SERVICE MANUAL

Dozer Crawlers DC150
Includes LGP



NEW HOLLAND
CONSTRUCTION

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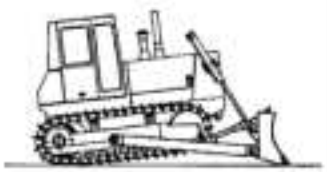
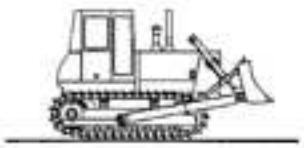
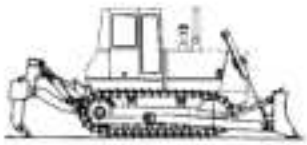
TIMES OF EQUIPMENT MANOEUVRES

		TIME (sec.)
	BLADE RAISING (PAT version)	
	1 From ground level to maximum height	2.7
2	From max. depth to maximum height	4.1
	BLADE LOWERING (PAT version)	
3	From maximum height to ground level in power down	2.5
4	From maximum height to maximum depth in power down	4
5	From maximum height to ground level in float	2.6
6	From maximum height to maximum depth in float	4.1
7	Delay for lifting of machine with blade	0
	TILT (PAT version)	
8	R.h. of blade from minimum to maximum height	2.2
9	R.h. of blade from maximum to minimum height	2.1
	ANGLE (PAT version)	
10	Blade r.h. side from reverse position to forward position	3.4
11	Blade r.h. side from forward position to reverse position	3.4
	RAISING OF RIPPER	
12	From ground level to maximum height	1.5
13	From max. depth to maximum height	2.5
	LOWERING OF RIPPER	
14	From maximum height to ground level	0.94
15	From maximum height to maximum depth	1.7
16	Delay for lifting of machine with ripper	0

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LEAKAGES

NOTE: PRIOR TO EACH TEST IT IS NECESSARY TO BRING THE HYDRAULIC OIL TO 60 TO 65° C BY PERFORMING SEVERAL HYDRAULIC STALLS (MAXIMUM DURATION OF EACH STALL 5 sec.s) INTER SPACED BY MOVEMENTS OF THE EQUIPMENT.

N.	TEST	Machine configuration	LIMIT
1	Raise the front side of the machine to max operating the blade lowering. Evaluate the movement of the blade cylinder rod, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤ 60 mm 2.36 in
2	Raise the blade to maximum height. Evaluate the movement of the blade cylinder, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤ 40 mm 1.57 in
3	With blade on the ground, actuate the right tilt control to stroke end. Evaluate the movement of the tilt cylinder rod, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤ 15 mm 0.59 in
4	With blade on the ground, actuate the left tilt control to stroke end. Evaluate the movement of the tilt cylinder rod, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤ 15 mm 0.59 in
5	Raise the rear side of the machine to maximum actuating the ripper lowering. Evaluate the movement of the ripper cylinder rod, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤15 mm 0.59 in
6	Raise the ripper to maximum height. Evaluate the movement of the ripper cylinder rod, keeping the machine under the conditions described above, with engine inoperative, for 15 minutes.		≤15 mm 0.59 in

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TABLES OF TECHNICAL DATA

HYDRAULIC RESERVOIR	Type		Boxed, separated from fuel reservoir, capacity 62 litres (16.38 US gal).
EQUIPMENT HYDRAULIC SYSTEM	HYDRAULIC RESERVOIR FILTRES	Suction	Immersed into the reservoir, steel mesh with 250 micron filtering capacity, with by-pass. (pressure setting at 0.2 bar/2.84 psi).
		Return	Immersed into the reservoir, micro fibre type and 10 micron filtering capacity with by-pass (pressure setting at 2.5 bar/35.5 psi).
	BLADE LIFTING CYLINDER	Type	Double stroke, with stroke-end valves and quick drop valves on the head of the cylinders.
		Diameter of cylinder	80 mm (3.14 in) 90 mm (3.54 in) (PAT version)
		Diameter of rod	40 mm (1.57 in) 50 mm (1.96 in) (PAT version)
		Stroke	1185 mm (46.65 in) 826 mm (32.51 in) (PAT version)
EQUIPMENT (BULLDOZER) (HS-HSU versions)	Type		Multiple boxed section with reversible lower sectors and lower cutting edge reinforced by ribs.
	Blade support		Two pusher type hinged to track frame by ball joints. Equistatic device to spread uniformly the load on the pushing arms.
	DIMENSIONS	Blade width	3180 mm (125.19 in)
		Blade height	1100 mm (43.30 in) 1320 mm (51.96 in) (HSU version)
	BLADE TILT HYDRAULIC CYLINDER (BULLDOZER)	Type	Double stroke
		Diameter of cylinder	125 mm (4.92 in)
		Piston stroke	146 mm (5.74 in) 135 mm (5.31 in) (with PAT blade)
		Outer diam. of rod	63 mm (2.48 in)

