

TEGA_Door_Open (Carrier Valve Test II)

Reconciled with block: tega_door_open\r36_TA1_6

Objectives: The Carrier valve since a sol 111 has been consistently opening on command. This block provides a confidence test for valve opening and closing on command. The final state of the carrier valve shall be in the "Open" state. It will also do a re-check of our ability to regulate gas via the bypass and oven inlet valves. (The test on Sol 118 gave a too high pressure)

Configuration: Needs to be run other than first thing in the morning because we don't want this run at a lower PEB temp of -40. This procedure may begin with TEGA off, or it may be tacked on the end of some other procedure.

TA Manifold Pressure is collected on Timer 1

Filaments used: None

SW Version (386): 515

SW Version (EGA): N/A

Sweep and hop mode version(s): None

Super modes and Sweep modes used: None

- 1) TEGA ON
- 2) Execute Sequence 30A
- 3) Select oven (as input parameter) Sol _121____ TA ____0____
- 4) Activate Sequence 24A
- 5) Change valve Pulse time to 4mS
- 6) Set TA_MANIFOLD_PRES to timer_1
- 7) Set TA OUTLET_PRES to timer 1
- 8) Loop 100 times (10 second loop)
 - a) Drive valve open using register write =2049
 - b) FPGA Dump B to verify valve state.
 - c) Drive valve closed using register write =4097
 - d) FPGA Dump B to verify valve state.

TEGA_Door_Open (Carrier Valve Test II)

- 9) Start TA Manifold Heater to regulate at 65 C (**Heat manifolds to ensure pressure sensors work**)
- 10) Start EGA Manifold Heater to regulate at 35 C
- 11) Loop 100 times (10 second loop)
 - a) Drive valve open using register write =2049
 - b) FPGA Dump B to verify valve state.
 - c) Drive valve closed using register write =4097
- 12) FPGA Dump B to verify valve state Loop 180 times (5 second loop) aka “A BUNCH”
 - a) Drive valve open using register write =2049
 - b) FPGA Dump B to verify valve state.
- 13) Set timer 5 to 8 s (to control on-off times of inlet or bypass valves for flow regulation)
- 14) Control bypass valve via duty cycle
- 15) Pause 520 seconds
- 16) Stop control of bypass valve
1. Set timer 5 to 16 s (to control on-off times of inlet or bypass valves for flow regulation)
- 17) Open oven outlet valve
- 18) Control oven inlet valve via duty cycle
- 19) Pause 1040 seconds
- 20) Stop control of inlet valve
- 21) Close outlet valve
- 22) Delay 10 minutes to determine leak rate
- 23) Disable heaters
- 24) Do TEGA TA 4 check with “check_oven=0”
- 25) Call power off

September 5, 2008

Revision 2

TEGA_Door_Open (Carrier Valve Test II)