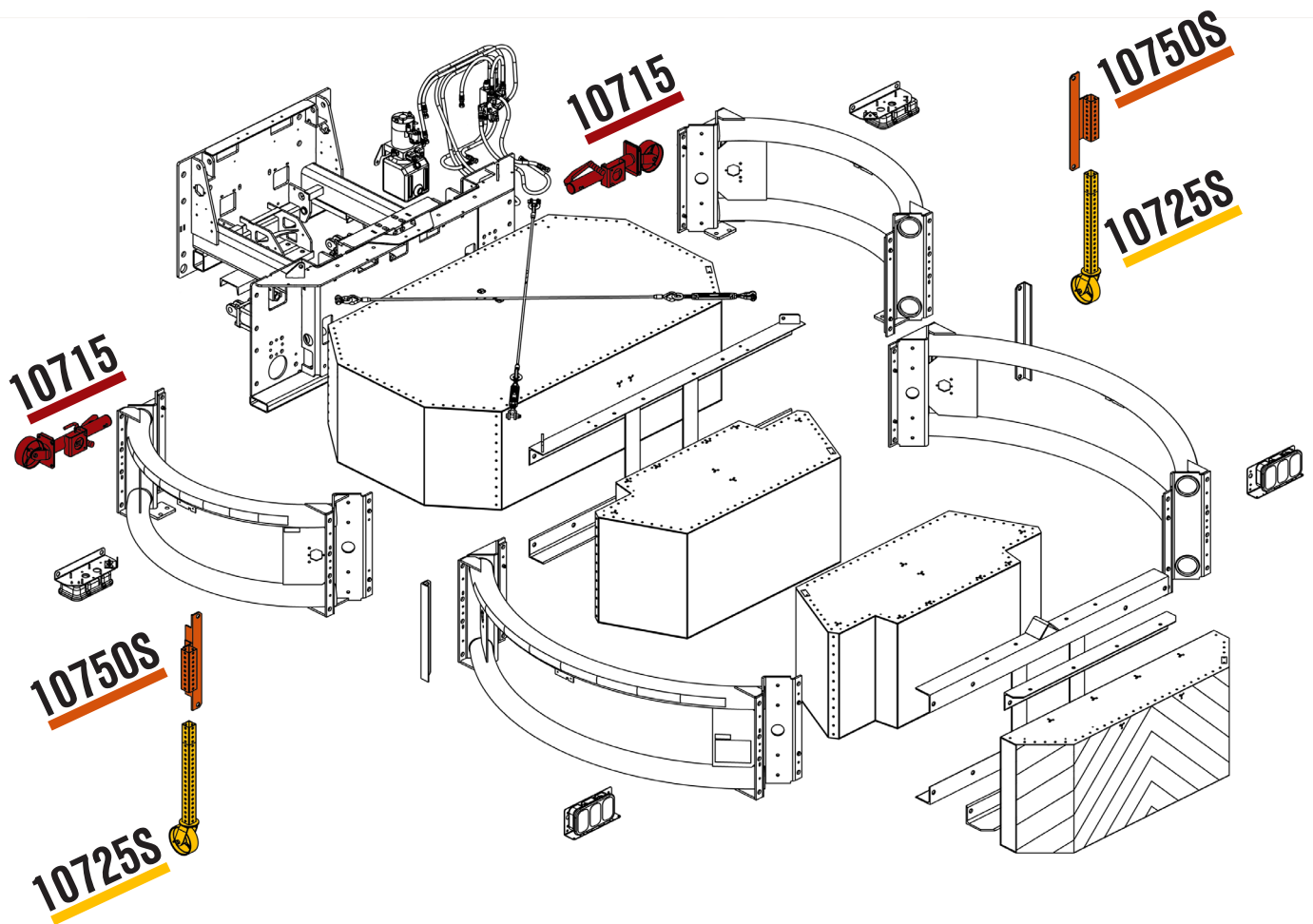
11505A

Retaining Bar



Replacement Jacks

For *TraFFix MASH Scorpion II[®] C-90 TMA*



Components Removed for Clarity.

Swivel Jack

Choose from either *Regular Duty* or *Heavy Duty*.
Both are universal (suitable for left or right placement).

10715

*Swivel Jack
Regular Duty*



OR

11508-01S

*Swivel Jack Top Wind
Heavy Duty*

+

11506

*Swivel Jack Drop Leg,
6" Caster, Heavy Duty*



10702

*Snap Ring
for Swivel Jack*



Drop Jack

Universal (suitable for left or right placement).

