

*A
Few
Advance
Points
On
"Toledo"
Motor
Cars*

*International Motor Car Co.
Toledo, Ohio.*

In these days of extravagant claims of horse power in Automobiles, the following *ex parte* report, made at our factory January 8th, 1903, is significant:

STEAM AND ELECTRIC RAILROADS
POWER PLANTS
POWER TRANSMISSIONS
STEEL CONSTRUCTION
BRIDGES AND PAVES

CLARK AND DENMAN
CIVIL, ELECTRICAL AND MECHANICAL ENGINEERS
1042 AND 1043 THE BAY VIEW

Wm. H. Clark
E. J. Denman

TOLEDO, OHIO, JANU. 8, 1903.

The International Motor Car Co.,
Toledo, O.

Gentlemen:-

In accordance with your request I have made a brake test of your three cylinder engine as fitted in No. 1 gasoline touring car.

Date of test, Jan. 7th, 1903.

Four cycle engine No. 1534. Description:- Three cylinder gasoline. Jump spark type. Cylinders 4-1/4 inch bore by 5-1/4 inch stroke.

Brake arm factor .00353.

Test.	Revs. per Minute.	Weight on Arm.	Brake H.P.
1	1172	45 pounds	16.62
2	1159	" "	16.41
3	1200	" "	19.06
4	1229	" "	19.52
5	1221	" "	19.40
6	1238	" "	19.66
		Average -----	19.11

Weight of engine including fly wheel 450 pounds.

Pounds of weight per brake horse power 23.49 pounds.

Brake horse power per cubic inch of cylinder capacity .0855.

It will be noticed that the first tests do not show as high a power as the last ones. This was due to the use of very cold water in the jackets, causing the pistons to bind. After the water was warmed to a temperature near that ordinarily used more power was developed. These results were obtained under conditions not so favorable as would obtain in ordinary use.

Very respectfully submitted,

Wm. H. Clark

Mechanical Engineer.

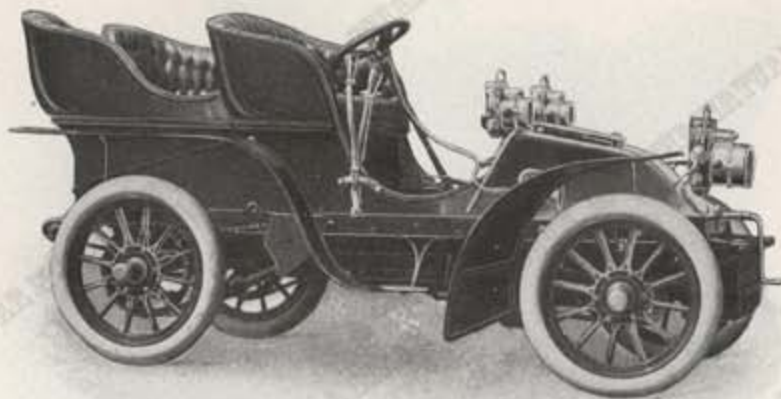


24 BRAKE HORSE-POWER

Toledo Gasoline Touring Car.
1903 MODEL.

Price, \$4,000, f. o. b. Toledo, Ohio.

SEATING CAPACITY.—Two in front seat; three in tonneau.
 MOTOR.—Four-cylinder vertical type, cylinders $4\frac{1}{4}$ inches x $5\frac{1}{4}$ inches, copper jacketed. New valve arrangements, etc.
 NORMAL POWER.—Twenty-four actual brake horse-power at 900 revolutions.
 IGNITION.—Jump spark; belt driven dynamo and dry battery circuit.
 TRANSMISSION.—Sliding gear; 3 speeds—8, 20 and 40 miles per hour.
 DOUBLE CHAIN DRIVE.— $1\frac{1}{4}$ -inch roller chains direct to rear wheels.
 BRAKES.—Three; one on counter-shaft, two direct to rear wheels.
 WHEELS.—Wood, 34 inches in diameter.
 TIRES.—Pneumatic, 34 inches by 4 inches (detachable).
 BEARINGS.—Ball, 1-inch diameter. Balls under vertical axis of wheels.
 DIFFERENTIAL.—On counter-shaft, solid rear axle.
 WHEEL BASE.—Ninety-four inches.
 TRACK.—Fifty-four inches.
 TANKS.—Gasoline, 16 gallons. Water, 5 gallons.
 CIRCULATION.—Chain driven gear pump.
 RADIATOR.—New type—very efficient, requiring only a small quantity of water to effect perfect cooling.
 MILEAGE CAPACITY.—150 miles on one charge.
 LUBRICATION.—Mechanical force feed, splash and compression grease cups.
 CONTROL.—Extremely sensitive self-acting throttle governor.
 STEERING.—Interlocking; hand wheel control.
 FENDERS.—Best procurable patent leather.
 UPHOLSTERING.—Highest possible grade hand-buffed leather.
 EQUIPMENT.—Two brass headlights, two side oil lamps, one rear signal lamp, and one large brass horn with flexible brass covered tube.



