

User's Manual for the Hybrid III Large Male Test Dummy

RATIONALE

This Surface Vehicle Report describes the assembly/disassembly and certification procedures for the Hybrid III Large Male Test Dummy. Storage and handling, measurement procedures for external dimensions, clothing specifications and part numbers are additions to this Surface Vehicle Report.

TABLE OF CONTENTS

1.	SCOPE.....	8
2.	REFERENCES.....	8
2.1	Applicable Documents .....	8
2.2	Related Publications.....	8
3.	ASSEMBLY/DISASSEMBLY.....	9
3.1	Head/Neck .....	9
3.2	Upper Torso .....	16
3.3	Lower Torso .....	28
3.4	Legs.....	33
3.5	Arms.....	38
4.	CERTIFICATION TEST PROCEDURES.....	40
4.1	Head Drop Test.....	40
4.2	Neck Tests .....	42
4.3	Thorax Impact Test.....	47
4.4	Knee Impact Test.....	50
4.5	Knee Slider Test.....	52
5.	INSPECTION PROCEDURES AND TESTS.....	55
5.1	Chest Depth Measurements .....	55
5.2	External Measurements .....	55
5.3	External Dimensions .....	58
5.4	Mass Measurements.....	58
5.5	Torso Flexion Test .....	59
5.6	Foot Test.....	62
5.7	Ankle Motion Test .....	64
6.	NOTES.....	68
6.1	Marginal Indicia .....	68
APPENDIX A	ACCELEROMETER HANDLING GUIDELINES .....	69
APPENDIX B	GUIDELINES FOR REPAIRING FLESH .....	71

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APPENDIX C	JOINT ADJUSTMENT PROCEDURES .....	72
APPENDIX D	AXIAL INTEGRITY OF THE NECK.....	73
APPENDIX E	BOLT TORQUE VALUES .....	74
FIGURE 1	ACCELEROMETER LOCATIONS .....	7
FIGURE 2	HEAD, EXPLODED VIEW .....	9
FIGURE 3	NECK ADJUSTMENT SHCS AND WASHER .....	10
FIGURE 4	UPPER NECK BRACKET AND BIB.....	10
FIGURE 5	SKULL CAP.....	11
FIGURE 6	NECK TRANSDUCER .....	11
FIGURE 7	NECK COMPRESSION TOOL .....	11
FIGURE 8	NECK REMOVAL.....	12
FIGURE 9	NODDING JOINT.....	12
FIGURE 10	NODDING BLOCK ORIENTATION .....	13
FIGURE 11	NECK TRANSDUCER REMOVAL.....	13
FIGURE 12	NECK, EXPLODED VIEW .....	15
FIGURE 13	NODDING JOINT BRACKET REMOVAL .....	16
FIGURE 14	CLAVICLE LINK, EXPLODED VIEW .....	17
FIGURE 15	CLAVICLE AND SHOULDER YOKE, EXPLODED VIEW .....	18
FIGURE 16	CLAVICLE LINK.....	19
FIGURE 17	ARM REMOVAL.....	19
FIGURE 18	CLAVICLE LINK BOLT.....	20
FIGURE 19	BUMPER STOP .....	20
FIGURE 20	SHOULDER YOKE ROTATION STOP.....	21
FIGURE 21	UPPER ARM STOP .....	21
FIGURE 22	CLAVICLE SHSS .....	21
FIGURE 23	URETHANE SPRING STOP.....	22
FIGURE 24	CLAVICLE SPACERS.....	22
FIGURE 25	CLAVICLE LOCK NUT.....	23
FIGURE 26	FRONT RIB STIFFENER.....	24
FIGURE 27	CHEST CAVITY, STERNUM SLIDER .....	24
FIGURE 28	STERNUM SLIDER AND BIB .....	24
FIGURE 29	RIB AND RIB STIFFENER REMOVAL .....	25
FIGURE 30	RIB AND DAMPING MATERIAL .....	25
FIGURE 31	THORACIC SPINE ASSEMBLY, EXPLODED.....	26
FIGURE 32	THORACIC SPINE REMOVAL .....	27
FIGURE 33	CHEST POTENTIOMETER.....	27
FIGURE 34	LOWER TORSO, EXPLODED VIEW .....	29
FIGURE 35	LEG REMOVAL.....	29
FIGURE 36	LOWER TORSO ASSEMBLY (ABDOMEN NOT SHOWN) .....	30
FIGURE 37	ABDOMEN .....	31
FIGURE 38	FEMUR REMOVAL .....	31
FIGURE 39	FEMUR ASSEMBLY .....	32
FIGURE 40	ASIS LOAD CELL REMOVAL.....	32
FIGURE 41	UPPER LEG, EXPLODED VIEW .....	33
FIGURE 42	BALL SLIDER ASSEMBLY, EXPLODED VIEW .....	34
FIGURE 43	LOWER LEG, EXPLODED VIEW.....	35
FIGURE 44	ANKLE ASSEMBLY, EXPLODED VIEW .....	36
FIGURE 45	FEET AND ATTACHMENT BOLT .....	37
FIGURE 46	ARM ASSEMBLY, EXPLODED VIEW .....	39
FIGURE 47	HEAD DROP TEST SET-UP SPECIFICATIONS .....	41
FIGURE 48	NECK PENDULUM SPECIFICATIONS .....	45
FIGURE 49	NECK EXTENSION TEST SET-UP SPECIFICATIONS.....	46
FIGURE 50	NECK FLEXION TEST SET-UP SPECIFICATIONS .....	46
FIGURE 51	THORAX IMPACT TEST SET-UP SPECIFICATIONS.....	49
FIGURE 52	HYSTERESIS DEFINITION .....	50
FIGURE 53	KNEE IMPACT TEST SET-UP SPECIFICATIONS .....	52
FIGURE 54	KNEE SLIDER TEST SET-UP SPECIFICATION .....	54
FIGURE 55	CHEST DEPTH MEASUREMENT TOOL.....	55
FIGURE 56	EXTERNAL DIMENSION MEASUREMENT.....	57