10750S

*Mounting Bracket for
Drop Jack*



90005-LP

*Lock Pin,
Square Retainer*



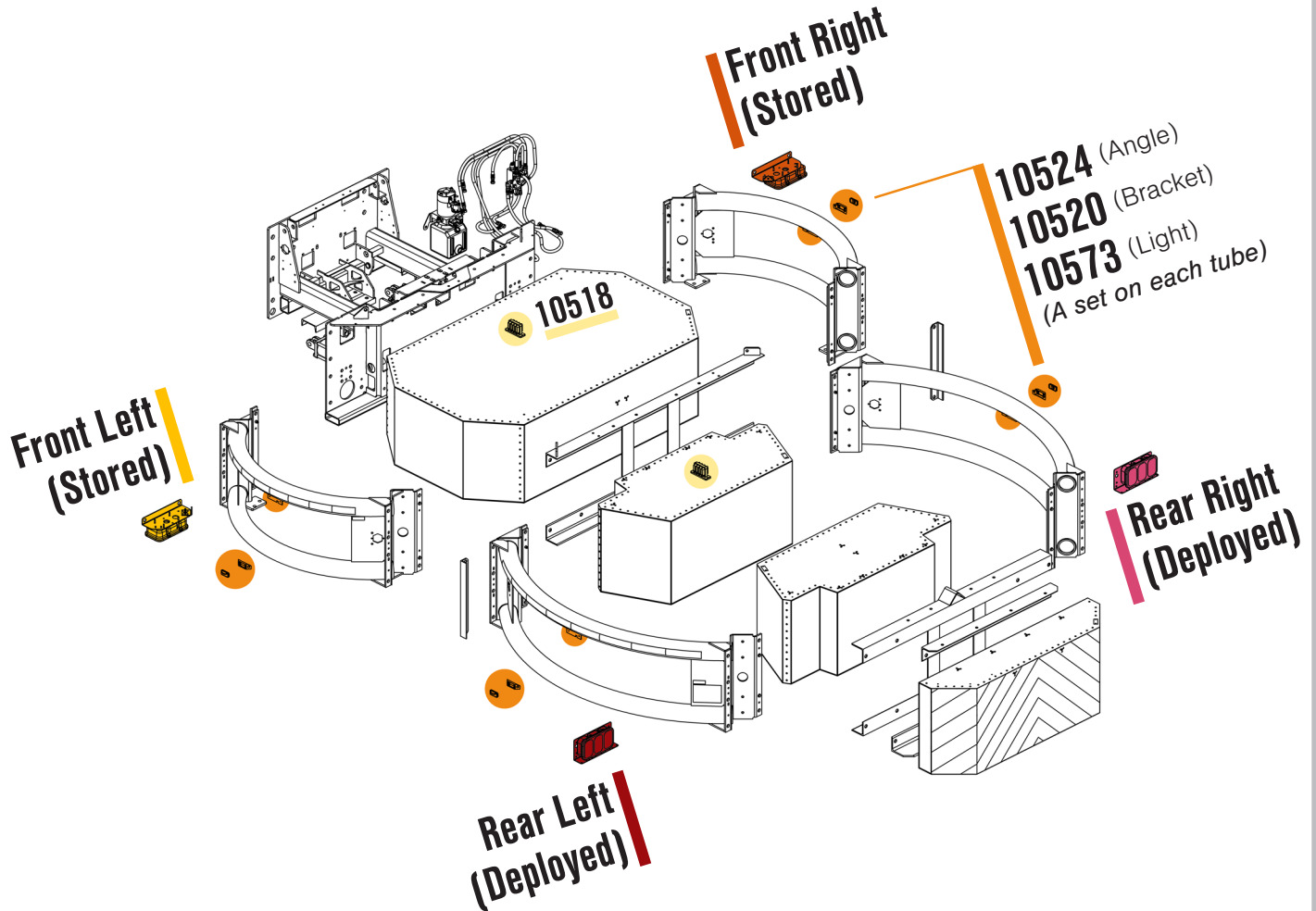
10725S

Drop Jack



Lights and Junction

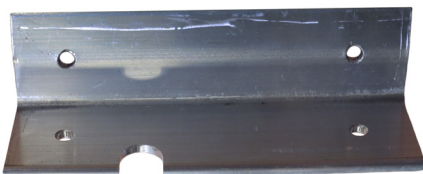
For **TraFix MASH Scorpion II® C-90 TMA**



Components Removed for Clarity.

10524

Angle, Side Marker Light



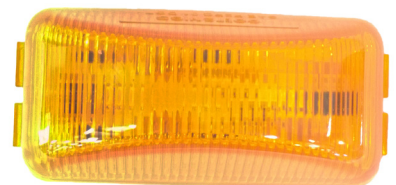
10520

Bracket, Side Marker Light



10573

Side Marker Light,
Amber, LED, Multivolt



Tail Light Configurations

For *TraFFix MASH Scorpion II® C-90 TMA*

| Color Pattern | Visible when Stored | Visible when Deployed |
|----------------------|--|---|
| RYW - WYR | Right, C-90 Front <u>10505D-LED-RYW</u> | Right, C-90 Rear <u>10505A-LED-RYW</u> |
| | Left, C-90 Front <u>10504D-LED-RYW</u> | Left, C-90 Rear <u>10504A-LED-RYW</u> |
| YRW - WRY | Right, C-90 Front <u>10505D-LED-YRW</u> | Right, C-90 Rear <u>10505A-LED-YRW</u> |
| | Left, C-90 Front <u>10504D-LED-YRW</u> | Left, C-90 Rear <u>10504A-LED-YRW</u> |
| YRR - RRY | Right, C-90 Front <u>10505D-LED-YRR-01</u> | Right, C-90 Rear <u>10505A-LED-YRR-01</u> |
| | Left, C-90 Front <u>10504D-LED-YRR-01</u> | Left, C-90 Rear <u>10504A-LED-YRR-01</u> |

10518

Junction Box



For cables, see *Light Wiring* on Page 26.

