



Humanetics Innovative Solutions, Inc.

CRABI 12M Child Dummy

921022-000-H

FMVSS213, 49CFR Part 572, Subpart R



Brand Harmonized Parts Catalog





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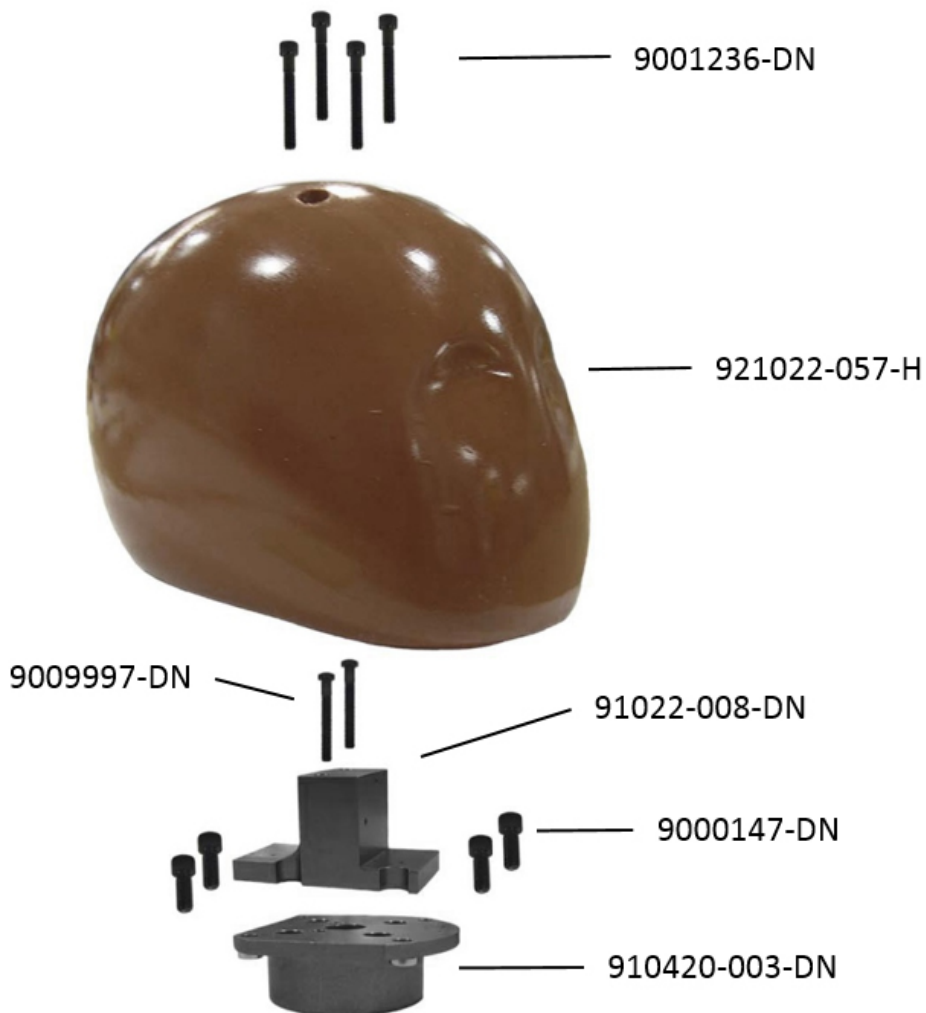
Background

The CRABI 12 Month Old was developed by FTSS and Denton to evaluate small child restraint systems in automotive crash environments, in all directions of impact, with or without air bag interaction. Basic anthropometry for this important new test device was taken from the University of Michigan Transportation Research Institute Report 85-23. Weight distribution and scaling methods for the infant were approved by the Society of Automotive Engineers' (SAE) Infant Dummy Task Group.

The dummy weighs 10.0Kg and has a 747 mm standing or 480 mm sitting height. The Hybrid III-like neck and lumbar spine are laterally notched to reduce lateral stiffness. The shoulders have ample support for durability and human-like performance in areas where seatbelt webbing may be placed. In addition, rubber elements are used in each joint to improve biofidelity and to give CRABI infant-like range of motion.

