



Congratulations on the purchase of your Tartan Ten. We hope she will give you years of pleasurable sailing.

Included with this booklet is an owner registration form. Please fill it out and return to Tartan Marine Company so you can be enrolled in the ranks of Tartan owners.

If questions arise about your boat which your dealer cannot answer, call Bill Seifert here at the office (216) 354-5671.

The Tartan Ten Class Association rules are included in the back of this publication. We are only including them as a service to the Class Association, as the Association is a separate incorporated entity from the Tartan Marine Company. Before you make any modifications to your Tartan Ten, we suggest you check the class rules, in that a modification in violation of Class Rules may adversely affect the one design investment of your vessel. Questions regarding interpretation of the Class Rules should be directed to the Tartan Ten Class Association, not Tartan Marine.

The Tartan Ten is a special purpose boat, suited to day sailing and closed course racing with limited offshore intent. Her cockpit is too large to fulfill the volume requirements of USYRU Category I races, and usage should be planned accordingly. The Tartan Ten gets a lot of her responsiveness and sailing fun from her light weight. One of the aspects of light displacement is that some flexure may be encountered, especially in the deck. We use one of the most flexible gel coats available, but even with this product, some cosmetic cracking may be encountered.

Your Tartan is built in accordance with currently established practices. No boat will be safe unless manned by a knowledgeable, experienced skipper and crew. Do not operate equipment with which you are not familiar. The information contained in this owner's manual in no way contributes all the information you need to know in order to operate your boat safely. This owner's manual is only intended to acquaint you with SOME of the features of your boat which may be unusual. If you are not experienced, you are strongly encouraged to take courses in boating skills and safety, and read the many books available on the subject.

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I. COMMISSIONING:

BEFORE LAUNCHING:

Check that the engine and head have been de-winterized and that all drain plugs are in place.

Inspect all thru hull connections, and close valves.

Mark propeller shaft with folding prop with blades opening horizontally. For best sailing speed, set shaft to this position while sailing and engage either forward or reverse. Never leave out of gear and allow the shaft to rotate while sailing.

Install fully charged battery.

Check engine and transmission oil level.

Note the location of the draft marks on the hull - refer to "DRAFT MARKS" section.

LIFTING THE HULL:

Straps used in lifting the Tartan Ten should be positioned fore and aft of the keel. The forward strap should be between the aft edge of the forward hatch and the mast step. The forward edge of the aft strap should be in line with the aft end of the doghouse. In no case should the aft strap be positioned aft of the propeller.

AFTER LAUNCHING:

Immediately check bilge for water.

Open all thru valves and inspect hose connections for leakage.

When the engine is initially started, check that water is coming out the exhaust. If water does not come out the exhaust, check that the engine water intake thru hull is open and not blocked, then check the water pump impellor.

After engine has run in gear for several hours, adjust the packing at the shaft stuffing box. Avoid over tightening. It may drip a little water, and a slight drip is better than an over tight packing, which will burn out.

About a week after the spar has been stepped, and the rigging tensioned, it is wise to check engine alignment. Engine alignment should only be checked or changed by a qualified mechanic, familiar with the procedure.

BEFORE STEPPING SPAR:

Backstay:

Attach upper portion to masthead. Lower end of upper portion goes in middle hole of link plates. Note that the link plates have a larger space between the hole on one end and the rest of the holes. The end with the larger spacing goes on the triangular backstay division plate. Until initial stretch is taken out of standing rigging, it may be necessary to attach upper backstay to the topmost hole. Remove all rollers from the backstay adjustment carriage. Be sure to retain the spacer bushings inside the rollers. Re-assemble the carriage with each half of the lower backstay assembly retained inside the sheaves on one side, with the pair of sheaves closest to each other in a horizontal place toward the backstay division plate. Use Loctite or other locking compound on the nuts which hold the rollers. Refer to diagram.

Shrouds:

Unscrew turnbuckle bodies fully so that the jaw fitting and the swage on the wire are separate from the middle portion (body) of the turnbuckle. Place the jaw portion of the turnbuckle close to the chainplates below decks. Screw the bodies onto the jaw portion only one turn. Do not attach the turnbuckle to the chainplate until the mast is stepped and the stud on the shroud is engaged in the threaded body. The upper end of the shrouds is a "Tee" tang and is installed by removing the stainless retaining plate which extends transversely across the oval hole in the mast. The "Tee" type terminal is inserted with its shank 90 degrees to the long axis of the mast and turned so that it is parallel to the long axis of the mast, and pointing at the lower end of the mast. Replace the retaining plate.

Headstay:

Attach link plates to the lower end of the headstay with the marine eye in the second hole down from the top of the link plates. The bottom end of the link plates is the portion with the larger spacing between holes.

The upper portion of the headstay is also a "Tee" tang and is installed by removing the retaining plate, inserting headstay, and reinstalling plate.

Spreaders:

Attach to mast and insert upper shrouds, using positive retention stops provided.

Halyards:

Halyards exiting from bottom of mast - DO NOT remove wood block from bottom of mast before spar is stepped.