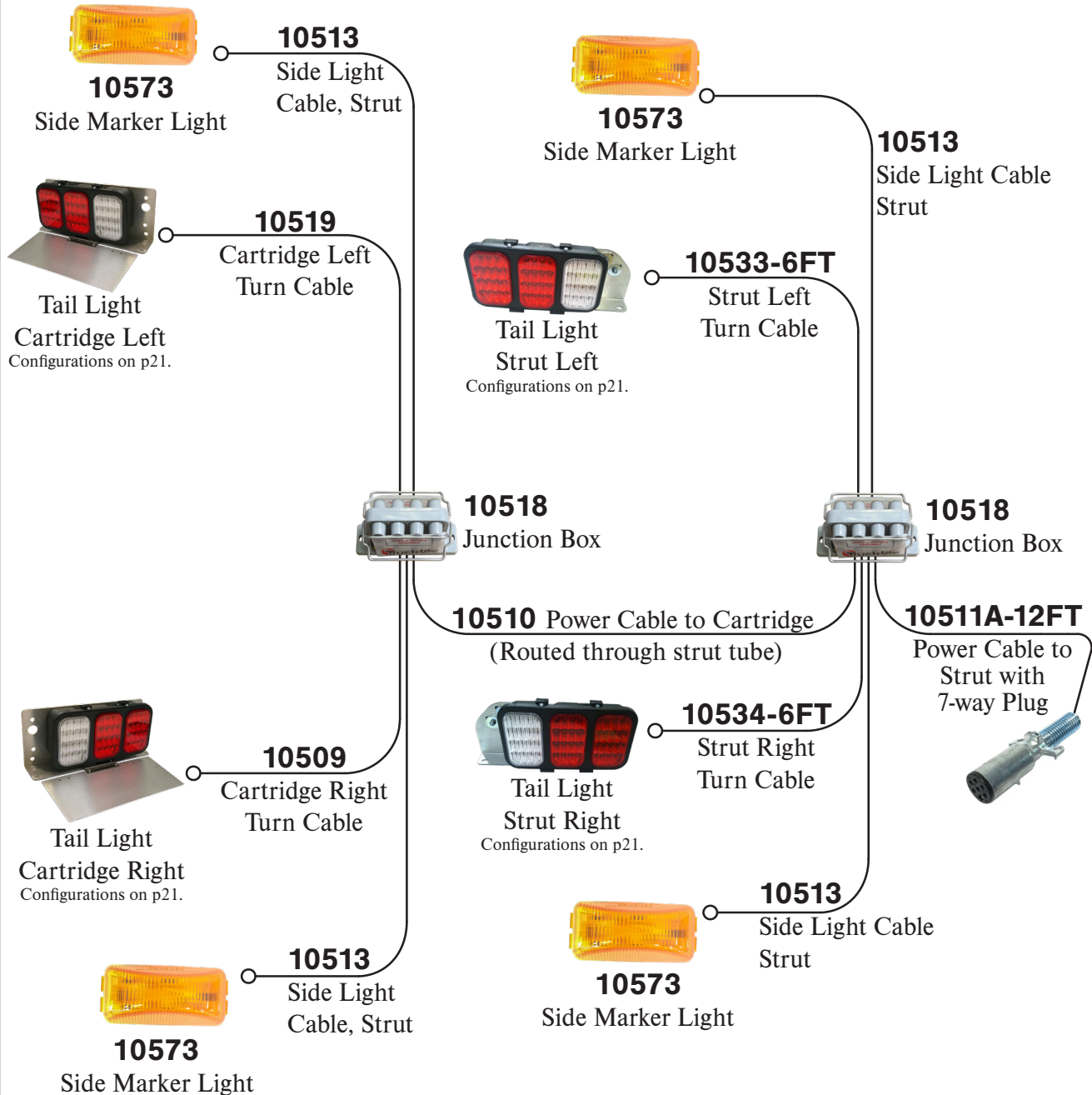
For *LED-Tail Light Hardware*, see page 28.

