

HELLER INDUSTRIES	Document Title: RETROFIT INSTRUCTIONS
Date: 7/11/2024	Drawing Number/Customer Order Number: 4224364(REV-INI)

Instructions for Reactor Catalyst Remove Retrofit

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7/11/2024	A	Remove aluminum foil	John Ma

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Read and understand all instructions prior to beginning work. Ensure that all parts have been received per retrofit BM

1. SCOPE:

Reactor Catalyst Remove Retrofit

2. TOOLS / ITEMS REQUIRED:

- Full set metric wrenches
- Adjustable or crescent wrenches;
- Diagonal pliers;
- Small flathead screwdriver;
- Wire stripper;
- Crimping pliers;
- Knife;
- Pistol drill;
- 3/8" Electronic Torque wrench
- 3/8" ratchet
- 3/8" socket set
- 3/8" extensions (2-3" should work)
- Allen set
- Loctite brand anti-seize (for reactor bolts)
- Large plastic bag (for containing reactor insulation while removing and storing)
- GREASE,LUBRIPLATE#107,16OZ TUB 227834



3. ASSEMBLY DRAWINGS & OTHER REFERENCES:

AIN01160- MK7 NGBA Flux reactor assembly



4. PRECAUTIONS:

1. Please understand the retrofit content first. If you need to complete the retrofit while the oven top cover is open, please first cool down the oven and open the oven top cover.
2. Do not perform maintenance while the tool is hot. Ensure tool is cool before opening.
3. Ensure that the tool is turned off. Use proper Lock-Out/ Tag-Out procedure to prevent any accidental startup of the equipment.

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5. INSTRUCTION

1. Cool down the oven, closed the hood and turn off the power supply, follow LOTO, Remove front panels of reactor location , Retain all hardware. Set aside for reinstallation.
2. Remove 2- quick connector for water Plumbing , 2- quick clamp and 2-Viton gasket for Air plumbing below picture red shown (See Fig 1), Set them aside for reinstallation

