



**Trade Show**

**The 9th International Auto Aftermarket Expo 2010 (JAPAN)**

March 18 - March 20, 2010  
Tokyo Big Sight, West Hall 1  
Booth No. **1093**

**The 53th Auto Maintenance & Repair Expo 2010 (CHINA)**

March 18 - March 21, 2010  
China National Convention Center, Beijing, China  
Booth No. **1060 at Hall 1 A-Area**

**Taipei AMPA 2010 (TAIWAN)**

April 12 - April 15, 2010  
TWTC Nangang Exhibition Hall, Taipei  
Booth No. **I 1012A**

**We look forward to greeting you there!**



**iSCAN-II / D91 Latest Versions (December, 2009)**

|                        |                   |                                   |            |
|------------------------|-------------------|-----------------------------------|------------|
| iSCAN-II VASS          | V1.06             | English/Chinese/Japanese /Spanish | 2009-12-08 |
| iSCAN-II OPEL-BR       | V2.01 SP1         | English                           | 2009-12-08 |
| iSCAN-II IMS2 PORSCHE  | V1.00             | English/Chinese                   | 2009-12-09 |
| iSCAN-II OPEL          | V1.00 SP3         | English/Chinese/Japanese          | 2009-12-09 |
| iSCAN-II HONDA         | V2.01 SP1 / V1.02 | English/Chinese/Japanese          | 2009-12-09 |
| IMS2-MB ADD-ON         | V3.00             | English/Chinese                   | 2009-12-15 |
| iSCAN-II IMS2 MB       | V3.00             | English/Chinese/Japanese          | 2009-12-15 |
| iSCAN-II SUBARU        | V2.00 / V1.01     | English/Chinese/Japanese          | 2009-12-16 |
| iSCAN-II CHRYSLER      | V2.00             | English/Chinese                   | 2009-12-21 |
| iSCAN-II BTM           | V1.00 SP1         | English/Chinese                   | 2009-12-21 |
| iSCAN-II DAIHATSU CAN  | V2.01             | English/Chinese/Japanese          | 2009-12-21 |
| iSCAN-II MB            | V2.01 / V1.04     | English/Chinese/Japanese          | 2009-12-23 |
| iSCAN-II VOLVO         | V2.01 / V1.01 SP3 | English/Chinese/Japanese          | 2009-12-24 |
| iSCAN-II IMS2 MB       | V3.01             | English/Chinese/Japanese          | 2009-12-24 |
| iSCAN-II SSANGYONG     | V2.01             | English/Chinese                   | 2009-12-29 |
| iSCAN-II BMW           | V2.01 / V1.07     | English/Chinese/Japanese          | 2009-12-29 |
| D91-PORSCHE            | V4.53             | English/Chinese/Japanese          | 2009-12-08 |
| D91-OPEL-BR Easytronic | V1.00 SP1         | English                           | 2009-12-08 |
| D91-OPEL-BR            | V2.01 SP1         | English                           | 2009-12-08 |
| D91-VASS               | V6.02             | English/Chinese/Japanese /Spanish | 2009-12-08 |
| D91-OPEL               | V1.60 SP7         | English/Chinese                   | 2009-12-09 |
| D91-HONDA              | V2.52             | English/Chinese/Japanese          | 2009-12-09 |
| D91-MB PRO             | V4.55 / V4.07 SP4 | English/Chinese/Japanese          | 2009-12-23 |
| D91-VOLVO              | V4.03 SP3         | English/Chinese/Japanese          | 2009-12-24 |
| D91-BMW                | V7.55 / V7.05     | English/Chinese/Japanese          | 2009-12-29 |

### VeDiS Yearly Update Project (YUP) Software

Software releases monthly for D91-EURO PRO YUP 2010 / D91-ASIAN PRO YUP 2010 YUP customers, please get the updates from web site.

### Technical Guidance

#### **MITSUBISHI : 4B11 & 4B12 MIVEC ENGINE SYSTEM ETV (Electronic Throttle Valve) Initialization & Learning Procedure for Idling**

##### **Introduction:**

The function of learning procedure for idling in MFI engine applies to accord the following situation (cold start, with or without electronic load) to adjust ignition timing, injection time, and air intake volume. To meet the specific range and keep it stabilized when idling.

##### **Situation required to carry out the learning procedure for idling:**

1. Remove or replace the throttle body or PCM
2. Replace the engine ECM
3. Disconnect the battery cable
4. Clean the throttle body valve
5. Idling or ignition timing does not meet the manufacturer's specification
6. Replace any related components of learning value  
(ex. coolant temperature sensor, airflow sensor, oxygen sensor...)

##### **Prerequisites:**

1. Battery voltage should be higher than 12.9V when idling
2. Engine coolant temperature: 80~100 °C
3. Transmission: P/N
4. Electronic load switch: OFF (air condition, headlamps, foglamp...)
5. Position the steering wheel in the straight ahead position

If any of the above-mentioned conditions are not met, please troubleshoot first. Or, it may not be possible to perform the learning procedure for idling.

