

# FOCUS Headform User Manual





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[http://www.humaneticsatd.com/Lead\\_Disclosure](http://www.humaneticsatd.com/Lead_Disclosure)



Figure 1 Focus headform components

1. Inventory all structural replacements (load cells if supplied), facial bone segments and screws. (See Figure 1.)

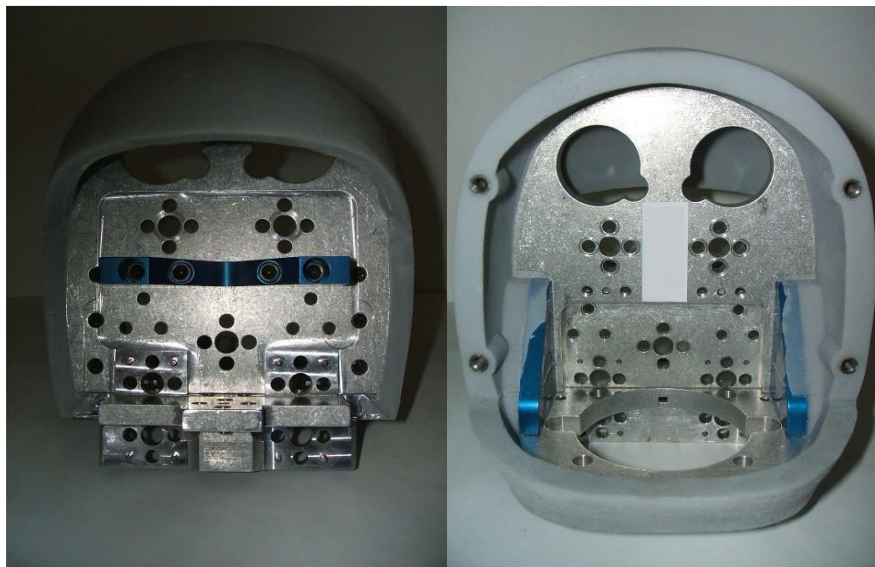


Figure 2 Skull assembly

2. Start assembly with the skull assembly part #575-1013. Remove the skull cap part #575-1017 & head skin part #575-1020 if attached. (See Figure 2.)

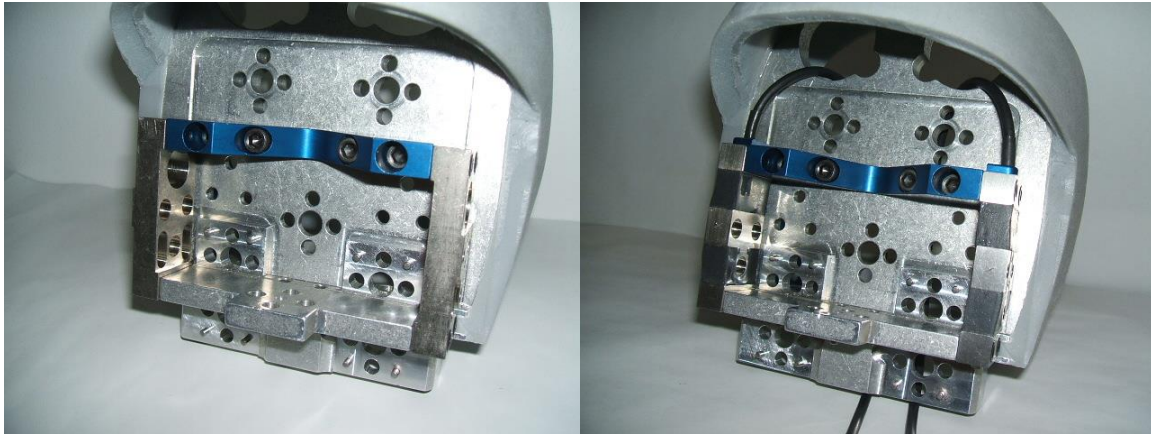


Figure 3 Zygoma structural replacement

3. Mount the right Zygoma structural replacements part #575-1040 using four #8-32 x 1/2 long socket head cap screws on each side. Position with large clearance hole up. (See Figure 3.) Or mount the right Zygoma load cell model #8040J and the left Zygoma load cell model #8045J. These two load cells must be mounted on the proper side for correct polarity. Note: cables of the load cell should be positioned toward the top of the skull. Load cable ends thru the upper clearance holes and thru the neck hole.



