| Edition 6/26/2023 Page 1/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|--------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

Reference conditions

| No. | Description | Index | Value | Unit |
|-----|--------------------------------|-------|-------|------|
| 6 | Intake air temperature | | 25 | °C |
| 7 | Charge-air coolant temperature | | 45 | °C |
| 8 | Barometric pressure | | 1000 | mbar |
| 9 | Site altitude above sea level | | 100 | m |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

Actual value must be greater than specified value
 Actual value must be less than specified value

Applicable
 The module is valid for this product type
 Non-applicable
 The module is not valid for this product type
 Nalue not named
 The value has not yet been named or will not be named

* Adequate verification not yet available (tolerance +/-10%)
** Adequate verification not yet available (tolerance +/-5%)

| Edition 6/26/2023 Page 2/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|--------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

0. Data-relevant engine design configuration

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|------|
| | Engine without sequential turbocharging (turbochargers without cut-in/cut-out control) | | х | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

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| Edition 6/26/2023 Page 3/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|--------------------------------|--|----------------------|------------------------|
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| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

1. Power-related data

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 1 | Engine rated speed | А | 1500 | rpm |
| 3 | Mean piston speed | | 10.5 | m/s |
| 4 | Continuous power ISO 3046 (10% overload capability) (design power DIN 6280, ISO 8528) | A | 3007 | kW |
| 5 | Fuel stop power ISO 3046 | А | 3308 | kW |
| 8 | Mean effective pressure (MEP) (Continuous power ISO 3046) | | 25.2 | bar |
| 9 | Mean effective pressure (MEP) (Fuel stop power ISO 3046) | | 27.8 | bar |

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| Edition 6/26/2023 Page 4/28 | Technical Sales Docur - Product Data - | ment | A Rolls-Royce solution |
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| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

2. General Conditions (for maximum power)

| No. | Description | Index | Value | Unit |
|------|---|-------|-------|------|
| 46 | Individual power calculation (ESCM) required for maximum power | | х | - |
| 3726 | Site altitude above sea level, max. (special hardware required for altitudes > site altitude) | L | 1300 | m |
| 3727 | Special hardware for altitude > site altitude needed (see chapter 2, item No. 3726) | | Х | - |
| 1 | Intake air depression (new filter) | А | 15 | mbar |
| 2 | Intake air depression, max. | L | 30 | mbar |
| 51 | Exhaust overpressure (total pressure against atmosphere) | A | 30 | mbar |
| 52 | Exhaust overpressure, max. (total pressure against atmosphere) | L | 50 | mbar |
| 5 | Fuel temperature at fuel feed connection | R | 25 | °C |
| 9 | Fuel temperature at fuel feed connection, max. (w/o power reduction) | L | 55 | °C |

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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

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| Technical Sales Document |
|---------------------------------|
|---------------------------------|

Page 5/28

Edition 6/26/2023

- Product Data -



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|---------------------|-----------------------------|----------------------|------|
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| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

3. Consumption

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|--------|
| 17 | Specific fuel consumption (be) - 100 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 196 | g/kWh |
| 18 | Specific fuel consumption (be) - 75 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 190 | g/kWh |
| 19 | Specific fuel consumption (be) - 50 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 203 | g/kWh |
| 20 | Specific fuel consumption (be) - 25 % CP (+ 5 %; EN 590; 42.8 MJ/kg) | R | 228 | g/kWh |
| 73 | No-load fuel consumption | R | 50 | kg/h |
| 92 | Lube oil consumption after 100 h of operation (B = fuel consumption per hour) Guideline value does not apply for the design of EGAT systems. Please consult the Applications Center with regard to the layout of EGA systems. | R | 0.2 | % of B |
| 62 | Lube oil consumption after 100 h of operation, max. (B = fuel consumption per hour) | L | 0.5 | % of B |

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| Edition 6/26/2023 Page 6/28 | Technical Sales Docur - Product Data - | ment | A Rolls-Royce solution |
|--------------------------------|---|----------------------|------------------------|
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| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

