RaceGrade

Specification

Document Number		RG_SPEC_0037	
Title		Generation I ZX-14 Adaptor Board	
Revision	Date	Prepared By	Change History
1.0	5/6/2013	Hannah Westbrook	Initial release.
1.1	11/14/2014	Hannah Westbrook	Updated description section

Introduction

The RaceGrade adaptor is used to interface a Suzuki Generation I Kawasaki (2009-2011) factory harness with a MoTeC M130 ECU. The adaptor box plugs directly in the factory harness replacing the factory ECU.



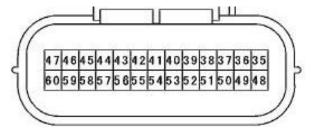
Figure 1: Adaptor Box

Specifications:

- Weight: 7.072 ounces
- Dimensions: 4.70 L x 1.972 W x 1.14 H in (119.4 x 50.1 x 29.0 mm)
- Key and Thumb switch power voltage supply through 30A fuse and 30A Relay
- Spares power supplied through 15A fuse
- 1 k Ω pull-up resistor to 5V on pin 4(Gear)

Connection:

- ZX-14 GEN I Stock wiring harness
- MoTeC ECU M130 Adaptor Loom M H 130PNP 401A
- Spares
 M PNP 26P Kit
 26 Pin Header with alternate Keyway



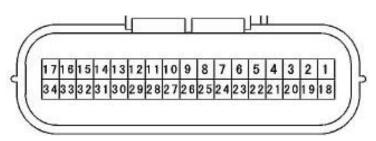


Figure 2: Kawasaki ZX-14 Connector Pin out Connector Mating View (wire entry view on harness)

Generation I Kawasaki ECU Pin out

PIN NO.	Kawasaki Parameter
1	CAN LO
2	N/A
3	N/A
4	GEAR
5	0V
6	SPEED SIGNAL
7	5V
8	AIR TEMP
9	TIP-OVER
10	N/A
11	BARO
12	N/A
13	FUEL PUMP
14	N/A
15	N/A
16	N/A
17	GND
18	CAN HI
19	N/A
20	N/A
21	N/A
22	REF
23	N/A
24	SYNC
25	ENG TEMP
26	TPS
27	N/A
28	MAP
29	N/A
30	FAN
31	N/A
32	N/A
33	IGNITION SWITCH
34	0V

PIN NO.	Kawasaki Parameter
35	N/A
36	N/A
37	N/A
38	N/A
39	GND
40	STARTER SWITCH
41	N/A
42	STARTER BUTTON
43	N/A
44	INJ #3
45	IGN #3
46	INJ #1
47	IGN #1
48	N/A
49	N/A
50	N/A
51	N/A
52	GND
53	N/A
54	N/A
55	GND
56	N/A
57	INJ #4
58	IGN #4
59	INJ #2
60	IGN #2

MoTeC Spares Connector

Not all of the M130 ECU channels are used on the Generation I Kawasaki ZX-14 harness. A spares connector is included with all other ECU resources for expansion. See MoTeC M130 manual for I/O Specifications.

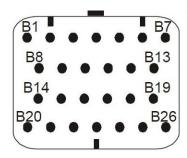


Figure 3: Spares Connector Pin out Connector Mating View (wire entry view on harness)

Note: The following factory controls are not available in the Adaptor Box kit:

- Subthrottle Throttle valve actuator (STVA) and Secondary throttle position sensor (STP)
- Idle Stepper control (ISC)
- EVAP system

PIN NO.	SPARES CONNECTOR
1	5V
2	5V
3	OUT_HB2
4	ECU 6.3V
5	OUT_HB3
6	OV
7	OV
8	AV #6
9	AV #5
10	12V
11	GROUND
12	OUT_LS2
13	OUT_HB1
14	INJ #5
15	U_DIG7
16	12V
17	GROUND
18	INJ #6
19	INJ #7
20	AT #3
21	AV #4
22	AT #4
23	INJ #8
24	
25	OUT_LS1
26	UDIG_5