

GLOSSARY

ACC. Abbreviation for Air Crew Systems Change.

AIRCREWMEMBER. An aircraft crewmember. Passengers are not considered aircrewmembers.

ANTI-SEIZE TAPE. A tape of any of several thin plastic-film materials (such as tetrafluoroethylene) characterized by a waxy, oily texture, and used to prevent binding between mating surfaces of threaded parts when applied to the male threaded portion.

APPROX. Abbreviation for approximately.

ASSEMBLY. A grouping of parts fitted together to form a complete unit.

ATMOSPHERIC PRESSURE. Pressure at sea level, expressed as 14.696 pounds per square inch, absolute, or 29.92 inches mercury column (barometer). See also: [PSIA](#) and [INHg](#).

C. Abbreviation for Celsius.

CAUTION. Indicates danger to equipment. The caution precedes the step or item to which it refers.

CDI. Abbreviation for collateral duty inspector.

CCM. Abbreviation for cubic centimeters per minute.

CO₂. Abbreviation for carbon dioxide.

COMBUSTIBLE MATERIAL/SUBSTANCE. Any material or substance capable of burning in the presence of oxygen. See also: [EXPLOSIVE MIXTURE](#), [FLAMMABLE MATERIAL](#).

COML. Abbreviation for commercial. Refers to parts that are commercially available.

COMPONENT. Item of equipment making up part of an assembly or subassembly.

CONFIGURATION. The makeup, size, shape, and relative location of parts of an item of equipment and its accessories. This includes the composition of the materials as well as marking details. The configuration of each equipment is specified by Government drawings, military specifications and modification instructions.

CONVOLUTION. Used in this manual as the protruding side or portion of a diaphragm.

DETAIL PART. See [COMPONENT](#).

DIA. Abbreviation for diameter.

DISPOSITION. Instructions on what is to be done with or to an item.

ELASTOMER. Any of various elastic substances resembling rubber.

ENSURE. To inspect closely, and to test the condition of an item.

EXAMINE. To inspect closely, and to test the condition of an item.

EXPLOSIVE MIXTURE. Any mixture of a combustible material or substance and oxygen capable of violent burning (detonation) either spontaneously or with the external application of heat. See also: [COMBUSTIBLE MATERIAL/SUBSTANCE](#) [FLAMMABLE Material](#).

F. Abbreviation for Fahrenheit.

FLAMMABLE MATERIAL. Any material capable of being easily ignited and of burning with extreme rapidity.

FLAP PATTERN. See [TEMPLATE](#).

FLUID. Gas, vapor, or liquid.

FREEZING POINT. Temperature at which a given liquid substance will solidify or freeze upon removal of heat. Freezing point of water is 32°F (0°C).

FULL. (In reference to oxygen cylinders) A full oxygen cylinder is a cylinder which is pressurized to its rated pressure. With respect to a high pressure oxygen cylinder, 1800 psig is considered full.

FUNCTIONAL TEST. A test which puts an item to use to determine if it operates properly.

GAPL. Abbreviation for Group Assembly Parts List. The GAPL, a section of the Illustrated Parts Breakdown, shows how major assemblies are disassembled into assemblies and detail parts.

NAVAIR 13-1-6.4-3

HEAT EXCHANGER. Apparatus in which heat is exchanged from one fluid to another.

H₂O. Abbreviation for water.

Hg. Abbreviation for mercury.

IN. Abbreviation for inches.

IND. Abbreviation for indicated.

INH₂O. Abbreviation for inches of water column (27.68 inH₂O equals 1.0 PSI equals 2.036 inHg). See Also: [inHg](#).

INHg. Abbreviation for inches of mercury column (0.07349 inHg equals 1.0 inH₂O). See Also: [inH₂O](#).

INSPECTION. A close examination for damage, wear and dirt. Also, a regularly scheduled examination of oxygen equipment and accessories.

LBS. Abbreviation for pounds.

LOX. Abbreviation for liquid oxygen.

LPM. Abbreviation for liters per minute.

MANUFACTURER'S CODES. Identification codes for every manufacturer listed as a procurement source in accordance with cataloging handbooks H4/H8, Commercial and Government Entity Codes.

MM. Abbreviation for millimeters.

