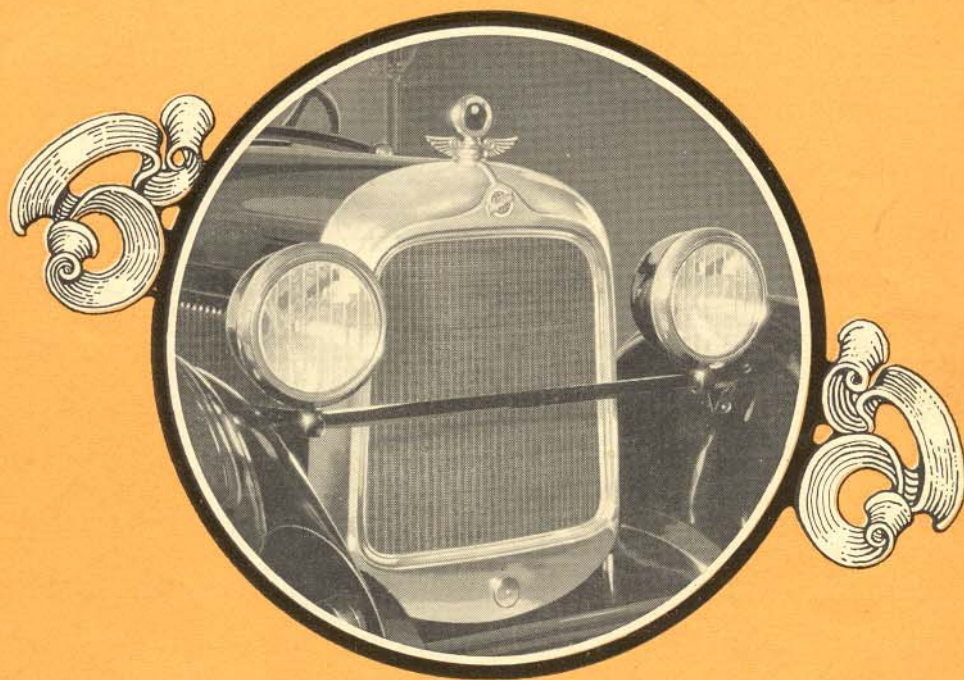


Announcing Two New
**STUDEBAKER
BUS CHASSIS**



*Manufactured Complete
by Studebaker*

The **STUDEBAKER CORPORATION**
of **CANADA, LIMITED**

WALKERVILLE, ONTARIO

T H I S I S A S T U D E B A K E R Y E A R

The Essentials of Profitable Motor Bus Operation

PROFITABLE Bus Operation depends on (1) the selection of dependable, economical carrying units, and (2) keeping these units in continuous capacity or near-to-capacity service.

There is no question about the great money-making opportunity for city and inter-city bus service.

The problem is to determine the right type and size of bus best suited to the varying conditions of traffic.

Analysis of the cost records of successful operators shows the smaller capacity units *running frequently on regular schedules* are much more profitable than *large-capacity units running at less frequent intervals*.

Large-capacity units that are full during rush hours are generally more than half empty of passengers and run at a loss during the balance of the day.

Frequency of service with smaller-capacity units remedies that loss.

Experience proves that more and smaller-capacity units are invariably more satisfactory than fewer and larger-capacity units—both to passengers and operators.

Restricted service penalizes the public. And the underloaded bus consumes profits—*empty seats eat into profits*. As many failures of bus operators are due to this cause as to the purchase of unreliable and uneconomical chassis.

This explains the trend to busses of 12- to 18-passenger capacity.

More and more operators are standardizing on this size of unit, selecting a bus of proved dependability with low first cost, low operating and upkeep expense, thus being able to purchase additional units for a small investment and cutting down overhead costs.

How Studebaker Meets These Essentials

THE new Studebaker Bus Chassis have been developed to meet the need for sturdy, dependable chassis, low in first cost as well as in operating and upkeep expense, accommodating bodies of 12- and 18-passenger capacity. For many years, busses on the Studebaker Big-Six chassis have been in operation in all parts of the country. Today more than one thousand are in daily service.

Now, Studebaker presents two specially designed Bus Chassis, 158 inches and 184 inches in wheelbase, respectively.

Studebaker has always specialized in passenger transportation.

These two new chassis carry that specialization a step further into the bus field.

They represent a wealth of experience and years of study of the requirements in the field of bus transportation.

They are built to carry the medium loads—12 to 18 passengers—that are proved to be the most profitable for operators.

They are built staunchly—with all the inbuilt stamina and dependability of every Studebaker—to answer the most rigorous demands of bus service.

Yet the price is very moderate.

This is because Studebaker builds these chassis *complete* in its own huge plants. *They are manufactured, not assembled.* Thus the quality is genuine Studebaker throughout and large production results in important savings to the purchaser.

The bus operator can purchase two new Studebaker Bus Chassis, equip them with the precise size and style of body to meet his requirements for the price of one large-capacity bus, and provide better service to the territory he serves and at the same time increase his profits considerably.

Tested and proved by actual daily service under widely varying conditions, the new Studebaker Bus Chassis are a sound investment.

FULL SPECIFICATION

The New, Specially Designed, Spec

Wheelbase

Wheelbase — 184 inches.

Engine

The powerful Big Six engine, of Studebaker design and manufacture, is of the L-head type, cast en bloc and mounted on its own sub-frame. Compact unit power plant, insures perfect alignment between engine and transmission. The bore is $3\frac{3}{8}$ inches and the stroke 5 inches. Actually develops 75-horsepower at 2400 revolutions per minute. Removable head, with combustion chambers exactly machined to uniform size.

Precisely machined cast iron pistons with four rings and extra long ($11\frac{1}{4}$ inches) connecting rods forged from selected steel, are weighed for perfect balance.

The connecting rod bearings are cast babbit; the sturdy one-inch piston pins, set high in the pistons, turn in bronze bushings.

The Studebaker crankshaft, drop-forged from steel specially made to Studebaker specifications, is fully machined on all surfaces to close limit dimensions and therefore inherently balanced. The crankshaft is extra heavy and is carried on four large, bronze-backed bearings, with a total bearing surface of $23\frac{3}{8}$ square inches.

The camshaft is carried on four large bearings. It is made of specially tough forging steel, with cams and bearings forged integral with the shaft. Cam surfaces are case hardened.

Large mushroom-type push rods operate the valves which are $1\frac{1}{8}$ inches in diameter with a lift of $\frac{5}{16}$ inch. The valve stems and push rods are amply lubricated by oil from the crankcase, through open passages which connect with valve chambers.

