



**IMPORTANT**

Always refer to OEM repair procedures for proper repair guidelines. Never subject EDV 500 to pulling forces.

Holding System  
User Manual  
IN20978  
REV. – 11.07.23  
CO12448.2

## 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 Rivian EDV500 Structural 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:**

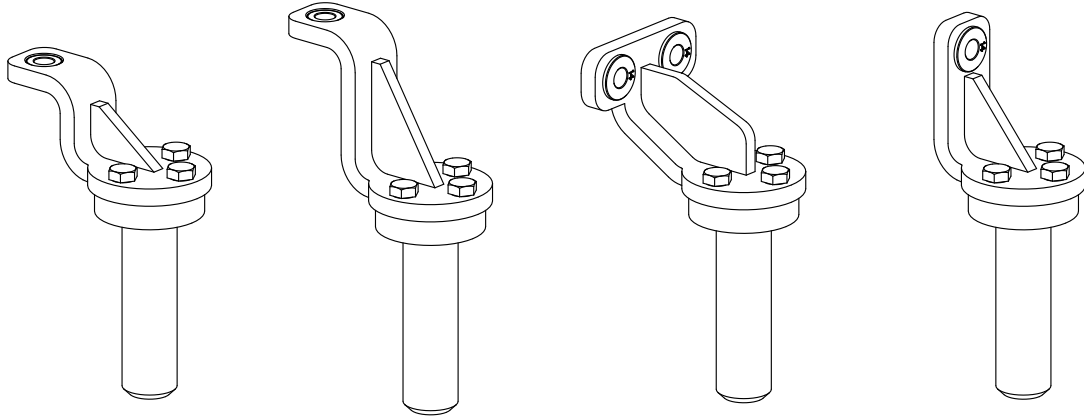
This manual only identifies basic usage procedures for the Rivian EDV500 Structural Holding System, it must be used with the Chief Structural Holding System. The usage of the system is limited only by the imagination of the technician doing the work.

The Chief Rivian EDV500 Structural Holding System is designed for the holding and positioning replacement parts. It is not designed as a replacement for Chief Anchoring. **IMPORTANT** The Rivian EDV500 Structural Holding System must not be subjected to pulling forces. The Chief Universal Stands provided will serve as the primary vehicle holding.

Because Chief Rivian EDV500 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.

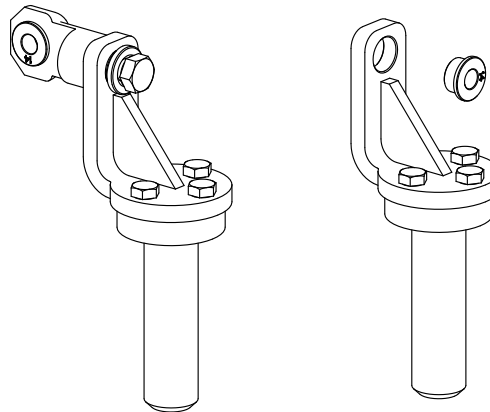
## PLANNING AND SETUP

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.

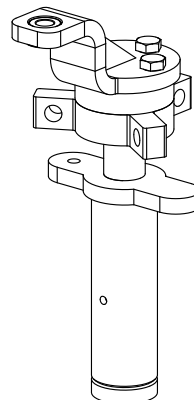


Additional attachments will allow for connection of the fixture to the structure in several different methods. The angle adapter allows for the location of the fixture to be used if the location is at an angle.

**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.



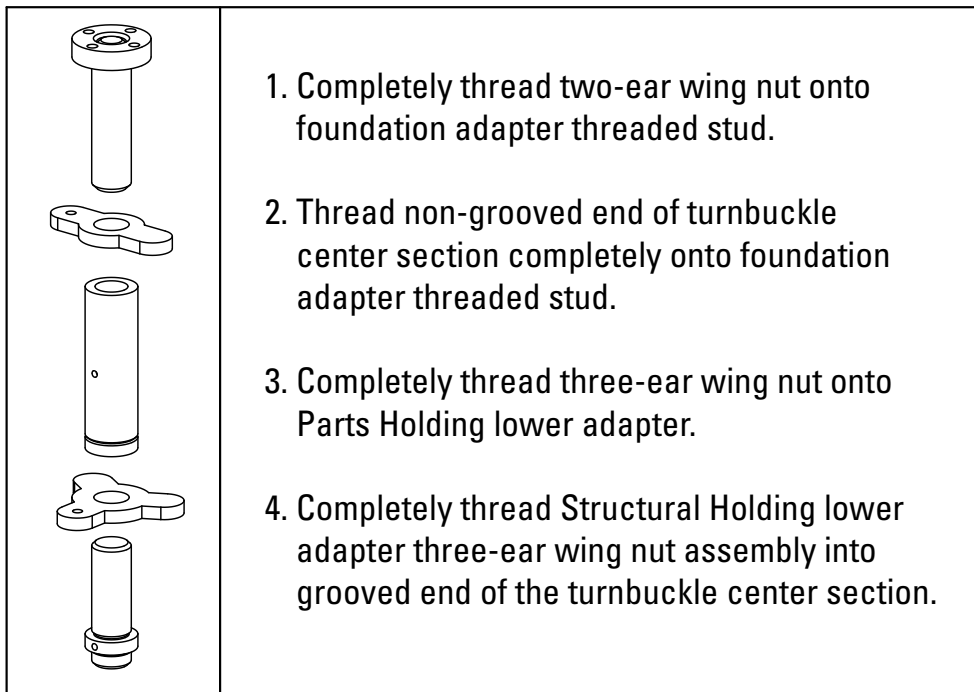
A heavy three-ear rigging nut can be placed directly below the foundation adapter. This will serve as a cable tie off when additional stability is needed.



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.

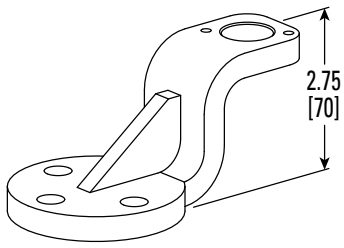
**Note:** It is not necessary to completely disassemble the turnbuckle section when changing setups or reconfiguring the stand. The fully assembled turnbuckle section can be unscrewed from the rest of the stand system using the included spanner wrenches.

**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.

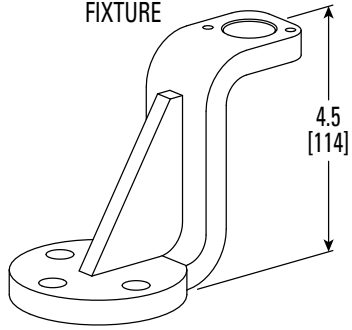
Vertical positioning of the Model X Structural Holding System, when used in conjunction with the Structural Holding System, uses a turnbuckle style adjustment over a 4.5" (115mm) range. Additional height can be achieved by using the extension tubes and extension adapters included with the system. Compare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



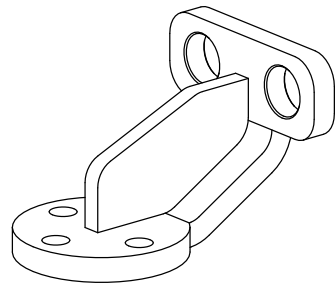
502000  
SHORT VERTICAL FIXTURE  
(FOR EXTENDED REACH USE CK110123)



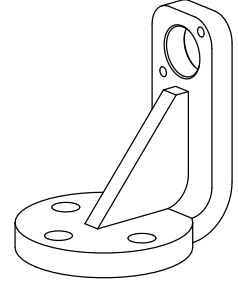
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TALL VERTICAL  
FIXTURE



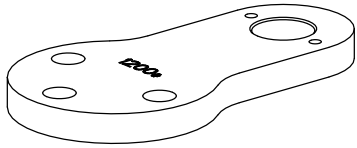
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LARGE HORIZONTAL  
FIXTURE



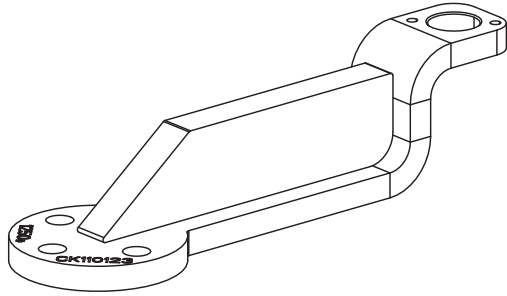
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TALL HORIZONTAL  
FIXTURE



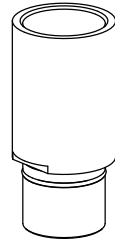
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FLAT FIXTURE



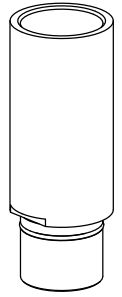
CK110123  
EXTENDED REACH  
VERTICAL FIXTURE



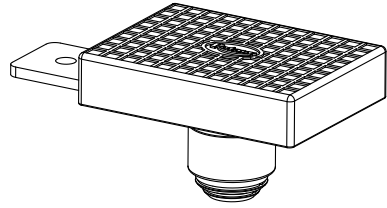
FJ6171-1  
90mm EXTENSION



FJ6171-2  
130mm EXTENSION



CK110124  
ADAPTER WITH  
LEVER ADJUSTMENT



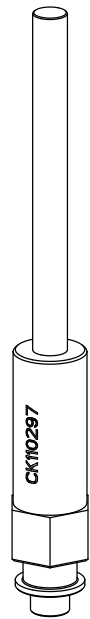
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STANDOFF  
M19 X 30 Lg.



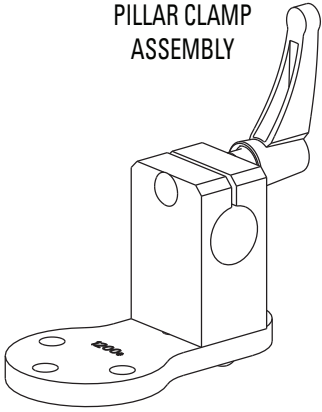
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STANDOFF-SLOT



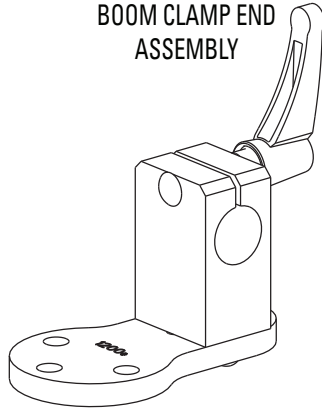
CK110297  
STANDOFF  
M16 X 165 Lg.



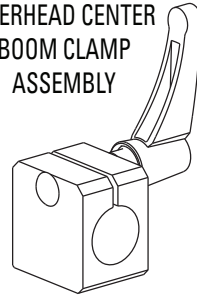
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PILLAR CLAMP  
ASSEMBLY



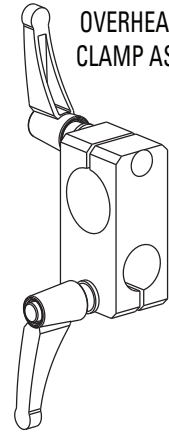
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BOOM CLAMP END  
ASSEMBLY



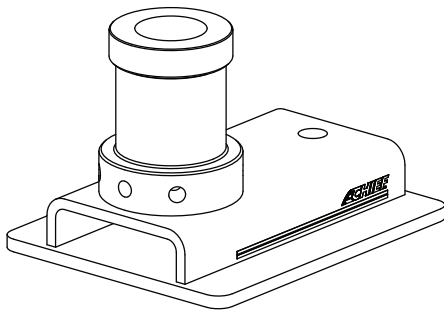
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OVERHEAD CENTER  
BOOM CLAMP  
ASSEMBLY



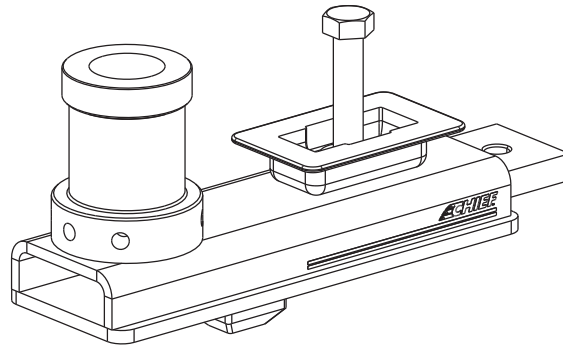
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OVERHEAD BOOM  
CLAMP ASSEMBLY



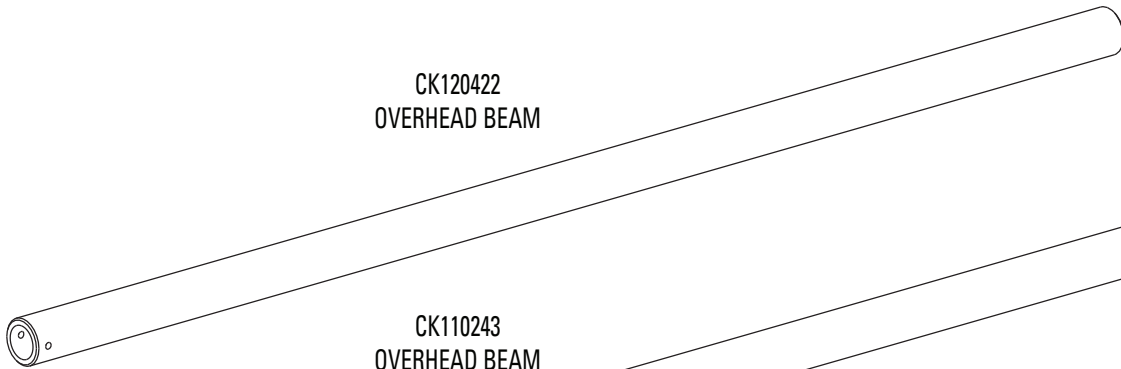
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FLAT BASE



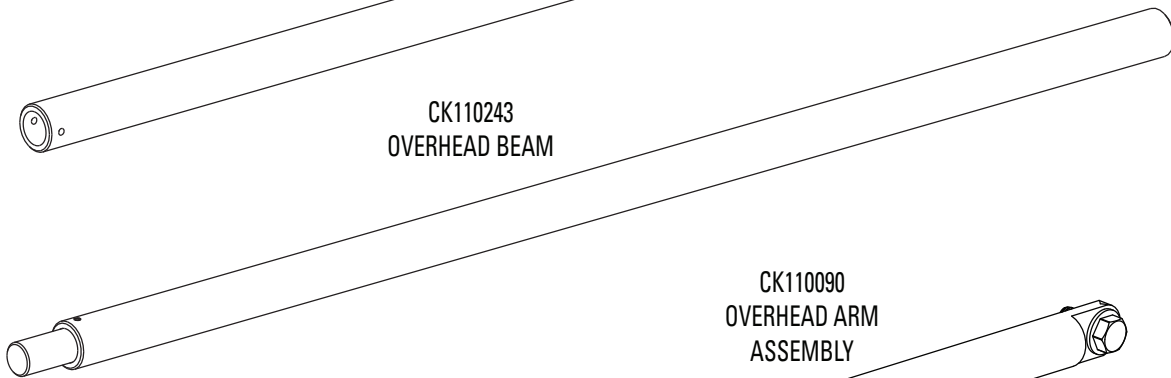
502128  
NARROW STRUCTURAL  
HOLDING BASE ASSY



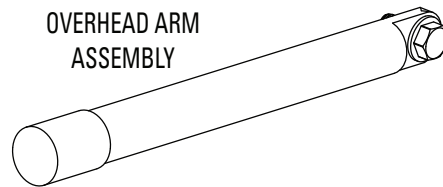
CK120422  
OVERHEAD BEAM



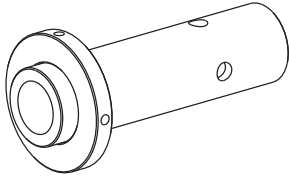
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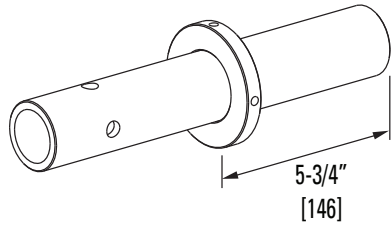
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OVERHEAD ARM  
ASSEMBLY



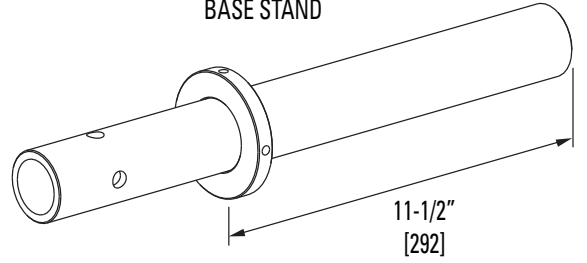
502055  
SHORT TUBE  
BASE STAND



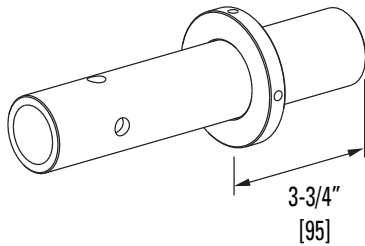
502063  
TALL TUBE  
BASE STAND



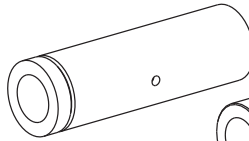
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11-1/2\" TUBE  
BASE STAND



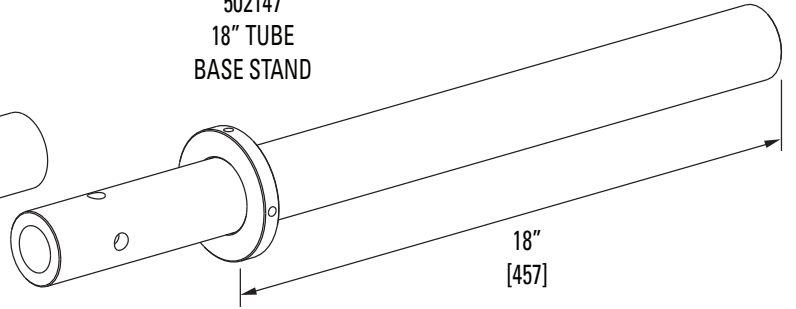
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3-3/4\" TUBE  
BASE STAND



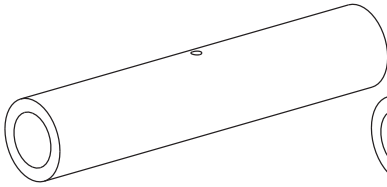
502034  
TURN BUCKLE  
CENTER TUBE



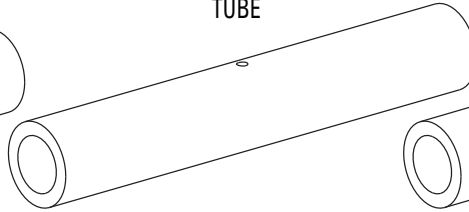
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18\" TUBE  
BASE STAND



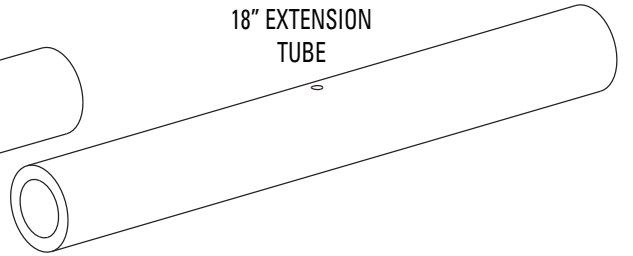
502061  
10\" EXTENSION  
TUBE



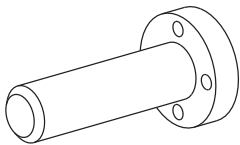
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12\" EXTENSION  
TUBE



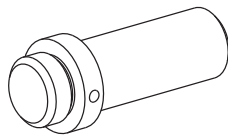
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18\" EXTENSION  
TUBE



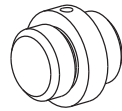
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ADAPTER HEIGHT  
SCREW



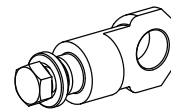
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LOWER ADAPTER  
SCREW



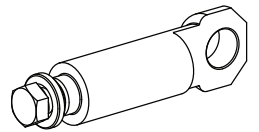
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ADAPTER  
EXTENSION



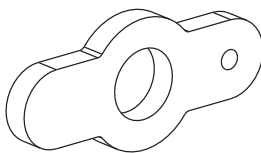
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ANGLE ADAPTER  
CLAMP



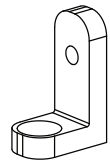
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LONG ANGLE ADAPTER  
CLAMP



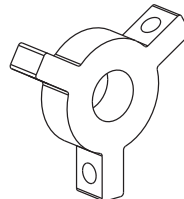
502015  
RIGHT HAND  
WING NUT



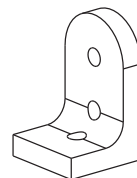
CK120491  
WRIST BLOCK



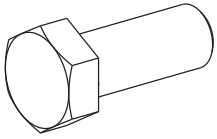
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RIGGING NUT



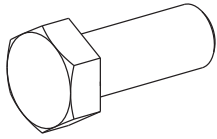
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WRIST BLOCK



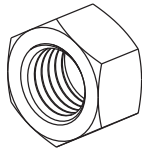
010625  
1/2"-13 x 1-1/4" HHCS



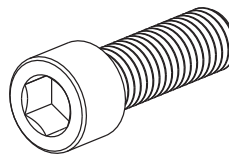
41684  
M12-1.75 x 30 HHCS



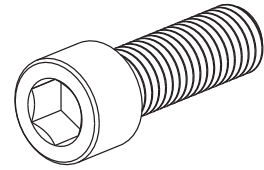
41590  
M16 x 2.0 HEX NUT



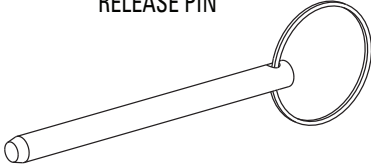
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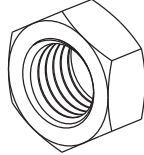
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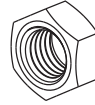
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RELEASE PIN



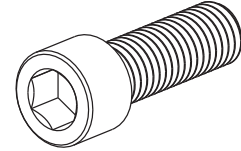
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M20 x 2.5 HEX JAM NUT



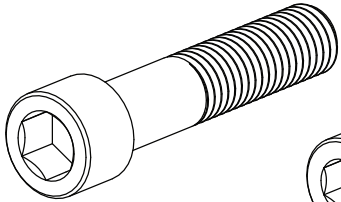
41600  
M6 HEX NUT



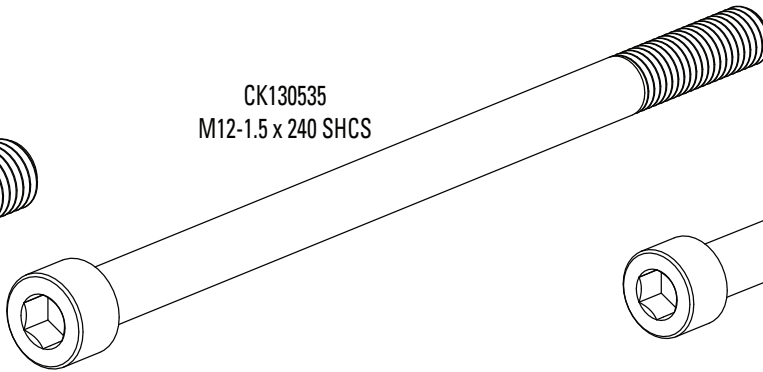
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5/8"-11NC x 2-1/2" SHCS



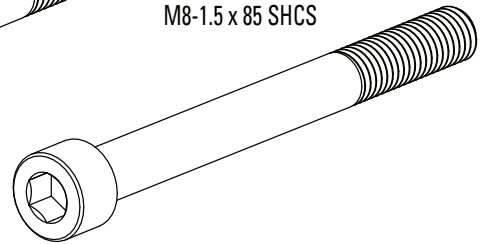
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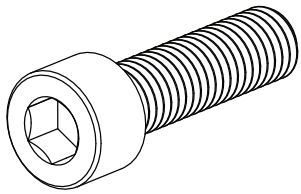
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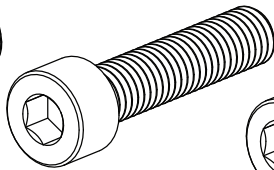
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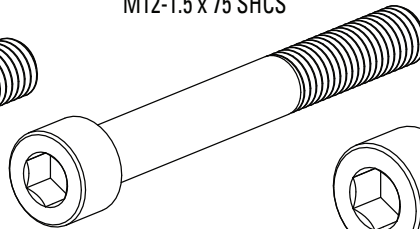
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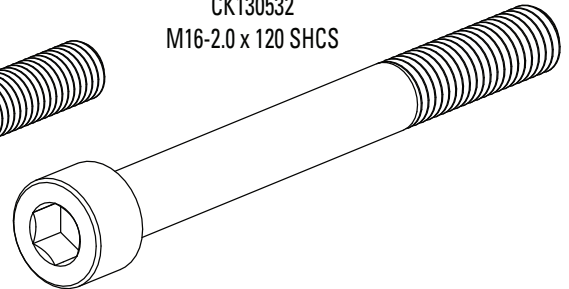
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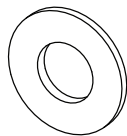
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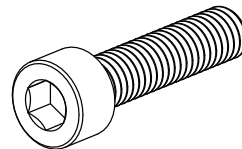
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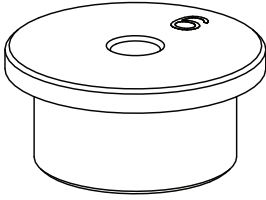
019095  
1/2" ASTM F436  
FLAT WASHER



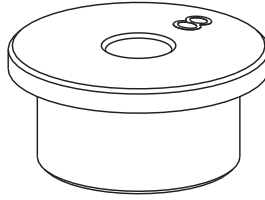
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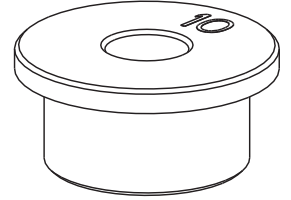
502165  
PILOT BUSHING  
6mm



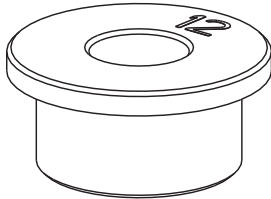
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PILOT BUSHING  
8mm



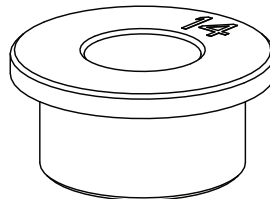
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PILOT BUSHING  
10mm



502028  
PILOT BUSHING  
12mm



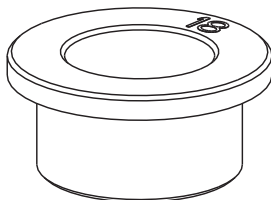
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PILOT BUSHING  
14mm



502030  
PILOT BUSHING  
16mm



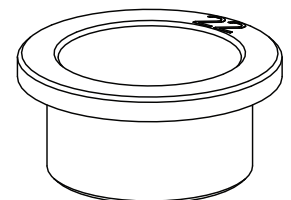
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PILOT BUSHING  
18mm



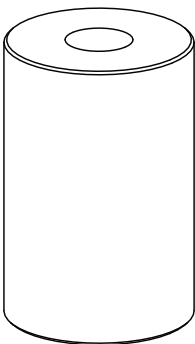
502036  
PILOT BUSHING  
20mm



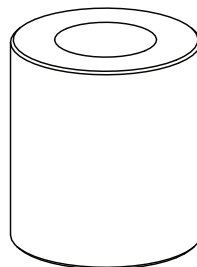
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PILOT BUSHING  
22mm



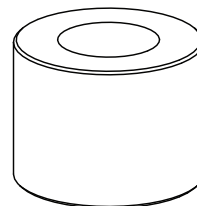
CK120489  
2" SPACER



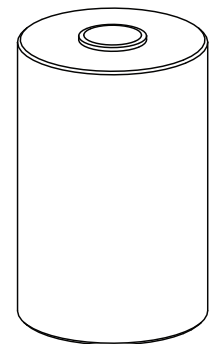
CK120519  
39.5mm SPACER



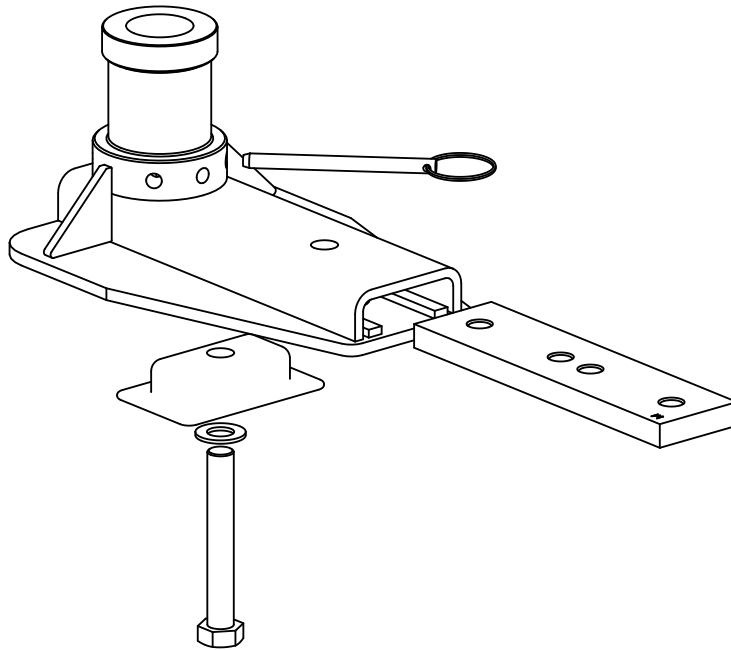
CK120560  
28mm SPACER



CK120521  
2" ROUND SET SPACER



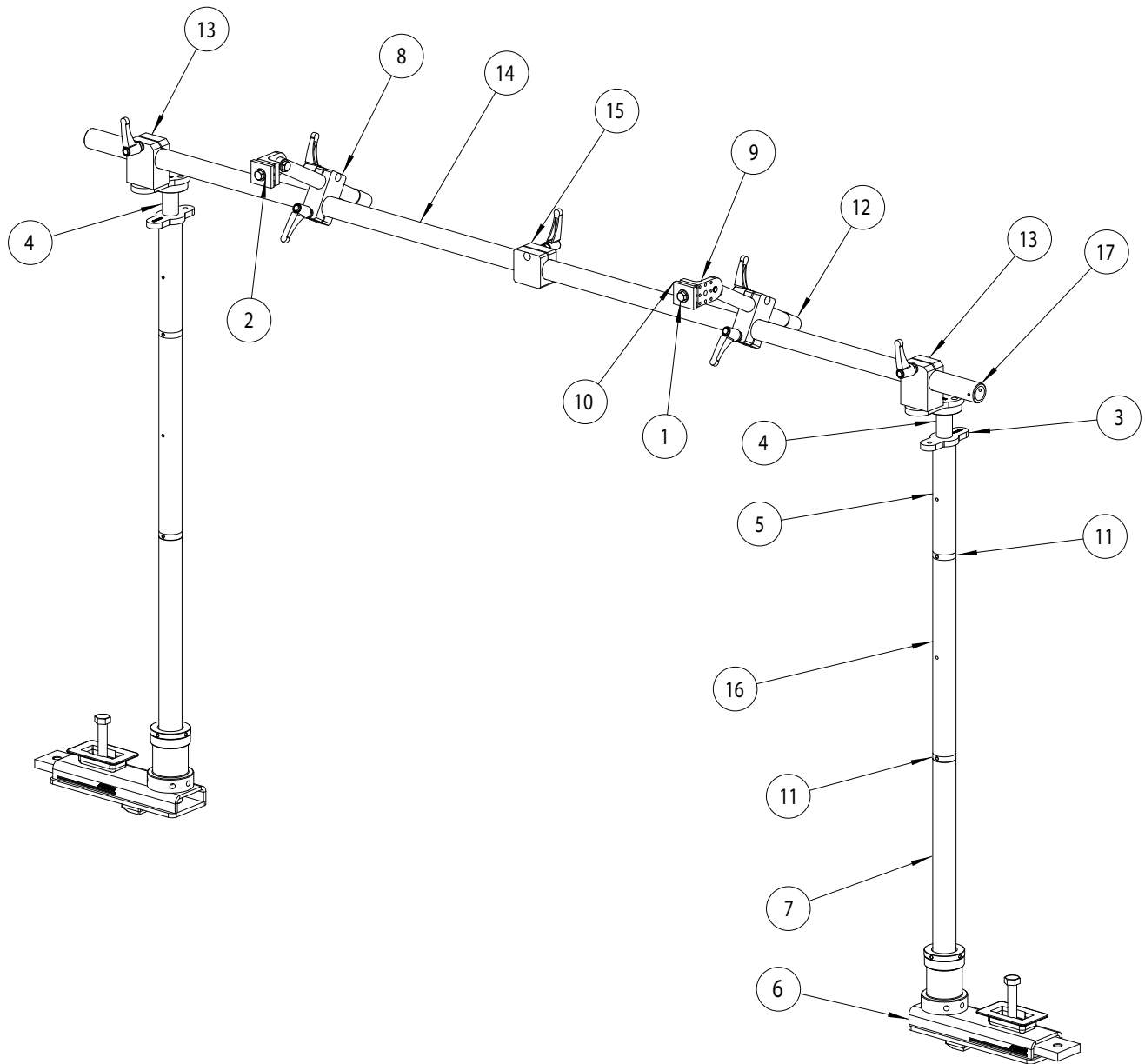
Once the proper configuration has been determined, assemble the required Structural Holding components on the base stand. The base stand should be loosely secured to the frame machine deck using M20x2.5 hardware and a UAS fastener plate. The M20x2.5 hardware will be fully tightened after the Structural 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**

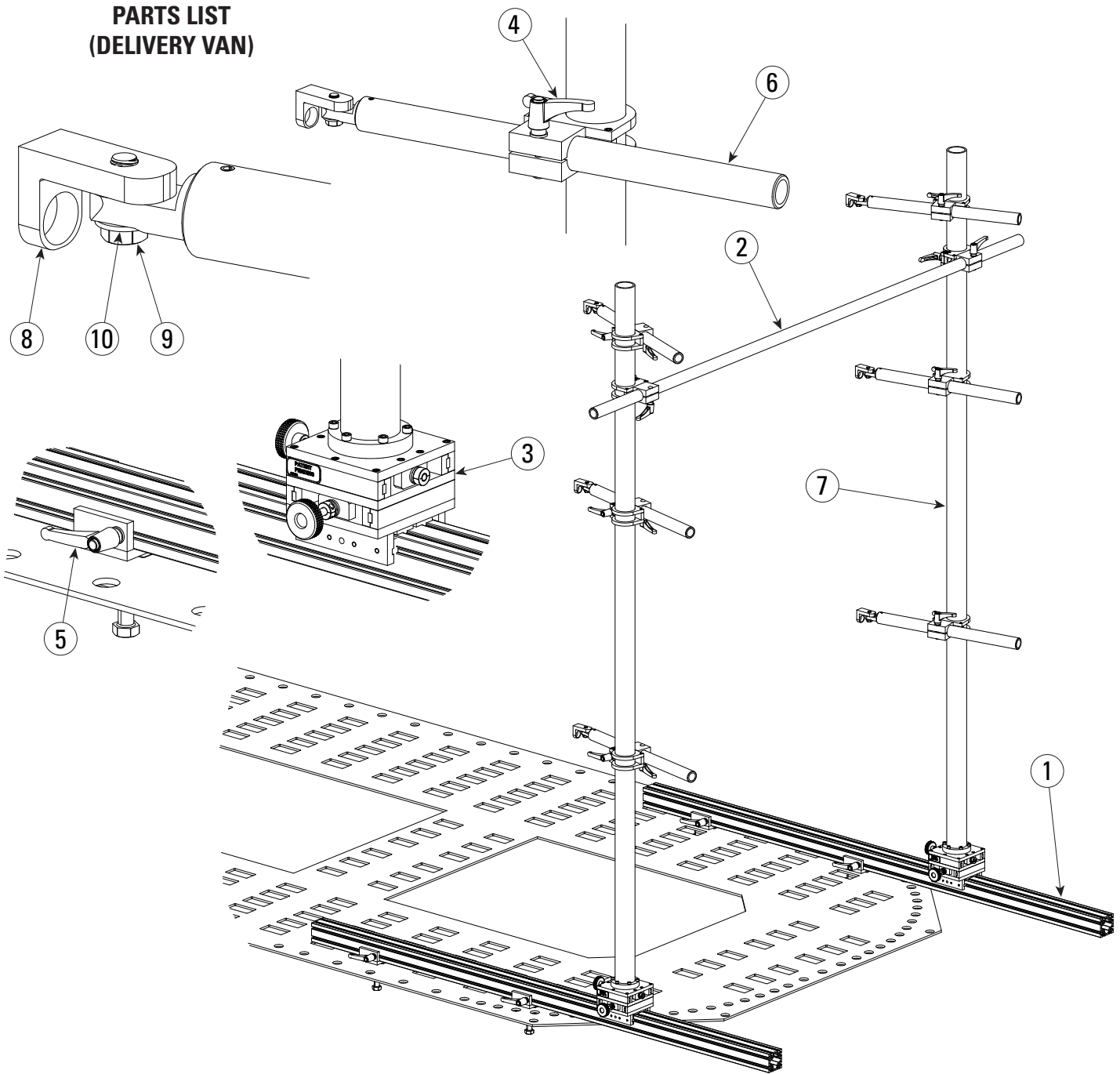
Secure the replacement part to the Structural Holding stand using the foundation adapter and fixtures. Horizontal adjustment of the part can be made by lightly tapping on the stand base. Once the part is located correctly in both horizontal directions, torque down the stand base using a 30 mm wrench 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.



