

FEATURES OF XS650

FOUR-CYCLE O.H.C. ENGINE

The Yamaha XS2 is equipped with Yamaha's first four-stroke, parallel twin cylinder, O.H.C. engine. This new engine has been developed fully utilizing Yamaha's experience in the manufacture of the four-stroke engines adopted for the Toyota 2000GT and the Toyota 7.

The high-performance engine is mounted on a double-cradle type steel tube frame which features light weight and high rigidity. With a combination of high horsepower and well-balanced transmission, the XS2 exhibits outstanding acceleration which is essential to a large displacement, high-performance sportster.

1) PERFORMANCE

In order to increase the intake efficiency of the air-fuel mixture, the combustion chamber is hemispherical. In addition to over-sized valves, the SU type carburetor is employed. Consequently, engine performance is steady throughout the speed range from idling speed to high speed.

2) VALVE AND CAMSHAFT MECHANISM

The valve mechanism employs the O.H.C. system which is most suitable for a high speed, high output engine. A single row endless chain is used as the cam drive. A chain guide and chain tensioner are employed to minimize the vibration and noise of the cam chain. The control of vibrations stabilizes the valve action at high speed. In addition, double springs are used for the valves in order to prevent surging of the valves at high rpm's.

3) SU TYPE CARBURETOR WITH BUILT-IN STARTER

The XS2 is equipped with SU type twin carburetors. This carburetor is equipped with a variable venturi. That is, the section area of the venturi automatically changes according to fluctuations of the negative pressure in the intake manifold. This type carburetor is capable of supplying fuel at the correct ratio according to the air flow throughout the speed range, thus assuring excellent acceleration. The built-in starter is most effective in starting the

engine in cold weather.

4) LUBRICATION SYSTEM WITH TROCHOID PUMP

The oil pump is the trochoid type, driven by means of a crankshaft gear. A pressure-feed lubrication system is employed. The oil filter, made of long-lasting wire netting, is of a double-filtrating type, and thereby the wear of the engine will be effectively minimized.

5) WELL-BALANCED 5-SPEED TRANSMISSION

Coupled with the well-balanced 5-speed transmission, the XS2 engine assures steady engine performance under any road conditions such as city streets, hills, high-speed highways, etc.

6) WELL-PROPORTIONED FRAME AND LIGHT WEIGHT

The XS2 uses a double-cradle frame which is best suited to its high output, large displacement engine and thus features superiority in maneuverability, stability, and durability. The over-all weight is lighter than other makes in the same class; that is, weight per horsepower is the most effective.

7) ADOPTION OF DISC BRAKE

The large size disc brake has been adopted to ensure efficiency in steady braking both at low and high speeds and in rainy weather.

8) THREE-WAY ADJUSTABLE REAR SUSPENSION

The XS2 uses a three-way adjustable rear suspension. The spring tension can be adjusted according to the rider's option and road conditions. The cushion stroke is 70 mm (2.75"). An oil lock system is employed as a shock-absorber and to prevent bottoming.

9) AIR CLEANER

A larger air cleaner is used compared with that for other motorcycles in the same class. The paper filter element has an oversize filtering area for improved air intake efficiency. Coupled with the SU type carburetor the superior acceleration and economy are ensured.

10) BRIGHT HEAD LAMP

The head lamp is 170 mm (6.7") in diameter with a 12V 50/40W bulb. Additional safety is guaranteed at night. The head lamp unit is of a special sealed beam type in which the bulb is rubber mounted.

11) DOUBLE-EDGED KEY

The double-edged main switch key is designed to allow the rider to insert the key more readily.

12) INSTALLATION OF ELECTRIC STARTER

The XS2 is equipped with electric switch built – in decompression.