The design meets all the SAE Infant Dummy Task Group anthropometry, biomechanical and instrumentation requirements. The instrumentation design incorporates six load cells to provide load measurements at the occipital condyles, cervical vertebrae-7, lumbar vertebrae-S, shoulders and pubic locations. Accelerometers are used to measure head, chest and pelvic acceleration and head angular acceleration. All instrumentation is easily accessed.

Head Assembly – Harmonized

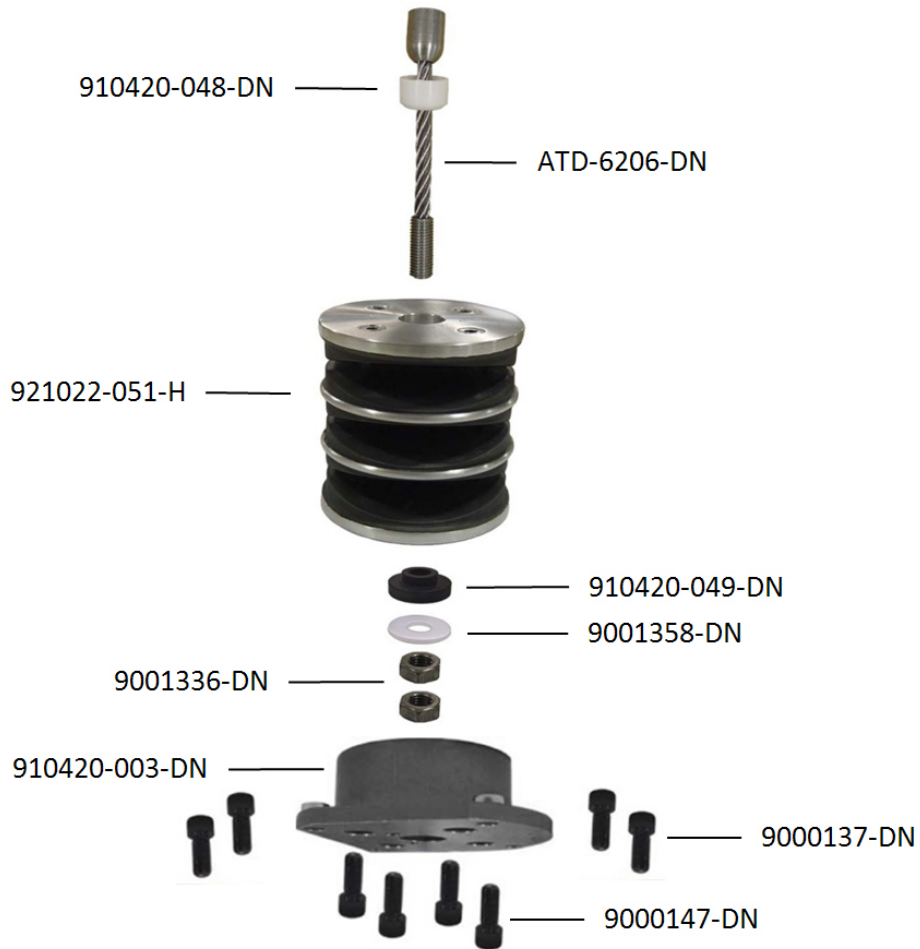


Part Number	Description	Qty. Req'd Per Dummy
921022-001-H	Head Assembly, CRABI 12	1
921022-057-H	Head, Molded Assy, CRABI, Tested/Certified	1
910420-003-DN	Neck and Lumbar Transducer S/R	1
921022-008-DN	Accelerometer Mount, Head, 7264-2000	1
9001236-DN	Screw, SHCS 10-32 X 1-1/2	4
9009997-DN	Screw, Low SHCS 10-32 X 1 1/2	2
9000147-DN	Screw, SHCS 10-32 X 1/2	4

*The Complete Head Assembly is supplied with an accelerometer mount kit free of charge. Please specify the type required when placing order.

