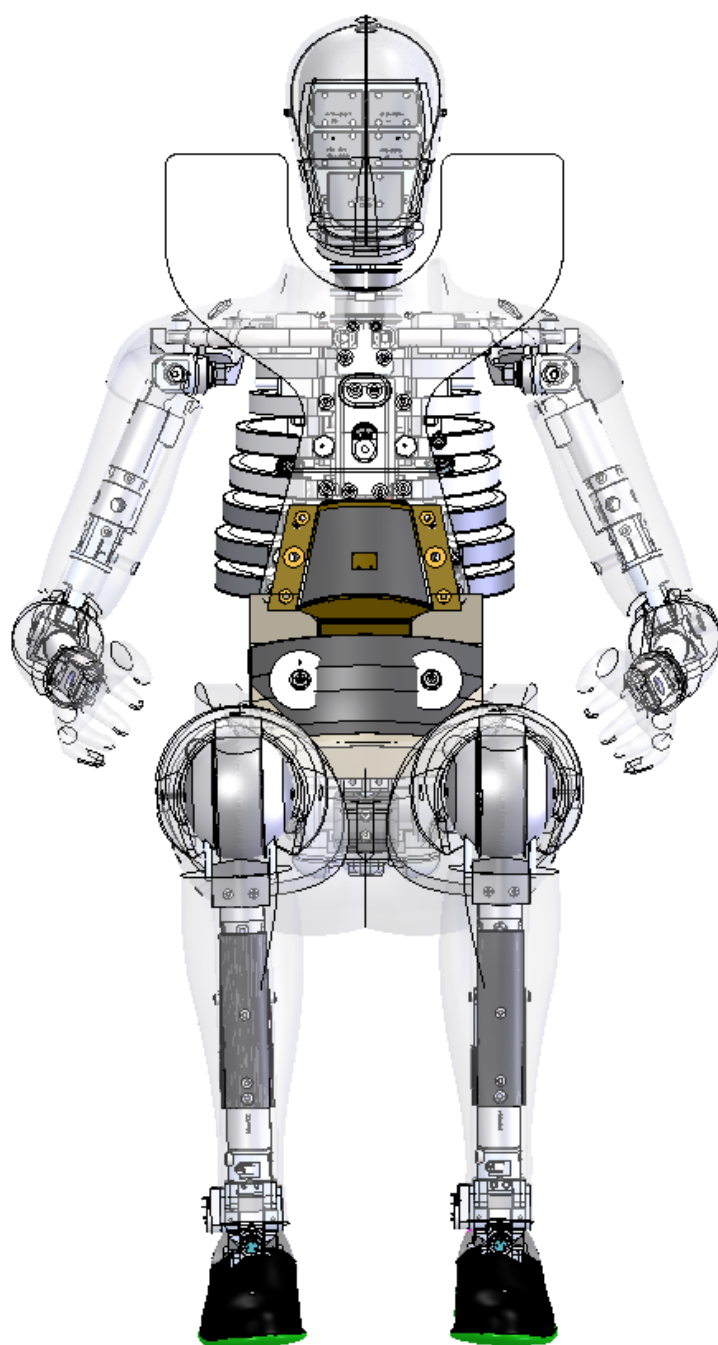


Instruction Manual

**THOR-50M DTI
Type 472-0000DTI**

Instruction Manual

THOR-50M DTI
Type 472-0000DTI



Foreword

We thank you for choosing a Kistler quality product distinguished by technical innovation, precision and long life.

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1. Introduction

Please take the time to thoroughly read this instruction manual. It will help you with the installation, maintenance, and use of this product.

To the extent permitted by law Kistler does not accept any liability if this instruction manual is not followed or products other than those listed under Accessories are used.

Kistler offers a wide range of products for use in measuring technology:

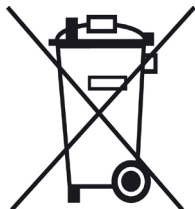
- Piezoelectric sensors for measuring force, torque, strain, pressure, acceleration, shock, vibration and acoustic-emission
- Strain gage sensor systems for measuring force and moment
- Piezoresistive pressure sensors and transmitters
- Signal conditioners, indicators and calibrators
- Electronic control and monitoring systems as well as software for specific measurement applications
- Data transmission modules (telemetry)

Kistler also develops and produces measuring solutions for the application fields engines, vehicles, manufacturing, plastics and biomechanics sectors.

Our product and application brochures will provide you with an overview of our product range. Detailed data sheets are available for almost all products.

If you need additional help beyond what can be found either online or in this manual, please contact Kistler's extensive support organization.

1.1 Disposal instructions for electronic equipment



Do not discard old electronic devices in municipal trash. For disposal at end of life, please return this product to an authorized local electronic waste disposal service or contact the nearest Kistler sales office for return instructions.

1.2 Organization of the manual

The purpose of this manual is to serve as a reference document for those technicians working assembling or working on the Kistler THOR-50M DTI dummy. The focus of this document is to provide the technician with a guide in the disassembly and reassembly of the dummy as necessary to remove and replace the DTI instrumentation without damaging the sensors, wiring or the dummy itself. In most cases, re-assembly is simply the dis-assembly procedure in reverse. Therefore a re-assembly procedure is not included unless there is particular care needed for a given assembly.

There are several other important documents that the user should also become familiar with. These are noted in chapter 2.6 of this document. This document is meant to be used in conjunction with the NHTSA THOR-50M Drawing Package and the NHTSA THOR-50M Qualification Manual. Each section describes in detail the components required for each assembly, the order of assembly if necessary as well as special notes and tips where appropriate.

In addition to the typical set of tools necessary to work on the ATD, it is highly recommended that a digital camera be used frequently when disassembling an ATD with instrumentation installed. The reason for using a camera to document the disassembly of the ATD is that since the instrumentation set can be unique to each ATD, the wiring is necessarily also unique to each ATD. The simplest way to document the routing of the wiring, location of tie wraps, grounding straps and connectors, is with a picture.

1.3 Conventions and abbreviations used in the manual

ATD	Anthropomorphic Test Device.
THOR	Test device for H uman O ccupant R estraints.
DTI	D igital T ransducer I nterface; all Kistler THOR parts that are modified or different from the NHTSA specified parts are identified by the "DTI" suffix added to the NHTSA part number.
C-G	Center of Gravity; a body's center of gravity is the point around which the resultant torque due to gravity forces vanishes, the unique point where the weighted relative position of the distributed mass sums to zero, or the point where if a force is applied it moves in the direction of the force without rotating. The distribution of mass is balanced around the center of gravity.
RH	Right Hand; assumed position of component as installed in the dummy as if the technician were oriented in the same position as the dummy.
LH	Left Hand; assumed position of component as installed in the dummy as if the technician were oriented in the same position as the dummy.
FR	Front or Anterior of the part or assembly based on the dummy orientation.
BK	Back or Posterior of the part or assembly based on the dummy orientation.
TP	Top or Superior of the part or assembly based on the dummy orientation.
BM	Bottom or Inferior of the part or assembly based on the dummy orientation.
Hardware and fasteners:	
FHCS	Flat Head Cap Screw.
BHCS	Button Head Cap Screw.
SHCS	Socket Head Cap Screw.
SSS	Socket Set Screw.
NP	Nylon Point (used in conjunction with one of the above).
CP	Cup Point (used in conjunction with one of the above).
NHTSA	National Highway Traffic Safety Administration is the department within the USA Department of Transportation (DOT). As part of its activities, NHTSA is charged with writing and enforcing Federal Motor Vehicle Safety Standards, develops the anthropomorphic dummies used in safety testing, as well as the test protocols themselves.

J-1733 In order to compare test results obtained from different crash test facilities, standardized coordinate systems needed to be defined for crash test dummies, vehicle structures, and laboratory fixtures. In addition, recorded polarities for various transducer outputs needed to be defined relative to positive directions of the appropriate coordinate systems. SAE J1733 issued in December 1994 and revised in November 2007 describes the standardized sign convention and recorded output polarities for various transducers used in crash testing.

Dummy coordinate system:

+X is toward the front (anterior) of the dummy
+Y is laterally toward the right of the dummy
+Z is toward the bottom (inferior) of the dummy

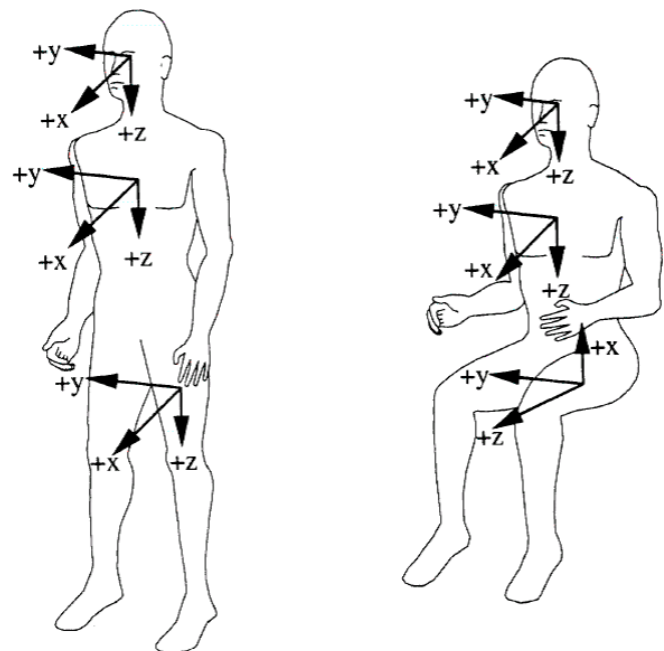


Fig. 1: Dummy coordinate system

2. General

2.1 Recommended tools

Table 1 includes the recommended standard tools which should be available to the technician when working on the Kistler THOR-50 M DTI dummy.

Item description	Size(s)
Set of "T" handle ball end hex wrenches	2, 2.5, 3, 4, 5, 6, 8, and 10 mm
Set of "L" handle ball end hex wrenches	1.5, 2, 2.5, 3, 4, 5, 6, 8, and 10 mm
Set of straight hex wrenches (screwdriver handle)	0.7, 0.9, 1.3, 1.5, 2, 2.5 and 3 mm
Socket set 3/8 drive	6 mm to 19 mm
Torque wrench 3/8 drive	10 – 98 Nm
Hex bit socket set 3/8 drive	4, 5, 6, 8, and 10 mm
Needle nose pliers	
Diagonal wire cutters	
Flat head screwdriver(s)	
Digital camera	

Table 1: Recommended standard tools

2.2 Fastener torque values

Table 2 and Table 3 include the recommended torque values for the various fastener sizes used in the THOR-50M dummy. Table 2 is specifically for the SHCS fastener and Table 3 is for the BHCS and FHCS fasteners. For fastener sizes not included here, engineering judgement should be used to determine a "reasonably tight" torque which will prevent the fastener from loosening during use.

Fastener size - SHCS	Recommended torque
M2	0.5 N·m
M2.5	0.8 N·m
M3	1.5 N·m
M4	3.5 N·m
M5	7.0 N·m
M6	13.0 N·m
M8	30.0 N·m
M10	55.0 N·m
M12	100.0 N·m
M14	160.0 N·m
M16	250.0 N·m

Table 2: Recommended torque values for the SHCS fastener

Fastener size - BHCS/FHCS	Recommended torque
M2	0.3 N·m
M2.5	0.5 N·m
M3	1.0 N·m
M4	2.5 N·m
M5	5.0 N·m
M6	10.0 N·m
M8	22.0 N·m
M10	40.0 N·m
M12	75.0 N·m
M14	120.0 N·m
M16	190.0 N·m

Table 3: Recommended torque values for BHCS and FHCS fasteners

2.3 THOR serial number

The Kistler THOR-50M DTI is assigned a serial number at the time of assembly. The serial number label is located on the right side of the Upper Thoracic Spine Box. Please refer to this number when corresponding with the factory regarding technical advice or service of the dummy.

All the parts used in the assembly of this particular dummy are recorded at the factory for lot or item traceability if required at a later date.

2.4 THOR storage

The Kistler THOR-50M DTI is shipped with two support brackets installed. It is strongly advised the both these brackets are installed on the dummy any time the dummy is not in use. The use of a proper storage "chair" is also strongly recommended.

Neck Support Bracket 472-3517-3 – this bracket attaches to the back of the upper spine box and the back of the skull and is designed to hold the head in the vertical position in order to minimize any angular forces on the neck assembly. These unintended forces caused by the unsupported weight of the head could cause the neck to adopt a permanent bend making it unusable in the dummy.

The Kistler Neck Support Bracket is installed by removing the two SHCS M6x18 (9005217)

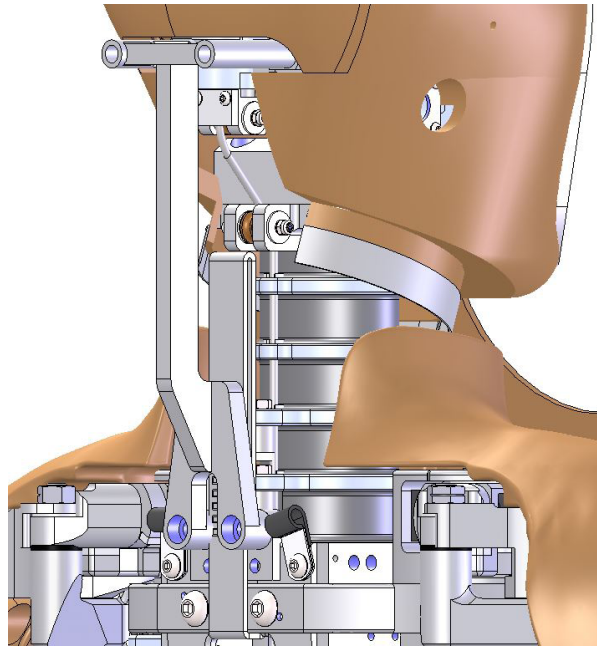


Fig. 2: Neck Bracket, installed

Thorax Storage Bracket 472-8100 – this bracket attaches to the front of both the upper spine box and the pelvis. It is designed to hold the rubber flex joints in a neutral position. Shackles are provided which can be installed at several lifting points for a winch or other lifting hook. Handles are also provided to aid in moving and positioning the dummy. The storage chair also attaches to this bracket.

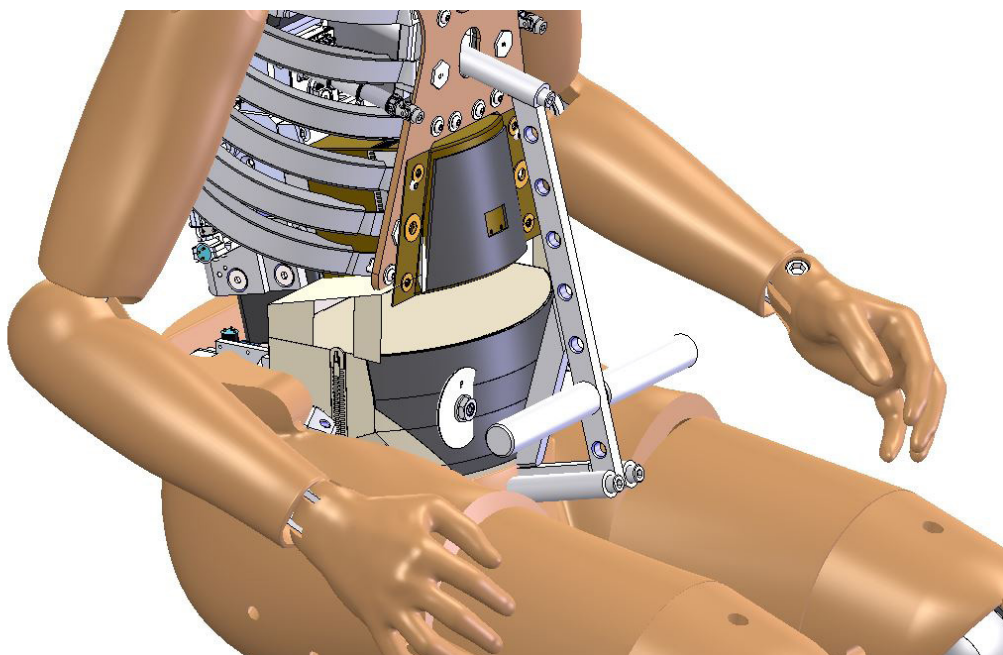


Fig. 3: Thorax Bracket, installed



The lower spine pitch angle adjustment **MUST** be in the neutral position in order to attach the Thorax Storage Bracket (refer to chapter 472-3000 of this manual for the correct adjustment procedure).

THOR Storage Chair 472-8000K – the THOR Chair is designed to be used with the Kistler Neck Support Bracket and the Thorax Storage Bracket installed on the dummy. The chair is designed for longer term storage of the assembled dummy in the upright position. The chair in combination with the Neck Support and Thorax Storage Brackets provide access to all areas of the dummy and eliminates stresses on the critical rubber components.

The handles of the Thorax Support Bracket fit into the detents built into the corresponding holding bracket on the chair. Once the handles are securely located into these detents, the Thorax Storage Bracket is also attached via a shackle to the turnbuckle provided on the chair. By turning the turnbuckle the posture of the dummy can be adjusted to maintain a vertical position.

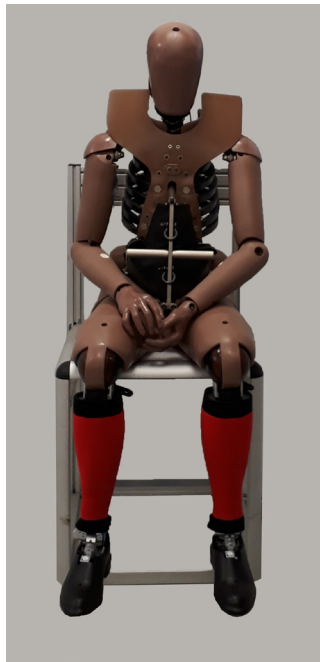


Fig. 4: THOR in chair

Kistler THOR Storage/Transport Box 472-9000K - the Kistler THOR Storage/Transport Box is designed to be used with the Kistler Neck Support Bracket and the Thorax Storage Bracket installed on the dummy. The box is designed for longer term storage and transport of the disassembled dummy.



Fig. 5: THOR in box

2.5 THOR lifting

The THOR-50M dummy **MUST NOT** be lifted by the head or neck in the same manner as the Hybrid 3 dummies. There are two methods by which the dummy can be safely lifted. These are the Lifting Strap and the Thorax Storage Bracket.

The lifting strap located at the top rear of the upper spine box should be used to lift and move the dummy. This strap should also be used to hold the dummy upright during disassembly/assembly. This strap can stay on the dummy permanently if desired.

The Thorax Storage Bracket includes shackles which can be installed at several lifting points for a winch or other lifting hook. Handles are also provided to aid in moving and positioning the dummy.

2.6 Reference materials

When working on the THOR-50M there are several documents the technician should find useful.

General THOR-50M information:

- NHTSA Drawing Package
https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/thor-50m_drawing_package-august_2016.pdf
- NHTSA THOR Parts List
https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/thor-50m_parts_list-aug_2016.pdf
- NHTSA Qualification Procedures
https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/thor-50m_qualification_august2016.pdf

Specific Kistler THOR-50M information (controlled by Serial Number):

- Qualification Performance Report(s)
- Instrumentation Calibration Report(s)
- Quality Assurance Report(s)

3. 472-0000 THOR dummy assembly

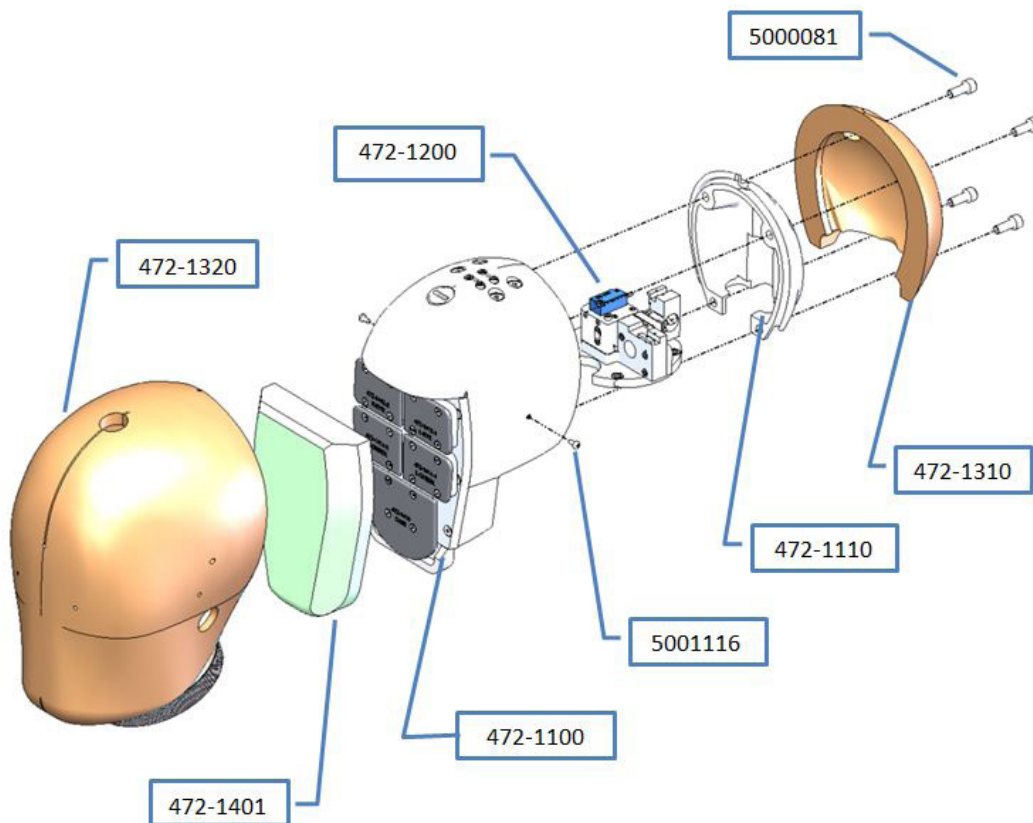
3.1 Exploded view and part list

The following sections illustrate the exploded view and parts list for every assembly included in the Kistler THOR 50M DTI ATD. There are two part numbers shown for each part where applicable. For all the assemblies, sub-assemblies and components used as specified in the NHTSA drawing package, the NHTSA part number is given. For all these items and those assemblies, sub-assemblies and components either modified or specific to the Kistler DTI version the Kistler part number is also given.