MOLECULAR SIEVE. A cannister containing a nitrogen-absorbing chemical compound (zeolite) through which air is forced, providing enriched breathing oxygen.

NOC. Abbreviation for Navy Oxygen Cleaner.

NOTE. An informative item. The note may precede or follow the step or item to which it refers.

NUMERICAL INDEX. A part of the Illustrated Parts Breakdown. The numerical index includes all the part numbers listed in the GAPL, arranged in alphabetical-numerical sequence.

OBOGS. Abbreviation for Onboard Oxygen Generating System.

OEAS. Abbreviation for Oxygen Enriched Air System.

PRESSURE. The force exerted by a liquid or gas per unit of area on the walls of a container. See Also: [PSM](#), [PSIA](#), and [ATMOSPHERIC PRESSURE](#).

PRESSURE DROP. Loss in pressure, as from one end of a distribution line to the other, due to friction and other factors.

PRESSURE EXPLOSION. Explosion caused by rapid conversion of liquid oxygen to gaseous oxygen in a confined space due to evaporation and warming.

PROPER. Correct or authorized configuration or method.

PSI. Abbreviation for pounds per square inch. See also: [PSI](#) and [PSIA](#).

PSIA. Abbreviation for pounds per square inch, absolute. Absolute pressure is measured from absolute zero (100% vacuum), rather than from normal, or atmospheric pressure. It equals gage pressure plus 14.696 pounds per square inch. See Also: [PSI](#) | [PSIG](#), and [ATMOSPHERIC PRESSURE](#).

PSIG. Abbreviation for pounds per square inch, gage. Indicates pressure above ambient pressure, as indicated on a pressure gage vented to the atmosphere. See also: [PSI](#) and [PSIA](#).

QA. Abbreviation for quality assurance.

QUALIFIED PERSONNEL. Qualified personnel are defined as personnel who have satisfactorily completed a prescribed course at a Navy Training School Fleet Readiness Aviation Maintenance Personnel Training Program (AMP), Inter Service/Factory Training, formal or informal In-Service Training (refer to OPNAVINST 4790.2 Series). In addition, a practical demonstration of the skills acquired in any of the foregoing training situations, to the satisfaction of the Work Center Supervisor/Director/Officer is required before the designation "Qualified" can be assigned.

R. Abbreviation for radius.

REFILL. (In reference to oxygen cylinders) To refill is to recharge a cylinder, regardless of the residual pressure remaining within the cylinder.

REPAIRS, MAJOR. Repairs requiring special equipment, personnel, or materials normally not available at intermediate or local levels of maintenance.

REPAIRS, MINOR. Repairs that can be effected at intermediate or local levels of maintenance.

REF. Abbreviation for reference.

SM&R CODES. Abbreviation for source, maintenance, and recoverability codes. Comprised of three parts, a two-position source code, a two-position maintenance code, and a one-position recoverability code. Refer to ■ NAVSUPINST 4423.29 for further details.

SPECIFIC GRAVITY. Density of fluid compared to density of water.

TEMPLATE. A pattern or gage usually in the form of a thin plate of cardboard, wood, or metal. It is used as a guide in the layout or cutting of flat work.

TORQUE. A force, or combination of forces, that tend to produce a rotating or twisting motion. Torque is often expressed pounds-inch (lbs-in.) or pounds-foot (lbs-ft.). A torque wrench is used to apply a measured torque.

TYP. Abbreviation for typical.

WARNING. Indicates danger to personnel. The warning precedes the step or item to which it refers.

THIS PAGE INTENTIONALLY LEFT BLANK.

