

HUNTER OWNER'S MANUAL

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Welcome to **THE HUNTER MARINE FAMILY**

Congratulations on your new sailing yacht manufactured by Hunter Marine. We have engineered and constructed your boat to be as fine a yacht as any afloat. In order to get the best performance and most enjoyment from your boat you should be familiar with its various elements and their functions. For your sailing pleasure and safety, please take time to study this manual.

We stand behind the quality of your boat with a warranty, which you should review. To insure the validity of your warranty, please complete the attached card and send it to us within ten (10) days of the purchase date. Section 15 of the U.S. Federal Boat Safety Act requires registration of a boat's first owner. The warranty data should also be recorded in the space below for your own reference.

This manual has been compiled to help you operate your craft with safety and pleasure. It contains details of the craft; equipment supplied

or fitted, systems, and information on operation and maintenance. Please read it carefully, and familiarize yourself with the craft before using it. If this is your first sailboat or you are changing to a type of craft you are not familiar with, please ensure that you obtain proper handling and operating experience before you assume command of the craft. Your dealer or national sailing federation or yacht club will be pleased to advise you of local sea schools or competent instructors.

PLEASE KEEP THIS MANUAL IN A SAFE PLACE AND HAND IT OVER TO THE NEW OWNER IF YOU SELL THE CRAFT.

You should also complete the warranty cards for your engine, stove, head, electric water pump and other accessories. These are enclosed in the manufacturers' manuals that are packaged with your owner's manual.

OWNER INFORMATION CARD

HULL IDENTIFICATION NUMBER IS ON THE STARBOARD AFT SIDE OF THE HULL OR TRANSOM.
THIS NUMBER MUST BE GIVEN IN ALL NECESSARY CORRESPONDENCE.

HULL NO.

DATE DELIVERED TO OWNER

YACHT NAME

OWNER NAME

STREET ADDRESS

CITY

STATE/COUNTRY

ZIP CODE

HOME PORT

ENGINE MODEL

SERIAL NO.

PROPELLER SIZE

DEALER

PHONE

STREET ADDRESS

CITY

STATE/COUNTRY

ZIP CODE

HUNTER MARINE LIMITED WARRANTY

LIMITED ONE-YEAR WARRANTY

Hunter Marine warrants to the first-use purchaser and any subsequent owner during the warranty period, that any part manufactured by Hunter will be free of defects caused by faulty workmanship or materials

for a period of twelve (12) months from the date of delivery to the first-use purchaser under normal use and service. During this period, Hunter will repair or replace any part judged to be defective by Hunter.

LIMITED FIVE-YEAR HULL STRUCTURE AND BOTTOM BLISTER WARRANTY

Hunter warrants to the first-use purchaser and any subsequent owner during the warranty period that the hull of each boat will be free from structural defects in materials and workmanship for a period of five (5) years from the date of delivery to the first-use purchaser under normal use and service.

This limited warranty applies only to the structural integrity of the hull and supporting pan/grid or stringer system. Hulls, pan/grid or stringers modified in any way or powered with engines other than the type and size installed or specified by Hunter are not covered by this limited warranty. The obligation of Hunter under this limited warranty is restricted to the repair or replacement of hulls that are determined to be structurally defective.

Hunter also warrants to the first-use purchaser and any subsequent owner during the warranty period that the boat will be free from gel-coat blistering on underwater surfaces of the hull, excluding the keel and rudder, for a period of five (5) years from the date of delivery to the first-use purchaser

under normal use and service. During this period, Hunter will supply or reimburse an authorized Hunter dealer for all of the parts and labor required to repair a blistered underwater surface of the hull. The labor cost reimbursement will be based on the Labor Allowance Schedule established by Hunter. However, if a non-Hunter dealer performs the repair, the repair cost must be authorized by Hunter in advance and be based on a reasonable number of hours as determined by Hunter. Transportation, hauling, launching, bottom paint, storage, dockage, cradling rental, rigging and derigging, or other similar costs will not be paid by Hunter. We recommend that the repair be done during a seasonal haul out for service or storage.

The bottom blister warranty is **void** under the following circumstances:

- (1) If the gel-coat has been sanded, sandblasted, or subjected to abrasion or impact.
- (2) If the instructions provided in the Hunter Owner's manual regarding bottom preparation techniques are not followed.

RESTRICTIONS APPLICABLE TO WARRANTIES

These limited warranties **do not cover** the following:

(1) Paint, window glass, gel-coat, upholstery, engines, engine parts, bilge pumps, stoves, blowers, pressure water pumps, propellers, shafts, rudders, controls, instruments, keels and equipment not manufactured by Hunter. Any warranty made by the manufacturer of such items will be, if possible, given on to the first-use purchaser.

(2) Problems caused by improper maintenance, storage, cradling, blocking, normal wear and tear, misuse, neglect, accident, corrosion, electrolysis or improper operation.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER REMEDIES AND WARRANTIES EXPRESSED AND IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS. SOME STATES OR COUNTRIES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THE PURCHASER ACKNOWLEDGES THAT NO OTHER REPRESENTATIONS WERE MADE TO HIM OR HER WITH RESPECT TO THE QUALITY AND FUNCTION OF THE BOAT. ANY CON-

HUNTER MARINE LIMITED WARRANTY

SEQUENTIAL DAMAGES THAT MAY BE INCURRED ARE EXCLUDED AND JUDGED DEFECTIVE BY HUNTER. SOME STATES OR COUNTRIES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION

MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE OR COUNTRY TO COUNTRY.

WARRANTY REGISTRATION

These limited warranties shall not be effective unless the Hunter Warranty Registration Form and Pre-Delivery Service Record, which are furnished with each new boat, are filled out completely and returned to Hunter within fifteen (15) days of delivery. Responsibility for sending the completed Registration Form remains with the dealer.

It is critical that the Warranty Registration Form is signed by both the dealer and the owner and returned to Hunter. Warranty coverage cannot be initiated until Hunter receives the completed form. All repairs and/or

replacements will be made by an authorized Hunter dealer, or at the option of Hunter, at the Hunter plant. If the repairs are of such a nature that the warranty work must be performed at the Hunter plant, the owner shall pay transportation costs to and from the Hunter plant. The labor cost reimbursement will be based on a labor allowance schedule established by Hunter and where not applicable, on a reasonable number of hours as determined by Hunter. An authorized Hunter service representative must approve any repairs and replacements in advance.

TRANSFER OF LIMITED WARRANTIES

Limited warranties will be transferred to a subsequent purchaser of the boat if:

(1) The subsequent purchaser gives Hunter written notice of transfer of ownership within thirty (30) days of the transfer.

(2) The notice shall include the name, address and telephone number of the subsequent purchaser, the date of pur-

chase, the hull number, and the name of the seller of the boat.

Hunter will mail notice of expiration dates of the limited warranties to the subsequent owner. The transfer of the ownership of the will not extend the expiration dates of the limited warranties.

EPOXY BARRIER COAT

Should a customer wish to have an epoxy barrier applied to the hull, (ex. Interlux Interprotect 1000/2000, West Systems, VC Tar), this will not void the five-year blister warranty. This refers to epoxy barrier coatings as mentioned above, not epoxy primer paints.

If an epoxy barrier coat is applied to a Hunter vessel, it must be registered with the Warranty Department **prior** to application of the product. If the dealer applies bottom paint only, sanding **will not** be allowed and the no sanding system must be used.

CUSTOMER SATISFACTION SURVEY

During the first year of ownership, the first purchaser will receive two Customer Satisfaction Surveys: the first (CSS #1) will be received shortly after taking delivery and focuses on the customer's experience with the dealer and commissioning of the boat, and the owner's initial satisfaction. The second survey (CSS #2) is given nine to ten months

into ownership, and primarily gives the customer an opportunity to evaluate dealer service capability and the boat's functional systems and characteristics. Both surveys are contingent upon receipt of the first purchaser's Warranty Registration form.

HUNTER MARINE'S OWNER AND FOUNDER

WARREN R. LUHRS

BRIEF BACKGROUND

Warren Luhrs was born in East Orange, New Jersey in 1944 into a family with an established tradition in the maritime and transportation industries. His great-grandfather, Henry, was a railroad and clipper-shipping pioneer in America, while his great-uncle John helped build the famous St. Petersburg to Moscow railroad for Czar Alexander II.

Henry Luhrs owned shares in twenty-two different ocean-going vessels – barks, brigs, and schooners - and was the principal owner of the bark *Sophia R. Luhrs*, named for his wife. He was also a partner with Albert Sprout, who managed the shipyard where the *Sophia R. Luhrs* was built in Melbridge, Maine.

Warren Luhrs' father Henry worked at a small boat manufacturer in Morgan, New Jersey, and later started his own company, continuing the Luhrs' family sea tradition during the great depression. During World War II he repaired boats and installed ice sheathing on their bows for the Coast Guard.

After the War, Henry built 27-foot fishing boats and in 1948 began to construct custom-built pleasure craft. He then turned to skiffs and in 1952 incorporated as Henry Luhrs Sea Skiffs, where he constructed lapstrake sea skiffs using assembly-line techniques. Henry personally "shook down" his prototypes on family trips up the Hudson River to Lake Champlain.

The sea skiff is a class of boat that has been very popular, owing to its seaworthiness. It features a sharp bow, which reduces pounding in surf or

choppy seas, and a hull whose forward section is rounded below the waterline to increase stability in rough water or a following sea. Such skiffs can either be smooth sided or of a lapstrake construction.

Inspired by Henry Ford, Henry Luhrs' aimed to give the average man the opportunity to enjoy the luxury of boating by building an affordable and reliable boat. He was both designer and engineer, and his progressive new models exhibited his talent for innovation. He successfully changed the line of the bow from straight to curved at a time when the industry trend was a straight square effect, and he is believed to be the first designer-builder to popularize a small boat with a fly bridge.

In 1960, Luhrs acquired the Ulrichsen Boat Company of Marlboro, New Jersey. It was here that Luhrs' Alura fiberglass division was located. In 1965, Henry sold his company to Bangor Arrostock Railroad, which was to become the recreational conglomerate Bangor-Punta. It was also during this period that Silverton of Tom's River, New Jersey was purchased by John and Warren Luhrs.

Today, Warren R. Luhrs and his brother John own the Luhrs Group of marine manufacturers, which consists of Silverton Marine, Mainship Motor Yachts, and Luhrs Fishing Boats with its Alura division, as well as Hunter Marine, which exclusively manufactures sailboats.

In January of 1996, the Luhrs family transferred a portion of the Luhrs Group to its employees through an ESOP program.

GLOSSARY OF SAILING TERMS

A

Aback: describes a sail when the wind strikes it on the lee side.

Abaft: towards the boat's stern.

Abeam: at right angles to the *center-line* of the boat.

Aft: at or near the stern.

Amidships: the center of the boat, *athwartships* and fore and aft.

Anti-fouling: a poisonous paint compound used to protect the underwater part of a hull from marine growths.

Apparent wind: The direction and speed of the wind felt by the crew. It is a combination of *true wind* and that created by the movement of the boat.

Astern: behind the boat; to go astern is to drive the boat in reverse.

Athwartships: at right angles to the fore and aft line of the boat.

B

Back: when a wind backs, it shifts anticlockwise.

Back a sail: to sheet it to windward so that the wind fills on the side that is normally to *leeward*.

Backstay: a stay that supports the mast from aft and prevents its forward movement.

Ballast: extra weight, usually lead or iron, placed low in the boat or externally on the keel to provide stability.

Ballast keel: a mass of ballast bolted to the keel to increase stability and prevent a keel boat from capsizing.

Batten: a light, flexible strip fed into a batten pocket at the *leech* of the sail to support the *roach*.

Beam: 1, the maximum breadth of a boat; 2, a transverse member that supports the deck; 3, on the beam means that an object is at right angles to the centerline.

Bear away: to steer the boat away from the wind.

Bearing: the direction of an object from an observer, measured in degrees true or magnetic.

Beat: to sail a *zigzag course* towards the wind, *close-hauled* on alternate *tacks*.

Delay: to make fast a rope around a *cleat*, usually with a figure-of-eight knot.

Bend: 1, to secure a sail to a spar before hoisting; 2, to moor a boat; 3, a sleeping place on board.

Bight: a *bend* or loop in a rope.

Bilge: the lower, round part inside the hull where the water collects.

Block: a pulley in a wooden or plastic case, consisting of a *sheave* around which a rope runs. It is used to change the direction of pull.

Boot-topping: a narrow colored stripe painted between the bottom paint and the *topside* enamel.

Bottlescrew: see Rigging screw.

Broach: when a boat *running* downwind slews broadside to the wind and *heels* dangerously. It is caused by heavy following seas or helmsman's error.

Broad reach: the point of sailing between a beam *reach* and a *run*, when the wind blows over a quarter.

Bulkhead: a partition wall in a boat normally fitted *athwartships*

C

Caulk: to make the seams between wooden planks watertight by filling with cotton, oakum or a compound.

Cavitation: the formation of a vacuum around a propeller, causing a loss in efficiency.

Center-board: a board lowered through a slot in the *keel* to reduce *leeway*.

Center-line: center of the boat in a fore and aft line.

Center of effort (COE): the point at which all the forces acting on the sails are concentrated.

Center of lateral resistance (CLR): the underwater center of pressure about which a boat pivots when changing *course*.

Chain pawl: a short lug which drops into a toothed rack to prevent the anchor chain running back.

Chain plate: a metal plate bolted to the boat to which the *shrouds* or *backstays* are attached.

Chart datum: reference level on a chart below which the tide is unlikely to fall. Soundings are given below

chart datum. The datum level varies according to country and area.

Chine: the line where the bottom of the hull meets the side at an angle.

Cleat: a wooden, metal or plastic fitting around which rope is secured.

Clevis pin: a locking pin through which a split ring is passed to prevent accidental withdraw.

Clew: the after, lower center of a sail where the foot and *leech* meet.

Close-hauled: the *point of sailing* closest to the wind; see also *beat*.

Close reach: the *point of sailing* between *close-hauled* and a beam reach, when the wind blows forward of the *beam*.

Close-winded: describes a boat able to sail very close to the wind.

Coaming: the raised structure surrounding a hatch, cockpit, etc., which prevents water entering.

Cotter pin: soft, metal pin folded back on itself to form an eye.

Course: the direction in which a vessel is steered, usually given in degrees; true, magnetic or compass.

Cringle: 1, a rope loop, found at either end of a line of reef points; 2, an eye in a sail.

D

Dead run: running with the wind blowing exactly aft, in line with the *center-line*.

Deviation: the difference between the direction indicated by the compass needle and the magnetic *meridian*; caused by object aboard.

Displacement: 1, the weight of water displaced by a boat is equal to the weight of the boat; 2, a displacement hull is one that displaces its own weight in water and is only supported by buoyancy, as opposed to a planning hull which can exceed its hull, or displacement, speed.

Downhaul: a rope fitted to pull down a sail or spar.

Draft: the vertical distance from the waterline to the lowest point of the keel.

Drag: 1, an anchor drags when it fails to hold; 2, the force of wind on the sails, or water on the hull, which impedes the boat's progress.

GLOSSARY OF SAILING TERMS

Drift: 1, to float with the current or wind; 2, US the speed of a current (rate UK); 3, UK: the distance a boat is carried by a current in a given time.

Drogue: a sea anchor put over the stern of a boat or life raft to retard *drift*.

Drop keel: a retractable *keel* which can be drawn into the hull, when entering shallow waters and recovering on to a trailer.

E

Eye of the wind: direction from which the true wind blows.

F

Fair: well-faired line or surface is smoother with no bumps, hollows or abrupt changes in directions.

Fairlead: a fitting through which a line is run to alter the lead of the line.

Fathom: the measurement used for depths of water and lengths or rope. 1 fathom = 6 ft. or 1.83m.

Fid: a tapered tool used for *splicing* heavy rope and for sail-making, often hollow.

Fiddle: a raised border for a cabin table, chart table etc., to prevent objects falling off when the boat *heels*.

Fix: the position of the vessel as plotted from two or more position lines.

Forestay: the foremost stay, running from the masthead to the stemhead, to which the headsail is hanked.

Freeboard: vertical distance between the *waterline* and the top of the deck.

G

Genoa: a large headsail, in various sizes, which overlaps the mainsail and is hoisted in light to fresh winds on all points of *sailing*.

Gimbals: two concentric rings, pivoted at right angles, which keeps objects horizontal despite the boat's motion, e. g. compass and cooker.

Go about: to turn the boat through the *eye of the wind* to change tack.

Gooseneck: the fitting attaching the boom to the mast, allowing it to move in all directions.

Goosewing: to boom-out the headsail to windward on a run by using a

whisker pole to hold the sail on the opposite side to the mainsail.

Ground tackle: general term used for anchoring gear.

Guard rail: a metal rail fitted around the boat to prevent the crew falling overboard.

Gudgeon: a rudder fitting. It is the eye into which the *pintle* fits.

Guy: a steadying rope for a spar; a spinnaker guy controls the fore and aft position of the spinnaker pole; the foreguy holds the spinnaker pole forward and down.

Gybe: to change from one *tack* to another by turning the stern through the wind.

H

Halyard: rope used to hoist and lower sails.

Hank: fitting used to attach the *luff* of a sail to a stay.

Hatch: an opening in the deck giving access to the interior.

Hawes pipe: see *Navel pipe*.

Head-topwind: when the bows are pointing right into the wind.

Headfoil: a streamlined surround to a *forestay*, with a groove into which a headsail *luff* slides.

Heads: the toilet.

Headway: the forward movement of a boat through the water.

Heave-to: to *back* the jib and lash the tiller to *leeward*; used in heavy weather to encourage the boat to lie quietly and to reduce *headway*.

Heaving line: a light line suitable for throwing ashore.

Heel: to lean over to one side.

I

Isobars: lines on a weather map joining places of equal atmospheric pressure.

J

Jackstay: a line running fore and aft, on both sides of the boat, to which safety harnesses are clipped.

Jury: a temporary device to replace lost or damaged gear.

K

Keel: the main backbone of the boat to which a *ballast keel* is bolted or

through which the *centerboard* passes.

Kicking strap: a line used to pull the boom down, to keep it horizontal, particularly on a reach or run.

L

Lanyard: a short line attached to one object, such as a knife, with which it is secured to another.

Leech: 1, the after edge of a triangle sail; 2, both side edges of a square sail.

Leehelm: the tendency of a boat to bear away from the wind.

Lee shore: a shore on to which the wind blows.

Leeward: away from the wind; the direction to which the wind blows.

Leeway: the sideways movement of a boat off its *course* as a result of the wind blowing on one side of the sails.

Lifeline: a wire or rope rigged around the deck to prevent the crew falling overboard.

Limber holes: gaps left at the lower end of frames above the *keel* to allow water to drain to the lowest point of the *bilges*.

List: a boat's more or less permanent lean to one side, owing to the improper distribution of weight, e.g., *ballast* or water.

Log: 1, an instrument for measuring a boat's speed and distance traveled through the water; 2, to record in a book the details of a voyage, usually distances covered and weather.

Luff: the forward edge of a sail. To luff up is to turn a boat's head right into the wind.

Luff groove: a groove in a wooden or metal spar into which the *luff* of a headsail is fed.

Lurch: the sudden roll of a boat.

M

Marlin spike: a pointed steel or wooden spike used to open up the strands of rope or wire then splicing.

Mast Step: the socket in which the base of the mast is located.

Measured mile: a distance of one nautical mile measured between buoys or *transits/ranges* ashore, and marked on the chart.

GLOSSARY OF SAILING TERMS

Member: a part of the skeleton of the hull, such as a *stringer* laminated into fiberglass hull to strengthen it.

Meridian: an imaginary line encircling the Earth that passes through the poles and cuts at right angles through the Equator. All lines of longitude are meridians.

Mizzen: 1, the shorter, after-mast on a *ketch* or *yawl*; 2, the fore and aft sail set on this mast.

N

Navel pipe: a metal pipe in the foredeck through which the anchor chain passes to the locker below.

Noon Sight: a vessel's latitude can be found, using a sextant, when a heavenly body on the observer's *meridian* is at its greatest altitude. The sight of the sun at noon is the one most frequently taken.

O

Off the wind: with the sheets slacked off, not *close-hauled*.

On the wind: *close-hauled*.

Out haul: a rope used to pull out the foot of a sail.

Overall length (LOA): the boat's extreme length, measured from the foremost part of the bow to the aftermost part of the stern, excluding bowsprit, self-steering gear etc.

P

Painter: the bow line by which a dinghy, or *tender*, is towed or made fast.

Pintle: a rudder fitting with a long pin that fits into the *gudgeon* to form a hinged pivot for the rudder.

Pitch: 1, the up and down motion of the bows of a boat plunging over the waves; 2, the angle of the propeller blades.

Point of sailing: the different angles from which a boat may sail; the boat's *course* relative to the direction of the wind.

Port: the left-hand side of the boat, looking forward (opp. of *starboard*).

Port tack: a boat is on a port tack when the wind strikes the port side first and the mainsail is out to *starboard*. A boat on the port tack

gives way to a boat on a starboard tack.

Position line/ Line of position: a line drawn on a chart, as a result of taking a bearing, along which the boat's position must be i.e. Two position lines give a fix.

Pulpit: a metal *guard rail* fitted at the bows of a boat to provide safety for the crew.

Pushpit: a metal *guard rail* fitted at the stern.

Q

Quarter: the portion of the boat midway between the stern and the beam; on the quarter means about 45 degrees *abaft* the beam.

R

Rake: the fore and aft deviation from the perpendicular of a mast or other feature of a boat.

Range: 1, see *transit*; 2, of tides, the difference between the high and low water levels of a tide; 3, the distance at which a light can be seen.

Rating: a method of measuring certain dimensions of a yacht to enable it to take part in handicap races.

Reach: to sail with the wind approximately on the *beam*; all sailing points between running and *close-hauled*.

Reef: to reduce the sail area by folding or rolling surplus material on the boom or *forestay*.

Reefing pennant: strong line with which the *luff* or leech *cringle* is pulled down to the *boom* when reefing.

Rhumb line: a line cutting all *meridians* at the same angle; the *course* followed by a boat sailing in a fixed direction.

Riding light to anchor light: an all-around white light, usually hoisted on the *forestay*, to show that a boat under 50 ft. (15m.) is at anchor. It must be visible for 2 mls. (3 km.).

Rigging screw: a deck fitting with which the tensions of standing rigging, e.g. stays, shrouds, etc. are adjusted.

Roach: the curved part of the *leech* of a sail that extends beyond the direct line from head to *clew*.

Run: to run with the wind *aft* and with the *sheets* eased well out.

Running rigging: all the moving lines, such as *sheets* and *halyards*, used in the *setting* and *trimming* of sails.

S

Scope: the length of rope or cable paid out when mooring or anchoring.

Scuppers: 1, holes in the toe rail that allow water to drain off the deck; 2, drain cockpit through hull.

Seacock: a valve that shuts off an underwater inlet or outlet passing through the hull.

Seize: to bind two ropes together, or a rope to a *spar*, with a light line.

Serve: to cover and protect a *splice* or part of a rope with twine bound tightly against the lay.

Serving mallet: tool with a grooved head, used when serving a rope to keep the twine at a constant and high tension.

Set: 1, to hoist a sail; 2, the way in which the sails fit; 3, the direction of tidal current or steam.

Shackle: a metal link with a removable bolt across the end; of various shapes: D, U.

Sheave: a grooved wheel in a *block* or *spar* for a rope to run on.

Sheet: the rope attached to the *clew* of a sail or to the boom, enabling it to be controlled or *trimmed*.

Shrouds: ropes or wires, usually in pairs, led from the mast to the *chain plates* at deck level to prevent the mast falling sideways; part of the standing rigging.

Sloop: a single-masted sailing boat with a mainsail and one head sail.

Spar: a general term for any wooden or metal pole, e.g., mast or boom, used to carry or give shape to sails.

Spindrift: spray blown along the surface of the sea.

Spinnaker: a large, light, balloon shaped sail set when *reaching* or *running*.

Splice: to join ropes or wire by unlaying the strands and interweaving them.

Split pin: see *cotter pin*.

GLOSSARY OF SAILING TERMS

Spreaders: horizontal struts attached to the mast, which extends to the *shrouds* and help to support the mast.

Stall: a sail stalls when the airflow over it breaks up, causing the boat to lose way.

Stanchion: upright metal post bolted to the deck to support guardrails or lifelines.

Standing part: the part of a line not used when making a knot; the part of a rope that is made fast, or around which the knot is tied.

Standing rigging: the shrouds and stays that are permanently set up and support the mast.

Starboard: right-hand side of a boat looking forward (opp. of *port*).

Starboard tack: a boat is the starboard tack when the wind strikes the starboard side first and the boom is out to the *port*.

Stay: wire or rope which supports the mast in a fore and aft direction; part of the *standing rigging*.

Steerage way: a boat has steerage way when it has sufficient speed to allow it to be steered, or to answer the helm.

Stem: the timber at the bow, from the keel upward, to which the planking is attached.

Sternway: the backward, stern-first movement of a boat.

Stringer: a fore and aft member, fitted to strengthen the frames.

T

Tack: 1, the lower forward corner of a sail; 2, to turn the boat through the wind so that it blows on the opposite sides of the sails.

Tacking: working to windward by sailing *close-hauled* on alternate *courses* so that the wind is first on one side of the boat, then on the other.

Tack pennant: a length of wire with an eye in each end, used to raise the tack of a headsail some distance off the deck.

Tackle: a purchase system comprising of rope and *blocks* that is used to gain mechanical advantage.

Tang: a strong metal fitting by which *standing rigging* is attached to the mast or other *spar*.

Tender of dinghy: a small boat used to ferry stores and people to a yacht.

Terminal fitting: fitting at the end of a wire rope by which a *shroud* or stay can be attached to the mast, a *tang* or a *rigging screw/turnbuckle*.

Tide: the vertical rise and fall of the oceans caused by the gravitational attraction of the moon.

Toe rail: a low strip of metal or molding running around the edge of the deck.

Topping lift: a line from the masthead to a spar, normally the boom, which is used to raise it.

Topsides: the part of a boat's hull that is above the waterline.

Track: 1, the course a boat has made good; 2, a fitting on the mast or boom into which the slides on a sail fit; 3, a fitting along which a traveller runs, used to alter the angle of the sheets.

Transit: two fixed objects are in transit when seen in line; two transit give position fix.

Traveller: 1, a ring or hoop that can be hauled along a *spar*; 2, a fitting that slides in a *track* and is used to alter the angle of the *sheets*.

Trim: 1, to adjust the angle of the sails, by means of *sheets*, so that they work most efficiently; 2, to adjust the boat's load, and thus the fore and aft angle at which it floats.

True wind: the direction and speed of the wind felt when stationary, at anchor or on land.

Turnbuckle: see *Rigging screw*.

U

Under way: a boat is under way when it is not made fast to shore, at anchor or aground.

Uphaul: a line used to raise something vertically, e.g., the spinnaker pole.

V

Veer: 1, the wind veers when it shifts in clockwise direction; 2, to pay out anchor cable or rope in a gradual, controlled way.

W

Wake: the disturbed water left *astern* of a boat.

Waterline: the line along the hull at which a boat floats.

Waterline length (WL): the length of a boat from *stem* to *stern* at the *waterline*. It governs the maximum speed of *displacement hull* and effects a boat's *rating*.

Weather helm: (opp. of *lee helm*).

Weather side: the side of a boat on which the wind is blowing.

Wetted surface: the area of the hull under water.

Whisker pole: a light pole used to hold out the *clew* of a headsail when *running*.

Winch: a mechanical device, consisting usually of a metal drum turned by a handle, around which a line is wound to give the crew more purchasing power when hauling taut a line, e.g. a *jib sheet*.

Windage: those parts of a boat that increase *drag*, e.g., rigging, spars, crew, etc.

Windlass: a *winch* with a horizontal shaft and a vertical handle, used to haul up the anchor chain.

Windward: the direction from which the wind blows; towards the wind (opp. of *leeward*).

Y

Yawl: a two masted boat with a mizzen stepped aft of the rudder stock/ post.

EXPLANATION OF SAFETY PRECAUTIONS

This manual contains safety precautions that must be observed when operating or servicing your boat.
Review and understand these instructions.

DANGER

Denotes an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken

WARNING

Denotes a hazard exists which can result in injury or death if proper precautions are not taken

CAUTION

Denotes a reminder of safety practices or directs attention to unsafe practices which could result in personal injury or damage to the craft or components

SAFE BOATING TIPS

BE PREPARED

Take a safe boating course. In the U.S., contact your local Boating Industry for details.

Carry all safety equipment required by the laws that apply to your area. Requirements are generally available from the Coast Guard or your local boating industry.



WARNING

As the owner of the craft, obtaining and maintaining necessary safety equipment is your responsibility. For more information about equipment required, contact local boating authorities

MINIMUM RECOMMENDED SAFETY EQUIPMENT

- Required life saving equipment, including life vests and throwables
- Required fire extinguishing equipment
- First Aid kit
- Emergency Position Indicating Radio Beacon (EPIRB)
- Manual bailing device
- Anchor with sufficient line and/or chain
- Flashlight with good batteries
- Binoculars
- VHF radio
- Appropriate navigational charts
- Flares
- Fog bell
- Noise emitting device
- Radar reflector
- Sufficient food and water provisions
- Auxiliary starting battery
- Spare fuses and bulbs
- Sunglasses and block
- Blanket

The legally required on-board safety equipment may vary by region or body of water. Please check with local authorities prior to departure for a safety examination.

LIFE JACKETS

A life jacket may save your life, but only if you wear it. Keep jackets in a readily accessible place – not in a closed compartment or stored under other gear. Remove them from any packaging, and keep throwable floatation devices ready for immediate use.



WARNING

It is very important that children, handicapped people, and non-swimmers wear lifejackets at all times. Make sure all passengers are properly instructed in use of life saving gear

FIRE EXTINGUISHERS

Approved fire extinguishers are required on most boats, local authorities can provide details. All passengers should know the location and operating procedure of each fire extinguisher. Fire extinguishers are normally classified according to fire type. Be familiar with the type of fire extinguishers you have on board.

Your boat has been equipped with an Automatic Fire Extinguisher. In the event of a fire in your engine compartment, this unit will automatically discharge. Please read your SEA-FIRE manual for operating instructions, maintenance and precautionary information.

SAFE BOATING TIPS


FLARES

Most boats operating on coastal waters are required to carry approved visual distress signals, therefore check with your local authorities as to which types are required.

 WARNING
FIRE/EXPLOSION HAZARD; Pyrotechnic signaling devices can cause injury and property damage if not handled properly. Follow manufacturer's directions regarding the proper use of signaling devices.

DRUGS AND BOATING

Consumption of alcohol while boating is not recommended. The combination of noise, sun, wind, and motion act to produce fatigue on the water, and can exaggerate the effects of alcohol.


 WARNING
IMPAIRED OPERATION HAZARD Operating any boat while is intoxicated or under the influence of drugs is both dangerous and illegal. Impaired vision or judgment on the water can lead to accidents and personal injury

BEFORE GETTING UNDERWAY

- Leave a float plan (example on p. 13)
- Perform a pre-departure checklist (example on p. 12)
- Check the weather. Do not venture out if the weather is, or will be, threatening.

WHILE UNDERWAY

- Keep a good lookout. Keep a watch to the leeward under the headsail. Keep away from swimmers, divers, and skiers.
- Know and obey local boating laws.
- Respect bad weather, and be prepared for quickly changing conditions.

 WARNING
COLLISION HAZARD Use extra caution in shallow water or where underwater/floating objects may be present. Hitting an object at speed or severe angle can seriously injure people and damage your boat

PRE-DEPARTURE CHECKLIST

- Check bilge for extra water
- Check weather conditions and tides
- Check food supply
- Foul weather gear
- Linen, sleeping bags
- Fuel
- Water
- Sunscreens and sunglasses
- Tools
- Docking and anchor gear
- Check radio operations
- Navigation charts and instruments
- Float plans to a friend or Coast Guard** (*see next page*)
- Fuel for stove
- Cooking and eating utensils
- Check battery water level
- Oil level, tight Vp-belts
- Check for loose electrical connections in engine compartment
- Secure tools or any loose equipment in engine compartment so as not to get fouled in engine
- AC systems off; electrical cord stowed
- Doors and drawers secured
- Check steering lock to lock
- Check mast for rigging irregularities and tightness
- Halyards and sheets are clear and ready to run
- No lines or other obstructions near propeller or bow
- Anchor ready to run
- Check lifelines for tightness
- Turn on fuel and waterlines
- Stow all loose gear
- Open engine cooling water intake thru-hull valve

FLOAT PLAN

1. Name of person reporting and telephone number:

2. Description of boat

NAME	TYPE	
MAKE	LENGTH	REGISTRATION#
HULL COLOR	STRIPE COLOR	DECK COLOR
OTHER DISTINGUISHING MARKS		

3. Number of Persons aboard

NAME	AGE	PHONE #
ADDRESS		
NAME	AGE	PHONE #
ADDRESS		
NAME	AGE	PHONE #
ADDRESS		

4. Engine

TYPE	H.P.	FUEL CAPACITY
------	------	---------------

5. Safety equipment

PFDs	<input type="checkbox"/>	Flares	<input type="checkbox"/>	Mirror	<input type="checkbox"/>	Flashlight	<input type="checkbox"/>
Food	<input type="checkbox"/>	Water	<input type="checkbox"/>	EPIRB	<input type="checkbox"/>	Raft/Dinghy	<input type="checkbox"/>

6. Radio

TYPE	FREQUENCIES
------	-------------

7. Trip Expectations

DEPARTURE TIME	DATE	FROM
DESTINATION	RETURN DATE	NO LATER THAN

8. Automobile:

LICENSE #	STATE	MAKE
COLOR	PARKED AT	

9. If not returned by-

Contact the Coast Guard or-

CALL - _____ AT- _____

AFTER SAILING CHECKLIST

When leaving your Hunter at the dock for more than a short time, it is a good idea to review the following checklist to make sure everything is in order. This

will help protect the various parts of your boat and add considerably to their attractiveness and usable life.

- Flake or furl mainsail and cover, or remove and bag.
- Remove and stow all portable deck hardware such as snatch blocks, winch handles, etc.
- Secure the boom to the topping lifts and set it firmly amidships with the main sheet purchase. (It is also a good idea to rig a line from the steering wheel or tiller to a convenience cleat to keep the rudder from swinging back and forth with the motion of the water or employ the wheel brake if so equipped.)
- Attach the shackle ends of all halyards to convenient fittings and take up slack. Find a location leading away from the mast to keep the halyard from slapping the mast.
- Coil and stow all lines in line lockers
- Cover the winches and steering pedestal when leaving the boat for several days or more
- Close all fuel lines and seacocks
- Switch off the electrical system
- Pump out the bilge
- Check air vents, secure ports and hatches, swab the deck, and clean deck stainless, particularly if you have operated in saltwater.
- Make a final check of mooring lines, chafing gear, fenders, etc.

SAFE BOATING TIPS

DOCKING

Docking your boat should be handled carefully to avoid potential damage. Under normal wind and water conditions, the following considerations should be made:

1. Whenever possible, your approach should be made against the prevailing wind and current to assist in stopping the boat. Where these conditions are contrary, the strongest should be used to determine approach.
2. Approaching the dock: dock lines should be at ready, loose gear stowed and decks cleared. Determine the direction of the wind and current and when you decide which side of the boat will be against the dock, rig dock lines and fenders on the appropriate side.

One dock line should be attached to the bow cleat, another to the stern cleat opposite the side that will lie against the dock. *NOTE: If the boat is to lie against a piling, rig a fender board across two or more pilings.*

3. Tying up: attach bow and stern lines to dock, hauling boat in with fenders against dock. Rig crossing spring lines to limit motion forward and aft. Be sure to allow some slack in all lines to compensate for tidal activity if present. Never use bow rail, stern rail, or stanchions to secure a vessel, even for brief periods. For other types of moorings, or for abnormal wind or water conditions, consult an approved boating guide.

ANCHORING

Your Hunter comes with an on deck anchor well and a Danforth type anchor as standard equipment. The anchor is selected to suit the size and weight of your boat under normal anchoring conditions, and is most effective in muddy or sandy bottoms.

When anchoring, pay particular attention to the scope of your anchor rode (the relationship between of the water and the length of the rode). A good rule of thumb is to allow a scope of about 7:1 (a rode seven times as long as the vertical distance from the bow to the bottom). A helpful aid is to mark the rode every 20 feet or so with knots or other types of indicators. Before dropping anchor, make sure the bitter end is secured to the cleat in the anchor well. Also, be sure to consider wind direction, currents,

mean low tide depths and other local conditions when anchoring, as well as positions of any boats already anchored nearby.

To weigh anchor, motor or sail (under main only) forward slowly. When at a point directly above the anchor, a quick tug should free it from the bottom. Take care not to damage the topsides when hauling.



WARNING


Anchoring in unusual water/ and or weather conditions will require additional precautions. Consult an approved guide for suggestions

SAFE BOATING TIPS


DIESEL ENGINE


An engine owner's manual is supplied with your boat and should be read thoroughly. It contains technical specifications, running instructions and a maintenance schedule on lubricants and fluids. For long engine life, follow routine maintenance schedules.

You should check engine oil, transmission fluid and coolant levels. Water, rust, scale and dirt will cause serious damage to the injectors on diesel engines. You should check your filters frequently and change when necessary. Check fuel line connections for proper tightness.


 WARNING
EXPLOSION/FIRE HAZARD – Fuel system connections that are too loose or too tight can leak, resulting in fuel loss, environmental pollution and explosion/fire hazard.

FUELING YOUR DIESEL ENGINE

 WARNING
EXPLOSION/FIRE HAZARD <ul style="list-style-type: none">•Store flammable material in safety-approved containers. Keep containers in a locker designed by the boat manufacturer for that purpose. Never store flammable material in a non-vented space.•Observe “No-Smoking” while fueling.•Run exhaust blower at least 4 minutes before starting engine. Check bilge and engine compartments for fumes.•Keep ventilation system free of obstructions. Never modify the vent system.•Fill less than the rated capacity of the tank. Allow for fuel expansion.•If fuel enters bilge, do not start engine. Determine cause and severity. Contact a knowledgeable marine service to remove fuel. Do not pump overboard. Contact Coast Guard for additional advice (See Environmental Considerations Fuel & Oil Spillage.)• Inspect fuel system regularly for leaks.

 DANGER
EXTREME HAZARD: carbon monoxide gas (CO) is colorless, odorless and extremely dangerous. All engines and fuel burning appliances produce CO as exhaust. Direct and prolonged exposure to CO will cause BRAIN DAMAGE or DEATH. Signs of exposure to CO include nausea, dizziness and drowsiness. Refer to BOATING SAFETY for more information.

When you start your engine, run it a minimum of 15 minutes to bring it up to operating temperature. This insures that any condensation is evaporated. Your engine should “run out” at $\frac{3}{4}$ throttle at least once a month to clean out carbon buildup and moisture.

 CAUTION
Follow engine manufacturer's recommendations for types of fuel and oil. Use of improper products can damage the engine and void the warranty.

Notice: Use fresh fuel. Fuel that has been in a tank too long can form gum and varnish, which may affect performance.

Inspect diesel fuel filters regularly. Diesel fuel must be kept as clean as possible. Keep fuel tank full.

SAFE BOATING TIPS

STARTING YOUR DIESEL ENGINE

1. Visually check engine compartment to see that the throttle linkage, shifting controls, electrical connections and fuel lines are properly secured.
2. **Before each start** check oil in engine and transmission.
3. Insure that the engine shut-off cable is properly secured and operating.
4. Place the shift lever in the neutral position. Pull out the button beside the shift lever to disengage the shift. On single lever controls, lift the collar under the shift lever knob and move the lever forward to advance the throttle for neutral warm-up.
5. Insert the starter key and turn to the "on" position.
6. Press the starter button and hold until engine starts, then release. The buzzer and/or light should then go off. **Press the starter button no longer than 5 seconds continuously.**
7. Allow cold engine to warm up a minimum of five minutes.
8. When warm-up is completed, return the hand lever to neutral position, and push

the button back to re-engage the shift. The shift is ready for shift and throttle operation.

9. Check that the lube oil pressure warning light and the charge lamp go off. If any of the warning lamps do not go off above 1,000 rpm, the engine is malfunctioning and should be stopped immediately. Consult your nearest engine dealer.

NOTE: The H386 and below are equipped with an "engine stop" pull lever. When pulled all the way out, this will stop the engine at any time.



CAUTION

Follow engine manufacturer's recommendations for types of fuel and oil. Use of improper products can damage the engine and void the warranty.

MOTERING YOUR DIESEL ENGINE

Before departure, remember to unplug the shore power. When the engine is warm, but prior to releasing the dock lines, move the shift lever to forward and to reverse to insure that it is working properly. To increase RPMs, push throttle lever forward and pull back to decrease RPMs. **IMPORTANT:** When sailing, it is best to start the engine before the sails are lowered. This way, it is possible to maneuver if the engine should not start.



CAUTION

Your rigging will conduct electricity. Always check for overhead high tension wires before proceeding. Once clear, you may increase your speed in a reasonable and safe manner as desired.

ELECTRICAL SYSTEM

Your Hunter is fitted with an electrical system designed for both AC and DC. While in port, you can operate any tool, appliance or other device designed to function on regular house current simply by plugging your dockside power cord into a convenient outlet on shore and turning your AC main breaker on.



WARNING

ELECTROCUTION HAZARD: If polarity is reversed, **DO NOT** use the shore power source. Immediately turn off the power source and disconnect the shore power cord. Reversed polarity is a dangerous and potentially lethal condition that may cause shock, electrocution, or death.

SAFE BOATING TIPS

ELECTRICAL SYSTEM (continued)

To minimize shock hazard, connect and disconnect cable as follows:

1. Turn off the boat's shore power connection before connecting or disconnecting shore power cable.
2. Connect shore power cable at the boat first.
3. If polarity warning indicator is activated, immediately disconnect cable and have the fault corrected by a qualified electrician.
4. Disconnect shore power cable at shore outlet first.
5. Close inlet cover tightly.


DO NOT ALTER SHORE POWER CABLE CONNECTORS.

Storage: Your shore power cable set is intended for use outdoors. To prolong the life of the set, store indoors when not in use.

General: The metallic parts of your cable set are made to resist corrosion. In a salt-water environment, periodically wiping the exposed parts with fresh water, drying and spraying with a moisture repellent can increase life of the product.


A soiled cable can be cleaned with a grease cutting household detergent. A periodic application of vinyl protector to both ends will help to maintain cables original appearance.


In case of salt water immersion, rinse plug end and/or connector end thoroughly in fresh water, shake or blow out excess water and allow to dry. Spray with moisture repellent before re-use.

 WARNING
Do not allow your dockside power cord to come in contact with the water. Never operate any AC power tool or other electrical equipment while you or the device are in contact with the water, as this may cause electrocution resulting in shock or death.

When leaving port, disconnect the dockside power cord and turn the main DC breaker on. This allows you to use the ship's lights and other equipment designed to operate on direct current. Keep in mind that your DC power source is a 12-volt battery, just as with your automobile, and it must be charged regularly by operating the engine (or by running the battery charger, if you have that option installed). Unless a state of charge is maintained, there may not be enough power to operate the starter motor. Dangerous situations can result if the engine cannot be started when needed.

Make a regular visual check of batteries to insure proper water level and inspect terminals for signs of corrosion. If your boat sits for long periods without use, it is often a good idea to remove the batteries and attach them to a trickle charger to keep them fully charged and ready to use.

 WARNING
EXPLOSION/FIRE HAZARD – ensure adequate ventilation of battery to prevent buildup of gases, especially hydrogen.

 WARNING
WHEN CHARGING THE BATTERY: <ul style="list-style-type: none">•Battery electrolyte contains sulfuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and get prompt medical attention, especially if your eyes are affected.•Batteries generate hydrogen gas that can be highly explosive. Do not smoke or allow flames or sparks near a battery, especially during charging.•Charge the battery in a fully ventilated place.

SAFE BOATING TIPS

ELECTRICAL SYSTEM (continued)


Hunter Marine recommends that on all boats with either/both a house and start battery, the cables be disconnected during winter storage or any time the boat is out of the water for an extended period of time. Because of the continuous electrical drain placed on the 12 volt system by certain electrical components such as stereos and CO monitors you will be preserving your batteries life expectancies.

We recommend that owners who leave their boats in the water during the sailing season charge the boats internal batteries at least once every seven days during the sailing season (we do not recommend leaving power connected to

the boat if it is unattended). Completely depleting a batteries internal charge can drastically shorten its life span. This includes gel cell and glass mat batteries.

For owners who live aboard or wish to leave their boat battery switches in the on position while unattended (again, we do not recommend this) should consider installing a N20504W Nicro Solar vent to reduce the chances of the CO monitor's sounding. Only exchanging the air inside the boat on a regular basis or leaving the battery switches in the off position totally eliminates the false sounding of the monitors while 12-volt systems are operating.

COOKING STOVE

 WARNING
EXPLOSION/FIRE/ASPHYXIATION HAZARD
<ul style="list-style-type: none">•Open flame cooking appliances consume oxygen. This can cause asphyxiation or death.•Maintain open ventilation.•Liquid fuel may ignite, causing severe burns.•Use fuel appropriate for type of stove.•Turn off stove burner before filling.•Do not use stove for comfort heating.•Use special care with flames or high temperatures near urethane foam. Once ignited, it burns rapidly, producing extreme heat, releasing hazardous gasses and consuming a large amount of oxygen.

Carefully read and understand the manufacturer's instructions prior to operating your stove. Save the instructions for review, and also to pass on to any subsequent owners.

Use only the fuel recommended by the manufacturer, and store the fuel in an approved container.

Do not smoke while working with fuel.

Immediately clean up any spilled fuel.

SAFE BOATING TIPS


TOILET

IMPORTANT: When not in use, lever must be left in the “dry” position to prevent flooding.

Before using, place the lever in the “wet” position and pump slowly to partly fill and wet the inside of the bowl. Return to the “dry” position.


After using, return the lever to the “wet” position for flushing and pump until the bowl is thoroughly cleaned. Continue with several more full strokes to flush discharge lines. Return lever to “dry” position and pump slowly until bowl is empty.

- There is a possibility of being fined for having an operable direct overboard discharge of waste in some waters. Removing seacock handle, in closed position, or other means must be used to avoid fine.
- It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States.

 CAUTION
Do not place facial tissue, paper towels or sanitary napkins in head. Such material can damage the waste disposal system and the environment.

OPENING HULL PORTS


If your boat is equipped with opening hull ports, they must remain closed and secured while under sail. Your boat could take on water when it heels, causing damage to the interior due to flooding or even possible sinking of your vessel.


 CAUTION
All hull ports must remain closed and secure while sailing.

PUMPS

All pumps should be checked frequently to insure proper operation. This is an especially important regular maintenance item since a properly operating pump could save your vessel from serious damage.

Inspect all bilge pump hoses for chafing and dry rot. See that all hose clamps are tight. Check that the bilge pump impeller area is clean and free of obstructions. Inspect electrical wiring for corrosion. Ensure that the float switch functions properly.

 CAUTION
Run pump only as long as necessary to remove water. Dry running can damage the pump motor

 WARNING
SINKING HAZARD – Ensure proper bilge pump operation.


SAFE BOATING TIPS

WATER SYSTEM OPERATION

Fill fresh water tank at deck fill. The tank filler cap will be marked “water”. When tank is full, water will back up through the vent hose and exit through a vent located on the side of the hull. Use tank gauge for filling. D.C. main should be turned on first.

To activate the water system, turn on D.C. main, flip the “water pressure” switch on the electrical panel. This will start the pump and pressurize the system. When the pressure builds, the pump will shut off. With continued use of fresh water the pressure in the system is reduced, automatically restarting the pump. Make sure there is water in the system while pump is in operation to prevent damage to the motor. The pump will also run if a leak develops in the system.

NOTE: Intermittent operation of the freshwater pump while all faucets are closed usually indicates a leak somewhere in the lines. Trace the lines to locate the leak and repair.


 CAUTION
Run pump only as long as necessary to remove water. Dry running can damage the pump motor

The water heater operates either on 120 or 240 volts AC or when the engine is running. To obtain hot water from the engine, it must run a minimum of one-half hour.

Pressure water pumps are the demand type. Once the circuit breaker switch is on, opening the faucet will produce water flow.

To operate shower, turn on hot and cold faucets until desired temperature is reached, while the showerhead is retracted at sink. Pull the showerhead out and use. The faucets must be turned off to prevent system drainage.

Opening the faucet will allow the pump to empty the tank. Flushing the tank and lines will be necessary for winterization. Refer to Maintenance & Winterization section for more information.

 WARNING
SINKING HAZARD –To ensure the safety of your vessel, always disconnect shore water and power connections when leaving your boat unattended.

WASTE DISCHARGE


The Hunter is equipped with a head waste holding tank, hose lines, and thru-fittings for either overboard discharge, using the standard equipped hand pump, deck pump out at dockside or Macerator Pump. Tank levels will be indicated on the gauge located below the main electrical panel. Familiarize

yourself with the locations of the deck pump out, overboard discharge thru-hull, and vent locations pictured in the Waste Water System section, as well as your local boating regulations concerning the overboard discharge of raw sewage.

ENVIRONMENTAL CONSIDERATIONS

FUEL AND OIL SPILLAGE

The spilling of fuel or oil into our waterways contaminates the environment and is dangerous to wildlife. Never discharge or dispose of fuel or oil into the water. It is dangerous and unlawful. Two common types of accidental discharge are overfilling the fuel tank and pumping contaminated bilge water into the sea.

 WARNING
EXPLOSION/FIRE/POLLUTION HAZARD: Fill fuel tank to less than rated capacity. Overfill forces fuel out the tank vents, which can cause explosion fire, or environmental pollution. Also allow for fuel expansion

DISCHARGE AND DISPOSAL OF WASTE

Waste means all forms of garbage, plastics, recyclables, food wood, detergents, sewage, and even fish parts in certain waters. We recommend that you bring back everything you take out with you for proper disposal ashore.

Your marine holding tank (if so equipped) must, in many areas, be pumped out by an approved pump-out facility normally found at marinas.

EXHAUST EMISSIONS

Hydrocarbon exhaust emissions pollute our water and air. Keep your engine

properly tuned to reduce emissions and improve performance and economy.

ANTI-FOULING PAINTS

The use of anti-fouling paints is common for boats kept in water. Be aware of environmental regulations that may govern your paint choice. These regulations may affect which paint may be used, and also the application or removal. Contact your local boating authorities for more information

 WARNING
EXPLOSION/FIRE/HAZARD: Ventilate when painting or cleaning. Ingredients may be flammable and/or explosive.

CLEANING CHEMICALS

Cleaning chemicals should be used sparingly and not discharged into waterways. Never mix cleaners and be sure to use plenty of ventilation in enclosed areas. Do not use products that contain phosphates, chlorine, solvents, non-biodegradable or petroleum-based products.

Common households cleaning agents may cause hazardous reactions. Fumes can last for hours, and chemical ingredients can attack people, property and the environment.

INSTRUCTIONS FOR PREPARATION FOR BOTTOM PAINTING

WARNING!

Do not use any sanding, sandblasting or other abrasive repair of the bottom, as this will

void your hull blistering warranty. See the warranty information at the beginning of this manual.

BOTTOM PAINTING

Choose a bottom paint system that suits the environment in your area. Follow the procedure recommended by the manufacturer of the paint, while making sure not to void the Hunter Hull Blistering Warranty. The

procedure for preparing and painting the bottom varies between paint manufacturers, but should always include dewaxing, etching and sometimes priming of the surface.

EPOXY BARRIER COAT

Sanding of the gel coat bottom surface will be permitted should a customer wish to have an epoxy barrier coat applied to the hull, (example Interlux Interprotect 1000, 2000, West System or VCTar). This will not void the Five-Year Blister Warranty.

Hunter Marine refers to epoxy barrier coatings as mentioned above, not epoxy primer paints.

If an epoxy barrier coat is applied to a Hunter vessel, it must be registered with the Warranty

Department prior to application of the product. If the dealer applies bottom paint only, sanding **will not** be allowed and the no sanding system must be used.

 WARNING
Cleaning agents and paint ingredients may be flammable and/or explosive, or dangerous to inhale. Be sure to use adequate ventilation, and appropriate safety clothing. (gloves, safety glasses, respiration, etc)

ENGINE, TRANSMISSION & DRIVETRAIN

ENGINE

Follow the fuel and lubrication requirements in the Engine Manual. Check the engine oil level before and after operation and use a quality motor oil (refer to Engine Manual). Be certain the proper amount of oils is in the crankcase at all times

Engine Alignment: the engine should be aligned by experienced marine service personnel. Final alignment should be done after launching, with all normal gear aboard. A description of the procedure follows:

The coupling flanges must come together evenly at all points, a feeler gauge is used to check the gap. If adjustment is necessary, the engine is tilted up or down and/or side-to-side until the flanges meet evenly. Severe vibration will result from misalignment and can cause strut bearing and shaft damage. Alignment should be checked again after several weeks of use. Routine checks of coupling bolts are a must to ensure they are tight.

Shaft Alignment:

1. Separate the coupling, move the shaft end back to clear the pilot in the center.

2. Establish the shaft in the center of the shaft log by raising the shaft until it touches the top of the log – note position – lower the shaft until it touches the bottom of the log – note position – repeat sideways and locate shaft in the center; block shaft in this position, using a block of wood under the shaft packing gland.

3. Now, adjust the engine mounts to allow the pilot on the coupling halves to slip together without moving shaft up down or sideways.

4. Adjust the engine mounts as necessary until a .004" feeler gauge will not enter anywhere along the edge of the flange between the faces.

5. Tighten the locks on the adjustable mounts

6. Recheck coupling with feeler, readjust if necessary.

7. Check stuffing box (allow to drip 3 to 5 drops per minute).

Any questions or problems concerning the engine, please contact the U.S. distributor, Mastery Marine at (727) 522-9471, or your local Yanmar service agent.

TRANSMISSION

Follow the lubrication requirements of the engine manual. The oil level should be

checked immediately after operation.

STUFFING BOX

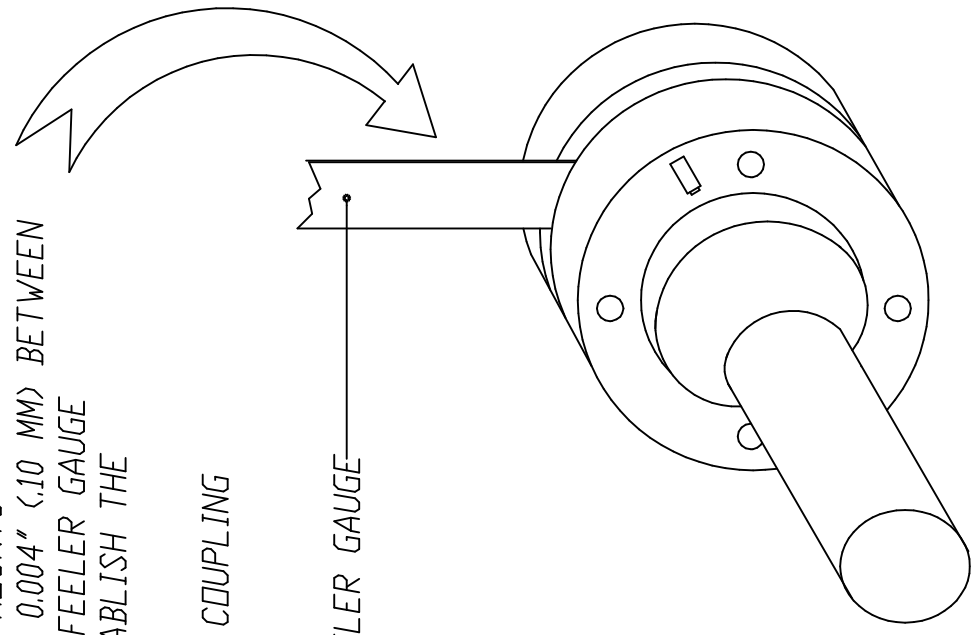
The stuffing box is held to the stern bearing by a rubber hose secured with hose clamps. (See the Shaft and Propeller section). The clamps should be tight and no water should leak from this location. While underway a slight drip from the stuffing box at the shaft exit is necessary (three to five drops a minute) and is normal. To adjust, loosen the locknut, tighten the gland nut one-quarter

turn, a retighten the locknut. If excessive water flow persists after adjustment, replace the packing with 3/16" (or 5mm) square flax packing and then adjust as above.

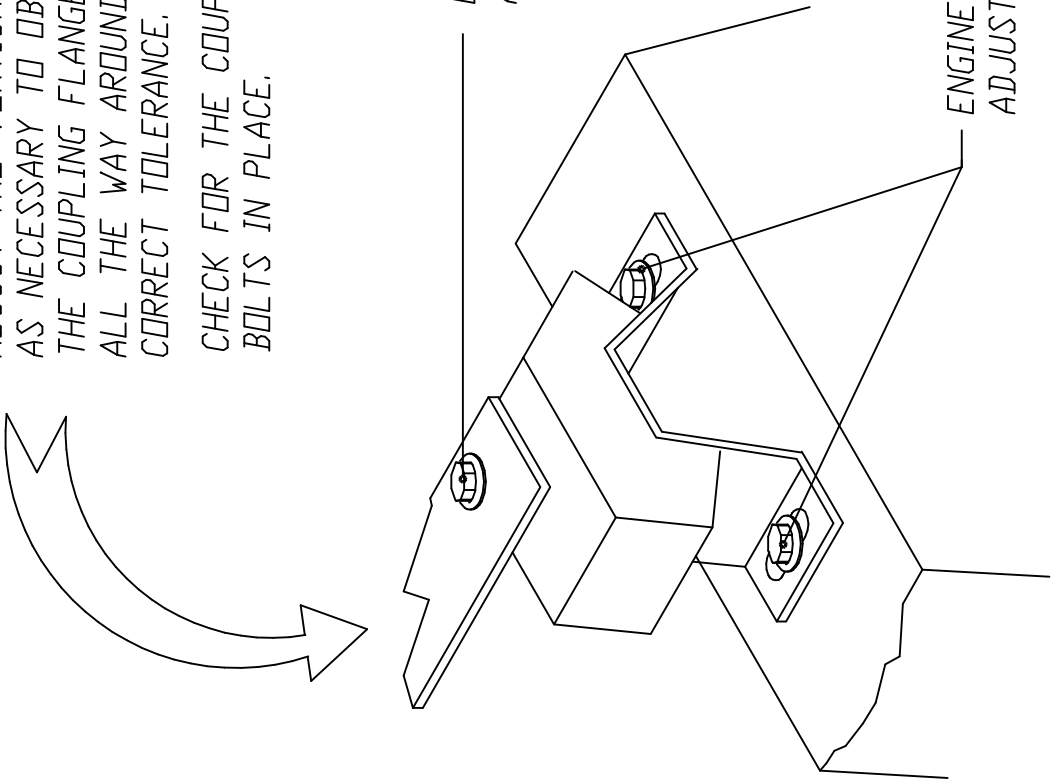
NOTE: Some models use a packless sealing system. Page 56 or Pages 56A, B, C, reflects the type of stuffing box used on this model.

ADJUST THE VERTICAL & HORIZONTAL ENGINE MOUNTS AS NECESSARY TO OBTAIN A MAXIMUM GAP OF 0.004" (.10 MM) BETWEEN THE COUPLING FLANGE FACES. USE A 0.004" FEELER GAUGE ALL THE WAY AROUND THE COUPLING TO ESTABLISH THE CORRECT TOLERANCE.

CHECK FOR THE COUPLING GAP WITHOUT THE COUPLING BOLTS IN PLACE.



0.004" FEELER GAUGE



ENGINE VERTICAL ADJUSTMENT

ENGINE HORIZONTAL ADJUSTMENT

MAINTENANCE

COMPASSES


A boat compass rarely exists in an environment that is completely free from magnetic materials or influences.

The compass on your boat should be adjusted by a certified compass adjuster and have a deviation table made for it.

If you must depend solely on your compass for navigation, make a quick check for any objects near the compass that may cause additional, unmeasured deviation. Typical objects that may fall in this category include: knives, small radios, flashlights or other tools.

STEERING

Refer to the manufacturer's instruction for maintaining pedestal steering system. Routinely inspect steering system components.


 WARNING
CONTROL HAZARD – Inspect and maintain steering system regularly. An improperly maintained system may fail, causing sudden loss of steering control, resulting in personal injury and property damage.

ELECTRICAL SYSTEMS

The electrical system is a 12-volt, negative ground installation, plus a shore power system of either 120v or 220v. The owner should inspect batteries, terminals and cables weekly for signs of corrosion, cracks, and electrolyte leakage. Battery terminals are to be kept clean and greased. Refer to separate instructions on batteries, wiring diagram, and electronics.

 WARNING
SHOCK/FIRE HAZARD Replace breaker or fuse with the same amperage device. Never alter over current protection.

 WARNING
SHOCK/FIRE HAZARD <ul style="list-style-type: none">•Disconnect electrical system from its power source before performing maintenance. Never work on the electrical system while it is energized.•Electrical appliances must be within the rated amperage of the boats circuits.•Observe boat carefully while the electrical components that can be left unattended are the automatic bilge pump, fire protection and alarm circuits.•Only a qualified marine electrical technician may service the boat's electrical system.

 CAUTION
<ul style="list-style-type: none">•Turn off engine before inspecting or servicing battery.•Disconnect battery cables before working on electrical system to prevent arcing or damage to alternator.

MAINTENANCE

PLUMBING SYSTEMS

All pumps should be checked frequently to insure proper operation. This is an especially important regular maintenance item since proper functioning of a pump could save your vessel from serious damage in the future.

Inspect all hoses for chafing and deterioration. See that hose clamps are tight. Check that the pump impeller area is clean and free of obstructions.

Inspect electrical wiring for corrosion. Make sure float switches move freely and are making an electrical connection.

The owner should become familiar with the layout of the water and waste

systems by walking through the boat with the diagrams provided in this manual. It is especially important that the owner knows all the thru-hull valve locations and inspects for leaks frequently. Refer to plumbing diagrams in Specifications and Technical section of this manual.

General Thru-hull Lists (varies from boat to boat---see diagrams in Systems and Circuits section).

- 1) Engine cooling system
- 2) Galley sink
- 3) Head sink
- 4) Head toilet (water intake)
- 5) Holding tank discharge
- 6) Scupper drains

FUEL SYSTEMS

The owner should inspect the condition of fuel lines for cracks or leaks. A primary source of fuel-related problems is water in the system. The owner should use only well maintained fueling facilities and make sure fuel fill caps are tightly secured after filling. Check and maintain fuel filters periodically. Refer to

your Engine Manual for additional information. Periodically, add biocide to prevent bacteria and fungi from contaminating diesel fuel that may contain some water. Carefully follow manufacturer's instructions and clean filter regularly.

MAINTENANCE

CLEANING FIBERGLASS SURFACES

Fiberglass surfaces should be cleaned regularly. Normal accumulations of surface dirt can be removed simply by occasional rinsings with water. If you operate your boat in salt water, more frequent rinsing will be required. To remove stubborn dirt, grease or oil, use a mild detergent and a soft brush. Rinse with fresh clean water. Avoid the plexiglass companionway slider, windshield, deck hatches and fixed ports when using a deck brush, since these surfaces can scratch.

It is a good idea to wax the fiberglass once or twice a year to maintain a deep, glossy appearance. Your local marine supply should be able to provide an appropriate wax.

WARNING

EXPLOSION/FIRE HAZARD

Cleaning agents and paint ingredients may be flammable and/or explosive, and dangerous to inhale. Be sure to use adequate ventilation, and appropriate safety clothing (gloves, safety glasses, respirator, etc.)

CLEANING ACRYLIC

Use only mild soap and water to clean acrylics. Do not use products containing solvents such as ammonia, which is found in many window cleaners.

CAUTION

Use care when cleaning acrylic. Dry cloth and many glass cleaners will scratch. Solvents will attack the surface.

SAIL CARE

Sunlight is a sail's worst enemy, so **cover the mainsail when not in use**. An ultraviolet guard, fitted down the leech of a roller headsail will protect the exposed part from the weathering effect of the sun and from dirt and grit.

Mildew, can be prevented by storing sails dry and by hand washing twice a season. Check all sails regularly for chafe, particularly where they chafe on deck fittings

or rigging, at reef points, batten sleeves and the foot of the headsail. Sail batten pockets should be inspected on a regular basis.

To stow the mainsail, start at the leech and flake it onto the boom, left and right, in about 18-in. (46 cm) folds, while pulling the leech aft. Secure with a sail tie and continue to the luff. Lash to the boom with sail ties or shock cord.

GENERAL HARDWARE MAINTENANCE

Check all fittings regularly to be sure screws are tight. Occasionally lubricate (use silicone lubricants) all moving parts on such fittings as blocks, turnbuckles and cam cleats, as well as the locking pins of snatch blocks, track slides, spinnaker poles, etc. Inspect cleat and fairleads for roughness and smooth with

fine-grained emery paper if necessary. Also, replace any missing or damaged cotter pins in turnbuckles and shackles, and either tape them or use them or use protective covers manufactured for that purpose. Grease winches a minimum of once yearly.

WINCH MAINTENANCE

Follow the maintenance instructions prescribed by winch manufacturer.

We recommend a minimum of an annual cleaning and light greasing.

VINYL CARE

These patterns, like all upholstery fabrics and vinyl, require a regularly scheduled cleaning program. A thorough cleaning should be administered on a daily, weekly or monthly basis depending on use and exposure to dirt and/or staining agents. It is important to begin treatment of a stain as soon as possible after a spill. It is important that efforts begin immediately after a spill to remove any potential staining agent. It is advisable to clean these products as soon as the first signs of dinginess occur, otherwise, delaying clean up will require a much greater effort to restore the product to its original appearance.

Regular cleaning requires the use of a mild cleaner such as Murphy's Oil soap and water. In situations where the vinyl has not been washed regularly and there is a build up of dirt, stronger vinyl cleaners such as Simonize's Tuff Stuff or Turtle Wax's vinyl/fabric cleaner are recommended. We do not recommended the use of any other cleaners. The use of cleaners other than

those recommended may result in irreparable damage to the product.

In order for the above listed cleaning solutions to work effectively on stubborn stains, please allow time for the cleaning solution to soak in thoroughly. Be sure to remove the cleaning solution before it has time to dry. Regardless of the type of cleaner used, it is necessary to finish up with a thorough rinse using fresh water on a clean sponge or rag. A soft bristled nylon or natural fiber brush can be used to remove built-up dirt and staining agents.

Finally, please remember that all our fabric grain vinyls require a greater cleaning effort to maintain than comparable smooth grain vinyls. These products will provide an attractive and durable alternative to conventional fabrics and vinyls if properly maintained. One must realize that the proper installation and use of our fabric grain vinyls require additional attention to the establishment and maintenance of a well thought out cleaning program.

CAUTION

Do not use acetone or other harsh cleaners on the vinyl soft headliner. Use soapy water or other mild detergent to avoid damage to the vinyl.

FABRIC CARE

Vinyl: Clean with mild soap and water. Wipe with vinyl or upholstery cleaner monthly, and especially before and after storage.

Leather: Mild soap water. Blot dry. Do not scrub as this will stretch and scratch. Wipe with leather cleaner/oil to preserve and help prevent cracks before and after storage.

Fabric: Blot dry. Do not machine wash. Use only mild soap and water. Wipe with a clean white cloth. If stain persists, dry clean. Be sure to treat cleaned surfaces with scotch guard. Stretched or loose covers may be

steam cleaned. If foam is removed, it will restuff more easily if wrapped with thin plastic.

Storage: Cover with airflow fabric to reduce dust build up. Do not use plastic, as this will cause cushions to sweat and mildew.

Cushions: If wet, prop cushions vertically to promote airflow around each cushion. Cushions can be cleaned by most dry cleaners. **Dry clean only.**

REPAIR OF POLYURETHANE (MINWAX) FLOORS

Surface Scratches: Sand floor with 220 grit sandpaper. Remove all dust with clean cotton cloth or blow off with air. Apply one coat of minwax evenly over sanded floor. Let dry completely, at least 24 hours

Deep Scratches: Remove all blemishes by sanding floor with 220, until all minwax is removed and you have a raw floor. Remove all dust with clean cloth or blow off with air. Apply one coat evenly over floor. Let dry four to six hours. Repeat steps one and four. Apply third coat of minwax only if needed by repeating steps one and four.) After final coat, let floor dry completely at least one day.

ELECTROLYSIS AND GALVANIC PROTECTION

Salt water allows electric current to flow from anodic to cathodic material. For any two metals from two components, their relative positions in the galvanic rating table, will determine which loses material (the anode) and which remains largely undisturbed (the cathode). The distance between the two metals on the galvanic table determines the rate of wear. Thus a sacrificial zinc anode is often fitted to the underwater area of a boat to attract any destructive currents away from bronze or steel propeller shafts, for example. It is not enough to know that your boat does not suffer from electrolysis; a newcomer in the adjacent marina berth may start a too-

friendly association with metal components on it. An easy place to fit an anode is on the propeller shaft, or covering the propeller nut. The anode should not be painted; this would render it ineffective.

To prevent electrolysis in seawater, the difference between the voltages of the two adjacent metals should not exceed 0.20 V. For example, zinc and carbon steel used together risk corrosion, while lead and active stainless steel are compatible. Metals with a high voltage corrode faster and need a larger area to diffuse the electrochemical reaction.

TEAK CARE (240,260,and 270 ONLY)

Teak wood is a high quality, extremely durable wood with high oil content. In order to help you protect the original beauty of your teak interior, we have sealed the wood with a 3 to 4 coat system of high quality Seafin Teak Oil, manufactured by Dalys. This material is penetrating oil that dries to a low sheen to seal and protect the wood from

moisture and weathering. It creates a durable, nonslip surface to repel water and resist wear. It won't chip, peel or blister. It reduces work and maintenance cost because it is easy to repair and maintain and repair. With proper maintenance it will outlive urethane varnish on interior and even exterior surfaces

MAINTENENCE

When oiled surfaces require renewing, simply wipe the surface area free of loose dirt, dust or other contaminants. Dampen a cloth with the Seafin Teal Oil and wipe on. Let

stand for 5-15 minutes, then polish dry. If your dinette table has an epoxy finish, clean with furniture polish

REPAIRS

When woodwork is damaged from scrapes or abrasions that go into or thru the finish, take the following steps:

1. Take 180 to 200 grit wet/dry sand paper to smooth out rough spots.
2. Wipe clean of dust and dirt with a clean rag. Note: before applying oil, wood surface must be dry.
3. Wipe or brush on oil, allow to penetrate 5-15 minutes while surface is still wet.
4. Sand until smooth with 400A wet/dry sandpaper.
5. Wipe dry with a clean rag. Allow 8-12 hours drying time.

6. Apply second coat, sand, and repeat procedure.

This procedure may be repeated as many times as needed to bring damaged area back to its original finish. If you have trouble with getting the same sheen, you may use a soaked and wrung out cloth to apply a very light coat to get an even sheen.

For more information about the product contact:

Dalys
3525 Stoneway North
Seattle, WA 98103
(206) 633-4200

INTERIOR FURNITURE & BULKHEAD SPRAY FINISH

TEAK CARE

Teak wood is a high quality, extremely durable wood with a high oil content. In order to help you protect the original beauty of your teak, we have sealed the interior with a (3 to 4) spray coat finish, using sealer and varnish for marine cabinets. The materials are

manufactured by "Chemcraft International Inc". This material will seal and protect the wood from moisture and weathering. It is easy to maintain and reduces work and maintenance costs.

REPAIRS

When woodwork is damaged from scrapes or abrasions (that go into or through the finish), take the following steps:

- 1) Sanding with the grain, take 320 grit sand paper to smooth out rough spots. If the spot is down to the raw wood, rag (100% cotton) wipe the spot with acetone and allow to dry. (Note: acetone only needs to be applied to the raw teak).
- 2) Reseal raw wood with Mohawk Spray Sealer (aerosol can) and allow to dry.
- 3) Lightly sand with 320 grit, sanding larger than original spot.
- 4) Wipe clean of dust and dirt with a clean rag.
- 5) Using Mohawk touch up and repair supplies, use clear lacquer spray (aerosol can). Apply (1) coat on the spot evenly and allow to dry.
- 6) This process (steps 3 – 5) may be repeated as many times needed to bring damaged area back up to its original finish. On your final spraying, be sure to feather into existing finish.

SOP FOR POLYURETHANE (MINWAX) FLOORS

SURFACE SCRATCHES

- 1) Sand floor with 220 grit sandpaper until all scratches are removed.
- 2) Remove all dust with a clean cotton cloth or blow off with an air gun, then wipe down with a tack cloth.
- 3) Apply one coat of minwax evenly over the sanded area.
- 4) Let the minwax dry completely (at least one day)

DEEP SCRATCHES

- 1) Sand floor with 220 grit sandpaper until all the minwax is removed and down to raw wood, removing all blemishes.
- 2) Remove all dust with a clean cotton cloth or blow off with an air gun then wipe down with a tack cloth.
- 3) Apply one coat of minwax evenly over the floor.
- 4) Let minwax dry 4-6 hours
- 5) Repeat steps 1-4, light sand
- 6) Apply a 3rd coat if needed by repeating steps 1-4.
- 7) Let the minwax dry completely (at least one day)

Chemcraft International

Telephone: 910-723-1846

U.S. Watts: 1-800-334-8556

Mohawk Finishing Products, Inc.

U.S. Watts: 1-800-545-0047

STORAGE/WINTERIZATION

IMPORTANT

Winter storage is recommended to be done in one of the following three ways, either: 1) by blocking the boat via a cradle 2) with chained stands on level ground; or 3) by storing the boat in the water with a bubbler system to prevent icing. Damage to your boat, including engine misalignment caused by twisting, is not covered by the warranty.

SAILS

Sails should be properly folded and stowed in a dry, well-ventilated place. Many sailboat owners send their sails back to the sail manufacturer at the end of each season. The sailmaker will check the stitching and sailcloth for wear and store the sails until the start of the next season.

ELECTRICAL

Remove battery from boat (Refer to Engine Manual) and charge. It is a good idea to also remove the electronics (radio, radar, etc) and store in a safe place.

CUSHIONS

Cushions should be removed and stored at home if possible. If not, prop them vertically to promote air flow around each cushion. *Dry clean only!*

HATCHES

Tenting the deck during storage will help prevent ice from forming and damaging hatches and deck fittings. The installation of a passive vent will help with ventilation while the boat is in storage.

WATER SYSTEM

Open a faucet and allow the pump to empty the tank. Then add approximately two gallons (7.6L) of non-toxic antifreeze solution to the tank and repeat the pumping out procedure.

A second method is to disconnect the hoses at the pump, allowing

them to drain. Find the lowest point in the system and disconnect the fitting. Open all faucets to allow the lines to drain. If possible, use a short section of hose on the faucet to blow through the lines to clear all water. A diluted solution with baking soda will help freshen the system.

WATER SYSTEM

Open valve and drain fully leave valve open during lay-up time.

TOILET AND HOLDING TANK

Drain and flush toilet. Using non toxic antifreeze in a 50/50 mixture with water, pump through toilet and into holding tank.

OUTBOARD ENGINE

Take it home and store it in a safe place. Be very careful storing the gas tank as the gasoline is very flammable. Refer to Engine Manual for specific maintenance schedule.

INBOARD ENGINE

Winterizing Fresh Water Cooled Diesel Engines

1. Drain crankcase and transmission and refill with fresh lubricant as specified in Engine Manual.
2. Drain and clean all fuel filters and change elements, gaskets, and seals. Bleed all air from fuel systems.
3. Start engine and bring up to operating temperature.
4. Close the sea cock, remove the raw water pickup hose from the raw water pump and immerse one end into a 5-gallon (19L) bucket of

STORAGE/WINTERIZATION

antifreeze solution. Start engine and run until antifreeze solution comes out exhaust stack or until bucket is empty. Attach the raw water pickup hose to the raw water pump. Tighten all clamps. **NOTE: This procedure bypasses the sea strainer to prevent antifreeze from crystallizing in sea strainer, which warranty will not cover.**

5. Loosen water pump and alternator belts to lessen tension on belts during winter.

6. For engines equipped with a hand crank: pull compression release levers and turn engine slowly with the hand crank. Slowly pour about 2 ounces of engine oil into the intake pipe or manifold while hand cranking the engine. This will allow for a thin coat of oil on the valves and upper cylinder. **DO NOT USE** starter to turn engine or serious engine damage may result.

7. Tape the openings of the intake and exhaust manifolds with duct tape to help prevent corrosion of the upper cylinder during layup.

8. Scrape all rust or corrosion from exposed metal parts and surfaces. Scrub all metal surfaces with detergent and rinse thoroughly. Paint any bare metal.

9. Place a dust cover over engine. Do not leave the engine exposed to rain and sea breeze.

10. Disconnect the battery cables; remove the battery from the boat. Clean the terminal ends and battery with a solution of baking soda and water, and then rinse thoroughly with clean water. Apply a light coat of grease on the terminal end of the battery and cables. Store the battery in a cool dry place. Use a trickle charger to keep battery charged. Do

not charge battery near any open flame or a confined area.

CAUTION: Wear safety goggles and rubber gloves to protect your skin.

Winterizing Raw Water Cooled Diesel Engines

1. Drain crankcase and transmission and refill with fresh oil as specified in the engine manual. Change oil filters.

2. Close seacock, remove raw water pickup hose from water pump, attach 4-foot (1.2m) length of hose to water pump and immerse in a 5 gallon(19L) bucket of anti freeze solution. Remove hose from engine or manifold that leads to exhaust elbow. Attach about a 4-foot length of hose and immerse one end in the bucket of antifreeze solution. Start engine and run until water begins to warm up (about 3-5 min.) and the thermostat opens. Stop engine. Replace hose that leads to exhaust elbow. Start engine and let run till water comes out exhaust pipe. Stop engine, remove hose from water pump to bucket, attach hose from seacock to water pump and tighten all hose clamps. **NOTE: this procedure bypasses the sea strainer to prevent antifreeze from crystallizing sea strainer, which warranty will not cover.**

3. Loosen water pump and alternator to lessen tensions on belts during winter.

4. Drain and clean all fuel filters and change elements, gaskets and seals. Bleed all air from fuel systems.

5. Pull compression release lever and turn engine slowly with hand crank. Slowly pour about 2 ounces of

STORAGE/WINTERIZATION

engine oil into the intake pipe or manifold while engine is turning.

DO NOT USE the starter to turn engine or serious engine damage may result.

6. Tape the openings of the intake and exhaust manifolds with duct tape to help prevent corrosion of the upper cylinder during lay-up.

7. Scrape all rust or corrosion from exposed metal parts and surfaces.

Scrub all metal surfaces with detergent and rinse thoroughly. Paint any bare metal.

8. Place a dust cover over engine. Do not leave engine exposed to rain and sea breeze.

9. Disconnect the battery cables; remove the battery from the boat.

Clean the terminal ends and battery with a solution of baking soda and water and rinse thoroughly with clean water. Apply a light coat of grease on the terminal end of the battery and cables. Store the battery in a cool dry place. Use a trickle charger to keep battery charged. Do not charge battery near any open flame or in a confined area.

CAUTION: Wear safety goggles and rubber gloves to protect your eyes and skin.

DEPARTURE FROM THE BOAT

The check list for leaving a boat unattended is very important because items overlooked often will not be remembered until you are far from the boat and corrective actions are impractical or impossible.

Primary choices for this list are items relating to the safety and security of the unattended craft: turning off fuel valves, properly setting electrical switches, pumping out bilge and leaving the switch on automatic (or arrange for periodic pumping out). **It is recommended that the power be turned off when leaving the boat.** Other departure checklist items are securing ports, windows, hatches and doors.

ROUTINE MAINTENANCE

Routine maintenance checklists should include items based on how much the boat is used (usually in terms of engine hours) and on calendar dates (weekly, monthly or seasonal checks). Typical of the former are oil level checks and changes, and oil and fuel filter changes.

On a calendar basis the lists should note such matters as electrolyte levels in storage batteries, pressure gauges on dry chemical fire extinguishers, and all navigation lights. Check the operation of automatic bilge alarms or pump switches by running water into the boat. Periodically close and open sea cocks several times to ensure their free and easy operation in case they are needed in an emergency. Equipment and supplies carried on board for emergencies should be inspected for any signs of deterioration.

CE CERTIFIED

Your Hunter has been manufactured in the United States and has been certified by the IMCI to be in compliance with the relevant parts of the Recreational Craft Directive 94/25/EC from the European Parliament. The CE mark means your craft meets or exceeds all current International Organization for Standardization (ISO) standards and directives in effect at time of manufacture. The builder's plate (copy provided on page 35 of this manual), affixed to your boat, describes various parameters involved in the design of your boat. Please refer to it regularly when operating your boat. Following are the Design Categories, established by the Recreation Craft Directive, which is to be considered a guideline of use application as per the Directive's criteria. Hunter Marine Corporation does NOT establish these criteria, and the category indicated is only a reference to the assigned category. The safety of the captain and crew of any vessel is not measurable by such categories, and you should not interpret these categories as an indication of your safety in such condition. The skill of your captain and crew, together with proper preparation, appropriate safety equipment for the given conditions and a well maintained vessel are critical to safe sailing.

CE CRAFT DESIGN CATEGORIES

Category A – “Ocean”: Craft designed for extended voyages where conditions may exceed wind force 8 (Beaufort Scale) and include significant wave heights of 4m, for vessels that are largely self-sufficient.

Category B - “Offshore”: Craft designed for offshore voyages where conditions include winds up to and including wind force 8 and significant wave heights up to and including 4m may be experienced.

Category C – “Inshore”: Craft designed for voyages in coastal waters, large bays, estuaries, lakes and rivers, where conditions up to and including wind force 6 and significant wave heights up to and including 4m may be experienced.

Category D – “Sheltered Waves”: Craft designed for voyages on small lakes, rivers and canals, where conditions up to and including wind force 4 and significant wave heights up to and including 0.5m may be experienced.

For additional information, contact

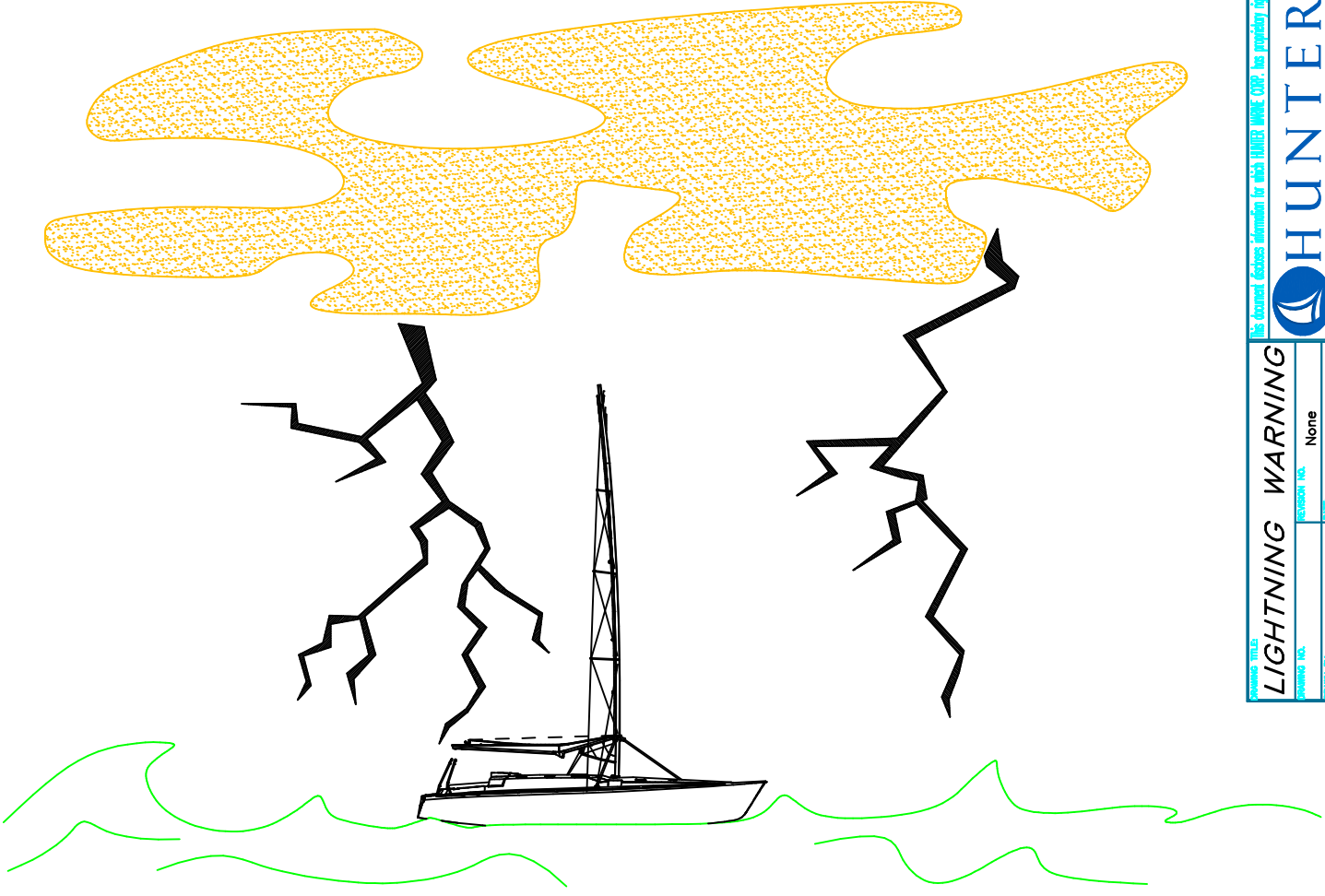
International Marine Certification Institute (IMCI)
Treves Centre, rue de Treves 45
1040 Brussels, Belgium
FX: (32) 2238-7700

NMMA CERTIFIED

Your Hunter has been judged by the National Marine Manufacturers Association (NMMA) to be in compliance with the applicable federal regulations and American Boat and Yacht Council (ABYC) standard and recommended practices in effect at the time of manufacture.

For additional information, contact:

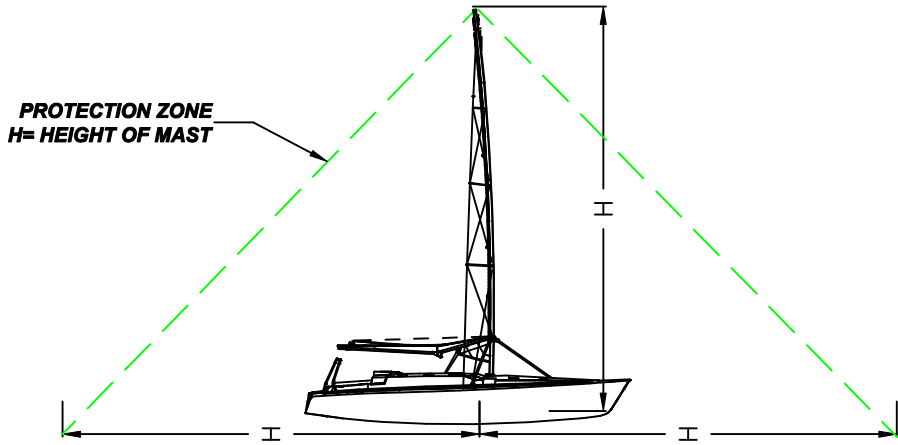
National Marine Manufacturers Association
200 E. Randolph Dr., Suite 5100
Chicago, IL 60611
PH: (1) 312-946-6200 FX: (1) 312-946-0388



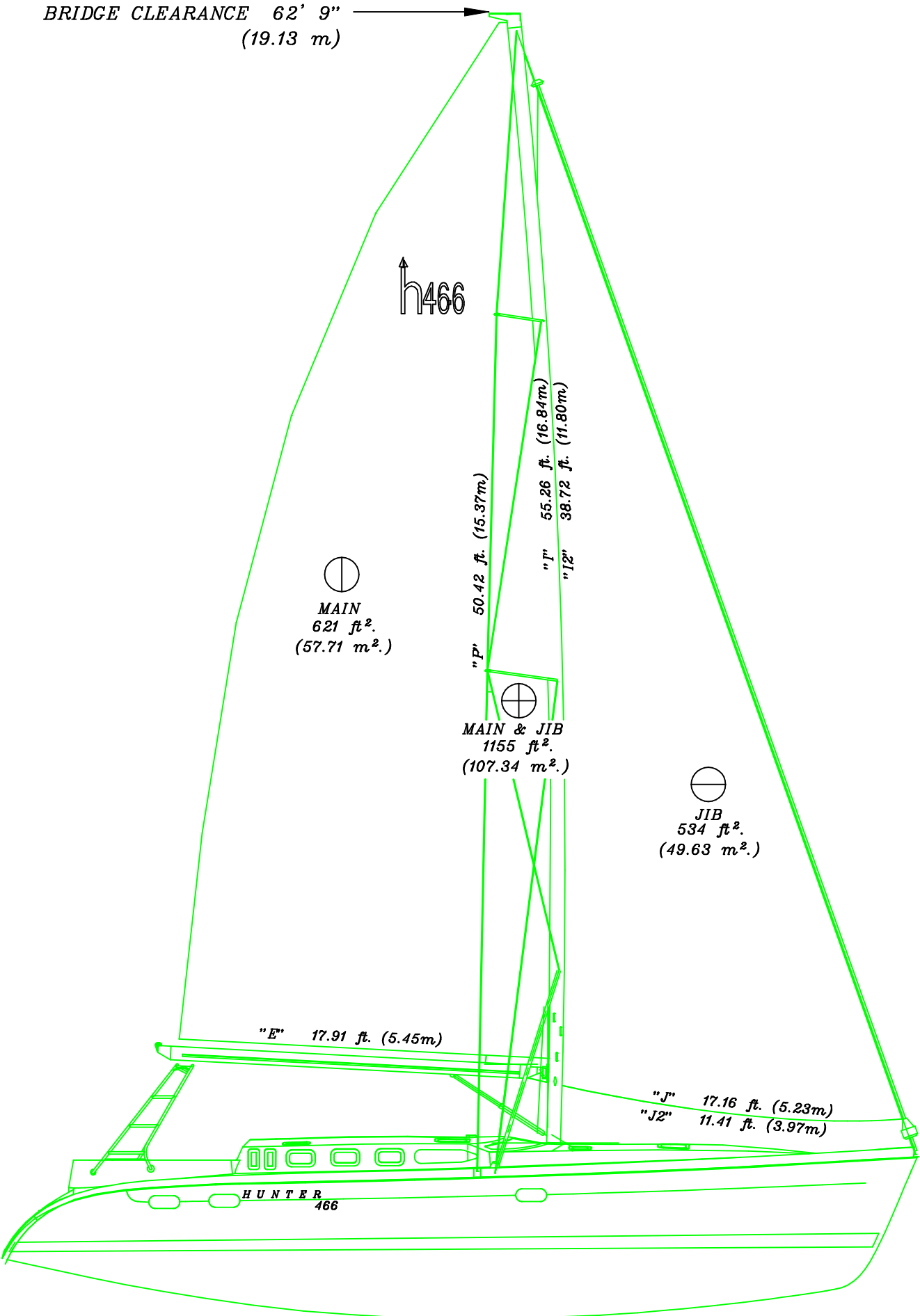
LIGHTNING STORM WARNING:

1. ALL WHIP ANTENNAS SHOULD BE TIED DURING STORM, UNLESS PART OF THE LIGHTNING PROTECTION SYSTEM.
2. PRECAUTIONS: DURING LIGHTNING STORMS: A. THE SHIPS OCCUPANTS SHOULD TAKE SHELTER INSIDE A CLOSED AREA OF THE BOAT. EXAMPLE: BELOW DECK. B. OCCUPANTS SHOULD NOT HAVE ANY BODY PARTS IN THE WATER. C. AVOID CONTACT WITH ANY COMPONENTS OF THE L.P.S. AND D. AVOID ALL CONTACT WITH ANY METAL OBJECTS.
3. SEE DIAGRAM BELOW FOR INFORMATION ON THE LIGHTNING PROTECTION ZONE.
4. IF LIGHTNING SHOULD STRIKE THE SHIP, INSPECT ALL ELECTRONICS, ELECTRIC GEAR, COMPASS AND L.P.S. SYSTEM FOR POSSIBLE DAMAGE. RECALIBRATE AS NECESSARY. NOTE: BEGIN CHECKING ELECTRONICS AFTER THE THREAT OF LIGHTNING HAS PASSED.

