

NOT LISTED SPRINKLER SOLUTIONS

N67MNTF40 HE OPERATION DATASHEET

ENGINE GENERAL DATA

| | |
|--|-------------------------------------|
| THERMODYNAMIC CYCLE | DIESEL - 4 STROKE |
| ENGINE ARCHITECTURE | 6 CYLINDERS, IN LINE |
| FIRING ORDER | 1 - 5 - 3 - 6 - 2 - 4 |
| AIR INTAKE | TCA |
| COOLING | WATER |
| CHARGE AIR COOLING SYSTEM | CHARGE AIR/RAW WATER HEAT EXCHANGER |
| COMPRESSION RATIO | 17,5:1 |
| INJECTION SYSTEM | MECHANICAL ROTARY PUMP |
| COMBUSTION | DIRECT INJECTION |
| ENGINE DISPLACEMENT | 6.7 l |
| VALVES PER CYLINDER | 2 |
| INTAKE | 1 |
| EXHAUST | 1 |
| ROTATION (VIEWED FROM ENGINE FLYWHEEL) | CCW |
| ENGINE CRANKCASE VENTILATION SYSTEM | OPEN |
| ENGINE WEIGHT | 650 kg |

ENGINE PERFORMANCE

| ENGINE SPEED [rpm] | NET POWER RATING | | | FUEL CONSUMPTION RATE [l/h] |
|--------------------|-----------------------|--|--|--------------------------------|
| | [kW (cv) (1) (2) (3)] | | | |
| 2600 rpm | 238 (324) | | | 65 |
| 2800 rpm | 244 (332) | | | 67 |
| 2940 rpm | 246 (335) | | | 69 |

- (1) Power at flywheel according to 97/68 EC (without fan), after 50 hours running, 3% tolerance, fuel Diesel EN 590
- (2) Power derating conditions: a deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m) , a deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F (5.6°C) above 77°F (25°C) ambient temperature.
- (3) Performance evaluated with intake restrictions and exhaust backpressures values as shown.

EXHAUST SYSTEM

| ENGINE SPEED [rpm] | EXHAUST MAX TEMPERATURE [°C] | MAX ALLOWABLE BACK PRESSURE | | EXHAUST GASES FLOW [kg/h] |
|--------------------|---------------------------------|--------------------------------|--|------------------------------|
| | | [kPa] | | |
| 2600 rpm | 590 | 5 | | 1402 |
| 2800 rpm | 600 | 5 | | 1460 |
| 2940 rpm | 610 | 5 | | 1485 |

LUBRICATION SYSTEM

| | |
|--|---------|
| LUBRICATION OIL MINIMUM PRESSURE @ IDLE SPEED | 0,7 bar |
| LUBRICATION OIL MAXIMUM PRESSURE @ RATED SPEED | 3,5 bar |
| LUBRICATION OIL MAXIMUM TEMPERATURE | 120°C |
| LUBRICATION CIRCUIT FULL CAPACITY | 17,2 l |

ELECTRIC SYSTEM

| | | | |
|-------------------------------------|------------------|------|-------------------|
| VOLTAGE | 12V | 24V | (Optional config) |
| ALTERNATOR | 90A | 90A | (Optional config) |
| STARTER MOTOR | 3 kW | 3 kW | (Optional config) |
| BATTERIES PER BANK | 1 | 2 | (Optional config) |
| BATTERY CABLES MAX RESISTANCE | 0,0013 ohm | | |
| BATTERY CABLES MIN ALLOWED SIZE (4) | | | |
| 1 M TO 3 M | AWG 0 | | |
| 3 M TO 4 M | AWG 00 | | |
| 4 M TO 5 M | AWG 000 | | |
| BATTERY CCA @ -18° C (5) | 1000 A | | |
| RESERVE CAPACITY (5) | 430 min - 180 Ah | | |

(4) Length combination of positive and negative cables.

(5) Parameters evaluated according to SAE Standard J537.