To help the user differentiate NHTSA specified parts from the Kistler DTI mechanical components and the Kistler DTI wiring and sensors, the parts lists also include a color code as follows:

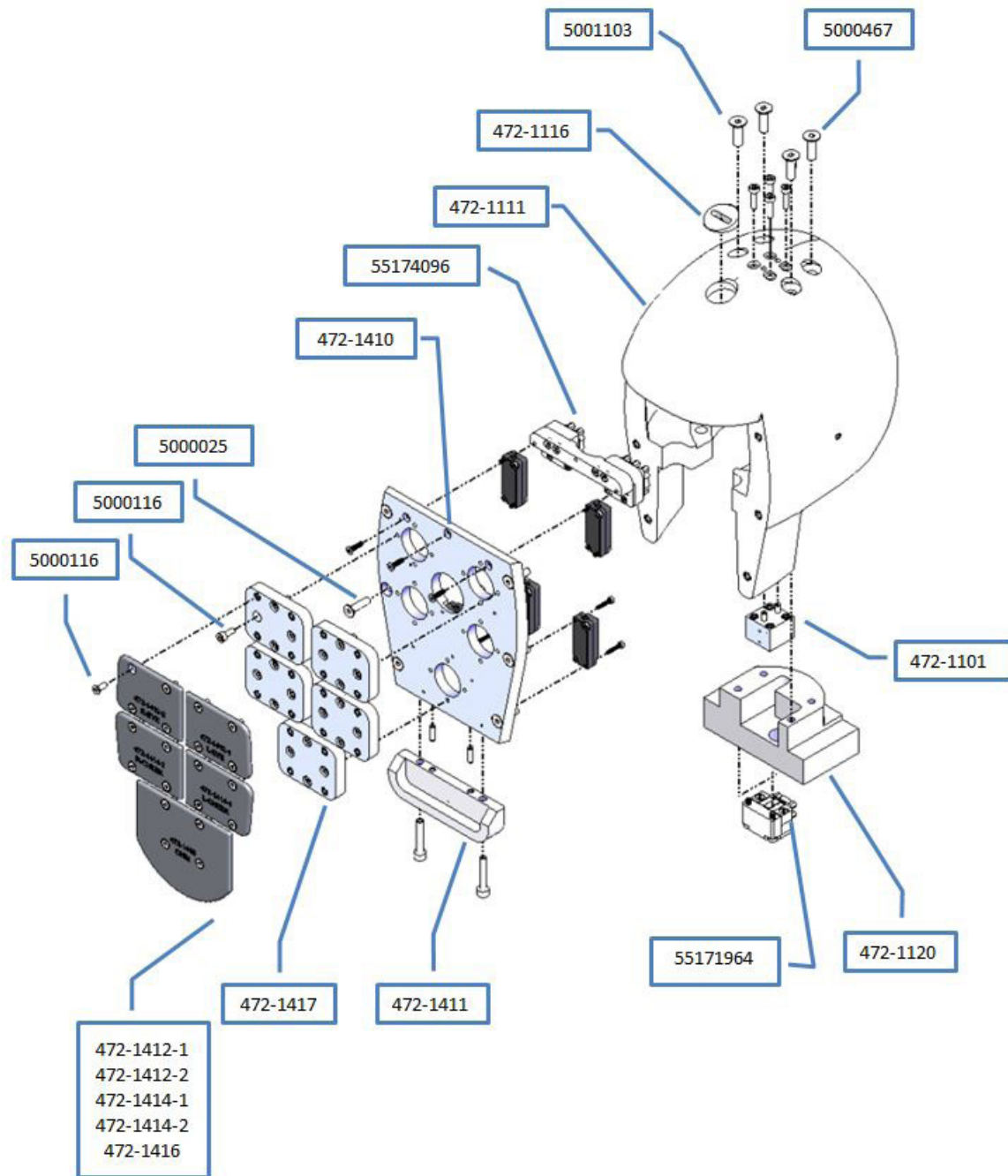
- → NHTSA parts
- → DTI mechanic parts
- → DTI wiring and sensors

472-1000 Head assembly



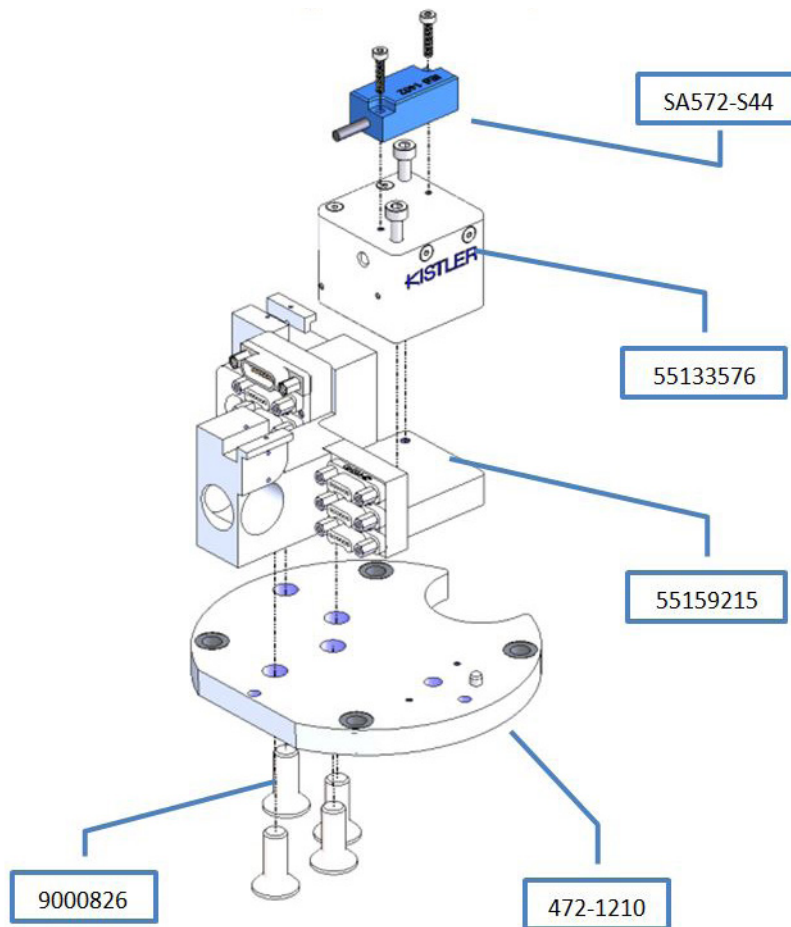
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-1000	18034132	Head assembly	1
●	472-1100	18034133	Skull assembly	1
●	472-1401	55171398	Confor foam, face	1
●	472-1200	55171354	Accelerometer mounting plate assembly, head	1
●	472-1110	55171285	Head cap	1
●	472-1320	55171295	Skin assembly	1
●	472-1321	55171291	Head skin molded	1
●	472-1324	55171292	Head/neck skin zipper	1
●	472-1310	55171289	Cap skin	1
●	5000081	55171400	Screw, M6x16 SHCS	4
●	5001116	55171401	Screw, Phillips Nylon M3x6	2

472-1100 Skull assembly



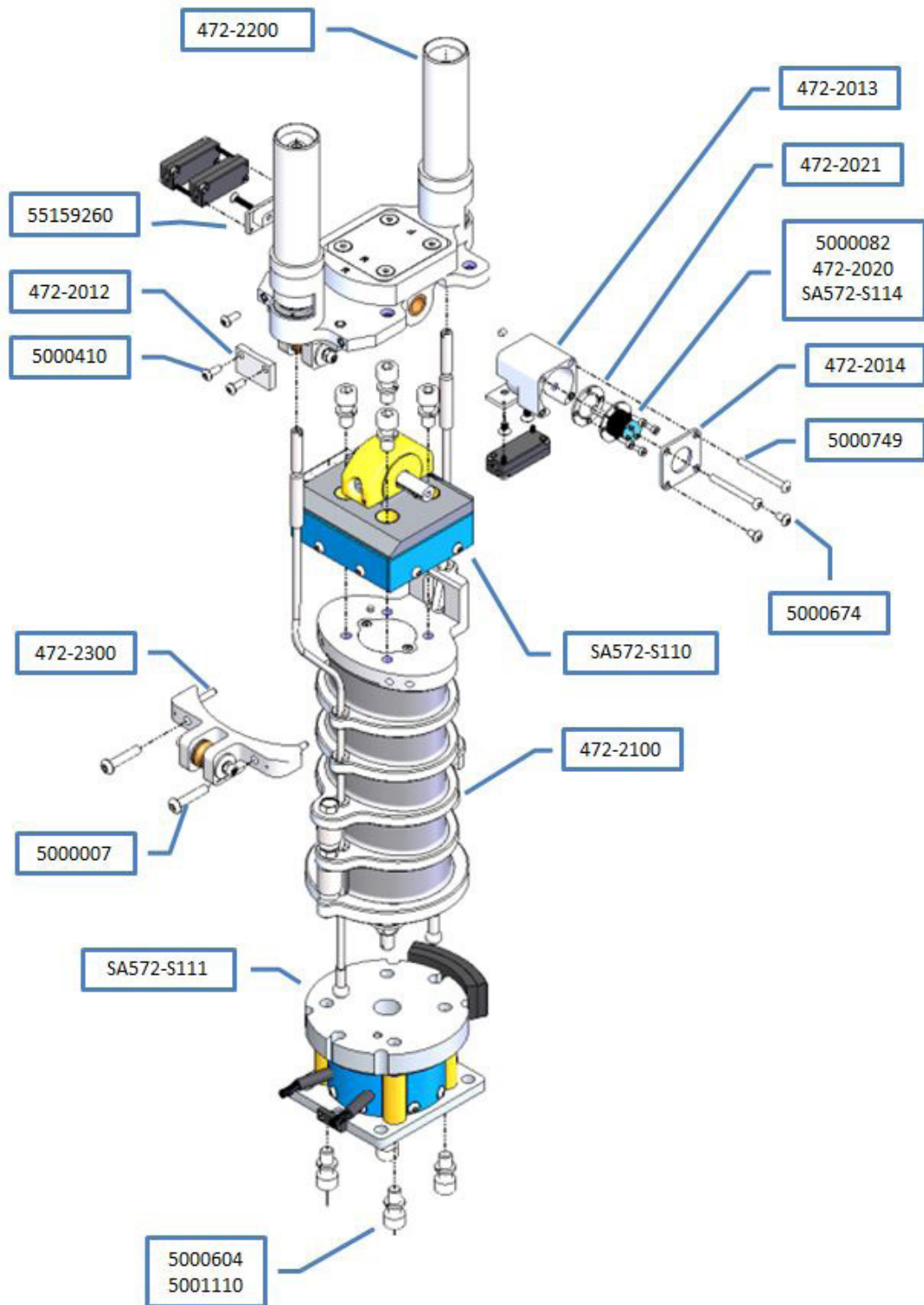
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-1100	18034133	Skull assembly	1
●	472-1111	55171363	Head machined	1
●	5000333	55171362	Heli-Coil, M3x0.5x6 SST	2
●	5000592	55171361	Dowel Pin, M3x16	2
●	5001108	55171347	Lightweight Keensert, M6x10	4
●	5000724	55171750	Mini Keensert, M4x5.25	6
●	472-1410	55171376	Face plate	1
●	472-1417	55171378	Face load cell, mock	5
●	472-1412-1	55171379	Left eye LC plate	1
●	472-1412-2	55171380	Right eye LC plate	1
●	472-1414-1	55171381	Left cheek LC plate	1
●	472-1414-2	55171382	Right cheek LC plate	1
●	472-1416	55171383	Chin LC plate	1
●	472-1411	55171374	Chin guard	1
●	472-1101	18034134	Biaxial accelerometer assembly, head	1
●	5000183	55172761	Pin, Dowel M3x12	2
●	5001107	55171313	Mini Keensert, M3x0.5x4.25	4
●	472-1120	55171384	Head ballast	1
●	472-1116	55171385	Plug, head	1
●	5001103	55171390	Screw, M3x12 SHCS	4
●	5001117	55183634	Screw, M4x22 SHCS	2
●	5000116	55171998	Screw, M3x8 SHCS	20
●	5000116	55171998	Screw, M3x8 SHCS	20
●	5000025	55171388	Screw, M4x16 FHCS	10
●		55171964	TILT collector	1
●		55174096	Face LC head collector	1

472-1200 Accelerometer mounting plate assembly, head



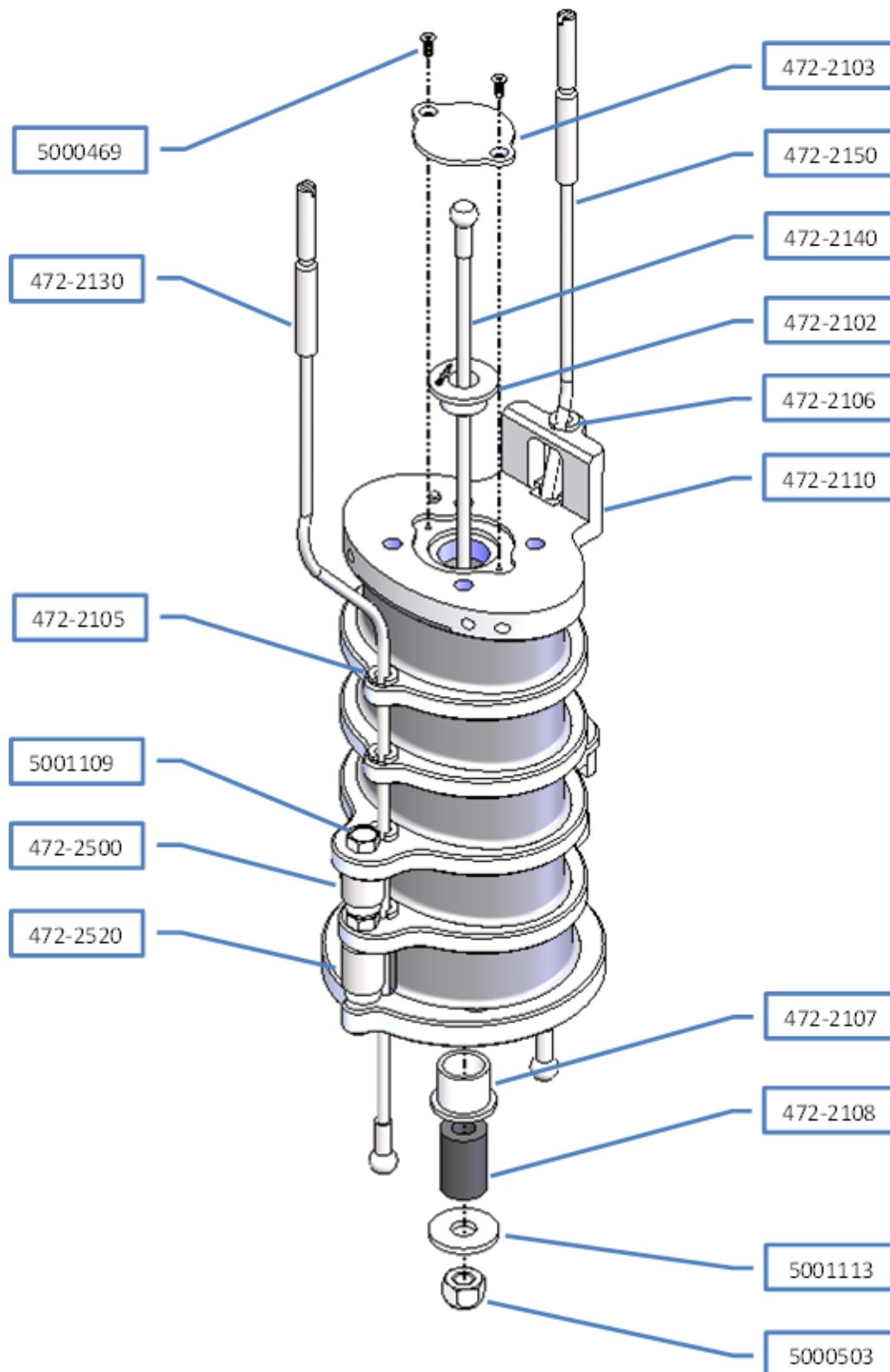
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-1200	55171354	Accelerometer mounting plate assembly, head	1
●	472-1210	55171351	Accelerometer mounting plate, head	1
●	5001108	55171347	Lightweight Keensert, M6x10	4
●	5000385	55171350	Dowel pin, M3x6	1
●		55159215	Head collector, assembly	1
●	9000826	55171355	Screw, M6x16 FHCS	4
●	SA572-S44	IES 1402	Tilt sensor IES 1402	1
●		55133576	DTI-SIXPACK	1

472-2000 Mechanical assembly, neck



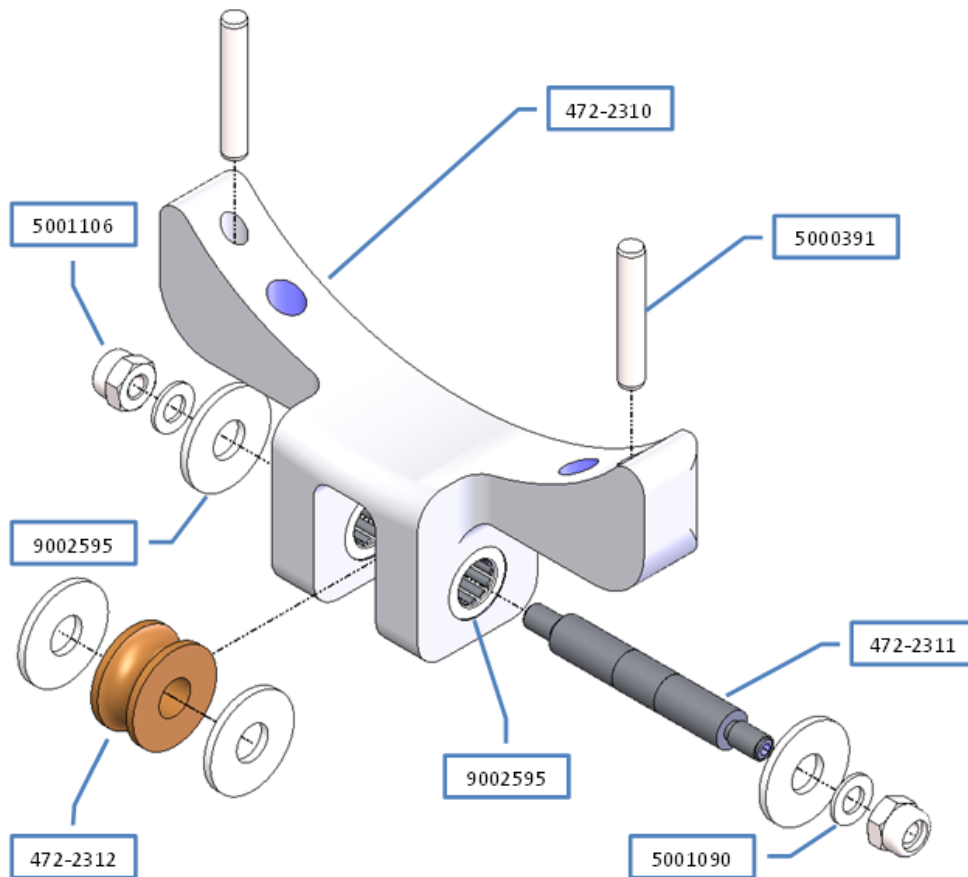
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-2000	18034135	Mechanical assembly, neck	1
●	472-2012	55171914	Neck pulley plate	1
●	472-2013	55171872	Rotary potentiometer housing, neck	1
●	472-2014	55171889	Rotary potentiometer cover, neck	1
●	472-2020	55171887	Rotary potentiometer clamp, neck	2
●	472-2021	55171886	Rotary potentiometer washer, neck	1
●	472-2100	18034136	Cable assembly, neck	1
●	472-2200	18034137	Mounting platform assembly, neck	1
●	472-2300	18034138	Neck pulley bracket assembly	1
●	5000007	55171918	Screw, M4x20 BHCS	2
●	5000082	55171916	Screw, M2x6 SHCS	4
●	5000380V	55171927	Nut, Hex jam M5	4
●	5000410	55171927	Screw, M3x8 BHCS	3
●	5000604	55171902	Screw, M6x14 SHCS	8
●	5000749	55171901	Screw, M3x30 BHCS SS	2
●	5001110	55171924	M6 HI-collar lock washer S.S.	8
●	5001112	55171926	Screw, M3x3 SSS Cone PT.	1
●	SA572-S110	M5559-DTI	Upper neck load cell (optional)	1
●	SA572-S111	M5569-DTI	Lower neck load cell (optional)	1
●	SA572-S114		Rotary potentiometer	1
●		55159260	Neck-Spring-DiMod Adapter	1

472-2100 Cable assembly, neck



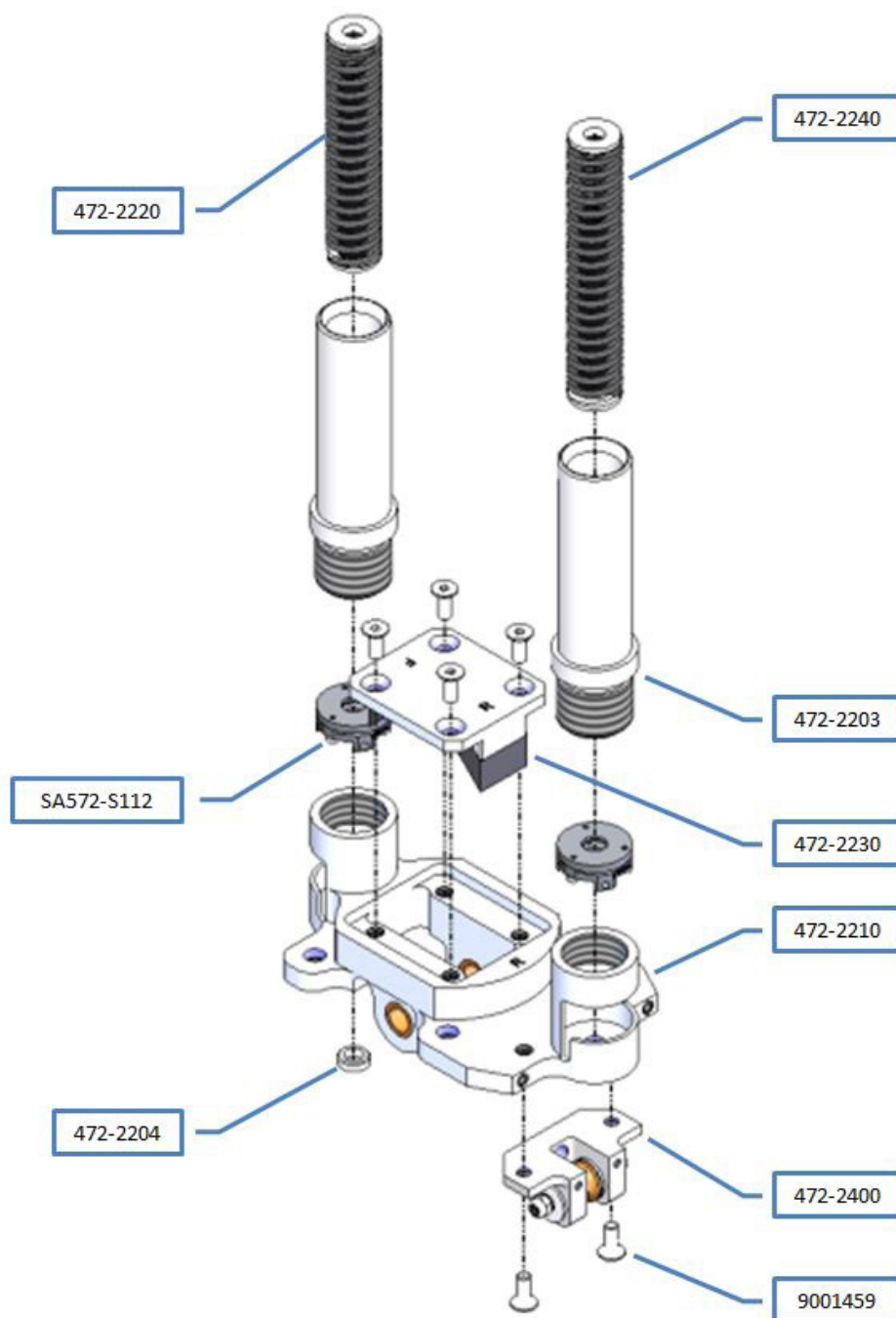
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-2100	18034136	Cable assembly, neck	1
●	472-2018	55171416	Neck neoprene spacer	1
●	472-2102	55171404	Center cable fixture, neck	1
●	472-2103	55171406	Cable cover, neck	1
●	472-2105	55171402	Neck cable guide	8
●	472-2106	55171403	Cable guide, neck	1
●	472-2107	55171417	Center cable lower bushing 1, neck	1
●	472-2108	55187805	Center cable lower bushing 2, neck	1
●	472-2110	55171441	Assembly neck	1
●	472-2120	55171439	Molded assembly, neck	1
●	472-2101	55171419	Front stop, neck	1
●	472-2104	55171420	Top plate cable guide, neck	1
●	5000385	55171350	Dowel pin, M3x6	2
●	5000680	55172105	Dowel pin, M4x6	1
●	472-2130	55171408	Rear cable assembly, neck	1
●	472-2140	55171407	Center cable assembly, neck	1
●	472-2150	55171409	Front cable assembly, neck	1
●	472-2500	55171412	Upper neck stop assembly	1
●	472-2510	55171410	Neck stop 2	1
●	472-2511	55171411	Neck soft stop 2	1
●	472-2520	55171415	Lower neck stop assembly	1
●	472-2512	55171413	Neck stop 1	1
●	472-2513	55171414	Neck soft stop 1	1
●	5000469	55171418	Screw, M4x6 FHCS	2
●	5001109	55171736	Screw, M5x12 HHCS	2
●	5001113	55171737	Washer, M6 Fender S.S.	1
●	5000503	55171738	Lock nut, M6x1 Hex SS	1

