

Please follow step by step and tick off as you go!

1) To make chamber safe

- Ask Ops to close IV4
- Turn off detector biases
- Turn off pre-amps
- Change cooler set-point to 20°C and switch off when warmed up
- Change trip point on Baratron control box to 800Torr

2) To remove hydrogen

- slowly open H2 fill valve on top of TUDA (pressure on CM5 may come up slightly)
- Close hand valve on roughing line
- Open RV5
- Slowly open hand valve on roughing line (~1Torr/s)
- Once CM5<1Torr, reconnect cables to gauges CG5, CG5A, B and C, and PNG5
- Once CG5<250mTorr, open RV4
- Replace TUDA end flange bolts

3) Flush chamber with nitrogen and back fill H2 line

- Close RV5
- Check hand valve on vent line is closed and vent line is attached to nitrogen bottle
- Open nitrogen bottle and flow valve (a little)
- Open VV5
- Slowly open hand valve on vent line (~1Torr/s)
- Fill until CM5 reads ~700Torr (do not overpressure)
- Close VV5 and hand valve
- Close H2 supply valve on top of TUDA
- Close nitrogen bottle and flow valve

Hydrogen supply line is now back filled to blue panel with nitrogen.

4) To clear hydrogen from exhaust line

- Close hand valve on roughing line
- Open RV5
- Slowly open roughing line hand valve (~1Torr/s)
- Pump out until CG5<250mTorr
- Close RV5
- Close roughing line hand valve

Chamber is now safe, and can be left in this state.

5) To vent to nitrogen and open

- Open nitrogen bottle and flow valve
- Open VV5
- slowly open hand valve on vent line (~1Torr/s)
- Fill until CM5 reads ~760Torr (atmospheric pressure)
- Close nitrogen bottle and flow valve
- Inform Ops you would like to open the chamber and ask to perform swipe test.

Once swipe test is complete, chamber can be opened.