

FORD

TRANSIT BUS



FOR POWER, PERFORMANCE AND PROFITS

FEATURES

Developed by 15 Million Miles of Ford Bus Service in Detroit • Operation of hundreds of Ford V-8 Buses in Detroit for more than 3 years established new standards for power and performance, and proved profit-making ability. Ford Transit Buses are a combination of all elements of design evolved from this experience.

High Average Speeds • Ford Transit Buses maintain higher average speeds because of fast acceleration, their quick deceleration, and rapid passenger loading and unloading.

High Maximum Speeds • Where operating conditions necessitate, Ford Transit Buses can attain high maximum speeds. The flexibility and high power output of the Ford V-8 85-Horsepower engine, its high torque over a wide range of engine speeds, the riding qualities of the bus, and its easy control, make possible high speeds with safety.

Operating Economy • Proved cost records show that Ford Transit Buses cost less to operate due to low initial cost, low depreciation, and low repair and parts replacement costs.

Greater Passenger Comfort • Equal weight distribution on front and rear axles, long chassis springs, four hydraulic bus-type shock absorbers, modern heating and ventilation, comfortable seats, and adequate interior lighting, combine to provide unusual riding comfort.

Increased Rider Appeal • The modern exterior design of the Ford Transit Bus, its attractive interior styling, its numerous convenience features, and the fast schedules it can maintain, contribute to increased rider appeal, resulting in greater patronage and profit-producing income.

Greater Revenue • Proved records show that Ford Transit Buses obtain increased patronage through their attractive appearance, rider satisfaction, and faster transportation. The fact that they can operate at high average speeds reduces the number of seat-miles ordinarily required. Ford Transit Buses operate at a higher percentage of capacity.

Increased Profits • Higher income producing capacity with low operating costs means increased profits. Actual records have proved this.

Ease of Operation • Drivers appreciate the easy steering, the easy braking, the light clutch action, the convenient location of hand controls and view of instrument panel that the Ford Transit Bus provides. Its lighter weight and shorter wheelbase makes it easy to maneuver in congested traffic.

Passenger Safety • All-metal body panel construction, side-to-side floor channels of steel, air-operated doors, air-pressure braking and other features assisting driver control, all contribute to passenger safety, both in preventing accidents and in affording protection should they occur.

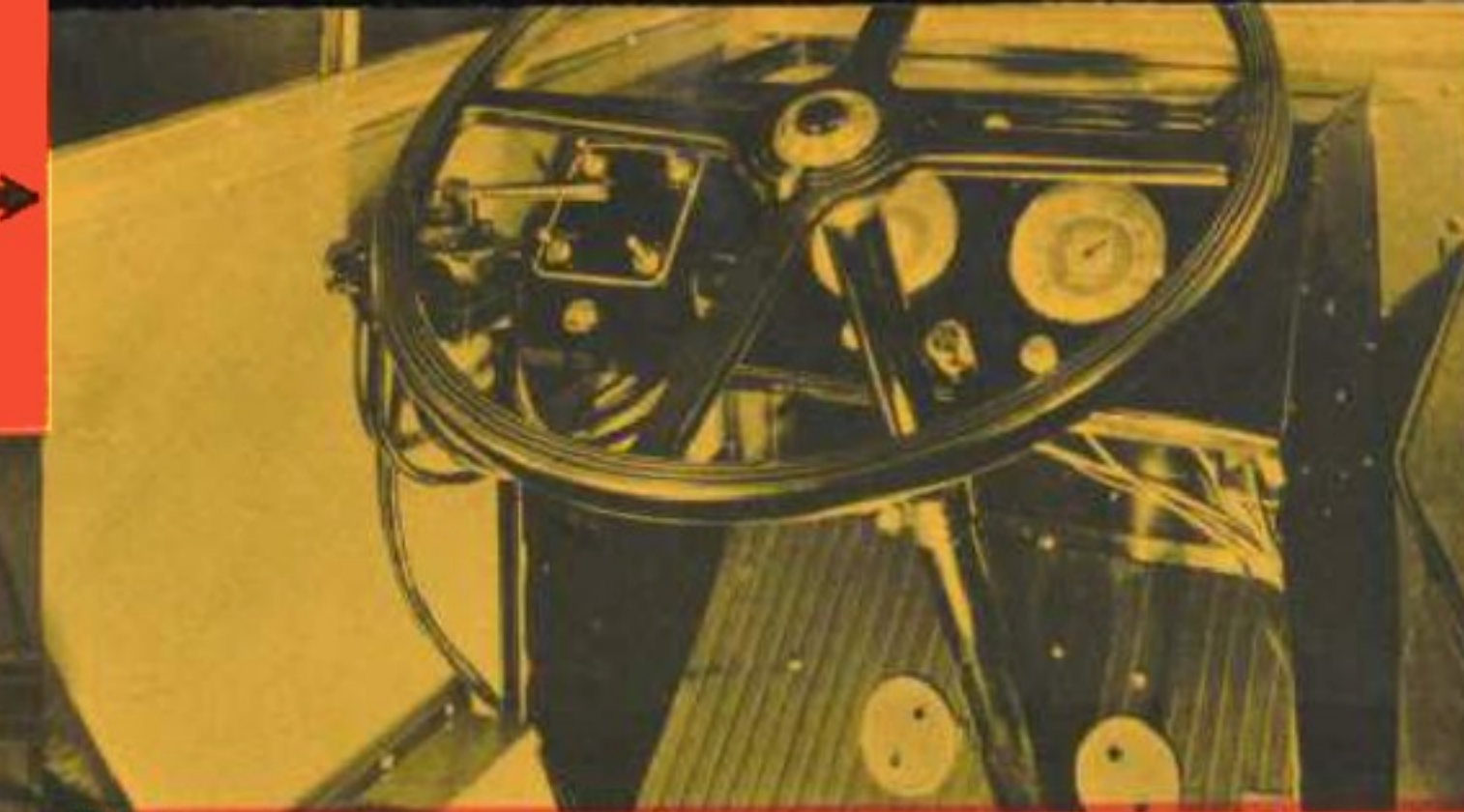
Low Fuel Consumption • Lighter over-all weight, and the efficiency of power output of which the Ford V-8 Transit Bus engine is capable, materially reduce fuel consumption. Ford Buses have proved that they can attain high fuel mileages. Disagreeable fumes and gases are unknown either in or outside of the Ford Transit Bus, a feature greatly appreciated by both passengers and pedestrians.