Appendix A

Drawings & Hardware, and Options

Light Wiring

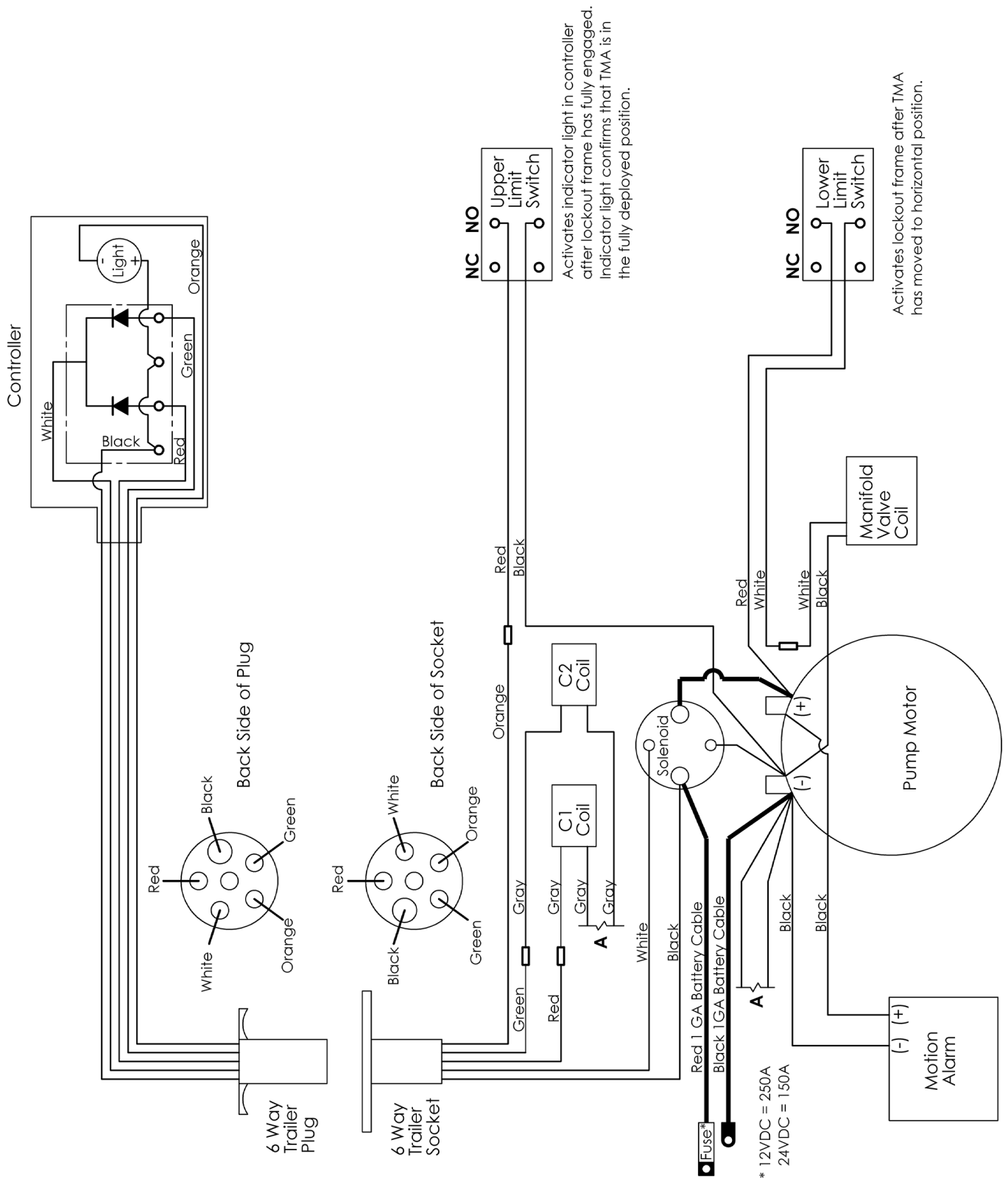
For TraFFix MASH Scorpion II® C-90 TMA



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

