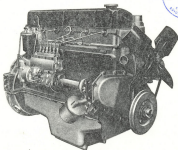


# Ford 590 E 96 bhp 2250 Rpm

## GENERAL SPECIFICATION

### FORD 6 CYLINDER INDUSTRIAL DIESEL ENGINE

Max. B.H.P. 96 at 2250 r.p.m. B.S. Overload



|                                 |         |   |
|---------------------------------|---------|---|
| Manufacturer .. .. .            | .. .. . | Ford Motor Company Ltd., Dagenham.  |
| Model Number .. .. .            | .. .. . | 590E  |
| Type .. .. .                    | .. .. . | Vertical 4 stroke, O.H.V.   |
| Cylinders .. .. .               | .. .. . | 6 in line.  |
| Injection .. .. .               | .. .. . | Direct  |
| Bore .. .. .                    | .. .. . | 3-917/3-818 in. (100 mm.) nominal.  |
| Stroke .. .. .                  | .. .. . | 4-524/4-528 in. (115 mm.) nominal.  |
| Swept Volume .. .. .            | .. .. . | 300-52 cu. in. (5005 c.c.)  |
| Compression Ratio .. .. .       | .. .. . | 18 : 1 nominal.   |
| Bore/Stroke Ratio .. .. .       | .. .. . | 1 : 1-15  |
| Compression Pressure .. .. .    | .. .. . | 365 lbs./sq. in. (25-66 kg./cm. <sup>2</sup> ) at 215 r.p.m.<br>(average)       |
| Maximum Firing Pressure .. .. . | .. .. . | 1100 lbs./sq. in. (77-53 kg./cm. <sup>2</sup> ) at 89° B.T.D.C.<br>upll timing. |
| Maximum Torque .. .. .          | .. .. . | 242 lbs./ft. (33-47 cu.kg.) at 1500 r.p.m.                                      |
| Maximum B.M.E.P. .. .. .        | .. .. . | 111 lbs./sq. in. (7-80 kg./cm. <sup>2</sup> ) at 1500 r.p.m.                    |

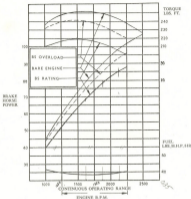
INDUSTRIAL

**Ford 590 E**

MODEL 590E

6 CYL. 9-42 LITRES

DIESEL

**DATA:**

CORRECTION FOR TEMPERATURE &amp; PRESSURE: NONE B

NO. OF CYLINDERS 6

CAPACITY 110 CU. INS. 545 CC.

BORE 3.875 IN. 100 MM.

STROKE 4.125 IN. 105 MM.

COMPRESSION RATIO 16:1

**TEST DATA: FULLY BURNING ENGINE**

ALL ACCESSORIES, WITH AIR CLEANER, LEAD FAN

AUXILIARY FAN DIRECTED ON TO ENGINE

FUEL TO BS, 200 190 CLASS A

S.A.E. 20 ENGINE DEL.

P-414-20-217

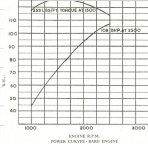
FORD MOTOR CO. U.S.A.

POWER UNIT

APPROVED: *[Signature]*

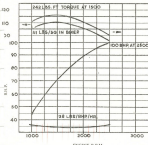
DATE: 12/2/54

# Ford Thames Trader 108 bhp 2500 rpm



4 CYL. DIESEL TRUCK  
 ENGINE FORD THAMES TRADER  
 FUEL TO BS. 200-147 CLASS A.  
 No. OF CYLES - 58  
 CAPACITY - 100-111 GALS. 344 C.C.S.  
 BORE DIA - 3.812 IN.  
 STROKE - 4.812 IN.  
 COMPRESSION RATIO - 16:1  
 FORD ORDER - 14-0824

CONNECTED - DRY AIR AT  
 29.5 IN. HG AT 60°



FORD HEVCO CO LTD  
 POWER UNIT ENCLAVE BOND  
 APPROVED *[Signature]*  
 DATE 4<sup>th</sup> OCT 1960



Tabelle 1: Technische Daten der Ford Dieselmotoren 90-100

Table 1: Technical data of Ford diesel engines 90-100

| Typ                            | 90   | 100  | 100   | 100  |
|--------------------------------|--|--|---|--|
| Bauart                         | Viertakt-Diesel,<br>Baugruppe<br>6 Zylinder in Reihe | Viertakt-Diesel,<br>Baugruppe<br>6 Zylinder in Reihe | Fortschritts-Diesel,<br>Baugruppe,<br>4 Zylinder in Reihe | Fortwirts-Dieselmotor,<br>Bauplan<br>6 Zylinder in Reihe |
| Brennstoff                     | mm   | mm   | mm  | mm   |
| Kurbelweg                      | 102,5/114,0  | 104,8/114,0  | 97,2/114,0  | 104,8/114,0  |
| Zylinderkopf                   | 100  | 100  | 100   | 100  |
| Nennleistung                   | kW/PS/Rev/1/min                                      | 55/75/2000   | 60/82/2000  | 70/95/2000   |
| max Drehmoment                 | Newton/Grads   | 27/1000  | 30/1000   | 35/1000  |
| Verdichtung                    | mm   | 15/10  | 15/10   | 15/10  |
| Mittlere Kurbelgeschwindigkeit | rev/min  | 2000   | 2000  | 2000   |
| Lebensdauer                    | h/1000   | 250-350  | 350-450   | 450-550  |
| Kühlwasserpumpe                |  |  |   |  |
| Kolbenringe                    |  |  |   |  |
| Verbindungsringe               |  |  |   |  |
| Kurbelwellenlager              |  |  |   |  |
| Nockenmechanismus              |  |  |   |  |
| Kurbelwellenlager              |  |  |   |  |
| Ölwanne                        | normal   | normal   | normal  | normal   |
| Luftfilter                     | vertikal/Grass                                       | 1.50/2000  | 1.50/2000   | 1.50/2000  |
| Lüfter                         |  |  |   |  |
| Kühler                         |  |  |   |  |
| Wasserpumpe                    |  |  |   |  |
| Umschaltvorrichtung            |  |  |   |  |
| Wasserpumpe                    |  |  |   |  |
| Umschaltvorrichtung            |  |  |   |  |
| Wasserpumpe                    |  |  |   |  |
| Umschaltvorrichtung            |  |  |   |  |

langsam, drücken sich die Kolben - beim Durchlaufen 20 mm hinunter - langsamer über den Deckel. Die Deckelstange rutscht auf 9 mm Durchmesser weiter. Bei langem großer dimensionierter Kippwinkel, die erst in zusammenbauenden Druckbereich lagern.

Verfahren des Ein- und Ausdrückens, die zur Haltepositionierung mit einem Ein- und Ausdrücken verbunden werden, sind auf geschlossene Baumstruktur ausgelegt. Sie können auch mit einer Ein- und Ausdrückung pro Minute drücken, was aus jeder dieser Zeitenbauern der Variante folgt.

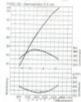
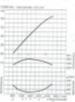


Fig. 3: Piston assembly for Ford diesel engine 90-100

Fig. 4: Piston rings for Ford diesel engine 90-100

**Kolben und Zylinder**

Charakteristik für die verwendete Kolben- und Zylinderbauweise für die Kippung mit kapillaren Ringen, Bild 3. Untersuchungen an Demotoren mit hohen Leistungsleistungen haben ergeben, dass der Verschleiß der Zylinderwand deutlich reduziert werden kann, wenn auch bei der oberen Ring polare Einträge sind, wie es bei Turbodieselmotoren üblich ist.

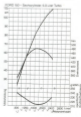
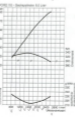


Fig. 5: Torque, Power and fuel consumption characteristics of Ford diesel engine 90-100

Fig. 6: Torque, Power and fuel consumption characteristics of Ford diesel engine 100-100

# BSD

## DIESEL ENGINES

6 cyl - 666 - 666T - 666TI



Power  
Products

# Introduction

The six cylinder Basidon Series Diesel (660) engines described in this specification have been developed to provide the high power and rugged characteristics required to suit a wide range of industrial applications.

The six cylinder range comprises of one normally aspirated engine (660 666), a turbocharged version (660 666T) and a turbocharged intercooled model (660 666TI). They all have a displacement of 6.5 litre (607 cu.in).

Some of the features which enhance durability and reliability of the six cylinder engines are as follows—

- A forged steel crankshaft with seven large hardened main bearing journals.
- Large diameter piston pins.
- Pistons are fitted with two chamfered compression rings for long life.
- All engines are fitted with valve seat inserts.
- The exhaust valves are fitted with positive rotators.