Halyards exiting from hounds and masthead - untie bundles of halyards, and tie off to gooseneck to prevent loss when spar is stepped.

If messengers are installed in lieu of halyards, reave all halyards and check that they are not twisted around each other.

STEPPING SPAR:

With spar hanging vertically over mast step, perhaps 12 to 18" above step, carefully pull block inside spar down to the mast step. Untie knots in halyards above the block. One by one, remove halyards from wood block, and lead into their respective mast step sheaves. The two foresail halyards (assuming spinnaker gear is ordered) go in the forward sheaves. The main halyard is in the aft sheave starboard side, with pole topping lift in the port aft sheave.

The block in the bottom of the spar keeps the halyards in the proper orientation to prevent tangling inside the mast. We suggest you save the block, and re-insert it each time the spar is unstepped, with the halyards reaved through it.

Lower the spar onto its step, keeping tension on the halyards so they are not pinched under the spar.

Attach headstay and backstay first. See diagrams of the link plate installation. Remember to slide the two different types of heat shrinkable tubing onto each shroud before the shrouds are slipped through deck. Lower shrouds go through the forward tubes. Refer to "Chainplate cover installation:" for more detail.

Start turnbuckle bodies on the stud end of the shrouds, attach turnbuckles to chainplates, and take up so they are hand tight.

Two 6" long pieces of soft aluminum are shipped with your boat. After the spar is stepped, these aluminum pieces should be bent to fit the sides of the mast, and driven into the space between each side of the mast and the mast step. Use a light hammer for this purpose. You may want to secure these pieces to the mast to prevent their working out, or becoming lost.

TUNING:

The headstay and backstay, when set into the link plate holes designated will yield a spar vertical to the boat's Datum Water Line. Refer to draft marks section for method of floating hull level. Remember that the Tartan Ten is ballasted to float down by the bow, and NO determination of rake can be established WITHOUT THE HULL FLOATING LEVEL. At rest, the spar will appear to have a forward rake.

Use the main halyard to measure from side to side on the hull to establish the mast in the middle of the boat. Tighten the uppers hand tight to hold the mast centered.

Next, tighten the uppers a little more to just start to bend the mast with the backstay tension released. Then use the backstay tensioning tackle to put about 4" of bend into the mast. (4" of bend is just a little more than HALF one mast fore and aft dimension). Tighten the lowers to about equal tension as the uppers, adjusting them so the mast is straight athwartships.

Due to the swept back shrouds, any change in rake fore and aft will necessitate a full re-tuning of the shrouds.

The amount of fore and aft rake adjustment is limited, and excessive helm should be rectified by re-cutting of sails.

TARTAN TEN CHAIN PLATE COVER INSTALLATION:

Before inserting the upper and lower shrouds through stainless tubes installed in the deck, slip one piece of short black heat shrinkable tubing and one piece of long heat shrink tubing over the wire.

After the upper and lower shrouds are adjusted to their final position, the heat shrinkable tubes may be used to give a water tight seal between the shrouds and the deck tubes.

The only tool required is a source of heat. The best source is a heat gun. Another source of heat is a "blow dryer" hair dryer. If you are careful, and use the area about 1/2" outside the flame tip end, a butane lighter may be used. Excessive heat will burn the tubing.

Use the long length of tubing to measure from the deck to the top of the long tube. Mark the shroud at that point. Position the small piece of tubing so that the top of the tubing is at the mark. Use a pair of pliers, or a

screw driver to hold the small tubing in this position while heat is applied. When the small tubing has shrunk tight on the wire, remove source of heat, and allow assembly to cool. Not much heat will be required.

Slip the large piece of tubing over the stainless tube so that its bottom end contacts the deck surface. Heat the upper end of the heat shrinkable tubing first so that it shrinks onto the smaller tubing. The very top of the heat shrinkable tubing may flare out a little, but a small flaring will not result in a leak if the tubing constricts to a tight fit lower down.

Heat the portion of the heat shrinkable tubing over the stainless tubing just a little until it constricts to a tight fit. There is a glue in the heat shrinkable tubing which will make a semi permanent bond to the stainless tubing if additional heat is applied.

RIGGING:

BACKSTAY TENSIONING DEVICE: Attach Harken #28 block to the strap on the backstay carriage. Orient the Harken block with its long axis fore and aft, and TIGHTEN the two small set screws near the top of the Harken block. This will prevent the block from swiveling, and snarling the backstay adjusting line.

MAIN SHEET: Attach Harken #32 block to the eye on the underside of the boom. Orient the block with its long axis fore and aft, and tighten the set screws near the top of the block to prevent its swiveling.

TRAVELLER TAG LINES: Unscrew the round head machine screw holding the eye strap to the traveller carriage. Work the eye in the tag line through to the eye in the strap, and reassemble. A small amount of Loctite or equal on the end of the round head machine screw will prevent its loosening. Be careful in removing the screw, as it also serves as the axle for the tag line sheave.

