

AUXILIARY POWER UNIT TM40



Auxiliary power unit APU TM40 is based on a turbo-shaft engine TM40 designed to provide independent supplies of D.C. and/or A.C. current and/or low pressure air for various services. Engine maximum power is 40kW at 46,500rpm and specific fuel consumption is 1.1kg/kWh at design conditions.

Engine operates with all types of fuels (gasoline, kerosene, diesel). Engine fuel installation is based on the fuel pump which is powered by electricity gained by the engine. Through the reduction gear box the engine is connected to the consumers. The engine and reduction gear box are lubricated with oil, driven by the electric oil pump.

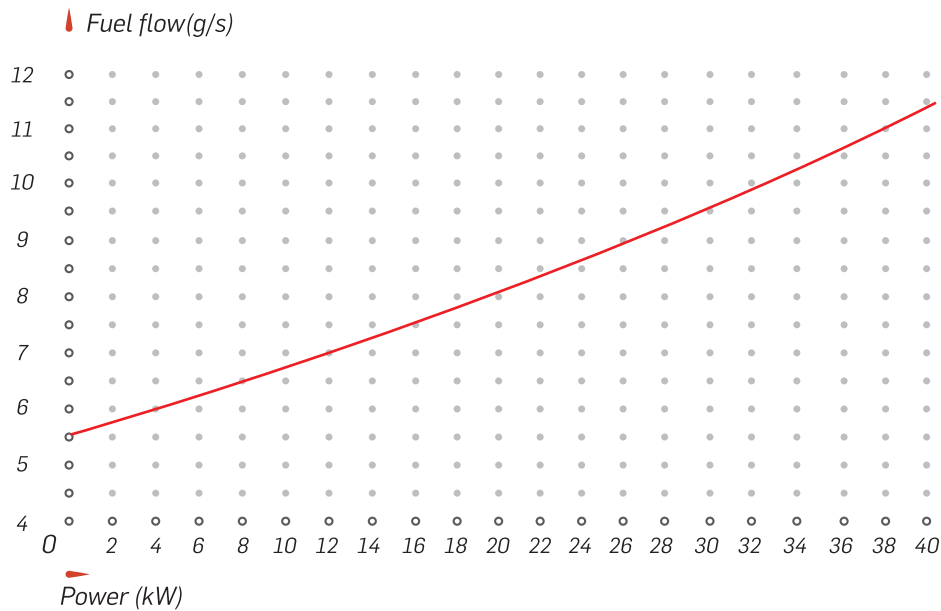
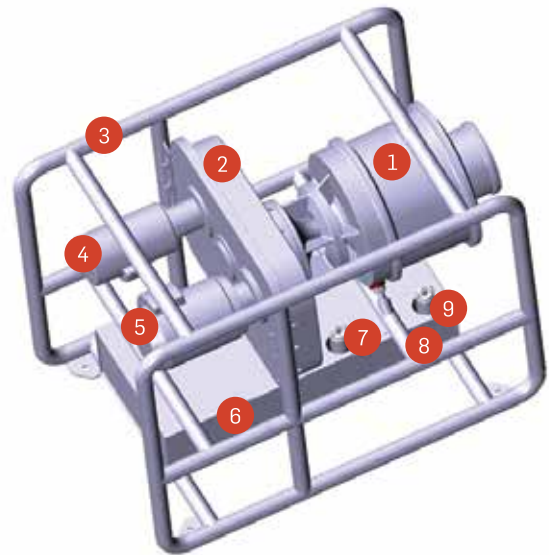
The main source of electrical power is 15kW 3-phase 400Hz A.C. generator, driven at 8,000rpm. It is possible to install an electrical unit to convert 400Hz A.C. to 28V D.C. if it is necessary. A 28V 5kW DC starter-generator is connected via gearbox on the motor with aim to rotate that same motor with the help of a battery. APU TM40 may also provide air delivery of 10kg/min.

APU TM-40 is designed for outdoor application. It has light, robust and compact construction. The system is designed in accordance with the metric system and it should be able to function in an environment between -30C and +50C, humidity 100% and it is dust and sand proof. Predicted life time for all the components is not less than 5000 hours. For application as an auxiliary power unit in tanks it can be mounted over the side of the caterpillar. It is predicted to be easy to install and replace with minimum time possible. Main engine and generator have self-air cooling system. APU TM-40 can withstand vibrations of Armored Fighting Vehicle, and also can't cause Electro Magnetic Interference to other electrical equipment in the tank. If necessary, this unit can generate smoke. The noise level of this unit is not more than 75db at 6m. The system has built-in gauge points for inspection, fault finding and performance checking. Moreover, modular construction ensures ease of maintenance and repair, when necessary. It is possible to adjust any type of generator or alternator to the APU by changing the reduction gear box. The only limitation is 40kW of power.

PERFORMANCES AT STANDARD SEA LEVEL

Maximum engine power	40 kW
Specific consumption	1.1 kg/kWh
Maximum rpm	48.000 rpm
Operating temperature	-30/+50 °C
Main drive (generator or alternator)	8.000 rpm/ 40kw
Maximum bleed air flow	10 kg/ min
Air bleed temperature	90 °C
Generatod rated power	15 kW
Generator speed	8.000 rpm
Unit length	1.420 mm
Unit width	500 mm
Unit height	420 mm
Unit weight	80 kg
Engine life (minimum)	5.000 h

- 1. TM 40 engine unit
- 2. Gearbox
- 3. Supporting frame
- 4. Starter motor
- 5. Generator
- 6. Fuel tank
- 7. Fuel pump
- 8. Oil tank
- 9. Oil pump (suction)



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