

Replacement Parts Guide

For TraFix MASH Scorpion II® C-90 TMA

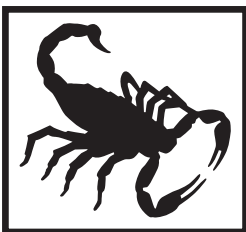
**TraFix
Devices Inc.**
Engineered Products for Safer Highways



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

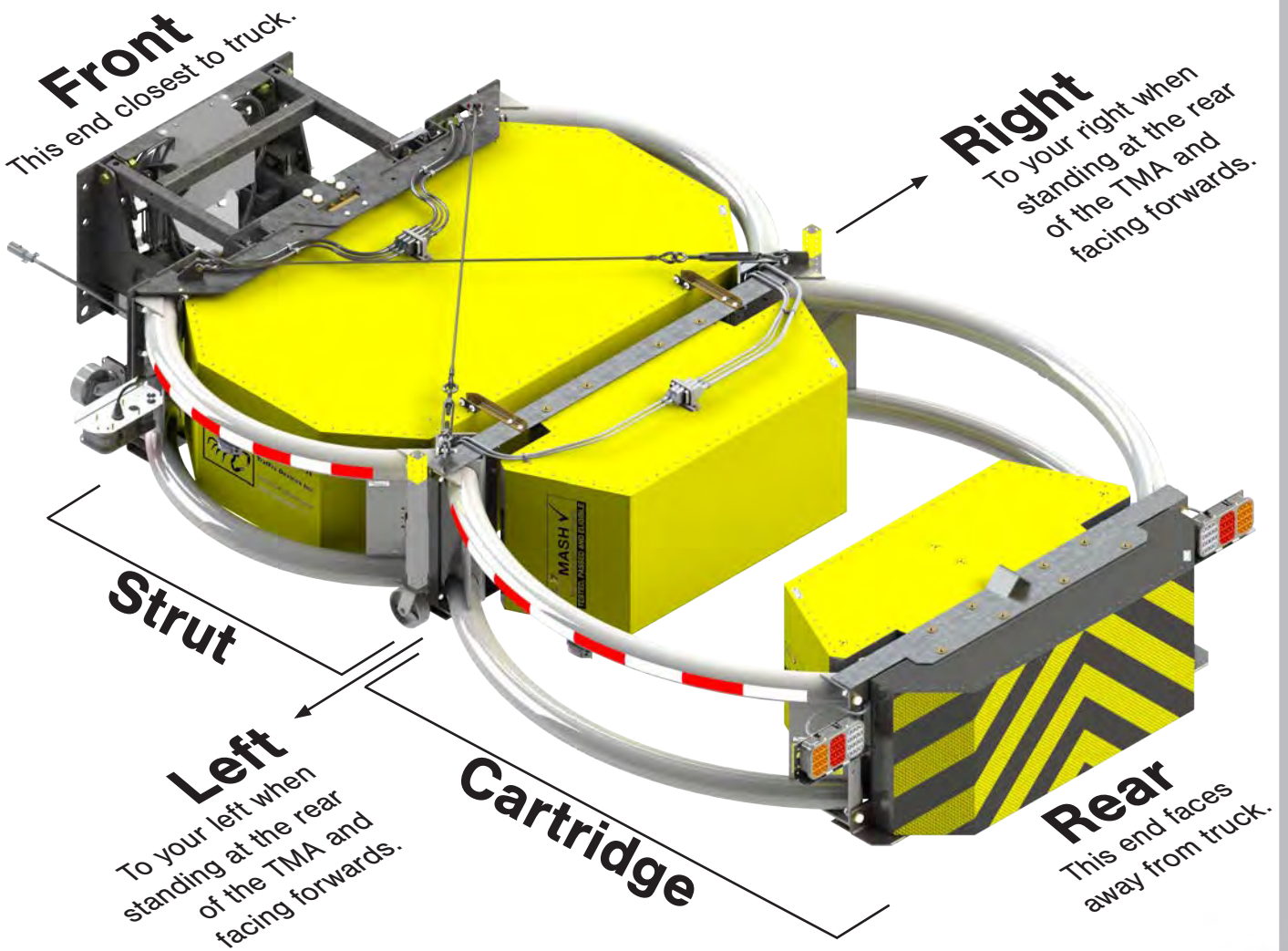


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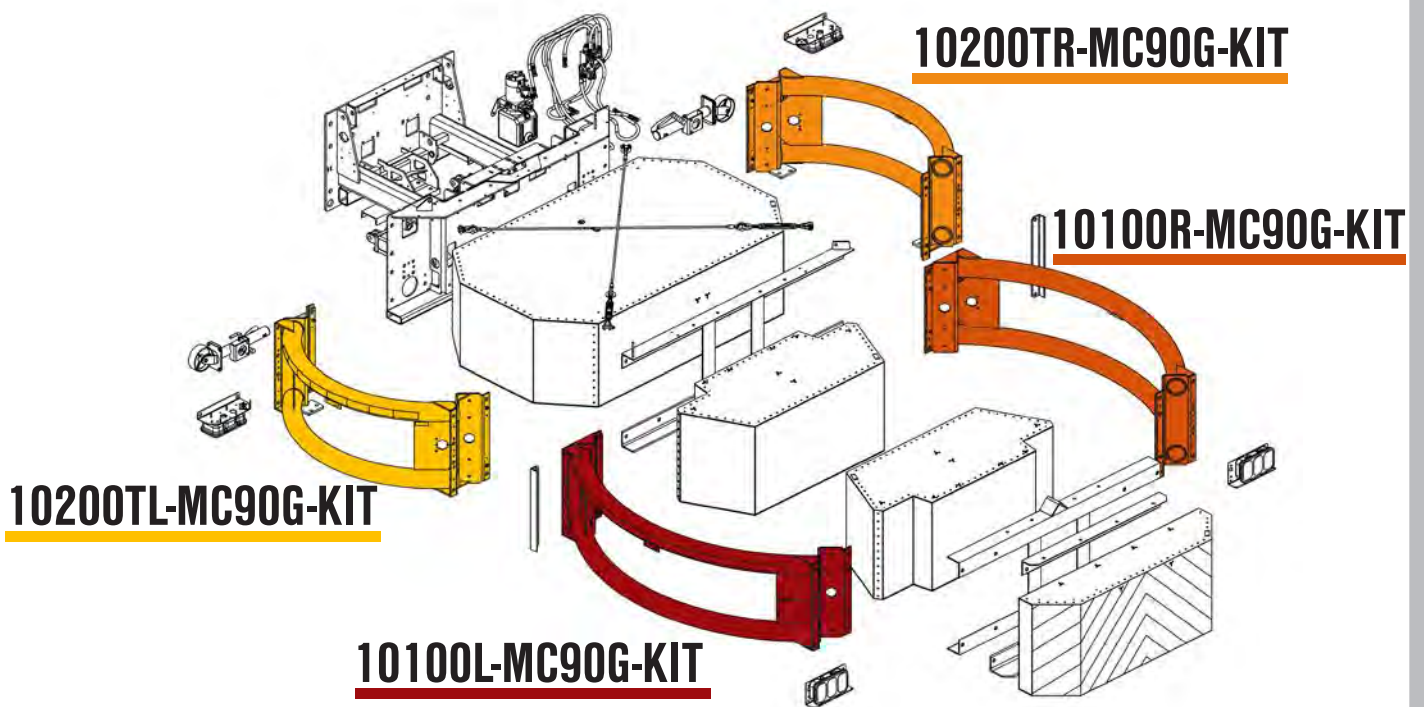
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Replacement Tubes

