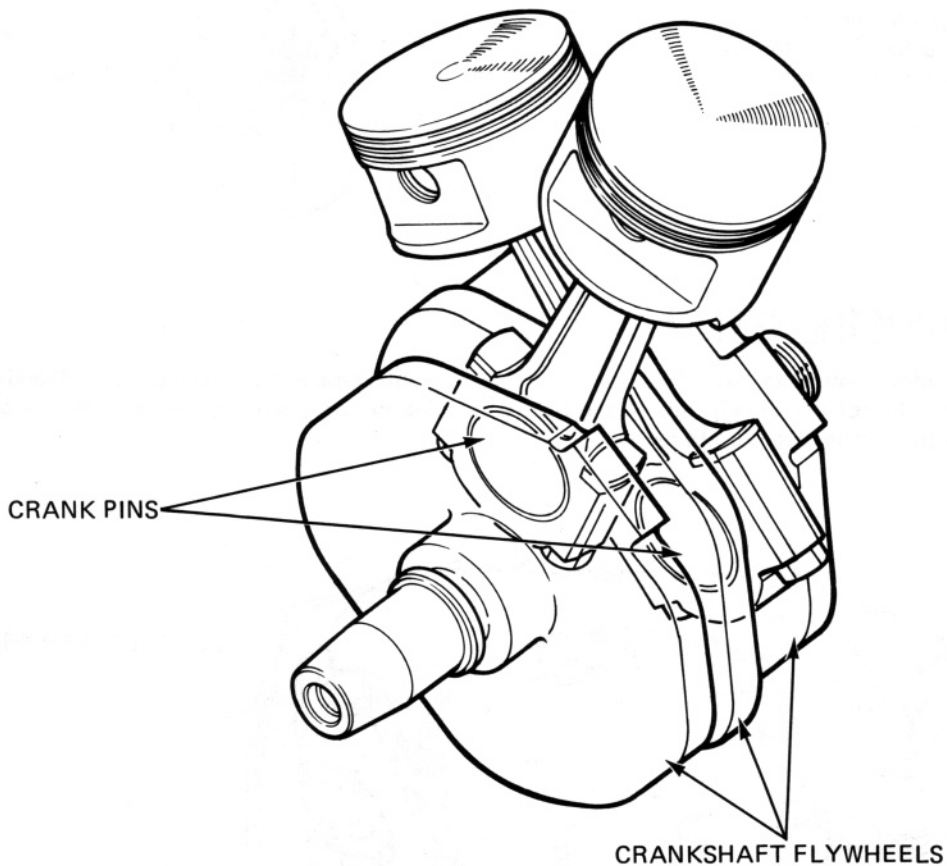


OFF-SET DUAL-PIN CRANKSHAFT

Unless its cylinders are 90° apart, the V-twin engine has an inherent primary imbalance. The imbalance or resulting vibration can be severe.

Honda engineers wanted the compactness of a narrow V-twin with its cylinders only 45° apart, but without the primary imbalance. They ruled out counter-balancers because they would not contribute to the goal of compactness and light weight. So the engineers decided to try off-setting the crankshaft pins. They successfully developed a mathematical formula to determine the amount of off-set needed for V-twin engines. The amount calculated for the VT750 just happens to be 90°. The off-set will be different for other sizes of Honda V-twins.



The front and rear crank pins are off-set 90° to each other. The connecting rods and pistons are inserted into the front and the rear cylinders which are 45° apart.