Lubrication

In the positive force feed lubricating system, oil, under pressure, is forced directly to the crankshaft, camshaft and connecting rod bearings. The overflow from the camshaft and crankshaft forward bearings drains into the timing gear housing and lubricates the timing gears. The overflow from the connecting rod bearings is thrown into the cylinders, lubricating the wrist pins and cylinder walls. The oil returning from the engine parts to the crankcase, is filtered through an extra large and easily cleaned screen, so that the engine operates always on clean oil.

Oil pressure gauge, mounted on instrument board, indicates oil pump pressure.

Chassis lubrication by high pressure system.

Carburetion

A one-and-one-half-inch, doublejet, two-range carburetor, specially designed for the engine, is used. It requires no dash adjustment except the choke for starting in cold weather. Throttle is located at head of steering post.

Accelerator is of the new ball-type, conveniently located on toe board. Improved intake manifold, with hot spot, is doubly divided to assure uniform fuel mixture to each cylinder.

Ignition

Current is supplied by generator, accessibly mounted at the right forward end of the engine, and by a threaded rubber separator storage battery. The distributor, carried at the left front end of engine, is of the full automatic spark control type, thus eliminating the necessity of hand operation by driver. The amount of current generated

is regulated automatically by the engine speed which prevents overcharge of battery. Ignition switch is a separate unit mounted on instrument board at left of steering column.

Starter

Compact, durable starting motor, developed and perfected from many years of use. Operated by starting switch conveniently located on toe board.

Gasoline System

Leak-proof gasoline tank, rectangular in shape. Gauge on instrument board, indicates, in gallons, quantity of gasoline in tank. Fuel is fed to engine through vacuum tank. Capacity: 15 Imperial gallons.

Cooling System

Water cooled with pump circulating system. Tubular type of radiator. Four-blade, 18-inch aero fan.

Electric Lights

Large, powerful headlights, with improved deflecting and diffusing lenses; dash light, which illuminates instrument group; extension lamp; combination stop-and-tail light. Lighting switch which controls headlights (including dimmers), and tail light conveniently mounted on steering wheel. All electric wires carried in flexible metal conduits.

Clutch

Improved single-disc, dry-plate clutch. Exceedingly simple and effective, smooth in engagement and soft in action.

Transmission

In unit with clutch and engine; selective type; three speeds forward and one reverse. Countershaft gears are forged integrally, thus assuring perfect alignment. All shafts and gears of special alloy steel. Shifting lever mounted on housing directly over gears.

Gear Ratio

Gear Ratio — 4.7 to 1.

Rear Axle

Semi-floating type, with extra large Chrome Molybdenum shafts. Spiral bevel gear drive. Load carried on large taper roller bearings at wheel hubs and differential. Housing of heavy pressed steel, shaped to provide great truss strength. By simply removing differential plate, all parts are readily accessible. Axle shaft, $2\frac{1}{8}$ inches diameter.

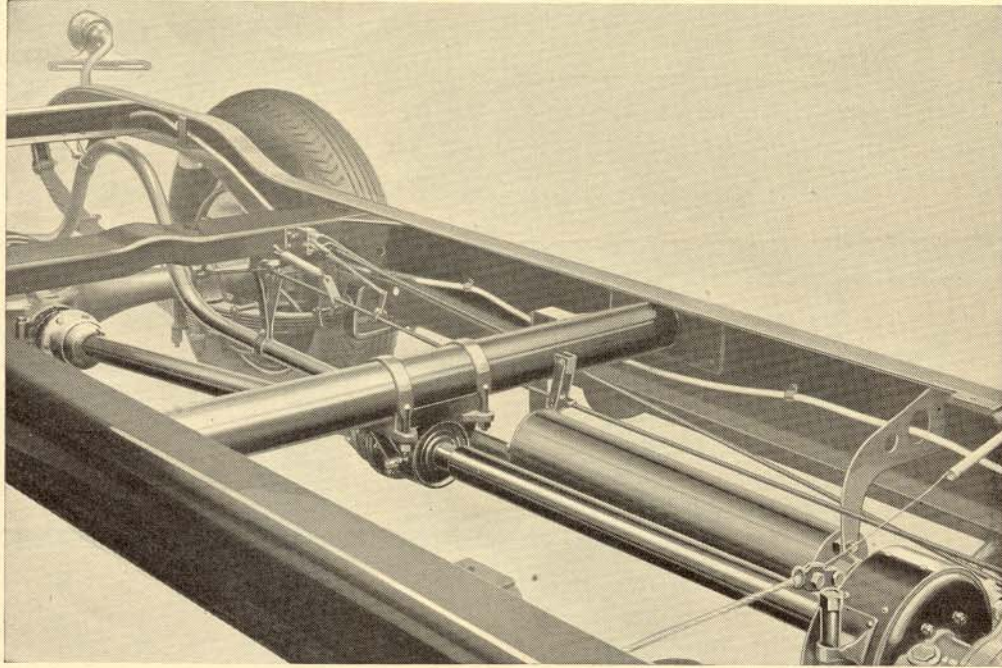
Springs

Semi-elliptic in type. The rear ends of both front and rear springs are carried on links of special steel and designed to take up wear. All spring bolts extra heavy. Studebaker manufactures its own springs from steel made to Studebaker formulas.

Dimensions: Front springs, 38 inches long, 2 inches wide, with 9 leaves. Rear, 56 inches long, 2 inches wide, with 12 leaves.

ONS, MODEL M-184

ially Built Studebaker Bus Chassis



View shows sturdy oversize propeller shaft, held rigid by ball-bearing steady rest

Tires

34 x 7.30, 6-ply, semi-balloons — one extra tire and tube.

Brakes

Powerful Studebaker hydraulic 4-wheel brakes, (licensed under Staude patents). The hydraulic braking power is developed mechanically by a gear pump located at the rear of the transmission case and driven by the propeller shaft. The braking pressure is exerted on the rear wheel drums by large external contracting bands and on the front wheel drums by internal expanding shoes — the front drums are 16 x $3\frac{1}{2}$ inches and the rear drums $16\frac{3}{8}$ x $2\frac{1}{4}$ inches.

Emergency brake — placed at the rear of, and on the main shaft of the transmission and is operated by means of a latching pull handle placed just under the center of the instrument board. By this arrangement, the old-style, hand emergency lever is eliminated.

Locks

Built-in, combination steering gear and ignition lock approved by Insurance Underwriters Laboratories.

Fenders (Front Only)

Made of heavy pressed steel. Extra deep oval, double crown design, beautiful and substantial.

Steering

Full worm and worm wheel type. Specially designed for use with balloon tires. Roller bearings on steering pivots insure the smooth, easy steering qualities, which are notable features of all Studebakers.

Frame

Side members, $\frac{3}{16}$ -inch gauge, 3-inch wide flange by 8-inch deep channel. $4\frac{1}{2}$ -inch deep channel extends 40 inches back of rear axle. Two $3\frac{1}{2}$ -inch tubular cross members in center and one $2\frac{1}{2}$ -inch tubular cross member at rear, in addition to regular cross members.

