

# Dialing In Your Trawler

Suggestions on how to track and monitor the gear and systems on your trawler / motor yacht



Trawler Fest  
Stuart, FL  
March 7, 2020  
by Jeff Merrill

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# Welcome!

This is a collection of ideas and photos I have seen other trawler owners use that you should be able to apply to your own trawler.





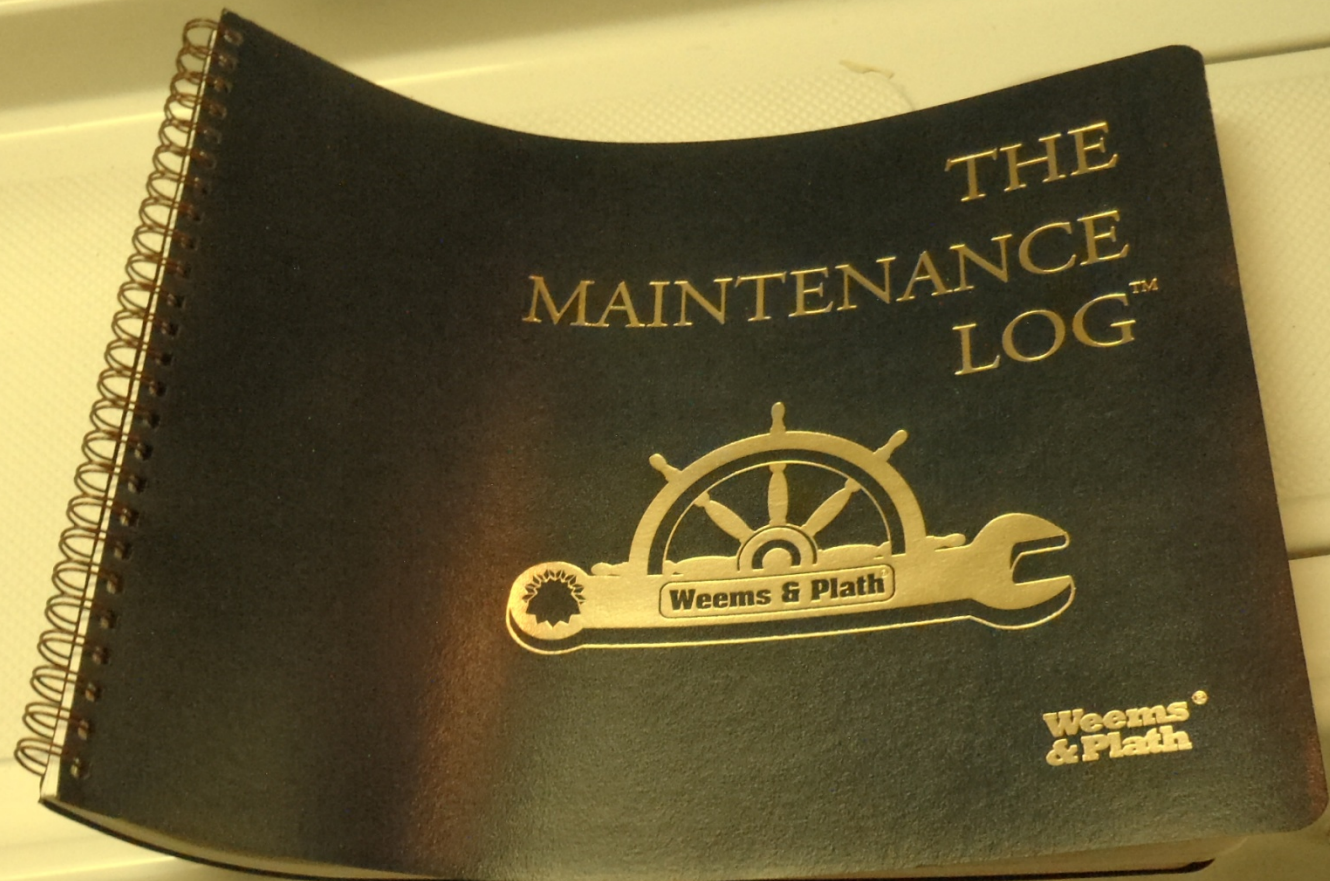
WARNING – I am a yacht broker!

20+ years of selling new and used trawlers and training owners. I've been on hundreds of boats and found some great ideas.





# TODAY'S TAKE AWAY



Learn some new ideas, I welcome your suggestions.  
Do you keep your maintenance log up to date?



Pick up something from every boat...

Every Trawler has a number of components that require attention and observation, we are all  
"in the same boat"



# Hold that thought...

Paying attention to details will help you monitor your systems and better understand your boat.

Please jot down questions so I can answer at the end, I may cover what you want to know.

Sign up to be notified when this is posted on  
[JMYS.com](http://JMYS.com)



# HANDOUTS

- USCG inspection Vessel Safety Check
- Performance Chart – RPM, burn, range
- Main engine maintenance log
- Engine room temperature watch – N47
- Summary Dialing in Your Trawler articles
- SDMC / JMYS Maintenance


## CHECK UPS

Your Trawler is “alive” (at the dock AND underway) and if you think of it that way and relate to your body it should make sense that regular “checkups” will help your boat run smoother.



Unlike annual human medical exams, a trawler should have many inspections (hourly at first) to keep track of operations.



A photograph of a boat's cockpit dashboard. The dashboard is black and features several electronic components. On the left, there is a laptop computer. In the center, there is a circular gauge and a digital display. To the right of the gauge, there are two large rectangular displays, likely for navigation or engine monitoring. Above the dashboard, there are two portholes with white frames. A black coiled cable is hanging from the top left. A black handheld radio is mounted on the right side of the dashboard. The background shows a view of a harbor with many sailboats.

# BASELINES

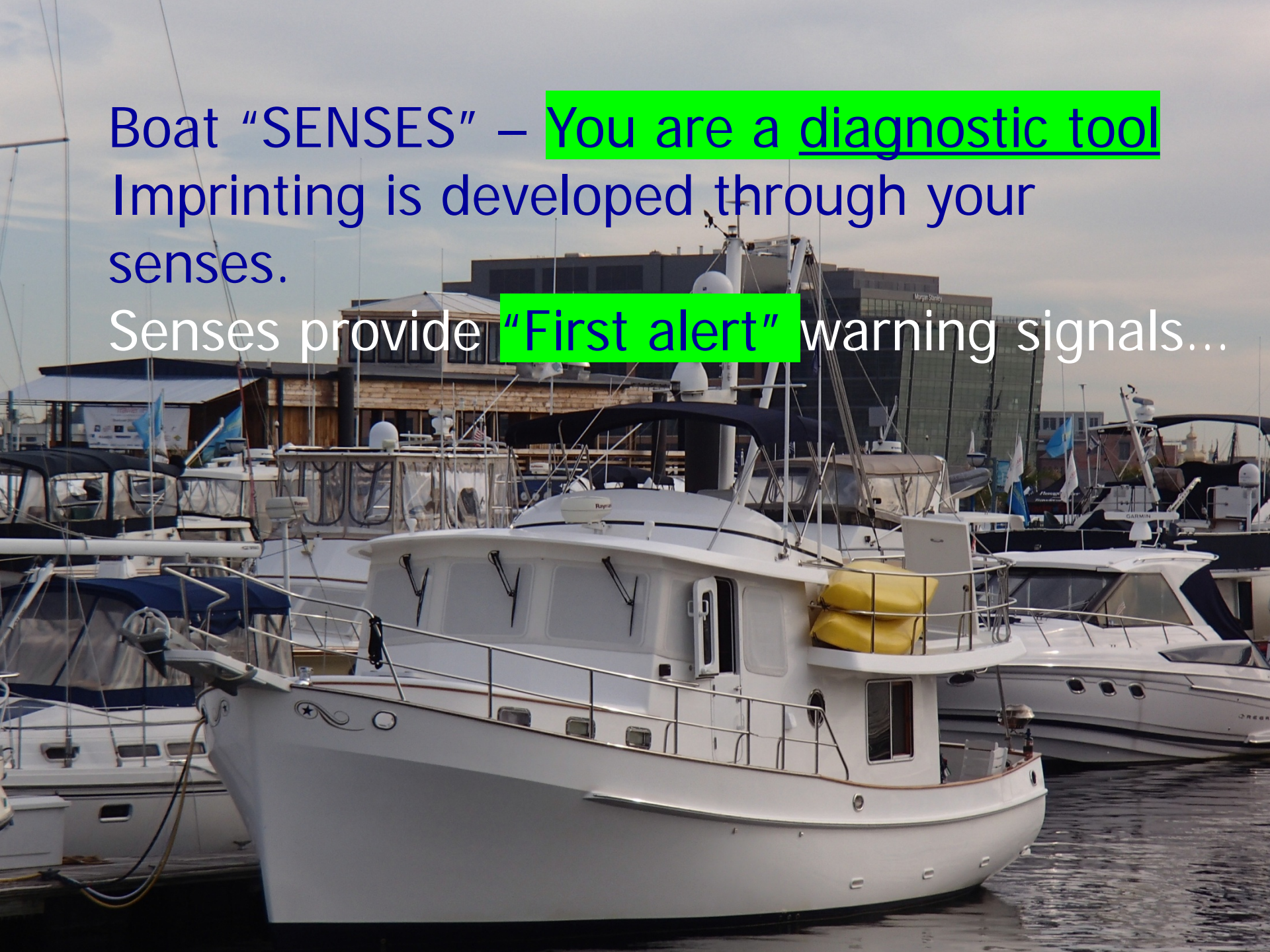
To track your boat you first have to establish baselines, and these initial impressions need to be cataloged so you can learn what the NORM is.



Boat "SENSES" – You are a diagnostic tool

Imprinting is developed through your senses.

Senses provide "First alert" warning signals...





# Sight/Vision

- We use our eyes as our primary means to process and understand information.
- At sea you may need prescription glasses, make sure you have a spare pair.
- You should have sun glasses.
- Protective goggles are a smart idea.
- Even magnifying lenses for small print on charts Binoculars or FLIR night vision.

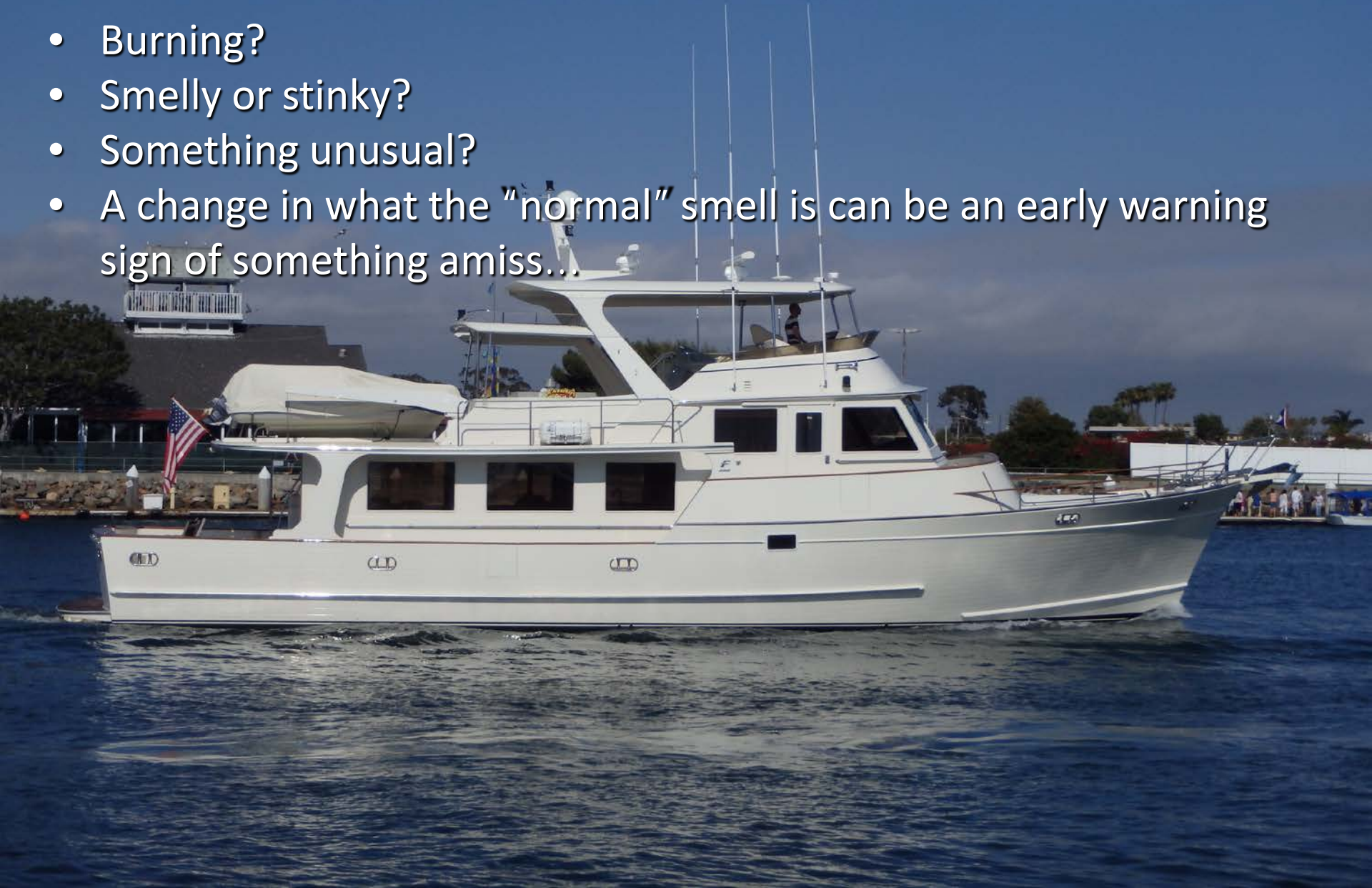
# Hearing

- New to you – pumps, beeps, clicks
- Alarms
- Vibrations
- High pitch
- Wear ear muffs in the engine room
- Buzzing outside
- Snap crackle pop = shrimp



# Smell

- Burning?
- Smelly or stinky?
- Something unusual?
- A change in what the "normal" smell is can be an early warning sign of something amiss...



# Touch (and what not to touch)

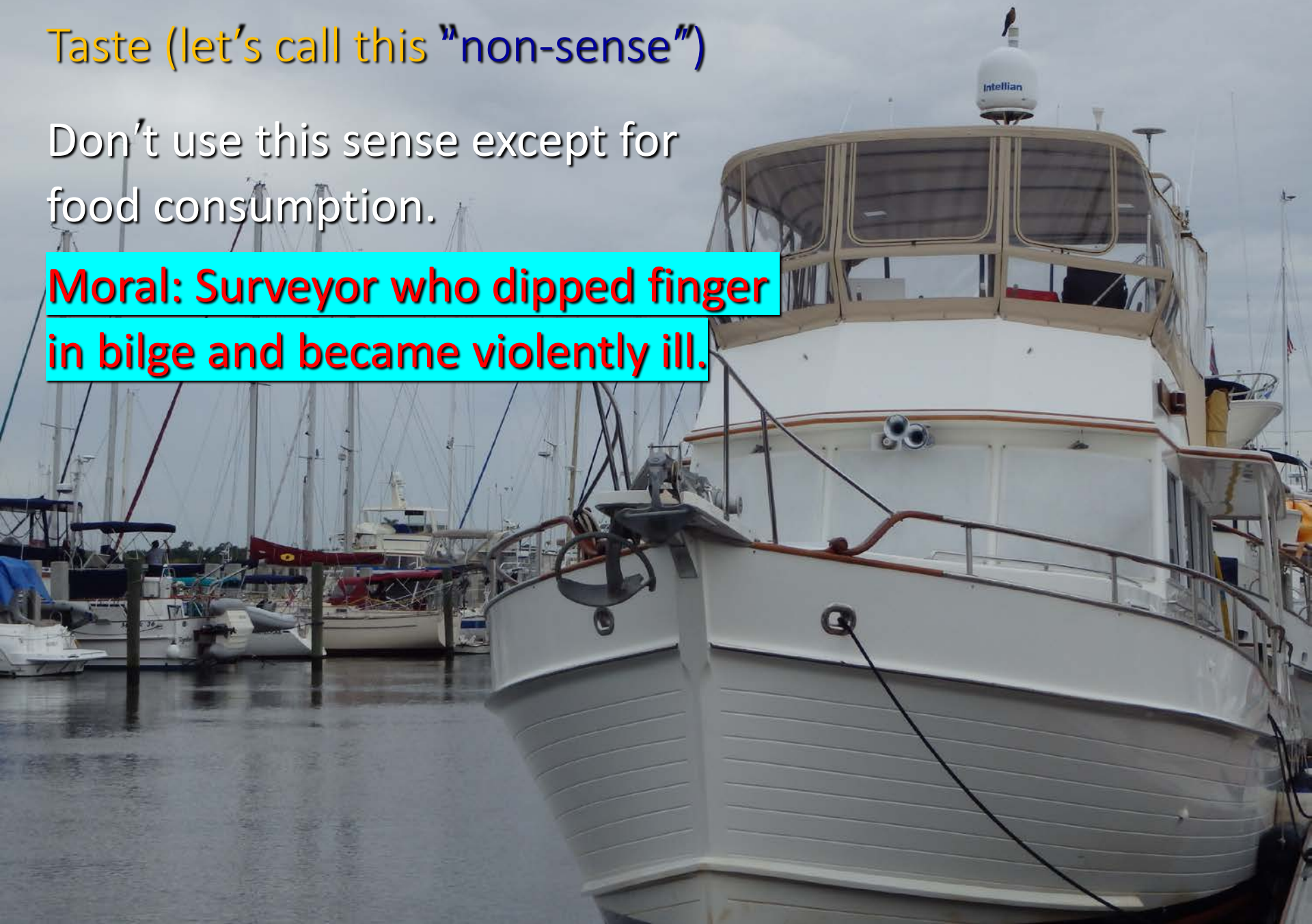
- Lots of hot parts – be careful of burns
- Fingers and Toes...
- Gloves – hot parts, sharp parts – paravane fish, even up to manage anchoring or handling dock lines (wood dock splinters)
- Shoes – windlass and chain



Taste (let's call this "non-sense")

Don't use this sense except for food consumption.

**Moral: Surveyor who dipped finger in bilge and became violently ill.**







## Common Sense

- Be observant
- Pay attention
- You typically have time to think through a good solution, don't rush to judgement



# Understanding Your Boat

You need to become familiar with your boat to better understand it.

Your trawler is a finite space, there is no reason why you should not know what **EVERY** piece of equipment is and what the **NORMAL** operating condition should be.

## GET YOUR TRAWLER ON TRACK

Let's see what other trawler owners do to stay on top of things.

Machinery with temperatures to **monitor** and many **reminders** or **quick reference** ideas.





Tools – you will need Metric and Imperial; nut drivers, sockets, etc. Find key service items and keep that tool nearby!

