



IMPORTANT

Always refer to OEM repair procedures for proper repair guidelines.
Never subject Tesla Cybertruck to pulling forces.

Holding System
User Manual
IN20979
REV. - 2.26.24
CO12492.1

CHIEF'S LIMITED ONE-YEAR WARRANTY & LIABILITY

Chief Collision Technologies warrants for one year from the date of installation and/or purchase any of its products which do not perform satisfactorily due to defect caused by faulty material or workmanship. Chief's obligation under this warranty is limited to the repair or replacement of products which are defective and which have not been misused, carelessly handled, or defaced by repairs made or attempted by others.

CHIEF COLLISION TECHNOLOGIES DOES NOT ASSUME RESPONSIBILITY FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM THE OPERATOR'S NEGLIGENCE OR MISUSE OF THIS PRODUCT OR ITS ATTACHMENTS. CHIEF MAKES NO WRITTEN, EXPRESS OR IMPLIED WARRANTY WHATSOEVER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE REGARDING THE EQUIPMENT OR ANY PART OF THE PRODUCT OTHER THAN THE LIMITED ONE-YEAR WARRANTY STATED ABOVE.

This users manual is designed to assist operators with the safe and efficient use of the Chief Cybertruck Holding System. When used with Chief Electronic Measuring, the parts holding system provides operators with the ability to accurately and securely hold replacement parts during vehicle repair.

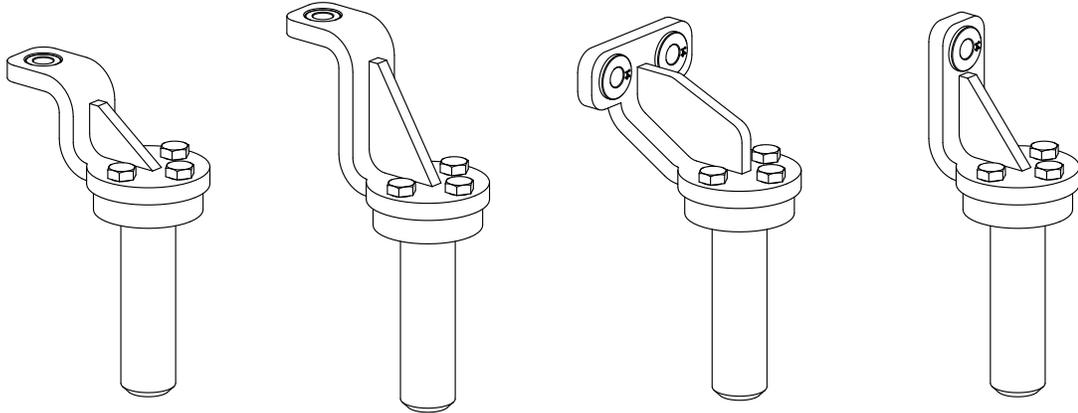
IMPORTANT This manual only identifies basic usage procedures for the Cybertruck Structural Holding System, it must be used with the Chief Structural Holding System. The usage of the system is limited only by the imagination of the technician doing the work.

The Chief Cybertruck Structural Holding System is designed for the holding and positioning replacement parts. It is not designed as a replacement for Chief Anchoring. **IMPORTANT** The Cybertruck Structural Holding System must not be subjected to pulling forces. The Chief Universal Stands provided will serve as the primary vehicle holding.

Because Chief Cybertruck Structural Holding System works with Chief electronic measuring, special attention should be given to the replacement of the Structural Holding stands during setup. Best results will be achieved with the stands located on the perimeter of the vehicle being repaired to prevent shading of measuring targets.

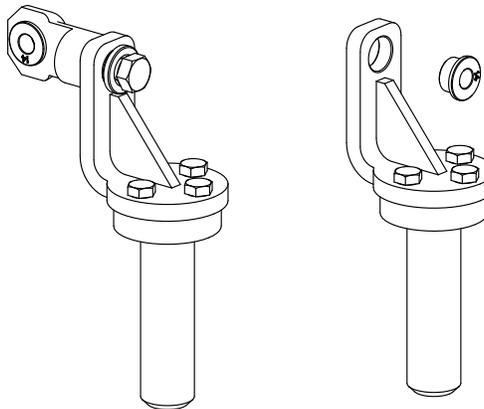
PLANNING AND SETUP

The Holding System is a universal system that will adapt to any Chief style systems with rectangular holes in the deck. The Fixtures are designed to be bolted to any existing threaded bolt or any location there is a threaded nut, flange or boxed rail on a vehicle. This could be used with suspension (components) that are installed or removed and are designed with an offset to also be used with Chiefs computerized measuring system. The system includes short vertical fixtures and tall vertical fixtures that will accommodate most bolts or threaded holes from 6mm to 25mm with the use of bushings. The large and tall horizontal fixtures are designed for any bolts or bolt hole ranging from 6mm to 25mm with the use of bushings that is facing forward, inward, outward or rearward.

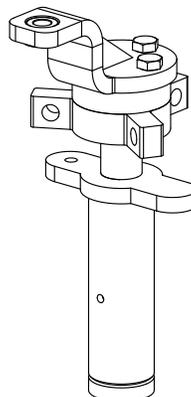


Additional attachments will allow for connection of the fixture to the structure in several different methods. The angle adapter allows for the location of the fixture to be used if the location is at an angle.

Note: All bushings are designed to allow for the correct sizing of the hole for the bolt to be used to allowing for centering of the Fixture and should be placed on the opposite side of the fixture away from the structure.



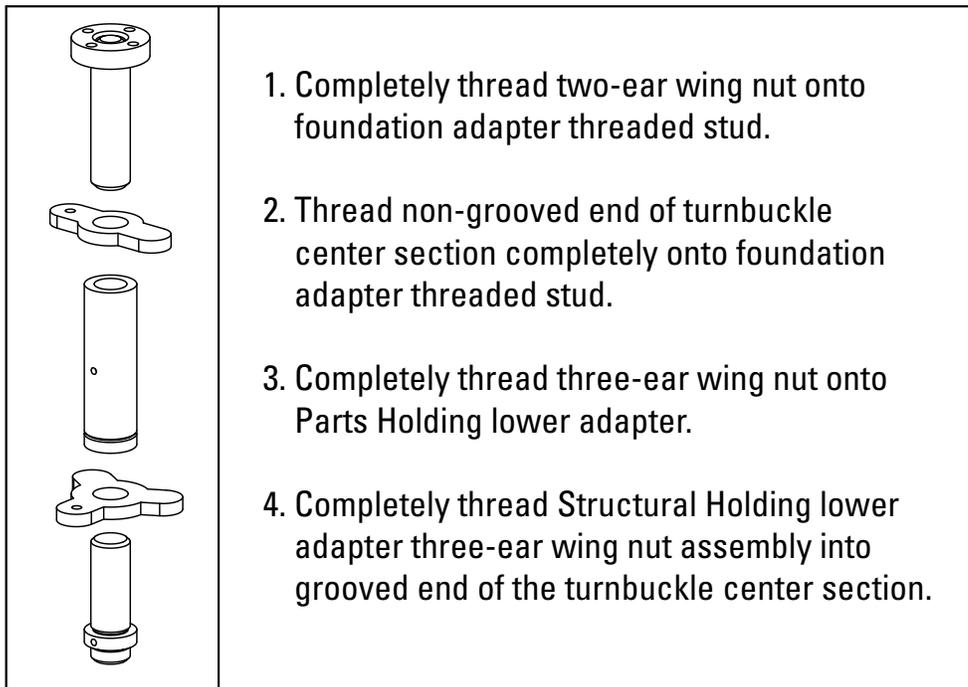
A heavy three-ear rigging nut can be placed directly below the foundation adapter. This will serve as a cable tie off when additional stability is needed.



Directly below the foundation adapter is the turnbuckle adjustment mechanism. The foundation adapter threaded stud screws into the top of the turnbuckle center section while the Structural Holding lower adapter screws into the bottom. A two-ear wing nut is threaded on to the foundation adapter to lock the top half of the turnbuckle once correct vertical position is achieved. A three-ear wing nut is threaded on the lower adapter to lock that half of the turnbuckle.

Note: The long threaded portion of the Structural Holding lower adapter utilizes a left hand thread, which is compatible with the bottom of the turnbuckle center section (marked with a v-groove around the outside of the part) and the three-ear wing nut.

Turnbuckle Assembly



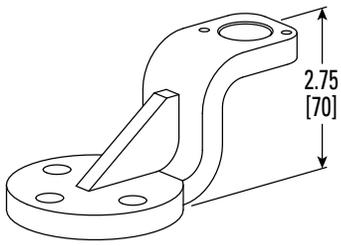
The short threaded side of the Structural Holding lower adapter is a standard right hand thread that is compatible with the Structural Holding stand base and extension tubes.

Note: It is not necessary to completely disassemble the turnbuckle section when changing setups or reconfiguring the stand. The fully assembled turnbuckle section can be unscrewed from the rest of the stand system using the included spanner wrenches.

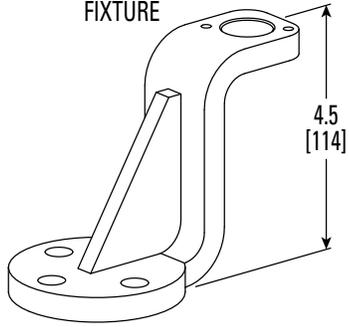
Note: For best results, always have foundation adapter and the lower Structural Holding adapter threaded into the turnbuckle center section equal amounts before starting up.

Vertical positioning of the Cybertruck Structural Holding System, when used in conjunction with the Structural Holding System, uses a turnbuckle style adjustment over a 4.5" (115mm) range. Additional height can be achieved by using the extension tubes and extension adapters included with the system. Compare the approximate height required to the table below to determine how to configure the extension tubes and adapters.

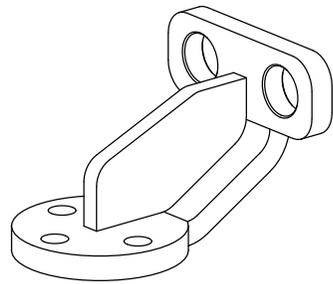
502000
SHORT VERTICAL FIXTURE
(FOR EXTENDED REACH USE CK110123)



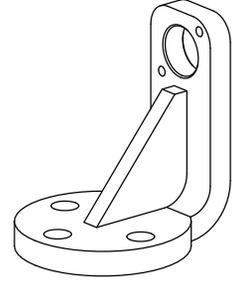
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TALL VERTICAL
FIXTURE



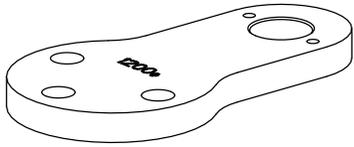
502005
LARGE HORIZONTAL
FIXTURE



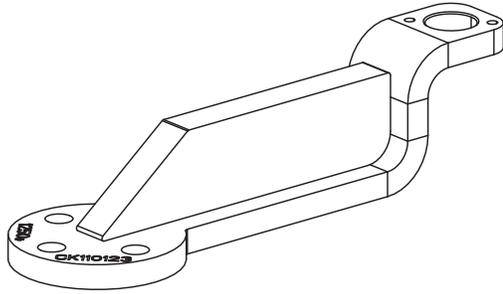
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TALL HORIZONTAL
FIXTURE



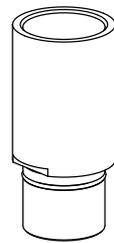
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FLAT FIXTURE



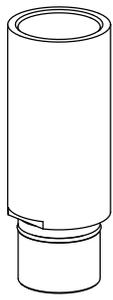
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EXTENDED REACH
VERTICAL FIXTURE



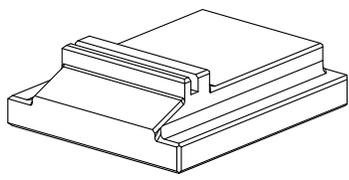
FJ6171-1
90mm EXTENSION



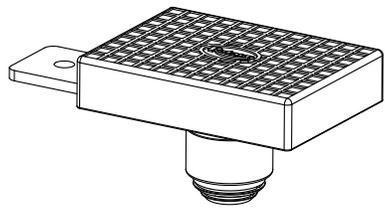
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130mm EXTENSION



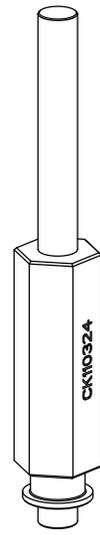
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PINCH WELD SUPPORT



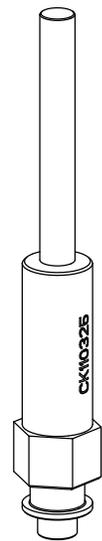
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ADAPTER WITH
LEVER ADJUSTMENT



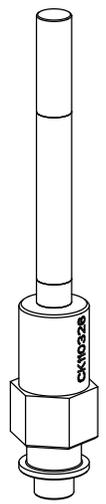
CK110324
STANDOFF
104 M18 X 115 Lg.



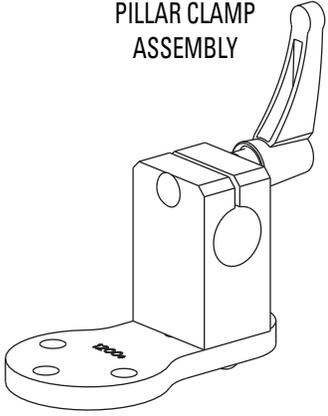
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STANDOFF
104 M16 X 120 Lg.



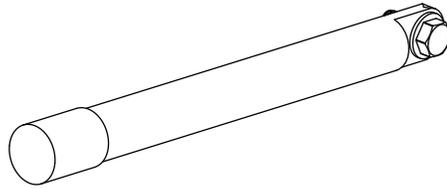
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STANDOFF
64 M16 X 140 Lg.



