

POWER PACK (i-map INJECTION CONTROLLER+POWER DRIVE KIT) No.1 /3

CODE : 230-1155950

APPLICATION : ZOOMER X (JF52)

●Thank you for purchasing Kitaco product. Read and understand the instruction before installing.

ATTENTION (MUST READ)

- This parts is made exclusive for racing use. Note that this parts is not covered under warranty. Obey national and local laws and regulations.
- We are not responsible for violation of law or damages and accidents caused by assembling mistake and improper setting.
- Please ask authorized mechanic for assembling and setting. Ask a specialist at specialty shop if you do not understand the role of the surrounding parts.
- Do not modify the way which is not listed or it will cause damage and trouble. This product is precision machinery. Do not apply excessive force or disassemble.
- Refer to the manufacturer service manual when installation.
- By installing this product, output characteristic is different from normal. Please enhance the brake to match the power and improve steering stability. Please be careful of riding.
- Do not spark the plug outside of cylinder for spark check. It might cause of fire.



This instruction sheet is for the person who has basic knowledge for maintenance. Do not operate if you do not have skill and knowledge.



Do not touch the engine parts (cylinder, crank case, exhaust pipe, etc) right after engine operation.



High speed rotating part is included. Must to install crank case cover and tighten bolt firmly before start engine.

HIGH SPEED PULLEY KIT DETAIL
This is a tuning parts includes pulley and weight roller with shift function scooter drive parts. Kitaco original roller guide is chosen and able to get perfect shift function. By using attached injection controller (i-map), cut the rev limiter and bring out engine original performance. (Refer to the other paper No.2 for i-map details.)

- HIGH SPEED PULLEY KIT ATTENTION (MUST READ)**
- ▼Install and use
 - Attached weight roller might not compatible with setting because of vehicle tolerance, etc. In that case, please purchase Kitaco weight roller that sold separately for setting. Generally, shift changes a little bit before engine max power is the best, but best setting roller weight is different depending on favorite riding experience, vehicle status, riders weight, etc.
 - If the weight roller is too light, shift does not changed on the max rev, therefore max speed might lower. In case of too heavy, shift changes before clutch meet, start→acceleration might be weak.
 - Shift changes incorrectly if the grease, etc apply to pulley or face belt slide side, clean up before installation.
 - Weight roller and slider have a limit. Check every 1,000km ride and please change if the wear down only one side or break. More tuning cause of fast wear.)

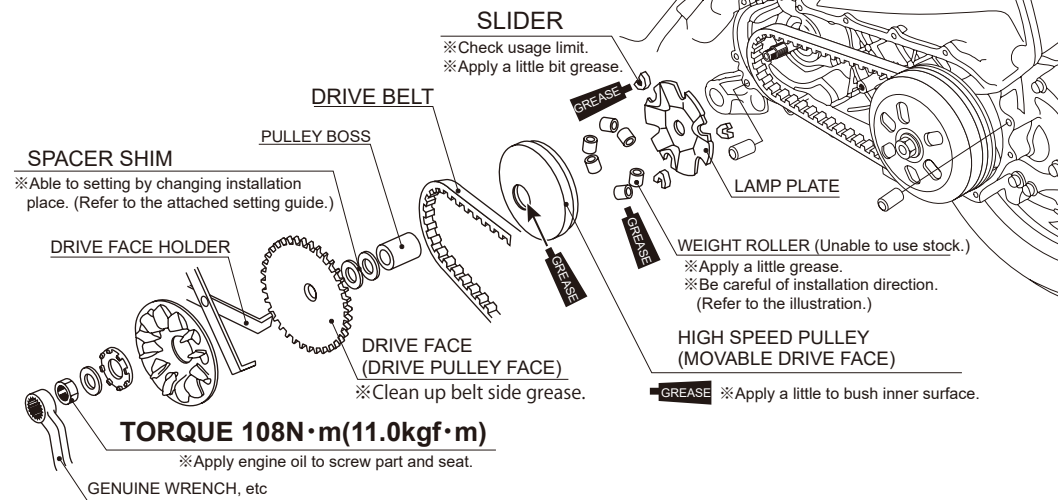
PACKING LIST *Inside () is 1set qty.			
NAME	CODE	QTY	REMARK
POWER DRIVE kit type X	489-1155000	× 1	
SUPER (WEIGHT) ROLLER (9.0g)	462-2106090	(× 6)	Unable to use stock
MOVABLE DRIVE FACE type-X	488-1425001	(× 1)	
POWER UP PULLEY BOSS	463-1155000	(× 1)	
SPACER SHIM 15x22xT0.3mm	0900-463-90015	(× 1)	Refer to the attached power up pulley boss setting guide.
SPACER SHIM 15x22xT0.5mm	0900-463-90016	(× 1)	
MOLYBDENUM GREASE (5g)	969-0500480	(× 1)	
POWER UP PULLEY BOSS SETTING GUIDE	-	(× 1)	
INJECTION CONTROLLER (i-map) (ZOOMER-X)	763-1155000	× 1	Refer to the other paper No.2