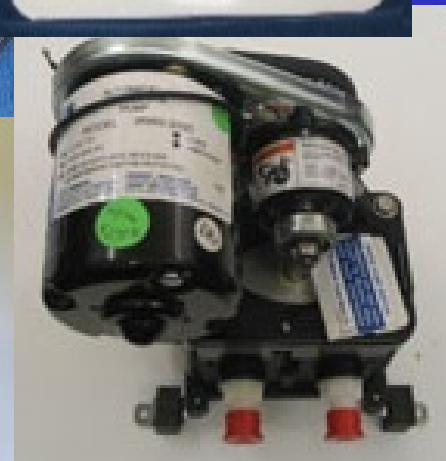


AllTimeTools.Com



# Spare Parts and Service Manuals

(When you get a spare replace the existing item)

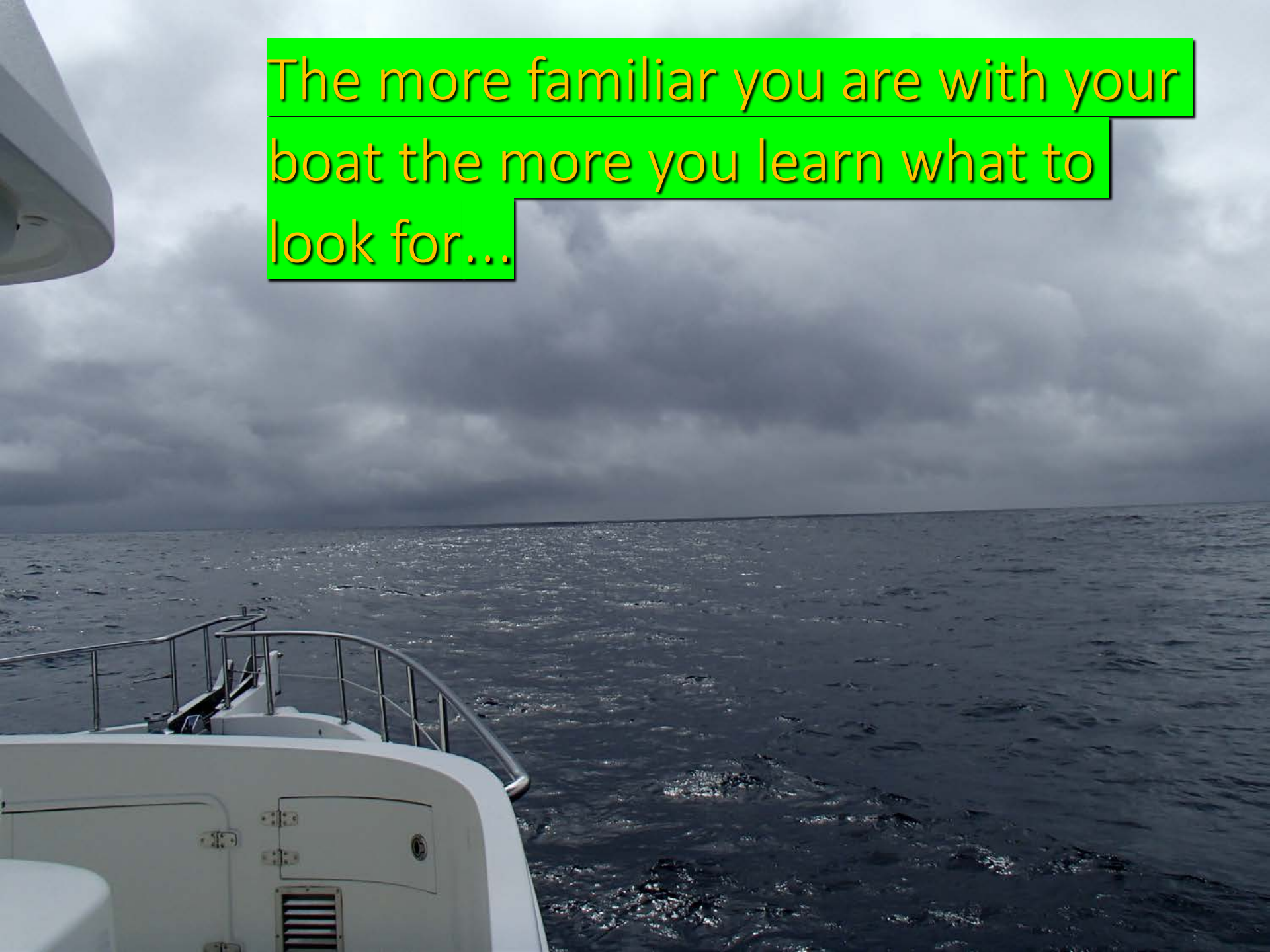




# Organize your manuals

- Keep them in organized bins
- Go online to get electronic PDF versions
- Keep a list of vendors with contact information – phone and email
- Manuals help with spare parts and service intervals

The more familiar you are with your  
boat the more you learn what to  
look for...





Where is your autopilot rate gain compass?

How about your GFCI outlets and shore power breakers?



Temperatures to monitor





# What other temperatures should we record?

- Stuffing box
- Engine coolant
- ER forward and aft bulkhead
- Class input?



Example of "tide mark" level



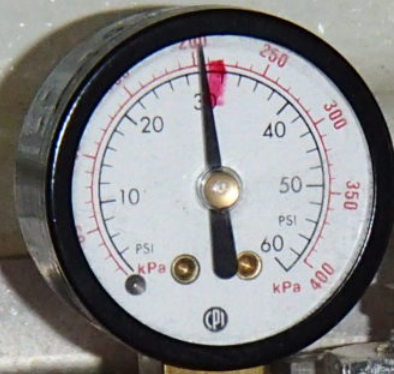


Analog "needle marks"





Mark normal needle position.  
Do you have a bicycle pump?



**RESERVOIR: MODEL No's. R-06, R-07, R-12**

Use only GoodStar Steering Fluid (HA5430) or a light viscosity hydraulic fluid meeting aircraft hydraulic fluid spec. MIL H-5606C, such as Shell Aero Fluid #41, Esso Unisvis N15, Chevron Aviation Hydraulic Fluid HFA. Heavier fluids such as automatic transmission oil or SAE 30W oil, may be added but will cause harder steering.

**MAXIMUM RESERVOIR LEVEL**

**PRESSURE: 100 PSI**



Know  
your  
flow...

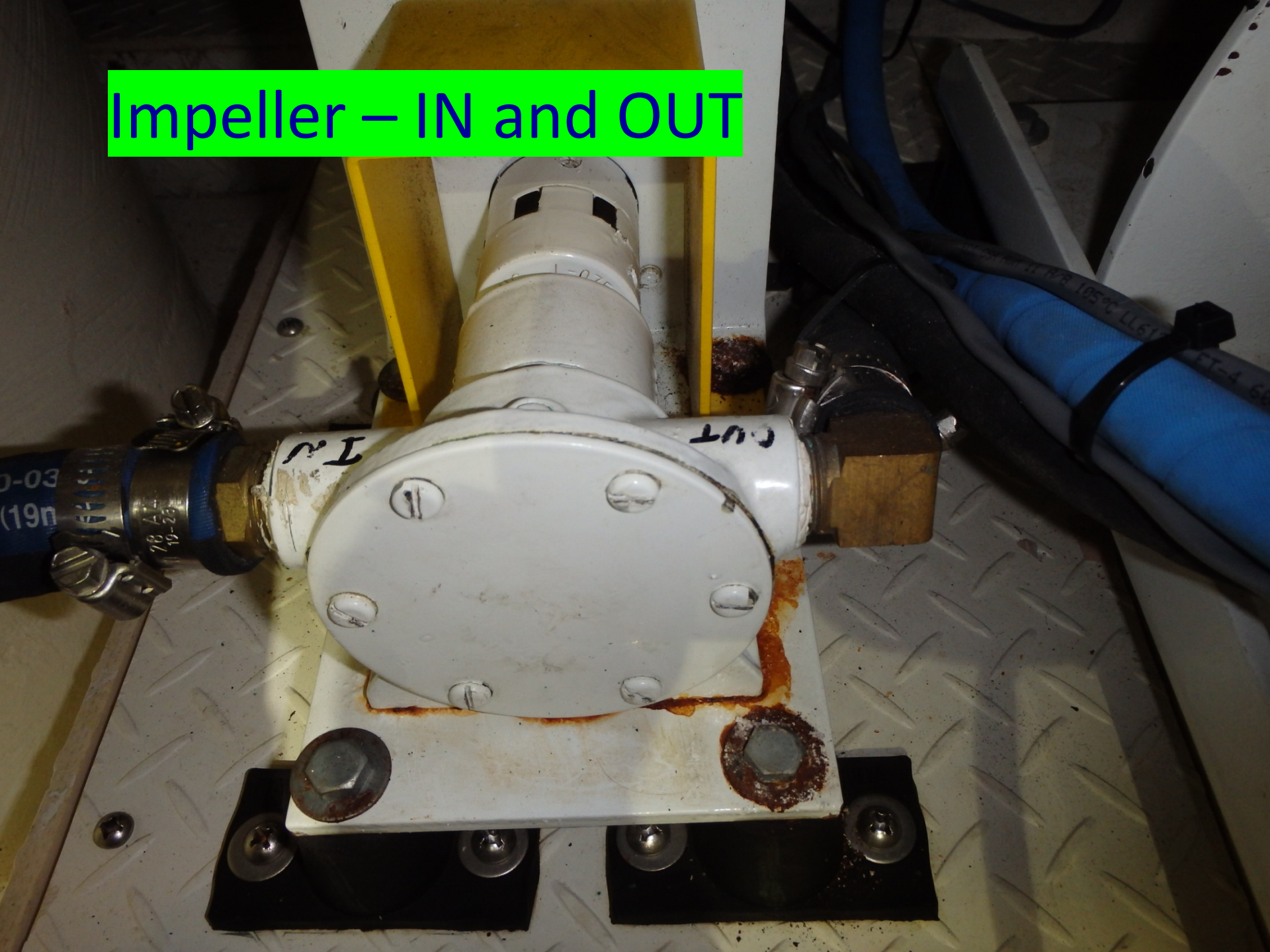




Flow direction arrows



# Impeller – IN and OUT





Learn the "INS"...

OLD

↑ ↑ ↑ IN ↑ ↑ ↑ ↑

# 10  
STBD  
MAIN  
ENG

RETURN FROM MOTORS

# 12  
PORT  
MAIN  
ENG

# 29

FUEL

RETURN FROM TRANSFER PUMP

#30

20KW  
GEN





and OUTS...

To and From, Supply and Return



# Get a Label Maker and use it!





# Bow Thruster ON/OFF





# CHECKLISTS

We all have fantastic memories, but give yourself some back up, create checklists!





# Routines

Develop a "return to the boat" routine that is the same each time, here is a quick run through of what I do.



# At The Dock

- Let's start by approaching your trawler tied up at the dock-what should you look for?
- Shore tower breaker still **ON**?
- Shore power cord plugged **IN**? In the water?
- Dock lines secure? Any chafing on lines?
- Fenders properly positioned?



# On Board

Can you be contacted  
in an emergency?  
Do you have a key for  
access to the boat?



# Emergency Contact Information

**M/V Convexity**

USCG #1186437

IN CASE OF EMERGENCY  
CALL OR TEXT **415-420-8800**



Is your lazarette hatch lockable?



Combination lock box for key





Shoes off basket



# Inside- My First Two Priorities

- **Electrical** – Do I have shore power coming in and are my batteries charged?
- **Bilge** – How much water do I have in the bilge?





AC IN = Good!

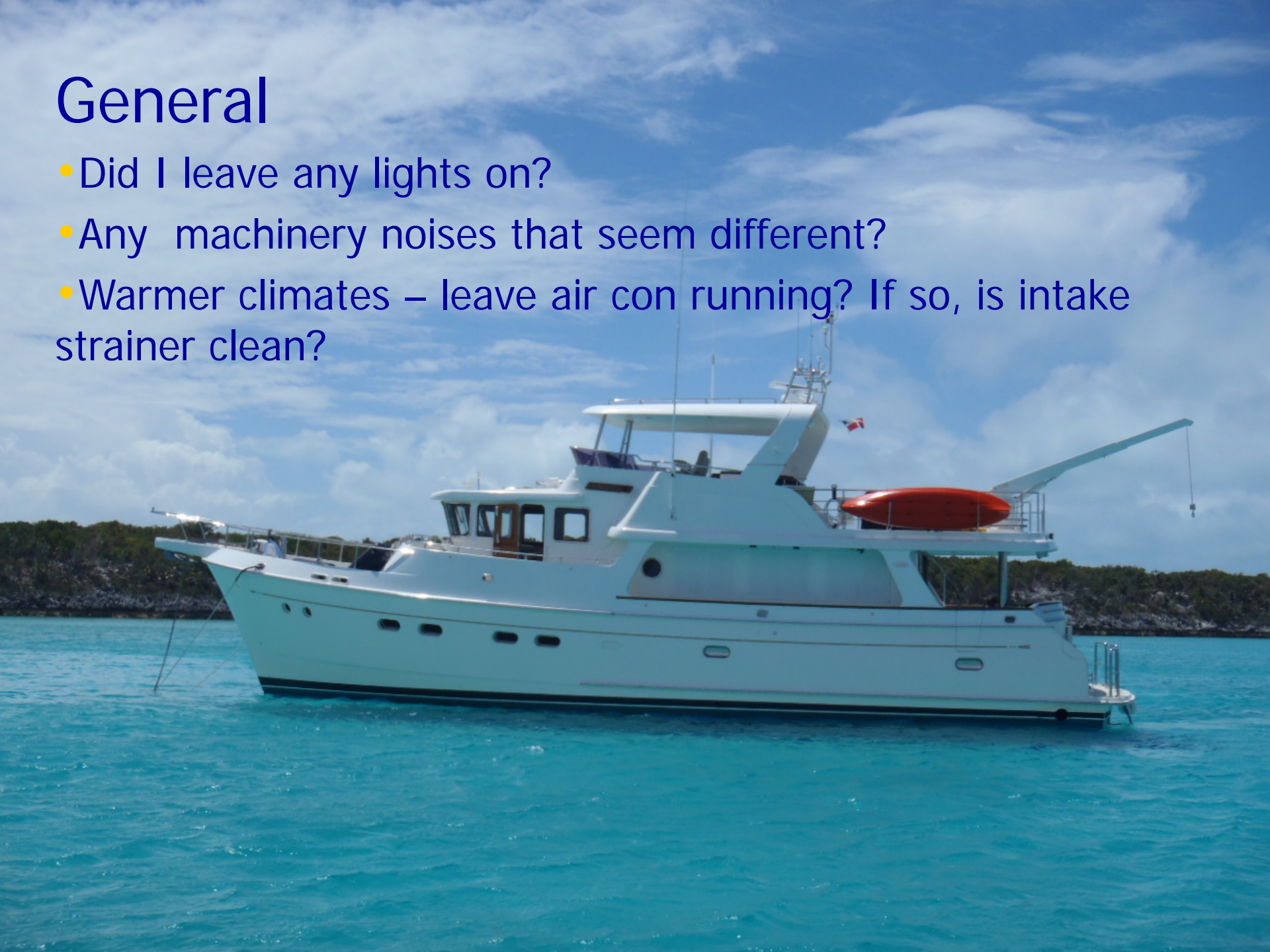
# Walk Through

- Anything out of place or different from last time on board?
- Port lights and hatches?
- Windows and Doors?
- Lockers and Drawers?



# General

- Did I leave any lights on?
- Any machinery noises that seem different?
- Warmer climates – leave air con running? If so, is intake strainer clean?



# Exterior

- All lines secure?
- All canvas covers in place
- Water in the tender?
- Anything out of place?



# USCG Vessel Safety Check

- **See the handout\*** This is a great way to make sure you are in compliance



## Ship Shape

One common theme I have noticed – whether the owner is an artist, engineer, doctor or farmer – keeping things clean and tidy makes it easier to notice when something goes wrong



# Performance

You need to understand how fast your boat will go at various RPM's and how much fuel you are burning to determine your range. **RPM performance handout\***





# RPM, Speed and fuel burn summary at helm

<u>BAGAN</u> Oct, 2002					Full Tanks 1970	
"NORMAL" SPEED & FUEL BURN					470 USGRsv. 1500	
(clean hull, quartering 15 kts. 5 ft. seas, full load, USG)					Ultimate	Safe
RPM	STW	"S/L"	GPH	NM/GAL	Range	Range
1200	6.8	0.93	3.4	2.0	3,940	3,000
1300	7.5	1.03	4.2	1.8	3,518	2,679
1400	8.0	1.10	5.2	1.5	3,031	2,308
1500	8.5	1.17	6.2	1.4	2,701	2,056
1600	9.1	1.25	7.5	1.2	2,390	1,820
1700	9.7	1.33	9.0	1.1	2,123	1,617
1800	10.6	1.45	13.0	0.8	1,606	1,223
lwl=53.1 ft. ; sq rt =				7.29	(minus gen. set use)	



A photograph of a boat's cockpit dashboard, featuring a wooden finish and various electronic instruments. A green rectangular text box is superimposed over the upper portion of the image. The dashboard includes a steering wheel, a central display screen showing a white flower, and several analog and digital gauges. The background shows a marina at night with other boats.

There are several areas where you can  
"Dial In"



# Anchoring Ideas





# Anchoring

- Length of chain (flake for easy deployment)
- Chain marking (HundRED)
- Bitter end – line, cut away on deck
- Nav Com – anchor alarm settings
- Windlass – auto/manual, clutch, release bar
- Chain stoppers, take shock load off windlass

Hund-RED's

NORDHAVN N5725  
ANCHOR CHAIN  
COLOR KEY

WHITE	=	50 FT
RED	=	100 FT
RW	=	150 FT
RR	=	200 FT
RRW	=	250 FT
RRR	=	300 FT
RRRW	=	350 FT
RRRR	=	400 FT



## Color code summary right by windlass

WHITE	50'
RED	100'
WHITE	150'
GREEN	200'
WHITE	250'
RED	300'

# Anchor Bridle







Load off windlass. Rubber snubbers and line soften shock



Stop Slop



Handle, I'd tie a leash to this...



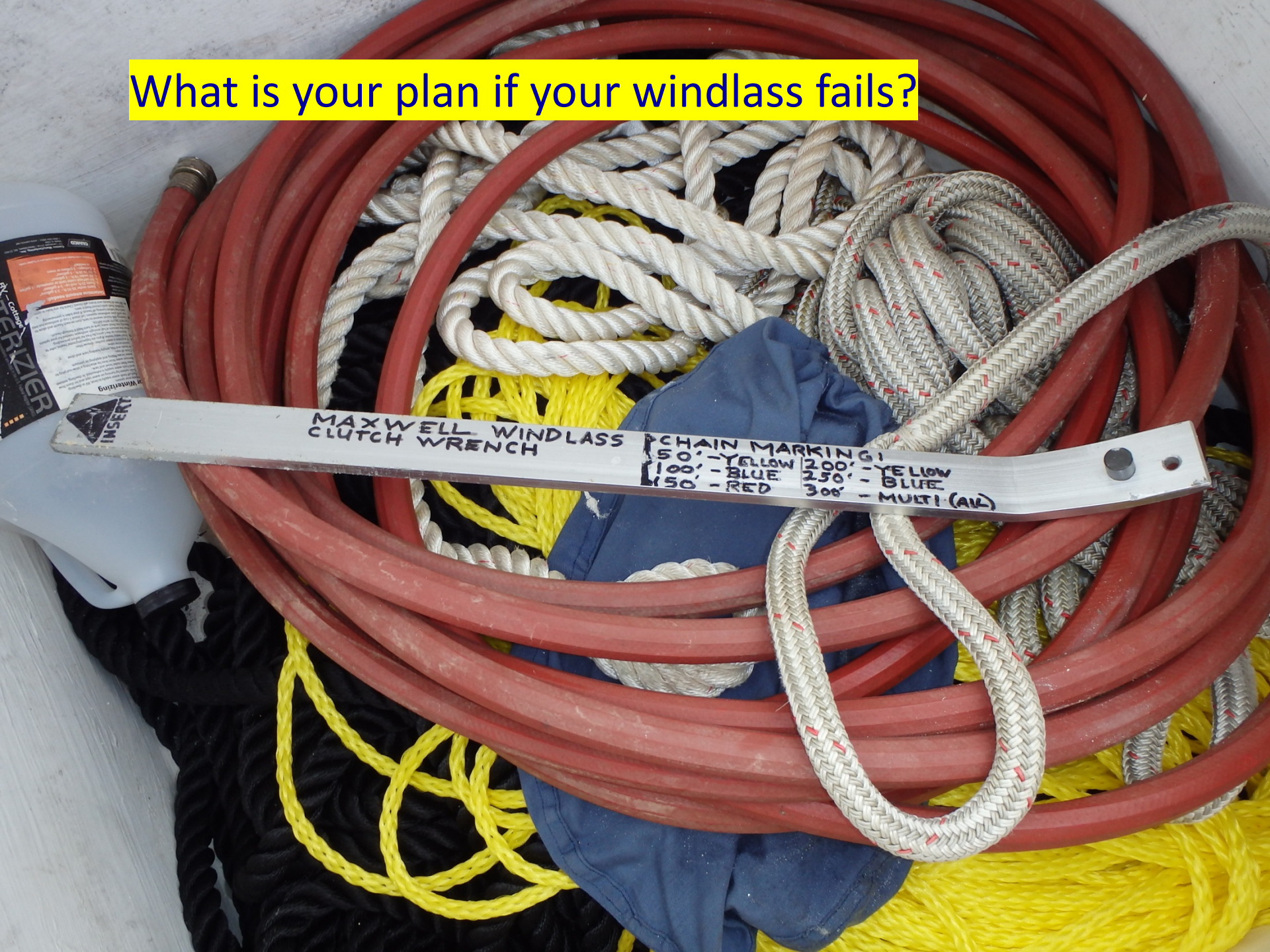


Chain tensioner, snug anchor on roller





What is your plan if your windlass fails?



