

THE  
PEARSON FLYER 30  
OWNER'S MANUAL

PEARSON YACHTS  
OWNER'S GUIDE AND PROTECTION PLAN  
PEARSON-FLYER

\_\_\_\_\_  
Name of Boat

\_\_\_\_\_  
Registration No.

\_\_\_\_\_  
Port of Call

\_\_\_\_\_  
Owner's Name and Address

\_\_\_\_\_  
Radio Telephone Call No.

\* 29' 11"  
Length Overall

                      
Hull Number

\* 11' 3/4"  
Beam

6135 Lbs.  
\* Displacement

\* 48' 5"  
Mast Height above DWL

35  
Sail Number

\* 25' 0"  
Length Waterline

\* 5' 9"  
Draft

\*                       
Ballast

\* 8 Gals  
Fuel Capacity



## Foreword

Welcome aboard your new Pearson-Flyer. We are proud to have you join the thousands of other Pearson owners, and hope you will find this manual helpful and informative.

Your decision is a source of great satisfaction to us, and we are confident your new boat will provide the same for you. By selecting a Pearson, you have expressed a confidence in us. You can rest assured that we have made and will make every effort to support your trust.

Every Pearson Yacht is manufactured by dedicated professionals and craftsmen of the finest materials available. It asks only that you treat it as one of the family, and it will return all you can ask of it and more. This manual is intended to guide you through your first few days of ownership, as well as to provide information on care and maintenance that should be of value over the life of the yacht. Individual instruction manuals from the manufacturers of installed equipment are also included where more detailed information is required.

Before getting underway, please take a few moments to familiarize yourself with the operations and functions of the various systems designed into the Pearson-Flyer to insure proper operation. In the event that additional information is needed, we suggest you consult with your dealer or call our Customer Services Department.

Please accept our congratulations. Have fun and smooth sailing!

Sincerely,

PEARSON YACHTS

# TABLE OF CONTENTS

## SECTION 1

### GENERAL INFORMATION

#### INTRODUCTION

Paragraph  
1.1

## SECTION 2

### COMMISSIONING

#### INTRODUCTION

2.1

#### PRE LAUNCH CHECKS

2.2

HULL, DECK, AND MACHINERY

2.2.1

BEFORE MAST IS STEPPED

2.2.2

EQUIPMENT ON BOARD

2.2.3

#### POST LAUNCH CHECKS

2.3

HULL INSPECTION

2.3.1

ELECTRICAL AND MACHINERY INSPECTION

2.3.2

RIGGING AND SAIL

2.3.3

PLUMBING

2.3.4

GALLEY

2.3.5

#### OWNER RESPONSIBILITY

2.4

COAST GUARD REQUIRED EQUIPMENT

2.4.2

ADDITIONAL SAFETY EQUIPMENT

2.4.3

ANCHORS AND RODES

2.4.4

MEDICAL EQUIPMENT

2.4.5

TOOLS AND SPARE PARTS

2.4.6

TABLE OF CONTENTS

(continued)

SECTION 3

YACHT SYSTEMS

<u>SPARS AND RIGGING</u>	Paragraph 3.1
GENERAL DESCRIPTION	3.1.1
DOCKSIDE TUNING	3.1.2
UNDERWAY TUNING	3.1.3
CARE AND MAINTENANCE	3.1.4
<u>POWER SYSTEM</u>	3.2
INTRODUCTION	3.2.1
OVERALL DESCRIPTION	3.2.2
ENGINE DESCRIPTION	3.2.3
OPERATION	3.2.4
FUELING	3.2.5
OPERATOR MAINTENANCE	3.2.6
<u>ELECTRICAL SYSTEM</u>	3.3
GENERAL DESCRIPTION	3.3.1
CARE AND MAINTENANCE	3.3.4
<u>HULL SYSTEMS</u>	3.4
THRU-HULLS	3.4.1
PLUMBING	3.4.2
CARE AND MAINTENANCE	3.4.3

## TABLE OF CONTENTS

(continued)

### SECTION 4

#### MAINTENANCE SUMMARY

<u>INTRODUCTION</u>	Paragraph 4.1
<u>ROUTINE MAINTENANCE</u>	4.2
TOPSIDES, DECK, AND BELOW DECKS	4.2.2
BELOW THE WATERLINE	4.2.3
SPARS AND RIGGING	4.2.4
WINCHES	4.2.5
POWER SYSTEM	4.2.6
<u>LAYING UP</u>	4.3
BEFORE YACHT IS HAULED	4.3.2
AFTER YACHT IS HAULED	4.3.3
<u>FITTING OUT</u>	4.4

# TABLE OF CONTENTS

(continued)

## SECTION 5

### PEARSON FLYER 30

#### ONE-DESIGN CLASS RULES

#### INTRODUCTION

Paragraph  
5.1

#### GENERAL RULES

1 thru 6

#### CONSTRUCTION AND MEASUREMENT

Rule No.

MOLDED PARTS

1

INTERIOR

2

KEEL

3

RUDDER AND TILLER

4

MAST

5

BOOM

6

SPINNAKER POLE

7

STANDING RIGGING

8

RUNNING RIGGING

9

DECK HARDWARE AND EQUIPMENT

10

SAIL MEASUREMENT - GENERAL

11

MAINSAIL MEASUREMENTS

12

GENOA MEASUREMENTS

13

JIB MEASUREMENTS

14

SPINNAKER MEASUREMENTS

15

MISCELLANEOUS RULES

16

EQUIPMENT

17

## LIST OF ILLUSTRATIONS

<u>TITLE</u>	<u>FIGURE NO.</u>
TYPICAL RIGGING SCHEMATIC	3.1-1
MASTHEAD ASSEMBLY	3.1-2
JIB BOX	3.1-3
T-TERMINAL INSTALLATION FOR UPPER AND LOWER SHROUDS	3.1-4
OUTHAUL ASSEMBLY	3.1-5
JIFFY REEFING, INTERNAL AFT REEFING	3.1-6
MAINSHEET REEVING	3.1-7
FUEL SYSTEM SCHEMATIC, DIESEL ENGINES	3.2-1
TYPICAL PROPELLER SHAFT ALIGNMENT	3.2-2
ELECTRICAL SYSTEM	3.3-1
BONDING SCHEMATIC	3.3-2
THRU-HULL LOCATION AND DOCKING PLAN	3.4-1
FRESH WATER SYSTEM	3.4-2
KEEL PLAN (CLASS RULES)	PLAN A
RUDDER PLAN (CLASS RULES)	PLAN B
PEARSON FLYLR EMBLEM (CLASS RULES)	PLAN C
DECK PLAN (CLASS RULES)	PLAN D
SAIL PLAN (CLASS RULES)	PLAN E



## SECTION 1

### GENERAL INFORMATION

#### 1.1 INTRODUCTION.

1.1.1 The Pearson flyer is a high performance, one-design auxiliary yacht. It is also designed to be competitive in other racing circuits under any existing rules, and to remain competitive for many years regardless of rule changes. The 7/8 fractional rig with tapered mast, allows quick adjustment for maximum response at all points of sailing, under a wide variety of wind and wave conditions. At the same time, the easily handled rig makes it a pleasure for relaxed day sailing or for short cruises. Careful attention to strong but lightweight construction as well as keeping the installed equipment inventory down to necessary items only, results in a power-to-weight ratio that provides delightful and exciting sailing. The BMW D7 single cylinder, diesel engine provides dependable auxiliary power without excessive weight contribution.

- 1.2 The commissioning procedure (section 2) covers the procedures that should be followed when commissioning the yacht. It includes the procedures that are normally followed by the dealer or by Pearson at the time of commissioning, as well as those items (such as safety equipment) that are the owners' responsibility. This section should also prove useful in subsequent recommissionings after periods of layup.
- 1.3 Section 3 of the manual describes the various systems installed in the yacht. Reference is made to manufacturers' instructions such as the BMW engine manual whenever practicable, with additional details being supplied wherever the installation varies from the general conditions assumed in the literature. Additional adjustment and maintenance procedures are also included.
- 1.4 Section 4 provides a maintenance summary covering the procedures that should be followed in order to maintain the beauty and serviceability of the Pearson Flyer. There are three subsections; routine maintenance, laying up procedures, and fitting out procedures. Reference is made to manufacturers' literature where appropriate.

- 1.5 Section 5 introduces and includes the latest edition of the one-design class rules for the Pearson Flyer 30. The rules are presented in their entirety using the same numbering system and figure designations formulated for the class association.
- 1.6 Manufacturers' literature on items such as the engine, winches, etc., is supplied with the yacht at commissioning. This manual is designed to supplement this literature, not to replace it. The literature should be retained and read carefully to ensure good dependable service.



## SECTION 2

### COMMISSIONING

#### 2.1 INTRODUCTION

2.1.1 The importance of a proper commissioning procedure for a new yacht cannot be over-estimated. It includes the launching and rigging of the yacht, as well as making certain that all standard and optional equipment is installed and operating. Essentially, it is the start of the yacht's life.

2.1.2 The first commissioning will be performed by company or dealer personnel with owner participation required only in those areas of owner responsibility delineated in paragraph 2.4. However, a complete series of pre-launch and post-launch checks have been provided in this section for those owners interested in understanding the commissioning procedure, as well as for use as a guide for any recommissionings that may be required after periods of wet or dry storage. The lists assume performance by persons cognizant of the procedures that are required, and do not attempt to provide step by step instructions. Detailed procedures are available in section 3 of this manual, and in the individual manufacturers instructions that are provided with the yacht.

2.1.3 The factory installed optional equipment, and items of owner responsibility that require attention during commissioning have been included, with the optional items marked with an asterisk (\*), and the items involving owner responsibility marked with a double asterisk (\*\*). Additional details on items of owner responsibility are provided in paragraph 2.4 of this section.

#### 2.2 PRE-LAUNCH CHECKS

2.2.1 HULL, DECK, MACHINERY. Check topsides, decks, and all interior spaces for cleanliness and proper finish. Make certain that all foreign matter has been removed from the bilge areas, and check the following specific items:

\* a. Installation of optional equipment completed.

- \* Compass
- \* Two burner stove
- \* Table
- \* Speedometer
- \* Depth Sounder

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\_\_\_\_\_  
\_\_\_\_\_

\* b. Thru-hulls associated with optional equipment in place.

\* Speedometer

\* Depth Sounder

\* c. All thru-hull valves lubricated and closed, all hose clamps tight.

d. Propeller nut and cotter pin properly made up.

e. Rudder operational.

\* f. Anti-fouling bottom paint applied.

g. Engine installation work completed.

h. Engine oil and transmission fluid levels satisfactory.

i. Battery fully charged, tied down, connected, electrolyte at proper level.

j. All electrical switches OFF.

k. Fuel valve closed.

l. Adequate amount of fuel in tank.

2.2.2 BEFORE MAST IS STEPPED. Check the following items:

a. Shrouds, stays, spreaders, installed and properly secured to masts.

b. Masthead light operational.

\* c. Mast mounted instrument units operational.

d. All chafe points on mast properly taped.

2.2.3 EQUIPMENT ON BOARD. Check the following items:

a. Winch handles.

\*\* b. Anchors and rode.

\*\* c. Dock lines and fenders.

**\*\* d. Safety equipment (see paragraph 2.4)**

PFDs (life preservers) *whistles, lights*  
Throwable horseshoe or ring buoy  
Horn  
Ships bell  
Emergency signals (flares etc.)  
Other

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**NOTE**

Additional safety equipment may be required for one-design or for certain other racing circuits. Consult paragraph 2.4.3 and Section 5 for further information.

**\*\* e. Medical kit**

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**\*\* f. Spars and tool kit**

**2.3 POST LAUNCH CHECKS**

**2.3.1 HULL INSPECTION.** Make an overall inspection of the hull interior. Check bilge areas for evidence of major leaks near thru-hulls, and then make the following specific checks:

- a. Open all thru-hull seacocks. Check each valve and associated hoses, couplings, etc.

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**NOTE**

Unless optional or owner responsible equipment has been installed, the engine intake will be the only seacock in the boat.

- b. Check the propeller shaft packing gland for nominal adjustment. Unless major leaking is observed, defer adjustment until paragraph 2.3.2 step e.

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- c. Check propeller shaft alignment, align if necessary, connect coupling.

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2.3.2 ELECTRICAL AND MACHINERY INSPECTION. Make the following checks:

- a. Energize the battery ON/OFF switch and the main circuit breaker on the electrical panel, and check for 12 volts at the switch panel. \_\_\_\_\_
- b. Make an operational check of all circuits connected to the panel. \_\_\_\_\_
- c. Tie the yacht down securely, open the fuel valve and start the engine. Operate the engine at low speeds in neutral, forward and reverse. Check the following:
  - (1) Throttle and shift control. \_\_\_\_\_
  - (2) Charging current. (AMP indicator extinguished) \_\_\_\_\_
  - (3) Water temperature. (WATER indicator extinguished) \_\_\_\_\_
- d. Check the entire fuel system for leakage. \_\_\_\_\_
- e. Recheck the shaft packing gland for proper adjustment. Adjust if necessary. \_\_\_\_\_

2.3.3 RIGGING AND SAIL. Check the following after the mast is in place.

- a. All standing rigging complete and in place, dockside tuning completed. \_\_\_\_\_
- b. All cotter pins in place and taped. \_\_\_\_\_
- c. Running rigging in place. \_\_\_\_\_
- d. Sails hoisted to check fit. \_\_\_\_\_

2.3.4 PLUMBING. Check the following:

- a. Water tank full, no leaks. \_\_\_\_\_
- b. Sink, hand-pump, and drain operational. \_\_\_\_\_
- c. Bilge pump operational. \_\_\_\_\_
- d. Porta-potti on board. \_\_\_\_\_

2.3.5 GALLEY. Check the following:

- a. Portable ice-chest on board. \_\_\_\_\_
- b. Two burner stove installed and operating \_\_\_\_\_

2.3.6 ADDITIONAL OPTIONS. List any options not previously mentioned in the post-launch inspection. Make an operational check on each.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

## 2.4 OWNER RESPONSIBILITY.

2.4.1 A number of items such as sails and safety equipment that must be considered during commissioning are the responsibility of the owner. The brand, type, and cut of sails is so dependent on the intended use of the yacht and on individual preference, that their listing in this manual would be impractical, and is more properly the domain of the selected sailmaker. However, it must be remembered that if it is intended to operate in the Pearson Flyer one-design class, the sails selected must conform to the measurements and specifications listed in the class specifications (section 5 of this manual).

Many safety items are required for compliance with the U.S. Coast Guard regulations, and still others may be required by class rules or by certain racing circuit regulations. These, plus a number of other items recommended for use, are briefly described in the following paragraphs:

2.4.2 COAST GUARD REQUIRED EQUIPMENT. The current U.S. Coast Guard requirements for a vessel the size of the Pearson Flyer 30 call for the following safety equipment (minimum requirement).

- a. PFDs (life jackets). One type I, II, or III PFD for each person on board, plus one type IV (throwable) PFD in each boat. Type I is recommended for offshore cruising, type II is somewhat more wearable and is more suitable for closer inshore work. Although legally acceptable, the type III PFD does not have the capability of keeping an unconscious person's face out of the water. It is, however, more comfortable and thus more likely to be worn, making it worthy of consideration under certain conditions. The type IV throwable PFD can be a flotation cushion, a standard life ring, or a horseshoe ring. The horseshoe is preferred on sailing vessels since it is capable of being fastened in a secure quick-release bracket, and is also easier for a man in foul-weather gear to cling to. For offshore work it is used in conjunction with a man-over-board pole.

WARNING!

It is important that a PFD fit properly if it is to perform it's assigned task. Make certain that the PFDs are of suitable size for the people on board. This is especially important in regard to small children. REMEMBER - One PFD for each person on board.

- b. Fire Extinguishers. Two type B-I or one type B-II fire extinguisher for a vessel without fixed fire extinguishing equipment in the machinery space. If fixed fire extinguishing equipment is installed in the machinery space, one type B-I fire extinguisher is considered sufficient.
- c. Whistle or Horn. Hand or power operated, capable of producing a blast of 2 seconds or more duration, and audible for a distance of at least one mile.
- d. Bell. Bell signals are required when a vessel is at anchor in a fairway under conditions of restricted visibility. No specific size of bell is stipulated, but it must be capable of producing a clear, bell-like tone.



- e. Distress Signals. All vessels over 16 feet in length are required to carry visual distress signals for day and night use. Although the law can be satisfied by simply carrying 3 meteor flares and a launcher, or three hand-held flares, it is recommended that more attention be devoted to this subject. A flare pistol capable of firing meteor and parachute flares, along with a generous supply of flares, is excellent for night use, with smoke cannisters and dye markers being a good supplement for bright sunlight conditions.

#### NOTE

Regulations are subject to change. It is the owner's responsibility to be cognizant of current regulations and to ensure that his boat is properly equipped.

2.4.3 ADDITIONAL SAFETY EQUIPMENT. A number of additional safety items are worthy of consideration. These range from safety harnesses and man-over-board rigs, to emergency beacons, life rafts, and survival suits. Some of these items are mandatory for certain racing circuits, and in any event their use depends upon the intended use of the yacht.

#### CAUTION

It must be remembered that safety equipment must function properly when needed if it is to be properly classified as safety equipment. Coast Guard and manufacturer's care and inspection procedures should be followed carefully for any items requiring such.

2.4.4 ANCHORS AND RODES. The type anchors and rode that should be carried will depend on the expected cruising locations and on the personal preference of the owner. Class rules to be followed while racing one-design specify an anchor of any configuration (metal), a minimum weight of 10 pounds, and a 150 ft. rode with at least 4 feet of chain.

2.4.5 MEDICAL KIT. Every yacht should carry a first aid manual, and a medical kit tailored to the specific needs and capabilities of the owner. Items in the kit should include aspirin, motion sickness pills, and first aid items, as well as supplies of medications that are used regularly by crew members. Yachts engaging in extensive off-shore work should obtain the advice of a physician in regard to additional supplies.

2.4.6 TOOLS AND SPARE PARTS. Any well found yacht should carry tools and spare parts. As is the case with most items of owner responsibility, the make up of the tool kit and stock of spares are subject to variations that depend to a great extent on the skill and desires of the crew. When making up tool or spare kits, it should be remembered that the Pearson Flyer is intended to be a light displacement boat, and that tools and parts that are unlikely to be used can be a source of unwanted weight.

2.4.7 The prime sources for specific information concerning needed tools or spare parts are the manufacturers' instructions and manuals supplied with the yacht. Class rules and racing circuit instructions should also be consulted for certain items that they may require. Some additional suggestions are listed below:

#### TOOL KIT

- a. Wrenches (combination open-end and box) from 3/8 to 1 inch.
- b. Two adjustable wrenches with 2½ inch jaws (needed on shaft packing gland).
- c. Hammers (large and small).
- d. Assortment of screwdrivers (standard and Phillips).
- e. Assortment of pliers (standard, long nose, vise grips, cutters).
- f. Wire cutter capable of severing standard rigging.
- g. Scissors.
- h. Hacksaw (several spare blades).
- i. Sail repair kit.