BOOM VANG: Refer to drawing of boom vang system for rigging plan. The "dinghy" style vang position (with tag line attached to mast step) is primarily a storage and very light weather position. Excessive tension will bend the boom. In heavy weather when there is a danger of the main boom dragging under water, a separate vang which can be released completely should be used to avoid damage to the boom.

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JIFFY REEFING LINES: Note that one is longer than the other one. Rig the longer one to the higher reef point. Typical rigging for a reefing line is:

From exit in aft end of boom
through reefing grommet in main
down to boom, forward of position of reefing
grommet when reefed, with a timber hitch tied
around boom

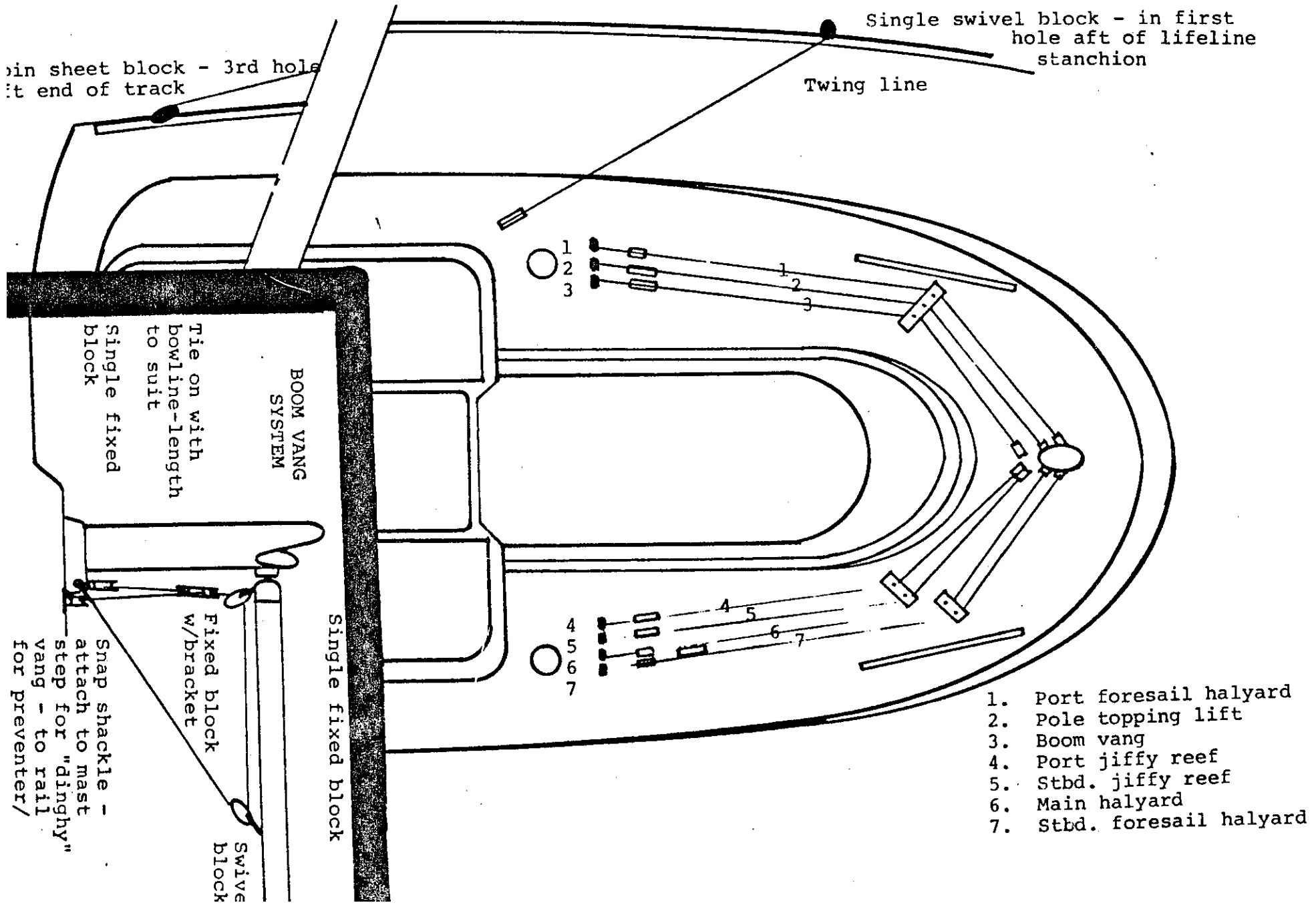
NOTE: If the main sail has a bolt rope along its foot, grommets should be provided along the foot to allow the bitter end of the reefing line to pass through so that timber hitch may be tied around the boom.

JIB/GENOA SHEETS: Must always be passed through the fairleads immediately ahead of the sheet winches in order to prevent overriding, if the lead is from either the class jib track or the optional 150% LP genoa track. If the sheet is lead direct from a snatch block or equal in the rail (as when reaching) the fairleads need not be used.

FOREGUY: Optional with spinnaker gear only - leads from fairlead on foredeck, to plastic Clam^r cleat on side of cockpit coaming.

