Starting System Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
ECU Main Relay	Ω (with battery)	*4→(+) - 5→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 6			
	Ω	**4 ↔ 5**	0 ~ 10 Ω	Ω	
		7 ↔ 6	OL	Ω	
Gear Position Sensor	Input VDC	**R ↔ BL/Y → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (angle -240°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	0.40 ~ 0.60 VDC	VDC	
	Output VDC (angle -185°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	1.03 ~ 1.23 VDC	VDC	
	Output VDC (angle +55°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	3.82 ~ 3.92 VDC	VDC	
	Output VDC (angle +110°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	4.40 ~ 4.60 VDC	VDC	
Ignition Switch	Ω (key on)	**W ↔ BR**	0 ~ 10 Ω	Ω	
	Ω (key off)	**W ↔ BR**	OL	Ω	
Run/Stop Switch	Ω (run)	**R/G ↔ GY**	0 ~ 10 Ω	Ω	
	Ω (stop)	**R/G ↔ GY**	OL	Ω	
Side Stand Switch	Ω (up)	**BK ↔ G**	0 ~ 10 Ω	Ω	
	Ω (down)	**BK ↔ G**	OL	Ω	
Starter Button	Ω (pressed)	**Y ↔ BK/R**	0 ~ 10 Ω	Ω	
	Ω (not pressed)	**Y ↔ BK/R**	OL	Ω	
Starter Circuit Relay	VDC (with battery)	*16→(+) - 12→(-)*	Near Battery Voltage	VDC	
		11→R - 12→BK			
	Ω	**11 ↔ 16**	OL	Ω	
		11 ↔ 12	0 ~ 10 Ω	Ω	

Starting System Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Starter Lockout Switch	Ω (in)	**G/W ↔ R/W**	0 ~ 10 Ω	Ω	
	Ω (out)	**G/W ↔ R/W**	OL	Ω	
Starter Relay	Ω (with battery)	**(+) ↔ (-)**	0 ~ 10 Ω	Ω	
	Ω	**(+) ↔ (-)**	OL	Ω	

Charging System Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Battery	Charging Voltage	**(+) - (-)**	14.6 ~ 15.0 VDC	VDC	
Alternator	VAC	**W (1) - W (2)**	48 ~ 72 VAC	VAC	
	VAC	**W (1) - W (3)**	48 ~ 72 VAC	VAC	
	VAC	**W (2) - W (3)**	48 ~ 72 VAC	VAC	
	Ω	**W (1) ↔ W (2)**	0.112 ~ 0.168 Ω	Ω	
	Ω	**W (1) ↔ W (3)**	0.112 ~ 0.168 Ω	Ω	
	Ω	**W (2) ↔ W (3)**	0.112 ~ 0.168 Ω	Ω	
	Ω	**W (1)** ↔ ⏚	OL	Ω	
	Ω	**W (2)** ↔ ⏚	OL	Ω	
	Ω	**W (3)** ↔ ⏚	OL	Ω	
Regulator / Rectifier	VDC @ Battery	**(+) - (-)**	< 15.5 VDC	VDC	
	VAC @ Battery	**(+) - (-)**	< 0.5 VAC	VAC	