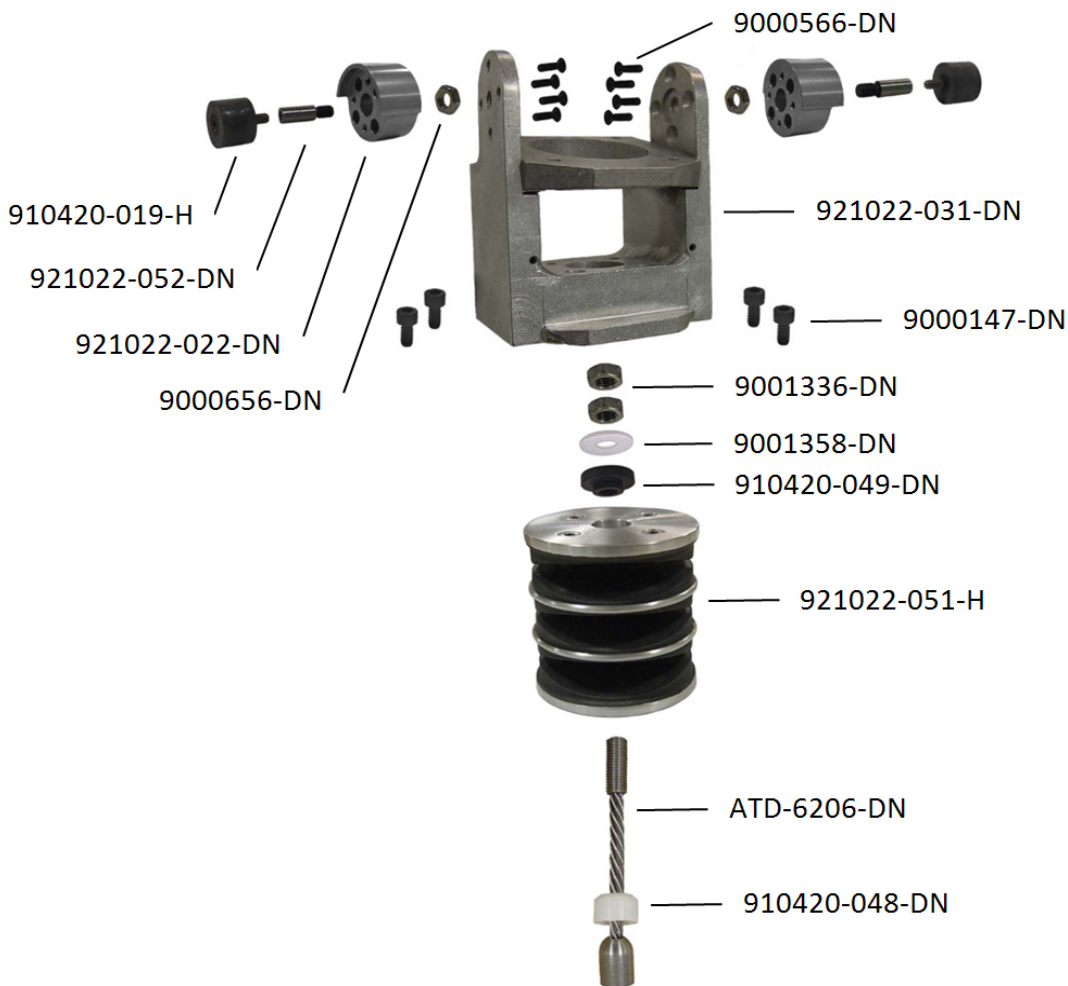
*Accelerometer Mount - Refer to Accelerometer Mount Matrix for Options

Neck Assembly – Harmonized



Part Number	Description	Qty. Req'd Per Dummy
921022-041-H	Neck / Lumbar Spine Assembly, CRABI 12	1
921022-051-H	Neck / Lumbar Molded Assembly T/C	1
ATD-6206-DN	Cable, Neck	1
910420-048-DN	Mounting Plate Insert	1
910420-049-DN	Washer Compression	1
9001336-DN	Nut, Hex Jam 5/16 -24	2
910420-003-DN	Neck and Lumbar Transducer S/R	1
9000147-DN	Screw, SHCS 10-32 X 1/2	4
9000137-DN	Screw, SHCS 10-32 X 5/8	4

