

# **PERKINS**

# **Diesel Engines Identification and Serial Numbers**

Use the bookmarks for navigation



***<http://engine.od.ua/Perkins>***

**workshop  
manual for  
100 SERIES**

**103-12/103-13/103-15/104-19/104-22**

**FOR PERAMA M35  
REFER TO 103-15 IDI**  
(unless shown otherwise)

*This publication is written for worldwide use. In territories where legal requirements govern engine smoke emission, noise, safety factors, etc., then all instructions, data and dimensions given must be applied in such a way that, after servicing (preventive maintenance) or repairing the engine, it does not contravene the local regulations when in use.*

# CONTENTS

	PAGE
ABBREVIATIONS and CODES .....	4
FOREWORD .....	5
SAFETY PRECAUTIONS .....	6
ENGINE PHOTOGRAPHS .....	7
SECTION I	
Description .....	1-1
SECTION II	
General Engine Data .....	2-1
SECTION III	
Dismantling Sequence .....	3-1
SECTION IV	
Disassembly, inspection, fits and clearances of component assemblies .....	4-1
Rocker Arm and Lever .....	4-1
Cylinder Head and Valves .....	4-2
Valve Guide and Seats .....	4-3
Piston .....	4-5
Piston Ring .....	4-6
Piston Rod .....	4-7
Oil Running Clearance .....	4-9
Main Bearing .....	4-9
Crankshaft .....	4-11
Crankshaft Rectification .....	4-11
Flywheel and Ring Gear .....	4-14
Camshaft .....	4-15
Timing Gear .....	4-15
Oil Pump .....	4-15
Oil Filter .....	4-16
Water Pump .....	4-16
Thermostat .....	4-16
Radiator .....	4-17
Fuel Filter .....	4-17
Fuel Lift Pump .....	4-18
Governor .....	4-19
Atomizers .....	4-20
Air Cleaner .....	4-21
SECTION V	
Reassembly .....	5-1
Timing .....	5-5
SECTION VI	
Electrical Systems .....	6-1
Alternator .....	6-1
Starter .....	6-8
Troubleshooting .....	6-8
Glow Plug .....	6-17
Thermostat .....	6-17
Oil Pressure Switch .....	6-17
Wiring Diagrams .....	6-18
SECTION VII	
Troubleshooting .....	7-1
SECTION VIII	
Service Standards .....	8-1
SECTION IX	
Recommended Torque Settings .....	9-1
SECTION X	
Perama Supplement .....	10-1
SECTION XI	
Conversion Formulas .....	11-1

## Abbreviations and codes

### Engine Build List (Parts List) Numbering System

The standard engine parts list numbering code system is defined as follows:

Code	I	II	III	IV	V
Example:	KE	30259	J	000001	M

#### Code I Engine Type

KE = 103-15 IDI/PERAMA M35  
 KF = 104-19 IDI  
 KG = 103-12  
 KH = 103-13  
 KJ = 103-15 DI  
 KK = 104-19 DI  
 KR = 104-22

#### Code II Engine Parts List

Parts list increases numerically for both OEMS and distributors.

#### Code III Country of Manufacture

J = Made in Japan

#### Code IV Engine Serial Number

Individual engine serial number commencing with 000001 increasing numerically

#### Code V Year of Manufacture

M = 1985  
 N = 1986  
 O is Omitted  
 P = 1987  
 Q/S = 1988  
 T = 1989  
 U = 1990  
 V = 1991  
 W = 1992  
 X = 1993  
 Y = 1994  
 A = 1995  
 B = 1996  
 C = 1997

## Engine I.D. location

The engine identification plate (A1) is located on the front right side of the engine, just above the fuel injection pump.

It consists of the following:

### Abbreviations and codes

Engine build list (parts list) numbering system

The standard engine parts list numbering code system is defined as follows:

Code	I	II	III	IV	V
Example	KE	30260	U	000001	D

### Code I Engine Build Code

Engine	Build code	Engine	Build code
102 - 05	KN	103 - 15	KE
103 - 07	KL	104 - 19	KF
103 - 10	KD	104 - 22	KR
103 - 13	KH		

### Code II Engine parts list

Parts list increases numerically for both OEMS and distributors.

### Code III Country of manufacture

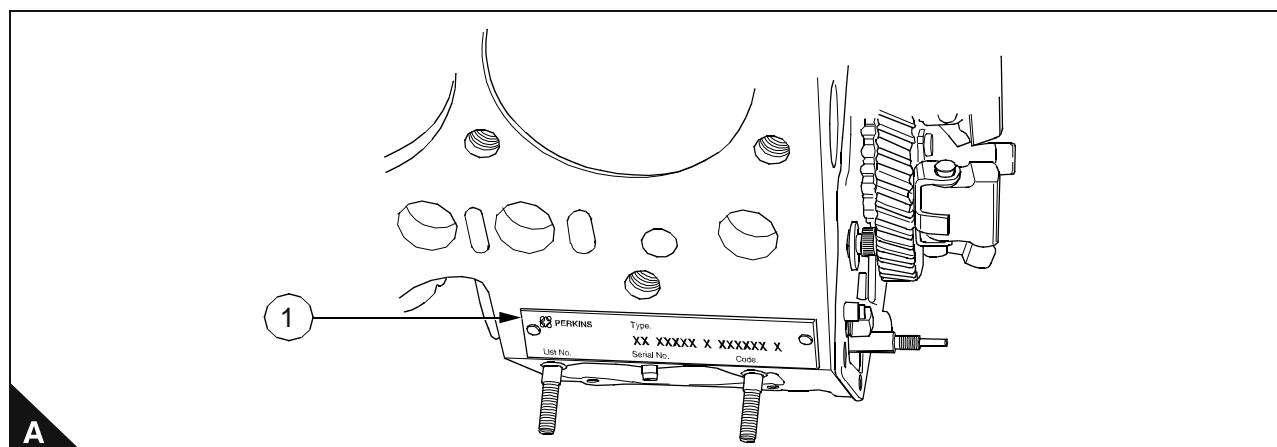
Code	Country of manufacture
J	Made in Japan
U	Made in U.K.

### Code IV Engine serial number

Individual engine serial number commencing with 000001 increasing numerically.

### Code V Year of Manufacture

Code	Year	Code	Year	Code	Year	Code	Year	Code	Year
M	1985	T	1989	Y	1994	E	01/01/99 31/03/99	J	2002
N	1986	U	1990	A	1995	F	01/04/99 31/12/99	K	2003
O	not used	V	1991	B	1996	G	2000	L	2004
P	1987	W	1992	C	1997	H	2001		
Q/S	1988	X	1993	D	1998	I	not used'		



# 400 series

## Product Identification Information

The following information is stamped on the Serial Number Plate: Engine serial number, Model, and Arrangement number.

i02216958

i02164876

## Engine Identification

## Reference Numbers

Perkins engines are identified by a serial number. This number is shown on a serial number plate that is mounted above the fuel injection pump on the right hand side of the engine block.

Information for the following items may be needed to order parts. Locate the information for your engine. Record the information in the appropriate space. Make a copy of this list for a record. Keep the information for future reference.

An example of an engine number is HHU000001J.

HH \_\_\_\_\_ Type of engine

U \_\_\_\_\_ Built in the United Kingdom

Engines that are built in Japan will have a (J).

Engines that are built in North America will have a (N).

000001 \_\_\_\_\_ Engine Serial Number

J \_\_\_\_\_ Year of Manufacture

Perkins dealers or Perkins distributors need all of these numbers in order to determine the components that were included with the engine. This permits accurate identification of replacement part numbers.

## Record for Reference

Engine Model \_\_\_\_\_

Engine Serial number \_\_\_\_\_

Engine Low Idle rpm \_\_\_\_\_

Engine Full Load rpm \_\_\_\_\_

Primary Fuel Filter \_\_\_\_\_

Water Separator Element \_\_\_\_\_

Secondary Fuel Filter Element \_\_\_\_\_

Lubrication Oil Filter Element \_\_\_\_\_

Auxiliary Oil Filter Element \_\_\_\_\_

Total Lubrication System Capacity \_\_\_\_\_

Total Cooling System Capacity \_\_\_\_\_

Air Cleaner Element \_\_\_\_\_

Fan Drive Belt \_\_\_\_\_

Alternator Belt \_\_\_\_\_

i02157258

## Serial Number Plate

\_\_\_\_\_



Illustration 18

g01094203

Typical serial number plate

The Serial Number Plate is located above the fuel injection pump on the right side of the cylinder block.

i02166528

## Emissions Certification Film

A typical example is shown.


IMPORTANT ENGINE INFORMATION	
	PERKINS SHIBAURA ENGINES LTD.
ENGINE FAMILY :	
ENGINE TYPE :	DISPL :
ADVERTISED POWER :	Kw at rpm
THIS ENGINE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS FOR OFF-ROAD COMPRESSION-IGNITION ENGINES.	
DIESEL FUEL ONLY	
INLET/EXH.VALVE CLEARANCE :	0.2mm COLD
LOW IDLE :	rpm
ADJUST IDLE SPEED WITH ENGINE AT NORMAL OPERATING TEMPERATURE, ACCESSORIES OFF, AND TRANSMISSION IN NEUTRAL.	
TUNE-UP BY AUTHORISED SHOP ONLY.	
EC NRMM No. :	

Illustration 19

g01098670

## Engine I.D. location

The engine number is stamped on a label (A1) that is located on the right rear side of the engine. It consists of the following:

### Abbreviations and codes

Engine build list numbering system.

The engine parts list numbering system is defined as follows:

Code	I	II	III	IV	V
Example	UA	80862	U	000001	A

### Code I Engine type code

Engine	Code
704 - 26	UA
704 - 30	UB
704 - 30T	UC

### Code II Engine build list number

Build list number is dependent upon specification.