Wheels

Special straight flange disc wheels — one extra. (Dual wheels and tires in rear, optional at small extra charge.)

Propeller Shaft

In two sections with center ball-bearing steady-rest. Spicer universal joints.

Instrument Board

Handsome, walnut-finished instrument board, the lower line of which is gracefully curved. Instruments in single grouping on silver-finished groundwork, under oval glass, illuminated indirectly.

Instruments include high-grade, 8-day clock, speedometer, ammeter, gasoline gauge, oil pressure gauge, and service brake oil pressure gauge. Instrument board also carries ignition switch and carburetor choke, just to left of steering post. American walnut steering wheel, with horn button, lighting switch and throttle lever conveniently mounted in center.

Hood

Hood with dummy cowl furnished for drive-away purposes.

Equipment

Front bumper, motometer with winged radiator cap, combination stop-and-tail light and extension lamp.

FULL SPECIFICATION

The New, Specially Designed, Special

Wheelbase

Wheelbase — 158 inches

Engine

The powerful Big-Six engine, of Studebaker design and manufacture, is of the L-head type, cast en bloc and mounted on its own sub-frame. Compact unit power plant, insures perfect alignment between engine and transmission. The bore is $3\frac{7}{8}$ inches and the stroke is 5 inches. Actually develops 75-horsepower at 2400 revolutions per minute. Removable head, with combustion chambers exactly machined to uniform size.

Precisely machined cast iron pistons with four rings and extra long ($11\frac{1}{4}$ inches) connecting rods forged from selected steel, are weighed for perfect balance.

The connecting rod bearings are cast babbit; the sturdy one-inch piston pins, set high in the pistons, turn in bronze bushings.

The Studebaker crankshaft, drop-forged from steel specially made to Studebaker specifications, is fully machined on all surfaces to close limit dimensions and therefore inherently balanced. The crankshaft is extra heavy and is carried on four large, bronze-backed bearings, with a total bearing surface of $23\frac{5}{8}$ square inches. The camshaft is carried on four large bearings. It is made of specially tough forging steel, with cams and bearings forged integral with the shaft. Cam surfaces are case hardened.

Large mushroom-type push rods operate the valves which are $1\frac{1}{16}$ inches in diameter with a lift of $\frac{5}{16}$ inch. The valve stems and push rods are amply lubricated by oil from the crankcase, through open passages which connect with valve chambers.

Lubrication

In the positive force feed lubricating system, oil, under pressure, is forced directly to the crankshaft, camshaft and connecting rod bearings. The overflow from the camshaft and crankshaft forward bearings drains into the timing gear housing and lubricates the timing gears. The overflow from the connecting rod bearings is thrown into the cylinders, lubricating the wrist pins and cylinder walls. The oil returning from the engine parts to the crankcase, is filtered through an extra large and easily cleaned screen, so that the engine operates always on clean oil.

Oil pressure gauge, mounted on instrument board, indicates oil pump pressure.

Chassis lubrication by high pressure system.

Carburetion

A one-and-one-half-inch, double jet, two-range carburetor, specially designed for the engine, is used. It requires no dash adjustment except the choke for starting in cold weather. Throttle is located at head of steering post.

Accelerator is of the new ball-type, conveniently located on toe board. Improved intake manifold, with hot spot, is doubly divided to assure uniform fuel mixture to each cylinder.

Ignition

Current is supplied by generator, accessibly mounted at the right forward end of the engine, and by a threaded rubber separator storage battery. The distributor, car-

ried at the left front end of engine, is of the full automatic spark control type, thus eliminating the necessity of hand operation by driver. The amount of current generated is regulated automatically by the engine speed which prevents overcharge of battery. Ignition switch is a separate unit mounted on instrument board at left of steering column.

Starter

Compact, durable starting motor, developed and perfected from many years of use. Operated by starting switch conveniently located on toe board.

Gasoline System

Leak-proof gasoline tank, rectangular in shape. Gauge on instrument board, indicates, in gallons, quantity of gasoline in tank. Fuel is fed to engine through vacuum tank. Capacity: $14\frac{1}{2}$ Imperial gallons.

Cooling System

Water cooled with pump circulating system. Tubular type of radiator. Four-blade, 18-inch aero fan.

Electric Lights

Large, powerful headlights, with improved deflecting and diffusing lenses; dash light, which illuminates instrument group; extension lamp; combination stop-and-tail light. Lighting switch which controls headlights (including dimmers), and tail light conveniently mounted on steering wheel. All electric wires carried in flexible metal conduits.

Clutch

Improved, single-disc, dry-plate clutch. Exceedingly simple and effective, smooth in engagement and soft in action.

Transmission

In unit with clutch and engine; selective type; three speeds forward and one reverse. Countershaft gears are forged integrally, thus assuring perfect alignment. All shafts and gears of special alloy steel. Shifting lever mounted on housing directly over gears.

Gear Ratio

Gear Ratio — 4.7 to 1.

Rear Axle

Semi-floating type, with extra large Chrome Molybdenum shafts. Spiral bevel gear drive. Load carried on large taper roller bearings at wheel hubs and differential. Housing of heavy pressed steel, shaped to provide great truss strength. By simply removing differential plate, all parts are readily accessible. Axle shaft, $2\frac{1}{8}$ inches diameter.

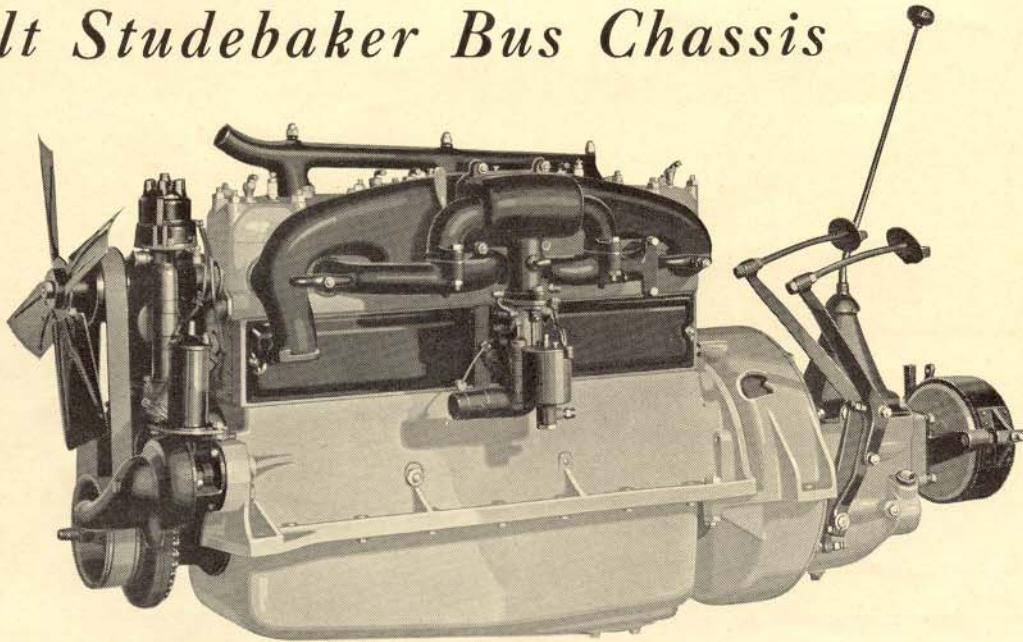
Springs

Semi-elliptic in type. The rear ends of both front and rear springs are carried on links of special steel and designed to take up wear. All spring bolts extra heavy. Studebaker manufactures its own springs from steel made to Studebaker formulas.