18 BRAKE HORSE-POWER

Toledo Gasoline Touring Car.
1903 MODEL.

Price, \$3,000 f. o. b. Toledo, Ohio.

SEATING CAPACITY.—Two in front seat; three in tonneau.
 MOTOR.—Three-cylinder vertical type, cylinders $4\frac{1}{4}$ x $5\frac{1}{4}$ inches.
 NORMAL POWER.—Eighteen actual brake horse-power at 900 revolutions.
 IGNITION.—Jump spark; belt driven dynamo and dry battery circuit.
 TRANSMISSION.—Sliding gear; 3 speeds—6, 18 and 35 miles per hour.
 DOUBLE CHAIN DRIVE.— $1\frac{1}{4}$ -inch roller chains direct to rear wheels.
 BRAKES.—Three; one on counter-shaft, two direct to rear wheels.
 WHEELS.—Wood, 32 inches in diameter.
 TIRES.—Pneumatic, 32 x 4 inches; detachable.
 BEARINGS.—Ball, balls under vertical axis of wheels.
 DIFFERENTIAL.—On counter-shaft; solid rear axle.
 WHEEL BASE.—84 inches.
 TRACK.—54 inches.
 TANKS.—Gasoline, 16 gallons. Water, 8 gallons.
 MILEAGE CAPACITY.—150 on one charge.
 CIRCULATION.—Chain driven gear pump.
 LUBRICATION.—Mechanical force feed, splash and compression grease cups.
 CONTROL.—Extremely sensitive self-acting throttle governor.
 STEERING.—Interlocking; hand-wheel control.
 FENDERS.—Best procurable patent leather.
 UPHOLSTERING.—Highest possible grade hand buffed leather.
 EQUIPMENT.—One large acetylene brass headlight and two brass side oil lamps. One rear signal light. One large brass horn, with brass covered flexible tube.



12 BRAKE HORSE-POWER

Toledo Gasoline Touring Car.

1903 MODEL.

Price, \$2,000, f. o. b. Toledo, Ohio.

SEATING CAPACITY.—Two in front seat; three in tonneau.
 MOTOR.—Two-cylinder vertical type, cylinders $4\frac{1}{4}$ inches x $5\frac{1}{4}$ inches.
 NORMAL POWER.—Twelve actual brake horse-power at 900 revolutions.
 IGNITION.—Jump spark; dry battery circuit.
 TRANSMISSION.—Sliding gear; 3 speeds—6, 14 and 30 miles per hour.
 DOUBLE CHAIN DRIVE.— $1\frac{1}{4}$ -inch roller chains direct to rear wheels.
 BRAKES.—Direct acting on hubs of rear wheels.
 WHEELS.—Wood, 30 inches in diameter.
 TIRES.—Pneumatic, 30 inches x $3\frac{1}{2}$ inches; detachable.
 BEARINGS.—Ball.
 DIFFERENTIAL.—On counter-shaft; solid rear axle.
 WHEEL BASE.—Seventy-six inches.
 TRACK.—Fifty-four inches.
 TANKS.—Gasoline, 10 gallons. Water, $5\frac{1}{2}$ gallons.
 MILEAGE.—On one charge, 125 miles.
 CIRCULATION.—Chain driven gear pump.
 LUBRICATION.—Splash, sight feed and compression grease cups.
 STEERING.—Interlocking; hand wheel control.
 FENDERS OR MUD GUARDS.—Metal.
 UPHOLSTERING.—Best procurable hand-buffed leather throughout.
 EQUIPMENT.—Two side oil lamps or option of brass headlight, and first quality brass signal horn.