### Code III Country of manufacture

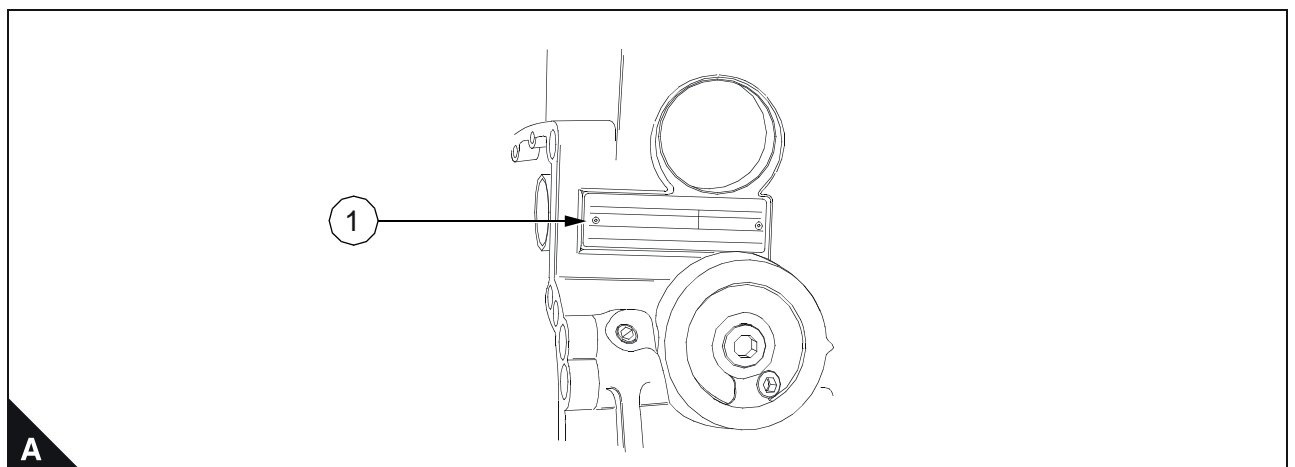
Code	Country of manufacture
U	Made in U.K.

### Code IV Engine serial number

The engine serial number is sequential.

### Code V Year of Manufacture

Code	Year	Code	Year
A	1995	F	1/4/1999 - 31/12/1999
B	1996	G	2000
C	1997	H	2001
D	1998	J	2002
E	1/1/1999 - 31/3/1999		



A



# 800 series

## Product Identification Information

i01933733

### Engine Identification

Perkins engines are identified by a serial number. This number is shown on a serial number plate that is mounted on the left hand side of the engine block.

An example of an engine number is UEU090001H.

UE \_\_\_\_\_ Type of engine  
 U \_\_\_\_\_ Built in the United Kingdom  
 0900001 \_\_\_\_\_ Engine Serial Number  
 H \_\_\_\_\_ Year of Manufacture

Perkins dealers need all of these numbers in order to determine the components that were included with the engine. This permits accurate identification of replacement part numbers.

i01933737

### Serial Number Plate

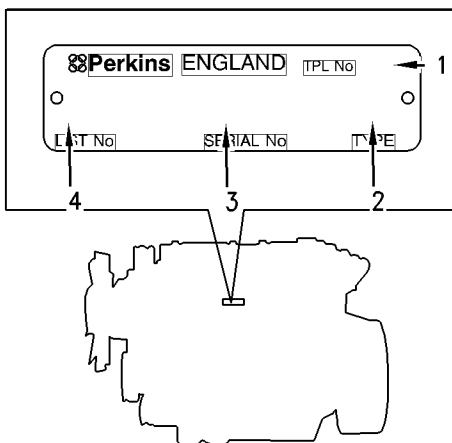


Illustration 12

g00994966

Typical serial number plate

- (1) Temporary Parts List number
- (2) Type
- (3) Serial number
- (4) List number

The Serial Number Plate is located on the left side of the cylinder block.

The following information is stamped on the Serial Number Plate: Engine serial number, Model, and Arrangement number.

i01892045

### Reference Numbers

Information for the following items may be needed to order parts. Locate the information for your engine. Record the information on the appropriate space. Make a copy of this list for a record. Keep the information for future reference.

#### Record for Reference

- Engine Model \_\_\_\_\_
- Engine Serial No. \_\_\_\_\_
- Engine Low Idle rpm \_\_\_\_\_
- Engine Full Load rpm \_\_\_\_\_
- Primary Fuel Filter No. \_\_\_\_\_
- Water Separator Element No. \_\_\_\_\_
- Secondary Fuel Filter Element No. \_\_\_\_\_
- Lubrication Oil Filter Element No. \_\_\_\_\_
- Auxiliary Oil Filter Element No. \_\_\_\_\_
- Total Lubrication System Capacity \_\_\_\_\_
- Total Cooling System Capacity \_\_\_\_\_
- Air Cleaner Element No. \_\_\_\_\_
- Fan Drive Belt No. \_\_\_\_\_
- Alternator Belt No. \_\_\_\_\_

i01933748

### Emissions Certification Film

A typical example is shown.

<b>Perkins</b>		IMPORTANT ENGINE INFORMATION			
ENGINE FAMILY		INITIAL INJECTION TIMING			
ENGINE TYPE		FUEL RATE AT ADVERTISED kW      mm <sup>3</sup> /STROKE			
ENGINE NO.		DISPLACEMENT      L		(E11)	96
ADVERTISED kW	AT	RPM	IDLE		RPM
VALVE LASH COLD (INCHES)		EXH.	INLET		
EMISSION CONTROL SYSTEM				e11•97/68	
SETTINGS ARE TO BE MADE WITH ENGINE AT NORMAL OPERATING TEMPERATURE TRANSMISSION IN NEUTRAL					
THIS ENGINE CONFORMS TO      U.S. EPA AND CALIFORNIA REGULATIONS LARGE NON-ROAD COMPRESSION-IGNITION ENGINES THIS ENGINE IS CERTIFIED TO OPERATE ON COMMERCIALY AVAILABLE DIESEL FUEL					
					3181A007

Illustration 13

g01002325

**Engine identification**

The engine is a six cylinder in-line unit and is available as turbocharged or turbocharged/intercooled.

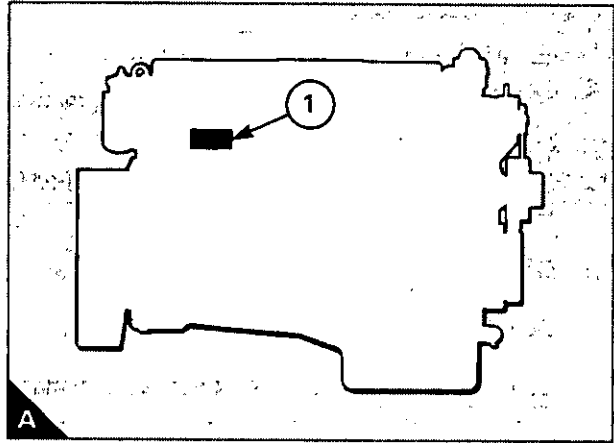
Various engine ratings are available. Details can be obtained from Perkins Engines (Shrewsbury) Limited.

The engine number is stamped on the data plate which is fastened to the right side of the crankcase (A1).

A typical engine number is 8B26116U 73545P which consists of these codes:

8B = Engine family  
26116 = Engine number  
U = Country of origin  
73545 = Build line number  
P = Year of manufacture

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.



## Engine identification

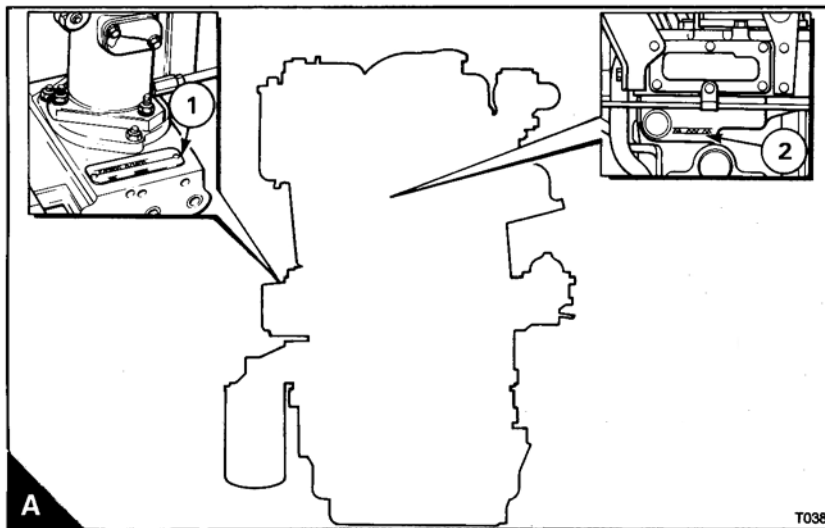
The 6.3544 Series consists of a range of six cylinder engines. The range has four basic engine types, naturally aspirated, compensated, turbocharged and turbocharged/intercooled.

In this handbook, the different engine types are indicated by their code letters, which are the first two letters of the engine number as indicated below:

Code	Engine type letters
TW	Naturally aspirated
TU	Turbocharged and turbocharged/intercooled
TX	Compensated

The engine number is stamped on a label which is fastened to the auxiliary drive housing (A1). Some engines also have the number stamped on the rear face of the cylinder block (A2). An example of an engine number is **TU30122\*U814627T\***.

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.



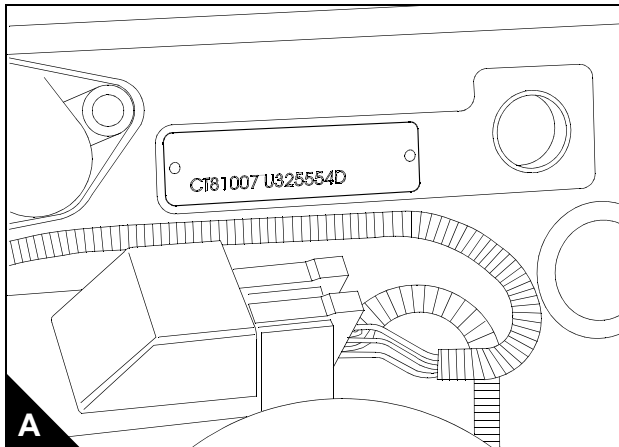
## Engine identification

Perkins 900 Series spark ignition engines have the code letters CT.

