COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST

POTABLE WATER SYSTEM TANK ASSEMBLY

PART NUMBER 417A2508–1, –10, –2, –3, –4, –5, –6, –7, –8, –9

PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA
A DIVISION OF THE BOEING COMPANY
PAGE DATE: Jul 01/2009

BOEING®

COMPONENT MAINTENANCE MANUAL

Revision No. 7
Jul 01/2009

To: All holders of POTABLE WATER SYSTEM TANK ASSEMBLY 38-11-01.

Attached is the current revision to this COMPONENT MAINTENANCE MANUAL

The COMPONENT MAINTENANCE MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

For printed manuals, changes are indicated on the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), O (Overflow, i.e. changes to the document structure and/or page layout), or D (Deleted). Each page in the LEP is identified by Chapter-Section-Subject number, page number and page date.

Pages replaced or made obsolete by this revision should be removed and destroyed.

ATTENTION

IF YOU RECEIVE PRINTED REVISIONS, PLEASE VERIFY THAT YOU HAVE RECEIVED AND FILED THE PREVIOUS REVISION. BOEING MUST BE NOTIFIED WITHIN 30 DAYS IF YOU HAVE NOT RECEIVED THE PREVIOUS REVISION. REQUESTS FOR REVISIONS OTHER THAN THE PREVIOUS REVISION WILL REQUIRE A COMPLETE MANUAL REPRINT SUBJECT TO REPRINT CHARGES SHOWN IN THE DATA AND SERVICES CATALOG.

Location of Change	Description of Change
	NO HIGHLIGHTS

BOEING®

COMPONENT MAINTENANCE MANUAL

Subject/Page	Date
TITLE PAGE	
O 1	Jul 01/2009
2	BLANK
38-11-01 TRANSMITTAL LETTER	
O 1	Jul 01/2009
2	BLANK
38-11-01 HIGHLIGHTS	
O 1	Jul 01/2009
2	BLANK
38-11-01 EFFECTIVE PAGES	
1	Jul 01/2009
2	BLANK
38-11-01 CONTENTS	
1	Mar 01/2006
2	BLANK
38-11-01 TR AND SB RECORD	
1	Mar 01/2006
2	BLANK
38-11-01 REVISION RECORD	
1	Mar 01/2006
2	Mar 01/2006
38-11-01 RECORD OF TEMPORARY REVISIONS	
1	Mar 01/2006
2	Mar 01/2006
38-11-01 INTRODUCTION	
1	Mar 01/2009
2	BLANK
38-11-01 DESCRIPTION AND OPERATION	
1	Mar 01/2006
2	Mar 01/2006
38-11-01 TESTING AND FAULT ISOLATION	
101	Mar 01/2006
102	BLANK
38-11-01 DISASSEMBLY	
301	Mar 01/2006
302	BLANK
38-11-01 CLEANING	
401	Mar 01/2006
38-11-01 CLEANING (cont)	
402	BLANK
38-11-01 CHECK	
501	Mar 01/2006
502	BLANK
38-11-01 REPAIR - GENERAL	
601	Mar 01/2006
602	BLANK
38-11-01 REPAIR 1-1	
601	Mar 01/2006
602	BLANK
38-11-01 ASSEMBLY	
701	Mar 01/2006
702	BLANK
38-11-01 FITS AND CLEARANCES	
801	Jul 01/2006
802	BLANK
38-11-01 SPECIAL TOOLS, FIXTURES, AND EQUIPMENT	
901	Mar 01/2006
902	BLANK
38-11-01 ILLUSTRATED PARTS LIST	
1001	Nov 01/2008
1002	Jul 01/2006
1003	Mar 01/2006
1004	Mar 01/2006
1005	Mar 01/2006
1006	Mar 01/2006

A = Added, R = Revised, D = Deleted, O = Overflow

TABLE OF CONTENTS

Paragraph Title		Page
POTABLE WATER SYSTEM TANK ASSEMBLY - DESCRIPTION AND OPERATION		1
TESTING AND FAULT ISOLATION	(Not Applicable)	
DISASSEMBLY		301
CLEANING		401
CHECK		501
REPAIR		601
ASSEMBLY		701
FITS AND CLEARANCES		801
SPECIAL TOOLS, FIXTURES, AND EQUIPMENT	(Not Applicable)	
ILLUSTRATED PARTS LIST		1001