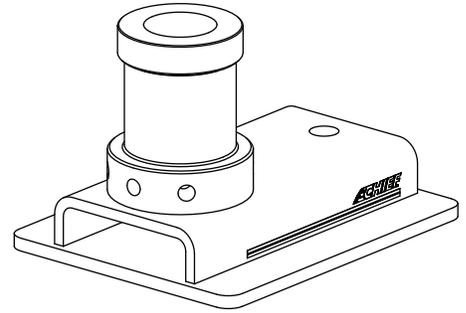
502143
PILLAR CLAMP
ASSEMBLY



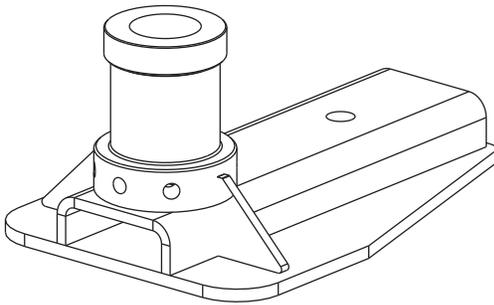
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OVERHEAD ARM
ASSEMBLY



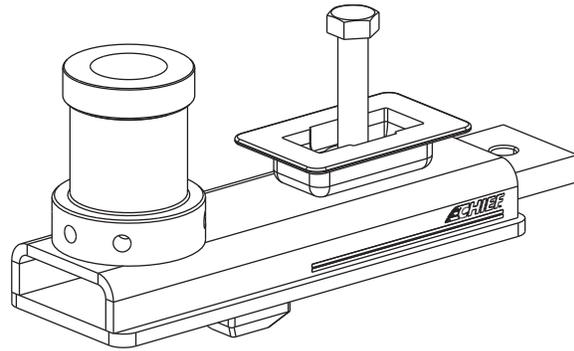
499118
FLAT BASE



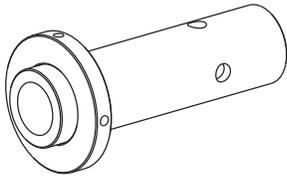
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STRUCTURAL HOLDING
BASE



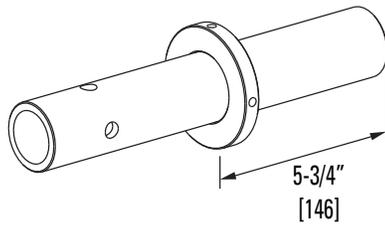
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NARROW STRUCTURAL
HOLDING BASE ASSY



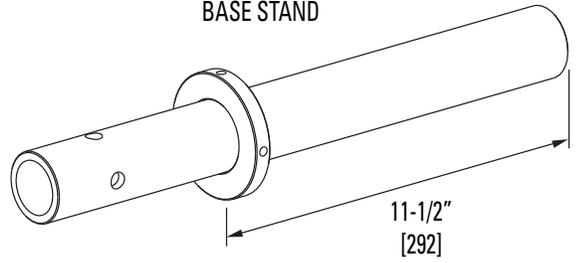
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SHORT TUBE
BASE STAND



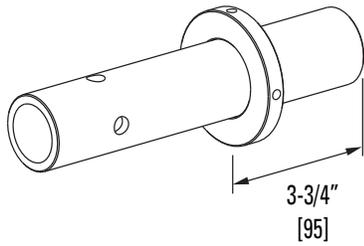
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TALL TUBE
BASE STAND



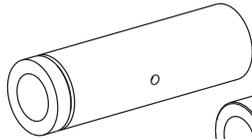
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11-1/2\" TUBE
BASE STAND



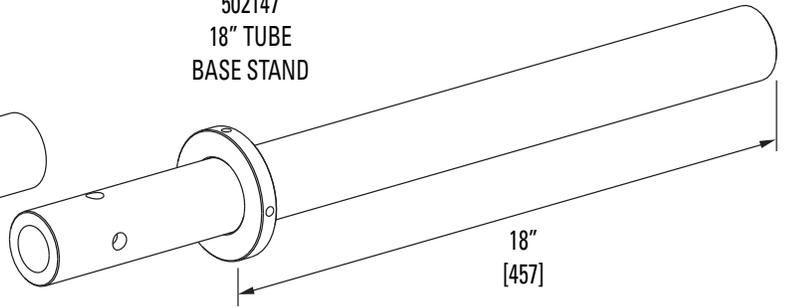
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3-3/4\" TUBE
BASE STAND



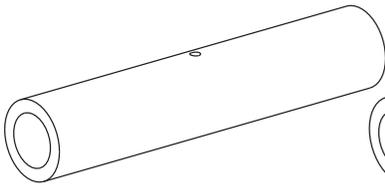
502034
TURN BUCKLE
CENTER TUBE



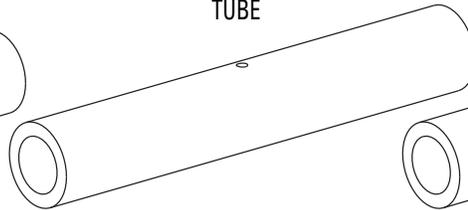
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18\" TUBE
BASE STAND



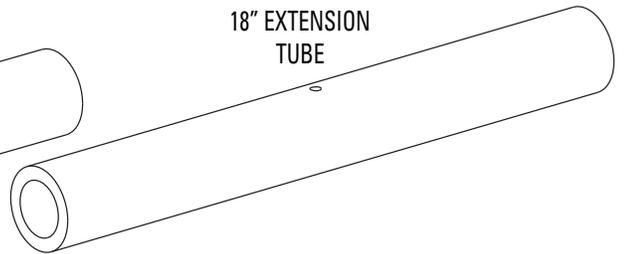
502061
10\" EXTENSION
TUBE



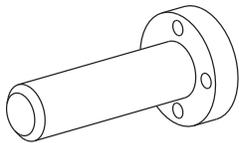
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12\" EXTENSION
TUBE



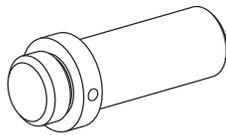
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18\" EXTENSION
TUBE



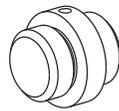
502039
ADAPTER HEIGHT
SCREW



502033
LOWER ADAPTER
SCREW



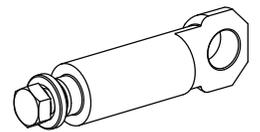
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ADAPTER
EXTENSION



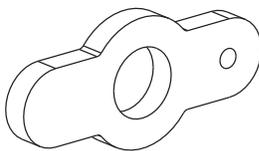
502026
ANGLE ADAPTER
CLAMP



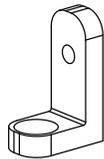
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LONG ANGLE ADAPTER
CLAMP



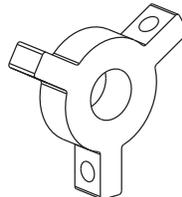
502015
RIGHT HAND
WING NUT



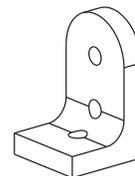
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WRIST BLOCK



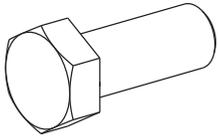
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RIGGING NUT



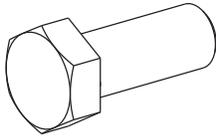
638073
WRIST BLOCK



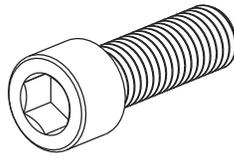
010625
1/2"-13 x 1-1/4" HHCS



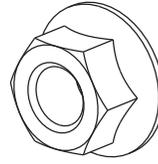
41684
M12-1.75 x 30 HHCS



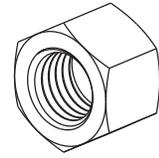
502078
M12-1.75 x 35 SHCS



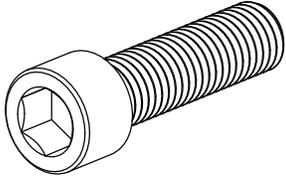
CK130190
M12-1.75
FLANGE NUT



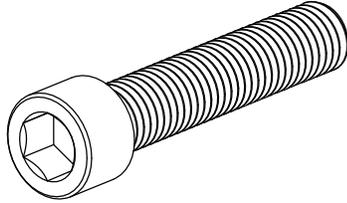
CK130610
M18-2.5
HEX NUT



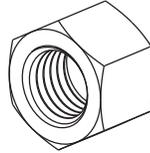
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M18-2.5 x 50 SHCS



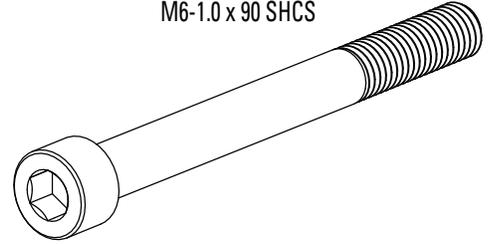
CK130603
5/8"-11NC x 3" SHCS



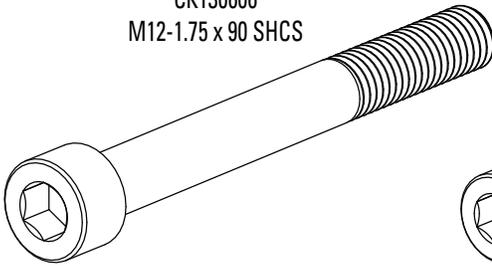
CK130604
5/8"-11NC
HEX NUT



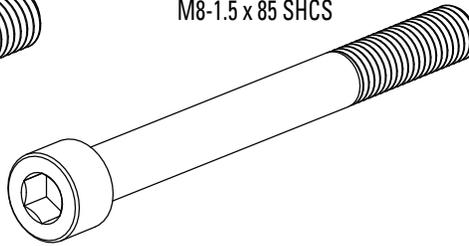
CK130605
M6-1.0 x 90 SHCS



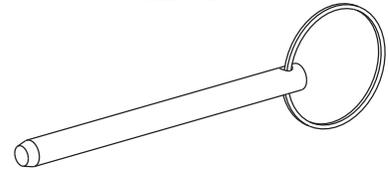
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M12-1.75 x 90 SHCS



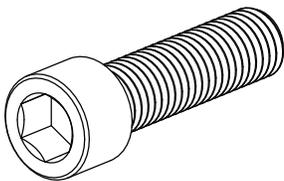
CK130522
M8-1.5 x 85 SHCS



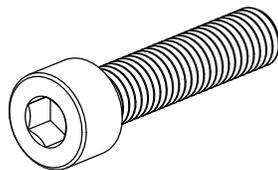
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RELEASE PIN



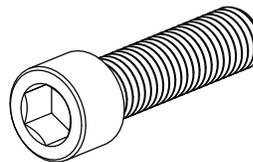
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M16-2.0 x 40 SHCS



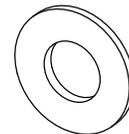
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M8-1.25 x 35 SHCS



