SUZUKI

GSX1100, GS1150

SERVICE MANUAL

THIS MANUAL COVERS THREE MODELS OF THE GSX1100 SERIES:
GSX1100E, GSX1100ES AND GSX1100EF.

IN CANADA THIS MOTORCYCLE SHOULD BE IDENTIFIED AS
GS1150E AND GS1150EF.

99500-39032-01E
(英)

FOREWORD

The SUZUKI GSX1100E has been developed as a new generation motorcycle to the GS-series models. It is packed with highly advanced design concepts including a fully adjustable suspension system, a full-transistorized ignition system and a new highly efficient combustion system (TSCC).
Combined light weight chassis with high performance engine, the GSX1100E provides excellent riding stability and riding comfort.

This service manual has been produced primarily for experienced mechanics whose job is to inspect, adjust, repair and service SUZUKI motorcycles. Apprentice mechanics and do-it-yourself mechanics, will also find this manual an extremely useful guide.

Model GSX1100E manufactured to standard specifications is the main subject matter of this Manual. However, the GSX1100E machines distributed in your country might differ in minor respects from the standard-specification and, if they do, it is because some minor modifications (which are of no consequence in most cases as far as servicing is concerned) had to be made to comply with the statutory requirements of your country.

This manual contains up-to-date information at the time of its issue. Latermade modifications and changes will be explained to each SUZUKI distributor in respective markets, to whom you are kindly requested to make query about updated information, if any.

SUZUKI MOTOR CORPORATION

Motorcycle Technical Service Department

VIEW OF SUZUKI GSX1100E

LEFT SIDE

RIGHT SIDE

GROUP INDEX

GENERAL INFORMATION

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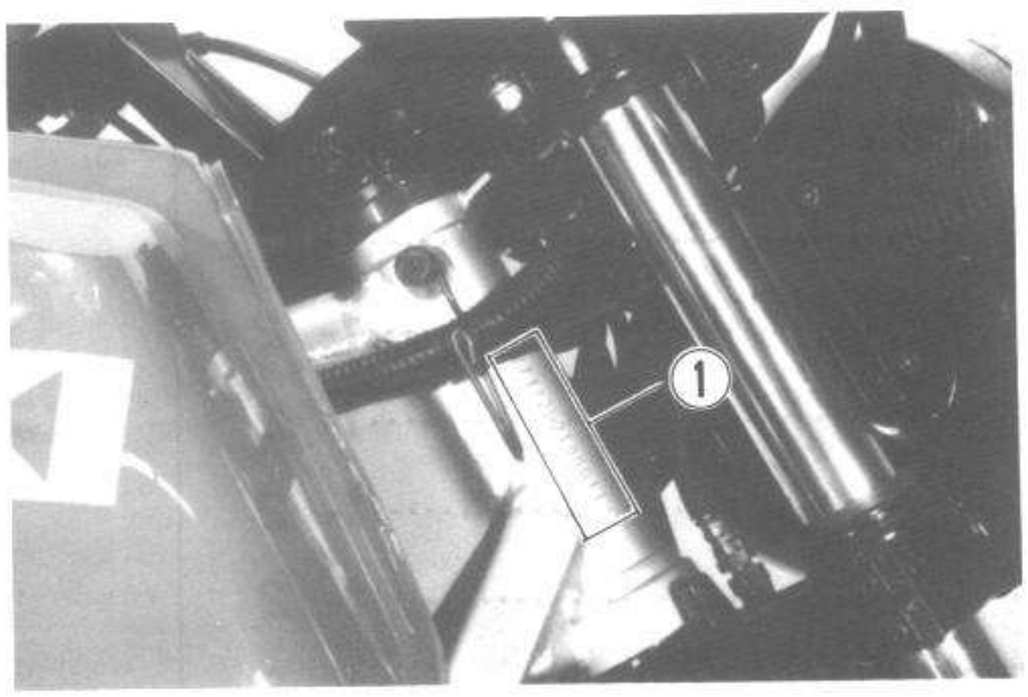
SERIAL NUMBER LOCATIONS

