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#77-63-06A: NO START, STALL, DTC 35 (94-95 M/Y) OR P1216 - (Jul 17, 1998)

REVISION: 07/16/98 DIVS INVL 1 5 7

THIS BULLETIN IS BEING REVISED TO ADD ADDITIONAL PARTS INFORMATION. PLEASE DISCARD CORPORATE BULLETIN NUMBER 77-63-06 (SECTION 6E - ENGINE FUEL AND EMISSION).



SUBJECT: NO START, STALL, DTC 35 (1994-95 MODEL YEARS) OR P1216 (1996-98 MODEL YEARS) MAY BE PRESENT (CURRENT OR IN HISTORY) (REPLACE FUEL SOLENOID DRIVER)

MODELS: 1994-98 CHEVROLET, GMC C/K, G, P, AND B MODELS WITH 6.5L DIESEL ENGINE (VINS P, S, Y, F - RPOS L49, L56, L57-EFI, L65, L65-CMT)

CONDITION:

SOME OWNERS MAY COMMENT OF A NO START, STALL. A DTC 35 (1994-1995 MODEL YEARS) OR P1216 (1996-1998 MODEL YEARS) MAY SET.

CAUSE:

THE MOST LIKELY CAUSE IS A FAILED FUEL SOLENOID DRIVER, LOCATED ON THE SIDE OF THE FUEL INJECTION PUMP.

CORRECTION:

REPLACE THE FUEL SOLENOID DRIVER, AFTER COMPLETING THE FOLLOWING STEPS:

1. CHECK THE FUEL SYSTEM FOR AIR, FUEL PRESSURE AND FUEL FLOW. REFER TO ENGINE CONTROLS IN THE 1998 MODEL YEAR SERVICE MANUAL FOR ALL MODEL YEARS.
2. CHECK POWERTRAIN CONTROL MODULE (PCM) AND INJECTION PUMP WIRING HARNESS' FOR CHAFFING, AND/OR LOOSE TERMINALS AT THE PCM CONNECTOR, 15 PIN CONNECTOR, INJECTION PUMP CONNECTOR AND FUEL SOLENOID DRIVER CONNECTOR. REFER TO ENGINE CONTROLS IN THE 1998 SERVICE MANUAL FOR ALL MODEL YEARS.
3. CHECK ALL ENGINE AND VEHICLE WIRING HARNESS GROUNDS. REFER TO ENGINE CONTROLS IN THE 1998 SERVICE MANUAL FOR ALL MODEL YEARS.
4. CHECK FOR LOSS OF IGNITION VOLTAGE ON CIRCUIT 339 AT THE FUEL SOLENOID DRIVER CONNECTION TO THE INJECTION PUMP. REFER TO ENGINE CONTROLS IN THE 1998 SERVICE MANUAL FOR ALL MODEL YEARS.
5. VERIFY THAT THE CONDITION IS STILL PRESENT: A. IF THE CONDITION IS NO LONGER PRESENT, THE VEHICLE IS REPAIRED. B. IF THE CONDITION IS STILL PRESENT, AND THERE ARE ACTIVE DTC'S SET, GO TO STEP 6. C. IF THE CONDITION IS STILL PRESENT, AND THERE ARE NO ACTIVE DTC'S SET, GO TO STEP 7.

6. FOR ACTIVE DTC'S 35 OR P1216, REFER TO ENGINE CONTROLS IN THE 1998 SERVICE MANUAL FOR ALL MODEL YEARS. IF THE DTC DIAGNOSTIC TABLE FLOW CHART DIRECTS YOU TO REPLACE THE INJECTION PUMP, REPLACE THE FUEL SOLENOID DRIVER ONLY. GO TO STEP 9.

7. FOR STALL CONDITION, DISCONNECT THE OPTICAL SENSOR AND OPERATE THE ENGINE IN BACK UP FUEL (YOU MAY EXPERIENCE AN EXTENDED CRANK TIME DURING ENGINE START - THIS IS NORMAL). IF THE CONDITION IS STILL PRESENT, REPLACE THE FUEL SOLENOID DRIVER ONLY. GO TO STEP 9.