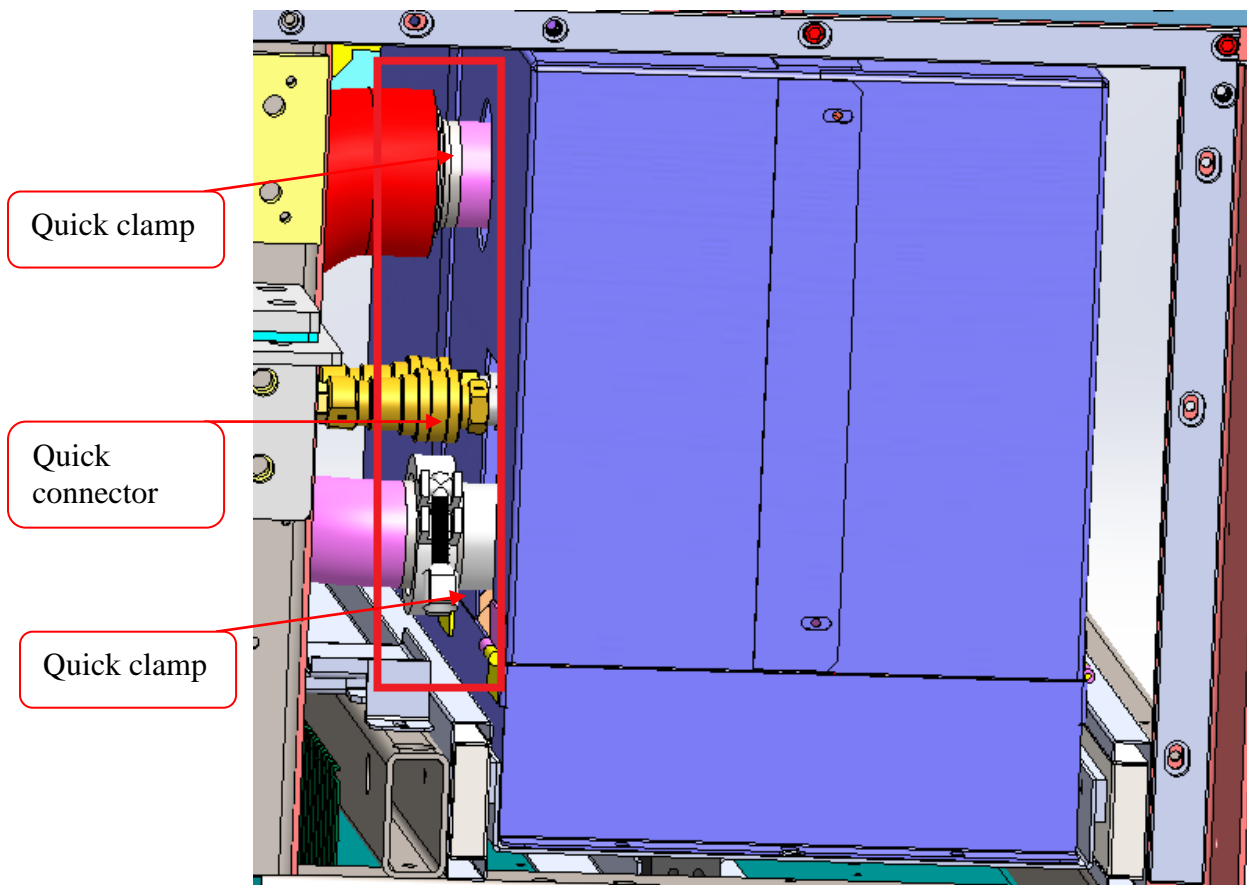


Fig 1

3. Remove 1- fixed screw below picture red shown (See Fig 2), Set them aside for reinstallation

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Fig 2

4. move reactor assembly to outside (see Fig 3/4), about the following location