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

**PARTS LIST  
(DELIVERY VAN)**

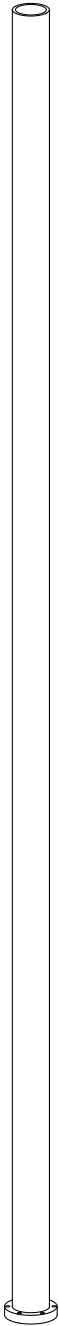


Item	Part No.	Description
1	638061	Base Rail
2	638079	Overhead Beam
3	638099	Positioning Base
4	638108	Mast Clamp
5	638131	Hold-Down Bracket
6	638142	Boom Asm
7	CK140123	Mast
8	CK120491	Wrist Block
9	010625	Bolt, 1/2"-13 x 1-1/4" HHCS Grd 8
10	019095	Washer, 1/2"

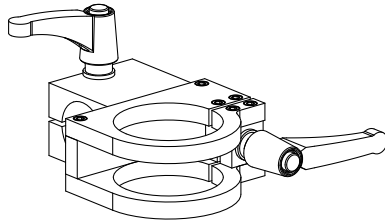


**PARTS LIST  
(DELIVERY VAN)**

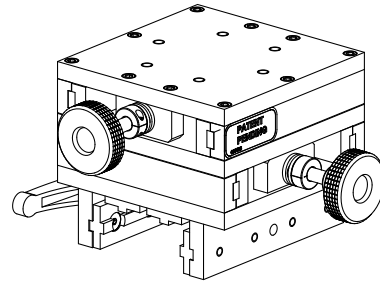
CK140123  
MAST 112-1/4" Lg. (2x)



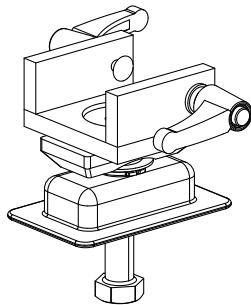
638108  
MAST CLAMP (8x)



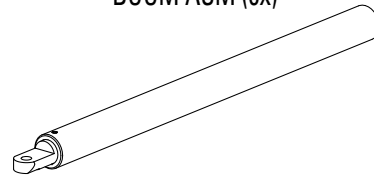
638099  
POSITIONING BASE (2x)



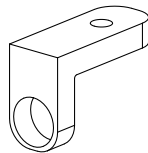
638131  
HOLD DOWN BRACKET (4x)



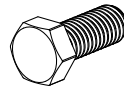
638142  
BOOM ASM (6x)



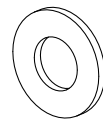
CK120491  
WRIST BLOCK (6x)



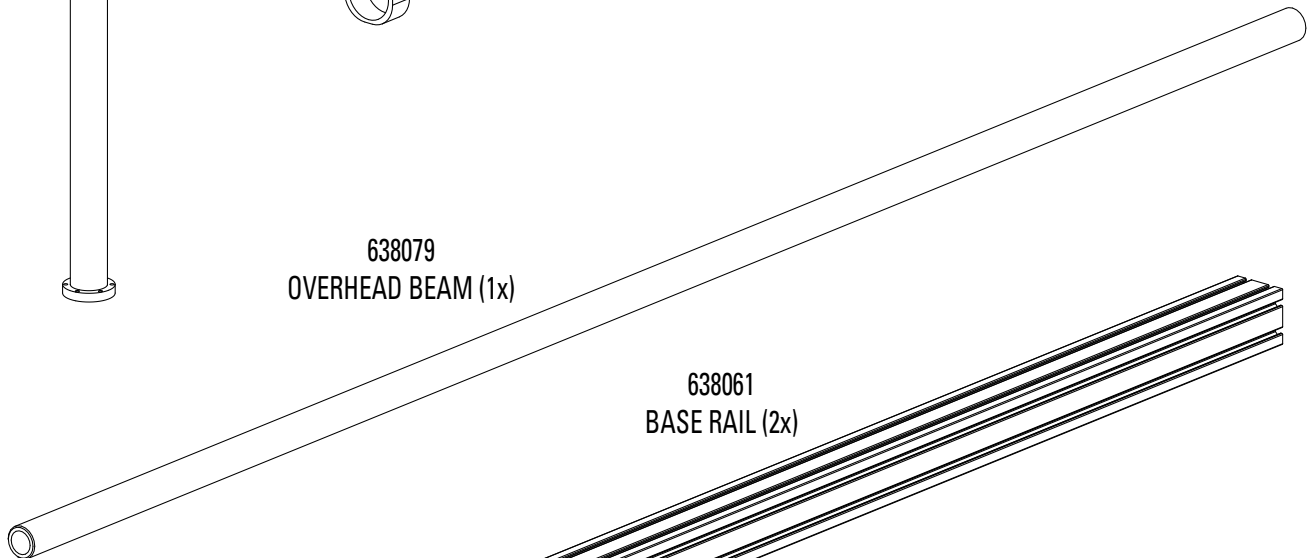
010625  
BOLT, 1/2" -13 x 1-1/4" HHCS (6x)



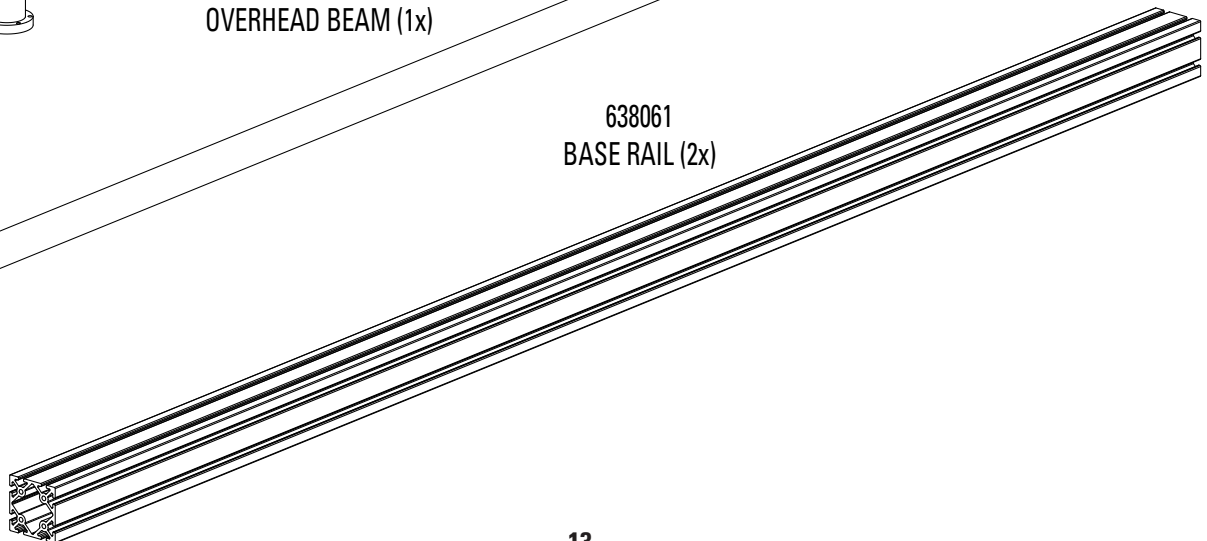
019095  
WASHER, 1/2" (6x)



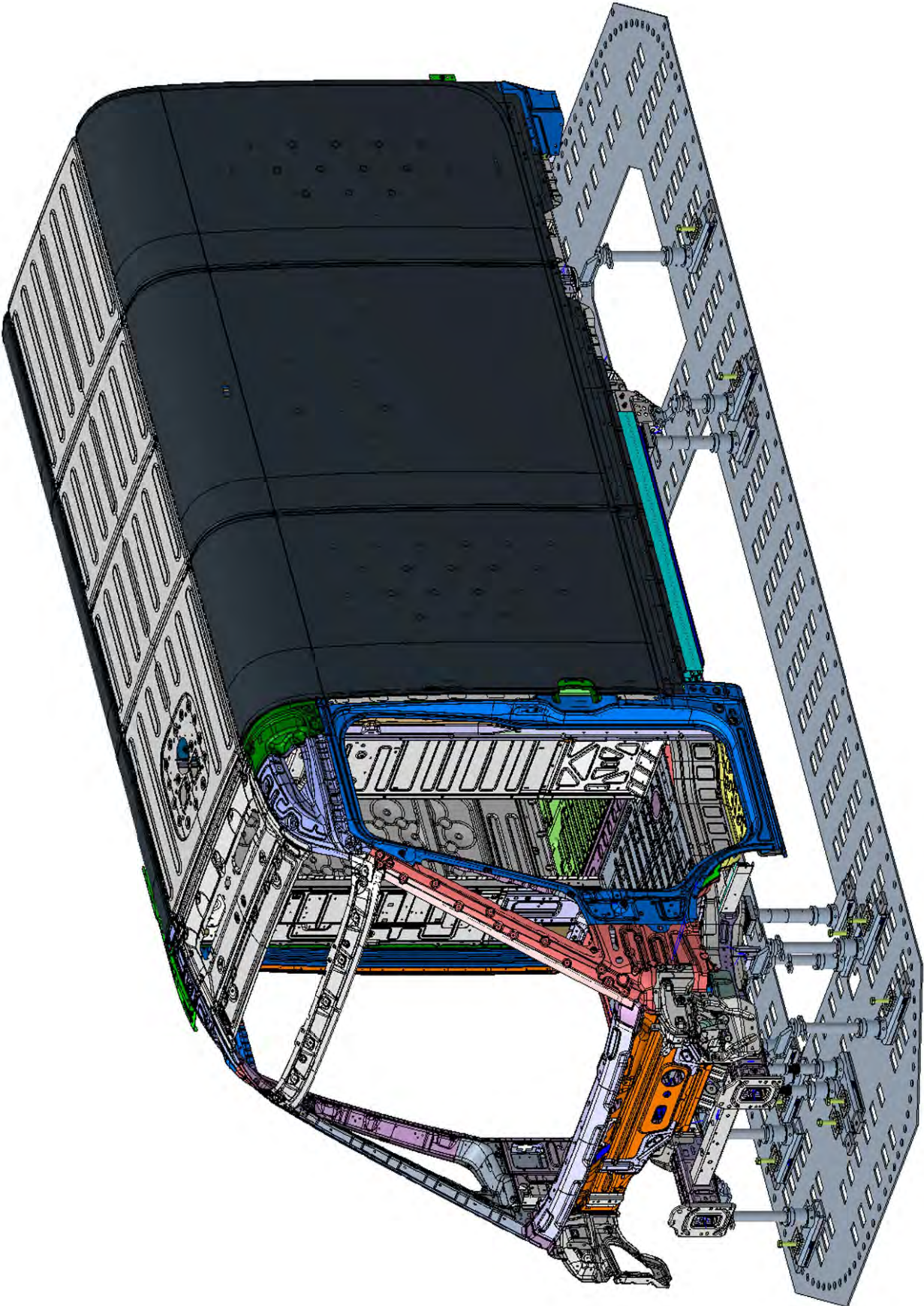
638079  
OVERHEAD BEAM (1x)



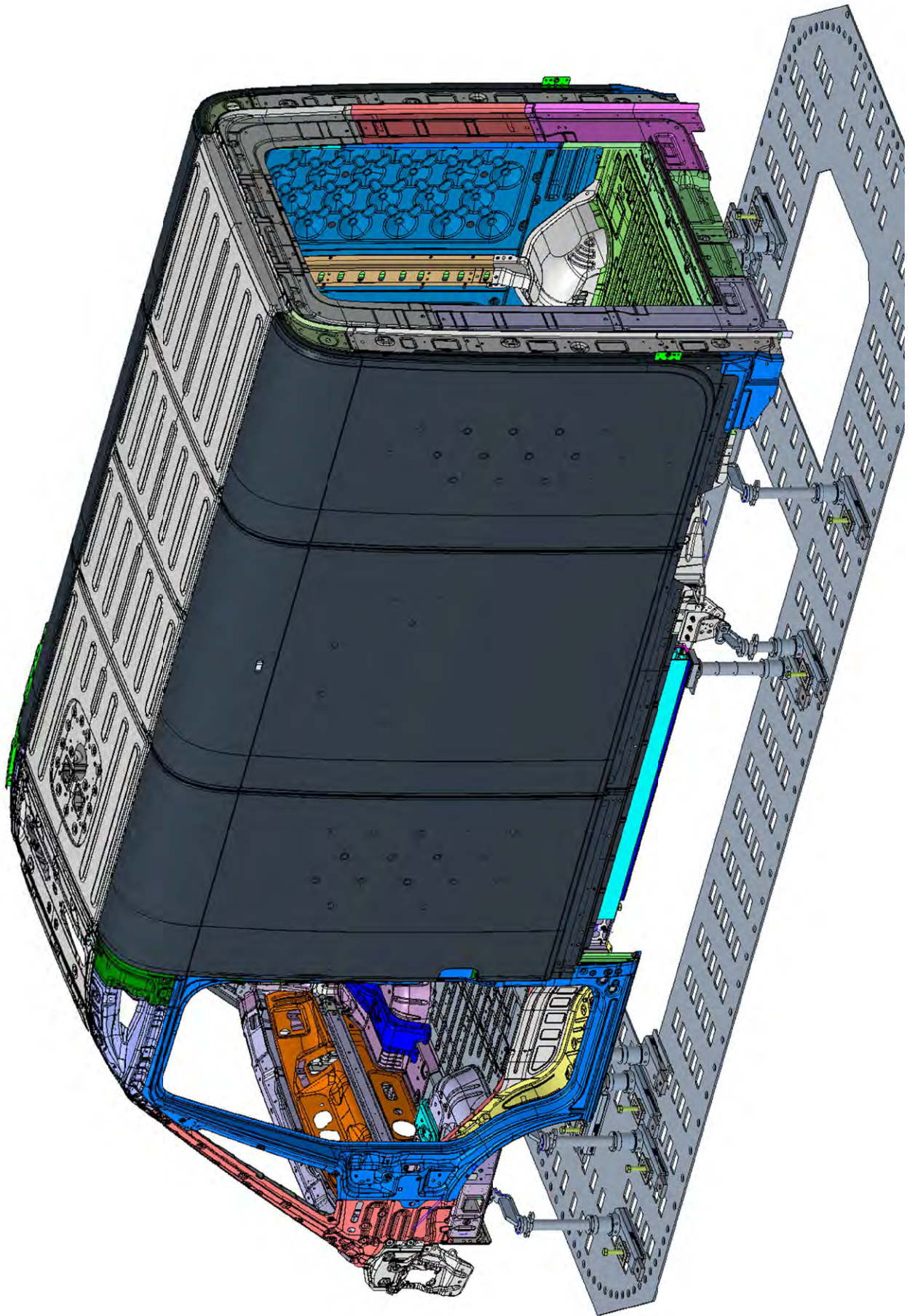
638061  
BASE RAIL (2x)



DATUM HEIGHT

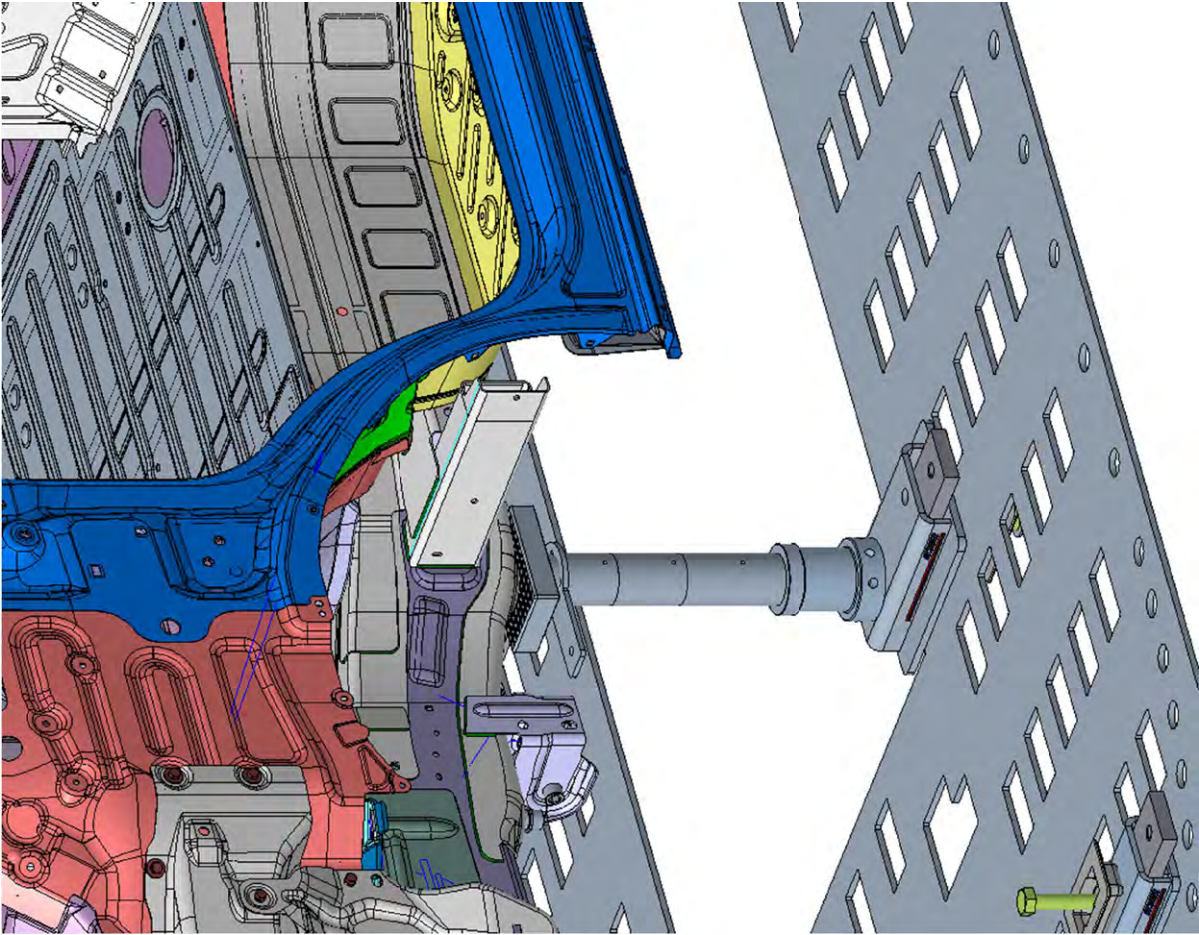
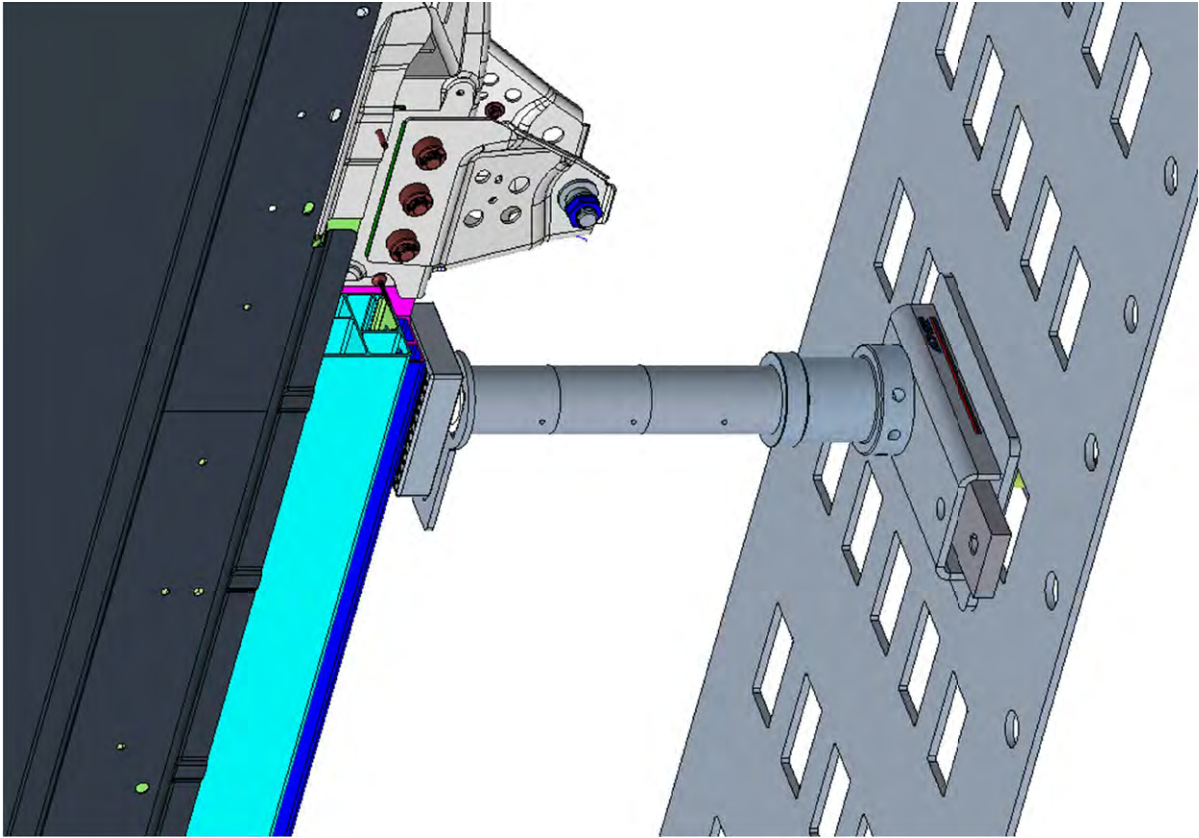




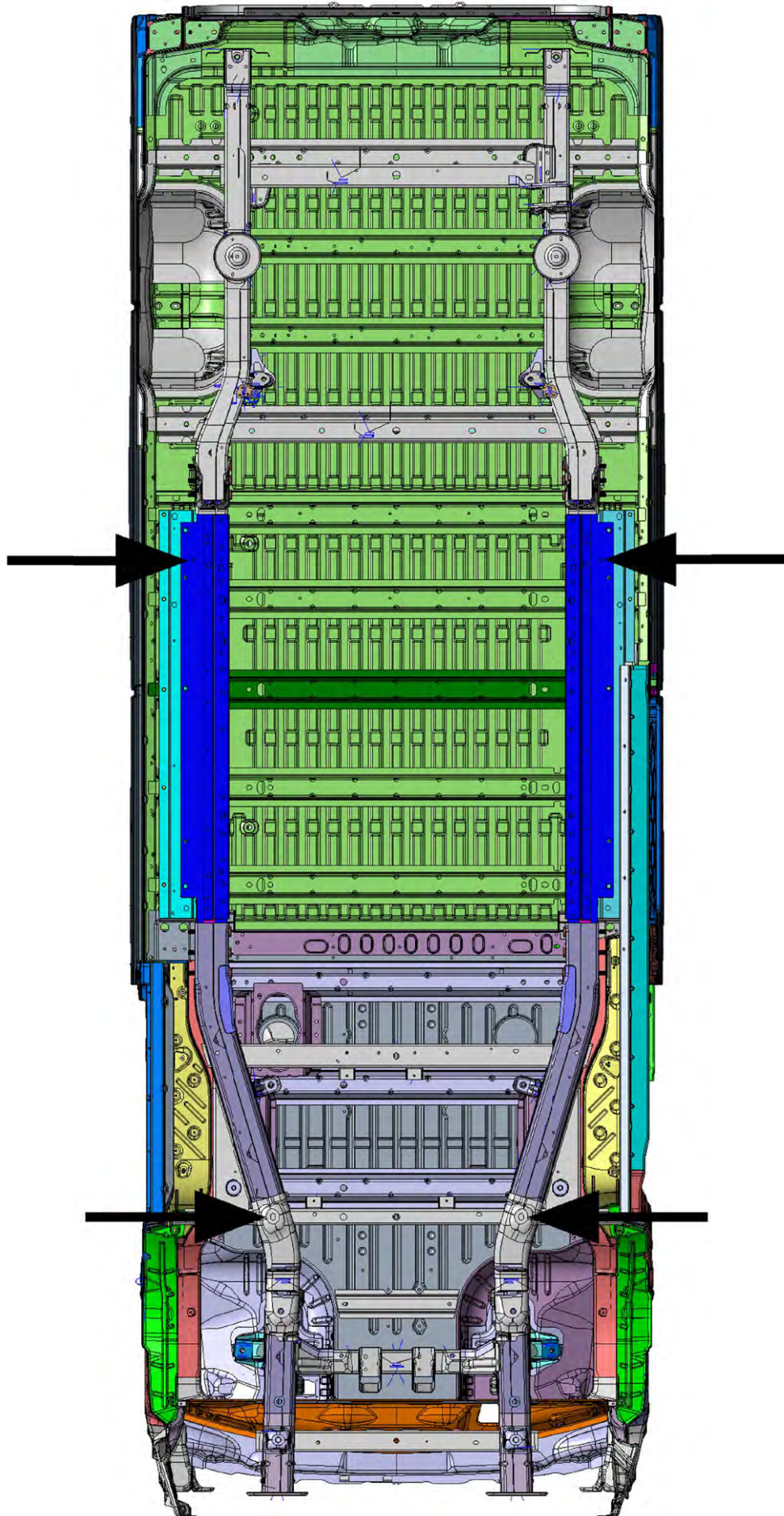




DATUM HEIGHT



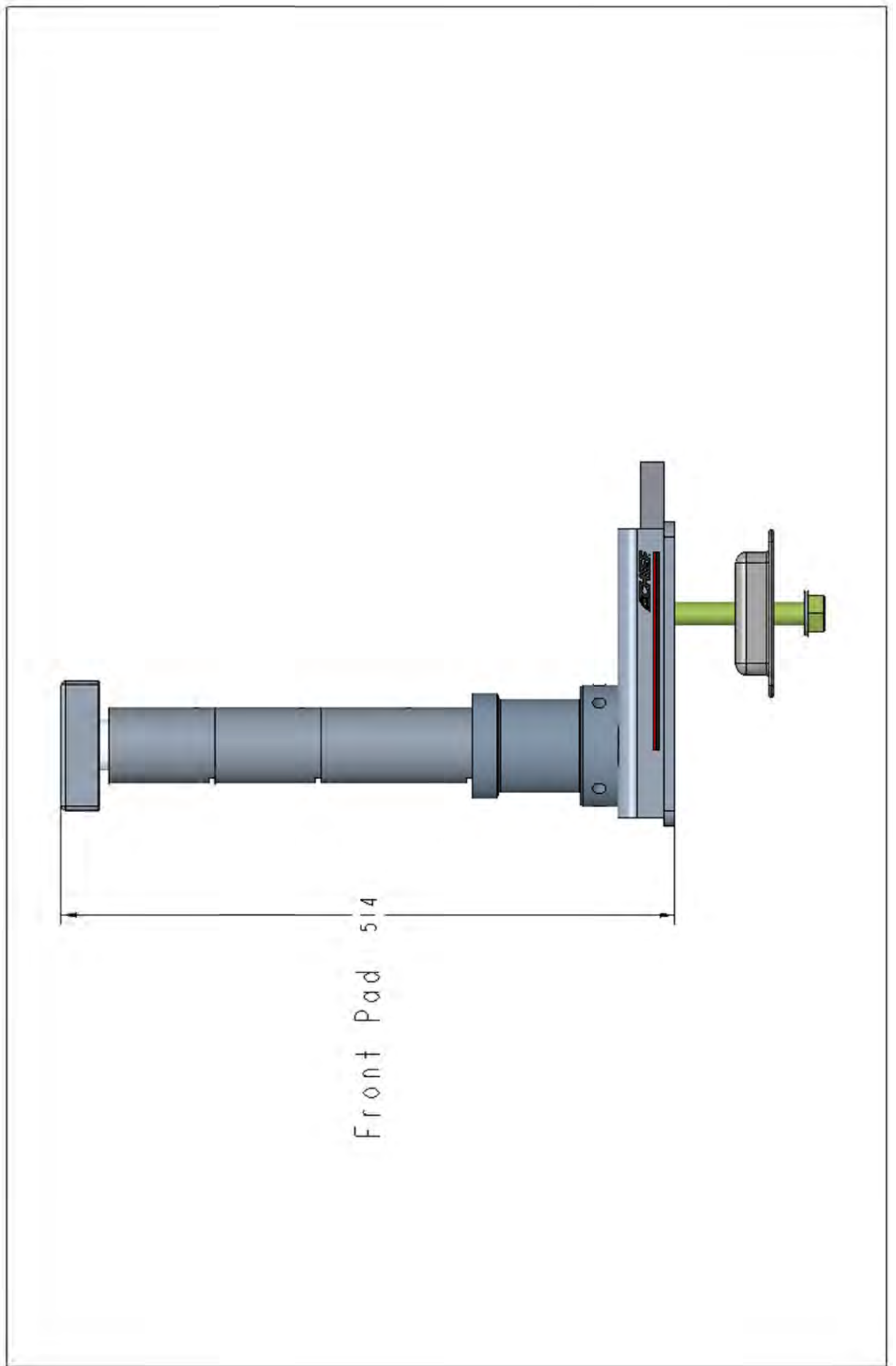




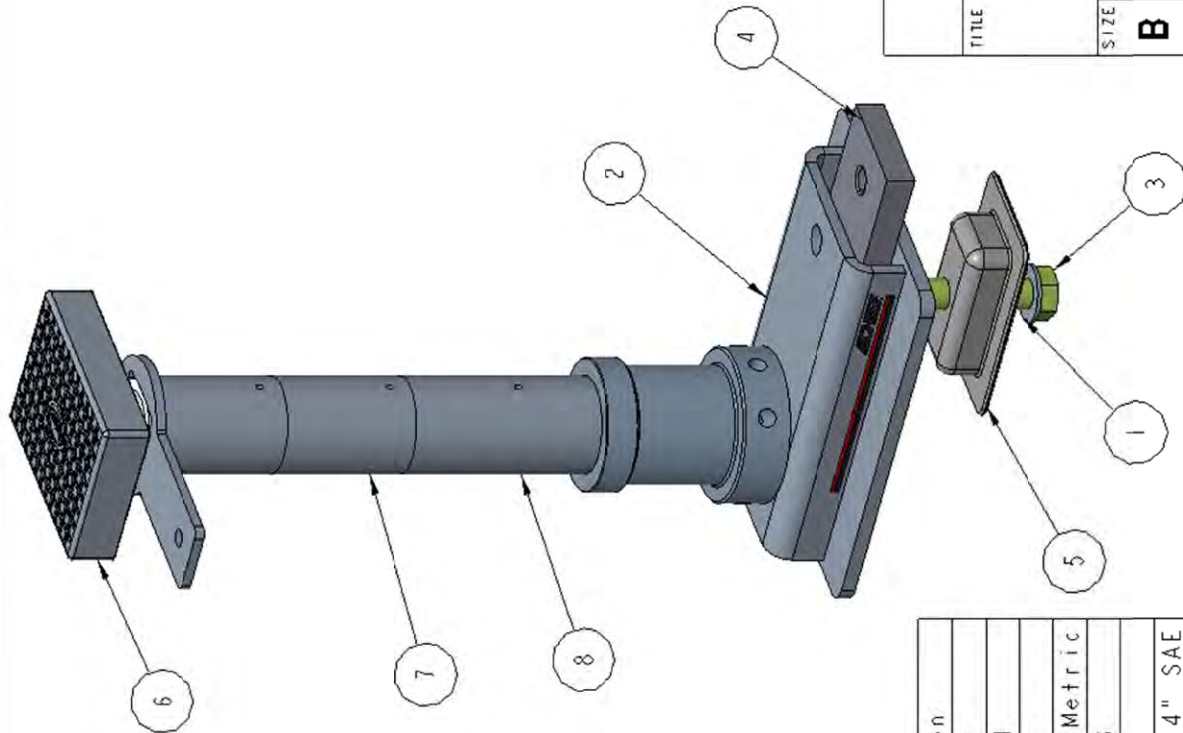
# DATUM HEIGHT

ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
8	FJ6171-2	1	fj6171-2.asm	130mm Extension
7	FJ6171-1	2	fj6171-1.asm	90mm Extension
6	CK110124	1	ck110124.asm	Adjustable Pad
5	607371	1	607371.prt	Fastener Plate
4	606860	1	606860.prt	Fastener Bar, Metric
3	539008	1	539008.prt	M20x140mm HHCS
2	499118	1	499118.asm	Base
1	41021	1	41021.prt	Flat Washer 3/4" SAE

<b>Chief Automotive</b>			
TITLE 514_datum.drw			
SIZE <b>B</b>	CAGE CODE	DWG NO	REV
			<b>514 Frt Pad</b>
SCALE: 0.350	UNIT WT: [.2]	SHEET 1 OF 2	



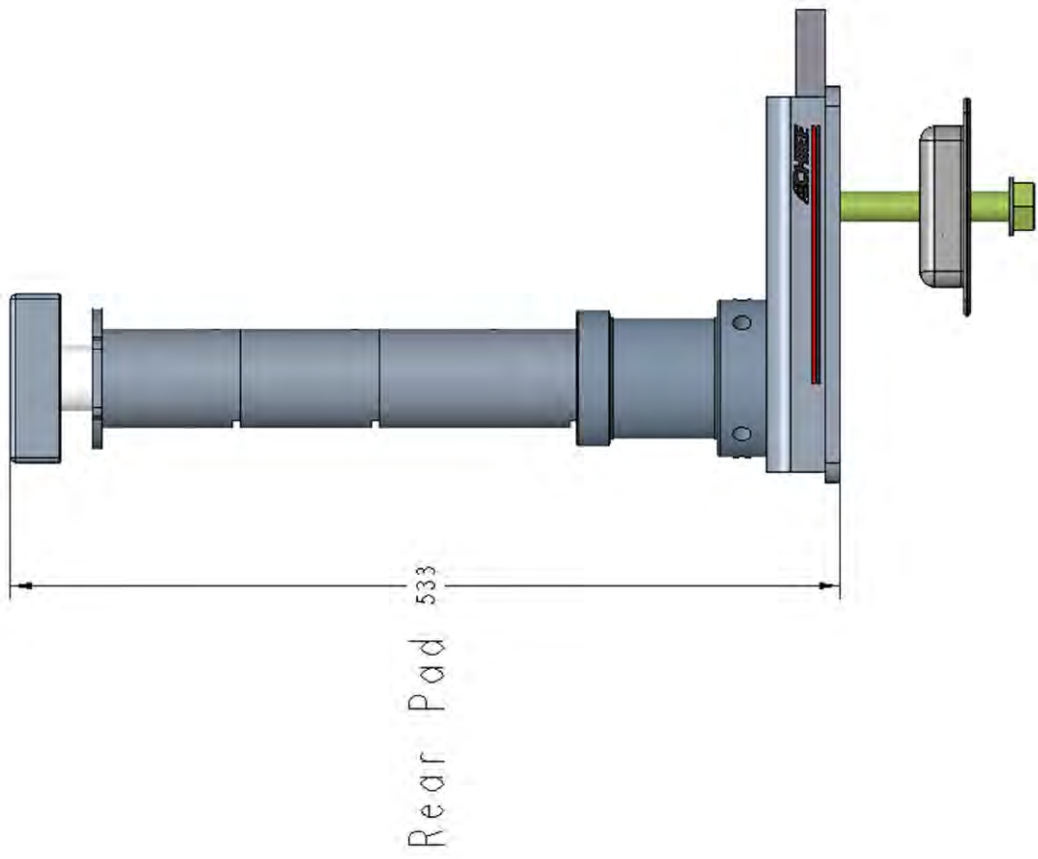
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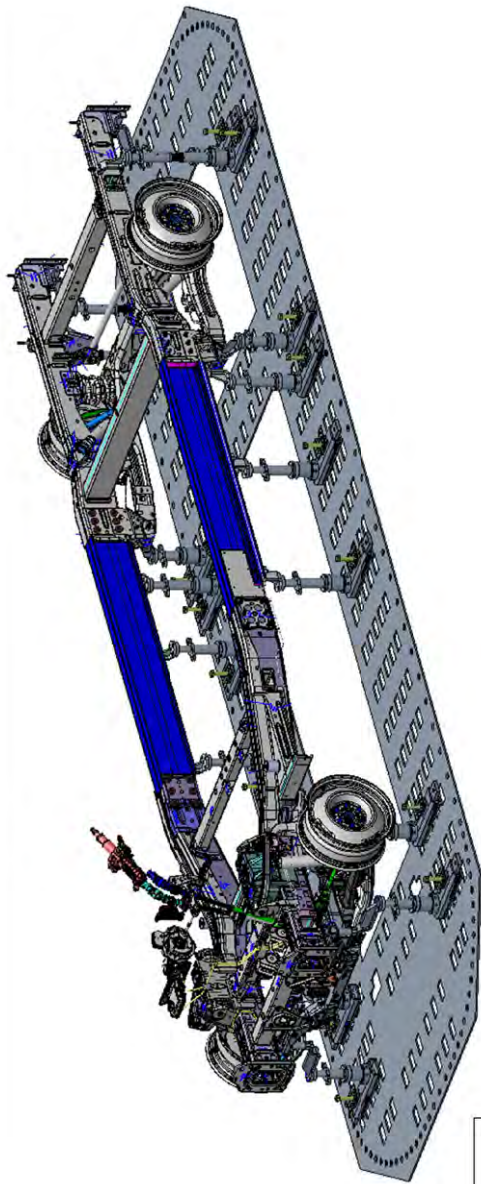


<b>Chief Automotive</b>			
TITLE			
533_datum.drw			
SIZE	CAGE CODE	DWG NO	REV
<b>B</b>			
SCALE: 0.350		UNIT WT: [ .2 ]	SHEET 1 OF 2

ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
8	FJ6171-2	1	fj6171-2.asm	130mm Extension
7	FJ6171-1	2	fj6171-1.asm	90mm Extension
6	CKI10124	1	cki10124.asm	Adjustable Pad
5	607371	1	607371.prt	Fastener Plate
4	606860	1	606860.prt	Fastener Bar, Metric
3	539008	1	539008.prt	M20x140mm HHCS
2	499118	1	499118.asm	Base
1	41021	1	41021.prt	Flat Washer 3/4" SAE







ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
21	CKI30535	2	ckI30535.prt	M12 x 240 SHCS
20	CKI30534	8	ckI30534.prt	M12 x 75 SHCS
19	CKI30532	2	ckI30532.prt	M16 x 120 SHCS
18	CKI20519	2	CKI20519.PRT	Spacer, 39.5mm Lg
17	CKI10297	4	CKI10297.ASM	Standoff M16 x 100
16	CKI10123	6	CKI10123.ASM	Extended Fixture
15	601738	2	601738.prt	Washer, 3/4"
14	502128	16	502128.asm	Base
13	502082	6	502082.ASM	3-3/4" Tube Base
12	502063	8	502063.ASM	5-3/4" Tube Base
11	502055	2	502055.asm	Short Tube Base
10	502039	16	502039.asm	Threaded Adapter
9	502034	4	502034.prt	Turn Buckle
8	502033	4	502033.PRT	LH Adapter Screw
7	502030	2	502030.prt	Bushing 16mm
6	502028	10	502028.prt	Bushing 12mm
5	502015	16	502015.prt	Wing Nut
4	502008	8	502008.ASM	Tall Vert Fixture
3	502005	2	502005.ASM	Double Horz Fixture
2	41684	42	41684.prt	M12x30 HHCS
1	41590	2	41590.prt	M16 Hex Nut

Chief Automotive

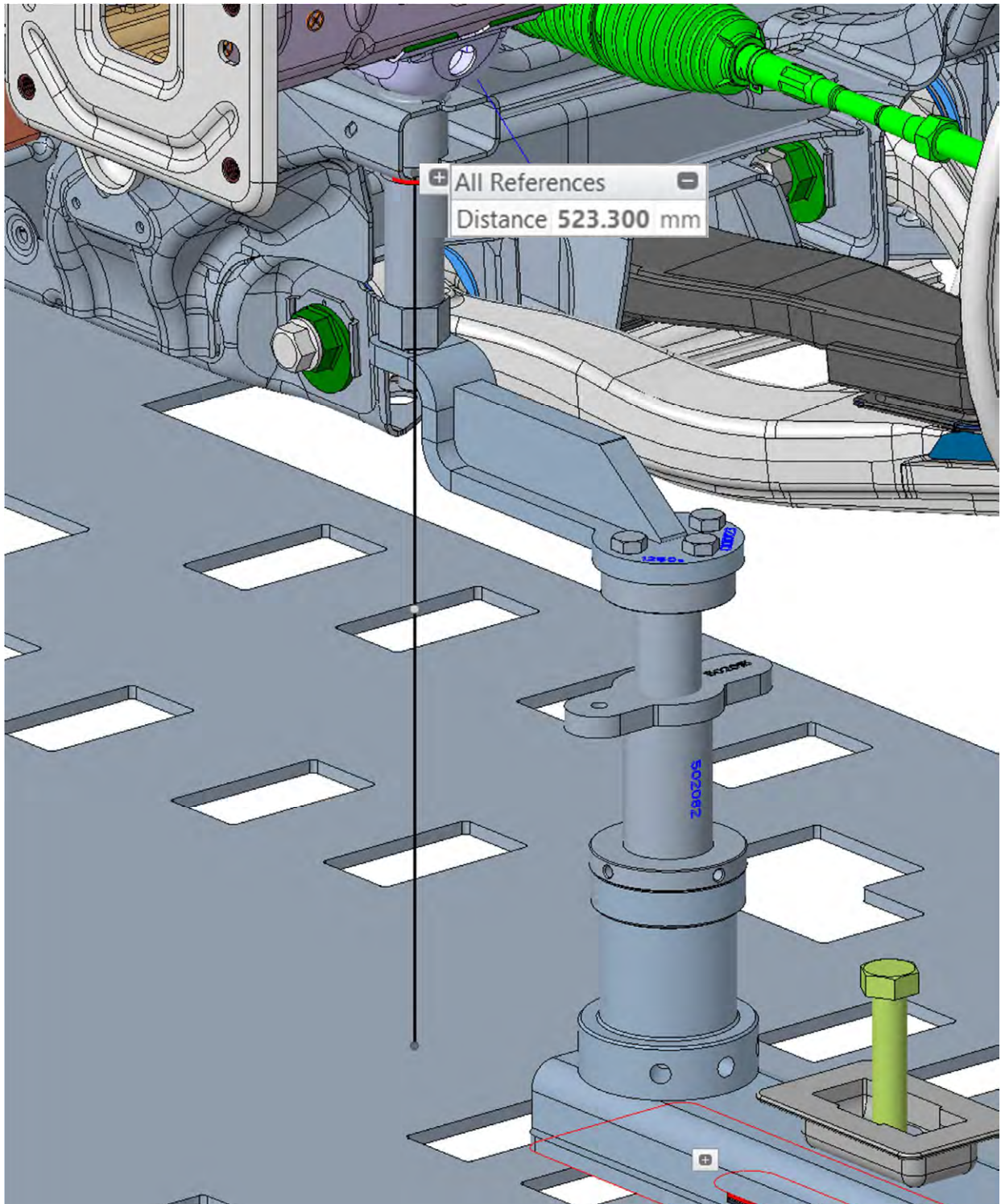
TITLE

mech\_in\_underbody.drw

SIZE	CAGE CODE	DWG NO	REV
<b>B</b>		<b>Mech In Underbody</b>	
		<b>EDV500</b>	
SCALE: 0.045	UNIT WT: [ .2 ]	SHEET 1 OF 1	

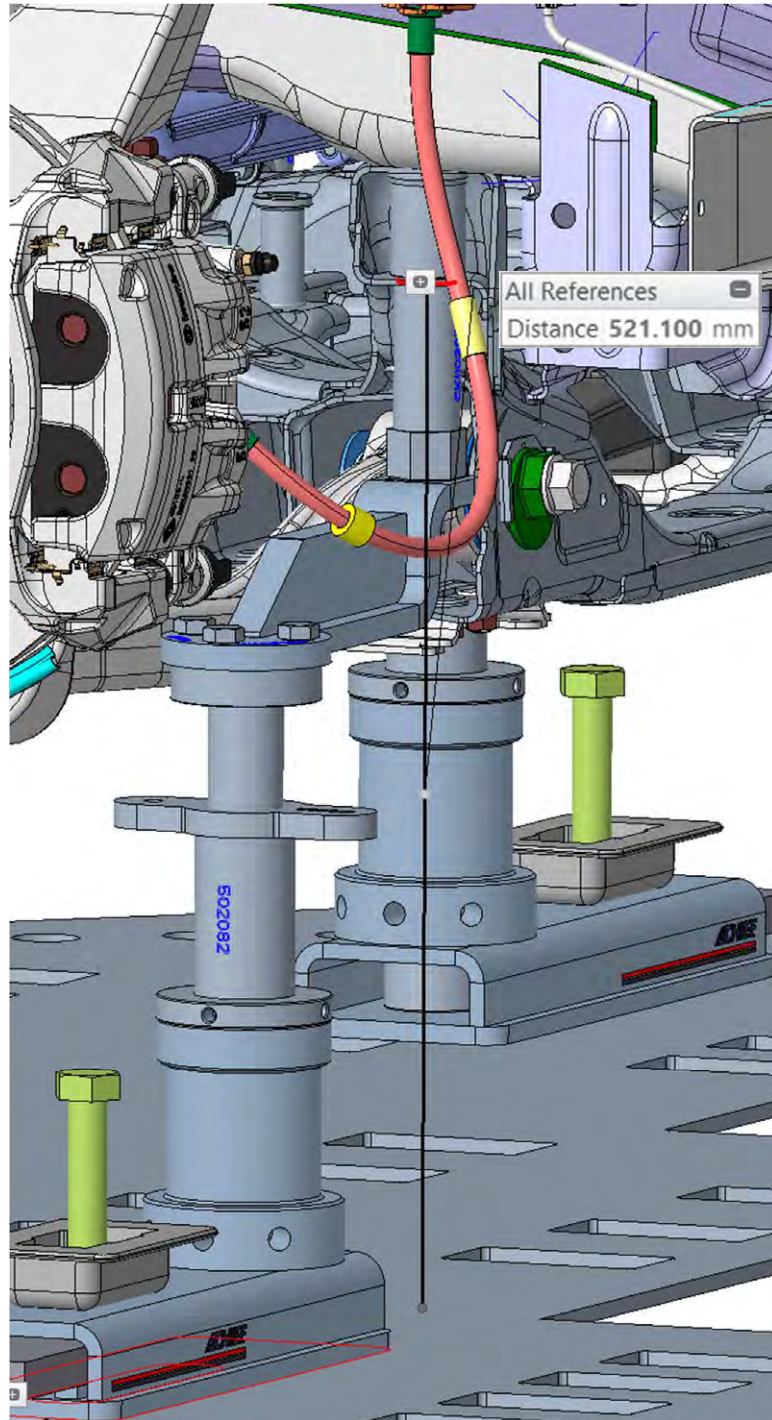
**MECH-IN UNDERBODY**

502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
CK110123IC	Ext'd Fixture
CK110297	Standoff M16 x 100
41684	HHCS, M12 x 30



