

ABSTRACT

This document will walk you through the procedure for removing and installing a colleted impeller on a HOMA A-Series pump. It is important to follow these instructions completely, or there is a risk that the impeller will slip on the shaft.

PROCEDURE

You will need:

- A torque wrench with a 40 foot pound capacity
- Allen key socket and extension
- Liquid soap to lubricate o rings

Disassembly

1. Remove impeller bolt and cover disc from impeller. (A)
2. Remove all screws from locking mechanism.
3. Four holes in the locking mechanism are threaded in the top layer. Insert four of the screws into these holes and tighten them progressively and equally in order to eject the first layer of the mechanism. (B)
4. The next layer of the locking mechanism also has four holes that are threaded. Tighten four screws in these in the same manner as before to remove the second piece. (C)
5. After the second layer of the mechanism is removed, the impeller should come off freely and easily.



A.



B.



C.

Assembly

6. Place o-ring around outside diameter and inside diameter of distance ring, lubricate with liquid soap, and place in impeller (D). **DO NOT USE GREASE TO LUBRICATE.**
7. Lightly tap ring in with a plastic hammer.
8. Loosen all screws in impeller locking mechanism, and pull the opposite sides to extend the mechanism. (E)
9. Degrease inside and outside surface of locking mechanism, shaft, and impeller borehole. Any residual on these surfaces may cause collet to slip.
10. Place locking mechanism into impeller borehole. (F)
11. Lubricate inner o-ring in distance ring with liquid soap.
12. Slide impeller onto shaft until locking mechanism reaches shoulder of the shaft.
13. Be certain that the locking mechanism stays in the proper position while installing on shaft.



D.



E.



H.

Part number	Inside Diameter (inch)	Outside Diameter (inch)	Torque (inch pounds)
4492007	1.575	2.5	100
4492010	1.75	2.875	80
4492016	2	2.875	90
4492020	2.2	3.35	120
4492025	2.36	3.35	140
4492027	2.56	3.75	160
4492033	2.75	4.33	400

14. Snug all screws in locking mechanism.
15. Tighten screws in the order shown in (G)
16. Tighten the screws to the required torque, given in table (H).
17. Retighten screws in the same pattern to the same torque to ensure the collet will not slip. This will take 5-8 repetitions. **THE COLLET WILL NOT HOLD IF SCREWS ARE ONLY TIGHTENED ONCE.**



G.

18. Using a soft-faced mallet, strike the nose of the impeller 4 times. This will set the impeller. The collet may loosen after the impeller is set.
19. Repeat steps 15-17 (tightening collet screws).
20. Put o-ring on cover disc and lubricate it.
21. Install cover disc over locking mechanism on impeller borehole.
22. Make certain to place copper washer and loctite on bolt before installation. (I)
23. Tighten bolt.



I.