502085
M12-1.75 x 45 SHCS



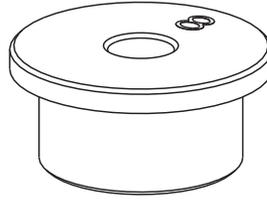
019095
1/2" ASTM F436
FLAT WASHER



502165
PILOT BUSHING
6mm



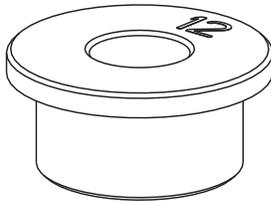
502086
PILOT BUSHING
8mm



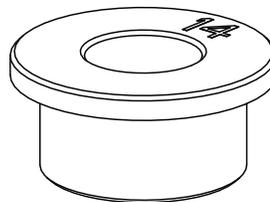
502027
PILOT BUSHING
10mm



502028
PILOT BUSHING
12mm



502029
PILOT BUSHING
14mm



502030
PILOT BUSHING
16mm



502035
PILOT BUSHING
18mm



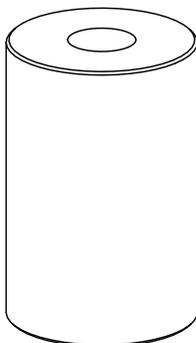
502036
PILOT BUSHING
20mm



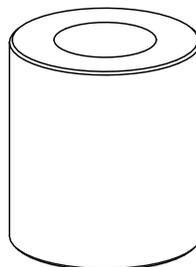
502037
PILOT BUSHING
22mm



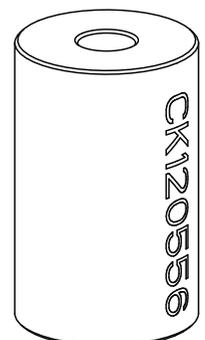
CK120489
2" SPACER

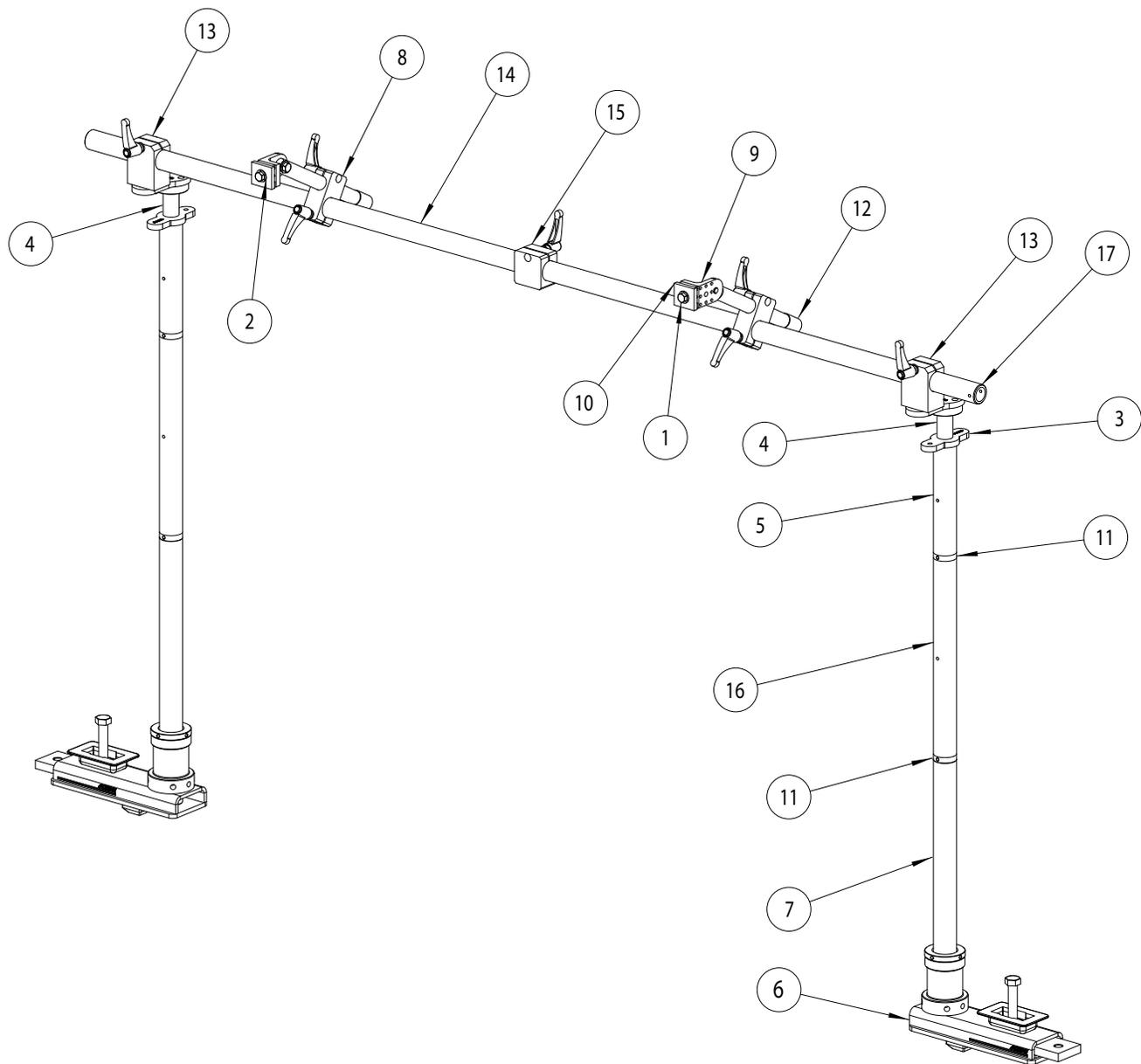


CK120519
39.5mm SPACER



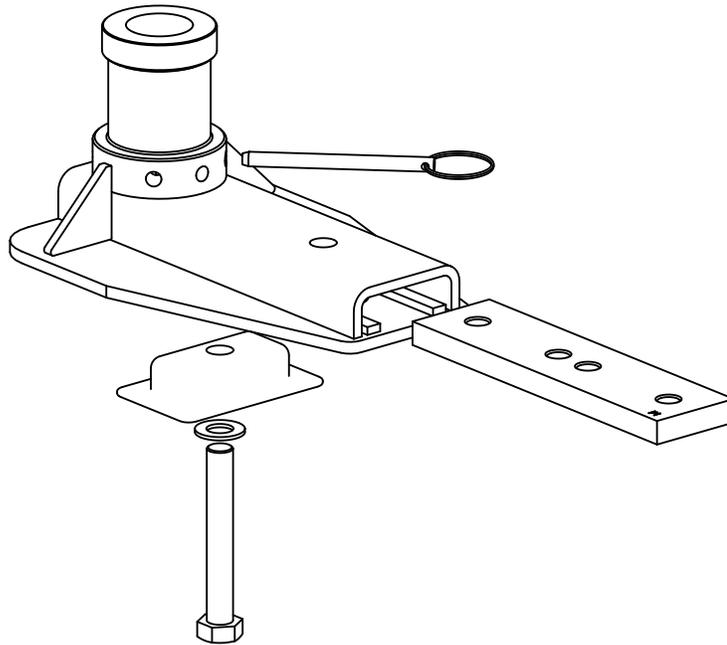
CK120556
2" SPACER
M8-1.25





ITEM	QTY	PART NO.	DESCRIPTION
1	2	010625	BOLT, 1/2-13 X 1-1/4, HHCS, GRADE 8, PLATED
2	2	019095	WASHER, 1/2" ASTM F436
3	2	502015	WING NUT, PARTS HOLDING - RH
4	2	502039	STRUCTURAL HOLDING ADAPTER ASSEMBLY
5	2	502061	10" EXTENSION TUBE, PARTS HOLDING
6	2	502128	NARROW STRUCTURAL HOLDING BASE ASSEMBLY
7	2	502147	18" TUBE BASE STAND ASS'Y.
8	2	638068	OVERHEAD BOOM CLAMP ASSY
9	2	638073	WRIST BLOCK
10	2	638133	JAW CLAMP ASSEMBLY, PARTS HOLDING
11	4	502032N	ADAPTER EXTENSION TUBE PARTS HOLDING
12	2	CK110090	OVERHEAD ARM ASSEMBLY
13	2	CK110231	BOOM CLAMP, END -ASSM-
14	1	CK110243	OVERHEAD BEAM SHORT ASSEMBLY
15	1	CK110244	OVERHEAD CENTER BOOM CLAMP ASSY
16	2	CK120413N	18" EXTENSION TUBE NITRIDE
17	1	CK120422	OVERHEAD BEAM, PARTS HOLDING

Once the proper configuration has been determined, assemble the required Structural Holding components on the base stand. The base stand should be loosely secured to the frame machine deck using M20x2.5 hardware and a UAS fastener plate. The M20x2.5 hardware will be fully tightened after the Structural Holding stand is located properly. Once the Structural Holding components are assembled, they can be fully tightened using the included spanner wrenches.



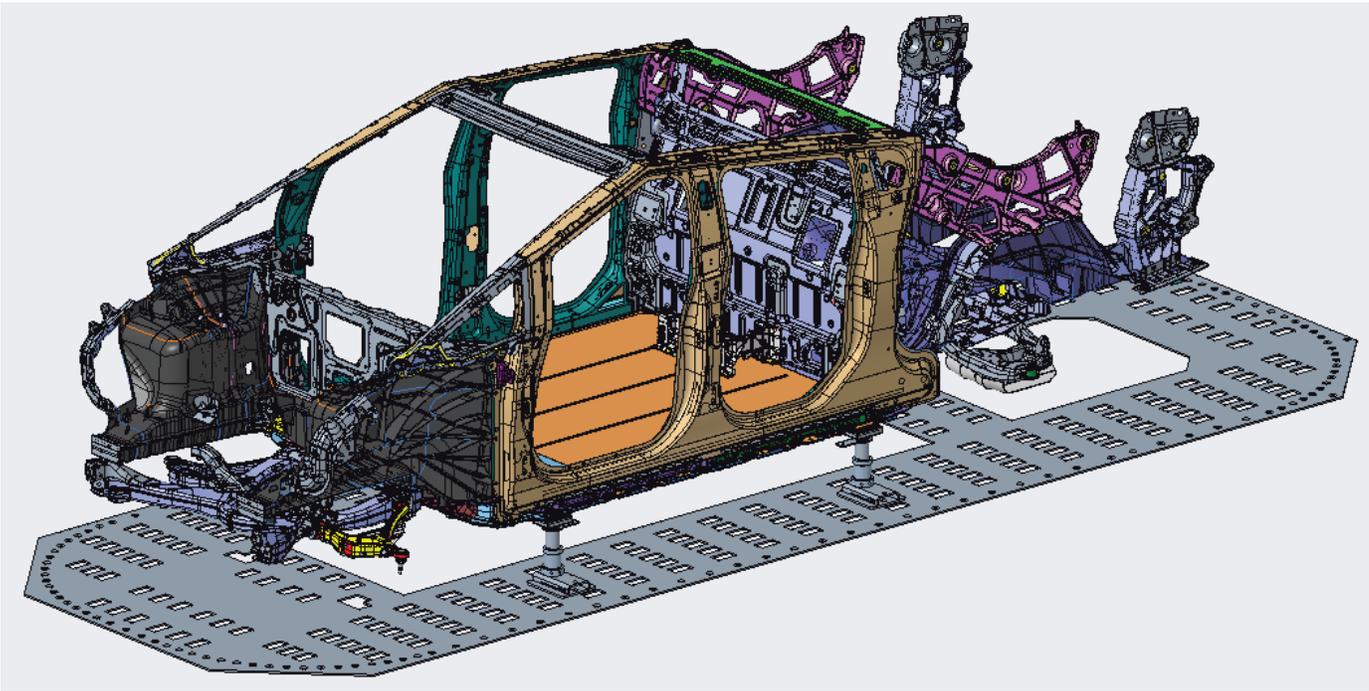
Securing New Part

Secure the replacement part to the Structural Holding stand using the foundation adapter and fixtures. Horizontal adjustment of the part can be made by lightly tapping on the stand base. Once the part is located correctly in both horizontal directions, torque down the stand base using a 30 mm wrench or socket. Vertical adjustment of the parts is achieved by turning the clockwise rotation will raise the stand. The turnbuckle section should turn easily by hand, but there is a provision to use a spanner wrench if necessary. Once the part is at the proper vertical position, tighten the top and bottom wing nuts to lock the turnbuckle center section in place and insert the release pin into one of the three hole positions.

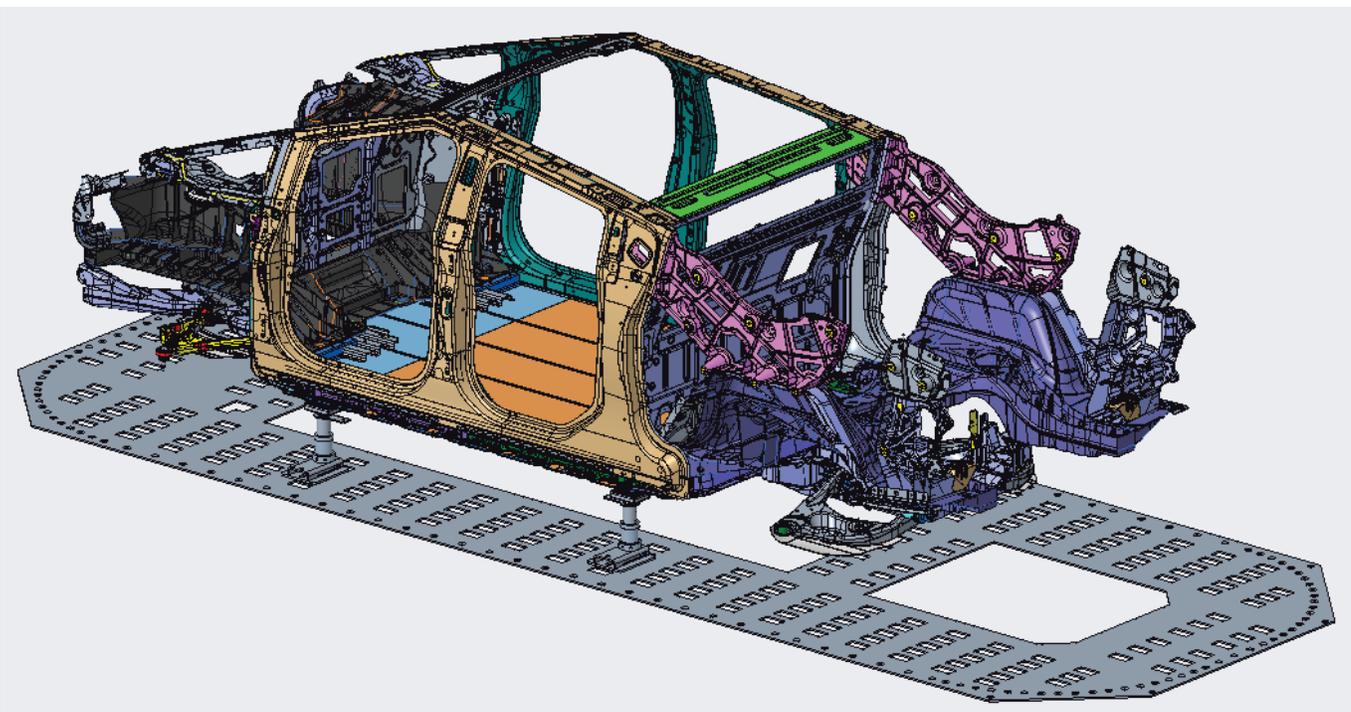
Note: For best results, the two-ear and three-ear wing nuts should be threaded away from the turnbuckle center section when making vertical position adjustments.

Cybertruck Parts-On

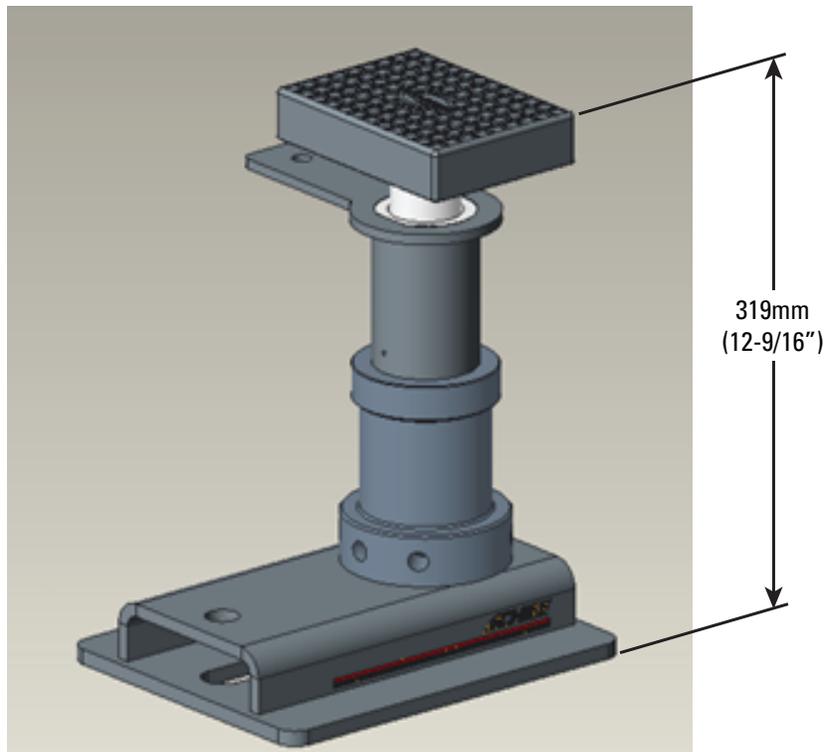
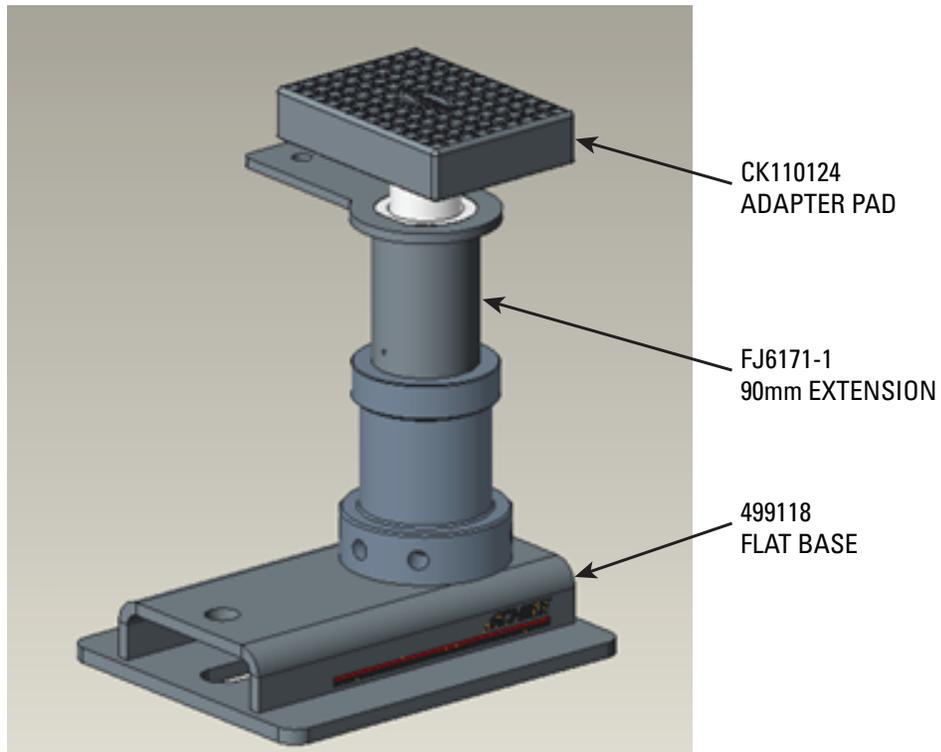
Positioning of the vehicle on the deck is very important, and the vehicle should be carefully located on the frame machine based on the type, severity and location of the damage. Once positioned, refer to your manual for proper installation and set-up procedures.



