

# Trinity PID LIST

The Trinity offers many, many parameters to monitor! Each of them has a special definition and abbreviation in your vehicles computer. The list below is a general guideline and description for some of the parameters you will find both in Trinity and the DiabloSport Data Viewer. Your vehicle may display some, or all of the specific items in this list; however, it you may find some items that are not available for viewing on screen on your Trinity. Any items that are not available in the logging menu on your device will be available for direct stream using your PC! For more information on what these parameters mean, how to use them, or to find any that may not be listed please consult the nearest DiabloSport CMR dealer, automotive professional, or tuning shop.

## 1. 03-07 Ford 6.0L Diesel PIDS

Acronym	Description	Unit Of Measure
VGT DC	Variable Geometry Turbocharger Duty Cycle	%
FAN SPEED	Vehicle Electric Fan Speed	RPM
TORQUE	Engine Torque	ft/lbs
INJ TIMING	Injection Timing	Deg
FUEL PRESS DES	Desired Fuel Pressure	MPA
PEDAL POS	Pedal Position Sensor (%)	%
IAT	Intake Air Temperature (F)	F
ECT	Engine Coolant Temp	F
ENG RPM	Engine RPM	RPM
BATTERY V	Battery Voltage	V
MAF V	Mass Air Flow Sensor Voltage	V
VSS	Vehicle Speed Sensor	MPH
ENGINE OIL	Engine Oil Temp	C
INJ PW	Injector Pulse Width	mS
VOL FUEL DES	Desired Volume Fuel	mm^3
MASS FUEL DES	Mass Fuel Desired	mG
MAN ABS PRES	Manifold Absolute Pressure	KPA
MAN GAUGE PRES	Manifold Gauge Pressure	KPA
BARO	Barometric Pressure	KPA
FUEL PRESS ACT	Actual Fuel Pressure	MPA
EXH BKPRES	Exhaust Backpressure	KPA

MAF	Mass Air Flow	Gm/S
IAT 2	Intake Air Temperature 2	F
FUEL PRES V	Fuel Pressure Sensor Voltage	V

## 2. 08-09 Ford 6.4L Diesel PIDS

Acronym	Description	Unit Of Measure
VGT DC	Variable Geometry Turbocharger Duty Cycle	%
FAN SPEED	Vehicle Electric Fan Speed	RPM
TORQUE	Engine Torque	ft/lbs
INJ TIMING	Injection Timing	Deg
FUEL PRESS DES	Desired Fuel Pressure	MPA
PEDAL POS	Pedal Position Sensor (%)	%
IAT	Intake Air Temperature (F)	F
ECT	Engine Coolant Temp	F
ENG RPM	Engine RPM	RPM
BATTERY V	Battery Voltage	V
MAF FREQ	Mass Air Flow Sensor Voltage	Hz
VSS	Vehicle Speed Sensor	MPH
ENGINE OIL	Engine Oil Temp	C
INJ PW	Injector Pulse Width	mS
VOL FUEL DES	Desired Volume Fuel	mm^3
MASS FUEL DES	Mass Fuel Desired	mG
MAN ABS PRES	Manifold Absolute Pressure	KPA
MAN GAUGE PRES	Manifold Gauge Pressure	KPA
BARO	Barometric Pressure	KPA
FUEL PRESS ACT	Actual Fuel Pressure	kPaG
EXH BKPRES	Exhaust Backpressure	KPA
IAT 2	Intake Air Temperature	F
FUEL PRES V	Fuel Pressure Sensor Voltage	V
EGT SNS 1	Exhaust Gas Temperature Sensor 1	F

EGT SNS 2	Exhaust Gas Temperature Sensor 2	F
DPF REGEN	Diesel Particulate Filter Regen Status	On/Off
DPF SOOT	DPF Soot Volume	Liters
FUEL TEMP	Fuel Temp	F

Desired Rail Pressure	Desired Fuel Rail Pressure	PSI
Injection Timing	Injection Timing	PSI
Turbo Vane Position	Turbo Vane Position	%
Fuel Rate	Fuel Rate	mm3
Cyl #1 Balance Rate	Injector Balance Rate Cylinder 1	mm3
Cyl #2 Balance Rate	Injector Balance Rate Cylinder 2	mm3
Cyl #3 Balance Rate	Injector Balance Rate Cylinder 3	mm3
Cyl #4 Balance Rate	Injector Balance Rate Cylinder 4	mm3
Cyl #5 Balance Rate	Injector Balance Rate Cylinder 5	mm3
Cyl #6 Balance Rate	Injector Balance Rate Cylinder 6	mm3
Cyl #7 Balance Rate	Injector Balance Rate Cylinder 7	mm3
Cyl #8 Balance Rate	Injector Balance Rate Cylinder 8	mm3

### 3. 06-07 GM Duramax LLY/LBZ PIDS

Acronym	Description	Unit Of Measurement
Engine Load	Engine Load	%
ECT	Engine Coolant Temp	F
Boost	Boost	PSI
RPM	Engine RPM	RPM
Vehicle Speed	Vehicle Speed	MPH
IAT	Intake Air Temperature	F
MAF Airflow	Mass Air Flow	g/s
Power Take Off Status	Status Of PTO	On/ Off
Battery Voltage	Battery Voltage	V
EGR Duty Cycle	EGR Dury Cycle	%
Cyl #1 PW	Injector Pulse Width Cylinder 1	ms
Cyl #2 PW	Injector Pulse Width Cylinder 2	ms
Cyl #3 PW	Injector Pulse Width Cylinder 3	ms
Cyl #4 PW	Injector Pulse Width Cylinder 4	ms
Cyl #5 PW	Injector Pulse Width Cylinder 5	ms
Cyl #6 PW	Injector Pulse Width Cylinder 6	ms
Cyl #7 PW	Injector Pulse Width Cylinder 7	ms
Cyl #8 PW	Injector Pulse Width Cylinder 8	ms
Desired Idle RPM	Desired Idle RPM	rpm
MAF Freq	Mass Air Flow Sensor Frequency	Hz
Actual Rail Pressure	Actual Fuel Rail Pressure	kPaG

### 4. 03-07 5.9L Dodge Cummins PIDS

Acronym	Description	Default Units
<b>Diagnostic 1</b>		
AvgRPM	Average Engine Speed	rpm
BattRawV	Battery Voltage Raw	counts
HPCRPres	HPCR Fuel Pressure	MPa
HPCRSet	HPCR Fuelpr Setpoint	MPa
FanSpd	Fan Speed	rpm
FanPWM	Fan Clutch 1 PWM Duty Cycle	%
DCMon0-10	DC Mon Percent Time Under Load 0-10%	%
DCMon11-20	DC Mon Percent Time Under Load 11-20%	%
DCMon21-30	DC Mon Percent Time Under Load 21-30%	%
DCMon31-40	DC Mon Percent Time Under Load 31-40%	%
DCMon41-50	DC Mon Percent Time Under Load 41-50%	%
DCMon51-60	DC Mon Percent Time Under Load 51-60%	%
DCMon61-70	DC Mon Percent Time Under Load 61-70%	%
DCMon71-80	DC Mon Percent Time Under Load 71-80%	%
DCMon81-90	DC Mon Percent Time Under Load 81-90%	%
DCMon91-100	DC Mon Percent Time Under Load 91-100%	%
Status1	Vehicle Configuration and Learn Mode Status #1	
DCMonMot	DC Mon Percent Time Under Load motoring	%
DCMonHI	DC Mon Percent Time Under Load high idle	%

VTASKIM	VTA SKIM Status	On/Off	ThrPosIdl	Throttle position before idle validation	%
<b>Diagnostic 2</b>			TransOil	Transmission oil temperature sensor	volts
VTASKIM2	VTA SKIM Status	On/Off	TransGov	Transmission governor pressure	psi
AirPres	Ambient Air Pressure	in Hg	Coolant	Engine coolant temperature	F
AirPresV	Ambient Air Pressure sensor	volts	CoolantV	Engine coolant temperature sensor	volts
AirTempF	Ambient Air Temperature	F	Boost	Boost pressure	psi
AirTempV	Ambient Air Temperature sensor	volts	Intake	Intake air temperature	F
Cyl1	Cylinder Contribution 1	%	IntakeV	Intake air temperature sensor	volts
Cyl5	Cylinder Contribution 2 (percent contribution from physical cylinder 5)	%	Battery	Battery Voltage	volts
Cyl3	Cylinder Contribution 3 (percent contribution from physical cylinder 3)	%	TransShaft	Transmission output shaft speed	rpm
Cyl6	Cylinder Contribution 4 (percent contribution from physical cylinder 6)	%	WaterFuel	Water in fuel	counts
Cyl2	Cylinder Contribution 5 (percent contribution from physical cylinder 2)	%	VFSPWM	Transmission VFS PWM duty cycle	%
Cyl4	Cylinder Contribution 6 (percent contribution from physical cylinder 4)	%	FinalFuel	Final fueling	
Cyl1-3	Cylinder Bank Contribution 1 (percent contribution from physical cylinders 1-3)	%	4DFuel	4D fueling table output	
Cyl4-6	Cylinder Bank Contribution 2 (percent contribution from physical cylinders 4-6)	%	AFCFuel	AFC fueling table output	
CylTest	Cylinder Performance Test	On/Off	LSGFuel	LSG fueling output	
HPSVTest	HPSV Test Active	On/Off	<b>Tuning 2</b>		
<b>History And Trip Data</b>			ASGFuel	ASG fueling output	
TotalFuel	Total Fuel Used	gal	HSGFuel	HSG fueling output	
TripFuel	Trip Fuel Used	gal	TarGovPres	Target governor pressure	psi_g
TotalTime	Total Time	hours	Pedal	Pedal Position Sensor 1	%
TripTime	Trip Time	hours	PedalV	Pedal Position Sensor 1 voltage	volts
IdleFuel	Total Idle Fuel Used	gal	4DOut	4D timing table output	Deg
TriplIdle	Trip Idle Fuel Used	gal	AFCInc	AFC timing increment	Deg
IdleTime	Total Idle Time	hours	MisfireMin	Misfire minimum timing	Deg
TriplIdle	Trip Idle Time	hours	PedalPos2	Pedal Position Sensor 2	%
Dist	Total Distance	mile	PedalPos2V	Pedal Position Sensor 2 voltage	volts
TripDist	Trip Total Distance	mile	WGDuty	Wastegate duty cycle	%
TripEconomy	Trip Average Fuel Economy	mpg	MAPV	MAP sensor	volts
ECMTime	ECM Run Time	s	WaterV	Water in fuel sensor	volts
EngTime	Engine Run Time	s	%Load	Percent Load	%
<b>Tuning 1</b>			MaxFuelCal	The calibrated maximum fueling that the system may output	
EngSpd	Engine Speed	rpm	MaxSpd100	The calibrated maximum engine speed for 100 percent throttle	rpm
TransOil	Transmission oil temperature	F	MaxSpd0	The calibrated maximum engine speed for zero percent throttle	rpm
Spd	Vehicle speed	mph	IntkHeater	Intake Air Heater Control Status	
ThrPos	Throttle position	%	AirPres	Initial ambient air pressure	psi
			Misfire	Misfire Total Attempts Number	counts
			<b>Tuning 3</b>		
			IAHTemp	IAH Temperature Input0	F
			CTIRDelta	CTIR Delta Temperature	F

BatTemp	Battery Temperature	F
ESS	Engine Speed from Crankshaft ESS	rpm
EPSI	Engine Speed from Cam Gear EPSI	rpm
TPSV	TPS Voltage (only reported in TPS applications)	volts
Cruise	cruise cannot be entered	
CruiseDis	cruise was disengaged	
CruiseEng	cruise is engaged	
CruiseLt	cruise light requested	
CruiseSw	cruise switch status	
CruiseRef	Cruise Control Reference Speed	mph
CruiseMux	Cruise Control Switch Mux Raw	volts
TorqueCont	Torque Control Indication	
CoolInRange	Coolant Temperature In Range Monitor State	

Radiator Fan Speed	Radiator Fan Speed	rpm
Desired Radiator Fan PWM	Desired Radiator Fan PWM	%

**Trip Information**

Total Fuel Used	Total Fuel Used	gal
Trip Fuel Used	Trip Fuel Used	gal
Total Time	Total Time	Hours
Trip Time	Trip Time	Hours
Total Idle Fuel	Total Idle Fuel	gal
Trip Idle Fuel	Trip Idle Fuel	gal
Total Idle Time	Total Idle Time	Hours
Trip Idle Time	Trip Idle Time	Hours
Total Distance	Total Distance	mile
Trip Distance	Trip Distance	mile
Trip Average Fuel	Trip Average Fuel	MPG
ECM Run Time	ECM Run Time	s
Engine Run Time	Engine Run Time	s
Powerup Counts	Powerup Counts	Counts

