

NEF 280

N67 MNT M28

FOR MARINE APPLICATIONS
6 CYLINDERS IN LINE - DIESEL CYCLE
206 kW (280 CV) @ 2800 rpm (A1)
191 kW (260 CV) @ 2800 rpm (B)
147 kW (200 CV) @ 2800 rpm (C)
132 kW (180 CV) @ 2500 rpm (D)



T E C H N O L O G I C A L E X C E L L E N C E

**IVECO
MOTORS**

N67 MNT M28 FOR MARINE APPLICATIONS

| | | |
|--|------------------|------------------------|
| Thermodynamic cycle | | Diesel 4 stroke - D.I. |
| Air intake | | TAA |
| Arrangement | | 6L |
| Bore x Stroke | mm | 104 X 132 |
| Total displacement | l | 6.7 |
| Valves per cylinder | | 2 |
| Cooling | | liquid |
| Direction of rotation (viewed facing flywheel) | | CCW |
| Compression ratio | | 17.5 : 1 |
| Rotation mass moment of inertia (without flywheel) | kgm ² | 0.32 |
| Standard flywheel inertia | kgm ² | 0.71 |

Air induction

| | | |
|---|--------------------------|-------------|
| Max suggested intake restriction with clean air filter | kPa(bar) | 3.5 (0.035) |
| Max allowable restriction with dirty air filter | kPa(bar) | 6.5 (0.065) |
| Air requirement for combustion at 100% load/rated speed (comb. + ventilation) | kg/h (m ³ /h) | 5200 (4500) |
| Turbocharging pressure at full load/rated speed | kPa(bar) | 150 (1.5) |
| Turbocharging air max temperature (engine inlet) | °C | 40 |

Exhaust system

| | | |
|--|----------|----------|
| Max allowable backpressure | kPa(bar) | 10 (0.1) |
| Max exhaust temperature at maximum power | °C | 580 |
| Exhaust flow at max output | kg/h | 1130 |

Lubrication system

| | | |
|--|----------|----------|
| Minimum oil pressure at idle (at 100°C) | kPa(bar) | 70 (0.7) |
| Max oil temperature at full load/rated speed | °C | 120 |
| Engine angularity limits continuous operation: max front up and front down | 0/360 | 16 |
| max left hand and right hand | 0/360 | 22 30' |
| Total system capacity including pipes, filters etc. | liters | 16.5 |

Sea water cooling system (open circuit)

| | | |
|------------------------------------|-------------------|-----------------|
| Max intake restriction | kPa(bar) | 20 (0.2) |
| Sea water pump flow | m ³ /h | 12 |
| Heat rejected (total) at max power | kJ/s(kcal/h) | 163.3 (140,000) |
| Sacrificial zinc anodes | n° | 2 |

Cooling system (closed circuit)

| | | |
|--|-------------------|----------------|
| Coolant capacity (engine only) | liters | 24.5 |
| Water pump flow at rated speed | m ³ /h | 15 |
| Thermostat (modulating range) | °C | 72 ÷ 82 |
| Cooling liquid max temperature | °C | 103 |
| Min/max inner pressure in the cooling circuit (for keel cooling) | kPa(bar) | 10/100 (0.1/1) |
| External cooling system max pressure drop (for keel cooling) | kPa(bar) | 35 (0.35) |

Fuel system

| | | |
|--------------------------------|----------|-----------------|
| Injection system | | mechanical pump |
| Gas oil max intake restriction | kPa(bar) | 15 (0.15) |
| Gas oil max intake temperature | °C | 40 |
| Max fuel backpressure to tank | kPa(bar) | 30 (0.3) |

