

PNEUMATIC TRUCK TIRE RULES GIVEN

Tables Show Proper Size to
Use and Air Pressure.

OVER-LOADING HARMFUL

Truck Tire Expert of the Miller
Rubber Company Writes to
N. W. Auto Co.

The following letter received last week from Fred Vogler, president of the Northwest Auto company, from C. H. Russell, head of the truck tire sales department of the Miller Rubber company of New York, should prove of particular value to users of pneumatic equipment on trucks. While the letter is intended primarily to aid users of Miller tires, for which the Northwest Auto company is distributor, the advice is applicable to all makes of pneumatic tires on trucks and for that reason is given below in full.

"The object of this letter is to familiarize branches as well as others interested in truck design with facts and opinions which will assist in providing correct pneumatic tire and rim equipment for trucks. The sizes which have been worked out during the past six years, and which are now standard, are given in the following table:

Rule for sizes of pneumatic tires:
Rim size 34x3 inches, normal tire 34x3 inches, over-size tire 36x4 inches; extreme allowable load per tire (cord) 1700; inflation pressure 100 pounds per square inch.

Rim size 36x4, normal tire 36x4, over-size 38x4, extreme maximum load 2200; inflation pressure 100 pounds per square inch.

Rim size 38x4, normal tire 38x4, over-size 40x4, extreme maximum load 3000; inflation pressure 110 pounds per square inch.

Rim size 40x4, normal tire 40x4, over-size 42x4, extreme maximum load 4000; inflation pressure 110 pounds per square inch.

Rim size 42x4, normal tire 42x4, over-size 44x4, extreme maximum load 5000; inflation pressure 120 pounds per square inch.

Rim size 44x4, normal tire 44x4, over-size 46x4, extreme maximum load 6000; inflation pressure 120 pounds per square inch.

"This table also gives the rim size, normal tire size and the tires which can be fitted as over-size. It shows that there is no over-size possible when 9 and 10 inch sizes go out on new trucks, because the over-size plan falls down above the 9-inch size, on account of the size and stiffness of the tires. It is to be built into the beads as designed at present.

Loads and Inflation.
"To our best knowledge tires give average satisfaction in the way of plenty of cushioning and not too much flexing. Flexing breaks down a tire when run under conditions which produce a deflection in the tire of from 12 to 15 per cent of the section diameter or the height above the rim. The deflection can be controlled by regulating the load or pressure or both. The above table also gives the standard maximum loads and inflation pressures. These inflation pressures are practical to maintain, the tires are built accordingly and the owner will get satisfactory practical results in first cost and mileage delivered if they are used.

"In reference to under-inflation and over-inflation, both evils result in an excessive deflection of the tire. This means that an excessive shearing action is put on the rubber between the piles of the tire and also on the cushion built into the tire between the tread and the piles, which in turn results in a separation of the parts and starts the tire on the road to failure.

Weights of tire equipment, weights of tires alone, without wheels or rims, including tubes and valves:
Tire Sizes in Inches—
Front, 6, 7, 8, 9, 10
Rear, 6, 7, 8, 9, 10
Weight, 6, 7, 8, 9, 10
Pounds, 6, 7, 8, 9, 10

Tubes, Flaps and Valves.
"Cord tubes for pneumatic truck tires are designed and compounded to retain as much of their original strength and shape as possible, after being subjected in service to more or less heat and to continued flexing. The truck tire tubes have been one of the most difficult problems in connection with large tires, but have been solved by building the tubes thick, shaped like the tire, so that they are stretched very little in the tire. The truck tire tube problem has been solved to a still greater extent by rubber compounding. Tubes are on a par with the casings in development and under satisfactory service even in the larger sizes.

"Flaps assume considerable importance in tires inflated to the pressures we recommend for truck tires. It is important that the flap should fit well, so there will be no adjustment of the flap when the tire is inflated, causing a localized stretch in the tube at the edge of the flap.