MAXWELL WINDLASS  
CLUTCH WRENCH

CHAIN MARKING	
50' - YELLOW	200' - YELLOW
100' - BLUE	250' - BLUE
150' - RED	300' - MULTI (ALL)

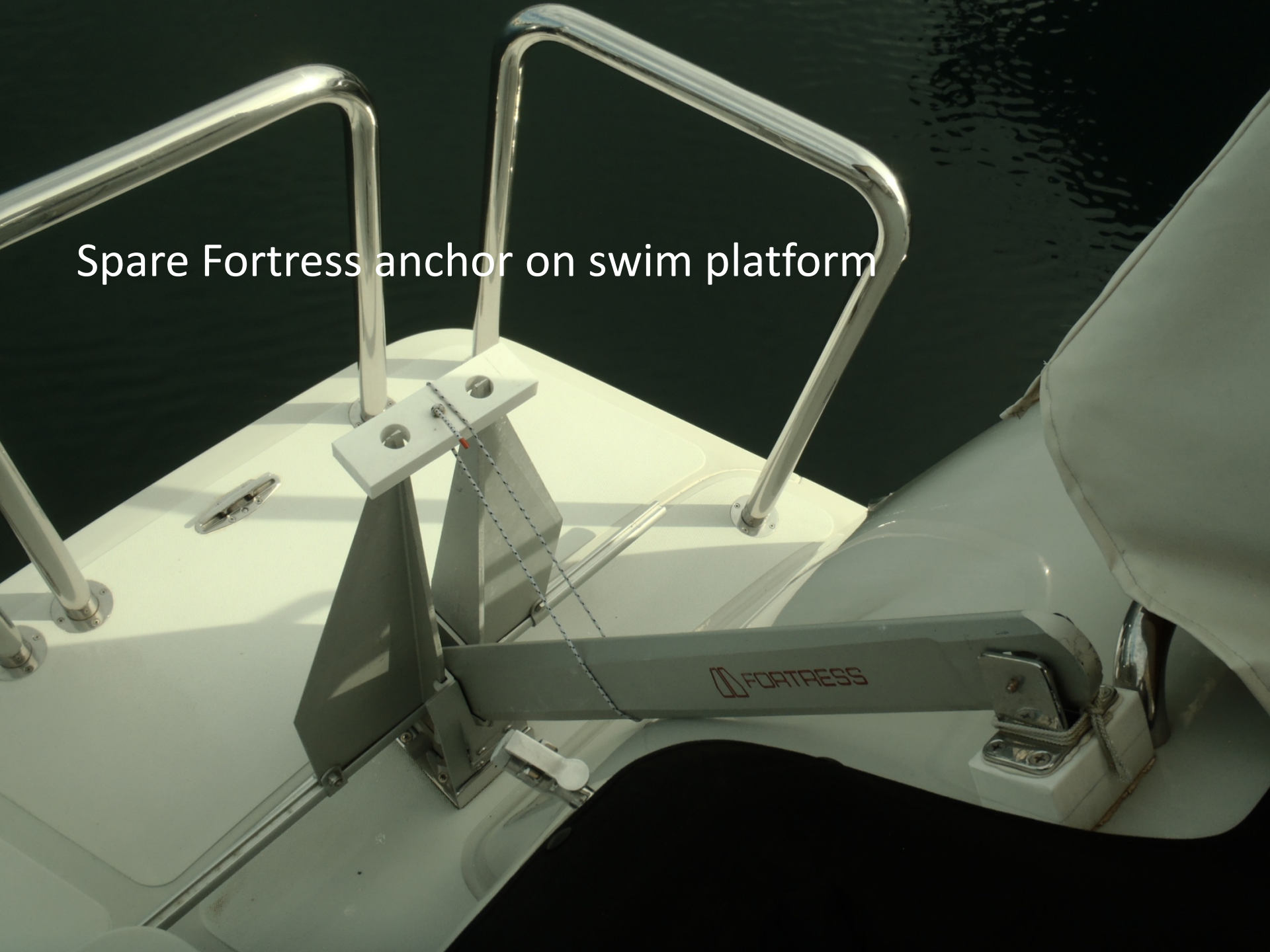




Spare Fortress anchor on foredeck



Spare Fortress anchor on swim platform





# Chain color coding by windlass control





Last 50' feet or anchor at waterline.

Can you disconnect from bitter end?







FIN

Hull ideas



Folding pad eye for clipping on fenders



Mark your fins for haul out





↑  
KURU KURU BULHURU HURURU  
KURU KURU BULHURU HURURU  
KURU KURU BULHURU HURURU

STABILIZER FINS  
EXTREME DANGER! KEEP AWAY!  
FINS MOVE WITHOUT WARNING  
↓





# Deck and Dinghy Tips

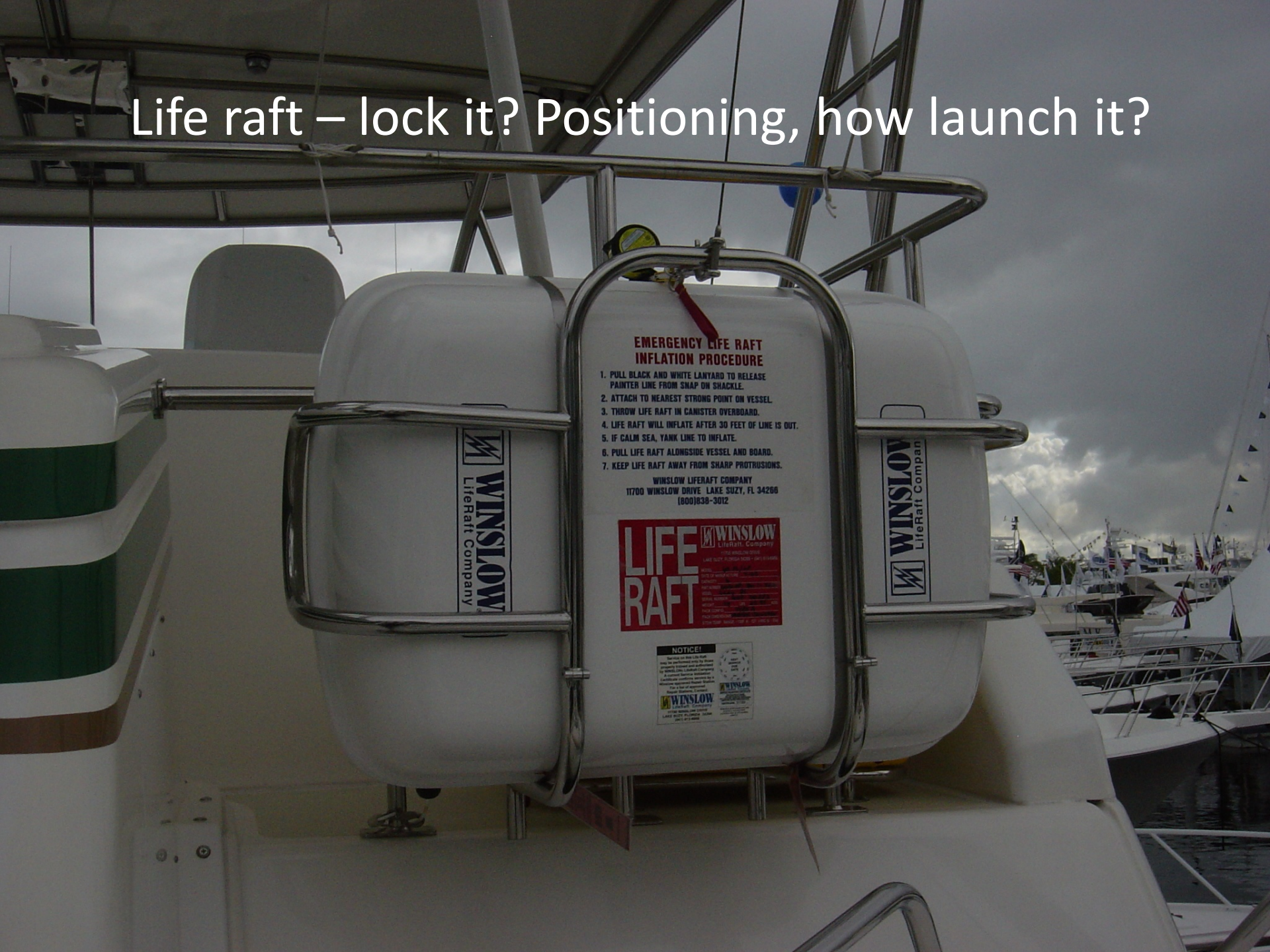


Secure outside deck lockers





# Life raft – lock it? Positioning, how launch it?



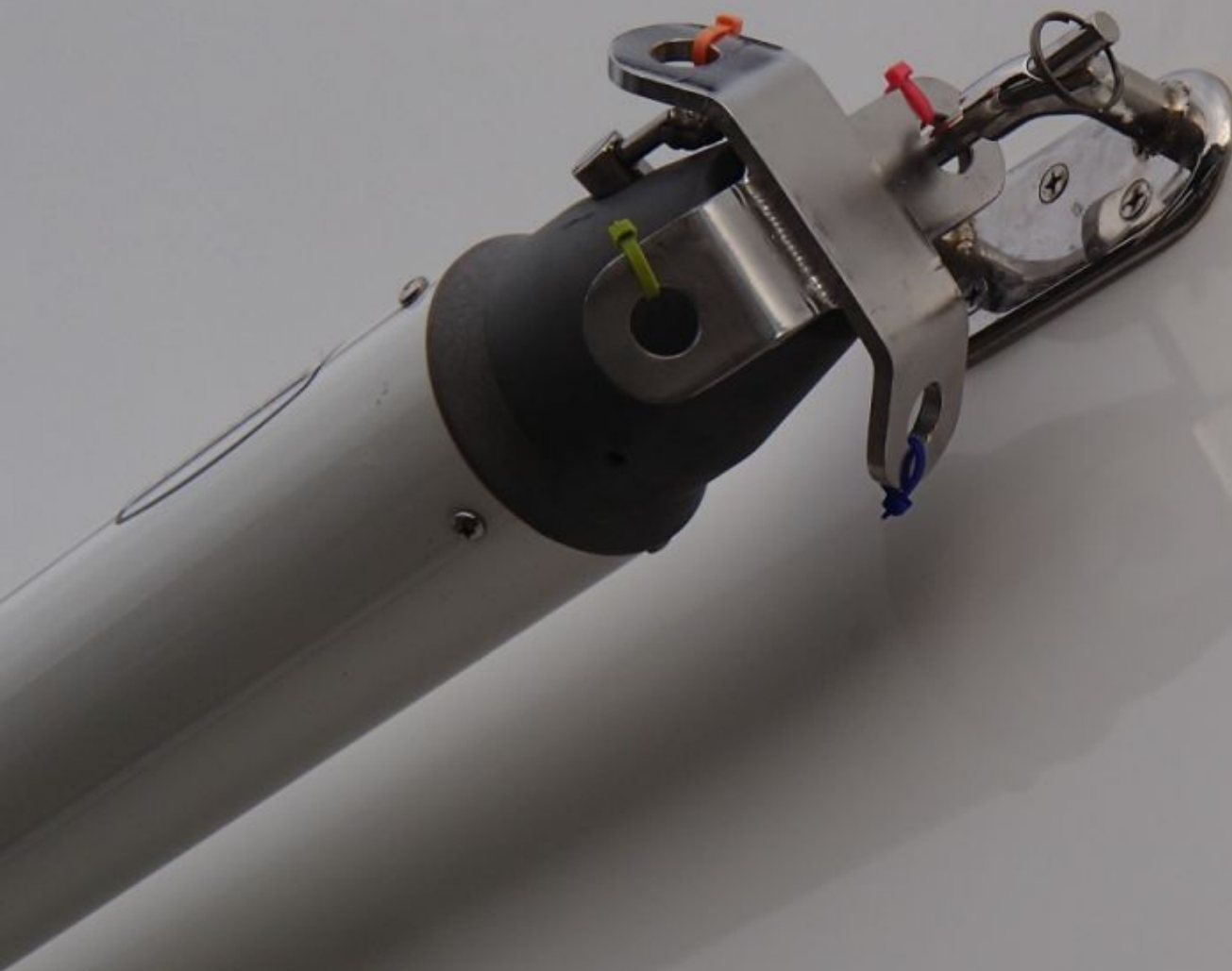
## EMERGENCY LIFE RAFT INFLATION PROCEDURE

1. PULL BLACK AND WHITE LANYARD TO RELEASE PAINTER LINE FROM SNAP ON SHACKLE.
2. ATTACH TO NEAREST STRONG POINT ON VESSEL.
3. THROW LIFE RAFT IN CANISTER OVERBOARD.
4. LIFE RAFT WILL INFLATE AFTER 30 FEET OF LINE IS OUT.
5. IF CALM SEA, YANK LINE TO INFLATE.
6. PULL LIFE RAFT ALONGSIDE VESSEL AND BOARD.
7. KEEP LIFE RAFT AWAY FROM SHARP PROTRUSIONS.

WINSLOW LIFERAFT COMPANY  
11700 WINSLOW DRIVE LAKE SUZY, FL 34206  
(800)838-3012



Flopper stopper – color code line attachments





Reflective tape on flopper pole



Dinghy launch with crane – level gauge





A white robotic crane is positioned on a grey deck. The crane has a cylindrical base with three vertical black alignment marks. White lines are painted on the deck to guide the crane's movement. In the background, a steering wheel and other ship equipment are visible.

Mark crane pick up to simplify line-up at return

## Center crane and pick up/return rotation





Boom winch lines can be marked with a Sharpie –  
Amsteel or Dyneema



# Dinghy Cover Opening







Outboard skid plate

# Dock Tips

- Dock lines – color code red/green
- Extra lines and chafe protection
- Surge areas – chain on cleats
- Fenders – clips on hull, fender boards
- Inflatable fenders (need air pressure)
- Fender hooks
- Shore power connections – secure?



Color markings or numbering of dock lines

**Dock Lines**  
**Short – White whipping**  
**Medium – Red whipping**  
**Long – Black whipping**



A photograph showing a simple rodent guard. A red and white funnel is placed over a wooden pole. A white power cord is tied to the pole with a knot, preventing it from hanging down into the water. The background is dark water with ripples. A wooden post is visible on the right side of the image.

Simple rodent guard

Power cord tied off to stay out of water



Keep lines coiled and ready to go







Loop around horn (chafe protection)









MB 3





# Fender Boards





Boat Hook Ready!







# Canvas wrap and snap



# Inflatable Fenders, Fender Hooks





# Sailboat Traveler track for fenders



# Line Snubbers and Chafe Guards





Shore Water: Filter Before Adding To Tanks



Hardware store cartridges  
sediment removal, charcoal  
– remove impurities







Water  
softener

# Maintenance Log - Records

- Note any repairs or upgrades
- Track oil changes and all other service, repairs
- This is an important record and sales tool when you are ready to sell your boat



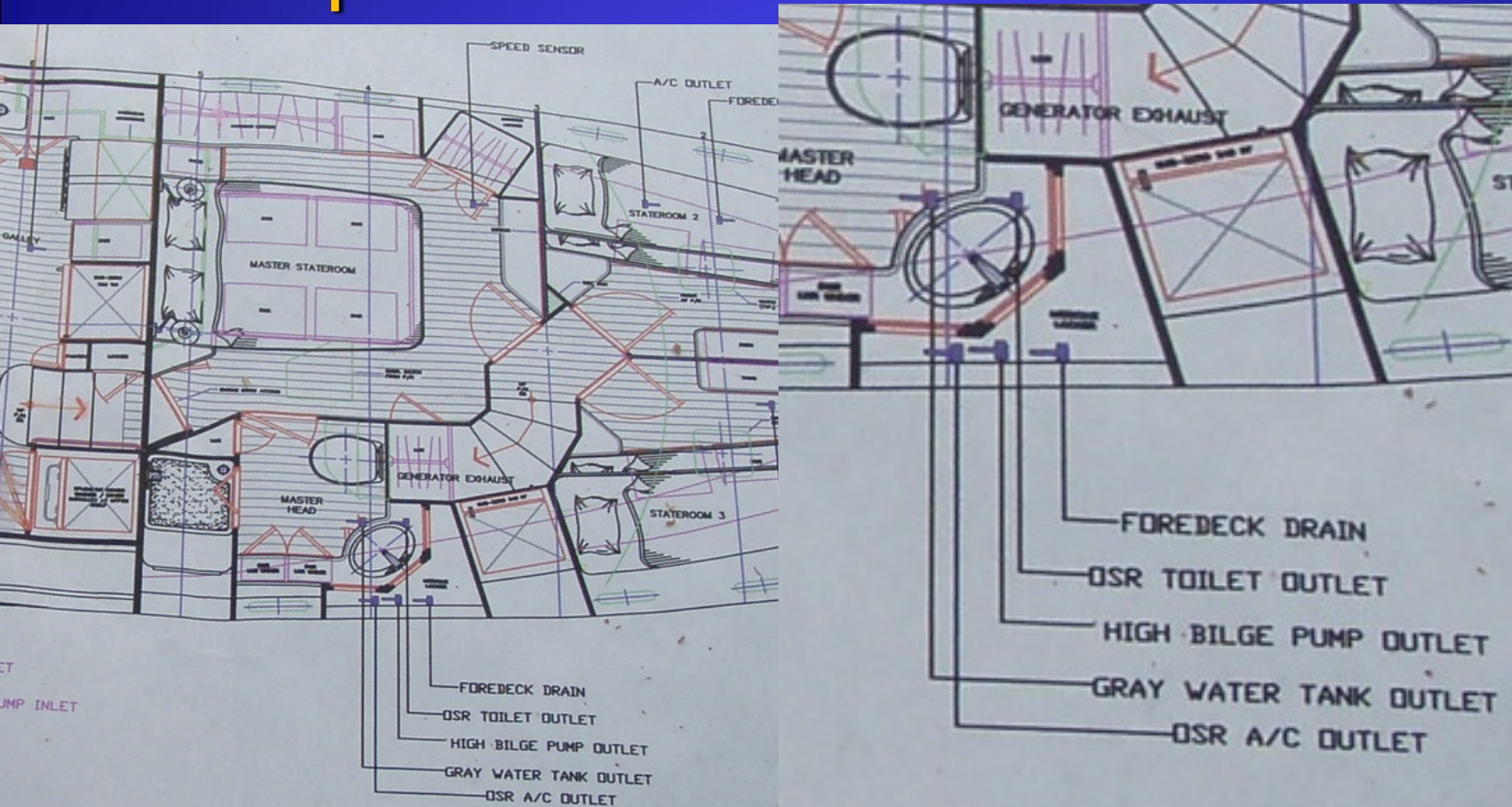
# Main Engine Maintenance Log

See handout Nordhavn 55\*

This example is for a main engine. I recommend you create an individual log for all major pieces of machinery: Transmissions, Generator, Windlass, Crane, Watermaker, Stabilizers, etc.