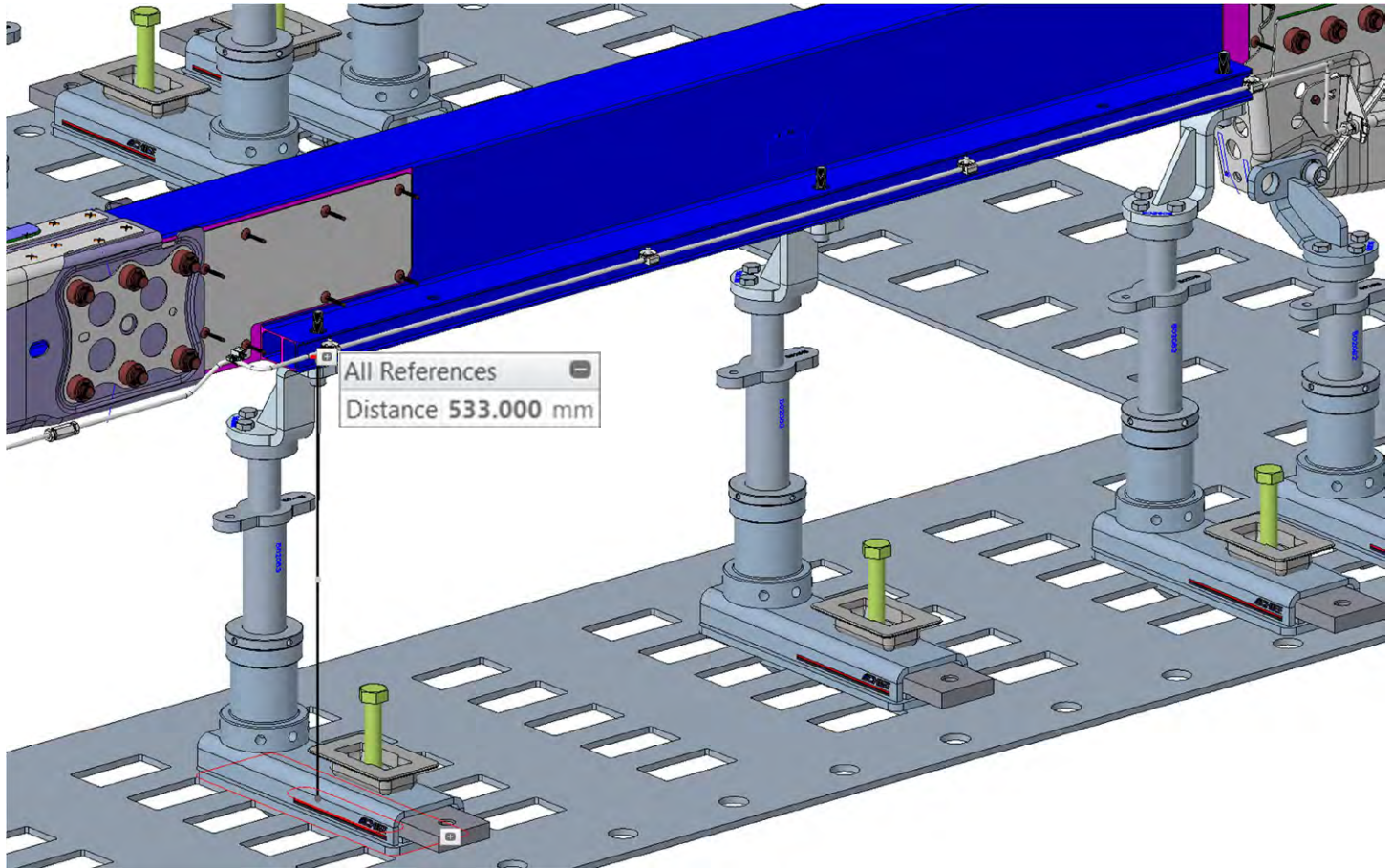


502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
CK110123IC	Ext'd Fixture
CK110297	Standoff M16 x 100
41684	HHCS, M12 x 30

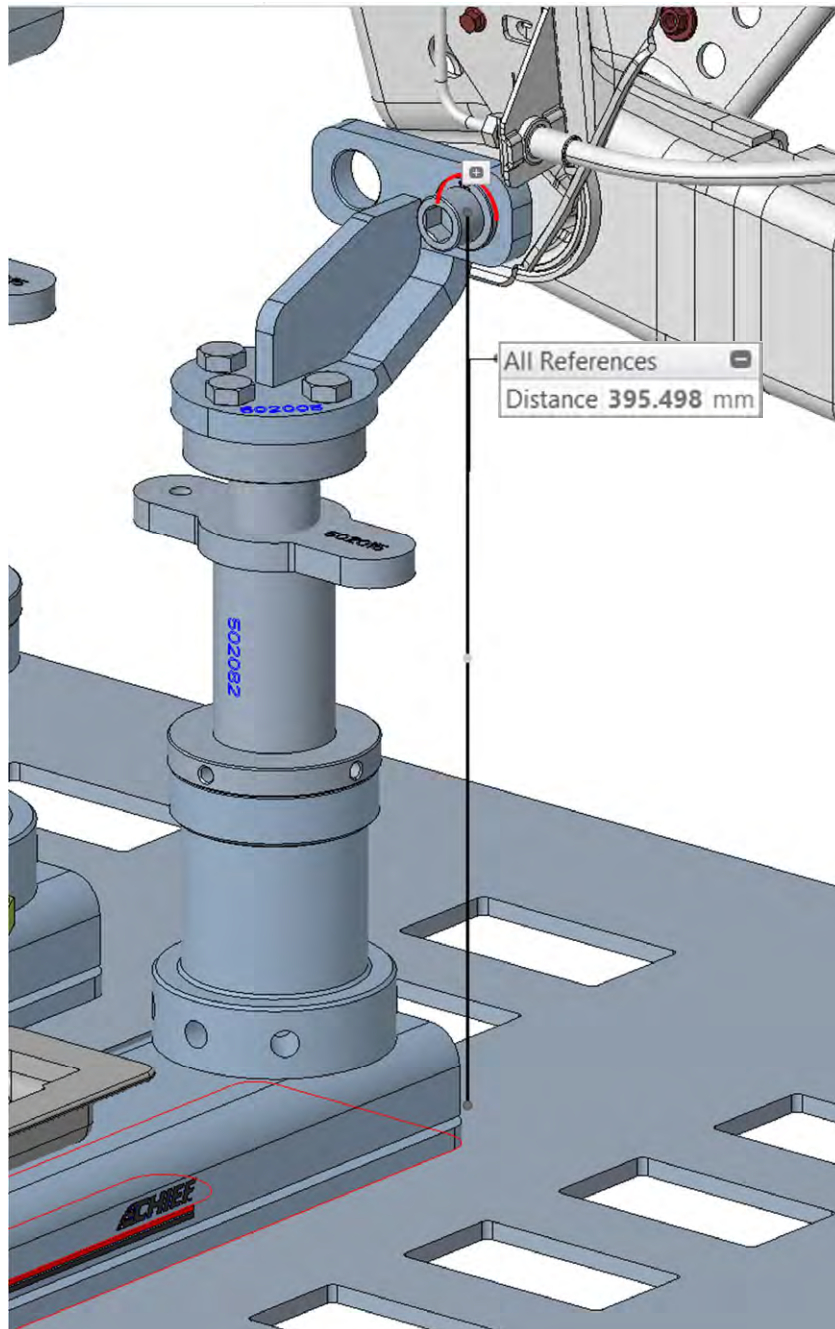


# MECH-IN UNDERBODY

502128	Base
502063	5-3/4" Tube Base
502039	Threaded Adapter
502008IC	Tall Vert. Fixture
502028	Bushing 12mm
CK130534	SHCS M12 x 75
41684	HHCS, M12 x 30



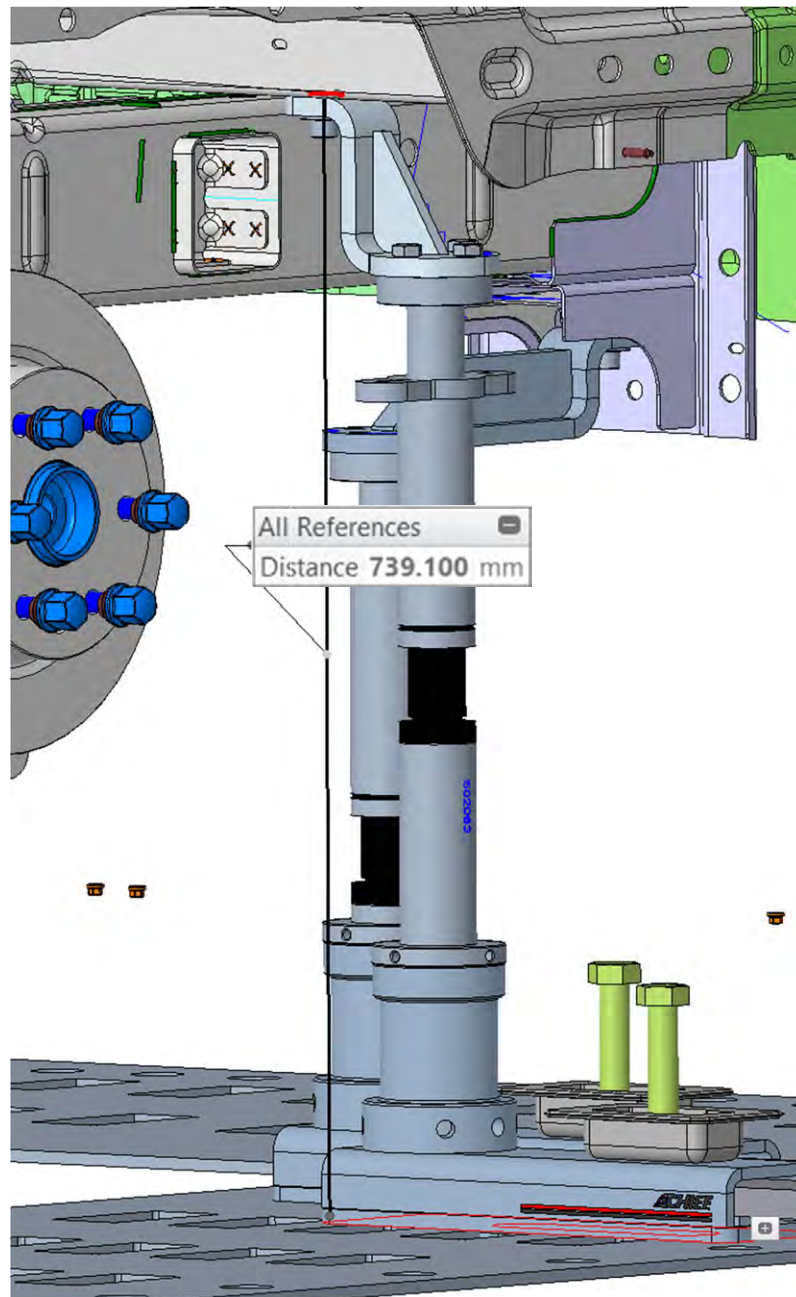
502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
502005IC	Double Horz. Fixture
502030	Bushing 16mm
CK130532	SHCS M16 x 120
41590	Hex Nut, M16
41684	HHCS, M12 x 30

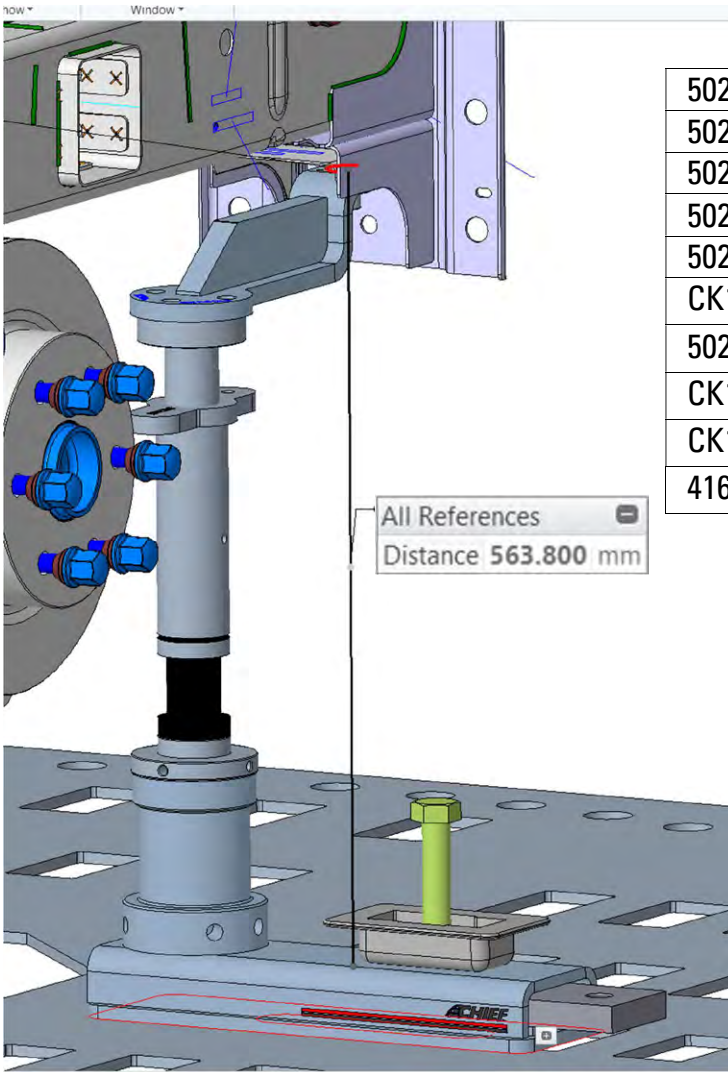




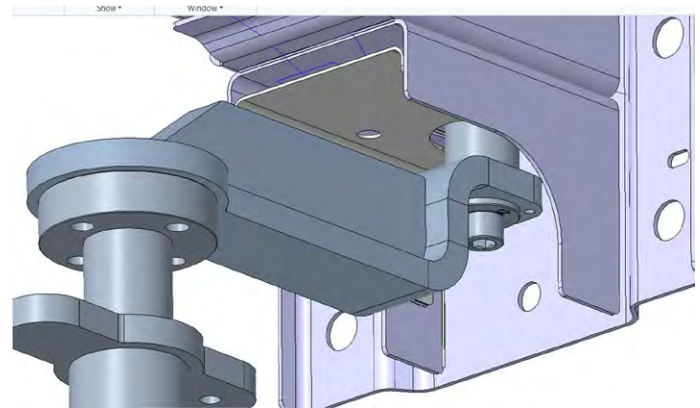
## MECH-IN UNDERBODY

502128	Base
502063	5-3/4" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502008IC	Tall Vert. Fixture
502028	Bushing 12mm
CK130534	SHCS M12 x 75
41684	HHCS, M12 x 30



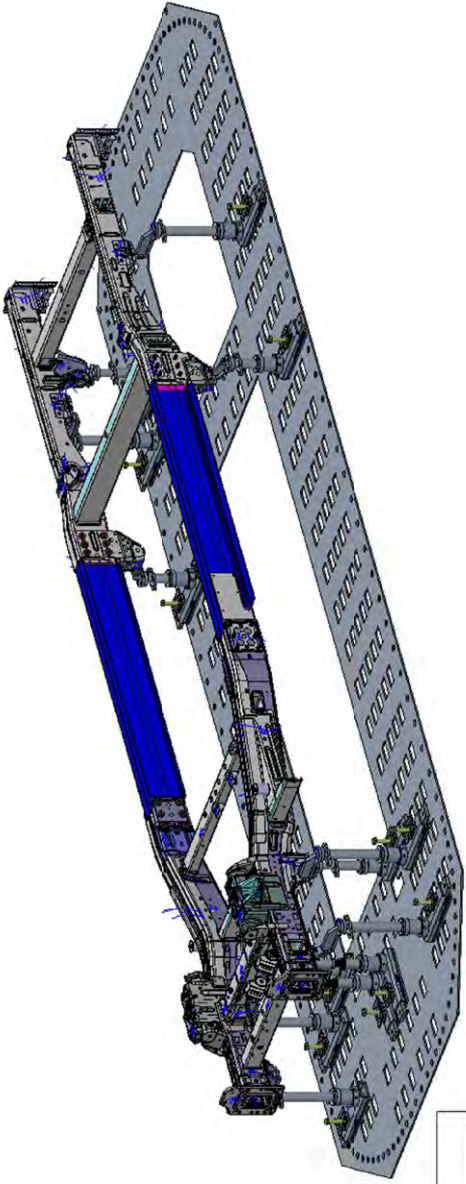


502128	Base
502055	Short Tube Base
502033	LH Adapter Screw
502034	Turnbuckle
502039	Threaded Adapter
CK1101231C	Ext'd Fixture
502028	Bushing 12mm
CK130535	SHCS M12 x 240
CK120519	Spacer, 39.5mm
41684	HHCS, M12 x 30



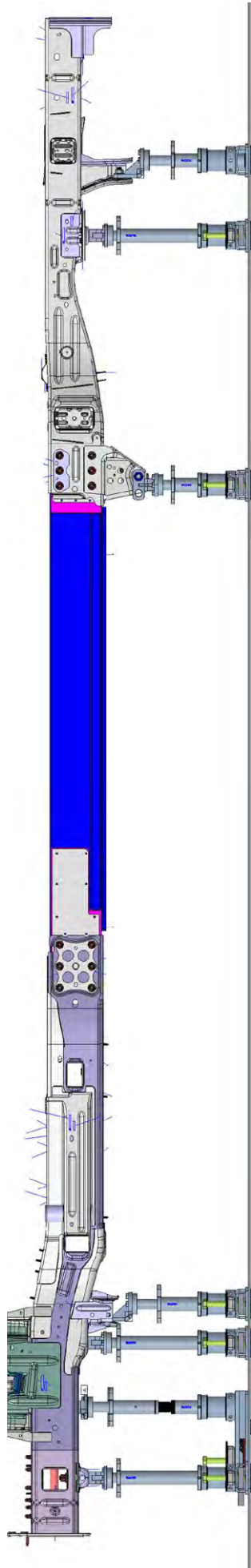


# MECH-OUT UNDERBODY



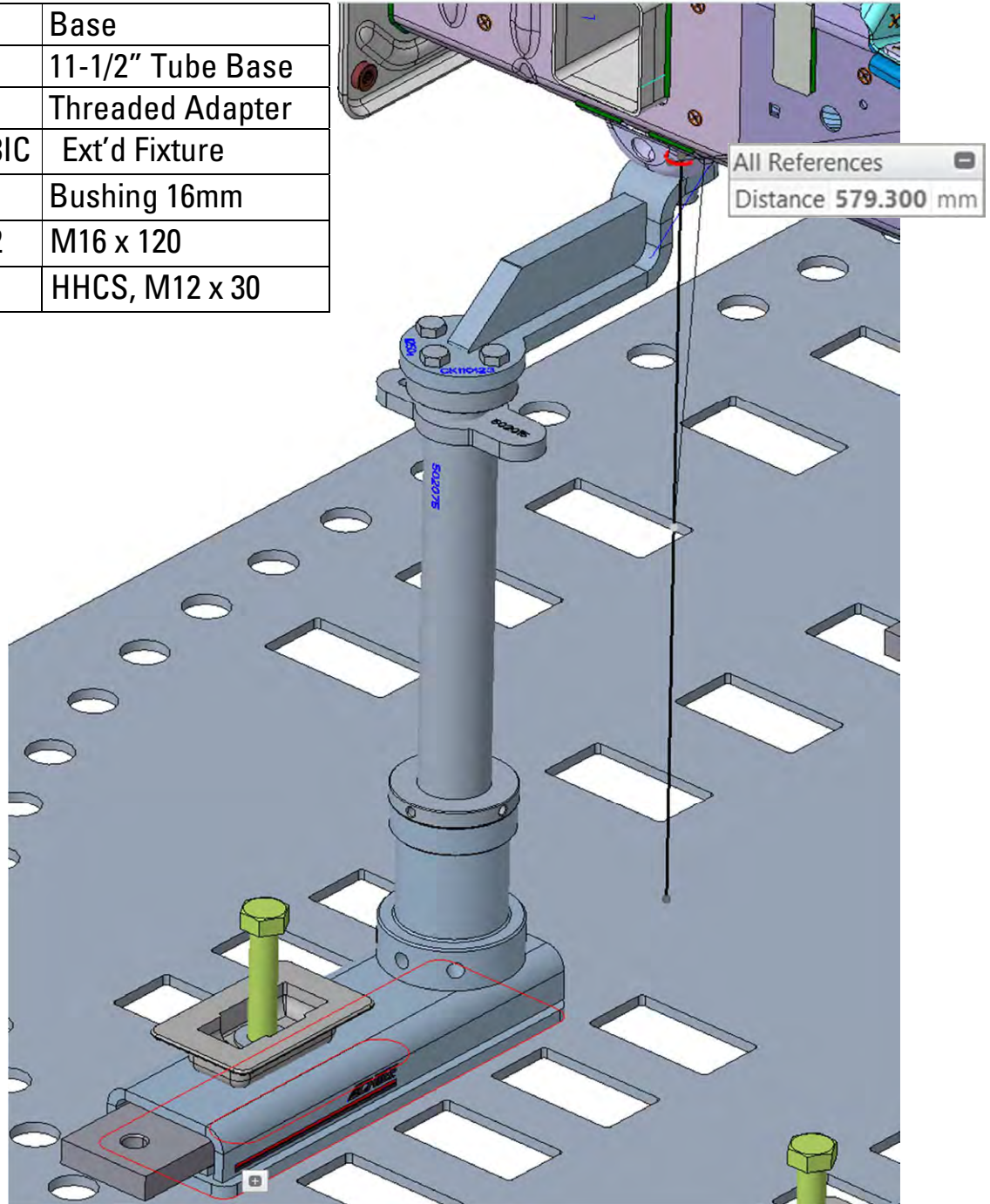
ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
22	CK130533	2	ck130533.prt	M20 x 40 SHCS
21	CK130532	4	ck130532.prt	M16 x 120 SHCS
20	CK130531	5	ck130531.prt	M16 x 40SHCS
19	CK130060	2	ck130060.prt	M10 x 35 SHCS
18	CK110123	6	CK110123.ASM	Extended Fixture
17	601738	2	601738.prt	Washer, 3/4"
16	502128	13	502128.asm	Base
15	502082	5	502082.ASM	3-3/4" Tube Base
14	502075	6	502075.ASM	11-1/2" Tube Base
13	502063	2	502063.ASM	5-3/4" Tube Base
12	502039	13	502039.asm	Threaded Adapter
11	502036	2	502036.prt	Bushing 20mm
10	502034	2	502034.prt	Turn Buckle
9	502033	2	502033.PRT	LH Adapter Screw
8	502030	9	502030.prt	Bushing 16mm
7	502027	2	502027.prt	Bushing 10mm
6	502019	5	502019.ASM	Tall Horz Fixture
5	502015	13	502015.prt	Wing Nut
4	502005	2	502005.ASM	Double Horz Fixture
3	41684	39	41684.prt	M12 x 30 HHCS
2	41590	5	41590.prt	M16 Hex Nut
1	41493	2	41493.prt	M20 Hex Nut

<b>Chief Automotive</b>			
TITLE			
mech_out-underbody.drw			
SIZE	CAGE CODE	DWG NO	REV
<b>B</b>		<b>Mech Out Underbody</b>	
		<b>EDV500</b>	
SCALE: 0.045	UNIT WT: [ .2]	SHEET 1 OF 1	



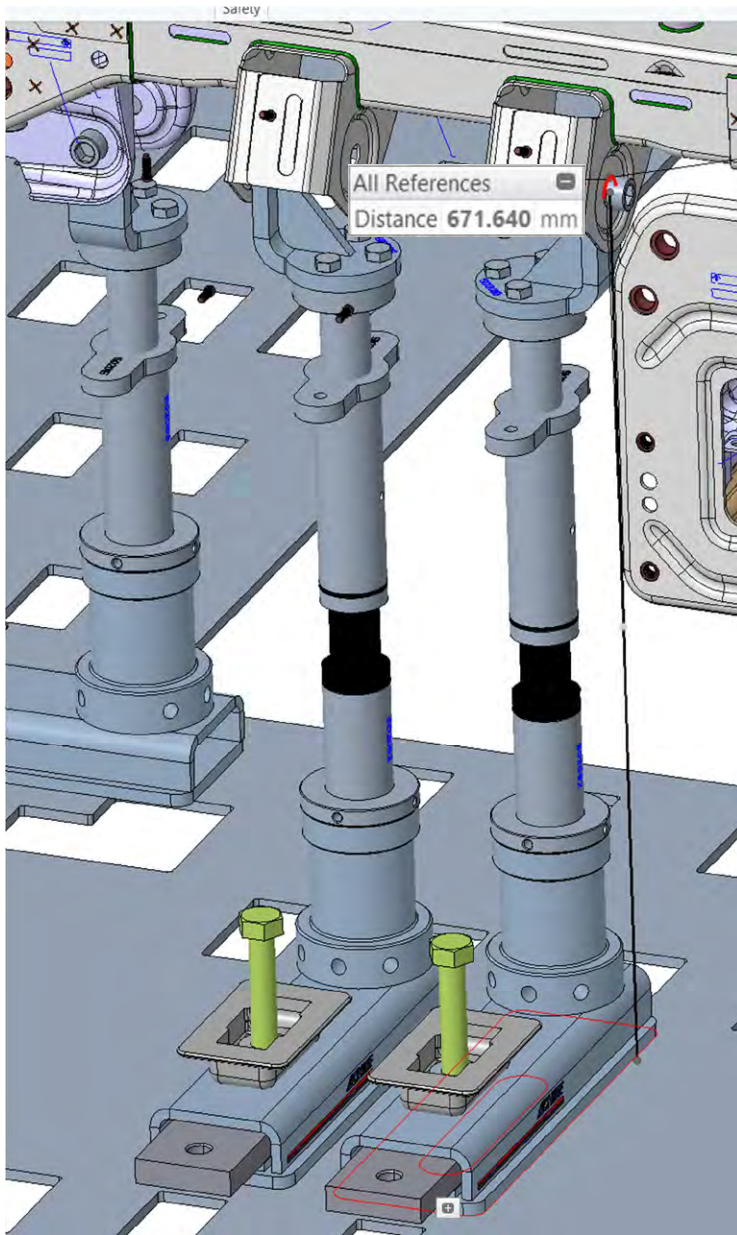
# MECH-OUT UNDERBODY

502128	Base
502075	11-1/2" Tube Base
502039	Threaded Adapter
CK110123IC	Ext'd Fixture
502030	Bushing 16mm
CK130532	M16 x 120
41684	HHCS, M12 x 30

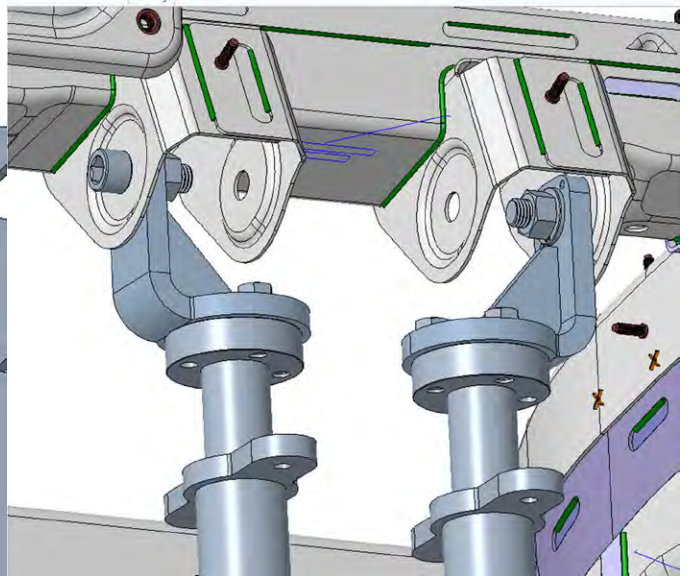




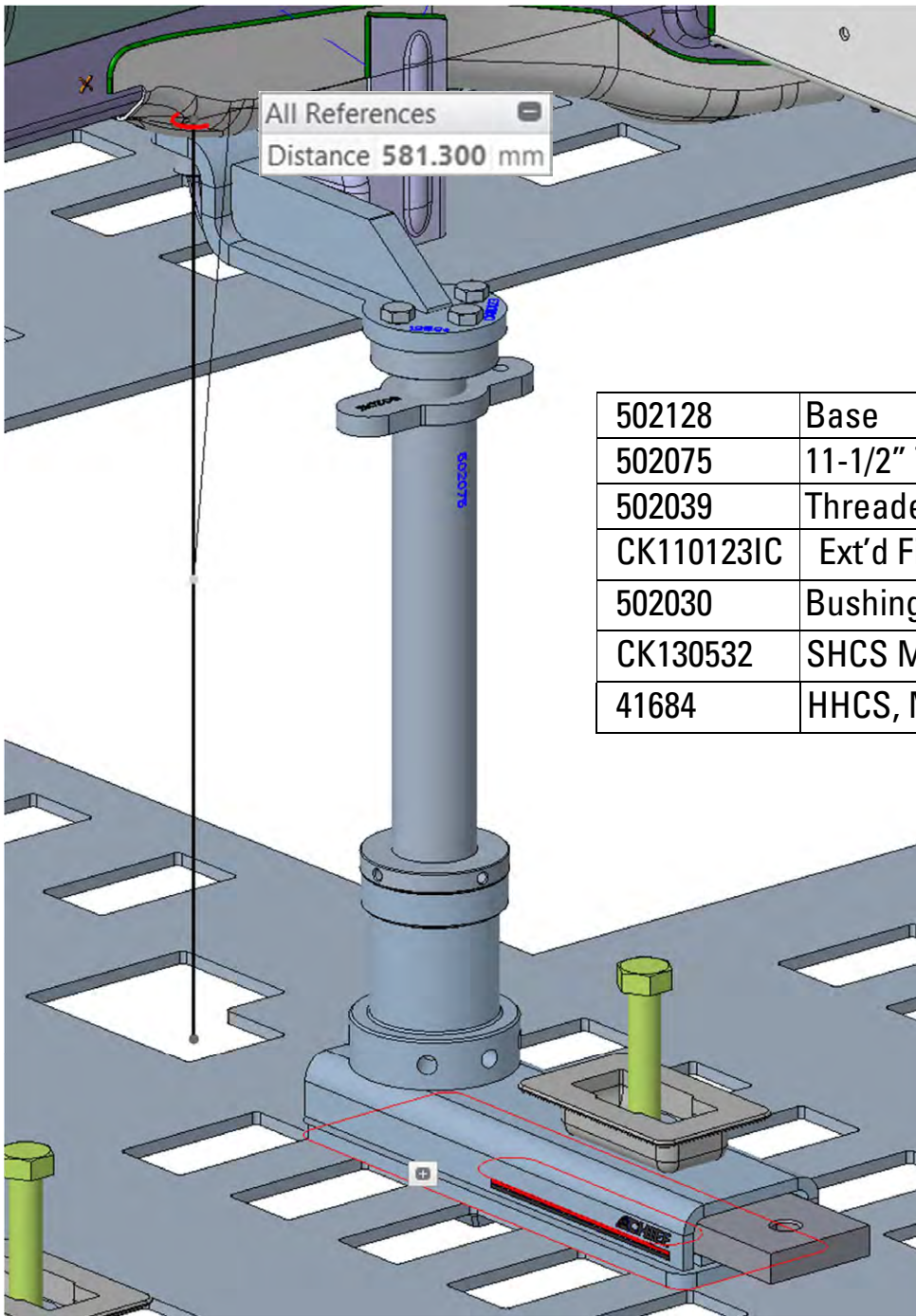
## MECH-OUT UNDERBODY



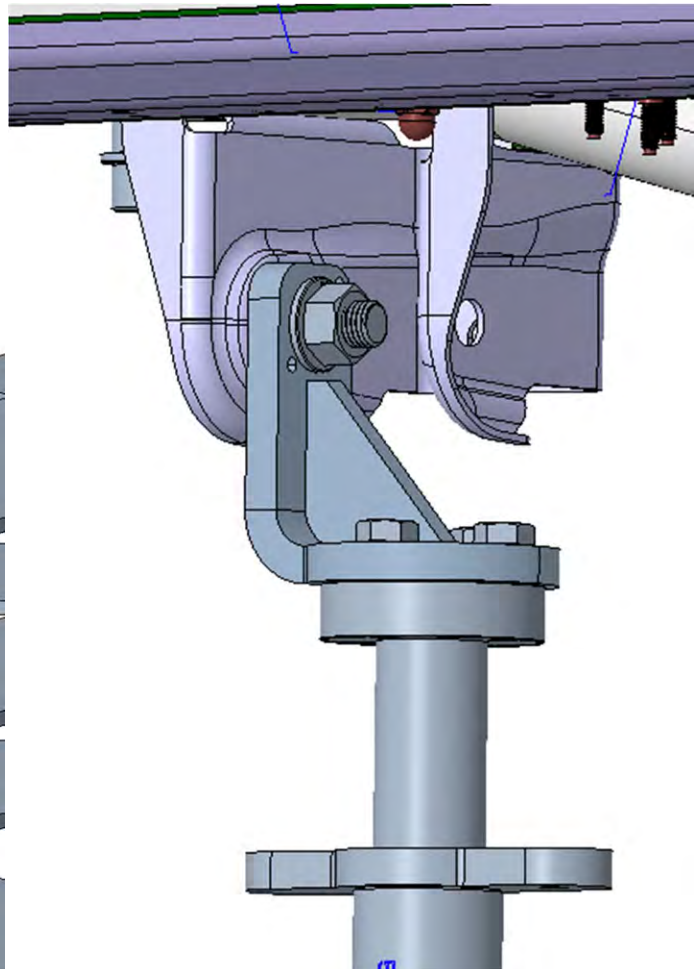
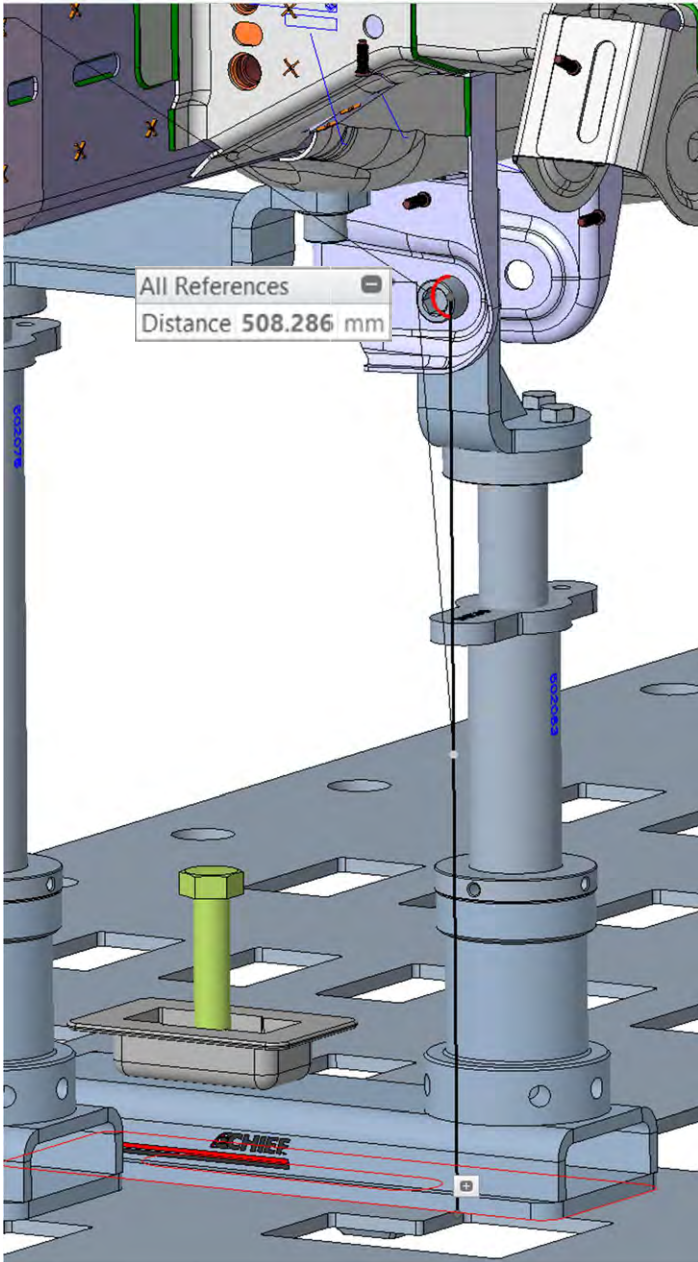
502128	Base
502082	3-3/4" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502019IC	Tall Horz. Fixture
502030	Bushing 16mm
CK130531	SHCS M16 x 40
41590	Hex Nut M16
41684	HHCS, M12 x 30



# MECH-OUT UNDERBODY

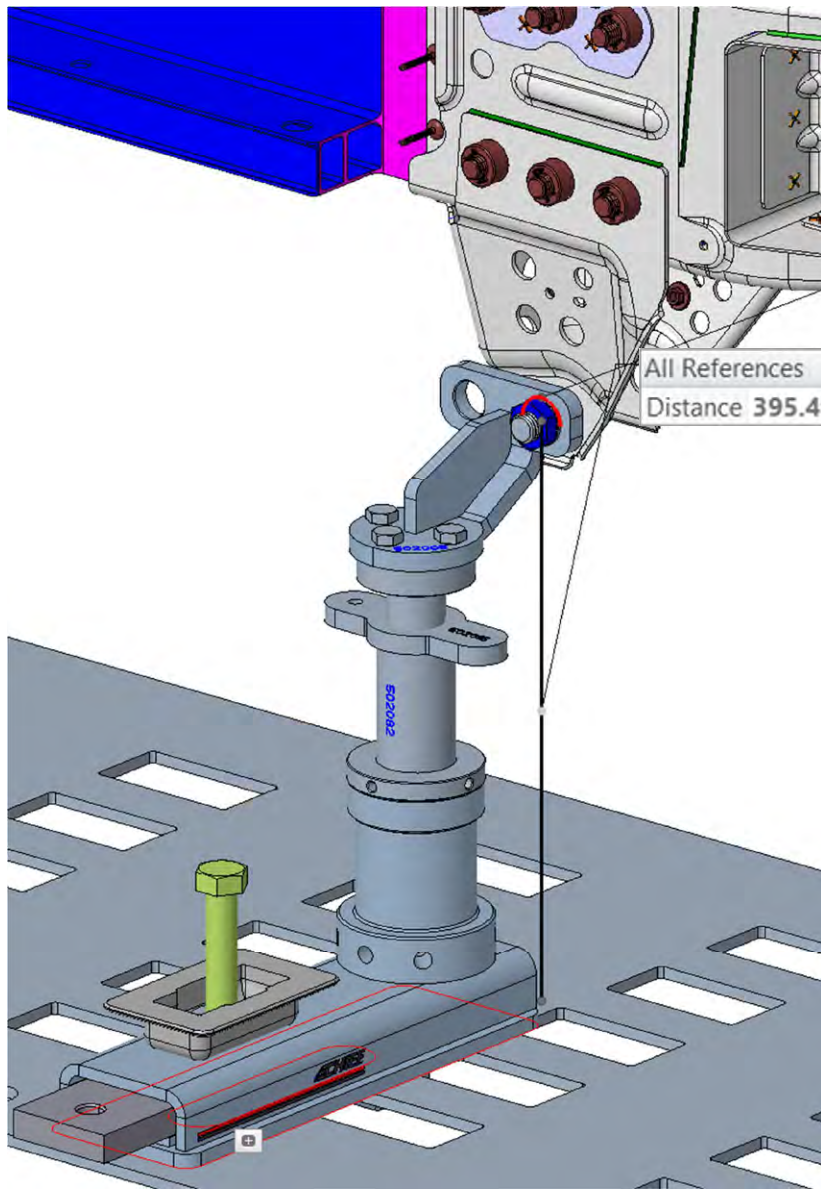


502128	Base
502063	5-3/4" Tube Base
502039	Threaded Adapter
502019IC	Tall Horz. Fixture
502030	Bushing 16mm
CK130531	SHCS M16 x 40
41590	Hex Nut M16
41684	HHCS, M12 x 30

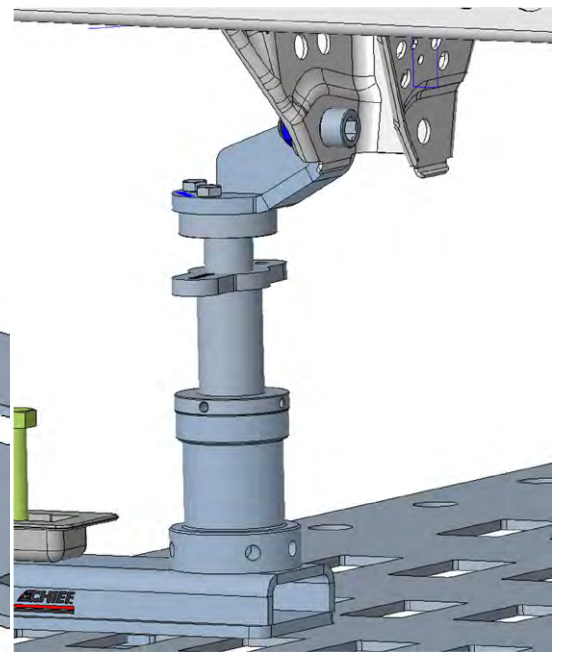


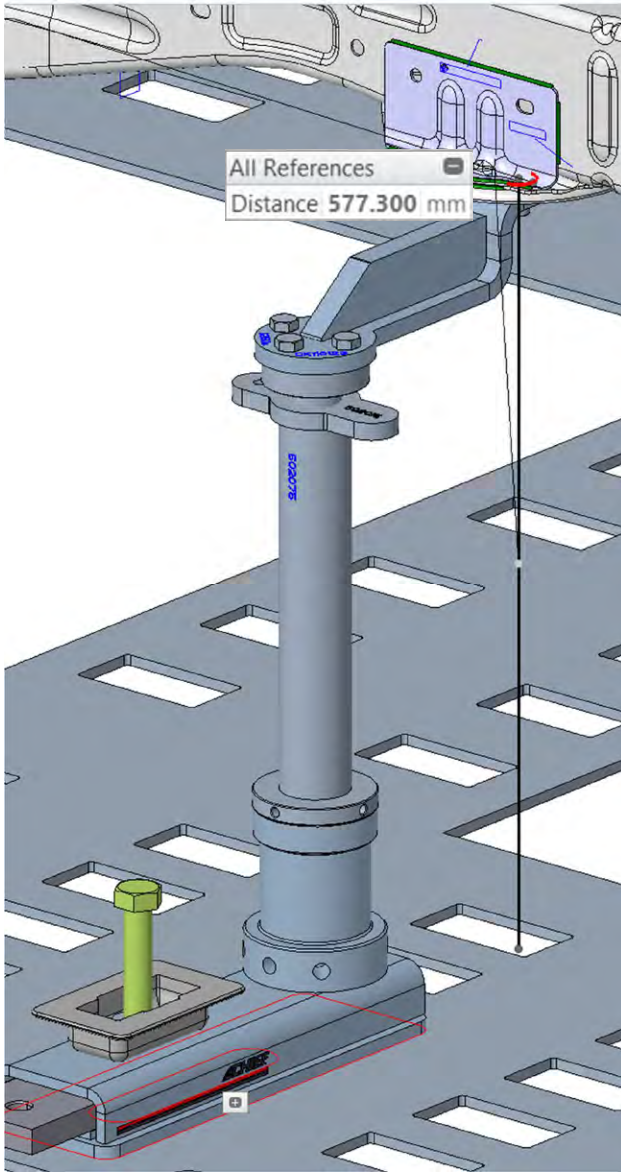


# MECH-OUT UNDERBODY

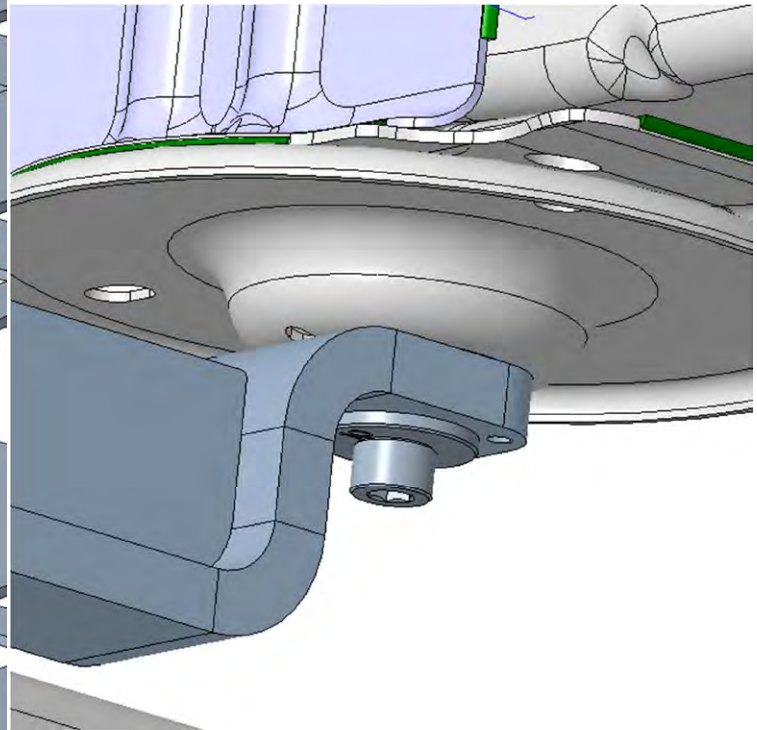


502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
5020051C	Double Horz. Fixture
502036	Bushing 20mm
CK130533	SHCS M20 x 40
41493	Hex Nut M20
41684	HHCS, M12 x 30





