

## Powertrain Management: All Technical Service Bulletins Water in AIR Pump and/or DTC's Set.

File In Section: 6E - Engine Fuel & Emission

Bulletin No.: 77-65-13

Date: April, 1997

Subject:  
Water in AIR Pump and/or DTC P0410, P0412, P1415, P1416, P0100, P0101, P0102 and DTC 48 (Install AIR Pump Service Kit)

Models:  
1994-96 Buick Roadmaster  
1994-96 Cadillac Fleetwood  
1994-96 Chevrolet Caprice, Impala SS  
with 4.3L and 5.7L Engines (VIN W, P - RPO L99, LT1)  
and 4L60E Automatic Transmissions

### Condition

Some vehicles may set any of DTC P0410, P0412, P1415, P1416, P0100, P0101, P0102, and DTC 48 (1994-1995). Also some police vehicles may exhibit a slight hesitation during wide open throttle acceleration. AIR Pump shows indication of water in it.

### Cause

Under high engine speeds and loads hot exhaust gases may leak past the AIR check valves. As the exhaust gases in the AIR tube cool, water vapors condense and collect into the AIR pump. When the vehicle is driven, condensation from the AIR Pump may come in contact with the Mass Air Flow sensor and cause a slight hesitation during acceleration. This may also set Mass Air Sensor DTC's.

### Correction

Verify AIR Pump operation using scan tool. Inspect AIR Pump for traces of water. If AIR Pump shows indication of water, install AIR Pump Service Kit. Inspect the AIR check valves by using a hand vacuum pump and applying 10 inches of mercury vacuum to the AIR hose side of the check valve. Vacuum should hold for at least 10 seconds. If not, replace the AIR check valves.

### Parts Information

Description	Part Number
AIR Pump	12554580
AIR Check Valves	22048212
AIR Pump Service Kit	12558522

Parts are currently available from GMSPO.

1	Installation Instructions with Art
1	AIR shut off valve
1	Solenoid, For AIR pump Shut off Valve
1	Hex washer Nut for Solenoid
1	Hose, AIR pump to Shut off valve
1	Vacuum Line, Shut off valve to Solenoid
1	Vacuum Line, Intake manifold to EGR Solenoid
1	Wire harness, AIR Solenoid to AIR pump
1	Wire harness cap

The AIR Pump Service kit Includes:

## Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
J6050	AIR Pump	0.3 hr
Add to J6050	AIR Service Kit	0.8 hr
J5068	AIR Check Valves	0.2 hr