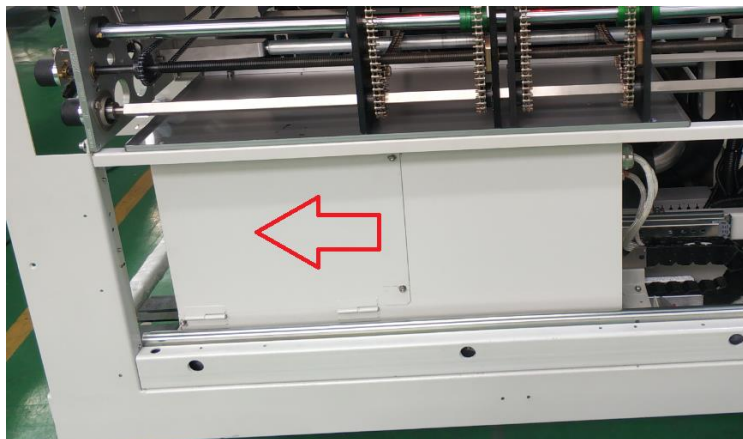


Fig 3

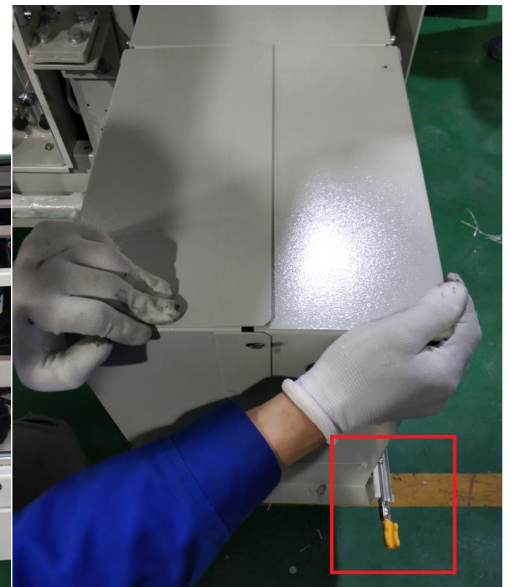


Fig 4

5. remove 6- fixed screw below picture red shown (See Fig5) , Set them aside for reinstallation

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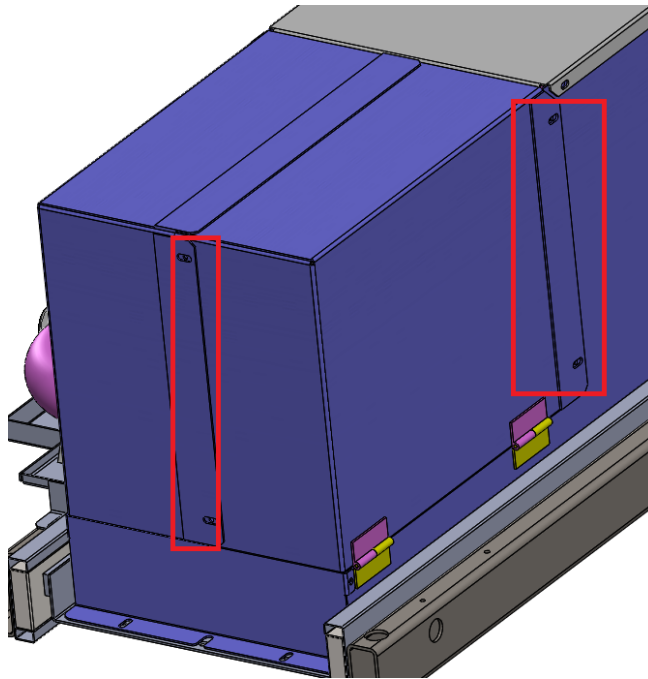