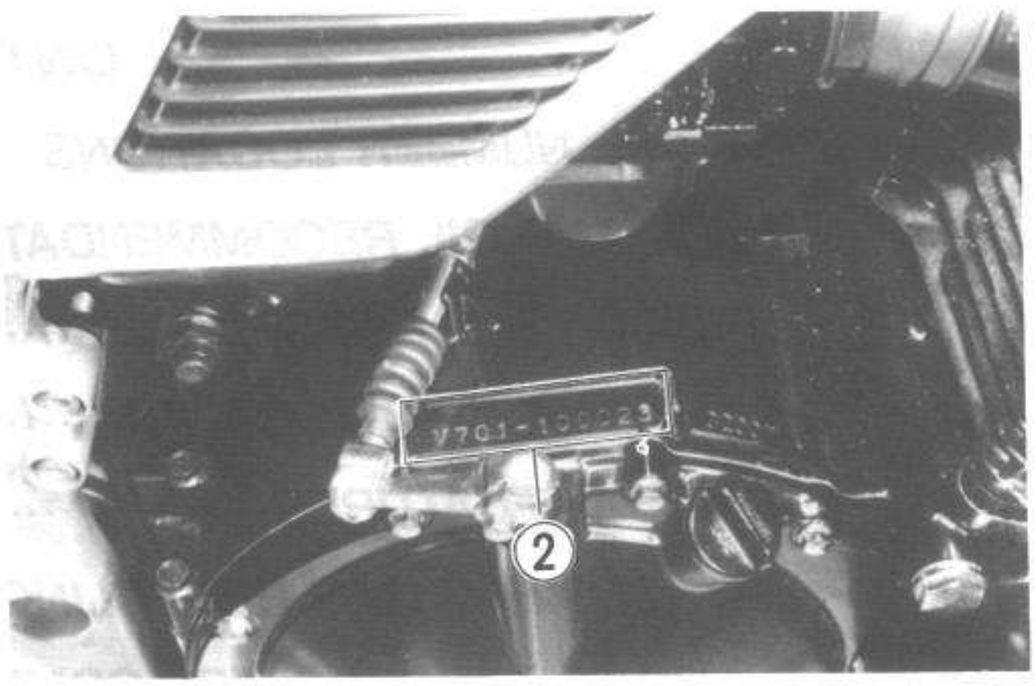
VIN NUMBER

The VIN (Vehicle Identification Number) ① is stamped on the steering head pipe.



ENGINE NUMBER

The engine serial number ② is located on the right side of the crankcase.



