1955 Chevrolet

FEATURES

TRUCK ENGINEERING ACHIEVEMENTS

1955

CHEVROLET FEATURES

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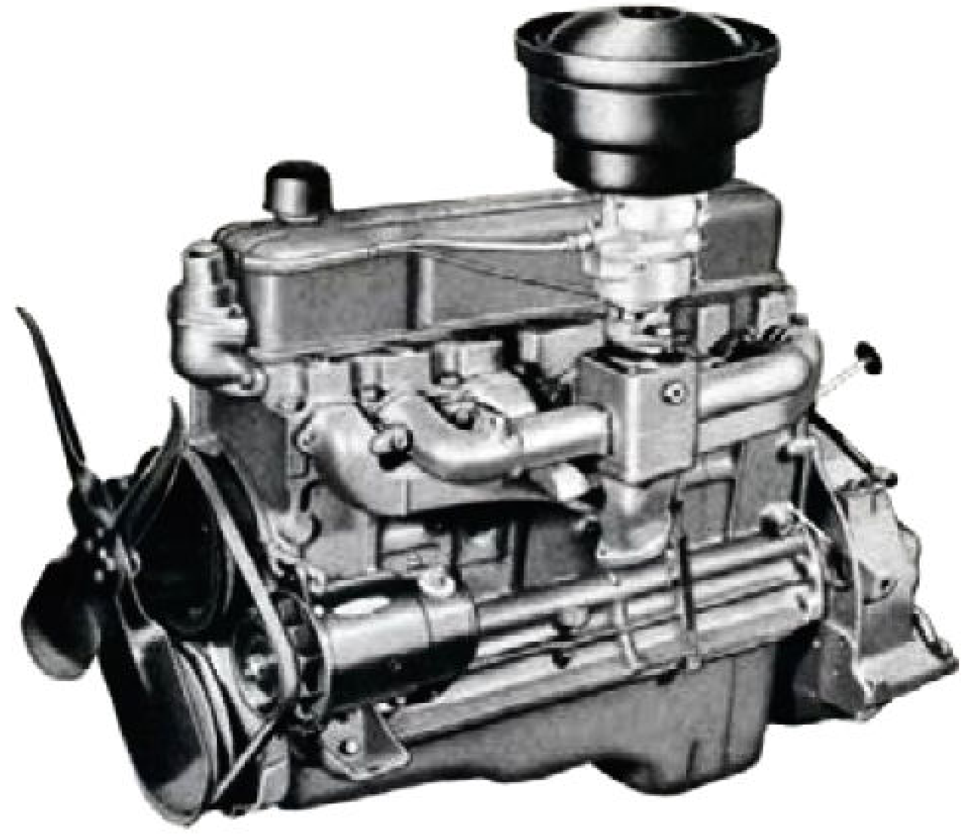
POWER TRAINS

NEW THRIFTMASTER ENGINE



NEW LOADMASTER ENGINE

ENGINES

Four powerful six cylinder engines, in addition to the new V-8, are provided in 1955. The 235 and 261 cubic inch displacement six cylinder engines are the subject of numerous improvements and have higher advertised power ratings.