**5. 03-06 DCX Gas Truck/LX Platform PIDS**

Acronym	Description	Default Units
<b>Boost Pressure Monitor Information</b>		
Initial Ambient Air Pressure	Initial Ambient Air Pressure	in Hg
<b>Engine Sensor Information (Service Only)</b>		
Calculated Engine Load	Calculated Engine Load	%
ECM Engine RPM	ECM Engine RPM	rpm
Engine Speed From Crankshaft Sensor	Engine Speed From Crankshaft Sensor	rpm
Engine Speed From Camshaft Sensor	Engine Speed From Camshaft Sensor	rpm
Engine Coolant Temperature Degrees	Engine Coolant Temperature Degrees	F
Intake Air Temperature Degrees	Intake Air Temperature Degrees	F
<b>Engine State Information</b>		
Intake Manifold Temperature	Intake Manifold Temperature	F
<b>Fuel Pump / AC / Fan Information (Service)</b>		
Fuel Pressure Sensor	Fuel Pressure Sensor	psi
Fuel Pressure Voltage	Fuel Pressure Voltage	Volts
Fuel Pressure Regulated Output	Fuel Pressure Regulated Output	%
Fuel Pump Current	Fuel Pump Current	mA
Vehicle Speed Signal	Vehicle Speed Signal	mph
A/C High Side Pressure	A/C High Side Pressure	psi
A/C Hide Side Voltage	A/C Hide Side Voltage	Volts

**Vehicle Sensor Information**

Ambient Air Temperature Degrees	Ambient Air Temperature Degrees	F
Ambient Air Temperature Voltage	Ambient Air Temperature Voltage	Volts
Ambient Air Pressure	Ambient Air Pressure	in Hg
Battery Temperature Degrees	Battery Temperature Degrees	F
Battery Temperature Voltage	Battery Temperature Voltage	Volts
Battery Voltage Raw	Battery Voltage Raw	Volts
ECM Battery Voltage	ECM Battery Voltage	Volts
Target Charging Voltage	Target Charging Voltage	Volts
Fuel Level Sense Voltage	Fuel Level Sense Voltage	Volts

**Water in Fuel / Throttle Sensor Info**

Barometric Pressure	Barometric Pressure	in Hg
PPS 1 Sensor Voltage	PPS 1 Sensor Voltage	Volts
PPS 2 Sensor Voltage	PPS 2 Sensor Voltage	Volts
Throttle Percent	Throttle Percent	%
PPS 1 Sensor Percent	PPS 1 Sensor Percent	%

**A/C Control**

AC LRN STATUS	AC LRN STATUS
AC CONTROL STATUS	AC CONTROL STATUS

AC STATUS	AC STATUS	
<b>A/C Head Pressure</b>		
AC HEAD PRESSURE STATUS	AC HEAD PRESSURE STATUS	
AC HEAD PRESSURE A2D	AC HEAD PRESSURE A2D	V
AC HEAD PRESSURE SCALED FILTERED	AC HEAD PRESSURE SCALED FILTERED	kPa
AC HEAD PRESSURE SCALED	AC HEAD PRESSURE SCALED	kPa
<b>Adaptive Dwell Control</b>		
COIL BURN TIME CYL1	COIL BURN TIME CYL1	us
COIL BURN TIME CYL2	COIL BURN TIME CYL2	us
COIL BURN TIME CYL3	COIL BURN TIME CYL3	us
COIL BURN TIME CYL4	COIL BURN TIME CYL4	us
COIL BURN TIME CYL5	COIL BURN TIME CYL5	us
COIL BURN TIME CYL6	COIL BURN TIME CYL6	us
COIL BURN TIME CYL7	COIL BURN TIME CYL7	us
COIL BURN TIME CYL8	COIL BURN TIME CYL8	us
TOTAL COIL DWELL1	TOTAL COIL DWELL1	us
TOTAL COIL DWELL2	TOTAL COIL DWELL2	us
TOTAL COIL DWELL3	TOTAL COIL DWELL3	us
TOTAL COIL DWELL4	TOTAL COIL DWELL4	us
TOTAL COIL DWELL5	TOTAL COIL DWELL5	us
TOTAL COIL DWELL6	TOTAL COIL DWELL6	us
TOTAL COIL DWELL7	TOTAL COIL DWELL7	us
TOTAL COIL DWELL8	TOTAL COIL DWELL8	us
BASE DWELL	BASE DWELL	us
DWELL RUN TIMER	DWELL RUN TIMER	s
<b>Ambient Temperature</b>		
AMB TEMP	AMB TEMP	F
AMB TEMP AVE	AMB TEMP AVE	F
AMB TEMP KEY OFF	AMB TEMP KEY OFF	C
<b>Baro Solenoid Rationality</b>		
BARO SOL RAT STAB TMR	BARO SOL RAT STAB TMR	ms
BARO SOL RAT STATUS	BARO SOL RAT STATUS	
<b>Barometric Pressure Read Solenoid Control</b>		
BARO LOOP CNTR	BARO LOOP CNTR	ms
BARO RAT	BARO RAT	kPa
BARO READ DELAY TMR	BARO READ DELAY TMR	ms

BARO READ INTERVAL TMR	BARO READ INTERVAL TMR	ms
BARO READ STAGE	BARO READ STAGE	Index
BARO RECORD TMR	BARO RECORD TMR	ms
BARO READ STATUS	BARO READ STATUS	
<b>Battery Voltage</b>		
BATTERY DISCONNECT STATUS REG	BATTERY DISCONNECT STATUS REG	
BATTERY VOLTAGE A2D	BATT_V	V
BATTERY VOLTAGE FILTERED	BATTERY VOLTAGE FILTERED	V
BATTERY VOLTAGE TRIMMED	BATTERY VOLTAGE TRIMMED	V
<b>BTPM</b>		
BATTERY TEMP	BATTERY TEMP	C
<b>Cat Temp Model</b>		
CAT TEMP	CAT TEMP	F
CAT TEMP LONG	CAT TEMP LONG	F
SHUTDOWN CAT TEMP	SHUTDOWN CAT TEMP	C
CAT TEMP WG CORR	CAT TEMP WG CORR	C
<b>Charge Temperature</b>		
ACT	ACT	F
ACT PREVIOUS	ACT PREVIOUS	C
<b>Coolant Temp Model</b>		
CTM PRED ECT	CTM PRED ECT	F
<b>Coolant Temperature</b>		
ECT UNLIMPED	ECT UNLIMPED	C
ECT	ECT	F
START ECT	START ECT	F
ECT PREVIOUS	ECT PREVIOUS	C
SHUT DOWN ECT	SHUT DOWN ECT	C
<b>DCFC</b>		
DCFC STATUS	DCFC STATUS	
DCFC ENABL TIME	DCFC ENABL TIME	s
DCFC P TERM	DCFC P TERM	Count
DCFC I TERM	DCFC I TERM	Count
DCFC D TERM	DCFC D TERM	Count
DCFC PID SUM	DCFC PID SUM	Count
DCFC DES FA MULT	DCFC DES FA MULT	Mult
DCFC RAMP OUT FCTR	DCFC RAMP OUT FCTR	Mult

DCFC DESIRED RPM ROUGH	DCFC DESIRED RPM ROUGH	rpm	DS FTM R 1 GOOD WINDOW TMR	DS FTM R 1 GOOD WINDOW TMR	s
DCFC SCALED RPM ROUGH	DCFC SCALED RPM ROUGH	rpm	DS FTM R 2 SCW MAP	DS FTM R 2 SCW MAP	kPa
DCFC RPM ROUGH	DCFC RPM ROUGH	rpm	DS FTM R 2 SCW RPM	DS FTM R 2 SCW RPM	rpm
DCFC RPM0	DCFC RPM0	rpm	DS FTM R 2 GOOD WINDOW TMR	DS FTM R 2 GOOD WINDOW TMR	s
DCFC RPM ROUGH ERROR	DCFC RPM ROUGH ERROR	rpm	DS FTM L 1 THRESH DLY TMR	DS FTM L 1 THRESH DLY TMR	s
<b>Desired Fuel Air</b>			DS FTM L 1 I LIMIT DLY TMR	DS FTM L 1 I LIMIT DLY TMR	s
FA STATUS	FA STATUS		DS FTM L 1 TRIM VALUE	DS FTM L 1 TRIM VALUE	V
DESIRED FA CYL1	DESIRED FA CYL1	FAR	DS FTM L 1 THRESH	DS FTM L 1 THRESH	V
DESIRED FA CYL2	DESIRED FA CYL2	FAR	DS FTM L 1 THRESH FAIL TMR	DS FTM L 1 THRESH FAIL TMR	s
DESIRED FA CYL3	DESIRED FA CYL3	FAR	DS FTM L 1 I LIMIT FAIL TMR	DS FTM L 1 I LIMIT FAIL TMR	s
DESIRED FA CYL4	DESIRED FA CYL4	FAR	DS FTM R 1 THRESH DLY TMR	DS FTM R 1 THRESH DLY TMR	s
DESIRED FA CYL5	DESIRED FA CYL5	FAR	DS FTM R 1 I LIMIT DLY TMR	DS FTM R 1 I LIMIT DLY TMR	s
DESIRED FA CYL6	DESIRED FA CYL6	FAR	DS FTM R 1 TRIM VALUE	DS FTM R 1 TRIM VALUE	V
DESIRED FA CYL7	DESIRED FA CYL7	FAR	DS FTM R 1 THRESH	DS FTM R 1 THRESH	V
DESIRED FA CYL8	DESIRED FA CYL8	FAR	DS FTM R 1 THRESH FAIL TMR	DS FTM R 1 THRESH FAIL TMR	s
OPEN LOOP FA	OL_AIR_FUEL	FAR	DS FTM R 1 I LIMIT FAIL TMR	DS FTM R 1 I LIMIT FAIL TMR	s
AP ACCUM AIR LAST TRIP	AP ACCUM AIR LAST TRIP	g	DS FTM L 2 THRESH DLY TMR	DS FTM L 2 THRESH DLY TMR	s
AP CAT FA ACTUAL	AP CAT FA ACTUAL	FAR	DS FTM L 2 I LIMIT DLY TMR	DS FTM L 2 I LIMIT DLY TMR	s
AP CAT FA DES	AP CAT FA DES	FAR	DS FTM L 2 TRIM VALUE	DS FTM L 2 TRIM VALUE	V
AP CYL FA DES	AP CYL FA DES	FAR	DS FTM L 2 THRESH	DS FTM L 2 THRESH	V
AP ENRICH FA	AP ENRICH FA	FAR	DS FTM L 2 THRESH FAIL TMR	DS FTM L 2 THRESH FAIL TMR	s
<b>Diagnostic Manager</b>			DS FTM L 2 I LIMIT FAIL TMR	DS FTM L 2 I LIMIT FAIL TMR	s
DM MIL ON KILOMETERS	DM MIL ON KILOMETERS	km	DS FTM R 2 THRESH DLY TMR	DS FTM R 2 THRESH DLY TMR	s
CHRONO MIL STATUS	CHRONO MIL STATUS		DS FTM R 2 I LIMIT DLY TMR	DS FTM R 2 I LIMIT DLY TMR	s
MIL CONTROL STATUS	MIL CONTROL STATUS		DS FTM R 2 TRIM VALUE	DS FTM R 2 TRIM VALUE	V
DM CURRENT KEY ON STATUS	DM CURRENT KEY ON STATUS		DS FTM R 2 THRESH	DS FTM R 2 THRESH	V
TM READINESS INDICATOR	TM READINESS INDICATOR		DS FTM R 2 THRESH FAIL TMR	DS FTM R 2 THRESH FAIL TMR	s
<b>Downstream Fuel Trim Monitor</b>			DS FTM R 2 I LIMIT FAIL TMR	DS FTM R 2 I LIMIT FAIL TMR	s
DS FTM L 1 SCW MAP	DS FTM L 1 SCW MAP	kPa	<b>Downstream O2 Response Rationality</b>		
DS FTM L 1 SCW RPM	DS FTM L 1 SCW RPM	rpm	O2 MON 12 NON INT TEST TMR	O2 MON 12 NON INT TEST TMR	s
DS FTM L 1 GOOD WINDOW TMR	DS FTM L 1 GOOD WINDOW TMR	s	O2 MON 22 NON INT TEST TMR	O2 MON 22 NON INT TEST TMR	s
DS FTM L 2 SCW MAP	DS FTM L 2 SCW MAP	kPa	O2 MON 12 TEMP INT TEST TMR	O2 MON 12 TEMP INT TEST TMR	s
DS FTM L 2 SCW RPM	DS FTM L 2 SCW RPM	rpm	O2 MON 22 TEMP INT TEST TMR	O2 MON 22 TEMP INT TEST TMR	s
DS FTM L 2 GOOD WINDOW TMR	DS FTM L 2 GOOD WINDOW TMR	s	O2 MON 12 BNP TMR	O2 MON 12 BNP TMR	s
DS FTM R 1 SCW MAP	DS FTM R 1 SCW MAP	kPa	O2 MON 22 BNP TMR	O2 MON 22 BNP TMR	s
DS FTM R 1 SCW RPM	DS FTM R 1 SCW RPM	rpm	O2 MON 12 INT ACCUM TEST TMR	O2 MON 12 INT ACCUM TEST TMR	s