SPINNAKER SHEETS: Ratchet blocks provided mount in third hole from aft end of perforated toe rail. We suggest light pieces of shock cord be attached to the ratchet blocks and lead to the lifeline to hold the block in its proper horizontal orientation. A large shackle is provided to mount in rail, with small shackle to attach block to large shackle.

TWING LINES: Swivel blocks for twing lines mount to the rail in the first or second hole aft of the middle stanchion. The spinnaker sheet should be passed through the block on the end of the short twing line. The twing line runs from the spinnaker sheet through the block on the rail, to the Clam^r cleat aft and outboard of the halyard winches. You can use the twing line to pull the spinnaker sheet (when it is on the guy side) down to the rail to prevent chafe of the sheet/guy on the shrouds. The twing line on the sheet side makes a handy "tweaker" to pull to fill a collapsing spinnaker. As with any line, use care in uncleating when under tension.



Main sheet block - 3rd hole at end of track

Single swivel block - in first hole aft of lifeline stanchion

Twing line

1
2
3

4
5
6
7

1. Port foresail halyard
2. Pole topping lift
3. Boom vang
4. Port jiffy reef
5. Stbd. jiffy reef
6. Main halyard
7. Stbd. foresail halyard

BOOM VANG SYSTEM

Tie on with bowline-length to suit
Single fixed block

Single fixed block

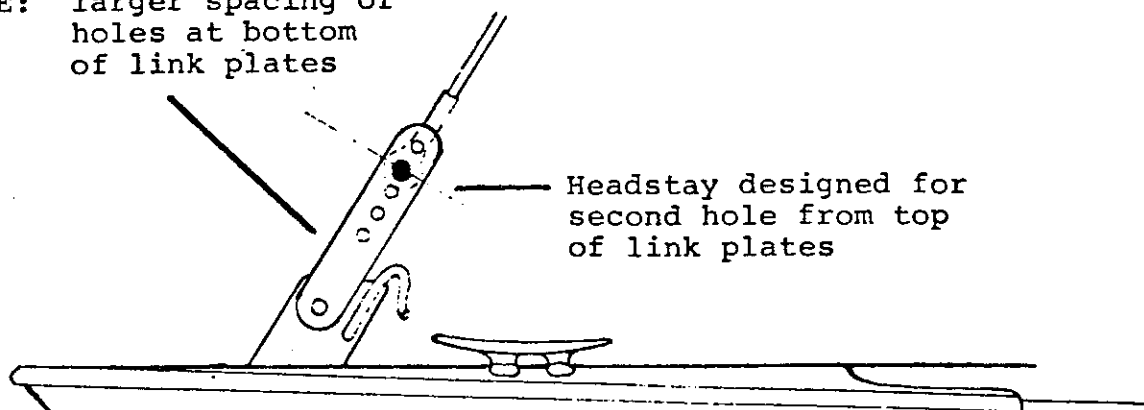
Fixed block w/bracket

Snap shackle - attach to mast step for "dinghy" vang - to rail for preventer/

Swive block

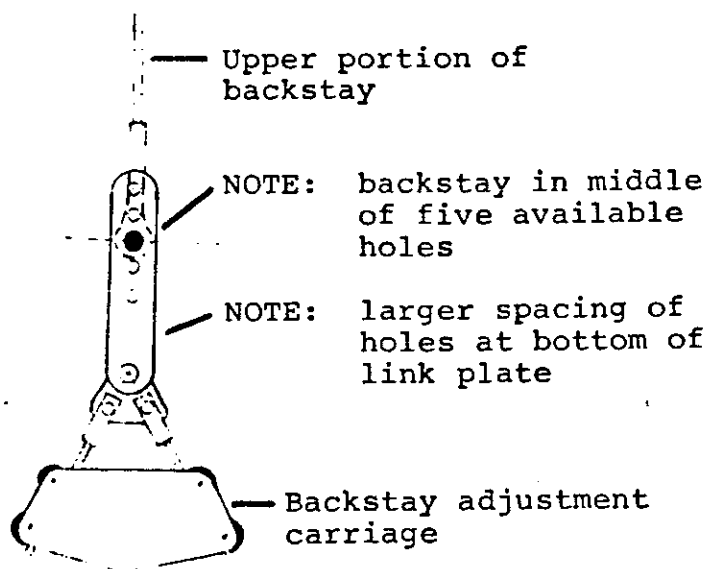
TARTAN TEN LINK PLATE INSTALLATIONS

NOTE: larger spacing of holes at bottom of link plates



Headstay designed for second hole from top of link plates

HEADSTAY



Upper portion of backstay

NOTE: backstay in middle of five available holes

NOTE: larger spacing of holes at bottom of link plate

Backstay adjustment carriage

BACKSTAY

II. GENERAL INFORMATION:

FARYMANN DIESEL ENGINE: Read the owner's manual furnished for the engine. Bleeding of the engine will be necessary any time the flow of fuel is interrupted to the engine. The bleeding procedure is very simple, if you have tried it a few times. Likewise, hand starting the engine comes readily with practice.

The engine holds only a small amount of oil. Therefore, the engine oil must be checked frequently and changed at recommended intervals.