8. FOR A NO START CONDITION, CHECK INJECTION PULSE WIDTH WITH A TECH 1 (1994-1995) OR FUEL SOLENOID CLOSURE TIME WITH A TECH 2 (1996-1998) WHILE CRANKING THE ENGINE (ENSURE THAT THE BATTERIES ARE FULLY CHARGED AND ENGINE CRANKING SPEED IS AT LEAST 100 RPM DURING TEST). IF THE CLOSURE TIME IS 1.95MS (1994-1995) OR 0.01MS (1996-1998), REPLACE THE FUEL SOLENOID DRIVER. GO TO STEP 9.

9. REPLACE FUEL SOLENOID DRIVER. A. REMOVE THE INTAKE MANIFOLD TO GAIN ACCESS TO FUEL SOLENOID DRIVER (ON THE LEFT SIDE OF THE INJECTION PUMP). REFER TO ENGINE MECHANICAL IN THE 1998 MODEL YEAR SERVICE MANUAL FOR ALL MODEL YEARS. B. SCRIBE A REFERENCE MARK ON THE ENGINE FRONT COVER AND THE INJECTION PUMP HOUSING TO ASSIST IN CORRECTLY LOCATING THE INJECTION PUMP DURING REASSEMBLY. C. LOOSEN THE INJECTION PUMP RETAINING NUTS APPROXIMATELY 1/2 TURN, USING INJECTION PUMP TIMING WRENCH J 41089 OR J 41711 (DO NOT REMOVE THE NUTS). D. ROTATE THE PUMP TO THE PASSENGER SIDE OF THE VEHICLE UNTIL IT STOPS, USING INJECTION PUMP ADJUSTING TOOL J 33042, AND RE-TIGHTEN THE TOP INJECTION PUMP RETAINING NUT, USING INJECTION PUMP TIMING WRENCH J 41089 OR J 41711. E. DISCONNECT THE FUEL SOLENOID DRIVER WIRING CONNECTOR AT THE INJECTION PUMP. F. LOOSEN THE FOUR FUEL SOLENOID DRIVER MOUNTING SCREWS UNTIL FREE OF THE INJECTION PUMP HOUSING, USING A T15 TORX BIT. (FIGURE 1). G. REMOVE THE FUEL SOLENOID DRIVER, HEAT TRANSFER PAD AND MOUNTING SCREWS FROM THE INJECTION PUMP. DISCARD THE HEAT TRANSFER PAD AND MOUNTING SCREWS. H. REMOVE THE FUEL SOLENOID DRIVER CALIBRATING RESISTOR USING SNAP RING PLIERS (FIGURE 2).

IMPORTANT: [verbar] THE CALIBRATING RESISTOR IS SPECIFIC TO THE INJECTION PUMP. DO NOT DAMAGE THE RESISTOR. [verbar] THE CALIBRATING RESISTOR IDENTIFICATION NUMBER IS LOCATED ON THE FRONT OF THE CALIBRATING RESISTOR (FIGURE 2).

IF THE CALIBRATING RESISTOR IS DAMAGED, IT CAN BE REPLACED BY THE IDENTICALLY NUMBERED RESISTOR THAT IS AVAILABLE THROUGH GMSPO. IF THE RESISTOR IS LOST AND IT'S NUMBER IS UNKNOWN, THE INJECTION PUMP MUST BE TAKEN TO A STANADYNE DEALER FOR CALIBRATION.

I. INSTALL THE CALIBRATING RESISTOR IN THE NEW FUEL SOLENOID DRIVER USING SNAP RING PLIERS (FIGURE 2).

IMPORTANT: IF THE FUEL SOLENOID DRIVER CALIBRATING RESISTOR IS MISSING, DTC 56 (1994 1995) OR P1218 (1996-1998) WILL SET.

J. INSTALL FUEL SOLENOID DRIVER. - PLACE THE NEW HEAT TRANSFER PAD ON THE SIDE OF THE NEW FUEL SOLENOID DRIVER AND INSERT THE FOUR FUEL SOLENOID DRIVER MOUNTING SCREWS INTO THE FUEL SOLENOID DRIVER. - ALIGN THE FUEL SOLENOID DRIVER MOUNTING SCREWS WITH THE HOLES IN THE PUMP HOUSING AND TIGHTEN TO 2.75 N.M (23 LB IN).

