



# Yanmar Pleasure Boat Marine Engine Help

## Understanding Engine model codes

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Most engine model designations are on an engine data plate, on the front or the top of the engine. Check out the Parts Descriptions page. Some older engines have the data plate on the adapter plate between the engine and



the gearbox like this rusty old YSE12.

### Here are some examples of engine model codes and their meanings:

- **YSE8**
- Y = horizontal cylinder,
- SE = engine "series" or "family", Latterly with the onset of design and production collaborations between Yanmar and other manufacturers the designation of the engine series signifies the companies involved in design & production. i.e. YM - Yanmar Marine, SY - Scania Yanmar, BY - BMW Yanmar,
- 8 = power rating in this case 8 horsepower. **Note**, the suffix numbers, although close, are not always the exact horsepower of the engine.
- If an engine model does not have the Y in the beginning, the engine has a vertical cylinder or cylinders.
- The numbers 1, 2, 3, 4, and 6 indicate the number of cylinders.
- For example, 3GM is a 3 cylinder engine from the GM series. A 2GM is a 2 cylinder GM series, and so on.
- A 3GM30 is a 3GM that has a larger bore and therefore develops more horsepower than its predecessor. The 1GM, 2GM and 3HM were also uprated to 1GM10, 2GM20 and 3HM35 respectively.  
All of the above engines are either 'raw water' cooled or 'fresh water' cooled.
- An engine with an enclosed cooling system containing fresh water and coolant, in turn cooled by raw water going through a heat exchanger, is called a fresh water cooled engine.  
An engine that takes the water from outside the boat, pumps it through the cylinder block, cylinder head and then out through the exhaust manifold and exhaust is a 'raw' water cooled engine.
- On engines that are either 'raw' or 'fresh', below 34hp, the fresh water cooled engine has the letter F in the model designation. i.e. a 3HM35F is a freshwater cooled engine.
- If the F is absent, it is a 'raw' water cooled engine.
- The YM, JH, BY, LH, LP, LY, CX, KY and SY family of engines are freshwater cooled.
- The letter C indicates the engine has a saildrive attached. A 3GM30FC is a 3 cylinder, freshwater cooled engine from the GM family, with a saildrive transmission.. Latterley a move has been made to standardise the engine models more and the 'B' / 'C' suffix have been dropped from the model code on engine data plates.
- A 4JH2-BE model is fitted with a down angle gearbox.
- An M, e.g., 6CXM-ETE, means the engine was shipped from the factory without a gearbox.
- The JH series was uprated to the JH2 series, then JH3 series & now the JH4 series. Each series increasing in bore size and horsepower while reducing emission levels to comply with the RCD in Europe and the EPA / CARB regulations in the USA.
- The 4LH and 4LHA series are both 4 cylinder engines with the same long block assembled in Japan, but the 4LHA is finally assembled in the USA with US sourced components, the same also applies to the 6LY and 6LYA engines.
- The models 3JH and larger have a suffix in the model code:
- E is a normally aspirated export model
- -TE, is a Turbo charged, Export model
- -ETE is Extra Turbo charged, Export model
- -HTE is Highly Turbo charged, Export model
- -DTE is Deluxe Turbo charged, Export model

- UTE is Ultra turbo charged, Export model
- STE is Super turbo charged, Export model, etc....
- A 'P', as in 6LYA-STP, is a pleasure boat performance engine. (There is no difference between the 'P' and the 'E' engines. They have been re-spec'd to show "competitive" horsepower. Yanmar was the only engine manufacturer I know who used to deliver, from the factory, more horsepower than what was stated on the brochure.
- When the code has a Z, e.g., 4LHA-STZE, the engine is an inboard outboard model with a Mercruiser sterndrive or 'Z' drive.
- For those of you who want to know why the codes don't go in alphabetical order...the Japanese language does not have a Roman alphabet.
- **Note** Engine serial numbers. Engine serial numbers may or may not have prefix letters. The letter 'E' indicates the engine was assembled in Europe. Letter 'E' prefix European engines are identified in parts listings with the suffix 'YEU' (Yanmar European Union). The prefix 'A' indicates the engine was assembled in America (USA) . Currently dealers do not have the means to easily cross reference to build date, date of commission, warranty status etc..

Please note that some distributors/dealers may have changed the engine model to satisfy a customer requirement, i.e., changed a 2GM20 from raw to freshwater cooled, so don't always take the data plate for gospel. If in doubt, ask your dealer.

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