ALPHABETICAL INDEX

Subject	Paragraph, Figure, Table Number
A	
Accident Evaluation.....	2-6A
Acronyms	
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-9
Assembly	
Electronic Box and Air Heater Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F85, F4-12, F4F17, F4-21
Electronic Box, Plenum, Sieve Beds, Rotary Valve, Inlet Filter and	
Air Heater Assemblies to Mounting Plate	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F89, F4-10, F4F11, F4-12
Inlet Filter Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F84, F4-18
Oxygen Concentrator, GGU-12/A (Modified Test Sets).....	6-75, F6-13
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F81
Oxygen Concentrator, GGU-12/A (Modified Test Sets).....	6-71
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-69
Plenum Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Sets).....	6-81, F6-12
Pressure Reducer Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F92, F4-14
Reducer Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-78, F9-14, F9-16, F9-17
Rotary Valve Assembly To Sieve Beds	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F88, F4-15
Shroud Assembly and Mounting Plate Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F87, F4-12
Shutoff Valve/Filter Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-77, F9-13, F9-14, F9-15
Sieve Beds, Plenum and Check Valve	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F83, F4-20
Solenoid Valve, Air Heater Assembly and Inlet Filter Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F84, F4-22
Stabilizer Plate Attachment	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F91, F4-14
Tube Fittings Disc Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-74, F9-10, F9-18
B	
C	
Cleaning	
Disassembled Parts	
Oxygen Concentrator, GGU-7/A (Modified Test Sets).....	4F75
Oxygen Concentrator, GGU-12/A (Modified Test Sets).....	6-65
O ₂ N ₂ Concentrator, Type GGU-xx/A.....	9-63

ALPHABETICAL INDEX (Cont)

Subject		Paragraph, Figure, Table Number
---------	--	---------------------------------------

C (Cont)

Comments and Recommendation	1-13
Configuration	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-3
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-3
O ₂ N ₂ Concentrator Type GGU-XX/A	9-13
Conflicting and Superscurences	1-9
Contents	1-8

D

Description	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-1, F4-1, T4-1
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-1, F6-1, T6-1
O ₂ N ₂ Concentrator Type GGU-XX/A	9-13, F9-13, T9-13
Description of NAVAIR 13-1-6.4-3	1-7

Disassembly

Aneroid Valve and Filter Assembly	
Inlet Filter Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-61, F6-13
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-64, F4-12, T4-13
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-47, F6-8, T6-9, F6-10
O ₂ N ₂ Concentrator Type GGU-XX/A	9-47

Plenum Assembly

Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-55, F6-12
---	-------------

Reducer Assembly

O ₂ N ₂ Concentrator Type GGU-XX/A	9-55, F9-14, T9-16, F9-17
--	---------------------------

Shutoff Valve/Filter Assembly

O ₂ N ₂ Concentrator Type GGU-XX/A	9-54, F9-14, T9-15
--	--------------------

Tube Fittings Disc Assembly

O ₂ N ₂ Concentrator Type GGU-XX/A	9-58, F9-10, T9-18
--	--------------------

E

Engineered Drawings	1-14
-------------------------------	------

F

Function	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-5, F4-2
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-5, F6-2
O ₂ N ₂ Concentrator Type GGU-XX/A	9-55, F9-13

G

General Information of Oxygen System	3-1
Group Assembly Parts List	2-13

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
H	
Hazards	3-13
Gasous Oxygen	3-19
Liquid Oxygen	3-23
Fire and Explosions	3-27
Freezing	3-25
Pressure Explosions	3-29
I	
Illustrated Parts Breakdown	
Bed Outlet Structure Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-26
Diaphragm Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-24
Electronics Box Assembly, Sieve Beds and Plenum Assembly with Check Valve	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	F4-28
Inlet Filter Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-24
Junction Box Assembly/Heater Assembly/Inlet Filter Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-22
Molecular Sieve Bed Assemblies/Special Cable Assembly/Electrical Box	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-23
Mounting Plate Assembly/Shroud	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-19
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-PII
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-PII
Plenum Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-21
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-86, F9-19
Pressure Reducer and Rotary Valve and Vent Tube Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-25
Pressure Reducer Assembly/Rotary Valve Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	F4-26
Pressure Swing Adsorption Unit	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-20
Reducer Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-23
Shroud Assembly/Mounting Plate	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	F4-25
Shutoff Valve and Filter Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-22
Shutoff Valve/Filter/Regulator Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	F9-21
Solenoid Valve, Air Heater Assembly and Inlet Filter Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	F4-27

