

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	1 of 103
		TITLE:	ICA Maintenance Manual for	FILE NO.
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	A-10035
			REVISION	03

**MAINTENANCE MANUAL AND INSTRUCTIONS FOR CONTINUED
 AIRWORTHINESS
 FOR
 AEROCET MODEL 2200 TWIN SEAPLANE FLOATS
 INSTALLED ON A SUPER CUB AIRPLANE**


Aerocet, Inc.
 P.O. Box 2119
 265 Shannon Lane
 Priest River, Idaho 83856
 Phone: (208) 448-0400
 Fax: (208) 448-1644

This ICA must be followed when Aerocet 2200 Floats are installed in accordance with Supplemental Type Certificate (STC) No. SA02000SE.

The information contained in this document supplements or supercedes the basic manuals only in those areas listed herein. For limitations, procedures, and performance information not contained in this manual, consult the basic aircraft ICA or maintenance manual.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	2 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

ISSUE DATE:		4/14/2009	 Incorporated		PAGE		3 of 103
					FILE NO.		A-10035
REVISION DATE:		3/4/10	TITLE:		ICA Maintenance Manual for		
			SUBTITLE:		2200 Floats on PA-18 Piper, Super Cub model		
					REVISION		03

LOG OF REVISIONS

Revision	Pages Affected	Description	Date	Approved
00	All	Initial Release	4/14/2009	--
01	All	Re-arranged and added multiple per FAA comments. Added 1.2 Availability and Revisions. Added Heading 1.4 Dimensions, Locations and Nomenclature. Moved all of Sec. 4 to Section 2. Added 2.6 Inspections Heading; 2.10.10 Placards; 2.11 Troubleshooting. Sec. 4 changed to Airworthiness Limitations, all new.	4/30/09	
02	10 21 31, 34 & 38 89-97 [New]	Spelling correction, Fig. 1.4.6. Corrected Fig. # from 8 to 2.9.1.1. Added references to applicable drawings for PA-18 Wide Body Installations. Added Appendix A. No changes to limitations. No FAA review required.	6/16/09	
03	(Old pg. #'s 59, 61, 62) (Figures) 65, 67, 68	Flying wires corrected, 22-34035 and 22-34036 were reversed fore and aft. Formatting – all Sections to start on odd pages.	3/4/10	

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	4 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	5 of 103
		TITLE:	ICA Maintenance Manual for	FILE NO.
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	A-10035
			REVISION	03

TABLE OF CONTENTS

	Log of Revisions	3
	Table of Contents	5
1.	Introduction.....	7
1.1.	How to Use This Supplemental Manual.....	7
1.2.	Availability and Revisions	8
1.3.	General Description	9
1.4.	Dimensions, Locations and Nomenclature.....	10
2.	Maintenance Manual	15
2.1.	General Practices	15
2.2.	Product Listings	15
2.3.	Fastener Torque	16
2.4.	Fastener Torque Values (Except where otherwise noted).....	17
2.5.	Fastener Use and Discretion.....	19
2.6.	Inspections	20
2.7.	Special Inspections	22
2.8.	Float Handling and Jacking.....	23
2.9.	Floats Installation.....	23
2.10.	Conversion from Wheels to Floats.....	35
2.11.	Troubleshooting	46
2.12.	Conversion from Floats to Wheels.....	46
3.	Repair Manual	49
3.1.	Struts	49
3.2.	Composite Float Hulls	49
3.3.	Repair Types and Procedures.....	50
3.4.	Impregnation of Fabric	51
3.5.	Resin Mixing.....	51
3.6.	Preparation of Fiberglass Materials.....	52
3.7.	Surface Coat Application (Gel Coat)	53
3.8.	Keel and Wear Strip Attachment	53
4.	AIRWORTHINESS LIMITATIONS	55
5.	Illustrated Parts Catalogue	57
5.1.	List of Figures.....	57
	APPENDIX A. Catalog Pages for PA-18 “Wide Body”	89

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	6 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	7 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

1. INTRODUCTION

Thank you for choosing Aerocet Floats. This manual covers the installation and maintenance of the 2200 floats as installed on the PA-18 Piper Super Cub airplane (and similar models), including instructions for installing the struts, steps, water rigging, and float structure. An IPC is also provided.

1.1. How to Use This Supplemental Manual

Used in conjunction with the Piper Owner's Manual, and Illustrated Parts Catalogue for a Super Cub, airplane, this supplemental manual provides the operator with a source of information for installing, removing, repairing, and maintaining Aerocet Model 2200 Twin Seaplane Floats on a Super Cub.

This manual is organized as follows:

Maintenance Manual. Instructions and information necessary to maintain, install, and remove the Aerocet Model 2200 Twin Seaplane Floats on a Piper Super Cub airplane.

Repair Manual. Instructions necessary to repair Aerocet Model 2200 Twin Seaplane Floats installed on a Piper Super Cub airplane.

Instructions for Continued Airworthiness. Instructions necessary to inspect and maintain an airworthy state with Aerocet Model 2200 Twin Seaplane Floats on a Piper Super Cub airplane. These instructions include Preflight, Daily, Periodic, and Special inspections.

Illustrated Parts Catalog. Drawings and parts necessary to use the Aerocet Model 2200 Twin Seaplane Floats on a Piper Super Cub airplane.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	8 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

1.2. Availability and Revisions

One complete, hard (paper) copy of this manual shall be provided with each new set of Aerocet Model 2200 floats. Additional copies and minor revisions shall be available via email, U.S.P.S (Mail), UPS or FedEx by request. Fees and delivery charges may apply.

Notification of any changes that require service for airworthiness shall be distributed to all applicable Aerocet owners on record with Aerocet, Inc. In such a case, copies of the applicable, revised portions of this manual shall be provided.

Aerocet, Inc. maintains record of purchasers and/or owners collected at the time of purchase in order to comply with the above as well as to maintain a high standard of service. If you have moved since your original purchase, have purchased a used product or otherwise have reason to believe that the contact information on file is incorrect, please provide the following information to Aerocet, Inc: (Aerocet contact information is on the front of this document.)

Float Information:

Float Model: _____

Float S/N (R/L) _____

Aircraft Information:

Aircraft Make/Model _____

Aircraft Registration _____

Aircraft S/N _____

Owner Information: (as applicable)

Previous Owner _____

Previous Address _____

Present Owner _____

Present Address _____

Present Phone Number _____

Present Email Address _____

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	9 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

1.3. General Description

The Aerocet Model 2200 Twin Seaplane Floats are all-composite float hulls. The float hulls are separated by spreader bars that slide into the float assemblies. The float design uses a double-fluted bottom contour from the step forward, and has a flat top deck design with built-in antiskid. Each float offers a large storage locker.

Water rudders are mounted on the stern of each float for water-taxi operations, and are connected directly to the airplane's rudder. The retract system, which is compatible with OEM and other approved cockpit handles, is installed in the standard manner.

Each float is attached to the airplane by forward, mid, and aft struts. Bolted to the upper end of the forward and mid struts is an attachment block, and to the upper end of the aft struts, a swivel fitting. The forward and mid struts are attached to the landing gear fitting. At the lower end, the forward struts are bolted to an attachment fitting, which in turn, is bolted to the forward attachment lug on the float. The mid and aft struts' forked attachment fitting is bolted to the rear lug on the float.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	10 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

1.4. Dimensions, Locations and Nomenclature

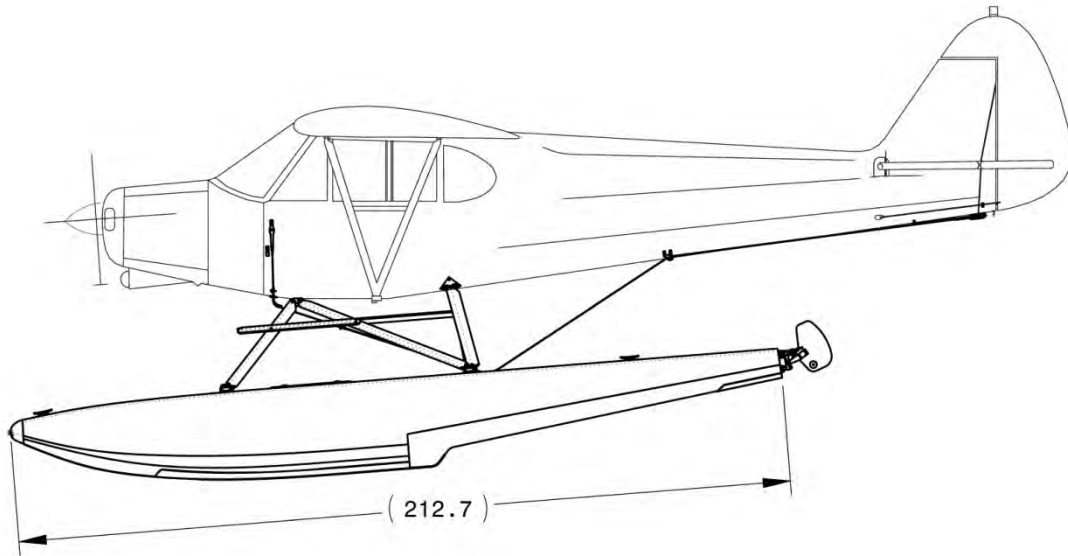


Figure 1.4.1

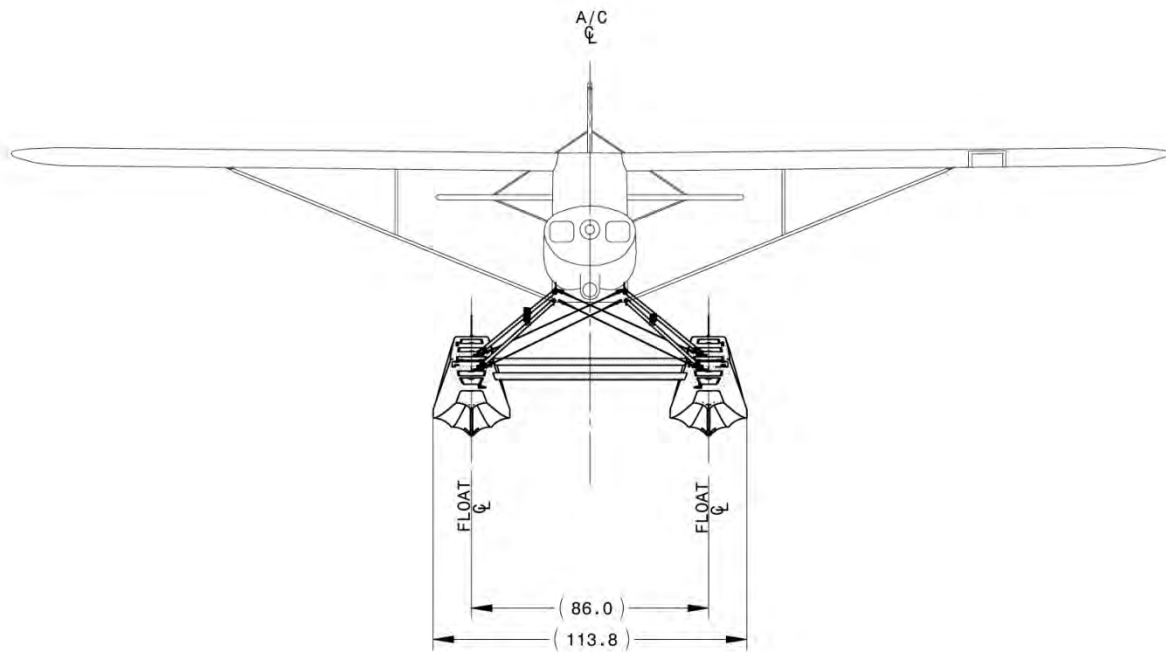


Figure 1.4.2

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	11 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

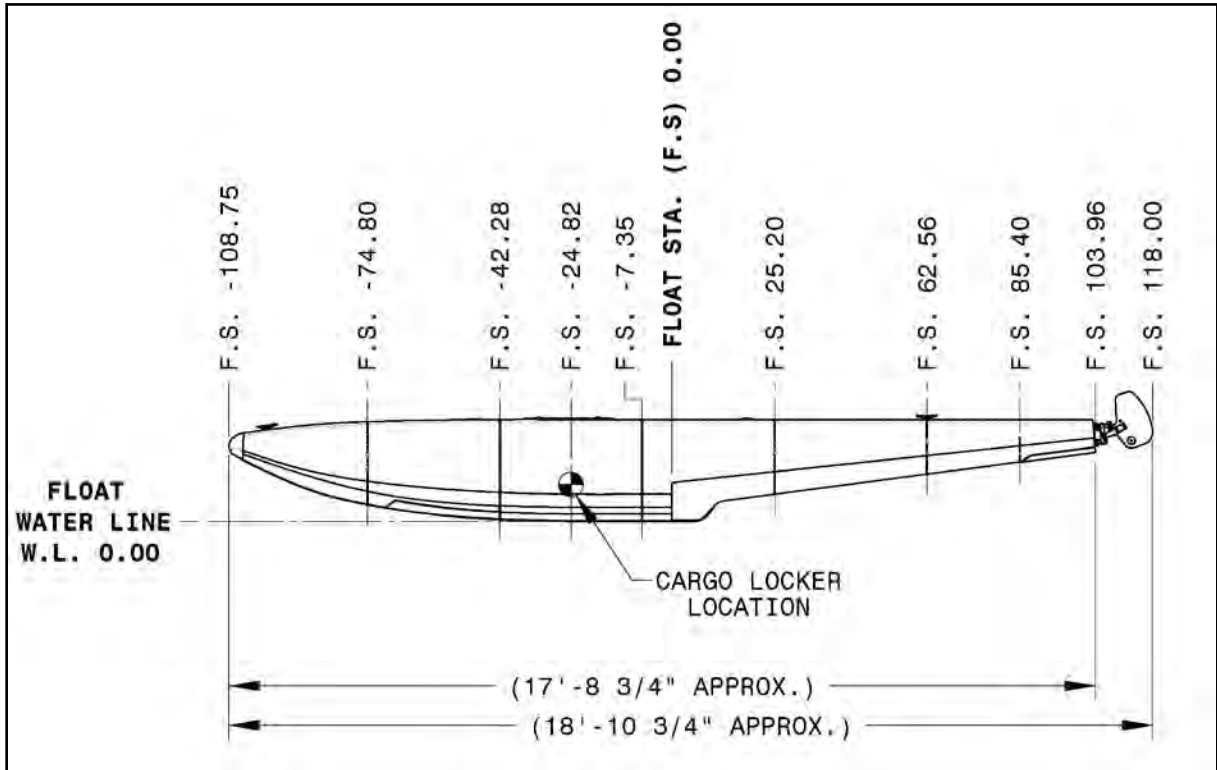


Figure 1.4.3

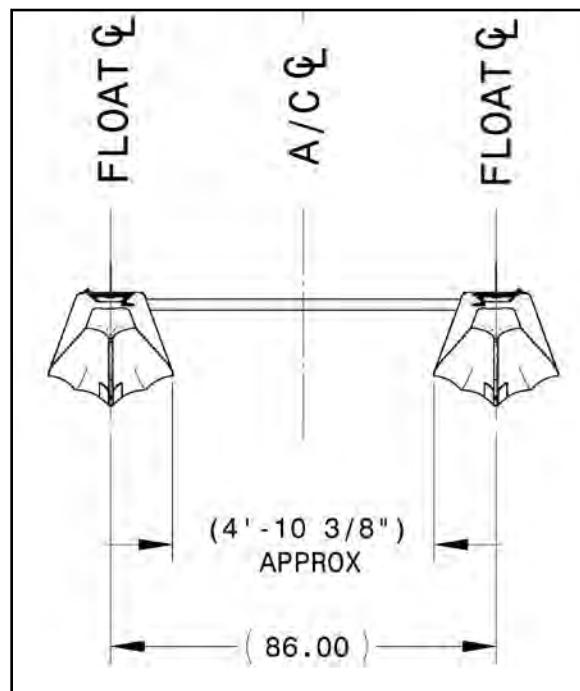


Figure 1.4.4

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	12 of 103
REVISION DATE:	3/4/10	TITLE:	ICA Maintenance Manual for	FILE NO.
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	A-10035
				REVISION
				03

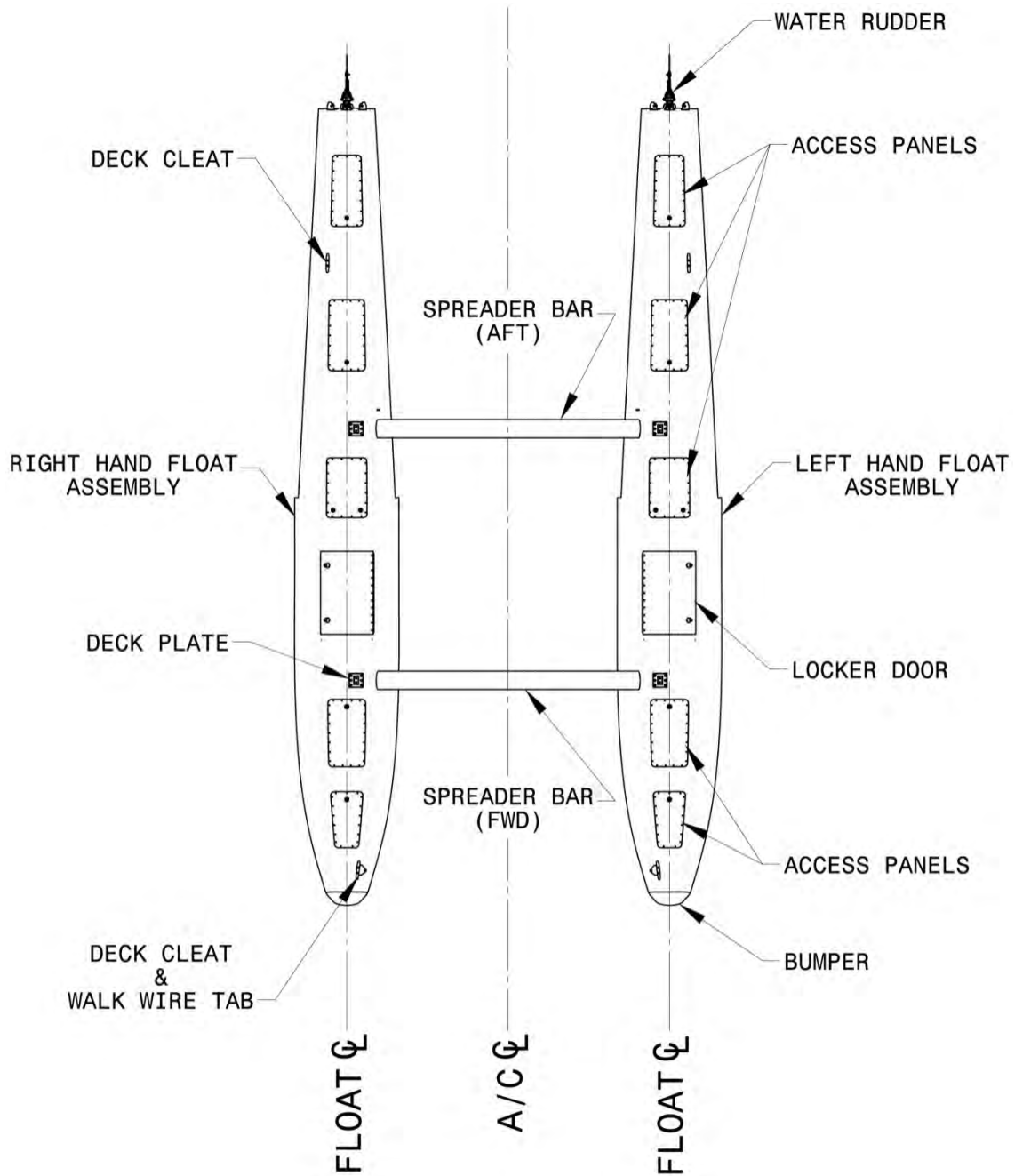


Figure 1.4.5

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	13 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

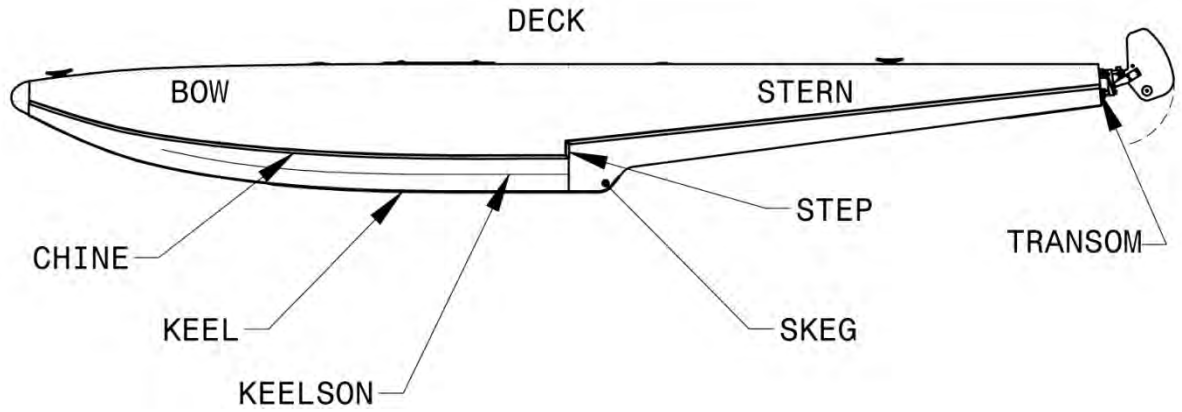


Figure 1.4.6

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	14 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	15 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.


2. MAINTENANCE MANUAL

2.1. General Practices

1. Metal Parts: check for corrosion (rust), stress cracks or metal distortion, elongation of holes, and rivet damage.
2. Critical Bolts: check for corrosion (rust), wear, and torque. It is recommended that some form of corrosion-inhibiting compound be applied to all threaded fasteners and other similar parts. Possible products used include those listed in the Product Listings that follow, but are not limited to these products. Apply per manufacturer recommendations only.
3. Composite Parts: check for stress cracks, gel coat presence (UV protection), and punctures. (Section 5 covers repair and re-work of composite parts.)
4. All parts/fasteners that penetrate float structures, such as a bulkhead or the float deck, must be sealed with marine-grade urethane adhesive such as Sikaflex 292.

2.2. Product Listings

1. Float Sealant for Bolts and Chine Strip Attachment: Sika Manufacturing Sikaflex 292.
2. Rust (corrosion) Protection: ACF-50, Corrosion X, Boeing Company Boeshield T9.
3. Bolt Protection: PUR-AL-KETONE, which is distributed by Lake and Air; LPS Industries LPS 3; Zip Chemical Company Zip D-5029NS.
4. United EZ Turn Lubricant: Produced by United Erie 1-800-377-7561, and available through distributors.
5. Composite Materials for Hull Repair: Contact Aerocet, Inc., for resin, cloth, gel-coat, resin thickeners.

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	16 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	

2.3. Fastener Torque

2.3.1. Torque Value Conversion:

To convert in.-lbs. to ft.-lbs: Value (ft.-lbs.) x 12 = Value (in.-lbs.)

To convert ft.-lbs. to in.-lbs: Value (in.-lbs.) x 0.0833 = Value (ft.-lbs.)

2.3.2. Tooling Requirements:

Calibrated torque wrench

Adapters that affect the length of the torque wrench will affect the required torque indication and must be calculated according to Figure 1.4.3.

2.3.3. Hardware Cleanliness

All hardware is to be free of dirt, grit and grease. All dirty hardware shall be thoroughly cleaned and lubricated with a dry film lubricant such as LPS 1, or Teflon products per manufacturer instructions. It is recommended that all stainless hardware be thoroughly lubricated with anti-seize lubricant of good quality to prevent galling upon assembly.

2.3.4. Torque Procedure

Assure that hardware is clean and properly prepared for installation. Assemble nuts to bolts, measuring the tension required to turn the nut and add this to the required final torque. Where possible apply torque to the nut, and not to the fastener head. Apply a smooth, even pressure, stopping and re-torquing if chattering or premature loading occurs. This may warrant disassembly and subsequent inspection for burrs or galling. Replace any damaged hardware.

Access panels should be torqued only to "hand tight", the fiberglass should exhibit only mild deformation. A portable hand drill could be used, provided that the clutch is set properly. Do not apply more pressure to the hatch screws than is necessary to engage the tool to the fastener head as this will risk damaging the Tinnerman style nuts below.

All other nuts shall be torqued per Section 1.4 unless otherwise noted.

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model		PAGE	17 of 103
REVISION DATE:	3/4/10			FILE NO.	A-10035
				REVISION	03

2.4. Fastener Torque Values (Except where otherwise noted)

CAUTION THE FOLLOWING TORQUE VALUES ARE DERIVED FROM OIL FREE CADMIUM PLATED THREADS.				
TORQUE LIMITS RECOMMENDED FOR INSTALLATION (BOLTS LOADED PRIMARILY IN SHEAR)			MAXIMUM TORQUE LIMITS	ALLOWABLE TIGHTENING
Thread Size	Tension type nuts MS20365 and AN310 (40,000 psi in bolts)	Shear type nuts MS20364 and AN320 (24,000 psi in bolts)	Nuts MS20365 and AN310 (90,000 psi in bolts)	Nuts MS20364 and AN320 (54,000 psi in bolts)
FINE THREAD SERIES				
8-36	12-15	7-9	20	12
10-32	20-25	12-15	40	25
1/4-28	50-70	30-40	100	60
5/16-24	100-140	60-85	225	140
3/8-24	160-190	95-110	390	240
7/16-20	450-500	270-300	840	500
1/2-20	480-690	290-410	1100	660
9/16-18	800-1000	480-600	1600	960
5/8-18	1100-1300	600-780	2400	1400
3/4-16	2300-2500	1300-1500	5000	3000
7/8-14	2500-3000	1500-1800	7000	4200
1-14	3700-5500	2200-3300*	10,000	6000
1-1/8-12	5000-7000	3000-4200*	15,000	9000
1-1/4-12	9000-11,000	5400-6600*	25,000	15,000

Figure 2.4.1 Recommended Torque Values (inch-pounds)

(from AC43.13-1B, Table 7-1)


FINE THREAD SERIES	
THREAD SIZE	MINIMUM PREVAILING TORQUE
7/16 - 20	8 inch-pounds
1/2 - 20	10 inch-pounds
9/16 - 18	13 inch-pounds
5/8 - 18	18 inch-pounds
3/4 - 16	27 inch-pounds
7/8 - 14	40 inch-pounds
1 - 14	55 inch-pounds
1-1/8 - 12	73 inch-pounds
1-1/4 - 12	94 inch-pounds
COARSE THREAD SERIES	
THREAD SIZE	MINIMUM PREVAILING TORQUE
7/16 - 14	8 inch-pounds
1/2 - 13	10 inch-pounds
9/16 - 12	14 inch-pounds
5/8 - 11	20 inch-pounds
3/4 - 10	27 inch-pounds
7/8 - 9	40 inch-pounds
1 - 8	51 inch-pounds
1-1/8 - 8	68 inch-pounds
1-1/4 - 8	88 inch-pounds

Self-Locking Nuts:

Self-locking nuts, when re-used, must have at least the minimum prevailing torque listed in figure to the left. Nuts that are smaller than those listed in the table shall not be used if they can be run up by hand.

Figure 2.4.2 Minimum Prevailing Torque Values for Re-used Self-Locking Nuts

(from AC43.13-1B, Table 7-2)

ISSUE DATE: 4/14/2009		 Incorporated	PAGE	18 of 103
			FILE NO.	A-10035
REVISION DATE:	3/4/10		TITLE:	ICA Maintenance Manual for
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
			REVISION	03

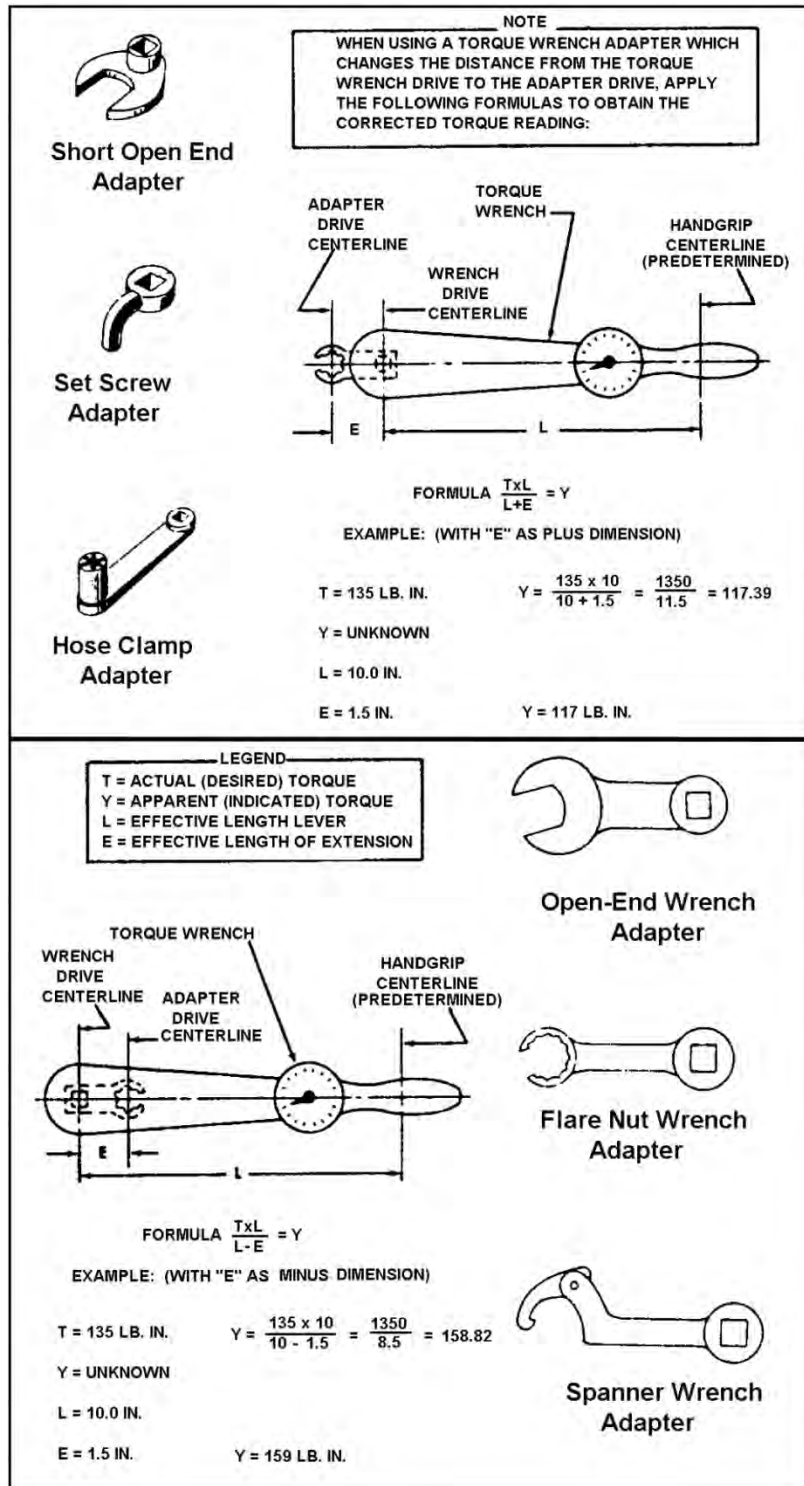


Figure 2.4.3 Torque Wrench with Various Adapters
(from AC43.13-1B, Figure 7-2)

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	19 of 103
		TITLE:	ICA Maintenance Manual for	FILE NO.
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	A-10035
			REVISION	03

2.5. Fastener Use and Discretion

2.5.1. Fastener Lengths

Rivets: Where replacement or repair of rivets is required, use rivets of proper specifications only. For instance, MS203426AD4-xxx. Lengths may be determined by measuring the thickness of the material(s) to be assembled and adding 1.5" X Diameter of the rivet to be used. Over-sized rivets may be substituted where holes have been drilled out.

Bolts and screws shall have a minimum of one thread visible through the nuts upon final torque.

Washers may be rearranged if necessary to accommodate proper fit, up to two washers beneath the nut and one beneath the fastener head. Typically, Aerocet intends to put one thin washer beneath the fastener head and one thicker washer beneath the nut.

2.5.2. Fastener Reuse

Fasteners are to be inspected per Section 4 of this manual for condition. Such fasteners that are acceptable, may be cleaned, re-lubricated and re-installed as determined. Self-locking nuts shall meet the minimum prevailing torque as listed in Figure 1.4.2, or shall be replaced.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	20 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.6. Inspections

2.6.1. Part 1, Preflight

Conduct Preflight inspections according to existing Piper owner's manual, and add the following to the Airframe group:

1. Check Float lockers secured.
2. Pump out all compartments to assure no damage has occurred.


Anything more than 4-5 full pumps should be investigated.

2.6.2. Part 2, Daily Inspections

Conduct daily inspections according to existing Piper Owner's Manual, and refer to Table 1, Recommended Airworthiness Service Schedule, below.

2.6.3. Part 3, Periodic Inspections

Conduct periodic inspections according to existing Piper owner's Manual section 4, and add the following inspections in Table 4.5, Recommended Service Schedule, below.

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	21 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	


2.6.4. Recommended Service Schedule

TABLE 5.5 Service Schedule

INSPECTION TIME INTERVALS		Notes	HOURS (MONTHS) (Whichever occurs first)		
			Daily	100 (12)	200 (12)
Water Rudder System	Water Rudders and Tiller Posts	Inspect for damage and freedom of movement. Check immediately after a take-off or landing with the rudders down.	X		
	Cables	Inspect for fraying, especially around the stern pulleys, and inspect cable guards (cotter pins).		X	
	Pulleys and Bushings	Inspect for freedom of rotation and condition of pulleys.		X	
Hulls and Struts	Float exterior	Inspect for damage, surface coat (gel coat - UV protection).	X		
	Float exterior, bottoms	Inspect for damage, wear, keel wear strips and chine wear strips.		X	
	Float interior	Inspect for evidence of damage from the interior vantage point.			X
	Access Panels and Pump Out System	Inspect seals, cracks in pump out tubes, attachment of pump out tubes, tube routing.			X
	Deck Blocks, Deck Plates and Hardware	Spray coat protection according to Note 1 and hardware according to Note 2. If working in saltwater, protect more frequently.		X	
	Struts	Inspect for damage, corrosion.			X
	Baggage Compartment	Inspect seals, latches, internal damage from baggage.			X
Walk-Wire (if installed)	Float Bow	Inspect for corrosion of all parts, wear, fatigue or fray.	X		
Placards	Cabin Placards	Inspect for placement and legibility.			X

Note 1: Spray coat of a migrating corrosion material (ACF-50, Boeshield T9, or Corrosion X).

Note 2: Coat hardware with PUR-AL-KETONE or LPS 3.

					
ISSUE DATE:	4/14/2009	Incorporated		PAGE	22 of 103
REVISION DATE:	3/4/10	TITLE:	ICA Maintenance Manual for	FILE NO.	A-10035
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	REVISION	03

2.7. Special Inspections

Conduct Special inspections per existing Piper maintenance manual, and add the following to the Airframe group:

In a variety of circumstances, it is necessary to perform prompt inspections for damage. Details relating to these investigations are addressed in Sections 2 and 5 of this supplemental manual, and in the Service Schedule (Table 4.5) above. The pilot is responsible for determining the severity of damage to the aircraft and its flightworthiness while in the field. Inspections and repairs are to be performed as necessary and per practices outlined in this manual.

- 2.7.1.** Landing completed on grass or other runway surfaces: Inspect bottom of float, including wear strips and keel plate.
- 2.7.2.** Harsh landings on either runway or water: Remove and inspect float strut attachment hardware for bent hardware and elongated holes, including all fitting bolts and AN bolts through struts.
- 2.7.3.** Impact with a submerged object during taxi, take-off, or landing on water: Remove and inspect float strut attachment hardware for bent hardware and elongated holes. Inspect entire bottom of float.
- 2.7.4.** Suspected damage incurred during tie-down or mooring (e.g. damage from wind or wave action): Remove and inspect attachment hardware and deck plates. Inspect both exterior and interior of float sides where contact with object may have occurred.
- 2.7.5.** Excessive water encountered during pump-out on pre-flight inspection: Inspect to determine cause of excess water.

Note that exceptional inspections are not limited to this list; other scenarios may occur that warrant exceptional inspections.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	23 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.8. Float Handling and Jacking

In order to service the float bottoms or aircraft installation rigging, the floats may be lifted with hydraulic jacks, or if installed, with aircraft lifting rings. If using hydraulic jacks, raise only one float at a time, and assure proper balancing. The best lift point is 7 inches ahead of the step on the keel; this locates the jack directly under the main bulkhead in the float and nearest the strong step area. If space permits, and as a precaution, use a board in between the jack and the keel to distribute the load and reduce point pressure on the float structure. After raising the float, block the float in two places ahead of the step. Use a sawhorse to support the after body of the float to keep the plane from tipping back. Alternatively, use a stand to support the tail of the aircraft. You may position sawhorse(s) beneath bulkheads, which are located 25.20 inches, 62.56 inches, and 85.4 inches aft of the center. and 85.4 inches aft of the center.

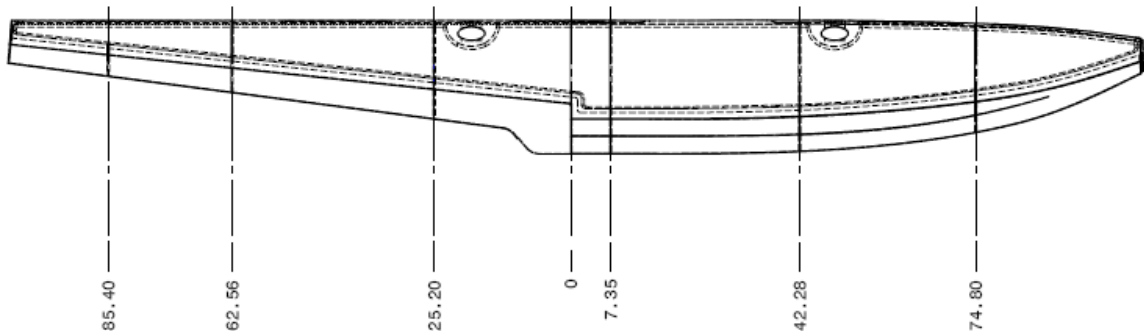



Figure 2.2.1 Bulkhead locations

The airplane may be otherwise lifted with a launching dolly or large forklift under the spreader bars. Lift as closely as possible to the float hulls without touching the hulls.