- The rocker arms have hardened tips to reduce wear and give longer adjustment periods.
- A water approximator/sedimentor is incorporated in the main fuel filter assembly.
- Twin fuel flow by-pass thermostat system ensures close engine temperature control.

The turbocharged engines have additional design features which include:

- Increased size cylinder head bolts.
- Larger diameter piston pins.
- Sterile faced exhaust valves.
- Pistons are oil spray coated via a hole drilled in the connecting rods.
- Inlet valve stems are flash chamfered.
- A water cooled oil cooler integral with the oil filter head is standard with the intercooled model.

## Engine Build & Options

For full details of the current basic engines and available options please refer to the current 660 range engine build scheme charts.

The basic engines (Section 1 of the build schemes) include the cylinder block and head, cast-iron flat wall oil pan, manifolds, turbocharger with intercooler and pipes where applicable, 8 o'clock inlet water pump, fuel filter, fuel pump, temperature sender, drain cock, water outlet connector, thermostat, starter, alternator and engine rear cover plate.

The options include—

- Class A governing — 1800 rpm.
- Class A governing — 1800 rpm.
- Flywheel — Flat faced — tapped for 330mm clutch.
- Flywheel — Heavy (97 kg).
- Flywheel — Recessed — tapped for 350mm agricultural clutch (models 666T and 666TI only).
- Puller Pin 580mm diameter x 6 blades.
- Puller Pin 660mm diameter x 6 blades.
- Dry Air Cleaner.
- Radiator fan shroud and pressure cap.
- SAE 3 Housing with side pads.
- SAE 3 Housing with feet.
- SAE 4 Housing with feet.

## Basic Engine Data

| ENGINE MODEL         |       | 660-666 | 660-666T     | 660-666TI   |
|----------------------|-------|---------|--------------|-------------|
| Aspiration           |       | Normal  | Turbocharged | Intercooled |
| Nominal displacement | litre | 6.56    | 6.56         | 6.56        |
| Bore                 | mm    | 111.76  | 111.76       | 111.76      |
| Stroke               | mm    | 111.76  | 111.76       | 111.76      |
| Compression Ratio    |       | 16.3:1  | 15.6:1       | 15.6:1      |
| Max. B.M.E.P.        | bar   | 7.79    | 18.08        | 12.86       |
| Max. Firing Pressure | bar   | 89.85   | 128.69       | 137.83      |
| Height               | mm    | 670     | 902          | 1166        |
| Width                | mm    | 642     | 642          | 671         |
| Length               | mm    | 1108    | 1108         | 1108        |
| Weight inc. flywheel | kg    | 521.8   | 544.3        | 680.3       |
| Flywheel weight      | kg    | 49.3    | 49.3         | 49.3        |

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The information in this publication is based on facts of representative engines from the range. Ford Motor Company Limited reserves the right to change the specifications at any time. Where possible any such

changes which may be introduced after publication of this booklet, but before it is supplied will be incorporated herein. For latest details always consult your Ford Industrial Products Dealer.

# Power Ratings

## Power Rating Summary

Extracted from full power curves. Power curves to BS 5514 Part 1, 1977 (BSI 6271) are included at the end of this specification.

Power curves to DIN 75000 are available on request from Industrial Products Engineering.

The Standard Reference Conditions in the second edition of ISO 3046/1-1985 have been used in the preparation of the BS 5514/DIN 8271 power curves in this publication. These are as follows:-

- Total barometric pressure — 100 kPa
- Air temperature — 300 K (27°C)
- Relative humidity — 60%
- Charge-air coolant temperature — 300 K (27°C)

## Power Ratings

| ENGINE MODEL | INTERMITTENT |               | CONTINUOUS   |               | POWER MEASUREMENT STANDARD |                  |               |             |
|--------------|--------------|---------------|--------------|---------------|----------------------------|------------------|---------------|-------------|
|              | POWER AT RPM | TORQUE AT RPM | POWER AT RPM | TORQUE AT RPM | BS 5514/DIN 8271           |                  | DIN 75000     |             |
| QSO 660      | 2500         | 1400          | 2300         | 1400          | 91.5 kW<br>81.5 kW         | 416 Nm<br>370 Nm | 95.0 kW<br>—  | 450 Nm<br>— |
| QSO 660T     | 2500         | 1800          | 2300         | 1800          | 110.8 kW<br>102.9 kW       | 550 Nm<br>501 Nm | 115.8 kW<br>— | 500 Nm<br>— |
| QSO 660T1    | 2500         | 1800          | 2300         | 1800          | 140.3 kW<br>134.5 kW       | 681 Nm<br>619 Nm | 140.3 kW<br>— | 680 Nm<br>— |

## Power Take Offs

| P.T.O. LOCATION       | DRIVE  | RATIO  | TORQUE (N-m) |
|-----------------------|--------|--------|--------------|
| Crankshaft front      | V-Belt | Direct | 1420         |
| Crankshaft front      | Axial  | 5:1    | 1920         |
| Camshaft gear (front) | Gear   | 1:2    | 400          |

# Cooling System

## Water Pump Data

- Type — Centrifugal impeller
- Drive — Twin 12.7mm shafts
- Drive Ratio — 1.35:1
- Water pump flow — 300 l/min @ 2500 engine rpm

**Coolant Capacity** — (see radiator) — 11.4 litre

- Antifreeze** — Ford Spec. 55M-87B-9100A
- 50 per cent solution

## Full Flow By-Pass System

- Twin Thermostat Operating Temperatures
- By-pass thermostat — 77°C (starts closing)
- Cyl. head thermostat — 82°C (starts opening)

**Optimum Operating Temperature** — 89°C

**Temperature Sender Unit** — Thread 1/8" — 27MPEF

## Fan Drive

- Location — Water pump
- Drive Ratio — 1.35:1
- Available fan belt power — 11.2kW

## HEAT REJECTION CHART (FULL LOAD CONTINUOUS RATED SPEED)

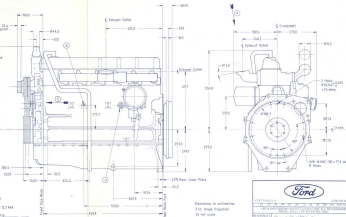
|           | RPM  | HEAT SUPPLIED kW | HEAT TO POWER kW | HEAT TO COOLANT kW | HEAT TO EXHAUST kW | HEAT TO OIL kW | HEAT TO RADIATION kW |
|-----------|------|------------------|------------------|--------------------|--------------------|----------------|----------------------|
| 1500-1800 | 1500 | 168.5            | 84.8             | 40.2               | 60.1               | 3.4            | 18.8                 |
|           | 1800 | 222.8            | 79.8             | 46.8               | 76.7               | 3.6            | 18.8                 |
|           | 2000 | 237.3            | 85.1             | 44.7               | 84.7               | 4.4            | 18.4                 |
|           | 2200 | 270.8            | 80.3             | 49.8               | 101.3              | 5.5            | 21.2                 |
|           | 2500 | 254.3            | 88.8             | 54.2               | 88.4               | 5.1            | 20.6                 |
| 1800-2200 | 1800 | 288.4            | 105.6            | 62.7               | 101.8              | 6.9            | 21.7                 |
|           | 2000 | 318.7            | 112.6            | 60.5               | 114.7              | 6.7            | 21.2                 |
|           | 2200 | 342.3            | 117.9            | 62.7               | 128.8              | 10.1           | 23.6                 |
|           | 1500 | 280.2            | 100.7            | 69.5               | 93.8               | 6.9            | 20.6                 |
|           | 1800 | 308.8            | 103.1            | 75.2               | 100.2              | 10.1           | 21.2                 |
| 2000-2500 | 2000 | 373.3            | 132.0            | 78.9               | 128.4              | 14.8           | 21.7                 |
|           | 2500 | 385.3            | 138.0            | 80.4               | 135.8              | 16.7           | 23.4                 |

Above results are computed from tests on individual engines. Different engines and installations may give different heat values.



