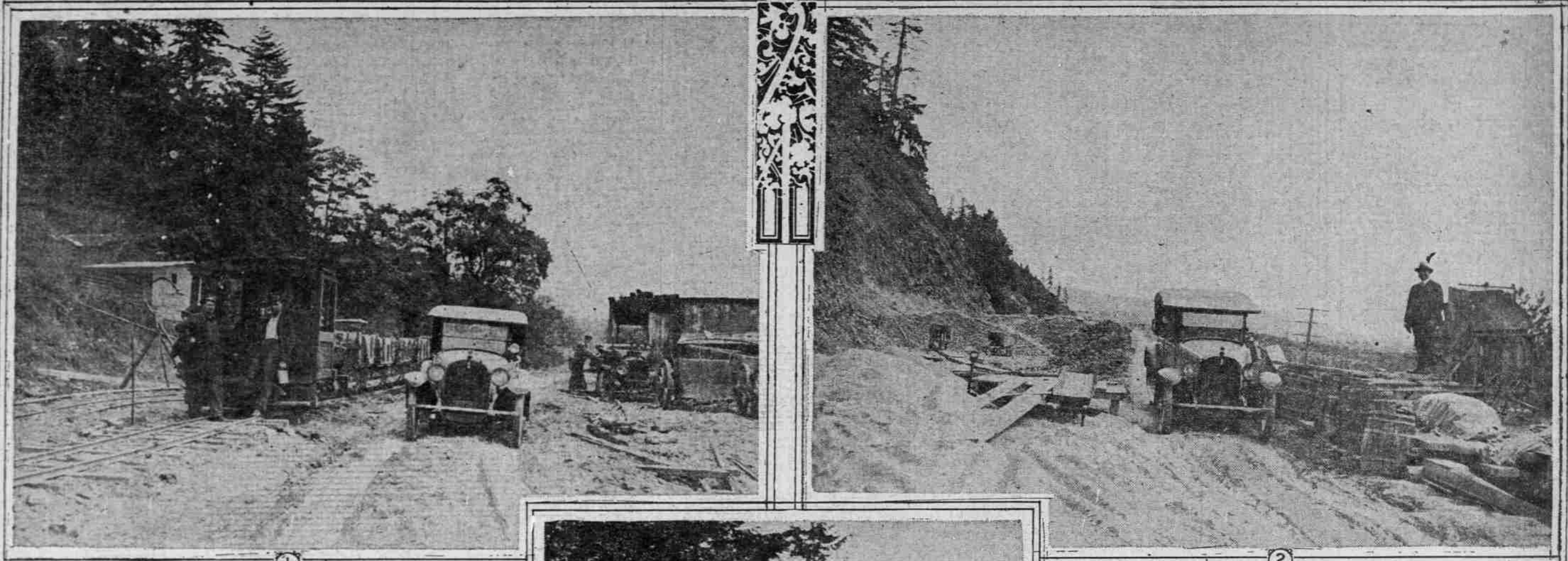


ALL ABOARD FOR AUTO RACES AT TACOMA JULY FOURTH!



BY L. H. GREGORY.
WHEN you drive to Kalama for the races next Friday, play safe and take the lower Columbia river highway. And the ferry across to Goble and there ferry across to Kalama. In emphatic preference to the main Pacific highway route on the Washington side to Kalama via Vancouver, La Center and Woodland.

This is advice of the heartiest kind, for the writer went over the Vancouver-Kalama road last Sunday with J. H. Graham in a big Case six on purpose to obtain information as to which is the better route—down the Oregon side or the Washington side—for motorists bound for Tacoma.

Mr. Graham fully concurs in the advice to keep off the Washington route and take the Oregon side. If the Case six could speak it would make it unanimous, for no car likes to drag along over a choppy, rutty, bumpy, pitted road at five to ten miles per hour, climb railroad construction tracks, dodge road rollers and concrete mixers.

No Place for Comfort.
So much new construction work is in progress near La Center and further along on the Martin's bluff section of the Washington road that, though open, it is in very poor condition for traveling. So bad on these stretches that it's surely worth \$2.50 of any man's money for ferry fare to avoid it.

The trip over it Sunday was made in dry weather. This was decidedly fortunate, for it's doubtful if a car could get through at all in very wet weather.

This for the reason that where new construction is in progress there is only a dirt bottom. And a dirt bottom that has written all over it the message of hub-deep mud in wet weather.

It will be a good highway when the grade is completed and rock and later paved. But this is not yet. The photographs on this page give a faint idea of its rough, choppy, cut-up condition along the Martin's bluff section in particular, even in the driest of weather.