Fig 5

6. open the reactor cover to the following location(See Fig 6). Remove all front insulation ,
Due to the large amount of dust in the INSURATION, it is necessary to take personal protective
measures (such as wearing masks, protective clothing, gloves, etc.)



Fig 6

7. Remove 2- flex tube for cool coil, Pay attention to the water inlet and outlet (See Fig7).

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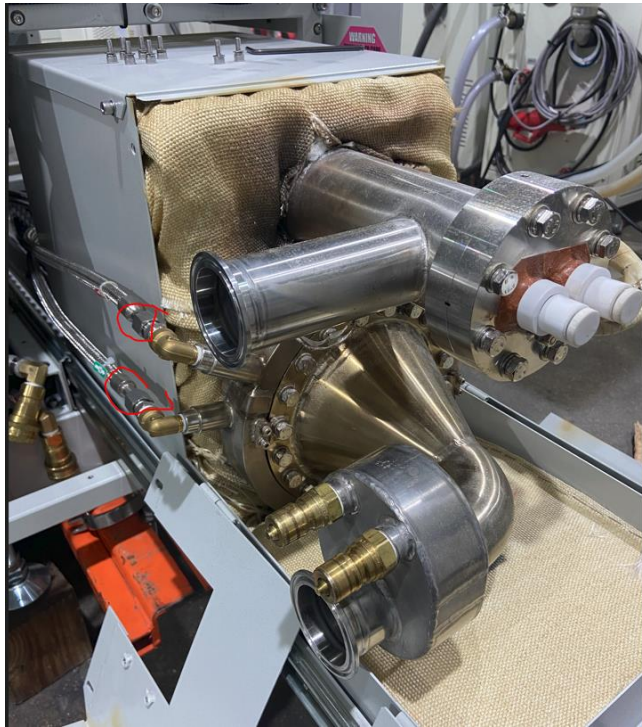


Fig 7

8. Use the torque wrench to loosen the reactor flange screws,

NOTE reactor flange can shift, take note of current reactor cooling pipe bracket bolt location. If reactor cooling coil is shifted and assembled in incorrect location, reactor cover will not fit when going back together. (See Fig 8).



Fig 8

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9. Remove the reactor flange (See Fig 9)

