

## Important Information









Please read

Please read this instruction manual carefully and proceed with the installation ONLY if you fully understand this manual. Make sure to pay close attention to all the "Important!", "Warning!" and "Caution!" messages throughout the manual.

### Important!




- This product is for off-road vehicle use only, which may never be driven on a public highway.
- This product is only for vehicles with 12V (battery) systems.

### Warning









-  Installation and tuning of this product should only be performed by a trained specialist who is very familiar with the automobile's mechanical, electrical and fuel management systems. If installed by an untrained person, it may cause damage to the unit as well as the vehicle.
-  When mounting this product in the vehicle, be sure the unit does not interfere with the driver's view and normal operation of the vehicle.
-  When using soldering iron and other tools for installation, be sure you read and understand the tool's user manual first. Misuse of these tools may cause injuries.
-  When working on the electrical wires, make sure to disconnect the negative terminal side of the battery on the vehicle.
-  When increasing the boost, be sure not to overboost. Overboosting may cause damage to the engine.
-  Be sure to find out what the safe boost pressure limit is for the vehicle before installing this product.
-  Trust Co. Ltd. and GReddy Performance Products, Inc. are not responsible for any engine damage caused by overboosting (increased boost over the safe limit).
-  Never tune the Profec B-spec II while the vehicle is moving.

## Important Information

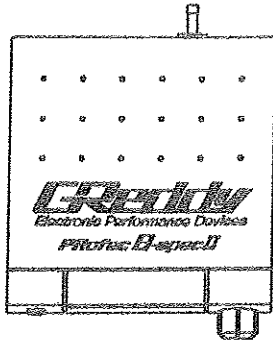
Please read

-  Never tune the Profec B-spec II on public highway. This may be dangerous to you as well as others on the road.
-  When tuning and operating the vehicle in a garage, be sure that the garage is equipped with a proper ventilation system.
-  After installation and tuning, be sure to clean up everything that would interfere with the driver. Tools and/or wires may interfere with the driver and may cause accidents.

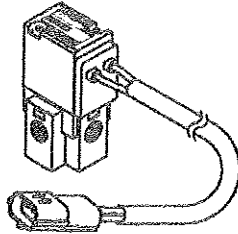
### **Caution**

-  Improper tuning of the Profec B-spec II may cause damage to the engine.
-  GReddy Performance Products, Inc. will not be responsible for any damage caused by improper installation or tuning.
-  Tuning should be performed only by a experienced technician who fully understands the vehicle's turbo system and fuel management requirement for the engine being tuned.
-  Always use a proper air/fuel ratio meter when tuning the Profec B-spec II to ensure safe boost level.  
Installation of this product requires modification of the vehicle's electrical system.
-  When making wire connections, be sure to remove the key from the ignition, and disconnect the negative terminal of the battery.
-  Never short out the system. It can damage the unit as well as the vehicle's electrical system.
-  Read and fully understand the wiring diagram before making any wire connection.
-  When connecting the connectors, push it in all the way until you hear them click in together.

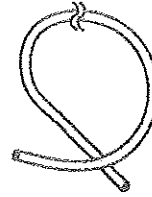
# Parts List



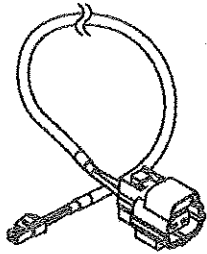
Main Unit



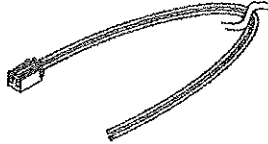
Valve Unit



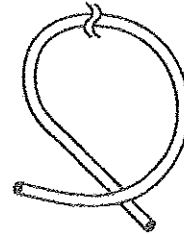
4mm Hose (2m)



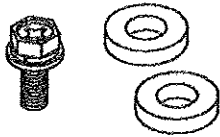
Valve Unit Harness (2.5m)



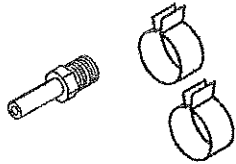
Power Harness (1.0m)



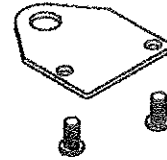
6mm Hose (1m)



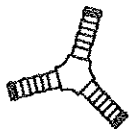
M6 Bolt x 1  
Rubber Washer x 2



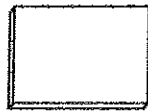
6mm Hose Fitting x2  
Hose Clamp x 2



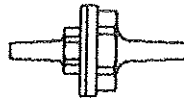
Bracket  
M4 Bolt x2



3 Way Fitting



Double Sided Tape



Air Filter



Instruction Manual

Please make sure all the parts listed above are included in the box. If there are any items missing, please contact your TRUST/GReddy authorized dealer where this unit was purchased.