4. Model-related data (basic design)

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-------------|
| 3 | Engine with exhaust turbocharger (ETC) and intercooler | | Х | - |
| 4 | Exhaust piping, non-cooled | | Х | - |
| 33 | Working method: four-cycle, diesel, single-acting | | Х | - |
| 34 | Combustion method: direct injection | | Х | - |
| 36 | Cooling system: conditioned water | | Х | - |
| 37 | Direction of rotation: c.c.w. (facing driving end) | | Х | - |
| 6 | Number of cylinders | | 20 | - |
| 7 | Cylinder configuration: V angle | | 90 | degrees (°) |
| 10 | Bore | | 170 | mm |
| 11 | Stroke | | 210 | mm |
| 12 | Displacement, cylinder | | 4.77 | liter |
| 13 | Displacement, total | | 95.4 | liter |
| 14 | Compression ratio | | 16.4 | - |
| 40 | Cylinder heads: single-cylinder | | Х | - |
| 41 | Cylinder liners: wet, replaceable | | Х | - |
| 49 | Piston design: solid-skirt piston | | Х | - |
| 21 | Number of piston compression rings | | 2 | - |
| 22 | Number of piston oil control rings | | 1 | - |
| 24 | Number of inlet valves, per cylinder | | 2 | - |
| 25 | Number of exhaust valves, per cylinder | | 2 | - |
| 15 | Number of turbochargers | | 2 | - |
| 16 | Number of L.P. turbochargers | | 2 | - |
| 18 | Number of intercoolers | | 1 | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
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 Engine power that can be run continuously under standard conditions
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A Design value Value required for the design of an external system (plant) R Guideline value Typical average value as information – only suitable for design purposes to a limited extent L Limit value A value representing the lower limit/minimum value or upper limit/maximum value that may not be exceeded. Not suitable for design purposes

Page 7/28

Edition 6/26/2023

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 19 | Number of L.P. intercoolers | | 1 | - |
|----|--|---|----|-----|
| 28 | Standard flywheel housing flange (engine main PTO) | | 00 | SAE |
| | Static bending moment at standard flywheel housing flange, max. | L | 15 | kNm |
| 51 | Dynamic bending moment at standard flywheel housing flange, max. | L | 75 | kNm |
| 43 | Flywheel interface (DISC) | | 21 | - |

 BL
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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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 Engine power that can be run continuously under standard conditions

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| Edition 6/26/2023 Page 8/28 | Technical Sales Docu - Product Data - | ment mtu | A Rolls-Royce solution |
|--------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

5. Combustion air / exhaust gas

| No. | Description | Index | Value | Unit |
|------|---|-------|-------|---------|
| 8 | Charge-air pressure before cylinder - CP | R | 3.82 | bar abs |
| 9 | Combustion air volume flow - CP | R | 4.2 | m³/s |
| 11 | Exhaust volume flow (at exhaust temperature) - CP | R | 10.3 | m³/s |
| 13 | Exhaust temperature before turbocharger - CP | R | 621 | °C |
| 4084 | Exhaust temperature after engine - CP (Position of interface according to installation drawing) | R | 435 | °C |

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 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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| Edition 6/26/2023 Page 9/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|--------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

6. Heat dissipation

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|------|
| 15 | Heat dissipated by engine coolant - CP with oil heat, without charge-air heat | R | 1015 | kW |
| 16 | Heat dissipated by engine coolant - FSP with oil heat, without charge-air heat | R | 1200 | kW |
| 26 | Charge-air heat dissipation - CP | R | 855 | kW |
| 27 | Charge-air heat dissipation - FSP | R | 950 | kW |
| 31 | Heat dissipated by return fuel flow - CP | R | 7.5 | kW |
| 33 | Radiation and convection heat, engine - CP | R | 105 | kW |
| 34 | Radiation and convection heat, engine - FSP | R | 105 | kW |

 BL
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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

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 Reference value: continuous power

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Edition 6/26/2023 Page 10/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