## SPARE PARTS

- a. Standing rigging repair materials such as cotter pins, turnbuckles, stainless wire, clevis pins.
- b. Running rigging and sail repair materials such as blocks, extra line, sail slides, duct tape.
- c. Miscellaneous items such as:
  - (1) Hose and hose clamps if any size used on the yacht. Include hose and hose clamps capable of repairing a fuel line break.
  - (2) Electrical tape, wire, crimp on lugs. Spare fuses for electronic equipment if required.
  - (3) Assortment of screws, nuts, bolts, and washers.
  - (4) Oil and transmission fluid for engine.
  - (5) Lubricating supplies such as spray lubes, and grease for standing rigging.

## SECTION 3

### YACHT SYSTEMS

#### 3.1 SPARS AND RIGGING

**3.1.1 GENERAL DESCRIPTION.** The Pearson Flyer 30 employs a high performance, 7/8 fractional rig (figure 3.1-1). The 456 square feet of sail area driving a hull just a shade over 6000 lbs. produces a highly favorable power-to-weight ratio, and the fractional rig provides sail control that permits powering and depowering to meet wide ranges of conditions.

3.1.1.1 The tapered mast is stepped through the deck and employs single swept-back aluminum tapered airfoil spreaders. Both upper and lower shrouds terminate at the same chainplate, positioned aft of the mast, directly under the swept-back spreader tips. Proper upper and lower shroud tension on this system forces a forward bend in the middle of the mast, and establishes limits for the additional bending that is produced by backstay adjustment. The backstay tension is adjusted while sailing to produce mainsail draft control, and is one of the features that accounts for the versatility of the rig.

3.1.1.2 Figures 3.1-2, 3.1-3 and 3.1-4 illustrate the masthead assembly, the jib box, and the T-terminal installations for the upper and lower shrouds for the Pearson Flyer.

3.1.1.3 The 274 square foot mainsail makes use of a fixed gooseneck assembly, with two internal jiffy reefing lines allowing the main to be reefed in two stages. Figures 3.1-5 and 3.1-6 illustrate the outhaul and jiffy reefing systems, and figure 3.1-7 illustrates the mainsheet reefing.

**3.1.2 DOCKSIDE TUNING.** The Pearson Flyer is delivered to the owner in as near ready-to-sail condition as possible, with all basic tuning completed at the time of commissioning. However, a basic tuning procedure has been included in this section to help provide an understanding of the rig as well as to assist the owner in subsequent re-commissionings.

3.1.2.1 Before Mast is Stepped. Perform the following steps:

- a. Adjust all turnbuckles to an extended position in order to facilitate their attachment to the chainplate when the mast is stepped.
- b. Ensure that all turnbuckles are equipped with toggles at their base in order to eliminate bending loads on the swage fittings, and on turnbuckle threads. Make certain that the forestay has a toggle at both ends.

#### NOTE

Headsail loading varies from side to side as the boat tacks. This exerts a high fatigue factor on the forestay terminals.

- c. Ensure that all shrouds and stays are properly secured to mast with all cotter pins and chafe points taped.

3.1.2.2 Preliminary Mast Adjustment. With the mast stepped and centered in column over the mast step, install the mast wedge and boot assembly.

3.1.2.3 Check and adjust mast rake by performing the following steps:

- a. Ensure that the shrouds are slacked to the point where they do not interfere with the rake adjustment.
- b. Hang a weight such as hammer, wrench, or bucket of water from the main halyard at approximately gooseneck level. The fore and aft distance between the halyard and the mast at the gooseneck is the amount of rake.

#### NOTE

Mast rake on the Pearson Flyer can be varied within the parameters defined in the class rules by adjusting the forestay turnbuckle. Rake as shown on the sail plan is approximately  $14\frac{1}{2}$  inches. This may be varied to satisfy preferences of sailmakers, but forward rake should be avoided, and class restrictions in regards to headstay length (rule 8.2) must be observed if it is intended to race in one-design. The standard headstay length is 35' 11", pin-to-pin, including the toggles.

- c. Make certain the backstay is loose enough so as not to cause mast bend, and with the standard headstay attached, adjust the mast step and the headstay turnbuckle until the desired rake is achieved.
- d. Tighten both upper shrouds uniformly, one full turn on one side, then one full turn on the other. Repeat until the shrouds are taut.



3.1.2.4 Perform the following steps to ensure that the mast is perpendicular to the designed transverse waterline:

- a. Lead the shackle end of the main halyard to an identifiable point on the rail or chainplate. Adjust the halyard tension so that the shackle just touches this point, and then cleat the halyard.
- b. Lead the halyard to the same location on the opposite side of the deck, and check if the shackle touches the same point with the same tension. If this is not the case, let off one upper shroud turnbuckle and take up on the other to get the desired result.
- c. Ensure that neither upper shroud is slack at this point and then tighten the lower shrouds evenly to a "just slack" condition.
- d. Sight up the mast to check for straightness. Make appropriate adjustments to the lower shrouds if the mast is not straight.

3.1.2.5 Final Mast Adjustment. With the mast raked, and adjusted for perpendicularity, adjust for pre-bend by performing the following steps:

- a. Tension the backstay to its maximum position. This will result in loosening both the upper and lower shrouds. Tighten the upper shrouds evenly to a slightly more than hand-tight condition (one turn past hand tight), then tighten the lower shrouds evenly to a hand tight condition.
- b. Release the backstay tension. This causes high tension in the upper shrouds, forcing the spreaders into the mast, and resulting in a slight forward bend in the mast (approximately 3 to 5 inches).
- c. Pin all turnbuckles, tape all cotter pins.

3.1.3 UNDERWAY TUNING. With genoa and main set, under moderate wind conditions, and with moderate backstay tension, sail on one tack and sight up the mast to check for straightness. The tip of the mast will fall off to leeward, but the rest of the mast should not bend either to leeward or to windward. If adjustment is indicated, go on the opposite tack so that the shrouds are more easily adjusted. Be sure to make equal and corresponding adjustment on each set of turnbuckles; i.e. a one-turn take-up on the port upper shroud should be matched by a one-turn easing on the starboard upper shroud, etc. Always tack both directions to ensure straightness of the mast.

3.1.3.1 Once basic tuning has been completed, the Pearson Flyer rig is designed to be adjusted while underway to obtain optimum results on various points of sailing, and to more easily handle changing weather conditions. This is accomplished primarily by making adjustments to the backstay tension. Increasing tension on the backstay increases the bend in the mast, flattening the mainsail and moving the center of effort for the sail aft. Releasing backstay tension reduces the mast bend, increases sail draft and moves the center of effort forward. The system can be handled easily by persons of moderate sailing experience but more precise adjustment and best results will be obtained after consultation with the sailmaker and after some practice sessions.

3.1.4 CARE AND MAINTENANCE. Spars, rigging, and associated hardware for the Pearson Flyer have been selected for ease of maintenance and durability, but require a certain amount of attention if proper performance over an extended period of time is to be expected. The following comments are intended as general guidelines, with precise schedules being dependent on the use of the yacht.

3.1.4.1 Rigging and Lines.

- a. Clean wire rope, swage fittings, toggles, with fresh water and, if desired, a water soluble detergent. Use a stiff brush or nylon scrubbing pads. Do not use steel wool or cleansers containing chlorine.
- b. When storing shrouds, stays or halyards, wash with fresh water, dry with a clean cloth, and store in a dry location away from chemicals, oil, or other contaminants. Avoid crushing, kinking, or coiling too tightly.
- c. Synthetic rope will deteriorate with prolonged exposure to salt and sun. Rinsing with fresh water is beneficial. An occasional soaking warm soapy water is also advisable. Rinse and dry thoroughly before stowing.

NOTE

An excellent way to clean synthetic rope is to run it through a washing machine set on a warm cycle. For the welfare of both the synthetic rope and the washing machine, make certain if this is done, that the construction of the washing machine is such that it is not possible for the rope to slip behind the basket.



d. A regular on-going check should be made on all standing and running rigging with emphasis on the following:

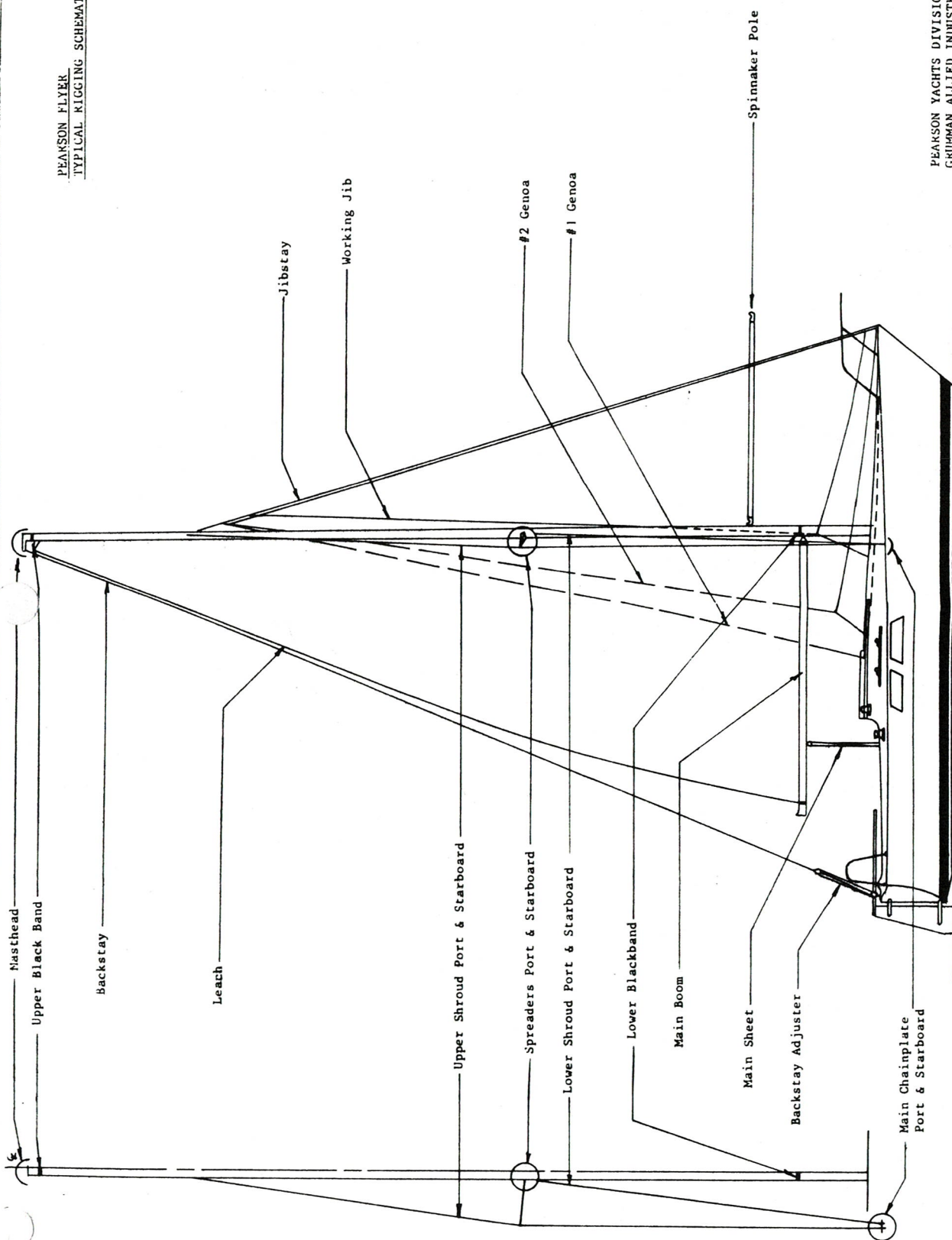
- (1) Evidence of fraying, chafing, kinking, or other signs of wear.
- (2) Cotter pins secure and taped.
- (3) Evidence of stress or cracking around swaged terminals.

CAUTION

Do not wrap wire rope with tape, plastic, or other adhesive material. Such a covering can exclude oxygen needed to maintain a passive surface on the wire. This can advance corrosive or deteriorating action.

3.1.4.2 Winches. All winches should be inspected, cleaned and lubricated in accordance with the instructions provided in the servicing booklet for the winches that is provided at commissioning.

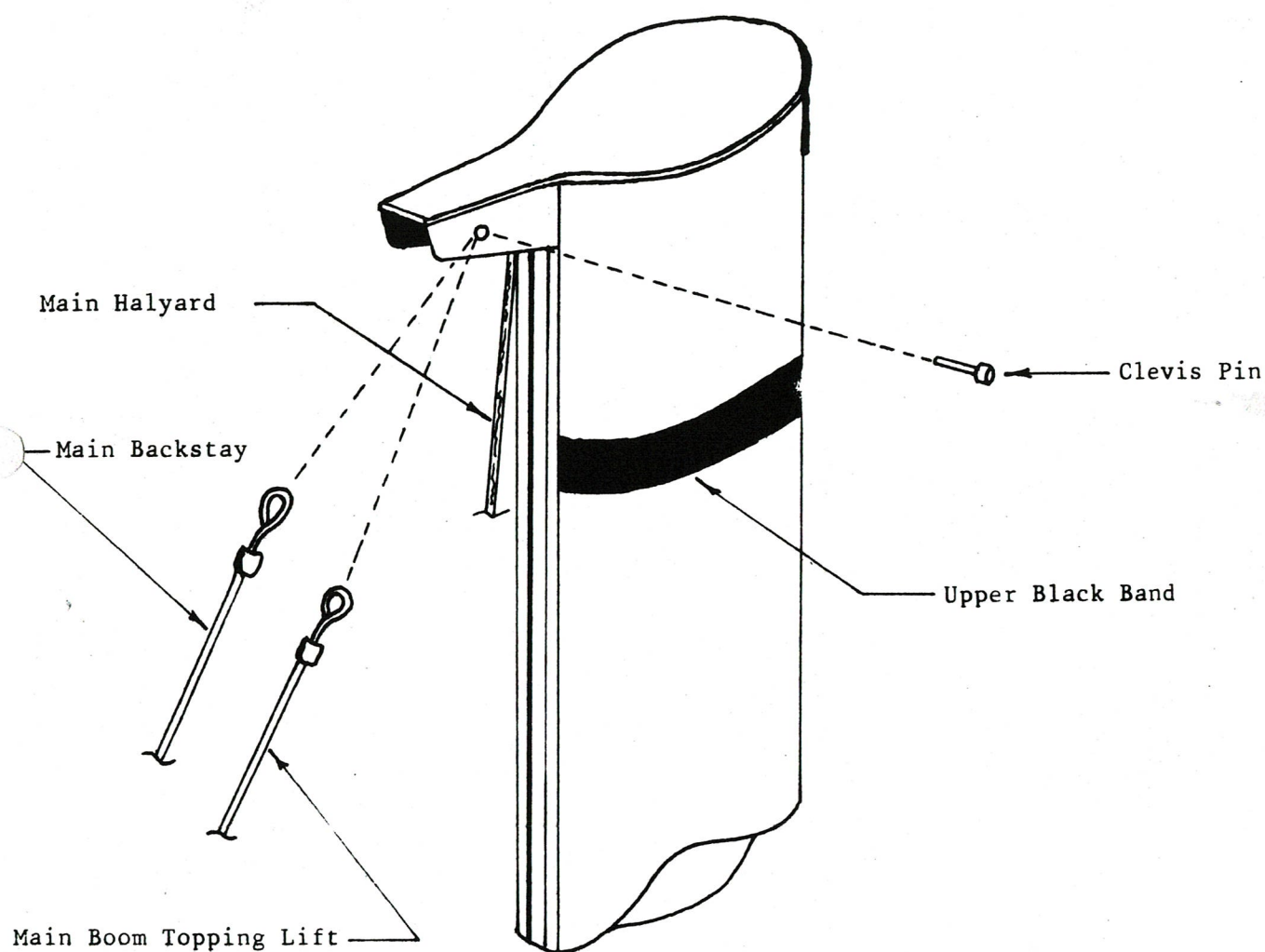
PEAKSON FLYER  
TYPICAL RIGGING SCHEMATIC