FAILURE TO FOLLOW PRECAUTIONS MAY RESULT IN SEVERE INJURY OR DEATH



BRIDGE CLEARANCE 62' 9"
(19.13 m)



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HUNTER

466 STANDARD SAILPLAN

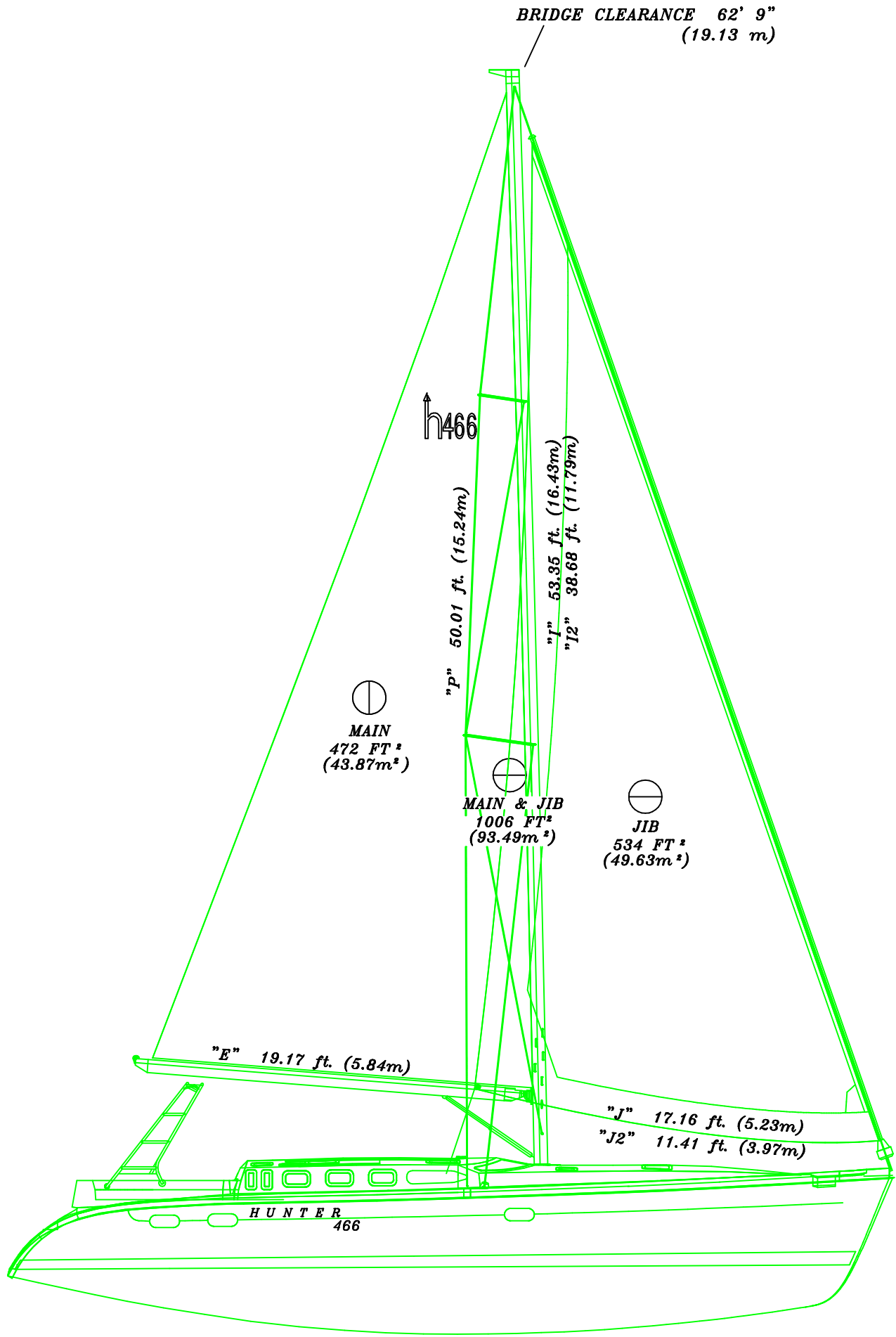
PROJECT NO.	4608036A	REVISION NO.	NONE
DATE	11/13/98	ENGINEERING DEPT.	

This document describes information for which HUNTER MARINE CORP. has proprietary rights.

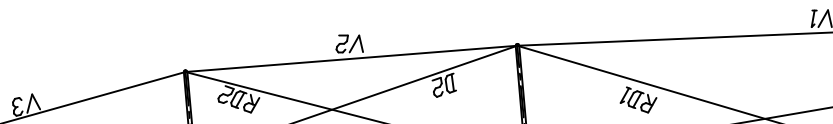


466 FURLING SAILPLAN

DESIGN NO.	4608036B	REVISION NO.	NONE
DATE	11/13/98	ENGINEERING DEPT.	



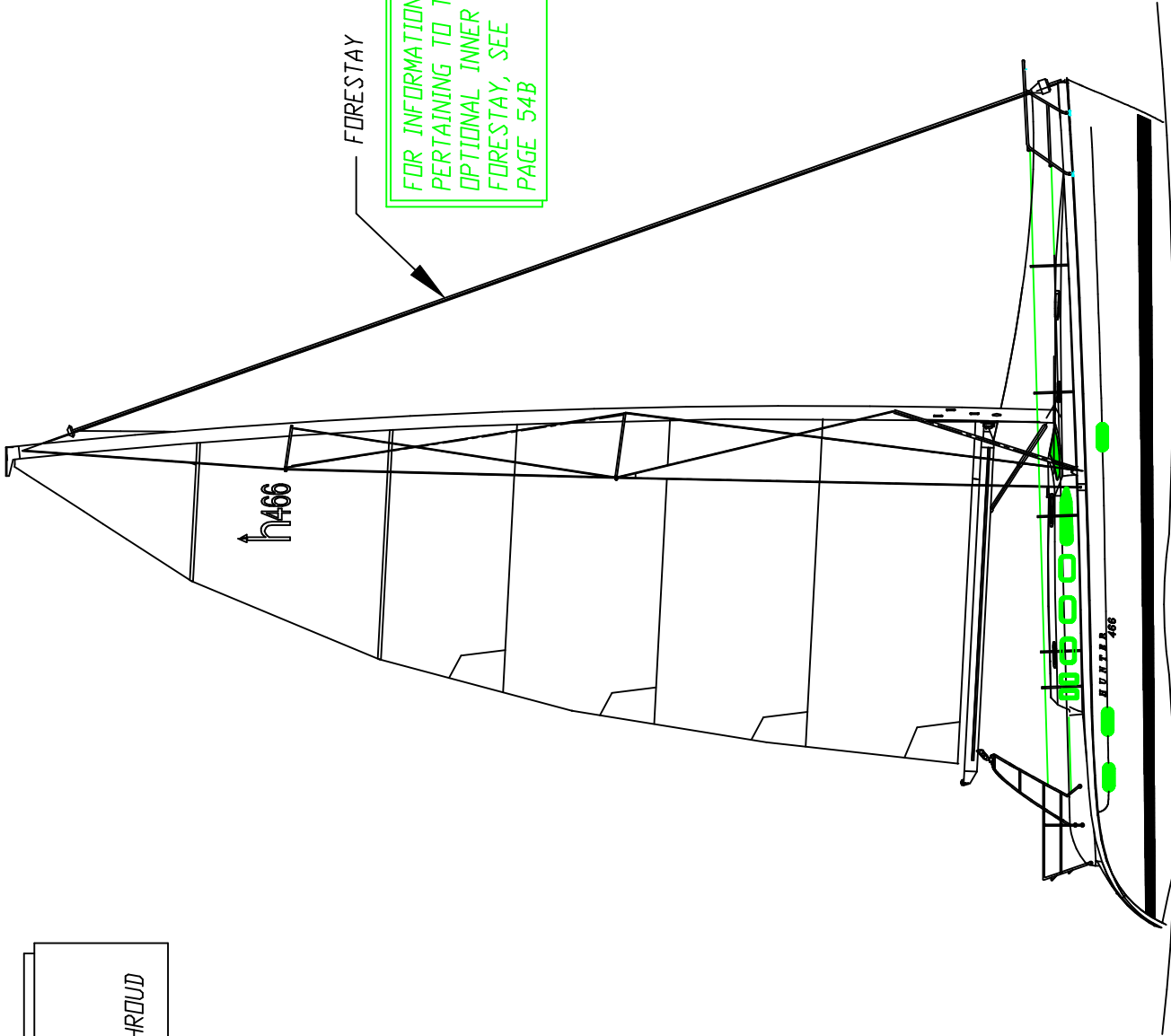
V= VERTICAL SHROUD
 D1= DIAGONAL SHROUD
 RD= REVERSE DIAGONAL SHROUD



NOTE:
 STRUTS UTILIZED ON
 STANDARD MASTS
 ONLY.

FORESTAY

FOR INFORMATION
 PERTAINING TO THE
 OPTIONAL INNER
 FORESTAY, SEE
 PAGE 54B



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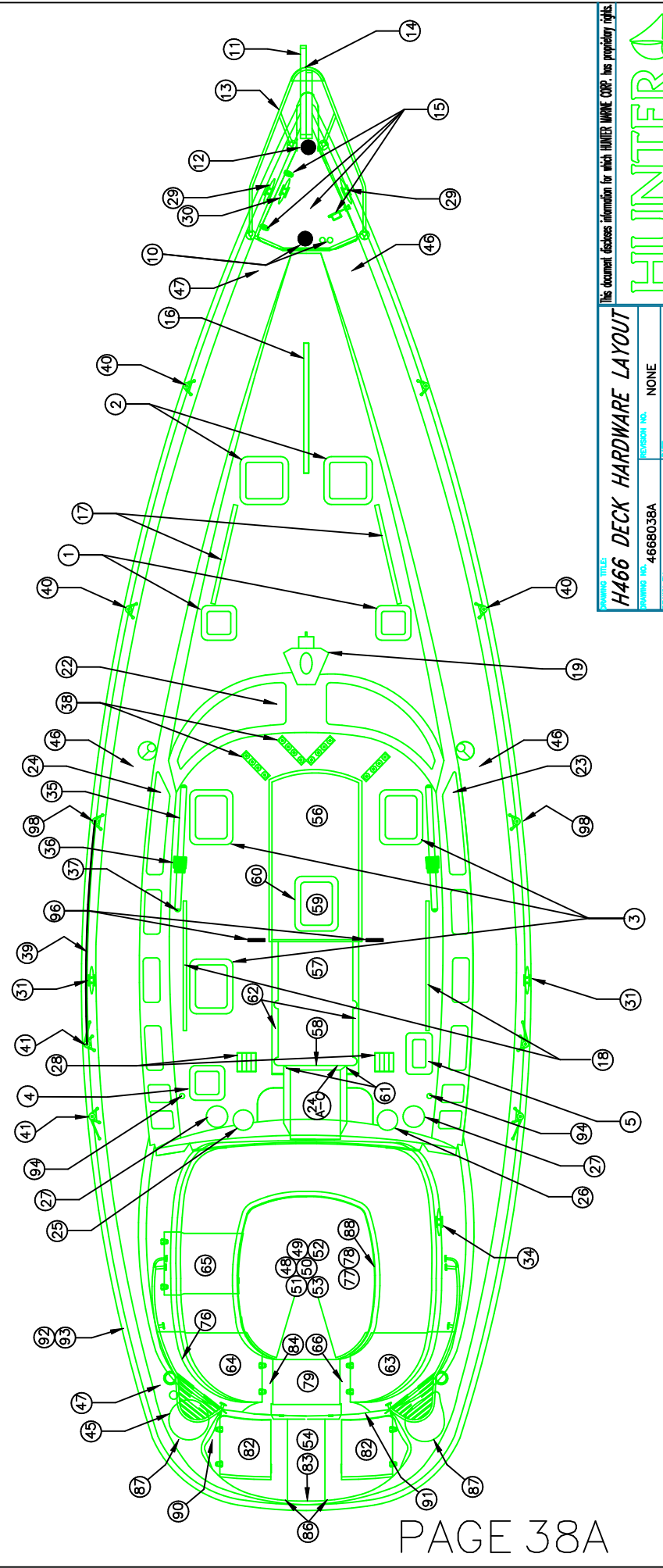
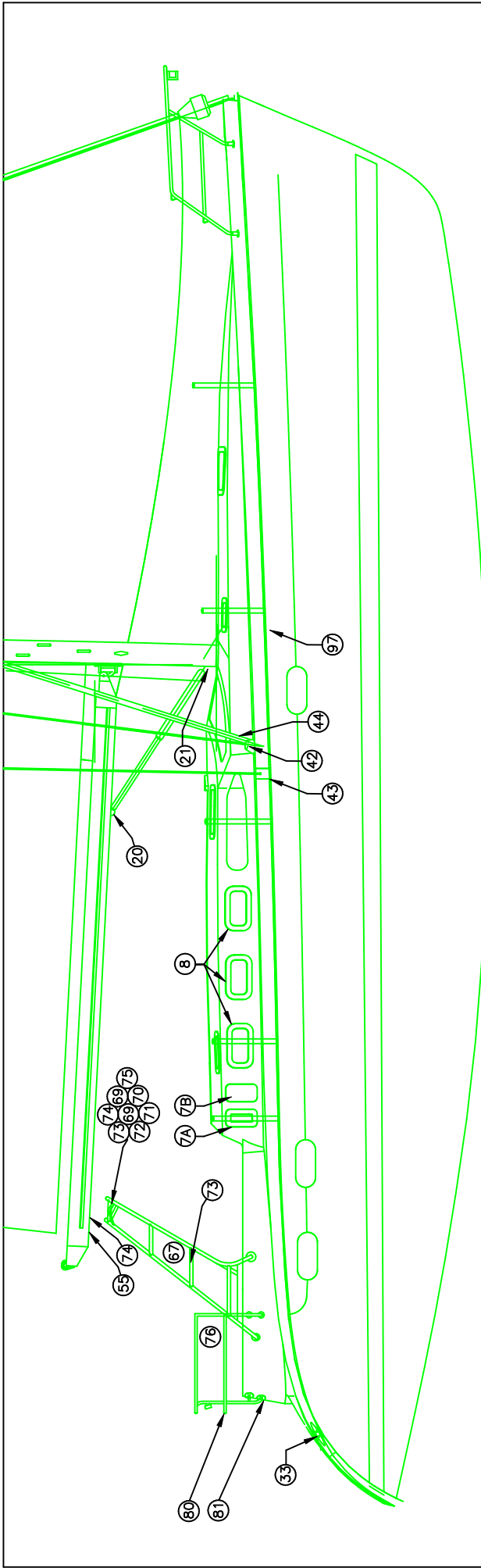
HUNTER

466 STANDARD RIG DEFINITIONS			
FORMING TITLE	4608036C	SCALE	NONE
FORMING NO.		DATE	11/13/98
FORMING DEPT			

DIMENSIONS, CAPACITIES, ETC.

HUNTER 466

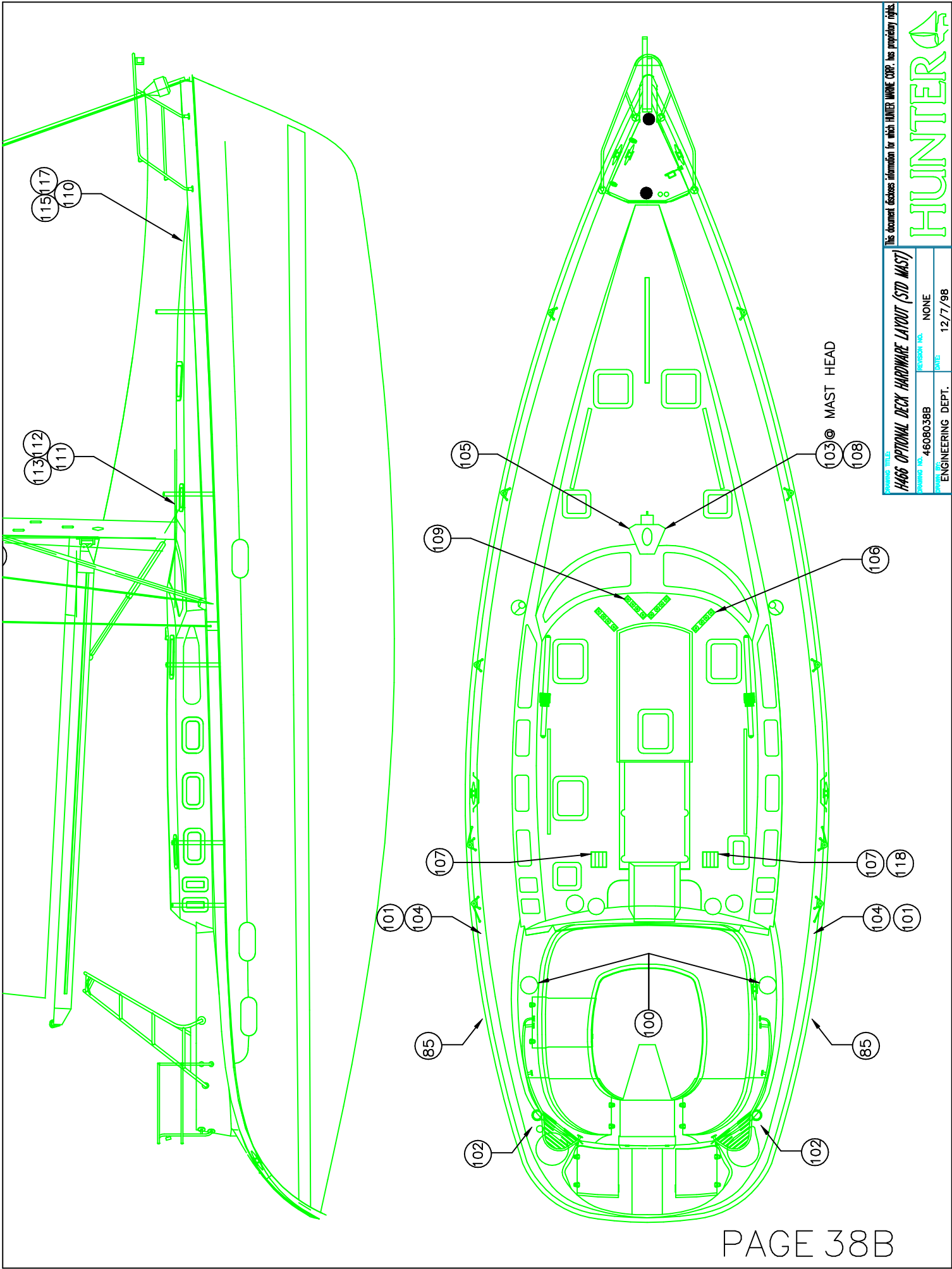
LENGTH OVERALL (LOA).....	44'3"	13.49m
LENGTH OF WATERLINE (LWL).....	38'8"	11.79m
BEAM (MAX).....	14'0	4.27m
DRAFT	5'6"	1.68m
DISPLACEMENT.....	28,000 lbs.	12,698 kg
BALLAST	9,500 lbs.	4,309 kg
SAIL AREA (100% TRIANGLES).....	908.1 sq. ft.	84.4 sq.m
SAIL AREA (ACTUAL W/STANDARD SAILS).....	1155 sq. ft.	81.29 sq.m
I.....	55.26 ft.	16.84m
J	17.16 ft.	5.23m
P.....	50.42 ft.	15.37m
E.....	17.91 ft.	5.45m
MAST HEIGHT (FROM WATERLINE).....	62' 9"	19.13m
HEADROOM.....	6'6"	1.98m
WATER CAPACITY.....	200 U.S. gal.	757 liters
HOLDING TANK CAPACITY.....	50 U S gal.	189 liters
FUEL TANK CAPACITY.....	100 US gal.	378 liters
LPG TANK CAPACITY.....	10 lbs.	4.54 kg
BATTERY CAPACITY.....	85 amp (1)	START BATTERY
	235 amp (2)	HOUSE BATTERIES
ELECTRICAL VOLTAGES.....	12 V.D.C./ 110 V.A.C.	
	(SELECT OVERSEAS MODELS 220 V)	
INBOARD ENGINES.....	62 hp	37.3 kw
	76 hp OPTIONAL	47.3 kw OPTIONAL
OPTIONAL GENERATOR.....		6 kw
MAXIMUM LOADING.....	10 PEOPLE	2460 kg
		(INCLUDING LUGGAGE)
LIFTING POINTS.....	INDICATED BY "SLING" LABELS ON HULL	
PROP DIAMETER & PITCH	2 BLADE	
YANMAR 4JH2TE (62 H.P.)	18" X 17 R.H.(457.2mm X 431.8mm)	
YANMAR 4JH2HTE (76 H.P.)	NOT OFFERED	
	3 BLADE	
YANMAR 4JH2TE (62 H.P.)	18" X 16 R.H.(457.2mm X 406.4mm)	
YANMAR 4JH2HTE (76 H.P.)	18" X 17 R.H.(457.2mm X 431.8mm)	



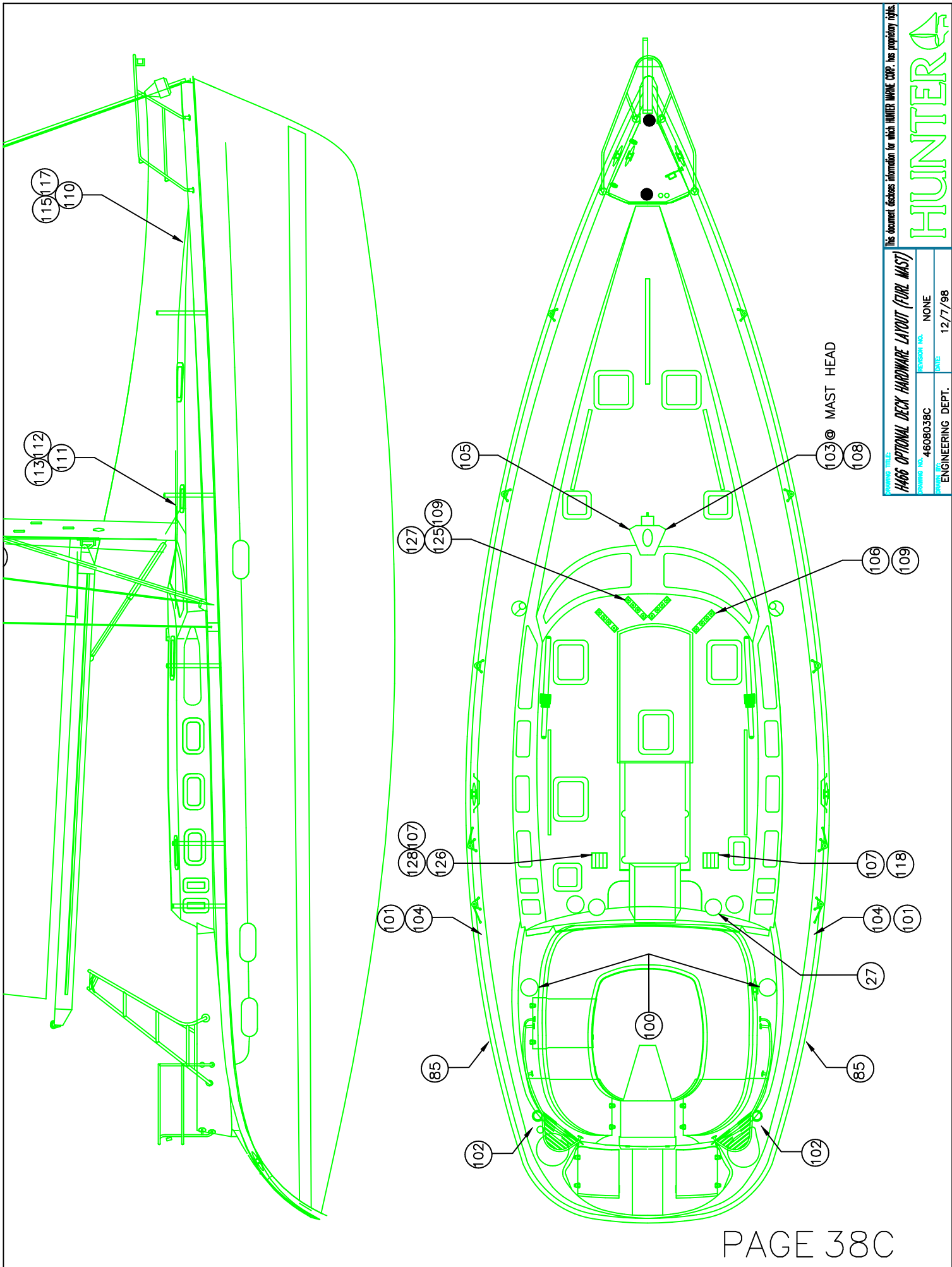
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H466 DECK HARDWARE LAYOUT	
REVISED NO.	NONE
DATE	12/7/98
ENGINEERING DEPT.	

HUNTER



H466 OPTIONAL DECK HARDWARE LAYOUT (STD MAST)			
REVISED NO.	4608038B	REVISION NO.	NONE
ENGINEERING DEPT.		DATE	12/7/98



H466 OPTIONAL DECK HARDWARE LAYOUT (FURL MAST)			
DESIGN NO.	4608038C	REVISION NO.	NONE
DATE	12/7/98	ENGINEERING DEPT.	

REVISION #	10/20/2003						
HUNTER P466 DECK HARDWARE							
	GEN.DESCR.	LOC. & TYPE	VENDOR	MDL/NAME/#	#REQ.	PART #	DWG #
1	HATCH	FWD. HEAD	LEWMAR	COAST S-10	2	300210	
	SCREEN	"	"	"	2	300220	
	TRIM RING	"	"	"	2	300230	
2	HATCH	FWD.S/R CABIN TOP	LEWMAR	COAST S-44	2	NEW	
	SCREEN	"	"	"		NEW	
	TRIM RING	"	"	"		NEW	
3	HATCH	MAIN SALOON & GALLEY	LEWMAR	COAST S-30	3	301050	
	SCREEN	"	"	"	3	301060	
	TRIM RING	"	"	"	3	301070	
4	HATCH	GALLEY	LEWMAR	COAST S-10	1	300210	
	SCREEN	"	"	"	1	300220	
	TRIM RING	"	"	"	1	300230	
5	HATCH	AFT HEAD	LEWMAR	COAST S20	1	300910	
	SCREEN	"	"	"	1	300920	
	TRIM RING	"	"	"	1	300940	
6	HATCH	HOUSE SIDE	LEWMAR	COAST S-20	6	300910	
	SCREEN	"	"	"	6	300920	
	TRIM RING	"	"	"	6	300940	
7A	PORTLIGHT	HOUSE SIDE	LEWMAR	SIZE 0	2	300484	
	SCREEN	"	"	"	2	300490	
7B	AFT FIXED CABIN WINDOW	P & S AFT HOUSE SIDE	NO. FLORIA GLASS	PLEXI	2	425540	
8	FIXED PORTLIGHT	HULL SIDE			3	424660	
	TRIM RING	"	"	"	3	300290	
9	FIXED PORTLIGHT	HULL SIDE	LEWMAR		2	300850	
	SCREEN	"	"	"	2	300860	
10	WINDLASS	ANCHOR LKR.	HORIZON	1500GD	1	310520	
	DUAL CONTROL BOX	WINDLASS			1	310550	
	DECK SWITCH - UP	WINDLASS			1	310570	
	DECK SWITCH - DOWN	WINDLASS			1	310600	
11	BOW ROLLER	BOW	HUNTER	450	1	304400	4462044A
12	FURLING UNIT	STEM	FURLEX		1	NEW	N/A
13	BOW RAIL	BOW	HUNTER	C/O 450	1	307820	4462024A
14	BOW LIGHT	ON BOW PULPIT	C/O 410	EL0344	1	255806	
15	ANCHOR HATCH	BOW		FIBERGLASS	1		N/A
	ANCHOR LATCH (HANDLE)	ANCHOR LOCKER		C/O 450	1	315700	N/A
	STRIKER PLATE	ANCHOR LOCKER		C/O 450	1	309740	
	HINGE	ANCHOR LOCKER		C/O 450	2	315059	
	EYE STRAP	ANCHOR LOCKER		C/O 450	4	315590	
	BUNGEE CORD	ANCHOR LOCKER		C/O 450	1	318530	
16	HANDRAILS	FWD. TRUNK CENTER	48"	WOOD	1		
17	HANDRAILS	FWD TRUNK EDGE	24"	WOOD	2		
18	HANDRAILS	CABIN TOP	48"	WOOD	2		
19	MAST STEP	MID DECK	SELDEN	450	1		
20	VANG BLOCK		SCHAEFER	705-55	1	302630	
21	VANG BLOCK		SCHAEFER	705-45	1	302340	
22	CABIN WINDSHIELD		NO. FLORIA GLASS	NEW DESIGN	1 SET	P4655	N/A
23	CABIN SIDE PLEXI (P&S)	FWD END OF CABIN SIDES	NO. FLORIA GLASS	NEW DESIGN	1 SET	P4614	
24A	PIN BOARDS-TOP	COMPANIONWAY	NO. FLORIA GLASS	PLEXI (TOP)	1	P4612	
24B	PIN BOARDS-MID	COMPANIONWAY	NO. FLORIA GLASS	PLEXI (MID)	1	P4613	
24C	PIN BOARDS-BOTTOM	COMPANIONWAY	NO. FLORIA GLASS	PLEXI (BOTTOM)	1	P4624	
25	WINCH	HALYARD	LEWMAR	COAST STD.44ST	1	308620	
26	WINCH	HALYARD-ELEC.	LEWMAR	COAST 48EST	1	308890	
27	WINCH	COCKPIT / JIB SHEET	LEWMAR	COAST 48ST	2	308630	
28	SHEETSTOPPER	PORT & STBD	SPINNLOCK	XT/3 TRIPLE	2	304020	
29	CLEAT	BOW	NORTH/JUDD	14051	2	308835	
30	CLEAT	ANCHOR LOCKER	NORTH/JUDD	14051	1	308835	
31	CLEAT	MIDSHIPS	NORTH/JUDD	14051	2	308835	
33	CLEAT	STERN	NORTH/JUDD	14051	2	308835	
34	CLEAT (FURL)	ON COAMING	4" SILVER	C/O 450	1	303850	
35	JIB TRACK	MID TRUNK	SCHAEFER	C/O 450	2	303152	
36	JIB CARS		SCHAEFER	C/O 450	2	302190	
37	JIB TRACK ENDS		SCHAEFER	C/O 450	4	302170	
38	DK. ORGANIZER (TRIPLE)	2 PORT & 2 STBD@ MAST	HARKEN	1590	4	303305	
39	LIFE LINES	ABOVE GUNN'LS				NEW	
40	STANCHION W/ BASE	ALONG GUNN'LS		C/O 410	6	305140	N/A
41	STANCHION GATE	PORT AND STARBOARD		380 GATE FWD	2 PR	304975	

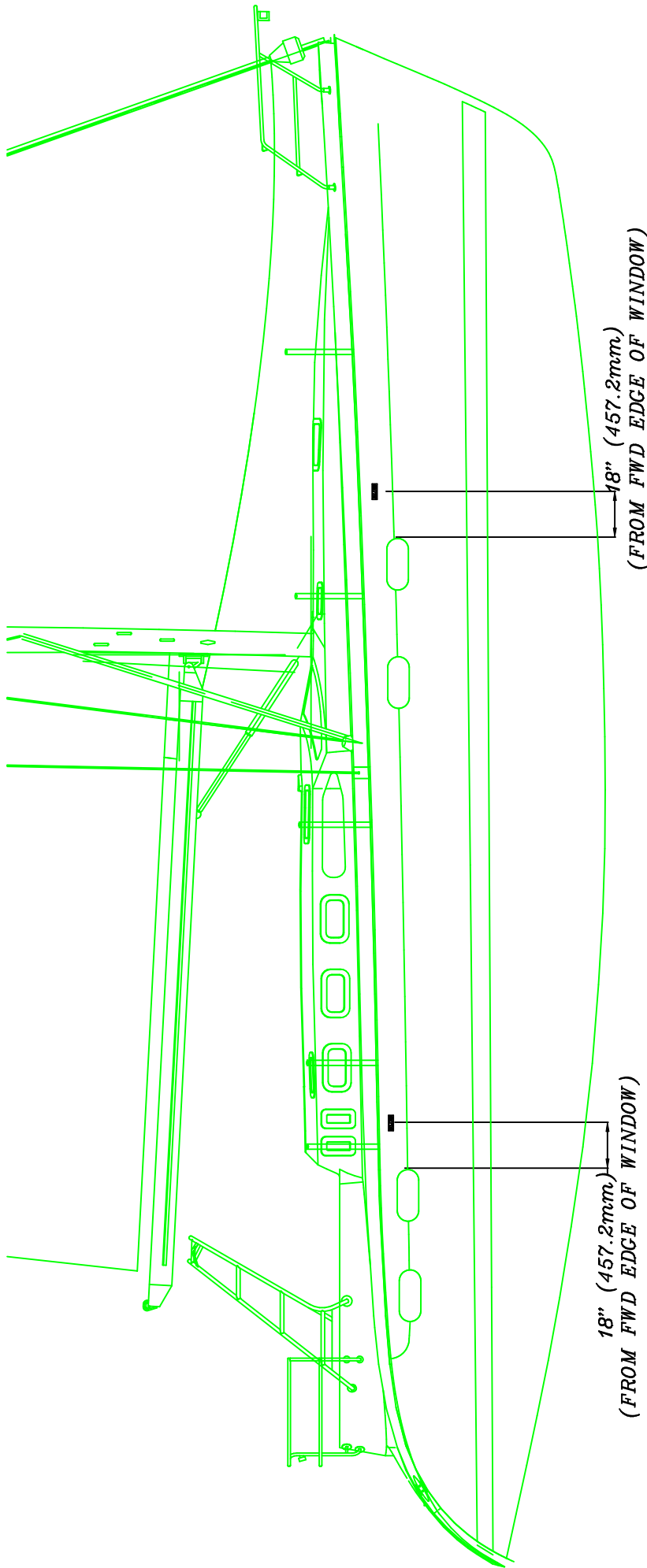
REVISION #	6/27/03						
HUNTER P466 DECK HARDWARE							
	GEN.DESCR.	LOC. & TYPE	VENDOR	MDL/NAME/#	#REQ.	PART #	DWG #
42	CHAIN PLATE	UPPER SHROUD	NEW DESIGN		2	NEW?	
43	CHAIN PLATE	LOWER SHROUD	NEW DESIGN		2	NEW?	4462020A
44	STRUTS	MAST	NEW LENGTH		2	NEW?	4462034A
45	FILL PLATE	DIESEL		PL1126	1	356181	4462037A
46	FILL PLATE	WATER		PL1130	3	356199	
47	FILL PLATE	WASTE		PL1140	2	356217	
48	STEERING CONSOLE	IN COCKPIT	HUNTER	C/O380	1		***
49	WHEEL	WHITEWATER	42"	WHITEWATER	1	310850	
50	STEERING SYSTEM	IN CONSOLE	EDSON	C/O 380	1	311630	
	"	"	"	"	1	311695	
51	SHIFT CONTROL	PEDESTAL		C/O 410	1		N/A
52	QUAD COVER	COCKPIT	C/O 380	GLASS PART	1		***
53	GRABRAIL, AFT CONSOLE	STEERING CONSOLE	C/O 380		1 EA	307130	***
	GRAB HANDLE, CONSOLE	STEERING CONSOLE	C/O 380			305080	***
54	EMERG.TILL ACCESS	IN QUAD COVER		C/O 380	1	300520	
55	MAINSHEET BLOCK	AFT END BOOM	HARKEN			303302	
56	SEA HOOD	FWD OF COMPANIONWAY		NEW DESIGN	1		N/A
57	SLIDING HATCH	COMPANIONWAY		NEW LENGTH	1	P4628	
58	SLIDER STOP	COMPANIONWAY HATCH	HUNTER	STARBOARD	1		
59	SOLAR PANEL	ON SEA HOOD		C/O 410	1	258092	
60	SOLAR PANEL MOUNT PLATE		ON SEA HOOD	GLASS PART	1		4462027A
61	COMPANIONWAY TRACK/SLIDER		HUNTER		1 PR		P4632
62	COMPANIONWAY HANDRAIL	COMPANIONWAY		SOUTHCOAST	PR	307280	
63	STBD GULLWING SEAT	COCKPIT	HUNTER	C/O 380	1	FRP	***
	HINGES	GULLWING		C/O 380	2	314900	***
	EYE STRAP	GULLWING				315590	
64	PORT GULLWING SEAT	COCKPIT	HUNTER	C/O 380	1	FRP	***
	HINGES	GULLWING			2	314900	
	EYE STRAP	GULLWING				315590	
65	EURO HATCH	COCKPIT	HUNTER	C/O 380	1	FRP	***
	EURO HATCH HINGE				2	314900	
	SPRING CLAMP	EURO HATCH		502-2	PR	303800	
	SPRING CLAMP	EURO HATCH		502-1	PR	303790	***
	EYE STRAP	EURO HATCH			2	315590	
66	MANUAL BILGE PUMP	IN COCKPIT	C/O 410	PL0371	1	352185	N/A
67	ARCH	ABOVE COCKPIT	HUNTER	STAINLESS	1		***
68	MAINSHEET TRAVELER TRACK	ON ARCH	HARKEN 516-5	AS ON 450	1		
70	" CONTROL BLOCK	" "	HARKEN 1845	MOUNTED ON CAR	2		
72	FIXED CONTROL BLOCK	MOUNTED ON ARCH	HARKEN 132		2		
73	CLEAT AND BLOCK	PIVOTING EXIT BLOCK	HARKEN 141	PIVOTING BLOCK	2		
74	SHACKLE	5/16" D SHACKLE		INVENTORY	2		
75	TRAVELER CAR	AS PER 450	HARKEN 1928		1		
76	ENGINE PANEL	ON COCKPIT PT. COAMING	YANMAR "C"	C/O 450	1	312130	
77	LIGHT ON CONSOLE	ON ARCH		C/O 380	1		4465007A
78	SPEAKERS	ON COCKPIT CONSOLE		C/O 380	2		
79	HELM SEAT	COCKPIT	HUNTER	C/O 380	1	FRP	***
	HINGES	HELM SEAT		C/O 380	2	314920	
	RUBBER LATCHES	HELM SEAT		C/O 380	2	315430	
	EYE STRAP	HELM SEAT		C/O 380	2	315590	
80	STERN RAIL	STERN		C/O 380	ST	306785	***
81	STERN LIGHT	ON SERN RAIL	C/O 380	EL0389	1	255878	
82	SWIMSEAT LID	STERN	HUNTER	C/O 380	2	FRP	***
	HINGE (SWIMSEAT LOCKER)	STERN		C/O 380	4	314900	
	RUBBER LATCH	SWIMSEATS		C/O 380	2	315430	
83	SWIM LADDER	STERN	WINDLINE	C/O 380	1	303650	4462015A
84	COCKPIT SHOWER	COCKPIT			1	351267	
86	SWIM GRAB HANDLE	STERN		C/O 410	2	307600	N/A
87	LPG LOCKER LID	PORT COCKPIT COAMING	HUNTER	C/O 380	1 SET	FRP	***
	PULL, PROPANE LOCKER	LPG LOCKER			2	315023	***
	STAINLESS, 1/8 x1 304 TRUE BAR			C/O 380	2	705235	***
	EYE STRAP	LPG LOCKER		C/O 380	4	315590	***
88	PORTLIGHT	COCKPIT	LEWMAR		1	300590	***
89	HATCH	HULLSIDE	LEWMAR	HW0074	2	300850	***

REVISION #	6/27/03					
HUNTER P466 DECK HARDWARE						
GEN.DESCR.	LOC. & TYPE	VENDOR	MDL/NAME/#	#REQ.	PART #	DWG #
90	SHORE WATER		PL1175	1	331700	
91	SHORE PWR.	TRANSOM		1	331780	
	"	"		1	331820	
92	RUBRAIL	GUNN'L	BARBOUR	380 STYLE (ROUND	100'	NEW STYLE
93	KEEPER, RUBRAIL	GUNN'L	BARBOUR			NEW STYLE
94	CHEEK BLOCK (JIB SHEET)	AFT OUTBRD CABIN TOP				302760
96	CHAFE GUARD	CABIN HOUSE TOP	HUNTER	SS CHAFE GUARD	2	P4666
97	SS RUB RAIL INSERT	PT & STBD RUBRAIL		SS RUB RAIL		P4653
98	SS VENTED STANCHION	PT & STBD SS VENTED STAN	HUNTER	SAME AS 420		305145
OPTIONAL GEAR (STD MAST)						
SPIN OPTION						
100	WINCH	COCKPIT / SPINN.SHEET	LEWMAR	COAST STD.50ST	2	308640
101	SNATCH BLOCK	MID RAIL	SCHAEFER	11--99	2	303143
102	SPIN BLOCK	AFT RAIL	SCHAEFER	10--15	2	303192
103	SPIN. MAST BLOCK	MAST STEP	RUTGERSON		1	302263
104	PADEYE	ON RAIL AFT OF GATE	SCHAEFER	78-99	2	303740
105	SPINNAKER MAST BLOCK	MAST HEAD	RUTGERSON	600 W/SPRING	1	302263
106	DK ORGANIZER (QUAD)	PORT SIDE AT MAST	HARKEN		2	303307
		REPLACES ONE TRIPLE FROM ITEM 38		(REDUCE #38 TO 2)		
107	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/4	1	304030
		REPLACES ONE TRIPLE FROM ITEM 28				
	SPINNAKER SHEETS					
STAYSAIL OPTION						
108	STAYSAIL MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
109	DK ORGANIZER (QUAD)	STBD SIDE AT MAST	HARKEN		2	303307
		REPLACES ONE TRIPLE FROM ITEM 38		(REDUCE #38 TO 2)		
110	INNER FORESTAY BASE		SCHAEFER		1	NEW
111	STRAP IFS	JUST FWD OF MAST		C/O 450		304270
112	U-BOLT	JUST FWD OF MAST				318030
113	PADEYE	FWD OF MAST	SCHAEFER 78-01		2	303760
114	HALYARD, STAYSAIL	IN MAST		C/O 450		400155??
115	INNER FORESTAY, W/REL LEVER			C/O 450		400185??
116	SHEETS, STAYSAIL			C/O 450		400170
117	TURNBUCKLE			C/O 450		400200
118	SHEET STOPPER	STBD SIDE	SPINLOCK	XT/4	1	304030
		REPLACES ONE TRIPLE FROM ITEM 28				
SPIN & STAYSAIL OPTION						
100	WINCH	COCKPIT / SPINN.SHEET	LEWMAR	COAST STD.50ST	2	308640
101	SNATCH BLOCK	MID RAIL	SCHAEFER	11--99	2	303143
102	SPIN BLOCK	AFT RAIL	SCHAEFER	10--15	2	303192
103	SPIN. MAST BLOCK	MAST STEP	RUTGERSON		1	302263
104	PADEYE	ON RAIL AFT OF GATE	SCHAEFER	78-99	2	303740
105	SPINNAKER MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
106	DK ORGANIZER (QUAD)	PORT & STBD	HARKEN		4	303307
		REPLACES ITEM 38				
107	SHEET STOPPER	PORT & STBD	SPINLOCK	XT/4	2	304030
		REPLACES ITEM 28				
108	STAYSAIL MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
110	INNER FORESTAY BASE		SCHAEFER		1	NEW
111	STRAP IFS	JUST FWD OF MAST		C/O 450		304270
112	U-BOLT	JUST FWD OF MAST				318030
113	PADEYE	FWD OF MAST	SCHAEFER 78-01			303760
114	HALYARD, STAYSAIL	IN MAST	7/16 X 107'???????	C/O 450		400155??
115	INNER FORESTAY, W/REL LEVER		1x19 x44'?????	C/O 450		400185??
116	SHEETS, STAYSAIL		7/16x40'	C/O 450		400170
117	TURNBUCKLE		1/4" T-BOLT W/TO	C/O 450		400200
OPTIONAL GEAR (FURLING MAST)						
FURLING, NO SPIN OR STAYSAIL						
125	DK ORGANIZER (QUAD)	PORT SIDE AT MAST	HARKEN		2	303307
		REPLACES ONE TRIPLE FROM ITEM 38		(REDUCE #38 TO 2)		
126	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/4	1	304030
		REPLACES ONE TRIPLE FROM ITEM 28				

REVISION #	6/27/03					
HUNTER P466 DECK HARDWARE						
GEN.DESCR.	LOC. & TYPE	VENDOR	MDL/NAME/#	#REQ.	PART #	DWG #
SPIN OPTION						
100	WINCH	COCKPIT / SPINN.SHEET	LEWMAR	COAST STD.50ST	2	308640
101	SNATCH BLOCK	MID RAIL	SCHAEFER	11--99	2	303143
102	SPIN BLOCK	AFT RAIL	SCHAEFER	10--15	2	303192
103	SPIN. MAST BLOCK	MAST STEP	RUTGERSON		1	302263
104	PADEYE	ON RAIL AFT OF GATE	SCHAEFER	78-99	2	303740
105	SPINNAKER MAST BLOCK	MAST HEAD	RUTGERSON	600 W/SPRING	1	302263
127	ORGANIZER, 3DECK STACK	PORT SIDE AT MAST	HARKEN	1503	2	303370
		REPLACES ONE TRIPLE FROM ITEM 38		(REDUCE #38 TO 2)		
107	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/4	1	304030
		REPLACES ONE TRIPLE FROM ITEM 28				
128	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/1	1	???
STAYSAIL OPTION						
85	PADEYE	ON RAIL AMIDSHIPS	SCHAEFER	78-99	2	303775
108	STAYSAIL MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
109	DK ORGANIZER (QUAD)	PORT & STBD AT MAST	HARKEN		4	303307
		REPLACES ITEM 38				
110	INNER FORESTAY BASE		SCHAEFER		2	NEW
111	STRAP IFS	JUST FWD OF MAST		C/O 450		304270
112	U-BOLT	JUST FWD OF MAST				318030
113	PADEYE	FWD OF MAST	SCHAEFER 78-01			303760
114	HALYARD, STAYSAIL	IN MAST	7/16 X 107'???????	C/O 450		400155??
115	INNER FORESTAY, W/REL LEVER		1x19 x44'?????	C/O 450		400185??
116	SHEETS, STAYSAIL		7/16x40'	C/O 450		400170
117	TURNBUCKLE		1/4" T-BOLT W/TOK	C/O 450		400200
118	SHEET STOPPER	STBD SIDE	SPINLOCK	XT/4	2	304030
		REPLACES ITEM 28				
SPIN & STAYSAIL OPTION						
100	WINCH	COCKPIT / SPINN.SHEET	LEWMAR	COAST STD.50ST	2	308640
101	SNATCH BLOCK	MID RAIL	SCHAEFER	11--99	2	303143
102	SPIN BLOCK	AFT RAIL	SCHAEFER	10--15	2	303192
103	SPIN. MAST BLOCK	MAST HEAD	RUTGERSON		1	302263
104	PADEYE	ON RAIL AFT OF GATE	SCHAEFER	78-99	4	303740
105	SPINNAKER MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
127	ORGANIZER, 3DECK STACK	PORT SIDE AT MAST	HARKEN	1503	2	303370
		REPLACES ONE TRIPLE FROM ITEM 38		(REDUCE #38 TO 2)		
107	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/4	1	304030
		REPLACES ONE TRIPLE FROM ITEM 28				
128	SHEET STOPPER	PORT SIDE	SPINLOCK	XT/1	1	???
108	STAYSAIL MAST BLOCK	MAST STEP	RUTGERSON	600 W/SPRING	1	302263
109	DK ORGANIZER (QUAD)	PORT & STBD AT MAST	HARKEN		4	303307
		REPLACES ITEM 38				
110	INNER FORESTAY BASE		SCHAEFER		1	NEW
111	STRAP IFS	JUST FWD OF MAST		C/O 450		304270
112	0	JUST FWD OF MAST				318030
113	PADEYE	FWD OF MAST	SCHAEFER 78-01		2	303760
114	HALYARD, STAYSAIL	IN MAST	7/16 X 107'???????	C/O 450		400155??
115	INNER FORESTAY, W/REL LEVER		1x19 x44'?????	C/O 450		400185??
116	SHEETS, STAYSAIL		7/16x40'	C/O 450		400170
117	TURNBUCKLE		1/4" T-BOLT W/TOK	C/O 450		400200
118	SHEET STOPPER	STBD SIDE	SPINLOCK	XT/4	2	304030
		REPLACES ONE ITEM 28				

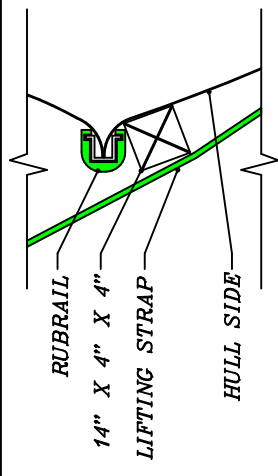
IMPORTANT

NOTE: BE AWARE OF THE STAINLESS STEEL RUB RAIL INSERT WHEN LIFTING THE BOAT.



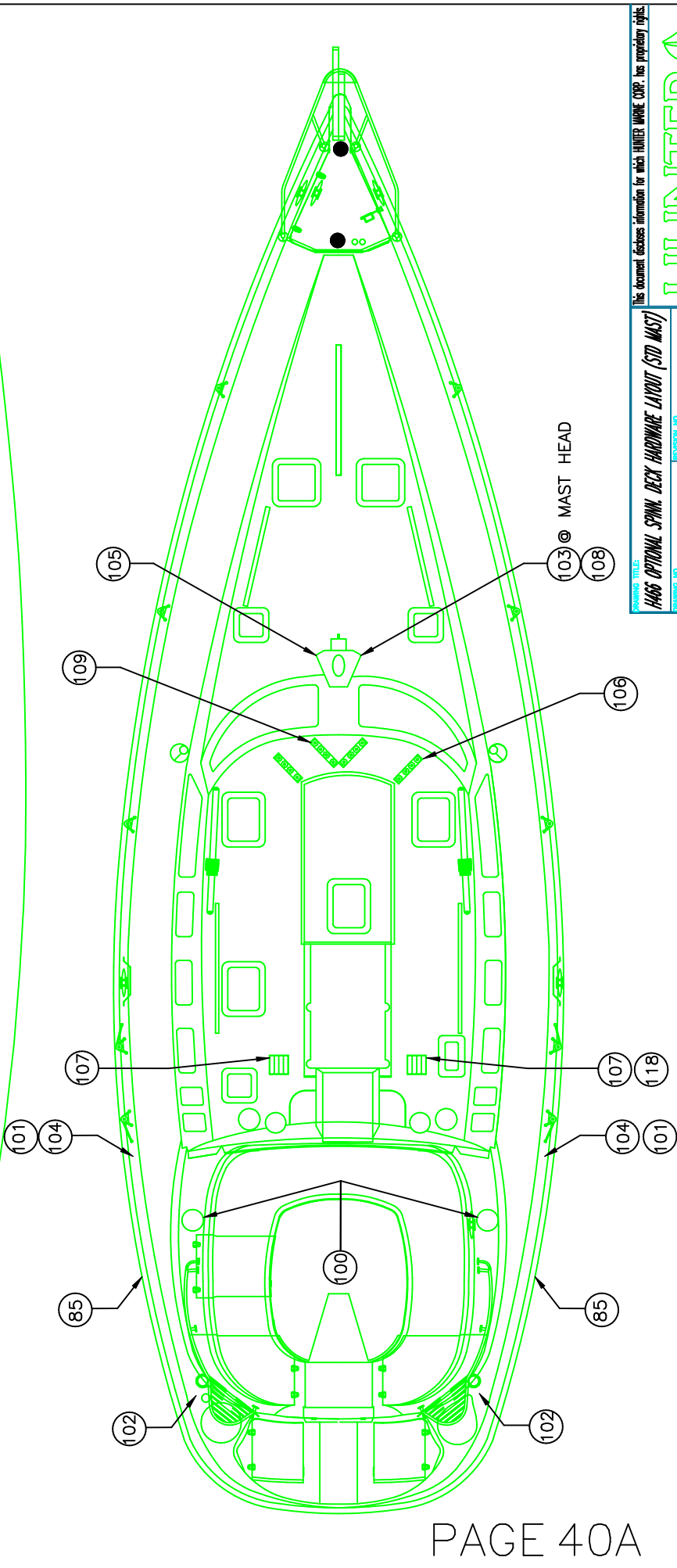
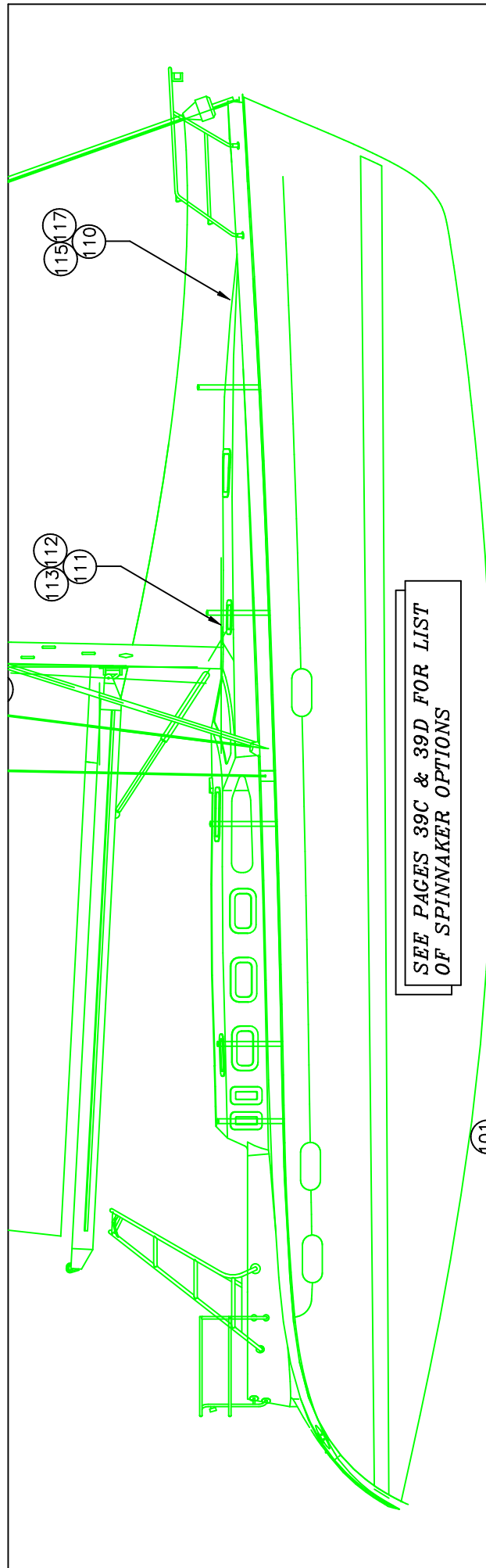
18" (457.2mm)
(FROM FWD EDGE OF WINDOW)

18" (457.2mm)
(FROM FWD EDGE OF WINDOW)



RUBRAIL
14" X 4" X 4"
LIFTING STRAP
HULL SIDE

NOTE: TO AVOID DAMAGING THE RUBRAIL WHEN LIFTING THE BOAT, A 14" X 4" X 4" WOOD STRAP SHOULD BE PLACED IN BETWEEN THE LIFTING STRAP AND THE HULL, JUST BELOW THE RUBRAIL

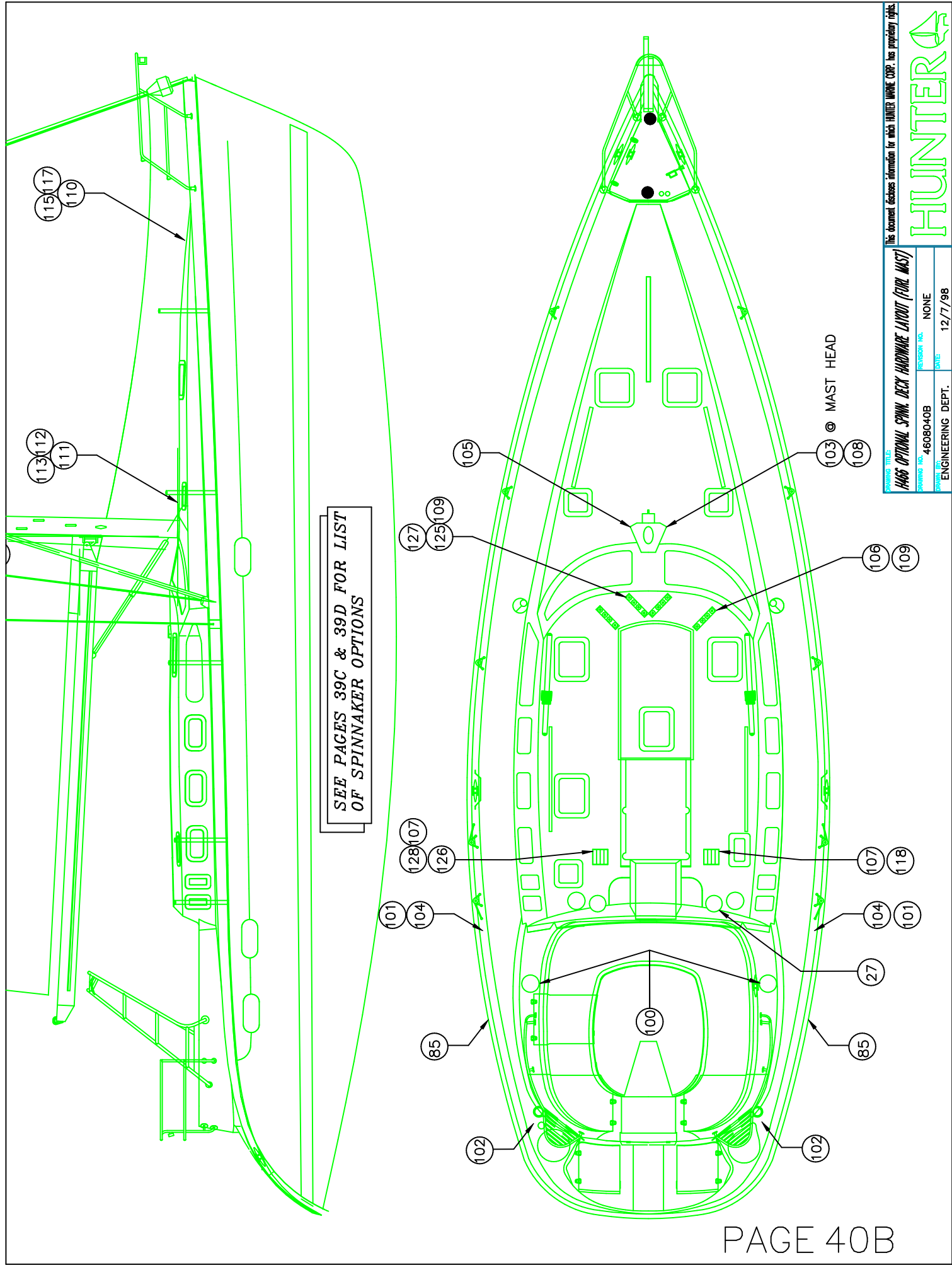


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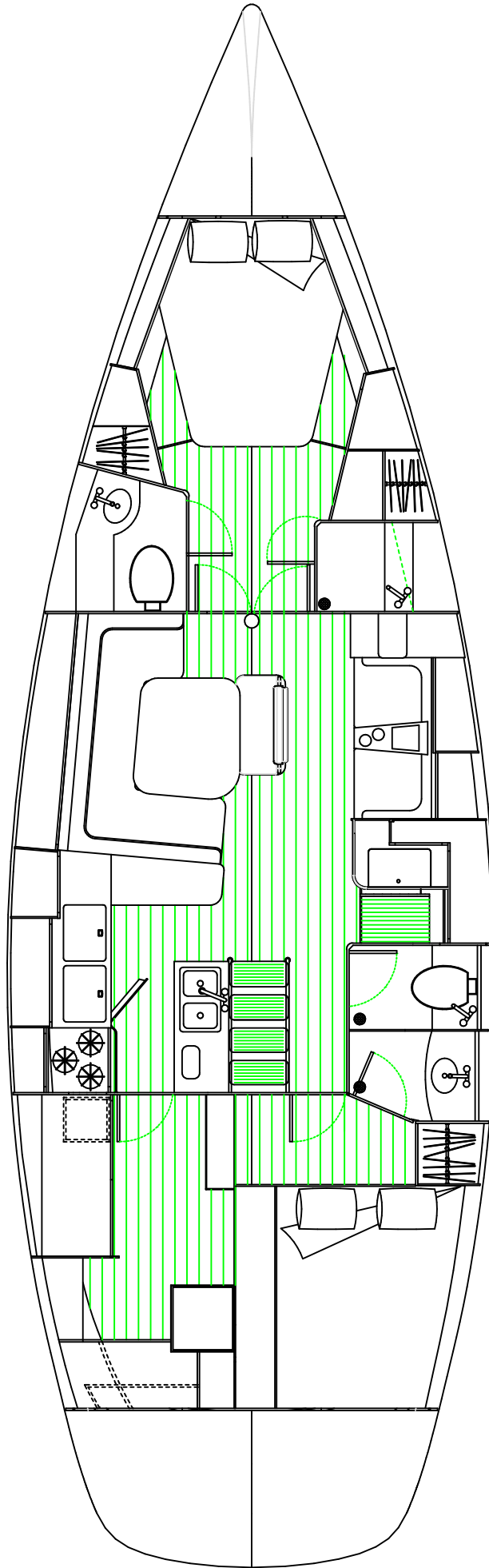
PROJECT FILE:	4608040A	REVISION NO.:	NONE
DATE:	12/7/98	ENGINEERING DEPT.:	

HAGG OPTIONAL SPINNAKER DECK HARDWARE LAYOUT (STD MAST)



PROJECT FILE: H466 OPTIONAL SPINN DECK HARDWARE LAYOUT (FOR MAST)	
DESIGN NO.: 4608040B	DATE: NONE
ENGINEERING DEPT.: ENGINEERING DEPT.	DATE: 12/7/98

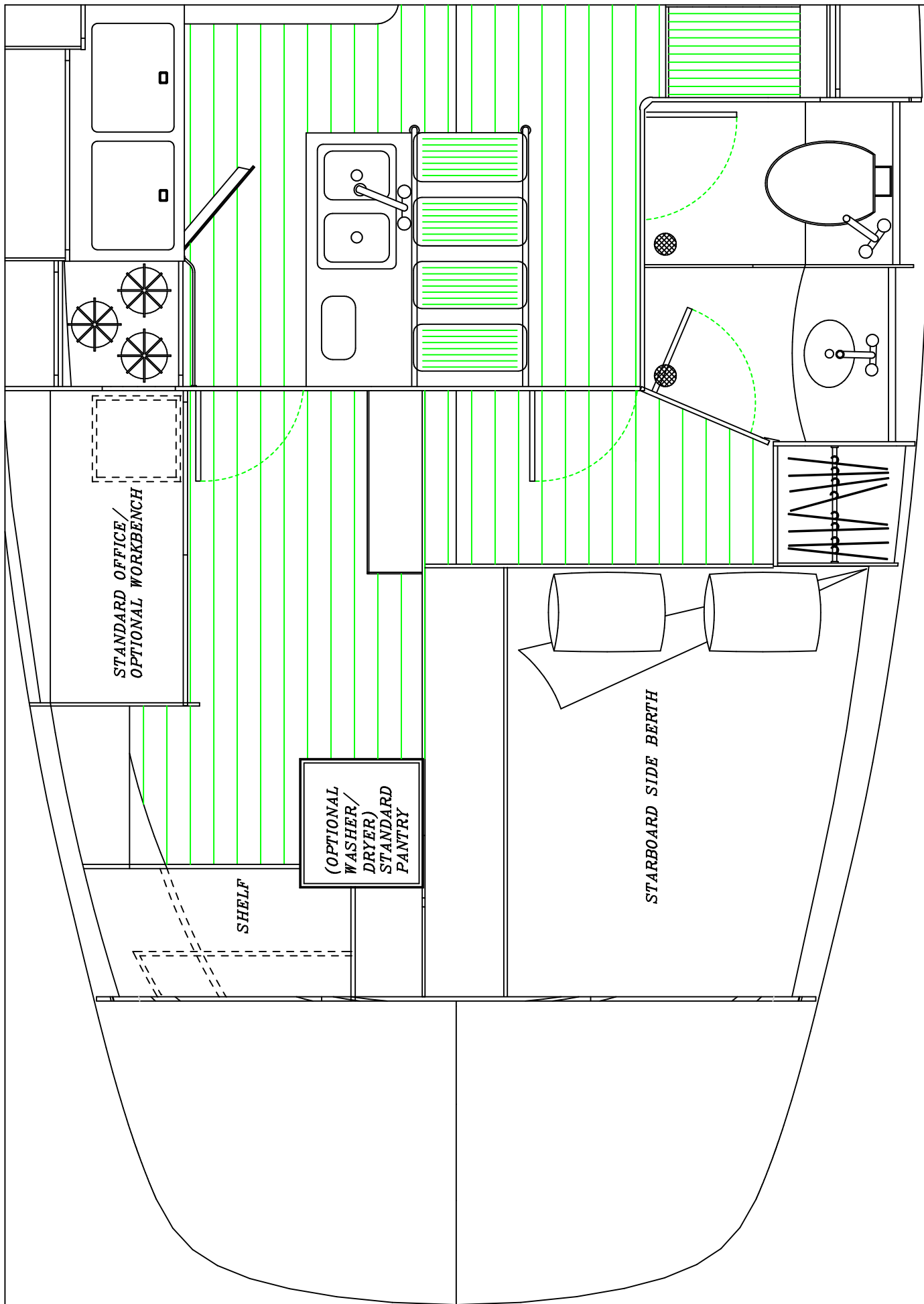
466 STANDARD INTERIOR



This document discloses information for which HUNTER MARINE CORP. has proprietary rights.



466 STANDARD CABIN INTERIOR LAYOUT			
REVISED TITLE	4608041A	REVISION NO.	NONE
DESIGNED BY		DATE	11/12/98
ENGINEERING DEPT.			

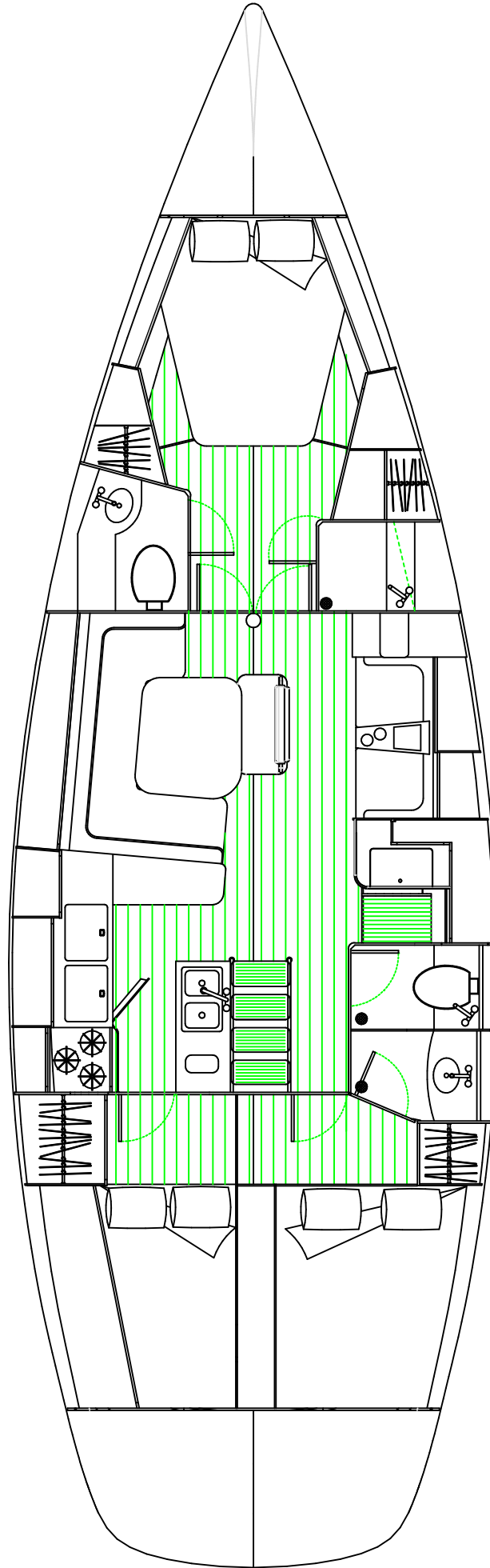


PROPOSED TITLE: **466 STANDARD CABIN OPTIONAL LAYOUT**
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DESIGN NO.	4608041B	REVISION NO.	NONE
DATE	11/12/98	ENGINEERING DEPT.	



466 TRI CABIN OPTION INTERIOR

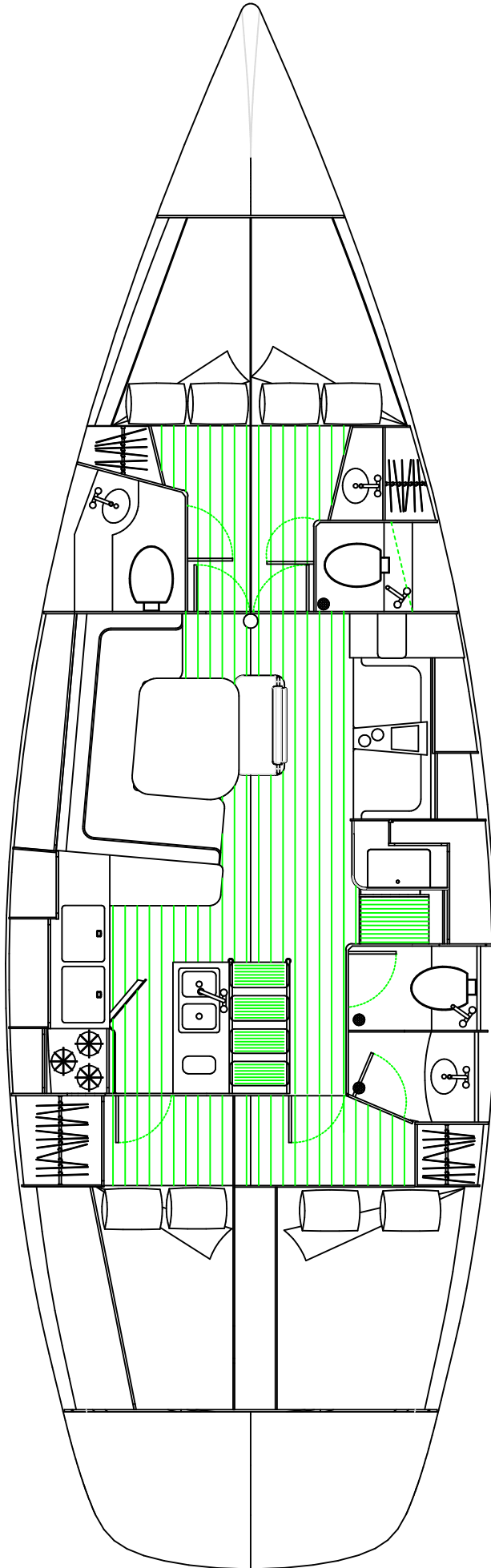


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466 TRI CABIN (OPT) INTERIOR LAYOUT			
REVISED BY:	4608041C	REVISION NO.	NONE
DESIGNED BY:		DATE:	11/12/98
ENGINEERING DEPT.			

466 QUAD CABIN OPTION INTERIOR



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466 QUAD CABIN INTERIOR LAYOUT

DESIGN NO.	4608041D	REVISION NO.	NONE
DATE	11/12/98	ENGINEERING DEPT.	

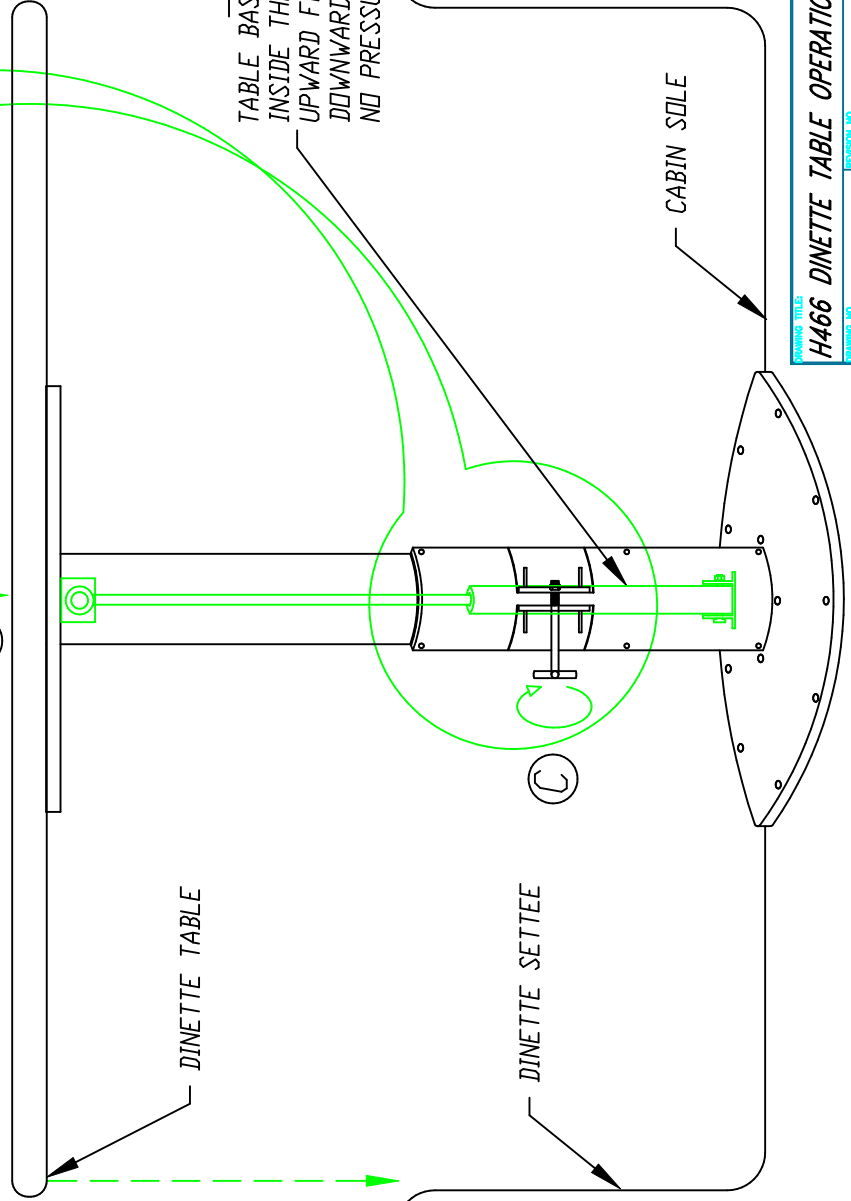
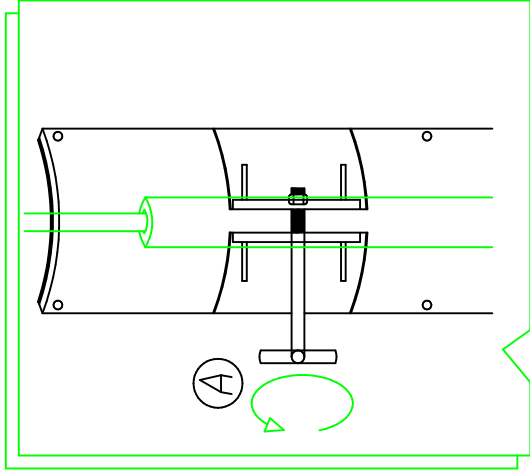


EXAMPLE: TO LOWER

- Ⓐ LOOSEN CLAMP WITH COUNTER CLOCKWISE MOTION
- Ⓑ AT THE CENTER OF THE TABLE, APPLY DOWNWARD PRESSURE UNTIL THE TABLE REACHES THE DESIRED HEIGHT.
- Ⓒ CONTINUE APPLYING PRESSURE WHILE RE-TIGHTENING THE CLAMP IN A CLOCKWISE MOTION
- Ⓓ SEE NOTE BELOW BEFORE ADJUSTING.

TO RAISE:

- A. LOOSEN CLAMP
- B. TABLE RAISES AUTOMATICALLY.
- C. RE-TIGHTEN THE CLAMP



Ⓓ

NOTE:

TABLE BASE FITTED WITH "GAS SHOCK"
INSIDE THAT CONSTANTLY APPLIES AN
UPWARD FORCE. TO LOWER, APPLY
DOWNWARD PRESSURE. TO RAISE,
NO PRESSURE OR LIFTING IS NEEDED.

REVISED TITLE
H466 DINETTE TABLE OPERATION

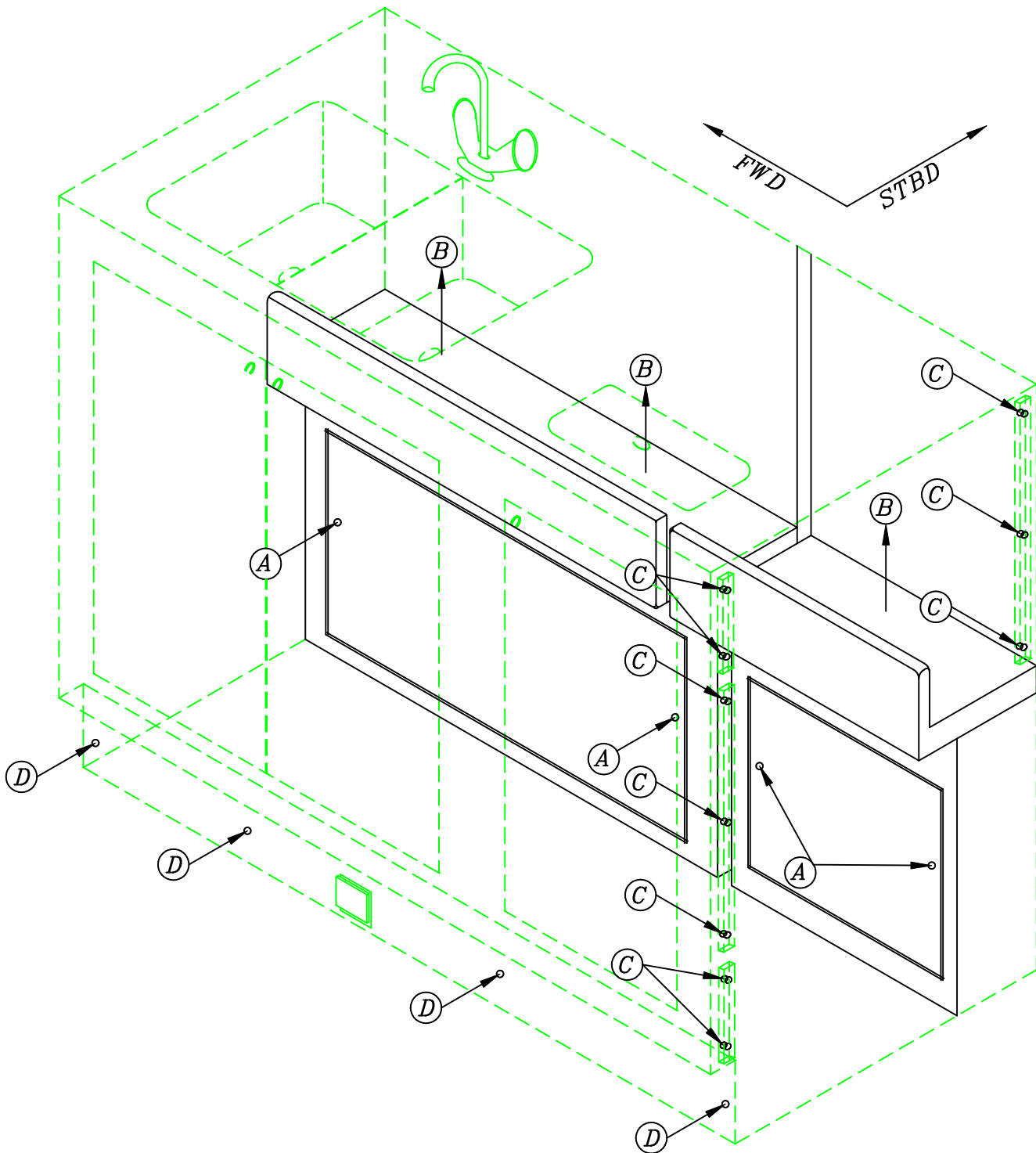
REVISED NO. 4608041E

REVISED DATE 11/12/98

ENGINEERING DEPT.

HUNTERA

This document discusses information for which HUNTER WARRIOR CORP. has proprietary rights.

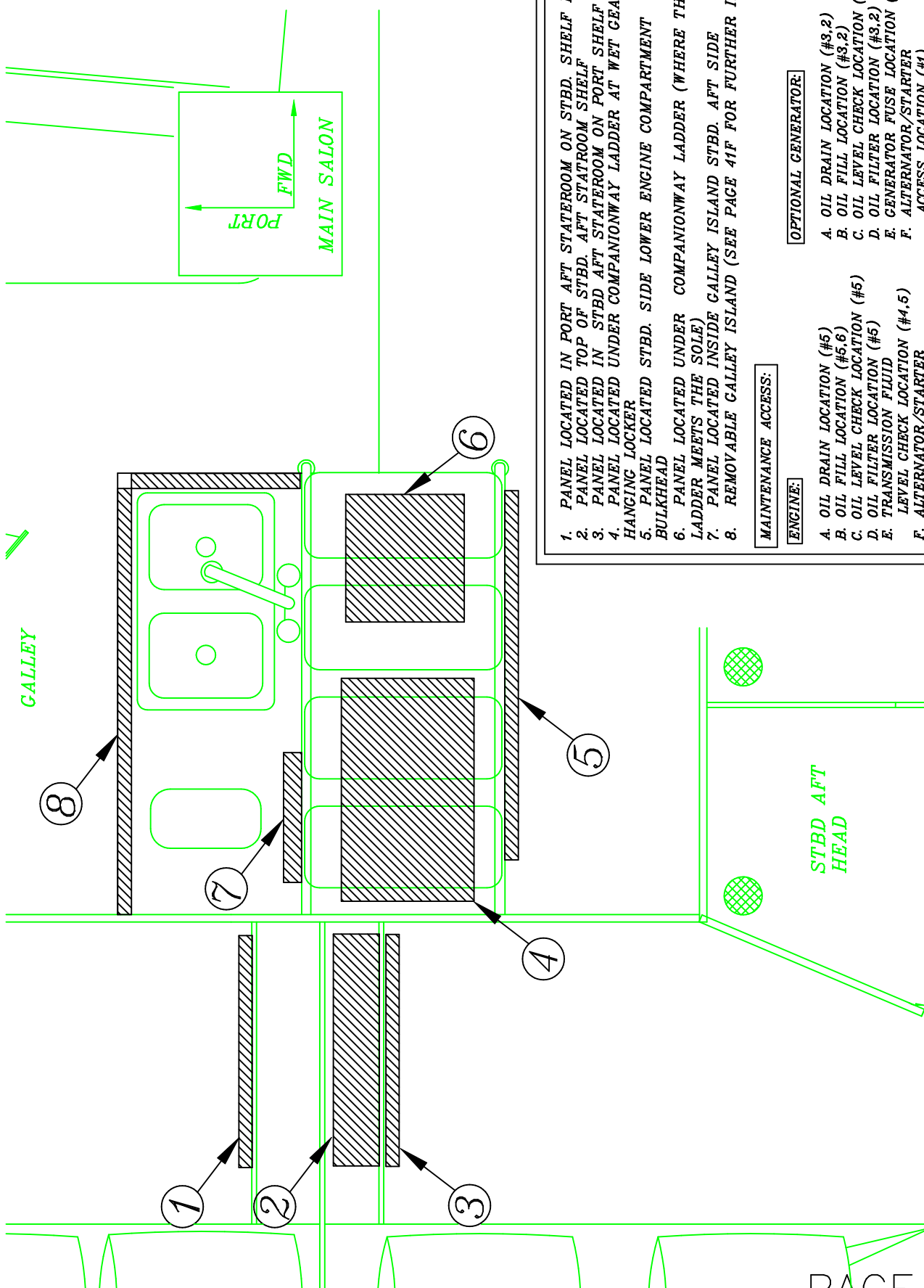


TO ACCESS ENGINE COMPARTMENT THRU GALLEY:

THIS IS POSSIBLE BY TWO WAYS.

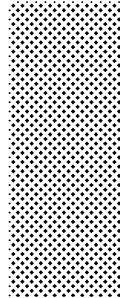
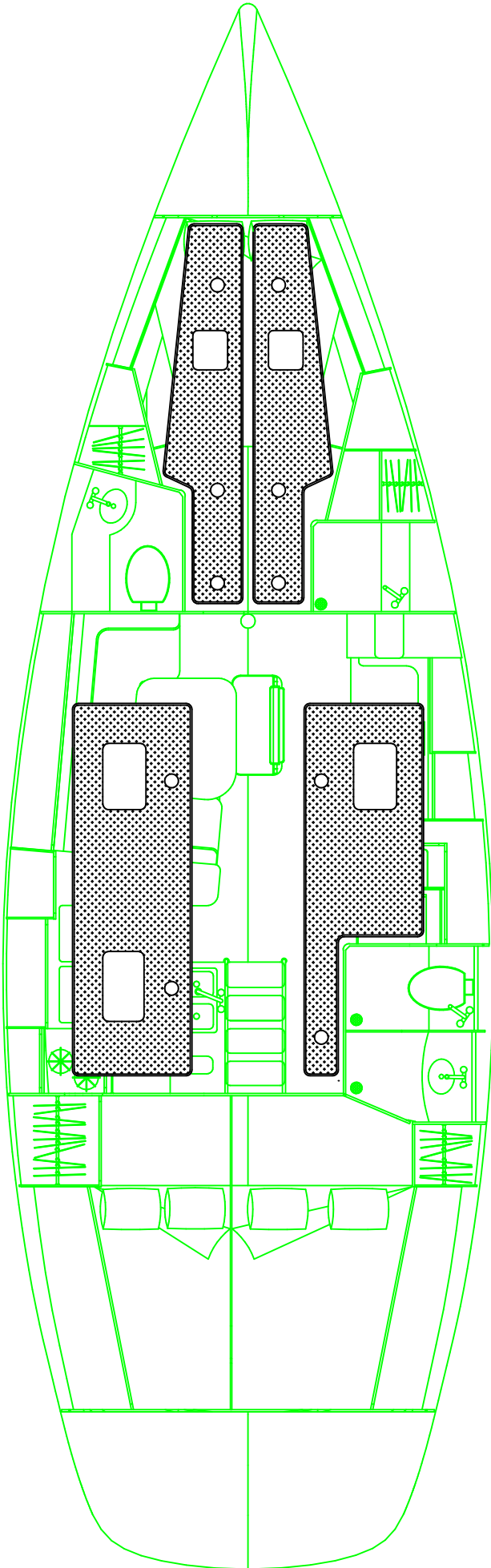
1. REMOVE LOWER CABINET FACE ACCESS PANELS FASTENERS (A) . (AND /OR) LIFT UP AND REMOVE CABINET SHELIVING (B). THIS WILL PROVIDE ACCESS TO THE ENGINE BEHIND THE GALLEY.

2. REMOVE THE BATTENS INSIDE THE CABINET (C) . THEY ARE LOCATED AT AFT OF THE UNIT. (ONE PIECE TO THE STBD, AND THREE PIECES TO THE PORT) ALSO REMOVE THE FASTENERS LOCATED ON THE INBOARD FACE OF THE GALLEY TOE KICK (D) . AT THIS POINT THE WHOLE GALLEY UNIT SHOULD NOW PIVOT TO THE PORT, ON THE TOE KICK, PROVIDING ACCESS TO THE ENGINE.



1. PANEL LOCATED IN PORT AFT STATEROOM ON STBD. SHELF FACE.
 2. PANEL LOCATED TOP OF STBD. AFT STATEROOM SHELF
 3. PANEL LOCATED IN STBD AFT STATEROOM ON PORT SHELF FACE
 4. PANEL LOCATED UNDER COMPANIONWAY LADDER AT WET GEAR HANGING LOCKER
 5. PANEL LOCATED STBD. SIDE LOWER ENGINE COMPARTMENT BULKHEAD
 6. PANEL LOCATED UNDER COMPANIONWAY LADDER (WHERE THE LADDER MEETS THE SOLE)
 7. PANEL LOCATED INSIDE GALLEY ISLAND STBD. AFT SIDE
 8. REMOVABLE GALLEY ISLAND (SEE PAGE 41F FOR FURTHER INFO)
- MAINTENANCE ACCESS:**
- ENGINE:**
- A. OIL DRAIN LOCATION (#5)
 - B. OIL FILL LOCATION (#5,6)
 - C. OIL LEVEL CHECK LOCATION (#5)
 - D. OIL FILTER LOCATION (#5)
 - E. TRANSMISSION FLUID LEVEL CHECK LOCATION (#4.5)
 - F. ALTERNATOR/STARTER ACCESS LOCATION (#7.8)
 - G. FAN BELT(S) (#4.5)
- OPTIONAL GENERATOR:**
- A. OIL DRAIN LOCATION (#3.2)
 - B. OIL FILL LOCATION (#3.2)
 - C. OIL LEVEL CHECK LOCATION (#3.2)
 - D. OIL FILTER LOCATION (#3.2)
 - E. GENERATOR FUSE LOCATION (#1)
 - F. ALTERNATOR/STARTER ACCESS LOCATION (#1)
 - G. FAN BELT(S) (#1.2)





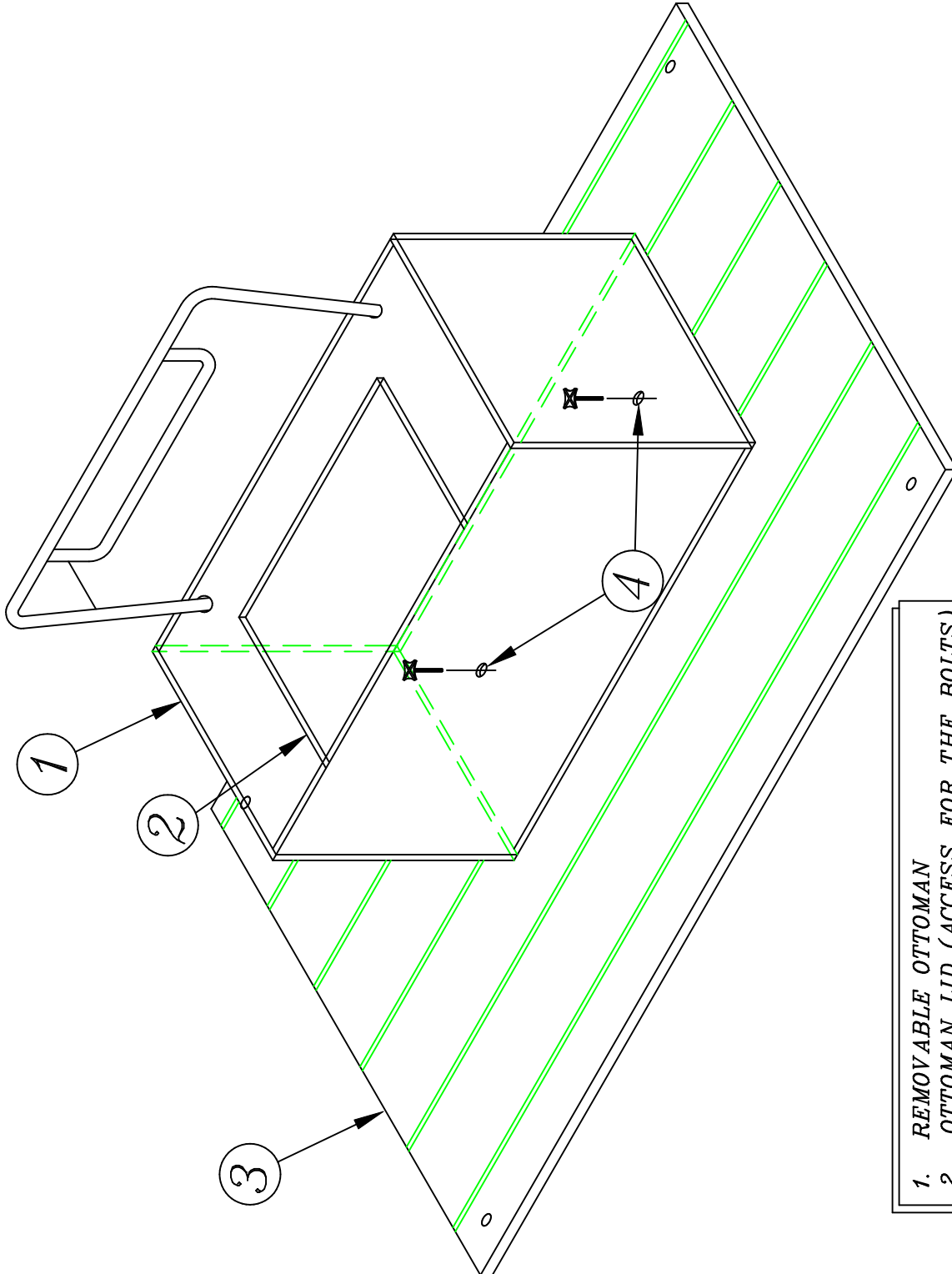
LOCATION OF "SOFT" HEADLINER ACCESS PANELS.

