CEN-TECH™

AUTOMOBILE CODE SCANNER
VW AND AUDI VEHICLES
Model 96374

OPERATION INSTRUCTIONS

Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed Exclusively by
HARBOR FREIGHT TOOLS ®

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: http://www.harborfreight.com

TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND ALL WARNINGS AND INSTRUCTIONS BEFORE USE.

For technical questions or replacement parts, please call 1-800-444-3353.

SPECIFICATIONS

Construction	Thermoplastic casing, L.C.D.
Protocols	ISO-15765 C.A.N.(Controller Area Network) ISO-9141-2 "CARB" ISO-14230 "KWP-2000"
Power	Testing Vehicle's 12 VDC
Features	Reads & Clears DTC's (Diagnostic Trouble Codes) and Clears Engine Light Identifies/Displays Multiple Codes for ABS, Airbag & Auto Trans. (Displays I/M Readiness Status) Back-lit Display/2 Lines, 8 Characters Stand-alone Power (no batteries required)
Dimensions	3-3/4" W x 7" L x 1-3/8" H 24AWG x 4',10" Long adapter cable
Weight	9.9 Oz. (16 Oz. w/ Cable)

Save This Manual

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Write the product's serial number in the back of the manual near the assembly diagram, or write month and year of purchase if product has no number. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY RULES

⚠️**WARNING!**

READ AND UNDERSTAND ALL INSTRUCTIONS
Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.
SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.

2. **Never allow children to operate or play with the Code Reader.**

3. **Do not expose this tool to rain or wet conditions.** Water entering a power tool can damage it.

4. **Do not abuse the DLC Cord. Never use the cord to carry the tool or pull the Plug from an outlet. Keep the DLC Cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately.**

PERSONAL SAFETY

1. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use this tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating any tool may result in serious personal injury.

2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair.**

3. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.

4. **Use safety equipment. Always wear ANSI approved eye protection.**

TOOL USE AND CARE

1. **Do not force the tool. Use the correct tool for your application.** The Code Scanner can **only** be used on 1990 or later VW® and Audi® model vehicles. Do not force the plug into the socket.

2. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

3. **Check for broken parts or any other condition that may affect the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

4. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

5. **Maintain labels and nameplates on the tool.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

6. **Never leave vehicle running while using the Code Reader.** When running, an engine produces carbon monoxide, a colorless, odorless, toxic gas that, when inhaled, can cause serious personal injury or death. The Code Reader does not require that a vehicle be started to operate, only that the ignition switch should be in the "ON" position after the DLC Cable is connected.

7. **People with pacemakers should consult their physician(s) before use.** Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near coil, spark plug cables, or distributor of running engine. Engine should be off during adjustment.

8. **This device complies with part 15 of the FCC Rules.** Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

The Code Reader comes in an anti-static plastic bag, it is recommended that the bag be retained for storing the Code Reader.
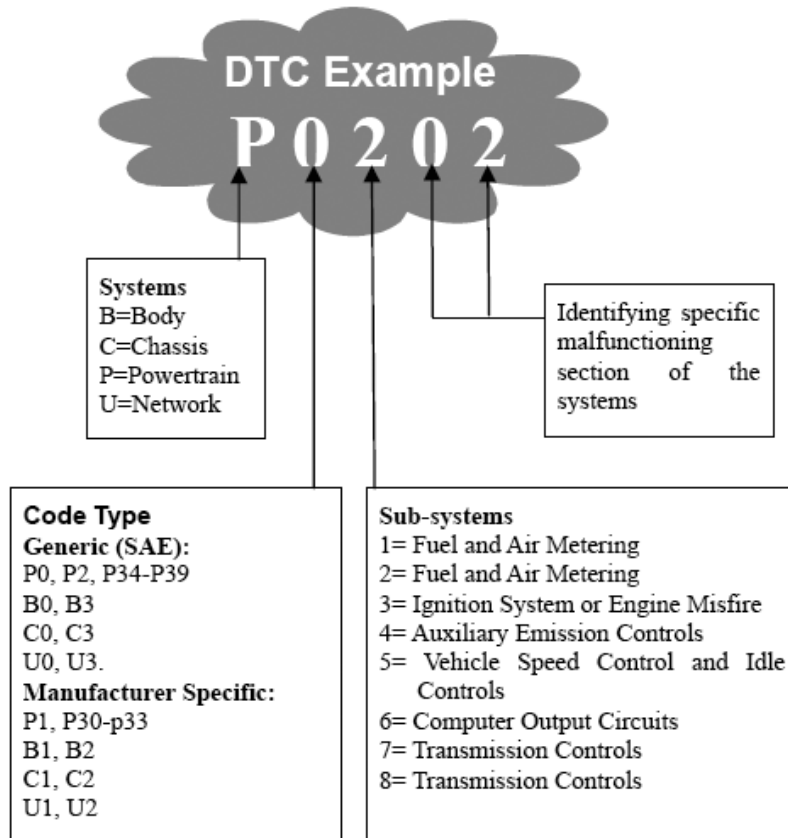
OPERATION INSTRUCTIONS