O2 MON 22 INT ACCUM TEST TMR	O2 MON 22 INT ACCUM TEST TMR	s	CRANK UNLOCKED TMR	CRANK UNLOCKED TMR	ms
O2 MON 12 MIN VOLT	O2 MON 12 MIN VOLT	V	CAM UNLOCKED TMR	CAM UNLOCKED TMR	ms
O2 MON 12 MAX VOLT	O2 MON 12 MAX VOLT	V	SYNC STATUS	SYNC STATUS	
O2 MON 22 MIN VOLT	O2 MON 22 MIN VOLT	V	UNLOCK CRANK STATUS	UNLOCK CRANK STATUS	
O2 MON 22 MAX VOLT	O2 MON 22 MAX VOLT	V	UNLOCK CAM STATUS	UNLOCK CAM STATUS	
<b>EGR Monitor and Rationality</b>			UNLOCK CAM CRANK PROC STATUS	UNLOCK CAM CRANK PROC STATUS	
EGRM ENABL REG	EGRM ENABL REG		CAM LIMP HOME STATUS	CAM LIMP HOME STATUS	
EGRM FLAGS	EGRM FLAGS		CRANK LIMP HOME STATUS	CRANK LIMP HOME STATUS	
EGRM BELOW THRES CNTR	EGRM BELOW THRES CNTR	Count	STARTS SINCE UNLOCK	STARTS SINCE UNLOCK	Count
EGRM ABOVE THRES CNTR	EGRM ABOVE THRES CNTR	Count	UNLOCK RPM	UNLOCK RPM	rpm
EGRM DEL POSN DES	EGRM DEL POSN DES	mm	UNLOCK CAM POSITION	UNLOCK CAM POSITION	deg
EGRM DEL POSN TMR	EGRM DEL POSN TMR	ms	TIMES CRANK UNLOCKED THIS TRIP	TIMES CRANK UNLOCKED THIS TRIP	Count
EGRM TEST CNTR	EGRM TEST CNTR	Count	TIMES CAM UNLOCKED THIS TRIP	TIMES CAM UNLOCKED THIS TRIP	Count
EGRM TEST TMR	EGRM TEST TMR	ms	STARTUP CRANK NOT SEEN TMR	STARTUP CRANK NOT SEEN TMR	ms
EGRM WAIT TMR	EGRM WAIT TMR	ms	STARTUP CC NOT SEEN TMR	STARTUP CC NOT SEEN TMR	ms
EGR RAT NON VOL STATUS	EGR RAT NON VOL STATUS		STARTUP CAM NOT SEEN TMR	STARTUP CAM NOT SEEN TMR	ms
EGR RAT VOL STATUS	EGR RAT VOL STATUS		CCDIFF DIFF	CCDIFF DIFF	deg
EGR POS RAT FAIL CNTR	EGR POS RAT FAIL CNTR	Count	CCDIFF LEARN DIFF	CCDIFF LEARN DIFF	deg
EGR POS RAT PASS CNTR	EGR POS RAT PASS CNTR	Count	CCDIFF LEARN MISBUILD	CCDIFF LEARN MISBUILD	deg
EGR POS RAT FAIL TMR	EGR POS RAT FAIL TMR	ms	CCDIFF LEARN	CCDIFF LEARN	deg
EGR POS RAT PASS TMR	EGR POS RAT PASS TMR	ms	CCDIFF LEARN STATUS	CCDIFF LEARN STATUS	
EGR ZREF RAT FAIL CNTR	EGR ZREF RAT FAIL CNTR	Count	<b>ETC Actuator Control</b>		
EGR ZREF RAT PASS CNTR	EGR ZREF RAT PASS CNTR	Count	ETC SETPOINT	ETC SETPOINT	V
EGR ZREF RAT FAIL TMR	EGR ZREF RAT FAIL TMR	ms	ETC DIR PWM	ETC DIR PWM	%DC
EGR ZREF RAT PASS TMR	EGR ZREF RAT PASS TMR	ms	ETC PWM	ETC PWM	%DC
EGRM ARM TMR	EGRM ARM TMR	ms	<b>ETC Torque Management</b>		
EGRM FILTD FSM FDBCK TRIM VAL 1	EGRM FILTD FSM FDBCK TRIM VAL 1	%/100	ETRQ FW ACT	ETRQ FW ACT	Nm
EGRM FILTD FSM FDBCK TRIM VAL 2	EGRM FILTD FSM FDBCK TRIM VAL 2	%/100	<b>Evaporative Emissions</b>		
EGRM FSM FDBCK TRIM HOLD 1	EGRM FSM FDBCK TRIM HOLD 1	%/100	NVLD SW CLOSURE TIME PREV SOAK	NVLD SW CLOSURE TIME PREV SOAK	min
EGRM FSM FDBCK TRIM HOLD 2	EGRM FSM FDBCK TRIM HOLD 2	%/100	NVLD SYSTEM STATUS	NVLD SYSTEM STATUS	
IP EE EGRM MAP	IP EE EGRM MAP	kPa	NVLD SYSTEM STATUS2	NVLD SYSTEM STATUS2	
<b>EPDSS</b>			NVLD THIS TRIP ENG ON TIME	NVLD THIS TRIP ENG ON TIME	min
RPM	RPM	rpm	NVLD TOTAL ENG OFF TIME	NVLD TOTAL ENG OFF TIME	min
UNLOCK CRANK POSITION	UNLOCK CRANK POSITION	deg	NVLD TOTAL ENG ON TIME	NVLD TOTAL ENG ON TIME	min
CC OUT OF TOL CNTR	CC OUT OF TOL CNTR	Count	NVLD TOTAL RAW ENG OFF TIME	NVLD TOTAL RAW ENG OFF TIME	min
			NVLD TOTAL RAW ENG ON TIME	NVLD TOTAL RAW ENG ON TIME	min

NVLD LAST TRIP ENG OFF TIME	NVLD LAST TRIP ENG OFF TIME	min	<b>Exhaust Temp Model</b>		
NVLD LAST TRIP ENG ON TIME	NVLD LAST TRIP ENG ON TIME	min	EXH TEMP	EXH TEMP	F
NVLD SEAL CLEANS CYCLE CNTR	NVLD SEAL CLEANS CYCLE CNTR	Count	SHUTDOWN EXH TEMP	SHUTDOWN EXH TEMP	C
NVLD SEAL CLEANS TIMER	NVLD SEAL CLEANS TIMER	s	<b>Fan Control</b>		
NVLD SOL DIAG TRAN CNTR	NVLD SOL DIAG TRAN CNTR	Count	COMPENSATION STATUS	COMPENSATION STATUS	
NVLD LEAK SIZE ABORT STATUS	NVLD LEAK SIZE ABORT STATUS		FAN AC HEAD PRESS	FAN AC HEAD PRESS	kPa
NVLD LEAK SIZE SUSPEND STATUS1	NVLD LEAK SIZE SUSPEND STATUS1		PWM FAN DES DC	PWM FAN DES DC	%DC
NVLD LEAK SIZE SUSPEND STATUS2	NVLD LEAK SIZE SUSPEND STATUS2		PWM FAN TGT DC	PWM FAN TGT DC	%DC
NVLD SMALL LEAK ABORT STATUS	NVLD SMALL LEAK ABORT STATUS		FAN TYPE SELECT	FAN TYPE SELECT	
NVLD O2 FACTOR	NVLD O2 FACTOR	Mult	FFV CLOSED LOOP NV STATUS	FFV CLOSED LOOP NV STATUS	
VAC LESS THAN MIN VAC TMR	VAC LESS THAN MIN VAC TMR	s	<b>Foundation Config</b>		
NVLD PRG TGT VLV FLOW	NVLD PRG TGT VLV FLOW	g/s	PSS GENERAL FLAGS	PSS GENERAL FLAGS	
NVLD O2 LOC 11 OUT OF RANGE TMR	NVLD O2 LOC 11 OUT OF RANGE TMR	s	AC PRESSURE EQUIP LRN TMR	AC PRESSURE EQUIP LRN TMR	ms
NVLD O2 F2 OUT OF RANGE TMR	NVLD O2 F2 OUT OF RANGE TMR	s	AC SEL AND REQ LRN TMR	AC SEL AND REQ LRN TMR	ms
NVLD LEAK TEST TMR	NVLD LEAK TEST TMR	s	SOFTWARE VERSION PID	SOFTWARE VERSION PID	Count
NVLD FROZEN LEAK TEST TMR	NVLD FROZEN LEAK TEST TMR	s	SOFTWARE MINOR VERSION PID	SOFTWARE MINOR VERSION PID	Count
NVLD PRG MON ABORT STATUS	NVLD PRG MON ABORT STATUS		SW ASAP VERSION PART1	SW ASAP VERSION PART1	Count
NVLD PRG MON SUSPEND STATUS	NVLD PRG MON SUSPEND STATUS		SW ASAP VERSION PART3	SW ASAP VERSION PART3	Count
PRG MON TEST DLY TMR	PRG MON TEST DLY TMR	s	SOFTWARE MODEL YEAR PID	SOFTWARE MODEL YEAR PID	Count
NVLD PRG TEST HOLD TMR	NVLD PRG TEST HOLD TMR	s	EMISSION CONFIG	EMISSION CONFIG	
NVLD SW OPEN TMR	NVLD SW OPEN TMR	s	VEHICLE SYSTEM CONFIG	VEHICLE SYSTEM CONFIG	
NVLD PRG TGT OUT OF RANGE TMR	NVLD PRG TGT OUT OF RANGE TMR	s	ENGINE CONFIG	ENGINE CONFIG	
NVLD LS PRG FLOW AT MAX TMR	NVLD LS PRG FLOW AT MAX TMR	s	INPUT CONFIG0	INPUT CONFIG0	
NVLD PRG TGT SW DEBOUNCE TMR	NVLD PRG TGT SW DEBOUNCE TMR	s	HUNTSVILLE PART NUMBER 1234	HUNTSVILLE PART NUMBER 1234	Count
NVLD LEAK VAC PULL DOWN TMR	NVLD LEAK VAC PULL DOWN TMR	s	MOTOROLA PART NUMBER 1234	MOTOROLA PART NUMBER 1234	Count
SERVICE LARGE LEAK TBL TIME	SERVICE LARGE LEAK TBL TIME	s	VEHICLE CONFIG	VEHICLE CONFIG	
<b>EVR</b>			NGC HOMOLOGATION ID 1234	NGC HOMOLOGATION ID 1234	Count
EVR STATUS	EVR STATUS		NGC HOMOLOGATION ID 56	NGC HOMOLOGATION ID 56	Count
EVR FAULT STATUS	EVR FAULT STATUS		INPUT CONFIG1	INPUT CONFIG1	
DESIRED SYSTEM VOLTAGE SETPOINT	DESIRED SYSTEM VOLTAGE SETPOINT	V	OUTPUT CONFIG	OUTPUT CONFIG	
DESIRED DUTY CYCLE	DESIRED DUTY CYCLE	%DC	INPUT CONFIG2	INPUT CONFIG2	
AVG DESIRED DUTY CYCLE	AVG DESIRED DUTY CYCLE	%DC	<b>Foundation Inputs</b>		
GENERATOR DUTY CYCLE	GENERATOR DUTY CYCLE	%DC	NV RATIO	NV RATIO	RPM/mph
EVR AVG DC	EVR AVG DC	%DC	MPH	MPH	mph
AVG SYSTEM VOLTAGE ERROR	AVG SYSTEM VOLTAGE ERROR	V	MPHX2	MPHX2	mph
			MPHX64	MPHX64	mph

