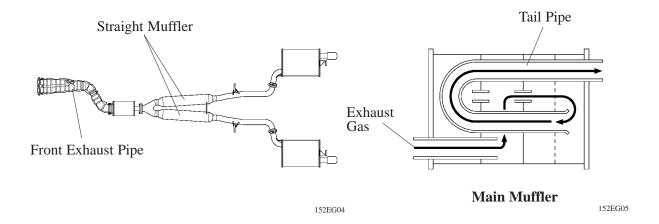
4. Exhaust Pipe

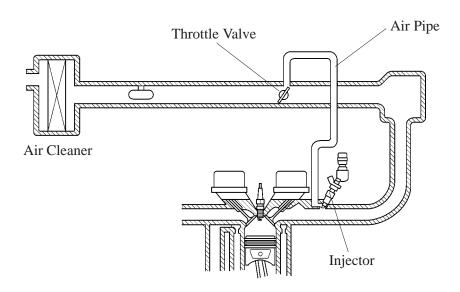
- The front exhaust pipe of the exhaust pipe has adopted a dual pipe construction to improve engine performance.
- The center exhaust pipe has adopted a larger diameter and a straight muffler to reduce the exhaust pressure and to improve engine performance.
- The main muffler has adopted a long tail pipe construction forquieter operation.



■FUEL SYSTEM

1. Air Assist Fuel Injection System

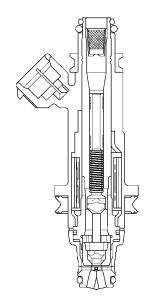
This system is designed to regulate air intake (atmospheric side) using the throttle valve, and direct it to the nozzle of the fuel injector inside the intake manifold (negative pressure side). This promotes atomization of the fuel while reducing emissions and improving fuel economy and idle stability.



2. Fuel Injector

- A compact 4-hole type fuel injector has been adopted.
- Air introduced from the throttle body, air pipe and air gallery flows through the air chamber formed by the o-ring and insulator under the fuel injector and then is mixed with the fuel.

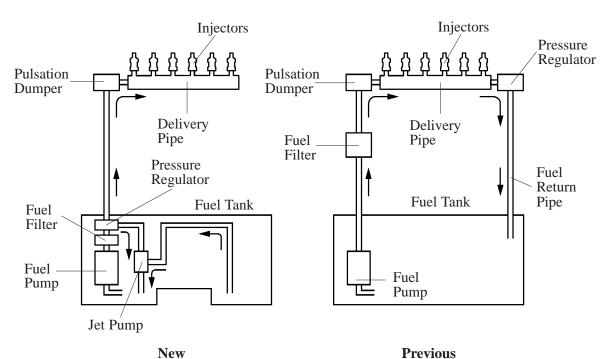
This design promotes atomization of the fuel.



150EG53

3. Fuel Returnless System

- The new GS300 has adopted a fuel returnless system to reduce evaporative emissions. With the pressure regulator housed inside the fuel tank, this system eliminates the return of fuel from the engine area. In addition, a jet pump has been adopted to use the fuel in the fuel tank effectively.
- The fuel filter is installed in the fuel tank.



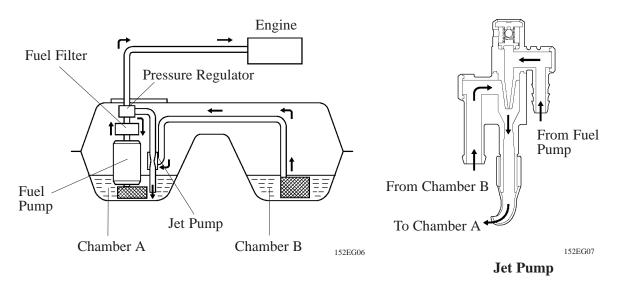
143EG06

4. Jet Pump

A jet pump is adopted in the fuel tank. Since the propeller shaft is located below its center bottom, the fuel tank of the GS300 is shaped as indicated below.

A fuel tank with such a shape tends to cause the fuel to be dispersed into both chamber A and chamber B when the fuel level is low, stopping the fuel in chamber B from being pumped out. To prevent this from occurring, a jet pump has been provided to transfer the fuel from chamber B to chamber A.

This is accomplished by utilizing the flow of the fuel, so that the vacuum created by the fuel, as it passes through the venturi is used to suck the fuel out of chamber B and send it to chamber A.



■IGNITION SYSTEM

1. General

A DIS (Direct Ignition System) has been adopted in the new 2JZ-GE engine. The DIS improves the ignition timing accuracy, reduces high-voltage loss and enhances the overall reliability of the ignition system by eliminating the distributor.

The DIS in new 2JZ-GE engine is a 2-cylinder simultaneous ignition system which ignites 2-cylinders simultaneously with one ignition coil.