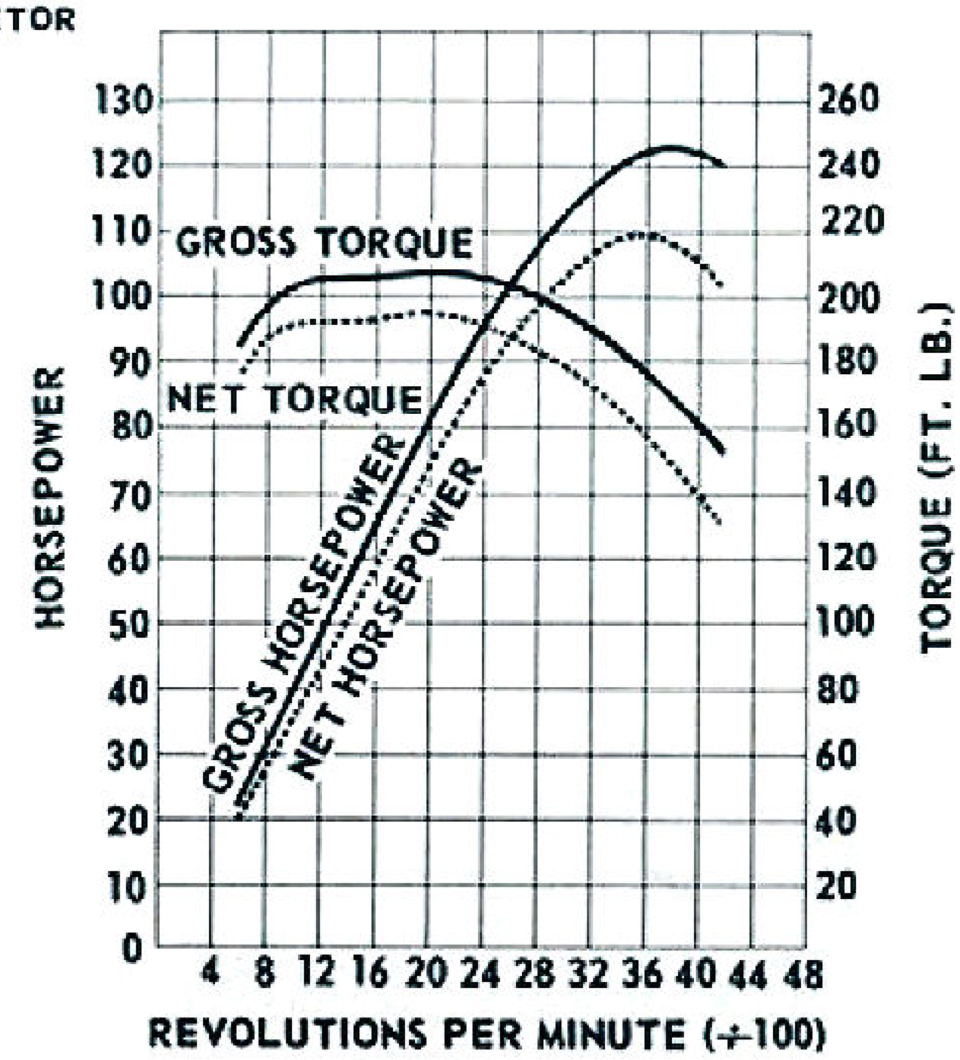
The standard 235 six cylinder engine is again furnished in the conventional 3000 and 4000 series trucks, being identified as NEW THRIFTMASTER on the rocker cover decal and finished in gray. The heavy-duty 235 six cylinder engine is painted green and carries the name NEW LOADMASTER on the decal. Again featuring valve rotators, XCR exhaust valves, and chrome-plated top compression rings for increased durability, it is continued as regular equipment in the 6000 series and is available as optional equipment in Series 4000 as in 1954. This heavy-duty 235 engine, painted gray, and with an updraft carburetor, powers the forward control models as before. The 261 cubic inch six cylinder engine, distinguished by yellow paint and the name NEW JOBMASTER on the decal, is continued as optional equipment in the 6000 series. The new 265 cubic inch V-8 engine, painted yellow and named TASKMASTER V-8, is supplied only in the 5000 series, where it is regular equipment.

The following table contains gross and net horsepower and torque ratings for each of the truck engines for 1955:

ENGINE OUTPUT RATING

SERIES	GROSS		NET	
	HP at RPM	TORQUE at RPM	HP at RPM	TORQUE at RPM
3000 and 4000 Conventional	123 at 3800	207 at 2000	109 at 3600	195 at 2000
34-35-3700 Forward Control	119 at 3600	205 at 2000	105 at 3600	188 at 2000
6000 (4000 RPO)	123 at 3800	207 at 2000	109 at 3600	195 at 2000
6000 RPO	140 at 4000	230 at 2000	123 at 3800	215 at 2000
5000	145 at 4000	238 at 2000	126 at 4000	220 at 2000

NEW THRIFTMASTER 235 ENGINE AND
NEW LOADMASTER 235 ENGINE
WITH DOWNDRAFT CARBURETOR



REGULAR PRODUCTION SIX CYLINDER ENGINES

The test method for establishing the advertised power rating has been brought into line with competition, with the result that the maximum output ratings for the engines show an increase. Under the new procedure, which liberalizes test conditions for higher gross engine performance rating, the production exhaust pipe is no longer used; intake restriction due to the air cleaner is reduced; and exhaust heat is deflected away from the engine for better volumetric efficiency. In addition, the barometric pressure correction factor, which also applies to the net rating, gives some gain.

Design changes in 1955 are manifested in quieter, more smoothly operating six cylinder engines with even greater durability.

Cooling system efficiency is improved through the use of a water pump with increased capacity, larger cooling fan, and radiators with larger frontal areas and increased core constants. A 160 degree thermostat replaces both the production 151 degree unit previously used and the 180 degree thermostat. This is made possible by the use of permanent-type anti-freeze in the assembly plants during the cold season and an increase to 7 pounds from 4 pounds in the radiator pressure cap valve, which provides improved engine operating temperatures for all seasons as well as improved heater output in cold weather. The 7 pound pressure cap allows the temperature of cooling water to reach 230°F. before boiling, compared to the boiling point of 222°F. with the 4 pound cap. To facilitate service replacement, a standard SAE 1/2-inch fan belt replaces the 3/8-inch and 11/16-inch belts formerly used.

An oil control ring consisting of two segments and one expander is used on all six cylinder truck engines, replacing the 4-piece unit. This new ring is of the same type as that for the V-8 engine.

The redesigned oil pump has a new floating-type pick-up which, because it floats just below the surface of the oil, insures only the cleanest portion of the oil being circulated. The addition of an oil pan baffle prevents oil surging on quick stops.