7. Coolant system (high-temperature circuit)

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|------|
| 17 | Coolant temperature (at engine outlet to cooling equipment) | А | 100.0 | °C |
| 57 | Coolant temperature differential after/before engine, from | R | 10.0 | к |
| 58 | Coolant temperature differential after/before engine, to | R | 12.0 | к |
| 23 | Coolant temperature differential after/before engine | L | 14.0 | К |
| 20 | Coolant temperature after engine, limit 1 | L | 102.0 | °C |
| 21 | Coolant temperature after engine, limit 2 | L | 104.0 | °C |
| 25 | Coolant antifreeze content, max. | L | 50 | % |
| 127 | Cooling equipment: coolant flow rate at max. pressure loss in off-engine cooling System (see chapter 7, item No. 41) | A | 75 | m³/h |
| 128 | Cooling equipment: coolant flow rate at min. pressure loss in off-engine cooling System (see chapter 7, item No. 72) | A | 80 | m³/h |
| 31 | Coolant pump: pressure differential | R | 2.25 | bar |
| 35 | Coolant pump: inlet pressure, min. | L | 0.50 | bar |
| 36 | Coolant pump: inlet pressure, max. | L | 2.50 | bar |
| 39 | Engine: coolant pressure differential with thermostat | R | 1.70 | bar |
| 41 | Pressure loss in off-engine cooling system, max. | L | 0.70 | bar |
| 72 | Pressure loss in off-engine cooling system, min. | L | 0.3 | bar |
| 43 | Pressure loss in off-engine cooling system, max. without thermostat | L | 0.70 | bar |
| 70 | Pressure loss in off-engine cooling system, min. without thermostat | L | 0.3 | bar |
| 47 | Breather valve (expansion tank) opening pressure (excess pressure) | R | 1.00 | bar |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
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 Engine power that can be run continuously under standard conditions

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Design value
 Value required for the design of an external system
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 Typical average value as information – only suitable
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 Limit value
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| Edition 6/26/2023 Page 11/28 | Technical Sales Docur - Product Data - | ment | A Rolls-Royce solution |
|---------------------------------|---|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |

Frequency [Hz]

50

Exhaust Regulations Fuel-consumption optimized;

| 54 | Cooling equipment: height above engine, max. | L | 15 | m |
|----|--|---|------|-----|
| 53 | Cooling equipment: operating pressure | A | 2.50 | bar |
| 74 | Coolant level in expansion tank, below min. shutdown | L | х | - |
| 50 | Thermostat, starts to open | R | 79.0 | °C |
| 51 | Thermostat, bypass closed | R | 92.0 | °C |
| 52 | Thermostat, fully open | R | 92.0 | °C |
| 48 | Breather valve (expansion tank) opening pressure (depression) | R | -0.1 | bar |
| 49 | Pressure in cooling system, max. | L | 5.00 | bar |

 BL
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 DL

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Edition 6/26/2023 Page 12/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

8. Coolant system (low-temperature circuit)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 53 | Coolant temperature (at engine outlet to cooling equipment) | R | 70.0 | °C |
| 9 | Coolant temperature before intercooler (at engine inlet from cooling equipment) | A | 45.0 | °C |
| 14 | Coolant temperature before intercooler, limit 1 | L | 75.0 | °C |
| 15 | Coolant temperature before intercooler, limit 2 | L | 78.0 | °C |
| 54 | Coolant temperature differential after/before intercooler, min. | L | 18.0 | К |
| 55 | Coolant temperature differential after/before intercooler, max. | L | 30.0 | К |
| 13 | Coolant antifreeze content, max. | L | 50 | % |
| 17 | Charge-air temperature after intercooler, max. | L | 80.0 | °C |
| 76 | Temperature differential between intake air and charge-air coolant before intercooler | A | 20.0 | К |
| 75 | Temperature differential between intake air and charge-air coolant before intercooler, max. | L | 22.0 | К |
| 56 | Coolant pump: flow rate | А | 44.0 | m³/h |
| 18 | Coolant pump: flow rate (± 5 %) | R | 44.0 | m³/h |
| 20 | Cooling equipment: coolant flow rate | А | 44.0 | m³/h |
| 80 | Cooling equipment: coolant flow rate at max. pressure loss in off-engine cooling system | A | 43 | m³/h |
| 81 | Cooling equipment: coolant flow rate at min. pressure loss in off-engine cooling system | A | 50 | m³/h |
| 21 | Intercooler: coolant flow rate | R | 44.0 | m³/h |
| 24 | Coolant pump: inlet pressure, min. | L | 0.5 | bar |
| 25 | Coolant pump: inlet pressure, max. | L | 2.5 | bar |
| 29 | Pressure loss in off-engine cooling system, max. | L | 1.0 | bar |

