Thank you for purchasing the A’PEX VTEC Airflow Converter. Please read through this Instruction Manual to operate this product correctly and keep it near the product so that you may refer to it whenever necessary. If you transfer the product to another customer, be sure to attach this Instruction Manual and the warranty to the product.

Product name: VTEC AFC II
Product code: 401-A015
Applicable car models: Car models mentioned in the Wiring Diagram by Model
Application: VTEC control and pressure sensor signal adjustment
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※ VTEC is a registered trademark of Honda Motor Co., Ltd.
Chapter 1  Introduction

Safety Precautions ................................................. 4
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Safety Precautions

Please read “Safety Precautions” carefully to operate the product with safety. Keep the Instruction Manual in custody so as to refer to it whenever you need it.

The Instruction Manual describes the items that you must observe to operate this product without giving any injury to you and other people and damage to property. The meanings of pictorial indications (signal words) are as shown on the right. Please understand their contents correctly before starting to read the text.

### Explanation of indications

<table>
<thead>
<tr>
<th>Indication</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WARNING</strong></td>
<td>This indicates the existence of potential hazard that will result in death or serious injury of the operator or a third person if the product is wrongly operated in disregard of this indication.</td>
</tr>
<tr>
<td><strong>CAUTION</strong></td>
<td>This indicates the existence of potential hazard that will result in slight injury or medium damage to the operator or a third person, and that will result in only physical damage if the product is wrongly operated in disregard of this indication.</td>
</tr>
<tr>
<td><strong>REQUEST</strong></td>
<td>This indicates the contents of a failure in obtaining the full performance of the product, or a product failure or faulty function item if the product is wrongly operated in disregard of this indication.</td>
</tr>
</tbody>
</table>

### WARNING

- **Do not under any circumstance use this product for any car application other than the applicable vehicles.**
  We shall disclaim the responsibility for operations in an application other than the applicable vehicles. It will result in an unexpected accident.

- **If this product gives out any abnormal noise or offensive smell, stop operating the product immediately.**
  Using the product in this status will result in an electric shock, fire, or damage of electric parts. Consult the distributor for information.

- **Do not use this product and its accessories in any way other than specified by A’PEX.**
  In this case, we shall disclaim all responsibility for any damage or loss to the customer and third persons.

- **Do not turn on and/or off immediately during and after operating a key.**
  Set/recorded data may be lost.
!!WARNING!!

● The driver must not operate this product while driving.
  It will interfere with driving operations, resulting in an accident.

● Mount this product securely. Do not install it in a place that may interrupt driving or in an unstable place.
  It will interfere with driving, resulting in an accident.

● When installing the product, first remove the negative terminal of the battery.
  A fire may be caused by short circuit or electric parts may be damaged or burnt out.

● When removing a coupler, be sure to hold the coupler without pulling the harness.
  If the harness is pulled, a fire may be caused by short circuit or electric parts may be damaged or burnt out.

● Be sure to perform wiring in accordance with the contents described in the Wiring Diagram by Vehicle Model.
  Incorrect wiring will result in a fire or other accident.

● If any adjustment must be made during actual driving, take special care not to interfere with other traffic, observing all of the traffic laws and regulations.
  It will interfere with driving, resulting in an accident.

!!CAUTION!!

● Regarding the installation of this product, be sure that it is installed by an experienced professional.
  Installing the product requires technical knowledge and skill.
  Be sure that the installer installs the unit correctly.

● Do not work, disassemble, or modify this product.
  It will cause an accident, fire, electric shock, or electric parts will be damaged or burnt out.

● Do not drop this product or expose it to strong shock.
  This may cause a malfunction, thereby giving damage to the product and the vehicle.

● Do not operate this product under direct sunlight or in high-temperature vehicle interiors that are not air-conditioned in the summer season.
  A malfunction will be caused, thereby giving damage to the product and the vehicle.

● Do not install the product in a high-temperature place or a place exposed to direct water.
  It will cause an electric shock or fire, or electric parts will be damaged. The malfunction may damage the vehicle.
Features of this Product

In the VTEC AFC II, the VTEC changeover point of a vehicle with a VTEC engine can be adjusted at an optional engine RPM. This fuel adjustment controller can increase and decrease fuel in a wide range of +50% to -50% by 1-point increments for the specified engine rpm. RPM points can be set in 100 rpm increments and make fuel correction according to the throttle position.

- Unconventional large screen monitor using a high-brightness VFD
  The futuristic front face of this unit uses the large screen, high-brightness and easy to read VFD (Vacuum Fluorescent Display).
  Use of the dot-matrix large screen monitor allows the displaying several types of information simultaneously. Display variations are not limited to only numeric value display but also graph display, analog display, and other various displays are shown.
  This allows the driver to recognize important information precisely in an instant.

- Utilizes a thin case and a single button
  A thin case of 52 mm (L) x 126 mm (W) x 18 mm (D) (Minimum) has been achieved by optimization of the circuit board and case design.
  Naturally, there is no other separate unit other than the main unit.
  Using a 4-direction switch with a center pushbutton and a rotary switch gets rid of a button-to-button distance and permits quick operations, thereby providing comfortable operation.

- Battery-less memory that can keep initial setup data in the memory even if the vehicle battery is disconnected
  With the use of the EEPROM, even if the power supply is turned off or the battery is disconnected, the initial setup data is not lost unless initialization is performed.
  Accordingly, you do not need to perform any setting again.

- Setting the pressure signal correction point for the low cam and the high cam
  An input intake pressure signal is converted into an absolute pressure value. This value is corrected with the air correction factor.
  While in the air correction factor setting, an adjustment value can be set for each of the 12 rpm points for Hi cam and Lo cam. (total: 24 points) Setting can be performed according to the throttle position.

- VTEC unmatch correcting function mounted
  When the VTEC engagement point is changed, the engine will continue to inject stock fuel amounts because the ECU does not monitor the actual cam.
  In the V-AFC II, the unmatch setting can be performed to prevent this discrepancy in fuel adjustment.

⚠️ CAUTION ⚠️

- This product cannot be used for any application other than the vehicles mentioned in the separate Vehicle Specific Application Charts.
- Note that noise interference may be caused to a radio set, TV set, etc... depending on the mounting location of this product and the routing of the signal harness.
- This product generates heat in the power ON status. This is not abnormal.
During driving, the driver must not operate this product. It will interfere with driving operations or result in an accident.

On public roads, observe all of the road and traffic laws to drive the car safely and responsibly.
Names and Functions of Parts

**Parts list**

Before installing this product, be sure to check the parts list to confirm that there are not any foreign or missing parts. If any difference is found between the actual parts and the items on the parts list, please contact the distributor.