## Product Features

- Controls boost up to 300kPa (43.5psi) (This may vary on different turbo applications)
- There are 2 preset settings that can be selected by a single switch.
- The response and the consistency of the boost can be adjusted by using the GAIN settings.
- Supplied with compact high capacity solenoid valve.
- Compact head unit that is easy to mount anywhere.
- The optional Remote switching system can be used to select the HI/LO boost mode. (Sold separately)

## Before Installation

Please read

### Tools required for installation

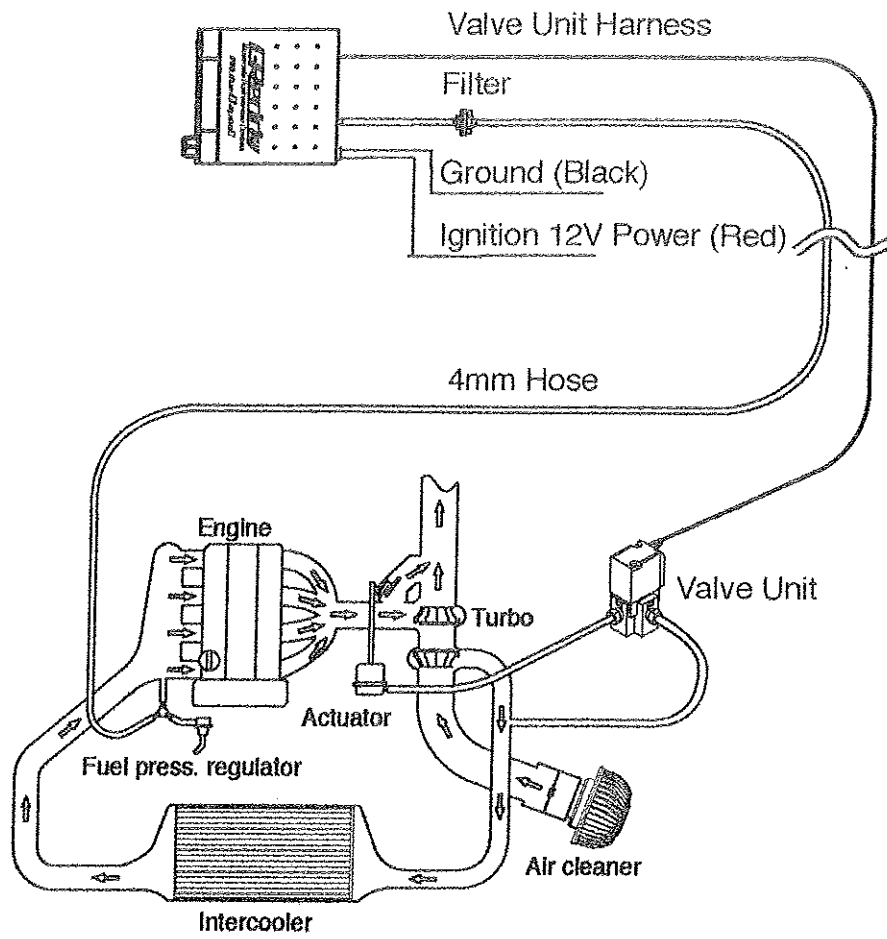
- |                  |                   |                              |          |
|------------------|-------------------|------------------------------|----------|
| • Voltage tester | • Wire cutter     | • Screw drivers (+,-)        | • Pliers |
| • 10mm wrench    | • Electrical tape | • Solder, and Soldering iron |          |

- Make sure the engine has cooled down before working under the hood.
- Take the key out of the ignition switch and disconnect the negative terminal of the battery.
- Before mounting the Valve Unit, be sure the supplied pressure hose is long enough to reach them.
- Locate the actuator/wastegate, factory boost controlling solenoid valve, and fuel pressure regulator or true pressure source before installation.

### To the installer

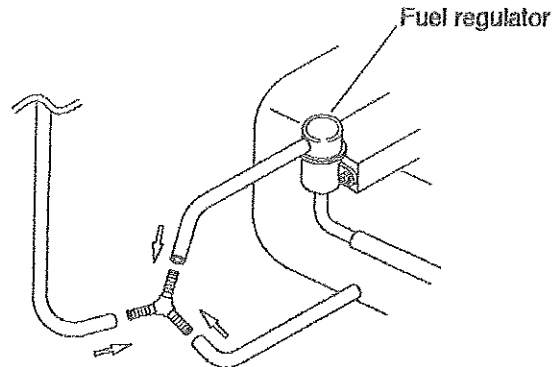
- After the installation, please make sure that you give this instruction manual to the owner of the vehicle.