1. The initial setup requires four center section locations to be installed. Two in the front of the center section and two in the rear of the center section. Additionally, at least one set of fixtures must be placed on the front and rear rails, for a total of eight point holding for entire vehicle.



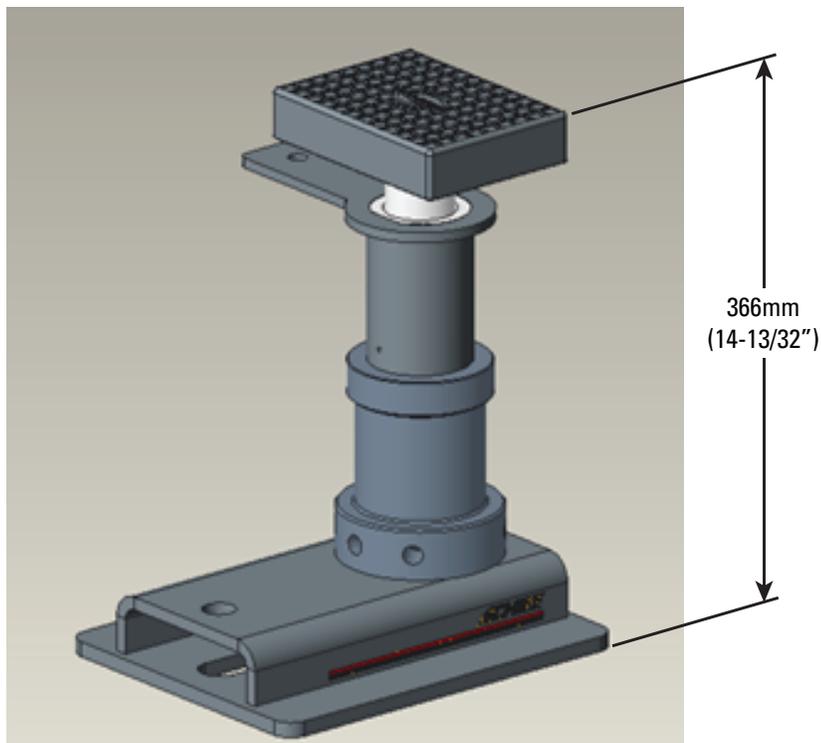
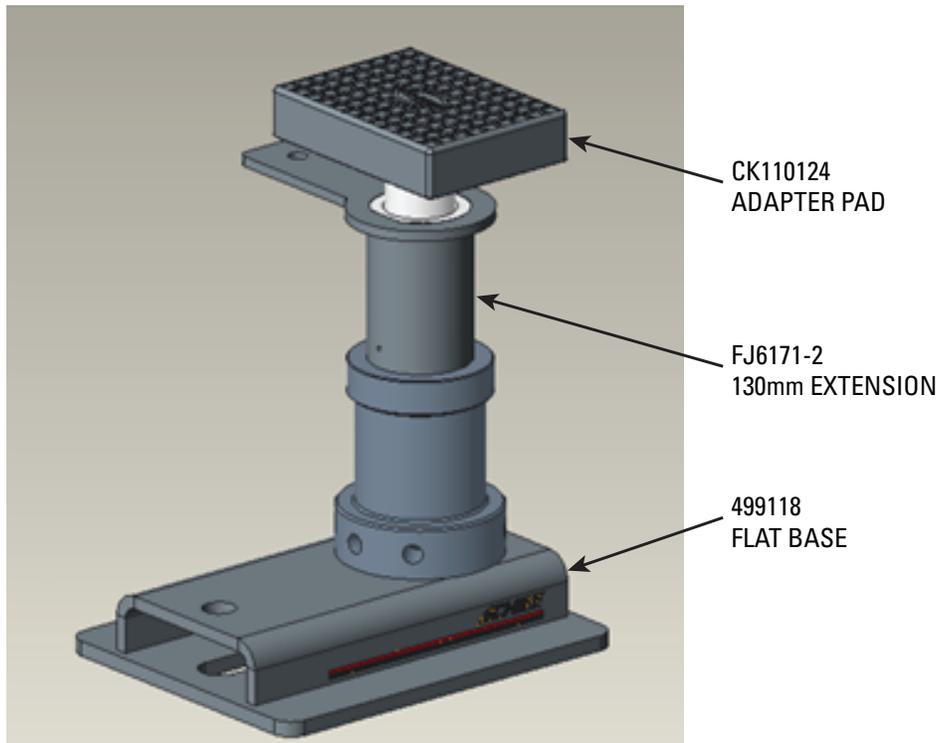
Center Section Base Mounting (with Battery)



Setting a level datum for Center Section:

1. Assembly Base (499118), 90mm Extension (FJ6171-1), and Adapter Pad (CK110124) .
2. Adjust Adapter Pad height 319mm (12-9/16") to establish level datum.
3. Assembled Base Stand will be placed as shown in Center Section of vehicle (with Battery details).
4. Final adjustments to raise or lower is achieved by rotating handle.

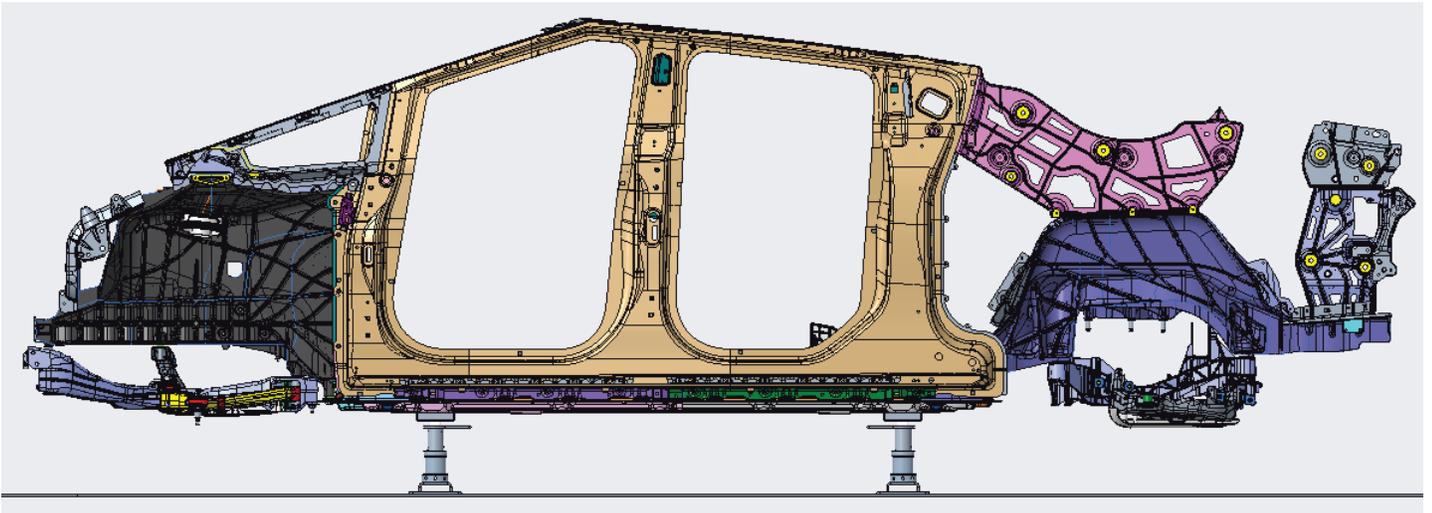
Center Section Base Mounting (less Battery)



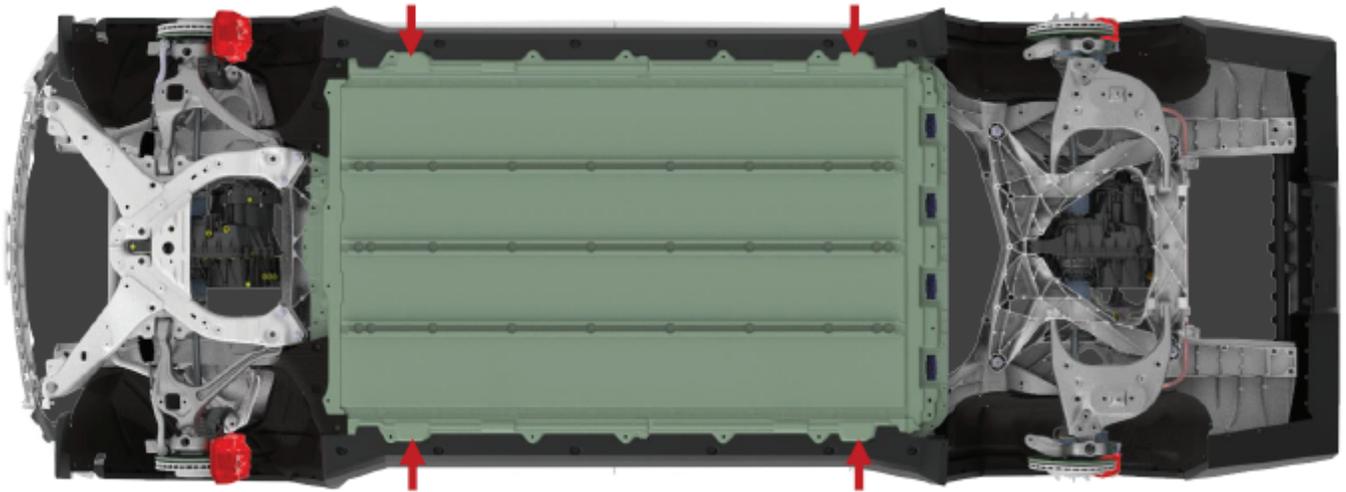
Setting a level datum for Center Section:

1. Assembly Base (499118), 90mm Extension (FJ6171-2), and Adapter Pad (CK110124) .
2. Adjust Adapter Pad height 366mm (14-13/32") to establish level datum.
3. Assembled Base Stand will be placed as shown in Center Section of vehicle (less Battery details).
4. Final adjustments to raise or lower is achieved by rotating handle.

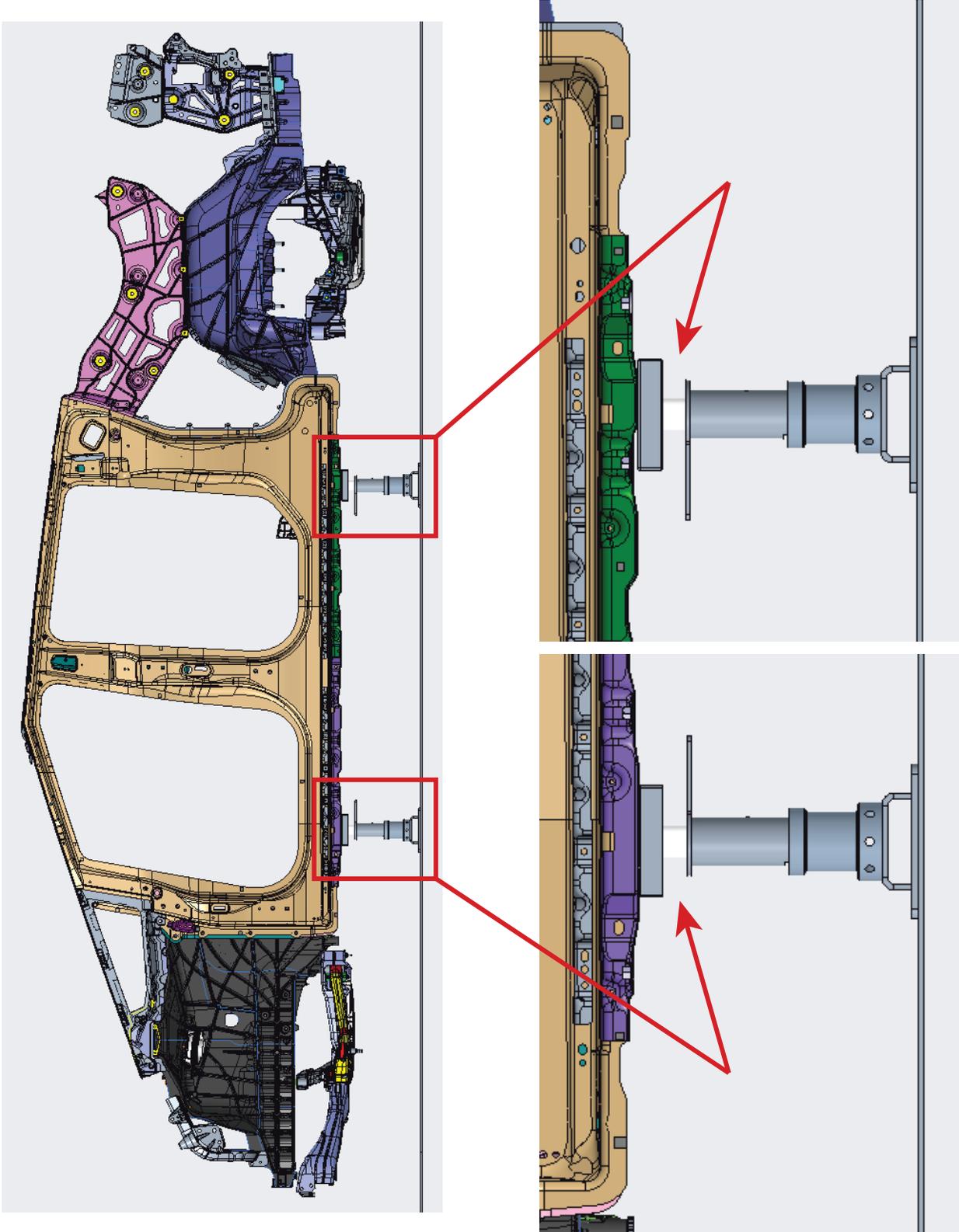
Center Section Base Mounting (with Battery)