# Through hull Map

Example from Nordhavn 52 *Dirona*



## N5263

SEACOCK/THRU-HULL LOCATION DWG



A close-up photograph of a wooden boat seat. The seat has a dark red cushion with a gold-colored diamond pattern. A red webbing strap is attached to the side of the seat. The background shows the wooden hull of the boat.

Webbing tab for quick thru-hull reminder



← DECK DRAIN  
THRU HULL UNDER  
HERE





Exercise  
and PVC  
pipe for  
leverage

CLOSE  
↓

Through hull labels, close direction





# Some Interior Suggestions





Clear plastic protects wood surfaces



# Refrigerator organization – bars and tubs

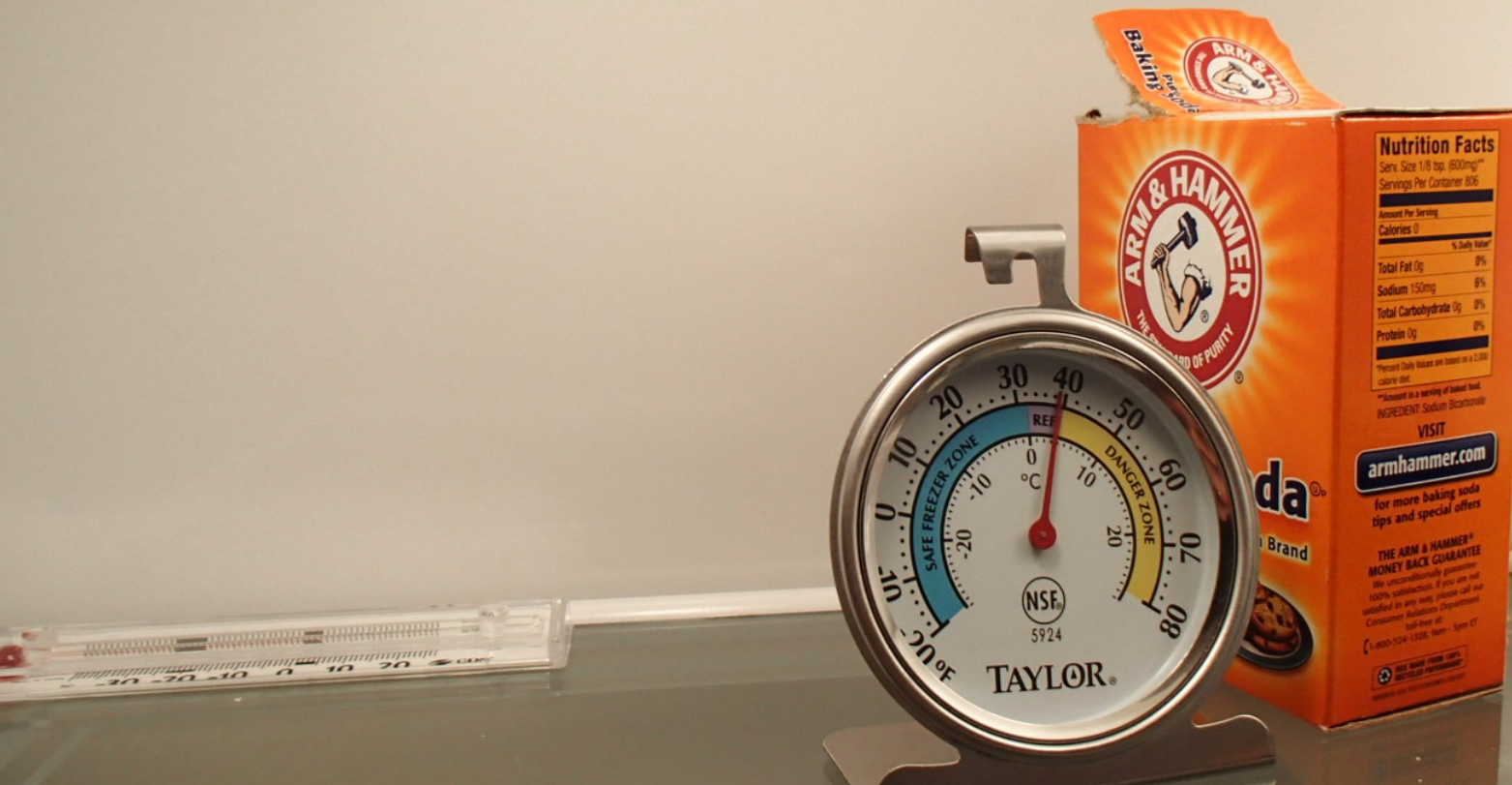








# Thermometer and baking soda in refrigerator



Story - leave boat, ice cube test...



Refrigerator door lock







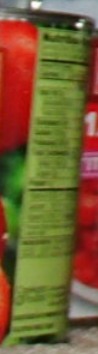
Ready for rocking and rolling at sea?



Shelf levels create more storage space











Soft rubber mesh protects



Peg system for plates and bowls





Kadey-Krogen peg system for  
pots and pans







Acrylic base with permanent pegs





# Stem ware protection









[illegible]

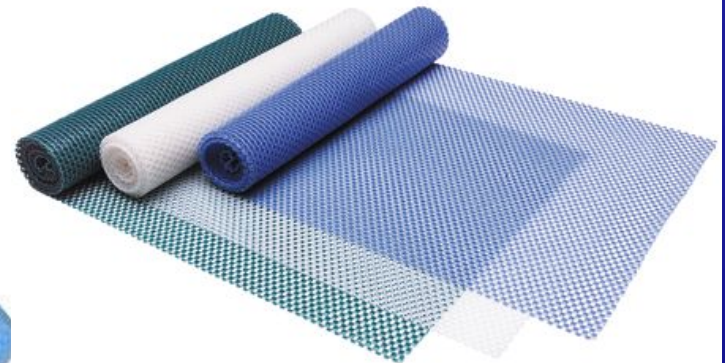
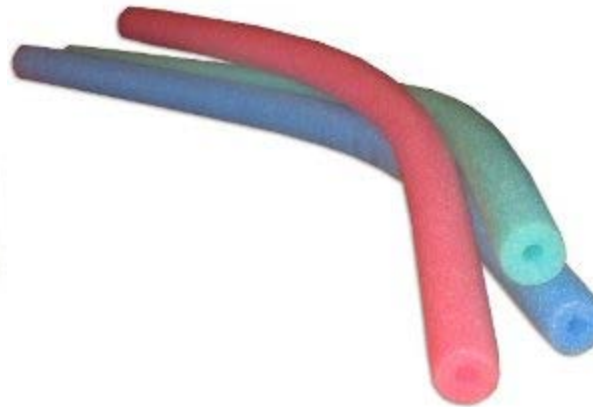


# Label Under Cushion Boards



# Stop things from "rattling"

- Soft items to wedge lockers and line drawers  
"Nerf" football, bubble wrap, Noodles, Liners





# Ready for sea

You need to have a plan to stow everything when you set out to sea!





# Clear tubs for storage





Storage bins "Lock and Lock"



# Really Useful Boxes





# Loose Parts Bin (you'll identify where it goes later)



Dust pan







Dust buster small vacuum

(Kelp flies story)

Swiffer Sweeper Vacs are great for wood floors





# Squeegee and Shower Spray



Shower drain cover





# Suction cup caddy



# 3M adhesive mounting





# Head essentials



# Toilet treatment and holding tanks (non chemical bioactive formula)





Zaal

No Flex  
Digestor



Special toilet paper is not a bad idea –  
Single ply, biodegradable, fast dissolving, ultra soft...





# Black Water holding tank valve lock



# Carbon Monoxide, Smoke Detector/Fire Alarms

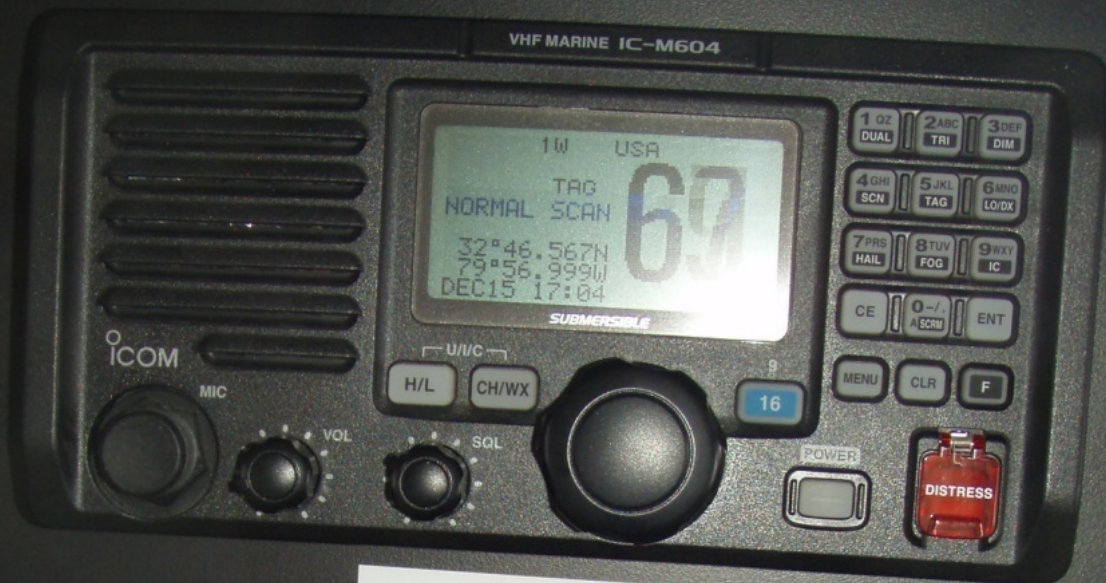




# Pilothouse Suggestions







WDE 4988

VHF call sign label





# Pilothouse – mark your gauges



4408 (MRTD)  
Rev. 1-2000



- above hydraulics breaker, protected switch)
- SET 2200 RPM ON WING ENGINE
  - PRESS "START" (GREEN) ON BOW THRUSTER KEYPAD; pump will whine and discharge stb'd. side, aft
  - PRESS "STOP" (RED) ON KEYPAD WHEN BILGE IS EMPTY; Repeat as necessary while locating water entry.

## Quick reference "norms"







Keep your display screens clean

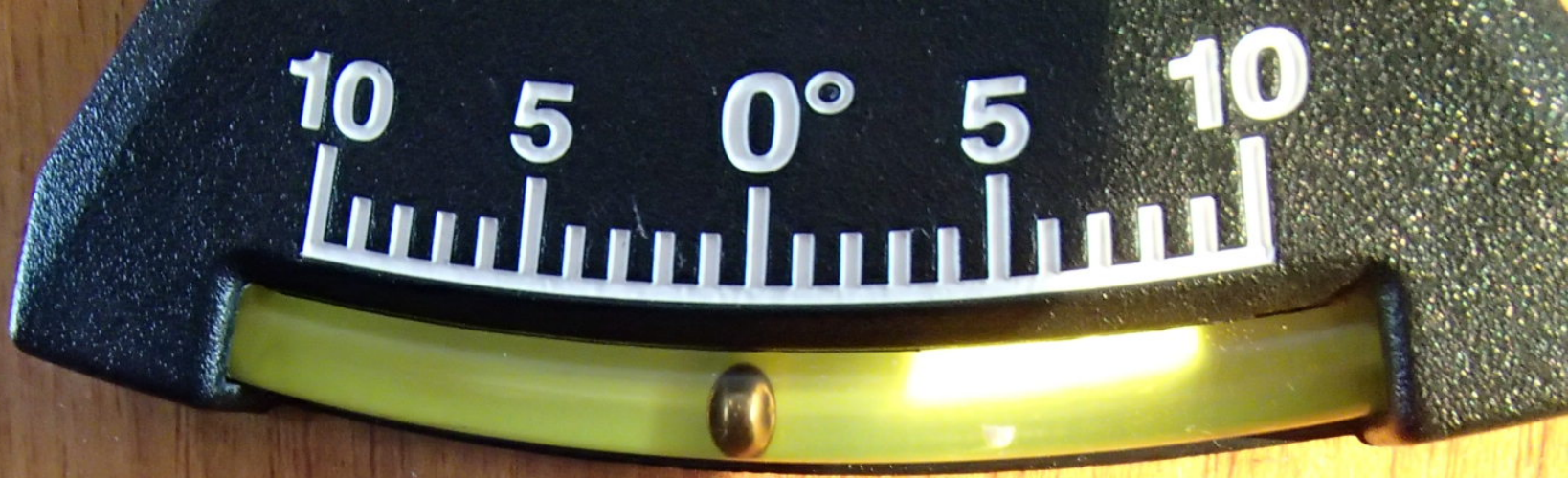
# rain.x for windshields





# Aquapel





LOA 61 FT  
BEAM 17 FT  
DRAFT 6 FT  
HEIGHT 24 FT  
ANCHOR MARKS 25 FT

LOA, Beam, Draft, Bridge clearance



# GRAY PEARL

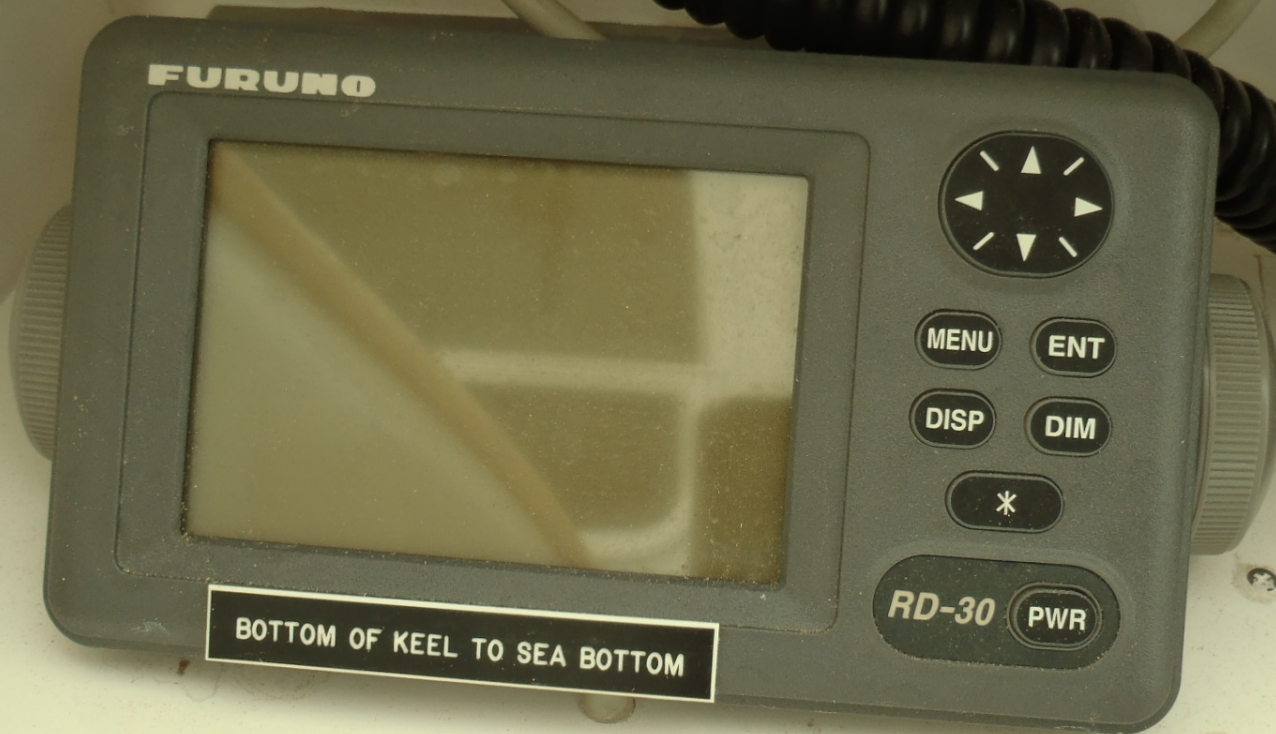
LOA	61'
BEAM	18'
DRAFT	6'
AIR DRAFT	31'

## M.V. JODA

DRAFT	5.0'	1.525 m
LOA	48.5'	14.75 m
BEAM	16.75'	5.10 m
DISPL.	56,200 lbs	
WATER	540 USG	2,044 L
FUEL	1,038 USG	3,945 L
MAST	30' 4"	9.2 m



What depth are you reading?





# Inland, River reminders

1 WHISTLE

HEAD ON PORT TO PORT

OVERTAKING BOAT PUTTING SLOWER BOAT TO PORT

2 WHISTLES

HEAD ON STBD TO STBD

OVERTAKING BOAT PUTTING SLOWER BOAT TO STBD



1 SHORT-ALTERING TO STBD  
2 SHORT-ALTERING TO PORT  
3 SHORT-BACKING ASTERN  
5 SHORT-ATTENTION or DAN

HORN

WINDSHIELD WIPERS

2 LONG, 1 SHORT-PASS YOUR STBD  
2 LONG, 2 SHORT-PASS YOUR PORT  
1 LONG, 1 SHORT, 1 LONG, 1 SHORT-AGREED

START

STOP

BATTERY

MOTOR

OVERID





NO. 2 INVERTER SERVICE

AMPS AT 120 VOLTS  
INVERT 20 AMP'S MAX  
PASS THRU 60 AMP'S



ENGINE ROOM EXHAUST  
ENGINE ROOM INTAKE  
ENGINE ROOM LIGHTS  
TV REFRIGERATOR

ICE FREEZER  
MICROWAVE  
SAT PHONE  
TV/STEREO

OUTLETS AFT  
OUTLETS FORWARD  
OUTLETS MIDSHIPS  
OUTLETS PILOT HOUSE  
and Computer

MICROWAVE  
VACUUM SYSTEM  
OUTLETS GALLEY  
and Fly Bridge

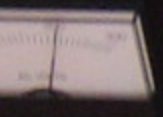
TRASH COMPACTOR  
GARBAGE DISPOSAL  
STOVE

SHIPS SERVICE  
60 HERTZ ONLY

240 VAC 60 HZ

AIR CONDITIONING  
50/60 HERTZ OK

GEN SET CAPACITY  
RUN AT 30 AMP'S



AMPS AT 240 VOLTS

SHORE POWER

SHIP

SHORE POWER

SHIP

DIVE COMPRESSOR  
WATER MAKER

DAVIT  
WASHER/DRYER

WATER HEATER  
OVEN

SALON  
WHEEL HOUSE

MASTER STATEROOM  
FORWARD CABIN

AIR COOL PUMP  
50-60 HERTZ  
CHARGER

I tape to segment electrical panel

CABIN LIGHTS AFT  
CABIN LIGHTS PILOT HOUSE  
COUNTER LIGHTS  
EXTERIOR LIGHTS  
ENGINE ROOM LIGHTS  
PRESSURE WATERS  
1 PUMP AFT  
1 PUMP MID

MAIN ENGINE  
WIND & GEN SET

ENGINE ROOM PUMP  
SHOWER ROOM PUMPS  
1 PUMP MID  
1 PUMP AFT

HEADS  
HEAD EXHAUST BLOWERS  
1 PUMP MID  
1 PUMP AFT

B/W DECK WASH PUMP  
FUEL TRANSFER/BOOST PUMP  
W/C CHARGE PUMP  
W/C OUTLETS

100A DC/24V 25A AT 240VAC

MAX LOAD EX INVERT

NOT AMP'S IN UNIT  
INCLUDES INVERTER

WELDER TANK PUMP  
100A DC/24V 25A AT 240VAC  
100A DC/24V 25A AT 240VAC



Color code dots – ON/OFF – Day/Night



1 BATTERY CHARGER  
ENGINE

2 BATTERY CHARGER  
WING ENGINE

3 GALLEY  
REFRIGERATOR

4 WATER  
HEATER

5 Color code AND numbered on Selene

6 OUTLET

7 GUEST CABIN  
OUTLET

8 MASTER CABIN  
OUTLET

9 SALON  
OUTLET

10 PILOT HOUSE  
OUTLET

11 GALLEY  
OUTLET

15 TV/VCR

16 E/R LIGHTS

17 E/R OUTLET

18 F/B OUTLET

19 FUEL POLISHING  
SYSTEM

20 GARBAGE  
DISPOSAL

21 SPARE

22 SPARE

23 SPARE

24



# Toggle guards on “permanent” breakers

INVERTER

FWD

AMIDSHIPS

TS AFT

ETS PILOT HOUSE

NE ROOM LIGHTS

/STEREO

4V CHARGER



GALLEY FRIDGE/FREEZE

EXHAUST STACK COOLING

P/H CHEST FREEZER

WASH COMPACTOR

MICROWAVE / SALON TV

STOVE TOP IGNITER

GARBAGE DISPOSAL

WATERMAKER

E / ROOM BLOWERS



# MAYDAY procedure

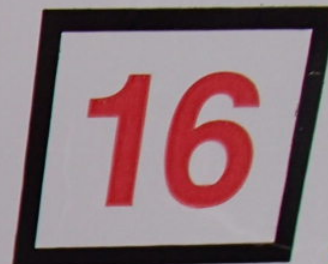
## To Broadcast a MAYDAY.