# Installation Diagram (Actuator Type)



## Connection to the Intake Manifold

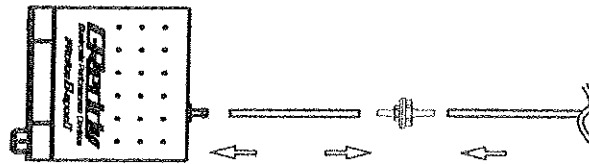
1. Cut the vacuum line on the fuel pressure regulator and install the supplied three way-fitting.
2. Install the supplied 4mm hose to the three way-fitting and route the hose in to the passenger compartment through the firewall.



### Important

- Please make sure that the 4mm hose is secured with a zip ties after the installation to prevent them from disconnecting.
- Toyota's JZ engines and Mitsubishi's 4G63 engine have fuel pressure controlling solenoid valves. For these vehicles, make sure to get pressure from the line between the intake manifold and the solenoid.
- When routing the 4mm hose through the firewall, make sure not to kink this hose. Kinked hose will cause the unit not to function properly.

## Connection to the Main Unit



1. Connect 4mm hose that was routed through in to the passenger compartment to the filter.
2. Connect the other end to the Main Unit.

### Important

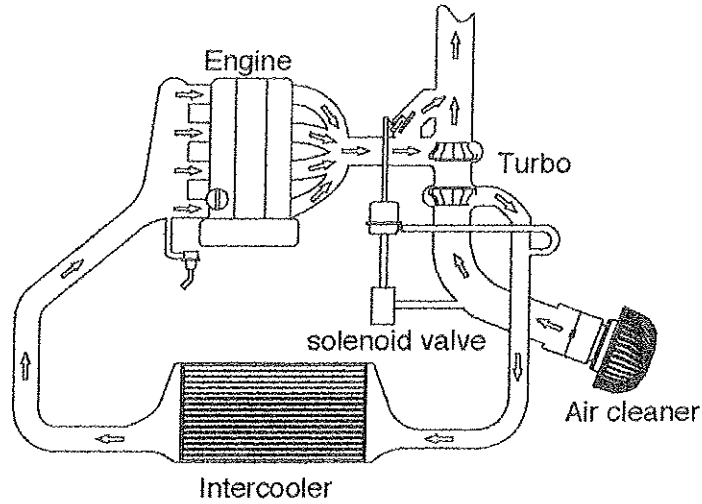
- Please make sure that the 4mm hose is secured with a zip ties after the installation to prevent them from disconnecting.
- The supplied filter must be installed.
- Make sure that the filter is installed in the correct direction.
- If the filter is dirty or clogged, replace it with a new one. A dirty filter can affect the unit's performance.

# Installation Diagram

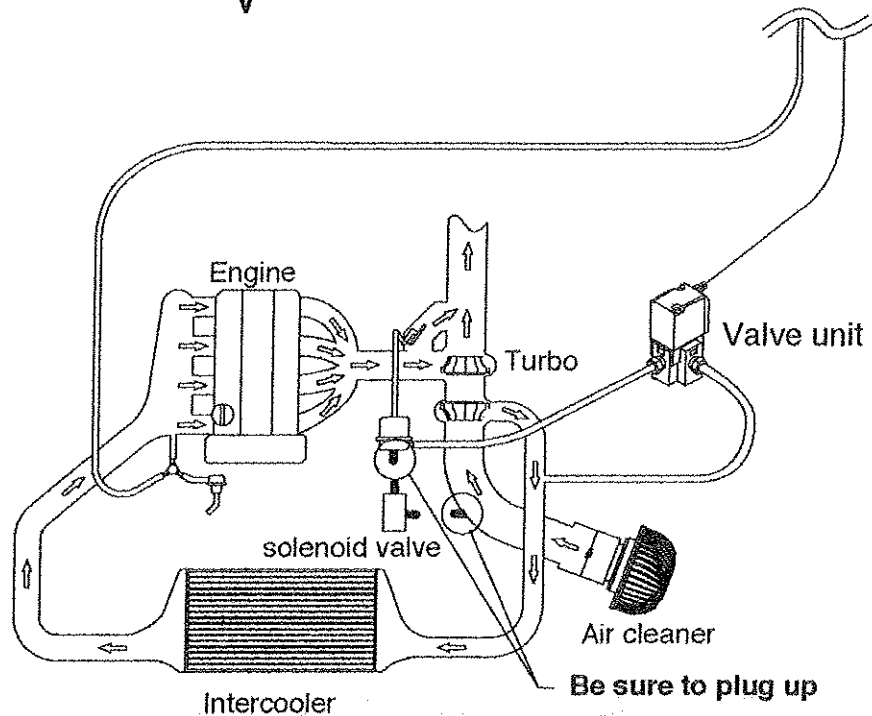
## Diagram 1: Vehicle with factory boost controlling solenoid valve Dual Port Actuator

Disconnect the connector and the vacuum lines off from the solenoid valve and plug up the all the vacuum ports.