472-2300 Neck pulley bracket assembly



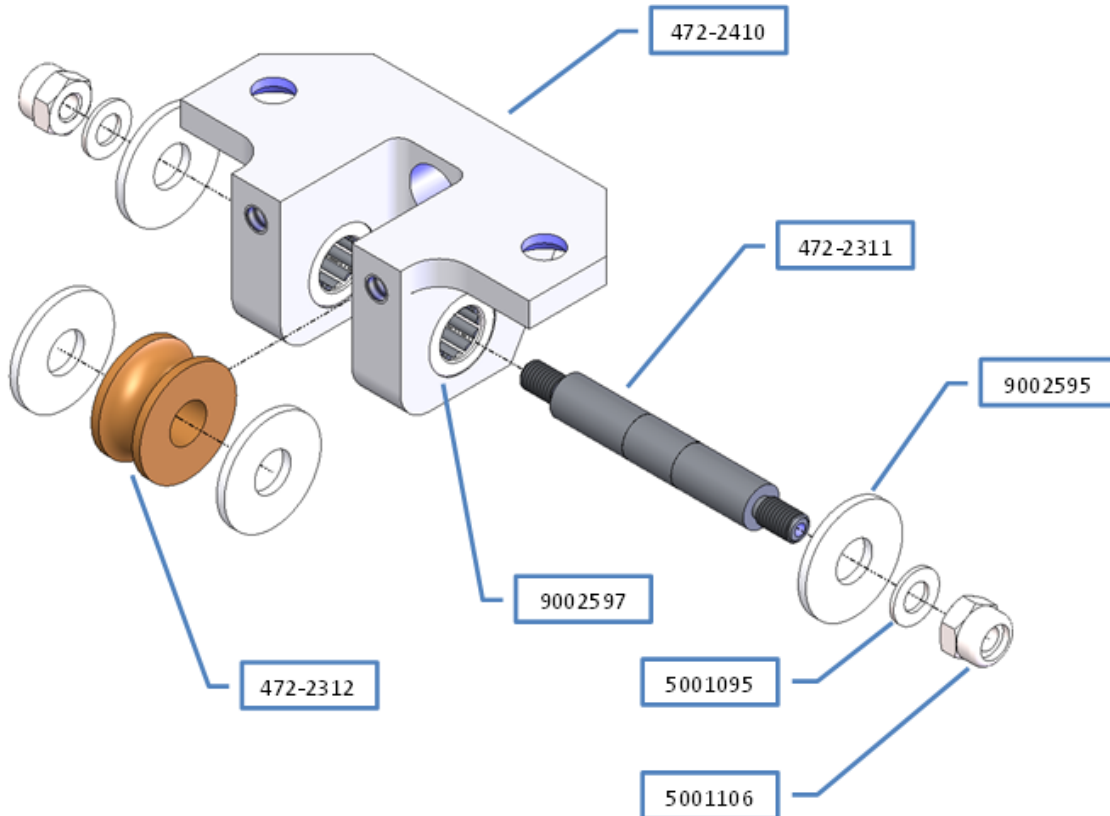
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-2300	18034138	Neck pulley bracket assembly	1
●	472-2310	55171744	Rear pulley bracket, neck	1
●	472-2311	55171739	Rear cable pulley shaft, neck	1
●	472-2312	55171740	Neck rear cable pulley	1
●	9002597	55171742	Bearing, needle roller (3/16 bore)	2
●	9002595	55171741	Washer, teflon 0.187x0.5x0.04 THK	4
●	5000391	55171748	Dowel pin, M3x18 SS	2
●	5001095		Flat washer, M3 plain zink	2
●	5001106	55171747	Lock nut, M3 Hex SS	2

472-2200 Mounting platform assembly, neck



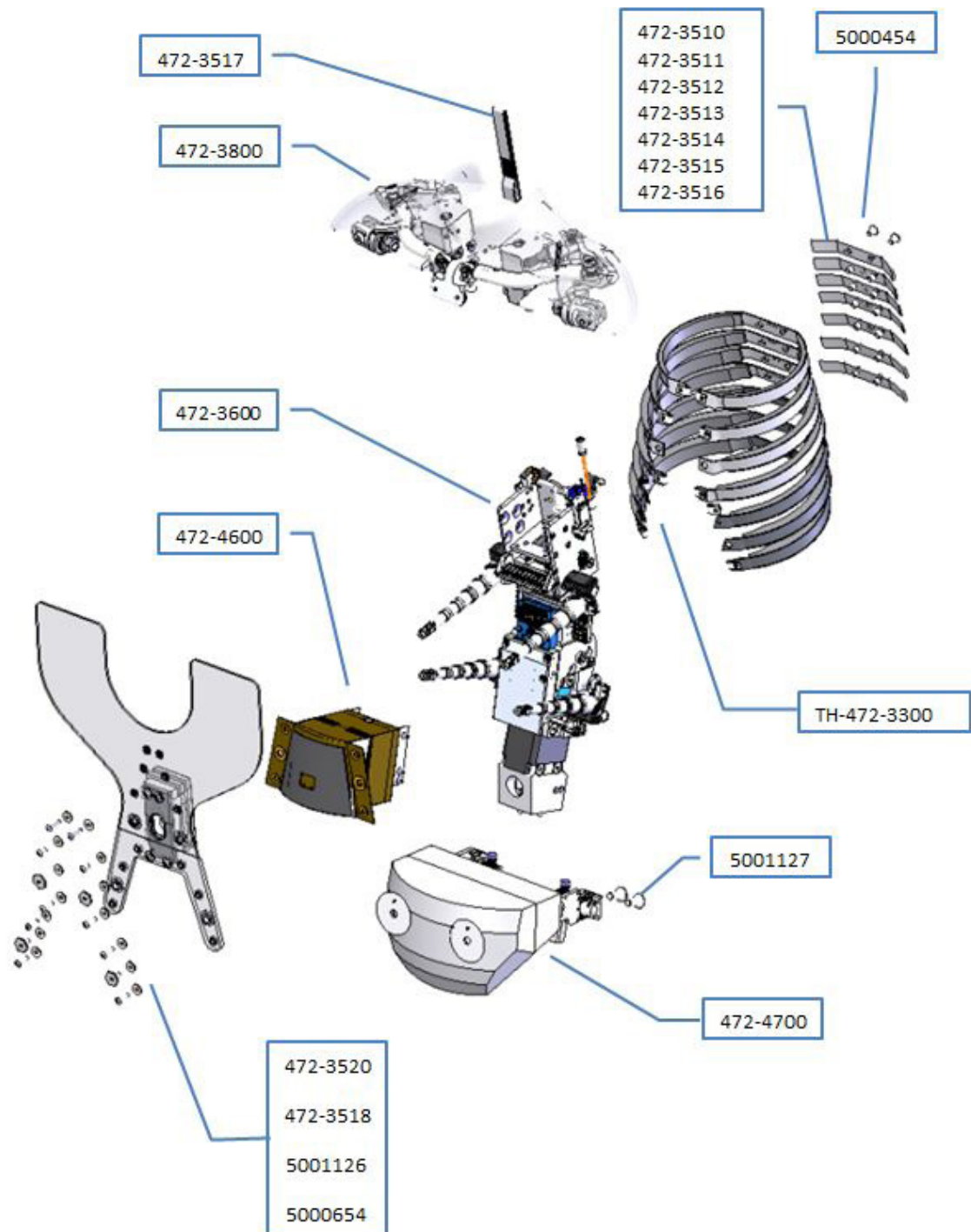
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-2200	18034137	Mounting Plattform Assembly, Neck	1
●	SA572-S112	M5519-DTI	Neck spring load cell	2
●	472-2203	55171784	Neck front / rear spring tube	2
●	472-2204	55171785	Front cable bushing, neck	1
●	472-2210	55171753	Head / neck mounting platform	1
●	472-2202	55171749	Optical condyle bushing	2
●	5000724	55171750	Mini keensert, M4 x 5,25	6
●	5001107	55171313	Mini Keensert, M3 x 4,25	4
●	472-2220	55171789	Front spring assembly	1
●	472-2221	55171786	Neck spring bushing	2
●	472-2222	55171787	Neck front spring damping tube	1
●	5000517	55171788	Spring, 16 x 8 I.D. x 76	1
●	472-2230	55171758	OC stop assembly	1
●	472-2231	55171754	Flexion extension stop plate, neck	1
●	472-2232	55171755	Neck front OC stop	1
●	472-2233	55171756	Neck rear OC stop	1
●	472-2240	55171859	Rear spring assembly	1
●	472-2221	55171786	Neck spring bushing	2
●	472-2241	55187907	Neck rear spring damping tube	1
●	5000516	55171857	Spring, 16 x 8 I.D. x 89	1
●	472-2400	18034139	Head / neck pulley bracket assembly	1
●	9001459	55171860	Screw, M4 x 10 FHCS	6

472-2400 Head/neck pulley bracket assembly



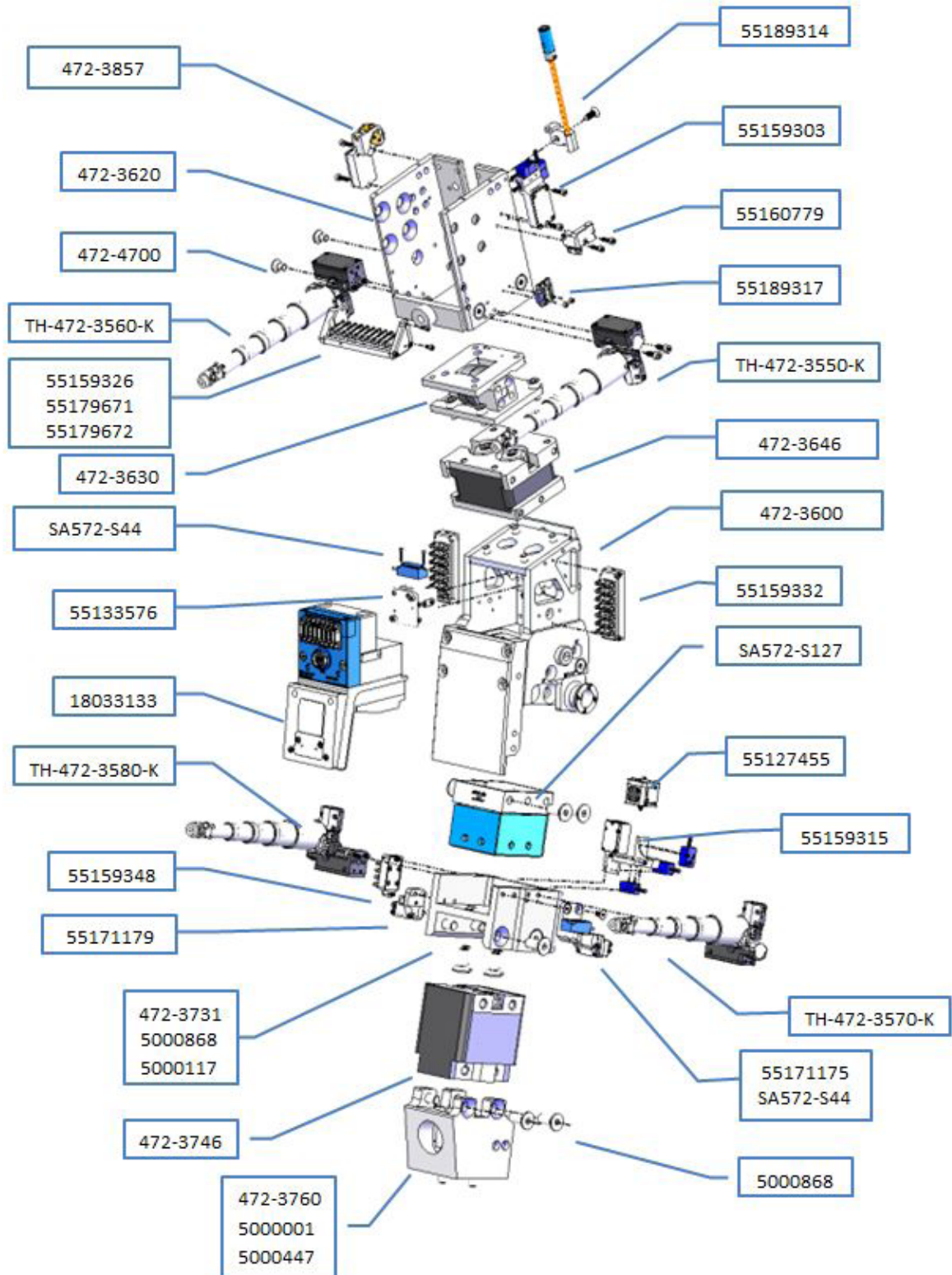
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-2400	18034139	Head/neck pulley bracket assembly	1
●	472-2410	55171761	Head/neck pulley bracket, neck	1
●	472-2311	55171739	Rear cable pulley shaft, neck	1
●	472-2312	55171740	Neck rear cable pulley	1
●	9002597	55171742	Bearing, needle roller	2
●	9002595	55171741	Washer, teflon 0.187x0.5x0.04 THK	4
●	5001106	55171747	Lock nut, M3x0.3 Hex SS	2
●	5001095		Flat washer, M3 plain zinc	2

472-3000 Thorax mechanical assembly



	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3000		Thorax mechanical assembly	1
●	TH-472-3300	55189214	Rib set, tested	1
●	472-3400	18034141	Thorax rib assembly	1
●	472-3510	55172225	Thorax elliptical rib stiffener #1	1
●	472-3511	55172226	Thorax elliptical rib stiffener #2	1
●	472-3512	55172227	Thorax elliptical rib stiffener #3	1
●	472-3513	55172229	Thorax elliptical rib stiffener #4	1
●	472-3514	55172230	Thorax elliptical rib stiffener #5	1
●	472-3515	55172231	Thorax elliptical rib stiffener #6	1
●	472-3516	55172232	Thorax elliptical rib stiffener #7	1
●	472-3517	55172267	Thorax rib #1 dummy lift strap	1
●	472-3518	55172266	IRTRACC connection bolt, upper thorax	2
●	472-3520	55172265	IRTRACC connection bolt, lower thorax	2
●	472-3600	18034147	Spine mechanical assembly	1
●	472-3800	18034151	Shoulder assembly	1
●	472-4600	18034153	Upper abdomen assembly	1
●	472-4700	18034154	Lower abdomen mechanical assembly	1
●	5000151	55172713	Screw, M4x10 SHCS	4
●	5000210	55172707	Screw, M5x20 BHCS	6
●	5000214	55172715	Screw, M5x6 BHCS	2
●	5000454	55172704	Screw, M8x10 BHCS	14
●	5000513	55172714	Clip nut, M5 (Monadnock #130300-M5-1)	10
●	5000571	55172710	Screw, M5x22 BHCS	2
●	5000654	55171923	Screw, M5x12 BHCS	2
●	5000989	55171920	Screw, M4x8 SHCS	4
●	5001126	55172222	Flat washer, M5 large OD SS	14
●	5001127	55172711	Screw, M10x25 FHCS	2
●	9003723	55172717	1/4 coated cable clamp	2

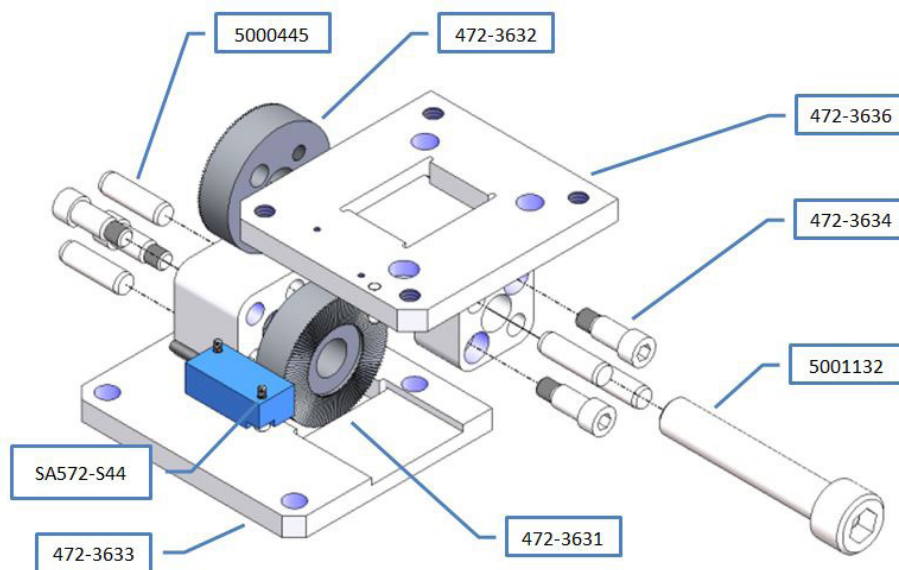
472-3600 Spine mechanical assembly



	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3600	18034147	Spine mechanical assembly	1
●	TH-472-3550-K	18036193	KIR-TRACC, Uppr Lft	1
●	TH-472-3560-K	18036768	KIR-TRACC, Uppr Rht	1
●	TH-472-3570-K	18036769	KIR-TRACC, Lwr Lft	1
●	Th-472-3580-K	18036815	KIR-TRACC, Lwr Rht	1
●	472-3600	55161912	Spine mechanical assembly	1
●	472-3620	55172331	Upper thoracic spinebox weldment	1
●	472-3630	18034148	Neck pitch change mechanism assembly	1
●	472-3646	55172347	Upper thoracic spine flex joint assembly	1
●	472-3720	55172349	Thoracic spine load cell structural replacement	1
●	472-3731	55172350	Thoracic spine load cell flex joint adaptor plate	1
●	472-3746	55172362	Lumbar spine flex joint assembly	1
●	472-3760	55172353	Pelvis/Lumbar mounting block assembly	1
●	472-3857	55159286	T1 accelerometer mount assembly	1
●	472-4203	55181889	Tri-pack accel assembly	2
●	5000001	55161911	Screw, M6x20 SHCS	4
●	5000117	55172572	Screw, M8x25 FHCS	2
●	5000151	55172713	Screw, M4x10 SHCS	1
●	5000204	55173448	Screw, M6x10 FHCS	4
●	5000281	55172564	Screw, M6x12 SHCS	8
●	5000326	55183651	Screw, M4x12 FHCS	2
●	5000354V	55183653	Screw, M3x16 FHCS	2
●	5000447	55171388	Screw, M4x16 FHCS	2
●	5000868	55172568	Screw, M8x20 FHCS	15
●	5000985		Screw, M2x16 SHCS	1
●	5001137		Screw, M2x14 SHCS	2
●	SA572-S44	IES 1402	Tilt sensor	2
●	SA572-S127	M56495-DTI	Thoracic spine load cell	1
●		55127455	T12 DTI-M60	1
●		55133576	T4 (6?) DTI-Sixpack	1
●		55159303	T1 Angular rate-mount bracket assembly	1
●		55159315	T12 M60&ACC mounting bracket assembly	1
●		55159326	DTI-10-mer collector	1
●		55159332	DTI-7-mer collector	2
●		55159348	DTI-Tilt 4-mer Collector	1
●		55160779	Tilt head collector	1
●		55171175	DTI-Disconnecting point pelvis, leg left	1
●		55171179	DTI-Disconnecting point leg right	1
●		55179671	DTI-10-mer collector mounting bracket	1
●		55179672	DTI-10-mer collector mounting bracket	1

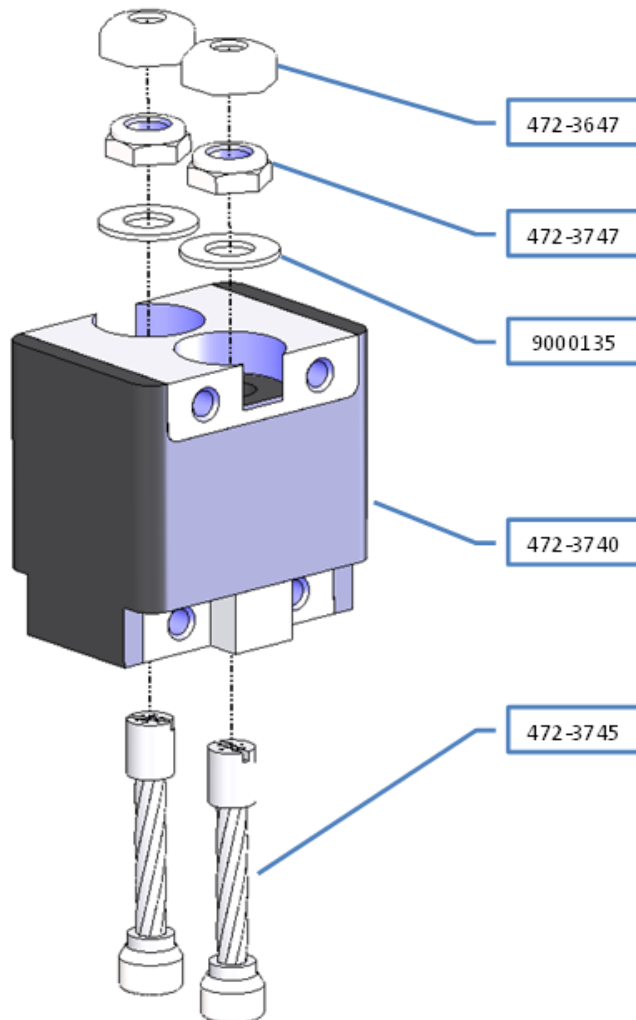
	NHTSA part no.	Kistler part no.	Description	QTY
●		55189314	DTI-LED-mounting bracket	1
●		55189317	DTI-Backshell assembly	1
●		18033133	DTI375.TH Crash-Datenrekorder system	1