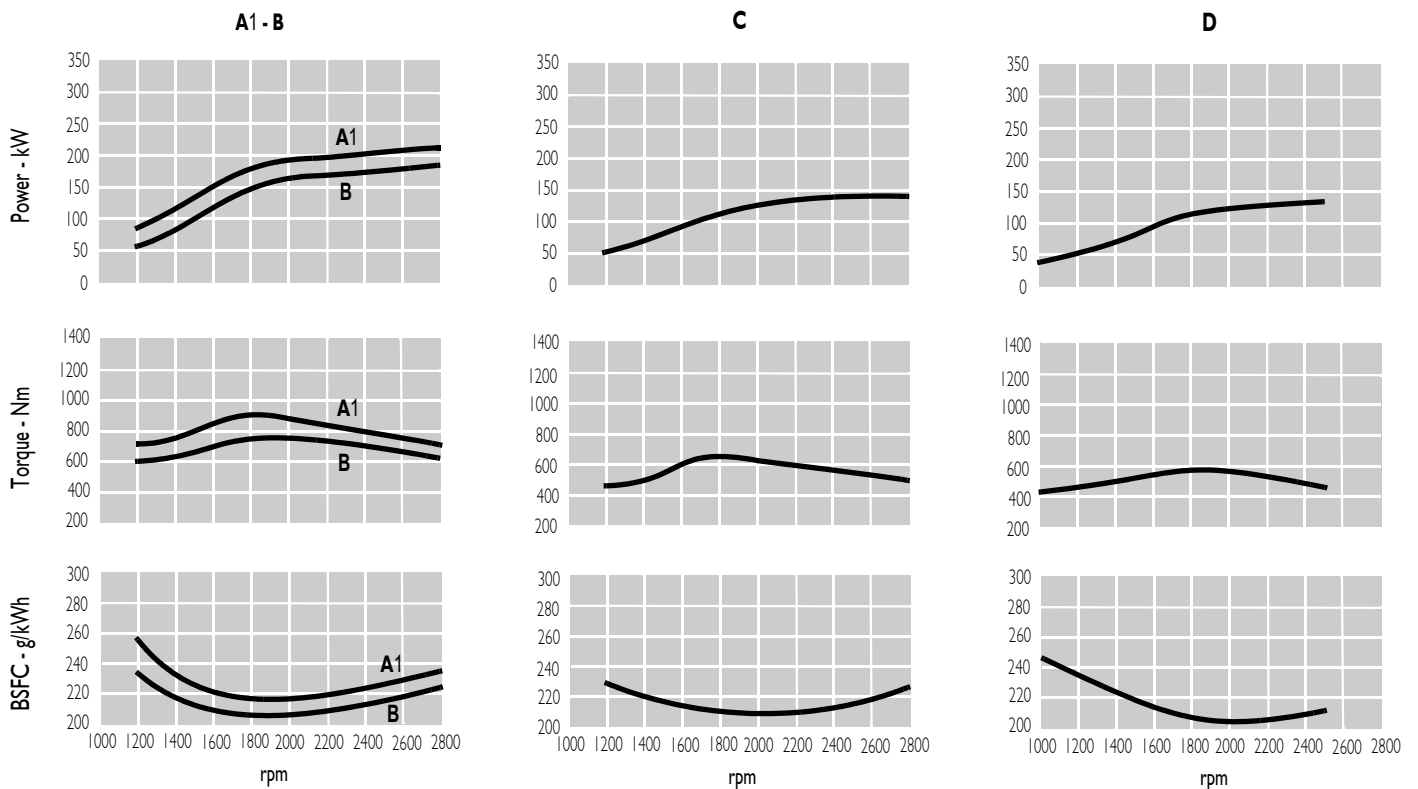
Electrical system

| | | |
|---------|---|----|
| Voltage | V | 12 |
|---------|---|----|

N67 MNT M28 FOR MARINE APPLICATIONS

| Rating type | | A1 | B | C | D |
|---|-------------------------|-----------|------------|-----------|-----------|
| Maximum power * | kW(CV) | 206 (280) | 191 (260) | 147 (200) | 132 (180) |
| At speed | rpm | 2800 | 2800 | 2800 | 2500 |
| Maximum no load governed speed at max rating | rpm | | 3150 | | |
| Minimum idling speed | rpm | | 650 | | |
| Mean piston speed at rated speed | m/s | 12.3 | 12.3 | 12.3 | 11.0 |
| BMEP at max torque | kg/cm ² | 18.2 | 15.2 | 11.2 | 11.3 |
| Available certifications | | | RINA | CCNR | |
| Specific fuel consumption at full load (best value) | g/kWh @ rpm | | 214 @ 2000 | | |
| Oil consumption at max rating | (% of fuel consumption) | | ≤ 0.2 | | |
| Minimum starting temperature without auxiliaries | °C | | - 15 | | |
| Oil and oil filter maintenance interval for replacement | hours | | 600 | | |
| Dry weight (without marine gear) | kg | | 605 | | |

* **Net Power** at flywheel according to ISO 3046/1, after 50 hours running, fuel Diesel EN 590. Power tolerance 5%
Test conditions : ISO 3046/1, 25 °C air temperature, 100 kPa atmospheric pressure, 30 % relative humidity.