Before



After

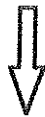
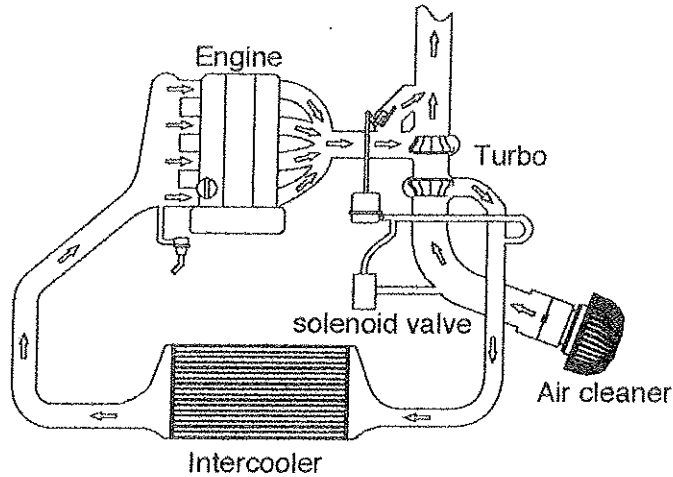


# Product Features

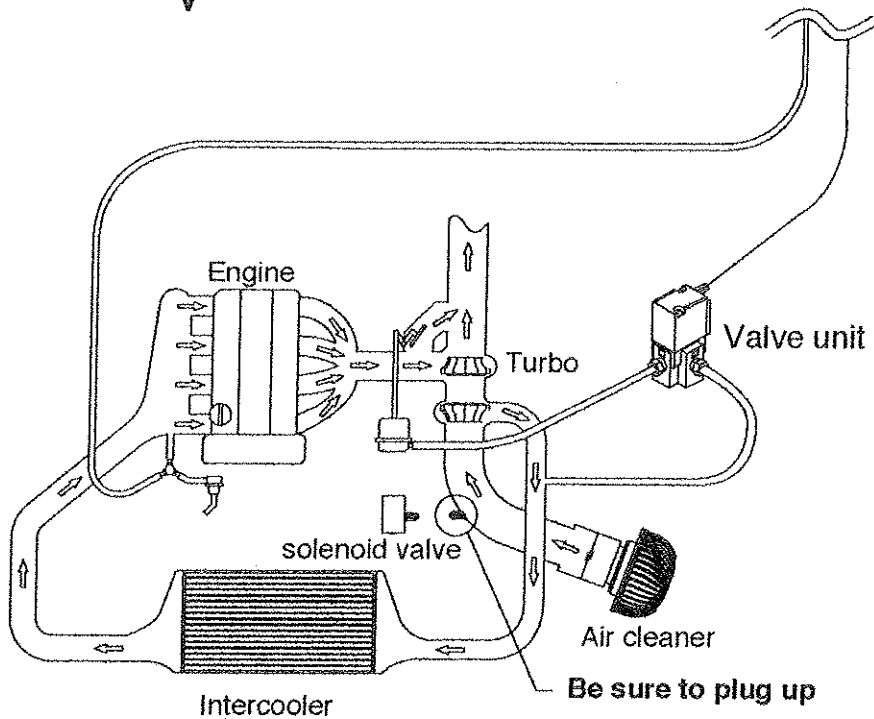
Diagram 2: Vehicle with factory boost controlling solenoid valve  
Single port actuator

Disconnect the connector and the vacuum lines off from the solenoid valve and plug up the all the vacuum ports.