472-3630 Neck pitch change mechanism assembly



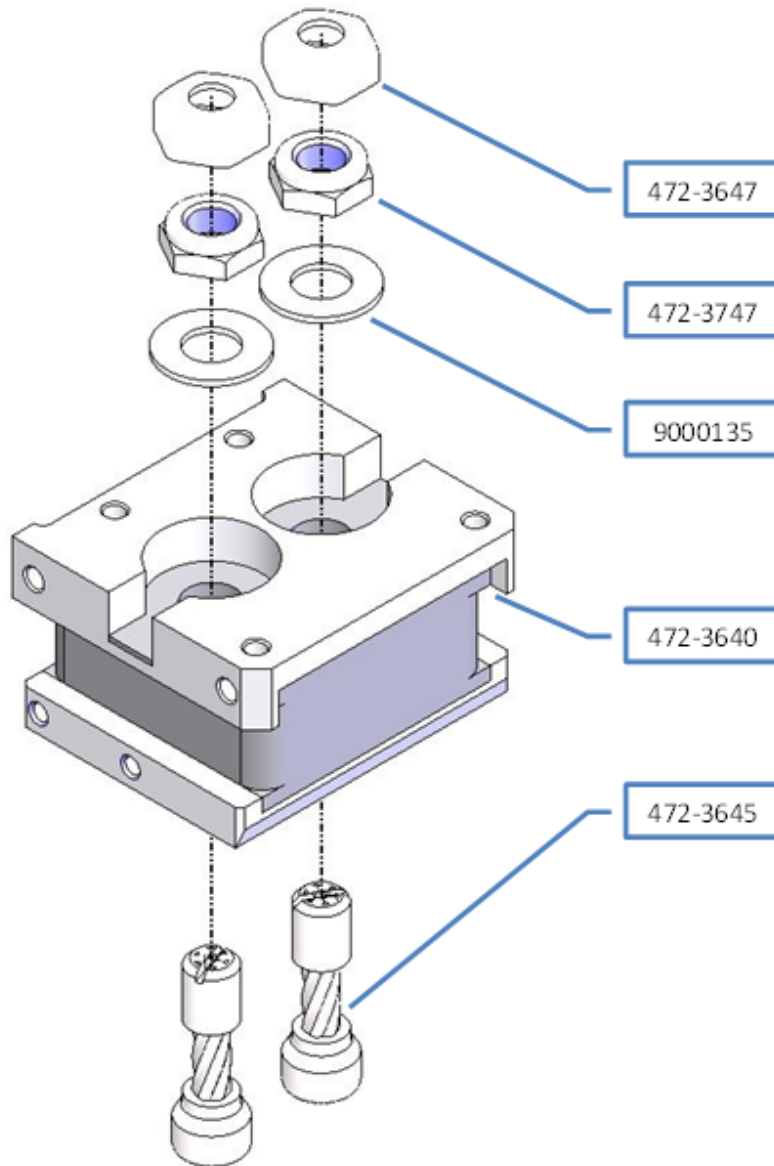
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3630	18034148	Neck pitch change mechanism assembly	1
●	472-3632	55172271	Neck pitch change mechanism star pattern 1	1
●	472-3631	55172270	Neck pitch change mechanism star pattern 2	1
●	472-3633	55172268	Neck pitch change mechanism base plate	1
●	472-3634	55172269	Neck pitch change mechanism bolt	4
●	472-3636	55172278	Neck pitch change mechanism top plate	1
●	5000284	55172277	Dowel pin, M3x10	1
●	5000445	55172563	Dowel pin, pull out M6x20	4
●	5001132	55172562	Screw, M10x55 SHCS	1
●	SA572-S44	IES 1402	Tilt sensor	1

472-3746 Lumbar spine flex joint assembly



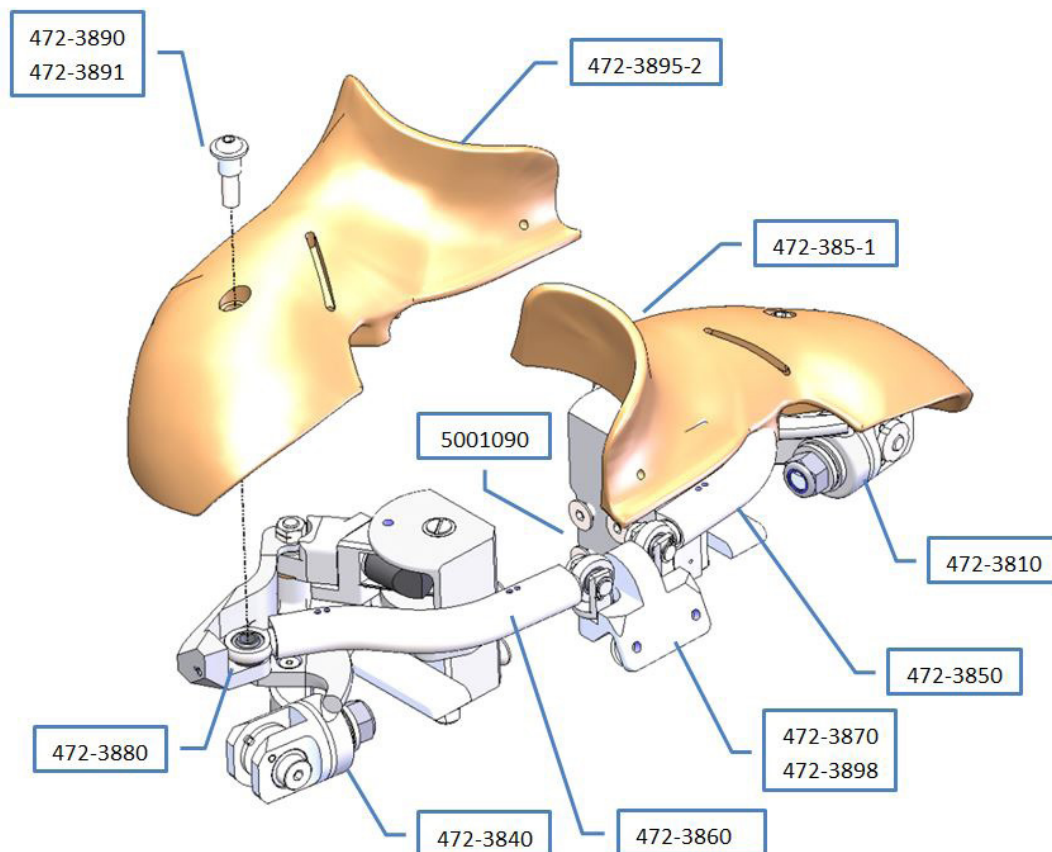
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3746	55172362	Lumbar spine flex joint assembly	1
●	472-3740	55172359	Lumbar spine flex joint molded assembly	1
●	472-3741	55172356	Lumbar spine flex joint top plate	1
●	472-3742	55172357	Lumbar spine flex joint bottom plate	1
●	472-3745	55172361	Lumbar spine flex joint cable assembly	2
●	472-3747	55172341	Locknut, M12x1.75 modified	2
●	472-3647	55172342	M12 Vinyl nut cover	2
●	9000135	55172340	Washer, ½ PTEE flat	2

472-3646 Upper thoracic spine flex joint assembly



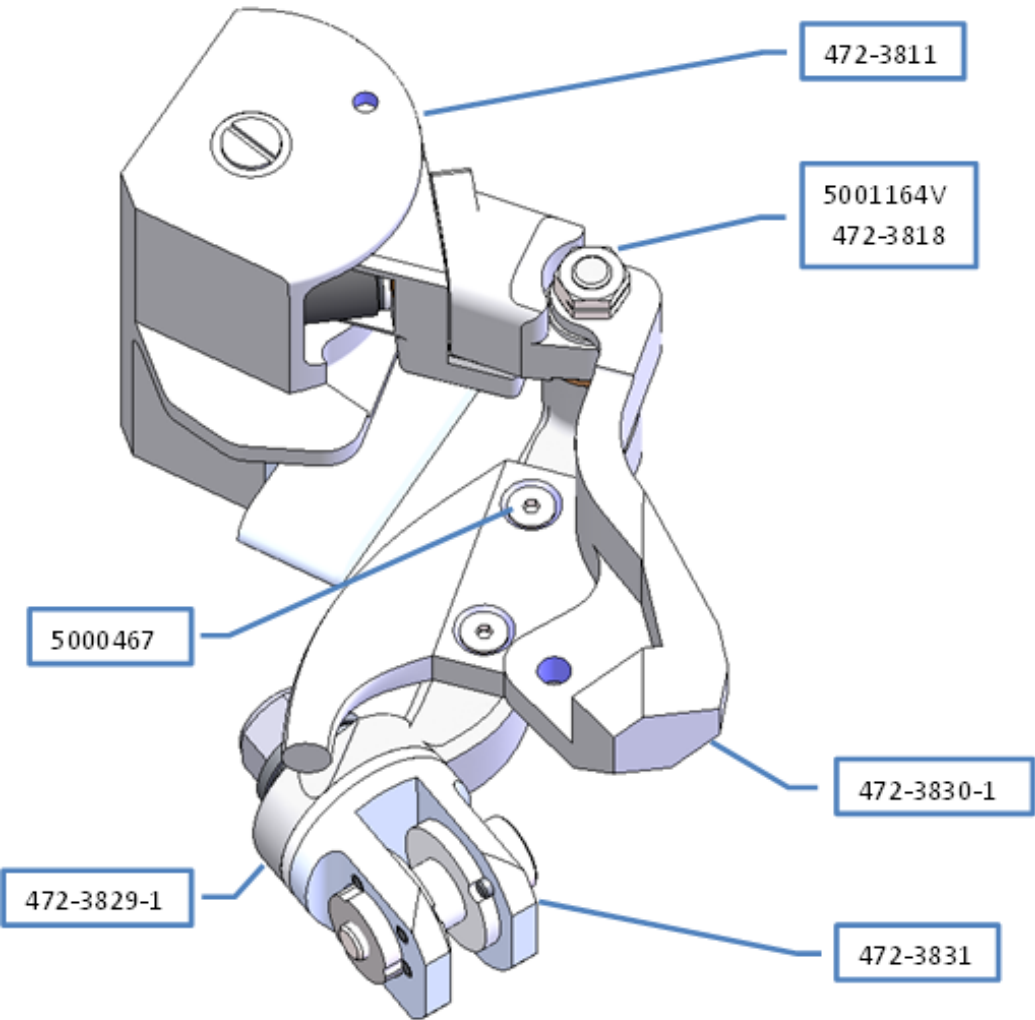
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3646	55172347	Upper thoracic spine flex joint assembly	1
●	472-3640	55172339	Upper thoracic spine flex joint molded assembly	1
●	472-3641	55172332	Upper thoracic spine flex joint bottom plate	1
●	472-3642	55172337	Upper thoracic spine flex joint top plate	1
●	472-3747	55172341	Locknut, M12x1.75 modified	2
●	472-3645	55172346	Upper thoracic spine flex joint cable assembly	2
●	472-3647	55172342	M12 vinyl nut cover	2
●	9000135	55172340	Washer, ½ PTFE flat	2

472-3800 Shoulder assembly



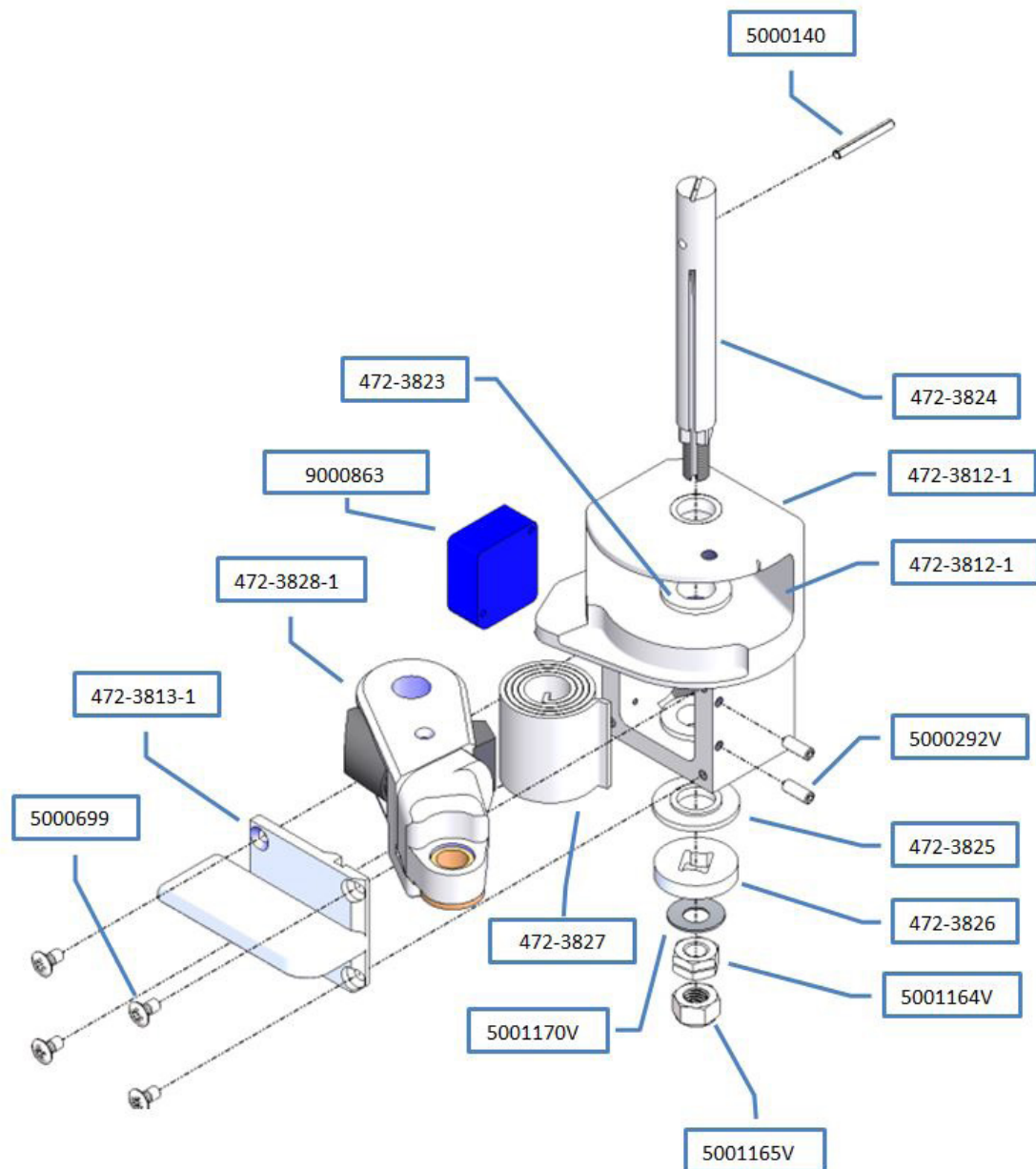
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3800	18034151	Shoulder assembly	1
●	472-3810	55172127	Left shoulder assembly	1
●	472-3840	55172148	Right shoulder assembly	1
●	472-3850	55172166	Left clavicle assembly	1
●	472-3860	55172173	Right clavicle assembly	1
●	472-3870	55172175	Sternum bracket	1
●	472-3880	55172170	Rod end spacer assembly	2
●	472-3890	55172178	Shoulder cover bushing	2
●	472-3891	55172179	Modified M8 bolt	2
●	472-3895-1	55172186	Shoulder cover, left	1
●	472-3895-2	55172187	Shoulder cover, right	1
●	472-3898	55172182	Rubber spacer washer	2
●	5001090	55172181	Screw, M8x12 FHCS	8

472-3810 Left shoulder assembly



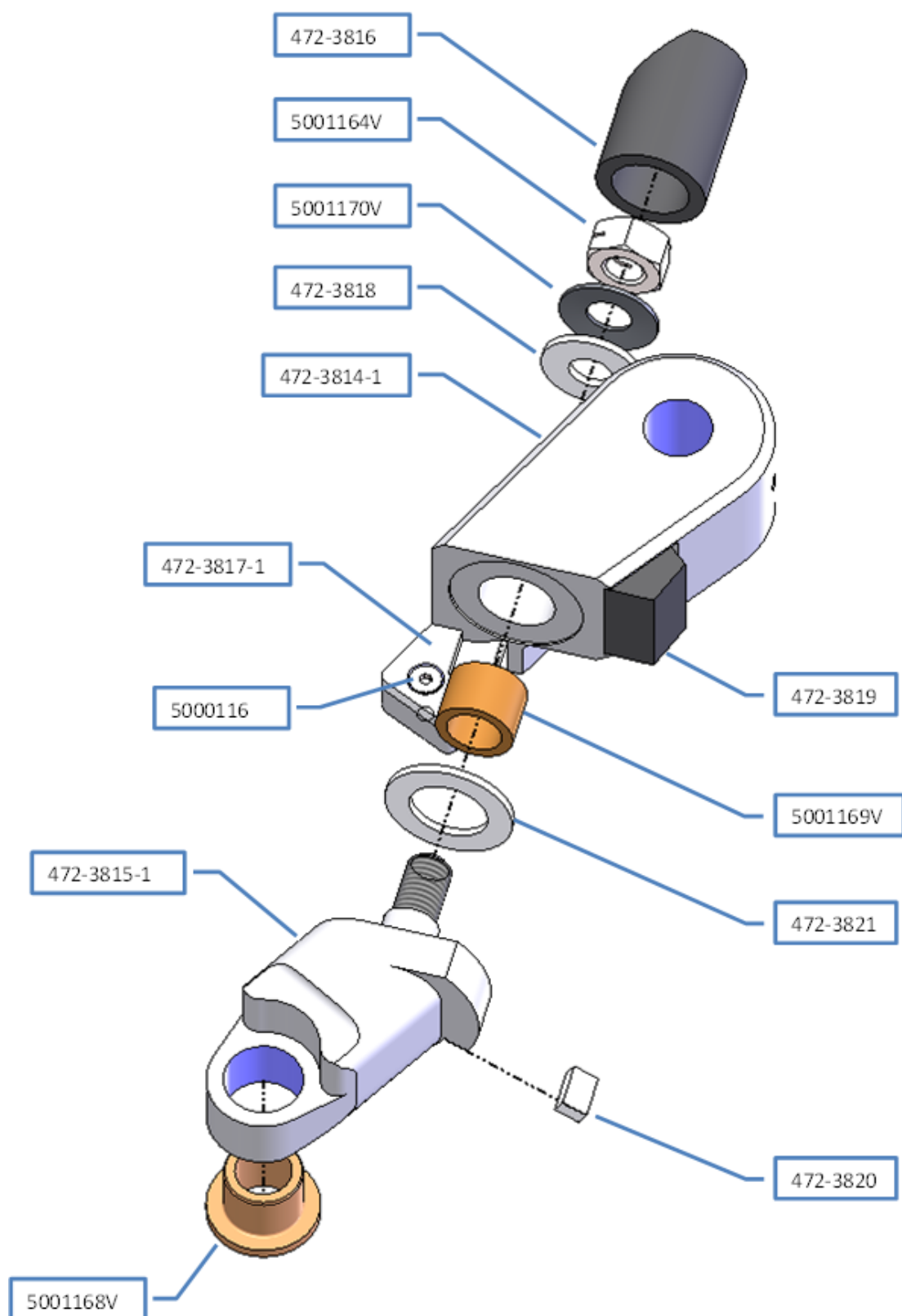
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3810	55172127	Left shoulder assembly	1
●	472-3811	55172091	Left shoulder pivot assembly	1
●	472-3829-1	55172104	Arm link, LH	1
●	472-3818	55171989	Washer link, 18x8x1.5	1
●	472-3830-1	55172097	Scapula, LH	1
●	472-3831	55172122	Arm clevis assembly	1
●	5000467	55172126	Screw, M5x16 FHCS	2
●	5001164V	55171991	Locknut, M8x1.25, SNEP #ESN H100	1

472-3811 Left shoulder pivot assembly



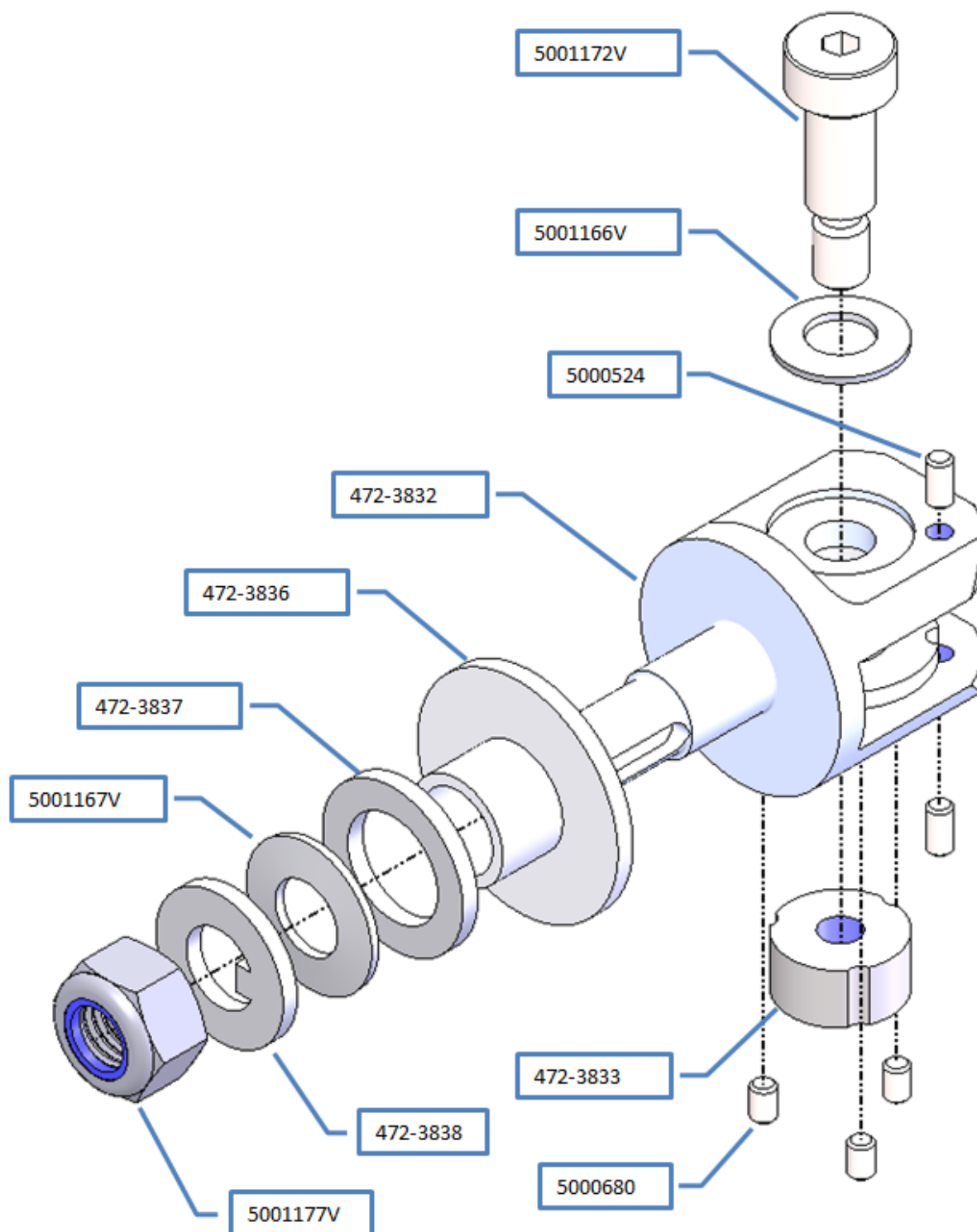
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3811	55172091	Left shoulder pivot assembly	1
●	472-3812-1	55172001	Spring housing cover, LH	1
●	472-3813-1	55171999	Shoulder support pivot assembly	1
●	472-3822	55172004	Spring housing bushing, upper	1
●	472-3823	55172006	Spring housing bushing, lower	2
●	472-3824	55172005	Spring shaft	1
●	472-3825	55172011	Spring housing washer, lower	1
●	472-3826	55172012	Washer	1
●	472-3827	55172007	Spring	1
●	472-3828-1	55172010	Rib guide lower, LH	1
●	5000140	55172090	Roll pin, M3x24	1
●	5000292V	55172089	Screw, M4x12 SSFP	2
●	5000699	55172013	Screw, M4x8 PHILLIPS FHMS	4
●	5001164V	55171991	Locknut, M8x1.25, SNEP #ESN H100	1
●	5001165V	55172014	Nylock, M8x1.25	1
●	5001170V	55171990	Spring disc washer, lower	1
●		IES 1404	TEMP	1
●	9000863	55183661	Screw, M2.5x16 SHCS	2