SEE "WHISPER" INSERT IN OWNERS MANUAL FOR FURTHER INSTRUCTIONS

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466 SOFT HEADLINER ACCESS PANEL LOCATIONS			
FORM NO.	4608041H	REVISION NO.	NONE
DATE		DATE	3/1/99
ENGINEERING DEPT.			

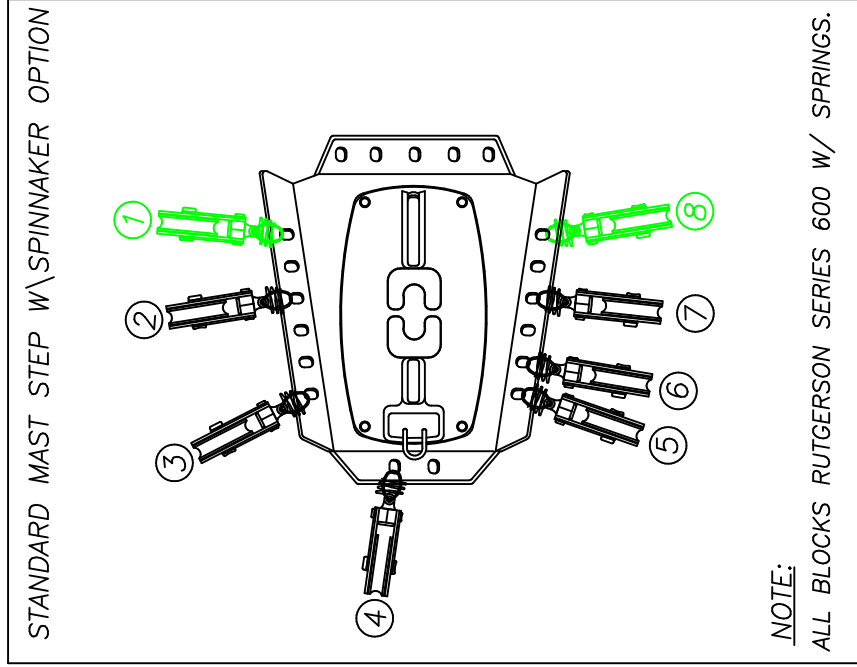
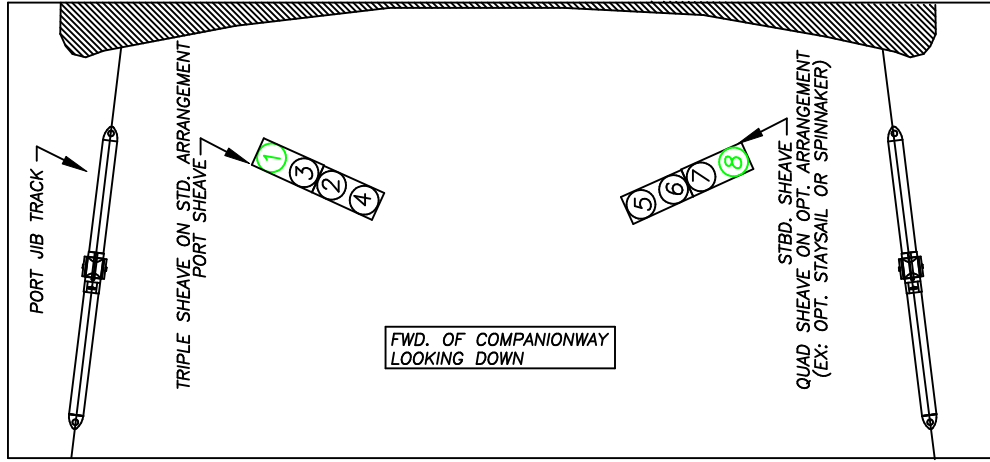
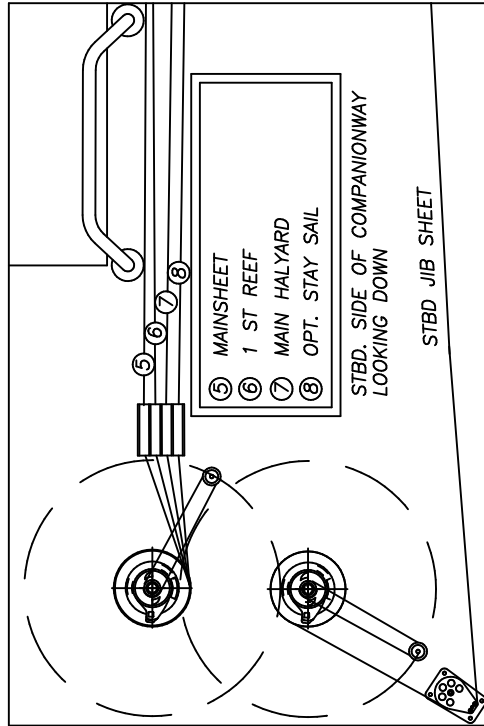
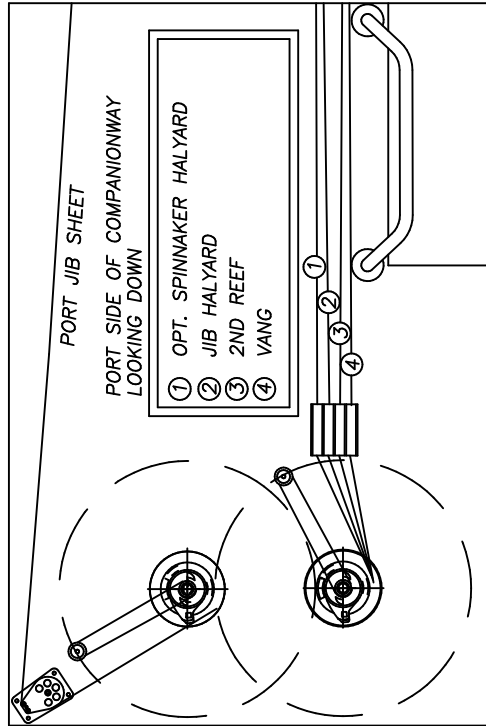


1. REMOVABLE OTTOMAN
2. OTTOMAN LID (ACCESS FOR THE BOLTS)
3. FLOOR BOARD SECTION
(SECURED IN THE FOUR CORNERS)
4. OTTOMAN SECURING BOLTS

NOTE: BE SURE THE OTTOMAN IS TIGHTLY SECURED AT ALL TIMES. THERE EXISTS A POSSIBILITY OF INJURY IF IT IS NOT.



SELDEN STANDARD MAST STEP



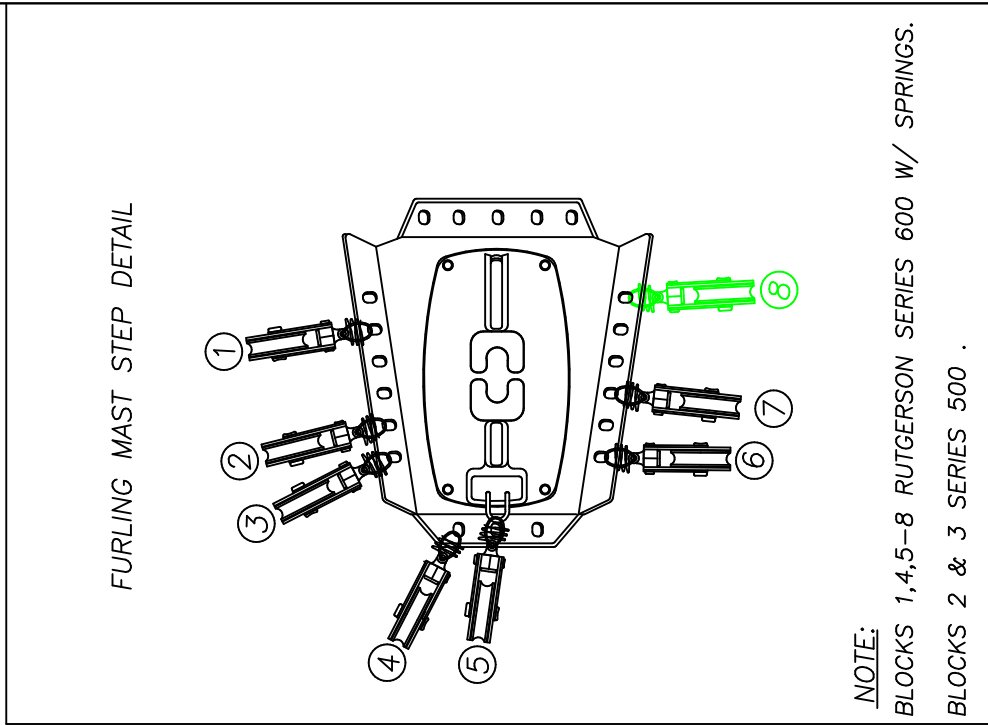
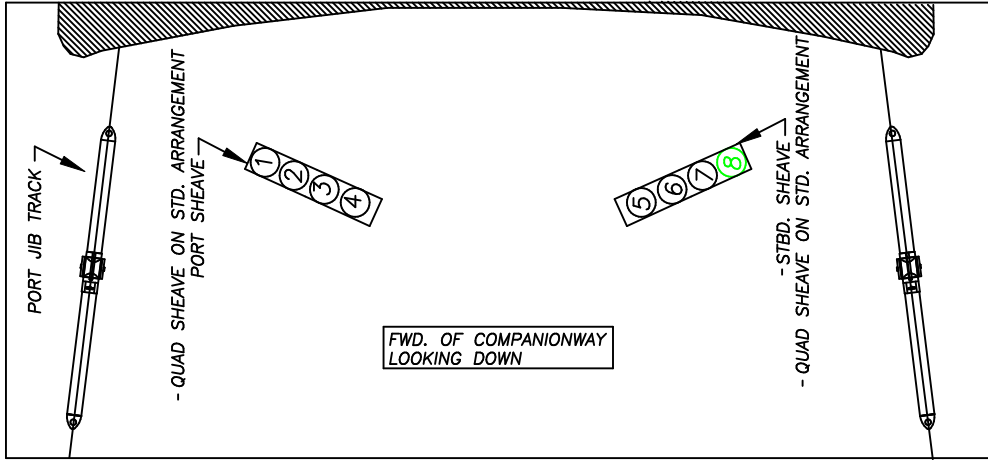
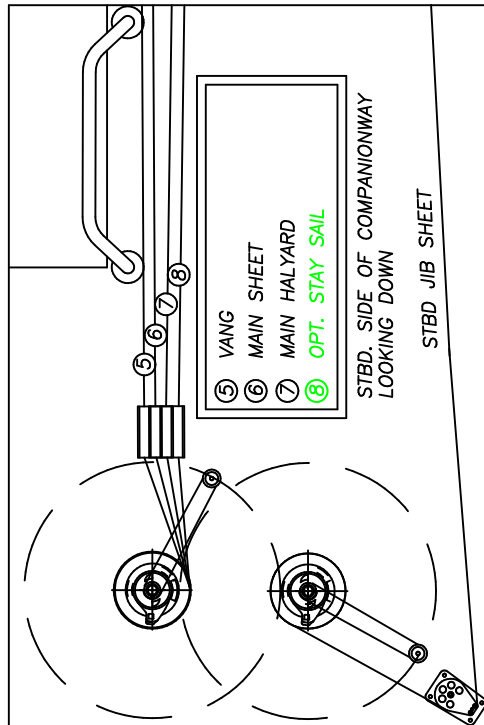
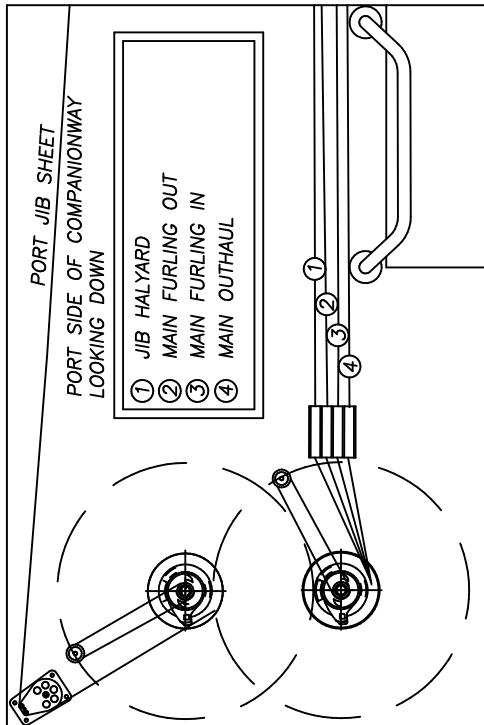
NOTE:
ALL BLOCKS RUTGERSON SERIES 600 W/ SPRINGS.

PROJ. FILE: H466 STANDARD RUN. RIG & MAST STEP DETAIL
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DESIGN NO. 4608042A-1	REV. NONE
DATE 11/12/98	ENGINEERING DEPT.

HUNTER

SELDEN FURLIN' MAST STEP LAYOUT
WITHOUT SPINNAKER OPTION



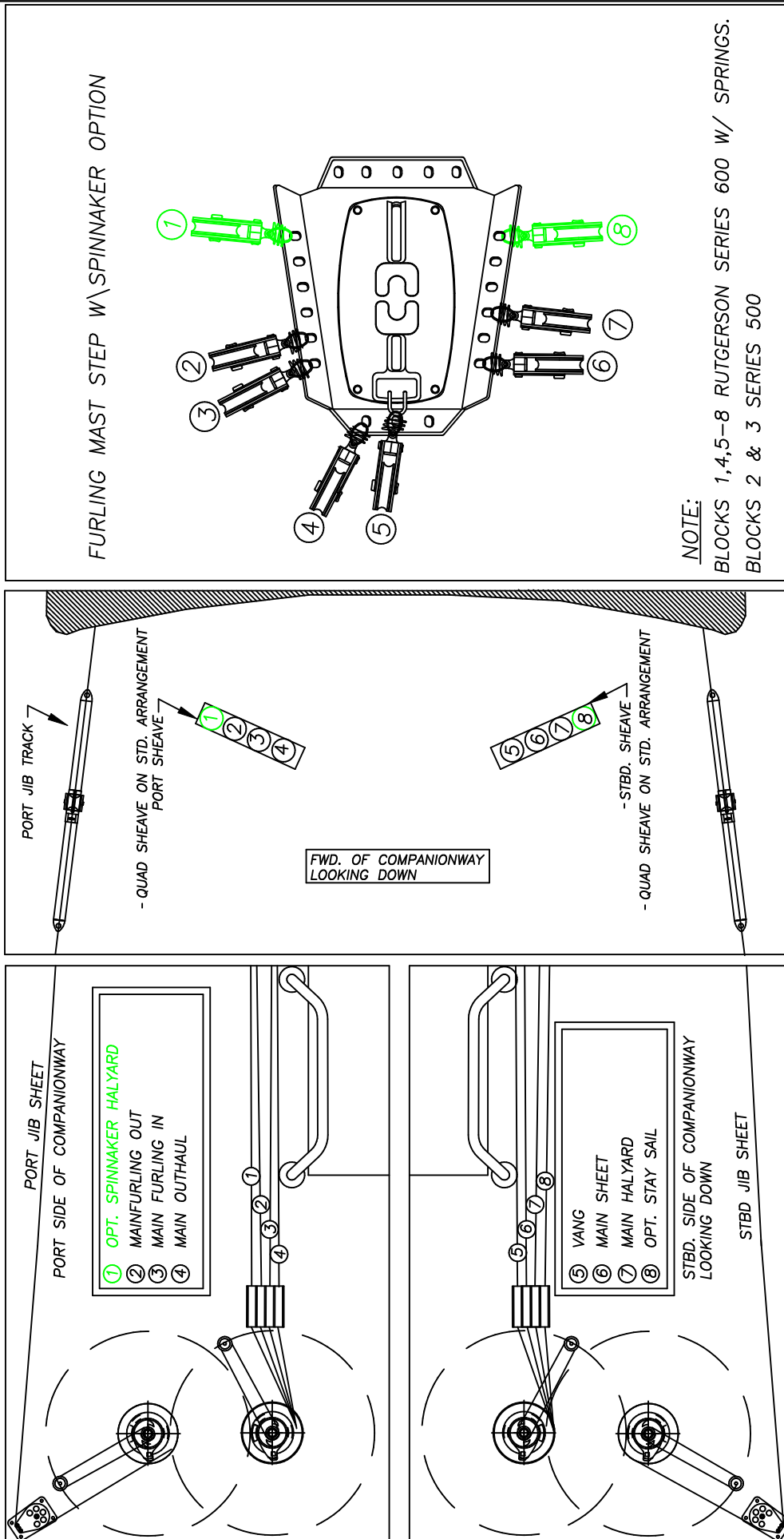
PROJ. FILE: H466 FURL. RUN. RIG & MAST STEP DETAIL (#1)

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DATE	11/12/98	
ENGINEERING DEPT.		

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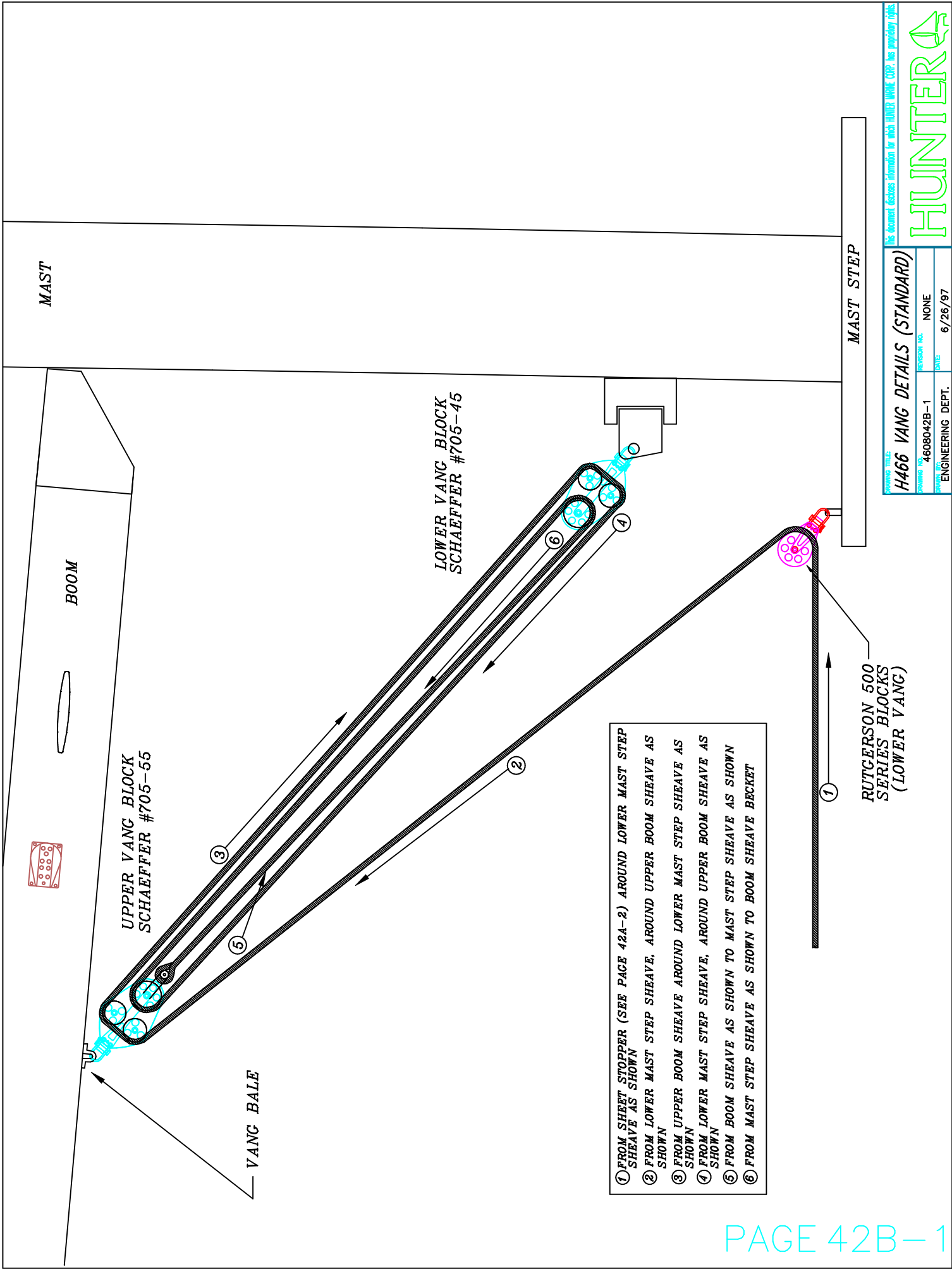
SELDEN FURLIN' MAST STEP LAYOUT WITH SPINNAKER OPTION



NOTE:
ON FURLING MASTS, WHEN AN OPTIONAL SPINNAKER IS PRESENT, THE JIB HALYARD IS "LOCKED OFF",
AND THE TAIL END OF THE HALYARD IS STOWED IN THE HOLE ON THE LOWER PORT SIDE OF THE
MAST.

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HUNTER	
H466 FURL. RUN. RIG & MAST STEP DETAIL (#2)	
DRAWING NO. 4608042A-3	NONE
ENGINEERING DEPT.	DATE 3/24/99



- ① FROM SHEET STOPPER (SEE PAGE 42A-2) AROUND LOWER MAST STEP SHEAVE AS SHOWN
- ② FROM LOWER MAST STEP SHEAVE, AROUND UPPER BOOM SHEAVE AS SHOWN
- ③ FROM UPPER BOOM SHEAVE AROUND LOWER MAST STEP SHEAVE AS SHOWN
- ④ FROM LOWER MAST STEP SHEAVE, AROUND UPPER BOOM SHEAVE AS SHOWN
- ⑤ FROM BOOM SHEAVE AS SHOWN TO MAST STEP SHEAVE AS SHOWN
- ⑥ FROM MAST STEP SHEAVE AS SHOWN TO BOOM SHEAVE BECKET

RUTGERSON 500
SERIES BLOCKS
(LOWER VANG)

MAST

BOOM

UPPER VANG BLOCK
SCHAEFFER #705-55

LOWER VANG BLOCK
SCHAEFFER #705-45

VANG BALE

MAST STEP

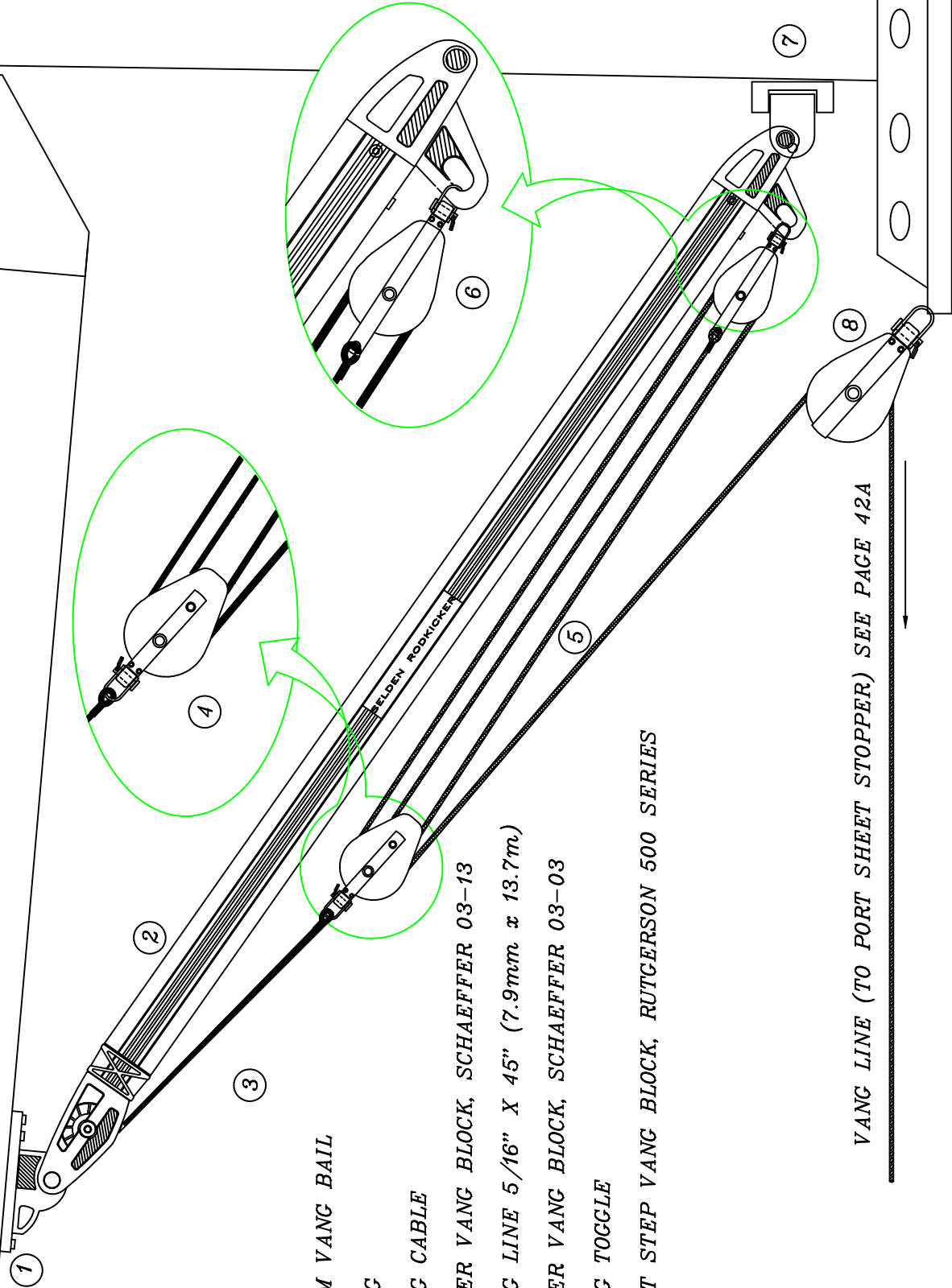
FOR MORE INFO:
H466 VANG DETAILS (STANDARD)
ISSUANCE NO. 4608042B-1 REVISION NO. NONE DATE 6/28/97
ENGINEERING DEPT.



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MAST

BOOM



- ① BOOM VANG BAIL
- ② VANG CABLE
- ③ VANG CABLE
- ④ UPPER VANG BLOCK, SCHAEFFER 03-13
- ⑤ VANG LINE 5/16" X 45" (7.9mm x 13.7m)
- ⑥ LOWER VANG BLOCK, SCHAEFFER 03-03
- ⑦ VANG TOGGLE
- ⑧ MAST STEP VANG BLOCK, RUTGERSON 500 SERIES

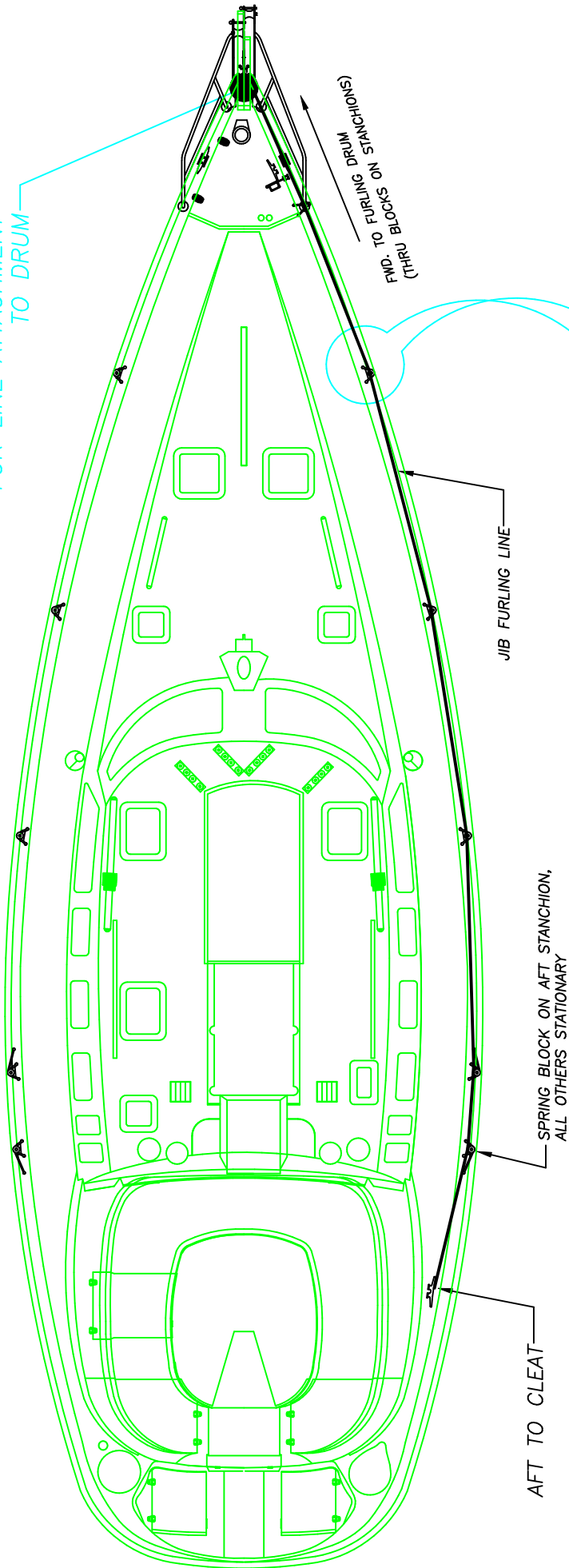
VANG LINE (TO PORT SHEET STOPPER) SEE PAGE 42A

H466 RIGID VANG DETAILS (FURLING/OPT.)
 4608042B-2
 NONE
 11/12/98
 ENGINEERING DEPT.

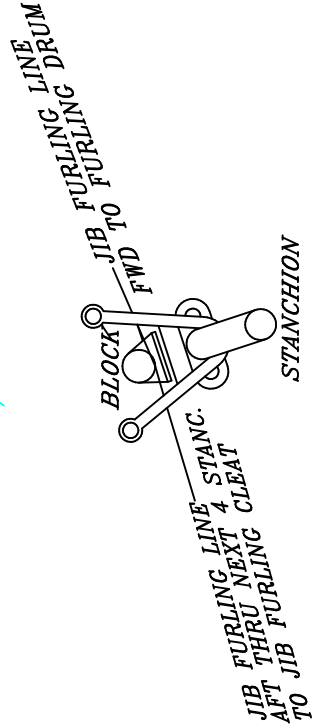
HUNTER
 For document feedback information for each HUNTER HUNTER GROUP, see page 42A

JIB FURLING SYSTEM

SEE FURLING MANUAL
FOR LINE ATTACHMENT
TO DRUM



FURLING BLOCK/ STANCHION DETAIL



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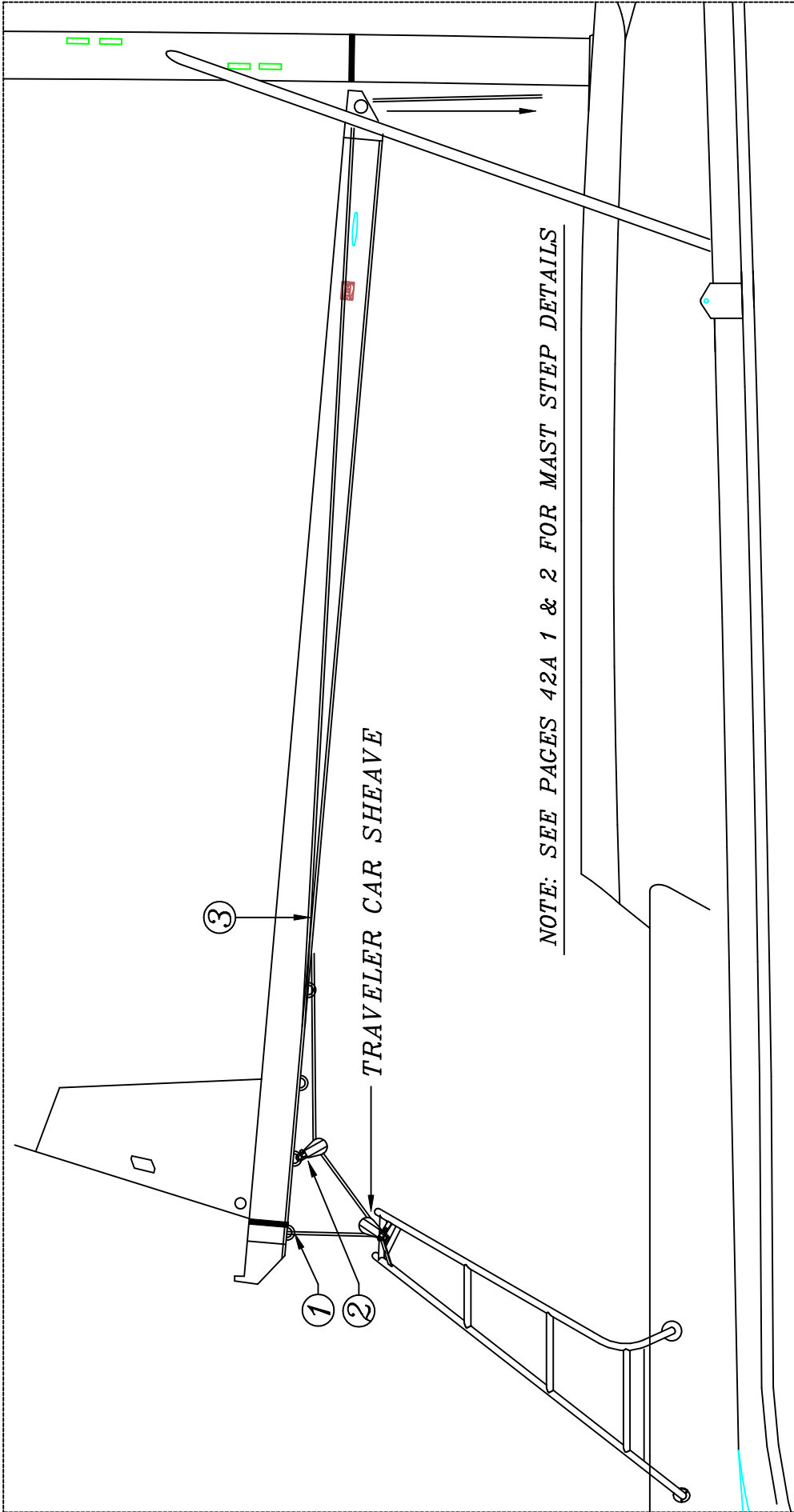


H466 JIB FURLING LINES LAYOUT			
REVISED NO.	4608042C	DESIGN NO.	NONE
DATE		DATE	11/12/98
ENGINEERING DEPT.			

MAINSHEET PURCHASE

- ① BAIL, MAINSHEET END
- ② BAIL, MAINSHEET BLOCK
- ③ EXIT, MAINSHEET

NOTE:
SEE PAGE 43C FOR TRAVELER DETAILS



NOTE: SEE PAGES 42A 1 & 2 FOR MAST STEP DETAILS

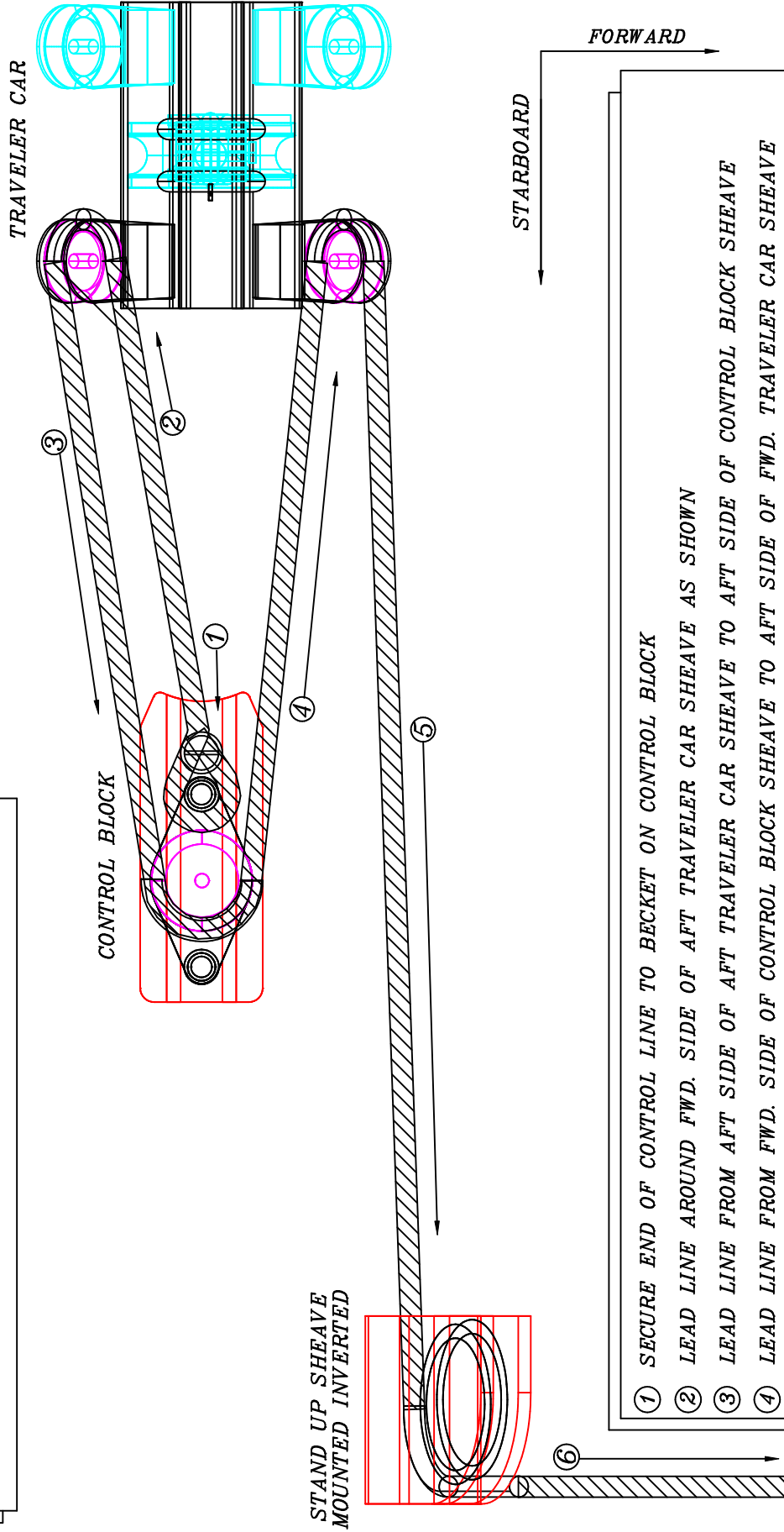
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H466 MAINSHEET PURCHASE (STD)

DESIGN NO.	4608043A	REVISION NO.	NONE
DATE		DATE	5/28/98
ENGINEERING DEPT.			

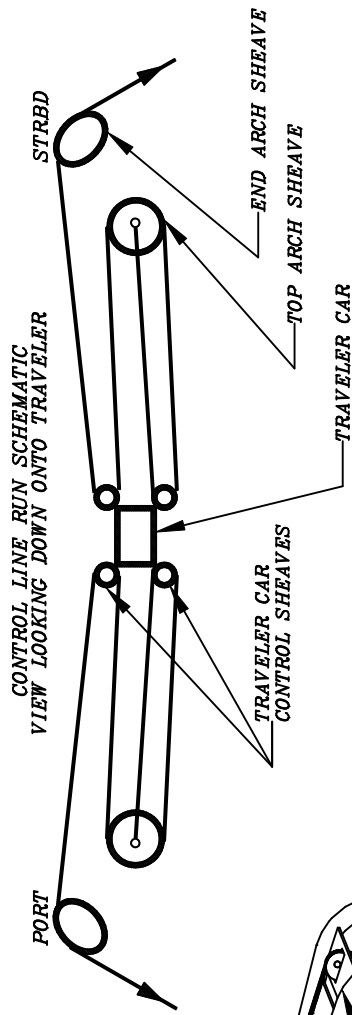


NOTE: ARCH & TRAVELER BAR NOT SHOWN FOR CLARITY.
 STARBOARD SIDE SHOWN, PORT SIDE IS MIRROR IMAGE
 SEE PREVIOUS PAGE FOR MORE DETAILS



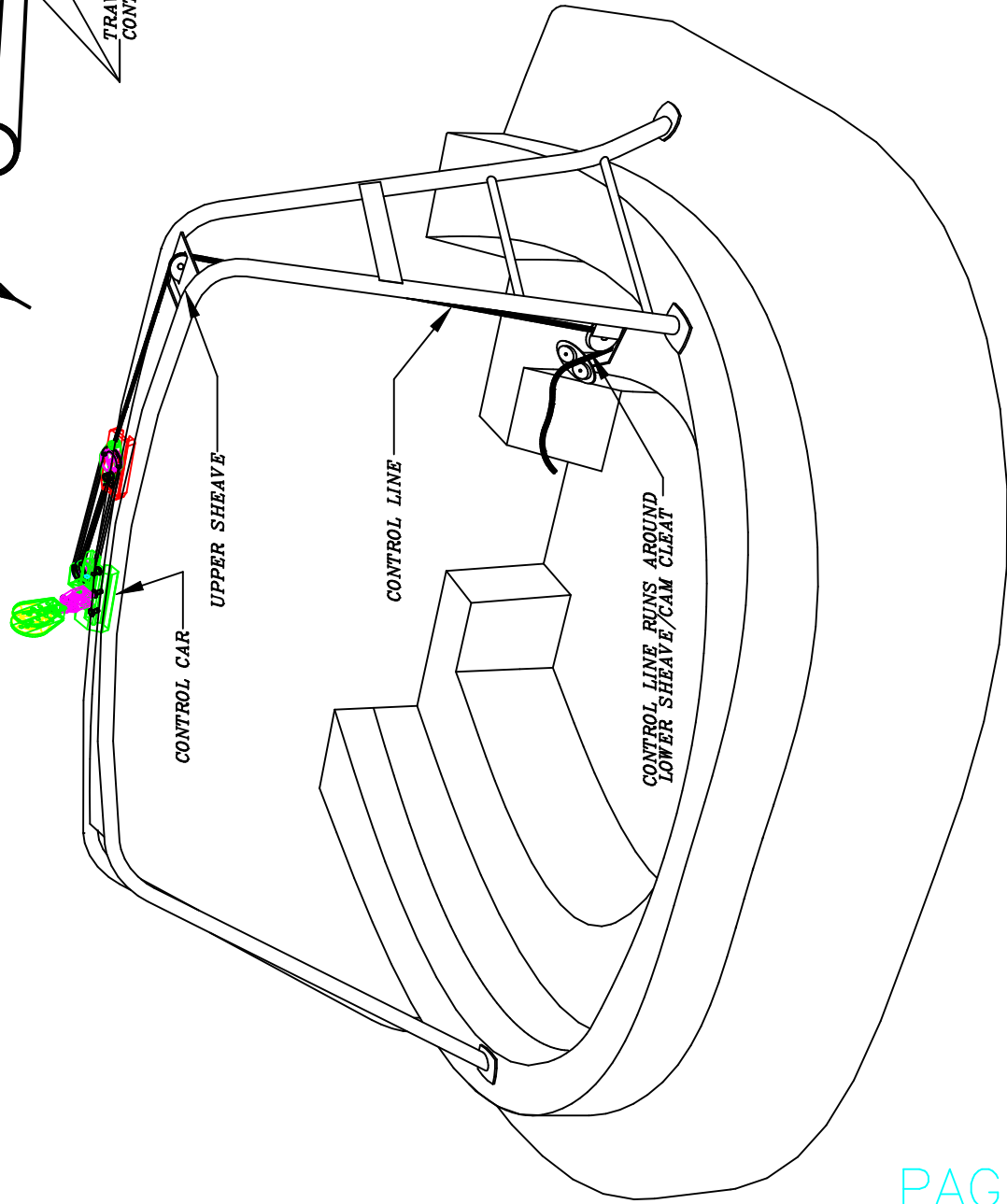
- ① SECURE END OF CONTROL LINE TO BECKET ON CONTROL BLOCK
- ② LEAD LINE AROUND FWD. SIDE OF AFT TRAVELER CAR SHEAVE AS SHOWN
- ③ LEAD LINE FROM AFT SIDE OF AFT TRAVELER CAR SHEAVE TO AFT SIDE OF CONTROL BLOCK SHEAVE
- ④ LEAD LINE FROM FWD. SIDE OF CONTROL BLOCK SHEAVE TO AFT SIDE OF FWD. TRAVELER CAR SHEAVE
- ⑤ LEAD LINE FROM FWD. SIDE OF FWD. TRAVELER CAR SHEAVE TO STAND UP SHEAVE
- ⑥ LEAD LINE AROUND STAND UP SHEAVE THEN DOWN THRU ARCH AND AROUND LOWER SHEAVE TO CAM CLEAT





SEE PC 43B FOR DETAILS

SEE PAGE 43A FOR
MAIN SHEET LINE RUNS



NOTE: PORT SIDE SHOWN,
STBD SIDE IS A MIRROR IMAGE.

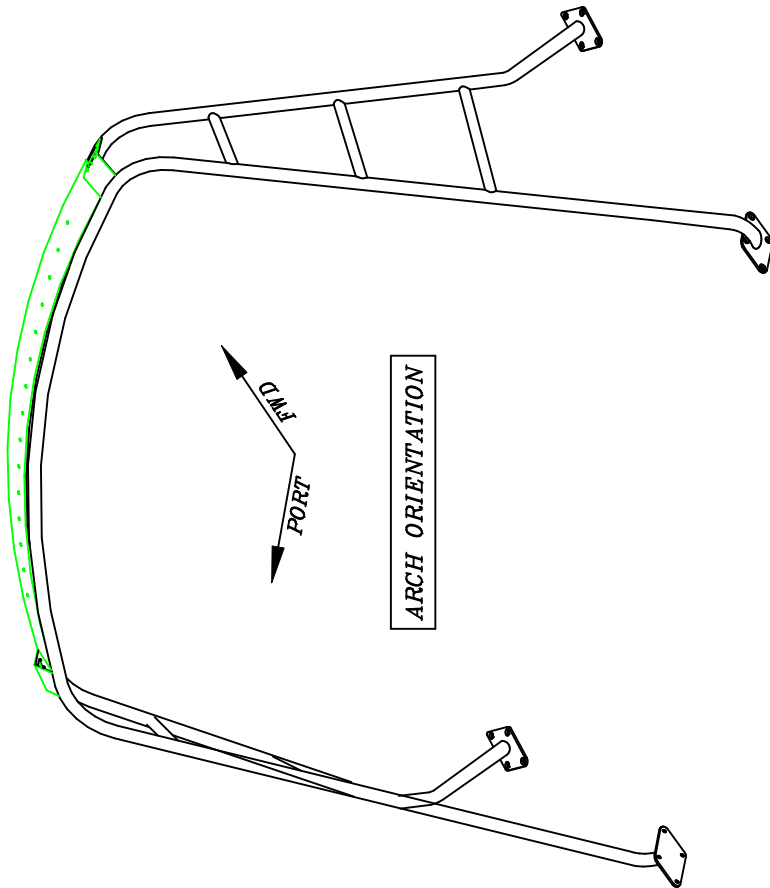
[View document details information for this HUNTER MARINE CORP. document online.](#)
H466 TRAV. CONTROL LINE DETAILS
 DRAWING NO. 4608043C
 REVISION NO. NONE
 DATE 3/3/99
 ENGINEERING DEPT.



ARCH INSTALLATION: NOTES AND TOOL LIST

NOTES:

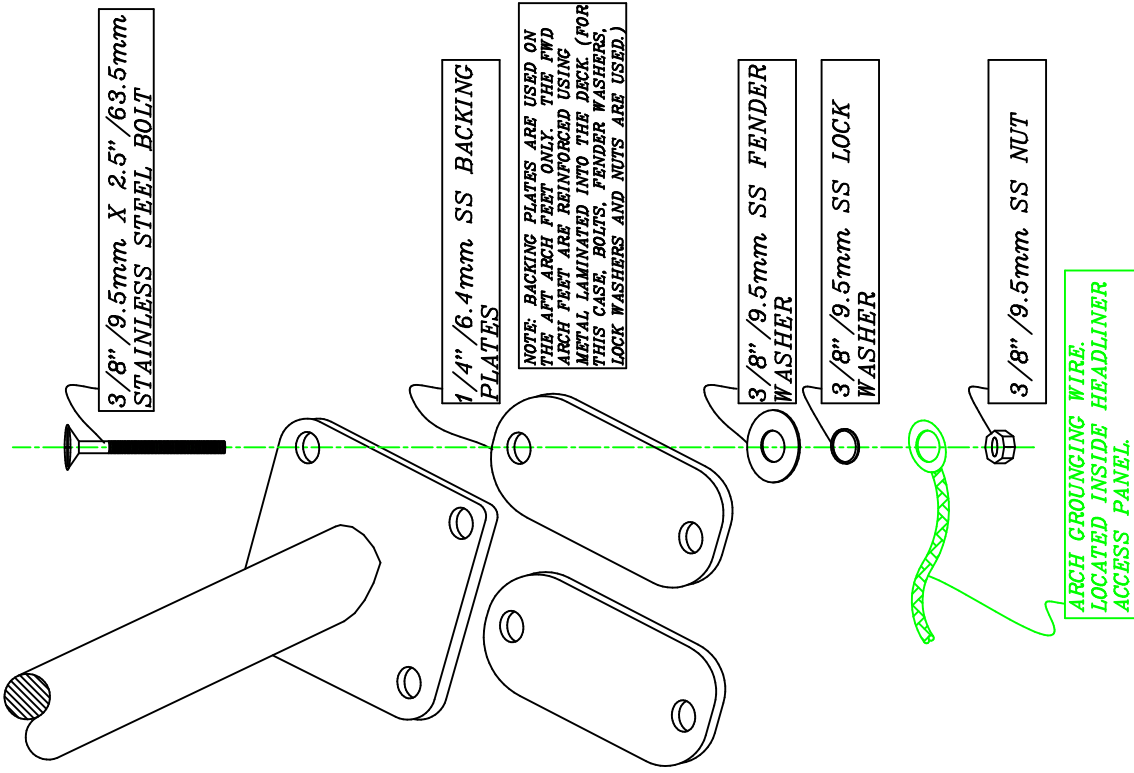
1. **IMPORTANT: COMPLETELY READ ALL OF THE INSTALLATION INSTRUCTIONS BEFORE BEGINNING.**
2. **THIS JOB REQUIRES THREE PEOPLE. IT IS IMPORTANT THAT THE ARCH CONTINUE BEING SUPPORTED ONCE IT HAS BEEN SET IN PLACE, UNTIL BEING FULLY SECURED TO THE DECK.**
3. **WHEN INSTALLING ARCH: TO AVOID POSSIBLE INJURY, ORIENT THE DIRECTION OF THE ARCH (LEANING FORWARD) PRIOR TO BEGINNING THE INSTALLATION PROCESS.**
4. **SEE BELOW FOR A LIST OF TOOLS SUGGESTED FOR THE INSTALLATION PROCESS**
5. **IMPORTANT: REMEMBER TO CHECK ALL THE ARCH BOLTS / NUTS AFTER THE INITIAL SEA TRIAL AND RETIGHTEN AS NECESSARY**



- SUGGESTED TOOL LIST:**
- 3/8" DRIVE RATCHET
 - 6" EXTENSION
 - 9/16" DEEP & REGULAR SOCKET
 - 9/16" WRENCH
 - SCREW DRIVER-- PHILLIPS HEAD
 - RATCHET STRAP
 - CAULK GUN
 - TUBE OF SEALANT (3M 5200)
 - NEVER SEIZE (BOLT LUBE)
 - RAZOR KNIFE
 - RAGS
 - ALCOHOL / CLEAN UP

1. REMOVE ALL ACCESSORIES STOWED IN THE COCKPIT LOCKERS. THIS WILL ALLOW EASIER ACCESS TO FASTEN THE ARCH BOLTS.
2. REMOVE ANY SEALANT IN THE ARCH PRE DRILLED HOLES.
3. CLEAN AROUND THE MOUNTING HOLES USING ALCOHOL.
4. APPLY A GENEROUS AMOUNT OF 3M 5200 SEALANT AT THE ARCH MOUNTING FOOT DECK MOUNTING HOLE LOCATIONS.
5. TO AVOID POSSIBLE INJURY, ORIENT THE ARCH (LEANING FORWARD) PRIOR TO PLACING IT ON THE BOAT.
6. PLACE THE ARCH ON THE DECK OF THE BOAT. ALIGN THE FORWARD MOST ARCH FOOT HOLE WITH THE MATCHING PRE DRILLED FWD MOST DECK COAMING HOLE.
7. INSERT A (3.0"(76.2mm)) STAINLESS STEEL BOLT THRU THE FWD MOST ARCH FOOT INTO THE COAMING.
8. ACCESS THE UNDERSIDES OF THE DECK AT THE ARCH FOOT LOCATIONS AS FOLLOWS:
 STBD FWD: THRU ACCESS PANEL IN THE PT. SIDE AFT STATEROOM HEADLINER.
 STBD AFT: THRU PORT SIDE GULLWING LOCKER
 PORT FWD: THRU STBD. SIDE EURO LOCKER
 PORT. AFT: THRU PORT SIDE GULLWING LOCKER
9. INSTALL THE (1/4" (6.4mm)) BACKING PLATE ON THE INSIDE OF THE COAMING. THEN INSTALL THE S.S. WASHER, LOCK WASHER AND THE S.S. NUT AS WELL. (NOTE: THERE EXISTS CASES WHERE A BACKING PLATE IS NOT ABLE TO BE INSTALLED. IF THIS IS ENCOUNTERED, USE (1/4" 6.4mm.) S.S. FENDER WASHERS INSTEAD. (IT IS IMPORTANT TO APPLY A SMALL AMOUNT OF NEVER SEIZE TO THE BOLT TO PREVENT "GAULING" OF THE THREADS.)
10. COMPLETELY TIGHTEN THE FORWARD MOST BOLT.
11. REPEAT THIS PROCEDURE FOR THE REMAINING THREE FEET. INSERTING ONLY ONE BOLT AT FIRST AND COMPLETELY TIGHTENING IT DOWN STARTING WITH THE ARCH FOOT DIRECTLY ACROSS FROM THE BOLT ALREADY INSTALLED. REPEAT THIS FOR THE NEXT TWO.
12. NOTE: IT MAY BE NECESSARY TO USE A RATCHET STRAP TO "PULL" THE ARCH INTO ALIGNMENT WITH THE REMAINING MOUNTING HOLES.
13. INSERT THE REST OF THE S.S. FASTENERS INTO THE MOUNTING HOLES. INSTALL ALL THE S.S. BACKING PLATES, WASHERS AND NUTS FROM THE UNDERSIDE OF THE DECK. (AT THIS TIME, BE SURE TO INSTALL THE ARCH GROUNDING WIRE, LOCATED IN THE HEADLINER ACCESS PANEL. SEE DIAGRAM FOR INSTALLATION DETAILS.)
14. RECHECK THE ARCH FIT ONTO THE DECK.
15. SECURELY TIGHTEN ALL THE NUTS AND BOLTS USING A CROSS TIGHTENING PATTERN. (DO NOT FORGET TO USE A SMALL AMOUNT OF LUBRICANT FOR THE BOLTS).
16. CLEAN OFF THE EXCESS SEALANT AROUND THE ARCH FEET AND COAMING AREAS USING ALCOHOL.
17. RECHECK THE BOLTS AFTER THE INITIAL SEA TRIAL AND TIGHTEN AS NECESSARY.
18. SEE FOLLOWING PAGE FOR INFO ON CONNECTING THE ARCH SPEAKER POD WIRING. (NOTE: REMEMBER TO CAULK AROUND THE ARCH SPEAKER WIRE EXIT HOLE IN THE DECK.

TYPICAL ARCH FOOT



3/8" / 9.5mm X 2.5" / 63.5mm
STAINLESS STEEL BOLT

1/4" / 6.4mm SS BACKING
PLATES

NOTE: BACKING PLATES ARE USED ON THE AFT ARCH FEET ONLY. THE FWD ARCH FEET ARE REINFORCED USING METAL LAMINATED INTO THE DECK. (FOR THIS CASE, BOLTS, FENDER WASHERS, LOCK WASHERS AND NUTS ARE USED.)

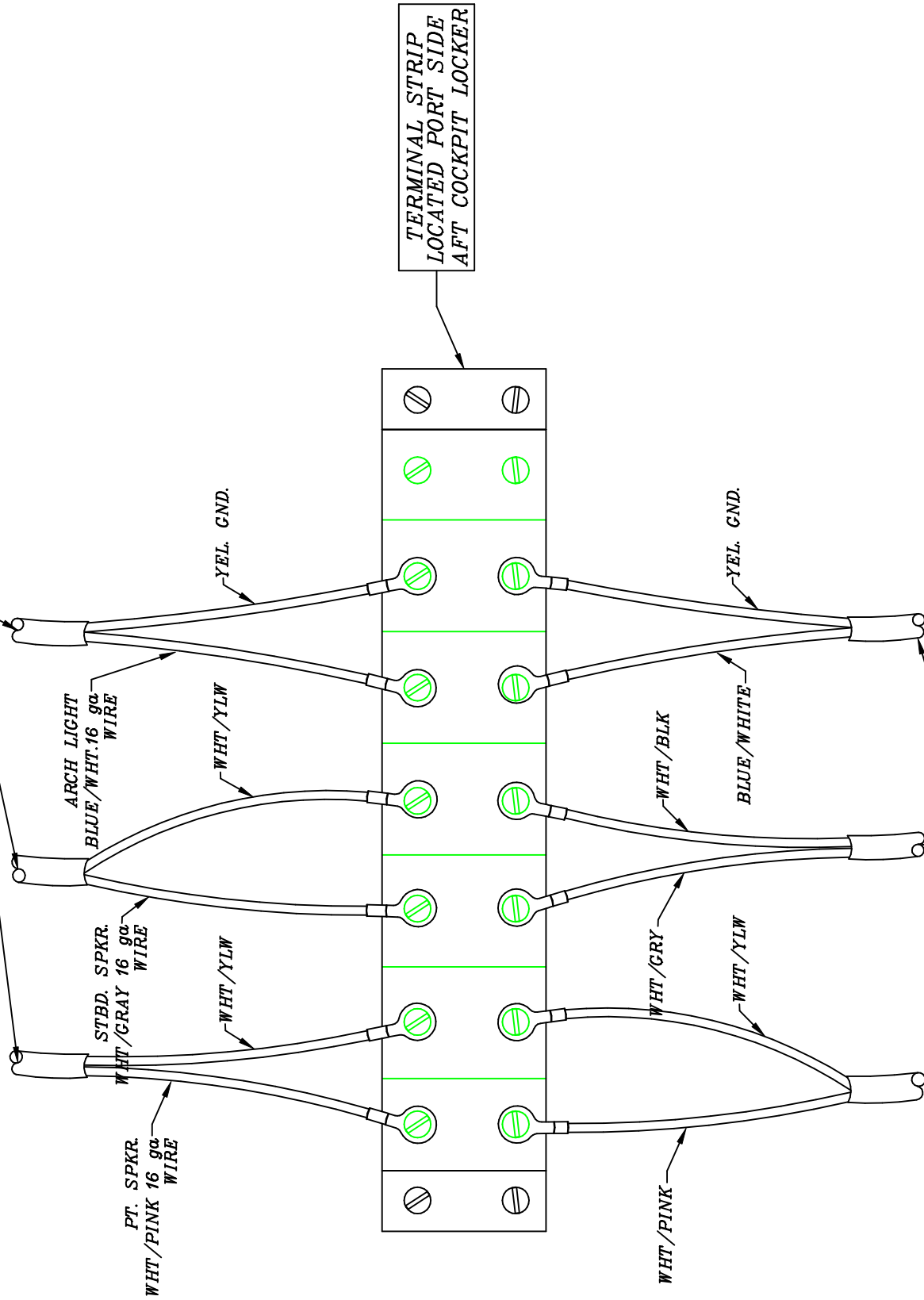
3/8" / 9.5mm SS FENDER
WASHER

3/8" / 9.5mm SS LOCK
WASHER

3/8" / 9.5mm SS NUT

ARCH GROUNDING WIRE,
LOCATED INSIDE HEADLINER
ACCESS PANEL.

WIRES TO ARCH SPEAKERS
AND ARCH LIGHT



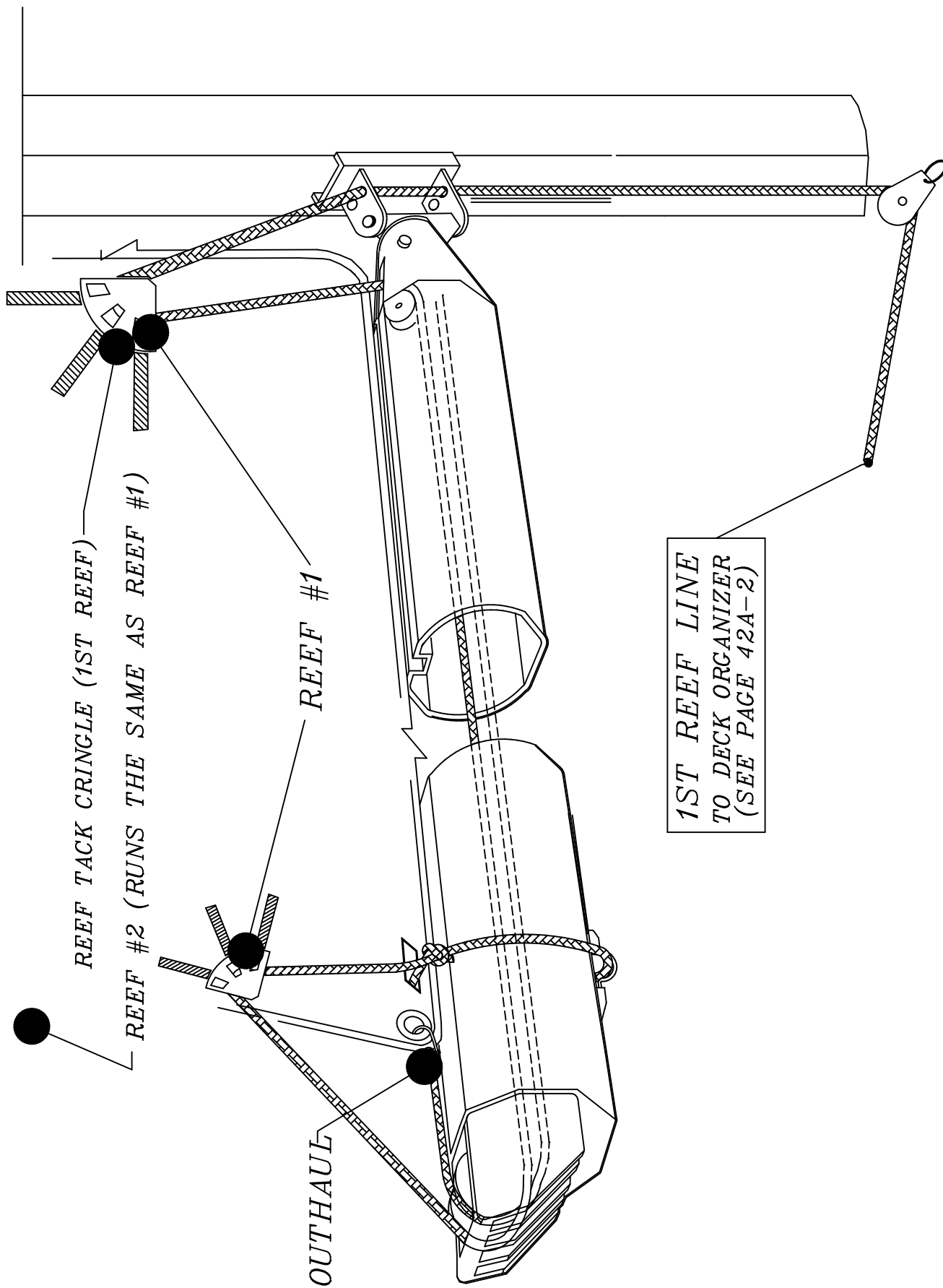
TERMINAL STRIP
LOCATED PORT SIDE
AFT COCKPIT LOCKER

WIRES TO
HEADLINER
ALL 16 ga.

THIS DOCUMENT CONTAINS INFORMATION FOR WHICH HUNTER HAWK CORP. HAS PROPRIETARY RIGHTS

HUNTER

H460 ARCH WIRING TERMINAL STRIP SCHEMATIC	
FORMING NO.	4608043D-3
SCALE	NONE
DATE	1/28/00
ENGINEERING DEPT	



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H466 BOOM AND REEF LAYOUT

HUNTER

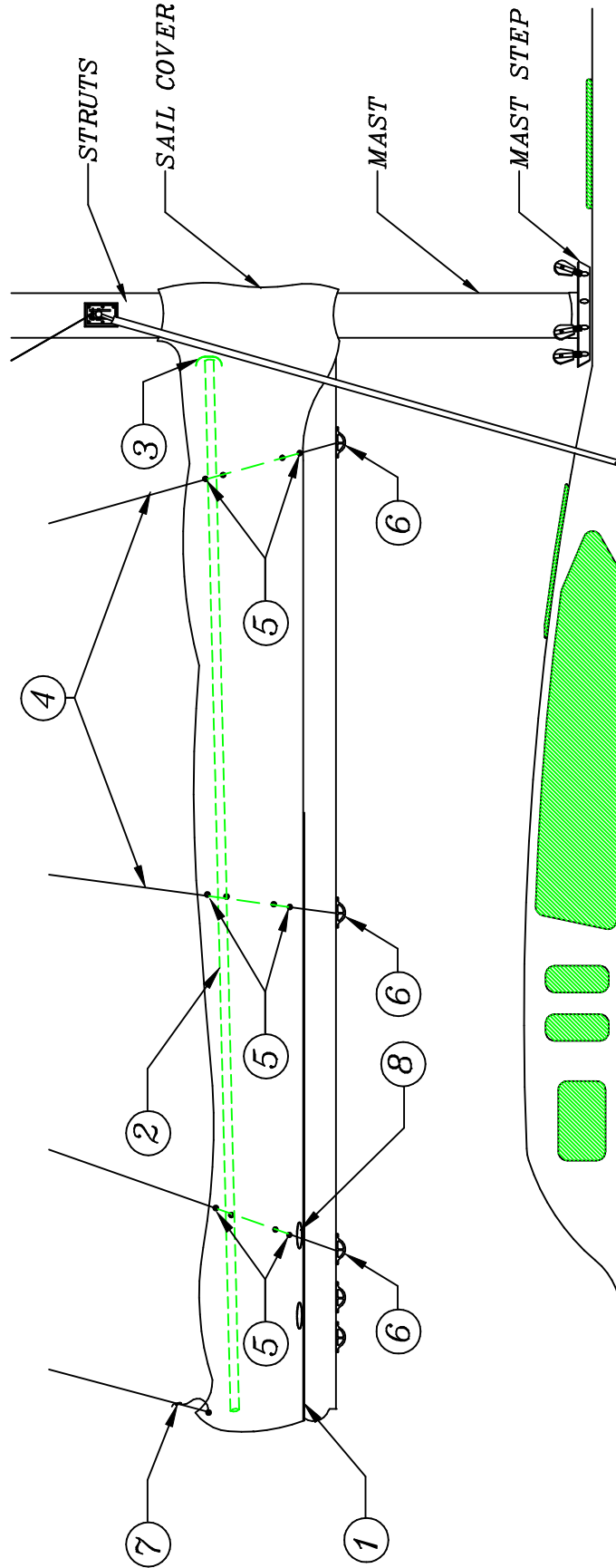
PROJECT NO.	4608044A	REVISION NO.	NONE
DATE		DATE	3/11/99
ENGINEERING DEPT.			

SLIDE THE BOLTROPE ON THE TWO HALVES OF THE COVER INTO THE BOLTROPE TRACKS (1) ON BOTH SIDES OF THE BOOM. START FROM THE AFT END AND MAKE YOUR WAY FORWARD.

INSTALL THE PVC BATTENS (2) INTO EACH HALF OF THE SAIL COVER. THERE ARE POCKETS (3) THAT OPEN TOWARDS THE FRONT, ON THE INSIDE OF THE COVER. SLIDE THE BATTENS INTO PLACE FROM THE FRONT, AND ROLL THE INSIDE LIP OF THE POCKET BACK IN ORDER TO HOLD THE BATTENS STATIONARY.

FEED THE LAZYJACK LINES (4) DOWN THROUGH THE GROMMETS/RINGS (5) IN THE SAIL COVER, STARTING AT THE TOP AND COMING OUT AT THE BOTTOM OF THE COVER. DEAD END THE LINES TO THE BAILS ON THE UNDERSIDE OF THE BOOM (6).

TIE THE AFT END OF THE SAIL COVER UP TO THE TOPPING LIFT LINE USING THE PIECE OF STRING PROVIDED (7). USE HALF HITCH KNOTS TO SECURE THE COVER IN PLACE AT THE OUTER END OF THE BOOM. THE REEF LINES RUN OUT THROUGH THE COVER SLOTS (8) AND TIE OFF.

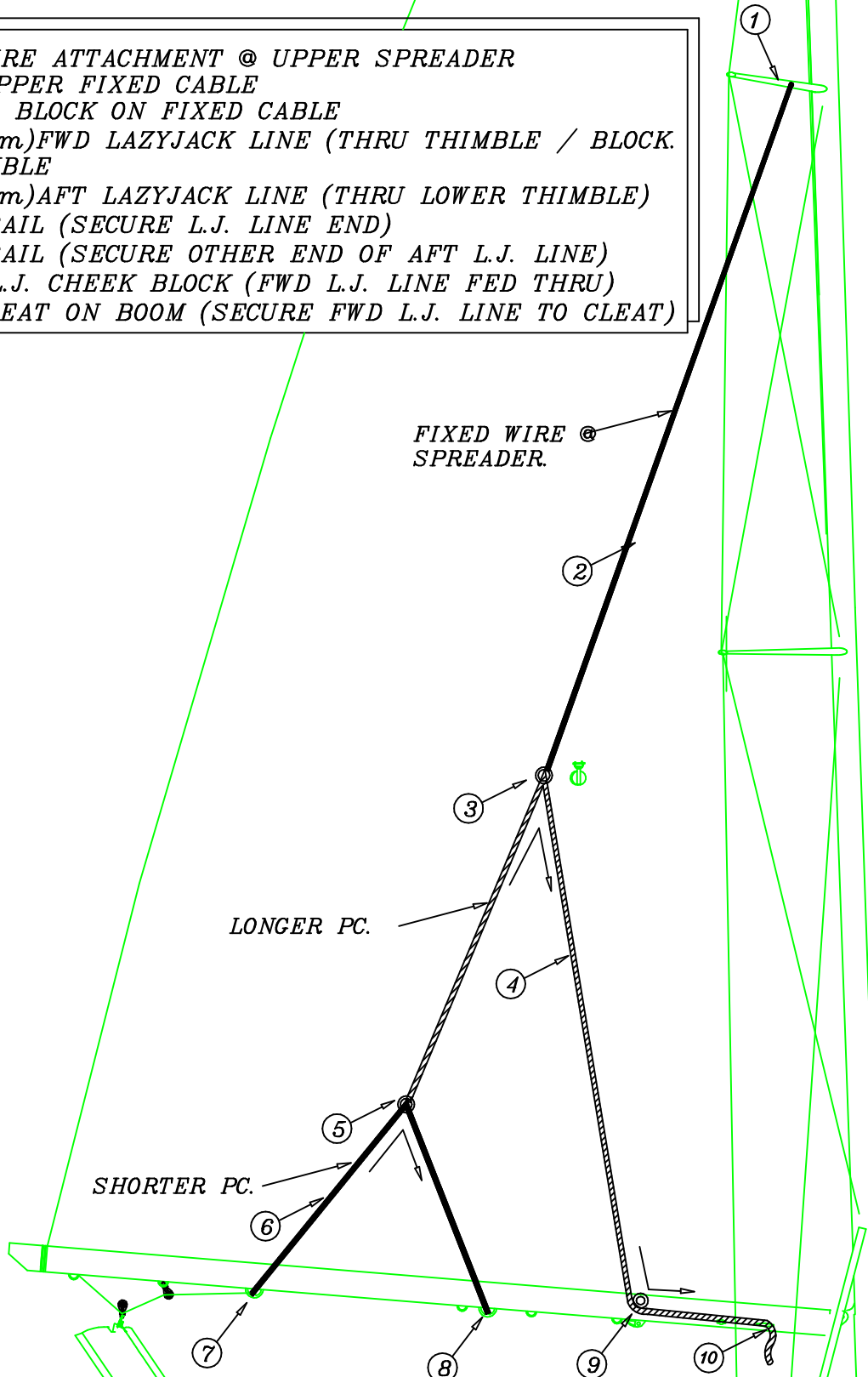


SAIL COVER ONLY OFFERED ON STANDARD MAST BOATS

PROPERTY FILE # H460 HUNTER LAZYJACK SAIL COVER
This document describes information for which HUNTER MARINE CORP. has proprietary rights.
DRAWING NO. 4608044B SCALE NONE
ENGINEERING DEPT DATE 3/11/99
HUNTER

h466

1. LAZYJACK WIRE ATTACHMENT @ UPPER SPREADER
2. LAZYJACK UPPER FIXED CABLE
3. THIMBLE OR BLOCK ON FIXED CABLE
4. 5/16" (7.9mm) FWD LAZYJACK LINE (THRU THIMBLE / BLOCK)
5. LOWER THIMBLE
6. 5/16" (7.9mm) AFT LAZYJACK LINE (THRU LOWER THIMBLE)
7. AFT BOOM BAIL (SECURE L.J. LINE END)
8. MID BOOM BAIL (SECURE OTHER END OF AFT L.J. LINE)
9. FWD BOOM L.J. CHEEK BLOCK (FWD L.J. LINE FED THRU)
10. LAZYJACK CLEAT ON BOOM (SECURE FWD L.J. LINE TO CLEAT)



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HUNTER

H460 LAZY JACKS INSTALLATION INSTRUCTIONS	
4608044C	SCALE NONE
ENGINEERING DEPT	DATE 5/14/99

REEFING INSTRUCTIONS

1. SHACKLE TACK REEF BLOCKS TO FIRST AND SECOND REEF TACK CRINGLES.
2. RUN BOTH REEFING LINES AS ILLUSTRATED IN THE BOOM & REEF LAYOUT. BOTH PORTIONS OF THE REEFING LINE LEADING TO THE REEF TACK BLOCK MUST RUN THROUGH THE GOOSE NECK ON THE AFT OF THE SPAR. THE SHORTER REEF LINE WILL BE USED ON THE FIRST REEF (STARBOARD SIDE, GREEN) THE LONGER REEF LINE ON THE SECOND REEF (PORT SIDE, RED.)
3. RAISE THE MAIN SAIL.
4. EASE THE MAINSHEET AND VANG.
5. LOWER THE MAIN SAIL TO APPROXIMATELY THE FIRST REEF POSITION.
6. TAKE UP THE SLACK IN THE FIRST REEF LINE UNTIL THE TACK AND THE CLEW ARE DOWN TO ABOUT 2" ABOVE THE BOOM.
7. ADJUST THE MAIN HALYARD SO THAT THE TACK REEF BLOCK IS NOT CONTACTING THE GOOSE NECK ON THE FRONT OF THE SPAR AND IS APPLYING TENSION TO THE LUFF OF THE MAIN ABOVE THE REEF, NOT BELOW. THERE WILL BE AP.

- PROXIMATELY 6" (150mm) OF STRECH IN THE MAIN LUFF AND MAIN HALYARD WHEN THE REEFING LINE IS TENSIONED, SO MAKE SURE THAT THIS IS ALLOWED FOR WHEN ADJUSTING THE MAIN HALYARD TO LOCATE THE TACK REEF BLOCK.
8. ALSO, TENSION THE REEF LINE WITH THE APPROPRIATE SELF-TAILING WINCH UNTIL THE CLEW REEF CRINGLE IS BROUGHT DOWN TO THE BOOM.
9. CONFIRM THAT THE TACK REEF BLOCK IS STILL CLEAR OF THE TACK SHACKLE AND THAT ONLY THE MAIN LUFF ABOVE THE REEF CRINGLE IS TENSIONED. NOT THE LUFF BETWEEN THE CRINGLE AND THE TOP STACKED SAIL SLIDE. EASE THE REEF LINE AND READJUST THE HALYARD IF NECESSARY.
10. MARK THE HALYARD AT THE STOPPER WITH A 1" (25mm) SINGLE BAND OF INDELIBLE MARKER INK. BY DROPPING THE HALYARD TO THIS MARK EVERY TIME A REEF IS REQUIRED THE HALYARD IS AUTOMATICALLY IN THE CORRECT POSITION FOR THE REEF.
11. REPEAT THE PROCEDURE FOR THE SECOND REEF, USING DOUBLE BANDS TO MARK THE HALYARD IN THE CORRECT POSITION.

REEFING PROCEDURE

1. HEAD UP INTO THE WIND.
2. EASE THE MAINSHEET AND VANG.
3. CHECK THE TOPPING LIFT FOR ADEQUATE BOOM SUP. PORT.

4. LOWER THE MAIN HALYARD TO THE APPROPRIATE MARK, AND SNUB THE LINE WITH THE STOPPER.
5. TENSION THE REEFING LINE WITH THE SELF-TAILING WINCH UNTIL THE REEF CLEW IS BROUGHT DOWN TO THE BOOM. APPLY STOPPER AND TENSION THE MAIN HALYARD BACK UP. EASE THE TOPPING LIFT. (IF NEEDED)

SHAKING OUT A REEF

1. HEAD UP INTO THE WIND.
2. EASE THE MAINSHEET AND VANG. TENSION TO TOPPING LIFT. (IF NEEDED)
3. RELEASE THE REEF STOPPER AND REMOVE REEF LINE FROM WINCH.

4. TENSION THE MAIN HALYARD TO RAISE SAIL, MAKING SURE REEF LINES RUN FREELY WHILE SAIL IS BEING RAISED. APPLY STOPPER TO MAIN HALYARD.
5. RE-TENSION VANG AND MAINSHEET. EASE THE TOPPING LIFT. (IF NEEDED)

H466 STANDARD RUNNING RIGGING SPECIFICATIONS

BOAT: H466	REVISION:
BY: KJC	DATE: 7/24/98
CHECKED BY:	DATE:

OPT/STD	ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH	END 2
1 STD	MAIN HALYARD	1	7/16" (11MM)	XLS EXTRA	BLUE	HEADBOARD SHACKLE	39.0 m 128 ft	BARE
2 STD	JIB HALYARD	1	7/16" (11MM)	XLS EXTRA	RED	EYE	40.1 m 132 ft	BARE
3 STD	MAIN TRAVELER LINE	2	5/16" (8MM)	LS	WHITE	SMALL EYE	7.0 m 23 ft	BARE
4 STD	MAINSHEET	1	7/16" (11MM)	XLS	BLUE FLECK	SMALL EYE	22.8 m 75 ft	BARE
5 STD	BOOM TOPPING LIFT	1	3/8" (9.5MM)	LS	WHITE	BARE	33.0 m 108 ft	BARE
6 STD	REEFING LINE #1	1	7/16" (11MM)	LS	GREEN FLECK	BARE	24.8 m 82 ft	BARE
7 STD	REEFING LINE #2	1	7/16" (11MM)	LS	RED FLECK	BARE	35.2 m 116 ft	BARE
8 STD	JIB SHEET	2	1/2" (12.5MM)	LS	RED FLECK	BARE	15.2 m 50 ft	BARE
9 OPT	CRUISING SPINN. SHEET	2	7/16" (11MM)	LS	BLACK FLECK	BARE	30.5 m 100 ft	BARE
10 OPT	SPINNAKER HALYARD	1	7/16" (11MM)	XLS	BLACK	SNAP SHACKLE NF1 1000s	40.1 m 132 ft	BARE
11 OPT	STAYSAIL HALYARD	1	7/16" (11MM)	XLS	GREEN	SNAP SHACKLE NF1 1000s	32.7 m 107 ft	BARE
12 OPT	STAYSAIL SHEETS	2	7/16" (11MM)	LS	GREEN FLECK	BARE	12.2 m 40 ft	BARE
13 STD	LAZY JACK WIRE	2	5/32" (4MM)	PLASTIC COATED 1x19 WIRE	WHITE	EYE & THIMBLE; SMALL SHACKLE	4.9 m 16 ft	EYE & THIMBLE; HARKEN 125 OR SCHAEFER 300-02
14 STD	FIXED LAZY JACK LINE	2	3/8" (9.5MM)	LS	WHITE	BARE	7.1 m 23 ft	BARE
15 STD	ADJUSTABLE LAZY JACK LINE	2	3/8" (9.5MM)	LS	WHITE	SS THIMBLE SPLICED	12.2 m 40 ft	BARE

FURLING MAST RUNNING RIGGING SPECIFICATIONS

BOAT: H466	FILE NAME: H466 SELDEN RUNNING	REVISION: REMOVED MAIN HALYARD 8/28/98
BY: KJC	DATE: 2/6/1998	
CHECKED BY:	DATE:	

OPT/STD	ITEM	QUANTITY	LINE SIZE	LINE TYPE	COLOR	END 1	LENGTH	END 2
1 STD	JIB HALYARD	1	7/16" (11MM)	XLS EXTRA	RED	EYE	40.1 m 132 ft	BARE
2 STD	MAIN TRAVELER LINE	2	5/16" (8MM)	LS	WHITE	SMALL EYE	7.9 m 26 ft	BARE
3 STD	MAINSHEET	1	7/16" (11MM)	XLS	BLUE FLECK	SMALL EYE	22.8 m 75 ft	BARE
4 STD	BOOM TOPPING LIFT	1	3/8" (9.5MM)	LS	WHITE	BARE	33.0 m 108 ft	BARE
5 STD	JIB SHEET	2	1/2" (12.5MM)	LS	RED FLECK	BARE	15.2 m 50 ft	BARE
6 STD	MAIN FURLING LINE	1	3/8" (9.5MM)	LS	BLUE	BARE	12.3 m 41 ft	BARE
7 OPT	CRUISING SPINN. SHEET	2	7/16" (11MM)	LS	BLACK FLECK	BARE	30.5 m 100 ft	BARE
8 OPT	SPINNER HALYARD	1	7/16" (11MM)	XLS	BLACK	SNAP SHACKLE NF11000s	40.1 m 132 ft	BARE
9 OPT	STAYSAIL HALYARD	1	7/16" (11MM)	XLS	GREEN	SNAP SHACKLE NF11000s	32.7 m 107 ft	BARE
10 OPT	STAYSAIL SHEETS	2	7/16" (11MM)	LS	GREEN FLECK	BARE	12.2 m 40 ft	BARE

H466 B&R RIG WITH STRUTS DESCRIPTION

The B&R rig, utilized on the Hunter H466, eliminates the need for a backstay to allow for a more efficient mainsail shape. Fixed backstays are commonly being designed out of today's performance-oriented boats to allow the mainsail to incorporate a full roach design - a more aerodynamic shape both for racing and cruising performance.

To accomplish this, the B&R rig has 30 degree swept spreaders, creating 120 degrees between each rigging point. This tri-pod arrangement has excellent strength for sailboat rigs, and has been used for years to support huge radio towers.

The latest advancement to the B&R rig is the addition of mast struts. These struts stabilize the lower section of the mast, allowing compression loads to be spread, reducing the point loading at the mast base. They also create a strong point for the boom and spinnaker pole loadings. The struts function also allow us to use a smaller mast section reducing weight aloft to decrease the heeling and pitching moments, making for a more comfortable ride. Additionally, they provide a secure handhold when going forward.

The struts perform an important structural function, **therefore never sail your boat without the struts properly fitted.** If your H466 is equipped with the in-mast furling option, the mast is a larger section size and the struts are not utilized.

Additional support is given to the B&R rig (and is unique to it) with the addition of reverse diagonal rigging. For example, the diagonals that you see beginning by the top of the mast strut, ending at the tip of the spreader, supports and stabilizes the lower section of the mast as it creates a triangle with

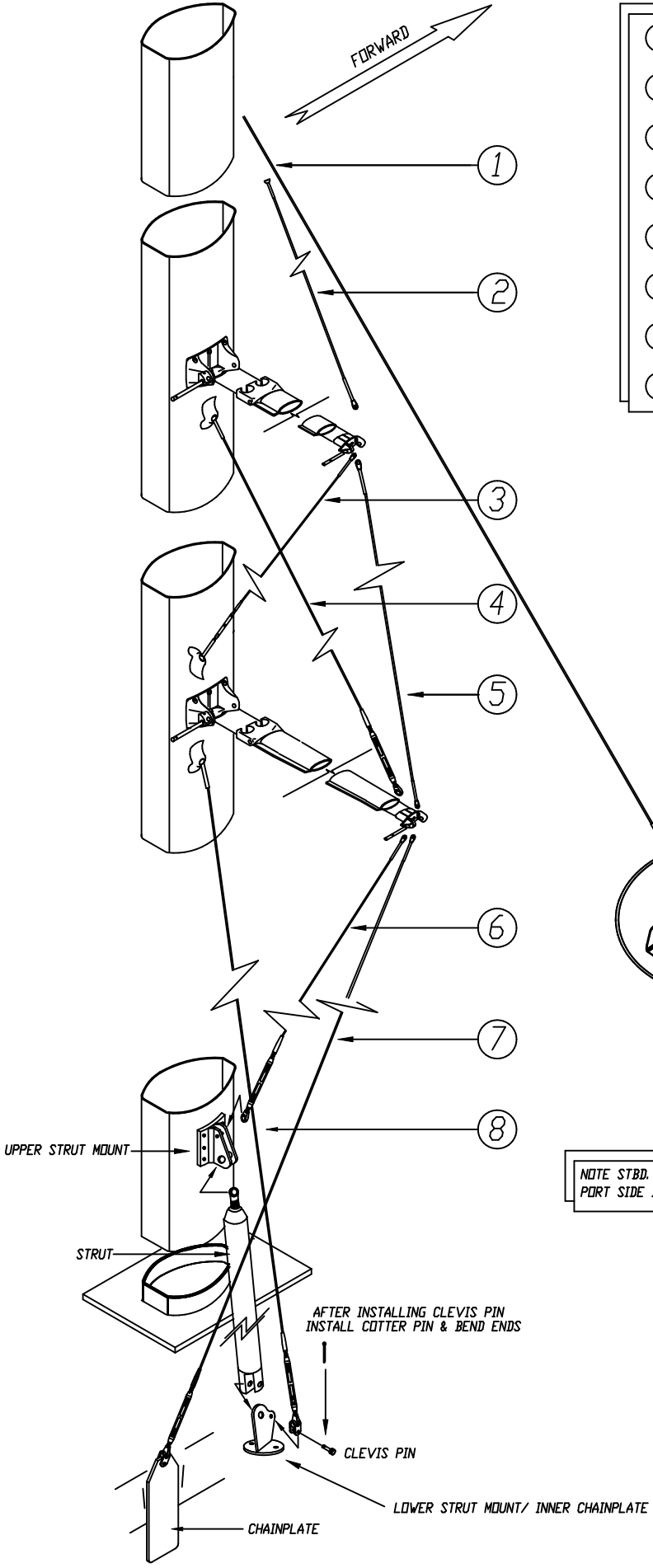
the lower shroud. The top RD2 runs from above the lower spreader base to the end of the top spreader, and stabilizes the top section of the mast.

The B&R rig is designed to be pre-bent to further add rigidity to the mast section and eliminate the need for adjustable rigging (like backstay adjusters). This design should prove more reliable than a rig with adjustable backstays or runners, as there is less chance for error.

The large main, small jib, sail plan on the H466 also eliminates the need for large overlapping headsails (genoa), as the driving power comes from the much improved shape and size of the mainsail. This allows for an easier tacking small jib, creating good performance and more comfortable sailing as it is less work for the crew.

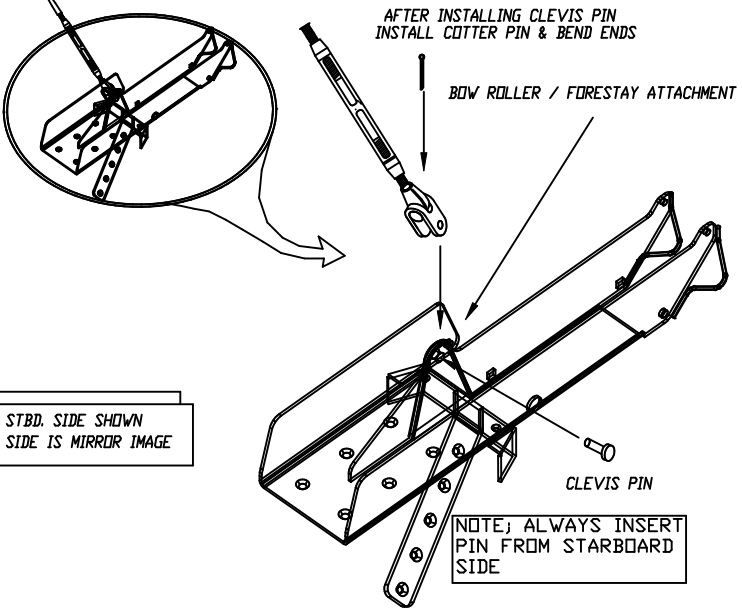
As the large main is creating additional mainsheet and leech loading, Hunter has included a cockpit arch whereby the mainsheet and leech loads are directed to the strong part of the boom (the outboard end) and is located at the heaviest loading point of the mainsail. The cockpit arch serves addition safety and comfort functions as handholds and cockpit canvas attachment points.

B&R rigs have been used on thousands of sailboats, and we are proud to incorporate this successful design on your new Hunter.



- ① FORESTAY 3/8 (9.5mm) 1 X 19
- ② D3 3/8 (9.5mm) 1 X 19
- ③ RD2 1/4" (6.4mm) 1 X 19
- ④ D2 5/16" (7.9mm) 1 X 19
- ⑤ V2 3/8 (9.5mm) 1 X 19
- ⑥ RD1 1/4" (6.4mm) 1 X 19
- ⑦ V1 3/8 (9.5mm) 1 X 19 DYFORM
- ⑧ D1 3/8 (9.5mm) 1 X 19 DYFORM

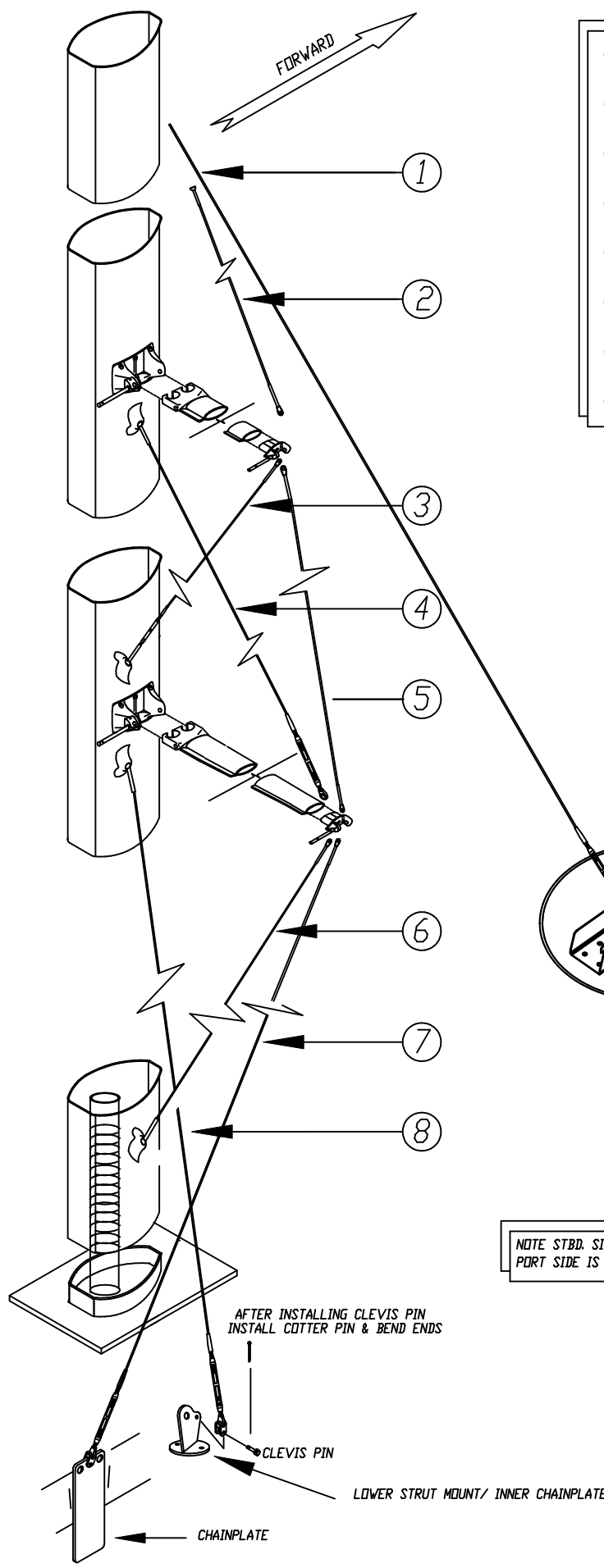
NOTE: SEE PAGES 49A-D FOR SPREADER & SPREADER TIP DETAILS.
 SEE PAGE 50A FOR STANDARD RIG STANDING RIG LENGTHS.