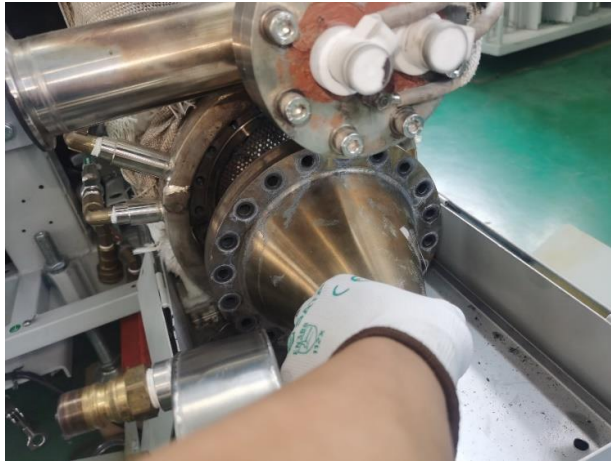


Fig 9

10. Remove the Ring (See Fig 10)

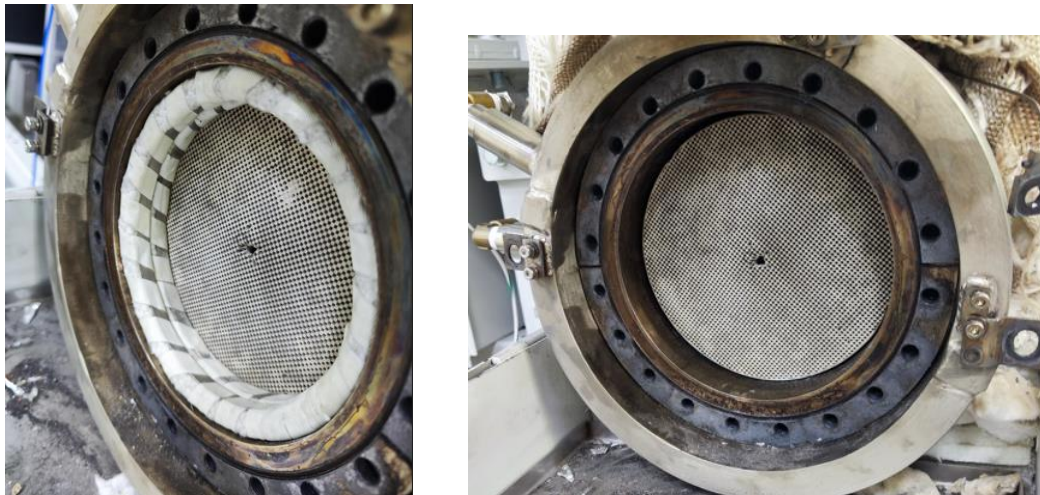


Fig 10

11. Remove ceramic filter (See Fig 11)

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Fig 11

12. Remove inside Ring (See Fig 12)

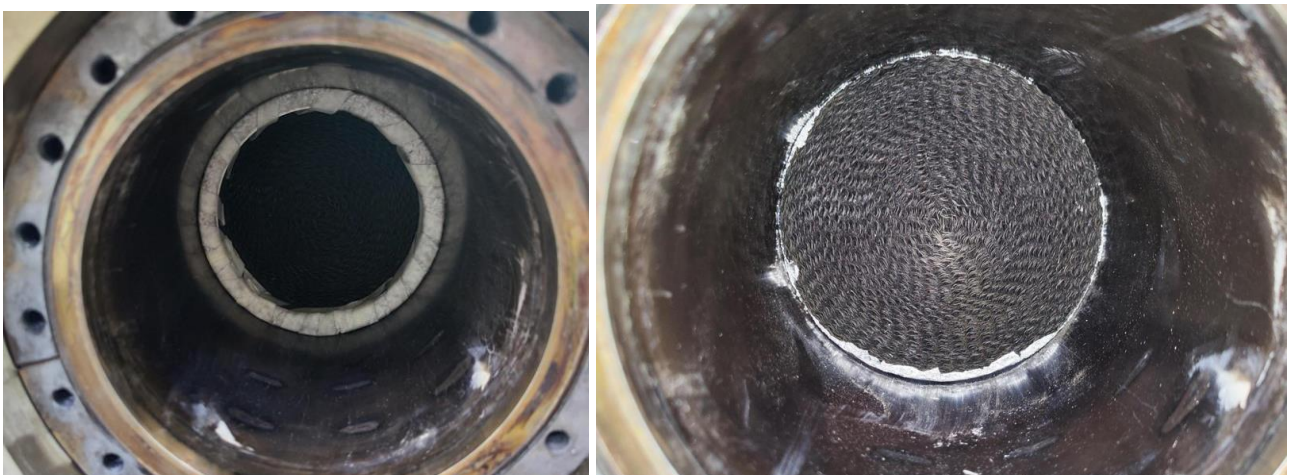


Fig 12

13. Remove black mesh (See Fig 13)



Fig 13

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New design shown:

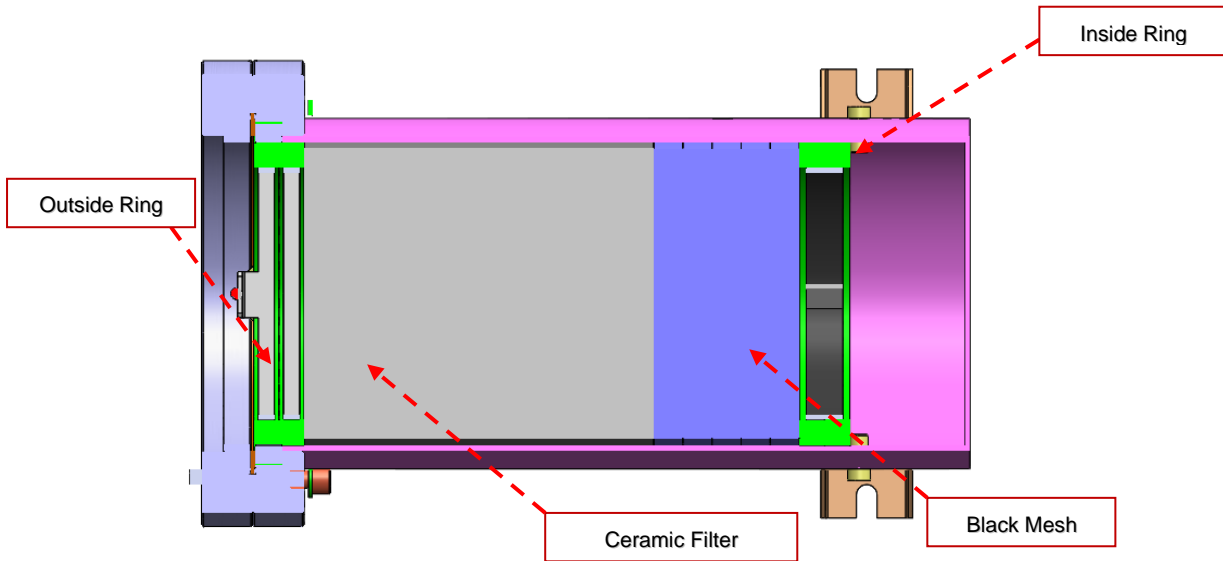


Fig 14

14. Insert new inside Ring (See Fig 14)



Use one long tool to squeeze sealing ring
let the seal ring to become vertical

Fig 14

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15. Put the stainless steel sheet bag outside the catalyst and put it together in the REACTOR
(See Fig 15)

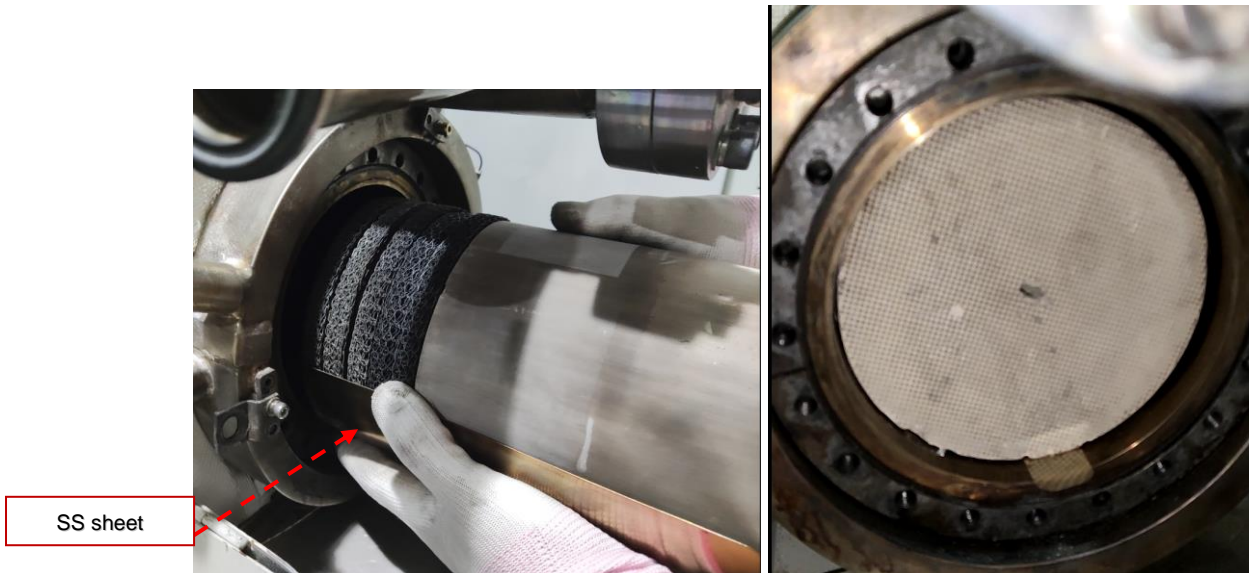
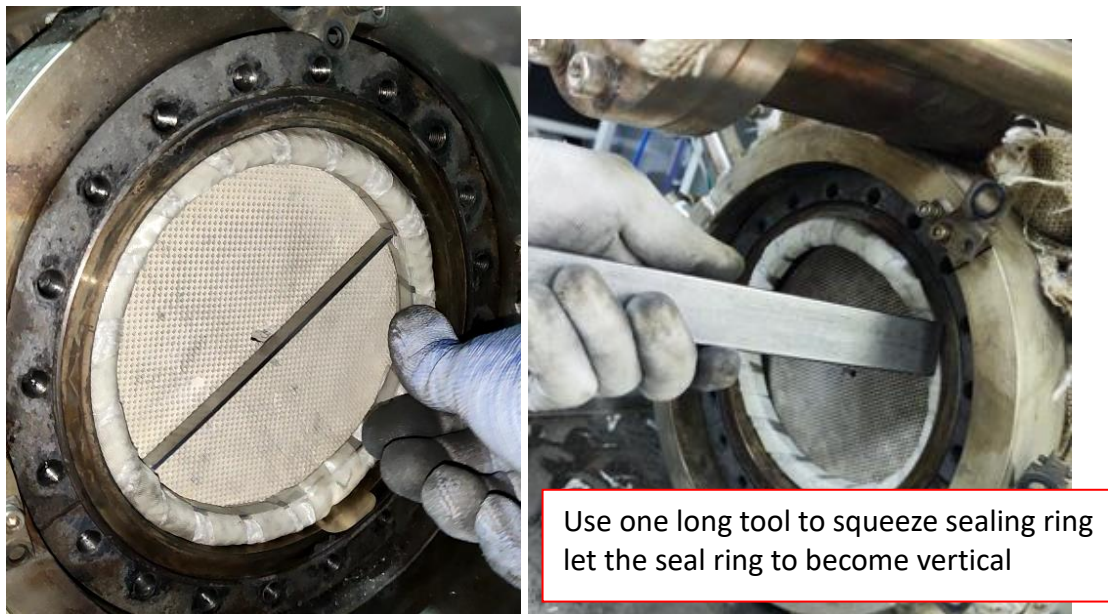