Ignition System Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Coil # 1	Primary Peak Voltage	**Coil Terminals R → R → (+) - BK → BK → (-)**	≥ 100 VP	VP	
	Input VDC	**BK (ECU Pin 7) (+) - Frame Ground (-)**	Battery Voltage	VDC	
	Ω Primary Winding	**Coil Terminals R ↔ BK**	1.19 ~ 1.61 Ω	Ω	
	Ω Secondary Winding	**Coil Terminal BK (-) ↔ Spark Plug Terminal**	10.2 ~ 13.8 kΩ	kΩ	
Coil # 2	Primary Peak Voltage	**Coil Terminals R → R → (+) - BK/R → BK → (-)**	≥ 100 VP	VP	
	Input VDC	**BK/R (ECU Pin 6) (+) - Frame Ground (-)**	Battery Voltage	VDC	
	Ω Primary Winding	**Coil Terminals R ↔ BK/R**	1.19 ~ 1.61 Ω	Ω	
	Ω Secondary Winding	**Coil Terminal BK/R (-) ↔ Spark Plug Terminal**	10.2 ~ 13.8 kΩ	kΩ	
Coil # 3	Primary Peak Voltage	**Coil Terminals R → R → (+) - BK/O → BK → (-)**	≥ 100 VP	VP	
	Input VDC	**BK/O (ECU Pin 25) (+) - Frame Ground (-)**	Battery Voltage	VDC	
	Ω Primary Winding	**Coil Terminals R ↔ BK/O**	1.19 ~ 1.61 Ω	Ω	
	Ω Secondary Winding	**Coil Terminal BK/O (-) ↔ Spark Plug Terminal**	10.2 ~ 13.8 kΩ	kΩ	
Coil # 4	Primary Peak Voltage	**Coil Terminals R → R → (+) - BK/G → BK → (-)**	≥ 100 VP	VP	
	Input VDC	**BK/W (ECU Pin 26) (+) - Frame Ground (-)**	Battery Voltage	VDC	
	Ω Primary Winding	**Coil Terminals R ↔ BK/G**	1.19 ~ 1.61 Ω	Ω	
	Ω Secondary Winding	**Coil Terminal BK/G (-) ↔ Spark Plug Terminal**	10.2 ~ 13.8 kΩ	kΩ	
Camshaft Position Sensor	Peak Voltage	**W/Y → R → (+) - Y → BK → (-)**	≥ 0.6 VP	VP	
	Ω	**W/Y ↔ Y**	344 ~ 516 Ω	Ω	

Ignition System Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Crankshaft Position Sensor	Peak Voltage	**Y → R → (+) -** **BK → BK → (-)**	≥ 3 VP	VP	
	Ω	**Y ↔ BK**	376 ~ 564 Ω	Ω	
ECU Main Relay	Ω (with battery)	*4→(+) - 5→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 6K			
	Ω	**4 ↔ 5**	0 ~ 10 Ω	Ω	
		7 ↔ 6	OL	Ω	
Fuel Pump Relay	Ω (with battery)	*9→(+) - 10→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 8			
	Ω	**9 ↔ 10**	0 ~ 10 Ω	Ω	
		7 ↔ 8	OL	Ω	
Ignition Switch	Ω (key on)	**W ↔ BR**	0 ~ 10 Ω	Ω	
	Ω (key off)	**W ↔ BR**	OL	Ω	
Vehicle Down Sensor	Input VDC	**R ↔ BL → (+) -** **BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (up)	**W ↔ Y/G → (+) -** **BK ↔ G → (-)**	3.55 ~ 4.45 VDC	VDC	
	Output VDC (tilted)	**W ↔ Y/G → (+) -** **BK ↔ G → (-)**	0.65 ~ 1.35 VDC	VDC	

DFI Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Throttle Position Sensor	Input VDC	**R ↔ W → (+) - BK ↔ BK → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC 1	**Y ↔ V → (+) - BK ↔ BK → (-)**	1.6 ~ 2.2 VDC	VDC	
	Output VDC 2	**W ↔ V/W → (+) - BK ↔ BK → (-)**	2.8 ~ 3.4 VDC	VDC	
Intake Air Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/BK → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC	VDC	
Atmospheric Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/W → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC	VDC	
Intake Air Temperature Sensor	Output VDC	**W ↔ GY/R → (+) - BK ↔ G → (-)**	2.5 ~ 3.0 VDC (68°)	VDC	
	Ω	**W ↔ BK**	5.4 ~ 6.6 kΩ (32°)	Ω	
		W ↔ BK	0.29 ~ 0.39 kΩ (176°)	Ω	
Water Temperature Sensor	Output VDC	**R ↔ O → (+) - BK ↔ G → (-)**	2.80 ~ 2.97 VDC	VDC	
	Ω	**R ↔ BK**	18.80 ± 2.37 kΩ (-4°)	kΩ	
		R ↔ BK	~ 6.544 kΩ (32°)	kΩ	
		R ↔ BK	1.136 ± 95 Ω (104°)	Ω	
		R ↔ BK	0.1553 ± 70 Ω (212°)	Ω	
Accelerator Position Sensor	Input VDC	**R ↔ W → (+) - BK ↔ BK → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC 1	**Y ↔ V → (+) - BK ↔ BK → (-)**	0.50 ~ 0.90 VDC	VDC	
	Output VDC 2	**W ↔ V/W → (+) - BK ↔ BK → (-)**	0.35 ~ 1.00 VDC	VDC	
	Ω	**W ↔ BK**	4.5 ~ 6.5 kΩ	Ω	

