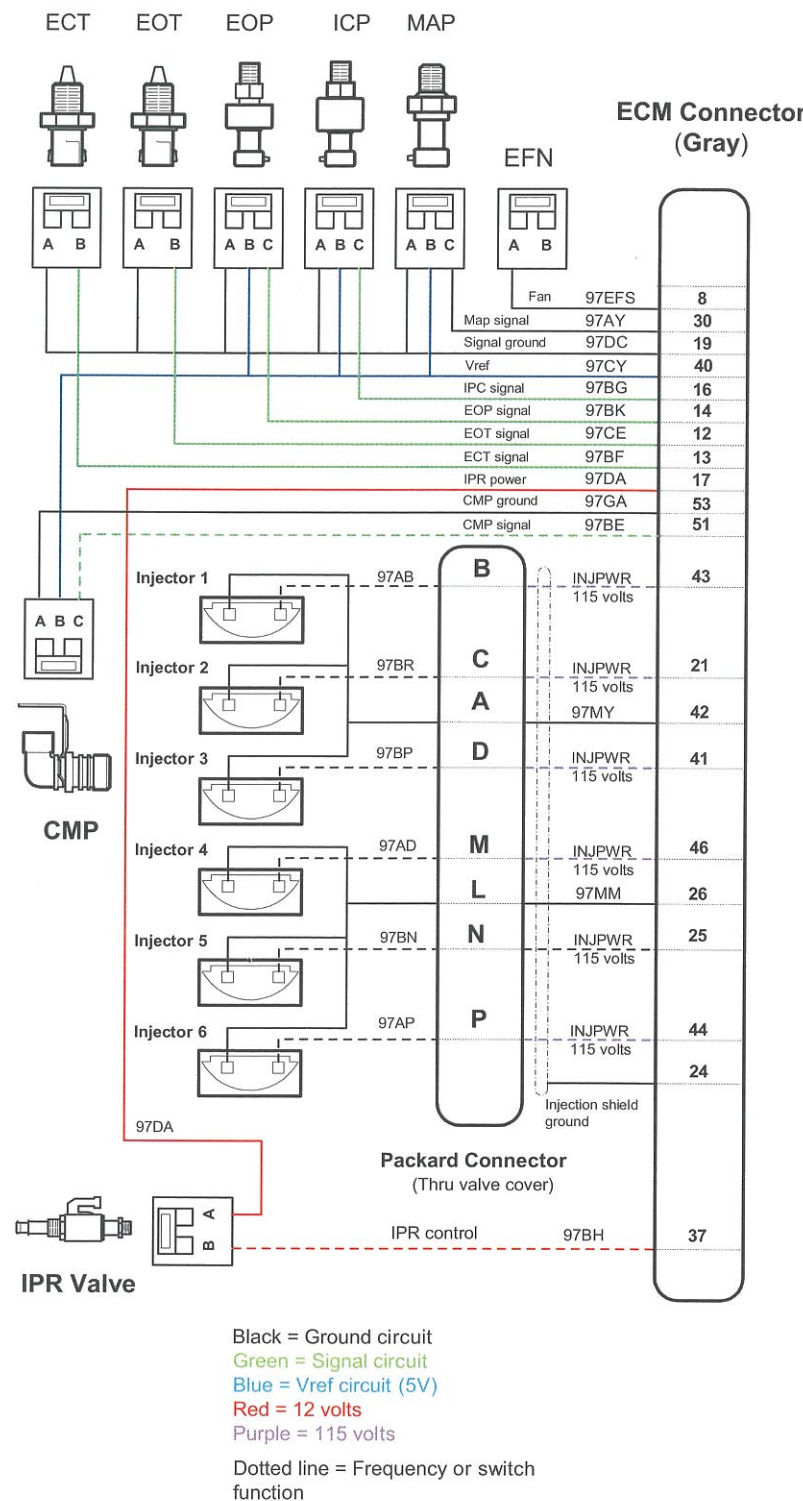


Warning: Refer to safety instructions in Diagnostic Manual EGES-215, before starting diagnostic procedures.

Engine Mounted Components



SIGNAL VALUES DT 466 and DT 530 (All values with breakout box installed on ECM and harness)