1. Pad height set at 319mm.
2. Red arrows indicate lifting points on battery pack.



Center Section Base Mounting (less Battery)



1. Pad height set at 366mm.

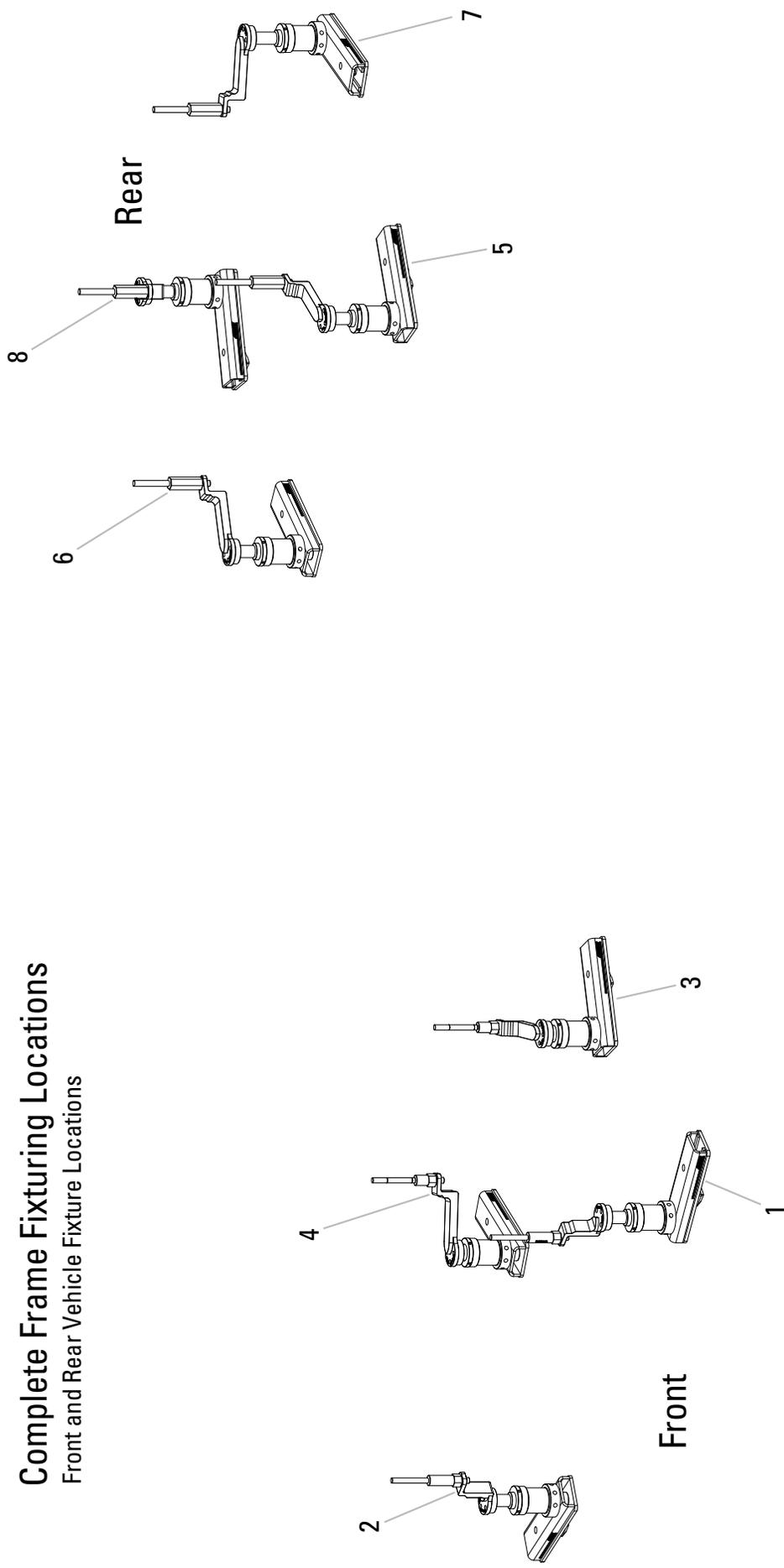
2. Red box indicate lifting points.

Frame Fixtures - Mechanicals In
Complete Vehicle Fixture Locations

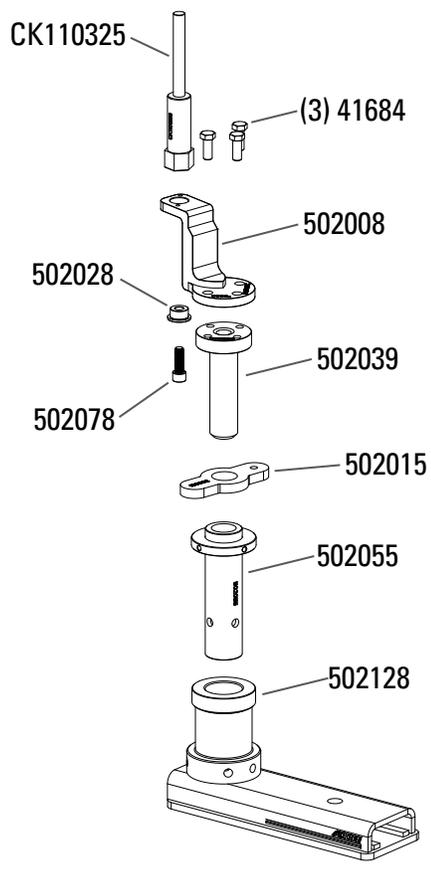


Complete Frame Fixturing Locations

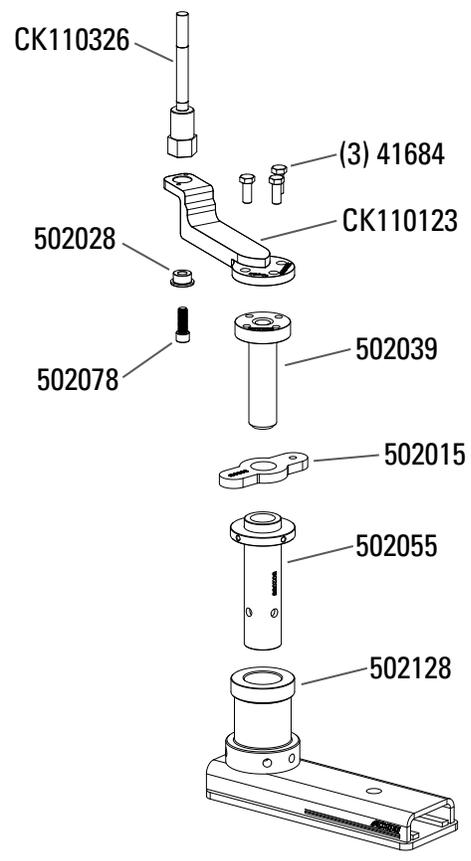
Front and Rear Vehicle Fixture Locations



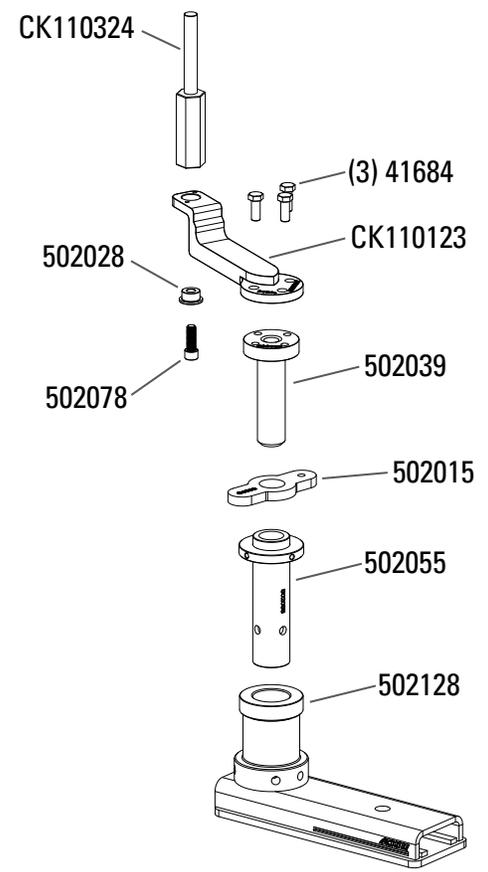
Fixture # 1, 2



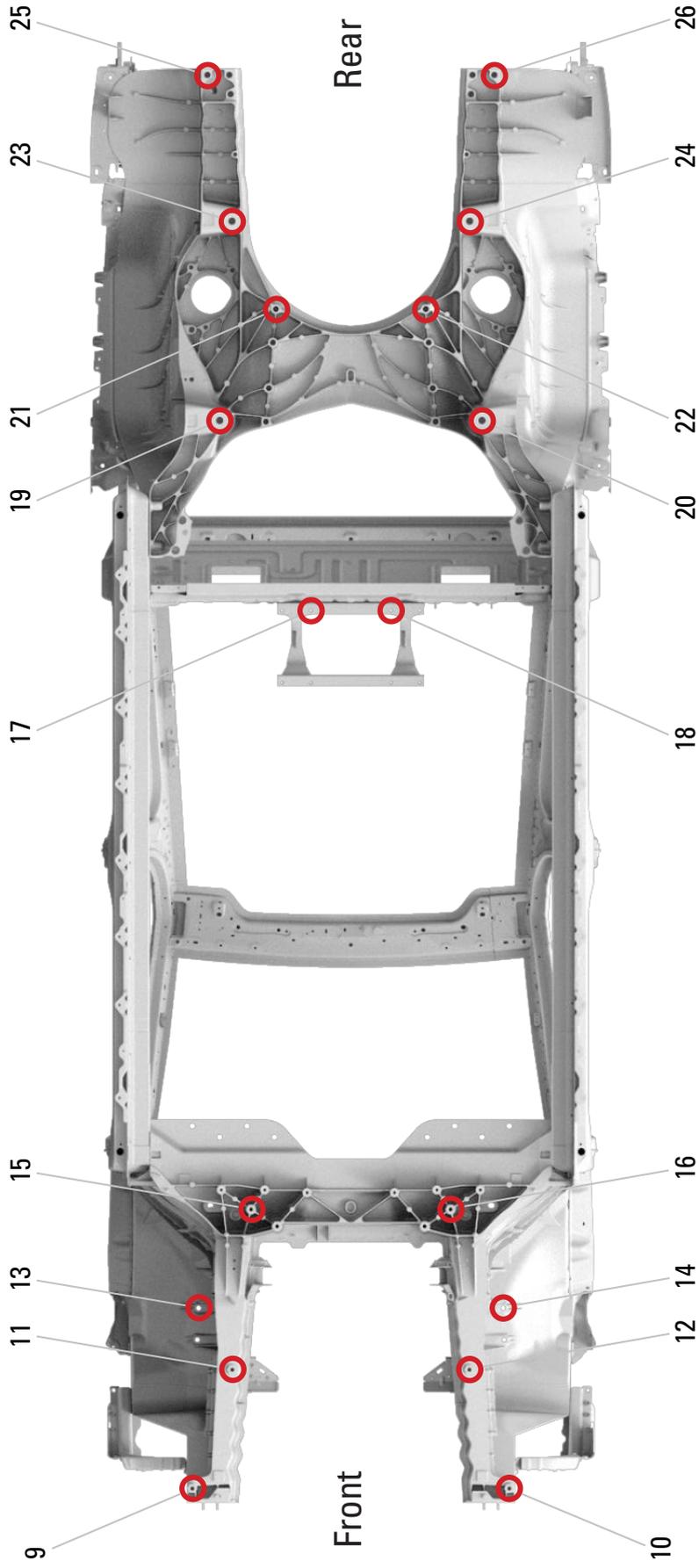
Fixture # 3, 4



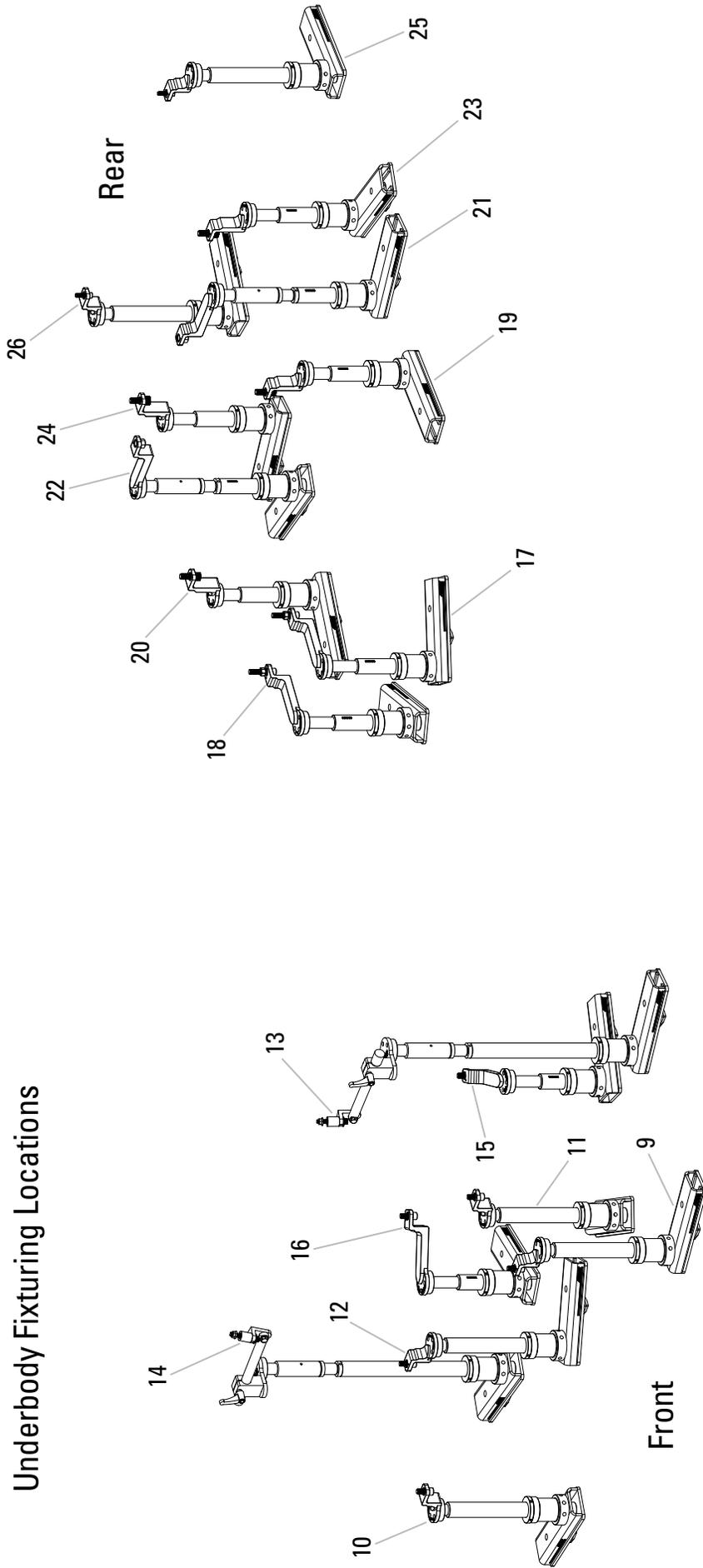
Fixture # 5, 6, 7, 8



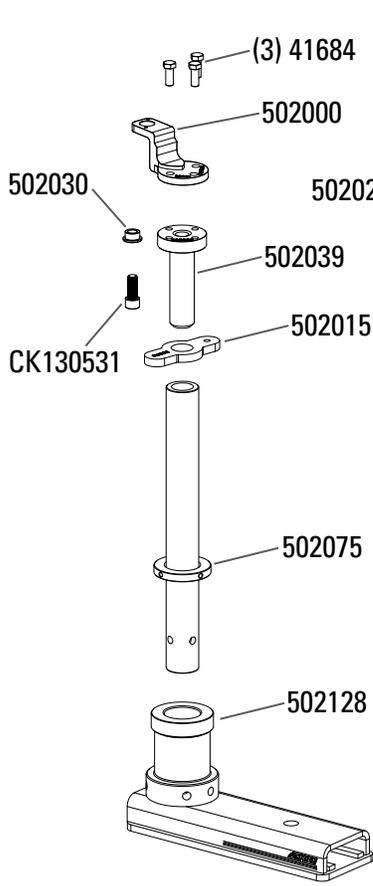
Frame Fixtures - Mechanicals Out
Underbody Fixture Locations