The engine number is stamped on the left side of the cylinder block (A). The engine number is also on two labels fitted to the engine, one is on the timing case cover and the other is on the front of the cylinder block.

An example of an engine number is: **CT81007 U30001D**.

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor. If there is a number in the area of the label, marked TPL No, then this number must also be given to your Perkins distributor.



## Engine identification

The New 1000 Series consists of a range of both four and six cylinder engines. Each range has three basic engine types, naturally aspirated, turbocharged and turbocharged with an intercooler.

There are different model variations within each range. Identification of the various models is by a system of numbers and letters, for example:

### 1006-60TW

1006 = 6 cylinder engine

60 = 6 litre engine

T = Turbocharged

TW = Turbocharged, but with an air to water intercooler to cool the induction air between the turbocharger and the cylinders.

In this handbook, the different engine types are indicated by their code letters, which are the first two letters of the engine number as indicated below:

Code Letters	Engine type
AJ	Four cylinder, naturally aspirated
AK	Four cylinder, turbocharged
AM	Four cylinder, turbocharged and intercooled
AP	Four cylinder, naturally aspirated, belt driven coolant pump
AQ	Four cylinder, turbocharged, belt driven coolant pump
AR	Four cylinder, naturally aspirated, 103 mm cylinder bores
AS	Four cylinder, naturally aspirated, belt driven coolant pump, 103 mm cylinder bores
YG	Six cylinder, naturally aspirated
YH	Six cylinder, turbocharged
YJ	Six cylinder, turbocharged and air-to-air intercooled
YK	Six cylinder, turbocharged and air-to-water intercooled

*Continued*

# 1103 and 1104E engines

## Product Identification Information

### Engine Identification

i01940475

Perkins engines are identified by a serial number. This number is shown on a serial number plate that is mounted on the left hand side of the engine block.

An example of an engine number is REU090001H.

RE \_\_\_\_\_ Type of engine  
 U \_\_\_\_\_ Built in the United Kingdom  
 0900001 \_\_\_\_\_ Engine Serial Number  
 H \_\_\_\_\_ Year of Manufacture

Perkins dealers need these numbers in order to determine the components that were included with the engine. This permits accurate identification of replacement part numbers.

i01940474

### Serial Number Plate

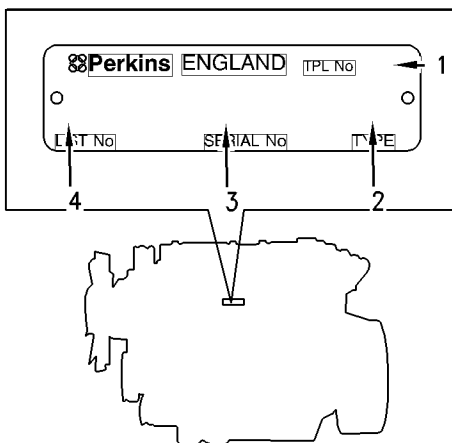


Illustration 12

g00994966

Typical serial number plate

- (1) Temporary Parts List number
- (2) Type
- (3) Serial number
- (4) List number

The Serial Number Plate is located on the left side of the cylinder block behind the high pressure pipes of the Fuel injection pump.

The following information is stamped on the Serial Number Plate: Engine serial number, Model, and Arrangement number.

i02164876

### Reference Numbers

Information for the following items may be needed to order parts. Locate the information for your engine. Record the information in the appropriate space. Make a copy of this list for a record. Keep the information for future reference.

### Record for Reference

- Engine Model \_\_\_\_\_
- Engine Serial number \_\_\_\_\_
- Engine Low Idle rpm \_\_\_\_\_
- Engine Full Load rpm \_\_\_\_\_
- Primary Fuel Filter \_\_\_\_\_
- Water Separator Element \_\_\_\_\_
- Secondary Fuel Filter Element \_\_\_\_\_
- Lubrication Oil Filter Element \_\_\_\_\_
- Auxiliary Oil Filter Element \_\_\_\_\_
- Total Lubrication System Capacity \_\_\_\_\_
- Total Cooling System Capacity \_\_\_\_\_
- Air Cleaner Element \_\_\_\_\_
- Fan Drive Belt \_\_\_\_\_
- Alternator Belt \_\_\_\_\_

i02197956

### Emissions Certification Film

#### Label for compliant engines

Examples of emissions labels



IMPORTANT ENGINE INFORMATION		
Engine Family: 3PKXL04.0AJ1 List: AP31478 Engine Type: 5633/2200 Displacement: 3.990		 Refer to Manufacturer  e11*97/68CA*00*000*0089*01
Advertised kw: 50.0 @ RPM: 2200 Fuel Rate at adv kw: 56.0 mm <sup>3</sup> /stk Init. Timing: 3 DEG BTDC idle RPM: 1000		
Settings are to be made with engine at normal operating temperature with transmission in neutral. This engine conforms to 2003 U.S. EPA non - road and California off - road Regulations for large C.I. engines and is certified to operate on commercially available diesel fuel.		
Emission Control System: DDI	Valve Lash Cold (inch): Exhaust 0.018 Inlet 0.008	Engine Label
Hanger No.	position	Label No. 3181A081

Illustration 13

g01127835

This label is installed on engines that comply with emissions.

## Label for engines that are not compliant


EMISSIONS CONTROL INFORMATION		
ENGINE FAMILY: Text2 ENGINE DISPLACEMENT: 6. 0	MODEL YEAR: 2003	
<b>INFORMATION APPLICABLE TO USA ONLY</b> This non - road engine does not comply with either federal non - road or California off - road engine emission regulation requirements. Sale or installation of this engine is a violation of federal and Californian law subject to civil penalty for any purpose other than as an EXPORT - ONLY or REPLACEMENT engine Export - only engine is indicated by an additional attached tag Replacement engine is for an engine manufactured prior to 1 Jan 2004		
		Label No. 3181A081

Illustration 14

g01119323

This label is installed on engines that have a variable speed. These engines do not comply with emissions.




EMISSIONS CONTROL INFORMATION		
ENGINE FAMILY: 1104C - 44TA ENGINE DISPLACEMENT: 4. 400	MODEL YEAR: 2003	
FOLLOWING INFORMATION APPLICABLE TO USA ONLY This non - road engine does not comply with either federal non - road or California off - road engine emission regulation requirement. Sale or installation of this engine can only be for STATIONARY ENGINE Use only as defined by CFR 40 PART 89.2.		
Hanger No	Position (81)	Label 318A081

Illustration 15

g01119325

This label is installed on engines that have a fixed speed. These engines do not comply with emissions.

## Engine identification

The 1300 Series EDi engines consist of a range of six cylinder in-line engines which are turbocharged or turbocharged/intercooled. The engines have an electronic management system.

In this handbook, the different engine types are indicated by their code letters, which are the first two letters of the engine number as indicated below:

Code letters	Capacity		Aspiration system
	Litre	in <sup>3</sup>	
WK	7,6	466	Turbocharged
WL	7,6	466	Turbocharged / intercooled
WM	8,6	531	Turbocharged
WN	8,6	531	Turbocharged / intercooled
WP	7,6	466	Turbocharged
WQ	7,6	466	Turbocharged / intercooled
WR	8,6	531	Turbocharged
WS	8,6	531	Turbocharged / intercooled

The engine number is stamped on the left side of the cylinder block (A1), behind the high pressure pump.

An example of an engine number is **WP1296N123456**.

The components of the engine number are as follows:

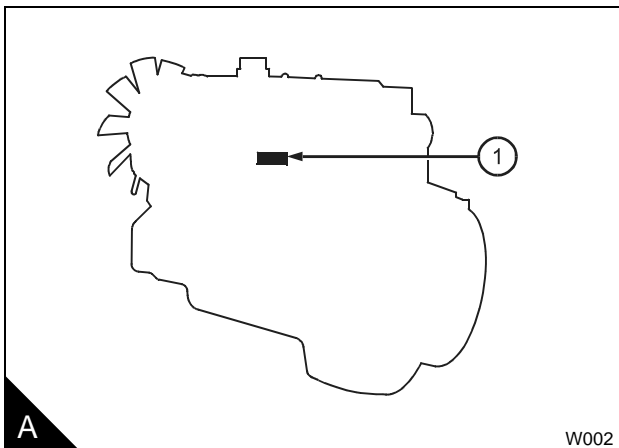
WP = Type code letters

1296 = Build list number

N = Built in the USA

123456 = Engine serial number

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.



## Engine Identification

The engine is a six cylinder in-line unit, turbocharged and intercooled.

Three engine ratings are available, 340Tx, 380Tx and 410Tx. Details can be obtained from Perkins Shrewsbury, or from the nearest Perkins distributor.

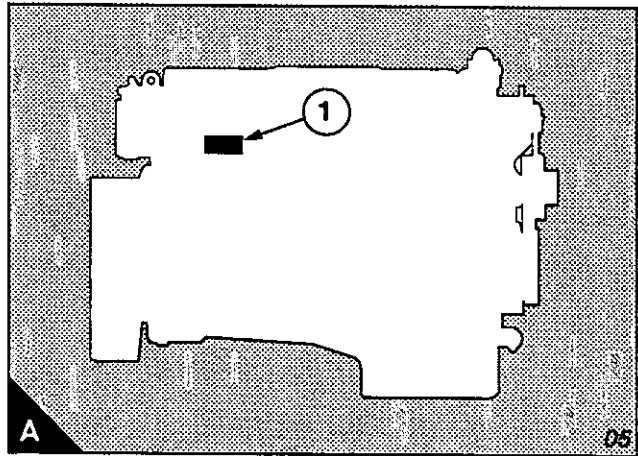
The engine number is stamped on the data plate which is fastened to the right side of the crankcase (A1).