<table>
<thead>
<tr>
<th>1. Main unit</th>
<th>2. Instruction manual (Operation part)</th>
<th>3. Wiring Diagram by Model</th>
<th>4. Operation transition diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Main unit" /></td>
<td><img src="image2.png" alt="Instruction manual" /></td>
<td><img src="image3.png" alt="Wiring Diagram" /></td>
<td><img src="image4.png" alt="Operation transition diagram" /></td>
</tr>
<tr>
<td>1 unit</td>
<td>1 volume (this document)</td>
<td>1 volume</td>
<td>1 sheet</td>
</tr>
<tr>
<td><img src="image1.png" alt="Main unit" /></td>
<td><img src="image2.png" alt="Instruction manual" /></td>
<td><img src="image3.png" alt="Wiring Diagram" /></td>
<td><img src="image4.png" alt="Operation transition diagram" /></td>
</tr>
<tr>
<td>1 sheet</td>
<td>1 piece</td>
<td>1 piece</td>
<td>2 pieces</td>
</tr>
</tbody>
</table>

5. Warranty

6. Signal harness

7. Mounting bracket

8. Plug

9. Male sleeve

10. Plug receptacle

11. Female sleeve

12. Splice

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Male sleeve" /></td>
<td><img src="image6.png" alt="Plug receptacle" /></td>
<td><img src="image7.png" alt="Female sleeve" /></td>
<td><img src="image8.png" alt="Splice" /></td>
</tr>
<tr>
<td>2 pieces</td>
<td>3 pieces</td>
<td>3 pieces</td>
<td>8 pieces</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
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</tr>
</tbody>
</table>
When you press the center push button, the popup menu shown on right appears. The selected portion appears as a reversing display. Make a selection by the upper/lower/left/right part of the center switch and decide the selection by pushing the center pushbutton.

Example) Press the center pushbutton and select [Nx] in the popup menu.

The meanings of alphabetic characters are as follows:

- **Tp [TOP]** .... Go back to the main menu.
- **Nx [NEXT]** .. Go to the next.
- **Pr [PREVIOUS]** Go back to the previous.
- **Cn [CANCEL]** Cancel the popup menu.
Chapter 2
Initial Setup

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Setting the number of cylinders ....................................................... 13
Setting the throttle sensor type ......................................................... 13
Setting the VTEC type .................................................................. 13
Checking the throttle sensor voltage .................................................. 13
Learning the throttle position .............................................................. 13
Setting the VTC monitor ................................................................. 13
Procedure before using this product

Install this product.
The details of the installing procedure are described in the separate "Vehicle Specific Wiring Diagram". Install the product securely referring to the "Vehicle Specific Wiring Diagram".

Turn on the ignition switch.
Make sure that any abnormal noise or offensive smell is not produced from the V-AFC II and the vehicle.

Perform initial setup
Perform initial setup referring to page 13.

Turn off the ignition switch.
The setting data is stored in the memory.

Start the engine.

⚠️ CAUTION ⚠️
If no display appears or any abnormal noise or offensive smell is produced from this product even though the product has been properly installed, please stop operating the product immediately and contact the distributor.
Perform initial setup.

To operate this product, you must set several items of initial setup. After making sure that the V-AFC II is properly installed, turn on the ignition switch and select Setting or etc. (etc. mode) in the main menu.

Table of initial setup items

1. **Setting the sensor number** (P 46 [etc.] → [Sensor No])
   Select Sensor No of the etc. mode and set the sensor number.

2. **Setting the number of cylinders** (P 47 [etc.] → [Car Select])
   Select Car Select and set the number of cylinders. You can select it in the range of 1 to 16 cylinders.

3. **Checking the throttle sensor voltage** (P 51 [etc.] → [Sensor chk])
   Select Sensor chk and check the throttle sensor voltage in the accelerator fully closed status and accelerator fully open status.

4. **Setting the throttle sensor type** (P 47 [etc.] → [Car Select])
   Select Car Select. When the throttle sensor voltage is 0 V to 1 V in the fully closed status in the previous item, set the arrow to the upward direction. When the same voltage is 3 V to 5 V, set the arrow to the downward direction. When the arrow is set to the mark **, no correction is performed by throttle position.

5. **Setting the VTEC type** (P 49 [etc.] → [Car Select])
   Set the VTEC type.

6. **Learning the throttle opening**
   Hold the accelerator fully closed for about 10 seconds while turning the ignition on. After that, hold the accelerator fully open for about 10 seconds.

7. **Setting the VTC monitor** (P 43 [Setting] → [Vtc Set])
   Set the VTC monitor. ※Perform this setting only for i-VTEC equipped vehicles.

8. **Turn off the ignition switch.**
   When the ignition switch is turned off, the set items are stored in the memory. With this, the initial setup is completed.

**WARNING**

- Do not start the engine before starting the initial setup.
- If the engine is started without initial setup, the engine may be damaged.
Chapter 3 Outline of Operating Method

Outline of Functions and Operating Method 16
Functions and operations in the monitor mode 18
Functions and operations in the setting mode 19
Setting in the etc. mode 19
Outline of Functions and Operating Method

**Main menu**
The V-AFC II consists mainly of 3 menus.

1. Monitor
2. Setting
3. etc.

**Monitor mode**
The data obtained from the sensor is displayed.

- Monitor
  - 1channel
  - 2channel
  - 3channel
  - 4channel
  - Rev.-[Y]

The intake pressure, throttle position, engine RPM, air correction rate, VTEC operating status, VTC cam adv angle, and battery voltage are displayed.

**Setting mode**
This mode is used for the user to perform settings.

- Setting
  - 1.Wide Thr
  - 2.Narr.Thr
  - 3.U/T Cont
  - 4.U/T Unmt
  - 5.U/T Pres
  - 6.TH-Point
  - 7.No-PHut
  - 8.No-P-Lvt
  - 9.UTC Set

The air correction factor, VTEC changeover point, VTEC unmatch fuel correction, load sensing VTEC changeover point, throttle position, air correction engine RPM, and cam angle settings are set.

**etc. mode**
This mode is used to perform various settings including initial setup.

- etc.
  - 1.SensorType
  - 2.Car Select
  - 3.Disp Scale
  - 4.Sensor chk
  - 5.WarningSet
  - 6.U/T Info
  - 7.Pass Lock
  - 8.UFD Bright
  - 9.Program Ver
  - 10.Initialize

The initial setup, display scale setting, warning setting, factory VTEC info, password setting/change, VFD brightness adjustment, and setting initialization are performed according to the vehicle specifications.
Channel 1 to Channel 4 display items
1. Prs ....... Intake pressure
2. Thr ....... Throttle position
3. Rev ....... Engine RPM
4. Cor ....... Air correction factor
5. VTi ....... VTEC solenoid signal from the ECU
6. VTo ....... VTEC solenoid signal output by V-AFC II
7. CAi ....... VTC cam advance angle
8. Bat ....... Battery voltage

Rev. - [Y] display items
A plot display is made by using the engine RPM for the horizontal axis.

