



IPD TECH BULLETIN

*General Information for 60 Series
Detroit Diesel® Engines.*

AUGUST 2009

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IPD Parts for Detroit Diesel Series 60

The Series 60 engine is an in-line 6 cylinder, with wet replaceable liners, overhead cam, and electronic engine control. These are mostly used in class 8 trucks, but can also be found in industrial & generator applications as well as occasional marine applications. The Series 60 DDC diesel engine comes in 14, 12.7 & 11.1 liter designs. IPD's focus at this time is on the 12.7L premium engines, ranging roughly from serial number 6R411,649 to serial number 6R740,000 produced from 1998 to 2003.

Series 60 Model Number Identification System

Digit position	Digit Value	Meaning
1 ST	6	Series 60 Engine
2 ND & 3 RD	06	Six Cylinders
4 TH	2 3 5 7	Marine Industrial Generator Automotive
5 TH	W, S, E, or L G, T, or M P or B F or H	11.1 Liter 12.7 Liter, Standard 12.7 Liter, Premium 14 Liter
6 TH	T U K	DDEC I Engine Control DDEC II Engine Control DDEC III & IV Engine Control
7 TH & 8 TH	28 32 40 60	1991 & Later Coach Underground Pre-1991 Engine 1991 & Later On-Highway

From the chart above we can tell that an engine model 6067PK28 is a Series 60, Six Cylinder, Automotive, 12.7 L Premium, DDEC III/ IV, 1991 & later coach engine.

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There have also been a number of design changes in the piston assemblies for these engines. Although the DDEC series indentifies the engine control type and not the piston design, generally speaking that breakdown is as follows:

- I. Commonly referred to as DDEC I , these “first” generation engines used articulated (2 pcs.) pistons with cast iron crowns, crosshead connecting rods, and were not piston cooled.

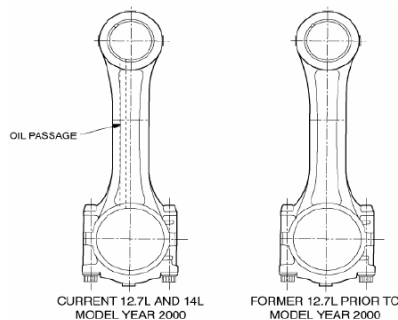
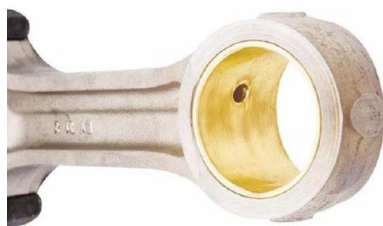
IPD Does NOT offer cylinder kits for these engines.

- II. Commonly referred to as DDEC II, these “second” generation engines used articulated (2 pcs.) pistons with cast iron crowns, and crosshead “rifle drilled” connecting rods. There were also bushings in the pin bosses of these piston crowns and they were piston cooled. IPD’s cylinder kits can be used to upgrade these engines but only if the connecting rods are updated to “trunk” style and the cylinder blocks have piston cooling tubes.

IPD Does NOT offer cylinder kits for these engines except in case of above mentioned upgrade.

- III. Commonly referred to as DDEC III & Early IV, these third generation engines used articulated (2 pcs.) pistons with steel crowns and “rifle drilled” – trunk style connecting rods (pin goes through the eye of the connecting rod). There are no bushings in the pin bosses of these piston crowns. The cylinder kits for these engines include top liner cooled liners.

DDECIII & DDIV are the engines that IPD’s cylinder kits were designed for.



Shown above: Trunk style rifle drilled connecting rod

- IV. Commonly referred to as later DDEC IV and up, these fourth generation engines used one piece steel pistons and were released in 2003.

These pistons are not yet available from IPD.

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More about the Third Generation, DDEC III & Early IV IPD Supplied Cylinder Kits:

Piston Pins: These third generation engines have two different weight piston pins (heavy and light). Both piston pins are the same OD but differing ID bores. The heavy pin has a 0.86" inside bore and the light pin has a 1.02" inside bore. It seems that updating to the heavy piston pin is preferred, BUT this must be done in complete sets only. You cannot mix light and heavy pins in the same engine. IPD does offer the light pin cylinder kits for those customers needing to replace only one or two cylinders, but we do not offer In-Frame or Out-of-Frame kits with the light pins. If all six cylinders are being replaced the engine should be updated to the heavy pin kits.

Compression Ratio: There are also two different compression ratios, 15.0:1 and 16.5:1. The most popular is the 23532562 cylinder kit (16.5:1 & 2.5mm Top Ring) which contains the heavy piston pin. To use our kits, the engine must have piston cooling jets (tubes) and rifle drilled "Trunk" style connecting rods.

Valve Cover and Pan Gaskets: The bearings and most gaskets are the same on these third generation engines with trunk style connecting rods and articulated pistons, but valve cover gaskets & pan gaskets may vary. The easiest way to tell them apart is by the color; grey or black. **They are not interchangeable.**

Oil Pan Gaskets:

- The original oil pan gasket p/n 8929102(grey) was used until approximately serial no. 6R490,000...
- After which a design change was made to a reusable black oil pan gasket (p/n 23522279).

Valve Cover Gaskets:

- The grey valve cover gasket (p/n 23516322) was used until May of 1999 and then...
- The design was changed to a reusable black valve cover gasket (p/n 23522269).

These gaskets are not included in O.E. head gasket sets or overhaul gasket sets, BUT the grey gaskets are included in IPD's engine kits. (Black gaskets can be substituted on request).

Hopefully this tech bulletin has given you some general working knowledge of the 60 series engines. The engines' serial, model and type numbers will identify the proper parts for the engine. Please contact your IPD Regional Sales Manager, IPD Distribution center, or the IPDNet for further assistances.

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