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



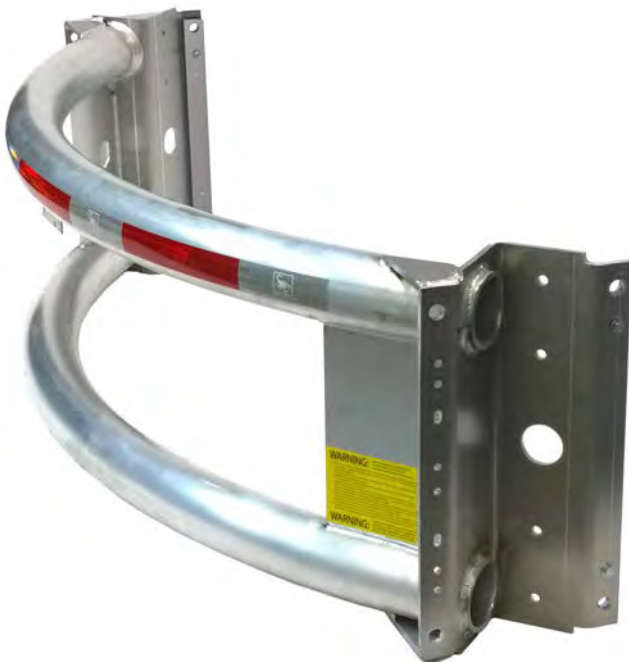
10200TR-MC90G-KIT

C-90 Strut Tube, Front Right



10100L-MC90G-KIT

C-90 Cartridge Tube, Rear Left



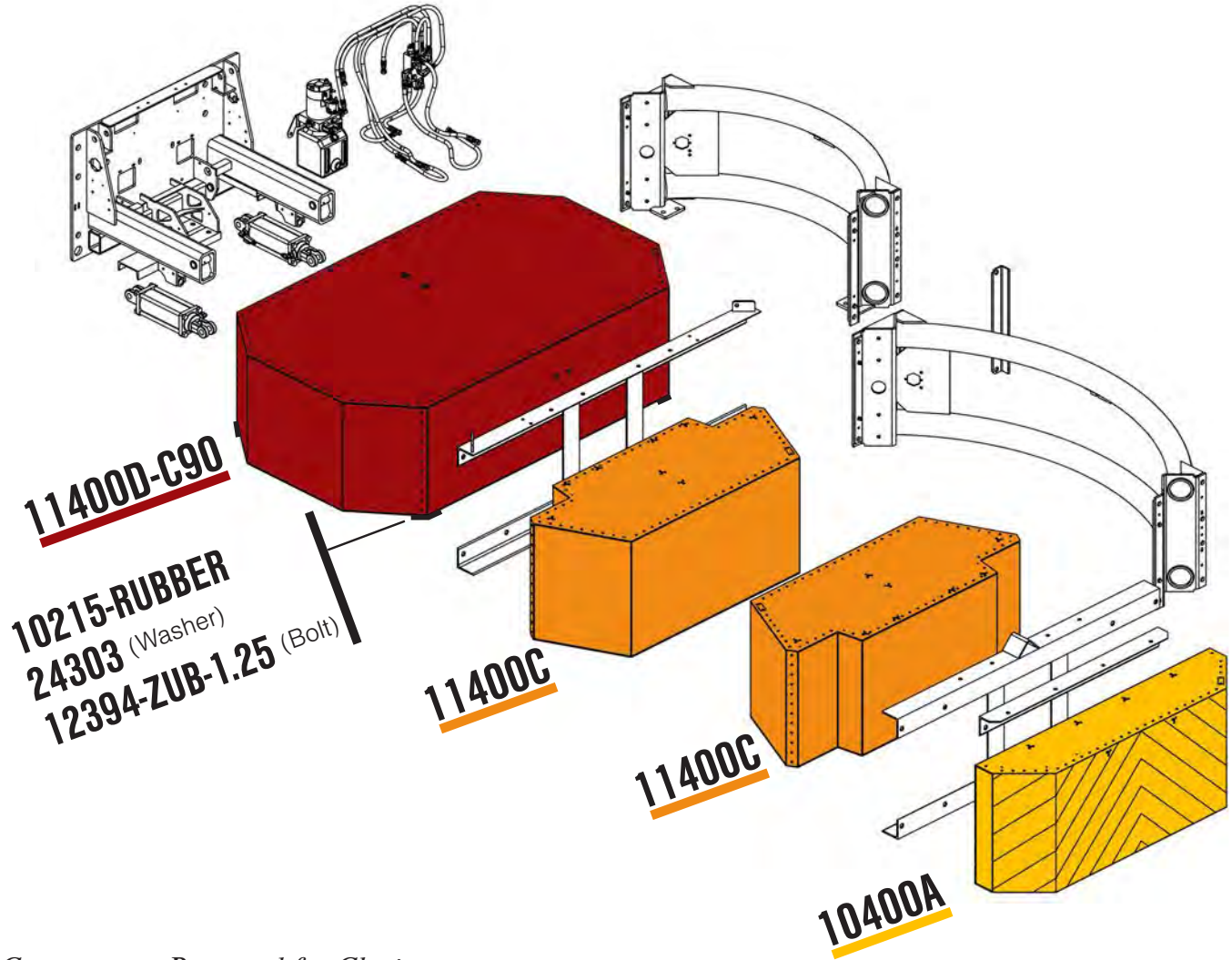
10100R-MC90G-KIT

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

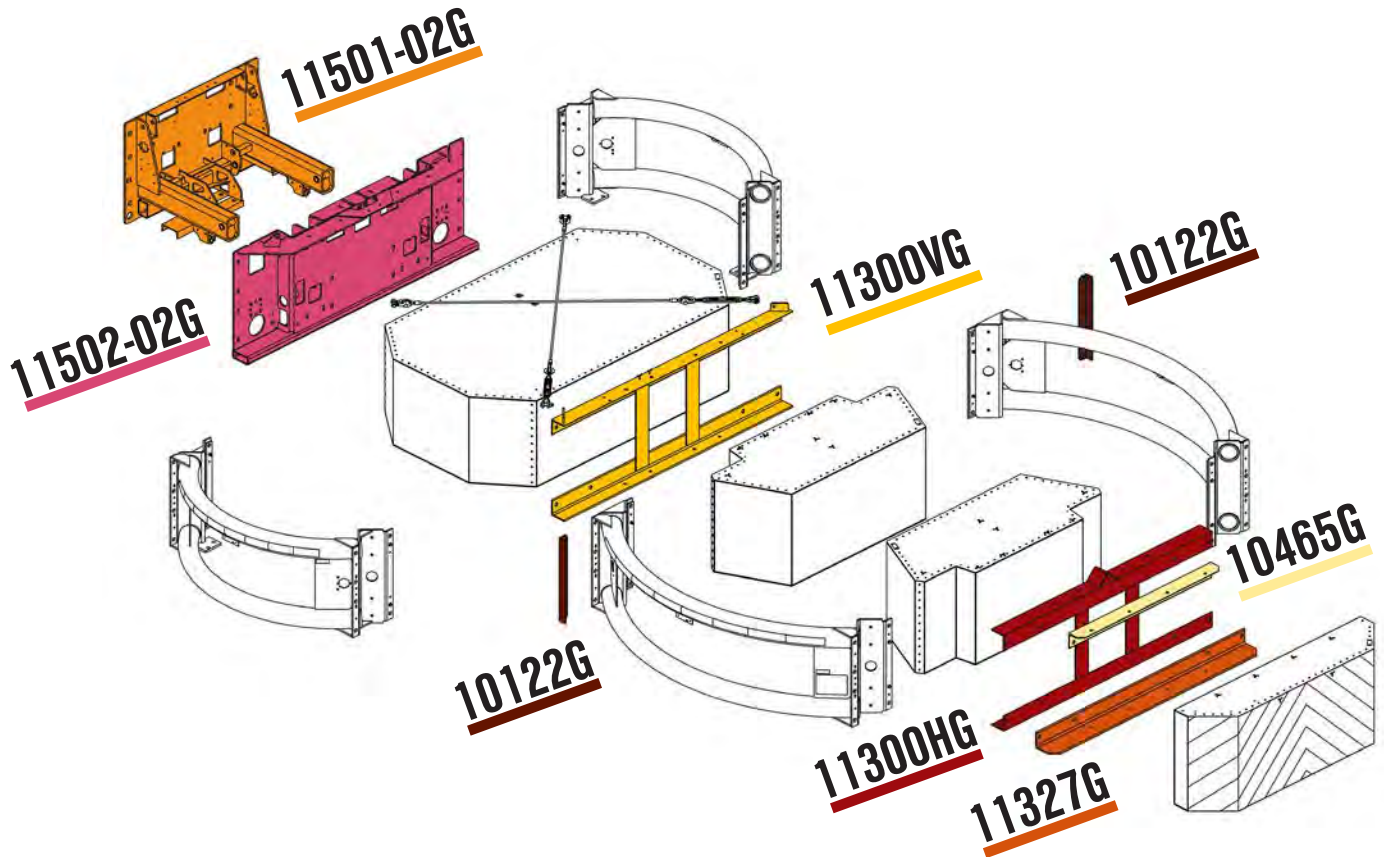
*Energy absorbing Module
4" Yellow Sheeting*



**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



11327G

Bottom Angle
Cartridge Rear
Galvanized



10122G

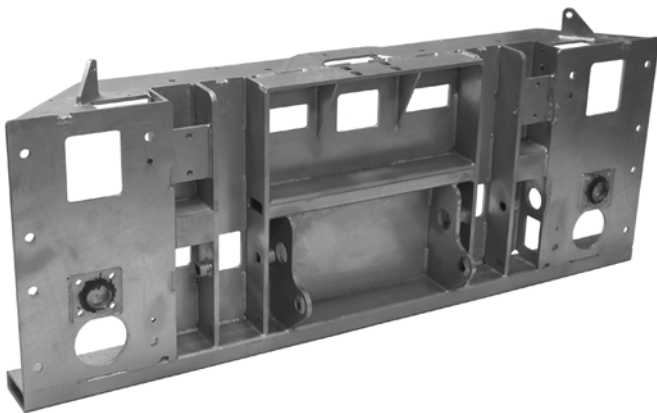
Vertical
Support
Angle
Cartridge
Tube
Galvanized





