California Environmental Protection Agency AIR RESOURCES BOARD	IRBIT MOTORWORKS OF AMERICA	EXECUTIVE ORDER M-075-0002 New On-Road Motorcycles

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles. Production vehicles shall be in all material respects the same as those for which certification is granted. **The manufacturer shall ensure that character "C" or "3" is not used in the eighth (8th) position of the vehicle identification number (VIN) of all vehicles in the engine family listed below. Violation of this VIN provision may result in incorrect registration of the vehicles.**

MODEL YEAR	ENGINE FAMILY	EVAPORATIVE FAMILY	ENGINE DISPLACEMENT (cc)	CLASS
2005	5IMFC.750A02	5IMFE0066IMZ	749	III

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	VEHICLE MODELS (equivalent inertia mass in kilograms, kg)	* = not applicable
2TWC	8.1037 8.1036 8.1236 8.1237 (410 kg, all models)	

ABBREVIATIONS: EM=engine modification TWC=three-way catalyst OC=oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2 (prefix)=parallel (2) (suffix)=in series

The following are the exhaust hydrocarbon (HC) and carbon monoxide (CO) standards, or designated HC standard as applicable, and certification levels in grams per kilometer (g/km), and evaporative standard and certification level in grams per test (g/test) for this engine/evaporative family. The designated HC standard, as applicable, shall be listed on the permanent tune-up label.

HC (g/km)				CO (g/km)		EVAPORATIVE (g/test)	
CORPORATE AVERAGE STANDARD	DESIGNATED STANDARD	(DIRECT) STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL
*	*	1.4	0.4	12	5	2.0	1.6

BE IT FURTHER RESOLVED: That certification to the designated HC standard listed above, as applicable, is subject to the following terms, limitations and conditions:

The designated HC standard shall be the exhaust emission limit for this engine family and cannot be changed during the model year. It serves as the HC exhaust standard applicable to this engine family for determining compliance with Title 13, California Code of Regulations, Sections 1958(b) and 2101.

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all materials required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Sections 2035 et seq.).

BE IT FURTHER RESOLVED: That because the listed motorcycles are certified to 0.2 grams per test or more below the applicable evaporative standard, the vehicles are exempt from complying with the Air Resources Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" pursuant to Executive Order G-70-16-E.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Vehicles in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 9TH day of March 2005.

Allen Lyons, Chief
Mobile Source Operations Division

CERTIFICATION SUMMARY

California Environmental Protection Agency
AIR RESOURCES BOARD

ON-HIGHWAY MOTORCYCLES

MODEL-YEAR 2005 **MANUFACTURER:** IRBIT MOTORWORKS OF AMERICA **EXECUTIVE ORDER:** M-075-0002

1. **EPA-Standardized Family Name:**

a. Engine Family:	5IMFC.750A02	b. Evaporative Family:	5IMFE006GIMZ	c. Evaporative Group:	n/a

2. **All Sales Codes within Engine Family:** 50- STATES
3. **All Engine Displacement(s) in Engine Family** (units in cubic centimeters, (cc)):

1) 749cc	2)	3)	4)

4. **Displacement Class** { **I** =(50-169cc), **II** =(170-279cc), **III** =(280-699cc), **IV** =(≥ 700 cc)} : IV
5. **Emission Standards Compliance:** DIRECT STANDARD
6. If Corp. Avg., list **Designated Standard:** (in g/km) n/a for n/a
7. **Engine Design:**

a. Combustion Cycle:	4 STROKE
@ Oil/Fuel Ratio	n/a
b. Engine Type:	RECIPROCATING
c. Valvetrain:	PISTON PORTED
d. Total Number of Intake and Exhaust Valves (Ports) per Cylinder:	2
e. Type of Engine Cooling:	AIR
f. Number of Cylinders:	2
g. Cylinder Arrangement:	FLAT

8. **Intake, Fuel and Emission Control Systems (ECS):**

a. Aftertreatment(s): 2TWC	3-way CATALYST
b. Sensor(s):	n/a
c. Fuel System: CARB	CARBURETION
d. Exhaust Gas Recirculation:	NO
e. Method of Aspiration: NAT	NATURAL
f. Air Injection Reaction:	n/a
g. Others:	n/a

9. **Deterioration Factors (DFs):** a. New Durability Testing: X ; Carryover from EF: ____;
   b. Durability Engine Model: 8.128 ID: ____; c. Durability Test Distance (km): 15,000
   d. Exhaust DF Values (no less than 1.000): HC: 1.000 ; NOx: — ; CO: 1.384.
   e. Evaporative DF Values (no less than 0.000): Average of V+B: 0.5 ;Vehicle: 0.5 ,Bench: 0.5.
10. **Certification Test Engine Information**: New Test: X ; Carryover from Engine Family: ____
    a. Test Engine: Model 8.128 ID: ____ Rated Power, hp: 36 @ 5600 rpm ;Test Dates: 8/9/02 - 9/13/02
    b. Equivalent Inertia Mass (kg): 410 RLF: 3.6 Trans: M-4 MPG: 56.
    c. Special Test Equipment (e.g., cooling fans, special couplings, etc.): Yes/No: NO . If Yes, describe below:
11. **Certification Emission Levels**: HC: 0.36 HC+NOx: ____ CO: 4.71 Evaporative: 1.6.

Test No. and Test Type	(raw) (i.e., no DFs) (g/km; or g/test for Evap)				(i.e., with DFs applied) (in g/km; or g/test for Evap)				
	HC	NOx	CO	Evap HC	HC	NOx	HC+NOx	CO	Evap HC
1 15,063	0.36		3.40	1.142	0.36			4.71	1.6
2									
3									
Standard:								12	2.0

Remarks:

Early Compliance Credits?: ____ Multiplier? ____ **Issue Date:** ____ **Revision Date:** ____
(If Yes, attach credit spreadsheet)

ARB USE ONLY
Processed by: P. Long Date: 3-3-05 Reviewed by: S. Hack Date: 3-3-05