DFI Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Gear Position Sensor	Input VDC	**R ↔ BL/Y → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (angle -240°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	0.40 ~ 0.60 VDC	VDC	
	Output VDC (angle -185°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	1.03 ~ 1.23 VDC	VDC	
	Output VDC (angle +55°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	3.82 ~ 3.92 VDC	VDC	
	Output VDC (angle +110°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	4.40 ~ 4.60 VDC	VDC	
Vehicle Down Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (up)	**W ↔ Y/G → (+) - BK ↔ G → (-)**	3.55 ~ 4.45 VDC	VDC	
	Output VDC (tilted)	**W ↔ Y/G → (+) - BK ↔ G → (-)**	0.65 ~ 1.35 VDC	VDC	
Oxygen Sensor	Output VDC	**R ↔ BK → (+) - BK ↔ GY → (-)**	Rich: 0.8 VDC	VDC	
		R ↔ BK → (+) - BK ↔ GY → (-)	Lean: 0.24 VDC	VDC	
Oxygen Sensor Heater	Input VDC	**R ↔ W/R → (+) - Frame Ground → (-)**	Battery Voltage	VDC	
	Ω	**W ↔ W**	13 - 17 Ω (68°)	Ω	
		ECU Pin 56 ↔ Sensor D	0 - 10 Ω	Ω	
Exhaust Butterfly Valve Actuator Sensor	Input VDC	**Y/W ↔ W → (+) - BK/BL ↔ BK → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**BL ↔ Y → (+) - BK/BL ↔ BK → (-)**	3.46 ~ 3.76 VDC	VDC	
	Ω	**W ↔ BK**	4 ~ 6 kΩ	kΩ	
Immobilizer Amplifier	Input VDC (amplifier)	**BR/W → (+) - BK/Y → (-)**	Battery Voltage	VDC	
	Ω (antenna)	**BK ↔ BK/W**	3.0 ~ 4.6 Ω	Ω	
CAN Communication Line	Ω (@ ECU)	**BK ↔ BK/W**	123 ~ 125 Ω	Ω	
	Ω	**ECU Pin 60 ↔ Meter Unit D**	0 - 10 Ω	Ω	
		ECU Pin 61 ↔ Meter Unit F	0 - 10 Ω	Ω	

DFI Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Quick Shifter Sensor	Input VDC	**R ↔ BL/Y → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ G/W → (+) - BK ↔ G → (-)**	0.35 ~ 4.65 VDC	VDC	
	Ω	**BL ↔ BK**	209 ~ 231 kΩ	kΩ	
Primary Fuel Injector #1	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**BL/BK → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**BL/BK ↔ W/R**	11.5 ~ 12.5 Ω (68°)	Ω	
		ECU Pin 20 ↔ FI D	0 - 10 Ω	Ω	
Primary Fuel Injector #2	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**BL/R → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**BL/R ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 8 ↔ FI D	0 - 10 Ω	Ω	
Primary Fuel Injector #3	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**BL/O → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**BL/O ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 2 ↔ FI D	0 - 10 Ω	Ω	
Primary Fuel Injector #4	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**BL/G → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**BL/G ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 4 ↔ FI D	0 - 10 Ω	Ω	

DFI Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Secondary Fuel Injector #1	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**O/R → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**O/R ↔ W/R**	11.5 ~ 12.5 Ω (68°)	Ω	
		ECU Pin 14 ↔ FI D	0 - 10 Ω	Ω	
Secondary Fuel Injector #2	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**O/G → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**O/G ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 1 ↔ FI D	0 - 10 Ω	Ω	
Secondary Fuel Injector #3	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**O/BK → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**O/BK ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 3 ↔ FI D	0 - 10 Ω	Ω	
Secondary Fuel Injector #4	Input VDC	**R ↔ W/R → (+) - Battery (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Output VDC	**O/Y → (+) - Frame Ground (-)**	Battery Voltage for 3 seconds, then 0 VDC	VDC	
	Ω	**O/Y ↔ W/R**	11.5 ~ 12.5 Ω (68°)		
		ECU Pin 5 ↔ FI D	0 - 10 Ω	Ω	
Fuel Pump Relay	Ω (with battery)	*9→(+) - 10→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 8			
	Ω	**9 ↔ 10**	0 ~ 10 Ω	Ω	
		7 ↔ 8	OL	Ω	