DISTANCE PULSES PER KILOMETER	DISTANCE PULSES PER KILOMETER	Count	TOTAL PORT MASS FLOW SCALED	TOT_PORT_MASS_FLOW_SCALED	g/s
ODOMETER READING	ODOMETER READING	mile	TOTAL PORT MASS FLOW	TOT_PORT_MASS_FLOW	g/s
POWER DOWN ODOMETER COUNTER	POWER DOWN ODOMETER COUNTER	Count	TOTAL SONIC AF	TOT_SONIC_AF	g/s
ODOMETER STATUS REGISTER	ODOMETER STATUS REGISTER		CALC MAP	CALC MAP	kPa
CRANK AT CAM POS	CRANK AT CAM POS	deg	CALC MAP2	CALC MAP2	kPa
NVLD SWITCH STATUS	NVLD SWITCH STATUS		AVG RPM	AVG RPM	rpm
NVLD SWITCH CLOSURE TIME	NVLD SWITCH CLOSURE TIME	min	IN MAN MASS FLOW	IN MAN MASS FLOW	g/s
SW INPUT POLARITY	SW INPUT POLARITY		INPUT PRG MASS FLOW	INPUT PRG MASS FLOW	g/s
VSS2 PULSES PER MILE	VSS2 PULSES PER MILE	Count	PRG MASS FLOW CONC CORR	PRG MASS FLOW CONC CORR	Mult
VSS2 PULSES PER MILE COMP	VSS2 PULSES PER MILE COMP	Count	PORT PRG FLOW BANK1	PORT PRG FLOW BANK1	g/s
VSS1 PULSES PER MILE	VSS1 PULSES PER MILE	Count	PORT PRG FLOW BANK2	PORT PRG FLOW BANK2	g/s
VSS1 PULSES PER MILE COMP	VSS1 PULSES PER MILE COMP	Count	TOTAL PORT PRG FLOW	TOT_PORT_PRG_FLOW	g/s
VSS1 PROG STAT REG	VSS1 PROG STAT REG	Count	IN MAN PRG MASS	IN MAN PRG MASS	g
<b>Foundation Outputs</b>			INPUT EGR MASS FLOW	INPUT EGR MASS FLOW	g/s
LIAC SOL STATUS	LIAC SOL STATUS		EGR PRATIO	EGR PRATIO	PRatio
EGR SOL STATUS	EGR SOL STATUS		TCYL	TCYL	K
BARO READ SOL FLT CNTR	BARO READ SOL FLT CNTR	ms	GASFLOW MAP	GASFLOW MAP	kPa
SEC AIR PUMP RLY STATUS	SEC AIR PUMP RLY STATUS		IN MAN AIR TEMP	IN MAN AIR TEMP	F
<b>Four Wheel Drive Status</b>			IN MAN EGR FRAC	IN MAN EGR FRAC	Mult
TCASE SW STATUS	TCASE SW STATUS		IN MAN EGR MASS	IN MAN EGR MASS	g
TCASE SW LEARN DLY TMR	TCASE SW LEARN DLY TMR	s	GAS MASS IN MANIFOLD	GAS_MASS_INTK	g
TCASE SW REGISTER	TCASE SW REGISTER		IN MAN GAS TEMP	IN MAN GAS TEMP	F
TCASE SW STABLE TMR	TCASE SW STABLE TMR	s	IN MAN PRG FRAC	IN MAN PRG FRAC	Mult
TCASE 4WD SW HI MATURE CNTR	TCASE 4WD SW HI MATURE CNTR	s	TOTAL PORT EGR FLOW	TOTAL PORT EGR FLOW	g/s
TCASE 4WD SW LO MATURE CNTR	TCASE 4WD SW LO MATURE CNTR	s	PORT EGR FLOW BANK1	PORT EGR FLOW BANK1	g/s
TCASE MUXSW INVALID MATURE CNTR	TCASE MUXSW INVALID MATURE CNTR	s	PORT EGR FLOW BANK2	PORT EGR FLOW BANK2	g/s
<b>Fuel Flows</b>			REQD FUEL CHARGE CYL1	REQD FUEL CHARGE CYL1	mg/charge/cyl
TCYL VE MOD	TCYL VE MOD	Mult	REQD FUEL CHARGE CYL2	REQD FUEL CHARGE CYL2	mg/charge/cyl
ACCUM AIR PORT MASS FLOW	ACCUM AIR PORT MASS FLOW	g	REQD FUEL CHARGE CYL3	REQD FUEL CHARGE CYL3	mg/charge/cyl
VAC	VAC	kPa	REQD FUEL CHARGE CYL4	REQD FUEL CHARGE CYL4	mg/charge/cyl
BARO	BARO	kPa	REQD FUEL CHARGE CYL5	REQD FUEL CHARGE CYL5	mg/charge/cyl
PRATIO	PRATIO	PRatio	REQD FUEL CHARGE CYL6	REQD FUEL CHARGE CYL6	mg/charge/cyl
AVG PRATIO	AVG PRATIO	PRatio	REQD FUEL CHARGE CYL7	REQD FUEL CHARGE CYL7	mg/charge/cyl
INTAKE SYS PRESS LOSS	INTAKE SYS PRESS LOSS	kPa			
TOTAL AIR PORT MASS FLOW	TOT_AIR_PORT_MASS_FLOW	g/s			

		yl	FSM LEAN 1 GOOD WINDOW TMR	FSM LEAN 1 GOOD WINDOW TMR	s
		mg/charge/c	FSM LEAN 1 LIMIT TMR	FSM LEAN 1 LIMIT TMR	s
REQD FUEL CHARGE CYL8	REQD FUEL CHARGE CYL8	yl	FSM STATUS 1	FSM STATUS 1	
1/1 Short Term ADAP	1/1 ST ADAP	%	FSM SCW WARM STATUS	FSM SCW WARM STATUS	
2/1 Short Term ADAP	2/1 ST ADAP	%	FSM RICH 1 SCW MAP	FSM RICH 1 SCW MAP	kPa
1/1 Long Term ADAP	1/1 LT ADAP	%	FSM RICH 1 SCW RPM	FSM RICH 1 SCW RPM	rpm
2/1 Long Term ADAP	2/1 LT ADAP	%	FSM RICH 1 FAILURE TMR	FSM RICH 1 FAILURE TMR	s
BASE VE BANK1	BASE VE BANK1	%/100	FSM RICH 1 GOOD WINDOW TMR	FSM RICH 1 GOOD WINDOW TMR	s
BASE VE BANK2	BASE VE BANK2	%/100	FSM RICH 1 LIMIT TMR	FSM RICH 1 LIMIT TMR	s
TOTAL VE BANK1	TOT_VE_BNK1	%/100	FSM LEAN 2 SCW MAP	FSM LEAN 2 SCW MAP	kPa
TOTAL VE BANK2	TOT_VE_BNK2	%/100	FSM LEAN 2 SCW RPM	FSM LEAN 2 SCW RPM	rpm
PHI ADAP	PHI ADAP	Mult	FSM LEAN 2 FAILURE TMR	FSM LEAN 2 FAILURE TMR	s
FLOW ADAPTION STATUS	FLOW ADAPTION STATUS		FSM LEAN 2 GOOD WINDOW TMR	FSM LEAN 2 GOOD WINDOW TMR	s
PHI MULT	PHI MULT	Mult	FSM LEAN 2 LIMIT TMR	FSM LEAN 2 LIMIT TMR	s
BARO INIT CNTR	BARO INIT CNTR	ms	FSM FDBCK TRIM VALUE 2	FSM FDBCK TRIM VALUE 2	%
BARO LEARN THROT THRESH TBL	BARO LEARN THROT THRESH TBL		FSM RICH 2 SCW MAP	FSM RICH 2 SCW MAP	kPa
RAM	RAM	V	FSM RICH 2 SCW RPM	FSM RICH 2 SCW RPM	rpm
<b>Fuel Level</b>			FSM RICH 2 FAILURE TMR	FSM RICH 2 FAILURE TMR	s
FUEL LVL SCALED	FUEL LVL SCALED	%	FSM RICH 2 GOOD WINDOW TMR	FSM RICH 2 GOOD WINDOW TMR	s
FUEL LVL FILTERED	FUEL LVL FILTERED	V	FSM RICH 2 LIMIT TMR	FSM RICH 2 LIMIT TMR	s
VAPOR VOLUME	VAPOR VOLUME	gal	FSM TM LEAN 1 DLY TMR	FSM TM LEAN 1 DLY TMR	s
FUEL LVL STATUS REGISTER	FUEL LVL STATUS REGISTER		FSM TM LEAN 2 DLY TMR	FSM TM LEAN 2 DLY TMR	s
FUEL TANK CAPACITY CAL	FUEL TANK CAPACITY CAL	gal	FSM TM RICH 1 DLY TMR	FSM TM RICH 1 DLY TMR	s
<b>Fuel Level Rationality</b>			FSM TM RICH 2 DLY TMR	FSM TM RICH 2 DLY TMR	s
FUEL LVL AVG FUEL VOL	FUEL LVL AVG FUEL VOL	gal	FSM LEAN 1 DLY TMR	FSM LEAN 1 DLY TMR	s
<b>Fuel Shutoff</b>			FSM LEAN 2 DLY TMR	FSM LEAN 2 DLY TMR	s
NUMBER OF EPPS NOT IN DECEL	NUMBER OF EPPS NOT IN DECEL	Count	FSM RICH 1 DLY TMR	FSM RICH 1 DLY TMR	s
NUMBER OF EPPS	NUMBER OF EPPS	Count	FSM RICH 2 DLY TMR	FSM RICH 2 DLY TMR	s
FSO STATUS 1	FSO STATUS 1		FSM RICH 1 CELL ID 1	FSM RICH 1 CELL ID 1	Index
FSO STATUS 2	FSO STATUS 2		FSM RICH 1 CELL ID 2	FSM RICH 1 CELL ID 2	Index
CYLINDER SEQUENCE	CYLINDER SEQUENCE	Cylinders	FSM RICH 1 CELL ID 3	FSM RICH 1 CELL ID 3	Index
<b>Fuel System Monitor</b>			FSM RICH 2 CELL ID 1	FSM RICH 2 CELL ID 1	Index
FSM FDBCK TRIM VALUE 1	FSM FDBCK TRIM VALUE 1	%	FSM RICH 2 CELL ID 2	FSM RICH 2 CELL ID 2	Index
FSM ENABLES	FSM ENABLES		FSM RICH 2 CELL ID 3	FSM RICH 2 CELL ID 3	Index
FSM LEAN 1 SCW MAP	FSM LEAN 1 SCW MAP	kPa	FSM LEAN 1 UPPER THRESHOLD	FSM LEAN 1 UPPER THRESHOLD	%
FSM LEAN 1 SCW RPM	FSM LEAN 1 SCW RPM	rpm	FSM RICH 1 LOWER THRESHOLD	FSM RICH 1 LOWER THRESHOLD	%
FSM LEAN 1 FAILURE TMR	FSM LEAN 1 FAILURE TMR	s			