Figure 4

4. Mount the right Zygoma bone part #575-1032 and left Zygoma bone part #575-1031 to the Zygoma load cells using three #8-32 x 1/2 long socket head cap screws on each side. (See Figure 4.)



Figure 5 Mandible structural replacement

5. Mount the Mandible structural replacements part #575-1038 with four #10-32 x 5/8 long socket head cap screws. (See Figure 5.) Or mount Mandible load cell model #8055J. Note: cable of the load cell should be positioned toward the front face of the skull and be pointing down.



Figure 6 Maxilla structural replacement

6. Mount the right and left Maxilla structural replacements part #575-1041 using six #10-32 x 1/2 long low head socket cap screws on each side. (See Figure 6.) Or mount the right and left Zygoma load cell model #8050J. These two load cells can be mounted on either side. Note: cables of the load cell should be positioned toward the bottom of the skull.





Figure 7 Nasal structural replacement

7. Mount the Nasal structural replacements part #575-1037 with four #10-32 x 1/2 long low head socket cap screws. (See Figure 7.) Or mount Nasal load cell model #8030J. Note cable of the load cell should be positioned toward the top of the skull. Load cable ends thru the upper clearance hole and thru the neck hole.

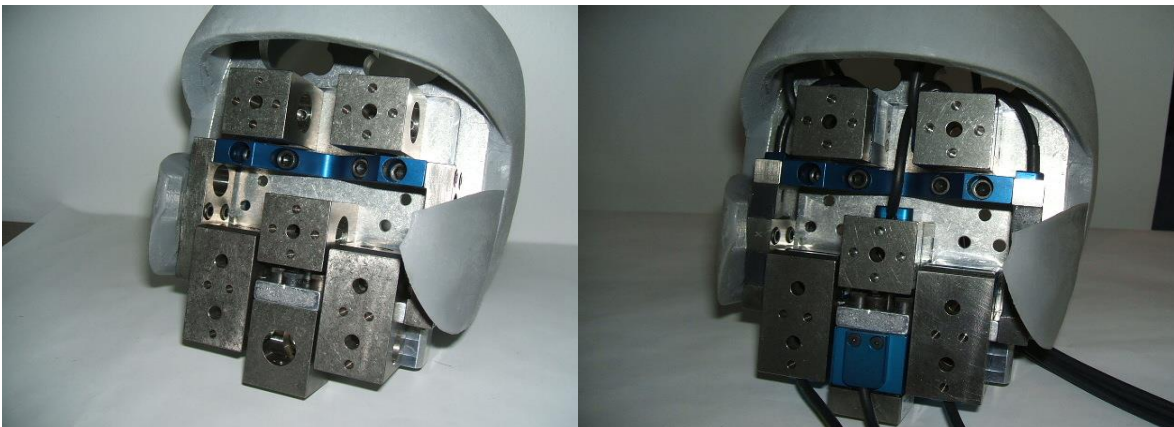


Figure 8 Frontal structural replacement

8. Mount the right and left Frontal structural replacements part #575-1037 using four #10-32 x 5/8 long socket head cap screws on each side. (See Figure 8.) Or mount the right and left Frontal load cell model #8035J. Note cables of the load cells should be positioned toward the right side of the skull. (Left side when looking into the face of the skull) Load cable ends thru the upper clearance holes and thru the neck hole.



