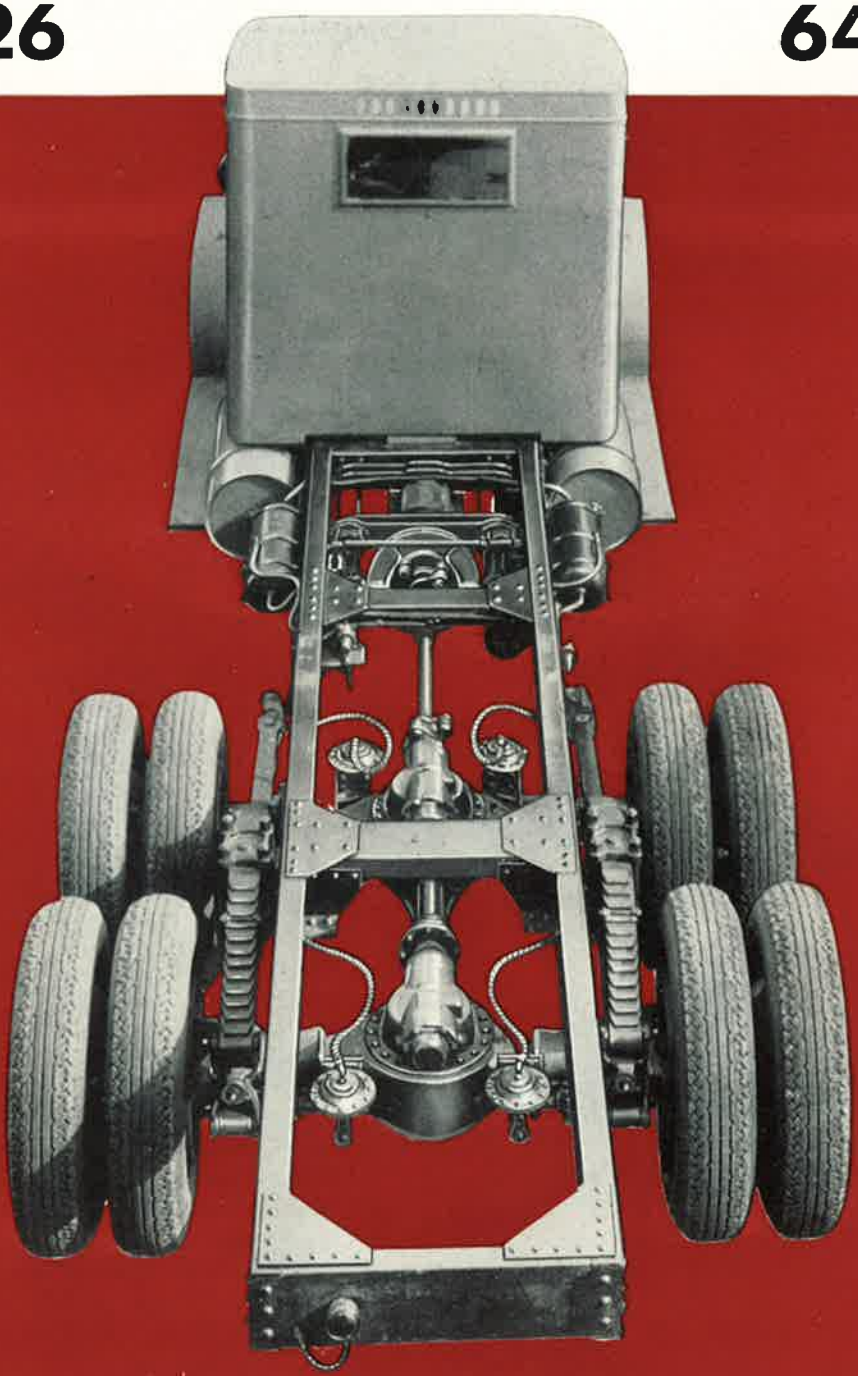
# FAGEOL

## BILL-BUILT SIX-WHEELER

**"SINGLE DRIVER"**
Models
**626-826**

**"DUAL DRIVER"**
Models
**646-846**



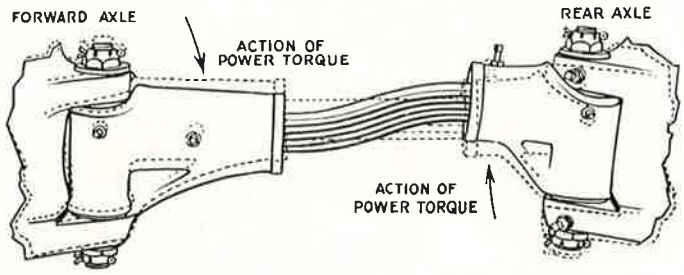
MANUFACTURED BY FAGEOL MOTORS COMPANY OAKLAND, CALIFORNIA

# The only complete factory-

The Fageol six-wheel truck is a startling improveme
rear axle hookups, regardless of whether power is ap
theory embodied in this design is a perfection of all
which have definitely established the economy and
There are two types of drive available in all Fageol s
of distinction are known as "Single-driver," and the
tion, which represents an integral part of the engin
both types of drive. The outstanding feature of thi
changeover from either a "Single-driver" to a "Dua
a "Single-driver," as operating conditions dictate, all
of time and without disturbing the rear axle hookup
nected by the patented Fageol torque spring which

## ADVANTAGES OF FAGEOL TORQUE SPRING

1. The flexibility of the torque spring allows a slight rotation of the axles as the driving torque is applied, so that each axle finds its own driving center and equal distribution of power torque is obtained.
2. Keeps both axles in alignment at all times.
3. By sliding free in the one knuckle sleeve, a telescoping action is permitted to compensate for deflection in the torque spring and separation of axles under spring deflection when truck is loaded.
4. Permits a rotating action to allow for difference in wheel angularity caused from uneven road conditions.
5. Torque spring knuckle sleeves are mounted to axle housings by vertical pins. Under extreme conditions of wheel angularity a slight lateral movement of the torque spring and knuckle sleeve assembly is necessary to relieve strain from the axle housing. This lateral movement permits the four driving wheels to track when turning.




## ALU

In developing the six-wheel aluminum truck chassis,
forgone its policy of building motor trucks especi
ditions, but rather has contributed the most outst
ing the net pay-load of heavy duty trucks over
since the advent of the compound transmission
truck.
In these days when operators are faced with the fac
profit margins, the matter of structural dead weig
slows up schedules, requires extra power to move a
of the wheel.
With the heat-treated aluminum alloy construction,
payload per pound of truck at an additional first c
pared with the extra revenue earned . . . and it is
The tensile strength of this heat-treated aluminum a
of steel. It is a versatile metal and in the Fageol six-

