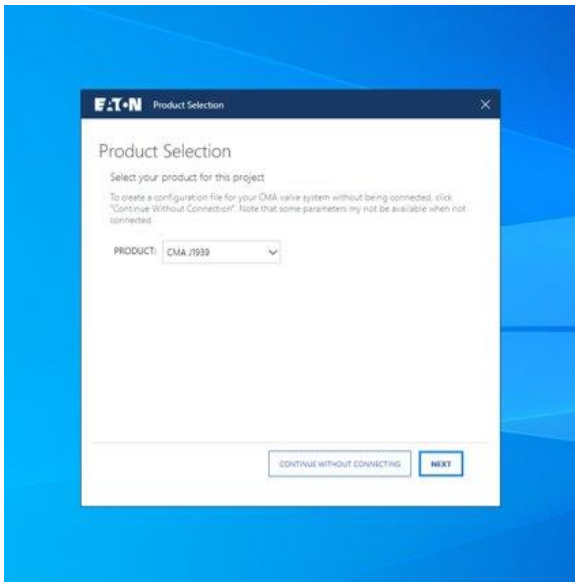
Connecting Service Laptop to ProFx

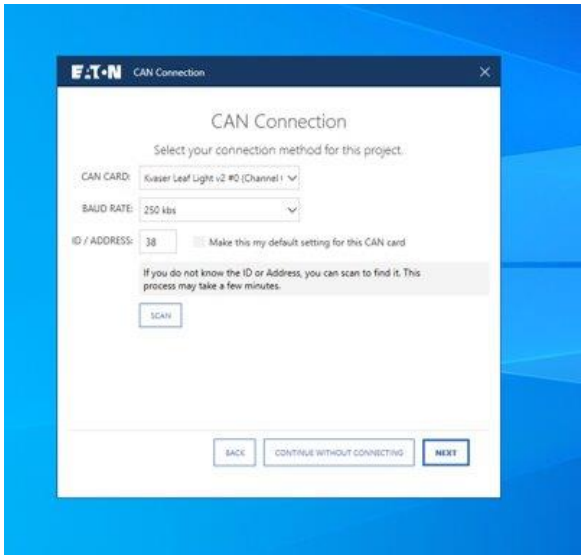
1. Connect the Kvaser Leaf Light HS v2 M12 adapter to the Service Laptop USB port.

2. Connect the Kvaser Leaf Light HS v2 M12 adapter to CAN2 diagnostic port located on the left operator control console.
   - For RRP machines: ATPI, AM3, DAA, DAS, DASP, and DCA are all on CAN 2.
   - For Nipper Clippers, the Left and Right Valve is on CAN2 and the Center valve CAN 3.

3. Click on the ProFx icon to open the *Eaton CMA ProFx* application.
4. In the *PRODUCT* field, select **CMA J1939**.
5. Click **NEXT**.



6. Make sure the following parameters are selected:
   - CAN CARD: **Kvaser Leaf Light v2 #0 (Channel 1)**
   - BAUD RATE: **250 kbs**
   - ID/ADDRESS
     - ✓ For ATPI Left & Right CMA valve bank enter 38.
     - ✓ For ATPI Center CMA valve bank enter 40.
     - ✓ For AM3, DAA, DAS, DCA & DASP Left and Right CMA valve banks enter 38.
     - ✓ Nipper Clipper Left, Right and Center CMA valve enter 38.