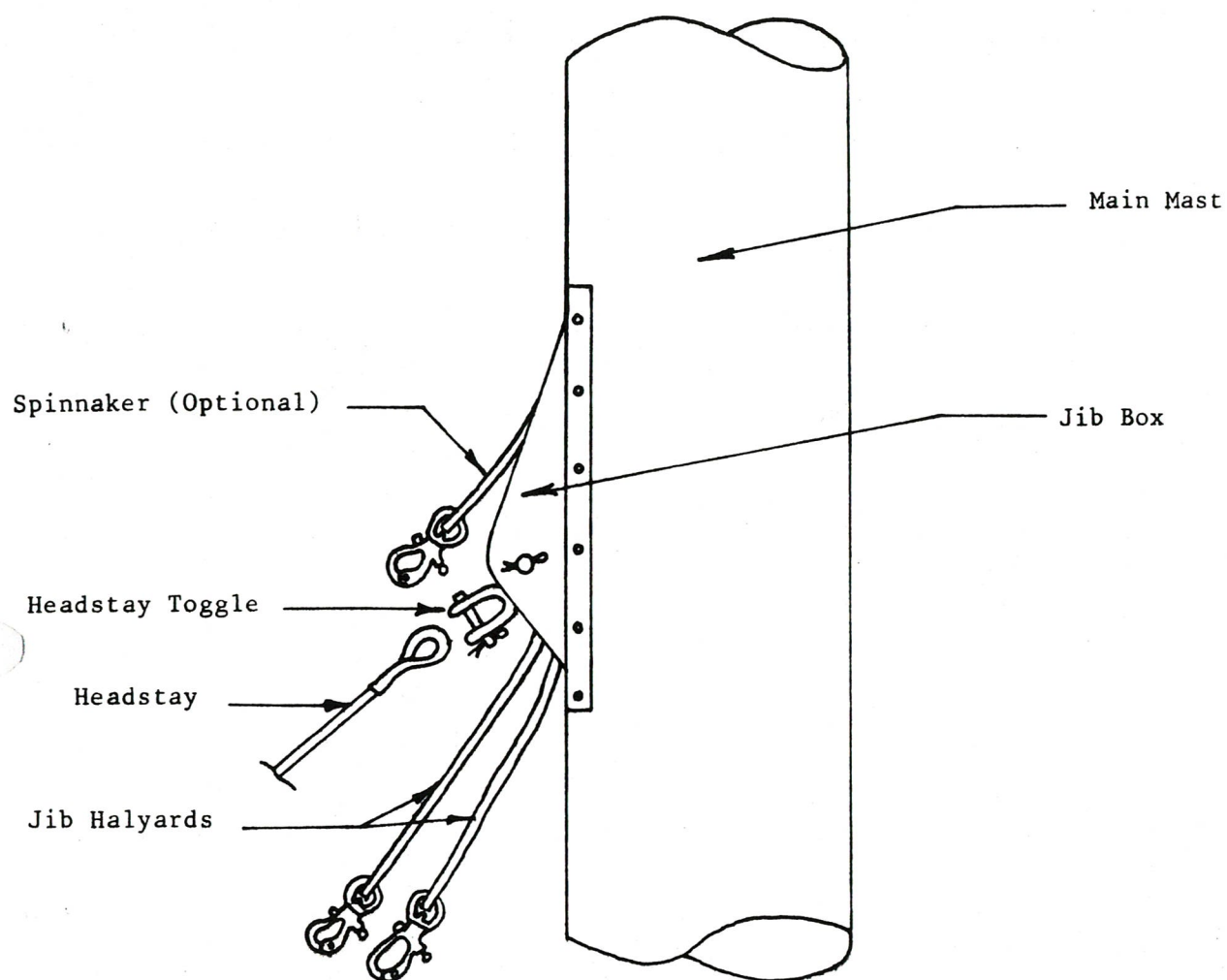
PEAKSON YACHTS DIVISION OF  
GRUHMANN ALLIED INDUSTRIES, INC.  
JULY 18, 1980

—PROFILE—

PEARSON FLYER  
MASTHEAD ASSEMBLY

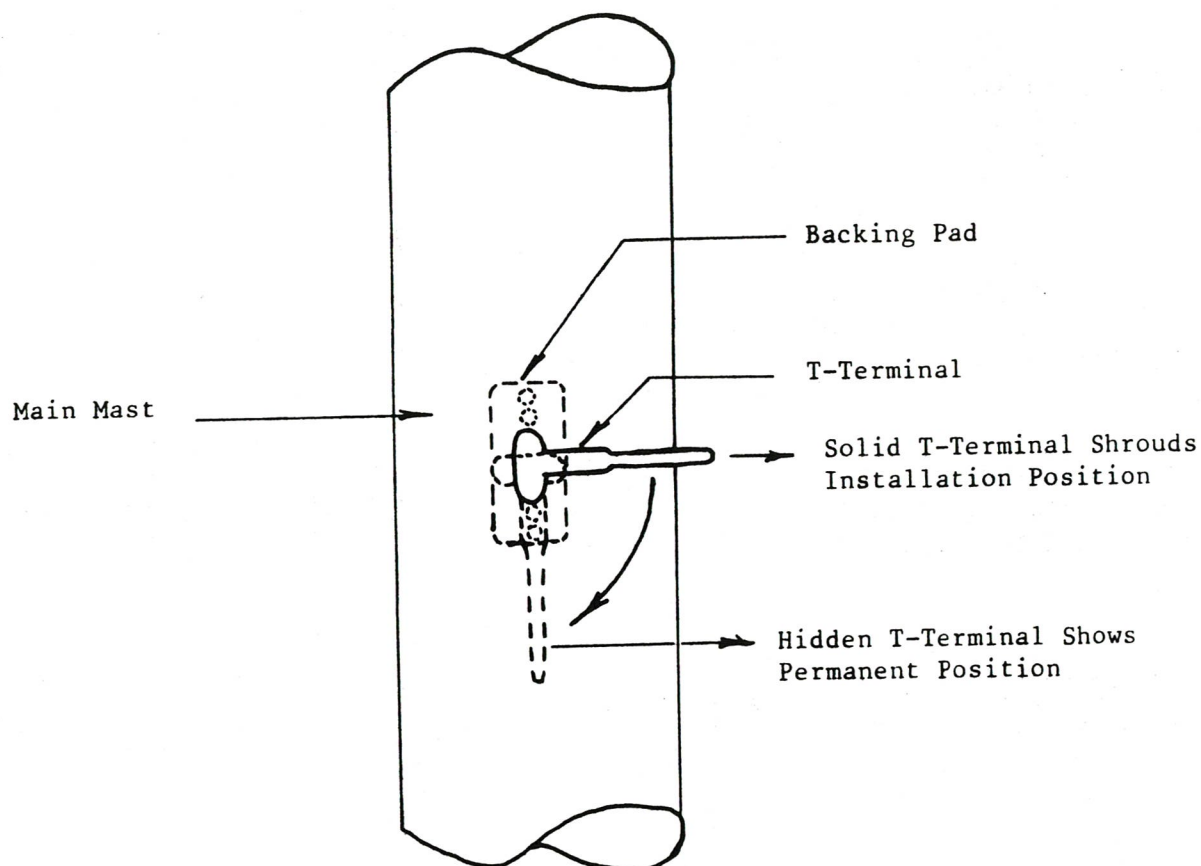




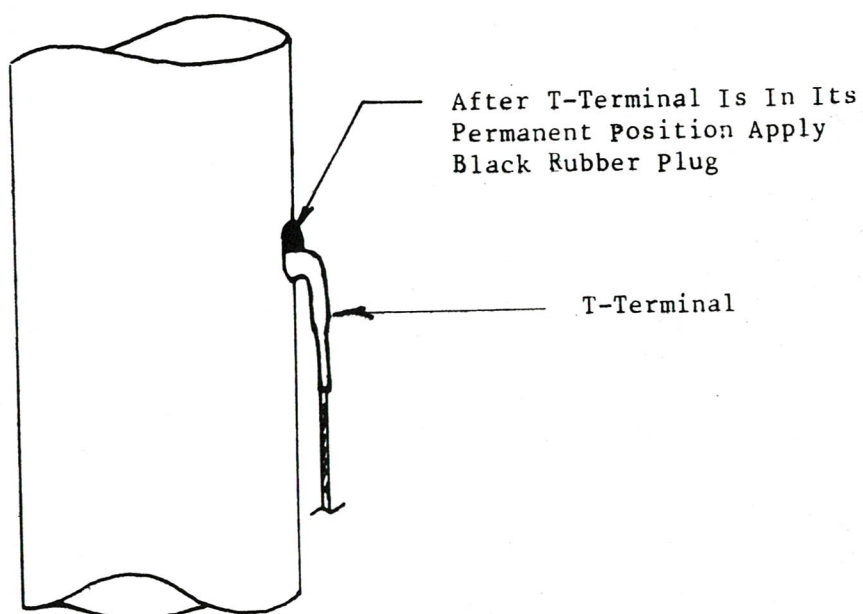
PEARSON FLYERJIB BOX

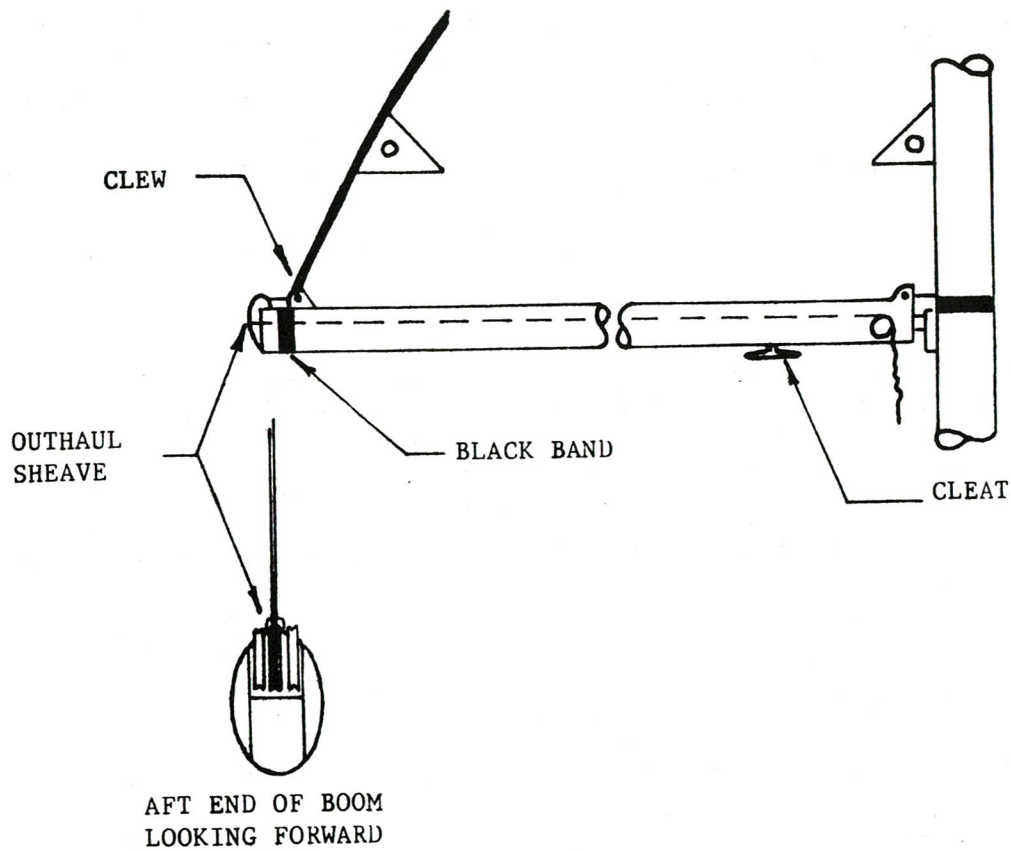
T-TERMINAL INSTALLATION  
FOR  
UPPER AND LOWER SHROUDS

VIEW ATHWART



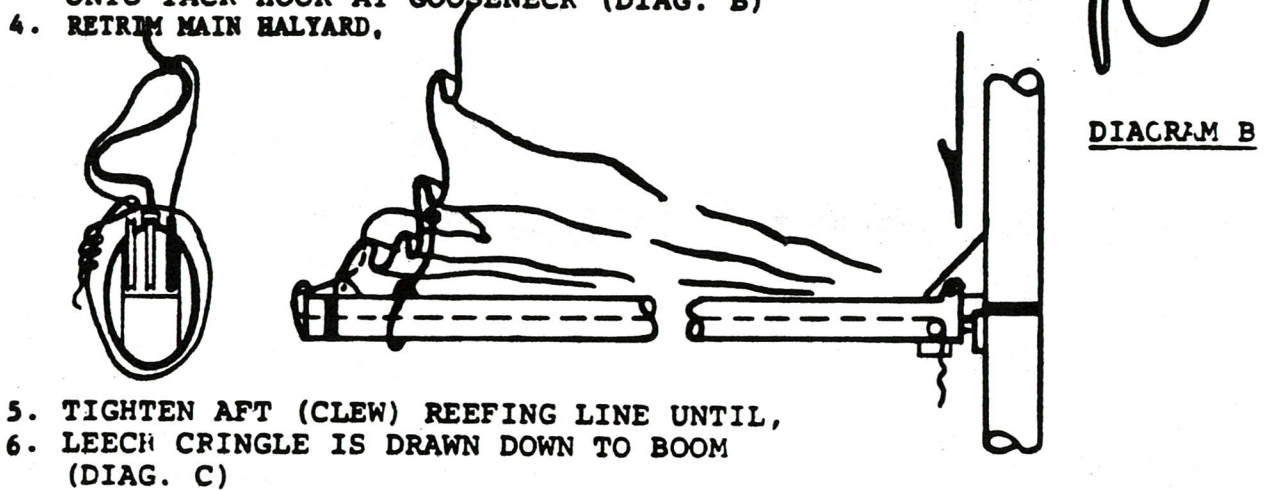
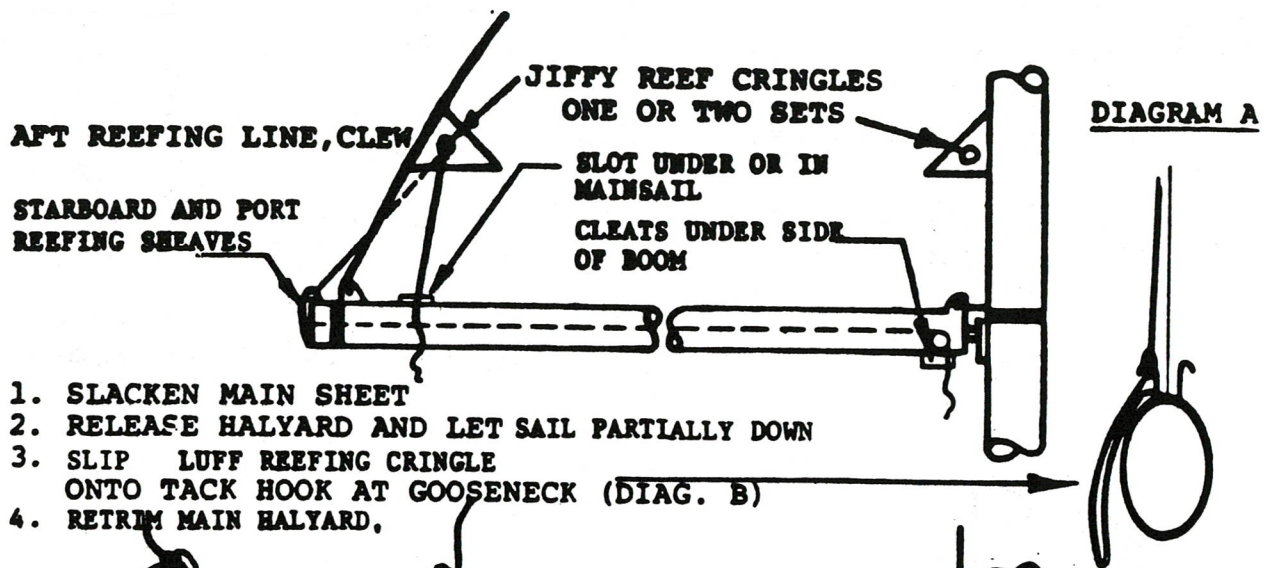
VIEW FORE & AFT

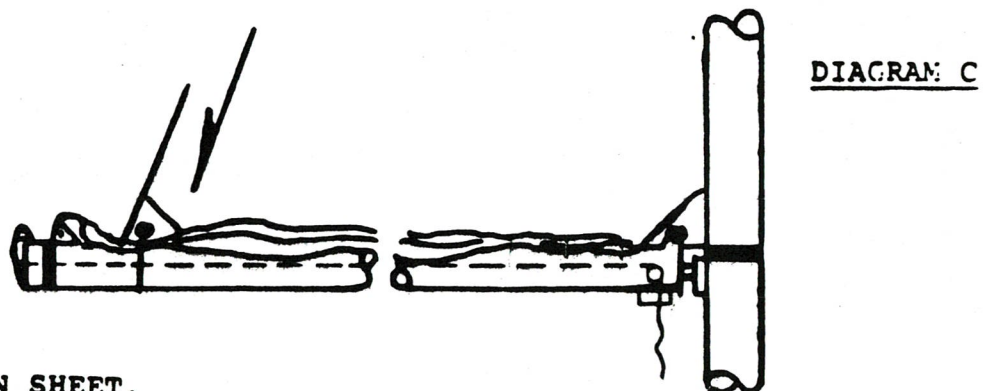


OUTHAUL

1. Attach outhaul shackle to mainsail clew.
2. Trim main halyard by hauling top of mainsail to black band at top of mast.
3. Trim outhaul by pulling on line in middle of boom (at forward end) until clew reaches black band at aft end of boom. Cleat outhaul (line) in cam cleat at forward end of boom.

**INTERNAL AFT REEFING**

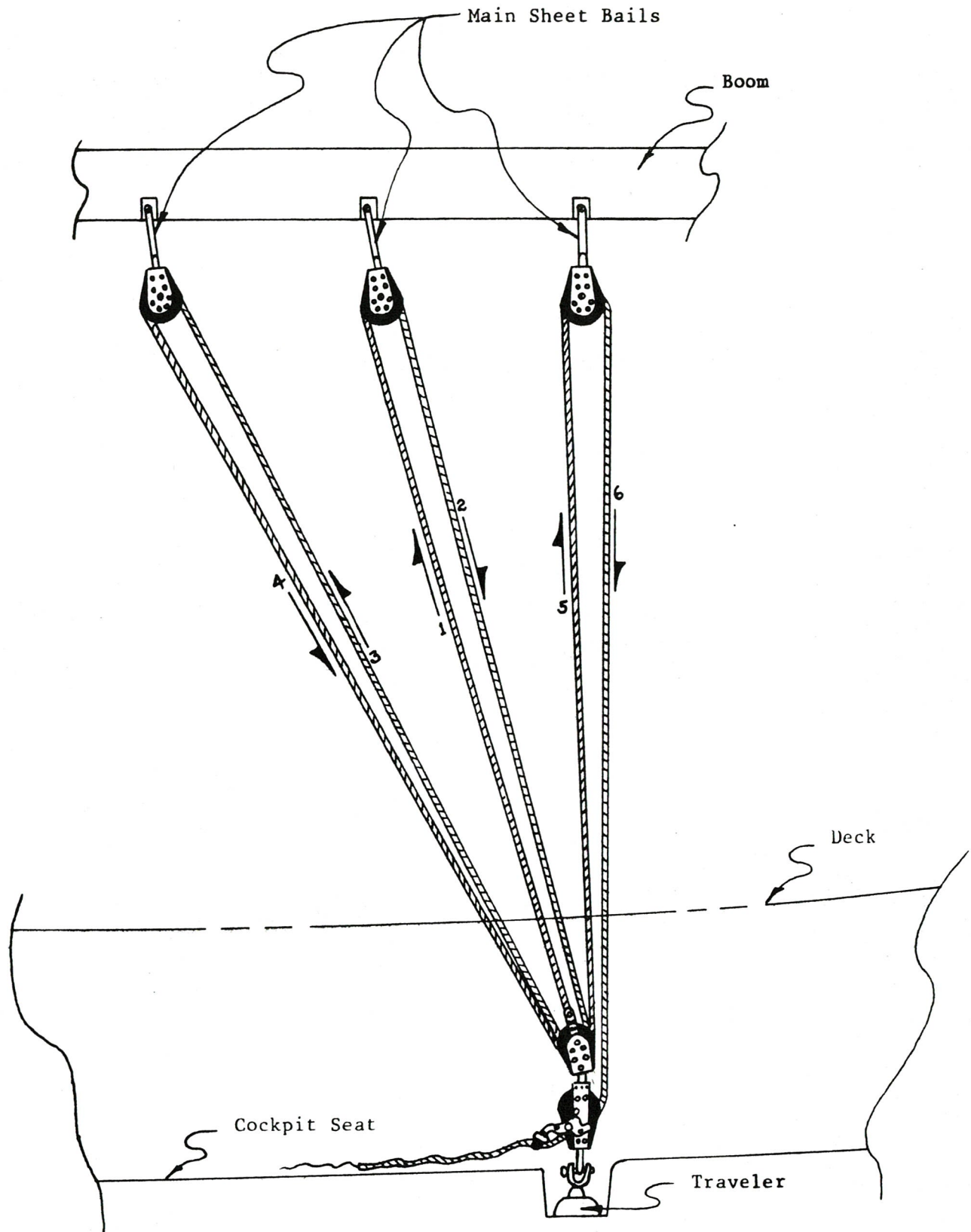


NOTE: OPERATION FOR SECOND REEF IS THE SAME AS FOR THE FIRST REEF.