DFI Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
ETV Actuator	Input VDC	**W/G ↔ ECU Pin 78 → (+) - BK/O ↔ ECU Pin70 → (-)**	1 ~ 2 or -1 ~ -2 VDC	VDC	
	Ω (with battery)	*1→(+) - 2→(-)*	0 ~ 10 Ω	Ω	
		3 ↔ 4			
	Ω	**1 ↔ 2**	0 ~ 10 Ω	Ω	
		3 ↔ 4	OL	Ω	
Exhaust Butterfly Valve Actuator	Ω	**P ↔ GY**	5 ~ 200 Ω	kΩ	
		ECU Pin 54 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 55 ↔ Sensor F	0 - 10 Ω	Ω	
Knock Sensor	Ω	**BL ↔ G**	504 ~ 616 kΩ	kΩ	
Purge Valve (for supercharger)	Ω	**W/R ↔ R/BK**	22 ~ 26 Ω (68°)	kΩ	
Air Intake Chamber Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/G → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC (@ 76 cmHg)	VDC	
IMU	Input VDC	**BR/W → (+) - BK/Y → (-)**	Battery Voltage	VDC	
IMU Communication Line	Ω	**ECU Pin 60 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 61 ↔ Sensor F	0 - 10 Ω	Ω	
Air Switching Valve	Ω	**W/R ↔ R/BL**	20 ~ 24 Ω (68°)	Ω	

KECS Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Front Fork Stroke Sensor	Ω	**Y/G ↔ R/BK**	10 ~ 30 Ω	Ω	
		KECS ECU Pin 39 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 40 ↔ Sensor F	0 - 10 Ω	Ω	
Front Fork Solenoid Coil	Ω	**O ↔ G**	2 ~ 6 Ω	Ω	
		KECS ECU Pin 17 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 33 ↔ Sensor F	0 - 10 Ω	Ω	
Rear Shock Absorber Stroke Sensor	Ω	**Y ↔ BL**	10 ~ 30 Ω	Ω	
		KECS ECU Pin 4 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 5 ↔ Sensor F	0 - 10 Ω	Ω	
Rear Shock Absorber Solenoid Coil	Ω	**P ↔ GY**	2 ~ 6 Ω	Ω	
		KECS ECU Pin 21 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 37 ↔ Sensor F	0 - 10 Ω	Ω	
Rear Shock Absorber Spring Preload Actuator	Ω	**G/R ↔ G**	0.5 ~ 5 Ω	Ω	
		KECS ECU Pin 35 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 19 ↔ Sensor F	0 - 10 Ω	Ω	
Rear Shock Absorber Spring Preload Position Sensor	Output VDC	**Y ↔ V → (+) -** **BK ↔ BK/Y → (-)**	0.20 ~ 4.65 VDC	VDC	
	Ω	**R/W ↔ BK/Y**	3.5 ~ 6.5 kΩ	kΩ	

KECS Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
KECS ECU CAN Communication Line	Ω	**KECS ECU Pin 1 ↔ FI ECU Pin 61**	0 - 10 Ω	Ω	
		KECS ECU Pin 2 ↔ FI ECU Pin 60	0 - 10 Ω	Ω	
		KECS ECU Pin 1 ↔ ABS Pin 2	0 - 10 Ω	Ω	
		KECS ECU Pin 2 ↔ ABS Pin 11	0 - 10 Ω	Ω	
		KECS ECU Pin 1 ↔ Meter Unit Pin 27	0 - 10 Ω	Ω	
		KECS ECU Pin 2 ↔ Meter Unit Pin 26	0 - 10 Ω	Ω	
		KECS ECU Pin 1 ↔ IMU D	0 - 10 Ω	Ω	
		KECS ECU Pin 2 ↔ IMU F	0 - 10 Ω	Ω	
KECS ECU Power Supply	Input VDC 1 (key on)	**KECS ECU Pin 9 (BR/W) (+) - Battery Ground (-)**	Battery Voltage	VDC	
	Input VDC 2 (key on)	**KECS ECU Pin 43 (R/Y) (+) - Battery Ground (-)**	Battery Voltage	VDC	
	Input VDC 1 (key off)	**KECS ECU Pin 9 (BR/W) (+) - Battery Ground (-)**	0 VDC	VDC	
	Input VDC 2 (key off)	**KECS ECU Pin 43 (R/Y) (+) - Battery Ground (-)**	Battery Voltage	VDC	
	Ω	**KECS ECU Pin 3 (BK/Y) ↔ Battery Ground (-)**	0 - 10 Ω	Ω	
KECS ECU Communication Line	Ω	**KECS ECU Pin 1 ↔ Meter Unit Pin 27**	0 - 10 Ω	Ω	
		KECS ECU Pin 2 ↔ Meter Unit Pin 26	0 - 10 Ω	Ω	

