

This test report replaces and cancels the previous Test report No: ATI-08JA395HTSSB dated on 2008-05-26

# EMC TEST REPORT

To :	AUCHAN INTL.(SHANGHAI) INTL. TRADING CO.	Fax:	021-65403398
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Cc :	JIANGSU ANIMAL BY-PRODUCTS IMP. AND EXP. GROUP CORP	Fax/Email	
ADDRESS:	50zhonghua Road, NANJING China, ROOM: 1301		
This document includes:	12 pages	Test date :	Jan. 24 to May 22, 2008

FACTORY NAME :	Suzhou Rununion Motivity Co., Ltd.	
ADDRESS:	29 Hongxi Road, Xushuguan, New District, Suzhou 215151, P. R. China.	
PRODUCT:	Motor Cycle	
TYPE REFERENCE :	645-7 Speed	
RATED VOLTAGE :	DC 36V for battery	
RATED INPUT POWER :	1	
PROTECTION CLASS:	III	MARK
TESTS REALISED :	On 1 sample	
STANDARDS USED(DATE) :	EN 61000-6-3:2007 EN 61000-6-1:2007	
CLAUSES EXAMINED :	All Clauses Relevant	

All the tests done in this report are subcontracted to Shanghai Inspection and Testing Institute of Instrumentation and Automatic Systems (SITIIAS), which is accredited by CNAS under number 'L0130'.

The sample does satisfy the clauses examined **CONCLUSION:** after modification. Test done by, Approved by, Name: Trulli LI Name: Zhaoqian YU : May 29, 2008 Date Date : May 29, 2008

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. compliance or non-compliance to the specification.

"All the modifications applied in this document are identified by a vertical line on the left at the place where information has been modified regarding to the previous edition of the document"

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## 1 TESTING PROGRAM

The tests have been carried out according to the requirements of the following standards:

#### Emission standard EN 61000-6-3:2007

- Measurement of the radiated emission.
- Measurement of the conducted emission.
- Measurement of the harmonic currents.
- Measurement of the voltage fluctuations.

### Immunity standard EN 61000-6-1:2007

- Immunity to electrostatic discharges publication IEC 61000-4-2.
- Immunity to fast transients/bursts publication IEC 61000-4-4.
- Immunity to conducted disturbances induced by radio-frequency fields publication IEC 61000-4-6.
- Immunity to radiated radio-frequency electromagnetic field with amplitude modulation publication IEC 61000-4-3.
- Immunity to surges publication IEC 61000-4-5.
- Immunity to voltage dips -publication IEC 61000-4-11.

Special None. Comment :

## 2 HISTORY OF FAILURE

The Radiated Emission was failed.

After a capacitor  $0.33\mu F/160V$  was additionally connected in parallel on the position that connect the controller with the motor cable and a line choke was additionally add out of the motor cable, this test item was passed.

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# 3 EQUIPMENT CHARACTERISTICS

# 3.1 Picture of tested sample

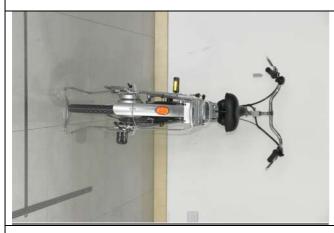




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None

# 3.2 List of critical EMC components

Object/Part No.	Manufacturer / Trademark	Type / Model	Technical data	Mark(s) of conformity
Control box	Nanjing Yun Yang Automatic Electric Research and Manufacture.	DKY-3616		1
Motor	Xuzhou Huanhai ZhongYi Machinery- electron Co.,Ltd	DG11	36V, 200W 0,777Ω at 19,6°C	
Sensor	Changzhou City Frecse Electrical Appliance Co.,Ltd	FRS-A		

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# 4 OPERATING CONDITIONS

The apparatus was placed in a shielded room, full or semi anechoic chamber, and was powered with an battery. The apparatus was worked continuously, the EUT was at max speed during the tests which produce max disturbance.

Ambient conditions: Temperature : 15 - 18 °C

Relative humidity : 44 - 54 % Atmospheric pressure : 101 kPa

# 5 PERFORMANCE CRITERIA

Criterion A : The apparatus operate as intended during the test. No degradation of performance or

loss of function is allowed below the performance level.

Criterion B : The apparatus operate as intended after the test. No change of operating state and the

stored data are allowed. During the test, degradation of performance is allowed.

Criterion C : Temporary loss of function is allowed, provided the function is self-recoverable or can

be restored by the operation of the controls, or by any operation specified in the

instructions for use.

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# 6 TEST RESULTS

# 6.1 EMISSION STANDARD EN 61000-6-3:2007

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Article	TEST	TEST SPECIFICATION		F	NA	Rem
9	Emission Limits  Radiated disturbance Frequency range: 30 – 1000 MHz  Table 1: Emission Enclosure Basic standard: EN 55022, Class B	Operating conditions: according to the article 9 Measuring Distance: 3 m Antenna: - horizontal position - vertical position Diagram(s) No. <1>	[X] [X]	[]	[]	[]
9	Conducted disturbance Frequency range: 0,15 – 30 MHz  Table 1: Emission AC mains Basic standard: EN 55022, Class B	Operating conditions: according to the article 9 Port(s):  • AC mains port • Diagram(s) No. <> to <>	[]	[]	[X]	[1]
9	Limits for harmonic currents emission  Basic standard: EN 61000-3-2	Frequency range: 0 to 2 kHz  Class of the apparatus: Table(s) No. <>	[]	[]	[X]	[1]
9	Limitation of voltage fluctuations and flicker in low-voltage supply systems  Basic standard: EN 61000-3-3	Frequency range: 0 to 2 kHz  Table(s) No. <>	[]	[]	[X]	[1]

