SisuDiesel

# WORKSHOP MANUAL

## SISUDIESEL

320
420
620
634

8366 40634

PARTEK

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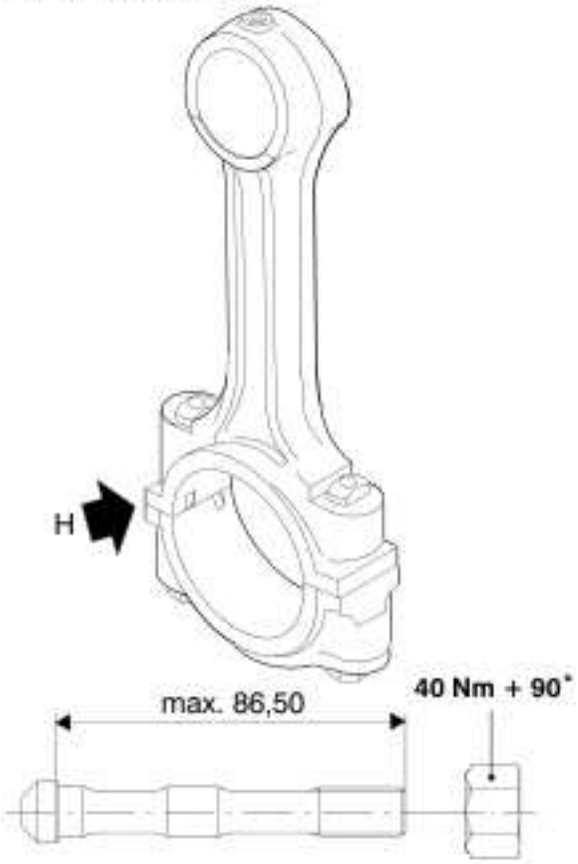
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**Earlier used connecting rod**



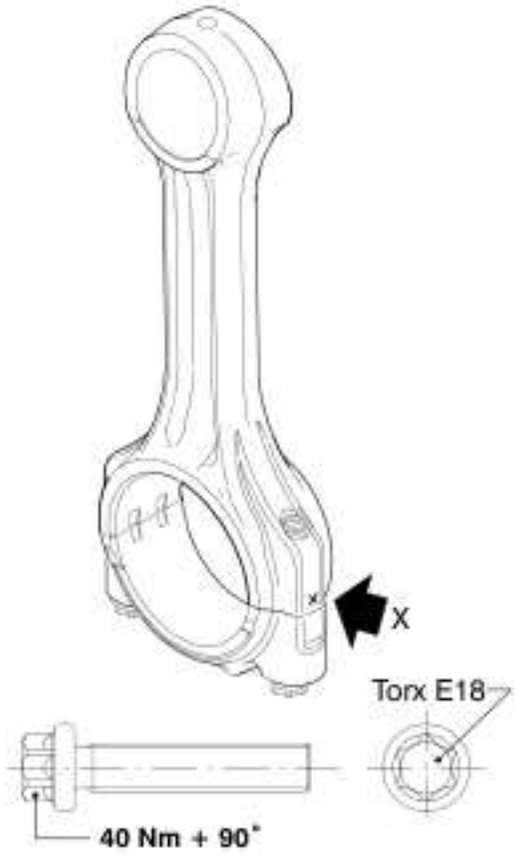

Measure the length of the connecting rod screws. The length should be max **86,50 mm**. If the screw is longer, change it with a new one. It is recommended that the screws are always changed when they are unscrewed.

The connecting rods are divided into weight classes with intervals of **20 g**. The weight class (a letter) is stamped on the side face of the connecting rod. All the connecting rods in one engine should be of the same weight class, that is to say the greatest permissible weight difference is **20 g**.

