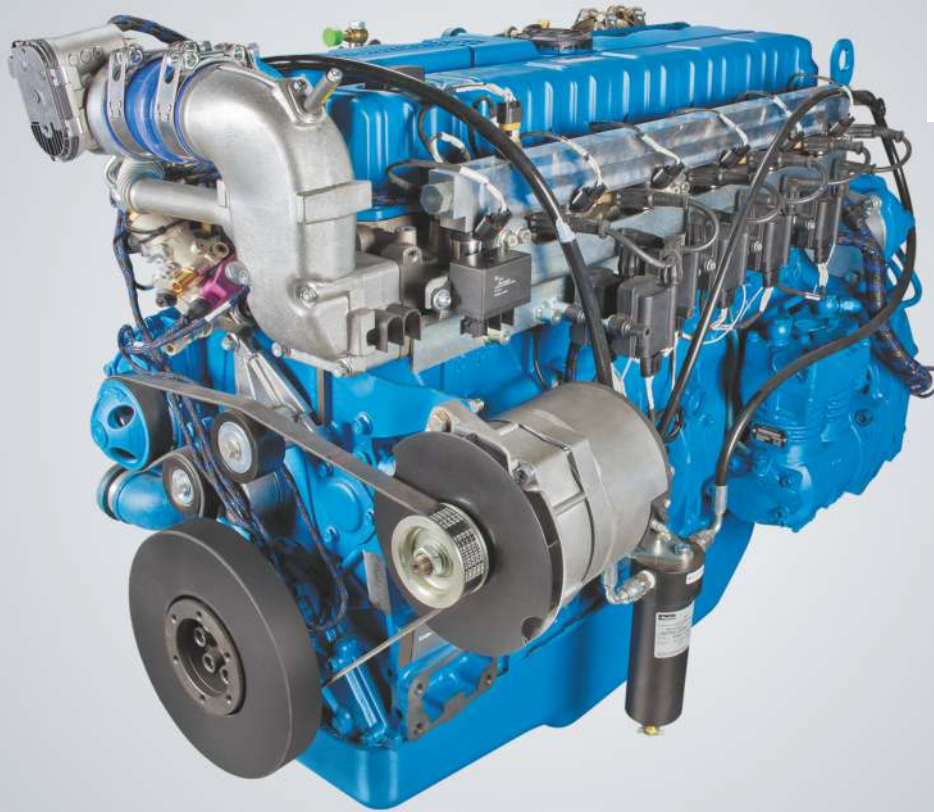


GAS ENGINE YMZ-53604 CNG



YMZ

EURO 5

ECONOMY, ECOLOGY, EFFICIENCY

modern, high-tech YMZ-530 CNG engines
to be installed on promising vehicles of environmental class 5

- Original engine design was developed together with world's leading company Westport, an internationally recognized leader in natural gas engines production
- High technical and economic performance on a level with the best foreign analogues ensures the effective vehicle operation
- Gas equipment components are by leading specialized suppliers
- Level of operating costs is by 40-50% lower as compared with diesel versions

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TECHNICAL SPECIFICATIONS OF YMZ-53604 CNG

| Basic model and versions | YMZ-53604 | YMZ-53624 | YMZ-53644 |
|--|---|---------------|---------------|
| Bore and Stroke, mm | 105 x 128 | | |
| Displacement, l | 6,65 | | |
| Arrangement and number of cylinders | L6 | | |
| Rated power gross, kW (hp) | 229,4 (312) | 211 (287) | 191,2 (260) |
| Net power (UN Regulations No. 85), kW (hp) | 229 (311,4) | 210 (285,6) | 190 (258,4) |
| Rated speed, min ⁻¹ | 2300 | | |
| Max. torque, gross, Nm (kgf·m) | 1236,1 (126) | 1047,8 (117) | 1098,7 (112) |
| Speed at max. torque, min ⁻¹ | 1200-1600 | 1100-1600 | 1100-1600 |
| Minimum specific gas consumption, g/kW·h (norm.m ³ /kW·h) | 210,6 (0,312) | 210,6 (0,312) | 215,6 (0,320) |
| Burning oil consumption, % from fuel consumption | 0,1 | 0,1 | 0,1 |
| Fuel supply system | of common rail type by Westport | | |
| Vehicle overhauls life, km of operation | road cars - 1 000 000, dump trucks - 800 000, buses - 900 000 | | |
| Weight, kg | 640 | 640 | 640 |
| Applicability | buses LiAZ, trucks MAZ, "URAL", KAMAZ | | |

Engine type

6-cylinder gas engine (CNG) of the YMZ-530 family, 4-stroke, in-line cylinders, spark ignition, liquid-cooled, turbocharged with supercharged air cooling in air-to-air exchanger installed on the vehicle
Compression ratio is 12

Design features

- gas supply system of YMZ-530 CNG by Westport – of common rail type, with distributed electronic injection
- original components: pressure regulator, ramp (common rail), gas measuring device, low pressure gas filter, high pressure filter, piping, low pressure filter, pressure regulator valve
- gas supply control system by Westport – microprocessor-based, control unit WP-580
- ignition system by Federal Mogul includes spark plug inserts by Westport, spark plugs by Bosch, ignition coils by Marshall

Ecology

Emissions comply with environmental class 5 – UN Regulations No. 49-05B2 (G) - Euro 5

Fuel

Compressed natural gas (Methane) NG-H/NG-L/NG-HL

To achieve the environmental class Euro-5 and higher technical and economic parameters the following are applied:

- EGR system (exhaust gas recirculation) and a catalyst
- upgraded turbocharging system with a turbocharger by Borg Warner or by "Turbotechnika"



"Avtodizel" (YaMZ) JSC

75, prospect Oktyabrya,
Yaroslavl, Russia, 150040
+7 (4852) 58-81-20, 58-78-78

www.gazgroup; www.ymzmotor.ru

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