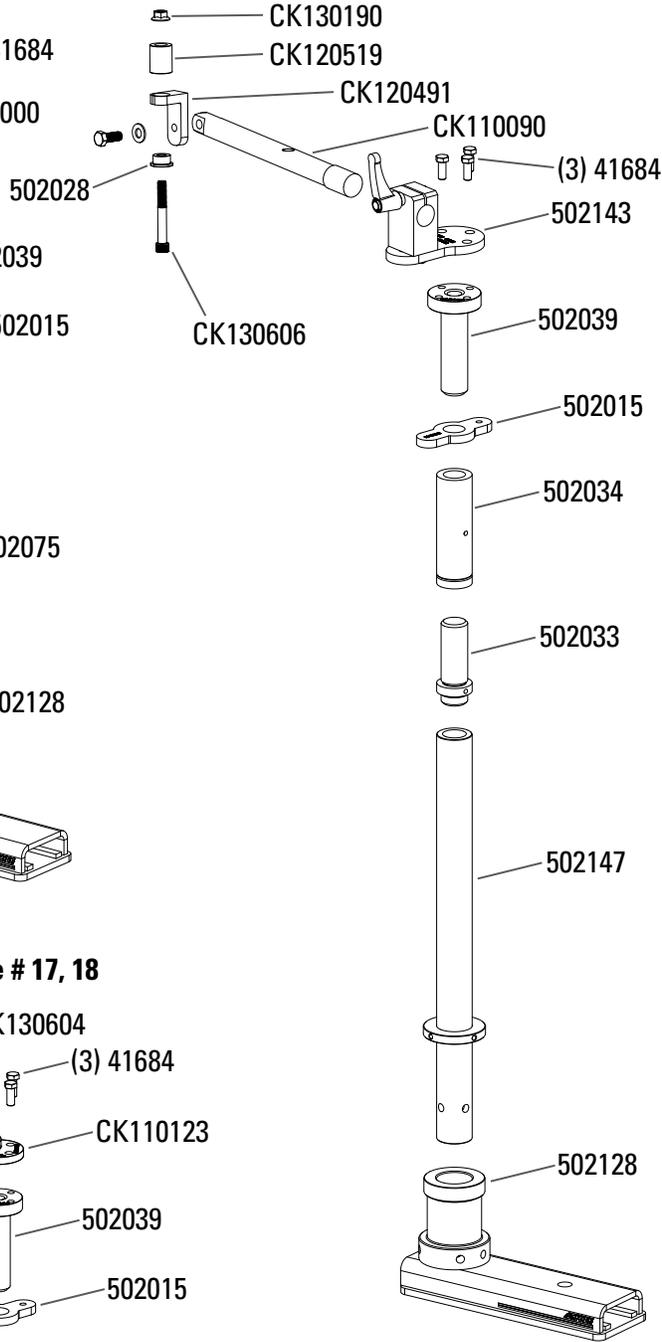
Underbody Fixturing Locations



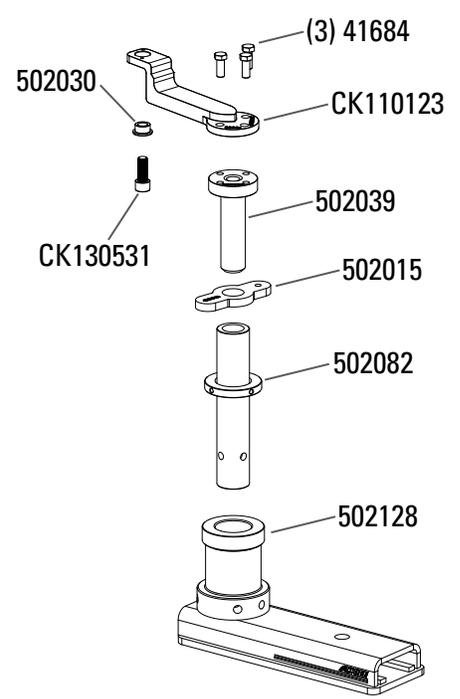
Fixture # 9, 10, 11, 12



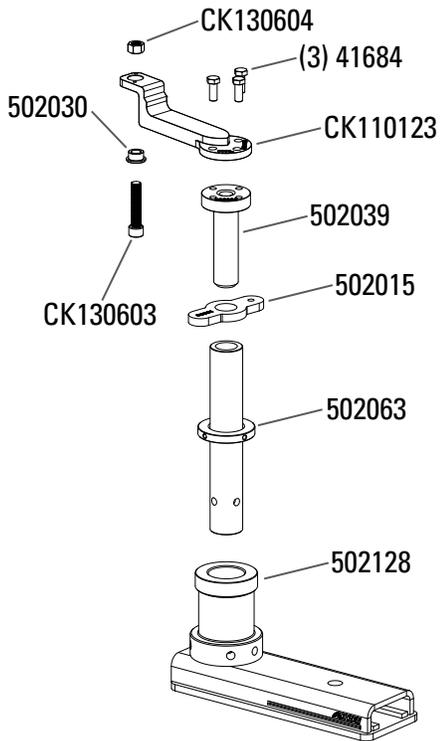
Fixture # 13, 14



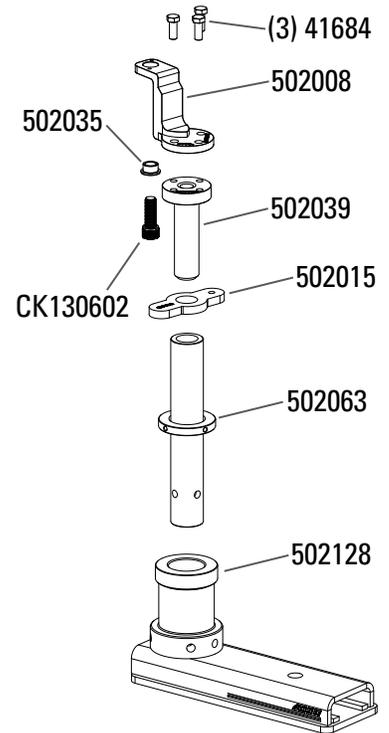
Fixture # 15, 16



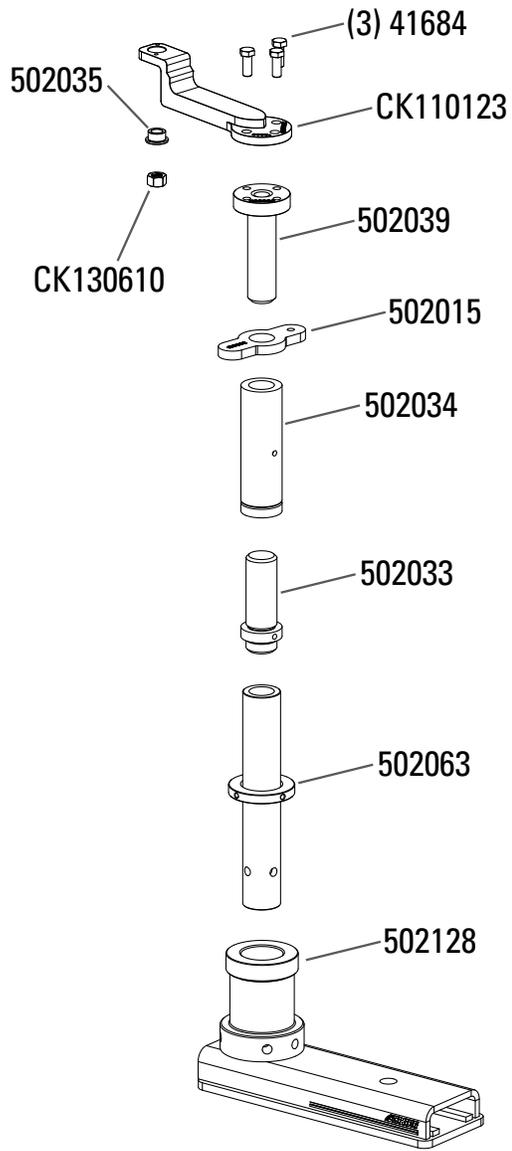
Fixture # 17, 18



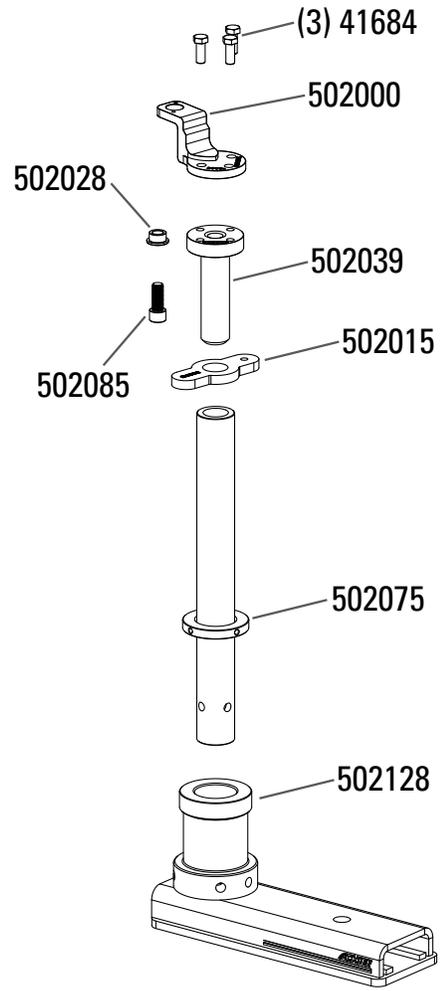
Fixture # 19, 20, 23, 24



Fixture # 21, 22

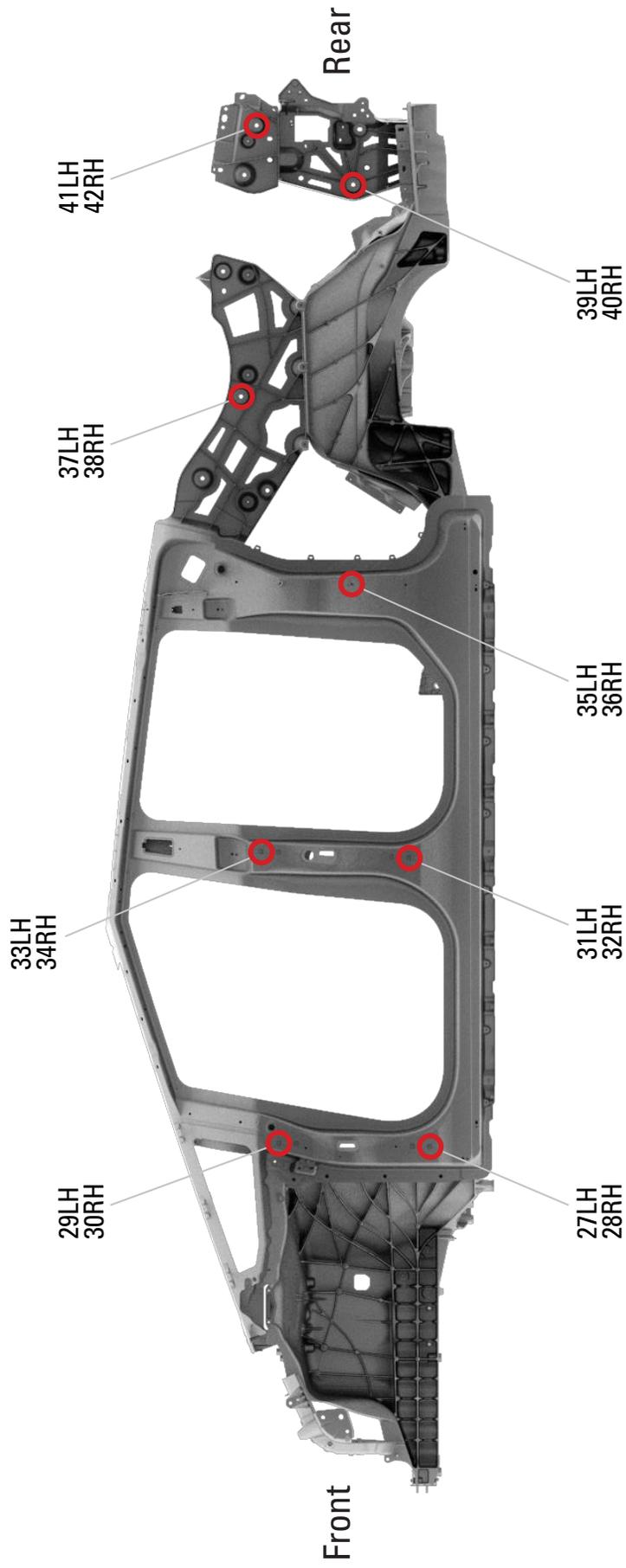


Fixture # 25, 26