OPTION PARTS (Please purchase in need.)			
DRIVE FACE HOLDER (FOR HONDA)	674-0500010	× 1	Kitaco specified tool
SUPER (WEIGHT) ROLLER SET (4.0~15.0g)	462-2106040 ~ 150	(× 6)	0.5/1.0g step

- ※ Refer to the service manual when installation.
- 1 Park vehicle to flat surface, remove L crank case cover (and outer cover).
- 2 Fix pulley side (front side) movable drive face/drive pulley face with drive face holder, then remove nut. Remove collar and lamp plate (remove with holding lamp plate of back side).
★Specified tool : drive face holder (674-0500010)
- 3 Change high speed pulley type-X to attached weight roller, pulley boss and shim. (At this time, drive belt is sanded to clutch side plate, make sure belt is down enough. If isn't, pull plate to make space for down belt. By lowering drive belt to clutch side, play occurs to belt and able to install drive face (tightening center lock nut) correctly.
- ※ Refer to the service manual, check the limit usage of consumable parts (slider, drive belt, etc), if its over the limit, must to change to new one.
- ※ In case of changing weight roller and slider, apply a little pulley grease to decrease coefficient of friction and increase durability. (Recommend to use Kitaco pulley grease.)
- ※ Refer to the service manual for tightening center lock nut wrench. (At this time, push drive face to touch pulley boss.)
- ※ Check the crank case gasket is not break.
- ※ After installation, break in and strange noise during ride, stop engine asap and check installation point and each parts.
- 4 Power up pulley boss is able to change setting by 2 pcs spacer shim combination. (Refer to the attached setting guide.)

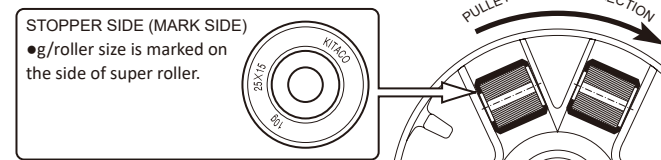
●ATTENTION WHEN INSTALLING

- ★When installing, must to use torque wrench and universal holder, etc to tighten with specified torque.
- ※**DO NOT USE IMPACT WRENCH**
(If using impact wrench, face deformation, cut screw, etc and cause of breaking crank shaft, pulley and face.)



Weight roller has a direction. Set as stopper to back side of pulley rotating direction. Install reverse direction might cause of missing inner.

Attached and stock weight roller have different size, therefore unable to use stock one. Be careful of it.



POWER PACK (i-map INJECTION CONTROLLER+POWER DRIVE KIT) No.2 /3

CODE : 230-1155950

APPLICATION : ZOOMER X (JF52)

● Thank you for purchasing Kitaco product. Read and understand the instruction before installing.

ATTENTION (MUST READ)

- This parts is made exclusive for racing use. Note that this parts is not covered under warranty. Obey national and local laws and regulations.
- We are not responsible for violation of law or damages and accidents caused by assembling mistake and improper setting.
- Please ask authorized mechanic for assembling and setting. Ask a specialist at specialty shop if you do not understand the role of the surrounding parts.
- Do not modify the way which is not listed or it will cause damage and trouble. This product is precision machinery. Do not apply excessive force or disassemble.
- Refer to the manufacturer service manual when installation.
- By installing this product, output characteristic is different from normal. Please enhance the brake to match the power and improve steering stability. Please be careful of riding.
- Do not spark the plug outside of cylinder for spark check. It might cause of fire.