Built and Backed by Ford • As with all Ford products, the tremendous resources of the Ford Motor Company are back of Ford Transit Buses. The engineering and manufacturing talent and facilities which have made Ford world-famous have been utilized in producing them. Ford quality is known and appreciated by those who are familiar with Ford materials and precision workmanship. Ford Transit Buses are no exception.

The interior is of modern design using tubular steel seat frames and deep cushions upholstered in genuine leather. Standard interior finish is light and dark green lacquer with green upholstery.



Controls are conveniently grouped on a large instrument panel. The large steering wheel pitched at a slight angle makes steering easier. The left front body pillar is especially narrow to provide a better view of the roadway. The heating plant is located underneath the driver's seat and is provided with separate control.



FORD V-8 FOR POWER PERFORMANCE AND PROFITS

The Ford V-8 bus engine not only delivers 85 brake horsepower, but has high pulling ability over a wide range of engine speeds. Coordinated with the proper transmission and rear axle ratios, this provides the fast acceleration and all-'round performance that along with powerful brakes make high average speeds possible in transit bus operation.

The broad speed range over which high pulling ability (torque) is delivered results from a combination of many Ford engine features. The free "breathing capacity" of the engine obtained from its dual carburetion system with duplex intake manifold; its low stroke-bore ratio and compact 8-cylinder design, which reduce the inertia of reciprocating parts; the overlapping of power impulses obtained from this number of cylinders; the low internal friction resulting from its polished cylinder walls, accurate fitting of moving parts and practically perfect dynamic balancing; the "precision timing" afforded by its direct-driven ignition unit; all help to maintain high torque far above the speeds possible with engines of larger size and fewer cylinders.

And Ford V-8 for profits too: Reduced cost of operation increases profits. The fuel and oil economy of the Ford V-8 engine are definitely proved. The fact that it delivers high torque and power at the higher engine speeds is direct evidence of its efficiency of output. Other cost-reducing factors are the long wearing qualities that result from its design, the superior materials used in its construction and the precision exercised in its manufacture, low parts prices and the unusual benefits afforded by the Engine and Parts Exchange Plan. Only Ford offers such complete profit-producing possibilities.

BODY CONSTRUCTION

For Low-Cost Maintenance and Passenger Safety

From floor to roof line the Ford Transit Bus body is constructed of metal. The side and end panel framing is of steel and utilizes truss-type design. Side and end panels up to the glass line are of heavy gage aluminum—lightness combined with strength. Above the glass line steel is used for the window pillars. The rounded body corner members also are of steel.

The body is sectionally built. The sections consist of the two sides, two ends, four corner members, roof and floor. Of special importance to bus operators is the fact that any section can be removed and replaced as a unit in case of damage. All sections are made to accurate dimensions. The side and end panel sections are assembled and welded together in fixtures so that interchangeability is assured. The use of steel and aluminum construction for the sides and ends of the body reduces their thickness without sacrificing strength. This permits a larger floor area for a given over-all width and length of the body.

The floor is of plywood covered with insulating material and long-wearing linoleum, affording insulation against heat, cold and noise. The floor

section is mounted on U-shaped steel cross bolsters extending across the chassis frame to the full width of the body. This affords increased protection to the sides of the body and reduces the height of the floor from the ground.