Motor and Electronics Wiring

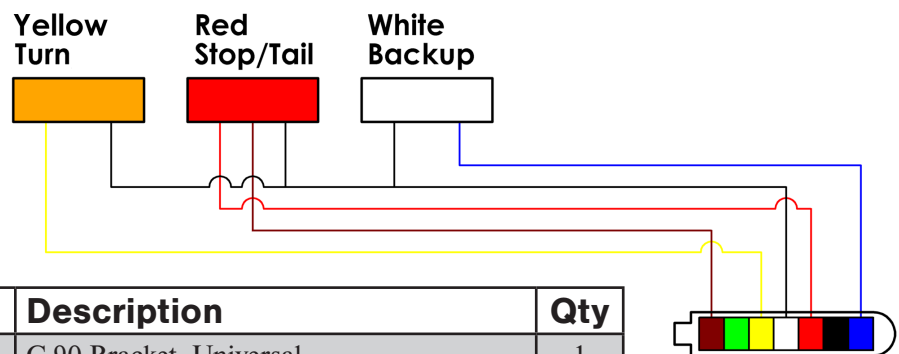
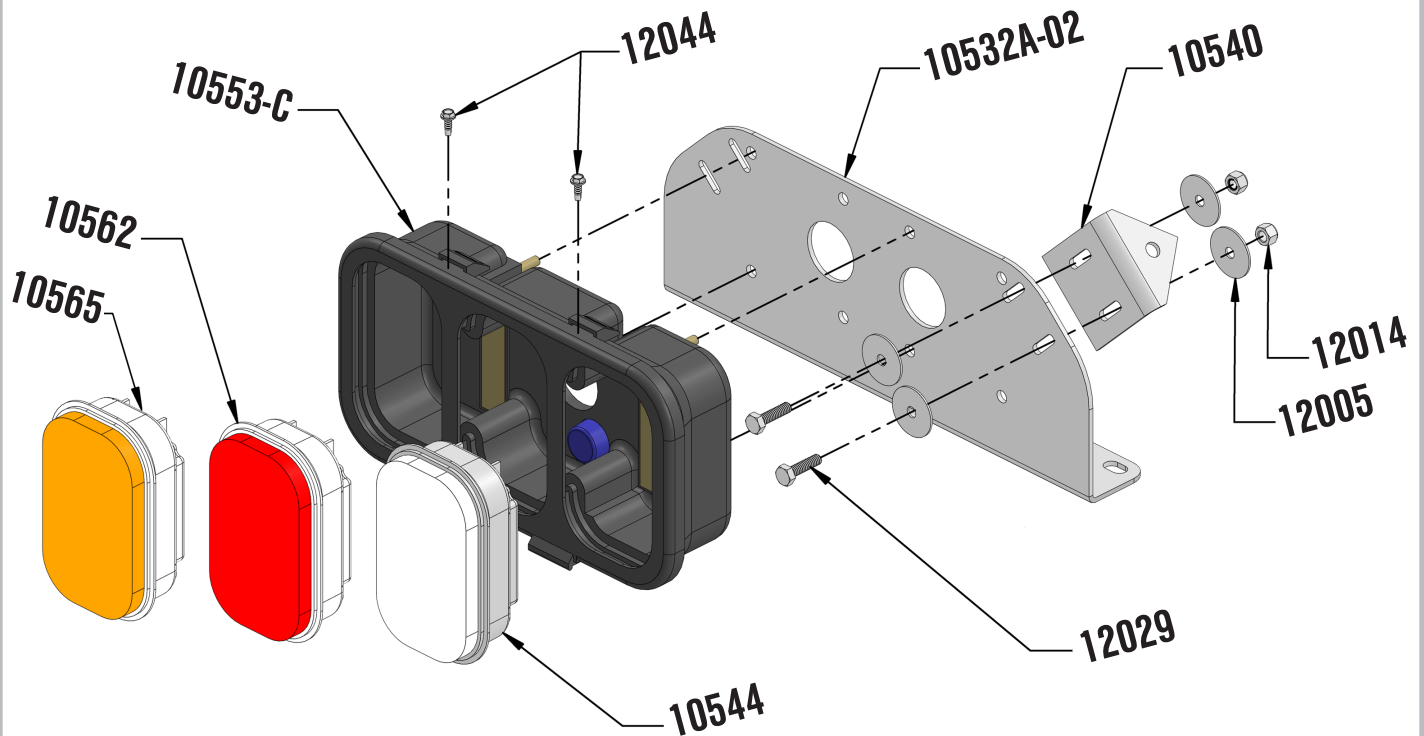
For TrafFix MASH Scorpion II® C-90 TMA