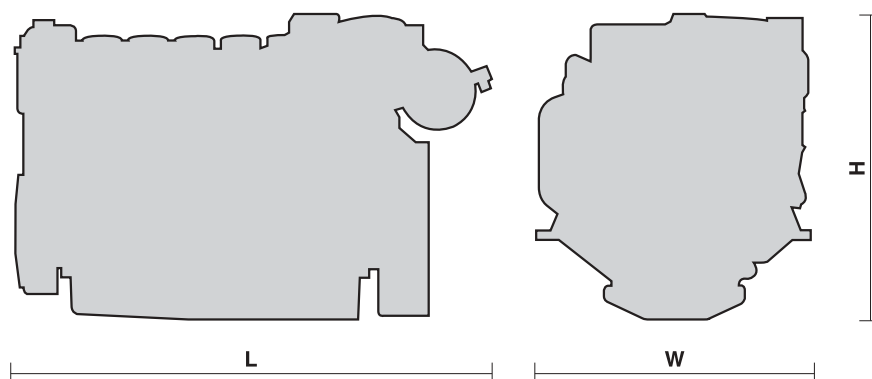


A1 = High performance crafts.
B = Light duty.
 Full throttle operation restricted within 10% of total use period.
 Cruising speed at engine rpm < 90% of rated speed setting - Maximum usage :
 - 300 hours per year (A1 service)
 - 1500 hours per year (B service).

C = Medium duty.
 Full throttle operation < 25% of use period.
 Cruising speed at engine rpm < 90% of rated speed setting - Maximum usage 3000 hours per year.

D = Heavy duty.
 Maximum rating utilisation up to 100% of use period, for unlimited hours per year.

L = 1236 mm
 W = 780 mm
 H = 793 mm



N67 MNT M28 FOR MARINE APPLICATIONS

Standard configuration

| | | |
|-----------------------------|--------|---------------------------|
| Flywheel housing | SAE | 3 |
| Flywheel size | inch | 11.5 |
| Air filter | | rear side |
| Turbocharger | | cooled |
| Heat exchanger | | tube type |
| Exhaust cooled elbow | | - |
| Water charge tank | | included |
| Fuel filter | n° | 1 - left side |
| Fuel prefilter | | included (loose) |
| Fuel pump | | included |
| Oil filter | n° | 1 - right side |
| Oil sump | | aluminium |
| Oil vapours blow-by circuit | | rear |
| Oil heat exchanger | | built in the crankcase |
| Oil filler | | on timing cover frontward |
| Starting motor | | 12 V - 3 kW |
| Alternator | | 12 V - 90 A |
| Engine stop device | | electrical excitation |
| Wiring harness | | engine wiring |
| Painting | colour | white "ICE" |

Not included in the standard configuration

| | | |
|--|--|--------|
| Battery - minimum capacity recommended | | 120 Ah |
| Battery - minimum cold cranking capacity recommended | | 900 A |

IVECO MOTORS OFFERS THE WIDEST AVAILABILITY OF ENGINE BUILD OPTIONS TO CUSTOMER SPECIFIC REQUIREMENTS WITHIN THE ENGINE SUPPLY. TO FIND OUT MORE ABOUT THE CONFIGURATIONS AND ACCESSORIES WHICH ARE AVAILABLE, CONTACT THE IVECO MOTORS SALES NETWORK.