2.9. Floats Installation

2.9.1. Description

Provision is made on the airplane for fitting a twin float installation, complete with retractable, cable-operated water rudders. The complete float unit, comprising floats,

		 Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	24 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

water rudders, spreader bars, struts and fittings, streamline wires, and rudder control rigging, may be fitted to the airplane in place of the main wheel and tailwheel units.

The Aerocet Model 2200 Twin Seaplane Floats are all-composite float hulls. The float hulls are separated by spreader bars that slide into the float assemblies. The float design uses a double fluted bottom contour from the step forward, and has a flat top deck design with built-in antiskid. Water rudders are mounted on the stern of each float for water taxi operations. Each float offers six water-tight compartments for safety, one of which serves as large storage locker. Access to the insides of these compartments is facilitated through fastened access panels on the deck or the storage locker hatch cover. The floats incorporate pump locations into each compartment. These pump locations are used to remove any excess water from condensation, leakage from the access panel gaskets, bolts, pump-out plugs, or a damaged float hull. Replacement plugs are readily available, and are common to many brands of floats.

Each float is attached to the airplane by forward, mid, and aft struts. Bolted to the upper end of the forward and mid struts is an attachment block, and to the upper end of the aft struts, a swivel fitting. The forward and mid struts are attached to the landing gear fitting. At the lower end, the forward struts are bolted to an attachment fitting, which in turn, is bolted to the forward attachment lug on the float. The mid and aft struts forked attachment fitting is bolted to the rear lug on the float.

The floats installation is braced by a system of crossed streamline wires (tie rods). These are connected from the top of the landing gear fitting and to the opposite front deck fitting, and similarly from the aft float fitting to the opposite rear deck fitting. The strut bracing wires are each attached to wire pulls at the strut-to-fuselage attachment points, and to wire pulls mounted at the attachment points at the float deck. Each bracing wire (tie rod) is provided with a threaded end and lock nut for tightening and rigging adjustment. One step is attached between the forward, mid and aft struts, on the right side of the airplane, for entrance to the cockpit. One boarding step is attached between the front and mid struts on the left side of the airplane, for re-fueling purposes.

Each of the float water rudder assemblies consists of a rudder post, which is hinged to upper and lower hinge brackets on the float, and carries a steering lever at its upper end

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	25 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

and a rudder at its lower end, on a swing type pivot bracket. (See Figure 2.9.1.1) The swing type pivot bracket permits the rudder to be retracted. Nyliner type bushings are installed on the assembly as bearings for of the rudder post pivot points and the rudder retraction pivot points. No lubrication is required. The water rudders are controlled together, through a series of pulleys, turnbuckles, and an extension spring, to the rudder. The steering system consists of two control cables, one attached to the inboard side of each water rudder steering tiller post, and a single balance cable attached to the outboard ends of the steering tiller posts.

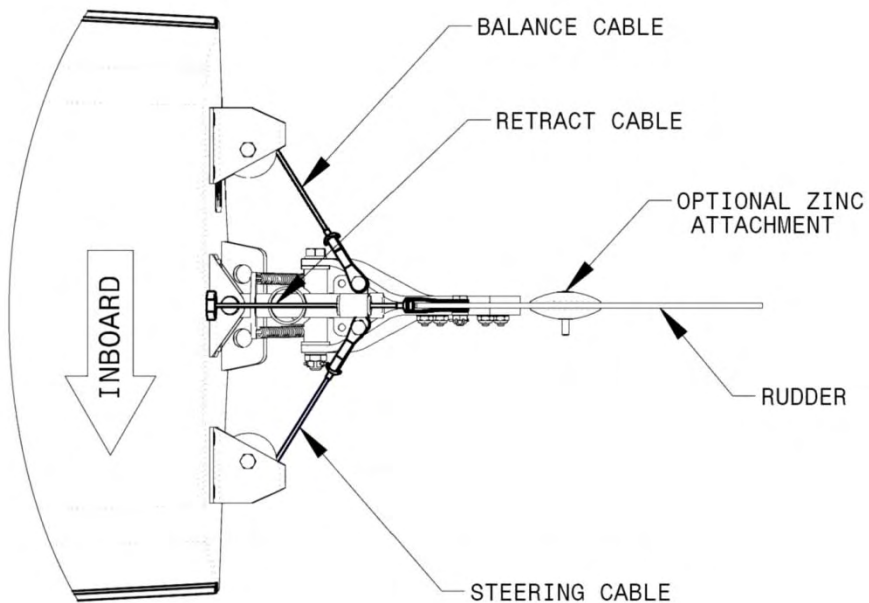


Figure 2.9.1.1

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	26 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

Each control cable is connected at the aircraft empennage by an extension spring, which in turn is connected to a rudder bar which is attached to the existing tailwheel fork. The purpose of the spring is to ensure air rudder operation if the water rudders become inoperative due to icing or other obstruction.

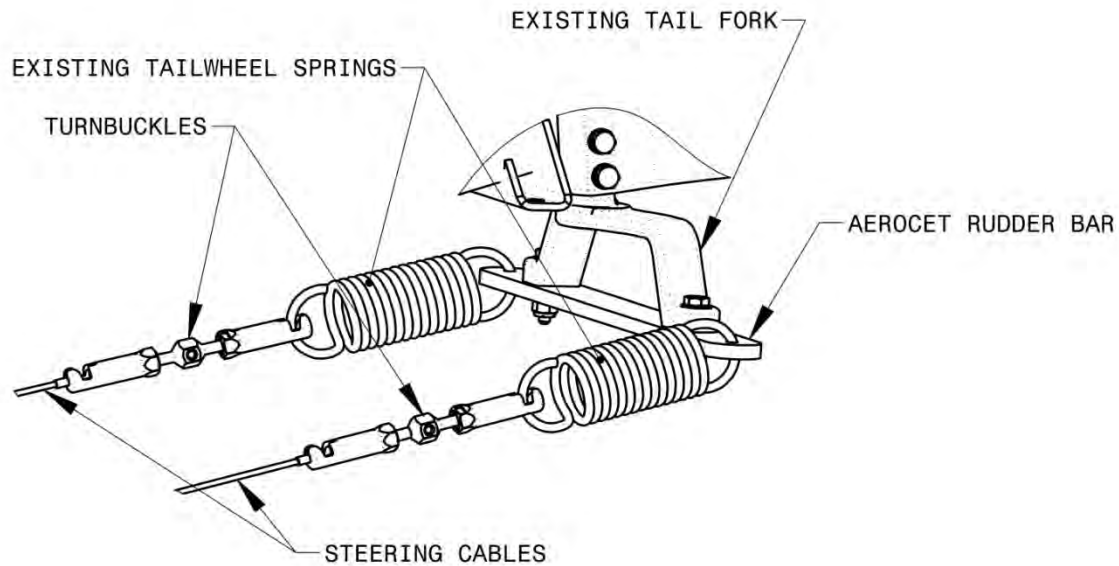


Figure 2.9.1.2

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	27 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
			FILE NO.	A-10035
			REVISION	03

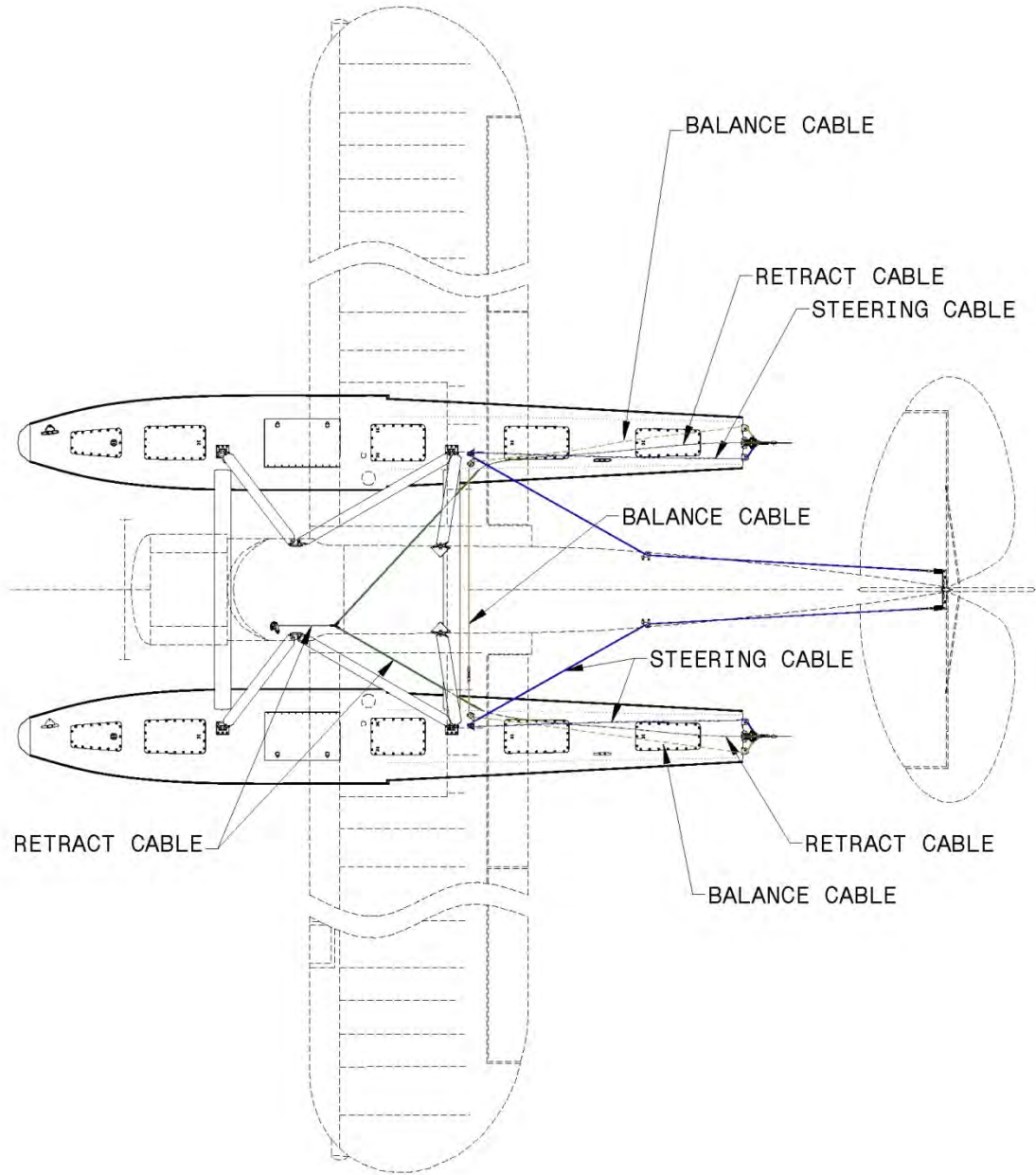



Figure 2.9.1.3

				
ISSUE DATE:	4/14/2009	Incorporated	PAGE	28 of 103
REVISION DATE:	3/4/10	TITLE:	FILE NO.	A-10035
		SUBTITLE:	REVISION	03

The principle of operation of the water rudder steering system is as follows: it is the reaction to the pilot's selected pedal through the air rudder system, that brings about the desired water rudder movement. As the float steering cable is pulled in one direction by the rudder movement, it moves one of the tiller posts on the stern of the float in the correct direction corresponding to the aircraft rudder position. The opposing float rudder is then moved by an interconnect or balance cable and moves in the same direction steering the aircraft on the water.

To enable the water rudders to be retracted for take-off and mooring, a retraction cable control is provided. The retraction handle is connected by a tie cable to the retraction cables, which are routed sealed slide tubes to the rudder, which is located within a pivot bracket, and held in the down position by a spring. The rudder may be retracted by lifting the handle up from the fair lead, and hooking the retraction handle into its catch on the fuselage wall.

The rudder steering rigging should align the rudders straight ahead when the airplane rudder is centered. Cables should be just taut. There should be no pre-stretching of the springs, which connect to the airplane rudder system. This keeps the friction low, not hampering yaw stability.

The water rudder retract cables should be rigged so that the rudders are tucked neatly behind the float transoms when retracted and the cables are just becoming slack in the down position. Acceptable throw may vary. Approximate travel should be 5.0 inches at the float transom (up to 7.5" in. when measured at the retract handle), dependent upon the retracted position of the water rudder and the cockpit retraction device arrangement used.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	29 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

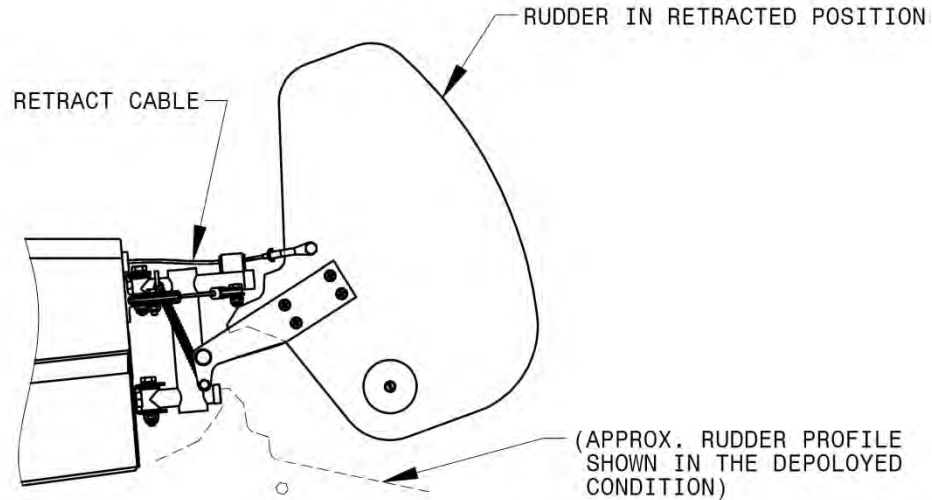


Figure 2.9.1.4

2.9.2. Cleaning

Seaplanes operating in salt water, or in a smoky area, should be thoroughly hosed down or flushed with fresh water each day.

The float's design, which uses an all-composite structure, basically eliminates hull corrosion and leakage. The floats should be kept clean with biodegradable soap and water. The sides and the bottoms from the step aft can be waxed to help in the cleaning process. The bottoms of the floats from the step forward should not be waxed, as this gives unpredictable water performance. Stains from the waterline down may be removed using marine fiberglass stain remover. We have been successful using a product called FSR (Davis Instruments Co., Do NOT use FSR while plane/floats are in-water, the product is toxic to the aquatic environment). Do not use abrasive cleaners or pads—these will scratch the white gel-coat surface. The gel-coat color surface should always be maintained on the floats for ultraviolet radiation protection.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	30 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.9.3. Float Hull Description and Maintenance

The metal chine strips are abrasive wear surfaces used to protect the floats from docks and pilings. (See Drawing 22-21007 for replacement installation.) These are extrusions bonded on using a one-part urethane adhesive. These strips should be kept intact.

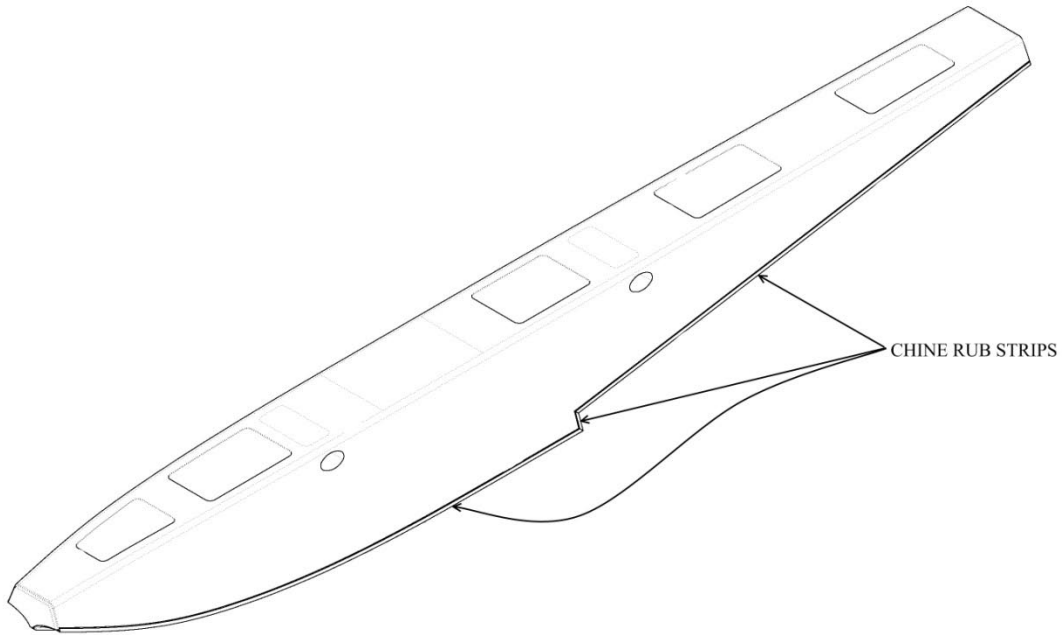


Figure 2.9.3.1

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	31 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

The keels have aluminum keel strips bonded and fastened on for protection; optional wear strips can be added upward and outward from the keel near the step area where the float would nest in the rocks on a beach. (See Drawing 22-21070 for replacement). These wear strips should be inspected on pre-flight or upon suspicion of damage. The strips should never be allowed to wear through to the gel-coat surface on the float. Replace the wear strips as necessary per the repair manual section 3.8.

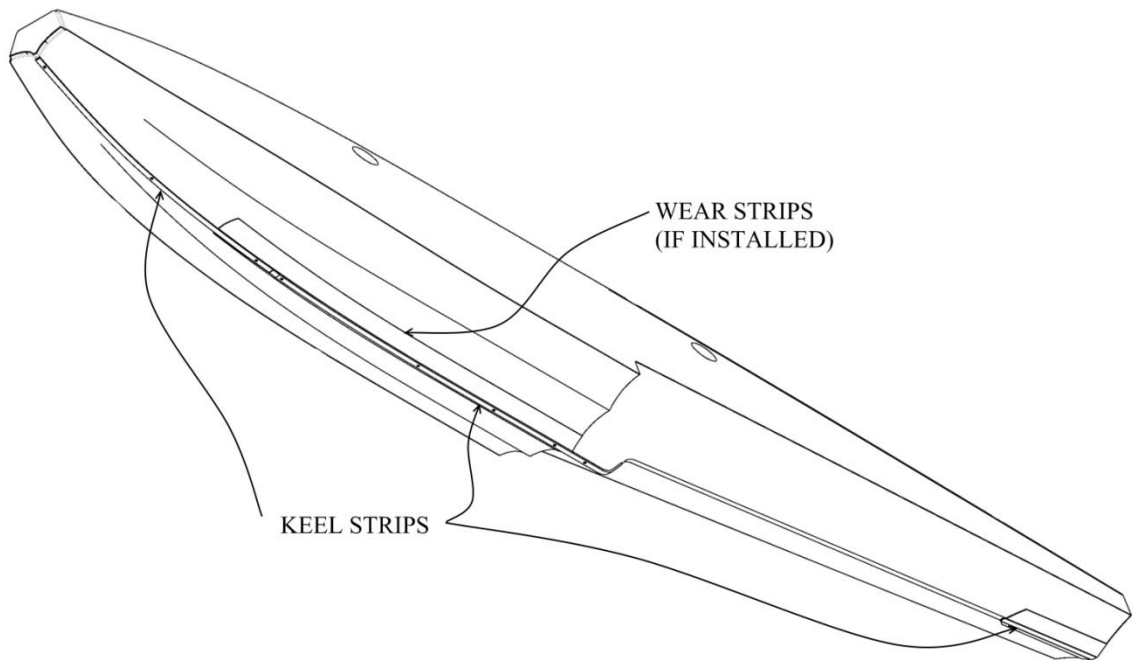


Figure 2.9.3.2

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	32 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

All float access panels are to be removed upon annual inspection to detect any hidden damage and to comply with the maintenance and water rudder sections of this supplemental manual. During this time, assure that all the pump-out tubes are not cracked (especially around the fitting to the pump-out cup), that they pass through their respective locators to keep them in the low spots, and that they have no blockages. If a pump-out tube is cracked, it will not pull the water out of its respective compartment, resulting in extra weight and CG problems. Replace as necessary. See drawing 22-21030 for access panel and pump tube assemblies.

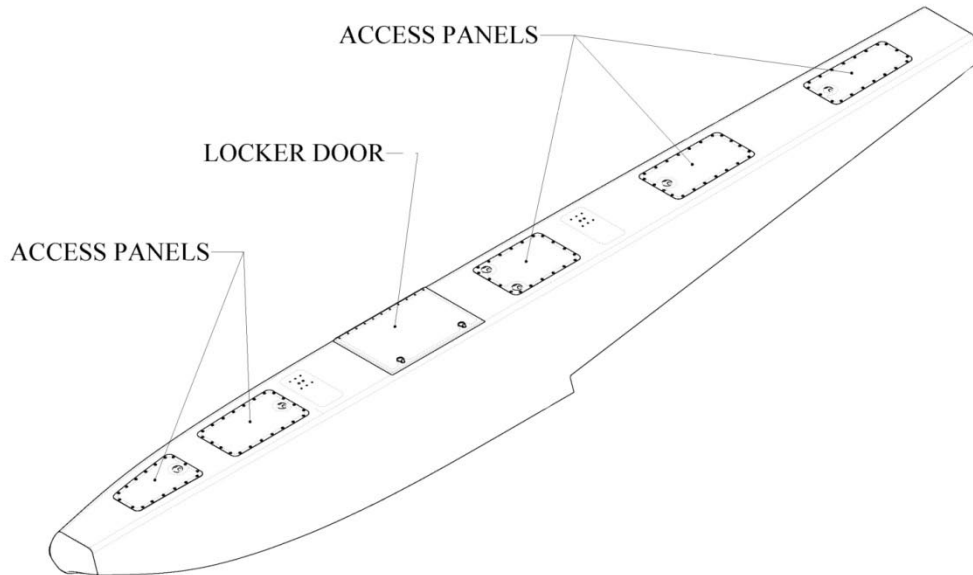


Figure 2.9.3.3

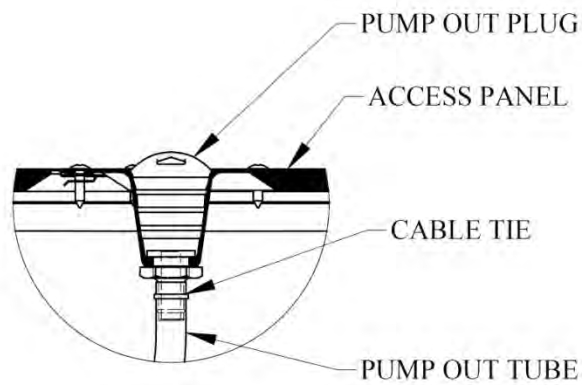


Figure 2.9.3.4

		AEROCET			
ISSUE DATE:	4/14/2009	Incorporated		PAGE	33 of 103
		TITLE:	ICA Maintenance Manual for	FILE NO.	A-10035
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	REVISION	03

Any penetration to the float structure, de-lamination of the layers of cloth, or wearing through of gel-coat must be repaired according to Hull Repair Section in the Repair Manual section of this supplemental manual. Significant damage warrants consultation from Aerocet, Inc.

Investigation should be prompted if excessive water is pumped from any of the pump-out cups during pre flight. Water can leak through the pump-out plugs and may also seep through the access panel seals. Condensation will also generate water inside the float compartments. More than four or five full pumps of water using an aircraft float pump should raise concern for maintenance. By contrast, if a pump-out tube is cracked or broken, a significant sucking sound will not be heard when the pump is removed from the pump-out cup. If there is question regarding the integrity of the pump-out tube, the operator should investigate and determine the cause. Attention should be given to any bolts that pass through the stern or other external float structures. These should be sealed into place using a single part urethane such as Sikaflex 292. It should also be noted that more water is typically pumped from the stern and bow compartments because they are often covered with water during operation and allow more seepage through the plugs and seals.

If the pilot strikes rocks or debris when on the water, he must assess the damage as soon as possible. Continuing into a high speed situation with the floats will typically exaggerate the damage due to high water pressure.

Float locker latches and seals are to be maintained as needed. Adjust the locker latches by spacing the black catch ramp the correct distance to maintain a detent when the locker catches. The white dots will face the outside when the locker catches.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	34 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

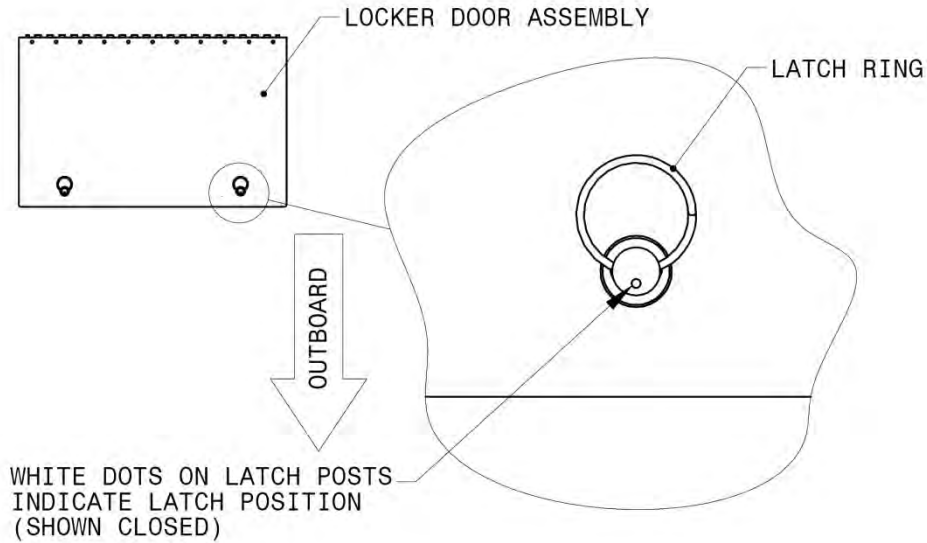


Figure 2.9.3.5

Bare steel parts such as wire pulls, bolt heads, nuts, and other hardware items should be protected with a coating of Paralketone rust preventive or heavy grease.

2.9.4. Winter Storage of the Floats

To address winter storage in locations where temperatures may drop below freezing, add a quart of RV antifreeze through each of the pump-out cups. Tape over the pump-out holes to minimize the amount of moisture that enters each of the six compartments. Do not use masking tape. Storing the floats under cover or indoors is recommended.

2.9.5. Lubrication

None required. Corrosion protection covered in the Instructions for Continued Airworthiness (ICA).

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	35 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.10. Conversion from Wheels to Floats

Complete instructions are given in the following paragraphs for conversion of the airplane from wheel to float landing gear.

2.10.1. Putting the Floats together (Use Drawing 22-15011 for PA-18; or Drawing 22-15014 for PA-18 "Wide Body" aircraft with STC SA02187AK)

Place the floats a suitable distance apart, and in a parallel position. Identify the correct spreader bar (fwd or rear) and be sure to put the identifying stampings to the lower side with the "Λ" facing forward.

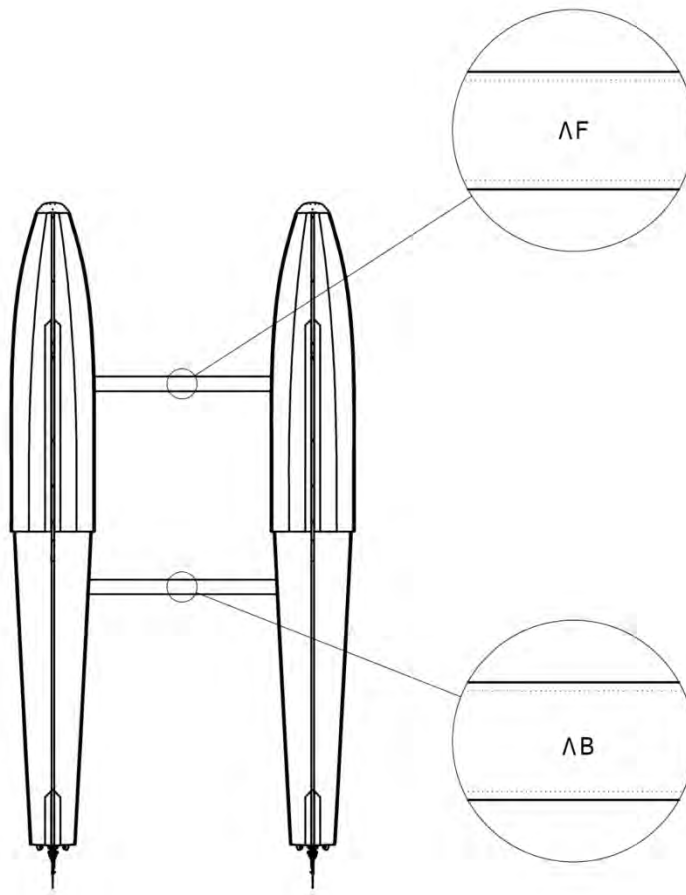


Figure 2.10.1.1

(Showing Bottom View of a float set)

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	36 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

Insert the spreader bars into slots of one float. Be very careful not to push them in too far as it will damage the outside of the float. Have someone watch for the holes in the spreader bar to line up with the holes in the deckplate. Install the AN6-57A bolts through the deck plates, wirepulls and spacers, and deck block. Be sure to stagger the wirepulls on each side so the Tie Rod Assemblies pass each other at the intersection under the aircraft.

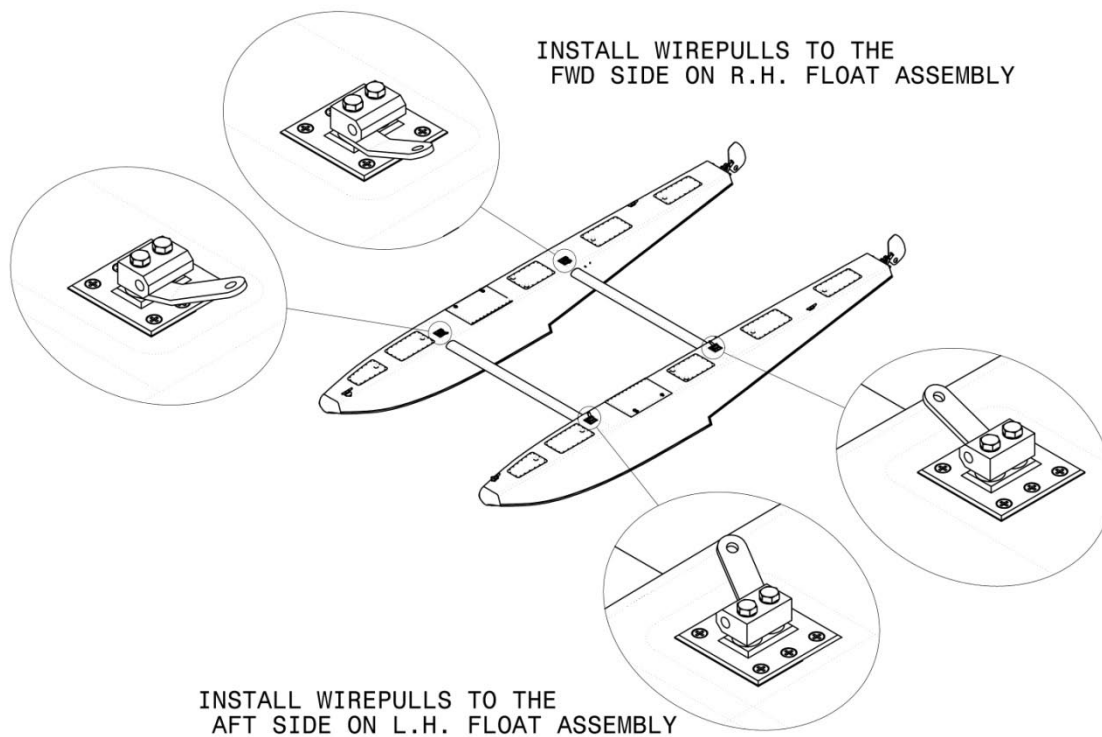


Figure 2.10.1.2
(Showing wirepull positions)

Some SIKA-FLEX or equivalent urethane adhesive is advisable for sealing these bolts from leaking. With help, guide the other float onto the spreader bars up to the point where the AN6-57A bolts drop in. If necessary, the floats can be leveraged together using lines around the cleats and winding the lines up with a piece of wood in the middle drawing the floats together. Again, assure that one doesn't allow the spreader bar to go in beyond the holes for the bolts, possibly damaging the exterior of the float. The clamp blocks, washers and nuts get installed. Tighten everything up snugly but do not finalize

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	37 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03

torque until all the rigging is in place. Final torque value for the AN6-57A bolts is only 15-18 ft/lbs. (not very high).

2.10.2. Installing Retraction Cable Systems on Float Units (Use Drawing 22-15200 for installation)

1. Attach retraction cables to water rudders, thread them through floats and pulleys at the float transoms. Cables will exit the floats through the inboard sides, aft of the rearmost spreader and generally aligned with the fairlead assembly at the underside of the aircraft behind the engine cowling. Left and right cables are different lengths to allow equal rudder blade retraction for both left and right floats. (This is because the retract handle is located to the left hand side of the cockpit.) These are connected to a single connector cable that is threaded through the fairlead and attached to the handle.
(See Sec. 3.4.3)
2. Attach balance cable to outboard sides of left of tiller posts, threading them around transom pulleys and through internal float tubes. (Outboard at the transom) These will exit from the inboard sides of each float and joined with a turnbuckle just behind the rear spreader. Note: turnbuckle or other hardware ought not be located too closely to the float hull (Left Hand Side as shipped from Aerocet), or it will disallow full rudder deflection and possibly induce damage to the cable tubing. Aerocet design places the turnbuckle or hardware such as nicopress fittings 10" inboard of the LH Float Hull.
3. Attach each control (steering) cables to the inboard sides of the float tiller posts, threading them through the transom pulleys and internal float tubing. The cables will exit through the float bulkhead at STA. 25.20, thread through a pulley and exit through the float deck at an angle closely aligned to a swivel pulley installed ahead of frame cluster at Fuselage STA. 90.90 (30.9 aft of Datum). Steering cables are then connected to extension springs, turnbuckles and to the rudder bar, which is itself attached to the existing tailwheel fork. Final tension on steering cables should be just taught - excessive tension will induce drag.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	38 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

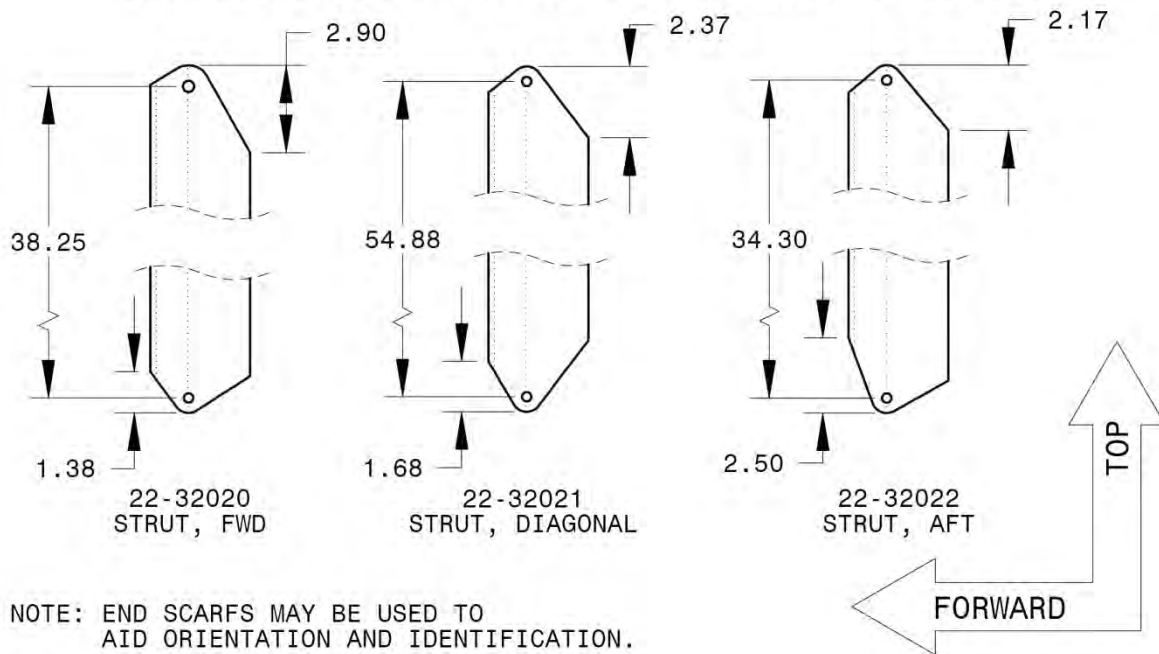
2.10.3. Installing Struts on Float Unit (Use Drawing 22-15100 for PA-18; Drawing 22-15102 for PA-18 “Wide Body” with STC SA2187AK)

1. Assemble forward strut and fuselage fitting, noting the alignment and orientation of parts.

Note

The forward struts are identified by their length, and are identified in Figure 2.10.3.1. The top and bottom ends of the forward strut are identified by the position of the corner cut-aways, which face aft on installation. The large 2.90” cut away (scarf) goes on top facing aft.

PA-18 2200 FLOAT MOUNTING STRUTS



NOTE: END SCARFS MAY BE USED TO AID ORIENTATION AND IDENTIFICATION.

Figure 2.10.3.1

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	39 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03

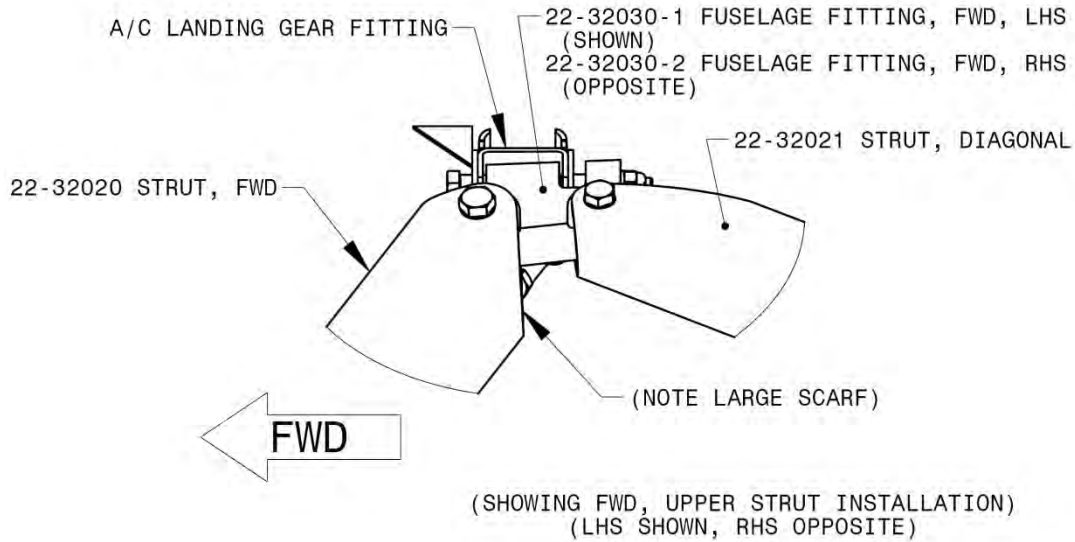


Figure 2.10.3.2

Smear the bolts with rust preventive compound, fit washers to bolts, and insert one bolt through each top strut and forward fuselage fitting. Fit washer and nut to each bolt, and finger tighten.