A new oil filler cap with a wire mesh air intake strainer replaces the plain cap and serves as the air intake for the engine ventilation system. The four air intake louvers in the rocker cover are eliminated so that any oil vapors, which formerly passed through the louvers, condense in the wire mesh and drain into the engine.

The valves and valve train are modified for quiet operation and improved durability. In mid-season 1954, a revision was made in the drilling of the rocker arms for better lubrication and the valve stem to guide clearance was reduced. This revision is carried over into 1955, and, in addition, the XB exhaust valves for the standard 235 cubic inch engine are aldipped, which minimizes build-up of combustion deposits and provides for excellent long life seating conditions and cooler valves, with greatly reduced wear on both valve face and seat.

The turning speed of valve rotators on models using this equipment was reduced during 1954 to lessen wear at the valve seats. This revision is included in the new models.

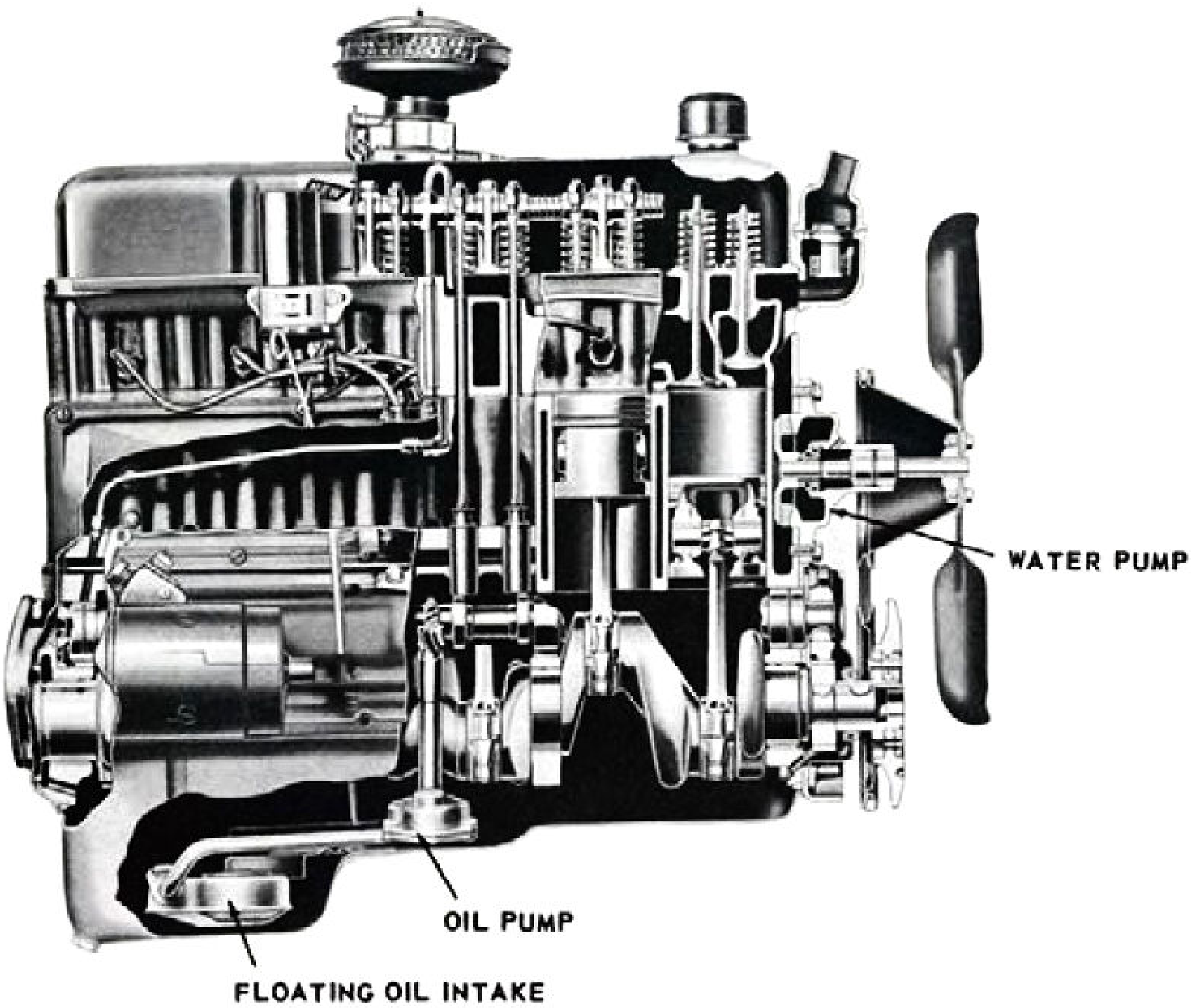
Main bearings are continued as changed during 1954, when the groove was eliminated from the lower halves. Similar to the bearing design used in diesel engines for many years, the new bearings have ample provision for lubrication and increased capacity for extended operating durability.