"The valve question had to be approached first from the standpoint of holding air at pressure from 90 to 140 pounds per square inch and, second, from the standpoint of ease of the change. The valve insides on all 6-inch and larger tubes of heavy-duty type differ from the ordinary valve insides in construction, but the two are interchangeable in any valve stem.

"As to the relation of the valve to easy tire changing, it is customary in applying the small-size tires to insert the valve in the hole in the rim and tip the tire on the rim. This necessitates considerable clearance in diameter of the beads over the rim and in 7-inch sizes and above such design is impractical because the rims are wide and would necessitate too much clearance in bead diameter. It is therefore necessary, if a straight valve and the usual valve hole is used, to push the valve up into the tire, fit the tire on the rim and then fit the valve through the valve hole. To avoid this difficulty some steel wheels are made with a U-shaped slot from the edge to the center of the rim, which permits the tire to go on the rim with no difficulty at the valve. We believe an offset valve with two right-angle bends in it will eventually be used. The offset valve requires only a depression in the rim from the edge to the center and not a slot. The wheel is stronger than the slot and besides making application just as easy, the valve comes out at the edge of the rim and is more accessible to inflate."

Wire Wheels Need Inspection.
Owners of cars fitted with wire wheels should give these parts a weekly inspection for loose spokes. While the wire wheel is strong enough to resist astonishing shocks, nevertheless such a blow may loosen one or two of the spokes, and such damage should be immediately repaired. Where the enamel has cracked off paint should be applied to keep moisture from working its way in and inducing rust.



Unique set of photographs showing four methods used by automobile thieves in making away with a car: 1—Cutting hole in glass of locked sedan door. The rest is easy. 2—Hitching tow line to car with locked ignition. 3—Picking ignition lock with skeleton keys. 4—Changing bodies to prevent identification.

NO SALES TALK WANTED

AUBURN DEALER GETS SURPRISE FROM BRUSQUE BUYER.

No High-Pressure Stuff, Declares
Salesman When He Comes In
to Make Purchase.

When it comes to purchasing an automobile, Fred A. Fisher is a "salesman" in the opinion of T. C. Albert of the Auto Sales company, Portland distributors for the Auburn "beauty six." Mr. Fisher walked into the Auto Sales company office about a month ago, and seeing Mr. Albert, said:

"I want to buy a car." Mr. Albert began to point out the "value" and "utilities" and "beauties" of the Auburn car, but Mr. Fisher stopped him before he had got rid of much of his "sales line."

"Say," said Fisher, "if you don't mind, I'm a salesman myself. I don't want any of this 'high pressure' stuff. You need not try to sell me. I've sold myself. I have had three Auburn cars and I want another, that's all there is to it. If I want to know how much does it cost."

A little staggered, Mr. Albert gave the necessary details. Fisher paid a deposit on the car and drove it away. Two weeks later he drove back. "I've driven this car 1600 miles and am more than satisfied, but I want to trade it in for a sedan."

Fisher is now the owner of an Auburn sedan. Mr. Fisher is a new comer to Portland, having formerly lived in Boston. He is a salesman for Beverly Goodwin, a firm engaged in financing work in connection with the wool industry here.

ASSEMBLING PLANT IN JAPAN
Knocked-Down Ford Cars Now Put Together at Yokohama.

Saturday, October 9, was a great day in industry at Yokohama, Japan, as the assembling of the first Ford car on a progressive assembly line similar to those used by the Ford Motor company in its various branches, according to a news letter just received from Japan by the Ford company.

The assembly line was installed by Sale & Frazar, Ford dealers for the Japanese empire, in their Yokohama branch, for the purpose of assembling faster and more economically the knocked-down cars which they receive from the Ford foreign department in New York city. It is equipped to handle a maximum of 200 Ford cars a month.

Many of Sale & Frazar's employees, besides a number of specially invited guests, attended the event. Motion pictures were taken of the chassis as they came off the line.