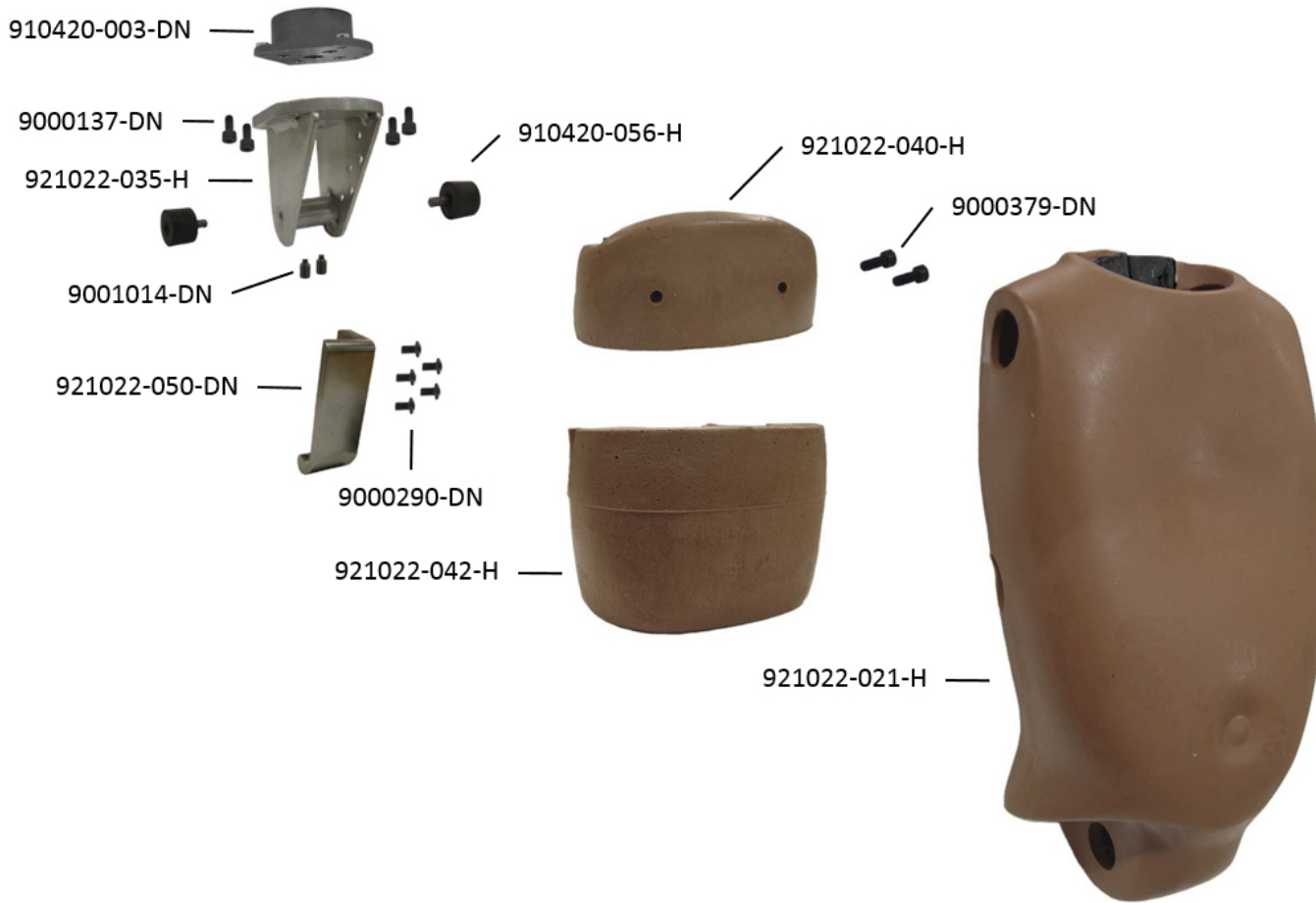
Torso Assembly – Harmonized



Part Number	Description	Qty. Req'd Per Dummy
921022-060-H	Torso Assembly	
921022-031-DN	Spine Box, Crabi	1
921022-022-DN	Shoulder Transducer S.R.	2
9403-374-H	Shoulder Assembly	2
910420-019-H	Isolation Damper, Shoulder	2
921022-052-DN	Screw, Shoulder Modified	2
9000566-DN	Screw, FHCS 10-24 X 5/8	8
9000147-DN	Screw, SHCS 10-32 X 1/2	4
921022-051-H	Neck / Lumbar Molded Assembly T/C	1
ATD-6206-DN	Cable, Neck	1
910420-048-DN	Mounting Plate Insert	1
910420-049-DN	Washer Compression	1
9001336-DN	Nut, Hex Jam 5/16 -24	2

*The Complete Upper Torso Assembly is supplied with an accelerometer mount kit free of charge. Please specify the type required when placing order.