Left Stored Tail Light Hardware

10504D-LED-YRW

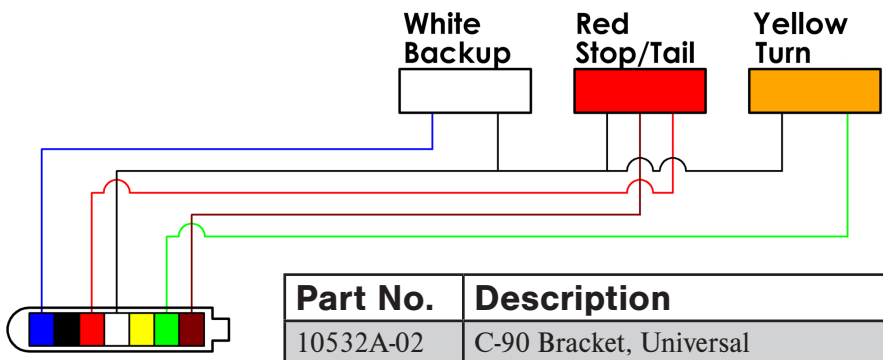
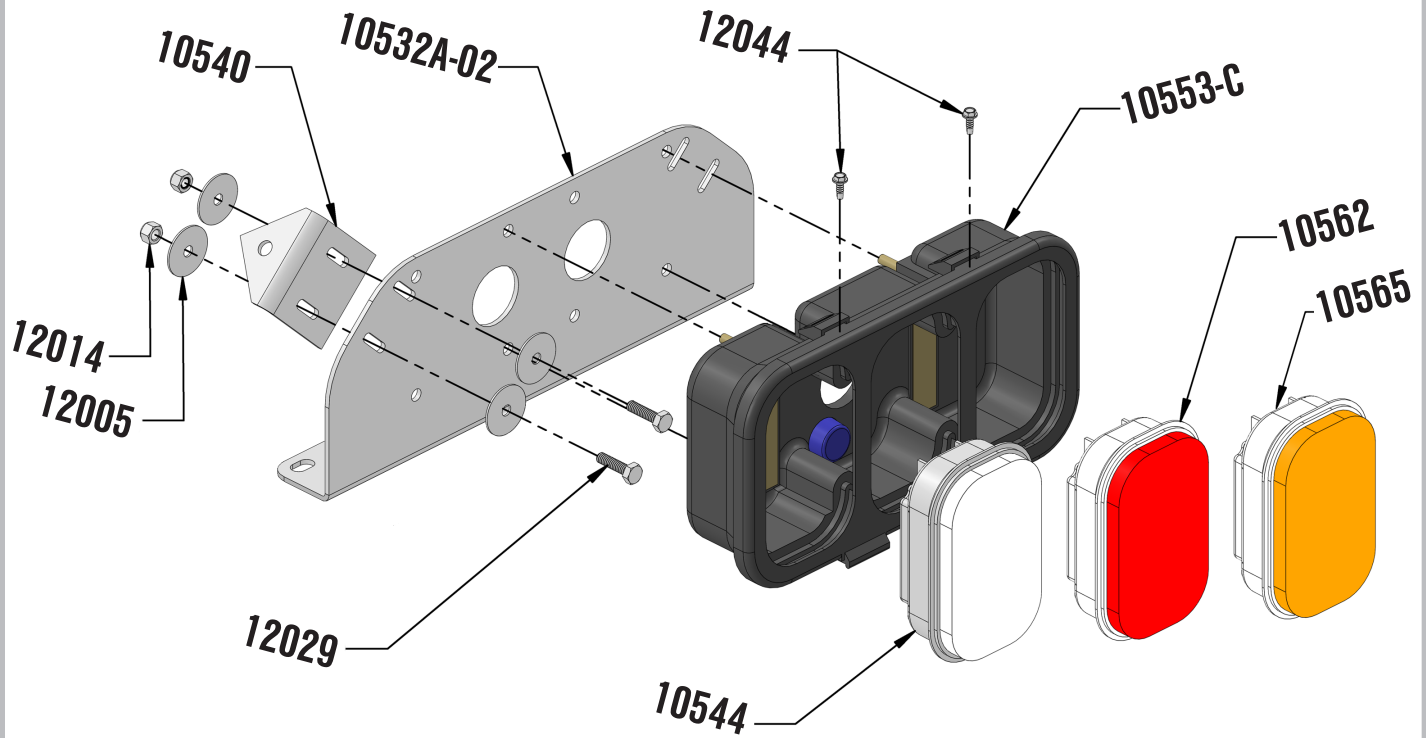
For *TraFFix MASH Scorpion II® C-90 TMA*



| Part No. | Description | Qty |
|-----------|---|-----|
| 10532A-02 | C-90 Bracket, Universal | 1 |
| 10540 | Adjustment Angle | 1 |
| 10553-C | Light Housing, Rubber | 1 |
| 10562 | LED Light, Red, Stop-Turn-Tail | 1 |
| 10544 | LED Light, White, Backup | 1 |
| 10565 | LED Light, Yellow, Turn | 1 |
| 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 10505D-LED-YRW

