

USA Ground Operations CIL Sheet

SAASF000000-001 JUL 15 1986

Critical Item: S40A Oxygen Analyzer
NASA Part No: None
Mfg/Part No: SERVOMEX / OA-540
System: Oxygen Deficiency Monitoring System

Criticality Category: 1B
Total Quantity: 59

Find No.	Qty / Area	PMN	Baseline	Drawing / Sheet
AS12883A1	1 CIP	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10028A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10029A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10041A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10042A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10043A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10044A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10045A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10038A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10039A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10040A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
AS02130A1	1 MLP-1	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10028A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10029A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10041A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10042A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10043A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10044A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10045A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10038A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10039A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
A10040A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
AS02130A1	1 MLP-2	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All
10028A1	1 MLP-3	C72-1501	142.00	7982-2189 IB-18C540 Issue 3 July 1984 / All

USA Ground Operations CIL Sheet

SAASF000000-001 JUL 15 1998

10029A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10041A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10042A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10043A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10044A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10046A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A10036A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A10038A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A10040A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A502130A1	1	MLP-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10032A1	1	OFF-1	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10031A1	1	OFF-1	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10150A1	1	OFF-1	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10030A1	1	OFF-2	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10031A1	1	OFF-2	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10175A1	1	OFF-2	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A512196A1	1	OFF-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A512197A1	1	OFF-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A514031A1	1	OFF-3	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10025A1	1	Pad-A	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10026A	1	Pad-A	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10027A1	1	Pad-A	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A02132A1	1	Pad-A	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
A522485	1	Pad-A	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10025A1	1	Pad-B	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10026A	1	Pad-B	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI
10027A1	1	Pad-B	C72-1501	142.00	7982-2169 IB-18C540 Issue 3 July 1984 / AI

USA Ground Operations OIL Sheet

SAABF00000-001 JUL 18 1992

602132A1	1	Pad-B	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
A522486	1	Pad-B	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
A517899A1	1	SSMEPF	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
10034A1	1	VAB HB-1	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
10035A1	1	VAB HB-1	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
10034A1	1	VAB HB-3	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
10035A1	1	VAB HB-3	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI
A503544A1	1	VAB Tro Shop	C72-1501	142.00	7882-2189 IS-18CS40 Issue 3 July 1984 / AI

Function:

Monitors the air in confined spaces for proper (21%) oxygen content. Should oxygen level fall below 19.5%, alarm is sounded and beacons flash warning personnel to vacate area.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
SFD00000-001.001	Internal piece part failure (e.g. Direct output card failure, RV4 failure).	Periodic Calibration check	1S
Erroneous high output (when oxygen is below 19.5%)	An erroneous "In Range" reading when oxygen content is below 19.5% could result in loss of life.	Immediate	

ACCEPTANCE RATIONALE

Design:

- Solid state design with protection diodes for stability, feedback network provides protection against overdrive, regulation circuitry to provide stability.
- Diagnostic for quick checks of analyzer's internal sensing logic is built in.

Test:

- Analyzer alarm operation will be verified monthly by introduction of zero gas (nitrogen for oxygen) into sample ports.

Inspection:

- OMRSD File VI requires calibration every two months of the analyzer including zero gas injection, (i.e., verifies proper operation of direct output module and RV4 potentiometer).

Failure History:

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and no data was found on this component in the critical failure mode.

*The GIDEP failure data interchange was researched and no failure data was found on this component in the critical failure mode.

Operational Use:

Correcting Action	Timeframe
There is no action which can be taken to mitigate the failure effect.	Since no correcting action is available, timeframe does not apply.