

Actron Code Diagnostics

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Actron Code Diagnostics

2021-04-16

AYERS EDWARDS

OBD II Mandy Concepcion

SAE J1979 / ISO 15031-5 set includes the communication between the vehicle's OBD systems and test equipment implemented across vehicles within the scope of the legislated emissions-related OBD. To achieve this, it is based on the Open Systems Interconnection (OSI) Basic Reference Model in accordance with ISO/IEC 7498-1 and ISO/IEC 10731, which structures communication systems into seven layers. When mapped on this model, the services specified are broken into: Diagnostic services (layer 7), specified in: ISO 15031-5/SAE J1979 (emissions-related OBD), ISO 27145-3 (WWH-OBD), Presentation layer (layer 6), specified in: ISO 15031-2, SAE J1930-DA, ISO 15031-5, SAE J1979-DA, ISO 15031-6, SAE J2012-DA, ISO 27145-2, SAE J2012-DA, Session layer services (layer 5), specified in: ISO 14229-2 supports ISO 15765-4 DoCAN and ISO 14230-4 DoK-Line protocols, ISO 14229-2 is not applicable to the SAE J1850 and ISO 9141-2 protocols, Transport layer services (layer 4), specified in: DoCAN: ISO 15765-2 Transport protocol and network layer services, SAE J1850: ISO 15031-5/SAE J1979 Emissions-related diagnostic services, ISO 9141-2: ISO 15031-5/SAE J1979 Emissions-related diagnostic services, DoK-Line: ISO 14230-4, ISO 15031-5/SAE J1979 Emissions-related diagnostic services, Network layer services (layer 3), specified in: DoCAN: ISO 15765-2 Transport protocol and network layer services, SAE J1850: ISO 15031-5/SAE J1979 Emissions-related diagnostic services, ISO 9141-2: ISO 15031-5/SAE J1979 Emissions-related diagnostic services, DoK-Line: ISO 14230-4, ISO 15031-5/SAE J1979 Emissions-related diagnostic services, Data link layer (layer 2),

specified in: DoCAN: ISO 15765-4, ISO 11898-1, -2, SAE J1850, ISO 9141-2, DoK-Line: ISO 14230-2, Physical layer (layer 1), specified in: DoCAN: ISO 15765-4, ISO 11898-1, -2, SAE J1850, ISO 9141-2, DoK-Line: ISO 14230-1, in accordance with Table 1 SAE document reference concept ISO 15031 references several SAE documents which contain all terms, data and DTC definitions. See Figure 1 - SAE Digital Annex document reference with the following definition of content in ISO 15031 parts: SAE J1930: the document is concerned with a procedure for naming objects and systems and with the set of words from which names are built. It references SAE J1930-DA which contains all standardized naming objects, terms and abbreviations. SAE J1979: the document is concerned with the definition of emissions-related diagnostic services (diagnostic test modes). It references SAE J1979-DA which contains all standardized data items like PIDs, Test Ids, Monitor IDs and InfoType IDs. SAE J2012: the document is concerned with the procedure for defining emissions-related diagnostic trouble codes. It references SAE J2012-DA which contains all standardized data items like DTCs and FTBs. On-Board Diagnostic (OBD) regulations require passenger cars, and light, medium and heavy duty trucks, to support a minimum set of diagnostic information to external (off-board) "generic" test equipment. SAE J1979-DA (Digital Annex) This part of ISO 15031 references the SAE J1979-DA. The SAE J1979-DA is concerned with the definition of: Parameter Identifiers (PIDs), Test Identifiers (TIDs), OBD Monitor Identifiers (OBDMIDs), Unit and Scaling Identifiers (UASIDs), and Info Types (INFOTYPES); SAE Digital Annex revision procedure New emissions-related regulatory requirements drive new in-vehicle technology to lower emissions. New technology related OBD monitor data and diagnostic trouble codes need to be standardized to support the external (off-board)