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



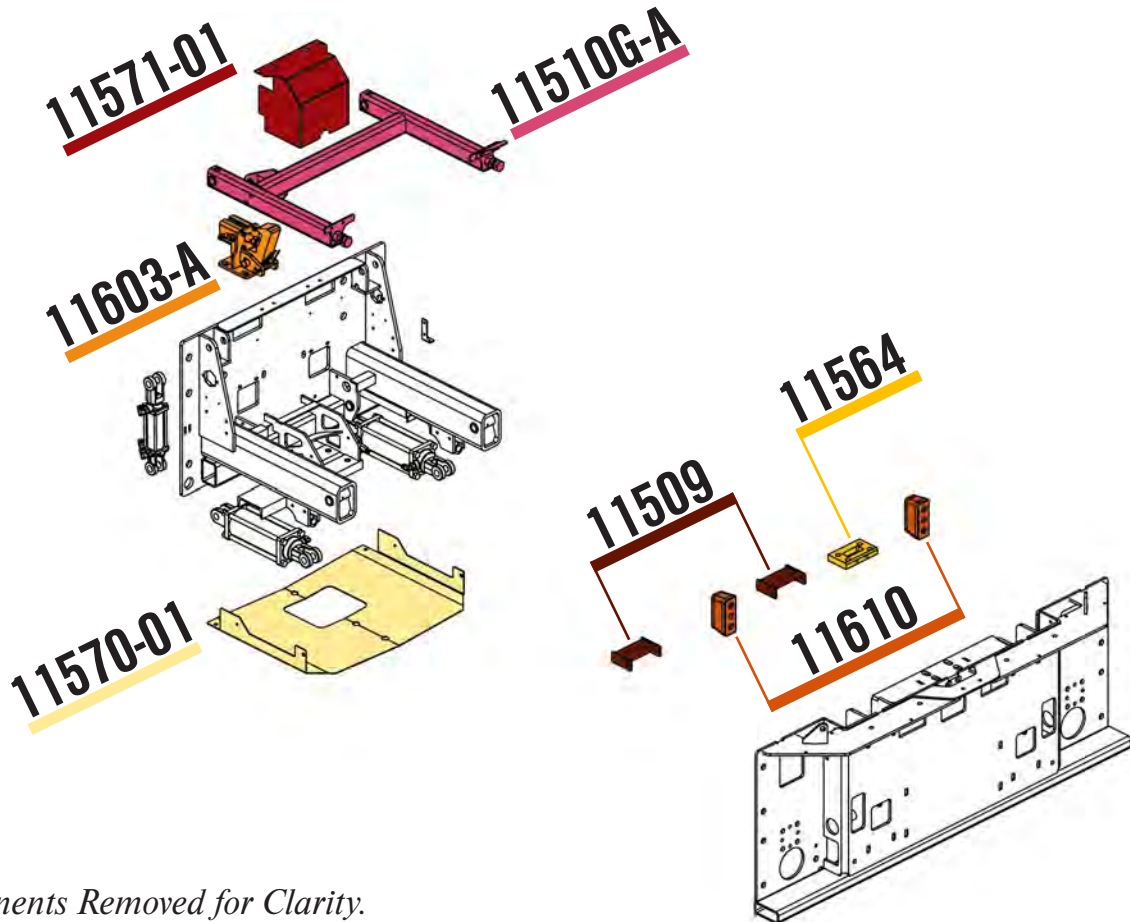
11300HG

Rear Diaphragm
Cartridge Rear
Galvanized

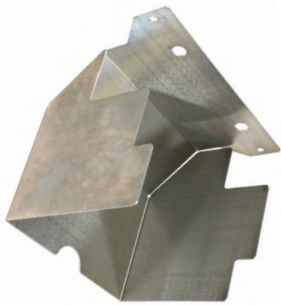


Plate and Enclosure

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

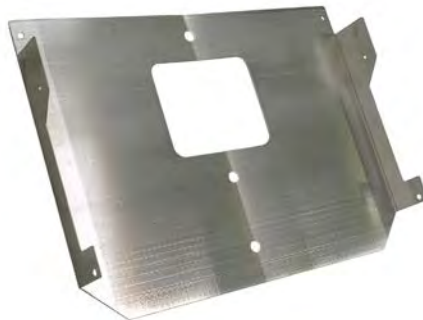


Components Removed for Clarity.



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

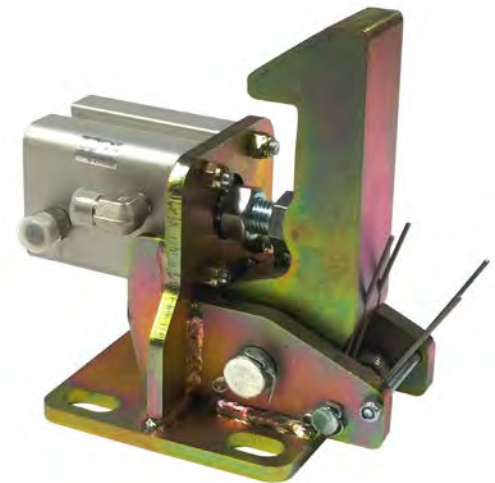
Latch Plate



11510G-A

Lockout Frame

Galvanized



11603-A

Locking Mechanism

Motor and Electronics

For TraFiX 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

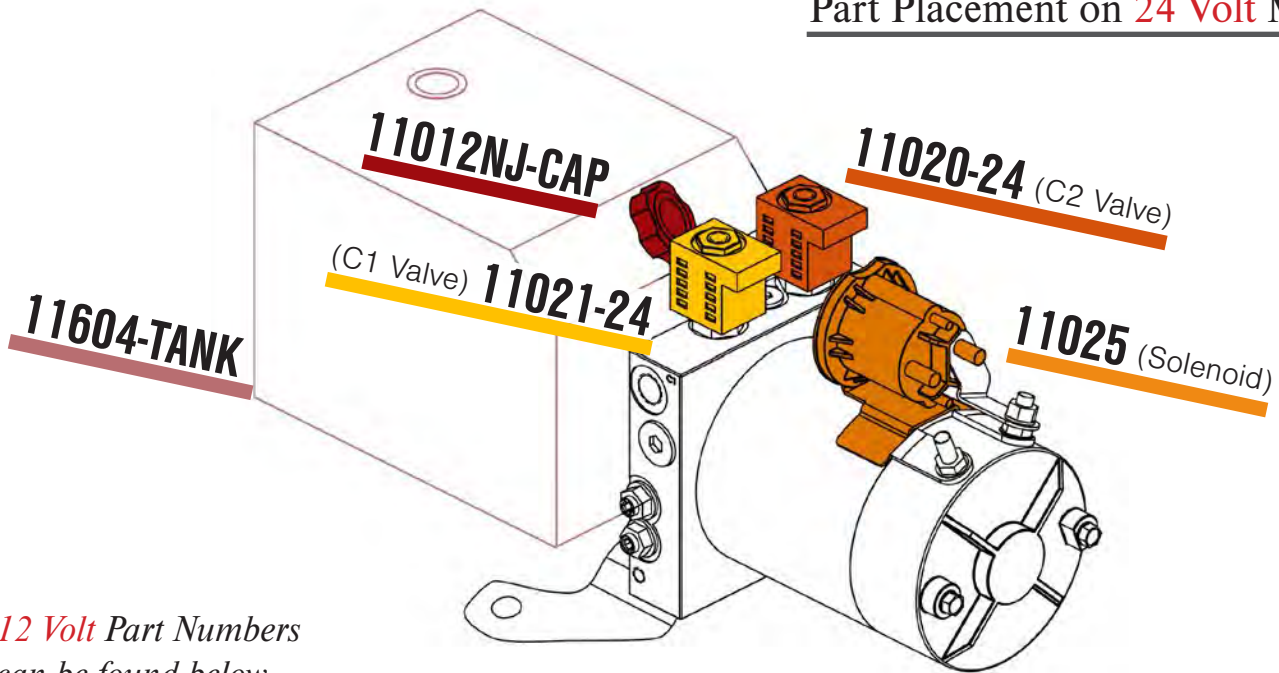


12089

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)