Figure 9 Eye cup

9. Attach the right eye cup part #575-1005 and left eye cup part #575-1004 to the structural replacements part #575-1039 using three #2-56 x 1/4 long socket head cap screws on each. No orientation is required for the structural replacement. (See Figure 9.) Or attach the right eye cup to the right eye load cell model #8060J. When facing the eye the cable will be positioned right and the lowest cup surface will be positioned left. Then attach the left eye cup to the left eye load cell model #8065J. When facing the eye the cable will be positioned left and the lowest cup surface will be positioned right. Note: Eyeballs can be re-attached to the eye cup using a small amount of clear RTV (silicone rubber) Permatex® #80050.

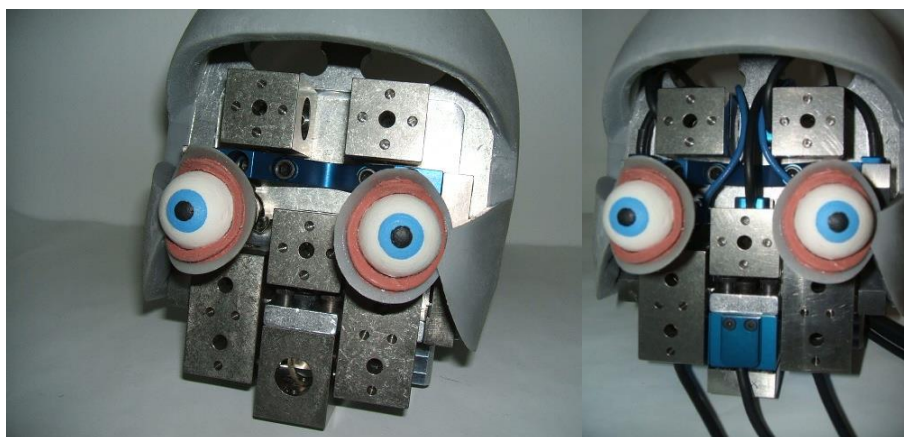


Figure 10 Eye Assembly

10. Mount the right eye assembly and left eye assembly to the skull using three #8-32 x 1/2 long socket head cap screws on each side. (See Figure 10.) Both cables should be facing the nasal structural replacement (or nasal load cell). Load cable ends thru the upper clearance holes and thru the neck hole.

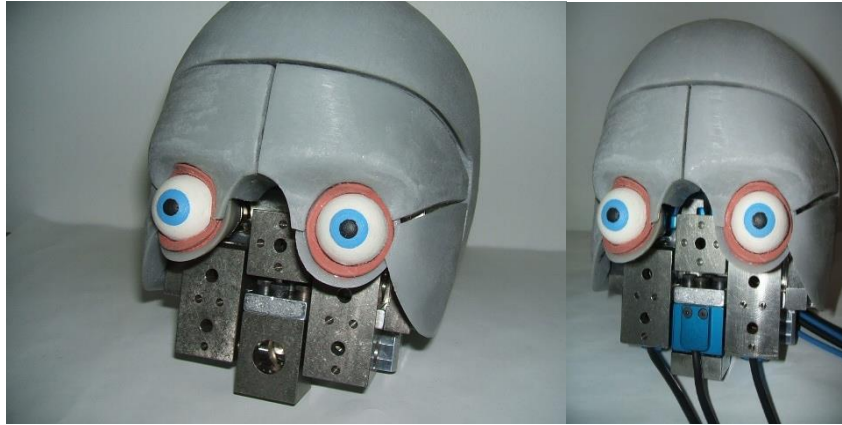


Figure 11 Frontal bone

11. Mount the right Frontal bone part #575-1022 and left Frontal bone part #575-1021 to the Frontal load cells model #8035J using one #10-32 x 5/8 long socket head cap screws on each side. (See Figure 11.) It is important to have a minimum gap of .05" between all segments. To achieve this, you may have to loosen the load cell mounting screws, realign the facial bone and retighten the mounting screws.



Figure 12 Maxilla bone

12. Mount the right Maxilla bone part #575-1026 and left Maxilla bone part #575-1025 to the Maxilla load cells model #8050J using two #10-32 x 5/8 long socket head cap screws on each side. (See Figure 12.) It is important to have a minimum gap of .05" between all segments. To achieve this, you may have to loosen the load cell mounting screws, realign the facial bone and retighten the mounting screws.