Note: The Code Reader is designed to work with 1990 or newer Audi® and VW® vehicles that utilize a 16 pin "OBD-II" style Data Link Connector. If the vehicle has an older style "2X2" Data Link Connector, the Code Reader will only work if a "2X2" cable adapter (not included) is used and if there are 4 wires connected to 4 pins.

1. LCD DISPLAY -- Displays test results.

2. Y BUTTON -- Confirms a selection (or action) from a menu. When a DTC's definition covers more than one screen, it is used to move down to the next screen for additional data.

3. N BUTTON -- Cancels a selection (or action) from a menu or returns to the menu. It can also be used to set up the unit when pressed and held for at least 3 seconds.

4. UP SCROLL BUTTON -- Moves up through menu and submenu items in menu mode. When more than one DTC is retrieved, moves up through the current screen to the previous screens for additional DTCs and definitions.

5. DOWN SCROLL BUTTON -- Moves down through menu and submenu items in menu mode. When more than one DTC is retrieved, moves down through the current screen to the next screens for additional DTCs and definitions.

6. OBD II CABLE -- Connects the scan tool to the vehicle's Data Link Connector (DLC).

Diagnostic Trouble Codes

OBD II Diagnostic Trouble Codes are stored by the on-board computer system in response to a problem with the vehicle. These codes identify a particular problem area and are intended to provide a guide as to where a fault might be occurring within a vehicle. OBD II Diagnostic Trouble Codes consist of a five-digit alphanumeric code. The first character, a letter, identifies which control system sets the code. The other four characters, all numbers, provide additional information on where the DTC originated and the operating conditions that caused it to be set. Below is an example to illustrate the structure of the digits:

DTC Example

P 0 2 0 2

Systems
B=Body
C=Chassis
P=Powertrain
U=Network

Identifying specific malfunctioning section of the systems

Code Type
Generic (SAE):
P0, P2, P34-P39
B0, B3
C0, C3
U0, U3.
Manufacturer Specific:
P1, P30-p33
B1, B2
C1, C2
U1, U2

Sub-systems
1= Fuel and Air Metering
2= Fuel and Air Metering
3= Ignition System or Engine Misfire
4= Auxiliary Emission Controls
5= Vehicle Speed Control and Idle Controls
6= Computer Output Circuits
7= Transmission Controls
8= Transmission Controls

Starting the Unit

• A flashing Down Arrow indicates additional information is available on the next screen.

• A flashing Up Arrow indicates additional information is available on the previous screen.

1. Turn ignition key to the "OFF" position.

2. Power is provided to the Code Reader through the vehicle Data Link Cable (DLC).

3. Connect the OBD II Cable to the Code Reader.

4.   Find DLC on vehicle. The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic scan tools interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dashboard), under or around the driver's side for most vehicles. If Data Link Connector is not located under the dashboard, there should be a label indicating the location. For some vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service manual for the location.