 BL
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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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Edition 6/26/2023 Page 13/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 62 | Pressure loss in off-engine cooling system, min. | L | 0.3 | bar |
|----|---|---|-------|-----|
| 31 | Pressure loss in off-engine cooling system, max. without thermostat | L | 1.0 | bar |
| 63 | Pressure loss in off-engine cooling system, min. without thermostat | L | 0.3 | bar |
| 43 | Cooling equipment: height above engine, max. | L | 15 | m |
| 36 | Breather valve (expansion tank) opening pressure (excess pressure) | R | 1.00 | bar |
| 37 | Breather valve (expansion tank) opening pressure (depression) | R | -0.10 | bar |
| 42 | Cooling equipment: operating pressure | Α | 2.50 | bar |
| 68 | Coolant level in expansion tank, below min. shutdown | L | x | - |
| 39 | Thermostat, starts to open | R | 38.0 | °C |
| 40 | Thermostat, bypass closed | R | 51.0 | °C |
| 41 | Thermostat, fully open | R | 51.0 | °C |

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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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 Engine power that can be run continuously under standard conditions

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Edition 6/26/2023 Page 14/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

10. Lube oil system

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-----------|
| 1 | Lube oil operating temp. before engine, from | R | 85 | °C |
| 2 | Lube oil operating temp. before engine, to | R | 98 | °C |
| 3 | Lube oil operating temp. after engine, from | R | 98 | °C |
| 4 | Lube oil operating temp. after engine, to | R | 108 | °C |
| 5 | Lube oil temperature before engine, limit 1 | L | 99 | °C |
| 6 | Lube oil temperature before engine, limit 2 | L | 101 | °C |
| 7 | Lube oil operating pressure before engine (measuring block) | R | 5.1 | bar |
| 8 | Lube oil operating press. bef. engine, from | R | 4.3 | bar |
| 9 | Lube oil operating press. bef. engine, to | R | 7.1 | bar |
| 33 | Lube oil pressure before engine, limit 1(speed-related value, consult Rolls-Royce Solutions GmbH) | L | 3.5 | bar |
| 34 | Lube oil pressure before engine, limit 2 (speed- related value, consult Rolls-Royce Solutions GmbH) | L | 3.2 | bar |
| 17 | Lube oil pump(s): oil flow, total | R | 835 | liter/min |
| 19 | Lube oil fine filter (main circuit): number of units | | 1 | - |
| 20 | Lube oil fine filter (main circuit): number of elements per unit | | 5 | - |
| 21 | Lube oil fine filter (main circuit): particle retention | R | 0.012 | mm |
| 32 | Lube oil fine filter (main circuit): pressure differential, max. | L | 1.5 | bar |
| 35 | Lube oil fine filter (main circuit): make (standard): MANN & HUMMEL | | х | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Continuous power

 X
 Applicable

 The module is valid for this product type
 Non-applicable

 The module is not valid for this product type
 N

 Value not named
 The value has not yet been named or will not be named

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Edition 6/26/2023 Page 15/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