ABS Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
ABS CAN Communication Line	Ω	**ABS Pin 2 ↔ Meter Unit D**	0 ~ 10 Ω	Ω	
		ABS Pin 11 ↔ Meter Unit F	0 ~ 10 Ω	Ω	

Cornering Light ECU Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Cornering Light ECU Communication Line	Ω	**Cornering Light ECU C (+) - Meter Unit D (-)**	0 ~ 10 Ω	Ω	
		Cornering Light ECU E (+) - Meter Unit F (-)	0 ~ 10 Ω	Ω	

Switches Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Fuel Reserve Switch	 (with full tank)	 →**(+)**	 (no light)		
		 →**R/BK**			
		BK/W→(-)			
	 (with empty tank)	 →**(+)**	 (light)		
		 →**R/BK**			
		BK/W→(-)			
Ignition Switch	Ω (key on)	**W ↔ BR**	0 ~ 10 Ω	Ω	
	Ω (key off)	**W ↔ BR**	OL	Ω	
Run/Stop Switch	Ω (run)	**R/G ↔ GY**	0 ~ 10 Ω	Ω	
	Ω (stop)	**R/G ↔ GY**	OL	Ω	
Side Stand Switch	Ω (up)	**BK ↔ G**	0 ~ 10 Ω	Ω	
	Ω (down)	**BK ↔ G**	OL	Ω	
Starter Button	Ω (pressed)	**Y ↔ BK/R**	0 ~ 10 Ω	Ω	
	Ω (not pressed)	**Y ↔ BK/R**	OL	Ω	
Starter Lockout Switch	Ω (in)	**G/W ↔ R/W**	0 ~ 10 Ω	Ω	
	Ω (out)	**G/W ↔ R/W**	OL	Ω	

Sensors Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Accelerator Position Sensor	Input VDC 1	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Input VDC 2	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC 1	**Y ↔ Y/BK → (+) - BK ↔ G → (-)**	0.50 ~ 0.90 VDC	VDC	
	Output VDC 2	**Y ↔ Y → (+) - BK ↔ G → (-)**	0.35 ~ 1.00 VDC	VDC	
	Ω 1	**BL ↔ G**	4.5 ~ 6.5 kΩ	Ω	
	Ω 2	**BL ↔ G**	4.5 ~ 6.5 kΩ	Ω	
	Ω	**ECU Pin 63 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 57 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 64 ↔ Sensor H	0 - 10 Ω	Ω	
		ECU Pin 66 ↔ Sensor J	0 - 10 Ω	Ω	
		ECU Pin 76 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 57 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 65 ↔ Sensor H	0 - 10 Ω	Ω	
		ECU Pin 66 ↔ Sensor J	0 - 10 Ω	Ω	
Air Intake Chamber Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/BK → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC (@ 76 cmHg)	VDC	
	Ω	**ECU Pin 44 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 83 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
Atmospheric Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/W → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC	VDC	
	Ω	**ECU Pin 44 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 81 ↔ Sensor D	0 - 10 Ω	Ω	