Timing of the six cylinder engines is changed to 0 degrees at idle, instead of 2 degrees after top center, to take advantage of fuel improvement and to improve torque. Clutch diameters are unchanged.

A completely new fuel pump provides improved operation and simplified maintenance. As electric windshield wipers are available as an option in 1955, the fuel pump with vacuum booster, formerly an option, is discontinued.

The fuel tanks for light and medium duty panel, suburban carryall, chassis, and forward control models have been revised to accommodate frame changes. The fuel filter, previously mounted on the fuel pump, is now located in the fuel tanks where condensation and other contaminants are filtered out before entrance to fuel lines. For ease of assembly in manufacture and service, the fuel lines are now attached to the frame with new push-on clips, instead of by the bolting method which was previously used.

For improved suppression of engine vibration, a four-point system replaces the previously used three-point engine mounting. High frequency engine noise is more effectively isolated from the chassis through the use of rubber fabric for flexible mounting of the muffler and tail pipe.



WATER PUMP AND OIL PUMP . . .

The water pump is redesigned to provide a larger impeller for increased pumping capacity, and is repositioned for overall engine assembly compactness by recessing the impeller into the front of the cylinder block.

Larger sized pulleys on the crankshaft and fan drive are proportioned to reduce fan and water pump speed by one-third, insuring longer impeller shaft bearing life and improved seal durability. The new speed ratio of pump to crankshaft is 0.95-to-1 compared with 1.40-to-1 in 1954.

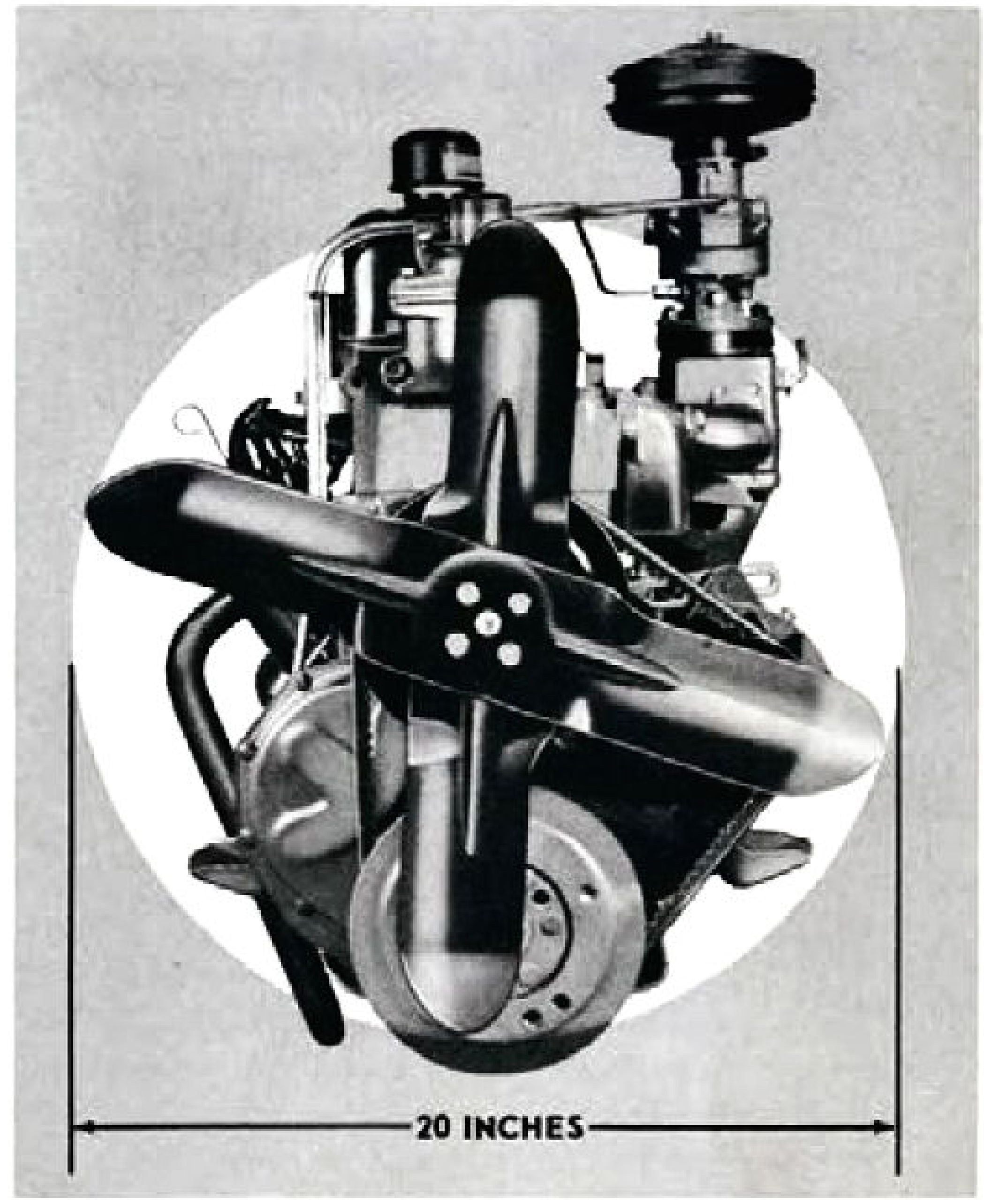
Water connections to the radiator and engine have larger internal diameters to improve the coolant flow and assure adequate cooling and better temperature regulation at low engine speed.