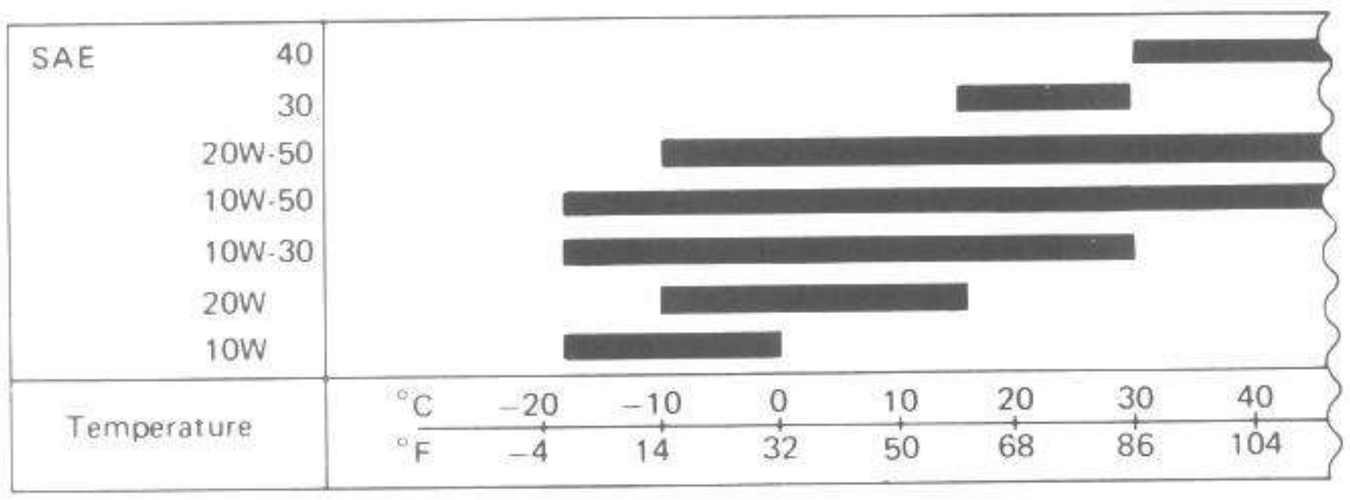
FUEL AND OIL RECOMMENDATIONS

FUEL

Gasoline used should be graded 85–95 octane or higher. An unleaded or low-lead gasoline type is recommended.

ENGINE OIL

Be sure that the engine oil you use comes under API classification of SE or SF and that its viscosity rating is SAE 10W/40. If SAE 10W/40 motor oil is not available, select the oil viscosity according to the following chart:



BRAKE FLUID

Specification and classification	SAE J1703, DOT3, DOT4

99000-23021	SUZUKI Brake fluid

NOTE:

* Since the brake system of this motorcycle is filled with a glycol-based brake fluid by the manufacture, do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will result.
* Do not use any brake fluid taken from old or used or unsealed containers.
* Never re-use brake fluid left over from the previous servicing and stored for a long period.

FRONT FORK OIL

Use fork oil #15

99000-99044-15G	SUZUKI fork oil #15

BREAKING-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows:

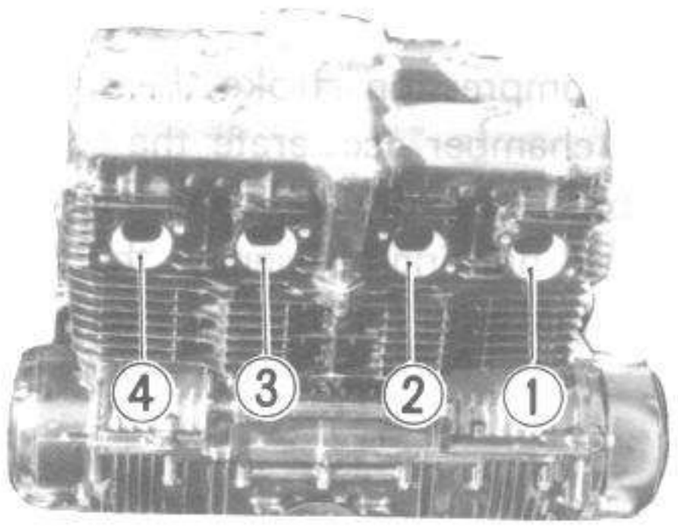
- Keep to these breaking-in engine speed limits:

Initial 800 km (500 miles)	Below 4 000 r/min
Up to 1 600 km (1 000 miles)	Below 6 000 r/min
Over 1 600 km (1 000 miles)	Below 9 000 r/min

- Upon reaching an odometer reading of 1 600 km (1 000 miles), you can subject the motorcycle to full throttle operation.
  However, do not exceed 9 000 r/min at any time.
- Do not maintain a constant engine speed for an extended time period during any portion of the break-in. Try to vary throttle position.