# Ford Basildon Series 666 NA

SEAP, VEA, SHIMM, BOWL, ETC

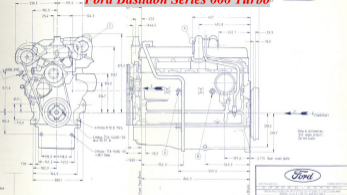


- ① 1/4"-8 NPT  
Oil Outlet to Cover  
10x2.5 from without Cover (2)
- ② 1/4"-8 NPT  
Oil Vent Plug Spacer  
10x3 from without Cover (1)
- ③ 1/4"-8 NPT  
Oil Pressure Gauge
- ④ 1/4"-20 NPT  
Water Temp Gauge

|   |  |
|---|--|
|   |  |
| <p>SEAP, VEA, SHIMM, BOWL, ETC</p> <p>10x2.5 from without Cover (2)</p> <p>10x3 from without Cover (1)</p>  |  |
| <p>1/4"-8 NPT Oil Outlet to Cover</p> <p>1/4"-8 NPT Oil Vent Plug Spacer</p> <p>1/4"-8 NPT Oil Pressure Gauge</p> <p>1/4"-20 NPT Water Temp Gauge</p> |  |
| <p>IND-324</p>  |  |

# Ford Basildon Series 666 Turbo

2000 cc Turbo  
 100000 100000



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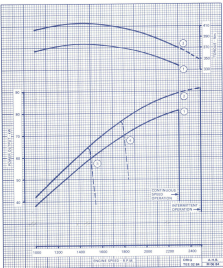




|   |  |  |  |
|---|--|--|--|
| Model & Power Rating<br>Model Designation: <b>6622 - 6 BLADE*</b>   |  | Engine Model<br><b>6622A/B/LR 6071</b>                             |  |
| The<br>Capacity<br>Rating<br>is<br>based<br>on<br>the<br>following<br>conditions:<br>1. ISO 3046<br>2. ISO 3046<br>3. ISO 3046<br>4. ISO 3046 |  | Engine<br>Features<br>1. 270 Nm @ 1400 RPM<br>2. 418 Nm @ 1400 RPM |  |
| 1. 91.5 kW @ 2500 RPM<br>2. 91.5 kW @ 2500 RPM  |  | 501 NOTES<br><b>BSD-666</b>  |  |

\*GENERAL PURPOSE GOVERNING  
 \*FAN USED DURING ENGINE TEST  
 \*LOWER GOVERNING F.I.E. - RATED POWER AT 1800 RPM = 58.0 kW  
 \*HIGHER GOVERNING F.I.E. - RATED POWER AT 1800 RPM = 70.0 kW

SEE POWER RATINGS SECTION FOR REFERENCE CONDITIONS.





Power Products

|   |  |   |  |  |
|---|--|---|--|--|
| Model: <b>6500</b> (1.9L) / <b>6500</b> (2.0L) / <b>6500</b> (2.3L)<br>Displacement: <b>1900 cc</b> / <b>1996 cc</b> / <b>2300 cc</b> |  | <b>BS661031A 6571</b>   |  | Engine Model:<br><b>BS661031A</b>                  |
| Max. Power:<br><b>152.8 kW @ 2000 RPM</b><br><b>170.8 kW @ 2000 RPM</b>   | Max. Torque:<br><b>200 Nm @ 1500 RPM</b><br><b>200 Nm @ 1500 RPM</b> | Max. Power:<br><b>201 kW @ 1800 RPM</b><br><b>200 kW @ 1800 RPM</b> | Max. Torque:<br><b>200 Nm @ 1500 RPM</b><br><b>200 Nm @ 1500 RPM</b> | Model: <b>BS661031A</b><br>Model: <b>BS661031A</b> |
| <b>SEE NOTES</b>  |  |   |  | <b>BSD-666T</b>                                    |

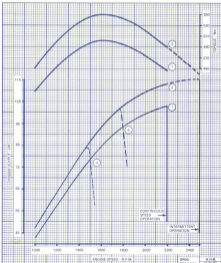
① GENERAL PURPOSE GOVERNING

MAX USED DURING ENGINE TEST

② CLOSE GOVERNING P.L.E. - RATED POWER AT 1500 RPM = 95.4 kW

③ CLOSE GOVERNING P.L.E. - RATED POWER AT 1500 RPM = 95.4 kW

SEE POWER RATINGS SECTION FOR REFERENCE CONDITIONS.

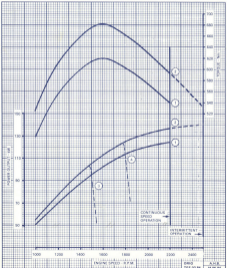




|   |   |   |   |   |   |                                  |
|---|---|---|---|---|---|----------------------------------|
| <b>PERFORMER POWER SERIES</b><br>Diesel Engines<br>Turbochargers  |   | <b>PERFORMER - Turbo Diesel Engines</b><br>Turbochargers  |   | <b>BS2014/D1A 6271</b>  |   | Engine Model<br><b>BSD-666Ti</b> |
| Net Output<br>(kW)  | Net Output<br>(HP)  | Net Output<br>(kW)  | Net Output<br>(HP)  | Maximum<br>Torque<br>(Nm)   | Maximum<br>Torque<br>(ft-lb)  | SEE NOTES                        |
| 124.0 kW @ 2000 RPM   | 168.0 HP @ 2000 RPM   | 140.0 kW @ 2000 RPM   | 189.0 HP @ 2000 RPM   | 61.9 Nm @ 1500 RPM  | 45.5 ft-lb @ 1500 RPM   |                                  |
| 140.0 kW @ 2000 RPM   | 189.0 HP @ 2000 RPM   | 168.0 kW @ 2000 RPM   | 228.0 HP @ 2000 RPM   | 66.1 Nm @ 1500 RPM  | 48.7 ft-lb @ 1500 RPM   |                                  |
| 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System | 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System | 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System | 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System | 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System | 1. Fuel System<br>2. Cooling System<br>3. Lubrication System<br>4. Exhaust System<br>5. Air Intake System<br>6. Electrical System |                                  |

- ① GENERAL PURPOSE GOVERNING
  - ② CLOSE GOVERNING F.L.E. - RATED POWER AT 1500 RPM = 95.0 kW
  - ③ CLOSE GOVERNING F.L.E. - RATED POWER AT 1800 RPM = 114 kW
- \*FAN USED DURING ENGINE TEST

SEE POWER RATINGS SECTION FOR REFERENCE CONDITIONS.



## 2701E PERFORMANCE CURVES—TO S.S. (48)1958

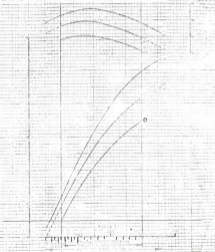
1000 DISE, INDUSTRIAL EVIDENCE

2701E CURVES OF TEST — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM

CORRECTIONS FOR TEST LOADS

| ENGINE RPM   | 100 | 125 | 150 | 175 | 200 | 225 |
|--------------|-----|-----|-----|-----|-----|-----|
| 2701E IN HD. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM



2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM  
 2701E IN HD. AT 2500 RPM — 2701E IN HD. AT 2500 RPM

# Ford 2703E Araç Motoru

## GENERAL SPECIFICATIONS

### MODEL TYPE

### 6 CYLINDER INDUSTRIAL DIESEL ENGINE



2703E

### GENERAL DATA

Model Number

Type

Valves

Injection

Cylinders

Firing Order

Bore

Stroke

Swept Volume

Compression Ratio

Bore/Stroke Ratio

Compression Pressure

Maximum I.M.E.P.

Maximum Firing Pressure

Rated Speed @ 1000 rpm

BEP (at Overload) per sq. in. (cm<sup>2</sup>)  
of Piston Area

BEP (at Overload) per Liter

Combustion Chamber

Method of Starting

Type of Breathing

Ramps

TYPE

Vertical 4 stroke

Overhead - Rotating Exhaust Valve

Direct

6 in line

1, 5, 3, 6, 2, 4

3.045 in. (76.9 mm)

4.524 in. (115 mm)

590.5 cu. in. (9678 cc)

16:1:1

9.87:1

155 lb./sq. in. (10.8 kg/cm<sup>2</sup>) @ 1000 rpm (approx.)

104 lb./sq. in. (7.3 kg/cm<sup>2</sup>) @ 1700 rpm

1100 lb./sq. in. (77.30 kg/cm<sup>2</sup>)

704 lb./min. (328.4 cu./min)

1.95 (9.31:1)

19.30

Machined in top of Piston (Control Top)

Electric, Hydraulic or Inertia

Closed or Ventilated

Shallow, Front, Rear Well & High Inclination - Absolute

Vertical 4 stroke 2703E 15. 590.5 cc. 16:1:1. Section 4



## PERFORMANCE

### INDUSTRIAL

| Speed Range Continuous                              | 1350 - 1500 rpm                |
|---|--------------------------------|
| BHP Maximum - BS 645 Overload                       | 88.5 @ 2500 rpm                |
| BHP Maximum - BS 645 Rating                         | 85.5 @ 2500 rpm                |
| PS Maximum Din 6270 - Continuous 'A'                | 88.5 @ 2500 rpm                |
| PS Maximum Din 6270 - Continuous 'B'                | 85.5 @ 2500 rpm                |
| BHP Maximum - SAE J816 - Intermittent               | 87.0 @ 2500 rpm                |
| BHP Maximum - SAE J816 - Continuous                 | 87.0 @ 2500 rpm                |
| Torque lb-ft maximum - BS 649 Overload              | 229.5 @ 1700 rpm               |
| Torque lb-ft maximum - BS 649 Rating                | 204.5 @ 1700 rpm               |
| Torque M kg Maximum Din 6270 - Continuous 'A'       | 24.55 @ 1700 rpm               |
| Torque M kg Maximum Din 6270 - Continuous 'B'       | 21.7 @ 1700 rpm                |
| Torque lb-ft maximum - SAE J816 - Intermittent      | 227 @ 1700 rpm                 |
| Torque lb-ft maximum - SAE J816 - Continuous        | 204 @ 1700 rpm                 |
| Duration for Altitude, Humidity and Air Temperature | In accordance with BS 645:1988 |