2. Locate the diagonal struts identified by Figure 3.4.3.1. Attach the diagonal struts to the forward fuselage fitting using the same procedure outlined for the forward struts.

Note

The rear of the diagonal struts are identified by the position of the larger corner cut-aways, which face aft on installation. The top of the diagonal strut, on the front side, also has a shallower cut-away (scarf) than the bottom.

3. Assemble the forward deck fittings (22-32107) to each forward strut. Assure that the deck fittings are oriented properly according to the drawing (thick base lug aft). Smear bolts with rust preventive compound, and fit washers to bolts. Install the bolts through each forward strut and the forward deck fittings.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	40 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

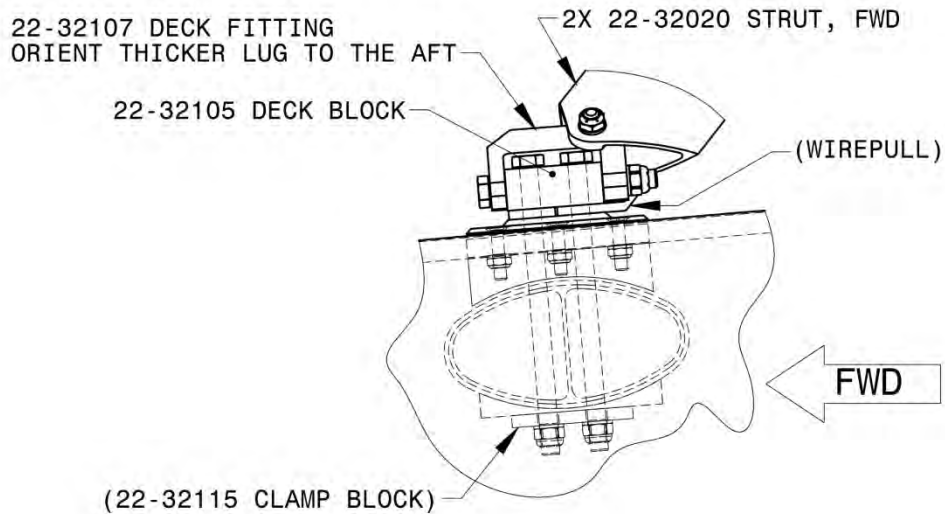
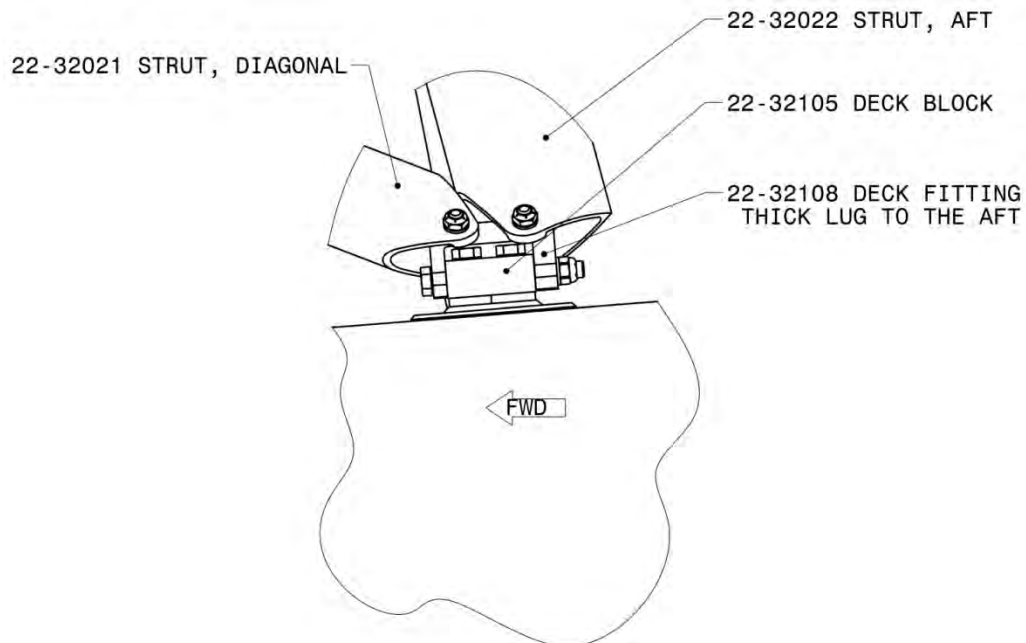


Figure 2.10.3.3

4. Assemble each mid strut bottom to the rear deck fitting (22-32108). Assure that it is oriented properly according to the drawing (thick base lug aft). Fit washer and nut to each bolt and tighten finger tight.



(SHOWING AFT, LOWER STRUT INSTALLATION)
(LHS SHOWN, RHS OPPOSITE)

Figure 2.10.3.4

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	41 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

5. Locate the aft struts identified by Figure 2.10.3.1. Have them ready to install in the correct position when attaching the floats to the aircraft.

Note

The top of the aft strut has the larger cut-away (scarf) than does the bottom.

6. Attach the deck fittings, located on the bottom of the front and diagonal struts onto the deck blocks (22-32105) on the float deck. Smear bolts with rust preventive compound, fit washer to each bolt, and insert one bolt through each. Fit washer and nut to bolts and tighten finger tight. Carefully support the struts in a manner to avoid damaging them prior to attachment to the aircraft.

2.10.4. Preparing Airplane for Reception of Float Unit

Prepare airplane for reception of float unit, and proceed as follows:

1. The brake system remains in place after removal of the gear legs, and the brake line is plugged and secured out of the way.
2. Attach the retract handle and fairlead according to Drawing 22-15200, Sheet 4, thread the cable through the fairlead for later connection. (See Section 3.4.7)
3. Place the Aerocet aft strut attach fitting onto the rear fuselage fitting according to the drawing.
4. Hoist airplane carefully, and tie down tail in order to balance loading of airplane during the removal of landing gear.
5. Remove main landing gear in a prudent manner.
6. Remove tailwheel.

2.10.5. Installing Float Unit on Airplane

1. With the airplane hoisted, position fuselage over float unit, lower airplane, and align forward fuselage attachment fittings, mounted to the struts, to the aircraft. Smear attachment bolt with rust preventive compound, fit washer, and insert bolt through fuselage lugs and forward fuselage attachment fittings. Fit washer and nut to bolt, and tighten finger tight.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	42 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2. Attach the aft struts into place at this time assuring correct orientation. Smear bolts with rust preventive compound. Fit washers to bolts, and insert bolts. Fit washers and nuts to each bolt, and tighten finger tight.

Note

The fitting of the bolts through each of the attachment points may be facilitated by slight rocking of the fuselage.

2.10.6. Installing Strut Bracing Wires (Tie Rods) (Use Drawing 22-15100 for PA-18; or 22-15102 for PA-18 "Wide Body" with STC SA02157SE)

1. Remove all threaded clevis terminals from wires, and clean wire threaded ends. Coat ends with liberal amounts of anti-seize compound. Rethread clevis terminals onto wires. (Do not force parts that thread with difficulty or risk galling.)
2. Install Forward Fuselage Wirepull fittings to the aircraft landing gear shock attach bracket. These fittings must be installed with one having the narrow lug forward and the opposite side with the narrow lug aft of the attach bracket. The orientation will be dependent on the position of the lower wirepull on the deck fitting. For example, if the lower wirepull on the left float is located to the aft, then the Forward Fuselage Wirepull on the right side would have the narrow lug on the aft side of the aircraft landing gear shock attach bracket.

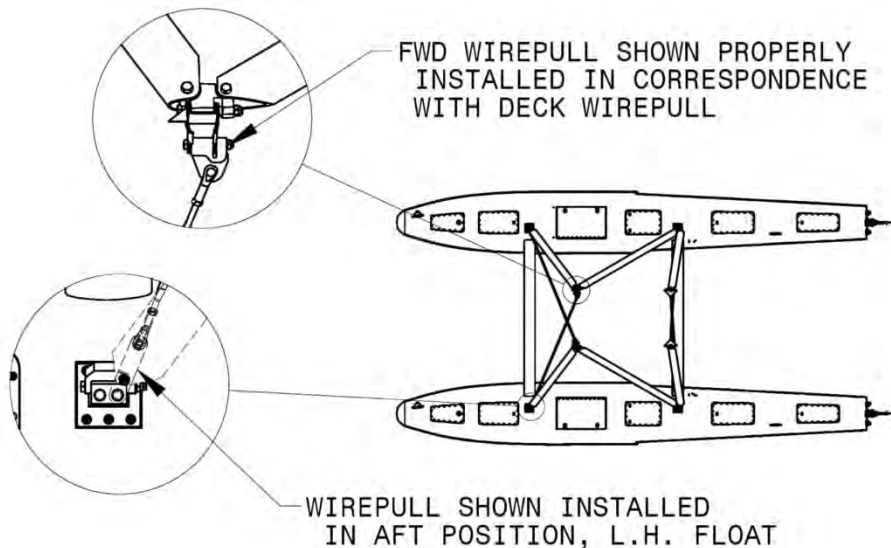


Figure 2.10.6.1

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	43 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

3. Install the aft Tie Rods according to the drawings.
4. Tighten all crosswires of the attachment gear until snug without sag.
5. Rig floats into alignment with the fuselage by letting out and taking up common crosswires equally (by number of turns).
6. Re-check all rigging cross-measurements.
7. Tighten each crosswire one additional full turn.
8. Inspect each crosswire terminal for the proper amount of thread engagement.
9. Install cotter pins or retaining rings (whichever is appropriate) and tighten jam nuts.
10. When all streamline bracing wires are fitted, and correct alignment and tension is obtained, fit a fiber separator between the rear wires to protect them from chaffing.
11. With struts installed, and streamline wires fitted and tensioned, tighten all nuts at strut ends. Be sure to torque the AN6-57A spreader bar through bolts to 18 ft/lbs
12. Lower the airplane on to the floor.

2.10.7. Connecting Water Rudder Control System (Use Drawing 22-15200)

1. Connect water rudder control cables according to the figures. Reference sections 2.3.1 and 2.4.1 for general instructions on operation and rigging.
2. With air rudder pedals in neutral position, line up water rudders with float keels and air rudder, and adjust and lock cable turnbuckles.

2.10.8. Connecting Water Rudder Retraction System (Use Drawing 22-15200)

Connect each of the retraction control cables using the options available in Detail F of installation drawing 22-15200. With water rudders retained in the fully down position. The retract handle should be in the down position. Ensure that there is sufficient tension in the cables to maximize the travel and keep the cables from sagging when the rudders are down.

2.10.9. Installing Steps (Use Drawing 22-15300)

Fit steps on struts per installation Drawing 22-15300, Sheet 2 and secure in position with bolts, washers and nuts. Assure that the plastic interface washers (Part # 35-32137)

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	44 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

are in place between the steps and the struts. Smear attachment bolts with rust preventive compound.

2.10.10. Information Placards

Cabin Placards

Aerocet P/N 35-70006, Water Rudder Placard is to be placed in full view of the pilot, 1"-3" from the Retract Handle, retracted position.

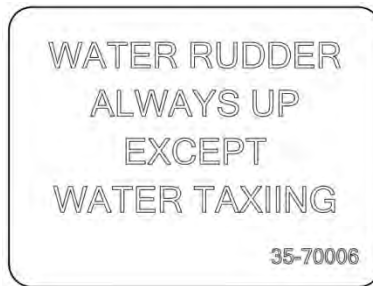


Figure 2.10.10.1

Float Placards

Aerocet P/N 22-15401 Placard, Float Locker Loading Data is to be located on the undersides of the locker doors, centered and 5"-7" below the outboard edge of the door panel.



Figure 2.10.10.2

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	45 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

Aerocet P/N 22-21201 [Float] Data Placard is to be located on the float transoms as shown below. (Note: These are installed at Aerocet, Inc.)

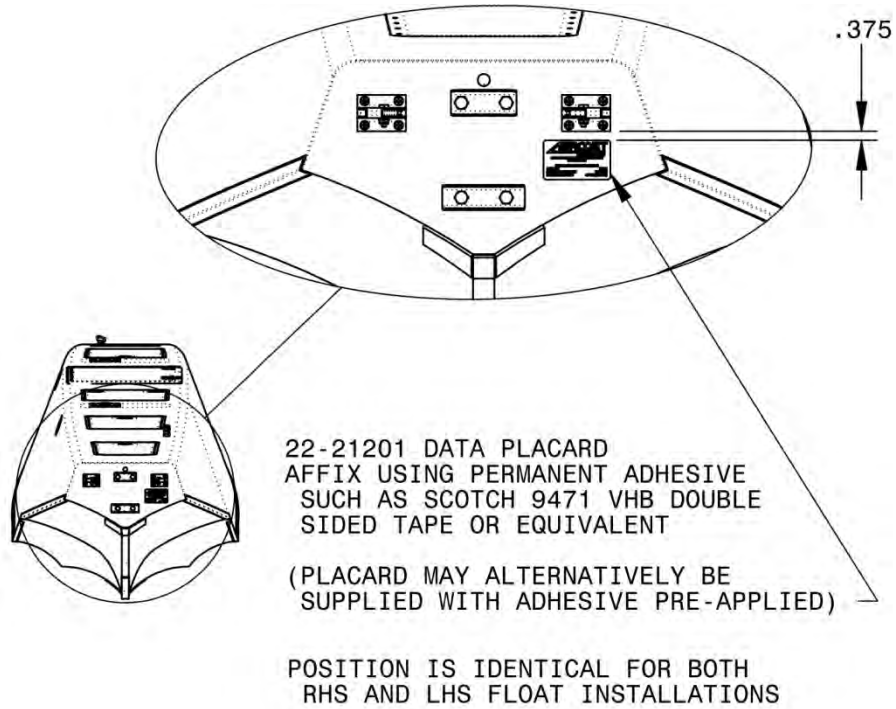


Figure 2.10.10.3



Figure 2.10.10.4

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	46 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

2.11. Troubleshooting

Problem	Possible Cause	Corrective Action
Water in floats	Missing plug	Install plug
	Condensation	Pump out float bays
	Improperly fastened access panel or locker door	Install panel, latch locker door
	Damaged or missing door seals	Inspect seals, replace as necessary
	Missing Access Panel fasteners	Replace as necessary
	Improperly sealed fasteners	Disassemble, clean, inspect and reinstall with sealant.
	Cracked cable sheathes	Replace as necessary
	Damaged float hull	Inspect float bays for signs of penetration
Excessive drift left or right during water taxi operations	Water Rudder rigging is mis-aligned	Align the float rudders by re-adjusting the steering cables and/or the balance cable.
	Debris caught on floats	Remove debris.
	Damage to one float	Inspect and repair damage.
	Damage to water rudder blade(s)	Locate and replace damaged pieces.
"Howling" noise from one or both floats after take-off	Locker door left open.	Fly the airplane. Land. Latch the doors.
Aircraft is unstable during water operations	Broken structural members	Inspect Struts, Tie Rods, etc. for breaks and for adjustment.
Rudder Pedal feels "stiff"	Mis-aligned steering cables	Correct the alignments of the exit holes through the floats to the aircraft mounted pulleys.
	Over-tightened turnbuckles	Adjust tension.
	Over-tightened internal float fittings	Loosen the fittings and re-slug them by hand.
Reduced water rudder steering	Broken cable	Replace as necessary.
	Debris caught in the tiller	Remove debris.
	Jammed Cable	Check all pulley assemblies for missing keepers and fouled cables.
	Broken rudder retract spring(s) - Rudders do not deploy fully.	Replace as necessary.
Water Rudders do not retract	Cable jammed	Check for fouled cables and debris, especially at tiller.

2.12. Conversion from Floats to Wheels

Procedures for conversion of the airplane from float to wheel landing gear are detailed in the following paragraphs.

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	47 of 103
REVISION DATE:	3/4/10			FILE NO.	A-10035
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	REVISION	03

2.12.1. Removing Float Gear and Fitting Wheel Gear.

1. Disconnect water rudder control cables from rear springs, remove float springs and Aerocet torque tube arm
2. Disconnect rudder retraction cable. Fairlead and clips may be left installed.
3. Re-install tailwheel with its appropriate hardware and springs.
4. Hoist airplane carefully, to take weight off of floats, and tie down the tail to balance loading of airplane during removal of floats.
5. Loosen and disconnect tie rod assemblies from the fuselage at the clevis pins.
6. Disconnect the aft struts at the floats. Take load off aft strut by adjusting hoist, and by rocking the rear of the fuselage.
7. Disconnect forward and center struts by removing the bolts attaching the forward fuselage attach fittings and hoist airplane clear of the floats.
8. Remove forward fuselage wirepulls.
9. Fit the main landing gear and landing gear shock system back onto the aircraft as removed.
10. Remove plugs from brake lines and reconnect to system.
11. Refill the brake master cylinders, and bleed the system. Refill after bleeding is completed.
12. Remove the retract handle and cable assembly and store with floats. The attach brackets and guide tube can remain in the aircraft when used on wheels.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	48 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

		AEROCET		
ISSUE DATE:	4/14/2009	Incorporated	PAGE	49 of 103
		TITLE:	ICA Maintenance Manual for	FILE NO.
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	A-10035
			REVISION	03

3. REPAIR MANUAL

3.1. Struts

3.1.1. Negligible Damage

Smooth dents in the skin surface of the float struts that are free from cracks and sharp corners may be classified as negligible damage, provided they do not exceed 1.0 inch diameter and 0.10 inch in depth. Multiple dents in one strut, provided they are at least 1.0 feet apart may be classified as negligible damage. Holes in the struts may be classified as negligible damage provided they do not exceed 0.25 inch diameter (for example, a mis-drilled hole for a step). Multiple holes in one strut may be classified as negligible damage, provided there are no more than two holes for every 4 inches of length.

3.1.2. Repairable Damage


With the exception of the work necessary to replace a badly damaged strut, no other repair must be attempted on a float strut.

3.1.3. Damage Repairable by Replacing Parts

Any damage to the struts that exceeds the negligible limits or causes any bending, twisting, or cracking of the struts will necessitate complete replacement.

3.2. Composite Float Hulls

Composite float repair, done correctly, will obtain the strength required to put the float back into service and cosmetically show little or no evidence of damage ever having taken place. The materials used for original construction and repair are conventional to the industry. Any damage on the bottom of the float should be repaired immediately because of the tremendous water pressures encountered. Contact Aerocet, Inc. prior to beginning a repair to obtain correct materials, including resin (resins have shelf lives), catalyst, cloth, gel-coat, and resin thickeners. Epoxy underwater patch kits may be used in an emergency if the damage is relatively small, but the repair must be replaced with correct materials for equal strength status. Damage larger than 4.0 inches in size requires

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	50 of 103
			FILE NO.	A-10035
REVISION DATE:	3/4/10		REVISION	03
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	

consulting Aerocet, Inc. for proper laminate orientation and assuring correct number of laminates in the damaged area.

3.3. Repair Types and Procedures

All repaired areas on the exterior must be surface coated (gel-coated) with a minimum of 10 mil thickness to assure UV protection. Types of repairs are described below:

1. Resin-starved Areas, Exposed Fibers, or Small Impact Damaged Soft Spots (0.5 Inches Diameter or less)
 - a. Sand surface within defective area to remove gloss.
 - b. Use a brush, squeegee, or syringe to work resin into defective area. Use the same resin as the original laminate.
2. Small Bruises, Punctures Less than 0.25 Inches Diameter, or Surface Voids
 - a. Sand surface surrounding defect to remove gloss.
 - b. Cut patches to fit correction area using the same fabric as the original part. Extending a minimum of 0.5 inch past the damaged area. All patch corners must be rounded.
 - c. Apply a light brush coat of resin so that it appears similar to the original coat.
 - d. Place one or more plies on detail covering correction area using impregnation of fabric as described below.
3. Cuts, Fractures, or Punctures 0.25 Inch Diameter or Larger
 - a. Cut back enough material to ascertain the extent of the damage. Trim back plies to a smooth oval; generally 0.5 inch per ply.
 - b. If the area is large enough, supply backing to hold the shape of the original contour. Put a parting agent on this backing to assure its release.
 - c. Replace the fabric on a ply-for-ply basis overlapping 0.5 inch minimum on each succeeding ply using impregnation of fabric as described in section 3.4. Any smooth areas need to be sanded with 80-grit sandpaper to assure proper bonding.

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	51 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03


- d. If damage has occurred where there is sandwich construction involving the core, work each layer separately. Fix either the outside or inside skins. Then cut to fit like core material to replace the damaged core. Bond the core onto the repaired skin using the proper resin and thickener. A mixture of Hydrex resin and Aerosil 202 thickener should be applied to the bonding surface of the core using a squeegee (using Torin Corebond alternative is acceptable). A film of approximately 0.015 inches should be used. Apply pressure to the bond to assure proper adhesion to the skin and to eliminate air voids. Apply this pressure to small areas of core bonding using weights such as lead shot bags with a release film that eliminates sticking to any excess bonding material. Larger areas require the use of a vacuum bag for core bonding. Consult Aerocet, Inc. for this procedure. Fill any seam voids with a resin/glass bubble mixture. Apply the final laminates according to the ply schedule to finish the repair.

3.4. Impregnation of Fabric

To impregnate fabric with resin, cut the fabric in a suitable shape, lay it on a flat surface, and apply the resin mixture evenly with a squeegee. Alternatively, you may impregnate the fabric with resin with the fabric on the defective area providing voids and starved areas are not produced. Impregnate the fabric in place by applying a thin coat of resin to the area to be laminated, applying the resin directly to the fabric using a squeegee or brush, and then laying the fabric down, rolling it into the resin. Any air in the laminate should be removed using a squeegee or brush. See section 3.5 (below) regarding resin mixing.

3.5. Resin Mixing

Gel times or pot life is the time it takes the resin to set up in the container after proper and thorough mixing with accelerators and catalysts. Gel times can be adjusted significantly by varying the amounts of these materials. Gel times will also vary

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	52 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

significantly with the batch size if left in a bucket, with a very thick laminate or with temperature.

TYPICAL GEL TIMES USING HYDREX 33-253 100gm castings only; laminate times are typically double that of the gel times.

33%MEKP %Catalyst	Resin Qty	50°F	60°F	70°F	80°F
0.75%	100gm	55 min	38 min	28 min	23 min
1.00%	100gm	40 min	27 min	20 min	15 min
1.50%	100gm	30 min	21 min	14 min	11 min
2.00%	100gm	23 min	17 min	12 min	8 min

Note

Under no circumstances should more than 2.0 percent catalyst mixture be used. Conversely, if you use less than the recommended minimum amount of catalyst (0.75 percent) the resin may never completely cure, resulting in a reduction of strength.

CAUTION

Be extremely careful with the MEKP catalyst. Contact with eyes must be prevented. Blindness may result. Flush eyes immediately if MEKP catalyst makes contact with eyes, and contact a physician immediately. Never mix MEKP catalyst into the resin without eye protection.

3.6. Preparation of Fiberglass Materials

1. Fiberglass shall be trimmed on a clean table to prevent contamination.
2. When laps are necessary, lap widths of at least 0.5 inch shall be maintained for fiberglass pieces in any given ply and no more than one of the component plies shall be lapped at any one place. The number of laps shall be kept to a minimum.

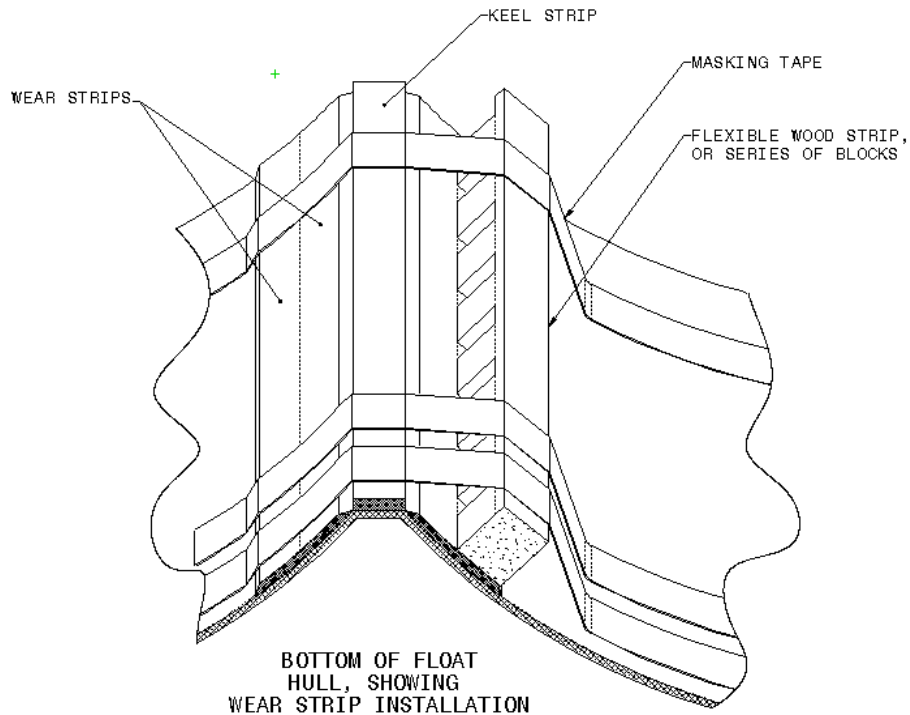
		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	53 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

3.7. Surface Coat Application (Gel Coat)

1. All surface coats must be applied to a thickness of 10 to 15 mil. Use a mil gauge and check often. Waterline down is very critical to prevent blistering from water absorption.
2. All surface coats must be catalyzed with 2 percent MEKP.
3. Thinning of surface coats can only be done to manufacturer's recommendations.

3.8. Keel and Wear Strip Attachment

1. Prepare keel and (optional) wear strip area by lightly sanding float surface with 80-grit sandpaper. It is desirable to mask out the area immediately surrounding the strips in order to avoid damage to the gel coat outside of the bonding areas.



2. Bond aluminum keel strips using a marine grade urethane adhesive (e.g. Sikaflex 292) and (optional) wear strips (part #'s 22-21074R/L and 22-21075R/L using a mixture of Hydrex resin and Aerosil 202 thickener. A thick epoxy resin (clear type, not yellow) may be used to bond the plastic wear strips as well.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	54 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

3. Optional Wear Strips only: Put a thick film mix of resin and thickener on the wear strip. Affix strips as shown in diagram below. Do not allow the resin to fully harden before trimming excess. Time to harden varies with temperature and ratios mixed.
4. Keel Strips only: Bond the keel strips in place according to drawing 22-21070. Line up the keel strip holes with the existing holes on the float keel. A primer is recommended for better adhesion to the aluminum (see mfg. recommendations). Hold the keel strip in place using an abundance of masking tape. Be sure to use a generous amount of bonding material around the fasteners and install them to help clamp the keel strip into place during bonding. Remove tape after the urethane cures and clean up excess material. Aerocet recommends carefully scoring the squeeze-out along the edges of the keel strips, then peeling it away in strips.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	55 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

4. AIRWORTHINESS LIMITATIONS

4.1.1. GENERAL

The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

4.1.2. DESCRIPTION

A. TIME LIMITED ITEMS.

None.


B. REQUIRED INSPECTIONS INTERVAL.

None.

C. Scheduled Maintenance: for Aerocet recommended Inspection or Replacement are located in Section 2.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	56 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank, except for this line.

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	57 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	

5. ILLUSTRATED PARTS CATALOGUE

These illustrations are an addendum to the Piper Illustrated Parts Catalogue (IPC) which contains no figures for float installation.

5.1. List of Figures

Figure 5.1.1. Top Level Assemblies.....	58
Figure 5.1.2. Aerocet 2200 Float Installation.....	59
Figure 5.1.3. Parts Listings for Float Installation	61
Figure 5.1.5. Parts Listings for Spreader Installation	63
Figure 5.1.6. Parts Listings for Strut and Tie Rod Installation	64
Figure 5.1.7. Parts Listings for Passenger Boarding Step Installation	70
Figure 5.1.8. Water Rudder Rigging and Pulley Installation	71
Figure 5.8.9. Torque Tube Arm Installation, 22-51212	76
Figure 5.1.10. Parts Listings for Swivel Pulley Assemblies, 35-34039.....	77
Figure 5.1.11. Parts Listings for Swivel Pulley Bracket Assembly, Float Mounted, 56-15240	78
Figure 5.1.12. Parts Listings for Flying Wires (Tie Rod Assembly) Installation, 22-34035	79
Figure 5.1.13. Parts Listings for Flying Wires (Tie Rod Assembly) Installation, 22-34036	80
Figure 5.1.14. 2200 Twin Seaplane Floats.....	81
Figure 5.1.15, [internal rigging], 22-20016.....	82
Figure 5.1.16, Float Hull Assembly, 22-21000	83
Figure 5.1.17. Chine Rub Strip Installation, 22-21007	84
Figure 5.1.18, Locker Door Installation, 22-21012.....	85
Figure 5.1.19, Bumper Installation, 22-21040	86
Figure 5.1.20, Deck Cleat Installation, 22-21060.....	87
Figure 5.1.21, Keel and Wear Strip Installation, 22-21070	88
Figure 5.1.22, Rudder Assembly, 22-24000	89
Figure 5.1.23, Rudder Bracket Installation, 22-24100	91
Figure 5.1.24, Pulley Bracket Assembly, 35-34039	92
Figure 5.1.25, Locker Door Assembly, 35-41045.....	93
Appendix A, Catalog Pages for PA-18 “Wide Body” Aircraft	95



Incorporated

ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	58 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03

INSTALLATION ASSEMBLIES FOR SUPER CUB STYLE AIRCRAFT ON AEROCET MODEL 2200 FLOATS

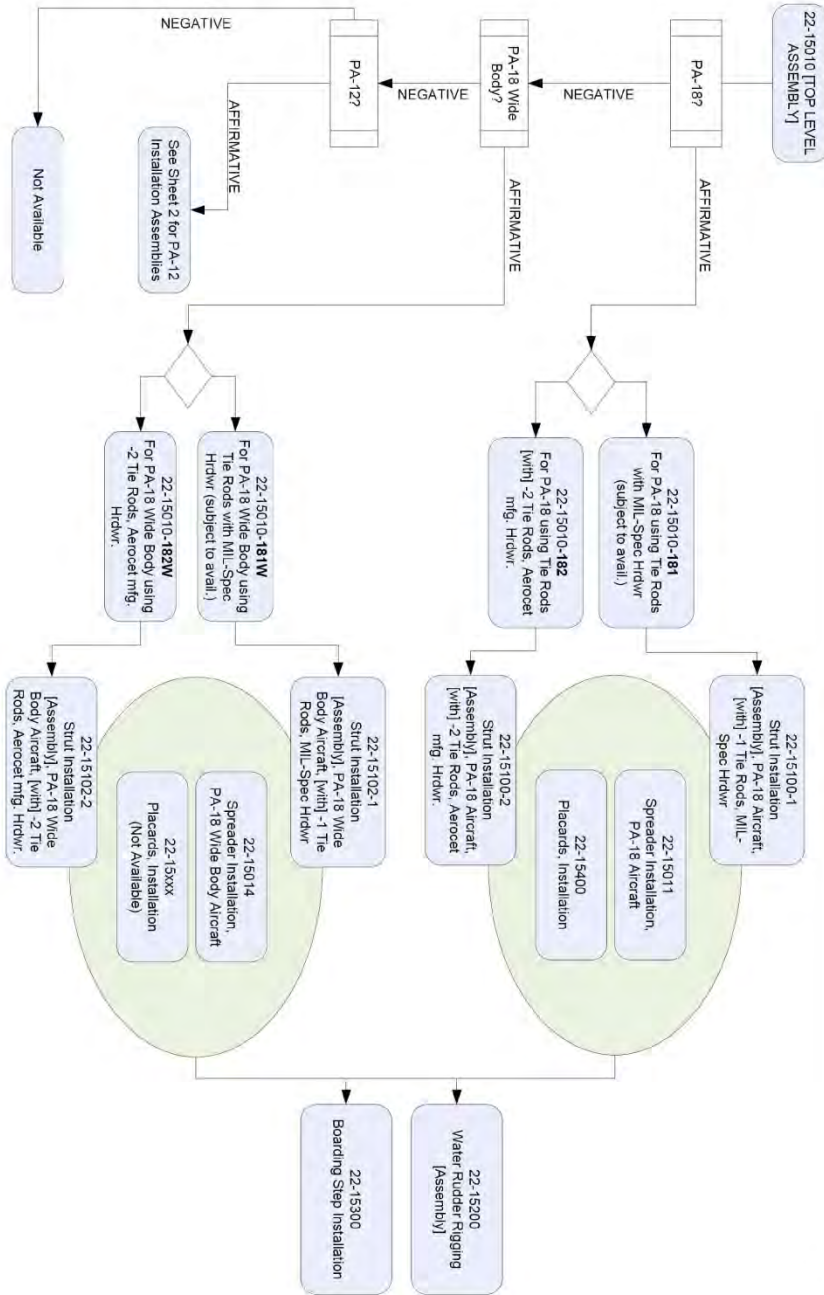



Figure 5.1.1. Top Level Assemblies

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	59 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	

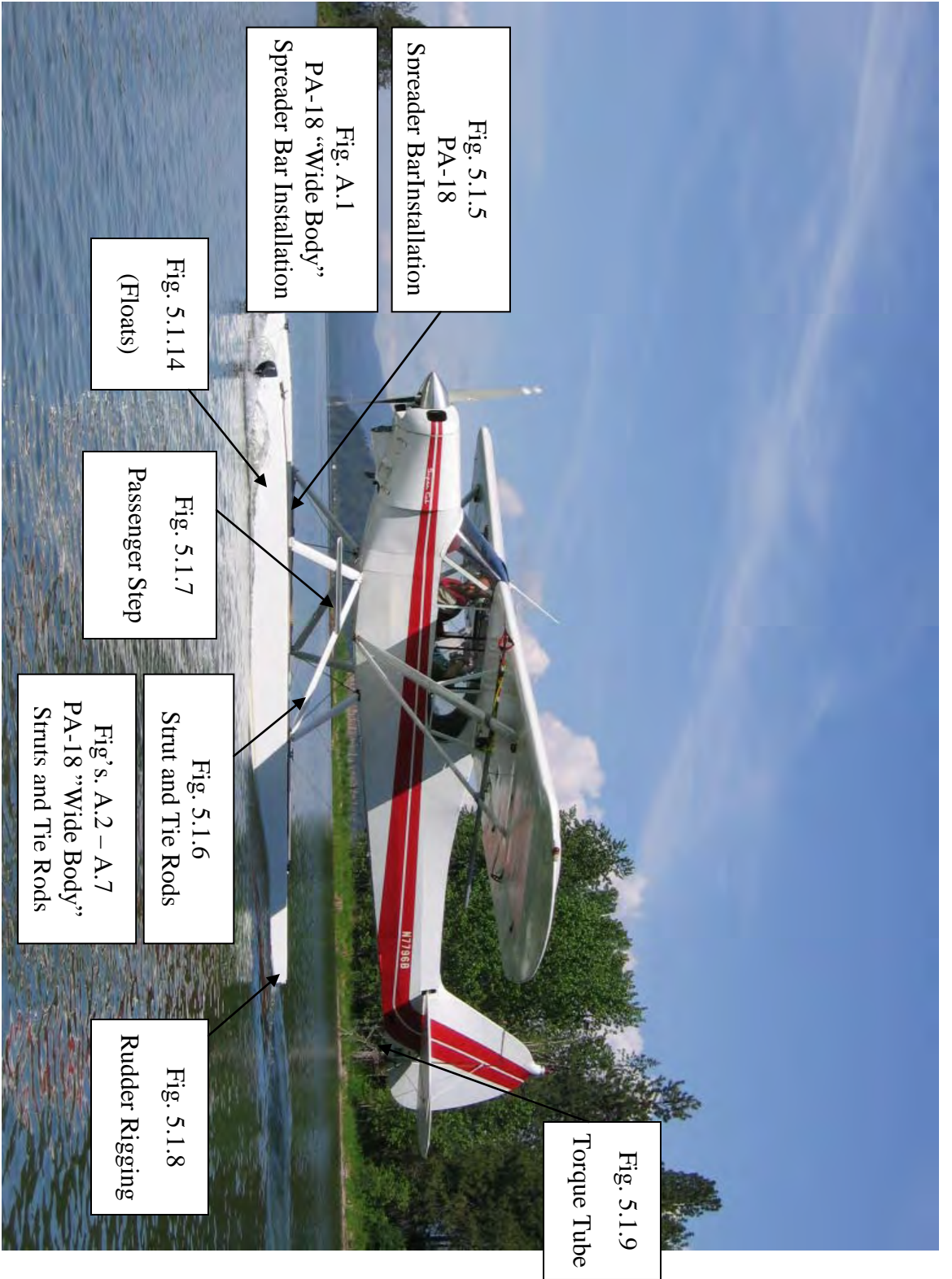
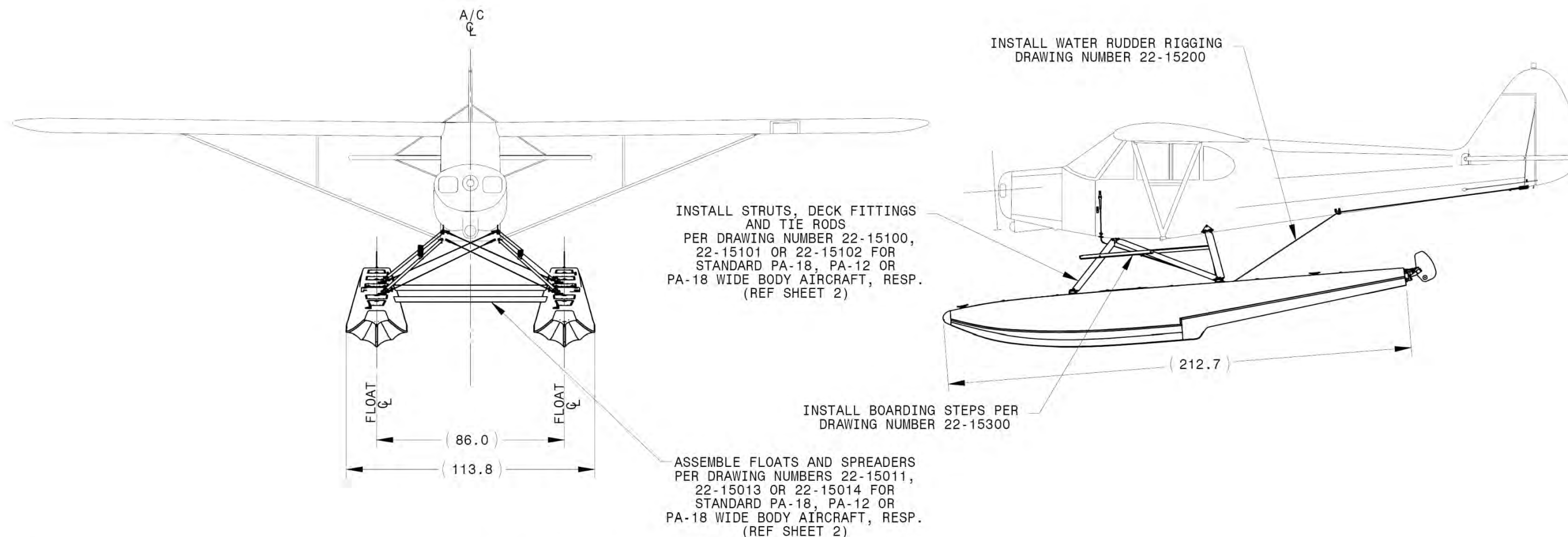


Figure 5.1.2. Aerocet 2200 Float

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009	TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE	60 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
			REVISION	03

This page intentionally left blank.