- a) Make sure bottom RIGHT RADIO-602 is on
- b) Turn SQL all the way to the left
- c) Turn volume right until you hear static
- d) Lift the RED cover, Press the button for 5 seconds
- e) When talking, use correct microphone (center)
- f) Press push to talk button, wait 1 second speak slowly
- g) Say Mayday Mayday Mayday
- h) Say three times "Strickly for Fun"
- i) Whiskey Delta Bravo niner, zero five eight.
- j) get GPS location off GPS top above the radio
- k) Say latitude ## degrees ## minutes, decimal # north
- l) Longitude ## degrees, ## minutes decimal # West.
- m) State problem and requested help.
- n) The boat is 50 feet long, white with blue canvas.
- o) This is Strickly for Fun OVER
- p) Wait one second then release push to talk button.
- q) Repeat every minute till acknowledgement.



## EMERGENCY RADIO CALL PROCEDURES

1. MAKE SURE RADIO IS ON
2. ON DSC RADIOS, LIFT COVER AND PRESS DISTRESS BUTTON FOR 5 SECONDS AND RELEASE
3. VERIFY RADIO HAS SWITCHED TO CHANNEL 16 AND GO TO STEP 5
4. ON NON-DSC RADIOS, CHANGE TO CHANNEL 16
5. PRESS AND HOLD TRANSMIT BUTTON
6. CLEARLY SAY: "**MAYDAY MAYDAY MAYDAY**"
7. ALSO GIVE: ☐ VESSEL NAME AND/OR DESCRIPTION  
☐ POSITION AND/OR LOCATION  
☐ NATURE OF EMERGENCY  
☐ NUMBER OF PEOPLE ON BOARD
8. RELEASE TRANSMIT BUTTON
9. WAIT 30 SECONDS — IF NO RESPONSE, REPEAT "**MAYDAY**" CALL.



VHF-FM

**HAVE ALL PERSONS PUT ON LIFE JACKETS**

\* Intentional hoax calls are an offense and subject to prosecution.







Binocular rack





**Organize dash console for convenient access to gear**

Drink holders







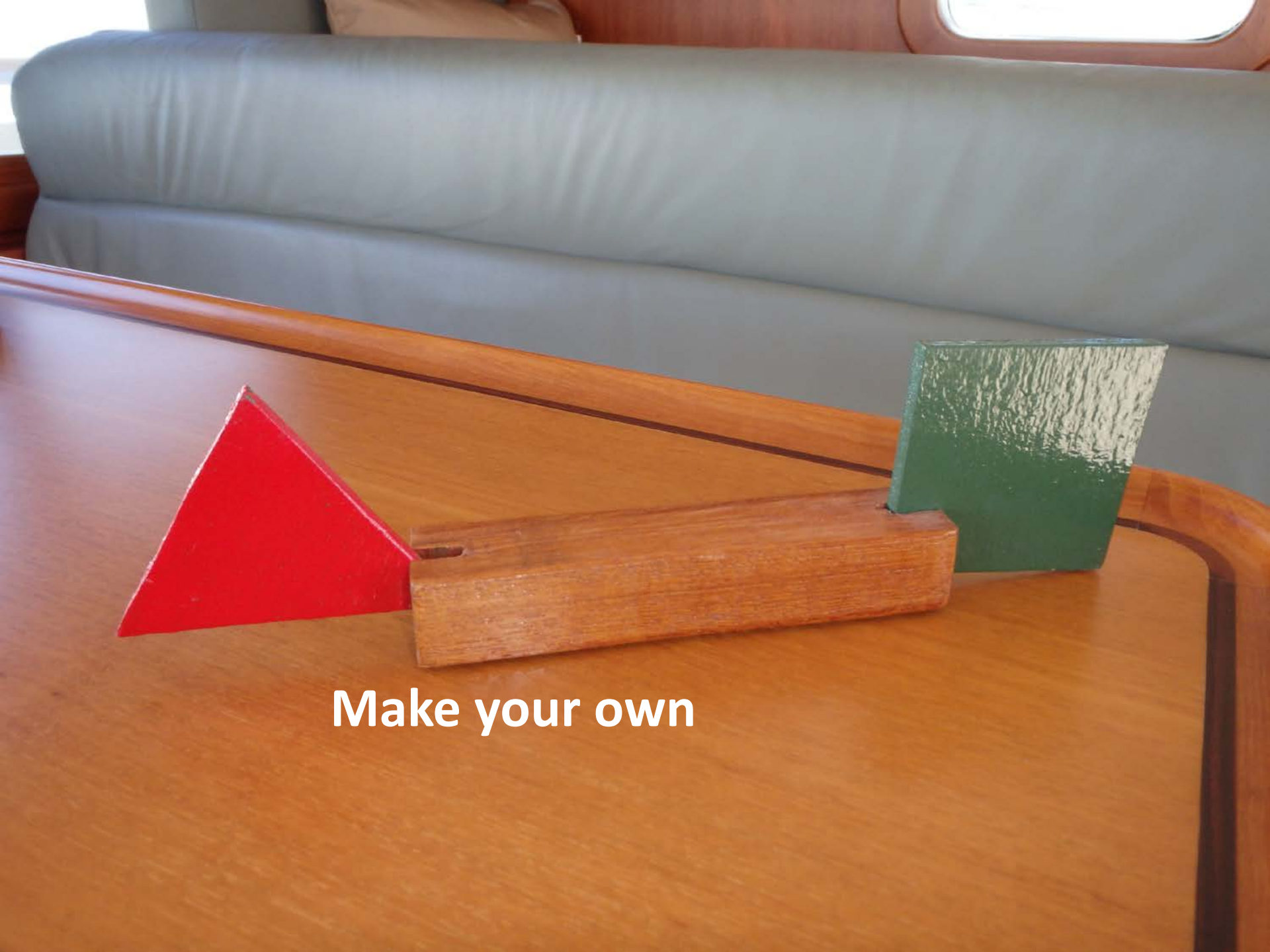
Portable caddy for  
important “stuff”



Channel buoy reminder  
Easily reversible!







Make your own

When you depart,  
leave yourself a reminder...

Thru Hull Closed !!

Gen  
Viking  
Water Maker

Start Charger - OFF



# Engine Room



# Engine room "must haves"

- Ear muffs
- Working gloves
- Temperature gun
- Flash light
- Knee pads
- Proper tools for adjustments
- Trash Can
- Tapered wooden plugs
- Open pipe for thru hull leverage
- Duct tape
- Paper towels
- Dry erase board and pen



# Ear Muffs – Noise Cancelling

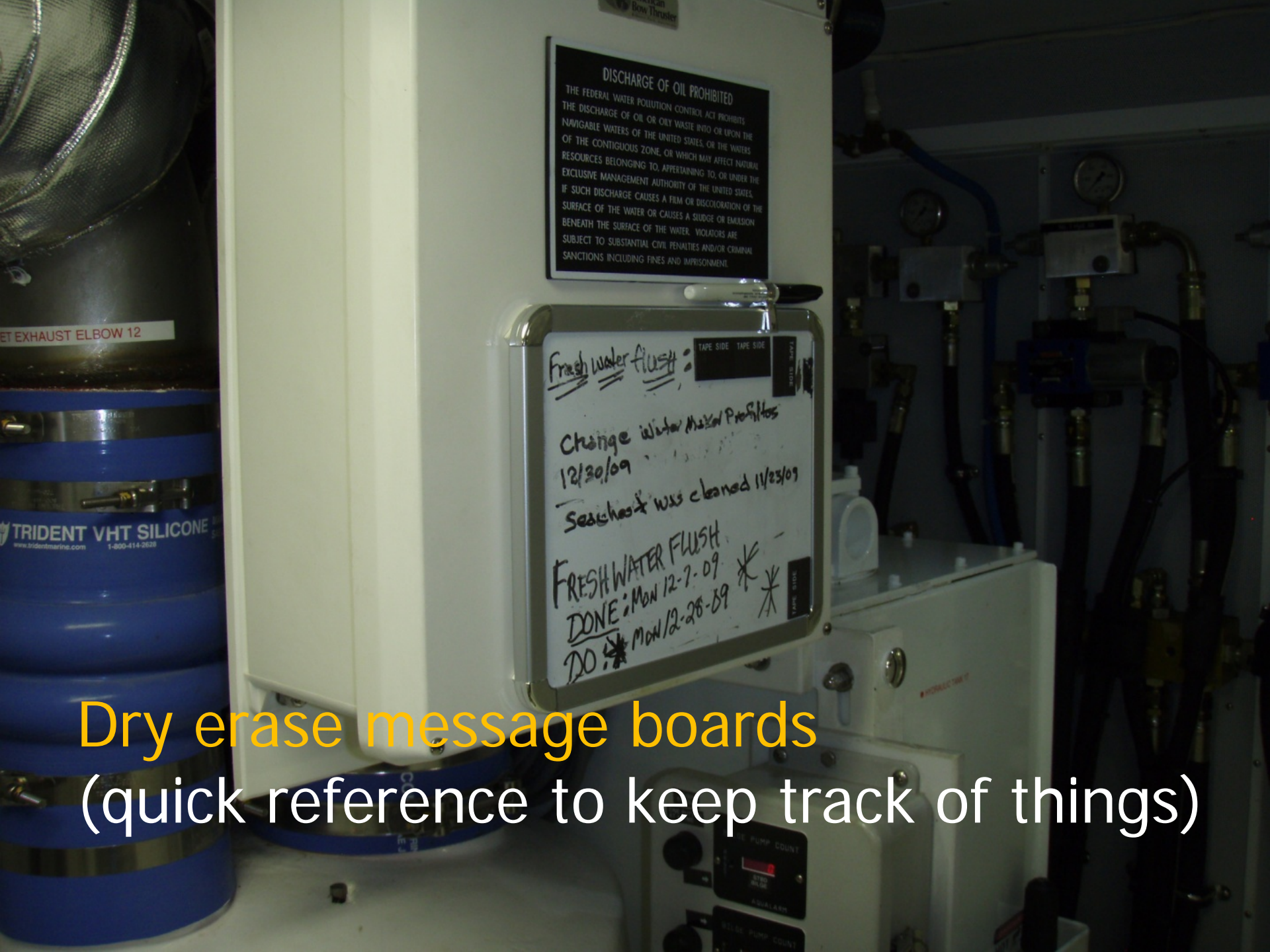
a must for the engine room get two pair



# Infrared Temperature Gun







DISCHARGE OF OIL PROHIBITED  
THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS  
THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE  
NAVIGABLE WATERS OF THE UNITED STATES, OR THE WATERS  
OF THE CONTIGUOUS ZONE, OR WHICH MAY AFFECT NATURAL  
RESOURCES BELONGING TO, APPERTAINING TO, OR UNDER THE  
EXCLUSIVE MANAGEMENT AUTHORITY OF THE UNITED STATES.  
IF SUCH DISCHARGE CAUSES A FIRM OR DISCOLORATION OF THE  
SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION  
BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE  
SUBJECT TO SUBSTANTIAL CIVIL PENALTIES AND/OR CRIMINAL  
SANCTIONS INCLUDING FINES AND IMPRISONMENT.

Fresh Water Flush : TAPE SIDE TAPE SIDE  
Change Water Makers Profiles  
12/30/09  
Seachoice was cleaned 11/23/09  
FRESH WATER FLUSH  
DONE: MON 12-7-09 \*  
DO: MON 12-28-09 \*

Dry erase message boards  
(quick reference to keep track of things)



ALL 3 RAW WATER IMPELLERS AND ALL BELTS CHECKED JULY 2004

27 OCT. 2004

## FUEL MANAGEMENT

NOTE :

- ENGINES SET UP TO RUN OFF STARBOARD FUEL TANK.
- WING ENGINE RUNS OFF DAY TANK.
- PORT SIDE M.E. RACOR IS NEW - READY TO USE.

Fuel management...

FWD PORT 310	FWD STBD 320
E.R. PORT 670	E.R. STBD 650
FULL TANKS 980	970

1950

DIPSTICK  $1/8" = 1QT$



**Definition**  
**boat** (bōt),  
- a hole in the sun  
of the water, into w  
money is throw





Level gauge in ER for fuel trim





Trash Bin





## Engine Room Inspection



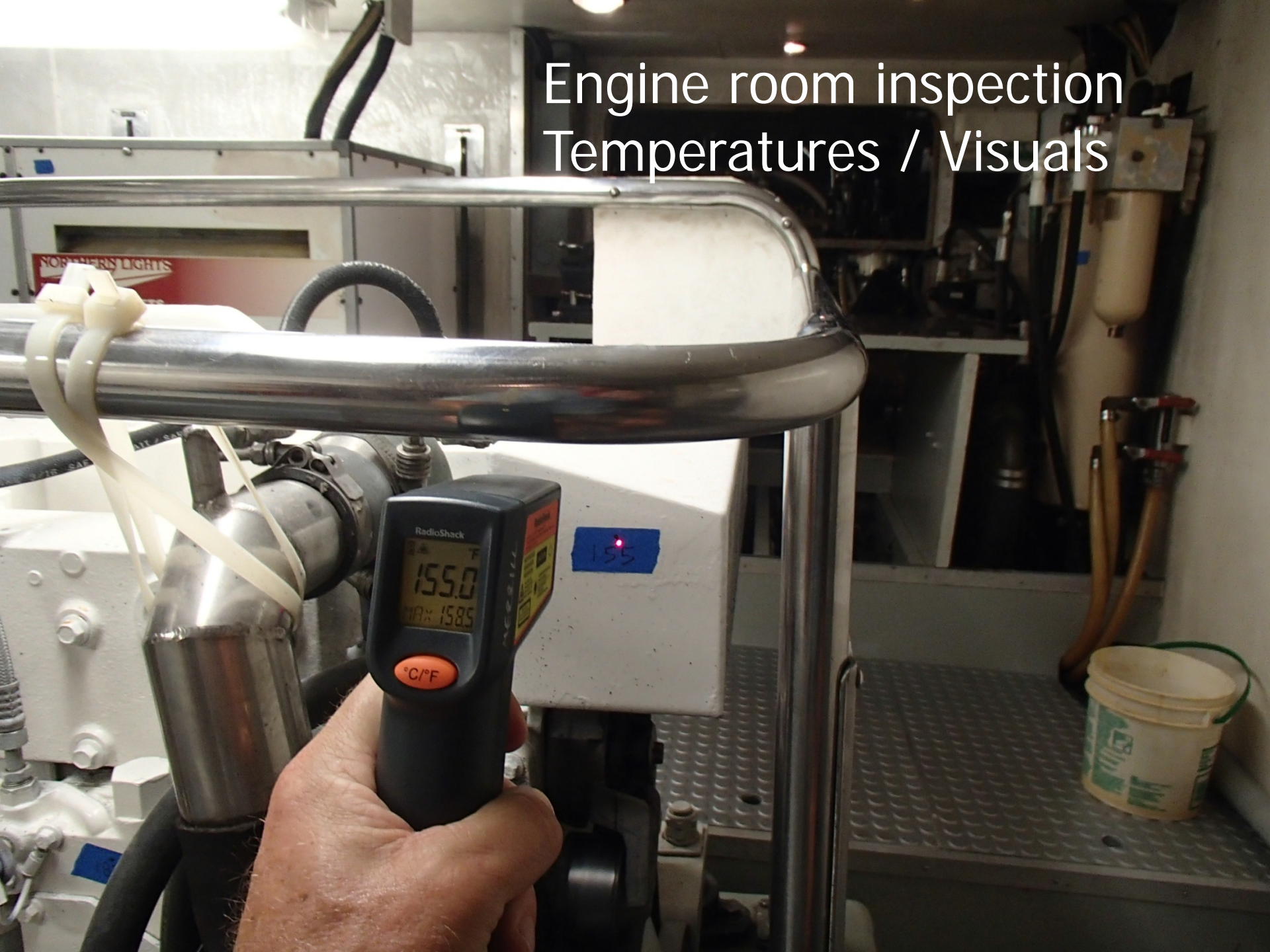
# ER: What to Check

(Trip to ER two part  
Ocean Navigator articles series)

- Inspect Fuel valves
- Bilge water level
- Temperature of stuffing box
- Under Engine Drips? Belt Chafe?
- Racor vacuum gauges



