

GRReddy®

GReddy Turbo Kit

97-99 Honda Prelude (non-SH model) TD05-18G



GRIPDRIVE TURBO KIT

HONDA PRELUDE (H22A)
TD_05SH18G (Actuator Type)

Installation Manual

Please read this manual completely before installation.

This product is legal for sale or use in CA only vehicles which may never be driven on a public highway.

Make	Model	Chassis Code	Year
HONDA	PRELUDE	BB8	97-99

Different size Battery is required. Use battery from a 96-00 Honda Civic.
Size: W 235mm x L 125mm x H 200mm

1. Parts List

1.	Turbocharger TD05SH-18G 8cm ² P565	1
2.	Exhaust Manifold (Cast Stainless)	1
3.	Down Pipe Adapter (Cast Stainless)	1
4.	Down Pipe (Steel 50Ø)	1
5.	Suction Pipe S-1 (Aluminum 80Ø)	1
6.	Suction Pipe S-2 (Aluminum 80Ø)	1
7.	Compression Pipe C-1 (Aluminum Elbow No.2 50Ø 5R 90°)	1
8.	Compression Pipe C-2 (Aluminum 60Ø)	1
9.	Airinx AY_MB (Blue Filter)	1
10.	Airinx Hose Adapter M80	1
11.	Injector (370cc)	4
12.	Injector insulator	4
13.	Injector Connector Harness	4
14.	Fuel Controlling Unit (FCU)	1
15.	Oil Pressure Line 1200mm	1
16.	Oil Pressure Banjo Fitting	1 set
17.	Oil Pressure Copper Washers (t=1.0mm)	2
18.	Oil Pressure Three way Fitting	1
19.	Oil Pressure Union Fitting 1/8 PT-1/8 PT	1
20.	Oil Pressure Union Fitting 1/8 PT-1/8 PF	1
21.	Oil Return Flange Tube (16Ø Turbo side)	1
22.	Oil Return Banjo Fitting male & Female (16Ø Engine side)	1 set
23.	Oil Return Banjo Spacer (t=16)	1
24.	Oil Return Banjo Copper Washer 15.5Ø (t=1.0)	3
25.	Oil Return Bracket	1
26.	Oil Return Bracket Spacer (t=5.0)	1
27.	Vacuum Hose (Blue) 5Ø x 1000mm (Actuator)	1
28.	Rubber Hose 8Ø x 220mm (Water line)	1
29.	Rubber Hose 10Ø x 550mm (Breather)	1
30.	Rubber Hose 16Ø x 330mm (Oil Return)	1

3 1.	Hose	50Ø x 70mm							1
3 2.	Hose	20Ø x 60mm							1
3 3.	Hose	80Ø x 80mm							1
3 4.	Reducer Hose	50Ø - 60Ø							1
3 5.	Reducer Hose	60Ø - 65Ø							1
3 6.	Hose Band	8 φ	# 4						2
3 7.	"	1 0 φ	# 5						2
3 8.	"	1 6 φ	# 1 0						2
3 9.	"	5 0 φ	# 3 2						3
4 0.	"	6 0 φ	# 3 6						2
4 1.	"	6 5 φ	# 4 0						1
4 2.	"	8 0 φ	# 4 8						5
4 3.	Gasket	Turbo I N							1
4 4.	Gasket	Turbo O U T							1
4 5.	Gasket	Down Pipe Adapter	5 0 φ						1
4 6.	Gasket	Down Pipe							1
4 7.	Gasket	Oil Return flange							1
4 8.	Exhaust Manifold Heat Shield								1
4 9.	Thermo Cloth	1 0 0 × 1 0 0 0 mm							2
5 0.	Zip ties	1 5 0 mm							1 0
5 1.	Battery Bracket	A							1
5 2.	Battery Bracket	B							1
5 3.	Battery Bracket Spacer	t= 8							1
5 4.	A/C line Bracket								1
5 5.	M 6 × 1 0 mm	P= 1. 0	Stainless	B S/W F/W	_			(Heat Shield)	3
5 6.	M 6 × 1 5 mm	P= 1. 0	Stainless	B S/W	_	_		(Oil Return)	2
5 7.	M 6 × 1 5 mm	P= 1. 0	Stainless	B S/W F/W	_			(Compression pipe)	1
5 8.	M 6 × 2 5 mm	P= 1. 0	Stainless	B S/W F/W	_			(Oil Return Bracket)	1
5 9.	M 8 × 2 5 mm	P= 1. 2 5	Stainless	B S/W	_	_		(Turbo OUT)	4
6 0.	M 8 × 3 0 mm	P= 1. 2 5	Stainless	B S/W F/W	_			(Battery Bracket B)	1
6 1.	M 8 × 3 0 mm	P= 1. 2 5	Stainless	B S/W	_	N		(Turbo IN)	4
6 2.	M 8 × 7 0 mm	P= 1. 2 5	Stainless	B S/W	_	_		(Turbo O U T)	1
6 3.	M 1 0 × 3 5 mm	P= 1. 2 5	Stainless Stud	B S/W F/W	N			(Ftube)	2

Parts List



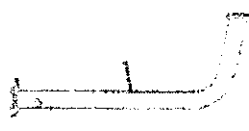
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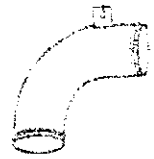
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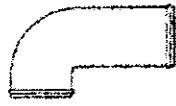
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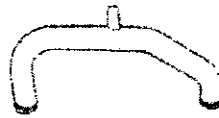
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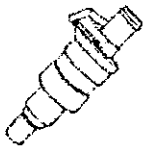
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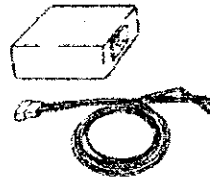
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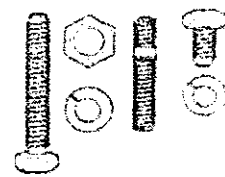



