

FITECH ULTIMATE LS ECU #7005x

FITECH PIN	FUNCTION	Color
1	#N/A	
2	IC 1 CONTROL	Orange
3	GROUND	Black
4	IC 8 CONTROL	Orange
5	IC 5 CONTROL	Yellow

far gnd

6	Trans 1-2 SHIFT SOLENOID VALVE CONTROL	Green
7	FUEL INJECTOR 5 CONTROL	White
8	FUEL INJECTOR 3 CONTROL	Tan
9	LOW REFERENCE MAP & IAT SENSOR	Orange
10	CKP (Crankshaft Position) SENSOR SIGNAL	Blue
11	12 VOLT REFERENCE, CKP	Green
12	BATTERY POSITIVE VOLTAGE	Orange
13	CMP (Camshaft Position) SENSOR SIGNAL	Tan
14	TRANSMISSION FLUID PRESSURE (Range) SWITCH SIGNAL C	Red
15	#N/A	
16	VSS HIGH SIGNAL	Purple
17	5 VOLT REFERENCE (TPS)	Grey
18	5-VOLT REFERENCE (MAP SENSOR)	Grey
19	Wideband Driver side UN1	Orange
20	Wideband Driver side RT1	Blue
21	Wideband Passenger side UN2 / 1 - optional	Orange
22	Wideband Passenger side RT2 / 2 - optional	Blue
23	Wideband Passenger side WBO2HT2 / 4 - optional	White
24	Wideband Driver side WBO2HT1 - optional	White

trans A

trans P

25	TCC SOLENOID VALVE CONTROL	Blue
26	FUEL INJECTOR 8 CONTROL	Blue
27	FUEL PUMP RELAY CONTROL PRIMARY	Yellow
28	GROUND	Black
29	#N/A	
30	12 VOLT REFERENCE, CMP	Red
31	BATTERY POSITIVE VOLTAGE	Orange
32	#N/A	
33	LOW REFERENCE CAMSHAFT POSITION SENSOR	White
34	#N/A	
35	K-LINE	Tan
36	VSS LOW SIGNAL	Green
37	KS 2 SIGNAL	Green
38	KS 1 SIGNAL	Blue
39	Wideband Driver side IP1	Red
40	Wideband Driver side VM1	Yellow
41	Wideband Passenger side IP2 / 6 - optional	Red
42	Wideband Passenger side VM2 / 5 - optional	Yellow
43	PCM GND	Black

Trans T

far gnd

deepest point in socket

far gnd

44	4L80E TCC, 4L60E 3-2 SHIFT SOLENOID	White
45	#N/A	
46	FUEL INJECTOR 2 CONTROL	Green
47	Alternator GENERATOR TURN ON SIGNAL	Red
48	Trans Torque Converter Clutch (TCC) SOLENOID OUTPUT PWM	Tan
49	IGNITION 1 VOLTAGE	White
50	AC Request In signal from Clutch drive	Yellow
51	LOW REFERENCE TRANSMISSION TEMPERATURE SENSOR	Black
52	TCC BRAKE SWITCH SIGNAL	Yellow
53	TRANSMISSION FLUID PRESSURE SWITCH SIGNAL A (Range)	White
54	IAT SENSOR SIGNAL	Tan
55	VSS SIGNAL (SPEEDO) Output	Black
56	#N/A	
57	ENGINE SPEED SIGNAL (TACH) Output	White
58	Trans Temp (TFT) SENSOR SIGNAL	Yellow
59	IAC COIL A HIGH CONTROL	Red
60	IAC COIL A LOW CONTROL	Blue
61	IAC COIL B LOW CONTROL	Yellow
62	IAC COIL B HIGH CONTROL	Green

trans S

trans U

trans M

trans N

trans L

63	Trans PC SOLENOID VALVE HIGH CONTROL SOL. A	Red
64	Trans PC SOLENOID VALVE LOW CONTROL SOL. A	Orange
65	FUEL INJECTOR 6 CONTROL	Yellow
66	FUEL INJECTOR 4 CONTROL	Orange
67	FAN1 LOW SPEED COLLING FAN RELAY CONTROL	Green
68	FAN2 HIGH SPEED COOLING FAN RELAY CONTROL	Blue
69	FUEL INJECTOR 1 CONTROL	Black
70	FUEL INJECTOR 7 CONTROL	Red
71	2-3 SHIFT SOLENOID VALVE CONTROL	Yellow
72	TRANSMISSION FLUID PRESSURE SWITCH SIGNAL B	Blue
73	ECT SENSOR SIGNAL	Yellow
74	LOW REFERENCE CRANK & TPS & ECT	Yellow
75	MAP SENSOR SIGNAL	Green
76	TPS SENSOR SIGNAL	Yellow
77	IC 6 CONROL	Blue
78	IC 7 CONTROL	Red
79	IC 2 CONTROL	Red
80	IC 4 CONTROL	Orange
81	IC 3 CONTROL	Blue

trans C

trans D

trans B

trans R

Relay and Fuses from Fuse and Relay Side

Black - 12V Fro	Orange - Fuel Pu	Red from Key	Big Red Battery
Red - Battery	Yellow - 27 Pump	Main Relay outp	Ground
Transmission	Handheld	To ECU - 12 & 3	Fuel Pump
Inj Coil Driver	Inj Coil Passenge	49 - Ign from M	Widebands and Alternator