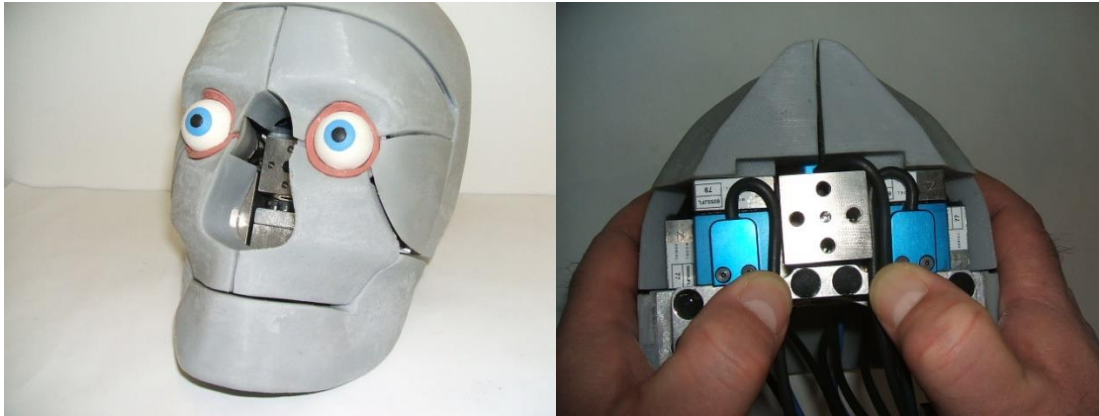


Figure 13 Mandible bone

13. Mount the Mandible bone part #575-1028 to the Mandible load cell model #8055J using four #10-32 x 1/2 long socket head cap screws. (See Figure 13.) Route cables as shown in the above picture before mounting mandible bone. It is important to have a minimum gap of .05" between all segments. To achieve this, you may have to loosen the load cell mounting screws, realign the facial bone and retighten the mounting screws.



Figure 14 Nasal bone

14. Mount the Nasal bone part #575-1024 to the Nasal load cell model #8030J using four #10-32 x 5/8 long socket head cap screws. (See Figure 14.) It is important to have a minimum gap of .05" between all segments. To achieve this, you may have to loosen the load cell mounting screws, realign the facial bone and retighten the mounting screws. Note: Molded nose section can be re-attached to the nasal bone using a small of clear RTV (silicone rubber) Permatex® #80050.

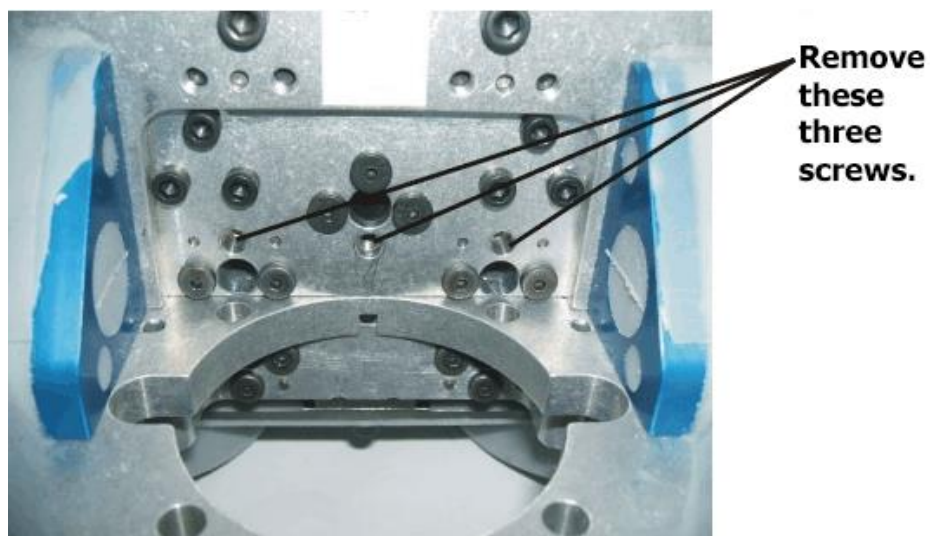


Figure 15 Remove #10-32 x 1/2 long low head cap screws

15. Remove three #10-32 x 1/2 long low head cap screws to mount upper neck structural replacement part #575-1042 or upper neck load cell model #8070J. (See Figure 15.)

