Gas Irrigation Engines

G3406

143-345 hp

1100-1800 rpm

SPECIFICATIONS

In-Line 6, 4-Stroke-Cycle, Gas

Bore—in (mm) .............. 5.4 (137)
Stroke—in (mm) ............ 6.5 (165)
Displacement—cu in (L) .... 893 (14)
Rotation (from flywheel end) Counterclockwise
Compression Ratio .......... 10.3:1

Jacket Water System

Capacity w/out radiator—gal (L) .... 8.5 (32)

Gas Pressure Requirements

Naturally Aspirated .......... 0.1 bar (1.5 psi)
Turbocharged-Aftercooled ... 1.8 bar (25 psi)

Lube Oil System—gal (L)

Naturally Aspirated .......... 22 (83)
Turbocharged-Aftercooled ... 44 (167)

Weight, Net Dry (approx)—lb (kg)

Naturally Aspirated .......... 2,900 (1,315)
Turbocharged-Aftercooled .... 3,000 (1,361)

FEATURES

- DIESEL STRENGTH BUILT IN
  Blocks, crankshafts, heads, liners, and connecting rods are common with Cat® Diesel Engines. Gas engine pressures are 40% to 50% lower:
  Result ... extra long life.

- SIMPLICITY
  Time proven solid state magnetos provide ignition power without the need for belt driven alternators and batteries. A magneto powered Murphy panel offers mechanical readout of engine water temperature, oil pressure, and inlet air temperature (on TA engines) plus contacts within the gauges are the safeties for these critical systems.

- APPLICATION FLEXIBILITY
  Constant torque over a wide speed range offers more flexibility for matching engine power output to job needs.

- DURABILITY
  Gas engine exhaust temperatures are higher than diesel. Watercooled exhaust manifolds provide longer life because they operate at lower temperatures resulting in fewer cracks and less warpage.

FUEL CONSUMPTION

<table>
<thead>
<tr>
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<th>STD HCR-90</th>
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<td>1000 rpm</td>
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STANDARD EQUIPMENT

Air cleaner, two-stage, with rain cap and service indicator
Breather, crankcase
Carburetor, natural gas
Cooler, lubricating oil
Filter, lubricating oil bypass (TA only)
Flywheel
Housing SAE 1
Ignition system
  Altronic V (NA)
  Altronic III (TA)
Instrument panel, LH
  oil pressure, coolant temperature gauges
Lifting eyes
Manifold, exhaust, watercooled
Pumps, gear driven
  auxiliary water, gear driven, centrifugal,
  non-self-priming (TA only)
  jacket water, gear-driven
Regulator, gas pressure
SAE standard rotation
Service meter
Shutoff system; shutoffs for:
  oil pressure
  coolant temperature
  overspeeds (2)
  inlet air temperature (TA)
Supports, engine
Thermostats and housing
Torsional vibration damper

OPTIONAL EQUIPMENT

Air cleaners and accessories
Bases and foundations
Cooling systems,
  heat exchangers
  aftercooler groups
  expansion tank
Controls and governors
Exhaust fittings
Fuel systems
  gas valve
Gauges and instrument panels
Mufflers
Power takeoffs
Protection devices
Starting systems

DIMENSIONS

<table>
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<tr>
<th>L</th>
<th>H</th>
<th>W</th>
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<tr>
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HORSEPOWER AT TYPICAL IRRIGATION SPEEDS

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<tr>
<th></th>
<th>1800 rpm</th>
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<tr>
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Bhp @ rated conditions of 500' and 77° F
90°F Rating

RATING CONDITIONS AND DEFINITIONS

Ratings are based on SAE J1349 standard conditions of 29.61 in-Hg (100 kPa) and 77°F (25°C). These ratings also apply at ISO 3046, DIN6271, BS5514 standard conditions of 29.61 in-Hg (100 kPa), 81°F (27°C); and API 79-11C standard conditions of 29.38 in-Hg (99 kPa), 85°F (29°C).

Ratings are based on dry natural gas having a low heat value of 905 Btu/ft³ (35.54 MJ/Nm³). Variations in altitude, temperature and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-aftercooled ratings apply to 5,000 ft (1525 m) and 77°F (25°C). Naturally aspirated engines apply to 500 ft (150 m) and 77°F (29°C). For applications which exceed these limits contact your Caterpillar dealer.

90°F (32°C) refers to aftercooler water inlet temperature. All data is based on standard conditions. 77°F (25°C) 500 ft Alt. These ratings do not allow for overload capability.

Materials and specifications are subject to change without notice.