PEARSON FLYER  
MAIN SHEET REEVING

FIGURE NO. 3.1-7





## 3.2 POWER SYSTEM

3.2.1 INTRODUCTION. The heart of the power system installed on the Pearson Flyer is a BMW D-7, single cylinder, four-stroke, direct injection diesel engine. Detailed descriptions of the engines features along with operating and maintenance procedures are provided in the BMW owners' manual which is supplied at commissioning. It is recommended that all operating, care, and maintenance procedures be performed as described in the engine manual in order to ensure efficient, dependable, engine operation. The following paragraphs provide a brief overall description of the complete power system installed in the Pearson Flyer, and supply details where this particular installation varies from the general conditions assumed in the engine manual.

3.2.2 OVERALL DESCRIPTION. The complete power system for the Pearson Flyer consists of the following:

- a. The BMW D-7 diesel engine.
- b. A propeller and shaft assembly consisting of a two-blade 13 x 8R.H. folding propeller, a 3/4 inch bronze shaft, a cast bronze strut with CUTLASS bearing, and a packing gland.
- c. A wet exhaust system with waterbox muffler.
- d. A fuel system consisting of an 8 gallon (30 liter) aluminum fuel tank, a primary fuel filter with water trap, and a manual shut-off valve (figure 3.2-1). A secondary screen filter is located inside the feed pump.

3.2.3 ENGINE DESCRIPTION. The BMW D-7 is a single-cylinder, four-stroke, direct injection diesel engine. The engine utilizes raw water cooling, a splash lubrication system, both electrical and hand-crank starting, and a built-in alternator. Pages 4 and 5 of the engine manual contain the technical data and specifications for the engine.

3.2.3.1 Instruments and Controls. Indicators and normal operating controls for the BMW D-7 are located within view and easy reach of the helmsman with additional cold starting and hand-cranking aids located on the engine. The following is a brief listing of these indicators and controls along with references to the appropriate sections of the engine manual for further information.

- a. A standard BMW instrument panel and the engine shut-off control are located on the forward cockpit bulkhead. Page 6 of the engine manual illustrates and describes the instrument panel in some detail but the following items should be noted:
  - (1) The Alternator Charging Control Light mentioned in the engine manual is the lamp captioned AMP on the panel.
  - (2) The Engine Temperature Control Light mentioned is the lamp captioned WATER on the panel.
  - (3) The lamp captioned OIL on the panel is not used, since this particular BMW engine does not employ a pressurized oil system.
- b. A combination throttle and gear shift control is located to starboard at the helm station. Page 6 of the engine manual illustrates and describes this control.
- c. There are four controls mounted directly on the engine that are utilized for starts other than normal (very cold engine, low battery, handcrank). These are the decompression valve, the cold starting device, the primer pump, and the primer device. The use of these controls along with cold starting procedures are described on pages 7 through 10 of the engine manual.
- d. A hand crank is supplied for manual starting of the engine. Complete instructions for its use will be found on page 11 of the engine manual.

3.2.4 OPERATION. The following paragraphs are intended as a general guide, with complete procedures being covered in the engine manual.

3.2.4.1 Preparation For Starting. With the primary purpose of the Pearson Flyer being operation under sail, the auxiliary engine will normally be used on an intermittent basis. Under these conditions it is not always possible to go through a pre-start routine each time the engine is started. It is recommended however, that pre-start procedures be employed at least prior to the start of a cruise, and before using the engine after extended periods under sail.



- a. Visually inspect the engine. Look for fuel and water leaks, and any other problems that might preclude starting.

WARNING!

Although less volatile and far safer than gasoline, diesel fuel is flammable, and a fuel leak can cause a serious fire.

- b. Ensure that the engine sea cock is open.
- c. Ensure that the fuel valve is open.
- d. Check fuel supply.
- e. Check engine oil and transmission fluid levels.

3.2.4.2 Starting and Operating Procedures. Normal starts, cold weather starts, starting procedures after a long shut-down and other operational suggestions are contained in the engine manual commencing at page 7. Some additional suggestions are listed below:

- a. Forward, Neutral, Reverse. When shifting from forward to reverse, or vice versa, the lever should be held in the neutral position for a moment before proceeding.
- b. Stopping. To stop the engine, pull the engine shut-off control and hold it in this position until the engine stops completely. If the situation warrants such action, this may be done at any time. However, under normal conditions it is recommended that the following procedure be followed:

- (1) Place engine in neutral.
- (2) Allow engine to idle for a few minutes in order to dissipate the heat generated by operation.
- (3) Pull the engine shut-off control and hold it in this position until the engine stops completely.
- (4) Turn the key on the instrument panel to OFF.



3.2.5 FUELING. While employment of a diesel engine results in a greatly reduced fire hazard when compared to gasoline, it should be remembered that diesel fuel is flammable, and that employment of good fueling practices are necessary. The following steps are provided as guide lines.

3.2.5.1 Before Starting to Fuel.

- a. Extinguish all smoking materials and check the fueling area for other sources of spark or flame. Remove if found.
- b. Shut off engine.
- c. Determine fuel requirements in order to prevent overfilling.
- d. De-energize all electrical equipment.
- e. Close all hatches and ports.
- f. Ensure that a fire extinguisher is readily available.
- g. Ensure that the proper (diesel not gasoline) hose is about to be used.

WARNING!

Do not fuel during electrical storms. Besides the obvious hazard of lightning, the possibility of static discharge is greatly increased at this time.

3.2.5.2 Fueling Procedure.

- a. Remove fill pipe cover (located in cockpit sole).
- b. Place nozzle of fuel hose in the fill pipe.

WARNING!

Keep the nozzle in contact with the fill pipe rim during fueling to avoid the possibility of a static spark.

- c. Fill slowly. Do not overfill. If it is not possible to see the meter on the fuel pump, the attendant or a crew member should call out the gallonage from the fuel dock.

### CAUTION

Fuel volume will increase with an increase in temperature. Filling the tank to only 95% of capacity will avoid overflow problems on a hot day.

#### 3.2.5.3 After Fueling.

- a. Replace fill pipe cover, clean up any spilled fuel. If any rags or paper towels were used for this purpose, dispose of them ashore.
- b. Check below decks for presence of fumes or fuel leakage.

### WARNING!

If fumes or evidence of leakage is found, determine the cause, correct it, and clean up any spillage before starting engine or energizing electrical equipment.

- c. Open all hatches to ventilate the boat. Wait at least 5 minutes before proceeding.
- d. The engine should be started only when it is certain that no potentially hazardous condition exists.

3.2.6 OPERATOR MAINTENANCE. A proper maintenance program for a yacht power system will lengthen the life of the system by minimizing unnecessary wear, and will help uncover possible problems before they can develop into major faults. The intermittent use of the engine in an auxiliary yacht make the power system particularly susceptible to problems associated with lack of use, and the occasionally critical need for auxiliary power, sometimes on short notice, require an engine that will start and run when needed. As well as being selected for proper power requirements, the engine installed in the Pearson Flyer has also been selected for simplicity and dependability, and operator maintenance is neither difficult nor time consuming. The engine manual is, of course, the prime source for operator maintenance information. The following paragraphs are included as a supplement to cover any required maintenance procedures that are not a part of the engine manual.



3.2.6.1 Fuel Sanitation. The fact that a diesel engine does not require an ignition system can, and usually does, result in an engine that is far superior to a gasoline engine in regards to dependability. Whether this is actually the case, depends greatly on the cleanliness of the fuel that is supplied to the engine, since the close tolerances required by the engines fuel delivery system make it extremely intolerant of any form of dirt or water contamination. The engine is supplied with primary and secondary filters that prevent contaminants from reaching the engine where they could cause damage, but a clogged filter, although providing this protection, can also stop an engine. Keeping the filters free of dirt and water is an obvious answer to this problem, and the cleaning schedules set forth in the engine manual will in most cases keep filters clean enough to prevent stoppages.

3.2.6.2 A factor that can cause additional problems is bacterial contamination of the diesel fuel. The bacteria involved need both water and fuel to exist, and if present, will thrive at the fuel/water interface in a fuel tank. As they multiply they form more water and a filter choking brown slime. Often their presence will not be known until rough weather churns up the fuel tank, causing clogged filters at a most inopportune time.

3.2.6.3 Keeping water out of the fuel will, of course, prevent the problem entirely, and while every effort should be made toward this end, such as obtaining fuel from reputable dealers, it must be remembered that a certain amount of water due to normal condensation in the tank is to be expected.

3.2.6.4 Fuel additives or conditioners have been used for sometime now to combat this problem. These additives break the water down to a molecular level, dispersing it throughout the fuel, and allowing it to pass harmlessly through the fuel system. Various brands of this product are increasingly available at marine supply stores. As with all products of this nature, the directions on the can should be read carefully.

#### CAUTION

The preceeding discussion is not referring to the alcohol based products used in gasoline engines to prevent fuel line freeze-up.

3.2.6.5 Shaft Packing Gland. A properly adjusted packing gland should drip slightly (from 4 to 15 drops per minute) with the engine off. Too loose an adjustment will allow too much water in the bilge, and with the engine operating, will spray water from the shaft, causing problems with adjacent equipment. Too tight an adjustment will rob the engine of power, and the lack of water lubrication can generate enough heat to damage the packing gland and/or score the propeller shaft.

3.2.6.6 To adjust the packing gland perform the following steps:

- a. Holding the packing nut with one wrench, use a second wrench to loosen the lock nut. Turn the lock nut far enough to keep it from interfering with the next adjustment (2 or 3 turns).
- b. Tighten the packing nut to obtain 4 to 15 drops per minute.

NOTE

Hand tightening of the packing nut is often sufficient to obtain this adjustment. If this is not the case, an additional  $\frac{1}{4}$  to  $\frac{1}{2}$  turn with the wrench should produce the desired result.

- c. Hold the packing nut in place with one wrench, and use the second wrench to bring the locking nut securely against the packing nut.

CAUTION

Make certain that the locking nut is tight. Failure to do this could allow the packing nut to back off when the engine is operating.

- d. Operate the engine at slow speeds and use a light to check for excessive water at the packing nut. Shut off the engine and recheck the packing nut for proper drip.



3.2.6.7 Shaft Coupling. All of the propulsion power produced by the engine is transferred to the propeller by way of the engine drive shaft, the propeller shaft, and the coupling that joins these two shafts together. A careful alignment between engine and propeller shaft at the shaft coupling is essential if efficient and vibration free operation is to be attained. The alignment involves making adjustments to the engine mounts and is one of the tasks that is performed by Pearson during commissioning.

3.2.6.8 Once adjusted, the alignment is not likely to require readjustment unless it becomes necessary to move the engine, or to perform extensive work on the propeller and shaft assembly. In cases such as this, it is recommended that an experienced marine mechanic perform the adjustment.

3.2.6.9 Since it may become necessary to disconnect and reconnect the coupling at one time or another (some people prefer to do this when the boat is hauled), this procedure, as well as the procedure for checking the alignment is included in the following paragraphs:

WARNING!

Remove the key from the engine control panel to make certain that the engine cannot be started during the following procedures.

3.2.6.10 To disconnect the coupling perform the following steps:

- a. Remove the four connecting bolts from the shaft coupling. Move the two mating surfaces approximately 3 inches apart.

CAUTION

If it is necessary to pry the coupling apart, use care not to scar the two mating surfaces.

- b. Ensure that the two mating surfaces of the shaft coupling are clean. If not, use a clean cloth and spray lube to clean the surfaces.

3.2.6.11 To check shaft alignment proceed as follows:

- a. Referring to figure 3.2-2, pull the shaft forward until the flange faces come gently into contact, and attempt to insert a .002 feeler gauge between the faces. Do this at the 12, 3, 6, and 9 o'clock positions on the flange.
- b. Rotate the propeller shaft 180 degrees and repeat step a.
- c. If the feeler gauge can be inserted at any point on the flange, the engine and shaft are in need of alignment.

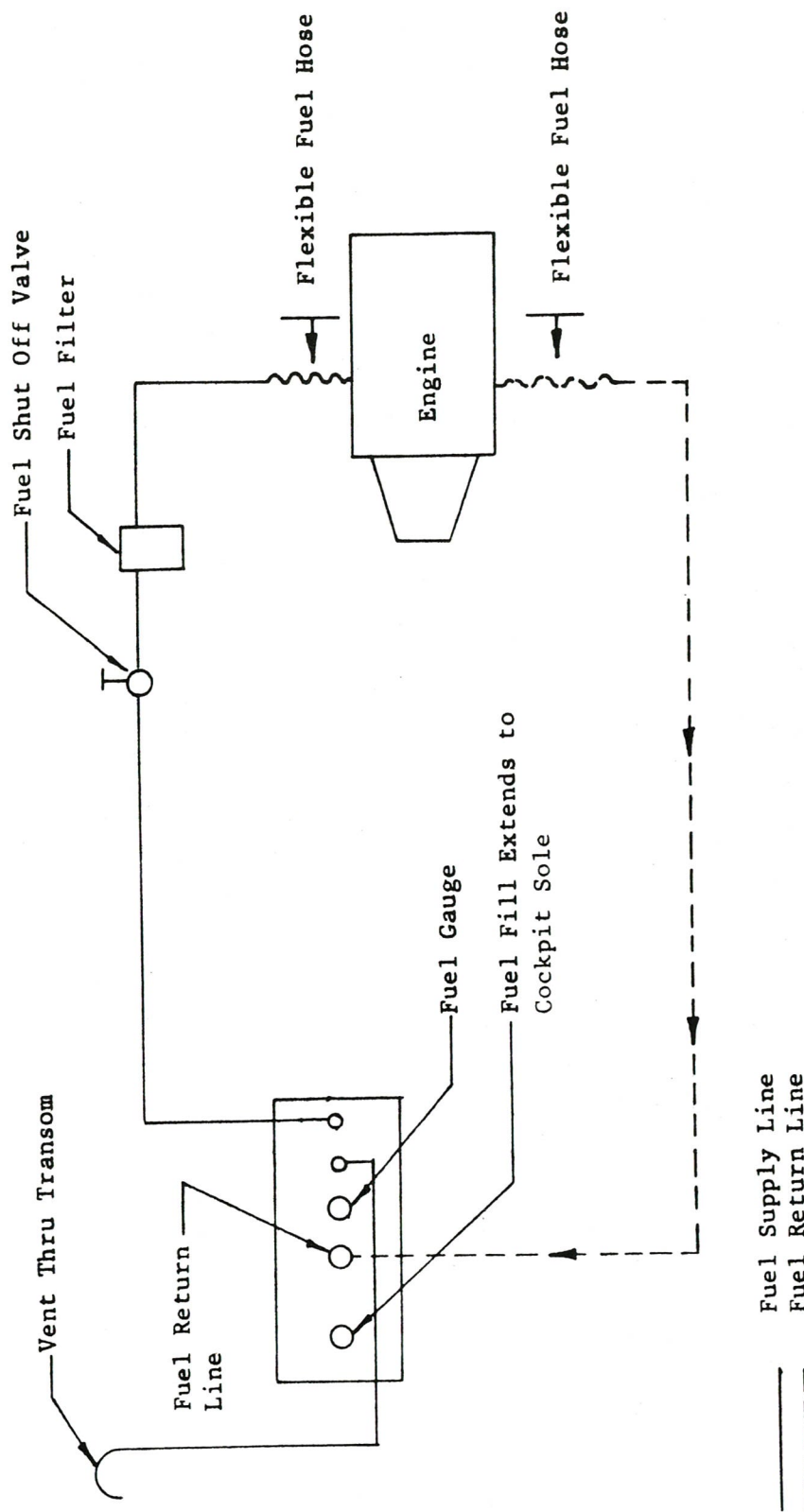
CAUTION

Shaft/engine alignment should not be attempted by persons unfamiliar with the procedures involved. If this is the case, an experienced mechanic should be consulted.

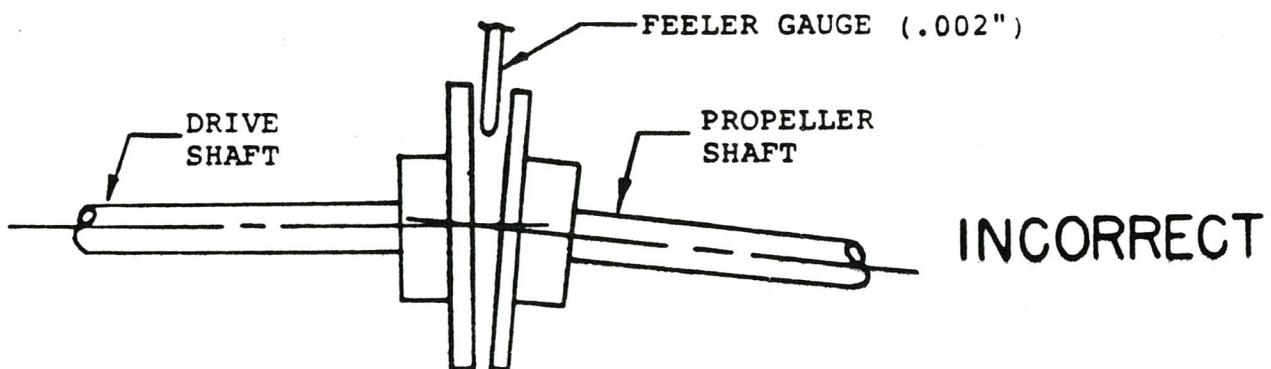
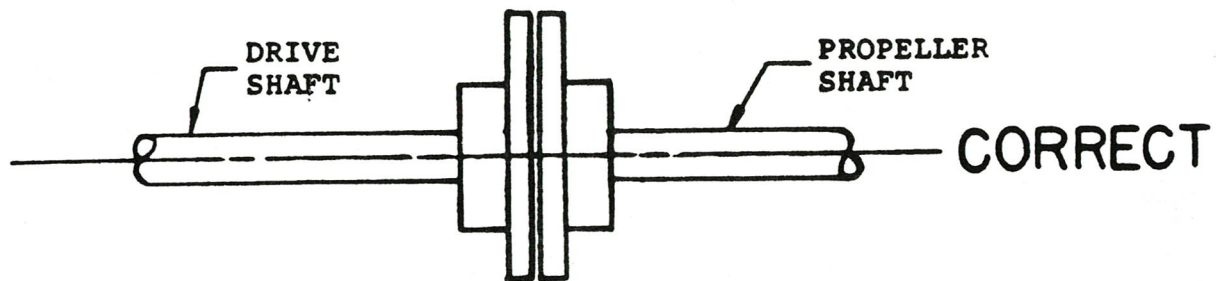
3.2.6.12 To reconnect the shaft coupling proceed as follows:

- a. Thread all four bolts into the flange, finger tight.
- b. Tighten all four bolts in a uniform manner until they are all tight (approximately 30 ft lbs.).

