

Dialing In Your Trawler

Suggestions on how to track and monitor the gear and systems on your boat. Tips and Ideas to make boating more fun and enjoyable



by Jeff Merrill, CPYB
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Racing sailboats led to this course

Trawlerfest

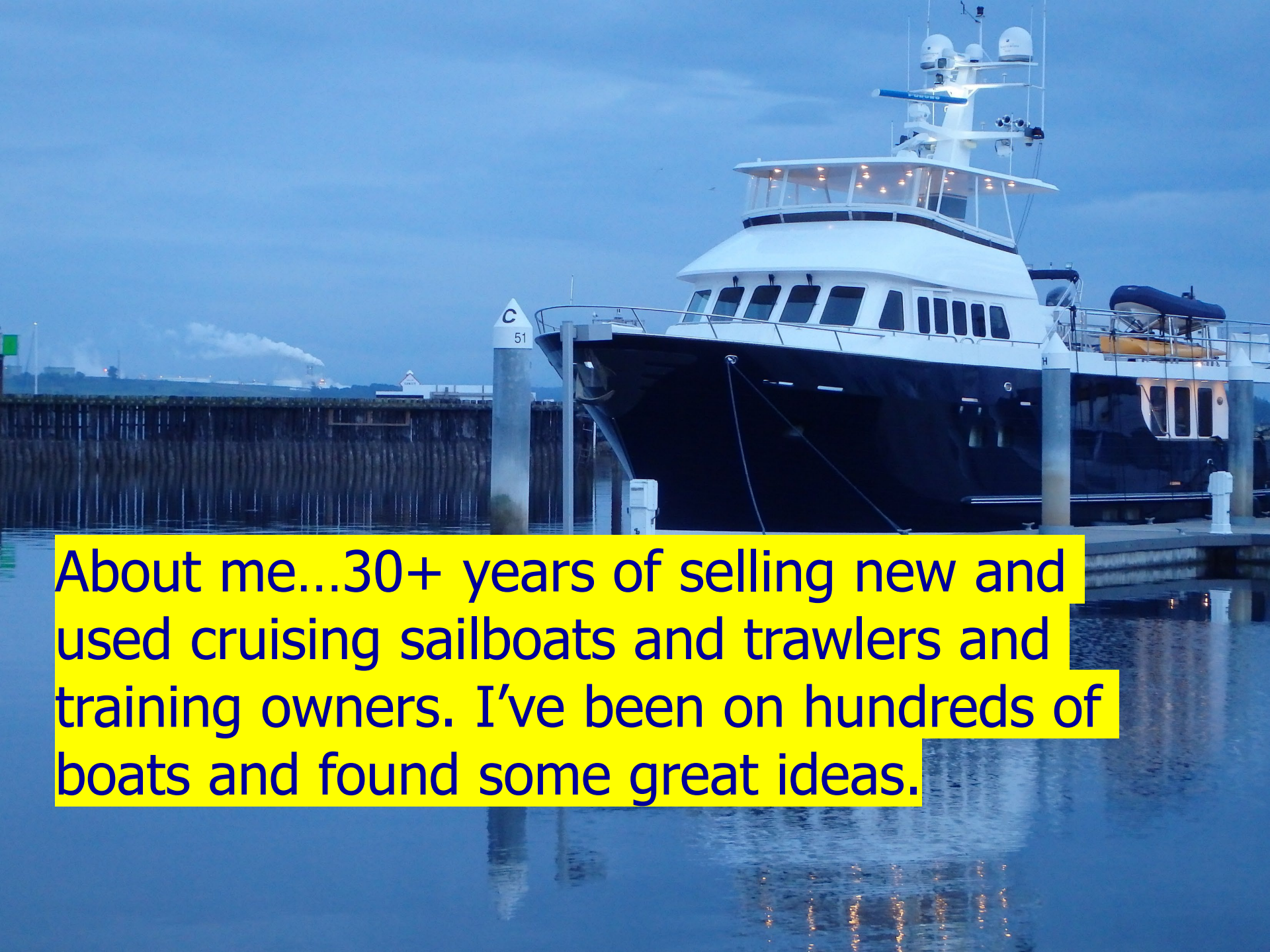
BOATSHOW • EDUCATION • RENDEZVOUS

Saturday September 30, 2023

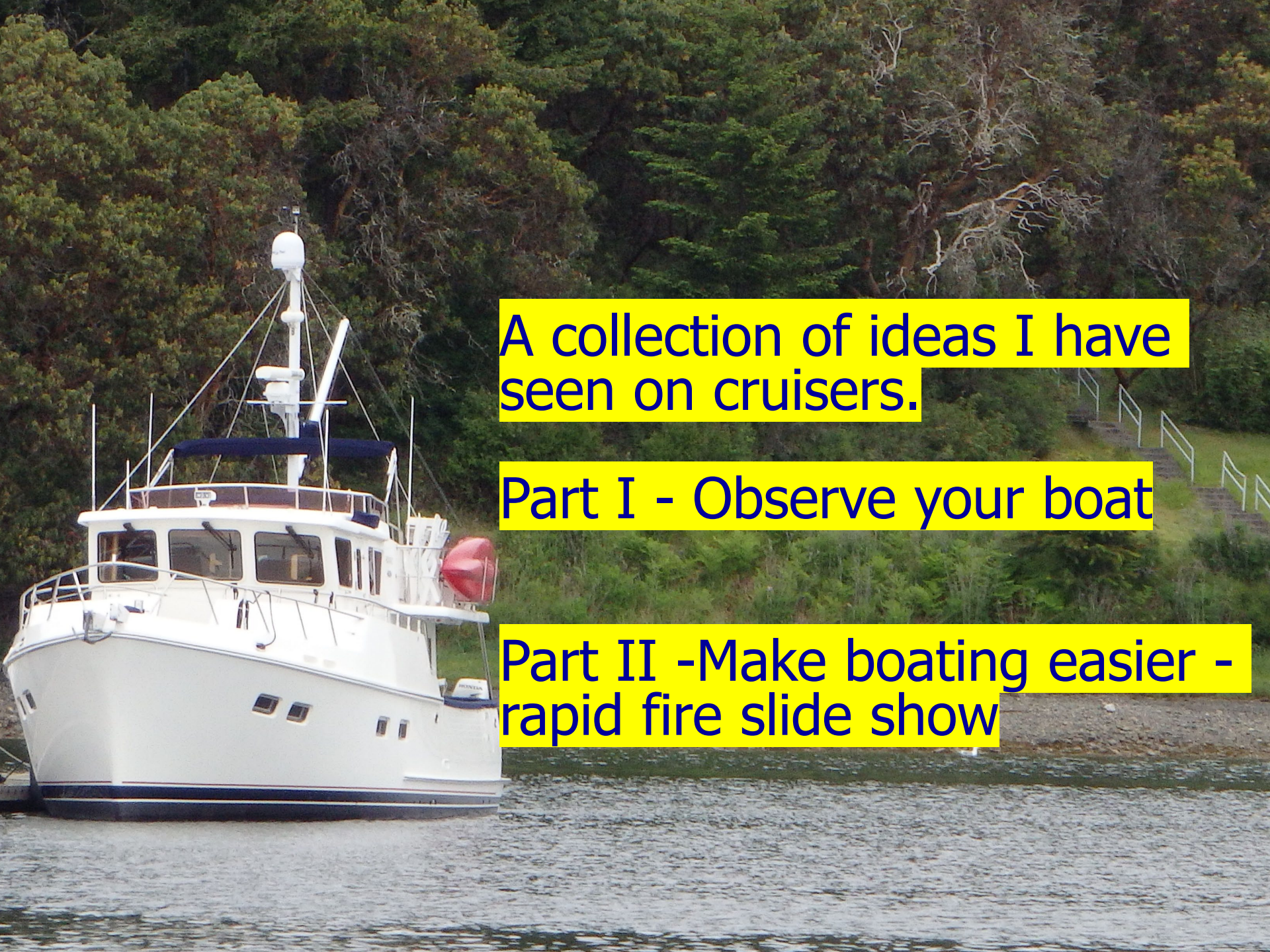
Pilothouse – Gauge Reference

My first power boat “AHA”





About me...30+ years of selling new and used cruising sailboats and trawlers and training owners. I've been on hundreds of boats and found some great ideas.



A collection of ideas I have seen on cruisers.

Part I - Observe your boat

Part II - Make boating easier - rapid fire slide show

! Noticing details will help you monitor your systems and better understand your boat.

I will post this PowerPoint as a PDF and include the handouts on www.JMYS.com within a week.

Please interrupt with questions

Sign up list for email notification.

HANDOUTS

- Summary Dialing in Your Trawler articles
- USCG inspection Vessel Safety Check
- Maintenance Log - Main Engine
- SDMC / JMYS Maintenance Guideline



ialing-In-Your-Trawler articles Jeff Merrill has written are available



Handout* A list of the articles I have written for Ocean Navigator magazine



Of course, a compass

Mar/Apr 2020



Enabling your boat to talk

Nov/Dec 2019



Ship's Papers

Jul/Aug 2019

Dialing-in-your-trawler articles - the series

There are over two dozen articles in the "Dialing-in-your-trawler" series so far.
Each article has been published in ***Ocean Navigator*** magazine.
You can read the articles on the ***Ocean Navigator*** website, "Power Voyaging" section
All articles are also archived on JMYS.com -|- Trawler Lifestyle section -|- Ocean Navigator

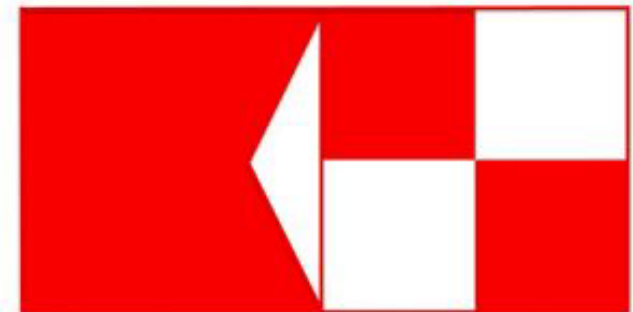
Here is a summary of the article titles:

Dialing in your trawler	
	Engine Essentials
Anticipating Anchoring	
	Steering Straight
Wanderers Water	
	Dinghy Dynamics
Night Running	
	Sea Safety
In Charge - 12V DC	
	Keeping Current - 120V AC

Expert Instruction From The Brands You Trust.

Offshore Cruising: Preparing Craft & Crew

Preparation is key to successful cruising. Regardless of the size, make or model of your boat, understanding its critical systems and having a plan is crucial to keep your craft performing efficiently and safely. Join yacht broker, boatbuilder and TrawlerFest instructor Jeff Merrill in this exclusive online course designed to help you prepare yourself, your boat and your crew to get the most out of your offshore boating adventures.



Boaters University

YouTube videos



SKILL

TIP #2

Learn something from every boat

Every vessel has a
number of components
that require attention and
observation, we are all
“in the same boat”

As a yacht broker I know that eventually you will sell your boat. You want a reliable vessel, and Buyers want maintenance records



Do you keep your maintenance log up to date?

Your Boat is "alive"

Like your body, it make senses that regular
"CHECK-UPS" will keep your boat healthier



Unlike annual human medical exams, a trawler should have many inspections (hourly at first) to check systems





Be observant and pay attention

What can you do to keep track of things
and make boating easier?

A photograph of a boat's dashboard area. The dashboard is dark grey and features several electronic components. On the left, there is a black VHF radio with a coiled microphone. Below it is a small white electronic device. In the center, a laptop is open on the dashboard. To the right of the laptop is a circular analog gauge with a digital display. Further right are two large, rectangular electronic displays, likely for engine monitoring or navigation. Above the dashboard, there are three large windows with white frames, providing a view of the water and other boats. A black compass is mounted on the right side of the dashboard. The background shows the interior of the boat with wood paneling.

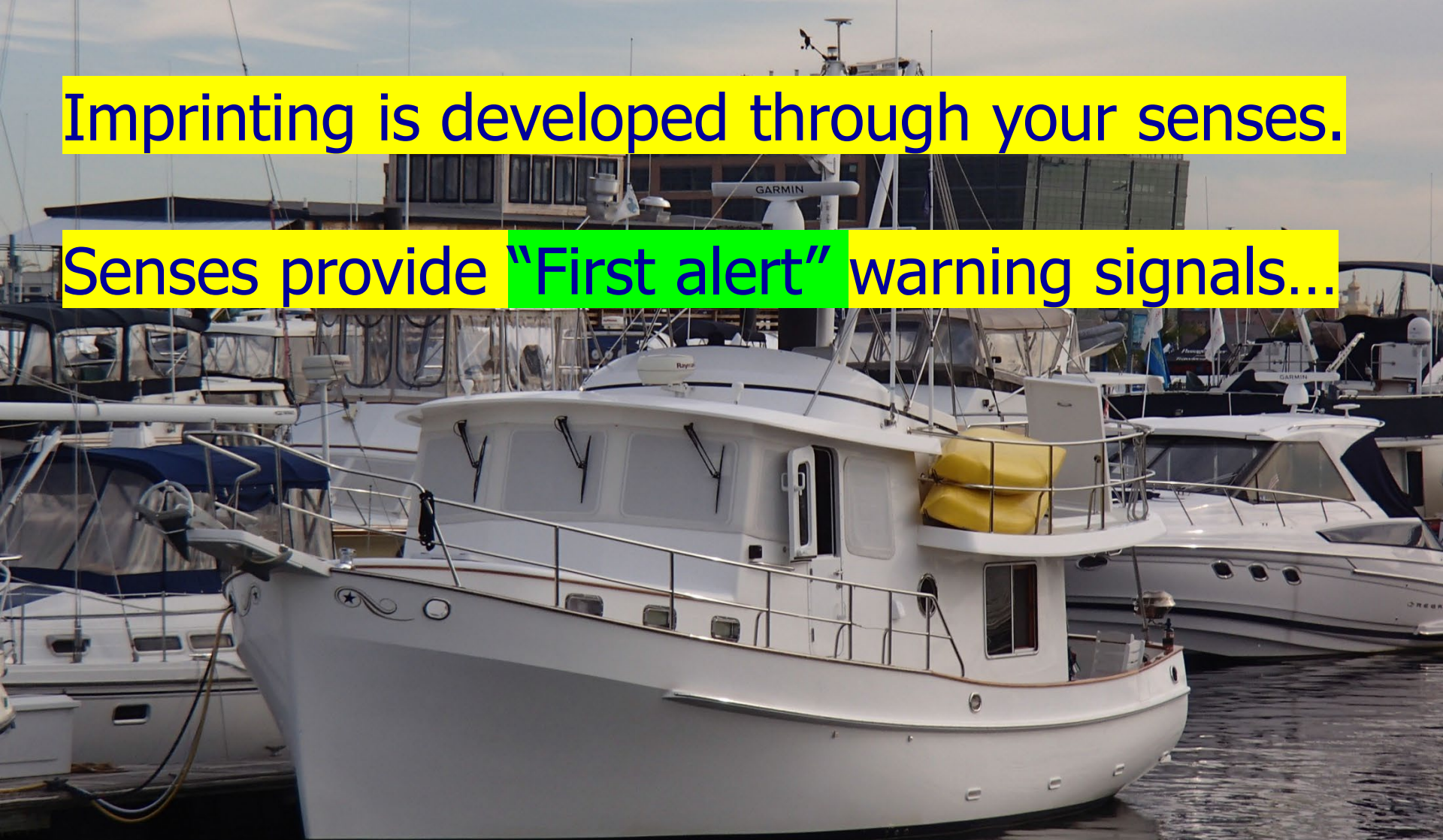
BASELINES

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...



A photograph of a boat on a body of water during sunset. The sun is low on the horizon, creating a warm orange and yellow glow across the sky and reflecting on the water. The boat is in the lower left, moving away from the viewer. The background shows a distant shoreline with some buildings and trees.

Sight/Vision

- Keen an eye on things...
- Visual observation is the most common way to notice if something is amiss.