FSM LEAN 2 UPPER THRESHOLD	FSM LEAN 2 UPPER THRESHOLD	%	CORR PW REMAINING TO DELIV CYL5	CORR PW REMAINING TO DELIV CYL5	us
FSM RICH 2 LOWER THRESHOLD	FSM RICH 2 LOWER THRESHOLD	%	CORR PW REMAINING TO DELIV CYL6	CORR PW REMAINING TO DELIV CYL6	us
<b>Gas Flow</b>			CORR PW REMAINING TO DELIV CYL7	CORR PW REMAINING TO DELIV CYL7	us
EXH PRESS	EXH PRESS	kPa	CORR PW REMAINING TO DELIV CYL8	CORR PW REMAINING TO DELIV CYL8	us
PCV MASS FLOW	PCV MASS FLOW	g/s	CYLINDER ID	CYLINDER ID	Cylinders
EGR SONIC FLOW	EGR SONIC FLOW	g/s	PULSE MODE	PULSE MODE	Mode
<b>Injector Control</b>			VIT 1	VIT 1	deg
FUEL TEMP	FUEL TEMP	C	VIT 2 1	VIT 2 1	deg
AVG TOTAL WORKING PW	AVG TOTAL WORKING PW	us	VIT 2 2	VIT 2 2	deg
TOTAL WORKING PW CYL1	TOTAL WORKING PW CYL1	us	VIT 2 3	VIT 2 3	deg
TOTAL WORKING PW CYL2	TOTAL WORKING PW CYL2	us	VIT 2 4	VIT 2 4	deg
TOTAL WORKING PW CYL3	TOTAL WORKING PW CYL3	us	VIT 2 5	VIT 2 5	deg
TOTAL WORKING PW CYL4	TOTAL WORKING PW CYL4	us	VIT 2 6	VIT 2 6	deg
TOTAL WORKING PW CYL5	TOTAL WORKING PW CYL5	us	VIT 2 7	VIT 2 7	deg
TOTAL WORKING PW CYL6	TOTAL WORKING PW CYL6	us	VIT 2 8	VIT 2 8	deg
TOTAL WORKING PW CYL7	TOTAL WORKING PW CYL7	us	VIT 3	VIT 3	deg
TOTAL WORKING PW CYL8	TOTAL WORKING PW CYL8	us	<b>Knock Control</b>		
MIN WORKING PW	MIN WORKING PW	us	KNK SENSOR 1	KNK_SNS_V1	V
CORR MASS RMNG TO DELIV CYL1	CORR MASS RMNG TO DELIV CYL1	mg/charge/cyl	KNK SENSOR1 AVE	KNK SENSOR1 AVE	V
CORR MASS RMNG TO DELIV CYL2	CORR MASS RMNG TO DELIV CYL2	mg/charge/cyl	KNK SENSOR 2	KNK_SNS_V2	V
CORR MASS RMNG TO DELIV CYL3	CORR MASS RMNG TO DELIV CYL3	mg/charge/cyl	KNK SENSOR2 AVE	KNK SENSOR2 AVE	V
CORR MASS RMNG TO DELIV CYL4	CORR MASS RMNG TO DELIV CYL4	mg/charge/cyl	KNK SENSOR VOLTAGE GLOBAL	KNK SENSOR VOLTAGE GLOBAL	V
CORR MASS RMNG TO DELIV CYL5	CORR MASS RMNG TO DELIV CYL5	mg/charge/cyl	KNK TOTAL RETARD	KNK_TOT_RET	deg
CORR MASS RMNG TO DELIV CYL6	CORR MASS RMNG TO DELIV CYL6	mg/charge/cyl	KNK MAX TOTAL RETARD	KNK_MAX_TOT_RET	deg
CORR MASS RMNG TO DELIV CYL7	CORR MASS RMNG TO DELIV CYL7	mg/charge/cyl	KNK FUEL RETARD	KNK FUEL RETARD	deg
CORR MASS RMNG TO DELIV CYL8	CORR MASS RMNG TO DELIV CYL8	mg/charge/cyl	KNK ST RETARD	KNK ST RETARD	deg
CORR PW REMAINING TO DELIV CYL1	CORR PW REMAINING TO DELIV CYL1	us	KNK ST RETARD INC	KNK ST RETARD INC	deg
CORR PW REMAINING TO DELIV CYL2	CORR PW REMAINING TO DELIV CYL2	us	KNK ST MAX MAP RET	KNK ST MAX MAP RET	deg
CORR PW REMAINING TO DELIV CYL3	CORR PW REMAINING TO DELIV CYL3	us	KNK ST MAX RETARD	KNK ST MAX RETARD	deg
CORR PW REMAINING TO DELIV CYL4	CORR PW REMAINING TO DELIV CYL4	us	KNK LT RETARD	KNK LT RETARD	deg
			KNK MAX LT RETARD	KNK MAX LT RETARD	deg
			KNK WINDOW START	KNK WINDOW START	deg
			KNK WINDOW END	KNK WINDOW END	deg
			KNK BKGND CELL ID	KNK BKGND CELL ID	Index

KNK WB CELL ID	KNK WB CELL ID	Index	EGR CDA DES	EGR CDA DES	mm <sup>2</sup>
KNK WB CENTER FREQ	KNK WB CENTER FREQ	Count	EGR MASS FLOW RATE DES	EGR MASS FLOW RATE DES	g/s
KNK WB GAIN	KNK WB GAIN	Index	EGR MASS FLUX	EGR MASS FLUX	g/s/mm <sup>2</sup>
KNK WB INTEGRATOR	KNK WB INTEGRATOR	Index	EGR EXH PRESS FILTD	EGR EXH PRESS FILTD	kPa
KNK SEVERITY	KNK SEVERITY	Mult	EGR EXH PRESS RATIO	EGR EXH PRESS RATIO	Ratio
KNK SEVERITY VOLTAGE GLOBAL	KNK SEVERITY VOLTAGE GLOBAL	V	EGR EXH TEMP	EGR EXH TEMP	C
KNOCK SENSOR1 STATUS	KNOCK SENSOR1 STATUS		EGR PORT FLOW FILTD	EGR PORT FLOW FILTD	g/s
KNOCK SENSOR2 STATUS	KNOCK SENSOR2 STATUS		EGR RAW A2D	EGR RAW A2D	V
KNK 1 ENABLE	KNK 1 ENABLE		EGR POSITION A2D	EGR POSITION A2D	V
KNK 2 ENABLE	KNK 2 ENABLE		<b>Linear EGR Actuator - Actuator Control</b>		
STATUS KBGN	STATUS KBGN		EGR CTRL DC	EGR CTRL DC	%DC
STATUS KNK LT RETARD	STATUS KNK LT RETARD		EGR CTRL PROP DC	EGR CTRL PROP DC	%DC
KNK WOT FA MUL	KNK WOT FA MUL	FAR	EGR CTRL INT DC	EGR CTRL INT DC	%DC
<b>Level 1 ECT</b>			EGR CTRL DERIV DC	EGR CTRL DERIV DC	%
LV1 ECT SLOW	LV1 ECT SLOW	C	EGR DERIV DC	EGR DERIV DC	%DC
SCALED ECT	SCALED ECT	C	EGR CTRL FF DC	EGR CTRL FF DC	%DC
<b>Level 1 MAP</b>			<b>Linear IAC</b>		
RAW DES TPS	RAW DES TPS	V	TOTAL BASE AF	TOT_BASE_AF	g/s
<b>Level 1 PVS</b>			FILTD THR POSN	FILTD THR POSN	V
DELPVS HIRES	DELPVS HIRES	V	BASE IDLE SPD	BASE IDLE SPD	rpm
<b>Level 1 TPS</b>			IDLE SPD	IDLE SPD	rpm
LV1 TPS MODE	LV1 TPS MODE	Mode	IDLE SPEED 8	IDLE SPEED 8	rpm
<b>Level 1 Vehicle Speed</b>			DES PID IDLE SPD	DES PID IDLE SPD	rpm
VSS2 PERIOD TIME	VSS2 PERIOD TIME	Count	FILTD RPM	FILTD RPM	rpm
LV1 MPHX2 2	LV1 MPHX2 2	mph	RPM ERR	RPM ERR	rpm
<b>Level 2 Powertrain Controller and Cruise</b>			AC LOAD STATUS	AC LOAD STATUS	
LV2 STEADY STATE FW TRQ	LV2 STEADY STATE FW TRQ	Nm	PURGE AF	PURGE AF	g/s
<b>Level 2 Torque Check</b>			IAC LOAD REG	IAC LOAD REG	
LV2 TRQ DLYD RLIM DRVR FW REQ	LV2 TRQ DLYD RLIM DRVR FW REQ	Nm	IAC MODE FIELD	IAC MODE FIELD	
<b>Linear EGR Actuator</b>			LIAC ACTUAL PID REG	LIAC ACTUAL PID REG	
EGR CTRL STATUS	EGR CTRL STATUS		LIAC BASE AIRFLOW REG	LIAC BASE AIRFLOW REG	
EGR CTRL MODE	EGR CTRL MODE	Mode	LIAC MODE REG	LIAC MODE REG	
EGR SP RAW A2D	EGR SP RAW A2D	V	DES PID AF	DES PID AF	g/s
EGR SP FILT A2D	EGR SP FILT A2D	V	IAC TOTAL AF	IAC TOTAL AF	g/s
EGR ZREF A2D	EGR ZREF A2D	V	P TERM AF	P TERM AF	g/s
EGR A2D STATUS	EGR A2D STATUS		I TERM AF	I TERM AF	g/s

D TERM AF	D TERM AF	g/s
P GAIN	P GAIN	Mult
I GAIN	I GAIN	Mult
D GAIN	D GAIN	Mult
TRANS LOAD REG	TRANS LOAD REG	
TRANS LOAD STATE FIELD	TRANS LOAD STATE FIELD	
TRANS CNFG 1	TRANS CNFG 1	
<b>Linear IAC Current Sense</b>		
IAC CURRENT SENSE STATUS	IAC CURRENT SENSE STATUS	
LINEAR IAC CURRENT	LINEAR IAC CURRENT	mA
LINEAR IAC PWM	LINEAR IAC PWM	%DC
SENSED IAC CURRENT	SENSED IAC CURRENT	mA
IAC SENSED VALVE POSITION	IAC_SNS_VLV_POS	V
IAC SENSE OFFSET	IAC SENSE OFFSET	Count
IAC SENSE SLOPE	IAC SENSE SLOPE	Count
<b>Manifold Tuning Valve (MTV)</b>		
MTVSRV FLAGS	MTVSRV FLAGS	
MTV CONFIG	MTV CONFIG	
<b>MAP</b>		
AV MAP READ	AV MAP READ	V
MAP ANGLE 4 RAW A2D	MAP ANGLE 4 RAW A2D	V
MAP ANGLE 1 RAW A2D	MAP ANGLE 1 RAW A2D	V
AVG MAP TO USE	AVG MAP TO USE	kPa
DEF READ MAP KPA	DEF READ MAP KPA	kPa
MAP SONIC AIRFLOW	MAP SONIC AIRFLOW	g/s
SENSED MAP	SENSED MAP	kPa
MAP TO USE	MAP TO USE	kPa
MAP ANGLE 2 RAW A2D	MAP ANGLE 2 RAW A2D	V
MAP ANGLE 3 RAW A2D	MAP ANGLE 3 RAW A2D	V
AV TIP READ	AV TIP READ	V
DEF READ TIP KPA	DEF READ TIP KPA	kPa
READ MAP KPA	MAP_KPA	kPa
READ TIP KPA	READ TIP KPA	kPa
AVG TIP TO USE	AVG TIP TO USE	kPa
BUFFER FILTD TIP	BUFFER FILTD TIP	kPa
FILTD TIP FOR BARO	FILTD TIP FOR BARO	kPa

SENSED TIP	SENSED TIP	kPa
TIP ANGLE 1 RAW A2D	TIP ANGLE 1 RAW A2D	V
TIP ANGLE 2 RAW A2D	TIP ANGLE 2 RAW A2D	V
TIP ANGLE 3 RAW A2D	TIP ANGLE 3 RAW A2D	V
TIP ANGLE 4 RAW A2D	TIP ANGLE 4 RAW A2D	V
TIP BARO OUT OF RANGE FAULT CNTR	TIP BARO OUT OF RANGE FAULT CNTR	Count
TIP VOLT HIGH MATURE CNTR	TIP VOLT HIGH MATURE CNTR	Count
TIP VOLT LOW MATURE CNTR	TIP VOLT LOW MATURE CNTR	Count
MAP FLAG REGISTER 1	MAP FLAG REGISTER 1	
TIP AVG SEL	TIP AVG SEL	
TIP FLAG REGISTER	TIP FLAG REGISTER	
<b>MDS</b>		
MDS STATUS	MDS STATUS	
<b>Miscellaneous</b>		
RAW PVS1	RAW PVS1	V
RAW PVS2	RAW PVS2	V
RAW TPS1	RAW TPS1	V
RAW TPS1X4	RAW TPS1X4	V
RAW TPS2	RAW TPS2	V
LV2 RPM	LV2 RPM	rpm
LV2 RPM LIMIT	LV2 RPM LIMIT	rpm
LV2 TRQ FW ACT	LV2 TRQ FW ACT	Nm
TPS1 MIN	TPS1 MIN	V
TPS2 MIN	TPS2 MIN	V
DELPVS	DELPVS	V
<b>Misfire</b>		
MF SCALED RPM	MF SCALED RPM	rpm
MF CAT 200 REV EPP CNTR	MF CAT 200 REV EPP CNTR	Count
MF WIN STATUS	MF WIN STATUS	
MF INH REG	MF INH REG	
MF FAULT MAN STATUS	MF FAULT MAN STATUS	
MF DM FAIL CYL ID	MF DM FAIL CYL ID	
MF ENGR CAT CYL MISFIRED	MF ENGR CAT CYL MISFIRED	
MF FAIL STATUS	MF FAIL STATUS	
MF ENGR FTP CYL MISFIRED	MF ENGR FTP CYL MISFIRED	
MF ENGR FAIL CYL ID	MF ENGR FAIL CYL ID	