PEARSON L YER  
FUEL SYSTEM SCHEMATIC  
 (DIESEL ENGINES)





TYPICAL PROPELLER SHAFT ALIGNMENT

### 3.3 ELECTRICAL SYSTEM.

3.3.1 GENERAL DESCRIPTION. In keeping with the intended use of the yacht, a basic electrical system has been installed on the Pearson Flyer (figure 3.3-1). A battery ON/OFF switch makes it possible to disconnect the 55 ampere-hour battery from the entire circuit, and a 5-gang switch/circuit breaker panel supplies the yacht's electrical loads. The engine circuit shown in simplified form on the diagram (shown in greater detail in the engine manual) contains its own electrical disconnect on the engine control panel.

#### CAUTION

As stated, when in the OFF position the battery ON/OFF switch completely disconnects the battery from the circuit. This switch should never be thrown when the engine is operating as this could cause damage to the engine alternator system.

3.3.2 The 5-gang switch/circuit breaker panel contains a 15 amp main breaker and four 15 amp load circuits. The running lights and masthead light circuits provide the lighting for navigating under either sail or power and are further described as follows:

3.3.2.1 Running Lights. This switch controls the red and green side lights and the 12 point stern light that are required lighting for night operation under sail.

3.3.2.2 Masthead Light. "Masthead light" is U.S. Coast Guard jargon for the 20 point forward white light required in addition to the sail running lights when operating under power, or under sail and power together. On the Pearson Flyer this light is located on the mast at the spreaders.

3.3.3 As illustrated in figure 3.3-2, the metal parts of the yacht (thru-hull, engine, keel, etc.) are all bonded to a common point for galvanic stability.

3.3.4 CARE AND MAINTENANCE. The electrical system on the Pearson Flyer requires very little maintenance other than bulb replacement, an occasional check for loose terminals, and the battery care described in the following paragraph.



3.3.4.1 Battery Care. With proper care, the battery installed in the Pearson Flyer will provide long and satisfactory service, and proper care is not difficult if a few basic points are remembered.

WARNING!

The electrolyte in a battery is a solution of sulphuric acid. If any should enter the eyes, rinse immediately with large amounts of fresh water, and seek medical attention. Electrolyte spilled on skin should be rinsed well with fresh water. Even small amounts of electrolyte spilled on clothing will destroy the clothing.

- (1) The electrolyte level in a battery should never be allowed to fall low enough to expose the plates. This not only results in a loss of battery capacity while the battery is low, but will cause hardening of the active material on the battery plates, resulting in a permanent loss of battery capacity.

CAUTION

Use only pure distilled water to replenish electrolyte levels. The water from many city water supply systems is unsatisfactory for battery use.

- (2) Leaving a battery in a discharged state for any length of time can also result in a permanent loss of capacity for the battery. Doing so in cold weather can destroy the battery since it will freeze at relatively low temperatures.
- (3) Keep battery connections clean and tight. A cup full of strong baking soda solution and a toothbrush will clean corrosion from the terminals and neutralize any spilled acid (do not allow any of the solution to enter the battery cells). A coating of petroleum jelly on the battery terminals will inhibit corrosion.

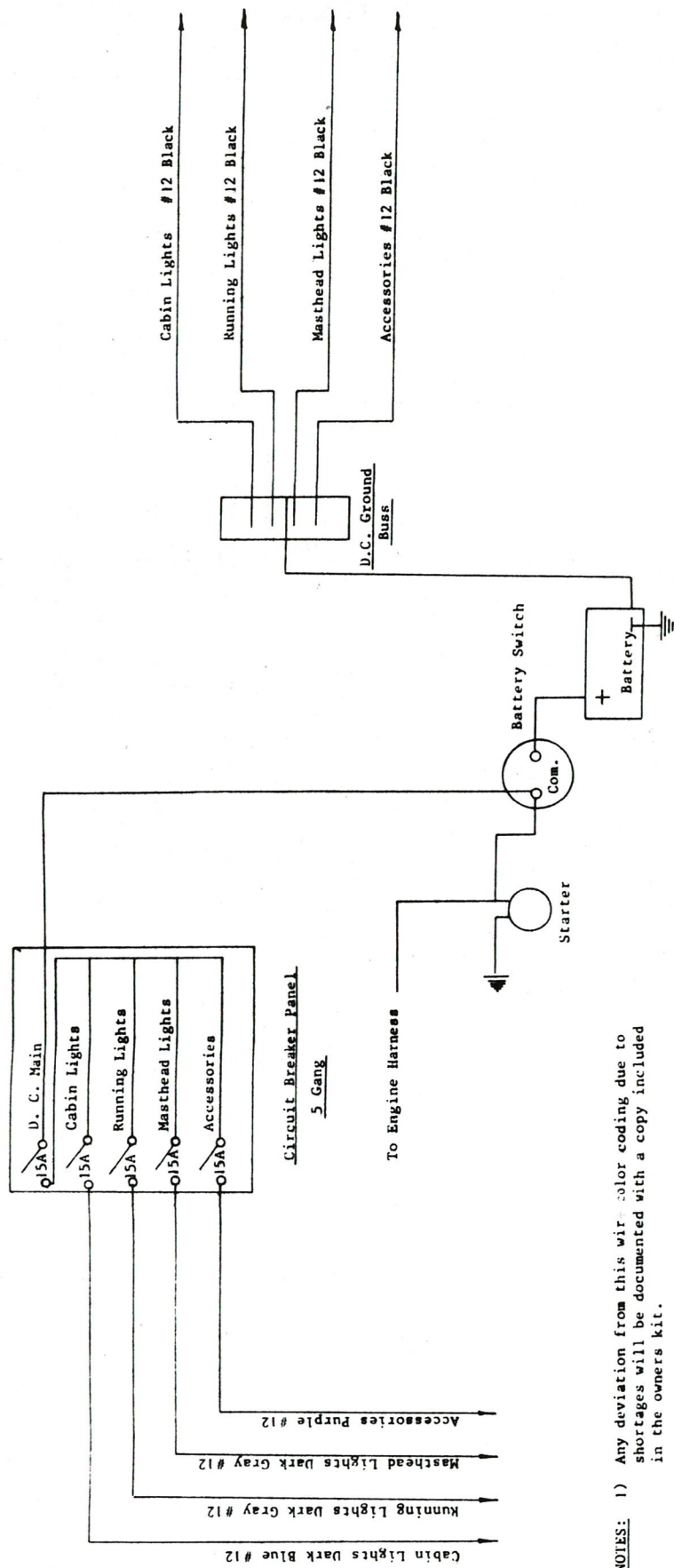
3.4 HULL SYSTEMS

3.4.1 THRU-HULLS. The engine intake is the only thru-hull located below the waterline on the standard Pearson Flyer, with cockpit drains and the bilge pump drain being brought out through the transom. Figure 3.4-1 illustrates the thru-hull locations in horizontal and vertical planes, as well as showing the lifting sling positions. As can be seen in the diagram, provision is also made for the additional options of a knot meter and depth sounder.



3.4.2 PLUMBING. Figure 3.4-2 illustrates the plumbing systems for the Pearson Flyer.

3.4.3 CARE AND MAINTENANCE. Except for draining all water from the systems before storing in freezing weather, and normal reasonable care, such as keeping the bilge intake clean, the hull systems on the Pearson Flyer require no regular maintenance.



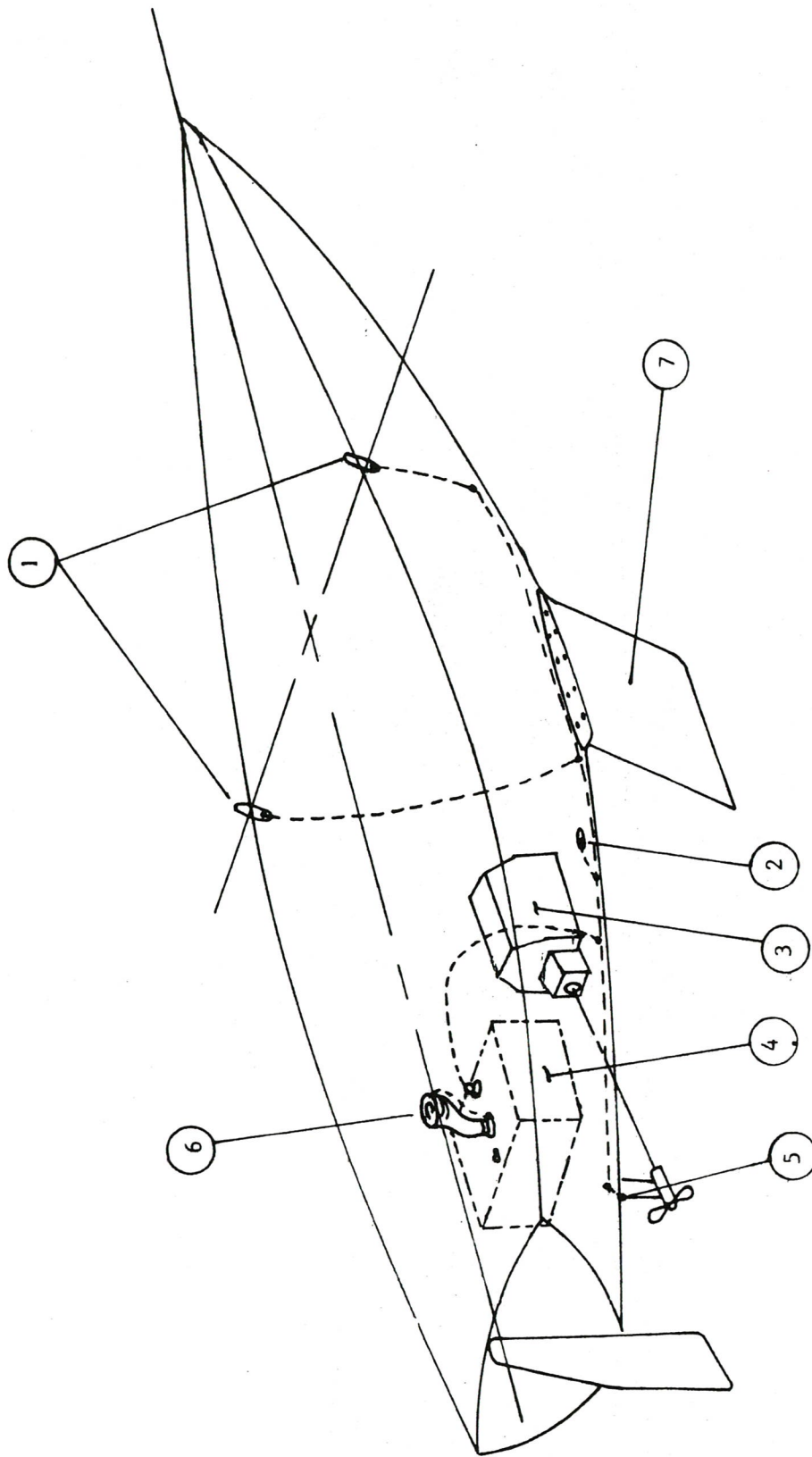
- NOTES:
- 1) Any deviation from this wiring color coding due to shortages will be documented with a copy included in the owners kit.
  - 2) Boat to be wired in accordance with Engineering Standard Practice number Code: 9-9 Electrical Systems.

PEAKSON YACHTS DIVISION OF  
GRUMMAN ALLIED INDUSTRIES, INC.  
STANDARD 12V ELECTRICAL WIRING DIAGRAM  
PEAKSON FLYER

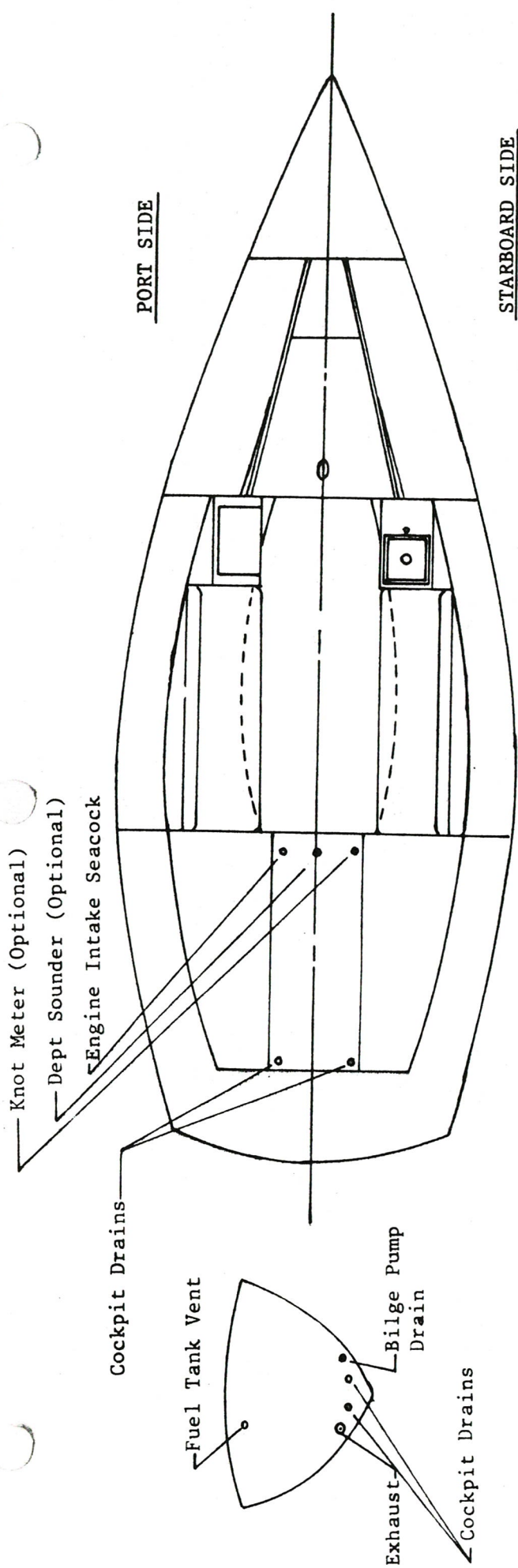
PEARS FLYER  
BONDING SCHEMATIC  
EXTERNAL KEEL-LEAD

FIGURE 3.3-2

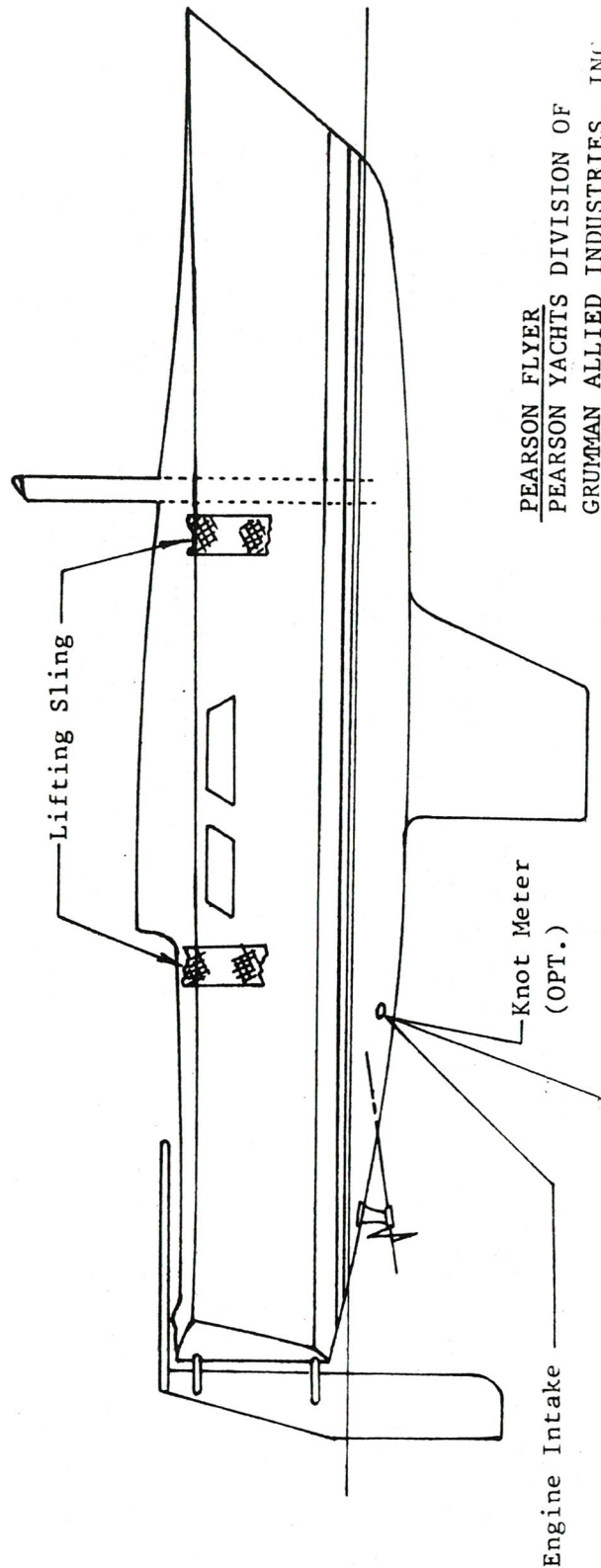
No.	Description
1.	Main Shroud Tangs (Upper & Lower Shroud - Chainplates)
2.	Thru-Hull
3.	Engine
4.	Fuel Tank
5.	Strut
6.	Deck Fuel Fill
7.	External Keel-Lead