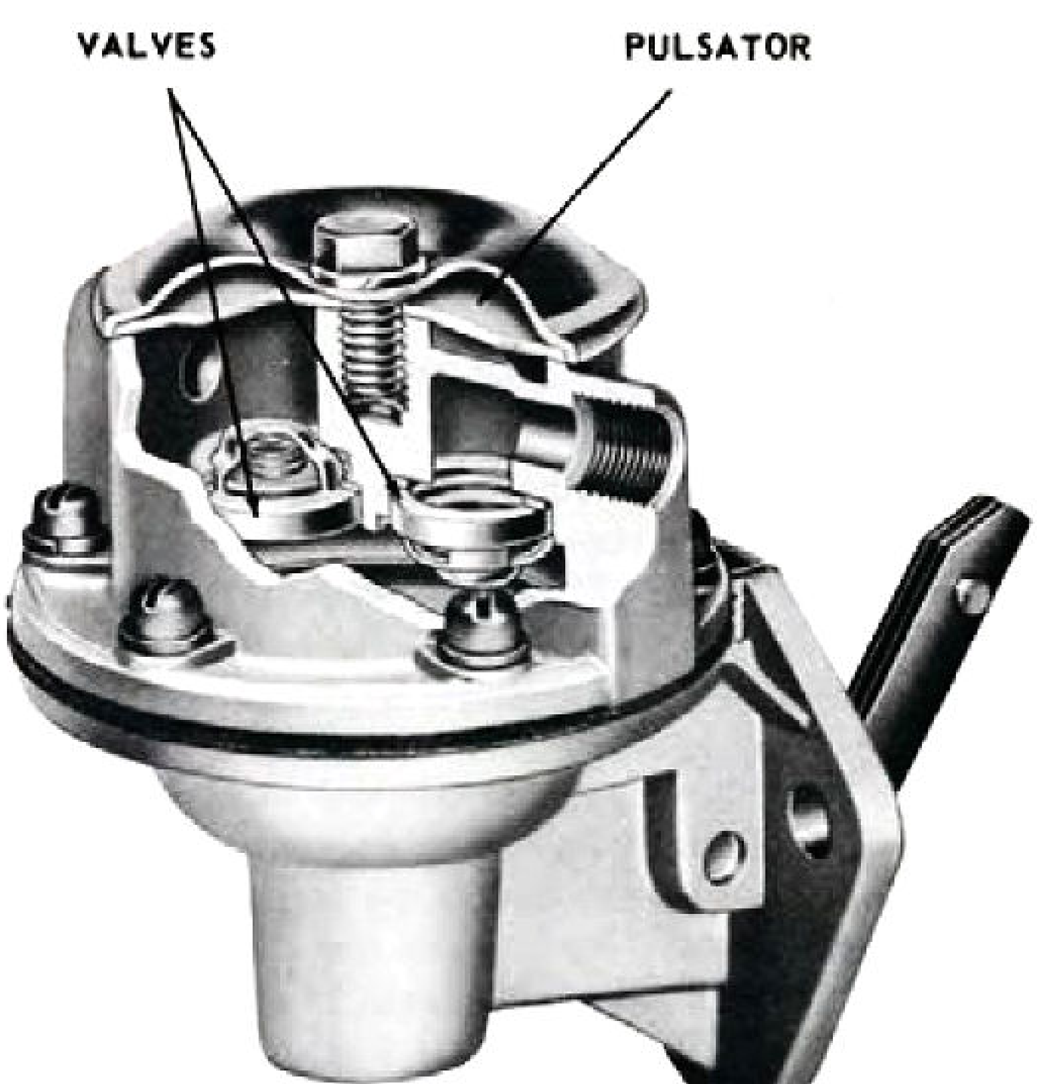
A new inlet is provided for the lubricating oil pump. This new floating-type pick-up floats just below the surface of the oil in the sump, minimizing the possibility of drawing floating or submerged precipitants into the oil distribution system. A new baffle, welded into the oil pan, reduces the surging of oil on quick stops, thereby minimizing the churning of oil into foam by the crankshaft counterweights.

RADIATOR AND FAN . . .