CYLINDER IDENTIFICATION

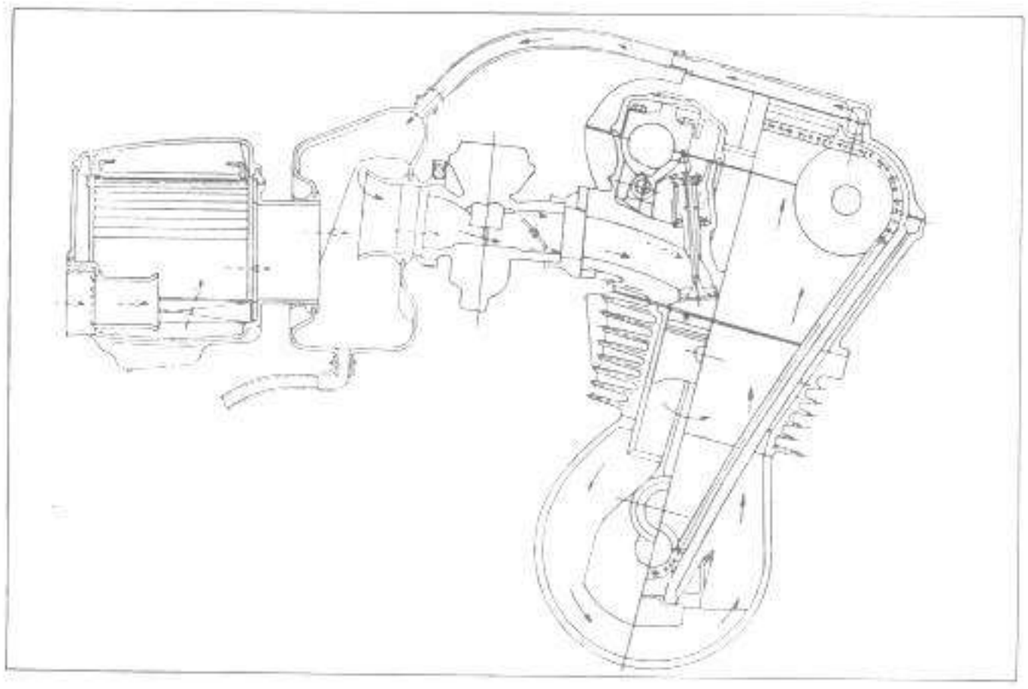
The four cylinders of this engine are identified as No. 1, No. 2, No. 3 and No. 4 cylinder, as counted from left to right (as viewed by the rider on the seat).



SPECIAL FEATURES

BLOWBY GAS RECYCLING

Blowby gases in the crankcase are constantly drawn into the chain chamber provided in the middle section of the cylinder block. The top section of this chamber is connected with the air chamber assembly through a rubber tube. In the air chamber, the gases merge with incoming air and thus are recycled to the engine through the normal intake system.



TSCC (TWIN SWIRL COMBUSTION CHAMBER)

