



Mechanical Inspection

The engine room is typically where the most expensive issues are discovered during a survey. Of all the moving parts on a trawler (and there are many), the most important machinery is the propulsion package.

Because of insurance coverage requirements, it is a given that you will conduct a hull survey to learn the condition and value of the trawler you are buying. Surveyors typically review construction, operate systems, check installations, test equipment and more to complete a comprehensive examination.

We also insist that our clients hire an experienced marine diesel mechanic to spend time in the engine room, stay for the underway performance review and inspect the trawler out of the water. The cost for a diesel inspection is comparable to what the hull surveyor will charge.

Your broker should be able help you search for a local diesel mechanic familiar with the engines on board. You'll want a good communicator who can show you issues while you are there, and who will be available to answer questions after reviewing the report.

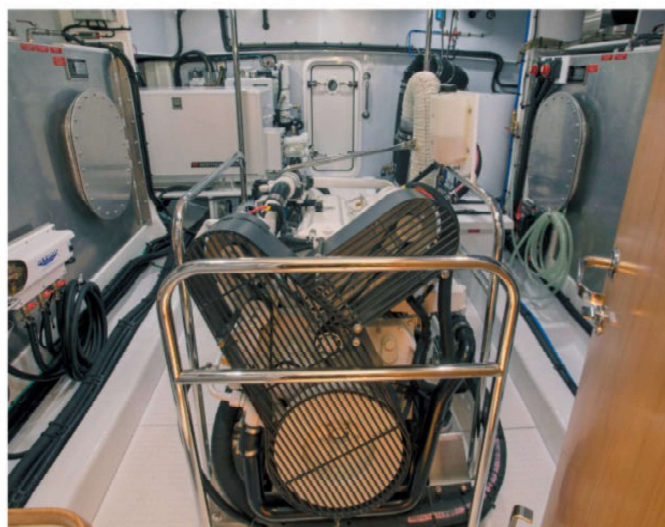
Some interview questions that we tell our clients to ask include: Are they available on the sea trial and haul-out day? Have they done inspections on this brand of engine? Do they do compression tests? Use a borescope? Will they bring kits to pull oil samples? How long does it take to get the oil reports? How long will they need to prepare a written summary report?

On survey day, the hull surveyor and diesel mechanic normally require a cold start (no machinery operating for a day before the test). It's easier to do a more in-depth study with a cooler engine room. During these inspections, I've seen the diesel tech save the day more than once by discovering something out of place before the owner turns the ignition key.

Oil and coolant levels are checked, as well as the general condition of the engine, transmission, generator, shaft glands, shafts, fuel lines, fuel filters, air filters and more. The mechanic will also identify and trace any leaks or drips of fuel, coolant or oil, and will check fuel-delivery system supply, return and transfer manifolds and valves, shaft seals, raw-water pumps and impellers. The exhaust system, exhaust elbows, hoses, mufflers and thru-hulls will be given a closer inspection,

If your out-of-water inspection is before your sea trial, then you can review the condition of the hull bottom, and the tech can inspect the running gear for cutlass bearing wear and verification that the propellers are true. Propellers caked with barnacles don't bite or push; once scraped clean, they return to proper performance.

You should be most interested to learn about the ride underway at various rpm, from idle through normal cruise. Check the sound levels, vibration and overall operation. Request a run at



A pre-purchase propulsion prognosis is an important step in the buying process.

wide-open throttle for several minutes to confirm that the propellers are pitched properly, and to see if the cooling system prevents over-temperature alarms. Do a back-down test to load up and evaluate the engine mounts. Later-model engines have plug-in diagnostics for computer reports of engine history.

Expect to receive a written and photographic record of model numbers, serial numbers and manufacturers' plates on all engines. Many diesel mechanics will also provide quotes to complete repairs, if needed. This information can be a potential conflict of interest. (Are they creating work, or providing solutions?) It may be prudent to get a second bid.

Most owners do their best to look after their engines, but a diesel specialist can find things that owners miss. Based on the findings and estimated costs to repair, it's not uncommon for a buyer to request a price concession from a seller. ⚙️



JEFF MERRILL is a professional yacht broker who has helped hundreds of trawler clients. He is a member of several yacht broker associations, has served as president of the CYBA and is licensed in California, Florida, Virginia and Washington. He has presented at Trawlerfest for over 20 years, hosts a popular YouTube channel and enjoys sharing his knowledge on JMYS.com.

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