A 20-inch diameter fan replaces the 18-inch fan formerly used. While the fan speed has been reduced almost one-third to minimize noise, an increased pitch of the fan blades provides ample air movement through the radiator. The fan location is lowered and the blades sweep more of the radiator core than previously. A number of other changes which increase the effectiveness of the cooling system include larger diameter inlet and outlet openings as well as larger hoses between the engine and radiator for low restriction to the coolant flow. The radiator core constant has been increased, providing larger and fewer air cells per unit area of radiator surface. This results in a lighter weight core for manufacturing economy. An increased radiator frontal area maintains cooling capacity through the larger area swept by the cooling air. Less air flow restriction is offered by fewer cells in the new radiator. Increased air flow is obtained on Series 3800 and the 4000 series because the core is reduced from 2-1/2 to 2 inches in thickness, and on the 5000 and 6000 series, by core reduction from 3 to 2 inches. Air flow is controlled on the 4000 series through the addition of a fan shroud, which has been made standard equipment.

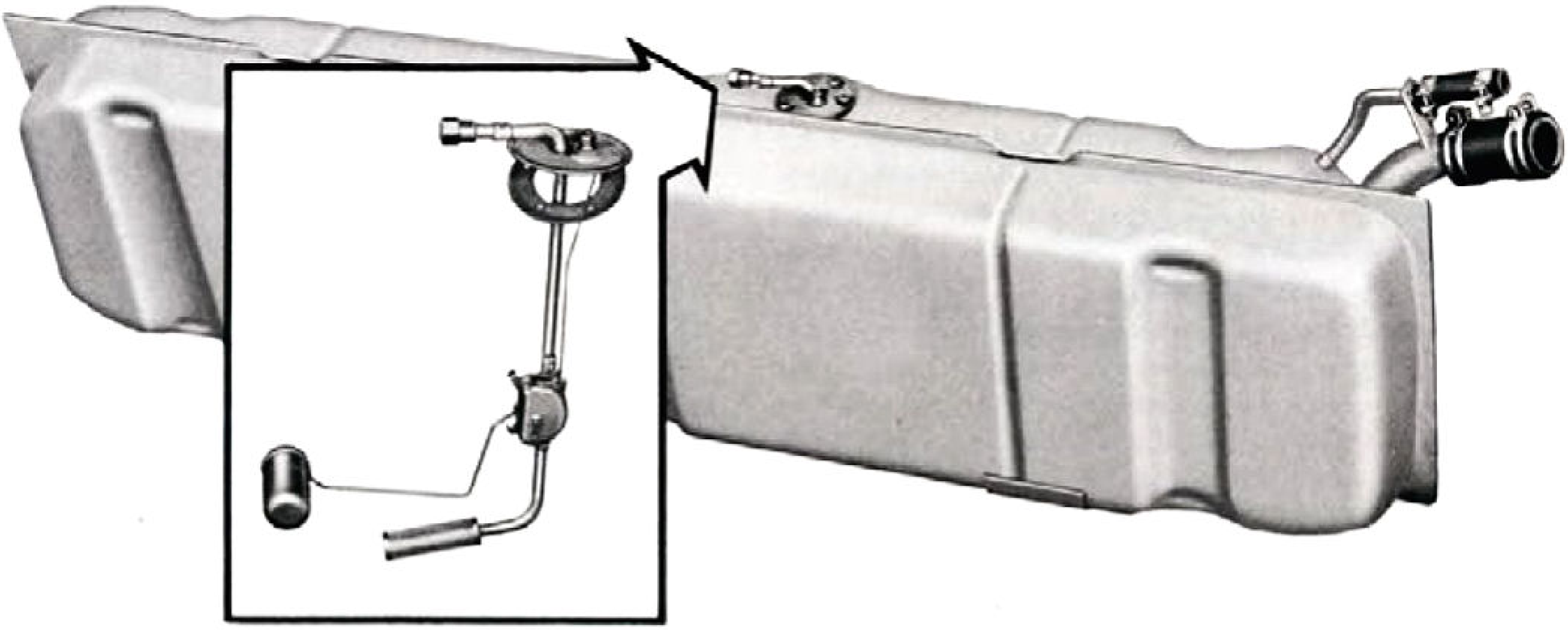
Frontal area for the Series 3000 radiator is 426 square inches, and that of Series 4-5-6000 is 470. A radiator also having a 470 square inch frontal area but with a 2-1/2 inch thick core is offered as optional equipment for all truck models.





FUEL PUMP . . .

Improved operation and simplified maintenance are among the advantages of the new fuel pump. The glass bowl and the filter screen are removed, eliminating the necessity for periodic disassembly and cleaning. An all metal air dome, located above the diaphragm and called a pulsator to describe its action, is a feature of the 1955 fuel pump design. During the pumping stroke the air in this dome is compressed by the incoming fuel and then expands when the fuel is released to the carburetor so that a more constant fuel delivery is supplied to the engine. The pump valves are increased to one inch diameter from three-quarters of an inch for better protection against vapor lock. This change also assures a more constant supply of fuel under adverse temperature conditions.