MF ENGR FAIL STATUS	MF ENGR FAIL STATUS		MF TLC ODO AT LAST LRN	MF TLC ODO AT LAST LRN	mile
MF FAIL CYL ID THIS TRIP	MF FAIL CYL ID THIS TRIP		MF TLCE TRIPS SINCE LAST LRN	MF TLCE TRIPS SINCE LAST LRN	Count
MF ENG START CNTR	MF ENG START CNTR	Count	MF TLC HI RPM DATA ACCUM CNTR	MF TLC HI RPM DATA ACCUM CNTR	Cycles
MF ENG CYC INH CNTR	MF ENG CYC INH CNTR	Count	MF TLC LO RPM DATA ACCUM CNTR	MF TLC LO RPM DATA ACCUM CNTR	Cycles
MF DECISION ENABLE CNTR	MF DECISION ENABLE CNTR	Count	MF DETECTION ENABLE STATUS	MF DETECTION ENABLE STATUS	
MF FTP 200REV CNTR	MF FTP 200REV CNTR	Count	MF DETCT STATUS	MF DETCT STATUS	
MF FSO 200 REV CNTR	MF FSO 200 REV CNTR	Count	MF LSR ENABL CNTR	MF LSR ENABL CNTR	Count
MF SAMPLE RATE CNTR	MF SAMPLE RATE CNTR	Count	MF TLCE LRN DLY CYC CNTR	MF TLCE LRN DLY CYC CNTR	Cycles
MF MSR CNTR	MF MSR CNTR	Count	MF FTP 4X MAX THRES	MF FTP 4X MAX THRES	%
MF CAT RAW TOT ACCUM	MF CAT RAW TOT ACCUM	Count	MF FTP INIT1K MAX THRES	MF FTP INIT1K MAX THRES	%
MF FTP RAW	MF FTP RAW	Count	MF TLC CONTROL STATUS	MF TLC CONTROL STATUS	
MF CAT WGHT	MF CAT WGHT	Count	TLC COEF TO USE PTR	TLC COEF TO USE PTR	Count
MF FTP WGHT	MF FTP WGHT	Count	MF COUNTS CURRENT1	MF COUNTS CURRENT1	Count
MF CAT EXCEED	MF CAT EXCEED	Count	MF COUNTS CURRENT2	MF COUNTS CURRENT2	Count
MF FTP EXCEED	MF FTP EXCEED	Count	MF COUNTS CURRENT3	MF COUNTS CURRENT3	Count
MF KEYON RAW ACCUM	MF KEYON RAW ACCUM	Count	MF COUNTS CURRENT4	MF COUNTS CURRENT4	Count
MF DYNM THRESH	MF DYNM THRESH	Count	MF COUNTS CURRENT5	MF COUNTS CURRENT5	Count
MF NPT MAP	MF NPT MAP	kPa	MF COUNTS CURRENT6	MF COUNTS CURRENT6	Count
MF PULSE MIL TMR	MF PULSE MIL TMR	s	MF COUNTS CURRENT7	MF COUNTS CURRENT7	Count
MF WIN RAW MAP	MF WIN RAW MAP	kPa	MF COUNTS CURRENT8	MF COUNTS CURRENT8	Count
MF WIN RAW RPM	MF WIN RAW RPM	rpm	MF COUNTS PREVIOUS1	MF COUNTS PREVIOUS1	Count
MF SCW MAP	MF SCW MAP	kPa	MF COUNTS PREVIOUS2	MF COUNTS PREVIOUS2	Count
MF SCW RPM	MF SCW RPM	rpm	MF COUNTS PREVIOUS3	MF COUNTS PREVIOUS3	Count
MF DM GOOD WIN TRIP CNTR	MF DM GOOD WIN TRIP CNTR	Count	MF COUNTS PREVIOUS4	MF COUNTS PREVIOUS4	Count
MF NONVOL FTP EXCEED	MF NONVOL FTP EXCEED	Count	MF COUNTS PREVIOUS5	MF COUNTS PREVIOUS5	Count
MF NONVOL RAW ACCUM	MF NONVOL RAW ACCUM	Count	MF COUNTS PREVIOUS6	MF COUNTS PREVIOUS6	Count
MF SERVICE CNT	MF SERVICE CNT	Count	MF COUNTS PREVIOUS7	MF COUNTS PREVIOUS7	Count
MF SERVICE CNT CYL1	MF SERVICE CNT CYL1	Count	MF COUNTS PREVIOUS8	MF COUNTS PREVIOUS8	Count
MF SERVICE CNT CYL2	MF SERVICE CNT CYL2	Count	<b>O2 Feedback</b>		
MF SERVICE CNT CYL3	MF SERVICE CNT CYL3	Count	US BANK 1 STATUS	US BANK 1 STATUS	
MF SERVICE CNT CYL4	MF SERVICE CNT CYL4	Count	O2S 11 DEF GOAL VOLT	O2S 11 DEF GOAL VOLT	V
MF SERVICE CNT CYL5	MF SERVICE CNT CYL5	Count	O2S 11 GOAL VOLT	O2S 11 GOAL VOLT	V
MF SERVICE CNT CYL6	MF SERVICE CNT CYL6	Count	O2S 11 SIGNAL LIN	O2S 11 SIGNAL LIN	V
MF SERVICE CNT CYL7	MF SERVICE CNT CYL7	Count	O2S 11 CLOOP TIME FROM START	O2S 11 CLOOP TIME FROM START	s
MF SERVICE CNT CYL8	MF SERVICE CNT CYL8	Count	O2S 11 DELAY AFTER OPEN LOOP TMR	O2S 11 DELAY AFTER OPEN LOOP TMR	s
MF DSABL INH TMR	MF DSABL INH TMR	s	O2S 11 LO RES VALUE SCALED	O2S 11 LO RES VALUE SCALED	V

O2S 11 KICK	O2S 11 KICK	Mult	O2S 12 INTGL GAIN	O2S 12 INTGL GAIN	Count
O2S 11 KICK LEAN	O2S 11 KICK LEAN	Mult	DS BANK 2 STATUS	DS BANK 2 STATUS	
O2S 11 KICK RICH	O2S 11 KICK RICH	Mult	O2S 22 GOAL VOLT	O2S 22 GOAL VOLT	V
O2S 11 PROP	O2S 11 PROP	Mult	O2S 22 SIGNAL LIN	O2S 22 SIGNAL LIN	V
O2S 11 PROP GAIN	O2S 11 PROP GAIN	1/V	O2S 22 DELAY AFTER OPEN LOOP TMR	O2S 22 DELAY AFTER OPEN LOOP TMR	s
O2S 11 INTGL GAIN	O2S 11 INTGL GAIN	1/V	O2S 22 ADAP	O2S 22 ADAP	V
O2S 11 DERIV	O2S 11 DERIV	Mult	O2S 22 LO RES VALUE SCALED	O2S 22 LO RES VALUE SCALED	V
O2S 11 DERIV ERROR	O2S 11 DERIV ERROR	V	O2S 22 PROP	O2S 22 PROP	V
O2 STATUS REG	O2 STATUS REG		O2S 22 INTGL	O2S 22 INTGL	V
US BANK 2 STATUS	US BANK 2 STATUS		O2S 22 INTGL GAIN	O2S 22 INTGL GAIN	Count
O2S 21 DEF GOAL VOLT	O2S 21 DEF GOAL VOLT	V	CELL ID	CELL ID	Index
O2S 21 GOAL VOLT	O2S 21 GOAL VOLT	V	O2S 11 AVG FACTOR	O2S 11 AVG FACTOR	Mult
O2S 21 SIGNAL LIN	O2S 21 SIGNAL LIN	V	O2S 11 MEDIAN O2 FACTOR	O2S 11 MEDIAN O2 FACTOR	Mult
O2S 21 CLOOP TIME FROM START	O2S 21 CLOOP TIME FROM START	s	O2S 11 MEDIAN O2 FACTOR MAX	O2S 11 MEDIAN O2 FACTOR MAX	Mult
O2S 21 DELAY AFTER OPEN LOOP TMR	O2S 21 DELAY AFTER OPEN LOOP TMR	s	O2S 11 MEDIAN O2 FACTOR MIN	O2S 11 MEDIAN O2 FACTOR MIN	Mult
O2S 21 LO RES VALUE SCALED	O2S 21 LO RES VALUE SCALED	V	O2S 11 MED O2 FACTOR RAMP TIMER	O2S 11 MED O2 FACTOR RAMP TIMER	ms
O2S 21 KICK	O2S 21 KICK	Mult	O2S 11 MED O2 FACTOR RATE TIMER	O2S 11 MED O2 FACTOR RATE TIMER	ms
O2S 21 KICK LEAN	O2S 21 KICK LEAN	Mult	O2S 21 AVG FACTOR	O2S 21 AVG FACTOR	Mult
O2S 21 KICK RICH	O2S 21 KICK RICH	Mult	O2S 21 MEDIAN O2 FACTOR	O2S 21 MEDIAN O2 FACTOR	Mult
O2S 21 PROP	O2S 21 PROP	Mult	O2S 21 MEDIAN O2 FACTOR MAX	O2S 21 MEDIAN O2 FACTOR MAX	Mult
O2S 21 PROP GAIN	O2S 21 PROP GAIN	1/V	O2S 21 MEDIAN O2 FACTOR MIN	O2S 21 MEDIAN O2 FACTOR MIN	Mult
O2S 21 INTGL GAIN	O2S 21 INTGL GAIN	1/V	O2S 21 MED O2 FACTOR RAMP TIMER	O2S 21 MED O2 FACTOR RAMP TIMER	ms
O2S 21 DERIV	O2S 21 DERIV	Mult	O2S 21 MED O2 FACTOR RATE TIMER	O2S 21 MED O2 FACTOR RATE TIMER	ms
O2S 21 DERIV ERROR	O2S 21 DERIV ERROR	V	O2S 12 US EXECUTIONS	O2S 12 US EXECUTIONS	Count
O2S 21 UNLINEARIZED GOAL VOLT	O2S 21 UNLINEARIZED GOAL VOLT	V	O2S 22 US EXECUTIONS	O2S 22 US EXECUTIONS	Count
DS BANK 1 STATUS	DS BANK 1 STATUS		O2S 11 CAT MON ALTERED O2FACTOR	O2S 11 CAT MON ALTERED O2FACTOR	Mult
O2S 12 GOAL VOLT	O2S 12 GOAL VOLT	V	O2S 21 CAT MON ALTERED O2FACTOR	O2S 21 CAT MON ALTERED O2FACTOR	Mult
O2S 12 SIGNAL LIN	O2S 12 SIGNAL LIN	V	IP EE CLOSED LOOP TIME	IP EE CLOSED LOOP TIME	s
O2S 12 DELAY AFTER OPEN LOOP TMR	O2S 12 DELAY AFTER OPEN LOOP TMR	s	<b>O2 Heater Control</b>		
O2S 12 ADAP	O2S 12 ADAP	V	O2 HTR11 FLAGS	O2 HTR11 FLAGS	
DS ADAP TIME FROM START TIMER	DS ADAP TIME FROM START TIMER	s	O2 HTR11 DC	O2 HTR11 DC	%DC
DS CLOSED LOOP TIME FROM START	DS CLOSED LOOP TIME FROM START	s	O2 HTR11 TEMP	O2 HTR11 TEMP	C
O2S 12 LO RES VALUE SCALED	O2S 12 LO RES VALUE SCALED	V			
O2S 12 PROP	O2S 12 PROP	V			
O2S 12 INTGL	O2S 12 INTGL	V			