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	61 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
	3/4/10		FILE NO.	A-10035
			REVISION	03



NOTES:

- 1) PA-18 AIRCRAFT THAT ARE MODIFIED BY STC FOR A 4" WIDER CABIN AREA ARE ACCOMODATED FOR AEROCET MODEL 2200 INSTALLATION WITH LONGER TIE RODS AND INCREASED ANGLES ON THE WIREPULLS.

USE THE PARTS LIST ON SHEET 2 OF THIS DRAWING TO DETERMINE THE APPROPRIATE ASSEMBLY PACKAGE FOR THE AIRCRAFT.

- 2) PART NUMBERS CONSIST OF THE BASE PART NUMBER (SUCH AS 22-21000) AND, WHERE APPLICABLE, A DASH NUMBER THAT DEPICTS A SIDE (SUCH AS -L FOR LEFT HAND SIDE), OR OTHER MINOR VARIATIONS. DRAWINGS CORRESPONDING TO THE BASE PART NUMBER DEFINE THE ALLOWABLE VARIATION(S).

NOTES: (CONT'D)

- 2) (CONT'D)
FOR STANDARD WIDTH PA-18 AIRCRAFT, USE EITHER 22-15010-181 OR -182.

FOR "WIDE BODY" PA-18 USE 22-15010-181W OR -182W.

FOR PA-12 AIRCRAFT USE 22-15010-121 OR 122.

DASH NUMBERS -XX1 AND -XX2 ARE INTERCHANGEABLE. FOR EXAMPLE -181 USES -1 TIE RODS AND -182 USES -2 TIE RODS.

-1 TIE RODS USE MS STANDARD PINS AND COTTERS, WHILE -2 TIE RODS USE AEROCET PINS AND MS STYLE RETAINING RINGS.

Figure 5.1.3. Parts Listings for Float Installation, (page 1 of 2)

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	62 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

EXAMPLE PART NUMBER:

22-15010-181W

BASE PART NUMBER

AIRCRAFT DESIGNATION:

"18" FOR PA-18

"12" FOR PA-12

"W" DESIGNATES WIDE BODY AIRCRAFT
LEAVE BLANK FOR STANDARD WIDTH

TIE ROD DASH NUMBER:

"1" FOR -1 TIE RODS WITH MS PINS

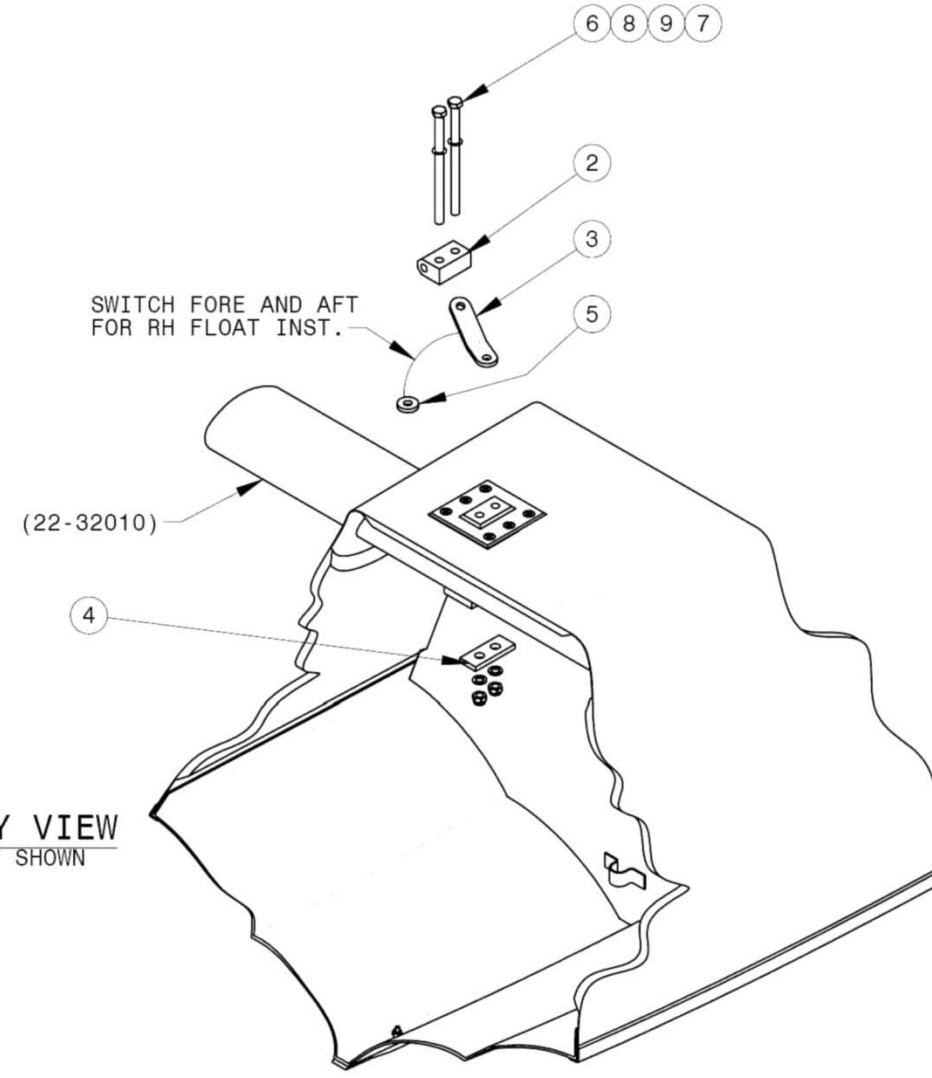
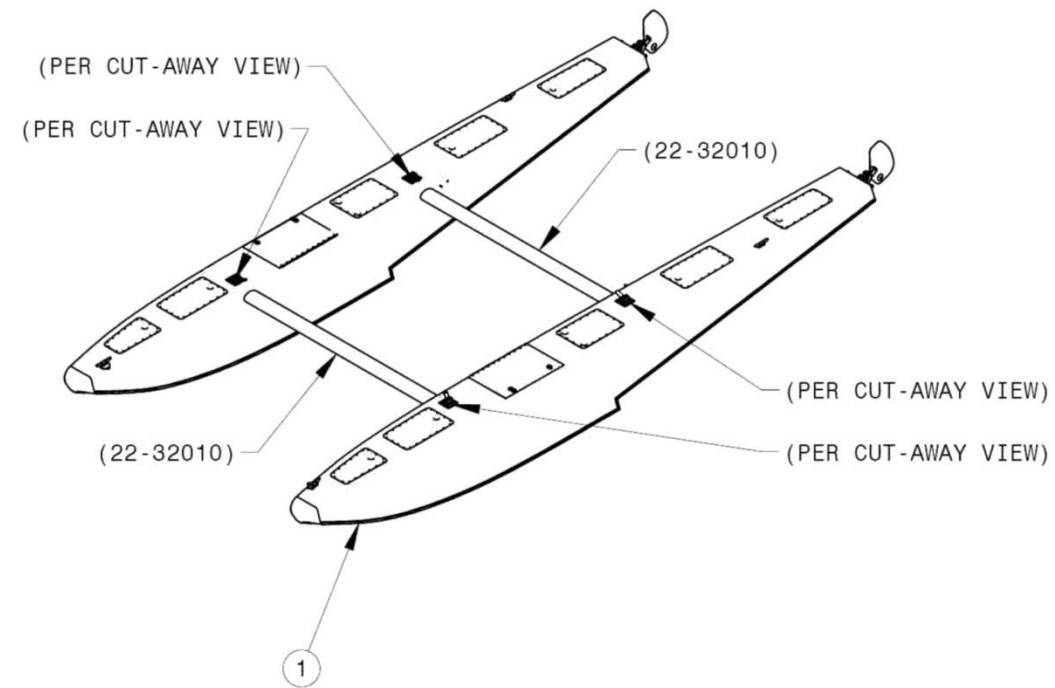
"2" FOR -2 TIE RODS WITH AEROCET

PINS AND MS STYLE RETAINING RINGS

PARTS LIST FOR AEROCET MODEL 2200 FLOAT INSTALLATIONS ON SUPER CUB AIRCRAFT
AEROCET TOP LEVEL ASSEMBLY 22-15010
WITH DASH NUMBERS AS SHOWN FOR AIRCRAFT AND INSTALLATION OPTIONS


ITEM NO.	PA-18 22-15010-181 QTY	PA-18 22-15010-182 QTY	PA-18 WIDE BODY 22-15010-181W QTY	PA-18 WIDE BODY 22-15010-182W QTY	PA-12 22-15010-121 QTY	PA-12 22-15010-122 QTY	PART NUMBER	DESCRIPTION
1	1	1	-	-	-	-	22-15011	SPREADER INSTALLATION, PA-18 AIRCRAFT
2	-	-	1	1	-	-	22-15014	SPREADER INSTALLATION, PA-18 WIDE BODY AIRCRAFT
3	1	-	-	-	-	-	22-15100-1	STRUT INSTALLATION, PA-18 AIRCRAFT, -1 TIE RODS
4	-	1	-	-	-	-	22-15100-2	STRUT INSTALLATION, PA-18 AIRCRAFT, -2 TIE RODS
5	-	-	1	-	-	-	22-15102-1	STRUT INSTALLATION, PA-18 WIDE BODY AIRCRAFT, -1 TIE RODS
6	-	-	-	1	-	-	22-15102-2	STRUT INSTALLATION, PA-18 WIDE BODY AIRCRAFT, -2 TIE RODS
7	1	1	1	1	1	1	22-15200	WATER RUDDER RIGGING
8	1	1	1	1	1	1	22-15300	BOARDING STEP INSTALLATION
9	1	1	-	-	-	-	22-15400	PLACARD, FLOAT LOCKER LOADING DATA, INSTALLATION

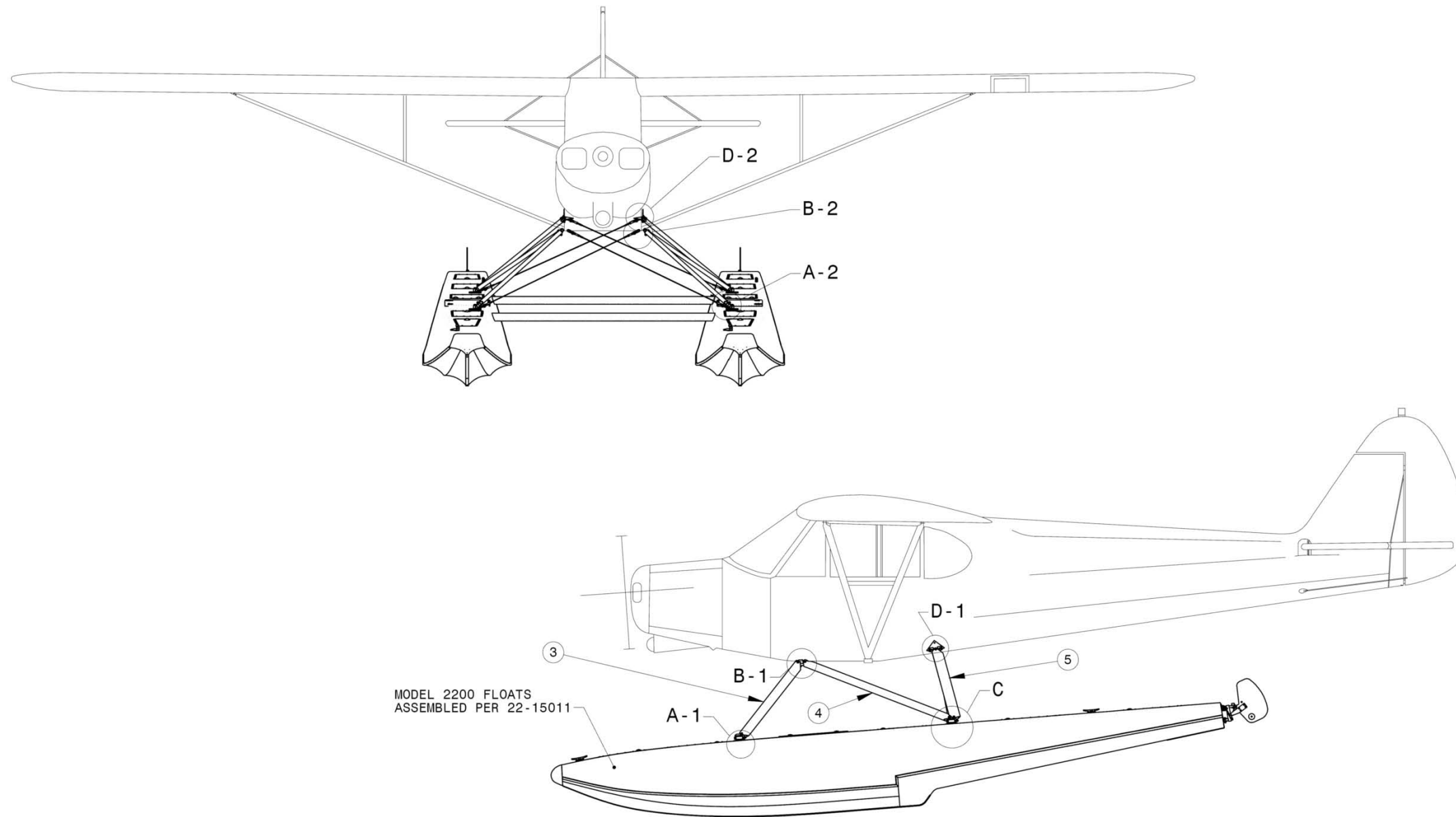
Figure 5.1.3. (cont'd) Parts Listings for Float Installation, (page 2 of 2)



PARTS LIST FOR 22-15011 SPREADER INSTALLATION, PA-18 AIRCRAFT			
ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	22-20010-2	TSO ASSEMBLY, AEROCET MODEL 2200 FLOATS
2	4	22-32105	DECK BLOCK, 2200
3	4	22-32111	WIREPULL, 20 DEGREE
4	4	22-32115	CLAMP BLOCK
5	4	22-32120	SPACER
6	8	AN6-57A	BOLT - MACHINE, AIRCRAFT
7	8	MS21044N6	NUT, SELF-LOCKING, REGULAR HEIGHT
8	8	NAS1149D0616K	WASHER, FLAT
9	8	NAS1149D0663K	WASHER, FLAT

Figure 5.1.5. Parts Listings for 22-15011 Spreader Installation

ISSUE DATE: 4/14/2009		 Incorporated	PAGE	64 of 103
REVISION DATE: 3/4/10			TITLE:	FILE NO.
		SUBTITLE:	REVISION	03
		ICA Maintenance Manual for 2200 Floats on PA-18 Piper, Super Cub model		



22-15100 STRUT AND TIE ROD INSTALLATION FOR PA-18 AIRCRAFT

DETAIL VIEWS ARE SHOWN ON FOLLOWING SHEETS

Figure 5.1.6. Parts Listings for Strut and Tie Rod Installation, (page 1 of 6)

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	65 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

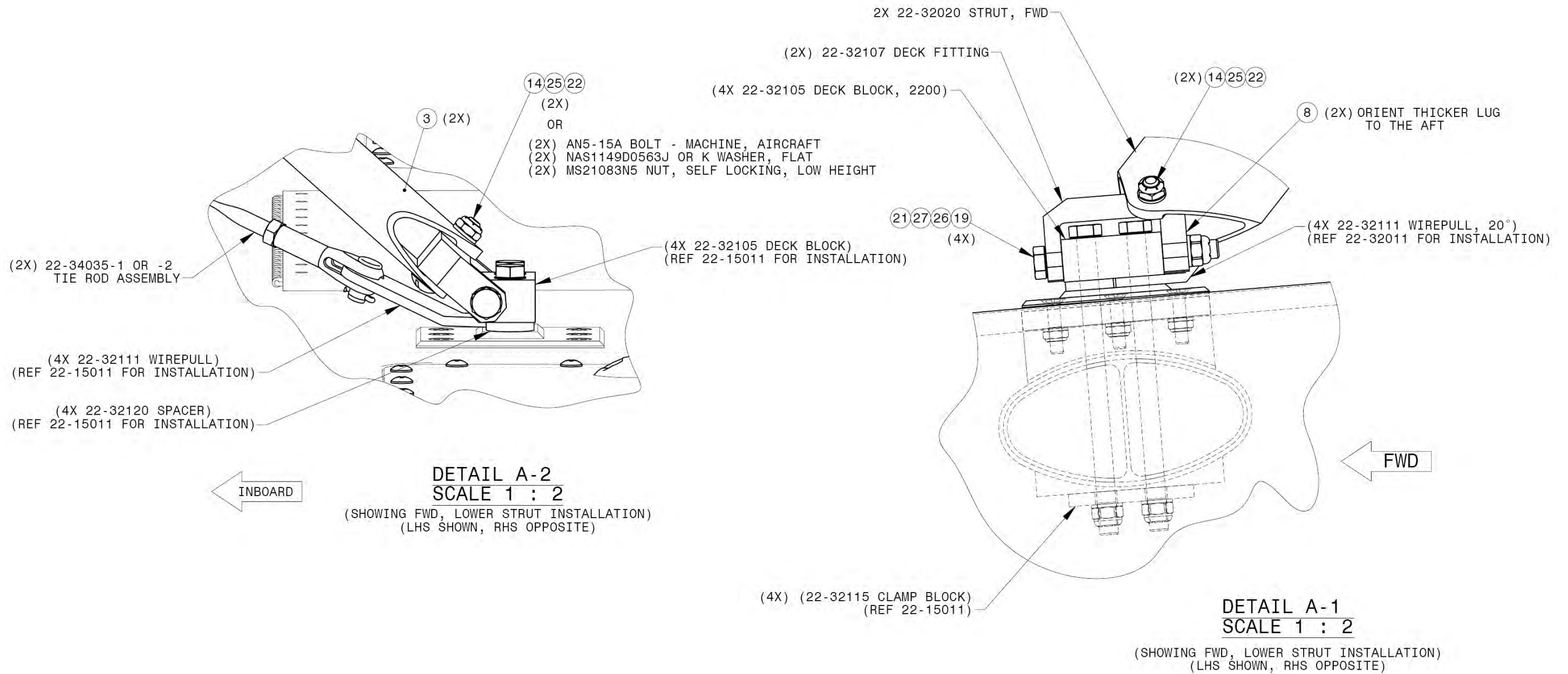


Figure 5.1.6 (Cont'd). Parts Listings for Strut and Tie Rod Installation, (page 2 of 6)

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	66 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

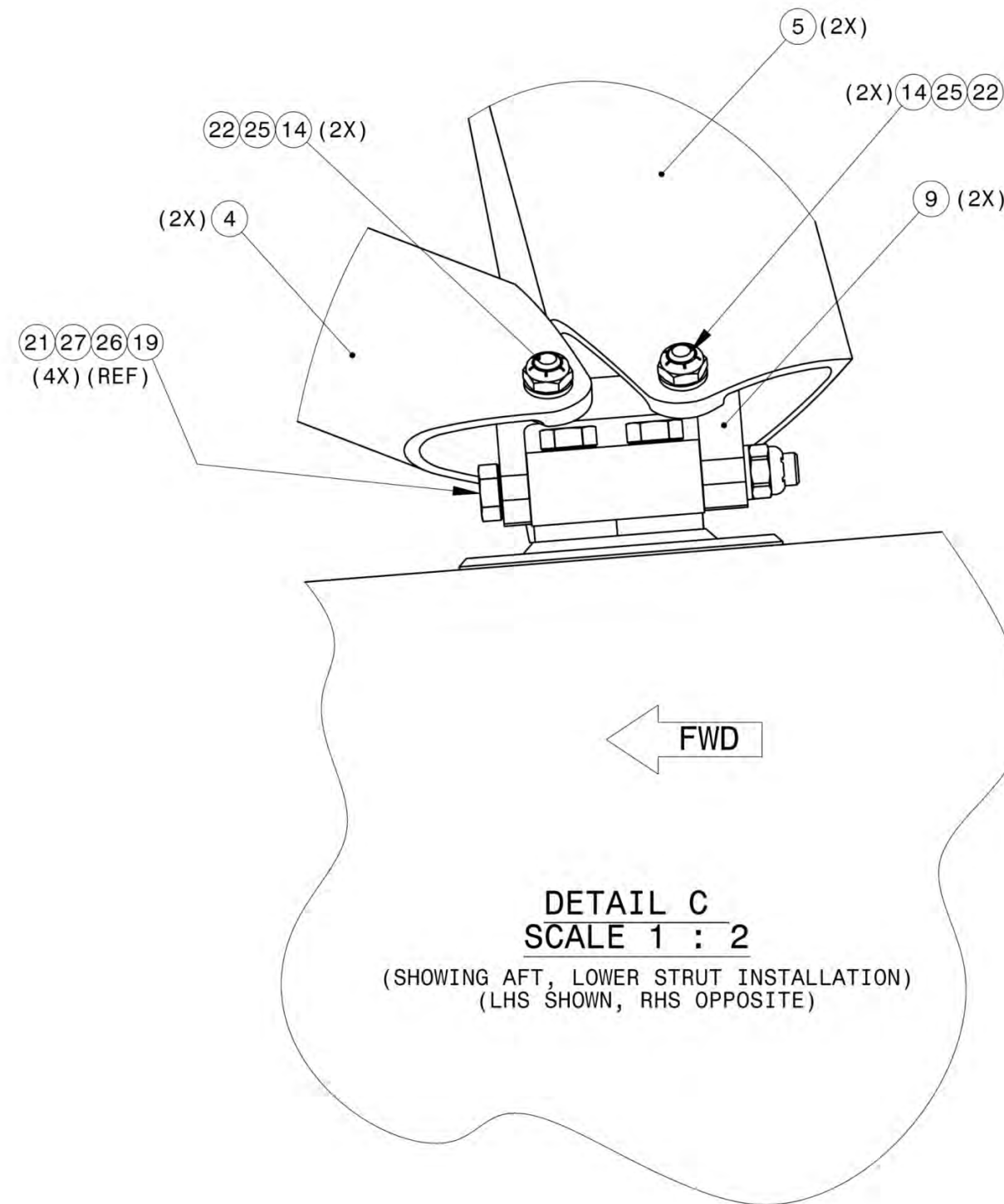


Figure 5.1.6 (Cont'd). Parts Listings for Strut and Tie Rod Installation, (page 3 of 6)

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	67 of 103
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
REVISION DATE:	3/4/10			REVISION	03

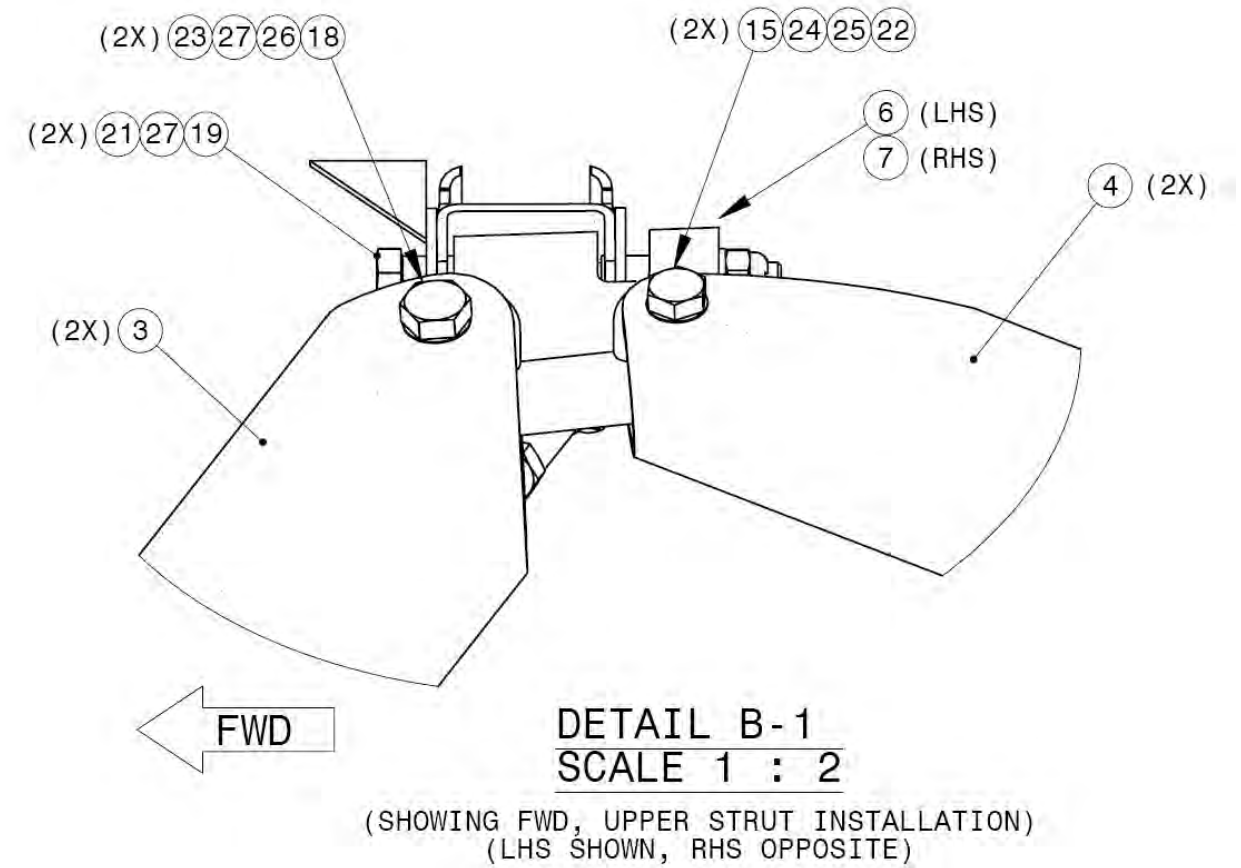
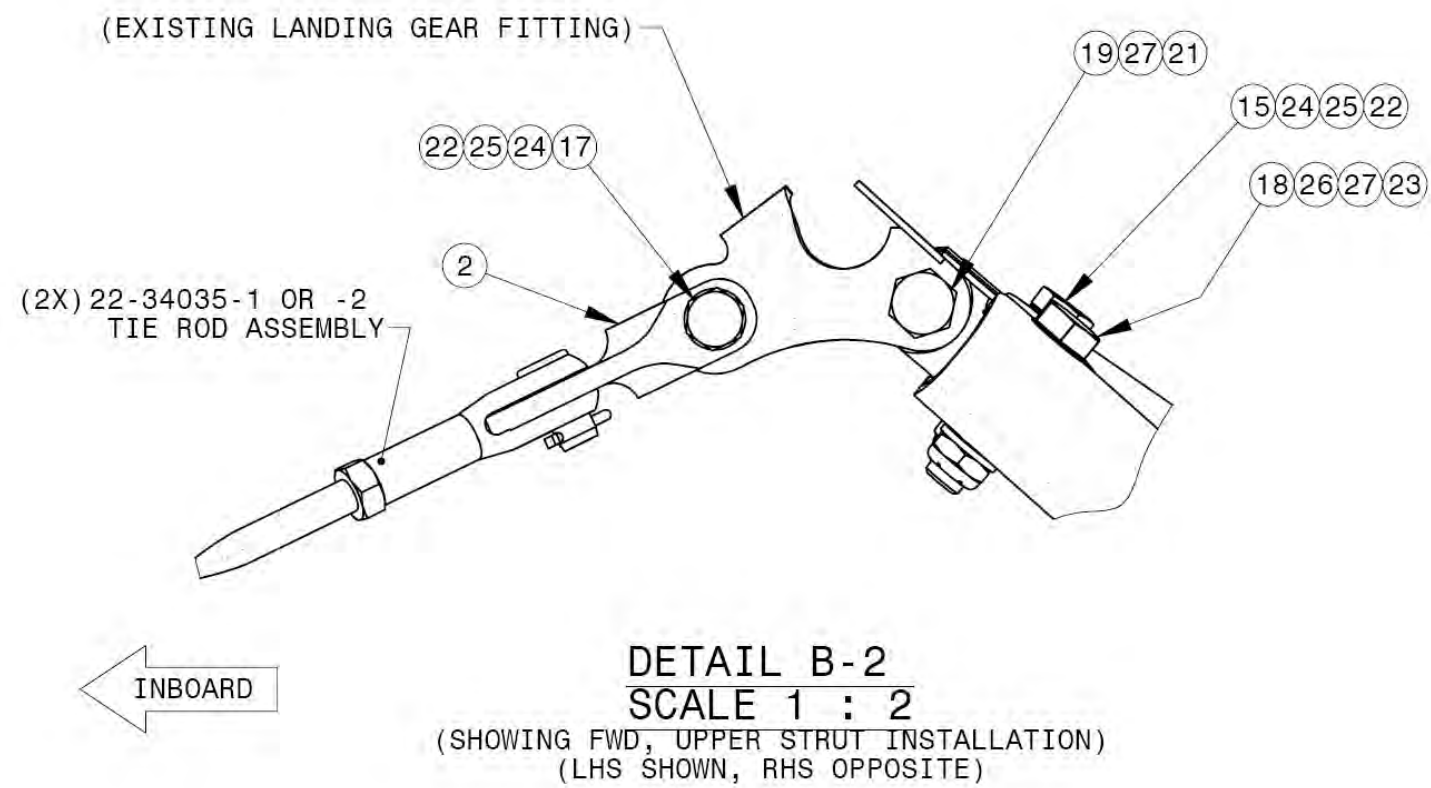



Figure 5.1.6 (Cont'd). Parts Listings for Strut and Tie Rod Installation, (page 4 of 6)

 Incorporated		PAGE	68 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03

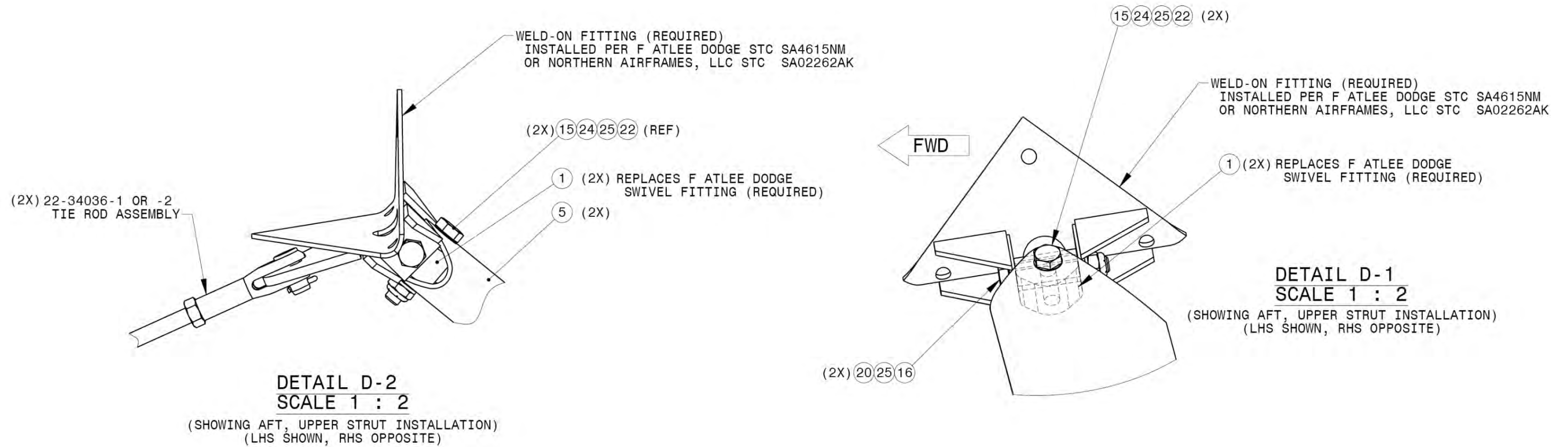
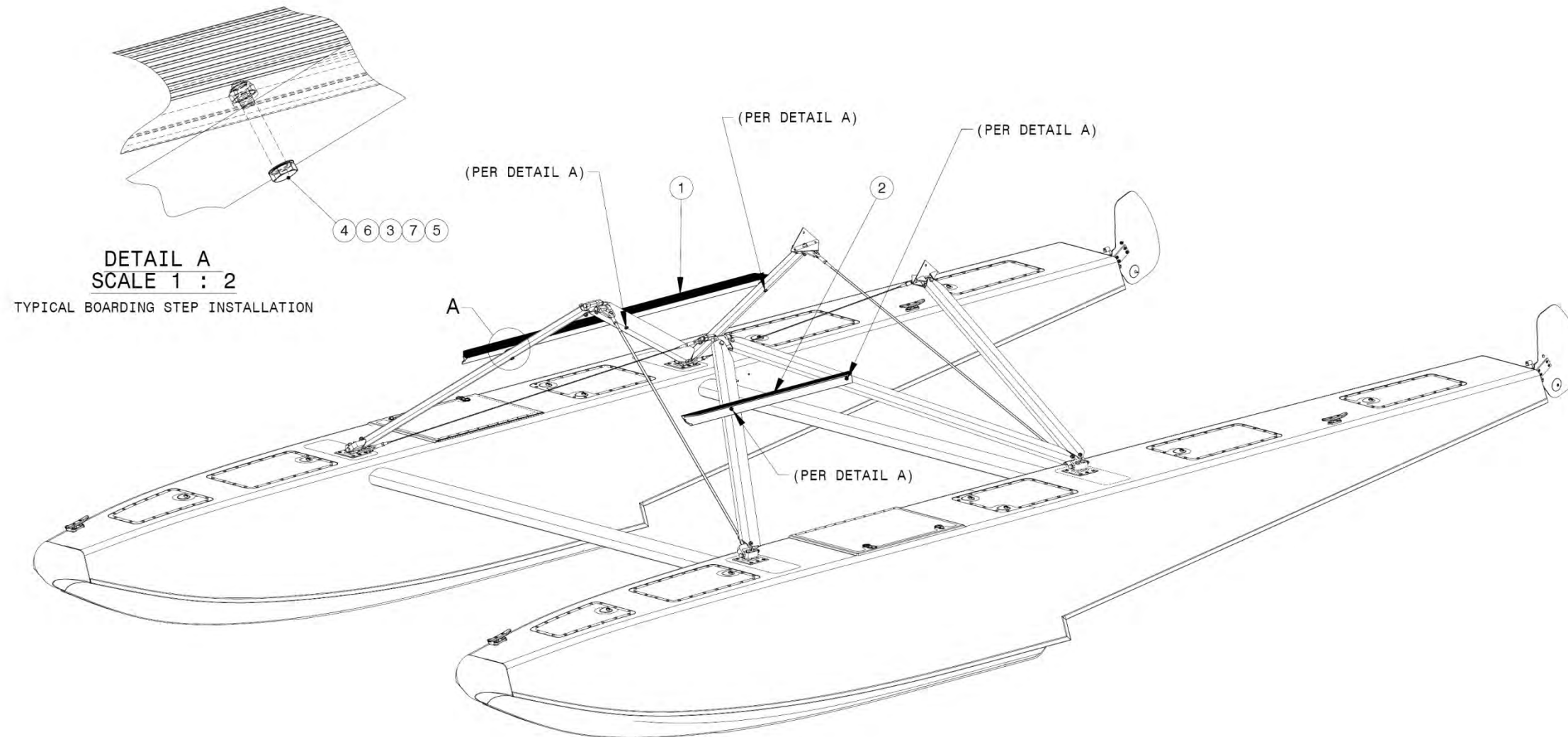


Figure 5.1.6 (Cont'd). Parts Listings for Strut and Tie Rod Installation, (page 5 of 6)

PARTS LIST FOR 22-15100 STRUT AND TIE ROD INSTALLATION ON PA-18 AIRCRAFT					
ITEM NO.	22-15100-1 QTY	22-15100-2 QTY	TYPE	PART NUMBER	DESCRIPTION
1	2	2	PART	22-15132	STRUT ATTACH FITTING, AFT
2	2	2	PART	22-15133	FWD WIREPULL
3	2	2	PART	22-32020	STRUT, FWD
4	2	2	PART	22-32021	STRUT, DIAGONAL
5	2	2	PART	22-32022	STRUT, AFT
6	1	1	PART	22-32030-1	FUSELAGE FITTING, FWD, LHS
7	1	1	PART	22-32030-2	FUSELAGE FITTING, FWD, RHS
8	2	2	PART	22-32107	DECK FITTING
9	2	2	PART	22-32108	DECK FITTING
10	2	-	ASSY	22-34035-1	TIE ROD ASSEMBLY
11	-	2	ASSY	22-34035-2	TIE ROD ASSEMBLY
12	2	-	ASSY	22-34036-1	TIE ROD ASSEMBLY
13	-	2	ASSY	22-34036-2	TIE ROD ASSEMBLY
14	6	6	HRDWR	AN25-25A	BOLT, CLEVIS
15	4	4	HRDWR	AN5-15A	BOLT - MACHINE, AIRCRAFT
16	2	2	HRDWR	AN5-17A	BOLT - MACHINE, AIRCRAFT
17	2	2	HRDWR	AN5-24A	BOLT - MACHINE, AIRCRAFT
18	2	2	HRDWR	AN6-15A	BOLT - MACHINE, AIRCRAFT
19	6	6	HRDWR	AN6-33A	BOLT - MACHINE, AIRCRAFT
20	2	2	HRDWR	MS21044N5	NUT, SELF-LOCKING, REGULAR HEIGHT
21	6	6	HRDWR	MS21044N6	NUT, SELF-LOCKING, REGULAR HEIGHT
22	12	12	HRDWR	MS21083N5	NUT, SELF-LOCKING, LOW HEIGHT
23	2	2	HRDWR	MS21083N6	NUT, SELF LOCKING, LOW HEIGHT
24	6	6	HRDWR	NAS1149D0516K	WASHER, FLAT
25	14	14	HRDWR	NAS1149D0563K	WASHER, FLAT
26	6	6	HRDWR	NAS1149D0616K	WASHER, FLAT
27	8	8	HRDWR	NAS1149D0663K	WASHER, FLAT