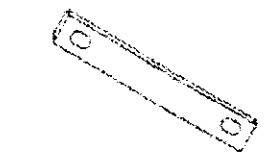
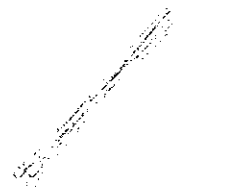
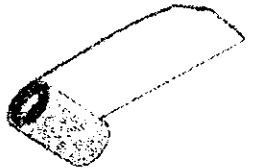
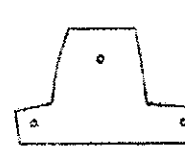
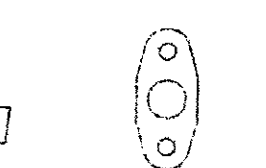
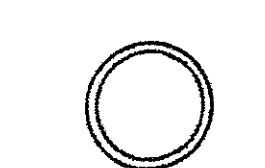
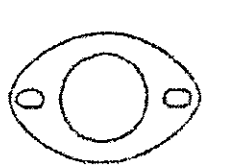
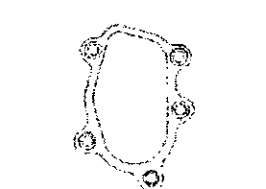
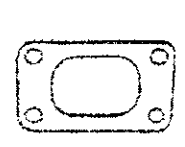
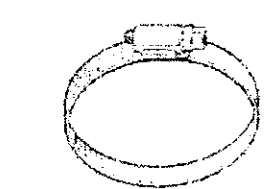
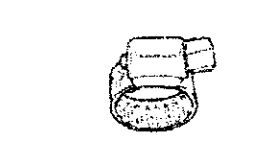
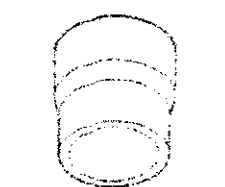






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Parts List

55-53

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2. Removal of Stock Parts

Please refer to the factory service manual for a detailed removal instruction.

2 _ 1 Remove the battery and the under cover.

2 _ 2 Drain the engine oil and coolant.

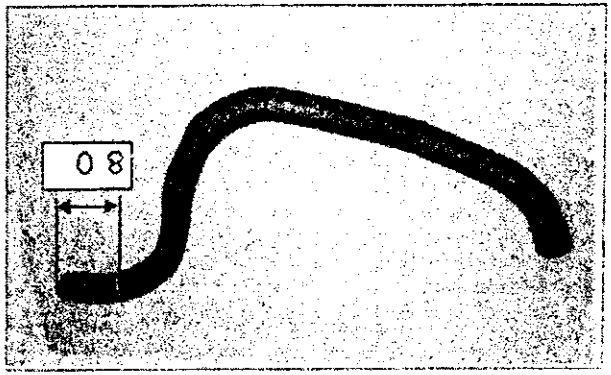
2 _ 3 Remove the air cleaner box, Intake tube, and air intake control assembly

2 _ 4 Remove the O2 sensor and the exhaust manifold.

3 Kit Installation

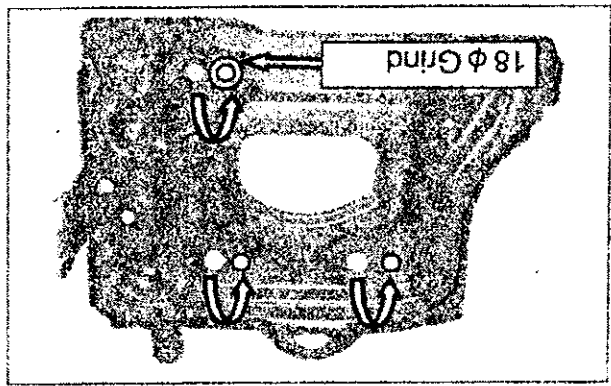
3-1 Radiator Hose Modification

- (1) Remove the lower radiator hose and the radiator hose clamp bracket mounted by the starter.
- (2) Cut off 80mm from the side that connects to the radiator.
- (3) Reinstall the hose back on to the engine.



3-2 Battery Tray Modification

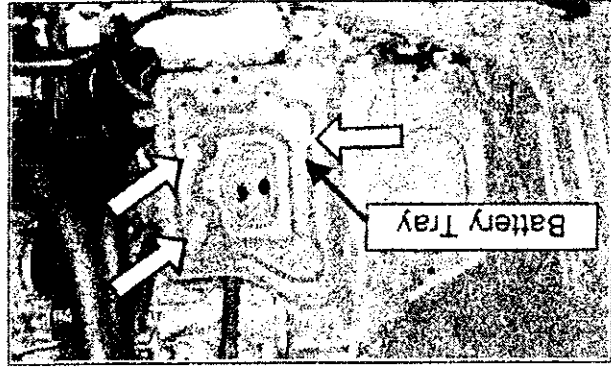
- (1) Remove the Battery Tray and redrill the mounting holes as shown. The holes are offset back 16mm. Grind the step by right front hole so that the Battery bracket spacer (part #53) will clear.
- ※ Debur all the drilled holes and paint to prevent rusting.



- (2) Reinstall the battery tray back using the new holes.

※ Use factory bolts for the two inside holes and Bracket B using the M8x30mm bolt with spacer.

< Parts # 5 2 , 5 3 , 6 0 >



- (3) Install the new Battery using the Battery Bracket A and hook the bracket rod in to the Battery Bracket B.