NOTE STBD. SIDE SHOWN
 PORT SIDE IS MIRROR IMAGE

NOTE; ALWAYS INSERT PIN FROM STARBOARD SIDE

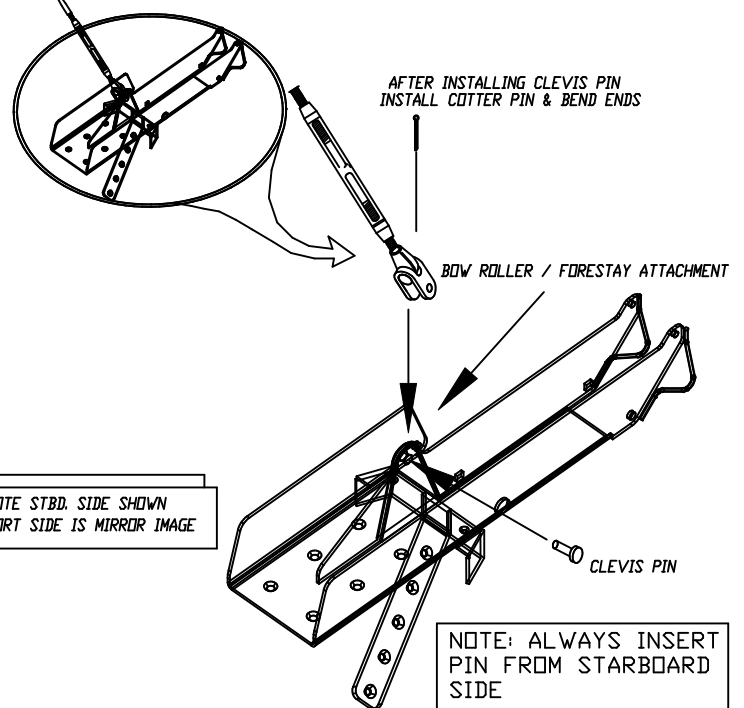
NOTE: NEVER TRY TO SAIL THE VESSEL WITHOUT THE STRUTS IN PLACE AND PROPERLY FASTENED (SEE PAGE 48B)
 NOTE: IN-MAST FURLING OPTION USES A LARGER MAST SECTION AND THE STRUTS ARE NOT UTILIZED. SEE FOLLOWING PAGE



- ① FORESTAY 3/8 (9.5mm) 1 X 19
- ② D3 3/8 (9.5mm) 1 X 19
- ③ RD2 1/4" (6.4mm) 1 X 19
- ④ D2 5/16" (7.9mm) 1 X 19
- ⑤ V2 3/8 (9.5mm) 1 X 19
- ⑥ RD1 1/4" (6.4mm) 1 X 19
- ⑦ V1 3/8 (9.5mm) 1 X 19 DYFORM
- ⑧ D1 3/8 (9.5mm) 1 X 19 DYFORM

NOTE: SEE PAGES 49A-D FOR SPREADER & SPREADER TIP DETAILS.
SEE PAGE 50B FOR FURLING RIG LENGTHS.

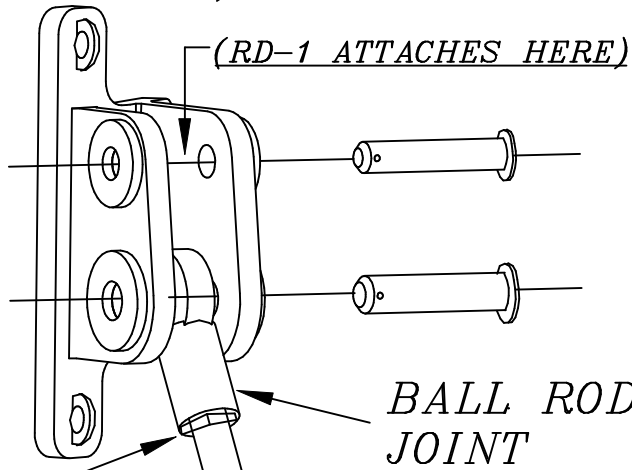
NOTE STBD. SIDE SHOWN
PORT SIDE IS MIRROR IMAGE



NOTE: ALWAYS INSERT PIN FROM STARBOARD SIDE

NOTE: IN-MAST FURLING OPTION USES A LARGER MAST SECTION AND THE STRUTS ARE NOT UTILIZED.

(UPPER STRUT MOUNT
ON EA. SIDE OF MAST)



BALL ROD
JOINT

STEP TWO
ADJUST THREADS UNTIL BALL ROD
JOINT IS ABLE TO BE EASILY PINNED
IN STRUT BRACKET

JAM NUTS

STEP THREE
PIN BALL ROD JOINT AND TIGHTEN
JAM NUT AGAINST END OF STRUT &
BALL JOINT ROD

STRUT

STEP ONE
PIN LOWER END OF STRUT TO
CHAINPLATE AND ADD SPLIT
RINGS

LOWERS
CHAINPLATE

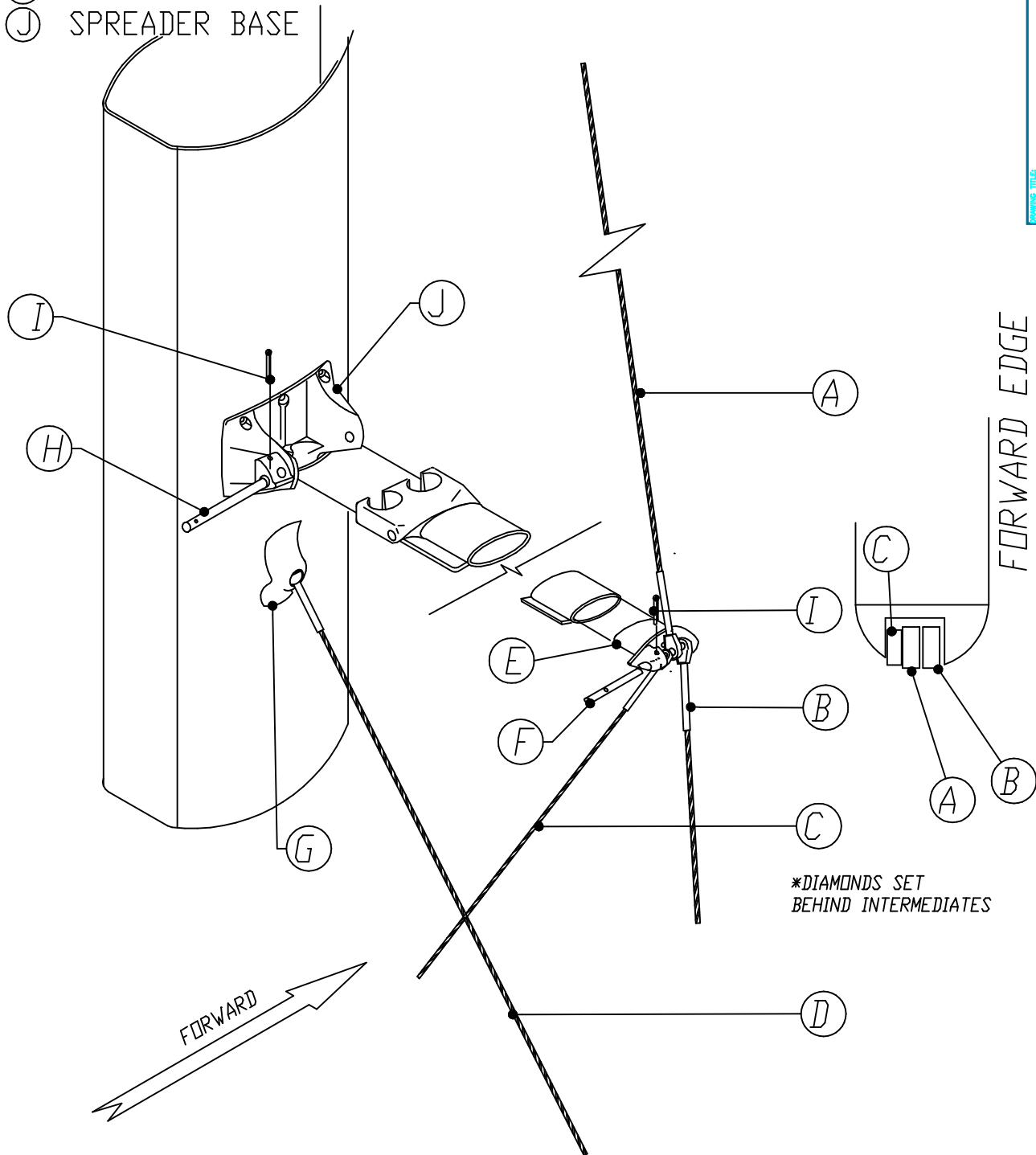
(D-1 ATTACHES HERE)

FOR MORE FILES
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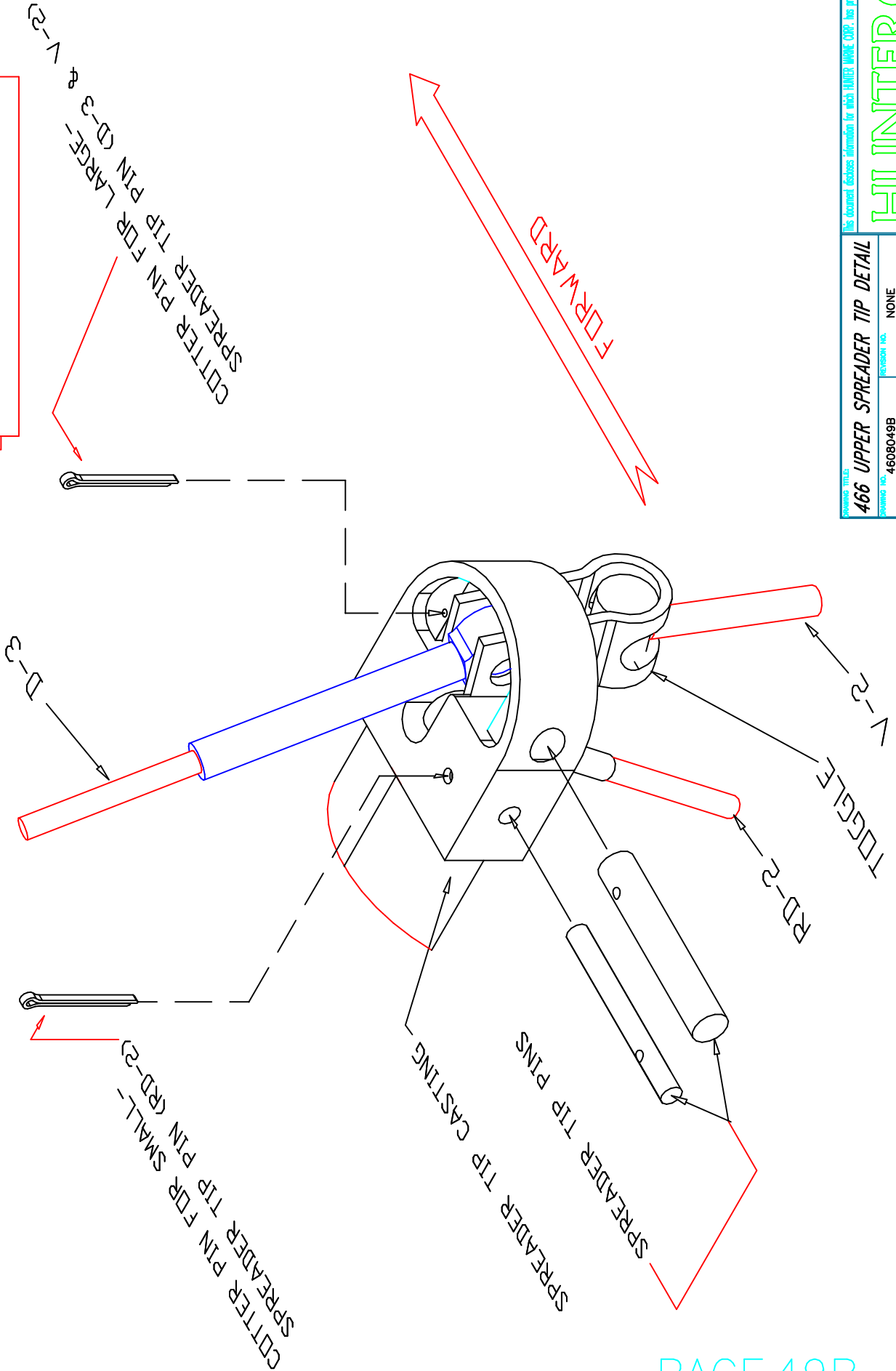
HUNTER

H460 STRUT ASSEMBLY	
REVISED NO.	4608048B
EXTENSION NO.	NONE
DATE	2/13/98
ENGINEERING DEPT.	

- (A) UPPER UPPER SHROUD-SMALL PIN EYE
- (B) LOWER UPPER SHROUD-SMALL PIN EYE
- (C) UPPER DIAMOND-MARINE EYE W/ 1/2" HOLE
- (D) UPPER INTERMEDIATE SHROUD-MARINE EYE
- (E) SPREADER TIP CASTING
- (F) SPREADER TIP PIN
- (G) BACKING SHELL
- (H) SPREADER BRACKET PIN
- (I) COTTER PIN
- (J) SPREADER BASE



NOTE: STBD. SIDE SHOWN
PORT SIDE IS MIRROR IMAGE.

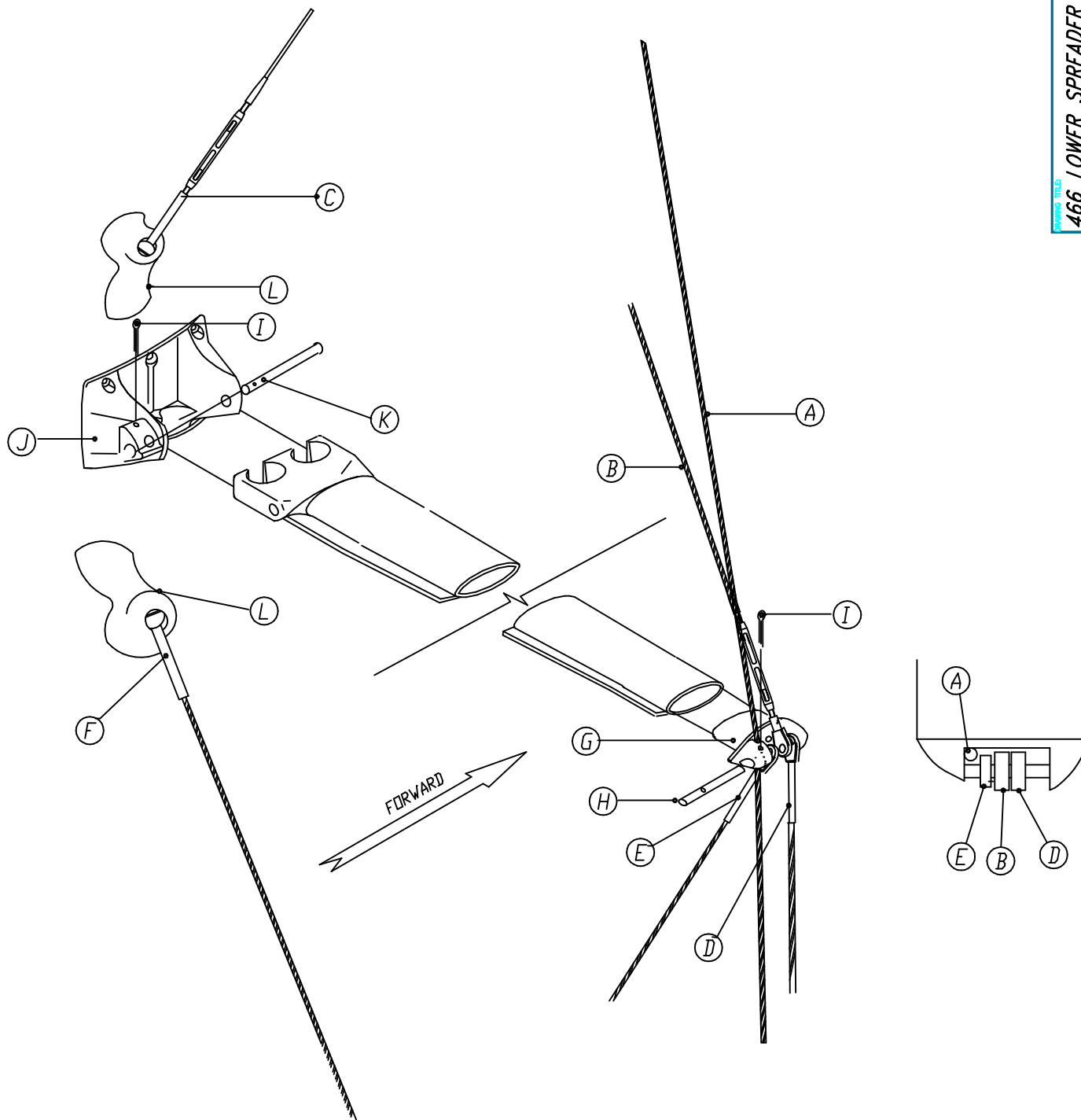


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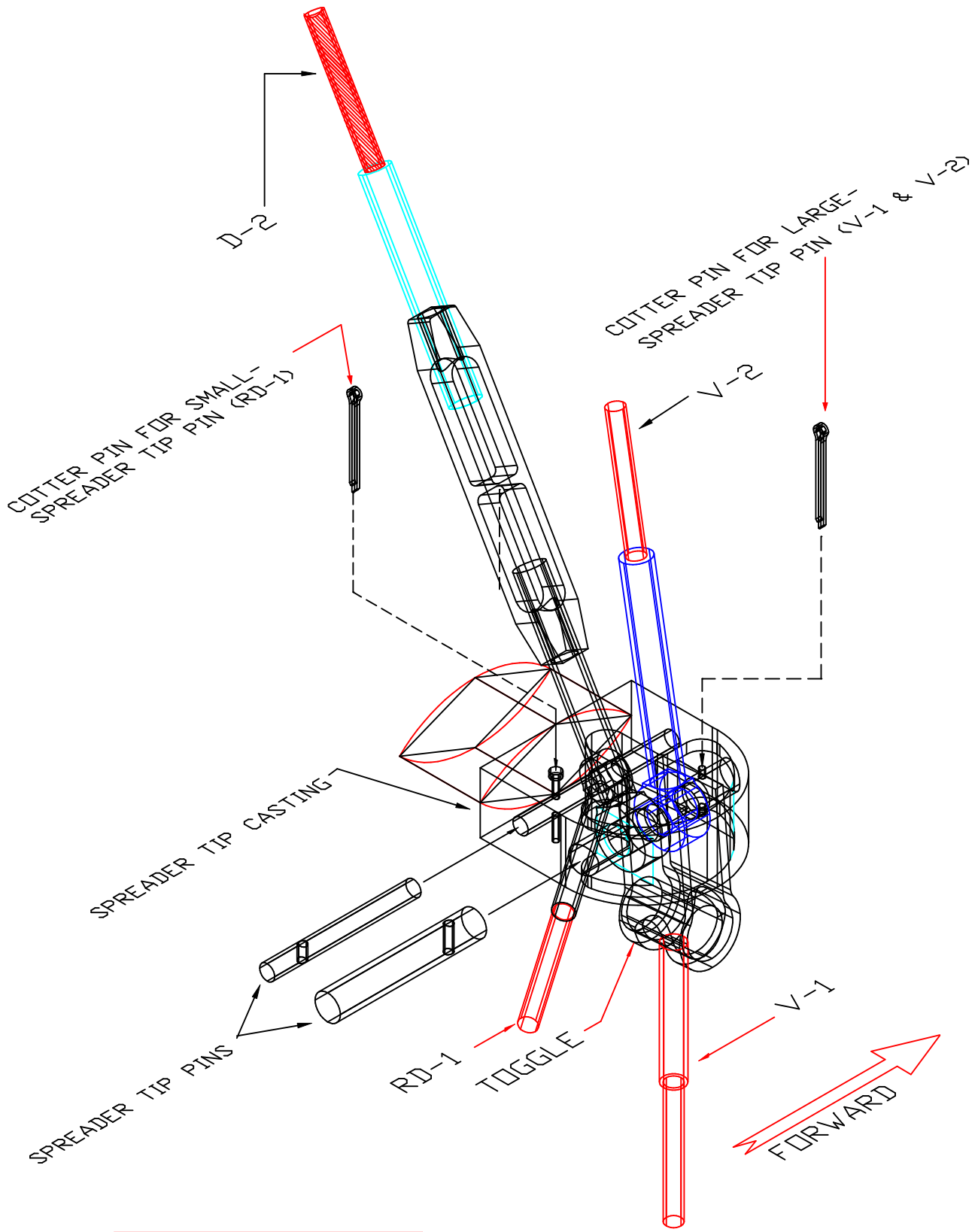
466 UPPER SPREADER TIP DETAIL	
REVISED NO.	NONE
ISSUANCE NO.	4608049B
DATE	2/13/98
ENGINEERING DEPT.	

LOWER UPPER SHROUD
 UPPER INTERMEDIATE SHROUD - MARINE EYE
 UPPER DIAMOND - STEMBALL & TURNBUCKLE
 LOWER INTERMEDIATE - MARINE EYE
 LOWER DIAMOND - MARINE EYE
 LOWER SHROUD - STEMBALL
 SPREADER TIP CASTING
 SPREADER TIP PIN
 COTTER PIN
 SPREADER BASE BRACKET
 SPREADER BASE BRACKET PIN
 BACKING SHELL



466 LOWER SPREADER TIP DETAIL

DESIGN NO.	4608049D	REVISION NO.	NONE
DATE	2/13/98	ENGINEERING DEPT.	



NOTE: STBD. SIDE SHOWN PORT SIDE IS MIRROR IMAGE

H466 SELDEN STANDARD STANDING RIGGING SPECIFICATIONS

BY: KJC		DATE: 1-Sep-01		REVISION:		
OPT/STD	ITEM	QUANTITY	WIRE SIZE	UPPER END	LENGTH	LOWER END
1	STD D3	2	3/8" (9.5mm) 1 X 19	RBS 10, BC10, SB12 STEMBALL IN BACKING SHELL	4.06 m	13.33 ft. ME12 MARINE EYE
2	STD V2	2	3/8" (9.5mm) 1 X 19	RTJ1220 JAW TOGGLE	5.31 m	17.41 ft. ME12 MARINE EYE
1	STD D2	2	5/16" (8mm) 1 X 19	RTJ1220 JAW TOGGLE	5.20 m	17.07 ft. TB122020 12-20-20 TURNBUCKLE
2	STD V1	2	3/8" (9.5mm) DYFORM	RBS 07A, SB10 STEMBALL IN BACKING SHELL	7.43 m	24.38 ft. 10-16-16 TURNBUCKLE W/ EYE
3	STD D1	2	3/8" (9.5mm) DYFORM	RBS 10, BC10, SB12 STEMBALL IN BACKING SHELL	6.97 m	22.86 ft. 12-20-20 TURNBUCKLE W/ JAW TOGGLE
3	STD UPPER DIAMOND, RD2	2	1/4" (6.4mm) 1 X 19	MEO8, MARINE EYE	5.21 m	17.10 ft. 8-12-12 STEMBALL TURNBUCKLE IN BACKING SHELL
4	STD LOWER DIAMOND, RD1	2	1/4" (6.4mm) 1 X 19	MEO8, MARINE EYE	4.50 m	14.78 ft. 8-12-12 STEMBALL TURNBUCKLE WITH JAW TOGGLE
	OPT. INNER FORESTAY	1	9/32" (7.1mm) 1 X 19	SBENG116 J2001616, MEO9, STEMBALL EYE, JAW TOGGLE	12.47 m	40.90 ft. FORESTAY QUICK RELEASE LEVER
5	STD FORESTAY	1	3/8" (9.5mm) 1 X 19	SBENG220, J2002020, MEO12, STEMBALL EYE, JAW TOGGLE	17.30 m	56.77 ft. GIBB 10-20-20 TURNBUCKLE W/ JAW TOGGLE LOOSE

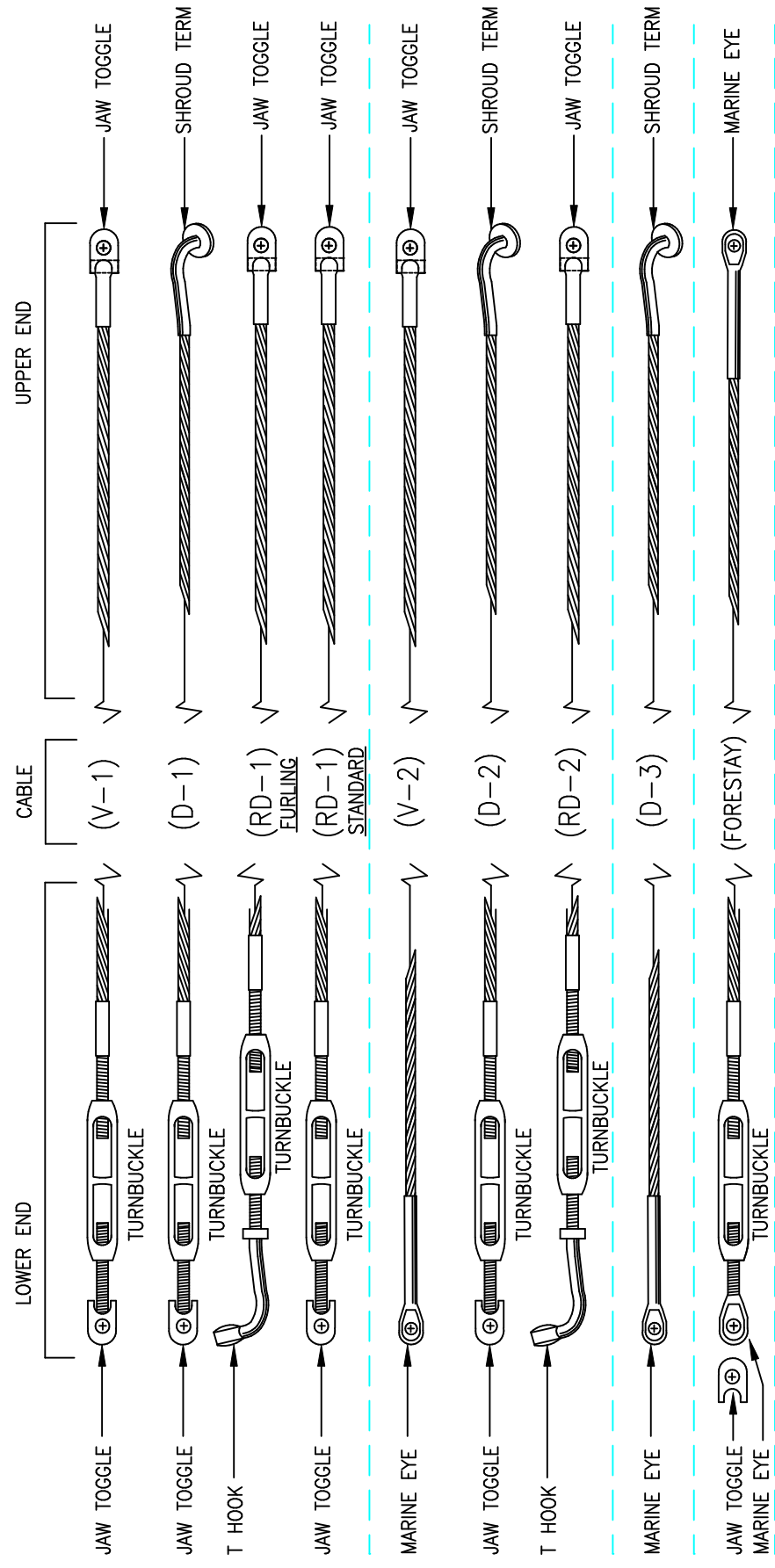
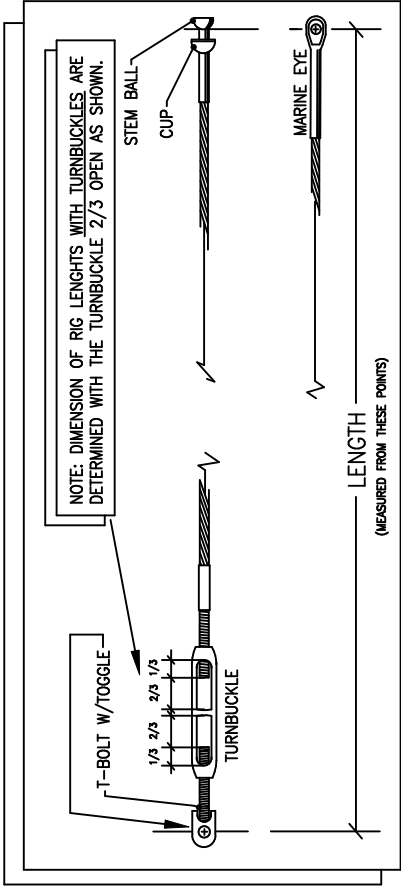
H466 SELDEN FURLING STANDING RIGGING SPECIFICATIONS

BY: KJC		DATE: 1-Sep-01		REVISION:		
OPT/STD	ITEM	QUANTITY	WIRE SIZE	UPPER END	LENGTH	LOWER END
1	STD D3	2	3/8" (9.5mm) 1 X 19	RBS 10, BC10, SB12 STEMBALL IN BACKING SHELL	4.54 m	14.91 ft. ME12 MARINE EYE
2	STD V2	2	3/8" (9.5mm) 1 X 19	RTJ1220 JAW TOGGLE	5.24 m	17.18 ft. ME12 MARINE EYE
1	STD D2	2	5/16" (8mm) 1 X 19	RTJ1220 JAW TOGGLE	5.15 m	16.88 ft. TB122020 12-20-20 TURNBUCKLE
2	STD V1	2	3/8" (9.5mm) DYFORM	RBS 07A, SB10 STEMBALL IN BACKING SHELL	6.92 m	22.69 ft. 10-16-16 TURNBUCKLE W/ EYE
3	STD D1	2	3/8" (9.5mm) DYFORM	RBS 10, BC10, SB12 STEMBALL IN BACKING SHELL	6.67 m	21.87 ft. 12-20-20 TURNBUCKLE W/ JAW TOGGLE
3	STD UPPER DIAMOND, RD2	2	1/4" (6.4mm) 1 X 19	MEO8 MARINE EYE	5.15 m	16.90 ft. 8-12-12 STEMBALL TURNBUCKLE IN BACKING SHELL
4	STD LOWER DIAMOND, RD1	2	1/4" (6.4mm) 1 X 19	MEO8 MARINE EYE	6.04 m	19.82 ft. 8-12-12 STEMBALL TURNBUCKLE WITH JAW TOGGLE
	OPT. INNER FORESTAY	1	9/32" (7.1mm) 1 X 19	SBENG116 J2001616, MEO9, STEMBALL EYE, JAW TOGGLE	12.49 m	40.98 ft. FORESTAY QUICK RELEASE LEVER
5	STD FORESTAY	1	3/8" (9.5mm) 1 X 19	SBENG220, J2002020, MEO12, STEMBALL EYE, JAW TOGGLE	17.32 m	56.81 ft. GIBB 10-20-20 TURNBUCKLE W/ JAW TOGGLE LOOSE

V = VERTICAL
 D = DIAGONAL
 RD = REVERSE DIAGONAL

1 = LOWER
 2 = INTER.
 3 = UPPER

NOTE: SEE PAGES 50A & 50B FOR ACTUAL RIG LENGTHS.



TUNING THE H466 B&R RIG

The easiest method for tuning the B&R rig is to perform step one as follows before the mast is stepped, with it lying aft side down on two sawhorses. Begin with all rigging slack. If the mast is already stepped, loosen all the rigging, and then proceed to step one.

1. Start with all the rigging slack. Then induce the mast bend by tightening the reverse diagonals (diamonds). Measure the bend by tensioning a line or the main halyard between the masthead and the gooseneck. The maximum amount of bend should be no more than 10" (254.0mm) for the standard rig and no more than 2" (50 mm) for the furling mast measured perpendicular from the aft face of the mast to the halyard at the deepest part of the bend. It can be less than that based on the sail shape and your own preference. The bend should also be evenly distributed along the mast to give a smooth shape. Keep in mind that bending a furling mast may make it more difficult to furl and will not do much to flatten the sail as in a standard rig. It is very important that the mast also be straight from side to side at this time. Tighten or loosen the reverse diagonals to achieve this.
2. Step the mast with all shrouds attached but with the turnbuckles completely loosened (if the mast was not already stepped).
3. Attach the jib halyard to a cleat on the bow to support the mast in a raked position (the masthead should be about 1-1/2' behind the step). Attach the verticals and tighten them until you can just see the hole for the cotter pin in the turnbuckle. Tighten the jib halyard until you can attach the forestay. At this point the masthead should be raked so that a weight hung on the main halyard hangs about 1' behind the mast step.
4. Use the main halyard to check that the mast is centered from side to side. Pull it tight and mark the halyard next to the verticals chainplate. Now do the same to the other side to see if the marks line up. If not, tighten and/or loosen the verticals until the marks line up. Once the masthead is centered, begin tightening the verticals until the turnbuckles are approximately half closed. While tightening the verticals you may notice the bend in the mast increasing. Now you can tighten the lowers which will tend to straighten the lower part of the mast. Be sure to tighten port and starboard sides evenly.
5. Now you should tighten the headstay until it is approximately half closed as well. This should induce the appropriate amount of headstay tension. Never use anything more than a pair of wrenches to tighten your rigging. If you use an extended piece of pipe on the handle of a wrench you can over tighten the rigging and do damage to the mast or rigging.
6. On the Hunter H466 it is necessary to go up the mast in a bosun's chair to tighten the number 2 diagonal shroud (D2 or intermediate shroud). Always use caution when "going aloft". You should always use a mountain climbing harness or Bosun's Chair intended for this use. Always tie into the harness with the halyard using a bowline and then secure the shackle as a back up as the knot is more reliable than a mechanical fastener. The person hoisting you aloft should keep the halyard stopper closed to prevent falls. Good communication between the two of you is also important. Tighten the D2 until it has just become tight and then add two complete turns. While at the first spreader, look up the back of the mast to see if it is straight (rather than bent from side to side). If it is not straight, then adjust the appropriate D2 to straighten it.
7. Have the person on deck carefully lower you. They should keep the halyard wrapped at least twice around the winch and should always have one hand able to stop the halyard from running free. Once on deck look up the back of the mast and see if it is straight.(rather

TUNING THE H466 B&R RIG

than bent from side to side) if it is not straight then adjust the lowers (D1) until it is.

rigging bending back the ends and taping them to prevent snagged lines, sails and fingers.

8. If you have the standard rig you need to attach the struts at this time. Attach the lower end of the strut to the smaller hole in the chainplate. Adjust the length by turning the ball joint bearing in the upper end of the strut until the holes in the pin can be attached. It is normal to have some play between the strut and the chainplate and strut bracket

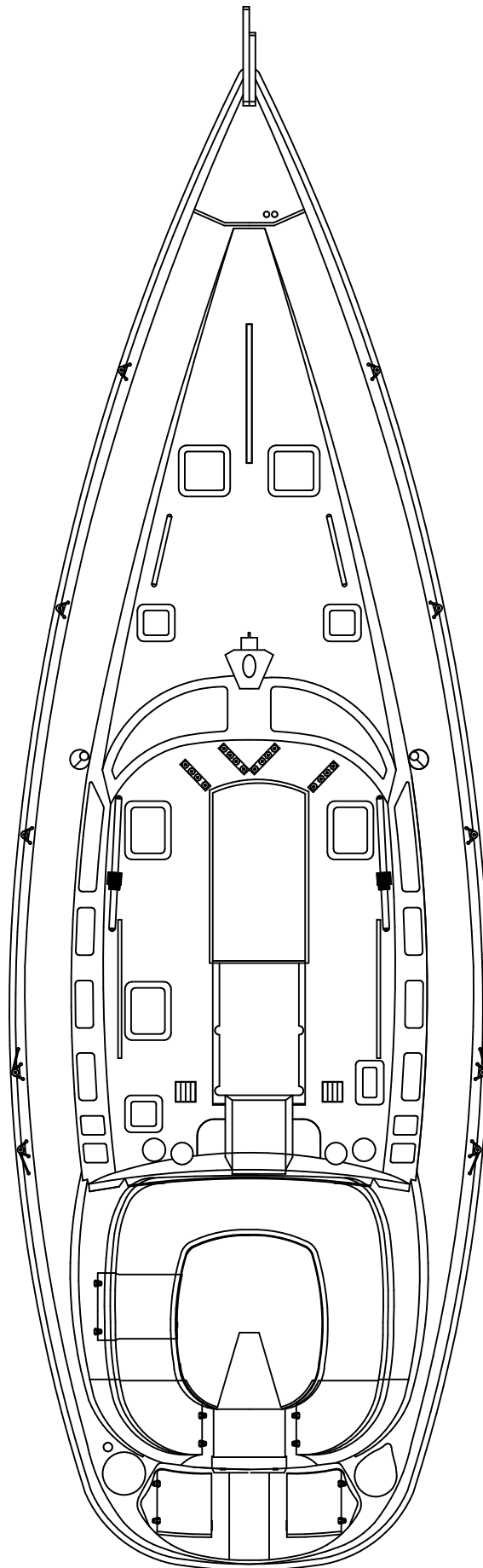
Remember that rigging, like everything else, can age. As it gets older it may need to be replaced. The frequency for which this becomes necessary depends on the climate and conditions in which the boat is sailed. For example: if you sail in the Caribbean it should be replaced every 2-3 years compared to every 10 for the great lakes. You should consult a professional rigger for advice.

9. The final test is to go sailing in 10-15 knots of wind. If when sailing upwind, the shrouds on the leeward side are slack then tighten them to remove about half the slack keeping note of the number of turns. Then tack and do the same to the other side. Do this until you are happy with the tension and the leeward side does not get loose when the boat is heeled. Now sight up the mast to be sure it is still relatively straight from side to side. If it is not then adjust to appropriate rigging to correct it. For example: if the mast is straight until the upper spreader and then hooks to the windward side then you will have to revisit steps 6 and 7 above. Remember to always tighten the leeward shroud, tack and tighten the new leeward shroud the same amount. This prevents damage to the turnbuckles and is also much easier to do. Keep in mind it is also possible to have something too tight such as a diagonal shroud.

10. At this point you should have adequate headstay tension. The sails are built for about 14" of headstay sag, the bend in the standard mast should be about 1' and 4" in the furling mast and it should be nearly straight from side to side when sailing upwind. If any of these are not true then revisit the appropriate step above to correct it. If the sag in the headstay is too much then adding tension to the verticals will fix it.

11. Once the rig is tuned you should make sure to add the cotter pins to all the

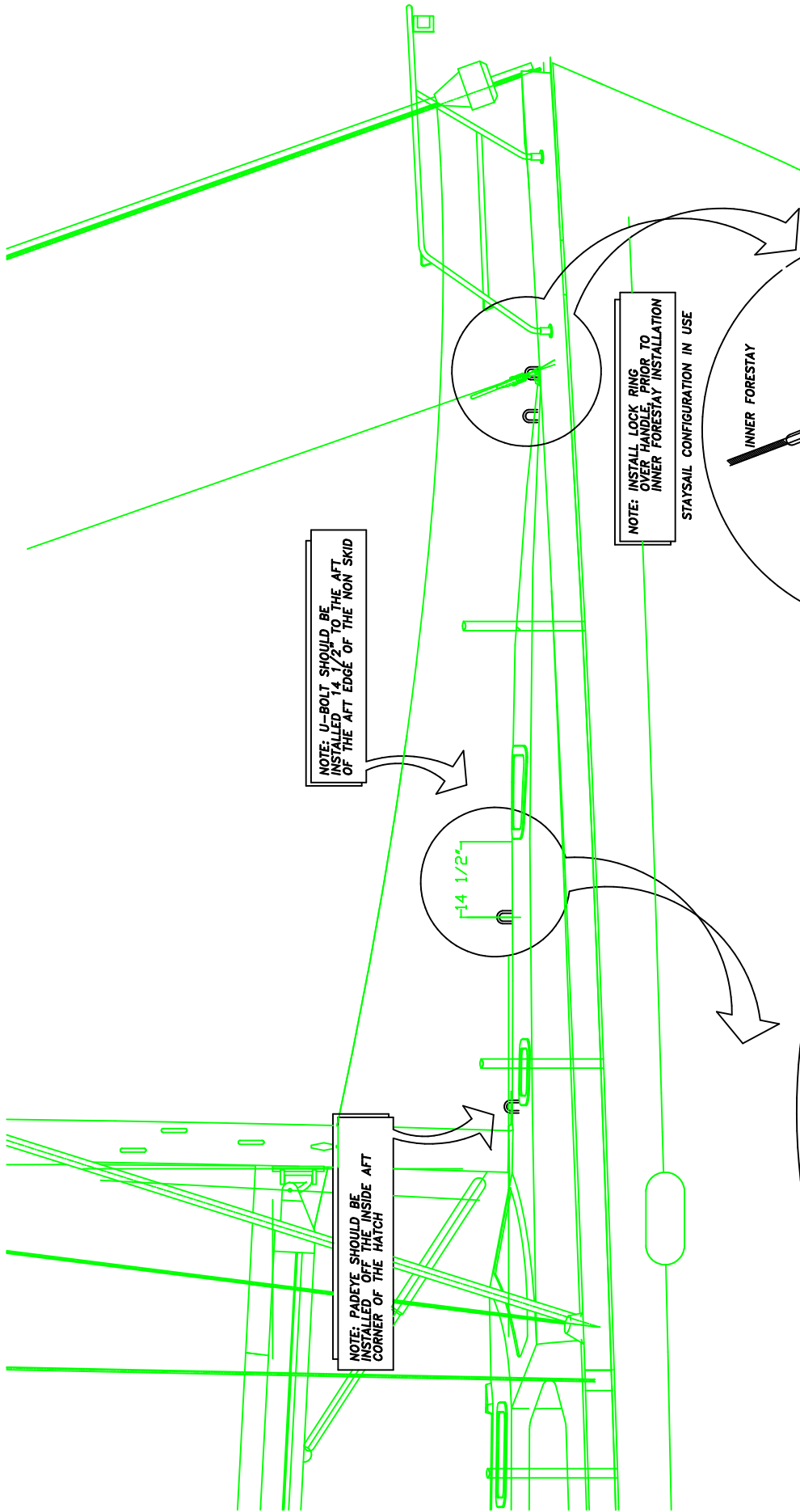
SEE PAGES 38B & 38C ALSO 40A & 40B FOR
OPTIONAL DECK HARDWARE INFORMATION.



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DRAWING TITLE	
H466 OPTIONAL SPINNAKER HARDWARE LAYOUT	
DRAWING NO.	4608054A
REVISED NO.	NONE
DATE	11/13/98
ENGINEERING DEPT.	

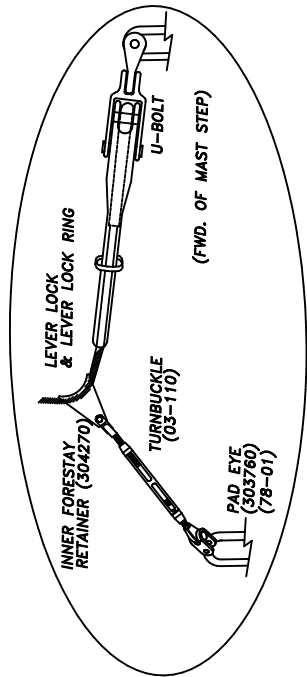
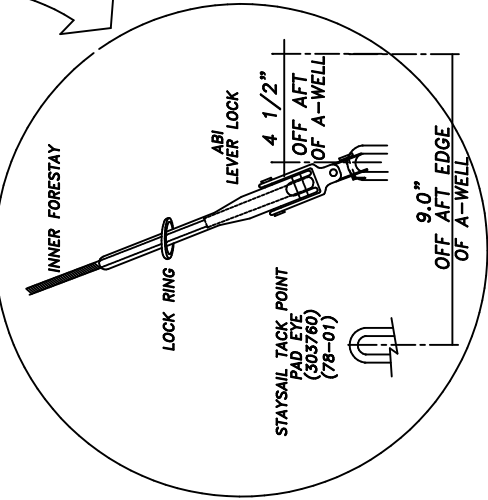


NOTE: U-BOLT SHOULD BE INSTALLED 14 1/2" TO THE AFT EDGE OF THE AFT EDGE OF THE NON SKID

NOTE: PADEYE SHOULD BE INSTALLED OFF THE INSIDE AFT CORNER OF THE HATCH

NOTE: INSTALL LOCK RING OVER HANDLE, PRIOR TO INNER FORESTAY INSTALLATION

STAYSAIL CONFIGURATION IN USE



CONFIGURATION WHEN NOT IN USE

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H466 OPTIONAL STAYSAIL LAYOUT

DESIGN NO.	4608054B
REVISION NO.	NONE
DATE	11/13/98
ENGINEERING DEPT	

ENGINE OPERATING INSTRUCTIONS:

- ① FILL DIESEL TANK WITH DIESEL FUEL
- ② CHECK ENGINE OIL LEVEL (SEE YANMAR MANUAL)
- ③ OPEN ENGINE RAW WATER PICKUP SEACOCK (SEE PAGE 60A)
- ④ TURN ON "START BATTERY SELECTOR SWITCH" (LOCATED AT NAVIGATION STATION)
- ⑤ TURN KEY TO START POSITION, PUSH START BUTTON AND RELEASE WHEN ENGINE STARTS. NOTE* IF ENGINE APPEARS TO HAVE TROUBLE STARTING, SEE YANMAR MANUAL
- ⑥ TO SHUT ENGINE DOWN: PUSH RED BUTTON AT KEY SWITCH PANEL UNTIL ENGINE STOPS RUNNING THEN TURN KEY TO OFF POSITION.

WARNING: DO NOT LEAVE AFT HATCHES/ PORTS OPEN WHILE ENGINE IS RUNNING. THERE EXISTS A POSSIBILITY OF EXHAUST POISONING, OR EVEN DEATH.

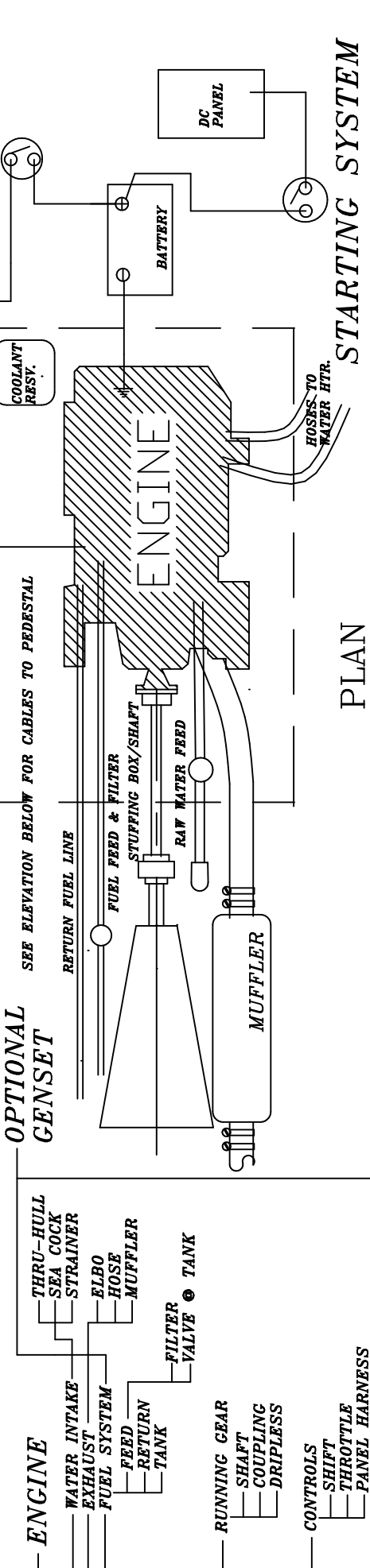
SEE PAGE 63E-1 FOR OPTIONAL GENERATOR OPERATING INSTRUCTIONS

<small>OWNER FILE</small>	
H466 ENGINE OPERATING INST.	
<small>ISSUANCE NO.</small>	4608055A
<small>EXTENSION NO.</small>	NONE
<small>DATE</small>	11/21/97
<small>ENGINEERING DEPT.</small>	

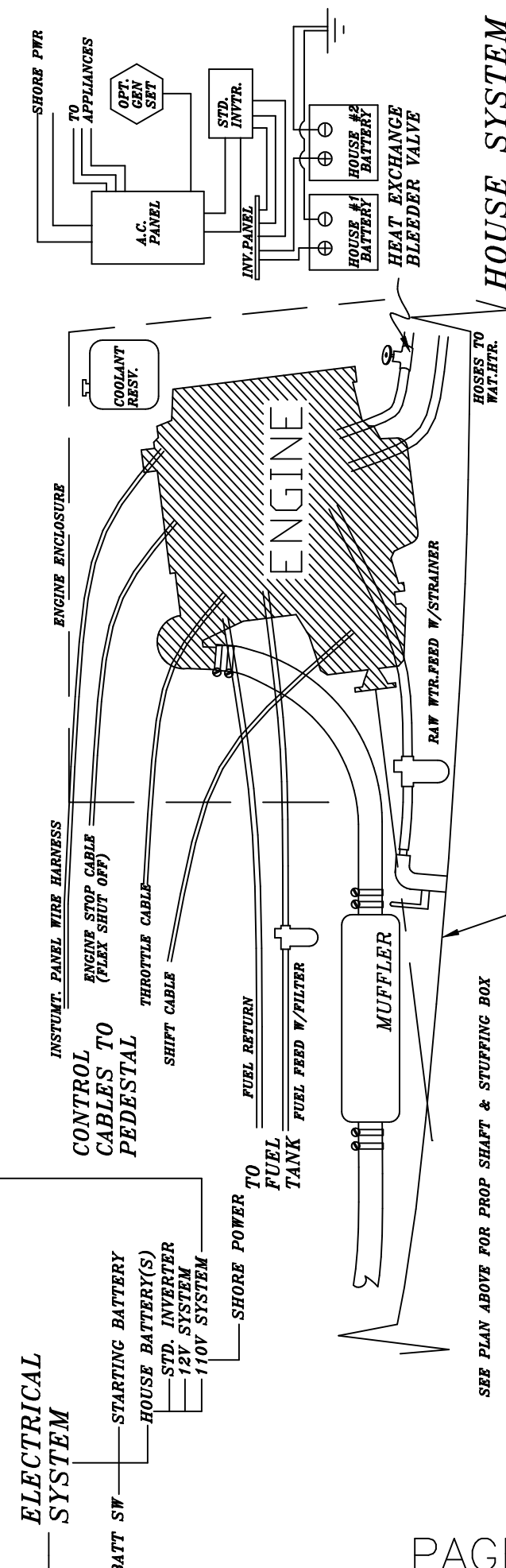
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SYSTEMS SCHEMATIC



PLAN



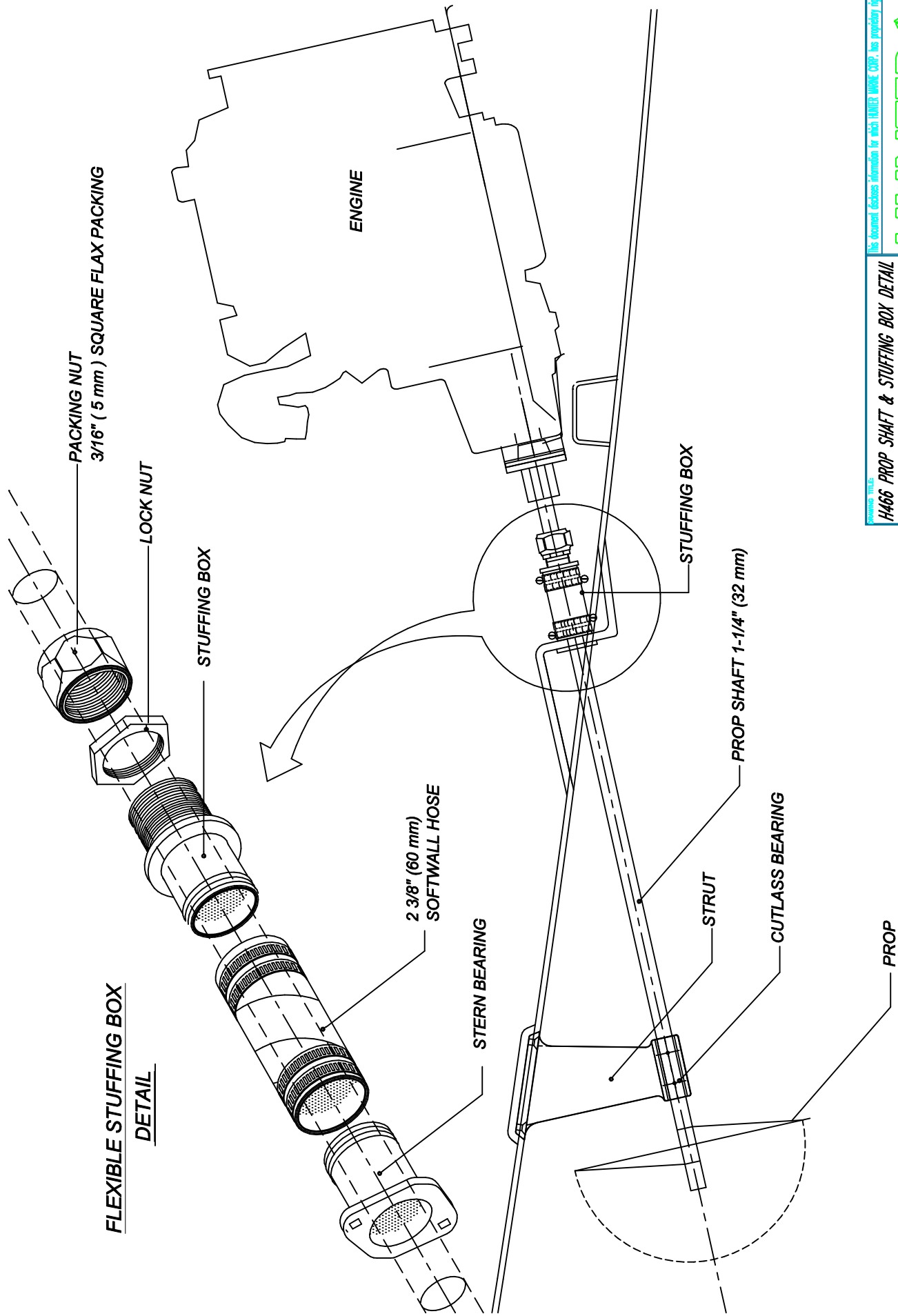
ELEVATION

NOTE: THIS DWG. IS SCHEMATIC FORM SEE SPECIFIC SYSTEM DWGS. FOR BATTERIES/SWITCHES/ CHARGER ETC. LOCATIONS AND WIRE RUNS.

OWNER FILE
H466 ENGINE COMPARTMENT LAYOUT
ISSUE NO. 4608055B ISSUE DATE NONE
DATE 11/21/98
ENGINEERING DEPT.



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**FLEXIBLE STUFFING BOX
DETAIL**

ISSUES FILE
H466 PROP SHAFT & STUFFING BOX DETAIL
ISSUE NO. 4608056A-1 REVISION NO. NONE
ISSUE DATE 3/2/00 ENGINEERING DEPT.



FRESH WATER SYSTEM OPERATION:

- ① FILL TANK/S WITH FRESH WATER (SEE PAGE 60 FOR FILL LOCATIONS)
- ② OPEN DESIRED MANIFOLD VALVE/S (SEE PAGE 57B-1 FOR MANIFOLD LOCATION)
- ③ TURN HOUSE BATTERY SELECTOR SWITCH TO DESIRED HOUSE BATTERY
"FLIP" MAIN PANEL BREAKERS @ BATTERY SWITCH TO THE "ON" POSITION
(SEE PAGE 63A-8 FOR SWITCH LOCATION)
- ④ TURN ON "D.C. MAIN" BREAKER ON MAIN BREAKER PANEL
- ⑤ TURN ON "WATER PRESSURE" BREAKER ON MAIN BREAKER PANEL
- ⑥ "HOT WATER" IS ATTAINABLE BASICALLY IN TWO WAYS...
 - Ⓐ BY HEATING THE WATER THRU THE ENGINE EXCHANGER UNIT
 - Ⓑ BY SUPPLYING 110V.A.C. BY "DOCKSIDE SHORE POWER" OR GENERATOR POWER.
- ⑦ TO HEAT BY "ENGINE" SEE PAGE 55 FOR ENGINE OPERATING INST.

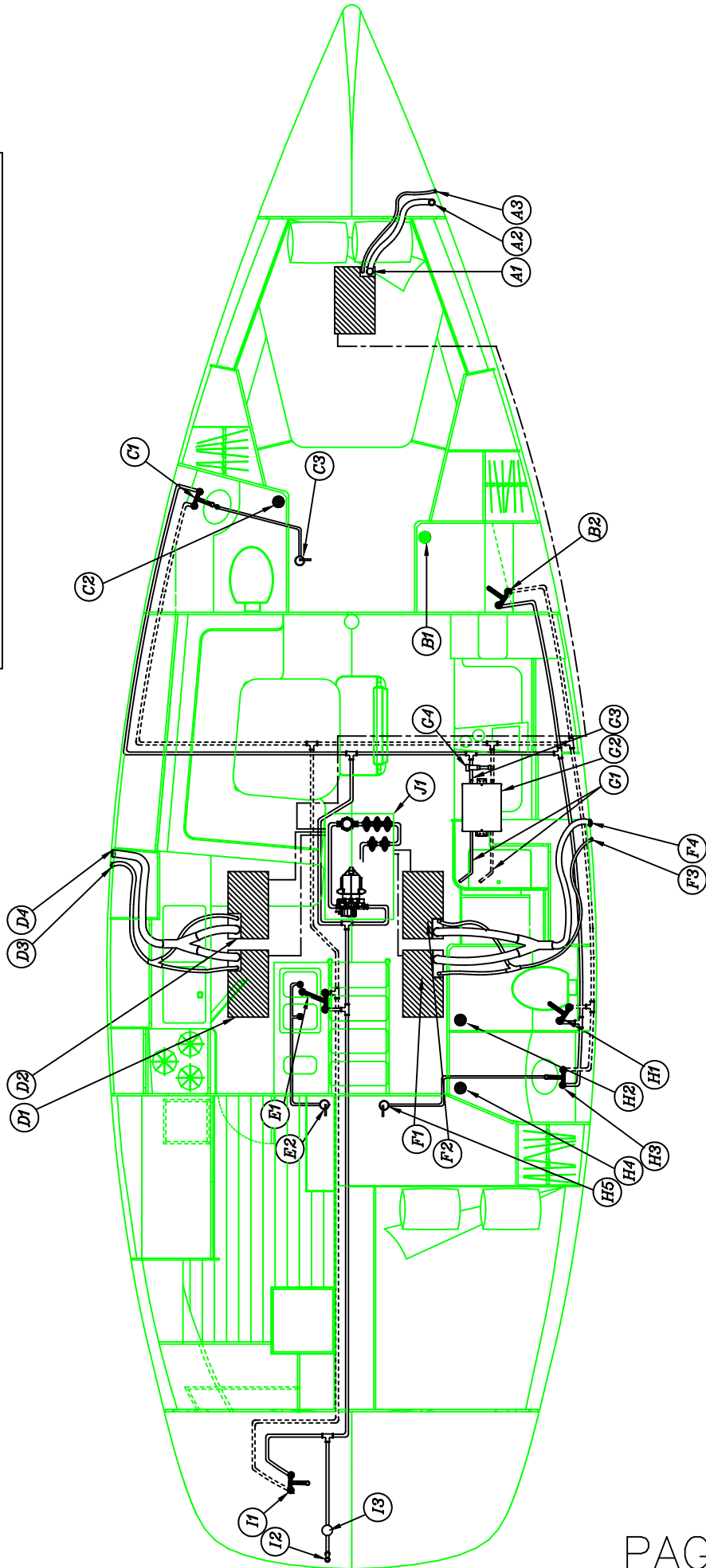
NOTE: WHEN COOLANT IS INSTALLED, BLEED AIR FROM HEAT EXCHANGER LINES TO WATER HEATER.
CRANK ENGINE, OPEN BLEEDER VALVE (SEE PAGE 55A) UNTIL AIR IS GONE FROM LINES

- ⑧ TO HEAT BY "SHORE POWER"
 - Ⓐ HOOK UP SHORE POWER CABLE/S
 - Ⓑ CYCLE WATERPUMP BY TURNING ON HOT WATER SPIGOT AT GALLEY TO MAKE SURE ALL AIR IS PURGED FROM SYSTEM.
 - Ⓒ TURN ON A.C. MAIN BREAKER ON MAIN BREAKER PANEL
 - Ⓓ TURN ON "WATER HEATER BREAKER" ON MAIN BREAKER PANEL
- ⑨ TO HEAT BY "GENERATOR POWER"... SEE PAGE 63E-1 FOR GENERATOR OPER. INSTRUCTIONS
THEN FOLLOW STEPS #8 B,C & D (THIS PAGE) UNDER "TO HEAT BY SHORE POWER".

NOTE: AS WITH ALL WATER HEATERS, BE SURE WATER TANK IS FULL
BEFORE APPLYING POWER TO UNIT, TO AVOID DAMAGE TO HEATING ELEMENT
GENERATOR IS OPTIONAL

HOT WATER LINES

 COLD WATER LINES
 =====
 FRESH WATER FEED LINES TO MANIFOLD



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FRESH WATER SYSTEM LAYOUT LIST

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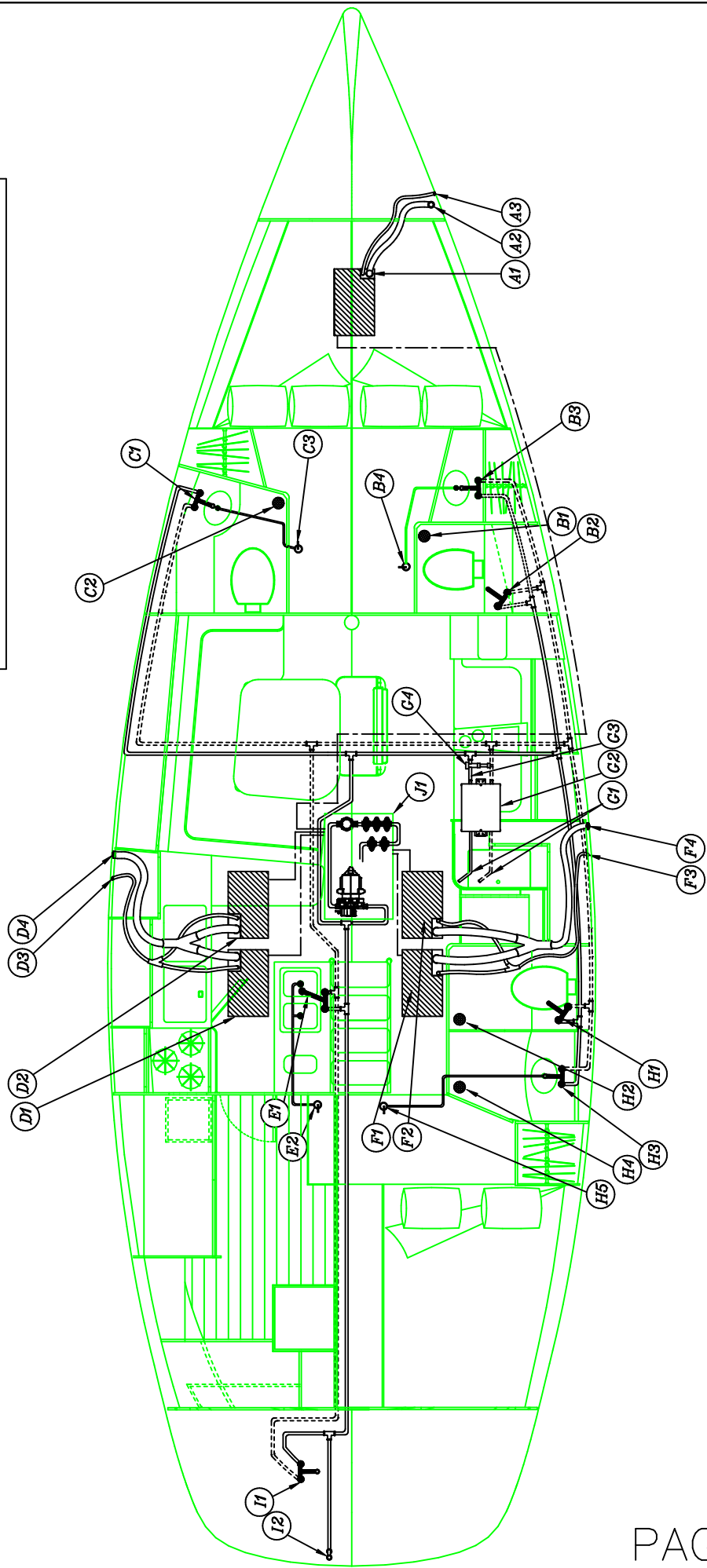
H466 FRESH WATER SYSTEM LAYOUT LIST (TR CAB.)

DRAWING NO.	NONE
DRAWING NO.	4608057B-2
DATE	11/21/98
DEPT.	ENGINEERING DEPT

FWD WATER TANK COMPONENTS	—	A1	FWD WATER TANK (66 GALLONS/249 LITERS)
		A2	TANK FILL LOCATION (DECK FITTING)
		A3	TANK FILL VENT LOCATION (HULL FITTING)
FWD STBD. VANITY COMPONENTS	—	B1	FWD STBD. (OPTIONAL) SHOWER DRAIN (SEE PG. 57B-6)
		B2	FWD STBD. SHOWER FAUCET
FWD PORT HEAD COMPONENTS	—	C1	FWD PT. VANITY FAUCET
		C2	FWD PT. SOLE DRAIN (SEE PG. 57B-6)
		C3	FWD PT. VANITY SINK DRAIN (SEACOCK FITTING)
PORT WATER TANKS COMPONENTS	—	D1	PORT AFT WATER TANK (36 GALLONS/132 LITERS)
		D2	PORT FWD WATER TANK (18 GALLONS/68 LITERS)
		D3	PORT FWD AND PORT AFT WATER TANK FILL VENT (VENTED STANCHION/DECK HDWR.)
		D4	PORT FWD AND PORT AFT WATER TANK FILL LOCATIONS (DECK FITTING)
			**(ONE VENT LOCATION FOR BOTH TANKS)
			**(ONE FILL LOCATION FOR BOTH TANKS)
GALLEY SINK COMPONENTS	—	E1	GALLEY FAUCET
		E2	GALLEY SINK DRAIN (SEACOCK FITTING)
STBD. WATER TANKS COMPONENTS	—	F1	AFT STBD. WATER TANK (21 GALLONS/79LITERS)
		F2	FWD STBD. WATER TANK (45 GALLONS/170 LITERS)
		F3	STBD. FWD AND STBD. AFT WATER TANK FILL VENT (VENTED STANCHION/DECK HDWR.)
		F4	STBD. FWD AND STBD. AFT WATER TANK FILL LOCATION (DECK FITTING)
			**(ONE VENT LOCATION FOR BOTH TANKS)
			**(ONE FILL LOCATION FOR BOTH TANKS)
WATER HEATER COMPONENTS	—	G1	WATER HEATER HEAT EXCHANGER LINES TO ENGINE
		G2	WATER HEATER (11 GALLONS/41.7 LITERS)
		G3	IN LINE CHECK VALVE (PREVENTS HOT WATER BACK FILL)
		G4	THERMOSTATIC MIXER VALVE
AFT HEAD COMPONENTS	—	H1	AFT HEAD SHOWER FAUCET
		H2	AFT HEAD SHOWER DRAIN (SEE PG. 57B-6)
		H3	AFT HEAD VANITY FAUCET
		H4	AFT VANITY SHOWER DRAIN (SEE PG. 57B-6)
		H5	AFT HEAD VANITY SINK DRAIN (SEACOCK FITTING)
TRANSOM SHOWER/ SHORE WATER COMPONENTS	—	I1	TRANSOM SHOWER FAUCET
		I2	SHORE WATER INLET FITTING
		I3	PRESSURE REGULATOR
MANIFOLD COMPARTMENT COMPONENTS	—	J1	SEE PAGE 57B-5 FOR THE WATER MANIFOLD COMPARTMENT LAYOUT

HOT WATER LINES 1/2" (12.7mm)

 COLD WATER LINES 1/2" (12.7mm)
 =====
 FRESH WATER FEED LINES TO MANIFOLD



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H466 FRESH WATER SYSTEM LAYOUT (QUAD CABIN)	
DRAWING NO. 4608057B-3	REVISION NO. NONE
PROJECT ENGINEERING DEPT.	DATE 11/12/98

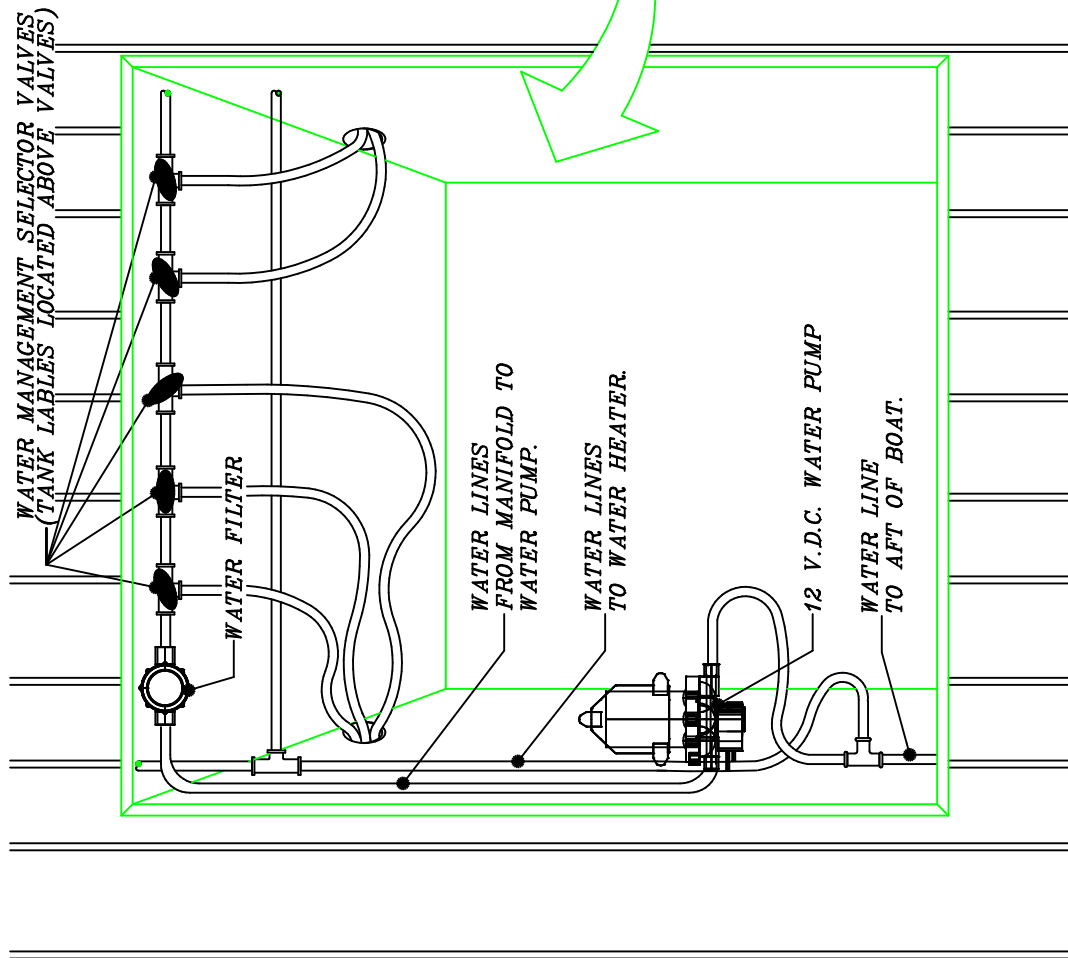
FRESH WATER SYSTEM LAYOUT LIST

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1466 FRESH WATER SYSTEM LAYOUT LIST (QUAD CAB.)
 PROJECT NO. 4608057B-4
 REVISION NO. NONE
 DATE 11/21/98
 DEPT. ENGINEERING DEPT.

FWD WATER TANK COMPONENTS	A1	FWD WATER TANK (66 GALLONS/249 LITERS)
	A2	TANK FILL LOCATION (DECK FITTING)
	A3	TANK FILL VENT LOCATION (HULL FITTING)
FWD STBD. VANITY COMPONENTS	B1	FWD STBD. SHOWER DRAIN (SEE PG. 57B-6)
	B2	FWD STBD. SHOWER FAUCET
	B3	FWD STBD. VANITY FAUCET (OPT.)
	B4	FWD STBD. VANITY SINK DRAIN (SEACOCK FITTING)
FWD PORT HEAD COMPONENTS	C1	FWD PT. VANITY/SHOWER FAUCET
	C2	FWD PT. SHOWER DRAIN (SEE PG. 57B-6)
	C3	FWD PT. VANITY SINK DRAIN (SEACOCK FITTING)
PORT WATER TANKS COMPONENTS	D1	PORT AFT WATER TANK (36 GALLONS/132 LITERS)
	D2	PORT FWD WATER TANK (18 GALLONS/68 LITERS)
	D3	PORT FWD AND PORT AFT WATER TANK FILL VENT (VENTED STANCHION/DECK HDWR.) **(ONE VENT LOCATION FOR BOTH TANKS)
	D4	PORT FWD AND PORT AFT WATER TANK FILL LOCATIONS (DECK FITTING) **(ONE FILL LOCATION FOR BOTH TANKS)
GALLEY SINK COMPONENTS	E1	GALLEY FAUCET
	E2	GALLEY SINK DRAIN (SEACOCK FITTING)
STBD. WATER TANKS COMPONENTS	F1	AFT STBD. WATER TANK (21 GALLONS/79LITERS)
	F2	FWD STBD. WATER TANK (45 GALLONS/170 LITERS)
	F3	STBD. FWD AND STBD. AFT WATER TANK FILL VENT (VENTED STANCHION/DECK HDWR.) **(ONE VENT LOCATION FOR BOTH TANKS)
	F4	STBD. FWD AND STBD. AFT WATER TANK FILL LOCATION (DECK FITTING) **(ONE FILL LOCATION FOR BOTH TANKS)
WATER HEATER COMPONENTS	G1	WATER HEATER HEAT EXCHANGER LINES TO ENGINE
	G2	WATER HEATER (11 GALLONS/41.7 LITERS)
	G3	IN LINE CHECK VALVE (PREVENTS HOT WATER BACK FILL)
	G4	THERMOSTATIC MIXER VALVE
AFT HEAD COMPONENTS	H1	AFT HEAD SHOWER FAUCET
	H2	AFT HEAD SHOWER DRAIN (SEE PG. 57B-6)
	H3	AFT HEAD VANITY FAUCET
	H4	AFT VANITY SHOWER DRAIN (SEE PG. 57B-6)
	H5	AFT HEAD VANITY SINK DRAIN (SEACOCK FITTING)
TRANSOM SHOWER/ SHORE WATER COMPONENTS	I1	TRANSOM SHOWER FAUCET
	I2	SHORE WATER INLET FITTING
MANIFOLD COMPARTMENT COMPONENTS	J1	SEE PAGE 57B-5 FOR THE WATER MANIFOLD COMPARTMENT LAYOUT



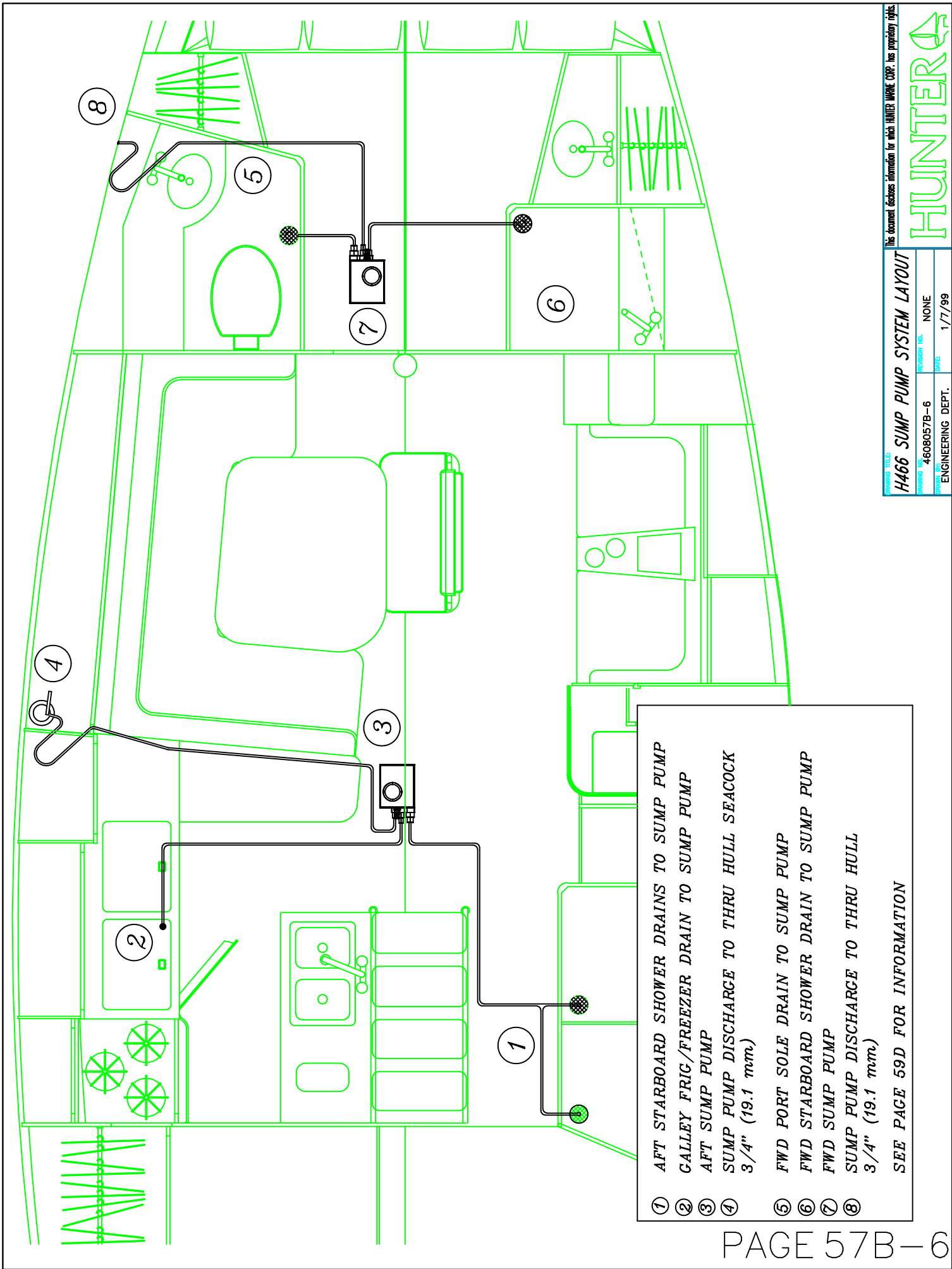
FWD
STBD

MANIFOLD COMPARTMENT LOCATED FORWARD OF COMPANIONWAY LADDER.

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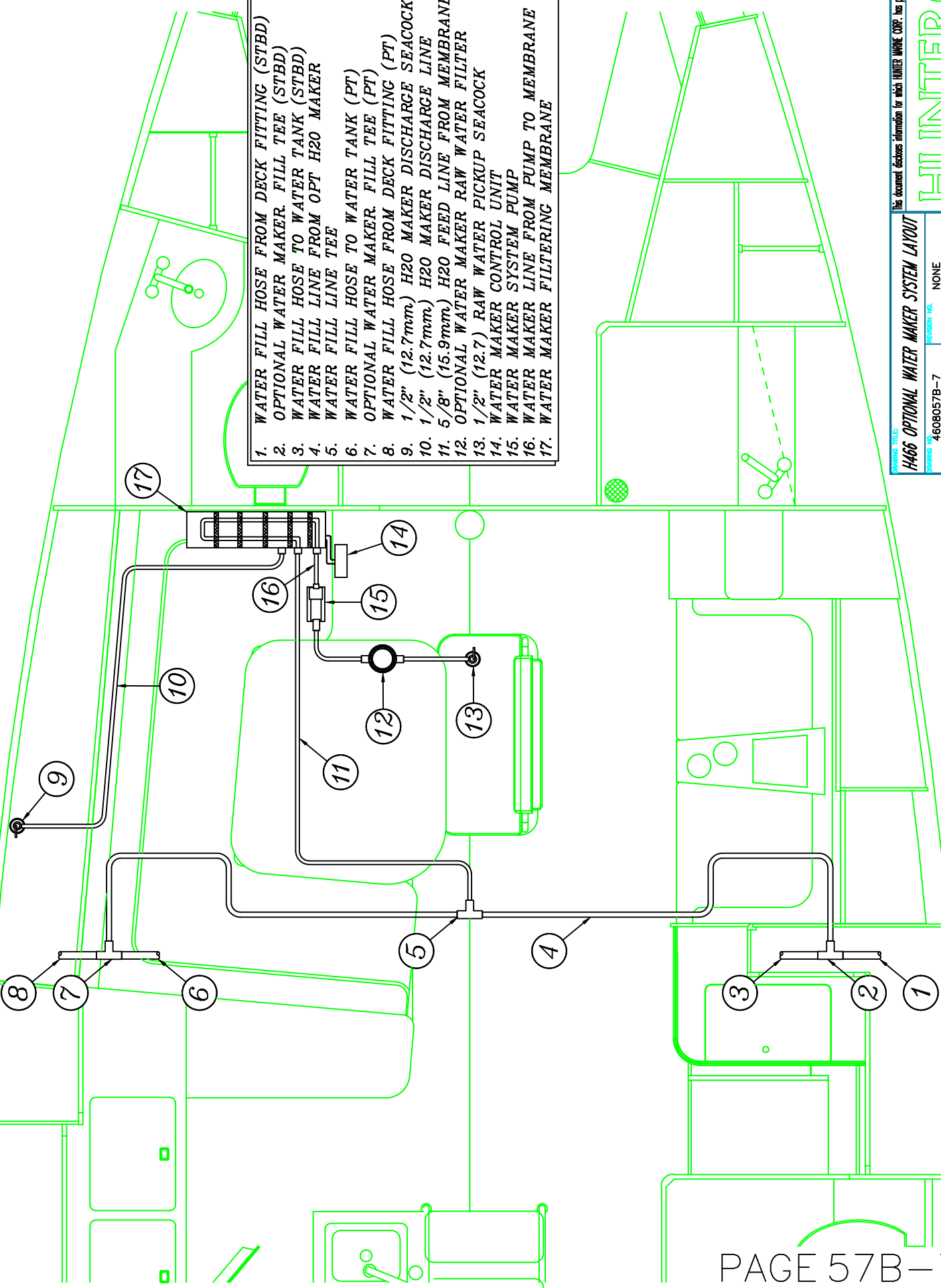
H466 WATER MANIFOLD COMPARTMENT LAYOUT			
REVISED TITLE	4608057B-5	REVISION NO.	NONE
ISSUED FOR	ENGINEERING DEPT.	DATE	11/23/98





- ① AFT STARBOARD SHOWER DRAINS TO SUMP PUMP
 - ② GALLEY FRIG/FREEZER DRAIN TO SUMP PUMP
 - ③ AFT SUMP PUMP
 - ④ SUMP PUMP DISCHARGE TO THRU HULL SEACOCK
3/4" (19.1 mm)
 - ⑤ FWD PORT SOLE DRAIN TO SUMP PUMP
 - ⑥ FWD STARBOARD SHOWER DRAIN TO SUMP PUMP
 - ⑦ FWD SUMP PUMP
 - ⑧ SUMP PUMP DISCHARGE TO THRU HULL
3/4" (19.1 mm)
- SEE PAGE 59D FOR INFORMATION

1. WATER FILL HOSE FROM DECK FITTING (STBD)
2. OPTIONAL WATER MAKER. FILL TEE (STBD)
3. WATER FILL HOSE TO WATER TANK (STBD)
4. WATER FILL LINE FROM OPT H2O MAKER
5. WATER FILL LINE TEE
6. WATER FILL HOSE TO WATER TANK (PT)
7. OPTIONAL WATER MAKER. FILL TEE (PT)
8. WATER FILL HOSE FROM DECK FITTING (PT)
9. 1/2" (12.7mm) H2O MAKER DISCHARGE SEACOCK
10. 1/2" (12.7mm) H2O MAKER DISCHARGE LINE
11. 5/8" (15.9mm) H2O FEED LINE FROM MEMBRANE
12. OPTIONAL WATER MAKER RAW WATER FILTER
13. 1/2" (12.7) RAW WATER PICKUP SEACOCK
14. WATER MAKER SYSTEM PUMP
15. WATER MAKER CONTROL UNIT
16. WATER MAKER LINE FROM PUMP TO MEMBRANE
17. WATER MAKER FILTERING MEMBRANE



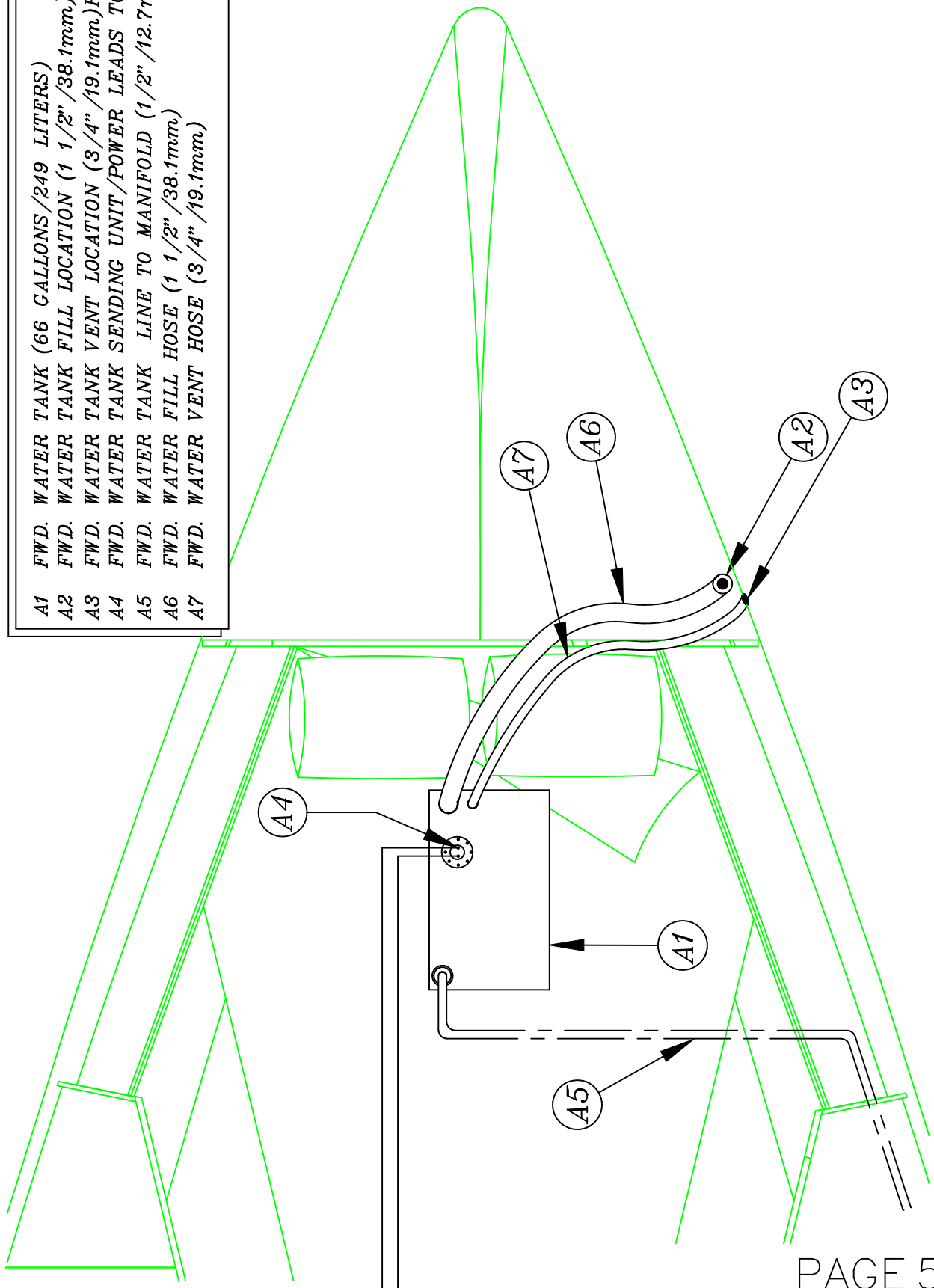
PROPERTY FILE
 H466 OPTIONAL WATER MAKER SYSTEM LAYOUT
 4608057B-7
 ENGINEERING DEPT.