Figure 5.1.6 (Cont'd). Parts Listings for Strut and Tie Rod Installation, (page 6 of 6)

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	70 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03



PARTS LIST FOR 22-15300 BOARDING STEP INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	22-15301	BOARDING STEP, PILOT SIDE
2	1	PART	22-15302	BOARDING STEP, LEFT SIDE
3	5	PART	35-32137	STEP WASHER
4	5	HRDWR	AN4-16A	BOLT - MACHINE, AIRCRAFT
5	5	HRDWR	MS21083N4	NUT, SELF-LOCKING, LOW HEIGHT
6	4	HRDWR	NAS1149D0416K	WASHER, FLAT
7	6	HRDWR	NAS1149D0463K	WASHER, FLAT

Figure 5.1.7. Parts Listings for Passenger Boarding Step Installation

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	71 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

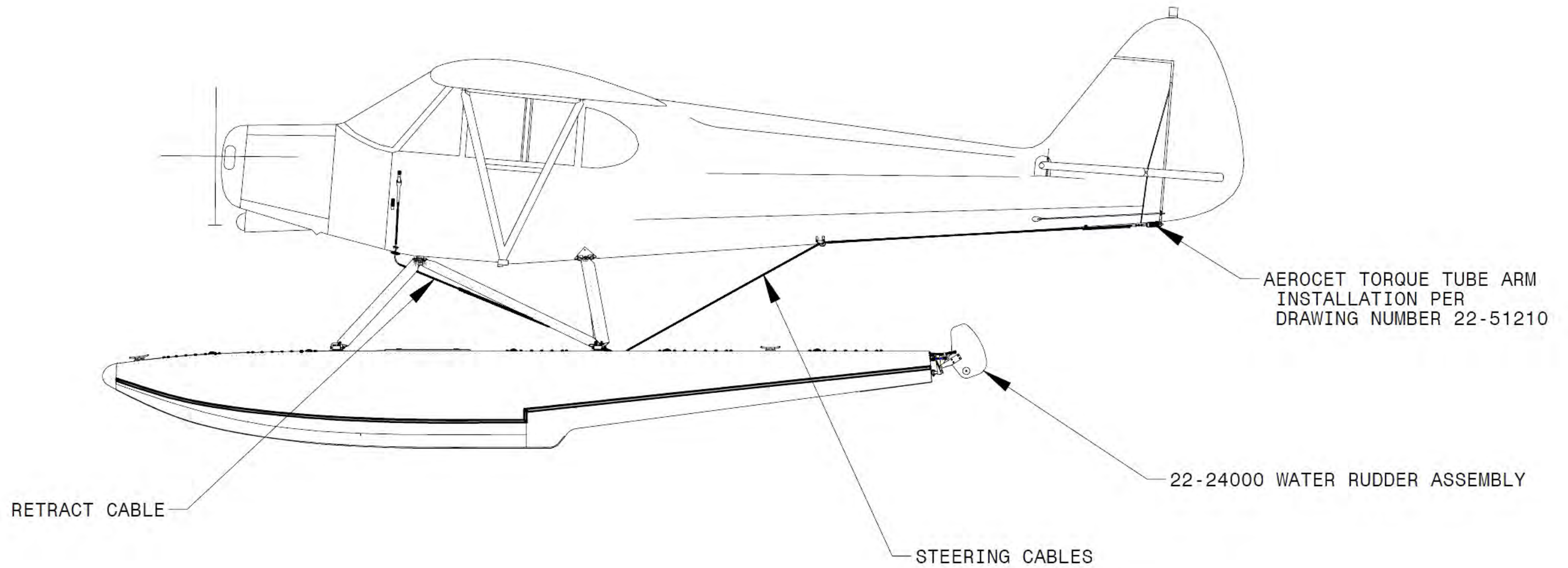



Figure 5.1.8. Water Rudder Rigging and Pulley Installation (Page 1 of 5)

		PAGE	72 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03

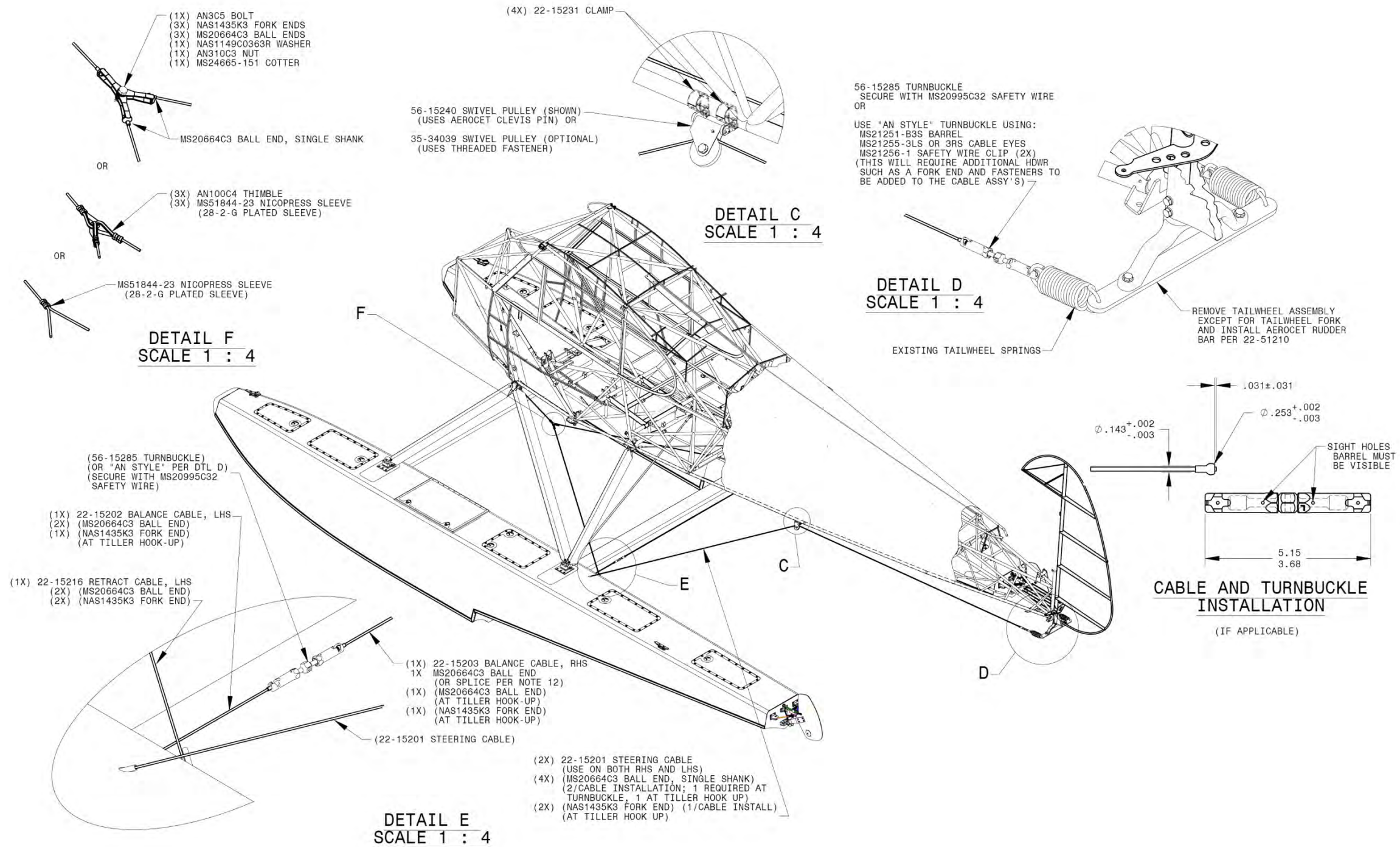



Figure 5.1.8 (Cont'd.). Water Rudder Rigging and Pulley Installation (Page 2 of 5)

ISSUE DATE: 4/14/2009		 Incorporated TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model	PAGE: 73 of 103
REVISION DATE: 3/4/10			FILE NO.: A-10035
			REVISION: 03

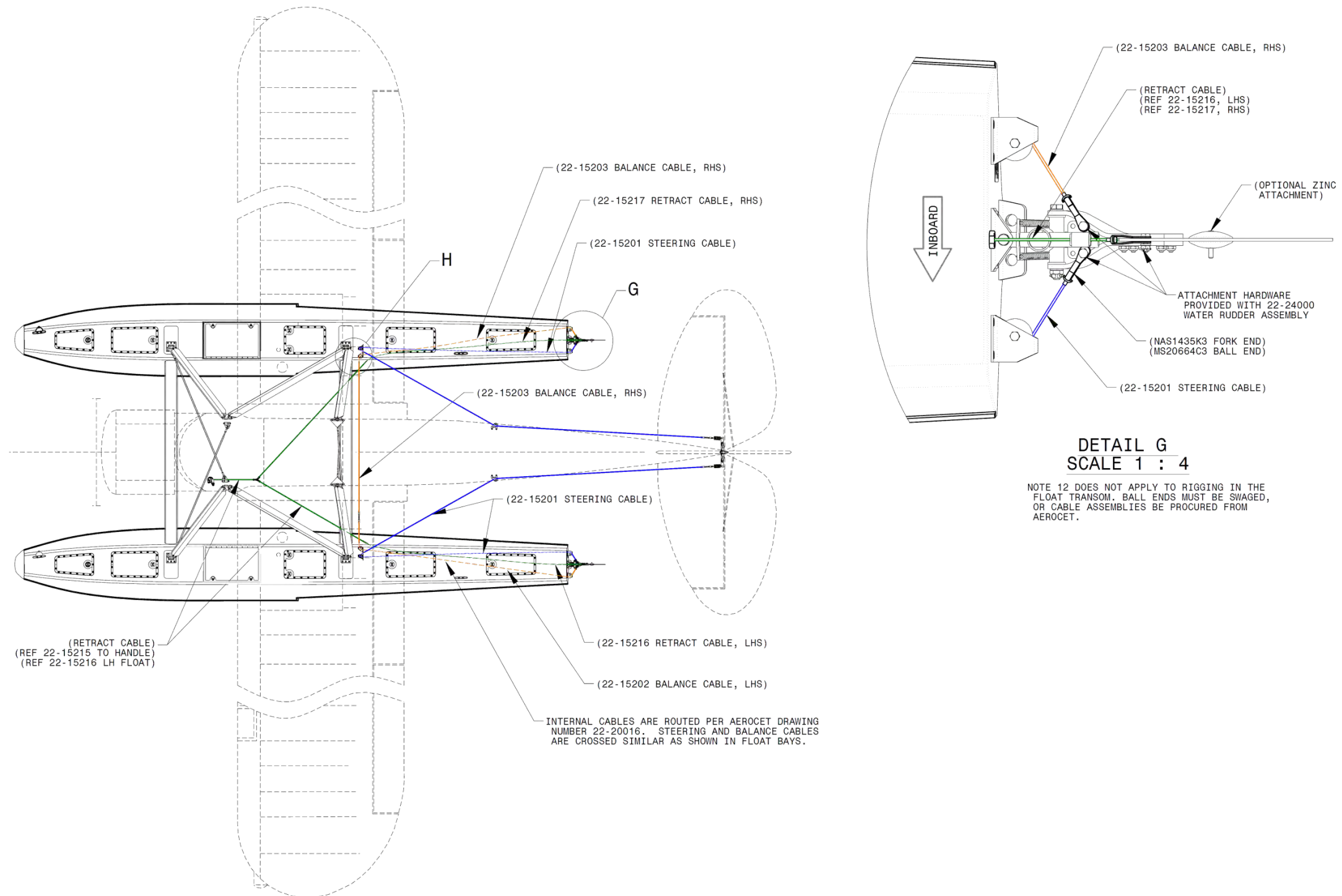

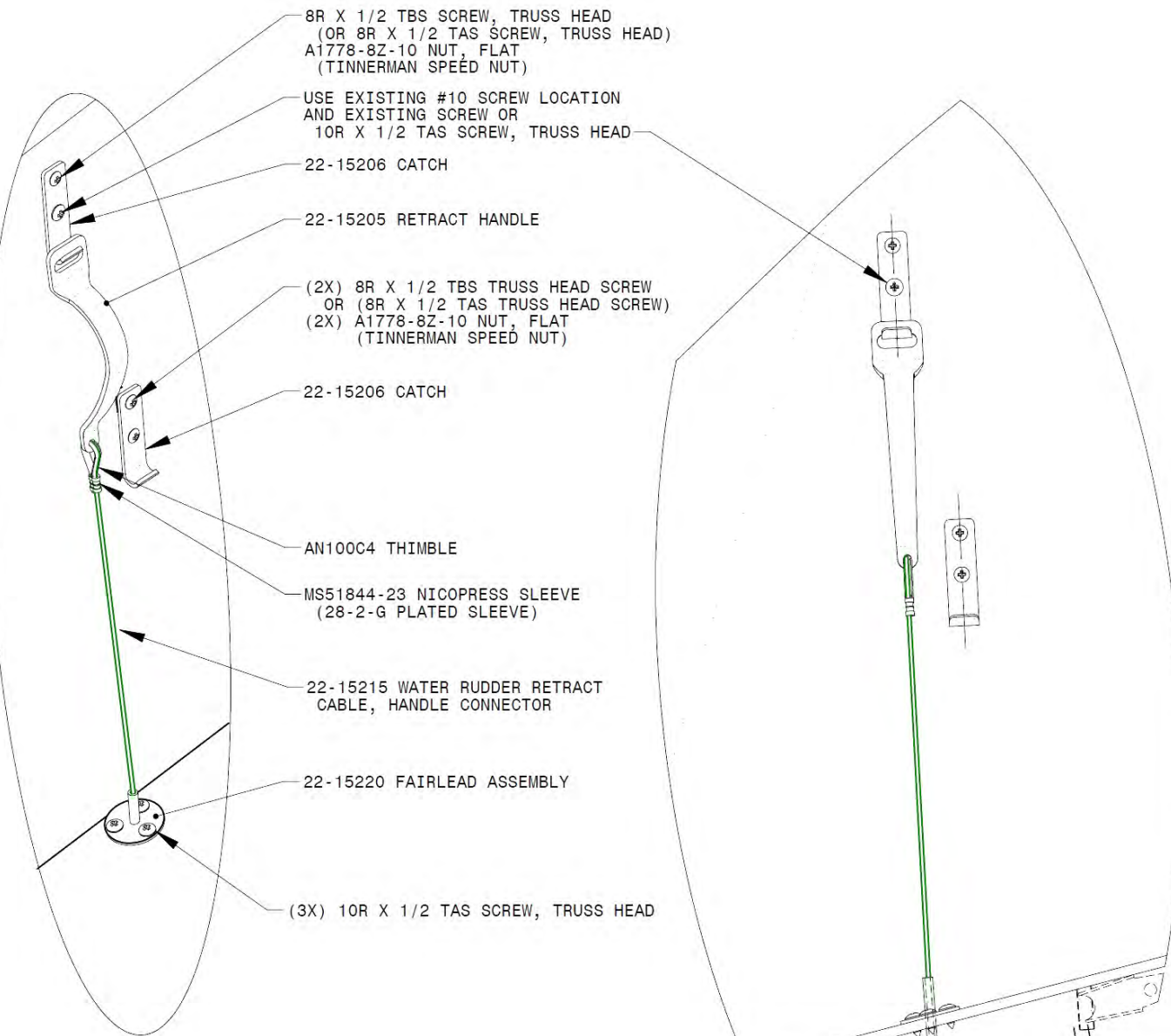
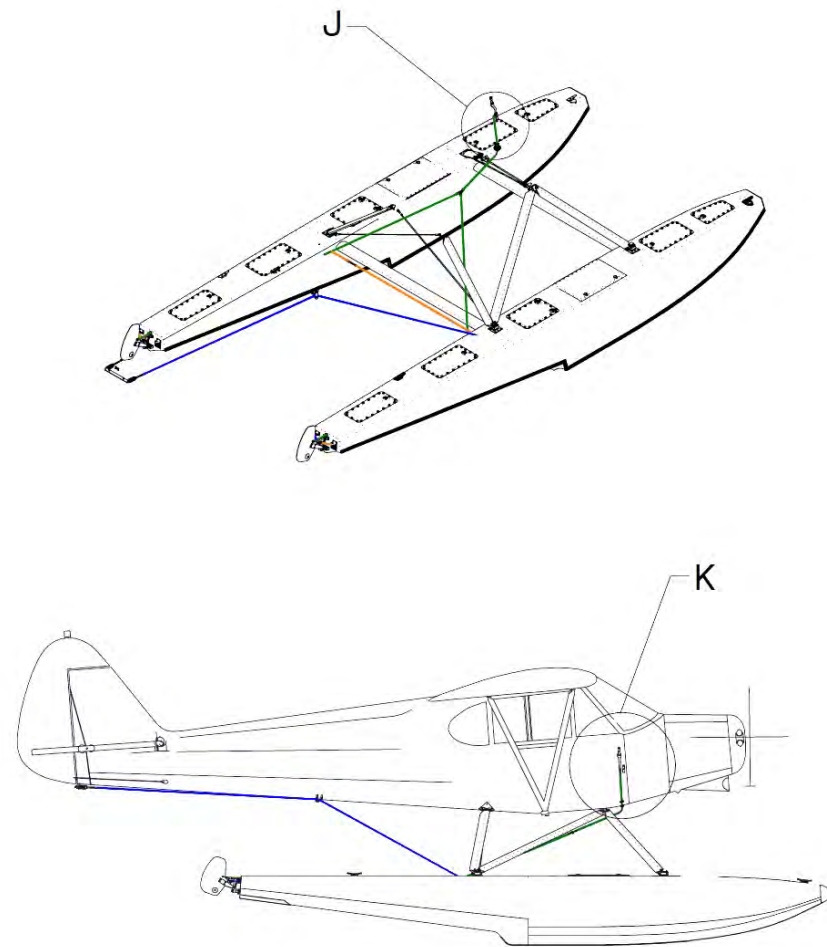


Figure 5.1.8 (Cont'd.). Water Rudder Rigging and Pulley Installation (Page 3 of 5)

 Incorporated		PAGE	74 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03




DETAIL J
SCALE 1 : 4

- 8R X 1/2 TBS SCREW, TRUSS HEAD
(OR 8R X 1/2 TAS SCREW, TRUSS HEAD)
- A1778-8Z-10 NUT, FLAT
(TINNERMAN SPEED NUT)
- USE EXISTING #10 SCREW LOCATION
AND EXISTING SCREW OR
10R X 1/2 TAS SCREW, TRUSS HEAD
- 22-15206 CATCH
- 22-15205 RETRACT HANDLE
- (2X) 8R X 1/2 TBS TRUSS HEAD SCREW
OR (8R X 1/2 TAS TRUSS HEAD SCREW)
- (2X) A1778-8Z-10 NUT, FLAT
(TINNERMAN SPEED NUT)
- 22-15206 CATCH
- AN100C4 THIMBLE
- MS51844-23 NICOPRESS SLEEVE
(28-2-G PLATED SLEEVE)
- 22-15215 WATER RUDDER RETRACT
CABLE, HANDLE CONNECTOR
- 22-15220 FAIRLEAD ASSEMBLY
- (3X) 10R X 1/2 TAS SCREW, TRUSS HEAD

- 22-15232 SKIN DOUBLER
INSTALL WITH NAS9301-4-02
BLIND RIVET (6X), OR
USE CCPO-4-02 SELF-PLUGGING
CHERRY RIVETS (6X)
- MS35489-6 GROMMET

DETAIL K
SCALE 1 : 4

Figure 5.1.8 (Cont'd.). Water Rudder Rigging and Pulley Installation (Page 4 of 5)


		 Incorporated	PAGE		
ISSUE DATE:	4/14/2009		75 of 103		
			FILE NO.		
		TITLE:	ICA Maintenance Manual for		
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model		
				REVISION	03

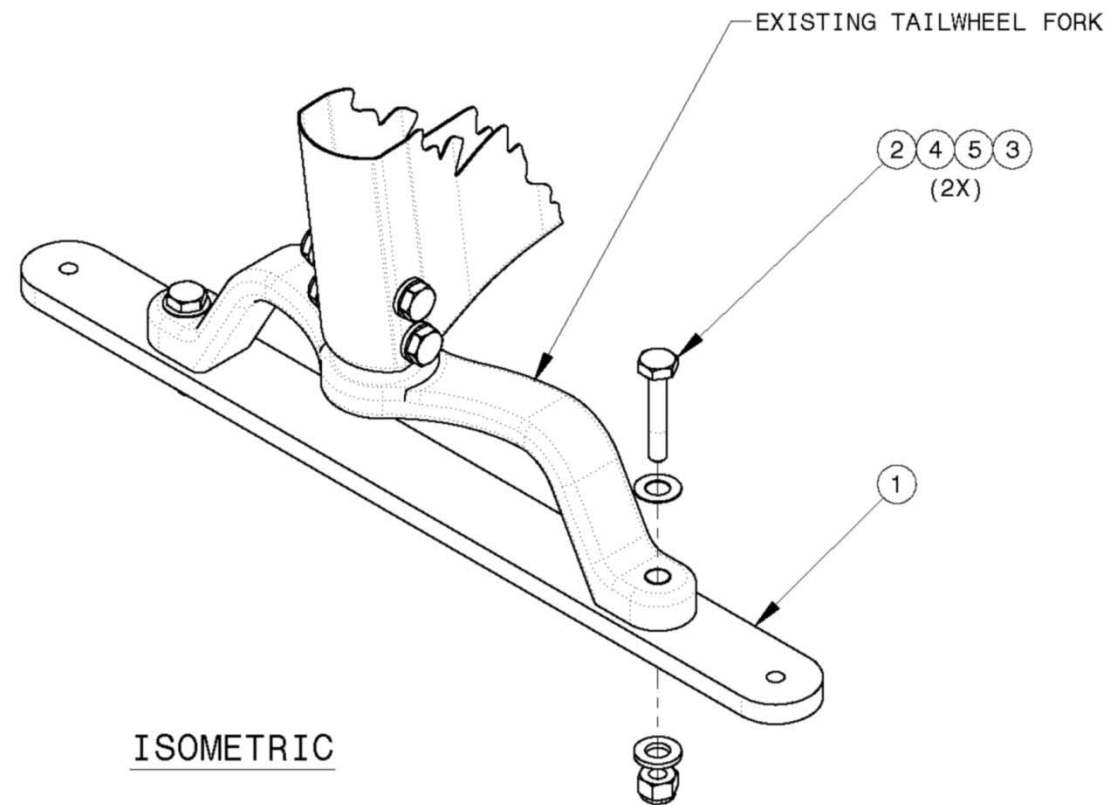
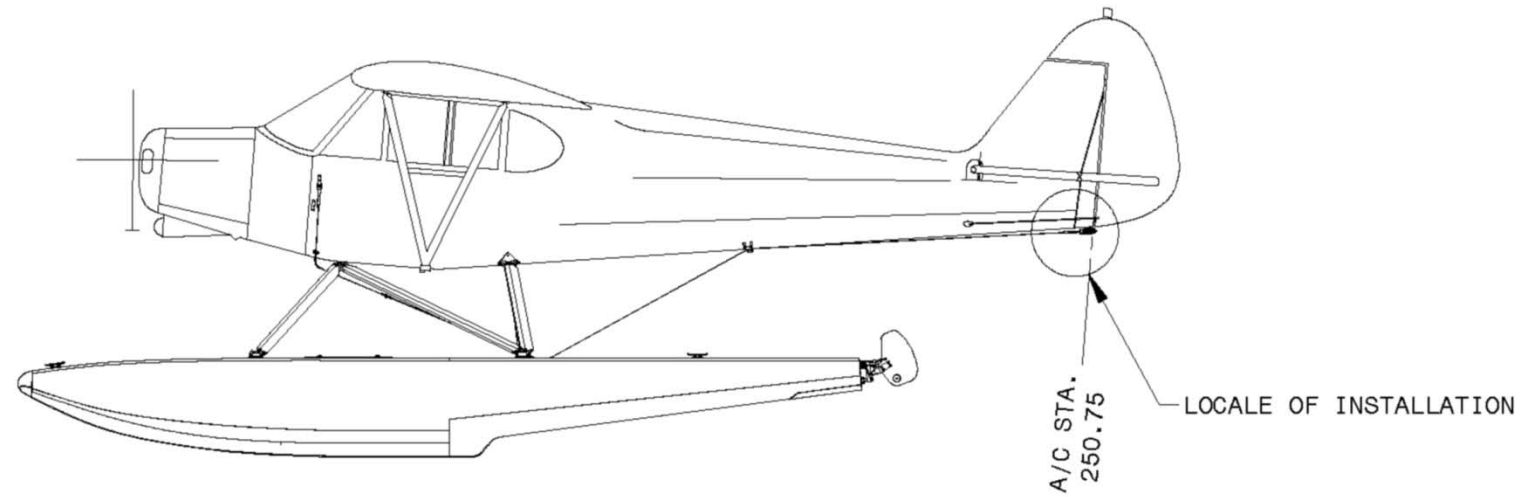
PARTS LISTS FOR 22-15200 WATER RUDDER RIGGING

ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	4	HRDWR	10R X 1/2 TAS	TRUSS HEAD SCREW, STAINLESS
2	2	ASSY	22-15201	STEERING CABLE
3	1	ASSY	22-15202	BALANCE CABLE ASSEMBLY, LHS
4	1	ASSY	22-15203	BALANCE CABLE ASSEMBLY, RHS
5	6	ASSY	22-15204	BALL END ADAPTER ASSEMBLY
6	1	PART	22-15205	WATER RUDDER RETRACT HANDLE
7	2	PART	22-15206	CATCH, WATER RUDDER RETRACT HANDLE
8	1	ASSY	22-15215	WATER RUDDER RETRACT CABLE ASSEMBLY, HANDLE CONNECTOR
9	1	ASSY	22-15216	WATER RUDDER RETRACT CABLE ASSEMBLY, LHS
10	1	ASSY	22-15217	WATER RUDDER RETRACT CABLE ASSEMBLY, RHS
11	1	ASSY	22-15220	FAIRLEAD ASSEMBLY, TUBE STYLE, WATER RUDDER RETRACT CABLE
12	4	PART	22-15231	CLAMP, LOOP TYPE
13	1	PART	22-15232	SKIN DOUBLER, FAIRLEAD TUBE ASSEMBLY INSTALLATION
14	1	ASSY	22-51210	AIR RUDDER TORQUE TUBE ARM INSTALLATION
15	2	BULK	44 NSR	1/4" NYLOFLOW TUBING, OR EQUIVALENT (LENGTH A/R)
16	2	ASSY	56-15240	SWIVEL PULLEY ASSEMBLY, FLOAT MOUNTED
17	3	PART	56-15285	TURNBUCKLE ASSEMBLY, LH-RH THREADED
18	3	HRDWR	8R X 1/2 TBS	SCREW, TRUSS HEAD, STAINLESS
19	3	HRDWR	A1778-8Z-10	NUT, FLAT (TINNERMAN SPEED NUT)
20	1	HRDWR	AN100C4	THIMBLE, WIRE CABLE
21	1	HRDWR	AN310C3	NUT, PLAIN, CASTELLATED, AIRFRAME
22	1	HRDWR	AN3C5	BOLT - MACHINE, AIRCRAFT
23	6	HRDWR	MS20664C3	BALL END, SINGLE SHANK
24	1	HRDWR	MS24665-151	COTTER PIN
25	1	HRDWR	MS35489-6	RUBBER GROMMET
26	1	HRDWR	MS51844-23	NICOPRESS SLEEVE
27	1	HRDWR	NAS1149C0363R	WASHER, FLAT, STAINLESS
28	2	HRDWR	NAS1435K3	FORK END
29	6	HRDWR	NAS9301-4-02	BLIND RIVET

OPTIONAL PER DETAIL C				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	2	ASSY	35-34039	SWIVEL PULLEY ASSEMBLY
OPTIONAL PER DETAIL D				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	HRDWR	MS21251-B3S	BARREL
2	1	HRDWR	MS21255-3LS	CABLE EYE, LH THREAD
3	1	HRDWR	MS21255-3RS	CABLE EYE, RH THREAD
4	2	HRDWR	MS21256-1	SAFETY WIRE CLIP
*ADDITIONAL HARDWARE SUCH AS A FORK END AND FASTENERS ARE ALSO REQUIRED TO USE THIS OPTION.				
OPTIONAL PER DETAIL F				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	3	HRDWR	AN100C4	THIMBLE, WIRE CABLE
2	3	HRDWR	MS51844-23	NICOPRESS SLEEVE
OPTIONAL PER DETAIL K				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	6	HRDWR	CCPQ-4-02	RIVET, SELF-PLUGGING, CHERRY

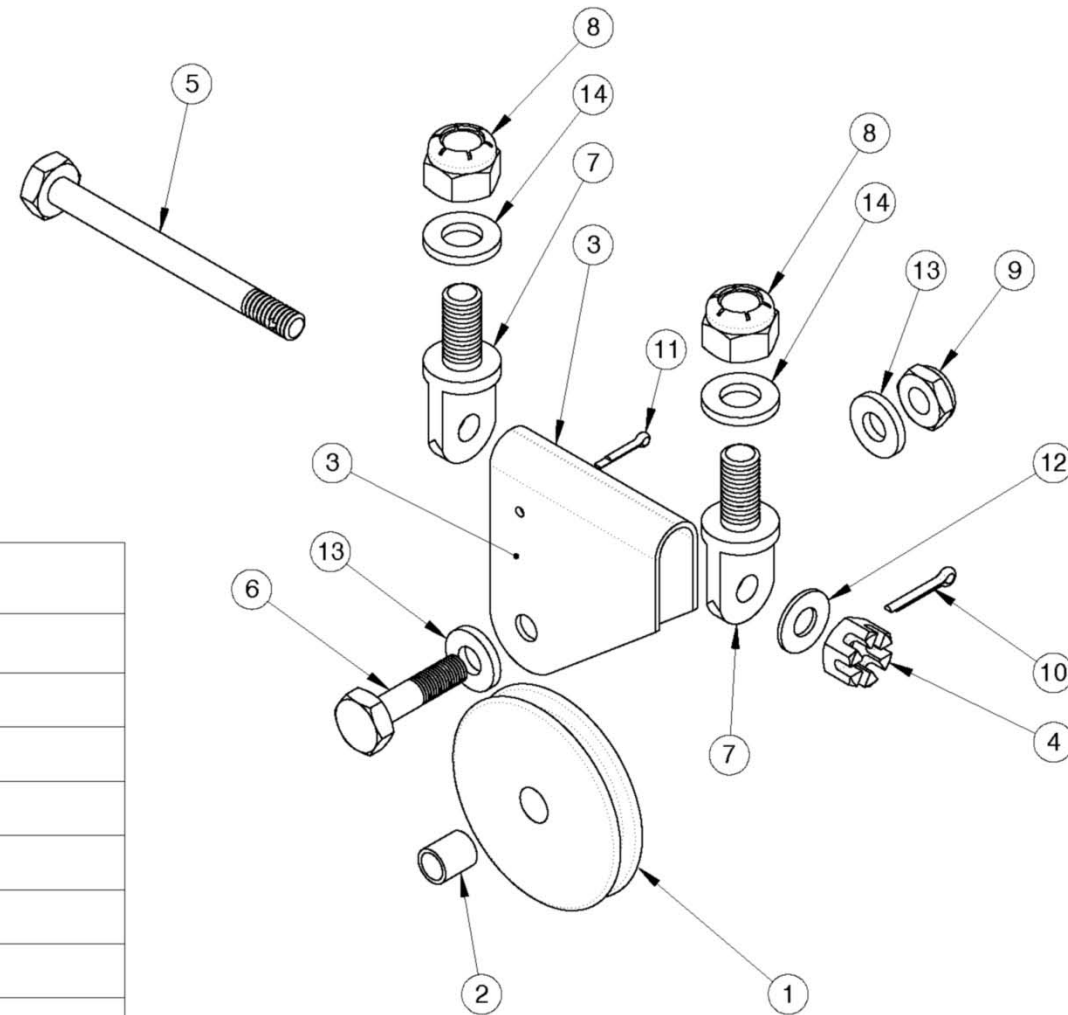
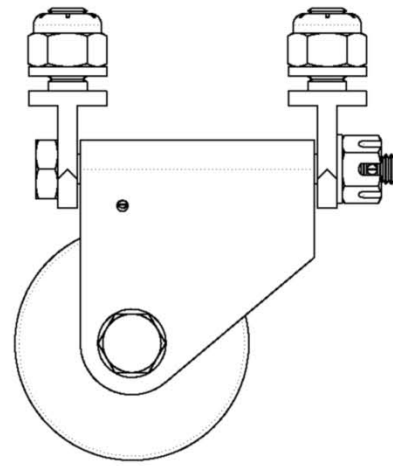
Figure 5.1.8 (Cont'd.). Water Rudder Rigging and Pulley Installation (Page 5 of 5)

 Incorporated		PAGE	76 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03




ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	22-51212	AIR RUDDER TORQUE TUBE ARM
2	2	HRDWR	AN3-11A	BOLT - MACHINE, AIRCRAFT
3	2	HRDWR	MS21044N3	NUT, SELF-LOCKING, REGULAR HEIGHT
4	2	HRDWR	NAS1149D0416K	WASHER, FLAT
5	2	HRDWR	NAS1149D0463K	WASHER, FLAT

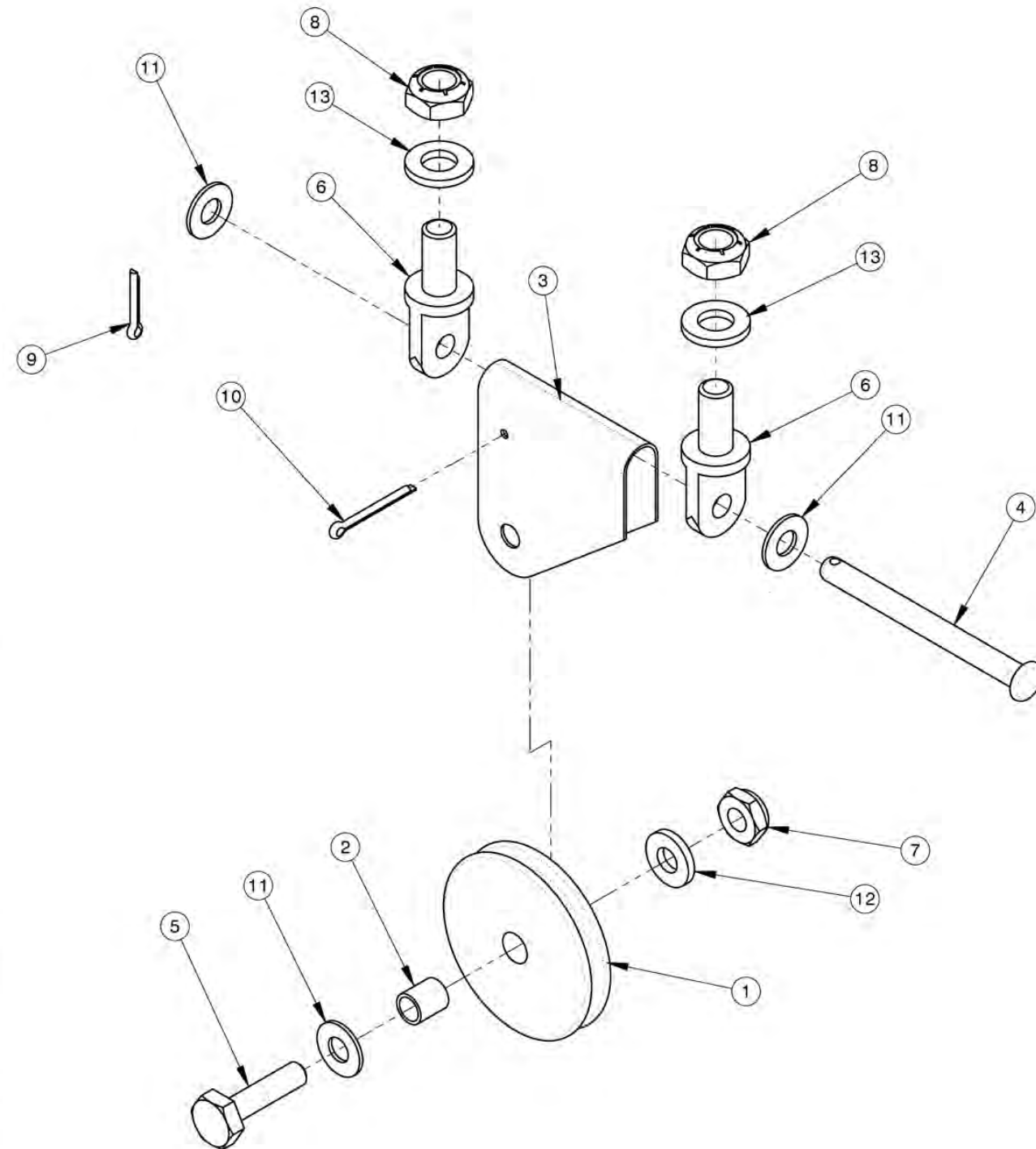
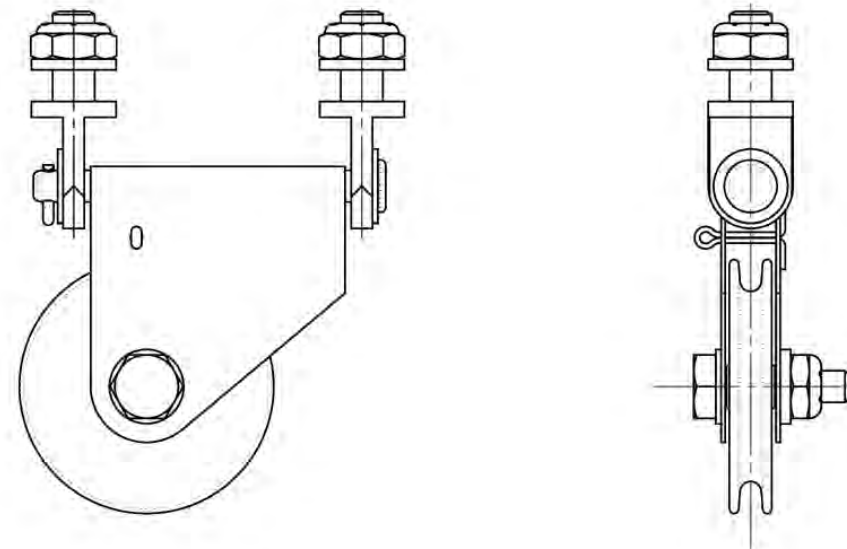
Figure 5.1.9. Torque Tube Arm Installation, 22-51212



