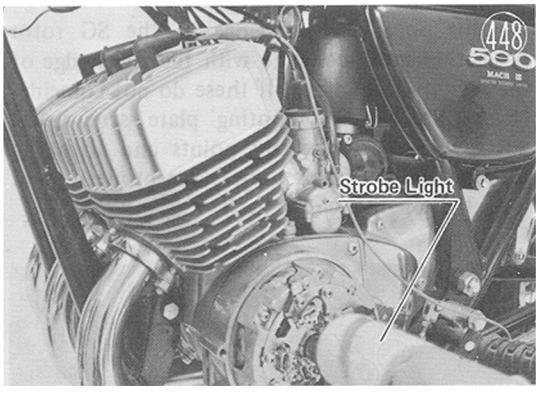
- Set up a strobe light, connecting the two leads to the battery and the single lead to the left spark plug.
- Open the fuel tap and turn the ignition to the ON position.
- Kick start the engine and set it to 4,000 rpm.
- Check that under the strobe light the pointer is pointing to mark (A).



NOTE: The (A) & (B) marks refer to the letters in the illustration and do not appear on the vehicle itself.

2) Lubrication System (H2-B)

The lubrication system used is the Kawasaki Injectlube. In this system, oil is kept in a separate tank, from which it is pumped to the engine by the oil pump and mixed with the gasoline. The rate at which the oil is pumped, which varies with the needs of the engine, is controlled by engine rotational speed and throttle opening. With the idle lubrication that results, engine performance is vastly improved, and the fresh, high viscosity oil supplied directly to the crankshaft bearings and connecting rod big ends increases engine durability.

(1) Oil passage

Fig. 450 is a diagram of the H2 Injectlube oil passages. The oil input to the pump is supllied by a hose from the engine oil tank, and the oil output of the pump goes to the carburetor and the cylinder. There are three outlet passages for oil injection via check valve into each carburetor froat chamber to mix the oil with the fuel. The oil from the last outlet is divided among three passages, each passage leading to a check valve installed at the rear side of a cylinder from where the oil goes to lubricate the connecting rod big end via the crankshaft bearings, oil holder and crank pin, in that order. A notch cut into the big end of the connecting rod enables the fuel/oil mixture to reach the crank pin and crankshafts bearings.

In order to lubricate the main bearing at the right end, there is a small hole in the scavenge passage in the right side of the crankcase, and this goes through to the right main bearing.

On the scavenge stroke a small portion of the fuel-oil (plus air) mixture being drawn in through the scavenge port, goes through this hole to the main bearing for lubrication. In addition, after the engine is stopped the gasoline volatizes from the fuel-oil mixture still adhering to the scavenge port wall, and the oil that remains runs down the scavenge port wall and into the hole to the bearing.

Of the vaporized fuel mixture that is drawn into the crank chamber, the small portion of it that is not well mixed with air and vaporized (that is, some of the oil) clings to the crankcase walls, crank web, and so on, and from there runs down to collect in the bottom of the crankcase as a liquid pool. Left like this, when engine rpm is raised the oil would be thrown around and find its way into the combustion chamber, where the gas mixture now made excessively rich in oil would cause such problems as white smoke in the exhaust.

To solve this problem before it occurs, a check valve is provided in the bottom of the crank chamber. The check valve not only lets oil be discharged, but it sends it back to the main bearings on the crankshaft. In other words, when the crank web rotates, the fuel-oil adhering to it is flung outward and hits the collected in the bottom of the crankcase. This pushes the oil down there through the check valve and through passages to lubricate the main bearings, and the connecting rod big-end needle bearings.

(2) Oil Pump

The oil pump is a plunger type pump driven by the oil pump gear mounted on the crankshaft, and it is used to supply oil to lubricate the engine. The amount of oil pumped varies both with the engine rotational speed and with the length of the plunger stroke, controlled by a cam inside the pump. The pump lever is ocnnected by a control cable to the throttle grip so that, as the grip is twisted, the pump lever moves, turning the camshaft and thereby increasing the oil flow.

Fig. 449 shows that when the cam is turned from the maximum flow to the minimum flow position, the plunger tip will strike the cam with less travel, thereby pumping less oil. Since there are two high points on the plunger cam face, there are two complate pumping cycle for each revolution of the pulnger.

Stroke Length Control (449)