# Engine room inspection Temperatures / Visuals





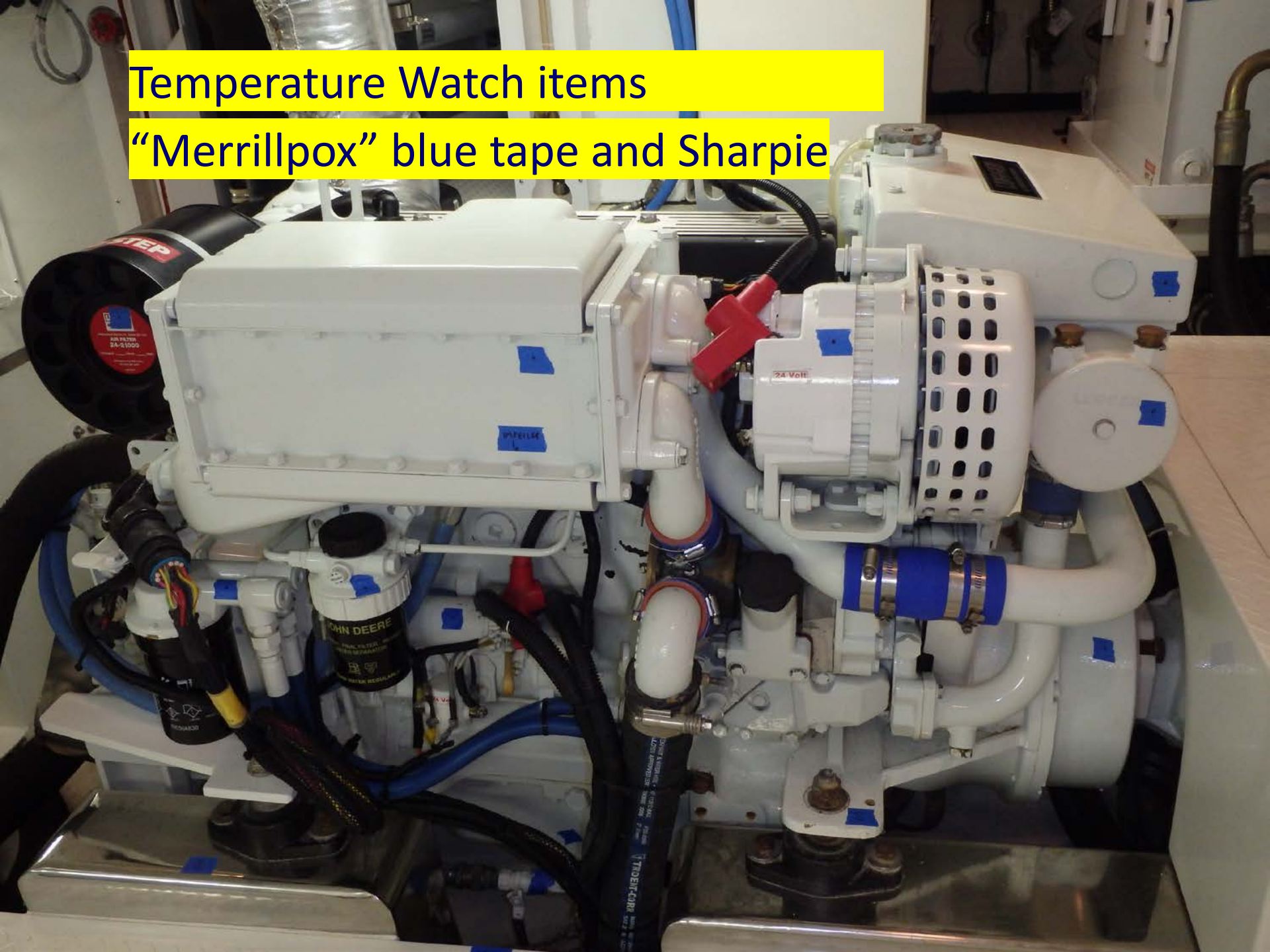
Mark single point to shoot





Temperature Watch items

“Merrillpox” blue tape and Sharpie

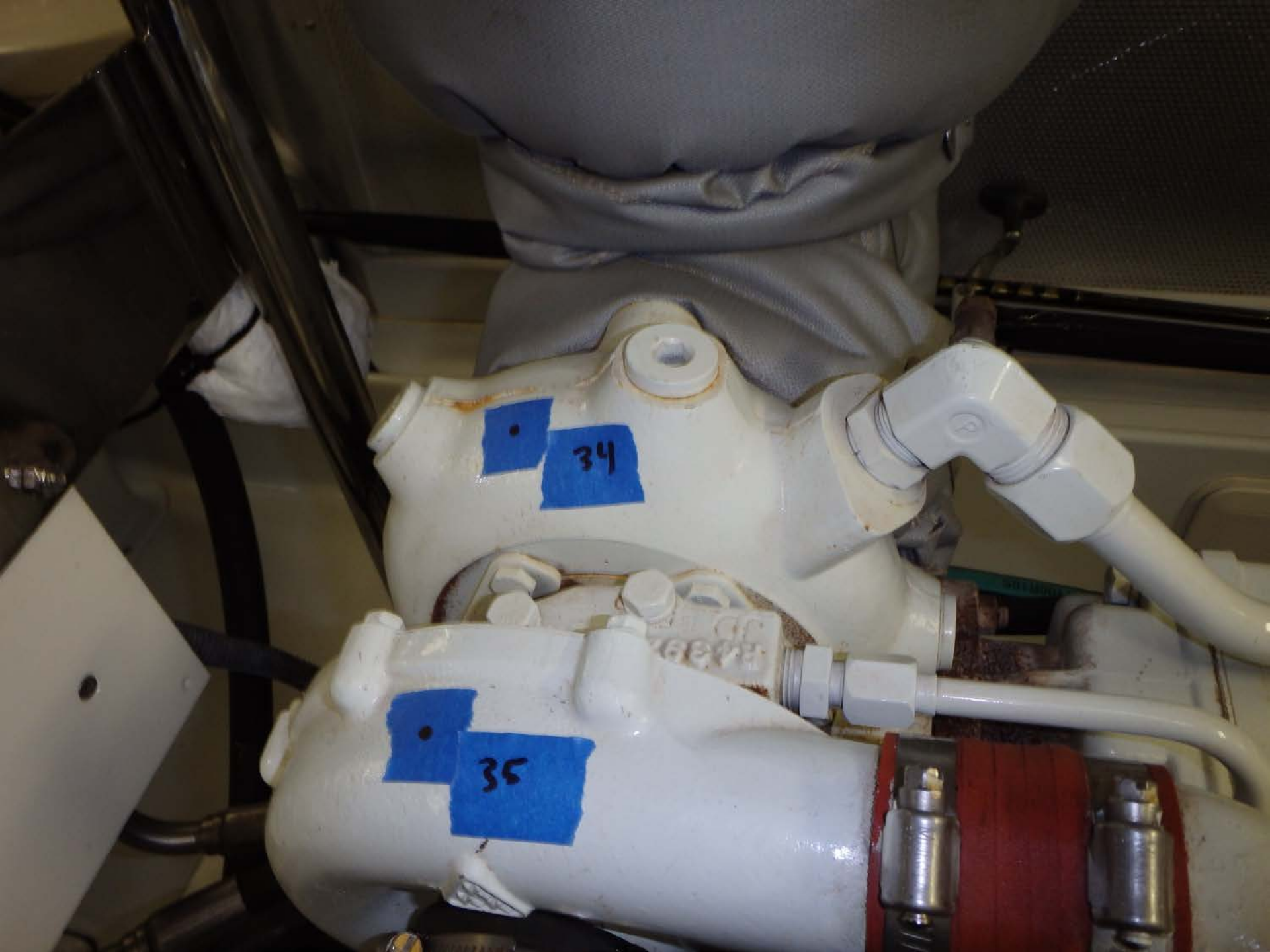




Hold Gun 2 – 6" away



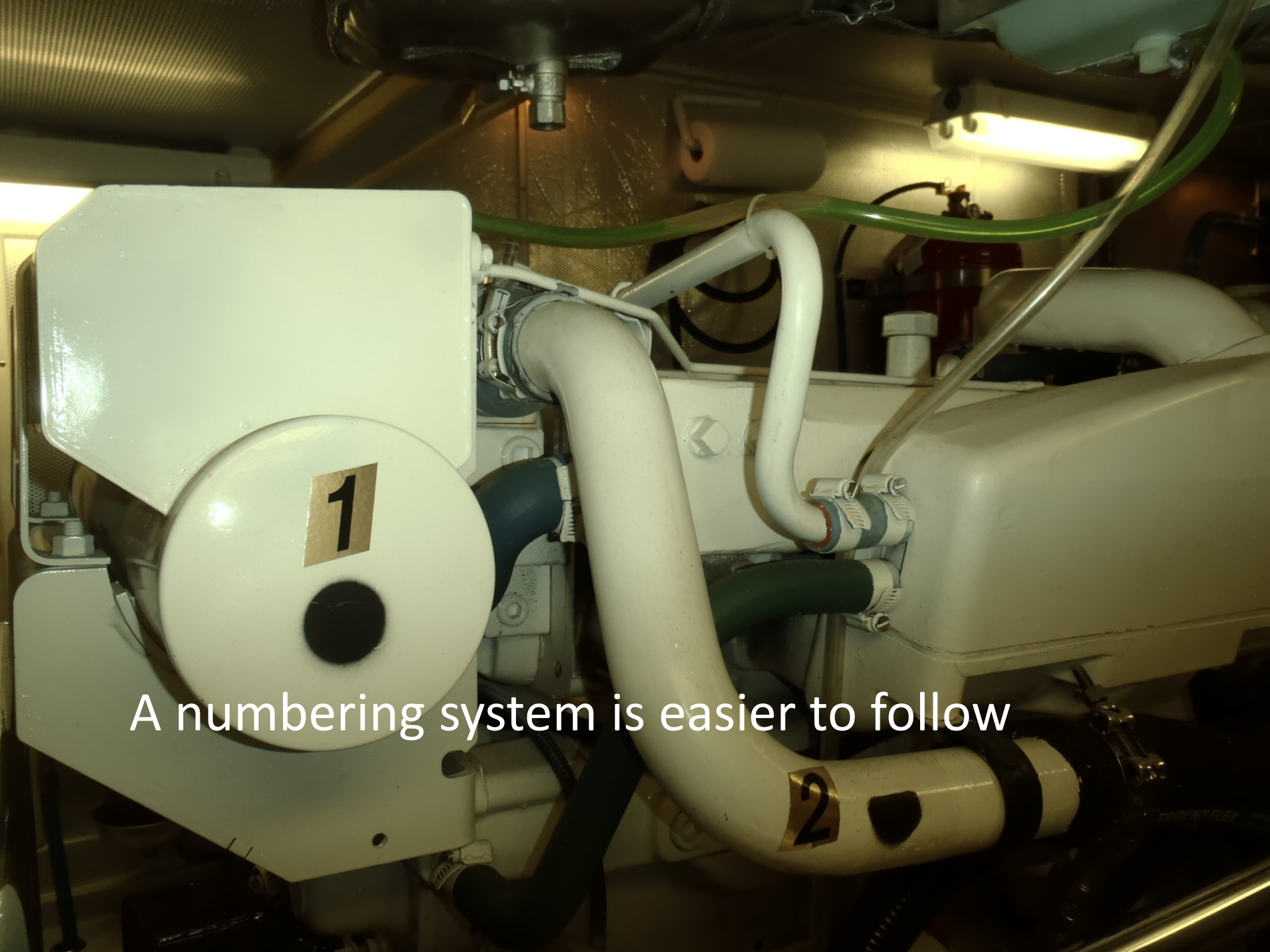




“(\*)”





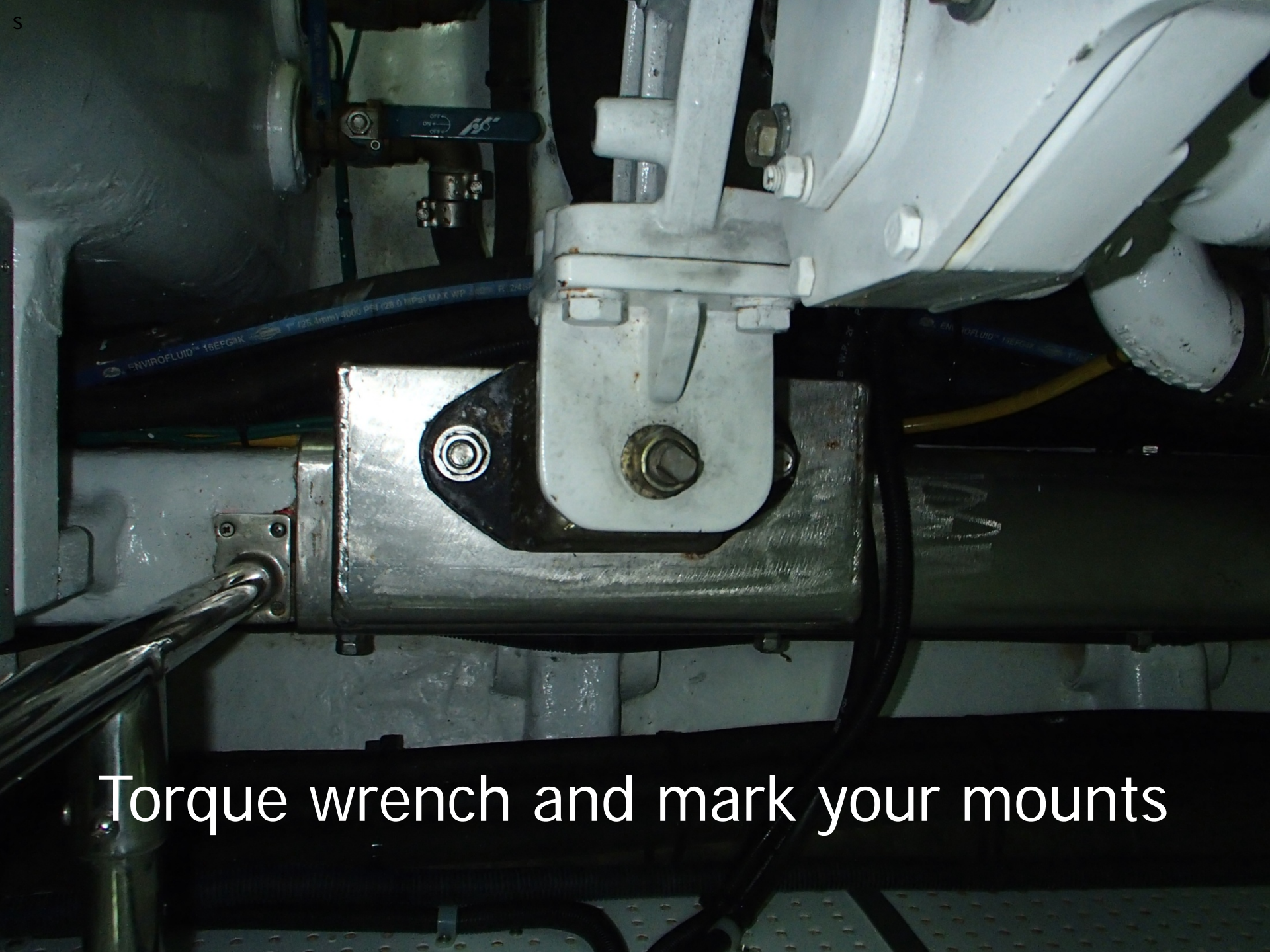


A numbering system is easier to follow

ER: Keep it clean! Make it easy to find small problems early before they escalate

- Look for belt chafe
- Monitor your temperatures – targets
- Drips, leaks, changes?
- Engine mounts torqued and marked?
- Fuel sight glasses – open to check.





Torque wrench and mark your mounts







engine  
13  
mounts



Bilge  
16  
Level

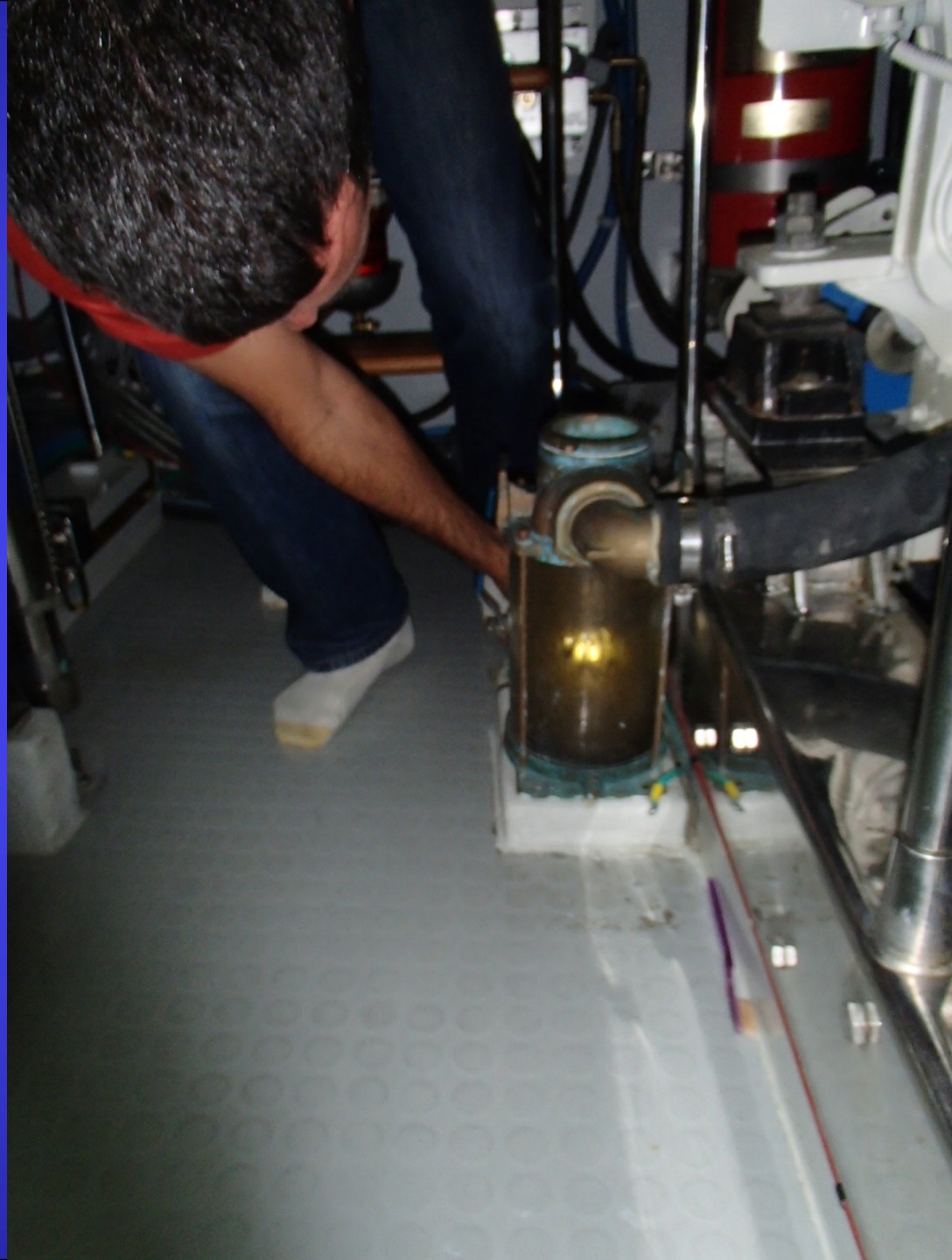
SNUGGED DOWN  
ALL ENGINE MOUNT.

13 SEPT 13

3/4" WRENCH.