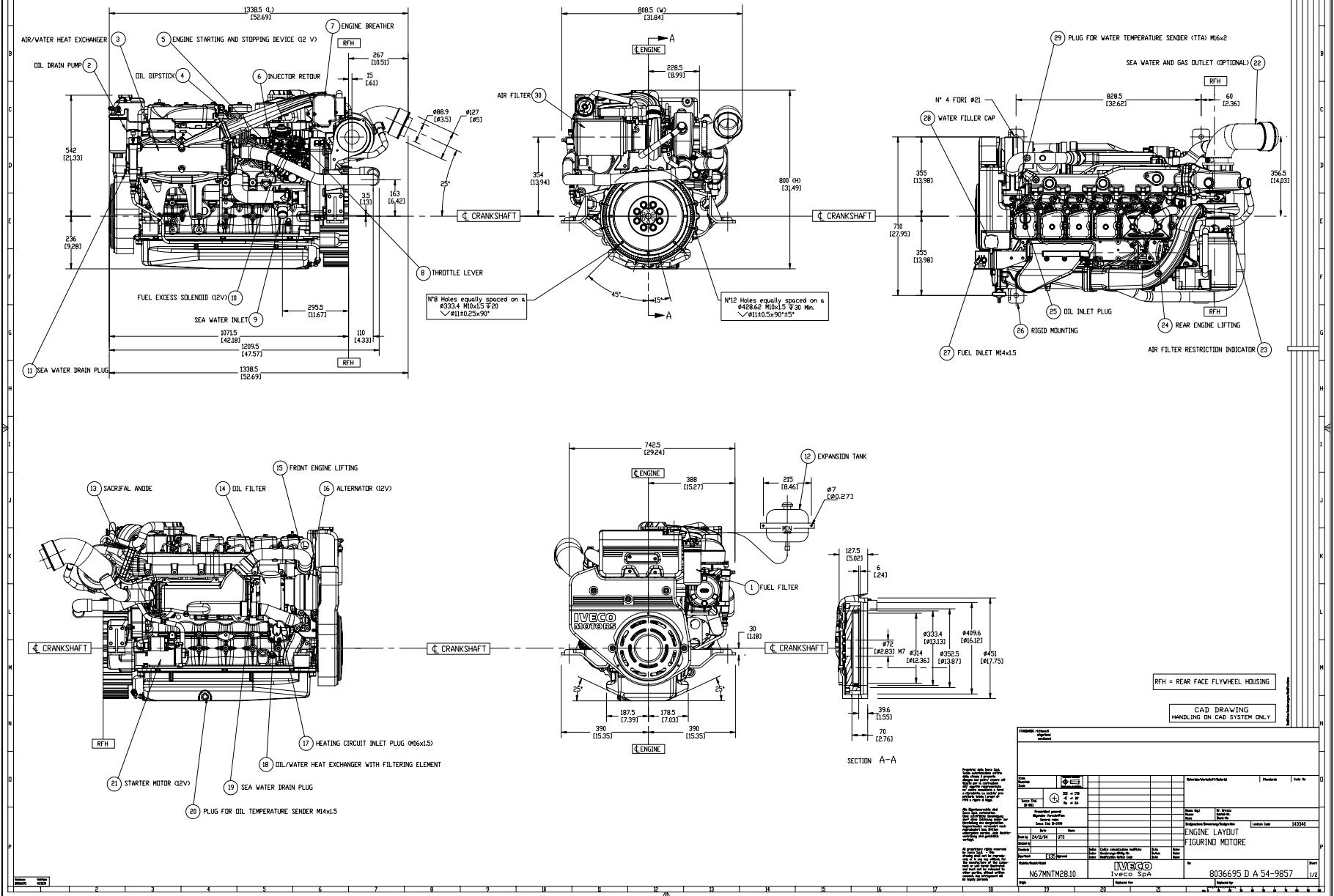
HEAD OFFICE AND BRANCHES

| | | | |
|---|-----------------------------|---|-----------------------------|
| <p>IVECO S.p.A. Iveco Motors Lungo Stura Lazio, 49 - 10156 Torino Tel. +39 (011) 0076245 - Fax +39 (011) 0076275 www.ivecomotors.com</p> | <p>Italy</p> | <p>IVECO S.p.A. Iveco Motors Viale dell'Industria, 15/17 - 20010 Pregnana Milanese - Milano Tel. +39 (02) 935101 - Fax +39 (02) 93590029</p> | <p>Italy</p> |
| <p>IVECO FRANCE S.A. Iveco Motors 50 Rue Ampère - B.P. 103 - 69685 Chassieu Cedex Tel. +33 (04) 72472222 - Fax +33 (04) 78905990</p> | <p>France</p> | <p>IVECO N.V. Iveco Motors - Liaison office-India Second Floor - 50, Okhla Industrial Estate - Phase III 110020 New Delhi Tel. +91 11 51613573 - Fax +91 11 26931271</p> | <p>India</p> |
| <p>IVECO MAGIRUS A.G. Iveco Motors Heiner Fleischmann-Strasse, 9 - 74172 Neckarsulm Tel. +49 (07132) 97690 - Fax +49 (07132) 976935</p> | <p>Germany</p> | <p>IVECO FIAT Representative Office in P.R. China 10/F Jinling Hotel World Trade Center 2 Hanzhong Road - 210005 Nanjing, Tel. +86 25 4710981 - Fax +86 25 4701105</p> | <p>China</p> |