Before

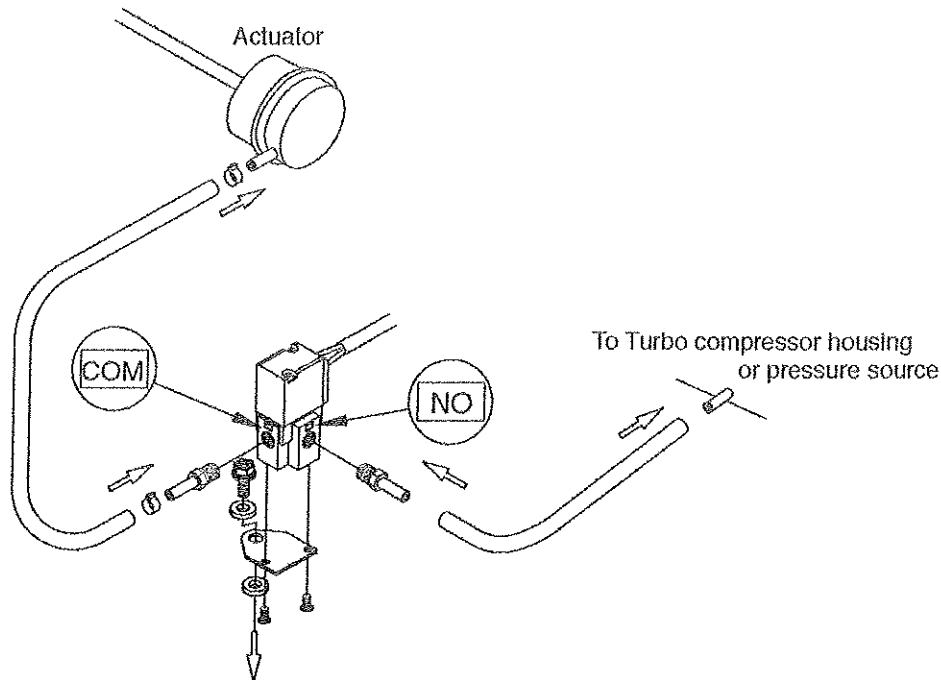


After





## Valve Unit Installation (Actuator Type)

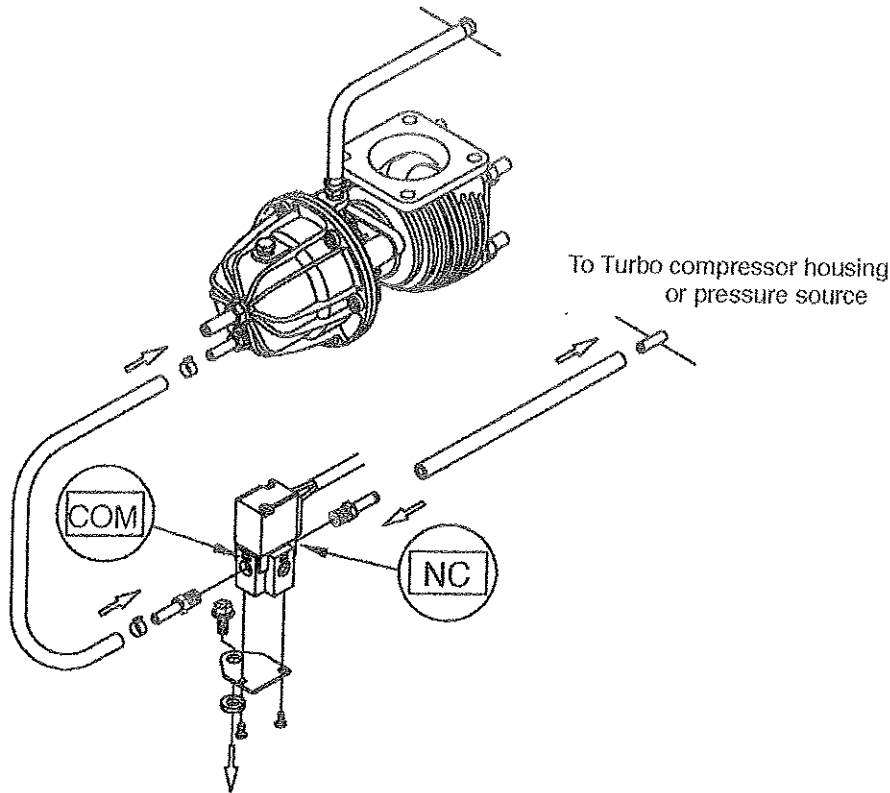


- (1) Remove ALL the plastic plugs from the Valve unit
- (2) Install the 6ø Hose fitting on to "NO" and "COM" port on the Valve unit.
- (3) Install the Valve bracket using the supplied M4 bolts. Then, secure the Valve assembly to the body using the supplied M6 Bolt and Rubber washer.
- (4) Disconnect the vacuum hose connecting the compressor housing of the turbo to the actuator at the actuator side and connect it to the "NO" side of the Valve unit.
- (5) Connect the "COM" port to the actuator using the supplied 6ø vacuum hose.

### Important!

- It is very important that the Rubber washer is used when mounting the bracket to the body.
- Mount the Valve unit in a cool area where the unit will not get hot or wet.
- Secure all the Vacuum connections with hose clamps.
- When routing the vacuum hoses, make sure not to kink or twist the hoses.
- Make the hoses as short as possible.
- It is normal for the Valve unit to make a clicking sound when it is operating.