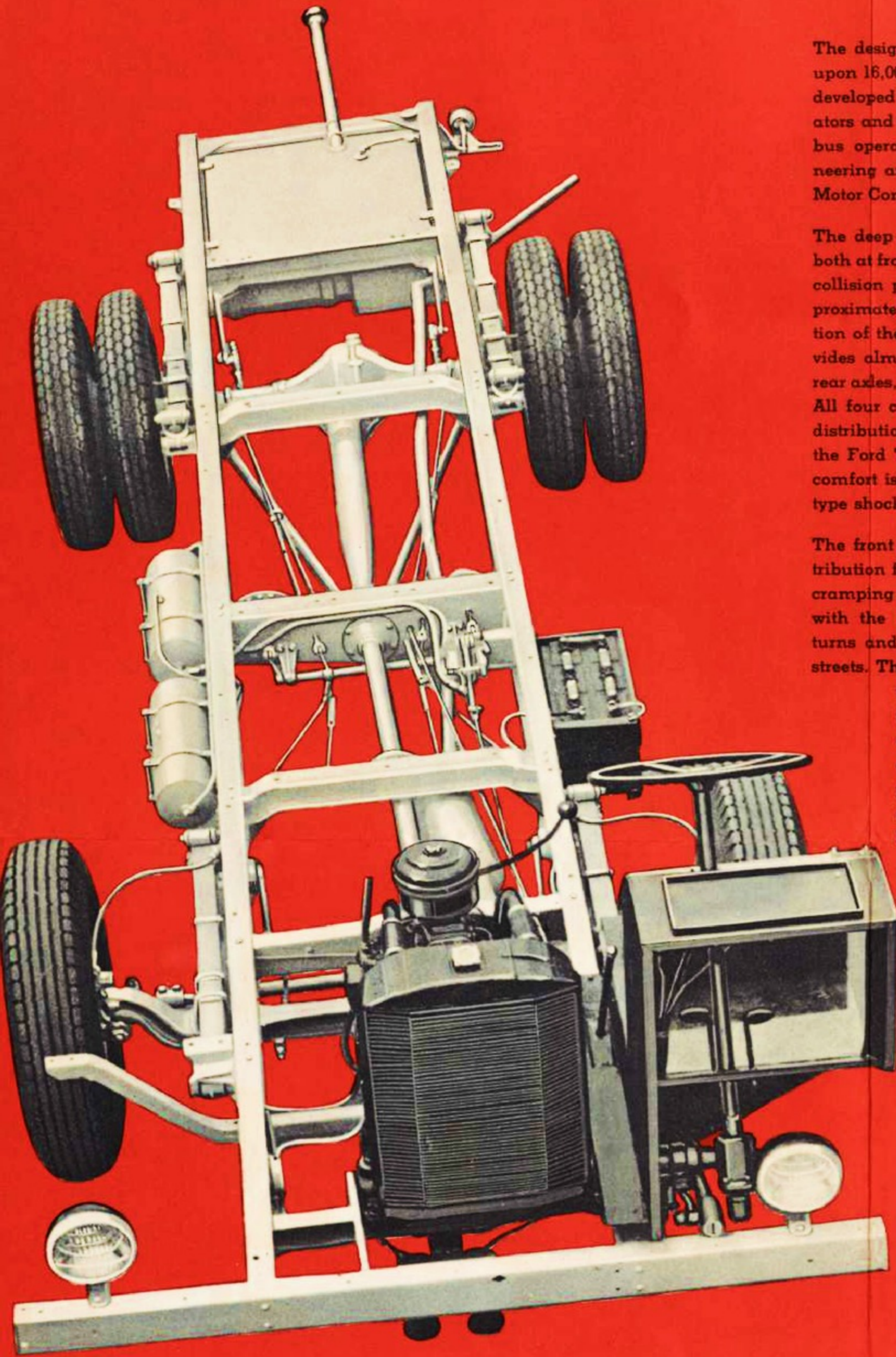
The roof unit is designed especially for insulation against heat, cold and to absorb internal and external sound. The framing and bows are of wood, with steel braces. Closely spaced longitudinal ribs are attached to the bows, over which thick padding, then the aluminum colored top deck material are placed. The corners of the top are of steel, similarly covered. The destination sign box is integral with the top unit.

To increase the driver's view, the front corner pillars are unusually narrow. Steel construction makes this possible, yet still provides exceptional strength. The windshield and all windows are of laminated Safety Glass.

All Ford Transit Bus bodies are constructed throughout to Ford specifications. Ford supervision extending even to the testing of floor and top coverings, paint and other finishes.

CHASSIS

F O R D V - B T R A N S I T B U S



The design of the Ford Transit Bus chassis is based upon 16,000,000 miles of transit bus experience. It was developed through the cooperative efforts of bus operators and Ford engineers. It is the product of actual bus operations, combined with the advanced engineering and production methods for which the Ford Motor Company is well known.

The deep frame extends the full length of the body, both at front and rear, for additional body support and collision protection. Front and rear overhang is approximately the same. This, combined with the location of the engine and the various chassis units, provides almost equal weight distribution on front and rear axles, when the Ford Transit Bus body is installed. All four chassis springs are identical. Equal weight distribution and identical springs front and rear make the Ford Transit Bus especially easy riding. Riding comfort is also assisted by the use of large hydraulic type shock absorbers at each wheel.