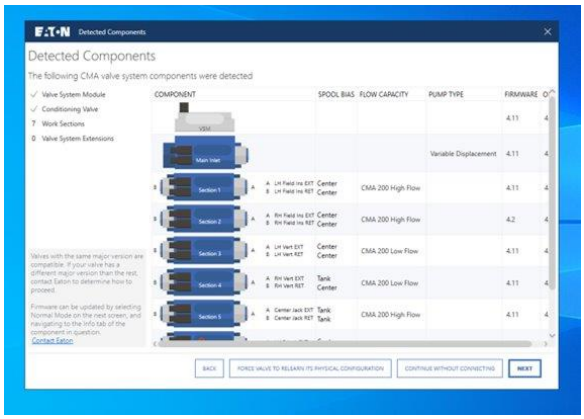


7. Click **Next**.

8. Check that all CMA valve system components were detected.

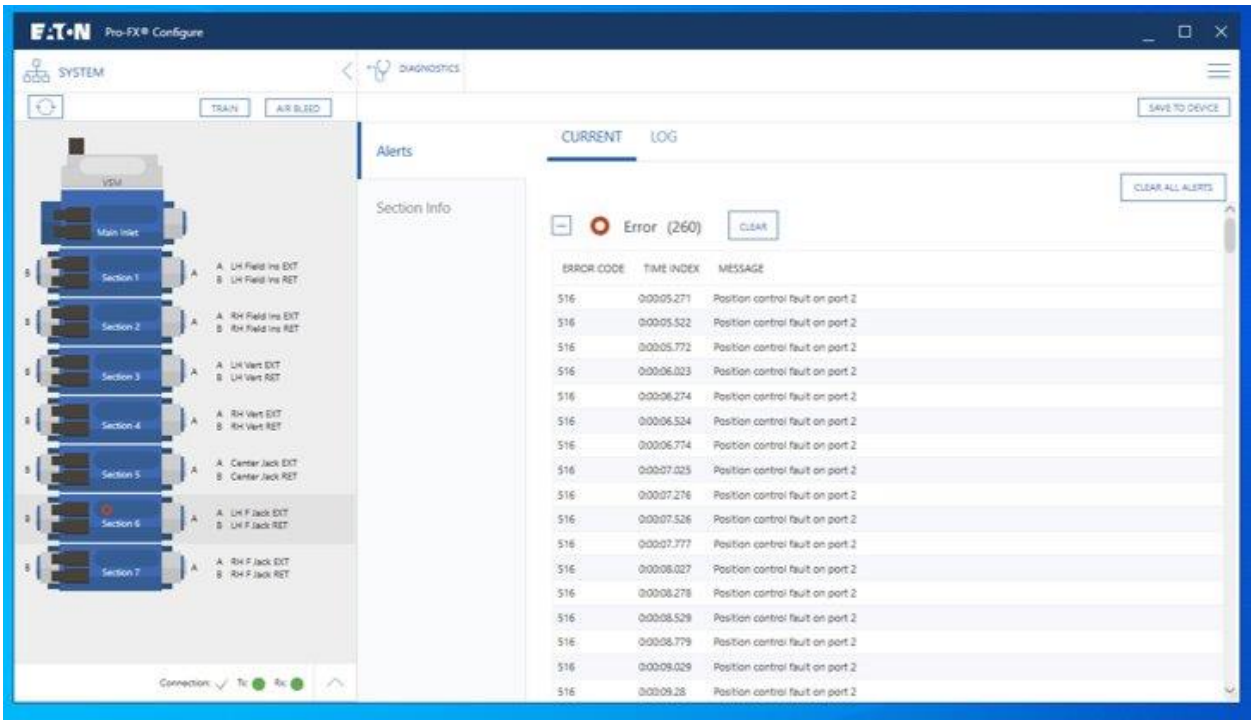
   Only CMA valves defined by ID/ADDRESS will be displayed.

9. Click **NEXT.**



11. Click on a Section to:
    - View current alerts, warnings and/or errors.
    - Clear all alerts.
    - View logged alerts.
    - View section info.
    - Perform training or air bleed if necessary.

Note: Refer to the preventative maintenance manual for training or air bleeding instructions.



