



VJ23 SAPC Wiring connections

Pin #	Color Codes	Wire Colors	Direction	Description
1	R	red	input	Ignition sensor input from magneto #1
2	Br	brown	input	Ignition sensor input from magneto #2
3	B	black	output	ground for magneto ignition sensor pickups
4	BG	black/green	output	ground for both throttle position sensor and power valve position sensor
5	OL	orange/blue	output	5 volt supply for both throttle position sensor and power valve position sensor
6	BY	black/yellow	output	Tachometer output (signal sent to tachometer)
7	YG	yellow/green	input	Input is 12V when Ignition switch is on, kill switch in run mode, starter button is pressed, and clutched is pulled in. Same signal drives one of the inputs to starter relay. See schematic on Page 2-21 of service manual. Also, see pin #22.
8	L	blue	input	Throttle position sensor input
9	LB	blue/black	input	Power Valve actuator position sensor
10	OR	orange/red	input	Ignition key switch. (When key is on, this is at GROUND)
11	P	pink	input	Neutral switch
12	G	green	input	Side stand switch
13	BR	black/red	output	Power Valve actuator motor
14	RB	red/black	output	Power Valve actuator motor
15	-	-	-	Not connected. No connector on SAPC and blank plug in harness connector.
16	OW	orange/white	input	12 volt power input
17	WR	white/red	output	Ignition Coil #1
18	WL	white/blue	output	Ignition Coil #2
19	Lg	light green	output	Air Solenoid #1
20	Gr	gray	output	Air Solenoid #2
21	Y	yellow	output	Oil Solenoids (Both solenoids controlled by this single output)
22	BBr	black/brown	output	From Starter Relay. (Schematic in manual labels pin as oil solenoid #2 but that is not correct). This pin is used to either activate or deactivate the starter solenoid. If the motor is already running or if the gearbox is in anything but neutral while the kickstand is down, then this pin will deactivate the starter relay, by driving this pin high (12 volts) and prevent the starter motor from running. Otherwise, this pin will be driven low (0 volts) to enable the starter motor. See schematic on page 2-21 of service manual. Also, see pin #7.
23	-	-	-	Not connected. No wire connected on wiring harness connector.
24	BW	black/white	input	GROUND

NOTES: Pin #11 connects directly to the "neutral switch" in the wiring schematic. However, it is more likely more complex as the M-Max derestictor modifies the signal from engines sensor to allow full power in the higher gears. I have a spare one of these somewhere so I'll investigate further once I figure out where it is.

Pin #22 is marked in the service manual schematic diagram as "oil solenoid #2" but this is not correct. The wiring harness has a single wire on this connector and it goes directly to the starter relay and nowhere else. Also, pin #21's yellow wire connects to both oil solenoids as verified with an ohm meter.

VJ23 Wiring diagram colors

Color Code	Color
B	Black
Br	Brown
G	Green
Gr	Gray
L	Blue
Lg	Light Green
O	Orange
R	Red
Sb	Sky Blue
W	White
Y	Yellow
Dg	Dark Green
P	Pink