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**workshop
manual for
T6.3543
diesel engines**

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Perkins Engines Limited

Peterborough England

1982

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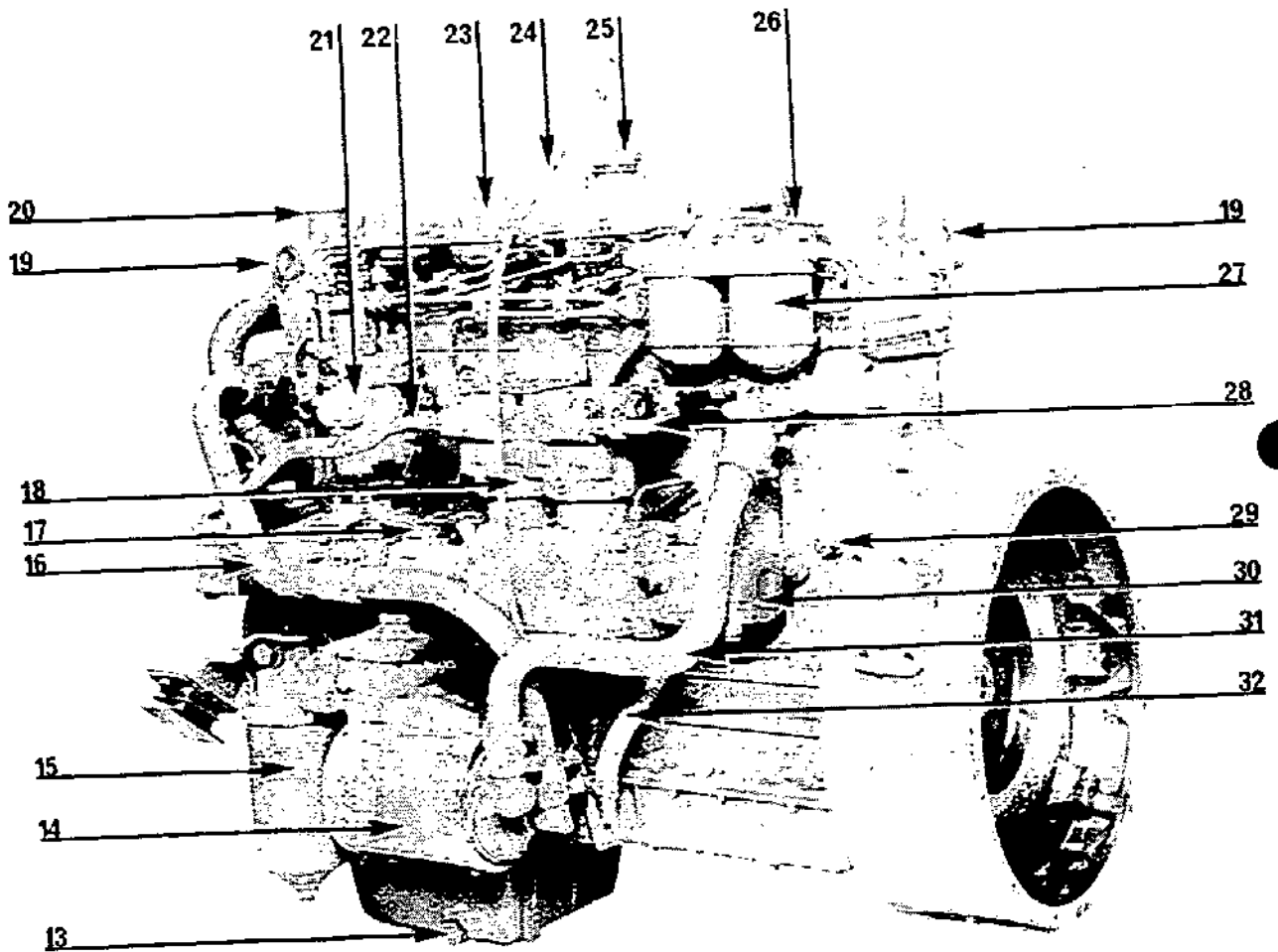
This publication is written for world wide use. In territories where legal limits govern engine smoke emission, noise, safety factors, etc., then all instructions, data and dimensions given must be applied in such a way that, after servicing, (preventative maintenance) or repairing an engine, it does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