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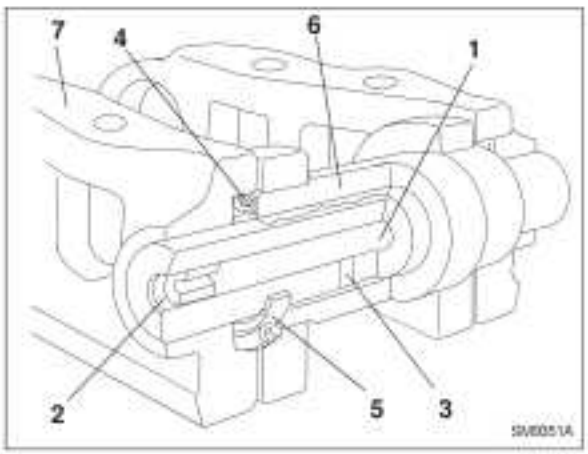
Pins and bushings are the components of the track chain most subject to wear. The symptoms characterizing the wear of pins and bushings are wear of the sides of the links, fast wear of the sprocket teeth and excessive sagging of the track chains.

Shoes are single ribbed. The ribbing, besides providing traction, contribute to reinforcing the shoe. Worn shoes, besides facilitating the slipping of the track chains, are more easily deformed.

The track chain is permanently lubricated and the wear between pin and bushing is greatly reduced. In fact, each pin (**1**) see Fig. 2, has an axial hole (**2**) and two radial holes (**3**) perpendicular to the first one, providing a constant and continuos lubrication. The movement between pin and bushing, ensures the distribution of lubricant over all the contact surfaces.

Fig. 2 - Permanent lubrication (SALT) track chains

1. Pin with lube oil reserve drilling
2. Rubber plug
3. Radial lube drillings
4. Seal
5. Thrust ring
6. Bushing
7. Link
8. Pin



Seals (**4**) provide the sealing, avoiding the entry of foreign materials and keeping the lubricant. Rubber plug (**2**) allows the filling with oil and provides sealing.

NOTE: On lubricated track chain, it is recommended to turn pins and bushings, as well.