Starting and stopping the engine: The throttle control is also the shut-off for the engine. The most frequent cause of engines not starting is the throttle left in the "stop" position. Always check that the throttle is advanced perhaps to 1/4 to 1/2 throttle when the engine is started. The key switch will turn the starter motor and start the engine. The key must be left ON whenever the engine is running. The engine will continue to run with the key in the OFF position, but damage to the alternator will result. To stop the engine, close the throttle past the idle position and hold it there until the engine dies. THEN, shut off the key switch.

INTERIOR CUSHIONS: The nylon fabric used on the Tartan Ten is purchased from the supplier for 90% of the marine industry. Like most nylon upholstery fabrics, the Tartan Ten fabric will support combustion if exposed to fire. Therefore, be careful with open flame or high temperatures in proximity to fabrics.

TRIMMING BALLAST: Each Tartan Ten is floated at the factory and ballasted to float in accordance with class rules. The trimming ballast is fibreglassed in, and should NOT be removed. The ballast is about a neutral axis, and its removal will not materially improve the performance of the vessel.

RUNNING BACKSTAYS: Many owners have sought our recommendation regarding the efficacy of running backstays on the Tartan Ten. If the boat is sailed offshore, you may want to add running backstays principally for peace of mind. If runners are added, they should be of light wire (1/8" dia maximum) and should run to short tackles not exceeding three standing parts, with the bottom of the tackles dead ended on the alum toe rail. Runners should be set up only tight enough to stop fore and aft pumping of the mast, not to increase headstay tension. Class rules do not allow running backstays.

FORWARD AIR VENTS: The forward air vents cut into the hull are intended for ventillation in harbor, and while underway in smooth seas. There is a box inside the boat

through which air passes. These boxes are accessible by removing the bulkhead forward of the vee berths. This bulkhead lifts out. Covers with clips are provided which clip into the top of the interior boxes. These covers will limit the amount of green water entering the vessel.

BILGE PUMP: To operate pump, first be sure pick up is immersed in bilge water. Insert handle in aperture on pump, and pump with vertical strokes. If the bilge pump should become clogged, its back may be unscrewed readily to remove the foreign matter.

WATER TANK: Is made from polyethelene. Be careful that sharp objects do not come in contact with the tank as it may puncture.

HEAD: The self contained toilet provided with your Tartan Ten can be converted to a more permanent installation with a deck mounted pump out fitting. The conversion kit which fits the head may be obtained from the head manufacturer, and your dealer can install the deck fitting and plumbing. This more permanent installation may be required in some states for legality.

HULL TO DECK JOINT: The fasteners which affix the hull to the deck run through the perforated alum toe rail, the deck, and the hull flange. They are tapped into non-ferrous metal imbedded in the hull flange. You will see the ends of some of the fasteners, and do not be alarmed that nuts are not visible. In addition to the mechanical fasteners, the hull/deck juncture is bedded with highly adhesive bedding.

DODGER: To install dodger, orient with open end aft. Simultaneously, pull both bolt ropes aft in their grooves, assisting horizontal portion over the companionway grab rails. When dodger is almost all the way aft, fasten snaps around forward perimeter, then pull dodger aft to tighten forward area.

The dodger will stow neatly if it is pulled forward all the way out of its grooves, but kept snapped on forward. Roll the dodger inside itself, then insert the short tab in the groove on each side.

FRESH WATER SYSTEM: The water tank has an inspection port in the top of the tank. This may be opened to clean out the natural accumulation of scum inside the tank. Use caution that the port is not excessively tightened. The tank fills independently through a fill fitting located on the side deck. Each time the tank is filled, it is wise to wipe off the threads on the center plug and those on the deck fitting to remove dirt which may prevent a good seal.

The vent for the water tank is located on the forward bulkhead of the starboard seat locker. Watch the vent line when filling the water tank, and stop filling the water tank before the vent line overflows into the bilge.

The water in your tank may develop a taste after a period of time. This will happen to any water in any tank, as it grows "flat". The addition of a commercial water preservation agent such as Sudbury Aqua Fresh crystals will greatly improve the taste of water stored for a long period.

BOTTOM PAINT: The keel, propeller strut area, and rudder of the Tartan Ten are painted with Interlux Fiberglass Bottomcote, #779 Black. Interlux advertises this paint as a "Co Polymer Epoxy". Check with your paint manufacturer for compatibility with the paint applied to the remainder of the bottom.

Boot top is painted with Interlux Interpoly polyurethane enamel.

Cove stripes are a special adhesive product, available from the Tartan Marine Co.

FIBERGLASS INTERIOR: You may wish to paint the exposed interior fiberglass of your Tartan Ten. The foremost problem in painting will be cleanliness of the surface. As an absolute minimum, wash the area to be painted with acetone at least twice, and then sand lightly. In general, synthetic finishes (epoxies, etc.) will stick better than oil or water based enamels.

SPEEDOMETER INSTALLATION: In order to facilitate installation of a speedometer thru hull, an area is left without coring immediately under the cabin sole floorboard forward of the mast support. As with any thru hull, the speedometer thru hull should be supported with a fiberglassed in block, and should be installed by a competent yard, or person familiar with such installations.

