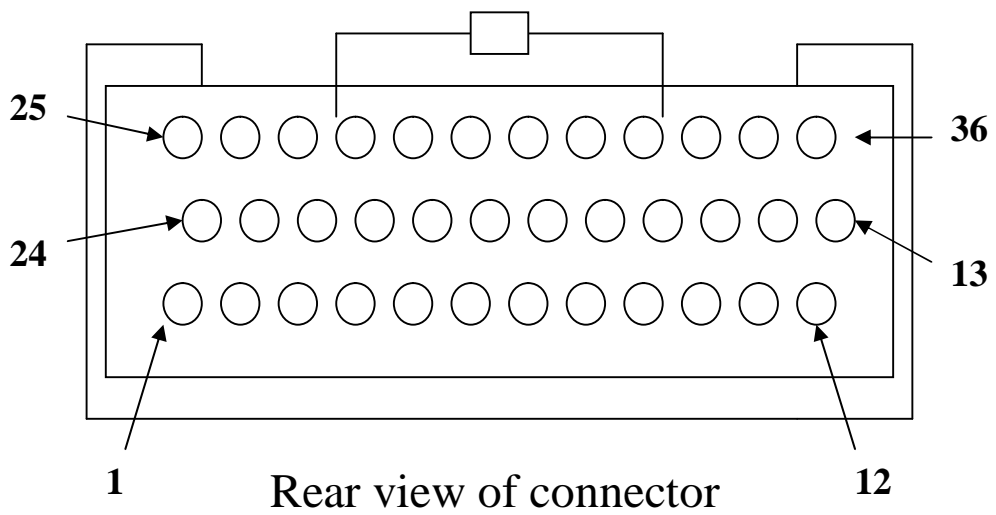


# 36-way ECU connector



Pin number	Normal use	VVC Emerald ECU
1	Injector driver 4	Injector 2
2	IACV	Channel 2
3	IACV	Channel 1
4	Main relay control	Main relay control
5	Ignition driver 2	Coil 2
6	Cooling fan relay control	Cooling fan relay
7	Oxygen sensor 1 signal input	0-1v (narrow band) input
8	Throttle pot signal input	0-5v input
9	Throttle pot supply / +5v out	TPS / MAP +5v supply
10	AuxIn10	Oil temp sensor signal
11	Ignition sense input	+12v supply via ignition switch
12	Tacho output signal	12v pulsed output
13	Immobilisor input	Immobilisor signal / Aux digital input
14	+8v out	Not used
15	Cam phase	Cam sensor signal
16	Air temperature signal input	ATS
17	AuxOut17	VVC increase
18	Oxygen sensor signal earth	Lambda signal earth
19	Shift-light driver	
20	Fuel pump relay driver	Fuel pump driver
21	AuxOut21	VVC decrease
22	IACV	Channel 3
23	Injector driver 2	Injector 3
24	Injector driver 1	Injector 1
25	Ignition driver 1	Coil 1
26	Injector driver 3	Injector 4
27	IACV	Channel 4
28	+12v Ignition supply	+12v supply
29	ECU earth	System earth
30	Sensor earth (common earth)	Common sensor earth
31	Main trigger signal input	Crank sensor signal
32	Main trigger sensor earth	Crank / Cam sensor earth
33	Coolant temp signal input	CTS
34	AuxIn34	MAP signal
35	AuxIn35	
36	AuxIn36 / AuxOut36	AuxOut36 - Lambda heater relay control

## VVC loom **RED** connector

Pin Number	Wire colour	Function	Emerald M3DK plug
1	Red/yellow	Cam sensor +	15
2	Black/blue	Cam sensor -	<b>32</b> (join with wire from Red26)
3			
4			
5			
6			
7			
8			
9	Black/white	Tacho output	12
10	Orange/green	IACV	22
11			
12	Yellow/brown	Injector, cylinder 1	24
13	Yellow/red	Injector, cylinder 2	1
14	Yellow/white	Injector, cylinder 3	23
15	Orange/blue	IACV	27
16			
17	Yellow/orange	-	-
18			
19			
20			
21			
22			
23			
24			
25	Blue/purple	Crank sensor +	31
26	Blue/white	Crank sensor -	<b>32</b> (join with wire from Red2)
27	Grey	Lambda sensor signal	7
28	Green/grey	Lambda sensor earth	18
29			
30			
31		diagnostics	-
32	Brown/Black	Engine bay cooling fan relay	-
33	Pink/blue	IACV	2
34	Orange/grey	IACV	3
35	Yellow/black	Injector, cylinder 4	26
36			

## VVC loom **BLACK** connector

Pin Number	Wire colour	Function	Emerald M3DK plug
1			
2	Brown/black	VVC increase	17
3			
4			
5			
6			
7			
8	Red/green?	+5v sensor supply (MAP sensor)	<b>9</b> (join with wire from Black18)
9			
10	Green/orange	Oil temp sensor signal	10
11	Grey/white	Engine bay temp signal	-
12	Yellow/green	Throttle pot signal	8
13	Pink/black	Sensor earth	30
14	Black/green	Air temp sensor signal	16
15	Pink/green	Coolant temp sensor signal	33
16	-	-	-
17	Yellow/red	Immobiliser input	13
18	Yellow/purple	+5v sensor supply (TPS)	<b>9</b> (join with wire from Black8)
19	-	-	-
20	Black/green	Oxygen sensor heater relay	36
21	Black	ECU earth	29
22	White/pink	Main relay control	4
23	Black/yellow	VVC decrease	21
24	-	-	-
25	White/black	Ignition coil 1	25
26	White/black	Ignition coil 2	5
27	Brown/pink	+12v from main relay	28
28	Blue/grey	Cooling fan relay	6
29	-	-	-
30	Black/purple	Fuel pump relay	20
31	Green/brown	-	-
32	-	-	-
33	White	Ignition sense	11
34			
35			
36	Yellow/purple	MAP sensor signal	34