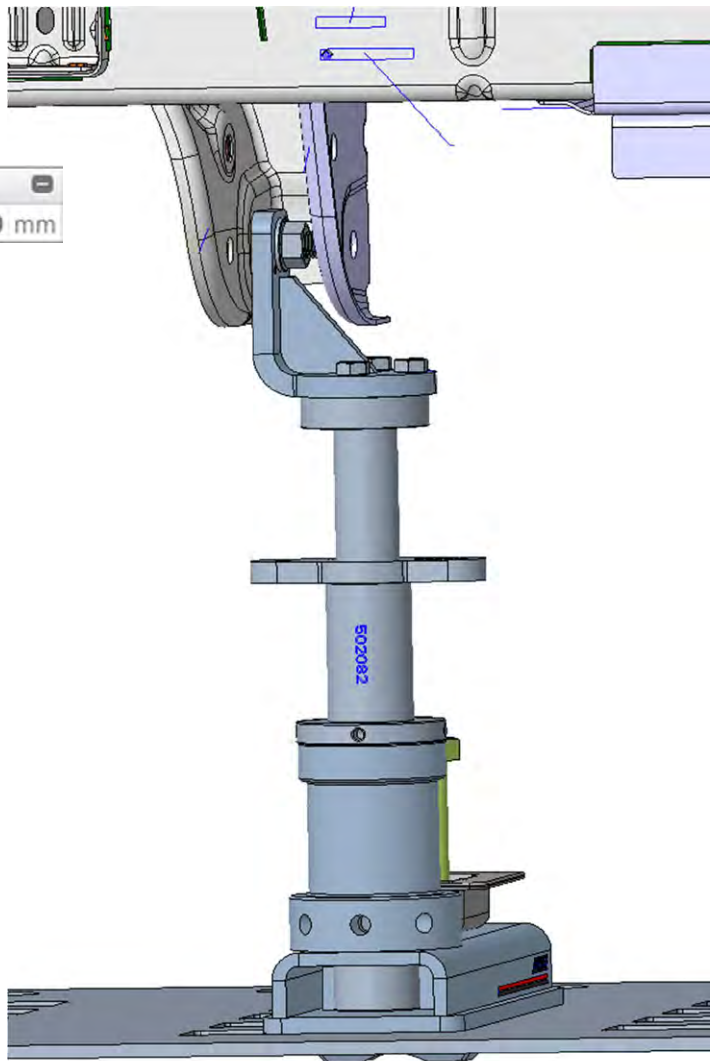
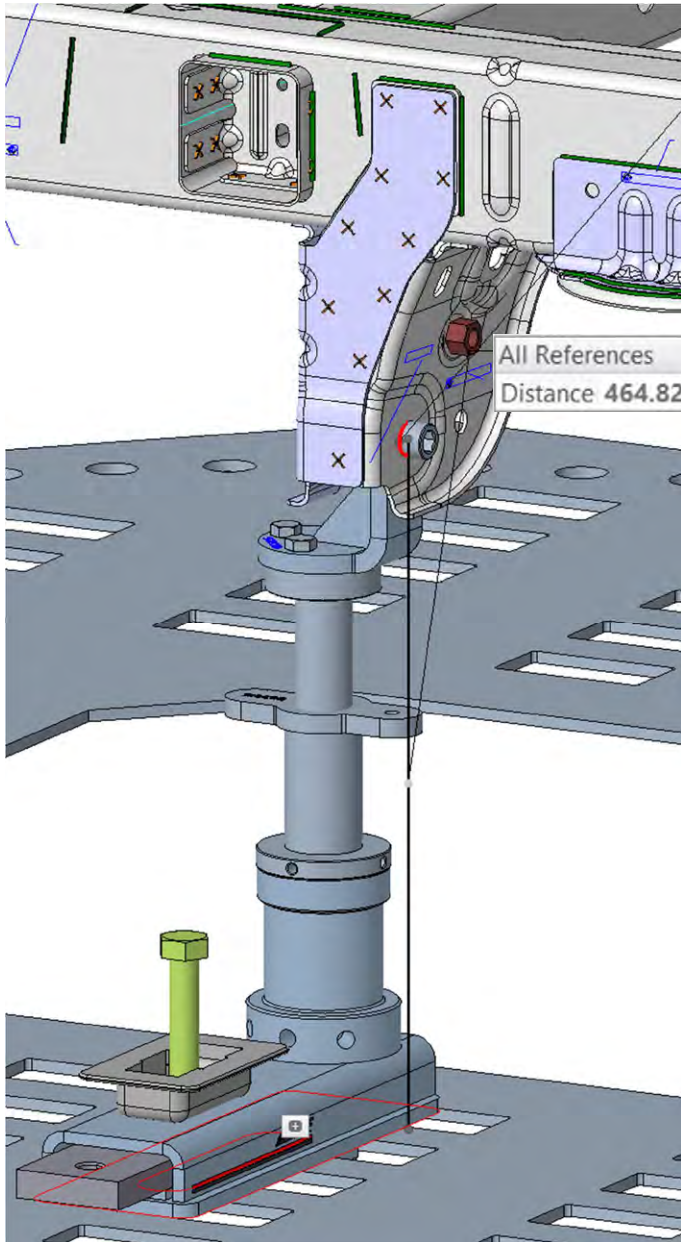
502128	Base
502075	11-1/2" Tube Base
502039	Threaded Adapter
CK1101231C	Ext'd. Fixture
502027	Bushing 10mm
CK130060	SHCS M10 x 35
41684	HHCS, M12 x 30

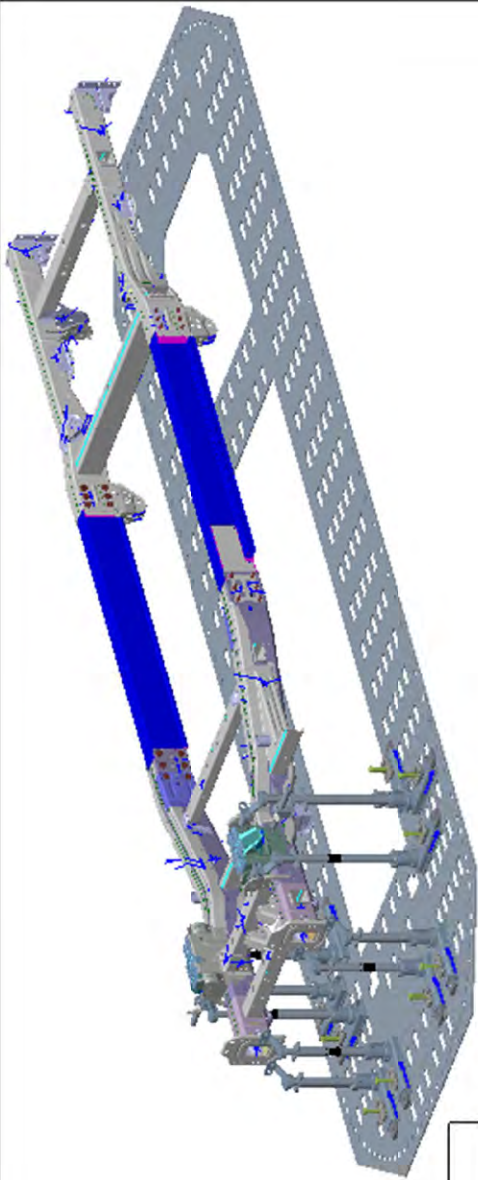




# MECH-OUT UNDERBODY

502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
502019IC	Tall Horz. Fixture
502030	Bushing 16mm
CK130531	SHCS M16 x 40
41590	Hex Nut 16mm
41684	HHCS, M12 x 30



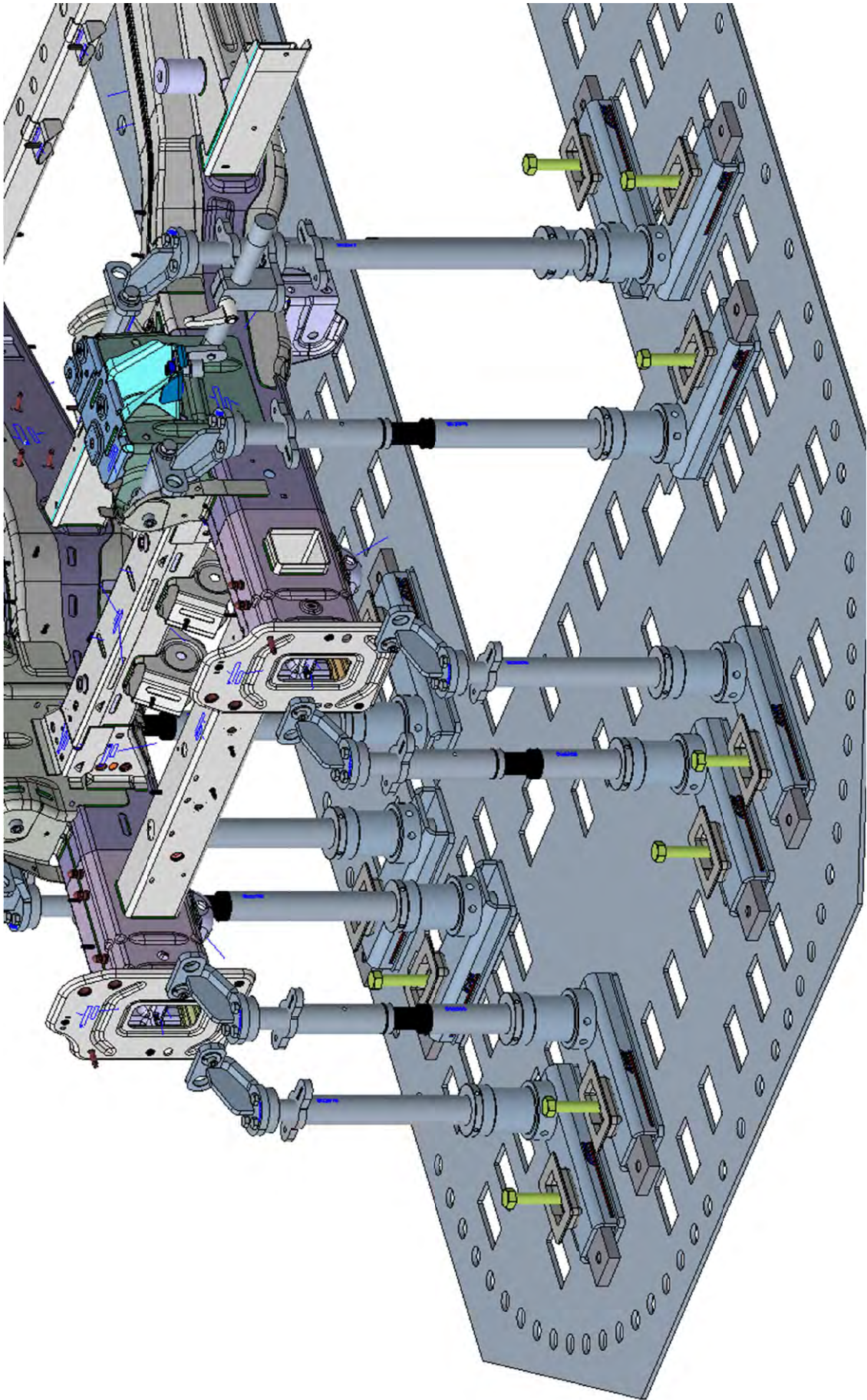


ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
22	CKI 30533	2	d170533.prl	M20 x 40 SHCS
21	CKI 30225	4	d130225.prl	M14 x 65 SHCS
20	CKI 30060	4	d170060.prl	M10 x 35 SHCS
19	CKI20560	4	d120560.PRI	Spacer, 28mm
18	CKI20491	2	d120491.prl	Wrist Block
17	CKI10282	4	d110282.NSM	Angle adapter Clamp Lg.
16	CKI10090	2	d110090.psm	Overhead Arm
15	502147	2	502147.ASM	18" Tube Base
14	502143	2	502143.psm	Pillar Clamp
13	502128	10	502128.psm	Base
12	502075	6	502075.ASM	11-1/2" Tube Base
11	502063	2	502063.ASM	5-3/4" Tube Base
10	502039	10	502039.psm	Threaded Adapter
9	502036	2	502036.prl	Bushing 20mm
8	502034	6	502034.prl	Turn Buckle
7	502033	6	502033.PRI	LH Adapter Screw
6	502029	4	502029.prl	Bushing 14mm
5	502027	4	502027.prl	Bushing 10mm
4	502015	10	502015.prl	Wing Nut
3	502005	8	502005.ASM	Double Horz Fixture
2	41684	30	41684.prl	M12 x 30 HHCS
1	41493	2	41493.prl	M20X2.5 Hex Jam Nut

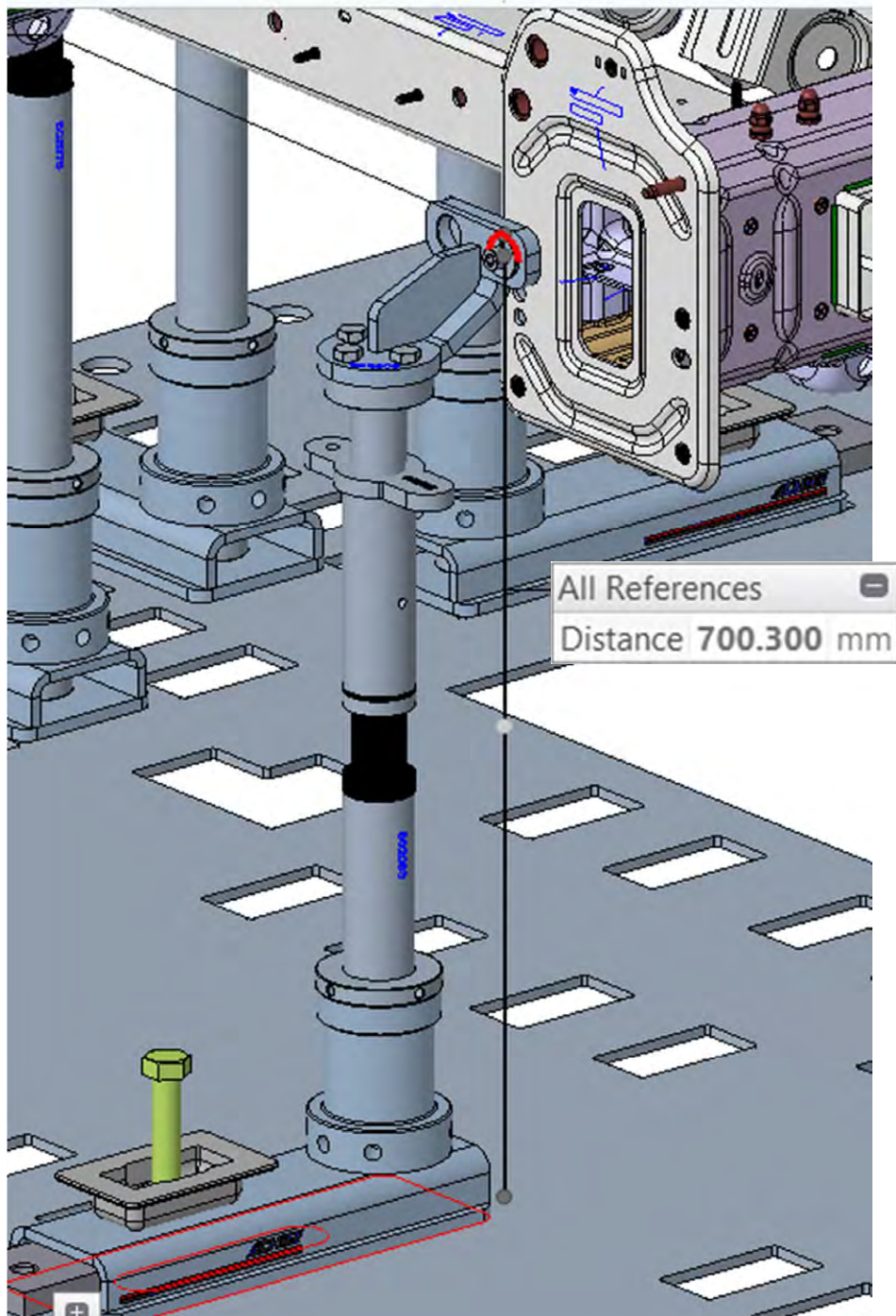
<b>Chief Automotive</b>			
TITLE mech_out_frt_rails.drw			
SIZE <b>B</b>	CAGE CODE	DWG NO <b>Mech Out Frt Rails</b>	REV
		<b>EDV500</b>	
SCALE: 0.045	UNIT WT: 1.2J	SHEET 1 OF 1	



# FRONT-RAILS



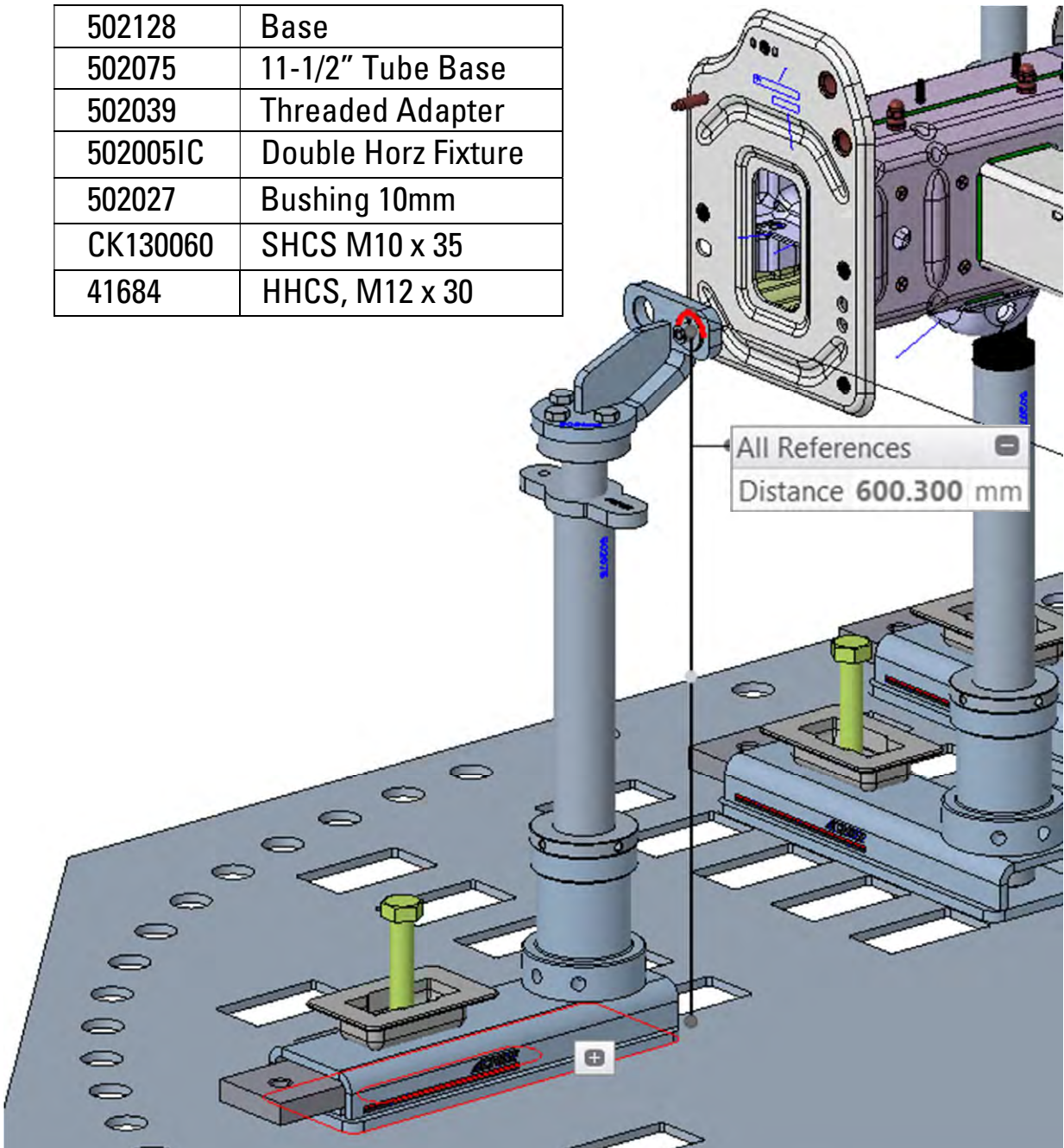
502128	Base
502063	5-3/4" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502005IC	Double Horz Fixture
502027	Bushing 10mm
CK130060	SHCS M10 x 35
41684	HHCS, M12 x 30



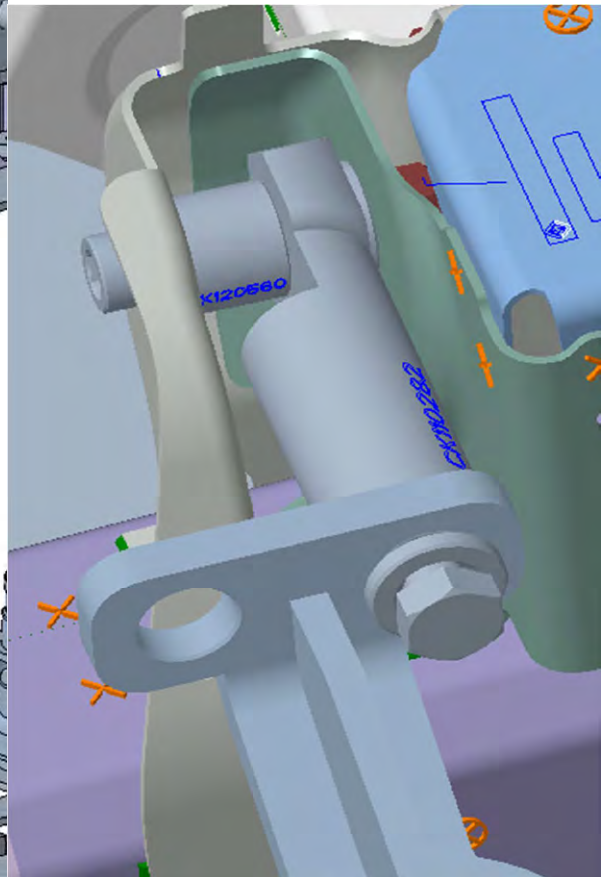
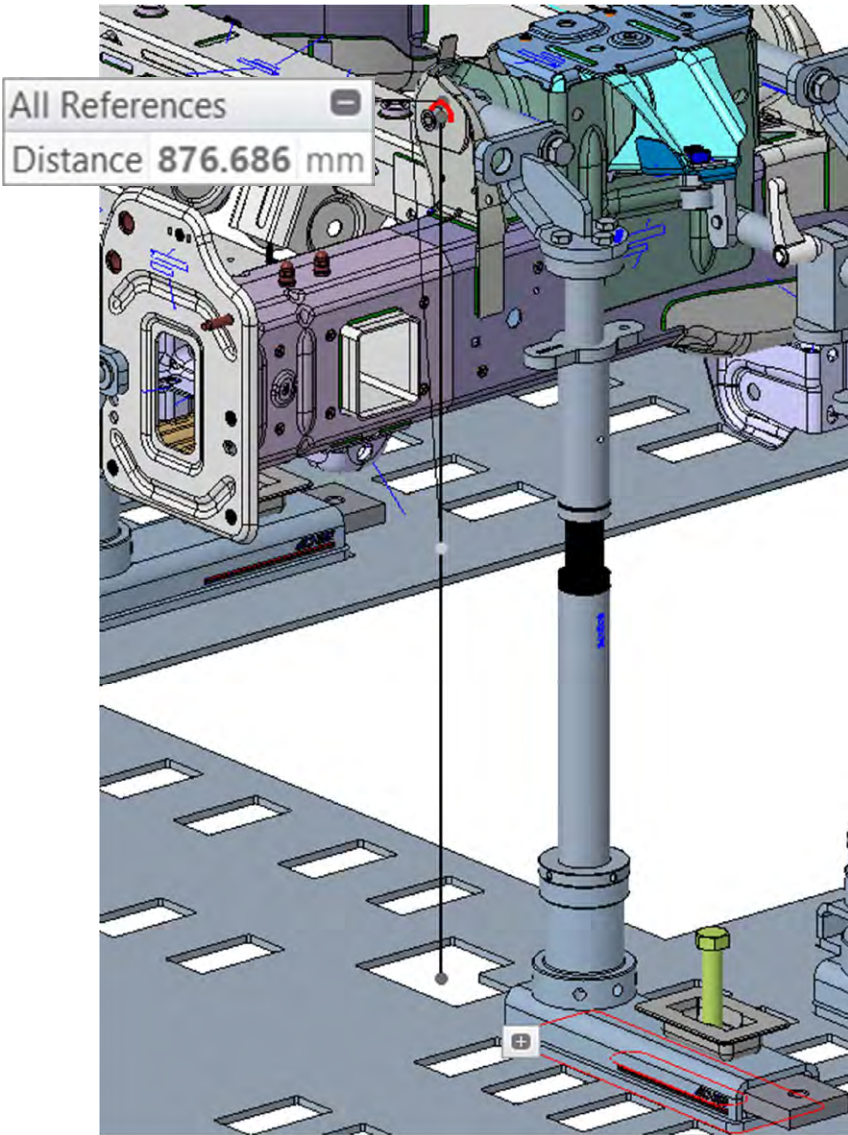


# FRONT-RAILS

502128	Base
502075	11-1/2" Tube Base
502039	Threaded Adapter
5020051C	Double Horz Fixture
502027	Bushing 10mm
CK130060	SHCS M10 x 35
41684	HHCS, M12 x 30



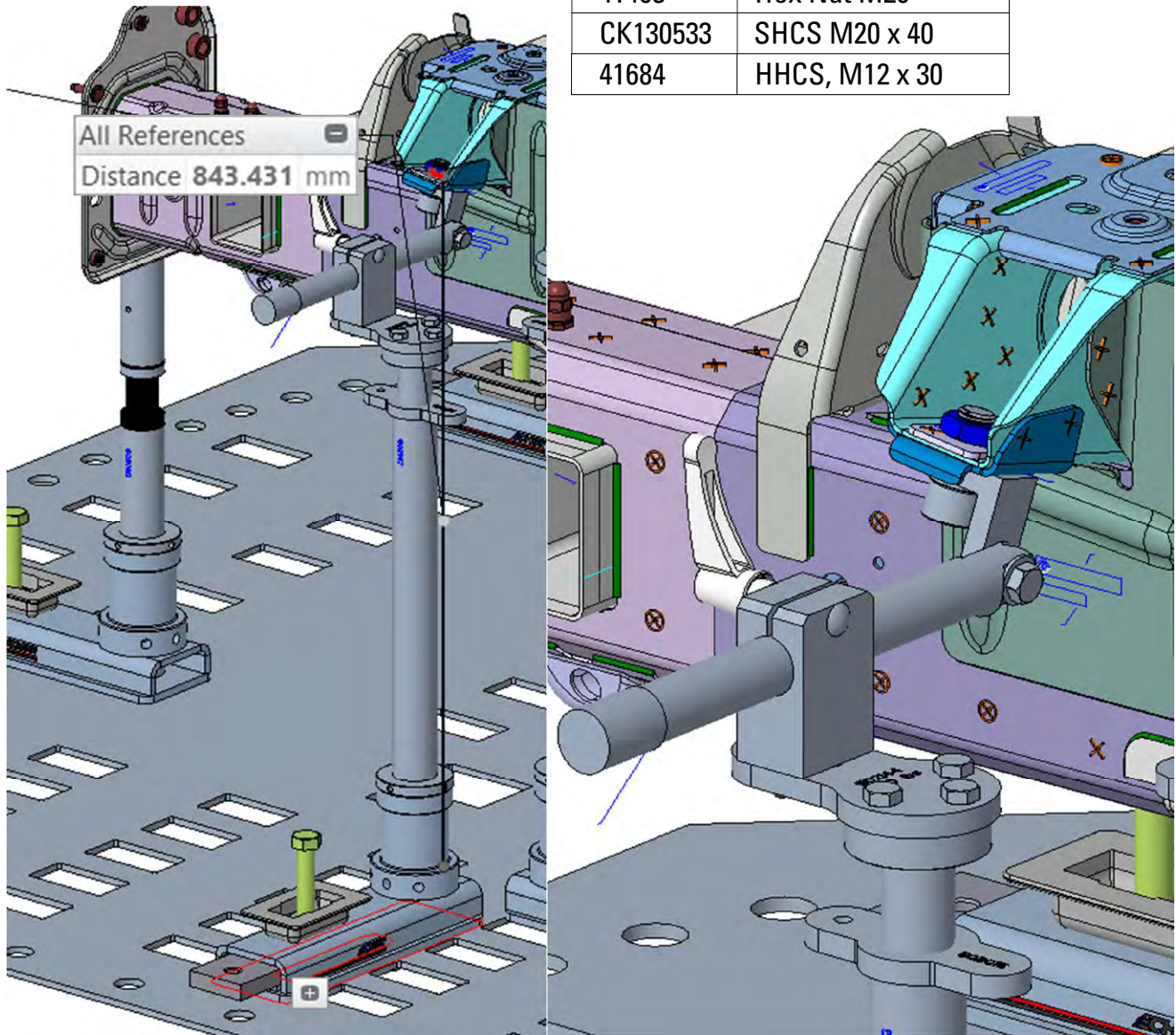
502128	Base
502075	11-1/2" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
5020051C	Double Horz. Fixture
CK110282	Angle Adapter, Long
CK120560	Spacer 28mm
502029	Bushing 14mm
CK130225	SHCS M14 x 65
41684	HHCS, M12 x 30



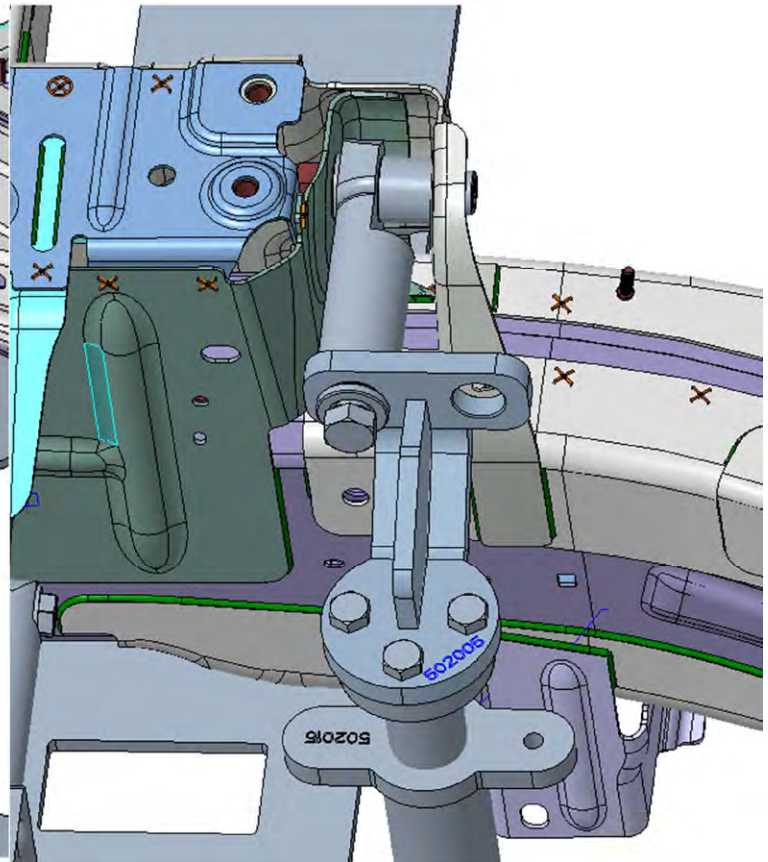
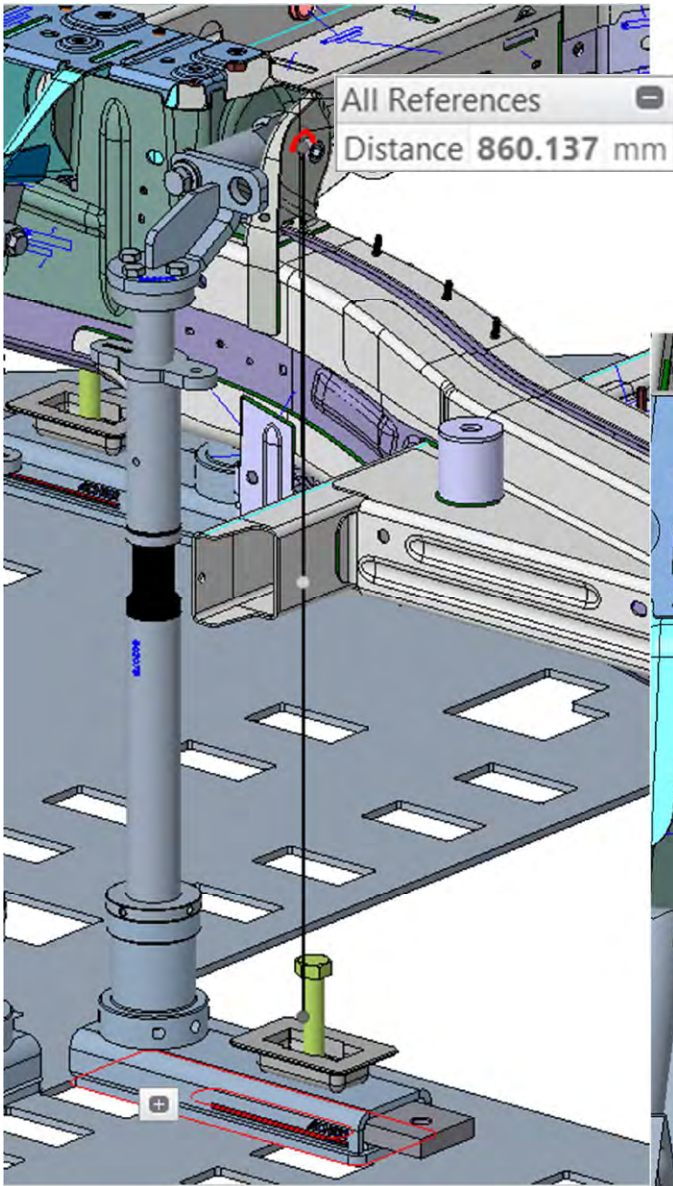


# FRONT-RAILS

502128	Base
502147	18" Tube Base
502039	Threaded Adapter
502143	Pillar Clamp
CK110090	Aluminum Arm
CK120491	Wrist Block
41493	Hex Nut M20
CK130533	SHCS M20 x 40
41684	HHCS, M12 x 30

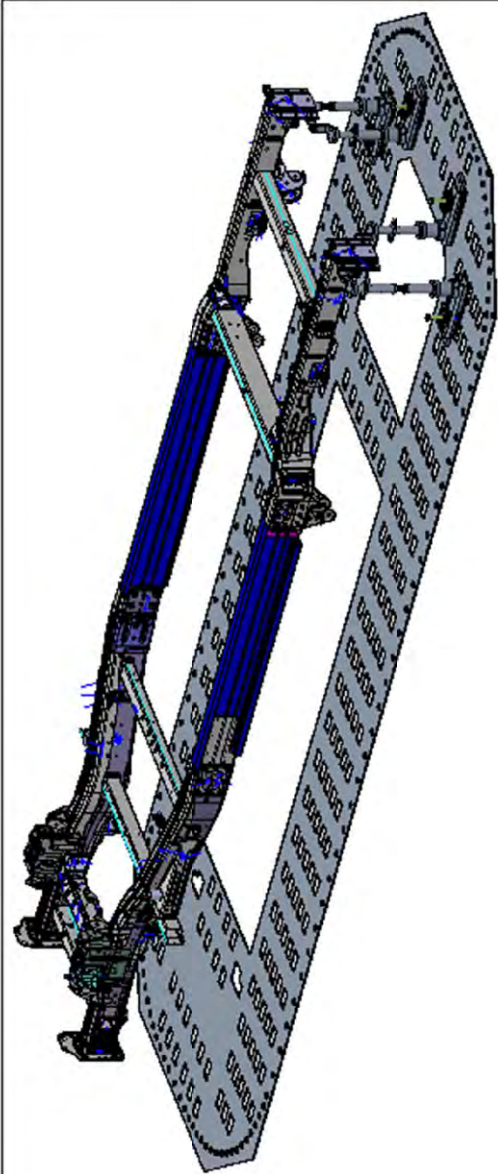


502128	Base
502075	11-1/2" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502005IC	Double Horz. Fixture
CK110282	Angle Adapter, Long
CK120560	Spacer 28mm
502029	Bushing 14mm
CK130225	SHCS M14 x 65
41684	HHCS, M12 x 30