SPEC	<ul style="list-style-type: none"> ● By changing i-map DIP switch, recommended fuel control map with Kitaco tuning parts is selectable. ● By releasing rev limiter to bring out engine original performance. ● Connect option product "PC interface cable" to computer and able to set up ±40%* compensation value for each rev and accelerator opening.
i-map ATTENTION (MUST READ)	<p>▼ For installing and using injection controller.</p> <ul style="list-style-type: none"> ● If installed to normal vehicle, it might be unable to perform perfectly because of lack of power. Kitaco products combination map is already pre-installed to i-Map. However, it might need to fuel control setting for yourself if the combination is not Kitaco products (exhaust, camshaft, air cleaner, etc.) ● Do not install near strong noise such as ignition coil, it causes of malfunction, trouble, etc.
	<ul style="list-style-type: none"> ● This product works under electrical system is normal. There is no guarantee of work under other special parts installed vehicle. (spark plug, plug cap, high tension code, ignition coil, HID, audio products, etc)
	<ul style="list-style-type: none"> ● This product (DIP switch, etc) is not perfectly waterproof. Water might enter if riding under rain, washing, concentrated water. Install where can avoid rain, etc. ● Please do wiring process as following attached wiring illustration. ● Do not take electrical ground from frame, it might cause of break machine.
	<ul style="list-style-type: none"> ● This product is precision equipment. If installing to hard vibration place, it causes of inability to perform as intended and at the worst case, it might break. If mounting beside of engine, it might malfunction by heat and vibration. ※ Malfunction by heat and vibration is out of warranty. Be careful of it. ● Do not disassemble this product. It might cause of malfunction and break.

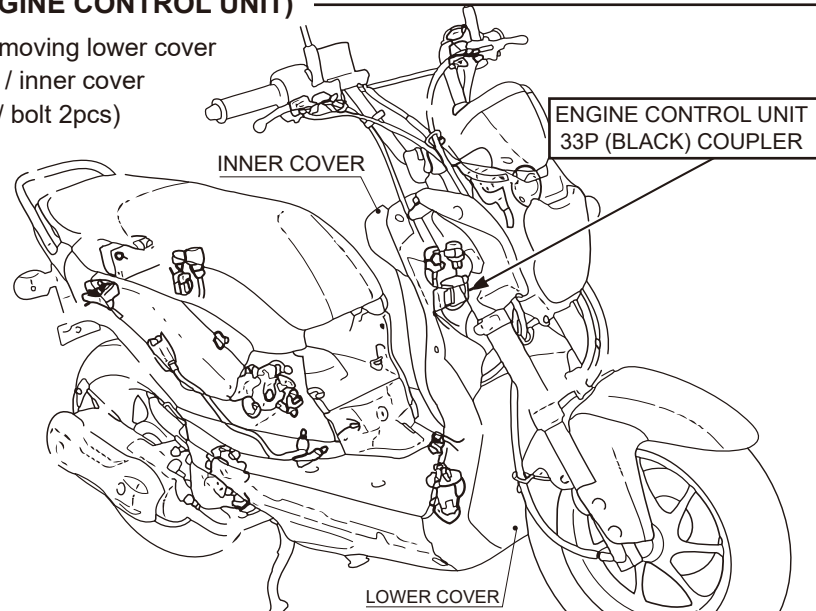
PACKING LIST			
NAME	CODE	QTY	
INJECTION CONTROLLER (i-map)		× 1	
HARNESS KIT		× 1	
BULLET (MALE) CA104	755-0900610	× 10	
BULLET (FEMALE) CB104	755-0900611	× 10	
SLEEVE (MALE/ROUND) P-2.5	755-0900640	× 10	
SLEEVE (FEMALE/ROUND) KS-2.5	755-0900641	× 10	
110 TYPE 6 POLE COUPLER (MALE)		× 1	
OP : OPTION PARTS (SOLD SEPARATELY)			
PC INTERFACE CABLE	763-0500900	× 1	

HOW TO INSTALL

- ※ Refer to the service manual when installation.
- ※ Turn main switch to OFF. Disconnect battery (-) terminal when installation.
- If the power is ON, it might cause of break and trouble.
- Remove outer cowls.
- Connect Kitaco controller (i-map) to ECU (engine control unit). (Refer to the wiring diagram / other paper No.2)
- Install controller where to avoid rain, etc and not to prevent riding.
- Set up MAP by controller DIP switch.
- Make sure it works correctly, then put the outer cowls back in the reverse order of installation.
- ※ Refer to the trouble shooting in case of PGM-FI warning lamp is ON (Anomaly detection)

ECU (ENGINE CONTROL UNIT)

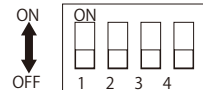
Installing / removing lower cover
(screw 5pcs) / inner cover
(screw 2pcs / bolt 2pcs)
are required.