5.   Plug OBD II Cable to the vehicle's DLC.

Product Setup

The Code Reader allows you to make the following adjustments and settings:
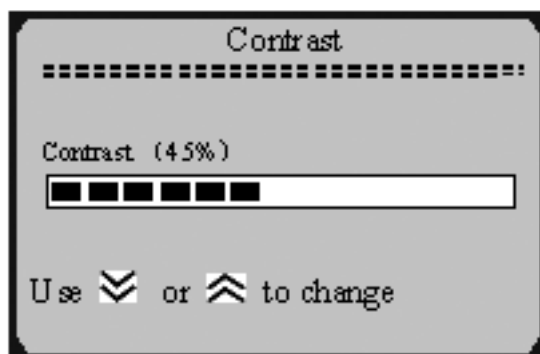
1.   Contrast adjustment: Adjusts the contrast of the LCD display.

2.   Display Test: Tests the LCD display.

3.   Keyboard test: Tests the keyboard.

To enter the setup menu mode

1.   From the keyboard: Press and hold the N button for at least 3 seconds until the System Setup menu shows up. Follow the instructions to make adjustments and settings as described in the following setup options.

2.   From the Main Menu: Use the UP/DOWN Scroll Buttons to select System Setup and then press the Y button. Follow the instructions to make adjustments and settings as described in the following setup options.

Contrast Adjustment

```
                    Contrast
========================================!

Contrast (45%)

■■■■■■
                                        
Use ⌄ or ⌃ to change
```
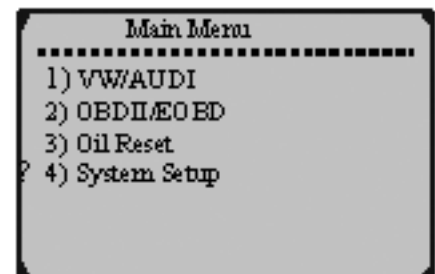
1.   From the System Setup menu, use the UP/DOWN scroll buttons to select Contrast, and press the Y button.

2.   From the Contrast menu, use the UP/DOWN scroll buttons to decrease or increase the contrast.

3.   Press the Y button to save your selection and return to previous menu.

4.   Press the N button to return to previous menus.

Display Test

1.   From the System Setup menu, use the UP/DOWN scroll buttons to select Display Test and press the Y button.

2.   Select Display Test from the Display Test menu and press the Y button.

3.   Press the Y button again to start test. Look for missing spots in the solid black characters.

4.   When completed, press the N button to return. If there are Display problems have the Code Reader serviced by a qualified technician.

Keyboard Test

1.   The Keyboard Test is used to verify that the keys are functioning properly.

2.   Use the UP/DOWN scroll buttons to select Keyboard Test from the System Setup menu, and then press the Y button.

3.   Press any key to start test. When a key is pressed, the key name should be observed on the Display. If the name does not show up, then the key is not functioning properly.

4.   Double press N to return to the previous menu. If there are Keyboard problems have the Code Reader serviced by a qualified technician.

Testing

Note: Never connect or disconnect any test equipment with ignition ON or engine running.

1. Turn the ignition off.

2. Locate the vehicle's 16-pin Data Link Connector (DLC).

3. Connect the Code Reader to the OBD II Cable.

4. Plug the OBD II Cable into the vehicle's DLC.

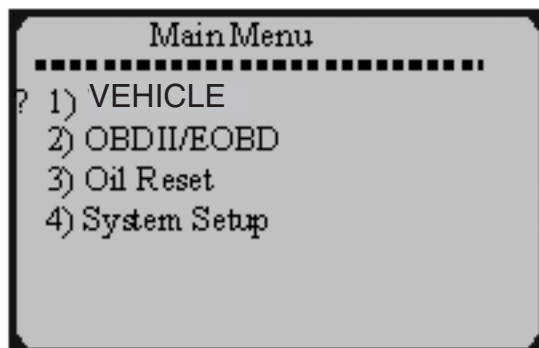5. Turn the ignition on, but do not start the engine.

6. Press the Y button. The Main Menu will be observed on the display. **(See Figure A)**

Figure A

7. Use the UP/DOWN scroll buttons to select the vehicle (VW®/Audi®) from the menu and press the Y button.

8. Use the UP/DOWN scroll buttons to select the system from the Select System menu and press the Y button. **(See Figure B)**

9. If the scan tool fails to communicate with the selected vehicle's ECU (Electronic Control Unit), a "LINK ERROR!" message shows up on the display.