BOEING®

COMPONENT MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
		PRR 38295-92	NOV 01/00
		PRR 38334	NOV 01/00

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed	
Number	Date	Date	Initials

Revision		Filed		Revision		Filed	
Number	Date	Date	Initials	Number	Date	Date	Initials

BOEING®

COMPONENT MAINTENANCE MANUAL

All temporary revisions to this manual will be accompanied by a cover sheet bearing the temporary revision number. Enter the temporary revision number in numerical order, together with the temporary revision date, the date the temporary revision is inserted and the initials of the person filing.
When the temporary revision is incorporated or cancelled, and the pages are removed, enter the date the pages are removed and the initials of the person who removed the temporary revision.

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

INTRODUCTION

1. General

A. The instructions in this manual supply the data necessary to do the maintenance functions together with the test, fault isolation, repair, and replacement of the defective parts.

B. This manual is divided into different parts:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) List of Effective Pages

(5) Table of Contents

(6) Temporary Revision & Service Bulletin Record

(7) Record of Revisions

(8) Record of Temporary Revisions

(9) Introduction

(10) Procedures & IPL Sections

C. Components that can be repaired have a different repair number for each specified repair. To find the repair number location of a component, look in the Repair-General procedure at the beginning of the REPAIR section. The Repair-General procedure also has an explanation of the True Position Dimension symbols used.

D. All dimensions, measures, quantities and weights included are in English units. When metric equivalents are given they will be in the parentheses that follow the English units.

E. The introduction to the Illustrated Parts List (IPL) shows how the IPL data is used.

F. Design changes, optional parts, configuration differences and Service Bulletin modifications may cause different part numbers. These part numbers are identified in the IPL with an alphabetical letter which is added to the end of the basic item number. This new item number is referred to as an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless shown differently.

G. The tool reference numbers found in the individual procedures and in the Special Tools, Fixtures, and Equipment section are used to identify if a tool is a standard tool (STD-XXXX), a commercial tool (COM-XXXX), or a Special Tool (SPL-XXXX). This reference number is also used to distinguish between tools with similar names in the same procedure. These reference numbers are for use in the documentation only. They are not to be used for ordering tools.

POTABLE WATER SYSTEM TANK ASSEMBLY - DESCRIPTION AND OPERATION

1. Description

A. Each potable water system tank assembly has a tank, a standpipe assembly, three fittings, four o-rings, and a retaining washer.

2. Operation

A. The Potable Water System Tank Assembly holds the clean water supply for the airplane.

3. Leading Particulars (Approximate)

A. For 417A2508-1, -2, -6, -7 tank assemblies:

(1) Length – 41.0 inches

(2) Width – 20.0 inches

(3) Height – 23.5 inches

(4) Weight – 20.0 pounds

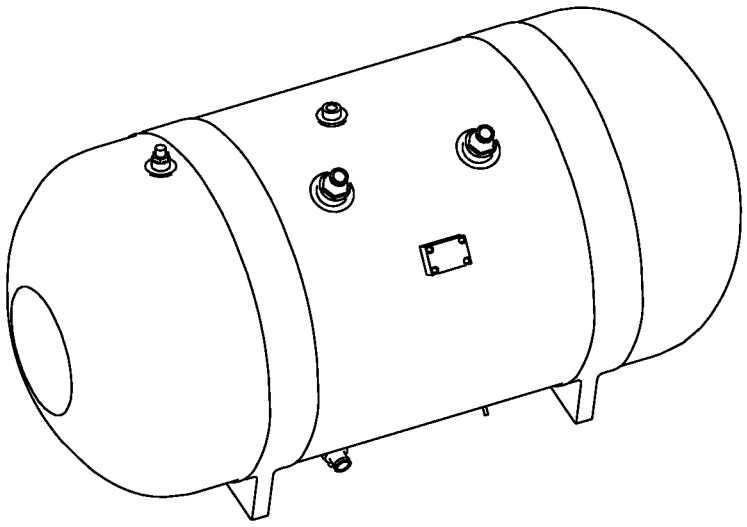
B. For 417A2508-3, -4, -5, -8, -9, -10 tank assemblies:

(1) Length – 55.0 inches

(2) Width – 20.0 inches

(3) Height – 23.5 inches

(4) Weight – 23.4 pounds



ASSEMBLY 417A2508-1 IS SHOWN
ASSEMBLIES 417A2508-2 THRU -10 ARE EQUIVALENT

Potable Water System Tank Assembly
Figure 1

(NOT APPLICABLE)

DISASSEMBLY

1. **General**
   A. This procedure has the data necessary to disassemble the potable water system tank assembly.
   B. Disassemble this component sufficiently to isolate the defects, do the necessary repairs, and put the component back to a serviceable condition.
   C. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.
   D. Refer to IPL Figure 1 for the applicable item numbers.
2. **Disassembly**
   A. Procedure
      (1) Use standard industry practices and these steps.
      (2) Remove the standpipe assembly (30), three fittings (5, 10), four o-rings (20, 25), and a retaining washer (15) from the tank (35).

CLEANING

1. General

A. This procedure has the data necessary to clean the potable water system tank assembly.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for the applicable item numbers.

2. Cleaning

A. References

Reference	Title
SOPM 20-30-03	GENERAL CLEANING PROCEDURES

B. Procedure

(1) Use standard industry practices and the instructions in SOPM 20-30-03.

CHECK

1. General

A. This procedure has the data necessary to find defects in the material of the specified parts.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for the applicable item numbers.

2. Check

A. References

Reference	Title
SOPM 20-20-02	PENETRANT METHODS OF INSPECTION

B. Procedure

(1) Use standard industry practices to do a visual check for defects on all the parts. Do the penetrant check only if the visual check shows possible defects or if you think there are defects on the parts listed below.

(2) Do a penetrant check (SOPM 20-20-02) of these parts:

(a) Fittings (5)

(3) Do a pressure check of the tank assembly.

(a) Fill the tank assembly with water, then seal the fittings (5, 32) at three locations.

(b) Apply 50 psi of pressure to the fitting (10). The fitting (10) has 0.5625-18 UNJF-3A threads. Make sure there are no leaks.

(c) Remove the water from the tank assembly.

(d) Apply -9.6 psi of air pressure (a vacuum of 9.6 psi or 20 inches Hg) to the tank assembly. Make sure that the tank assembly has no deformation.

REPAIR

1. General

A. Instructions for repair, refinish, and replacement of the specified subassembly parts are included in each REPAIR when applicable:

Table 601:

PART NUMBER	NAME	REPAIR
—	REFINISH OF OTHER PARTS	1-1

REFINISH OF OTHER PARTS - REPAIR 1-1

1. General

A. This procedure has the data necessary to refinish the parts which are not given in the specified repairs.

B. Refer to the Standard Overhaul Practice Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for the applicable item numbers.

2. Refinish of Other Parts

A. References

Reference	Title
SOPM 20-30-02	STRIPPING OF PROTECTIVE FINISHES
SOPM 20-41-01	DECODING TABLE FOR BOEING FINISH CODES

B. Procedure

NOTE: For stripping of protective finishes, refer to SOPM 20-30-02. For the decoding table for Boeing finish codes, refer to SOPM 20-41-01.

(1) Instructions for the repair procedure of the parts listed in REPAIR 1-1, Table 601 is for repair of the initial finish.

Table 601: Refinish details

IPL FIG. & ITEM	MATERIAL	FINISH
Standpipe assembly (30)	321 bar/tubing	Passivate (F-17.25).

ASSEMBLY

1. General

A. This procedure has the data necessary to assemble the potable water system tank assembly.

B. Refer to the Standard Overhaul Practices Manual (SOPM) for the SOPM subjects identified in this procedure.

C. Refer to IPL Figure 1 for the applicable item numbers.

2. Assembly

A. References

Reference	Title
SOPM 20-50-06	INSTALLATION OF O-RINGS AND TEFLON SEALS

B. Procedure

(1) Use standard industry practices and these steps.

(2) For the installation of the o-rings (20, 25) in the following steps, refer to SOPM 20-50-06.

(a) Install the standpipe assembly (30) into the tank (35) with o-ring (25). Tighten the standpipe assembly (30) to 750-830 pound-inches.