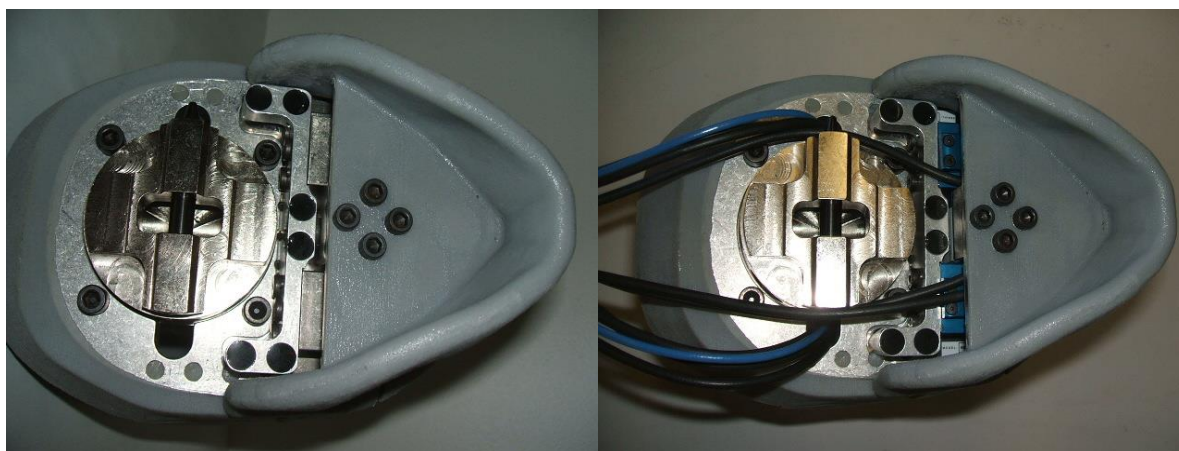


Figure 16 Upper neck structural replacement

16. Mount the Upper Neck structural replacement part #575-1042 or upper neck load cell model #8070J to the skull using four #1/4-28 x 3/4 long socket head cap screws and washers. (See Figure 16.)

