

PROCESS EQUIPMENT FAILURE RESPONSE

ERROR	RESPONSE	ERROR	RESPONSE
MFS#1 communication failure	CONT	MFS#2 communication failure	CONT
MFS#1 in manual mode	CONT	MFS#2 in manual mode	CONT
MFS#1 temp/presr interlock	CONT	MFS#2 temp/presr interlock	CONT
MFS#1 ambient temp too high	CONT	MFS#2 ambient temp too high	CONT
MFS#1 activation error	CONT	MFS#2 activation error	CONT
MFS#1 leak error	CONT	MFS#2 leak error	CONT
MFS#1 fault	CONT	MFS#2 fault	CONT
TCU communication failure	CONT	BOATL communication failure	CONT
TCU in manual mode	CONT	BOATL in manual mode	CONT
TCU fault	CONT	BOATL fault	CONT

If powerfail duration is less than 3 sec, then CONT else CONT.

TOLERANCE/FAULT RESPONSE

GNAL	LO-TOL	HI-TOL	DELAY	DURATION	GOTO(if out-of-tolerance)
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All default tolerance/fault items

IDLE CONDITION

STEP: IDLE COMMENT: IDLE STATE
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 550.0 DEGC
BOATSPD = 5.0 IPM
N2 = 1250. SCCM
BOATIN = ON
N2CARR = 250.0 SCCM

PROCESS RUN SEQUENCE

STEP: STRT COMMENT: RUN: 1ST STEP TIME: 00.00.05
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 550.0 DEGC
N2 = 5000. SCCM
STEP: 0005 COMMENT: PULL BOATS OUT TIME: 00.08.00
TEMPL = 400.0 DEGC
TEMPC = 500.0 DEGC
TEMPS = 450.0 DEGC
BOATSPD = 5.0 IPM
N2 = 5000. SCCM
BOATOUT = ON
If OUTLMT = ON then goto 0006
If EVENT = ON then goto 0006
STEP: 0006 COMMENT: LOAD WAFERS TIME: 00.15.00
TEMPL = 400.0 DEGC
TEMPC = 500.0 DEGC
TEMPS = 450.0 DEGC
BOATSPD = 5.0 IPM
N2 = 5000. SCCM
BOATOUT = ON
If EVENT = ON then goto BTIN
SONIC = ON
STEP: BTIN COMMENT: PUSH BOATS IN TIME: 00.09.00
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 550.0 DEGC
BOATSPD = 5.0 IPM
TCUID = 18
BOATIN = ON
N2 = 5000. SCCM
STEP: 0008 COMMENT: STABLIZE TIME: 00.15.00
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC

TEMPS = 550.0 DEGC
BOATSPD = 5.0 IPM
N2 = 3000. SCCM
BOATIN = ON
STEP: 0010 COMMENT: TEMP RAMP UP TIME: 00.50.00
TEMPL = 950.0 DEGC
TEMPC = 950.0 DEGC
TEMPS = 950.0 DEGC
N2 = 3000. SCCM
O2LO = 60. SCCM
RMPRATE = 10.0 D/M
STEP: 0015 COMMENT: STABLIZE TIME: 00.05.00
TEMPL = N/C DEGC
TEMPC = N/C DEGC
TEMPS = N/C DEGC
N2 = 3000. SCCM
O2LO = 60. SCCM
STEP: 0020 COMMENT: DRYOX TIME: 00.28.00
TEMPL = N/C DEGC
TEMPC = N/C DEGC
TEMPS = N/C DEGC
O2HI = 3000. SCCM
STEP: 0025 COMMENT: ANNEAL TIME: 00.20.00
TEMPL = N/C DEGC
TEMPC = N/C DEGC
TEMPS = N/C DEGC
N2 = 3000. SCCM
STEP: 0026 COMMENT: RAMP DOWN TIME: 02.00.00
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 550.0 DEGC
N2 = 3000. SCCM
If TEMPC < 550.5 DEGC then goto BTOT
If EVENT = ON then goto BTOT
STEP: BTOT COMMENT: HOLD FOR EVENT TIME: 00.00.00
TEMPL = 550.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 550.0 DEGC
SONIC = ON
N2 = 1250. SCCM
N2CARR = 250.0 SCCM
If EVENT = ON then goto 0030
STEP: 0030 COMMENT: BOATOUT TIME: 00.09.00
TEMPL = 400.0 DEGC
TEMPC = 550.0 DEGC
TEMPS = 450.0 DEGC
BOATOUT = ON

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      N2 = 5000. SCCM
      BOATSPD = 5.0 IPM
      If EVENT = ON then goto 0031
      If OUTLMT = ON then goto 0031
STEP: 0031      COMMENT: UNLOAD WAFERS      TIME: 00.15.00
      TEMPL = 400.0 DEGC
      TEMPC = 500.0 DEGC
      TEMPS = 450.0 DEGC
      SONIC = ON
      N2 = 5000. SCCM
      If EVENT = ON then goto 0035
STEP: 0035      COMMENT: BOATIN      TIME: 00.09.00
      TEMPL = 550.0 DEGC
      TEMPC = 550.0 DEGC
      TEMPS = 550.0 DEGC
      BOATSPD = 5.0 IPM
      N2 = 5000. SCCM
      BOATIN = ON
      If EVENT = ON then goto 0040
STEP: 0040      COMMENT: DATA COL END      TIME: 00.00.09
      TEMPL = 550.0 DEGC
      TEMPC = 550.0 DEGC
      TEMPS = 550.0 DEGC
      BOATSPD = 5.0 IPM
      N2 = 3000. SCCM
      BOATIN = ON
```

SPECIAL HOLD STEP

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STEP: SHLD      COMMENT: SPECIAL HOLD
      TEMPL = N/C DEGC
      TEMPC = N/C DEGC
      TEMPS = N/C DEGC
      BOATIN = ON
      N2 = 2750. SCCM
      SONIC = ON
      BOATSPD = 5.0 IPM
      N2CARR = 250.0 SCCM
```

ABORT SEQUENCE

```
STEP: ABRT      COMMENT ABRT: 1ST STEP      TIME: 00.15.00
      SONIC = ON
      TEMPL = 550.0 DEGC
      TEMPC = 550.0 DEGC
      TEMPS = 550.0 DEGC
      BOATIN = ON
```

BOATSPD = 5.0 IPM
If EVENT = ON then goto ABR1
N2 = 5000. SCCM

STEP: ABR1 COMMENT: ABORT 1

TIME: 00.00.05

TEMPL = 550.0 DEGC

TEMPC = 550.0 DEGC

TEMPS = 550.0 DEGC

N2 = 3000. SCCM

*** END OF FILE ***