The front axle is expressly designed for the load distribution featured by the Ford Transit Bus. The sharp cramping angle of the front wheels, in conjunction with the 141-inch wheelbase, permits making easy turns and maneuvering in narrow or congested city streets. The large steering wheel and worm and roller type steering gear reduce the effort required in turning or bringing the bus up to and away from curbs when taking on or discharging passengers. These features are partly responsible for the high average speeds drivers regularly attain with Ford Transit Buses on city routes.

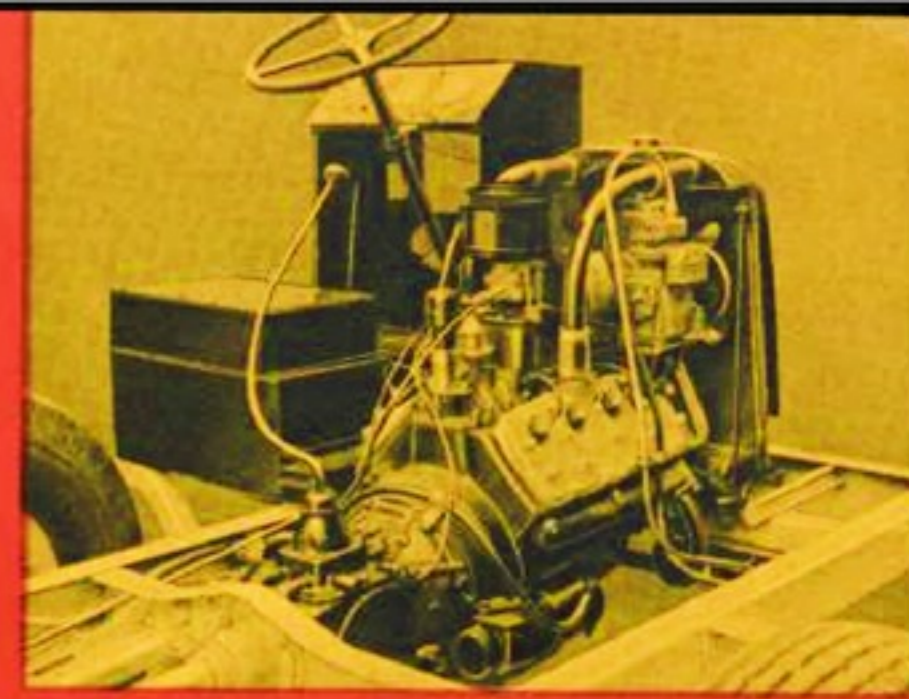
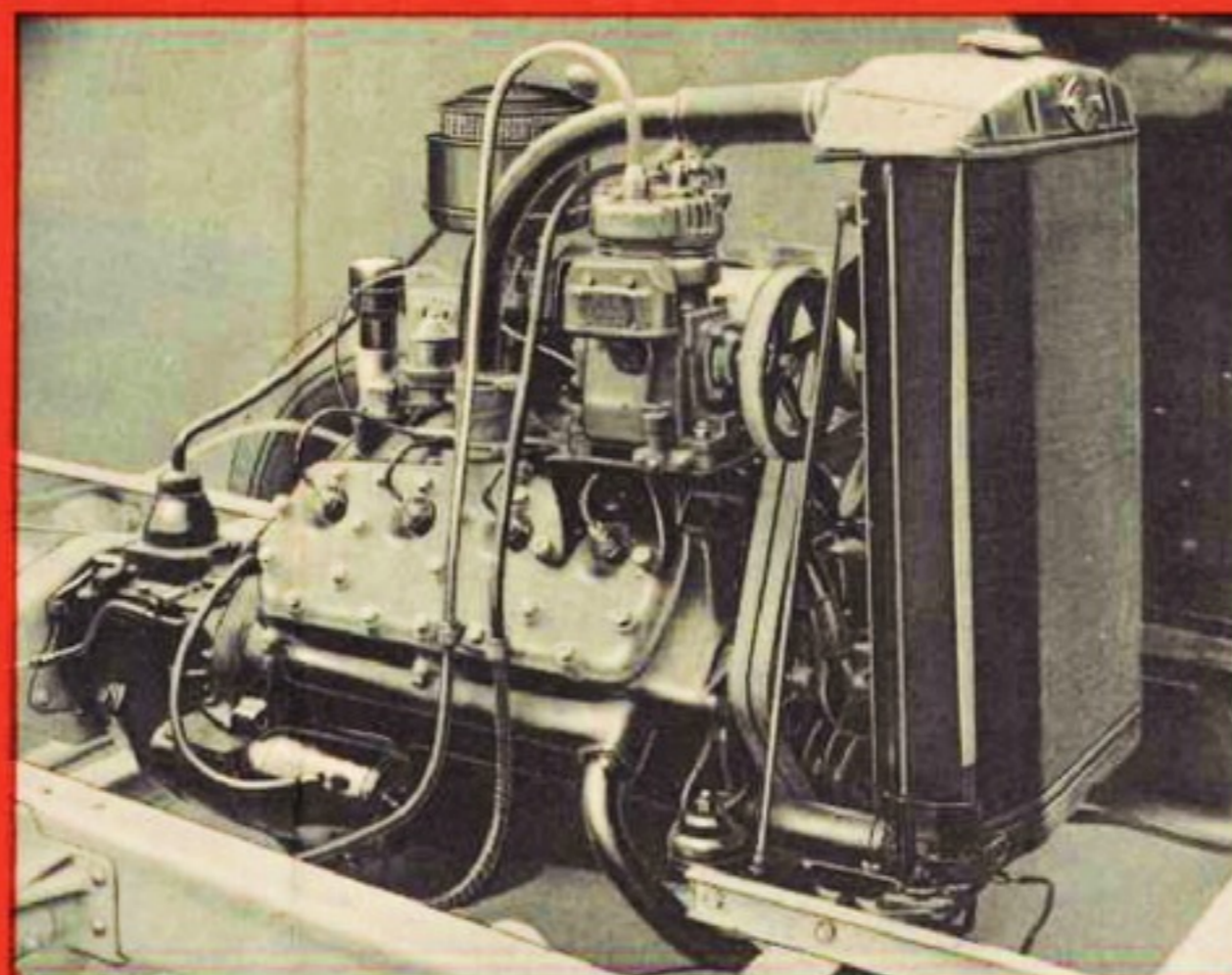
Other chassis features include special bus-type clutch and transmission, heavy-duty Ford truck-type rear axle with full torque-tube drive, large braking areas, air-pressure operated service brakes, and traditional Ford quality of materials and manufacture throughout: the hand brake is independent of the service brakes and is positive in its action. Throughout the chassis special attention has been directed toward making all units accessible for lubrication, easy maintenance or adjustment. No small part of the low operating costs shown by Ford Transit Buses is the result.