Setting items
1. Wide Thr Air correction factor setting (throttle opening, large)
2. Narr. Thr Air correction factor setting (throttle opening, small)
3. V/T Cont VTEC changeover point setting
4. V/T Unmt Fuel correction at VTEC unmatch
5. V/T Pres Load sensing VTEC changeover setting
6. TH-Point Throttle position setting
7. Ne-P: Hvt Air correction engine RPM setting (Hi cam side)

Setup items
1. Sensor No. Sensor number setting
2. Car Select Number-of-cylinders, throttle type setting, and vehicle type setting
3. Disp Scale Display scale setting
4. Sensor chk Sensor check
5. Warning Set Intake pressure and engine rpm warning setting
6. V/T Info Factory VTEC info
7. Pass Lock Password setting/change
8. VFD Bright VFD brightness adjustment
9. Program Ver. Program version check
10. Initialize All data initialization
Main menu  

Functions and operations in the monitor mode

[One of items 1 to 4 is selected and displayed.]

P22. Monitor → [1 Channel] ~ [4 Channel]

Contents of items

1. Prs...... Intake pressure
2. Thr ...... Throttle position
3. Rev ...... Engine RPM
4. Cor ...... Air correction factor
5. V Ti ...... VTEC solenoid signal from the ECU
6. V To ...... VTEC solenoid signal output by V-AFC II
7. CAi ........ VTC cam advance angle
8. Bat ...... Battery voltage

Display method

- Numeric display/analog display: Real-time display, peak hold display, and pause
- Graphic display: Real-time display, replay display, and pause
- Digital/analog display: Real-time display, peak hold display

[A plot display is made by using the engine RPM for the horizontal axis.]

P27. Monitor → [Rev. ~ [Y]]

Contents of the vertical axis

1. Pressure Intake pressure
2. Throttle Throttle position
3. Correct Air correction factor

Display method

1-point display, 10-point display, and trace display

...... Real-time display, replay display, and pause
Main menu  【Setting】
Functions and operations in the setting mode

1. Wide Thr .................................................. P 30  
   Air correction factor setting (throttle opening, large)
2. Narr. Thr .................................................. P 30  
   Air correction factor setting (throttle opening, small)
3. V/T Cont .................................................. P 32  
   VTEC changeover point setting
4. V/T Unmt .................................................. P 34  
   Fuel correction at VTEC unmatched
5. V/T Pres .................................................. P 36  
   Load based VTEC changeover point setting
6. TH—Point .................................................. P 39  
   Throttle position setting
7. Ne—P:Hvt .................................................. P 41  
   Air correction engine RPM setting (Hi cam side)
8. Ne—P:Lvt .................................................. P 41  
   Air correction engine RPM setting (Lo cam side)
9. VTC Set .................................................. P 43  
   VTC Monitor setting

Main menu  【etc.】
Setting in the etc. mode

1. Sensor No .................................................. P 46  
   Sensor number setting
2. Car Select .................................................. P 47  
   Cylinder setting, throttle sensor type, and VTEC type setting
3. Disp Scale .................................................. P 50  
   Display scale setting
4. Sensor chk .................................................. P 51  
   Sensor check
5. Warning Set .................................................. P 52  
   Intake pressure and engine rpm warning setting
6. V/T Info .................................................. P 54  
   Factory VTEC changeover point information
7. Pass Lock .................................................. P 55  
   Password setting/change
8. VFD Bright .................................................. P 57  
   VFD brightness adjustment
9. Program Ver .................................................. P 58  
   Program version check
10. Initialize .................................................. P 59  
    All data initialization

※ VTEC is a registered trademark of Honda Motor Co., Ltd.
Chapter 4 Monitor Mode

Selecting and displaying one of items 1 to 4 \[\textit{22}\]
Plot display by using the RPM for the horizontal axis \[\textit{27}\]
[Monitor Menu] → [1 Channel] ~ [4 Channel]

Selecting and displaying one of items 1 to 4

In the data of the following 8 items, one of channels 1 to 4 is selected and displayed. A numeric display, analog display, graphic display, and digital/analog display are available as the display method. A pause is also available in each display (except the digital/analog display). In the numeric display, analog display and digital display, peak hold can be performed. In the graphic display, replay (*) can be performed.

Display Items

1. Prs... Intake pressure  2. Thr... Throttle position  3. Rev... Engine RPM  4. Cor... Air correction factor  5. VTi... VTec solenoid signal from the ECU  6. VT... VTec solenoid signal output by V-AFC II  7. CAi... VTC cam advance angle  8. Bat... Battery voltage

- Numeric display example
  [Function] Pause and peak hold

- Analog display example
  [Function] Pause and peak hold

- Digital/analog display example
  [Function] Peak hold

- Graphic display
  [Function] Pause and replay

1. Select [Monitor] in the main menu.

2. Select [1~4 Channel] in the monitor menu.

![Diagram showing selection process]

- Main menu:
  1. Monitor
     2. Setting
     3. etc.

- Monitor menu:
  Item 1 data display
  Item 2 data display
  Item 3 data display
  Item 4 data display

[Note] The replay function stores the last saved display in the memory. Accordingly, even if the display item is changed, the last saved item display is replayed regardless of the display item.

- Common display to all channels
3. Select the data to be display in the item selection menu.

(1) Select a display item.
Operate the upper part or lower part of the switch in the display item selection mode to select a display item. The selected item is displayed as a reversing display.

(2) Make a display.
Press the right part of the switch or press the center pushbutton to make a display.

When selecting 2~4 Channel

(1) Select a display channel.
Operate the upper part or lower part of the switch in the display channel selection mode to select a display channel. The number of the selected channel is displayed as a reversing display.

(2) Select a display item.
Select a display channel and operate the right part of the switch to set the display item selection mode. The numeric value of channel and the display item are displayed as a reversing display. In this status, operate the upper part or lower part of the switch to select a display item.

(3) Select a display item of another channel.
Operate the left part of the switch in the display item selection mode to go back to the display channel selection mode. Repeat steps (1) and (2) until all the display items are set.

(4) Make a display.
Operate the right part of the switch in the display item selection mode, or press the center pushbutton in the display channel selection mode and select [Nx] in the popup menu to make a display.
4. The selected item is displayed in the item selection menu.

Each time the center pushbutton is pressed and [Nx] is pressed in the popup menu, (numeric display) → (graphic display) → (analog display) → (digital/analog display) → (numeric display) ... is selected in sequence.

● Function at numeric display and analog display

○ Ordinary display

■ Peak display

- The figure shows an example when 【1 Channel】 is selected.
● Function at graphic display

※The following figure shows an example when [1 Channel] is selected.

Ordinary display

- Memory start
- Pause
- Replay start (Rightward)

Memory function

- Memory stop
- Remaining time

Replay function

- Reset
- Rightward scroll
- Leftward scroll
- Restart
- Temporary stop

Pause

- Reset
- PAUSE

The memory time is as follows.