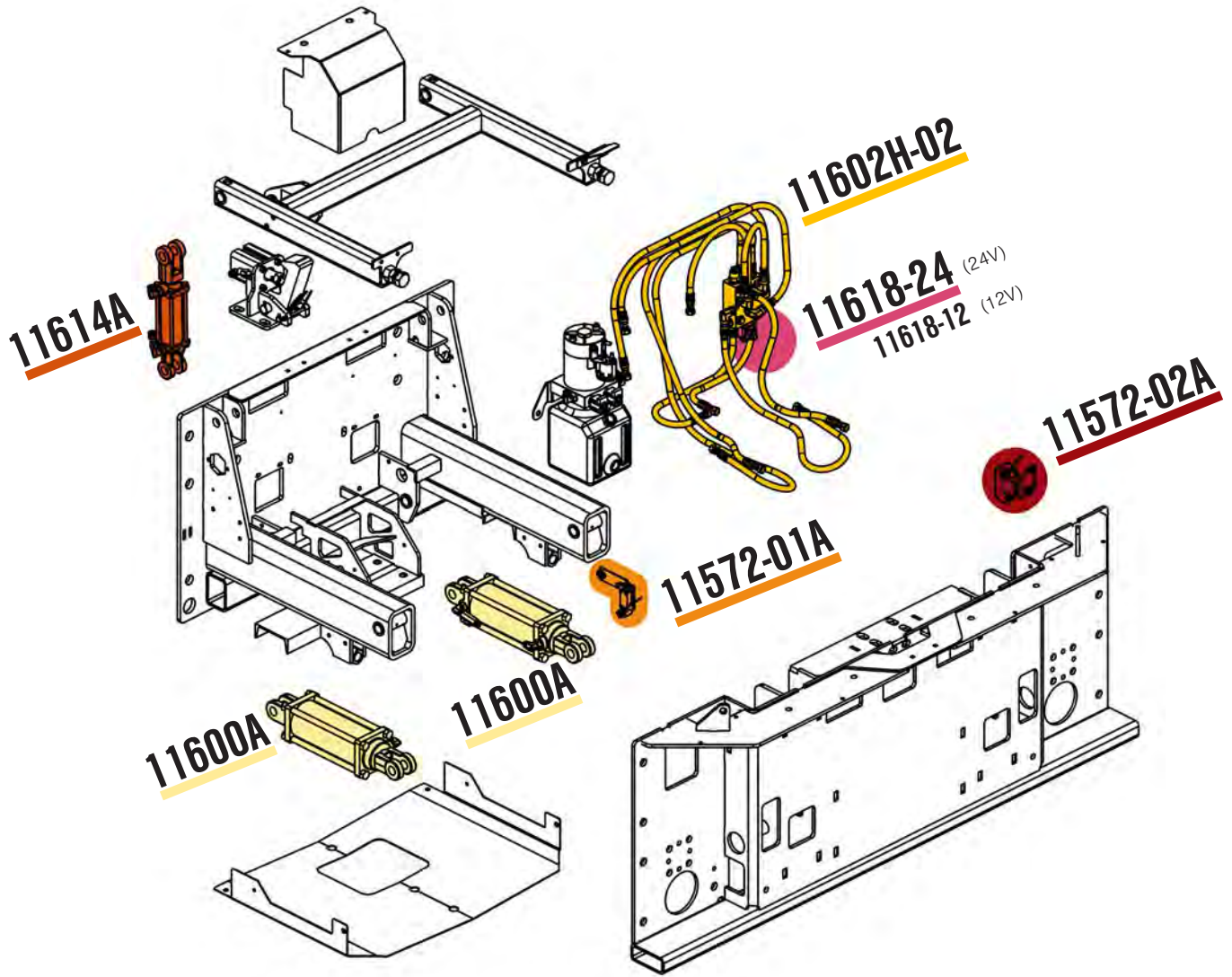
11020-24 (24 Volt)

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



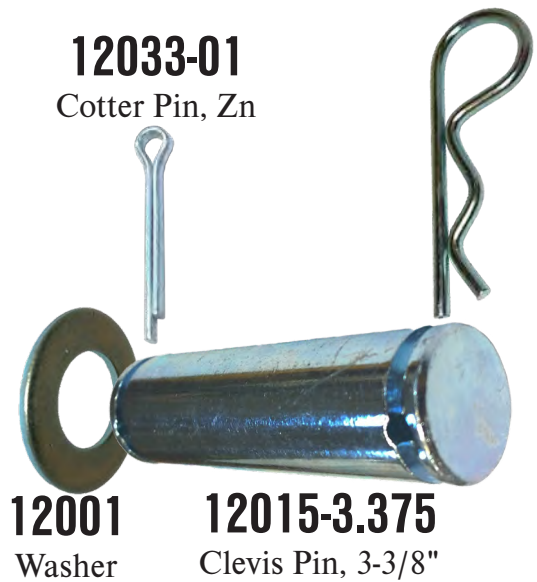
12033-01
Cotter Pin, Zn
(2 required)



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

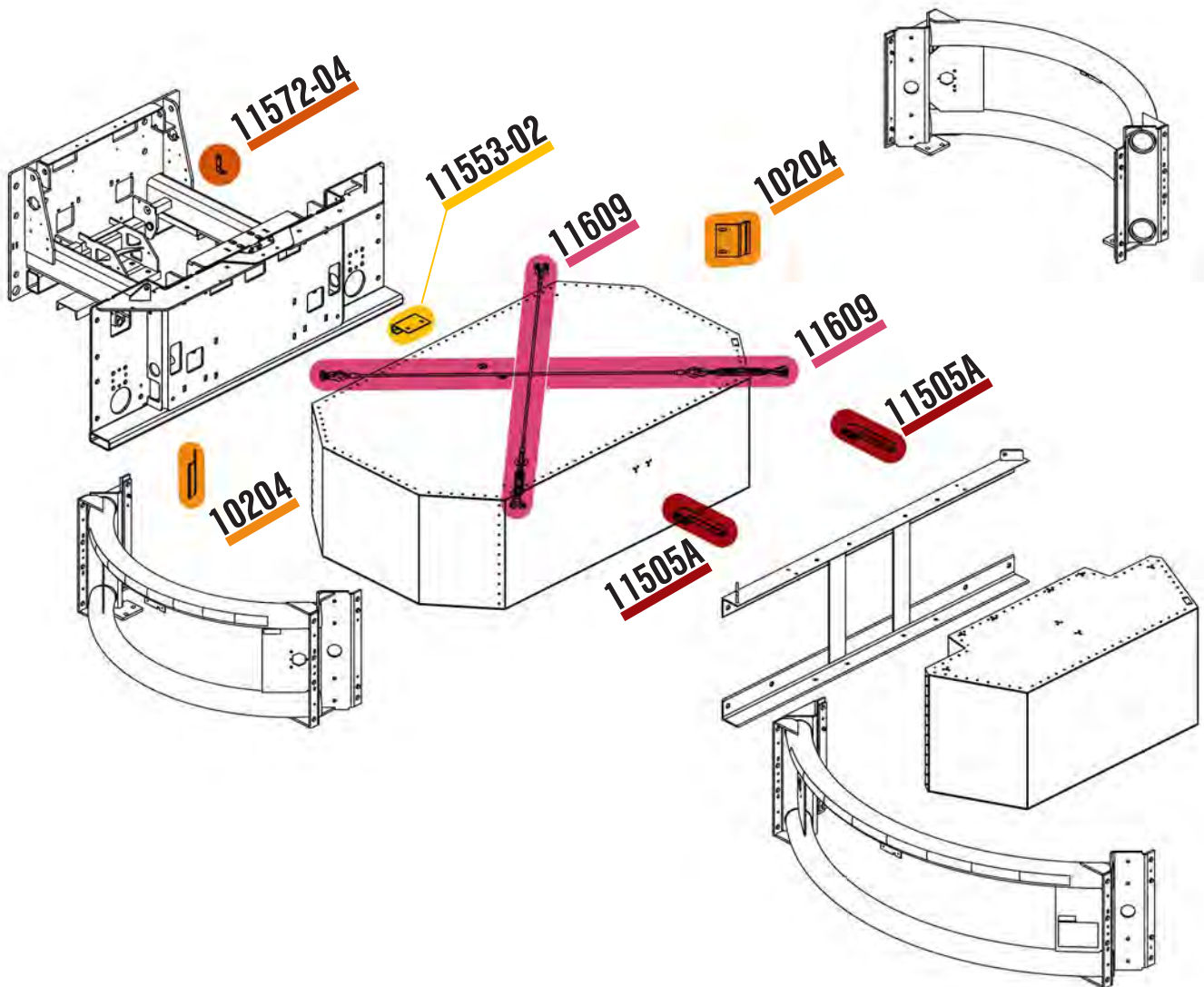


12001
Washer

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

Misc. Components

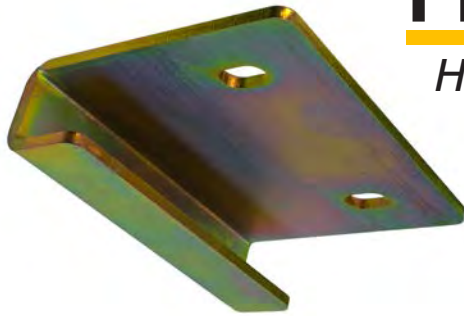
For *TraFFix MASH Scorpion II® C-90 TMA*



Components Removed for Clarity.