P: pass - F: Fail - NA: not applicable - Rem: remark

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# 6.2 IMMUNITY STANDARD EN 61000-6-1:2007

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Article	TEST	TEST SPECIFICATION		F	NA	Rem
9	Electrostatic discharges  Table 1 Enclosure  Performance criteria B	Contact discharges Level: ± 4 kV Application points:  • horizontal coupling plane • vertical coupling plane • Screw and metal part	[X] [X] [X]	[]	[]	[] [] []
	Performance criteria B	Air discharges Level: ± 8 kV Application points:  • plastic enclosure •	[X]	[]	[]	[]
9	Radio-frequency electromagnetic fields 80 to 1000 MHz  Table 1 Enclosure  Performance criteria A	Test field strength: 3 V/m (unmodulated signal) Modulation frequency: 1 kHz Modulation depth: 80 % Frequency Step: 1% Dwell Time: 2 s Logperiodic antenna: - horizontal position - vertical position	[X] [X]	[]	[]	[]
9	Power Frequency Magnetic Field  Table 1 Enclosure Performance criteria A	Field frequency : 50/60 Hz Level : 3 A/m	[]	[]	[X]	[2]
9	Fast transients/bursts  Table 4 Alternative current power input and output ports  Performance criteria B	Level: ± 1 kV Rise time/hold time: 5/50 ns Repetition rate: 5 kHz Testing time: 2 min Port(s):  • AC mains	[]	[]	[X]	[1]

P: pass - F: Fail - NA: not applicable - Rem: remark

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		TEST SPECIFICATION		RESULTS				
Article	TEST			F	NA	Rem		
9	Injected current 0,15 to 80 MHz  Table 4 Alternative current power input and output ports  Performance criterion A	Voltage level: 3 V (unmodulated signal) Modulation frequency: 1 kHz Frequency Step: 1% Dwell Time: 2 s Modulation depth: 80 % Application with Port(s):  • AC mains •	[]	[]	[X]	[1]		
9	Surges  Table 4 Alternative current power input and output ports  Performance criterion B	Tr/Th(μs): 1.2/50 (8/20)  Number of surges: 5 positive and 5 negative  Phase angles: 0°, 90°, 180° and 270°  Level: ± 1 kV  Port(s):  • power input, between lines and neutral	[]	[]	[X]	[1]		
	Performance criterion B	Level: ± 2 kV Port(s):  • power input, between lines and earth • power input, between neutral and earth	[]	[]	[X] [X]	[1] [1]		
9	Voltage dips and voltage interruptions  Table 4 Alternative current power input port(s) Performance criterion C	Voltage interruptions Test level: 0 % Ut-> 0 V Duration: 5 s Phase angles: 0° Port(s): • AC mains	[]	[]	[X]	[1]		
	Table 4 Alternative current power input port(s) Performance criterion C	Voltage dips Test level: 40 % Ut-> 92 V Duration: 100 ms Phase angles: 0° Port(s): • AC mains	[]	[]	[X]	[1]		
	Table 4 Alternative current power input port(s)  Performance criterion B	Voltage dips Test level: 70 % Ut-> 161 V Duration: 10 ms Phase angles: 0° and 180° Port(s): • AC mains	[]	[]	[X]	[1]		

P: pass - F: Fail - NA: not applicable - Rem: remark

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# Remark(s):

1 : The samples were powered by battery only.

2 : As there is no components in the EUT susceptible to magnetic fields, so it is not needed to perform this test.

# 7 CONCLUSION

The apparatus *Motor Cycle* and models *645-7 Speed* is in compliance with the requirements of the standards EN 61000-6-3:2007, EN 61000-6-1:2007.

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# Diagram No. 1

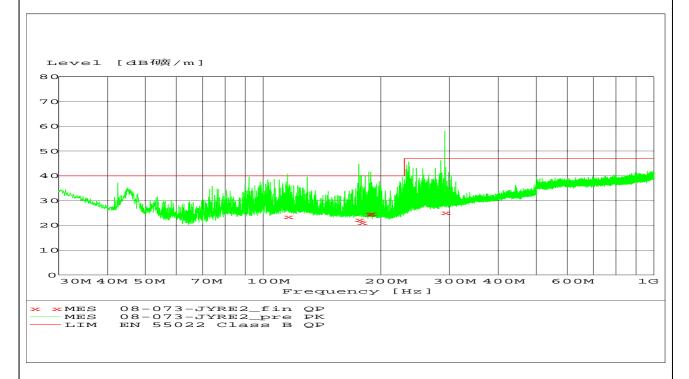
EUT: Motor cycle
Manufacturer: ATI-08JA395HTSS

Operating Condition: 18degree, 44% humidity
Test Site: 3m semi-anechoic chamber

Operator:

Test Specification:

Comment: Model:645-7 speed Start of Test: 2/21/2008 / 1:26:54PM



### MEASUREMENT RESULT: "08-073-JYRE2\_fin QP"

2/21/2008 1:43PM

_,,							
Frequency	Level	Transd	Limit	Margin	Height	Azimuth	Polarisation
MHz	dBµV/m	dВ	dBµV/m	dВ	cm	deg	
115.560000	23.50	15.3	40.0	16.5	100.0	46.00	VERTICAL
175.620000	22.40	13.1	40.0	17.6	100.0	45.00	VERTICAL
178.440000	21.10	12.9	40.0	18.9	136.0	7.00	VERTICAL
186.600000	24.50	12.7	40.0	15.5	100.0	50.00	VERTICAL
188.520000	24.80	12.6	40.0	15.2	100.0	45.00	VERTICAL
291.660000	25.20	16.9	47.0	21.8	100.0	134.00	HORIZONTAL

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