Sensors Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Camshaft Position Sensor	Peak Voltage	**W/Y → R → (+) - Y → BK → (-)**	≥ 0.6 VP	VP	
	Ω	**W/Y ↔ Y**	344 ~ 516 Ω (68°)	Ω	
		ECU Pin 35 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
Crankshaft Position Sensor	Peak Voltage	**Y → R → (+) - BK → BK → (-)**	≥ 3 VP	VP	
	Ω	**Y ↔ BK**	376 ~ 564 Ω	Ω	
		ECU Pin 36 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 37 ↔ Sensor F	0 - 10 Ω	Ω	
Exhaust Butterfly Valve Actuator Sensor	Input VDC	**Y/W ↔ W → (+) - BK/BL ↔ BK → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**BL ↔ Y → (+) - BK/BL ↔ BK → (-)**	3.46 ~ 3.76 VDC	VDC	
	Ω	**W ↔ BK**	4 ~ 6 kΩ	kΩ	
		ECU Pin 44 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 73 ↔ Sensor D	0 - 10 Ω	Ω	
Front Fork Stroke Sensor	Ω	**Y/G ↔ R/BK**	10 ~ 30 Ω	Ω	
		KECS ECU Pin 39 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 40 ↔ Sensor F	0 - 10 Ω	Ω	
Front Wheel Rotation Sensor	Ω	**ECU Pin 59 ↔ ABS Pin 8**	0 - 10 Ω	Ω	
		ABS Pin 12 ↔ Sensor D	0 - 10 Ω	Ω	
		ABS Pin 3 ↔ Sensor F	0 - 10 Ω	Ω	
Fuel Level Sensor	Ω	**W/Y ↔ BK/Y**	Full: 9 ~ 11 Ω	Ω	
			Empty: 213 ~ 219 Ω	Ω	

Sensors Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Gear Position Sensor	Input VDC	**R ↔ BL/Y → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (angle -240°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	0.40 ~ 0.60 VDC	VDC	
	Output VDC (angle -185°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	1.03 ~ 1.23 VDC	VDC	
	Output VDC (angle +55°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	3.82 ~ 3.92 VDC	VDC	
	Output VDC (angle +110°)	**Y ↔ G/R → (+) - BK ↔ G → (-)**	4.40 ~ 4.60 VDC	VDC	
	Ω	**ECU Pin 49 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 74 ↔ Sensor D	0 - 10 Ω	Ω	
Immobilizer Amplifier	Input VDC (amplifier)	**BR/W → (+) - BK/Y → (-)**	Battery Voltage	VDC	
	Ω (antenna)	**BK ↔ BK/W**	3.0 ~ 4.6 Ω	Ω	
Intake Air Pressure Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ R/BK → (+) - BK ↔ G → (-)**	1.43 ~ 1.55 VDC (@ 76 cmHg)	VDC	
	Ω	**ECU Pin 44 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 86 ↔ Sensor D	0 - 10 Ω	Ω	
Intake Air Temperature Sensor	Output VDC	**W ↔ GY/R → (+) - BK ↔ G → (-)**	2.5 ~ 3.0 VDC (68°)	VDC	
	Ω	**W ↔ BK**	5.4 ~ 6.6 kΩ (32°)	VDC	
		W ↔ BK	0.29 ~ 0.39 kΩ (176°)	VDC	
		ECU Pin 77 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
Knock Sensor	Ω	**BK ↔ BK/W**	504 ~ 616 kΩ	kΩ	
Outside Temperature Sensor	Ω	**BK ↔ BK/Y**	5.4 ~ 6.6 kΩ (32°)	kΩ	
			0.29 ~ 0.39 kΩ (176°)	kΩ	

Sensors Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Oxygen Sensor	Output VDC	**R ↔ BK → (+) - BK ↔ GY → (-)**	Rich: 0.8 VDC	VDC	
		R ↔ BK → (+) - BK ↔ GY → (-)	Lean: 0.24 VDC	VDC	
	Ω	**ECU Pin 84 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 85 ↔ Sensor F	0 - 10 Ω	Ω	
Quick Shifter Sensor	Input VDC	**R ↔ BL/Y → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC	**Y ↔ G/W → (+) - BK ↔ G → (-)**	0.35 ~ 4.65 VDC	VDC	
	Ω	**BL ↔ BK**	209 ~ 231 kΩ	kΩ	
		ECU Pin 49 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 46 ↔ Sensor D	0 - 10 Ω	Ω	
Rear Shock Absorber Spring Preload Position Sensor	Output VDC	**Y ↔ V → (+) - BK ↔ BK/Y → (-)**	0.20 ~ 4.65 VDC	VDC	
	Ω	**R/W ↔ BK/Y**	3.5 ~ 6.5 kΩ	kΩ	
		KECS ECU Pin 6 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 14 ↔ Sensor F	0 - 10 Ω	Ω	
		KECS ECU Pin 22 ↔ Sensor H	0 - 10 Ω	Ω	
Rear Shock Absorber Stroke Sensor	Ω	**Y ↔ BL**	10 ~ 30 Ω	Ω	
		KECS ECU Pin 4 ↔ Sensor D	0 - 10 Ω	Ω	
		KECS ECU Pin 5 ↔ Sensor F	0 - 10 Ω	Ω	
Rear Wheel Rotation Sensor	Ω	**ECU Pin 68 ↔ ABS Pin 16**	0 - 10 Ω	Ω	
		ABS Pin 14 ↔ Sensor D	0 - 10 Ω	Ω	
		ABS Pin 13 ↔ Sensor F	0 - 10 Ω	Ω	