472-3813-1 Shoulder support assembly, LH



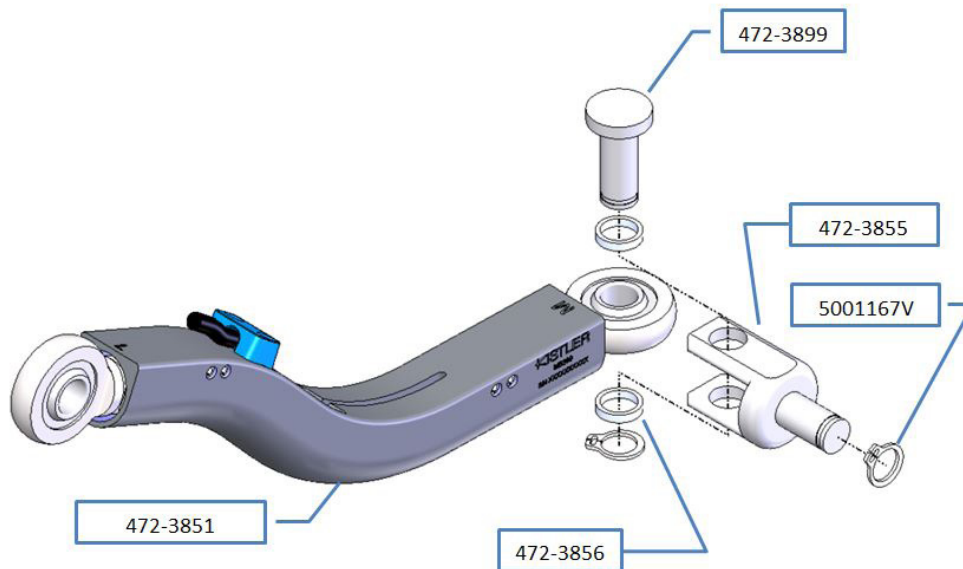
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3813-1	55172091	Left shoulder support assembly	1
●	472-3814-1	55171984	Shoulder support, LH	1
●	472-3815-1	55171987	Spring support pivot, LH	1
●	472-3816	55171992	Forward rom buffer	1
●	472-3817-1	55171993	Buffer, lower left	1
●	472-3818	55171989	Washer link, 18x8x1.5	1
●	472-3819	55171994	Rear rom buffer	1
●	472-3820	55171996	Buffer, vertical	1
●	472-3821	55171986	Link washer, 23x14.2x1.5	1
●	5000116	55171998	Screw, M3x8 FHCS	1
●	5001164V	55171991	Locknut, M8x1.25, SNEP #ESN H100	1
●	5001168V	55171997	Flange Bearing, 14 ODx20 FLx10 IDx12 LG	1
●	5001169V	55171985	Bearing, Iglidur 14x10x10	1
●	5001170V	55171990	Spring disc washer, 20x8.2x1	1

472-3831 Arm clevis assembly



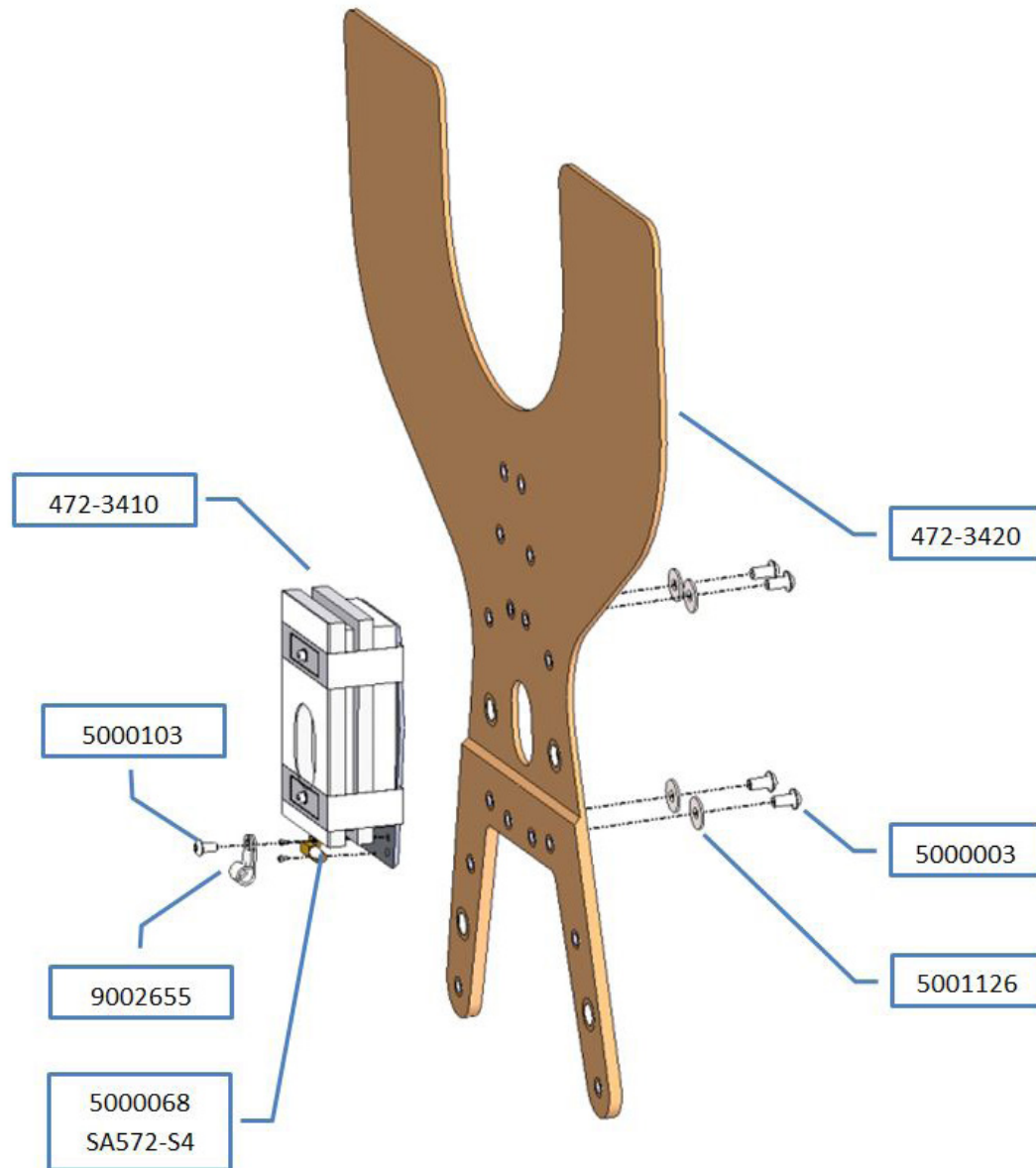
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3831	55172122	Arm clevis assembly	1
●	472-3832	55172110	Arm clevis	1
●	472-3833	55172112	Nut, upper arm pivot	1
●	472-3834	55172115	Washer, upper arm	1
●	472-3835	55172116	Bushing, upper arm	1
●	472-3836	55172117	Bushing, arm pivot	1
●	472-3837	55172118	Washer, arm clevis	1
●	472-3838	55172119	Tabbed washer	1
●	5000524	55172106	Dowel pin, M4x8	2
●	5000680	55172105	Dowel pin, M4x6	3
●	5001166V	55172121	Disc spring washer, 20x10.2x1.1	1
●	5001167V	55172107	Disc spring washer, 25x12.2x1.25	1
●	5001172V	55172120	Screw, M10x20 SHSS	1
●	5001177V	55172108	Locknut, Nylon M12x1.75	1

472-3850 Left clavicle assembly



	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3850	55172166	Left clavicle assembly	1
●	472-3851	55172150	Clavicle	1
●	472-3855	55172161	Linkage base, inboard	1
●	472-3856	55172158	Rod end bearing spacer, inboard	1
●	472-3899	55172159	Linkage pin, inboard clavicle	1
●	5001174V	55172163	8 mm retaining ring	2

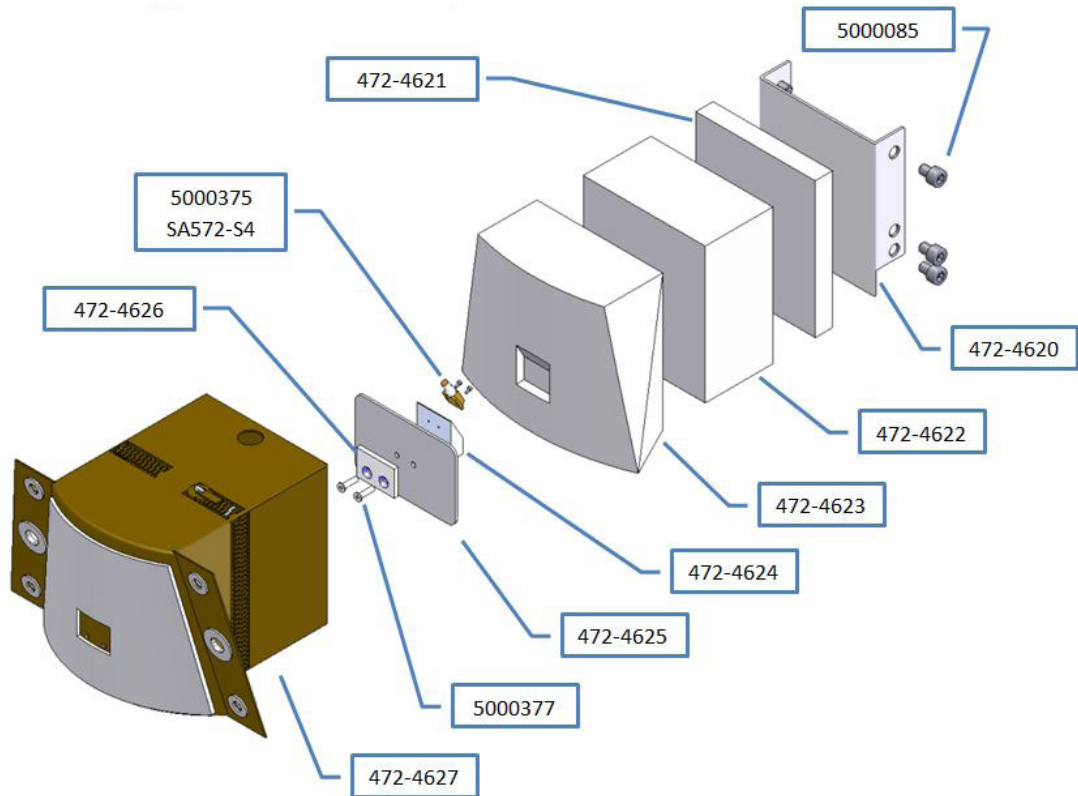
472-3400 Thorax bib assembly



	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3400	18034141	Thorax bib assembly	1
●	472-3410	55172208	Mid-sternum bonding assembly	1
●	472-3413	55172203	Mid-sternum plate	1
●	472-3414	55172199	Mass damping foam #1, mid-sternum	1
●	472-3411	55172200	Mid-sternum mass	1
●	472-3412	55172201	Mass-damping foam #2, mid-sternum	1
●	472-3415	55172197	Mid-sternum rubber pad	1

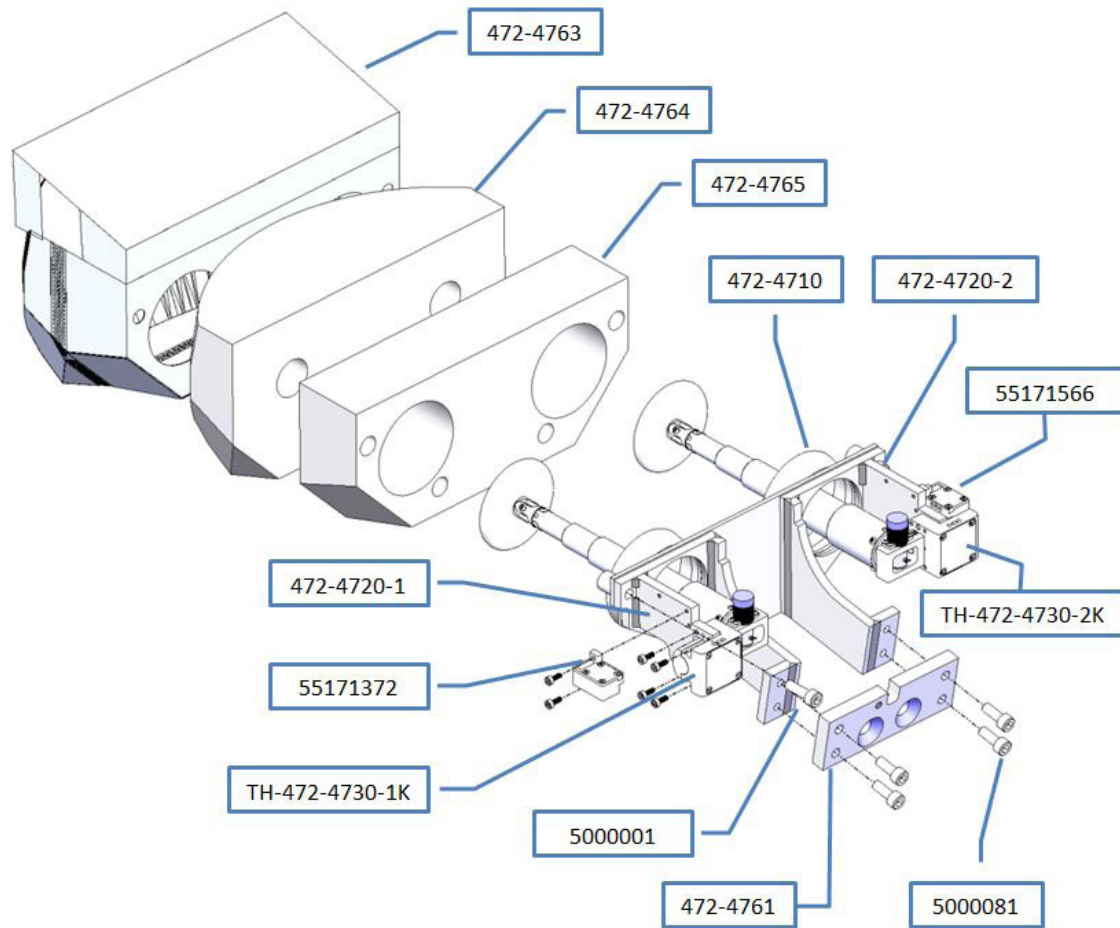
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-3420	55172215	Thorax outer rib	1
●	472-3421	55172205	Bib insert – thin, small	6
●	472-3422	55172209	Bib insert – thick, small	10
●	472-3423	55172210	Bib insert – thin, large	2
●	472-3424	55172211	Bib insert – thick, large	2
●	5000003	55172223	Screw, M5x10 BHCS	4
●	5000068	55181888	Screw, M1.4x0.3x3 SHCS	2
●	5000103	55172224	Screw, BHCS M4x0.7x8	1
●	5001126	55172222	Washer, M5x15x1.2 S.S.	4
●	9002655	55172217	Wire clamp, nylon 1/8 DIA	1
●	SA572-S4		Accelerometer	1

472-4600 Upper abdomen assembly



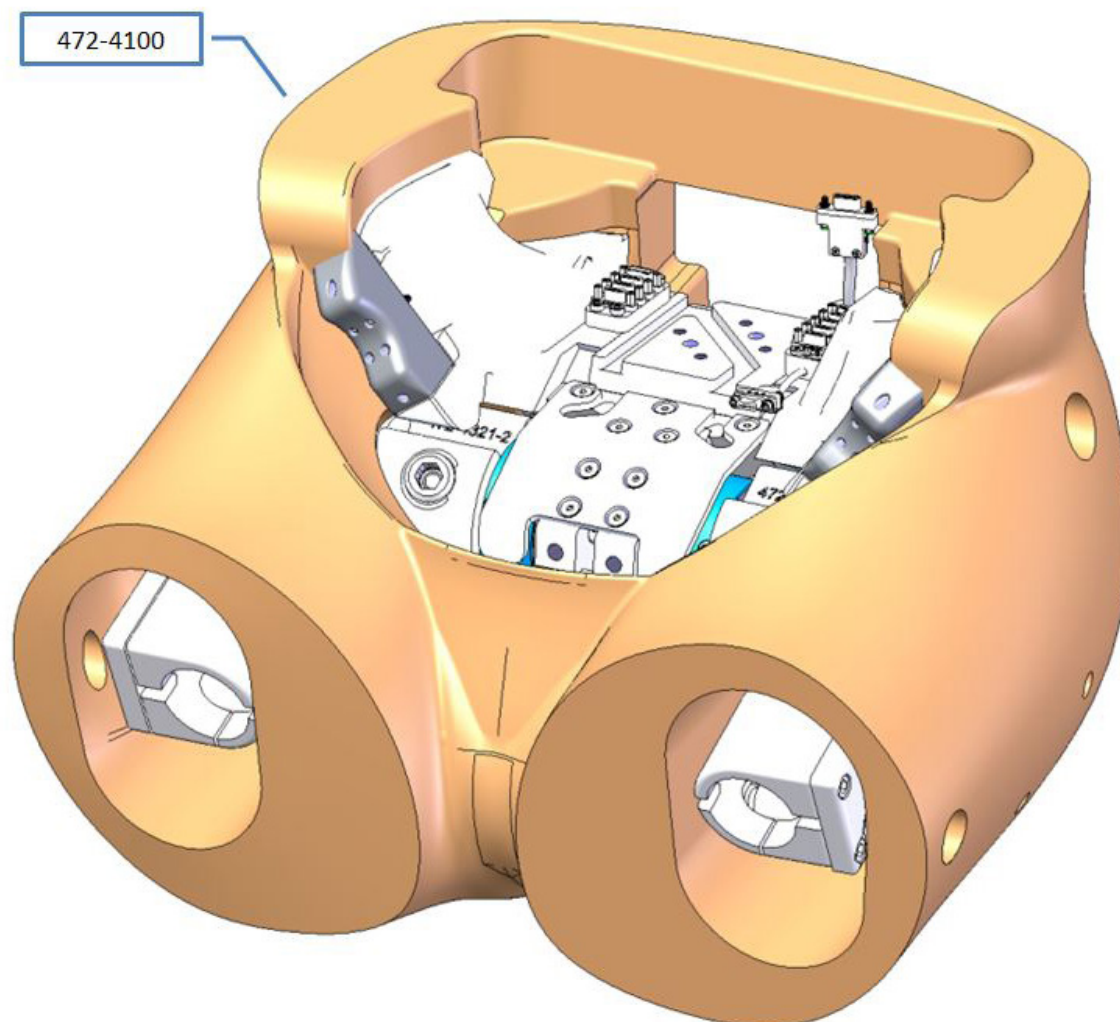
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-4600	18034153	Upper abdomen assembly	1
●	472-4620	55172579	Upper abdomen intern mount plate front	1
●	472-4621	55172580	Internal foam rear layer	1
●	472-4622	55172581	Internal foam middle layer	1
●	472-4623	55172582	Internal foam front layer	1
●	472-4624	55172585	Accelerometer mount, upper abdomen	1
●	5001107	55171313	Mini Keensert, M3x4.25	2
●	472-4625	55172586	Load distribution plate	1
●	472-4626	55172588	Accelerometer mount plate	1
●	472-4627	55172595	Grommet assembly, upper abdomen bag	1
●	5000085	55172598	Screw, M6x8 SHCS	6
●	5000375	55172219	Screw, M1.4x0.3x4 SHCS	2
●	5000377	55172172	Screw, M3x12 FHCS SS	2
●	SA572-S4		Accel	1

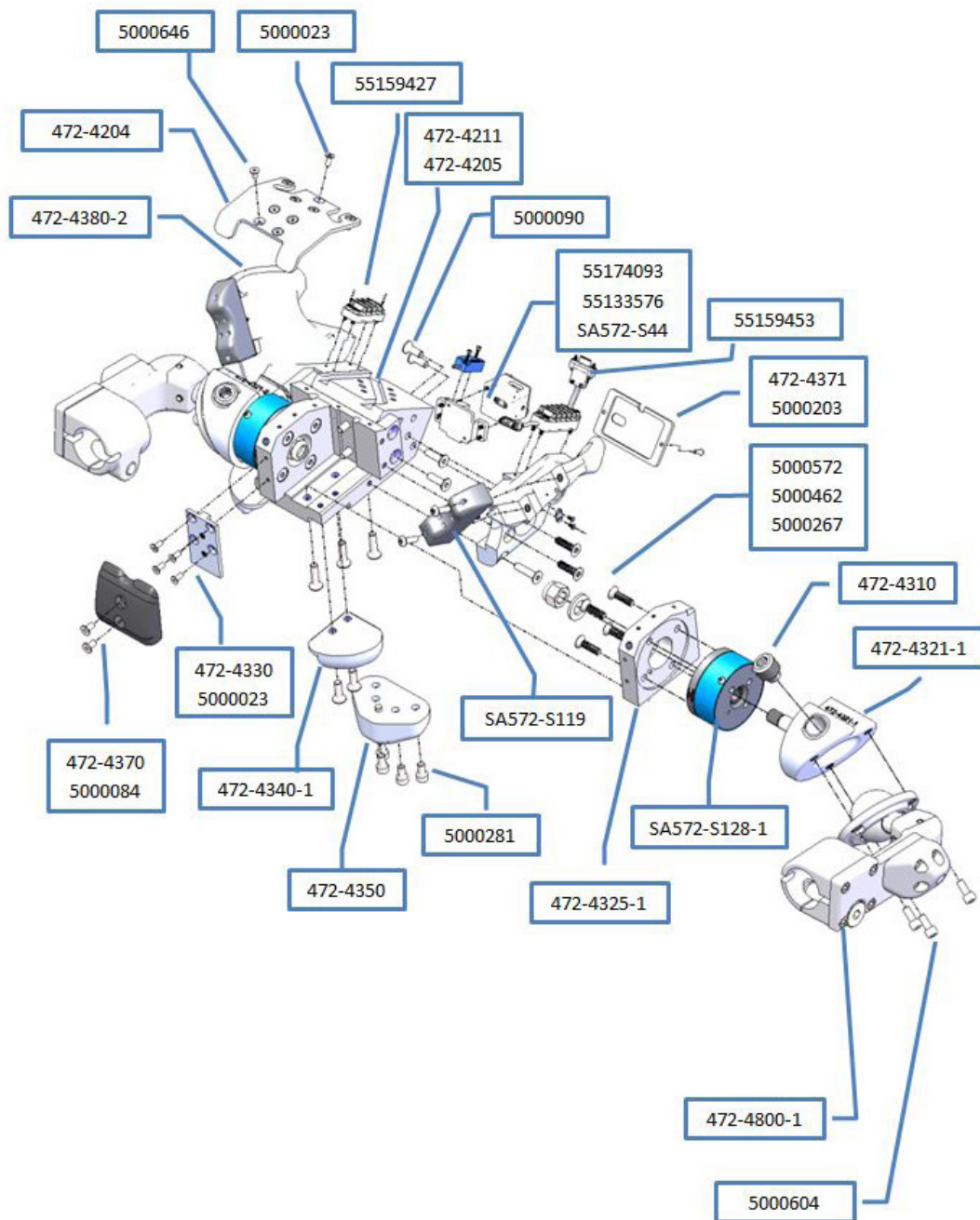
472-4700 Lower abdomen mechanical assembly