A typical engine number is SAL O6 0161 U 3757 A which consists of these codes:

- SA = Identifies the engine application
- L = Identifies the engine type
- 06 = The number of cylinders
- 0161 = The engine specification number
- U = Country of manufacture
- 3757 = Build line number
- A = Year of manufacture

Units such as the fuel injection pump and turbochargers have their own data plates.

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.



## Engine identification

The engine number is stamped on the data plate which is fastened to the right side of the crankcase (A1).

For early engines a typical engine number is **8D26113U 71813P**, which consists of these codes:

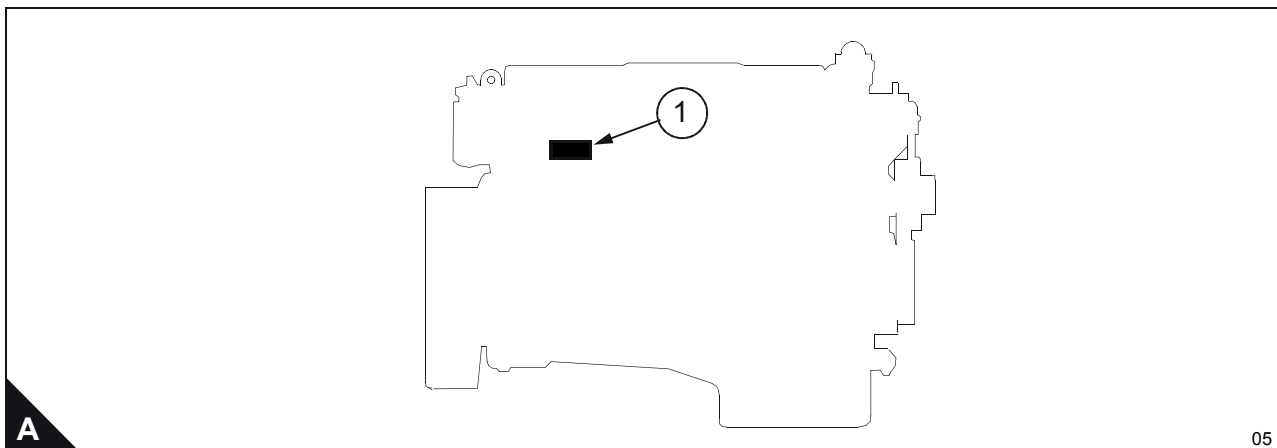
<b>8D</b>	Engine family
<b>26113</b>	Engine number
<b>U</b>	Country of origin
<b>71813</b>	Build line number
<b>P</b>	Year of manufacture

Engines made after August 1994, have a new engine number system. For these engines, a typical number is: **SGH 06 0002 U 0059 C**, which consists of these codes:

<b>SG</b>	Engine application
<b>H</b>	Engine type
<b>06</b>	Number of engine cylinders
<b>0002</b>	Engine specification number
<b>U</b>	Country of manufacture
<b>0059</b>	Build line number
<b>C</b>	Year of manufacture

Units such as the fuel injection pump and turbochargers have their own data plates.

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.



---

## Engine identification

If you need parts, service or information for your engine, you must give the complete engine number. The engine number is stamped on a data plate which is fastened to the right side of the engine.

A typical engine number is: FGB060125U 2905J, which consists of these codes:

F	Code for engine capacity
G	Engine application
B	Engine type
06	Number of engine cylinders
0125	Engine specification number
U	The country of manufacture
2905	Build line number
J	Year of manufacture

## Engine identification

If you need parts, service or information for your engine, you must give the complete engine number. The engine number is stamped on a data plate which is fastened to the right side of the engine.

A typical engine number is: HGA060125U 1103H, which consists of these codes:

<b>G</b>	Code for engine capacity
<b>G</b>	Engine application
<b>A</b>	Engine type
<b>06</b>	Number of engine cylinders
<b>0125</b>	Engine specification number
<b>U</b>	The country of manufacture
<b>1103</b>	Build line number
<b>H</b>	Year of manufacture

## Engine lift equipment

The total dry weighs is approximately 2050 kg (4516.4 lb). Ensure that the lift equipment used is suitable. An adjustable lifting beam should be used and the chains or cables must be parallel to each other during use.

Before the engine is lifted:

- Always use lift equipment of the approved type and of the correct capacity to lift the engine. Never use a single lift bracket to raise an engine.
- Check the engine lift brackets for damage and security before the engine is lifted.

Use suitable lift equipment or obtain assistance to lift heavy engine components such as the cylinder block, cylinder head, damper unit, flywheel housing, crankshaft and flywheel.

**Warning!** *The lifting eyes which are fitted to the engine must be used for lifting only the engine. Do NOT use them to lift the engine if it is still attached to its driven unit.*

**Engine identification**

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor.

The engine number is stamped on the data plate which is fastened to the left side of the crankcase.

For early engines, a typical engine number is: 6A27487U 59426U, which consists of these codes:

6A = Engine family  
27487 = Engine number  
U = Country of manufacture  
59426 = Build line number  
U = Year of manufacture

Engines made after August 1994, have a new engine number system. For these engines, a typical number is: SGJ 12 0029 U 3254 C, which consists of these codes:

SG = Engine application  
J = Engine type  
12 = Number of engine cylinders  
0029 = Engine specification number  
U = Country of manufacture  
3254 = Build line number  
C = Year of manufacture

Units such as the fuel injection pump and turbochargers have their own data plates.

## Engine identification

The 3012 Series engine is a Vee 12 normally aspirated unit. It is supplied in various power ratings, depending on the application and the calorific value of the gas supply.

The engine number is stamped on the data plate which is fastened to the right side of the crankcase.

For early engines, a typical engine number is **6E27883U 59426W**, which consists of these codes:

<b>6E</b>	Engine family
<b>27883</b>	Engine number
<b>U</b>	Country of manufacture
<b>59426</b>	Build line number
<b>W</b>	Year of manufacture

Engines produced after August 1994, have a new engine number system. For these engines, a typical engine number is **SIA120249U93852B** which consists of these codes:

<b>SI</b>	Engine application
<b>A</b>	Engine type
<b>12</b>	Number of engine cylinders
<b>0249</b>	Engine specification number
<b>U</b>	Country of manufacture
<b>93852</b>	Build line number
<b>B</b>	Year of manufacture

If you need parts, service or information for your engine, you must give the complete engine number to the Perkins Distributor.



## Engine identification

The 4006-23 engine consists of a range of six cylinder engines. This range has three basic engine types, TAG1A, TAG2A and TAG3A.

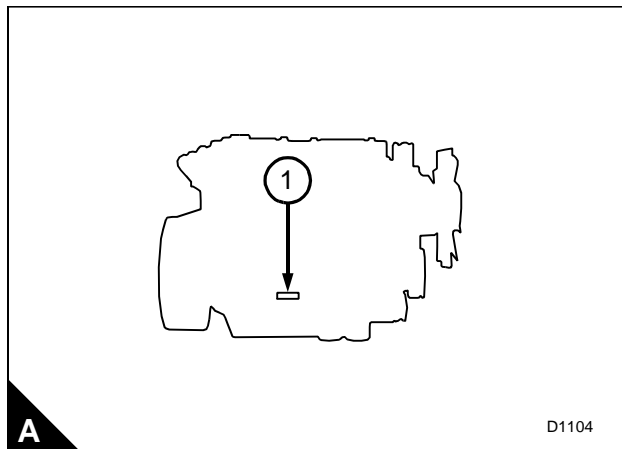
In this User's Handbook, the different engines are identified by their engine number and their type as shown below:

A typical example of an engine number: DGB 060081 U0017 B

Engine number identification	
D	Made in Stafford
G	Application code
B	Engine type
06	Number of cylinders
0081	Fixed build number
U	United Kingdom
0017	Number of engines built
B	Year that the engine was built

Engine type	
A	4006-23TAG1A
B	4006-23TAG2A
D	4006-23TAG3A

The position of the plate for the engine number (A1).

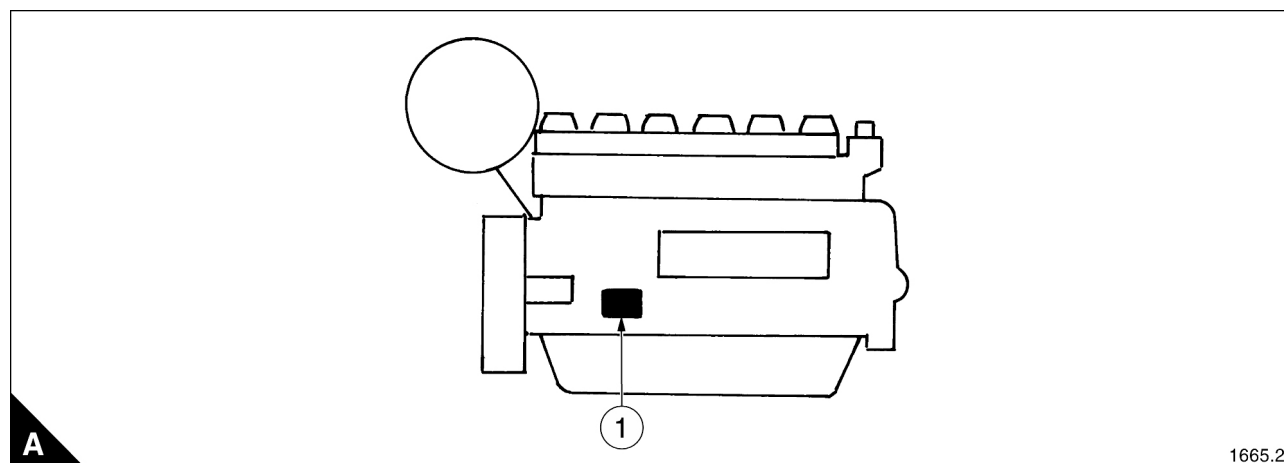


## Engine identification

The engine number and its build specification details are given on its data plate (A1) which is fitted to the right side of the crankcase by the oil filters.

A reference code and engine description is given in the table below.