UNITED MOTORS SERVICE OFFICIAL VISITS PORTLAND.
H. J. Galvin, western district manager of United Motors Service, with headquarters in San Francisco, was in Portland recently on his way home after a visit in the east. While here he conferred with officials of the Sunset Electric company, authorized representatives of the United States Motor Service in Portland.



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CAR THIEVES ARE BUSY EVERYWHERE—WATCH YOUR AUTO.

WINTER BATTERY NEEDS

LOCAL EXPERT EXPLAINS CARE
IN COLD WEATHER.

Keep Charge Up So That Danger
of Freezing May Be Reduced
to Minimum, Is Advice.

AMERICAN TO WRITE ON AUTO
New York Engineer Chosen to
Write Encyclopedia Article.

NEW YORK, Dec. 24.—Peter M. Heldt, engineering editor of Automotive Industries, has accepted an invitation from the publishers of the Encyclopedia Britannica to prepare the article on the development of the motor car for the last ten years, which will be used in three supplemental volumes to be brought out as soon as possible.

Only one previous article on automobiles has been printed in the encyclopedia and that was prepared by Edward Shrapnel Smith, editor of Commercial Motor, London. Mr. Heldt's article will supplement this, and an American was chosen to write it because of the unprecedented development of the industry in this country. Mr. Heldt is one of the leading American authorities on automotive engineering.

MANY MAXWELL TRUCKS

SURVEY SHOWS VARIED USES
OF LIGHT VEHICLE.

Total of 142 Different Lines of
Business Represented in Census
of Maxwell Trucks.

The great number of lines of business to which the light motor truck is especially adapted is indicated by the result of a recent survey of the truck department by the Maxwell interests.

Questionnaires were sent out to 2000 owners of Maxwell trucks, picked at random from all parts of the country. Their replies showed that 142 different lines of business were using Maxwell trucks. A glance over the result of the survey shows conclusively the important part the truck now plays in modern business, the figures having been received here by the C. L. Bose Automobile company, distributors of the Hudson, Chalmers, Essex and Maxwell cars and the Maxwell trucks.

Listed prominently among the users of Maxwell trucks are general merchandise dealers, wholesale grocers, dairies, oil industries, contractors, manufacturers, municipal services, iron and steel industries and public utilities. Government departments are well represented.

The general hauling and cartage business, which includes trucks with bus bodies used to carry children to consolidated schools in the country, for service between towns and in hauling passengers in cities, finds the Maxwell truck well adapted to its needs.

Farm work provides a multitude of uses to which the truck can be put. Beyond these is a wide scattering of miscellaneous uses, tending to show that the vocational uses of the Maxwell truck are as varied as our business life.

Of nearly 2000 replies received, the average total mileage was 15,713 and the daily average 36.5 miles. The average load was 2647 pounds; gasoline consumption 11.8 miles per gallon and oil 19.4 miles.

Statistics such as these collected by the Maxwell company prove that the motor truck is an established and economical part of our industrial system.

NO CHANGES IN FORD DESIGNS

Message From Factory Denies Rumor That Has Been Prevalent.

No change whatever in body design of the Ford car is contemplated the first of the year, according to R. W. Bush, assistant manager of the local plant of the Ford Motor company. A statement sent out by the local plant is as follows: "There has been a persistent rumor to the effect that a change in body design of the Ford car is contemplated the first of the year. The local Ford assembling plant is in receipt of a telegram from the factory stating that these rumors are false and that no change will be made in the present car models this winter."

LOCAL EXPERT EXPLAINS CARE

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BRUTE STRENGTH

Complete Line—
1½-ton
2½-ton
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5-ton
6-ton

Only Truck Built With
3 Final Drives
Timken Worm
Internal Gear
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DISTRIBUTORS
BROADWAY AT BURNSIDE
Phone Broadway 616
PORTLAND—SEATTLE—PENDLETON

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is my
Pup?

Trucks

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Where
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TIRES! TIRES!

3000 TIRES OF VARIOUS MAKES—CORDS AND FABRICS

PRE-INVENTORY SALE OF TIRES AND TUBES

Never, even when Tires were at the lowest prices since the industry started, have they been as low as we are quoting during our annual pre-inventory sale.

