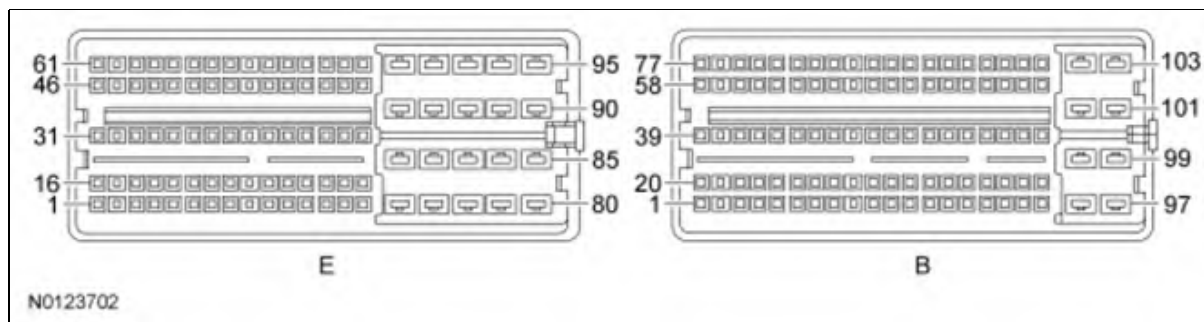


Fig 1: 3.5L GTDI Transit PCM Connector



Courtesy of FORD MOTOR CO.

3.5L GTDI TRANSIT > TYPICAL DIAGNOSTIC REFERENCE VALUES

Sensors/Inputs	PCM Pin/PID Only	Measured/PID Values				Units Measured/PID
		KOEO	Hot Idle	48 KM/H (30 MPH)	89 KM/H (55 MPH)	
HTRCM12	B1	0	569	569	569	mA
FPM	B27	59.40	59.40	60	60.39	%
CAC_T	B32	34 (93.20)	33 (91.40)	28 (82.40)	30 (86)	DEG C (DEG F)
CAC_V	B32	2.54	2.56	2.84	2.74	VOLTS
KEYST	B48	ON	ON	ON	ON	ON/OFF
AAT	B51	21 (69.80)	21 (69.80)	20 (68)	20 (68)	DEG C (DEG F)
AAT_V	B51	1.23	1.23	1.25	1.24	VOLTS
APP2	B54	0.39	0.39	0.63	0.66	VOLTS
APP1	B55	0.78	0.78	1.25	1.30	VOLTS
O2S22	B56	(I)	switching (D)	switching (D)	switching (D)	VOLTS
O2S12	B57	(I)	switching (D)	switching (D)	switching (D)	VOLTS
HTRCM22	B61	0	618	618	618	mA
BOO2	B65	OFF	OFF	OFF	OFF	ON/OFF
BOO1	B66	OFF	OFF	OFF	OFF	ON/OFF
TURBO_INLET	B72	98.87 (14.34)	98.87 (14.34)	98.87 (14.34)	98.75 (14.32)	kPa (PSI)
TURBO_INLET_V	B72	3.99	3.99	3.99	3.99	VOLTS
FTP	B73	2.26/-632 (-0.09)	2.26/-632 (-0.09)	2.19/-744 (-0.11)	2.38/-426 (-0.06)	VOLTS/Pa (PSI)
FTP_H2O	B73	-2.52	-2.52	-3	-1.72	in-H ₂ O