| <p>IVECO U.K. Ltd Iveco Motors Road One - Industrial Estate CW7 3QP Winsford Tel. +44 (01606) 541027 - Fax +44 (01606) 541124</p> | <p>Great Britain</p> | <p>IVECO LATIN AMERICA Ltda. Iveco Motors Rua Alameda da Serra, 222 Vale do Sereno - 34000 - 000 Nova Lima (MG) Tel. +55 31 3286 3732/33/34 - Fax +55 31 3286 3735</p> | <p>Brazil</p> |
| <p>IVECO SWEDEN A.B. Iveco Motors Lergöskgatan, 12 - 42150 Västra Frölunda Tel. +46 (31) 492450 - Fax +46 (31) 492457</p> | <p>Sweden</p> | <p>IVECO Motors of N.A. 245 E. North Avenue Carol Stream, IL 60188 - 2021 USA Tel. +1 630 260 4226 - Fax +1 630 260 4267</p> | <p>North America</p> |

Local Distributor

NEF 6CYL 2V TAA

N67 MNT M28



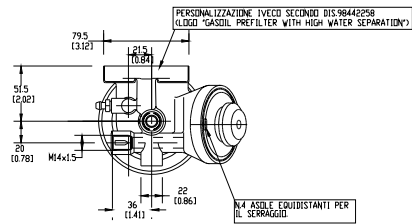
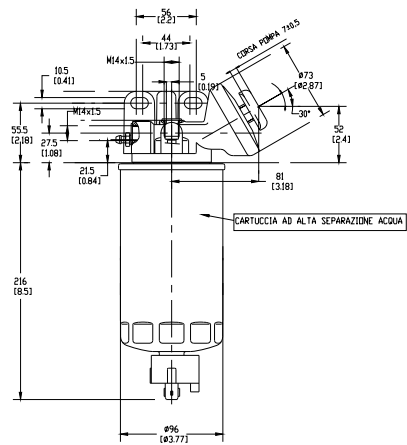
Revision date 14/01/05



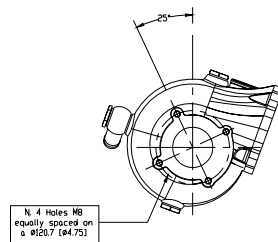
NEF 6CYL 2V TAA

N67 MNT M28

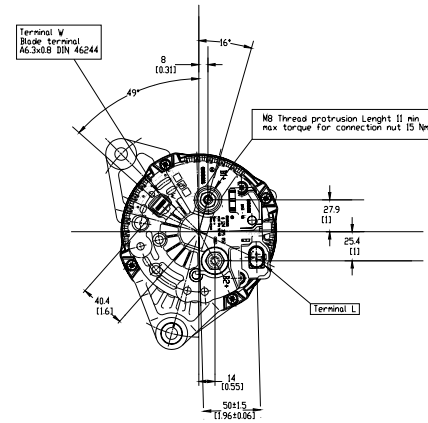
FUEL PREFILTER



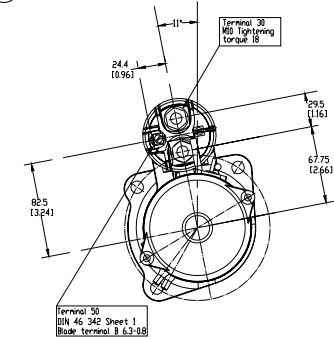
TURBINE



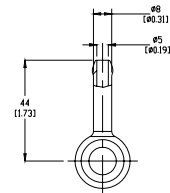
16 ALTERNATOR



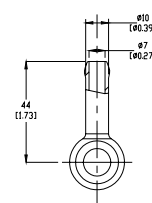
21 STARTER MOTOR (12V)