### AUTOMOTIVE

|                               |                  |                  |
|-------------------------------|------------------|------------------|
| BHP Gross -                   | 115 @ 2800 rpm   | 115 @ 2800 rpm   |
| BHP Gross - SAE J816          | 110 @ 2800 rpm   | 110 @ 2800 rpm   |
| PS - DIN 70620                | 104.5 @ 2800 rpm | 103 @ 2800 rpm   |
| Torque lb-ft Gross -          | 251.5 @ 1700 rpm | 251.5 @ 1700 rpm |
| Torque lb-ft Gross - SAE J816 | 238 @ 1700 rpm   | 238 @ 1700 rpm   |
| Torque M kg - DIN 70620       | 32.5 @ 1700 rpm  | 32.7 @ 1700 rpm  |

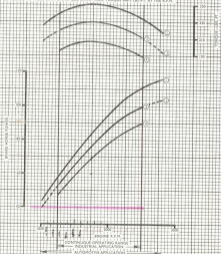
# 2703E PERFORMANCE CURVES—TO B.S. 649:1958

## 2703E DIESEL INDUSTRIAL ENGINE

CONDITIONS OF TEST — (1) 24.5 IN. H<sub>2</sub>O. AT 80°F DRY AIR  
 (2) 24.5 IN. H<sub>2</sub>O. AT 80°F 90% HUMIDITY (1.8 IN. H<sub>2</sub>O)  
 (3) 1.0 IN. H<sub>2</sub>O. OIL TO B.S. 286 (150° C. CLASS) OIL  
 COMPRESSION RATIO 16.5:1

| REDUCTION FOR RAIN (100% H.P.) |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|
| EXHAUST R.P.M.                 | 1200 | 1500 | 1800 | 2000 | 2200 | 2400 |
| 4 BLADE 17 1/2" DIA.           | 71   | 77   | 1.28 | 1.40 | 2.10 | 2.50 |
| 6 BLADE 17 1/2" DIA.           | 88   | 95   | 1.40 | 1.50 | 2.10 | 2.50 |

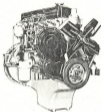
B.S. OVERLOAD — MAX. B.H.P. 91.5 AT 2000 R.P.M. — MAX. TORQUE 2615 LB.-FT. AT 1500 R.P.M.  
 B.S. RATING — MAX. B.H.P. 87.5 AT 2000 R.P.M. — MAX. TORQUE 2541 LB.-FT. AT 1500 R.P.M.



- GROSS OUTPUT — TEST BED EXHAUST LOSS AND CORRECTED
- AUTOMOTIVE RATING
- B.S. OVERLOAD
- B.S. RATING

ENGINE WITH GENERATOR AND AIR CLEANER, LESS FUEL, EXHAUST BACK PRESSURE NOT EXCEEDING 2 IN. H<sub>2</sub>O.

**2703E**

**GENERAL SPECIFICATION****MODEL TYPE****4 CYLINDER INDUSTRIAL DIESEL ENGINES****2704E****GENERAL DATA**

|   |  |
|---|--|
| <b>Model Number</b>   | <b>2704E</b>   |
| <b>Type</b>   | Vertical 4 Stroke  |
| <b>Valves</b>   | Overhead - Rotating Exhaust Valve                            |
| <b>Injection</b>  | Direct   |
| <b>Cylinders</b>  | 4 In Line  |
| <b>Firing Order</b>   | 1, 3, 2, 4   |
| <b>Bore</b>   | 4.125 in. (105 mm)   |
| <b>Stroke</b>   | 4.824 in. (123 mm)   |
| <b>Swept Volume</b>   | 302.6 cu.in. (5045 cc)                                       |
| <b>Compression Ratio</b>  | 16.5:1   |
| <b>Bore/Stroke Ratio</b>  | 0.845:1  |
| <b>Compression Pressure</b>   | 368 lb/sq.in. (26.66 kg/cm <sup>2</sup> ) @ 225 rpm (Approx) |
| <b>Maximum B M E P</b>  | 100.1 lb/sq.in. (7.28 kg/cm <sup>2</sup> ) @ 1500 rpm        |
| <b>Maximum Firing Pressure</b>                                      | 1188 lb/sq.in. (77.33 kg/cm <sup>2</sup> )                   |
| <b>Piston Speed @ 1500 rpm</b>                                      | 754 ft./min. (230.5 m./min)                                  |
| <b>BHP (BS Overload) per sq.in. (cm<sup>2</sup>) of Piston Area</b> | 1.355 (9.2100)   |
| <b>BHP (BS Overload) per Litre</b>                                  | 18.25  |
| <b>Combustion Chamber</b>   | Machined in top of Piston (Toroidal Tip)                     |
| <b>Method of Starting</b>   | Electric, Hydraulic and Inertia                              |
| <b>Type of Breathing</b>  | Closed or Ventilated   |
| <b>Bumps -</b>  | Shallow, Front, Rear Well & High Inclination - Aluminium     |

## PERFORMANCE

### INDUSTRIAL

|  |                                |
|--|--------------------------------|
| Speed Range Continuous                                     | 1200 - 2000 rpm                |
| BHP Maximum - BS 648 Overload                              | 199.5 @ 2000                   |
| BHP Maximum - BS 648 Rating                                | 99 @ 2000                      |
| PS Maximum Dia 6270 - Continuous 'A'                       | 98.5 @ 2000                    |
| PS Maximum Dia 6270 - Continuous 'B'                       | 197.5 @ 2000                   |
| BHP Maximum - SAE J816 - Intermittent                      | 196 @ 2000                     |
| BHP Maximum - SAE J816 - Continuous                        | 99 @ 2000                      |
| Torque I <sub>h</sub> -R, maximum - BS 648 Overload        | 253.5 @ 1500                   |
| Torque I <sub>h</sub> -R, maximum - BS 648 Rating          | 228 @ 1500                     |
| Torque M kg Maximum Dia 6270 - Continuous 'A'              | 31.3 @ 1500                    |
| Torque M kg Maximum Dia 6270 - Continuous 'B'              | 34.8 @ 1500                    |
| Torque I <sub>h</sub> -R maximum - SAE J816 - Intermittent | 251.7 @ 1500                   |
| Torque I <sub>h</sub> -R maximum - SAE J816 - Continuous   | 226.5 @ 1500                   |
| Deration for Altitude, Humidity, and Air Temperature       | In Accordance with BS 648-1968 |

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### AUTOMOTIVE

|   |              |              |
|---|--------------|--------------|
| BHP Gross -                             | 128 @ 2000   | 128 @ 2000   |
| BHP Gross - SAE J816                    | 121 @ 2000   | 121 @ 2000   |
| PS - Dia 70020                          | 118 @ 2000   | 114 @ 2000   |
| Torque I <sub>h</sub> -R Gross -        | 276.5 @ 1500 | 276.5 @ 1500 |
| Torque I <sub>h</sub> -R Gross SAE J816 | 261 @ 1500   | 261 @ 1500   |
| Torque M kg - DIN 70020                 | 36.2 @ 1500  | 36 @ 1500    |

# 1704C PERFORMANCE CURVES—TO B.S. 649-1958

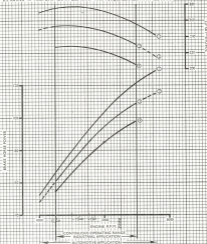
## 1704C DIESEL INDUSTRIAL ENGINE

CONDITIONS OF TEST:  $\odot$  2700 R.P.M. AT 50% B.S. W.S.  
 $\odot$  2700 R.P.M. AT 25% B.S. TORQUE (240 H.P. W.S.)  
 $\odot$  2700 R.P.M. AT 10% B.S. TORQUE (240 H.P. W.S.)  
 FUEL: COMMER. DIE. TO B.S. STANDARD CLASS "A"  
 COMPRESSION RATIO 16.5:1

DEDUCTIONS FOR 4 BLADE IP  
 (0.5 IN. WIDE 11" C) DIA. 15.5 IN.  
 ENGINE R.P.M. 2500 3000 3500 2000 2500  
 H.P. 2800 H.P. 3700 H.P. 4500 H.P. 3100 H.P. 3500

85% OVERLOAD—MAX. S.H.P. 585 AT 2600 R.P.M.—MAX. TORQUE 325 LBS. FT. AT 2500 R.P.M.