[1 Channel] .............. 60 sec

[2 Channel]
Function at digital/analog display

- At the digital/analog display, a 4-channel display is made regardless of the selected channel. The display items are fixed to the 4 items of engine RPM, throttle position, VTEC ON/OFF, and air correction factor.

- **Ordinary display**
  - Peak display
    - Peak value
    - The numeric display or analog display cannot be moved
      - Check if Pause is set.
        - If Pause is set, the numeric display or analog display will not move. Operate the lower part of the center switch to reset the pause status.

- **The numeric display blinks**
  - Check if Warning is set.
    - When Rev [engine RPM] or Prs [Intake pressure] is displayed, the numeric value blinks as a reversing display after it exceeds the preset RPM. (P 52)
[Monitor Menu] → [Rev. - [Y]]

Plot display by using the RPM for the horizontal axis

1. Select [Monitor] in the main menu.

2. Select [Rev. - [Y]] in the Monitor Menu

3. Select the data to be displayed in the item selection menu.

4. The selected item is displayed in the item selection menu.

※ Press the center pushbutton. Each time [Nx] is pressed in the popup menu, (1-point display) → (10-point display) → (trace display) → (1-point display) is selected in sequence.

- Memory function
  - Remaining time
  - Memory start
  - Memory stop
  - The memory of [1 to 4 Channel] in the graph is cleared.

- Replay function
  - Replay time
  - Replay start
  - Replay end
  - Pause
  - After all the memory is replayed, the replay is automatically ended.

- Memory function
  - Memory time 3 sec
  - Memory start
  - Memory stop

- Replay function
  - Replay time
  - Replay start
  - Replay end
  - Pause
  - Trace clear

- 1-point display
- 10-point display
- Trace display
Chapter 5 Setting Mode

Setting the air correction factor (Throttle opening, large) 30
Setting the air correction factor (Throttle opening, small) 30
Setting the VTEC changeover point 32
Fuel correction at VTEC unmatch 34
Setting the load sensing type VTEC changeover 36
Setting the throttle position 39
Setting the air correction engine RPM (Hi cam side) 41
Setting the air correction engine RPM (Lo cam side) 41
In the V-AFC II, the input pressure signal is converted into an absolute pressure value. This value is corrected by the air correction factor. As an output signal, the corrected absolute pressure value is converted back into a pressure signal and is output to the engine control unit (ECU).

For air correction factor setting, the adjustment value can be set for each engine RPM at a total of 24 points, namely, at 12 points each for Hi cam and Lo cam. It can also be set according to the throttle position level.

※The following figure shows an example of [Wide-Thrtl].

![Diagram showing settings menu and correction factors](image)

1. Select [Setting] in the main menu.


**WARNING**

Never operate this product while driving. It will interfere with driving operations, resulting in an accident.
**Air correction through function**

When the upper part of the center switch is held down on the air correction factor setting screen, the set correction value is put into in the flat (no correction) status. The set value is returned to the initial status by holding down the upper part of the same switch once again.

3. The air correction factor setting mode is set.

Select an engine RPM by the left or right part of the center switch and increase or decrease the correction factor by the rotary switch.

When the rotary switch is turned clockwise, the graph is shifted in the + direction (increase). When the rotary switch is turned counterclockwise, the graph is shifted in the – direction (decrease).

Changing the Hi cam mode over to the Lo cam mode

Operate the upper or lower part of the center switch to select the Hi cam mode or Lo cam mode.

※To Narr-Thrtl (throttle opening), the same operating method is applicable.

Changing [Wide-Thrtl] over to [Narr-Thrtl]

Each time [Nx] is pressed in the popup menu after the center pushbutton is pressed, the Hi-Thrtl mode and the Lo-Thrtl mode can be switched over between each other.

※To Htv (Hi cam), the same operating method is applicable.
Setting the VTEC changeover point

The normal VTEC changeover point can be moved forward or backward by optionally setting the VTEC changeover point with VAFC II.

1. Select 【Setting】 in the main menu.

2. Select 【V/T Cont】 in the setting menu.

※The “THROUGH” function of VTEC changeover point setting
If the right part of the center switch is pressed when the cursor is at the numeric input position in the VTEC changeover point setting screen, the normal VTEC signal is sent directly to the VTEC solenoid (* is displayed for all the digits) regardless of the setting point. The “through” status is released and the set value is reset by pressing the upper or lower part of the center switch or turning the rotary.
3. The VTEC changeover point setting mode is set.

1. Select a VTEC changeover point.
   Press the upper or lower part of the center switch or turn the rotary switch clockwise or counterclockwise to select L to H or H to L. The selected item is displayed as a reversing display.
   When the rotary switch is turned clockwise, the cursor is moved upward. When the rotary switch is turned counterclockwise, the cursor is moved downward.
   
   **L to H:**
   Changeover point from Lo cam to Hi cam when RPM increases.
   
   **H to L:**
   Changeover point from Hi cam to Lo cam when RPM decreases.

2. Set a numeric value.
   Select each item and press the right part of the center switch, and the Lo cam to Hi cam changeover point can be set at L to H or the Hi cam to Lo cam changeover point can be set at H to L.
   Press the upper or lower part of the center switch or turn the rotary switch clockwise or counterclockwise to increase or decrease the numeric value of the cursor position. When the rotary switch is turned clockwise, the numeric value is increased. When the rotary switch is turned counterclockwise, the numeric value is decreased.
   ※Setting range
   The setting range varies depending on the VTEC type. Refer to the separate table on page 49.

3. End the setting.
   Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch at item (L to H or H to L) selection, and the setting menu will reappear.

**NOTE**
- It is impossible to set the H to L rpm higher than the L to H rpm.
- It is also impossible to set the L to H rpm lower than the H to L rpm.
**Fuel correction at VTEC unmatch**

Fuel correction is performed when there is a difference in VTEC control between the ECU and the V-AFC II.

**Lo cam → Hi cam**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Lo</th>
<th>Hi</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-AFC II</td>
<td>Lo</td>
<td>Hi</td>
</tr>
</tbody>
</table>

The ECU recognition is different at this portion.

Multiply by unmatch ratio.

**Hi cam → Lo cam**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Hi</th>
<th>Lo</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-AFC II</td>
<td>Hi</td>
<td>Lo</td>
</tr>
</tbody>
</table>

The ECU recognition is different at this portion.

Multiply by unmatch ratio.

When VTEC changeover point has been changed in the V-AFC II, improper fuel injection is performed because the ECU does not recognize the actual cam status. This correction is performed so that the fuel adjustment may not be shifted at that time. This setting permits achieving higher-accuracy fuel correction.

※This correction is performed by adding on top of the fuel correction for each RPM.

1. Select **[Setting]** in the main menu.

2. Select **[V/T Unmt]** in the setting menu.
3. The fuel correction factor setting mode is set.

(1) Select a fuel correction point at VTEC unmatch.
Press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to select Hi << L or Lo << H. The selected item is displayed as a reversing display. Then, press the right part of the center switch to move the cursor to correction factor value setting.