Torso Assembly – Harmonized (Con’t)



Part Number	Description	Qty. Req'd Per Dummy
921022-060-H	Torso Assembly (Con't)	1
921022-021-H	Torso Chest Jacket Assembly	1
921022-040-H	Chest Foam and Support Plate Assembly	1
921022-042-H	Abdominal Insert, CRABI 12	1
921022-050-DN	Pubic Transducer –S.R.	1
921022-035-H	Pelvic Structure, Weldment	1
910420-056-H	Hip Isolation Damper	1
9000137-DN	Screw, SHCS 10-32 X 5/8	4
9001014-DN	Set Screw, SS NYLON, #10-32 X 1/4	2
9000290-DN	Screw, BHCS 10-24 X 3/8	1
9000379-DN	Screw, SHCS 6-32 X 3/8	1
910420-003-DN	Neck and Lumbar Transducer S/R	1

*The Complete Upper Torso Assembly is supplied with an accelerometer mount kit free of charge. Please specify the type required when placing order.

Arm Assemblies– Harmonized



Part Number	Description	Qty. Req'd Per Dummy
921022-054L-H	Complete Arm Assembly, Left	1
921022-014L-H	Arm, Upper Assembly, Left	1
921022-017L-H	Forearm Assembly, Left	1
9000227-FT	Screw, SHSS 1/4 X 3/8	1
921022-054R-H	Complete Arm Assembly, Right	1
921022-014R-H	Arm, Upper Assembly, Right	1
921022-017R-H	Forearm Assembly, Right	1
9000227-FT	Screw, SHSS 1/4 X 3/8	1
(910420-043-DN)	Shoulder Bolt, Modified	2
(ATD-3051-4-FT)	Washer, Friction, Fiberglass	2

Leg Assemblies– Harmonized



Part Number	Description	Qty. Req'd Per Dummy
921022-055L-H	Complete Leg Assembly, Left	1
921022-011L-H	Leg, Upper Assembly, Left	1
921022-020L-H	Leg, Lower Assembly, Left	1
9000619-DN	Screw, SHSS 1/4 X 5/8	1
921022-055R-H	Complete Leg Assembly, Right	1
921022-011R-H	Leg, Upper Assembly, Right	1
921022-020R-H	Leg, Lower Assembly, Right	1
9000619-DN	Screw, SHSS 1/4 X 5/8	1
(910420-042-DN)	Hip Bolt, Modified	2
(ATD-3051-4-FT)	Washer, Friction, Fiberglass	2

Accelerometer Mounts

Accelerometer Type	Complete Dummy (921022-000-H)	Components			Triax Cubes
		921022-001-H	921022-060-H		
	6-Axis	Head	Chest	Pelvis	
Endevco					
7264-2000	921022-7264-2000-DN	921022-008-ASSY-DN	921022-061-DN	921022-062-DN	7264-A-DN
7264C-2000	921022-7264C-2000-DN	921022-008C-ASSY-DN	921022-061 -DN	921022-062-DN	7264-A-DN
Endevco					
7264A-2000	921022-7264A-2000-DN	921022-008A-ASSY-DN	921022-061-DN	921022-062-DN	7264-B-DN
7264B-2000	921022-7264B-2000-DN	921022-008B-ASSY-DN	921022-061 -DN	921022-062-DN	7264-B-DN
Kyowa					
ASM-200BA	921022-KYOWA-200BA-DN	921022-008D-ASSY-DN	921022-061 -DN	921022-062-DN	7264-C-DN

Misc.

Part Number	Description	Qty. Req'd Per Dummy
PADI-CRABI	Proc. for Assy, Disassy and Insp, CRABI	1