TCBP	B74	99.38 (14.41)	99.38 (14.41)	99.71 (14.46)	102.71 (14.90)	kPa (PSI)
TCBP_V	B74	1.56	1.56	1.56	1.77	VOLTS
IAT	B75	1.16/66 (150.8)	1.52/45.56 (114.80)	2.31/26 (78.80)	2.35/27 (80.60)	VOLTS/DEG C (DEG F)
B+	B100	12.29	14.33	13.89	14.05	VOLTS
IAT2	E33	1.46/58 (136.40)	1.44/58 (136.40)	2.48/34 (93.20)	2.32/38 (100.40)	VOLTS/DEG C (DEG F)
MAP	E34	99 (14.36)	42 (6.09)	39 (5.66)	77 (11.17)	kPa (PSI)
MAP_GAUGE	E34	2 (0.29)	59 (8.56)	62 (8.99)	24 (3.48)	kPa (PSI)
MAP_V	E34	1.60	0.97	0.93	1.64	VOLTS
FRP	E35	1.12/3.68 (533.74)	0.74/1.48 (214.66)	0.87/2.25 (326.33)	1/3.02 (438.01)	VOLTS/MPa (PSI)
CHT	E36	3.01/97 (206.60)	3.01/97 (206.60)	3.18/91 (195.80)	3.05/91 (195.80)	VOLTS/DEG C (DEG F)
KNOCK_2	E50	0	46	67	57	COUNT
TP2	E52	1.24/24.70	0.77/15.29	1.17/23.13	1.63/32.54	VOLTS/%
O2S21_CUR	E61	(I)	switching	switching	switching	mA/uA
O2S21	E62	(I)	switching (C)	switching (C)	switching (C)	VOLTS
O2S11_CUR	E63	(I)	switching	switching	switching	mA/uA
KNOCK_1	E65	0	30	42	43	COUNT
TP1	E68	4.09/18.03	4.32/15.29	4.23/15.29	3.96/20.39	VOLTS/%
AC_REQ	PID	NO	NO	NO	NO	YES/NO
APP	PID	0	0	15	16.50	%
APP_MAXDIFF	PID	0	0	0	0	DEG
APP_MODE	PID	NO PEDAL	NO PEDAL	PART PEDAL	PART PEDAL	NO PEDAL/PART PEDAL
APP1 (APP_D)	PID	15.29	15.29	25.09	25.88	%
APP2 (APP_E)	PID	7.84	7.84	12.54	12.94	%
BRKOVRR_ACTION	PID	1	1	1	1	NUMERIC VALUE
BRKOVRRD_POSS	PID	143	143	144	144	NUMERIC VALUE
CYL_1-6_ACCL	PID	(I)	-1 TO +1	-1 TO +1	-1 TO +1	NUMERIC VALUE
DECHOKE	PID	YES	NO	NO	NO	YES/NO
DIST_BRKOVRRD	PID	50.96 (31.67)	50.96 (31.67)	78.45 (48.75)	80.45 (49.99)	KM (MILES)
EONV_RDY	PID	NOT READY	NOT READY	NOT READY	NOT READY	READY/NOT READY