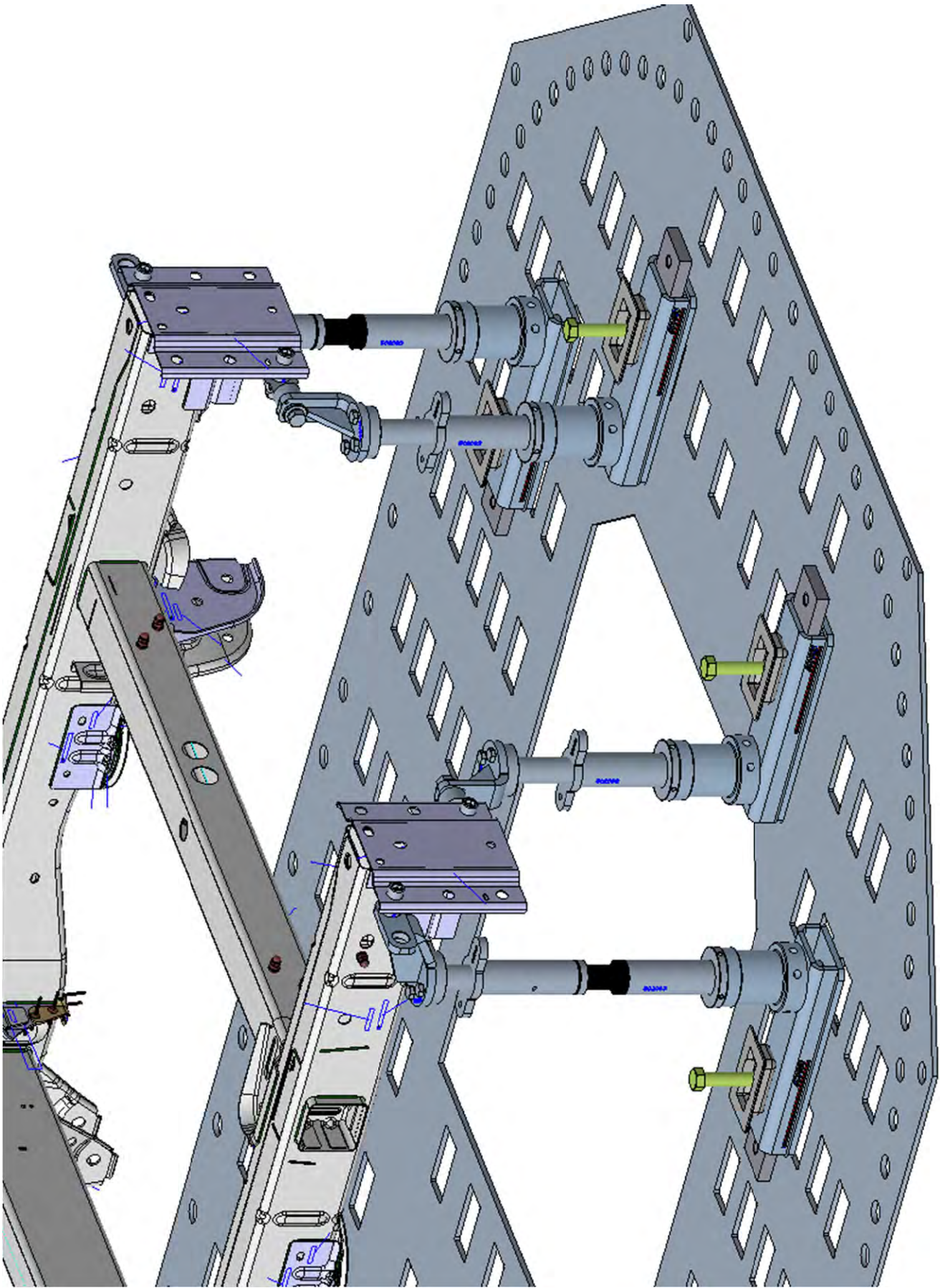


REAR-RAILS



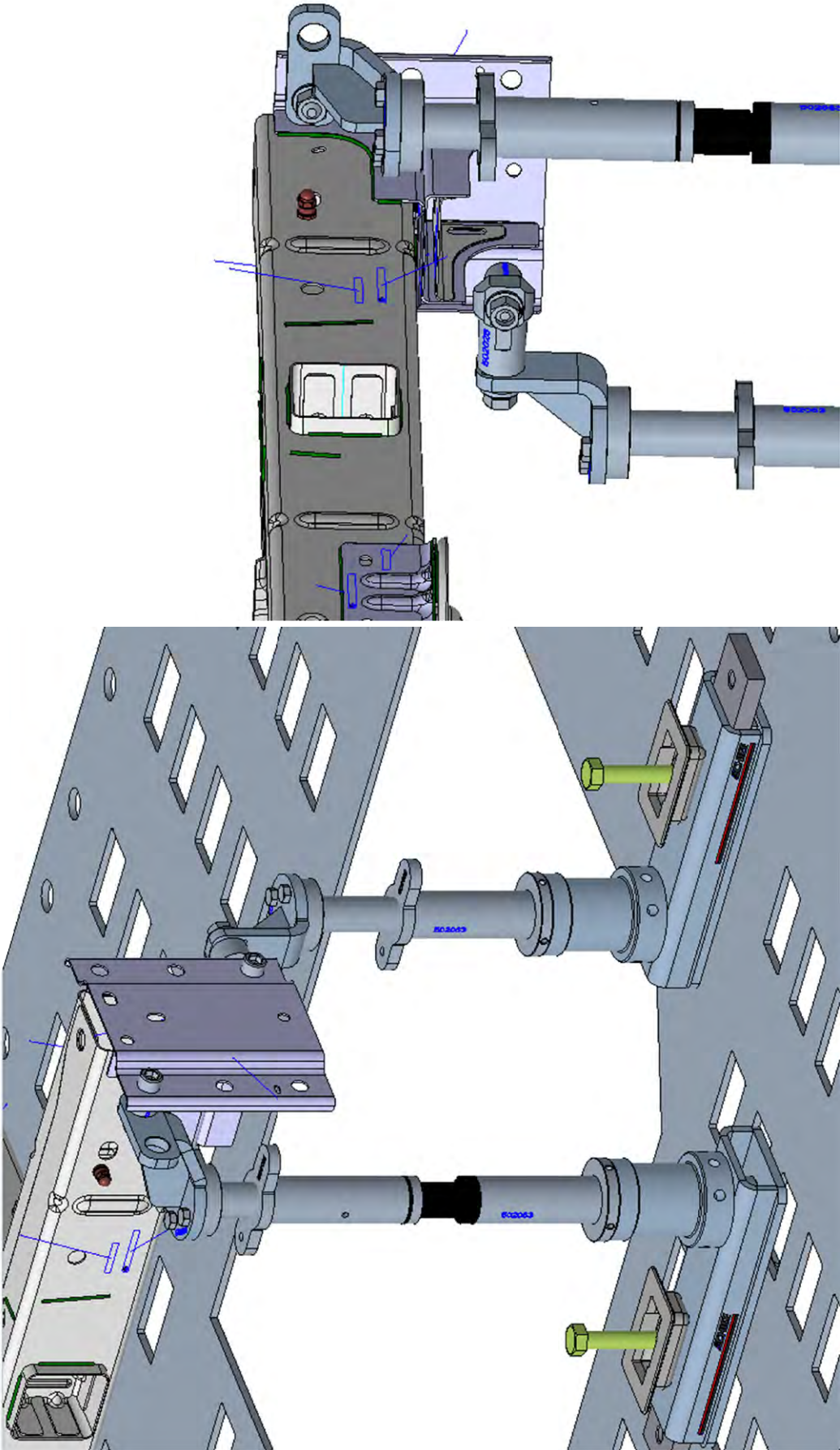
ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
14	CK120560	4	CK120560.PRT	Spacer, 28mm
13	502128	4	502128.asm	Base
12	502063	4	502063.ASM	5-3/4" Tube Base
11	502039	4	502039.asm	Threaded Adapter
10	502034	2	502034.prt	Turn Buckle
9	502033	2	502033.PRT	LH Adapter Screw
8	502030	4	502030.prt	Bushing 16mm
7	502026	2	502026.asm	Angle Adapter Clamp
6	502019	2	502019.ASM	Tall Horz Fixture
5	502015	4	502015.prt	Wing Nut
4	502005	2	502005.ASM	Double Horz Fixture
3	41684	12	41684.prt	M12 x 30 HHCS
2	40720	4	40720.prt	5/8" Hex Nut
1	40343	4	40343.prt	5/8 x 2-1/2" SHCS

<b>Chief Automotive</b>			
TITLE			
mech_out_rrails.drw			
SIZE	CAGE CODE	DWG NO	REV
<b>B</b>		<b>Mech</b>	<b>Out Rear Rails</b>
SCALE: 0.045		UNIT WT: (.2)	SHEET 1 OF 1
		<b>EDV500</b>	

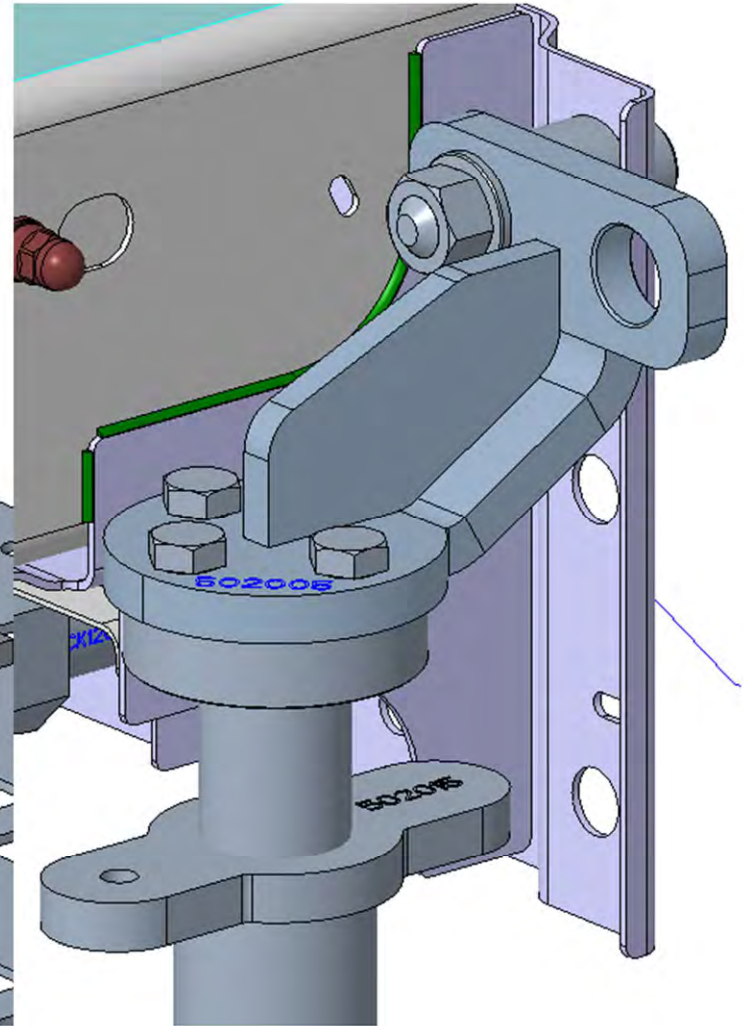
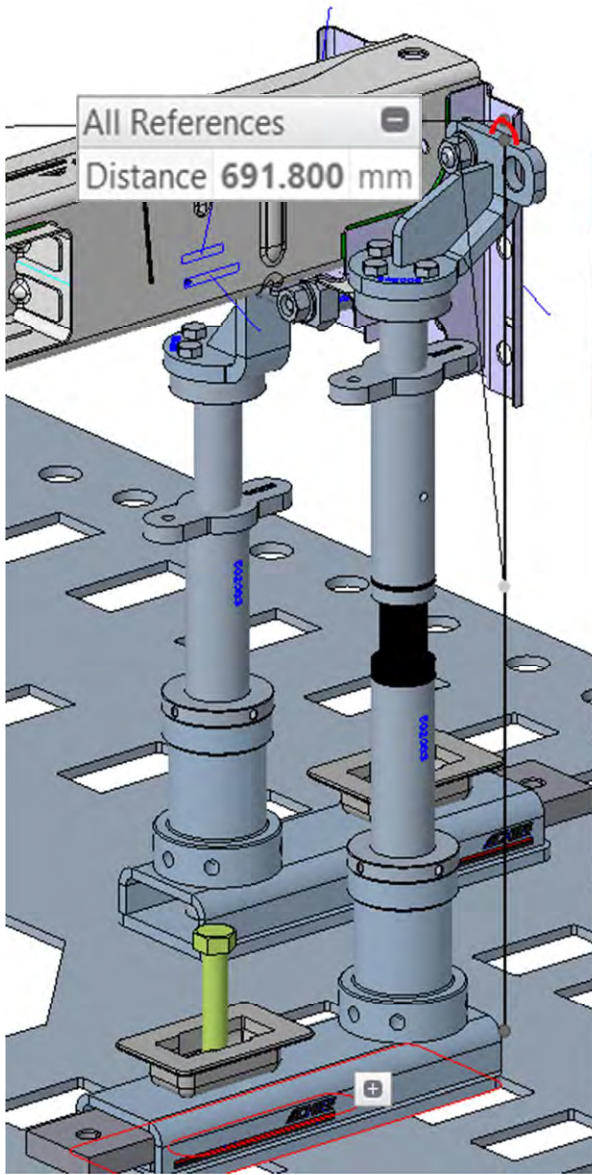




REAR-RAILS

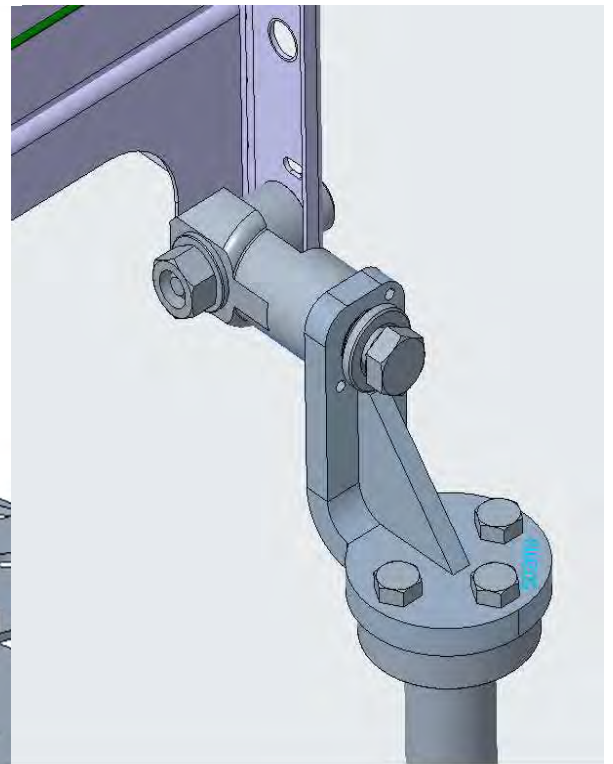
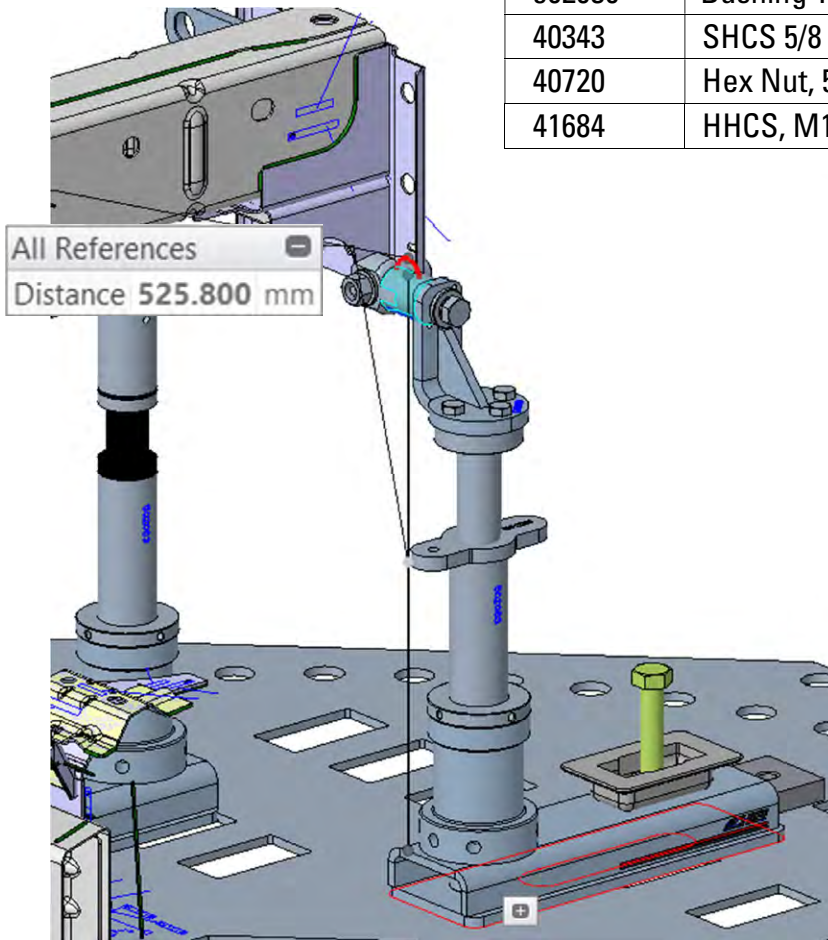


502128	Base
502063	5-3/4" Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
5020051C	Double Horz Fixture
CK120560	Spacer, 28mm
502030	Bushing 16mm
40343	SHCS 5/8 x 2-1/2"
40720	Hex Nut, 5/8"
41684	HHCS, M12 x 30

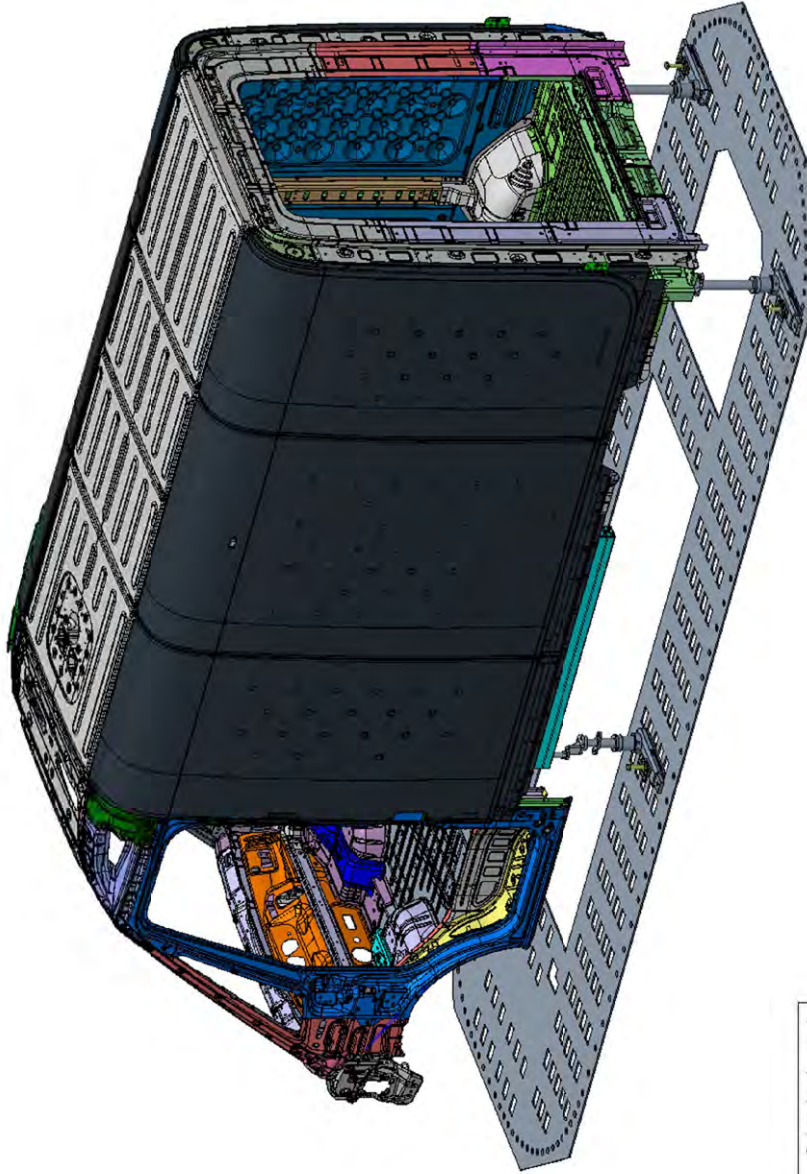


# REAR-RAILS

502128	Base
502063	5-3/4" Tube Base
502039	Threaded Adapter
502019IC	Tall Horz Fixture
502026	Angle Adapter, Short
CK120560	Spacer, 28mm
502030	Bushing 16mm
40343	SHCS 5/8 x 2-1/2"
40720	Hex Nut, 5/8"
41684	HHCS, M12 x 30



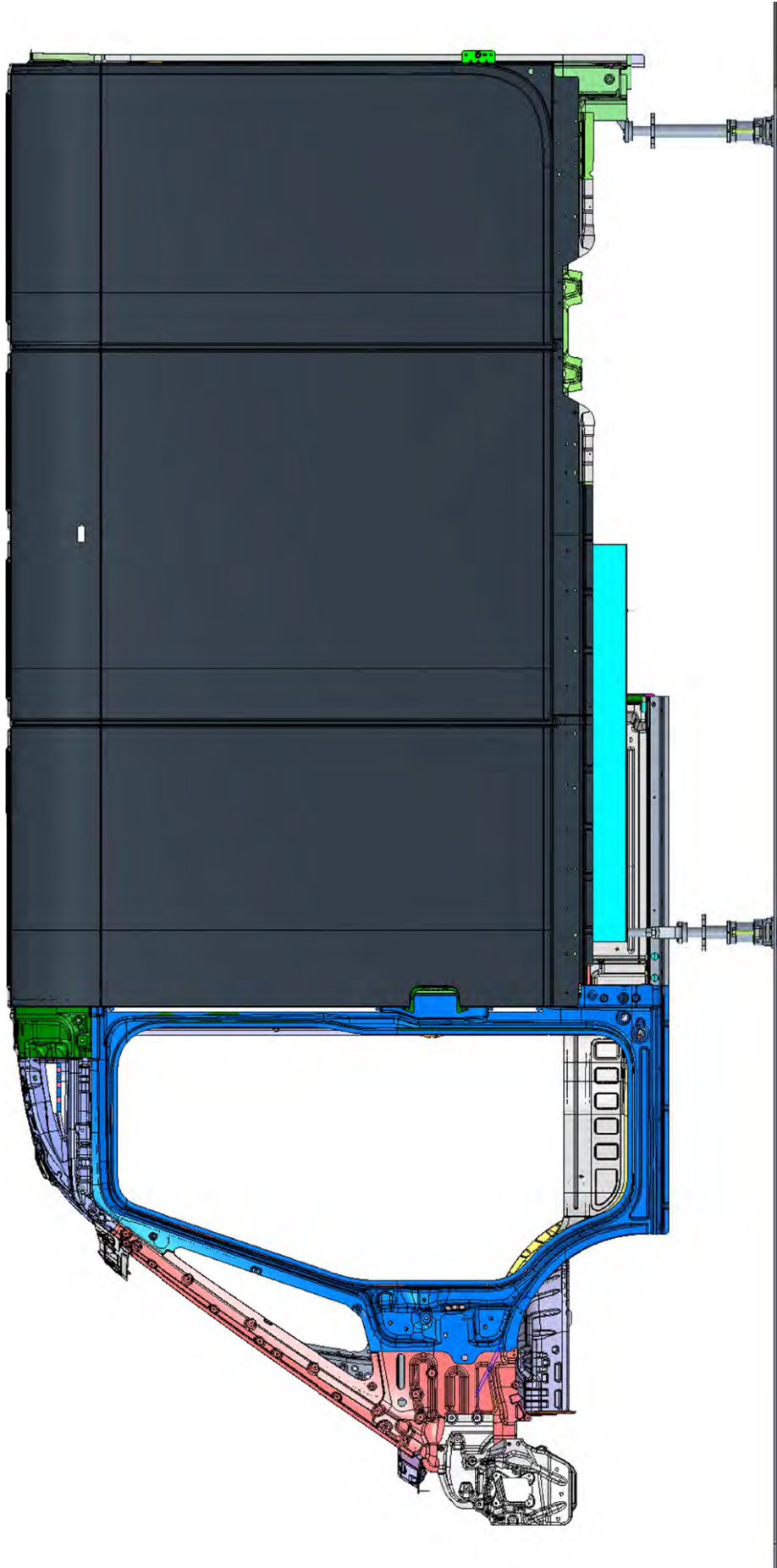


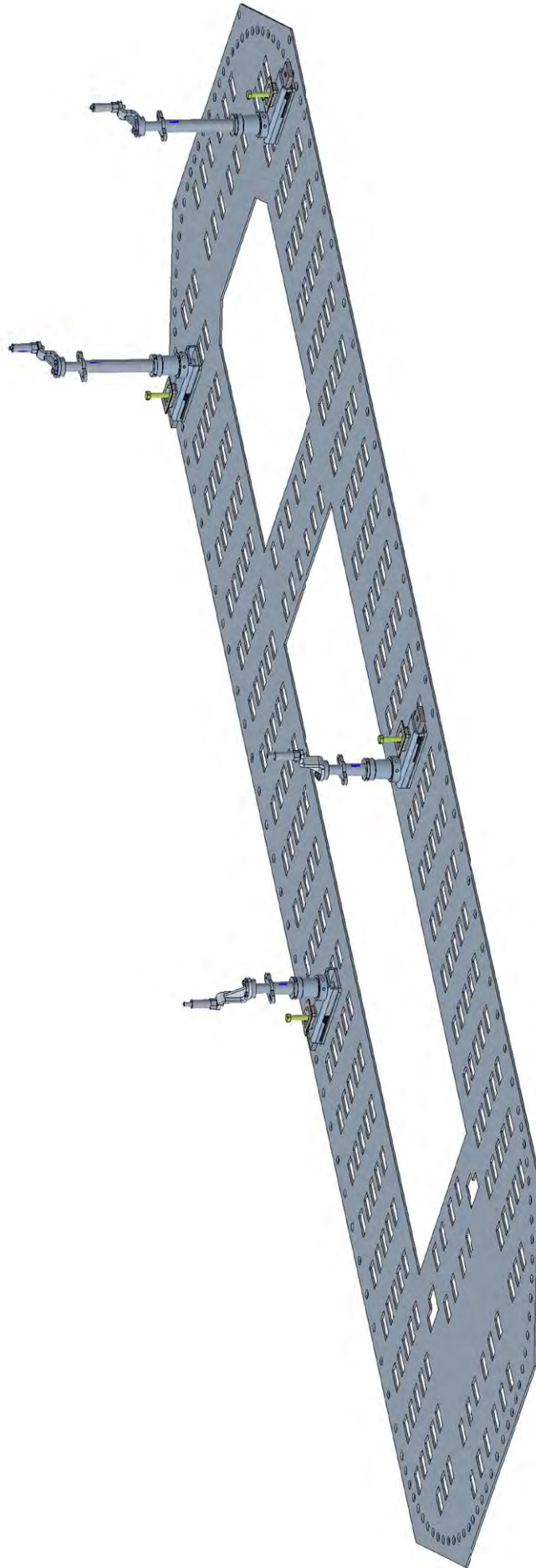


ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
10	CK110301	2	CK110301.ASM	Standoff M19 Slot Lock
9	CK110299	2	CK110299.ASM	Standoff M19 Peg
8	502128	4	502128.asm	Base
7	502082	2	502082.ASM	3-3/4" Tube Base
6	502075	2	502075.ASM	11-1/2" Tube Base
5	502039	4	502039.asm	Threaded Adapter
4	502015	4	502015.prt	Wing Nut
3	502008	2	502008.ASM	Tall Vert Fixture
2	502000	2	502000.ASM	Short Vert Fixture
1	41684	12	41684.prt	M12 x 30 HHCS

<b>Chief Automotive</b>			
TITLE			
mech_out_top_underside.drw			
SIZE	CAGE CODE	DWG NO	REV
<b>B</b>		<b>Mech Out Tophat U/side</b>	
			<b>EDV500</b>
SCALE: 0.045	UNIT WT: (.2J)	SHEET 1 OF 1	

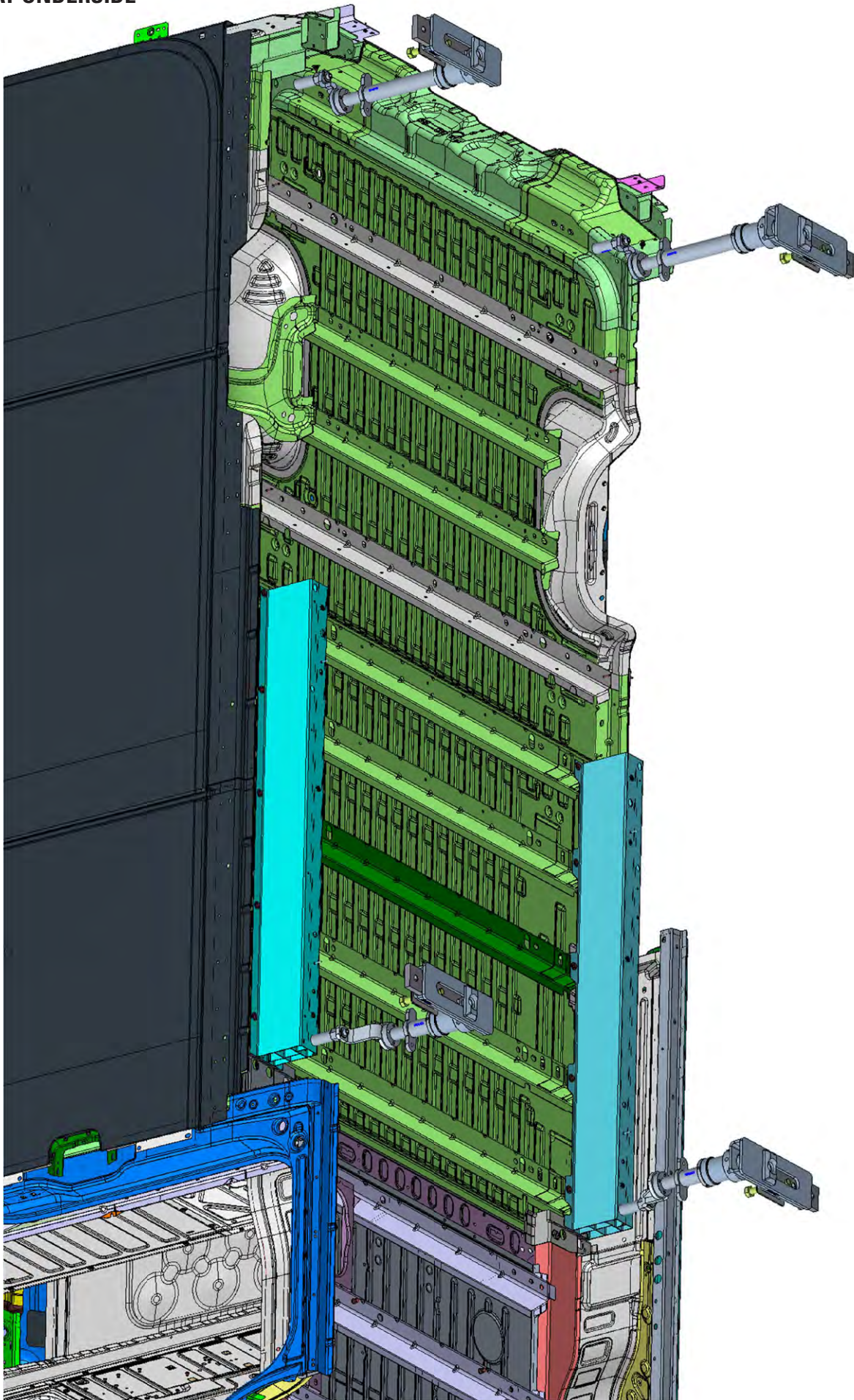
TOP HAT-UNDERSIDE



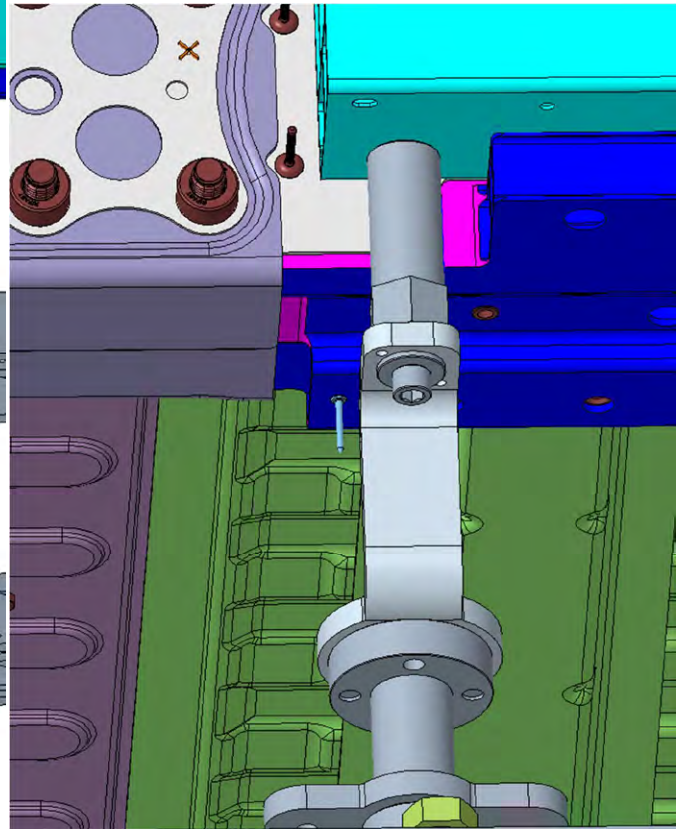
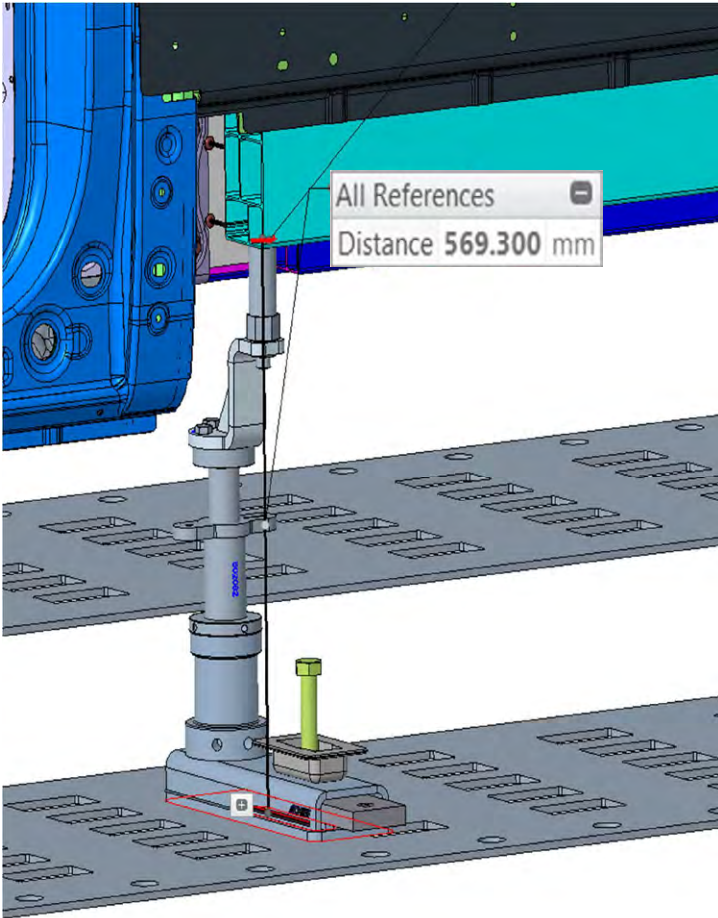




TOP HAT-UNDERSIDE

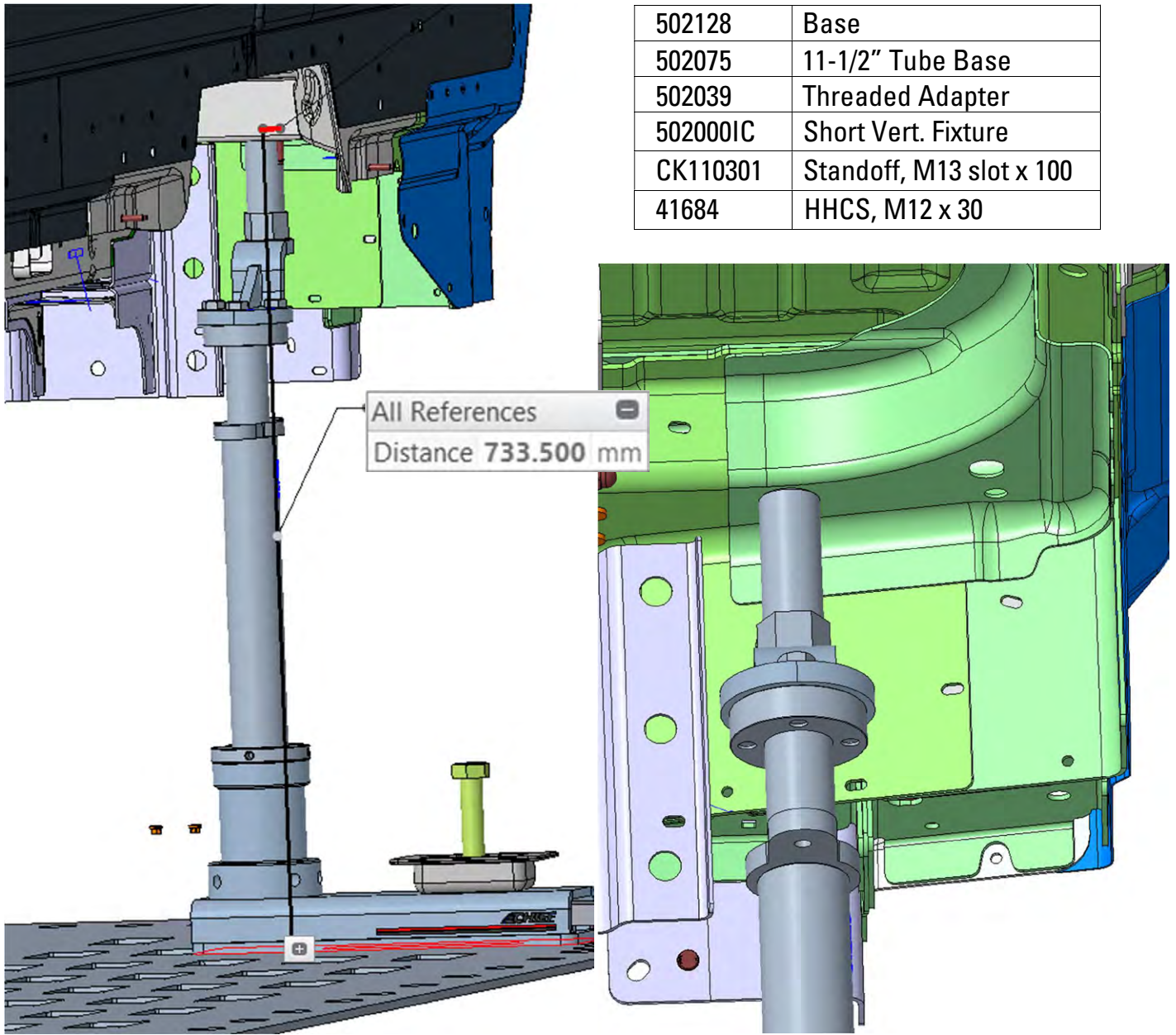


502128	Base
502082	3-3/4" Tube Base
502039	Threaded Adapter
5020081C	Tall Vert. Fixture
CK110299	Standoff, M19 x 30
41684	HHCS, M12 x 30





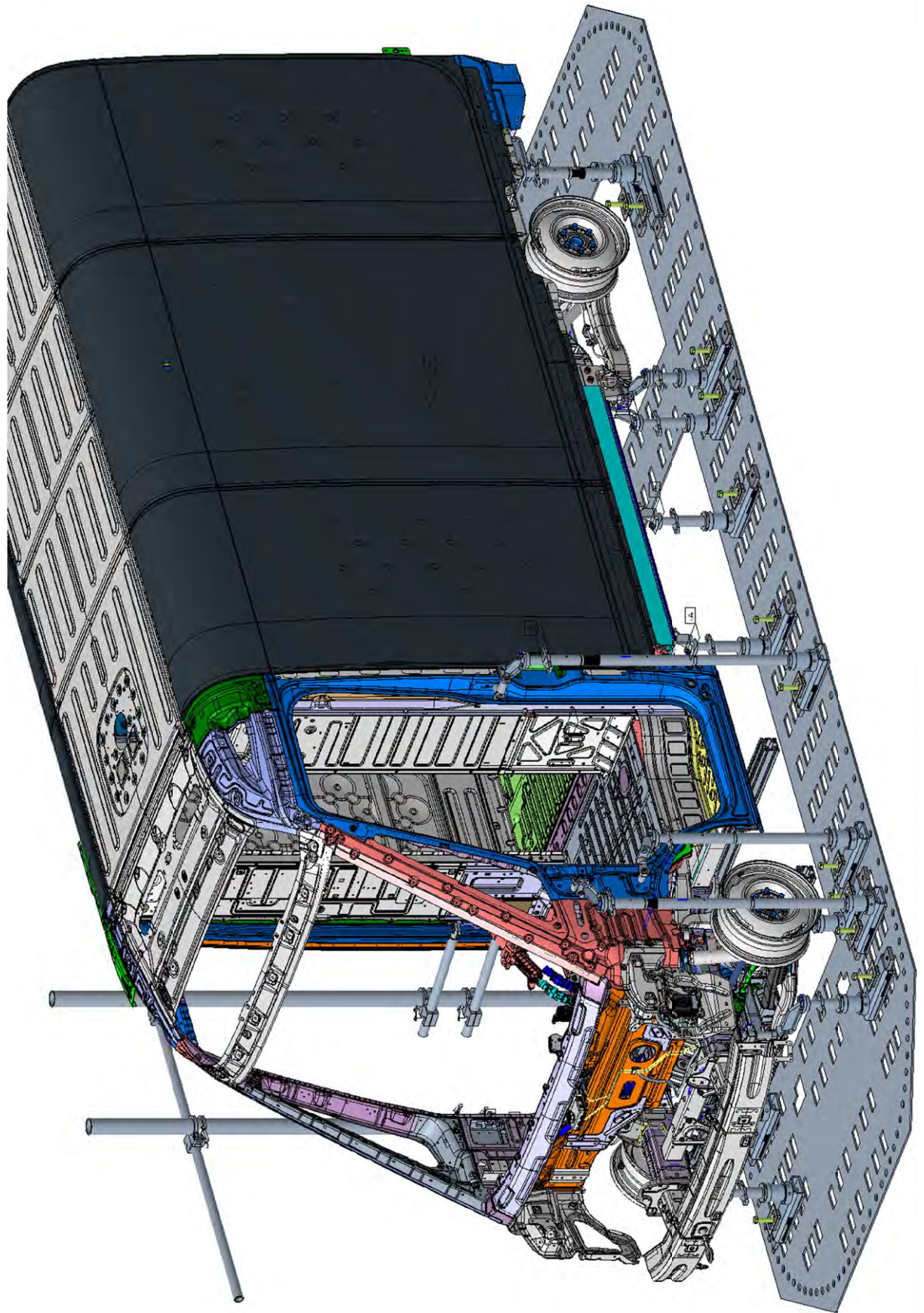
# TOP HAT-UNDERSIDE



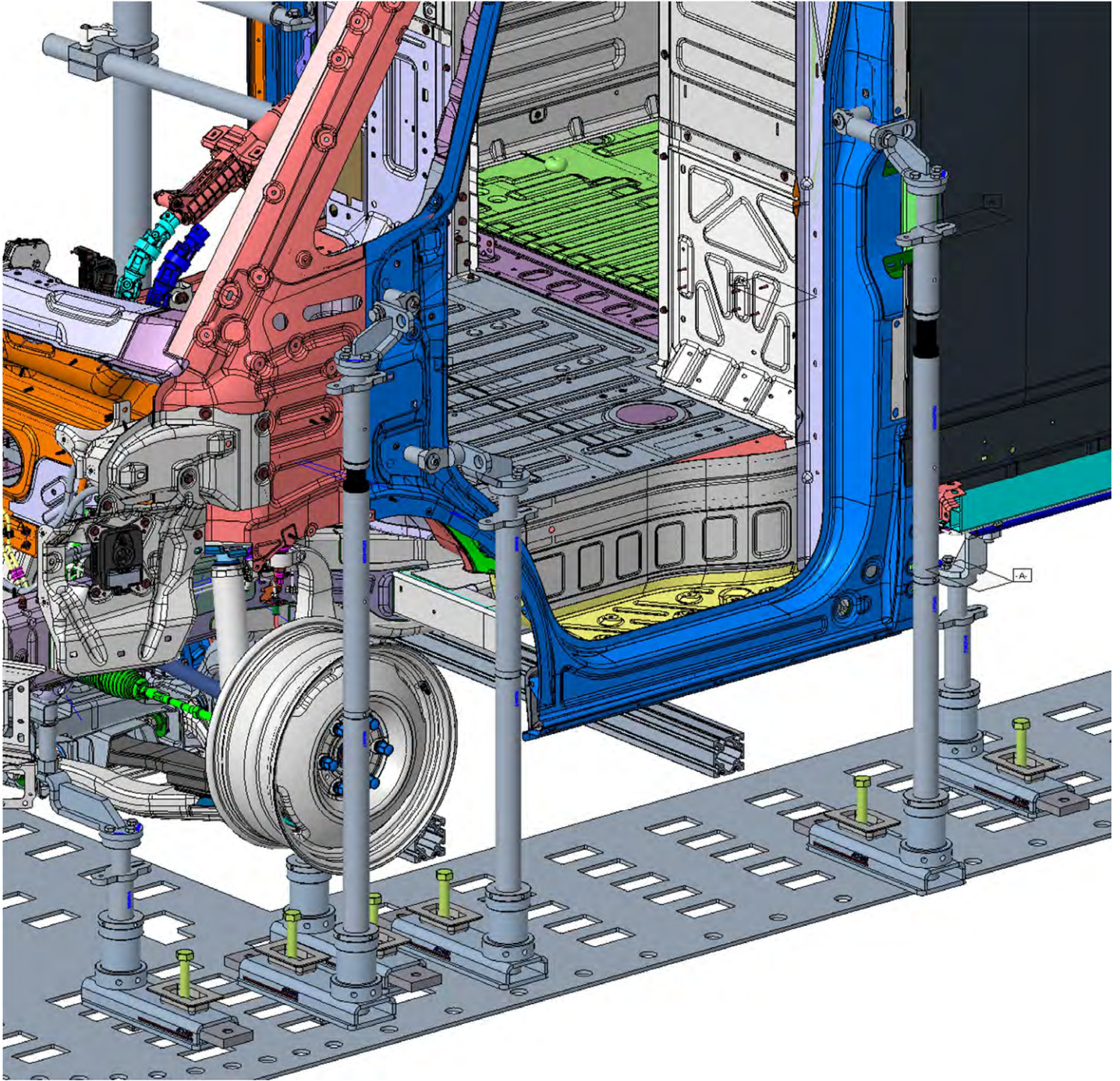
502128	Base
502075	11-1/2" Tube Base
502039	Threaded Adapter
502000IC	Short Vert. Fixture
CK110301	Standoff, M13 slot x 100
41684	HHCS, M12 x 30