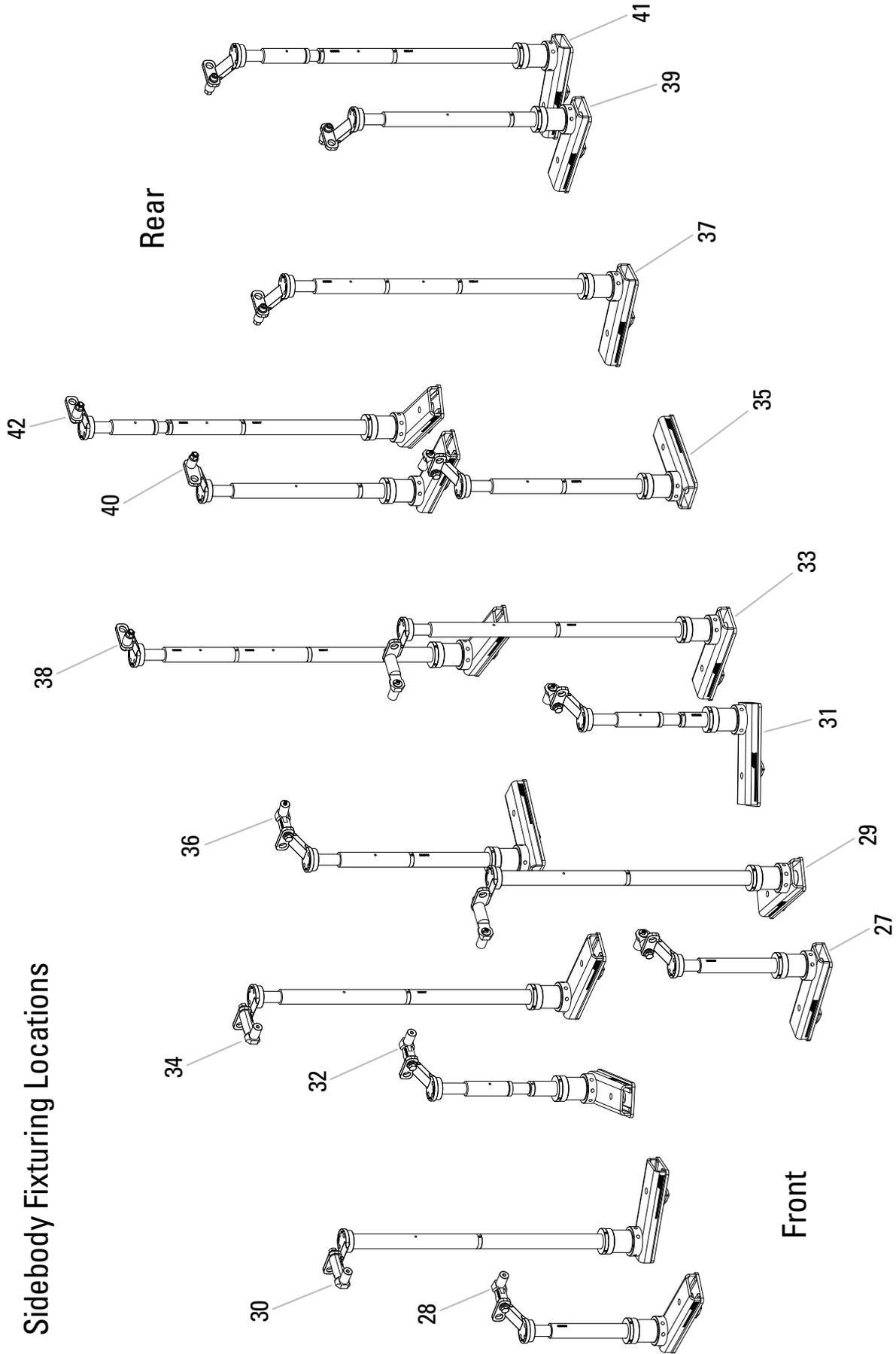


Frame Fixtures - Mechanicals Out

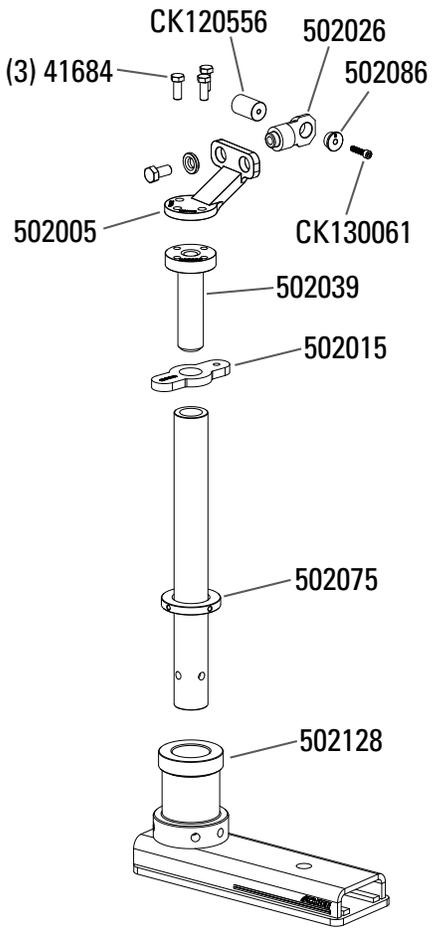
Sidebody Fixture Locations



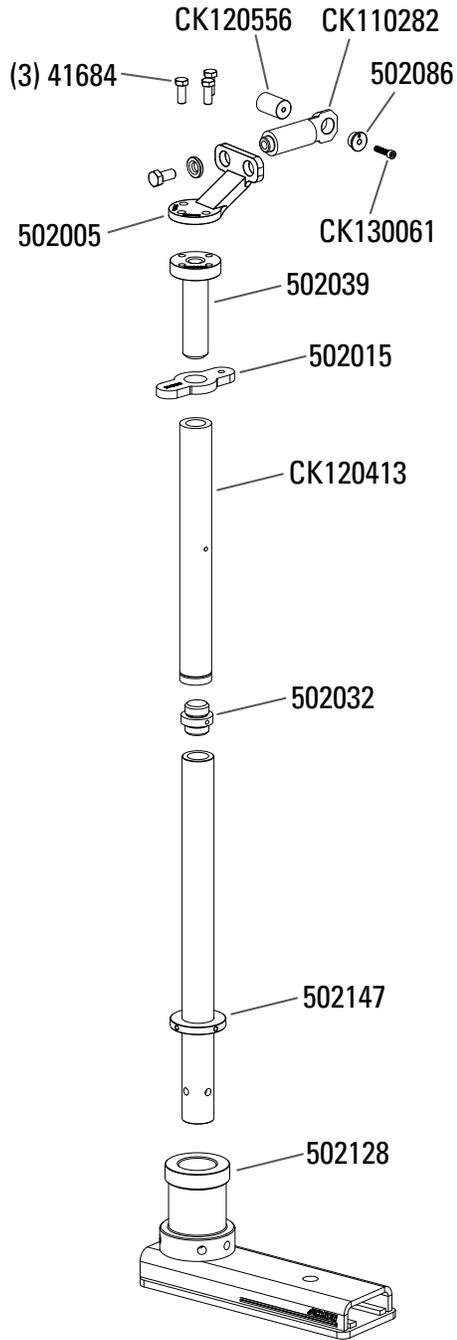
Sidebody Fixturing Locations



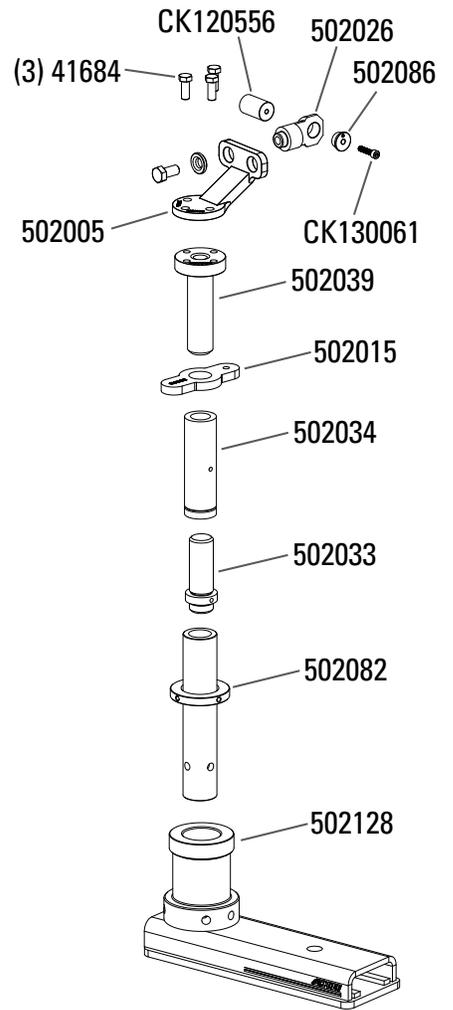
Fixture # 27, 28



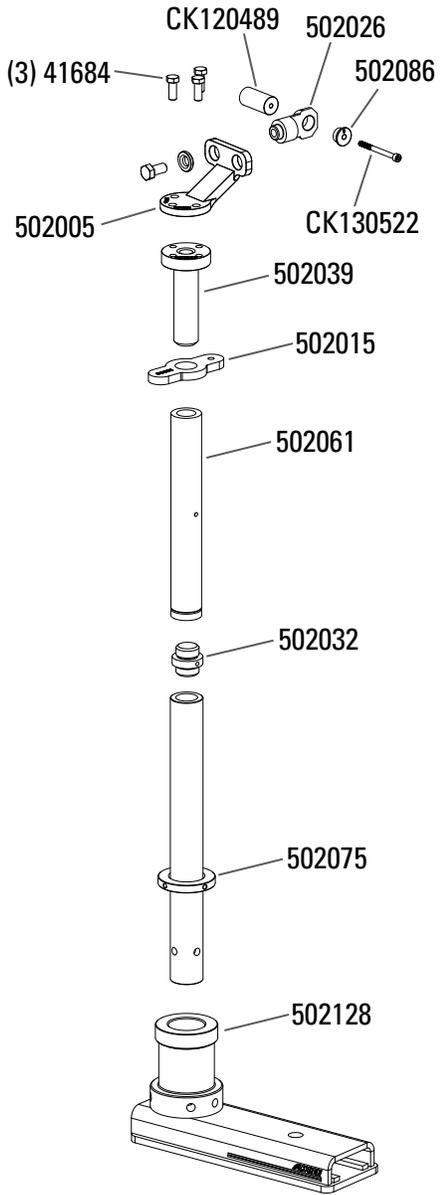
Fixture # 29, 30, 33, 34



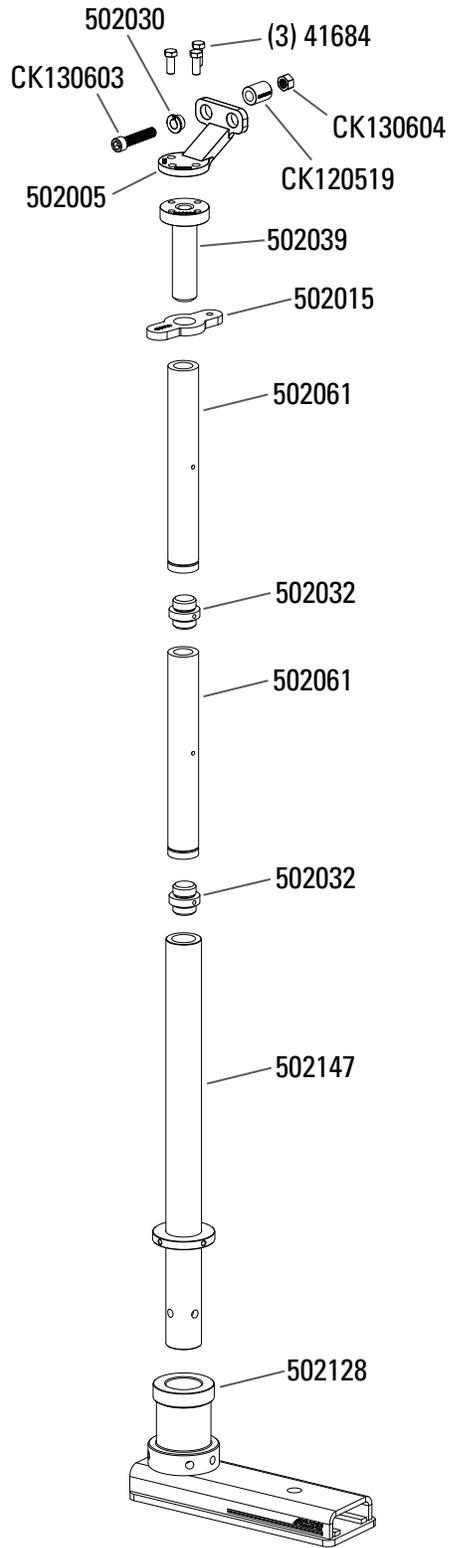
Fixture # 31, 32



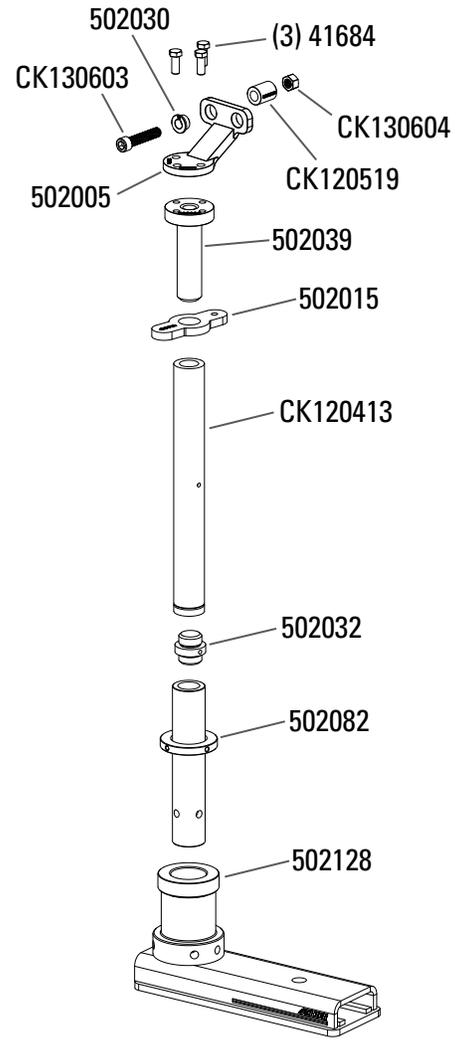
Fixture # 35, 36