DOCKING PLAN



PEARSON FLYER  
PEARSON YACHTS DIVISION OF  
GRUMMAN ALLIED INDUSTRIES, INC

FRESH WATER SYSTEM

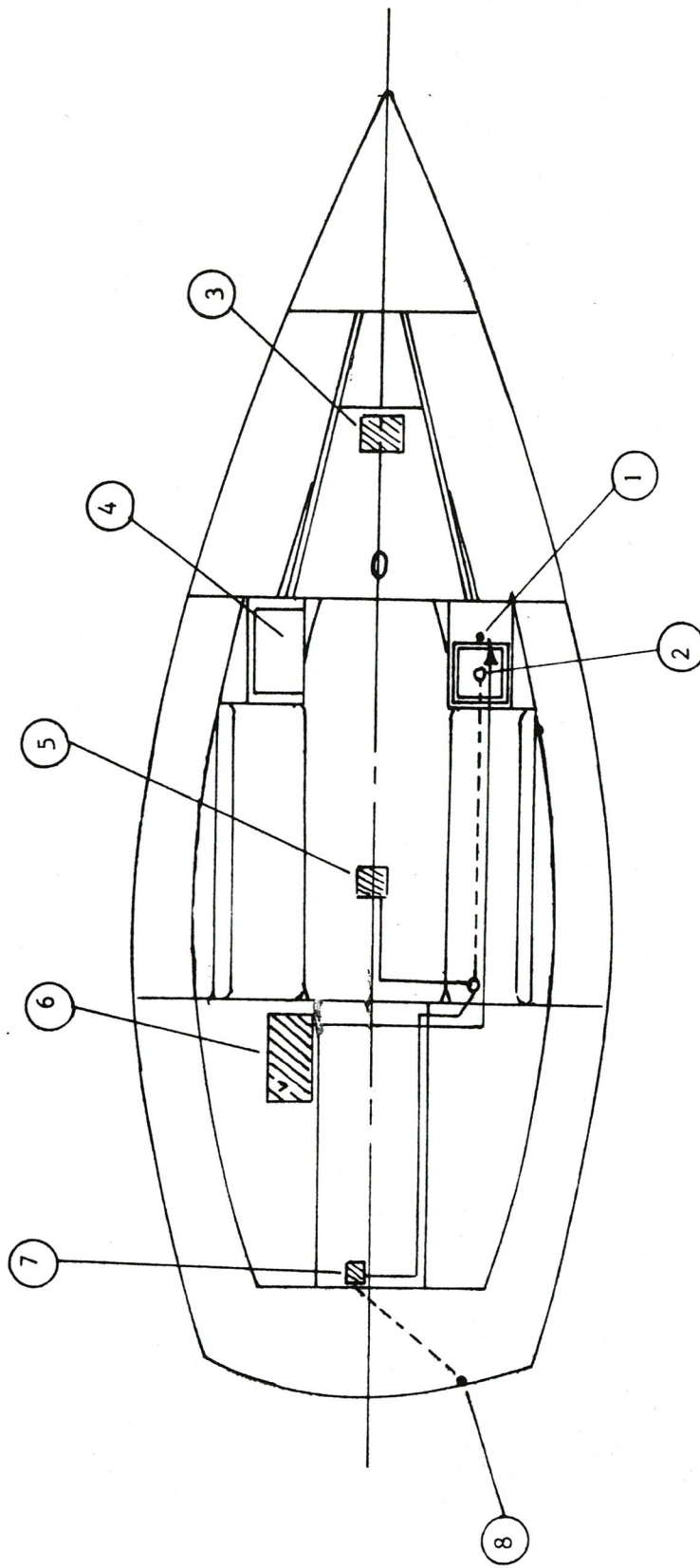
— Suction (at lowest point in tank)

v Vent (in top of tank)

----- Sink Drain

NO. DESCRIPTION

- |   |                      |
|---|----------------------|
| 1 | Faucet and Hand Pump |
| 2 | Galley Sink          |
| 3 | Toilet               |
| 4 | Ice Box              |
| 5 | Bilge Suction        |
| 6 | Water Tank           |
| 7 | Bilge Pump           |
| 8 | Bilge Pump Drain     |



## SECTION 4

### MAINTENANCE SUMMARY

#### 4.1 INTRODUCTION

4.1.1 This section of the manual consists of a summary of the maintenance required for the hull proper, and for the various systems installed in the Pearson Flyer. The section is divided into three categories:

- (1) Routine Maintenance. Those duties that should be performed on a more or less continuing schedule. These range from daily tasks such as engine fluid level checks, to tasks such as bottom painting that normally fall into annual cycles.
- (2) Laying up. Tasks to be performed if the yacht is to be stored for a period of time, especially during cold weather.
- (3) Fitting Out. Tasks required to place the yacht back in commission after a lay up period.

4.1.2 It should be evident that it is not possible to draw up precise schedules in this section that will completely satisfy the requirements of each individual yacht. For example, a vessel receiving moderate use that is laid up during the winter months, can perform much of the long term routine maintenance at the beginning or end of the winter lay up period, while those used throughout the year will have to schedule time to perform these tasks.

#### 4.2 ROUTINE MAINTENANCE

4.2.1 Many of the routine maintenance tasks can be performed when their need becomes evident, others must be performed on a regular schedule if expensive repair bills are to be avoided. Recommended schedules have for the most part been taken from the manufacturer's literature that has been provided. Additional information that may be desired should be taken from this source.

#### CAUTION

Never use steel wool for any kind of cleaning on a yacht. Small particles will remain on the surface causing rust spots that are difficult to remove.



4.2.2 TOPSIDES, DECK, AND BELOW DECKS. All surfaces above and below decks on the Pearson Flyer require a minimum of maintenance as described in the following paragraphs:

4.2.2.1 Gelkote. A fresh water hose-down of deck and top sides at every opportunity, plus an occasional fresh water and detergent wash, will help preserve the gelkote surfaces. Use a sponge and a soft brush on the smooth surfaces, and a stiff brush on the non-skid areas. Rinse thoroughly with fresh water to avoid streaking.

CAUTION

Do not use abrasive cleaners for day-to-day cleaning. This will rapidly dull the gelkote surface.

4.2.2.2 At least once a year, the smooth gelkote surfaces should be cleaned thoroughly, waxed and polished. Bronze wool can be used for cleaning stubborn areas. Abrasive cleaners should be used sparingly if at all. Use a wax especially formulated for fiberglass surfaces.

4.2.2.3 Wood Surfaces. Depending on the personal preference of the owner, the teak on the Pearson Flyer may be oiled, varnished, or left alone. If left untreated, exterior teak takes on a gray appearance that is pleasing to some people but requires almost constant scrubbing to keep presentable. Varnished teak retains a fresh light color but requires a lot of attention since varnish does not adhere well to teak. Oiled teak is the easiest to maintain although it has a tendency to darken with age. A number of excellent products for maintaining oiled teak are available and the instructions regarding their use should be followed carefully.

4.2.2.4 When a lighter finish is desired with oiled teak, the dark outside layer of wood can be removed by rubbing with bronze wool or fine sandpaper. After rubbing, the teak should be well oiled.

4.2.2.5 The interior varnished mahogany surfaces on the Pearson Flyer should last for several seasons before requiring renewal. It should, however, be kept in mind that it is far easier to refinish a surface in fair to good condition, than to refinish a surface that has been allowed to deteriorate.

4.2.3 BELOW THE WATERLINE. All vessels, other than small craft that are removed from the water between operations, require some form of bottom protection, usually on a yearly basis, to avoid the accumulation of bottom growth. Although fresh water areas do not generate the wealth of animal life that accumulates on bottoms in salt water, it nevertheless will cause growth of moss, grass and other flora that will significantly affect the performance of the yacht.

4.2.3.1 The actual formula of the bottom paint that should be applied to the yacht is to a great extent determined by the general area in which the yacht is expected to operate (fresh-salt water, temperate or tropical areas, etc.), and local advice from reputable yards is helpful. Whatever bottom paint is selected always follow the directions printed on the can regarding surface preparation, application, and the length of time that can elapse before the boat is returned to the water.

4.2.3.2 Bottom Cleaning. As time progresses, all boats will accumulate a certain amount of bottom growth. Cleaning is far easier when this growth is wet than after it has been allowed to dry out. While still wet, a power spray and a stiff brush will remove most bottom growth. Barnacles that resist this action can easily be removed with a scraper.

#### NOTE

While cleaning the bottom, probe into all thru-hulls to remove any barnacles that may have attached themselves to the inside of the passages.

4.2.3.3 Bottom Preparation for Painting. Most bottom paints require removal of all loose materials from the bottom and a thorough but light sanding of any portions of the old paint that remains in good condition. A proper sanding procedure will normally take off approximately the same amount of the old paint as is going to be applied fresh. This avoids excessive paint accumulation that will eventually cause peeling and roughness on the bottom.

4.2.3.4 Application of bottom paint should always conform to the manufacturer's instructions if maximum effect is to be achieved. Some bottom paints recommend thinning, others do not: some specify that the boat be returned to the water before the paint has completely dried out (usually 3 or 4 days), others make no qualifications in this area but may have other requirements.



4.2.4 SPARS AND RIGGING. The aluminum spar and stainless steel rigging on the Pearson Flyer require little routine maintenance other than cleaning, and the regular on-going checks that any prudent person would make for signs of chaffing or wear. Some suggested cleaning and inspection procedures are included in the following paragraphs:

4.2.4.1 Cleaning Wire Rope and Fittings. Using a stiff brush or nylon pads, clean with fresh water and detergent. Rinse thoroughly.

CAUTION

Do not use steel wool or cleansers containing chlorine for this operation.

4.2.4.2 Cleaning Synthetic Rope. When practicable, soak overnight in warm water, rinse thoroughly, dry before storing.

NOTE

An excellent way to clean synthetic rope is to run it through a washing machine set on a warm cycle. For the welfare of both the synthetic rope and the washing machine, make certain that the construction of the washing machine is such that it is not possible for the rope to slip behind the basket.

4.2.4.3 Rigging Inspection. At least once a season, more often if the boat is being raced extensively, make a complete inspection of all of the yacht's rigging and fittings.

- (1) Check swaged fittings for cracks and other signs of wear.
- (2) Check that cotter pins are secure and properly taped.
- (3) Check running rigging (lines, blocks, etc.) for signs of wear.

4.2.5 WINCHES. Perform maintenance in accordance with the maintenance instructions provided in the manufacturer's literature. This involves periodic disassembly, cleaning, oiling, and greasing.



4.2.6 POWER SYSTEM. Details for most of the power system maintenance procedures are contained in the engine manual with the following being a brief summary of those items that should receive particular attention. For long engine life and efficient operation, the complete maintenance schedule as set up in the engine manual should be followed.

4.2.6.1 Daily. Daily or at the start of each trip, check the oil level.

4.2.6.2 Every Two Weeks. Drain the water trap in the primary fuel filter.

4.2.6.3 Every 50 Hours or Yearly. Change engine oil.

4.2.6.4 Every 100 Hours or Yearly. Perform the following:

- (1) Replace primary filter cartridge.
- (2) Replace air filter cartridge.
- (3) Clean secondary filter screen.

4.2.6.5 Every 150 Hours or Yearly. Change transmission oil.

4.2.7 ELECTRICAL SYSTEM. Perform the following:

4.2.7.1 Monthly. Check the electrolyte level in the battery and fill with pure distilled water if required.

4.2.7.2 Twice Each Season.

- (1) Remove, clean and retighten battery terminals.
- (2) Clean battery surfaces with a solution of baking soda.
- (3) Apply coating of petroleum jelly to battery terminals.

#### 4.3 LAYING UP.

4.3.1 The most common reason for laying-up a yacht is for winter storage in cold climates. The following paragraphs are oriented to that purpose, but if it becomes necessary to lay-up the yacht for an extended period in a warm climate, the procedures will still be of value with winterizing procedures omitted.

4.3.1.1 The tendency to close up and abandon a yacht at the end of the season, without proper laying-up procedures is a practice that should be avoided. Improperly winterized equipment can result in expensive repair bills and needless delays at the beginning of the new season. In addition, accumulations of gear left in a poorly ventilated yacht can either corrode, or generate a bumper crop of mildew. The owner must ensure that proper lay-up procedures are performed if the yacht is to be ready for re-commissioning at the end of the lay-up period.

#### 4.3.2 BEFORE YACHT IS HAULED.

- (1) Consult engine manual for instructions for winterizing the engine. Perform the appropriate in-water steps.
- (2) If it is intended to disconnect the shaft coupling during haul-out, do so at this time. (Para. 3.2.6.10).

#### 4.3.3 AFTER YACHT IS HAULED.

- (1) Wash bottom.
- (2) Wash topsides, deck, and all other exterior fiberglass surfaces.
- (3) Remove all sails, follow sailmaker's instructions in regard to cleaning, store in a dry place.
- (4) Remove all sheets and lines, clean, store in a dry place.
- (5) If the mast is to be removed from the yacht, remove the boom and all stays and shrouds from the mast. Wash the entire stay or shroud assembly using fresh water and a stiff brush, dry thoroughly, and coil into large un-kinking coils. Store the coils in a dry place. Wash and wax the mast and boom, coil halyards into non kinking coils and lash them to the mast. Store the mast and boom either inside or outside with adequate support along their length.
- (6) If the mast is to be left in place, remove the boom and clean and store as described above; clean swage fittings, toggles, turnbuckles, etc. with fresh water and a stiff brush; apply a light coating of silicon grease paying particular attention to the swage fittings where they connect to the cables.
- (7) Clean and lubricate all deck hardware that contain moveable parts. Follow manufacturers instructions on winches.



- (8) Remove all gear such as books, documents, bedding, PFDs, anything moveable that is subject to rust, corrosion or mildew.
- (9) If the portable ice chest and the portable toilet are to be left aboard, wash both out with a weak solution of Clorox, prop ice chest open, ensure that the portable toilet is drained completely.
- (10) The storage battery should be fully charged, be up to proper electrolyte level, and both battery terminals should be disconnected. The battery may be either left aboard, or stored ashore in a cool, dry place.

NOTE

Sub zero temperatures will not harm a fully charged battery.

- (11) Drain the water tank and work the galley faucet to clear the lines.
- (12) Pump the bilge until it is free of water.
- (13) Remove all electronic gear that may require servicing during the winter.
- (14) Remove fire extinguishers for weighing, checking, and any necessary recharging. If an automatic fire extinguishing system is installed, return the cylinders to the yacht and re-install as soon as possible.
- (15) If security is likely to be a problem, remove easily removed items such as compasses and radio transmitters, store in a safe place.
- (16) If cushions are left aboard, bring cockpit cushions below and place all cushions on edge to encourage ventilation.
- (17) Leave all interior lockers open to encourage ventilation.
- (18) Ensure that cockpit scuppers are free,
- (19) If the boat is to be covered, ensure that the cover is installed in such a way as to provide adequate ventilation, and that the cover is not permitted to chafe against portions of the hull.



- (20) If the boat is not to be covered, ensure that mechanisms such as winches are provided with adequate covers.
- (21) If the mast is to remain stepped, slack the backstay and shrouds to light tension, snub all shrouds and halyards to minimize noise and wear.

#### 4.4 FITTING OUT.

4.4.1 Fitting out is the performance of the tasks required to place a yacht into service after a lay-up period. Since it is in effect, the recommissioning of the vessel, the procedure provided in Section 2 (Commissioning) of this manual should once again be followed along with the following additions:

- (1) Follow the procedures outlined in the engine manual for placing the engine back in service.
- (2) If the mast was removed during lay-up, the tuning procedures outlined in paragraphs 3.1.2.1 through 3.1.3 in this manual should be performed in addition to the steps in the commissioning procedure. If the mast remained stepped, perform the procedure described in paragraphs 3.1.2.4 through 3.1.3.
- (3) Make a complete inspection of all standing and running rigging. Look for signs of stress or cracking at swaged fittings; evidence of fraying, chafing, kinking; cotter pins and other hardware secure and taped. Pay particular attention to the wire-to-rope splice on halyards.

## SECTION 5

### PEARSON FLYER 30

#### ONE-DESIGN CLASS RULES

##### 5.1 INTRODUCTION

- 5.2 The following pages of this section contain the latest edition of the one-design class rules for the Pearson Flyer 30. The rules are presented in their entirety, using the same numbering system and figure designation formulated for the class association.
- 5.3 As stated in paragraph 5 of the rules, it is the intention of Pearson Yachts to encourage the formation of an independent governing committee to administer the class association, and this may eventually result in some organizational changes to the general rules. It should also be noted that rule 17.4 allows local fleet jurisdiction regarding alterations to the recommended equipment list. The owner interested in one-design racing should obtain the latest edition of the rules from his local fleet in order to be aware of any changes in these two areas.
- 5.4 The standard Pearson Flyer 30 as released from the dealer meets all class rule requirements, except for those items such as sails or safety equipment that are the owners' responsibility. The class rules regarding sail measurements should be discussed with the sailmaker before any sails are made, and other owner responsible items listed in the rules or covered in section 2 of this manual should be studied carefully.

## PEARSON FLYER 30

### ONE-DESIGN CLASS RULES

#### 1. Objectives of the Pearson Flyer One-Design Class Association.

The Pearson Flyer, manufactured by Pearson Yachts, Portsmouth, Rhode Island is intended to:

- a. Promote and develop Pearson Flyer racing under uniform rules and to maintain the one-design feature of the Pearson Flyer.
- b. To promote the Pearson Flyer as a recreational boat with only those items necessary to provide safe one-design racing, daysailing and family cruising.

#### 2. One-Design

No modifications are permitted except those alterations or modifications explicitly permitted by these rules or approved by the class measurer. Modifications and alterations shall be defined to include any changes in hull, deck or keel form, any changes in materials and any movement of standing rigging or permanently installed hardware.

#### 3. Organization and Membership

It is the intent of Pearson Yachts to encourage the formation of an independent governing committee to administrate the Pearson Flyer Association.

To that end, Pearson Yachts, West Shore Road, Portsmouth, Rhode Island, 02871 will function as a "pro tem" Governing Committee and will administrate the Pearson Flyer Association until 100 hulls have been built and sold and dues have been received from their owners.

When this criteria has been met, Pearson Yachts will supervise the election of the Governing Committee.

Any owner or bona fide charterer of a Pearson Flyer may apply for membership in the Pearson Flyer Association. Membership is encouraged through a Pearson Flyer fleet in those waters where the applicant usually sails.

The fleet shall function as a self-governing territorial branch of the Association which shall open membership to all eligible individuals (and partnerships) and shall uphold the Association's rules.



#### 4. Fleet Charters

The Governing Committee may grant Fleet Charters to any fleet consisting of 5 boats upon application to the Association Secretary. Relocation of fleet charters may be made by the Governing Committee upon failure of a fleet to maintain a minimum number of members in good standing or other adequate cause.

#### 5. Dues and Membership

- a. Members of the Pearson Flyer Association shall be owners, part-owners or bona fide charterers registered upon payment of dues.
- b. Associate Members may be accepted to the class.
- c. Each boat shall be entitled to a single vote in matters acted upon by Fleets and/or the Governing Committee.
- d. Annual dues of \$15.00 per member/associate member are payable to the Pearson Flyer Association.

Until the election of the Governing Committee, dues shall be held in escrow by Pearson Yachts.

- e. Applicants for membership and associate membership shall remit dues to the Pearson Flyer Association Treasurer through fleet treasurers wherever possible.

#### 6. Construction and Measurement Rules

- a. Intent - the following construction and measurement rules are intended to promote the spirit of bona fide one-design racing. It is the responsibility of the owner(s) or charterer that his boat complies with these rules at all times during one-design racing events.
- b. The Pearson Flyer Association Class Measurer shall be a member of the Governing Committee. The Measurer shall report any variation from the intended nature and design of the yacht or any variation against the general interest of the class.

## CONSTRUCTION AND MEASUREMENT

### 1. MOLDED PARTS

- 1.0 Construction of the hull, deck and small parts shall take place in molds built and maintained by Pearson Yachts. The construction of said parts shall be in accordance with plans and specifications set forth by Pearson Yachts. It is the owner(s) responsibility to insure the vessel is maintained in accordance with the above parameter.