Hearing/Sound

New noises to identify:

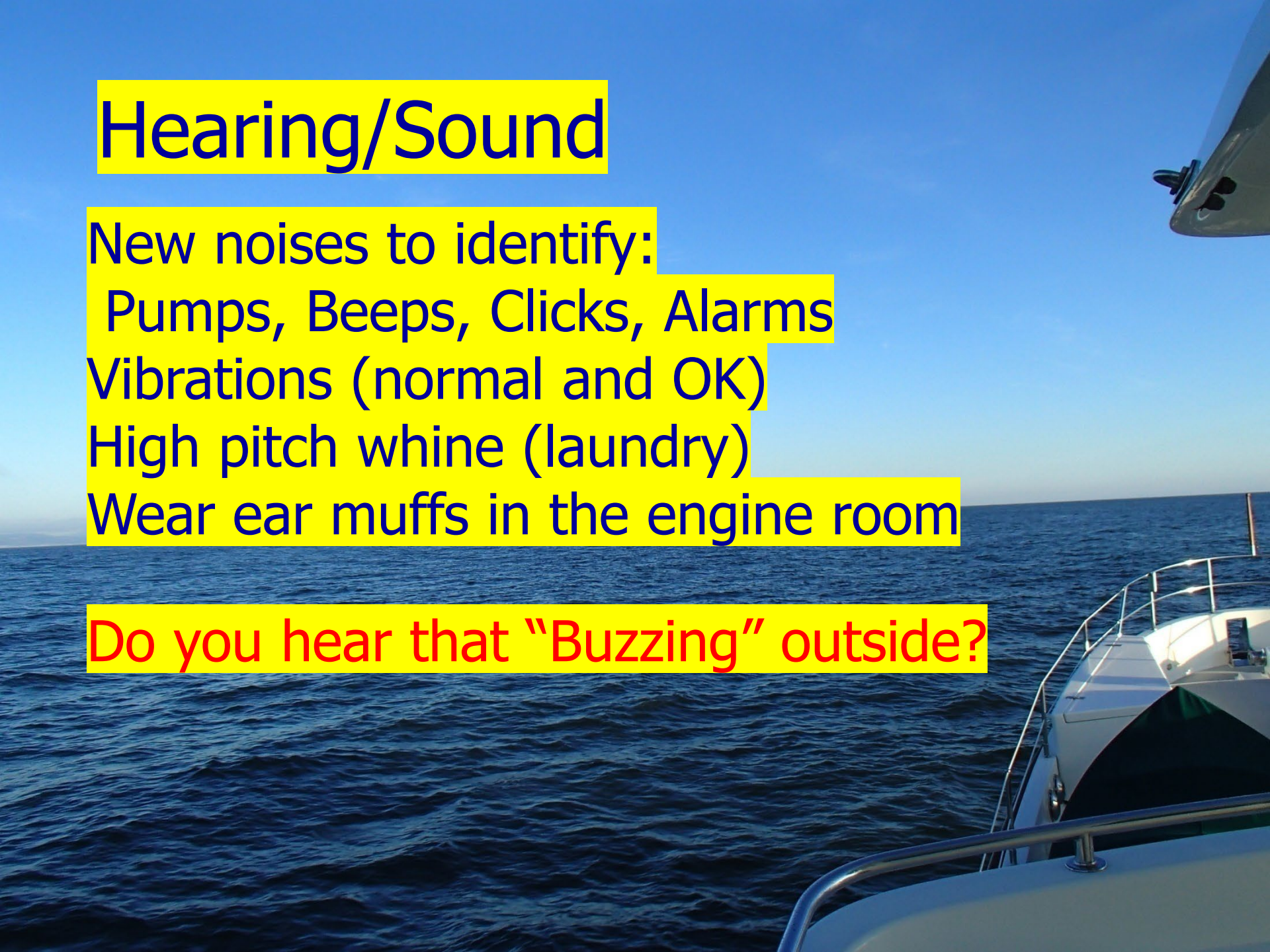
Pumps, Beeps, Clicks, Alarms

Vibrations (normal and OK)

High pitch whine (laundry)

Wear ear muffs in the engine room

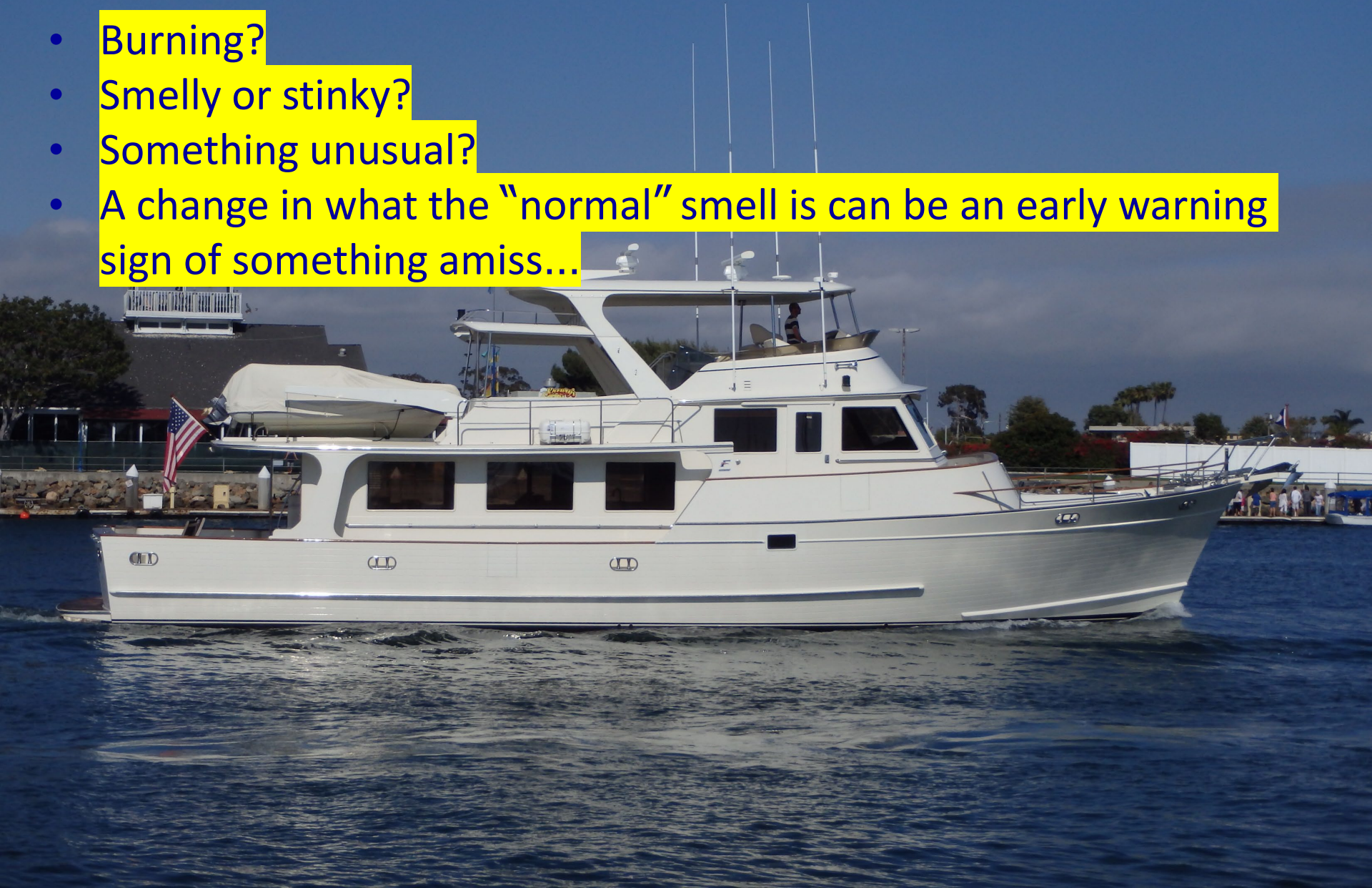
Do you hear that "Buzzing" outside?





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)

Machinery hot parts – be careful of burns

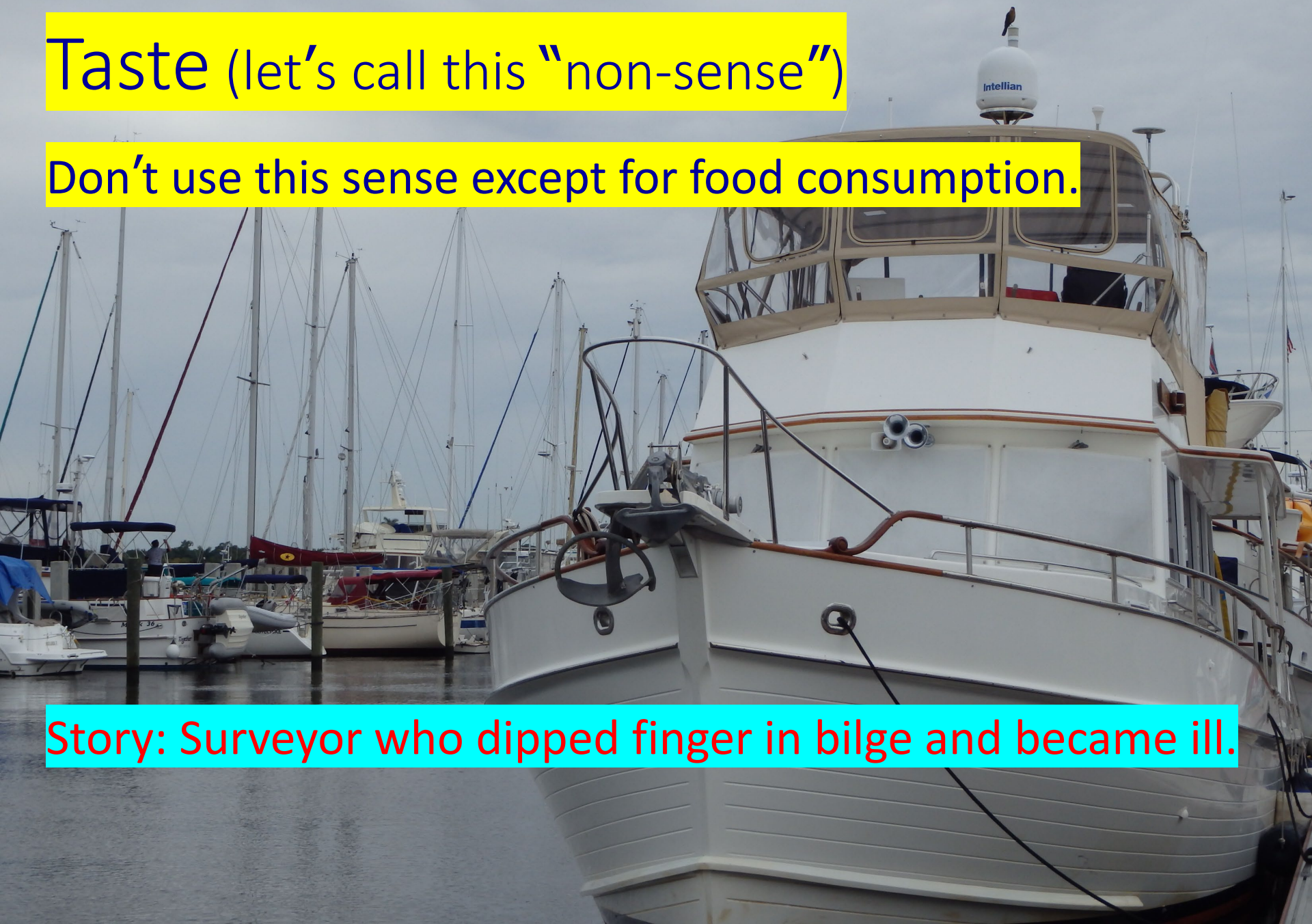
Gloves – anchoring and handling dock lines
(wood dock splinters)

Shoes on deck: hatch dogs, sure footing,
around windlass, anchor and chain

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

Don't use this sense except for food consumption.

Story: Surveyor who dipped finger in bilge and became ill.





Common Sense

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

5-year expiration...

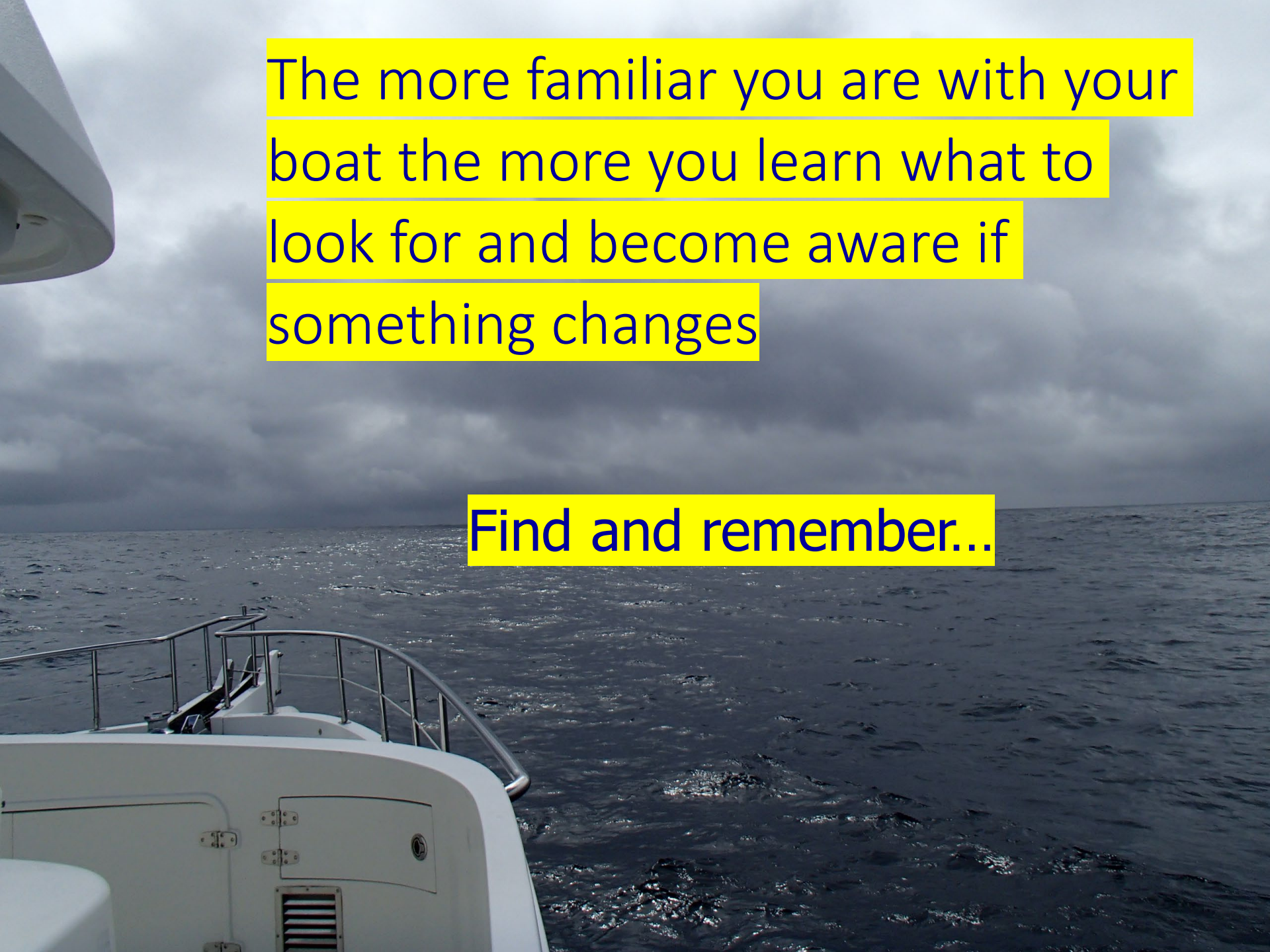


GET YOUR BOAT ON TRACK

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

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



A photograph taken from the perspective of someone on a boat, looking out over a dark, choppy sea. The sky is filled with heavy, grey clouds. In the foreground, the white hull and metal railings of the boat are visible. The text is overlaid on the upper part of the image, with each line in a separate yellow box.

The more familiar you are with your
boat the more you learn what to
look for and become aware if
something changes

Find and remember...

Locate where things are installed

Anti siphon vents?

Where is your autopilot rate gain compass?



How about your GFCI outlets and shore power breakers?

Temperatures to monitor



What other temperatures should you record?

- Stuffing box
- Engine coolant
- ER forward and aft bulkhead



Analog "needle marks"



Mark normal needle position.

Do you have a bicycle pump?



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

Use standard 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 (SAE 30W) may be added but will cause harder steering.

MAXIMUM RESERVOIR LEVEL

PRESSURE

Example of "tide mark" level



Learn the "INS"...

OLD

↑ ↑ ↑ IN ↑ ↑ ↑ ↑

10
STBD
MAIN
ENG

RETURN FROM MOTORS

12
PORT
MAIN
ENG

RETURN FROM TRANSFER PUMP

29
FUEL

#30
20KW
GEN



and OUTS...

To and From, Supply and Return



Get a Label Maker and use it!

