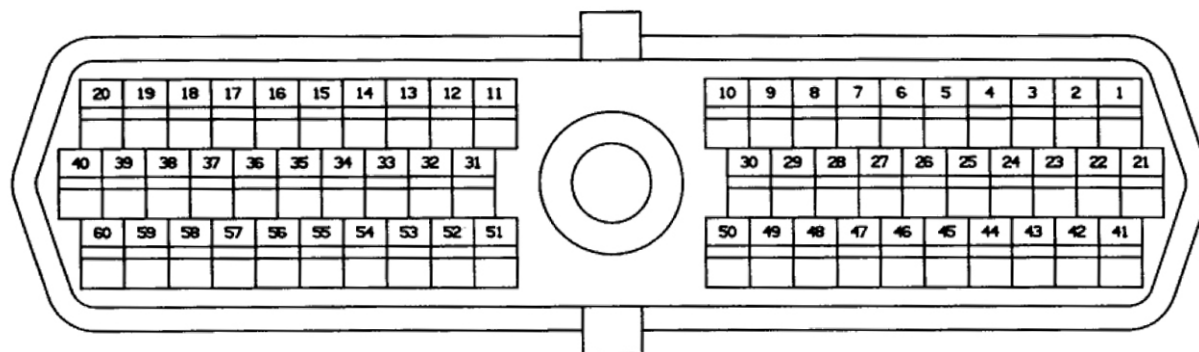


FTC1-121 Fuel/Timing Calibrator for Jeep 4.0

Use and Installation Instructions for models from 1991 through 1995

This is the wire side view of the PCM connector:



Wire colors below are for the 1991 Wrangler. See the table on the following page for the specific wire colors used on all models from 1991 through 1995.

- 1) Use with R4 software
- 2) Select Vac/Pressure and Additional Injector Controller under system settings. Refer to the AIC1 and FTC1 data sheets for more information.
- 3) Select 3-cylinder, 2-stroke under Engine Settings
- 4) Program timing retard in Map table A
- 5) The cell values can range from 0 to 20. A value of 20 will result in 20 degrees of retard.
- 6) Cell values can have one decimal place. For example 10.1. There are a total of 200 levels available for cell value.
- 7) Program the fuel in Map table B
- 8) The cell value represents the additional injector on-time in milliseconds. The minimum practical cell value is 1.0 the maximum call value will have a corresponding duty cycle of 40%
- 9) The highest cell value is 25.5, but you should never get anywhere near that number.
- 10) Cell values can have one decimal place. For example 10.1. There are a total of 200 levels available for cell value
- 11) Disconnect the battery before making connections to the factory wiring harness.
- 12) Use solder and heat shrink for the best possible electrical connections
- 13) All connections are made to the wire harness leading to the ECU connector
- 14) Wire colors in bold refer to wires on the FTC1
- 15) Connect the **RED** wire (B+) to the YL wire on pin 9
- 16) Connect one **BLACK** wire (B-) to the BK wire on pin 11
- 17) Connect the other **BLACK** wire (B-) to the BK wire on pin 12
- 18) Cut the RD/DG crank sensor wire leading to pin 24
- 19) Connect the **GRAY** wire to the wire leading to the crank sensor
- 20) Connect the **GRAY/BLACK** wire to the wire leading to the ECU crank sensor input
- 21) Cut the GY/BK cam sensor wire leading to pin 44
- 22) Connect the **TAN** wire to the wire leading to the cam sensor
- 23) Connect the **TAN/YELLOW** wire to the wire leading to the ECU cam sensor input
- 24) Connect the **BLUE** wire (+5V) to the BR/YL wire on pin 6
- 25) Cut the RD/WT MAP sensor wire leading to the ECU on pin 1
- 26) Connect the **GREEN** wire (MAP IN) to the wire leading to the MAP sensor
- 27) Connect the **VIOLET** wire (MAP OUT) to the wire leading to the ECU
- 28) Cut the GY O2 sensor wire leading to the ECU on pin 41

- 29) Connect the **PINK** wire (O21 IN) to the wire leading to the O2 sensor
- 30) Connect the **PINK/BLUE** wire (O21 OUT) to the wire leading to the ECU
- 31) The **WHITE** and **WHITE/GREEN** wires are not used
- 32) Plug the injector connector into the additional injector
- 33) Connect the vacuum line to a source of manifold pressure
- 34) Reconnect the battery

Wire colors by function for 1991 through 1995 Wrangler YJ

Function	Pin#	1991	1992	1993	1994	1995
IGN	9	YL	WT/YL	DB/WT	DB/WT	DB/WT
Ground	11,12	BK	BK	BK	BK	BK
+5 V	6	BR/YL	BR/YL	VT/WT	VT/WT	VT/WT
Map	1	RD/WT	RD/WT	DG/RD	DG/RD	DG/RD
Crank	24	RD/DG	RD/GN	GY/BK	GY/BK	GY/BK
Sync	44	GY/BK	GY/BK	TN/YL	TN/YL	TN/YL
O2 B1	41	GY	GY	BK/DG	BK/DG	BK/DG

Wire colors by function for 1991 through 1995 Cherokee XJ

Function	Pin#	1991	1992	1993	1994	1995
IGN	9	DB	DB	DB	DB	DB
Ground	11,12	BK/TN	BK/TN	BK/TN	BK/TN	BK/TN
+5 V	6	VT	VT/WT	VT/WT	VT/WT	VT/WT
Map	1	DG/RD	DG/RD	DG/RD	DG/RD	DG/RD
Crank	24	GY/BK	GY/BK	GY/BK	GY/BK	GY/BK
Sync	44	TN/YL	TN/YL	TN/YL	TN/YL	TN/YL
O2 B1	41	BK/DG	BK/DG	BK/DG	BK/DG	BK/DG

Wire colors by function for 1991 through 1995 Comanche and Grand Cherokee

		Comanche		Grand Cherokee		
Function	Pin#	1991	1992	1993	1994	1995
IGN	9	DB	DB	LB/RD	LB/RD	LB/RD
Ground	11,12	BK/TN	BK/TN	BK/TN	BK/TN	BK/TN
+5 V	6	VT	VT/WT	VT/WT	VT/WT	VT/WT
Map	1	DG/RD	DG/RD	RD/WT	RD/WT	RD/WT
Crank	24	GY/BK	GY/BK	RD/LG	RD/LG	RD/LG
Sync	44	TN/YL	TN/YL	GY/BK	GY/BK	GY/BK
O2 B1	41	BK/DG	BK/DG	BK/OR	BK/OR	BK/OR

Color Code

Abbreviation	Color	Abbreviation	Color
BL	Blue	OR	Orange
BK	Black	PK	Pink
BR	Brown	RD	Red
DB	Dark Blue	TN	Tan
DG	Dark Green	VT	Violet
GY	Grey	WT	White
LB	Light Blue	YL	Yellow
LG	Light Green		