"generic" test equipment. All relevant information is proposed by the automotive industry represented by members of the appropriate SAE task force. ISO 15031-5/SAE J1979 references a "Change Request Form" to be used for new data items to be defined by the SAE task force for standardization. The standardized data items will be defined in the SAE J1979-DA. Once the information has been balloted and approved, the documents will be published on the SAE Store Web Site. The revision request form and instructions for updating ISO 15031 Part 5 / SAE J1979 can be obtained on the Registration Authority's web site at: <http://www.sae.org/servlets/works/committeeHome.do?comtID=TEVDS14> The column titled "Resources" shows a document with the title: J1979-DA_Revision_Request_Form.doc. Double click on the name and you will be asked to download the document with the filename: SAE_J1979-DA_Revision_Request_Form.doc Fill out the revision request form with your request. Please send e-mail with completed revision request form as attachment to: SAE Automotive Headquarters 755 West Big Beaver Road Suite 1600 Troy, MI 48084-4093, USA Fax: +1 (248) 273-2494 Email: saej1979@sae.org SAE J1979 is being republished with no appendices to complement the J1979DA document that is now available. No other changes have been made since the last publication. The rationale from the previous publication has been retained below for reference. Changes have been made to this document in order to keep pace with changes made to the California Air Resources Board legislation: Title 13, California Code Regulations, Section 1968.2, Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (OBD II), and Regulation (EC) No 715/2007 of the European

Parliament and of the Council of June 20, 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information as amended by Commission Regulation (EC) 692/2008. Some clarifications and functional enhancements have also been included in this document.

Lexus & Toyota/Scion Onboard Diagnostics Motorbooks
AUTOMOTIVE COMPUTERIZED AND ELECTRICAL DIAGNOSTICS TECHNOLOGY is a book that deals with the technology behind computerized and electrical diagnosis of systems and components in the vehicle. This book provides theories of the operations of the On-Board Diagnostic (OBD) protocol; which include the OBD I and OBD II protocol. This book is present a practical approach to automotive diagnostic technology, with step by step analysis. The book also entails the use of various kind of diagnostic tools for various diagnostics operations, the terminology involves in the diagnostic procedure and also the technology behinds it operation. The render step by step procedures of diagnostics operations which is compatible for all kind of diagnostic tool, with necessary advices on how to perform the operations. It also touches all kind of diagnostic tools and diagnostics operation available in the automotive technology industry. This book also cover aspect such as Electronic Control Unit (ECU) reprogramming and repairs, it involves reprogramming of various systems and components in the vehicle. Some key topics in this book involves: 1. AUTOMOTIVE DIAGNOSTICS TECHNOLOGY. 2. THE ON-BOARD DIAGNOSTICS (OBD I) SYSTEM/PROTOCOL. 3. HOW TO DIAGNOSE USING OBD I PROTOCOL. 4. ON-BOARD DIAGNOSTIC (OBD II) SYSTEM/PROTOCOL. 5. DIAGNOSTIC TOOLS/SCANNERS. 6. ELM327. 7. LIMITATIONS OF ELM327. 8. ELECTRONIC CONTROL UNIT (ECU) AND SENSORS. 9. CONTROLLER AREA NETWORK (CAN). 10. CHECK ENGINE LIGHT. 11. CODE READERS VERSUS DIAGNOSTIC SCANNERS. 12. CURRENT AND STORED FAULTS CODES. 13. SOFTWARE/APPLICATIONS FOR DIAGNOSTICS TOOLS. 14. CRACKED SOFTWARE VERSION AND CLONED SCAN TOOLS. 15. IMMOBILIZERS. 16. VIN- VEHICLE IDENTIFICATION NUMBER. 17. SCN- SOFTWARE CALIBRATION NUMBER coding. 18. MULTIPLEXING. 19. WARNING LIGHTS. 20. SENSORS AND APPLICATIONS. 21. APPLICATION OF SENSORS IN BRAKING AND