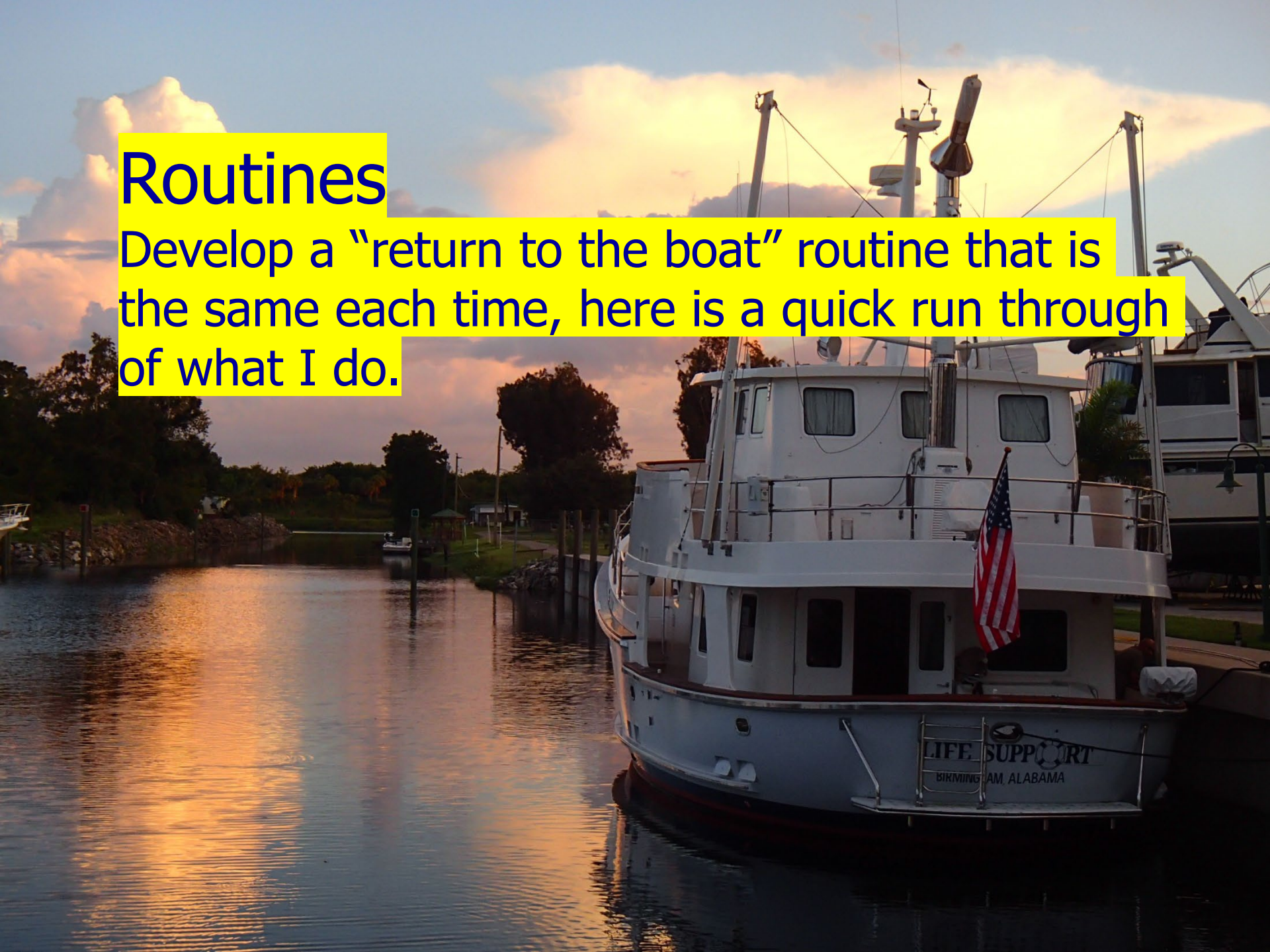


Bow Thruster ON/OFF



Routines

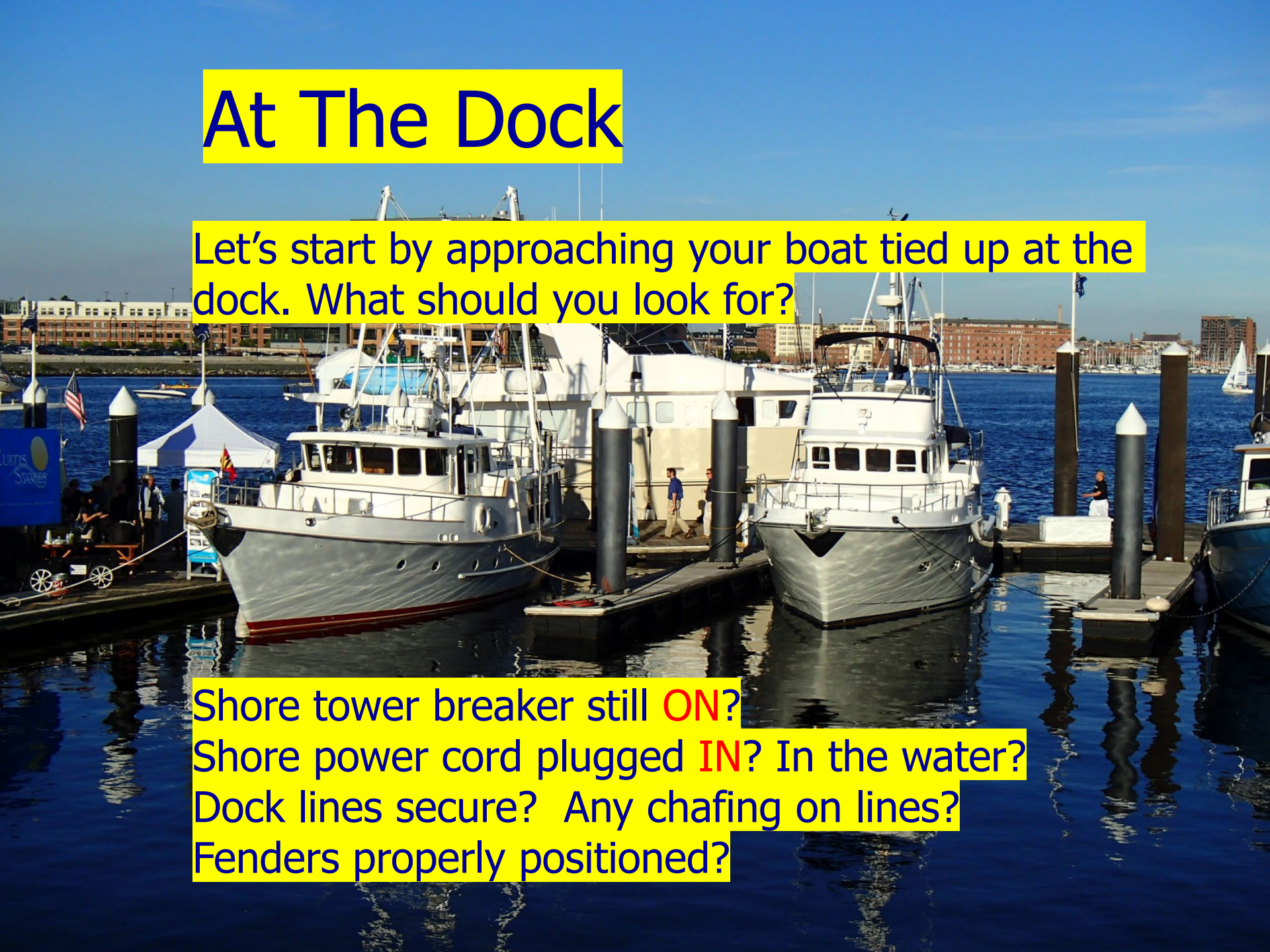
Develop a “return to the boat” routine that is the same each time, here is a quick run through of what I do.



At The Dock

Let's start by approaching your boat 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



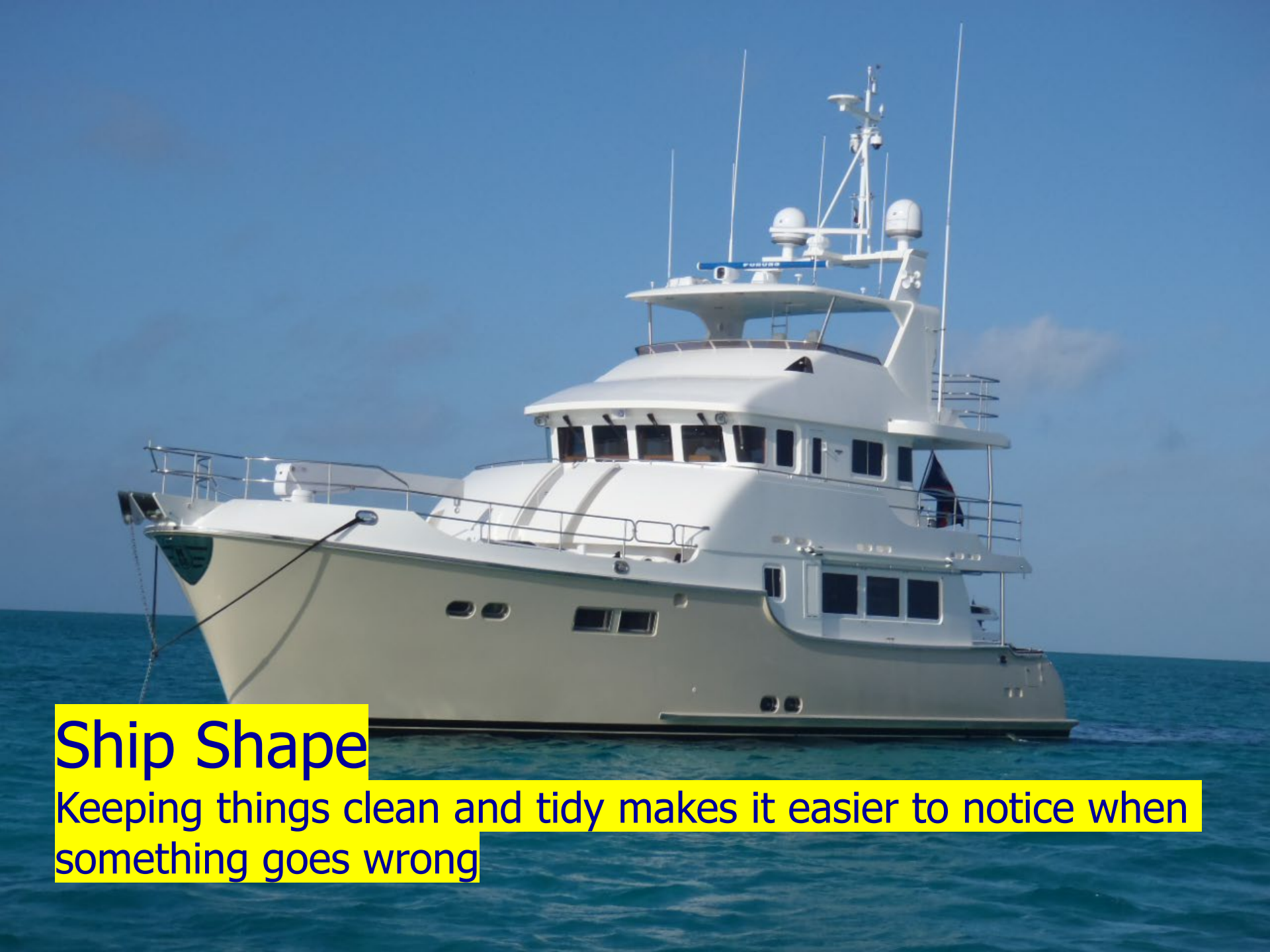
Inside- My First Two Priorities

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!



Ship Shape

Keeping things clean and tidy makes it easier to notice when something goes wrong

USCG Vessel Safety Check

Handout* This is a great way to make sure you are in compliance



VESSEL SAFETY CHECK (VSC)

To be completed by a U.S. Coast Guard approved Vessel Examiner.
See the back of this form for a brief explanation of required items.
A Federal Requirements pamphlet is also available.

Date of VSC: _____

Decal Awarded: Yes ☐ No ☐

Owner/Operator Name: _____

Owner/Operator has attended a CGAUX, USPS, State
or _____ Boating Safety Class: Yes ☐ No ☐

Location of VSC - County: _____ State: _____

Replaced decal was: Last Year ☐ Outdated ☐ First time ☐

VESSEL INFORMATION:

Registration or
Documentation Number: _____

HIN: _____

Length: <16 ☐ 16-25 ☐ 26-39 ☐ 40-65 ☐ >65 ☐

Powered by: Gas ☐ Diesel ☐ Sail ☐ Other ☐

Area of Operations: Inland ☐ Coastal ☐

Type: PWC ☐ Open ☐ Cabin ☐ Other ☐

VESSEL SAFETY CHECK DECAL REQUIREMENTS

Item	Yes	No	N/A
1. Display of Numbers			
2. Registration/Documentation			
3. Personal Flotation Devices (PFD)			
4. Visual Distress Signals (VDS)			
5. Fire Extinguishers			

RECOMMENDED AND DISCUSSION ITEMS

(While encouraged, items below are not VSC requirements)

Item	Yes	No
I. Marine Radio		
II. Dewatering Device & Backup		
III. Mounted Fire Extinguishers		
IV. Anchor & Line for Area		
V. First Aid and PIW Kits (**over)		



There are several areas where you can
"Dial In"

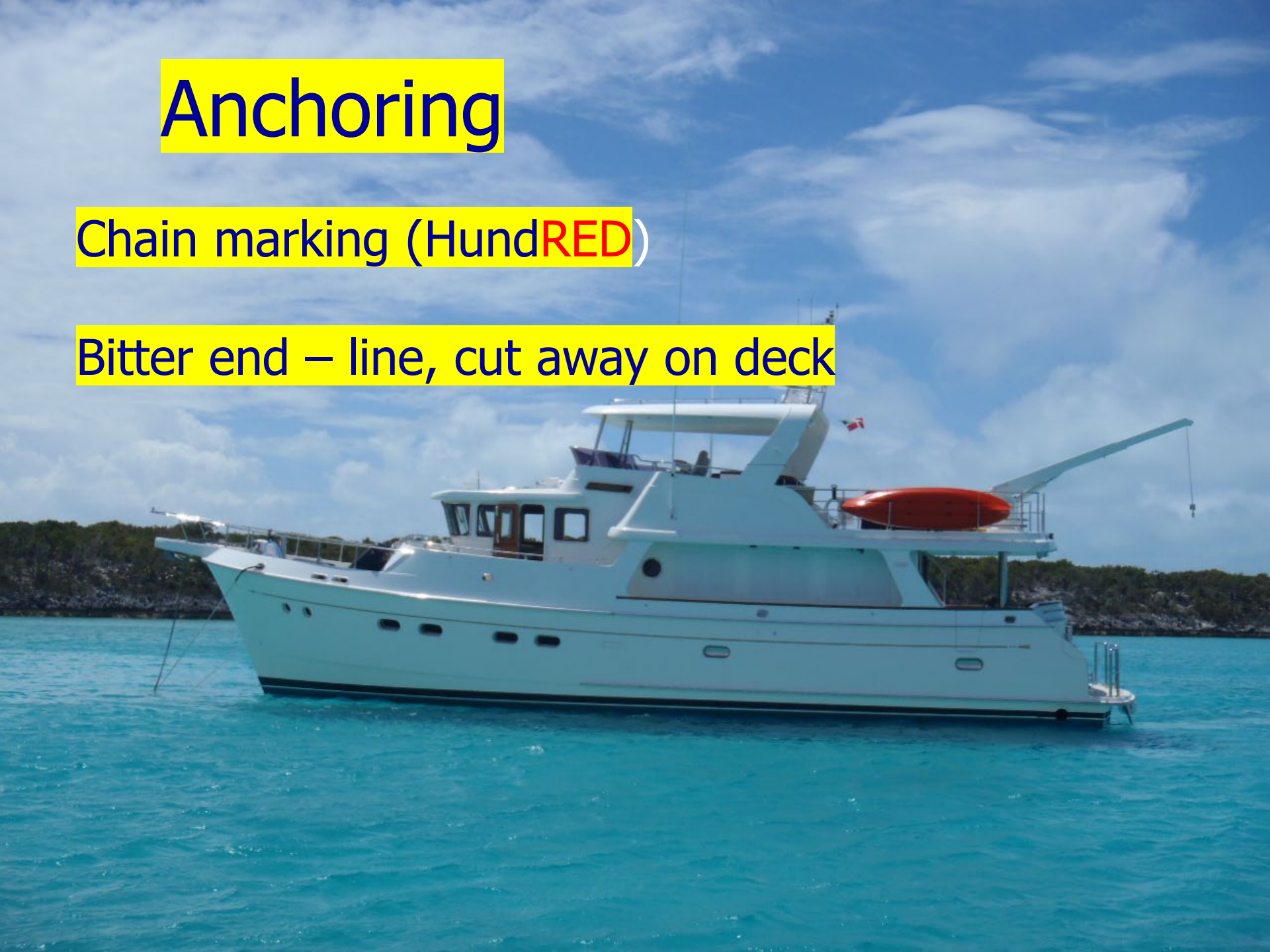
Anchoring Ideas



Anchoring

Chain marking (HundRED)

Bitter end – line, cut away on deck



Hund-RED's

NORDHAVN N5725
ANCHOR CHAIN
COLOR KEY

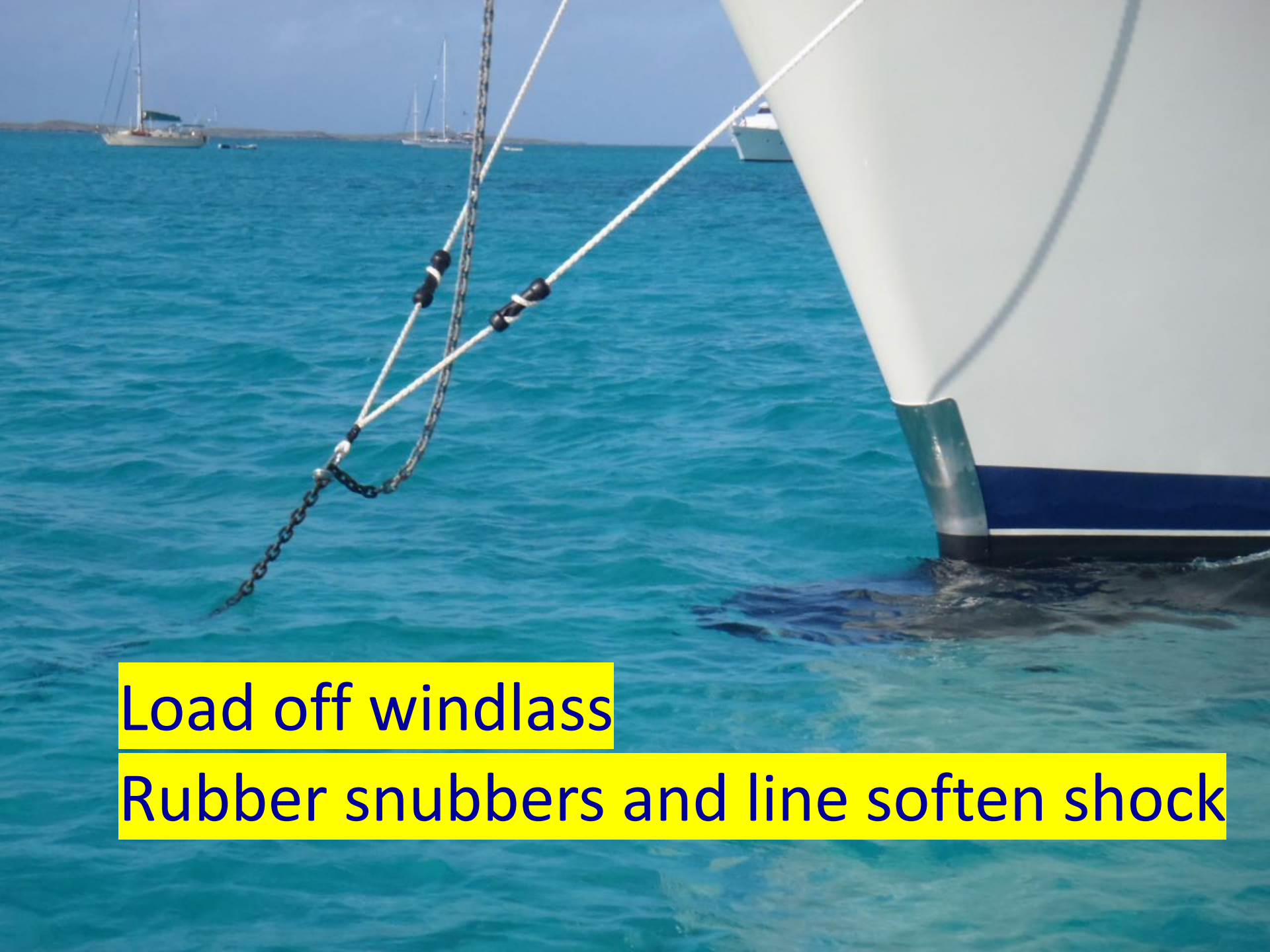
WHITE	=	50 FT
RED	=	100 FT
RW	=	150 FT
RR	=	200 FT
RRW	=	250 FT
RRR	=	300 FT
RRRW	=	350 FT
RRRR	=	400 FT

