

# POWER PACK 125 No.1/2

CODE	( With HIGH CAMSHAFT TYPE 1 ) 355-1432110	( With HIGH CAMSHAFT TYPE 2 ) 355-1432210
APPLICATION	GROM (FNO,JC61-1000001 ~ 1299999/JC61-1300001 ~)	

## ATTENTION !

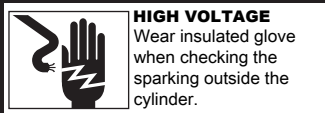
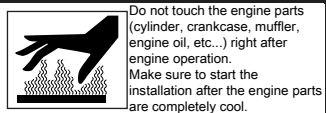
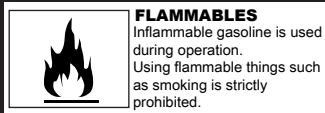
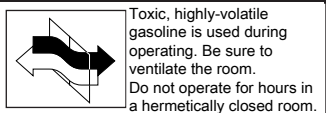
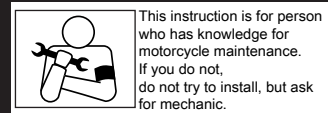
Please use the fuel injection controller (i-map) ver.2.0 sold separately to bring out the full engine performance. Also, please exchange for Kitaco exhaust. It's required to make the setting of i-map when use with other parts doesn't be installed on i-map. (Other company's exhaust etc.)

●H-shaped con-rod / crankshaft not usable as they interfere with stock cylinder.

- Thank you for purchasing Kitaco product. Read and understand the instruction before installing.
  - There are necessary special tools to install this kit.
  - The instruction is not included in repair parts, please keep this instruction and use it as a setting manual.
- ※ Please keep the instruction for later needs.

## ATTENTIONS (MUST READ)

- Race use only. Note that racing parts are not covered under warranty.
- We are not responsible for damages and accidents caused by assembling mistake and improper setting.
- It is required to make the right setting of i-map when use with other company's parts. If running without the right setting, you cannot improve and may cause seizure and damage. Make sure to make the right setting for each engine.
- Follow the instructions and instal correctly. Do not modify the way which is not fisted, or it wift cause damage and trouble.
- Ask a mechanic or a specialist at a specialty shop for assembling and setting if you do not understand the role of the surrounding parts.
- Bolts and nuts may get loosen by engine vibration. Make sure to check that each part of bolts and nuts are not loose before running.
- Clean each parts by parts cleaner and use air duster to check whether the oil line is choked up.
- Oil the parts with engine oil when assembling.
- Out put characteristic of the engine will be changed from original by use this parts. Make sure to make suitable set up for the brake system, steering and so on.
- Do not check the sparking of sparkplug outside of the cylinder head. There are dangerousness of explosion.
- Refer to the HONDA service manual for each vehicle when installing.



### SPEC

- Displacement : 124 cc
- Stock (Bore) 52.4X (Stroke) 57.9
- Compression 12.2 : 1 (Stock 9.3 : 1)
- Fuel type : Unlead Premium gasoline
- Valve clearance Average  
IN Valve : 0.10±0.02mm EX Valve : 0.17±0.02mm

### REQUIRED TOOL & REPAIRPARTS

- Each general tools
- Thickness gauge
- Universal holder (Honda genuine parts No:077725-0030000)

### REQUIRED OPTIONAL PARTS (Sold separately)

	NAME	CODE	QTY	REFERENCE
EXHAUST	EXHAUST GRR MUFFLER TYPE M-1	548-1432100	× 1	FNO,JC61-1000001 ~ 1299999
	EXTREME-R MUFFLER	541-1444600	× 1	FNO,JC61-1300001 ~
RECOMMENDED ENGINE OIL	elf MOTO4 PROTECH 5w40 1L	968-2000021	× 1	
	PANOLIN STREET 4T RACE 10W/50 1L	968-2996001	× 1	
ENGINE	SUPER OIL COOLER KIT	-	× 1	FOR CLUTCH COVER
	CLUTCH COVER KIT	307-1432200/10	× 1	BLACK / SILVER
	IRIDIUM PLUG IU22D	025-001-0220400	× 1	