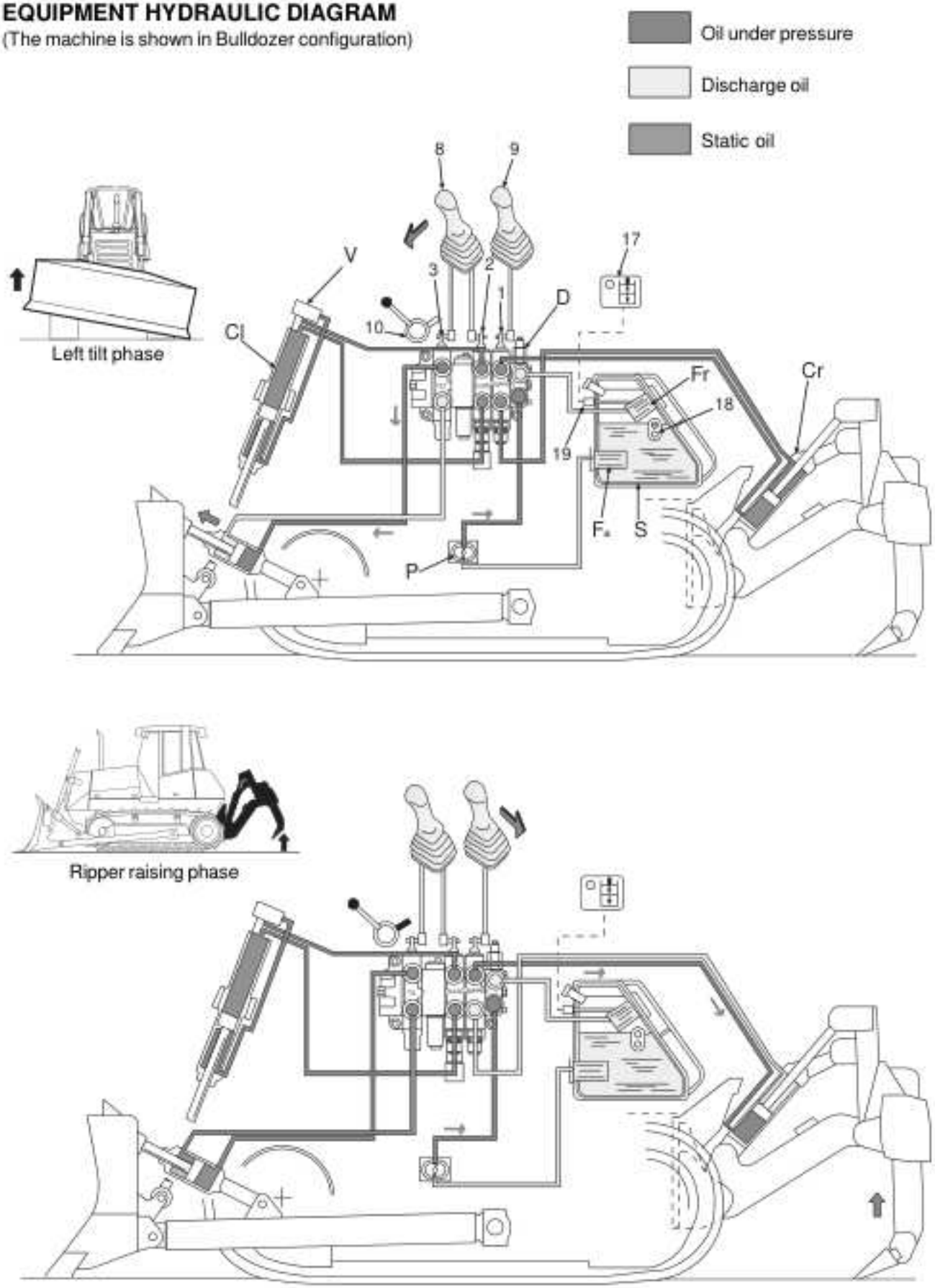
7. Toothed segment idler

The idler transfers, directly, to the track chain the rotation received from the final drive. The sprocket is mounted on the final drive output shaft. There are nine toothed segment bolted to the hub, thus they are individually replaceable. The profile of the teeth is of a self-cleaning type. The toothed segments can be replaced without removing the chains.

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EQUIPMENT HYDRAULIC DIAGRAM

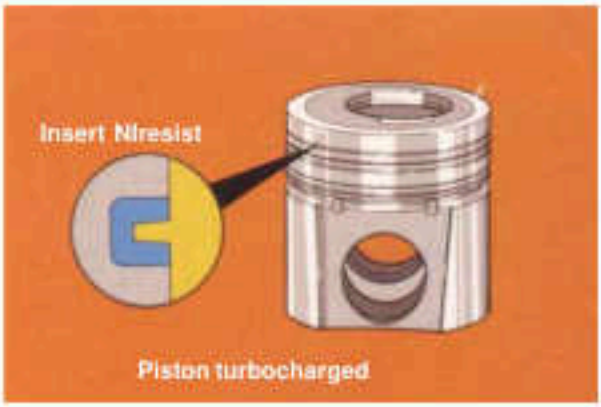
(The machine is shown in Bulldozer configuration)



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Turbocharged engines use pistons with three ring seats. a single high nickel content insert with a Keystone profile ensures optimized anti-wear features to the upper ring seat. The most powerful turbocharged engines use an anodized lining on the piston face and on the head to increase life.

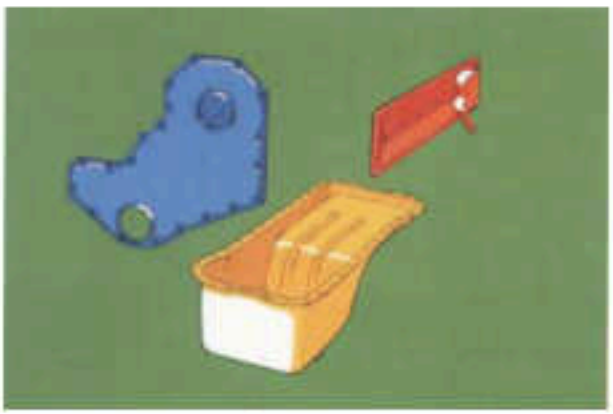
Always check the spare part numbers or be sure about the right configuration of the piston to be used as a replacement.



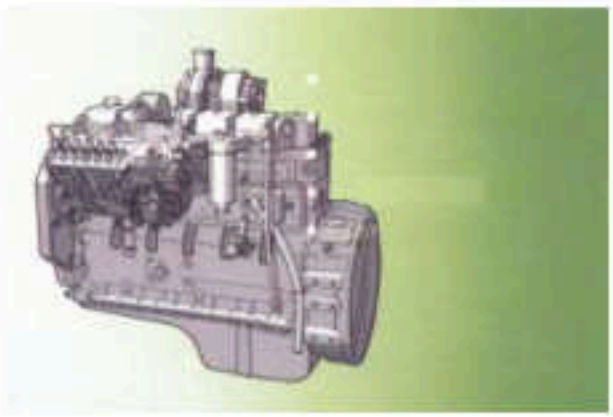
The crankshaft is an integral steel forged balanced component. Crossed inner drillings provide lubrication to the connecting rod bearings. The main and connecting rod journals are significantly larger than competitive engine crankshafts.