Reference Code	Description
<b>4006TESI 200 LC</b>	6 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of 200g/GJ or less.
<b>4006TESI 140 LC</b>	6 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 140g/GJ.
<b>4006TESI 140 HC</b>	6 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 140g/GJ, and higher thermal efficiency than the 4006TESI 140 LC.
<b>4006TESI 90 HC</b>	6 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 90g/GJ.
<b>4008TESI 200 LC</b>	8 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of 200g/GJ or less.
<b>4008TESI 140 LC</b>	8 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 140g/GJ.
<b>4008TESI 140 HC</b>	8 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 140g/GJ, and higher thermal efficiency than the 4006TESI 140 LC.
<b>4008TESI 90 HC</b>	8 cylinder, in-line, 4 stroke, turbocharged, spark ignition gas engine, with water based engine coolant and oil cooler, raw water pump and separate cooling system for charge air intercooler. With NOx emission of less than 90g/GJ.



A

1665.2

## Product Identification Information

i02531889

### Plate Locations and Film Locations

### Engine Identification

Perkins engines are identified by an engine serial number.

A typical example of an engine serial number is DGE F\*\*\*\* U00001M.

D \_\_\_\_\_ Made in Stafford  
 G \_\_\_\_\_ Application (Table 5)  
 E \_\_\_\_\_ Type of engine (Table 6)  
 F \_\_\_\_\_ Number of cylinders (Table 7)  
 \*\*\*\*\_ \_\_\_\_\_ Fixed build number  
 U \_\_\_\_\_ Built in the United Kingdom  
 00001 \_\_\_\_\_ Engine Number  
 M \_\_\_\_\_ Year of Manufacture

Table 5

Application	
<b>G</b>	Genset
<b>I</b>	Gas

Table 6

Type of engine (Gas)	
<b>F</b>	TESI Gas Unit
<b>E</b>	TESI Combined Heat and Power Unit
<b>G</b>	4016-E61 TRS
<b>H</b>	TRS Combined Heat and Power Unit
<b>J</b>	TRS Gas Unit

Table 7

Number of Cylinders	
<b>F</b>	6
<b>H</b>	8

Perkins dealers and Perkins distributors require all of these numbers in order to determine the components that were included in the engine. This permits accurate identification of replacement part numbers.

### Serial Number Plate

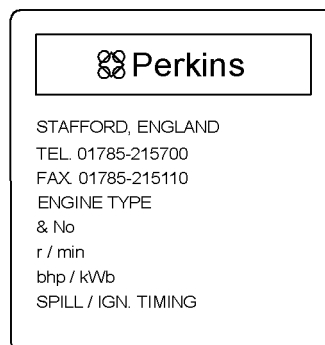


Illustration 16  
 Serial number plate

g01266904

The engine serial number plate contains the following information:

- Place of manufacture
- Telephone number of manufacturer
- Fax number of manufacturer
- Type of engine
- Engine serial number
- Rated speed
- Power output
- Engine timing
- Rating

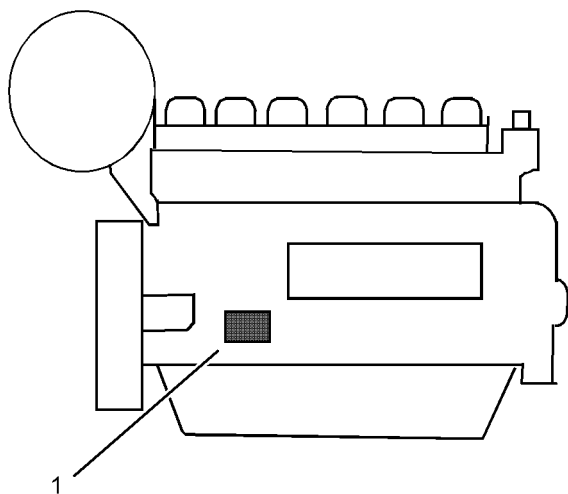


Illustration 17

g01212991

Location of the serial number plate for in-line engines

The serial number plate (1) on an in-line engine is located on the right side of the cylinder block. See Illustration 17.

## Description of 4012 series engine models

Reference Code	Description
<b>4012TWG</b>	12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), jacket water cooled charge air coolers. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TWG2</b>	Upated version of the 4012TWG. 12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), jacket water cooled charge air coolers. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TAG</b>	12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TAG1</b>	Upated version of the 4012TAG. 12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers) air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TAG2</b>	Upated version of the 4012TAG1. 12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TEG</b>	12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), raw water cooled charge air coolers with separate water pump and cooling circuit. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4012TEG2</b>	Upated version of the 4012TEG. 12 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), raw water cooled charge air coolers with separate water pump and cooling circuit. Oil coolers in engine cooling circuit. Horizontal air cleaners.

## Description of 4016 series engine models

Reference Code	Description
<b>4016TWG</b>	16 cylinder "V" form diesel engine, water cooled, turbocharged (four turbochargers), jacket water cooled air charge coolers. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TWG2</b>	Upated version of the 4016TWG. 16 cylinder "V" form diesel engine, water cooled, turbocharged (four turbochargers), jacket water cooled charge air coolers. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TAG</b>	16 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TAG1</b>	Upated version of the 4016TAG. 16 cylinder "V" form diesel engine, water cooled, turbocharged (four turbochargers) air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TAG2</b>	Upated version of the 4016TAG1. 16 cylinder "V" form diesel engine, water cooled, turbocharged (four turbochargers) air cooled charge air intercooler in radiator. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TEG</b>	16 cylinder "V" form diesel engine, water cooled, turbocharged (twin turbochargers), raw water cooled charge air coolers with separate water pump and cooling circuit. Oil coolers in engine cooling circuit. Horizontal air cleaners.
<b>4016TEG1 and 4016TEG2</b>	Upated versions of the 4016TEG. 16 cylinder "V" form diesel engine, water cooled, turbocharged (four turbochargers), raw water cooled charge air coolers with separate pump and cooling circuit. Oil cooler in engine cooling circuit. Horizontal air cleaners.

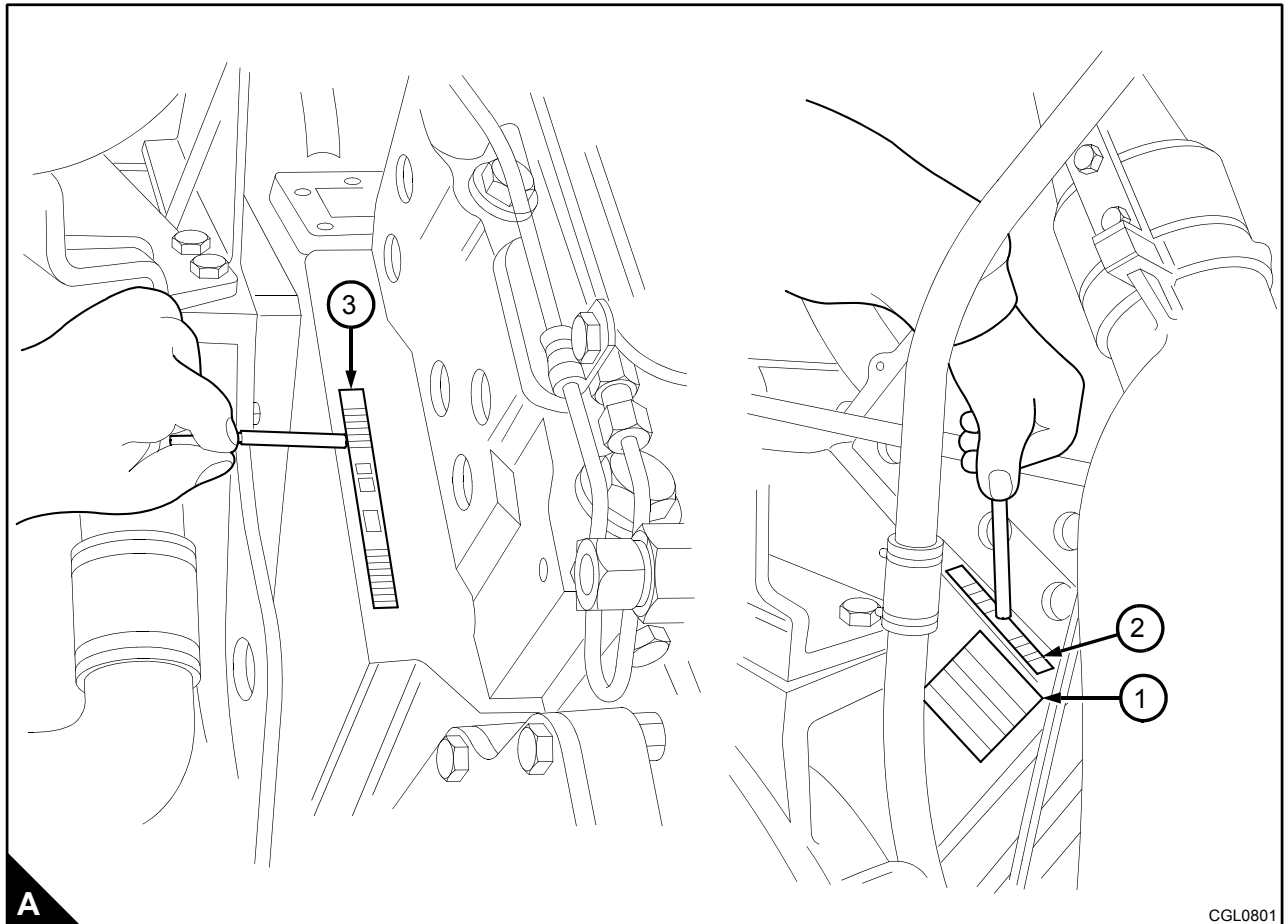
## Engine identification

The engine number and its build specification details are given on the date plate, fixed to the crankcase above the flywheel housing on 'A' bank (A1).

### Notes:

- On engines built before January 2000, the engine number is stamped on the face of the crankcase 'A' bank, above the flywheel housing (A2).
- On engines built from February 2000, the engine number is stamped on the face of the crankcase 'B' bank, above the gearcase (A3).