	NHTSA part no.	Kistler part no.	Description	QTY
●	472-4700	18034154	Lower abdomen mechanical assembly	1
●	472-4710	55172605	Internal mounting weld assembly	1
●	472-4711	55172601	Internal plate	1
●	472-4712	55172599	Threaded plug	4
●	472-4713	55172600	Flared overload cone	2
●	472-4720-1	55172649	Attach bracket weld assembly, left	1
●	472-4721	55172643	DGSP mount	1
●	472-4722	55172645	Side bracket rear flange	1
●	472-4723-1	55172644	Side bracket plate, left	1
●	472-4724-1	55172650	Side attach bracket front left plate	1
●	472-4720-2	55172654	Attach bracket weld assembly, right	1
●	472-4721	55172643	DGSP mount	1
●	472-4722	55172645	Side bracket rear flange	1
●	472-4723-2	55172650	Side bracket plate, right	1
●	472-4724-2	55172652	Side attach bracket front right plate	1
●	472-4760		Potentiometer cover	2
●	472-4761	55172656	Rear attachment plate	1
●	472-4762	55172661	Lower abdomen distribution plate	2
●	472-4763	55172666	Lower abdomen back, sewing assembly	1
●	472-4764	55172660	Lower abdomen front foam layer	1
●	472-4765	55172658	Lower abdomen rear foam layer	1
●	5000001	55161911	Screw, M6x20 SHCS	4
●	5000081	55171400	Screw, M6x16 SHCS	4
●		55171566	2-Channels housing right, assembly	1
●		55171372	2-Channels housing left, assembly	1
●	TH-472-4730-1K		KIR-TRACC, abdomen left, assembly	1
●	TH-472-4730-2K		KIR-TRACC, abdomen right, assembly	1

472-4000 Pelvis assembly

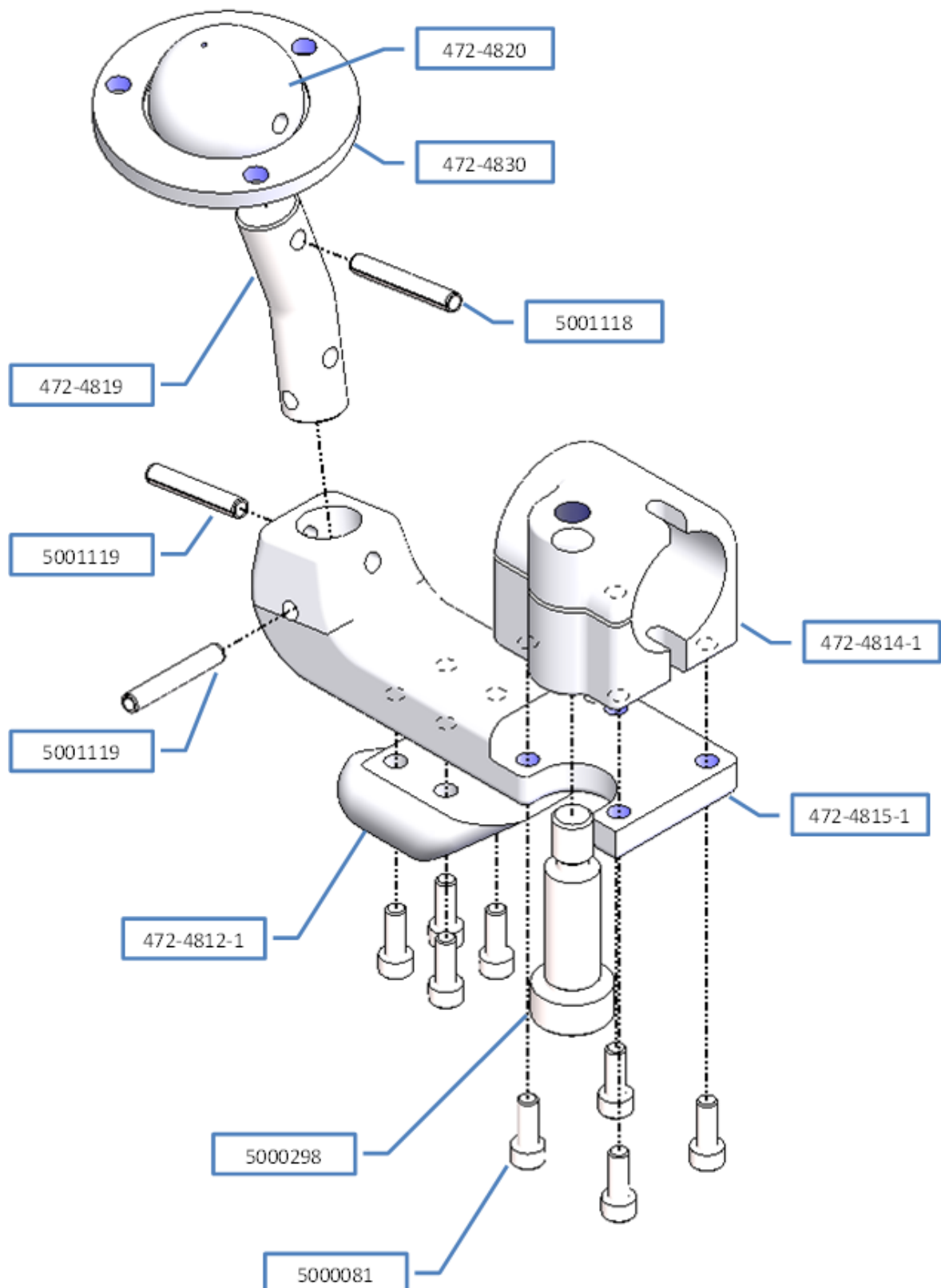




	NHTSA part no.	Kistler part no.	Description	QTY
●	472-4000	18034152	Pelvis assembly	1
●	472-4100	55172866	Pelvis flesh, molded	1
●	472-4204	55172881	Pelvis top plate	1
●	472-4205	55172743	Pelvis rear plate	1
●	472-4211	55172728	Pelvis base module	1
●	472-4310	55172821	Friction adjustment set screw assembly	2

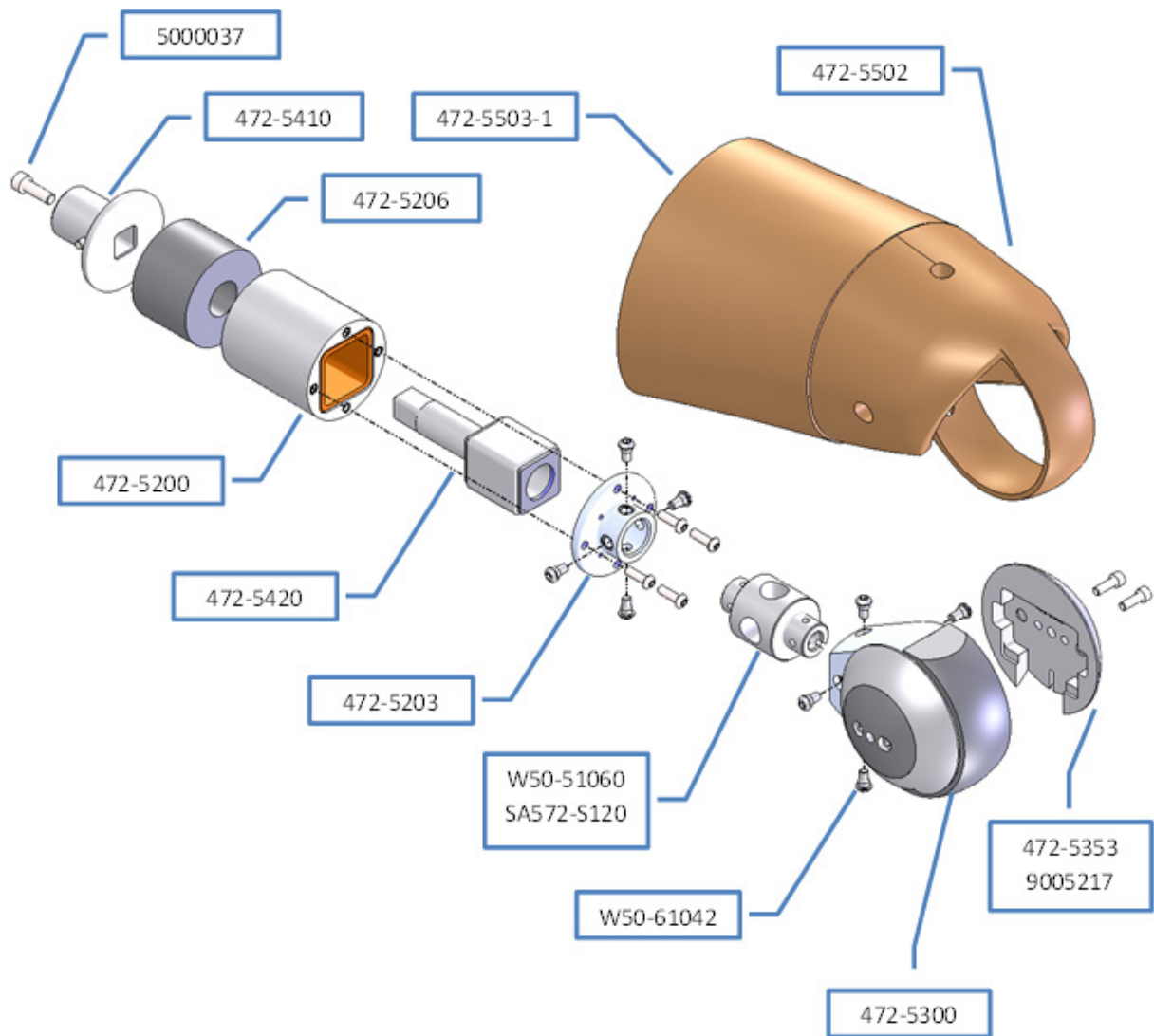
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-4321-1	55172762	Pelvis socket adaptor, left	1
●	472-4321-2	55172767	Pelvis socket adaptor, right	1
●	472-4323	55172753	Acetabular load cell structural replacement	2
●	472-4325-1	55172751	Pelvis load cell mounting plate, left	1
●	472-4325-2	55172746	Pelvis load cell mounting plate, right	1
●	472-4330	55172808	Pelvis front plate	1
●	472-4340-1	55172730	Pelvis left D-PT	1
●	472-4340-2	55172732	Pelvis right D-PT	1
●	472-4350	55172739	Pelvis coccyx	1
●	472-4370	55172816	Machined front pelvic casting	1
●	472-4371	55172839	Pelvis accelerometer cover	1
●	472-4380-1	55172830	Left iliac assembly	1
●	472-4380-2	55172832	Right iliac assembly	1
●	472-4800-1	18034155	Left femur ball joint assembly	1
●	472-4800-2	18034156	Right femur ball joint assembly	1
●	SA572-S119	M52292-DTI	A.S.I.S. load cell right	1
●	SA572-S119	M52292-DTI	A.S.I.S. load cell left	1
●	SA572-S129	M52993-DTI	Acetabular load cell assembly, right	1
●	SA572-S128	M52893-DTI	Acetabular load cell assembly, left	1
●	5000023	55172868	Screw, M4x10 FHCS	9
●	5000084	55172869	Screw, M5x10 FHCS	2
●	5000090	55172875	Screw, M6x16 FHCS	4
●	5000135	55172871	Screw, M6x25 FHCS	8
●	5000203	55172877	Screw, M3x10 FHCS	3
●	5000267	55172878	Flat washer, M12 plain zinc	2
●	5000281	55172564	Screw, M6x12 SHCS	4
●	5000462	55172879	Lock nut, M12x1.75 hex zinc	2
●	5000572	55172870	Screw, M6x22 FHCS	12
●	5000604	55171902	Screw, M6x14 SHCS	6
●	5000646	55172867	Screw, M4x8 FHCS	4
●	5000723	55172880	Screw, M2.5x0.45x5 FHCS	16
●	5001089	55172873	Screw, M6x20 FHCS	12
●	5001111V		Washer, spring lock M3	1
●	9002655	55172217	Wire clamp, nylon 1/8 DIA	1
●	9009248V		Nut, M3x0.5 hex	1
●		55159427	DTI-Collector housing II pelvis, assembly	1
●		55159453	DTI-Collector housing I pelvis, assembly	1
●		55174093	DTI-Pelvis-Tilt+6Pack, Assembly	1
●		55133576	DTI-Sixpack	1
●	SA572-S44	IES 1402	Tilt sensor	1

472-4800-1 Left femur ball joint assembly



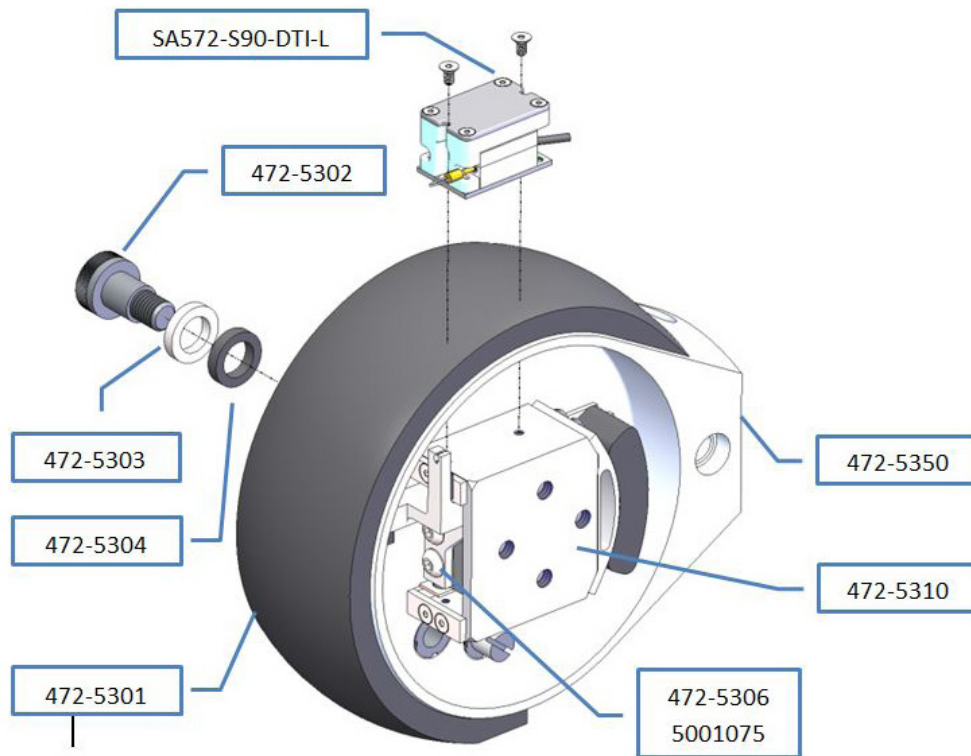
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-4800-1	18034155	Left femur ball joint assembly	1
●	472-4812-1	55172799	Trochanter, left	1
●	472-4814-1	55172770	Hip cylinder, left	1
●	472-4815	55172797	Hip arm, left	1
●	472-4819	55172772	Hip shaft	1
●	472-4820	55172779	Femur ball	1
●	472-4830	55172783	Femur retaining ring	1
●	5000081	55171400	Screw, M6x16 SHCS	8
●	5000298	55172791	Screw, M16x40 SHSS	1
●	5001118	55172795	Roll pin, M6x40	1
●	5001119	55172793	Roll pin, M6x35	2

472-5100-1 Left upper leg assembly



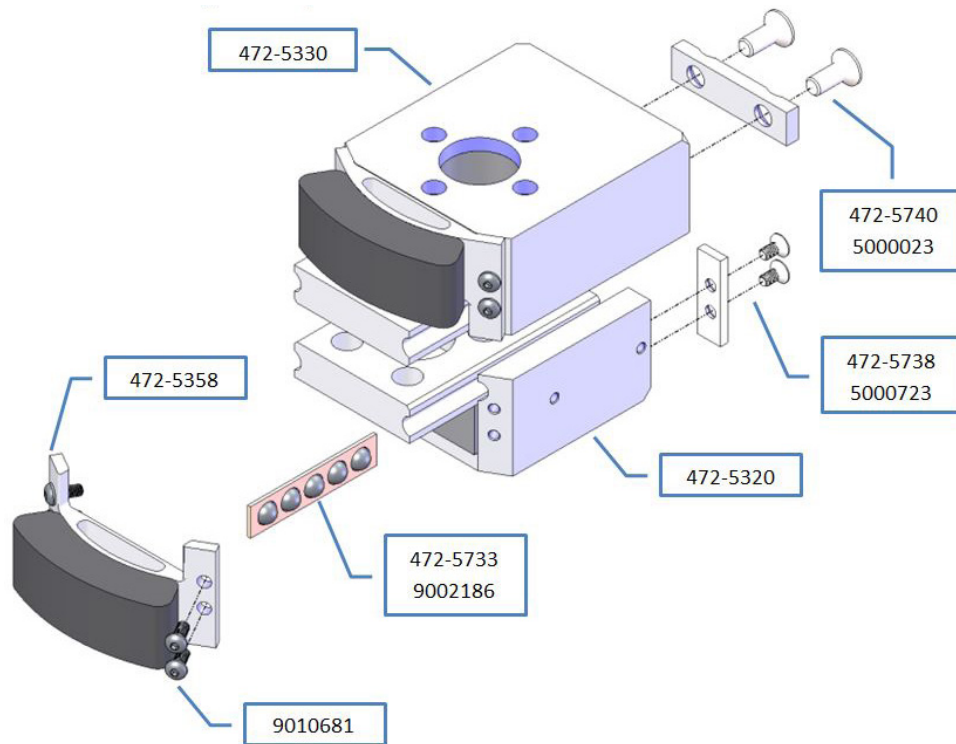
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-5100-1	18034157	Left upper leg assembly	1
●	472-5200	55173975	Femur bushing assembly	1
●	472-5201	55173900	Femur cup assembly	1
●	472-5202	55173972	Femur bushing	1
●	472-5203	55173894	End cap, femur	1
●	472-5206	55173897	Compression element upper leg	1
●	472-5300	18034160	Knee cap assembly, left	1
●	472-5353	55174025	Knee cover	2
●	472-5410	55174006	Femur ball attachment plate assembly	1
●	472-5411	55174005	Femur ball joint attachment plate	1
●	5000433	55172352	Dowel pin, M6x12	2
●	472-5420	55173996	Femur plunger assembly	1
●	472-5421	55173984	End stop	2
●	472-5422	55173995	Plunger, femur	1
●	472-5502	55174036	Knee flesh	1
●	472-5503-1	55174030	Tigh flesh, left	1
●	SA572-S120-DTI	M56506-DTI	Femur load cell	1
●	W50-61042	55174028	Modified BHSS M6 thread	8
●	5000037	55183592	Screw, M8x25 SHCS	1
●	5000438	51183618	Screw, M6x20 BHCS	4
●	9005217	55183617	Screw, M6x18 SHCS	4
●		55160120	DTI-Collector femur, assembly	

472-5300 Knee cap assembly, left



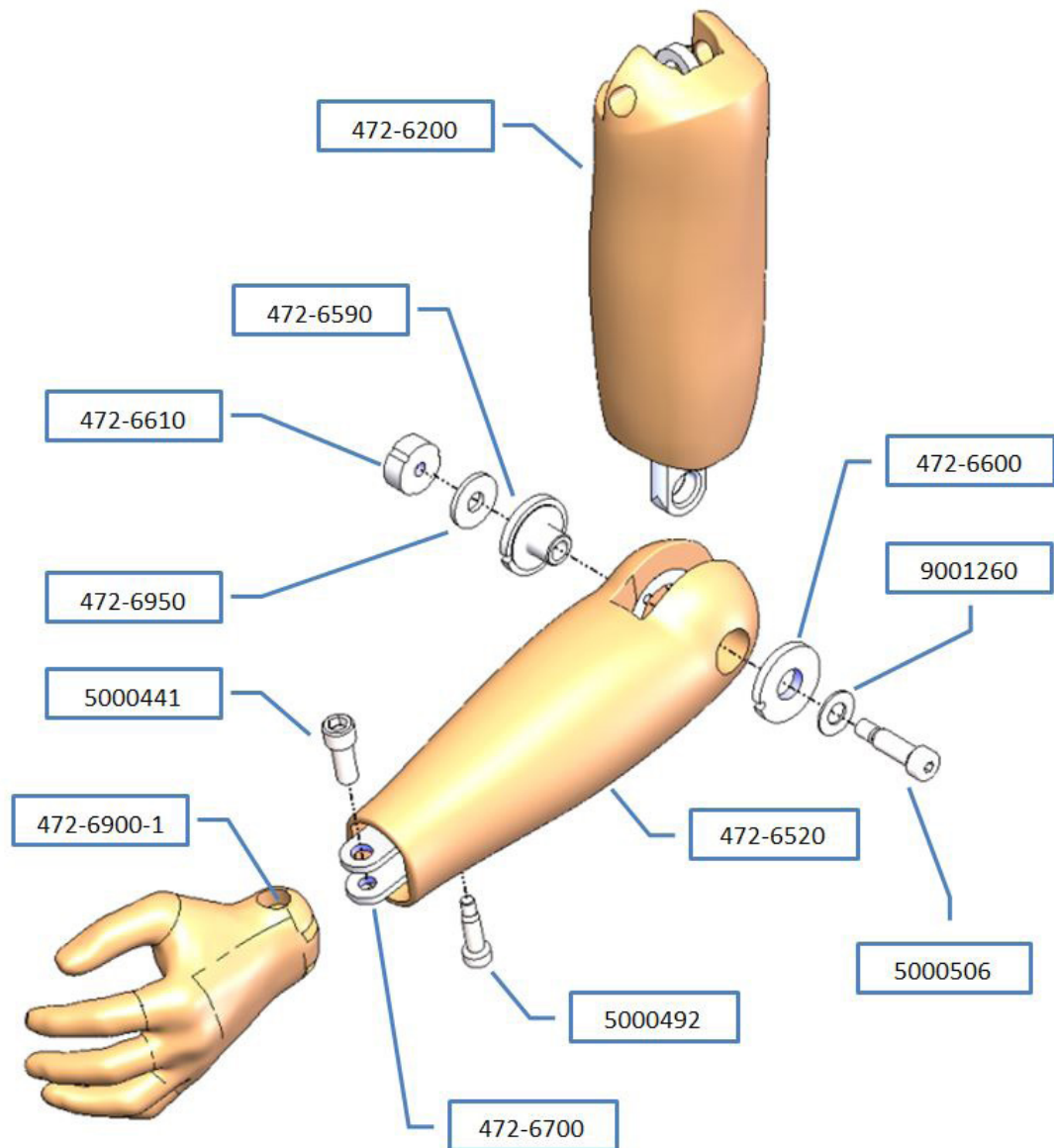
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-5300	18034160	Knee cap assembly, left	1
●	472-5301	55174087	Knee flesh insert, molded	1
●	472-5302	55174099	Bolt, shoulder	1
●	472-5303	55174089	Washer, sliding knee	1
●	472-5304	55174090	Washer, compression	1
●	472-5306	55174111	Assembly pot string holder, left	1
●	472-5737-1	55174110	Holder, pot string left	1
●	472-5735	55174106	Bumper, extension stop	1
●	472-5736	55174105	Bumper, return stop	1
●	472-5310	55174155	Assembly, inboard/outboard slider	1
●	472-5350	18034161	Knee cap assembly	1
●	472-5351	55174173	Knee cap	1
●	472-5762	55174174	Threaded insert, modified	2
●	5000182	55183602	Roll pin, M4x10	
●	472-5763	55174104	Pin, knee stop	1
●	5001075	55183616	Screw, M4x6 BHCS	2
●	SA572-S90-L		DTI-Firstmark DiMod housing (100.275.980)	1
●	SA572-S90-R		DTI-Firstmark DiMod housing (100.275.979)	1