<table>
<thead>
<tr>
<th>V/T unmt</th>
<th>Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi&lt;&lt;L:  +10%</td>
<td>or</td>
</tr>
<tr>
<td>Lo&lt;&lt;H:  ±0%</td>
<td></td>
</tr>
</tbody>
</table>

→ To correction factor value setting

(2) Set a numeric value.
Press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. When the rotary switch is turned clockwise, the numeric value is increased. When this switch is turned counterclockwise, the numeric value is decreased. Press the left key to return to the Hi << L or Lo << H selection mode.

### Setting range

<table>
<thead>
<tr>
<th>Setting</th>
<th>Hi &lt;&lt; L</th>
<th>Lo &lt;&lt; H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>-50~+50 [%]</td>
<td>-50~+50 [%]</td>
</tr>
<tr>
<td>Note</td>
<td>Settable in 1% increments.</td>
<td>Settable in 1% increments.</td>
</tr>
</tbody>
</table>

4. Set the fuel correction factor.

<table>
<thead>
<tr>
<th>V/T unmt</th>
<th>Go back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi&lt;&lt;L:  +10%</td>
<td>or</td>
</tr>
<tr>
<td>Lo&lt;&lt;H:  ±0%</td>
<td></td>
</tr>
</tbody>
</table>

→ Correction factor value setting

<table>
<thead>
<tr>
<th>To the Hi &lt;&lt; L or Lo &lt;&lt; H selection mode</th>
<th>• Hi &lt;&lt; L</th>
</tr>
</thead>
<tbody>
<tr>
<td>The V-AFC II VTEC is at Hi cam (on), but the ECU only reads Lo cam (off). (At this time, the engine is at Hi cam.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>• Lo &lt;&lt; H</th>
</tr>
</thead>
<tbody>
<tr>
<td>The V-AFC II VTEC is at Lo cam (off), but the ECU only reads Hi cam (on). (At this time, the engine is at Lo cam.)</td>
</tr>
</tbody>
</table>
Setting the load sensing type VTEC changeover

Load sensing type VTEC

Load sensing VTEC is the type where cam changeover occurs not only by rpm, but also by engine load. In the V-AFC II, this function can correct a cam changeover by engine load which is used on some vehicles as a factory system.

**Example**

- If the throttle is pressed suddenly all the way, and the PRESSURE in the engine reaches the predetermined switchover point before the engine RPM, VTEC will engage due to PRESSURE.
- If the throttle is gradually opened and the RPM reaches the predetermined switchover point before the pressure, VTEC will engage due to RPM.

**Load sensing**

VAFC II load sensing is the intake pressure and *throttle position rate of change (*Throttle position rate of change = 100% is if the throttle position goes from 0→100% in 0.2 sec.

This is the mechanism that allows a VTEC changeover from Lo cam to Hi cam using load sensing (refer to the above description.) When the *load changeover point* or the *throttle position rate of change* comes before the RPM based changeover point, the Hi cam will be activated. If the RPM level hits the predetermined changeover point first, the original rpm point has priority and the Hi cam is activated.

The load sensing VTEC changeover function is an auxiliary function for some vehicles using this factory system.
1. Select [Setting] in the main menu.

2. Select [V/T Pres] in the setting menu.

3. The load sensing VTEC changeover setting mode is set.

(1) **Select a load sensing VTEC changeover point.**
Press the upper or lower part of the center switch or turn the rotary switch clockwise or counterclockwise to select Hpr or HiThr. The selected item is displayed as a reversing display. When the right part of the rotary switch is pressed, the cursor is moved upward. When the left part of the rotary switch is pressed, the cursor is moved downward. Press the right part of the center switch to go to numeric value setting.

**Hiprs:** Pressure point where the Lo cam is changed over to the Hi cam.

**HiThr:** Throttle position rate of change at which the Lo cam is changed over to the Hi cam.
(Throttle position rate of change for 0.2 second)
Continued from the previous page

(2) **Set a numeric value**
Select each item and press the right part of the center switch. For Hpr, the pressure point where the Lo cam is changed over to the Hi cam can be set.
For HiThr, the throttle movement at which the Lo cam is changed over to Hi cam can be set.
Press the upper or lower part of the center switch or turn the rotary switch clockwise or counterclockwise, the numeric value is increased or decreased. When the rotary switch is turned clockwise, the numeric value is increased. When the rotary switch is turned counterclockwise, the numeric value is decreased.

(3) **End the setting**
Select 【Pr】 in the popup menu after pressing the center pushbutton or press the left part of the center switch at item selection (Hpr or HiThr), and the setting menu will reappear.

Timing for the return to the Lo cam:
The timing where the Hi cam returns to the Lo cam is when, 1) the engine rpm falls back to the specified RPM changeover point or, 2) when the rpm falls back to the specified RPM changeover point for the Load sensitive Hi cam setting.

**NOTE**
- Even if the engine load reaches the specified changeover point, the function will not work if the engine rpm is below the *rpm based cam changeover point.

*Setting the cam changeover point by rpm: Refer to the separate table of VTEC types on page 49.

※ON/OFF function for the load sensing VTEC changeover point
If the right part of the center switch is pressed 1) when the cursor is at the numeric value input position and 2) in the load sensing VTEC changeover setting screen, the changeover control by load is turned off and a changeover is performed by **RPM only**. Press the upper or lower part of the center switch or turn the rotary switch clockwise or counterclockwise to reset the set value.

※The pressure and throttle position rate of change can be turned ON or OFF individually.
1. Select [Setting] in the main menu.

2. Select [TH-Point] in the setting menu.

3. The throttle opening setting mode is set.

(1) Select the throttle opening Lo/Hi. Operate the left/right part of the center switch to select the throttle opening Lo or Hi. The selected numeric value is displayed as a reversing display.

(2) Select a numeric value. Select a numeric value and press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to increase or decrease.

(3) End the setting. Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch at throttle opening Lo selection, and the setting menu will reappear.

Setting range
The value in parentheses is the initial value.

Lo [Throttle opening, small ] 0 ~ 98 (10) [%]
Hi [Throttle opening, large ] 1 ~ 99 (50) [%]

* Settable in [Setting Menu] → [TH-Point]
Change of correction factor according to throttle position setting

If the throttle position is set to Lo-10% and Hi-50%, the air correction factor at a throttle position 40% is as follows:

IF:
- At a throttle opening of 50% or more, the Hi-Thrt correction factor has been set to: + 3%.
- At a throttle opening of 10% or less, the Lo-Thrt correction factor has been set to: - 1%.

Air correction factor at a throttle opening of 40%

Then:
※ The air correction factor at a throttle opening of 40% can be obtained by the following formula.

\[
\frac{(3\% - (-1\%)) \times (40\% - 1)}{50\% - 1} + (-1\%) =
\]
The hi cam setting point 【Ne-P: Hvt】 and the lo cam setting point 【Ne-P: Lvt】 can be set. The following figure shows an example of 【Ne-P: Hvt】.