FIGURE 57	TORSO FLEXION TEST SETUP .....	61
FIGURE 58	TORSO FLEXION PULL BRACKET SPECIFICATIONS .....	62
FIGURE 59	COMPRESSION TEST SETUP .....	63
FIGURE 60	FOOT TEST SPECIFICATIONS .....	64
FIGURE 61	LEG REFERENCE PLANES .....	66
FIGURE 62	ANKLE/FOOT REFERENCE PLANES .....	67
TABLE 1	INSTRUMENTATION.....	6
TABLE 2	HEAD, EXPLODED VIEW PART LIST .....	9
TABLE 3	NECK EXPLODED VIEW PART LIST .....	14
TABLE 4	CLAVICLE LINK EXPLODED VIEW PARTS LIST .....	17
TABLE 5	CLAVICLE AND SHOULDER YOKE EXPLODED VIEW PART LIST .....	18
TABLE 6	SPINE BOX EXPLODED PART LIST .....	26
TABLE 7	LOWER TORSO EXPLODED PART LIST .....	28
TABLE 8	UPPER LEG EXPLODED VIEW PART LIST .....	33
TABLE 9	BALL SLIDER ASSEMBLY, EXPLODED VIEW PART LIST .....	34
TABLE 10	LOWER LEG, EXPLODED VIEW PART LIST .....	35
TABLE 11	ANKLE ASSEMBLY, EXPLODED VIEW PART LIST .....	36
TABLE 12	FOOT ASSEMBLY, EXPLODED VIEW PART LIST .....	37
TABLE 13	ARM ASSEMBLY, EXPLODED VIEW PART LIST .....	38
TABLE 14	HEAD DROP TEST SPECIFICATIONS.....	41
TABLE 15	NECK FLEXION TEST SPECIFICATIONS.....	43
TABLE 16	NECK EXTENSION TEST SPECIFICATIONS .....	44
TABLE 17	THORAX IMPACT TEST SPECIFICATIONS .....	48
TABLE 18	KNEE IMPACT TEST SPECIFICATIONS.....	51
TABLE 19	KNEE SLIDER TEST SPECIFICATIONS .....	53
TABLE 20	EXTERNAL MEASUREMENTS .....	58
TABLE 21	SEGMENT MASS .....	59
TABLE 22	FOOT TEST SPECIFICATIONS .....	64
TABLE 23	ANKLE MOTION SPECIFICATIONS .....	68
TABLE E1	TORQUE SPECIFICATIONS.....	74

## INTRODUCTION

### FOREWORD

The Hybrid III Large Male dummy was developed under a grant awarded by the Center for Disease Control (CDC) to the Ohio State University in 1997. A task force of experts from the SAE International Mechanical Human Simulation Subcommittee of the Human Biomechanics and Simulation Standards Committee supported the development activity. The design incorporated the same level of biofidelity and measurement capacity as the Hybrid III mid-size adult male. Therefore, the certification procedures are based on the test procedures that were developed for the Hybrid III mid-size adult male dummy. The basic test fixtures are the same.

The Hybrid III Large Male Dummy is based on the characteristic size and weight measurements taken from anthropometry studies of the large adult male. Its impact response requirements for the head, neck, chest, hip, knee and ankle were scaled from the biofidelity requirements of the Hybrid III mid-size male dummy. (See Mertz, H. J., Irwin, A. L., Melvin, J. W., Stalnaker, R. L., Beebe, M. S., "Size, Weight, and Biomechanical Impact Response Requirements for Adult Size Small Female and Large Male Dummies", SAE #890756, SP-782, 1989.) The Hybrid III Large Male dummy is designed to represent the upper extreme of the United States adult population. Much of the anthropometry and design is a scaled version of the Hybrid III midsize adult male dummy.