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

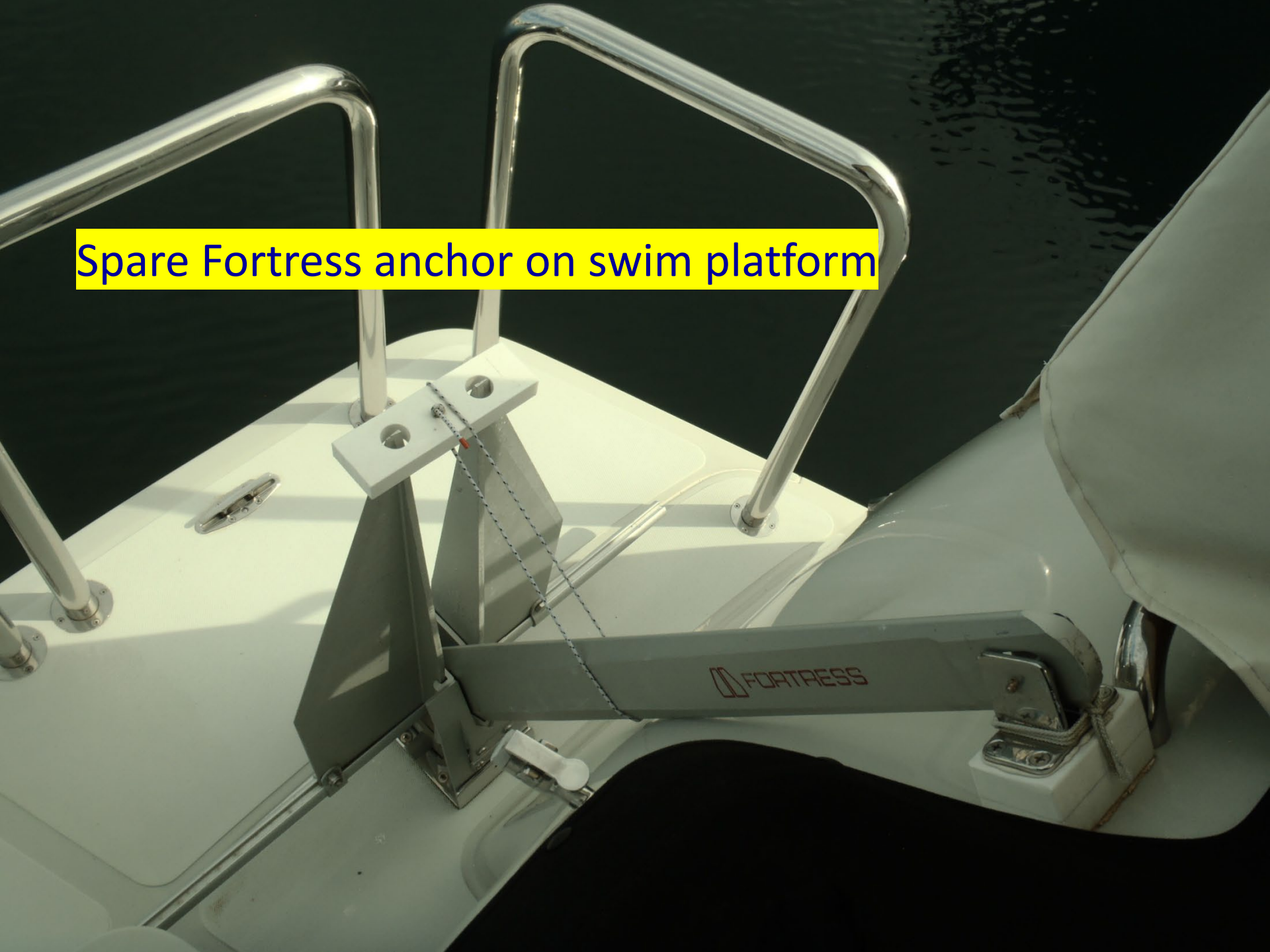
Chain tensioner, snug anchor on roller





Spare Fortress anchor on foredeck

Spare Fortress anchor on swim platform

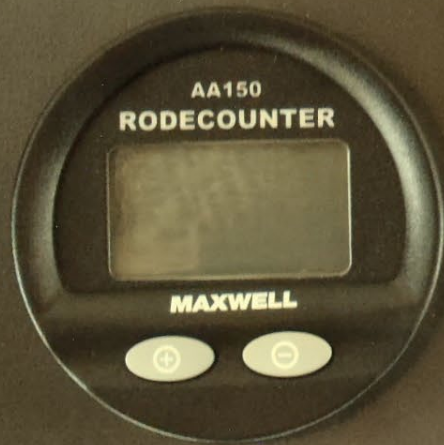


Chain color coding by windlass control



Last 50' feet or anchor at waterline.

Can you disconnect from bitter end?



ANCHOR CHAIN
1st WHITE AT 40'
WHITE MARK EVERY 50'
LAST 50' PAINTED RED



Folding pad eye for clipping on fenders



Mark your fins for haul out



Deck and Dinghy Tips



Secure outside deck lockers



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



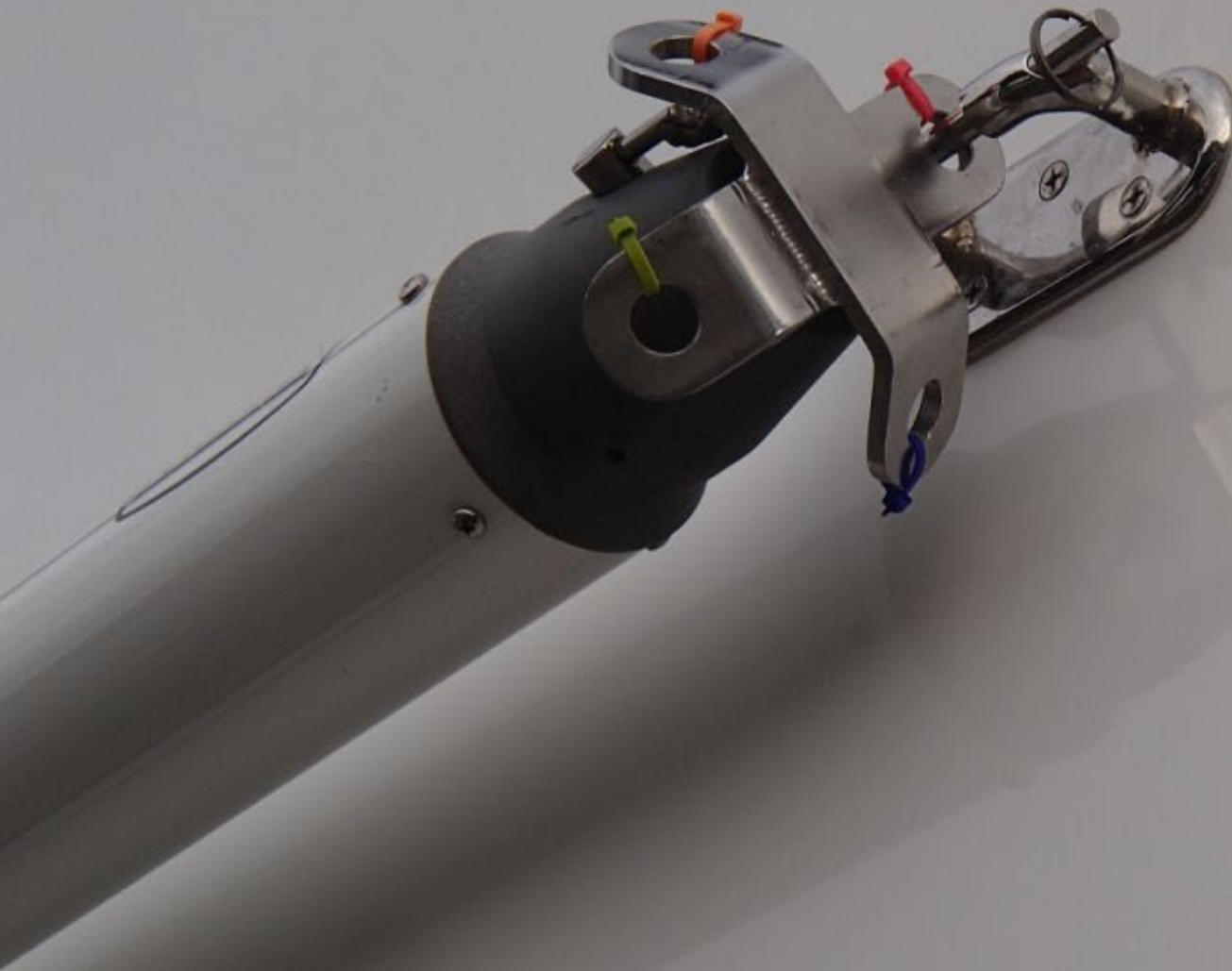
EMERGENCY LIFE RAFT INFLATION PROCEDURE

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 ship's deck. The crane has a cylindrical base with two vertical black markings. A yellow text box is overlaid on the image. In the background, a white railing and a steering wheel are visible.

Mark crane pick up to simplify line-up at return

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

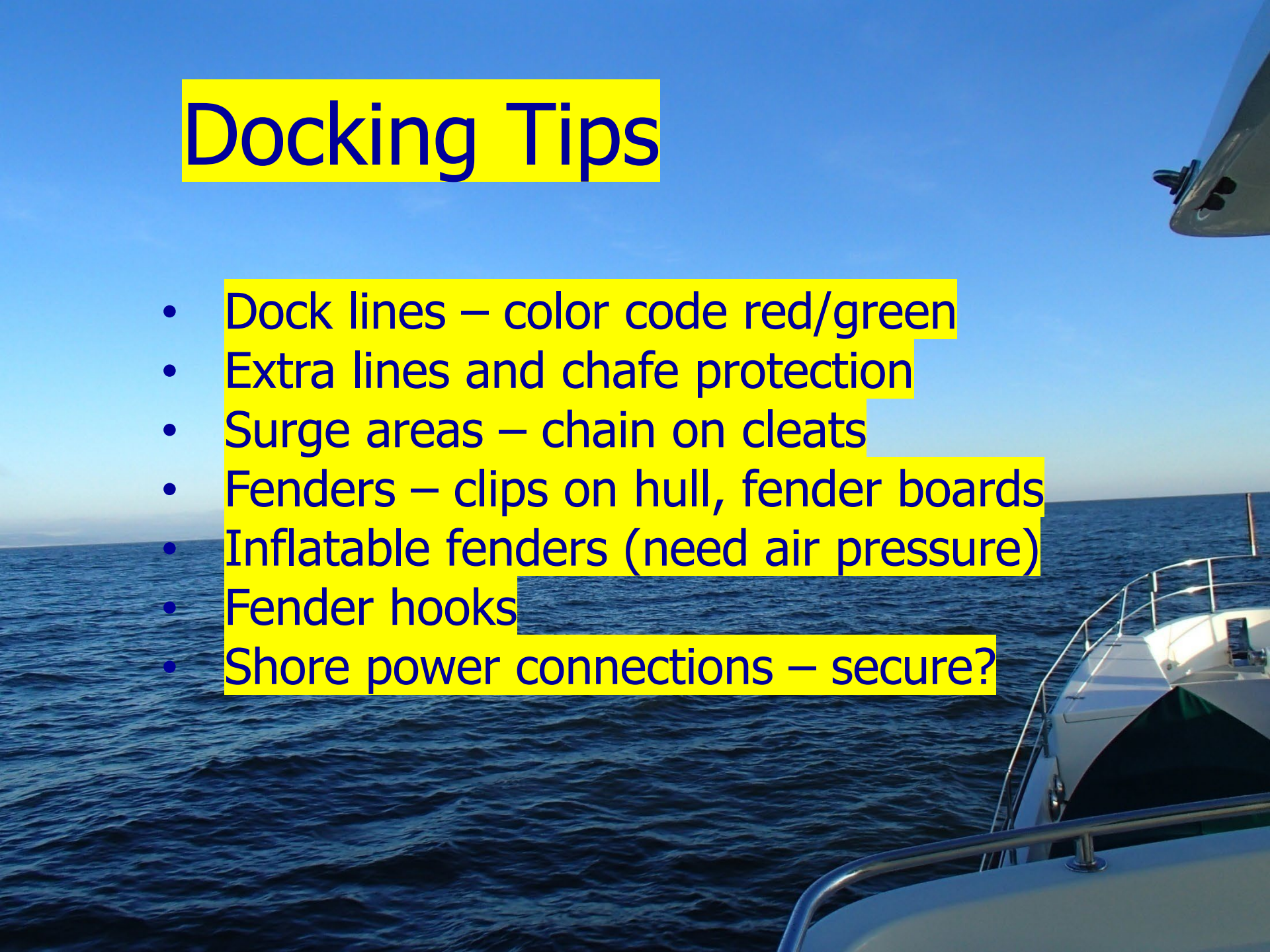




Outboard skid plate

Docking 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

Fender Boards



Boat Hook Ready!



Shore Water: Filter Before Adding To Tanks



Hardware store cartridges
sediment removal, charcoal –
remove impurities



Water
softener

The background of the slide is a photograph of a ship's deck at sunset. The sky is a deep blue with a hint of orange near the horizon. The sea is visible in the distance. In the foreground, there is a metal railing and some equipment on the deck. The text is overlaid on this image.

Main Engine Maintenance Log

Handout - Nordhavn 55*

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

Nordhavn 55

Main Engine Maintenance Log

John Deere I Luger L1276A.2C/MG5091SC Serial # 1271-2708 :340 HP @ 1800 RPM

*Fuel, Coolant (brand and gallons) Filters (air, fuel oil), Belts,
Zincs, Oil Changes*

Service contact:

Engine mounts, drips/leaks

Engine mounts, shaft, stuffing box, shaft brush

Main Engine Service records

Date	Hours	Project	Comments
Note - create a separate maintenance page for ALL major equipment:			
		Black holding Toilets	
		Crane or Davit	
		Engine 2 (twin or wing)	
		Fuel Log	
		Fuses and Breakers	
		Generator (s)	
		Haul out	
		Hydraulics	
		Laundry	
		Lube oil	
		Main Transmission	
		Shaft, stuffing box, propeller	
		Stabilizers	
		Steering	
		Tender and outboard	
		Thruster(s)	
		Watermaker	
		Windlass	
		Zincs	

Maintenance Log - Records

Note all purchases and upgrades

Keep receipts

Track oil changes and all service repairs

This collected information is an important record and doubles as a sales tool when you are ready to sell your boat

Handout*

Steve D'Antonio and
Jeff Merrill Maintenance List

Maintenance Guidelines and Recommendations

Engines and Generators

- Check engine oil, transmission fluid and coolant daily/before each use
- Change oil and filters seasonally or every 200 hrs. whichever comes first
- Change primary and secondary fuel filters seasonally, or if vacuum exceeds 5 in. hg. All primary filters should be equipped with vacuum gauges, see <https://www.proboat.com/the-vacuum-gauge-tool.html> for more on vacuum gauge selection, installation and use.
- Adjust valves per engine manufacturer's requirements (typically every 1000-2000 hrs.). <http://www.cruisingworld.com/how/keep-valve-train-track>
- Check belts monthly, replace every two years.
<http://www.cruisingworld.com/how/orderly-transfer-power>
- Check/replace air filters as needed. These should be equipped with vacuum monitors. See <http://stevedmarineconsulting.com/fuel-and-air-filter-service-protocols/>
- Pressure test cooling systems annually.
- Flush and refill cooling systems every two years or 1000 hrs. whichever comes first. Coolant should be analyzed annually.
<http://stevedmarineconsulting.com/photo-essay-may-2015/>
<http://www.cruisingworld.com/how/engine-cooling-system-tips>

PART TWO

IDEAS THAT YOU CAN USE ON YOUR TRAWLER



by Jeff Merrill, CPYB
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I hope you will say...

That's a good idea!