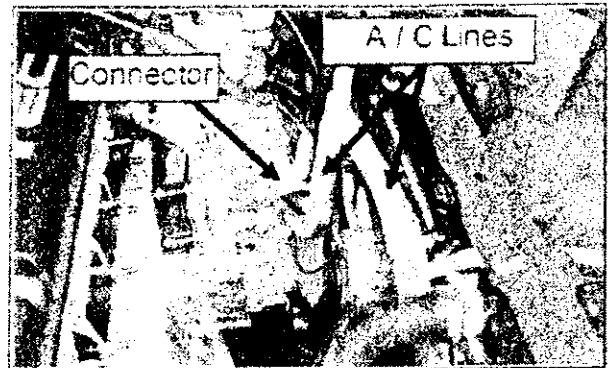
< Part # 5 1 >



3 _ 3 Thermo Cloth

- (1) Remove the bracket holding the A/C lines over the radiator and apply the Thermo cloth on the A/C lines and the A/C pump connector as shown

<Part # 4 9 >

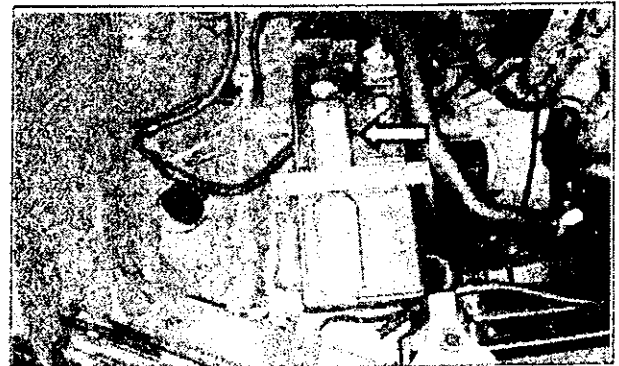
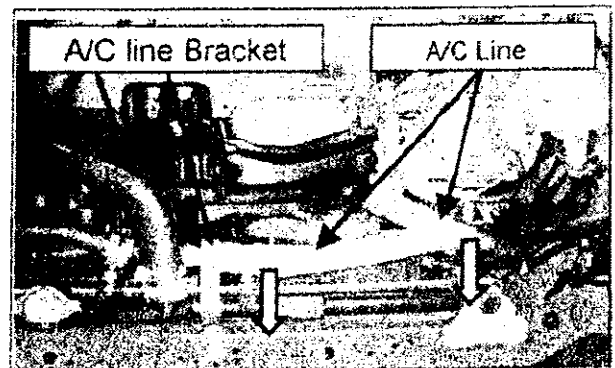


3 _ 4 Bend the A/C line

- (1) Bend the A/C line towards the radiator and the battery as shown. Secure the line to the front cross member using the A/C Line Bracket.

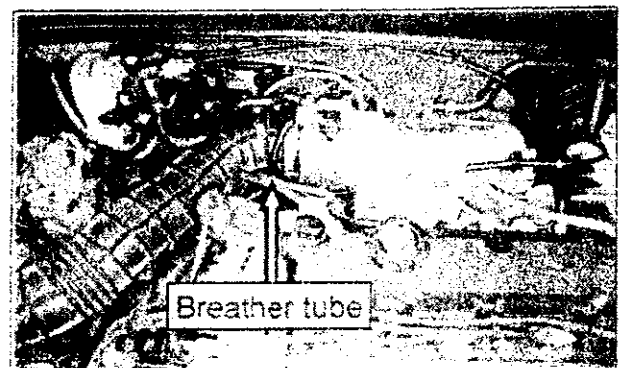
※ Factory mounting bolt from the factory bracket.

<Part # 5 4 >

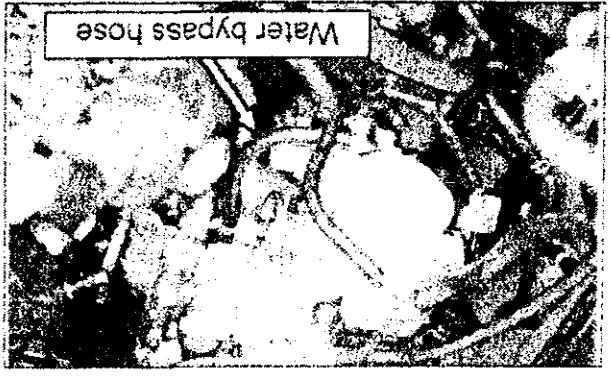


3 _ 5 Changing the Water bypass line

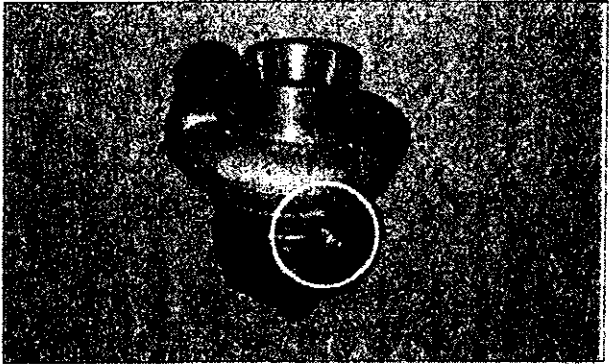
- (1) Remove the factory Breather / Water bypass tube



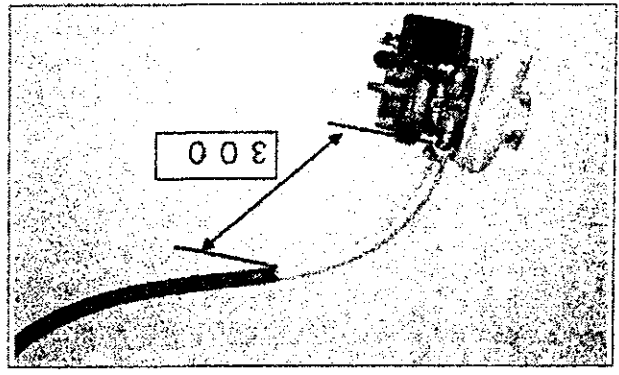
(2) Reconnect the water bypass line using the provided 8mm hose.
<Part # 2 8, 3 6 >