Dimensions: Front springs, 38 inches long, 2 inches wide, with 9 leaves. Rear, 56 inches long, 2 inches wide, with 10 leaves.

ONS, MODEL A-158

ially Built Studebaker Bus Chassis



*The 75-Horsepower Big Six Engine of the
New Studebaker Bus Chassis*

Tires

34 x 7.30, 6-ply, semi-balloons — one extra tire and tube.

Brakes

Powerful Studebaker hydraulic 4-wheel brakes, (licensed under Staude patents). The hydraulic braking power is developed mechanically by a gear pump located at the rear of the transmission case and driven by the propeller shaft. The braking pressure is exerted on the rear wheel drums by large external contracting bands and on the front wheel drums by internal expanding shoes — the front drums are 16 x 3½ inches and the rear drums 16¾ x 2¼ inches.

Emergency brake — placed at the rear of, and on the main shaft of the transmission and is operated by means of a latching pull handle placed just under the center of the instrument board. By this arrangement, the old-style, hand emergency lever is eliminated.

Locks

Built-in, combination steering gear and ignition lock approved by Insurance Underwriters Laboratories.

Fenders (Front Only)

Made of heavy pressed steel. Extra deep oval, double crown design, beautiful and substantial.

Steering Wheel

Full worm and worm wheel type. Specially designed for use with balloon tires. Roller bearings on steering pivots insure the smooth, easy steering qualities, which are notable features of all Studebakers.

Frame

Side members, ⅜-inch gauge, by 2¼-inch wide flange, 7⅛-inch deep channel. 3½-inch tubular cross member used in addition to the seven standard cross members.

Wheels

Special straight flange disc wheels — one extra.

Propeller Shaft

In two sections with center ball-bearing steady-rest. Spicer universal joints.

Instrument Board

Handsome, walnut-finished instrument board, the lower line of which is gracefully curved. Instruments in single grouping on silver-finished groundwork, under oval glass, illuminated indirectly.

Instruments include high-grade, 8-day clock, speedometer, ammeter, gasoline gauge, oil pressure gauge, and service brake oil pressure gauge. Instrument board also carries ignition switch and carburetor choke, just to left of steering post. American walnut steering wheel, with horn button, lighting switch and throttle lever conveniently mounted in center.