STABILITY SYSTEM OF VEHICLES. 22. AUTOMOBILE DIAGNOSTIC TECHNOLOGY IN AFRICA (TAKING NIGERIA AS A CASE STUDY). 23. IMPORTANCE OF EVENT/HISTORY RECORDS IN AUTO DIAGNOSTICS TECHNOLOGY. 24. IMPORTANCE OF REGULAR DIAGNOSTICS OPERATION. 25. MECHATRONICS IN AUTOMOBILE DIAGNOSTICS TECHNOLOGY. 26. ELECTRIC VEHICLES. 27. CLASSIFICATION AND FEATURES OF DIAGNOSTIC TOOLS/SCANNERS. 28. GENERIC FAULT CODES. 29. CHOOSING A DIAGNOSTIC TOOL/SCANNER. 30. HOW TO USE A DIAGNOSTIC TOOL/SOFTWARE. 31. STEP BY STEP DIAGNOSTIC PROCEDURE. 32. REPROGRAMMING OF SYSTEMS AND COMPONENTS IN THE VEHICLE. 33. STEPS TO REPROGRAM THE AIRBAG SYSTEM. 34. IMMOBILIZER AND ECU REPROGRAMMING. 35. PIN GENERATION FOR REPROGRAMMING. 36. HOW TO REPROGRAM KEY TO THE IMMOBILIZER AND ECU. 37. HOW TO GENERATE PASSCODE OR PIN FROM THE MANUFACTURER OR SERVICE PROVIDER. 38. HOW DOES THE IMMOBILIZER SYSTEM WORKS. 39. HOW TO DETECT AND DEAL WITH FAULTS IN THE IMMOBILIZER SYSTEM. 40. VARIOUS FAULTS IN THE IMMOBILIZER SYSTEM AND SOLUTION. 41. LIMITATIONS OF SOME DIAGNOSTIC TOOLS ON SCANNING AND REPROGRAMMING THE IMMOBILIZER SYSTEM. 42. HOW TO REPROGRAM THE IMMOBILIZER SYSTEM. 43. HOW TO KNOW AN IMMOBILIZER UNIT IS FAULTY. 44. HOW TO KNOW A FAULTY ECU. 45. DIAGNOSTIC TOOL/SOFTWARE FOR ECU/IMMOBILIZER REPROGRAMMING. 46. ELECTRICAL ERASABLE PROGRAMMABLE READ ONLY MEMORY-EEPROM. 47. ECU MAPPING. 48. ECU TURNING. 49. POWERTRAIN CONTROL MODULE (PCM). 50. GENERIC DIAGNOSTIC TROUBLE CODES (DTC). 51. GENERIC DIAGNOSTIC TROUBLE CODES (DTC) WITH THEIR DESCRIPTION.

Automotive Scan Tool Pid Diagnostics Haynes Manuals N.

America, Incorporated

Author McCord provides a thorough process for trouble shooting problems, tracing a problem to its root, explaining why DTCs may not lead to the source of the underlying problem, and ultimately resolving the problem. Contains full DTC code chart.

OBD-II & Electronic Engine Management Systems Createspace Independent Publishing Platform

Model year coverage for the Domestic DTC manual is 1994-2007. The manual features domestic diagnostic trouble codes and list the probable cause of each code. The manual provides MIL Codes,

OBD Codes and Fault locations. Code retrieval techniques are described using concise text and clear illustrations in separate sections for each model. Instructions for retrieval and erasure of trouble codes are provided as well as data link connector locations. All data is based on OEM information. The information is available on CD. CDs contain both English and Spanish languages. *General Motors Onboard Diagnostics* Kotzig Publishing
From hand-held, dedicated units to software that turns PCs and Palm Pilots into powerful diagnostic scanners, auto enthusiasts today have a variety of methods available to make use of on-board diagnostic systems. And not only can they be used to diagnose operational faults, they can be used as low-budget data acquisition systems and dynamometers, so you can maximize your vehicle's performance. Beginning with why scanners are needed to work effectively on modern cars, this book teaches you how to choose the right scanner for your application, how to use the tool, and what each code means. "How To Use Automotive Diagnostic Scanners" is illustrated with photos and diagrams to help you understand OBD-I and OBD-II systems (including CAN) and the scanners that read the information they record. Also included is a comprehensive list of codes and what they mean. From catalytic converters and O2 sensors to emissions and automotive detective work, this is the complete reference for keeping your vehicle EPA-compliant and on the road!

