

How To Time Valves

When the car leaves the factory the valves are set so as to open and close at exactly the proper time. After the car has been in service for some time, the ends of the valve stems may wear, which will throw the engine out of time. The following instructions explain how to time the valves:

How to Time the Valves

The first of the three marks, on the fly wheel, is used to time the ignition, the second two are used to time the valves. When the second mark is exactly on top the exhaust valve should just close. This applies to one side of the engine only, at one time. To see which side is working, turn the engine over by hand until you see the exhaust valve beginning to close. When the valve is entirely closed you will find that the second mark on the fly wheel is directly on top. When the third mark on the fly wheel is directly on top the inlet valve should start to open. To make sure that the timing is correct, mark on the fly wheel a point half way between the second and third marks. When this mark is directly on top, both valves should be completely closed; that is, there should be a very small amount of play between the end of the valve stem and the end of the push rod. By turning the engine over one complete revolution, the same test can be applied to the valves on the opposite cylinder. When the car leaves the factory the valves are accurately timed, but in the course of a season's use the end of the valve stems and push rods may become slightly worn, so as to throw the valve adjustment somewhat out.

If the valves are found to be out of time, the wear can be taken up by the adjusting screws with which the push rods are fitted. First loosen the lock nut, then regulate the adjusting screws so that the valve closes at the proper instant, as explained above. When the proper adjustment is made, the set screws should be locked in place by the lock nut. As the valve stems and push rods are carefully hardened, wear at this point is unlikely. We would advise, before making this adjustment, to get someone who is familiar with timing valves to do it the first time. If, however, this is impossible, you should have no trouble in making the adjustment as above outlined.

To Adjust Brakes

The brakes on the Messenger are controlled by a foot pedal and operate on the drums on the rear wheels. It is imperative that these be adjusted so that when the brake is applied the braking effort on each wheel is the same; that is, when you suddenly apply the brakes both wheels should lock at the same time. If one wheel turns while the other one is locked fast, this will result in tremendous wear on one tire. The adjustment of these brakes is very simple. On each brake band is found a large adjusting nut by which the bands can be tightened. Note particularly that the above brakes must be adjusted the same.

Oiling Brakes

All brake pins and levers should be well oiled at least twice a week. Do not allow grease to get on the brake drum or brake