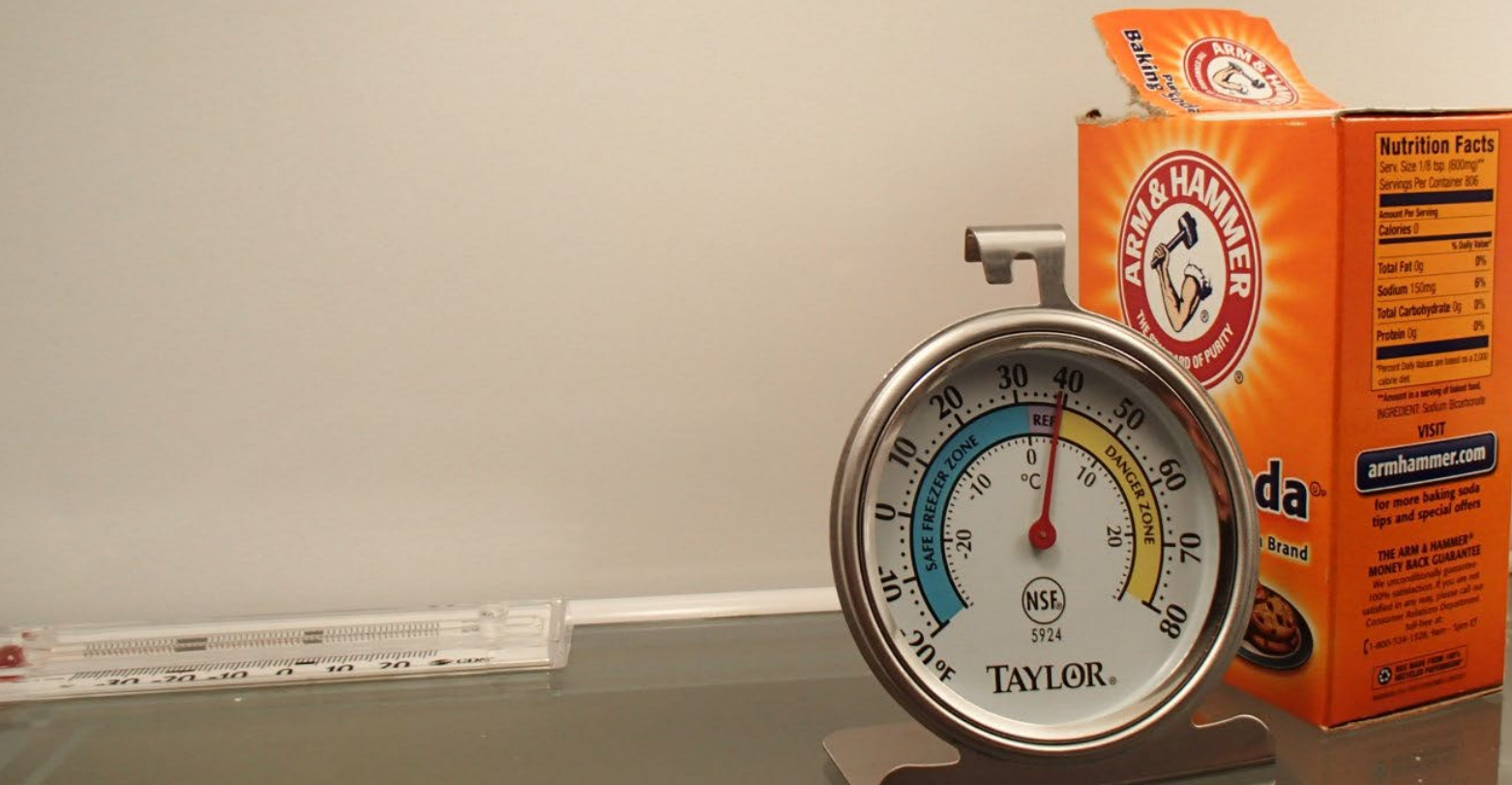
Clear plastic protects wood surfaces



Refrigerator organization – bars and tubs



Thermometer and baking soda in refrigerator



Story - leave boat, ice cube test...

Shelf levels create more storage space





Soft rubber mesh protects

Peg system for plates and bowls



Kadey-Krogen peg system for
pots and pans





Organized home style drawer caddy



Clear tubs for storage



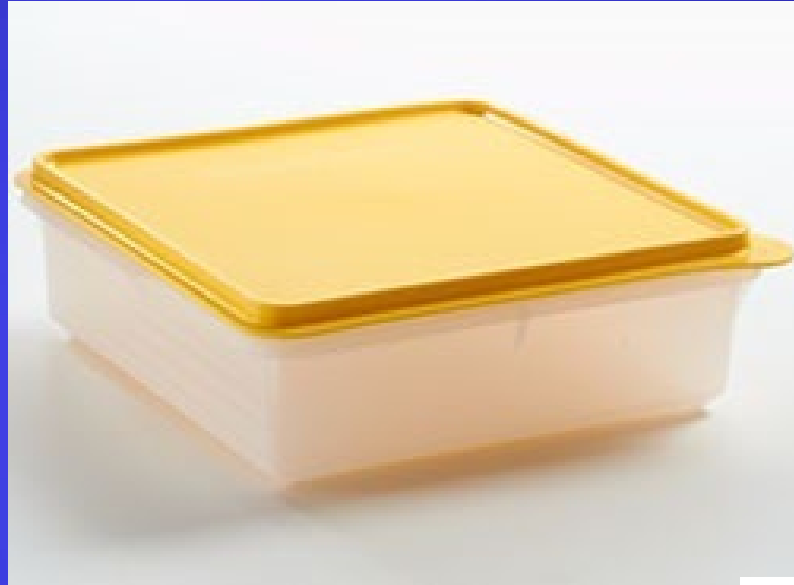
Storage bins "Lock and Lock"



Really Useful Boxes



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



A Bissell Lift-Off pet vacuum cleaner is shown lying on a red and beige patterned rug. The vacuum is primarily grey with red accents on the handle and the front of the motor unit. The brand name 'Bissell' and the product line 'LIFT-Off' are printed on the side of the motor unit, along with the text 'FLOORS & MORE pet'. A black power cord is visible extending from the back of the device.

Dust buster small vacuum

(Kelp flies story)

Swiffer Sweeper Vacs are great for wood floors



Squeegee and Shower Spray

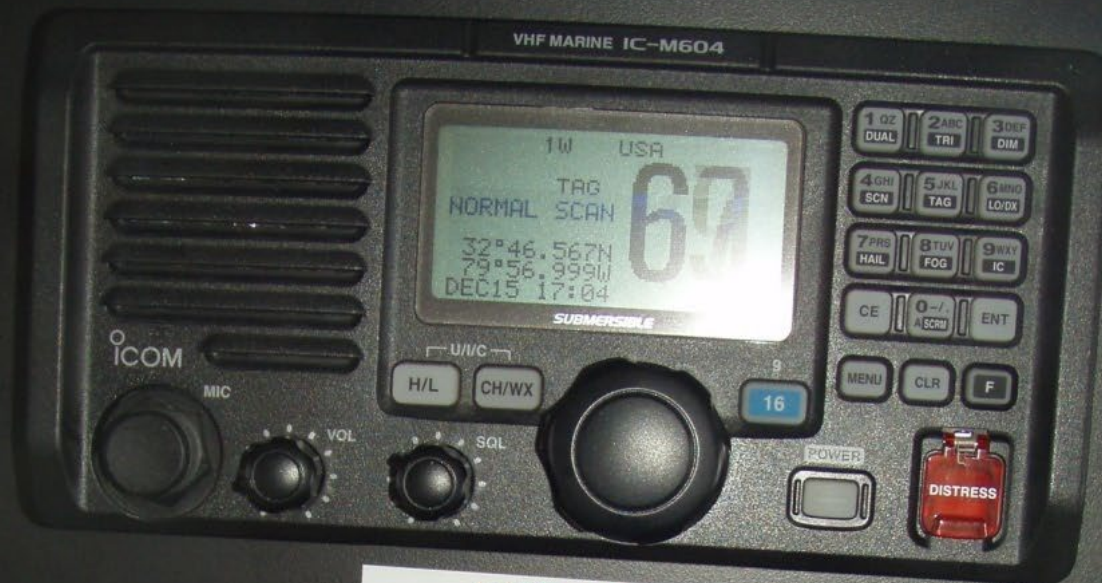


Suction cup caddy



Helm area suggestions





WDE 4988

VHF call sign label

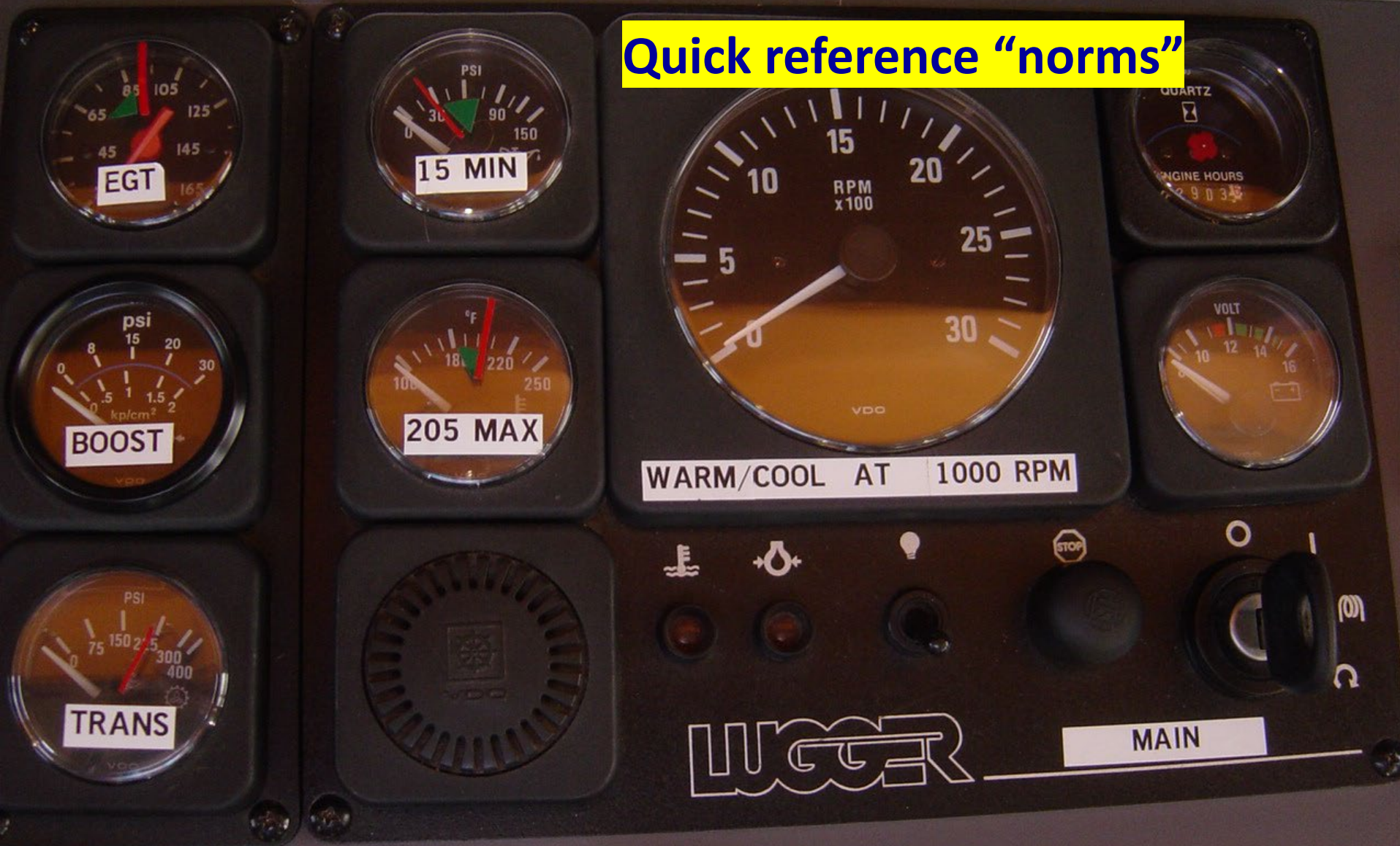




Keep your display screens clean

- 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"





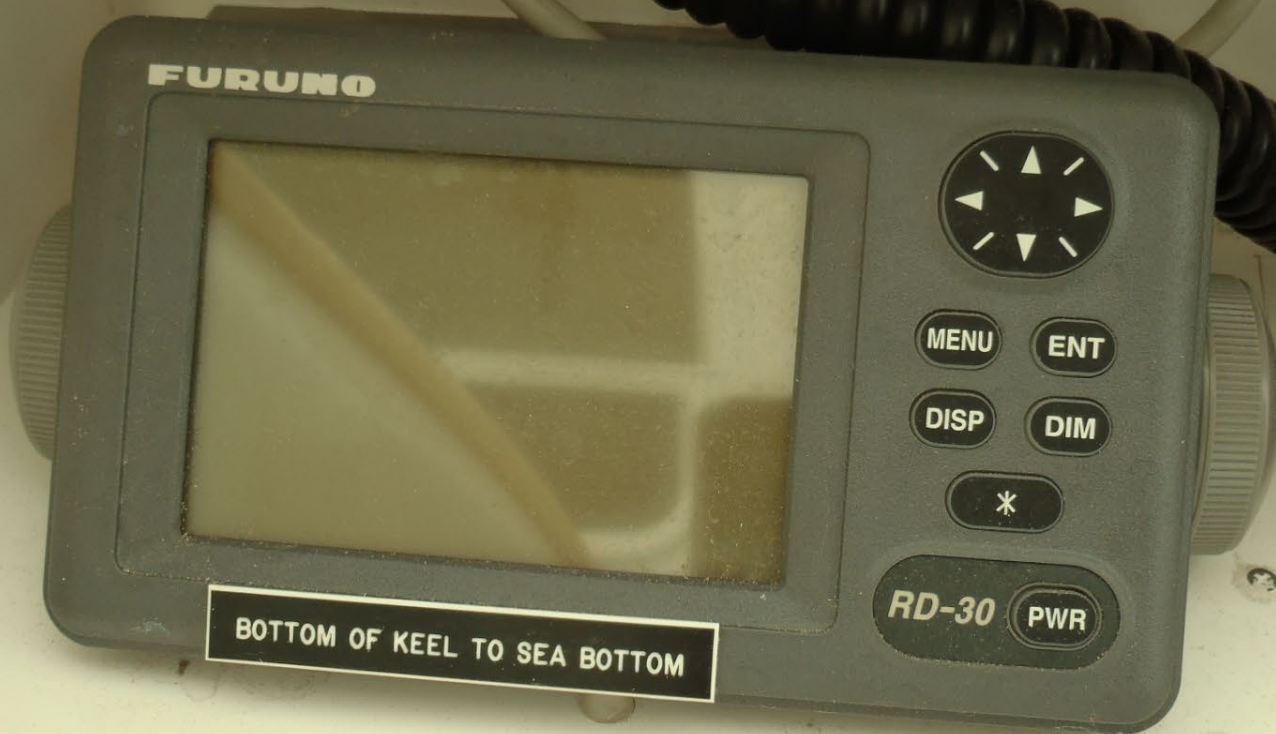
LOA 61 FT
BEAM 17 FT
DRAFT 6 FT
HEIGHT 24 FT
ANCHOR MARKS 25 FT

LOA, Beam, Draft, Bridge clearance

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

BILGE PUMP

HOLDING TANK

124

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





Binocular rack

Drink holders



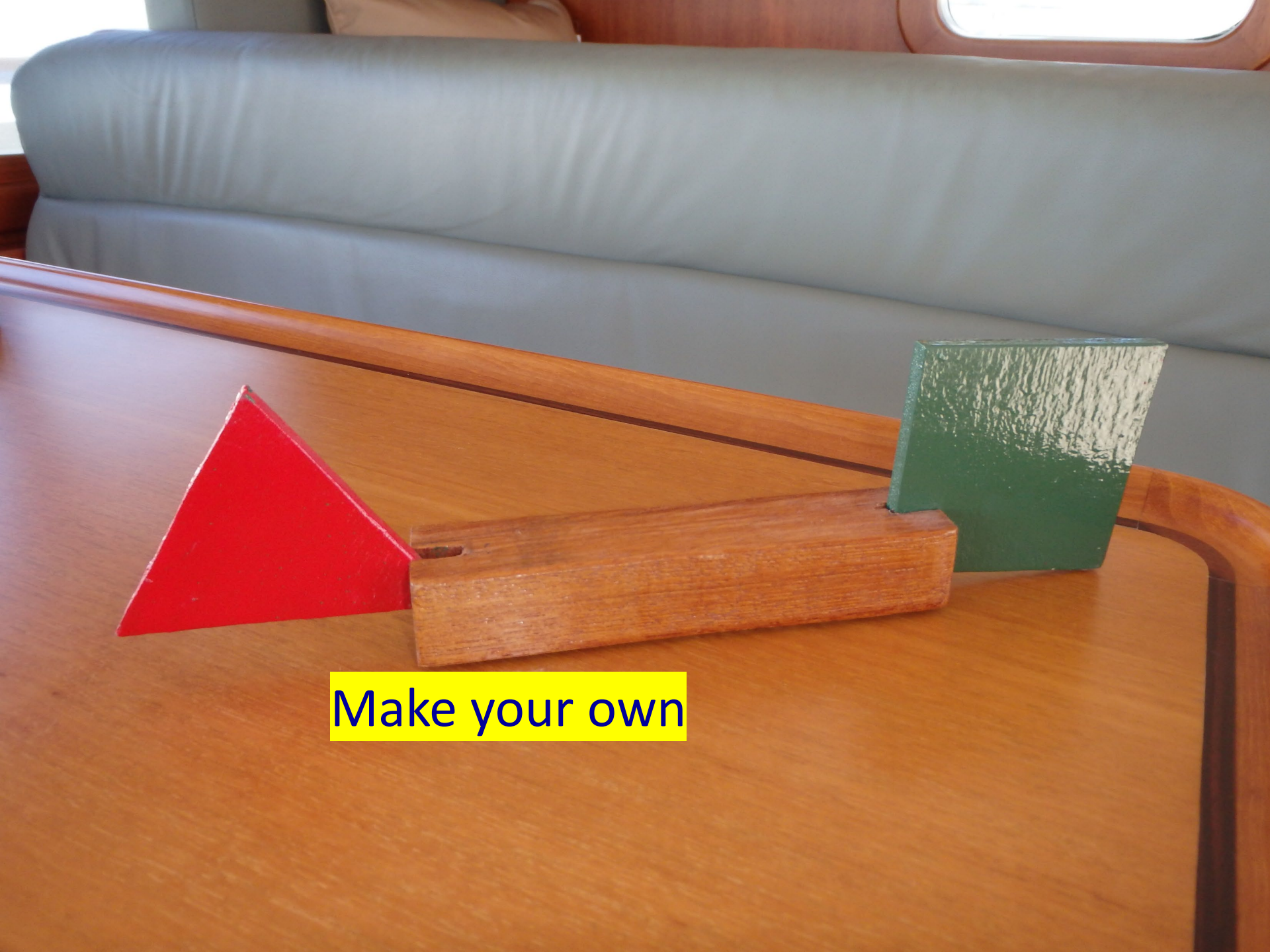


Portable caddy for important “stuff”

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

A man wearing a blue short-sleeved shirt with a white floral pattern, khaki shorts, and large red earmuffs is working on a white engine. He is using a white cloth to wipe a metal rail. The engine is a large, white, industrial-looking unit with various pipes and hoses. The background shows more of the engine room, including a green storage bin and a white wall.

