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<b>GENERAL INFORMATION</b>	<b>PAGE</b>
INTRODUCTION & LIST OF PERKINS COMPANIES WORLDWIDE	1-2
CONTENTS	3 - 5
BRIEF DESCRIPTION OF THE 4006/8 DIESEL ENGINES	7
PHOTOGRAPHS	INSERT
SAFETY PRECAUTIONS	INSERT
GENERAL INFORMATION	9 - 10
ENGINE DATA	11 - 15
PRESERVATION	16 - 17
INSTALLATION CONSIDERATIONS	18 - 22
LUBRICATING OIL	23 - 24
COOLANT	25
FUEL SPECIFICATION	26
GENERAL OVERHAUL NOTES	27 - 31
THE REMOVAL OF SCALE, CORROSION AND OIL	31
PREPARATORY PROCEDURES	32 - 33
COMMISSIONING CHECK LIST	34 - 35
TORQUE SETTINGS	36 - 38
WEAR AND RENEWAL LIMITS	39 - 41
TOOLS	42 - 45
FAULT TRACING CHART	46

---

## CONTENTS

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MAINTENANCE PROCEDURES INDEX	SECTION
AIR CLEANER	A1
AIR SHUT OFF VALVE	JJ1 - JJ3
ALTERNATOR (BATTERY CHARGING)	B1 - B3
CAMSHAFT REMOVAL	V1 - V3
INSPECTION	
BEARING REPLACEMENT	
REFITTING	
CHANGE OVER FUEL FILTERS	N2
CHANGE OVER OIL FILTERS	M5
CHARGE AIR COOLER	K3
COOLING SYSTEMS (RADIATOR)	F1 - F5
COOLING SYSTEMS (HEAT EXCHANGER)	F6 - F10
CRANKSHAFT AND BEARINGS	W1 - W5
REMOVING & REFITTING THE CRANKSHAFT	
CYLINDER HEAD (REMOVING)	Q1 - Q5
REMOVING THE EXHAUST MANIFOLD	
REMOVING FUEL AND OIL PIPES	
REMOVING ROCKERS AND ROCKER BOXES	
REMOVING CYLINDER HEAD	
CYLINDER HEAD (OVERHAULING)	R1 - R11
REMOVING VALVES	
SERVICING VALVES, SEATS AND GUIDES	
REPLACING VALVES	
REMOVING INJECTOR BUSH	
REPLACING INJECTOR BUSH	
REPLACING CORE PLUGS	
CYLINDER HEAD (REPLACEMENT)	R12 - R14
CRANKCASE	
REMOVING & REPLACING A CYLINDER LINER	T1
CRANKCASE INSPECTION COVER	S1 & T3
EXHAUST MANIFOLD EXPANSION JOINT	Q2
FLEXIBLE COUPLING	LL1 - LL7
FLYWHEEL AND HOUSING	X1 - X3
REMOVING FLYWHEEL	
REMOVING FLYWHEEL HOUSING	
REFITTING FLYWHEEL HOUSING	
REFITTING FLYWHEEL	
FUEL FILTER AND WATER SEPARATOR	N1
FUEL INJECTION SYSTEM	P1
REMOVING INJECTORS	
STRIPPING THE INJECTORS	
CLEANING AND CHECKING	
REASSEMBLING INJECTORS	P2 - P32
TESTING AND SETTING INJECTORS	
FITTING INJECTORS	
CALIBRATION AND TIMING	
PRIMING FUEL SYSTEM	
FUEL LIFT PUMP	N3