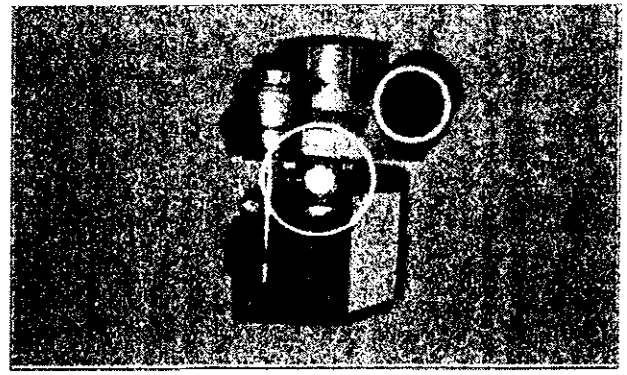
3-6 Turbocharger Assembly
 (1) Install the Oil Return Flange Tube using the provided gasket and hardware.
 ※ The tube should point to the left looking from the compressor housing side.
 <Parts # 1, 2 1, 4 7, 5 6 >



(2) Wrap 300mm section of the provided 16Ø Oil Return Hose with the Thermo Wrap.
 <Parts # 3 0, 3 8, 4 9 >



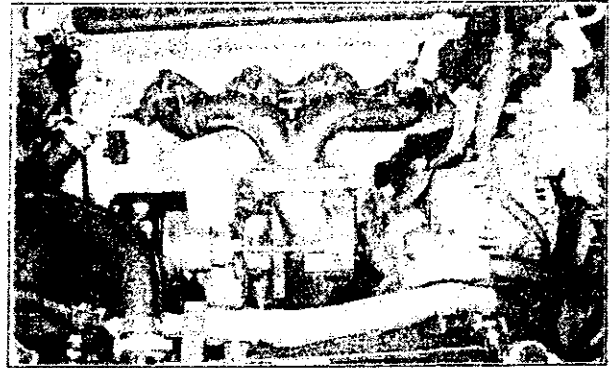
(3) Install the Oil Pressure Banjo Fitting to the turbocharger.
 ※ The fitting should point to the right looking from the compressor housing side.
 <Parts # 1 6, 1 7 >



3 _ 7 Turbo Kit installation

(1) Install 4 stud bolts (M8x30mm) on to the exhaust manifold.

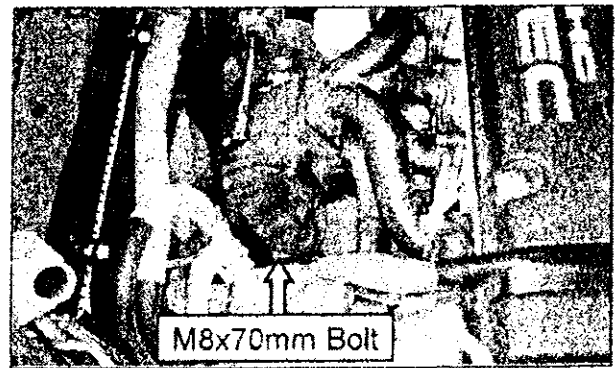
< Parts # 2 , 6 1 >



(2) Place the Turbocharger assembly in the engine compartment. Mount the exhaust manifold on to the head then bolt the turbocharger assembly on the manifold.

※use factory exhaust manifold bolts and gasket.

< Parts # 4 3 >



(3) Install stud bolts on the Down pipe adapter and bolt it on to the turbocharger using provided bolts and washers.

< Parts # 3 , 4 4 , 5 9 , 6 2 , 6 3 >

3 _ 8 Oil return hose installation

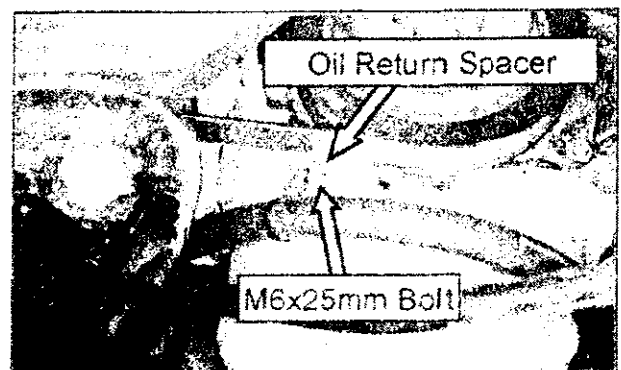
(1) Remove the oil drain bolt and install the provided Oil return banjo fitting using the spacer as shown. Make sure the fitting is pointing to the front of the engine.

< Parts # 2 2 , 2 3 , 2 4 >

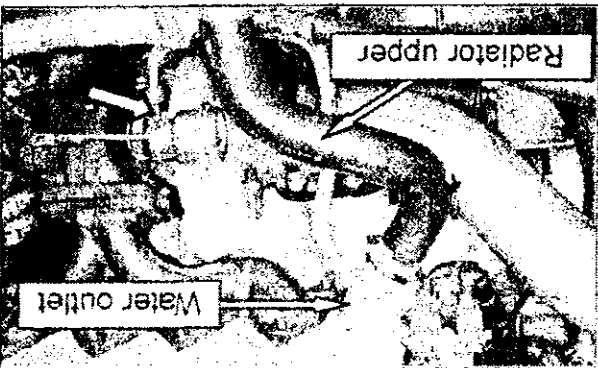


(2) Remove one of the oil pan bolt and mount the oil return bracket using the spacer as shown.

< Parts # 2 5 , 2 6 , 5 8 >



(3) Route the oil pressure line over the water neck and under the top radiator hose. Then connect it to the barjo fitting on the turbocharger.
 ※ Make sure that the oil pressure line does not rub up on the actuator rod.