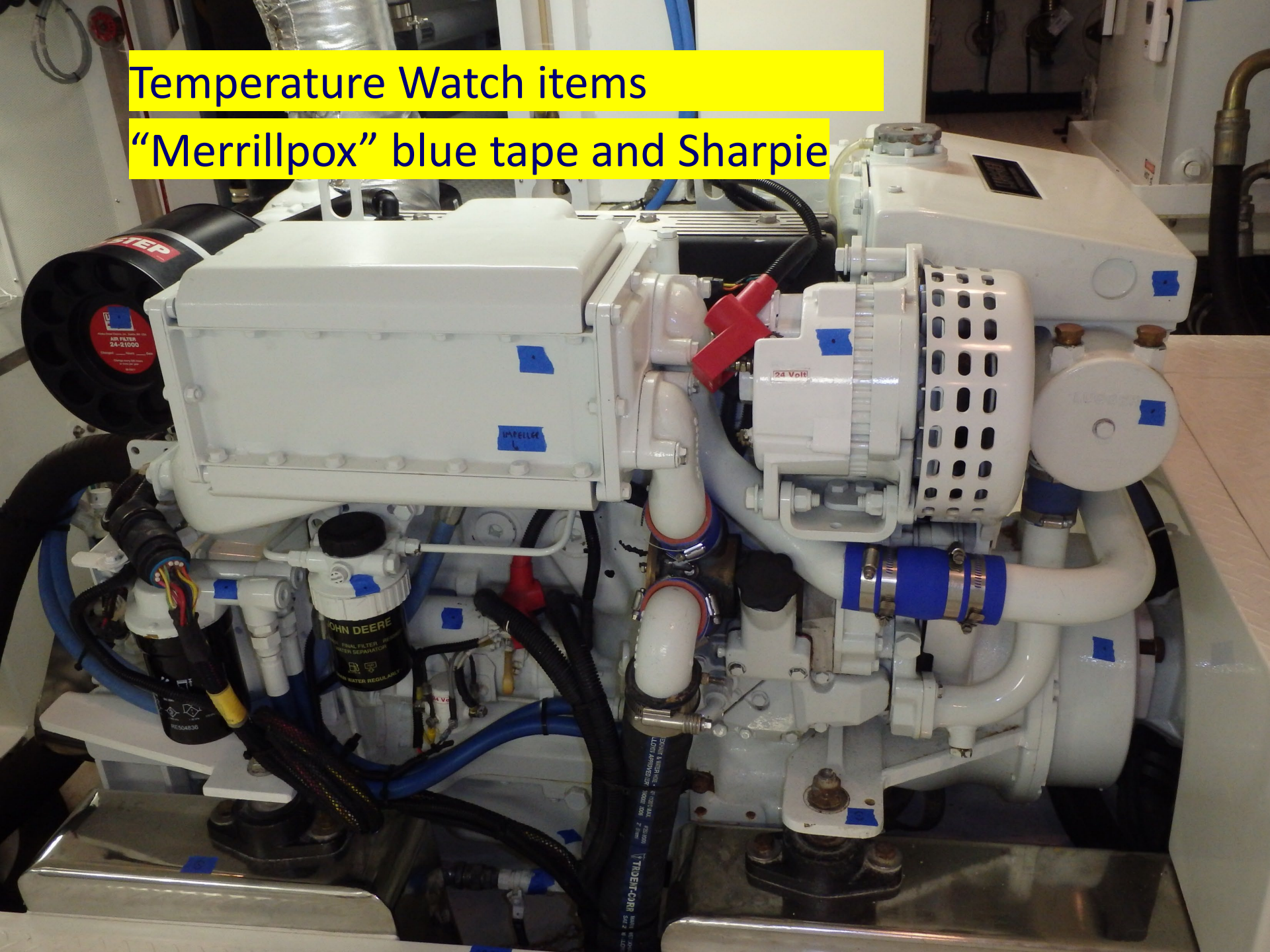
Engine Room Inspection Tips

Infrared Temperature Gun



Temperature Watch items

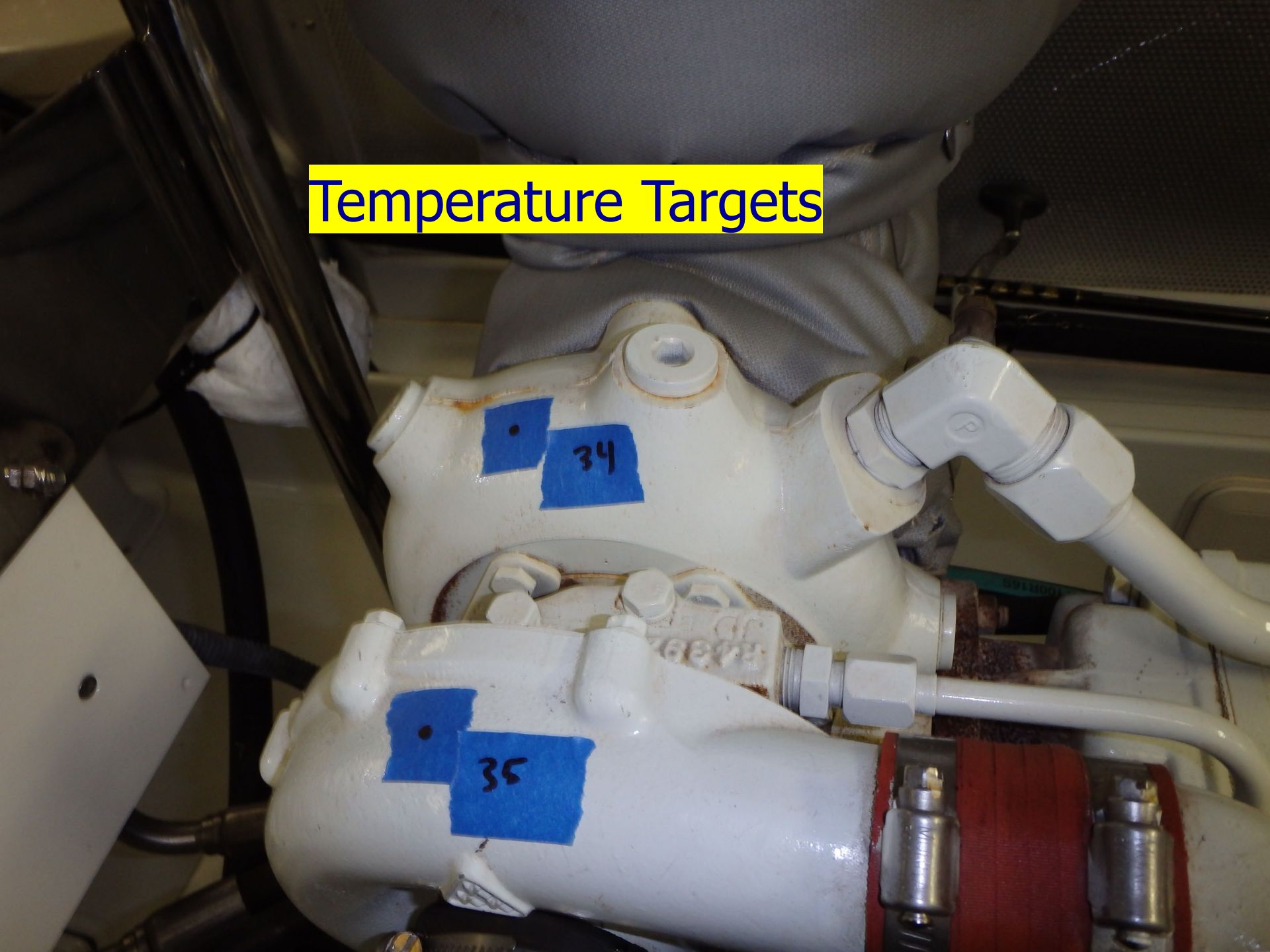
“Merrillpox” blue tape and Sharpie



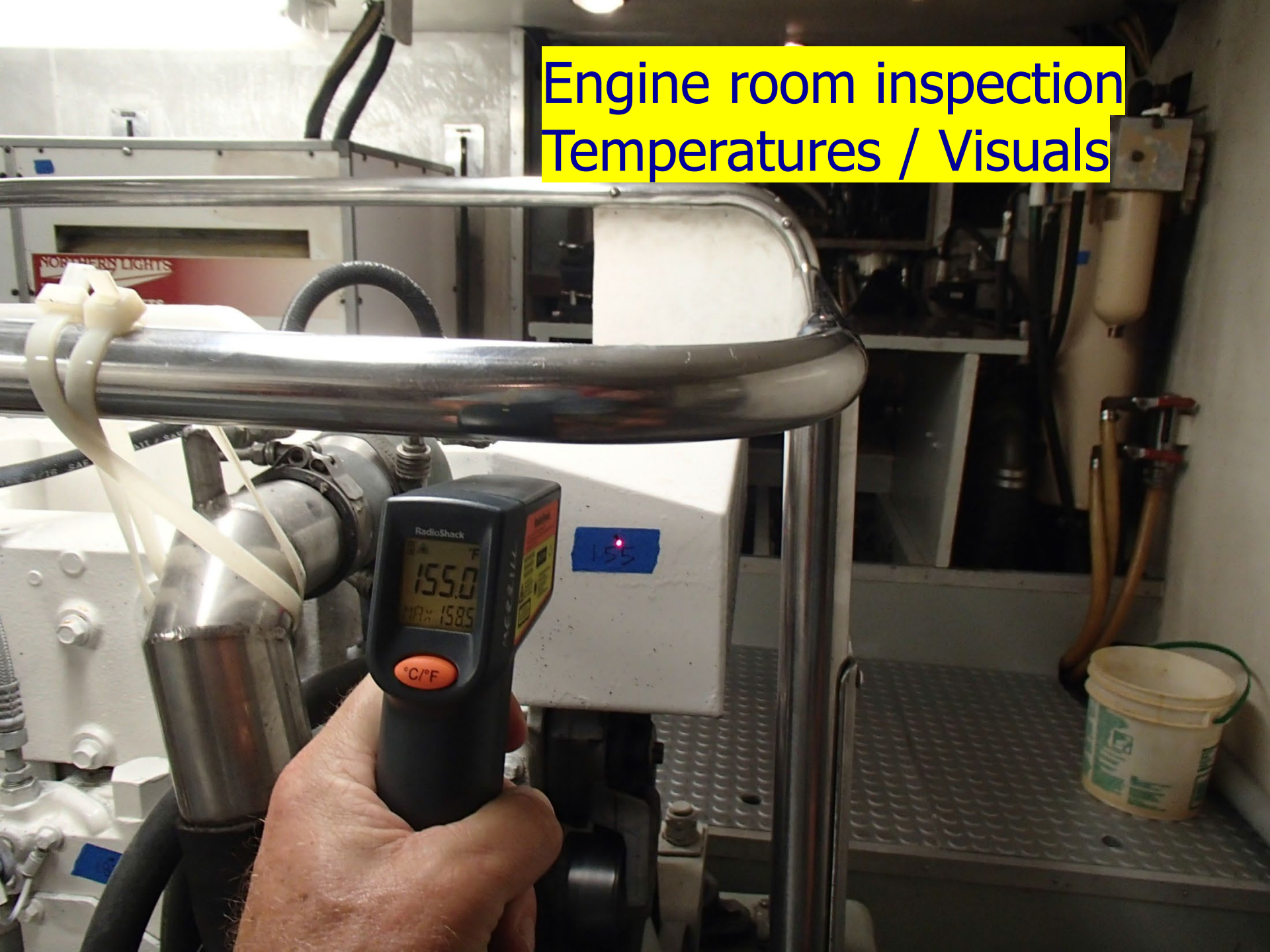
Mark single point to shoot



Temperature Targets



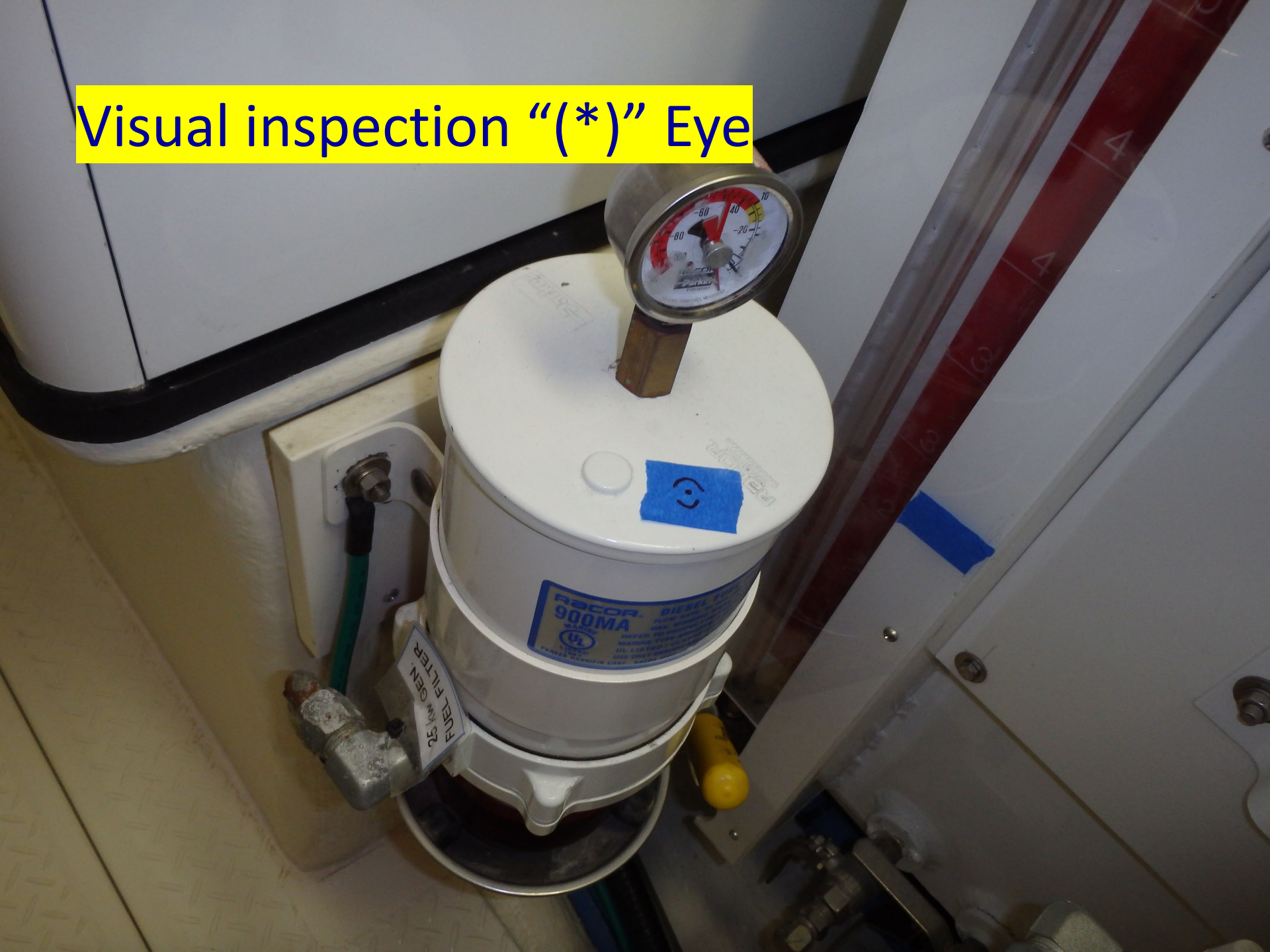
Engine room inspection Temperatures / Visuals