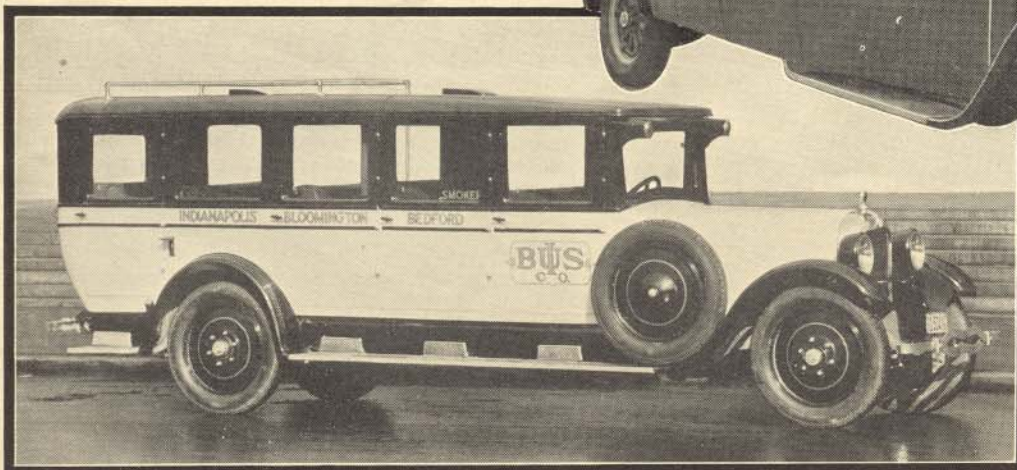
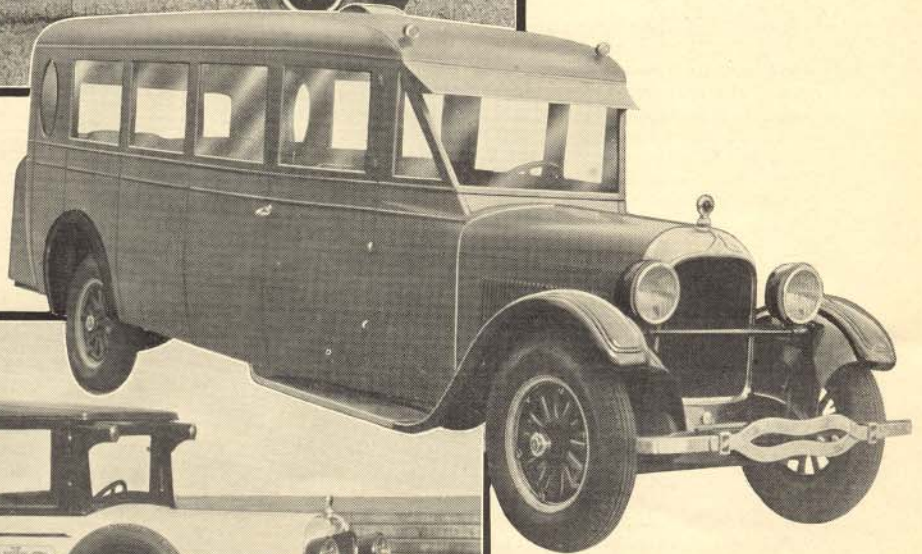
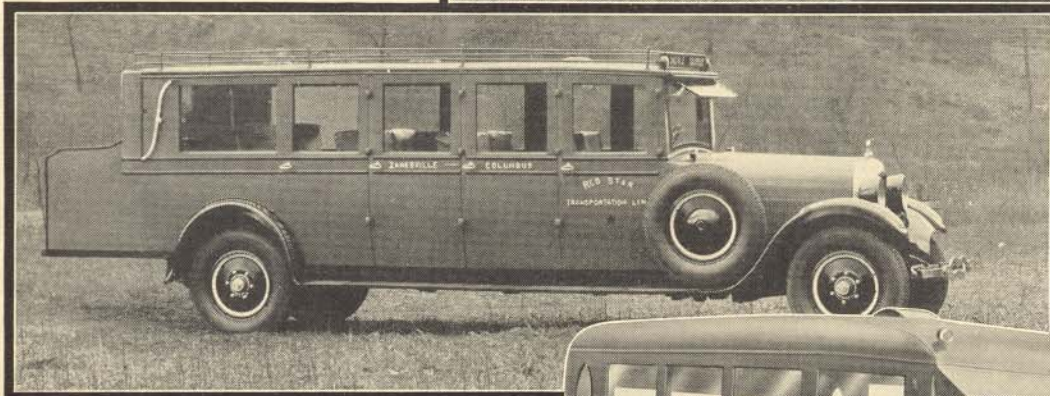
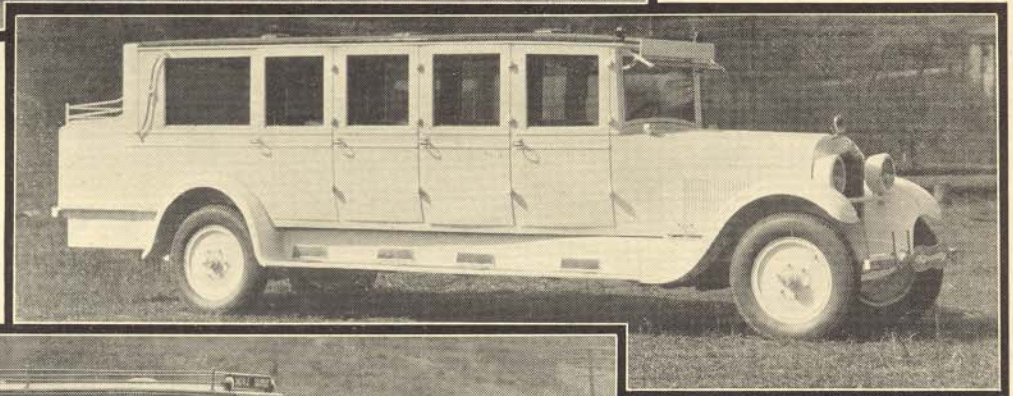
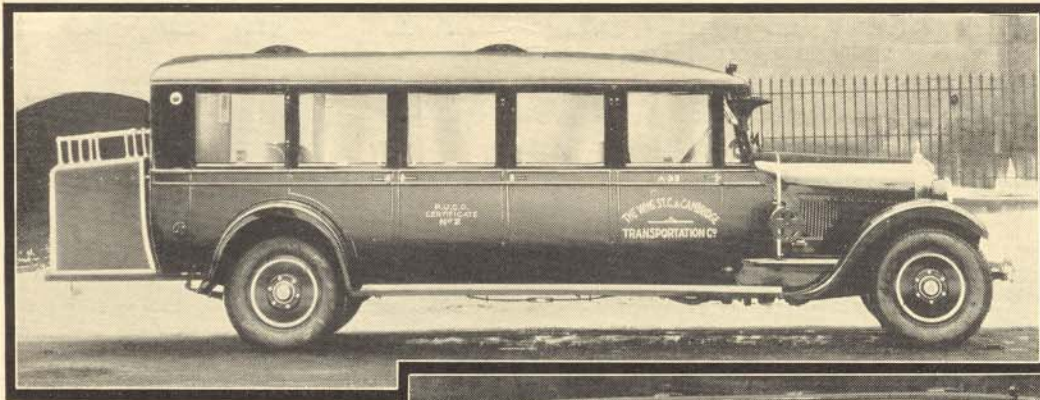
Hood

Hood with dummy cowl furnished for drive-away purposes.

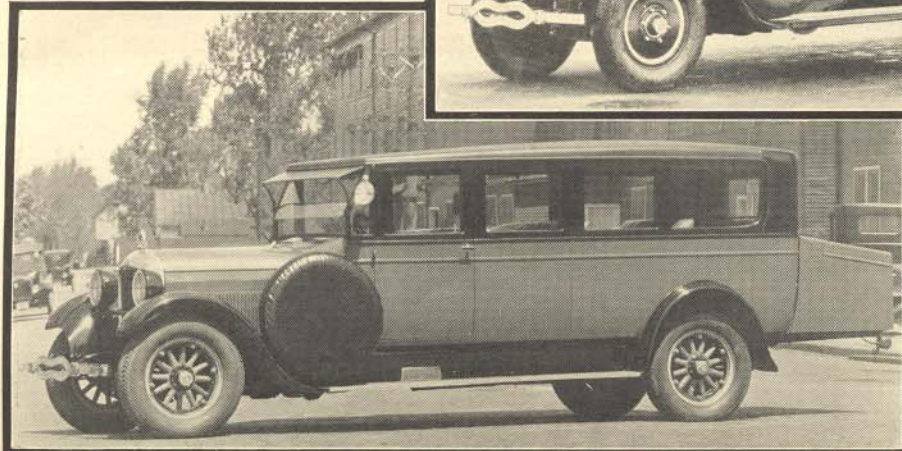
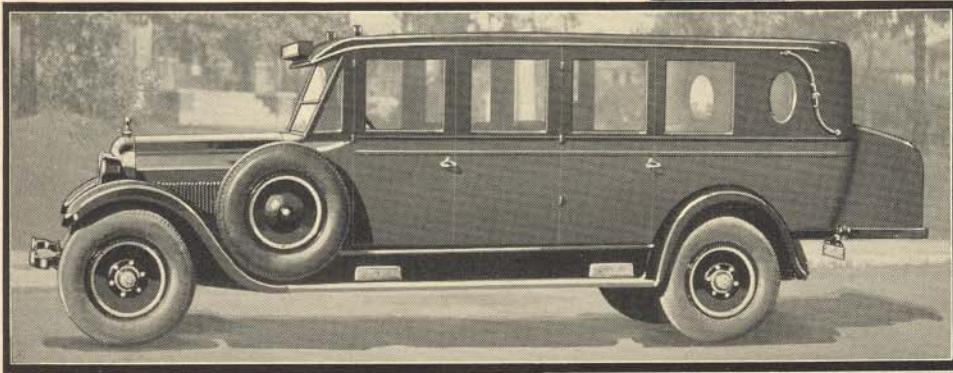
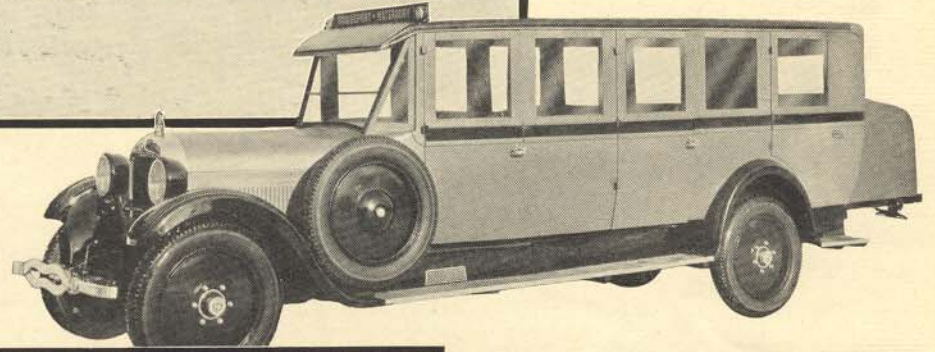
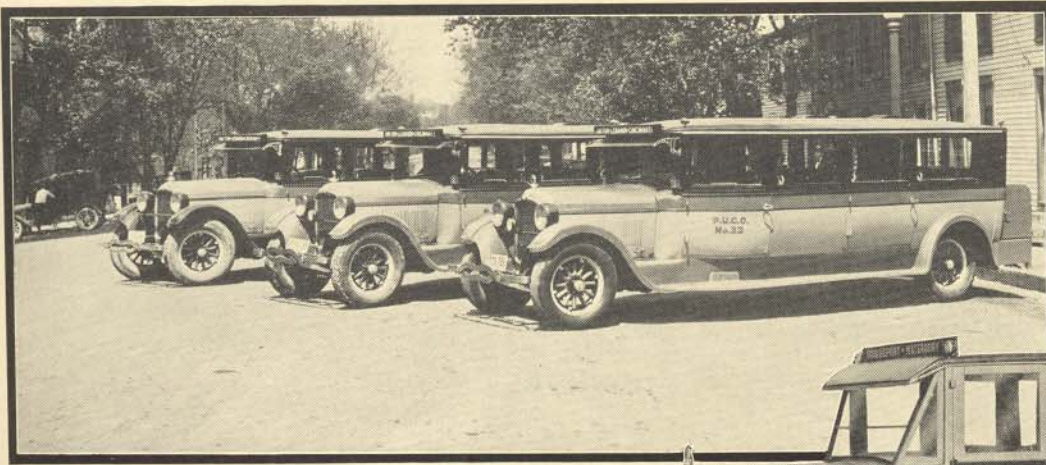
Equipment