1. Select 【Setting】 in the main menu.

2. Select 【Ne-P: Hvt】 or 【Ne-P: Lvt】 in the setting menu.

3. The air correction engine RPM setting mode is set.

※For the Lo cam, the menu is 【Ne-P:Lvt】 and the setting method is the same as 【Ne-P: Hvt】

Ne= Engine RPM
Ne01 < Ne02 < Ne03 < Ne04 < Ne05 < Ne06 < Ne07 < Ne08 < Ne09 < Ne10 < Ne11 < Ne12
For Ne02, the engine RPM cannot be set to a lower value than that of Ne01. The same rule applies to the other rpm points.

※The setting range varies depending on the VTEC type. For more details, refer to the separate table of VTEC types on page 49.
Continued from the previous page

(1) **Select an engine RPM.**
Press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to select an engine RPM. The selected item is displayed as a reversing display. When the rotary switch is turned clockwise, the cursor is moved upward. When this switch is turned counterclockwise, the cursor is moved downward.

(2) **Set the engine RPM.**
Select an engine RPM and press the right part of the center switch to set. When the upper or lower part of the center switch is pressed or the rotary switch is turned counterclockwise or clockwise, the numeric value is increased or decreased. When the rotary switch is turned clockwise, the numeric value is decreased.

⇒ **For setting another engine RPM point**
Operate the left part of the center switch and repeat steps (1) and (2).

(3) **End the setting.**
Select 【Pr】 in the popup menu after pressing the center pushbutton or press the left part of the center switch at engine RPM selection (No.01 to No.12), and the setting menu will reappear.

---

### How to make a correction by engine RPM setting and throttle position setting

<table>
<thead>
<tr>
<th>Thr (%)</th>
<th>Ne01</th>
<th>Ne02</th>
<th>Ne03</th>
<th>Ne04</th>
<th>Ne05</th>
<th>Ne06</th>
<th>Ne07</th>
<th>Ne08</th>
<th>Ne09</th>
<th>Ne10</th>
<th>Ne11</th>
<th>Ne12</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Hi) 80%</td>
<td>0.16</td>
<td>0.22</td>
<td>0.28</td>
<td>0.34</td>
<td>0.40</td>
<td>0.46</td>
<td>0.52</td>
<td>0.58</td>
<td>0.64</td>
<td>0.70</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>(Lo) 30%</td>
<td>0.22</td>
<td>0.28</td>
<td>0.34</td>
<td>0.40</td>
<td>0.46</td>
<td>0.52</td>
<td>0.58</td>
<td>0.64</td>
<td>0.70</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At a position below Lo-Thrtl, the same correction factor is applied.

At a position between Hi-Thrtl and Lo-Thrtl, linear interpolation is applied.

At a position over Hi-Thrtl, the same correction factor is applied.
When displaying the VTC advance angle, please set the following. The VTC advance angle is corrected and displayed based on the following settings.

1. Select 【Setting】 in the main menu.

2. Select 【C/A Base】 in the setting menu.

3. The base cam angle setting mode is set.

The advance angle at idling can be activated by operating the right part of the center switch. When pressing the left part of the center switch, you can go back to the setting mode.

※When Idle is not set or reset, “**.**” is displayed.

**NOTE**

● Set the base cam angle during idling. It can only be set when idling (The throttle must not be opened even slightly). Be sure to perform the throttle position setting first (see the initial setting on page 13).
Chapter 6  Etceteras (etc.) Mode

Setting the sensor number 4 6
Setting the vehicle type 4 7
Setting the display scale 5 0
Sensor check 5 1
Setting the warning 5 2
VTEC learning information display 5 4
Setting and changing the password 5 5
VFD brightness adjustment 5 7
Program version check 5 8
All data initialization 5 9
Troubleshooting 6 2
Setting the sensor number

The sensor number (sensor characteristic) is set according to the vehicle. This item is indispensable for initial setup.

1. Select ? etc.? in the main menu.

2. Select ? Sensor No? in the etc. menu.

3. The sensor number setting mode is set.

In the V-AFC II, set the sensor number as shown in the following display.

? This is default setting.
Setting the vehicle type

1. Select \textbf{etc.} \textbf{Car Select} in the main menu.

2. Select \textbf{Car Select} in the etc. menu.

- Select \textbf{Sensor Type}
- Select \textbf{Disp Scale}
- Select \textbf{Sensor chk}
- Select \textbf{Warning Set}
- Select \textbf{U/T Info}
- Select \textbf{Pass chk}
- Select \textbf{UFD Bright}
- Select \textbf{Program Ver}
- Select \textbf{Initialize}

Select \textbf{Select} or \textbf{Go back}

The number of cylinders, throttle sensor, and VTEC type setting mode is set.

(1) Select the number of cylinders.
Operate the left or right part of the center switch to select the number of cylinders (Cyl). The selected item is displayed as a reversing display.

(2) Set the number of cylinders.
Select an item and press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. When the rotary switch is turned clockwise, the numeric value is increased. When this switch is turned counterclockwise, the numeric value is decreased.

\begin{itemize}
  \item \textbf{Setting range}\ The value in parentheses is the initial value.
  \item \text{Cyl} \ ? Number of cylinders? \ 1 \sim 16 \ (4) \ *
  \item \text{T hr} \ ? Throttle sensor? \ \begin{array}{c}
  \rightarrow \ \\
  \leftarrow \ (4)
  \end{array}
  \item \text{V / T} \ ? VTEC type? \ 1 \sim 3 \ (1)
\end{itemize}
Continued from the previous page

(3) Select the throttle sensor type.
Press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to select the throttle sensor type (Thr). The selected item is displayed as a reversing display.

(4) Set the throttle sensor type.
Select an item and press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to change the direction of the arrow (sensor type). When the rotary switch is turned clockwise, the operation is the same as when the upper part of the center switch is pressed. When the rotary switch is turned counterclockwise, the operation is the same as when the lower part of the center switch is pressed.

? Pressing the upper part of the center switch provides the same function as turning the rotary switch clockwise, and pressing the lower part of the center switch provides the same function as turning the rotary counterclockwise.

When the throttle is completely closed, the throttle sensor voltage is 0 V to 1 V.

When the throttle is completely opened, the throttle sensor voltage is 3 V to 5 V.

When the throttle is completely closed, the throttle sensor voltage is 3 V to 5 V.

When the throttle is completely opened, the throttle sensor voltage is 0 V to 1 V.

* * No throttle signal

? Set the throttle sensor type after checking the voltage in the completely closed/opened status of the throttle in the sensor voltage check mode described on page 51.
(5) Select the VTEC type.
Press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to select the VTEC type (V/T). The selected item is displayed as a reversing display.

(6) Set the VTEC type.
Select an item and press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. When the rotary switch is turned clockwise, the numeric value is increased. When the rotary switch is turned counterclockwise, the numeric value is decreased.