# designed and built Six-wheel t

nt over all other methods of double plied to one or both rear axles. The six wheel principles . . . principles fficiency of this type of installation. x-wheel models which for purposes "Dual-driver." The basic construc- eering of the truck, is the same for ; construction is its adaptability for l-driver" or from a "Dual-driver" to of which can be done in a minimum in any way. The two axles are con- has many advantages over the con- ventional type of rigid connection. This torque spring is an important "safety-valve" against material shocks, serious unit damage, or perhaps complete destruction of the driving assembly. When power impulse is applied, there occurs an immediate flexing of the torque spring connector, permitting a sufficient axle rotation to dissipate unnecessary initial shock and the proper division of tractive effort is accomplished. The type of construction and hookup of the two rear axles is such that under all kinds of conditions and no matter what position the wheels are in, the same percentage of gross load is equally distributed to each rear axle. In other words, the load is divided at all times just as though the vehicle were on level ground so that there is no loss of tractive effort with road irregularities. The mounting of the trunnioned springs controls the percentage of load affecting each axle and the oscillating movement permitted by the universal shackles compensates for wheel angularity, thus keeping the equal distribution of load a constant factor.

## MINUM ALLOY CONSTRUCTION

the Fageol Motors Company has not lly adapted to western hauling con- nding advancement toward increas- anything attempted by the industry nd the six-wheel, four-wheel drive

ts of highway weight limits and small t has become a serious problem. It nd takes its toll of profit at every turn

we are offering truck operators more st that is very reasonable when com- backed up by the Fageol guarantee. loy is equal to that of the best grades wheel chassis design its use has been extended to include the entire frame construction, frame brackets, special Fageol three piece rear axle housings, front and rear hubs, brake shoes, brake spiders, brake diaphragms and brackets, radius rods, cab, hood, fenders and radiator shell. As an example of the tremendous saving in chassis weight effected by the use of aluminum alloy may be had by a comparison with that of the chassis weight in steel:

| | |
|---|---|
| Weight of steel construction chassis with cab and dual tires on both rear axles (Model 646) | 11,500 pounds |
| Weight of aluminum alloy chassis with aluminum cab and dual tires on both rear axles (Model 646) | 9,485 pounds |
| Total saving in weight or extra net pay-load | 2,015 pounds |