Buick Onboard Diagnostics Autodata Publications Inc.

In the early part of the 21st century, we find our lives intertwined with a maze of technological wonders. From cell-phones to personal computers, no human being today can escape it. Automobiles are no exception to this rule. With the ever changing emission laws of today, the one constant in the automotive industry is that things always change and will continue to do so. OBD II was designed from the beginning to do so as well. Late model vehicle systems are much more demanding, in both the amount of technology they possess and in the knowledge necessary to repair them. This work was designed to just that, a step-by step diagnostic approach to OBD II systems. It is also written with the State Inspections in mind. This is in direct response to the increasing adoption of OBD II inspections by most States throughout the country. OBD II repair don't have to be difficult or cumbersome and knowledge is the key to successful OBD II diagnostics and repair. About the Author Mandy

Concepcion has worked in the automotive field for over 21 years. He holds a Degree in Applied Electronics Engineering as well as an ASE Master & L1 certification. For the past 16 years he has been exclusively involved in the diagnosis of all the different electronic systems found in today's vehicles. It is here where he draws extensive practical knowledge from his experience and hopes to convey it in his books. Mandy also designs and builds his own diagnostic equipment, DVD-Videos and repair software.

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caught in a particular mind set - Taking all the facts into account

How To Use Automotive Diagnostic Scanners SAE International

More than 4,000 OBDII fault codes are compiled and qualitatively described in this compendium of generic and manufacturer-specific proprietary fault codes for common vehicles. The diagnostic connectors, protocols and their classifications, breakdown of fault codes, and vocabulary used to describe components are detailed in the discussion of the anatomy of the OBDII scan tool. This comprehensive reference to fault codes aids in diagnostic assessment by making clear the nature of an automotive problem so that beginner and advanced technicians can make effective repairs.

Chrysler Onboard Diagnostics CarTech Inc

This document supersedes SAE J2012 APR2002, and is technically equivalent to ISO 15031-6:2005 with the exceptions described in Section 1.2. This document is intended to define the standardized Diagnostic Trouble Codes (DTC) that On-Board Diagnostic (OBD) systems in vehicles are required to report when malfunctions are detected. This document includes:

a. Diagnostic Trouble Code format.

b. A standardized set of Diagnostic Trouble Codes and descriptions.

c. A standardized set of Diagnostic Trouble Codes subtypes known as Failure Types.

The prior version of SAE J2012 was technically equivalent to a draft version of ISO 15031-6: April 30, 2002. The ISO document was subsequently edited and published as an International Standard ISO 15031-6:2005, including minor editorial changes. This version of SAE J2012 includes all of the editorial changes that were included in the published version of the ISO document. This version is updated to include; the latest standardized fault codes and failure type byte subfaults, provide a new fault code appendix format and remove certain figures that belong in the SAE J1930 standard. SAE is offering the current Diagnostic Trouble Code (DTC) and Failure Type Byte (FTB) appendices in a new Digital DTC and FTB appendices web tool.

2003 Import Diagnostic Trouble Code Manual 1999-02 Kotzig Publishing

This manual takes the mystery out of Second-Generation On-Board Diagnostic Systems allowing you to understand your vehicles OBD-II system, plus what to do when the "Check Engine" light comes on, from reading the code to diagnosing and fixing the problem. Includes a comprehensive list of computer codes.