For reference codes and engine description refer to "[Description of 4012 series engine models](#)" on page 10 and "[Description of 4016 series engine models](#)" on page 10.



**4012-46A and 4016-61A****Product Identification Information**

i02414720

**Plate Locations and Film Locations****Engine Identification**

Perkins engines are identified by an engine serial number.

A typical example of an engine serial number is DGB L\*\*\*\* U00001M.

D \_\_\_\_\_ Made in Stafford

G \_\_\_\_\_ Application (Table 3)

B \_\_\_\_\_ Type of engine (Table 4)

L \_\_\_\_\_ Number of cylinders (Table 5)

\*\*\*\* Fixed build number

U \_\_\_\_\_ Built in the United Kingdom

00001 \_\_\_\_\_ Engine Number

M \_\_\_\_\_ Year of Manufacture

Table 3

Application	
<b>G</b>	Genset
<b>I</b>	Gas

Table 4

Type of engine (Diesel)	
<b>F</b>	TG
<b>L</b>	TAG
<b>A</b>	TAG1
<b>B</b>	TAG2
<b>D</b>	TAG3
<b>M</b>	TWG
<b>K</b>	TWG2
<b>N</b>	TWG3
<b>P</b>	TEG
<b>R</b>	TEG2
<b>S</b>	TEG3
Type of engine (Gas)	
<b>F</b>	TESI Gas unit
<b>E</b>	TESI Combined Heat and Power unit
<b>G</b>	4016-E61-TRS
<b>H</b>	TRS Combined Heat and Power Unit
<b>J</b>	TRS Gas Unit

Table 5

Number of Cylinders	
<b>F</b>	6
<b>H</b>	8
<b>L</b>	12
<b>P</b>	16

Perkins dealers and Perkins distributors require all of these numbers in order to determine the components that were included in the engine. This permits accurate identification of replacement part numbers.

## Serial Number Plate

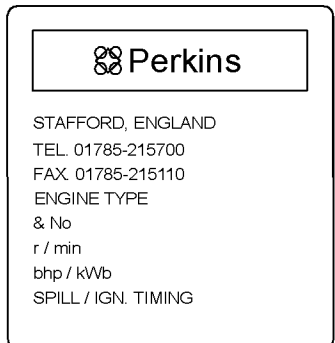


Illustration 17  
Serial number plate

g01266904

The engine serial number plate contains the following information:

- Place of manufacture
- Telephone number of manufacturer
- Fax number of manufacturer
- Type of engine
- Engine serial number
- Rated speed
- Power output
- Engine timing
- Rating

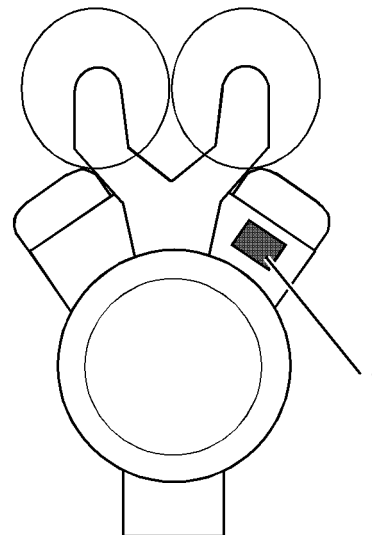


Illustration 18

g01229580

The location of the serial number plate for vee-form engines

The serial number plate (1) on a vee-form engine is located on the rear face of the cylinder block (bank A). See Illustration 18.



## Engine identification

The Peregrine EDi engines consist of a range of six cylinder in-line engines that are turbocharged /intercooled. The engines have an electronic management system.

In this handbook, the different engine types are indicated by their code letters, which are the first two letters of the engine number as indicated below:

Code letters	Capacity		Aspiration system
	Litre	in <sup>3</sup>	
WL	7,6	466	Turbocharged / intercooled
WN	8,6	531	Turbocharged / intercooled
WQ	7,6	466	Turbocharged / intercooled
WS	8,6	531	Turbocharged / intercooled

The engine number is stamped on the left side of the cylinder block (A1), behind the high pressure pump.

An example of an engine number is WP1296N123456.

The components of the engine number are as follows:

### WP1296N123456

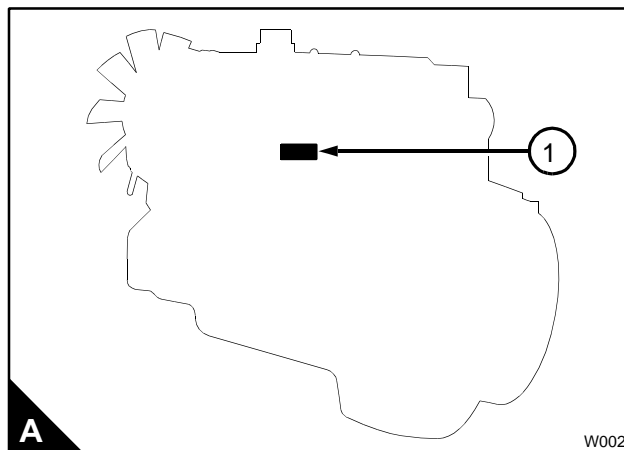
WP = Type code letters

1296 = Build list number

N= Built in the USA

123456 = Engine serial number

**Note:** If parts, service or information are necessary for your engine, the complete engine number must be given to a Perkins distributor.



## Engine identification

The Phaser 135Ti engine is rated at 135 bhp. The letters Ti indicate that the engine is turbocharged and intercooled.

The latest Phaser 135Ti can be identified by the letters AL at the beginning of the engine number. The correct identification of the engine is by the full engine number.

The engine number is stamped on a label (A2) which is fastened to the left side of the cylinder block. An example of the engine number is:

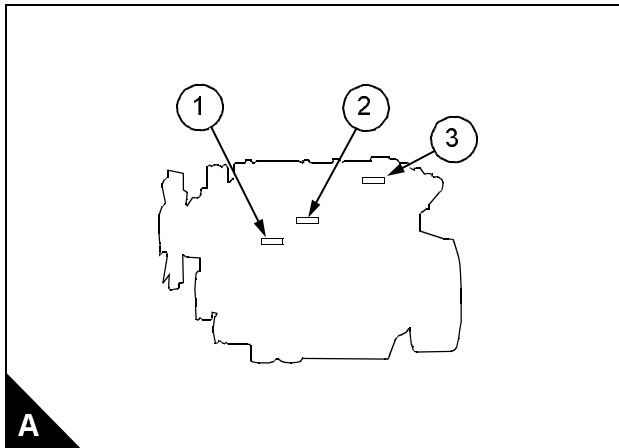
**AL30126\*U510256B\***

If you need parts, service or information for your engine, you must give the complete engine number to your Perkins distributor. If there is a number in the area of the label marked TPL No, then this number must also be given to your Perkins distributor.

Other identification labels fitted to the engine include:

An emissions legislation label (A3) fitted to the side of the cylinder block.

A label (A1) with the fuel injection pump part numbers.



# Engine Number Guide

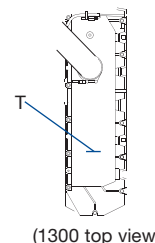
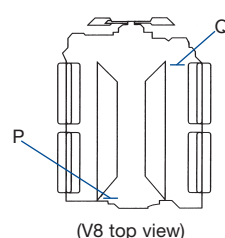
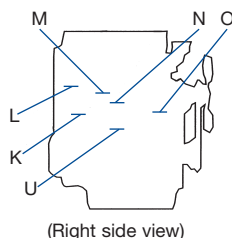
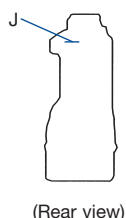
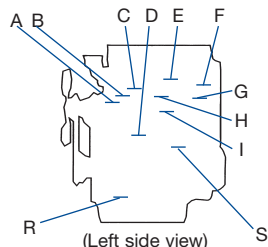
## Engines < 2 litre/cylinder (produced post 1974)

Engine number guide		
Example:	<b>PJ 12345 U 123456P</b>	
Engine family and type code	PJ	1106D-E66TA
Parts list number of SOS order reference number	12345	
Country of manufacture code	U	UK
Engine serial number	123456	
Year of manufacture code	P	2007

Year of manufacture code					
This code indicates the calendar year of manufacture. The letters I, O, Q, R and Z will not be used.					
A	1974	L	1984	Y	1994
B	1975	M	1985	A	1995
C	1976	N	1986	B	1996
D	1977	P	1987	C	1997
E	1978	S	1988	D	1998
F	1979	T	1989	E	1/1/99-31/3/99
G	1980	U	1990	F	1/4/99-31/12/99
H	1981	V	1991	G	2000
J	1982	W	1992	H	2001
K	1983	X	1993	J	2002
				K	2003
				L	2004
				M	2005
				N	2006
				P	2007
				R <sup>1/S</sup>	2008
				T	2009
				U	2010
				V	2011
				W	2012
				X	2013
				Y	2014

Country of manufacture code					
This code indicates the country in which the basic engine was manufactured.					
A	Argentina	H	Group	L	Italy
B	Brazil <sup>2</sup>	HC	China <sup>2</sup>	M	Mexico
C	Australia	HM	Indonesia	MX	Mexico
D	Germany	HK	Iraq	N	USA <sup>2</sup>
E	Spain	HU	Uruguay	P	Poland
F	France	J	Japan	R	China <sup>2</sup>
G	Greece	K	Korea	S	India
				SA	South Africa
				T	Turkey
				U	UK <sup>2</sup>
				V	Pakistan
				W	Iran
				X	Peru
				Y	Yugoslavia

## Where to find your engine number



Engine type	Position	Engine type	Position	Engine type	Position
3.152	M	4.318	F	Perama/100/400 Series	O
4.108	A	4.41	H	Phaser/1000/1100(A/B/C) Series	H or J
4.154/200 Series	B	6.247	C or F	1104D	S
4.165	B or G	6.354	D	850 Series	D or R
4.203	J or N	V8.540	Q	1204E	S
4.212/4.248/900 Series	C	Peregrine/1300 Series	I or O	1206E	R
1106D including PK	R	V8.640	P	1300 Series	T
4.236	C or L	700/800 Series	K	1600 Series	U

## Notes

<sup>1</sup> A number of engines were built with the letter 'R' as the year of manufacture code. In the middle of January 2008, the year of manufacture code was changed to the letter 'S'. If your full engine serial number ends with the letter 'R', Perkins Engines Company Limited will recognise the full engine serial number.