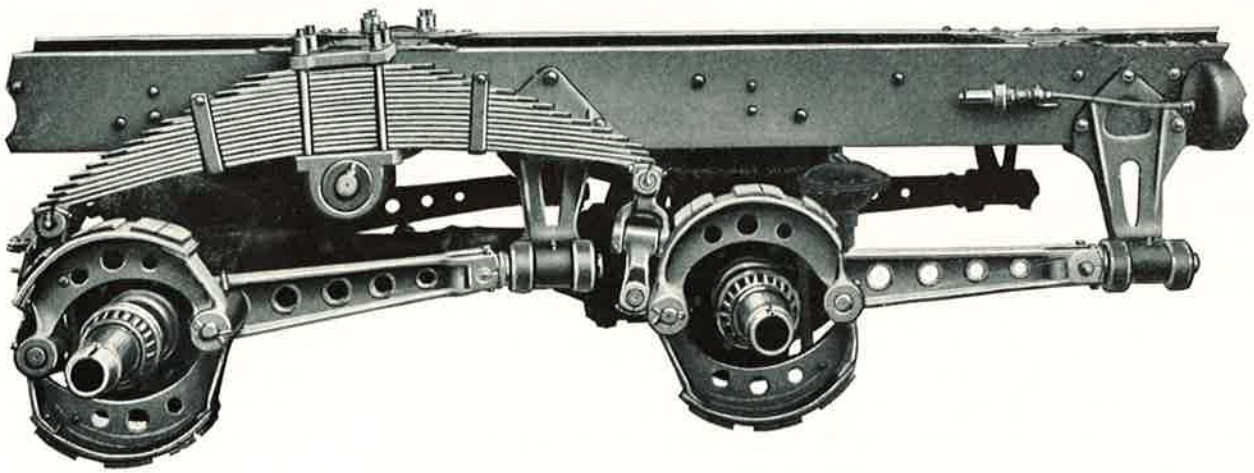
The six-wheel aluminum alloy construction is the result of many months of experimenting and exhaustive tests by Fageol engineers. The perfecting of this design is a typical example of Fageol ingenuity in its unceasing endeavor to produce better transportation equipment to meet the many and varied types of operating conditions of the West . . . to perform economically and earn greater profits for Fageol owners.

# ruck available either as a "Single-driver" or "Dual-driver" in the same chassis

## Spring suspension

FAGEOL six-wheel construction embodies a unique principle of spring suspension whereby each of the two driving axles are hooked up as though they were independent units. The springs are mounted in the center to a trunnion which is built integral with the frame and by this method an oscillating movement is permitted and the springs assume the same action as a "walking beam."

The spring eyes are connected to the rear end of each radius rod by means of double acting spring shackles. In addition to the movement necessary to compensate for spring deflection, these spring shackles provide for a lateral movement that relieves the springs of torsional twist caused from road irregularities. Further, this lateral movement comes into play very effectively in conjunction with the lateral "slip" movement provided in the radius rod journals on the axle housing when making turns.



model 626
20 ft frame

6900 lbs
110
7010

Closed Cab.
9.75-20 tires
6135 motor
714 transmission
75700 D.R. Differential

# SPECIFICATIONS

## FAGEOL MODELS 626 646 and 826 846

### SIX-WHEEL "SINGLE-DRIVER" and "DUAL-DRIVER"

### Models 626 RL—646 RL

Maximum gross weight allowance (Chassis, body and load) — 626RL . . 28,000 pounds; 646RL . . 30,000 pounds

Chassis Weight . . . . . 626RL . . 11,500 pounds; 646RL . . 11,100 pounds

DRIVE SHAFT—Three section—First section Spicer with 500 series Universal Joints; Second section Peters with 600 series joints; Spicer shaft connecting two driving axles with 500 series Universal Joints.

REAR AXLE—On Model 646 "Dual-Driver"—two Fageol patented "Synchro-Drive" special nickel steel cast housings; Timken 65000 series differentials. Axles connected by Fageol patented torque spring.
On Model 626 "Single-Driver"—Double reduction or worm drive can be furnished, as ordered.