Airbleeding

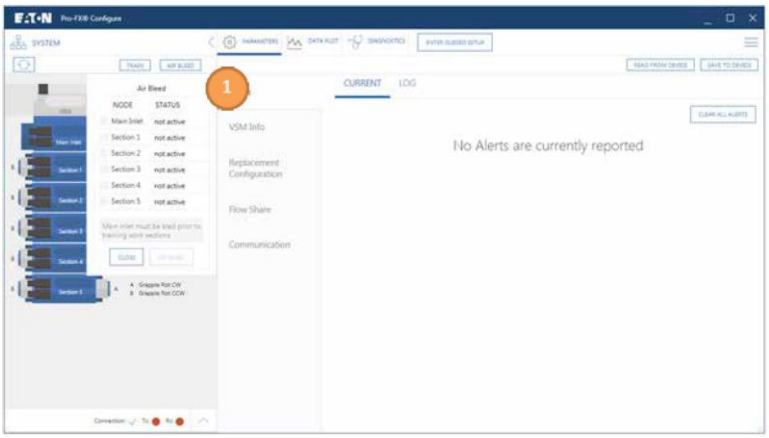
General Information

- The steps in “Connecting Service Laptop to ProFx” ” must be completed before starting this routine.
- During airbleeding of work sections, CMA will control the supply pressure to 30 bar.
- During airbleeding of the inlet, supply pressure will oscillate between tank and full system pressure.
- The prime mover must be “On” and supplying hydraulic power.
- Airbleeding moves the pilot spools back and forth in order to remove air from the pilot cavities.
- When the pilot spools are cycled, the main stage spools also cycle from fully open to supply to fully open to tank simultaneously (i.e. both open to Pressure, then both open to Tank) at approximately 5 Hz.

  As a result, the work port will oscillate between tank and 30 bar pressure.
- Airbleeding typically lasts about 3 minutes.
- If a PV or CV has been replaced, CMA will require airbleeding prior to operation.
- If the inlet (CV) and a work section (PV) both are requiring airbleeding, the inlet (CV) must be airbled before the work section (PV) is airbled.
- Multiple work sections can be airbled at the same time.
- The user can also request airbleeding at any time.

Procedure

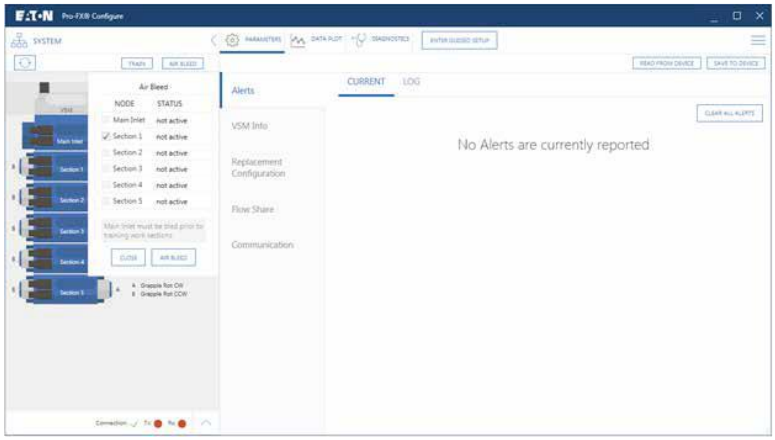
1. Press the “Airbleed” button (1) to expand the airbleeding menu.



2. If CMA is requiring a valve be airbled, it will be checked. I

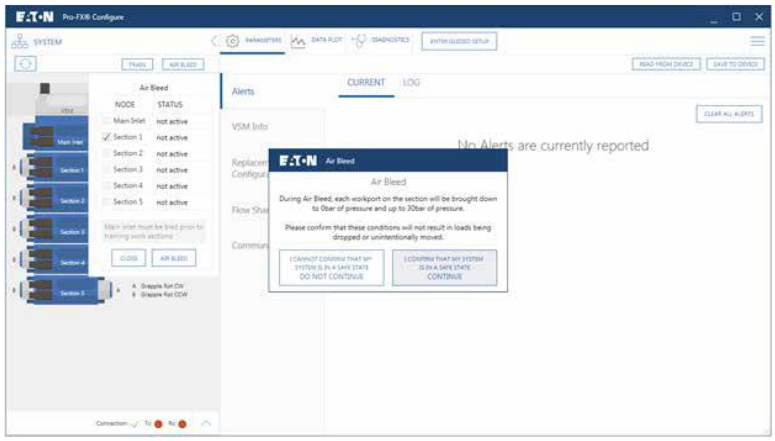
   If the user would like to also airbleed another valve, it can also be checked.

   Press “Airbleed” to airbleed the checked valves.



3. Ensure that the machine is in a safe state for the work ports to be opened to tank and 30 bar pressure.

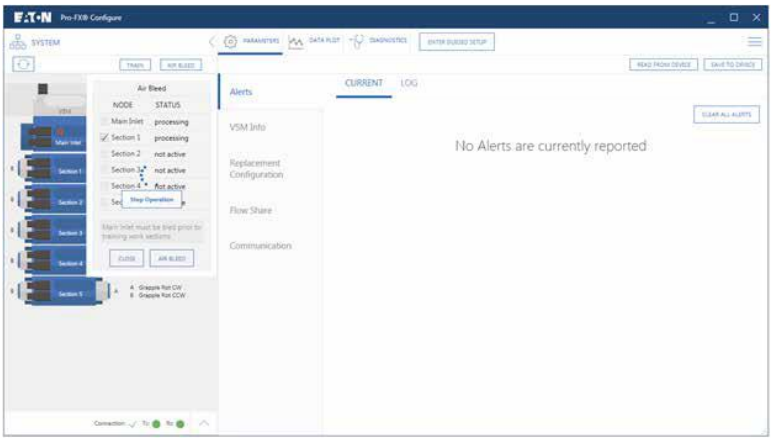
   Press “Continue” to proceed to airbleed.