1903 *Toledo* Steam Car.

Price, \$1,200 f. o. b. Toledo, Ohio.

NUMBER OF PASSENGERS.—Four, with detachable dos-a-dos seat.
 WEIGHT OF VEHICLE.—1300 lbs.
 HORSE-POWER OF ENGINE.— $7\frac{1}{2}$.
 NORMAL SPEED OF ENGINE.—360.
 NUMBER OF CYLINDERS.—Two. Bore 3-inch; stroke, 4 inches.
 VALVES.—Piston type with rings.
 GENERATOR.—Water tube.
 DIMENSIONS OF GENERATOR.—19 inches diameter, 18 inches deep.
 CAPACITY IN GALLONS.—Eight.
 RUNNING CAPACITY.—Four.
 KIND OF FUEL USED.—Kerosene or Gasoline (optional).
 SPEED RATIO BETWEEN ENGINE AND WHEELS.— $2\frac{1}{2}$ to 1
 WHEEL BASE.—76 inches.
 WIDTH OF TRACK.—54 inches.
 DIAMETER OF WHEELS.—30 inches.
 WHEELS.—Wood.
 SIZE OF TIRES.— 3×30 inches; detachable.
 BEARINGS.—Ball.
 BRAKES.—One double acting on differential.
 DRIVE TO WHEELS.—Chain, $1\frac{1}{2}$ -inch pitch.
 STEERING.—Side lever.
 CAPACITY OF FUEL TANKS IN GALLONS.—Nine.
 CAPACITY OF WATER TANK IN GALLONS.—Fifteen.
 AUTOMATIC DEVICES.—Water Pump and Air Pump
 MILEAGE RATIO ON ONE CHARGE OF FUEL AND WATER.—200 on water,
 75 on fuel.



1903 *Toledo* Steam Car.

Price, \$1,200 f. o. b. Toledo, Ohio.

NUMBER OF PASSENGERS.—Four, with detachable dos-a-dos seat.

WEIGHT OF VEHICLE.—1300 lbs.

HORSE-POWER OF ENGINE.—7½.

NORMAL SPEED OF ENGINE.—360.

NUMBER OF CYLINDERS.—Two. Bore 3-inch; stroke, 4 inches.

VALVES.—Piston type with rings.

GENERATOR.—Water tube.

DIMENSIONS OF GENERATOR.—19 inches diameter, 18 inches deep.

CAPACITY IN GALLONS.—Eight.

RUNNING CAPACITY.—Four.

KIND OF FUEL USED.—Kerosene or Gasoline (optional).

SPEED RATIO BETWEEN ENGINE AND WHEELS.—2½ to 1

WHEEL BASE.—76 inches.

WIDTH OF TRACK.—54 inches.

DIAMETER OF WHEELS.—30 inches.

WHEELS.—Wood.

SIZE OF TIRES.—3x30 inches; detachable.

BEARINGS.—Ball.

BRAKES.—One double acting on differential.

DRIVE TO WHEELS.—Chain, 1½-inch pitch.

STEERING.—Side lever.

CAPACITY OF FUEL TANKS IN GALLONS.—Nine.

CAPACITY OF WATER TANK IN GALLONS.—Fifteen.

AUTOMATIC DEVICES.—Water Pump and Air Pump

MILEAGE RATIO ON ONE CHARGE OF FUEL AND WATER.—200 on water,
75 on fuel.

CONTENTS

Automobiles in Latin America.
Automobiles in the Canary Islands.
Automobiles in Cape Colony.
Automobiles in Asia.
Automobiles in Australasia.

No. 1489.

Issued daily, except Sundays and legal holidays, by the Bureau of Foreign Commerce, Department of State, to which applications for copies should be addressed.

ADVANCE SHEETS
OF
CONSULAR REPORTS.

NOVEMBER 7, 1902.

*AUTOMOBILES IN CAPE COLONY.

Counsel-General W. R. Bingham reports from Cape Town:

Automobiles here are called motor cars; and, although this business is practically in its infancy, there are a few horseless vehicles to be seen on the streets of this city, and I am told the same is true of other cities on the coast. Owing to the unsettled condition of this country on account of the war, but few have reached the interior.

The military have used some American steam-motor cars (the Toledo car taking the lead in number) and they have given great satisfaction.

Difficulty is experienced in getting orders filled.

TARIFF.