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ENGINE VIEWS A2

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A2

VIEW OF LEFT HAND SIDE OF ENGINE

- 13. Sump Drain Plug
- 14. Lub. Oil Cooler
- 15. Lub. Oil Filter
- 16. Water Inlet Pipe to Oil Cooler
- 17. Compressor Coupling
- 18. Compressor
- 19. Lifting Hook
- 20. Water Outlet Connection
- 21. Fuel Injection Pump
- 22. Water Inlet Pipe to Compressor
- 23. Cylinder Head Top Cover
- 24. Dipstick
- 25. Lubricating Oil Filler
- 26. Atomiser
- 27. Twin Fuel Oil Filters
- 28. Water Outlet Pipe from Compressor
- 29. Cylinder Block Drain Tap
- 30. Power Steering Pump
- 31. Water Outlet Pipe from Oil Cooler
- 32. Breather Pipe

SECTION B
General Information

GENERAL INFORMATION B2

Engine Data

Type	Six cylinder, four stroke, direct injection
Bore	3.877/3.878 in (98.48/98.50 mm)
Stroke	5.0 in (127 mm)
Compression Ratio	16:1
Cubic Capacity	353.8 in ³ (5.8 litre)
Firing Order	1, 5, 3, 6, 2, 4
Lubricating Oil Pressure	30 lbf/in ² (2.1 kgf/cm ²) -207 kN/m ² minimum, at maximum engine speed and normal operating temperature.
Valve Tip Clearance (prior to Engine No. 3543U10342TL)	0.012 in (0,30 mm) COLD
Valve Tip Clearance (commencing Engine No. 3543U10342TL)Inlet	0.008 in (0,20 mm) COLD
.....Exhaust	0.018 in (0,46 mm) COLD

Rating Details

Standard Vehicle with Air Charge Cooler	
Gross Rated Output	155 b.h.p. (116 kW) at 2600 rev/min.
Maximum Torque	376 lbf ft (520 kgf m) at 1600 rev/min.
Combine Harvester with Air Charge Cooler	
Gross Rated Output	153 b.h.p. (114 kW) at 2500 rev/min.
Maximum Torque	376 lbf ft (520 kgf m) at 1600 rev/min.

The above ratings are "new engine" maximum and can vary according to application. For further details apply to the equipment manufacturer or the Service Department of Perkins Engines, Peterborough, England.

Recommended Torque Tensions

The following figures will apply with the components lightly oiled.

Component	Screw Size UNF	lbf ft	kgf m	Nm
Cylinder Head Nuts	1/2	95	13,1	129
Cylinder Head Setscrews	1/2	95	13,1	129
Cylinder Head Nuts with preformed integral washers				
Cold Torque	1/2	115	15,9	156
Hot Torque		105	14,5	142
Cylinder Head Setscrews with preformed integral washers				
Cold Torque	1/2	115	15,9	156
Hot Torque		105	14,5	142
Connecting Rod Nuts prior to Engine Number 3543U1384T	1/2	70	9,7	95
Connecting Rod Nuts (current)	1/2	75	10,4	102
Main Bearing Setscrews	5/8	180	24,9	244
Main Bearing Setscrews prior to Engine Number 3543U435T	5/8	150	20,7	203
Idle Gear Hub Nuts	3/8	36	5,0	49
Crankshaft Damper Setscrews (where fitted)	5/16	19	2,6	26
Sump to Cylinder Block, Setscrews	5/16	15	2,1	20
Flywheel Securing Setscrews	1/2	80	11,1	108
Camshaft Gear Retaining Setscrew	1/2	50	6,9	68
Crankshaft Pulley Setscrews	7/16	65	9,0	88
Piston Cooling Jet Banjo Bolt	3/8	20	2,7	27
Oil Cooler to Cylinder Block, Setscrews	7/16	50	6,9	68
Lub. Oil Filter to Oil Cooler, Setscrews	7/16	32	4,4	43
Atomiser Securing Nuts	5/16	12	1,7	16
Aux. Drive Shaft Gear to Shaft, Screws	5/16	22	3,0	30
Alternator Pulley Retaining Nut	7/16	30	4,1	41
Fuel Oil Lift Pump to Cylinder Block (to be re-torqued when hot)	5/16	20	2,7	27
Induction Manifold Setscrews (re-torque after 10 minutes see Page E.3)	3/8	24	3,3	32
High Pressure Fuel Pipe Nuts	12 x 1,5 mm	15	2,1	20
Thermostart		10	1,4	14
Thermostart Adaptor (where fitted)		10	1,4	14

Engine Weights

Bare engine, alternator, fuel and lubricating oil filters, compressor and lubricating oil cooler.
Approx. dry weight = 960 lbs (435 kg)

Bare engine, alternator, fuel and lubricating oil filters, compressor, lubricating oil cooler, flywheel, flywheel housing, air charge cooler, starter motor and fan.

Not including radiator and clutch = 1180 lbs (536 kg)

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