Harness		FFJ105 Pin (LIB309)		Configuration	I/O	29/07/2005
	1	Ignition #3,	Q303	5V-PP/400V-OD	Out	
	2	GND Power		GND Ignition	-	
	3	Fuel pump relay		40V-OD	Out	
	4	Idle/EGAS #1	Q313-,Q309+	12V-PP,40V-OD	Out	Water Blower
	5	Ignition #2,	Q302	5V-PP/400V-OD	Out	
	6	RPM meter	Q405	40V-PP	Out	
	7	Airflow +		220k-PD 0-6.1V	In	
	8	Intake CAM sensor		1k-PU/22k-AC	In	J202=Hall type
	9	CAN-L 500kbaud		120 Ohm load	In/Out	
	10	Lambda- (Vs-Ip/YELLOW/LSU4.5)		25R to 2V5	In/Out	
	11	Knock sensor +		4.7k-AC	In	
	12	+5V reference		Max 100 mAmps	Out	
DB9 pin 3	13	RS232 RXD		1k in series	In	
	14	GND Power		GND Injection	-	
	15	Error/Shift light	Q408	40V-OD	Out	
	16	Injector #2	Q402	40V-OD	Out	
	17	Injector #3	Q403	40V-OD	Out	
	18	KL30 (constant batt 12V)		0-150 mAmps	In	
DB9 pin 5	19	GND Signal		GND Shield	-	
	20	Ignition #4,	Q307	5V-PP/400V-OD	Out	
	21	Ignition #1,	Q301	5V-PP/400V-OD	Out	
	22	Idle/EGAS #2	Q318-,Q315+	12V-PP,40V-OD	Out	VTEC J306=On
	23	Heater (H-/WHITE/LSU4.4)		40V-OD	Out	
	24	GND Signal		GND ECU	-	
	25	IP or TI (Ip/RED/LSU4.6)		220R-PP	Out	220R or Q412
	26	Airflow -		1k to GND	In	
	27	KL15 (ign)		10 mAmp	In	
	28	Lambda+ (Vs/BLACK/LSU4.1)		674k-PD 0-5V	In	
	29	Speed driveline		1k-PU, Hall	In	
	30	GND Signal		GND Knock sensor		
	31	GND Signal		GND Cam sensor		
	32	AUX:RPM/Evap/Freeburn/Oil		10k-PU, 40V-OD	Out	Water Blower
	33	Injector #1	Q401	40V-OD	Out	
	34	Exhaust vanos	Q406	40V-OD	Out	
	35	Injector #4	Q404	40V-OD	Out	
	36	Main power relay	Q409	40V-OD	Out	
	37	KL87, (H+/GRAY/LSU4.3)		10 Amp if EGAS	In	
	38	12V=ALS on		1M-PD	In	Pilot Brake
	39	Left Speed input		60k-AC ABS	In	
	40	Laptimer input		60k-AC	In	
	41	Wategate or Intake vanos		40V-OD	Out	
	42	0V=Traction		1k-PU	In	Pilot Set
	43	EGAS trottle,AFR/KnockOut		2.2M-PD/5V-PP	In/Out	
	44	Air temp		4.7k-PU 0-5V	In	
	45	Water temp		4.7k-PU 0-5V	In	
	46	MAP or Height sensor		2.2M-PD 0-5V	In	
	47	Crank sensor +		1k-PU/22k-AC	In	J201=Hall type
	48	GND Signal		GND Crank sensor		
	49	CAN-H 500kbaud		120 Ohm load	In/Out	
	50	Exh CAM Sensor/Powershift		1k-PU	In	Pilot Resume
	51	Right Speed input		60k-AC ABS	In	
	52	Potmeter		2.2M-PD 0-5V	In	
	53	Rs meas (connected to 28)		100nF 1-70kHz	In/Out	
	54	+5V reference		Max 100 mAmps	Out	
DB9 pin 2	55	RS232 TXD		1k in series	Out	

5V-PP = Push pull output with drive between 0 and 5V with 20mAmps.
400V-OD = Open drain. Drives to GND, and is limited to 400V and 10Amps.
40V-OD = Open drain. Drives to GND, and is limited to 40V. 2 or 10Amps.

1k-PU = 1kOhm pull-up resistor. Used with Hall element or switch to GND.
1M-PD = 1MOhm pull-down resistor. Used with 12V input signals.
22k-AC = 22kOhm AC load. Used with Inductive crank/cam sensors.

60k-AC = 60kOhm AC load. Used with ex. Inductive ABS sensors.

Ignition FET's IRFP450 cannot be mounted if 5V-PP ignition outputs is to
be used. This is the case when external ignition modules are used.

J201 : 1k Pullup to 60-2.   Mounted: Hall. Not mounted: Inductive.
J202 : 1k pullup tp Intake Cam. Mounted: Hall. Not mounted: Inductive.

EGAS Configuration:

J304 mounted: H-bridge output on pin 4.
J306 mounted: H-bridge output on pin 22.
Pin 52 = Potmeter is the potmeter in the cabin of the car.
Pin 43 = Egas feedback is the potmeter on the trottle body.

Not EGAS:

J304 not mounted: Pin 4 is driving low only.
J306 not mounted: Pin 22 is driving low only.
Pin 52 = Potmeter on the trottle body.
Pin 43 = Can be used as 0-5V output, temp measurement (R243=4k7) or other.

Using Wideband sensor:

Check if 56 Ohm mounted between pin 10 and 12 to get 2.5V on LambdaGND.
Check if Pin 28 connected to pin 53 to measure sonde impedance.
Wideband sensor Bosch 0 258 007 057.
Harness Connector for wideband sensor: VW 1J0 973 733

Using Lambda sensor:
---
56 Ohm not mounted between pin 10 and 12 to reduce power consumption of ECU.