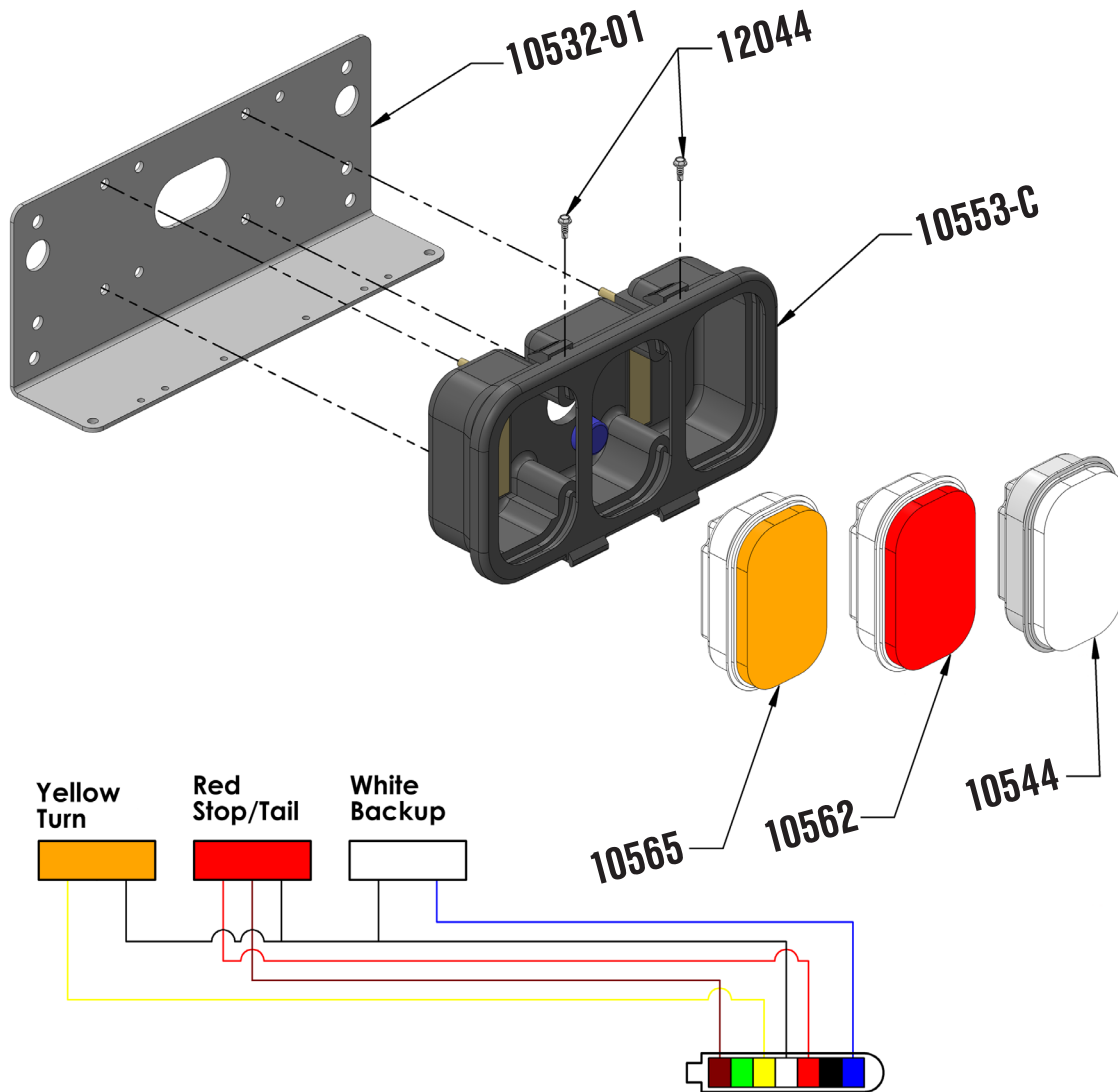
For TraFFix MASH Scorpion II[®] C-90 TMA



| Part No. | Description | Qty |
|-----------|---|-----|
| 10532A-02 | C-90 Bracket, Universal | 1 |
| 10540 | Adjustment Angle | 1 |
| 10553-C | Light Housing, Rubber | 1 |
| 10562 | LED Light, Red, Stop-Turn-Tail | 1 |
| 10544 | LED Light, White, Backup | 1 |
| 10565 | LED Light, Yellow, Turn | 1 |
| 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 10504A-LED-YRW