PARTS LIST FOR 35-34039 SWIVEL PULLEY PRACKET			
ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	35-34030	PULLEY
2	1	35-34036	PULLEY BUSHING
3	1	35-34043	PULLEY BRACKET
4	1	AN310C3	NUT, CASTELLATED
5	1	AN3C21	BOLT, STAINLESS
6	1	AN3C6A	BOLT, STAINLESS
7	2	AN43B-C4A	EYEBOLT
8	2	MS21044N4	NUT, SELF-LOCKING, REGULAR HEIGHT
9	1	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
10	1	MS24665-132	COTTER PIN
11	1	MS24665-151	COTTER PIN
12	1	NAS1149C0332R	WASHER, FLAT
13	2	NAS1149C0363R	WASHER, FLAT
14	2	NAS1149C0463R	WASHER, FLAT

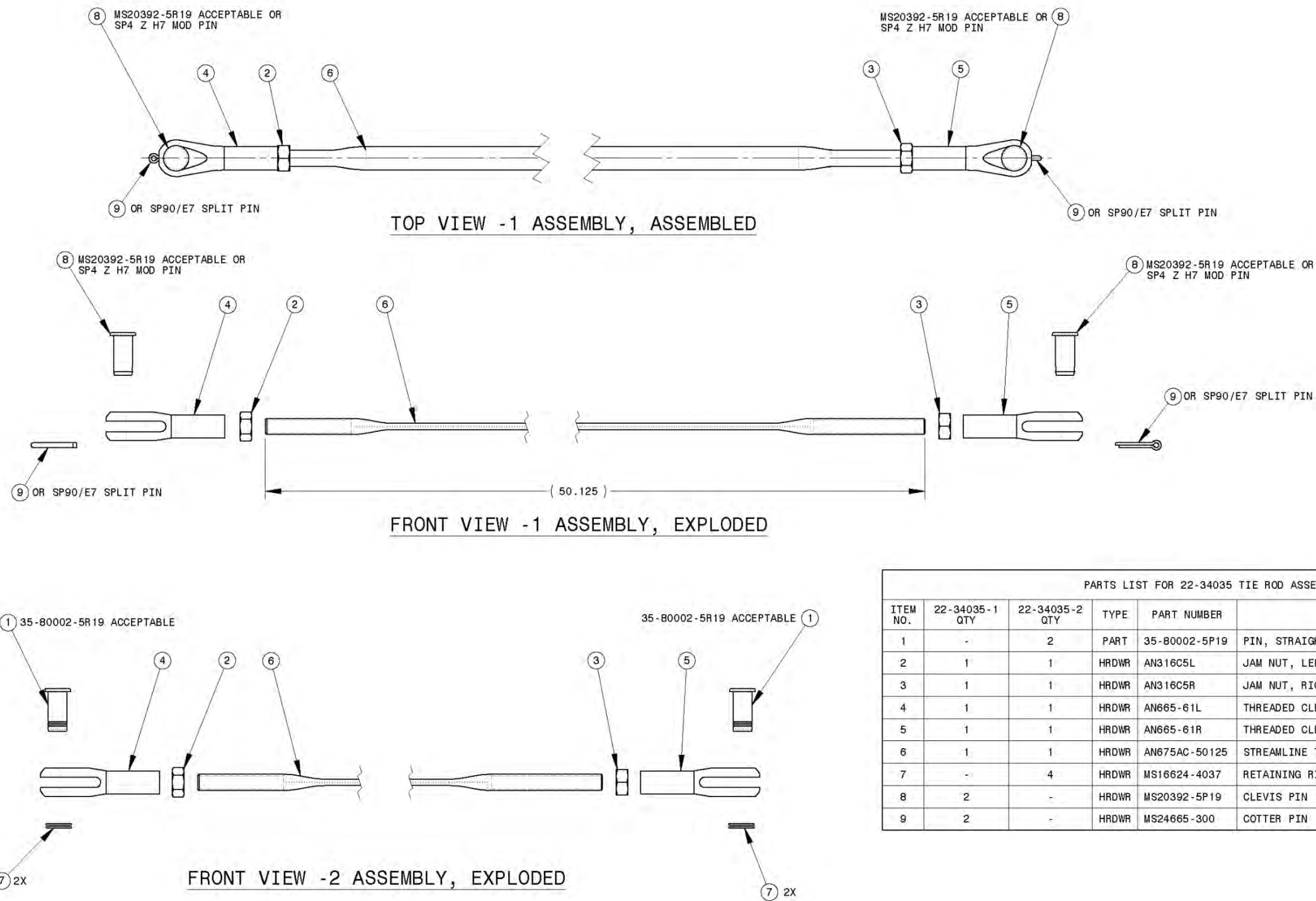
Figure 5.1.10. Parts Listings for Swivel Pulley Assemblies, 35-34039

 Incorporated		PAGE	78 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03




PARTS LISTING FOR 56-15240 SWIVEL PULLEY BRACKET ASSEMBLY, FLOAT MOUNTED			
ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	35-34030	PULLEY
2	1	35-34036	PULLEY BUSHING
3	1	35-34043	PULLEY BRACKET
4	1	56-15265-2-61	PIN, STRAIGHT
5	1	AN3C6A	BOLT - MACHINE, AIRCRAFT
6	2	AN43B-C4A	EYEBOLT
7	1	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
8	2	MS21083C4	NUT, SELF-LOCKING, LOW-HEIGHT, STAINLESS
9	1	MS24665-151	COTTER PIN
10	1	MS24665-153	COTTER PIN
11	3	NAS1149C0332R	WASHER, FLAT, STAINLESS
12	1	NAS1149C0363R	WASHER, FLAT, STAINLESS
13	2	NAS1149C0463R	WASHER, FLAT, STAINLESS

Figure 5.1.11. Parts Listings for Swivel Pulley Bracket Assembly, Float Mounted, 56-15240



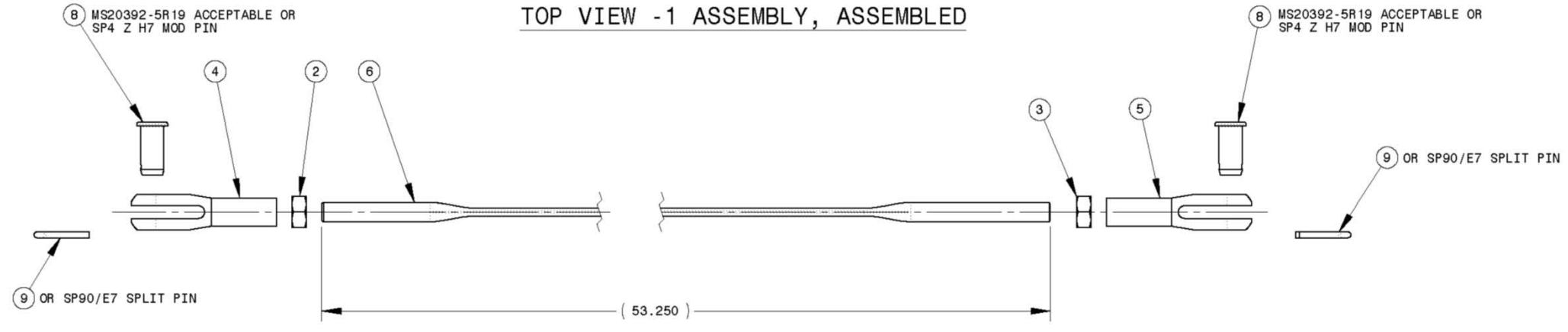
PARTS LIST FOR 22-34035 TIE ROD ASSEMBLY					
ITEM NO.	22-34035-1 QTY	22-34035-2 QTY	TYPE	PART NUMBER	DESCRIPTION
1	-	2	PART	35-80002-5P19	PIN, STRAIGHT, HEADED, GROOVED SHANK
2	1	1	HRDWR	AN316C5L	JAM NUT, LEFT HAND THREADS
3	1	1	HRDWR	AN316C5R	JAM NUT, RIGHT HAND THREADS
4	1	1	HRDWR	AN665-61L	THREADED CLEVIS TERMINAL, LEFT HAND THREADS
5	1	1	HRDWR	AN665-61R	THREADED CLEVIS TERMINAL, RIGHT HAND THREADS
6	1	1	HRDWR	AN675AC-50125	STREAMLINE TIE ROD, 5/16" -24, 50 1/8" LONG
7	-	4	HRDWR	MS16624-4037	RETAINING RING, EXTERNAL
8	2	-	HRDWR	MS20392-5P19	CLEVIS PIN
9	2	-	HRDWR	MS24665-300	COTTER PIN

Figure 5.1.12. Parts Listings for Flying Wires (Tie Rod Assembly) Installation, 22-34035

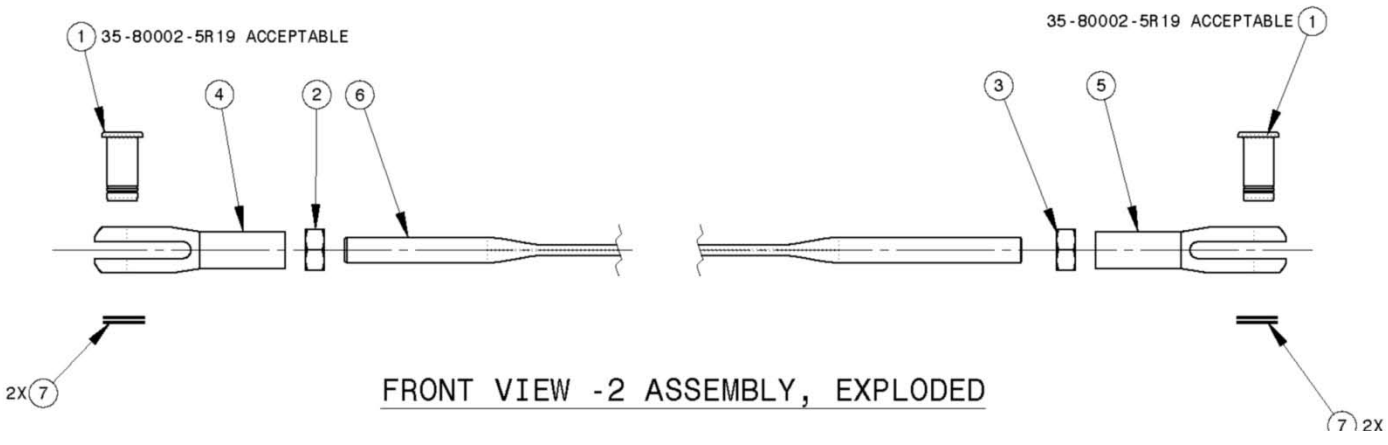
 Incorporated		PAGE	80 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03



TOP VIEW -1 ASSEMBLY, ASSEMBLED



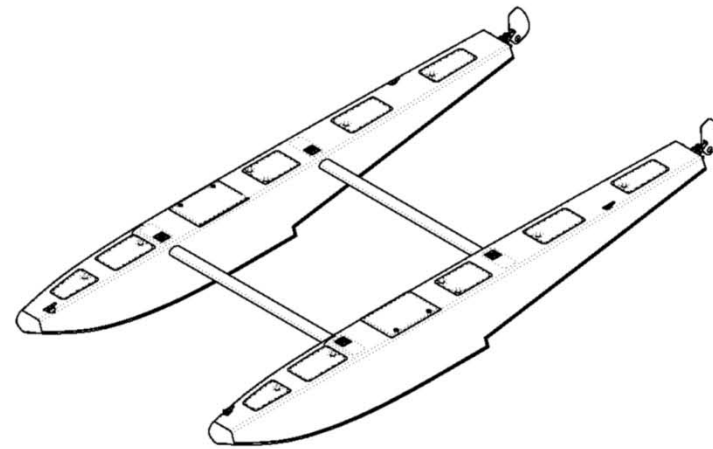
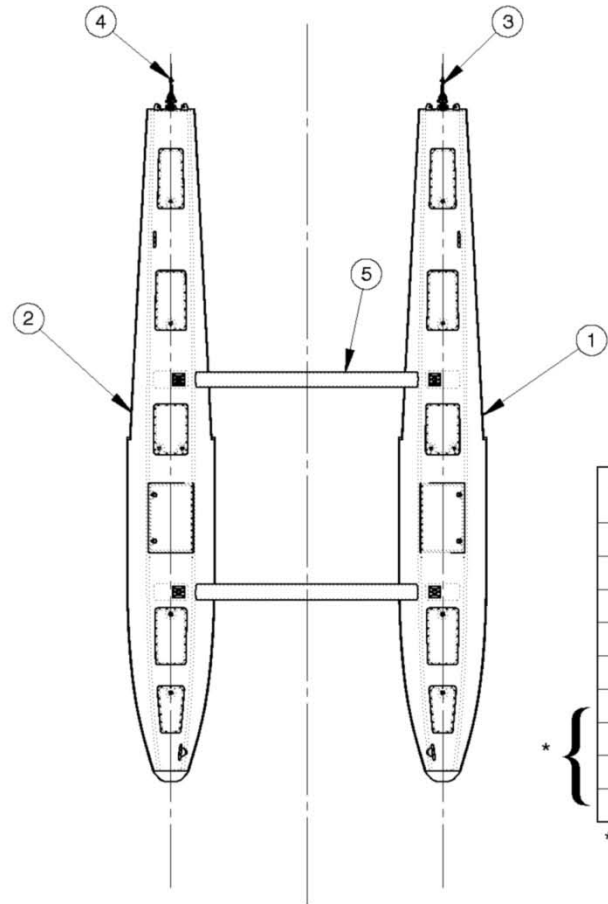
FRONT VIEW -1 ASSEMBLY, EXPLODED



FRONT VIEW -2 ASSEMBLY, EXPLODED

PART LIST FOR 22-34036 TIE ROD ASSEMBLY					
ITEM NO.	22-34036-1 QTY	22-34036-2 QTY	TYPE	PART NUMBER	DESCRIPTION
1	-	2	PART	35-80002-5P19	PIN, STRAIGHT, HEADED, GROOVED SHANK
2	1	1	HRDWR	AN316C5L	JAM NUT, LEFT HAND THREADS
3	1	1	HRDWR	AN316C5R	JAM NUT, RIGHT HAND THREADS
4	1	1	HRDWR	AN665-61L	THREADED CLEVIS TERMINAL, LEFT HAND THREADS
5	1	1	HRDWR	AN665-61R	THREADED CLEVIS TERMINAL, RIGHT HAND THREADS
6	1	1	HRDWR	AN675AC5325	STREAMLINE TIE ROD, 5/16-24, 53 1/4" LENGTH
7	-	4	HRDWR	MS16624-4037	RETAINING RING, EXTERNAL
8	2	-	HRDWR	MS20392-5P19	CLEVIS PIN
9	2	-	HRDWR	MS24665-300	COTTER PIN

Figure 5.1.13. Parts Listings for Flying Wires (Tie Rod Assembly) Installation, 22-34036



ITEM NO.	22-20010-1 QTY	22-20010-2 QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	1	ASSY	22-21000-L	FLOAT HULL ASSEMBLY, LHS
2	1	1	ASSY	22-21000-R	FLOAT HULL ASSEMBLY, RHS
3	1	1	ASSY	22-24000-L	WATER RUDDER ASSEMBLY, LHS
4	1	1	ASSY	22-24000-R	WATER RUDDER ASSEMBLY, RHS
5	2	2	PART	22-32010	SPREADER BAR
6	1	-	ASSY	22-20015-L	RIGGING LAYOUT STYLE 1, MODEL 2200 FLOATS
7	1	-	ASSY	22-20015-R	RIGGING LAYOUT STYLE 1, MODEL 2200 FLOATS
8	-	1	ASSY	22-20016-L	RIGGING LAYOUT STYLE 2, MODEL 2200 FLOATS
9	-	1	ASSY	22-20016-R	RIGGING LAYOUT STYLE 2, MODEL 2200 FLOATS

*AEROCET RIGGING STYLES PER DRAWING NUMBERS 22-20015 OR 22-20016 PER NOTE 6. (NOT SHOWN)

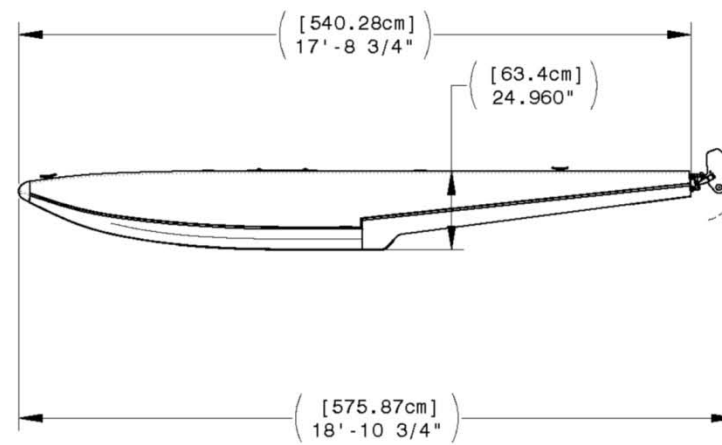
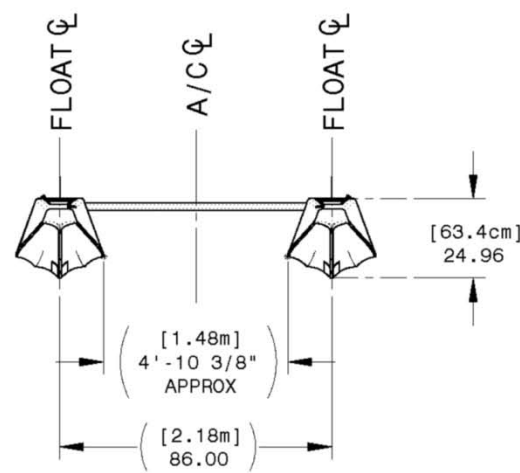



Figure 5.1.14. 2200 Twin Seaplane Floats (TSO Assembly)

ISSUE DATE: 4/14/2009		 Incorporated	PAGE	82 of 103
REVISION DATE: 3/4/10			FILE NO.	A-10035
TITLE: ICA Maintenance Manual for SUBTITLE: 2200 Floats on PA-18 Piper, Super Cub model		REVISION	03	

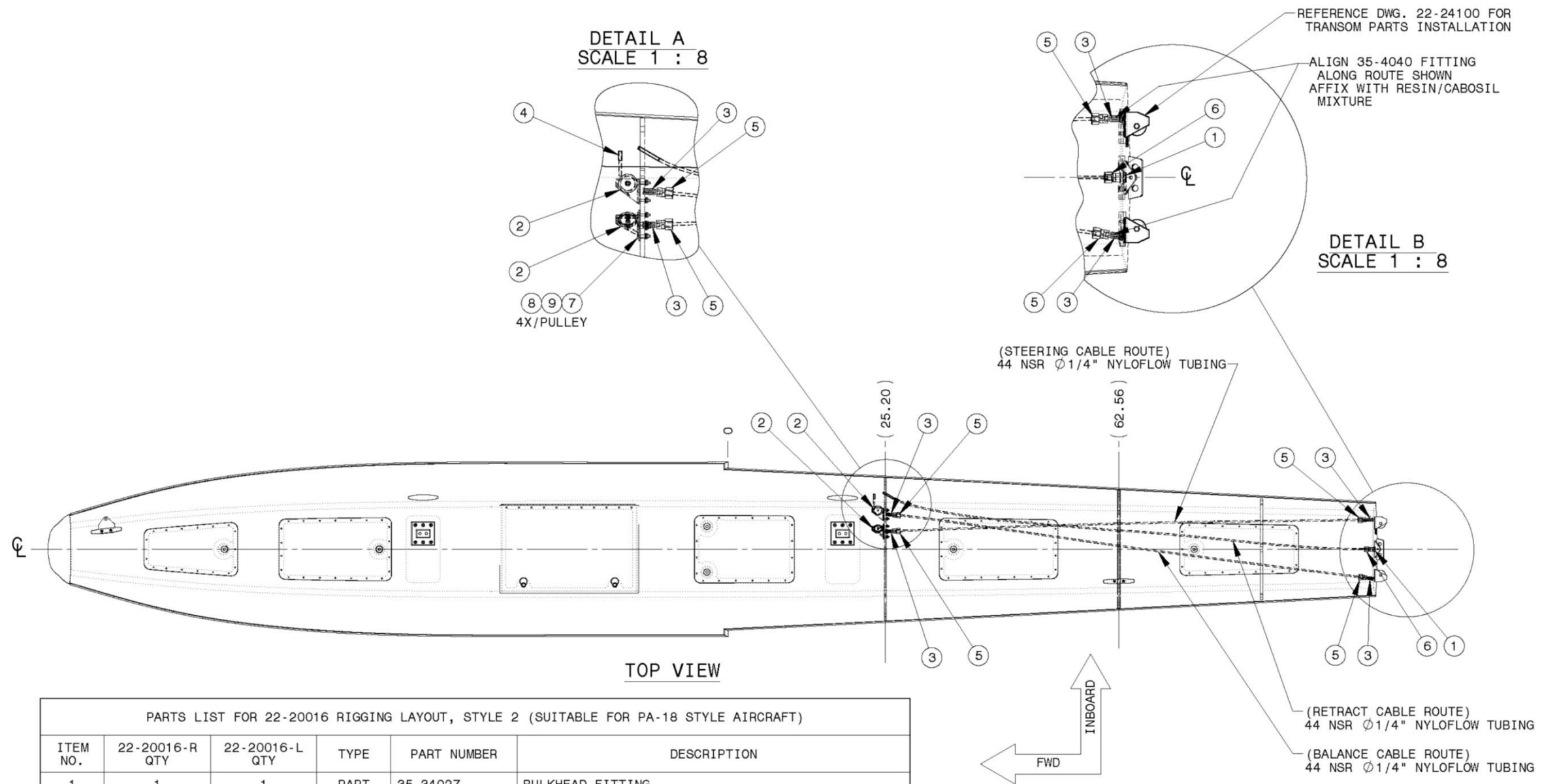
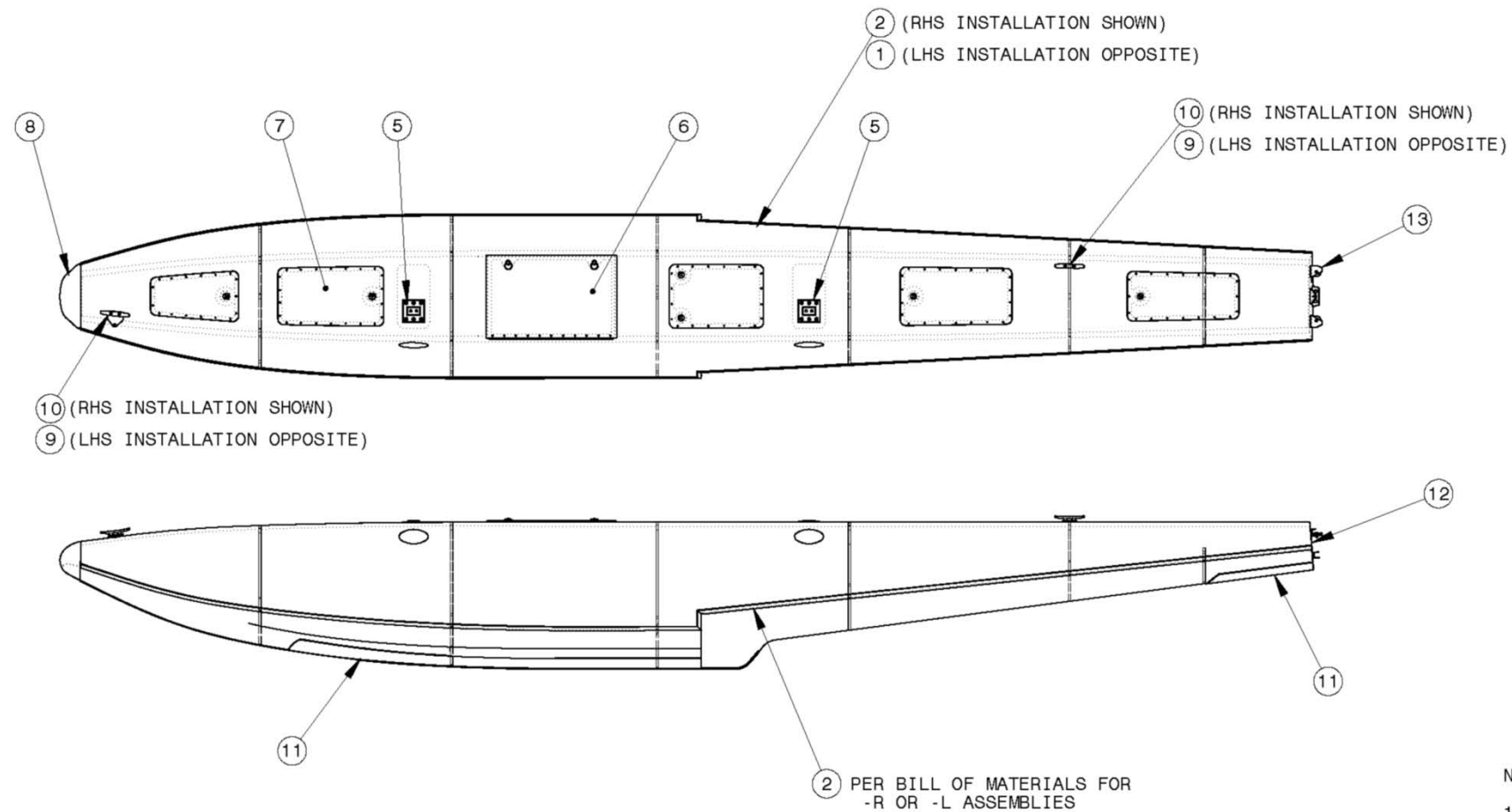


Figure 5.1.15, [internal rigging], 22-20016




NOTES:

- 1) 22-21000-R FLOAT HULL ASSEMBLY, RHS SHOWN
 22-21000-L FLOAT HULL ASSEMBLY, LHS,
 OPPOSITE ALONG CENTERLINE. (SPREADER SLIP
 TUBE CUT-OUTS AND DECK PLATE INSTALLATION
 IS ALWAYS TO THE INBOARD SIDE.)

ITEM NO.	22-21000-L QTY	22-21000-R QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	-	ASSY	22-21001-L	COMPOSITE HULL ASSEMBLY, LHS
2	-	1	ASSY	22-21001-R	COMPOSITE HULL ASSEMBLY, RHS
3	1	1	ASSY	22-21005	SPREADER SLIP TUBE INSTALLATION
4	1	1	ASSY	22-21007	CHINE RUB STRIP INSTALLATION
5	1	1	ASSY	22-21010	DECK PLATE INSTALLATION
6	1	1	ASSY	22-21012	LOCKER DOOR INSTALLATION
7	1	1	ASSY	22-21030	ACCESS PANEL CONSTRUCTION AND INSTALLATION
8	1	1	ASSY	22-21040	BUMPER INSTALLATION
9	1	-	ASSY	22-21060-L	DECK CLEAT INSTALLATION
10	-	1	ASSY	22-21060-R	DECK CLEAT INSTALLATION
11	1	1	ASSY	22-21070	KEEL AND WEAR STRIP INSTALLATION
12	1	1	ASSY	22-21200	DATA PLACARD INSTALLATION
13	1	1	ASSY	22-24100	RUDDER BRACKET INSTALLATION

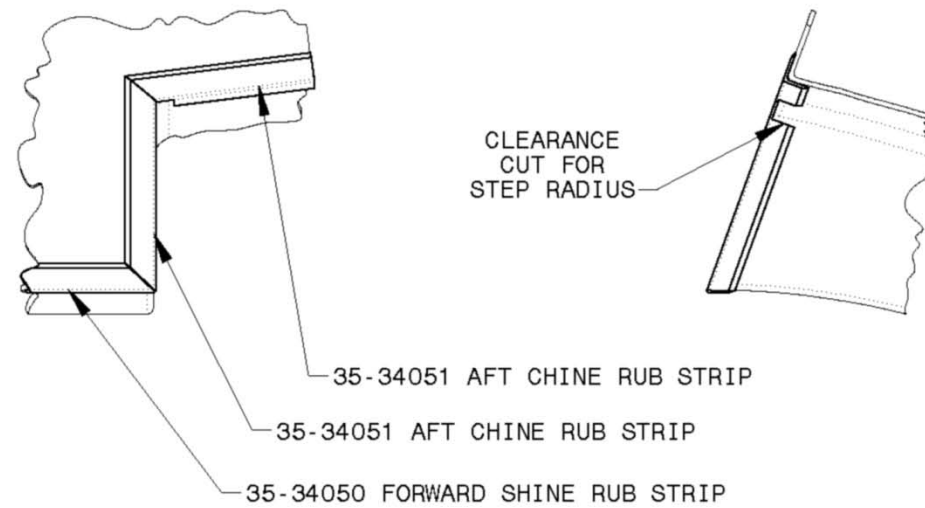
Figure 5.1.16, Float Hull Assembly, 22-21000

 Incorporated		PAGE	84 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03

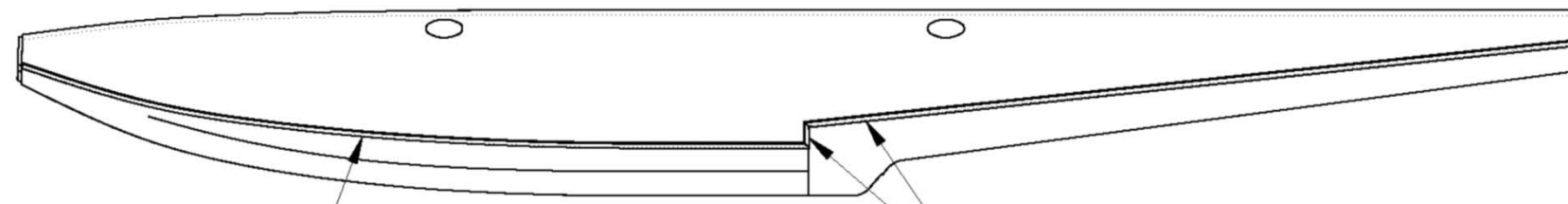
LEFT SIDE VIEW

DETAIL OF STEP AREA
INSTALLATION

REAR VIEW



PARTS LIST FOR 22-21007 CHINE RUB STRIP INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	35-34050	FORWARD CHINE RUB STRIP
2	1	PART	35-34051	AFT CHINE RUB STRIP



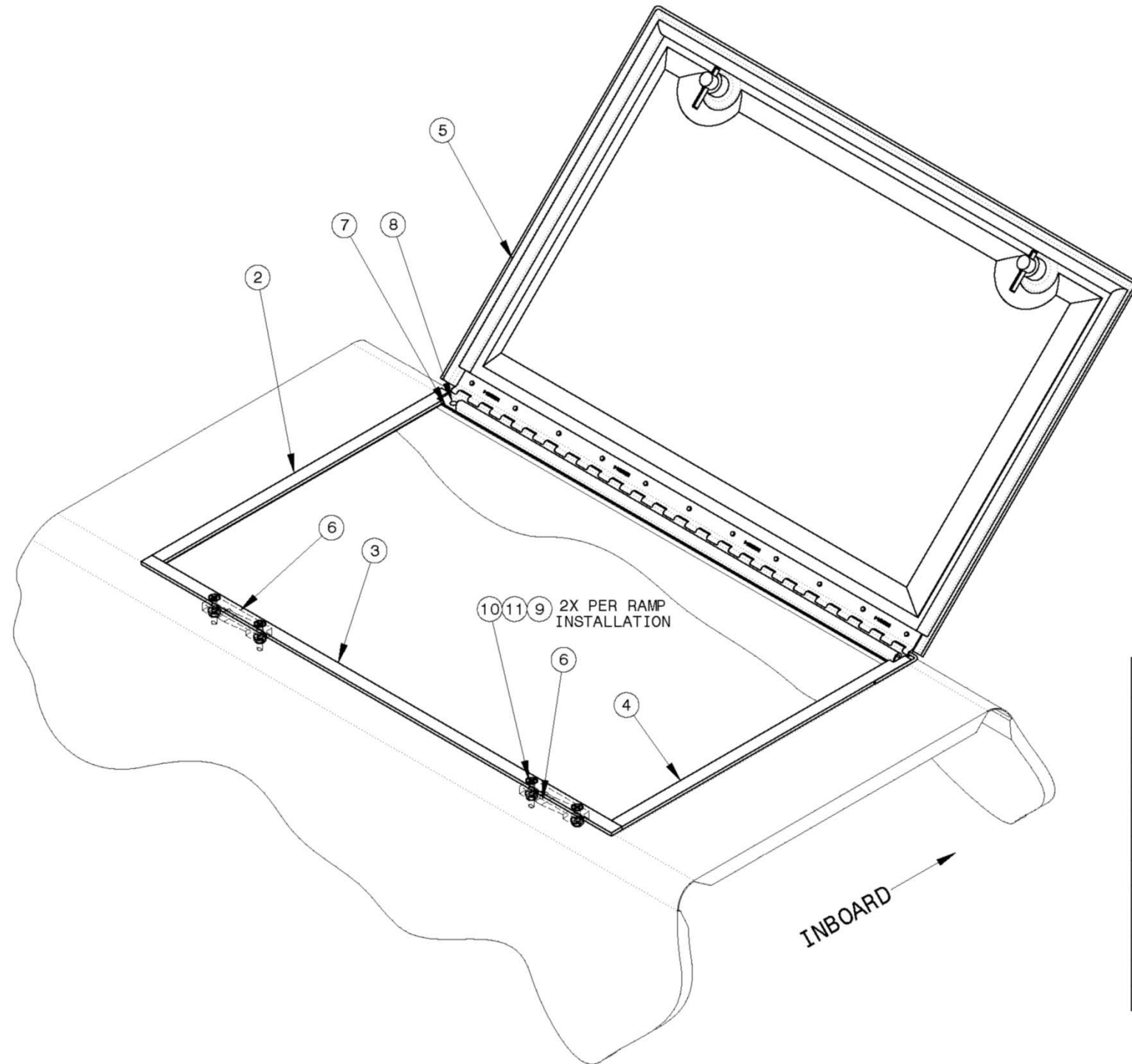
USE AEROCET EXTRUSION,
35-34050 FORWARD CHINE RUB-STRIP

NOTE: MAY BE SPLICED IF EXTRUSION
LENGTH IS NOT LONG ENOUGH TO BE
INSTALLED IN A SINGLE LENGTH.

USE AEROCET EXTRUSION,
35-34051 REAR CHINE RUB-STRIP

NOTE: MATERIAL MUST BE REMOVED FROM
UNDERSIDE PORTIONS OF THE RUB-STRIPS
TO FIT PROPERLY IN THE INSIDE
CORNERS OF THE STEP AREA (SEE DTL)

Figure 5.1.17. Chine Rub Strip Installation, 22-21007

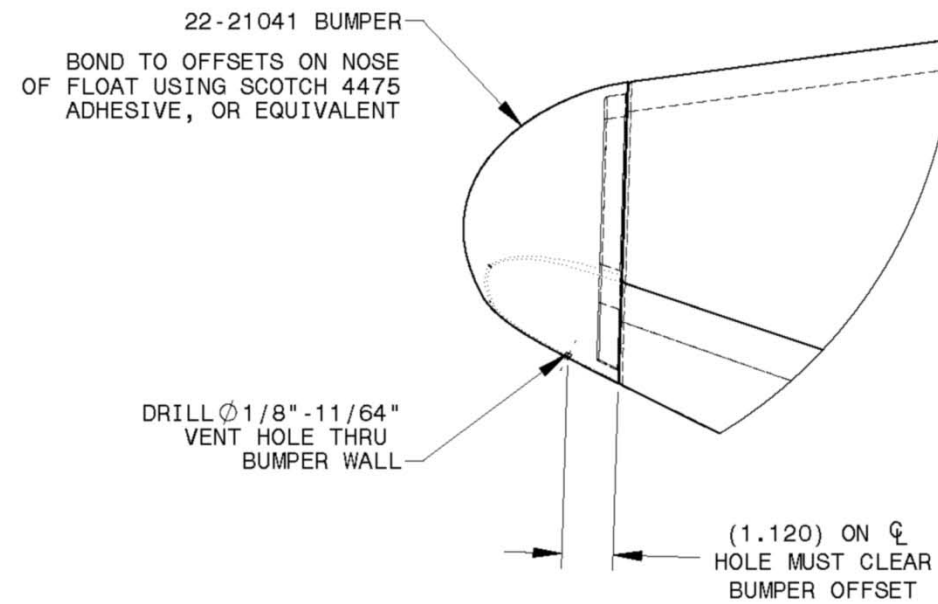


PARTS LIST FOR 2-21012 LOCKER DOOR INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	HDWR	3/8 X 7/32	EPDM FOAM RUBBER SEAL, APPROX 21"
2	1	PART	35-22601-1	LOCKER WEAR STRIP, LHS
3	1	PART	35-22601-2	LOCKER WEAR STRIP, OUTBOARD
4	1	PART	35-22601-3	LOCKER WEAR STRIP, RHS
5	1	ASSY	35-41045	LOCKER DOOR ASSY
6	2	PART	35-51015	LOCKER RAMP
7	1	HRDWR	MS20001-4	PIANO HINGE (REF)
8	11	HRDWR	MS204026AD4-4	RIVET, 100° COUNTERSUNK HEAD, LENGTH A/R
9	4	HRDWR	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
10	4	HRDWR	MS24694C58	MACHINE SCREW, FLAT COUNTERSUNK HEAD, 100°
11	4	HRDWR	NAS1149C0332R	WASHER, FLAT, STAINLESS

Figure 5.1.18, Locker Door Installation, 22-21012

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	86 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	

22-21040 BUMPER INSTALLATION



DETAIL A
SCALE 1 : 4

ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	22-21041	BUMPER
2	1	HRDWR	4475	3M SCOTCH 4475 ADHESIVE

NOTES:

- 1) SOME TRIMMING OF THE BUMPER MAY BE NECESSARY TO ASSURE PROPER, SNUG FIT.
- 2) USE 3M SCOTCH 4475 ADHESIVE, OR EQUIVALENT PERMANENT ADHESIVE PER MANUFACTURER'S RECOMMENDATIONS.
- 3) DRILL VENT HOLE AT DIAMETER SHOWN THOUGH BUMPER WALL.

