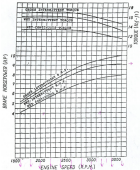




SAE J1349  
 PERFORMANCE CURVES - P04100  
 ENGINE MODEL 2.04



# DETROIT DIESEL 100 Series

Marine Model Pleasure Craft 140Hcc 34 BHP



A Product From  **Ford**



## General Specifications

Block Type	4Cyl
Displacement	1.4 Liters (85 cu in)
Stroke	70mm
Compression Ratio	17
Max. Wet Weight	1.800 kg (3.967 lb) (incl. oil and water)
Weight (dry)	1.570 kg (3.461 lb)
Maximum RPM	3.000
Maximum Torque	200 Nm (147.2 ft-lb)
Maximum Power	25 kW (33.9 hp)

## Rated Power Output—Maximum

Max. Power	25 kW (33.9 hp) @ 3.000 rpm
Max. Torque	200 Nm (147.2 ft-lb) @ 2.000 rpm

## Equipment Specifications

- In-line with Drive
- Water-Tight Flyng
- Full 360° Rotation
- Cooling System—Water-cooled with raw water pump
- Lubrication—Dry sump, oil-cooled piston for maximum life
- Exhaust—Forward Exh. Exhaust
- Trough Support—Front and rear mounting with rear support
- Fuel System—Fuel injection pump with electronic control
- Fuel Filter—High efficiency paper filter with water separator
- Oil Filter—High efficiency 20 micron with bypass for filter change
- Water Pump—Forward Exh. Exhaust
- Oil Pan—High efficiency 20 micron with bypass for filter change
- Water Pump—Forward Exh. Exhaust
- Oil Filter—High efficiency 20 micron with bypass for filter change

## Performance Curves

### 1400cc—Maximum



### Rating Explanation

DETROIT DIESEL Base engine gross horsepower figure (BHP) has been recorded at the marine gear output flange. (BHP) LER (LASH) indicates horsepower obtained by a typical gear train.

Rating (BHP) is the marine maximum horsepower rating performance based on standard 15 minute operating conditions and standard 1500 RPM. For optimum continuous running BHP should be limited to 75% of rated engine BHP. Average useful fuel load under conditions limited to 75% submerged operating. This rating is normally reserved to provide reserve power in full-throttle applications with an average annual run accumulated of 500 hrs.

DETROIT DIESEL 1400cc—MAXIMUM The maximum maximum rating is reserved to provide reserve power with long range running capability and is used in emergency situations. Average of continuous running BHP should be about 75% of the rated engine BHP and the useful fuel load power should be limited to 75% average operating time. All loads in this category are limited to a maximum of 1500 RPM per year.

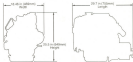
NOTE: Gear loads are the option with universal shaft splines and shafts in conjunction. Maximum may be applied with appropriate rating.

Consult your authorized Detroit Diesel Corporation representative for the rating that will apply to your vessel.

### Dimensional Drawing

Model 1400cc

Approximate dimensions shown.  
For complete dimensional information  
refer to installation drawing.



# DETROIT DIESEL

GENERATION



15000 Duxin Drive, West, Detroit, Michigan 48208-4001

Telephone: 313-982-9000

Telex: 522000D1 / TWX: 810-331-5540

FAX: 313-982-7588





mm (inch)

MODEL TYPE	A	B	C	D	E	F	G	H	K	L
103-09	547 (21.54)	195 (7.68)	1700 (66.93)	620 (24.41)	260 (10.24)	190 (7.48)	280 (11.02)	540 (21.26)	190 (7.48)	127 (5.00)



# 103-09

103-09

3 inlets/3 in outlets/3 in inlets

70 - 73

87%<sup>1</sup>

Installed/Inlet/Outlet

110 kg

-DPE (Downplay/Imp/Graff)  
Control valve (control valve)

4.2.1

1500

kw  
8.0 (8.7)

bhp  
8.2 (9.1)

4.8 (5.4)

6.0 (6.7)

1800

8.9 (7.7)

9.4 (10.4)

5.5 (6.2)

6.9 (7.7)

3000

9.8 (11.0)

13.3 (14.9)

7.8 (8.6)

9.8 (11.0)

3600

10.5 (11.9)

14.2 (15.7)

8.4 (9.5)

10.5 (11.9)



103-10 (cm)