PLASTIC CLAM^F CLEATS: These cleats are subject to wear and subsequent failure. If a line ever slips at all in a plastic Clam^F cleat, replace the cleat immediately. Due to the possibility of a line not being properly belayed in a Clam^F cleat, causing

slippage and consequent failure of the cleat, the Clam^r cleats on the Tartan Ten are NOT covered in the warranty in any way whatsoever.

METAL CRADLE: The optional cradle supplied by Tartan Marine is designed to allow the keel of the vessel to ride in the center depression of the trucks used. For general storage, the wooden bunks may be raised on the upright pipes so that the keel is on the same plane as the "feet" of the cradle. In storage, almost all of the weight of the boat should be taken on the keel, with the cradle bunks only stopping the boat's tipping over. If the boat is stored on a soft surface, additional pads should be provided under the "feet" of the cradle and the keel area to prevent sinking into the ground.

ELECTRICAL SYSTEM: A 12 volt D.C. electrical system is used throughout the vessel for lighting and operation of various accessories. For any 12 volt current to be delivered, the following criteria must be met:

1. Charge in the battery.
2. Top switch on electrical panel - ON.
3. Switch for the individual appliance - (cabin light, running lights, etc.) - ON.
4. Switch on the appliance (if there is one, such as cabin lights) - ON.

The amount of charge going into the battery when the engine is running is shown on the Ammeter in engine panel. Generally, this meter will show a high rate of charge as soon as the engine starts, and the charge will taper off as the battery comes up to full charge. The voltage regulator automatically regulates the amount of charge going into the battery "boiling" over as it reaches capacity. For this reason, even though the engine has a 35 amp alternator, charging the battery for an hour will NOT put a full 35 amp hours back into the battery.

Battery will last longer if it is kept charged during periods when it is not used. Be sure to check the water level in the battery at least every two weeks. Distilled water is preferable, and will extend battery life. Adding water to a partially charged battery will lower the charge in the battery. Never add water to a battery which is charging, either via the engine alternator or a separate charger. Be careful in adding water so that the battery acid does not splash. Never add salt water

to a battery. Most boat batteries have a shortened life from improper storage during lay up periods, lack of water, and the use of "quick" chargers.

The use of inexpensive automotive battery chargers which do not have a built-in isolation transformer can cause electrolysis to the vessel. Disconnect the NEGATIVE battery lead from the engine when using any charger other than a high quality marine charger with built-in transformer.

DRAFT MARKS: At the bow and stern there are impressions of screws in the gel coat surface. These are NOT imperfections, and are placed in the hull to give a reference point for establishing level flotation.

The boats float a little down by the bow. It will be necessary to put several people in the cockpit to level the boat, as would happen when sailing. Measure from the center of the screw head to the water both bow and stern, and adjust the cockpit personnel so that the measurement at the bow and stern are the same. The exact amount of the measurement is not important, just so the measurement is equal both places.

EXHAUST SYSTEM: Your boat is equipped with a water lift principle muffler. This system cools the engine exhaust as it exits from the engine, reducing heat built-up, and substantially reducing exhaust noise.

If the flow of cooling water is interrupted, and the engine overheats severely, the rubber hose coming from the engine exhaust elbow may melt. Always check this hose after an occurrence of overheating.

There will always be a little water in the bottom of the water lift "pot". ~~In Fall decommissioning, the pot should be drained,~~ or anti-freeze should be added to the pot so that the residual water will not freeze.

If the engine should lose compression from sticking valves, bad piston rings, or other causes, and is cranked for a prolonged period, engine cooling water may build up in the pot. In this very unlikely situation, drain the water lift pot to prevent flooding the engine.

Before engine cooling water is injected into the exhaust elbow, it runs up to a point above the water line where air is admitted to the high point of the line so that a syphon action cannot start which may fill the pot and possibly back up into the engine after the engine has been shut off.

*
If contamination in the engine cooling water plugs this anti-syphon line, a syphon action may start, as described above. ~~Check the operation of this anti-syphon device frequently,~~ and disassemble the unit for cleaning at the end of each season as an absolute minimum, and more often if running the engine in dirty water.

LIFELINES: As with any boat, do NOT attach safety harness lines to the lifelines. The aluminum toe rail is a much more secure attachment.

KEEL/HULL JOINT: The lead keel of the Tartan Ten is bedded to the hull with a flexible Thiokol^F compound, which allows for the divergent expansion and contraction rates of lead and fiberglass. A polyester fairing putty is used over the joint between the hull and keel. This putty is not flexible, and will show a crack between the hull and keel in time. This crack should be caulked with a flexible seam compound.

The occurrence of the above mentioned crack is NOT a sign that the keel bolts need to be tightened. Do not tighten keel bolts arbitrarily. Frequently tightening keel bolts will cause the bedding to be dislodged, and initiate a leak.