Front bumper, motometer with winged radiator cap, combination stop-and-tail light and extension lamp.

Profitable Mileage Proved by More



Than a Thousand Studebaker Busses



Economical Operation

The First Essential in Profitable Bus Operation

FIRST cost, operating cost and upkeep cost are three important factors in profitable bus transportation.

Studebaker chassis have proved their economy on all three counts.

Cost figures have been maintained, comparing Studebaker operating costs with those of other chassis—and the figures demonstrate conclusively the time and money-saving economy of Studebaker.

These figures will be placed at the disposal of bus operators who plan to add to their equipment, and to others who expect to enter this field.

The new Studebaker Bus Chassis, specially developed from this experience, is making an even more impressive record.

Its low first cost, its remarkably low mileage costs, its freedom from repairs and upkeep expense are winning rapid recognition.

Many operators are standardizing their fleets on the Studebaker chassis.

The new bus chassis lives up to the Studebaker reputation for quality and dependability. They assure greater dependability of service at much less cost.

You are invited to write us for important facts and figures relative to operative costs, names of body makers who specialize in building bus bodies for the new Studebaker Bus Chassis, and other helpful information.

Clip the coupon below. It will bring full particulars.

THE STUDEBAKER CORPORATION OF CANADA, LIMITED

Walkerville, Ontario

TEAR HERE AND MAIL

Studebaker, Walkerville, Ontario

Please send me your data on bus operating costs, body designs, etc.

I operate a bus line Distance covered _____ miles. I plan to start a bus line

Please Check.

Name _____ Street _____

City _____ State _____

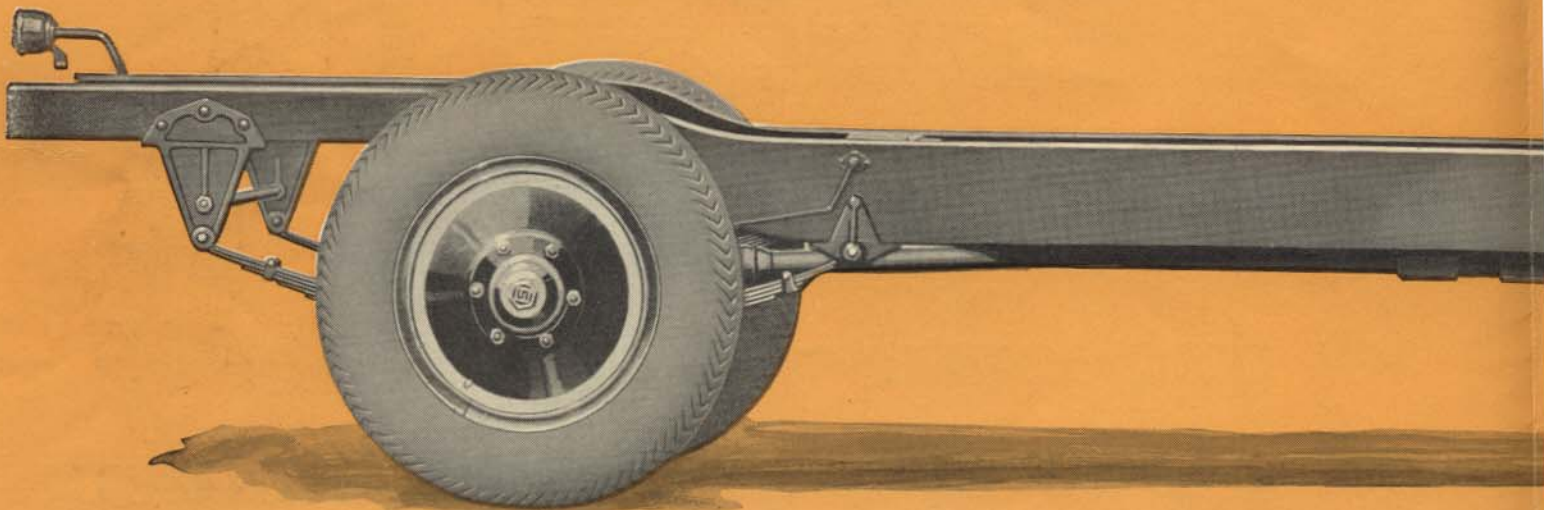
Extra Power, Extra Strength and Are Built Into the

STUDEBAKER BUS CHASSIS

MODEL M-184

Wheelbase, 184 inches; 75 horsepower Studebaker Big Six engine; extra sturdy frame with eight stout cross members; Studebaker hydraulic four-wheel brakes; semi-balloon tires. Furnished with either single or dual rear wheels.