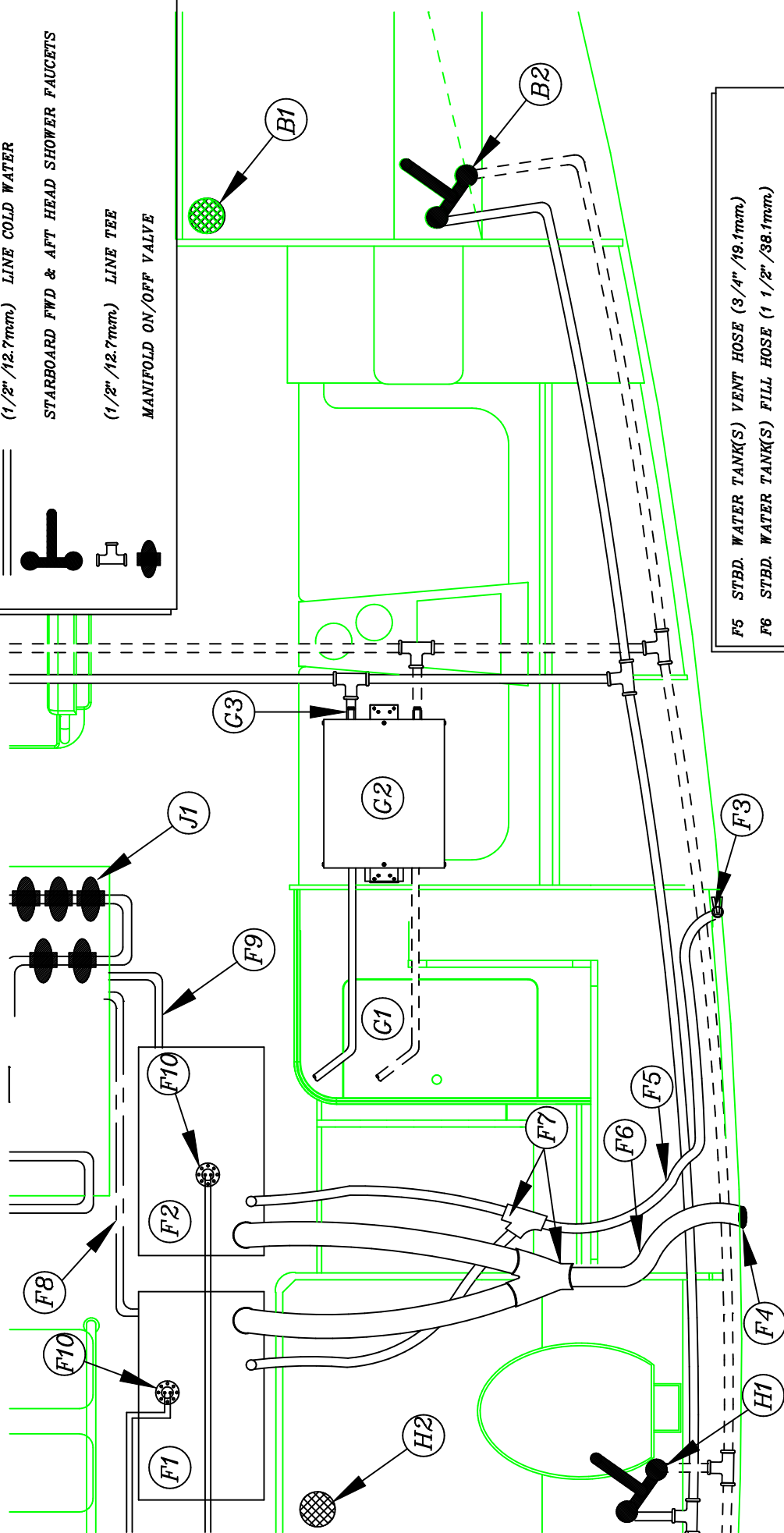
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DISCUSS WITH: NONE
 DATE: 2/17/00

HUNTER

- A1 FWD. WATER TANK (66 GALLONS/249 LITERS)
- A2 FWD. WATER TANK FILL LOCATION (1 1/2" /38.1mm)DECK FITTING
- A3 FWD. WATER TANK VENT LOCATION (3/4" /19.1mm)HULL FITTING
- A4 FWD. WATER TANK SENDING UNIT/POWER LEADS TO PANEL
- A5 FWD. WATER TANK LINE TO MANIFOLD (1/2" /12.7mm)
- A6 FWD. WATER FILL HOSE (1 1/2" /38.1mm)
- A7 FWD. WATER VENT HOSE (3/4" /19.1mm)



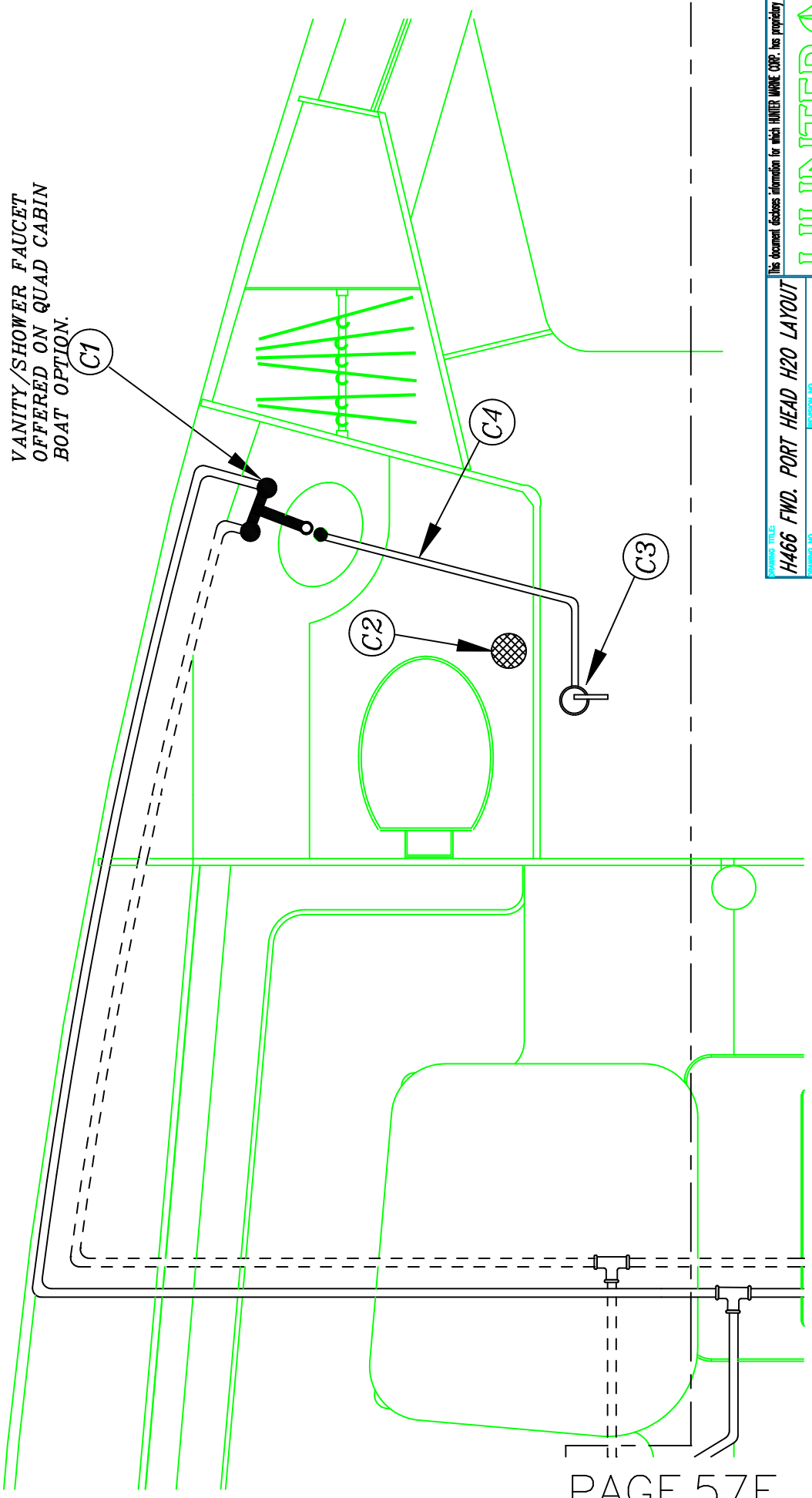
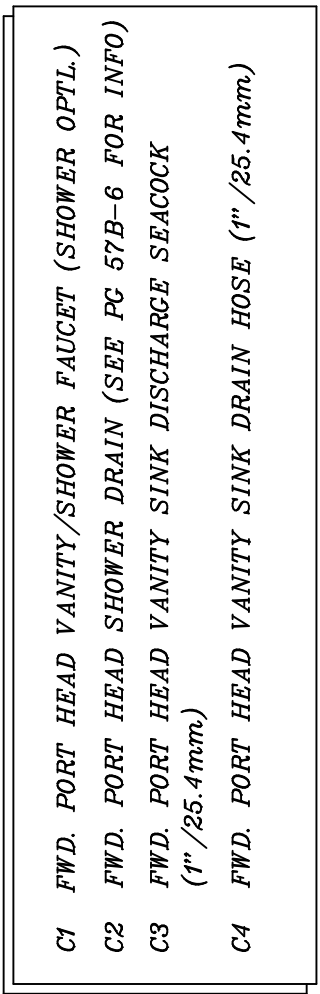
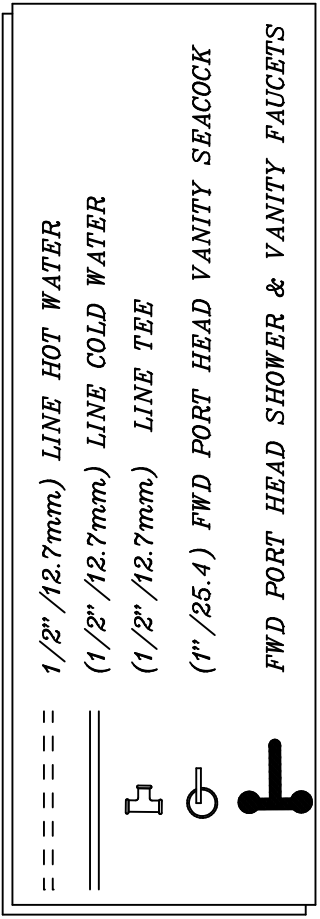


--- LINE HOT WATER
 --- H2O SUPPLY LINE
 --- LINE COLD WATER
 STARBOARD FWD & AFT HEAD SHOWER FAUCETS
 (1/2" / 12.7mm) LINE TEE
 MANIFOLD ON/OFF VALVE

F5 STBD. WATER TANK(S) VENT HOSE (3/4" / 19.1mm)
 F6 STBD. WATER TANK(S) FILL HOSE (1 1/2" / 38.1mm)
 F7 TANK FILL/VENT "Y"
 F8 STBD. AFT WATER TANK LINE TO MANIFOLD (1/2" / 38.1mm)
 F9 STBD. FWD. WATER TANK LINE TO MANIFOLD (1/2" / 38.1mm)
 F10 STBD. FWD./AFT. WATER TANK SENDING UNITS
 H1 AFT STBD. HEAD SHOWER FAUCET
 H2 AFT STBD. HEAD SHOWER DRAIN (SEE PG 57B-5 FOR INFO)

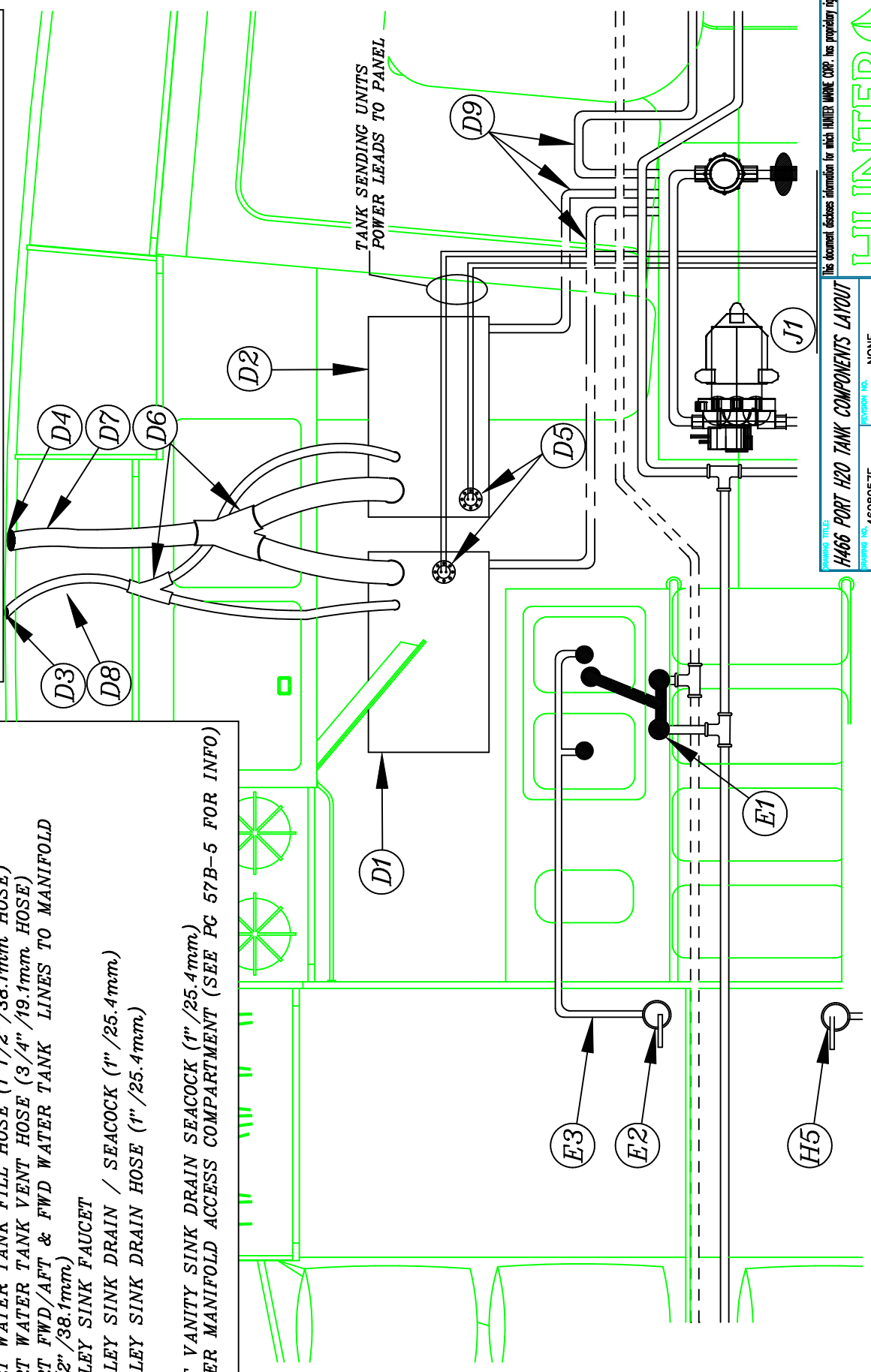
B1 FWD. STBD. VANITY SHOWER FAUCET DRAIN (SEE PG 57B-6 FOR INFO)
 B2 FWD. STBD. VANITY SHOWER FAUCET
 J1 WATER MANIFOLD ACCESS COMPARTMENT (SEE PG 57B-5 FOR INFO)
 G1 WATER HEATER HEAT EXCHANGE LINES TO ENGINE
 G2 WATER HEATER (11 GALLONS/41.7 LITERS)
 G3 IN LINE CHECK VALVE (PREVENTS HOT WATER BACK FILL)
 F1 STBD. AFT WATER TANK (36 GALLONS/132 LITERS)
 F2 STBD. FWD. WATER TANK (18 GALLONS/68 LITERS)
 F3 STBD. WATER TANKS VENT LOCATION (VENTED STANCHION DECK HARDWARE) (3/4" / 19.1mm) NOTE: ONE LOCATION VENTS BOTH TANKS
 F4 STBD. WATER TANKS FILL LOCATION (1 1/2" / 38.1mm) DECK FITTING NOTE: ONE LOCATION FILLS BOTH TANKS

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 H466 FWD STARBOARD H2O LAYOUT
 4608057D
 NONE
 1/1199
 ENGINEERING DEPT.



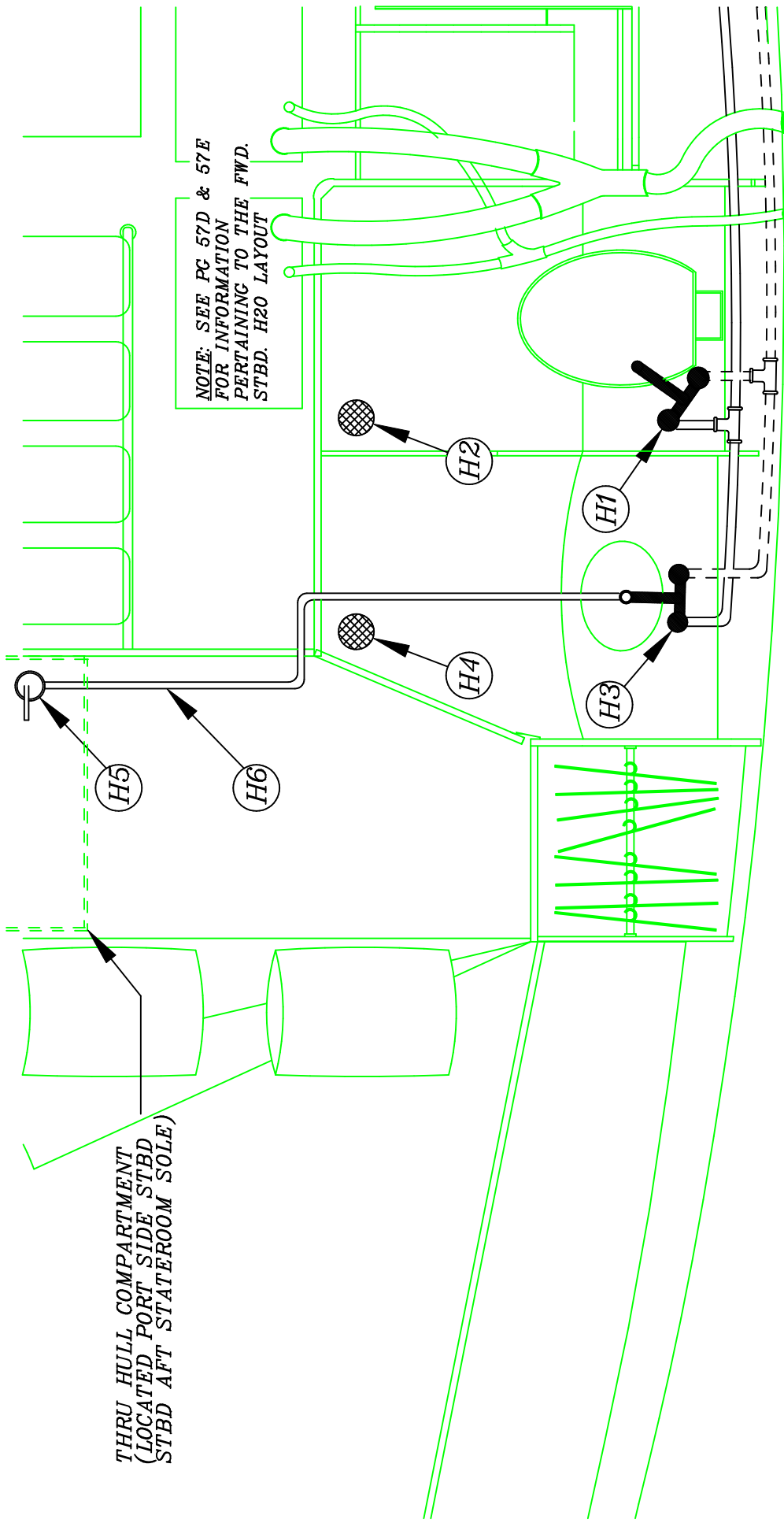
- D1 PORT AFT WATER TANK (36 GALLONS/132 LITERS)
- D2 PORT FWD. WATER TANK (18 GALLONS/68 LITERS)
- D3 PORT WATER TANKS VENT LOCATION (VENTED STANCHION DECK HARDWARE) (3/4" /19.1mm) NOTE: ONE LOCATION VENTS BOTH TANKS.
- D4 PORT WATER TANKS FILL LOCATION (1 1/2" /38.1mm) DECK FITTING NOTE: ONE LOCATION FILLS BOTH TANKS.
- D5 PORT FWD./AFT WATER TANKS SENDING UNITS
- D6 TANK FILL/VENT "Y"
- D7 PORT WATER TANK FILL HOSE (1 1/2" /38.1mm HOSE)
- D8 PORT WATER TANK VENT HOSE (3/4" /19.1mm HOSE)
- D9 PORT FWD./AFT & FWD WATER TANK LINES TO MANIFOLD (1/2" /38.1mm)
- E1 GALLEY SINK FAUCET
- E2 GALLEY SINK DRAIN / SEACOCK (1" /25.4mm)
- E3 GALLEY SINK DRAIN HOSE (1" /25.4mm)
- H5 AFT VANITY SINK DRAIN SEACOCK (1" /25.4mm)
- J1 WATER MANIFOLD ACCESS COMPARTMENT (SEE PG 57B-5 FOR INFO)

- (1/2" /12.7mm) LINE HOT WATER
- (1/2" /12.7mm) H2O SUPPLY LINE
- (1/2" /12.7mm) LINE COLD WATER
- (1" /25.4mm) AFT HEAD VANITY/GALLEY SINK SEACOCKS
- GALLEY SINK FAUCET
- (1/2" /12.7mm) QUEST LINE TEE



PROPERTY FILE
H466 PORT H2O TANK COMPONENTS LAYOUT
ISSUANCE NO. 4608057F REVISION NO. NONE DATE 1/12/99
ENGINEERING DEPT.

This document discloses information for which HUNTER MARINE CORP. has proprietary rights.
HUNTER



THRU HULL COMPARTMENT
(LOCATED PORT SIDE STBD
STBD AFT STATEROOM SOLE)

NOTE: SEE PG 57D & 57E
FOR INFORMATION
PERTAINING TO THE FWD.
STBD. H2O LAYOUT

- H1 AFT HEAD SHOWER FAUCET
- H2 AFT HEAD SHOWER DRAIN (SEE PG 57-B FOR INFO)
- H3 AFT HEAD VANITY SINK FAUCET
- H4 AFT VANITY SOLE DRAIN (SEE PG 57-B FOR INFO)
- H5 AFT HEAD VANITY SINK DRAIN SEACOCK (1" /25.4mm.)
- H6 AFT HEAD VANITY SINK DRAIN HOSE (1" /25.4mm.)

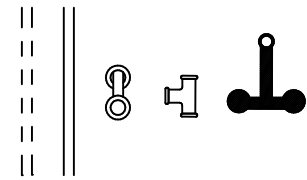
- ==== (1/2" 12.7mm) LINE HOT WATER
- ===== (1/2" 12.7mm) LINE COLD WATER
- ⊕ (1" /25.4mm) AFT VANITY SINK SEACOCK
- ⊖ AFT HEAD VANITY SINK/SHOWER FAUCETS

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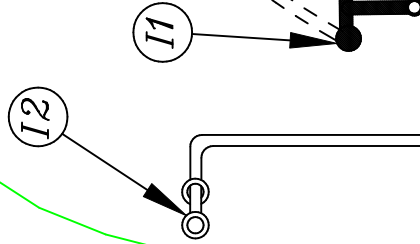
H466 AFT HEAD H2O LAYOUT	DRAWING NO. 4608057G	REVISION NO. NONE	DATE 1/12/99
ENGINEERING DEPT.			

HUNTER

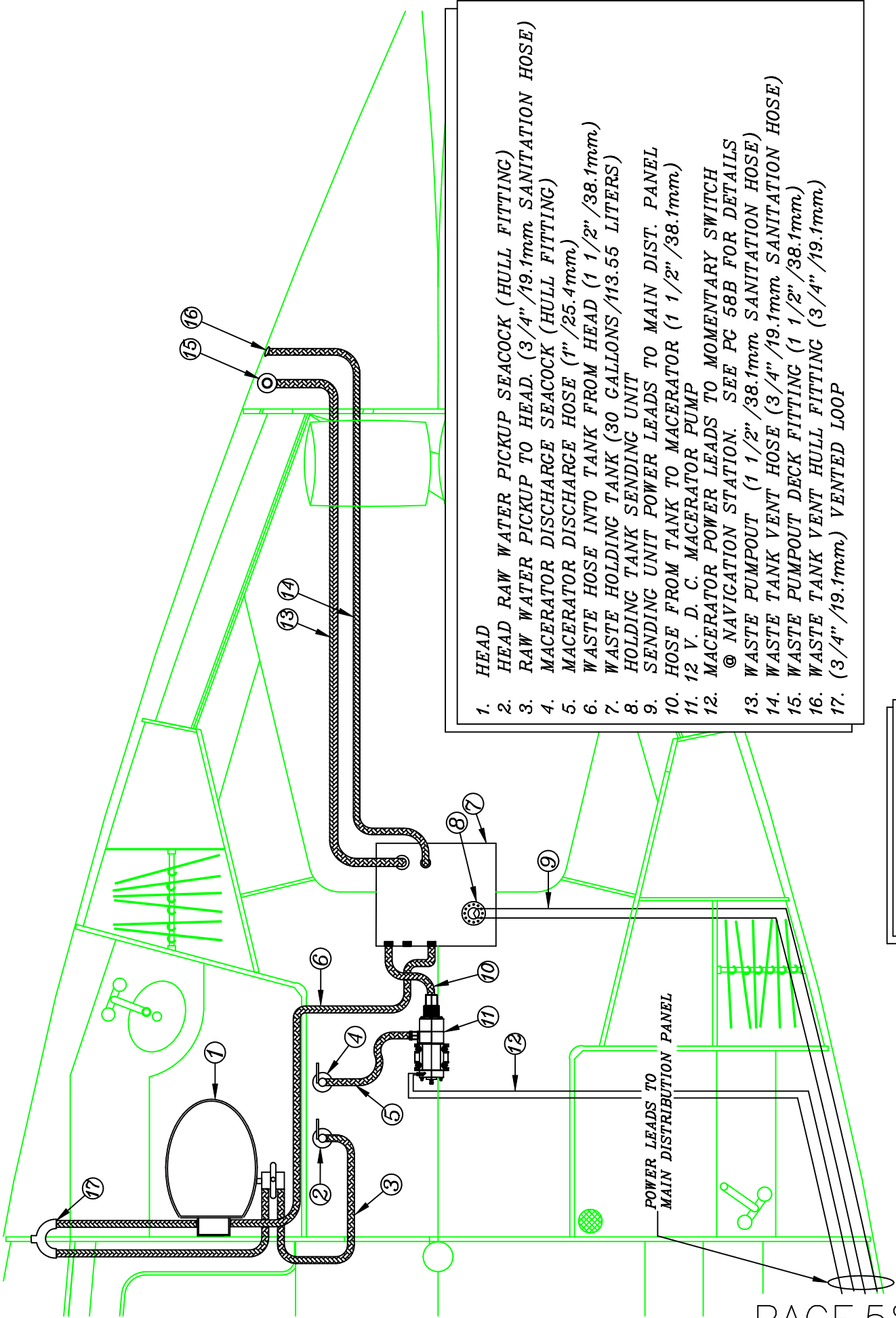
(1/2" / 12.7mm) LINE HOT WATER
 (1/2" / 12.7mm) LINE COLD WATER
 FRESH "SHORE" WATER INLET
 (1/2" / 12.7mm) LINE TEE
 TRANSOM SHOWER FAUCET



I1 TRANSOM SHOWER FAUCET
 I2 TRANSOM FRESH WATER INLET



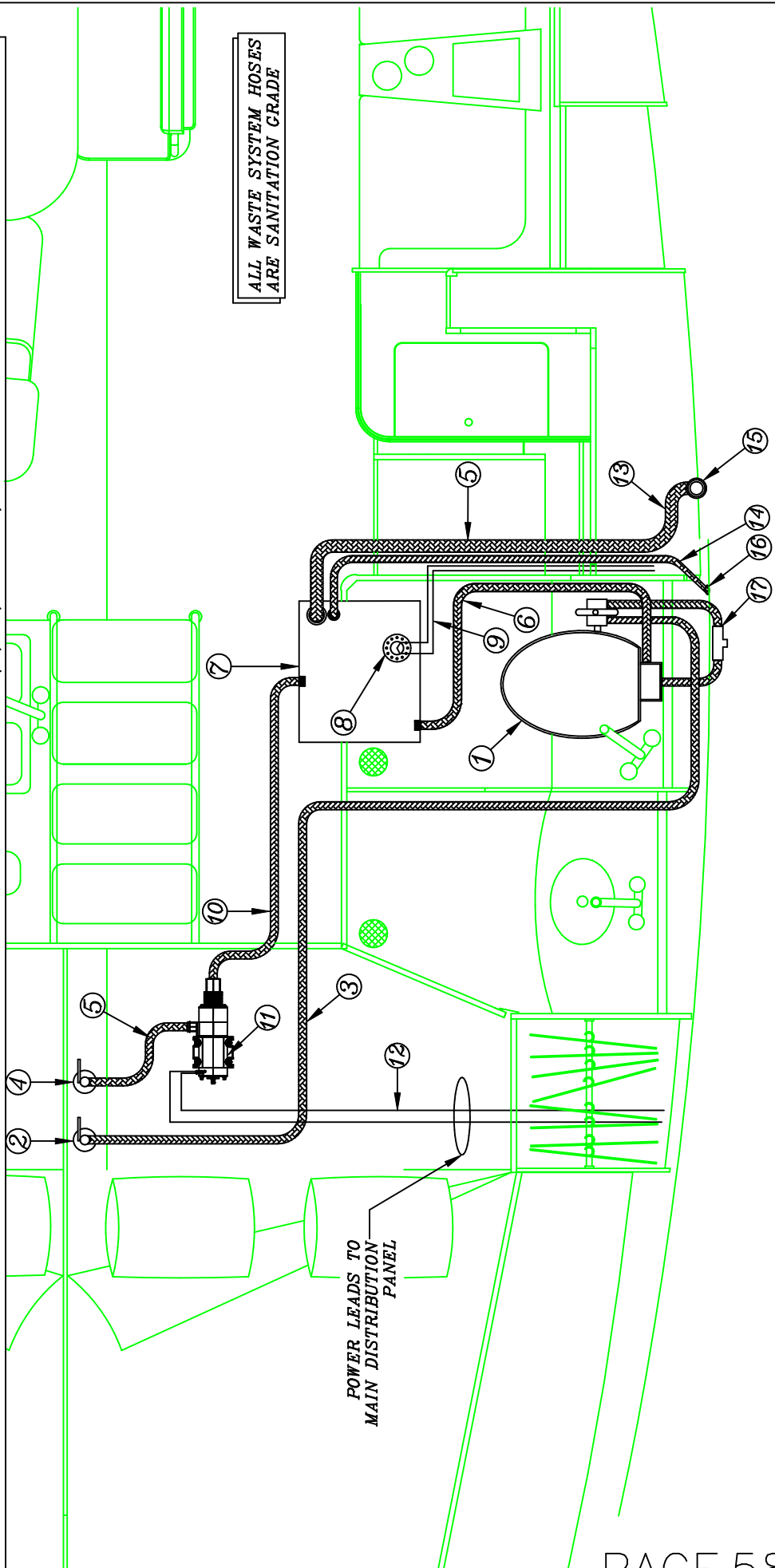
H2O LINE FEEDS
 FROM FWD SHIP
 SEE PAGE 57F



1. HEAD
2. HEAD RAW WATER PICKUP SEACOCK (HULL FITTING)
3. RAW WATER PICKUP TO HEAD. (3/4" /19.1mm SANITATION HOSE)
4. MACERATOR DISCHARGE SEACOCK (HULL FITTING)
5. MACERATOR DISCHARGE HOSE (1" /25.4mm)
6. WASTE HOSE INTO TANK FROM HEAD (1 1/2" /38.1mm.)
7. WASTE HOLDING TANK (30 GALLONS /113.55 LITERS)
8. HOLDING TANK SENDING UNIT
9. SENDING UNIT POWER LEADS TO MAIN DIST. PANEL
10. HOSE FROM TANK TO MACERATOR (1 1/2" /38.1mm.)
11. 12 V. D. C. MACERATOR PUMP
12. MACERATOR POWER LEADS TO MOMENTARY SWITCH @ NAVIGATION STATION. SEE PG 58B FOR DETAILS
13. WASTE PUMPOUT (1 1/2" /38.1mm SANITATION HOSE)
14. WASTE TANK VENT HOSE (3/4" /19.1mm SANITATION HOSE)
15. WASTE PUMPOUT DECK FITTING (1 1/2" /38.1mm)
16. WASTE TANK VENT HULL FITTING (3/4" /19.1mm)
17. (3/4" /19.1mm.) VENTED LOOP

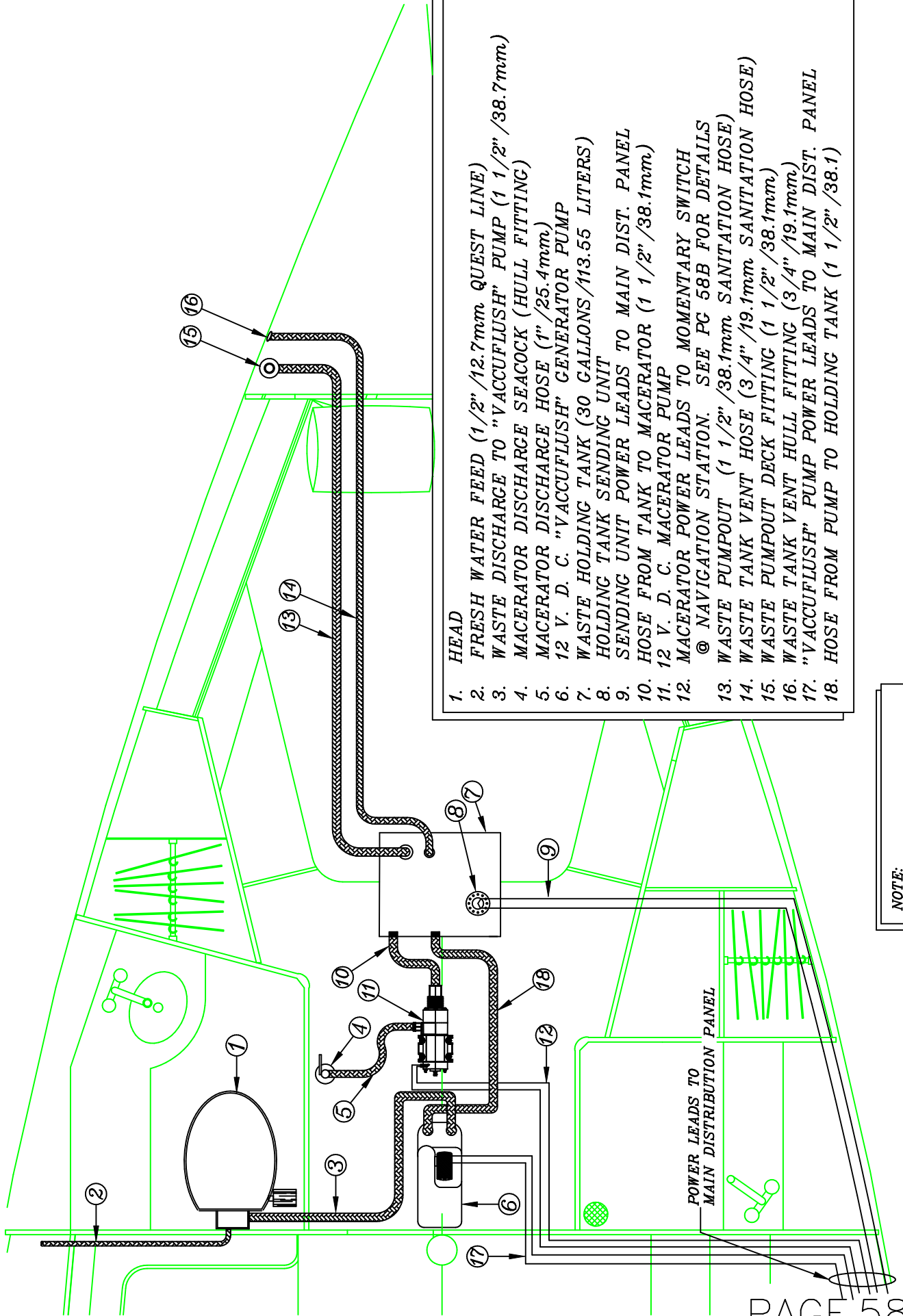
ALL WASTE SYSTEM HOSES
ARE SANITATION GRADE

1. HEAD
2. HEAD RAW WATER PICKUP SEACOCK (HULL FITTING)
3. RAW WATER PICKUP TO HEAD. (3/4"/19.1mm SANITATION HOSE)
4. MACERATOR DISCHARGE SEACOCK (HULL FITTING)
5. MACERATOR DISCHARGE HOSE (1"/25.4mm)
6. WASTE HOSE INTO TANK FROM HEAD (1 1/2"/38.1mm)
7. WASTE HOLDING TANK (20 GALLONS/75.70 LITERS)
8. HOLDING TANK SENDING UNIT
9. SENDING UNIT POWER LEADS TO MAIN DIST. PANEL
10. HOSE FROM TANK TO MACERATOR (1 1/2"/38.1mm)
11. 12 V. D. C. MACERATOR PUMP
12. MACERATOR POWER LEADS TO MOMENTARY SWITCH @ NAVIGATION STATION. SEE PC 58B FOR DETAILS
13. WASTE PUMPOUT (1 1/2"/38.1mm SANITATION HOSE)
14. WASTE TANK VENT HOSE (3/4"/19.1mm SANITATION HOSE)
15. WASTE PUMPOUT DECK FITTING (1 1/2"/38.1mm)
16. WASTE TANK VENT HULL FITTING (3/4"/19.1mm)
17. (3/4"/19.1mm) VENTED LOOP



POWER LEADS TO
MAIN DISTRIBUTION
PANEL

ALL WASTE SYSTEM HOSES
ARE SANITATION GRADE



HEAD

1. FRESH WATER FEED (1/2"/12.7mm QUEST LINE)
2. WASTE DISCHARGE TO "VACCUFLUSH" PUMP (1 1/2"/38.7mm)
3. MACERATOR DISCHARGE SEACOCK (HULL FITTING)
4. MACERATOR DISCHARGE HOSE (1"/25.4mm)
5. MACERATOR DISCHARGE HOSE (1"/25.4mm)
6. 12 V. D. C. "VACCUFLUSH" GENERATOR PUMP
7. WASTE HOLDING TANK (30 GALLONS/113.55 LITERS)
8. HOLDING TANK SENDING UNIT
9. SENDING UNIT POWER LEADS TO MAIN DIST. PANEL
10. HOSE FROM TANK TO MACERATOR (1 1/2"/38.1mm)
11. 12 V. D. C. MACERATOR PUMP
12. MACERATOR POWER LEADS TO MOMENTARY SWITCH @ NAVIGATION STATION. SEE PG 58B FOR DETAILS
13. WASTE PUMP/OUT (1 1/2"/38.1mm SANITATION HOSE)
14. WASTE TANK VENT HOSE (3/4"/19.1mm SANITATION HOSE)
15. WASTE PUMP/OUT DECK FITTING (1 1/2"/38.1mm)
16. WASTE TANK VENT HULL FITTING (3/4"/19.1mm)
17. "VACCUFLUSH" PUMP POWER LEADS TO MAIN DIST. PANEL
18. HOSE FROM PUMP TO HOLDING TANK (1 1/2"/38.1)

NOTE:
ALL WASTE SYSTEM HOSES
ARE SANITATION GRADE.

POWER LEADS TO
MAIN DISTRIBUTION PANEL

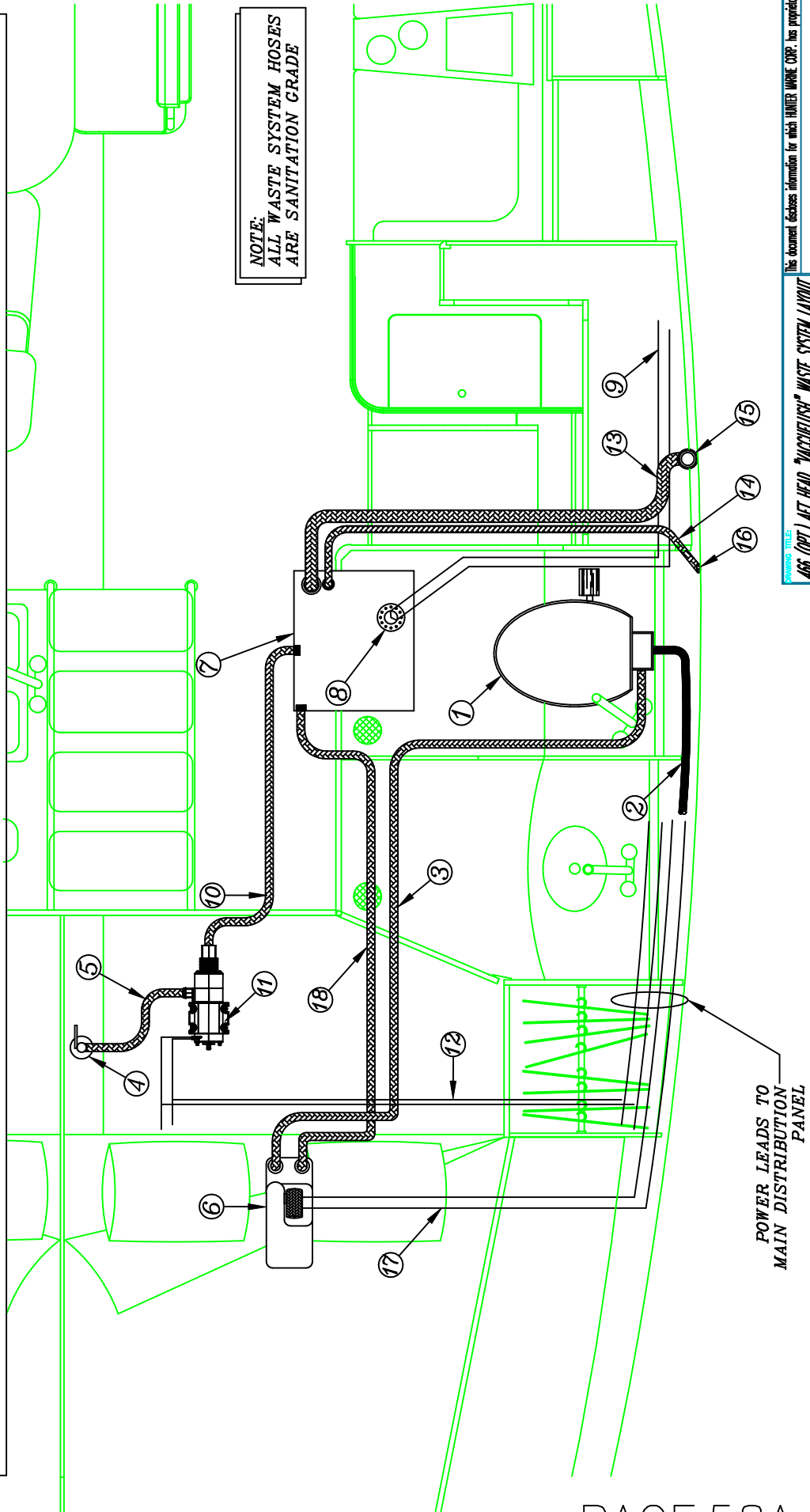
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HUNTERWARE

466 (OPT.) FWD HEAD "VACCUFLUSH" WASTE SYSTEM LAYOUT	<small>REVISION NO.</small>	<small>DATE</small>
4608058A-3	NONE	1/18/99
<small>ENGINEERING DEPT.</small>		

1. HEAD
2. FRESH WATER FEED (1 1/2" / 12.7mm QUEST LINE)
3. WASTE DISCHARGE TO "VACCUFLUSH" PUMP
4. MACERATOR DISCHARGE SEACOCK (HULL FITTING)
5. MACERATOR DISCHARGE HOSE (1" / 25.4mm)
6. 12 V. D. C. "VACCUFLUSH" GENERATOR PUMP
7. WASTE HOLDING TANK (20 GALLONS / 75.70 LITERS)
8. HOLDING TANK SENDING UNIT
9. SENDING UNIT POWER LEADS TO MAIN DIST. PANEL
10. HOSE FROM TANK TO MACERATOR (1 1/2" / 38.1mm)

11. 12 V. D. C. MACERATOR PUMP
12. MACERATOR POWER LEADS TO MOMENTARY SWITCH @ NAVIGATION STATION. SEE PG 58B FOR DETAILS
13. WASTE PUMPOUT (1 1/2" / 38.1mm SANITATION HOSE)
14. WASTE TANK VENT HOSE (3/4" / 19.1mm SANITATION HOSE)
15. WASTE PUMPOUT DECK FITTING (1 1/2" / 38.1mm)
16. WASTE TANK VENT HULL FITTING (3/4" / 19.1mm)
17. "VACCUFLUSH" PUMP POWER LEADS TO MAIN DIST. PANEL
18. HOSE FROM PUMP TO HOLDING TANK (1 1/2" / 38.1mm)

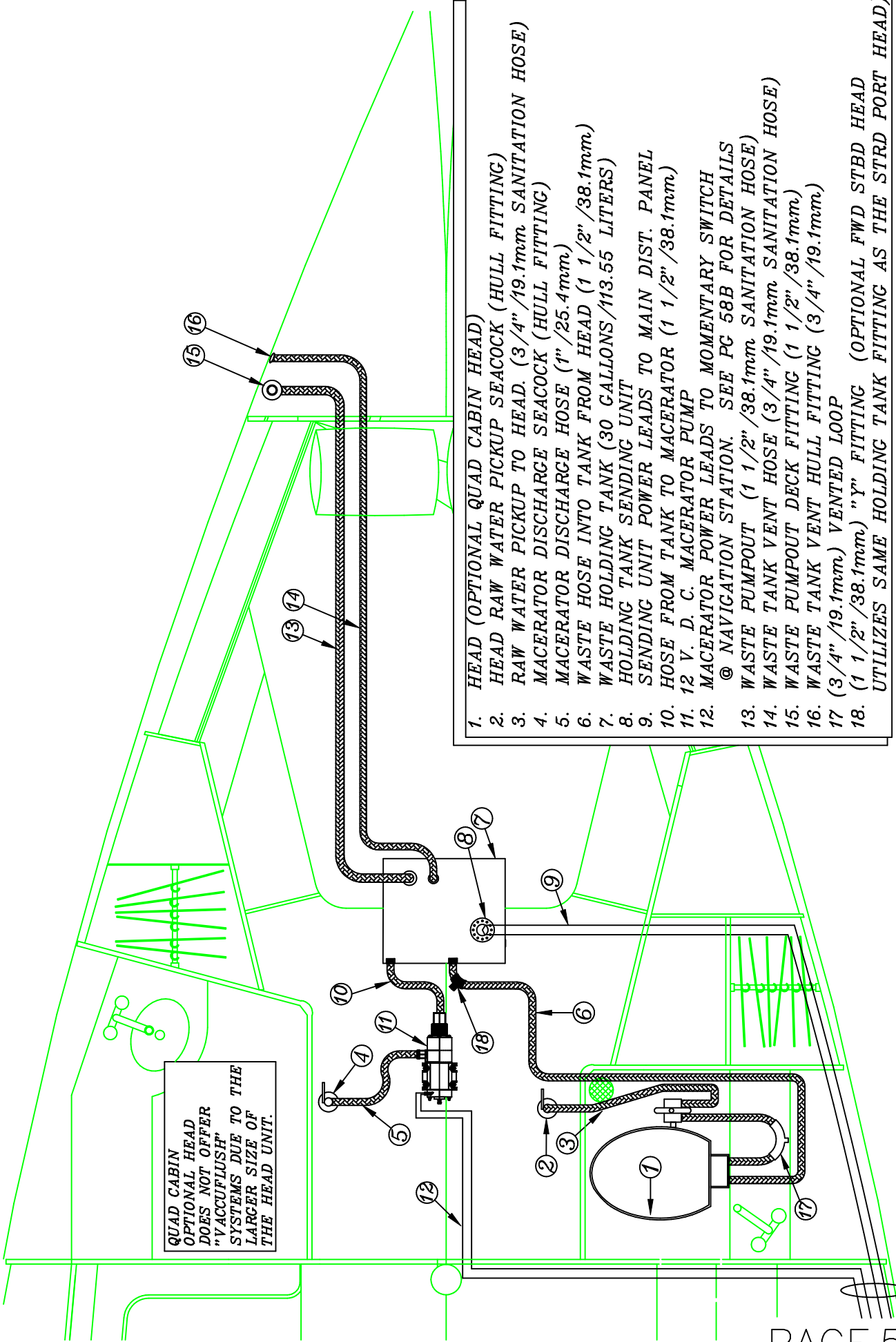


NOTE:
ALL WASTE SYSTEM HOSES
ARE SANITATION GRADE

POWER LEADS TO
MAIN DISTRIBUTION
PANEL

HUNTER

PROJECT FILE		This document describes information for which HUNTER MARINE CORP. has proprietary rights.	
466 (OPT.) AT HEAD "VACCUFLUSH" WASTE SYSTEM LAYOUT	DESIGN NO.	NONE	
4608058A-4	DATE	1/18/99	
ENGINEERING DEPT.			



QUAD CABIN
OPTIONAL HEAD
DOES NOT OFFER
"VACUFLUSH"
SYSTEMS DUE TO THE
LARGER SIZE OF
THE HEAD UNIT.

1. HEAD (OPTIONAL QUAD CABIN HEAD)
2. HEAD RAW WATER PICKUP SEACOCK (HULL FITTING)
3. RAW WATER PICKUP TO HEAD. (3/4" /19.1mm SANITATION HOSE)
4. MACERATOR DISCHARGE HOSE (1" /25.4mm)
5. MACERATOR DISCHARGE HOSE (1" /25.4mm)
6. WASTE HOSE INTO TANK FROM HEAD (1 1/2" /38.1mm)
7. WASTE HOLDING TANK (30 GALLONS /113.55 LITERS)
8. HOLDING TANK SENDING UNIT
9. SENDING UNIT POWER LEADS TO MAIN DIST. PANEL HOSE FROM TANK TO MACERATOR (1 1/2" /38.1mm)
10. HOSE FROM TANK TO MACERATOR (1 1/2" /38.1mm)
11. 12 V. D. C. MACERATOR PUMP
12. MACERATOR POWER LEADS TO MOMENTARY SWITCH @ NAVIGATION STATION. SEE PG 58B FOR DETAILS
13. WASTE PUMPOUT (1 1/2" /38.1mm SANITATION HOSE)
14. WASTE TANK VENT HOSE (3/4" /19.1mm SANITATION HOSE)
15. WASTE PUMPOUT DECK FITTING (1 1/2" /38.1mm)
16. WASTE TANK VENT HULL FITTING (3/4" /19.1mm)
17. (3/4" /19.1mm) VENTED LOOP
18. (1 1/2" /38.1mm) "Y" FITTING (OPTIONAL FWD STBD HEAD UTILIZES SAME HOLDING TANK FITTING AS THE STRD PORT HEAD)

ALL WASTE SYSTEM HOSES
ARE SANITATION GRADE

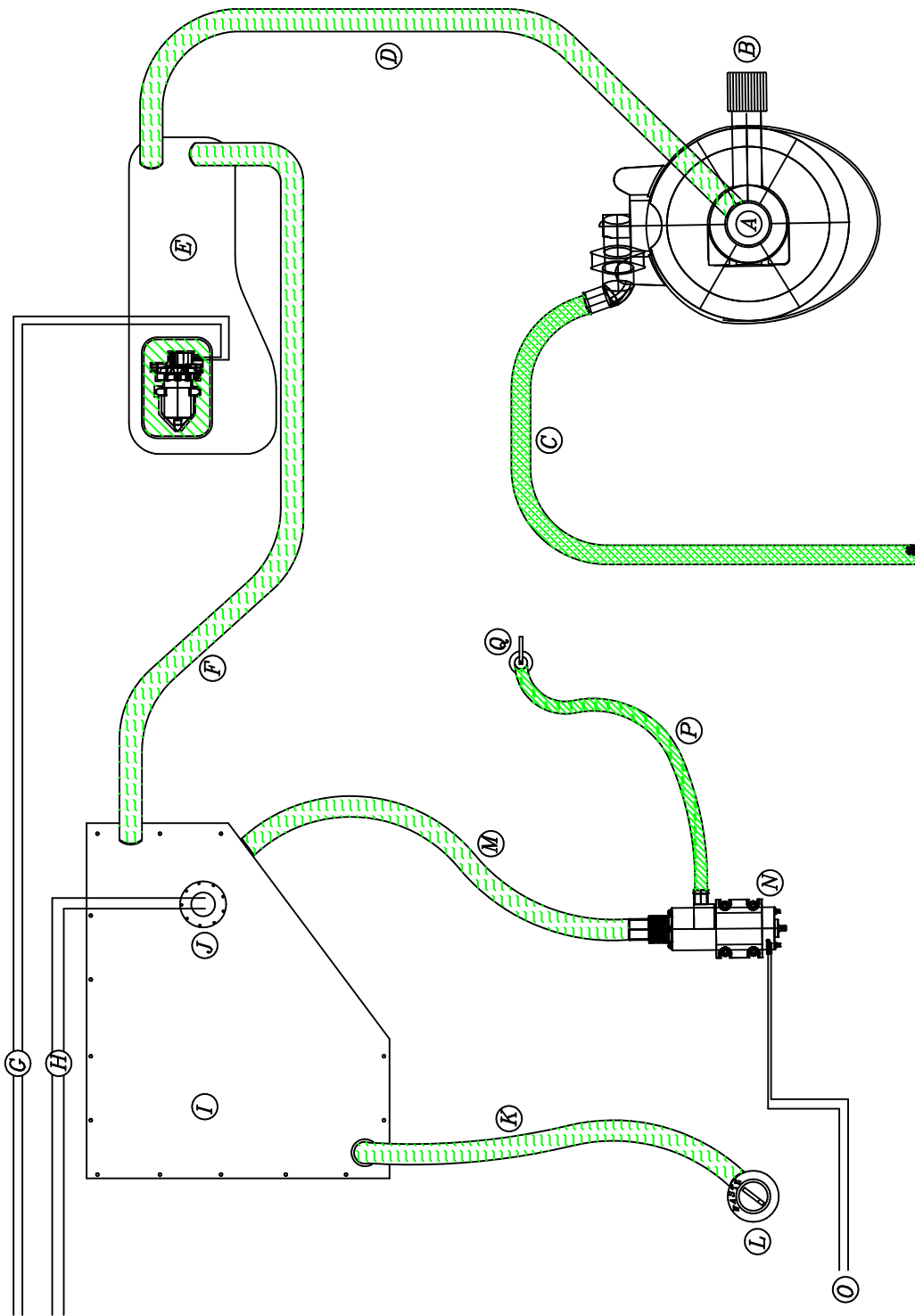
POWER LEADS
TO MAIN
DISTRIBUTION
PANEL

466 (OPT.) QUAD CABIN STBD HEAD WASTE SYSTEM LAYOUT

DESIGN NO.	4608058A-5	REVISION NO.	NONE
ENGINEERING DEPT.		DATE	1/18/99

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HUNTER



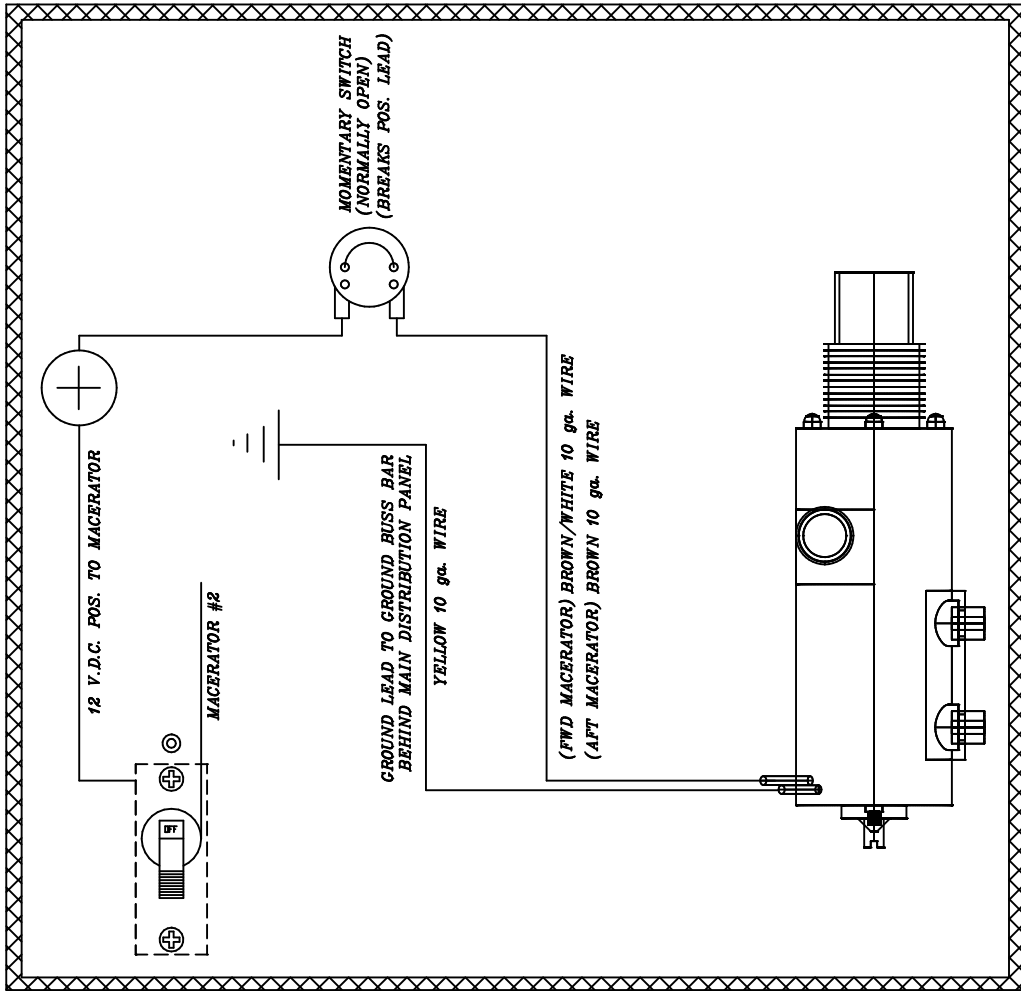
- (A) "VACUFLUSH" HEAD
- (B) PEDAL TO ENGAGE FLUSHING SEQUENCE
- (C) FRESH H2O QUEST LINE FEED. TEED FROM CLOSEST SOURCE. (EX. VANITY SINK OR SHOWER)
- (D) WASTE HOSE FROM HEAD TO GENERATOR.
- (E) "VACUFLUSH" GENERATOR PUMP
- (F) WASTE HOSE FROM GEN. TO HOLDING TANK
- (G) GEN. POWER LEAD TO MAIN DIST. PANEL.
- (H) SENDING UNIT POWER LEAD TO MAIN DIST. PANEL.
- (I) TYP. WASTE HOLDING TANK

- (J) SENDING UNIT.
- (K) WASTE HOSE TO DECK PUMP OUT.
- (L) DECK FITTING.
- (M) WASTE HOSE FROM TANK TO MACER.
- (N) MACERATOR
- (O) 12 VDC TO MOMENTARY SWITCH @ NAV STATION.
- (P) WASTE HOSE FROM MACER. TO SEACOCK.
- (Q) MACER. DISCHARGE THRU HULL SEACOCK.

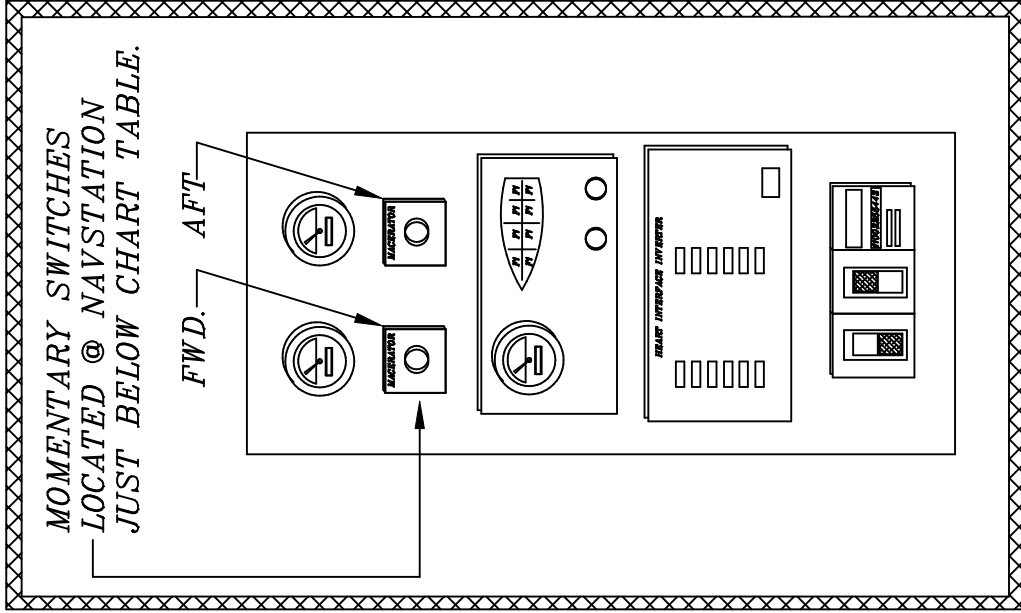
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HUNTERA	
H466 OPT. "VACUFLUSH" BASIC WASTE SYSTEM SCHEMATIC	
REV. NO.	4608058A-6
DATE	1/19/99
ENGINEERING DEPT.	NONE

THE MACERATOR MOMENTARY SWITCH IS PROVIDED TO PROHIBIT THE "DRY RUNNING" OF THE MACERATOR. TO OPERATE THE MACERATOR, TURN THE MACERATOR BREAKER TO THE "ON" POSITION. WHILE EITHER WATCHING THE WASTE TANK LEVEL INDICATOR, OR LISTENING TO THE PITCH OF THE PUMP, PUSH THE MOMENTARY SWITCH IN. THIS WILL ACTIVATE THE MACERATOR. ONCE THE TANK LEVEL INDICATOR REACHES "EMPTY", OR THE PITCH CHANGES NOTICEABLY, RELEASE THE MOMENTARY SWITCH AND TURN THE BREAKER TO THE "OFF" POSITION. NOTE: OCCASIONALLY THE TANK SENDING UNIT BECOMES STUCK, THEREFORE IT IS MORE EFFECTIVE AND SAFER FOR THE PUMP IF THE OPERATOR USES THE "LISTENING" METHOD TO DETERMINE IF THE TANK HAS BEEN EMPTIED.



MACERATOR SCHEMATIC
TYPICAL



MOMENTARY SWITCHES
LOCATED @ NAVSTATION
JUST BELOW CHART TABLE.

MOMENTARY SWITCH LOCATION

PROJ. FILE: H466 BASIC MACERATOR WIRING SCHEMATIC

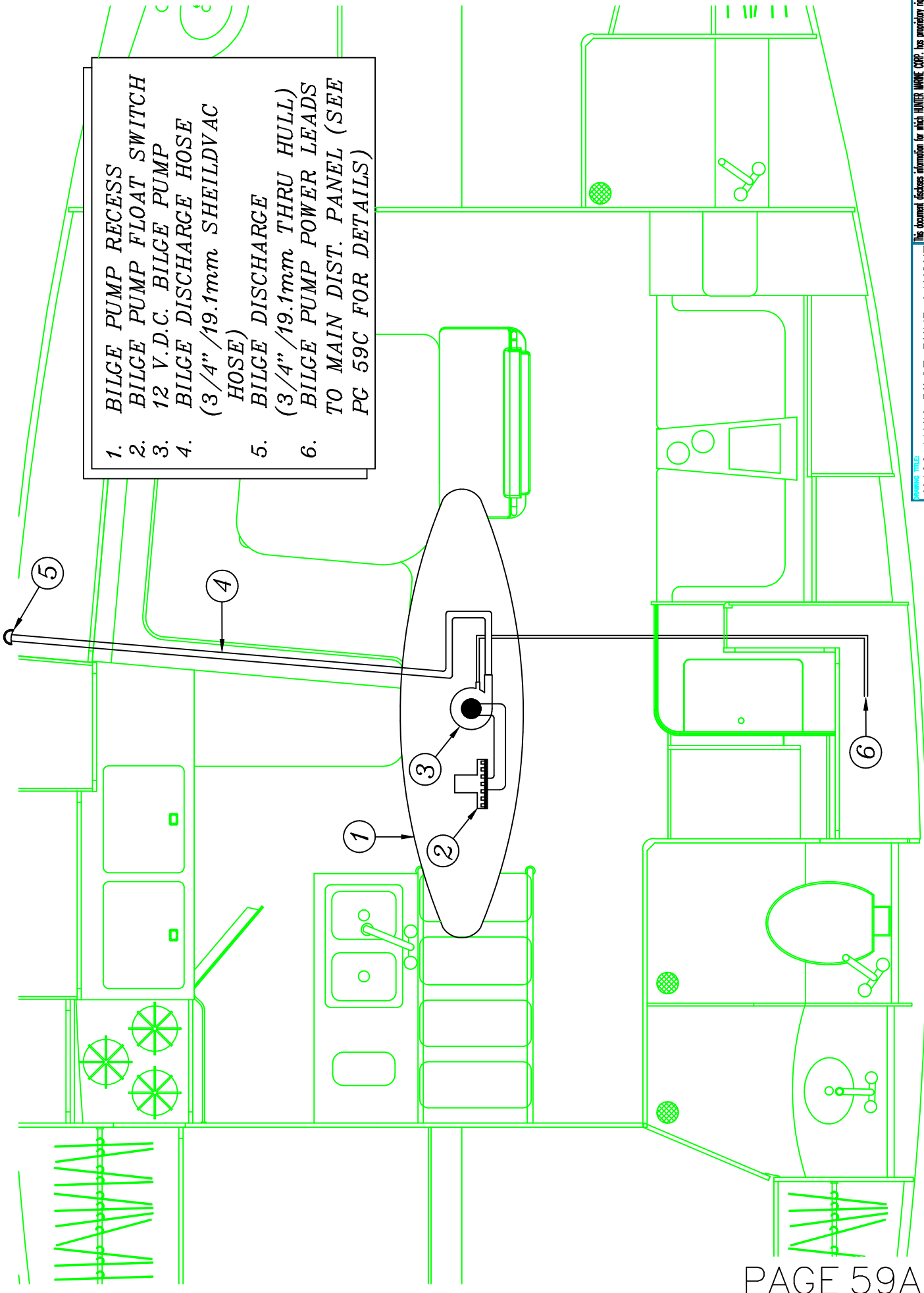
ISSUANCE NO. 4208058B

DATE: 1/20/99

ENGINEERING DEPT



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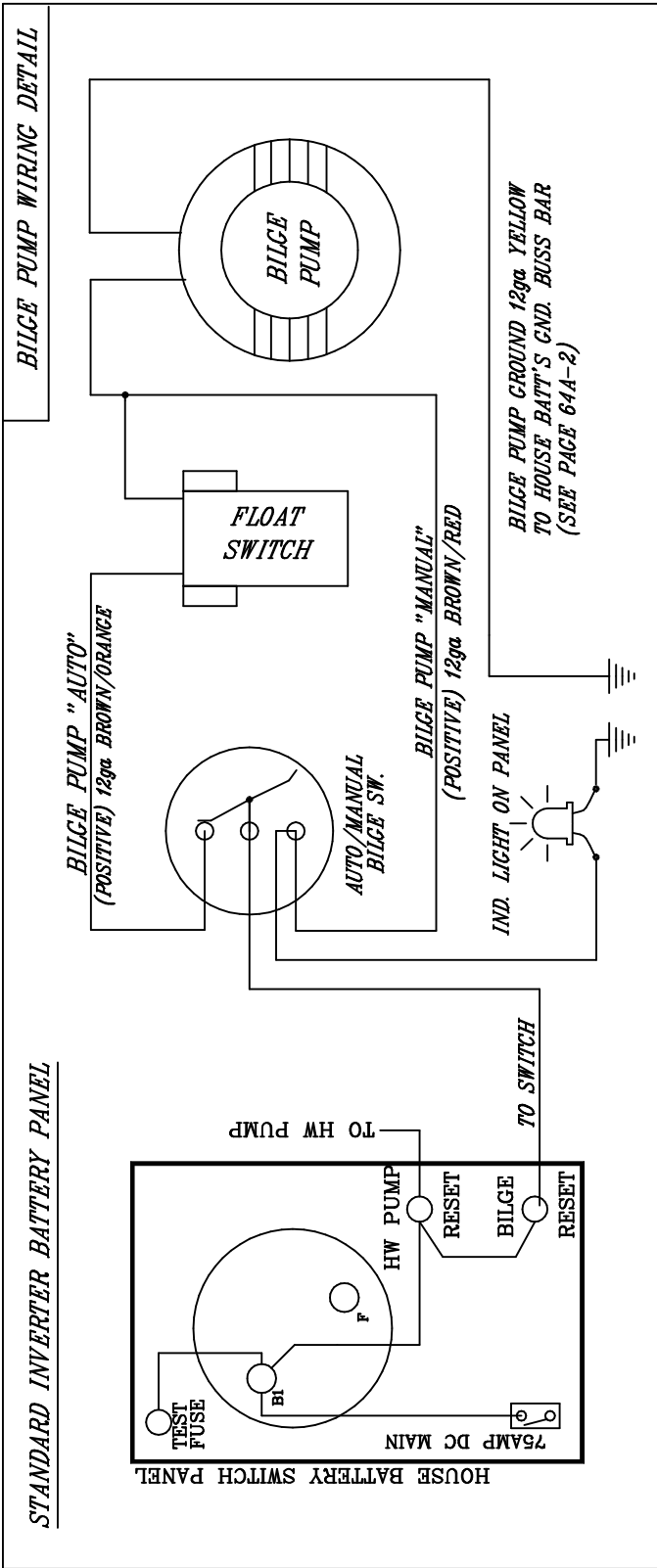
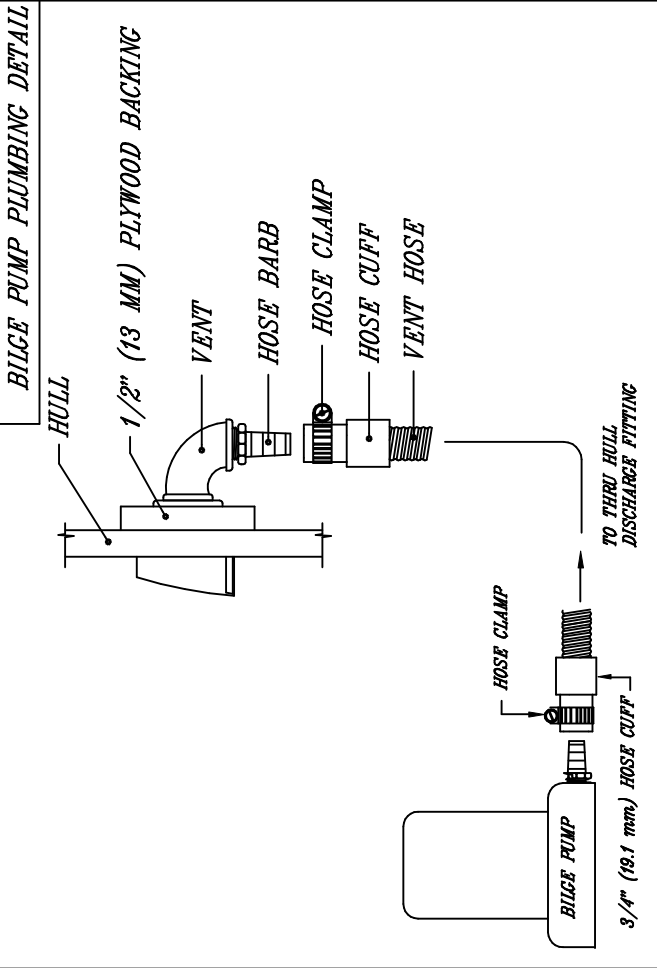


1. *BILGE PUMP RECESS*
2. *BILGE PUMP FLOAT SWITCH*
3. *12 V.D.C. BILGE PUMP
BILGE DISCHARGE HOSE
(3/4" /19.1mm SHEILDVAC
HOSE)*
5. *BILGE DISCHARGE
(3/4" /19.1mm THRU HULL)*
6. *BILGE PUMP POWER LEADS
TO MAIN DIST. PANEL (SEE
PG 59C FOR DETAILS)*

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H466 MAIN BILGE PUMP LAYOUT	
DRAWING NO.	4608059A
REVISION NO.	NONE
DATE	1/21/99
ENGINEERING DEPT.	





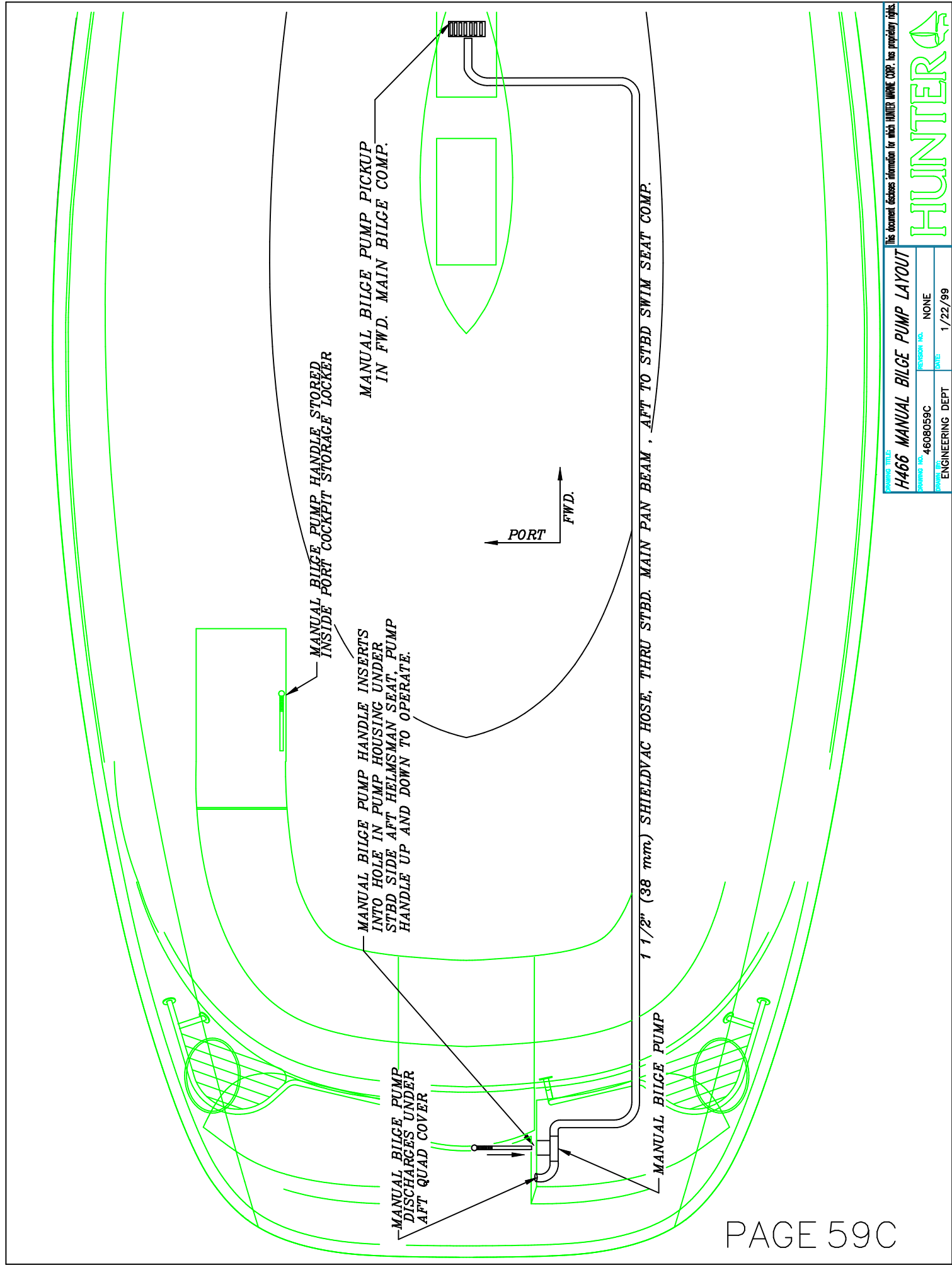
FORWARD FILE

H466 BILGE SYSTEM DETAILS

PROJECT NO.	4608059B	REVISION NO.	NONE
ISSUE NO.	1	DATE	1/21/99
ENGINEERING DEPT.			

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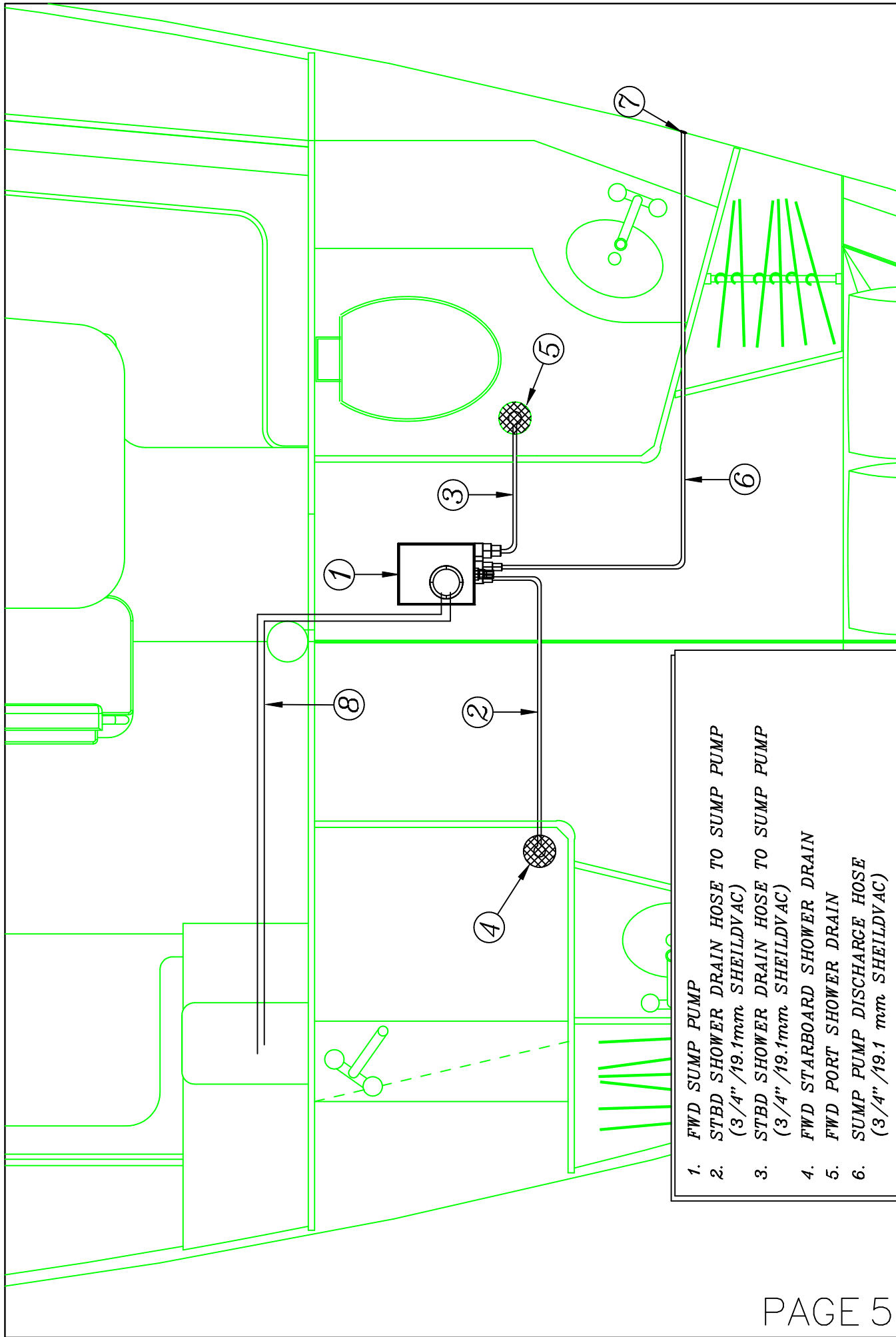
HUNTER



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H466 MANUAL BILGE PUMP LAYOUT			
REVISED NO.	4608059C	DESIGN NO.	NONE
DATE	1/22/99	ENGINEERING DEPT	

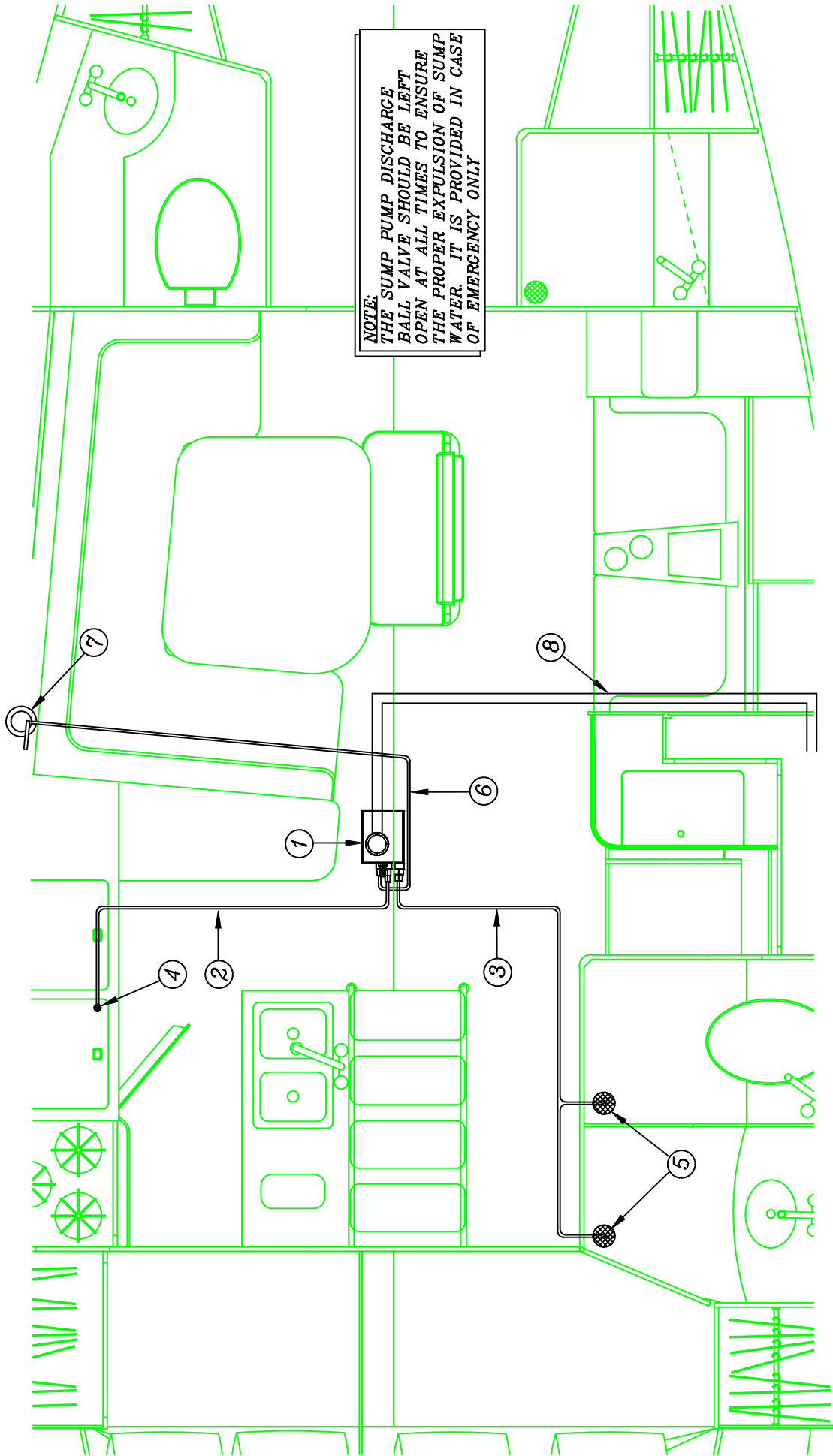


- 1. FWD SUMP PUMP
- 2. STBD SHOWER DRAIN HOSE TO SUMP PUMP
(3/4" / 19.1mm SHEILDVAC)
- 3. STBD SHOWER DRAIN HOSE TO SUMP PUMP
(3/4" / 19.1mm SHEILDVAC)
- 4. FWD STARBOARD SHOWER DRAIN
- 5. FWD PORT SHOWER DRAIN
- 6. SUMP PUMP DISCHARGE HOSE
(3/4" / 19.1 mm SHEILDVAC)
- 7. SUMP PUMP DISCHARGE THRU HULL FITTING
(3/4" / 19.1 mm SHEILDVAC)
- 8. SUMP PUMP POWER LEADS TO MAIN DIST. PANEL

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H466 FWD SUMP PUMP SYSTEM LAYOUT	
REVISED NO.	4608059D
DESIGN NO.	NONE
DATE	1/77/99
ENGINEERING DEPT.	





NOTE:
 THE SUMP PUMP DISCHARGE BALL VALVE SHOULD BE LEFT OPEN AT ALL TIMES TO ENSURE THE PROPER EXPULSION OF SUMP WATER. IT IS PROVIDED IN CASE OF EMERGENCY ONLY

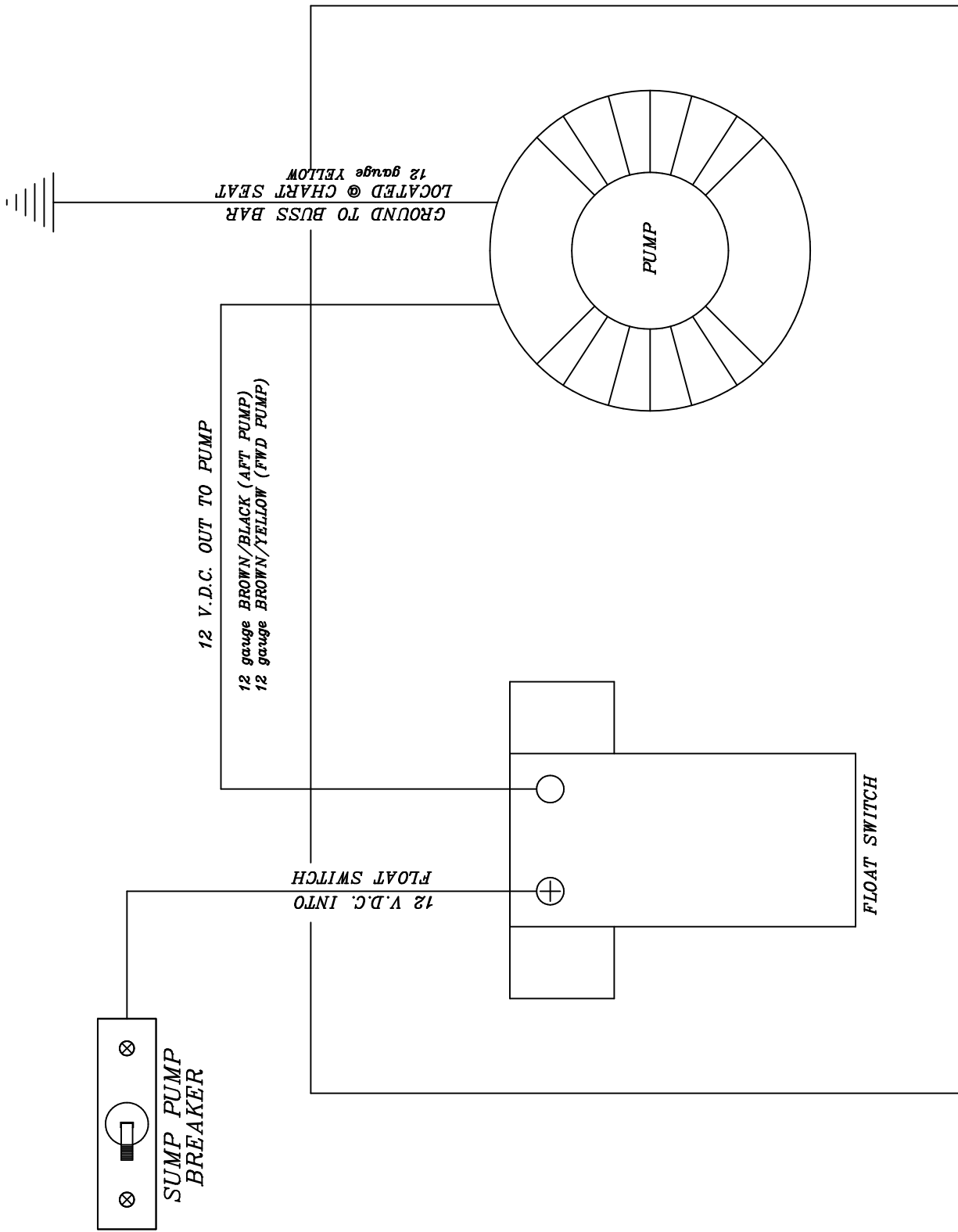
1. AFT SUMP PUMP
2. FRIG/FREEZER DRAIN HOSE TO SUMP PUMP (3/4" /19.1mm SHEILDVAC)
3. STBD AFT SHOWER DRAIN HOSE TO SUMP PUMP (3/4" /19.1mm SHEILDVAC)
4. FRIG/FREEZER DRAIN
5. STBD. AFT SHOWER DRAIN(S)
6. SUMP PUMP DISCHARGE HOSE (3/4" /19.1 mm SHEILDVAC)
7. SUMP PUMP DISCHARGE THRU HULL BALL VALVE (3/4" /19.1 mm SHEILDVAC)
8. SUMP PUMP POWER LEADS TO MAIN DIST. PANEL

1. AFT SUMP PUMP
2. FRIG/FREEZER DRAIN HOSE TO SUMP PUMP (3/4" /19.1mm SHEILDVAC)
3. STBD AFT SHOWER DRAIN HOSE TO SUMP PUMP (3/4" /19.1mm SHEILDVAC)
4. FRIG/FREEZER DRAIN

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H466 AFT SUMP PUMP SYSTEM LAYOUT			
PROJECT NO.	4608059E	REVISION NO.	NONE
DATE		DATE	1/22/99
ENGINEERING DEPT.			