11. Fuel system

| No. | Description | Index | Value | Unit |
|------|---|-------|-------|-----------|
| 1 | Fuel pressure at engine fuel feed connection, min. (when engine is starting) | L | -0.1 | bar |
| 2 | Fuel pressure at engine fuel feed connection, max. (when engine is starting) | L | 1.5 | bar |
| 57 | Fuel pressure at engine fuel feed connection, min. (when engine is running) | L | -0.3 | bar |
| 65 | Fuel pressure at engine fuel feed connection, max. (when engine is running) | L | 0.5 | bar |
| 37 | Fuel supply flow, max. | А | * | liter/min |
| 4211 | Max. fuel supply volume Normal mode | A | 20.1 | liter/min |
| 4212 | Max. fuel supply volume Failure mode | А | 22.6 | liter/min |
| 4 | Fuel pressure before injection pump, from (high-pressure pump) | R | 7.0 | bar |
| 5 | Fuel pressure before injection pump, to (high-pressure pump) | R | 9.0 | bar |
| 6 | Fuel pressure before injection pump, min. (high-pressure pump) | L | 5.0 | bar |
| 7 | Fuel pressure before injection pump with engine not running, max. (high-pressure pump) | L | 1.5 | bar |
| 4213 | Max. fuel return volume Normal mode | A | 5.5 | liter/min |
| 4214 | Max. fuel return volume Failure mode | A | 21.8 | liter/min |
| 10 | Fuel pressure at return connection on engine, max. | L | 0.5 | bar |
| 3235 | Fuel fine filter (secondary filter): Number of units | A | 1 | - |
| 3236 | Fuel fine filter (secondary filter): Number of elements per unit | А | 2 | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions

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Edition 6/26/2023 Page 16/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 18 | Fuel fine filter (main circuit): number of units | A | 1 | - |
|----|--|---|-----|-----|
| | Fuel fine filter (main circuit): number of elements per unit | A | 2 | - |
| | Fuel fine filter (main circuit): pressure differential, max. | L | 2.0 | bar |
| | Fuel fine filter (intermediate filter): Pressure differential, max. | L | 4.0 | bar |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions

Actual value must be greater than specified value
 Actual value must be less than specified value

 X
 Applicable

 The module is valid for this product type
 Non-applicable

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 N

 Value not named
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Edition 6/26/2023 Page 17/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

12. General operating data

| No. | Description | Index | Value | Unit |
|------|--|-------|-------|------|
| 1 | Cold start capability: air temperature (w/o starting aid, w/o preheating) - (case A) | R | 10 | °C |
| 2 | Additional condition (to case A): engine coolant temperature | R | 10 | °C |
| 3 | Additional condition (to case A): lube oil temperature | R | 10 | °C |
| 4 | Additional condition (to case A): lube oil viscosity | R | 15W40 | SAE |
| 9 | Cold start capability: air temperature (w/o starting aid, w/ preheating) - (case C) | R | 0 | °C |
| 10 | Additional condition (to case C): engine coolant temperature | R | 40 | °C |
| 11 | Additional condition (to case C): lube oil temperature | R | -10 | °C |
| 12 | Additional condition (to case C): lube oil viscosity | R | 15W40 | SAE |
| 21 | Coolant preheating, heater performance (standard) | R | 9.0 | kW |
| 22 | Coolant preheating, preheating temperature, min. | L | 32 | °C |
| 3506 | Coolant preheating, preheating temperature, max. | L | 55 | °C |
| 28 | Breakaway torque (without driven machinery) coolant temperature +5°C | R | 2600 | Nm |
| 30 | Breakaway torque (without driven machinery) coolant temperature +40°C | R | 2200 | Nm |
| 29 | Cranking torque at firing speed (without driven machinery) coolant temperature +5°C | R | 1400 | Nm |
| 31 | Cranking torque at firing speed (without driven machinery) coolant temperature +40°C | R | 1100 | Nm |
| 37 | High idling speed, max. (static) | L | 1613 | rpm |
| 38 | Limit speed for overspeed alarm / emergency shutdown | L | 1950 | rpm |
| 39 | Limit speed for overspeed alarm | L | 1950 | rpm |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions

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Edition 6/26/2023 Page 18/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 42 | Firing speed, from | R | 80 | rpm |
|------|--|---|------|--------|
| 43 | Firing speed, to | R | 120 | rpm |
| 44 | Engine coolant temperature before starting full-load operation, recommended min. (for emergency/standby sets with coolant preheating the minimum preheating temperature referred to extended property No.22 is sufficient) | R | 60 | °C |
| 3515 | Minimum continuous load (operation > 10h) | R | 30 | kW/cyl |
| 50 | Engine mass moment of inertia (without flywheel) | R | 24.6 | kgm² |
| 52 | Standard flywheel mass moment of inertia | R | 10.2 | kgm² |
| 51 | Engine mass moment of inertia (with standard flywheel) | R | 34.8 | kgm² |
| 69 | Speed droop (with electronic governor) adjustable, from | R | 0 | % |
| 70 | Speed droop (with electronic governor) adjustable, to | R | 7 | % |
| 95 | Number of starter ring-gear teeth on engine flywheel | | 182 | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