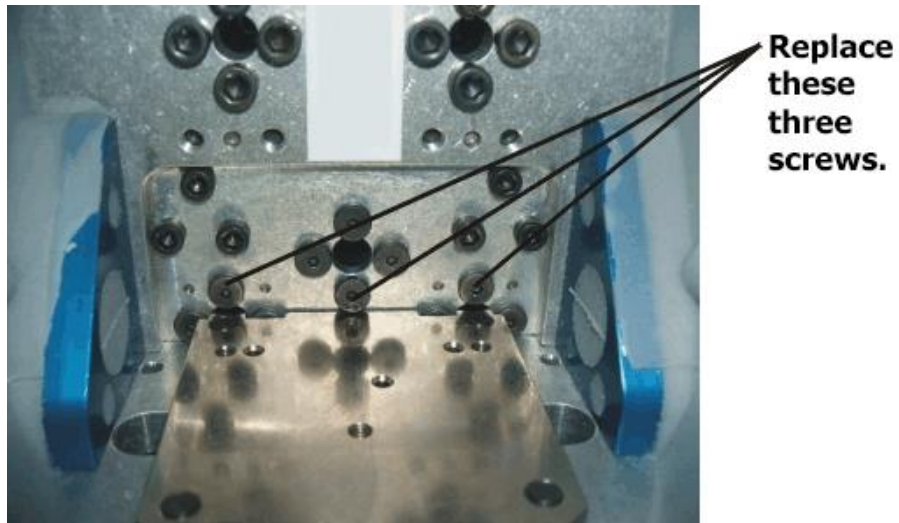


Figure 17 Replace #10-32 x 1/2 long low head socket cap screws

17. Replace three #10-32 x 1/2 long low head socket cap screws removed in step #15. (See Figure 17.)

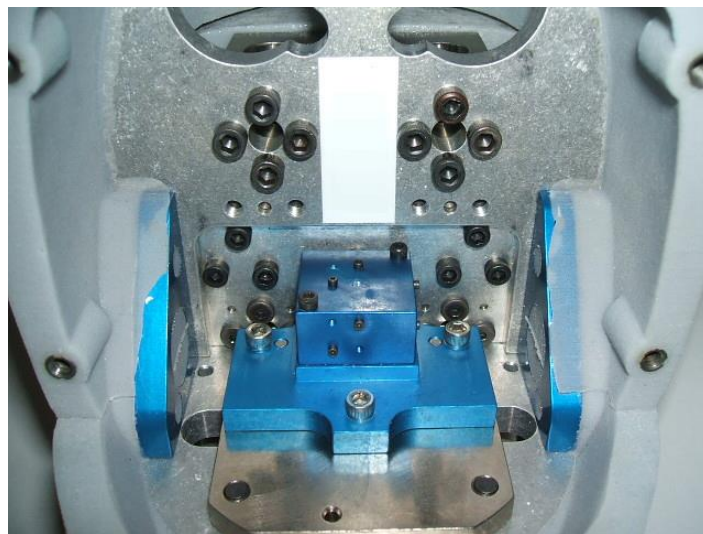


Figure 18 Head accelerometer mount

18. Mount the Head Accelerometer Mount part #575-1011 to the Upper Neck structural replacement part #575-1042 or Upper Neck load cell model #8070J using three #8-32 x 7/16 long socket head cap screws. (See Figure 18.)



Figure 19a Check pin assembly

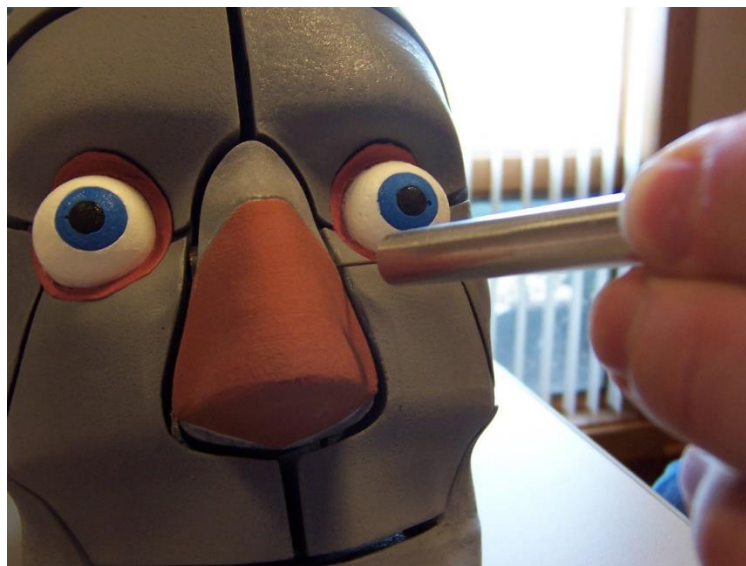


Figure 19b Check gap clearance

19. Use the pin assembly tool, 06-575-0008 to check gap clearance of facial bones. (See Figures 19a and 19b.)





Figure 20 Skull assembly

20. Insert skull assembly into Head Skin part #575-1020 (See Figure 20.)



Figure 21 Skull cap assembly

21. Attach Skull Cap assembly part #575-1017 using four #10-24 x 1/2 long socket head cap screws. (See Figure 21.)

## Manual Update Log

### Rev. A, Sept. 2015

Humanetics logo was DN