

Auxiliary Air Valve shafts also gave a considerable amount of trouble, due to wearing and leaking air. The correction of this difficulty will require some study as the functioning of the carburetor depends upon the proper vibration of this particular valve.

Difficulty was also observed in sandy country caused by the sand passing down beside the needle valve and upsetting the carburetor adjustment. This difficulty was not experienced upon the medium weight Harley-Davidson motorcycles on account of the fact that the Schelller carburetors with which they were fitted had a small felt washer at the point where the sand generally passed down. It is recommended that this washer be applied to all Schelller carburetors.

One machine gave trouble due to the small cork washer on the bottom of the carburetor bowl breaking up and getting into the carburetor, clogging up the same and causing considerable trouble.

All of the motorcycles used on this trip were equipped with half inch wide, 6/8 inch pitch roller drive chains. On the large side-car type machines these chains run in the open end and are not protected from road dirt except by those guards which are provided to prevent the driver's clothing from becoming caught. Throughout the entire trip it was necessary for all of the motorcycle drivers to readjust their chains for stretch and wear at least once every two days. When the stretches of alkali dust were reached, the chains would dry out, a crust of dust would be pressed into the bottom of each sprocket teeth, building up to such an extent as to make it necessary to stop and either clean it out or loosen the chain. A number of chains on both Indian and Harley-Davidson motorcycles were completely replaced during the trip on account of this condition.

The two medium weight Harley-Davidson motorcycles are equipped with the same type drive chain with the exception of the fact that it is completely enclosed in a dust proof case. These chains were adjusted four times between Washington and San Francisco and at the end of the trip were perfectly clean, well lubricated and showed no signs of any excessive wear. The sprockets were in perfect condition.

All saddles supplied by the manufacturer with their motorcycles have proved very unsatisfactory and show every evidence of very poor material and workmanship. This applies to the Wessinger spring saddle and also to the Fretzel spring saddle. The Wessinger special air cushion type saddle gave very satisfactory service. The additional cost of this saddle however, is an unnecessary expenditure and could be saved if proper attention was given to details in the production of the spring type saddle.