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Preliminary Report Ram Jet III, Model MPG

WHAT IT IS:

The Ram Jet III, Model MPG is a device designed to improve the efficiency of the positive crankcase ventilation system (P.C.V.) and the condition of the combustible mixture in the intake manifold, by separating and atomizing heavy unburned hydrocarbon condensates through an internal baffle system that increases residence time. It incorporates a continuously circulating ball on the inlet side to aid in breaking up heavy particulates and deter crankcase vapor explosion if engine backfire or after-running should occur.

The device incorporates a valve for mechanically regulating and admitting filtered outside air into the P.C.V. system, and regulates the air fuel ratio (A.F.R.) to increase fuel economy, whenever the engine vacuum is reduced below a pre-determined level.

A fine tuning knob positioned on the side of the unit is rotatable and permits precise adjustment and/or control over the pre-determined level for engines of all cubic inch displacements.

HOW IT WORKS:

Oil condensates are separated from the crankcase blow-by vapors in the inlet chamber and oscillated through a swirl baffle system consisting of a ball and aeration baffle that break up the heavy particulates into atomized molecules of hydrocarbons.

When engine vacuum is reduced below a pre-determined level a valve for mechanically regulating the admission of filtered outside air into the P.C.V. system opens and causes aeration of the atomized particulates, regulating the engine's A.F.R. in direct relation to the load.

A fine tuning adjustment is provided to allow precise control over opening and closing vacuums which may differ due to engine displacement, vehicle weight or load, and climatic conditions.

WHAT IT DOES:

Increases gasoline mileage. Preliminary tests indicate that most vehicles with engine sizes over 225 cubic inches should realize fuel savings of 5 to 20% depending on specific driving and climatic conditions. These fuel savings can be expected to be even greater if used on recreational vehicles, vehicles pulling trailers, or on long hard mountain pulls which allow the unit to be used to its fullest potential.

Increases power up to 10%. Dynamometer tests indicate that most engines will result in a 5 to 10% increase in horsepower due to improved combustion efficiency. Various engines will result in different horsepower gains depending on specific displacements, fuel induction efficiency, and total overall engine condition at the time of installation.

Increases potential engine life. It is a well known fact that the cleaner an internal combustion reciprocating engine operates the longer the life expectancy due to reduced degradation of internal components. Engines using the Ram Jet III, Model MPG, run more efficiently with less carbon build-up, fewer oil and varnish deposits that generally result in a cleaner running engine that should prolong engine life through increased efficiency.

Increases miles between tune-ups. Tune-up intervals are not required as frequently due to reduced degradation and cleaner more efficient burning of the fuel air mixture and crankcase vapors. Spark plug fouling caused by rich mixtures and insufficiently atomized crankcase vapors is eliminated allowing greater miles of clean efficient fuel utilization.

Reduces exhaust emissions. Both unburned hydrocarbons (HC) and carbon monoxide (CO) exhaust emissions are reduced. High levels of HC and/or CO indicate that fuel is being wasted; reduction of emissions is an obvious way of improving fuel economy and reducing air pollution. Significant fuel savings are realized by reducing HC/CO exhaust emissions; however, maximum fuel savings potential of a vehicle can only be achieved if an engine is kept in sound mechanical condition at all times.

Deters crankcase explosion if engine backfires. A continuously circulating ball on the inlet side of the unit assists in breaking up heavy oil particulates when crankcase vapors are flowing into the intake manifold. If a backfire occurs creating a pressure in the reverse direction, the ball causes internal resistance and deters vapors in the valve covers and crankcase from exploding.

Reduces the potential of engine ping and knock. Engine ping and knock most frequently occur from combustion chamber deposits. As the Ram Jet III, Model MPG is used and the engine rids itself of combustion chamber deposits, ping caused by carbon build-up is reduced or eliminated.

Energizes crankcase vapors increasing the capability of reclaiming unburned fuel. Atomizes unburned hydrocarbon fuel from the P.C.V. system by swirling particulates through an advanced baffle system and aerates these raw, corrosive blow-by condensates into presently unused power.

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