(b) Install two fittings (5) and retaining washer (15) onto the tank (35) with o-rings (25). Tighten the fittings (5) to 750-830 pound-inches.

(c) Install the fitting (10) onto the tank (35) with o-ring (20). Tighten the fitting (10) to 252-278 pound-inches.

(d) Apply 50 psi with water to the tank assembly, with the gage and o-rings installed. Make sure there are no leaks.

FITS AND CLEARANCES

REF IPL		NAME	TORQUE*	
FIG. NO.	ITEM NO.		POUND-INCHES	POUND-FEET
1	30	Stand Pipe Assembly	750-830	
1	5	Fitting	750-830	
1	10	Fitting	252-278	

* REFER TO SOPM 20-50-01 FOR TORQUE VALUES OF STANDARD FASTENERS.

Torque Table
Figure 801

COMPONENT MAINTENANCE MANUAL

SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

(NOT APPLICABLE)

ILLUSTRATED PARTS LIST

1. Introduction

A. The Illustrated Parts List (IPL) contains an illustration and a list of component parts you can repair or replace. The Illustrated Parts Catalog (IPC) shows how to use the Boeing part number system.

B. This shows how parts are related: The relation of each item to its next higher assembly (NHA) is shown in the NOMENCLATURE column. Use the indenture system that follows:

1 2 3 4 5 6 7

. Assembly

. Attaching parts for assembly

. . Detail parts for assembly

. . Subassembly

. . Attaching parts for subassembly

. . . Detail parts for subassembly

. . . Sub-subassembly

. . . Attaching parts for subassembly

. . . . . Details parts for sub-subassembly

Detail Installation Parts (Included only if installation parts may be sent to the shop as part of assembly)

C. Each top assembly is given one use code letter (A, B, C, etc.) in the USAGE CODE column. All subsequent component parts in the list can have one or more of the use code letters to show effectivity to top assemblies. A component part without a use code applies to all top assemblies.

D. An alphabetical letter is added after the item number for optional parts, parts changed by a Service Bulletin, configuration differences (except left-handed and right-handed parts), last engineering releases, and parts added between item numbers in a sequence. The alphabetical letter will not be shown on the illustration for equivalent parts of the same part number.

E. Color-coded parts are identified with a single digit alpha following the dash number or with ''SP'' suffix. If the ''SP'' suffix is used, it represents consolidation of all color codes applicable for a given usage which are not separately listed. Orders for color-coded parts should include the registry number of the airplane for which the parts are ordered.

F. If a part number is 15 characters long but will not fit in the part number column, the part number will be displayed with a ''~'' at the end of the line and will be continued on the next line. The ''~'' denotes that the part number continues on the next line.

G. Parts changed by a Service Bulletin are shown by PRE SB XXXX and POST SB XXXX added to the NOMENCLATURE column.

(1) When a new top assembly is added by a Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the top assembly level only. The configuration differences at the detail part level are shown by use code letters.

(2) When the top assembly part number is not changed by the Service Bulletin, PRE SB XXXX and POST SB XXXX will be added at the detail level.