Misc. Components

For TrafFix MASH Scorpion II® C-90 TMA



11553-02

Holding Plate

Energy-Absorbing Bracket

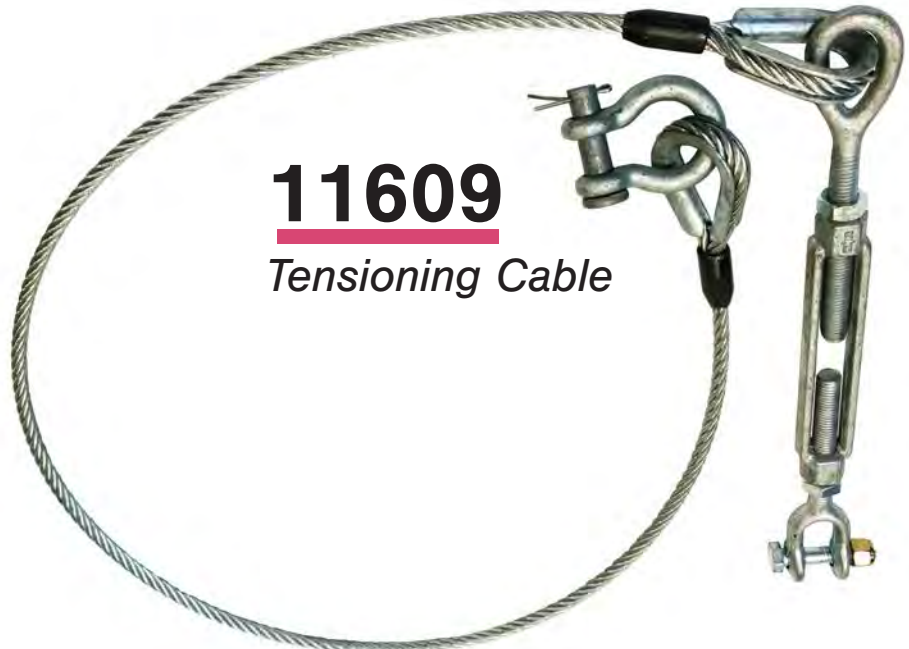
10204



11572-04

Trigger Plate

*Indicates TMA
is stowed*

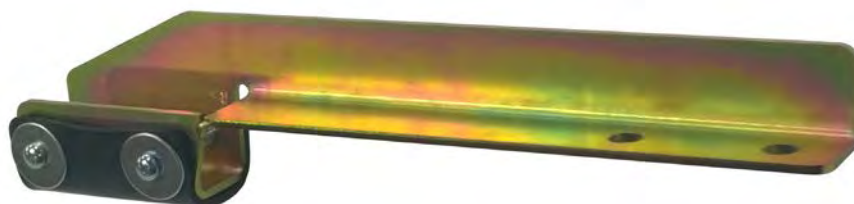


11609

Tensioning Cable

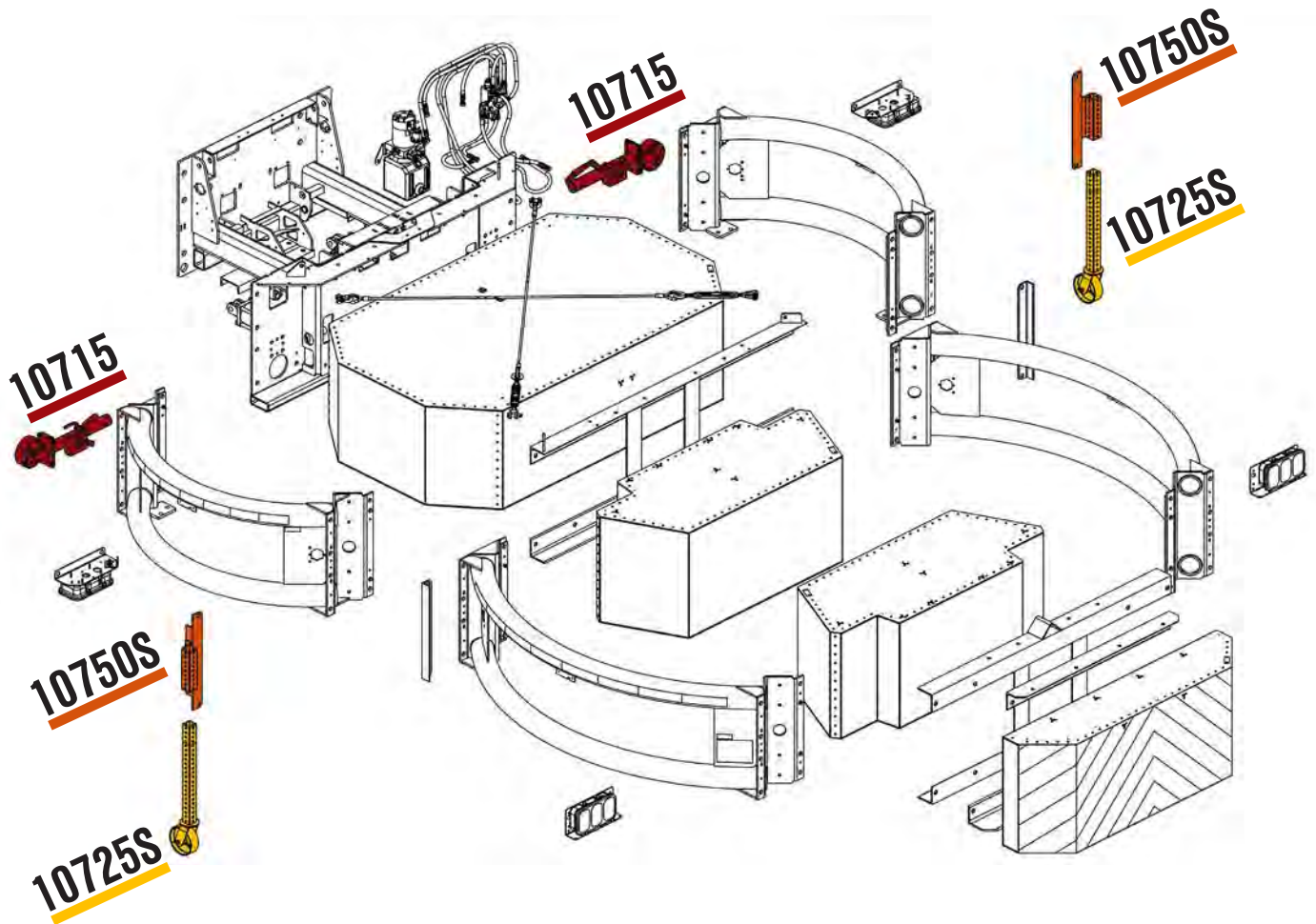
11505A

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*



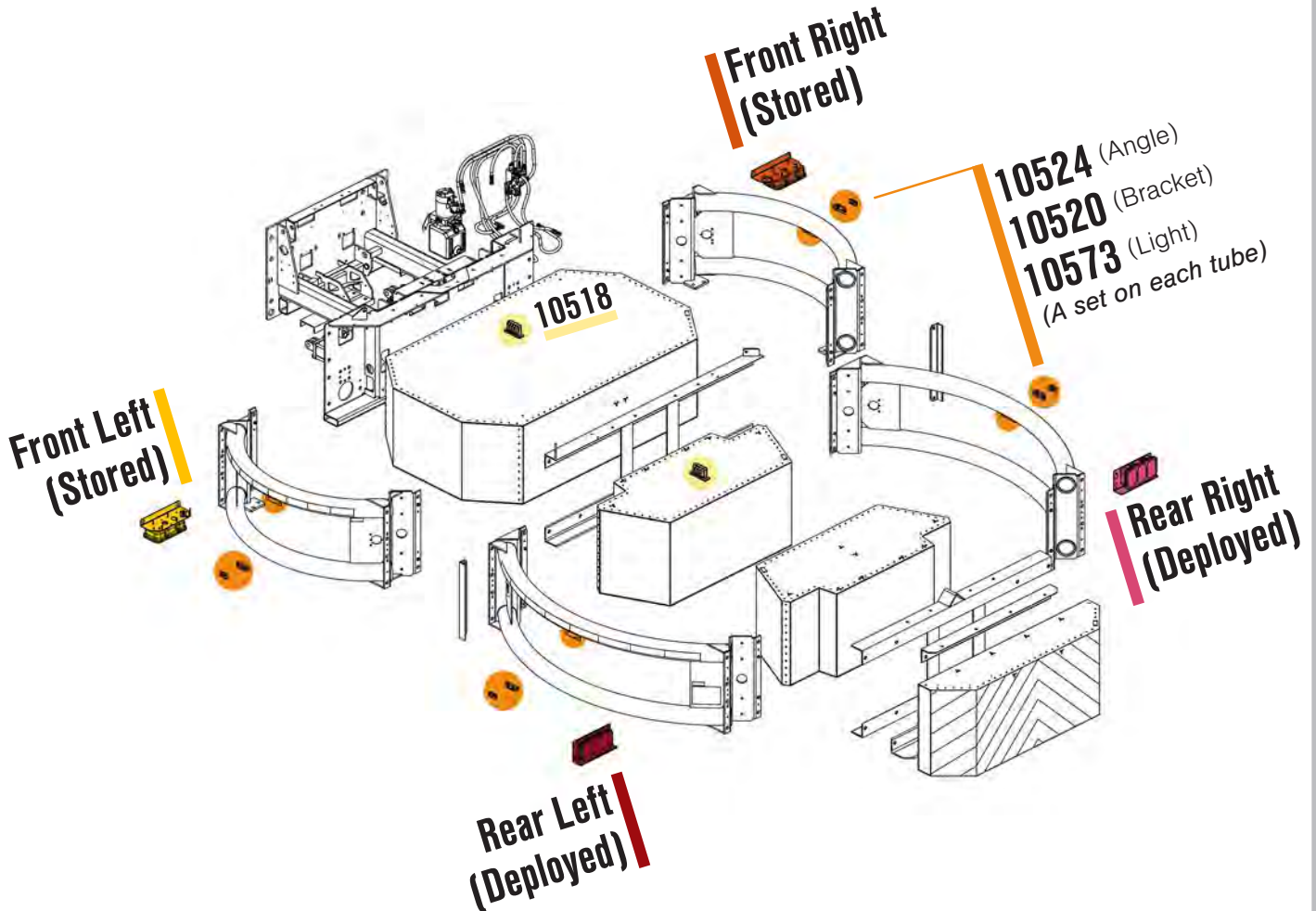
10725S

Drop Jack



Lights and Junction