EQ_RAT11	PID	0:1	14.466:1	14.044:1	14.419:1	RATIO
EQ_RAT21	PID	0:1	14.452:1	14.218:1	14.476:1	RATIO
ETC_ACT	PID	7.97	2.27	6.35	5.92	DEG
ETC_TRIM	PID	0.36	0.36	0.36	0.36	DEG
FLI	PID	90.19 (H)	90.19 (H)	86.27 (H)	85.49 (H)	%
IACKAM2	PID	-0.23	-0.38	-0.47	-0.38	NUMERIC VALUE
INJPWR_M	PID	0	0	0	0	VOLTS
KNK_CNTR_CYL1	PID	0	0	0	0	COUNT
KNK_CNTR_CYL2	PID	0	1	1	1	COUNT
KNK_CNTR_CYL3	PID	0	0	0	0	COUNT
KNK_CNTR_CYL4	PID	0	0	0	0	COUNT
KNK_CNTR_CYL5	PID	0	0	0	0	COUNT
KNK_CNTR_CYL6	PID	0	0	0	0	COUNT
LOAD	PID	0 (I)	32.54	30.19	52.54	%
MISFIRE	PID	NO	NO	NO	NO	YES/NO
MP_LRN	PID	YES	YES	YES	YES	YES/NO
NUM_MISFIRE	PID	0	2	22	2	COUNT
O2S11_IMPED	PID	4.98	1.01	1.01	1.01	VOLTS
O2S11_READY	PID	NO	YES	YES	YES	YES/NO
O2S11_TR	PID	0	0	0	0	Kohm
O2S21_IMPED	PID	4.99	1.02	1.01	1.01	VOLTS
O2S21_READY	PID	NO	YES	YES	YES	YES/NO
O2S21_TR	PID	0	0	0	0	Kohm
OCTADJ_R_LRND	PID	3.27	3.27	5.26	5.26	%
RPM	PID	0	654.50	1418	1565	RPM
SYNC	PID	NO	YES	YES	YES	YES/NO
TP1_LRN_TRIM	PID	6.87	6.87	6.87	6.87	DEG
TP2_LRN_TRIM	PID	7	7	7	7	DEG
TPMODE	PID	CT	CT	PT	PT	CLOSED/PART/WIDE OPEN THROTTLE
TURBO_BP1_STAT	PID	NO FAULT	NO FAULT	NO FAULT	NO FAULT	FAULT/NO FAULT
VCT_EXH_ACT1	PID	0	-0.12	39	37.50	DEG
VCT_EXH_ACT2	PID	0	0.12	38.68	36.25	DEG
VCT_EXH_DIF1	PID	0	0.12	-0.31	0.12	DEG
VCT_EXH_DIF2	PID	0	-0.12	0	0.75	DEG

VCT_INT_ACT1	PID	0	0.06	1.25	1.25	DEG
VCT_INT_ACT2	PID	0	0	0.12	0.43	DEG
VCT_INT_DIF1	PID	0	-0.18	-1.43	-1.37	DEG
VCT_INT_DIF2	PID	0	0.12	-0.31	-0.31	DEG
VCTSYS	PID	OPEN LOOP	CLOSED LOOP	CLOSED LOOP	CLOSED LOOP	OPEN LOOP/CLOSED LOOP
VSS	PID	0	0	48 km/h (30 MPH)	89 km/h (55 MPH)	km/h/MPH

Actuators/Outputs	PCM Pin/PID Only	Measured/PID Values				Units Measured/PID
		KOEO	Hot Idle	48 KM/H (30 MPH)	89 KM/H (55 MPH)	
HTR12	B1	OFF	ON	ON	ON	ON/OFF
HFC	B4	OFF	OFF	OFF	OFF	ON/OFF
EVAPCV	B20	0/OFF	0/OFF	0/OFF	0/OFF	%/ON-OFF
EVAPCP	B22	0	35	0	22.30	%
LFC	B23	OFF	OFF	OFF	OFF	ON/OFF
FP	B39	75/OFF	27.96/ON	28.17/ON	28.43/ON	%/ON/OFF
HTR22	B61	OFF	ON	ON	ON	ON/OFF
VCT_INT_DC1	E1	0	0	0	41.79	%
TURBO_BPASS	E3	OFF	OFF	ON	OFF	ON/OFF
HTR11	E14	OFF	ON	ON	ON	ON/OFF
O2S11_HTR	E14	0	40	35.29	34.11	%
HTR21	E15	OFF	ON	ON	ON	ON/OFF
O2S21_HTR	E15	0	41.96	35.29	34.11	%
TURBO_WGATE	E16	0	0	0	90.89	%
VCT_EXH_DC2	E17	0	0	48.44	50.64	%
VCT_INT_DC2	E18	0	0	0	41.59	%
VCT_EXH_DC1	E29	0	0	44.64	45.09	%
F_VCV	E78	0	7.40	12.06	19.55	%
ETC [TAC_PCT]	PID	9.02	2.74	7.84	7.05	%
EVAP020C	PID	NO	NO	NO	NO	YES/NO
EVAPSOAK	PID	NO	NO	NO	NO	YES/NO
EVAPSTA	PID	NOT RUNNING	NOT RUNNING	NOT RUNNING	NOT RUNNING	STATUS