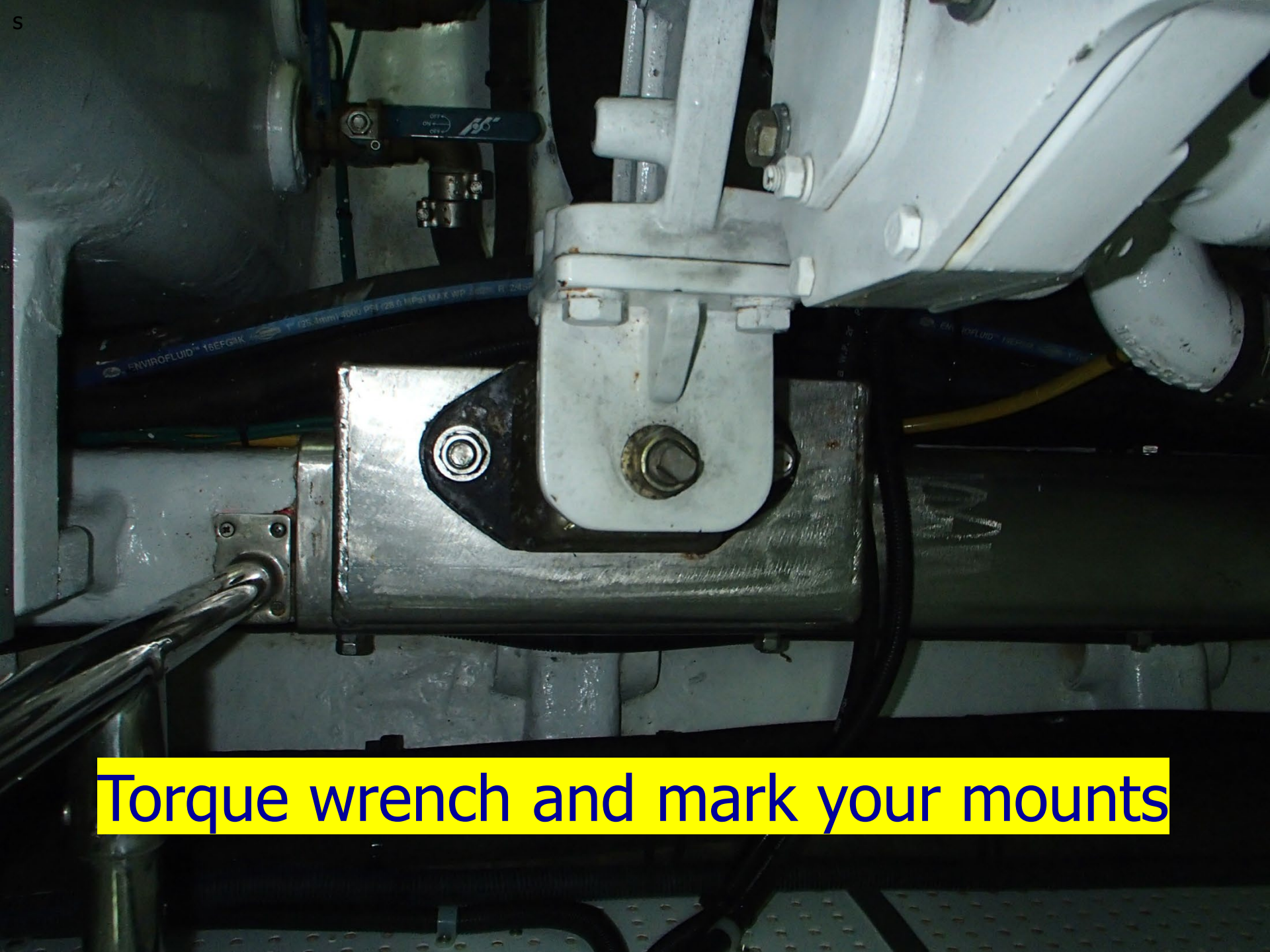


Hold Gun 2 – 6" away



Visual inspection “(*)” Eye





Torque wrench and mark your mounts

engine
13
mounts



Bilge
16
Level

SNUGGED DOWN
ALL ENGINE MOUNT.

13 SEPT 13

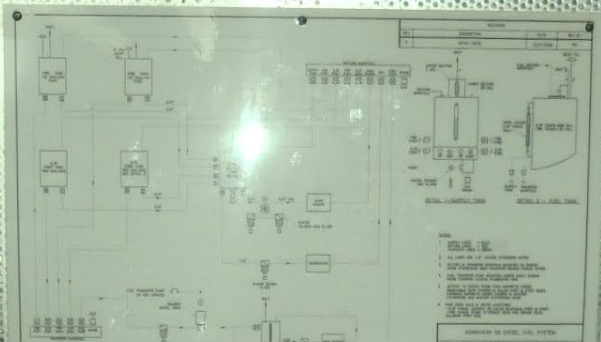
3/4" WRENCH.

PRODUCED

CLARK

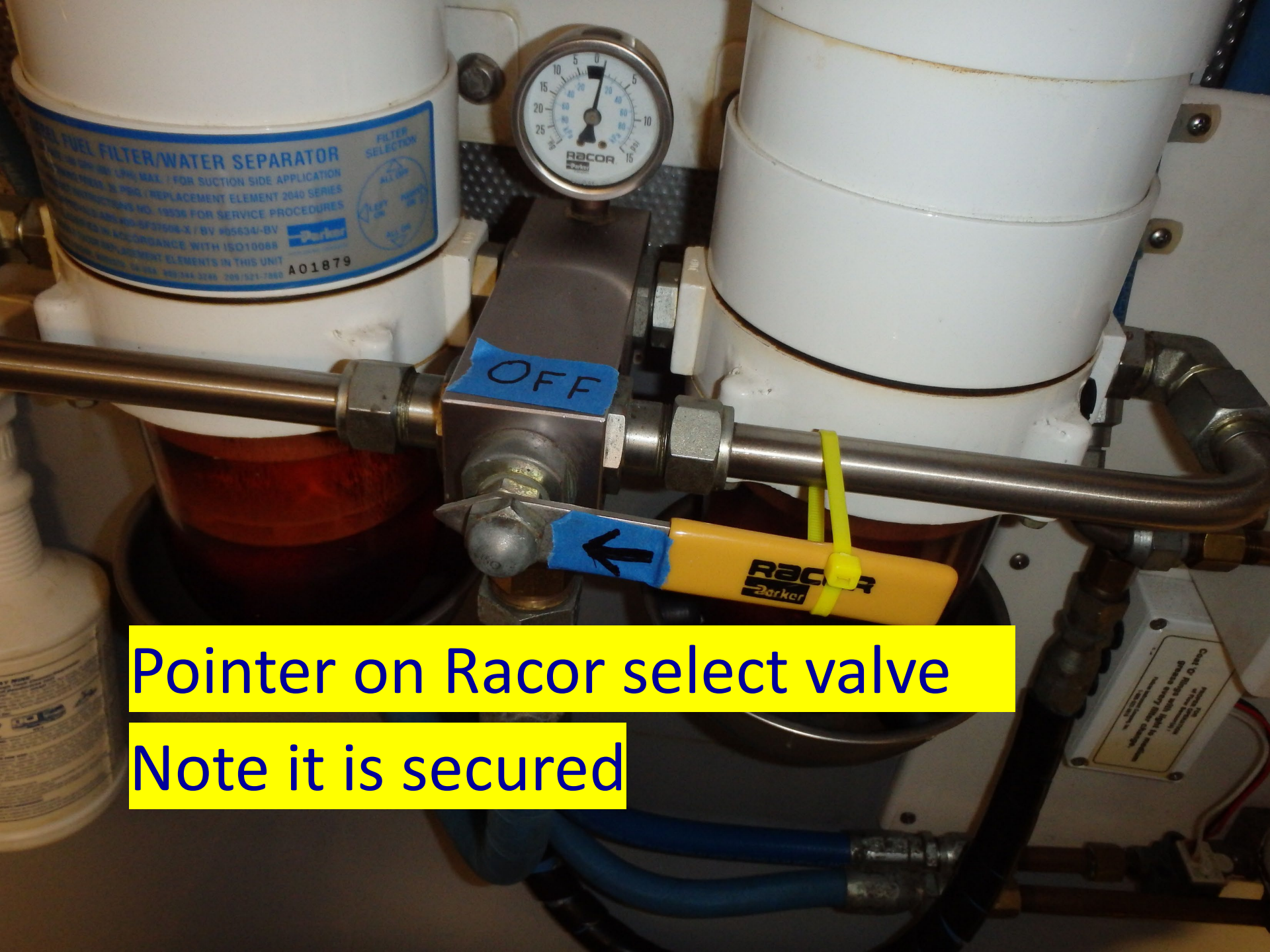
STBD

Laminated fuel diagram by manifold





The sharp end points to desired bowl



Pointer on Racor select valve

Note it is secured

Velcro straps so valve handle isn't bumped



Replacement sizes and hours noted



MARINE WET EXHAUST & WATER HOSE • 250°F (120°C) MAX.
SAE J2006 • LLOYDS APPROVED CERT. 02/69002 • 2304

#250-1120
1 1/2" (38mm)



TRIDENT-FLEX



MARINE WET EXHAUST & WATER HOSE • 250°F (120°C) MAX.
SAE J2006 • LLOYDS APPROVED CERT. 02/69002 • 2304

TRIDENT-FLEX

#250-1120
1 1/2" (38mm)

Color code multiple tank valves



Nail polish or red Sharpie to mark Zincs





Mark fuel filter for bleeding

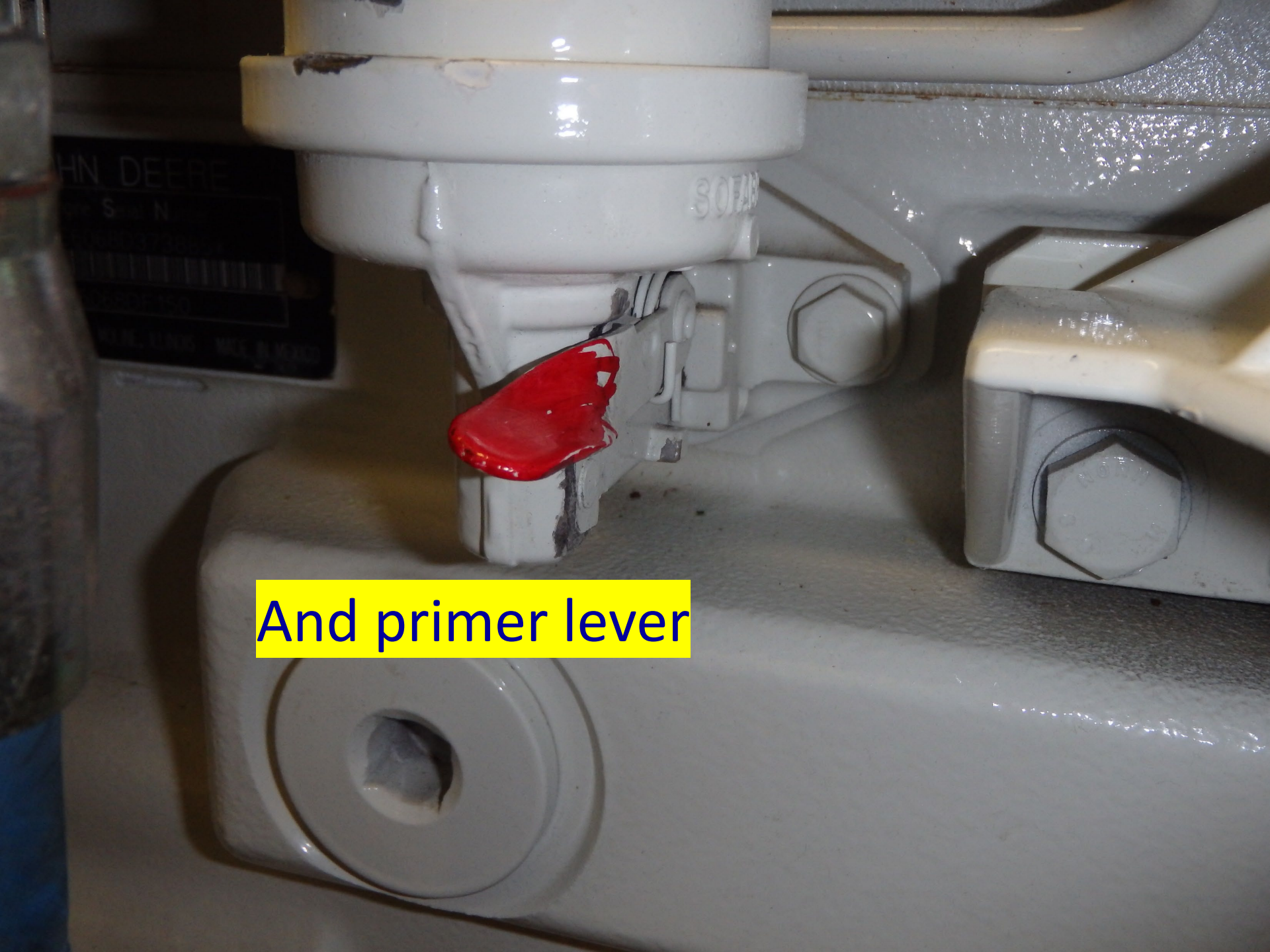
WARNING
ON ANY ENGINE WITH AN
CONTROLLED FUEL SYSTEM

FUEL FILTER
SEPARATOR
51005

NORTHERN

FILTER @ 1700 HRS
14 APRIL 2015

LUGGE
NORTHERN LUGGE



And primer lever

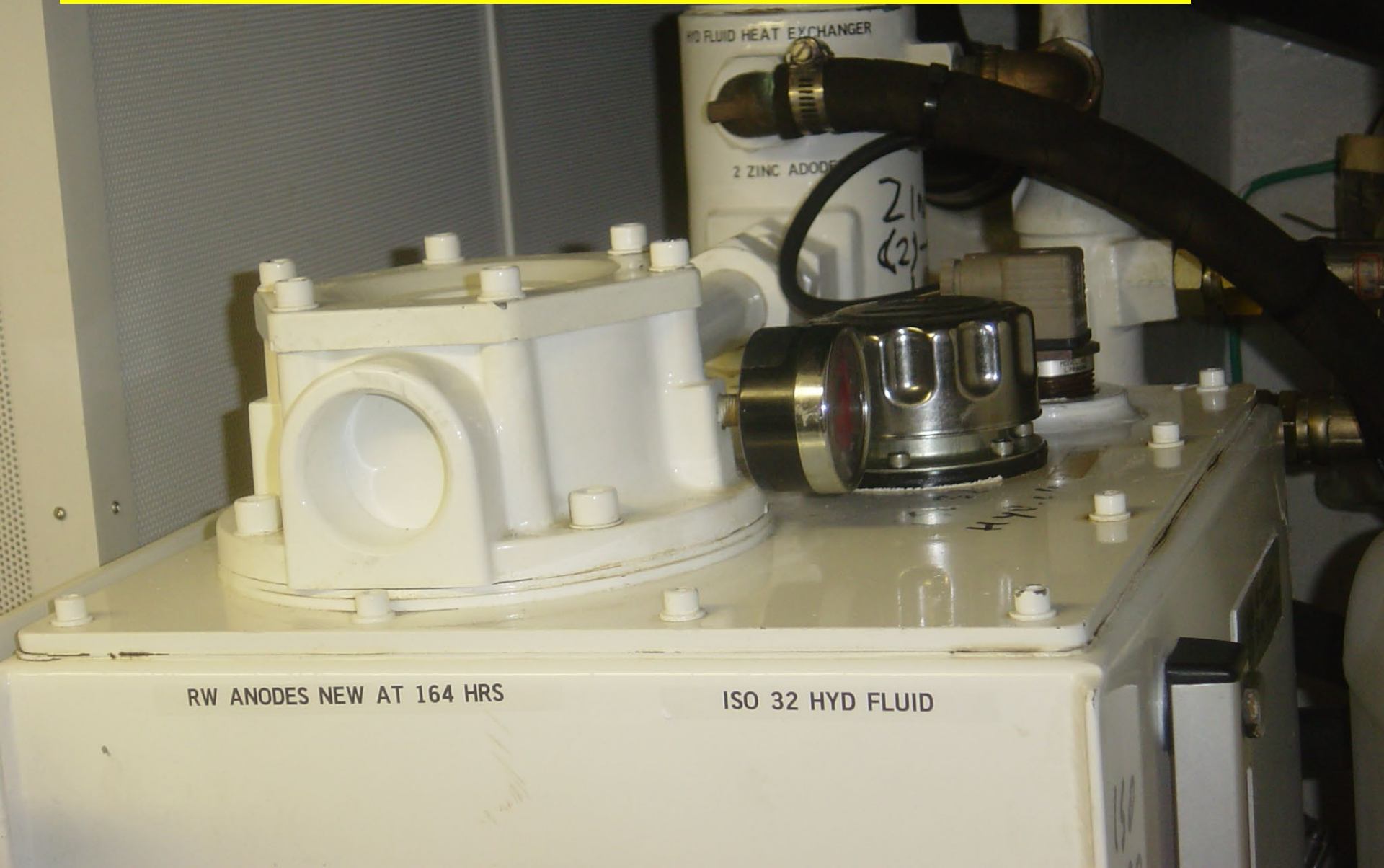
A close-up photograph of a white cylindrical muffler. At the bottom, there is a circular drain hole surrounded by a significant amount of brown rust. The muffler is mounted on a white metal plate with a diamond-plate texture. In the background, a black hose is connected to a valve with a white label that reads "USE DRY NITROGEN (N2) ONLY!" and lists instructions for installation and safety.

Potential trouble, will your muffler drain?