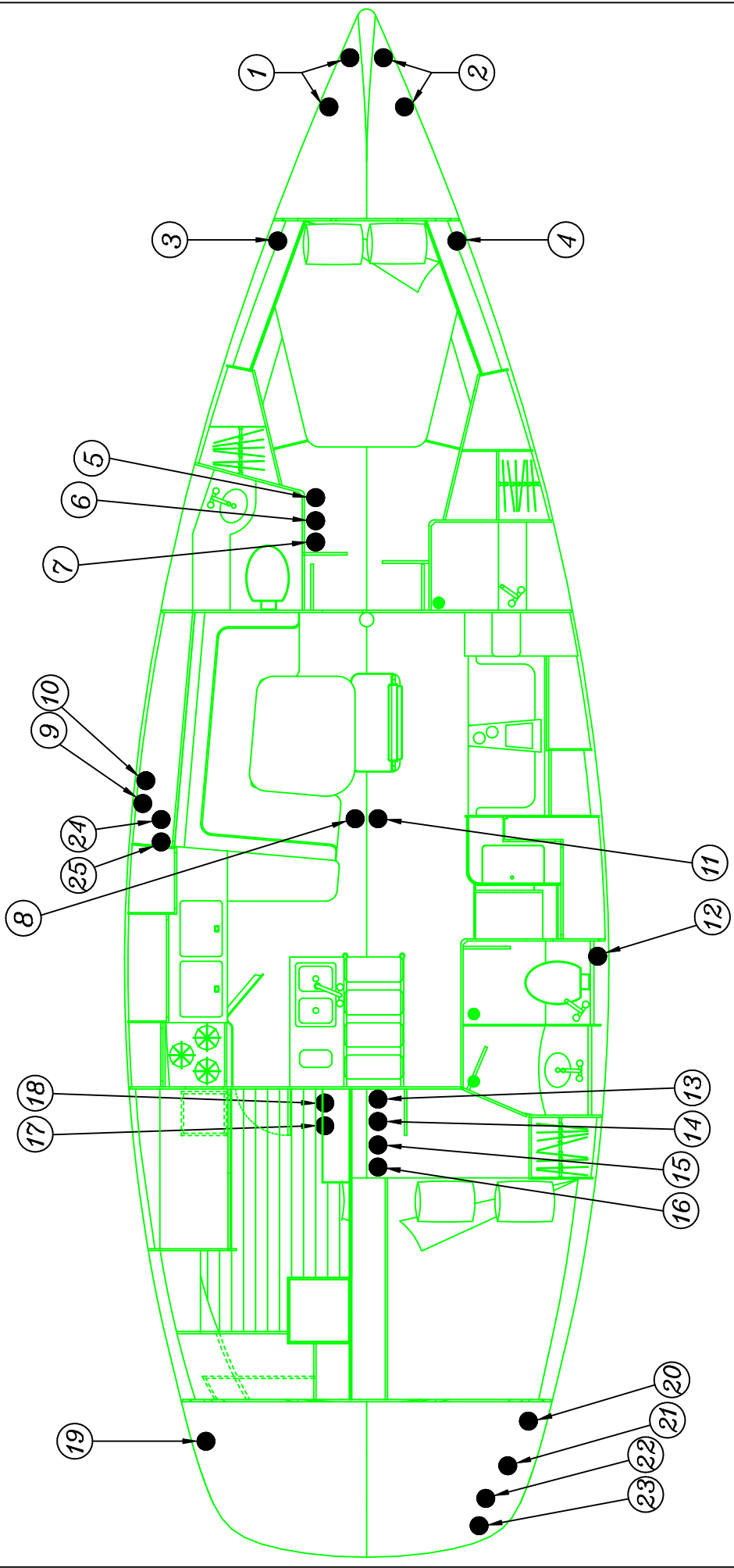




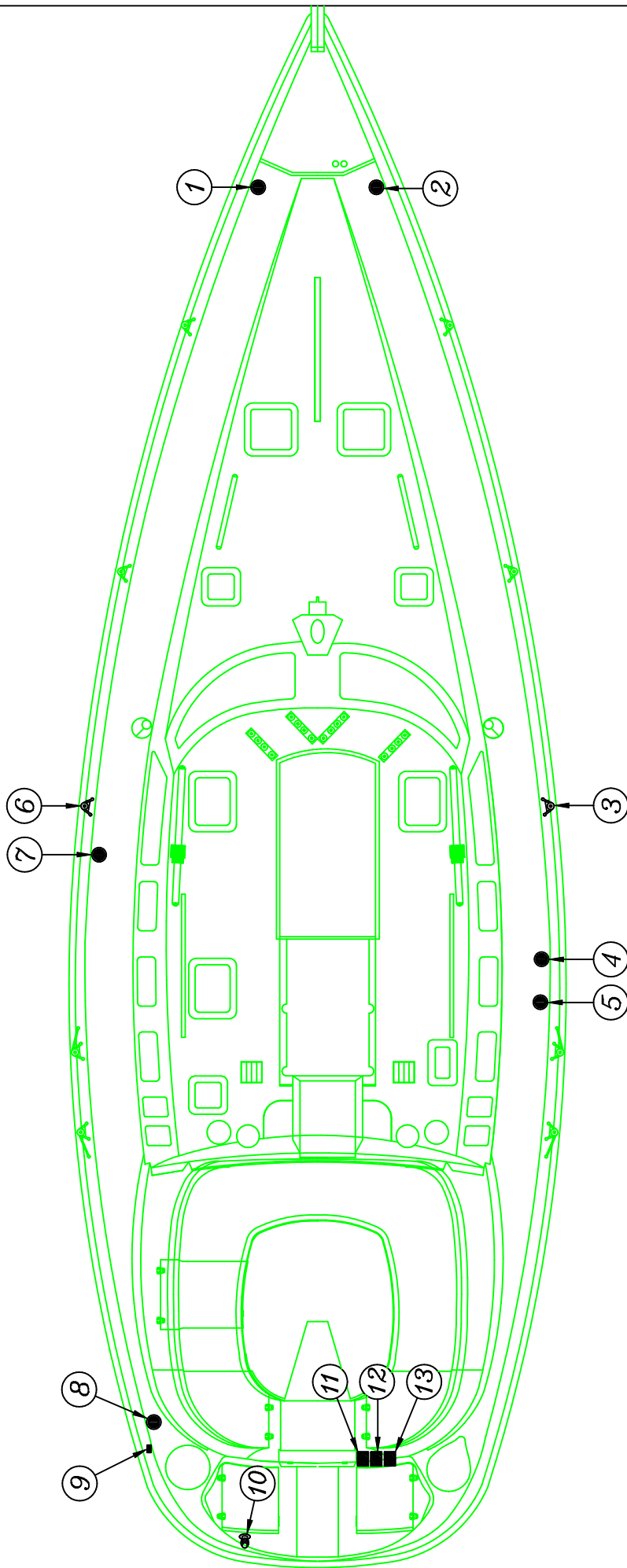
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H466 SUMP PUMP SCHEMATIC	
REVISED NO.	4608059F
DESIGNER	NONE
DATE	1/22/99
ENGINEERING DEPT.	

HUNTER



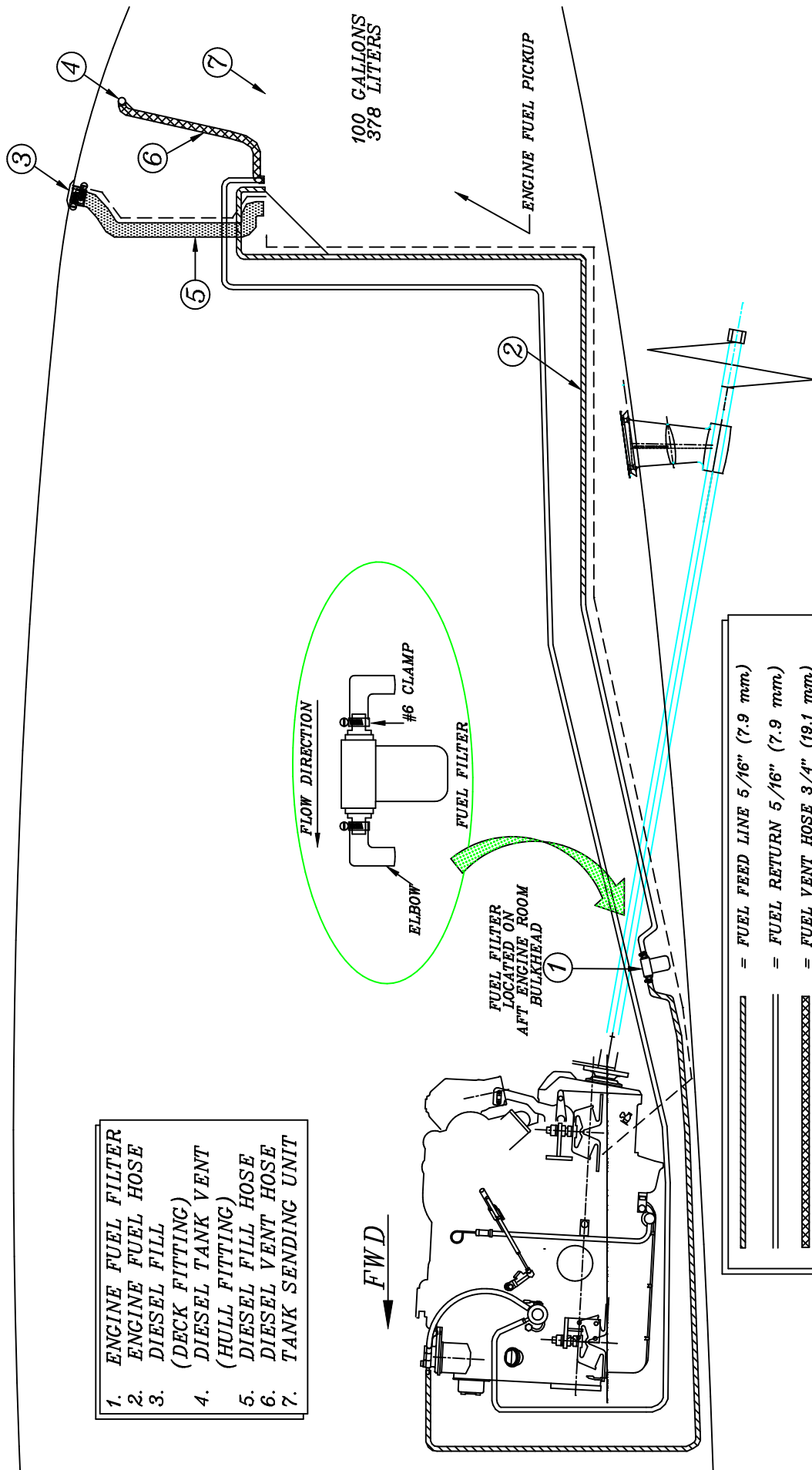
- | | |
|---------------------------------|---------------------------------------|
| 1. PORT ANCHOR WELL DRAIN | 14. AFT VANITY DRAIN DISCHARGE |
| 2. STARBOARD ANCHOR WELL DRAIN | 15. AFT HEAD RAW WATER PICK UP |
| 3. FWD WASTE TANK VENT | 16. AFT MACERATOR DISCHARGE |
| 4. FWD WATER TANK VENT | 17. ENGINE RAW WATER PICKUP |
| 5. FWD MACERATOR DISCHARGE | 18. GALLEY DRAIN DISCHARGE |
| 6. FWD VANITY DRAIN DISCHARGE | 19. PORT LPG LOCKER DRAIN |
| 7. FWD HEAD RAW WATER PICK UP | 20. STBD. LPG LOCKER DRAIN |
| 8. A.C RAW WATER PICK UP | 21. AFT AC RAW WATER DISCHARGE |
| 9. BILGE PUMP DISCHARGE | 22. ENGINE EXHAUST DISCHARGE |
| 10. SUMP PUMP DISCHARGE | 23. GENERATOR EXHAUST DISCHARGE |
| 11. REFRIG. RAW WATER PICK UP | 24. FWD AC RAW WATER DISCHARGE |
| 12. AFT WASTE TANK VENT | 25. REFRIGERATION RAW WATER DISCHARGE |
| 13. GENERATOR RAW WATER PICK UP | |



- | | |
|---|--|
| 1. FWD WASTE TANK PUMP OUT LOCATION | 7. PORT WATER TANK FILL LOCATION |
| 2. FWD WATER TANK FILL LOCATION | 8. FUEL TANK FILL LOCATION |
| 3. STBD. WATER TANK VENT LOCATION
(VENTED STANCHION) | 9. FUEL TANK FILL VENT LOCATION |
| 4. STBD. WATER TANK FILL LOCATION | 10. "SHORE" WATER INLET VALVE LOCATION |
| 5. AFT HOLDING TANK PUMP OUT LOCATION | 11. SHORE POWER #1 INLET LOCATION |
| 6. PORT WATER TANK VENT LOCATION
(VENTED STANCHION) | 12. SHORE POWER #2 INLET LOCATION |
| | 13. TV COAX/PHONE INLET LOCATION |



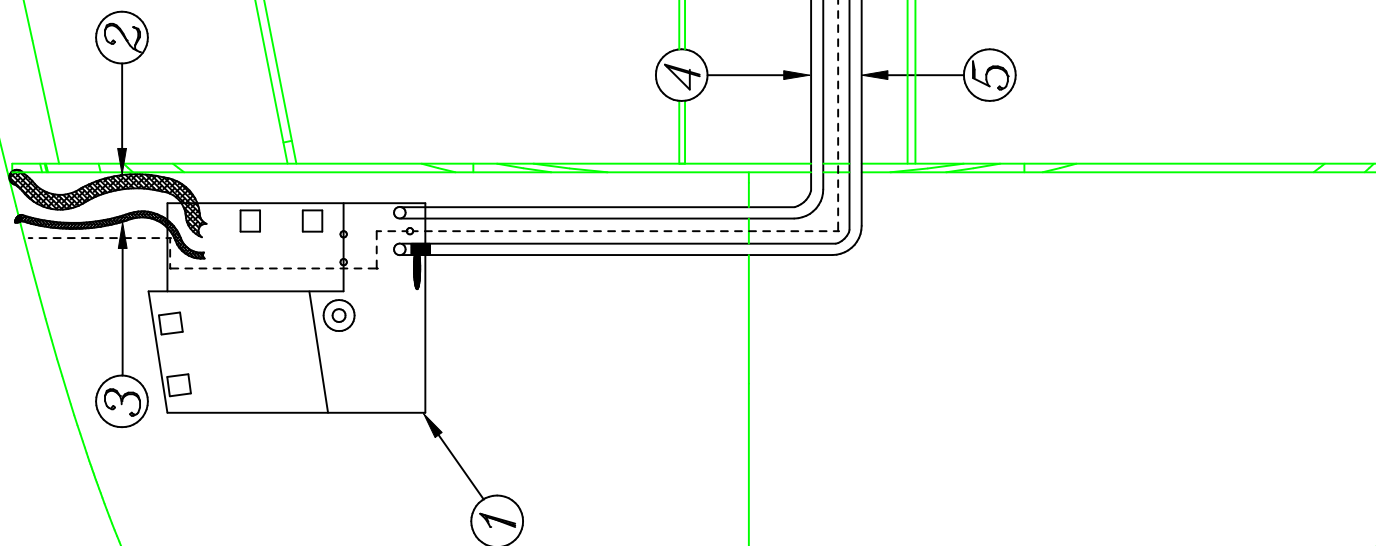
This document discloses information for which HUNTER MARINE CORP. has proprietary rights.



- 1. ENGINE FUEL FILTER
- 2. ENGINE FUEL HOSE
- 3. DIESEL FILL (DECK FITTING)
- 4. DIESEL TANK VENT (HULL FITTING)
- 5. DIESEL FILL HOSE
- 6. DIESEL VENT HOSE
- 7. TANK SENDING UNIT

[Hatched] = FUEL FEED LINE 5/16" (7.9 mm)
 [Solid] = FUEL RETURN 5/16" (7.9 mm)
 [Dotted] = FUEL VENT HOSE 3/4" (19.1 mm)
 [Cross-hatched] = FUEL FILL HOSE 1 1/2" (38.1 mm)
 [Dashed] = FUEL FILL STATIC GROUND

1. DIESEL FUEL TANK (100 GALLONS/378 LITERS)
(TANK NOTE: THERE MUST BE A RUBBER BARRIER BETWEEN THE TANK AND ANY BRACKETS OR STRAPS USED TO FASTEN DOWN THE TANK. THIS IS TO PREVENT THE POSSIBILITY OF DAMAGE TO THE TANK FROM VIBRATION.)
2. FUEL FILL HOSE TO DECK FITTING (1 1/2" /38.1mm)
3. FUEL VENT HOSE TO DECK FITTING (5/8" /15.9mm)
4. DIESEL FUEL RETURN LINE (1/4" /6.4mm)
5. DIESEL FUEL FEED LINE (1/4" /6.4mm)
6. FUEL FILL STATIC GROUND
7. PRIMARY FUEL FILTER
8. SECONDARY FUEL FILTER @ GENERATOR
9. OPTIONAL 6 KW. GENERATOR



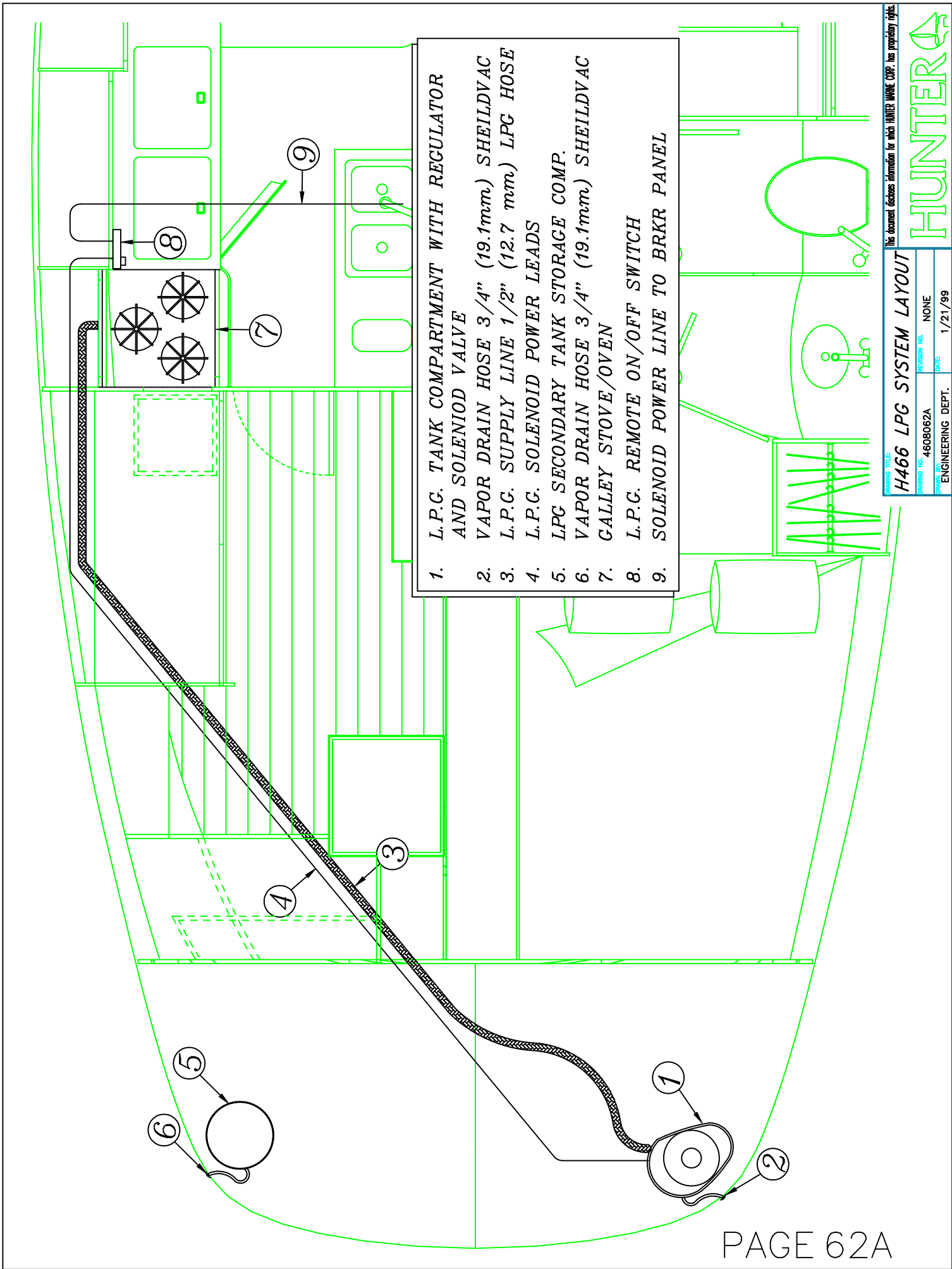
FILTER LOCATED ON AFT STBD BERTH BULKHEAD.

FILTER LOCATED ON STBD. SIDE OF GENERATOR

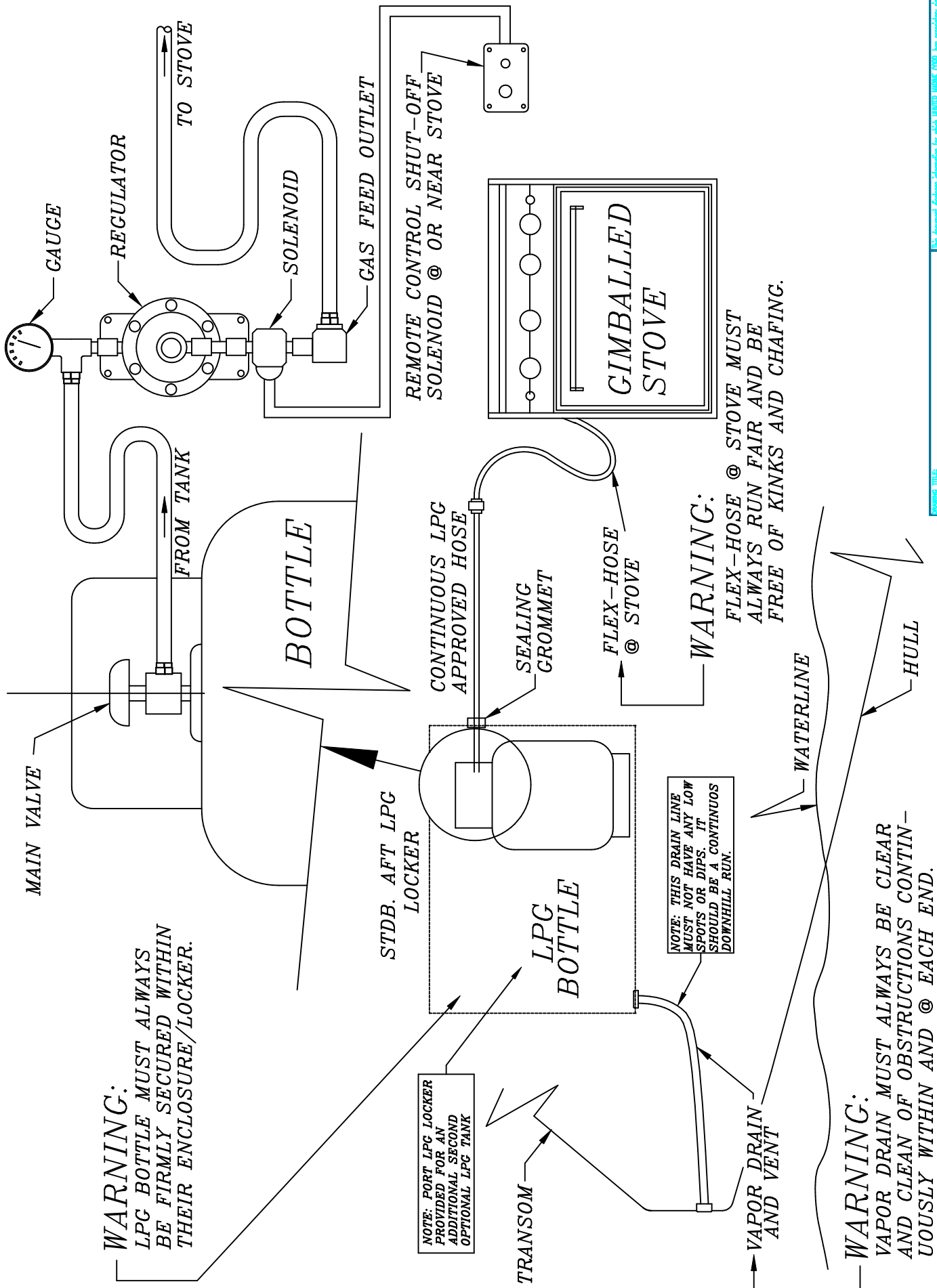
PROPOSED FILE: **H466 (OPT) GENERATOR FUEL SYSTEM LAYOUT**
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DESIGN NO.	4608061B	REVISION NO.	NONE
DATE	1/21/99	ENGINEERING DEPT.	

HUNTER



1. L.P.G. TANK COMPARTMENT WITH REGULATOR AND SOLENIOD VALVE
2. VAPOR DRAIN HOSE 3/4" (19.1mm) SHEILDVAC
3. L.P.G. SUPPLY LINE 1/2" (12.7 mm) LPG HOSE
4. L.P.G. SOLENIOD POWER LEADS
5. LPG SECONDARY TANK STORAGE COMP.
6. VAPOR DRAIN HOSE 3/4" (19.1mm) SHEILDVAC
7. GALLEY STOVE/OVEN
8. L.P.G. REMOTE ON/OFF SWITCH
9. SOLENIOD POWER LINE TO BRKR PANEL



WARNING:
LPG BOTTLE MUST ALWAYS BE FIRMLY SECURED WITHIN THEIR ENCLOSURE/LOCKER.

NOTE: PORT LPG LOCKER PROVIDED FOR AN ADDITIONAL SECOND OPTIONAL LPG TANK

NOTE: THIS DRAIN LINE MUST NOT HAVE ANY LOW SPOTS OR DIPS. IT SHOULD BE A CONTINUOUS DOWNHILL RUN.

WARNING:
FLEX-HOSE @ STOVE MUST ALWAYS RUN FAIR AND BE FREE OF KINKS AND CHAFING.

WARNING:
VAPOR DRAIN MUST ALWAYS BE CLEAR AND CLEAN OF OBSTRUCTIONS CONTINUOUSLY WITHIN AND @ EACH END.

Part Number: H466 L.P.G. SYSTEM LAYOUT
 Revision No: 4608062B
 Date: 1/20/00
 Engineering Dept.



NOTE TO CONSUMER

THE FOLLOWING PAGES PROVIDE DETAILED INFORMATION, SCHEMATICS ETC. PERTAINING TO THE H466 **STANDARD** ELECTRICAL SYSTEMS AS WELL AS THE **OPTIONAL** ELECTRICAL SYSTEMS.

READ THE DRAWING TITLE IN THE TITLE BLOCK TO BE SURE YOU ARE REFERRING TO THE CORRECT SYSTEM FOR YOUR MODEL.

H466 ELECTRICAL SYSTEM CONTENTS

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PAGES 64A-1 THRU 64I CONTAINS D.C. POWER SYSTEMS (12 VOLT D.C.)

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PAN WIRE CHASE LOCATIONS.....	PAGE 64H
DC CONSUMER NOTES.....	PAGE 64I
SHORE POWER WIRING.....	PAGE 65A
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H466 POWER SYSTEMS OPERATIONS PROCEDURES

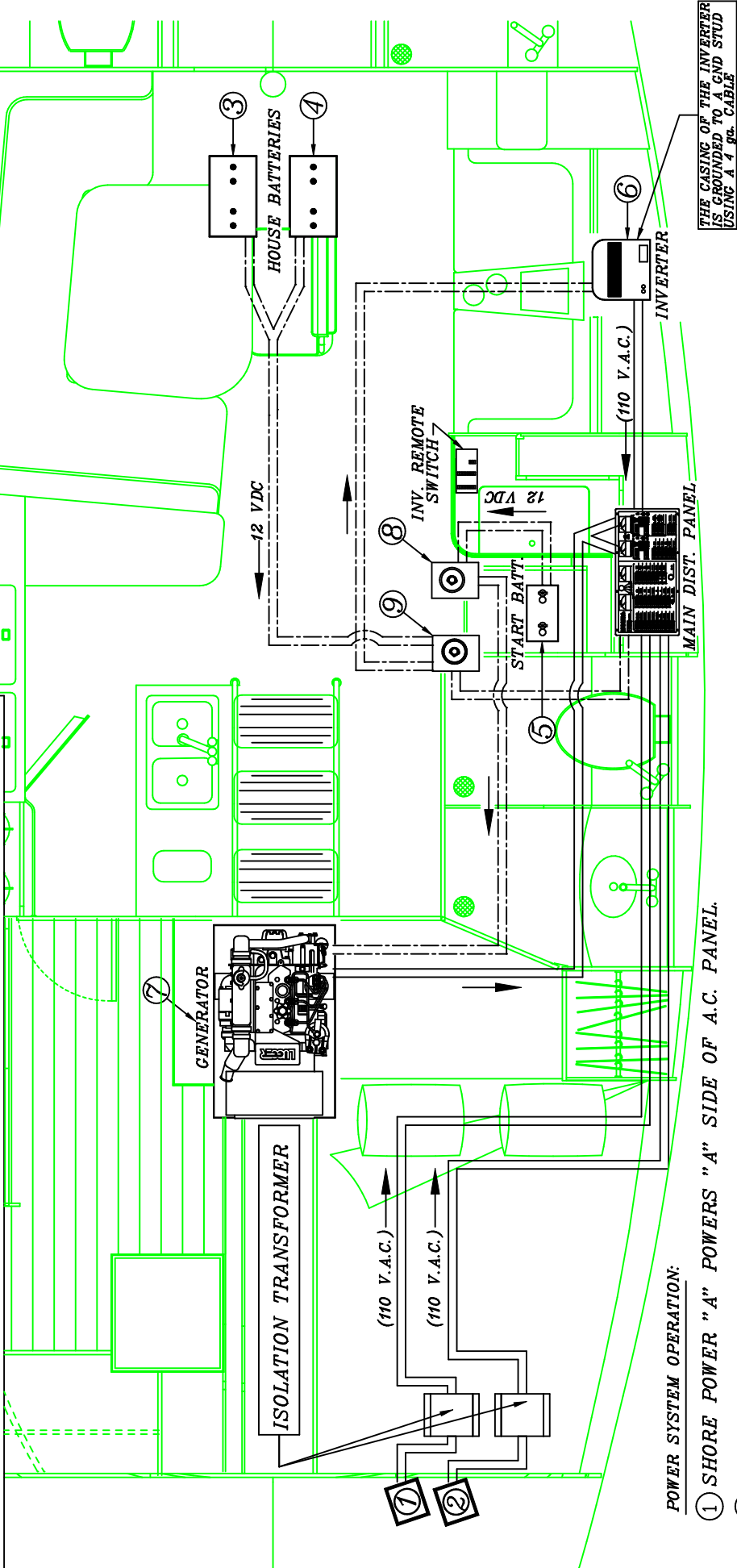
POWER SOURCE:	TO OPERATE:
<p>"D.C. MAIN"</p>	<p>TURN ON "D.C. MAIN" BRKR. ON D.C. SIDE OF MAIN DISTRIBUTION PANEL. IT IS NOT NECESSARY TO TURN ON THE INVERTER/DRAW SEL. SW. HOWEVER THE #1, #2, OR BOTH POSITION, THIS PORTION OF THE INV/DRAW SEL. SW. IS FOR THE CHARGING/INVERTING SYSTEM (AND ISOLATION OF) ONLY. IT IS NECES. EITHER TO TURN ON EITHER THE "PANEL #1", OR "PANEL #2", BREAKER/S LOCATED ON THE BOTTOM OF THE INV/DRAW SEL. SW. PANEL TO PROVIDE POWER TO D.C. PANEL FROM EITHER THE HOUSE BATT. #1 OR HOUSE BATT. #2. (PANEL #1 "BREAKER" = HOUSE BATTERY #1) (PANEL #2 "BREAKER" = HOUSE BATTERY #2) IF NO POWER: CHECK 300 amp IN LINE FUSE AT EACH HOUSE BATTERY IN HOUSE BATTERY COMPARTMENT, AND/OR BATTERY CONNECTIONS IF NECESSARY.</p>
<p>SHORE POWER "A"</p>	<p>1. CONNECT SHORE POWER CABLE #1, TO SUPPLY POWER TO "A" SIDE OF A.C. POWER MAIN DISTRIBUTION PANEL 2. TURN ON MAIN BREAKER ON SHORE POWER "A" SIDE OF PANEL 3. "A" SIDE OF A.C. POWER MAIN DISTRIBUTION PANEL SHOULD NOW BE OPERABLE (NOTE: INVERTER CAUSES APPROX. 15 SECOND DELAY) IF NO POWER TO "A" SIDE OF PANEL CHECK THE FOLLOWING: 1. BREAKER AT DOCKSIDE POWER SUPPLY BOX 2. BREAKER #1 LOCATED IN HEADLINER STBD. AFT STRM. (ON 220V.A.C. MODELS IN STBD. AFT SWIMSEAT LOCKER.)</p>
<p>SHORE POWER "B"</p>	<p>1. CONNECT SHORE POWER CABLE #2, TO SUPPLY POWER TO "B" SIDE OF A.C. POWER MAIN DISTRIBUTION PANEL 2. TURN ON MAIN BREAKER ON SHORE POWER "B" SIDE OF PANEL 3. "B" SIDE OF A.C. POWER MAIN DISTRIBUTION PANEL SHOULD NOW BE OPERABLE IF NO POWER TO "B" SIDE OF PANEL CHECK THE FOLLOWING: 1. BREAKER AT DOCKSIDE POWER SUPPLY BOX 2. BREAKER #2 LOCATED IN HEADLINER STBD. AFT STRM. (ON 220V.A.C. MODELS IN STBD. AFT SWIMSEAT LOCKER.)</p>
<p>" INVERTER" WHEN IN INVERT MODE (CONVERTS 12V.D.C. TO 110V./A.C.)</p> <p>POWERS "A" SIDE OF A.C. PANEL ONLY WHEN INVERTING</p> <p>USED WHEN NO SHORE POWER OR GEN.POWER BEING USED.</p>	<p>1 CHOOSE HOUSE BATTERY/S TO DRAW POWER FROM BY TURNING INV/DRAW (HOUSE BATT'S) SEL. SWITCH TO 1,2, OR BOTH POSITION, LOCATED AFT END PORT SETTEE MAIN CABIN (THIS SW. PROVIDES ISOLATION CAPABILITY IN THE EVENT OF A BAD BATTERY, FOR EX. A DEAD CELL) 2. TURN THE INVERTER REMOTE SWITCH (LOCATED AT NAV. STATION) TO THE "ON" POSITION. LOCATED AFT END PORT SETTEE IN MAIN CABIN. 3. TURN ON DESIRED BREAKER (EX. OUTLETS) ON "A" SIDE OF A.C. MAIN DISTRIBUTION PANEL NOTE: IT TAKES 10D.C. AMPS TO CREATE 1A.C. AMP. IF THE BATTERY VOLTAGE DROPS BELOW 10.5V. THE INVERTER WILL AUTOMATICALLY SHUT DOWN. (SEE "BATT. SEL. SW" & "METERS" ON PAGE 63A-6) NOTE: THE INVERTER WILL NOT POWER THE WATER HEATER OR AIR COND. SYSTEM, THE WATER HEATER IS POWERED BY "SHORE POWER A" CABLE OR OPT. GENERATOR. THE AIR COND'S ARE POWERED BY THE "SHORE POWER B" CABLE OR THE OPT. GENERATOR. NOTE: IF ANY OTHER APPLIANCES ARE TO BE USED WITH AIR COND'S RUNNING WHEN ON SHORE POWER BOTH "SHORE POWER A" AND "SHORE POWER B" CABLES MUST BE CONNECTED.</p> <p>TO POWER D.C. SIDE OF PANEL AND "A" SIDE OF A.C. PANEL SIMULTANEOUSLY USING INVERTER: 1. TURN ON D.C. MAIN BREAKER ON D.C. SIDE OF MAIN DISTRIBUTION PANEL 2. TURN THE INV/DRAW (HOUSE BATT'S) SELECTOR SWITCH TO THE #2 POSITION 3. TURN THE #1 BREAKER LOCATED AT THE BOTTOM OF THE INV/DRAW SEL. SWITCH PANEL TO THE "ON" POSITION. AND TURN THE #2 BREAKER TO THE "OFF" POSITION. 4. TURN INVERTER REMOTE SWITCH TO THE "ON" POSITION THIS PROCEDURE ALLOWS INVERTER TO SUPPLY 110V.A.C. POWER TO "A" SIDE OF A.C. PANEL BY DRAWING POWER FROM HOUSE BATTERY #2, WHILE D.C. SIDE OF PANEL DRAWS POWER FROM HOUSE BATTERY #1. THIS ISOLATION PROCEDURE COMES IN HANDY FOR EXAMPLE WHEN USING A HIGHER AMPERAGE APPLIANCE OFF OF THE INVERTER THAT MIGHT CAUSE A MOMENTARY VOLTAGE DROP THAT COULD EFFECT EQUIP. (SUCH AS THE OPT. AUTOPILOT) THAT IS VOLTAGE SENSITIVE CAUSING THE UNIT TO TURN OFF. (THIS APPLIES WHEN THERE IS NO SHORE OR GENERATOR POWER BEING SUPPLIED TO PANEL) THE INVERTER AUTOMATICALLY TRANSFERS SHORE POWER TO THE A.C. PANEL WHEN "SHORE POWER A" CABLE CONNECTED AND DOCKSIDE POWER PRESENT AT A.C. PANEL, BYPASSING THE INVERT MODE CAPABILITIES.</p>
<p>OPTIONAL GENERATOR</p>	<p>1. TURN (START) BATTERY SWITCH TO THE "ON" POSITION 2. CHECK SEA STRAINER AND OPEN RAW WATER SEACOCK. SEE PAGE 60 FOR LOCATIONS 3. START GENERATOR (FOLLOW STARTING INSTRUCTIONS PROVIDED IN THE "GENERATOR MANUAL") 3. RAISE SLIDE BAR ON "A" SIDE OF A.C. PANEL AND TURN GENERATOR BREAKER TO THE "ON" POSITION TO POWER "A" SIDE OF A.C. MAIN DISTRIBUTION PANEL.; 4. TO POWER "B" SIDE OF A.C. PANEL (TO USE AIR COND'S), RAISE SLIDE BAR ON "B" SIDE OF A.C. PANEL AND TURN PARALLEL BREAKER TO THE "ON" POSITION</p>

H466 POWER SYSTEMS OPERATIONS PROCEDURES

H466 BATTERY CHARGING SYSTEMS OPERATION PROCEDURES

<p>ENGINE ALTERNATOR</p>	<ol style="list-style-type: none"> 1. TURN (START) BATTERY SELECTOR SWITCH TO THE "ON" POSITION; LOCATED ON STBD. AFT ENGINE ROOM BULK. IN AFT STRM. 2. CHECK SEA STRAINER & OPEN RAW WATER SEACOCK. SEE PAGE 60 FOR LOCATIONS 3. START SHIP'S ENGINE (FOLLOW STARTING INSTRUCTIONS IN THE "ENGINE MANUAL") 4. TURN "INV/DRAW" (HOUSE) BATTERY SWITCH TO THE "BOTH" POSITION
<p>INVERTER INVERTER HAS A BUILT IN AUTO. CHARGING SYSTEM</p>	<ol style="list-style-type: none"> 1. CONNECT SHORE POWER CABLE #1 TO POWER "A" SIDE OF A.C. POWER MAIN DISTRIBUTION PANEL AND TURN ON "SHORE POWER A" MAIN BREAKER 2. TURN INVERTER REMOTE SWITCH (LOCATED AT NAV. STATION) TO THE "OFF" POSITION 3. TURN INVERTER/DRAW (HOUSE BATT'S) SELECTOR SWITCH TO THE "BOTH" POSITION, LOCATED AFT END PORT SETTEE MAIN CABIN. NOTE: IT IS NOT NECESSARY TO TURN ON THE "START" BATTERY SWITCH TO PROVIDE CHARGING POWER TO THE START BATTERY. NOTES: WHEN LEAVING BOAT UNATTENDED, BE SURE INVERTER REMOTE SWITCH IS IN THE "OFF" POSITION, THIS WAY IF SHORE POWER IS LOST FOR ANY REASON, THIS WILL PREVENT THE INVERTER FROM CONVERTING 12V.D.C. TO A.C. VOLTAGE CAUSING HOUSE BATTERIES TO BE DRAINED. WHEN THE INVERTER REMOTE SWITCH IS IN THE "OFF" POSITION THE INVERTER AUTOMATICALLY GOES INTO CHARGE MODE INVERTER CHARGE MODE WORKS ONLY WHEN THERE IS POWER TO THE "A" SIDE OF THE A.C. PANEL
<p>OPTIONAL GENERATOR</p>	<ol style="list-style-type: none"> 1. TURN (START) BATTERY SWITCH TO THE "ON" POSITION, LOCATED ON STBD. AFT ENGINE ROOM BULK. IN AFT STRM. 2. CHECK SEA STRAINER & OPEN RAW WATER SEACOCK. SEE PAGE 60 FOR LOCATIONS 2. START GENERATOR (FOLLOW STARTING INSTRUCTIONS IN THE "GENERATOR MANUAL") 4. TURN THE INVERTER REMOTE SWITCH TO THE "OFF" POSITION. 5. TURN THE INV/DRAW SELECTOR SWITCH TO THE "BOTH" POSITION

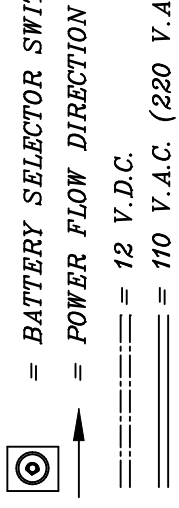
NOTE: THIS LAYOUT IS INTENDED TO PROVIDE A BASIC UNDERSTANDING OF THE VARIOUS POWER SYSTEMS ONLY, IT IS NOT A SCHEMATIC! SEE FOLLOWING PAGES FOR MORE DETAILED INFO. SCHEMATICS, ETC.



POWER SYSTEM OPERATION:

- ① SHORE POWER "A" POWERS "A" SIDE OF A.C. PANEL.
- ② SHORE POWER "B" POWERS "B" SIDE OF A.C. PANEL.
- ③ & ④ HOUSE BATTERY PROVIDES 12V.D.C. VOLTAGE TO D.C. SIDE OF DISTRIBUTION PANEL AND INVERTER.
- ⑤ START BATTERY PROVIDES 12 V.D.C. POWER TO ENGINE & GEN. STARTERS. (NOTE: ISOLATOR PREVENTS INVERTER FROM DRAWING POWER FROM START BATTERY.
- ⑥ INVERTER CONVERTS 12 V.D.C. TO A.C. VOLTAGE AND POWERS "A" SIDE OF A.C. PANEL ONLY. (WITH THE EXCEPTION OF THE WATER HEATER) (FREEDOM 25 (2,500 WATTS PER UNIT, 80 AMP SURGE BRKR.) (LOCATED UNDER CHART SEAT, SHOWN HERE FOR CLARITY)
- ⑦ OPT. GENERATOR PROVIDES A.C. POWER TO BOTH "A" & "B" SIDES OF PANEL WHEN GENERATOR AND PARALLEL BREAKERS ARE IN THE "ON" POSITION WHILE GENERATOR RUNNING.

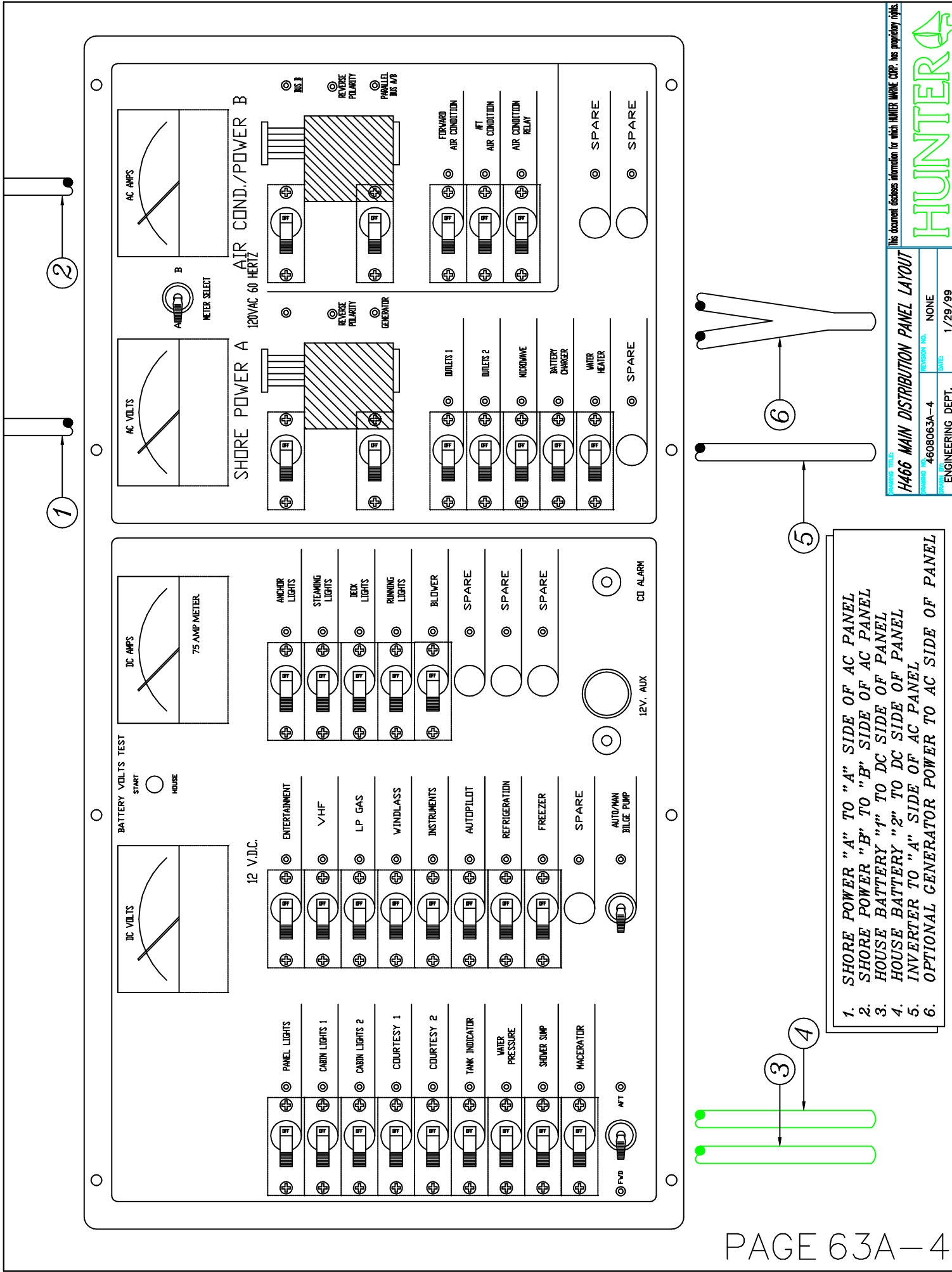
- ⑧ START BATTERY "ON/OFF" SWITCH
- ⑨ INVERTER/ DRAW SELECTOR SWITCH



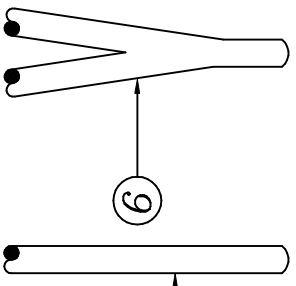
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H466 BASIC POWER SYSTEM LAYOUT	
PROJECT NO. 4608063A-3	REVISION NO. NONE
ENGINEERING DEPT.	DATE 1/21/99

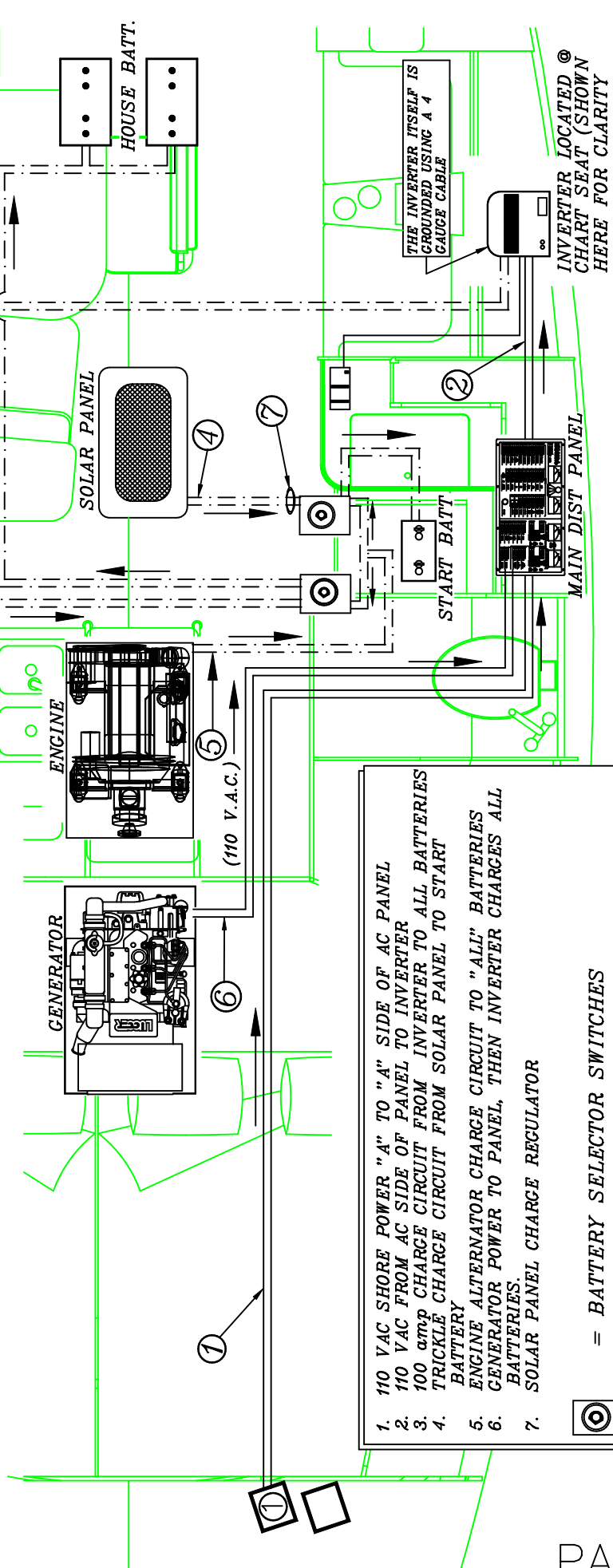
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1. SHORE POWER "A" TO "A" SIDE OF AC PANEL
2. SHORE POWER "B" TO "B" SIDE OF AC PANEL
3. HOUSE BATTERY "1" TO DC SIDE OF PANEL
4. HOUSE BATTERY "2" TO DC SIDE OF PANEL
5. INVERTER TO "A" SIDE OF AC PANEL
6. OPTIONAL GENERATOR POWER TO AC SIDE OF PANEL



BASIC OPERATION:
 INVERTER CHARGES ALL BATTERIES WHEN INVERTER IS IN CHARGE MODE. INVERTER AUTOMATICALLY SWITCHES OVER TO CHARGE MODE WHEN IT IS NOT CONVERTING D.C. VOLTAGE TO A.C. VOLTAGE AND SHORE POWER "A" IS CONNECTED AND THE INV/DRAW (HOUSE BATTERY) SELECTOR SWITCH IS IN THE "ON" POSITION. ENGINE ALTERNATOR PROVIDE CHARGING POWER TO ALL BATTERIES WHEN ENGINE IS RUNNING AND THE INV/DRAW (HOUSE BATTERY) SELECTOR SWITCH IS IN THE "ON" POSITION. THE OPTIONAL GENERATOR PROVIDES POWER TO THE MAIN DISTRIBUTION PANEL, ALLOWING THE INVERTER/CHARGER TO CHARGE THE BATTERIES MENTIONED ABOVE.



- 1. 110 VAC SHORE POWER "A" TO "A" SIDE OF AC PANEL
 - 2. 110 VAC FROM AC SIDE OF PANEL TO INVERTER
 - 3. 100 amp CHARGE CIRCUIT FROM INVERTER TO ALL BATTERIES
 - 4. TRICKLE CHARGE CIRCUIT FROM SOLAR PANEL TO START BATTERY
 - 5. ENGINE ALTERNATOR CHARGE CIRCUIT TO "ALL" BATTERIES
 - 6. GENERATOR POWER TO PANEL, THEN INVERTER CHARGES ALL BATTERIES
 - 7. SOLAR PANEL CHARGE REGULATOR
- = BATTERY SELECTOR SWITCHES
 = POWER FLOW DIRECTION
 = CHARGE CIRCUITS OVERSEAS MODELS
 = 110 V.A.C. (220 V.A.C.)

NOTE:
 THIS LAYOUT IS INTENDED TO PROVIDE A BASIC UNDERSTANDING OF THE CHARGING SYSTEM ONLY. IT IS NOT A SCHEMATIC SEE FOLLOWING PAGES FOR MORE DETAILED INFO, SCHEMATICS, ETC.

12 V.D.C. DISTRIBUTION PANEL

BREAKER	DESCRIPTION
PANEL LIGHTS	ILLUMINATES BOTH A.C. & D.C. SIDES OF THIS PANEL FOR NIGHT USE
CABIN LIGHTS 1	SUPPLIES POWER TO CABIN LIGHTS FORWARD OF THE GALLEY AND NAVIGATION STATION
CABIN LIGHTS 2	SUPPLIES POWER TO CABIN LIGHTS AFT OF THE GALLEY AND NAVIGATION STATION
COURTESY 1	SUPPLIES POWER TO SWITCHED CTSY. LIGHTS , THESE ARE THE FRIDGE/FREEZER, BILGE COMPTS. AND COCKPIT
COURTESY 2	SUPPLIES POWER TO ALL CABIN SOLE LIGHTS LOCATED AT THE GALLEY, NAV. STA., AFT STRM. FWD STRM
COCKPIT LIGHTS	SUPPLIES POWER TO COCKPIT LIGHTS IN THE ARCH
WATER PUMP	SUPPLIES POWER TO FRESH WATER PUMP TO PRESSURIZE H2O SYSTEM.
SUMP PUMP	SUPPLIES POWER TO BOTH FWD. AND AFT SHOWER SUMP BOXES. (SELF CONTAINED FLOAT SWITCH IN EACH SUMP ACTIVATES PUMP INSIDE EACH SUMP BOX. (SEE PAGE 59A FOR SUMP LOCATIONS)
ENTERTAINMENT	SUPPLIES POWER TO OPTIONAL STEREOS.
ANCHOR LIGHT	SUPPLIES POWER TO 360 DEGREE LIGHT AT TOP OF MAST, USE WHEN ANCHORED AT NIGHT.
STEAMING LIGHT	SUPPLIES POWER TO STEAMING LIGHT LOCATED ON FWD. SIDE OF MAST APPROXIMATELY AT THE HEIGHT OF THE LOWER SPREADERS. USE AT NIGHT WHEN VESSEL UNDERWAY BY ENGINE POWER. (ALONG W/RUNNING LTS.)
DECK LIGHT	SUPPLIES POWER TO DECK LIGHT (IS COMBINATION WITH STEAMING LIGHT) PROVIDES LIGHT TO DECK BELOW.
RUNNING LIGHTS	SUPPLIES POWER TO THE BOW, STERN, & COMPASS LIGHT. USE AT NIGHT UNDER SAIL AND/OR ENGINE POWER.
INSTRUMENTS	SUPPLIES POWER TO KNOT, DEPTH, & SPEED REPEATERS LOCATED ON HELM CONSOLE.
VHF	SUPPLIES POWER TO THE VHF RADIO LOCATED INSIDE COMPANIONWAY OPENING
WINDLASS	SUPPLIES POWER TO UP/DOWN CONTROLS AT ANCHOR WELL. NOTE: BECAUSE THE WINDLASS DRAWS IT'S POWER FROM THE START BATTERY, IT IS GOOD PRACTICE TO START THE SHIPS ENGINE PRIOR TO OPERATING WINDLASS TO PREVENT BATTERY DRAIN. (IF NO POWER, CHECK RESET ON REMOTE PANEL)
AUTOPILOT	THIS BREAKER PROVIDED FOR AN OPTIONAL AUTOPILOT SYSTEM.
REFRIGERATION	SUPPLIES POWER TO REFRIGERTOR COMPRESSOR.
FREEZER	SUPPLIES POWER TO FREEZER COMPRESSOR.
MACERATOR	SUPPLIES POWER TO THE MACERATOR TOGGLE SWITCH.
	NOTE: THESE DEVICES ARE USED FOR DIRECT OVERBOARD DISCHARGE OF RAW SEWAGE, BE AWARE OF YOUR LOCAL BOATING REG. BEFORE USING.
L. P. GAS	SUPPLIES POWER TO L.P. GAS SWITCH AT GALLEY. SEE "STOVE MANUAL" FOR OPER. & SAFETY INST.
BLOWER	SUPPLIES POWER TO ENGINE ROOM EXHAUST FAN.
TANK INDICATOR	SUPPLIES POWER TO TANK MONITOR.
BILGE PUMP	TOGGLE SWITCH STAYS IN THE "AUTO" POSITION, THIS ALWAYS FEEDS POWER TO THE FLOAT SWITCH (AS LONG AS BATTERIES ARE CONNECTED AND HAVE AMPLE CHARGE) FOR MANUAL USE, PUSH SWITCH TO "MANUAL" ILLUMINATED L.E.D. INDICATES POWER TO PUMP AND PUMP SHOULD BE RUNNING. PRIOR TO LEAVING VESSEL "MANUALLY" TEST PUMP AND CHECK BATTERY LEVEL. SEE BATTERY SELECT SWITCH BELOW.
BATT. VOLTS SEL. SW.	USE TO REVIEW STATUS OF THE START AND HOUSE BATTERIES.
METERS	D.C. VOLTS DISPLAYS AVAILABLE VOLTAGE FROM SELECTED BATTERY D.C. AMPS DISPLAYS AMPERAGE BEING DRAWN FROM HOUSE BATTERY BANK.
YELLOW L.E.D.'S	LIGHT EMITTING DIODES ILLUMINATE WHEN 12 V.D.C. POWER PRESENT.
NOTE:	IF THE OPTIONAL AUTOPILOT WAS INSTALLED AT THE FACTORY, THE "INSTRUMENTS" POWER LEADS ARE WIRED TO THE AUTOPILOT BREAKER. THIS ALLOWS THESE UNITS TO WORK SIMULTANEOUSLY OFF THE AUTOPILOT BREAKER.

110V.A.C. (220 OVERSEAS MODELS) DISTRIBUTION PANEL

BREAKERS

DESCRIPTION

"A" SIDE OF A.C. PANEL

SHORE POWER "A"	PROVIDES A.C. VOLTAGE TO "A" SIDE OF MAIN DISTRIBUTION PANEL WHEN SHORE POWER CORD "A" IS CONNECTED TO OUTLET AT DOCKING FACILITY.
GENERATOR	SUPPLIES POWER FROM GENERATOR TO SHORE POWER "A" (AND SHORE POWER "B" IF DESIRED) PANEL. NOTE: TO PROVIDE POWER TO SHORE POWER "B" SIDE OF PANEL MOVE SLIDE BAR UP AND TURN ON THE PARALLEL BREAKER ON THE SHORE POWER "B" SIDE OF PANEL.
OUTLETS 1	PROVIDES A.C. POWER TO THE OUTLETS ON THE PORT SIDE OF BOAT.
OUTLETS 2	PROVIDES A.C. POWER TO THE OUTLETS ON THE STBD. SIDE OF BOAT.
MICROWAVE	SUPPLIES POWER TO OUTLET BEHIND MICRO. IN WHICH MICROWAVE IS PLUGGED INTO.
WATER HEATER	SUPPLIES POWER TO WATER HEATER. BE SURE TANK IS FULL AND SYSTEM IS FREE FROM AIR BEFORE APPLYING POWER TO HEATER TO PREVENT ELEMENT BURNOUT.

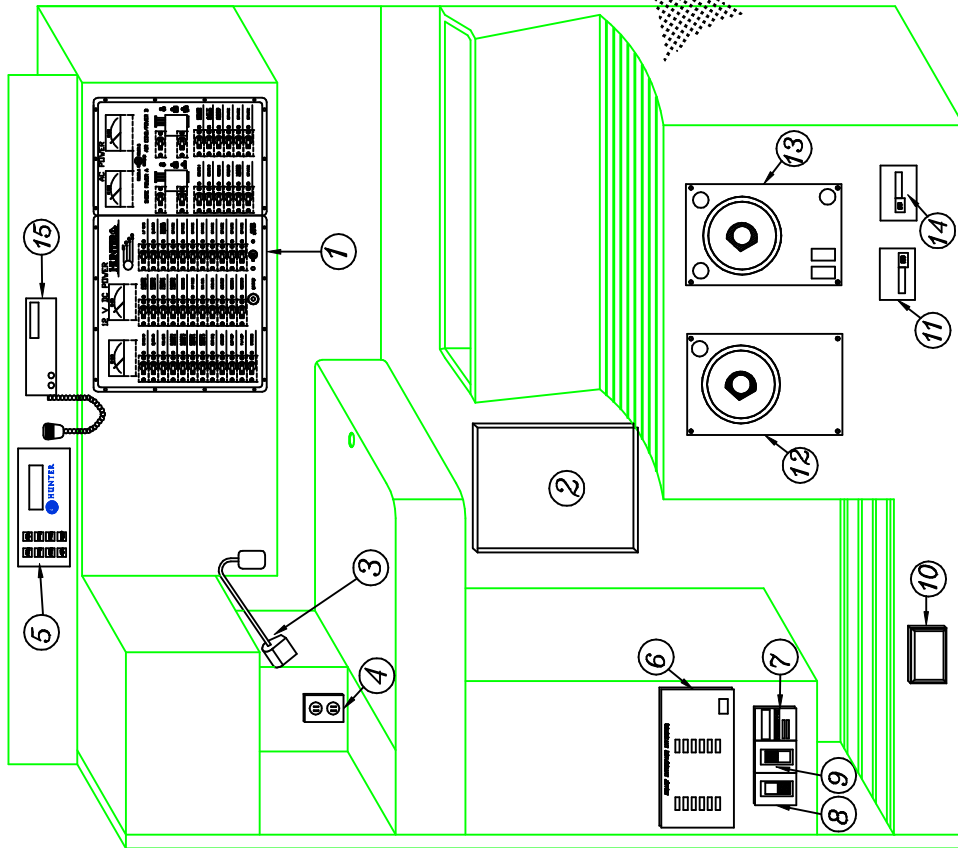
"B" SIDE OF PANEL

SHORE POWER "B"	PROVIDES A.C. VOLTAGE TO THIS SIDE OF PANEL WHEN SHORE POWER CORD "B" IS CONNECTED TO OUTLET AT DOCKING FACILITY.
PARALLEL	PROVIDES POWER FROM GENERATOR TO THIS SIDE OF PANEL.(MOVE SLIDE BAR UP TO TURN BREAKER ON.)
FWD/AFT AIR COND.	PROVIDES POWER TO EITHER FWD. OR AFT AIR COND. UNITS (SEE "MARINE AIR MANUAL" FOR OPER. INSTRUCTIONS.
AIR COND. RELAY	PROVIDES POWER TO RAW WATER CIRCULATION PUMP USED TO COOL AIR COND. COMPRESSORS UNITS, THIS BREAKER MUST BE ON WHEN OPERATING AIR COND. UNIT/S.

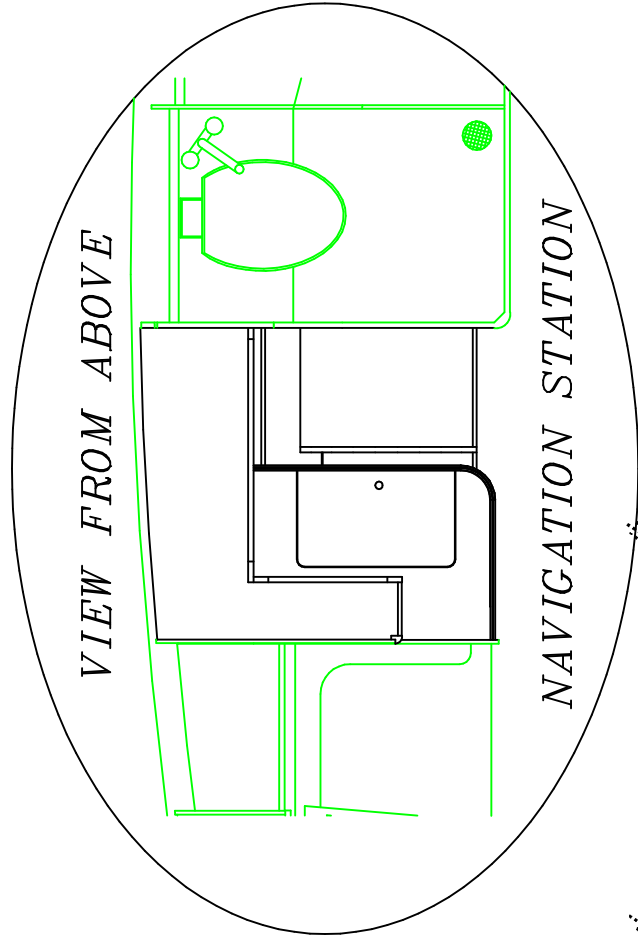
MISC. INFO

RED L.E.D.'S	ILLUMINATE WHEN A.C. POWER PRESENT.
METER SEL. SWITCH	ALLOWS VOLTAGE BEING SUPPLIED AND AMPERAGE BEING DRAWN TO BE DISPLAYED ON VOLT & AMP METERS SWITCH POSITION "A" = "A" SIDE OF PANEL. SWITCH POSITION "B" = "B" SIDE OF PANEL.
REV. POLARITY	IF REVERSED POLARITY L.E.D./S ILLUMINATE AFTER CONNECTING SHORE POWER HAVE DOCKSIDE POWER CHECKED BY QUALIFIED PERSONELL.

NOTE: A PRUDENT MARINER REALIZES THAT THE RESOURCES TO POWER A VESSEL ARE LIMITED. WHEN USING THE INVERTER OR GENERATOR ONE SHOULD BE CONSERVATIVE AND AWARE OF THE AMOUNT OF POWER BEING SUPPLIED VERSES POWER BEING DRAWN. THIS IS ESPECIALLY IMPORTANT WHEN USING OPTIONAL INVERTER POWER. CONSULT THE "INVERTER MANUAL" FOR POWER OUTPUT CAPABILITIES.



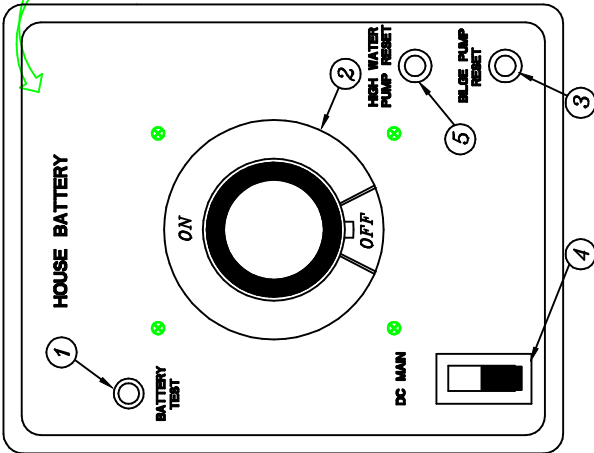
1. MAIN DISTRIBUTION PANEL
2. NAVIGATION STATION ACCESS PANEL
3. NAVIGATION STATION CHART LIGHT
4. NAVIGATION STATION GFI OUTLET
5. FUEL/WATER TANK SELECTOR SWITCH
LEVEL INDICATOR LOCATION ALSO.
6. INVERTER REMOTE SWITCH PANEL
7. (OPTIONAL) GENERATOR HOURS METER
8. (OPTIONAL) GENERATOR PREHEAT/STOP SWITCH



9. (OPTIONAL) GENERATOR START SWITCH
10. NAVIGATION STATION COURTESY LIGHT
11. ANCHOR WINDLESS RESET BREAKER
12. START BATTERY ON/OFF SWITCH
13. INVERTER DRAW (HOUSE BATT. SELECTOR) SWITCH
14. ELECTRIC HALYARD RESET BREAKER.
(NOT OFFERED ON ROLLER FURLING MAST BOATS)
15. LOCATION OF VHF RADIO.



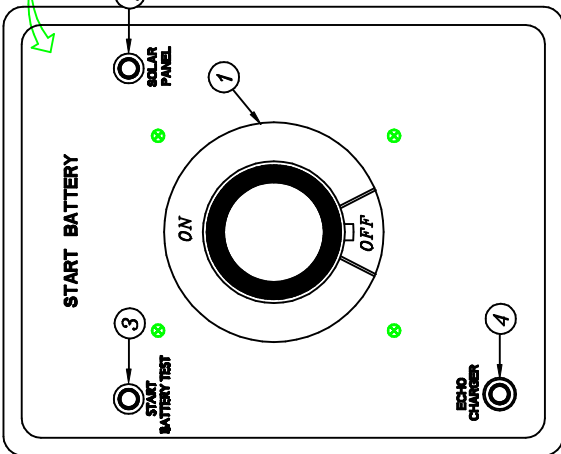
INVERTER/DRAW (HOUSE BATTERY) SELECTOR SWITCH



1. IN LINE FUSE FROM HOUSE BATTERY BANK (TEST CIRCUIT) USED TO DISPLAY AVAILABLE VOLTAGE FROM HOUSE BATTERIES. SEE BATTERY SELECTOR SWITCH & METERS PAGE 63A-6.
2. HOUSE BATTERY SWITCH. SUPPLIES POWER TO INVERTER.
3. BILGE PUMP RESET. PUSH TO RESTORE POWER TO BILGE PUMP.
4. HOUSE BATTERY BREAKER SUPPLY POWER FROM HOUSE BATTERY BANK TO MAIN DC PANEL.
5. HIGH WATER PUMP RESET. PUSH TO RESTORE POWER TO PUMP.

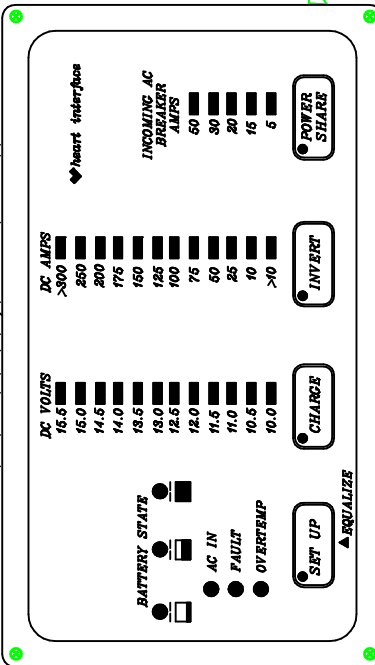
SEE PAGE 63A-2 "INVERTER" FOR OPERATING DETAILS

START BATTERY ON/OFF SAFETY SWITCH PANEL



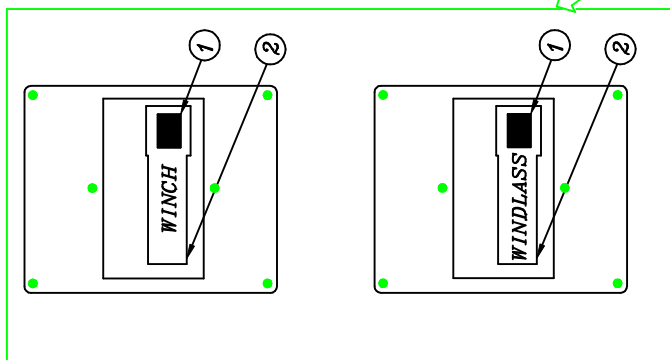
1. ON/OFF SWITCH SUPPLIES POWER FROM START BATTERY TO ENGINE AND OPTIONAL GENERATOR STARTER(S)
2. SOLAR PANEL CHARGE CIRCUIT FUSE.
3. FUSE FOR START BATTERY VOLTS TEST SWITCH.
4. FUSE FOR ECHO CHARGER USED WITH 120V INVERTER ONLY.

INVERTER REMOTE ON/OFF SWITCH PANEL

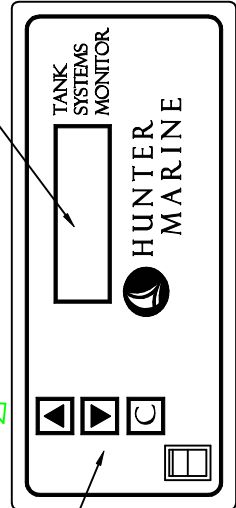


1. INVERTER STATUS DISPLAY
 2. INVERTER ON/OFF SWITCH
- SEE PAGE 63A-2 "INVERTER FOR OPERATION DETAILS.

1. (TEST) ON/OFF BUTTON. PUSH UP TO TRIP RESET
 2. "RESET" PUSH UP TO RESTORE POWER.
 NOTE: WINDLASS PANEL SUPPLIES POWER TO THE WINDLASS MOTOR. THE "WINDLASS BREAKER" ON THE DC MAIN DISTRIBUTION PANEL, SUPPLIES POWER TO THE UP/DOWN CONTROLS IN THE ANCHORWELL LOCKER.
 THE HALLYARD WINCH PANEL SUPPLIES POWER TO THE SWITCH, (LOCATED ON STBD SIDE BLKHD OF COMPANIONWAY OPENING) WHICH SUPPLIES POWER TO THE WINCH. WINDLASS IS OPTIONAL
 ELECTRIC HALLYARD IS STD. (EXCEPT ON FURLING MASTS)



1. TANK SELECTOR SWITCHES
2. TANK SELECTION DISPLAYS



H466 NAV STATION SELECTOR SWITCH PANELS

PARAVALE FILE	REVISION NO.	NONE
NUMBER NO. 4608063A-9	DATE	1/21/99
ISSUED BY	ENGINEERING DEPT.	

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12V.D.C. SYSTEM TROUBLESHOOTING GUIDE

TO POWER PANEL: TURN ON "D.C. MAIN" BREAKER ON HOUSE BATTERY SWITCH PANEL, IT IS NOT NECESSARY TO TURN HOUSE BATTERY SWITCH ON.
IF NO POWER TO PANEL, CHECK 300 AMP IN-FUSE AT THE HOUSE BATTERIES.

COMPONENT	SYMPTOM	POSSIBLE SOLUTIONS
PANEL LIGHTS	PANEL WON'T ILLUMINATE	SEE "TO POWER PANEL" ABOVE BATTERY TERMINALS CLEAN? SEEK QUALIFIED PERSONELL
CABIN LIGHTS	WON'T ILLUMINATE	SEE "TO POWER PANEL" ABOVE BULB/S NEED REPLACING?
COURTESY LIGHTS	WON'T ILLUMINATE	SEE "TO POWER PANEL" ABOVE BULBS/S NEED REPLACING?
COCKPIT LIGHTS	WON'T ILLUMINATE	SEE "TO POWER PANEL" ABOVE BULBS/S NEED REPLACING?
WATER PUMP	NO POWER CYCLES ON/OFF EXCESSIVELY	SEE "TO POWER PANEL" ABOVE FAUCETS OFF? LEAK IN SYSTEM SEE PAGEC 57A FOR CONNECTION LOC.
SUMP PUMP	WON'T PUMP WHEN SUMP BOX FILLED (PUMP WON,T QUIT RUNNING) PUMP MAKES NOISE, DOESN'T PUMP PUMP RUNS BUT DOESN'T PUMP	SEE "TO POWER PANEL" ABOVE IS FLOAT SWITCH STUCK? DEBRIS IN PUMP IMPELLER? DISCHARGE HOSE CLOGGED?
STEREO	WON'T TURN ON	SEE "TO POWER PANEL" ABOVE CHECK INLINE FUSE BEHIND STEREO.
ANC., ST., DECK, & RUNNING. LIGHTS	WON'T ILLUMINATE	SEE "TO POWER PANEL" ABOVE CHECK CONNECTIONS IN ACCESS PANEL AT TOP OF COMPRESSION POST BULBS NEED REPLACING?
INSTRUMENTS	REPEATERS DON'T OPERATE	SEE "TO POWER PANEL" ABOVE DO TRANSDUCERS NEED CLEANING? SEE "INSTRUMENTS" MANUAL
V.H.F. RADIO	WON'T OPERATE TURNS ON WON'T TRANSMIT/RECEIVE	SEE "TO POWER PANEL" ABOVE RADIO TURNED ON? ANTENNA CONNECTED PROPERLY?
WINDLASS	UP/DOWN CONTROLS DON'T OPERATE WINDLASS	SEE "TO POWER PANEL" ABOVE IS RESET "TRIPPED" ON WINDLASS RESET PANEL?
OPT. AUTO PILOT	WON'T OPERATE WON,T HOLD STEADY COURSE CONSTANTLY ADJUSTING HELM	SEE "TO POWER PANEL" ABOVE IS THERE ANY METAL OBJECTS NEAR THE FLUX GATE COMPASS LOCATED IN THE CENTER BILGE COMPARTMENT? SENSITIVITY SETTING SET TO HIGH, SEE "AUTO PILOT MANUAL" FOR SENS. ADJ.
MACERATOR/S	WON'T TURN ON RUNS BUT DOESN'T DISCHARGE PUMP MAKES NOISE, DOESN'T PUMP	SEE "TO POWER PANEL" IS DISCHARGE SEACOCK OPEN? IS WASTE DECK FITTING SECURE, IS IT PULLING AIR THRU? IF SO, TIGHTEN CAP OR REPLACE O- RING ON CAP. IS TANK VENT (HULL FITTING) CLOGGED? SEE PAGE 60 FOR LOCATIONS LODGED DEBRIS, TURN OFF POWER TO PUMP, INSERT SCREWDRIVER INTO PUMP ARMATURE AT END OF PUMP AND TURN TO DISLodge DEBRIS
NOTE: COMPONENT/S FAILURE COULD ALSO BE THE RESULT OF A POOR "GROUND" CONNECTION. SEE GROUND SYSTEM LAYOUT. DUE TO VIBRATION, WEATHER CONDITIONS, ECT. OCCASIONAL INSPECTION, CLEANING AND TIGHTENING OF THESE TERMINALS (BY QUALIFIED PERSONELL) MAY BE NECESSARY.		

12V. D.C. SYSTEM TROUBLESHOOTING GUIDE CONT:

COMPONENT	SYMPTOM	POSSIBLE SOLUTION/S
L.P. GAS	NO POWER TO SWITCH AT GALLEY SYSTEM TURNS ON, NO GAS PRESENT	SEE "TO POWER PANEL" PREV. PAGE IS TANK VALVE OPEN? IS TANK EMPTY? SEE "STOVE/OVEN" MANUAL
BLOWER	WON'T TURN ON	SEE "TO POWER PANEL" PREV. PAGE DID YOUR AUTOMATIC FIRE EXTINGUISHING SYSTEM LOSE PRESSURE?
BILGE PUMP	WON'T OPERATE AUTO OR MANUAL PUMP MAKES NOISE, DOESN'T PUMP PUMP RUNS BUT DOESN'T DISCHARGE	BATTERY LEVEL O.K.? SEE VOLT METER CHECK BILGE RESET ON HOUSE BATTERY SWITCH PANEL. BATTERY CONNECTIONS GOOD? DEBRIS IN PUMP IMPELLER? DISCHARGE HOSE CLOGGED?
VOLT METER	NO VOLTAGE DISPLAYED	SEE "TO POWER PANEL" PREV. PAGE CK. FUSES ON HOUSE BATTERY SW. PANEL ARE BATTERY CONNECTIONS GOOD? HAVE BATTERIES CHECKED HAVE METER CHECKED BY QUALIFIED PERSONNEL.
AMP METER	NO AMPERAGE DISPLAYED	IS D.C. MAIN ON? IS ANYTHING IN THE 12V. SYSTEM TURNED ON & RUNNING? HAVE METER CHECKED BY QUALIFIED PERSONNEL.
SOLAR PANEL	NO OUTPUT TO BATTERY/S	CK. FUSE ON START BATTERY ON/OFF SWITCH PANEL.

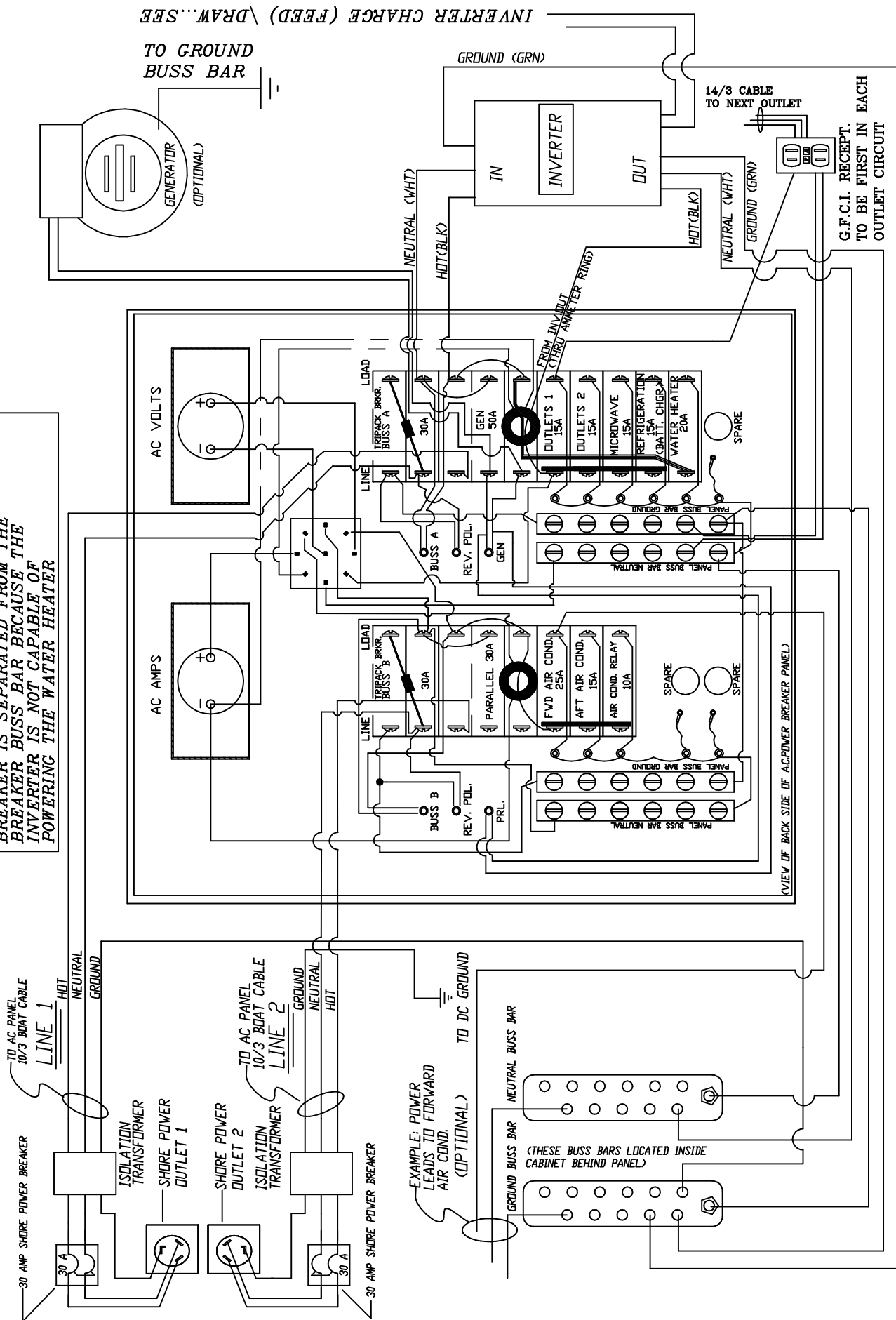
120V.A.C. (230V. OVERSEAS MODELS) SYSTEM TROUBLESHOOTING GUIDE

COMPONENT	SYMPTOM	POSSIBLE SOLUTION/S
SHORE POWER "A"	NO POWER TO PANEL	SEE "POWER SYSTEM OPERATIONS" PAGE 63A-2 CHECK DOCKSIDE BREAKER AND/OR BREAKER LOCATED INSIDE STARBOARD AFT STATEROOM HEADLINER (230V. MODELS INSIDE STB. SWIMSEAT LOCKER) CHECK RESET/S ON INVERTER. SEE "INV MANUAL" FOR LOCATION OF RESETS
OUTLETS #1 & 2	NO POWER	SEE "POWER SYSTEM OPERATIONS" PAGE 63A-2 IS OUTLET BREAKER/S ON? CHECK RESET ON G.F.I. OUTLETS AT GALLEY & AT NAV. STATION. CHECK INPUT/OUTPUT RESETS ON OPT. INVERTER MODELS SEE "INV MANUAL" FOR LOCATION OF RESETS.
MICROWAVE	NO POWER	IS BREAKER ON? SEE "POWER SYSTEM OPERATIONS" PAGE 63A-2 IS MICROWAVE ON? SEE "MICRO MANUAL"
WATER HEATER	NO POWER WON'T HEAT WATER WATER TO COLD/HOT	IS BREAKER ON? SEE "POWER SYSTEM OPERATIONS" PAGE 63A-2 CHECK "RESET" ON WATER HEATER SEE "WATER HEATER MANUAL" FOR LOCATION. SEE "WATER HEATER MANUAL" FOR THERMOSTAT ADJUSTMENT AND/OR ELEMENT REPLACEMENT, SEEK QUALIFIED PERSONELL.
INVERTER/BATT. CHARGER	INV. NOT SUPPLYING A.C.POWER INV. ON BUT UNABLE TO OPERATE DESIRED APPLIANCE/S	IS INVERTER REMOTE SWITCH AT NAV. STATION ON? IS DESIRED APPLIANCE BREAKER ON? IS BATTERY VOLTAGE LOW? SEE VOLTAGE DISPLAY ON INVERTER REMOTE PANEL, SELECT OTHER BATTERY ON INVERTER/DRAW SELECTOR SWITCH PANEL IN AFT STRM. ARE YOU ASKING THE INVERTER TO POWER MORE THAN IT IS CAPABLE? SEE "INVERTER MANUAL" FOR INFORMATION REGARDING POWER OUTPUT CAPABILITIES.
INVERTER/BATT. CHARGER	NOT CHARGING BATTERY/S	IS SHORE POWER "A".ON? SEE "POWER SYSTEM OPERATIONS" PAGE 63A-2 IS HOUSE BATTERY SWITCH IN THE "ON" POSITION? CHECK IN-LINE FUSE AT BATTERY/S ARE BATTERY CONNECTIONS GOOD? INVERTER REMOTE SWITCH SHOULD BE IN THE "OFF" POSITION. (THIS IS NECESSARY IN THE EVENT YOU "LOSE" SHORE POWER, THE INVERTER DOESN'T GO INTO INVERT MODE CAUSING BATT./S TO DRAIN IF YOU LEFT AN A.C. APPLIANCE ON..
BATTERY CHARGER	NOT CHARGING BATTERY/S	IS SHORE POWER "A".ON? CHECK RESETS ON HOUSE BATTERY SWITCH PANEL. CHECK IN-LINE FUSE AT BATTERY/S ARE BATTERY CONNECTIONS GOOD?

120V.A.C. (230V. OVERSEAS MODELS) SYSTEM TROUBLESHOOTING GUIDE CONT:

COMPONENT	SYMPTOM	POSSIBLE SOLUTIONS
SHORE POWER "B"	NO POWER TO PANEL	IS SHORE POWER "B" BREAKER ON? CHECK DOCKSIDE BREAKER CHECK SHORE POWER BREAKER LOCATED IN HEADLINER STBD. AFT STRM. (ON 230V.A.C. MODELS IN STBD. AFT SWIMSEAT LOCKER.)
AIR COND. FWD/AFT	WON'T TURN ON TURNS ON THEN SHUTS DOWN OTHER	ARE APPROPRIATE BREAKER/S ON? SEE "POWER SYSTEMS OPERATION" PAGE 63A-2 SEE "MARINE AIR" MANUAL IS AIR COND. RELAY "ON" ? IS AIR COND. RAW WATER SEACOCK OPEN? IF SO, IS WATER CIRCULATING? SEE PAGE 60 FOR AIR COND. DISCHARGE THRUHULL LOCATION, IF NOT IS AIR COND. PICKUP BEING RESTRICTED BY DEBRIS? SEE "MARINE AIR" MANUAL
OPTIONAL GENERATOR (APPLIES TO BOTH "A" & "B" SIDES OF A.C. PANEL)		
GENERATOR	NO POWER TO STARTER RUNNING, BUT NO POWER AT PANEL. WON'T START GEN. STARTS THEN SHUTS DOWN	IS START BATT. SELECTOR SWITCH ON? IS "GENERATOR BREAKER" ON "A" SIDE OF PANEL ON? (MOVE SLIDE BAR UP TO TURN THIS BREAKER ON). IS "PARALLEL BREAKER" ON "B" SIDE OF PANEL ON? (TO POWER "B" SIDE OF A.C. PANEL) SEE GENERATOR MANUAL DID YOU FOLLOW PROPER STARTING PROCEDURE AS DESCRIBED IN THE "GENERATOR MANUAL"? DO YOU HAVE AN AMPLE AMOUNT OF DIESEL FUEL? REMEMBER THE GENERATOR FUEL PICKUP TUBE IS SHORTER THAN THE PICKUP TUBE FOR THE ENGINE, THIS PREVENTS GENERATOR FROM DRAINING TANK SINCE ENGINE POWER IS MORE IMPORTANT THAN GENERATOR POWER. REFER TO GENERATOR MANUAL FOR POSSIBLE FUSE OR RESET ON GENERATOR. HAS THE AUTOMATIC FIRE EXTINGUISHER SYSTEM LOSE PRESSURE? IS RAW WATER PICKUP SEACOCK OPEN? IS RAW WATER PICKUP BEING RESTRICTED BY DEBRIS?

NOTE: THE HOT SIDE OF THE WATER HEATER BREAKER IS SEPARATED FROM THE BREAKER BUSS BAR BECAUSE THE INVERTER IS NOT CAPABLE OF POWERING THE WATER HEATER



INVERTER CHARGE (FEED) (DRAW...SEE)

TO GROUND BUSS BAR

GROUND (GRN)

14/3 CABLE TO NEXT OUTLET

G.F.C.I. RECEPT. TO BE FIRST IN EACH OUTLET CIRCUIT

GENERATOR (OPTIONAL)

NEUTRAL (WHT)

HOT (BLK)

FROM IN/OUT (30A) AMP METER RINGS

HOT (BLK)

NEUTRAL (WHT)

GROUND (GRN)

AC VOLTS

AC AMPS

LOAD

TRIPACK BRKR. BUSS A

30A

GEN 50A

OUTLETS 1 15A

OUTLETS 2 15A

MICROWAVE 15A

REFRIGERATION 15A

WATER HEATER 20A

SPARE

TRIPACK BRKR. BUSS B

30A

PARALLEL 30A

FWD AIR COND. 25A

AFT AIR COND. 15A

AIR COND. RELAY 10A

SPARE

SPARE

SPARE

EXAMPLE: POWER LEADS TO FORWARD AIR COND. (OPTIONAL)

TO DC GROUND

NEUTRAL BUSS BAR

GROUND BUSS BAR

(THESE BUSS BARS LOCATED INSIDE CABINET BEHIND PANEL)

(VIEW OF BACK SIDE OF AC-POWER BREAKER PANEL)

NOTE: IF OPTIONAL WASHER/DRYER CHOSEN INSTALL BREAKER (CORRECT AMPERAGE) BUT DO NOT CONNECT HOT SIDE OF BREAKER TO BREAKER BUSS BAR. THE INVERTER IS NOT CAPABLE TO POWER THE WASHER/DRYER

H460 AC PANEL SCHEMATIC

REVISED NO. NONE
 DRAWN BY: 4608063A-14
 ENGINEERING DEPT. DATE: 2/2/99



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H466 WATTAGE DEMAND FOR ELECTRICAL EQUIPMENT AND APPLIANCES

NOTE: A PRUDENT MARINER REALIZES THAT THE RESOURCES TO POWER A VESSEL ARE LIMITED. WHEN USING THE ALTERNATE POWER SOURCES ONE SHOULD BE CONSERVATIVE AND AWARE OF THE AMOUNT OF POWER BEING SUPPLIED VERSES POWER BEING DRAWN THIS IS ESPECIALLY IMPORTANT WHEN USING THE INVERTER POWER. CONSULT THE "INVERTER MANUAL" FOR POWER OUTPUT CAPABILITIES.

FIXED APPLIANCES:
SEE MANUALS AND/OR SPECIFICATION SHEETS IN YOUR OWNER'S PACK

PORTABLE APPLIANCES:
BELOW ARE APPROXIMATE EXAMPLES OF THE AMPERAGE DRAW ASSOCIATED WITH CERTAIN ITEMS.