Map SETTING

Set up MAP by DIP switch No.1~4.

DIP SWITCH



Application : ZOOMER X (JF-52)					
Map-	Switch	1	2	3	4
1		●	-	-	-
2		-	●	-	-
3		-	-	●	-
Original		-	-	-	●
● : Switch ON					

Map-1 (SWITCH : 1) Rev limit 10000rpm Compatible with stock vehicle
Map-2 (SWITCH : 2) *1 Rev limit 10000rpm Compatible with KITACO GPR MUFFLER installed vehicle
Map-3 (SWITCH : 3) *1 Rev limit 11500rpm Compatible with 126cc BBK + KITACO GPR MUFFLER installed vehicle
Map-4 (SWITCH : 4) *1 User setting map range (Manual) *For making user MAP, INTERFACE CABLE that sold separately is required.
*1) Valve surging might occur because of rev limit setting. Do not ride with valve surging.

HOW TO REWRITE USER SETTING MAP
 Connect PC interface cable to controller (i-map) main unit, then connect to computer.
 Operate software (i-map/Fuel-manager) and edit MAP.
 ※ Download software [i-map*Fuel-manager] from Kitaco website
 (http://www.kitaco.co.jp) download service.
 After editing, remove PC interface cable and re-install it.

POWER PACK (i-map INJECTION CONTROLLER+POWER DRIVE KIT) No.3/3

CODE : 230-1155950

APPLICATION : ZOOMER X (JF52)