472-5310 Assembly, inboard/outboard slider



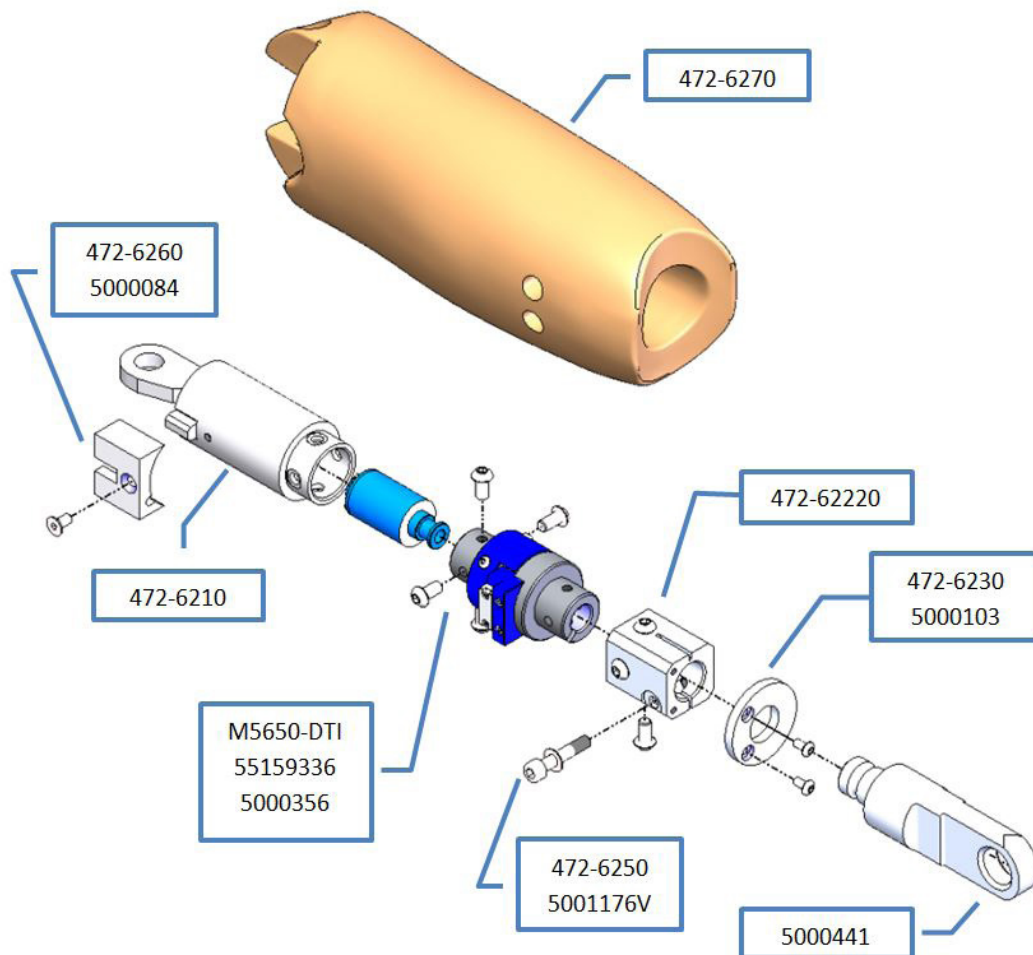
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-5310	55174155	Assembly, inboard/outboard slider	1
●	472-5320	55174127	Inboard slider, molded	1
●	472-5321	55174122	Race, outer	1
●	472-5322	55174121	Race, inner	1
●	472-5330	55174130	Outboard slider, molded	1
●	472-5331	55174128	Race, outer	1
●	472-5332	55174129	Outboard slider, inner race	1
●	472-5358	55174133	Knee slider stop assembly	2
●	472-5356	55174131	Stop, slider	1
●	472-5357	55174132	Bumper, slider	1
●	472-5733	55174152	Bronze separator	4
●	472-5738	55174151	Stop, ball	2
●	472-5740	55174134	Ball slider stop	1
●	5000023	55172868	Screw, M4x10 FHCS	2
●	5000723	55172880	Screw, M2.5x5 FHCS	4
●	9002186	55174153	Ball 4.76 mm DIA	20
●	9010681	55174154	Screw, M2.5x6 BHCS	8

472-6000-1 Left arm assembly



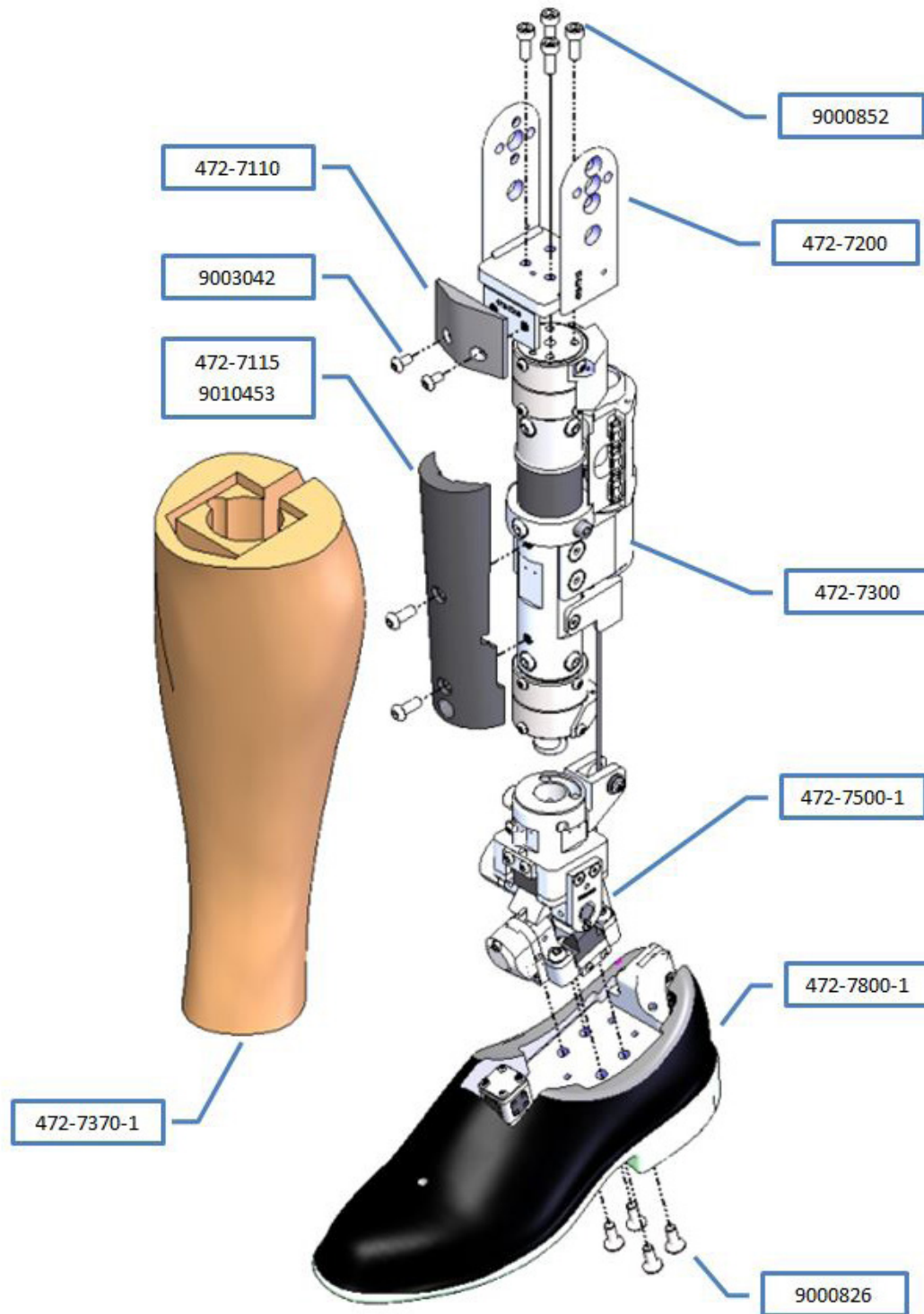
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-6000-1	18034162	Left arm assembly	1
●	472-6200	18034164	Upper humerus assembly	1
●	472-6520	55175033	Lower arm molded	1
●	472-6590	55173232	Bushin, upper arm & elbow pivot	1
●	472-6600	55173247	Washer, upper arm & elbow pivot	1
●	472-6610	55173249	Nut, elbow pivot	1
●	472-6700	55173848	Lower wrist rotation assembly	1
●	472-6710	55173844	Lug – wrist, upper	1
●	472-6720	55173846	Lug – wrist, lower	1
●	472-6730	55173843	Shaft, wrist rotation	1
●	472-6900-1	18034165	Hand assembly molded, left	1
●	472-6910	55173859	Structural assembly, hand	1
●	472-6950	55173248	Washer, shoulder joint spring	1
●	9001260	55183619	Washer, 1.06 OD x 0.53 ID x 0.06 THK	1
●	5000506	55183620	Screw, M12x30 SHSS	1
●	5000492	55183625	Screw, M10x25 SHSS	1
●	5000441	55183628	Screw, M12x30 SHCS	1

472-6200 Upper humerus assembly



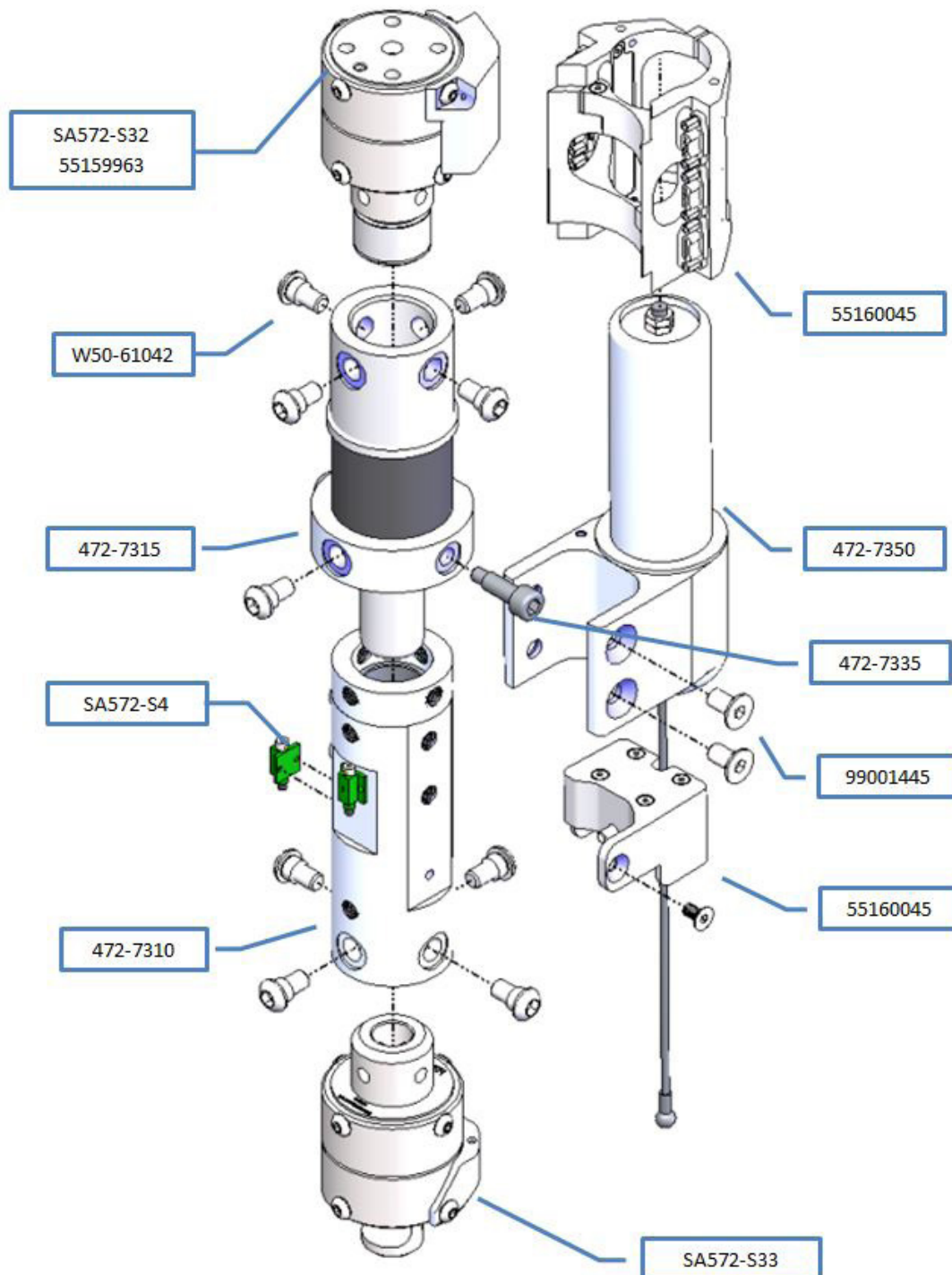
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-6200	18034164	Upper humerus assembly	1
●	472-6210	55173032	Upper humerus weldment	1
●	472-6220	55173132	Lower load cell interface	1
●	472-6230	55173168	Arm end plate	1
●	472-6240	55173167	Upper arm, lower section	1
●	472-6250	55173180	Screw, M6 SHCS (modified)	1
●	472-6260	55173171	Arm flesh spacer	1
●	472-6270	55173172	Upper arm flesh	1
●		M5650-DTI	Load Cell	1
●	5000103	55172224	Screw, M4x8 BHCS	2
●	5000356	55183612	Screw, M6x12 BHCS	8
●	5000084	55172869	Screw, M5x10 FHCS	1
●	5001176V	55183613	Spring disc washer, 12.5x6.2x0.5	1
●		55159336	DTI-Arm LC-Tube for M5650 Assembly	1

472-7000-1 Lower leg assembly, left



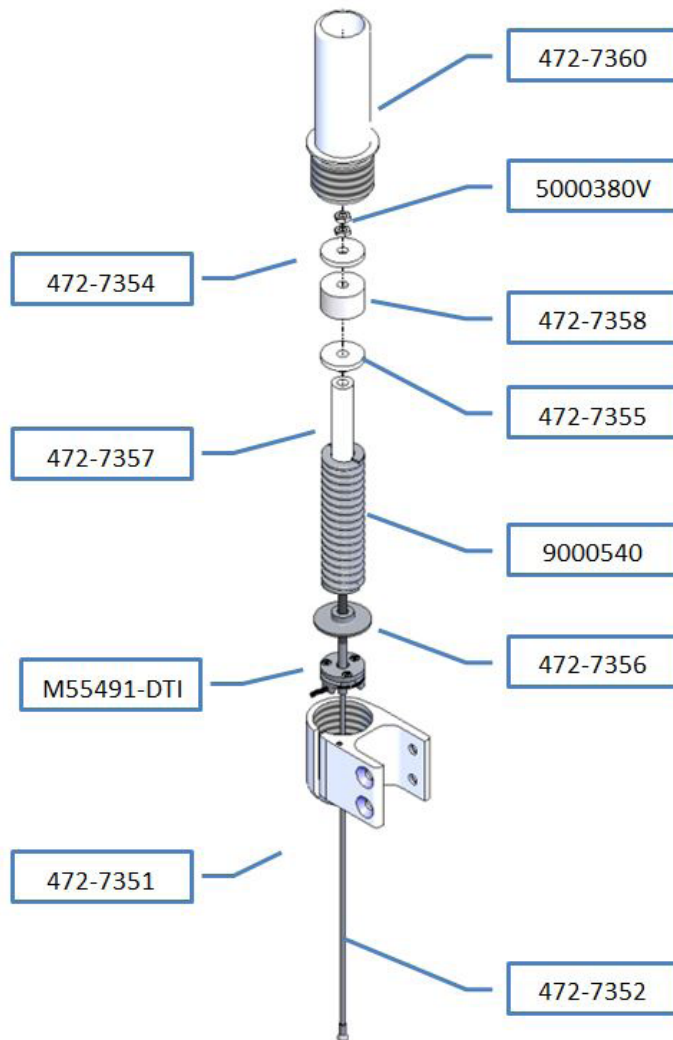
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-7000-1	18034167	Lower leg assembly, left	1
●	472-7110	55188011	Knee bumper, molded	1
●	472-7115	55181780	Tibia guard	1
●	472-7200	55181765	Knee clevis weldment	1
●	472-7300	18034169	Lower leg mechanical assembly	1
●	472-7370-1	55181798	Lower leg flesh, left	1
●	472-7500-1	18034171	Ankle assembly, left	1
●	472-7800-1	18034173	Molded shoe assembly, left	1
●	9000826	55171355	Screw, M6x16 FHCS	4
●	9000852	55183663	Screw, M6x16 SHCS	4
●	9003042	55183669	Screw, M5x10 BHCS	2
●	9010453	55183665	Screw, M6x16 BHCS	2

472-7300 Lower leg mechanical assembly



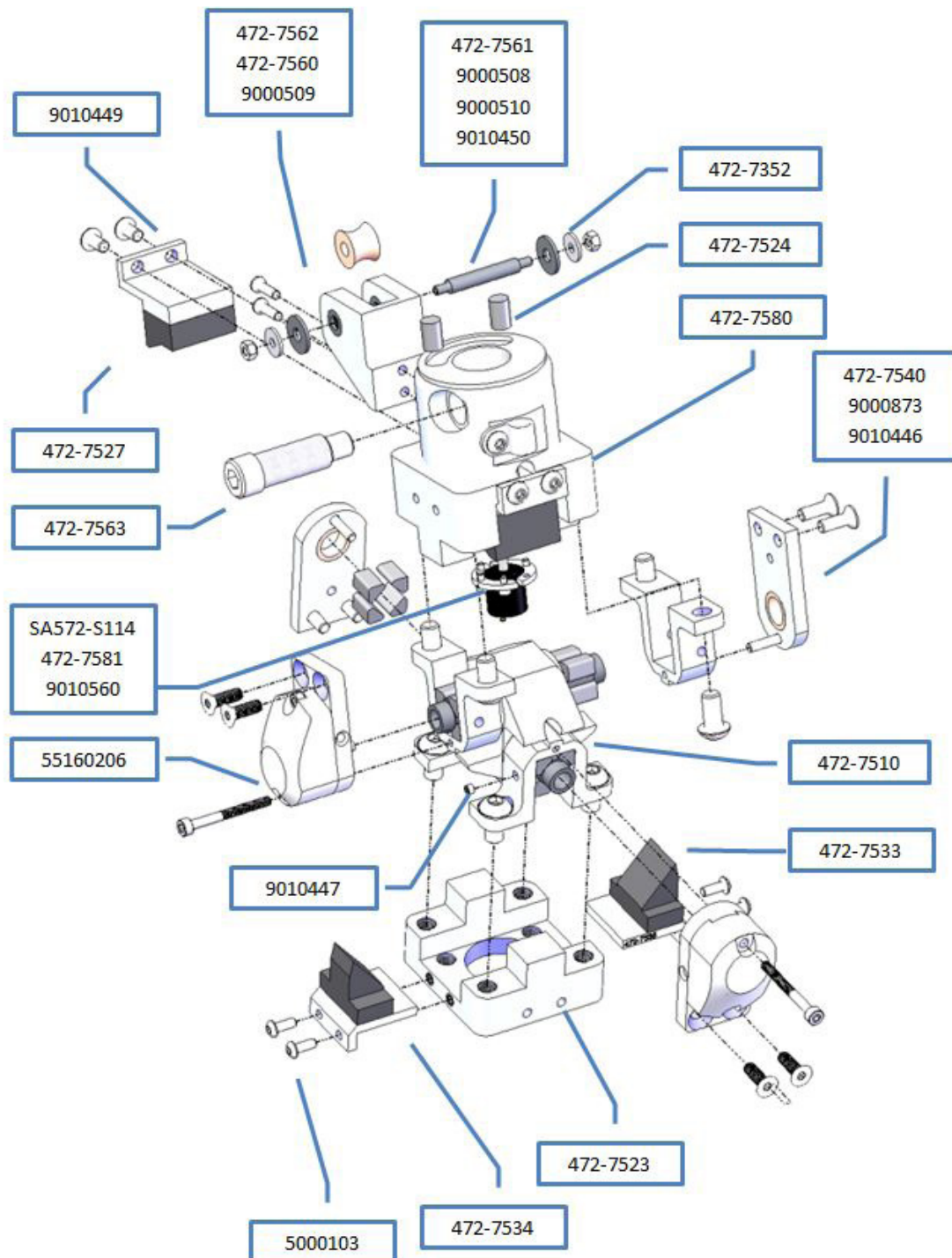
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-7300	18034169	Lower leg mechanical assembly	1
●	472-7310	55181482	Lower tibia tube assembly	1
●	472-7311	55181476	Lower tibia tube	1
●	9010423	55181480	Igus Iglide J bearing, 1" OD x ¾" ID x 1" LG	2
●	9010437	55181481	Helicoil, M6x6	10
●	472-7315	55181496	Tibia complaint bushing	1
●	472-7316	55181487	Plunger, complaint bushing	1
●	472-7318	55181492	Bushing, complaint	1
●	472-7317	55181490	Lower flange	1
●	472-7335	55181536	Plunger retaining bolt	2
●	472-7350	18034170	Achilles spring tube mechanical assembly	1
●	9000058	55183598	Screw, M3x12 SHCS	1
●	9001445	55183597	Screw, M6x12 FHCS	5
●	9010447	55183601	Screw, M3x3 SHSS	1
●	SA572-S32		Five channel upper tibia load cell (M5529-DTI)	1
●	SA572-S33		Five channel lower tibia load cell (M5539-DTI)	1
●	W50-61042	55174028	Modified BHSS M6 thread	9
●		55159963	DTI-LC Dom, Assembly	1
●		55160008	DTI- Collector -A Achilles Spring, Assembly	1
●		55160045	DTI-Collector-B Achilles Spring, Assembly	1
●	SA572-S4		Tibia Accel	2