(See complete specifications, pages 4 and 5.)



Rear axle shafts of
Chrome Molybdenum
steel—2½" in
diameter

Large, powerful
Studebaker
hydraulic
4-wheel brakes

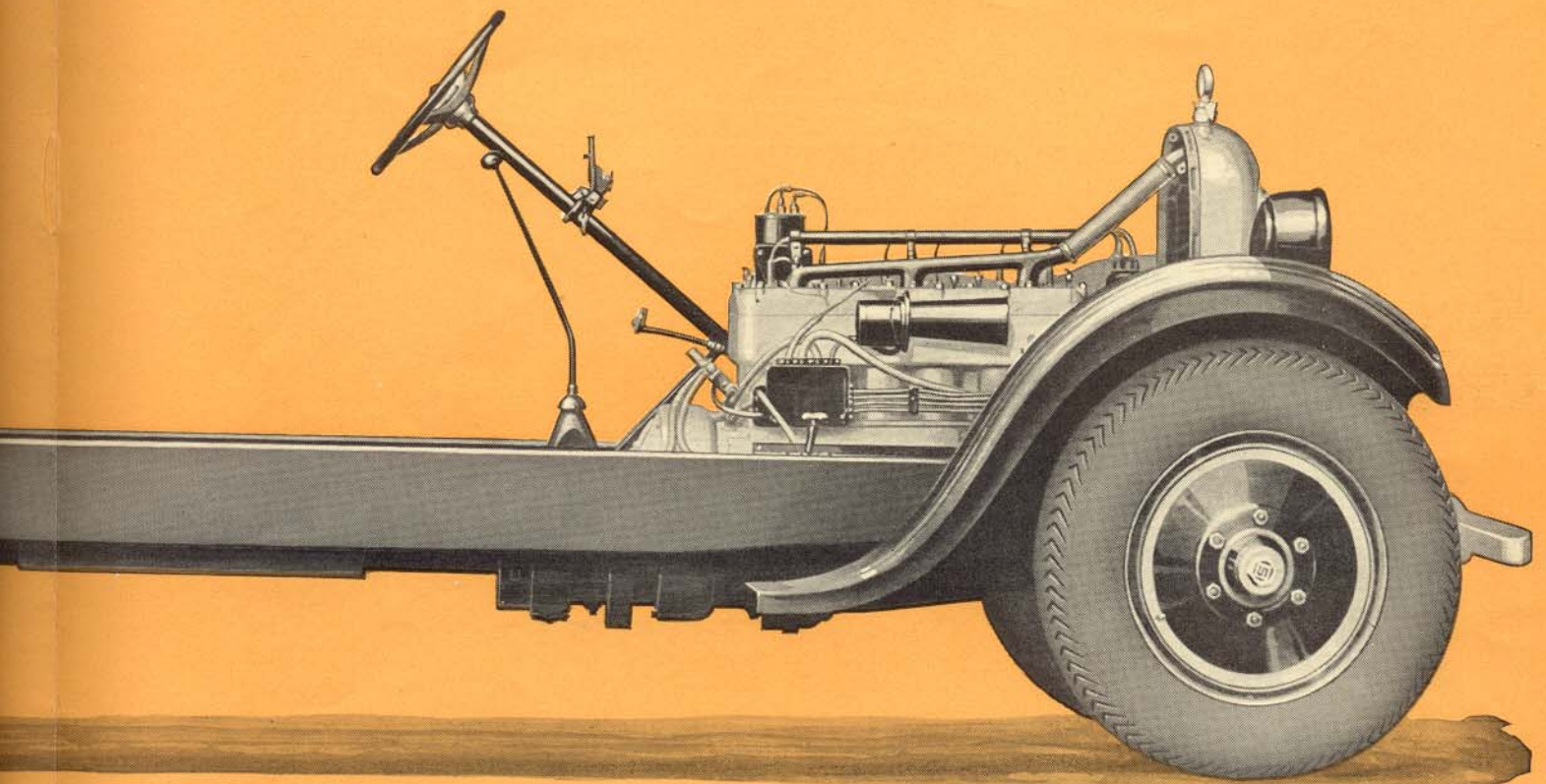
Strong, sturdy frame:
side members, 3½"
flange, 2¼"
channel, 7½"