PACKING LIST ( ) Quantity in the 1SET			CAM SHAFT		
CODE	NAME	No.	TYPE 1	TYPE 2	
A	HIGH CAMSHAFT TYPE 1	300-1432000	× 1	-	without Compression system
	HIGH CAMSHAFT TYPE 2	300-1432010	-	× 1	
B1	φ 52.4 HIGH COMP PISTON ver,2	351-1432210	× 1	× 1	
B2	φ 52.4 PISTON RING (0.8-0.8-1.5)	352-1432200	× 1	× 1	
B3	PISTON PIN 13 X 36 X 9	353-0001336	× 1	× 1	
B4	PISTON PIN CLIP 13mm	354-0000130	× 2	× 2	
C1	HEAD GASKET (φ 52.4)	961-1432200	× 1	× 1	
C2	BASE GASKET	962-1432300	× 1	× 1	
D	EX GASKET (H-06)	70-963-11006	× 1	× 1	
-	i-Map coupler on SET Ver 2.1 (INJECTION CONTROLLER)	763-1432100	× 1	× 1	As per attachment
OP1	DLC PISTON PIN 13 X 36mm	353-3001336	× 1 ※	× 1 ※	※ OPTIONAL PARTS
OP2	TITANIUM NUT	303-1013711	× 2 ※	× 2 ※	※ OPTIONAL PARTS

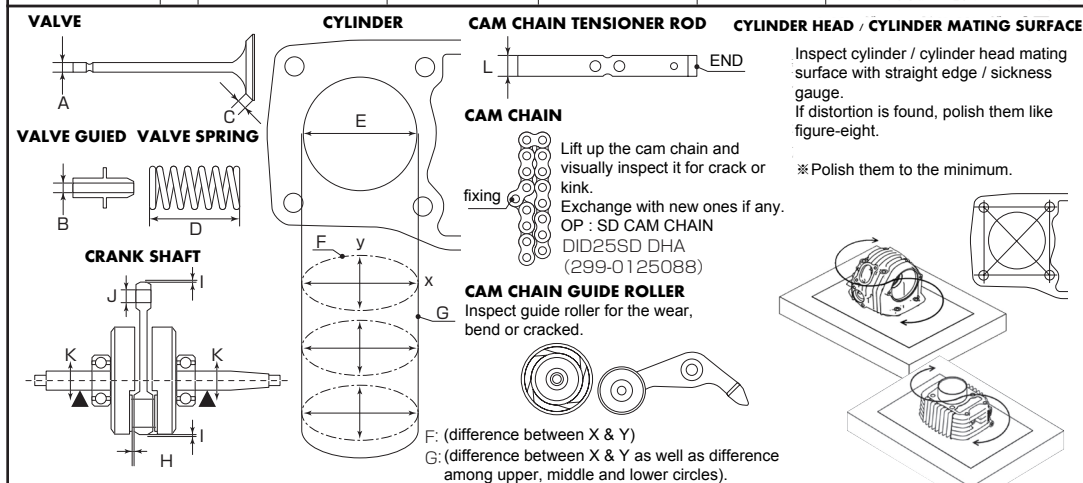
## MAKE SURE TO FOLLOW THE FOLLOWING INSTRUCTION WHEN ASSEMBLING



Inspect each parts service standard and limit before using OEM parts.  
Exchange new ones when worn or damaged. Even new parts might have distortion.  
Installing without inspection causes severe engine trouble.