   • Verify that the ignition is ON

   • Check if the Code Scanner's OBD II connector is securely connected to the vehicle's DLC

Figure B

   • Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.

   • If the "LINK ERROR" message does not go away, the Code Scanner is not communicating with the module being tested. The most common cause of this problem, is that the Code Scanner is not supported by the vehicle.
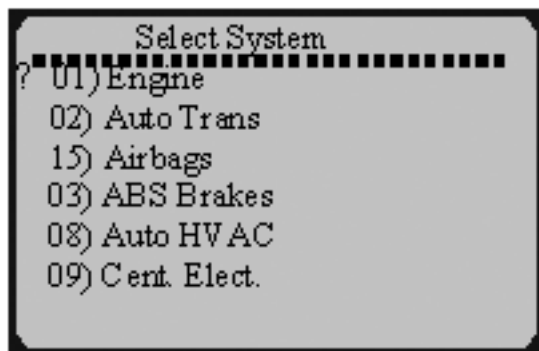
Note: The numbers (01, 02, 15, 03, 08, etc) in front of the system names refer to the physical addresses assigned to the systems, not the sequence of the systems to be arranged.

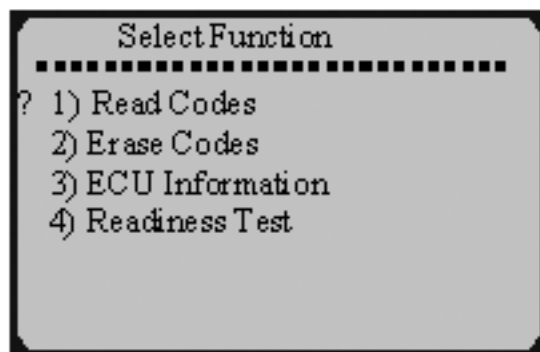10. Select Read Codes from the Select Function menu and press the Y button. **(See Figure C)**

Figure C

11.   If there are no Diagnostic Trouble Codes present, the display will indicate "NO CODES ARE STORED IN THE MODULE!"

12.   Refer to the example Figure D for the following:
•   If there are any Diagnostic Trouble Codes present, the DTC number and its definition will show on the LCD display.

•   The sub code, the communication protocol, the sequence of the DTC currently being observed, and the total number of codes detected will be displayed on the upper right hand corner of the display.

•   When a DTC's definition covers more than one display screen, use the Y button, as necessary, to view any additional information.
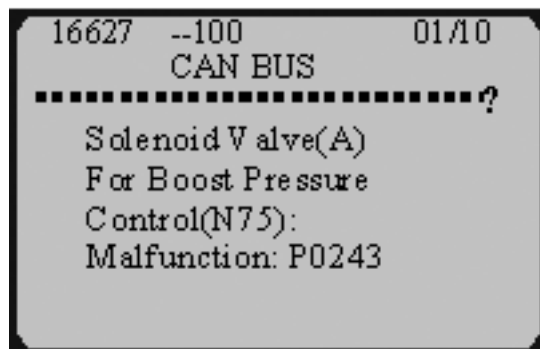
Figure D

•   If the DTC definition is not available, an advisory message prompting you to refer to the vehicle service manual will be observed on the display.

•   If more than one DTC is found, use the UP/DOWN scroll buttons, as necessary, until all the codes have been displayed.
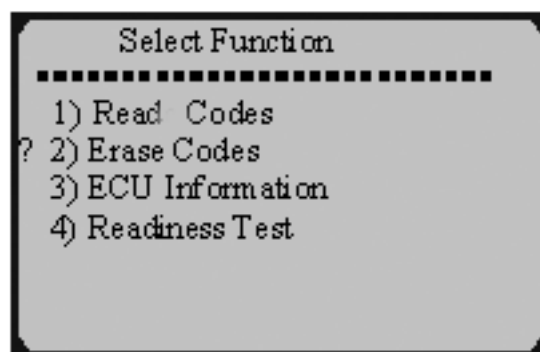
Erasing Codes

Figure E

Note: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Fail status. **Do not erase the codes before the system has been checked completely by a technician.**

1. If you decide to erase the DTCs, use the UP/DOWN scroll buttons to select Erase Codes from the Select Function menu and press the Y button.