Computer-controlled car repair made easy! For all car and light truck models manufactured since 1996. Understand your vehicle's On-Board Diagnostic system How to deal with that "Check Engine" light--from reading the code to diagnosing and fixing the problem

Comprehensive computer codes list Diagnostic tools: Powertrain management fundamentals OBD-II "monitors" explained Generic trouble codes that cover all models! Manufacturer-specific trouble codes for GM, Ford, Chrysler, Toyota/Lexus and Honda/Acura vehicles Let your car's computer help you find the problem!

Component replacement procedures Glossary and acronym list Fully illustrated with over 250 photographs and drawings

[Diagnostic Trouble Code Definitions](#) Cartech

Modern vehicles have electronic control units (ECUs) to control various subsystems such as the engine, brakes, steering, air conditioning, and infotainment. These ECUs (or simply 'controllers') are networked together to share information, and output directly measured and calculated data to each other. This in-vehicle network is a data goldmine for improved maintenance, measuring vehicle performance and its subsystems, fleet management, warranty and legal issues, reliability, durability, and accident reconstruction. The focus of Data Acquisition from HD Vehicles Using J1939 CAN Bus is to guide the reader on how to acquire and correctly interpret data from the in-vehicle network of heavy-duty (HD) vehicles. The reader will learn how to convert messages to scaled engineering parameters, and how to determine the available parameters on HD vehicles, along with their accuracy and update rate. Written by two specialists in this field, Richard (Rick) P. Walter and Eric P. Walter, principals at HEM Data, located in the United States, the book provides a unique road map for the data acquisition user. The authors give a clear and concise description of the CAN protocol plus a review of all 19 parts of the SAE International J1939 standard family. Pertinent standards are illuminated with tables, graphs and examples. Practical applications covered are calculating fuel economy, duty cycle analysis, and capturing intermittent faults. A comparison is made of various diagnostic approaches including OBD-II, HD-OBD and World Wide Harmonized (WWH) OBD. Data Acquisition from HD Vehicles Using J1939 CAN Bus is a must-have reference for those interested to acquire data effectively from the SAE J1939 equipped vehicles.

2007 Import Diagnostic Trouble Code Manual (1994-2007)

Mandy Concepcion

Automotive Scan Tool PID Diagnostics (Diagnostics Strategies of Modern Automotive Systems) By Mandy Concepcion In this section, the different techniques of scan tool parameter (PID) analysis will be exposed. Techniques involving PID analysis are quickly catching on, due to their speed and accuracy. By properly analyzing the different scanner PIDs, the technician can arrive at the source of the problem much faster and accurately. These procedures give rise to the new term "driver seat diagnostics", since most of the preliminary diagnostic work is done through the scanner. However, these techniques will in no way replace the final manual tests that are a part of every diagnostic path. They are simply geared to point the technician in the right direction.

Table of Contents INTRODUCTION (Introduction to scan tool diagnostics and the relevance of using PIDs or scanner parameter to perform the first leg of all diagnostics.) - Theory of Operation Behind the Different PIDs (Describes CARB, the difference between generic and enhanced PIDs, the FTP) - OBD II Generic PIDs (PID calculated and actual values, calculated data relationships, base injection timing, ECM value substitution) - OBD I & II General PID analysis (erasing code-or not, recording, analyzing and pinpoint tests, separating PIDs into groups) - Fuel Delivery Fault Detection (fuel delivery issues, intake air temp. sensor, BARO sensor, Engine LOAD, RPM PID, Short-Term Fuel Trims, Long-Term Fuel Trims, 60% of check engine light issues, block learn/integrators, Example 1: injector fault, Example 2: intake gasket issues, fuel status, ignition timing, MAP/MAF, TPS, O2 sensor, IAC, Closed Throttle, injector pulse width, voltage power, injector duty-cycle, fuel trim cell) - Test #1 (Determining an engine's fuel Consumption (rich-lean operation, duty-cycle to fuel trim relationship, O2 sensor to fuel trim relation, FT and vacuum leaks, ignition timing and idle control, test conclusion) - Test # 2 (Misfire Detection Strategy, EGR, Ignition and Mechanical misfires) (misfires and OBD2, scanner misfire detection - a time saver, OBD2 40 and 80 cycle misfire, ignition, injector and EGR density misfire, coil-on-plug, misfires and O2 sensor, lean O2 & Secondary misfire, O2 sensor & injector misfires, leaky injector, EGR and the MAP, Type A, B, C misfires, test conclusion) - Test # 3 (Air/Fuel Ratio Faults) (air-fuel imbalance, MAF and post O2 sensors, open-closed-loop, fuel enable, HC & CO relation to AF issues, test conclusion) - Test # 4 (BARO, MAP & MAF PID