O2 HTR11 RESISTANCE	O2 HTR11 RESISTANCE	Ohms	O2 HTR21 RAT TIME OUT	O2 HTR21 RAT TIME OUT	s
O2 HTR11 TEMP ERROR	O2 HTR11 TEMP ERROR	C	O2 HTR22 ID	O2 HTR22 ID	Index
O2 HTR11 RAT TIME IN	O2 HTR11 RAT TIME IN	s	O2 HTR22 OVER TEMP TMR	O2 HTR22 OVER TEMP TMR	s
O2 HTR11 RAT TIME OUT	O2 HTR11 RAT TIME OUT	s	O2 HTR22 REF VOLT	O2_HTR22_REF_V	V
O2 HTR21 FLAGS	O2 HTR21 FLAGS		O2 HTR22 RT LINE NUM	O2 HTR22 RT LINE NUM	Index
O2 HTR21 DC	O2 HTR21 DC	%DC	O2 HTR22 SENSE VOLT	O2_HTR22_SNS_V	V
O2 HTR21 TEMP	O2 HTR21 TEMP	C	O2 HTR22 TEMP ERROR	O2 HTR22 TEMP ERROR	C
O2 HTR21 RESISTANCE	O2 HTR21 RESISTANCE	Ohms	O2 HTR22 RAT TIME IN	O2 HTR22 RAT TIME IN	s
O2 HTR12 FLAGS	O2 HTR12 FLAGS		O2 HTR22 RAT TIME OUT	O2 HTR22 RAT TIME OUT	s
O2 HTR12 DC	O2 HTR12 DC	%DC	O2 HTR COLD START VALID FLAG	O2 HTR COLD START VALID FLAG	
O2 HTR12 TEMP	O2 HTR12 TEMP	C	O2 HTR REF VOLT	O2 HTR REF VOLT	V
O2 HTR12 RESISTANCE	O2 HTR12 RESISTANCE	Ohms	O2 HTR SENSE VOLT	O2 HTR SENSE VOLT	V
O2 HTR22 FLAGS	O2 HTR22 FLAGS		<b>O2 Sensor</b>		
O2 HTR22 DC	O2 HTR22 DC	%DC	O2 11 A2D RAW	O2 11 A2D RAW	V
O2 HTR22 TEMP	O2 HTR22 TEMP	C	O2 LOC 11 A2D	O2 LOC 11 A2D	V
O2 HTR22 RESISTANCE	O2 HTR22 RESISTANCE	Ohms	O2 LOC 11 A2D W	O2 LOC 11 A2D W	V
O2 HTR11 ID	O2 HTR11 ID	Index	O2 21 A2D RAW	O2 21 A2D RAW	V
O2 HTR11 OVER TEMP TMR	O2 HTR11 OVER TEMP TMR	s	O2 LOC 21 A2D	O2 LOC 21 A2D	V
O2 HTR11 REF VOLT	O2_HTR11_REF_V	V	O2 LOC 21 A2D W	O2 LOC 21 A2D W	V
O2 HTR11 RT LINE NUM	O2 HTR11 RT LINE NUM	Index	O2 12 A2D RAW	O2 12 A2D RAW	V
O2 HTR11 SENSE VOLT	O2_HTR11_SNS_V	V	O2 LOC 12 A2D	O2 LOC 12 A2D	V
O2 HTR12 ID	O2 HTR12 ID	Index	O2 LOC 12 A2D W	O2 LOC 12 A2D W	V
O2 HTR12 OVER TEMP TMR	O2 HTR12 OVER TEMP TMR	s	O2 22 A2D RAW	O2 22 A2D RAW	V
O2 HTR12 REF VOLT	O2_HTR12_REF_V	V	O2 LOC 22 A2D	O2 LOC 22 A2D	V
O2 HTR12 RT LINE NUM	O2 HTR12 RT LINE NUM	Index	O2 LOC 22 A2D W	O2 LOC 22 A2D W	V
O2 HTR12 SENSE VOLT	O2_HTR12_SNS_V	V	<b>OBDII Standard</b>		
O2 HTR12 TEMP ERROR	O2 HTR12 TEMP ERROR	C	CALC ENG LOAD	CALC ENG LOAD	%
O2 HTR12 RAT TIME IN	O2 HTR12 RAT TIME IN	s	ENG COOLANT TMP	ENG COOLANT TMP	C
O2 HTR12 RAT TIME OUT	O2 HTR12 RAT TIME OUT	s	ST FUEL TRIM B1	ST FUEL TRIM B1	%
O2 HTR21 ID	O2 HTR21 ID	Index	LT FUEL TRIM B1	LT FUEL TRIM B1	%
O2 HTR21 OVER TEMP TMR	O2 HTR21 OVER TEMP TMR	s	ST FUEL TRIM B2	ST FUEL TRIM B2	%
O2 HTR21 REF VOLT	O2_HTR21_REF_V	V	LT FUEL TRIM B2	LT FUEL TRIM B2	%
O2 HTR21 RT LINE NUM	O2 HTR21 RT LINE NUM	Index	REL THR POS	REL THR POS	%
O2 HTR21 SENSE VOLT	O2_HTR21_SNS_V	V	AMB AIR TMP	AMB AIR TMP	C
O2 HTR21 TEMP ERROR	O2 HTR21 TEMP ERROR	C	ABS THR POS B	ABS THR POS B	%
O2 HTR21 RAT TIME IN	O2 HTR21 RAT TIME IN	s	ABS THR POS C	ABS THR POS C	%

ACC PDL POS D	ACC PDL POS D	%				yl
ACC PDL POS E	ACC PDL POS E	%				mg/charge/c
ACC PDL POS F	ACC PDL POS F	%		FUEL MASS CYL6	FUEL MASS CYL6	yl
<b>Oil Pressure</b>				FUEL MASS CYL7	FUEL MASS CYL7	mg/charge/c
OIL PRESSURE A2D	OIL_PRES	V		FUEL MASS CYL8	FUEL MASS CYL8	mg/charge/c
OIL PRESSURE SCALED	OIL PRESSURE SCALED	kPa		FUEL MASS FROM PW1 CYL1	FUEL MASS FROM PW1 CYL1	yl
OIL PRESSURE HIGH LIMIT	OIL PRESSURE HIGH LIMIT	Count		FUEL MASS FROM PW1 CYL2	FUEL MASS FROM PW1 CYL2	mg/charge/c
OIL PRESSURE LOW LIMIT	OIL PRESSURE LOW LIMIT	Count		FUEL MASS FROM PW1 CYL3	FUEL MASS FROM PW1 CYL3	yl
OIL PRESSURE SS HIGH COUNT	OIL PRESSURE SS HIGH COUNT	s		FUEL MASS FROM PW1 CYL4	FUEL MASS FROM PW1 CYL4	mg/charge/c
OIL PRESSURE SS LOW COUNT	OIL PRESSURE SS LOW COUNT	s		FUEL MASS FROM PW1 CYL5	FUEL MASS FROM PW1 CYL5	yl
OIL PRESSURE STATUS REGISTER	OIL PRESSURE STATUS REGISTER			FUEL MASS FROM PW1 CYL6	FUEL MASS FROM PW1 CYL6	mg/charge/c
<b>Powertrain Controller</b>				FUEL MASS FROM PW1 CYL7	FUEL MASS FROM PW1 CYL7	yl
PTC FW TRQ REQ SLW	PTC FW TRQ REQ SLW	Nm		FUEL MASS FROM PW1 CYL8	FUEL MASS FROM PW1 CYL8	mg/charge/c
PTC PDL PERCENT	PDL_POS_%	%		FUEL MASS FROM PW2 CYL1	FUEL MASS FROM PW2 CYL1	yl
PTC DELPVS CALCULATED	PTC DELPVS CALCULATED	V		FUEL MASS FROM PW2 CYL2	FUEL MASS FROM PW2 CYL2	mg/charge/c
<b>Puddle</b>				FUEL MASS FROM PW2 CYL3	FUEL MASS FROM PW2 CYL3	yl
BVS INV	BVS INV	Mult		FUEL MASS FROM PW2 CYL4	FUEL MASS FROM PW2 CYL4	mg/charge/c
TOTAL MASS TO DELIV CYL1	TOTAL MASS TO DELIV CYL1	mg/charge/c		FUEL MASS FROM PW2 CYL5	FUEL MASS FROM PW2 CYL5	yl
TOTAL MASS TO DELIV CYL2	TOTAL MASS TO DELIV CYL2	yl		FUEL MASS FROM PW2 CYL6	FUEL MASS FROM PW2 CYL6	mg/charge/c
TOTAL MASS TO DELIV CYL3	TOTAL MASS TO DELIV CYL3	mg/charge/c		FUEL MASS FROM PW2 CYL7	FUEL MASS FROM PW2 CYL7	yl
TOTAL MASS TO DELIV CYL4	TOTAL MASS TO DELIV CYL4	yl		FUEL MASS FROM PW2 CYL8	FUEL MASS FROM PW2 CYL8	mg/charge/c
TOTAL MASS TO DELIV CYL5	TOTAL MASS TO DELIV CYL5	mg/charge/c		FUEL MASS FROM PW3 CYL1	FUEL MASS FROM PW3 CYL1	yl
TOTAL MASS TO DELIV CYL6	TOTAL MASS TO DELIV CYL6	yl		FUEL MASS FROM PW3 CYL2	FUEL MASS FROM PW3 CYL2	mg/charge/c
TOTAL MASS TO DELIV CYL7	TOTAL MASS TO DELIV CYL7	mg/charge/c		FUEL MASS FROM PW3 CYL3	FUEL MASS FROM PW3 CYL3	yl
TOTAL MASS TO DELIV CYL8	TOTAL MASS TO DELIV CYL8	yl		FUEL MASS FROM PW3 CYL4	FUEL MASS FROM PW3 CYL4	mg/charge/c
FUEL MASS CYL1	FUEL MASS CYL1	mg/charge/c				yl
FUEL MASS CYL2	FUEL MASS CYL2	yl				mg/charge/c
FUEL MASS CYL3	FUEL MASS CYL3	mg/charge/c				yl
FUEL MASS CYL4	FUEL MASS CYL4	yl				mg/charge/c
FUEL MASS CYL5	FUEL MASS CYL5	mg/charge/c				yl

FUEL MASS FROM PW3 CYL5	FUEL MASS FROM PW3 CYL5	mg/charge/c yl	PW1 CYL6	PW1 CYL6	us
FUEL MASS FROM PW3 CYL6	FUEL MASS FROM PW3 CYL6	mg/charge/c yl	PW1 CYL7	PW1 CYL7	us
FUEL MASS FROM PW3 CYL7	FUEL MASS FROM PW3 CYL7	mg/charge/c yl	PW1 CYL8	PW1 CYL8	us
FUEL MASS FROM PW3 CYL8	FUEL MASS FROM PW3 CYL8	mg/charge/c yl	PW2 CYL1	PW2 CYL1	us
MASS ALREADY INJECTED CYL1	MASS ALREADY INJECTED CYL1	mg/charge/c yl	PW2 CYL2	PW2 CYL2	us
MASS ALREADY INJECTED CYL2	MASS ALREADY INJECTED CYL2	mg/charge/c yl	PW2 CYL3	PW2 CYL3	us
MASS ALREADY INJECTED CYL3	MASS ALREADY INJECTED CYL3	mg/charge/c yl	PW2 CYL4	PW2 CYL4	us
MASS ALREADY INJECTED CYL4	MASS ALREADY INJECTED CYL4	mg/charge/c yl	PW2 CYL5	PW2 CYL5	us
MASS ALREADY INJECTED CYL5	MASS ALREADY INJECTED CYL5	mg/charge/c yl	PW2 CYL6	PW2 CYL6	us
MASS ALREADY INJECTED CYL6	MASS ALREADY INJECTED CYL6	mg/charge/c yl	PW2 CYL7	PW2 CYL7	us
MASS ALREADY INJECTED CYL7	MASS ALREADY INJECTED CYL7	mg/charge/c yl	PW2 CYL8	PW2 CYL8	us
MASS ALREADY INJECTED CYL8	MASS ALREADY INJECTED CYL8	mg/charge/c yl	PW3 CYL1	PW3 CYL1	us
MASS REMAINING TO DELIV CYL1	MASS REMAINING TO DELIV CYL1	mg/charge/c yl	PW3 CYL2	PW3 CYL2	us
MASS REMAINING TO DELIV CYL2	MASS REMAINING TO DELIV CYL2	mg/charge/c yl	PW3 CYL3	PW3 CYL3	us
MASS REMAINING TO DELIV CYL3	MASS REMAINING TO DELIV CYL3	mg/charge/c yl	PW3 CYL4	PW3 CYL4	us
MASS REMAINING TO DELIV CYL4	MASS REMAINING TO DELIV CYL4	mg/charge/c yl	PW3 CYL5	PW3 CYL5	us
MASS REMAINING TO DELIV CYL5	MASS REMAINING TO DELIV CYL5	mg/charge/c yl	PW3 CYL6	PW3 CYL6	us
MASS REMAINING TO DELIV CYL6	MASS REMAINING TO DELIV CYL6	mg/charge/c yl	PW3 CYL7	PW3 CYL7	us
MASS REMAINING TO DELIV CYL7	MASS REMAINING TO DELIV CYL7	mg/charge/c yl	PW3 CYL8	PW3 CYL8	us
MASS REMAINING TO DELIV CYL8	MASS REMAINING TO DELIV CYL8	mg/charge/c yl	DCFC COLD LAUNCH MULT	DCFC COLD LAUNCH MULT	Mult
PW1 CYL1	PW1 CYL1	us	TLO MAG	TLO MAG	Mult
PW1 CYL2	PW1 CYL2	us	TLO MAX DELTA AMOUNT	TLO MAX DELTA AMOUNT	kPa
PW1 CYL3	PW1 CYL3	us	TLO TRIGGER	TLO TRIGGER	kPa
PW1 CYL4	PW1 CYL4	us	TMAP	TMAP	kPa
PW1 CYL5	PW1 CYL5	us			
				<b>Spark</b>	
			BASE SPK	BASE SPK	deg
			SPK ADJ	SPK ADJ	deg
			ACTUAL TRQ SPK	ACTUAL TRQ SPK	deg
			ACTUAL SPK CYL1	SPK_CYL1	deg
			ACTUAL SPK CYL2	SPK_CYL2	deg
			ACTUAL SPK CYL3	SPK_CYL3	deg
			ACTUAL SPK CYL4	SPK_CYL4	deg
			ACTUAL SPK CYL5	SPK_CYL5	deg
			ACTUAL SPK CYL6	SPK_CYL6	deg
			ACTUAL SPK CYL7	SPK_CYL7	deg
			ACTUAL SPK CYL8	SPK_CYL8	deg