### 2. INTERIOR

- 2.0 The interior components, supplied or installed by Pearson Yachts may not be altered or deleted in anyway except by items of equivalent weight. Additional equipment may be added or installed by the owner or dealer provided, that said equipment is not intended to significantly improve the boat's performance.

### 3. KEEL

- 3.1 The keel shall be of lead with 4% antimony and be poured in an iron mold, cast from the master pattern.
- 3.2 The weight of the keel shall be 2700 LB. + 0, -30 LB.
- 3.3 The external keel dimensions shall not exceed the measurement as shown in the offset table contained herein. (PLAN A)
- 3.4 The keel coating for fairing purposes may be any synthetic material.

### 4. RUDDER AND TILLER

- 4.1 The dimensions of the rudder shall in all cases be in accordance with the offset table contained herein. (Plan B)
- 4.2 The tiller shall be of wood and shall not be altered in length. Tiller extensions may be fitted.

### 5. MAST

- 5.1 The mast section shall be specifically shaped of extruded aluminum from a supplier approved by Pearson Yachts.
- 5.2 The mast, 1" contrasting measurement bands, and associated hardware shall be positioned in accordance with the plans and specifications set forth by Pearson Yachts.

5.3 The position of the mast shall be governed by the following parameters:

- a) The distance from the forward face of the main (chain plate) bulkhead to the aft face of the mast shall not exceed 0.78'
- b) The distance from the forward face of the mast to the stem at the sheer shall be  $10.40' + 0.04'$ .
- c) The distance from the upper forestay pin centerline to the deck at the forward face of the mast shall not be less than 33.94' with no pre bend.
- d) The position of the mast at the heel and partners shall remain fixed whilst racing.

5.4 The use of rotating or permanently bent masts is prohibited.

## 6. BOOM

- 6.1 The boom shall be of extruded aluminum from a supplier approved by Pearson Yachts.
- 6.2 The boom, 1" contrasting measurement band, and associated hardware shall be positioned in accordance with the plans and specifications set forth by Pearson Yachts.
- 6.3 Lightening holes machined in the extrusion are prohibited.

## 7. SPINNAKER POLE

- 7.1 The spinnaker pole shall be of extruded aluminum from a supplier approved by Pearson Yachts.
- 7.2 The spinnaker pole shall not exceed 10.88' in length, including end fittings.
- 7.3 The distance from the mast centerline to the outboard end of the spinnaker pole shall not exceed 10.94' when the pole is in its fittings on the mast and set in a horizontal position athwartships.
- 7.4 The end fittings shall be optional.
- 7.5 The spinnaker pole shall be stowed on deck while not being readied for or in use.
- 7.6 Two spinnaker pole mast fittings are permitted. The upper and lower positions are 6' 3" and 4' 3" above the mast flat at deck centerline, (tolerance  $\pm 1.0"$ ).



8. STANDING RIGGING

- 8.1 The standing rigging shall be of 1 x 19 S.S. wire, sizes to be in accordance with specifications set forth by Pearson Yachts. A groove type headstay system is permitted.
- 8.2 The headstay length as measured between the centerlines of the points of fixity shall not exceed 35.92'.
- 8.3 The following items are prohibited:
  - a) No adjustment of the standing rigging is permitted (manually, mechanically or hydraulically) whilst racing, excluding the backstay.
  - b) The use of running backstays or devices to simulate such are prohibited.

9. RUNNING RIGGING

- 9.1 One spinnaker halyard of 3/8" D. pre stretch or low stretch synthetic line.
- 9.2 Two Genoa/Jib halyard of 5/32" D. 7 x 19 S.S. wire rope (approximately 41.83' long) with 3/8" D. synthetic line tails.
- 9.3 One main halyard of 3/16", 7 x 19 S.S. wire rope with (approximately 43.5' long) 3/8" D. synthetic line tail.
- 9.4 One each spinnaker pole foreguy and topping lift of 3/8" D. synthetic line.
- 9.5 One boom vang, of 3/8" D. synthetic line in a 4:1 power tackle.
- 9.6 One mainsail cunningham of 3/8" D. synthetic line in a 4:1 power tackle.
- 9.7 Two reefing lines of 3/8" D. synthetic line.
- 9.8 One internal outhaul of S.S. wire with 3/8" D. synthetic line tail in a 4:1 power tackle.
- 9.9 Two mainsheet traveler control lines of 5/16" D. synthetic line in a 4:1 power ratio.
- 9.10 One mainsheet of 7/16" D. synthetic line in a 6:1 power tackle. There shall be three single blocks affixed to boom bails and a triple block with becket and integral cam action cleat on the traveler car.

- 9.11 One backstay of 5/32" 1x 19 S.S. wire rope with 8:1 power tackle system.
- 9.12 One main boom topping lift of 1/8" 7 x 19 S.S. wire rope (approximately 40.0" long) with synthetic line tail.
- 9.13 Genoa sheets of not more than 1/2" D. synthetic line.
- 9.14 Spinnaker sheets of not more than 1/2" D. synthetic line.
- 9.15 The following items are prohibited:
  - a) The substitution of Kevlar or wire cored lines for synthetic or pre/low stretch lines.
  - b) The use of hydraulics.
  - c) The use of a reaching strut.
  - d) The use of a barber haul system, which exceeds a 4:1 power ratio.

#### 10. DECK HARDWARE AND EQUIPMENT

- 10.1 In general, the deck hardware shall be located in accordance with the plans and specs set forth by Pearson Yachts. (Plan D)
- 10.2 The following alterations or additions are permitted.
  - a) Self tailing winches comparable to those supplied by the builder both in power ratio and location.
  - b) Deck prisms and ventilators provided water tight integrity is maintained.
  - c) Two pairs of pad eyes to serve as foundations for head sail trimming and boom preventers.
- 10.3 The following alterations or additions are not permitted.
  - a) The installation of foot blocks for Genoa sheets.
  - b) Thru deck spinnaker launchers.

#### 11. SAIL MEASUREMENT - GENERAL

- 11.1 The sails shall be contained within the limitations as shown on the official sail plan. (Plan E)
- 11.2 The sails shall be measured dry, laid on a flat surface with sufficient tension to remove across wrinkles and along the line of measurement.

- 11.3 The lengths of the sail edges are to be measured in a straight line to the fair extension of intersecting boundaries, (including bolt ropes and luff tapes) except where defined otherwise.
- 11.4 Genoas only may be made of non-woven material.
- 11.5 There is no limitation on the size or number of windows on the mainsail, genoa or jib.
- 11.6 Purchase of sails shall be limited to the following in each calendar year. (Exclusive of storm sails)

Spinnaker: Two  
Main: One  
Headsails: Two

- 11.7 Numbers shall be of the following dimension:  
15" high, 10" wide, 2½" thick, 2½" spacing.  
Numbers shall be provided on the mainsail, genoa and spinnaker.
- 11.8 The class insignia shall be in accordance with the plans and specification contained herein. (PLAN C) It shall be installed to flow aft and mounted back to back.
- 11.9 The number of sails carried on board during one design racing shall not exceed mainsail, genoa, class jib and two spinnaker(s) defined as follows. This does not include storm sails.

## 12. MAINSAIL MEASUREMENTS

- 12.1 Cross width measurements (luff to leech) shall be the distance from the leech measurement points as defined in 12.1 (a), to the nearest point on the forward edge of the sail. The points on the leech from which the cross width measurements are taken shall be established by bridging any hollows in the leech with straight lines.
- a) The mid point of the leech shall be determined by folding the head to the clew. The 3/4 leech point shall be determined by folding the clew and the head to the mid point of the leech.
- 12.2 The cross width measurements shall not exceed the following dimensions:

Upper ¼ Girth: 5.76'  
Midgirth: 9.24'

- 12.3 Leech line is permitted.



12.4 At least four intermediate grommets shall be fitted to the sail at each reef point (except flattening reef).

12.5 Reef positions to be per sail plan. (PLAN E)

13.. GENOA MEASUREMENTS

13.1 No reef points or cunninghams cringles are permitted.

13.2 Leech and camber lines are permitted.

13.3 The luff perpendicular including luff rope shall not exceed 16.33' + .00".

14. JIB MEASUREMENTS

14.1 A battened leech is permitted with restriction as follows:

a) A maximum of four battens approximately equally spaced along the leech.

b) Batten lengths shall not exceed 0.83'.

c) No positive roach.

14.2 Leech and camber lines are permitted.

14.3 The luff perpendicular including luff rope shall not exceed 11.23'.

14.4 One reef position is allowed, measured from the head as follows:

a) 30' 11" along the luff to the centerline of the reef luff grommet (I.17')

b) 26' 2" along the leech to the centerline of the reef leech grommet (I.17')

c) At least two intermediate grommets shall be fitted to the sail between the luff and leech grommets.

15. SPINNAKER MEASUREMENTS

15.1 The spinnaker shall be a three cornered sail, symmetrical about its centerline.

15.2 The sail measurements shall not exceed the following dimensions:

a) Spinnaker maximum width - the maximum width of the spinnaker measured between points on the luff and leech equidistant from the head shall be 19.69' + 0, - .17'.

- b) Spinnaker luff or leech - the maximum length of the spinnaker luff or leech measured around the sail shall not exceed  $34.84' + 0", - .17'$ . Luff and leech shall be of equal length.
- c) Spinnaker midgirth - the width of the spinnaker measured the midpoints of the luff and leech shall not exceed  $19.69' + 0, - .17'$ .

15.3 The following restrictions shall apply to spinnakers:

- a) The angle at the tack and clew and measured between the luff or leech and the foot shall not exceed  $110^{\circ}$ .
- b) Battens shall not be used in spinnakers.
- c) Adjustable leech lines are not permitted.

16. MISCELLANEOUS RULES

16.1 Instruments carried during one design racing shall be limited to the following:

- a) Two mechanical trim indicators.
- b) Two compasses.
- c) Tell tales of any kind and number.
- d) One electronic boat speed and/or distance registering device.
- e) One electronic depth transmitter.
- f) One CB, VHF or other radio transmitter.
- g) One electronic apparent wind speed and direction transmitter.

16.2 Crew

- a) The crew shall be limited to 3 thru 7 inclusive in number.

17. EQUIPMENT

17.1 The equipment carried on board whilst racing shall:

- a) Function properly.
- b) Be readily accessible.
- c) Be of a size, type and capacity suited to and adequate for the intended use and size of the yacht.

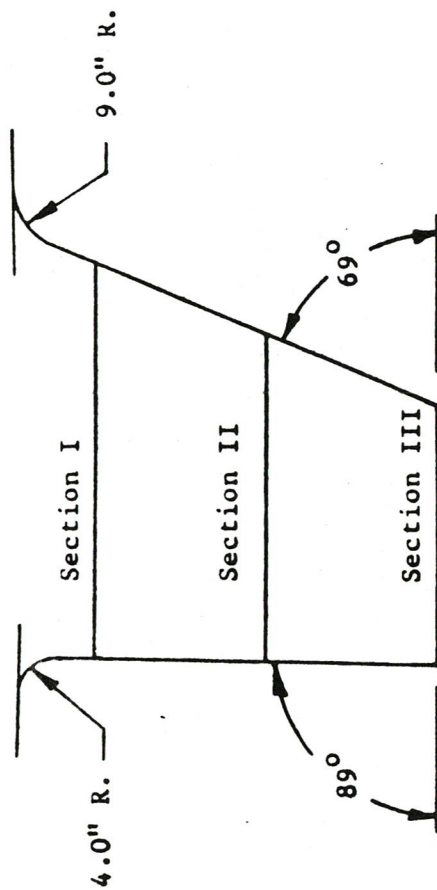
17.2 The following equipment shall be carried on board whilst racing:

- a) Two (2) soft wood round plugs, 6" long and tapering from  $\frac{1}{2}$ " D. to  $1\frac{1}{4}$ " D.
- b) Two (2) buckets with lanyards of 2 gallon minimum capacity.
- c) One (1) flashlight, water resistant with spare batteries and bulbs.
- d) One (1) first aid kit and manual.
- e) One (1) radar reflector.
- f) Tools and spare parts, including adequate means to disconnect or sever standing rigging from their foundations.
- g) One (1) anchor of any configuration (metal construction only) with a minimum weight of 10.0 pounds exclusive of rode, chain or shackles.
- h) One (1) anchor rode consisting of chain and synthetic line. The chain shall be a minimum of 4.0' in length,  $\frac{1}{4}$ " nominal with a weight (in air) of 0.75 LBS/FT minimum. The synthetic line shall be a minimum of  $\frac{3}{8}$ " D. of either twisted or stranded construction, with a minimum length of 150.0 FT. The anchor rode must be securely attached to the anchor.

17.3 The owner(s) or representative has the responsibility of compliance with all federal, state, and local government regulations as they pertain to safety equipment required to be carried on board.

17.4 The equipment list contained herein is a recommended minimum compliment. Any alterations to these requirements shall be left to the jurisdiction of the local fleets.





PLAN A - KEEL PLAN

	I	II	III
Front - down leading edge from hull	9.50	33.687	57.812
Back - down trailing edge from hull	8.656	31.156	53.687
Section chord length	52.00	42.437	33.812
Leading edge radius	0.375	0.312	0.250

Front - down leading edge from hull  
 Back - down trailing edge from hull  
 Section chord length  
 Leading edge radius

KEEL SECTION OFFSETS

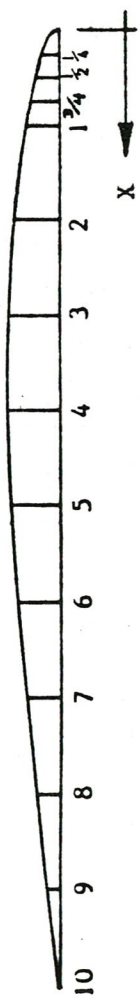
STATION ALONG (X)

1.00	0.875	0.687
1.406	1.187	0.937
1.718	1.468	1.156
2.00	1.687	1.312
2.687	2.218	1.781
3.00	2.437	2.00
3.062	2.562	2.031
2.812	2.375	1.906
2.406	2.062	1.593
1.937	1.687	1.281
1.343	1.187	0.875
0.750	0.687	0.468
0.062	0.062	0.062

$\frac{1}{4}$   $\frac{1}{2}$   $\frac{3}{4}$  1 2 3 4 5 6 7 8 9 10

NOTES: Dimensions are in inches.

These are the minimum faired dimensions at each station.



# PLAN B RUDDER PLAN

## SECTION A OFFSETS

### STATION ALONG (X) RUDDER SECTION OFFSETS

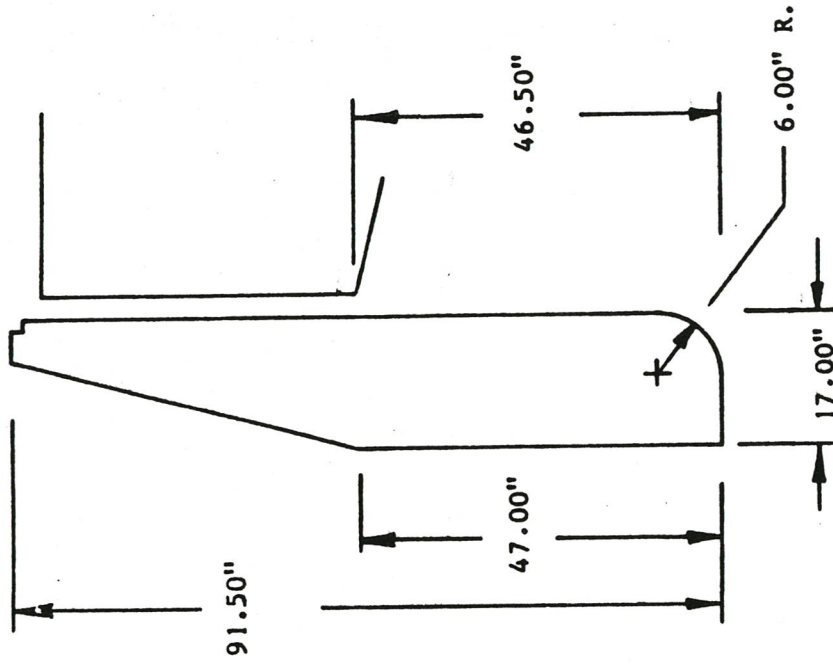
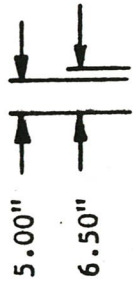
1/4	.325"
1/4	.531"
1/4	.625"
1	.718"
2	.968"
3	1.093"
4	1.125"
5	1.031"
6	.875"
7	.687"
8	.500"
9	.281"
10	.062"

Leading edge .165" Radius

Section A is perpendicular to the leading edge

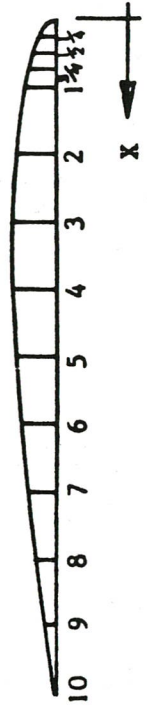
NOTES: Dimensions are in inches.

These are the minimum faired dimensions at each station.