## SERVICE GUIDE (Exchange with new one if blen or wear is found.)

			STANDARD (mm)	LIMIT (mm)	CAUTION
VALVE	A Stem O.D.	IN	5.0 (-0.01 ~ -0.025)	-	
		EX	5.0 (-0.03 ~ -0.045)	-	
	B Guide I.D.	IN/EX	5.0 ( 0 ~ +0.12)	-	
VALVE GUIDE	C Valve seat width	IN/EX	1.0	-	Inspect contact width of valve sheet with red lead and so on. If it is not consistent, seat polishing is required.
VALVE SPRING	D Free length	IN/EX	33.14	31.5	Narrower side faces combustion chamber.
CYLINDER	E I.D.		52.4 (+0.005 ~ 0.015)	-	Measure all the cylinder, including new one. Polishing surface might be required if cylinder / cylinder head mating place has distortion.
	F Circularity		-	0.05	
	G Cylindricity		-	0.05	
CRANK SHAFT	H Connecting rod large end	Side clearance	0.10 ~ 0.35	0.60	Make sure that the crankshaft rotates smoothly.
		Radial clearance	0.004 ~ 0.016	0.05	
	I Connecting rod small end	I.D.	13 (+0.10 ~ 0.028)	+ 0.05	
	K Run out		-	0.10	
CAM CHAIN TENSIONER	L O.D.		12 ( 0 ~ -0.015)	11.94	Inspect tensioner push rod end rubber for wear or crack.



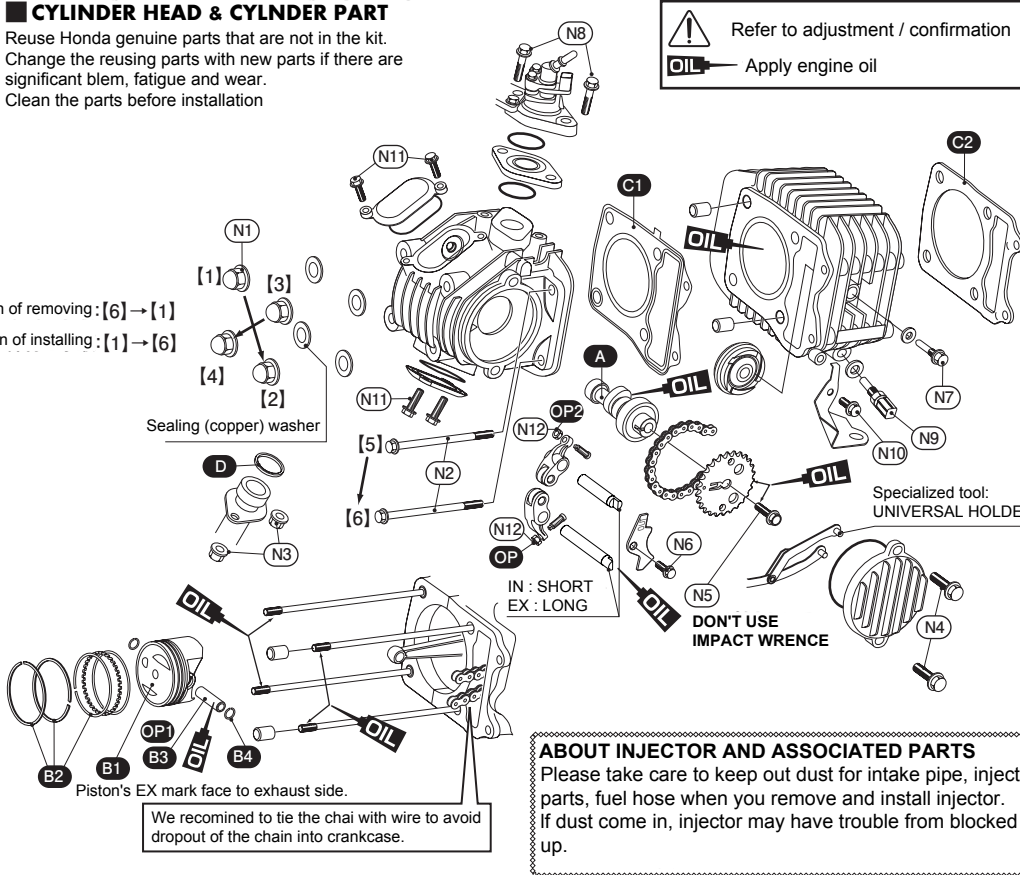
## ABOUT INJECTION CONTROLLER (I-MAP)

If intake / exhaust port mods is done, preinstalled map is not good enough for the performance. Make your original map on I-Map (Refer to the attached instruction).