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MAINTENANCE PROCEDURES INDEX	SECTION
GEARCASE - REMOVAL & REFITTING	U1
GOVERNORS	AA1
HEINZMANN ELECTRONIC GOVERNOR E6 & E6V	AA1 - AA45
WOODWARD PSG HYDRAULIC	AA46 - AA64
GOVERNOR INJECTOR CONTROL LINKAGE	BB1 - BB3
HEAT EXCHANGER COOLING	F6 - F10
IMMERSION HEATERS	MM1 - MM2
OIL FILTERS AND HEADER	M1 - M2
OIL PUMP	G1 - G8
OIL COOLER	L1 - L7
OVERSPEED SWITCH	Y1
SYNCHRO-START STOP SOLENOID	Z1 - Z3
PISTONS AND CONNECTING RODS	S1 - S8
PISTON COOLING JETS	T2 - T3
PROTECTION SWITCH (LOW OIL PRESSURE/HIGH WATER TEMPERATURE)	FF1
RADIATOR COOLING	F1 - F5
REPEATER RELAY CAV TYPE 381 - 4A	GG1 - GG2
REN VALVE OIL LEVEL CONTROL	NN1 - NN3
RESTRICTION INDICATOR	A2
STARTER MOTOR CAV TYPE S130 AND S152L	C1 - C3
STARTER MOTOR PRESTOLITE TYPE MS1/41 AND MS7/3	C4 - C5
STARTER MOTOR (AIR) INGERSOLL-RAND TYPE SS350	C6 - C8
THERMOSTATS	H1 - H3
TIMING GEARS	U1 - U4
TORSIONAL VIBRATION DAMPER	HH1 - HH4
TURBOCHARGERS	J1 - J4
WATER PUMP (FRESH)	D1 - D6
WATER PUMP (RAW)	E1 - E3

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**WARNING**

READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND WARNINGS MENTIONED IN THIS MANUAL. IMPROPER OPERATION OR MAINTENANCE PROCEDURES COULD RESULT IN A SERIOUS ACCIDENT OR DAMAGE TO THE EQUIPMENT CAUSING INJURY OR DEATH. NON-COMPLIANCE WITH THESE INSTRUCTIONS AND THOSE INCLUDED IN THE INSTALLATION MANUAL TSL4068 MAY INVALIDATE THE WARRANTY OFFERED WITH THE ENGINE.

MAKE QUITE CERTAIN THAT THE ENGINE CANNOT BE STARTED IN ANY WAY BEFORE UNDERTAKING ANY MAINTENANCE, PARTICULARLY IN THE CASE OF AUTOMATICALLY STARTING GENERATING SETS.

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The purpose of this Manual is to enable the operator to carry out routine servicing of the engine. Before undertaking any work on the engine the appropriate section in the **Manual** should be read fully and completely understood prior to starting work.

The information contained within the manual is based on such information as was available at the time of going to print. In line with Perkins Engines (Stafford) Limited policy of continual development and improvement that information may change at any time without notice. The engine user should therefore ensure that he has the latest information before starting work.

The instructions contained in this Manual will, provided that they are correctly carried out, ensure the safe operation of the equipment.

Users are respectfully advised that it is their responsibility to employ competent persons to operate, maintain and service the equipment in the interest of safety.

Certain overhaul operations are impracticable without the use of special tools, and those operators who are not equipped to undertake major repairs are urged to consult their Perkins distributor.

When not working on the engine, ensure that all covers, blank flanges, doors, etc., are refitted to openings to prevent the ingress of dirt, etc.

Please quote the engine type and serial number with all your enquiries. This will help us to help you. The type and serial number are on a plate fitted to the crankcase.

If any doubt exists regarding the installation, use or application of the engine, the Installation Manual should be consulted for further advice contact Applications Department at Perkins Engines (Stafford) Ltd.

Oil change intervals may be changed according to operating experience by agreement with Perkins Engines (Stafford) Limited and subject to oil analysis being carried out at regular intervals.

Please note that this 4000 Series manual also covers SE engines dispatched from the factory from 1 March 1996. A table of equivalent engine designations is given on **page 2**.

## PERKINS COMPANIES

**Perkins Group of Companies**  
**Perkins Engines (Peterborough) Ltd.**  
 Frank Perkins Way, Eastfield,  
 Peterborough, PE1 5NA, England.  
 Tel: (01733) 583000  
 Telex: 32501 PERKEN G  
 Fax: (01733) 582240

**Perkins Engines (Shrewsbury) Ltd.**  
 Lancaster Road, Shrewsbury,  
 SY1 3NX, England.  
 Tel: (01743) 212000  
 Telex: 35171/2 PESL G  
 Fax: (01743) 212700

**Perkins Engines (Stafford) Ltd.**  
 Tixall Road, Stafford, ST16 3UB, England.  
 Tel: (01785) 223141  
 Telex: 36156 PERKEN G  
 Fax: (01785) 215110