85% RATING — MAX. S.H.P. 540 AT 2500 R.P.M.—MAX. TORQUE 300 LBS. FT. AT 2500 R.P.M.



$\odot$  GROSS OUTPUT—TEST BED EXHAUST LOSS APPLICABLE  
 $\odot$  AUTOMOTIVE RATING  
 $\odot$  85% OVERLOAD  
 $\odot$  85% RATING

ENGINE WITH GENERATOR AND AIR CLEANER, LEEB TANK,  
 EXHAUST BACK PRESSURE NOT EXCEEDING 1 IN. HG.



Industrial  
Power  
Products

Engine Model:

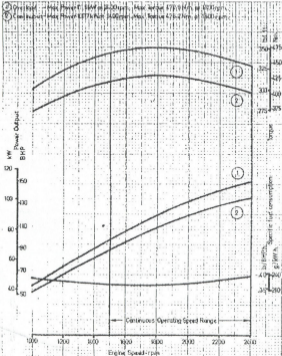
# 2704ET (INDUSTRIAL)

Geearing :- General Purpose

Test Conditions :- Temp. 15.6°C, Pressure 763 mm. Hg., Dry air.

Power measuring Std.

Fuel





Industrial Power Products

# Engine Model: 2704ET (MARINE)

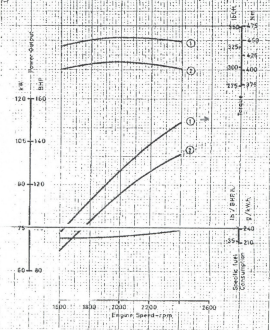
Governing:

Test Conditions: Temp 15, 8°C, Pressure 769mm Hg, Dry Air

(Tower measuring Std.)

Excl.

- 1 Overload - Max Power 115.9kW at 2400 rpm, Max Torque 475.6 Nm at 2400 rpm
- 2 Cruise - Max Power 101.8kW at 2400 rpm, Max Torque 413.8 Nm at 2400 rpm





Industrial Power Products

Engine Model: **2704ETI - INTERCOOLED**

Test conditions - Air temp 16.1°C, Pressure 761mm Hg, Dry air.

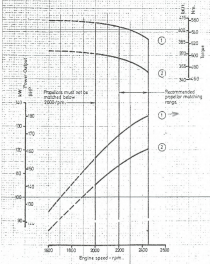
Power measured 3rd

Fuel

- ① Gearbox (1st to 12th)
- ② Continuous

Max power 131 kW at 2150 rpm, Max torque 540 Nm at 1000 rpm.

Max power 121 kW at 2150 rpm, Max torque 508 Nm at 900 rpm.







Industrial Power Products

# Engine Model: 2704ETI - INTERCOOLED

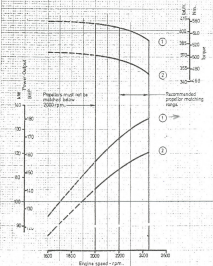
Test conditions: Air temp. 15°C, Pressure 101 mm.Hg, Dry air.

Power measuring Set

Fuel

① **Condition 1 (100%)** - Max. power 124 kW at 3150 rpm, Max. torque 500 Nm at 1800 rpm.

② **Condition 2** - Max. power 121 kW at 3150 rpm, Max. torque 500 Nm at 1800 rpm.





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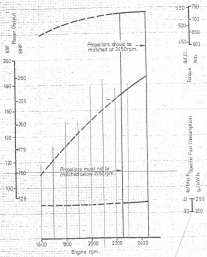
# Z104E 1 TURBO-PLUS

Test conditions - Engine with alternator, sea water pump and exhaust back pressure representing 250 mm. Hg.

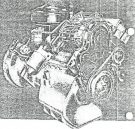
Power measuring Std.

Dist.

This curve represents the maximum power & torque available for continuous running. The propeller should ideally be matched to absorb up to 185.5kW at 2450rpm, but if required 21-rpm be matched to any point on or below this power available curve down to 2250rpm.







**Technical Specification**

**TEKNİK ÖZELLİKLERİ**

Model No: 2709E  
 Silind. Sayısı: 6  
 Silind. Çapı: 92 mm  
 Silind. Uzunluğu: 110 mm  
 Silind. Yüksekliği: 130 mm  
 Silind. Aralığı: 40 mm  
 Silind. Döner Hızı: 2200 dev/dk  
 Silind. Döner Yönü: Saat yönünde  
 Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s

Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s  
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 Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s  
 Silind. Döner Zamanı: 0,0024 s

**MOTOR ÖZELLİKLERİ**

Model No: 2709E  
 Silind. Sayısı: 6  
 Silind. Çapı: 92 mm  
 Silind. Uzunluğu: 110 mm  
 Silind. Yüksekliği: 130 mm  
 Silind. Aralığı: 40 mm  
 Silind. Döner Hızı: 2200 dev/dk  
 Silind. Döner Yönü: Saat yönünde  
 Silind. Döner Zamanı: 0,0024 s

Ford Motor Company Ltd.  
**2709E**  
 4 Silind. Araç Motoru  
 2709E  
 6 Silind.  
 92 mm  
 110 mm  
 130 mm  
 40 mm  
 2200 dev/dk  
 Saat yönünde  
 0,0024 s

6 Silind. Araç Motoru  
 92 mm  
 110 mm  
 130 mm  
 40 mm  
 2200 dev/dk  
 Saat yönünde  
 0,0024 s

Model No: 2709E  
 Silind. Sayısı: 6  
 Silind. Çapı: 92 mm  
 Silind. Uzunluğu: 110 mm  
 Silind. Yüksekliği: 130 mm  
 Silind. Aralığı: 40 mm  
 Silind. Döner Hızı: 2200 dev/dk  
 Silind. Döner Yönü: Saat yönünde  
 Silind. Döner Zamanı: 0,0024 s

| Model | 2709E | 2709E | 2709E | 2709E | 2709E |
|-------|-------|-------|-------|-------|-------|
|-------|-------|-------|-------|-------|-------|

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| <b>Özellikler</b> | 2709E | 2709E | 2709E | 2709E | 2709E |
| Özellikler        | 2709E | 2709E | 2709E | 2709E | 2709E |
| Özellikler        | 2709E | 2709E | 2709E | 2709E | 2709E |

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| <b>Özellikler</b> | 2709E | 2709E | 2709E | 2709E | 2709E |
| Özellikler        | 2709E | 2709E | 2709E | 2709E | 2709E |

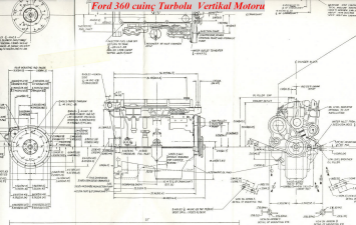
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# Ford 360 cuinç Turbolu Vertikal Motoru



TECHNICAL SPECIFICATION

**2711E 2712E**

**2713E 2714E**

**2715E**

INDUSTRIAL DIESEL ENGINES



**Industrial  
Power  
Products**

# General Data

The 2710 Range consists of three basic diesel engines. The 4 cylinder 2711E has a swept volume of 4150 cc (254 cu in). The six cylinder 2713E has a swept volume of 6060 cc (369 cu in) and the 2714E is also a six cylinder engine but with a swept volume of 6220 cc (380 cu in). The 2711E and 2714E have high power versions which are given the model numbers 2712E and 2715E respectively.

All the engines have a stroke of 115 mm (4.52 in) and a compression ratio of 18:1. The bore dimensions are all 107 mm (4.22 in) except the 2713E which is 109 mm (4.25 in).