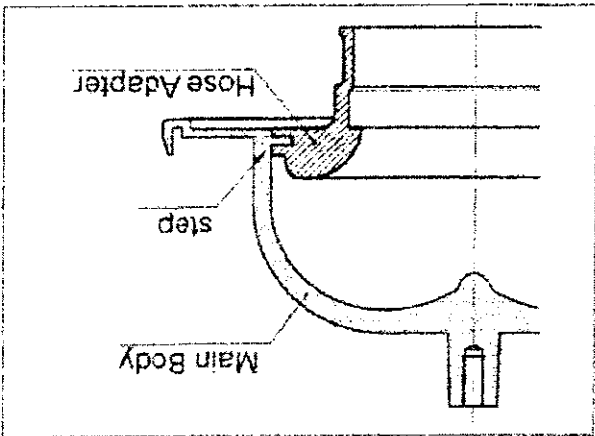
3-1-0 Suction pipe installation

(1) Remove the top nut on the Airinx filter to remove the filter element.

< Parts # 9 >

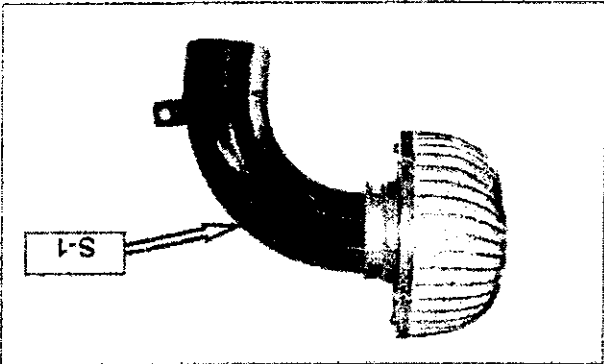
(2) Install the Hose adapter to the main body. ※ Make sure that the adapter hose is securely on the step.

< Parts # 1 0 >



(3) Reassemble the Airinx and install the filter on to the suction pipe S-1 as shown.

< Parts # 5 , 4 2 >



(4) Install the suction pipe S-2 on to the turbo inlet routing it under the AC line as shown. The side without the 10mm pipe connects to the turbo inlet using 80φ hose and clamps. ※ Bend the AC line to avoid the line rubbing on the suction pipe S-2.
 ※ Remove the upper radiator hose to make this step easier.

< Parts # 6 , 3 2 , 4 2 >



(3) Connect the oil return hose from the turbo charger to the banjo fitting on the oil pan routing it below the crank pulley as shown. Using the zip ties, strap the hose on the oil return bracket on the oil pan. Make sure that the hose does not rub up on anything.

< Parts # 3 8 , 5 0 >



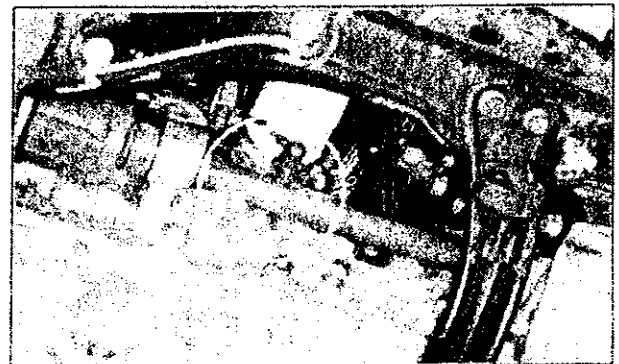
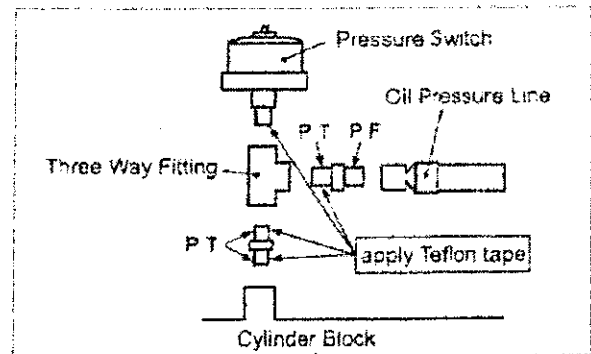
3 _ 9 Oil Pressure line Installation

(1) Remove the Oil pressure switch located under the oil filter, and install the oil pressure union fitting and three way fitting as shown.

※ Make sure to use Teflon tape on the PT (pipe thread) end of the fittings.

※ Install the three way fitting so that the oil pressure line points towards the distributor.

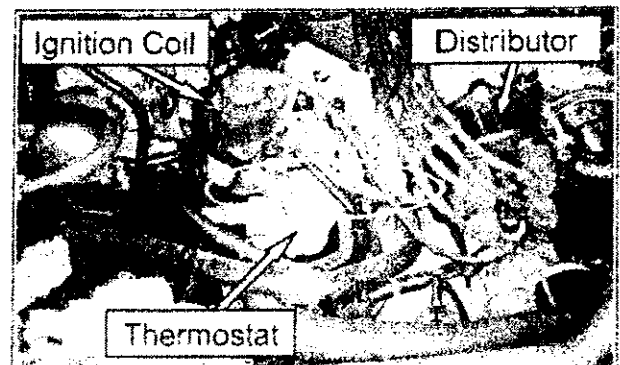
< Parts # 1 8 , 1 9 , 2 0 >

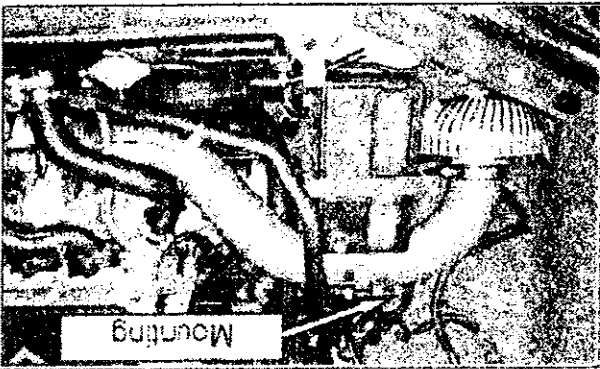


(2) Install the Oil Pressure Line on to the three way fitting that was installed in the previous step. Reconnect the pressure switch connector.