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|-----------|---------------|---|

Edition 6/26/2023 Page 19/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

13. Starting (electric)

| No. | Description | Index | Value | Unit |
|------|---|-------|------------|------|
| 2309 | Manufacturer | | Delco | - |
| 4101 | Туре | | 50MT | - |
| 2310 | Number of starter | | 2 | - |
| 2312 | Starter electrically redundant | | - | - |
| 2313 | Rated power per starter | R | 9 | kW |
| 2314 | Starter, rated voltage | R | 24 | VDC |
| 2315 | Rated short-circuit current per starter | L | 1900 | A |
| 2316 | Power consumption per starter (at an engine speed of 100 rpm) | R | 580 | A |
| 2317 | Internal resistance of power supply + line resistance per starter | А | 0.008 | Ω |
| 2318 | Manufacturer | | Bosch | - |
| 4118 | Туре | | HEP | - |
| 2319 | Number of starter | | 2 | - |
| 2320 | Starter electrically redundant | | - | - |
| 2321 | Rated power per starter | R | 11.3 | kW |
| 2322 | Starter, rated voltage | R | 24 | VDC |
| 2323 | Rated short-circuit current per starter | L | 2190 | А |
| 2324 | Power consumption per starter (at an engine speed of 100 rpm) | R | 750 | A |
| 2325 | Internal resistance of power supply + line resistance per starter | A | 0.0047 | Ω |
| 2326 | Manufacturer | | Prestolite | - |
| 4119 | Туре | | S-152 | - |
| 2327 | Number of starter | | 1 | - |
| 2328 | Starter electrically redundant | | - | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

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 Applicable

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Edition 6/26/2023 Page 20/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 2329 | Rated power per starter | R | 15 | kW |
|------|--|---|------------|-----|
| 2330 | Starter, rated voltage | R | 24 | VDC |
| 2331 | Rated short-circuit current per starter | L | 3000 | A |
| 2332 | Power consumption per starter (at an engine speed of 100 rpm) | R | 1400 | A |
| 2333 | Internal resistance of power supply + line resistance per starter | A | 0.0049 | Ω |
| 2334 | Manufacturer | | Prestolite | - |
| 4120 | Туре | | S-152 | - |
| 2335 | Number of starter | | 2 | - |
| 2336 | Starter electrically redundant | | Х | - |
| 2337 | Rated power per starter | R | 15 | kW |
| 2338 | Starter, rated voltage | R | 24 | VDC |
| 2339 | Rated short-circuit current per starter | L | 3000 | A |
| 2340 | Power consumption per starter (at an engine speed of 100 rpm) | R | 1400 | A |
| 2341 | Internal resistance of power supply + line resistance per starter | A | 0.0049 | Ω |
| 4104 | Manufacturer | | Prestolite | - |
| 4105 | Туре | | M128R | - |
| 4106 | Number of starter | | 2 | - |
| 4107 | Starter electrically redundant | | - | - |
| 4108 | Rated power per starter | R | 9.4 | kW |
| 4109 | Starter, rated voltage | R | 24 | VDC |
| 4110 | Rated short-circuit current per starter | L | 2000 | A |
| 4111 | Power consumption per starter (at an engine speed of 100 rpm) | R | 600 | A |
| 4112 | Power consumption per starter (at an engine speed of 100 rpm, SAE0) | R | - | A |
| 4113 | Power consumption per starter (at an engine speed of 100 rpm, SAE1) | R | - | A |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

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Edition 6/26/2023 Page 21/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|-------------------|----------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |

Exhaust Regulations Fuel-consumption optimized;

| 4114 | Internal resistance of power supply + line resistance per starter | A | 0.008 | Ω |
|------|--|---|-------|-----|
| 2347 | Generally valid data for starter | | Х | - |
| 2342 | Rated starting-attempt Duration (at +20°C ambient temperature with battery full) | R | 5 | S |
| 2343 | Interval between starts (at rated starting-attempt duration), min. | L | 20 | S |
| 2345 | Maximum acceptable starting-attempt duration | L | 15 | S |
| 2344 | Interval between starts (when starting-attempt duration > rated starting- attempt duration) | R | 60 | S |
| 2346 | Starting attempts within 30 minutes (at +20°C ambient temperature with battery full), max. | L | 6 | - |
| 3565 | Disengagement of starter pinion at engine Speed Note: Exceeding the guideline value of the disengagement speed will reduce the life cycle of the starter depending on how often and how much the speed has been exceeded | R | 400 | rpm |
| 3566 | Disengagement of starter pinion at engine speed, max. | L | 500 | rpm |

 BL
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 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
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 Conditions

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Edition 6/26/2023 Page 22/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|------------------------|-------------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Full avait Damilations | Fuel concurrentian entimized. | | |

Exhaust Regulations Fuel-consumption optimized;

15. Starting (pneumatic/oil pressure starter)

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------------------|
| 36 | Pneumatic starter: make TDI | | Х | - |
| 5 | Starting air pressure before starter motor, min. | R | 8 | bar |
| 6 | Starting air pressure before starter motor, max. | R | 9 | bar |
| 7 | Starting air pressure before starter motor, min. | L | 8 | bar |
| 8 | Starting air pressure before starter motor, max. | L | 9 | bar |
| 18 | Start attempt duration (engine preheated) | R | 3 | S |
| 19 | Start attempt duration (engine not preheated) | R | 5 | S |
| 114 | Air consumption/start attempt (engine preheated) Engine without generator Control with engine controller | R | 1.4 | m ³ n |
| 116 | Air consumption with external control for air-starter (per second | R | 0.5 | m³n |
| 29 | Starting air tank for 3 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 30 | Starting air tank for 3 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |
| 31 | Starting air tank for 6 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 32 | Starting air tank for 6 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |
| 33 | Starting air tank for 10 start attempts (max. 40 bar) (engine not preheated) | R | N | liter |
| 34 | Starting air tank for 10 start attempts (max. 30 bar) (engine not preheated) | R | N | liter |
| 103 | Starting oil pressure before starter motor, max. | R | 207 | bar |
| 105 | Starting oil pressure before starter motor, max. | L | 207 | bar |
| 106 | Start attempt duration (engine preheated) | R | 2.5 | S |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

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| Edition 6/26/2023 Page 23/28 | Technical Sales Docun - Product Data - | nent | A Rolls-Royce solution |
|---------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

| 108 Start attempt duration, max. | L | 15 | s |
|----------------------------------|---|----|---|
|----------------------------------|---|----|---|

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 Image: Stabilization reserve)

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions

Actual value must be greater than specified value
 Actual value must be less than specified value

 X
 Applicable

 The module is valid for this product type
 Non-applicable

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| Edition 6/26/2023 Page 24/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|---------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

16. Inclinations - standard oil system (ref.: waterline)

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-------------|
| 15 | Longitudinal inclination, continuous max. driving end down (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 17 | Longitudinal inclination, continuous max. driving end up (Option: max. operating inclinations) | L | 5 | degrees (°) |
| 19 | Transverse inclination, continuous max. (Option: max. operating inclinations) | L | 10 | degrees (°) |

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 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
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 Engine power that can be run continuously under standard conditions
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Edition 6/26/2023 Page 25/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

18. Capacities

| No. | Description | Index | Value | Unit |
|-----|--|-------|-------|-------|
| 1 | Engine coolant capacity (without cooling equipment) | R | 260 | liter |
| 10 | Intercooler coolant capacity | R | 50 | liter |
| 11 | On-engine fuel capacity | R | 9 | liter |
| 14 | Engine oil capacity, initial filling (standard oil system) (Option: max. operating inclinations) | R | 390 | liter |
| 20 | Oil change quantity, max. (standard oil system) (Option: max. operating inclinations) | R | 340 | liter |
| 28 | Oil pan capacity, dipstick mark min. (standard oil system) (Option: max. operating inclinations) | L | 270 | liter |
| 29 | Oil pan capacity, dipstick mark max. (standard oil system) (Option: max. operating inclinations) | L | 315 | liter |