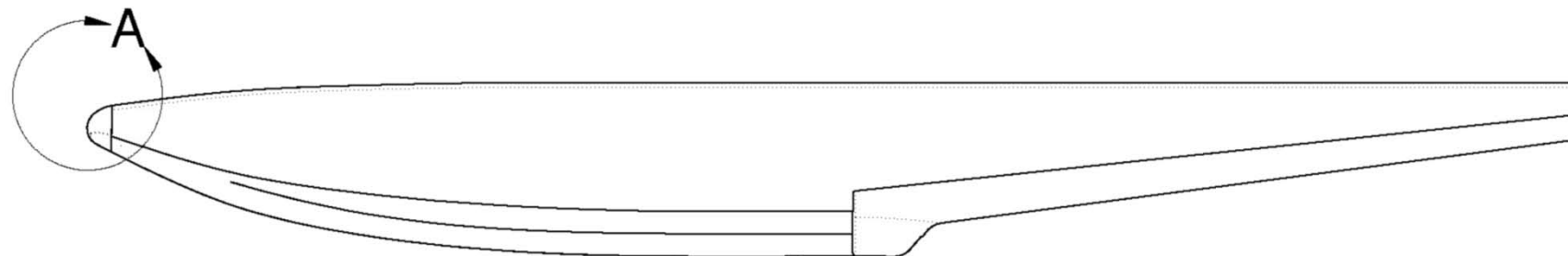
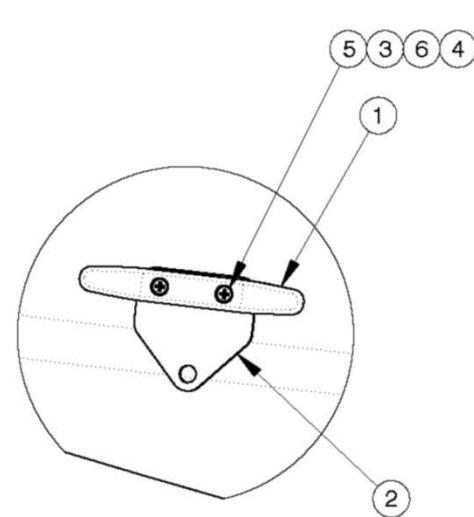
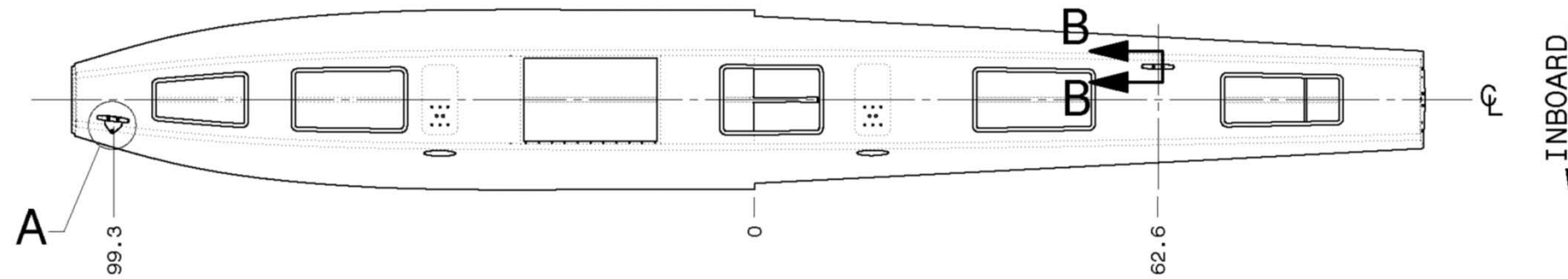
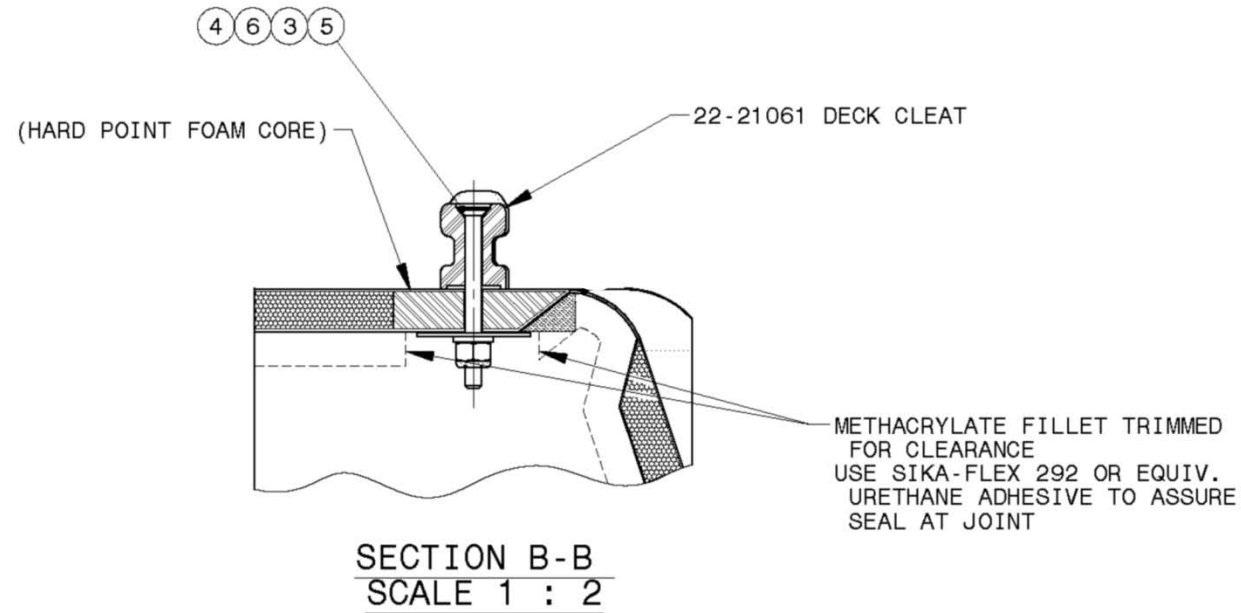


Figure 5.1.19, Bumper Installation, 22-21040




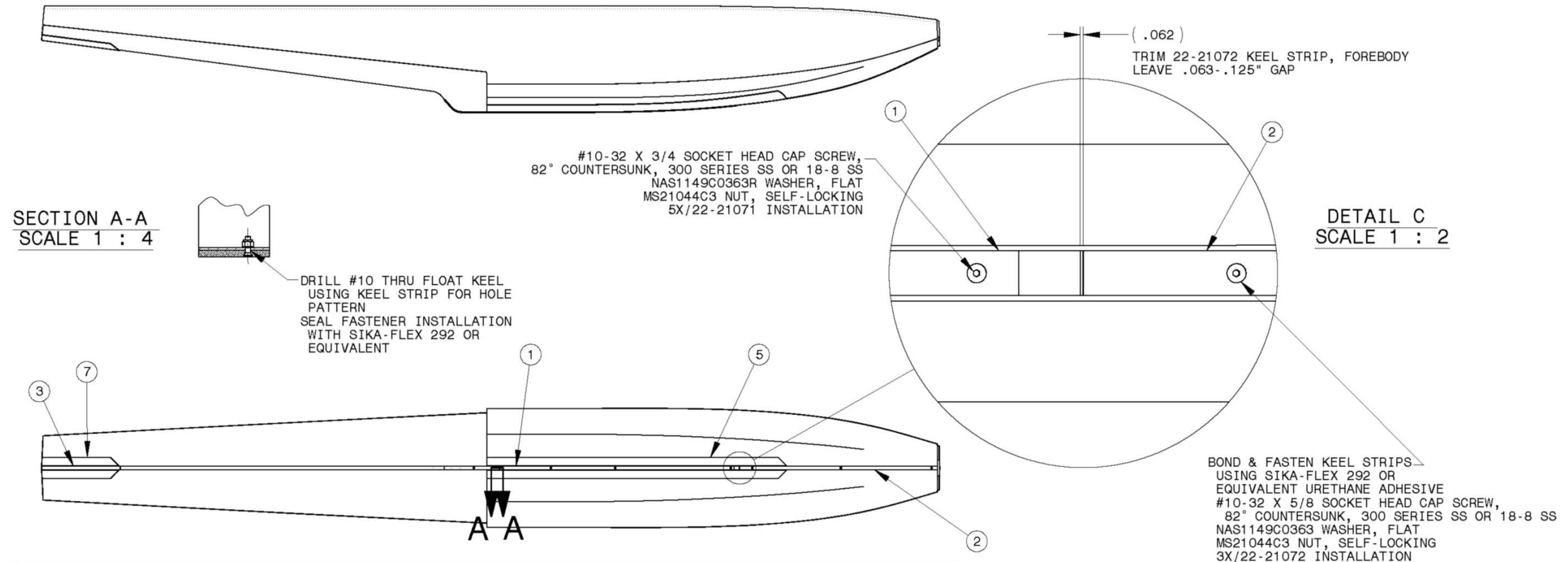
DETAIL A
SCALE 1 : 4



PARTS LIST FOR 22-21060 DECK CLEAT INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	2	PART	22-21061	DECK CLEAT
2	1	ASSY	22-51060	WALKWIRE TAB ASSEMBLY
3	4	PART	35-32251	FENDER WASHER
4	4	HRDWR	MS21044C3	NUT, SELF-LOCKING, STAINLESS, REGULAR HEIGHT
5	4	HRDWR	MS24694C73	MACHINE SCREW, FLAT COUNTERSUNK HEAD, 100°
6	4	HRDWR	NAS1149C0363R	WASHER, FLAT, STAINLESS

Figure 5.1.20, Deck Cleat Installation, 22-21060


 Incorporated		PAGE	88 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model
		REVISION	03



PARTS LIST FOR KEEL AND WEAR STRIP INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	22-21071	KEEL STRIP, STEP AREA
2	1	PART	22-21072	KEEL STRIP, FOREBODY
3	1	PART	22-21073	KEEL STRIP, STERN
4	1	PART	22-21074-L	WEAR STRIP, FOREBODY, LHS
5	1	PART	22-21074-R	WEAR STRIP, FOREBODY, RHS
6	1	PART	22-21075-L	WEAR STRIP, STERN, LHS
7	1	PART	22-21075-R	WEAR STRIP, STERN, RHS
8	8	HRDWR	MS21044C3	NUT, SELF-LOCKING, STAINLESS, REGULAR HEIGHT
9	8	HRDWR	NAS1149C0332R	WASHER, FLAT, STAINLESS
10	3	HRDWR	SCHSCREW 0.19-32x0.625x0.625-HX-C	SOCKET HEAD CAP SCREW, 82 DEG. C-SINK, 300 SERIES SS OR 18-8 SS (#10-32 X 5/8)
11	5	HRDWR	SCHSCREW 0.19-32x0.75x0.75-HX-C	SOCKET HEAD CAP SCREW, 82 DEG. C-SINK, 300 SERIES SS OR 18-8 SS (#10-32 X 3/4)

- NOTES:
- 1) RH AND LH INSTALLATIONS ARE SIMILAR.
 - 2) SEAL ALL FASTENERS WITH SIKAFLEX 292 OR EQUIVALENT URETHANE ADHESIVE.
 - 4) WEAR STRIPS ARE OPTIONAL, BONDED IN PLACE AS SHOWN USING RESIN/CABOSIL/ MILLED FIBER MIXTURE.
 - 4) SOCKET HEAD OR CROSS-RECESSED SCREWS MAY BE USED INTERCHANGEABLY.

Figure 5.1.21, Keel and Wear Strip Installation, 22-21070

ISSUE DATE: 4/14/2009		 Incorporated	PAGE	89 of 103
			FILE NO.	A-10035
REVISION DATE: 3/4/10		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
			REVISION	03

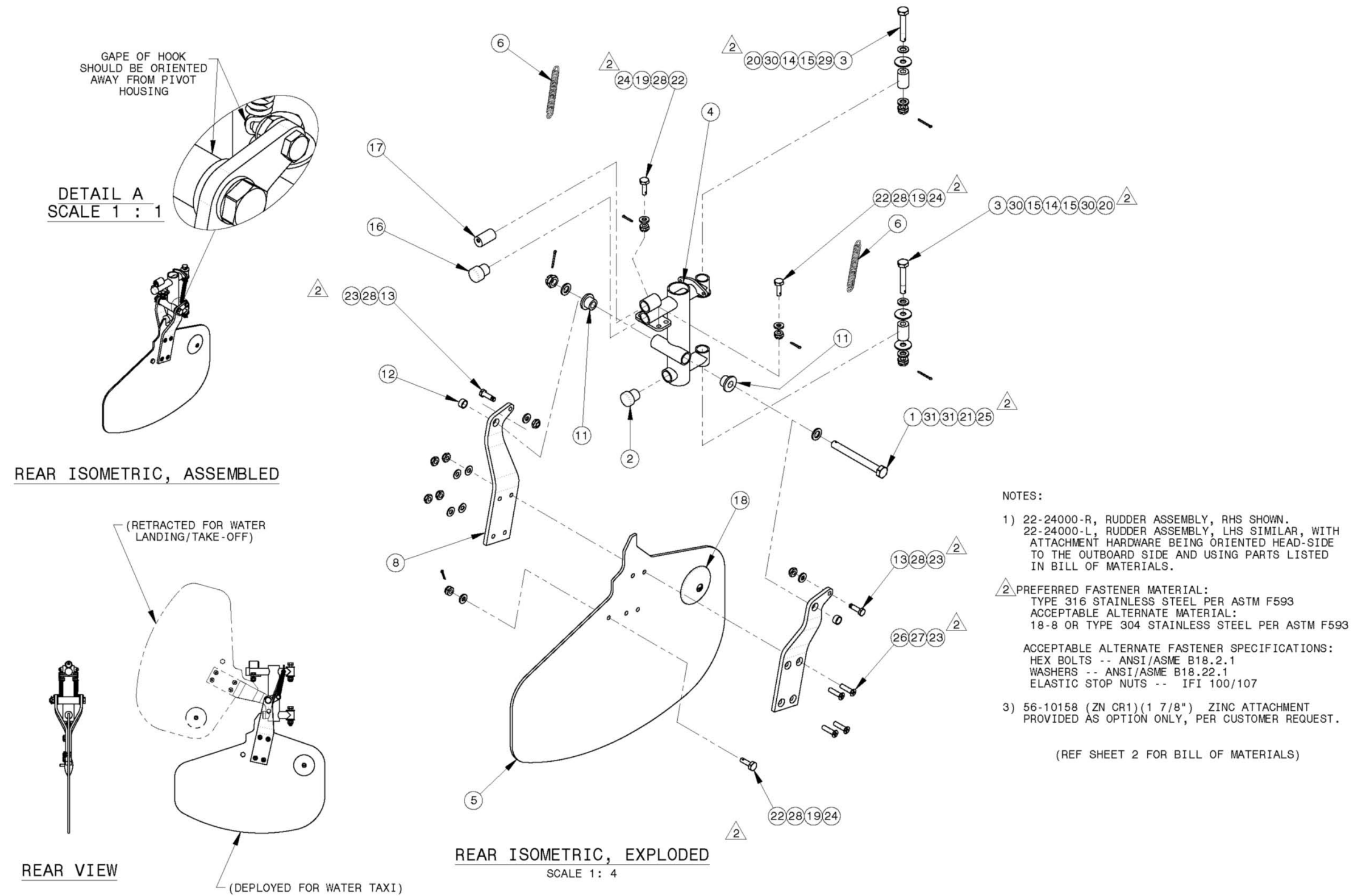

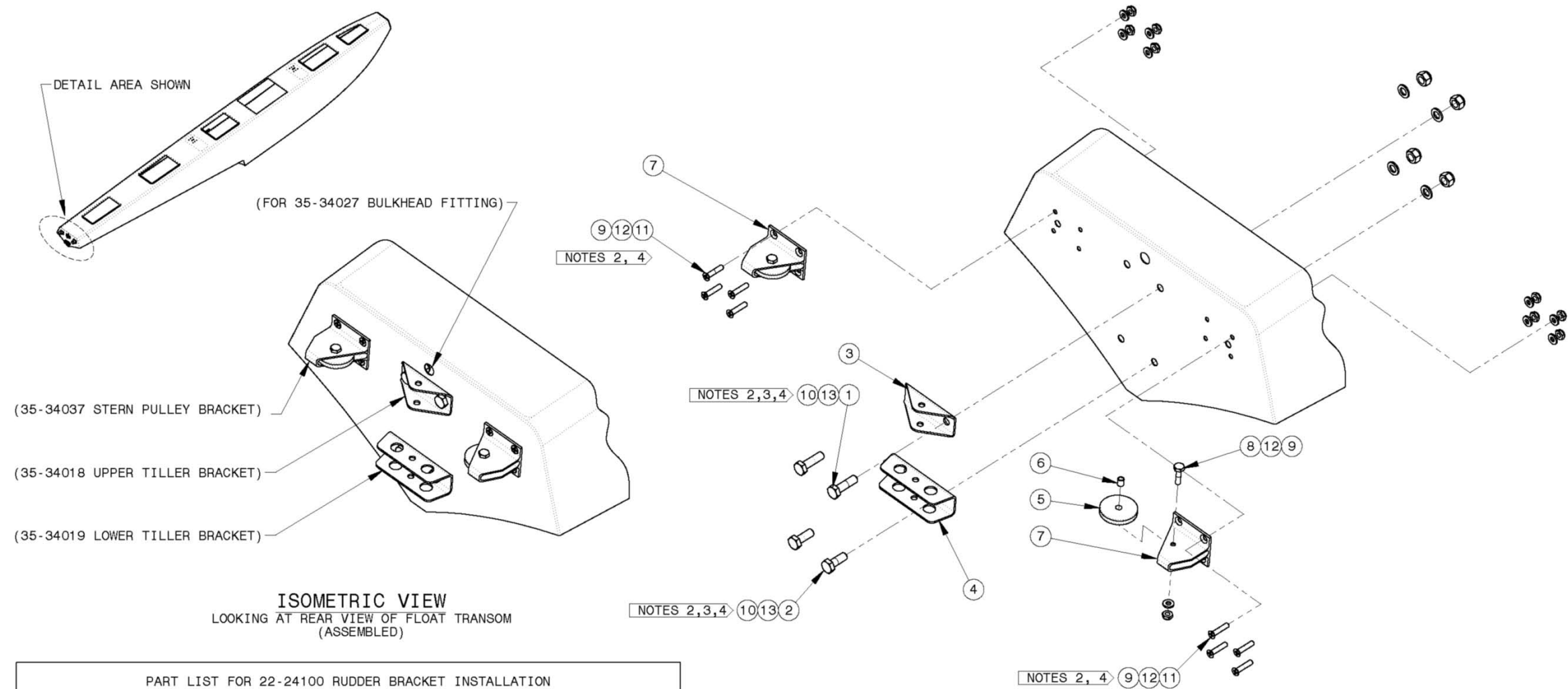


Figure 5.1.22, Rudder Assembly, 22-24000

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	90 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
			REVISION	03

PARTS LIST FOR 22-24000 RUDER ASSEMBLY					
	RHS/QTY	LHS/QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	1	PART	22-24007	BOLT - MACHINE, STAINLESS
2	1	1	PART	22-24024	RUDDER STOP, LOWER
3	2	2	PART	22-24154-14	BOLT - MACHINE, STAINLESS
4	1	1	ASSY	22-34010	TILLER ASSEMBLY
5	1	1	PART	22-34020	RUDDER BLADE, MODEL 2200 SERIES FLOATS
6	2	2	PART	22-34023	WATER RUDDER RETRACT SPRING
7	1	-	PART	22-34025-1	RUDDER YOKE, LHS, NO COUNTERSINKS
8	-	1	PART	22-34025-1C	RUDDER YOKE, LHS, COUNTERSUNK
9	-	1	PART	22-34025-2	RUDDER YOKE, RHS, NO COUNTERSINKS
10	1	-	PART	22-34025-2C	RUDDER YOKE, RHS, COUNTERSUNK
11	2	2	PART	22-34029	TILLER BUSHING
12	2	2	PART	22-34031	RUDDER YOKE BUSHING
13	2	2	PART	22-34045	YOKE SPRING BOLT
14	2	2	PART	35-34021	TILLER BUSHING
15	4	4	PART	35-34022	TILLER WASHER
16	1	1	PART	35-34024	RUDDER STOP
17	1	1	PART	35-34026	CABLE GUIDE
18	1	1	PART	56-10158	ZINC ANODE ASSEMBLY
19	3	3	HRDWR	AN310C3	NUT, CASTELLATED, STAINLESS
20	2	2	HRDWR	AN310C4	NUT, CASTELLATED, STAINLESS
21	1	1	HRDWR	AN310C5	NUT, CASTELLATED, STAINLESS
22	3	3	HRDWR	AN3C5	BOLT - MACHINE, AIRCRAFT
23	6	6	HRDWR	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
24	3	3	HRDWR	MS24665-151	COTTER PIN
25	3	3	HRDWR	MS24665-153	COTTER PIN
26	4	4	HRDWR	MS24694C54	MACHINE SCREW, FLAT COUNTERSUNK HEAD, 100°
27	4	4	HRDWR	NAS1149C0332R	WASHER, FLAT, STAINLESS
28	5	5	HRDWR	NAS1149C0363R	WASHER, FLAT, STAINLESS
29	1	2	HRDWR	NAS1149C0416R	WASHER, FLAT, STAINLESS
30	3	2	HRDWR	NAS1149C0463R	WASHER, FLAT, STAINLESS
31	2	2	HRDWR	NAS1149C0563R	WASHER, FLAT, STAINLESS

Figure 5.1.22 (cont'd) 22-24000 Rudder Assembly



PART LIST FOR 22-24100 RUDDER BRACKET INSTALLATION				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	2	PART	22-24155-10A	BOLT - MACHINE, STAINLESS
2	2	PART	22-24155-6A	BOLT - MACHINE, STAINLESS
3	1	PART	35-34018	UPPER TILLER BRACKET
4	1	PART	35-34019	LOWER TILLER BRACKET
5	2	PART	35-34030	PULLEY
6	2	PART	35-34036	PULLEY BUSHING
7	2	PART	35-34037	STERN PULLEY BRACKET
8	2	HRDWR	AN3C6A	BOLT - MACHINE, AIRCRAFT
9	10	HRDWR	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
10	4	HRDWR	MS21083C5	NUT, SELF-LOCKING
11	8	HRDWR	MS24694C56	MACHINE SCREW, FLAT COUNTERSUNK HEAD, 100°
12	10	HRDWR	NAS1149C0363R	WASHER, FLAT, STAINLESS
13	4	HRDWR	NAS1149C0563R	WASHER, FLAT, STAINLESS

NOTES:

- INSTALLATIONS FOR RIGHT HAND AND LEFT HAND SIDES ARE IDENTICAL.
- SEAL ALL FASTENERS THAT PASS THROUGH FLOAT SHELL STRUCTURE WITH SIKAFLEX 292 OR EQUIVALENT URETHANE ADHESIVE.
- PREFERRED FASTENER MATERIAL:
TYPE 316 STAINLESS STEEL PER ASTM F593

ACCEPTABLE ALTERNATE MATERIAL:
18-8 OR TYPE 304 STAINLESS STEEL PER ASTM F593

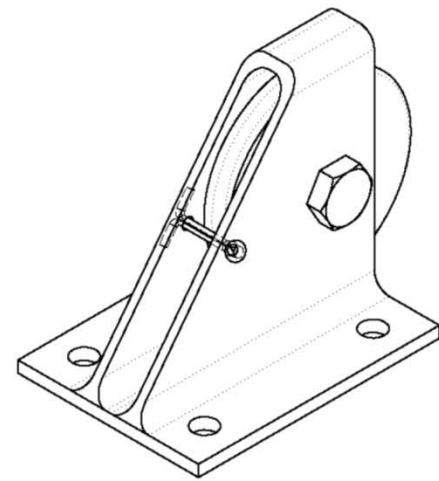
ACCEPTABLE ALTERNATE FASTENER SPECIFICATIONS:
HEX BOLTS -- ANSI/ASME B18.2.1
WASHERS -- ANSI/ASME B18.22.1
ELASTIC STOP NUTS -- IFI 100/107

NOTES: (CONT'D)

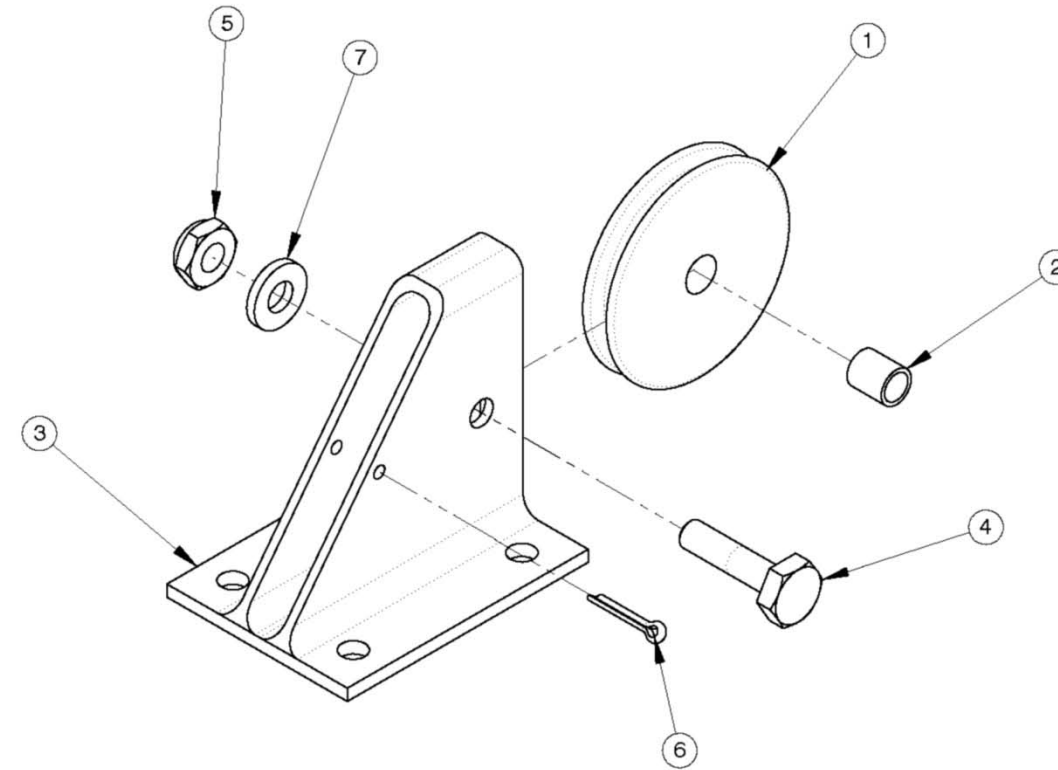
- VARIATION IN LAMINATE THICKNESSES MAY REQUIRE ADJUSTMENT OF WASHER COUNT OR THICKNESS IN AREAS INDICATED.

Figure 5.1.23, Rudder Bracket Installation, 22-24100

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	92 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	



ISOMETRIC
(ASSEMBLED)



ISOMETRIC
(EXPLODED)

PARTS LIST FOR 35-34039 PULLEY BRACKET ASSEMBLY				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	PART	35-34030	PULLEY
2	1	PART	35-34036	PULLEY BUSHING
3	1	PART	35-34041	INTERNAL PULLEY BRACKET
4	1	HRDWR	AN3C6A	BOLT - MACHINE, AIRCRAFT
5	1	HRDWR	MS21083C3	NUT, SELF-LOCKING, LOW HEIGHT, STAINLESS
6	1	HRDWR	MS24665-151	COTTER PIN
7	1	HRDWR	NAS1149C0363R	WASHER, FLAT, STAINLESS

Figure 5.1.24, Pulley Bracket Assembly, 35-34039

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	93 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	

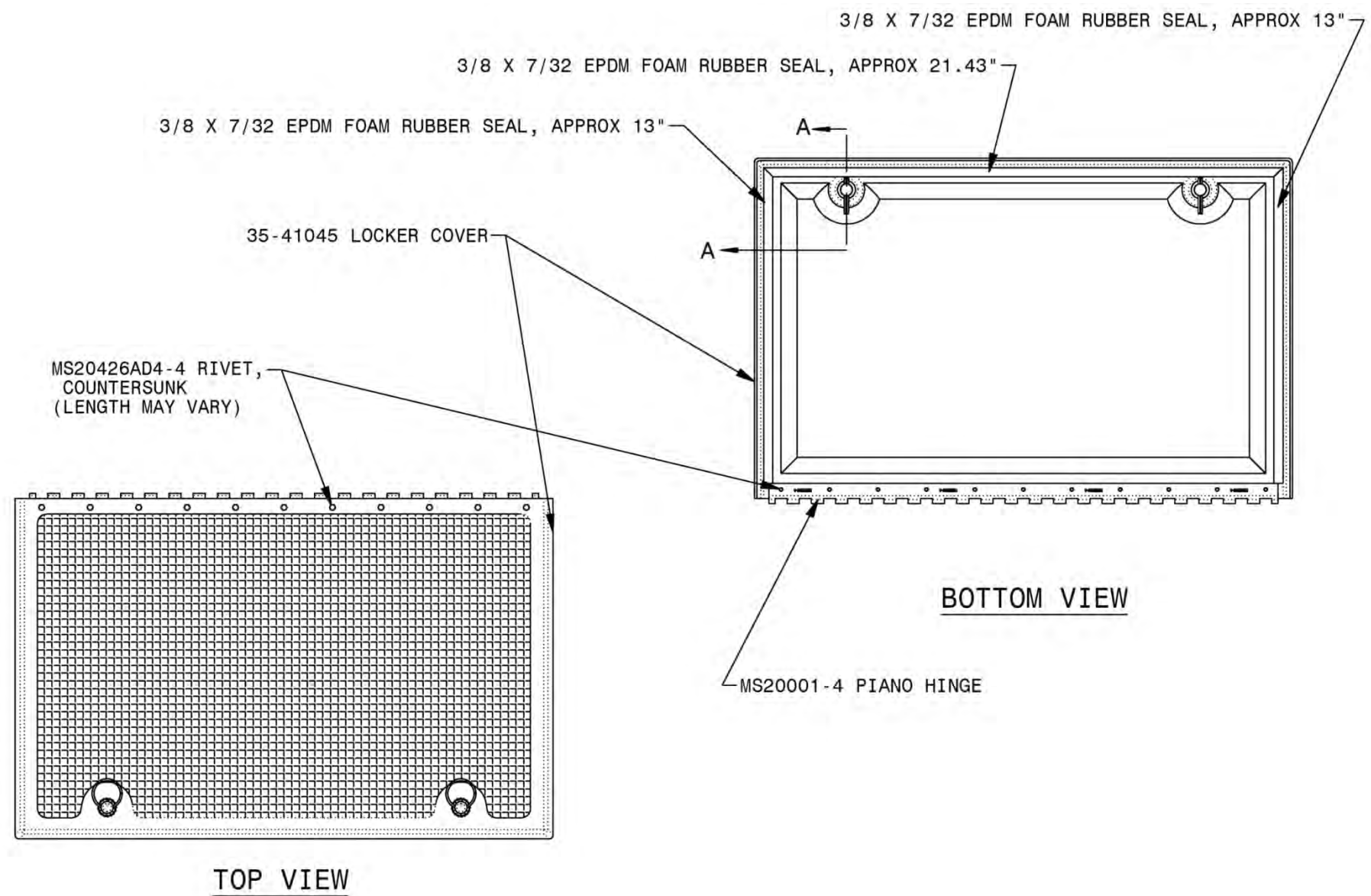
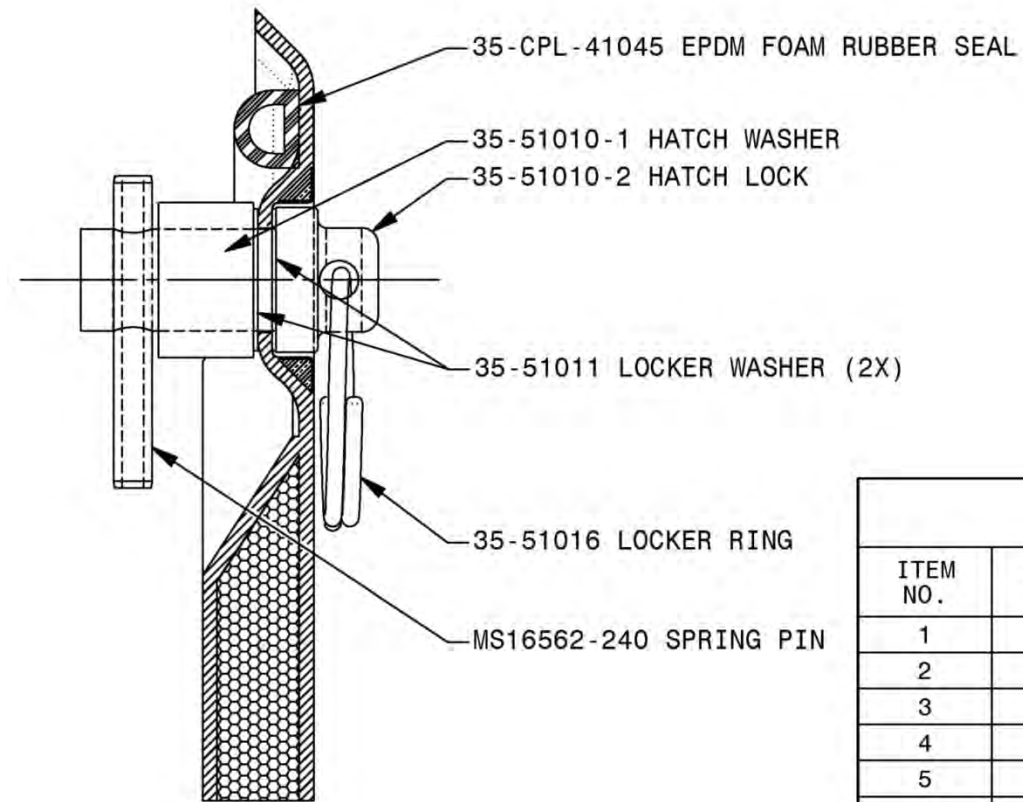


Figure 5.1.25, Locker Door Assembly, 35-41045

		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	94 of 103
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
REVISION DATE:	3/4/10	FILE NO.	A-10035	
		REVISION	03	



DOOR LATCH ASSEMBLY

BILL OF MATERIALS FOR 35A-41045 LOCKER DOOR ASSEMBLY				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	2	PART	35-51010-2	HATCH LOCK [PIN]
2	2	PART	35-51010-1	HATCH WASHER
3	4	PART	35-51011	WASHER
4	2	PART	35-51016	LOCKER RING
5	1	PART	35-41045	LOCKER COVER
6	2	HRDWR	MS16562-240	SPRING PIN
7	1	HRDWR	MS20001-4	PIANO HINGE
8	11	HRDWR	MS204026AD4-4	RIVET, 100° COUNTERSUNK HEAD, LENGTH A/R
9	1	HDWR	3/8 X 7/32	EPDM FOAM RUBBER SEAL, APPROX 13"
10	1	HDWR	3/8 X 7/32	EPDM FOAM RUBBER SEAL, APPROX 13"
11	1	HDWR	3/8 X 7/32	EPDM FOAM RUBBER SEAL, APPROX 21.43"

Figure 5.1.25, (cont'd) 35-41045 Locker Door Assembly

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	95 of 103
			FILE NO.	A-10035
REVISION DATE:	3/4/10	TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		REVISION	03	