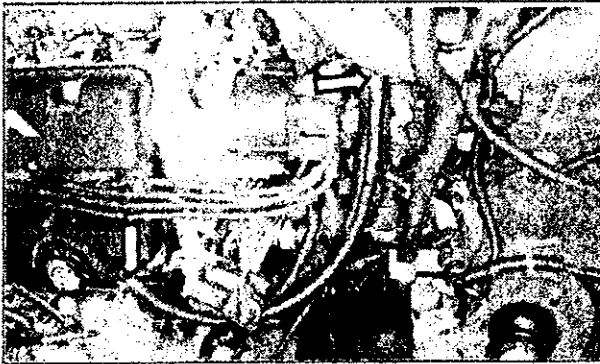
※ Route the Oil Pressure Line under the distributor and the coil, and secure the line using zip ties. Make sure the line is not rubbing up on any wire harness.

< Parts # 1 5 , 5 0 >

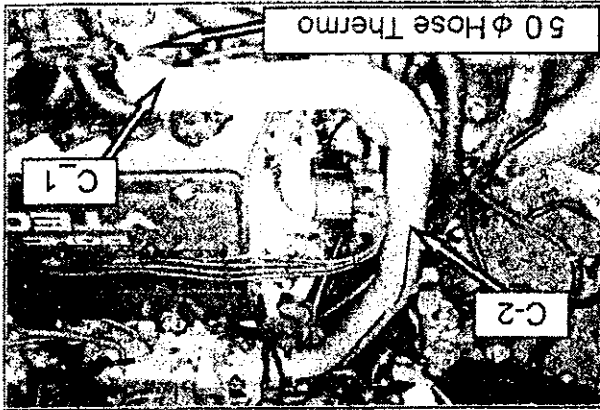




(5) Install the suction pipe S-1 with the Airinx on to the Suction Pipe S-2 as shown using 800 hose and clamps. Mount the bracket on the S-1 to the body where the vacuum chamber was mounted.
 ※ Make sure that the Airinx and the suction pipe does not rub up on the battery.
 < Parts # 3 3, 4 2 >



(6) Connect the 100 breather hose from the outlet on the valve cover to the suction pipe S-2.
 < Parts # 2 9, 3 7 >



3-1 1 Compression Pipe Installation
 (1) Install the Compression Pipe C-1, and C-2 between the turbo outlet to the throttle body using 50φ, 50φ-60φ, and 60φ-65φ hose and clamps.
 ※ Wrap the 50φ hose on the turbo outlet with thermo cloth before clamping.
 < Parts # 7, 8, 3 1, 3 4, 3 5, 3 9, 4 0, 4 1, 4 9 >



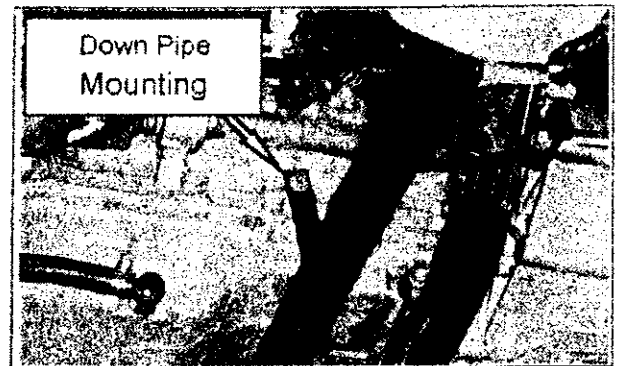
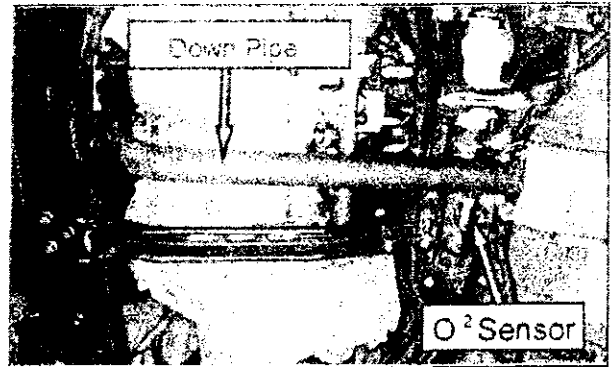
(2) Secure the bracket on the Compression pipe C-2 on to the transmission as shown next to the transmission breather.
 < Parts # 5 7 >

3_12 Down Pipe Installation

(1) Install the down pipe to the down pipe adapter using the supplied gasket and install the O² sensor

※ Make sure that the Oil return hose does not rub up on to the down pipe.

< Parts # 4 . 4 5 , 4 6 >

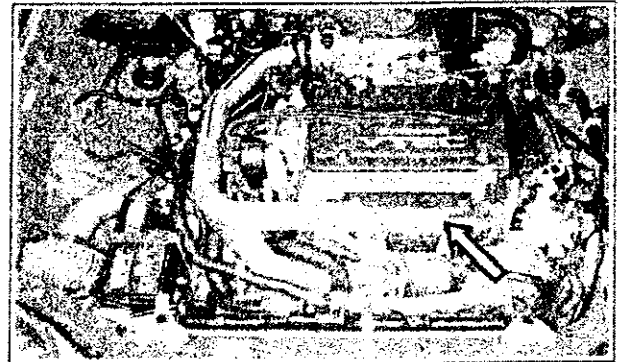


3_13 Heat Shield Installation

(1) Install the heat shield on the exhaust manifold

※ The exhaust manifold gets very hot! Make sure to use the heat shield to prevent any damage do to extreme heat.