From Vancouver there is pavement for seven miles, a total of 15 miles from Portland, as compared to 22 miles of pavement on the Oregon side. From the end of the pavement there is a good gravel road for 7.7 miles, then the same old detour toward Ridgefield motorists have had to take for more than a year and a half. This detour is rough for most of its four miles.

On Again, Off Again.
It comes into the new highway grade this side of the Lewis river bridge at La Center—rather, comes into it and immediately hops off it again round a hairpin curve and down the hill to the bridge, for the grade isn't completed. No place for reckless driving.

In this connection, we wish a lot of new motorists might take a trip with Mr. Graham driving. It's a liberal education in motor-car handling to see the care he takes to get into second, or even low gear, in descending a bad hill, and to sound his horn and round a blind curve with the car fully in control. He is the kind of driver that eliminates accidents.

From La Center to Woodland there is a good gravel road, but from Woodland there are five to half miles of very bad road. Part of it is over new grade, and part of it over detours on the narrow old road, which is full of steep pitches and very rough.

The worst part of the run is about four miles along the Martin's bluff section, most of it over new construction, but part over the old road. It is impossible to make time here. The motorist is lucky, at that, if he doesn't break a spring. Mr. Graham slowed the Case down to ten miles an hour, occasionally to five, and took the bumps as easily as possible. The Case has so much power that he was able to move at five miles on high gear over the worst of it, and pick up again between the rough spots.

The final four miles from the end of this stretch into Kalama is over good road.

Highway Good to Tacoma.
By taking the Oregon side to Goble and ferrying across to Kalama, motorists north-bound will find very little rough road all the way to Tacoma. The highway is not as smooth as a few weeks ago, but it is in very good condition.

Between Scappoose and St. Helens, and along the Deer Island stretch between St. Helens and Goble, it is quite rough, but nothing to compare with the roughness of the Vancouver-Kalama road.

Detour at Kelso.
The Pacific highway from Kelso to Kalama is in better condition than ever before, but new construction between Kelso and Castle Rock necessitates a detour at Kelso to the west side of the Columbia river. But this detour road is in first-class condition between Kelso and Castle Rock.



Road pictures showing miserable condition of Vancouver-Kalama (Wash.) portion of Pacific highway to Tacoma, and some of the famous racers who will hit it up on the speedway next Friday.

The Vancouver-Kalama road is in such poor shape, due to new construction work, as these pictures, taken on a trip over it last Sunday with J. H. Graham in a Case Six show, that motorists bound for the races will do better to take the lower Columbia river highway to Goble and ferry across to Kalama.

Photographs 1 and 2 show road conditions on the Martin's bluff section, about 24 miles from Vancouver. In photograph 1 the Case Six was snapped beside a baby construction train, the tracks of which cars must climb across. In photograph 2 Mr. Graham is standing on a concrete mixer and the torn-up condition of the road is plainly evident. Photograph 4 is another part of this highway—yes, the main Pacific highway—not wide enough for two cars to pass. This, also, near Martin's bluff.

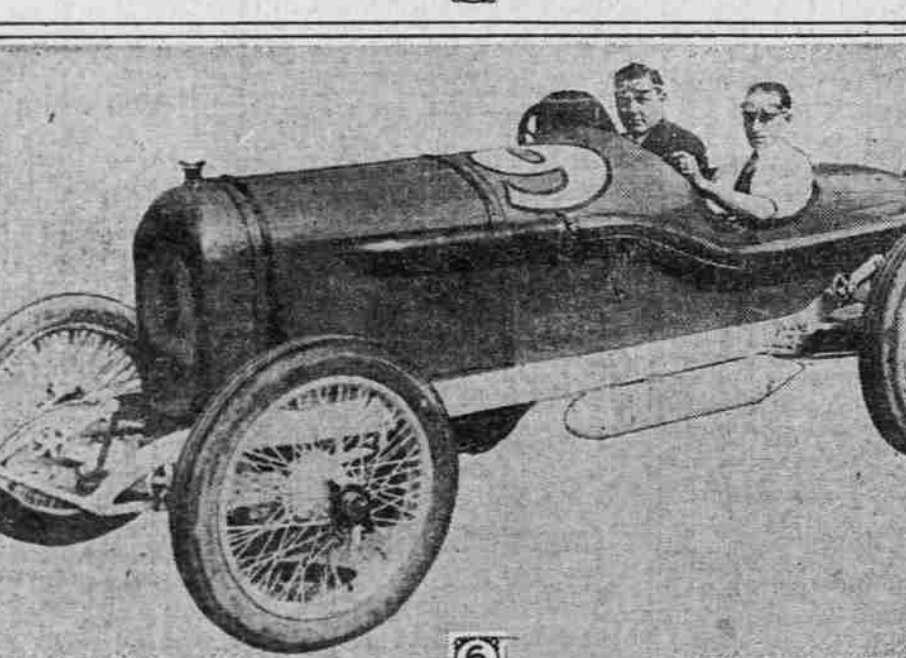
In photograph 3 is shown Ralph Mulford, "ward of the wheel," who will drive a Frontenac at Tacoma. Photograph 5 shows the famous Darlo Resta, who will drive a Resta Special. In photograph 6 our own Cliff Durant is at the wheel of the Chevrolet Special in which he won at Tacoma last year. Photograph 7 shows Eddie Hearne, who will pilot his Durant Special, which is really a Stutz.