analysis) (MAP & valve timing faults, ECM behavior, fuel delivery or duty cycle test, volumetric efficiency, , test conclusion) - Test # 5 (Clogged exhaust) (clogged catalytic converter detection, TPS, MAF and converters, idle and WOT or wide open throttle values, vacuum readings, MAP to WOT charts analysis, engine and MAP vacuum, test conclusion) - Test # 6 (EGR Fault Detection) (EGR and MAP values, ECM reaction to EGR issues, EGR temp sensor, DPFE sensor, EGR and O2-MAP and lift position sensor, EGR and engine pre-loading, EGR and the ECM erroneous high LOAD issues, test conclusion) - Test # 7 (O2 Sensor Heater) (O2 heaters and why?, tough to check O2 heater issues, O2 heater effect on signal output, O2 heater bias voltage, engine off and O2 changing value, test conclusion) - Test # 8 (Resetting Fuel Trims) (resetting injection pulse corrections, long-term and short-term fuel trims, learn condition, Lambda, case study on fuel trims, FT resetting according to manufacturer, test conclusion) - Test # 9 (Engine Cranking Vacuum Test) (MAP/MAF cranking vacuum, vacuum to PID analysis, vacuum leaks, gauge-PID test, sources of leaks, cranking values, test conclusion)

Automotive Diagnostic Systems Independently Published

The principles of tuning OBDII vehicles are outlined for do-it-yourself novices and repair professional alike in this introduction to automotive electronic diagnostics. Beginning with basic automotive concepts of engine operation and the powertrain control module, topics span the history of OBDII, anatomy of the scan tool and its components, and the language and protocols that the OBDII uses to communicate faults. Diagnostic tips and detailed fault code descriptions for major domestic automobile manufacturers including General Motors, Ford, and Daimler-Chrysler accompany tips for Asian and European vehicles. The straightforward prose and cooking recipes listed at the end contribute to this comprehensive primer to electronic diagnostics.

Acura & Honda Onboard Diagnostics Mandy Concepcion
diagnostic code reader for all vehicles log

Pontiac Onboard Diagnostics CreateSpace

OBD 2 Repair Strategies (Including State Smog Inspections) In the early part of the 21st century, we find our lives intertwined with a maze of technological wonders. From cell-phones to personal computers, no human being today can escape it. Automobiles are no exception to this rule. With the ever changing emission laws of today, the one constant in the automotive industry is that things

always change and will continue to do so. OBD II was designed from the beginning to do so as well. Late model vehicle systems are much more demanding, in both the amount of technology they possess and in the knowledge necessary to repair them. This work was designed to just that, a step-by-step diagnostic approach to OBD II systems. It is also written with the State Inspections in mind. This is in direct response to the increasing adoption of OBD II inspections by most States throughout the country. OBD II repairs don't have to be difficult or cumbersome and knowledge is the key to successful OBD II diagnostics and repair. About the Author Mandy Concepcion has worked in the automotive field for over 32 years. He holds a Bachelor's Degree in Electronics Engineering as well as an ASE Master & L1 certification. For the past 16 years he has been exclusively involved in the diagnosis of all the different electronic systems found in today's vehicles. It is here where he draws extensive practical knowledge from his experience and hopes to convey it in his books. Mandy also designs and builds his own diagnostic equipment, DVD-Videos and repair software. Edition 4.0, Table of Contents, Copyright 2004, 2011, All rights reserved

