For Harmonious Living with Global Environment

Techniques for Complying with IMO Tier II Emission Standards:

Exhaust Gas Recirculation (EGR)

In the 6AY engine, the internal EGR system is used. This design does not require any external control devices or any significant changes to the engine structure. In contrast, EGR is the key of the engine and can be equipped with devices to ensure effective operation. These functions can be performed by controlling the lift of the intake and exhaust valves.

Lift of the exhaust valve  Lift of the intake valve

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Performance

510rpm / 670(hp) at 10% trim in the L operating mode

Type-Fractional loading in the presence of the exhaust: Compostion

4-stroke, Vertical, Turbo-charged with sea watercooled intercooler diesel engine

6AYM-WGT

6cycle, Vertical, Turbo-charged with internal EGR system

6AYM-WGT

IMO Tier II Compliant

Mechanical Engine Control

911 mhp
**YANMAR, Providing Quality Propulsion Engine Packages for Over 60 Years.**

**Operation side**
- Fore water supply (Cold type)
- After water intake
- Inter cooler (cast-iron, water cooled)
- Exhaust manifold
- Lubricating oil cooler (Multi-plates type)
- Fuel injection pump
- Lubricating oil filler cap
- Fuel filter
- Starter
- Propulsion Engine Packages
  - YANMAR, Providing Quality
- Emergency seawater inlet
- for keel cooling circuit
- Inter cooler (water cooled)
- Turbocharger
- External Turbocharger
- Optional wiring to suit classification society requirement available.
- Photograph may show optional equipment.
- When keep cooler option is
- Marine engine room conditions.
- 3. Type Approved by Marine Class Societies.
- Improved wear resistance
- in combination with
- Oil: Nitrided SUS
- Piston rings
- "Silicard" liners
- Top: Ion plate
- Bottom: chrome plated
- Variations of cold flow type piston ring and 4-corner guide rings
- Tufftride treatment
- Al-Alloy
- 6LA
- 1. Large inspection windows on the side of the block allow in-site replacement of pistons.
- 2. Full mechanical engine management avoids the chance of delicate and expensive electronics failing in hot,
- 3. Min. Fuel Consumption Range is Wide, ( Line C )
- A wide range propeller matching, from the passenger ship (light/medium duty) to tug boat (heavy duty), is possible.
- 2. Wide Max. Power Range, ( Line B )
- 1. The engine torque-rise characteristics having much in reserve, ( Line A )
- Stable cruising with least speed reduction against sudden load changes.
- The Engine Performance Gives Following Advantages:
  - High Torque
  - Reserve Power
  - High capacity front PTO
  - Lower exhaust emission zone
  - Outer bearing
  - Inner bearing
  - Cylinder heads

**Non operation side**
- Lower exhaust emission zone
- Outer bearing
- Inner bearing
- Cylinder heads
- Slow motion Load Range (L-range)
- Ranges of low speed valve and governor pressure
- The clutch hydraulic oil pressure is decided
- by manipulating the trolling change-over lever
- the output shaft rotation speed.
- and governor valve that detects
- the output revolution speed
- C.W. level
- L.O. filter clogged
- Early Routine Inspection, Easy Maintenance
  - 1. Large inspection windows on the side of the block allow in-site replacement of pistons.
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**High Torque**
- Excellent Torque-Rise Characteristics in High Speed and Low Load Range Enables Performance of 250kW even at High Load
- The Engine Performance Gives Following Advantages:
  - 1. The engine torque-rise characteristics having much in reserve, ( Line B )
  - 2. Stable cruising with least speed reduction against sudden load changes.
- BX Type Trolling operation principle
- Indicating engine operation in line of speed and governing value that detects
- the output revolution speed
- by the throttle. Therefore the ratio calculated by correlating the governing value with the output revolution speed is
- a guide for the output revolution speed control
- against the fluctuation of load.
- This figure indicate in case of 6AYM-WGT ( L-rating )
- Output (kW) 300 400 500 600 700 800
- Eng speed min-1 1200 1400 1600 1800 2000 2200
- YANMAR original marine gear that can be
- adapted to a wide range of applications
- YANMAR’s original gearbox, which enables us to supply total marine
- engineering & servicing to customers!
- YANMAR provides our original gearbox, which enables us to supply total marine
- engineering & servicing to customers!
- YANMAR original rubber mounts (option)
- Note: Specially arranged engine mounting bracket is to be used.

**Lower Down Time**
- Easier Routine Inspection, Easy Maintenance
- 1. Large inspection windows on the side of the block allow in-site replacement of pistons.
- 2. Full mechanical engine management avoids the chance of delicate and expensive electronics failing in hot,
- 3. Type Approved by Marine Class Societies.
- 4. Individual cylinder heads for each cylinder.

**Simulation curve**
- Operation side
- Fresh water intake
- Oil cooler
- Water box
- Fresh water pump
- Coolant pump
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