## PERFORMANCE FIGURES

| Model                           | Type      | STANDARD          |                              |                     |                              |  |                              |
|---------------------------------|-----------|-------------------|------------------------------|---------------------|------------------------------|--|------------------------------|
|                                 |           | B.S. AU1414c 1971 |                              | B.S. 649 - 10000rpm |                              | DIN 6270 - International<br>DIN 7082 - 10000rpm<br>Automatic |                              |
|                                 |           | Max. Power<br>rpm | Max. Torque<br>N.m @ 1000rpm | Max. Power<br>rpm   | Max. Torque<br>N.m @ 1000rpm | Max. Power<br>rpm  | Max. Torque<br>N.m @ 1000rpm |
| 2711E<br>4150-cc<br>(254-cu in) | G.P.      | 55.5 kW<br>7500   | 305                          | 57 kW<br>2500       | 341                          | 47.0 kW<br>2500  | 333                          |
|                                 | Automatic | 55.5 kW<br>7500   | 305.4                        | --                  | --                           | 55.5 kW<br>2500  | 354                          |
| 2712E<br>4150-cc<br>(254-cu in) | G.P.      | 55.1 kW*<br>7500  | 300                          | 56.2 kW<br>2500     | 343                          | 55.5 kW<br>2500  | 354                          |
|                                 | Combine   | 55.1 kW<br>2500   | 300                          | --                  | --                           | --   | --                           |
| 2713E<br>6060-cc<br>(369-cu in) | G.P.      | 75.1 kW<br>2500   | 336                          | 75.9 kW<br>2500     | 372                          | 75.1 kW<br>2500  | 363                          |
|                                 | Automatic | 75.1 kW<br>2500   | 337                          | --                  | --                           | 75.1 kW<br>2500  | 371                          |
|                                 | Combine   | 75.1 kW<br>2500   | 336                          | --                  | --                           | --   | --                           |
| 2714E<br>6220-cc<br>(380-cu in) | G.P.      | 55.5 kW<br>2500   | 336                          | 57.5 kW<br>2500     | 363                          | 55.5 kW<br>2500  | 348                          |
|                                 | Automatic | 57.5 kW<br>2500   | 336                          | --                  | --                           | 57.5 kW<br>2500  | 370                          |
| 2715E<br>6220-cc<br>(380-cu in) | G.P.      | 55.5 kW*<br>2500  | 417                          | 55.5 kW<br>2500     | 386                          | 55.5 kW<br>2500  | 371                          |
|                                 | Combine   | 55.5 kW<br>2500   | 400                          | --                  | --                           | --   | --                           |

\* These are gross output ratings, see note below.

Full power curves for most of the above standards are shown at the back of this brochure.

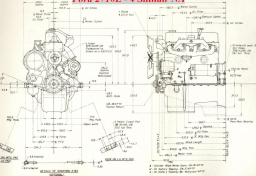
## B.S. AU1414c 1971:

All 2710 range engines have been certified to comply with this standard.

The B.S. AU1414c gross output ratings for the 2712E and 2715E engines, shown in this specification are included for reference purposes only. It is not intended that these ratings should be used for continuous full load running purposes.

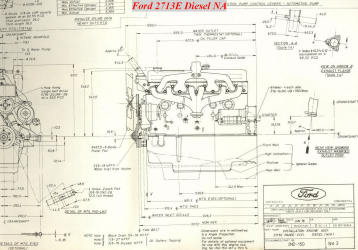
When continuous full load ratings are required, use the B.S. 649 or DIN 6270 power curves as appropriate.

# Ford 2710E - 4 Silindir NA





# Ford 2713E Diesel NA



**DESCRIPTION:**

2713E Diesel NA

**REVISIONS:**

| NO. | DATE       | DESCRIPTION        |
|-----|------------|--------------------|
| 1   | 1980-01-15 | Initial Release    |
| 2   | 1980-03-15 | Revised Dimensions |
| 3   | 1980-05-15 | Added Notes        |

**PREPARED BY:** Ford Motor Co.

**DESIGNED BY:** Ford Motor Co.

**ENGINEERING:** Ford Motor Co.

**DATE:** 1980-01-15

**SCALE:** 1:1

**FIG. NO.:** 2713E-1

DETAIL OF HOLES (SEE FIG. 2713E-2)

Block Drain, 1/4" x 1/2" x 1/2"

Block Drain, 1/4" x 1/2" x 1/2"

Oil Sump Flange

Dimensions are in millimeters

3rd angle projection

ISO unit system

For details of optional equipment

See also the engine code

See the end of the manual



Engine Model:

# 2711E

Engine fitted with 4 Blade Ø457 Fan

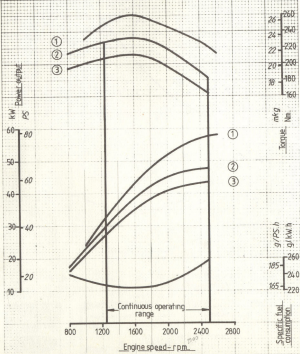
①

② & ③

Power measuring Std. Din. 70020 Din 6270 Fuel

Industrial Power Products

- ① Automotive - Max power 58 kW at 2600 rpm. Max torque 260 Nm at 1600 rpm.
- ② Continuous B - Max power 47.8 kW at 2500 rpm. Max torque 232 Nm at 1600 rpm.
- ③ Continuous A - Max power 43.4 kW at 2500 rpm. Max torque 211 Nm at 1600 rpm.





Industrial Power Products

# Engine Model: 2712E

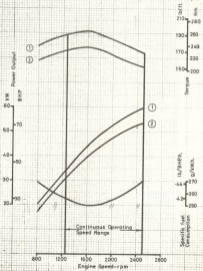
Test Conditions:



Power measuring Std. BS 648

Base

- ① BS-Overload: Max Power 55,7 kW at 1500 rpm, Max Torque 353 Nm at 1600 rpm.
- ② BS-Rating: Max Power 50,7 kW at 1500 rpm, Max Torque 327 Nm at 1600 rpm.





# Engine Model: 2713E

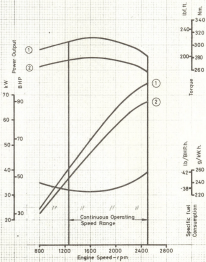
Industrial Power Products

Test Conditions:

Power measuring Std. BS 649

Fuel

- ① BS Overload : Max Power 74,8 kW at 1500 rpm, Max Torque 310 Nm at 1500 rpm
- ② BS Rating : Max Power 67,3 kW at 1500 rpm, Max Torque 280 Nm at 1500 rpm





Engine Model: **2714E**



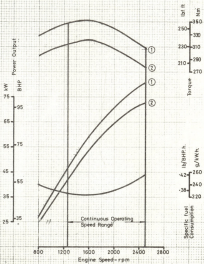
Industrial Power Products

Test Conditions:

Power measuring Std. 85 649

Fuel

- ① 85 Overload : Max Power 81.0 kW at 2500 rpm, Max Torque 35.2 Nm at 1600 rpm
- ② 85 Rating : Max Power 71.8 kW at 2500 rpm, Max Torque 30.1 Nm at 1600 rpm





Industrial  
Power  
Products

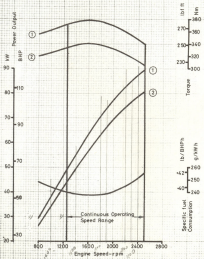
Engine Model: **2715E**

Test Conditions:

Power measuring Std. BS 649

Fuel

- ① BS Overload: Max Power 83.5 kW at 2500rpm, Max Torque 319 Nm at 1500rpm
- ② BS Rating: Max Power 80.8 kW at 2500rpm, Max Torque 341 Nm at 1500rpm



TECHNICAL SPECIFICATION



# DIESEL ENGINES

## 2722·2723·2725

# 2720



# Introduction

The 2720 range engines described in this specification are in-line 4 stroke diesels and comprise three normally aspirated variants: one 4 cylinder of 4.16 litre displacement (2722) and two six cylinder engines of 5.96 (2723) and 6.22 litre displacement (2725).

The engines have been developed specifically to provide premium reliability, low fuel consumption and extra power to meet the demands of a wide variety of Industrial and Marine applications.

## Basic Engine Data

| Engine Type          |     | 2722    | 2723    | 2725    |
|----------------------|-----|---------|---------|---------|
|                      |     | 4 Cyl.  | 6 Cyl.  | 6 Cyl.  |
|                      |     | In-line | In-line | In-line |
| Cylinder Bore        | mm  | 107     | 105     | 107     |
| Stroke               | mm  | 115     | 115     | 115     |
| Displacement         | cc  | 4158    | 5993    | 6220    |
| Compression Ratio    |     | 16.1:1  | 16.1:1  | 16.1:1  |
| Max. Firing Pressure | bar | 98.2    | 98.2    | 98.2    |
| Max. BMEP            | bar | 8.75    | 7.32    | 8.75    |
| Height               | mm  | 802.1   | 879*    | 879*    |
| Width                | mm  | 618     | 623     | 623     |
| Length               | mm  | 779     | 1028    | 1020    |
| Weight <sup>†</sup>  | kg  | 349     | 475     | 475     |

†With front wall oil pan \*With shallow oil pan

†The weights included are for reference purposes, the actual weight will depend on engine build.

## Options

A comprehensive list of options are available with the 2720 range and for further details please consult the Engine Fluid Schemes Charts and the Optional Equipment Guide with Dimensions Brochure D6L 38250.

The options available include—

Choice of Oil Pans; Standstill or Heavy Duty Power Take-Off; Water Pump and Fan Drive Systems; Inlet and Exhaust Manifolds; Choice of Fuel Injection Equipment; Industrial/Marine Alternators and Starter Motors; Cold Start Aids; Fans; Flywheels; Front and Rear Mounting Brackets; Air Compressors and Exhausters; Clutches; Heuristics etc.