(7) End the setting.
Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch at number-of-cylinders (Cyl) selection, and the etc. menu will reappear.

Table of VTEC types

<table>
<thead>
<tr>
<th>Set point (VTEC type code)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High-rpm selection</td>
<td>Medium rpm selection</td>
<td>Low rpm selection</td>
</tr>
<tr>
<td>Cam changeover range</td>
<td>Lower limit</td>
<td>3000</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td>Upper limit</td>
<td>7000</td>
<td>6000</td>
</tr>
<tr>
<td>Air correction engine RPM</td>
<td>Lo cam</td>
<td>From 800 up to 7000 by 100-point steps</td>
<td>From 800 up to 6000 by 100-point steps</td>
</tr>
<tr>
<td></td>
<td>Hi cam</td>
<td>From 3000 up to 9000 by 100-point steps</td>
<td>From 3000 up to 9000 by 100-point steps</td>
</tr>
<tr>
<td>Default fuel correction RPM points</td>
<td>Lo cam</td>
<td>From 1000 up to 6500 by 500-point steps</td>
<td>From 1000 up to 5400 by 400-point steps</td>
</tr>
<tr>
<td></td>
<td>Hi cam</td>
<td>From 3000 up to 8500 by 500-point steps</td>
<td>From 3000 up to 7400 by 400-point steps</td>
</tr>
</tbody>
</table>

? For detailed vehicle types, refer to the separate “Wiring Diagram by Model”.

unit: rpm
Setting the display scale

The monitor mode: graphic display, analog display, and graph scale in the two-dimensional trace mode is set. For pressure display, mmHg and kPa and Psi can be selected.

1. Select ? etc.? in the main menu.

2. Select ? Disp Scale? in the etc. menu.

3. The display scale setting mode is set.

(1) Select an item.
Press the upper or lower part of the center switch and turn the rotary switch counterclockwise or clockwise to select an item to set a numeric value. The selected item is displayed as a reversing display. When the rotary switch is turned clockwise, the cursor is moved upward. When this switch is turned counterclockwise, the cursor is moved downward.

(2) Set a numeric value.
Select a numeric value and press the right part of the center switch to set the numeric value. Press the upper or lower part of the center switch and turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. When the rotary switch is turned clockwise, the numeric number is increased. When this switch is turned counterclockwise, the numeric value is decreased. For setting another item, operate the left part of the center switch and repeat steps (1) and (2).

(3) End the setting.
Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch at item selection (Pr, Ne or Cr), and the etc. menu will reappear.
Sensor check

The pressure sensor voltage, throttle sensor voltage, TDC signal and VTEC cam position signal are checked. After wiring, each connection can be checked for normality and each sensor status can be checked. When setting the throttle sensor type on page 48, it is necessary to check the throttle sensor voltage.

1. Select ? etc.? in the main menu.

2. Select ? Sensor Chk? in the etc. menu.

3. The sensor check mode is set.

<table>
<thead>
<tr>
<th>Sensor Check</th>
<th>Pressure sensor voltage: 1.364 V</th>
<th>Throttle sensor voltage: 1.382 V (only for vehicles with a throttle sensor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T D C:</td>
<td>TDC signal</td>
<td>Signal</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>Signal</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>Signal</td>
</tr>
<tr>
<td>C M P:</td>
<td>VTEC cam position signal</td>
<td>? - - - Signal OFF</td>
</tr>
<tr>
<td></td>
<td>During engine stop, the signal does not blink.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This function can be used only for models equipped with i-VTEC.</td>
<td></td>
</tr>
</tbody>
</table>

End the check. Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch, and the etc. menu will reappear.
Setting the warning

When the intake pressure or engine RPM exceeds the set warning value, the indicator blinks to give a warning to the driver.

1. Select "etc." in the main menu.

2. Select "Warning Set?" in the "etc." menu.

3. The warning setting mode is set.

If the display scale setting on page 50 has been set to pascal (kPa) or (*psi), this warning value will reflect those settings.

psi: An abbreviation of pound per square inch. This is a pressure unit of the yard/pound system.
(1) Select an item.
Press the upper or lower part of the center switch and turn the rotary switch counterclockwise or clockwise to select an item to set a numeric value. The selected item is displayed as a reversing display. When the rotary switch is turned clockwise, the cursor is moved upward. When this switch is turned counterclockwise, the cursor is moved downward.

(2) Set a numeric value.
Select a numeric value and press the right part of the center switch and turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. When the rotary switch is turned clockwise, the numeric number is increased. When this switch is turned counterclockwise, the numeric value is decreased.

For setting another item
Operate the left part of the center switch and repeat steps (1) and (2).

(3) End the setting.
Select ? Pr? in the popup menu after pressing the center pushbutton or press the left part of the center switch at item selection (PrW, RevW), and the etc. menu will reappear.

When exceeding the set warning value, ...

```
<table>
<thead>
<tr>
<th>Setting range</th>
<th>The value in parentheses is the initial value.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PrW</td>
<td>Intake pressure</td>
</tr>
<tr>
<td>RevW</td>
<td>Engine RPM</td>
</tr>
</tbody>
</table>
```
VTEC learning information display

In the V-AFC II, the factory status VTEC changeover points are learned and the learning information is displayed.

1. Select "etc." in the main menu.

2. Select "V/T Info." in the etc. menu.

3. The VTEC changeover point learning mode is set.

<table>
<thead>
<tr>
<th>Normal changeover point display</th>
<th>Display in the unlearned status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L</strong> &gt; <strong>H</strong>: RPM when changing from Lo cam to Hi cam</td>
<td><strong>L</strong> &gt; <strong>H</strong>: RPM when changing from Hi cam to Lo cam</td>
</tr>
<tr>
<td><strong>Prs</strong> : Intake pressure value when changing from Lo cam to Hi cam</td>
<td><strong>Prs</strong> : Intake pressure value when changing from Hi cam to Lo cam</td>
</tr>
<tr>
<td><strong>Thr</strong> : Throttle increase rate when changing from Lo cam to Hi cam</td>
<td><strong>Thr</strong> : Throttle increase rate when changing from Hi cam to Lo cam</td>
</tr>
</tbody>
</table>

NOTE

These learning contents do not affect any setting. Use them for setting reference only.

When those items are not learned, "**" is displayed.
Setting and changing the password

Setting a password can prevent setup data or setting data from being changed by mistake or mischief.

1. Select ? etc.? in the main menu.

2. Select ? Pass Lock? in the etc. menu.

3. The password setting/ change mode is set.

   (1) Select an item.
   - Press the upper or lower part of the center switch and turn the rotary switch counterclockwise or clockwise to select an item. The selected item is displayed as a reversing display. When the rotary switch is turned clockwise, the cursor is moved upward. When this switch is turned counterclockwise, the cursor is moved downward.