LIGHTNING PROTECTION: The shrouds and stays of the Tartan Ten are grounded to the keel and engine in accordance with industry practice. In spite of this grounding, there can be no assurance the personnel or the boat will not suffer injury if the vessel is hit by lightning.

The following are adapted from the ABYC safety standards, are suggestions only, and in no way guarantee safety.

1. If possible, remain inside a closed boat during a lightning storm. Do not contact any metallic objects inside the vessel.
2. Avoid making contact with any items connected to a lightning conductive system, (the shrouds, turn-buckles, mast step support, etc.) and especially in a way to bridge between two of them.
3. No one should be in the water during a lightning storm.
4. If the boat has been struck by lightning, compasses and electrical gear should be checked to determine that no damage or change in calibration has taken place.

TARTAN TEN UPWIND SAILING CHART

<u>Approx. Wind Speed Apparent</u>	<u>Head Sail</u>	<u>Main Sail</u>	<u>Boat Speed</u>	<u>Jib Track</u>	<u>Comments</u>
0-5	lt. wt., 2.2-3.5 oz. drifter/ reacher high clew for max. LP area	full w/draft at 50%	0-3	rail to inboard with increasing boat speed	loose mainsheet. Main traveller 4-6" to weather, genoa leech 6-8" off spreader (min. mast bend)
5-10	lt. #1 genoa 4-5 oz.	medium	3-5.5	Inboard	main sheeted completely, traveller to control leech shape. Mod. (4") mast bend to tighten headstay
10-15	#1 genoa to one design at top wind- speed	flat	5-6	inboard (both sails)	6-8" mastbend, play traveller in puffs, main cunningham to flatten bottom of sail
15-20	one design genoa	flat, full cunningham to reef at top wind- speed	5.5-6	inboard	genoa leech 4" off spreaders. 8-10" mastbend to twist off leech, depower mainsail and keep headstay tensioned
20-25	one design genoa	1 reef, if puffy with traveller played 2 reefs at 25 kts.	6	inboard	if heavy sea, sail full and by. If flat, can point and feather in puffs

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25-30	one design genoa (may reef O.D. genoa)	2 or 3 reefs	to 6+	inboard, barber haul out	traveller down. Mastbend 10" to 12"
30-35	reefed O.D. genoa	3 reefs	6+	inboard, barber haul out	sail for best speed, keel will lift to weather
35+	reefed O.D. genoa to storm jib (100 ft. ² spitfire)	3 reefs to no main	6+	outboard	boat can be feathered to hold heel down with no drastic loss of boat speed

NOTE: This chart is provided as an approximate guide, and is not to be construed as definite instruction.

1. Experience with your Tartan Ten and seamanship will dictate sail to be carried.

III. TARTAN MAINTENANCE SCHEDULE

GENERAL:

Regular preventive maintenance is required to keep any boat in "as new" condition. It starts with the day after delivery and continues throughout the year. The heaviest time commitment is, of course, in the Spring but one should always be observant of the condition of such areas as running rigging, finishes, the engine, head, and other moving parts of gear and tackle. The following comments are intended to serve as an initial guideline. You will no doubt want to develop a check list of your own.

FINISHES:

Fiberglass: Even though fiberglass construction has vastly reduced upkeep, some attention to gel coat surfaces is necessary to maintain the appearance of the finish. After a few years exposure with no protection, the finish may begin to fade or chalk. The annual application of a good commercially available wax (Johnson, Fuller, or equal) containing an ultra-violet shield will preserve the appearance of this finish for many years. Generally, an application at the beginning of the season will suffice. Abrasive cleaners (cleanser) should not be used for general cleaning.

Gel Coat: A small quantity of matching gel coat is shipped with each boat. This material should be kept in a cool place, not on board the boat. Generally, the shelf life of gel coat is about 6 months. Even during this period the original gel coat may not perfectly match due to fading. The gel coat is a polyester product, not a paint, and requires mixing a catalyst before use. Patching gel coat is a job requiring some experience, and best results are generally obtained from professional work. A manual on fiberglass repair is shipped with the boat.

Boot Top: Is painted with polyurethane paint. If touch-up is needed, contact your dealer for the matching paint.

Exterior Teak: If left untreated, exterior teak will discolor rapidly, turning a dull grey color. Teak is a relatively open grain wood, and eventually, mildew may form in the grain, resulting in a very dark color.

If you wish to maintain the warm brown color, the teak must be kept clean, and oiled. The grain of the teak will raise as the wood is wetted. The job of keeping up the teak will be much easier if the wood is sanded very smooth. Use sandpaper for this purpose, and be careful not to scratch the gel coat. The best routine for bringing back discolored teak is to scrub thoroughly with a teak cleaner and water, allow to dry, sand, then apply multiple coats of a high grade teak oil. Some teak cleaners will stain the gel coat, so be sure to hose off the deck and topsides thoroughly.

A good applicator for teak oil is a small piece of a sponge, perhaps 1" square, by about 3" long, with one end tapered to allow application close to the deck without touching the gel coat. Most teak oils will stain the gel coat, and are difficult to remove, so be careful and clean up drips promptly.