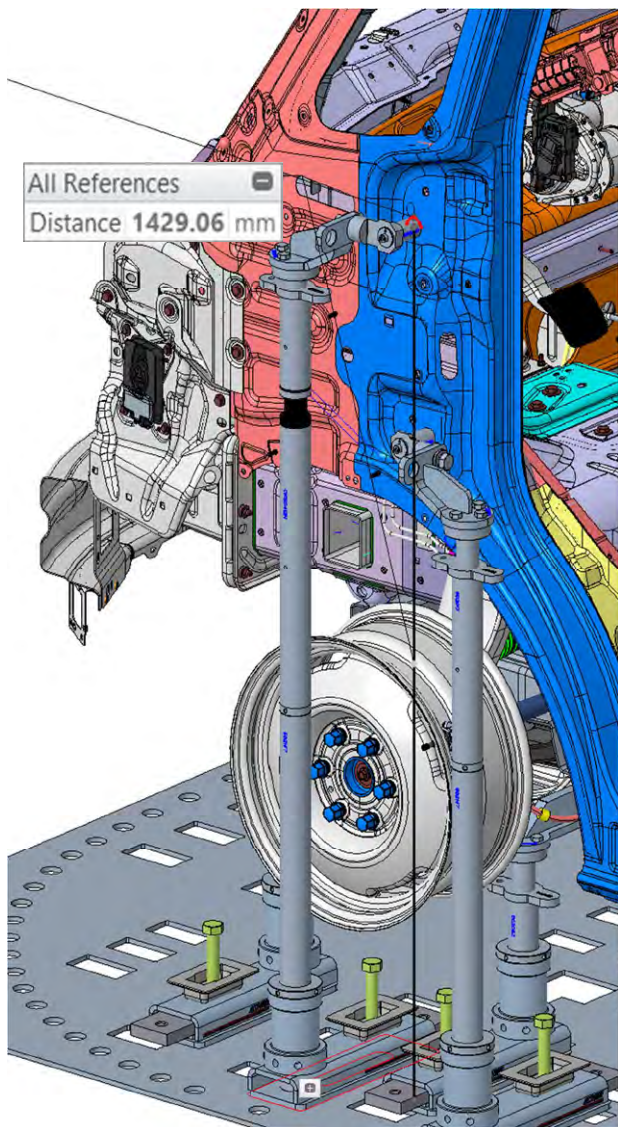




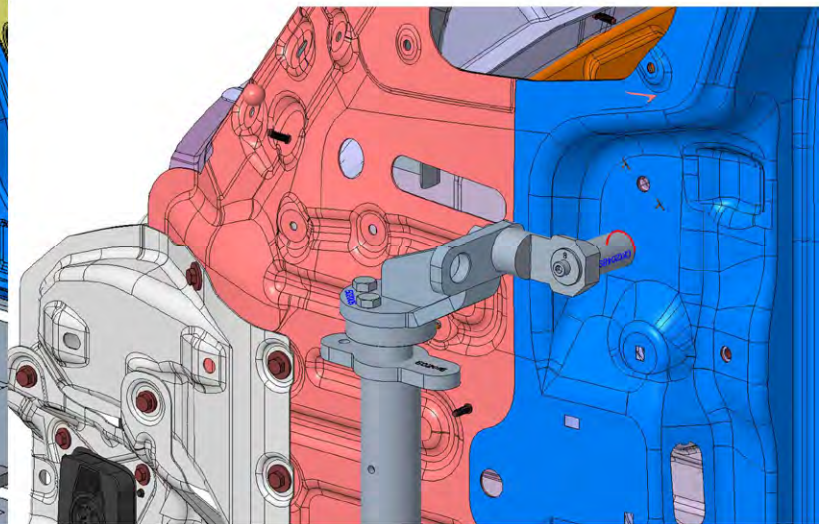


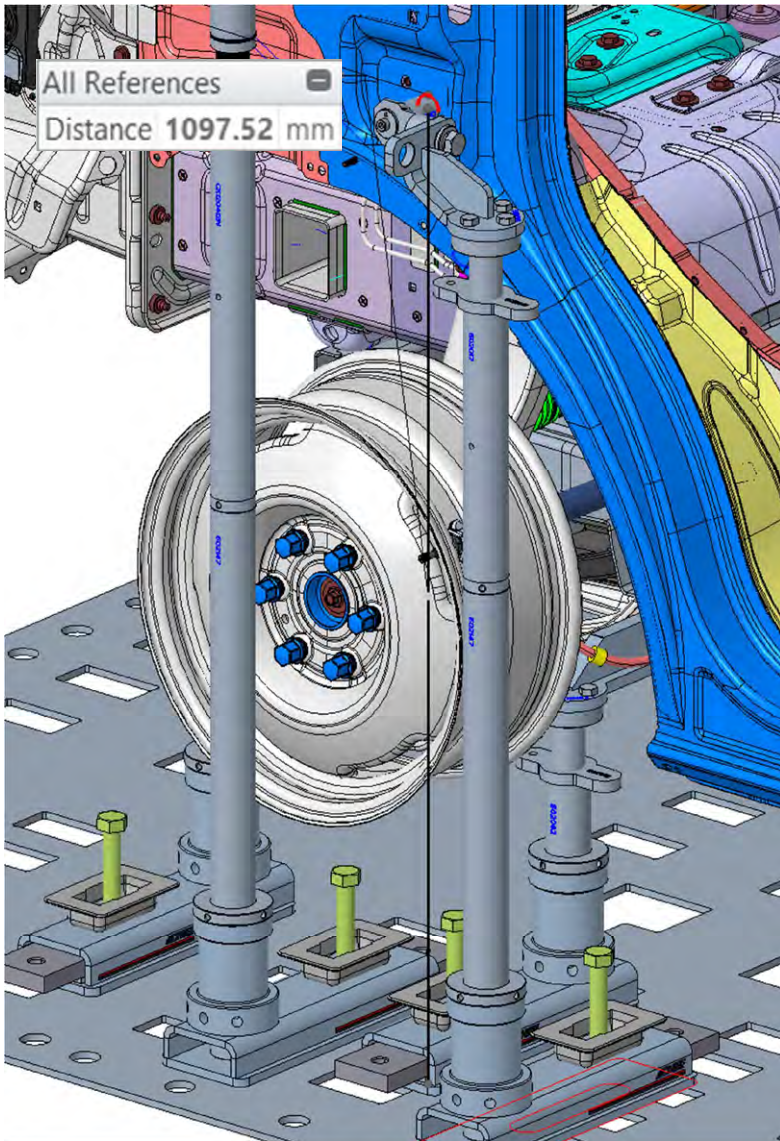


# PILLARS

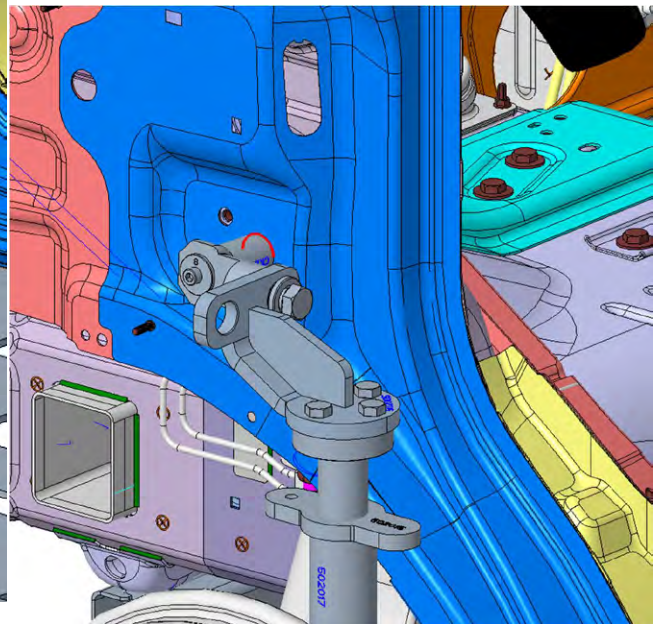


502128	Base
502147	18" Tube Base
502032	Adapter Extension
CK120413	Extension Tube, 18"
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502005IC	Double Horz Fixture
502026	Angle Adapter, Short
CK120489	Spacer, 2"
502086	Bushing 8mm
CK130522	SHCS M8 x 85
41684	HHCS, M12 x 30



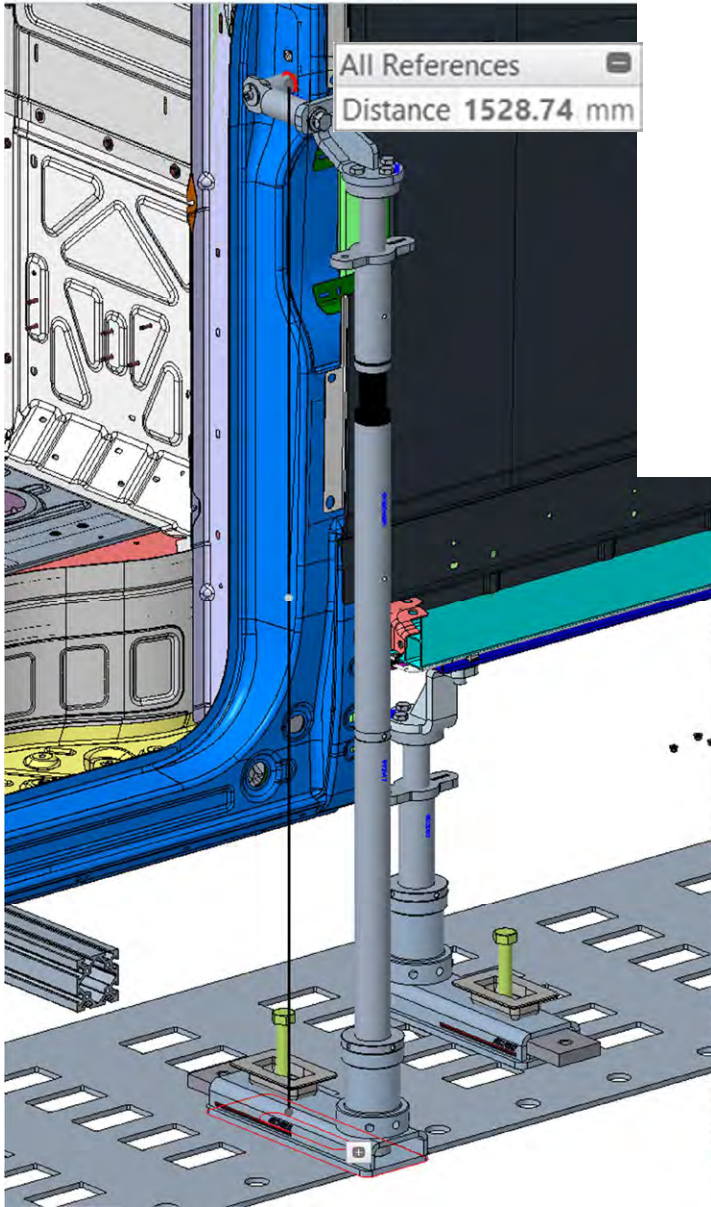


502128	Base
502147	18" Tube Base
502032	Adapter Extension
502017	Extension Tube, 12"
502039	Threaded Adapter
5020051C	Double Horz Fixture
502026	Angle Adapter, Short
CK120489	Spacer, 2"
502086	Bushing 8mm
CK130522	SHCS M8 x 85
41684	HHCS, M12 x 30

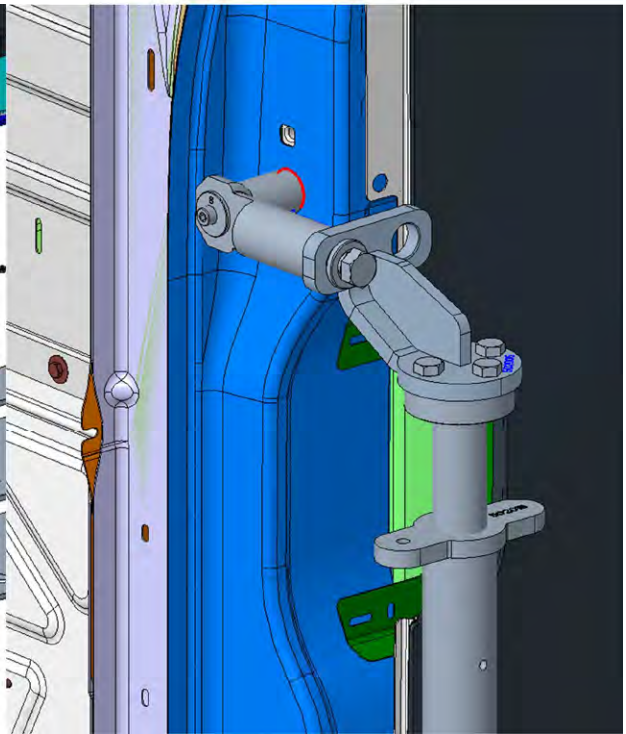




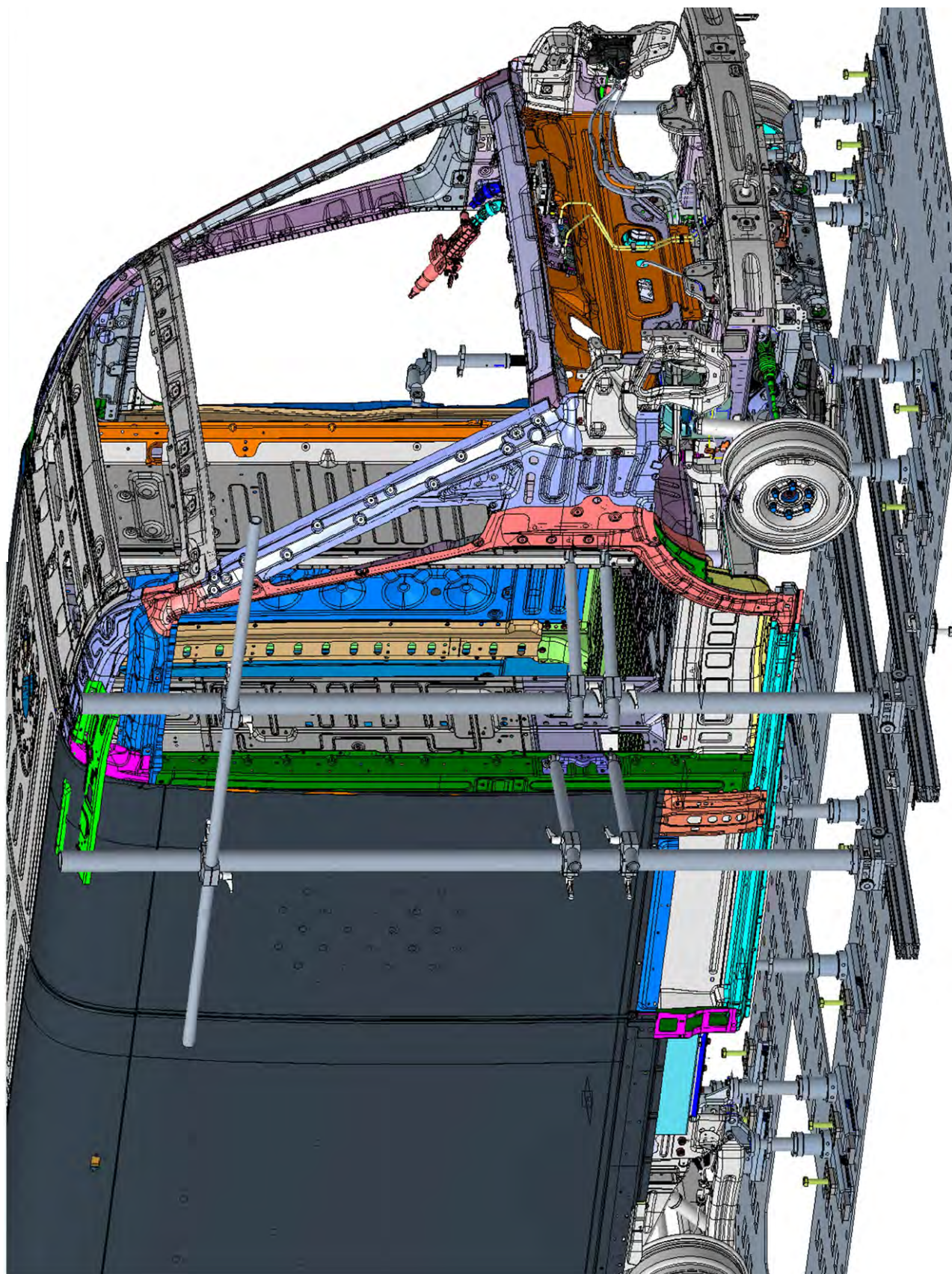
# PILLARS



502128	Base
502147	18" Tube Base
502032	Adapter Extension
CK120413	Extension Tube, 18"
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502005IC	Double Horz Fixture
CK110282	Angle Adapter, Long
CK120521	Spacer, 2" Round Set
502086	Bushing 8mm
CK130522	SHCS M8 x 85
41684	HHCS, M12 x 30



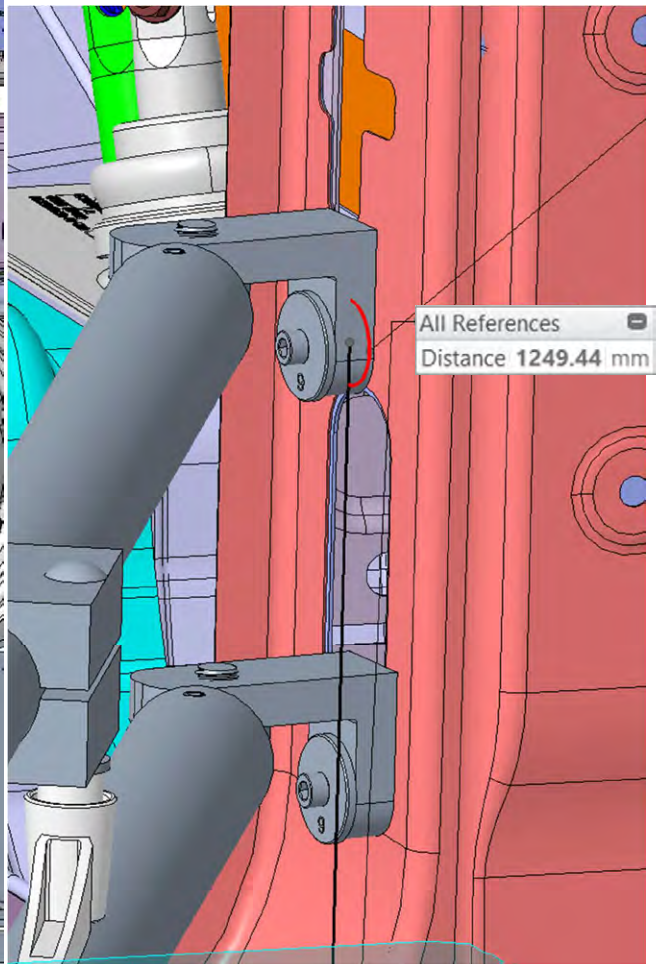
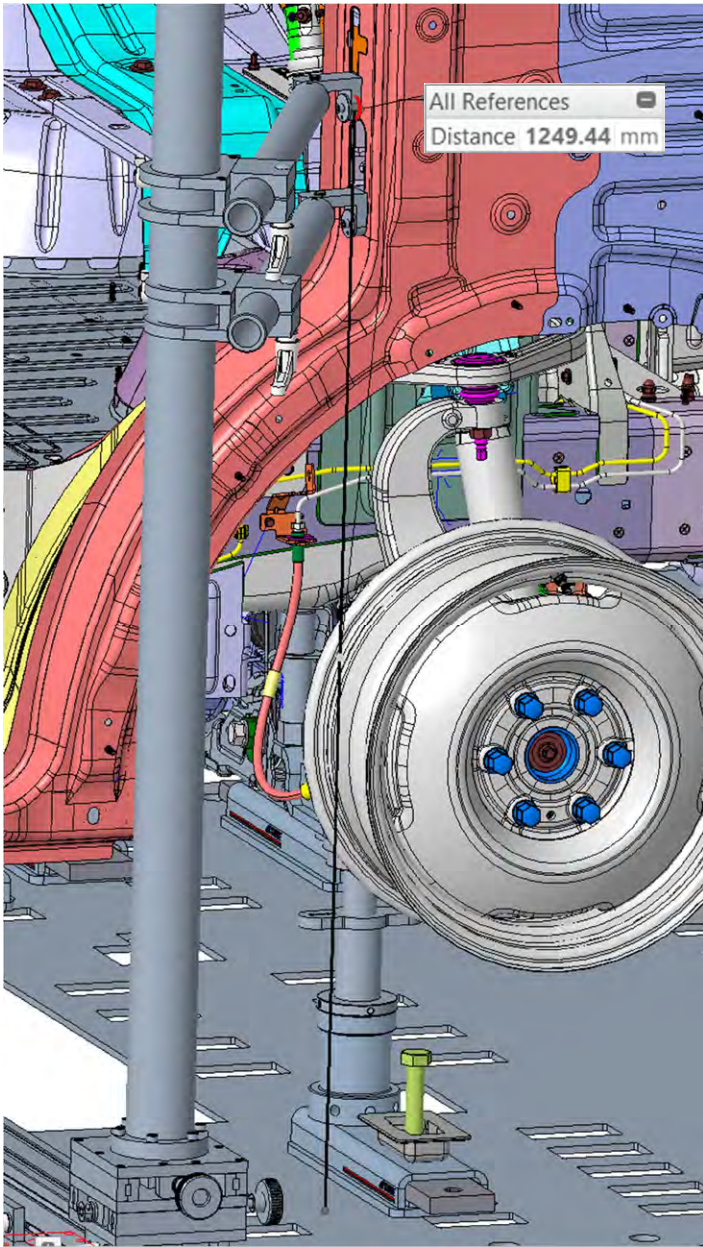


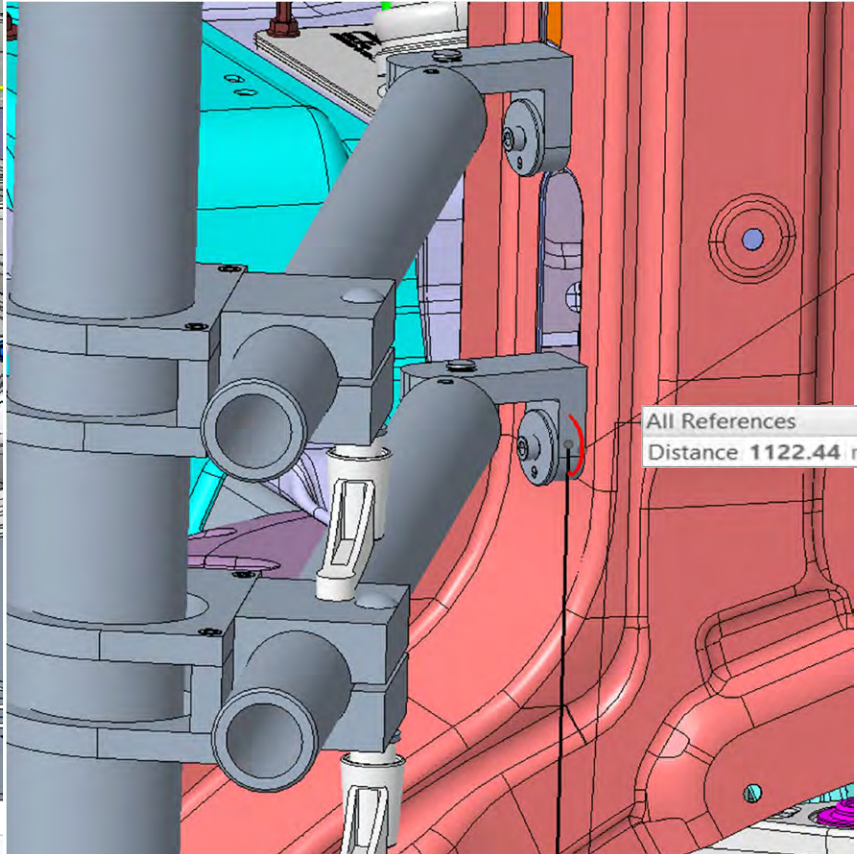
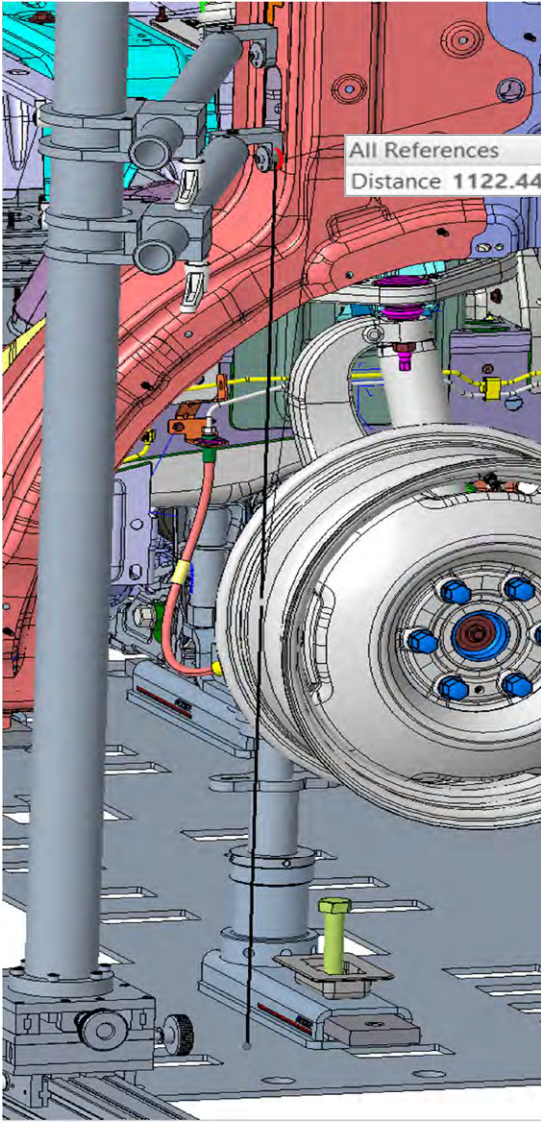




**PILLARS**

638061	Base Rail
638131	Hold Down Bracket
638099	Positioning Base
CK140123	Mast Tower, 112mm
638108	Mast Clamp
638142	Boom Assm
019095	Washer, 1/2"
010625	HHCS, 1/2" x 1-1/4"
CK120491	Wrist Block
502165	Bushing 6mm
CK130058	SHCS, M6 x 25
638079	Overhead beam

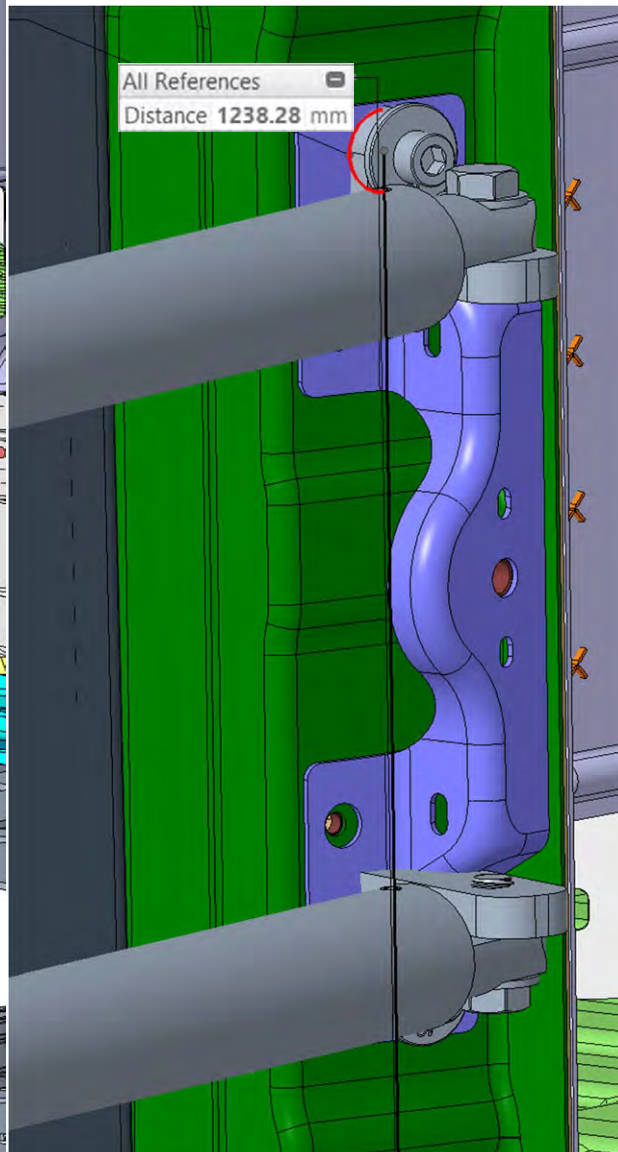
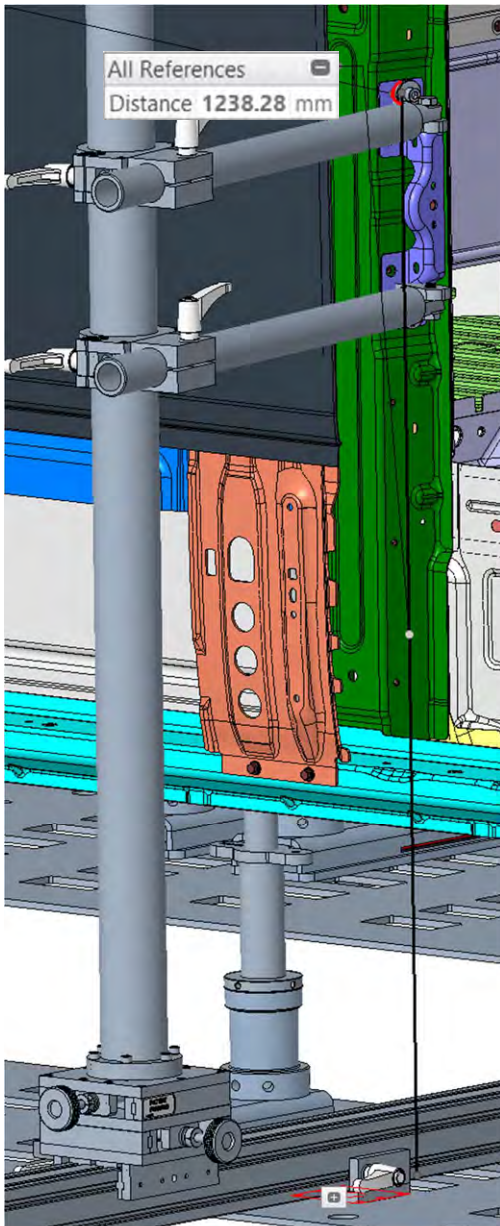


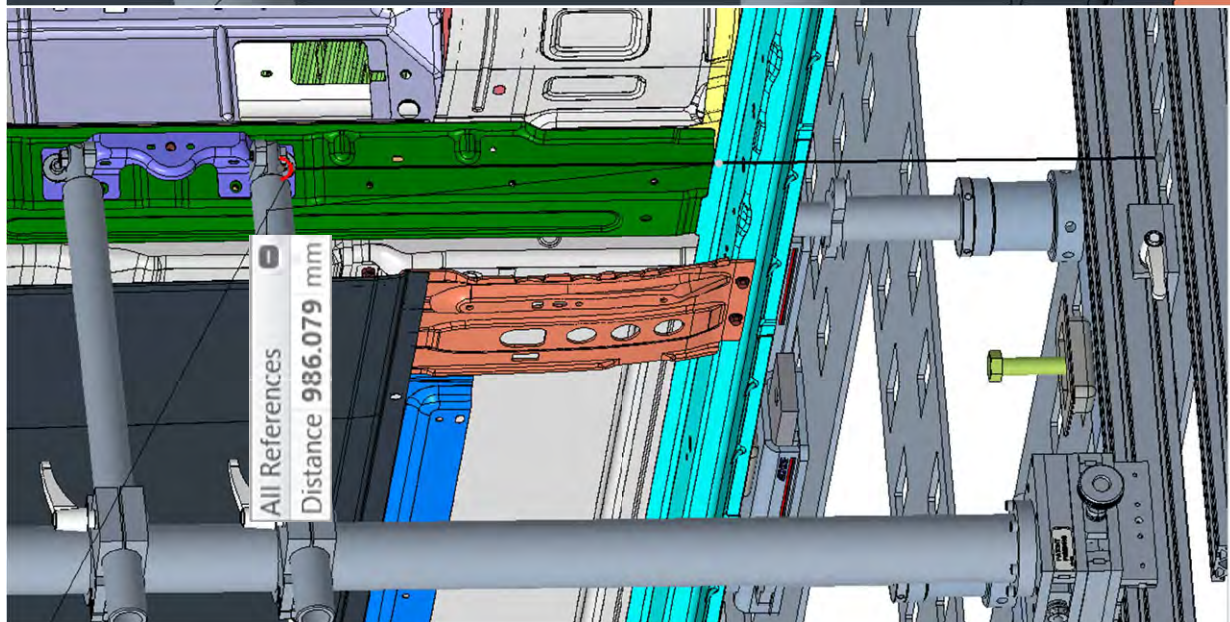
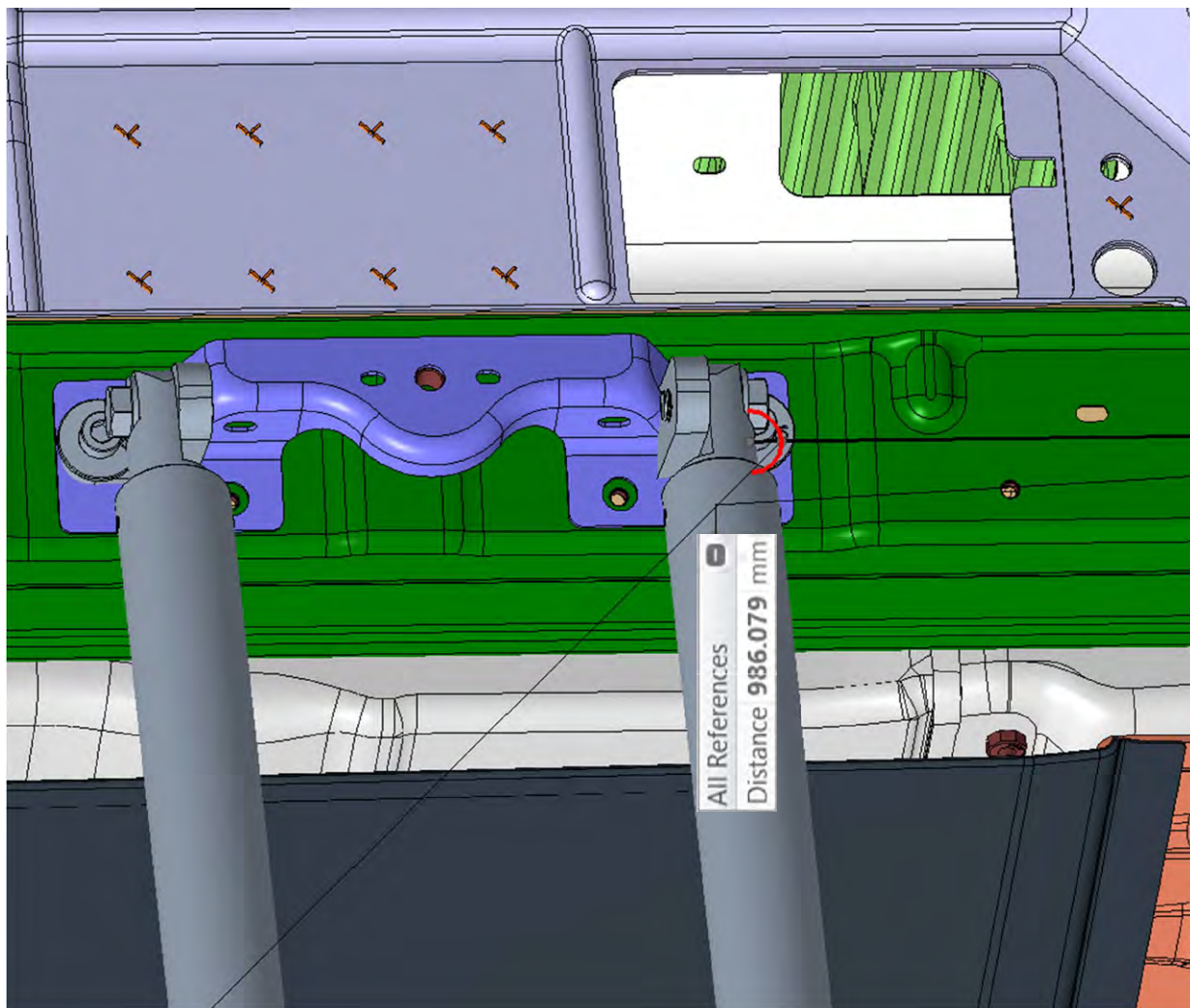




# PILLARS

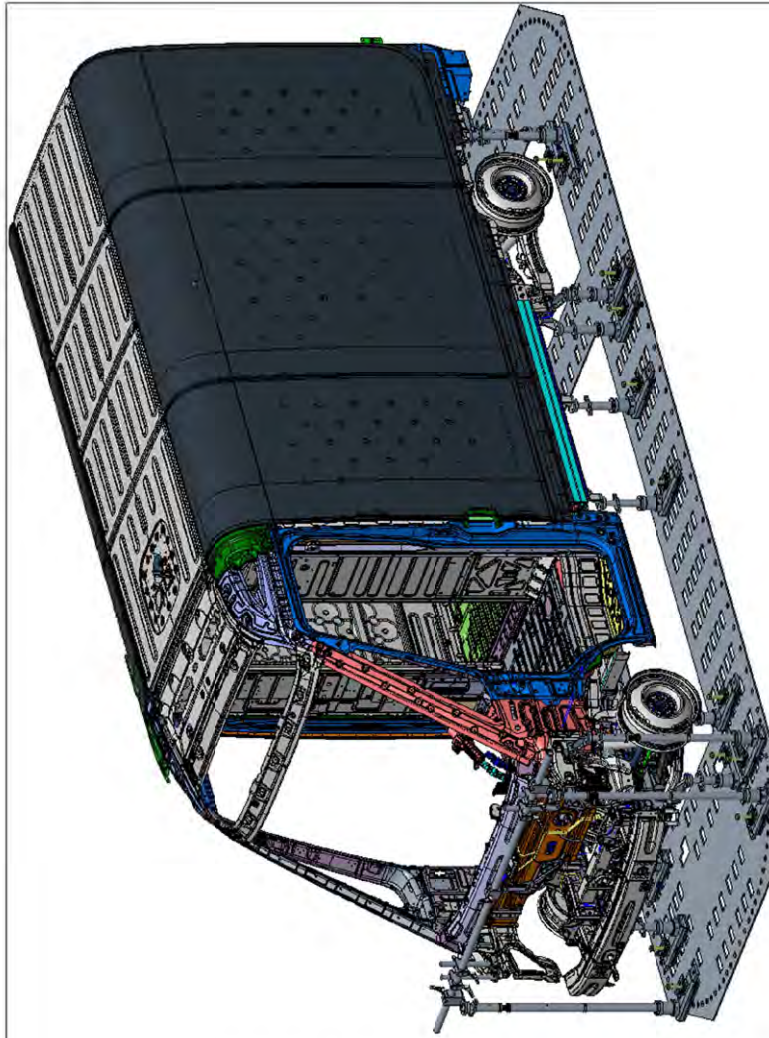
638061	Base Rail
638131	Hold Down Bracket
638099	Positioning Base
CK140123	Mast Tower, 112mm
638108	Mast Clamp
638142	Boom Assm
019095	Washer, 1/2"
010625	HHCS, 1/2" x 1-1/4"
CK120491	Wrist Block
502027	Bushing 10mm
CK130060	SHCS, M10 x 35
638079	Overhead beam