472-7350 Achilles spring tube – mechanical assembly

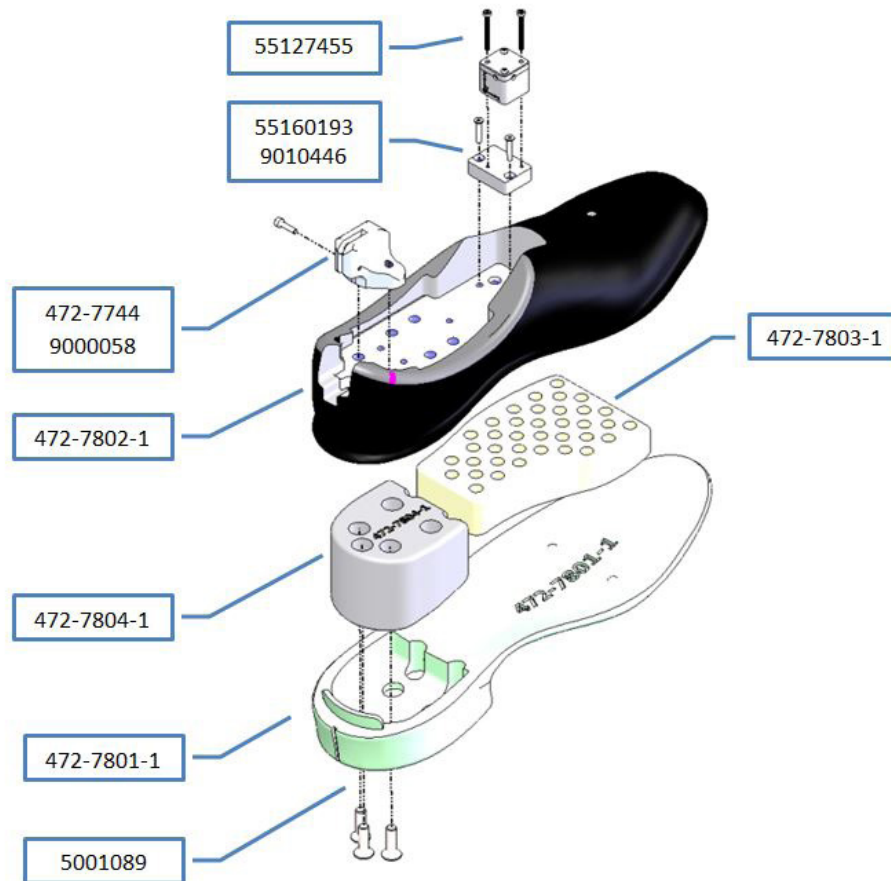


	NHTSA part no.	Kistler part no.	Description	QTY
●	472-7350	18034170	Achilles spring tube mechanical assembly	1
●	472-7351	55181502	Tube base, achilles spring	1
●	472-7352	55181522	Achilles cable assembly	1
●	472-7354	55181518	Washer, achilles primary	1
●	472-7355	55181516	Spring cap, achilles	1
●	472-7356	55181509	Spring base cap, achilles	1
●	472-7357	55181514	Elastomeric spring element	1
●	472-7358	55181517	Foam compression element	1
●		M55491-DTI	Achilles load cell (M55491-DTI)	1
●	472-7360	55181519	Tube, achilles spring	1
●	5000380V	55171927	Nut, hex jam M5	2
●	9000540	55181510	Compression spring	1

472-7500-1 Ankle assembly, left



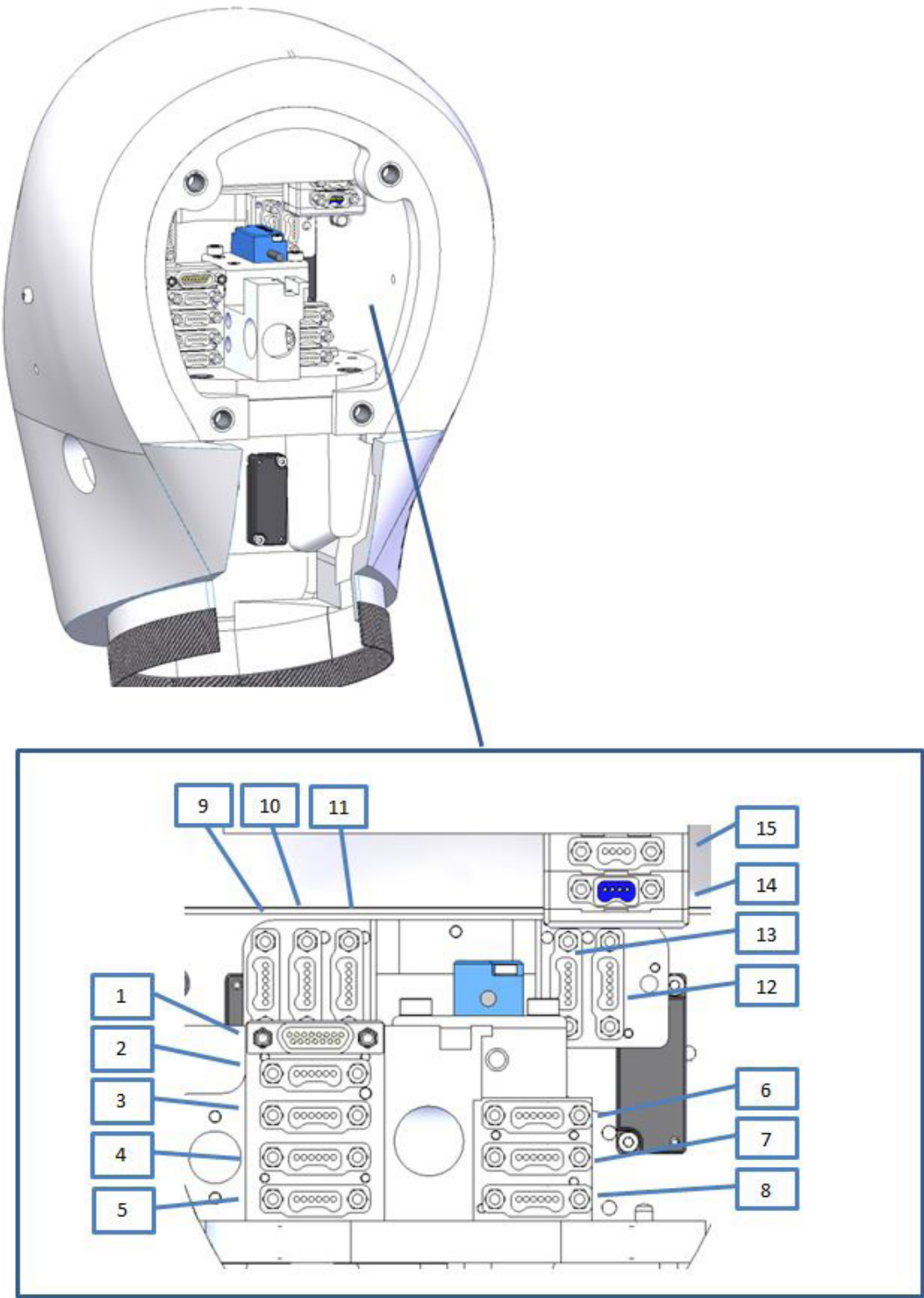
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-7500-1	18034171	Ankle assembly, left	1
●	472-7510	55181606	Ankle center block assembly	1
●	472-7511	55181595	Center block, ankle	1
●	472-7512	55181600	Torque shaft, upper	1
●	472-7513	55181602	Torque shaft, lower	1
●	9010444	55181605	Spring pin, M6x20	2
●	472-7515	55181609	Retaining washer	4
●	472-7522	55181613	Cap, base torque	4
●	472-7523	55181685	Base, torque bottom	1
●	9010437	55181481	Helicoil, M6x6	8
●	9010508	55181618	Helicoil, M3x4.5	4
●	472-7524	55181747	Torque cylinder	18
●	472-7527	55181723	Stop assembly, plantar	1
●	472-7530	55181720	Stop assembly, dorsi	1
●	472-7533	55181716	Stop assembly, eversion	1
●	472-7534	55181713	Stop assembly, inversion	1
●	472-7540	55181703	Ankle bushing plate assembly, free end	2
●	472-7560	55181699	Bracket, achilles pulley	1
●	472-7561	55181729	Shaft, achilles cable pulley	1
●	472-7562	55181724	Pulley, achilles cable	1
●	472-7563	55181734	Bolt and sleeve assembly, ankle	1
●	472-7580	55181691	Base, torque ankle top	1
●	472-7521	55181689	Thrust bushing	1
●	9010437	55181481	Helicoil, M6x6	4
●	472-7581	55181742	Potentiometer clamp	3
●	5000103	55172224	*Varies*	11
●	9000508	55181730	Achilles washer	2
●	9000509	55181726	Needle roller bearing	2
●	9000510	55183401	Flat washer, #4 type B narrow	2
●	9000873	55183651	Screw, M4x12 FHCS	4
●	9005135	55181741	Clamp, nylon loop	3
●	9010445	55183655	Screw, M6x12 BHCS	8
●	9010446	55183653	Screw, M3x16 FHCS	4
●	9010447	55183601	Screw, M3x3 SHSS	2
●	9010449	55172172	Screw, M3x12 FHCS	2
●	9010450	55183650	Nut, nylock M3x0.3	2
●	9010559	55183660	Screw, M2x4 SHCS	6
●	9010560	55183659	Screw, M2x6 SHCS	6
●	SA572-S114		Potentiometer	1
●		55160206	DTI-Housing-SA572-S114-Rot. pot, assembly	2

472-7800-1 Molded shoe assembly, left


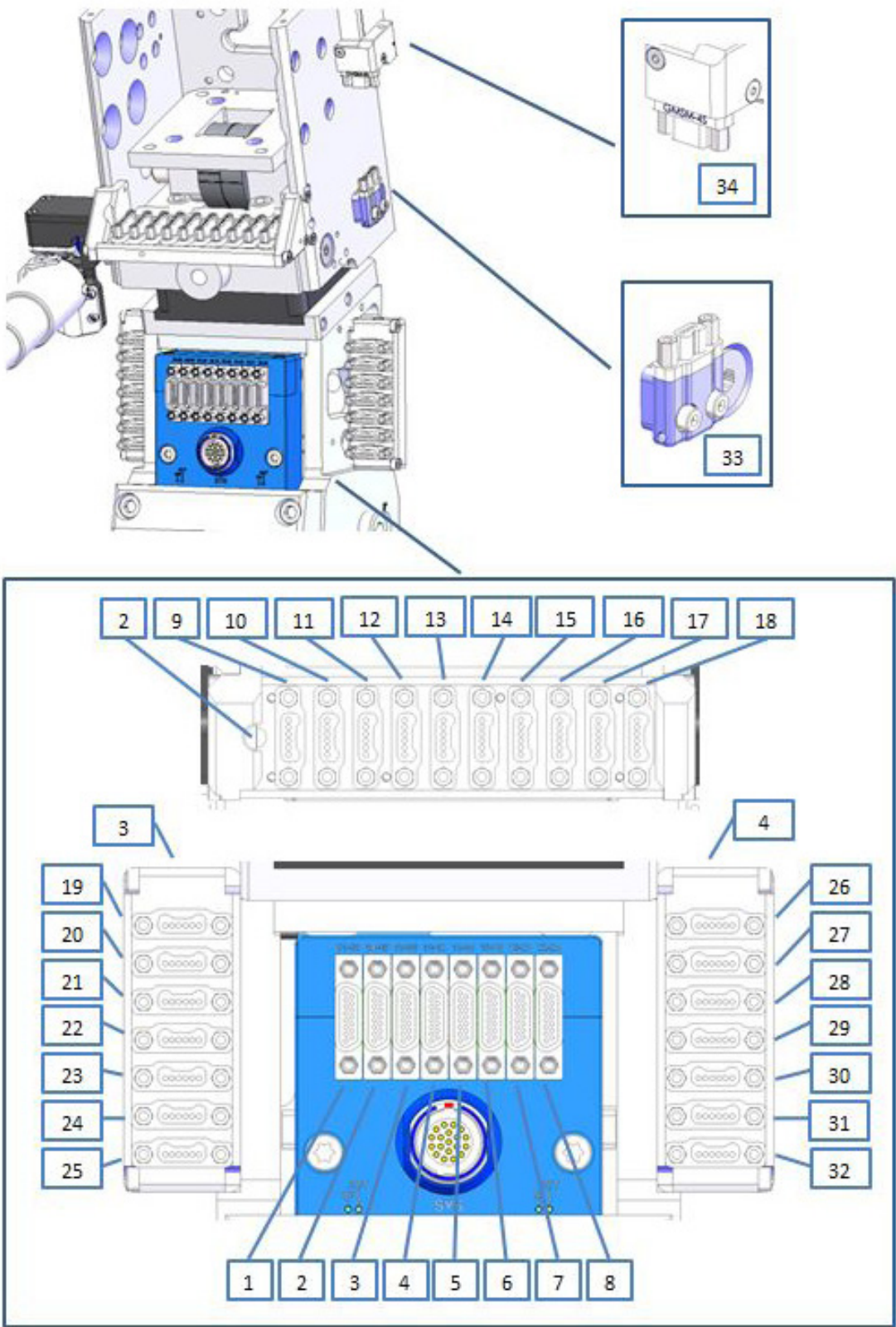
	NHTSA part no.	Kistler part no.	Description	QTY
●	472-7800-1	18034173	Molded shoe assembly	1
●	472-7802-1	55181923	Shoe upper, left	1
●	472-7804-1	55181810	Heel pad molded, left	1
●	472-7803-1	55181814	Ball of foot pad molded, left	1
●	472-7801-1	55181816	Shoe sole, left	1
●	472-7744	55181868	Mounting post, lower achilles	1
●	5001089	55172873	Screw, M6x20 FHCS	3
●	9000058	55183598	Screw, M3x12 SHCS	1
●	9000863	55183663	Screw, M2.5x16 SHCS	2
●	9010446	55183653	Screw, M3x16 FHCS	2
●		55127455	DTI-M60	1
●		55160193	DTI-Adapterplatte-DTI-M60	1

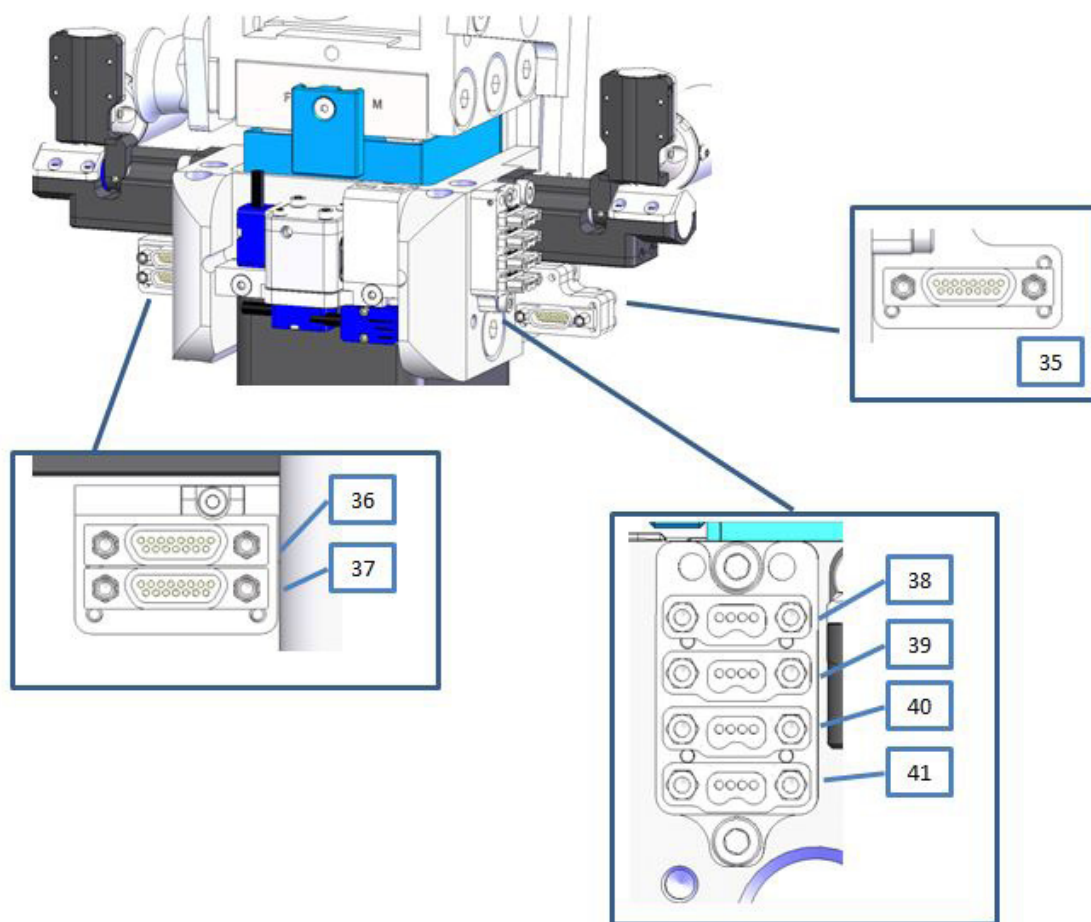
Connecting information - Thorax

Position	Description
1	DR-Port 01-03
2	Port 1 Lower neck load cell Lower neck load cell
3	Neck rotation pot.
4	Neck spring front
5	Neck spring back
6	6 pack
7	Face load cell
8	free
9	Face DiMod housing
10	Face DiMod housing
11	Face DiMod housing
12	Face DiMod housing
13	Face DiMod housing
14	Tilt head
15	Tilt thorax



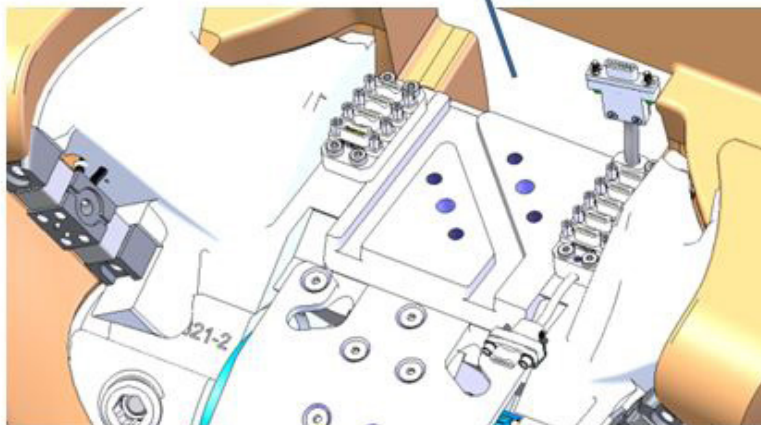
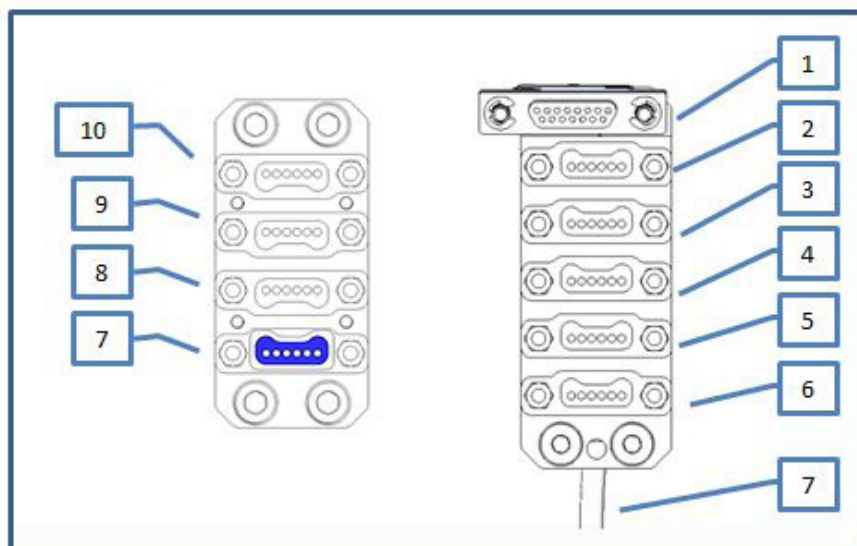
Position	Description
1	DR-Port 01 ... 03 (head)
2	DR-Port 04 ... 06 (thorax)
3	DR-Port 07 ... 09 (thorax)
4	DR-Port 10 ... 12 (thorax)
5	DR-Port 13 ... 15 (disconnection pelvis)
6	DR-Port 16 ... 18 leg right
7	DR-Port 19 ... 21 leg left
8	DR-Port 22 ... 24 free
9	Arm load cell right
10	Clavical load cell
11	Free (2 canals)
12	Arm load cell left
13	Clavicle load cell left
14	Free (2 canals)
15	DTI M60
16	T1 angular rate
17	Free (3 canals)
18	Free (3 canals)
19	KIR-TRACC right
20	KIR-TRACC right
21	T12 ACC
22	T4 6-pack
23	Mid-sternum ACC
24	Free
25	Free
26	KIR-TRACC left
27	KIR-TRACC left
28	T12 angular rate
29	T12 load cell
30	Upper abdomen ACC
31	Free
32	Free
33	LED
34	Temp
35	Leg right
36	Leg left
37	Pelvis
38	Tilt thorax
39	Tilt thorax
40	Tilt thorax
41	Tilt pelvis





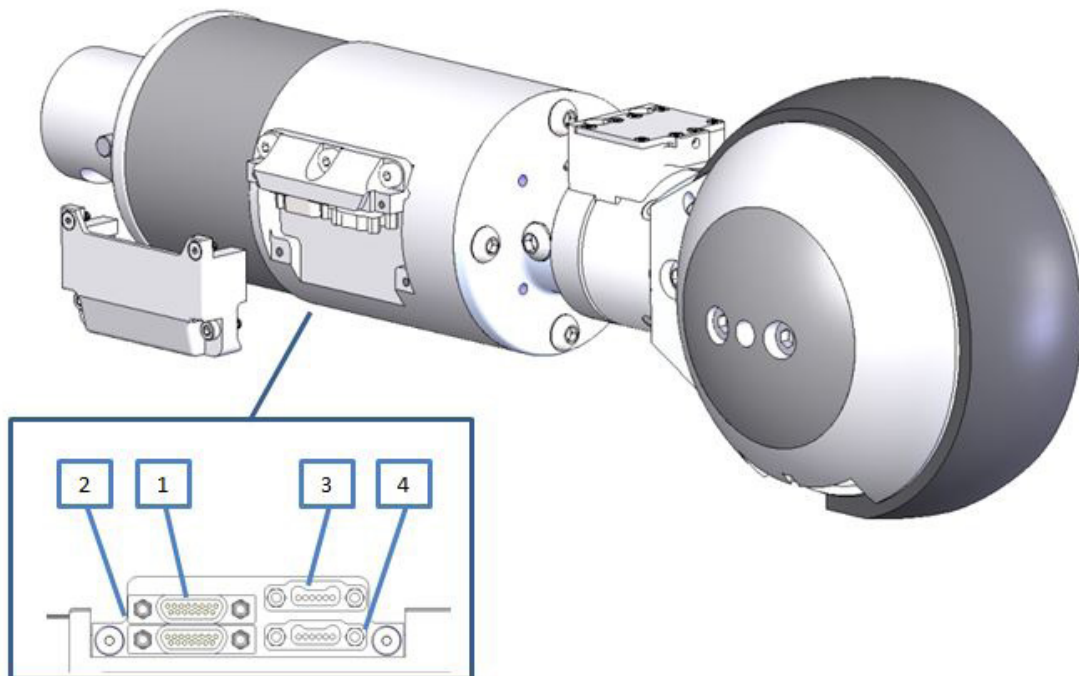
Connecting information - Upper leg assembly, left

Position	Description
1	DR-Port 13 ... 15
2	KIR-TRACC L
3	ASIS load L
4	Acetabulum load L
5	Accel angular rate
6	Lumbar LC
7	Port 15
8	Acetabulum load R
9	ASIS load R
10	KIR-TRACC R



Connecting information - Upper leg assembly, right / left

Position		Description
right	left	
1	1	DR-port 16 ... 18 (right) / DR-port 19 ... 21 (left)
2	2	Port 17 + port 18 (right) / port 20 + port 21 (left)
2	2	
3	3	Femur load
4	4	Knee shear



Connecting information - Lower leg assembly, right / left

Position		Description
right	left	
1	1	Port 18 (right) / port 20 (left)
2	2	Upper tibia load cell
3	3	Collector-B achilles spring
4	4	Tibia accel
5	5	Achilles spring
6	6	Lower tibia
7	7	Port 17 (right) / port 21 (left)
8	8	Collector-B achilles spring
9	9	Ankle rotation X
10	10	Foot accel
11	11	Ankle rotation Z
12	12	Tibia accel
13	13	Ankle rotation Y