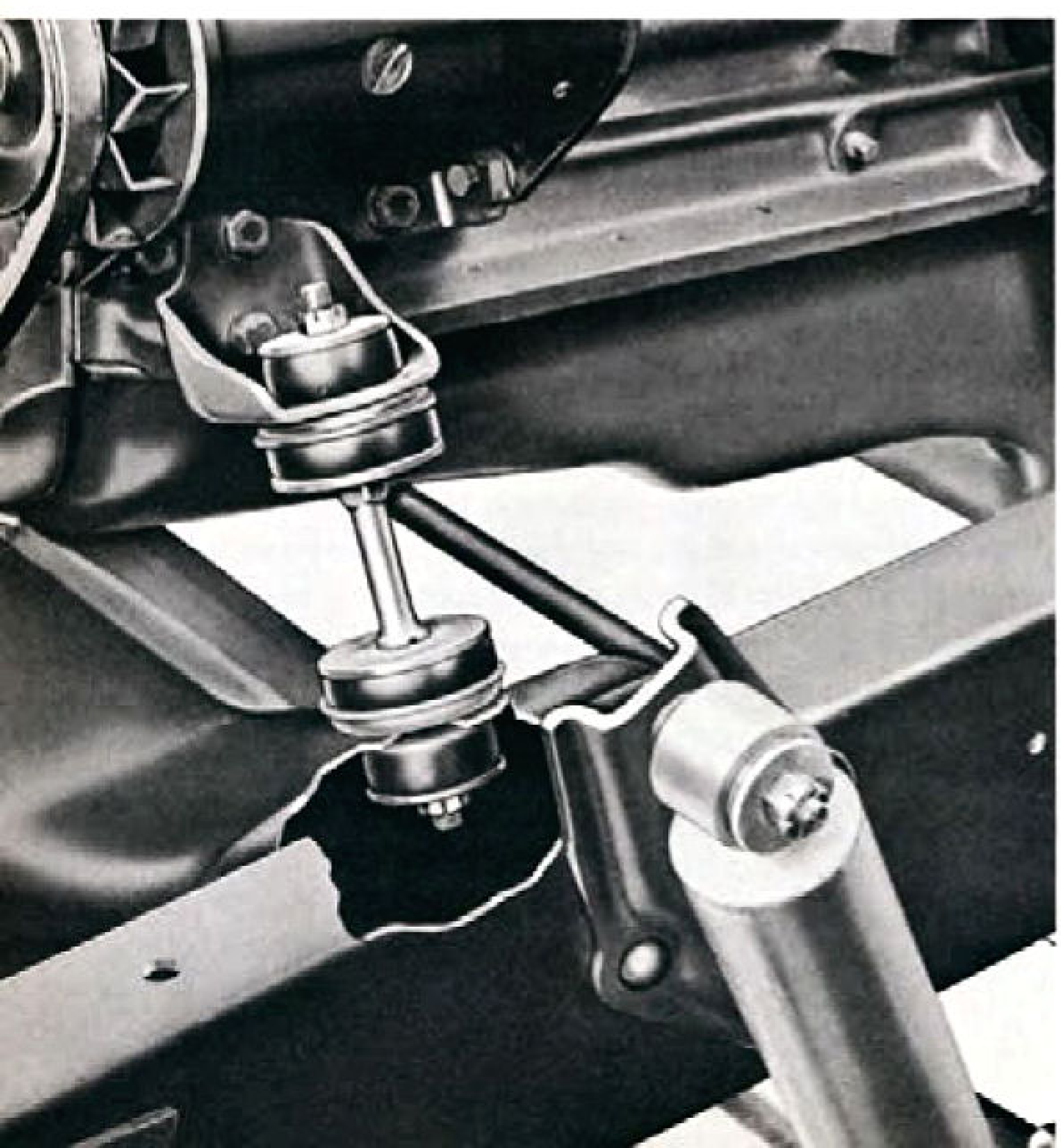


FUEL TANK . . .

Fuel tanks of cab models are unchanged except for being turned end for end, placing the fuel filler neck on the left instead of the right side of the vehicle.

