altronic
GTI Bi-Fuel®

Golden Rules

18 General Orders – GTI+

The following is a list of standing requirements for any GTI+ Bi-Fuel installation and commissioning:

1. An electrical load bank with metering or equivalent means of setting a controlled/stable load on the (POWER PACK) generator set, variable throughout its full range of operation (0%-100% of rated load) in repeatable 5% to 10% of rated load increments.

2. Basic hand tools, high quality digital multi meter, and digital differential manometer (minimum range -2.0 to 30.0 psig).

3. A reliable and accurate method of measuring real-time diesel fuel consumption throughout the commissioning process and full range of operation (0% to 100% of rated load).

4. A responsible operator who will maintain responsibility for engine operation and safety.

5. Adequate supply of clean, dry, fuel-grade gas at a statically and dynamically stable pressure from 3 psig to 15 psig at a rate of 8.0 SCFH per kWe of set rating.

6. Verify a full and complete installation of the Bi-Fuel kit.

7. Verify manual gas isolation valve is closed before and during “Configure” and “Calibrate” operations.

8. With engine OFF, set the AGM-PV to the full counterclockwise (closed) position.

9. With engine OFF, use appropriate Altronic Terminal Program to “Configure” panel, “Edit Setpoints” and replace default “Safety” and “Control” values with “anticipated/working” values to provide minimal system protection during commissioning.

10. With engine off, use appropriate Altronic Terminal Program to “Calibrate” appropriate sensors.

11. With engine running at no-load rated speed, and also at full-load rated speed, use appropriate Altronic Terminal Program to “Calibrate” kW and/or RPM sensors.

12. Gather complete “Diesel-only Baseline” data consisting of a minimum of 11 load points, sampled in 10% load steps (0% to 100% of rated load).

13. Open the AGM-PV three turns. Verify that manual gas isolation valve is OPEN.

14. With bi-fuel on, and in manual mode, run the engine at the minimum load required to allow for bi-fuel operation. Using the AGV_GTI terminal program slowly use the units and tens keys to increase the D value 2% above the S value. Once valve position is above 0%, use the units and tens keys to increase to desired substitution.

15. Repeat step 14 in 10% load steps until desired bi-fuel window is established. Gather “Bi-Fuel operational data” consisting of the same points recorded on the diesel baseline. NEXT screen D value and kW will load into the AGV map in the terminal program.

16. Transfer NEXT screen data to AGV map in terminal program. “Edit Set-points” to update the “anticipated/working” values with “Final” “Safety” and “Control” values to provide required system protection during normal bi-fuel operation.

17. Via the NEXT screen, change the bi-fuel mode to AUTO. Verify proper operation throughout the defined bi-fuel window.

18. Install anti-tamper seals and double-check Bi-Fuel Commissioning Worksheet for completeness of all required data. Have the end user sign the sheet, then return it to the factory for final approval.