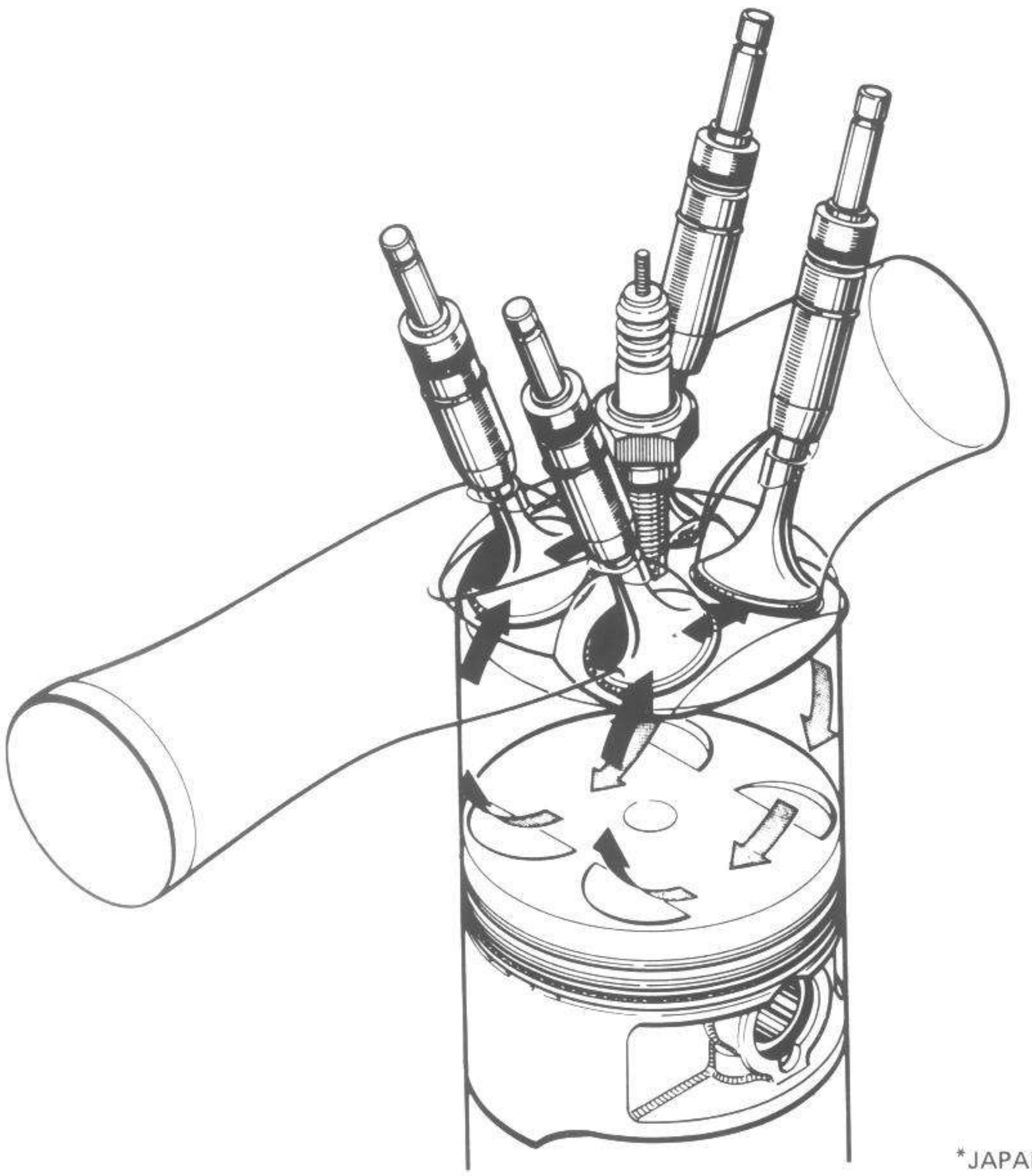
SUZUKI has introduced a new breed of 4-valves-per-cylinder high-performance 4-stroke engines — the TSCC series. TSCC describes the heart of the engine, the Twin Swirl Combustion Chamber.

What the TSCC engine series does better than conventional 4-stroke engines, either 2-valve or 4-valve, is to improve on the two major factors which affect engine performance, charge burning efficiency and intake charging efficiency.

First, charge burning efficiency. The TSCC* system consists of a subtle, yet unique shape machined into the head. Each of the two intake valves is set into adjoining semi-hemispherical depressions in the head. During the intake stroke these depressions channel the incoming fuel/air mixture to form two separate high-speed swirls.

