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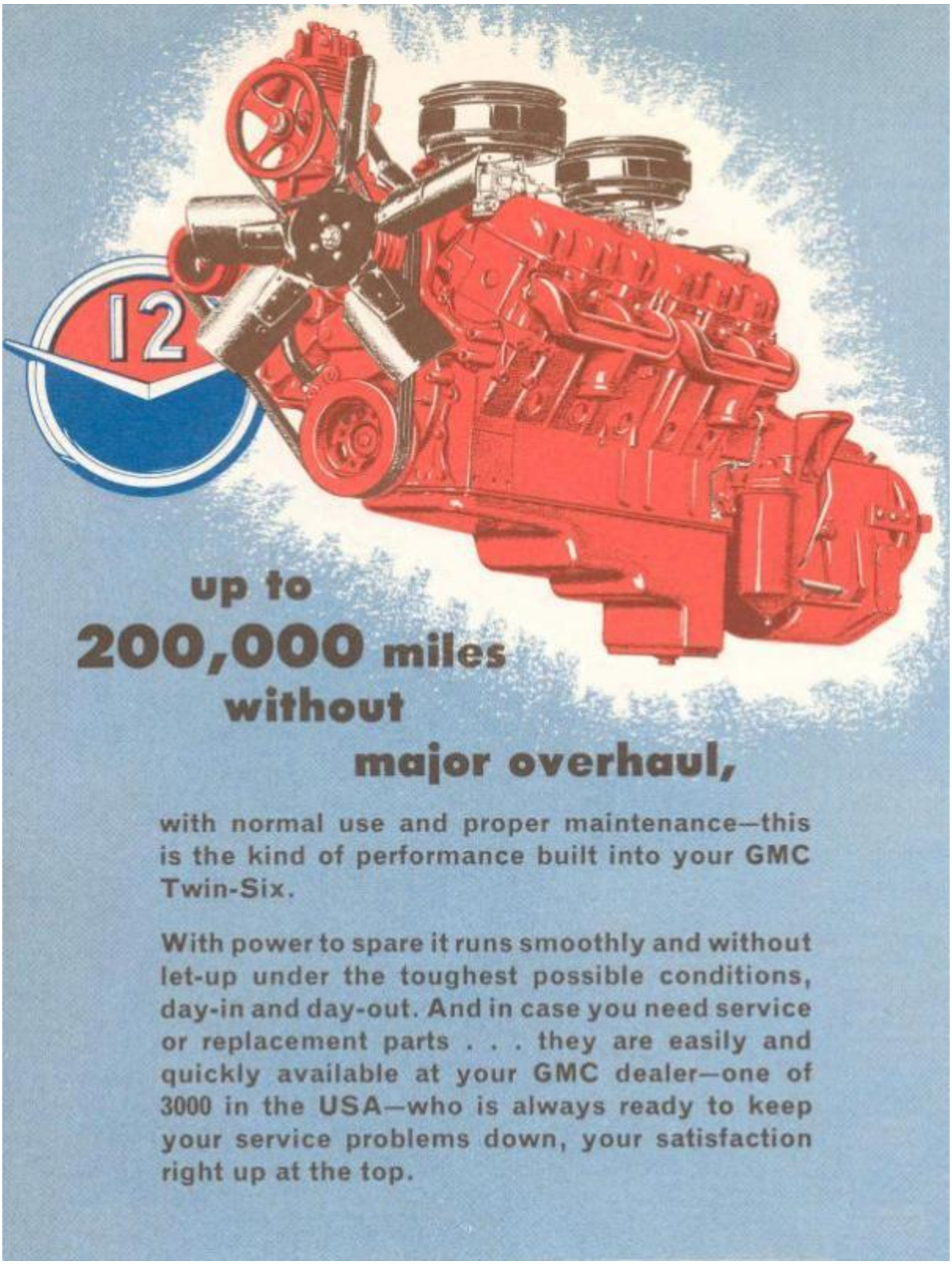
GMC's Twin-Six V-12 Engine !

KING OF GMC's GASOLINE ENGINE FAMILY !

