

# 13A MULTIPPOINT FUEL INJECTION (MPI)

## CONTENTS

### MULTIPPOINT FUEL INJECTION (MPI)

GENERAL INFORMATION

GENERAL SPECIFICATIONS

MULTIPPOINT FUEL INJECTION (MPI) SYSTEM  
DIAGRAM

MULTIPPOINT FUEL INJECTION (MPI) SYSTEM  
DIAGRAM <WITH TCL>

### SERVICE SPECIFICATIONS

#### SEALANT

#### SPECIAL TOOLS

#### TROUBLESHOOTING

DIAGNOSIS TROUBLESHOOTING FLOW

DIAGNOSIS FUNCTION

FAIL-SAFE FUNCTION REFERENCE TABLE

INSPECTION CHART FOR DIAGNOSIS

INSPECTION CHART FOR TROUBLE  
SYMPTOMS

PROBLEM SYMPTOMS TABLE (FOR YOUR  
INFORMATION)

INSPECTION PROCEDURE FOR TROUBLE  
SYMPTOMS

DATA LIST REFERENCE TABLE

ACTUATOR TEST REFERENCE TABLE

CHECK AT THE ENGINE A/T-ECU TERMINALS

### ON-VEHICLE SERVICE

THROTTLE BODY (THROTTLE VALVE AREA)  
CLEANING

CLOSED THROTTLE POSITION SWITCH AND  
THROTTLE POSITION SENSOR ADJUSTMENT  
<Vehicles without TCL>

THROTTLE POSITION SENSOR ADJUSTMENT  
<Vehicles with TCL>

CLOSED THROTTLE POSITION SWITCH AND  
ACCELERATOR PEDAL POSITION SENSOR  
ADJUSTMENT  
<Vehicles with TCL>

FIXED SAS ADJUSTMENT

BASIC IDLE SPEED ADJUSTMENT

FUEL PRESSURE TEST

FUEL PUMP CONNECTOR DISCONNECTION  
(HOW TO REDUCE PRESSURISED FUEL  
LINES)

FUEL PUMP OPERATION CHECK

### INSPECTION OF MPI COMPONENTS

COMPONENT LOCATION

MPI CONTROL RELAY AND FUEL PUMP  
RELAY CONTINUITY CHECK

INTAKE AIR TEMPERATURE SENSOR CHECK

ENGINE COOLANT TEMPERATURE SENSOR  
CHECK

THROTTLE POSITION SENSOR CHECK

ACCELERATOR PEDAL POSITION SENSOR  
CHECK (Vehicles with TCL)

CLOSED THROTTLE POSITION SWITCH  
CHECK <Vehicles without TCL>

CLOSED THROTTLE POSITION SWITCH  
CHECK (Vehicles with TCL)

OXYGEN SENSOR CHECK

INJECTOR CHECK

IDLE SPEED CONTROL (ISC) SERVO  
(STEPPER MOTOR) CHECK

PURGE CONTROL SOLENOID VALVE CHECK

EGR CONTROL SOLENOID VALVE CHECK

VENTILATION CONTROL SOLENOID VALVE  
CHECK <Vehicles with TCL>

VACUUM CONTROL SOLENOID VALVE CHECK  
<Vehicles with TCL>

VACUUM TANK CHECK <Vehicles with TCL>

VACUUM ACTUATOR CHECK  
<Vehicles with TCL>

THROTTLE VALVE OPERATION CHECK  
<Vehicles with TCL>

NEGATIVE PRESSURE CHECK DURING  
TRACTION CONTROL OPERATION  
<Vehicles with TCL>

## INJECTOR

REMOVAL SERVICE POINT

INSTALLATION SERVICE POINTS

## THROTTLE BODY

REMOVAL AND INSTALLATION  
<Vehicles without traction control, with cruise  
control>

<Vehicles with traction control and cruise control>

INSTALLATION SERVICE POINT

DISASSEMBLY AND REASSEMBLY  
<Vehicles without traction control, with cruise  
control>

<Vehicles with traction control, and cruise  
control>

CLEANING THROTTLE BODY PARTS

REASSEMBLY SERVICE POINT