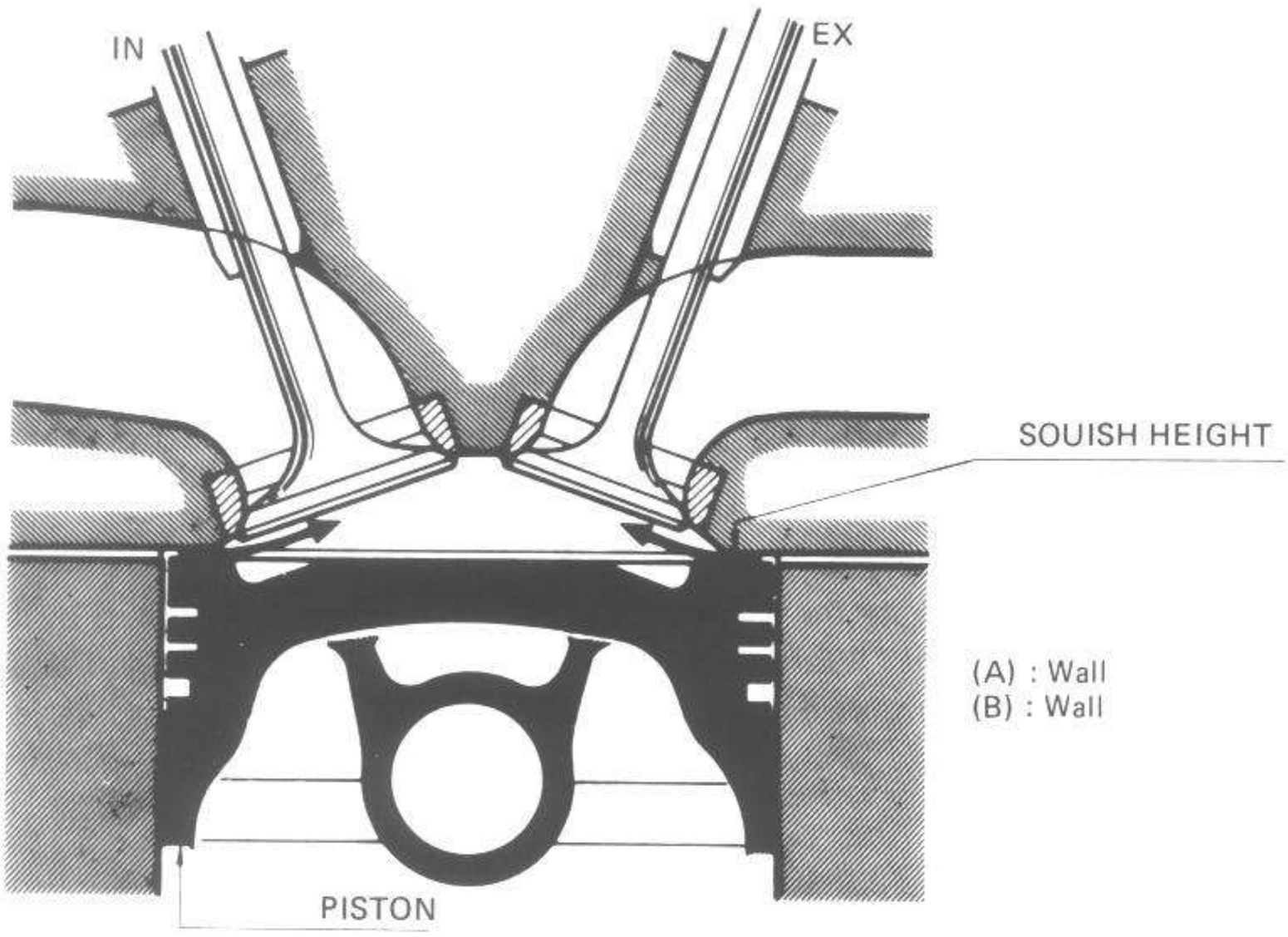
During the compression stroke the squish areas machined in the front and the rear of the cylinder head's combustion chamber accelerate the speed of the swirls. Thus, when the spark plug ignites the mixture, the flame spreads rapidly and completes the combustion more quickly.