## Valve Unit Installation (External Wastegate Type)

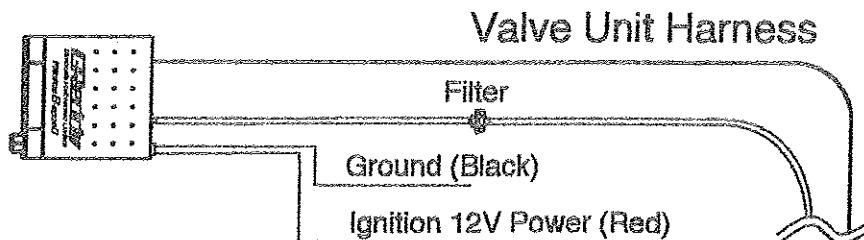


- (1) Install the 6ø Hose fitting onto "NC" and "COM" port on the Valve unit.
- (2) Install the Valve bracket using the supplied M4 Bolts. Then, secure the Valve assembly to the body using the supplied M6 Bolt and Rubber washer.
- (3) Install a 6ø Hose fitting (sold separately) on the top of the wastegate.
- (4) Connect the 6ø Hose fitting that was just installed to the "COM" port of the valve unit using the supplied 6ø Vacuum hose.
- (5) Connect the "NC" port to a good pressure source such as the Compressor housing of a turbo using the supplied 6ø Vacuum hose. (It is ok to tap into the same line that is going to the bottom port on the wastegate)

### Important!

- It is very important that the Rubber washer is used when mounting the bracket to the body.
- Mount the Valve unit in a cool area where the unit will not get hot or wet.
- It is normal for the Valve unit to make a clicking sound when it is operating.

## Wiring Procedures




- (1) Connect the Valve unit harness to the Valve unit that was installed in the engine compartment.
- (2) Route the Valve unit harness through the firewall in to the passenger compartment and connect them to the main unit.
- (3) Reconnect the battery and find 12V ignition source with a tester.
- (4) Disconnect the negative terminal of the battery and connect the 12V ignition source to the power harness. (red wire)
- (5) Ground the black wire to the body. When grounding to the body, sand or grind off any paint or rust to ensure good contact.

## Wiring Procedures

- (1) Mount the Main Unit to a desired location using the provided double sided tape

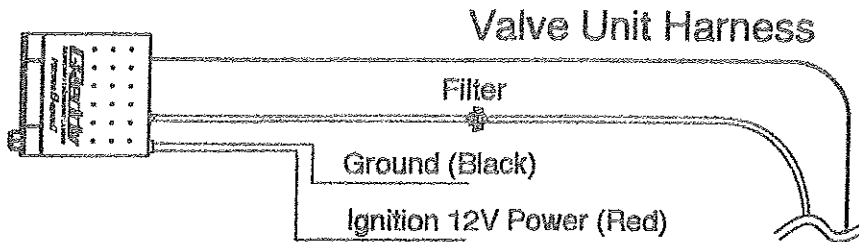
### **Warning**

-  When mounting this product in the vehicle, be sure the unit does not interfere with the driver's view and normal operation of the vehicle.

### **Please**

- Make sure that the area where the main unit going to mount is free of dirt and oil. Wipe the area clean.

## Wiring Procedures




- (1) Connect the Valve unit harness to the Valve unit that was installed in the engine compartment.
- (2) Route the Valve unit harness through the firewall in to the passenger compartment and connect them to the main unit.
- (3) Reconnect the battery and find 12V Ignition source with a tester.
- (4) Disconnect the negative terminal of the battery and connect the 12V ignition source to the power harness. (red wire)
- (5) Ground the black wire to the body. When grounding to the body, sand or grind off any paint or rust to ensure good contact.

## Wiring Procedures

- (1) Mount the Main Unit to a desired location using the provided double sided tape

### **Warning**

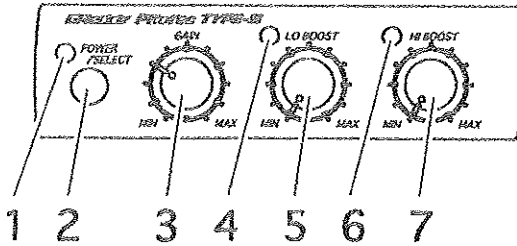
 When mounting this product in the vehicle, be sure the unit does not interfere with the driver's view and normal operation of the vehicle.

### **Please**

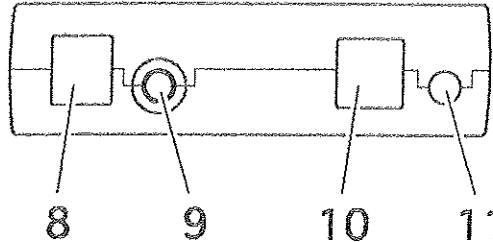
- Make sure that the area where the main unit going to mount is free of dirt and oil. Wipe the area clean.

# Controller Functions

## Front Panel



## Back Panel



### <Front Panel>

#### 1. POWER LED

- LED will illuminate when the unit is turned ON. When the unit is in OFF mode the LED will still illuminate with a dimmer light when the Ignition is ON.

#### 2. POWER/SELECT switch

- Press once . . . . . to switch the boost mode (HI/LO)
- Hold down for 2 sec . . . to turn the boost controller OFF. Repeat to turn it back ON.