Red from Key needs 12V when ignition switch is on and during crank, preferably off in accessory

Coil D, facing open end of connector, latch up

33 - Reference	IC 3 pin 81	IC1, pin 2	12V from fuse
	IC 5 pin 5	IC 7 pin 78	Coil Ground Far

Coil P, facing open end of connector, latch up

51 Reference G	IC 6 pin 77	IC8, pin 4	12V from fuse
	IC 4 pin 80	IC 2 pin 79	Coil Ground Far

MAP, facing open end of connector, latch up

5V, pin 18	GND pin 9	MAP, pin 75
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spelling wrong

CKP, facing open end of connector, latch up

CKP Signal pin	GND pin 74	12V CKP, pin 11
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CMP, facing open end, latch up

CMP Signal pin	GND pin 33	12V pin 30
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Ground RING (Near to ECU with long lead)

Handheld Grou	Main Relay Ground
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VSS, facing open end, latch up

VSS High pin 14	VSS Low pin 36
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TPS, facing open end, latch up

Ref Gnd 74	5V pin 17
TPS, pin 76	

WBO2-1, facing open end, latch up

RT1, pin 20	HT1 pin 24	IP1, pin 39
UN1, pin 19	12V from Fuse	VM1, pin 40

WBO2-2 Intermediate

UN2, pin 21	RT2, pin 22	12V from Fuse
VM2, pin 42	IP2, pin 41	WBO2 HT2 pin 23

Knock, facing open end, latch up

KS1, pin 38	Knock 2, pin 37
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Alternator, Facing open end, latch up

Generator Turn	12V from Fuse
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IAT, Facing open end, latch up

IAT signal, pin 39	low reference
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IAC, facing open end, latch up

IAC A+, pin 59	IAC A-, pin 60	IAC B+, pin 62	IAC B-, pin 61
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ECT, Facing open end, latch up

ECT, Pin 73	74 - Low Reference
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Trans connector View from trans side, arrow on top

	D blk PCv return	C red PCv feed	B yel Shft A	A wht Shft A	E org Fuse
S wht 3-2 sol/TCC PWM 4l80e	R blu TP2	P red TP3	N org TP1	M blk Temp	L yel Temp
			U tan TCC	T org TCC sol (4l60e only)	

ECU PIN	Transmission Controls 4L80E	4L60E	Color
A	6 Shift Solenoid A Output		Green
B	71 Shift Solenoid B Output		Yellow
C	63 Transmission Force Motor Feed		Red
D	64 Transmission Force Motor Return		Orange
E	Power from Fuse from Main Relay		Black
L	58 TFT (Transmission Temperature) Sensor Signal		Yellow
M	51 TFT Sensor Return		Black
N	53 Transmission Pressure Switch Signal 1		White
P	14 Transmission Pressure Switch Signal 3		Red
R	72 Transmission Pressure Switch Signal 2		Blue
S	44 TCC Solenoid Output PWM	3-2 Solenoid	White
T	25	TCC	Blue
U	48	TCC PWM	Tan

SUB HARNESS Trans Sub Harness 6p

L yel temp	empty
T org TCC sol	U tan TCC PWM 4l60e
S wht 3-2 Sol / T	M blk temp return

SUB HARNESS

Trans Sub Harness 8P			
N org TP1	D blk pcv return	B yel shft B	E org Fuse
A wht Shft A	P red TP3	R blu TP2	C red pcv feed

16	VSS HIGH SIGNAL	Purple
36	VSS LOW SIGNAL	Green

Flying Lead Harness

52	TCC BRAKE SWITCH SIGNAL	Yellow	High when no brake pressed
55	VSS SIGNAL to Speedometer (12v square)	Black	Programmable in Handheld
50	AC Request In signal from Clutch drive	Yellow	Default High when AC ON
67	FAN1 LOW SPEED COLLING FAN RELAY CONTROL	Green	Must connect to relay to turn on Relay
68	FAN2 HIGH SPEED COOLING FAN RELAY CONTROL	Blue	Must connect to relay to turn on Relay
57	ENGINE SPEED SIGNAL (TACH) Output (12V square)	White	Programmable in Handheld

ECU connector viewed from harness side

4	5	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6
		43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
	3																			
		62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
1	2	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63