<sup>2</sup> Represents current manufacturing facilities.

If the letter 'R' appears after the country code this represents a remanufactured engine (ie UR = UK remanufactured engine).

### Engine family and type code - small/medium engines

A	Phaser/1004 Series		900 Series	GN	404D-22	KL	103.07		1104C Range		800D Range
AA	1004-4	CR	903-27	GP	404D-22T	KN	102.05	RE	1104C-44	UK	804D-33
AB	1004-4T	CP	903-27	GR	404D-22TA	KR	104.22	RF	1104C-E44	UL	804D-33T
AC	1004-4T	CS	903-25	GS	403D-17	KS	103.11	RG	1104C-44T	UM	804D-33TA
AD	1004e-4TW	CT	903-27S	GT	403A-11	L	4.236 Series	RH	1104C-E44T	V	1106C Range
AE	Fed. CC	D	1103C Range	GU	403A-15	LA	4.212	RJ	1104C-44TA	VK	1106C-E60TA
AF	1004-40S	DC	1103C-33	GV	404A-22	LD	4.236	RK	1104C-E44TA	X	V8.540 Series
AG	1004-4	DD	1103C-33T	H	4.165 Series	LE	G4.236		1104A Range	XA	V8.510
AH	1004-4T	DE	1103C-33TA	HA	4.165	LF	4.248	RR	1104A-44	XB	TV8.510
	New 1000 Series		1103B Range		400C Range	LG	4.2482	RS	1104A-44T	XC	V8.540
AJ	1004-40	DF	1103B-33	HB	402C-05	LH	C4.236	RT	1104A-44TA	XE	TV8.540
AK	1004-40T	DG	1103B-33T	HD	403C-07	LJ	T4.236	SD	Sabre CC6.68		1103D Range
AL	1004-40TA		1103A Range	HH	403C-11	LM	4.41	T	6.354 Series	XG	1103D-E33
AM	1004-40T	DJ	1103A-33	HL	403C-15		1204E Range	TC	6.354	XH	1103D-E33T
AP	1004-40	DK	1103A-33T	HM	403C-17	MK	1204E-E44TA wall flow	TD	H6.354	XJ	1103D-E33TA
AQ	1004-40T	E	4.108 Series	HN	404C-15	ML	1204E-E44TA wall flow	TE	T6.354	XK	1103D-33
AR	1004-42	ED	4.108	HP	404C-22	N	4.318 Series	TF	HT6.354	XL	1103D-33T
AS	1004-42	E	400F Range	HR	404C-22T	NC	4.318	TG	6.3541	XM	1103D-33TA
AT	1004-40TA	EG	402F-05	J	4.203 Series	ND	4.3182	TH	T6.3541	Y	Phaser/1006 Series
B	Prima/500 Series	EH	403F-07	JD	4.203	NH <sup>2</sup> /NP	1104D Range	TJ	6.3542	YA	1006-6
BA	504-2	EJ	403F-11	JE	D4.203	NJ <sup>2</sup> /NR	1104D-E44TA	TK	C6.3542	YB	1006-6T
BB	504-2T	EK	403F-15	JF	G4.203		1104D-E44T	TP	T6.3543	YC	1006-6T
	1206 Range	EL	403F-15T	JG	4.2032		1104D-E44TA	TR	6.372	YD	1006e-6T
BK	1206E-E66TA wall flow	EN	404F-22		850 Series	NK	1104D-44	TT	TC6.3541	YE	Fed. CC
BL	1206E-E70TTA wall flow	EP	404F-22T	JR	854E-E34TA wall flow	NL	1104D-44T	TU	T6.3544	YF	1006-60S
		G	4.154/200 Series	JS	854F-E34T wall flow	NM	1104-44TA	TV	6.3724		New 1000 Series
C	3.152 Series	GA	4.154	KT	854F-E34T through flow	P	1106D Range	TW	6.3544	YG	1006-60
CA	P3	GB	4.135	JT	854F-E34T through flow	PJ	1106D-E66TA	TX	C6.3544	YH	1006-60T
CB	3.144	GC	4.182		Perama/100 Series	PK	1106C-E66TA <sup>1</sup>	TY	H6.3544	YJ	1006-60TA
CC	P3.144	GD	4.25	K	102.04		1106A Range	TZ	HT6.3544	YK	1006-60TW
CD	3.152	GE	4.3	KA	103.06	PR	1106A-70TA	U	700 Series	Z	V8.640 Series
CE	D3.152		400D/A Range	KB	103.09		1106C Range	UA	704.30	ZA	V8.640
CF	G3.152	GG	402D-05	KC	103.10	PT	1106C-70TA	UB	704.26	ZB	TV8.640
CG	P3.152	GH	403D-07	KD	103.15	PU	1106D-70TA	UC	704.30		
CJ	3.1522	GJ	403D-11	KE	104.19	PW	1106D-E70TA		800C Range		
CM	3.1524	GK	403D-15	KF	103.13	R	6.247 Series	UE	804C-33		
CN	T3.1524	GL	403D-15T	KH		RA	6.247	UF	804C-33T		
		GM	404D-15								

A Air to air charge cooling  
C Compensated  
CC Charged cooled  
D Direct Injection

E Electronic  
F Federal emissions  
FF Federal  
G Gasoline/gas

H Horizontal  
N Narrow front end  
P Timing chain  
S Spark ignition

T Turbocharged  
U Unit injection  
V V form  
W Water to air charge cooling

### Engine family and type code - large engines

	4006 Range		4012 Range	DGL	4016TAG	JGB	2806TAG2 (A) (18 litre)	WD	1306-E87T/TA post June 2010	WS	1306-E87TA EP pre Jan 2010 IOPU pre June 2010
DIE	4006TESI	DIE	4012TESI	DGA	4016TAG1 (A)	JGD	2806TAG3 (18 litre)	WE	1306-7TA		
DIF	4006TESI	DIF	4012TESI	DGB	4016TAG2 (A)		2500 Range	WF	1306-8T NGD		1306A Range
DIH	4006TRS	DGA	4012-46TAG1 (A)	DGK	4016TWG2		2506TAG1	WG	1306-8TA NGD pre Jan 2010	WGD	1306A-E87TAG3
DIJ	4006TRS	DGB	4012-46TAG2 (A)	DGR	4016TEG1/2 (A)	MGA	2506TAG2	WG	1306C-E87TA post Jan 2010	WGE	1306A-E87TAG4
DGA	4006TAG1	DGD	4012-46TAG3 (A)	DGP	4016-61TRG1 (A)	MGB	2506TAG3	WH	1306-9T NGD	WGH	1306A-E87TAG6
DGB	4006-23TAG2 (A)	DGL	4012-46TAG0A	DGW	4016-61TRG2 (A)	MGD	2506TAG4				1600 Series
DGD	4006-23TAG3 (A)	DGM	4012TWG	DGX	4016-61TRG3 (A)	MGE	2206 Range	WJ	1306-9TA NGD	XGA	1606D-E93TAG1
DGM	4006TWG	DGN	4012-46TWG2 (A)		2300 Range	TGB	2206TAG2		1300 Series EDi	XGB	1606D-E93TAG2
DGP	4006TEG	DGN	4012-46TWG3 (A)	FGA	2306TAG1	TGD	2206TAG3	WK	1306-E76T	XGD	1606D-E93TAG3
	4008 Range	DGV	4012-46TWG4 (A)	FGB	2306TAG2	TGF	2206TAG5	WL	1306-E76TA	XGE	1606A/D-E93TAG4
DIE	4008TESI	DGP	4012TEG	FGD	2306TAG3	TGH	2206TAG6	WM	1306-E87T	XGF	1606A/D-E93TAG5
DIF	4008TESI	DGR	4012TEG2		2800 Range	W	1300 Series Peregrine	WN	1306-E87TA		
DIH	4008TRS		4016 Range	HGA	2806TAG1 (16 litre)	WB	1306-8T	WP	1306-E76T		
DIJ	4008TRS	DIE	4016TESI	HGB	2806TAG2 (16 litre)	WC	1306-8TA	WQ	1306-E76TA		
DGL	4008TAG	DIF	4016TESI	JGA	2806TAG1 (A) (18 litre)	WD	1306-7T pre June 2010	WR	1306-E87T		
DGA	4008TAG (A)	DIG	4016E61-TRS								
DGB	4008TAG (A)	DIH	4016TRS								
DGK	4008TWG2	DIJ	4016TRS								

61 Capacity in litres  
A Air to air  
CHP Combined heat and power

E External water circuit  
E Electronic  
G Genset

I Intercooled  
M Marine  
R Remote cooled

S (SI) Spark ignition  
T Turbocharged  
W Water

### Notes

<sup>1</sup> PK Series engines are derived from the 1106D Range platform but are only Stage II EU 2007 generator sets emissions compliant.

<sup>2</sup> Not available from 2014.

Peterborough products may show a finishing list on the engine plate, eg F1895. It is very important to quote this when spare parts are required.

## 1300 Series (Stafford)

From January 2010 ElectropaK (EP) and June 2010 Industrial Open Power Unit (IOPU) the engine numbering format for 1300 Series engine range changed to bring it into line with 2000 and 4000 Series engines.