POWER PACK 125 No.2/2	
CODE	( With HIGH CAMSHAFT TYPE 1 ) 355-1432100 ( With HIGH CAMSHAFT TYPE 2 ) 355-1432200
APPLICATION	GROM (JC61)

### CYLINDER HEAD & CYLINDER PART

Reuse Honda genuine parts that are not in the kit.  
Change the reusing parts with new parts if there are significant blem, fatigue and wear.  
Clean the parts before installation



Turn of removing : [6] → [1]  
Turn of installing : [1] → [6]

Sealing (copper) washer

**ABOUT INJECTOR AND ASSOCIATED PARTS**  
Please take care to keep out dust for intake pipe, injector parts, fuel hose when you remove and install injector. If dust come in, injector may have trouble from blocked up.

### INSTALLING PISTON RINGS

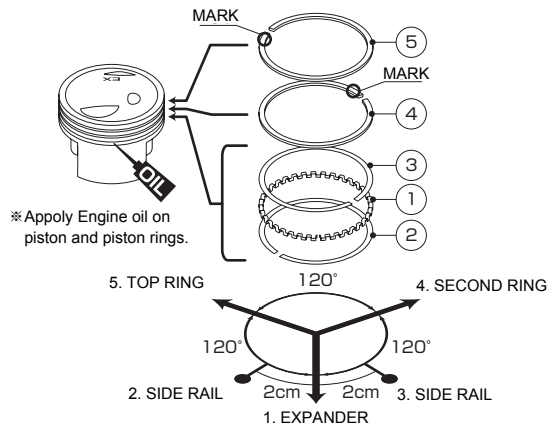
Install the piston rings as it is shown.

#### "POINT"

- The mark of TOP RING and SECOND RING must be set upward.
- Set ring's disconnected part as it is shown.
- There is no specified direction of top or bottom for EXPANDER and SIDE RAIL.

PART DATE		
No.	NAME	PCS
1	EXPANDER	× 1
2/3	SIDE RAIL (BOTH SAME)	× 2
4	SECOND RING (BLACK)	× 1
5	TOP RING (WHITE)	× 1

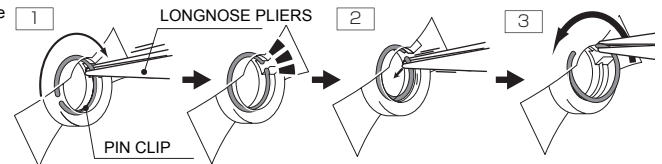
※ Piston's EX mark face to exhaust side.



TIGHTENING TORQUE : N · m (1kgf · m : 9.80665N · m)											
FIG	NAME	QTY	N · m	FIG	NAME	QTY	N · m				
N1	CYLINDER HEAD CAP NUT 8mm	4	24	N7	CAM CHAIN GUIDE ROLLER PIN BOLT M8	1	10				
N2	FLANGE BOLT M6 × 90	2	12	N8	INTAKE PIPE BOLT M6 × 30	2	12				
N3	FLANGE NUT 8mm	2	27	N9	OIL TEMPERATURE SENSOR M10	1	14.5				
N4	L SIDE COVER BOT M6 × 20	2	12	N10	FLANGE BOLT M6 × 14	1	12				
N5	CAMSPROCKET BOLT M8 × 22	1	27	N11	TIMING HOLE CAP BOLT M6 × 20	4	12				
N6	ROCKER ARM SET PLATE BOLT M6X12	1	12	N12	ADJUST SCREW LOCK NUT	2	9.0				

### How to remove and install PISTON PIN CLIP

1) Pinch the pin clip by longnose pliers and turn the cutout section for the groove section of the piston.



2) Pinch the cutout section of pin clip by longnose pliers and pull in to inside of the hole, and remove to out side of the piston.

