

Essex Industries, Inc.
7700 GRAVOIS AVE. ● ST. LOUIS, MO. 63123

**INDICATOR, LEAKAGE TESTER
PART NUMBER 3630010100-1**

**COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST**



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL

PART NUMBER 3630010100-1

LIST OF EFFECTIVE PAGES

Chapter/Section	Page	Date
Title Page	T-1	11/1/84
Record of Revisions	RR-1	11/1/84
List of Effective Pages	LEP-1	11/1/84
Table of Contents	T/C-1	11/1/84
Introduction	INTRO-1	11/1/84
Description and Operation	1	11/1/84
Testing and Troubleshooting	2	11/1/84
Disassembly	2	11/1/84
Cleaning	2	11/1/84
Check	3	11/1/84
Repair	3	11/1/84
Assembly	3	11/1/84
Fits and Clearances	4	11/1/84
Special Tools	4	11/1/84
Storage	4	11/1/84
Illustrated Parts List	4	11/1/84
	5	11/1/84
	6	11/1/84



Essex Industries, Inc.
COMPONENT MAINTENANCE MANUAL
PART NUMBER 3630010100-1

TABLE OF CONTENTS

Paragraph Title	Page
Description and Operation	1
Testing and Troubleshooting	2
Disassembly	2
Cleaning	2
Check	3
Repair	3
Assembly	3
Fits and Clearances	4
Special Tools	4
Storage	4
Illustrated Parts List	4



Essex Industries, Inc.
COMPONENT MAINTENANCE MANUAL
PART NUMBER 0171520100-3

INTRODUCTION

The instructions contained in this manual provide information necessary to understand the valve operation and allow the mechanic to perform maintenance functions consisting of: testing, disassembly, assembly, inspection and complete shop-type repair.

The manual is divided into separate sections. Refer to the Table of Contents for the page location of a particular section.

Some assembly tools are special in nature and are listed by part number in the Assembly section of this manual. The balance of assembly tools and all test equipment are universally applicable and are commercially available. Where a particular item of non-special equipment includes a manufacturer and model number, equal or better equipment may be substituted.

An explanation of the use of the Illustrated Parts List is provided in the Introduction to that section.

The manual will be revised as necessary to reflect current information.

Verification

Testing	Verified	11/1/84
Disassembly	Verified	11/1/84
Assembly	Verified	11/1/84



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL

PART NUMBER 3630010100-1

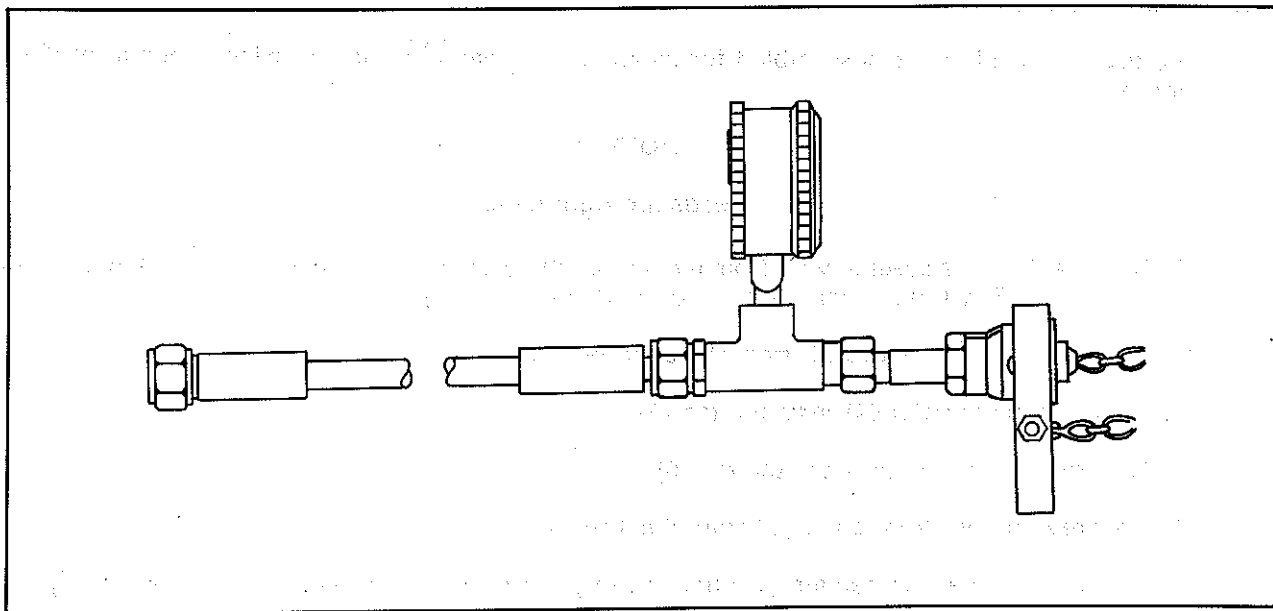
I. DESCRIPTION AND OPERATION

A. Physical Description (see Figure 1)

1. The indicator, leakage tester is designed for use on F-18 and similar aircraft, to provide a means for leak testing gaseous oxygen systems.