FORD V-8 ENGINE

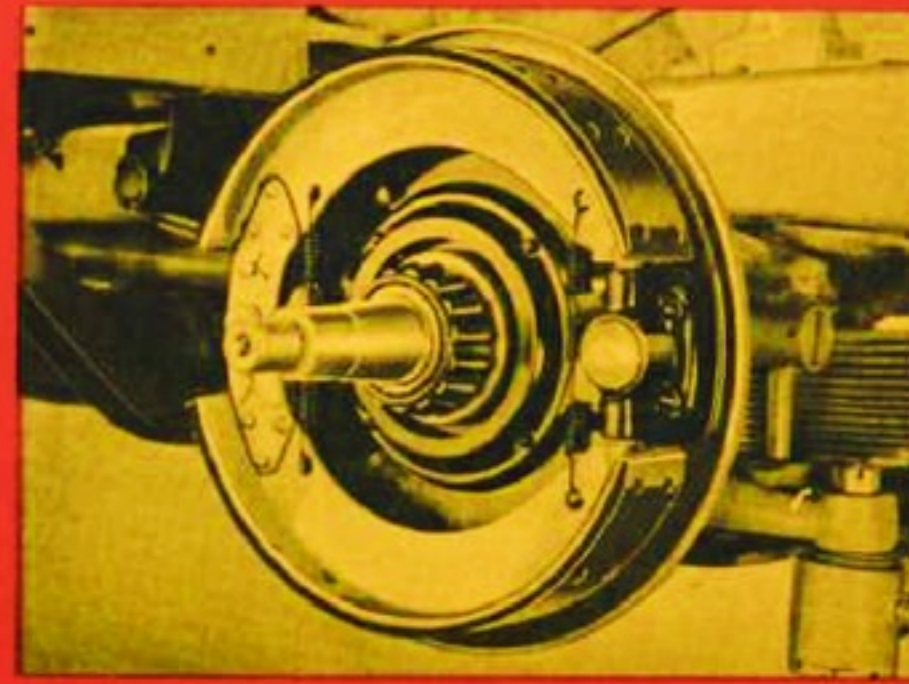
Ford V-8 heavy-duty type 85-horsepower engine is equipped with double V-belt drive for fan, generator and water pumps, high-compression cast iron cylinder heads, steel pistons and economy type carburetor. Water jackets not only completely surround all cylinders, but also enclose crankcase walls. Engine designed for high torque output and high fuel economy over a wide range of engine speeds. New location of self-sealing water pumps of increased capacity improves cooling especially for slow-moving traffic operation

of bus. Air-compressor accessibly located and driven by V-belt from generator shaft.