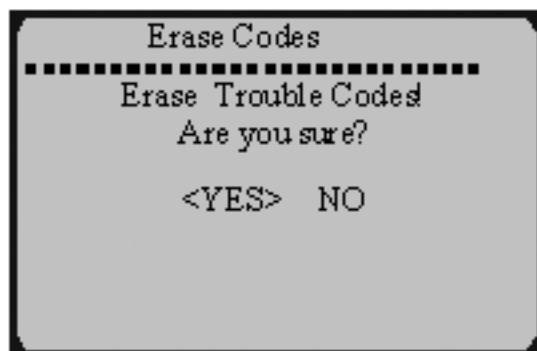2. A warning message comes up asking for your confirmation. **(See Figure F)**

3. If you do not want to proceed with erasing the codes, press the N button to exit. A message of "command cancelled" will show up.

4. If you do wish to proceed to erase the codes, then press the Y button.

Figure F

5. If the codes are cleared successfully, an "ERASE DONE!" confirmation message will show on the display. Press any button to return to the previous menus.

6. If the codes are not cleared, then an "ERASE FAILURE!" message will appear. Press the N button to return to previous menus. Have the system checked by a certified technician.

Viewing ECU Information

1. To view ECU Information, use the UP/DOWN scroll buttons to select ECU Information from the Select Function menu and press the Y button.

2. If there is no ECU Information available, a warning message shows on the display.

3. Press the N button to return to previous menu.
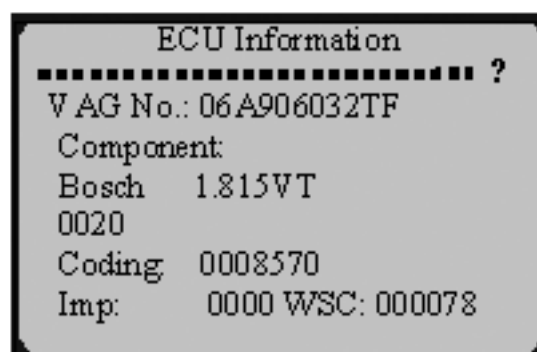
Readiness Test
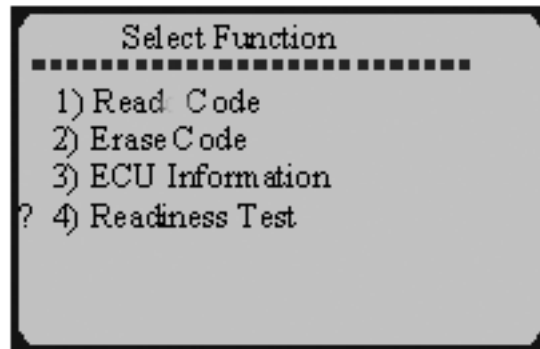
1. The Readiness Test function is used to check the operations of the Emission System on OBDII/EOBD compliant vehicles. It is an excellent function to use prior to having a vehicle inspected for emissions compliance.

   • "Pass" -- Indicates that a particular monitor being checked has completed the diagnostic testing.

   • "Fail" -- Indicates that a particular monitor being checked has not completed the diagnostic testing or the monitor is not supported on that vehicle.

   • Use the UP/DOWN scroll buttons to select Readiness Test from the Select Function menu and press the Y button.

Note: The Code Scanner can not determine whether a vehicle will pass or fail an emissions compliance test.

2. Use the UP/DOWN scroll buttons, as necessary, to view the status of the following monitors:

   EGR Sys. - EGR System Monitor

   O2 Sensor(s) - Oxygen Sensors Monitor

   Catalyst - Catalyst Monitor

   EVAP Sys. - Evaporative Emission System Monitor

   Heated O2 - Oxygen Sensor Heater Monitor

   Figure H

   Sec Air Inject - Secondary Air Injection Monitor

   A/C - A/C system Monitor

   Catalytic Conv. - Catalytic Convertor Monitor

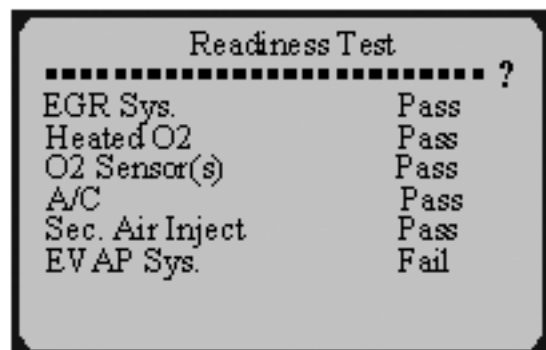3. Press the N button to return to previous menus.