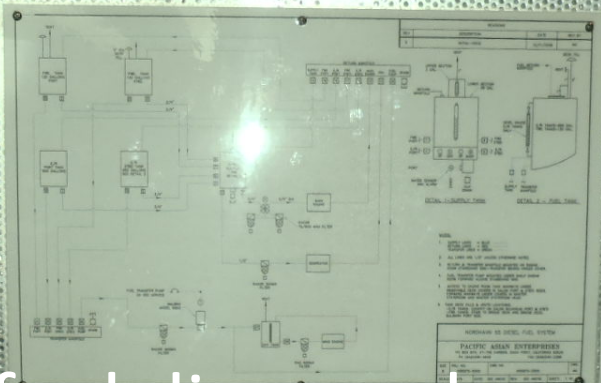
# Check Strainers





STBD

Laminated fuel diagram by manifold

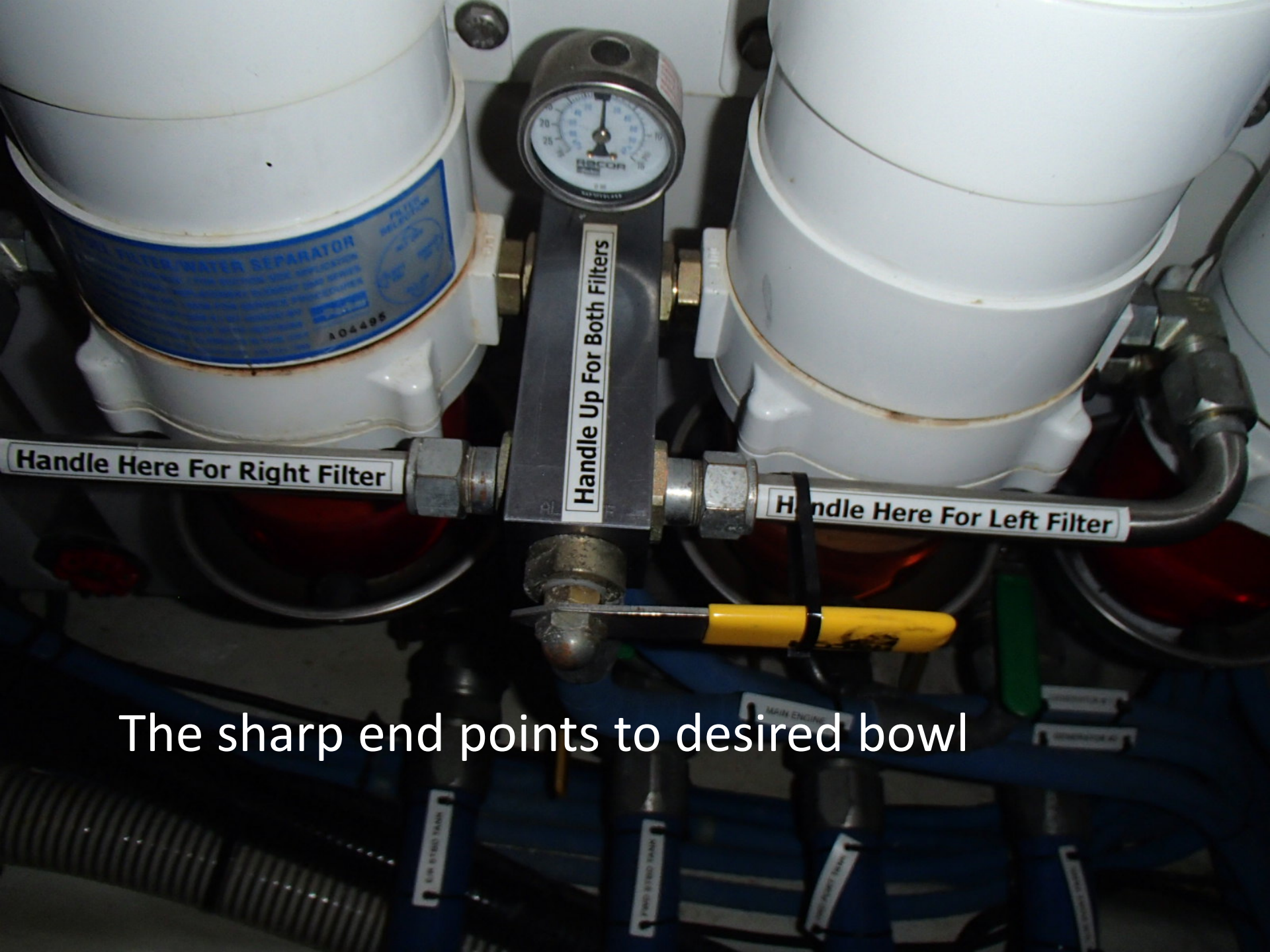


TRANSFER OIL INTO ENGINE TRANSFER OIL INTO ENGINE

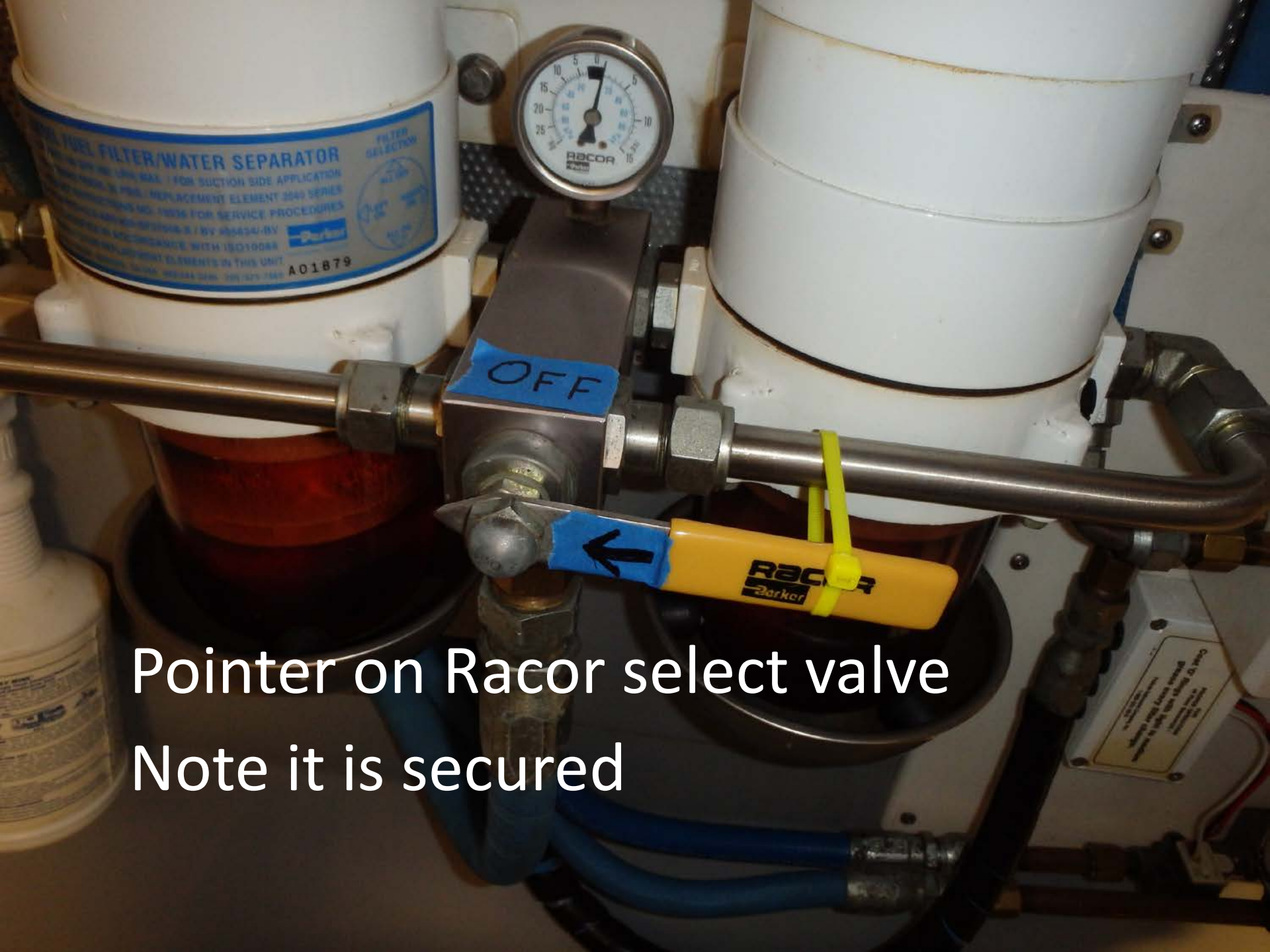
ENGINE LUBE OIL MANIFOLD

ENGINE OIL TRANSFER PUMP





The sharp end points to desired bowl



Pointer on Racor select valve  
Note it is secured



Velcro straps so valve handle isn't bumped





Change annually or at hour interval

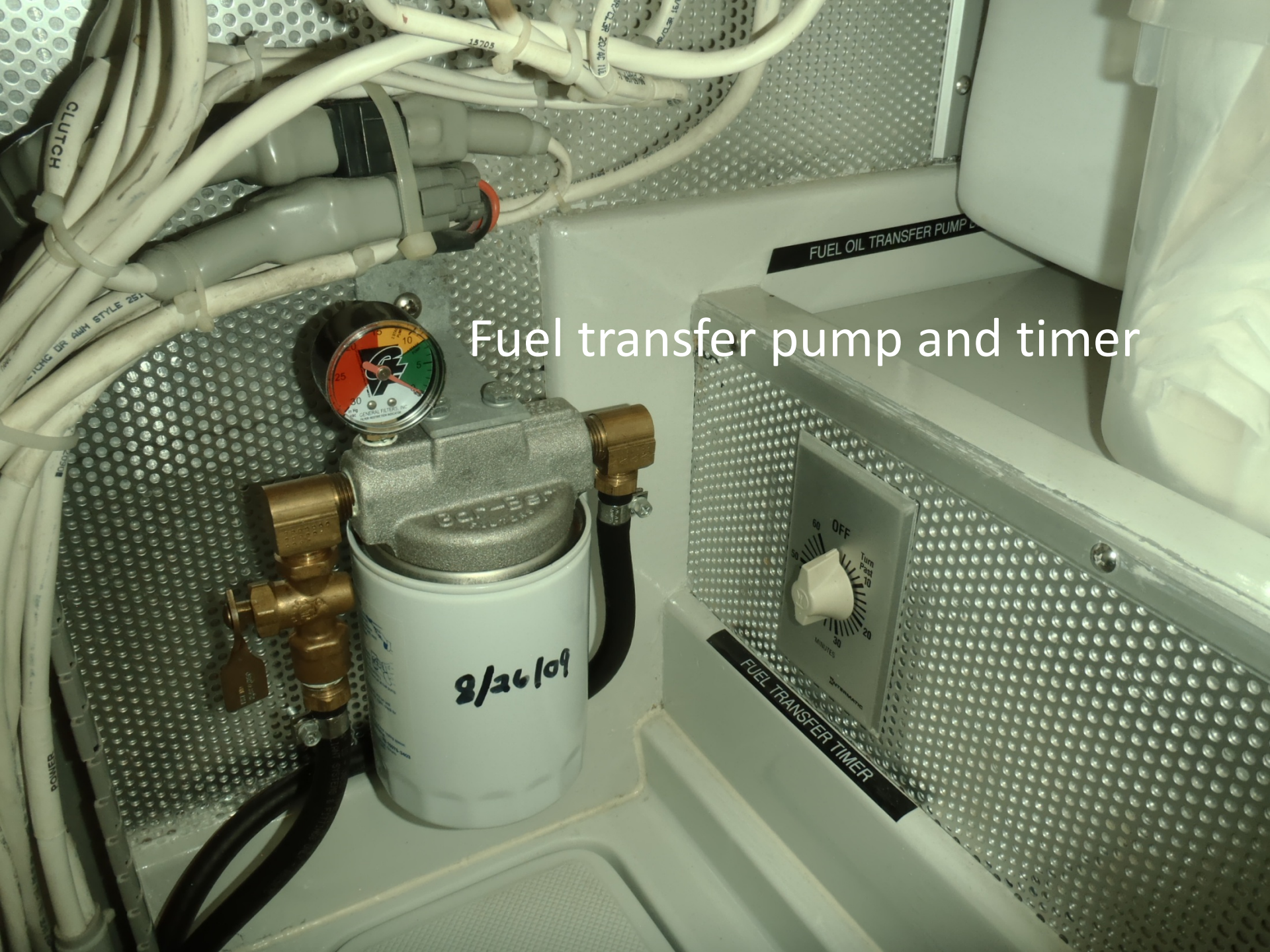




# Replacements sized and hours noted







Fuel transfer pump and timer



# Racor pet cock drains





Label "To" and "From" on your manifolds





# Color code multiple tank valves





Pipe cleaners on connections help identify leaks







Keep Sight Gauge Valves Closed

The image shows a white, rectangular industrial sight gauge. On the left side, there is a red, handwheel-style valve with a circular cutout in the white panel behind it. The panel has two screws. A warning label is affixed to the panel. The background is dark and industrial.

Nail polish or red Sharpie to mark Zincs








Mark fuel filter for bleeding



And primer lever



A white cylindrical tank, possibly a nitrogen cylinder, is shown with a leaking valve at its base. The valve is surrounded by a large, dark, circular puddle of liquid, likely nitrogen, which has spread across the diamond plate floor. The tank has some brownish stains and a small hole near the base. A label on the tank reads: "USE DRY NITROGEN (N2) ONLY! 1. BEFORE INSTALLING, INSURE 3000 PSI GAGE 2. AFTER GAS CHARGING, 3. FULLY CHARGED WITH NITROGEN". The tank is mounted on a metal plate. The floor is made of diamond plate metal.

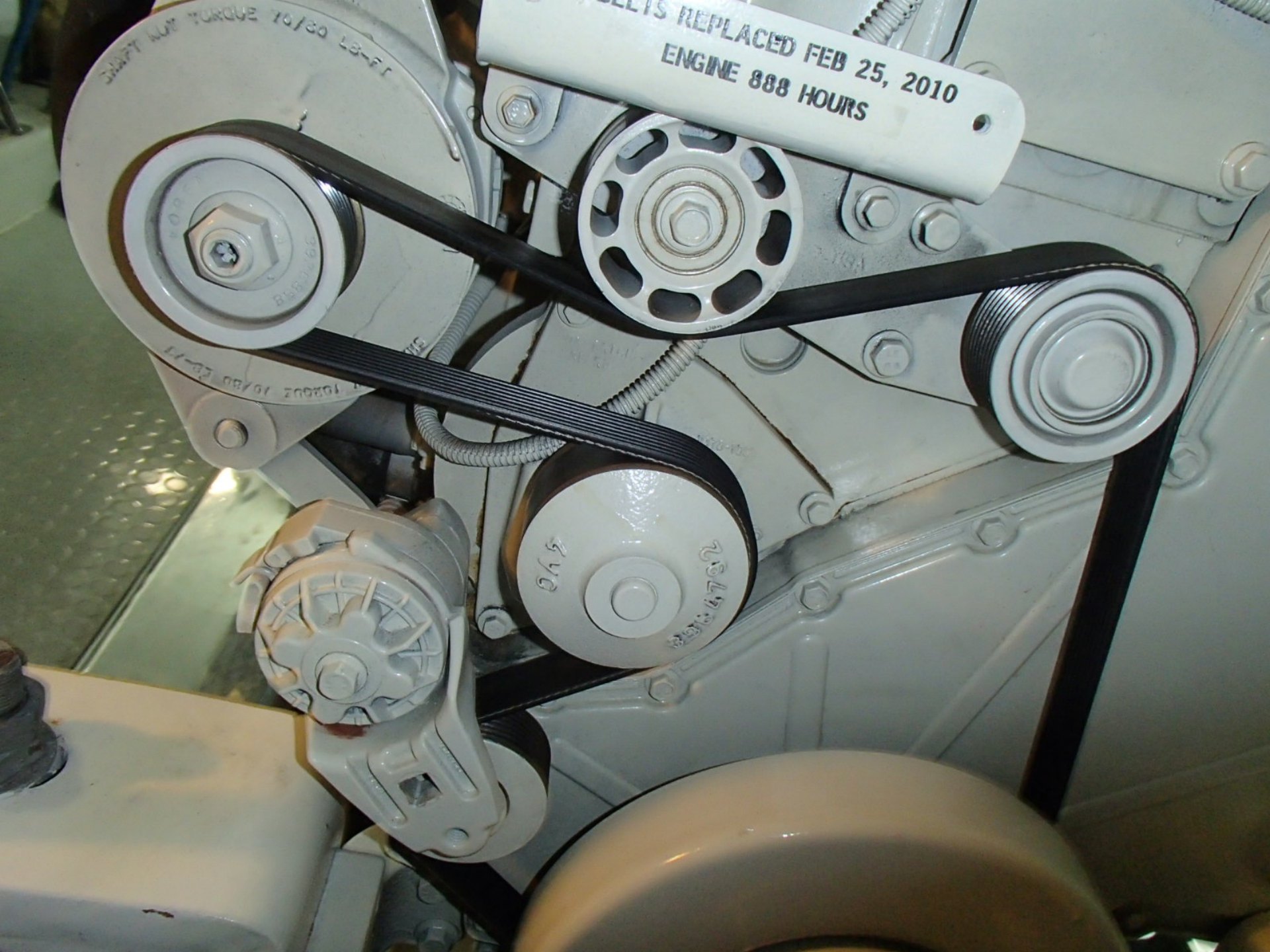
Potential trouble, will yours drain?



Install a drain valve








BELTS REPLACED FEB 25, 2010  
ENGINE 888 HOURS

SHAFT NUT TORQUE 10/30 LB-FT

10/30 LB-FT

849

254792

A white mesh storage hammock is suspended between two circular metal brackets on a white wall. The hammock is filled with various items of laundry, including white socks, a yellow cloth, and a green and white patterned cloth. A small white label with black text is attached to the mesh. To the left, a black rectangular sign with white text is partially visible. Below the hammock, a white cylindrical object with a brown handle is visible. The text "Storage hammock" is overlaid in the center of the image.

Storage hammock



# Hydraulic Oil – note level



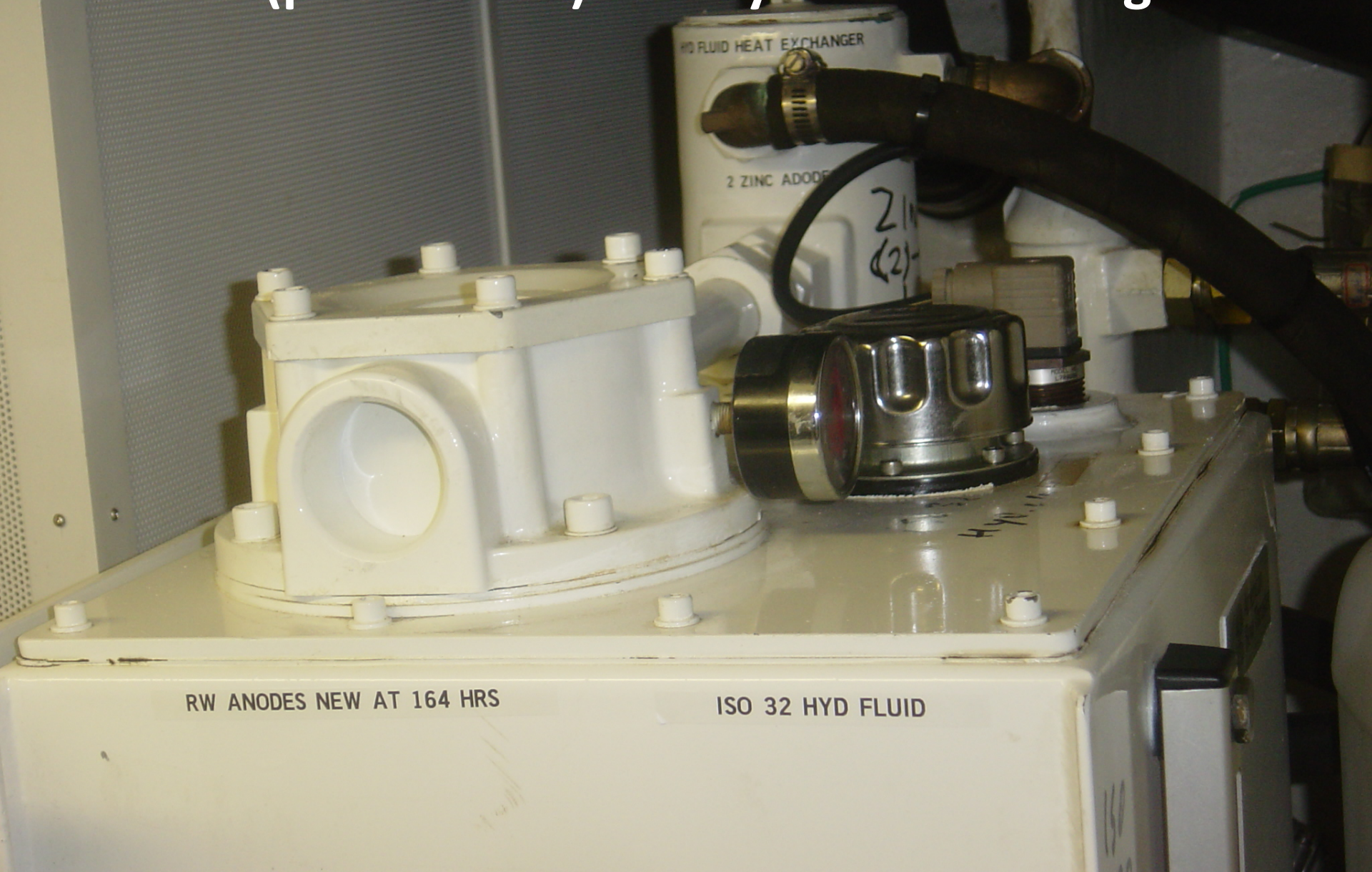
FULL



← LEVEL



# Anodes (pencil zincs) and hydraulic oil weight







Coolant over flow catcher

A clear plastic bottle with a red cap and a blue base, used for coolant overflow recovery, sitting on a metal surface next to a machine. The bottle has volume markings (400, 500, 600, 700) and is partially filled with a clear liquid. A metal tube is inserted into the red cap. The bottle is positioned on a metal surface, likely a workbench or machine base, next to a white machine component. The background shows various mechanical parts and a blue handle.

Coolant overflow recovery





DELO 400 15W-40

4 GALLONS

Brand of oil, viscosity weight and quantity.  
Make it easy!