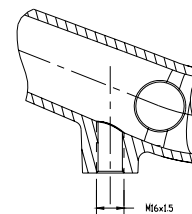
6 INJECTOR RETOUR



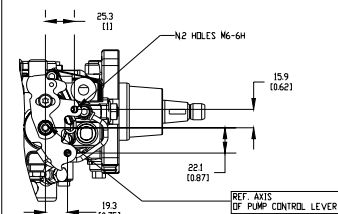
27 FUEL INLET



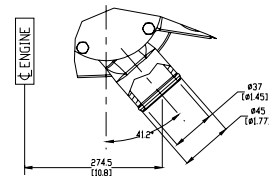
17 HEATING CIRCUIT INLET PLUG (M6x15)



8 THROTTLE LEVER



9



CAD DRAWING
HANDLING IN CAD SYSTEM ONLY

| | | | | | |
|---------------------------------|--|------------------------------|--|---------------------------------|--|
| <p>Revision date 14/01/05</p> | | <p>DATE: 14/01/05</p> | | <p>TIME: 10:00</p> | |
| <p>Author: [Name]</p> | | <p>Checked: [Name]</p> | | <p>Approved: [Name]</p> | |
| <p>Part Name: ENGINE LAYOUT</p> | | <p>Part No: N67MNTM28.10</p> | | <p>Rev: 01</p> | |
| <p>Material: [Material]</p> | | <p>Quantity: [Quantity]</p> | | <p>Location: [Location]</p> | |
| <p>Notes: [Notes]</p> | | <p>Comments: [Comments]</p> | | <p>References: [References]</p> | |

N67 MNT M28

6 CYL - 6,7 L - TAA - 2V - 12V

| Main Components | Description |
|-------------------------------|--|
| Engine setting | 206 kW @ 2800 rpm (ISO 8665) |
| Rigid mounting | N° 4 rigid mountings, transversal mounting distance = 710 mm |
| Flywheel Housing | Rear, cast iron, SAE#3 |
| Flywheel | 11,5", Inertia 0,71 kgm ² |
| Power Take Off | None |
| Crankshaft Pulley | 8 groove, ø 173 mm - No additional groove available |
| Fuel injection system | Mechanical, rotary injection pump |
| Lift Pump | None |
| Fuel filter | Single cartridge, left side |
| Fuel pre-filter | Mandatory - Loose prefilter with sedimenter, water presence and priming manual pump |
| Engine electric system | 12 V |
| Wiring Harness | Onto the engine |
| Engine Starter | 3 kW, 12 V, right side |
| Alternator | 90 A, 12 V with W terminal, right side |
| Cold starting device | None |
| Engine shut off | 12 V energize to stop fuel shut off (integrated into the injection pump) |
| Air cleaner | Wet air cleaner with clogging elect. sender |
| Turbocharger | Cooled by soft water, right side |
| Intercooler - Intake Manifold | Raw water cooled intercooler directly connected to the intake manifold, left side |
| Exhaust manifold | Cooled by soft water, right side |
| Cooling system heat exchanger | Soft water / raw water heat exchanger, right side |
| Thermostat | Temperature operating range : 72°C - 82°C |
| Soft water pump | Poly-V belt driven soft water centrifugal pump (anticavitation profile fibre impeller) |
| Raw water pump | Gear driven raw water pump (1 ½ " centrifugal pump with neoprene impeller) |
| Load water tank | Integrated in load soft water tank, front side |
| Expansion tank | Loose |
| Oil pump | Cylinder block integrated gear-type oil pump (crankshaft driven) |
| Oil coolant heat exchanger | Cylinder block integrated plate-type oil cooler |
| Oil filter | Single cartridge, left side |
| Oil pan | Aluminum, max.continuous operating limits: longitudinal 16°- transversal 22°30' |
| Closed crankcase ventilation | Oil vapours recirculation by Mann&Hummel valve. |
| Oil dipstick | Vertical pull dipstick, left side |
| Oil drain pump | Manual oil drain pump, left side |
| Oil Fill | Onto the cylinder head cover, cyl#1 |
| Engine Testing | Standard test bench |
| Engine painting | White ice paint (IC 194) |