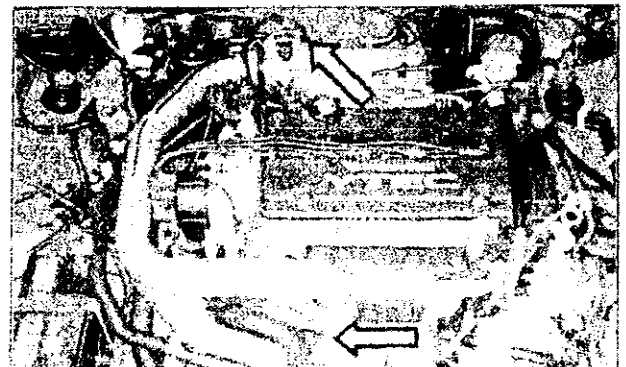
< Parts # 4 8 , 5 5 >



3_14 Actuator pressure signal

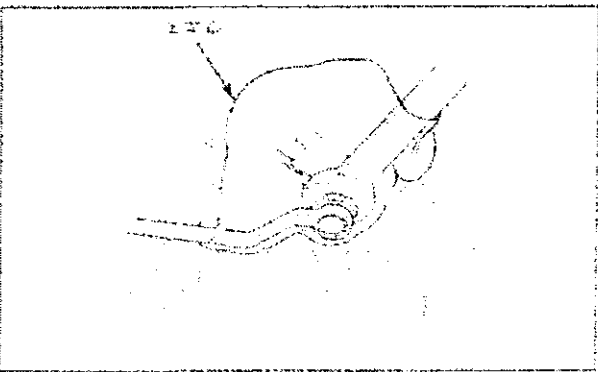
(1) Connect the supplied 5Ø vacuum hose to the port on the intake manifold where the intake control solenoid valve used to be connected. Route the hose under the compression pipe C-2 and connect it to the actuator.

< Parts # 2 7 , 5 0 >



3-15 Fuel Injector Installation

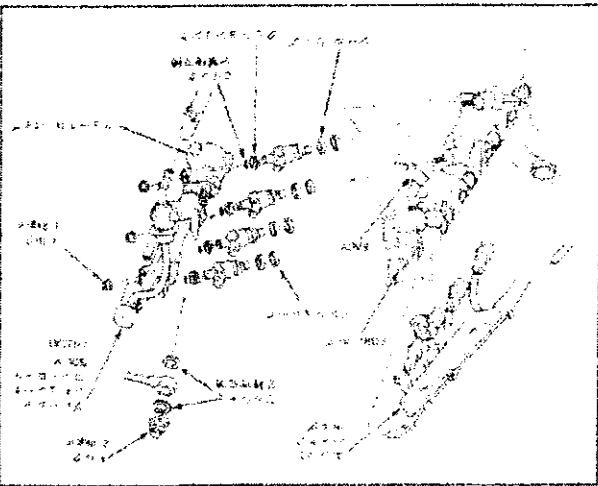
(1) Loosen the 12mm bolt on the fuel rail one complete turn to release the fuel pressure in the rail. Make sure to place a rag over and under this area to catch the fuel spill.



(2) Disconnect the injector harness and remove the harness holder, rail and the injectors. * Make sure to place a rag over and under this area to catch the fuel spill.

(3) Install the provided injectors on to the rail. Make sure to lubricate the o-rings on the injectors before installing. Be careful not to tear the o-rings when installing.

< Parts # 1 1 >

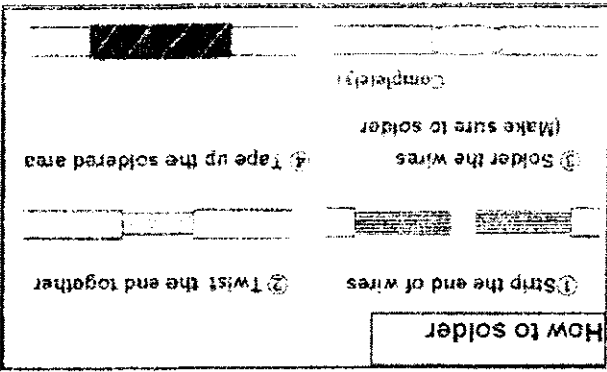


(4) Install the injector insulators and the rail spacers on to the intake manifold and install the injectors with rail. Make sure to lubricate the insulators before installing the injectors.

< Parts # 1 2 >

(5) Cut the factory injector connectors off and resolder the provided injector connectors. After the connectors are soldered on, place the wires back in the harness holder