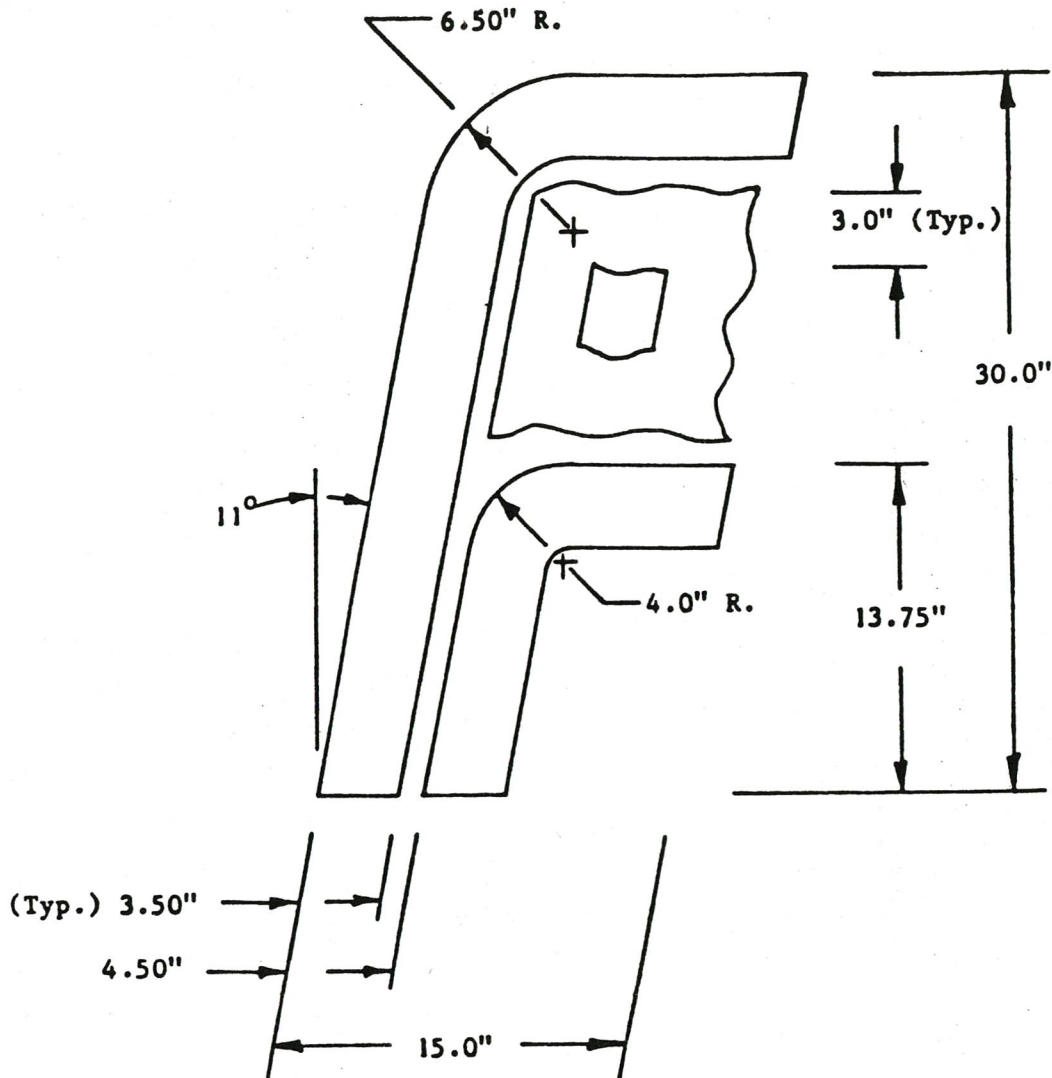


Section a constant for 3'-11\"/>

Station spacing = 1.703"



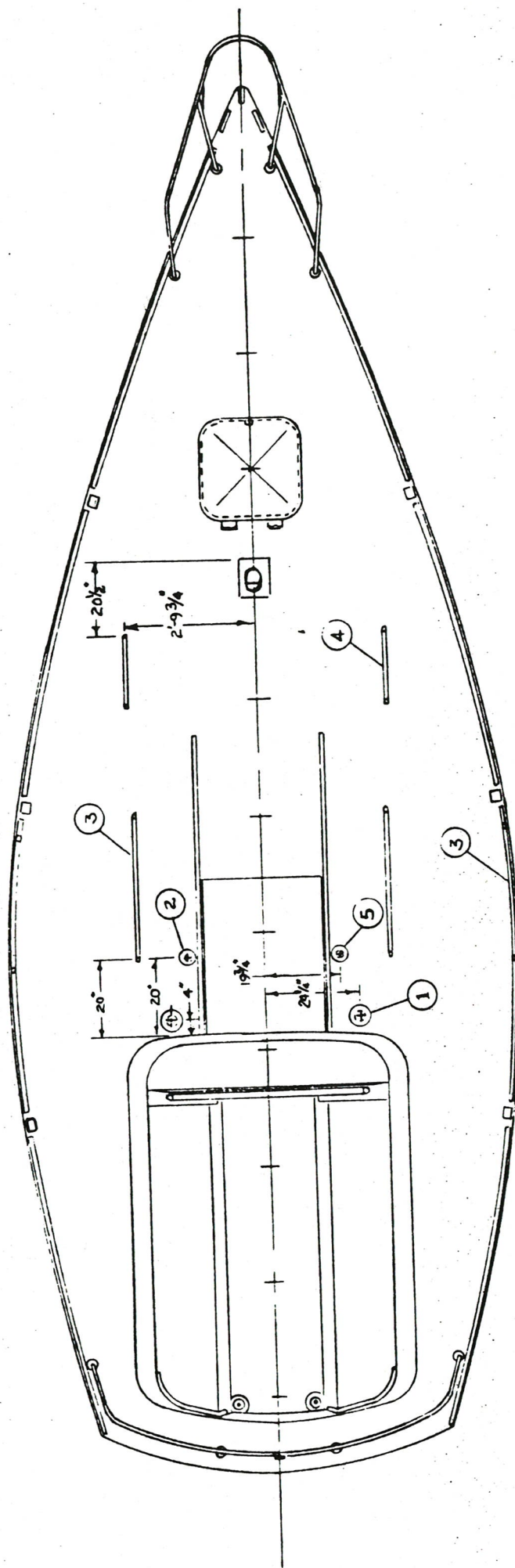
PLAN C  
PEARSON FLYER  
EMBLEM



NOTE: EMBLEMS TO BE MOUNTED BACK TO BACK PORT AND STARBOARD - STREAMING AFT.



ITEM	QTY	DESCRIPTION
1	2	PRIMARY WINCHES #30 ALLOY
2	1	WINCH HALYARD #8 ALLOY
3	4	GENOA TRACKS 3'-0"
4	2	GENOA TRACKS 16"
5	1	OPT. WINCH HALYARD #8 ALLOY



10	9	8	7	6	5	4	3	2	1	0
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PEARSON FLYER  
JUN 3-11-81 NO SCALE

DECK PLAN - D

### WARRANTY

PEARSON YACHTS are carefully inspected and tested prior to shipment from our factory.

Because of this attention to quality control, our warranty is one of the most effective in the industry.

More important, however, is the knowledge and cooperation you as the owner, and we as the manufacturer, receive from the PEARSON Dealer Organization.

Your warranty is included in your file of ship's papers. Be sure to follow the instructions on filling out and forwarding. You can rest assured that our policy towards your warranty will result in your satisfaction.

THE RESPONSIBILITY OF THE OWNER

1. Your prompt return of the warranty will help us insure continued satisfaction. Your dealer will provide you with the required information and will co-sign the warranty. Please return the manufacturer's copy within thirty (30) days after taking delivery of your new boat.
2. Thoroughly check your Ship's Papers file to insure that all instructions furnished with accessories are included.
3. Your Pearson dealer will competently handle any service problems that may arise. It is essential that you contact him for all warranty matters.
4. When it is necessary to contact Pearson, please address your letters as follows:

PEARSON YACHTS DIVISION

GRUMMAN ALLIED INDUSTRIES

WEST SHORE ROAD

PORTSMOUTH, RHODE ISLAND 02871

ATTENTION: CUSTOMER SERVICES DEPARTMENT



PARTS CATALOG

PEARSON FLYER

## INTRODUCTION

## PARTS CATALOG

Because of the variations in costs, we must advise that there may be changes in retail prices between the published price and the actual selling price.

Your dealer carries many items and is prepared to expedite any parts you may wish to order through him which he has not inventoried.

Important: If you wish to prepay, please contact us for a firm price quote before sending your remittance; otherwise orders from the company are shipped COD.

IMPORTANT - READ BEFORE ORDERING

This catalog has been sectionalized to facilitate your locating desired parts. Your local Pearson Dealer may stock many of these parts. If they do not, they will be happy to accept your order. If it is inconvenient for you to contact your nearest Pearson Dealer, you may order directly from Pearson Yachts.

When ordering, please provide us with the following information:

1. Boat Model and Hull Number (e.g. P-30 #100)
2. Quantity. Specify for each item ordered.
3. Part Number.
4. Description, as shown in this catalog.
5. Shipping Instructions. In the absence of your specific shipping instructions, we will use our best judgment. However, we cannot be responsible for delays or expense.

CREDIT: Credit is gladly extended to rated dealers. All other orders will be sent prepaid or COD.

PRICES: The prices in this catalog are suggested retail prices only, listed for the guidance of our dealers. The actual resale price in different areas may vary due to transportation costs and other conditions beyond the control of the seller. All monies being sent from a foreign country (e.g. Canada) must be in American currency or equivalent. All prices in this catalog are subject to change without notice and are F.O.B. Portsmouth, Rhode Island.

PACKING: We use every reasonable precaution in packing our parts to reach you in perfect condition, with due consideration to type of article and means of transportation. All shipments are made at the risk of the purchaser and we cannot be responsible for shortage, loss, or damage occurring in transit. In the event of such loss or damage, you must advise the carrier within 15 days of receipt of goods, and secure the carrier's notation of damage on the freight bill. Promptly thereafter, you must file your claim with the carrier. If any further assistance is needed, please contact us. We will give all reasonable assistance in tracing shipments.

WARRANTY: Every item we manufacture is warranted to be free from defects in material and workmanship. Any item found to be defective will be replaced or adjustment made provided we are notified promptly upon receipt and, if we request, the item is to be returned to us for examination. Repair and replacement of purchased accessories and components will be handled by us in accordance with the policies and apply to any part which shall have been repaired, altered, or otherwise serviced at other than duly authorized service facilities. In no event shall our liability for defects of any item exceed its replacement cost to us. Exterior finishes, applied during manufacture of the part, cannot be warranted because of the widely varying effect experienced in various climates.



RETURNED GOODS: All items being returned must have proper authorization. You must contact us for our written permission and Return Authorization Card. On the back side of the card is a printed form. This form should be filled out completely and used as a shipping label. If the label is not exposed, all incoming packages will be refused and returned to sender.

No credit for merchandise returned will be granted without the proper authorization from Pearson Yachts.

MINIMUM PARTS ORDERS: There is a minimum charge of three dollars (\$3.00) on all parts orders. This policy has been innovated for reasons of economy.

RESTOCKING CHARGE: Any items being returned for reasons other than exchange will be charged a fee of \$5.00 for restocking.

SPECIFICATIONS AND DESIGNS: The company reserves the right to make changes in design, materials, and prices without notice.

## PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Carpenter Shop  
 Page 1  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
81036		1	WEATHERBOARD	48.20
81035		1 set	RUNNERS, WEATHERBOARDS, TEAK PORT and STARBOARD	21.63
81041		1	TILLER ASSEMBLY COMPLETE	140.14
	22320	1	tiller fitting only	60.32
	16393	1	tiller wood only	60.81
81303		1	TABLE ASSEMBLY COMPLETE (19729) (19730) (81300) (81301) (81302) (81303)	

Prices and Specifications Subject to Change Without Notice

# PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Rigging Loft  
 Page 1  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
81700		1	JIBSTAY	99.42
81701		1	BACKSTAY	43.60
81702		2	UPPER SHROUDS	<u>ea.</u> 91.26
81703		2	LOWER SHROUDS	<u>ea.</u> 60.11
81704		1	JIB HALYARD	132.81
81705		1	MAIN HALYARD	145.26
81706		2	GENOA SHEETS	<u>ea.</u> 24.99
81707		1	MAIN SHEET	45.68
81708		1	TOPPING LIFT	55.20
81712			PREVENTER BACKSTAY (see Assembly for blocks)	12.15
81713		1	TRAVELLER CONTROL LINES	<u>ea.</u> 11.02
			<u>SPINNAKER GEAR:</u>	
81725		1	Spinnaker halyard, Internal	76.80
81726		1	Spinnaker sheet	72.10
81727		1	Spinnaker Guy	72.10
81728		1	Spinnaker Foreguy	43.97
81729		1	Spinnaker Pole Lift, Internal (see Spar Loft & Assembly)	56.50
81817		1	BOOM VANG (see Spar Loft & Assembly)	23.48
81731		1	ADDITIONAL JIB HALYARD, INTERNAL (see Spar Loft & Assembly)	133.15

Prices and Specifications Subject to Change Without Notice



# PEARSON YACHTS PARTS CATALOG

Model Flyer  
Department Spar Loft  
Page 1  
Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
			<u>MISCELLANEOUS MAST HARDWARE:</u>	
	11712	1	Extrusion with masthead only	2080.00
	11714	1	Spreader, port	45.79
	11715	1	Spreader, starboard	45.79
	19703	1	Clips, spreaders, port	33.64
	19704	1	Clips, spreaders, starboard	33.64
	19705	1	Winch base (#8 Lewmar)	12.87
	19706	1	Gooseneck bracket	32.19
	10974	1	Masthead light	10.71
			<u>BOOM</u>	
	11713	1	Boom complete, less bail	533.00
	19018	1	Boom bail	12.53
			<u>BOOM VANG:</u>	
	19708		Vang bracket, mast	21.94
	19709		Vang bail, boom (see Rigging & Assembly)	12.58
			<u>ADDITIONAL JIB HALYARD</u>	
	1275	1	Block, swivel exit	52.13
	22326	1	Plate, cover exit (see Rigging Loft & Assembly)	6.58

Prices and Specifications Subject to Change Without Notice

## PEARSON YACHTS PARTS CATALOG

Model Flyer  
Department Spar Loft  
Page 2  
Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
			<u>SPINNAKER GEAR:</u>	
	1275	2	Block, swivel exit <u>ea.</u>	52.13
	19707	2	Fixed eye, spinnaker <u>ea.</u>	29.25
	22325	1	Box exit, pole lift	26.62
	22326	2	Plate, cover exit <u>ea.</u> (see Rigging & Assembly)	6.58

Prices and Specifications Subject to Change Without Notice

## PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Small Parts & Machine Shop  
 Page 1  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
			<u>SMALL PARTS (fiberglass)</u>	
81612		1	Forward hatch	105.72
81614		1	Hatch Companionway	179.48
81615		1	Rudder	318.50
			<u>MACHINE SHOP</u>	
81500		1	Number plate	2.24
81501		1	Traveller bar (19527)	91.47
81504		2	Genoa track (11717), 18"	18.72
81510		1 set	Windows, smoked lexan	130.72

Prices and Specifications Subject to Change Without Notice



## PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Assembly  
 Page 1  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
	11708	1	PROP SHAFT 3/4 x 60" (BMW diesel)	195.00
	13318	1	PROPELLER, FOLDING 14 x 8 x 3/4	392.55
	2246	1	PROPSTRUT WITH 3/4" BEARING	150.67
	10964	1	EXHAUST FLANGE	25.04
	21296	1	STOP CABLE, 5'	11.83
	21134	1	THROTTLE CABLE, 7'	12.61
	21296	1	SHIFT CABLE, 5'	11.83
	19702	1	SHIFT & THROTTLE CONTROL, BMW	97.73
	22317	2	RUDDER GUDGEONS	80.18
	22318	1	PINTLE, UPPER	74.31
	22319	1	PINTLE, LOWER	78.62
	19263	1	ELECTRIC PANEL, 5-GANG	46.28
	10341	1	CABIN LIGHT	10.35
	19699	2	LIGHT, TRIM FLOURESCENT	37.86
	19695	1	BOW RAIL	195.00
	19696	1	STERN RAIL, PORT	72.80
	19697	1	STERN RAIL, STARBOARD	72.80

Prices and Specifications Subject to Change Without Notice

## PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Assembly  
 Page 2  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
	19679	1	BOW CHOCK, 5" PORT	15.16
	19680	1	BOW CHOCK, 5" STARBOARD	15.16
	19268	1	CLEAT 6" 2 HOLE, JIB HALYARD	7.18
	19628	2	CLEAT 6" 2 HOLE GENOA <u>ea.</u>	19.29
	19700	2	CLEAT 4" 2 HOLE STERN <u>ea.</u>	18.07
	19701	1	CLEAT 7" 4 HOLE <u>ea.</u>	20.70
	19675	2	SLIDES, GENOA TRACK <u>ea.</u>	12.58
	11709	2	GENOA TRACK, INBOARD <u>ea.</u>	9.36
	11709	2	GENOA TRACK, OUTBOARD <u>ea.</u>	9.36
	1153	4	BLOCK GENOA SHEET <u>ea.</u>	26.78
	22321	2	COVERS GENOA TRACK 39" <u>ea.</u>	11.65
	10958	8	STOPS, GENOA TRACK <u>ea.</u>	.55
	1243	2	CLEAT, SWIVEL TRAVELLER <u>ea.</u>	27.51
	1242	4	BLOCK, UPRIGHT, TRAVELLER CONTROL <u>ea.</u>	7.96
	19526	2	STOPS, TRAVELLER <u>ea.</u>	5.38
	19532	1	CAR, TRAVELLER	90.61
	17231	2	STRAP EYE, TRAVELLER <u>ea.</u>	.75
	1279	3	BLOCK, SINGLE SHEAVE, MAIN SHEET <u>ea.</u>	17.42
	1194	1	BLOCK TRAVELLER	118.33

Prices and Specifications Subject to Change Without Notice

## PEARSON YACHTS PARTS CATALOG

Model Flyer  
 Department Assembly  
 Page 3  
 Date 12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
	19102	6	STANCHION W/ BASE, 24 " <u>ea.</u>	34.19
	22328	12	BACK-UP PLATE, STANCHION <u>ea.</u>	.60
	19297	1	STERN LIGHT	20.15
	10124	1 pr	RUNNING LIGHTS	19.66
	19065	2	SCALLOPED HINGES, FORWARD HATCH <u>ea.</u>	5.67
	19714	2	TACK HOOK <u>ea.</u>	9.36
	1273	1	CHEEK BLOCK, JIB HALYARD	18.88
	1194	1	BLOCK, BACKSTAY TACKLE	118.33
	1247	1	BLOCK, BACKSTAY TACKLE	139.26
	1226	3	SNATCHBLOCKS <u>ea.</u>	73.29
	17203	4	TURNBUCKLE, UPPERS & LOWERS <u>ea.</u>	24.80
	17344	2	TOGGLE ½ PIN, HEADSTAY	16.09
	17341	1	TOGGLE, DOUBLE JAW	14.66
			<u>SPINNAKER GEAR:</u>	
	1139	1	Block, foreguy	12.19
	1141	2	Block, spin turning blocks <u>ea.</u>	30.32
	1272	1	Block, double sheave	34.45
	1273	1	Block, single sheave	18.88
	19073	2	Cam cleat w/ bullseye <u>ea.</u>	11.13

Prices and Specifications Subject to Change Without Notice



## PEARSON YACHTS PARTS CATALOG

Model      Flyer  
 Department      Assembly  
 Page      4  
 Date      12-1-80

Part # Complete Assembly	Part# Per Item	Quantity	Description	Retail Price
	19677	1	Double sheet stopper	45.24
	19034	1	Bullseye	12.53
	19716	1	Spinnaker pole (see Rigging Loft & Spar Loft)	291.20
			<u>BOOM VANG :</u>	
	1125	1	Block, fiddle	18.1
	1185	1	Block, fiddle w/ cam & snap shackle (see Rigging Loft & Spar Loft)	54.18
			<u>ADDITIONAL JIB HALYARD INTERNAL:</u>	
	1273	1	Cheek block	18.88
	19628	1	Cleat 6" 2 hole (see Rigging Loft & Spar Loft)	19.29

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