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



Components Removed for Clarity.

10524

Angle, Side Marker Light



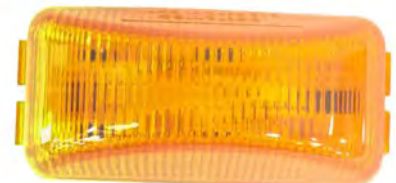
10520

Bracket, Side Marker Light









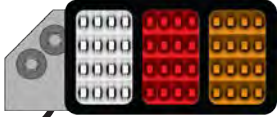

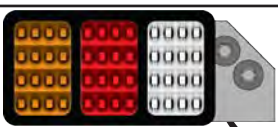


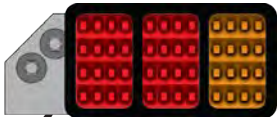


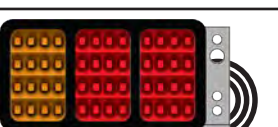
10573

*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.

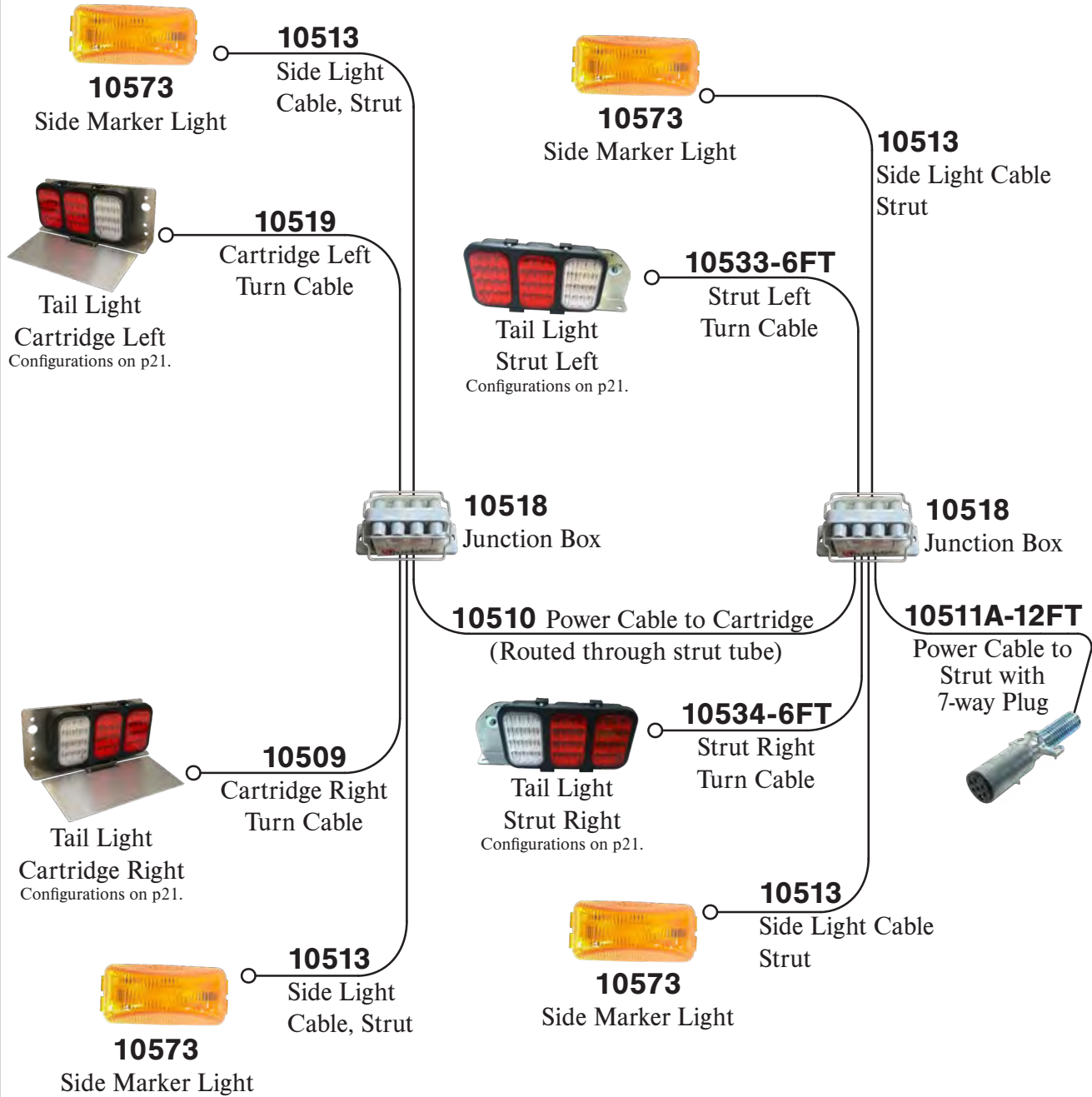
For *LED-Tail Light Hardware*, see page 28.

