

2. TECHNICAL FEATURES

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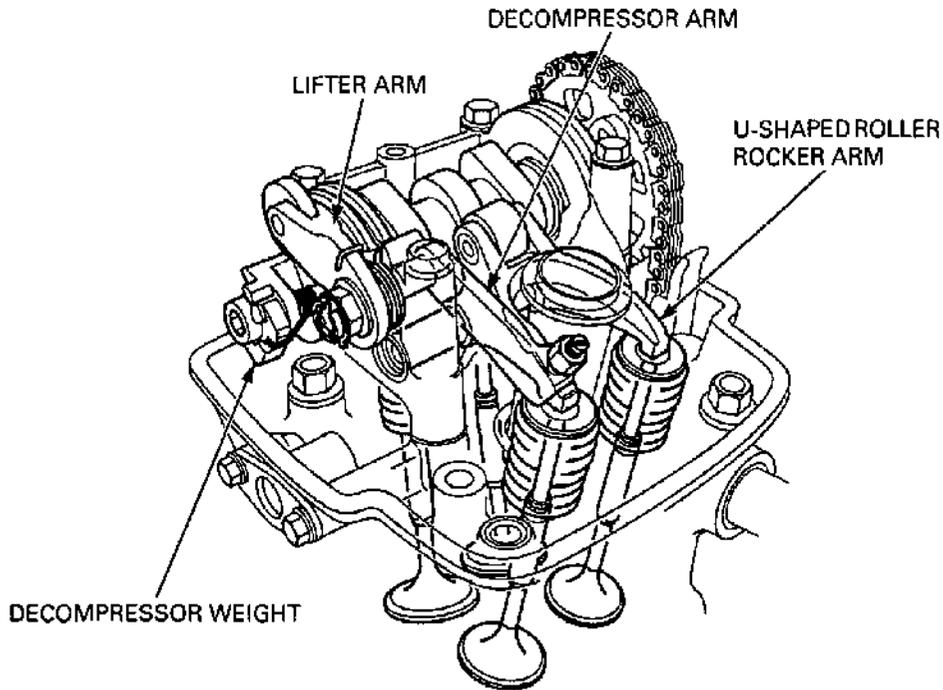
TECHNICAL FEATURES

UNICAM SYSTEM

OUTLINE

The Honda Unicam has a single overhead camshaft (SOHC) and one-piece camshaft holder. The camshaft acts directly on the intake valves while the exhaust valves are activated by a U-shaped roller rocker arm.

This Unicam design is lighter and more compact than a dual overhead camshaft (DOHC) cylinder head design. The Unicam cylinder head incorporates a narrow and 22 degree valve angle.



U-SHAPED ROLLER ROCKER ARM

The exhaust roller rocker arm is U-shaped to fit around the centrally located spark plug.

AUTO-DECOMPRESSION SYSTEM

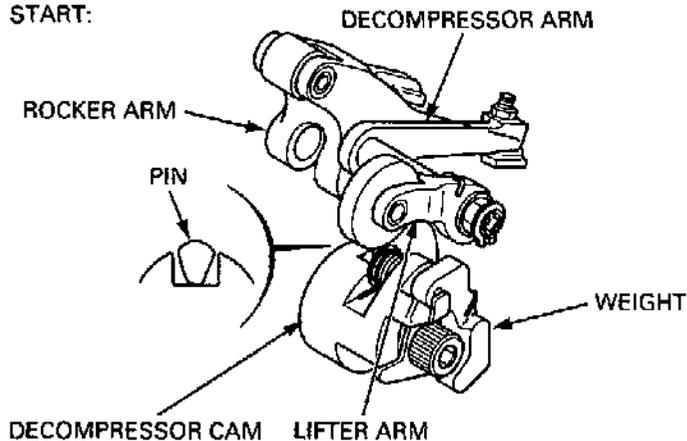
DURING START-UP (OR WHEN ENGINE IS OFF)

The lifter arm is raised slightly by the rounded side of the decompressor weight's pin. The raised lifter arm causes the decompressor arm to push against the rocker arm, opening the exhaust valve slightly.

