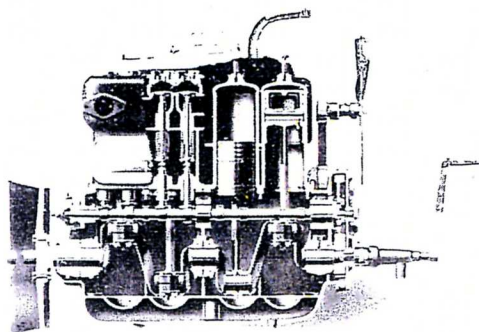


BUDA MOTORS TRANSMISSIONS AND UNIT POWER PLANTS



Care of the Buda Motor

BULLETIN No. 176

Address all communications in regard to sales to

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Care of the Buda Motor

The Buda Motor is constructed of the very best material and the design is the result of years' experience in the designing and building of motors, and is in accordance with the most modern practice.

The motor which receives a reasonable amount of care and attention always runs quieter and more satisfactorily.

Lubrication is of primary importance. Our motors use little oil, and the oil in the crank case should be changed each one thousand miles run by the car. We prefer to use a medium grade of oil on new motors.

The Oil Pump is bolted to the outside of the crank case, the plunger being inside the case, and is driven from the cam shaft. The pump may be removed by loosening the two bolts on the pump flange. The oil flows to the pump through a large screen which is covered by a small flange bolted to the bottom of the oil pan. This screen should be removed and cleaned each time the oil is changed. The oil is discharged from the pump through a sight glass into a pipe at the rear end of the motor. Openings from this pipe lead to each of the main bearings and the excess oil not used by the bearing which is constantly flooded flows into the gear case from the forward bearing and from thence and from the other bearings into the pans in the bottom of the crank case in which the connecting rod dips. The oil in these pans is maintained at a constant level by overflow notches milled in the side of each pan.

The cam shaft bearings and cylinders are lubricated by the splashing of the oil dips on the connecting rods into the oil in the pans. The oil level should be carried between the marks on the oil level indicator glass on the side of the motor.

A large proportion of motor troubles is due to the use of poor oil which causes a deposit of carbon on the pistons and cylinders. To remove this, pour about one-half pint of kerosene into the cylinders, turn the motor over a few times by hand. Let stand all night, which will soften and loosen the carbon.

To Inspect the Bearings of the Motor it will be necessary to remove the oil pan, which can be done without disturbing the

bearings by removing the bolts from the lower half of the gear cover and around the outside flange between the oil pan and the crank case. If the bearings are loose, which can be determined by rocking the crank shaft back and forth, some of the metal liners should be removed. These liners are of varying thickness, and if a thin liner is removed, it should be retained, as it may be necessary to replace it at some future date, in case it is found necessary to take out one of the thicker liners. The bearings should be adjusted so that they turn freely without being loose.

Adjusting Valve Lifters. Each have a set screw and lock nut. When the valve is closed, the space between the bottom of the valve stem and the set screw head should be on the exhaust valves, about .005-inch, and on the intake valves, about .003-inch. A piece of writing paper can be used to determine the thicker dimensions, and a piece of newspaper for the lesser dimensions. After they are properly adjusted, the lock nuts should be securely tightened. By keeping the proper adjustment of the valve lifters, excessive noise will be eliminated.

Compression. The compression in the cylinder is the pressure which is created by the upward movement of the piston compressing the volume of gas which has been drawn into the cylinder previous to the firing stroke. By turning the motor by hand, weakness of compression can be easily located. It is usually caused by valve lifters being adjusted so that there is not sufficient clearance between the valve stem and the set screw head, or from the accumulation of carbon beneath one of the valves. After the valve lifters are properly adjusted, if the compression on one of the cylinders is weak, examine the spark plugs to see that there is no leak around them, and if found tight, it will be necessary to grind the valves, as in all probability that will be the source of the trouble. To remove the valve for grinding, remove the valve cover plug, then by holding the valve on the seat, the valve spring can be raised enough to remove the slotted washer under the valve spring retainer. This will allow the retainer to slip off the valve, and the spring and valve can be removed.

In regrinding the valve, it is advisable to use a light spring under the head, so that it can be worked up and down to allow the grinding compound to work onto the seat. In grinding, the valve should be rotated with a reciprocating motion, not turned around continually in one direction. If the compression is still weak, the pistons should be removed, and the piston rings examined. If these are found to be

loose sideways, they should be replaced by new rings. The pistons on all of the Buda motors can be removed without removing the crank shaft.

The Firing of the Buda Motor is cylinders Nos. 1, 3, 4 and 2, starting with the cylinder next to the radiator as No. 1.

The majority of engine troubles is due to defective ignition, or improper carburetion.

To ascertain if the IGNITION SYSTEM is working properly, remove the spark plugs and lay them on the top of the cylinder, then close the battery switch and turn the motor over by hand. If a strong spark is shown in the spark plugs, the system is in proper working order.

To adjust the CARBURETOR, it is best to first make slow speed adjustment when the motor is running idle. Care should be taken at all times to give the maximum air opening which the motor is capable of handling, as the more air taken in, the greater the power developed. After the proper adjustment is made at slow speed, which can be readily determined by the sound of the exhaust, the high speed adjustment can be made by speeding up the motor.

We find it advisable to adjust the carburetor so that at high speed the carburetor has a tendency to pop back, then gradually cut down on the air supply, or if the carburetor is arranged with a high speed gasoline adjustment, this can be increased slightly, so that it will just overcome the tendency of the carburetor to pop back, when the maximum power will be developed.

All adjustments should be made a very little at a time, as the carburetor is extremely sensitive.