This is the king of GMC's gasoline engine family, the power-laden 702 Twin-Six. It makes words like durability, performance and operating economy take on a whole new meaning. It's true truck horsepower and tremendous torque at low r.p.m. take on the biggest jobs with an easy-stroking effort. It digs into grades and requires far less gear shifting to keep in step.

With relatively slow operating speed, of only 2400 maximum r.p.m., the Twin-Six combines ideal fuel / air mixture, economical 2-barrel carburetion, low internal friction, short stroke, and good exhaust scavenging to add years to engine life and squeeze every mile from every gallon of gasoline.

The Twin-Six's 60 degree "V" type design compacts it's massive strength. But ruggedness does not stop there. For example, it's valve train is the most outstanding of any production vehicle. In trucks, engine life is largely determined by valve life. So in the 702, push rods, lifters, rocker arms, shafts and the valves themselves are made from the best quality, commercially practical material available; larger, more sturdy than valve trains in other engine of comparable output.



For Horsepower & Torque rating, see the GMC V6 & V12 Engine Data Page.

It does your job better and saves you money.

Here are a few reasons why:

**It's short stroke reduces internal friction . . .
gives full power with less piston travel.
Result is less engine wear . . . longer engine life.**

Peak torque is reached at low r.p.m. and maintained over a wide range of engine speed for longer sustained power. The toughest jobs are handled in stride.

Oil and fuel consumption is low . . . maintenance and service cost are low . . . save you money four ways.

It has the highest cooling and lubricating ability of any comparable size engine. This means greater engine efficiency . . . longer trouble-free service.

56 major parts are interchangeable between the Twin-Six and all other GMC V-6 engines to provide greater parts availability and standardization.

High mounted camshaft . . . short push rods . . . big, tough, long-lived valves combine to make an exceptionally rigid, durable valve train. Again . . . lower cast, longer life, more economy.

Strength where strength counts ! Exceptionally, rigid crankshaft . . . massive connecting rods . . . big, rugged, heavy-duty pistons. Many thousands of miles of dependable service.

THE HIGH OUTPUT OIL PUMP

capable of pumping 17 gallons of oil per minute, provides extra circulation at all engine speeds . . . extra protection and well oiled surfaces on all vital moving parts. Engine is lubricated as soon as it's started. Cam lobes dip into a built-in reservoir of oil as the camshaft rotates, preventing cam and valve scuffing - a major reason why this engine gives long, dependable service.

118 GALLONS OF WATER

(at 2400 r.p.m.) Are pumped through this engine every minute. With thermostat open, only half the water goes to the radiator, the other half returns to the pump through a by-pass. This results in excellent cooling ability. There is less than four degrees variation in water temperature throughout the engine. This checks the possibility of hot spots. Here's cooling efficiency that is not matched by any other comparable size engine. Life of pistons, valves, valve guides and spark plugs in much greater, and the possibility of head-cracking is held safely in check . . . further proof of the durability and long life that is built into this engine.

POSITIVE CRANKCASE VENTILATION

is provided by using manifold vacuum to draw fresh air through the engine. Air enters through a replaceable paper-element breather, travels up through the crankcase to the cylinder head covers, then through air flow regulating valves directly into an intake port of each head, carrying with it, into the combustion chamber, harmful sludge-forming fumes and moisture laden air. Bearings and other precision parts last longer . . . maintenance is less . . . engine life is extended.

Here's The Inside Story GMC's Twin-Six Engine

EXCEPTIONALLY RIGID, FORGED CRANKSHAFT

has 7 extra large main bearing journals . . . 6 extra large crankpins - one for each pair of connecting rods, and all "Tocco" hardened. It's heavy construction makes it exceptionally rigid. M400 main and connecting rod bearings, the best available, provide up to 7 times the life of commonly used bearings. Crankshaft and bearings are freed from torsional impulses by a rubber type damper in crankshaft pulley.

CAST ALUMINUM PISTONS

cam ground; and with cast-in steel expansion control band, eliminate piston slap. Pistons are balanced to within 1.8 grams to ensure vibration-free performance. Long skirts are precision-ground and tin-plated to prevent scuffing during initial run-in. 4 rings, 3 compression, 1 oil control - provide positive compression sealing . . . improved oil economy. Top compression ring and oil control rings are has chrome plating for longest wear. Top ring rides in a cast-in steel groove for even more durability.