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
I (Cont)	
Illustrated Parts Breakdown (Cont)	
Stabilizer Plate	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	F4-24
Stabilizer Plate/Shroud	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	F6-18
Tube Fittings Disc Assembly	
O ₂ N ₂ Concentrator Type GGU-xx/A	F9-25
Illustrated Parts Breakdown Information	2-10
Inspections	
Acceptance	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-23
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-22
O ₂ N ₂ Concentrator Type GGU-xx/A	9-21
Calendar	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-24
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-23
O ₂ N ₂ Concentrator Type GGU-xx/A	9-22
Daily	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-23
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-22
O ₂ N ₂ Concentrator Type GGU-xx/A	9-21
Disassembled Parts	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-77
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-67
O ₂ N ₂ Concentrator Type GGU-xx/A	9-66
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-20
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-19
O ₂ N ₂ Concentrator Type GGU-xx/A	9-18
Permanently Installed Converters	3-60
Phased	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-24
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-23
O ₂ N ₂ Concentrator Type GGU-xx/A	9-22
Postflight	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-22
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-21
O ₂ N ₂ Concentrator Type GGU-xx/A	9-20
Preflight	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-22
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-21
O ₂ N ₂ Concentrator Type GGU-xx/A	9-20
Quick-Disconnect Converters	3-59
SDLM	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-24
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-23
O ₂ N ₂ Concentrator Type GGU-xx/A	9-22

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
I (Cont)	
Inspections (Cont)	
Special	
Oxygen Concentrator, GGU-7/A [Modifed Test Sets]	4-23
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-22
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-21
Transfer	
Oxygen Concentrator, GGU-7/A [Modifed Test Sets]	4-22
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-21
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-20
Turnaround	
Oxygen Concentrator, GGU-7/A [Modifed Test Sets]	4-22
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-21
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-20
Visual	
Oxygen Concentrator, GGU-7/A [Modifed Test Sets]	4-25
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-24
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-23
Installation	
Bed Inlet Structure Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-73, F9-10, F9-12
Bed Outlet Structure Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-76, F9-10, F9-11, F9-13
Center Structure Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-71, F9-11, F9-12, F9-13, F9-14
Check Valve Assembly	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-80, F6-12
Controller/Monitor Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-83, F9-10, F9-19
Electrical Wiring Terminal Leads on Terminal Strip	
Oxygen Concentrator, GGU-7/A [Modifed Test Sets]	4-90, F4-8, F4-13
Filter Element Tube	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-77, F6-13
Heater Assembly	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-74, F6-13, F6-14, F6-17
Inlet Filter Assembly	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-76, F6-13, F6-16
Junction Box Assembly	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-78, F6-13
Molecular Sieve Bed Assembly	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-72, F6-14
Mounting Plate	
Oxygen Concentrator, GGU-12/A [Modifed Test Sets]	6-86, F6-9, F6-10, F6-13
Nitrogen Check Valves	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-81, F9-10, F9-11

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
---------	---------------------------------------

I (Cont)

Installation (Cont)	
Oxygen Check Valves	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-82, F9-10, F9-11
Oxygen Fitting	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-79, F6-12
Oxygen/Nitrogen Bed Assembly	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-71, F9-11, F9-12, F9-13, F9-14
Plastic Tubing	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-70, F9-11, F9-12
Plenum Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-82, F6-12
O ₂ N ₂ Concentrator Type GGU-XXXX	9-80, F9-10, F9-11, F9-12, F9-13
Pressure Reducer Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-84, F6-11
Rotary Valve Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-83, F6-11
Shroud Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-85, F6-9
Shutoff Valve/Filter/Regulator (Reducer) Assembly	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-79, F9-10, F9-11, F9-12, F9-13, F9-14
Slide Valve Assembly	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-72, F9-10, F9-11, F9-12
Special Cable Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-73, F6-13, F6-14, F6-15, F6-16, F6-17
Stabilizer Plate	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-87, F6-9
Tube Fittings Disc Assembly	
O ₂ N ₂ Concentrator Type GGU-XXXX	9-75, F9-10, F9-11, F9-12
Introduction of NAVAIR 13-1-6.4-3	1-1

J

K

L

M

Maintenance	
LOX Converter	3-58
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-15
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-15, F6-3, F6-11
O ₂ N ₂ Concentrator Type GGU-XXXX	9-16
Maintenance Concepts	2-1