H. Interchangeable Parts

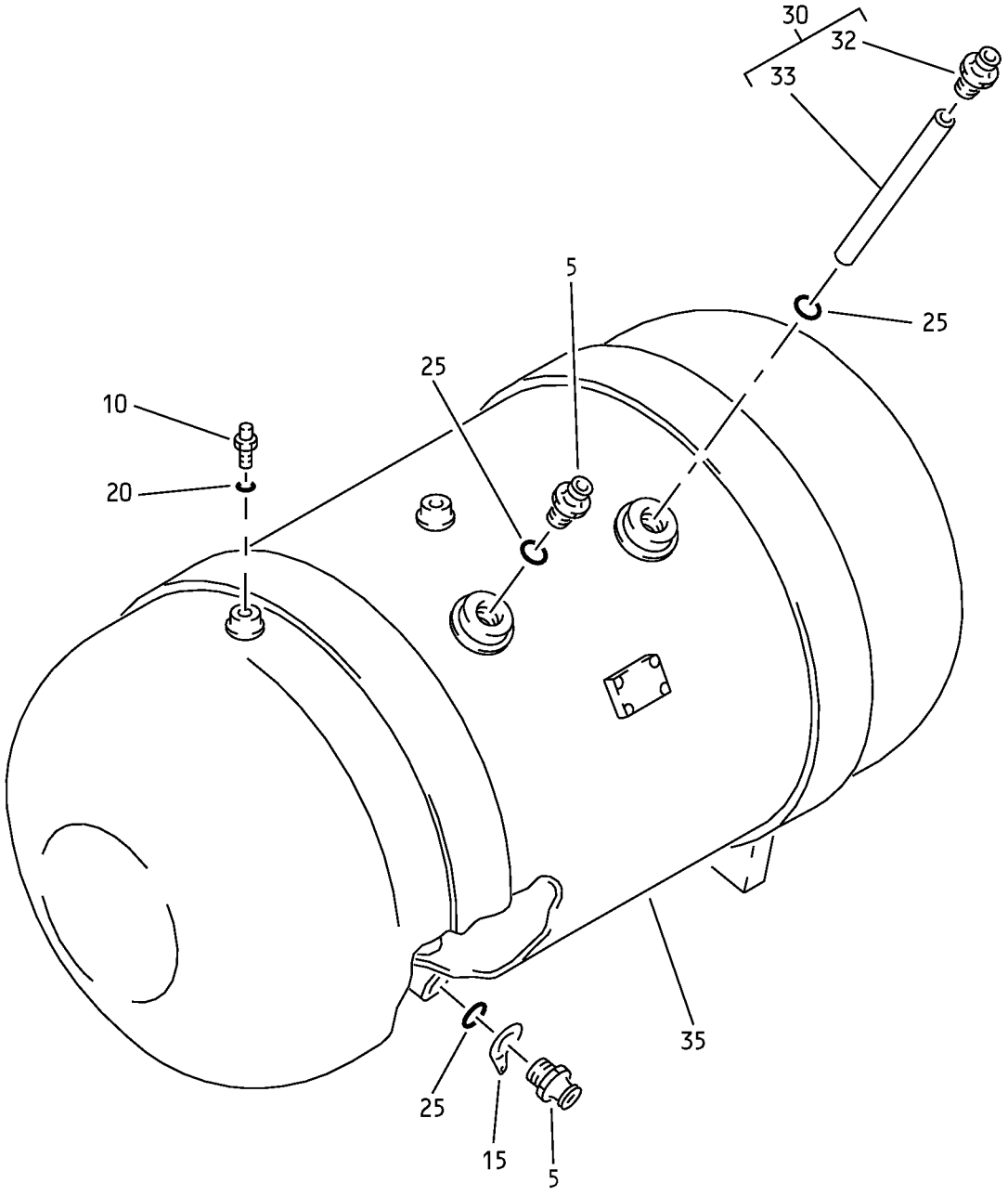
Optional (OPT)	The part is optional to and interchangeable with other parts that have the same item number.
Replaces, Replaced by and not interchangeable with (REPLACES, REPLACED BY AND NOT INTCHG/W)	The part replaces and is not interchangeable with the initial part.
Replaces, Replaced by (REPLACES, REPLACED BY)	The part replaces and is interchangeable with, or is an alternative to, the initial part.

VENDOR CODES

Code	Name
S5825	YOKOHAMA RUBBER CO LTD 36-11 SHIMBASHI 5-CHOME MINATO KU TOKYO 105, JAPAN FORMERLY V0587B

NUMERICAL INDEX

PART NUMBER	AIRLINE PART NUMBER	FIGURE	ITEM	UNITS PER ASSEMBLY
0A011-0236-1		1	35B	1
0A011-0236-11		1	35C	1
0A011-0236-21		1	35D	1
0A011-0236-31		1	35E	1
417A2508-1		1	1A	RF
417A2508-10		1	1K	RF
417A2508-2		1	1B	RF
417A2508-3		1	1C	RF
417A2508-4		1	1E	RF
417A2508-5		1	1D	RF
417A2508-6		1	1F	RF
417A2508-7		1	1G	RF
417A2508-8		1	1H	RF
417A2508-9		1	1J	RF
417A2509-1		1	5	2
		1	32	1
417A2509-10		1	30B	1
417A2509-13		1	33C	1
417A2509-14		1	30C	1
417A2509-15		1	33D	1
417A2509-16		1	30D	1
417A2509-2		1	30	1
417A2509-3		1	33	1
417A2509-4		1	30A	1
417A2509-5		1	33A	1
417A2509-9		1	33B	1
5759-29		1	15	1
MS21902J6		1	10	1
NAS1611-014		1	20	1
NAS1611-119		1	25	3
S417A201-1		1	35B	1
S417A201-10		1	35E	1
S417A201-2		1	35C	1
S417A201-9		1	35D	1