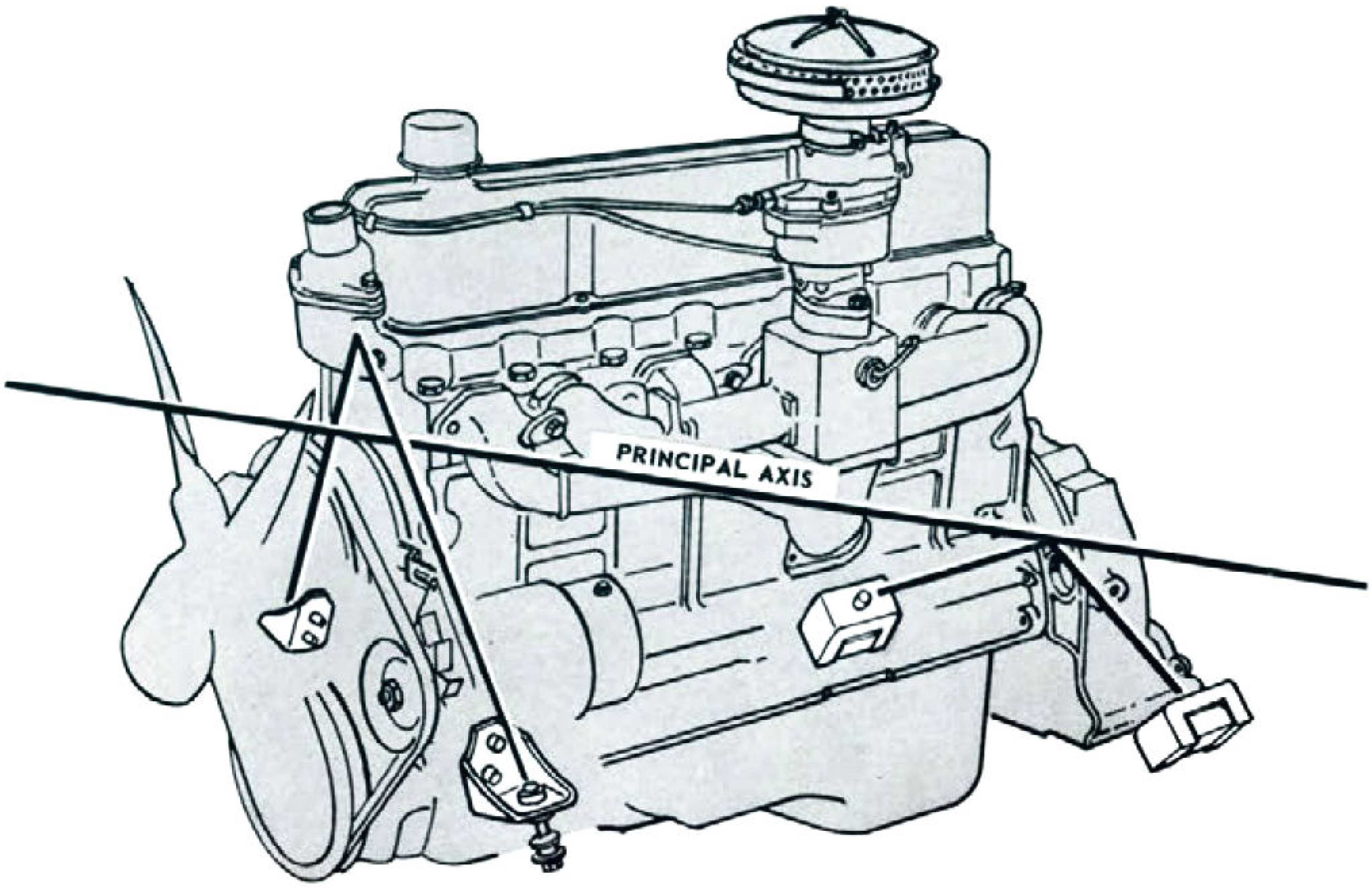
The fuel filter screen, formerly in the fuel pump, is now situated on the riser pipe in the fuel tank where space permits the installation of a new type of filter cloth with larger capacity. The new filter is less sensitive to clogging and does not require frequent cleaning to remove water or solid contaminants deposited by the fuel. The fine mesh not only prevents the passage of water, but insures that any particle passing through will be too small to interfere with valve operation in the fuel pump or to unseat the carburetor float needle valve. The fuel filter may be readily removed for cleaning.

The fuel tank for 1/2, 3/4 and 1-ton panel, suburban carryall, and chassis models is standardized so that each model takes the same 17 gallon tank. The new tank is longer and narrower than the previous tanks and is shaped to fit the new contour of the frames. A new fuel tank, the same as that used in 6000 series truck chassis models, is introduced in the forward control models. This tank, with a capacity of 18 gallons, is longer and narrower, with the fuel filler mounted on the end of the tank instead of at the middle.



ENGINE FRONT MOUNTS . . .

Two strut-type front mounts are used. Each consists of four circular rubber biscuits on a metal spacing stud which is secured to a bracket on the front lower corner of the cylinder block, and perpendicular to a seat on the frame front crossmember. One of the rubber biscuits is mounted over the engine bracket and another under it; similarly, one rubber biscuit is mounted on top of the crossmember and the other under the crossmember. Downward loads compress the biscuits under the bracket and over the crossmember, and upward loads compress the biscuits under the crossmember and over the bracket. This arrangement provides resilient but firm control of engine compression and rebound vertical movements, and allows relatively free torsional movement.



ENGINE MOUNTING SYSTEM . . .

A dynamically balanced four-point engine suspension system which better isolates power plant movements from the chassis replaces the three-point system. The 30 degree rear mounts which proved so successful in the 1954 truck are retained and two strut-type front mounts are new for 1955.

The four mountings are located and inclined so that the roll axis derived results in relatively minor reactions to frame and body from engine torque and firing frequency.

The new front mounts are strut-type, attaching to brackets on each side of the cylinder block at the front lower corners and to seats on the frame front crossmember. The intersection of straight lines projected through the inclined front mounts is in the upper part of the engine. The new front mounting locations, in combination with the rear mounts, permit the proper freedom of engine movement about its principal axis.