Pin	Item	Circuit	Circuit No.	Key ON	Low Idle		High Idle		Operating Range	Comments
					Signal	Data List	Signal	Data List		
ECM CONNECTOR (GREY)										
8	EFN	Fan	97EFS	0V = Solenoid ON (fan OFF).	12V = Solenoid OFF (fan ON)					
12	EOT	Engine Oil Temperature	97CE	Temperature dependent						4.348V @ 32° F, 0.819V @ 212° F
13	ECT	Engine Coolant Temperature	97BF	Temperature dependent						4.33V @ -5° F, 0.356V @ 230° F
14	EOP	Engine Oil Pressure	97BK	0.61V	2.6V	39 psi	3.60V	60 psi	0.5V-4.64V	0.5V @ 0 psi, 4.64V @ 80 psi
16	ICP	Injection Control Pressure sensor	97BG	0.2V	0.48V	431 psi	1.97V	1370 psi	0.3V-4.5V	0.84V @ 444 psi, 3.8V @ 3000 psi
17	IPR	Injection Pressure Regulator power	97DA	B+	B+	-	B+	-	B+	Power supply for IPR valve
19	Sig_Grd D	Signal Ground D	97DC	0V	0V	-	0V	-	0V	Ground for engine sensors
21	INJ_2	Injector 2	97BR	Do not measure voltage						High voltage pulse width signal
24	INJ_SHD	Injector Shield Ground	97DW							Bank 1 injector grounds to ECM
25	INJ_5	Injector 5	97BN	Do not measure voltage						High voltage pulse width signal
26	INJ_gnd	Injector ground 4,5, and 6	97MM	Do not measure voltage						Bank 1 injector grounds to ECM
30	MAP	Manifold Absolute Pressure	97AY	0.92V	0.96V	0.5 psi	1.36V	3.75 psi	0.85V-4.56V	0.92V @ 0 psi, 2.72V @ 18 psi
37	IPR_CNTR	Injection Pressure Regulator Control	97BH	0V	0V	-	0V	-	0V	Duty cycle, duty controlled
40	Vref D	Voltage reference D	97CY	5±0.5V	5±0.5V		5±0.5V		5±0.5V	Vref for engine sensors
41	INJ_3	Injector 3	97BP	Do not measure voltage						High voltage pulse width signal
42	INJ_gnd	Injector ground 1,2, and 3	97MY	Do not measure voltage						Bank 2 injector grounds to ECM
43	INJ_1	Injector 1	97AB	Do not measure voltage						High voltage pulse width signal
44	INJ_6	Injector 6	97AP	Do not measure voltage						High voltage pulse width signal
46	INJ_4	Injector 4	97AD	Do not measure voltage						High voltage pulse width signal
51	CMP	Camshaft Position Sensor	97BE	5V/1V	2.11V	-	2.44V	-	140-600 Hz	700-3000 rpm, Hz vary with rpm
53	CMP Grd	Camshaft sensor ground	97GA	0V	0V	-	0V	-	0V	CMP sensor ground
ECM CONNECTOR (BLACK)										
1	DC/DC	Power ground for injector drivers	K97V	0V	0V	-	0V	-	0V	
2	DC/DC	Power ground for injector drivers	K97P	0V	0V	-	0V	-	0V	
3	Vref B	Voltage reference B	K97C	5±0.5V	5±0.5V		5±0.5V		5±0.5V	Vref for chassis builder sensors
4	EPG	Electronic Pressure Governor	K97HE	Input from EPG enable switch						12V enabled, 0V disabled
5	Vref C	Voltage reference C	K97DD	5±0.5V	5±0.5V		5±0.5V		5±0.5V	Vref for body builder sensors
6	RPS_Grd	Remote Pedal Sensor Ground	K97HM	0V	0V	-	0V	-	0V	Remote accelerator pedal sensor ground
7	Sig_Gnd C	Signal Ground C	K97WA	0V	0V	-	0V	-	0V	Signal ground body builder sensors
8	APS	Accelerator Pedal Sensor	K99T	0.64V	0.64V	0%	3.84V	102%	0.64V-3.84V	APS signal (min 3.65V required for 102%)
9	XCS	Input transfer case switch	K97XC							12V = Auxiliary ON, 0V = Drive line
10	CLS	Coolant Level Switch	K34A	Coolant temperature dependent					0V/5V	0V = Low cool, 5V = Full cool
11	Sig_gnd B	Signal ground B	K97D	0V	0V	-	0V	-	0V	Signal ground cab mounted sensors
12	IAT	Intake Air Temperature	K97E	Temperature dependent						3.846V @ 32° F, 0.446V @ 212° F
13	EPG	Electronic Pressure Gov. sensor	K97EA							0.49V @10 psi, 4.88V @ 510 psi
16	ATA (+)	Communication Link (Red)	K3A+	Digital data signal-no signal, no EST data display						Dash/Diagnostic/Programming
17	ATA (-)	Communication Link (Blue)	K3B-	Digital data signal-no signal, no EST data display						Dash/Diagnostic/Programming
18	KL31B	CAN Shield	K5AE	CAN Shield						Dash/Diagnostic/Programming
19	CAN +	CAN	K5V	Digital data Shield						
20	CAN -	CAN	K5W	Digital data Shield						
21	DC/DC	Power supply for injector drivers	K97F	B+	B+	B+	B+	B+	B+	Power from ECM power relay
22	DC/DC	Power supply for injector drivers	K97Z	B+	B+	B+	B+	B+	B+	Power from ECM power relay
23	ECM gnd	ECM ground	K97N	0V	0V	-	0V	-	0V	
24	Vref (+)	ECM ignition voltage	K97M	B+	B+	B+	B+	B+	B+	Power from ignition circuit
25	ECM_CNTR	ECM power relay control	K97J	1.15V	1.15V	-	1.15V	-	B+/1.15V	1.15V = ECM relay ON, B+ = ECM relay OFF
26	DDS	Driveline Disengagement Switch	K17E	0V = Clutch pedal down, 12V = Clutch pedal up, 0V = Transmission in gear, 12V = Transmission in neutral						
27	IVS	Idle Validation Switch	K99S	0V/12V	0V	-	12V	-	0V/12V	0V = APS ON at idle, 12V =

I6-HEUI Electronic Engine Controls (Truck Side)