The unit provides an inter-face between the aircraft oxygen system and an external ground support oxygen charging system. The tester assembly is a ground support accessory and not an integral aircraft part.

The tester assembly consists of an AN6024-5, Filler Valve, an MS24548-5-24, Hose Assembly, a Pressure Gage, an AN917-2 Tee, and miscellaneous fittings and supplies.



Indicator, Leakage Tester
Figure 1

B. Operation

The tester assembly is designed to be attached to an aircraft oxygen system by means of its hose connection. Testing is accomplished by connecting an oxygen charging supply to the Filler Valve Assembly. Leakage in the system is determined by observing the pressure gage of the tester assembly.



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL
PART NUMBER 3630010100-1

II. TESTING AND TROUBLESHOOTING

A. Testing of the assembly shall consist of leakage testing. Apply a pressure of 350 psig of filtered dry nitrogen or oxygen to the hose fitting. Test for leakage at all fitting joints and filler valve inlet. There shall be no external leakage from the leakage tester assembly.

B. Test Equipment

Equipment/Materials	Description
Gas Pressure Source, Filtered to 10 Microns or Better	Regulated gas pressure source of dry nitrogen, oxygen or equivalent, to 350 psi.
Valves and Fittings	As required to connect test unit.
Gages	Pressure gage to read minimum of 350 psi.

III. DISASSEMBLY

The tester assembly is disassembled for cleaning or repairs by the following procedure: (See Figure 2)

NOTE

All threads are right hand.

- A. Remove the hose assembly (7) from the nipple (6) by unscrewing the end fitting nut of the hose assembly. (The hose assembly can not be disassembled.)
- B. Unscrew the Filler Valve (3) from the adapter (4).
- C. Unscrew the adapter (4) from the tee (5).
- D. Unscrew the nipple (6) from the tee (5).
- E. Unscrew the pressure gage (2) from the Tee (5).
- F. Record data from nameplate (1) attached to gage (2) if the gage (2) is to be replaced.

IV. CLEANING

CAUTION

Personnel using freon to clean parts should use all safety precautions coincident with this material. Eye and body protection, through the use of goggles, adequate glasses or safety face shields, aprons and gloves must be employed. For eye contamination, seek medical attention immediately. Freon will displace air in confined and low lying areas and must be used with adequate ventilation.

- A. Remove all teflon tape from all internal and external threads.
- B. Clean all parts by thoroughly flushing with Freon 113 or equivalent.



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL

PART NUMBER 3630010100-1

- C. The Filler Valve Assembly (3) is cleaned by washing in the cleaning solvent, using a stiff (non metallic) bristle brush to loosen stubborn dirt deposits. Thoroughly brush clean the inlet to the valve. Clean internally by flushing with clean, filtered Freon 113.
- D. Cleaning of the pressure gage (2) should be done by an approved oxygen gage repair and calibration facility.
- E. All freon used to clean this assembly should meet the cleanliness levels required for oxygen systems.
- E. The Filler Valve (3) shall be replaced if it shows leakage from its inlet.

V. CHECK

- A. Visually inspect hose fittings and all metal parts under a strong light for cracks or other surface damage. Inspect all threads for crossthreading, stripping or other damage. Inspect for cleanliness of threads. No cracks are permitted.
- B. Inspect hose assembly for deterioration or damage.

VI. REPAIR

- A. Minor nicks or scratches may be polished smooth with 320 to 400 grit abrasive cloth if required. Small nicks or scratches on non-sealing surfaces need not be repaired.
- B. Minor damage to threads may be repaired by rechasing with a thread chaser or "dressed out" with a small triangular file.
- C. Hose deterioration or damage is not repairable. Replace the hose assembly.
- D. The pressure gage should be cleaned and tested by a qualified oxygen repair facility. Gage calibration should be checked with approved dead weight test equipment. The gage shall be checked for accuracy at 10 psi intervals from 65 psi to 85 psi and from 290 psi to 320 psi. Calibration errors exceeding ± 2 psi at any test point will require replacement of the gage.
- E. The Filler Valve (3) shall be replaced if it shows leakage from its inlet.