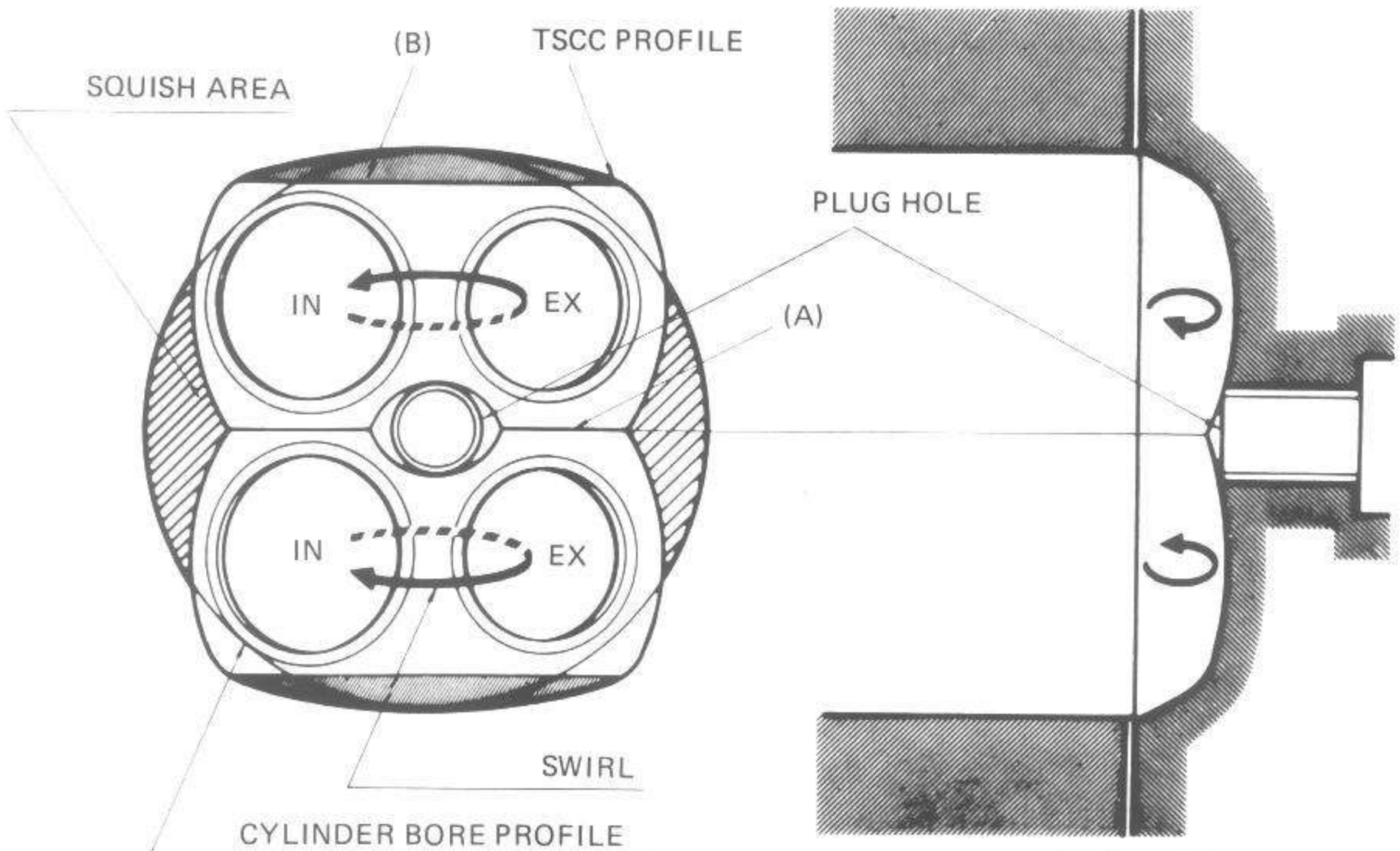
To further aid burning efficiency, the spark plug is centrally located, the ideal location. This results in the shortest possible path for the flame to travel.



*JAPAN PATENT NO. 771502

The quick completion of burning results in more energy being developed while the piston is in position to transmit maximum power to the crankshaft.
High burning efficiency results in more power, improved throttle response at all rpm's, more complete combustion of the air/fuel mixture (cleaner combustion) and less chance of detonation.
Second, charging efficiency. The benefits of increased burning efficiency are further multiplied if intake charging efficiency is also increased. Basically, increasing the charging efficiency results in more fuel and air being drawn into the engine during each intake stroke. Thus, greater energy potential.
To achieve this, the four valve head was adopted. Two smaller diameter intake valves can flow more than one large valve. Additionally, two smaller valves run cooler due to increased valve seat area and two valve guides to increase heat transfer.





*JAPAN PATENT NO. 771502