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| Lubrication System .....        | 3    |
| Inlet & Exhaust Systems .....   | 3    |
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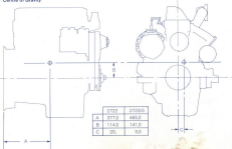
# Power Ratings

The table below summarises maximum power output levels of the 2720 range normally aspirated engines. Power curves to BS5514/DIN 8270 are to be found at the rear of this specification.

| Power Measuring Standard   | 2720                        | 2720               | 2720                | 2725                | 2725               |                     |
|----------------------------|-----------------------------|--------------------|---------------------|---------------------|--------------------|---------------------|
|                            | Standard Power GP I         | High Power GP II   | Standard Power GP I | Standard Power GP I | High Power GP II   |                     |
| Intermittent Power Output  | BS5514 (ISO 3046) DIN 8270  | 64.6 kW @ 2500 rpm | 66.6 kW @ 2800 rpm  | 70.2 kW @ 2500 rpm  | 64.6 kW @ 2500 rpm | 66.0 kW @ 2600 rpm  |
|                            | BS AU 141a                  | 63.6 kW @ 2500 rpm | 65.2 kW @ 2800 rpm  | 65.6 kW @ 2500 rpm  | 65.4 kW @ 2500 rpm | 101.6 kW @ 2600 rpm |
| Intermittent Torque Output | BS 5514 (ISO 3046) DIN 8270 | 237 Nm @ 1500 rpm  | 261 Nm @ 1800 rpm   | 326 Nm @ 1500 rpm   | 364 Nm @ 1500 rpm  | 380 Nm @ 1600 rpm   |
|                            | BS AU 141a                  | 230 Nm @ 1500 rpm  | 258 Nm @ 1800 rpm   | 326 Nm @ 1500 rpm   | 360 Nm @ 1500 rpm  | 417 Nm @ 1600 rpm   |

# General Installation Data

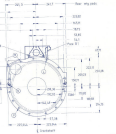
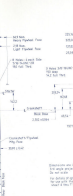
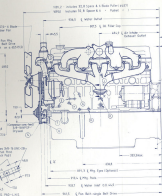
Centre of Gravity



# Ford 2723/5 NA Araç Motoru

Motor No: 27-1020-00 (31) 700

- 1 Motor: 27-1020-00 (31) 700
- 2 Motor: 27-1020-00 (31) 700
- 3 Motor: 27-1020-00 (31) 700
- 4 Motor: 27-1020-00 (31) 700



Vertical text on the left side of the page, partially cut off, providing additional technical specifications and dimensions. Includes terms like 'Flywheel', 'Water Pump', 'Timing Belt', and 'Crankshaft'.

- |                              |   |
|------------------------------|---|
| 1 Motor: 27-1020-00 (31) 700 | 2 1/2 - 1/4 20 x 1 - 1/4 (10) (10) (10) |
| 2 Motor: 27-1020-00 (31) 700 | 3 1/2 - 1/4 20 x 1 - 1/4 (10) (10) (10) |
| 3 Motor: 27-1020-00 (31) 700 | 4 1/2 - 1/4 20 x 1 - 1/4 (10) (10) (10) |
| 4 Motor: 27-1020-00 (31) 700 | 5 1/2 - 1/4 20 x 1 - 1/4 (10) (10) (10) |

Instructions and notes regarding the engine assembly, including reference to the Ford engineering manual for further details.



**FORD**

COLLEZIONE - FORD 1950-1960  
 1950 - 1960 - FORD 1950-1960

**FORD 150**      **9404112**

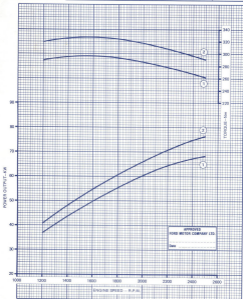




|  |                     |   |                  |                     |     |
|--|---------------------|---|------------------|---------------------|-----|
| Reference Power Standard<br>with adjustments |                     | Reference Power Standard<br>without adjustments |                  | S/N 55-14-D1 N 6270 |     |
| Net<br>Output                                | Reference<br>Output | 4 Stroke<br>90.7 kW (123.5 hp)                  | Stroke<br>Output | Stroke<br>Reference | GP1 |
| 1 68.8 kW @ 2500                             |                     | 1 285 Nm @ 1500                                 |                  |                     |     |
| 4 78.2 kW @ 2500                             |                     | 4 325 Nm @ 1500                                 |                  |                     |     |

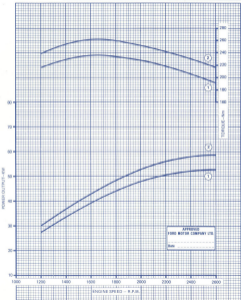
Engine Model  
Motor Model  
Modelo do motor  
Modelo motor

**2723**





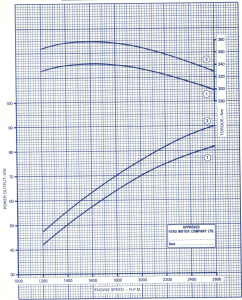
|  |                                    |                                |
|--|------------------------------------|--------------------------------|
| Reference Power Number: 95 5514/01M 8278                   |                                    | Engine Model: Multi Model      |
| No. Cylinders: 4 Cylinders                                 |                                    | Modelle de moteur: Multi Model |
| Displacement: 987 cm <sup>3</sup> (60.4 in. <sup>3</sup> ) |                                    | Modelle motor: 2722            |
| 1 51.9 kW @ 3000<br>2 58.3 kW @ 3000                       | 1 238 Nm @ 1500<br>2 261 Nm @ 1500 |                                |
|  |                                    |                                |





|  |   |  |  |                         |  |
|--|---|--|--|-------------------------|--|
| <b>Operating Power Standard</b><br><small>Net 1/2 Brake Horsepower</small> |   | <b>Reference - Net 1/2 Brake Horsepower</b><br><small>Reference - Net 1/2 Brake Horsepower</small> |  | <b>BS 5514/21N 5270</b> |  |
| <b>Net Power</b><br><small>Net 1/2 Brake Horsepower</small>                | <b>Reference Power</b><br><small>Reference - Net 1/2 Brake Horsepower</small> | <b>Operating Power</b><br><small>Net 1/2 Brake Horsepower</small>                                  | <b>Output Reference</b><br><small>Net 1/2 Brake Horsepower</small> | <b>GP1</b>              |  |
| <b>11.4 kW @ 1800</b>  | <b>11.4 kW @ 1800</b>   | <b>11.4 kW @ 1800</b>  | <b>11.4 kW @ 1800</b>  | <b>11.4 kW @ 1800</b>   |  |
| <b>90.8 kW @ 2600</b>  | <b>90.8 kW @ 2600</b>   | <b>90.8 kW @ 2600</b>  | <b>90.8 kW @ 2600</b>  | <b>90.8 kW @ 2600</b>   |  |

Engine Model  
 Motor Model  
 Model No. Motor  
 Model Motor  
**2725**



TECHNICAL SPECIFICATION

**TURBOCHARGED  
DIESEL ENGINES  
2726T · 2726TG  
2726TM · 2728T**



**2720**



# Introduction

The 4 stroke engines described in this specification are all six cylinder in-line turbocharged diesels.

They have been developed specifically to provide premium reliability, low fuel consumption and extra power to meet the demands of a wide variety of industrial and Marine applications.

There are three 2736 engine variants available. The 2736T is for general industrial duties. The 2736TG is for Class A1 applications of either 1800 or 1900 r.p.m. and the 2736TM is for use in marine applications.

The 2736T is a premium quality inter-cooled turbocharged engine for use in marine applications.

## Basic Engine Data

| Engine Type          | 2736T | 2736TG  | 2736TM  | 2736T   |        |
|----------------------|-------|---------|---------|---------|--------|
| Cylinder bore        | mm    | 105     | 107     | 105     | 105    |
| Stroke               | mm    | 115     | 115     | 115     | 115    |
| Displacement         | cc    | 5650    | 6220    | 5850    | 5850   |
| Compression ratio    |       | 15.45:1 | 15.45:1 | 15.45:1 | 14.7:1 |
| Max. Firing Pressure | bar   | 11.03   | 12.00   | 11.03   | 12.07  |
| Max. IMMP            | bar   | 10.7    | 12.0    | 10.7    | 12.0   |
| Height               | mm    | 870     | 870     | 847     | 868    |
| Width                | mm    | 758     | 758     | 760     | 681    |
| Length               | mm    | 1103    | 1063    | 1058    | 1070   |
| Weight               | kg    | 495     | 495     | 518     | 520    |

# Options

For a full list of options available with the 2736 Range turbocharged engines please refer to the respective build schemes. The options are illustrated with dimensions in the Optional Equipment Guide D9L 30250.