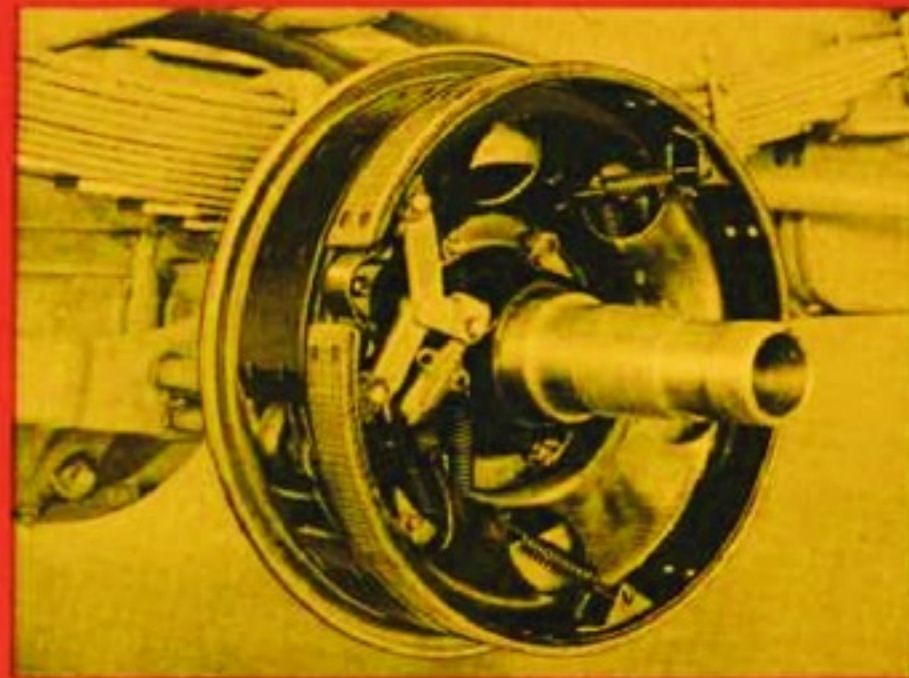
To provide increased entrance space in the body, the engine is offset to left of chassis centerline. A heavily insulated hood prevents engine heat and sound from disturbing passengers, yet provides ready access to engine auxiliaries for lubrication or adjustment. The inherent smoothness of the Ford V-8 engine combined with accurate weighing and balancing of all moving parts, insures remarkable quietness of operation.



The Ford V-8 Transit Bus powerplant is compact and offers low weight in proportion to its power and ruggedness. All units ordinarily requiring attention are accessibly located.



The strength of the front axle is illustrated by the large steering spindles and large roller bearings. Front brakes are the same diameter as the rear brakes and have wide brake shoes.



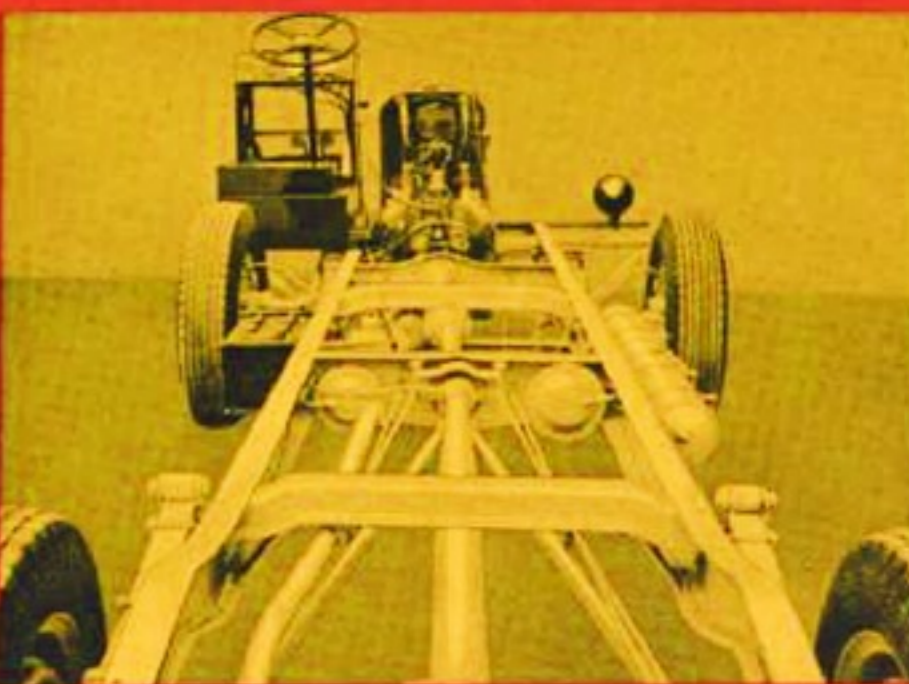
Rear brakes are large and powerful. The handbrakes are completely independent of the service brakes and have separate band-type shoes within the rear drums as shown.



The heavy front axle is designed especially for equal load distribution on front and rear axles. Front brakes are controlled by cables and conduits.



The rugged frame construction, full torque-tube rear axle and springs are illustrated here. Notice also the large size and protected mounting of the fuel tank.



The engine and drive-line are offset to the left of the chassis centerline to provide additional body aisle width near the front door, facilitating loading of passengers. Notice the position of the battery and two air reservoir tanks.