HIGH STRENGTH, ALLOY IRON CAMSHAFT

Cam lobes and bearing journals are induction-hardened for great wear resistance. Short, stiff push rods provide for a rigid valve train and positive valve action. 7 large, closely spaced bearings keep camshaft precision-straight. Valves last longer . . . fewer adjustments are needed . . . service expense is lower.

FULLY-MATCHED COMBUSTION CHAMBERS

Smooth, precision-machined combustion chamber - rarely found in other engines - minimizes carbon deposits, hot spots and pre-ignition. And there is uniform combustion in all cylinders for smoothest engine operation. 6 equally-spaced head bolts (not 4 as found in other engines) surround each cylinder to reduce bore distortion . . . guarantee gasket sealing for long engine service. Spark plugs, located inside the "V", away from hot exhaust manifolds, run cooler, have much shorter wires, and are easy to service.

EXTRA HEAVY BLOCK AND CRANKCASE

is solidly cast of high strength, long-wearing iron alloy. A deep, 3-inch ribbed skirt below the centerline of the crankshaft provides rigid reinforcement to the crankcase. Cylinders are widely spaced and staggered, providing even greater block rigidity and much greater cooling area around the cylinder walls for long engine life. Heavy bearing caps and the use of 4 large cap screws on the rear main bearing assure perfect crankshaft alinement, minimize crankshaft deflection and assure maximum bearing life.

ALUMINUM ROCKER ARM BRACKETS

Each of the 4 hardened steel rocker arm shafts is held firmly in place by 5 aluminum brackets. As valves warm up and expand, brackets expand too, assuring proper valve clearance under all operating temperatures. The engine runs quieter . . . fewer valve adjustments are needed . . . valve life is extended. Brackets at both ends of the shaft, and one bracket between each set of rockers arms holds shaft deflection in check. This plus the high-up camshaft mounting and use of short, stiff push rods provides an exceptionally rigid valve train. Just another way

you save on maintenance and get longer engine life.

TWIN INTAKE MANIFOLDS

with individual ports for each cylinder are a special feature of this engine. Individual ports permit faster intake and more uniform distribution of fuel-air mixture to each cylinder. Because manifolds are short and have a minimum of bends and curves, too rich or too lean fuel mixtures, usually found in longer in-line or V-8 engines are completely eliminated. This results in much better fuel economy, cleaner, more complete combustion and greater engine efficiency.

TOP QUALITY HEAVY RIBBED EXHAUST MANIFOLDS

Interchangeable exhaust manifolds of special alloy iron and highly resistant to cracking and warping by extreme temperature changes. Large individual ports for each cylinder and short, large diameter passages permit more complete scavenging of exhaust gases. Result is better fuel economy . . . longer life . . . better performance.

FUEL FILTER,

is standard. It protects the carburetor from dirt and other foreign materials that can cause annoying engine failure and costly down time. The fuel filter is the replaceable element type.

LARGEST VALVES

This engine has the largest diameter intake and exhaust valves of any comparable size engine. This means it is unsurpassed in volumetric, or breathing, efficiency. Combustion is more complete,
scavenging of exhaust gases more thorough. The engine gets more work out of a gallon of gasoline . . .
and stays cleaner longer, too. In addition, valves have short, large diameter stems to reduce possible distortion and dissipate heat quickly. Positive rotation of both intake and exhaust valves is an extra-quality feature. Short, rigid puck rods hold valve train deflection to a minimum
and help keep engine in top running condition. Valve clearance is controlled by self-locking adjusting
screws . . . tune-ups are easy . . . upkeep low.

HYDRAULIC GOVERNOR

Extra long life for heavy duty engines is assured by the hydraulic governor. Operated by oil pump pressure, this accurate, positive, and reliable governor keeps engine from exceeding it's proper operating speeds.

The above Information came from GMC Truck brochures put out in 1960.
If you know or have information about any of the GMC engines,
please send it to me to use here.

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