3 Universal joints
insure flexibility
in driving

Motor
mounted on substantial
sub-frame

Every Detail Reflects the Sturdiness Studebaker Bus Chassis, Model

and Studebaker Dependability The New Bus Chassis



stantia

Oil Filler opening
conveniently
located

Water-proof
distributor

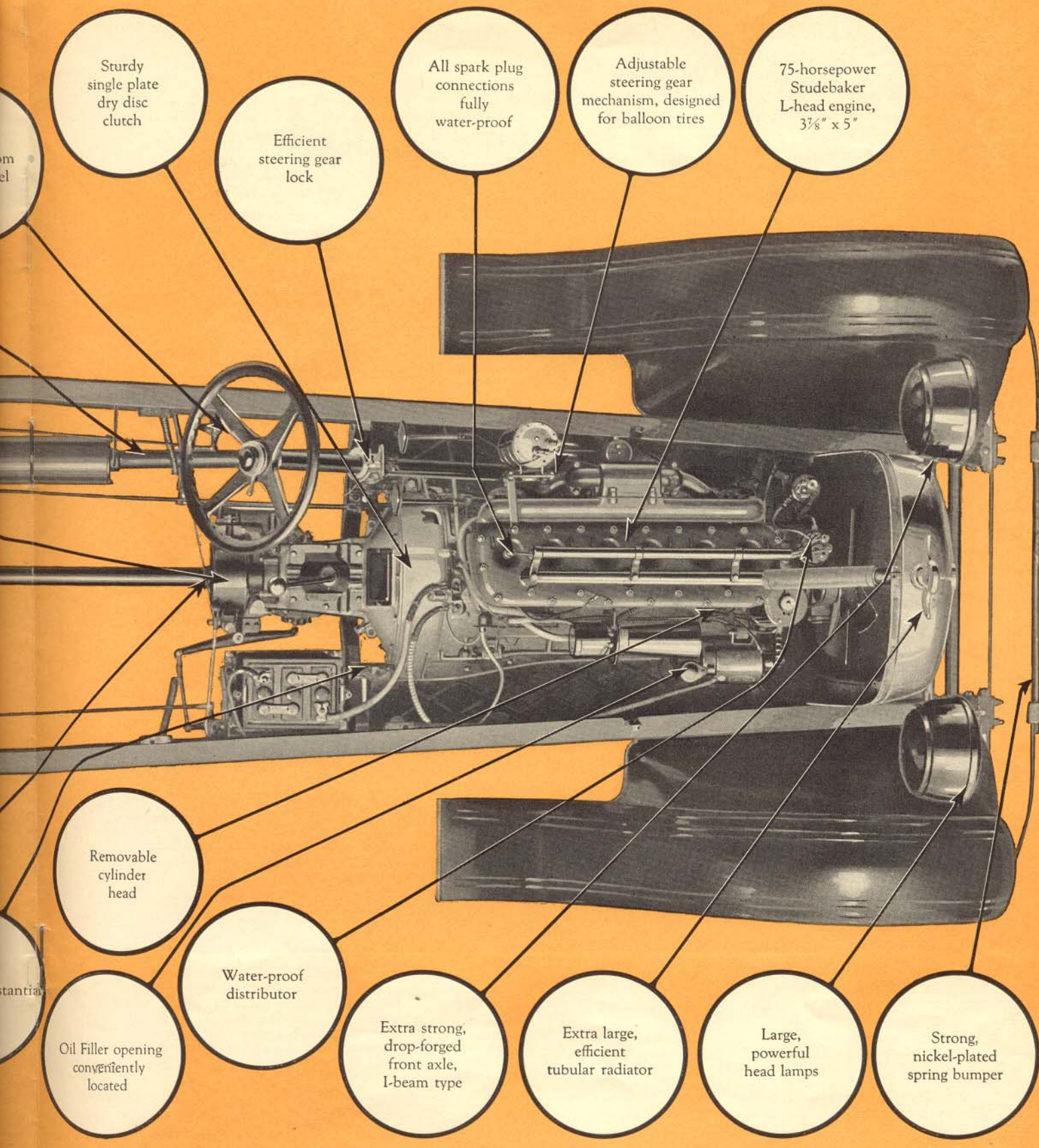
Extra strong,
drop-forged
front axle,
I-beam type

Extra large,
efficient
tubular radiator

Large,
powerful
head lamps

Strong,
nickel-plated
spring bumper

Sturdiness of Construction of the New Model A-158 (Wheelbase, 158 Inches)



Sturdy single plate dry disc clutch

Efficient steering gear lock

All spark plug connections fully water-proof

Adjustable steering gear mechanism, designed for balloon tires

75-horsepower Studebaker L-head engine, 3 7/8" x 5"

Removable cylinder head

Water-proof distributor

Extra strong, drop-forged front axle, I-beam type

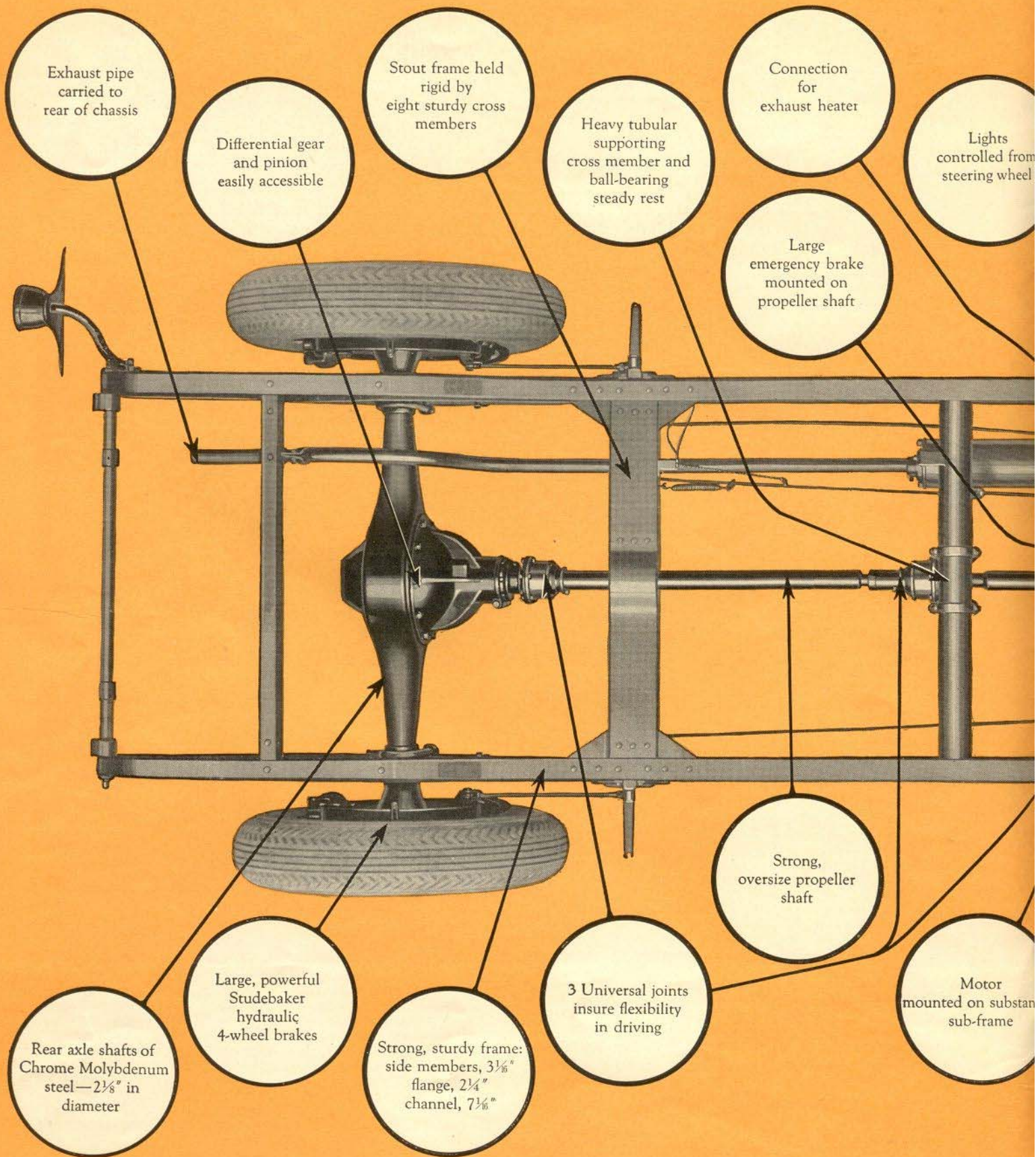
Extra large, efficient tubular radiator

Large, powerful head lamps

Strong, nickel-plated spring bumper

Oil Filler opening conveniently located

Sturdiness of Construction of the New Model A-158 (Wheelbase, 158 Inches)



Every Detail Reflects the Sturdy
Studebaker Bus Chassis, Mode