APPLIANCES: / WATTS:

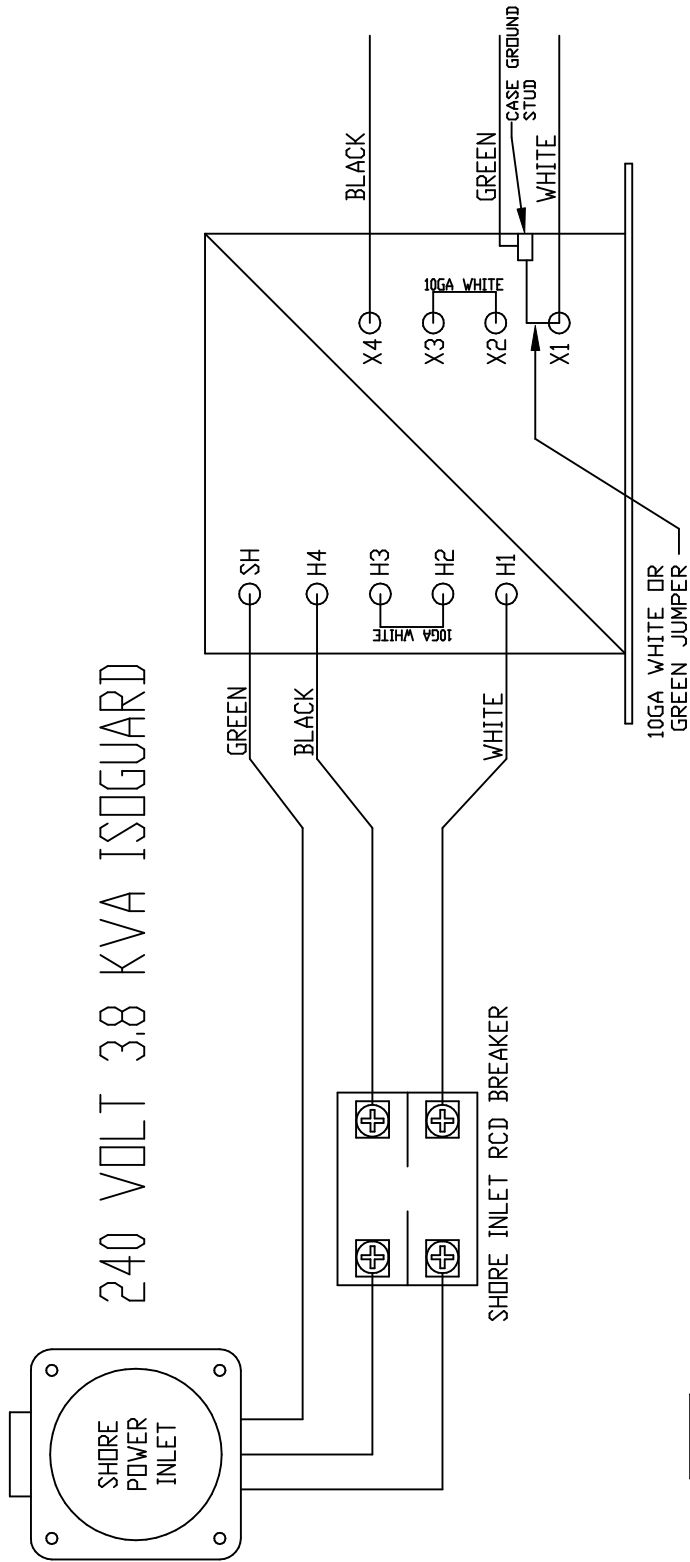
COFFEE MAKER.....	800 - 1,000 WATTS
FRYING PAN.....	1,000 - 2,500 WATTS
TOASTER.....	800 - 1,000 WATTS
FAN.....	75 - 300 WATTS
RADIO.....	60 - 150 WATTS
TV.....	250 - 600 WATTS
HOT PLATE.....	800 - 1,200 WATTS
HAIR DRYER.....	700 - 1,100 WATTS
SHAVER.....	50 - 100 WATTS
CLOCK.....	25 - 50 WATTS
BLENDER.....	250 - 350 WATTS
TOASTER OVEN.....	1,250 - 1,700 WATTS

ALTERNATE POWER SOURCES: / PROVIDED WATTS:

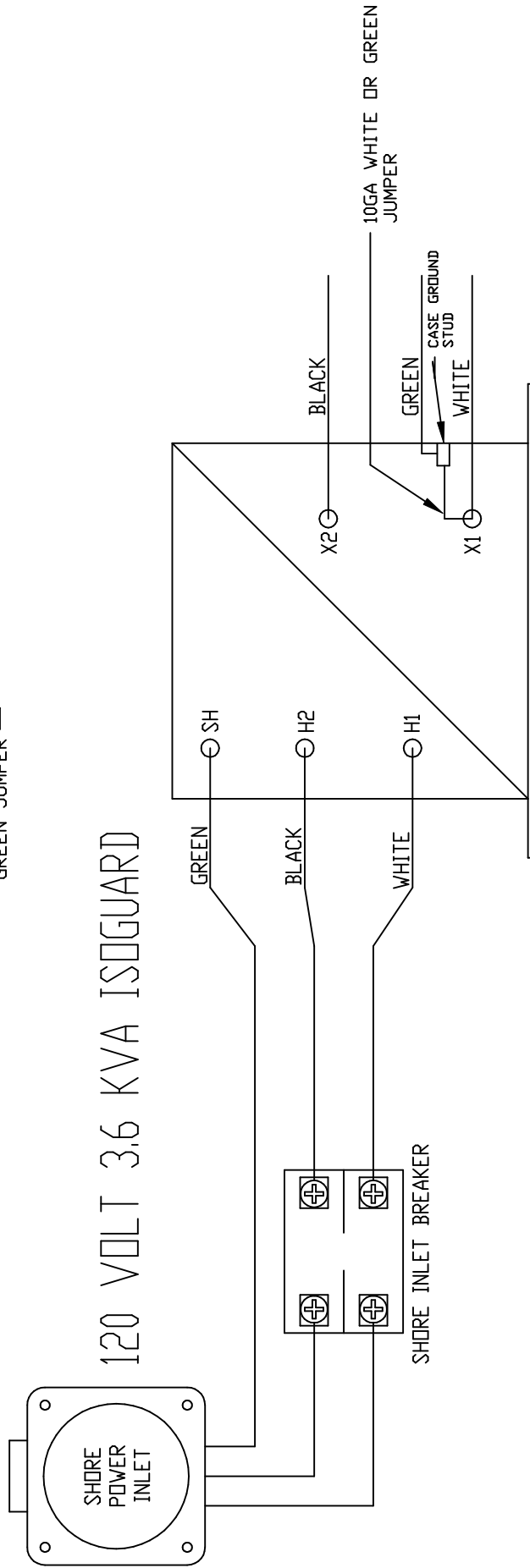
SMALLER MODEL INVERTER.....	1,000 WATTS
LARGER MODEL INVERTER.....	2,500 WATTS (THIS MODEL ON YOUR BOAT)
SMALLER MODEL GENERATOR.....	6,000 WATTS (5,000 WATTS FOR 50 Hz)
LARGER MODEL GENERATOR.....	8,000 WATTS (6,600 WATTS FOR 50 Hz)
SHORE POWER (PER INLET).....	3,600 WATTS

EXAMPLE: TV (250-600)+ TOASTER (800-1,000)+ HAIR DRYER (700-1,100) = TOTAL (1,750-2,700)
THUS, IF THE WATTS BEING USED EXCEEDS THE WATTS BEING PRODUCED, THEN SOME OF THE ITEMS IN USE WILL NOT BE FUNCTIONAL. AGAIN, IT IS IMPORTANT TO BE AWARE OF THE AMPERAGE DRAW VERSUS THE AMPERAGE OUTPUT AT ALL TIMES.

240 VOLT 3.8 KVA ISOGUARD



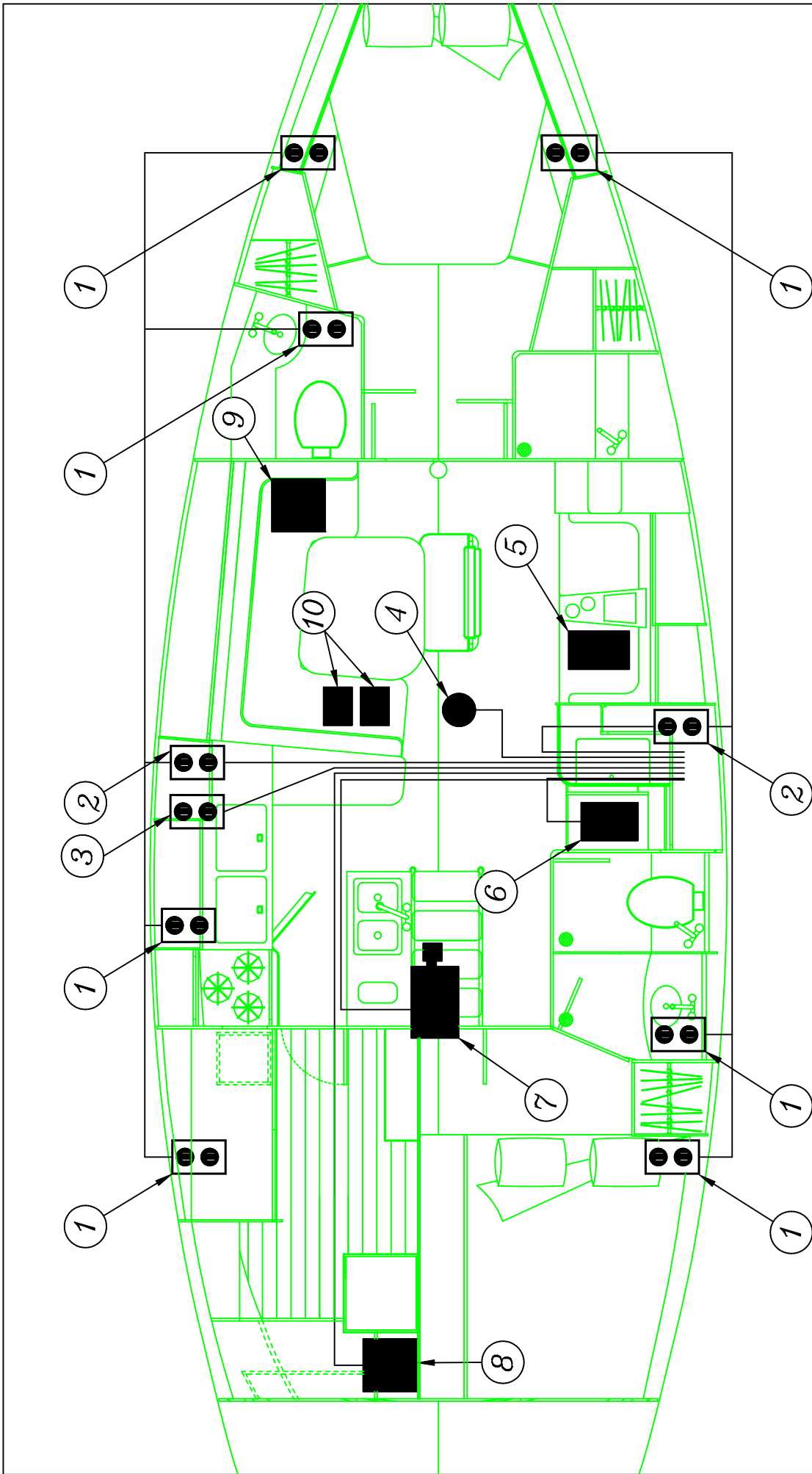
120 VOLT 3.6 KVA ISOGUARD



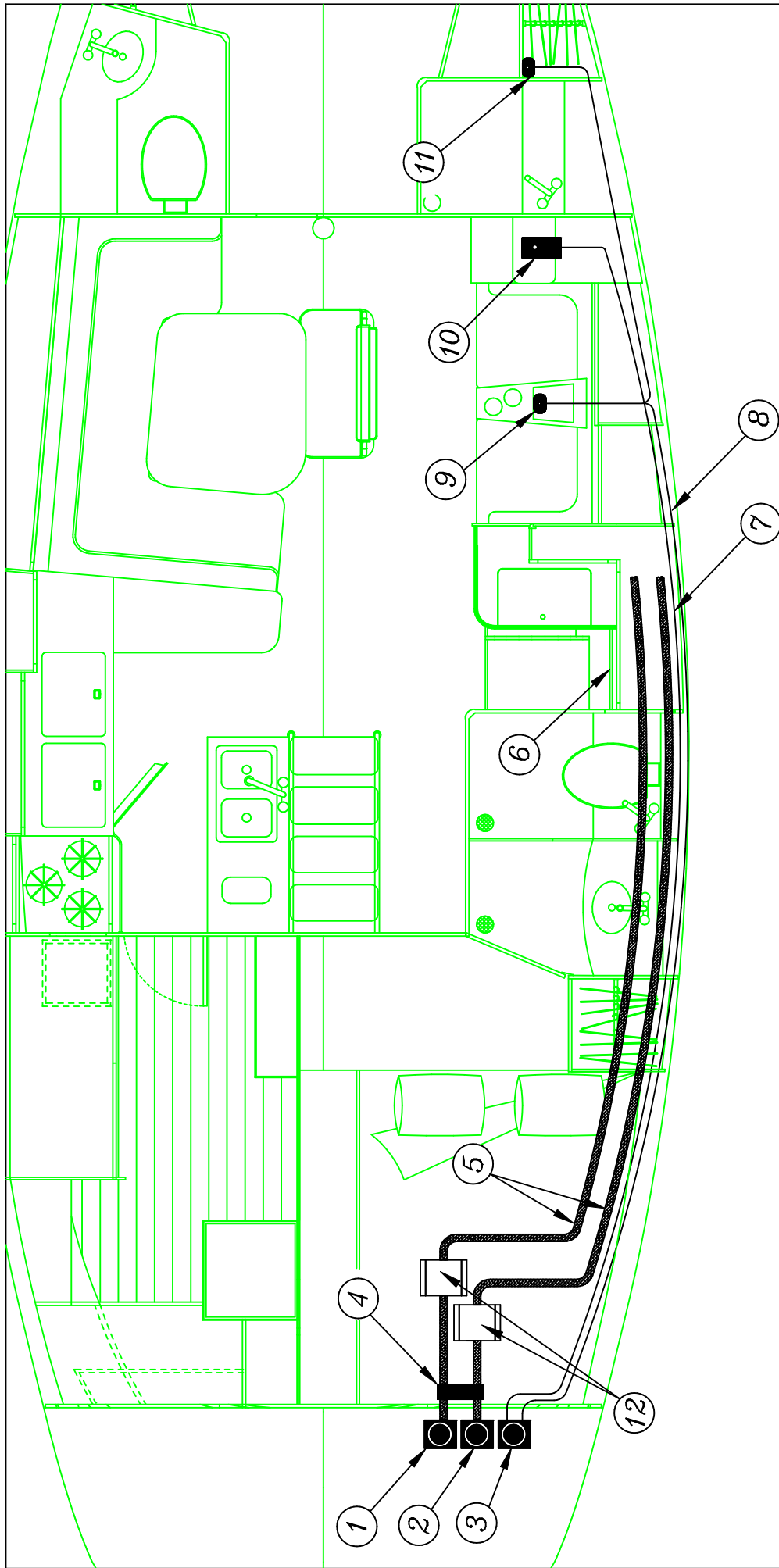
FORWARD FILE
H466 ISOLATION TRANSFORMER SCHEMATIC
FORM NO. 4608063A-16
REVISION NO. None
DATE 08/15/02
ENG



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- | | |
|-----|--------------------------------------|
| 1. | POWER OUTLETS |
| 2. | GFI POWER OUTLETS |
| 3. | MICROWAVE OVEN OUTLET |
| 4. | AIR CONDITIONER WATER PUMP |
| 5. | WATER HEATER |
| 6. | INVERTER |
| 7. | OPTIONAL GENERATOR |
| 8. | (OPT) AFT AIR CONDITIONER COMPRESSOR |
| 9. | (OPT) FWD AIR CONDITIONER COMPRESSOR |
| 10. | 12 VDC REFRIGERATION COMPRESSOR |



- | | |
|---|--|
| <ol style="list-style-type: none"> 1. SHORE POWER "1" INLET 2. SHORE POWER "2" INLET 3. TV COAX/PHONE LINE INLET 4. 30 AMP SHORE POWER BREAKERS
(LOCATED IN STBD COCKPIT LOCKER) 5. 10/3 SHORE POWER CABLE TO MAIN PANEL 6. MAIN DISTRIBUTION PANEL @ NAV STATION 7. TV COAX CABLE RUN | <ol style="list-style-type: none"> 8. TELEPHONE LINE WIRE RUN 9. MAIN SALON PHONE JACK
(LOCATED BETWEEN SALON CHAIRS) 10. TV COAX OUTLET
(LOCATED BEHIND TV/VCP FWD SALON) 11. FWD STATEROOM PHONE JACK
(LOCATED ON TOP OF STBD HANGING LCKR) 12. ISOLATION TRANSFORMER |
|---|--|

SECTION 63D...OPTIONAL AIR COND. SYSTEMS

BASIC OPERATING INSTRUCTIONS:

- ① CHOOSE POWER SOURCE (SHORE POWER OR GENERATOR) SEE PAGES 63A-2
- ② CHECK AIR COND. SEA STRAINER, (AFT MAIN BILGE) CLEAN IF NECESSARY
- ④ OPEN THE RAW WATER PICKUP SEACOCK (3/4" /19.1mm)
- ④ ENSURE THE 1/2" (12.7mm) DISCHARGE SEACOCK IS OPEN.
(SEACOCK ACCESSED THRU HOLE IN SETTEE BACK, BEHIND STBD FWD SETTEE CUSHION)
- ⑤ TURN A.C. (BUS "B") BREAKERS (FWD, AFT & RELAY) ON AT MAIN A.C. PANEL
- ⑥ TURN ON UNIT AT THERMOSTAT DISPLAY PANEL AND SET TEMP.

NOTE:

IF ANY OTHER APPLIANCES ARE TO BE USED WHEN AIR CONDITIONER IS RUNNING WHEN ON SHORE POWER, BOTH "SHORE POWER A" AND "SHORE POWER B" CABLES MUST BE HOOKED UP.

IF THERE IS NO POWER AT PANEL WHEN CONNECTED TO SHORE POWER, CHECK MAIN BREAKERS INSIDE STBD AFT COCKPIT LOCKER

SEE AIR CONDITION MANUAL FOR DETAILED OPERATING PROGRAMMING/TROUBLESHOOTING INSTRUCTIONS

Part Number: H466 AIR CONDITIONER OPERATING INST

Revision No: 4608063D-1

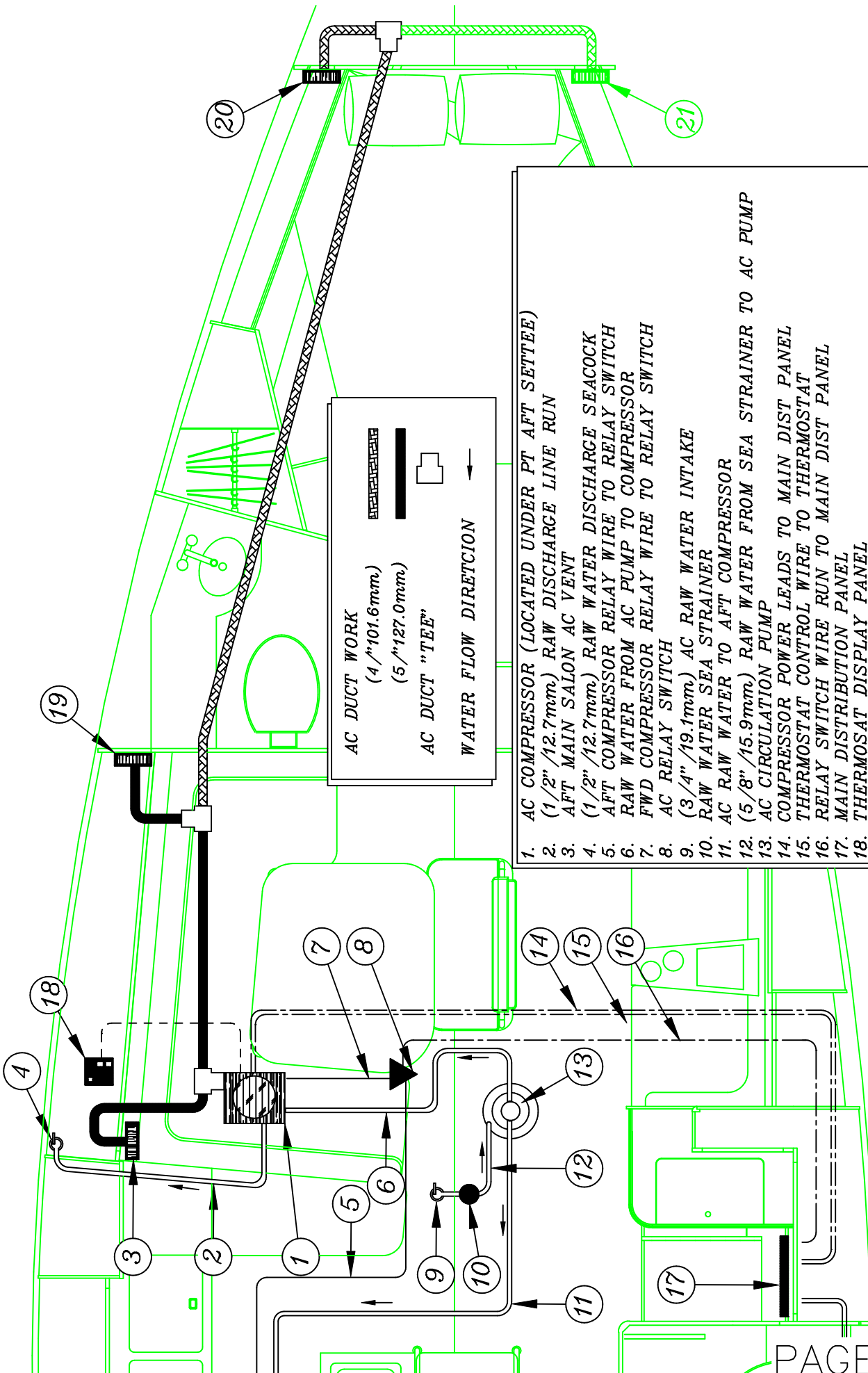
Engineering Dept: ENGINEERING DEPT.

Revision No: NONE

Date: 3/27/98

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AC DUCT WORK
 (4" / 101.6mm)
 (5" / 127.0mm)

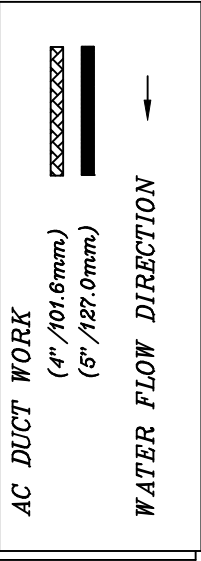
WATER FLOW DIRECTION

←

1. AC COMPRESSOR (LOCATED UNDER PT AFT SETTEE)
2. (1/2" / 12.7mm) RAW DISCHARGE LINE RUN
3. AFT MAIN SALON AC VENT
4. (1/2" / 12.7mm) RAW WATER DISCHARGE SEACOCK
5. AFT COMPRESSOR RELAY WIRE TO RELAY SWITCH
6. RAW WATER FROM AC PUMP TO COMPRESSOR
7. FWD COMPRESSOR RELAY WIRE TO RELAY SWITCH
8. AC RELAY SWITCH
9. (3/4" / 19.1mm) AC RAW WATER INTAKE
10. RAW WATER SEA STRAINER
11. AC RAW WATER TO AFT COMPRESSOR
12. (5/8" / 15.9mm) RAW WATER FROM SEA STRAINER TO AC PUMP
13. AC CIRCULATION PUMP
14. COMPRESSOR POWER LEADS TO MAIN DIST PANEL
15. THERMOSTAT CONTROL WIRE TO THERMOSTAT
16. RELAY SWITCH WIRE RUN TO MAIN DIST PANEL
17. MAIN DISTRIBUTION PANEL
18. THERMOSTAT DISPLAY PANEL
19. FWD MAIN SALON AC VENT
20. PORT FWD STATEROOM AC VENT
21. STBD FWD STATEROOM AC VENT (QUAD CABIN OPT. BOATS ONLY)

SEE PAGE 65B FOR WIRE
 SIZES AND COLORS

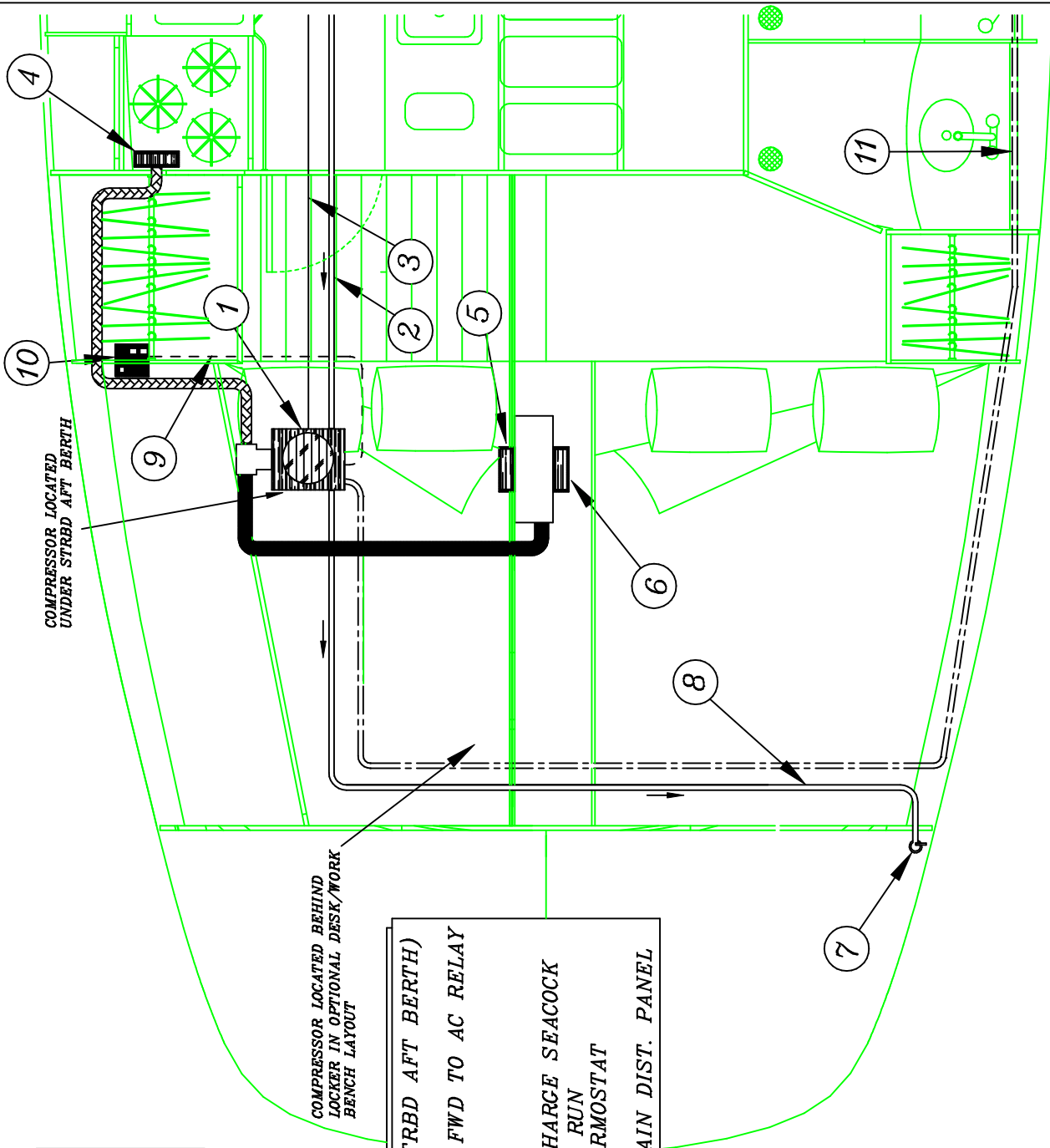




AC LAYOUT IS THE SAME FOR ALL OPTIONS OFFERED ON THIS MODEL

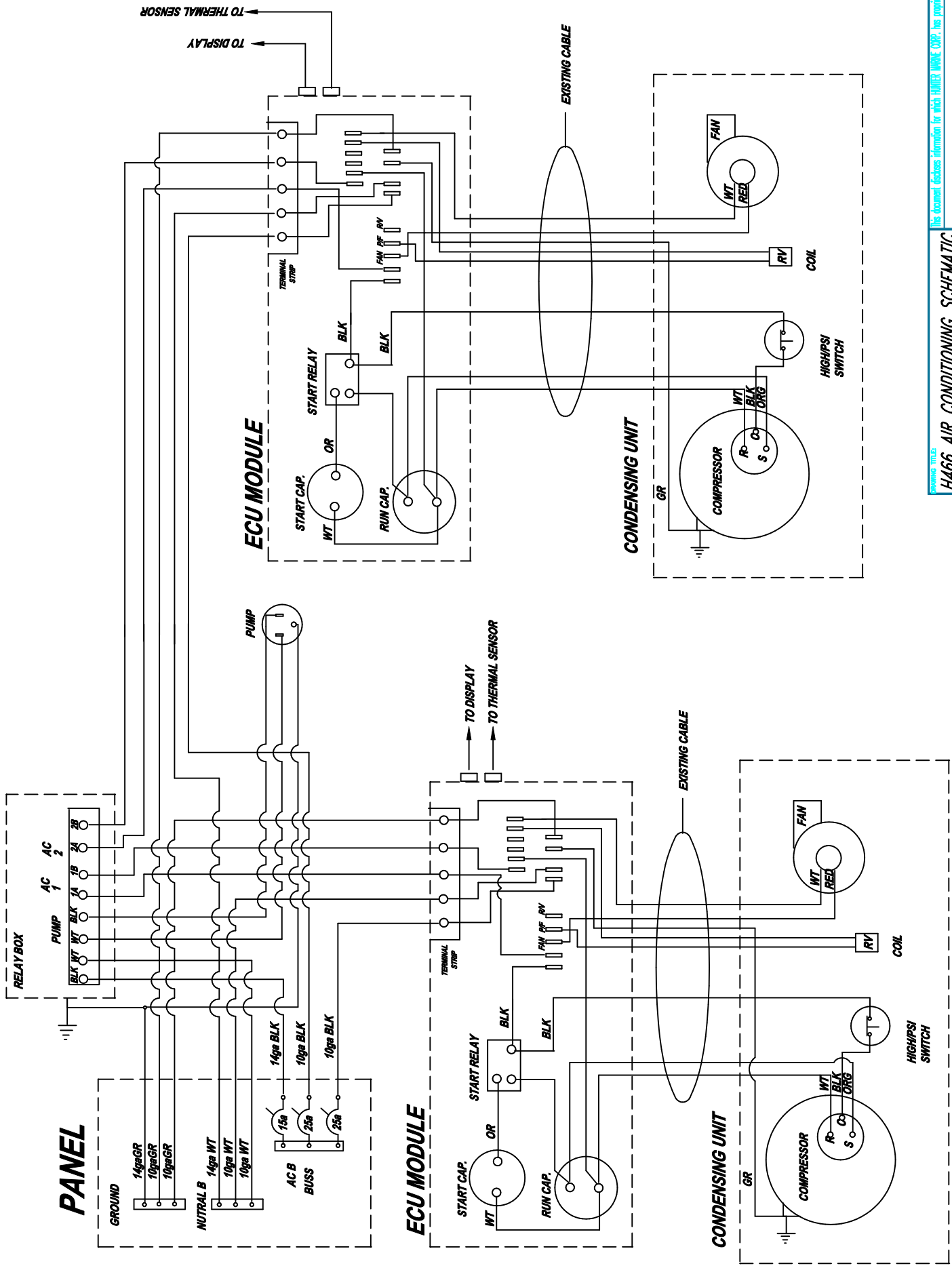
1. AC COMPRESSOR (LOCATED UNDER STRBD AFT BERTH)
2. RAW WATER FROM AC PUMP
3. AFT COMPRESSOR RELAY WIRE RUN FWD TO AC RELAY GALLEY AC VENT
5. PORT AFT STATEROOM AC VENT
6. STBD AFT STATEROOM AC VENT
7. (1/2" / 12.7mm.) AC RAW WATER DISCHARGE SEACOCK (1/2" / 12.7mm.) AC DISCHARGE HOSE RUN
8. THERMOSTAT CONTROL WIRE TO THERMOSTAT THERMOSTAT DISPLAY PANEL
10. THERMOSTAT DISPLAY PANEL
11. AC COMPRESSOR POWER LEADS TO MAIN DIST. PANEL

SEE PAGE 65B FOR WIRE SIZES AND COLORS



COMPRESSOR LOCATED UNDER STRBD AFT BERTH

COMPRESSOR LOCATED BEHIND LOCKER IN OPTIONAL DESK/WORK BENCH LAYOUT



PANEL

ECU MODULE

CONDENSING UNIT



REVISED TO: 4608063D-4

DATE: 2/4/99

ENGINEERING DEPT.

REVISION NO. NONE

DESIGNED BY: [blank]

PROJECT NO. [blank]

PROJECT TITLE: H466 AIR CONDITIONING SCHEMATIC

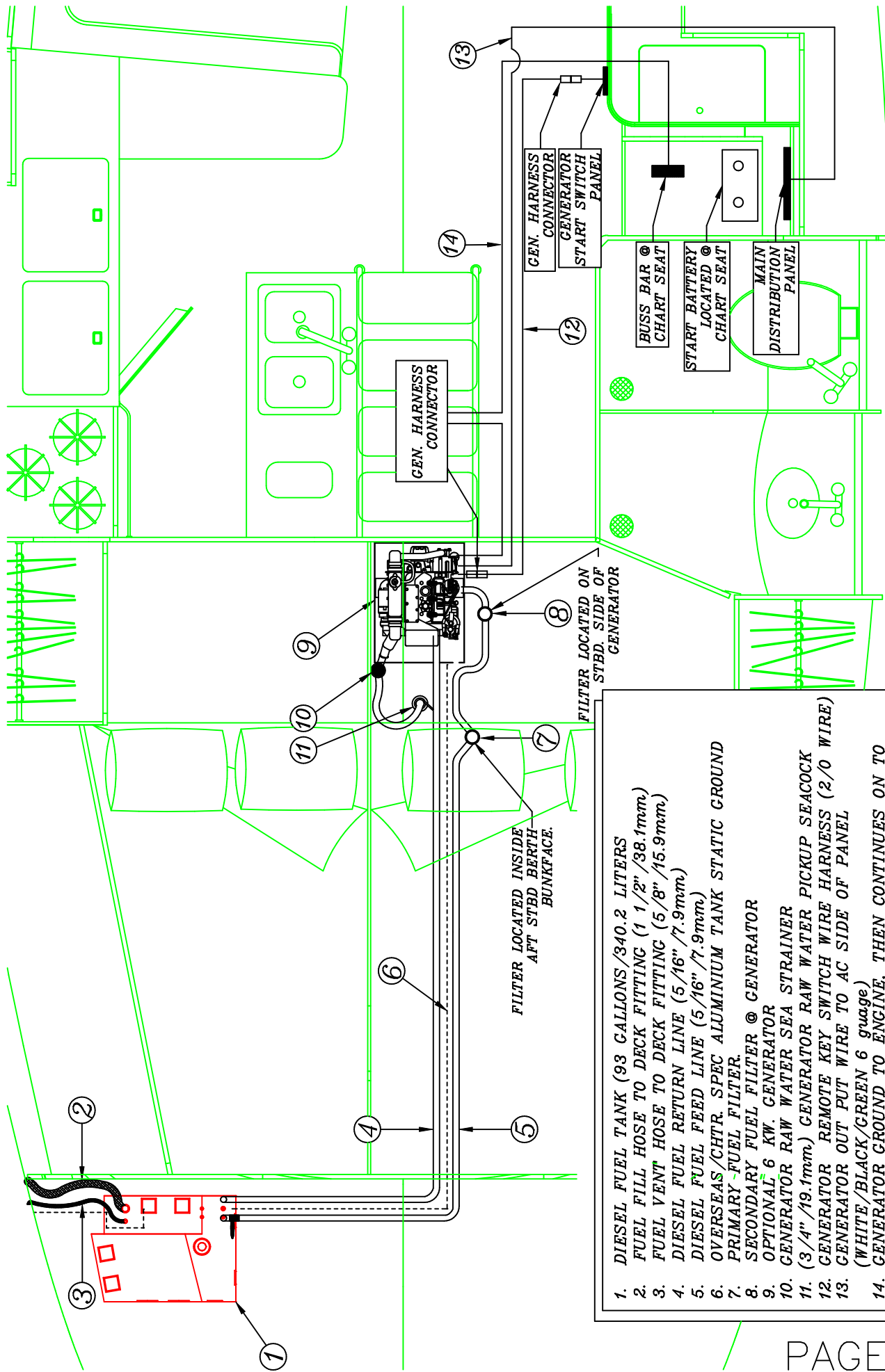
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SECTION 63E OPTIONAL GENERATOR SYSTEM...

BASIC OPERATING INSTRUCTIONS: (NOTE: READ GENERATOR MANUAL BEFORE OPERATING GEN.)

- ① FILL DIESEL FUEL TANK WITH DIESEL FUEL
- ② CHECK OIL LEVEL IN GENERATOR (SEE GEN. MANUAL FOR INST.)
- ③ TURN ON START BATTERY SELECTOR SWITCH (AT NAV. STA.)
- ④ CHECK SEA STRAINER (INSIDE SHAFT LOG COMPARTMENT, AFT OF ENGINE)
- ⑤ OPEN RAW WATER SEACOCK (INSIDE SHAFT LOG COMPARTMENT, AFT OF ENGINE)
- ⑥ PUSH START SWITCH ON GEN. START PANEL AT NAV. STATION TO START GEN. DO NOT RUN STARTER FOR MORE THAN 10 SECONDS AT A TIME WITH 15 SECONDS INTERVALS. IF GENERATOR DOESN'T START CONSULT THE GENERATOR MANUAL.
- ⑦ TURN ON THE "GENERATOR" BREAKER ON "A" SIDE OF MAIN A.C. PANEL. TO POWER "B" SIDE, RAISE THE SLIDE BAR ON "B" SIDE OF MAIN A.C. PANEL AND TURN "PARALLEL" BREAKER "ON". A.C. PANEL SHOULD NOW BE OPERABLE.
- ⑧ TO SHUT GEN. DOWN PUSH STOP SWITCH UNTIL GEN STOPS.

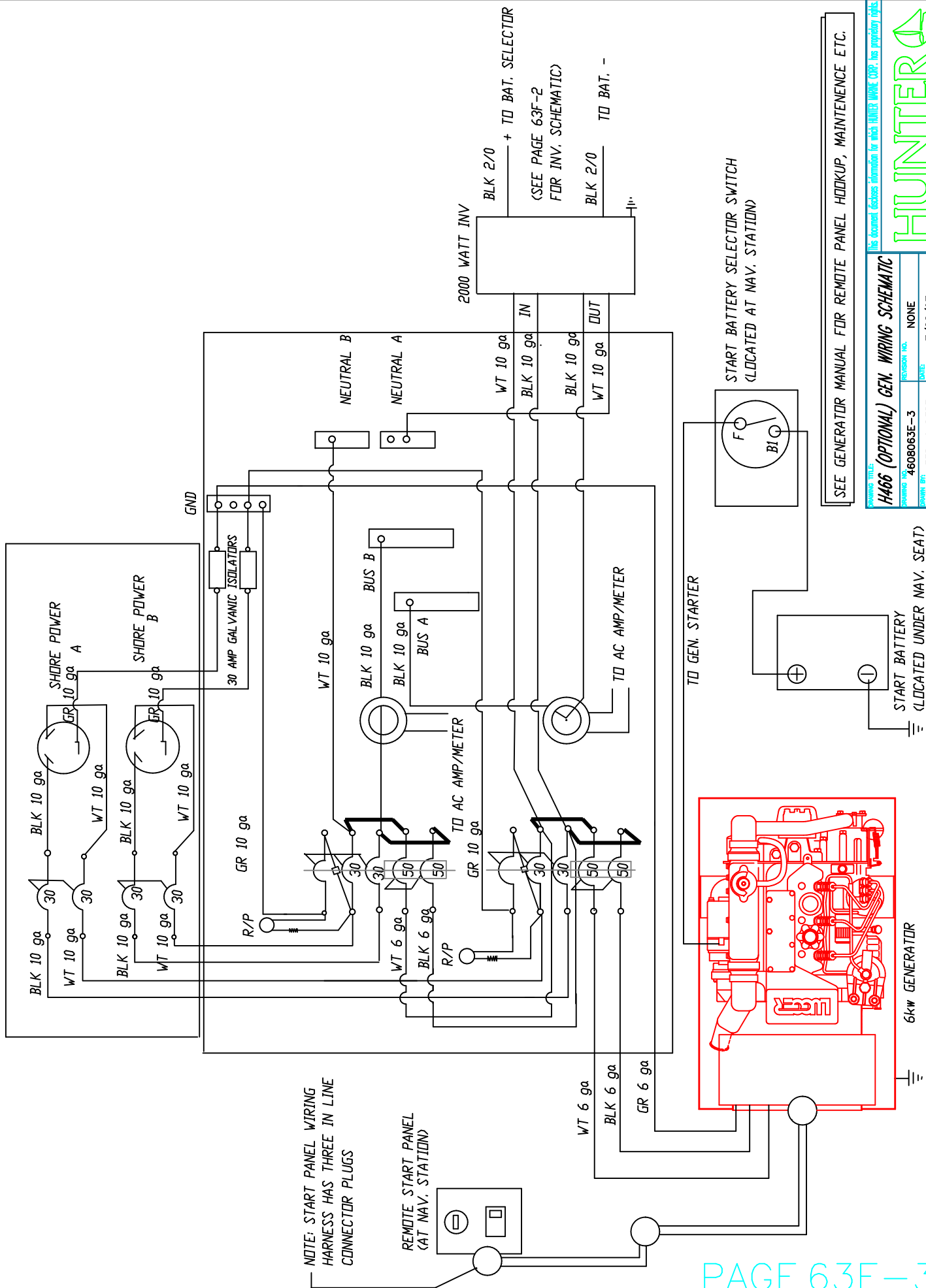
NOTE: SEE GENERATOR MANUAL FOR PROPER MAINTENANCE, TROUBLESHOOTING, ETC.



1. DIESEL FUEL TANK (93 GALLONS/340.2 LITERS)
2. FUEL FILL HOSE TO DECK FITTING (1 1/2" /38.1mm)
3. FUEL VENT HOSE TO DECK FITTING (5/8" /15.9mm)
4. DIESEL FUEL RETURN LINE (5/16" /7.9mm)
5. DIESEL FUEL FEED LINE (5/16" /7.9mm)
6. OVERSEAS/CHTR. SPEC ALUMINIUM TANK STATIC GROUND
7. PRIMARY-FUEL FILTER
8. SECONDARY FUEL FILTER @ GENERATOR
9. OPTIONAL 6 KW GENERATOR
10. GENERATOR RAW WATER SEA STRAINER
11. (3/4" /19.1mm) GENERATOR RAW WATER PICKUP SEACOCK
12. GENERATOR REMOTE KEY SWITCH WIRE HARNESS (2/0 WIRE)
13. GENERATOR OUT PUT WIRE TO AC SIDE OF PANEL (WHITE/BLACK/GREEN 6 gauge)
14. GENERATOR GROUND TO ENGINE, THEN CONTINUES ON TO BUSS BAR AT CHART SEAT (SEE PC 64A-2 FOR DETAILS)



This document discloses information for which HUNTER MARINE CORP. has proprietary rights.



NOTE: START PANEL WIRING HARNESS HAS THREE IN LINE CONNECTOR PLUGS

REMOTE START PANEL (AT NAV. STATION)

START BATTERY SELECTOR SWITCH (LOCATED AT NAV. STATION)

SEE GENERATOR MANUAL FOR REMOTE PANEL HOOKUP, MAINTENANCE ETC.

H466 (OPTIONAL) GEN. WIRING SCHEMATIC

REVISED NO.	4608063E-3
DESIGNER	ENGINEERING DEPT.
DATE	7/28/97
REVISION NO.	NONE

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SECTION 63F.....INVERTER SYSTEM

BASIC OPERATING INSTRUCTIONS: (FOR INVERTING D.C. POWER TO A.C. POWER)

- ① TURN THE HOUSE BATTERY SWITCH TO THE "ON" POSITION.
- ② TURN ON INVERTER REMOTE PANEL AT THE NAVIGATION STATION.
- ③ TURN ON APPROPRIATE APPLIANCE BREAKER ON A.C. SIDE OF PANEL.

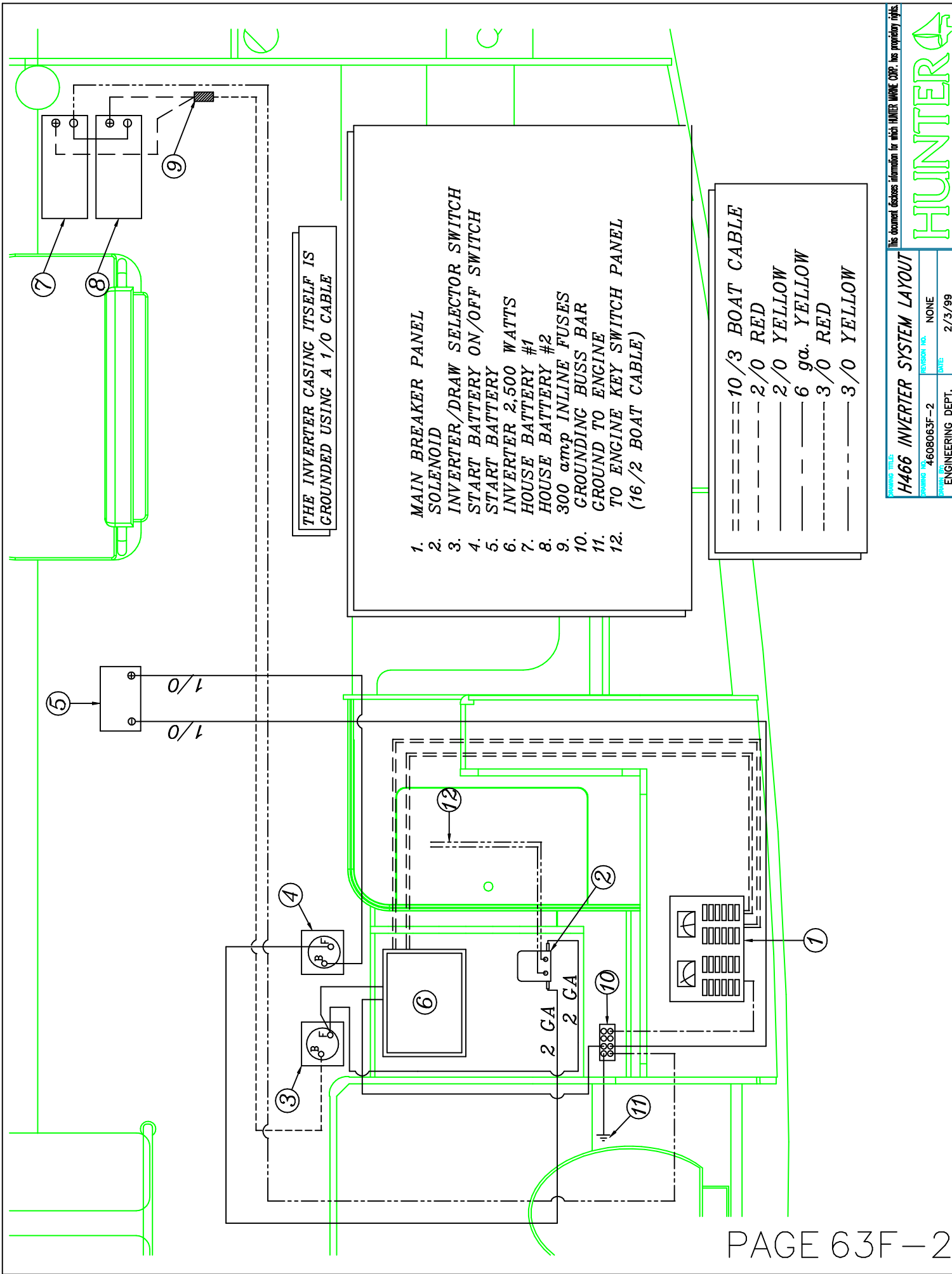
NOTE:

READ "INVERTER" SECTION ON PAGE 63A-2 FOR INVERTER SYSTEM DETAILS

SEE INVERTER MANUAL FOR TECHNICAL DATA, TROUBLESHOOTING, ETC.
OPERATING/PROGRAMMING INSTRUCTIONS

<small>ISSUES FILE</small>			
H466 INVERTER OPERATING INSTRUCTIONS			
<small>ISSUE NO.</small>	<small>REVISION NO.</small>	<small>DATE</small>	<small>PERSON</small>
4608063F-1	NONE	2/3/99	
<small>ISSUE NO.</small>		<small>DEPT.</small>	
ENGINEERING			





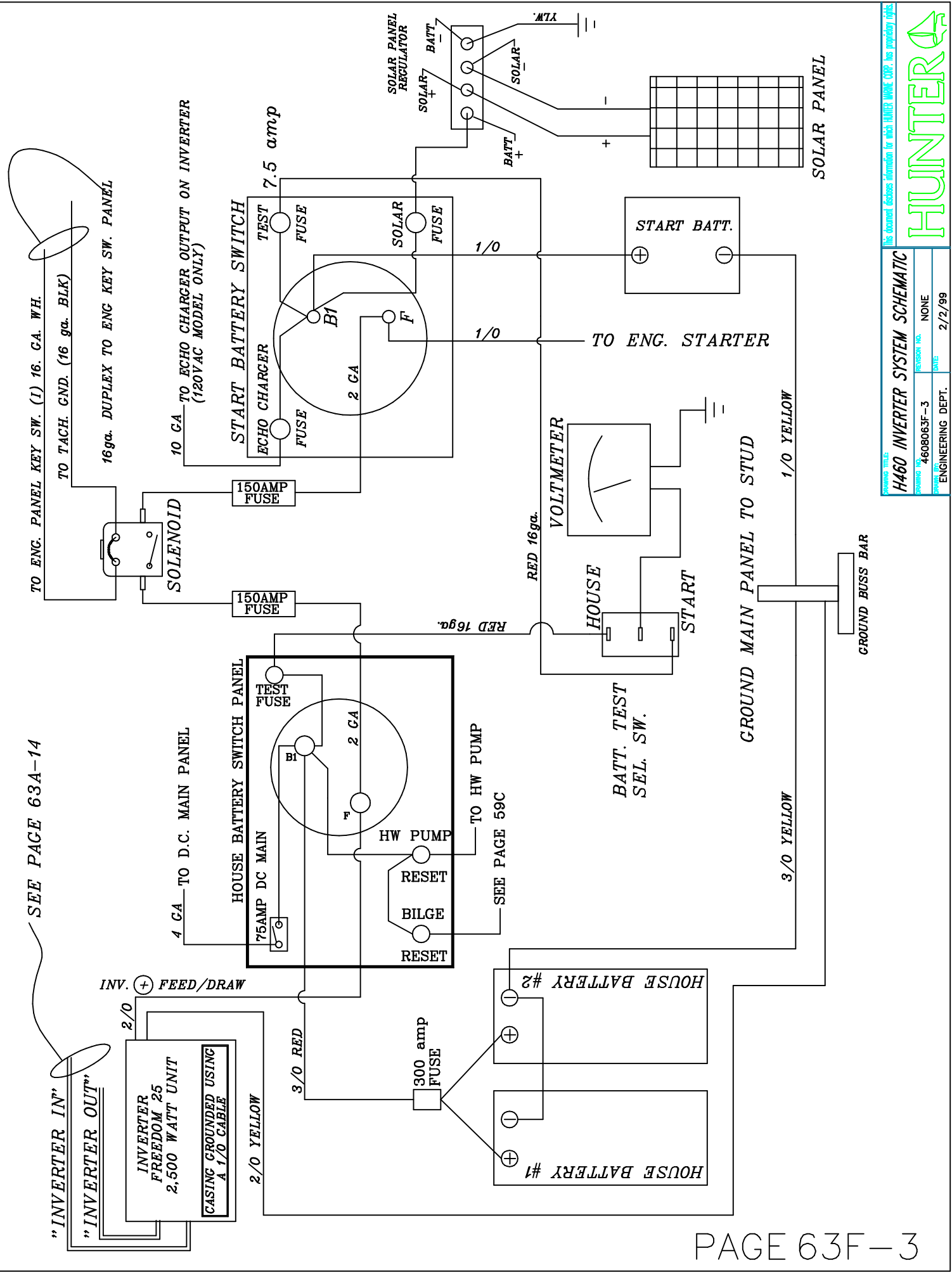
THE INVERTER CASING ITSELF IS GROUNDED USING A 1/0 CABLE

1. MAIN BREAKER PANEL
2. SOLENOID
3. INVERTER/DRAW SELECTOR SWITCH
4. START BATTERY
5. INVERTER 2,500 WATTS
6. HOUSE BATTERY #1
7. HOUSE BATTERY #2
8. 300 amp INLINE FUSES
9. GROUNDING BUSS BAR
10. GROUND TO ENGINE
11. TO ENGINE KEY SWITCH PANEL (16/2 BOAT CABLE)

=====	10/3 BOAT CABLE
-----	2/0 RED
-----	2/0 YELLOW
-----	6 ga. YELLOW
-----	3/0 RED
-----	3/0 YELLOW



SEE PAGE 63A-14



"INVERTER IN"
"INVERTER OUT"

INVERTER
FREEDOM 25
2.500 WATT UNIT
CASING GROUNDED USING
A 1/0 CABLE

HOUSE BATTERY SWITCH PANEL
75AMP DC MAIN
TEST FUSE
2 GA
HW PUMP
TO HW PUMP
RESET
BILGE
RESET
SEE PAGE 59C

START BATTERY SWITCH
ECHO CHARGER
TEST FUSE
7.5 amp
2 GA
F
B1

SOLAR PANEL REGULATOR
SOLAR +
SOLAR -
BATT +
BATT -
7.5A

START BATT.

VOLTMETER

HOUSE
START

BATT. TEST
SEL. SW.

GROUND MAIN PANEL TO STUD
1/0 YELLOW

3/0 YELLOW

GROUND BUSS BAR

SOLAR PANEL

THIS DOCUMENT PROVIDES INFORMATION FOR WHICH HUNTER MARINE CORP. HAS PROPRIETARY RIGHTS.
HUNTER

OWNER TITLE: **H460 INVERTER SYSTEM SCHEMATIC**

PROJECT NO:	4608063F-3	REVISION NO.:	NONE
ISSUED BY:	ENGINEERING DEPT.	DATE:	2/2/99

SECTION 63E...REFRIGERATION SYSTEM

BASIC OPERATING INSTRUCTIONS:

- ① TURN ON REFRIGERATOR AND FREEZER BREAKERS.
- ② SET THERMOSTATS TO DESIRED TEMP.

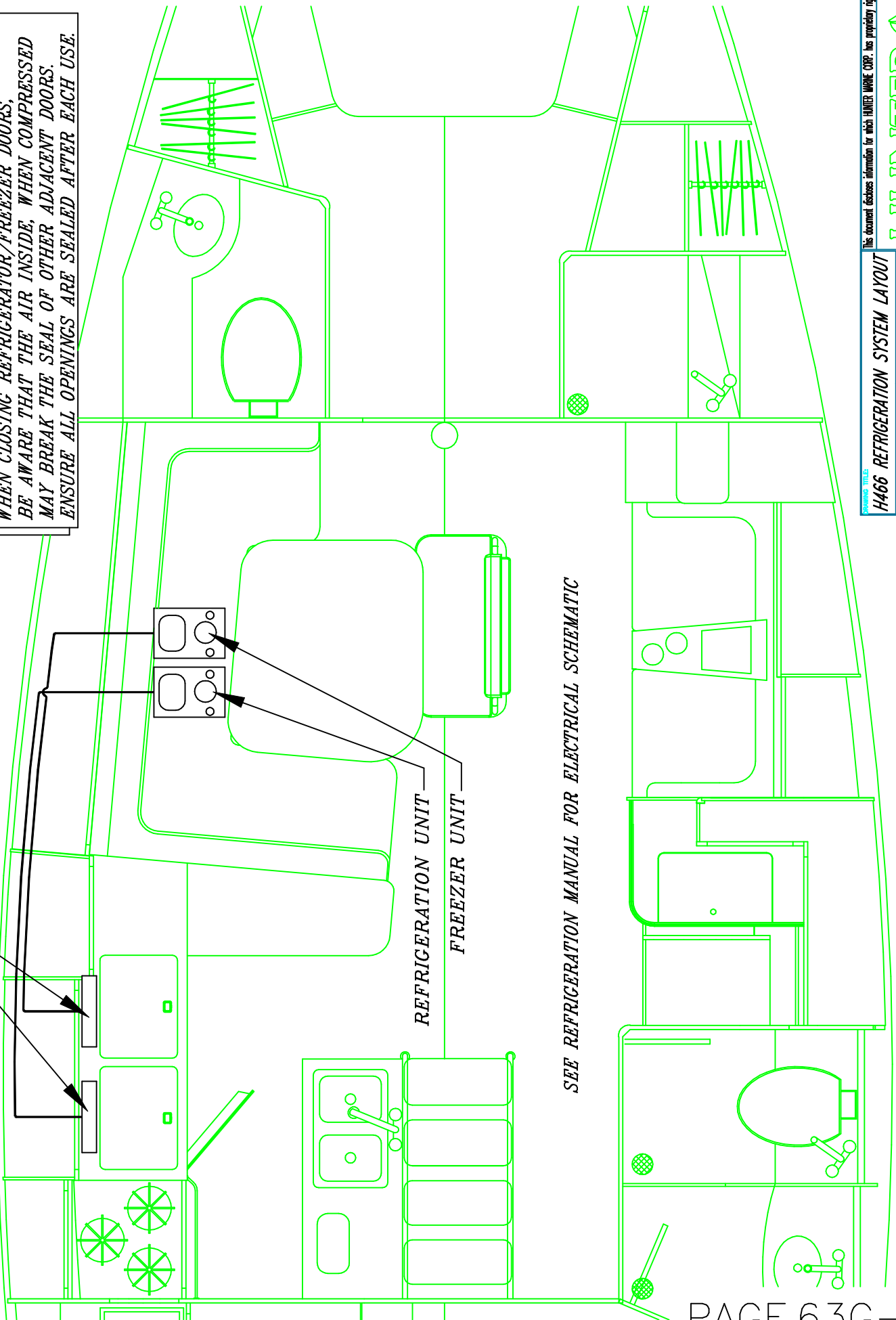
THE AC MAIN MAY BE TURNED ON ALONG WITH THE CHARGE BUTTON ON THE INVERTER REMOTE TO MAINTAIN BATTERY VOLTAGE.

NOTE: IF LEAVING UNIT ON WHEN AWAY FROM BOAT (THIS IS NOT RECOMMENDED), BE SURE SHORE POWER CABLE "A" IS CONNECTED AND INVERTER REMOTE IS IN THE "OFF" POSITION OTHERWISE INVERTER WILL DRAIN BATTERIES.

REFRIGERATOR VD-170 EVAPORATOR
 FREEZER VD-171 EVAPORATOR

NOTE:

WHEN CLOSING REFRIGERATOR/FREEZER DOORS,
 BE AWARE THAT THE AIR INSIDE, WHEN COMPRESSED
 MAY BREAK THE SEAL OF OTHER ADJACENT DOORS.
 ENSURE ALL OPENINGS ARE SEALED AFTER EACH USE.



SEE REFRIGERATION MANUAL FOR ELECTRICAL SCHEMATIC

PROPERTY TITLE: This document discloses information for which HUNTER HAWNE CORP. has proprietary rights.

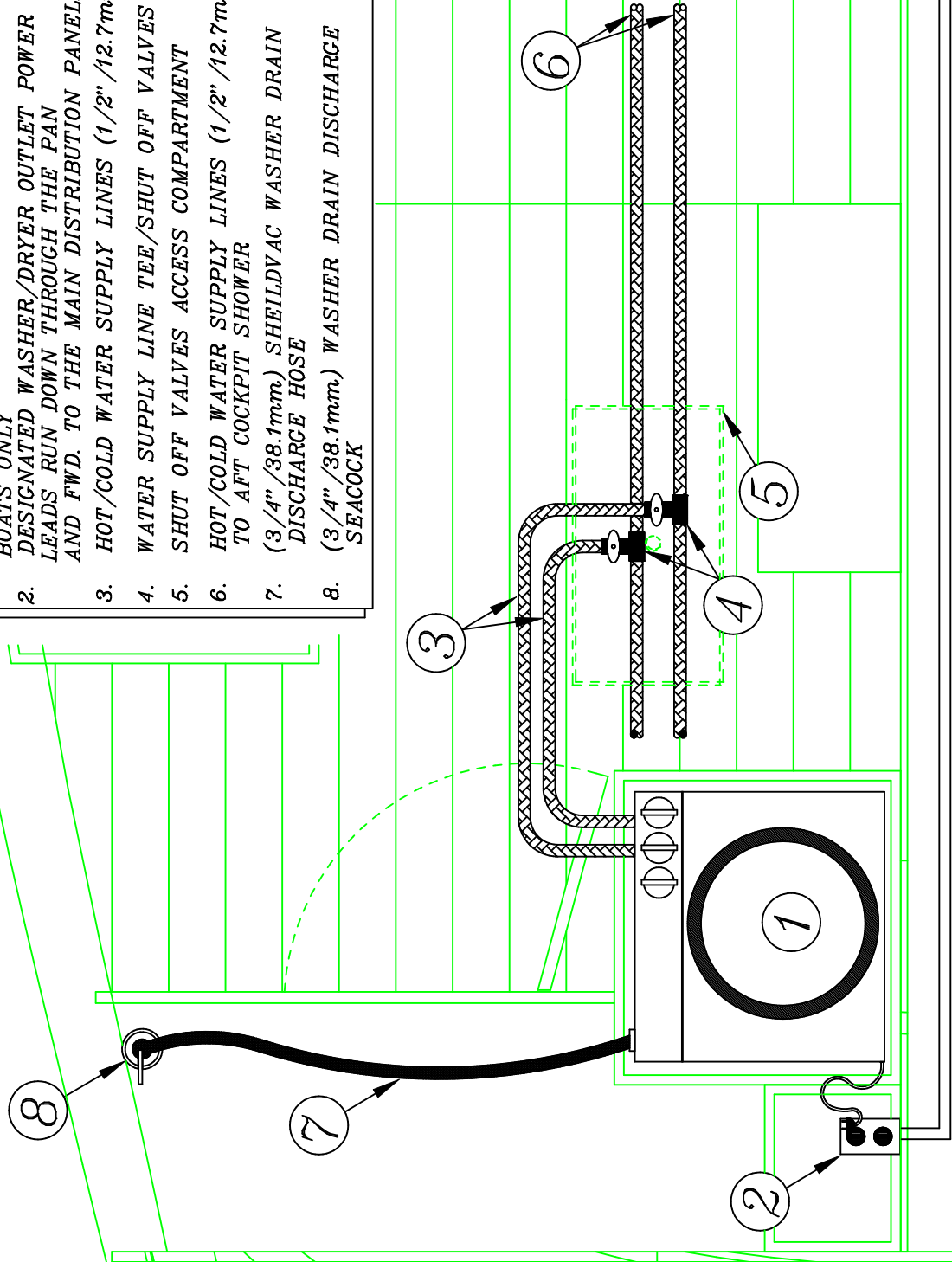
H466 REFRIGERATION SYSTEM LAYOUT

HUNTER HAWNE CORP.

FORMING NO.	4608063G-2	REVISION NO.	NONE
ENGINEERING DEPT.		DATE	2/3/99

NOTE: BE SURE THAT THE WASHER DISCHARGE SEACOCK IS OPEN DURING DRAINAGE, AND CLOSED WHEN MACHINE IS NOT IN USE. IMPORTANT: BE AWARE OF LOCAL REGULATIONS REGARDING OVERBOARD DISCHARGES OF "GRAY WATER". BEFORE USING THIS SYSTEM.

- NOTES:** WHEN A WASHER AND DRYER IS OPTIONED, A 15 amp FUSE IS INSTALLED @ THE MAIN BREAKER PANEL, LOCATED @ NAV STATION.
1. WASHER/DRYER UNIT LOCATED IN PORT AFT STRM. IN OFFICE/WORK BENCH OPTIONED BOATS ONLY
 2. DESIGNATED WASHER/DRYER OUTLET POWER LEADS RUN DOWN THROUGH THE PAN AND FWD. TO THE MAIN DISTRIBUTION PANEL.
 3. HOT/COLD WATER SUPPLY LINES (1/2" /12.7mm)
 4. WATER SUPPLY LINE TEE/SHUT OFF VALVES
 5. SHUT OFF VALVES ACCESS COMPARTMENT
 6. HOT/COLD WATER SUPPLY LINES (1/2" /12.7mm) TO AFT COCKPIT SHOWER
 7. (3/4" /38.1mm) SHEILDVAC WASHER DRAIN DISCHARGE HOSE
 8. (3/4" /38.1mm) WASHER DRAIN DISCHARGE SEACOCK



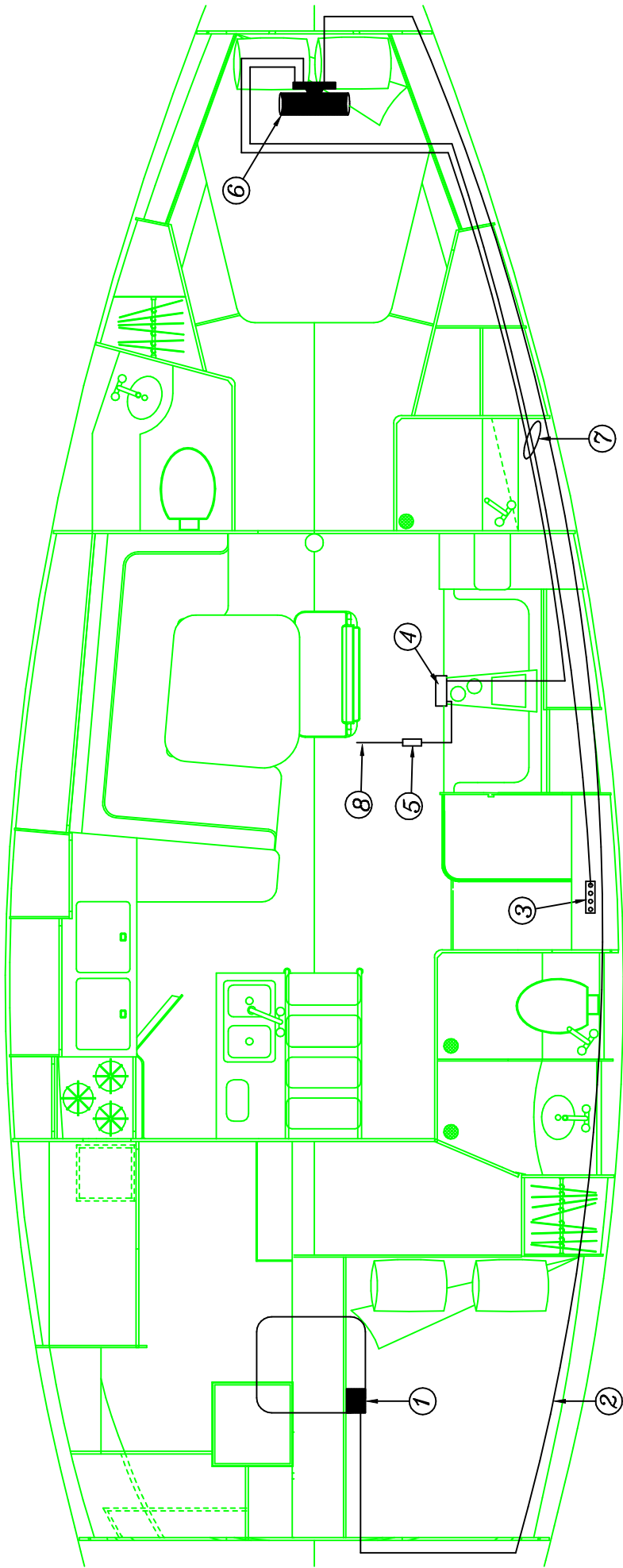
NOTE: SEE WASHING MACHINE OWNERS MANUAL FOR OPERATING INSTRUCTIONS, MAINTENANCE, ETC.

466 OPTIONAL WASHER/DRYER LAYOUT

PROJECT FILE NO.	4608063H	REVISION NO.	NONE
DATE	2/11/99	ENGINEERING DEPT.	

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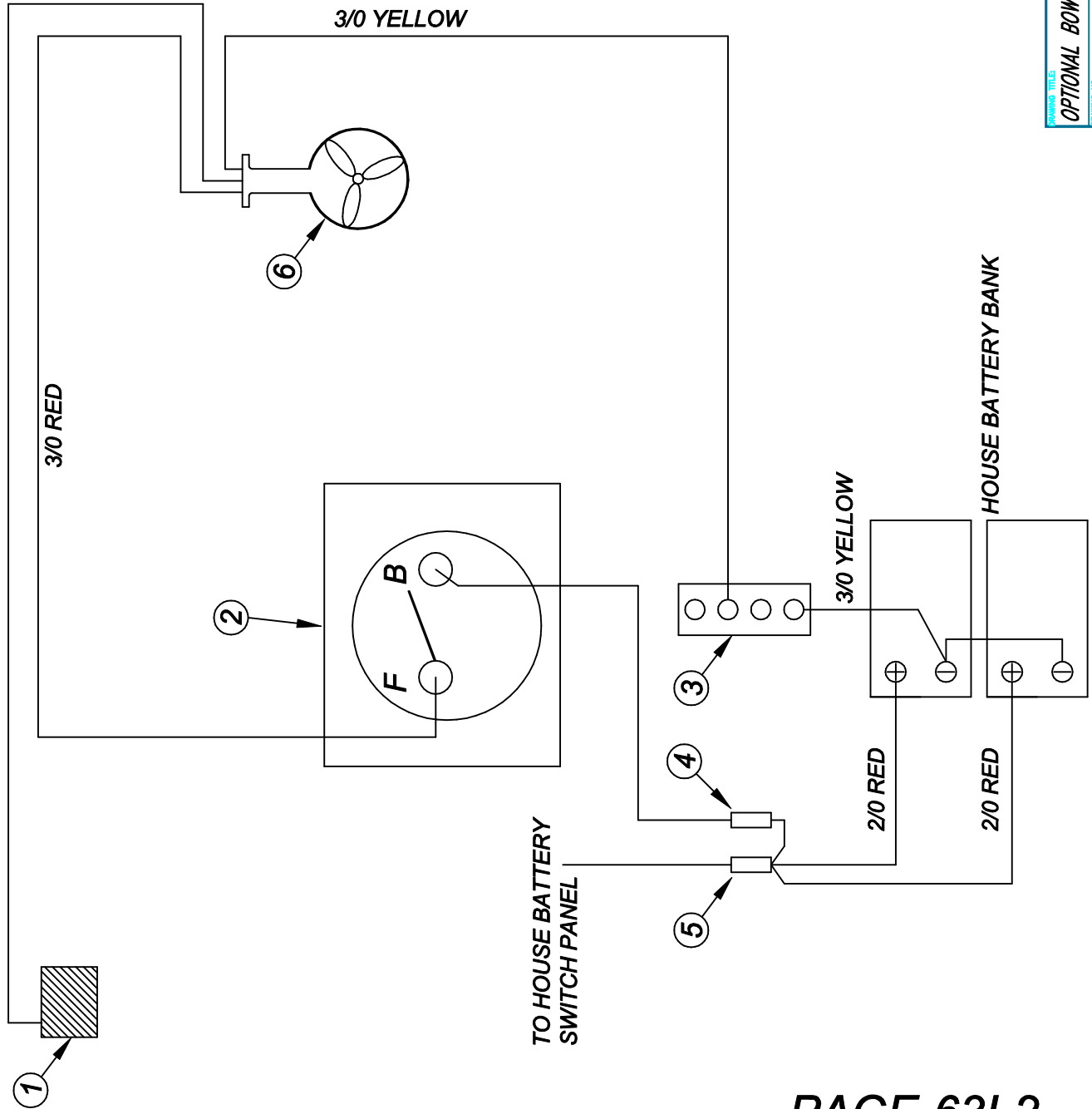


1. BOW THRUSTER REMOTE CONTROL LOCATION (ON COCKPIT CONSOLE)
2. REMOTE WIRE RUNS (THRU HEADLINER) 4 WIRES
3. GROUNDING STUD LOCATION (BEHIND NAVIGATION STATION)
4. BOW THRUSTER SWITCH PANEL
5. 250 AMP FUSE
6. BOW THRUSTER
7. BOW THRUSTER MOTOR CABLES
8. TO HOUSE BATTERIES

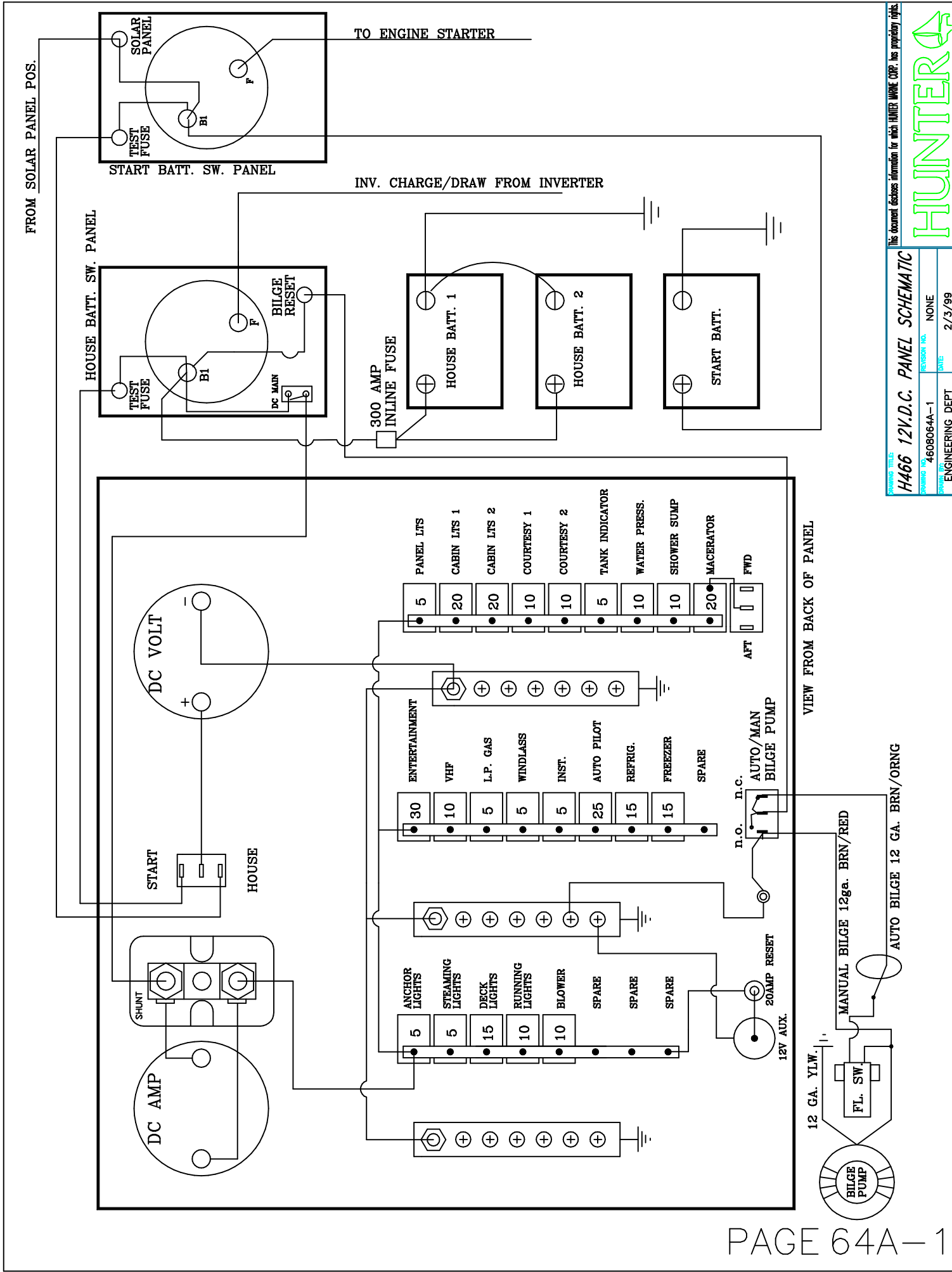
- IMPORTANT NOTES:**
1. SEE PAGE 63J FOR MORE DETAILS AND A SCHEMATIC FOR THE OPTIONAL BOW THRUSTER AND ITS COMPONENTS
 2. SEE BOW THRUSTER OWNERS MAUNAL FOR GUIDELINES, INSTRUCTIONS AND MAINTENANCE. (EX: OIL FILL RESIVOIR AND BATTERY STATUS WHEN NOT IN USE.)



16 ga (BLUE, RED, GRAY, BLACK) 4 SEPERATE WIRES

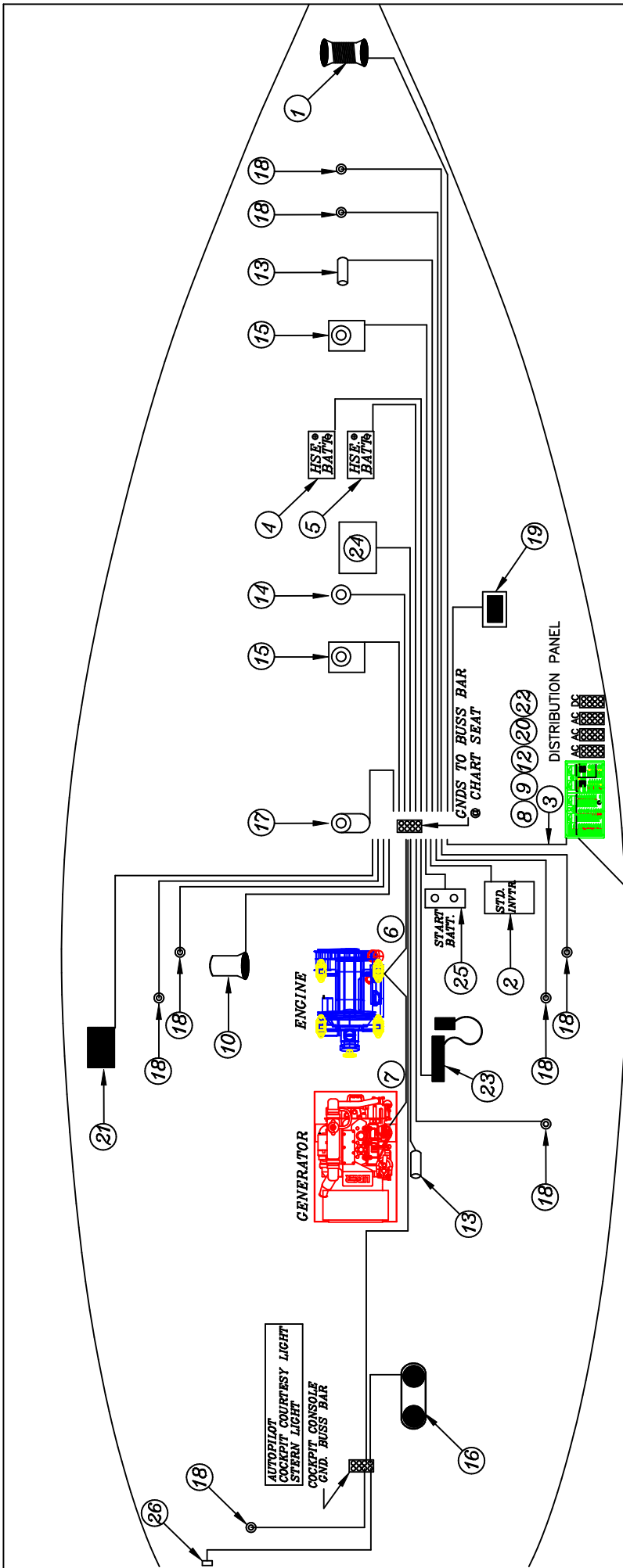


1. BOW THRUSTER REMOTE CONTROL BOX (LOCATED @ COCKPIT CONSOLE)
2. BOW THRUSTER SWITCH PANEL
3. NEGATIVE BUS BAR (LOCATED BEHIND BATTERY SWITCH PANEL)
4. 250 amp IN-LINE FUSE
5. 300 amp IN-LINE FUSE
6. OPTIONAL 12 VOLT BOW THRUSTER



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H466 12V.D.C. PANEL SCHEMATIC
 DRAWING NO. 4608064A-1
 REVISION NO. NONE
 DESIGNER: ENGINEERING DEPT. DATE: 2/3/99



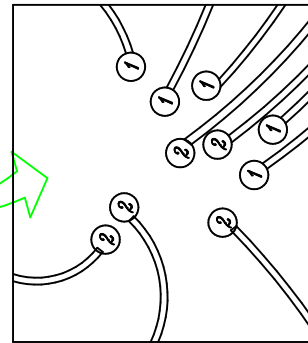
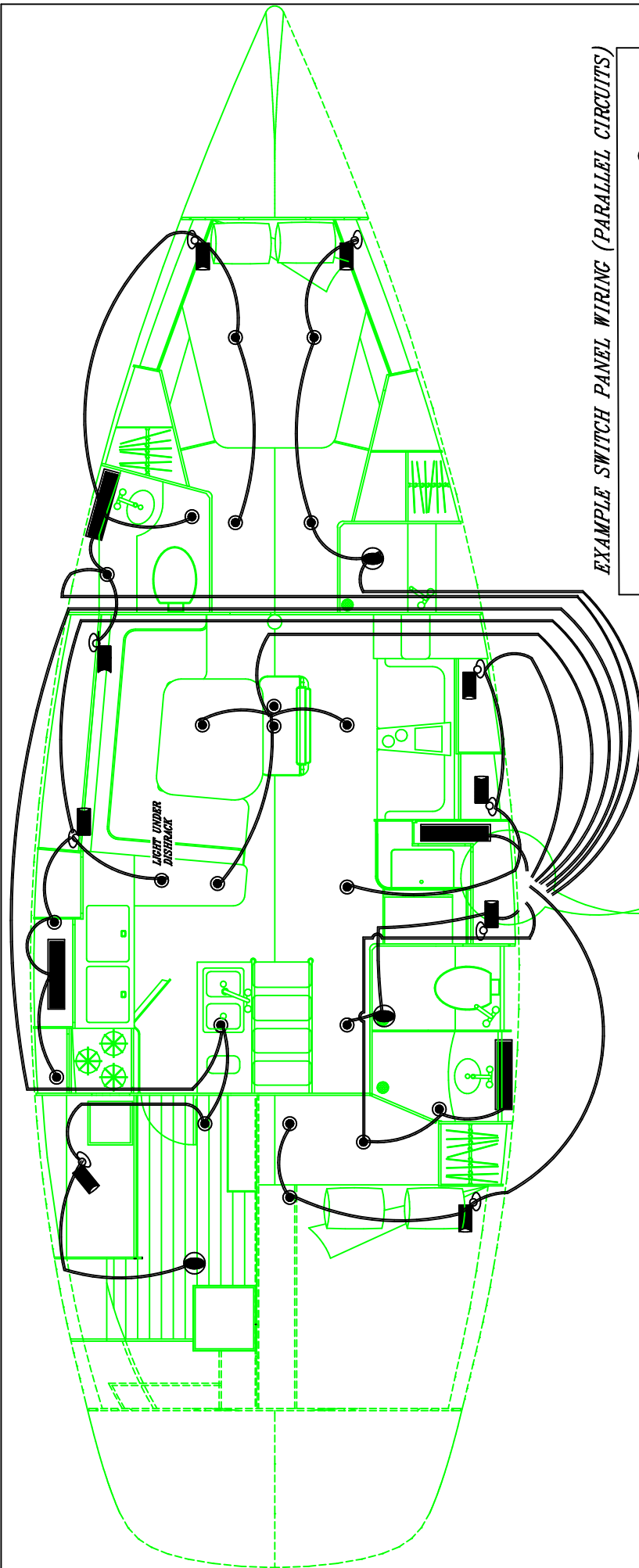
GROUND WIRE/CABLE SPECS: (ALL WIRES NOTED BELOW ARE (YELLOW) GROUND)

- ① WINDLASS (OPTIONAL).....2ga. WIRE
- ② INVERTER.....2/0 CABLE
- ③ PANEL GND. TO BUSS BAR.....6ga. WIRE
- ④ HOUSE BATT. #1 GND TO BUSS BAR.....2/0 CABLE
- ⑤ HOUSE BATT. #2 GND TO BUSS BAR.....2/0 CABLE
- ⑥ ENGINE GND. TO BUSS BAR.....2/0 CABLE
- ⑦ GENERATOR (OPTIONAL) GND. TO ENGINE.....2/0 CABLE
- ⑧ TO PORT CTSY LIGHTS.....16ga. WIRE
- ⑨ ALL CABIN LIGHTS.....16ga. WIRE
- ⑩ OPTIONAL ELEC. HALYARD.....2 ga. WIRE
- ⑪ COCKPIT GROUND TO BACK OF PANEL.....6ga. WIRE
- ⑫ STARBOARD CTSY. LIGHTS.....16ga. WIRE
- ⑬ MACERATOR(S).....10ga. WIRE
- ⑭ BILGE PUMP.....12ga. WIRE
- ⑮ SHOWER SUMP(S).....12ga. WIRE
- ⑯ OPTIONAL AUTO PILOT.....8ga. WIRE
- ⑰ WATER PRESSURE PUMP.....12ga. WIRE
- ⑱ TANK SEND UNIT.....16ga. WIRE
- ⑲ TV/VCR.....16ga. WIRE
- ⑳ STEREO.....16ga. WIRE
- ㉑ L.P.C. SOLENOID.....16ga. WIRE
- ㉒ INSTRUMENTS.....MANUF. SUPPLIED CABLE
- ㉓ VHF RADIO.....16ga. WIRE
- ㉔ ANC./STEAM./DECK/RUNNING LIGHTS
(TERMINAL STRIP ATOP COMP POST).....16ga. WIRE
- ㉕ START BATTERY.....2/0 CABLE
- ㉖ STERN LIGHT.....16 ga. WIRE

NOTE: WIRE RUNS & COMPNTS. ARE SHOWN IN SCHAMATIC FORM FOR CLARITY

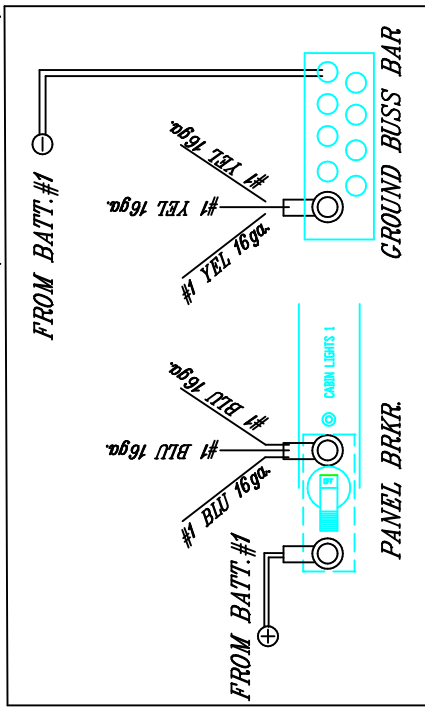
H466 D.C. GROUNDING SYSTEM LAYOUT <small>This document describes information for which HUNTER MARINE CORP. has proprietary rights.</small>	
<small>PROJECT NO.</small> 4608064A-2	<small>REVISION NO.</small> NONE
<small>ENGINEERING DEPT.</small> ENGINEERING DEPT.	<small>DATE</small> 2/3/99





#1 & #2 = CABIN LIGHTS #1 & #2 CIRCUITS
TO MAIN DISTRIBUTION PANEL

EXAMPLE SWITCH PANEL WIRING (PARALLEL CIRCUITS)



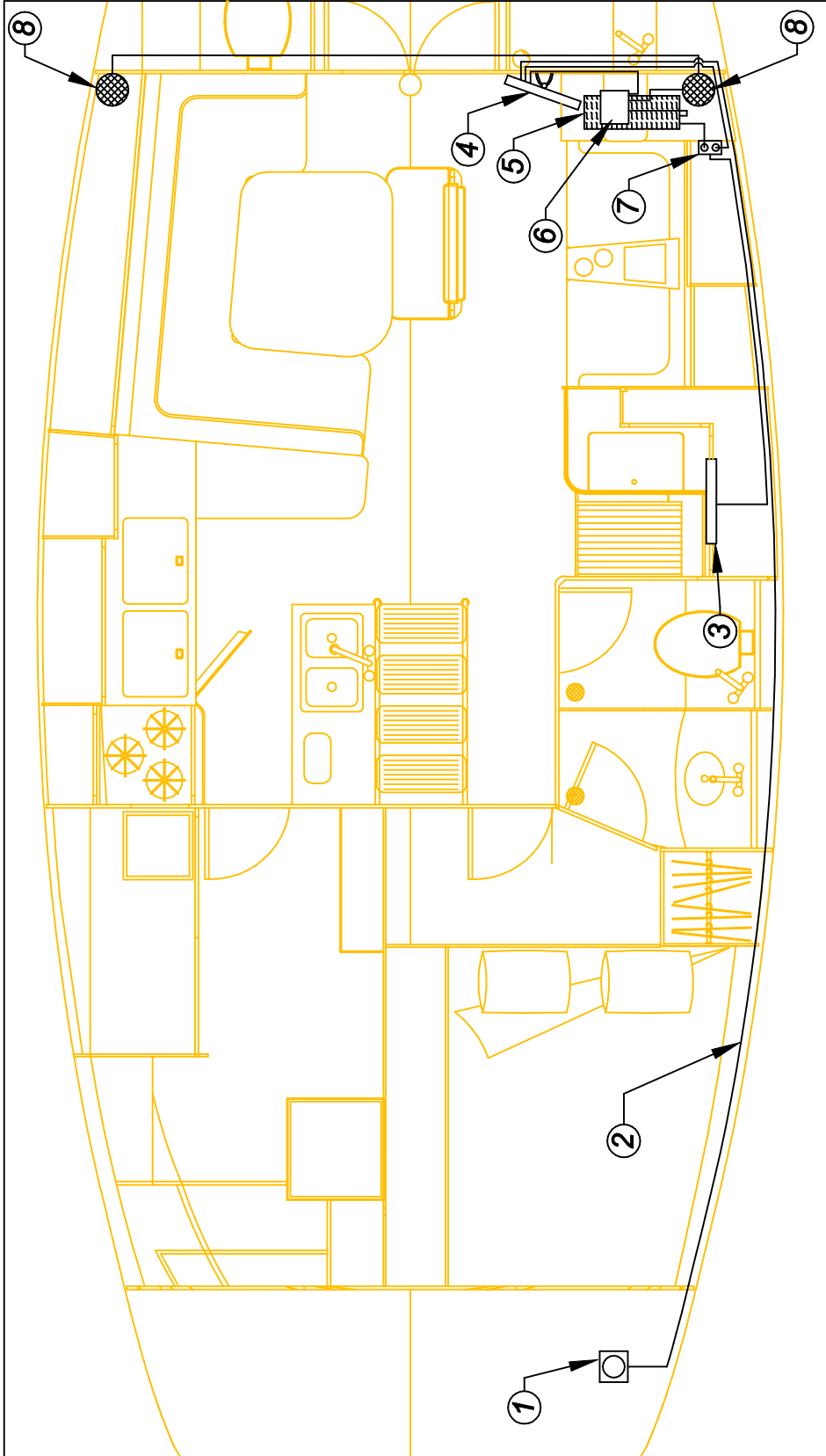
EACH CIRCUIT IN PARALLEL. 16ga. BLU (LOAD TO BREAKER) AND 16ga. YELLOW. GROUND TO GROUND BUSS BAR (SEE EX.)

- SWIVEL LIGHTS
- DOME LIGHTS
- RECESSED LIGHTS
- FLUORESCENT LIGHT

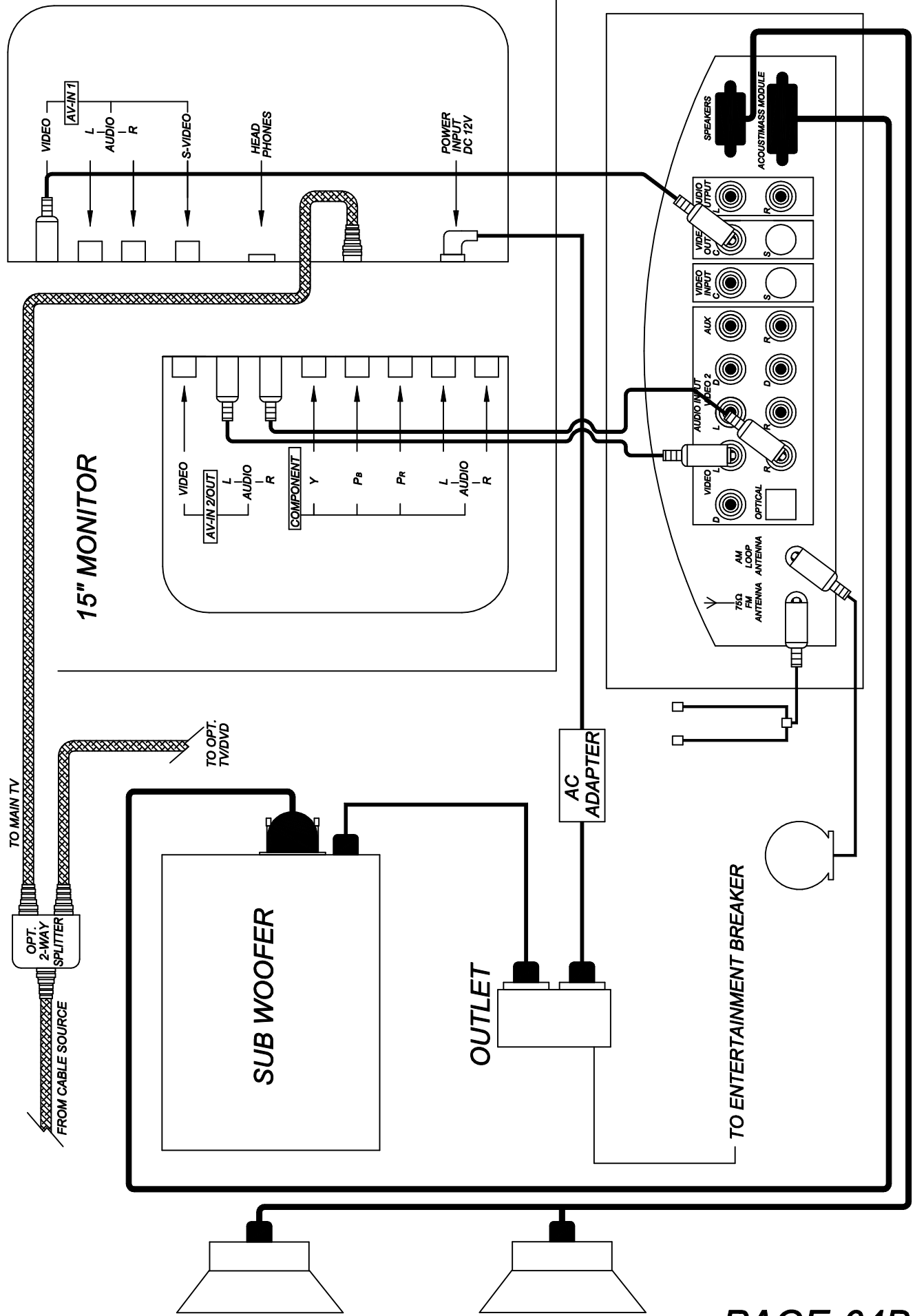
PROJECT FILE
H466 12V. LIGHTS WIRING (HEADLINER)
ISSUANCE NO. 4608064B-1 REVISION NO. NONE DATE 2/3/99
ENGINEERING DEPT.