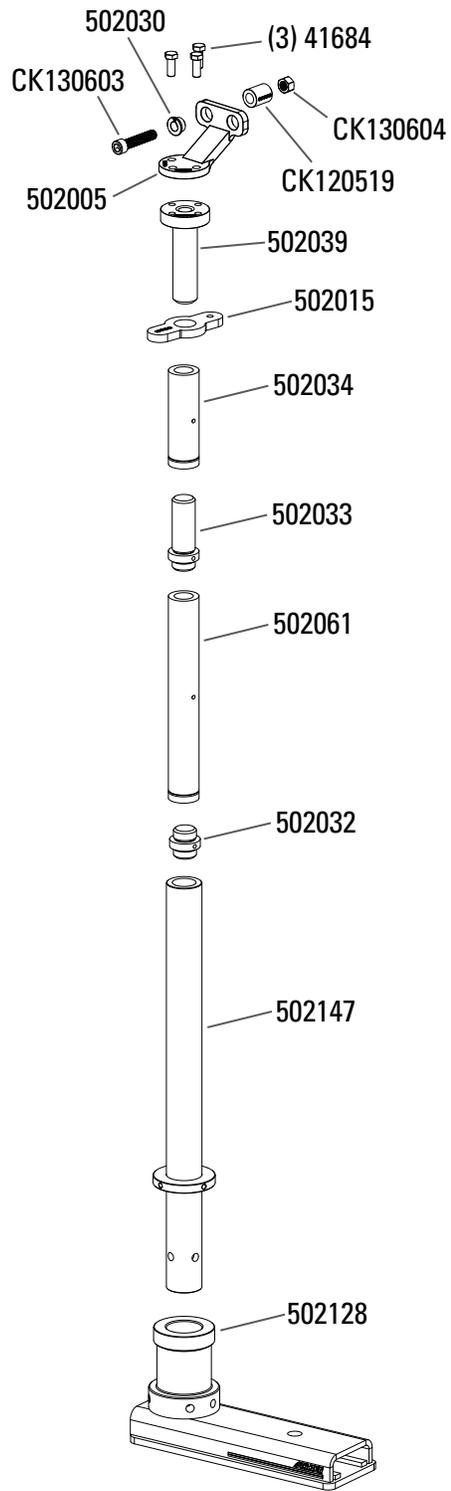
Fixture # 37, 38



Fixture # 39, 40

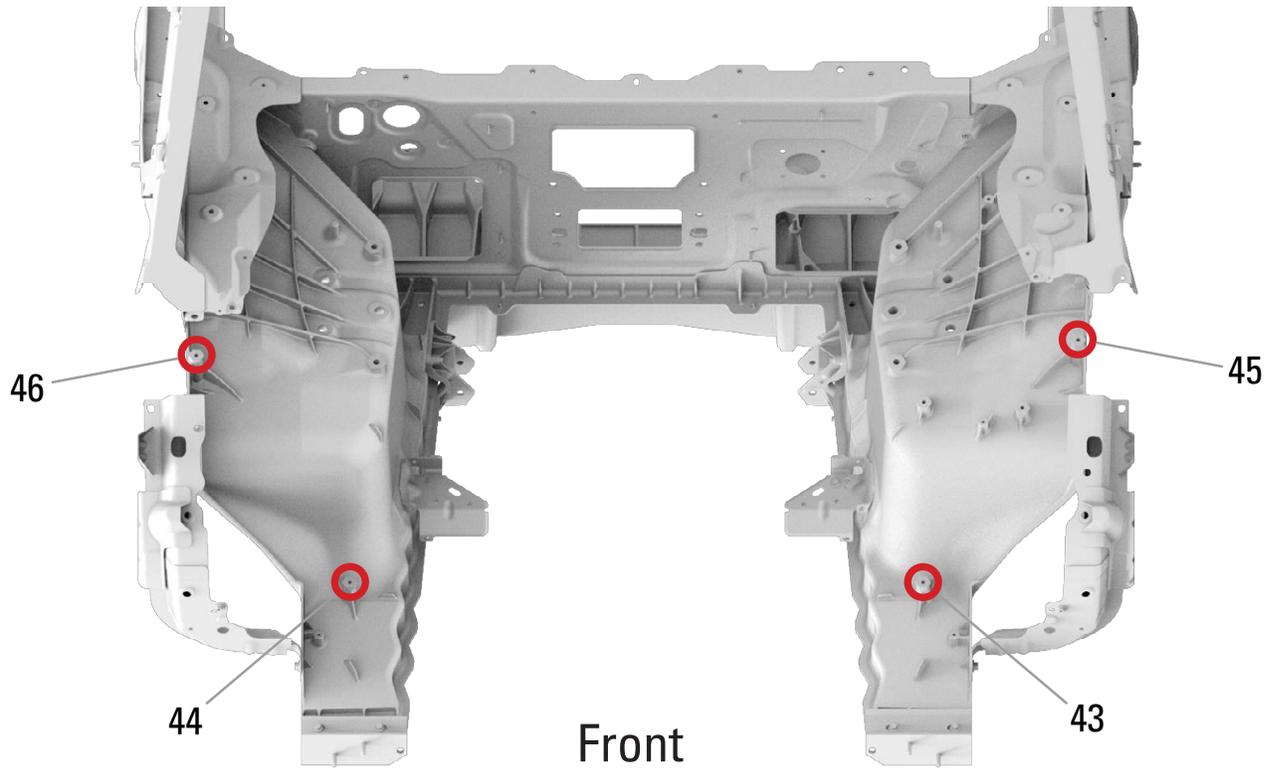


Fixture # 41, 42

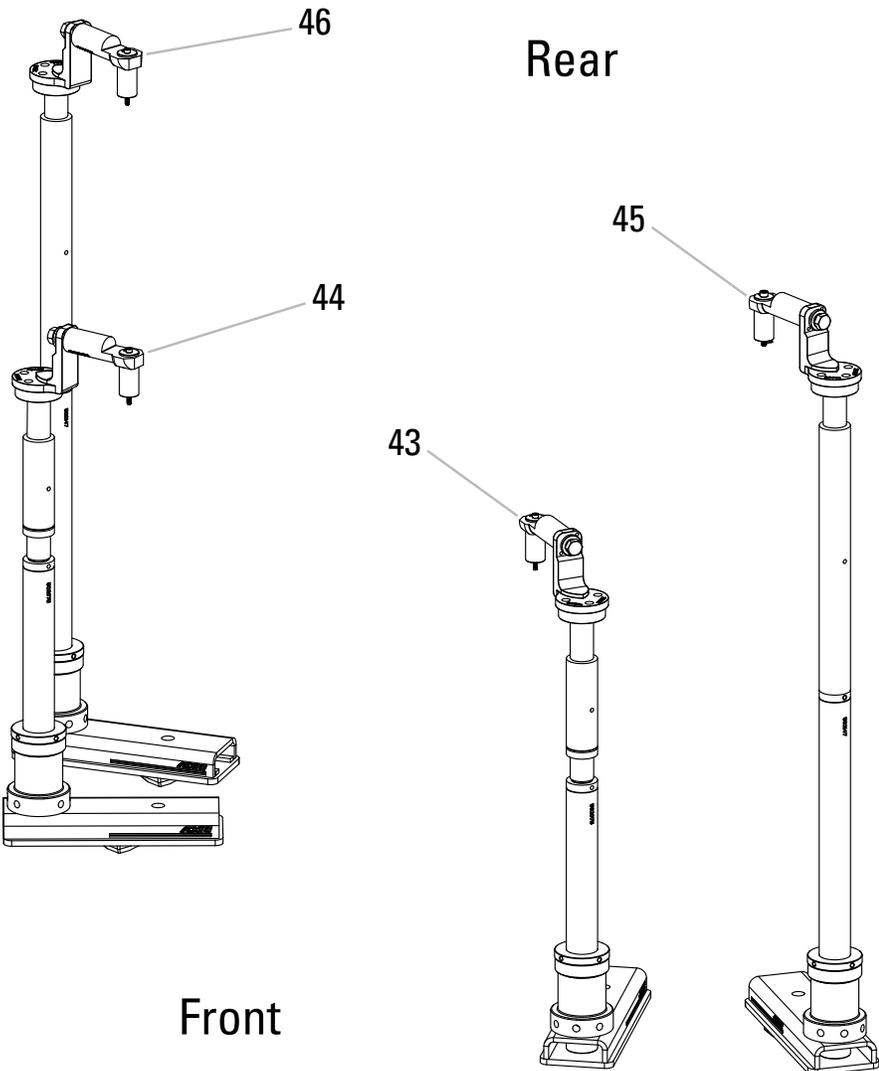


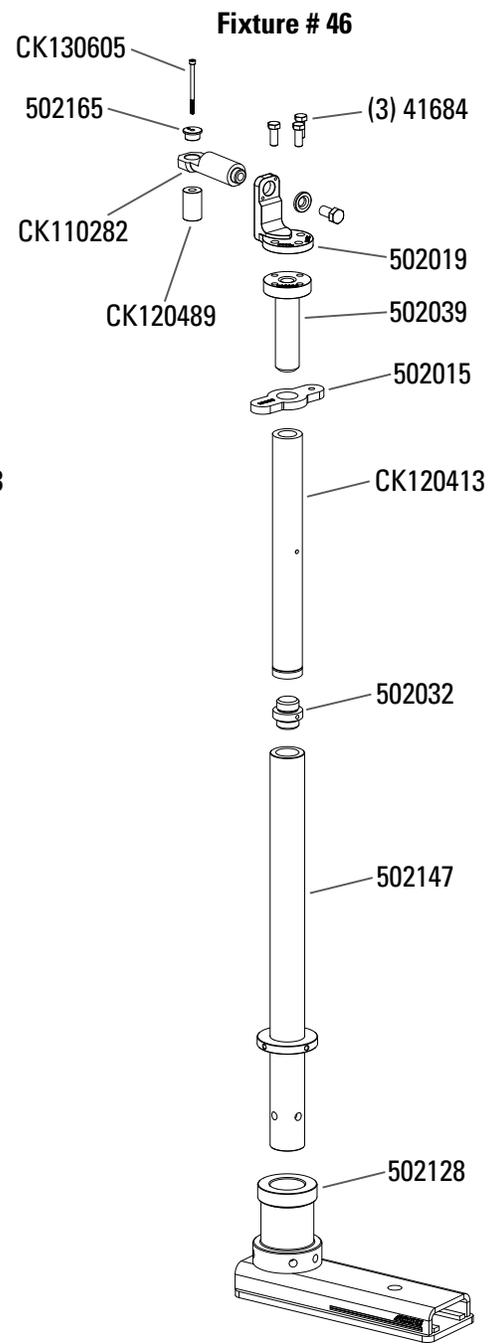
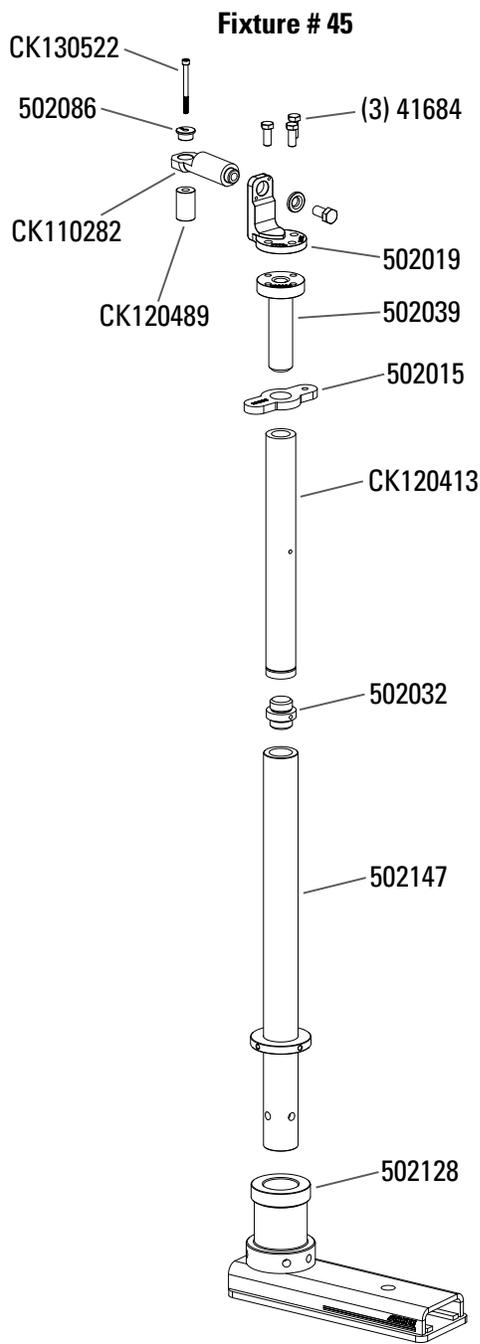
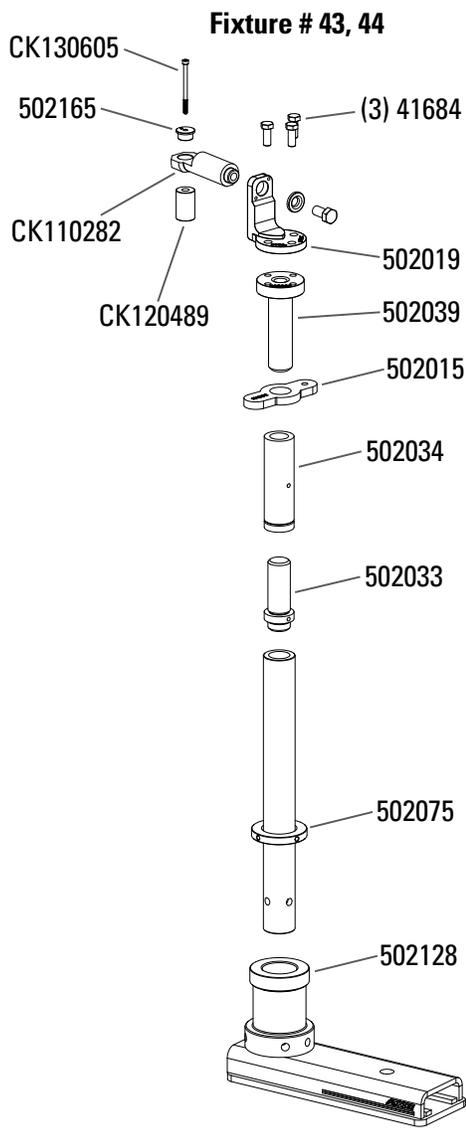
Frame Fixtures - Mechanicals Out

Front Underbody Casting, Top Locations



Front Underbody Casting Fixturing, Top Locations







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