### Models 826 RL—846 RL

Maximum gross weight allowance (Chassis, body and load) — 826RL . . 32,000 pounds; 846RL . . 34,000 pounds

Chassis Weight . . . . . 826RL . . 11,800 pounds; 846RL . . 12,200 pounds

DRIVE SHAFT—Three section—First section, Spicer with 500 series Universal Joints; Second section, Peters with 600 series joints and Spicer Shaft connecting two driving axles with 500 series Universal Joints.

REAR AXLE—On Model 846 "Dual-Driver"—two Fageol patented "Synchro-Drive" special nickel steel cast housings; Timken 65700 series differentials; axles connected by Fageol patented torque spring.
On Model 826 "Single-Driver"—Double reduction or worm drive can be furnished, as ordered.

**The following specifications are the same for models 626 RL—646 RL and 826 RL—846 RL**

FRAME—Pressed steel channel, 8-inch web, 3 1/2-inch flange, 5/16 inch thick.

WHEELBASE—195 inches, standard; option of 167 inch or 172 inch for dump body; 220 inch long wheelbase with fish-plated frame at extra cost.

MOTOR—Six cylinder Waukesha, bore 4 3/8 inches, stroke 5 1/8 inches; S. A. E. Horsepower 46.0, actually develops 105 at 2400 R.P.M.; Displacement, 462 cubic inches; Maximum torque, 300 foot pounds at 650 R.P.M. Seven bearing crankshaft, genuine "Ricardo" head, full pressure lubrication, Hall-Winslow oil filter. "Silv-O-Lite Special" Aluminum Pistons.

CARBURETOR—Zenith.

IGNITION—Delco-Remy distributor, generator and starting motor; distribution through heavy duty truck type battery, 12 volt system.

COOLING—Tubular radiator core; four-piece rust proof cast aluminum housing, highly polished; cushioned to frame by Thermoid rubber pads. Water circulated by pump. Belt driven fan.

CLUTCH—Brown-Lipe.

TRANSMISSION—Brown-Lipe, direct on fourth, low ratio, 7.28 to 1, reverse, 8.28 to 1; used in conjunction with Brown-Lipe Model 60 Compound.

FRONT AXLE—Timken drop forged "I" beam section. Timken wheel bearings.

AXLE RATIO—To suit operating requirements.

BRAKES—Westinghouse air, separate diaphragms, operate on each of the four driving wheels; total braking area: 504 square inches. Hunt-Spiller gun-iron cast drums; "Tru-Stop," 16 inch emergency brake mounted on rear of compound transmission, with total area of 123.25 square inches; steel-to-steel brakes optional on request.

CHASSIS LUBRICATION—Alemite high pressure system to all working parts.

SPRINGS—All leaves chrome-vanadium steel; front size, 41 inches by 3 inches; rear size, 46 inches by 3 1/2 inches; rear springs mounted on frame trunnions, connected to axles by double-acting spring shackles.

RADIUS RODS—Separate radius rod to each driving wheel, journaled to axle housings. Front ends connected to frame brackets by swivel pins, protected from shock by rubber bumpers.

CONTROLS—Left hand drive with transmission and emergency brake levers at center; separate lever for using compound gears; spark and throttle levers mounted on steering wheel; improved foot accelerator.

STEERING GEAR—Ross cam and lever type with large diameter steering wheel. Steering post set to give maximum driving comfort. Ball thrust bearings.

FUEL SUPPLY—Two twenty-five gallon tanks mounted on side of frame. Stewart Vacuum System.

WHEELS—Budd steel disc. Spare wheel furnished.

TIRES—626 and 826: 9.00-20 balloon tires front, and dual on "Driver" axle, single tires on "Idler" axle.
646 and 846: 9.00-20 balloon tires front, and dual on both rear axles.

ELECTRICAL UNITS—Electric headlights, electric horn, electric tail light and dash light.

STANDARD EQUIPMENT—Steel front bumper; crown type fenders; speedometer; motometer; hinged hood; metal dash; tow hooks on front; tool kit; grease gun; wheel wrenches; heavy duty jack; oil can and tire carrier. Note: Tire carrier not furnished on dump trucks.

CAB—Fully enclosed or half door; optional at extra cost. Constructed entirely of steel; cushions upholstered in genuine leather over deep coil springs. Built for utmost driver comfort.