### **Purpose of the learning procedure for idling:**

When the PCM is replaced, or when the learning value is initialized, the idling is not stabilized because the learning value in MFI engine is not completed. In such case, the idle learning procedure is recommended.

### **Learning procedures:**

1. Start the engine and allow the engine coolant temperature to reach 80°C (176°F) or more.
2. If the engine coolant temperature is already 80°C (176°F) or more, the previous step is not needed.
3. Turn the ignition switch to LOCK(OFF) position and stop the engine.
4. After 10 seconds or more, start the engine again.
5. Carry out the idling for 10 minutes under the condition shown below, then confirm the engine idling speed is within normal range.
  - a) Transmission: P
  - b) Operation in ignition-related, fan and attachments, not to be operated
  - c) Engine coolant temperature: 80°C (176°F) or more

Note: When the engine stalls during idling, check the throttle body, and then perform the service from step 1.

**Example: Year 2008 MITSUBISHI OUTLANDER 2.4L**

### **Procedures on iSCAN-II:**

1. Select **Vehicle Diagnostic** -> select **ASIAN**



2. Select **JAPAN** -> select **MITSUBISHI**

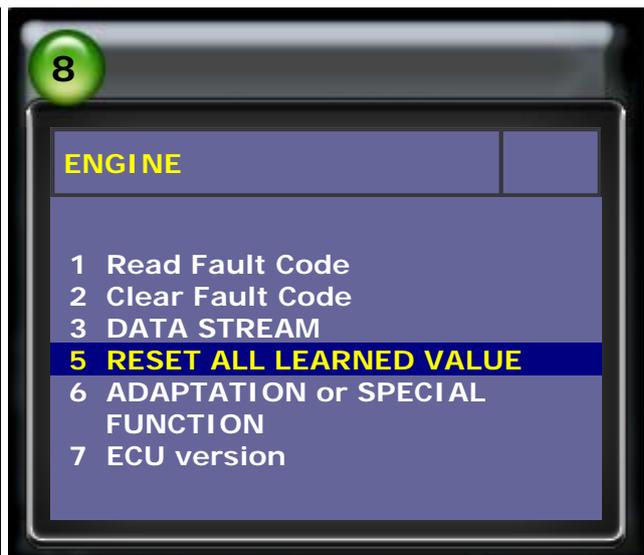
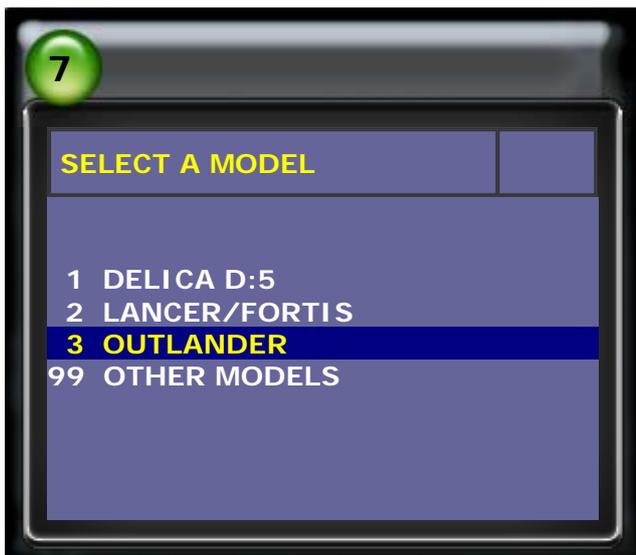




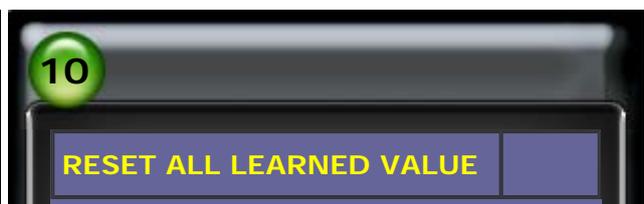
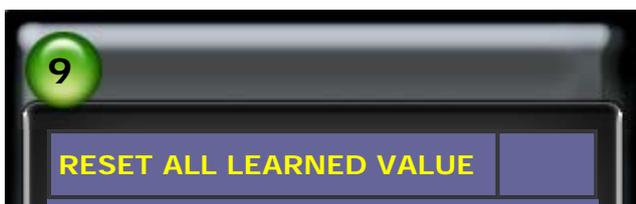
3. Select **Engine** -> select **ENGINE, Automatic Detection**



4. Select **OUTLANDER**, please confirm no fault code in engine system first.  
Then, select **RESET ALL LEARNED VALUE**



5. Press ENTER to reset all learned value.



This function is to reset all learned value.  
Press [ENTER] to do, or press [EXIT]

In progress, please wait

6. After reset all learned value, KEY OFF for 10 seconds, then KEY ON.  
Select **6 ADAPTATION or SPECIAL FUNCTION**

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### RESET ALL LEARNED VALUE

Completed.  
Ignition switch must be turned off once, otherwise, engine will not start.