Engine number guide			
Example:	<b>W G H F 7004 N 12345 U</b>		
1300 Series engine	W	Differentiator for customer specific options	7004
Generator set application (D for IOPU)	G	USA country of origin base engine	N
Rating (eg TAG6)	H	Unique serial number	12345
6 cylinders	F	Year of manufacture	U

Engine family and type code			
Build list ID pre January 2010	Build list ID from January 2010	Product type	Speed
1300 Series EP			
WS5360	WGDF7002	1306C-E87TAG3	1500 rpm
WS5361	WGEF7003	1306C-E87TAG4	1500 rpm
WS5358	WGFF7007	1306C-E87TAG5	1500 rpm
WS5362	WGHF7004	1306C-E87TAG6	1500 rpm
WS5359	WGDF7008	1306C-E87TAG3	1800 rpm
WS5357	WGEF7009	1306C-E87TAG4	1800 rpm
WS5363	WGDF7005	1306C-E87TAG3	1500/1800 rpm
WS5364	WGEF7006	1306C-E87TAG4	1500/1800 rpm

Build list ID pre June 2010	Build list ID from June 2010	Product type	Gross rating kWm @ rpm
1300 Series IOPU			
WR4424	WDMF7100	1306-E87T	153.0 @ 2200
WP4423	WDNF7101	1306-E76T	156.5 @ 2400
WR4425	WDPF7102	1306-E87T	168.0 @ 2200
WS4426	WDQF7103	1306-E87TA	186.5 @ 2000
WS4427	WDRF7104	1306-E87TA	186.5 @ 2200
WS4580	WDSF7105	1306-E87TA	197.5 @ 2100
WS4428	WDTF7106	1306-E87TA	197.5 @ 2100
WS5093	WDUF7107	1306-E87TA	197.5 @ 2200
WS5095	WDVF7108	1306-E87TA	197.5 @ 2200
WS5405	WDWF7109	1306-E87TA	223.5 @ 2200
WS5404	WDXF7110	1306-E87TA	246.0 @ 2000

Engine family and type code	
Build list ID	Product type
1306A Range	
WGDF	1306A-E87TAG3
WGEF	1306A-E87TAG4
WGHF	1306A-E87TAG6

## 1600 Series (Stafford)

Engine number guide			
Example:	<b>X G D F 7147 N 12345 W</b>		
1600 Series engine	X	Differentiator for customer specific options	7147
Generator set application	G	USA country of origin base engine	N
Rating (eg TAG3)	D	Unique serial number	12345
6 cylinders	F	Year of manufacture	W

Engine family and type code	
Build list ID	Product type
1600 Series EP	
XGAF	1606D-E93TAG1
XGBF	1606D-E93TAG2
XGDF	1606D-E93TAG3
XGEF	1606A/D-E93TAG4
XGFF	1606A/D-E93TAG5

From the 1 January 2008 the engine numbering format for large engines changed. The two numbers used previously to determine the number of cylinders per engine, have been replaced by one letter. The following letters will define the number of cylinders:

- 6 cylinder engine      F will replace 06      ● 12 cylinder engine      M will replace 12
- 8 cylinder engine      H will replace 08      ● 16 cylinder engine      R will replace 16

## 2000 Series Electronic (Stafford)

Engine number guide			
Example:	<b>T G A F 0019 U 0178 P</b>		
2000 Series engine	T	Engine specification number	0019
Generator set application	G	Country of manufacture	U
Rating (eg TAG1)	A	Build line number	0178
6 cylinders	F	Year of manufacture	P

Engine family and type code		
Build list ID pre January 2009	Build list ID from January 2009	Product type
2206 range		
N/A	TGBF	2206TAG2 (13 litre)
N/A	TGDF	2206TAG3 (13 litre)
N/A	TGFF	2206TAG4 (13 litre)
N/A	TGHF	2206TAG5 (13 litre)
Build list ID pre January 2008	Build list ID from January 2008	Product type
2300 range		
FGA06	FGAF	2306TAG1 (14 litre)
FGB06	FGBF	2306TAG2 (14 litre)
FGD06	FGDF	2306TAG3 (14 litre)

Engine family and type code		
Build list ID pre January 2008	Build list ID from January 2008	Product type
2500 range		
MGA06	MGAF	2506TAG1 (15 litre)
MGB06	MGBF	2506TAG2 (15 litre)
MGD06	MGDF	2506TAG3 (15 litre)
MGE06	MGEF	2506TAG4 (15 litre)
2800 range		
HGA06	N/A	2806TAG1 (16 litre)
HGB06	N/A	2806TAG2 (16 litre)
JGA06	JGAF	2806TAG1 (A) (18 litre)
JGB06	JGBF	2806TAG2 (18 litre)
JGD06	JGDF	2806TAG3 (18 litre)

## 4000 Series (Stafford)

Engine number guide			
Example:	<b>DGB F 0081 U 0017 B</b>		
4000 Series engine	D	Fixed build number (0000 means configured product)	0081
Generator set application	G	Country of manufacture	U
Rating (eg TAG2)	B	Build line number	0017
6 cylinders	F	Year of manufacture	B

Engine family and type code - Diesel		
Build list ID pre January 2008	Build list ID from January 2008	Product type
4006 range		
DGA06	N/A	4006TAG1
DGB06	DGBF	4006 / 4006-23TAG2 (A)
DGD06	DGDF	4006 / 4006-23TAG3 (A)
DGM06	N/A	4006TWG
DGP06	N/A	4006TEG
4008 range		
DGL08	DGLH	4008TAG
DGA08	DGAH	4008TAG1 (A)
DGB08	DGBH	4008TAG2 (A)
DGK08	N/A	4008TWG2
4012 range		
DGL12	N/A	4012TAG
DGA12	DGAM	4012 / 4012-46TAG1 (A)
DGB12	DGBM	4012 / 4012-46TAG2 (A)
DGD12	DGDM	4012-46TAG3 (A)
N/A	DGLM	4012-46TAG0A
DGM12	N/A	4012 TWG
DGK12	DGKM	4012 / 4012-46TWG2 (A)
DGN12	DGNM	4012-46TWG3 (A)
N/A	DGVM	4012-46TWG4 (A)
DGP12	N/A	4012TEG
DGR12	N/A	4012TEG2
4016 range		
DGL16	DGLR	4016TAG
DGA16	DGAR	4016TAG1 (A)
DGB16	DGBR	4016TAG2 (A)
DGK16	DGKR	4016TWG2
DGR16	DGRR	4016TEG1/2 (A)
N/A	DGPR (Introduced July 2010)	4016-61TRG1 (A)
N/A	DGWR (Introduced July 2010)	4016-61TRG2 (A)
N/A	DGXR (Introduced July 2010)	4016-61TRG3 (A)

Engine family and type code - Gas		
Build list ID pre January 2008	Build list ID from January 2008	Product type
4006 range		
DIE06	DIEF	4006TESI
DIF06	DIFF	4006TESI
DIH06	DIHF	4006TRS
DIJ06	DIJF	4006TRS
4008 range		
DIE08	DIEH	4008TESI
DIF08	DIFH	4008TESI
DIH08	DIHH	4008TRS
DIJ08	DIJH	4008TRS
4012 range		
DIE12	DIEM	4012TESI
DIF12	DIFM	4012TESI
4016 range		
DIE16	DIER	4016TESI
DIF16	DIFR	4016TESI
DIG16	DIGR	4016E61-TRS
N/A	DIHR (Build List ID from Jan 2009)	4016TRS
N/A	DIJR (Build List ID from Jan 2009)	4016TRS

### Note

A letter 'A' after the engine type equals the first evolution of that product, eg TAG1A

## 2000/3000 Series Mechanical (Shrewsbury)

Engine number guide			
Example: <b>SG A 06 0010 U 0001 Y</b>			
Engine application	SG	Country of manufacture	U
Engine family and type code	A	Build line number	0001
Number of cylinders	06 = 2000 Series, 08/12 = 3000 Series	Year of manufacture	Y
Engine specification number	0010		

Engine family and type code					
Family: SA Automotive		Family: SI Gas		Family: SG Generator set (cont/d)	
SAA	300TX	SIA	SI	SGE	TAG4
SAB	320MX	SIB	SI Gas Unit	SGF	TG
SAC	335TX	SIC	TSI CHP	SGG	TG1A
SAE	350E	SID	TSI Gas Unit	SGH	TG2A
SAG	375TX	SIE	TWSI CHP	SFJ	TTAG
SAJ	340TX2	SIF	TWSI Gas Unit	SGK	TWG2
SAK	380TX2	Family: SM Marine		SGL	TAG
SAL	410TX2	SMA	M600T1	SGM	TAG5
Family: SB Short Block		SMB	M700T1	Family: SH Horizontal	
SBA	TX	SMC	M800T1	SHA	TWH
SBB	2000 Series	Family: SF Forklift		Family: SP Plant	
SBC	3008 Series	SFA	T1	SPA	T
SBD	3012 Series	SFB	T2	SPB	T1
Family: SL Long Engine		SFC	TA	SPC	T2
SLA	TX / Euro 2	SFD	TW	SPD	TA
SLB	2000 Series	Family: SG Generator set		SPE	TAP
SLC	3008 Series	SGA	TAG1A	SPJ	TP
SLD	3012 Series	SGB	TAG2	SPK	TTA
SLE	3008 Marine	SGC	TAG2A	SPL	TTAP
SLG	3008 / 3012SI	SGD	TAG3A	SFM	TW
		SGE	TAG4	SPP	TW1

## Shrewsbury Product (produced pre 1994)

Engine number guide			
Example: <b>8C 27655 U 88900 W</b>			
Engine family and type code	8C	Build line number	88900
Engine specification number	27655	Year of manufacture	W
Country of manufacture	U		

Engine family and type code	
8BT, 8CTA, 8DTW	Eagle
8CTA	Eagle TX
8BT, 8CTA/TTA, 8DTW, 8ESI, 8GTW-H	2000 Series
4AT, 4BTA, 4ESI	3008/CV8
4CTI	Condor Marine
6ATA, 6CTW, 6DT, 6ESI	3012/CV12

Engine type	Position
Eagle/2000 Series	R
3008 Series	T
3012 Series	S
2300/2500/2800 Series	W
4006/4008 Series	U
4012/4016 Series	V or X