#### 3. GAIN Knob

- Turn to set the GAIN setting.

#### 4. LO BOOST LED

- Illuminates when in LOW BOOST mode.

#### 5. LO BOOST knob

- Turn to set the LOW BOOST setting.

#### 6. HI BOOST LED

- Illuminates when in HI BOOST mode.

#### 7. HI BOOST knob

- Turn to set the HI BOOST setting.

### <Back Panel>

#### 8. Power Harness connector

#### 9. 4mm pressure port

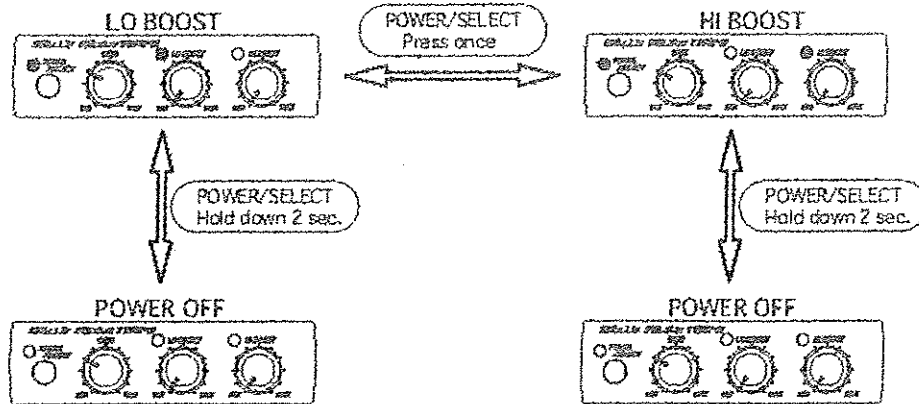
#### 10. Vale Unit Harness connector

#### 11. Option

- used for Remote Switching System or Switching Harness (sold separately)

\*NEVER insert any thing other than items specified in the OPTION.

## MODE Flow Chart



### ◎ Changing LO BOOST/ HI BOOST mode

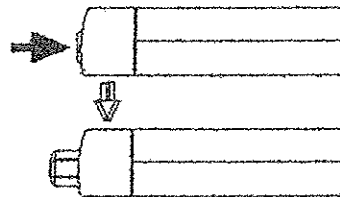
- Turn the power ON and press the POWER/SELECT button to select the desired BOOST mode.

### ◎ Turning the POWER ON and OFF

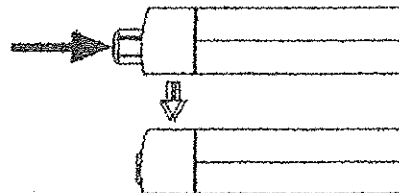
- To turn the unit ON, hold the POWER/SELECT button down for 2sec until the back light illuminates.
- To turn the unit OFF, hold the POWER/SELECT button down for 2sec until the back light turns off.

## About the adjustment knobs

- Press the knob down until you hear a click to pop out the knob.



- Press the knob down again until you hear click to retract the knob.



## Factory Setting

Boost Mode . . . . . LOW BOOST  
GAIN . . . . . 3rd mark from MIN  
(9 clicks)  
LO BOOST . . . . . MIN  
HI BOOST . . . . . MIN



## To Set the LO BOOST

1. Press the Power/Select button to select LO BOOST mode. Confirm that the LED next to the LO BOOST is illuminated.

Push the LO BOOST knob to pop out the knob.  
Turn the LO BOOST knob full counter  
clock wise to MIN.



Set the GAIN to the 3rd mark from MIN.

2. Monitoring a boost gauge, turn the  
LO BOOST knob clock wise one notch at  
a time until a desired boost is achieved.



- \* Please do not make any adjustment while driving the vehicle.

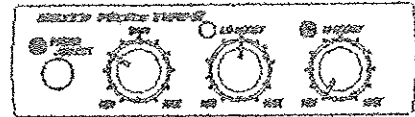
3. Monitor the boost for any inconsistency, erratic boost, or boost spike.  
To complete the setting, push the knob in.

- If boost spike occurs, see page . . . . . P17
- If boost decreases or increases at higher rpm . . . . . P17
- To improve the boost response, See page . . . . . P17

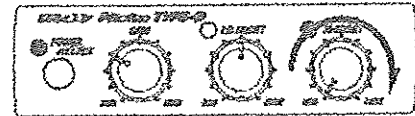
## To Set the HI BOOST

1. Press the Power/Select button to select HI BOOST mode. Confirm that the LED next to the HI BOOST is illuminated.

Push the HI BOOST knob to pop out the knob.  
Turn the HI BOOST knob full counter  
clock wise to MIN.