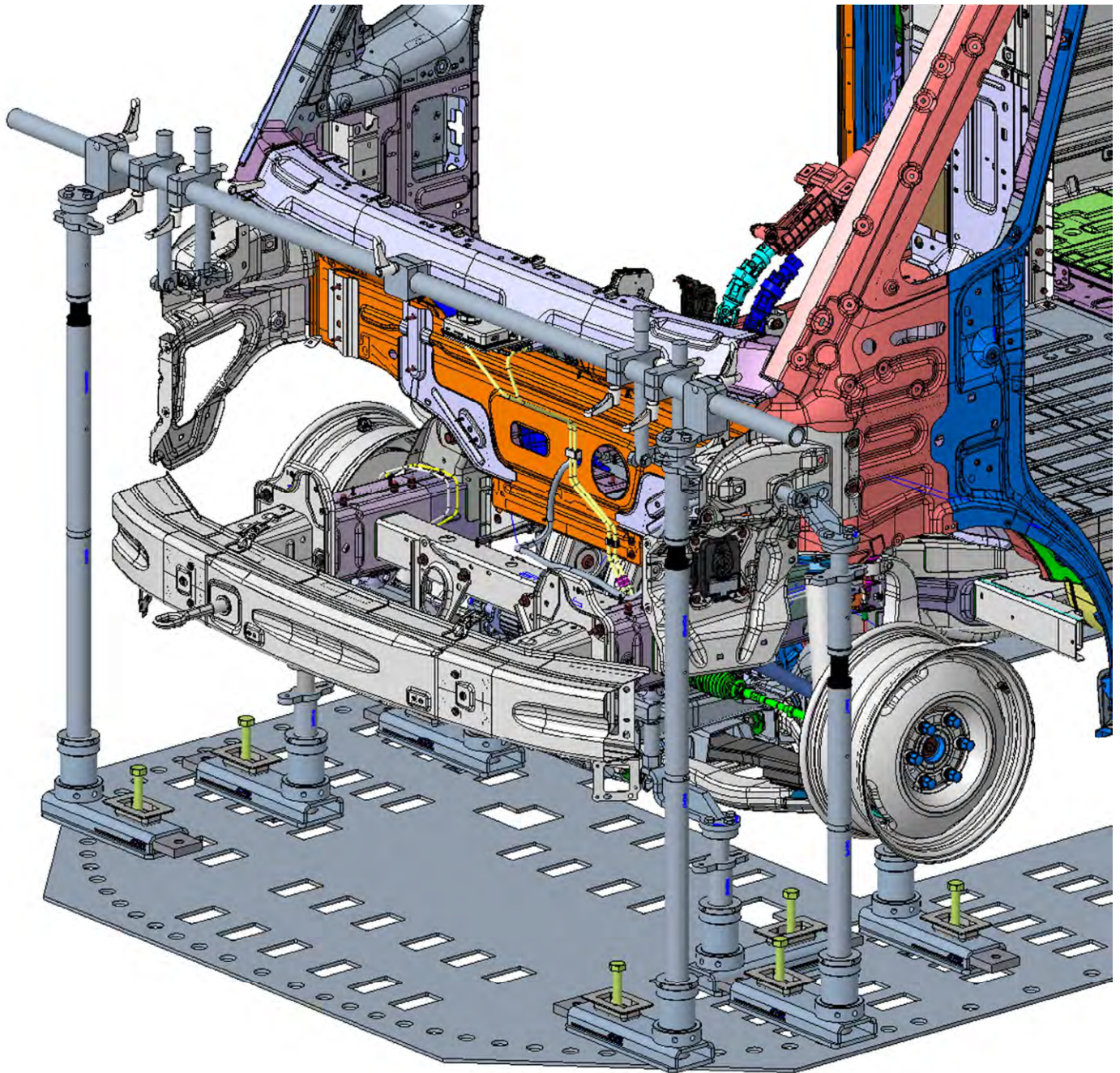
# FRONT DASH MOUNT



ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
37	CKI30535	2	CKI30535.PRT	M12 x 240 SHCS
36	CKI30534	8	CKI30534.PRT	M12 x 75 SHCS
35	CKI30532	2	CKI30532.PRT	M16 x 120 SHCS
34	CKI30522	1	CKI30522.PRT	M8 x 85 SHCS
33	CKI30061	4	CKI30061.PRT	M8 x 35 SHCS
32	CKI20519	2	CKI20519.PRT	Spacer 39.5mm
31	CKI20491	4	CKI20491.PRT	Wrist Block
30	CKI20489	1	CKI20489.PRT	Spacer, 2"
29	CKI20422	1	CKI20422.PRT	Overhead Beam
28	CKI20413	2	CKI20413.PRT	Extension Tube 18"
27	CKI10297	4	CKI10297.ASM	Standoff M16 x 100
26	CKI10244	1	CKI10244.ASM	Center Boom Clamp
25	CKI10243	1	CKI10243.ASM	Overhead Beam Assm
24	CKI10231	2	CKI10231.ASM	Boom Clamp End
23	CKI10123	6	CKI10123.ASM	Extended Fixture
22	CKI10090	4	CKI10090.ASM	Overhead Arm
21	638068	4	638068.ASM	Overhead Boom Clamp
20	601738	2	601738.PRT	Washer, 3/4"
19	502147	2	502147.ASM	18" Tube Base
18	502128	19	502128.ASM	Base
17	502086	5	502086.PRT	Bushing 8mm
16	502082	6	502082.ASM	3-3/4" Tube Base
15	502075	1	502075.ASM	11-1/2" Tube Base
14	502063	8	502063.ASM	5-3/4" Tube Base
13	502055	2	502055.ASM	Short Tube Base
12	502039	19	502039.ASM	Threaded Adapter
11	502034	7	502034.PRT	Turn Buckle
10	502033	7	502033.PRT	LH Adapter Screw
9	502032	3	502032.PRT	Extension
8	502030	2	502030.PRT	Bushing 16mm
7	502028	10	502028.PRT	Bushing 12mm
6	502017	1	502017.PRT	12" Extension Tube
5	502015	19	502015.PRT	Wing Nut
4	502008	8	502008.ASM	Tall Vert Fixture
3	502005	3	502005.ASM	Double Horz Fixture
2	41684	51	41684.PRT	M12 x 30mm HHCS
1	41590	2	41590.PRT	M16 Hex Nut

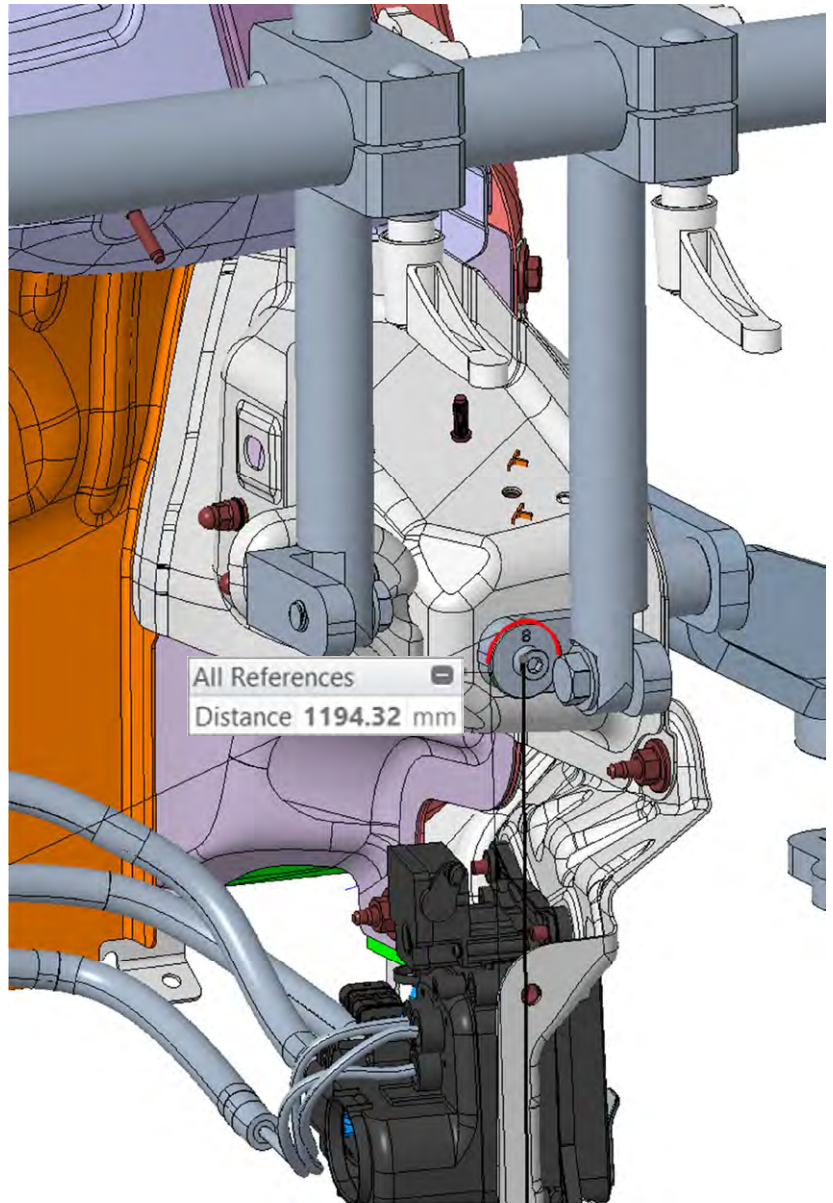
Chief Automotive	
TITLE	
mech_in_wiper_mount.drw	
SIZE	DWG NO
B	Mech In Wiper Mount
CAGE CODE	REV
	EDV500
SCALE: 0.040	UNIT WT: (.2J)
	SHEET 1 OF 1



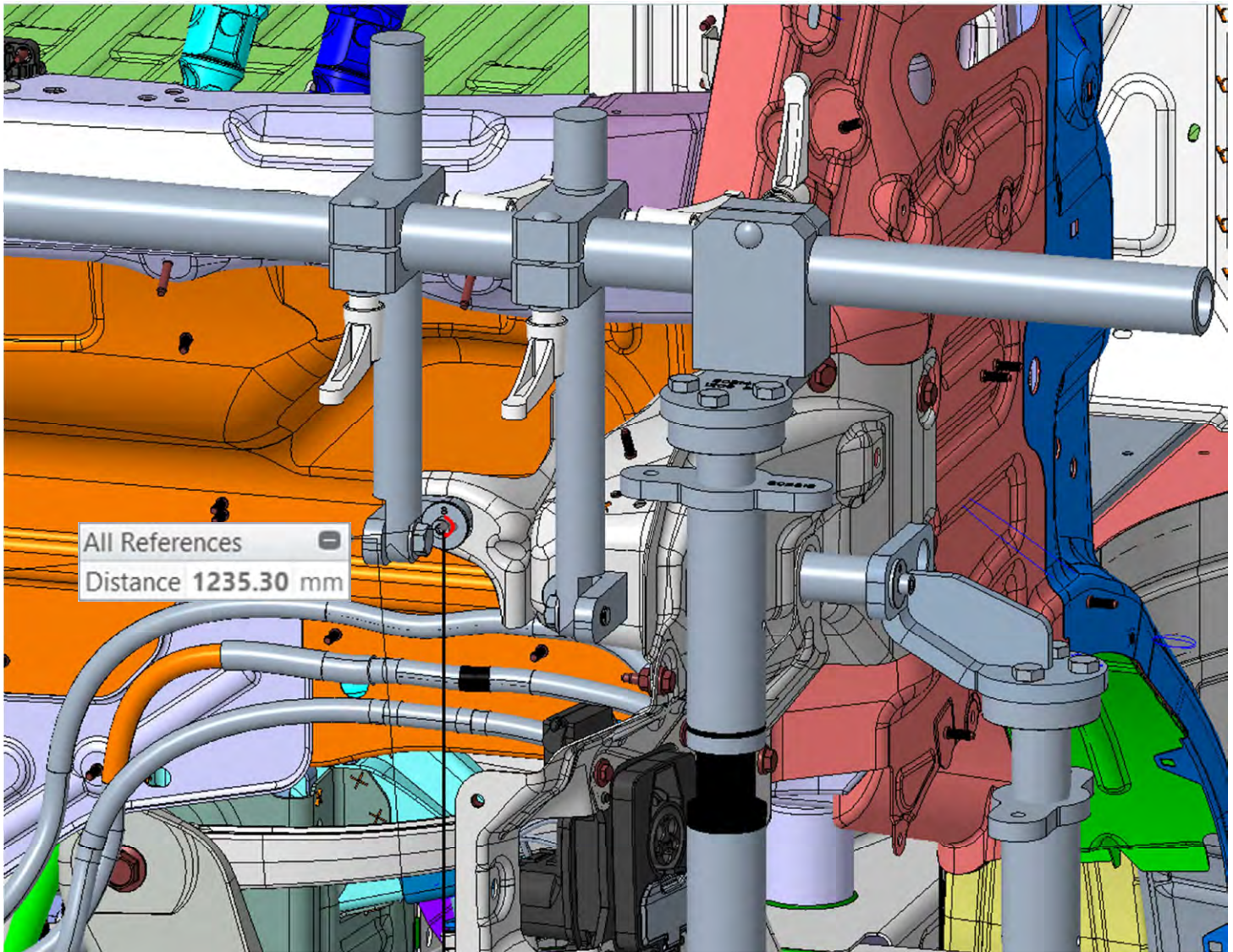


## FRONT DASH MOUNT

502128	Base
502147	18" Tube Base
502032	Extension Adapter
CK120413	18" Extension Tube
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
CK110231	Boom Clamp, Ends
CK120422	Overhead beam
CK110243	Overhead beam Assm
CK110244	Center Boom Clamp
638068	Overhead boom clamp
CK110090	Overhead arm
CK120491	Wrist Block
502086	Bushing 8mm
CK130061	SHCS M8 x 35
41684	HHCS, M12 x 30

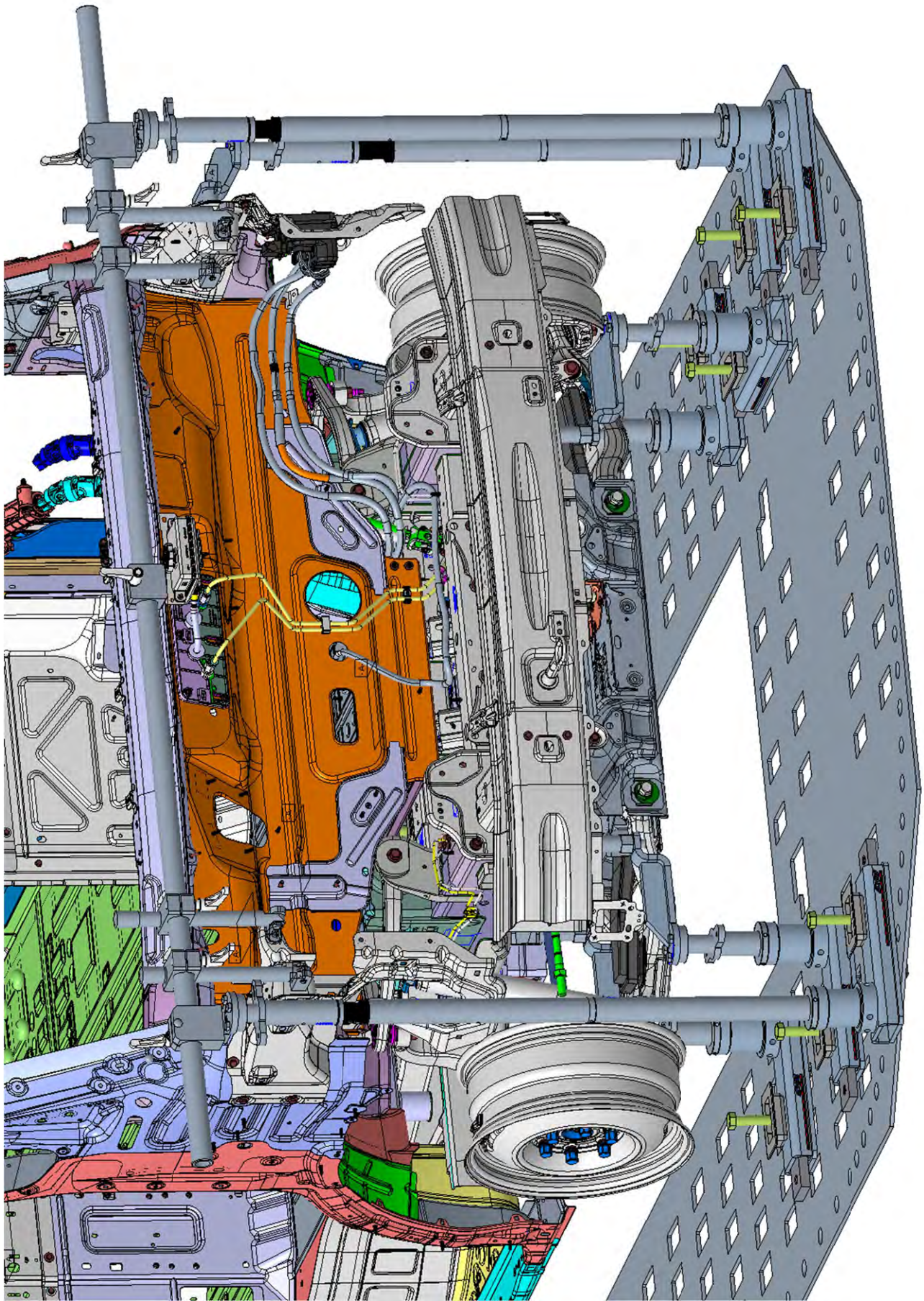




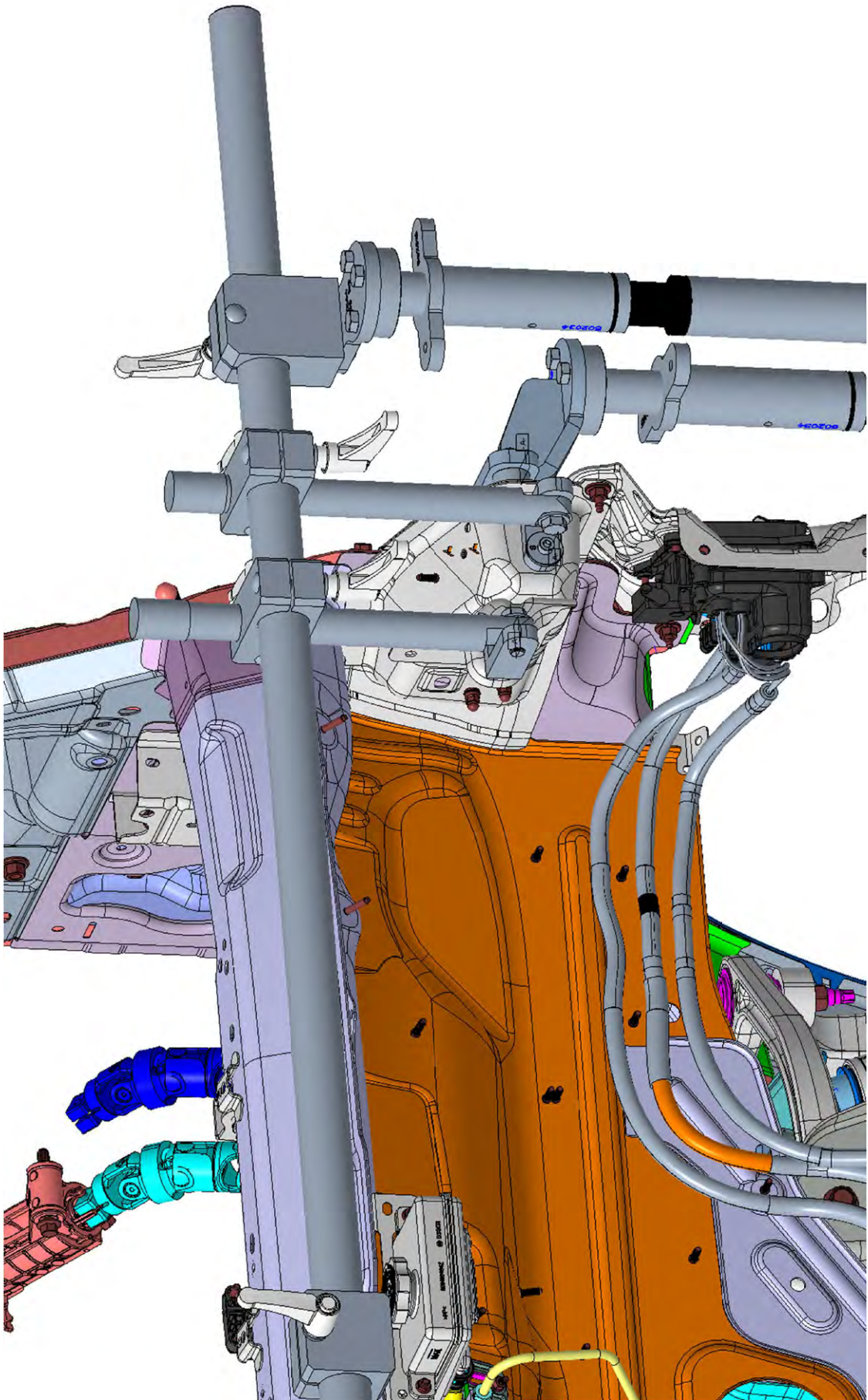




# FRONT DASH MOUNT

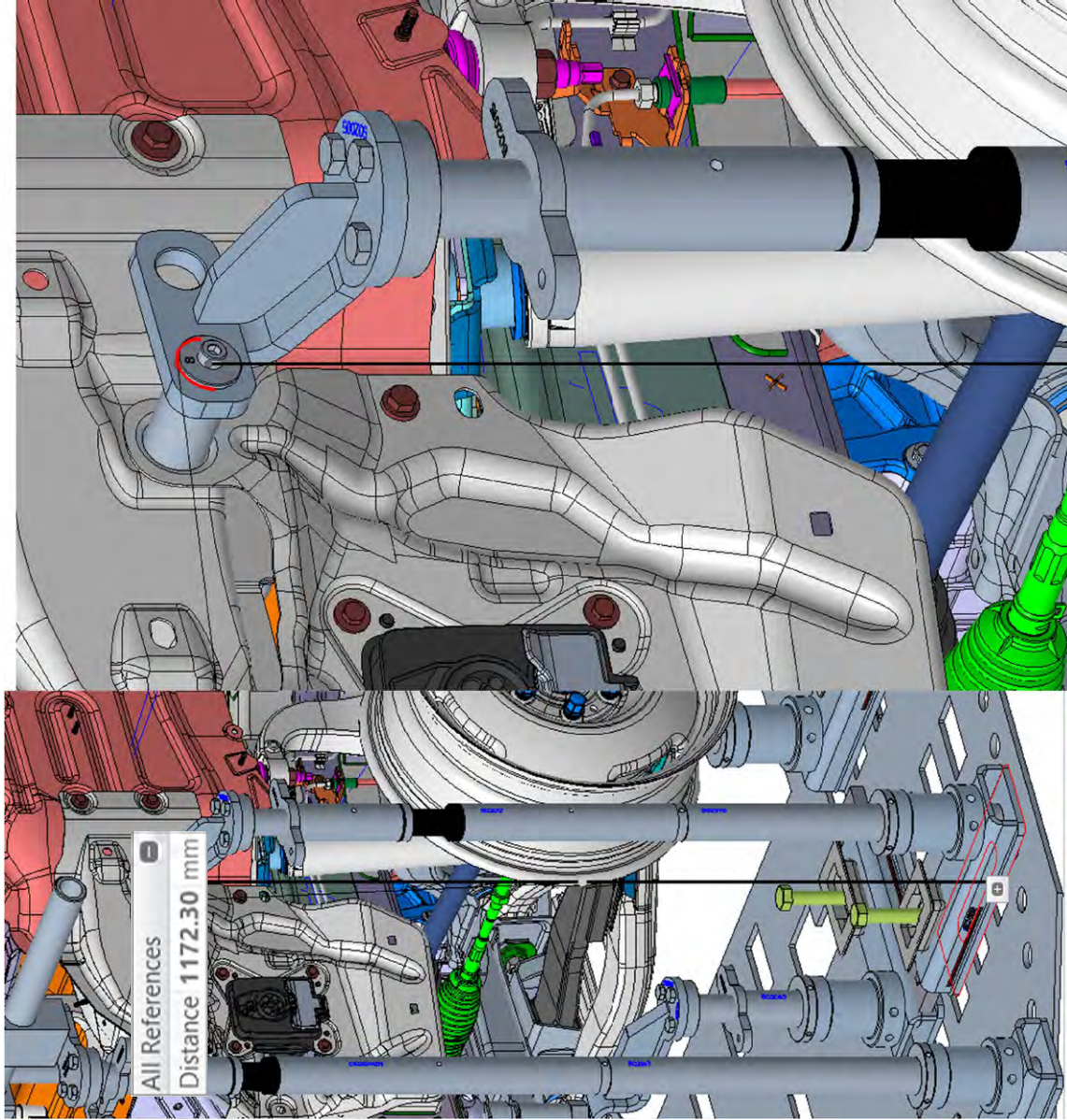






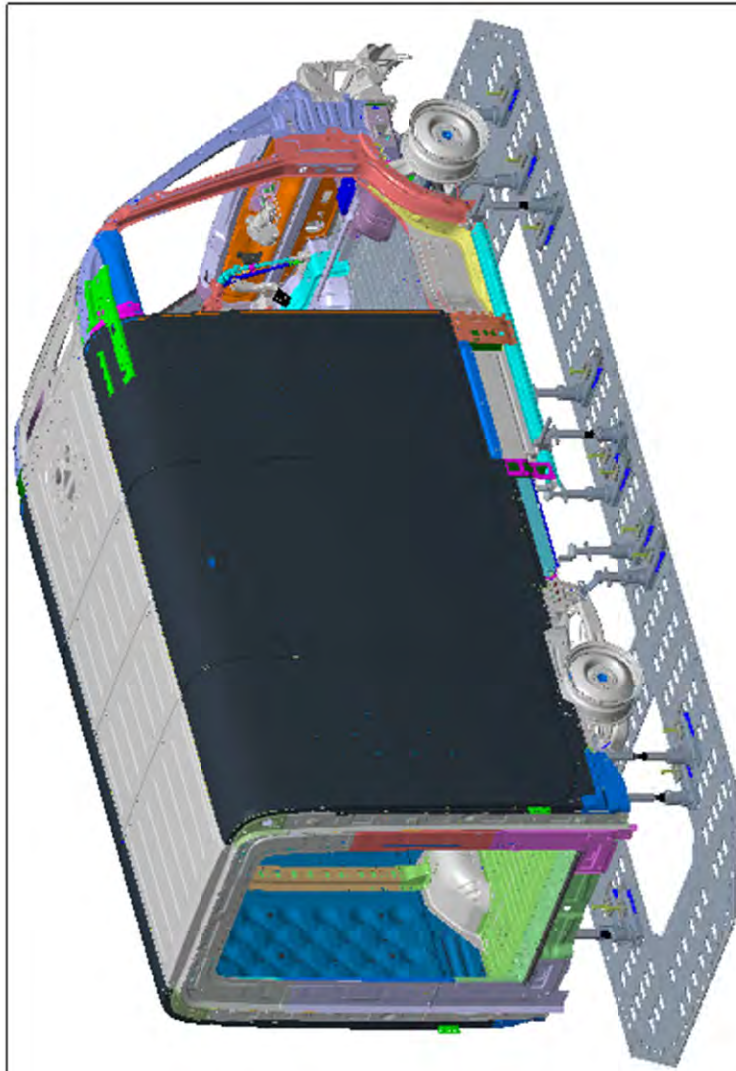


# FRONT DASH MOUNT



502128	Base
502075	11-1/2" Tube Base
502032	Extension Adapter
502017	12" Extension Tube
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502005IC	Double Horz Fixture
CK120489	Spacer, 2"
502086	Bushing, 8mm
CK130522	SHCS, M8 x 85
41684	HHCS, M12 x 30





ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
26	CKI30535	2	M12 x 240 SHCS	
25	CKI30534	8	M12 x 75 SHCS	
24	CKI30532	2	M16 x 120 SHCS	
23	CKI30058	2	M6 x 25 SHCS	
22	CKI20519	2	Spacer, 39, 5mm	
21	CKI20491	2	Wrist Block	
20	CKI10297	4	Standoff M16 x 100	
19	CKI10123	6	Extended Fixture	
18	CKI10090	2	Overhead Arm	
17	601738	2	Washer, 3/4"	
16	502165	2	Bushing 6mm	
15	502143	2	Pillar Clamp	
14	502128	18	Base	
13	502082	6	3-3/4" Tube Base	
12	502063	8	5-3/4" Tube Base	
11	502055	4	Short Tube Base	
10	502039	18	Threaded Adapter	
9	502034	6	Turn Buckle	
8	502033	6	LH Adapter Screw	
7	502030	2	Bushing 16mm	
6	502028	10	Bushing 12mm	
5	502015	18	Wing Nut	
4	502008	8	Vert Tall Fixture	
3	502005	2	Double Horz Fixture	
2	41684	48	M12 x 30 HHCS	
1	41590	2	M16 Hex Nut	

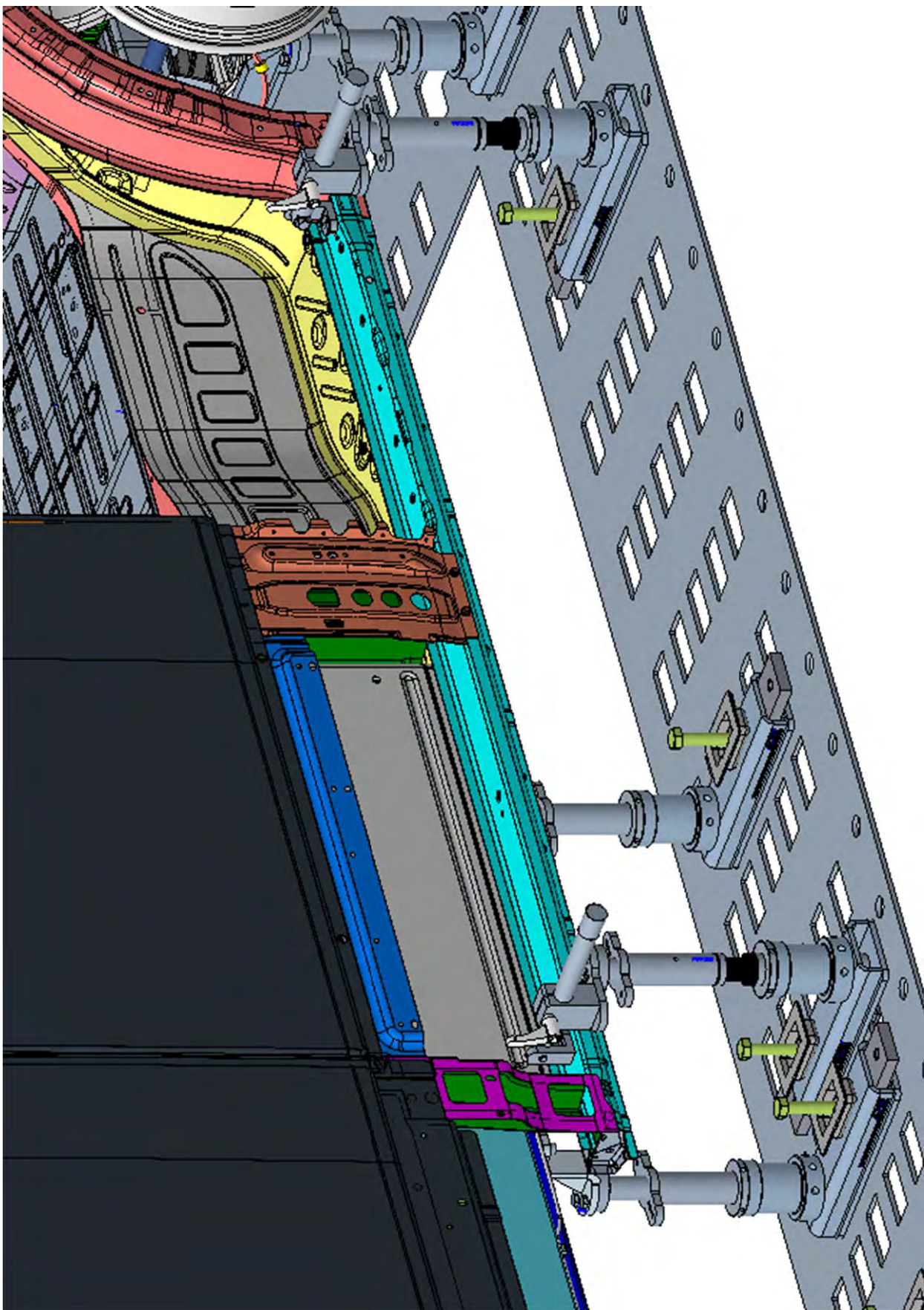
**Chief Automotive**

TITLE

mech\_in\_sliding\_door.drw

SIZE	CAGE CODE	DWG NO	REV
<b>B</b>		<b>Sliding Door Rocker</b>	
		<b>EDV500</b>	
SCALE: 0.040	UNIT WT. (1.2)	SHEET 1 OF 1	

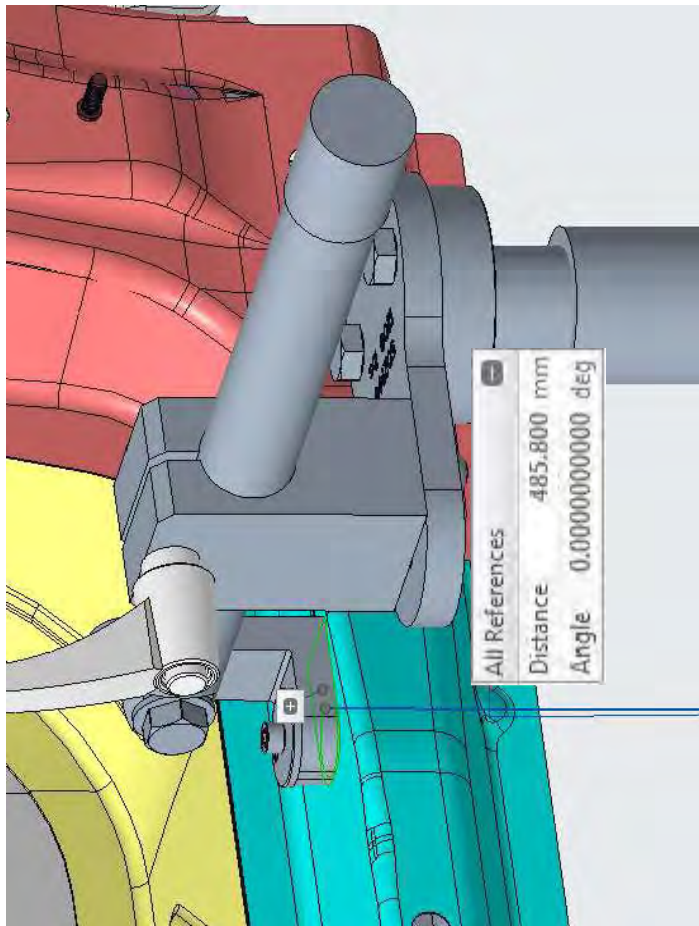
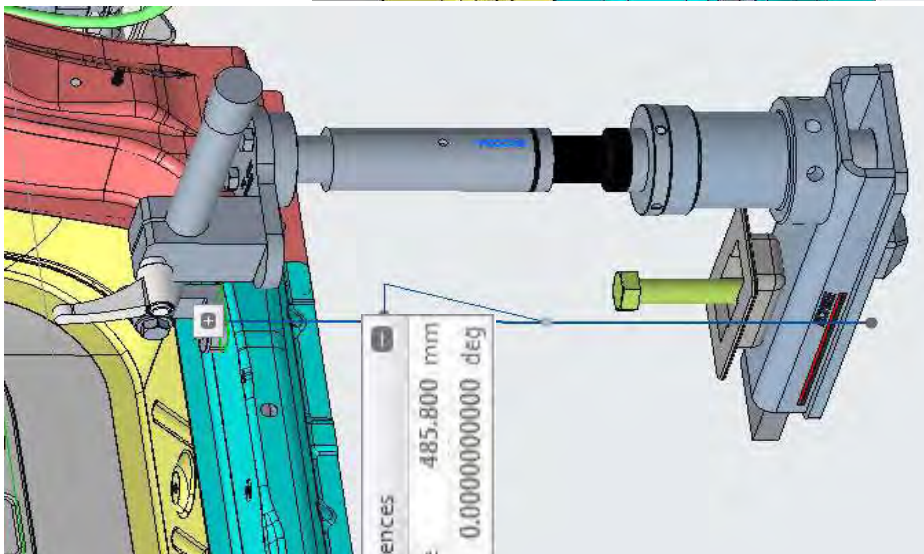
# SLIDING DOOR





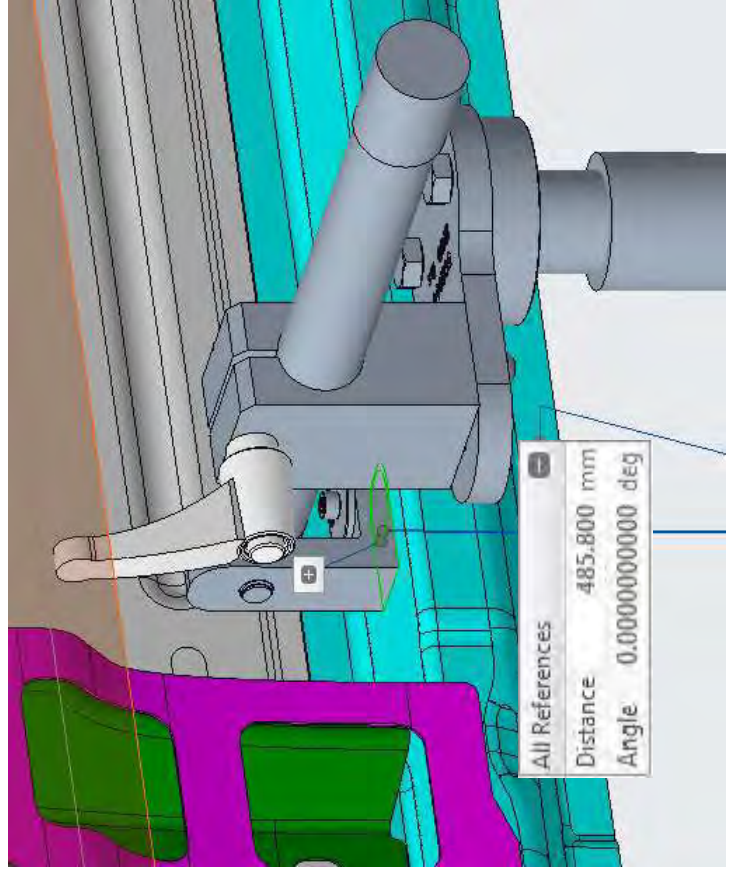
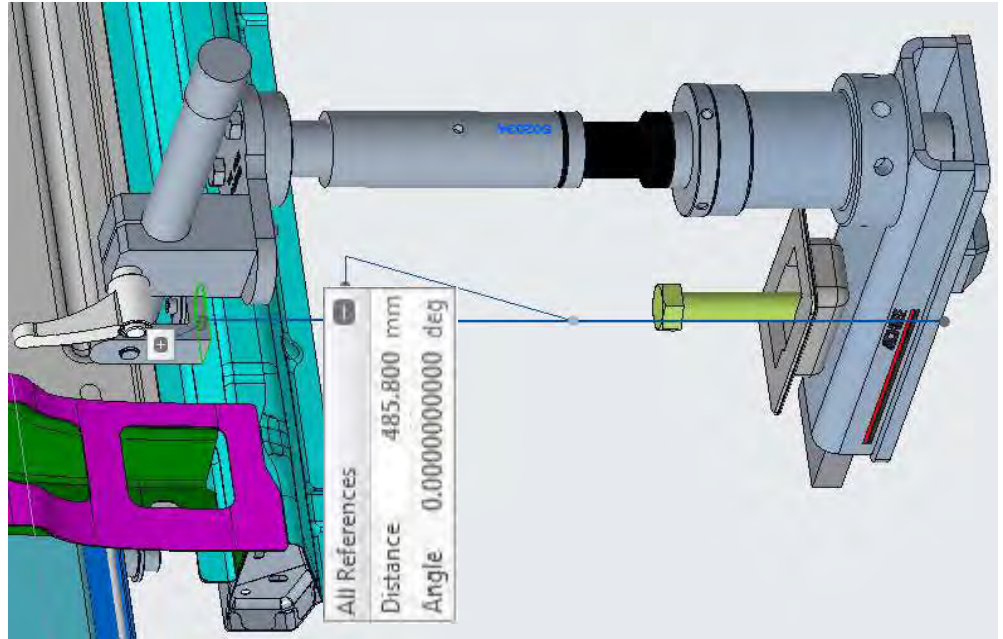
Position #Forward

502128	Base
502055	Short Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502143	Pillar Clamp
CK110090	Alumn Overhead Arm
CK120491	Wrist Block
502165	Bushing 6mm
CK130058	SHCS M6 x 25
41684	HHCS, M12 x 30

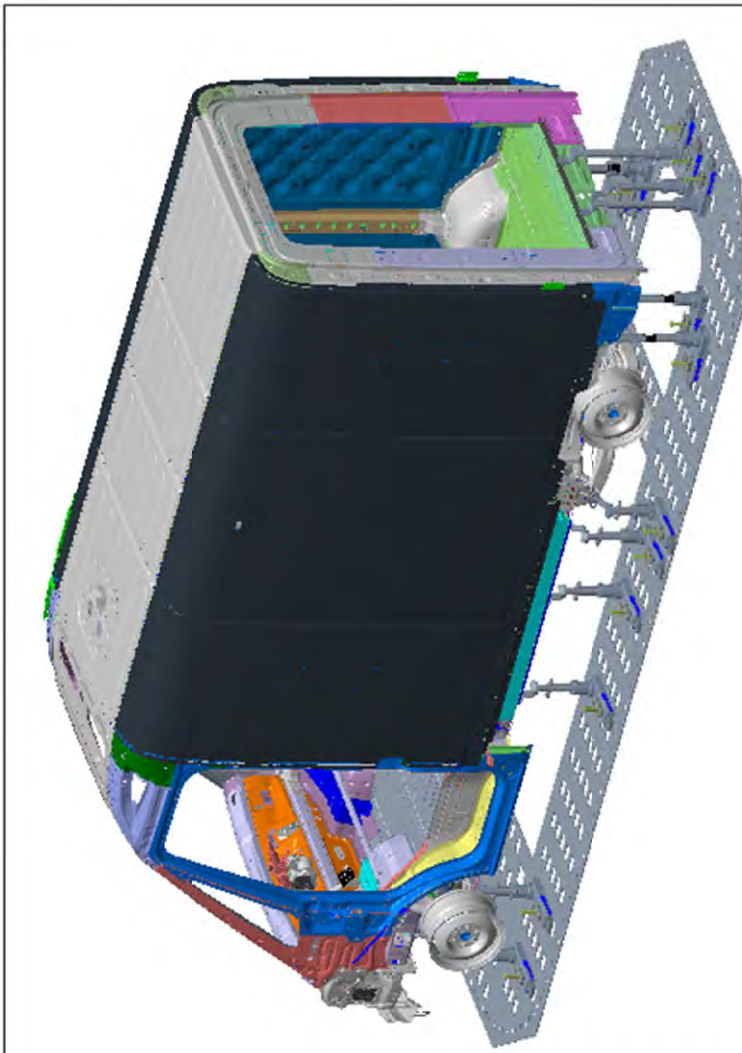


Position #Rearward

502128	Base
502055	Short Tube Base
502033	LH Adapter Screw
502034	Turn Buckle
502039	Threaded Adapter
502143	Pillar Clamp
CK110090	Alumn Overhead Arm
CK120491	Wrist Block
502165	Bushing 6mm
CK130058	SHCS M6 x 25
41684	HHCS, M12 x 30