Sensors Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Throttle Position Sensor	Input VDC	**R ↔ W → (+) - BK ↔ BK → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC 1	**Y ↔ V → (+) - BK ↔ BK → (-)**	1.6 ~ 2.2 VDC	VDC	
	Output VDC 2	**W ↔ V/W → (+) - BK ↔ BK → (-)**	2.8 ~ 3.4 VDC	VDC	
	Ω	**ECU Pin 71 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 80 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 72 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 79 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 80 ↔ Sensor H	0 - 10 Ω	Ω	
Vehicle Down Sensor	Input VDC	**R ↔ BL → (+) - BK ↔ G → (-)**	4.75 ~ 5.25 VDC	VDC	
	Output VDC (tilted)	**W ↔ Y/G → (+) - BK ↔ G → (-)**	0.65 ~ 1.35 VDC	VDC	
	Output VDC (up)	**W ↔ Y/G → (+) - BK ↔ G → (-)**	3.55 ~ 4.45 VDC	VDC	
	Ω	**ECU Pin 44 ↔ Sensor D**	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	
		ECU Pin 75 ↔ Sensor D	0 - 10 Ω	Ω	
Water Temperature Sensor	Output VDC	**R ↔ O → (+) - BK ↔ G → (-)**	2.8 ~ 2.97 VDC (68°)	VDC	
	Ω	**R ↔ BK**	18.80 ± 2.37 kΩ (-4°)	kΩ	
		R ↔ BK	~ 6.544 kΩ (32°)	kΩ	
		R ↔ BK	1.136 ± 95 Ω (104°)	Ω	
		R ↔ BK	0.1553 ± 70 Ω (212°)	Ω	
		ECU Pin 82 ↔ Sensor D	0 - 10 Ω	Ω	
		ECU Pin 38 ↔ Sensor F	0 - 10 Ω	Ω	

Relays Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Accessory Relay	Ω (with battery)	*1→(+) - 2→(-)*	0 ~ 10 Ω	Ω	
		3 ↔ 4			
	Ω	**1 ↔ 2**	0 ~ 10 Ω	Ω	
		3 ↔ 4	OL	Ω	
ECU Main Relay	Ω (with battery)	*4→(+) - 5→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 6			
	Ω	**4 ↔ 5**	OL	Ω	
		7 ↔ 6	0 ~ 10 Ω	Ω	
Fuel Pump Relay	Ω (with battery)	*9→(+) - 10→(-)*	0 ~ 10 Ω	Ω	
		7 ↔ 8			
	Ω	**9 ↔ 10**	0 ~ 10 Ω	Ω	
		7 ↔ 8	OL	Ω	
Headlight Circuit	Ω (with battery)	*2→(+) - 11→(-)*	0 ~ 10 Ω	Ω	
		1 ↔ 3			
	Ω	**2 ↔ 11**	0 ~ 10 Ω	Ω	
		1 ↔ 3	OL	Ω	
Radiator Fan Relay	Ω (with battery)	*18→(+) - 19→(-)*	0 ~ 10 Ω	Ω	
		17 ↔ 20			
	Ω	**18 ↔ 19**	0 ~ 10 Ω	Ω	
		17 ↔ 20	OL	Ω	
Starter Relay	Ω (with battery)	**(+) ↔ (-)**	0 ~ 10 Ω	Ω	
	Ω	**(+) ↔ (-)**	OL	Ω	

Relays Electrical Test Sheet

Component	Test	Connections	Spec	Result	✔ / ✖
Starter Circuit Relay	VDC	*16→(+) - 12→(-)*	Near Battery Voltage	VDC	
		11→R - 12→BK			
	Ω	**11 ↔ 16**	OL	Ω	
		11 ↔ 12	OL	Ω	