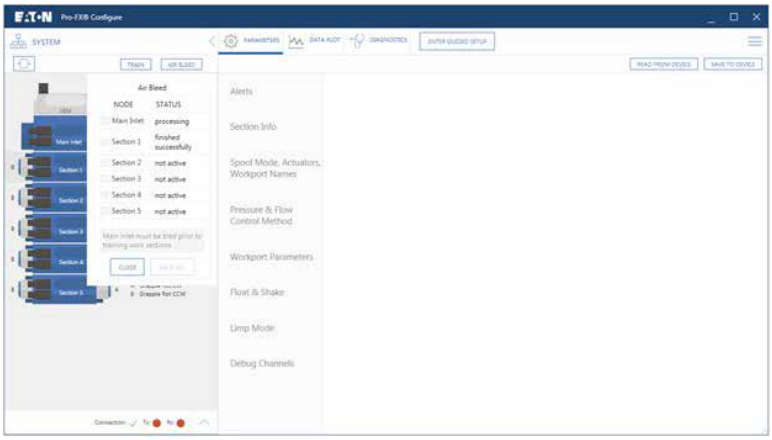
4. While airbleeding is in process, the busy indicator will be displayed.

   Note that if a work section is being airbled, the main inlet will also so as in process because it will be controlling supply pressure to 30 bar.

   If airbleeding needs to be discontinued, the “Stop Operation” button can be pressed.



5. After airbleeding is completed, the status will show as either Finished Successfully or Finished Unsuccessfully.



Training

General Information

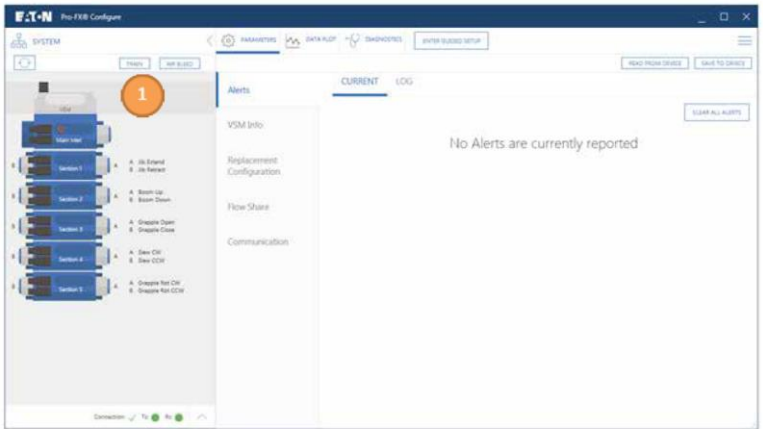
- The steps in “Connecting Service Laptop to ProFx” ” must be completed before starting this routine.
- During work section training, CMA will control the supply pressure to 30 bar.
- During inlet training, CMA will ramp supply pressure from tank to full system pressure.
- The prime mover must be “On” and supplying hydraulic power.
- Training moves the pilot and main stage spools back and forth sequentially (Spool A first, then Spool B) through the complete stroke to learn characteristic information.
- When the main stage spools are cycled from fully open to supply to fully open to tank, the work port will be opened to tank and 30 bar pressure.

  As the spools are trained sequentially, while spool A is moving between end-stop to end-stop, spool B will remain the spring-biased condition and vice-versa.
- Training typically lasts about 2 minutes.
- If a PV or CV has been replaced, CMA will require training prior to operation.
- If the inlet and a work section both are requiring training, the inlet must be trained before the work section is trained.
- Before training the inlet, the inlet’s Maximum Pressure must be set to an achievable pressure (usually a bit lower than the inlet or system relief).