ITEM NO.	PART NUMBER	QTY	DESCRIPTION	NOTES
26	CKI30535	2	<I130535.prt	M12 x 240 SHCS
25	CKI30534	8	<I130534.prt	M12 x 7.5mm SHCS
24	CKI30532	2	<I130532.prt	M16 x 120mm SHCS
23	CKI30061	3	<I130061.prt	M8 x 35 SHCS
22	CKI20519	2	CKI20519.PRT	Spacer, 39.5mm
21	CKI10297	4	CKI10297.ASM	Standoff M16 x 100
20	CKI10123	6	CKI10123.ASM	Extended Fixture
19	601738	2	601738.prt	Washer, 3/4"
18	502147	2	502147.ASM	18" Tube Base
17	502128	19	502128.asm	Base
16	502086	3	502086.prt	Bushing 8mm
15	502082	6	502082.ASM	3-3/4" Tube Base
14	502075	1	502075.ASM	11-1/2" Tube Base
13	502063	8	502063.ASM	5-3/4" Tube Base
12	502055	2	502055.asm	Short Tube Base
11	502039	19	502039.asm	Threaded Adapter
10	502034	4	502034.prt	Turn Buckle
9	502033	4	502033.PRT	LH Threaded Adapter
8	502030	2	502030.prt	Bushing 16mm
7	502028	10	502028.prt	Bushin 12mm
6	502019	3	502019.ASM	Tall Horz Fixture
5	502015	19	502015.prt	Wing Nut
4	502008	8	502008.ASM	Tall Vert Fixture
3	502005	2	502005.ASM	Double Horz Fixture
2	41684	51	41684.prt	M12 x 30 HHCS
1	41590	2	41590.prt	M16 Hex Nut

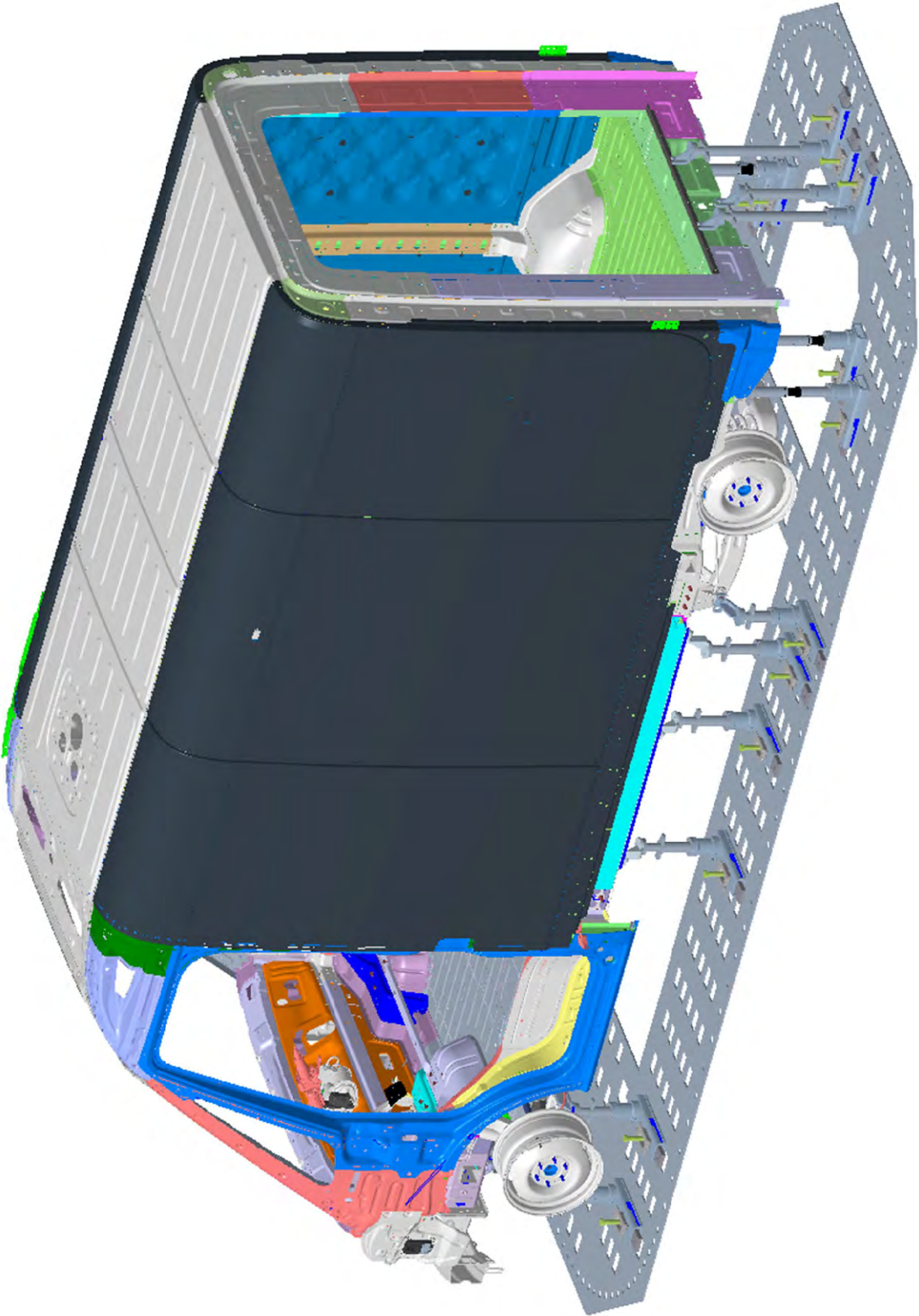
Chief Automotive

TITLE

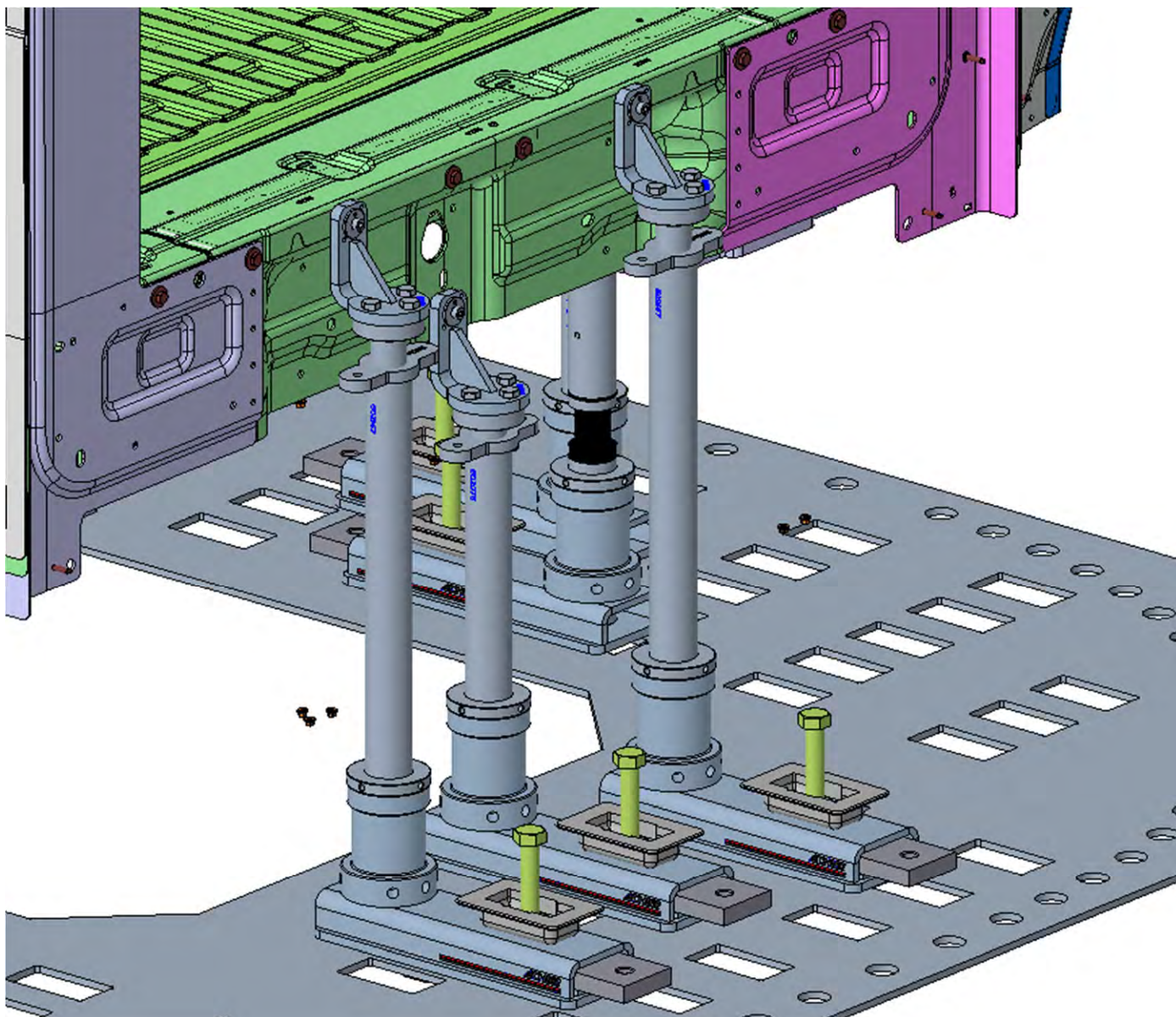
mech\_in\_rear\_gate\_lower.drw

SIZE	CAGE CODE	DWG. NO.	REV
<b>B</b>		<b>Rear Gate Lower</b>	
SCALE: 0.040			SHEET 1 OF 1
UNIT WT. [ .2 ]			

REAR GATE LOWER

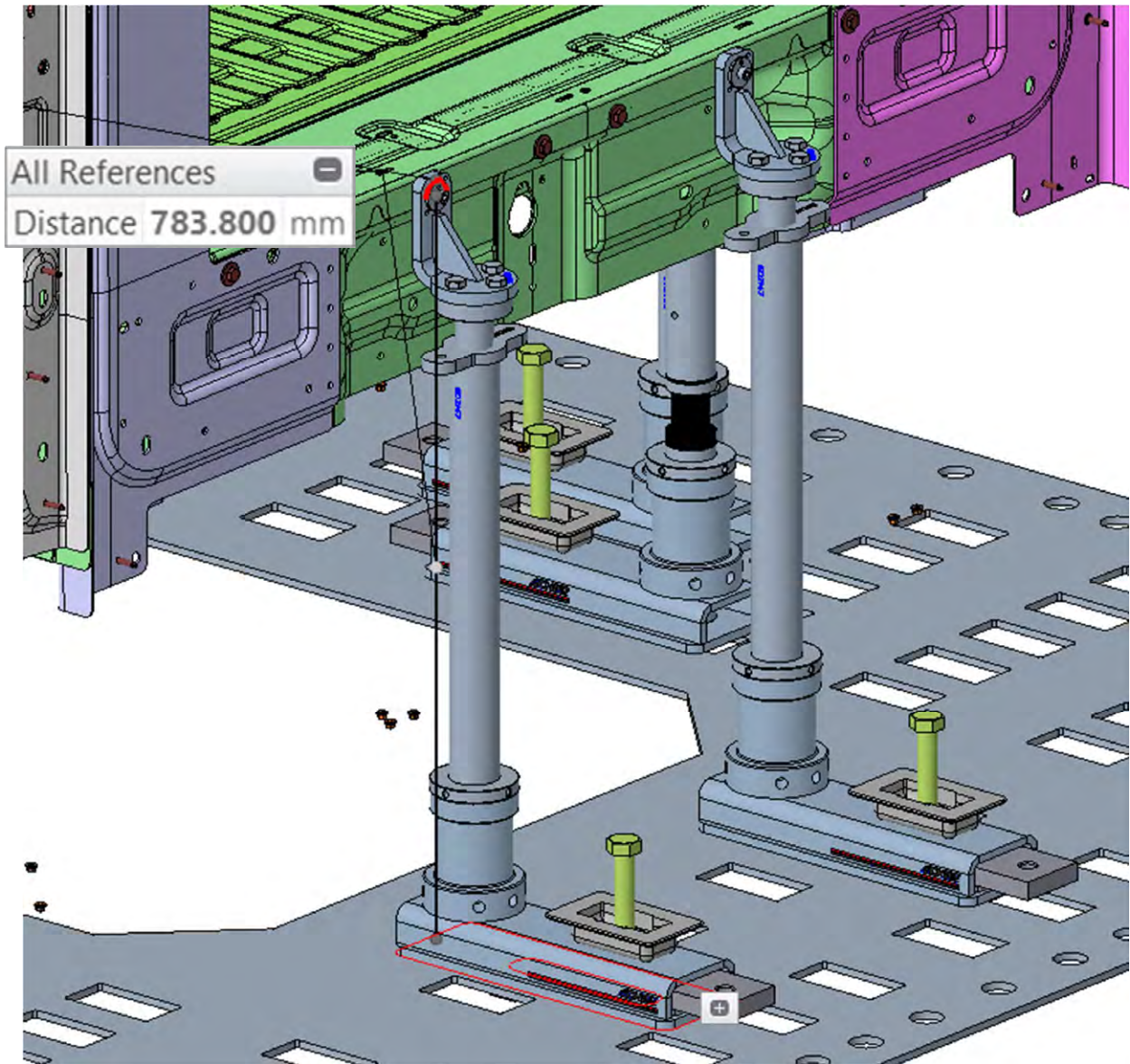






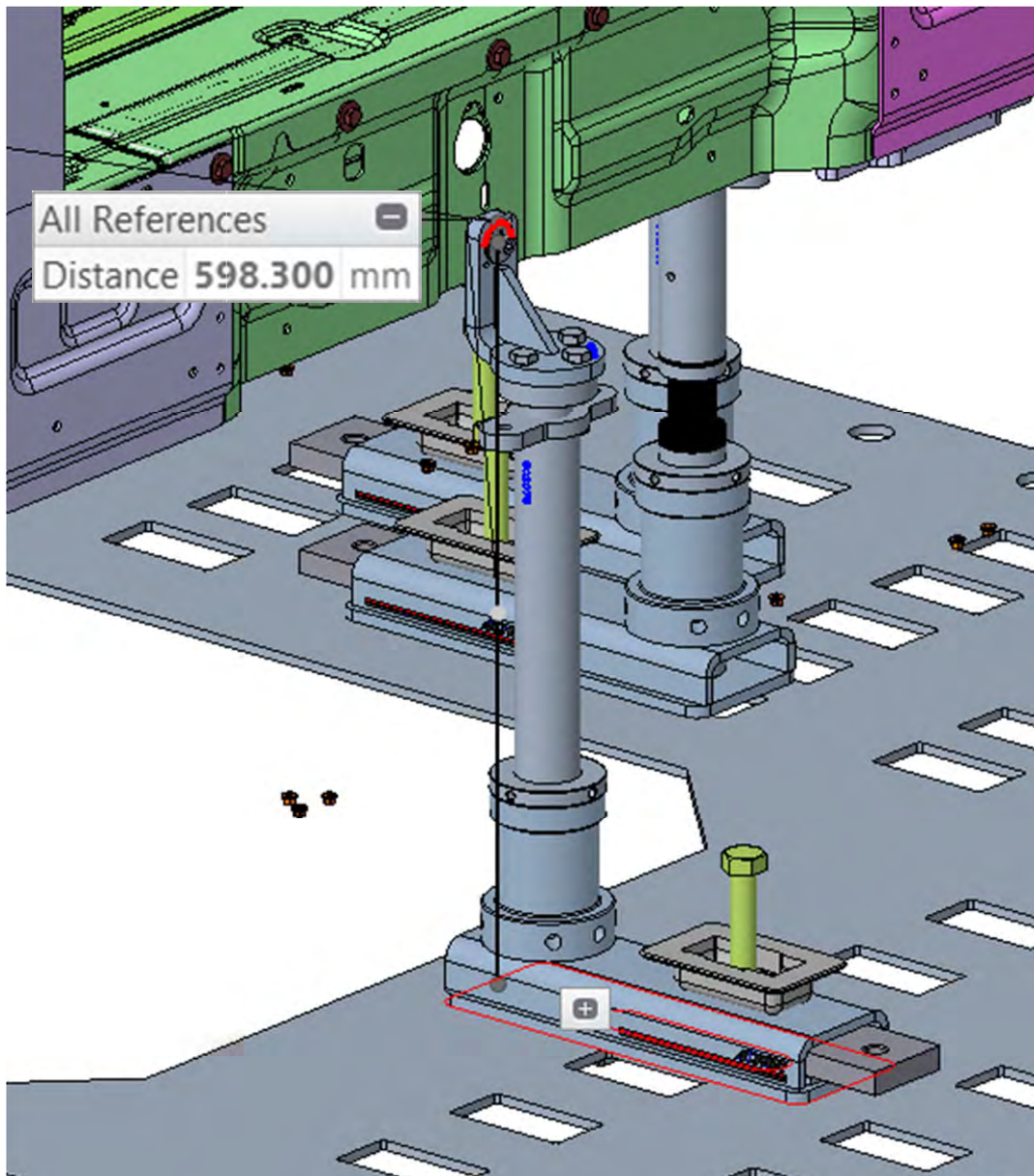
# REAR GATE LOWER

502128	Base
502147	18" Tube Base
502039	Threaded Adapter
502019IC	Tall Horz Fixture
502086	Bushing 8mm
CK130061	SHCS M8 x 35
41684	HHCS, M12 x 30

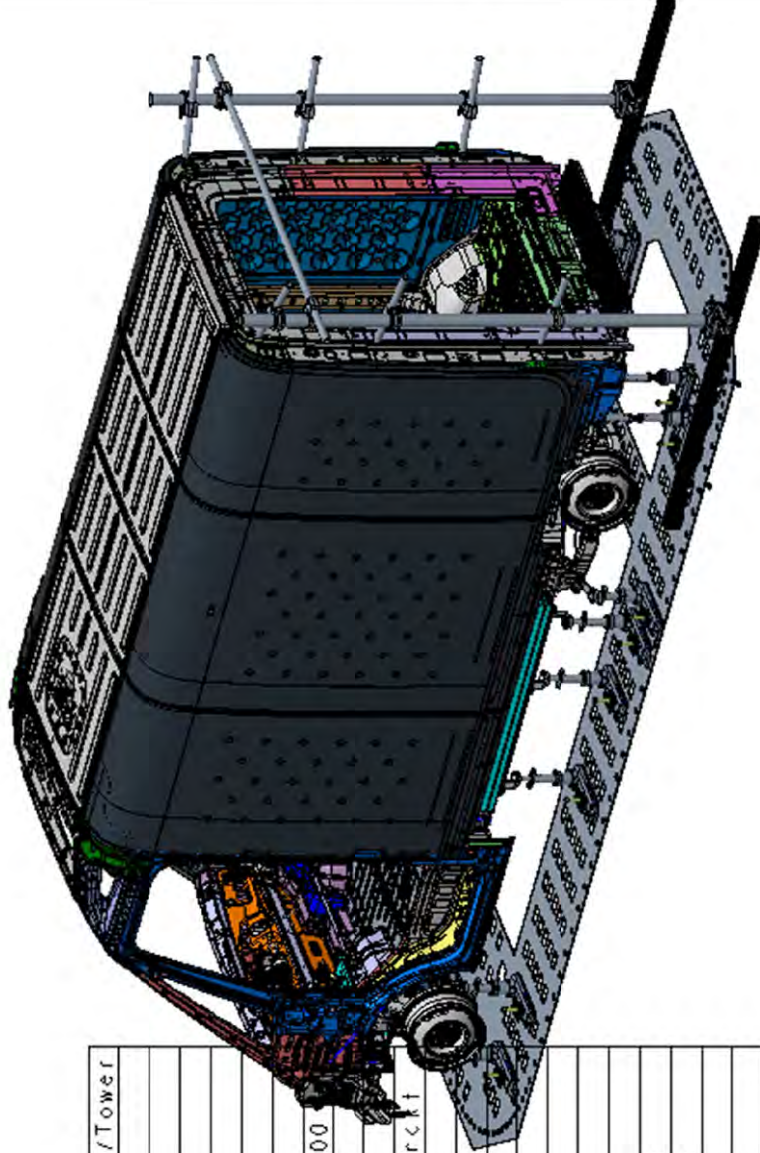




502128	Base
502075	11-1/2" Tube Base
502039	Threaded Adapter
502019C	Tall Horz Fixture
502086	Bushing 8mm
CK130061	SHCS M8 x 35
41684	HHCS, M12 x 30



CK140123 Mast Assm, 112"  
638099 Positioning Base assm.

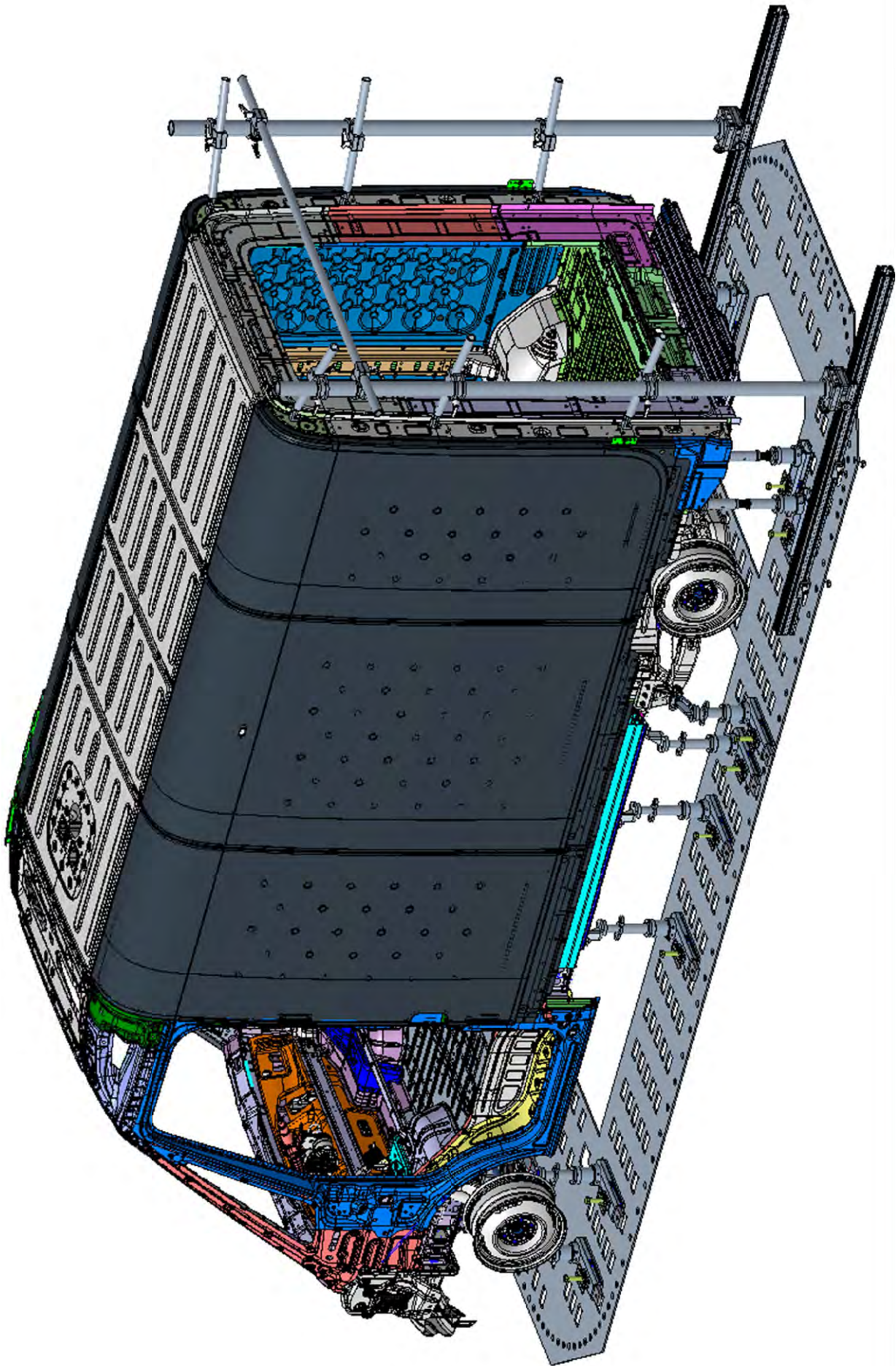


ITEM NO	PART NUMBER	QTY	DESCRIPTION	NOTES
34	CK140123A\$SMD		ck140123a.smd.asm	Positioning Base/Tower
33	CK130535	2	ck130535.prt	M12 x 240 SHCS
32	CK130534	8	ck130534.prt	M12 x 75 SHCS
31	CK130532	2	ck130532.prt	M16 x 120 SHCS
30	CK130061	4	ck130061.prt	M8 x 35 SHCS
29	CK120519	2	ck120519.prt	Spacer, 39.5mm
28	CK120491	6	ck120491.prt	Wrist Block
27	CK110297	4	ck110297.asm	Standoff M16 x 100
26	CK110123	6	ck110123.asm	Extended Adapter
25	638142	6	638142.asm	Boom Arm
24	638131	4	638131.asm	Mast Hold Down Brckt
23	638108	8	638108.asm	Mast Clamp
22	638079	1	638079.prt	Overhead Beam
21	638061	2	638061.prt	Base Rail
20	601738	2	601738.prt	Washer, 3/4"
19	502165	2	502165.prt	Bushing 6mm
18	502128	16	502128.asm	Base
17	502086	4	502086.prt	Bushing 8mm
16	502082	6	502082.asm	3-3/4" Tube Base
15	502063	8	502063.asm	5-3/4" Tube Base
14	502055	2	502055.asm	Short Tube Base
13	502039	16	502039.asm	Threaded Adapter
12	502034	4	502034.prt	Turn Buckle
11	502033	4	502033.prt	LH Threaded Adapter
10	502030	2	502030.prt	Bushing 16mm
9	502028	10	502028.prt	Bushing 12mm
8	502015	16	502015.prt	Wing Nut
7	502008	8	502008.asm	Tall Vert Fixture
6	502005	2	502005.asm	Double Horz Fixture
5	41684	42	41684.prt	M12 x 30 HHCS
4	41600	2	41600.prt	M6 Hex Nut
3	41590	2	41590.prt	M16 Hex Nut
2	019095	6	019095.prt	Washer 1/2"
1	010625	6	010625.prt	1/2 x 1-1/4" HHCS

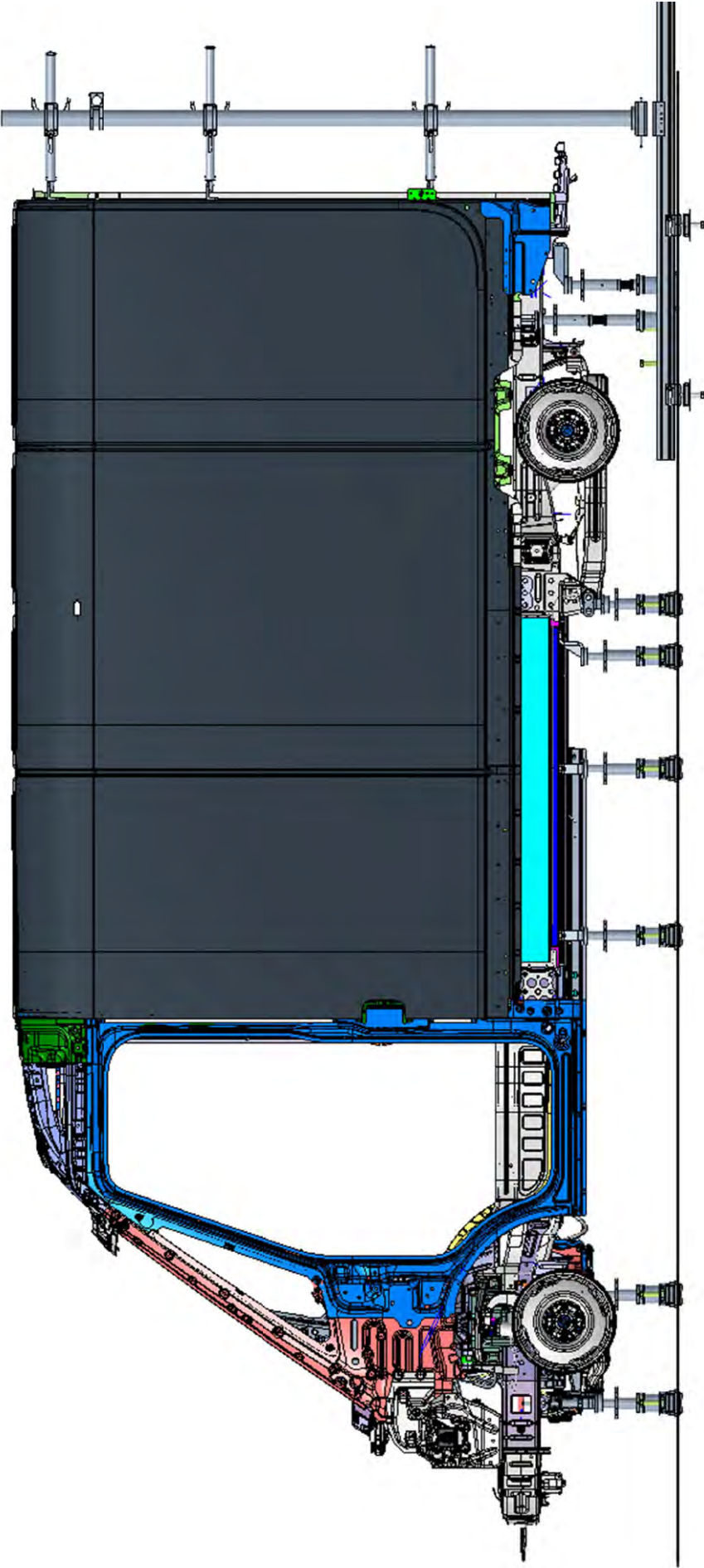
Chief Automotive

TITLE	
mech_in_rear_gate_top.drw	
SIZE	DWG NO
B	Rear Gate Top
CAGE CODE	EDV500
SCALE: 0.040	UNIT WT: [.]
SHEET 1 OF 1	
REV	



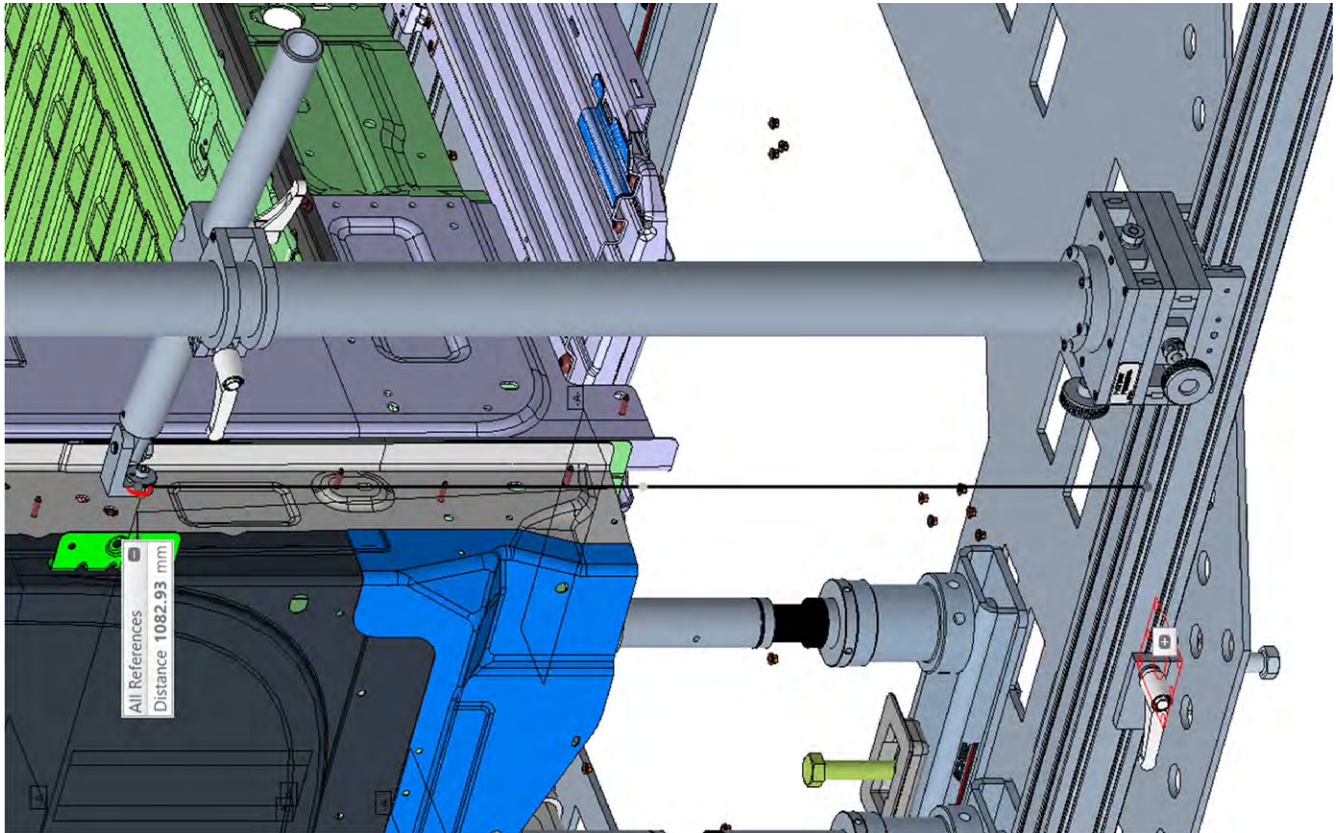
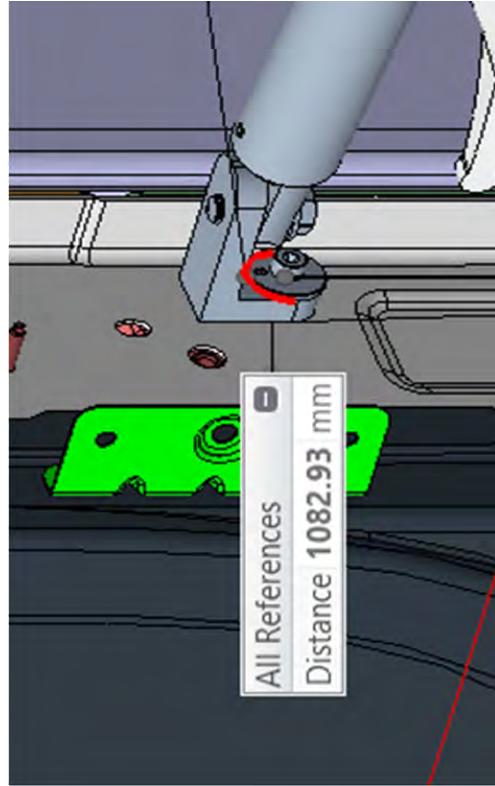


REAR GATE TOP



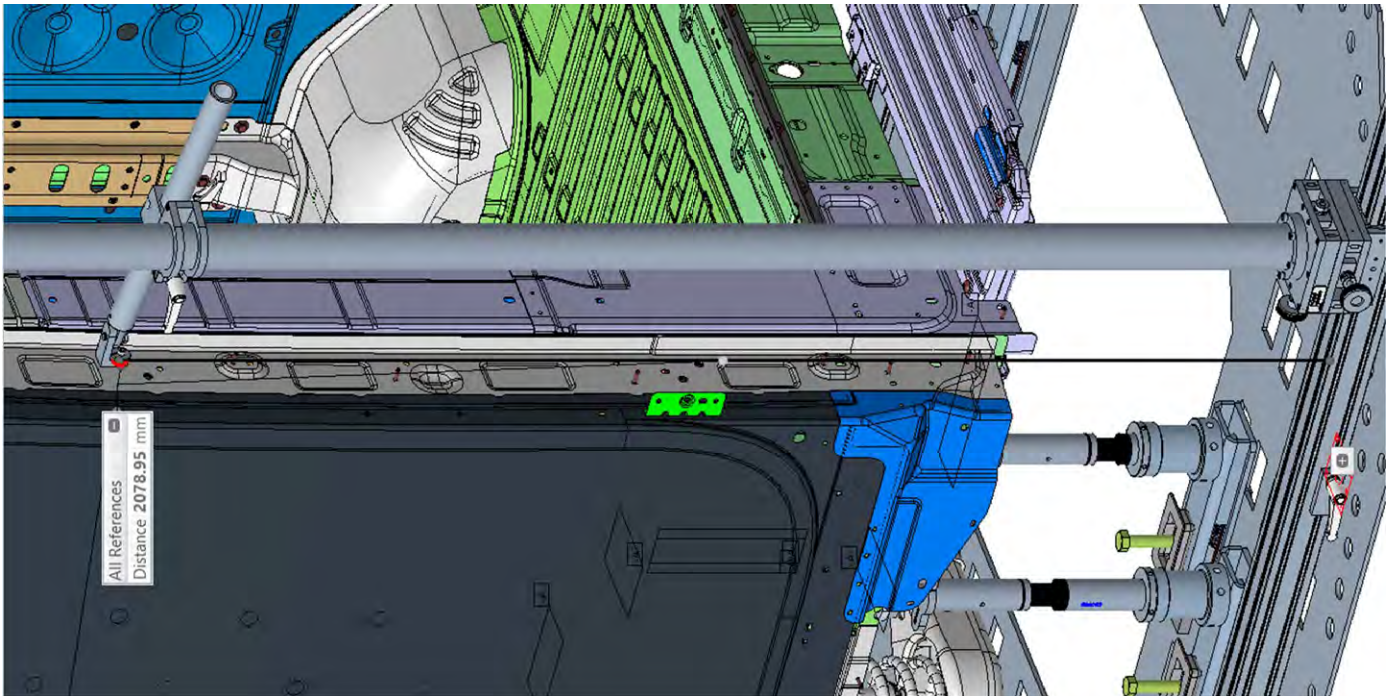
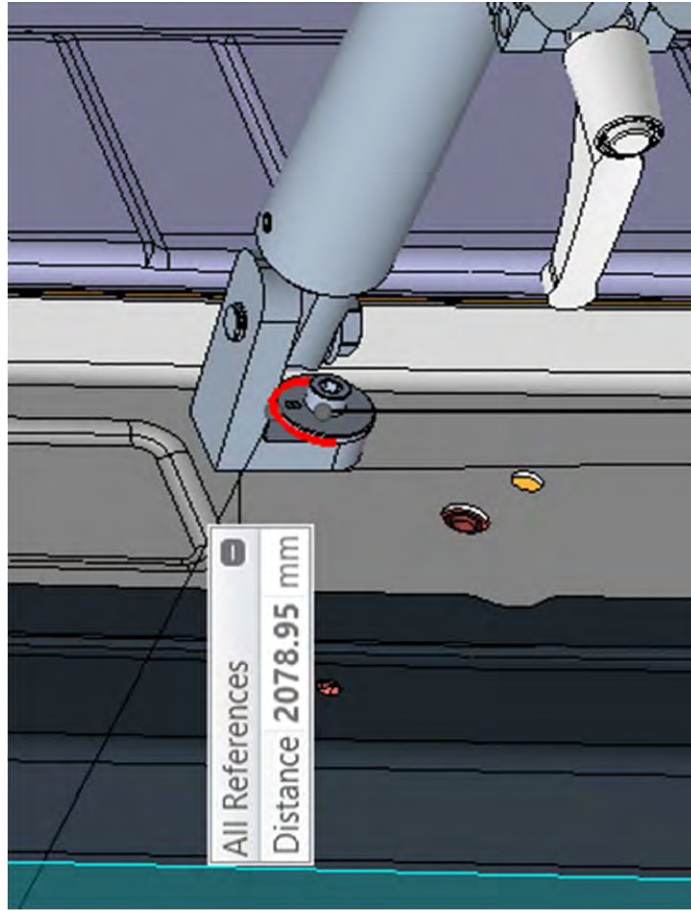


CK120491	Wrist Block
502086	Bushing 8mm
CK130061	SHCS M8 x 35
019095	Washer, 1/2"
010625	HHCS, 1/2" x 1-1/4"



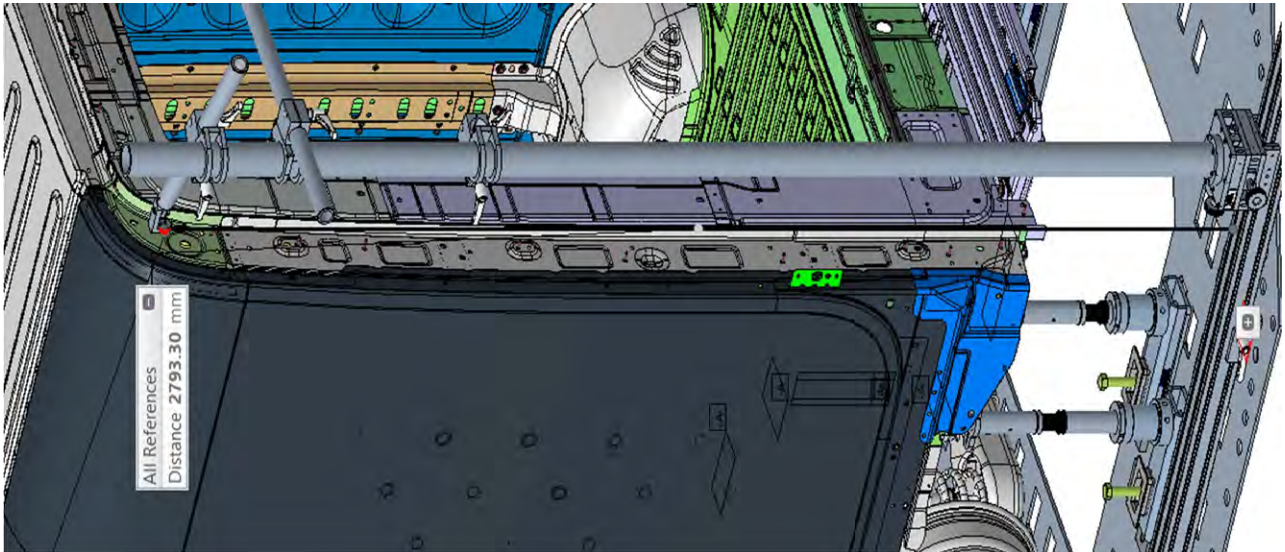
# REAR GATE TOP

CK120491	Wrist Block
502086	Bushing 8mm
CK130061	SHCS M8 x 35
019095	Washer, 1/2"
010625	HHCS, 1/2" x 1-1/4"





CK120491	Wrist Block
502165	Bushing 6mm
41600	Hex Nut, M6
019095	Washer, 1/2"
010625	HHCS, 1/2" x 1-1/4"







## Notes

## Notes





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