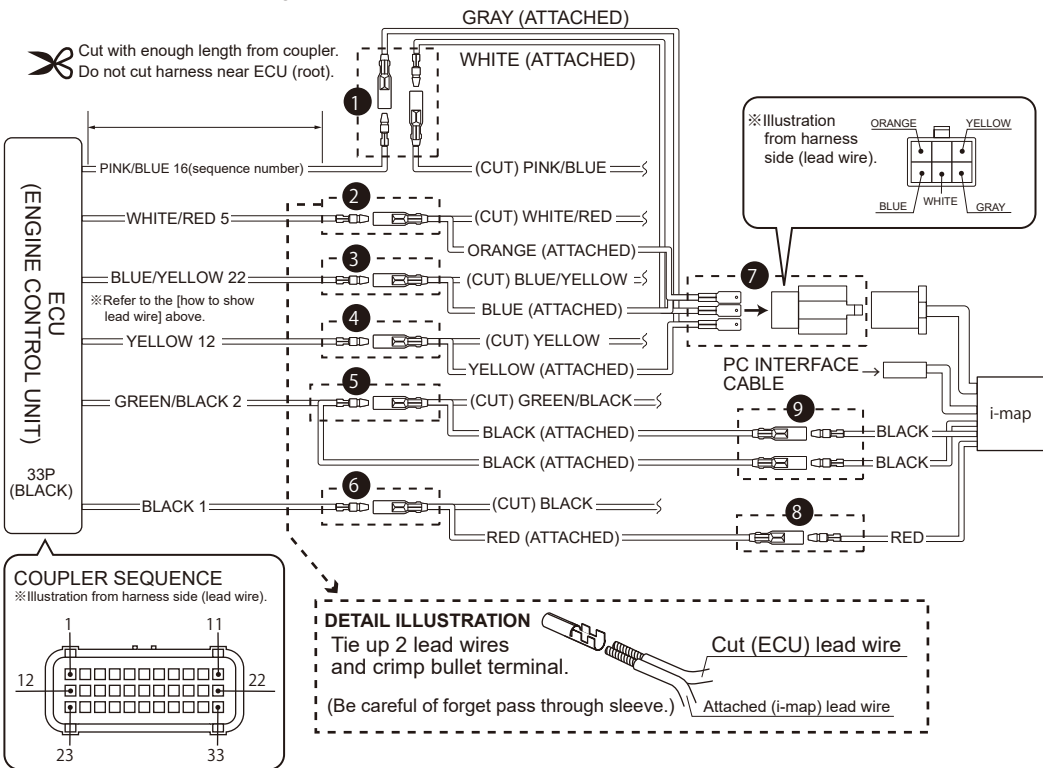
●WIRING DIAGRAM

- ※Must to wrap vinyl tape, etc to connecting spot to waterproof treatment.
- ※When processing harness, remove stock harness protect tube and vinyl tape for extra, and keep enough length.
- ※In case of crimping terminal to lead wire, please use lineman's pliers (M hole shape). (Recommend to soldering after crimping to avoid missing terminal and connection failure. When soldering, be careful of melting surrounding harness cover, etc.)

※How to show 2 colored lead wire on wiring diagram.
ex) blue/yellow lead wire



①~⑨ are user processing point. Refer to the below.



ATTENTION! (Must to check the connection again before ignition key to "ON")
Check again the wiring before turning ignition key "ON". After finishing i-map wiring, check the wiring again before ignition key power "ON". If the power on with wiring mistake, warning LED lamp (PGM-FI warning lamp) is on. Also, it might cause of breaking this product and ECU (engine control unit). Be careful of it.

- ① Cut stock ECU pink/blue harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect pink/blue harness combination on illustration. Then crimp bullet terminal to attached white and gray harness and connect as illustration.
- ② Cut stock ECU white/red harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect white/red harness combination on illustration. The white/red harness on other side, crimp bullet terminal with attached orange harness. After finished crimping both sides, connect bullet terminal as illustration.
- ③ Cut stock ECU blue/yellow harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect blue/yellow harness combination on illustration. The blue/yellow harness on other side, crimp bullet terminal with attached blue harness. After finished crimping both sides, connect bullet terminal as illustration.
- ④ Cut stock ECU yellow harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect yellow harness combination on illustration. The yellow harness on other side, crimp bullet terminal with attached yellow harness. After finished crimping both sides, connect bullet terminal as illustration.
- ⑤ Cut stock ECU green/black harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect green/black harness combination on illustration. The green/black harness on other side, crimp bullet terminal with attached black harness. After finished crimping both sides, connect bullet terminal as illustration.
- ⑥ Cut stock ECU black harness, then crimp attached bullet terminal to cutting section. There is no specifying polarity of bullet terminal, please crimp with able to connect black harness combination on illustration. The black harness on other side, crimp bullet terminal with attached red harness. After finished crimping both sides, connect bullet terminal as illustration.
- ⑦ Insert attached harness orange/yellow/blue/gray/white flat terminal (male) to attached 110type 6pole coupler (male) as illustration. After processing, connect to i-map main unit side 110type 6pole coupler (female).
- ⑧ Crimp attached bullet terminal to i-map main unit side red harness and processed red harness, then connect. There is no specifying polarity on bullet terminal, recommend to crimp male terminal to i-map side harness not to expose bullet terminal when removing i-map.
- ⑨ Crimp attached bullet terminal to i-map main unit side black harness and processed black harness, then connect. There is no specifying polarity on bullet terminal, recommend to crimp male terminal to i-map side harness not to expose bullet terminal when removing i-map.

TROUBLE SHOOTING

EX	Injector anomaly detection In case of i-map installed vehicle, PGM-FI warning lamp is flash when the injector anomaly detection is occur. Continues 0.5sec ON → 1.5sec OFF → 0.5sec ON → 1.5sec OFF ...
CAUSE	Main reasons of injector anomaly detection is missing coupler, disconnection, breaking injector, etc. oFollow the service manual to check.
HOW TO DEAL WITH	oIf there is a trouble not only the injector but also other places, remove i-map and put back to stock condition for check. HOW TO PUT BACK TO STOCK CONDITION 1) Remove type110 6P coupler and power supply harness (red, black) connecting to i-map. 2) Connect cut/processed pink/blue harness on wiring diagram ① again.

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KITACO
3-8-13 NAGATA,
HIGASHI-OSAKA,
OSAKA, JAPAN