Appendix A

Drawings & Hardware, and Options

Light Wiring

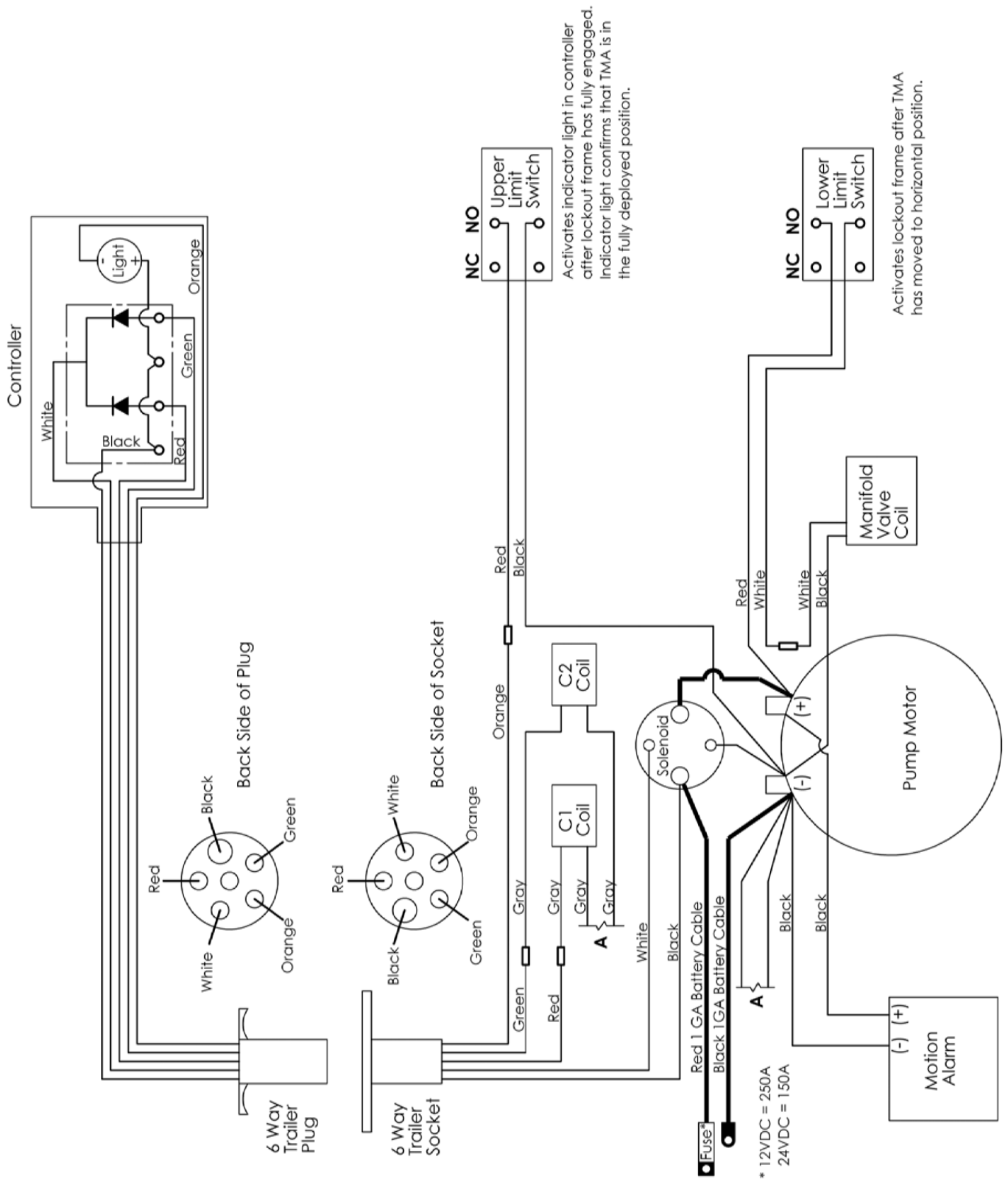
For TraFFix MASH Scorpion II® C-90 TMA



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

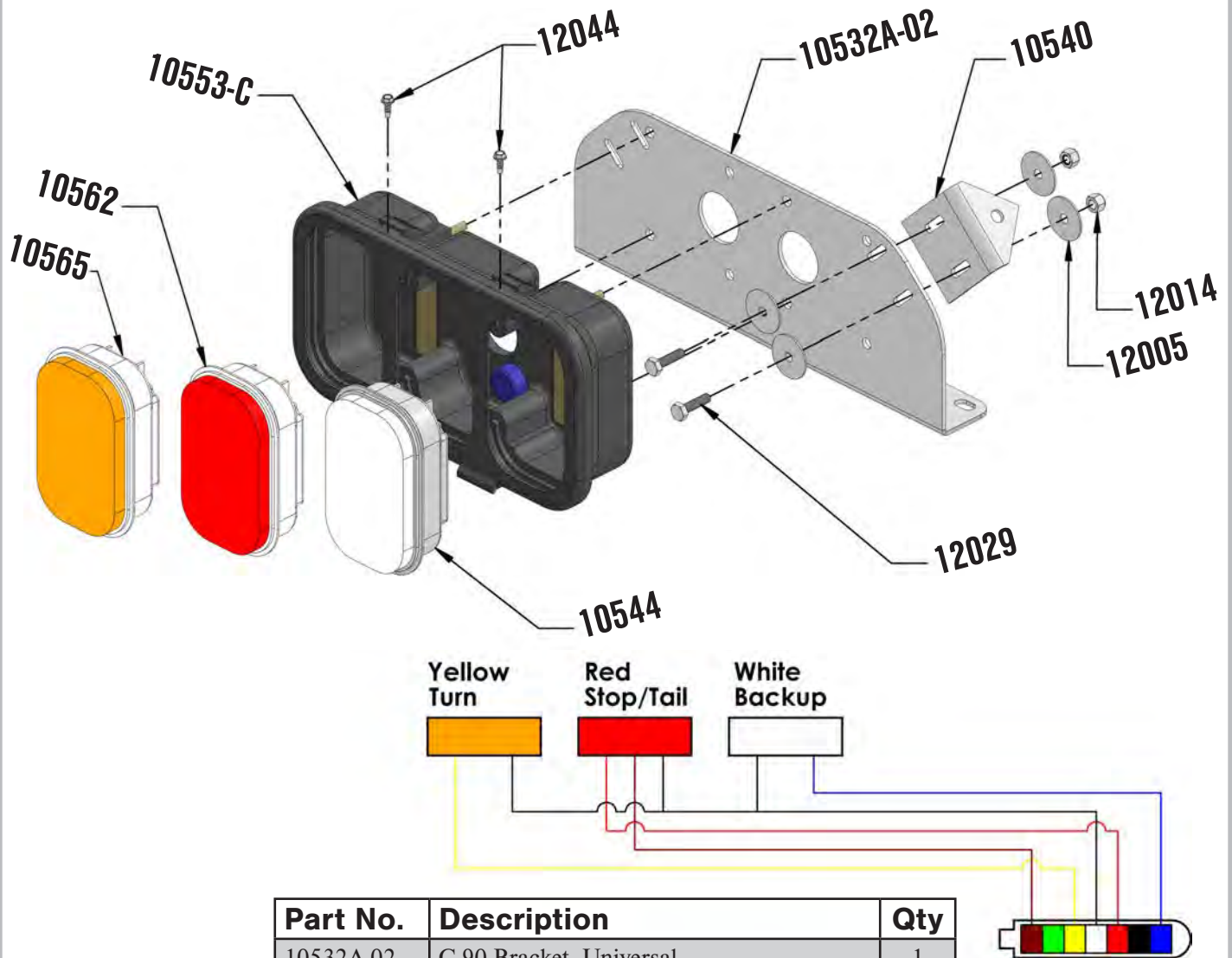
Motor and Electronics Wiring

For TrafFix MASH Scorpion II® C-90 TMA



Left Stored Tail Light Hardware 10504D-LED-YRW

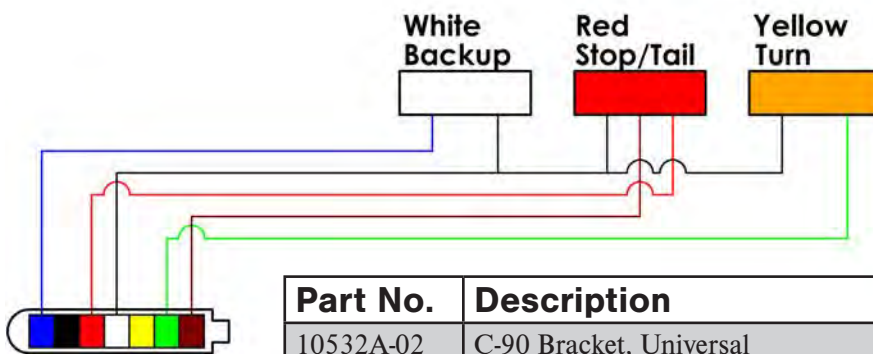
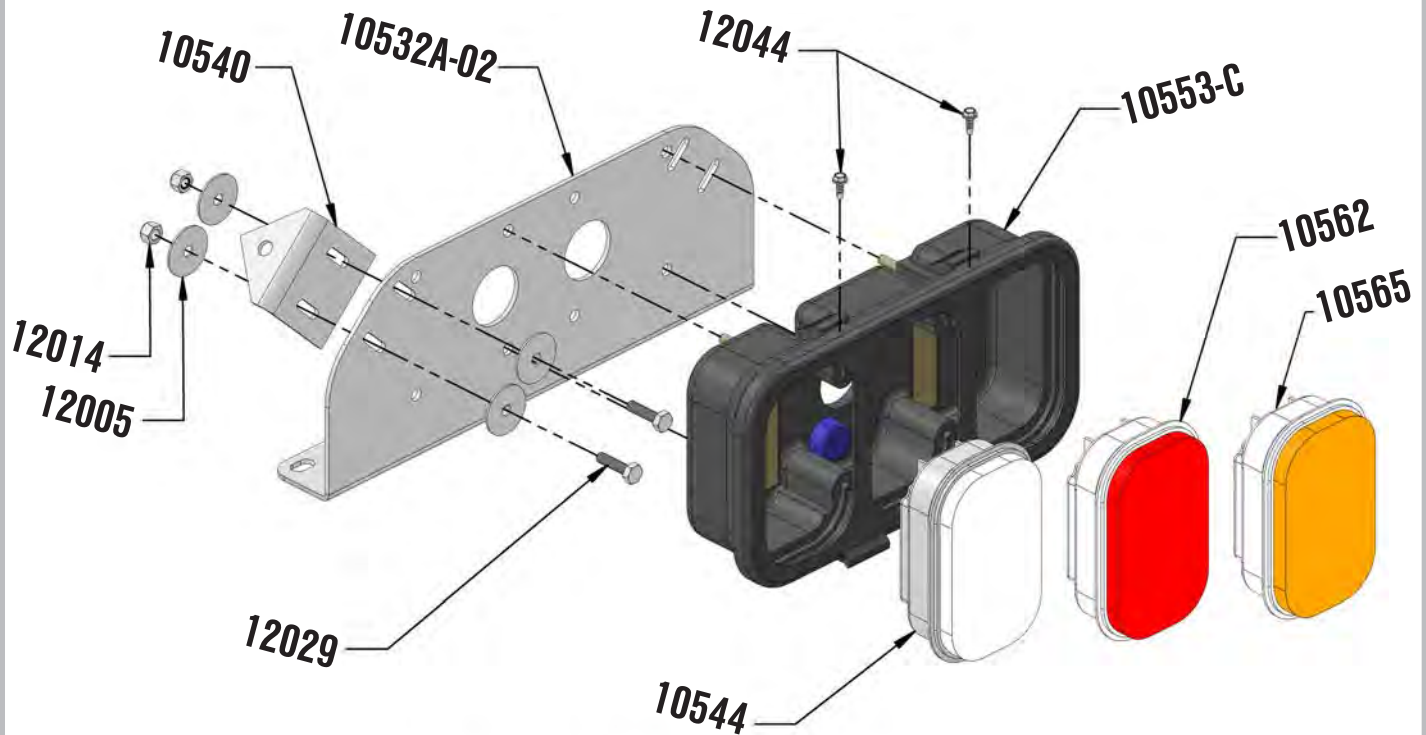
For TraFFix MASH Scorpion II® C-90 TMA