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
M (Cont)	
Maintenance Document(s)	2-7
Maintenance Scheduling	2-5
Modifications	
Inlet Filter Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Sheet)	6-90, F6-3, F6-13
Oxygen Concentrator, GGU-7A (Modified Test Sheet)	4-11
Oxygen Concentrator, GGU-12/A (Modified Test Sheet)	6-11
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-11
N	
Numerical Index	2-22, T2-1
O	
Oxygen Concentrator, GGU-7A (Modified Test Sheet) 110-452A/00110-518A/B	4-11, F4-11, F4-11
Oxygen Concentrator, GGU-12/A (Modified Test Sheet)	6-11, F6-11, F6-11
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-1, F9-1, T9-1
Oxygen System Component Maintenance Shop	3-62, F3-2
Cleanliness	
Personal	3-81
Work Area	3-79
Electrical	3-70
Interior Finishing and Fixtures	3-72
Ceilings	3-75
Floors	3-73
Storage Bins	3-76
Tables	3-76
Walls	3-74
Work Benches	3-76
Quality Assurance	3-83
Tools	3-77
Training	3-85
Ventilation	3-66
Oxygen Systems	3-3
Gaseous Systems	3-5
Liquid System	3-6
P	
Performance Test Sheet Preparation	
Oxygen Concentrator, GGU-7A (Modified Test Sheet)	4-11, F4-11, F4-11
Oxygen Concentrator, GGU-12/A (Modified Test Sheet)	6-11, F6-11, F6-11
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-13, F9-3
Protective Clothing	3-44
Purging	
Aircraft Oxygen Systems	3-51

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
---------	---------------------------------------

P (Cont)

Purging

Aircraft Oxygen Systems(Cont)	
High-Pressure.....	3-54
Low-Pressure.....	3-53
LOX[Conve]ter.....	3-61

Q

R

Reference Numbers, Items, and Supply Data

Oxygen[Concen]trator, GGU-7/A[Modified Test Set].....	4-9
Regulators.....	3-7
Air[Concen]trator/Diluter/Demand Type.....	3-8
Automatic Positive Pressure Diluter/Demand Type.....	3-9
Continuous Flow Type.....	3-10
Mimicure Oxygen Breathing Type.....	3-10
Torso Mounted Diluter/Demand Type.....	3-11

Removal

Air Heater	
Oxygen[Concen]trator, GGU-7/A[Modified Test Set].....	4-71, F4-17
Bed Inlet Structure Assembly	
O ₂ N ₂ [Concen]trator Type GGU-[xx]A.....	9-59, F9-10, F9-12
Bed Outlet Structure Assembly	
O ₂ N ₂ [Concen]trator Type GGU-[xx]A.....	9-59, F9-10, F9-11
Check Valve Assembly	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-56, F6-12
O ₂ N ₂ [Concen]trator Type GGU-[xx]A.....	9-50, F9-10
Center Structure Assembly	
O ₂ N ₂ [Concen]trator Type GGU-[xx]A.....	9-51, F9-10, F9-12, F9-13
Controller/Monitor Assembly	
O ₂ N ₂ [Concen]trator Type GGU-[xx]A.....	9-49, F9-11
Electronics Box Assembly	
Oxygen[Concen]trator, GGU-7/A[Modified Test Set].....	4-73, F4-19
Filter Element Tube	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-59, F6-13
Heater Assembly	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-62, F6-10, F6-13
Inlet Filter Assembly	
Oxygen[Concen]trator, GGU-7/A[Modified Test Set].....	4-72, F4-18
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-60, F6-13
Junction Box Assembly	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-58, F6-13
Molecular Sieve Bed Assembly	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-64, F6-14
Mounting Plate	
Oxygen[Concen]trator, GGU-12/A[Modified Test Set].....	6-50, F6-10

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
R (Cont)	
Removal (Cont)	
Nitrogen Check Valves	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-51, F9-11
Oxygen Fitting	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-57, F6-12
Oxygen/Nitrogen Bed Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-61, F9-10, F9-12, F9-13
Plastic Tubing	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-62, F9-11, F9-12
Plenum Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-54, F6-12
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-52, F9-11, F9-12, F9-13
Pressure Reducer Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-68, F4-14
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-52, F6-11
Rotary Valve Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-69, F4-15
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-53, F6-11
Shroud Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-66, F4-9, F4-10, F4-11, F4-12
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-51, F6-9
Shutoff Valve/Filter/Regulator (Reducer) Assemblies	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-53, F9-11, F9-12, F9-13, F9-14, F9-15
Sieve Beds, Plenum and Check Valve	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-74, F4-20
Slide Valve Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-60, F9-10, F9-11, F9-12
Solenoid Valve Assembly	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-70, F4-16
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-55, F6-12
Special Cable Assembly	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-63, F6-13, F6-14
Stabilizer Plate	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-67, F4-13
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-49, F6-8, F6-9
Tube Fittings Disc Assembly	
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-57, F9-10, F9-18
Repair	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-70
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-59
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-67
Replacement	
Inlet Filter Assembly Parts	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-96, F4-18, F4-23
Requirements	
Aircraft Oxygen System	3-47