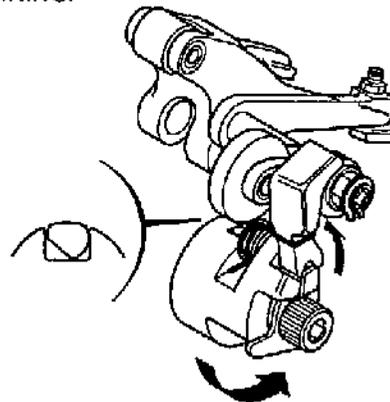
AFTER START-UP

Centrifugal force of the spinning camshaft causes the decompressor weight to swing out. As the weight swings out, its pin rotates so the flat side is facing up. This allows the decompressor cam to be flush with the camshaft surface, releasing pressure on the rocker arm and closing the exhaust valve.

START:

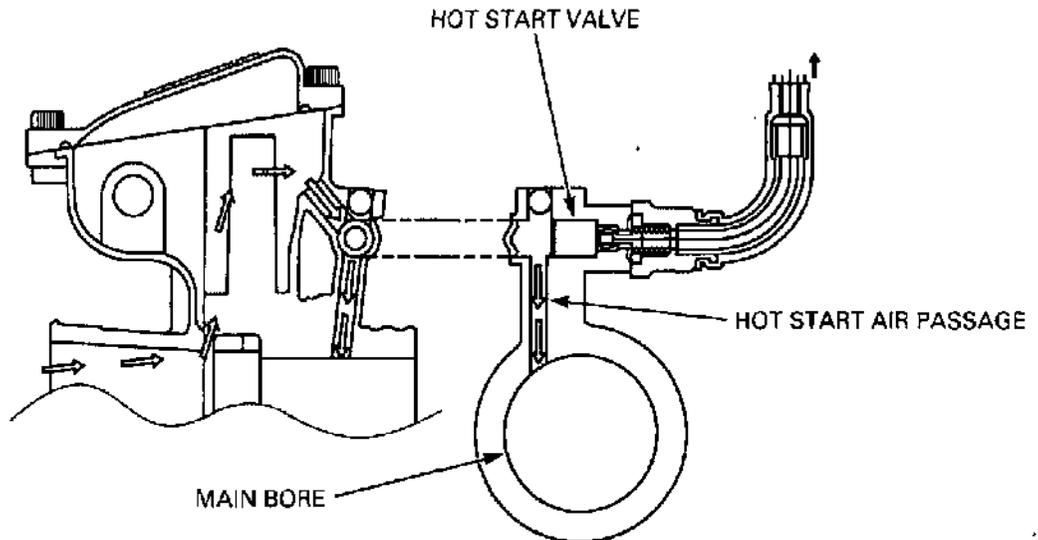


RUNNING:



HOT START SYSTEM (TRX450R only)

The hot start system creates a lean air/fuel mixture that enables a hot engine to be started easily. When the hot-start lever (located on the left side of the handlebar) is pushed away from the rider, the hot start valve in the carburetor opens, supplying air to the main bore through the hot start air passage. This extra air blends with the air/fuel mixture from the slow circuit resulting in a lean condition.



TWIN SUMP LUBRICATION SYSTEM

The Honda twin-sump lubrication system separates the oil supply for the crankshaft, piston and valve train from the clutch and transmission. This ensures a cool supply of oil to the clutch, eliminates clutch and transmission material contamination of the engine oil, and reduces the amount of circulating oil and required size of the oil pump. This design allows for an oil cooler and no external oil tank is needed. Because there are separate oil supplies the crankcase oil level and transmission oil level are checked independently. Make sure to review both oil level check procedures in section 4, "Maintenance".