CONDENSED SPECIFICATIONS

Ford Transit Bus

POWERPLANT

ENGINE • Type 90° V-8 with two plane crankshaft. Bore 3.062 in. Stroke 3.75 in. Piston displacement 221 cu. in. Brake horsepower 85 at 3700 r.p.m. Taxable horsepower rating 30. Torque 150 lb. ft. from 1500 to 2500 r.p.m. Compression ratio 8.12 to 1.

ENGINE BLOCK • Semi-steel casting. Cylinders with exhaust passages, crankcase and flywheel housing cast integral. Full length water-jacketed cylinder walls and crankcase. Cylinders polished and honed to mirror-finish. Aluminum cylinder heads.

CRANKSHAFT • Special Ford cast alloy steel. Fully counterbalanced with integral counterweights. Weight 63.5 lb. Three replaceable main bearings with net total area 35.9 sq. in.

CONNECTING RODS • Carbon-manganese steel forgings. Mounted side by side in pairs on floating type, special alloy bearings. Bronze piston pin bushings.

PISTONS • Ford light-weight cast alloy steel. Floating type piston pins with bearing surfaces in both pistons and connecting rods.

CAMSHAFT • Wear-resisting cast alloy iron. Three steel-backed replaceable babbitt bushings. Camshaft gear, highly compressed baked-lized material.

VALVES AND SEATS • All valves of heat-resisting chrome-nickel alloy steel. Enlarged valve-stem ends. Light-weight, hollow-cast, one-piece valve lifters. Precision-set valve stem end clearances requiring no adjustment. Tungsten chrome-alloy steel exhaust valve-seat inserts.

ENGINE LUBRICATION • Direct pressure oiling to all main, camshaft and connecting rod bearings; positive timing gear lubrication. Directed flow ventilation through crankcase and valve chamber. Crankcase capacity 5 qts.

COOLING • Double V-belt drive to water pumps, fan and generator. Two centrifugal self-sealing water pumps with prelubricated ball pump-shaft bearings. Heavy-duty radiator, flat tube and fin type, cushion mounted. Thermostatic water temperature control. Cooling system capacity 25.5 qts. without heater, 27.5 qts. with heater.

FUEL SYSTEM • Dual downdraft carburetor equipped with oil-bath type cleaner. Duplex intake manifold. Mechanical fuel pump. Fuel tank capacity 45 gallons. Air vented filler pipe.

IGNITION • Direct driven unit with distributor and coil in waterproof housing. Fully automatic spark advance by vacuum controlled centrifugal governor.

GENERATOR • 12 volt, 300 watt with automatic voltage and load regulation. Ball bearing mounted shaft.

BATTERY • 12 volt, 137 ampere hr. capacity. Located on outside of left frame channel.

AIR COMPRESSOR • Two cylinder, air-cooled, pressure lubricated, driven by V-belt from generator shaft pulley. Bore 1.625 in. Stroke 1.375 in. Capacity 4 cu. ft. displacement at 1250 r.p.m. of compressor. Governor controls delivery pressure at 85 to 100-105 lb. through unloading valves.

CLUTCH • Dry single disc with plate pressure increased by centrifugal force. Facing diam. 11 in. Total friction area 123.7 sq. in. Pedal pressure to disengage 28 lb. at engine idling speed, 51 lb. at 4000 r.p.m.

TRANSMISSION • Selective 3-speed designed for bus use, in unit with powerplant. Synchronous meshing of second and high speeds. Helical, silent-type constant mesh and second speed gears. Shafts rotate on anti-friction bearings in all forward speeds. Transmission with lower intermediate gear ratios optional. All ratios selected to advantageously utilize the high torque-speed characteristics of the engine.

CHASSIS

FRAME • Parallel channel type, channels 7 x 2.75 x 20 to 22 in. medium high carbon pressed steel. Length 268.81 in., width 38 in. 8 cross members.

FRONT AXLE • Special for Ford Transit Bus. Reverse Ellipt type with heat treated drop forged "I" beam hnd of manganese steel. Tread 74.5 in.

STEERING • Worm and roller type sector steering gear with worm mounted on roller bearings, 20.5 to 1 ratio. 21 in. diam. steering wheel.

REAR AXLE AND DRIVE LINE • Full-floating axle with straddle-mounted driving pinion and ring gear thrust plate. Drive taken through full torque tube and radius rods. All universal joints fitted with needle roller bearings. Front joint bi-partible for easy disassembly. Tread with dual wheels 65 in.

BRAKES • Air pressure operated four-wheel mechanical. Front brakes equipped with cable and conduit control, rear brakes with steel rod control. Pressure applied by movement of brake pedal to two diaphragm type air chambers in proportion to pedal travel. Two compressed air reservoirs connected in series. System equipped with pressure control, safety valve, compressor governor and pressure gage. Brake drums 14 in. diam. Service brake lining area 350 sq. in. Handbrake acts on independent shoes in rear drums with 120.75 sq. in. lining area. Total lining area 470.75 sq. in.