Potable Water System Tank Assembly
IPL Figure 1

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–1A	417A2508-1		TANK ASSY-POTABLE WATER SYS 40 GAL USEABLE, STAND PIPED TO 30 GAL	A	RF
–1B	417A2508-2		TANK ASSY-POTABLE WATER SYS 40 GAL USABLE, STAND PIPED TO 30 GAL	B	RF
–1C	417A2508-3		TANK ASSY-POTABLE WATER SYS 60 GAL USABLE, STAND PIPED TO 40 GAL	C	RF
–1D	417A2508-5		TANK ASSY-POTABLE WATER SYS 60 GAL USABLE, STAND PIPED TO 60 GAL	D	RF
–1E	417A2508-4		TANK ASSY-POTABLE WATER SYS 60 GAL USABLE, STAND PIPED TO 40 GAL	E	RF
–1F	417A2508-6		TANK ASSY-WATER, 40 GALLON USEABLE, STAND PIPED TO 30 GALLON	F	RF
–1G	417A2508-7		TANK ASSY-WATER, 40 GALLON USEABLE, STAND PIPED TO 40 GALLON	G	RF
–1H	417A2508-8		TANK ASSY-WATER, 60 GALLON USEABLE, STAND PIPED TO 40 GALLON	H	RF
–1J	417A2508-9		TANK ASSY-WATER, 60 GALLON USEABLE, STAND PIPED TO 50 GALLON	J	RF
–1K	417A2508-10		TANK ASSY-WATER, 60 GALLON USEABLE, STAND PIPED TO 60 GALLON	K	RF
5	417A2509-1		. FITTING		2
10	MS21902J6		. UNION		1
15	5759-29		. WASHER-RETAINING		1
20	NAS1611-014		. PACKING		1
25	NAS1611-119		. PACKING		3
30	417A2509-2		. STANDPIPE ASSY	A, F	1
–30A	417A2509-4		. STANDPIPE ASSY	B, G	1
–30B	417A2509-10		. STANDPIPE ASSY	C, H	1
–30C	417A2509-14		. STANDPIPE ASSY	D, K	1
–30D	417A2509-16		. STANDPIPE ASSY	E, J	1
32	417A2509-1		. . FITTING-FILL		1
33	417A2509-3		. . TUBE	A, F	1
–33A	417A2509-5		. . TUBE	B, G	1
–33B	417A2509-9		. . TUBE	C, H	1

–Item not Illustrated

FIG/ ITEM	PART NUMBER	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY
1–					
–33C	417A2509-13		. . TUBE	D, K	1
–33D	417A2509-15		. . TUBE	E, J	1
34	417A2509-5		DELETED		
–34M	417A2509-9		DELETED		
35	S417A201-1		DELETED		
–35A	S417A201-2		DELETED		
35B	0A011-0236-1		. TANK-POTABLE WATER, NON-METALLIC, 45 GALLON CAPACITY, CAPACITANCE SENSOR (VS5825) (SPEC S417A201-1)	A, B	1
–35C	0A011-0236-11		. TANK-POTABLE WATER, NON-METALLIC, 65 GALLON CAPACITY, CAPACITANCE SENSOR (VS5825) (SPEC S417A201-2)	C-E	1
–35D	0A011-0236-21		. TANK-POTABLE WATER, NON-METALLIC, 45 GALLON CAPACITY, CAPACITANCE SENSOR (VS5825) (SPEC S417A201-9)	F, G	1
–35E	0A011-0236-31		. TANK-POTABLE WATER, NON-METALLIC, 65 GALLON CAPACITY, CAPACITANCE SENSOR (VS5825) (SPEC S417A201-10)	H-K	1

–Item not Illustrated