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Which Monitors are Incomplete. The need to prove each system without having to run a drive cycle by using the scanner, saving time & money- General Idle PID Snap-Shot Section 3 - INTRODUCTION- OBD-2 Generic PID list- OBD I and OBD II, and general PID analysis- FUEL DELIVERY FAULT DETECTION- TEST # 1- TEST #2- TEST #3- TEST #4- TEST #5- RUNNING THE MONITORS IN YOUR MIND USING THE SCANNER Section 4 - Putting it all together.- Principles of diagnostics- Basic Scope Testing and Bi-Directional Control- No-Start, General Diagnostics- The correct decision making process to a sound repair- Don't assume anything or get caught in a particular mind set- Taking all the facts into account

OBD II Trouble Codes and Diagnostics for Asian Vehicles, 1994-1999 Autodata Publications Inc.

Model year coverage for the Import DTC Manual is 1994-2007. The manual features domestic diagnostic trouble codes and list the probable cause of each code. The manual provides MIL Codes, OBD Codes and Fault locations. Code retrieval techniques are described using concise text and clear illustrations in separate sections for each model. Instructions for retrieval and erasure of trouble codes are provided as well as data link connector locations. All data is based on OEM information. The information is available on CD. CDs contain both English and Spanish languages.

2007 Domestic Diagnostic Trouble Code Manual (1994-2007)
Haynes Manuals N. America, Incorporated
"Includes pressure/voltage/current volumes, OBD-2 code definitions & code-setting criteria"--Cover.

Data Acquisition from HD Vehicles Using J1939 CAN Bus
This manual takes the mystery out of Second-Generation On-Board Diagnostic Systems allowing you to understand your vehicles OBD-II system, plus what to do when the "Check Engine" light comes on, from reading the code to diagnosing and fixing the problem. Includes a comprehensive list of computer codes. Computer-controlled car repair made easy! For all car and light truck models manufactured since 1996. Understand your vehicle's On-Board Diagnostic system How to deal with that "Check Engine" light--from reading the code to diagnosing and fixing the problem Comprehensive computer codes list Diagnostic tools: Powertrain management fundamentals OBD-II "monitors" explained Generic trouble codes that cover all models! Manufacturer-specific trouble codes for GM, Ford, Chrysler, Toyota/Lexus and Honda/Acura vehicles Let your car's computer help you find the problem! Component replacement procedures Glossary and acronym list Fully illustrated with over 250 photographs and drawings

OBDII Diagnostic
"OBD expert, tuner, and author Keith McCord explains system architecture, function, and operation. He shows you how to use a

hand-held scanner, connect it to the port connector in the car, and interpret the data. But most importantly, he shows you a practical, analytical, and methodical process for tackling a problem, so you can quickly trace its actual source and fix the root cause and not just the symptom..." -- from page 4 of cover.

E/E Diagnostic Test Modes
Contents include: Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations and Acronyms Diagnostic Connector OBD II Scan Tool E/E Diagnostic Test Modes Recommended Practice for Diagnostic Trouble Code Definitions E/E Data Link Security Enhanced E/E Diagnostic Test Modes Class B Data Communications Network Interface Class B Data Communication Network Messages - Detailed Header Formats and Physical Address Assignments Class B Data Communication Network Messages - Part 2: Data Parameter Definitions Class B Data Communication Network Messages - Part 3: Frame IDs for Single Byte Forms of Headers Class B Data Communication Network Messages - Message Definitions for Three Byte Headers High-Speed CAN (HSC) for Vehicle Applications at 500 KBPS Bibliography of related SAE technical papers.

Chevrolet Onboard Diagnostics
"Includes pressure/voltage/current volumes, OBD-2 code definitions & code-setting criteria"--Cover.