< Parts # 1 3 >

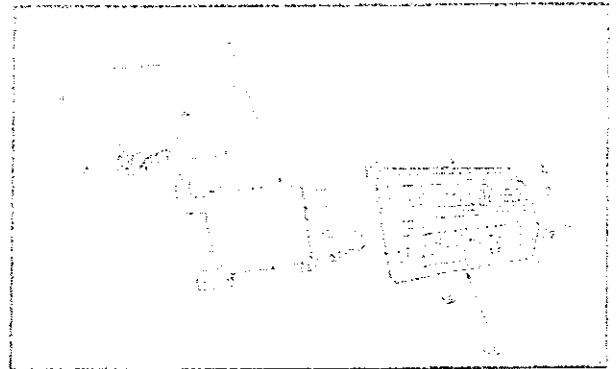


3_1.6 FCU Installation

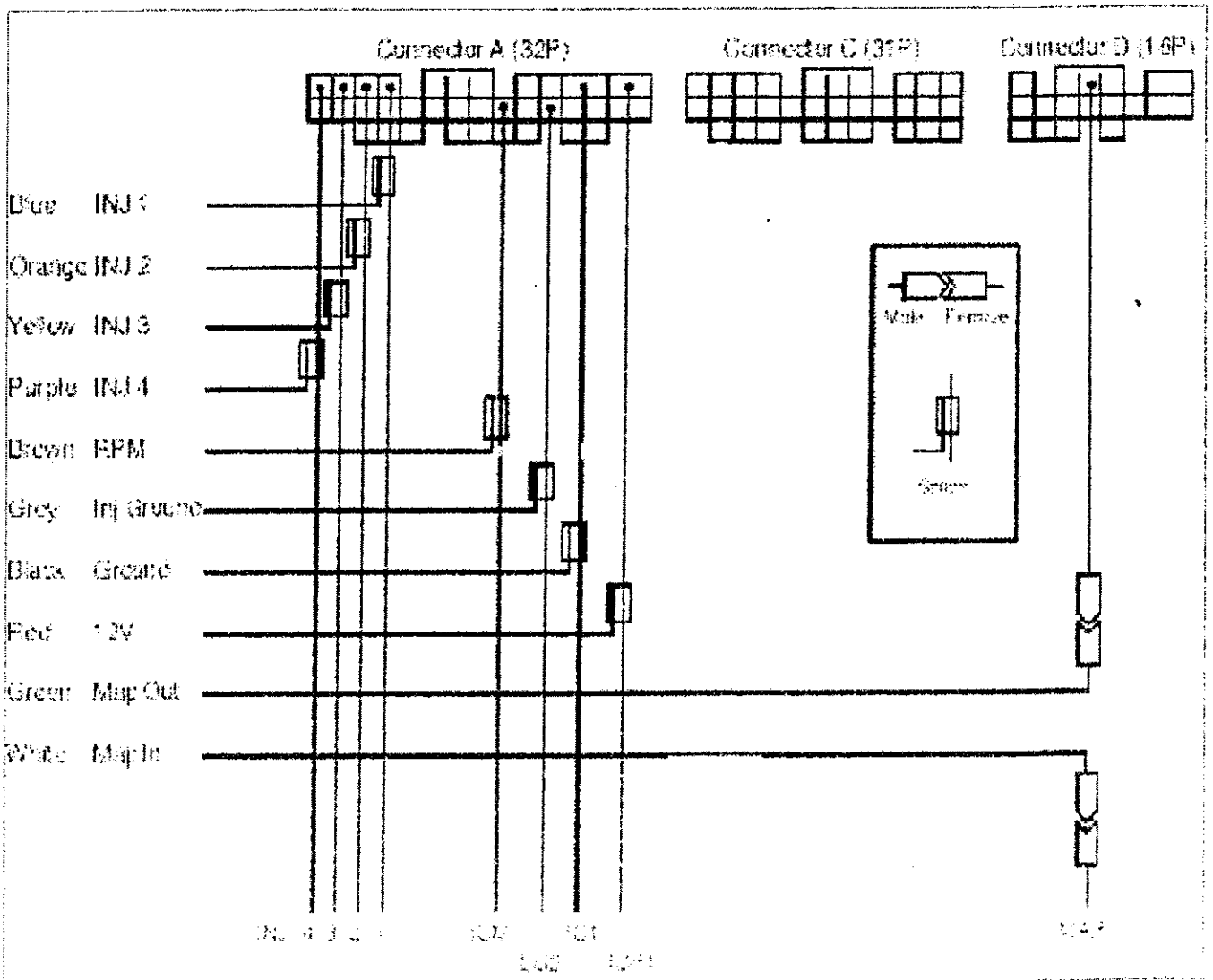
(1) Take out the ECU located under the passenger footrest. (Under the carpet)

(2) Wire in the provided FCU Harness as shown in the diagram below

<Parts # 1 4>



※ Looking at the harness side of the connector



This completes the Turbo Kit installation.

warranty

proper installation and use of this product. Greddy Performance Products will not offer any boosting (increased boost), modified kit, or misuse of the product. Due to lack of control over Greddy Performance Products, Inc. is not responsible for any engine damage caused by over

Important!

- (1) Refill the coolant to factory spec.
- (2) Refill the engine oil to factory spec.
- (3) Check all the hoses and wires connection, then reconnect the negative side of the battery.
- (4) Disconnect the distributor harness to crank the engine to get oil pressure to the turbo. Check for any oil leaks, then reconnect the distributor and start the engine.
- (5) While idling, check for any oil, coolant, or air leaks.
- (6) After inspection, reinstall the under cover and other stock parts that was removed.
- (7) On the initial run, be sure to have a boost gauge to check the turbo-actuator setting. This turbo kit is preset to boost between 0.6kg/cm² to 0.5kg/cm². It is very important that you monitor the boost pressure, and make sure not to over boost. Over boosting can cause engine damage.

3_17 Before Starting Engine

(3) Reconnect the ECU and connect the FCU and install them back to the passenger floor.

FCU Harness	Color	ECU Pin	color	Description/Signal
Injector 1	Blue	A_4	Brown	No. 1 Injector / INJ 1
Injector 2	Orange	A_3	Red	No. 2 Injector / INJ 2
Injector 3	Yellow	A_2	Blue	No. 3 Injector / INJ 3
Injector 4	Purple	A_1	Yellow	No. 4 Injector / INJ 4
Injector Ground (-)	Grey	A_2 2	BR/B	GND / LG2
RPM	Brown	A_2 0	Blue	ICM / ICM
MAP Input Signal	White	D_3	R/GR	Map sensor (harness side) / MAP
MAP Output Signal	Green	"	"	Map sensor (ECU side) / MAP
Power (+) 12V	Red	A_1 1	Y/B	PGM-FI ECU Power 1 / IGP 1
Ground (-)	Black	A_1 0	Black	Power Ground 1 / PG1