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### ENGINE

- 1 Read Fault Code
- 2 Clear Fault Code
- 3 DATA STREAM
- 5 RESET ALL LEARNED VALUE
- 6 ADAPTATION or SPECIAL FUNCTION**
- 7 ECU version

7. Perform **Electronic Throttle Valve Initialization procedure**, and follow the instructions on the screen to do ETV initialization.

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### ADAPTATION

- 1 Electronic Throttle Valve(ETV) Initialization Procedure**
- 2 LEARNING PROCEDURE FOR IDLING

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### ETV Initialization

The ETV must be initialized after performing any of the following operations:

1. Throttle body cleaning.
  2. Throttle body or PCM installation, removal or replacement.
  3. Battery cable disconnect and reconnect
- Press [ENTER] key to continue

8. After ETV Initialization, press ENTER and follow the instructions on screen to do **LEARNING PROCEDURE FOR IDLING**.

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### ETV Initialization

To initialize ETV  
Step1: turn the ignition switch to

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### LEARNING PROCEDURE FOR IDLING

The pre-condition of this function  
1. Transmission: P range.

ON position (do not start engine)  
 Step2: one second after turn the ignition switch to OFF position.  
 Step3: Keep it OFF for at least 10 seconds  
 Step4: Press [ENTER] key to do the LEARNING procedure for IDLING

2. Make sure all electrical item (AC, Audio, light, etc) are off.

Please start the engine and carry out the warm-up for the engine coolant temperature to reach 80°C or more. Press [ENTER] key to continue

9. After learning procedure for idling, select **DATA STREAM** to check the value difference.  
 For example, crankshaft position sensor, target idle speed, ECT sensor, target ETV value, throttle actuator, and cancel code.

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**LEARNING PROCEDURE FOR IDLING**

1. Place the ignition switch in Lock (OFF) and stop the engine. After 10 seconds or more, start the engine.
2. Let the engine for about 10 minutes or more with the idling. If the radiator fan come on, don't include its running time. Confirm the engine has the normal idling.

Note: when the engine stalls during the idling, check the dirtiness on the Throttle valve and then re-start the steps.

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**ENGINE**

- 1 Read Fault Code
- 2 Clear Fault Code
- 3 DATA STREAM**
- 5 RESET ALL LEARNED VALUE
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10. Before ETV Initialization & Learning Procedure for Idling.

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**Data Stream (1/7)**

|                               |           |
|-------------------------------|-----------|
| Power supply voltage          | 14.1 V    |
| Vehicle speed                 | 0 Km/h    |
| Crankshaft position sensor    | 860 r/min |
| Target idle speed             | 850 r/min |
| ECT sensor                    | 82°C      |
| Intake air temperature sensor | 49°C      |
| MAP sensor                    | 39.10 kPa |
| Airflow sensor                | 1662.7 mV |

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**Data Stream (4/7)**

|                                 |           |
|---------------------------------|-----------|
| Target ETV value                | 0.67 V    |
| Throttle actuator               | 5.0 %     |
| Cancel code                     | 0         |
| ISC learned value(A/C OFF)      | 1.744 L/s |
| ISC learned value(A/C ON)       | 1.564 L/s |
| Calculated load value           | 32.9 %    |
| Absolute load value             | 22.9 %    |
| Closed throttle position switch | ON        |

11. After ETV Initialization & Learning Procedure for Idling.



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## Data Stream (1/7)

|                               |           |
|-------------------------------|-----------|
| Power supply voltage          | 14.0      |
| V                             |           |
| Vehicle speed                 | 0         |
| Km/h                          |           |
| Crankshaft position sensor    |           |
| 645 r/min                     |           |
| Target idle                   |           |
| speed                         | 650 r/min |
| ECT sensor                    | 84°       |
| C                             |           |
| Intake air temperature sensor | 49°C      |
| MAP sensor                    | 38.60     |
| kPa                           |           |
| Airflow sensor                | 1582.7    |
| mV                            |           |

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## Data Stream (4/7)

|                                 |           |
|---------------------------------|-----------|
| Target ETV value                | 0.63 V    |
| Throttle actuator               | 3.5 %     |
| Cancel code                     | 0         |
| ISC learned value(A/C OFF)      |           |
| 1.342 L/s                       |           |
| ISC learned value(A/C           |           |
| ON)                             | 0.354 L/s |
| Calculated load value           | 32.5 %    |
| Absolute load value             | 21.9 %    |
| Closed throttle position switch | ON        |

**AUTOLAND**  
S C I E N T E C H  
AUTOMOTIVE DIAGNOSTIC SYSTEM



Dear Valued Partners,

Thanks for your long term support and cooperation.

Chinese New Year is coming. We wish you good health, good luck and much happiness throughout the year.

Autoland Scientech Co., Ltd.



2010年  
庚寅年 TIGER  
HAPPY NEW YEAR

