	Rotor	Rotor	Gear
Pump type:	Full-flow	Full-flow	Full-flow
External filter:	55–60 lb/sq in	55–60 lb/sq in	50 lb/sq in
Oil pressure, running:	25–30 lb/sq in	25–30 lb/sq in	20 lb/sq in
idling:	2·562 in	2·562 in	2·687 in
Relief valve spring, free length:	13	13	13
number of coils:	0·484 +0·000 in	0·484 +0·000 in	0·484 +0·000 in
diameter:	—0·015 in	—0·015 in	—0·015 in

Oil filter: The full-flow oil filter is situated at the right-hand side of the engine. The element is replaceable.

Specifications:
External filter: full-flow.
Element: Tecalemit or Purolator.

Oil pressure relief valve: The non-adjustable oil pressure relief valve is situated under the oil filter.

Oil pump: On early engines the oil pump is of the Hobourn Eaton type.

Later engines are equipped with a gear-type pump.

Specifications, gear-type pump:

Radial clearance between gears and body:	0·00125–0·0025 in
End-float between gears and end-cover:	0·0005–0·002 in

Ignition system: Ignition by means of coil and battery.

Firing order: 1–5–3–6–2–4.

Ignition timing: The contact breaker points should just start to open when the notch in the crankshaft pulley is in line with the centre pointer on the timing cover and No. 1 piston is at T.D.C. at the end of the compression stroke. This will be 5° B.T.D.C. (on BN4 and BN6 engines 6°).

To time the distributor proceed as follows:

Remove the rocker cover. Rotate the engine with the starting handle until No. 1 piston is at the top of its compression stroke (the exhaust valve of No. 6 cylinder is just closing and the inlet opening). Line up the notch in the crankshaft pulley with the pointer. Set the micro-adjuster on the distributor to its central position. Rotate the crankshaft backwards and then forwards again until the marks are in line. Remove the distributor cover, slacken the distributor clamping bolt and turn the distributor so that the rotor arm is pointing to the position of No. 1 electrode in the cover and the points are just opening. Tighten the clamping bolt. Replace the distributor cover.

Finer adjustment can be made under road conditions by turning the micro-adjuster.

Specifications:	*BN4*	*BN6*	*BN7/BT7*
Distributor type:	Lucas DM 6 A	Lucas DM 6	Lucas DM 6 A
Direction of rotation:	anti-clockwise	anti-clockwise	anti-clockwise
Contact breaker gap:	0·014–0·016 in	0·014–0·016 in	0·014–0·016 in
Static setting:	6° B.T.D.C.	6° B.T.D.C.	5° B.T.D.C.
Maximum advance:	35° B.T.D.C.	36° B.T.D.C.	35° B.T.D.C.

Spark plugs:
Champion: N5 – 14 mm, Long reach (BN4)
N3 – 14 mm, Long reach (BN6 – BN7/BT7)
Spark plug gap: 0·024 in–0·026 in.

Ignition coil: Lucas HA 12.

Fuel system: The 12-gallon (14·4 US gallons) fuel tank is situated in the rear of the car. The fuel is fed to the carburettors by means of an electrical fuel pump.

Fuel pump: On early models (BN4, up to engine No. 60412) an S.U. type HP electrical fuel pump is fitted; later models are fitted with a type LCS pump.

The action of the electric fuel pump is as follows:

When the pump is at rest, the outer rocker lies in the outer position and the contact points are closed. When the ignition switch is turned on, current passes from the terminal through the magnet coil, through the closed contact points to earth; thus the magnet coil is energised and attracts the armature.

Movement of the armature causes the diaphragm to suck in fuel through the inlet valve into the pump housing. When the armature has advanced nearly to the end of its stroke the trip lever mechanism (the inner rocker) operates and the outer rocker snaps back, thus separating the contact points and breaking the circuit. The volute spring then pushes the armature and diaphragm back, forcing the fuel through the outlet valve at a rate determined by the requirements of the engine. As soon as the armature gets near the end of the stroke, the trip mechanism again operates, the contacts are closed and the cycle recommences.

When a new pump diaphragm is fitted, it should be stretched to its correct position before tightening the screws which hold the magnet coil housing to the pump body; this is done in either of two following ways:

(*a*) Stretch the diaphragm by inserting the special SU forked tool under the rocker mechanism and then tighten the pump-housing screws.

(*b*) Insert a matchstick behind one of the white fibre rollers on the outer rocker, thus holding the contacts closed, then pass a current through the pump. This will energise the magnet coil which will pull the armature and diaphragm forward. In this position the six pump-housing screws should be tightened. With the rocker in the 'rest' position (the white fibre rollers will be resting on the magnet coil housing) the contact spring blade must rest on the ledge of the bakelite mounting plate. There should now be a clearance of approximately 0·030 in between the contact points. When fitting the contact spring blade, make sure it is properly lined-up with the contact on the rocker mechanism; the contact points must touch each other in the centre and not on the outer edges. During operation of the pump the contact points move against each other with a wiping action, thus keeping the points clean. A petrol pump in good condition should be able to deliver at least one pint per minute. (Disconnect fuel pipe from carburettor float chamber and hang it in a suitable container, then turn on ignition switch and measure the amount of fuel running out of the pipe in one minute.)

Carburettors: Twin or triple SU semi-downdraught carburettors. For description of construction, operating principles, and adjustment procedure see special section on SU carburettors.

Specifications:

Model	*Series*	*Year*	*Carburettor No. & Type*	*Throttle diameter*	*Needle Rich*	*Needle Stand'd*	*Needle Weak*	*Spring colour*
100-Six	BN4	1956–57	Twin H4	1½ in	4	AJ	M1	Red
100-Six (6-port head)	BN4	1957–59	Twin HD6	1¾ in	RD	CV	SQ	Yellow