VII. ASSEMBLY

- A. Tape all male pipe threads on the pressure gage (2), adapter (4) and nipple (6) with teflon tape (8), starting with the second thread on each fitting. Wrap the tape in the direction of the thread spiral and overlap the start end by approximately one half turn. Assemble to the tee (5), positioning the gage so that it may be read from the filler valve end of the assembly (approximately). (See Figures 1 and 2)
- B. Assemble Filler Valve assembly (3) to the adapter (4) and secure.
- C. Assemble the hose assembly (7) to the nipple (6) and secure.
- D. Clean after assembly by flushing the completed assembly with Freon 113. The flushing fluid shall be introduced through the Filler Valve (3). Blow dry internally and externally using dry nitrogen (filtered to 10 microns minimum) or equivalent.
- E. If pressure gage (2) is replaced a new nameplate (1) must be attached to pressure gage (2), incorporating data from removed gage nameplate.



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL

PART NUMBER 3630010100-1

VIII. FITS AND CLEARANCES

Not applicable.

IX. SPECIAL TOOLS

Not Applicable.

X. STORAGE

A. Preparation for Storage.

The leakage tester assembly shall be prepared for storage by installing a thread protector/dust plug in the hose fitting and inserting the chain mounted closure plug assembly in place in the filler valve.

Alternate Method for Storage. Place the leakage tester assembly in a polyethylene plastic bag or a Kraft bag or an equivalent and heat seal the bag.

XI. ILLUSTRATED PARTS LIST

A. Purpose

- (1) This section provides illustrations and parts breakdown of all parts of the assembly shown on the title page which can be disassembled, repaired or replaced and reassembled.

B. Explanation and Usage of Section

(1) Assembly Order Indenture System

The indenture system used in the parts list shows the relationship of one part to another. For a given item, the number of indentures depicts the relationship of the item to the associated next higher assembly as follows:

1 2 3

Assembly

 Detail Parts for Assembly

 Subassembly

 Attaching Parts for Subassembly

 Detail Parts for Subassembly

(2) Effective Code

- (a) Reference letters (A, B, C, etc.) are assigned in the EFF CODE column to each top assembly. The reference letter of the applicable top assembly is also shown in the EFF CODE column for each detail part and subassembly except that no reference letter is shown for detail parts and subassemblies used on all top assemblies.

(3) Quantity Per Assembly

- (a) The UNIT PER ASSY column shows the total number of units required per assembly, per subassembly, as applicable. For bulk items, the letters AR indicate "as required." The letters RF indicate the item is listed for reference purposes.

(4) Parts Replacement Data

- (a) The interchangeability relationship between parts, where applicable, is identified in the NOMENCLATURE column of the parts list. A list of the terms used to show interchangeability and their definition is as follows:



Essex Industries, Inc.

COMPONENT MAINTENANCE MANUAL

PART NUMBER 3630010100-1

Term	Parts List Abbreviation	Definition
Optional	OPT	This part is optional to and interchangeable with other parts in the same item number variant group or other item number if designated.
Superseded by	SUPSD BY	The part in the part number column is replaced by and is not interchangeable with the item number shown in the notation.
Supersedes	SUPSDS	The part in the part number column replaces and is not interchangeable with the item number shown in the notation.
Replaced by	REPLD BY	The part in the part number column is replaced by and interchangeable with the item number shown in the notation.
Replaces	REPLS	The part in the part number column replaces and is interchangeable with the item number shown in the notation.

(5) Service Bulletin Incorporation

(a) Except as indicated below, assemblies, subassemblies and detail parts subject to modification, deletion, addition or replacement by an issued service bulletin are annotated to show both pre- and post-service bulletin configuration. The term (PRE SB XXXX) in the Nomenclature column designates the original configuration, and the term (POST SB XXXX) identifies assemblies and parts after the service bulletin modification has been completed.

(b) Subassemblies and detail parts used on assemblies bearing the pre- or post-service-bulletin notation will not carry the same notation themselves if the use code(s) assigned to them clearly reflect(s) their pre- or post-service bulletin status.

(c) Top assemblies subject to modification by a service bulletin without assignment of a new part number (no production equivalent of the modified assembly) are not annotated with pre- or post-service-bulletin information.

(d) If a subassembly or detail part is modified by a service bulletin without a new part number being assigned, the original part number is listed with an alpha-variant item number and the term (POST SB XXXX). The effectivity code remains the same as for the pre-service bulletin configuration.

(6) Items Not Illustrated

(a) Alpha variants A-Z (except I and O) are assigned to existing item number when necessary to show:

- 1) Added items
- 2) Service bulletin modifications
- 3) Configuration differences
- 4) Optional parts
- 5) Product improvement parts (non-service bulletin)

(b) Alpha variant item numbers are not shown on the exploded view when the appearance and location of the alpha variant item is the same as the basic item.