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 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

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| Edition 6/26/2023 Page 26/28 | Technical Sales Docu - Product Data - | ment | A Rolls-Royce solution |
|---------------------------------|--|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

19. Masses / dimensions

| No. | Description | Index | Value | Unit |
|-----|---|-------|-------|------|
| 1 | Engine dry mass (standard scope of supply) | R | 9650 | kg |
| 2 | Engine dry mass (with engine-mounted standard accessories incl. coupling) | R | 10050 | kg |
| 4 | Engine length (standard scope of supply) | R | 3479 | mm |
| 5 | Engine width (standard scope of supply) | R | 1700 | mm |
| 6 | Engine height (standard scope of supply) | R | 2252 | mm |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Continuous power

Actual value must be greater than specified value
 Actual value must be less than specified value

Applicable
 The module is valid for this product type
 Non-applicable
 The module is not valid for this product type
 Nalue not named
 The value has not yet been named or will not be named

* Adequate verification not yet available (tolerance +/-10%)
** Adequate verification not yet available (tolerance +/-5%)

| Edition 6/26/2023 Page 27/28 | Technical Sales Docur - Product Data - | ment | A Rolls-Royce solution |
|---------------------------------|---|----------------------|------------------------|
| Name | 20V4000G44LF | Speed [rpm] | 1500 |
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

21. Exhaust emissions

| No. | Description | Index | Value | Unit |
|------|----------------------------|-------|-------|------|
| 1972 | Emissions data sheet: | | Х | - |
| | Fuel-consumption optimized | | | |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Continuous power

Actual value must be greater than specified value
 Actual value must be less than specified value

Applicable
 The module is valid for this product type
 Non-applicable
 The module is not valid for this product type
 Nalue not named
 The value has not yet been named or will not be named

* Adequate verification not yet available (tolerance +/-10%)
** Adequate verification not yet available (tolerance +/-5%)

Edition 6/26/2023 Page 28/28

- Product Data -



| Name | 20V4000G44LF | Speed [rpm] | 1500 |
|---------------------|-----------------------------|----------------------|------|
| Application Group | 3E | Nominal power [kW] | 3007 |
| Dataset | Ref. 25°C/45°C | Nominal power [bhp] | 4032 |
| | | Nominal power [kVA] | - |
| | | Nominal power [kWel] | - |
| | | Frequency [Hz] | 50 |
| Exhaust Regulations | Fuel-consumption optimized; | | |

22. Acoustics

| No. | Description | Index | Value | Unit |
|-----|---|-------|---------|-------|
| 101 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +3dB(A) tolerance) | R | 120 | dB(A) |
| 201 | Exhaust noise, unsilenced - CP (sound power level LW, ISO 6798, +3dB(A) tolerance) | R | 133 | dB(A) |
| 103 | Exhaust noise, unsilenced - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 737702e | - |
| 109 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798, +2dB(A) tolerance) | R | 109 | dB(A) |
| 209 | Engine surface noise with attenuated intake noise (filter) - CP (sound power level LW, ISO 6798, +2dB(A) tolerance) | R | 128 | dB(A) |
| 111 | Engine surface noise with attenuated intake noise (filter) - CP (free-field sound-pressure level Lp, 1m distance, ISO 6798) Spectrum No. | R | 737692e | - |
| 125 | Structure borne noise at engine mounting brackets in vertical direction above resilient engine mounts - CP Spectrum No. | R | 737696e | - |

 BL
 Reference value: fuel stop power

 Maximum engine power that cannot be run continuously on some applications (stabilization reserve)
 DL

 DL
 Reference value: continuous power

 Engine power that can be run continuously under standard conditions
 Conditions

Actual value must be greater than specified value
 Actual value must be less than specified value

X Applicable The module is valid for this product type

The module is value for this product type **Non-applicable** The module is not valid for this product type **N** Value not named The value has not yet been named or will not be named

* Adequate verification not yet available (tolerance +/-10%)
* Adequate verification not yet available (tolerance +/-5%)