There is no duty on the machinery of an automobile, but the vehicle part is appraised at about what the value of a carriage of the same capacity would be, and an ad valorem duty of 25 per cent. is collected on this valuation.

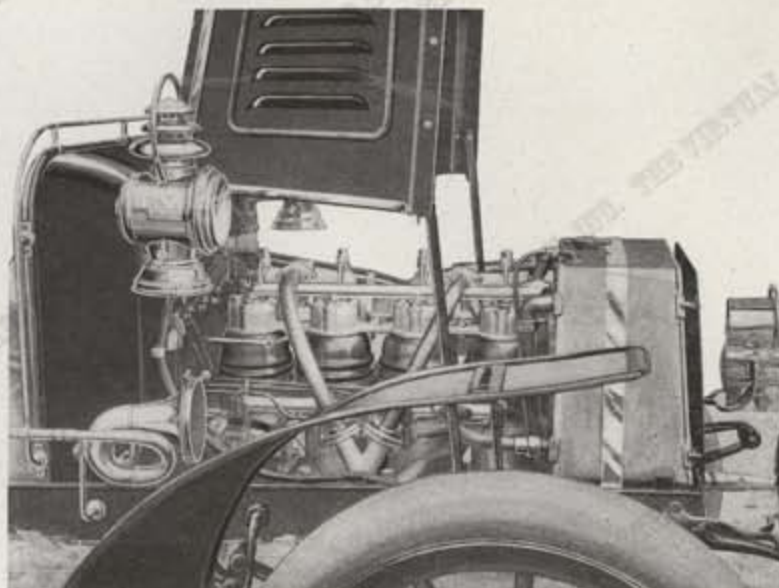
LAWS.

There is no license required for automobiles used here, except if used for hire or to transport passengers (as cabs or landaus about the city).

I can find no other laws which apply to automobiles in this colony. It is possible that some cities have enacted ordinances on this subject, but I do not know of any. All vehicles here are obliged to carry side lights after nightfall.

I am largely indebted for my information to Mr. H. L. Jenkins, an enterprising American, who is now in the United States buying a stock of automobiles. His firm has introduced nearly all of these goods that have been landed in Cape Town.

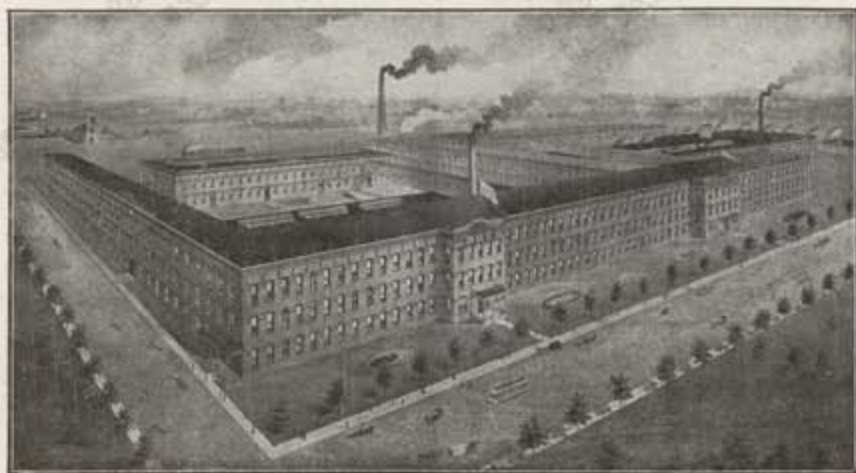
* The reports in this issue of ADVANCE SHEETS are part of the series in answer to Department instruction of April 25, 1902, begun in ADVANCE SHEETS, No. 1482.



Four Cylinder Toledo Engine such as used in the
24-Horse Power *Toledo* Gasoline Touring Car.

If interested get our more
complete and comprehensive
catalogue, now in course of
preparation. * * * * *
International Motor Car Co.,
* * Toledo, Ohio. * *

THE HOME OF THE *Toledo*



International Motor Car Co.
Toledo, Ohio.

The largest, most thoroughly equipped
Automobile Factory in the world.

A
Few
Advance
Points

2

Toledo

or

International Motor Car Co.

Toledo, Ohio.

A
Few
Advance
Points
On

Toledo

Motor
Cars

International Motor Car Co.

Toledo, Ohio.