Fig 15

16. Install new outside ring (See Fig 16)



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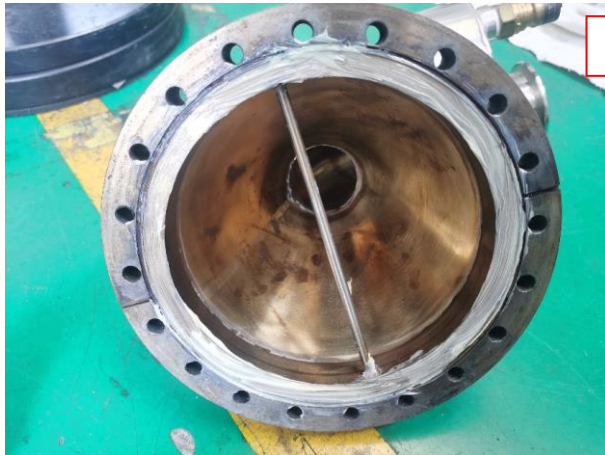
Use the same method to insert more one in it

Fig 16

17. The reactor flange copper gasket installation (See Fig 17)



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Apply a thin layer of grease to the flange



Fig 17

18. Place the copper gasket in position (See Fig 18)



Fig 18

19. Reinstall the flange and the screws. (See Fig 19)



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Fig 19

20. The screws should be applied with the high temperature anti-seize oil (See Fig 20)

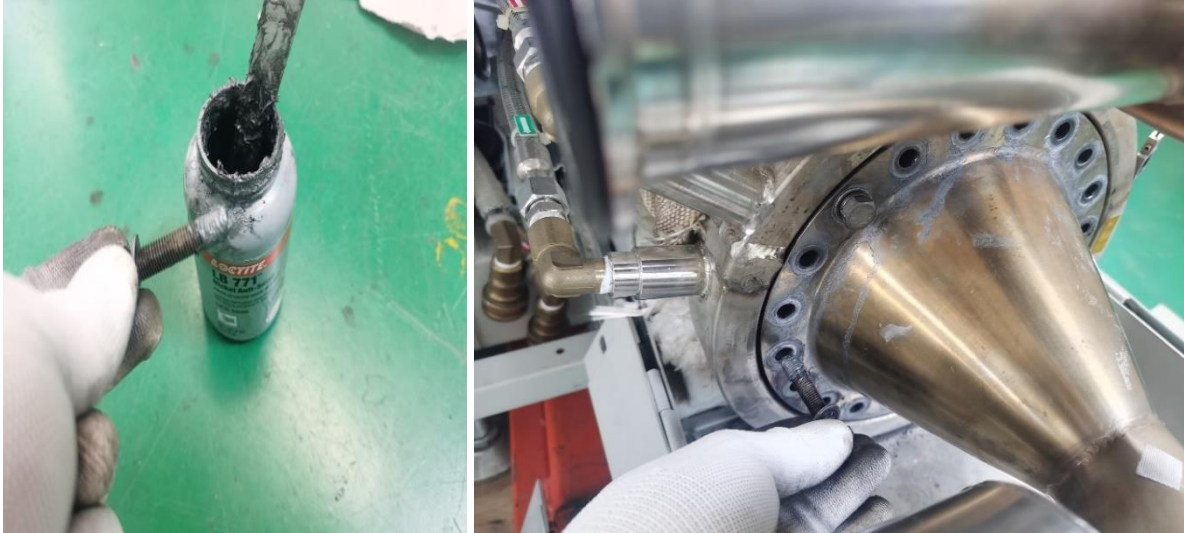


Fig 20

21. Flange weldment mount screw reference ALPHA SOP : AISN01160- MK7 NGBA Flux reactor assembly . (See Fig 21) Torque spec for Reactor bolts: 45nm

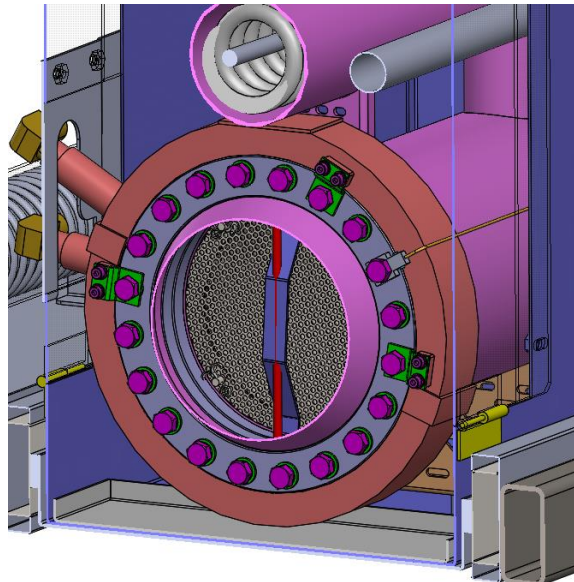


Fig 21

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22. Reinstall the reactor front cover and locate the reactor box in position (See Fig 22)

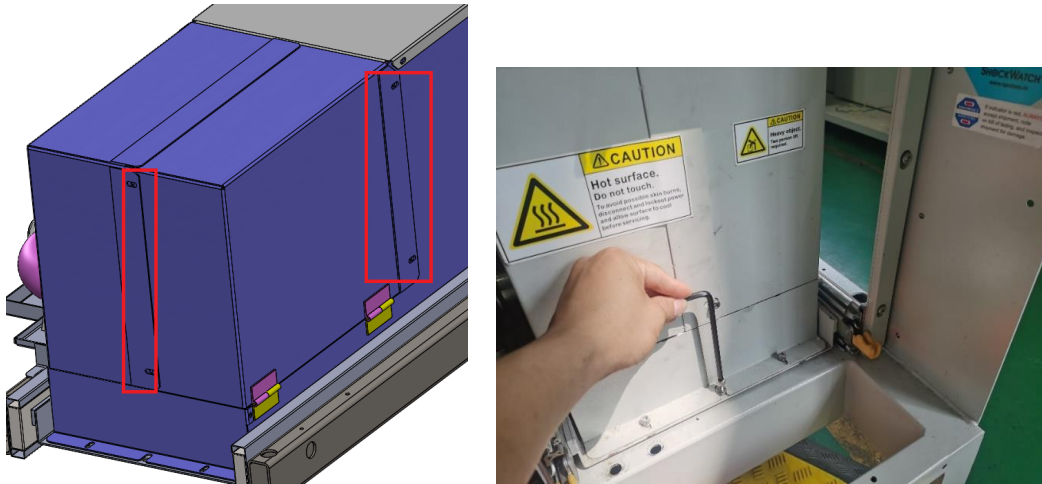


Fig 22

23 . check all water tube and N2 tube , reinstall all other removed parts

24. Before starting up, confirm that all modifications have been completed.