Interior Teak: The interior teak has been oiled with Watco Danish Wood Finish or equal. These surfaces should be inspected regularly and touched up if needed.

SAILS, SHEETS AND LINES: Sails and lines should be removed at the end of each season and stored in a warm, dry place. If it is possible to dry them thoroughly, they should be rinsed with fresh water before storage.

SPARS AND STANDING RIGGING: The mast should be supported so that it lies straight. A thorough inspection of all wire, swages, splices, pins and fittings should be made prior to winter storage; any necessary replacement or reinforcement should be made before beginning the next sailing season.

ENGINE AND FUEL SYSTEM: Check the engine manual for maintenance guidance during the season and for the specific haul out procedures necessary to winterize the engine.

TARTAN TEN RUNNING RIGGING LIST

<u>ITEM DESCRIPTION</u>	<u>LENGTH</u>	<u>DIAMETER</u>	<u>ATTACHMENTS/END FINISH</u>
Boom vang tag line	10.5'	3/8"	5,000 lb. min snap shackle - spliced in.
Boom vang tackle line	18'	3/8"	Eye splice one end
Boom topping lift tag line	7'	1/4"	Splice to boom topping lift wire
Boom topping lift wire	41.5'	1/8" wire	Eye Nicopressed each end
Main sheet	68'	7/16"	No eye - can be end-for-ended with wear
Genoa sheets (2)	42'	3/8"	
Reef #1	40'	3/8"	
Reef #2	50'	3/8"	
Backstay tensioning tackle line	35'	3/8"	Eye splice one end
Traveller tag lines (2)	16'	5/16"	Eye splice one end
Main halyard	47' 56'	3/8" 1/8" galvanized wire	NOTE: These are raw lengths - halyard length is critical due to ball stops.
Foresail halyards	39' 48'	3/8" 1/8" galvanized wire	NOTE: These are raw lengths - halyard length is critical due to ball stops. One foresail halyard is standard. Second foresail halyard is a part of spinnaker gear. 4,000 lb. min. snap shackle

NOTE: All lengths are approximate, and variances are to be expected.

SPINNAKER GEAR

<u>ITEM DESCRIPTION:</u>	<u>LENGTH</u>	<u>DIAMETER</u>	<u>ATTACHMENTS/END FINISH</u>
Foreguy	27'	3/8"	2,500 lb. min. snap shackle - spliced in
Twing lines (2)	15'	3/8"	Single block, 1,750 lb. spliced in
Pole topping lift	54'	3/8"	2,500 lb. min. snap shackle - spliced in
Spinnaker sheets (2)	50'	3/8"	4,000 lb. min. snap shackle - spliced in

NOTE: All lengths are approximate, and variances are to be expected.

TARTAN TEN

MAINSAIL BOOM CUT-BACK SHEET
May 10, 1978

- Note:
1. Spar is set up to accept slugs for mainsail hoist. If boltrope is used, another sail entrance must be cut in the mast higher above the boom, and a feeder must be added. These modifications are NOT available from the factory. One source for a suitable feeder is Merriman Holbrook. A luff groove feeder is available through any authorized Merriman Holbrook dealer.
 2. Mainsail slugs on hoist must be positioned so that jiffy reef cringles or D rings fall IN BETWEEN slugs so that the jiffy reef cringle may be slipped over a hook at the gooseneck, without the necessity for a jack line.
 3. If bolt rope is used on foot, grommets must be provided through which to run the dead end of jiffy reef lines so that they may be tied with a timber hitch around the boom. Both jiffy reefing lines enter the boom at the extreme aft end of the boom.

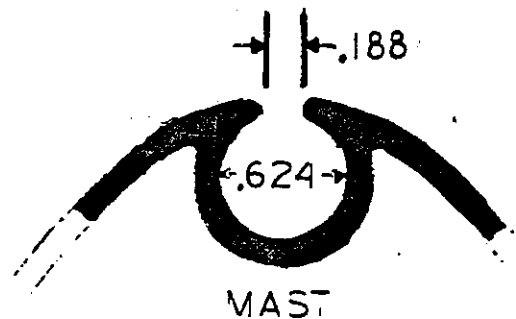
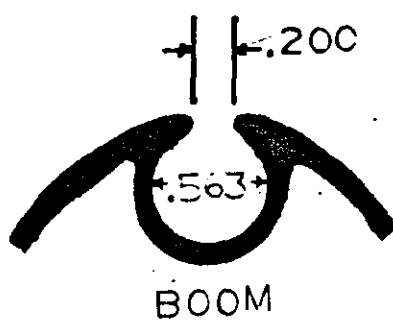
Position of mainsail tack pin: 1-3/8" aft of aft face of spar
(cut back)

9/16" above top of boom (cut up)

Outhaul: Mainsails to employ H&B 2-7/8" coated aluminum slide at clew. Maximum clew cringle thickness is 1/2". No outhaul car is used.

Main sail slug entrance on mast: 2" long, with bottom end 2" above boom.

Mainsail groove sizes:



Note 1. Refer to Tartan Ten Class Association Sail Rules for additional information.