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

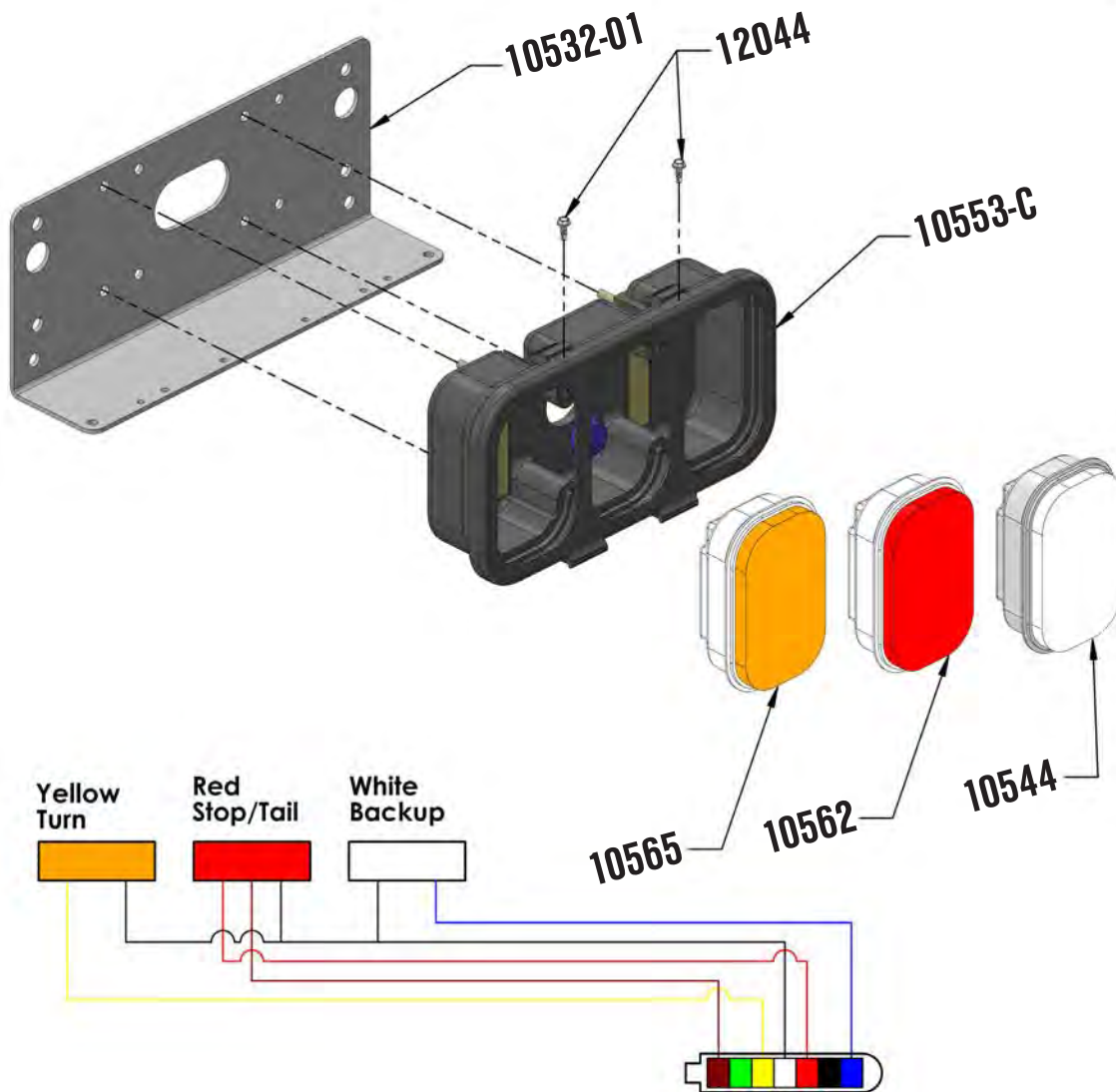
For TraFFix MASH Scorpion II® C-90 TMA



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

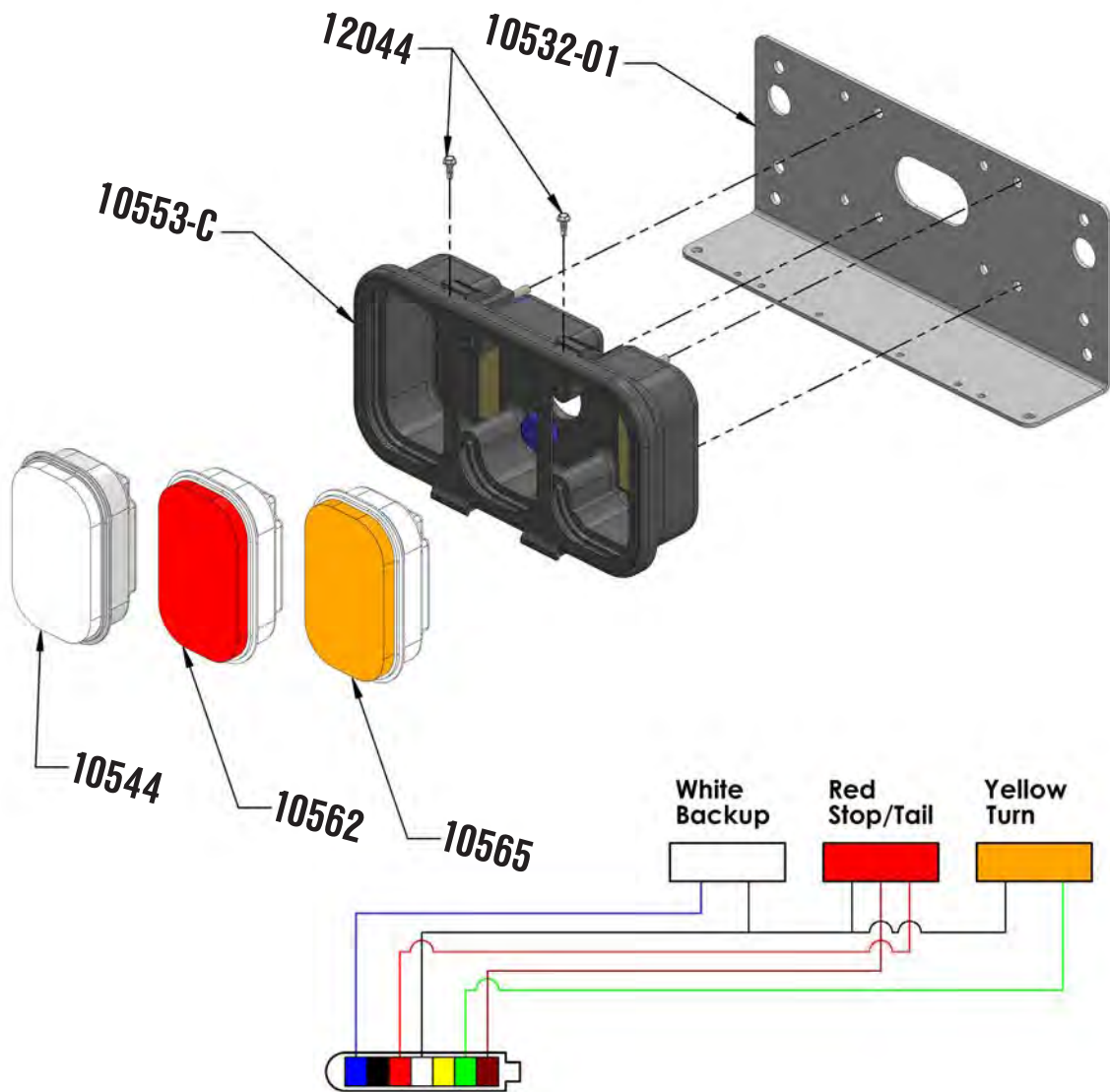
For TrafiX MASH Scorpion II® C-90 TMA



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.

**TraFFix
Devices Inc.**



Engineered Products for Safer Highways

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(949) 361-5663

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