IMPORTANT: [verbar] DO NOT INSTALL THE FUEL SOLENOID DRIVER WITHOUT A NEW HEAT TRANSFER PAD. DO NOT REUSE A HEAT TRANSFER PAD. USE A NEW HEAT

TRANSFER PAD ONLY. THE HEAT TRANSFER PAD IS REQUIRED TO PREVENT RAPID FAILURE OF THE FUEL SOLENOID DRIVER FROM OVERHEATING.

NOTICE: [verbar] DO NOT OVER TIGHTEN FUEL SOLENOID DRIVER MOUNTING SCREWS. DAMAGE TO THE FUEL SOLENOID DRIVER WILL RESULT.

K. CONNECT THE FUEL SOLENOID DRIVER WIRING HARNESS CONNECTOR. L. LOOSEN THE UPPER INJECTION PUMP RETAINING NUT APPROXIMATELY 1/2 TURN, USING INJECTION PUMP TIMING WRENCH J 41089 OR J 41711 (DO NOT REMOVE THE NUT). M. ROTATE THE PUMP BACK TO IT'S ORIGINAL POSITION (USING THE REFERENCE MARK MADE PREVIOUSLY), USING INJECTION PUMP ADJUSTING TOOL J 33042, AND TIGHTEN THE INJECTION PUMP RETAINING NUTS, USING INJECTION PUMP TIMING WRENCH J 41089 OR J 41711. N. INSTALL THE INTAKE MANIFOLD. REFER TO ENGINE MECHANICAL IN THE SERVICE MANUAL. O. PERFORM INJECTION TIMING ADJUSTMENT PROCEDURE. REFER TO ENGINE CONTROLS IN THE SERVICE MANUAL.

PARTS INFORMATION:

PUMP MOUNTED DRIVER KIT, P/N 12561590 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 1 P/N 12561886 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 2 P/N 12561887 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 3 P/N 12561888 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 4 P/N 12561889 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 5 P/N 12561890 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 6 P/N 12561891 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 7 P/N 12561892 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 8 P/N 12561893 CALIBRATION RESISTOR, IDENTIFICATION NUMBER 9 P/N 12561894

PARTS ARE CURRENTLY AVAILABLE THROUGH GMSPO.

DO NOT CONTACT YOUR LOCAL STANADYNE DEALER TO OBTAIN THESE PARTS.

WARRANTY INFORMATION:

FOR VEHICLES REPAIRED UNDER WARRANTY, USE:

LABOR OPERATION LABOR OPERATION NUMBER DESCRIPTION TIME -----

J5974 PUMP MOUNTED DRIVER 2.7 HR (C/K/P/B) REPLACEMENT 4.1 HR (G-VAN)

ADD: DIAGNOSTIC TIME (IF NEEDED) 0.0 - 0.3 HR

ADD: FOR L56 ONLY 0.2 HR

FIGURES: 2 ATTACHMENTS: 0

FIGURE 2 1. FUEL SOLENOID DRIVER 2. FUEL SOLENOID DRIVER CALIBRATING RESISTOR 3. FUEL SOLENOID DRIVER CALIBRATING RESISTOR IDENTIFICATION NUMBER 4. FUEL SOLENOID DRIVER CALIBRATING RESISTOR INDEX NOTCH 5. FUEL SOLENOID DRIVER CALIBRATING RESISTOR REMOVAL HOLES 6. NEEDLE NOSE PLIERS 7. FUEL SOLENOID DRIVER INDEX NOTCH FOR CALIBRATING RESISTOR

Figure 1

Figure 2

GENERAL MOTORS BULLETINS ARE INTENDED FOR USE BY PROFESSIONAL TECHNICIANS, NOT A "DO-IT-YOURSELF". THEY ARE WRITTEN TO INFORM THOSE TECHNICIANS OF CONDITIONS

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