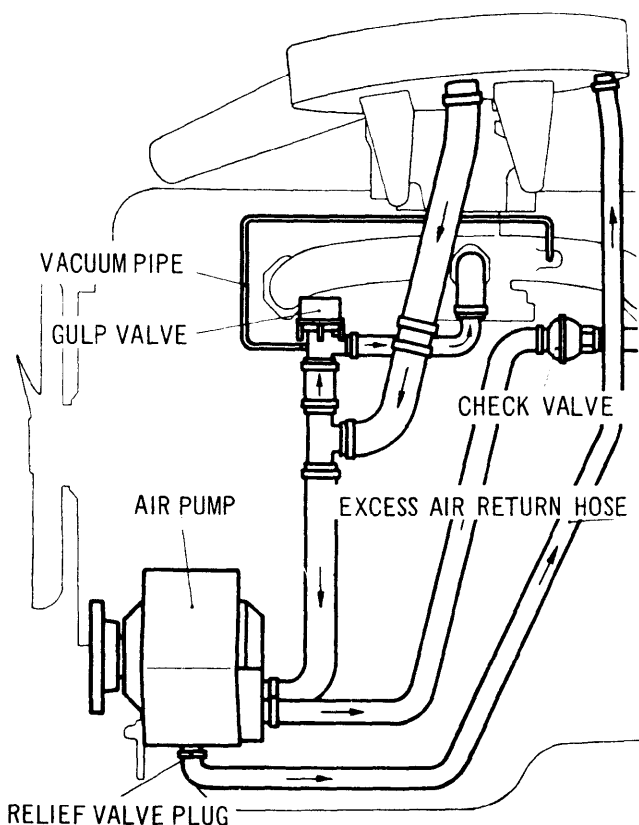


BMW AIR INJECTION

1600 (1968-73)
2002 (1968-73)

DESCRIPTION

Air is drawn into the air pump from the air filter. It passes from the pump through a check valve to injector tubes located in each exhaust port immediately behind the exhaust valve. A gulp valve, in the system, allows a measured amount of air to enter the inlet manifold following rapid throttle closure. The air pump, gulp valve, check valve and air pump relief plug require no maintenance.



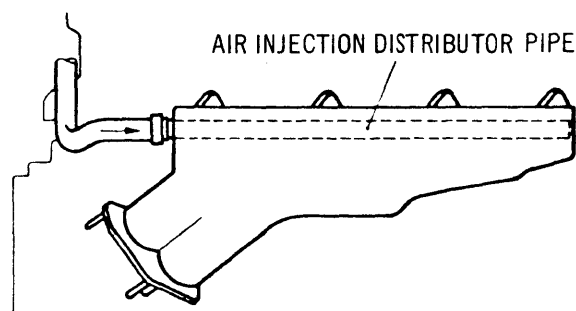
8SM385 B.M.W. AIR INJECTION SYSTEM

ADJUSTMENTS

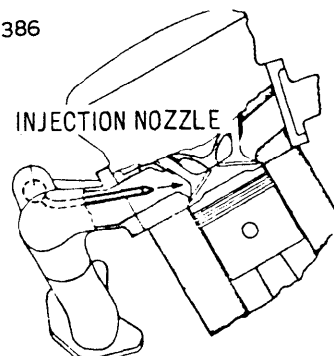
Checking and Resetting of Ignition Timing- Ignition timing is checked and reset with engine running at normal operating temperature. Remove vacuum adjustment line from distributor. Using a tachometer, adjust idle to exactly 2,000 RPM. Direct stroboscopic timing light, through opening in clutch housing flange next to starter, to ignition mark on flywheel. Ignition timing mark (steel ball) on flywheel must be exactly in line with mark on clutch housing. If marks do not line up loosen clamp on distributor housing and turn distributor until specified setting has been achieved. Retighten distributor housing clamp, reconnect vacuum adjustment line.

Idle Adjustment- Disconnect air hose from air pump to exhaust manifold. Set engine idle to 1,000 RPM with engine at normal operating temperature. Turn idle mixture adjustment screw (with air hose removed) to obtain $7 \pm 1\%$ C.O. exactly. Use a Sun Combustion Efficiency Tester or equivalent. If your tester should not give a CO reading adjust to 75.5% combustion efficiency. Reconnect air hose.

Additional Checks- Check belt tension of air pump ($1/8$ to $3/8$ slack under thumb pressure); adjust if required. Visually inspect all hoses, connections and clamps of the emission control system for tightness or leaks. Check all nuts and bolts for tightness.



8SM386



AIR INJECTION PIPE & NOZZLE

TROUBLE SHOOTING

Air Pump Troubles- Replace pump if it develops excessive noise and does not rotate freely. Replace pump if air pressure relief valve is defective or leaks. (Relief valve is a press fit in the pump housing). Relief valve should open at an engine speed of 1,700 to 2,000 RPM. To Check: move gear shift lever to neutral, remove relief valve hose connection and attach tachometer. Holding your hand at valves discharge port, increase engine speed until valve opens. If the valve opens at a lower engine speed either the "pressure setting plug" of the valve assembly is improperly set (if so insert new plug) or the valve was damaged. If the relief valve should not open, or only at a higher speed, it is defective and the pump has to be exchanged.

Gulp Valve Troubles- Replace gulp valve if backfiring occurs on deceleration or engine low idle speed cannot be adjusted and carburetor idle speed adjustment control was found serviceable.