The letters show the weight classes as follows:

| Letter | Part no. | Weight |
|---|---|---|
| X | 8366 47460 | 2150–2169 g |
| A | 8366 52104 | 2170–2189 g |
| B | 8366 52105 | 2190–2209 g |
| C | 8366 52106 | 2210–2229 g |
| D | 8366 52107 | 2230–2249 g |
| E | 8366 52108 | 2250–2269 g |
| H | 8366 52109 | 2270–2289 g |
| I | 8366 52110 | 2290–2309 g |
| J | 8366 52111 | 2310–2329 g |
| K | 8366 52112 | 2330–2349 g |
| L | 8366 52113 | 2350–2369 g |
| M | 8366 52114 | 2370–2389 g |
| N | 8366 52115 | 2390–2409 g |
| O | 8366 52116 | 2410–2429 g |
| P | 8366 52117 | 2430–2449 g |
| R | 8366 52118 | 2450–2469 g |
| S | 8366 52119 | 2470–2489 g |
| T | 8366 52120 | 2490–2509 g |
| U | 8366 52121 | 2510–2529 g |

**New connecting rod** from engine number L 11212




**Note!** Always change the screws when opened.

The connecting rods are divided into weight classes with intervals of **20 g**. The weight class (a letter) is stamped on the side face of the connecting rod. All the connecting rods in one engine should be of the same weight class, that is to say the greatest permissible weight difference is **20 g**.

The letters show the weight classes as follows:

| Letter | Part no. | Weight |
|---|---|---|
| F | 8366 66430 | 1935–1954 g |
| V | 8366 66431 | 1955–1974 g |
| X | 8366 66432 | 1975–1994 g |
| Y | 8366 66433 | 1995–2014 g |
| W | 8366 66434 | 2015–2034 g |
| Z | 8366 66435 | 2035–2054 g |
| G | 8366 66436 | 2055–2074 g |

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## Trouble shooting

If the timing deviates remarkably from given, check the following:

1. Vibrating delivery pipe, hold the pipe with hand.

2. Distance of magnetic probe from flywheel not correct, re–set the magnetic probe.

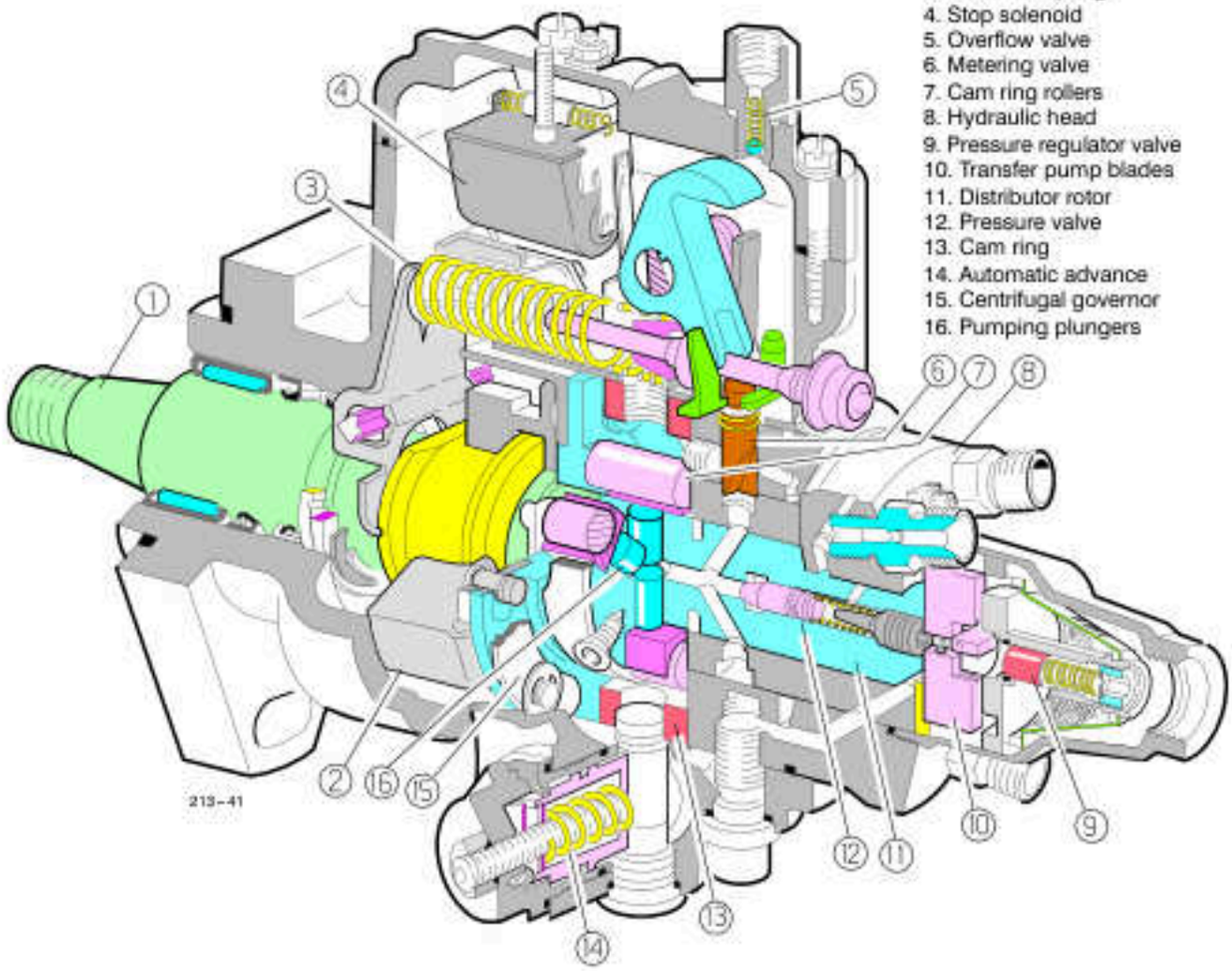
3. "Offset" or "Trig Level" value wrong, re–set.

4. Disturbing scratches on the flywheel.

5. Alignment of flywheel–crankshaft wrong, remove the flywheel and reassemble correct.

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## Stanadyne distributor pump




## Construction

The main rotating components are the drive shaft, transfer pump blades, distributor rotor and governor.

The drive shaft engages the distributor rotor in the hydraulic head. The drive end of the DB2 rotor incorporates two pumping plungers and DB4 four.

The plungers are actuated toward each other simultaneously by an internal cam ring through rollers and shoes which are carried in slots at the drive end of the rotor. The numbers of cam lobes normally equals the number of cylinders (not 3–cyl. engines).

The transfer pump at the rear of the rotor is of the positive displacement vane type and is enclosed in the end cap. The end cap also houses the fuel inlet strainer and transfer pump pressure regulator. The face of the regulator assembly is compressed against the liner and distributor rotor and forms an end seal for the transfer pump.

The injection pump is designed so that end thrust is against the face of the transfer pump pressure regulator.