**Perkins Powerpart Distribution Centre**  
 Frank Perkins Way,  
 Northbank Industrial Park, Irlam,  
 Manchester, M44 5PP, England.  
 Tel: (0161) 776 5000  
 Specifications Help Desk  
 Tel: (0161) 776 5151  
 Fax: (0161) 776 5200  
 Specifications Help Desk  
 Tel: (0161) 776 5100  
 Telex: 32501 PERKEN G

**Perkins International - North America**  
 12025 Tech Center Drive,  
 Livonia, Michigan 48150,  
 U.S.A.  
 Tel: 313 266 5427  
 Fax: 313 266 2700

**Perkins Engines Latin America Inc**  
 999 Ponce de Leon Boulevard,  
 Suite 710, Coral Gables,  
 Florida 33134, U.S.A.  
 Tel: (305) 442 7413  
 Telex: 32501 PERKEN G  
 Fax: (305) 442 7419

**Perkins Engines Australia Pty Ltd**  
 Suite 2, 364 Main Street, Morningside  
 3931, Victoria, Australia.  
 Tel: (059) 75 1877  
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 Fax: (059) 75 1305

**Motori Perkins SpA**  
 Via Socrate, 8, 22070 Casnate  
 Con Bernate (Como), Italy.  
 Tel: 031 56 46 25 / 031 56 46 33  
 Telex: 380658 PERKIT I  
 Fax: 031 24 90 92 / 031 56 41 45

**Perkins Motoren GmbH**  
 D-63801 Kleinostheim,  
 Saalackerstrasse 4, Germany.  
 Tel: (49) (6027) 5010  
 Fax: (49) (6027) 501130

**Moteurs Perkins SA**  
 Parc de Reflets - Paris Nord II,  
 165 Avenue du Bois de la Pie, BP 40084,  
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 Tel: 00 33 149 90 71 72  
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**Perkins Engines (Far East) Pte Ltd.**  
 39 Tuas Avenue 13,  
 Singapore 638999.  
 Tel: (65) 661 1318  
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In addition to the above companies, there are Perkins distributors in most countries. Perkins Engines (Peterborough) Limited or one of the above companies can provide distributor handbooks Publication No. 1407/4/97

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## INTRODUCTION

<b>PERKINS ENGINES (STAFFORD) ENGINE DESIGNATIONS 4000 SERIES AND SE SERIES EQUIVALENT TERMS</b>	
<b>4000 SERIES</b>	<b>SE SERIES</b>
4006TG	6SET
4006TWG	6SETCR
4006TWG3	6SETCR3
4006TAG1	6SETCA1
4006TAG2	6SETCA2
4006TAG3	6SETCA3
4006TEG	6SETCW
4008TWG2	8SETCR2
4008TAG	8SETCA
4008TAG1	8SETCA1
4008TAG2	8SETCA2

## BRIEF DESCRIPTION OF THE 4006/8 DIESEL ENGINES

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- 4006TG 6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit.
- 4006TWG 6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler and charge air cooler in engine cooling circuit.
- 4006TWG3 Up-rated version of the 4006TWG.  
6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler and charge air cooler in engine cooling circuit.
- 4006TAG1 6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit and air cooled charge air cooler in radiator.
- 4006TAG2 Up-rated version of the 4006TAG1.  
6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit and air cooled charge air cooler in radiator.
- 4006TAG3 Up-rated version of the 4006TAG2.  
6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit, and air cooled charge air cooler in radiator.
- 4006TEG 6 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit, and water cooled charge air cooler with raw water pump in separate cooling circuit.
- 4008TWG2 8 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler and charge air cooler in engine cooling circuit.
- 4008TAG 8 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit and air cooled charge air cooler in radiator.
- 4008TAG1 Up-rated version of the 4008TAG.  
8 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit and air cooled charge air cooler in radiator.
- 4008TAG2 Up-rated version of the 4008TAG1.  
8 cylinder, inline, water cooled, 4 stroke, turbocharged diesel engine, with jacket water cooled oil cooler in engine cooling circuit and air cooled charge air cooler in radiator.
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