That need be given of the whole highway from Kalama to Tacoma is this: Do not make the mistake of turning off the Olegua ferry route, which was the route used a year ago, and which arrives at Chehalis via Napavine and Winlock.

The main highway now leads through Toledo, from which point there are several miles of fine pavement toward Chehalis. From the latter town and its twin, Centralia, the Tenino route to Olympia is recommended. From Olympia there is pavement to Tacoma. This whole route from Kalama north is so well sign-posted that it would be hard to get off it.

Follows a brief log of the Portland-Vancouver-Kalama section for those who may still banker to try it out, despite what has been said:

Vancouver-Kalama Log.
8.0. Portland.
8.0. Vancouver: pavement for seven miles.
8.0. End pavement: very fair gravel road for 7.7 miles straight ahead.
22.7. Detour left over Ridgefield road: gravel but rough.
24.0. Straight ahead at sign, leaving Ridgefield road; mainly dirt bottom, some rock, rough.
25.7. New grade to bridge over gully.
25.7. New grade above Lewis river: turn right (not left) for about 50 feet, then turn left into old road down hill to Lewis river bridge; needs careful driving.
27.1. Lewis river bridge.
27.1. La Center: good gravel road to Woodland.
34.5. Bridge at Woodland; pavement for 0.9 mile.
34.5. Turn left from pavement, over dirt and sand road; rough and hard riding. The route now alternately follows new grade in fair condition and



detours over old road, which is rough, crooked, steep up-and-down pitches, narrow but graded.

32.2. Construction in progress: cross construction railroad tracks. This is beginning of Martin's bluff section; follow new grade, dirt, rough, cut up from heavy trucks, to 33.8.

33.8. Detour to old road: steep up-and-down pitches, narrow, rocky.

34.0. New grade again, but here it is partly rocky and in fair condition.

40.0. Good road from here to Kalama.

44.0. Kalama.

HUGE AUTO OUTPUT PLANNED
General Motors Alone to Manufacture 577,000 Cars.

NEW YORK, June 28.—The estimated output of motor vehicles of all classes by the General Motors corporation, from July 1, 1918, to June 30, 1920, is placed at 577,000. Of this total, passenger cars account for 512,000, trucks for 40,000 and tractors for 25,000. In addition, the corporation's output of farm implements is figured at 75,000. In its 41 plants General Motors employs 40,000 persons.

The General Motors company's total volume of sales for 1918, according to a booklet issued by the company, was \$216,044,755, which was exceeded only by the United States Steel corporation, Swift & Co., Armour & Co., Bethlehem Steel corporation, Wilson & Co. and the Du Pont company. Earnings on this volume, before taxes, amounted to \$45,541,725. Net quick assets are shown as \$150,390,492, of which more than \$59,000,000 is in cash and Liberty bonds.

Commutator Trouble.
It sometimes happens in the Ford car that the commutator contains so much grease as to make it impossible for the distributor arm to make contact. As a matter of fact, grease should not be used for commutator lubrication. Cylinder oil is the correct lubricant for this location, and even this should be used sparingly. This applies to all commutators or ignition distributors.



ROAD PICTURES SHOWING MISERABLE CONDITION OF VANCOUVER-KALAMA (WASH.) PORTION OF PACIFIC HIGHWAY TO TACOMA, AND SOME OF THE FAMOUS RACERS WHO WILL HIT IT UP ON THE SPEEDWAY NEXT FRIDAY.

The Pacific highway from Kelso to Kalama is in excellent condition this year, in fact, it is better than ever before. There are a few rough spots, but it compares favorably with any stretch of road, not hard-surfaced, in the country.

Between Kelso and Castle Rock the Pacific highway is closed on account of road construction near Ostrander, and autos should turn to the west at the corner of Second and Allen streets. In Kelso, where the Rockwood hotel stands, and cross the Kelso bridge.