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
---------	---------------------------------------

S

Safety	3-13
Aboard Ship	3-34
Gaseous Oxygen	3-21, T3-1
Liquid Oxygen	3-30, T3-1
Oxygen Cleaning Compound	3-16
Towing	3-85

Sanitizing

Scheduled Maintenance

Inlet Filter Tube Element Replacement	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-89, F6-13
O ₂ N ₂ C concentrator Type GGU-xx/A	9-85
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-93, F4-18
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-88
O ₂ N ₂ C concentrator Type GGU-xx/A	9-84
Rotary Valve Assembly Repair Procedures	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-95
Service Life	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-18, F4-20
Storage	
LOX Converter	3-42
Supplementary Publications	1-16

T

Technical Directives and Forms	1-16
Testing	
115V Motor Heater Current (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-33, F6-4
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-40, F6-5
115V Motor Valve RPM (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-34, F6-4
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-41, F6-5
ARINC Functional	
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Concentrator Controller Monitor)	9-86
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Test Set Controller Monitor)	9-84
Automated Individual	
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Concentrator Controller Monitor)	9-81
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Test Set Controller Monitor)	9-89
Automated Performance	
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Concentrator Controller Monitor)	9-80
O ₂ N ₂ C concentrator Type GGU-xx/A (Using Test Set Controller Monitor)	9-88

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
T (Cont)	
Testing (Cont)	
Bench	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-26, F4-3, F4-4
Test Set TTU-452A/	4-31
Test Set TTU-452A/With OBOGS Adapter Assembly	4-39
Test Set TTU-518A/	4-46
Test Set TTU-518A/With OBOGS Adapter Assembly	4-54
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-25, F6-4, F6-5
Test Set TTU-518A/	6-31
Test Set TTU-518A/With OBOGS Adapter Assembly	6-38
O ₂ N ₂ Concentrator, Type GGU-xx/A	9-24, F9-4
Concentrator Shutdown	
O ₂ N ₂ Concentrator, Type GGU-xx/A (Using Concentrator Control/Monitor)	9-35
O ₂ N ₂ Concentrator, Type GGU-xx/A (Using Test Set Control/Monitor)	9-43
Display Lamp (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-32, F4-3, F4-5
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-30, F4-5
Display Lamp (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-32, F4-5
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-35, F4-5, F4-6
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-32, F6-4
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-39, F6-4
Internal Leakage (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-36, F4-3
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-34, F4-5
Internal Leakage (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-51, F4-4
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-59, F4-5, F4-6
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-36, F6-4
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-43, F6-5
Leakage	
O ₂ N ₂ Concentrator, Type GGU-xx/A (Using Concentrator Control/Monitor)	9-32
O ₂ N ₂ Concentrator, Type GGU-xx/A (Using Test Set Control/Monitor)	9-40
Monitor (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-40
Monitor (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-41
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-30

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
T (Cont)	
Testing (Cont)	
Motor Heater Solenoid Current (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-33, F4-3
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-41, F4-3
Motor Heater Solenoid Current (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-48, F4-4
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-56, F4-4
Motor Valve RPM (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-34, F4-3
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-52, F4-3
Motor Valve RPM (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-49, F4-4
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-57, F4-4
Outlet Gas Performance	
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Concentrator Controller/Monitor)	9-34
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Test Set Controller/Monitor)	9-42
Oxygen Flow and Air Filter Bleed Flow (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-38, F4-3
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-45, F4-3, F4-6
Oxygen Flow and Air Filter Bleed Flow (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-53, F4-4
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-60, F4-4, F4-6
Oxygen Flow/Filter Drain Flow (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-37, F6-4, F6-6, T6-8
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-43, F6-5, F6-6, T6-8
Pressure Reducer	
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Concentrator Controller/Monitor)	9-33
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Test Set Controller/Monitor)	9-41
Pressure Reducer (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-35, F4-3
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-43, F4-3, F4-6
Pressure Reducer (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-50, F4-4
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-58, F4-4, F4-6
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-35, F6-4
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-42, F6-5
Setup	
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Concentrator Controller/Monitor)	9-29
O ₂ N ₂ C ₂ H ₂ O ₂ Type GGU-xx/A (Using Test Set Controller/Monitor)	9-37