Essex Industries, Inc.
 COMPONENT MAINTENANCE MANUAL
 PART NUMBER 3630010100-1

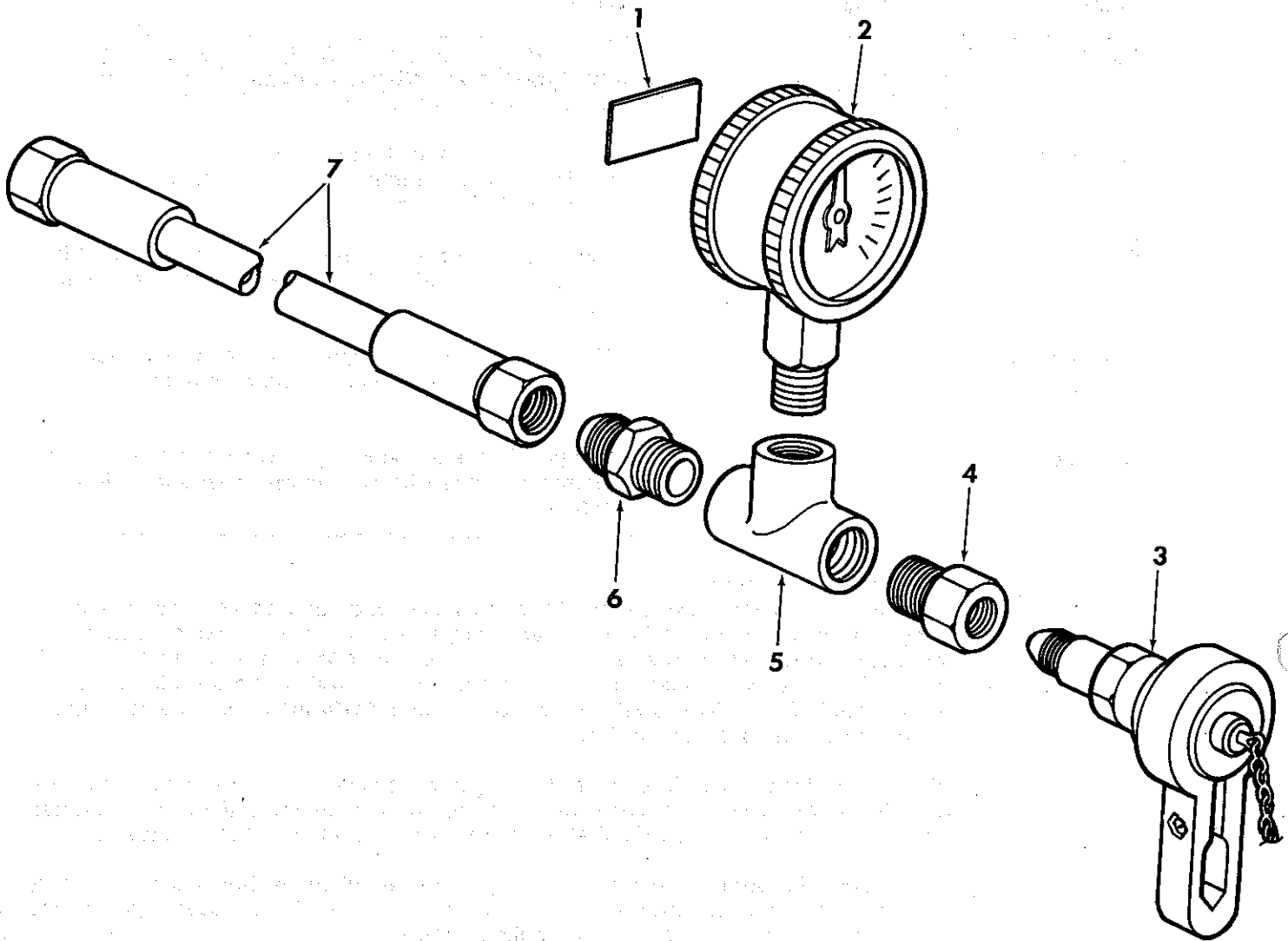


FIG. INDEX NO.	PART NUMBER	1	2	3	4	5	6	7	DESCRIPTION	USABLE ON CODE	UNITS PER ASS'Y.
2-1	3630010100-1								†INDICATOR, LEAKAGE TESTER ASS'Y.		RF
-1	3630010101-1								NAMEPLATE		1
-2	3630010102-1								GAGE, PRESSURE		1
-3	AN6024-5								VALVE, FILLER-LOW PRESSURE OXY		1
-4	3630010103-1								ADAPTER		1
-5	AN917-2								TEE - INTERNAL		1
-6	AN816-5-4B								NIPPLE - FLARED TUBE AND PIPE THREAD		1
-7	MS24548-1								HOSE ASSEMBLY-TETRAFLUOROETHYLENE OXYGEN		1
-8	1/4 in. x .004 in.								TEFLON TAPE		A/R

FIGURE 2 INDICATOR LEAKAGE TESTER ASSEMBLY