Turn north at west end of bridge and follow good gravel and dirt road through Lexington and Sandy Bend to Castle Rock. From Sandy Bend two routes are open to the tourist. One of these follows the river bottom to Cook's ferry, where the Cowlitz river is crossed on a county ferry. Service on ferry is free from 7 A. M. to 6 P. M., and a charge of 25 cents is made for carrying an auto from 6 P. M. to 7 A. M.

The other route climbs the hill on a good grade and brings the tourist to Castle Rock via the bridge at that city. There is no choice between the two routes from Sandy Bend to Castle Rock except that via the ferry is a little shorter.

The detour road on the west side from Kelso to Castle Rock is as good as the Pacific highway has been in former years, if not better, and there is no reason for any auto getting stalled between Kelso and Castle Rock.

CHAMBER OF COMMERCE APPROPRIATES \$2000 FOR PURPOSE.
The motor trades bureau of the Des Moines chamber of commerce will spend about \$2000 marking the highway which enters Des Moines during the present season. This week Polk county directors for eight highway associations which enter Des Moines met. An unusual amount of interest in highway associations is being manifested this season. Polk county is proposing to vote \$2,000,000 for hard-surfaced roads, and enough signatures have been secured to call a special election to vote on the bonds in accordance with the law passed by the recent Iowa legislature.

The Cylinder Head.
In engines with detachable heads the nuts that hold the head in place should be tightened at intervals. When the head is removed for any reason it should be tightened by turning opposite nuts. This tends to prevent the head from being sprung.

ALL SET FOR AUTO RACES

SPEED KINGS AT TACOMA ON EDGE FOR BIG EVENT.

Five of World's Fastest Waiting for the Signal at Tacoma Speedway July 4.

TACOMA, June 28.—(Special).—All is in readiness for the biggest motor-car races in the history of the Tacoma speedway, with the best-known speed kings in the country coming to try for new records on the far western track.

When the signal is given July 4, Darlo Resta, Louis Chevrolet, Eddie Hearne, Ralph Mulford and Cliff Durant will go forth in their speed chariots for new and faster records on the Tacoma track.

Captain Eddie Rickenbacher, American ace of aces, is coming to referee the big events and will no doubt prove one of the big features, since he is also to tell his story of thrilling fights with Hun planes. Rickenbacher will talk between events and explain how he happened to bag 26 Hun machines during his participation in the great war.

Resta and Chevrolet have come to Tacoma for their initial appearance on the speedway.

Resta, bringing his new and mysterious car, a recent creation.

Chevrolet has his rebuilt Frontenac, noted for its great speed.

Durant will again be seen in his Chevrolet special, and Eddie Hearne has a Durant special.

Ralph Mulford will use his Frontenac special, the car with which he took the 10 and 30-mile events at the Sheepshead track.

Eddie Hearne recently won second place in the 30-mile race at Indianapolis and sends word to Tacoma that the Durant special is running like wild this year. Durant, who holds all speed records at Tacoma, is coming back to protect his records against Resta and Chevrolet, both strangers to the Tacoma track.

Racing fans predict the best card in the history of the speedway. Ralph Mulford has not been seen in Tacoma since 1913, the opening year of the track. The Durant special is coming back to protect his records against Resta and Chevrolet, both strangers to the Tacoma track.

The five men to take part in the events at Tacoma have all been making new records in recent years, and this year have been in the front ranks of the men who have won the best of the American records from foreign cars on eastern tracks.

The events at Tacoma will consist of 25, 30 and 50 mile races. The track has been put in the best possible condition. The Durant special driven by Hearne and the Chevrolet special driven by Resta will be the main attraction of the mechanicians. Resta and Chevrolet shipped their cars direct from New York to Tacoma, and Mulford sent his car on after his race at Sheepshead bay.

Captain Eddie Rickenbacher will be the guest at a banquet at the Tacoma Commercial club the evening of July 3, where he will tell his experiences in France. All drivers for the July 4 events will be present.

WEST SIDE HIGHWAY CLOSED
Fill Beyond Newberg Shuts Off Travel Over It for Time.

The West Side highway route to Salem, via Newberg and Dayton, is closed temporarily by new construction work a short distance beyond Newberg. This will also affect travel to McMinnville.

Work is to be rushed on this work, which is a fill, but it will be a week or so before the road is open again. This makes it necessary for motorists bound for Salem either to take the East Side highway via Oregon City, or if they prefer to travel via Newberg, to detour across the Willamette river, there on the steel bridge to the east side and take the St. Paul road, according to information received by George Chambers of the State Motor association.

The St. Paul road should be followed, says Mr. Chambers, to the Westland ferry road, which goes direct into Salem, or else cars should cross the river again to the west side by this ferry and come into Salem over the Willamette river bridge there.

The St. Paul road is said to be good, but requiring care to follow because of many roads branching off it.