2. Monitoring a boost gauge, turn the  
LO BOOST knob clock wise one notch at  
a time until a desired boost is achieved.



- \* Please do not make any adjustment while driving the vehicle.
3. Monitor the boost for any inconsistency, erratic boost, or boost spike.  
To complete the setting, push the knob in.

- ⊙ If boost spike occurs, see page . . . . . P17
- ⊙ If boost decreases or increases at higher rpm . . . . . P17
- ⊙ To improve the boost response, See page . . . . . P17

### Important!

- MIN setting on HI BOOST mode will be about the same as LO BOOST set to the 3rd notch back from the MAX setting, so please monitor the boost and make sure that over boosting does not occur.



### If boost spike occurs

- If boost spike occurs, lower the GAIN setting one click at a time until the boost is consistent.



### If boost is inconsistent

- If the boost drops off or increases at higher rpm, increase the GAIN setting one click at a time until the boost is consistent.



### To improve the boost response

- To improve the boost response, increase the GAIN setting one click at a time to right before boost spike occurs.



### Important!

- The adjustments to GAIN setting will affect both LO and HI boost mode, so make sure to check the boost pressure in LO and HI BOOST mode after adjustments. Turning the GAIN towards MIN will decrease the boost and turning the GAIN towards MAX will increase the boost.
- There will be some vehicles that this boost controller could not eliminate the boost spike or inconsistency of the boost.

## Installation inspection

Please read

- Reinstall all the parts that were removed during the installation of this product.
- Reconnect the negative terminal of the battery.
- Make sure that all harnesses and hoses are secured, properly connected and routed.
- Improper connection and routing of the harnesses and hoses can damage the unit and the sensors, which can cause engine damage.
- TRUST Co. Ltd. and GReddy Performance Products, Inc. is not responsible for any engine damage caused by improper installation.

## How to use with Switching Harness (sold separately)

- To connect to the GReddy Speed Limiter Cut Controller Type-A

The HI/LO mode can be switched at desired vehicle speed.

### Wiring procedure

1. Connect the WHITE wire on the Switching Harness to the YELLOW wire (option output wire) of the GReddy Speed Limiter Cut Controller.
2. Connect the BLACK wire on the Switching Harness to the BLACK wire (ground wire) of the GReddy Speed Limiter Cut Controller
3. Turn the #4 dip switch in the GReddy Speed Limiter Cut Controller on.
4. With the Main Unit turned off, connect the GReddy Speed Limiter Cut Controller jack in to the Option port of the main unit.
5. Set the desired speed to switch the HI/LO mode. Refer to the GReddy Speed Limiter Cut Controller manual.

## Trouble shooting

| Problem description   | Possible Cause  | Solution  |
|---|---|---|
| 1. Boost will not increase.<br>Boost will continue to increase. | • Not receiving intake manifold pressure.   | • Check the pressure hose connection to the intake.   |
|   | • Valve Unit connector is disconnected.   | • Check the Valve Unit connector.   |
|   | • The hose fitting on the Valve Unit is installed improperly.<br>• Pressure hoses are installed improperly.<br>• Pressure hoses are disconnected.<br>• Plug is not removed on the Valve Unit. | • Check the hose fitting and the pressure hose on the Valve Unit.<br>• The hose fitting should be installed in NO port for Actuator type and NC for external wastegate. |
| 2. Inconsistent boost.<br>Boosts up and down.                   | • GAIN is set too high.   | • Lower the GAIN setting.   |
| 3. Bad response.  | • GAIN is set too low.  | • Increase the GAIN setting.  |
| 4. Boost spike occurs.  | • GAIN setting is not adjusted for the vehicle's application.<br>• GAIN is set too high.  | • Adjust the GAIN setting.<br>• Lower the GAIN setting.   |
| 5. Boost fall off or continue to raise at higher rpm.           | • GAIN is set too low.<br>• Trying to boost over the turbocharger's capacity, and/or due to wastegate's characteristic. Too much exhaust pressure.  | • Increase the GAIN setting.<br>• Need to upgrade the turbo, and/or wastegate setup to handle the desired boost.  |

## Option Parts, Replacement Parts

Option parts for Profec B-spec Type-S

| Product                   | Price    |
|---------------------------|----------|
| • Switch Harness          | \$12.00  |
| • Remote Switching System | \$128.00 |

Replacement parts for Profec B-spec Type-S

- Air filter
- Valve Unit
- Valve Unit Harness

\* to purchase these items, please contact your Trust or GReddy authorized dealer where the Profec B-spec was purchased.

## about Customer Service

- If there are any questions or concerns regarding this product, please contact you dealer or TRUST/GReddy.
- This product is covered by 1 year warranty from time of purchase towards any manufacture defects. Please check your warranty policy of our product with your TRUST/GReddy authorized dealer as our warranty policy vary in different counties.

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