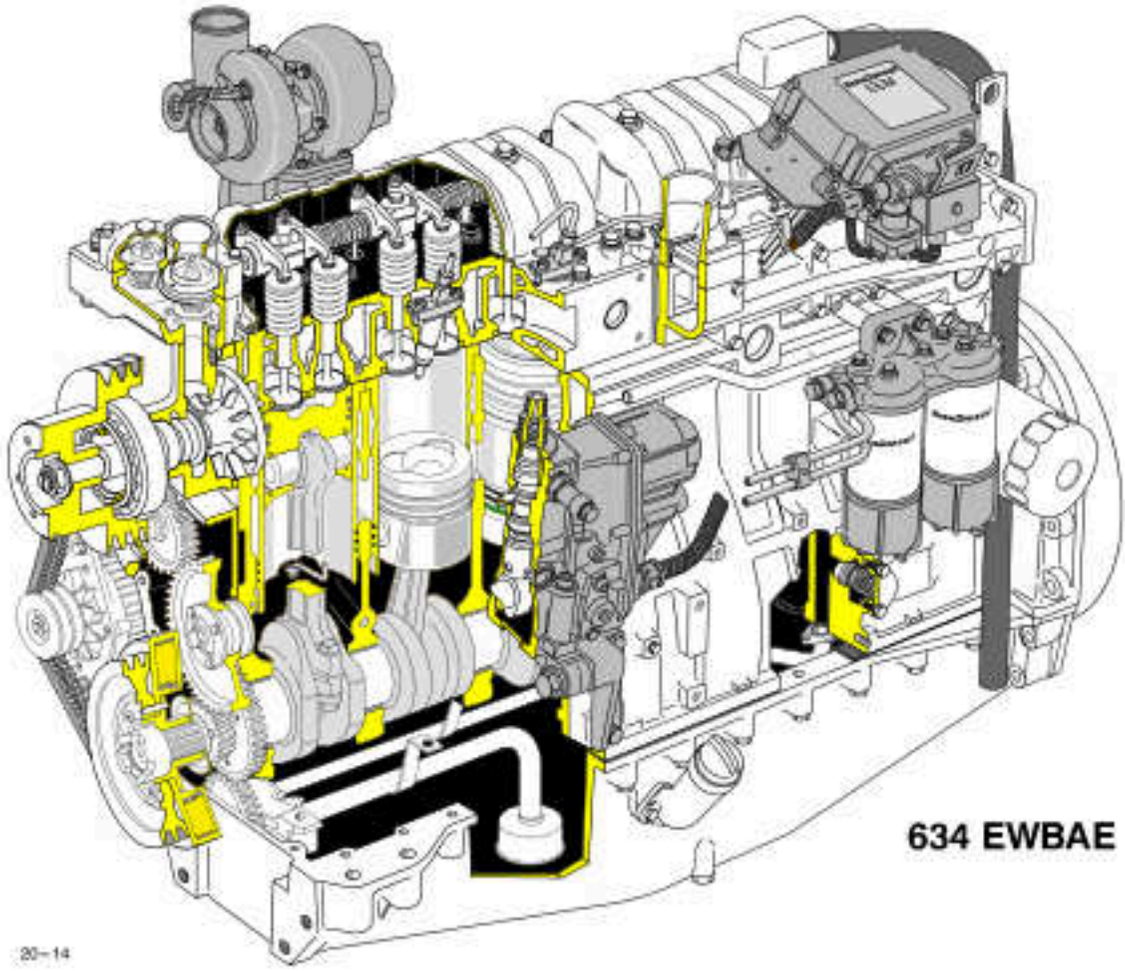
The distributor rotor incorporates two charging ports and a single axial port (pressure chamber), in which is placed the pressure valve. After the delivery valve, there is one discharge port to serve all head outlets to the fuel injection pipes.

The hydraulic head contains the bore in which the rotor revolves, the metering valve bore, the charging ports and the connections to the fuel injection pipes.

The pump contains a mechanical governor. The centrifugal force of the weights is transferred to the metering valve via a linkage. The metering valve can be closed electrically with aid of the solenoid in the pump housing.

The automatic advance is a hydraulic mechanism which turns the cam ring and advances or retards the beginning of the fuel delivery from the pump.

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## Electronic Engine Management system (EEM)

The Sisudiesel EEM system is a microprocessor based diesel engine control system to replace the traditional mechanical speed governor on the engine. This system significantly improves the properties of the engine and adds several functions and operational features that could not be realised with mechanical governors. The EEM system is applicable to all kinds of vehicles, on– or off–road.

The system consists of the following components:

– Fuel injection pump with electrical actuator system
– Electronic control unit
– Sensors for engine parameters and speed demand value
– Wiring harness

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