IMPELLER  
10/5/11 2494

RAW WATER PUMP  
10/5/11 2494

Generator Oil 15W-40 8.2Q 7.9L



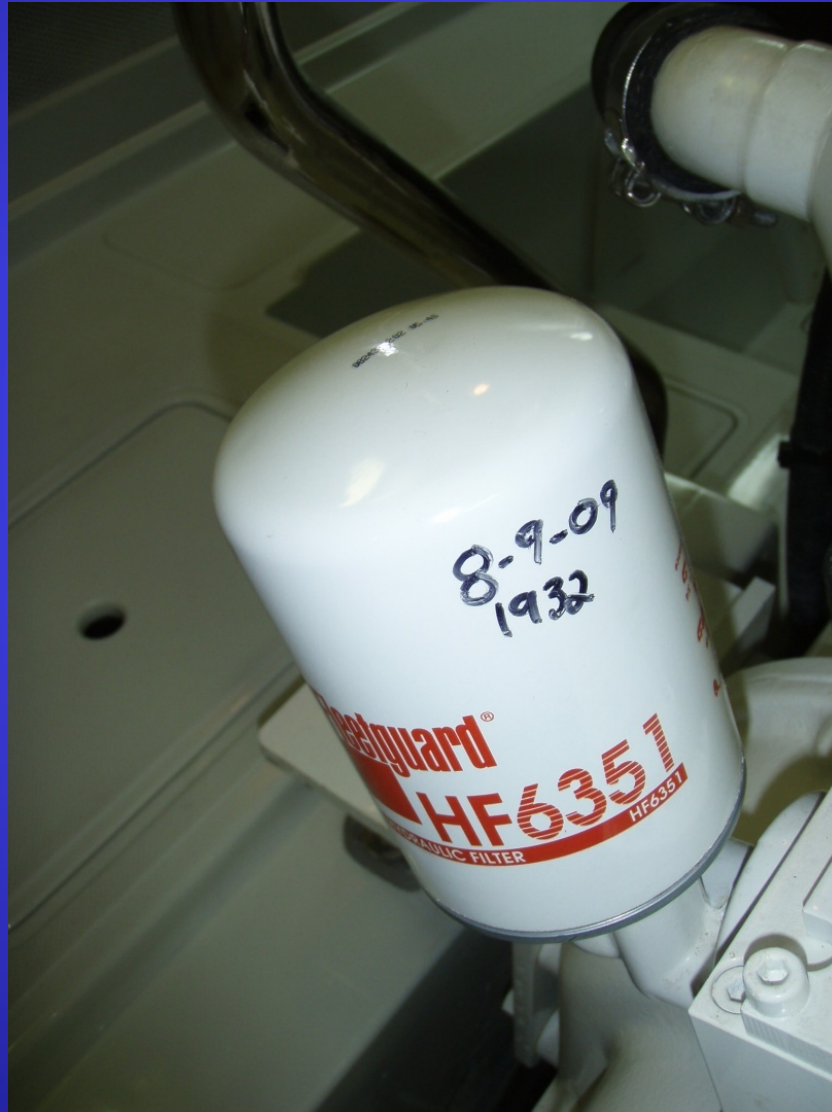
Allen Wrench In Tool Bag

30W



↑  
Fill

# Label filters for next change








Righty Tightly, Lefty Loosey



Impeller – temp and rotation







The image shows three fuse blocks mounted on a white panel. Each block is labeled with its function and fuse rating. The left block is for the Bilge Pump (50A), the middle for the Stbd. Eng. Isolator (60A), and the right for the Port Eng. Isolator (60A). A red text box at the bottom says 'Identify fuses, carry spares'. The background is a white panel with a yellow pipe at the top and black corrugated hoses at the bottom.

BILGE PUMP  
POWER SOURCE  
(50A FUSE)

FROM STBD. ENG.  
ISOLATOR TO  
CHARGE HOUSE  
BANK (60A FUSE)

FROM PORT ENG.  
ISOLATOR TO  
CHARGE HOUSE  
BANK (60A FUSE)

Identify fuses, carry spares



Secure spare fuse near active one





Stuffing box temp, drips?



Stuffing box wrench caddy







Cleaning  
spray  
bottles  
ready







Fresh water tap and bucket

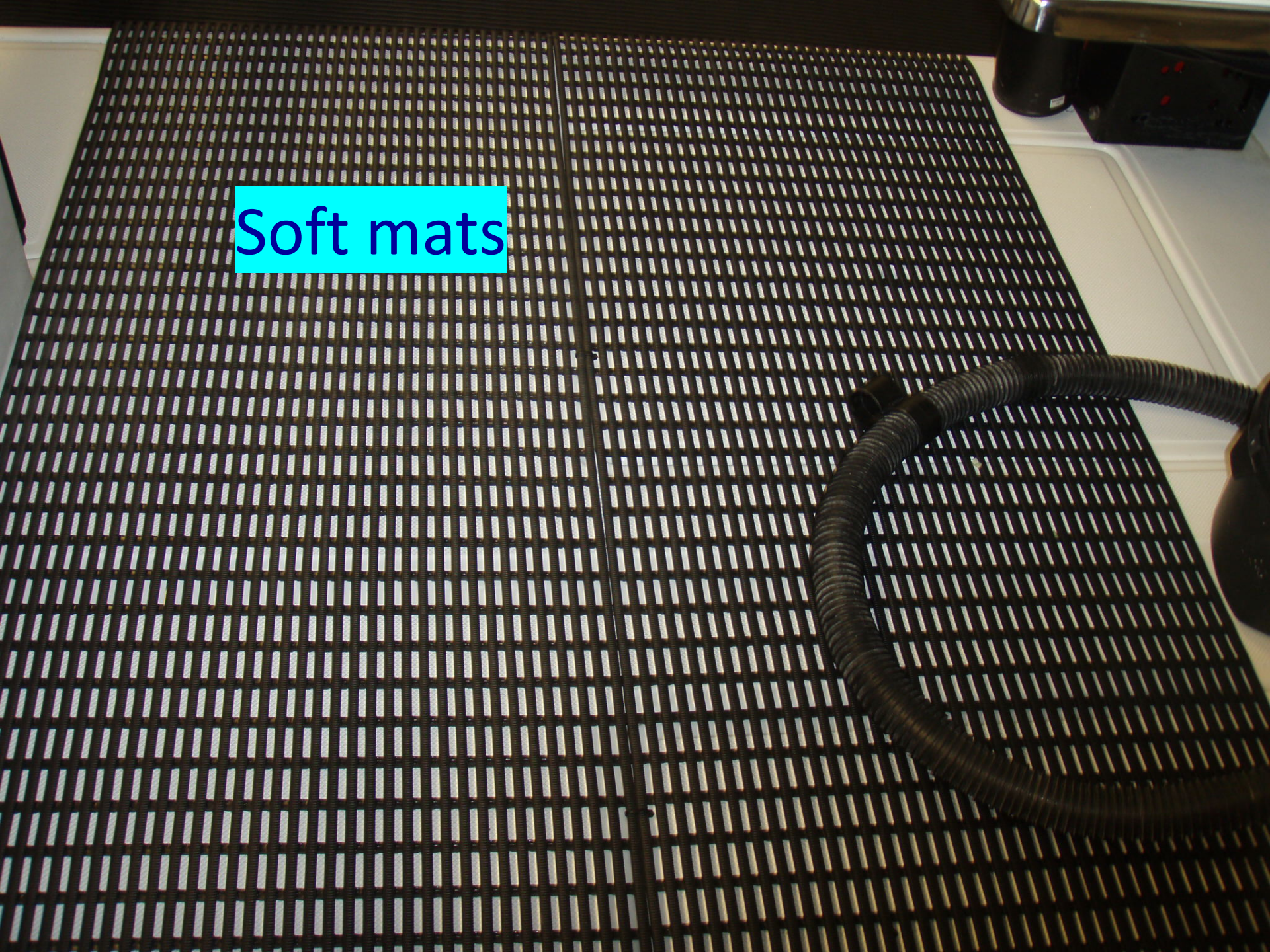




Cleaning product shelf

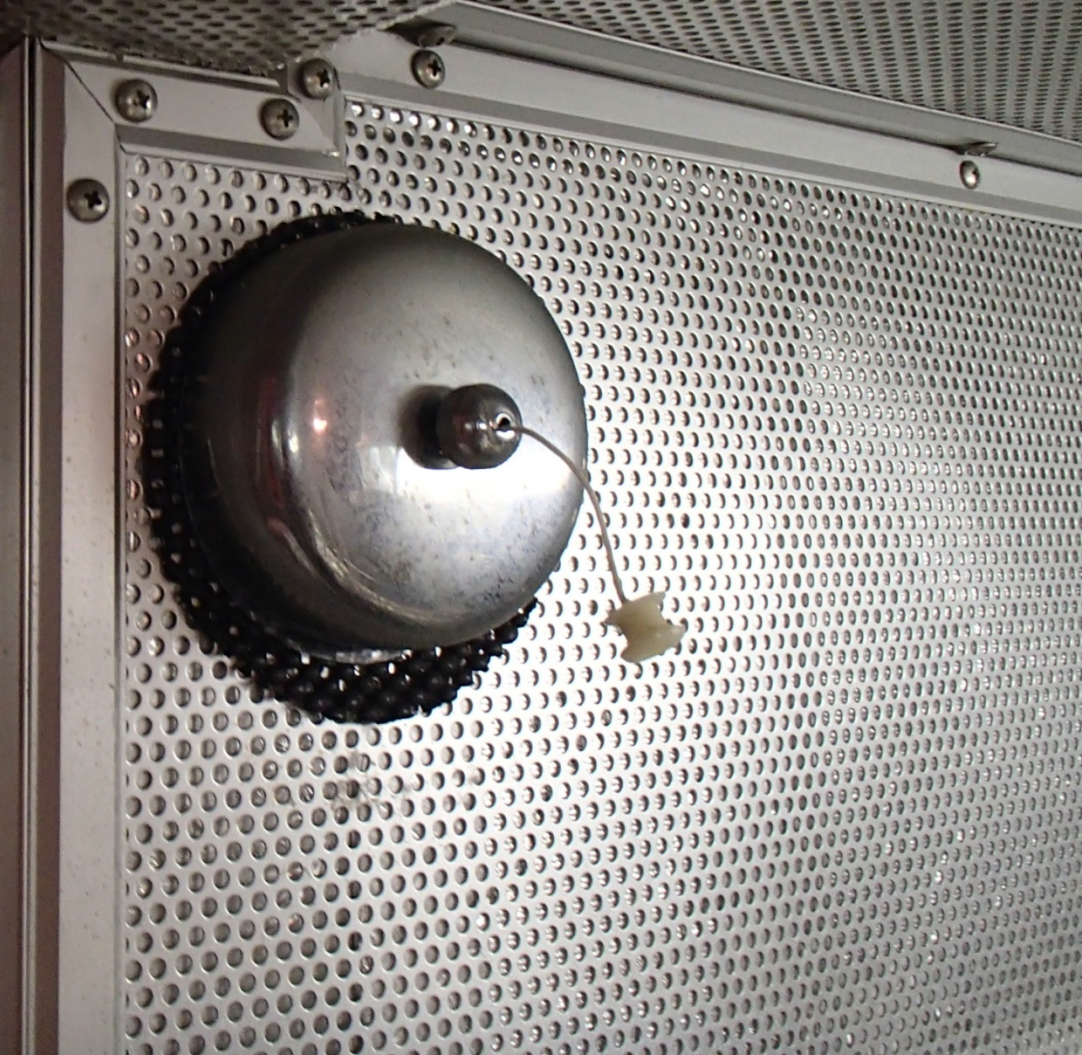


Soft mats





Engine room temp and clothes line







Air circulation fans – move air/air flow



# Engine Room Bilge Tips

Plug leaks, absorb oil








Suction mesh bag for through hull bungs





Zippered pillow bag for engine diapers





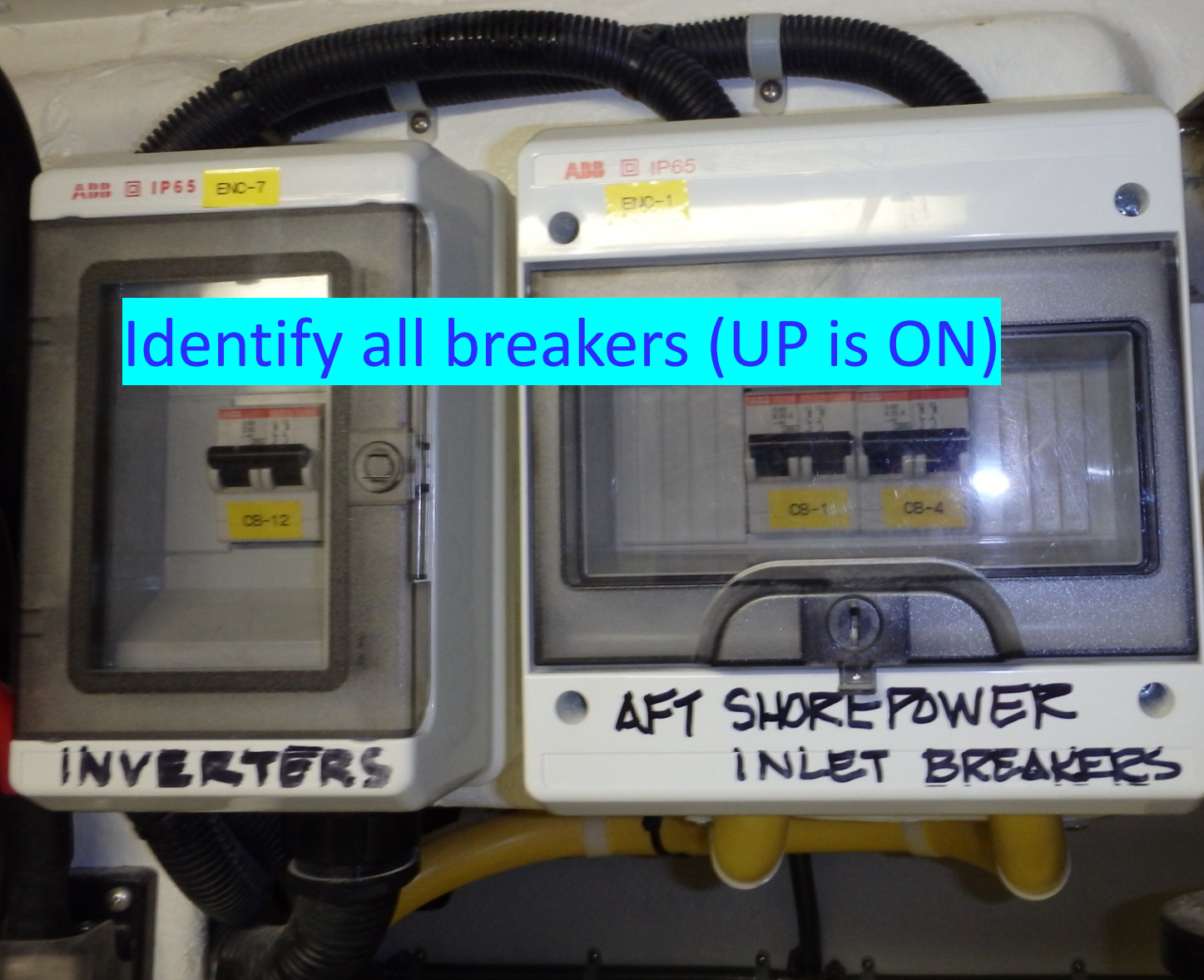
Strive for a clean, dry bilge



# Wet Vacuum

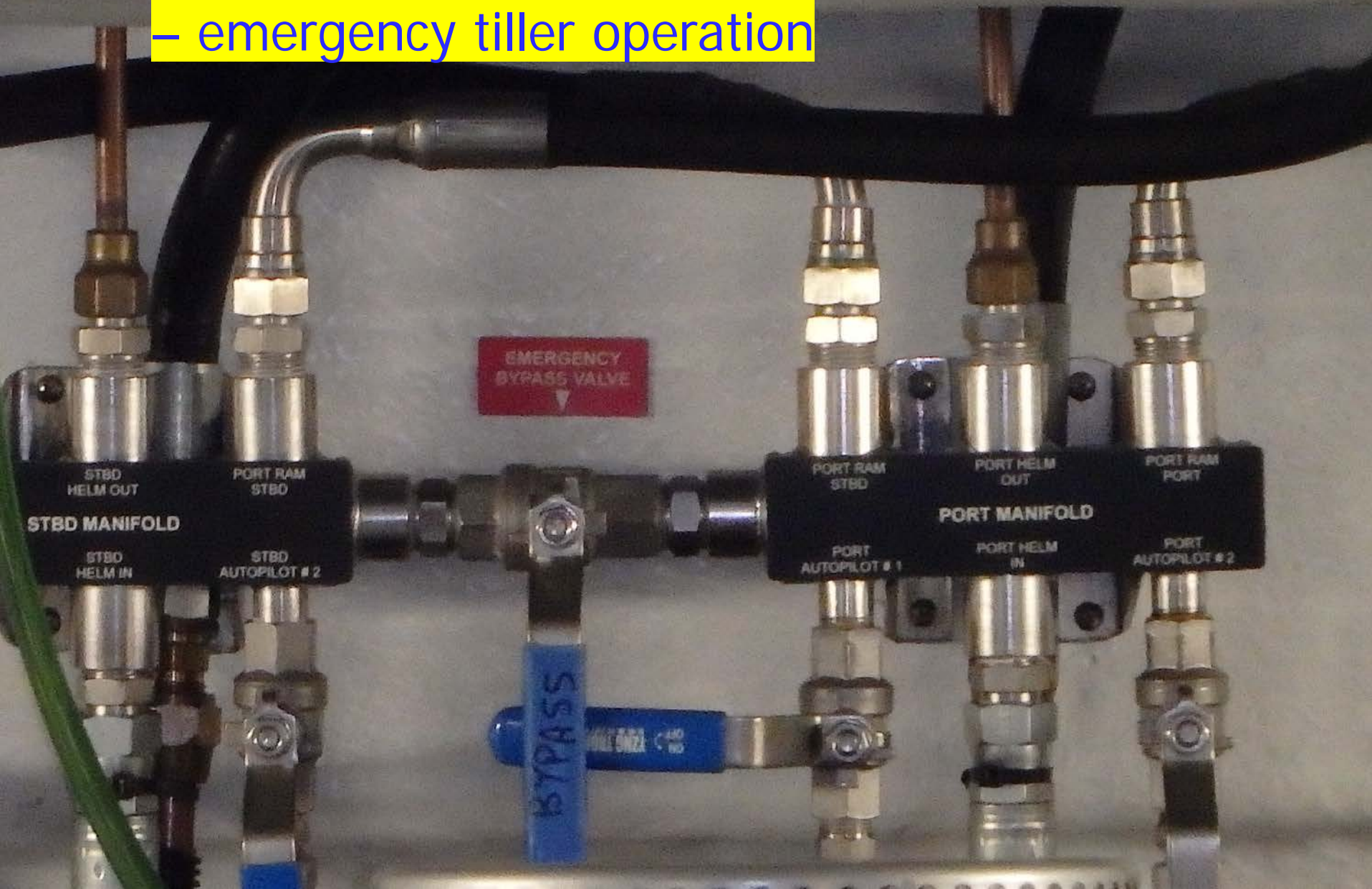


Identify all breakers (UP is ON)





Steering manifold – bypass valve  
– emergency tiller operation



Night lights





# Questions? Other ideas?

**SDMC / JMYS Maintenance sheet\***

PS - I am always on the hunt looking for other ideas, if you have any recommendations please let me know.



A full-page background image of a sunset over the ocean. The sun is a bright, glowing orb on the horizon, casting a shimmering path of light across the dark, choppy water. The sky is filled with large, billowing clouds that are illuminated from below, giving them a warm, orange and yellow glow. The overall scene is serene and majestic.

# Thank you!

Please fill out the sign-up sheet

Dial-In-Your-Trawler series PDF on [www.JMYS.com](http://www.JMYS.com)