OBDII/EOBD Diagnostics

Main Menu
1) VEHICLE
2) OBDII/EOBD
3) Oil Reset
4) System Setup

Figure I

Reading Codes

1. Use the UP/DOWN scroll buttons to select OBDII/EOBD from the menu.

2. Press the Y button. A sequence of messages showing the OBDII/EOBD protocols will be observed on the display until the vehicle protocol is detected.

3. After the vehicle protocol is displayed on the screen, press any key or wait about 2 seconds for the OBDII/EOBD Diagnostic menu to come up.

4. Use the UP/DOWN scroll buttons to select Read Codes from the menu and press the Y button.

5. If there are no Diagnostic Trouble Codes present, the display will indicate "NO CODES ARE STORED IN THE MODULE!"

6. If there are Diagnostic Trouble Codes present, the Fault Codes and Pending Codes will be shown on the display.
   (See Figure J)

   P0118   Pd   06/06
   ISO9141 $09
   Pressure Control
   Solenoid A Control
   Circuit Low

   Figure J

   • The DTC number will appear on the upper left hand corner and its definition will show on the body of screen.

   • The type of code (Generic or Manufacturer specific), the vehicle protocol, the sequence of the DTC currently being observed, the total number of codes detected and the module ID will be observed on the upper right hand corner of the display.

   • If the code being displayed is a pending code, the "Pd" icon will be observed next to the DTC number on the upper right hand corner of the display.

7. When a DTC's definition covers more than one display screen, use the Y button, as necessary, to view any additional information.
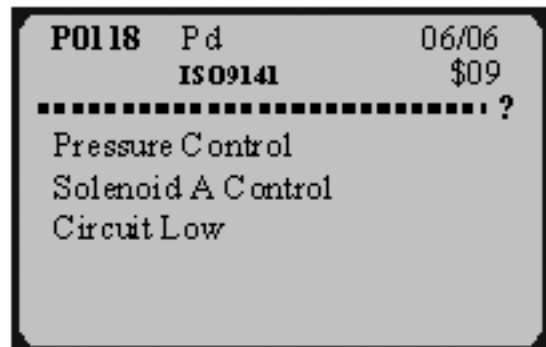
8. If the retrieved DTCs contain any manufacturer specific or enhanced codes, you will be prompted to refer to the CD DTC library (not included) or the vehicle service manual to view the DTC definitions.

9. Erase Codes if desired.

10. Turn vehicle ignition key to "OFF" position, disconnect Code Scanner.

<u>Oil Reset</u>

Use the UP/DOWN scroll buttons to select Oil Reset from the menu. Press the Y button to accept the option and to move to the next screen.

This option only turns the "Oil Warning Light" off, it does not monitor the level or check the quality of the engine oil in the vehicle. This is a convenient option if the operator personally changes the vehicle's oil or the mechanic forgets to turn off the Oil Warning Light. Using the Oil Reset option is not a replacement for proper and timely vehicle maintenance.

INSPECTION, MAINTENANCE, AND CLEANING

1. Make sure the ignition of the vehicle is in its "OFF" position and that the tool is un-plugged from its OBD II connection before performing any inspection, maintenance, or cleaning procedures, other than tests noted on page 7.

2. **BEFORE EACH USE,** inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, dam-aged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **<u>Do not use damaged equipment.</u>**

3. Clean unit as necessary with a soft cloth and mild detergent. Never immerse in water or any other liquid.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part	Description	Qty
1	Black Nylon Storage Bag	1
2	Code Scanner	1
3	OBD II Connector	1

Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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