Take advantage of the bargains we are offering, caused by the manufacturers sacrificing to get money for their surplus stocks. This sale lasts only until January 10, 1921. Tires listed here subject to prior sale.

For Fords, Chevrolets, Maxwells and Cars Having 30x3½ Rims

Size 30x3½	List Price	Sale Price
Lehigh Rib Tread, firsts	\$22.65	\$11.50
Lehigh NS Tread, firsts	23.50	12.50
Republic, seconds	24.95	13.75
General, seconds	27.20	14.25
Portage Huskie, seconds	23.80	11.50
Portage Daisy, seconds	26.50	13.50
Blackstone, firsts	23.80	15.50

Size 32x3½—Included in This Lot
Are Republic, Formost, General, Etc.

ALL AT ONE PRICE	List Price	Sale Price
Lehigh NS, firsts	\$32.80	\$18.75
Blackstone, firsts	33.30	22.50
Perfection, plain, firsts	32.80	16.75
General NS, seconds	37.95	24.00
Lehigh Rib, firsts	\$35.15	\$17.50
Lehigh NS, firsts	37.40	18.00
Blackstone NS, firsts	37.70	23.50
Perfection NS, firsts	37.40	21.00
Kokomo, firsts	37.40	22.50

Size 30x4	List Price	Sale Price
Lehigh Rib, firsts	\$36.85	\$17.75
Lehigh NS, firsts	37.70	18.00
Republic NS, seconds	42.25	24.00
Republic Rib, seconds	38.20	25.00
Blackstone NS, firsts	39.55	25.50

Size 30x4	List Price	Sale Price
Lehigh Rib, firsts	\$37.60	\$18.25
Lehigh NS, firsts	40.10	20.00
Republic, seconds	43.35	24.45
Blackstone, firsts	40.60	25.70

CORD TIRES

Size	List Price	Sale Price
32x3½ NS, firsts	\$46.75	\$31.65
32x4 NS, firsts	58.30	40.75
33x4 NS, firsts	60.10	41.00
34x4 NS, firsts	62.20	42.00
33x4½ NS, firsts	67.55	45.00
34x4½ NS, firsts	70.40	47.40
35x4½ NS, firsts	71.40	48.50
36x4½ NS, firsts	73.50	50.00
35x5 NS, firsts	87.40	58.80

TUBES TUBES GUARANTEED FIRST QUALITY

Size	List Price	Sale Price
30x3 Gray Tubes	\$3.05	\$2.15
30x3½ Gray Tubes	3.65	2.65
32x3½ Gray Tubes	4.15	2.80
31x4 Gray Tubes	4.95	3.40
32x4 Gray Tubes	5.15	3.60
33x4 Gray Tubes	5.35	3.70
34x4 Gray Tubes	5.50	3.80
32x4½ Gray Tubes	6.20	4.50
34x4½ Gray Tubes	6.50	4.60
34x4½ Gray Tubes	6.70	4.70
35x4½ Gray Tubes	6.90	4.75

FOR FORDS

Size 30x3	List Price	Sale Price
30x3 Lehigh Rib, firsts	\$19.25	\$ 8.75
30x3 Blackstone, firsts	19.60	12.50

MAIL ORDERS. Out-of-town customers unable to attend this sale, mail your orders in. Money refunded if not satisfied upon receipt of goods.

THESE TIRES WILL ALSO BE ON SALE AT

Sams' Tire Shop, 5th & Wash., Vancouver, Wash.

Portland Tire Co., Main & Lincoln, Spokane, Wash.

PORTLAND TIRE CO.

SIXTH AND BURNSIDE STS., PORTLAND, OR., BDWY. 2275

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seldom remembers it. Given this fit- quietly and for a long period without the attention, the drive will operate other cars.

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Mitchell, Seven-Passenger Jordan
MITCHELL, LEWIS & STAYER CO.
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