SPECIAL EQUIPMENT AT EXTRA COST—Fishplated frame, Westinghouse trailer connection; draw bar, Waukesha, 4 1/2 inches by 5 3/4 inches, model "AB" motor or Waukesha 5 inches by 5 3/4 inches, model "RB" motor; and other specials.

TRAILER RECOMMENDATIONS—Model 626, no trailer; 646, four-wheel trailer on highway only.
Model 826, four-wheel trailer on highway only; 846, six-wheel trailer on highway only.

NOTE: Above specifications subject to change as often as additional proven refinements are perfected.

## BODY BUILDERS' DIMENSIONS

| | 167" W.B. | 172" W.B. | 195" W.B. | 220" W.B. |
|---|---|---|---|---|
| Back of Cab to end of frame | 128" | 138" | 192" | 216" |
| Back of Cab to center line mean wheelbase | 86 5/8" | 91 5/8" | 114 5/8" | 139 5/8" |
| Center line mean wheelbase to end of frame | 41 3/8" | 46 3/8" | 77 3/8" | 76 3/8" |
| Overall length | 233 3/4" | 243 3/4" | 297 3/4" | 321 3/4" |

The following dimensions are the same for all wheelbases:

| | |
|---|---|
| Front tread | 72" |
| Mean tread — dual tires | 71 1/8" |
| Width of frame | 33 1/2" |
| Width of frame with fish-plates | 34" |
| Dash to back of Cab | 48" |
| Cab height | 57" |
| Cab width | 58" |
| Body clearance | 7" |
| Overall width (38x9.00 tires) | 91" |
| Dump body capacity | 5 yds. |

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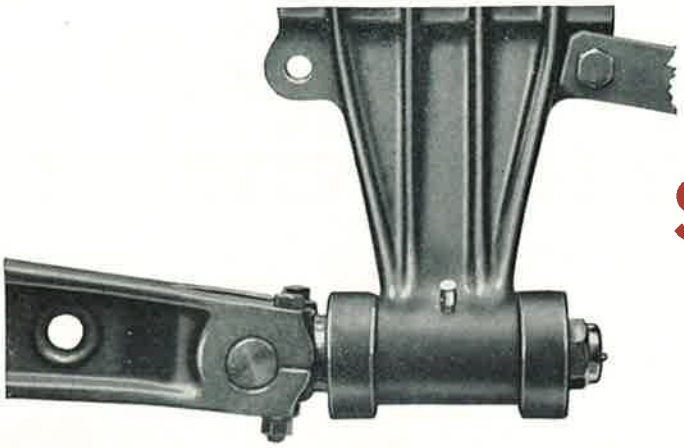

## SHOCK-PROOF RADIUS ROD CONSTRUCTION

THE construction and mounting of the radius rods as designed by Fageol engineers are outstanding. There is a separate radius rod connecting each of the four rear driving wheels to the frame. The front of each radius rod is connected to the radius rod frame bracket by a swivelled pin upon which are mounted two heavy pure gum rubber shock absorbers—one in front of the radius rod bracket and one in the rear, each of which can be compressed ¼ inch. Not only are these rubber shock absorbers resistant to road irregularities, but aid in equal distribution of road shock throughout the spring linkage. The radius rod journal around the axle housing has been so designed that a lateral "slip" movement amounting to about ¼ inch is permitted, which relieves springs from torsional twist caused from road irregularities. This laterial "slip" also permits enough flexibility so that each pair of driving wheels track when making turns. Consequently, the vital parts of the driving unit are relieved from shock and strains to a great degree, resulting in long life to working parts. The lateral "slip" movement is one of the three factors that have resulted in very high tire mileage being secured by operators of Fageol six-wheel Motor Trucks.

# BRAKES

TWO important things are accomplished in the brake assembly on Fageol six-wheel models. First, the axle driving assembly, consisting of the worm, worm wheel and differentials are relieved of all braking torque. Second, all braking torque is distributed to the frame and load through the radius rods. Fageol engineers accomplished this by mounting the Westinghouse air brake units on separate castings that are bolted to the inner flange of the radius rod journal. The brake spiders are bolted to the outer flange of the radius rod journal. The brake camshafts running from diaphram plungers to the brake shoes pass through the radius rods. In this manner, each radius rod and brake mechanism assembly forms a complete unit, one to each rear driving wheel. This construction permits positive braking contact and eliminates brake "grabbing."