The options available include:-

Choice of Oil Pans, Water Pump and Fan Drive Systems, Inlet and Exhaust Manifolds, Choice of Fuel Injection Equipment, Industrial/Marine Alternators and Starter Motors, Cold Start Aids, Fans, Flywheels, Front and Rear Mounting Brackets, Air Compressors and Exhausts, Clutches, Hourmeters etc.

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# Power Ratings

## 2726T, 2726Tm and 2726T Engines

The following table summarizes the maximum power output levels for the 2726T Industrial and Marine engines and for the 2726T. Performance comes to

ISO 5514/DIN 6271 for 2726T engines and to ISO A/J 141 a/DIN 70620 for the 2726T will be found at the end of this specification.

|                            | Power Measuring Standard | 2726T                  | 2726T Marine           | 2726T                |
|----------------------------|--------------------------|------------------------|------------------------|----------------------|
| Intermittent Power Output  | ISO 5514/<br>DIN 6271    | 107.6 kW<br>@ 2400 rpm | 127 kW<br>@ 2400 rpm   | —                    |
|                            | ISO A/J 141 a<br>1971    | 118 kW<br>@ 2400 rpm   | 134.0 kW<br>@ 2400 rpm | 149 kW<br>@ 2450 rpm |
|                            | DIN 70620                | —                      | 134.0 kW<br>@ 2400 rpm | 149 kW<br>@ 2450 rpm |
| Intermittent Torque Output | ISO 5514/<br>DIN 6271    | 457 Nm<br>@ 1750 rpm   | 446 Nm<br>@ 2000 rpm   | —                    |
|                            | ISO A/J 141 a<br>1971    | 498 Nm<br>@ 1700 rpm   | 475 Nm<br>@ 2000 rpm   | 606 Nm<br>@ 1800 rpm |
|                            | DIN 70620                | —                      | 475 Nm<br>@ 2000 rpm   | 606 Nm<br>@ 1800 rpm |

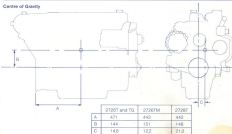
## 2726 TG Engines (Class A1 governing)

Continuous and intermittent power figures extracted from the curves at the end of this specification are shown below.

| Power Measuring Standard | Continuous Power                     | Intermittent Power                   |
|--------------------------|--------------------------------------|--------------------------------------|
| ISO 5514/DIN 6271        | 79 kW @ 1800 rpm<br>55 kW @ 1800 rpm | 87 kW @ 1800 rpm<br>57 kW @ 1800 rpm |

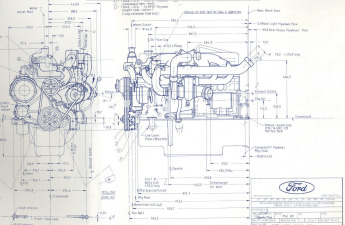
# General Installation Data

## Centre of Gravity





# Ford 2726T -Industrial Turbo



130300, 13728, 13228  
C27100A2

For details of optional equipment  
see page 20, this catalog and  
the following pages of it.

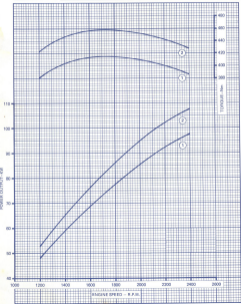
Dimensions in millimeters  
are given in parentheses  
for use only.

| Ford     |       |
|----------|-------|
| Model    | 2726T |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |
| Capacity | 1000  |





|   |                                 |  |                               |                          |                               |                              |
|---|---------------------------------|--|-------------------------------|--------------------------|-------------------------------|------------------------------|
| Model/Year/Power<br>2000-2001/2002/2003 |                                 | Reference - Ford's official<br>literature is the only source |                               | <b>95 MPA/DIN 6271</b>   |                               | Engine Model<br><b>2726T</b> |
| Part<br>Label                           | Reference<br>Location           | <b>"LOW LOSS"</b><br>200, 200.5 & 200.9                      | Operating<br>Pressure         | Major<br>Reference<br>QP | QP                            | Model/Year<br>Model/Year     |
|   | <b>1</b><br>97.1 QP @ 2400 rpm  |  | <b>1</b><br>474 Nm @ 1750 rpm |                          | <b>1</b><br>474 Nm @ 1750 rpm | <b>2726T</b><br>INDUSTRIAL   |
|   | <b>2</b><br>107.5 QP @ 2400 rpm |  | <b>2</b><br>467 Nm @ 1750 rpm |                          | <b>2</b><br>467 Nm @ 1750 rpm |                              |

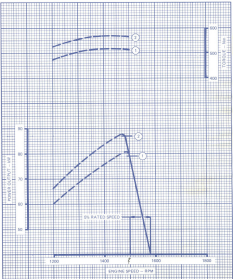




Power Products

|                                       |   |                  |                         |
|---------------------------------------|---|------------------|-------------------------|
| Reference Power Number<br>Part Number | Reference - Motor<br>Number & Performance | 30-5014-DIN-0271 | Engine Model            |
| 1                                     | 108" x 8" BLADE<br>1.87:1 RATIO           |                  | Motor Model             |
| 2                                     | 70 LN @ 1500 RPM                          | Control System   | 100-3087V<br>CLASS 'AT' |
| 3                                     | 87 LN @ 1500 RPM                          | 1                | Reference Curve         |
|                                       |   | 2                | Reference Curve         |
| 1                                     | 1   | 2                |                         |
| 2                                     | 2   | 3                |                         |

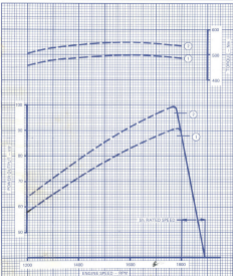
2726TG





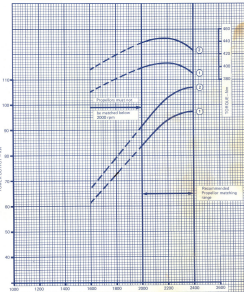
Power Products

|   |                               |  |   |                                   |                      |                             |                             |
|---|-------------------------------|--|---|-----------------------------------|----------------------|-----------------------------|-----------------------------|
| International Standard<br>Truck & Bus Engines |                               | Reference: ... Norme de puissance<br>Standard de puissance globale |   | BS 6841:2011 (201)                |                      | Engine Model<br>Motor Model |                             |
| Type<br>Fuel<br>Cycle                         | Configuration<br>Displacement | 4<br>2.0L : 1991 cc<br>1.87 : 1821 cc                              | Injection System<br>Power<br>Regulation | Diesel<br>Injection<br>CLASS "A1" | 1<br>REFERENCE CURVE |                             | Engine Model<br>Motor Model |
| 1<br>98 kW @ 1800 RPM                         |                               | 1<br>97 kW @ 1800 RPM  |   | 1<br>REFERENCE CURVE              |                      | 2726TG                      |                             |





|   |                                 |                                       |                                 |   |
|---|---------------------------------|---------------------------------------|---------------------------------|---|
| <b>Marine Power Products</b><br>Motor Characteristics |                                 | <b>2726T / 2726T</b><br>2726T / 2726T |                                 | Engine Model<br>2726T                         |
| Max. Torque<br>187 kW @ 2480 RPM                      | Max. Power<br>217 kW @ 2480 RPM | Max. Torque<br>400 Nm @ 2280 RPM      | Max. Power<br>440 Nm @ 2280 RPM | Model de moteur<br>2726T                      |
| Max. Torque<br>187 kW @ 2480 RPM                      | Max. Power<br>217 kW @ 2480 RPM | Max. Torque<br>400 Nm @ 2280 RPM      | Max. Power<br>440 Nm @ 2280 RPM | Modelo motor<br><b>2726T</b><br><b>MARINE</b> |







|                                    |                     |   |                    |              |                               |
|------------------------------------|---------------------|---|--------------------|--------------|-------------------------------|
| Reference from Service Information |                     | Reference to other publications: "504A" 141 G - 1971, "507A" 141 G 1980 |                    | Engine Model | 2728T                         |
| Part Number                        | Vehicle Application | Maximum Rating  | Engine Application | 57A-F-704    | Model to which Model to which |
|                                    | 120.5 kW @ 2400     |   | 550 Nm @ 1500      |              | Model to which                |
|                                    | 140.0 kW @ 2400     |   | 800 Nm @ 1500      |              |                               |

Engine Model  
2728T  
(IM)

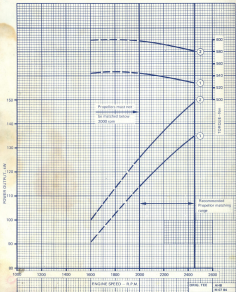


FIGURE 100 - R.P.M.

2728T, 702  
4000  
2000 60