SPRINGS • All four semi-elliptic of same size and load capacity, 50 x 2.5 in. All leaves chrome alloy steel. Rear springs free-shackled at both ends. Shackle bolts of high manganese steel.

SHOCK ABSORBERS • Four bus-type double-acting hydraulic, adjustable.

WHEELS • Tapered steel disc, 18 x 7 in. single front, 20 x 6 in. dual rear. Front and rear wheel bearings, opposed tapered roller.

TIRES • Front 9.00 x 18 in. single. Rear 7.00 x 20 in. dual.

WHEELBASE • 141 in. Wheel turning circle 54 ft. Body clearance circle 60 ft.

WEIGHT • Chassis with oil, fuel and water 9625 lb.

BODY

CAPACITY • 25 seated passengers and driver. 50 sq. ft. floor area for approximately 24 standees.

LENGTH • Overall, bumper to bumper at centerline 296.68 in. Body only at centerline, 280.38 in.

HEIGHT • Overall from ground, approximately 108.5 in. unloaded. Headroom 76.5 in. forward portion, 74.75 in. rear portion.

FLOOR AREA • 157 sq. ft. Aisle width 16 in.

STEP HEIGHT • Both service doors, 17 in.

BODY CONSTRUCTION • Sectional type. Side and end panel framing, 18-gage formed steel channels and pillars welded into truss-type unit, covered with 14-gage aluminum paneling from skirt to glass line. Floor, waterproof plywood mounted on U-shaped steel cross-bolsters, covered with black bus inoleum. Roof framed of hardwood, reinforced with steel braces, covered with aluminum colored deck material over thick insulation. Windshield, doors and all windows equipped with laminated Safety Glass. Fenders steel integral with body, with rubber outer edges. Hood, two formed steel shells with insulation between. Sponge rubber sealed edges. Hinged at front.

DOORS • Entrance and exit doors on right side of body, front door ahead of front axle and rear door in front of rear axle. Air-pressure operated. Four-section type of metal covered plywood, fitted with 2.5 in. rubber safety edges. Emergency exit door, single section hinged at front edge, located on left side of body in front of rear wheel.

WINDSHIELD • Slanting divided V-type, each half 24 in. high x 39 in. wide. Equipped with air-pressure driven windshield wiper. Additional wiper supplied for right side at slight extra cost.

WINDOWS • Number, 2—rear, 7—right side and 9—left side. All except driver's window slide upwards from lower edge, providing 50 per cent opening. Driver's window slides back allowing 25 per cent opening. Window hardware, rustless steel.

SEATS • Frames of welded tubular steel. Springs two-stage type. Cushions and backs upholstered in genuine leather.

INTERIOR LIGHTING • 8, 6 in. 21 cp. flush type dome lights located in roof, step-well lights, instrument panel, door warning and fare box lights.

EXTERIOR LIGHTING • Depressible beam headlamps with parking bulbs, 32-32 cp.—3 cp. Two combination tail and stoplights, 21 cp. and 3 cp., four 52 cp. destination sign and four 3 cp. marker lights, color as specified.

INSTRUMENT PANEL AND CONTROLS • Speedometer with odometer, and cluster including ammeter, fuel gage, oil pressure gage, engine heat indicator, air pressure gage. Starter switch relay control button. Throttle and choke knobs. Heater control knob (when supplied). Adjustable windshield control valve. Switch cluster, including dome light, ignition, door signal light and heater motor switches. Exterior light switch on steering wheel with horn button.

GRAB RAILS AND STANCHIONS • Rails at ceiling above each longitudinal seat, also top edge of each transverse seat back except driver's and rear seats. Stanchions, 6 for passengers, 1 for fare box wired for light.

REGULAR EQUIPMENT • Advertising racks, buzzer signal, destination sign of single roll type, two interior and two exterior mirrors.

PAINTING • Standard colors, cream, green, yellow, orange, black, brown and blue. Horizontal mouldings with any of these colors. Combinations at regular price, body one color, drip moulding, belt and lower guard mouldings any of above colors. Type finish, one coat primer, one surfacer and two coats of enamel. Interior finished in green metallic lacquer, light and dark.

FORD ENGINE AND PARTS EXCHANGE PLAN

Ford Transit Bus engines can be exchanged for factory-reconditioned engines under the same famous Exchange Plan that has been available to all Ford users for several years. The engine assembly is conveniently removable through the front panel of the body after dismantling the grille, radiator and allied parts. The exchange takes much less time and costs far less than an ordinary engine overhaul. New engine performance is restored at low cost whenever required. Many other units also can be exchanged for factory-reconditioned parts. These include carburetors, ignition distributors, fuel pumps, clutch parts and brake shoe assemblies.

FORD TRANSIT BUSES AVAILABLE FOR PROOF TESTS

Ford Transit Bus dealers and representatives are located at convenient points throughout the country. They have Ford Transit Buses available for tests and demonstrations under actual operating conditions on existing bus routes. Interested bus operators are invited to find out how and why Ford Transit Buses can reduce operating costs and increase profits. Communicate with the Ford Motor Company, Dearborn, Mich.