12 LINA

**103-10**

**103-10**

12 cilindri (12 cilindri) di 103-10

75-72

103-10

12 cilindri (12 cilindri) di 103-10

110 kg

-30°C (Riscaldamento)  
Candela scintillante

4:1

MODEL 103-10	A	B	C	D	E	F	G	H	K	L
103-10	507 (20.12)	195 (7.72)	2286 (90.36)	438 (17.24)	236 (9.30)	190 (7.48)	238 (9.37)	348 (13.70)	190 (7.48)	107 (4.21)

1500

6.3 (7.1)

8.6 (9.6)

5.0 (5.7)

6.3 (7.1)

1800

7.5 (8.3)

10.2 (11.2)

6.0 (6.8)

7.5 (8.3)

3000

11.0 (12.4)

14.9 (16.6)

8.8 (9.9)

11.0 (12.4)

3600

11.7 (13.1)

15.8 (17.8)

9.4 (10.5)

11.7 (13.1)

kw  
bhp



103-10 (cm)



MODEL 103-10	A	B	C	D	E	F	G	H	K	L
103-10	507 (19.97)	195 (7.69)	2286 (90.35)	438 (17.24)	256 (10.08)	190 (7.48)	238 (9.37)	348 (13.69)	190 (7.48)	107 (4.21)



12 LINA

**103-10**

**103-10**

12 cilindri (12 cilindri) di 103-10

75-72

103-10

12 cilindri (12 cilindri) di 103-10

118 kg

-30°C (Riscaldamento)  
Candela scintillante

4:1

1500

6.3 (7.1)

8.6 (9.6)

5.0 (5.7)

6.3 (7.1)

1800

7.5 (8.3)

10.2 (11.2)

6.0 (6.8)

7.5 (8.3)

3000

11.0 (12.4)

14.9 (16.6)

8.8 (9.9)

11.0 (12.4)

3600

11.7 (13.1)

15.8 (17.8)

9.4 (10.5)

11.7 (13.1)

kw  
bhp



# 103-12

103-12

Die Cast / In-Fan / In-Line

62 mm

100 mm

Indirect / Indirect / Indirect

140 kg

ISO 9001 / ISO 14001 / ISO 45001  
Certified Manufacturer

4:1



mm (inch)

MODEL TOP (mm)	A	B	C	D	E	F	G	H	K	L
103-12	660 (26.00)	254 (10.00)	2260 (89.00)	442 (17.40)	268 (10.55)	330 (13.00)	600 (23.75)	630 (25.00)	330 (13.00)	132 (5.20)

1500

1800

3000

3600

8.9 (9.8)

10.7 (12.0)

—

—

12.0 (13.3)

14.5 (16.3)

—

—

7.6 (8.3)

9.1 (10.2)

—

—

9.5 (10.4)

11.4 (12.8)

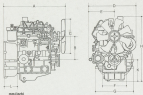
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kw  
bhp



# 103-15



103-15

3 in (80.7 mm) bore (1 in, 25.4 mm)

84 × 80

1800cc

Indirect/Indirect/Indirect

150kg

-30°C (depending on coolant)  
Combined combustion

R 1

MODELS 103-15	A	B	C	D	E	F	G	H	K	L
103-15	810 (31.5)	234 (9.2)	1146 (45.1)	462 (18.2)	217 (8.5)	226 (8.9)	488 (19.2)	695 (27.4)	221 (8.7)	100 (3.9)

	1500	1800	3000	3600
<i>kw</i>	10.8(14.0)	12.7(17.2)	—	—
<i>bhp</i>	14.6(19.3)	17.2(23.2)	—	—
	9.2(12.3)	10.8(14.5)	—	—
	11.5(15.6)	13.5(18.1)	—	—

# 104-19



mm (inch)



104-19

4 in Diesel / 4 in Petrol / 4 in Diesel

84 x 90

1800-3000

Infrared / Infrared / Infrared

200kg

-30°C Storage / -30°C Storage / -30°C Storage  
Combined Infrared / Combined Infrared

4 ± 1

MODEL TOP TYPE	A	B	C	D	E	F	G	H	K	L
104-19	665 (26.17)	294 (11.57)	1348 (53.06)	665 (26.17)	343 (13.50)	230 (9.09)	460 (18.11)	676 (26.61)	324 (12.75)	133 (5.24)

	1500	1800	3000	3600
<i>kw</i>	13.8 (15.4)	16.4 (18.3)	-	-
<i>blp</i>	18.7 (20.9)	22.2 (24.8)	-	-
	11.7 (13.1)	13.9 (15.8)	-	-
	14.7 (16.4)	17.4 (19.4)	-	-