HUNTERA

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- ① CABLE/PHONE INLET
- ② CABLE LEAD
- ③ AC/DC MAIN PANEL
- ④ 15" FLAT SCREEN MONITOR
- ⑤ SUB-WOOFER
- ⑥ BOSE 3-2-1
- ⑦ POWER OUTLET
- ⑧ STEREO SPEAKERS



15" MONITOR

SUB WOOFER

OUTLET

AC ADAPTER

TO ENTERTAINMENT BREAKER

TO OPT. TV/DVD

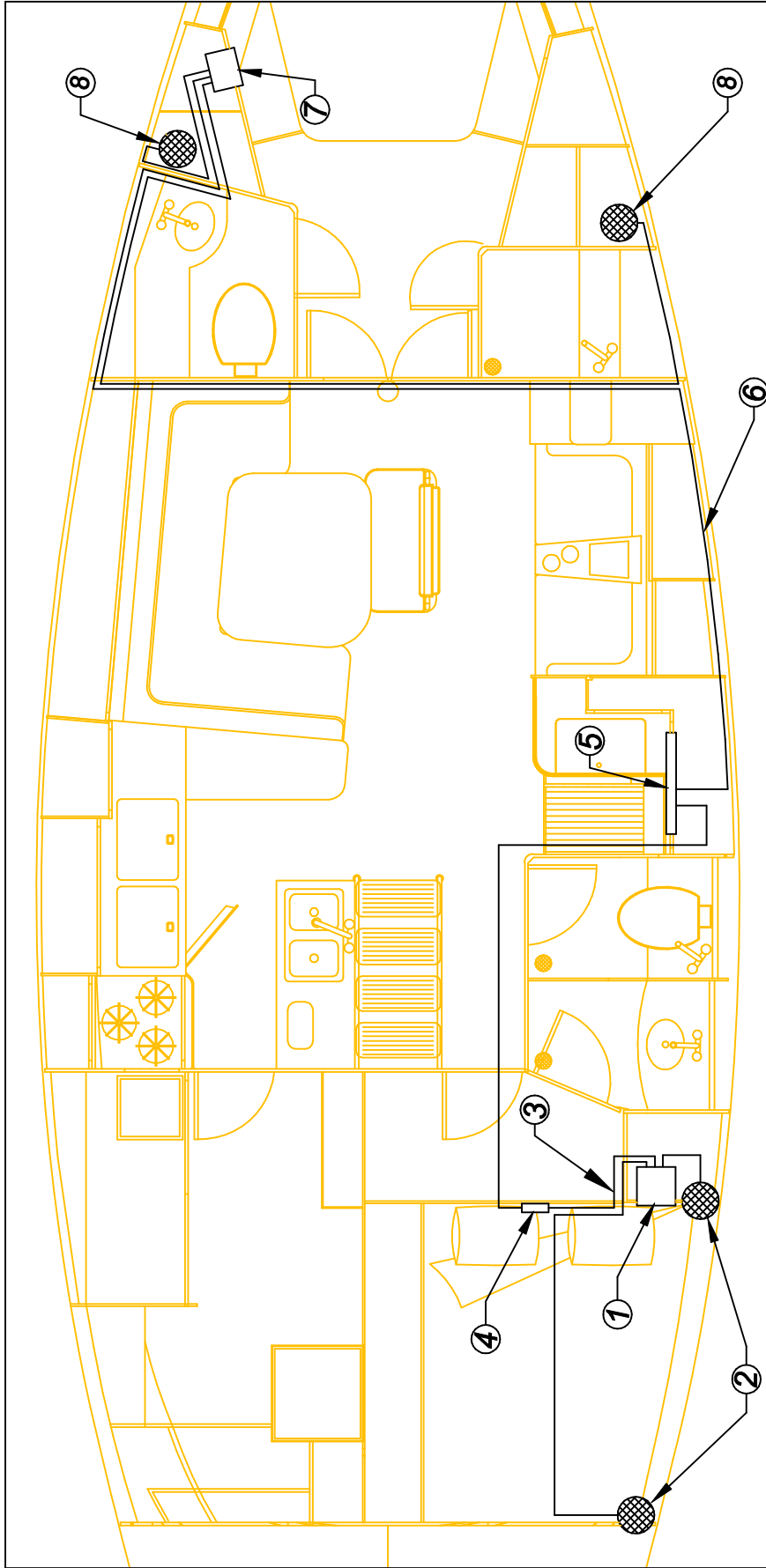
FROM CABLE SOURCE
OPT. 2-WAY SPLITTER
TO MAIN TV

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HUNTER

BOSE 3-2-1/TV SCHEMATIC

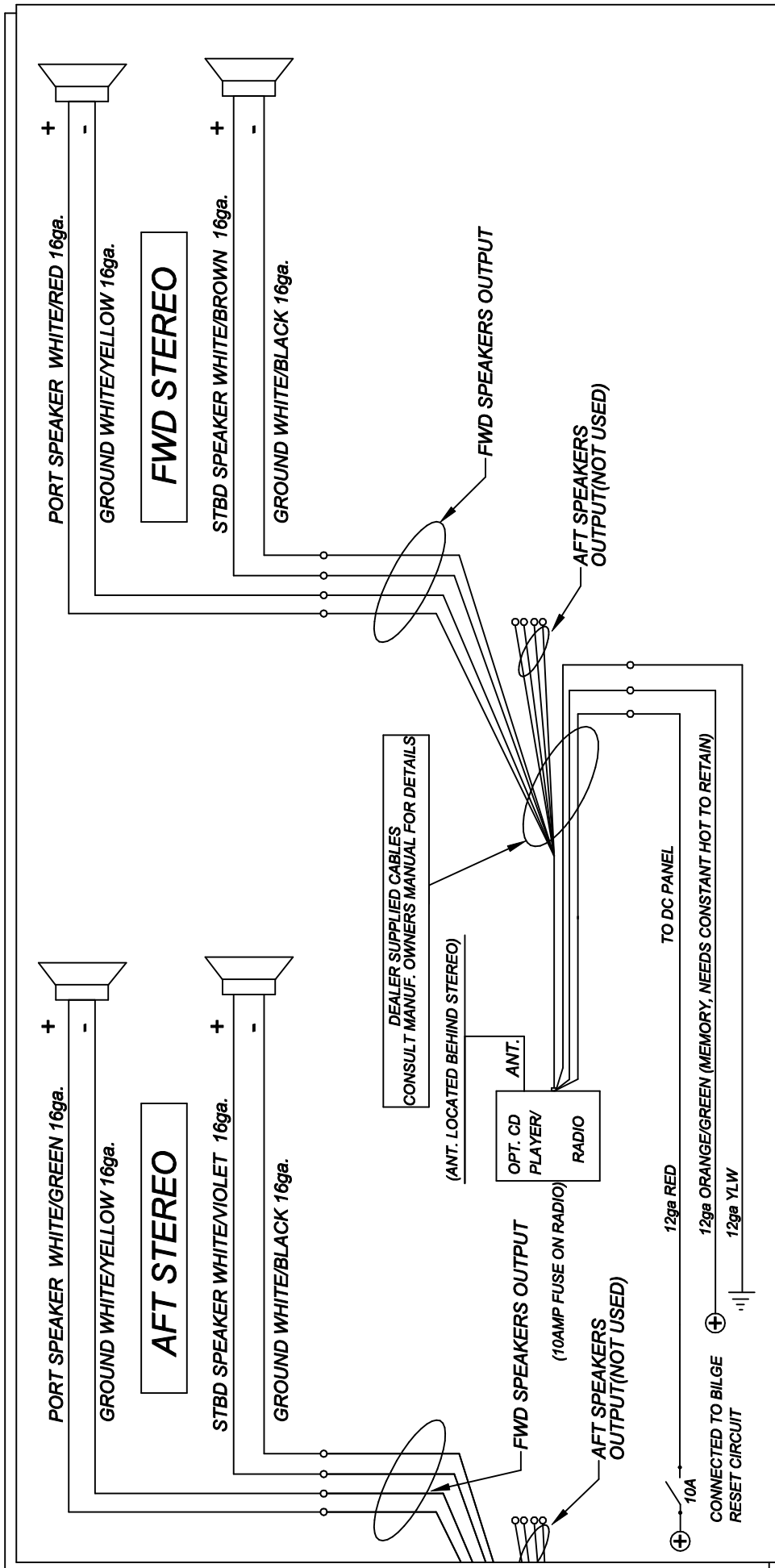
REVISION NO.	None	DATE	09/04/02
ISSUANCE NO.	4668064B-3	ENGINEER	ENG



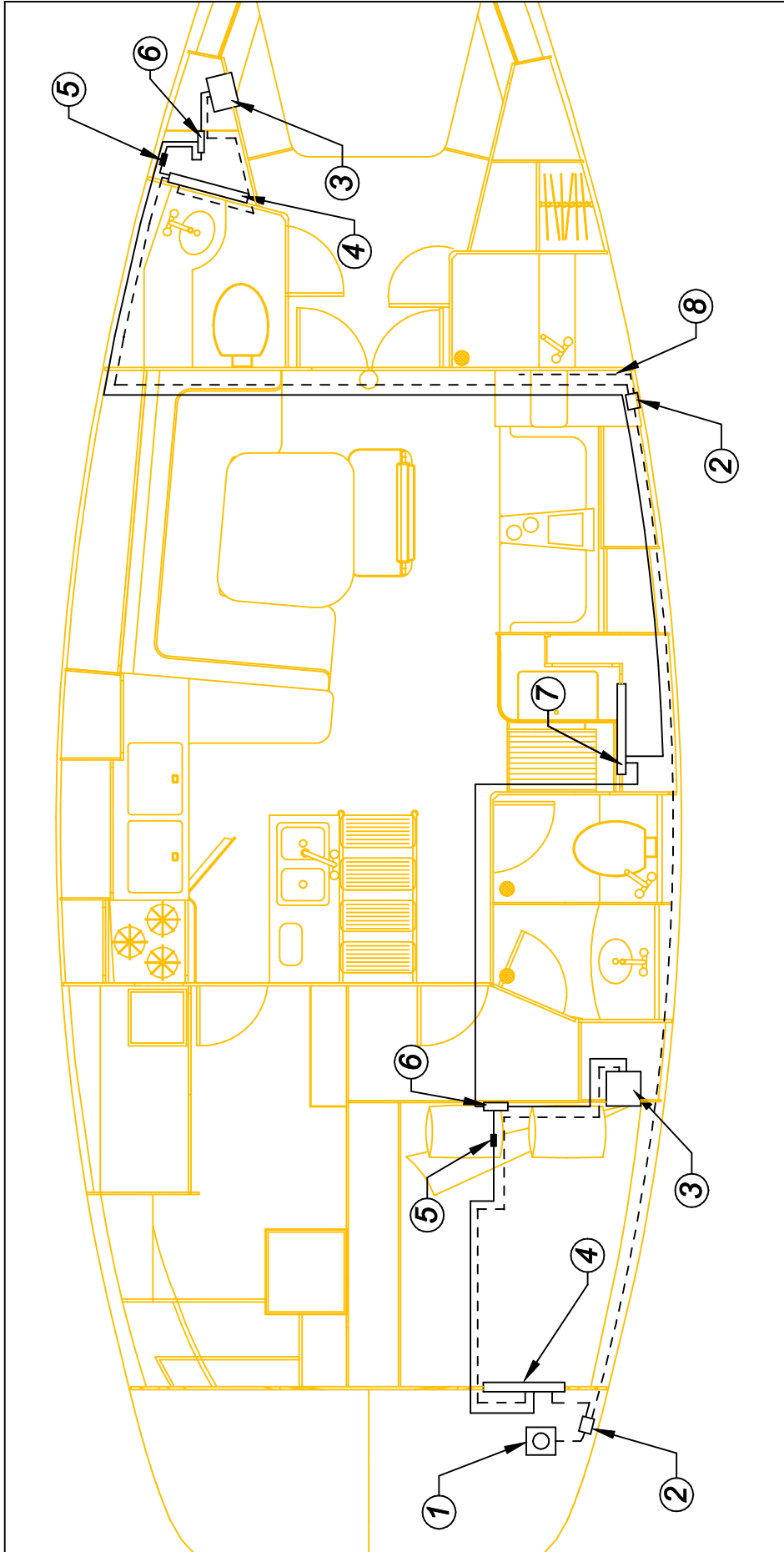
- | | |
|-------------------------|-------------------------|
| ① AFT STEREO CD PLAYER | ⑤ AC/DC MAIN PANEL |
| ② AFT STEREO SPEAKERS | ⑥ FWD STEREO POWER LEAD |
| ③ AFT STEREO POWER LEAD | ⑦ FWD STEREO CD PLAYER |
| ④ TERMINAL STRIP | ⑧ FWD STEREO SPEAKERS |



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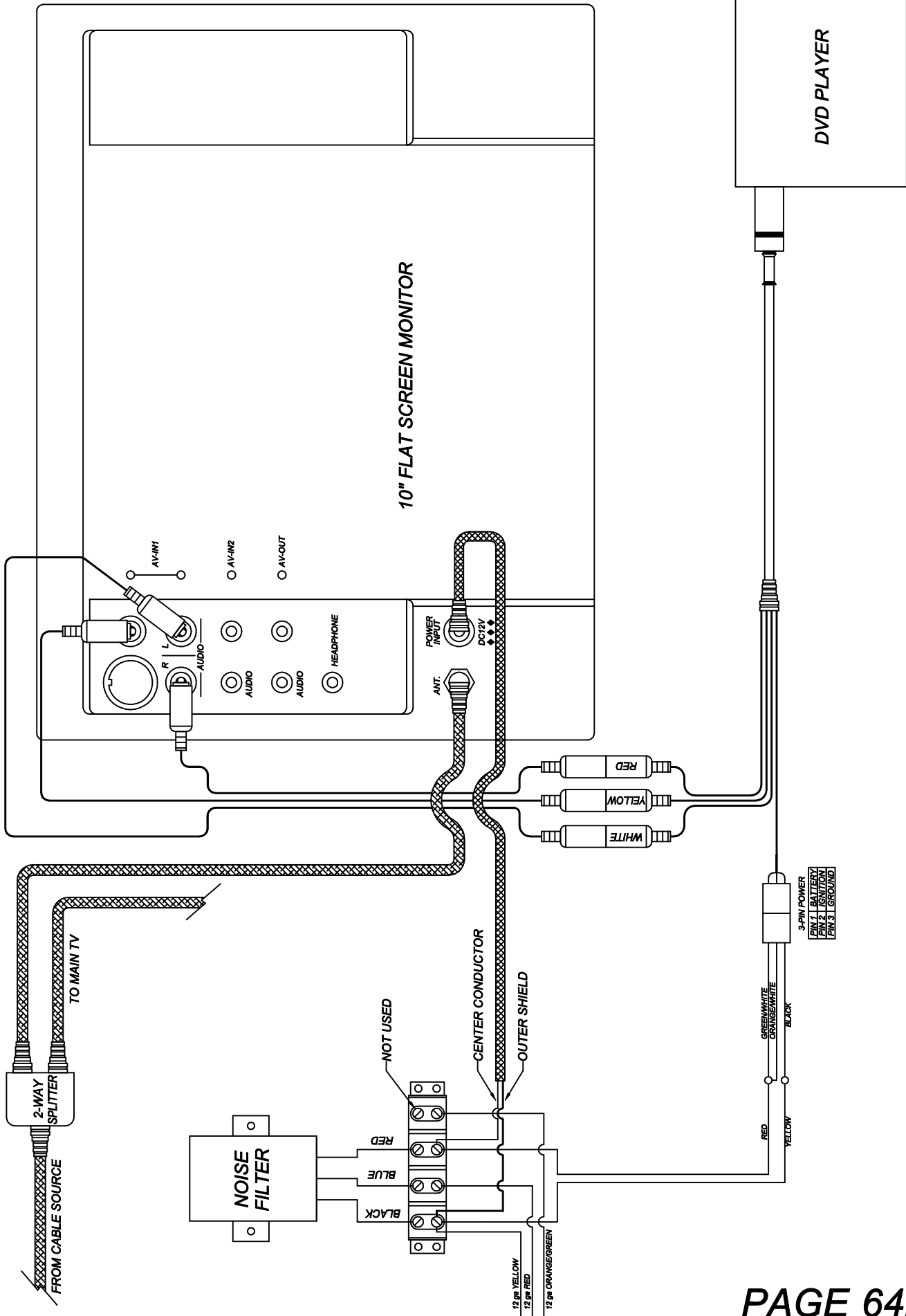


NOTE:
THE FWD AND THE AFT STEREO ARE WIRED THE SAME. THE ONLY DIFFERENCE IS THE COLOR OF THE POSITIVE SPEAKER LEAD.



- | | |
|---------------------------|--------------------------|
| ① CABLE/PHONE INLET | ⑤ NOISE REDUCTION FILTER |
| ② CABLE SPLITTER | ⑥ TERMINAL STRIP |
| ③ DVD PLAYER | ⑦ AC/DC MAIN PANEL |
| ④ 10" FLAT SCREEN MONITOR | ⑧ TO MAIN TV |

--- CABLE LEADS
 — POWER LEADS



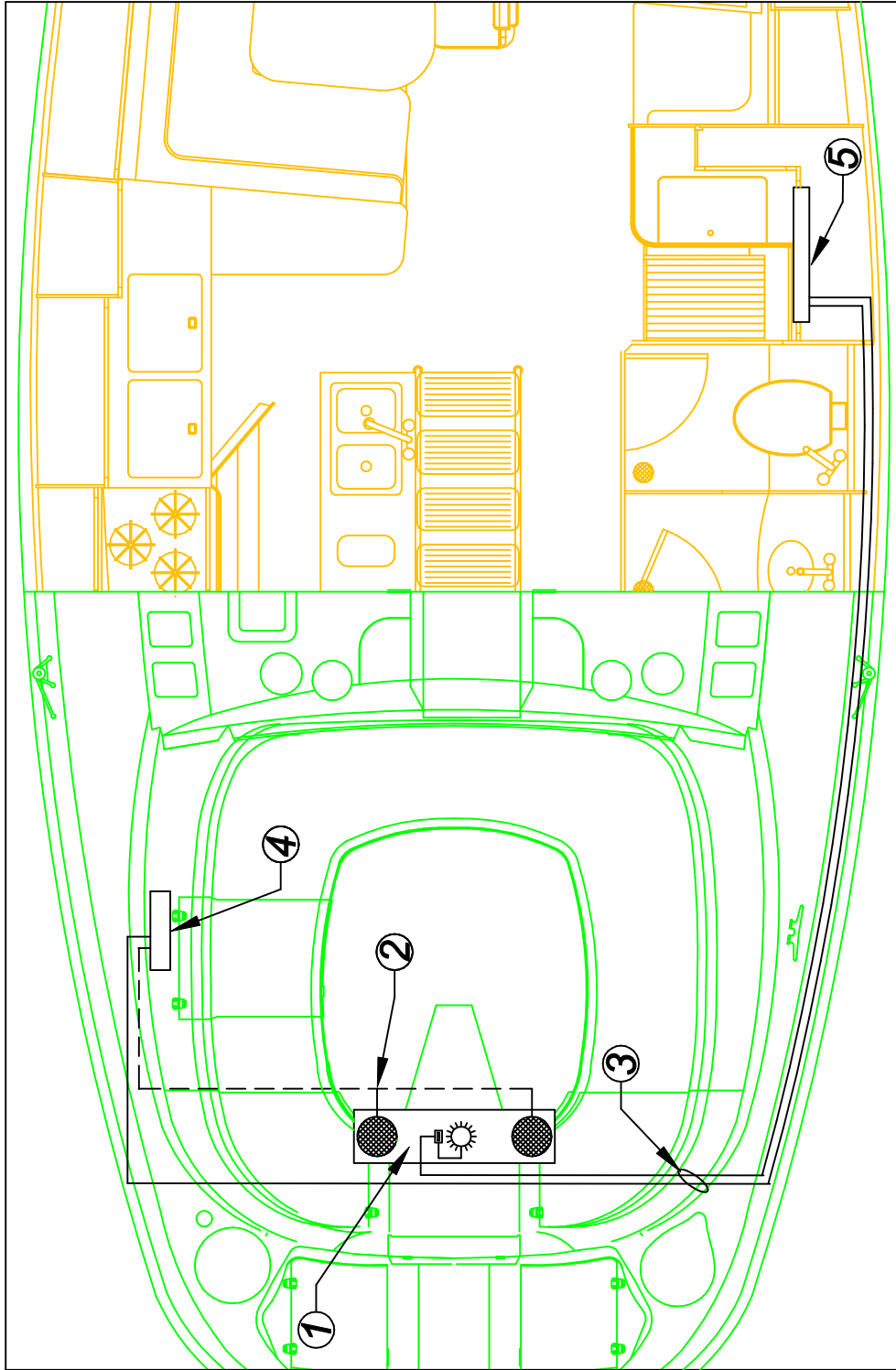
10" FLAT SCREEN MONITOR

DVD PLAYER

POWERING TITLE
 This document contains information for which HUNTER MARINE CORP. has proprietary rights.

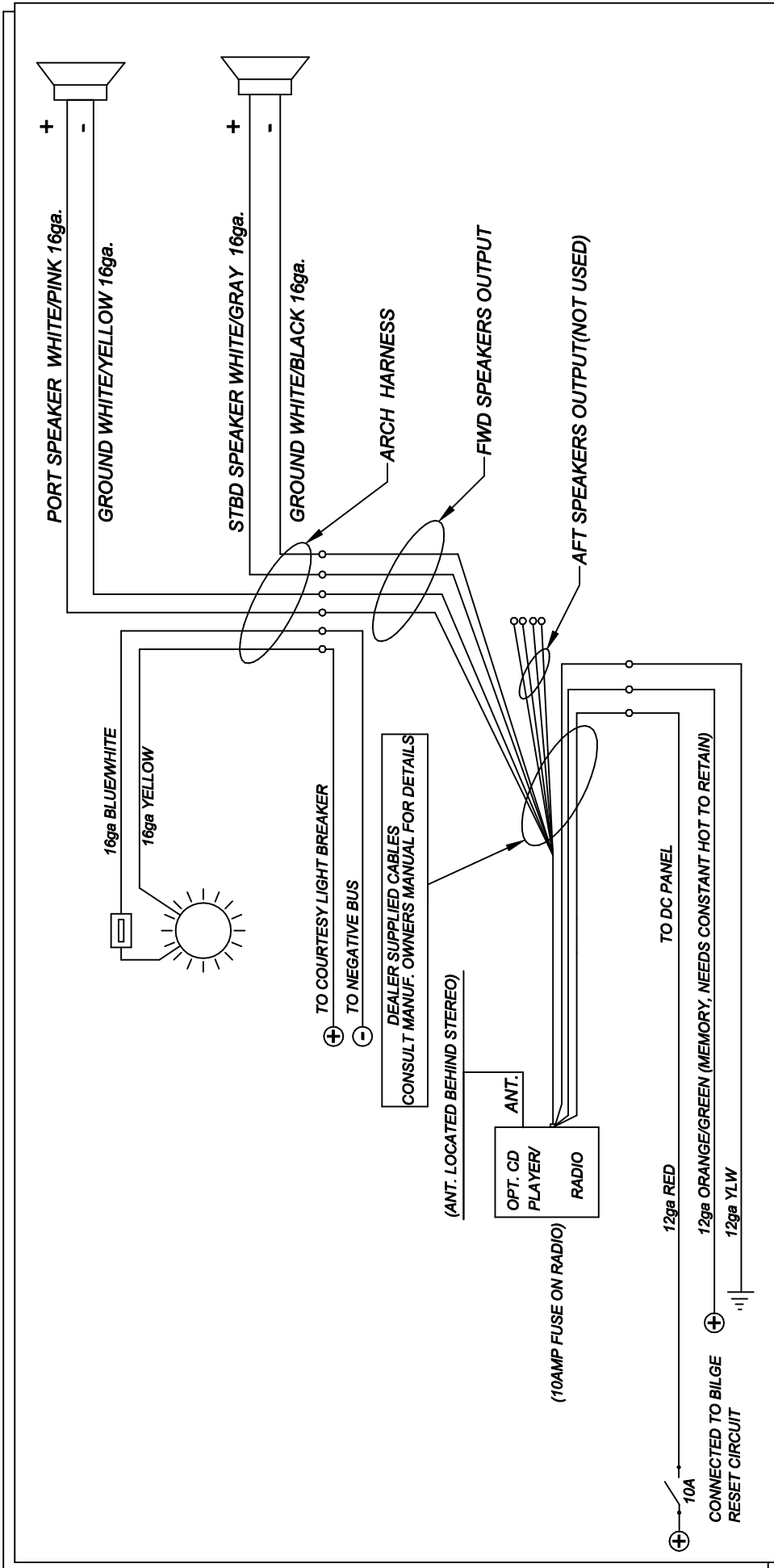
OPTIONAL FWD/AFT TV/DVD SCHEMATIC	
DESIGN NO.	4668064B-7
REVISION NO.	None
DATE	09/04/02
DRAWN BY	ENG

HUNTER

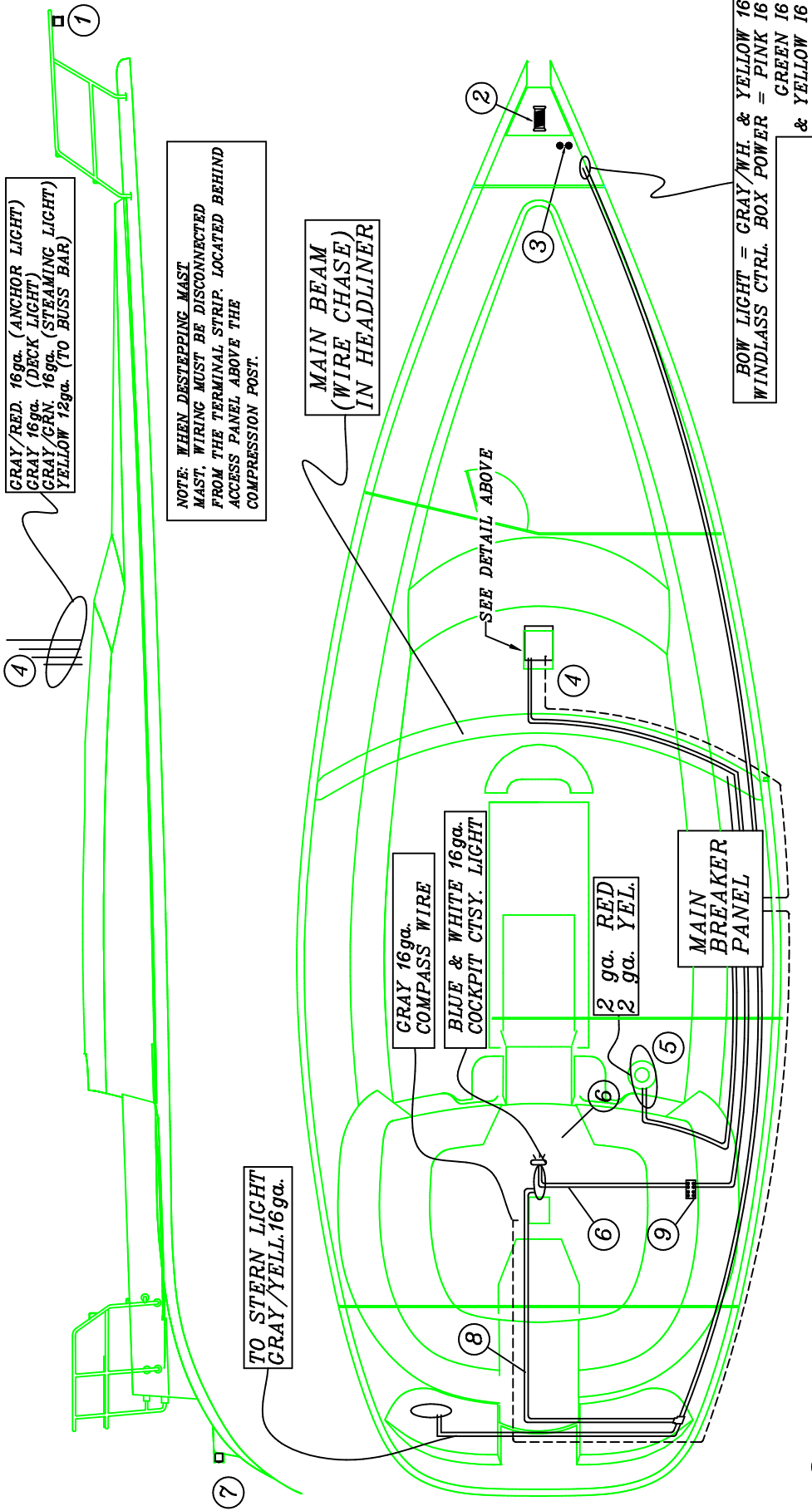


—— POWER LEADS
 - - - - - SPEAKER WIRE

- ① SPEAKER POD W/LIGHT (MOUNTED ON ARCH)
- ② SPEAKER WIRE RUN
- ③ POWER LEADS
- ④ STEREO CD PLAYER
- ⑤ AC/DC MAIN PANEL



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- ① BOW LIGHT
- ② OPTIONAL ANCHOR WINDLASS (SEE PAGE 64D-1 & 64D-2)
- ③ WINDLASS CONTROLS
- ④ POWER LEADS TO ANCHOR, DECK, STEAMING LIGHTS
- ⑤ OPTIONAL ELEC. HALYARD (SEE PAGE 64E-1 & 2)
- ⑥ COURTESY LIGHT (IN COCKPIT CONSOLE BASE)
- ⑦ STERNLIGHT
- ⑧ COMPASS WIRE RUN
- ⑧ ARCH WIRING TERMINAL STRIP LOC. @ AFT STRM. HEADLINER

NOTE: SOME WIRE RUNS SHOWN IN APPROXIMATE LOCATIONS FOR CLARITY, SEE PAGE 64F FOR WIRE CHASE LOCATIONS

PROJECT FILE # H466 12V. WIRING DECK	
DRAWING NO. 4608064C	NONE
DATE 2/4/99	ENGINEERING DEPT

----- = VHF COAX CABLE (CONNECTOR ABOVE MAST POST)

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SECTION 64D...OPTIONAL WINDLASS SYSTEM

BASIC OPERATING INSTRUCTIONS:

LOWERING ANCHOR....

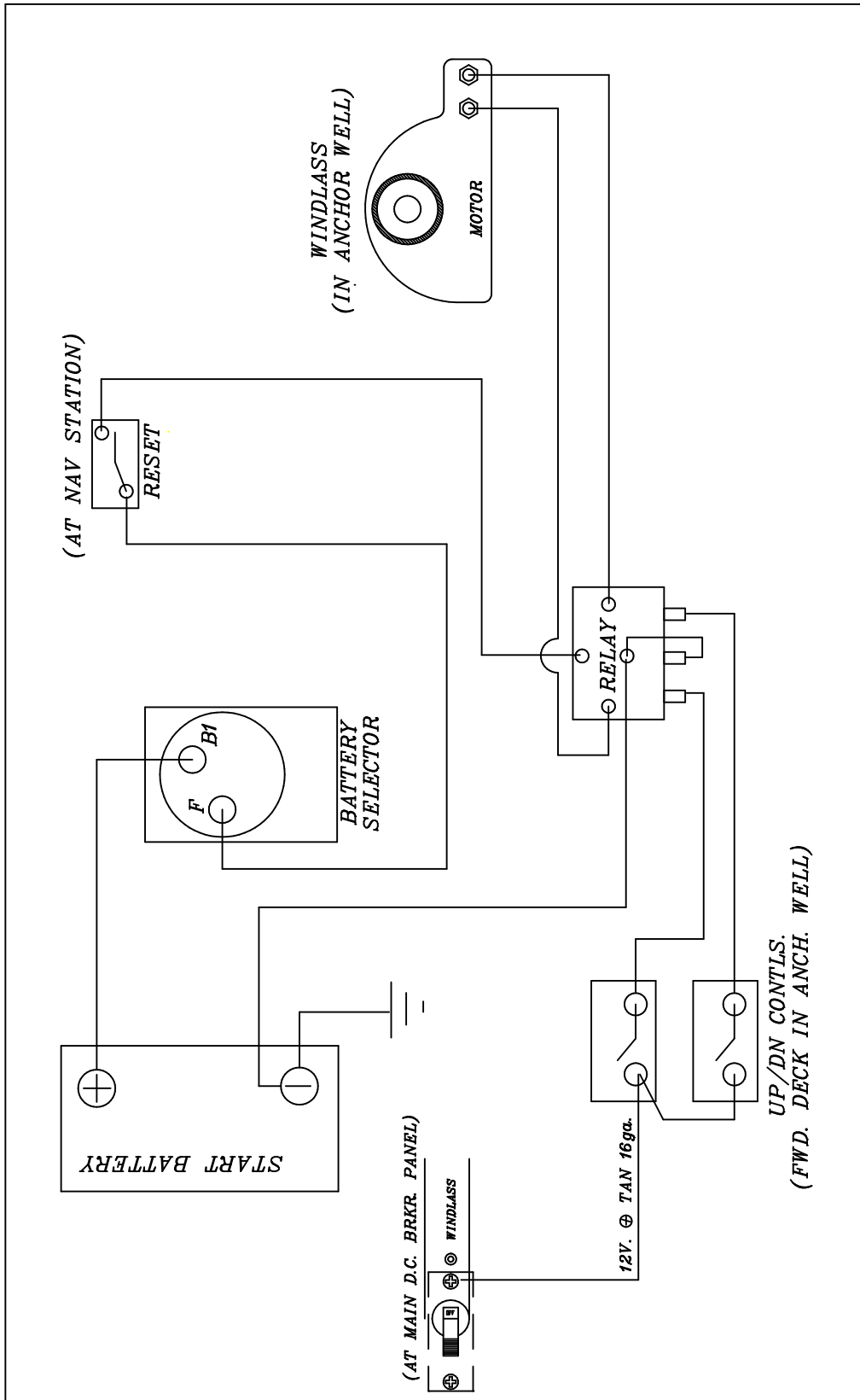
- ① TURN ON START BATTERY SWITCH UNDER NAV. STATION.
- ② TURN ON WINDLASS BRKR. ON MAIN D.C. BRKR. PANEL.
- ③ ENSURE THE RESET BREAKER @ NAVIGATION STATION IS "RESET".
- ④ PUSH WINDLASS "DOWN" BUTTON INSIDE ANCHOR WELL LOCKER.

NOTE: "BUMP" SWITCH UNTIL ANCHOR CLEARS ANCHOR ROLLER AND HULL BEFORE LETTING ANCHOR DOWN FREELY.

RAISING ANCHOR....

- ① START BOAT ENGINE, THIS WILL ALLOW CONTROL OF BOAT WHEN ANCHOR BECOMES FREE, AS WELL AS REDUCING LOAD ON BATTERY
- ② SAME AS STEP #1 OF LOWERING ANCHOR
- ③ SAME AS STEP #2 OF LOWERING ANCHOR
- ④ PUSH WINDLASS "UP" BUTTON (LOCATED NEXT TO "DOWN BUTTON" BEING CAREFUL AS THE ANCHOR APPROACHES THE HULL AND ANCHOR ROLLER) UNTIL THE ANCHOR RESTS IN THE STEMHEAD PROPERLY.

NOTE: IF IT APPEARS THERE IS NO POWER TO THE WINDLASS, CHECK RESET BRKR. AT THE NAV. STATION.
IF WINDLASS BECOMES INOPERABLE ELECTRICALLY, A MANUAL WINCH HANDLE IS SUPPLIED, SEE THE "WINDLASS MANUAL" SUPPLIED IN YOUR OWNERS MANUAL PACKAGE FOR INSTRUCTIONS.



NOTE: SEE PAGE 64C FOR POWER FEED/WIRE RUN LOCATIONS

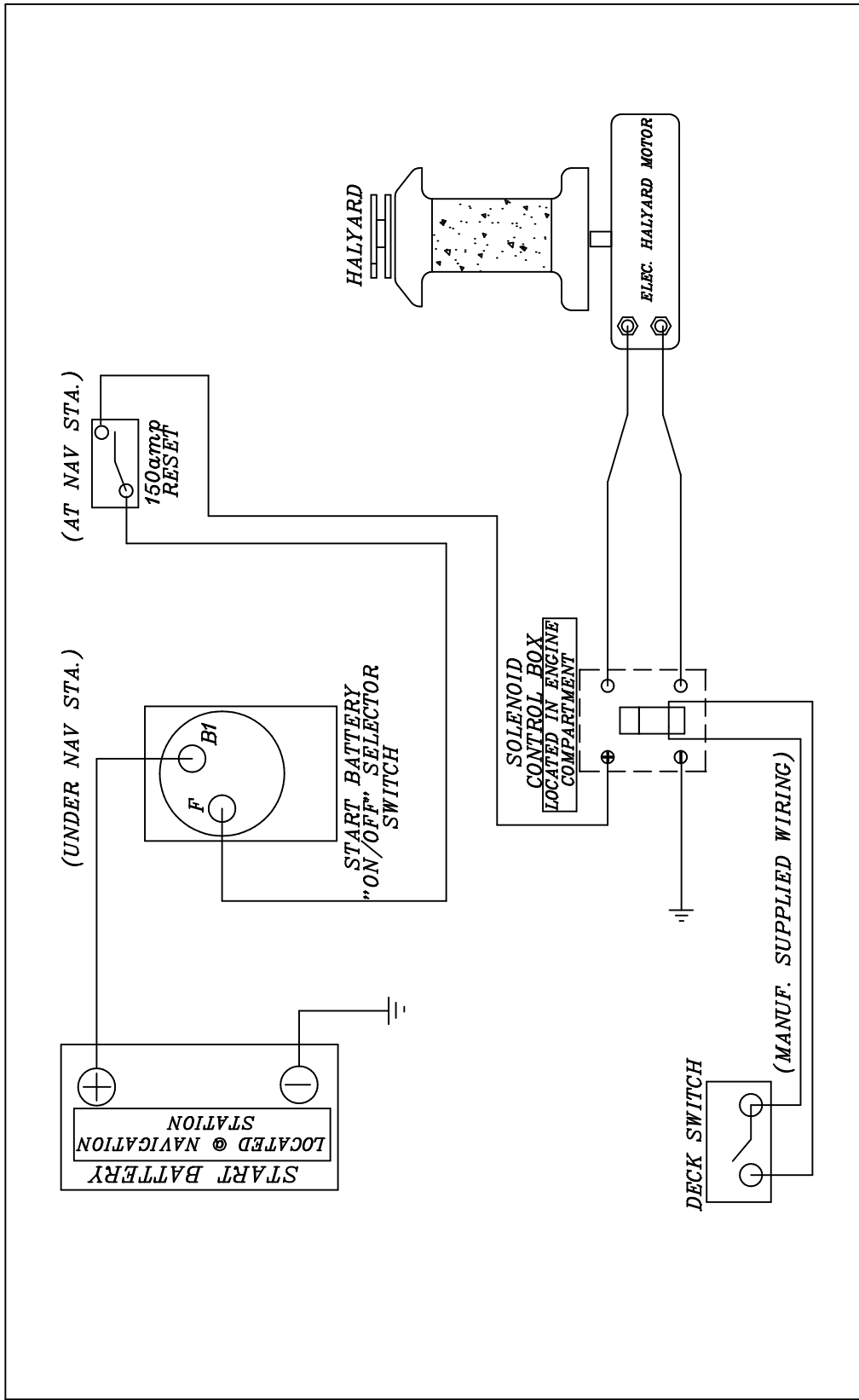


SECTION 64E...OPTIONAL ELEC. HALYARD SYSTEM

BASIC OPERATING INSTRUCTIONS:

- ① *TURN THE START BATTERY SELECTOR SWITCH TO THE "ON" POSITION.
(FOUND @ NAVIGATION STATION)*
- ② *HALYARD SWITCH ON DECK SHOULD NOW OPERATE WINCH*



SEE PAGE 63A-9 FOR FURTHER OPERATING DETAILS

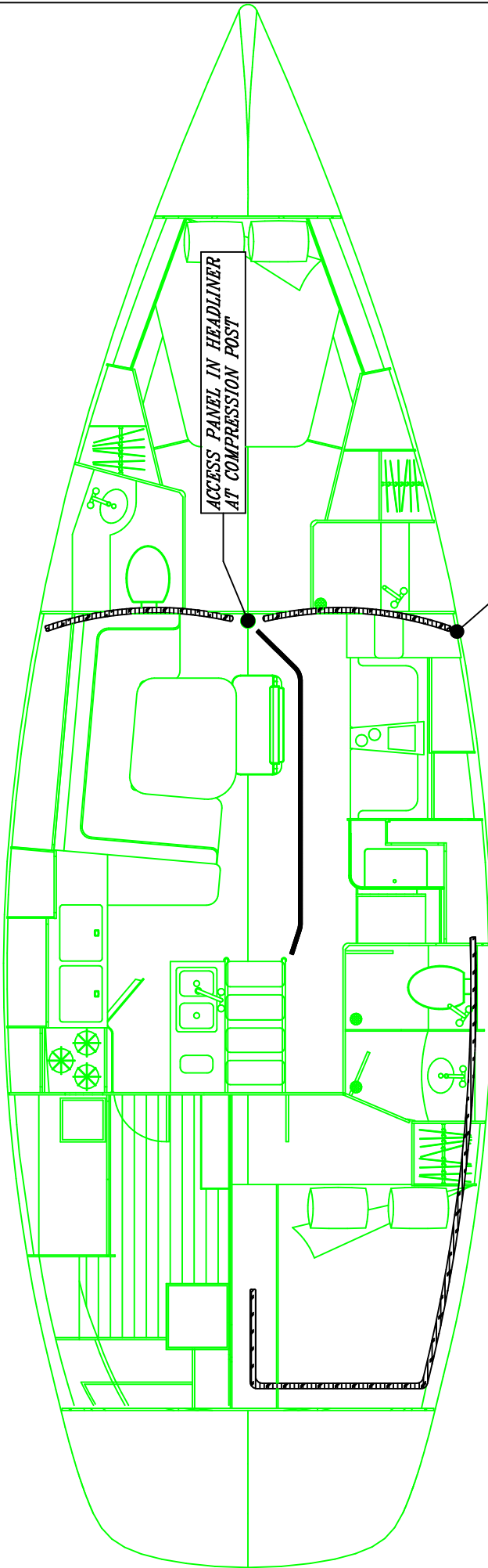


NOTE: SEE PAGE 64C FOR MORE DETAILS

POWER FILE
H466 ELECTRIC HALYARD SCHEMATIC
ISSUANCE NO. 4608064E-2 REVISION NO. NONE
DATE 2/3/99
ENGINEERING DEPT.



 (2" / 50.8mm) BLACK FLEX TUBE HEADLINER WIRE CHASES
 (1" / 25.4mm) FLEX TUBE HEADLINER INSTRUMENT WIRE CHASE



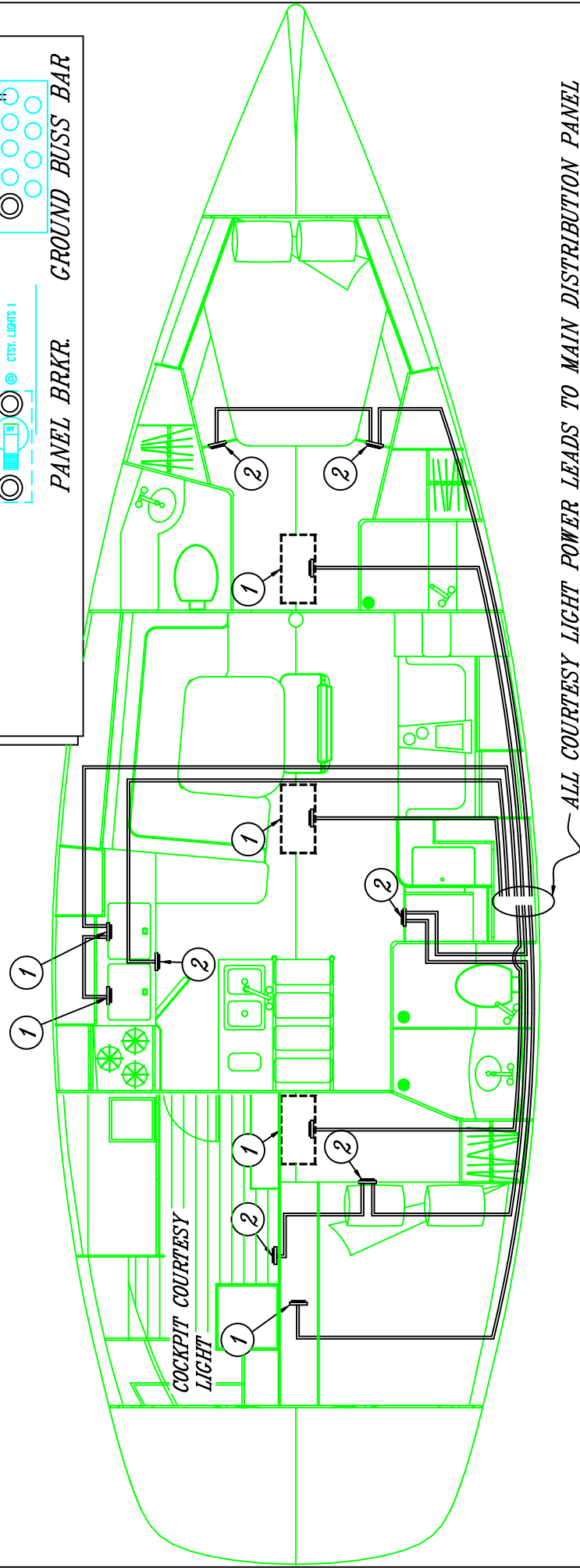
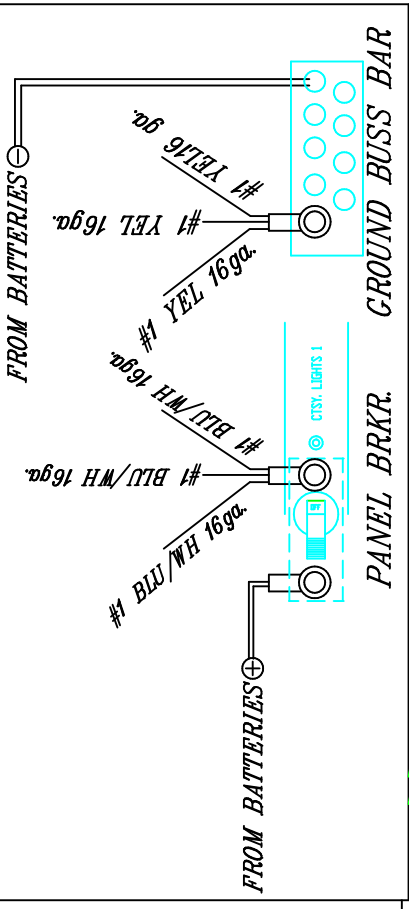
ACCESS PANEL IN HEADLINER (JUST FWD OF CHAINPLATE COVERS.)

ACCESS PANEL IN HEADLINER AT COMPRESSION POST

PROPOSED TITLE
H466 HEADLINER WIRE CHASE LOCATIONS
ISSUANCE NO. 4608064F
REVISION NO. NONE
DATE 2/3/99
ENGINEERING DEPT.

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EXAMPLE SWITCH PANEL WIRING (PARALLEL CIRCUITS)



- 1. #1 COURTESY LIGHT CIRCUIT (INCLUDES FRIG/FREEZER, BILGE COMPARTMENT, SEACOCK COMPARTMENT(S), AND COCKPIT SWITCHED COURTESY LIGHTS.)
- 2. #2 COURTESY LIGHT CIRCUIT (INCLUDES "RED" COURTESY FLOOR LIGHTING, @ NAV STATION AND STATEROOMS, AND "WHITE" GALLEY TOE KICK)

HUNTERA
 H466 COURTESY LIGHTS WIRING SCHEMATIC
 4608064G
 NONE
 2/3/99
 ENGINEERING DEPT.
 HUNTER MARINE CORP. has proprietary rights.

1 1/4" PAN CHASE TUBE

(38.1mm X 76.2mm)
1/4" X 30

3" PAN CHASE TUBE

(76.2mm X 142.4mm)
3" X 56"

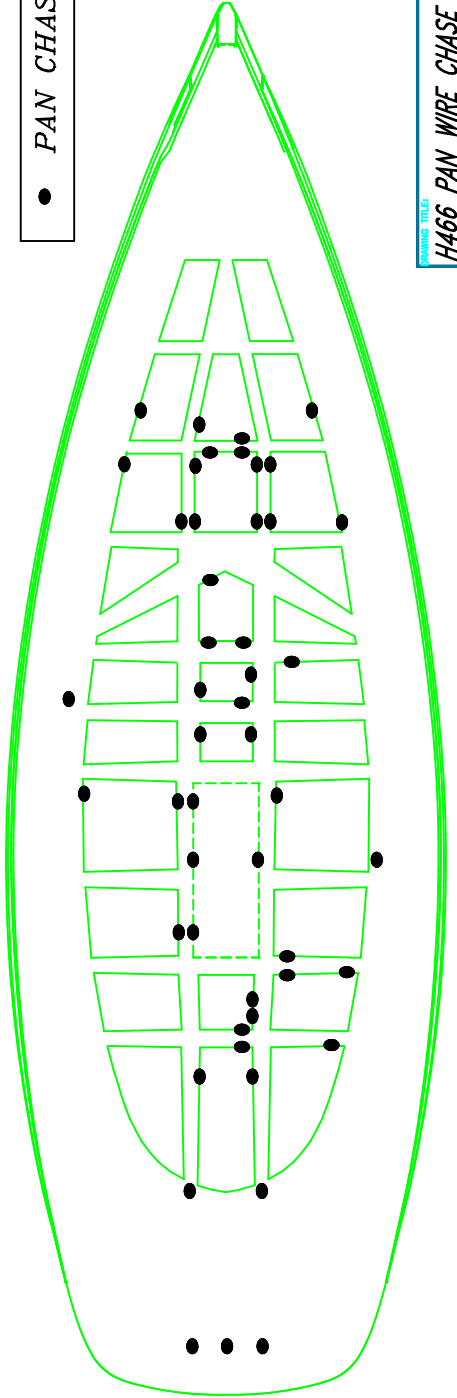
3" X 8' (76.2mm X 2438.4mm)

2" PAN CHASE TUBE

2" X 14'
(51.8mm X 4267.2mm)

CHASE TUBES SHOWN SEPERATELY FOR CLARITY

● PAN CHASE HOLE LOCATIONS



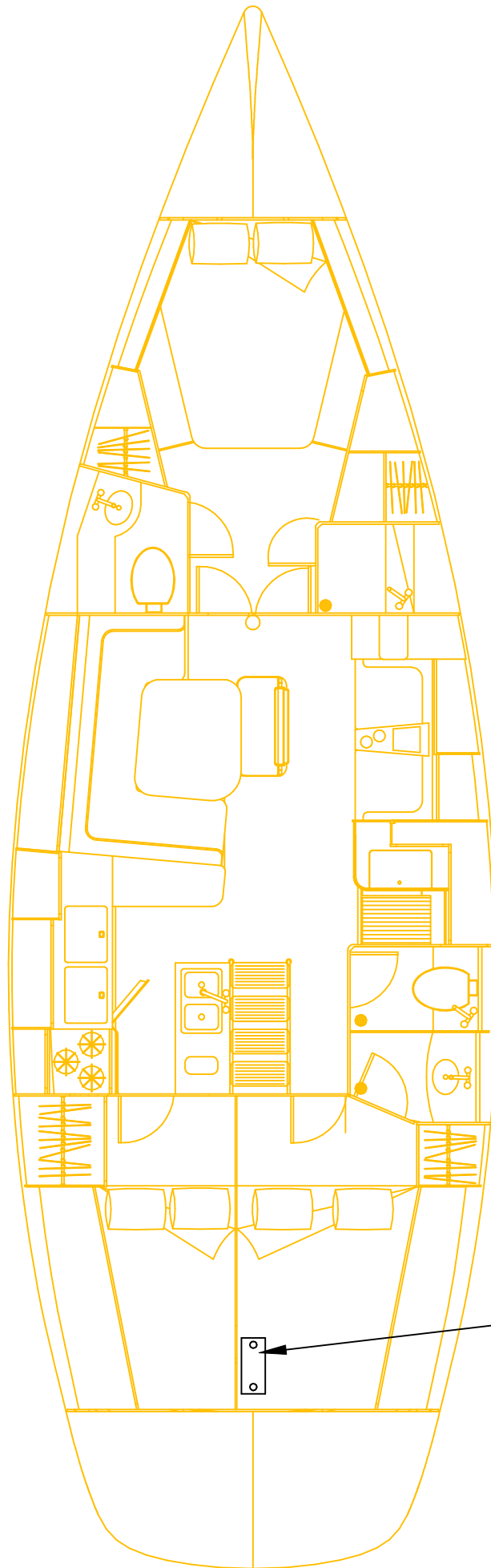
THIS PAGE IS PROVIDED FOR ANY
ADDITIONAL DC ELECTRICAL INFORMATION.

1. ALL DC WIRING WITHIN 12" OF ANY COMPASS SHALL BE TWISTED PAIRS... THAT IS THE HOT LINE AND GROUND SHALL BE TWISTED TOGETHER.
2. NOTE: DUE TO A.B.Y.C. REGULATIONS NO MORE THAN FOUR CONDUCTORS SHALL BE SECURED TO ONE TERMINAL STUD. IF ADDITIONAL CONNECTIONS ARE NECESSARY TWO OR MORE TERMINAL STUDS SHALL BE CONNECTED TOGETHER BY MEANS OF JUMPERS OR COPPER STRIPS.

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PROJ. TITLE H466 DC CONSUMER NOTES	
ISSUANCE NO. 46080641	REVISION NO. NONE
ISSUED BY ENGINEERING DEPT.	DATE 2/3/99

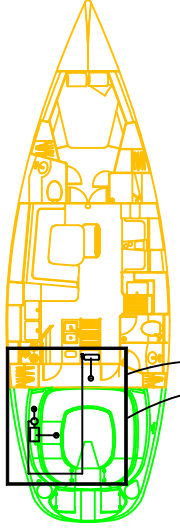
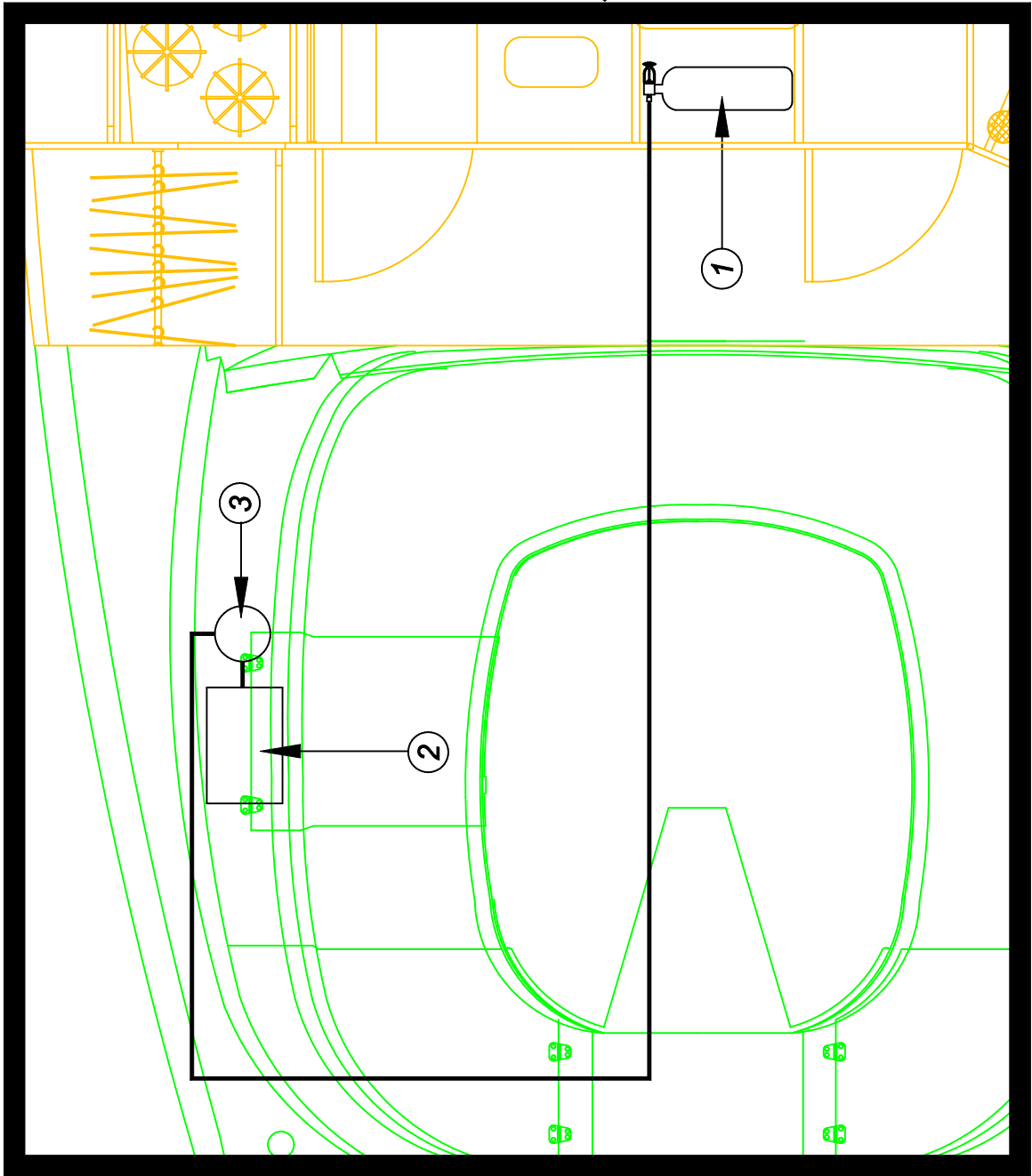


DYNAPLATE
GROUNDING PLATE
INSTALLED
BETWEEN STRUT
AND RUDDER

DRAWING TITLE: **OPTIONAL DYNAPLATE GROUND LAYOUT**
 DRAWING NO.: 4668064J
 DESIGN NO.: None
 DATE: 08/15/02
 DRAWN BY: ENG

HUNTER

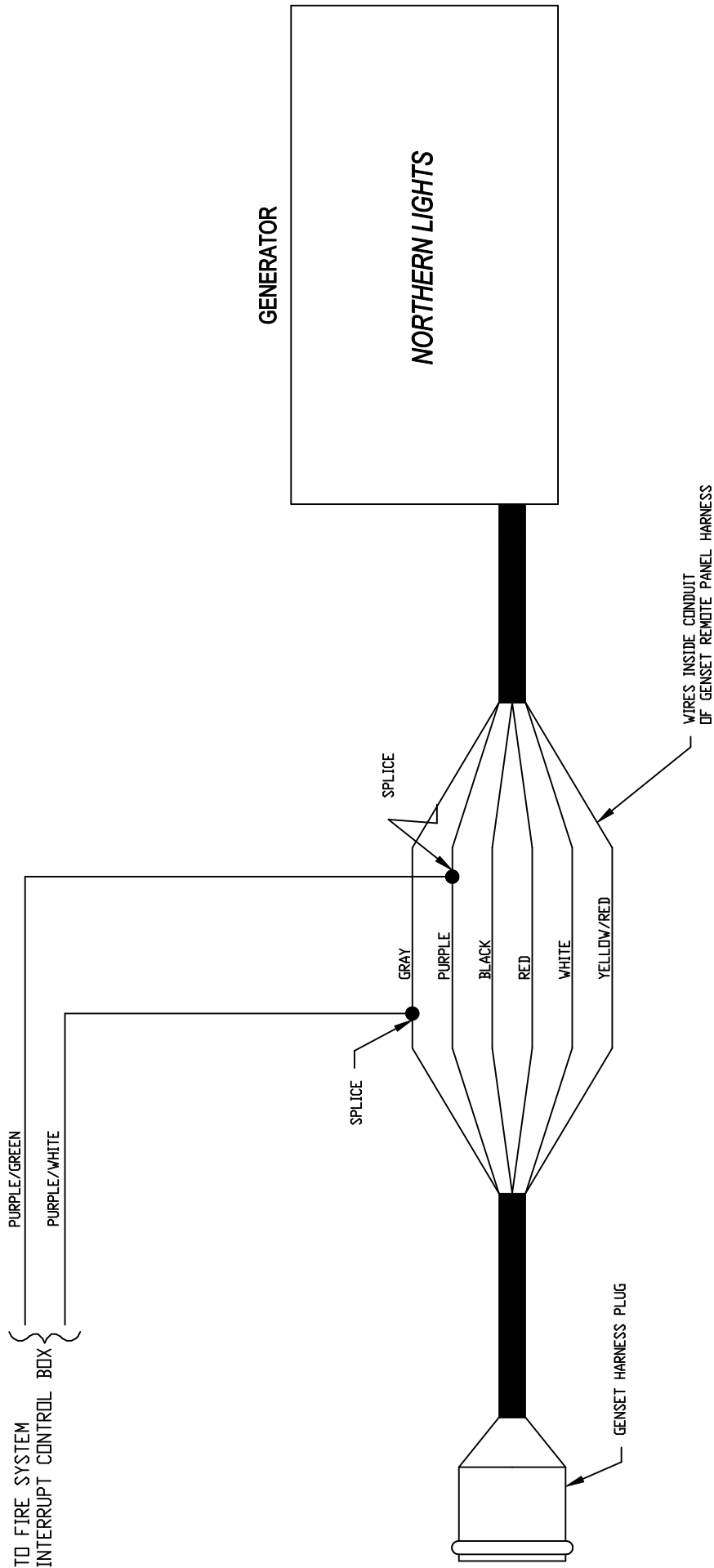
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ENLARGEMENT OF BOXED AREA

- ① AUTOMATIC FIRE EXTINGUISHER
- ② ENGINE PANAL (PORT COCKPIT COAMING)
- ③ DISPLAY (PORT COCKPIT COAMING)

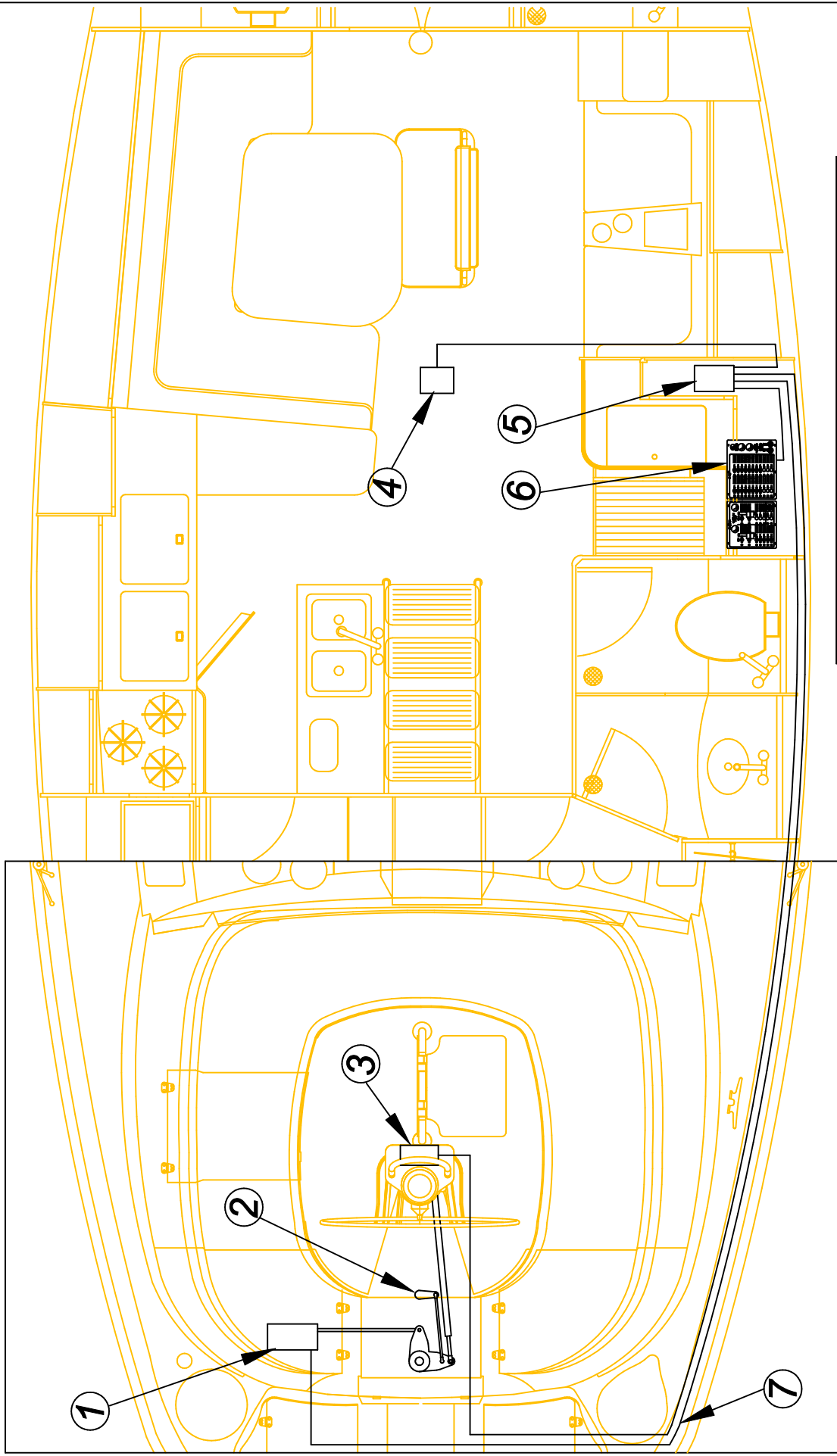




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GENSET SHUTDOWN SCHEMATIC
 DRAWING NO. 4668064K-3 REVISION NO. None DATE 08/15/02
 DRAWN BY: ENG DATE



HUNTER

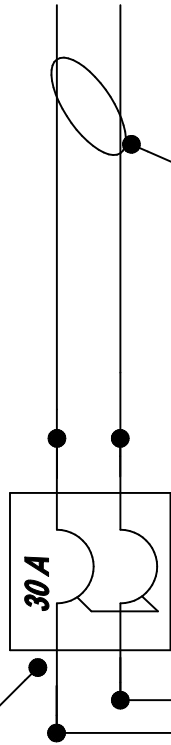


1. LINEAR DRIVE UNIT
2. RUDDER REFERENCE
3. AUTOPILOT DISPLAY (IN STEERING PEDESTAL)
4. FLUX GATE COMPASS (UNDER CENTER MAIN BILGE)
5. AUTOPILOT COURSE COMPUTER
6. MAIN POWER PANEL
7. MOTOR CONTROL LEAD

BOXED AREA DEPICTS ABOVE DECK AREA

SEE RAY MARINE MANUAL FOR FURTHER DETAILS

**30 AMP SHORE POWER BREAKER
(LOCATED IN STBD AFT SWIMSEAT LOCKER)**

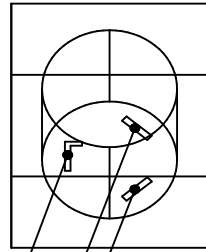


**TO AC PANEL
10/3 BOAT CABLE**

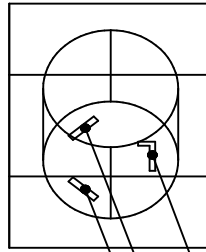
LINE 1

NOTE: TO ISOLATION TRANSFORMER.

SHORE POWER INLET 1



SHORE POWER INLET 2

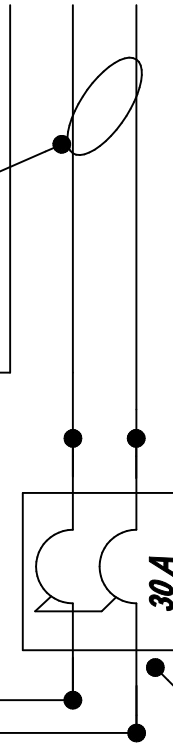


NOTE: TO ISOLATION TRANSFORMER.

**10/3 BOAT CABLE
TO AC PANEL**

LINE 2

**30 AMP SHORE POWER BREAKER
(LOCATED IN STBD AFT SWIMSEAT LOCKER)**



H466 ELECTRICAL AMPERAGE DATA

12V.D.C. SYSTEM	
CIRCUIT/BREAKER	AMPERAGE
D.C. MAIN	75amp
PANEL LIGHTS	5amp
CABIN LIGHTS 1	20amp
CABIN LIGHTS 2	20amp
COURTESY 1	10amp
COURTESY 2	10amp
TANK INDICATOR	5amp
WATER PRESSURE	10amp
FWD.SHOWER SUMP	10amp
AFTSHOWER SUMP	10amp
MACERATOR 1	20amp
MACERATOR 2	20amp
STEREO	15amp
STEREO W/AMPLIFIER	20amp
REFRIGERATION OR FREEZER	15amp
L.P. GAS	5amp
WINDLASS (SWITCH)	5amp
INSTRUMENTS	5amp
G.P.S.	5amp
V.H.F.	10amp
AUTO-PILOT	VARIES PER MODEL
ANCHOR LIGHT	5amp
STEAMING LIGHT	5amp
DECK LIGHT	15amp
RUNNING LIGHTS	10amp (LGR. MOD.)
RUNNING LIGHTS	5amp (SM. MOD.)
COMPASS (TIES TO RUN. LIGHTS)	
BATTERY CABLES	
ENGINE STARTER CABLE	
HALYARD WINCH	
WINDLASS (MOTOR) CABLE	

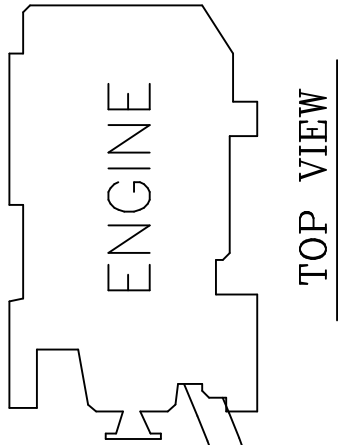
120V.A.C. SYSTEM	
SHORE POWER A.C. MAIN/S	30 amp
OUTLETS	15amp
MICROWAVE OVEN	15amp
WATER HEATER	15amp
BATTERY CHARGER	15amp
INVERTER	INTERNAL
AIR CONDITIONING	25amp

230V.A.C. SYSTEM (ON SELECT OVERSEAS MODELS ONLY)	
SHORE POWER A.C. MAIN/S	15 amp
OUTLETS	10amp
MICROWAVE OVEN	10amp
WATER HEATER	10amp
BATTERY CHARGER	10amp
INVERTER	N/A
AIR CONDITIONING	15amp

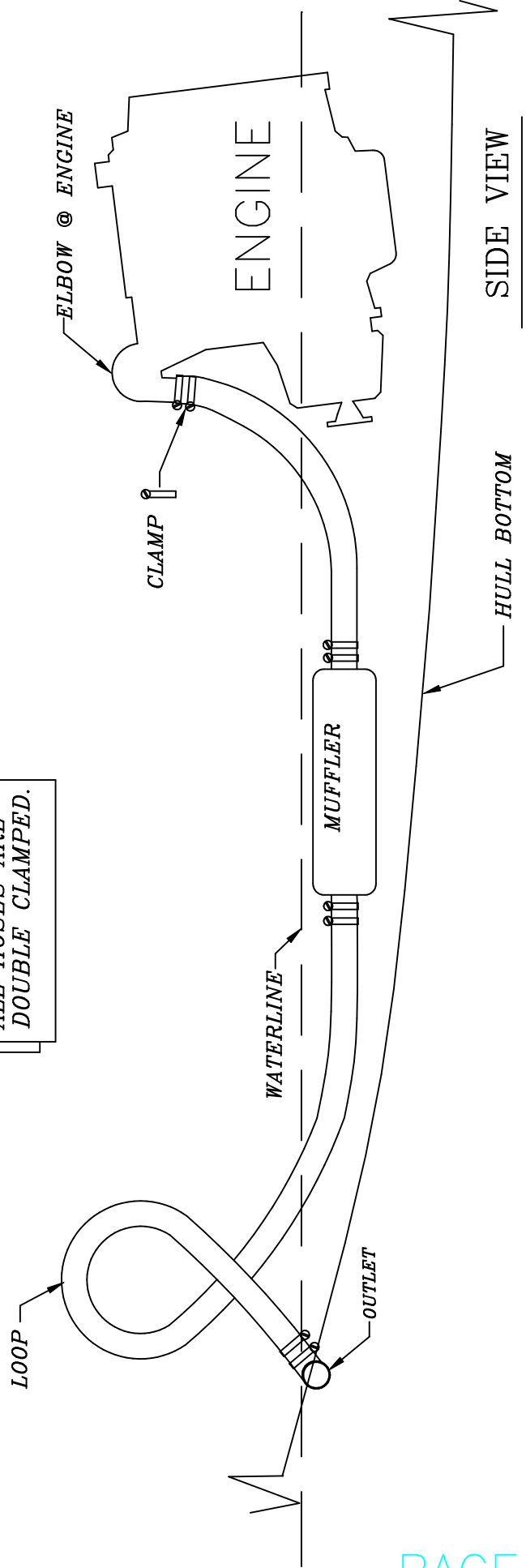
H466 ELECTRICAL WIRING/CABLE DATA

DISCRIPTION	PRT. NUMBER	WIRE SIZE	WIRE COLOR
LPG SWITCH/POWER	659802	16 gauge	ORANGE/RED
SENDER GUAGES	658600	16 gauge	RED
FUEL SENDER	658100	16 gauge	PINK
GROUND	659800	16 gauge	YELLOW
WATER SENDER	659806	16 gauge	ORANGE/BLUE
GROUND	659800	16 gauge	YELLOW
WATER PUMP	655200	12 gauge	BROWN
GROUND	659700	12 gauge	YELLOW
VACCU FLUSH	652202	10 gauge	BROWN/RED
GROUND	653631	16 gauge	YELLOW
WASTE SENDER	659805	16 gauge	ORANGE/GREEN
GROUND	659800	16 gauge	YELLOW
AFT SUMP PUMP	655400	12 gauge	BROWN/BLACK
GROUND	659700	12 gauge	YELLOW
FWD MACERATOR	655800	10 gauge	BROWN/WHITE
GROUND	653631	16 gauge	YELLOW
SOLAR PANEL	653640	16/2 DUPLEX	RED/YELLOW
VHF	653300	16 gauge	RED/WHITE
GROUND	659800	16 gauge	YELLOW
COURTESY LIGHTS	655100	16 gauge	BLUE/WHITE
GROUND	659800	16 gauge	YELLOW
CABIN LIGHTS	655000	16 gauge	BLUE
GROUND	659800	16 gauge	YELLOW
PORT FWD SPEAKERS	653620	16 gauge	WHITE/RED
STBD FWD SPEAKERS	653622	16 gauge	WHITE/BROWN
PORT MAIN SPEAKERS	653623	16 gauge	WHITE/ORANGE
STBD MAIN SPEAKERS	653624	16 gauge	WHIT/EBLUE
PORT AFT SPEAKER	653625	16 gauge	WHITE/GREEN
STBD AFT SPEAKER	653626	16 gauge	WHITE/VIOLET
PORT ARCH SPEAKER	653627	16 gauge	WHITE/PINK
PORT GROUND	653629	16 gauge	WHITE/YELLOW
STBD ARCH SPEAKER	653630	16 gauge	WHITE/GRAY
STBD GROUND	653623	16 gauge	WHITE/BLACK
COMPASS WIRE BOW	659804	16 gauge	GRAY/YELLOW
GROUND	659800	16 gauge	YELLOW
MAST	657300	16 gauge	GRAY
STEAMING LIGHT	656800	16 gauge	GRAY/GREEN
ANCHOR LIGHT	656900	16 gauge	GRAY/RED
HOUSE BATTERY	653610	2/O	RED
GROUND	653900	2/O	YELLOW
AC/DC PANEL	657900	6 gauge	ORANGE/RED
GROUND	653618	6 gauge	YELLOW
ENGINE	654100	1/O	RED
HALYARD	654010	1/O	YELLOW
T.V. / V.C.R.	658400	10 gauge	RED
GROUND	653631	10 gauge	YELLOW
REFRIGERATION	658800	8 gauge	RED/BLACK
FREEZER	658900	8 gauge	RED/WHITE
GROUND	653615	8 gauge	YELLOW
STEREO OUT	657600	12 gauge	ORANGE/GREEN
STEREO POWER	658500	12 gauge	RED
GROUND	659700	12 gauge	YELLOW
INVERTER GROUND	653642	4 gauge	GREEN/YELLOW
WINDLASS SWITCH	659200	16 gauge	TAN
MANUAL BILGE	655700	12 gauge	BROWN/RED
AUTO BILGE	655600	12 gauge	BROWN/ORANGE
GROUND	659700	12 gauge	YELLOW
AFT MACERATOR	652400	10 gauge	BROWN
AFT SUMP PUMP	655400	12 gauge	BROWN/BLACK
FWD SUMP PUMP	654600	12 gauge	BROWN/YELLOW
AUTO PILOT	658700	8 gauge	RED
GROUND	653615	8 gauge	YELLOW
CHAINPLATE	653642	4 gauge	GREEN/YELLOW
BATTERY CHARGER # 1	658000	8 gauge	ORANGE/RED
BATTERY CHARGER # 2	657800	8 gauge	ORANGE/GREEN

HEAVY DUTY FLEXIBLE EXHAUST HOSE
 3" (76.2mm) FOR THE ENGINE
 2" (50.8mm) FOR THE GENERATOR



ALL HOSES ARE
 DOUBLE CLAMPED.



Part Number: H466
 Title: EXHAUST SYSTEM LAYOUT
 Drawing No.: 4608066
 Revision No.: NONE
 Date: 1/18/00
 Department: ENGINEERING DEPT.

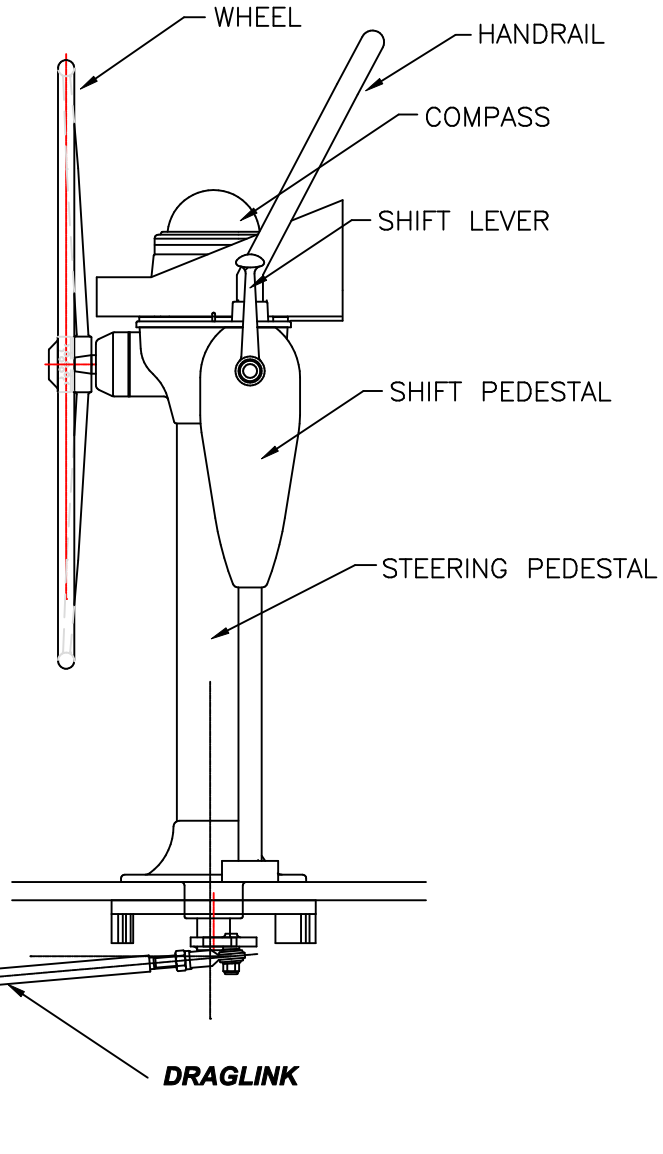


STEERING PEDESTAL

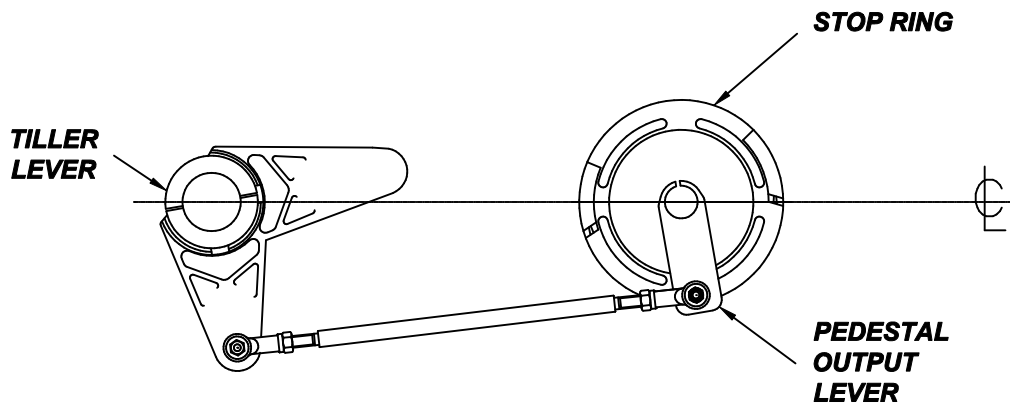
REVISED NO.	4668067	DATE	07/11/02
ISSUES	None	BY	ENG

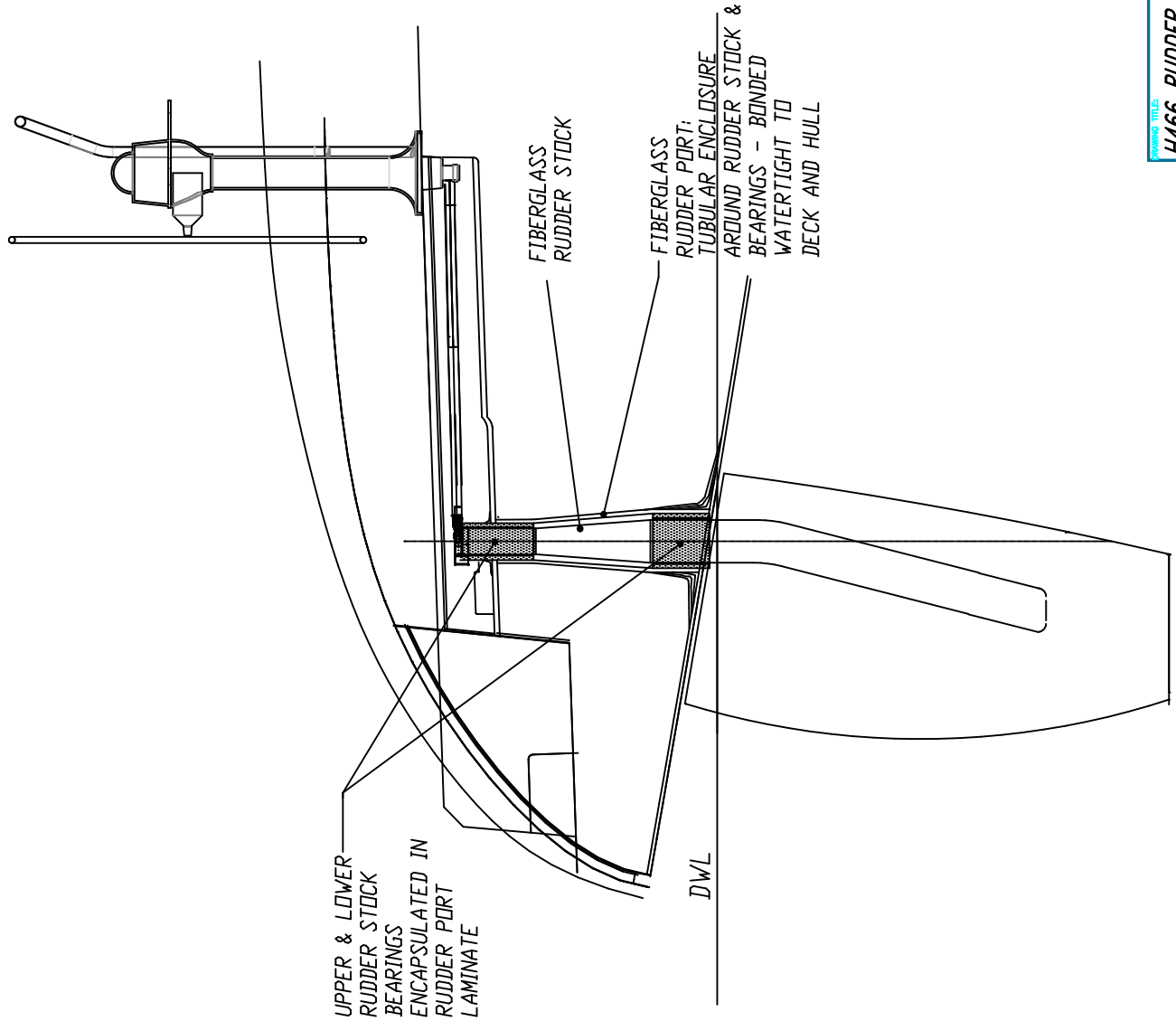


STEERING CONSOLE HOLDS INSTRUMENTS SUCH AS KNOTMETER, DEPTH GAUGE, WIND INDICATOR, ETC. CONFIGURATIONS MAY VARY WITH DIFFERENT OPTIONS.



SEE WHITLOCK PROVIDED MATERIAL FOR DETAILED INFORMATION ON COMPONENTS, MAINTENANCE, ETC





UPPER & LOWER
RUDDER STOCK
BEARINGS
ENCAPSULATED IN
RUDDER PORT
LAMINATE

FIBERGLASS
RUDDER STOCK

FIBERGLASS
RUDDER PORT:
TUBULAR ENCLOSURE
AROUND RUDDER STOCK &
BEARINGS - BONDED
WATERTIGHT TO
DECK AND HULL

DWL

6.550+0.0050 OD X 6.000±.0050
CARBON FIBER SLEEVE

7.750+0.0050 OD X 6.250+0.0050
CARBON FIBER SLEEVE



UMHW
UPPER BEARING
3.99 OD X 8.50
NYLON TUBE



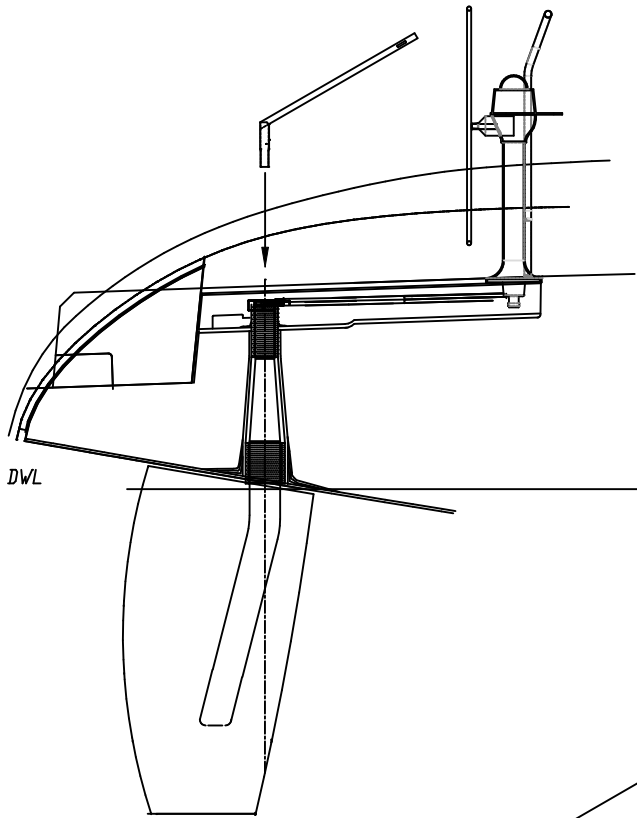
UMHW
LOWER BEARING
4.90 OD X 6.0
NYLON TUBE

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H466 RUDDER & SHAFT DETAILS

DESIGN NO.	4608068	REVISION NO.	NONE
DATE		DATE	2/4/99
ENGINEERING DEPT.			





DWL

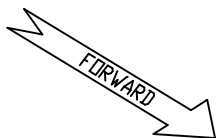
CONTROL LINE EYE

SLOT IN BOTTOM OF EMERGENCY TILLER
 FITS OVER BOLT IN TOP OF CONTROL
 ARM AFTER OPENING
 DECK PLATE ACCESS

DECK PLATE ACCESS

CONTROL ARM

TO OPTIONAL AUTOPILOT

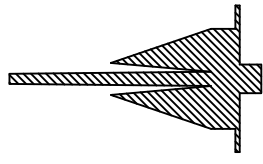


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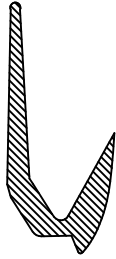
HUNTER

H466 EMERGENCY TILLER	
DESIGN NO.	4608069
REVISION NO.	NONE
DATE	4/14/98
ENGINEERING DEPT.	

NOTE: THE FORWARD SIDE CLEATS ON THE DECK ARE CONSIDERED THE STRONG POINT. THAT SHOULD BE THE ANCHOR POINT IF THE BOAT IS TO BE LEFT UNATTENDED.



DANFORTH ANCHOR



FLOW ANCHOR



ANCHOR RODE
(CHAIN OR ROPE OR COMBO)

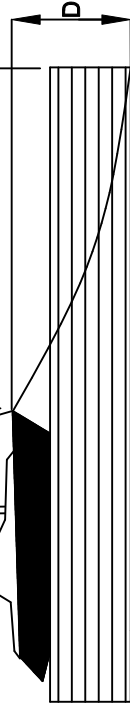


TYPICAL CLEAT
LOCATIONS VARY
W/ MODEL.

STAINLESS BOW ROLLER
(SIZE & SHAPE VARIES
BETWEEN MODELS)

- GROUND TACKLE:**
- 1.) BOW SHACKLE(W/PIN WIRED)
@ ANCHOR...FOLD BY...
 - 2.) SWIVEL...FOLD BY...
 - 3.) CHAIN(OPTION)...FOLD BY...
 - 4.) D-SHAPED SHACKLE(W/PIN
WIRED) @ EA. 27M OF CHAIN
OR @ CHAIN TO ROPE RODE.

3D=CHAIN
5D=ROPE



PLAN

ELECTRIC ANCHOR
WINDLASS
(STANDARD OR
OPTIONAL ON
LARGER MODELS)

WELL: SMALLER MODELS

WELL: LARGER MODELS

ELEVATION

WATERLINE

BASIC ANCHORING DIAGRAM

DESIGN NO.	4608070
DATE	12/1/002
ENGINEER	ENG
DESIGNER	NONE