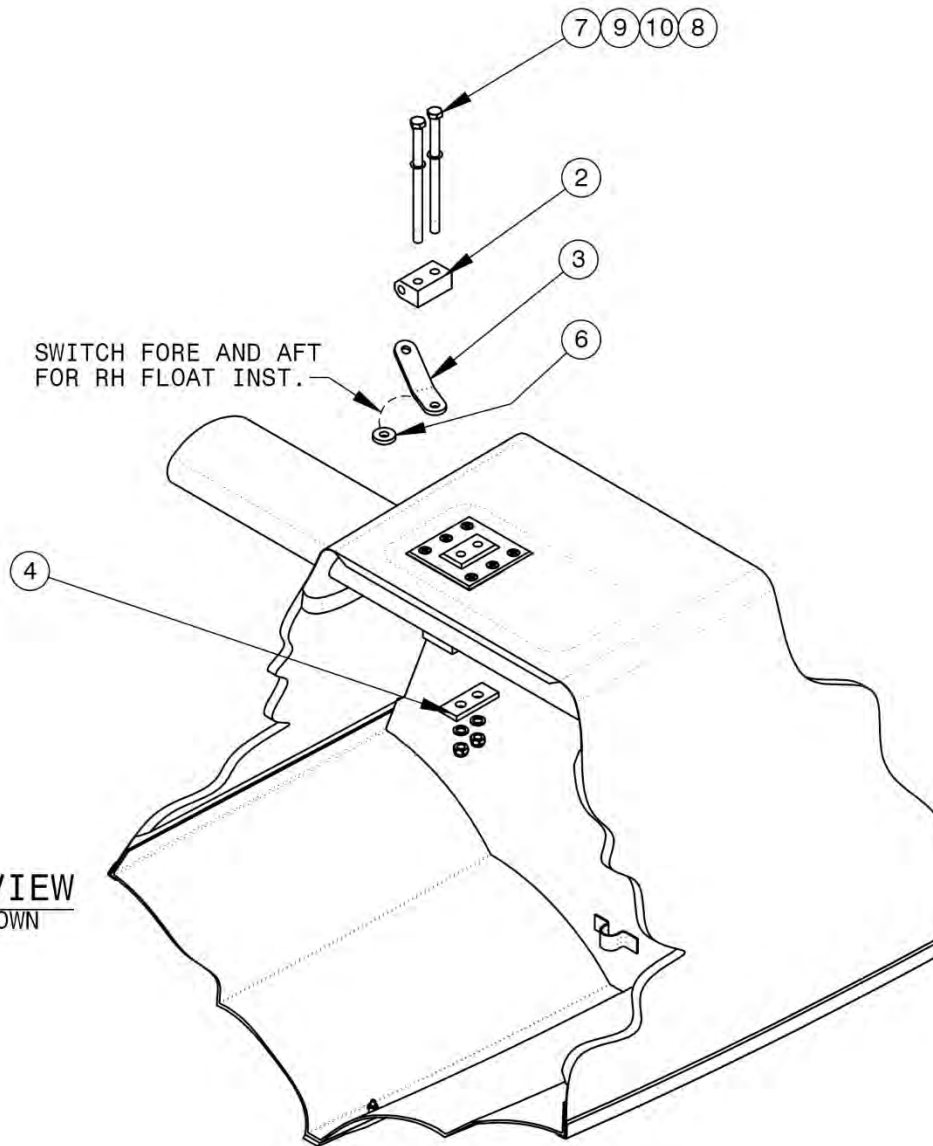
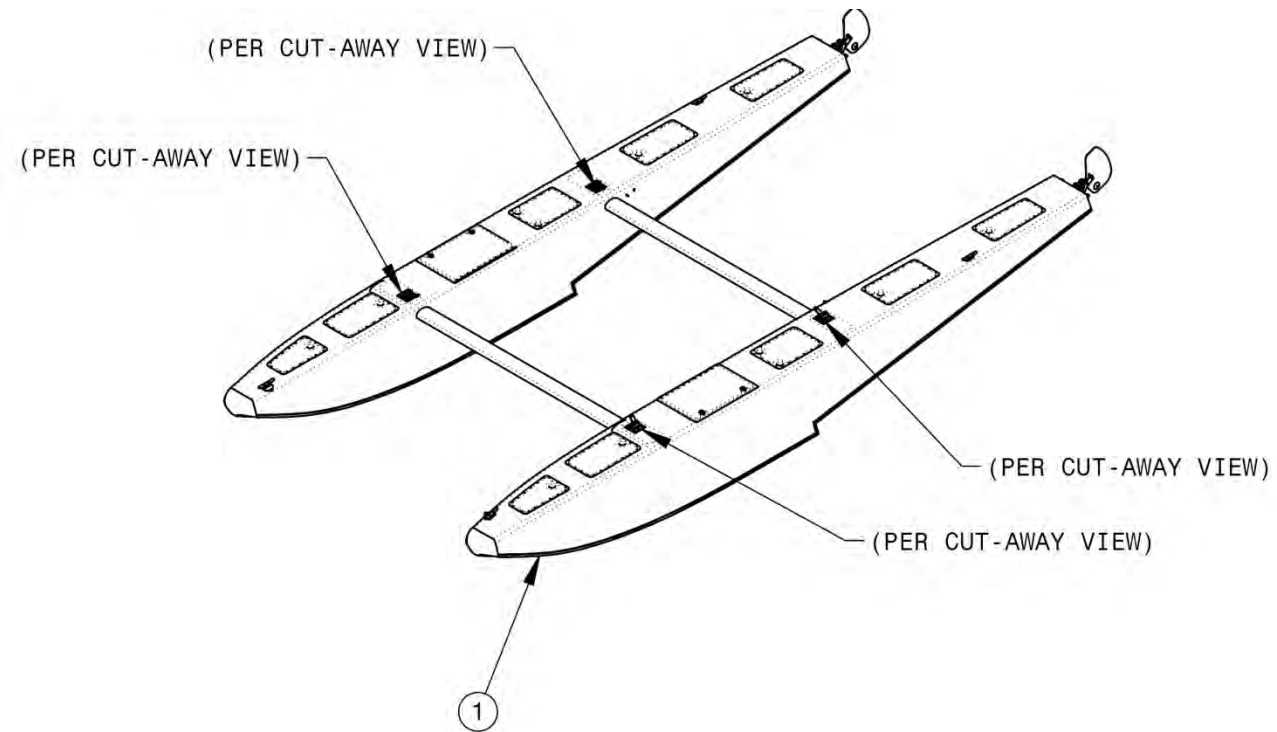
APPENDIX A

CATALOG PAGES FOR PA-18 "WIDE BODY" AIRCRAFT

List of Figures:

Assembly Number	Description	Figure Number
22-15014	SPREADER INSTALLATION, PA-18 "WIDE BODY"	A.1
22-15102	STRUT AND TIE ROD INSTALLATION ON PA-18 "WIDE BODY"	A.2-A.7
22-34038	TIE ROD ASSEMBLY [FOR PA-18 WIDE BODY]	A.8

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	96 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03

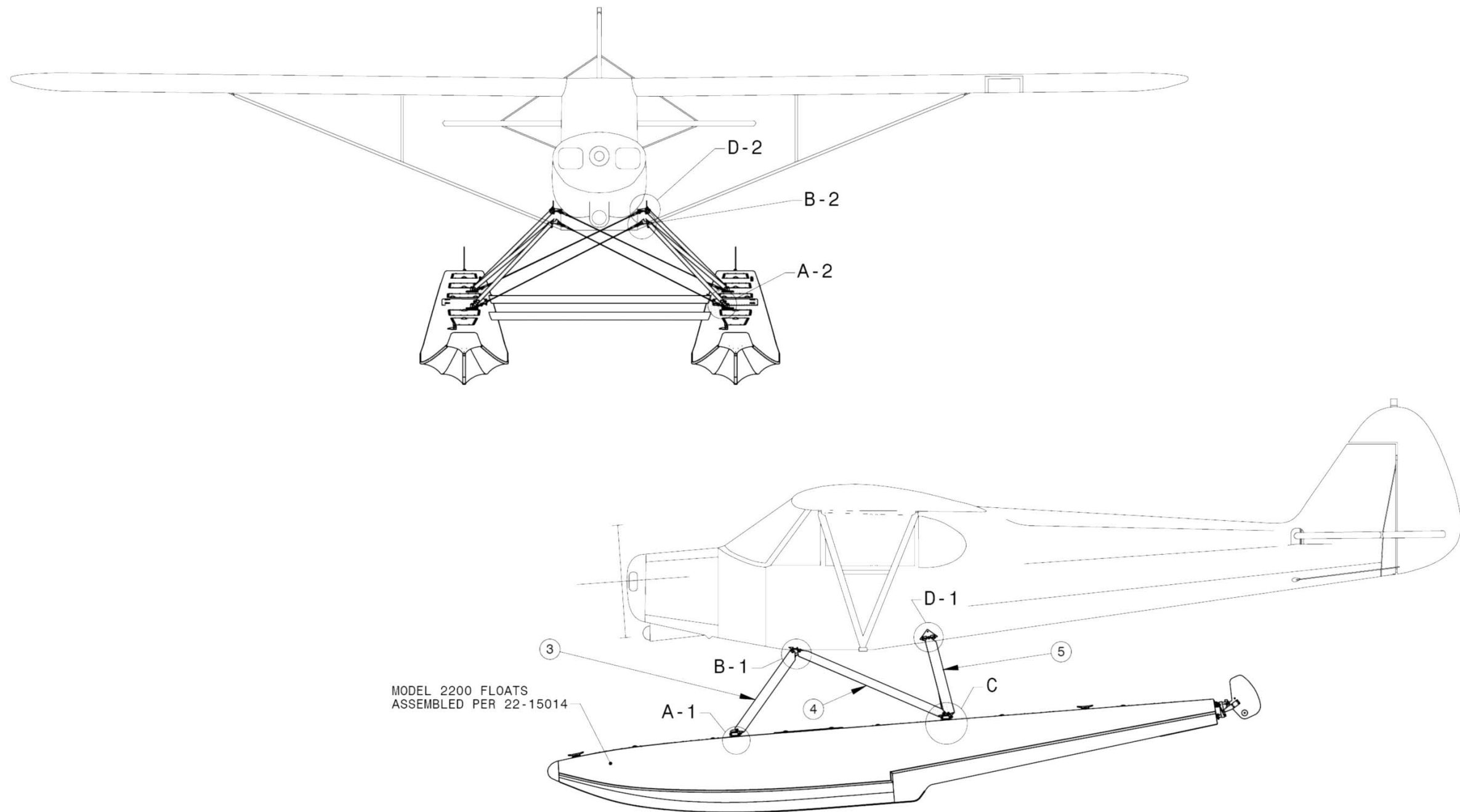


CUT-AWAY VIEW
LHS FLOAT SHOWN

PARTS LIST FOR 22-15014 SPREADER INSTALLATION, PA-18 "WIDE BODY"				
ITEM NO.	QTY	TYPE	PART NUMBER	DESCRIPTION
1	1	ASSY	22-20010-2	TSO ASSEMBLY, AEROCET MODEL 2200 FLOATS
2	4	PART	22-32105	DECK BLOCK, 2200
3	2	PART	22-32114	WIREPULL, 24 DEGREE
4	4	PART	22-32115	CLAMP BLOCK
5	2	PART	22-32116	WIREPULL, 26 DEGREE
6	4	PART	22-32120	SPACER
7	8	HRDWR	AN6-57A	BOLT - MACHINE, AIRCRAFT
8	8	HRDWR	MS21044N6	NUT, SELF-LOCKING, REGULAR HEIGHT
9	8	HRDWR	NAS1149D0616K	WASHER, FLAT
10	8	HRDWR	NAS1149D0663K	WASHER, FLAT

Figure A.1, 22-15014 [for PA-18 "Wide Body"]


		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		TITLE:	ICA Maintenance Manual for
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		PAGE	97 of 103	
		FILE NO.	A-10035	
		REVISION	03	

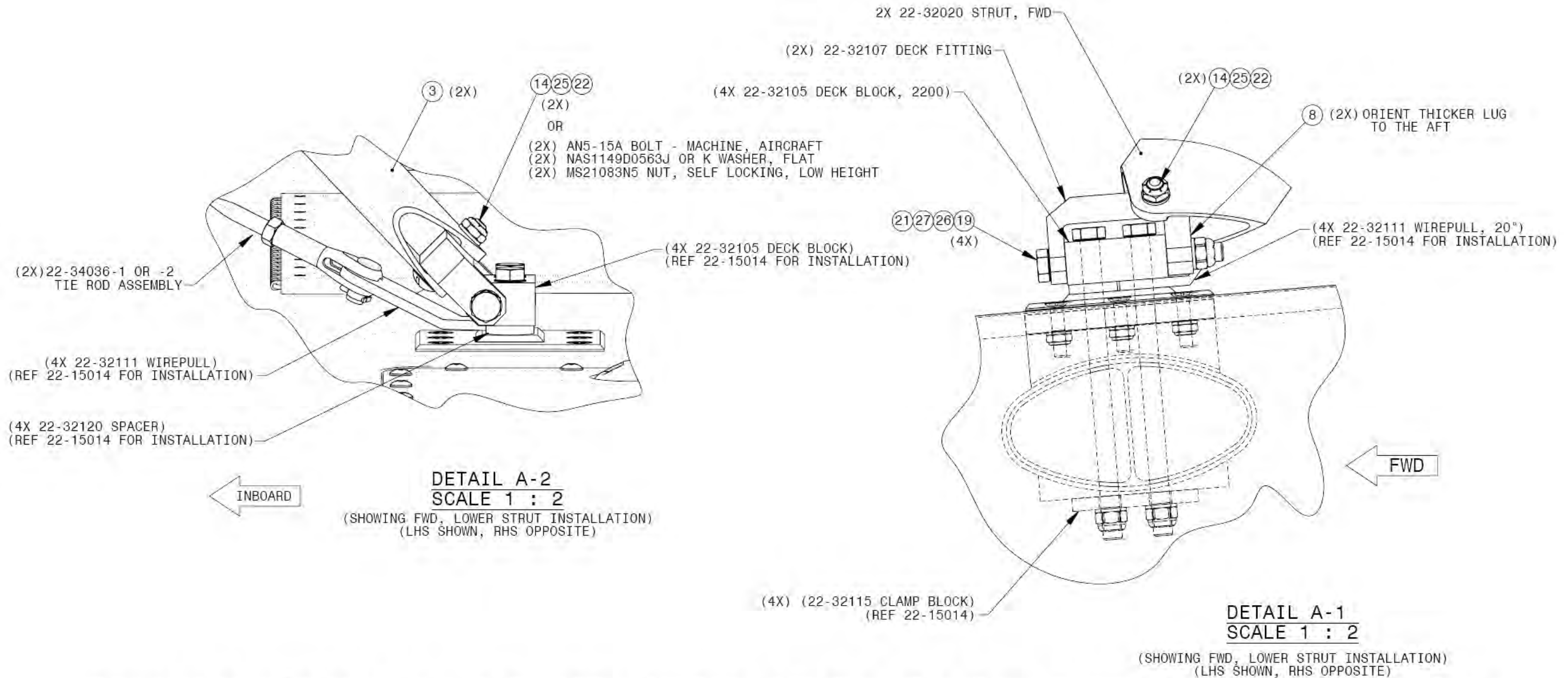


22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT

DETAIL VIEWS ARE SHOWN ON FOLLOWING SHEETS

Figure A.2, 22-15102 Strut Installation [for PA-18 "Wide Body"]

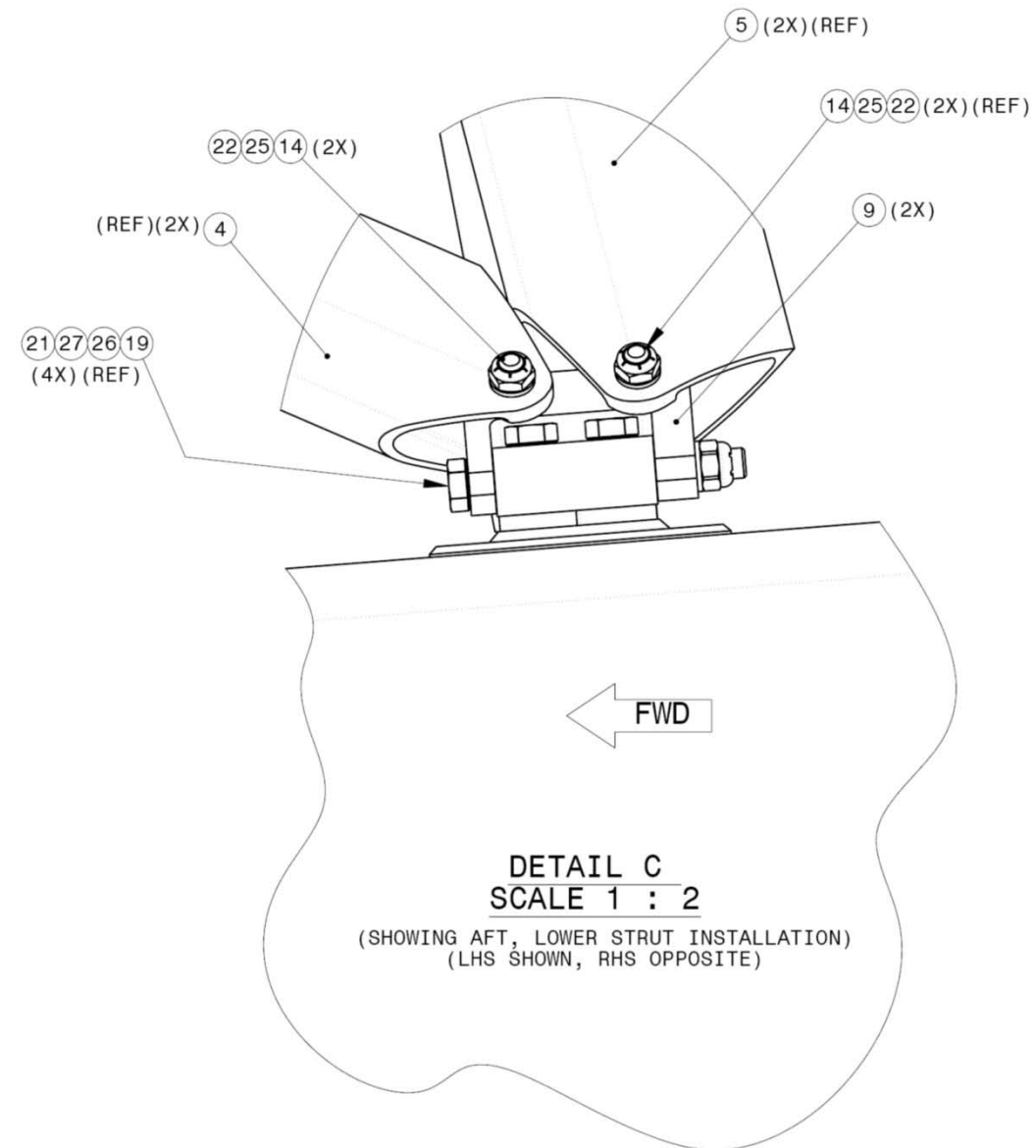
 Incorporated		PAGE	98 of 103
		FILE NO.	A-10035
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for 2200 Floats on PA-18 Piper, Super Cub model
REVISION DATE:	3/4/10	SUBTITLE:	
		REVISION	03



22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT

Figure A.3, 22-15102 Strut Installation [for PA-18 "Wide Body"]

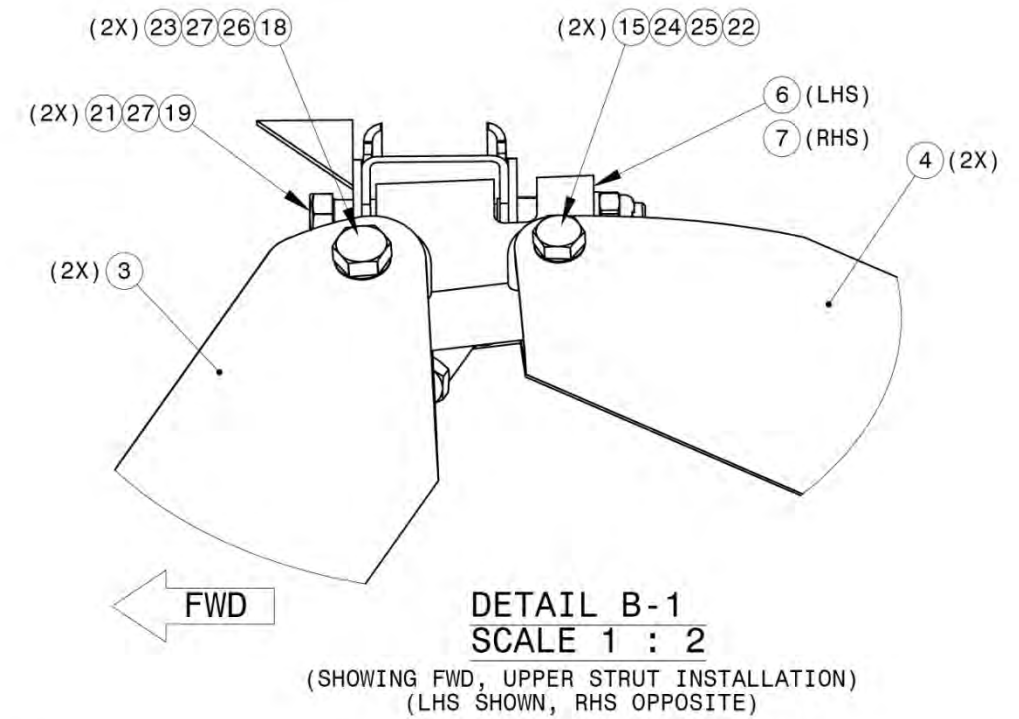
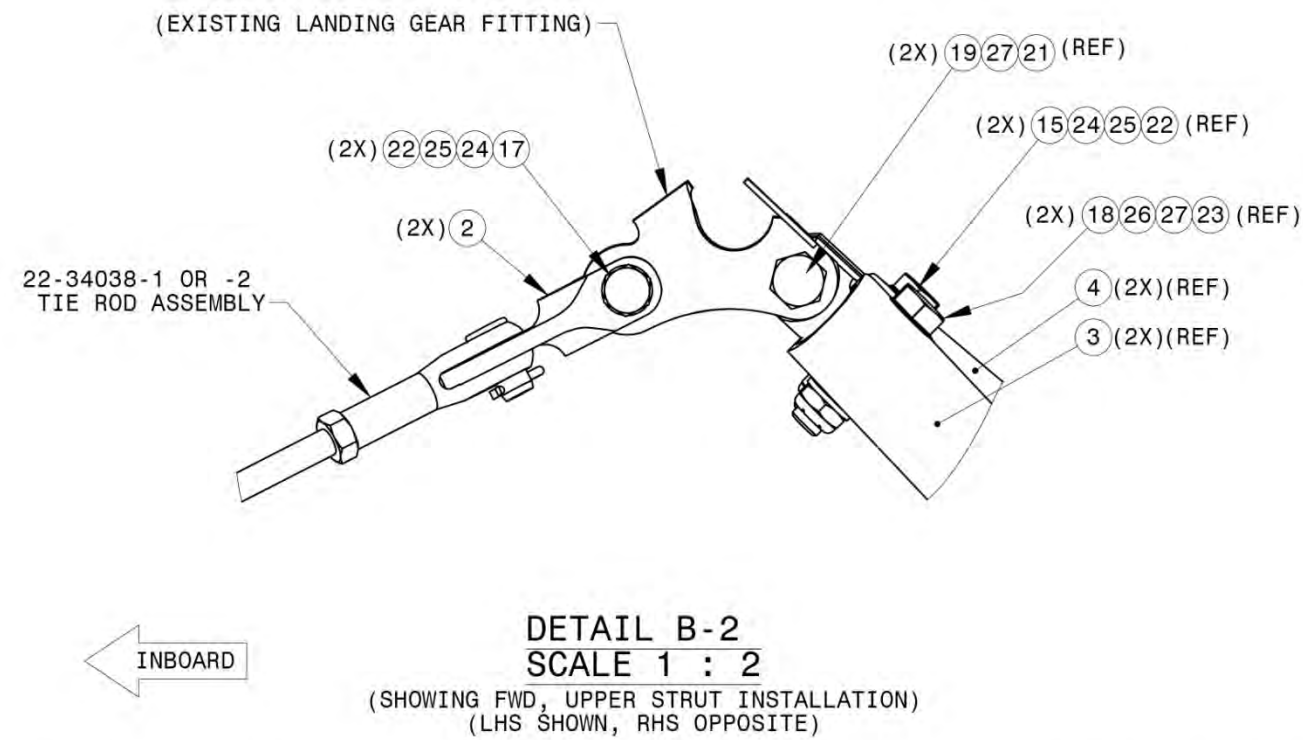
		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	99 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	



22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT

Figure A.4, 22-15102 Strut Installation [for PA-18 "Wide Body"]

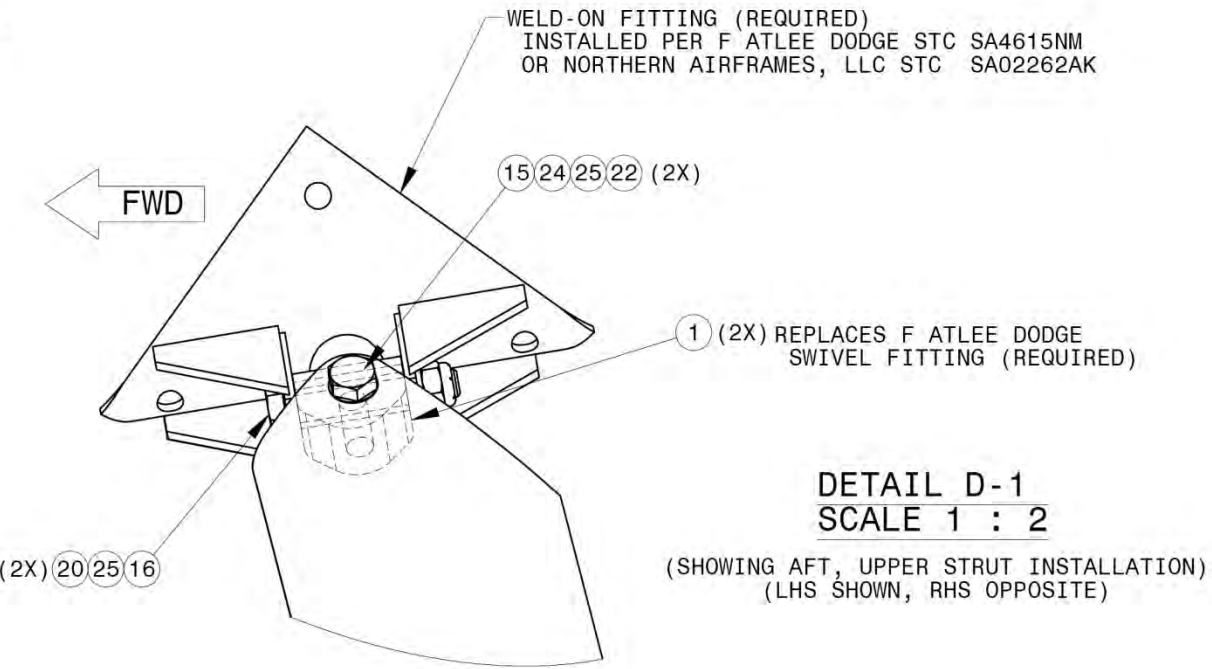
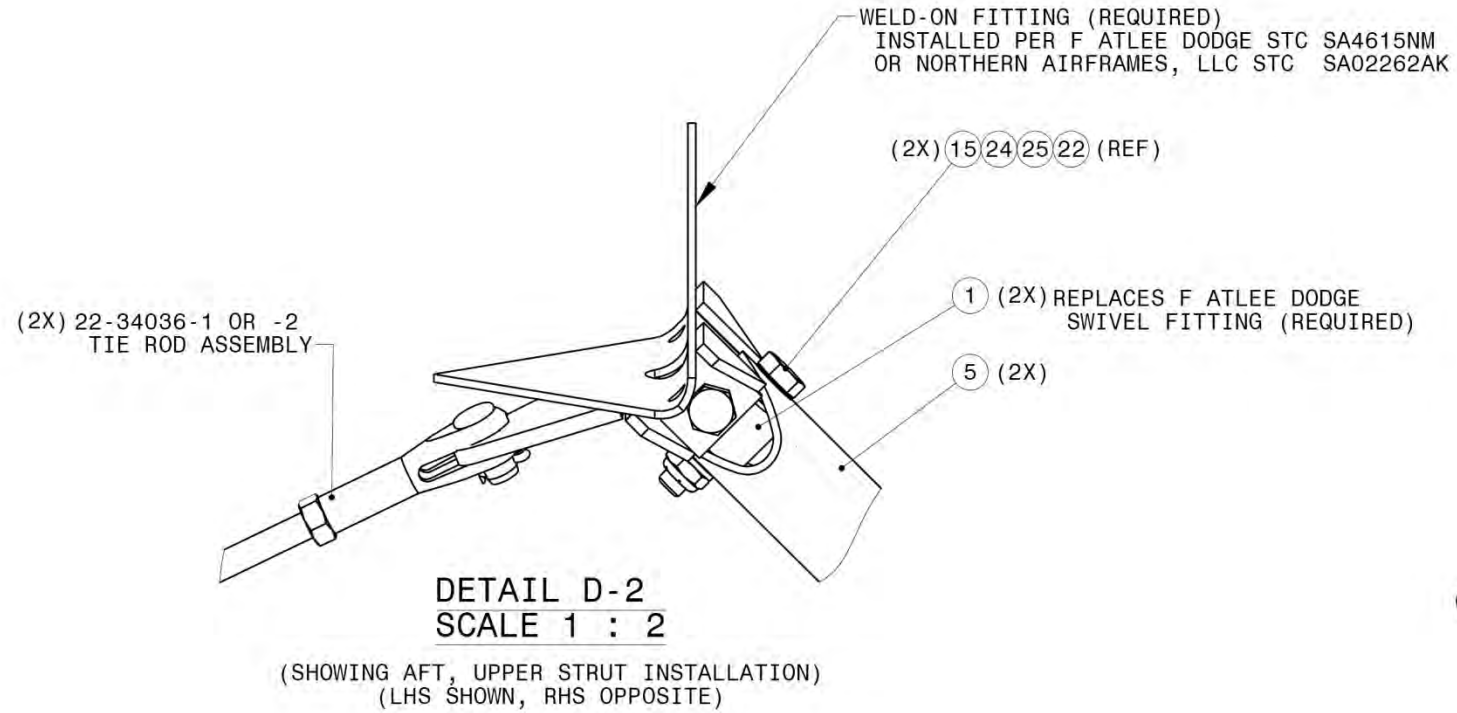
		AEROCET Incorporated		
ISSUE DATE:	4/14/2009		PAGE	100 of 103
		TITLE:	ICA Maintenance Manual for	
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
		FILE NO.	A-10035	
		REVISION	03	



22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT


Figure A.5, 22-15102 Strut Installation [for PA-18 "Wide Body"]

		AEROCET Incorporated			
ISSUE DATE:	4/14/2009	TITLE:	ICA Maintenance Manual for	PAGE	101 of 103
REVISION DATE:	3/4/10	SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	FILE NO.	A-10035
				REVISION	03



22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT

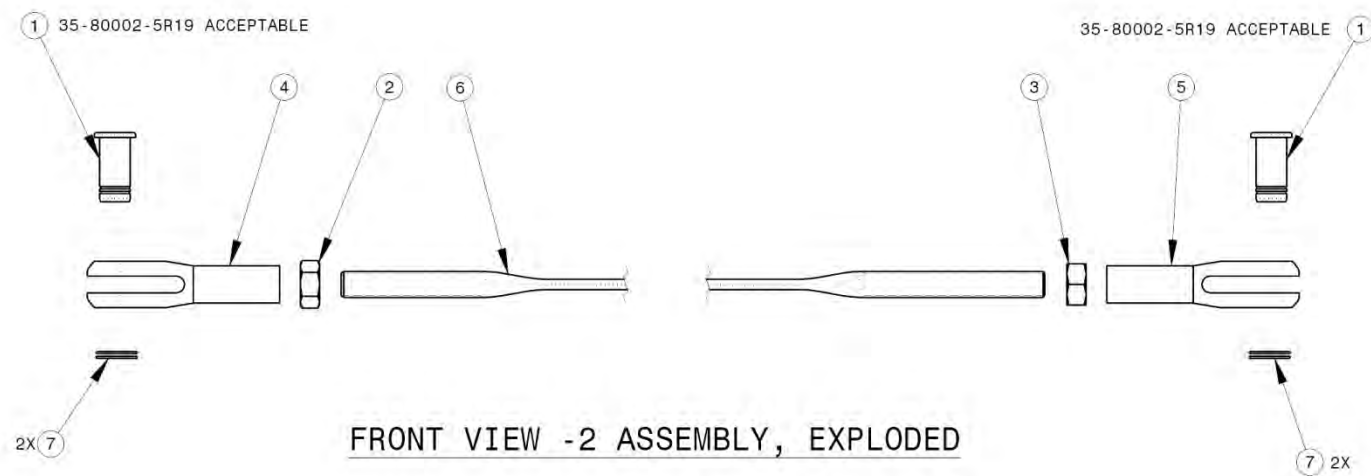
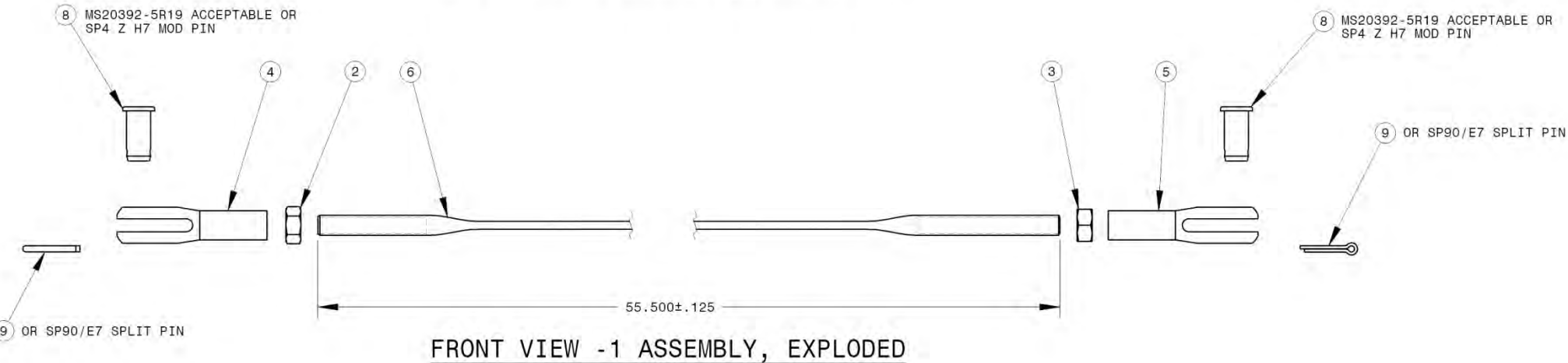
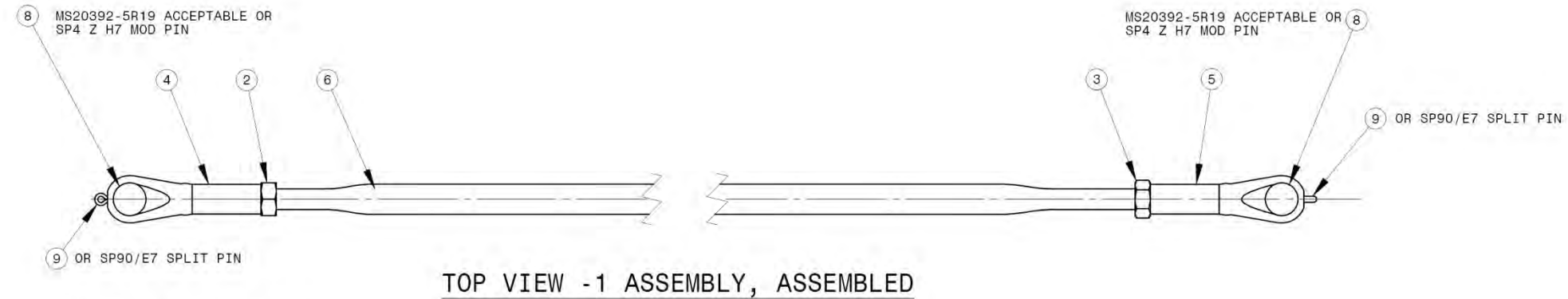
Figure A.6, 22-15102 Strut Installation [for PA-18 "Wide Body"]

		 Incorporated		
ISSUE DATE:	4/14/2009		PAGE	102 of 103
REVISION DATE:	3/4/10		FILE NO.	A-10035
		TITLE:	ICA Maintenance Manual for	
		SUBTITLE:	2200 Floats on PA-18 Piper, Super Cub model	
			REVISION	03

PARTS LIST FOR 22-15102 STRUT AND TIE ROD INSTALLATION ON PA-18 "WIDE BODY" AIRCRAFT WITH STC SA02187AK					
ITEM NO.	22-15102-1/QTY.	22-15102-2/QTY.	TYPE	PART NUMBER	DESCRIPTION
1	2	2	PART	22-15132	STRUT ATTACH FITTING, AFT
2	2	2	PART	22-15133	FWD WIREPULL
3	2	2	PART	22-32020	STRUT, FWD
4	2	2	PART	22-32021	STRUT, DIAGONAL
5	2	2	PART	22-32022	STRUT, AFT
6	1	1	PART	22-32030-1	FUSELAGE FITTING, FWD, LHS
7	1	1	PART	22-32030-2	FUSELAGE FITTING, FWD, RHS
8	2	2	PART	22-32107	DECK FITTING
9	2	2	PART	22-32108	DECK FITTING
10	2	-	ASSY	22-34036-1	TIE ROD ASSEMBLY
11	-	2	ASSY	22-34036-2	TIE ROD ASSEMBLY
12	-	2	ASSY	22-34038-2	TIE ROD ASSEMBLY
13	2	-	ASSY	22-34038-1	TIE ROD ASSEMBLY
14	6	6	HRDWR	AN25-25A	BOLT, CLEVIS
15	4	4	HRDWR	AN5-15A	BOLT - MACHINE, AIRCRAFT
16	2	2	HRDWR	AN5-17A	BOLT - MACHINE, AIRCRAFT
17	2	2	HRDWR	AN5-24A	BOLT - MACHINE, AIRCRAFT
18	2	2	HRDWR	AN6-15A	BOLT - MACHINE, AIRCRAFT
19	6	6	HRDWR	AN6-33A	BOLT - MACHINE, AIRCRAFT
20	2	2	HRDWR	MS21044N5	NUT, SELF-LOCKING, REGULAR HEIGHT
21	6	6	HRDWR	MS21044N6	NUT, SELF-LOCKING, REGULAR HEIGHT
22	12	12	HRDWR	MS21083N5	NUT, SELF-LOCKING, LOW HEIGHT
23	2	2	HRDWR	MS21083N6	NUT, SELF LOCKING, LOW HEIGHT
24	6	6	HRDWR	NAS1149D0516K	WASHER, FLAT
25	14	14	HRDWR	NAS1149D0563K	WASHER, FLAT
26	6	6	HRDWR	NAS1149D0616K	WASHER, FLAT
27	8	8	HRDWR	NAS1149D0663K	WASHER, FLAT

22-15102 STRUT AND TIE ROD INSTALLATION FOR PA-18 "WIDE BODY" AIRCRAFT

Figure A.7, 22-15102 Strut Installation [for PA-18 "Wide Body"]



ITEM NO.	22-34035-1 QTY	22-34035-2 QTY	TYPE	PART NUMBER	DESCRIPTION
1	-	2	PART	35-80002-5P19	PIN, STRAIGHT, HEADED, GROOVED SHANK
2	1	1	HRDWR	AN316C5L	JAM NUT, LEFT HAND THREADS
3	1	1	HRDWR	AN316C5R	JAM NUT, RIGHT HAND THREADS
4	1	1	HRDWR	AN665-61L	THREADED CLEVIS TERMINAL, LEFT HAND THREADS
5	1	1	HRDWR	AN665-61R	THREADED CLEVIS TERMINAL, RIGHT HAND THREADS
6	1	1	HRDWR	AN675AC-55500	STREAMLINE TIE ROD, 5/16"-24, 55 1/2" LONG
7	-	4	HRDWR	MS16624-4037	RETAINING RING, EXTERNAL
8	2	-	HRDWR	MS20392-5P19	CLEVIS PIN
9	2	-	HRDWR	MS24665-300	COTTER PIN

Figure A.8, 22-34038 Tie Rod Assembly [for PA-18 "Wide Body"]