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
T (Cont)	
Testing (Cont)	
Setup (Model TTU-452A/E Test Set)	
Oxygen Concentrator, GGU-7/A (Modified Test Set with OBOGS Adapter Assembly)	4-10, F4-1
Setup (Model TTU-518A/E Test Set)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-32
Oxygen Concentrator, GGU-12/A (Modified Test Set with OBOGS Adapter Assembly)	6-39, F6-7
Troubleshooting	
ARINC Functional Test	
O ₂ Concentrator, Type GGU-xx/Using Concentrator Control/Monitor)	T9-6
O ₂ Concentrator, Type GGU-xx/Using Test Set/Control/Monitor)	T9-11
Concentrator Shutdown Test	
O ₂ Concentrator, Type GGU-xx/Using Concentrator Control/Monitor)	T9-5
O ₂ Concentrator, Type GGU-xx/Using Test Set/Control/Monitor)	T9-10
Heater Lamp (Does Not Illuminate)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-4
Heater Lamp (Illuminates and Does Not Extinguish)	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-2
Heater No. 1 (DS4) and Heater No. 2 (DS5) (Lamps Do Not Illuminate), TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-7
Heater No. 1 (DS4) and Heater No. 2 (DS5), TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-3
Heater No. 1 (M2) and Heater No. 2 (M3) (Do Not Indicate 7 to 10 amps), TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-6
Heater No. 1 (M2) and Heater No. 2 (M3), TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-2
Heater No. 1 and Heater No. 2 (Lamps DS4 and DS5), TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-11
Heater No. 1 and Heater No. 2 (Meters M2 and M3), TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-10
Internal/External Leakage Tests	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-7
Internal/External Leakage Tests, TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-14
Internal/External Leakage Tests, TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-5
Leakage Test	
O ₂ Concentrator, Type GGU-xx/Using Concentrator Control/Monitor)	T9-2
O ₂ Concentrator, Type GGU-xx/Using Test Set/Control/Monitor)	T9-7
Model TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-62, F4-7, F4-8, T4-2, T4-4, T4-6, T4-8, T4-10, T4-12, T4-14, T4-16
Model TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-63, F4-7, F4-8, T4-3, T4-5, T4-7, T4-9, T4-11, T4-13, T4-15, T4-17
Motor	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-5

ALPHABETICAL INDEX (Cont)

Subject	Paragraph, Figure, Table Number
T (Cont)	
Troubleshooting (Cont)	
Motor/Solenoid Meter (M1), TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-8
Motor/Solenoid Meter (M1), TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-9
Oxygen Concentrator, GGU-7/A (Modified Test Set)	4-61
Oxygen Concentrator, GGU-12/A (Modified Test Set)	6-45
Oxygen Flow Test, TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-16
Oxygen Flow Test, TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-17
Oxygen Flow Test/Filter Drain Flow	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-8
O ₂ /N ₂ Concentrator Type GGU-xx/A	9-45
Outlet Performance Test	
O ₂ /N ₂ Concentrator Type GGU-xx/A (Using Concentrator Controller/Monitor)	T9-11
O ₂ /N ₂ Concentrator Type GGU-xx/A (Using Test Set Controller/Monitor)	T9-12
Pressure Reducer	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-3
O ₂ /N ₂ Concentrator Type GGU-xx/A (Using Concentrator Controller/Monitor)	T9-13
O ₂ /N ₂ Concentrator Type GGU-xx/A (Using Test Set Controller/Monitor)	T9-14
Pressure Reducer, TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-4
Pressure Reducer, TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-5
Rotary Valve	
Oxygen Concentrator, GGU-12/A (Modified Test Set)	T6-6
Rotary Valve, TTU-452A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-12
Rotary Valve, TTU-518A/E Test Set	
Oxygen Concentrator, GGU-7/A (Modified Test Set)	T4-13
U	
Update.....	1-12
V	
W	
X	
Y	
Z	