  The inlet LS volume must also be set for Variable Displacement pumps
- Multiple work sections can be trained at the same time.
- The user can also request training at any time.
- If any of the work-section spools are spring-biased to Supply and the downstream service can consume enough flow to saturate the pump, steps must be taken to prevent this (such as installing a shut-off valve and plugging the work-port.

Procedure

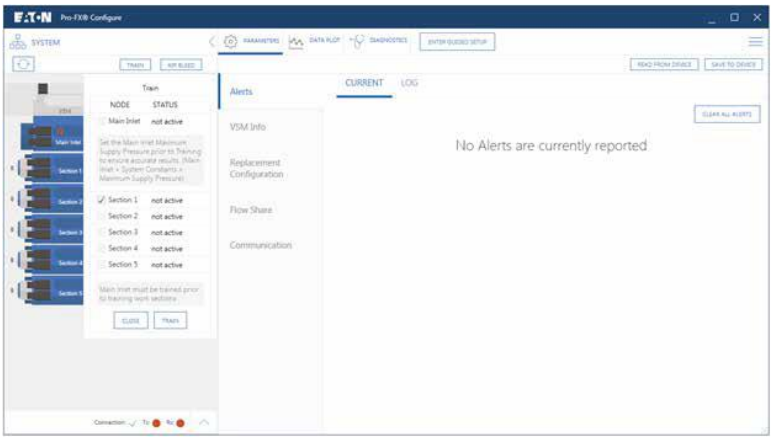
1. Press the “Train” button (1) to expand the airbleeding menu.



2. If CMA is requiring a valve be trained, it will be checked.

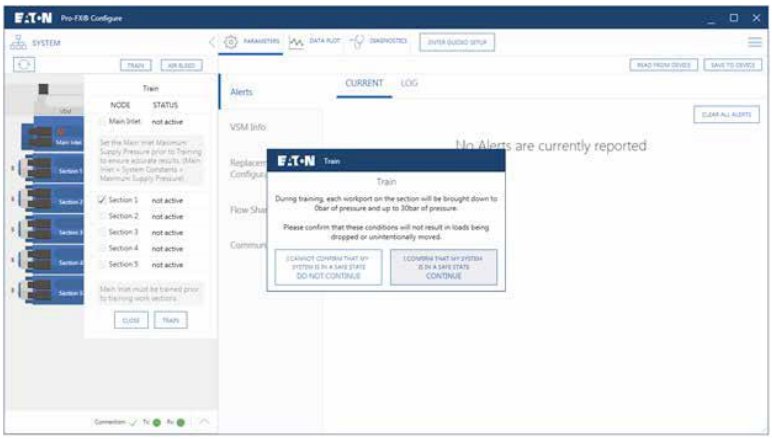
   If the user would also like to train another valve, it can also be checked.

   Press “Train” to train the checked valves.



3. Ensure that the machine is in a safe state for the work ports to be opened to tank and 30 bar pressure.

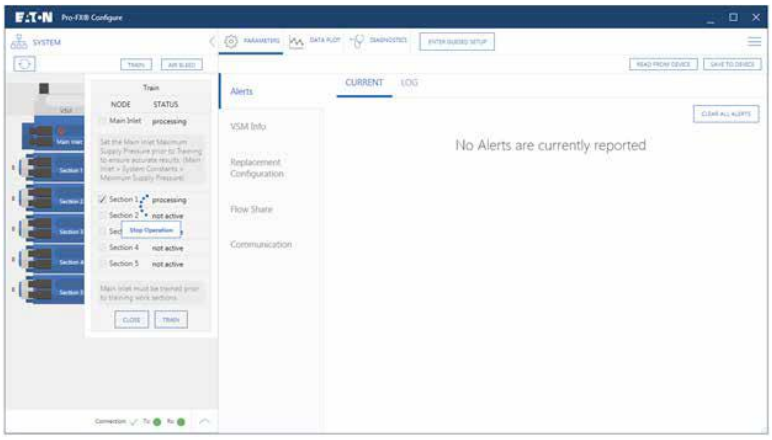
   Press “Continue” to proceed to training.



4. While training is in process, the busy indicator will be displayed.

   Note that if a work section is being trained, the inlet will also be shown as being in process because it's being used to control supply pressure to 30 bar.

   If training needs to be discontinued, the "Stop Operation" button can be pressed.



5. After training is completed, the status will show as either Finished Successfully or Finished Unsuccessfully.