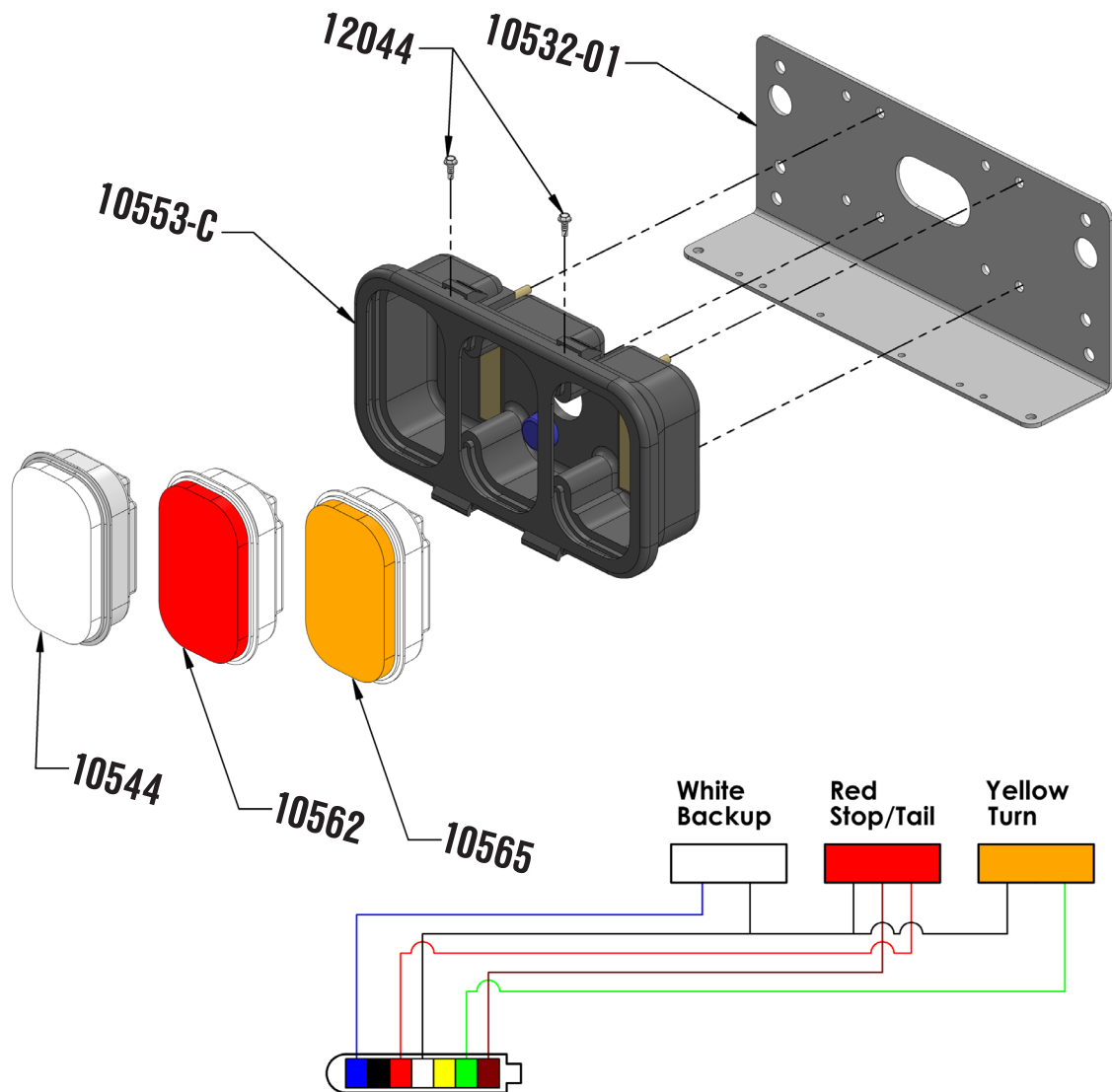
For TrafiX MASH Scorpion II[®] C-90 TMA



| Part No. | Description | Qty |
|----------|--|-----|
| 10532-01 | Bracket, Universal | 1 |
| 10553-C | Light Housing, Rubber | 1 |
| 10562 | LED Light, Red, Stop-Turn-Tail | 1 |
| 10544 | LED Light, White, Backup | 1 |
| 10565 | LED Light, Yellow, Turn | 1 |
| 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 10505A-LED-YRW

For TraFFix MASH Scorpion II® C-90 TMA



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

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, with non-reflective module as background color.

Reflective Sheeting

Includes Module A and Two Colors of Reflective Sheeting

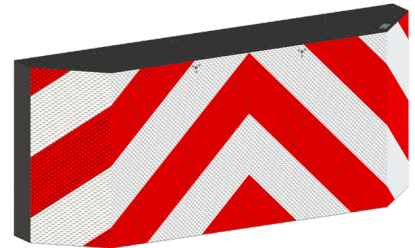
10400A-B1HI-6OW

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



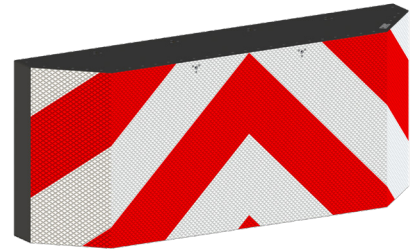
10400A-B1AV-6RW

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



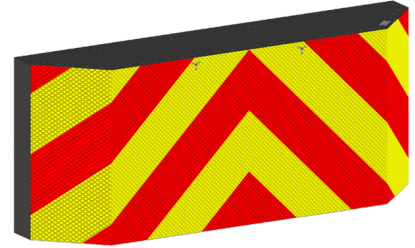
10400A-B1AV-8RW

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



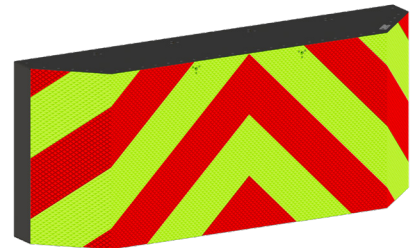
10400A-B1AV-6RY

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



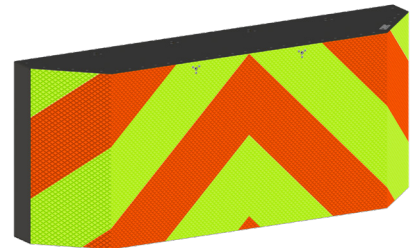
10400A-B1OR-6RL

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.

Notes

Notes

**TraFFix
Devices Inc.**



Engineered Products for Safer Highways

ScorpionHelp@traffixdevices.com

(949) 361-5663

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