3) Remove completely by turn the pin clip slowly.

● Install method is inverse process.

### How to remove and install CAM SPROCKET REMOVE

1) Remove cam sprocket cover, O-ring, crankshaft hole cap and timing hole cap, oil filler bolt.

#### INSTALL

1) Turn the camshaft to TDC (COMPRESSION TOP DEADCENTER) and fix temporary to camshaft with camchain when the mark on the camsprocket "O" aligns the cylinder head matching projection.

2) Turn the crankshaft counterclockwise until the line adjoining the line mark on the flywheel "T" aligns the crankcase matching projection with keep TDC, and confirm the mark on the camsprocket "O" aligns the cylinder head matching projection. If it's not correct, try again to install camsprocket.

3) Fix the camsprocket and tighten the camsprocket bolts by UNIVERSALHOLDER (specialized tool)

4) Pour the engine oil 4.0cc into the push rod from flange bolt hole (M6x18) and tighten the bolt with new sealing washer.

### SETUP VALVE CLEARANCE

1) Turn the crankshaft counterclockwise until the line adjoining the line mark on the flywheel "T" aligns the crankcase matching projection and confirm the TDC position by rocker arm movement.

2) With correct valve timing, insert the thickness gauge between the adjust screw and valve stem and check the valve clearance of intake and exhaust side.

#### ● VALVE CLEARANCE

IN intake side : 0.10±0.02mm  
EX exhaust side : 0.17±0.02mm

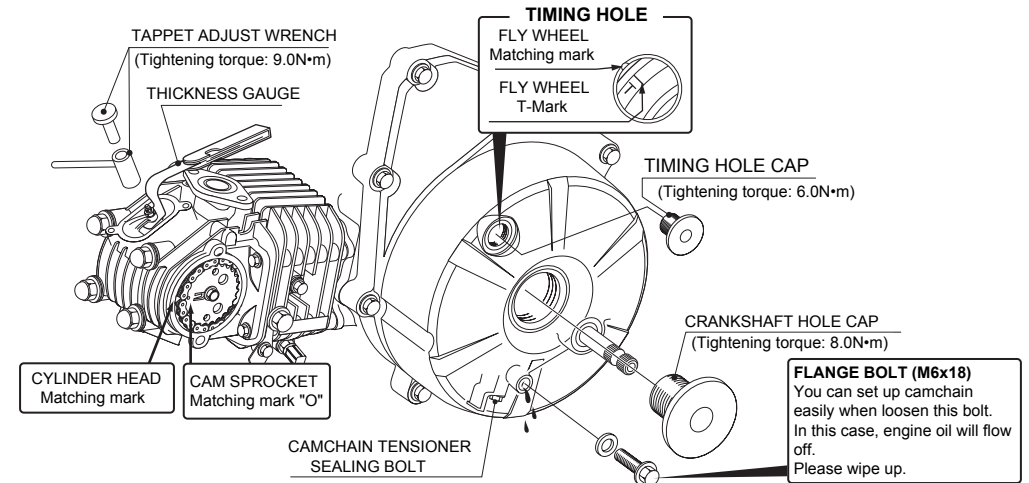
#### ADJUST

1) Loosen the lock nut and adjust correct valve clearance by turning the adjust screw. After the adjustment, tighten the lock nut with fix the adjust screw. After tightening the lock nut, check the valve clearance again. (Tightening torque : 9.0N·m)

2) Check the condition of O-ring for each hole, and if necessary change the new one and apply engine oil to the O-ring. install valve adjust hole cap, cam sprocket cover, crankshaft hole cap and timing hole cap. (Tightening torque : Crankshaft hole cap: 8N·m / Timing hole cap: 6.0N·m)

### ADJUSTMENT TDC / VALVE CLEARANCE

Adjust the valve clearance with TDC situation (Aligned each matching mark)



**FLANGE BOLT (M6x18)**  
You can set up camchain easily when loosen this bolt. In this case, engine oil will flow off. Please wipe up.