

Free Motion Headform (FMH) Selector Guide

Publication Date: March, 2012



This guide covers these Free Motion Headform Assy's:

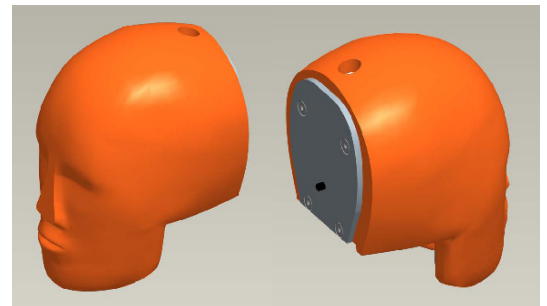
- 92041-001-FT - Headform Free Motion Assy T/C
- 92041-001-DN - Free Motion Headform
- 92041-001-F - Headform Motion Assy T/C W/O Head Skin
- 92041-001-BIA - Headform, FMH BIA Modified, T/C
- 92041-001-BIA2 - Free Motion Headform BIA MOD 2
- 92041-001-CONCEPT - Headform Free Motion CONCEPT T/C
- Accel Mount Assemblies

FMH Descriptions

92041-001-FT and 92041-001-DN

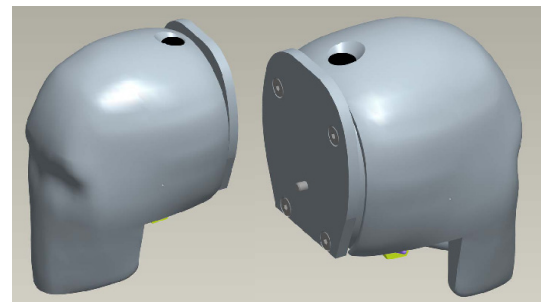
The 92041-001 assemblies are the original NHTSA Free Motion Headforms designed in 1982.

- Both have Hybrid III 50th skulls which by design have no nose giving the face a flat front. The -FT model features a skull with buffed forehead to even out the impact response. The -DN model uses the un-buffed standard skull.
- The head skins are standard Hybrid III with the nose removed. The -FT model assembles the skin and skull as a unit tested together. The -DN model keeps these as separate items in the bill of materials.
- The neck transducers and hardware are included except that the -DN model omits the neck pivot pin washers.
- The skull caps are flat metal plates with a ¼ inch diameter pin protruding ¼ inch from the back in line with the head's specified center of gravity. The pin locates the head on the accelerator rod used to propel the head.



92041-001-F

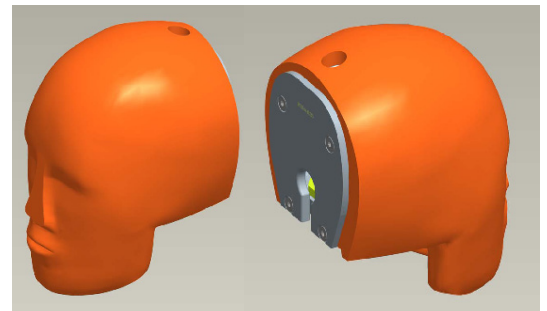
The 92041-001-F has the same features as the 92041-001-FT but the head skin is omitted.



92041-001-BIA

The 92041-001-BIA was designed in 2007 and is modified to fit a BIA impactor.

- The back plate is the only feature different from the -001-Ft and -001-DN assemblies. Instead of a pin it has a keyhole approximately 1 inch in diameter to mate to the guide pin on the BIA impactor. The keyhole shape is clearance for an accelerometer mounted on the bottom of the impactor rod.
- This item does not work with the redesigned BIA impactor and should only be used with an older model impactor.

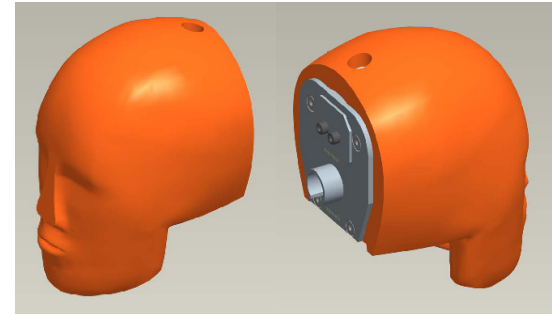


92041-BIA2

The 92041-BIA2 was designed in 2009 and is modified to fit a redesigned BIA impactor.

- The back plate is the only different feature. It is an assembly with a welded guide sleeve with a counter bored hole of very precise dimensions (~17.5 & ~ 25 mm) to mate with the revised impactor rod. It also has a ballast plate fastened to the outside with screws. The outside shape is simplified.

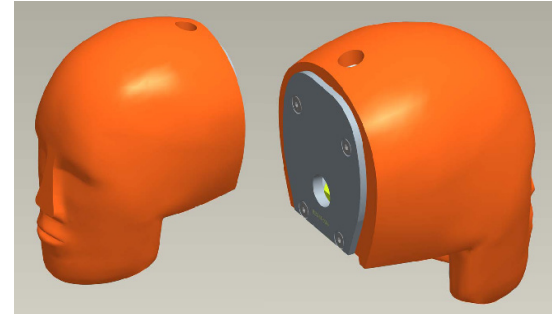
- This item is designed to work with the current model BIA impactor.



92041-001-CONCEPT

The 92041-CONCEPT was designed in 2011 to fit the Concept Launcher System.

- It features a circular hole less than 1 inch in diameter in the back plate to mate to the Concept Launcher.



Accelerometers

In general Hybrid III accelerometer mounts will work with the Free Motion Headforms. Mount kits specific to the Free Motion Headform are listed:

Part No.	Description	Accel	Mfg
1032417	Mount Kit-Head, Free Motion, Silicon 2420	2420 triaxial, digital pulse output	Silicon Designs
1032508	Mount Kit Head FMH EGAS-S077-2500	EGAS-S077D-2500	Entran