Install a drain valve



Anodes (pencil zincs) and hydraulic oil weight





Coolant over flow catcher



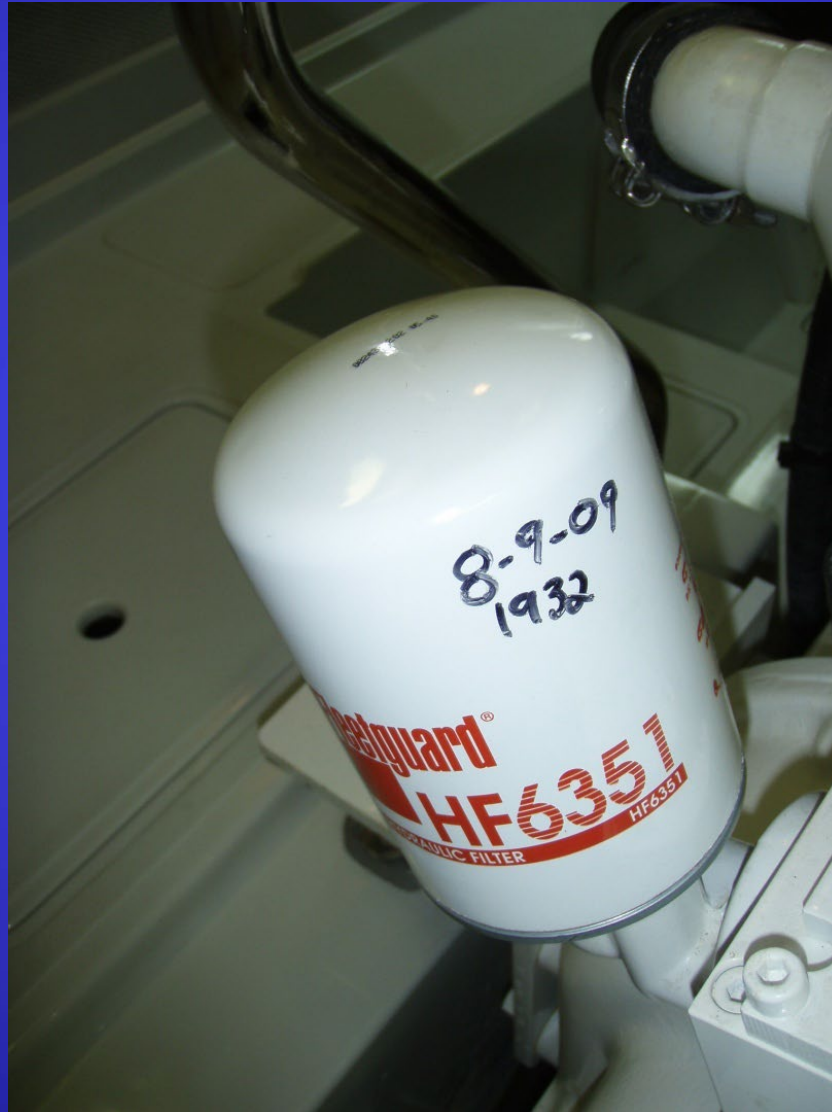
DELO 400 15W-40


4 GALLONS

Brand of oil, viscosity weight and quantity.

Make it easy!

Label filters to track changes





The image shows three fuse blocks mounted on a white panel. Each block has a clear window showing the internal fuse. The left block is labeled 'BILGE PUMP POWER SOURCE (50A FUSE)'. The middle block is labeled 'FROM STBD. ENG. ISOLATOR TO CHARGE HOUSE BANK (60A FUSE)'. The right block is labeled 'FROM PORT ENG. ISOLATOR TO CHARGE HOUSE BANK (60A FUSE)'. A yellow bar at the bottom contains the text 'Identify fuses, carry spares'. The background is a white metal panel with various cables and connectors.

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

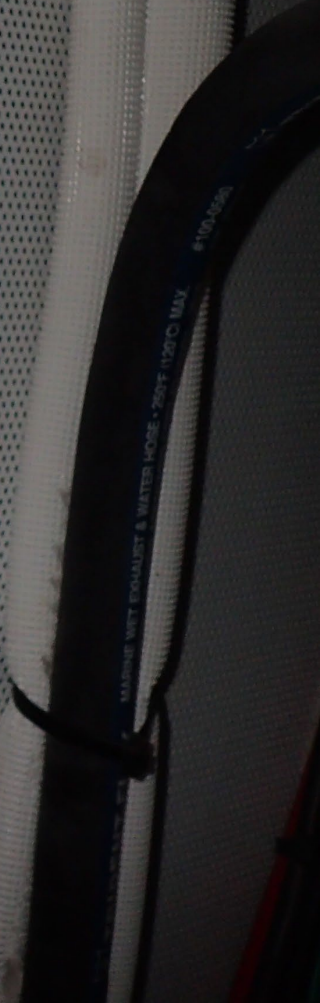


Replacement at location



FUSE

HOUSE BATTERY FUSE



Stuffing box wrench caddy





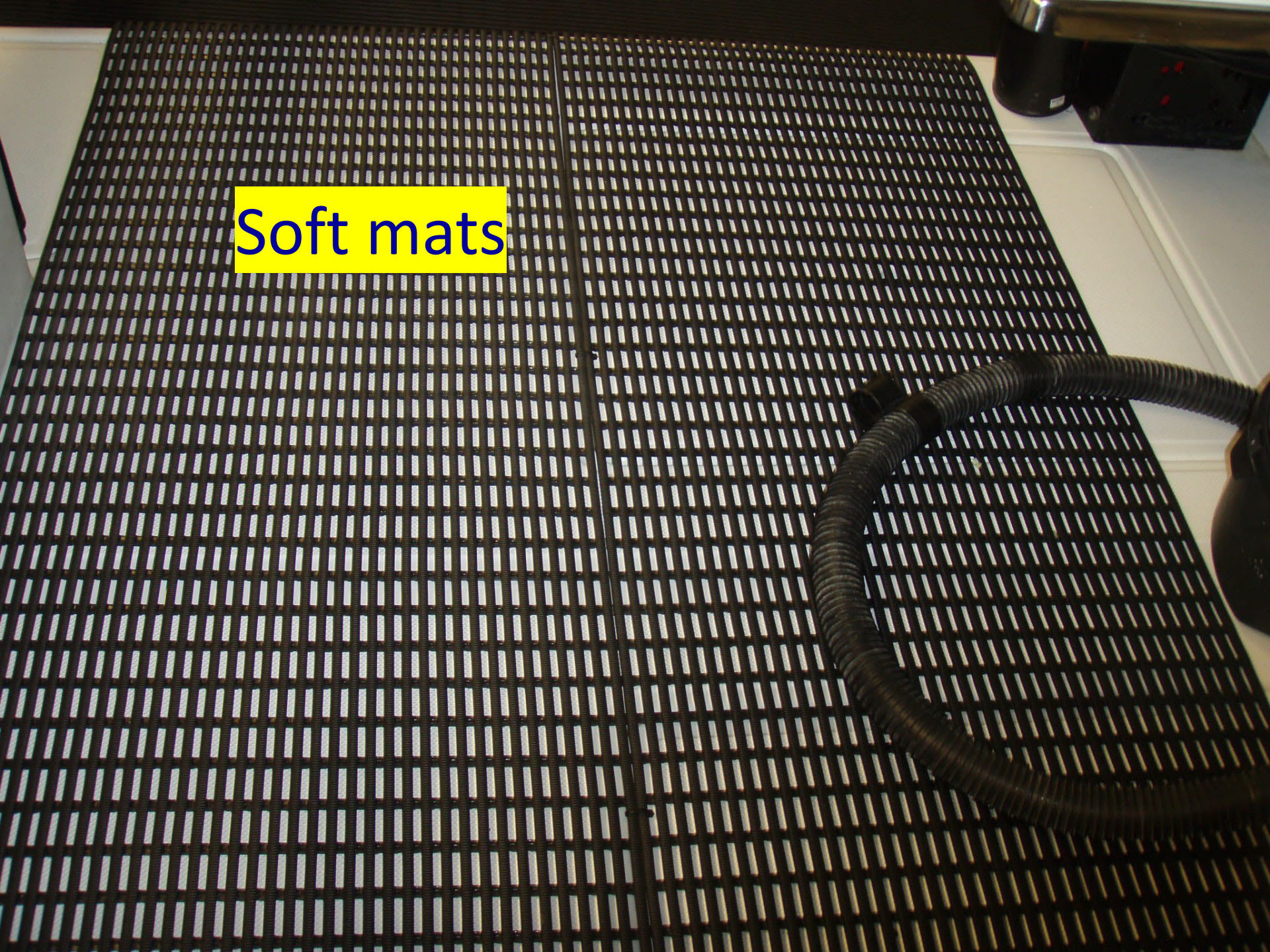
Cleaning
spray
bottles
ready



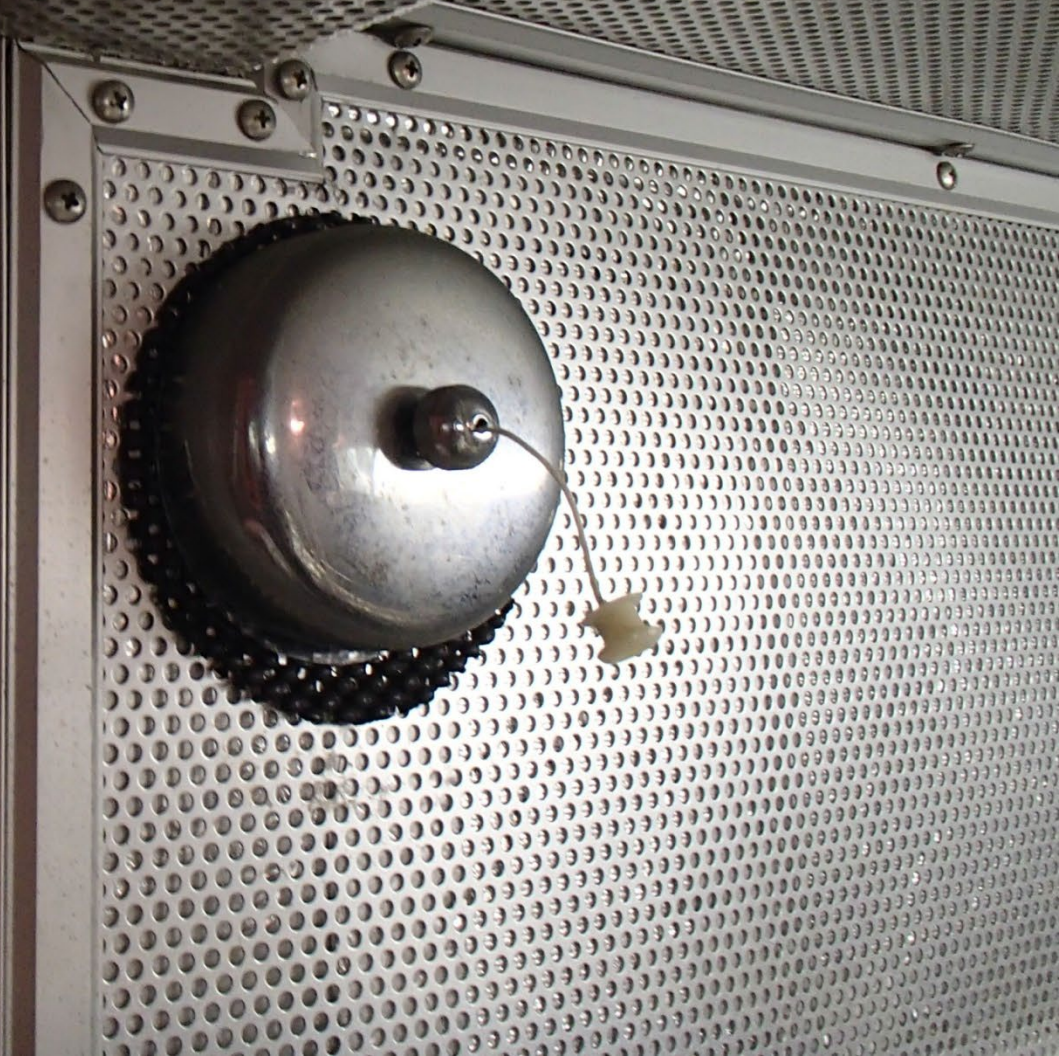
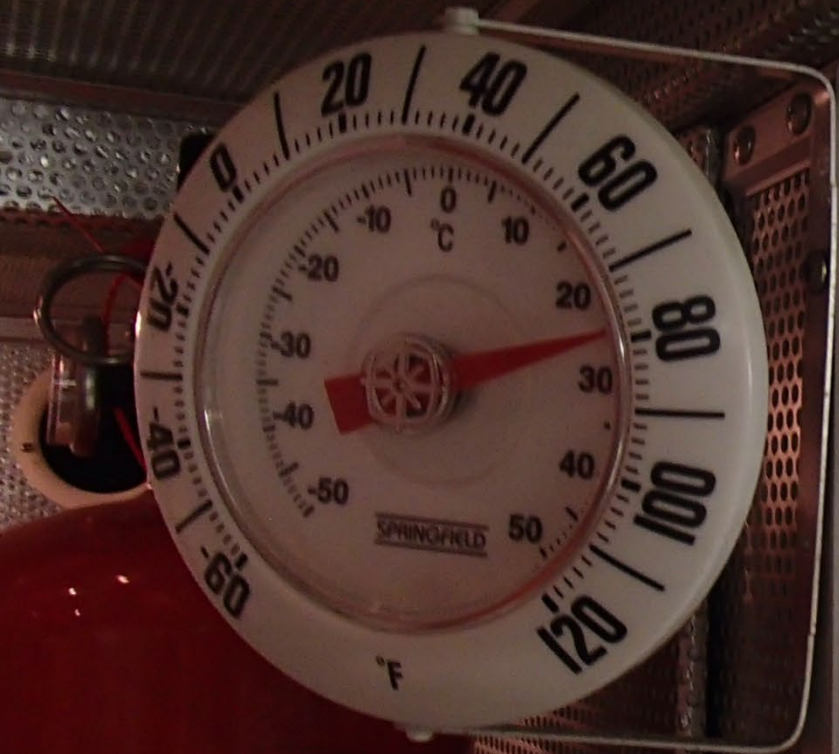


Fresh water tap and bucket

Soft mats



Engine room temp and clothes line





Cleaning product shelf

Storage hammock



A blue, fine-mesh bag is shown, designed for use with through hull bungs. The bag is rectangular with rounded corners and is made of a durable, woven material. It is attached to a white surface, likely a boat's hull, by three black circular suction cups. One suction cup is visible at the top center, and two others are partially visible at the top left and top right corners. The bag is slightly wrinkled and folded, showing its flexibility. A yellow rectangular box with blue text is overlaid on the center of the bag.

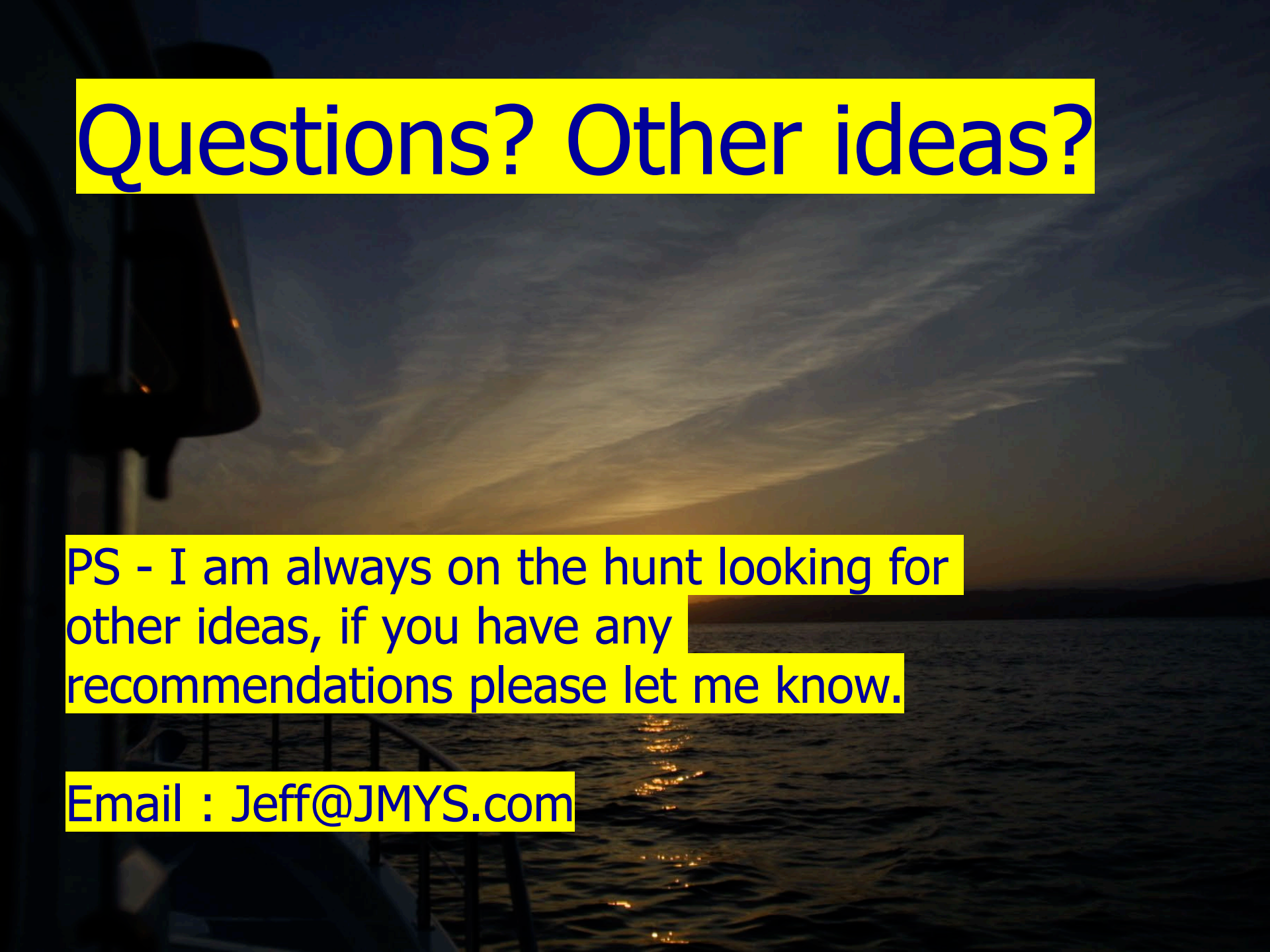
Suction mesh bag for through hull bungs

A clear plastic zippered pillow bag is shown, filled with numerous white, folded engine diapers. The bag is resting on a white diamond plate surface. In the background, there are some mechanical components and a black cable. The bag has a silver zipper and a small metal pull tab.

Zippered pillow bag for engine diapers

Get out there and have fun!





Questions? Other ideas?

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

Email : Jeff@JMYS.com

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!

Dial-In-Your-Trawler series PDF on www.JMYS.com