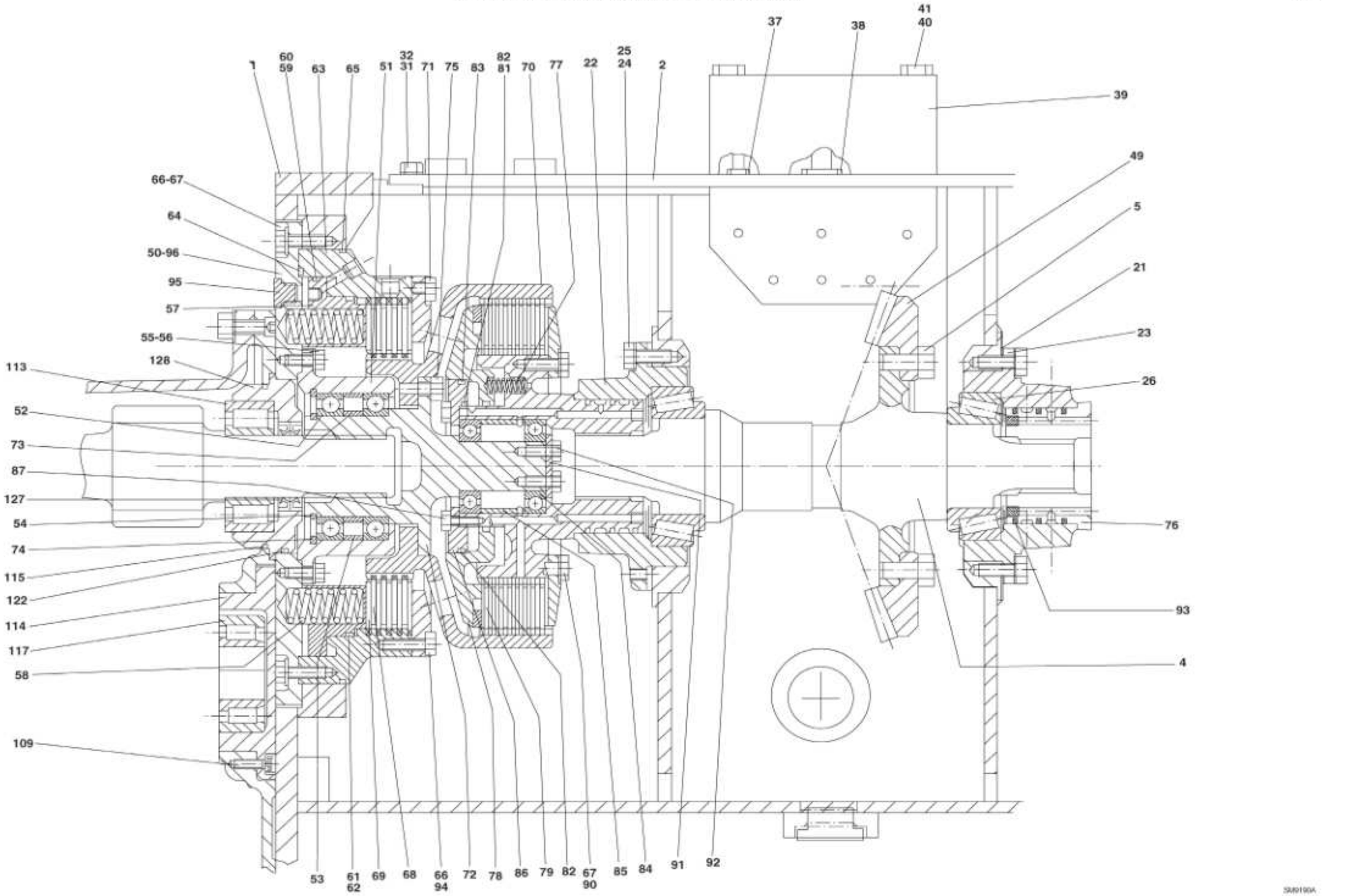
Another technical feature is the use of pressed steel parts to reduce the engine weight. These light components include the timing gear cover, valve cover with breather group and engine sump.



The design objectives are:
- Simplicity
- Reliability
- Durability
- Reduction of components
- Better serviceability



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