   (2) Set or change a password.
   - Select ? Nx? in the popup menu after selecting an item and pressing the center pushbutton, or press the right part of the center switch to go to the password input screen.

   (1) End the setting.
   - Select ? Pr? in the popup menu after pressing the center pushbutton or press the left part of the center switch, and the etc. menu will reappear.

NOTE

? Be sure to write down the password.
? Avoid setting an easy-to-remember password such as 1111 and AAAA
? When selecting Lock Mode

(1) Input the password.
   Turn the rotary switch counterclockwise or clockwise and input a password. For the password, select characters from 0 to 9 and A to Z. Operate the left or right part of the center switch to shift a digit. (In the initial status, the password is 0000.) After inputting the password, press the center pushbutton and select ? N x ? in the popup menu. To abort it, select ? Pr? or ? Tp? in the popup menu to exit from the mode.

(2) Lock the setup/setting.
   Press the right part of the center switch, select [Yes], and press the center pushbutton.
   If you do not lock the setup/setting, select [No] and press the center pushbutton.

? When selecting Change Pass

(1) Input the password.
   Input the current password by performing the same procedure as that for Lock Mode. (In the initial status, the password is 0000.) After inputting the password, press the center pushbutton and select [N x] in the popup menu. To abort it, select [Pr] or [Tp] in the popup menu to exit from the mode.

(2) Input a new password.
   Input the new password by performing the same procedure as before. After inputting the password, press the center pushbutton.

? If a password is incorrectly input on the Ent Password screen, the warning screen shown on right appears. Input a correct password again.

? Setting items prohibited by the Password Lock feature
   Setting Menu ???. All items
   etc. Menu ???????Sensor No. Car Select
   If an attempt to change any item shown above is made in the

   Warning
   PASSWORD Unmatched!

   Warning
   PASSWORD Protected!
Select an item.
Press the left or right part of the center switch to select an item to set a numeric value. The selected item is displayed as a reversing display.

(2) Set a numeric value.
Select a numeric value and press the upper or lower part of the center switch or turn the rotary switch counterclockwise or clockwise to increase or decrease the numeric value. As the numeric value is increased, it becomes brighter. As the numeric value is decreased, it becomes darker. When the rotary switch is turned clockwise, the numeric number is increased. When this switch is turned counterclockwise, the numeric value is decreased.

(3) End the setting.
Select ? etc.? in the popup menu after pressing the center pushbutton or press the left part of the center switch at ? Day? or press the left part of the center switch at ? Nig? , and the etc. menu will reappear.
Program version check

1. Select ? etc.? in the main menu.

2. Select ? Program Ver. ? in the etc. menu.

3. The program version check mode is set.

? The program version information is displayed.

End the check.
Select [Pr] in the popup menu after pressing the center pushbutton or press the left part of the center switch, and the etc. menu will reappear.
Initialize all data to return it to the original factory data status.

1. Select etc.? in the main menu.

2. Select Initialize etc.? in the etc. menu.

3. The all data initialization mode is set.

? Initialize all data.
In the all data initialization mode, operate the right part of the center switch, select [Yes], and press the center pushbutton. After that, turn off the ignition switch.

? Exit from the mode without initialization.
In the all data initialization mode, perform one of the following operations.
- Select [No] and press the center pushbutton.
- When [No] has been selected, operate the left part of the center switch.
- When [Yes] has been selected, operate the right part of the center switch.
Then, the etc. menu will reappear.
## Troubleshooting

### Fault related to the power supply

- Check if the battery is connected.
- Check if the vehicle ECU harness is securely connected to the signal harness.
- Check if the signal harness is connected to the connector of the V-AFC II main unit cable.
  - Even if the connection is properly made, the power supply may not be turned on because of a contact defect. Check the plug and splice portion once again.
- The power supply is turned off due to vibrations.
  - This may be due to a wiring contact defect.

### The display is not normal.

- Each signal is not displayed (monitored).
  - Check if the harness connecting position is correct. Install the harness by referring to the "Wiring Diagram by Model" attached to this product, taking special care about the direction of the ECU, and checking the connector shape and the number of pins.
  - The rpm display is not normal.
    - Check if the number of cylinders is correctly set.
      - Factory tachometers have a slight error. Even when a deviation of 200 to 300 rpm occurs at a high-speed rpm, this is normal. The numeric value of this product is the correct rpm.
  - The throttle position display is not normal.
    - Check if the throttle sensor type has been set.
    - Check if the throttle position has been learned.
  - Throttle position Hi/Lo cannot be selected.
    - Check if the throttle type is not set to **.
      - If it is set to **, correction is not made by throttle position, so the Hi/Lo map cannot be changed over.
The display is too dark or bright.

· Make a VFD brightness adjustment. (P 57)

The password has been forgotten.

· Initialize the main unit. (P 59)

The engine is not operating properly

? An engine stall occurs.
· Check if the harness is connected to a wrong position.
  Install the harness by referring to the “Wiring Diagram by Model” attached to this product, taking special care about the direction of the ECU, and checking the connector shape and the number of pins.
· Check if the sensor type is incorrectly set.

? Idling is unstable.
· Check if the harness is securely connected.
· Check if the sensor number is incorrectly set.

? The engine check lamp comes on.
· Check if the harness is securely connected.
· Check if the sensor number is incorrectly set.

? The engine does not rev.
· Check if the harness is securely connected.
· Check if the sensor number is incorrectly set.
· Check if the fuel is not set to an extremely rich level by the correction factor setting.

? The engine seems to be bogging.
· Check if the harness is securely connected.
· Check if the sensor number is incorrectly set.
· Check if the fuel is not set to an extremely rich level by the correction factor setting.

? The engine fails to start.
· Check if the harness is securely connected.
· Check if the sensor number is incorrectly set.

? Functions are not active.
· If the air correction factor setting, VTEC changeover point setting, and the load sensing VTEC changeover setting is not active, check if the function is not in the “THROUGH” status.
· Upon delivery, the unit is in the “THROUGH” status.
Notes

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2. The contents of this document have been prepared with extreme care. However, if you find a
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- VTEC is a registered trademark of Honda Motor Co., Ltd.
- The names, addresses and telephone numbers mentioned as where to contact are as of April 16, 2003.
  Note that this information is subject to change.

Specifications of This Product

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>DC 10 V ~ 16 V</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20 ~ +60 °C</td>
</tr>
<tr>
<td>Power consumption</td>
<td></td>
</tr>
</tbody>
</table>

Warranty

This product is warranted under the contents of the separate warranty.
Confirm the contents of the warranty and enter necessary items. Keep the warranty in your custody.

Revision record

<table>
<thead>
<tr>
<th>No.</th>
<th>Date of issue</th>
<th>Part No. of instruction manual</th>
<th>Edition</th>
<th>Change of description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>May 19, 2003</td>
<td>7107-0250-0</td>
<td>First edition</td>
<td></td>
</tr>
</tbody>
</table>

Where to contact:

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