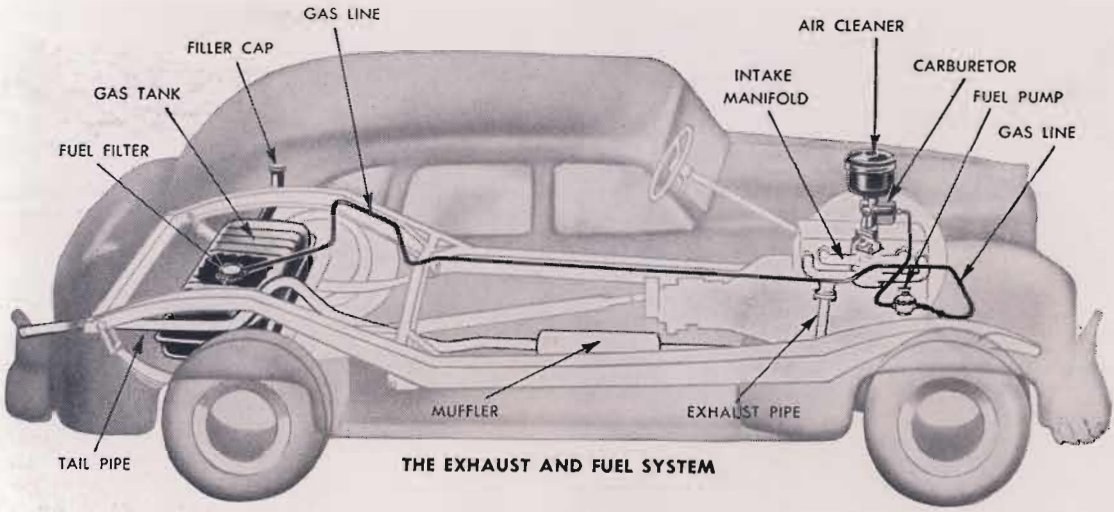

THE EXHAUST AND FUEL SYSTEM

Economy and efficiency in the operation of your car depend largely on the fuel and exhaust system. The typical passenger-car system illustrated indicates several definite and necessary services you should know

Fuel System

FREQUENTLY a thorough cleaning of the carburetor alone will make an old car run like new. Accumulations of dirt and gum probably result in more carburetor troubles than any other single cause, and periodic cleaning and adjusting of the unit will give you easier starting, snappier acceleration and greatly improved gas mileage for both summer and winter driving. Anyone can take apart, clean and reassemble a carburetor, but to avoid damaging certain of the delicate parts of the unit, you should acquire the "mechanic's touch," and handle everything as if it were made of glass.

Anything that causes the engine speed to vary when the accelerator is set is an indication of a mechanical fault. The most common fault is a rich fuel mixture. In a new car there's a good chance that the trouble is due to a clogged air cleaner. In an older car the cause may be a bit of dirt or gum in the carburetor jets, and, more rarely, the float sticking, or not properly adjusted. Perhaps a needle valve has been damaged by turning it in too tightly. Sometimes the air holes in the metering jet are clogged with gum and dirt. These are among the more common causes of a rich fuel mixture and a rough engine.

In carburetor diagnosis, one thing to keep in mind is the age of the car, both in years and miles. In older cars the float level will change gradually because of wear in the parts and, in time, looseness reaches a point where raw fuel is discharged into the air stream in ever increasing quantities.

When the engine and carburetor are in good operating condition, adjusting idling speed and fuel mixture is simple, even though some engines are more sensitive to changes in the adjustments than others. First, turn the speed screw inward to speed up the engine, or outward to slow it, until the desired idling speed is obtained. Next, the mixture screw is turned in very slowly and by stages until the engine begins to roll and lose power. Then back off the screw (counterclockwise) until the engine smooths out and idles steadily. If the

Gum and dirt clogging the air holes in metering jet are causes of rich fuel mixture and a rough engine