AIR INDUCTION SYSTEM

| ENGINE SPEED [rpm] | COMBUSTION AIR FLOW [kg/h] | MAX INLET TEMPERATURE [°C] | MAX ALLOWED RESTRICTION (CLEAN FILTER) [kPa] | MAX ALLOWED RESTRICTION (DIRTY FILTER) [kPa] |
|-----------------------|-------------------------------|----------------------------------|---|---|
| 2600 rpm | 1350 | 55 | 3,5 | 6,5 |
| 2800 rpm | 1405 | 55 | 3,5 | 6,5 |
| 2940 rpm | 1430 | 55 | 3,5 | 6,5 |

COOLING SYSTEM

| ENGINE SPEED [rpm] | REJECTED HEAT [kW] | REQUIRED RAW WATER FLOW @ 15°C [l/min] | REQUIRED RAW WATER FLOW @ 38°C [l/min] | ENGINE RADIATED HEAT [kW] |
|-----------------------|-----------------------|--|--|------------------------------|
| 2600 rpm | 145 | 165 | 185 | 33 |
| 2800 rpm | 155 | 165 | 185 | 34 |
| 2940 rpm | 160 | 165 | 185 | 35 |

| | | |
|---------------------------------------|---------------|------|
| THERMOSTAT | START OPENING | 83°C |
| | FULL OPENING | 95°C |
| PRIMARY COOLANT TEMPERATURE RANGE | 83-95°C | |
| PRIMARY COOLANT MAXIMUM TEMPERATURE | 99°C | |
| PRIMARY COOLANT LOW TEMPERATURE ALARM | 35°C | |
| PRIMARY COOLANT CAPACITY | 15 l | |
| PRIMARY COOLANT PRESSURE (CAP) | 0,7 bar | |
| SECONDARY CIRCUIT MAXIMUM PRESSURE | 3,8 bar | |
| RAW WATER TEMPERATURE ALARM | 40°C | |

LIQUID HEATERS (OPTIONAL)

| | | |
|--|--------------|--------------|
| COOLANT EXTERNAL HEATER (39-49°C HYSTERESIS CYCLE) | 1000W – 230V | 1000W – 120V |
| COOLANT EXTERNAL HEATER (49-59°C HYSTERESIS CYCLE) | 1500W – 230V | 1500W – 120V |
| COOLANT INTERNAL HEATER (39-49°C HYSTERESIS CYCLE) | 1500W – 230V | 1500W – 120V |
| LUBRICATION OIL HEATER | 350W – 230V | |

FUEL SYSTEM

| | |
|---|-------|
| FUEL PUMP MAX INTAKE RESTRICTION | 0 bar |
| MAX ALLOWABLE FUEL HEAD ABOVE FUEL PUMP | 1 m |
| MINIMUM FUEL LINE INTERNAL DIAMETER | 10 mm |

ENGINE SELECTION CRITERIA

THIS ENGINE MUST BE SELECTED BY DETERMINING THE MAXIMUM POWER ABSORBED BY THE FIRE PUMP AT THE TOP OF THE APPROPRIATE IMPELLER CURVE AND ADD A 10% MARGIN TO THIS POWER REQUIREMENT. THIS VALUE NOW DETERMINES THE MINIMUM POWER REQUIREMENT FOR A FIRE PUMP DUTY.

STANDARD CONFIGURATION

SAE#3 FLYWHEEL HOUSING
 11.5" FLYWHEEL
 DRY AIR FILTER
 FUEL FILTER
 LUBE OIL FILTER
 ENGINE RIGID SUPPORTS
 FUEL METAL CONNECTIONS
 HIGH WATER TEMPERATURE SWITCH
 LOW OIL PRESSURE SWITCH
 12V STARTER
 12V ALTERNATOR
 12V ENERGIZE TO STOP FUEL SOLENOID

OPTIONS

| | |
|--------------------------------|-------------------------|
| SECONDARY COOLANT COOLING LOOP | EXHAUST COMPENSATOR |
| ENGINE CONTROL PANEL | ENGINE BASEFRAME |
| LUBE OIL 220V HEATER | COOLANT INTERNAL HEATER |
| EXHAUST MUFFLER | ENGINE WIRING |
| 24V ELECTRIC SYSTEM | COOLANT EXTERNAL HEATER |
| ETR STOP SOLENOID | LUBE OIL HEATER |
| WATER TEMPERATURE SENSOR | CRANK MANUAL CONTACTORS |
| OIL PRESSURE SENSOR | EXHAUST MUFFLERS |
| OIL DRAIN PUMP | COOLANT RECOVERY BOTTLE |

Informations, modifications and details contained in this page may be updated without any notice.