EGR SPK ADJ	EGR SPK ADJ	deg
BARO SPK ADJ	BARO SPK ADJ	deg
<b>Start Fuel</b>		
CRNK RPM	CRNK RPM	rpm
ENGINE RUNTIME	ENGINE RUNTIME	s
PRIME SHOT PATTERN	PRIME SHOT PATTERN	Count
STRT FUEL PULSE WIDTH	STRT FUEL PULSE WIDTH	us
START FUEL PW STATUS REGISTER	START FUEL PW STATUS REGISTER	
FUEL CONTROL STATUS	FUEL CONTROL STATUS	
SKIPPED INJECTOR	SKIPPED INJECTOR	Count
FIRST CAM COUNT	FIRST CAM COUNT	Count
BARO MULT	BARO MULT	Ratio
VEH STRTS	VEH STRTS	Count
<b>Throttle Sensor Input</b>		
MIN THR	MIN THR	V
MIN THR 8 BIT	MIN THR 8 BIT	V
THROTTLE FLAG REGISTER	THROTTLE FLAG REGISTER	
THR A2D	THR A2D	V
DELTHR	DELTHR	V
DELTHR 8 BIT	DELTHR 8 BIT	V
THR POSN 10BIT	THR POSN 10BIT	V
THR POSN	THR POSN	V
CLSD THR TMR	CLSD THR TMR	s
OPEN THR TMR	OPEN THR TMR	s
<b>Torque Management</b>		
TURBINE SPEED RPM RATIO	TURBINE SPEED RPM RATIO	Mult
ANGLE BETWEEN CYL EVENTS	ANGLE BETWEEN CYL EVENTS	deg
TRQ DESIRED	TRQ DESIRED	Nm
INIT CUT OUT MODIFIER	INIT CUT OUT MODIFIER	Mult
TRANS REQ DEL TRQ	TRANS REQ DEL TRQ	Nm
TORQUE LIMITERS STATUS	TORQUE LIMITERS STATUS	
<b>VTA and SKIM</b>		
SKIMVTA MODE STATUS	SKIMVTA MODE STATUS	
SKIMVTA RAM STATUS	SKIMVTA RAM STATUS	
SKIM VTA STATUS PID	SKIM VTA STATUS PID	Count
SKIMVTA STATUS	SKIMVTA STATUS	

## 6. 03-05 SRT4/03-06 PT Cruiser GT PIDS

<b>Boost Pressure Monitor Information</b>		
Estimated Gage Boost Pressure	Estimated Gage Boost Pressure	in Hg
Boost in Range Startup Error	Boost in Range Startup Error	
Turbo Pass Counter	Turbo Pass Counter	
Turbo Total Pass Time	Turbo Total Pass Time	s
Boost In Range Numerator	Boost In Range Numerator	
Boost Voltage	Boost Voltage	Volts
Boost Pressure	Boost Pressure	psi
Wastegate Duty Cycle	Wastegate Duty Cycle	%
<b>Baro Solenoid Rationality</b>		
TIP MAX COMPARE	TIP MAX COMPARE	kPa
<b>Barometric Pressure Read Solenoid Control</b>		
TURBO BARO	TURBO BARO	kPa
TIP ARM VALUE	TIP ARM VALUE	kPa
TIP READ DELAY TMR	TIP READ DELAY TMR	ms
TIP TEST VALUE	TIP TEST VALUE	kPa
BARO READ STATUS	BARO READ STATUS	
<b>Cat Temp Model</b>		
CAT TEMP WG CORR	CAT TEMP WG CORR	C
<b>Engine Sensor Information (Service Only)</b>		
Boost Voltage	Boost Voltage	Volts
Boost Pressure	Boost Pressure	psi
Wastegate Duty Cycle	Wastegate Duty Cycle	%
<b>Fuel Flows</b>		
TURBO ATMOS DENS EFFECTS FCTR	TURBO ATMOS DENS EFFECTS FCTR	Mult
TURBO PRATIO	TURBO PRATIO	PRatio
TURBO TOTAL AIR PORT MASS FLOW	TURBO TOTAL AIR PORT MASS FLOW	g/s
TURBO TOTAL AIR PORT MASS FLOW S	TURBO TOTAL AIR PORT MASS FLOW S	g/s
TURBO TOTAL VE BANK2	TURBO TOTAL VE BANK2	%/100
TURBO TOTAL VE BANK1	TURBO TOTAL VE BANK1	%/100
TURBO VE CORR BANK1	TURBO VE CORR BANK1	Mult

TURBO VE CORR BANK2	TURBO VE CORR BANK2	Mult	IN BOOST TMR	IN BOOST TMR	ms
<b>GasFlow</b>			KNK BOOST MULT	KNK BOOST MULT	Mult
TURBO AIR PORT MASS FLOW BANK1	TURBO AIR PORT MASS FLOW BANK1	g/s	KNOCK BOOST REQ DEL TRQ	KNOCK BOOST REQ DEL TRQ	Nm
TURBO AIR PORT MASS FLOW BANK2	TURBO AIR PORT MASS FLOW BANK2	g/s	LAUNCH BOOST LIMIT	LAUNCH BOOST LIMIT	Nm
TURBO PORT MASS FLOW BANK1	TURBO PORT MASS FLOW BANK1	g/s	LAUNCH BOOST REQ DEL TRQ	LAUNCH BOOST REQ DEL TRQ	Nm
TURBO PORT MASS FLOW BANK2	TURBO PORT MASS FLOW BANK2	g/s	MAP OVER BOOST EPP CNTR	MAP OVER BOOST EPP CNTR	Count
<b>Overboost Diagnostic Rationality</b>			MAP OVER BOOST ERR	MAP OVER BOOST ERR	kPa
OVERBOOST AIR CHARGE COMP	OVERBOOST AIR CHARGE COMP	Mult	MAP OVER BOOST MULT	MAP OVER BOOST MULT	Mult
OVERBOOST ALTITUDE COMP	OVERBOOST ALTITUDE COMP	Mult	MAP OVER BOOST REQ DEL TRQ	MAP OVER BOOST REQ DEL TRQ	Nm
OVERBOOST BOOST RATIO	OVERBOOST BOOST RATIO	Ratio	OVERMPH BOOST MPH ERR	OVERMPH BOOST MPH ERR	mph
OVERBOOST BOOST RATIO MAX	OVERBOOST BOOST RATIO MAX	Ratio	OVERMPH BOOST REQ DEL TRQ	OVERMPH BOOST REQ DEL TRQ	Nm
OVERBOOST RAT FAIL TMR	OVERBOOST RAT FAIL TMR	ms	RPM BOOST LIMIT	RPM BOOST LIMIT	Nm
<b>P/S Switch Rationality</b>			RPM BOOST REQ DEL TRQ	RPM BOOST REQ DEL TRQ	Nm
OVERBOOST RAT STATUS	OVERBOOST RAT STATUS		SENSOR LIMPIN BOOST REQ DEL TRQ	SENSOR LIMPIN BOOST REQ DEL TRQ	Nm
<b>TIP Sensor Rationality</b>			TIM IN BOOST LIMIT	TIM IN BOOST LIMIT	Nm
TIPSEN RAT BOOST TIP MULT	TIPSEN RAT BOOST TIP MULT	Mult	TIM IN BOOST REQ DEL TRQ	TIM IN BOOST REQ DEL TRQ	Nm
TIPSEN RAT FILTERED	TIPSEN RAT FILTERED	kPa	TIP OVER BOOST EPP CNTR	TIP OVER BOOST EPP CNTR	Count
TIPSEN RAT SCALED	TIPSEN RAT SCALED	kPa	TIP OVER BOOST ERR	TIP OVER BOOST ERR	kPa
TIPSEN RAT STATUS TEST	TIPSEN RAT STATUS TEST		TIP OVER BOOST MULT	TIP OVER BOOST MULT	Mult
<b>Torque Management</b>			TIP OVER BOOST REQ DEL TRQ	TIP OVER BOOST REQ DEL TRQ	Nm
ACT BOOST REQ DEL TRQ	ACT BOOST REQ DEL TRQ	Nm	TURBO DEL TRQ REDUCTION REQ	TURBO DEL TRQ REDUCTION REQ	Nm
BARO BOOST LIMIT	BARO BOOST LIMIT	Nm	TURBO TOTAL TRQ DESIRED	TURBO TOTAL TRQ DESIRED	Nm
BARO BOOST REQ DEL TRQ	BARO BOOST REQ DEL TRQ	Nm	TURBO TRQ CONTROL INDICATOR	TURBO TRQ CONTROL INDICATOR	Count
BARO PREV	BARO PREV	kPa	TORQUE LIMITERS STATUS	TORQUE LIMITERS STATUS	
CAT BOOST MULT	CAT BOOST MULT	Mult	<b>Wastgate Control</b>		
CAT BOOST REQ DEL TRQ	CAT BOOST REQ DEL TRQ	Nm	TURBO WG OVERSPD ODO	TURBO WG OVERSPD ODO	mile
ECT BOOST LIMIT	ECT BOOST LIMIT	Nm	TURBO WG TURBINE SPD HI TMR1	TURBO WG TURBINE SPD HI TMR1	s
ECT BOOST REQ DEL TRQ	ECT BOOST REQ DEL TRQ	Nm	TURBO WG TURBINE SPD HI TMR2	TURBO WG TURBINE SPD HI TMR2	s
EGT BOOST MULT	EGT BOOST MULT	Mult	CPRATIO	CPRATIO	PRatio
EGT BOOST REQ DEL TRQ	EGT BOOST REQ DEL TRQ	Nm	DC HOLD FAILSAFE TMR	DC HOLD FAILSAFE TMR	ms
HTR BOOST DS MULT	HTR BOOST DS MULT	Mult	TURBINE OVERSPD FLT MATURE CNTR	TURBINE OVERSPD FLT MATURE CNTR	Count
HTR BOOST DS TEMP	HTR BOOST DS TEMP	C	TURBO ADAP UPDATE INTERVAL TMR	TURBO ADAP UPDATE INTERVAL TMR	ms
HTR BOOST OVERTEMP MULT	HTR BOOST OVERTEMP MULT	Mult	TURBO CORR TOTAL AIR PT MASS FL	TURBO CORR TOTAL AIR PT MASS FL	g/s
HTR BOOST OVERTEMP REQ DEL TRQ	HTR BOOST OVERTEMP REQ DEL TRQ	Nm	TURBO DC DEC INTERVAL TMR	TURBO DC DEC INTERVAL TMR	ms
HTR BOOST US MULT	HTR BOOST US MULT	Mult	TURBO FILTD MAP	TURBO FILTD MAP	kPa
HTR BOOST US TEMP	HTR BOOST US TEMP	C	TURBO FILTD TIP	TURBO FILTD TIP	kPa

TURBO OVERBOOST DEC	TURBO OVERBOOST DEC	%DC
TURBO TOTAL AF DES	TURBO TOTAL AF DES	g/s
TURBO TOTAL AF DES FILTD	TURBO TOTAL AF DES FILTD	g/s
TURBO TOTAL AF DES FILTD S	TURBO TOTAL AF DES FILTD S	g/s
TURBO TRQ POTENTIAL STP	TURBO TRQ POTENTIAL STP	Nm
TURBO TURBINE SPEED	TURBO TURBINE SPEED	rpm
TURBO TURBINE SPEED FILTD	TURBO TURBINE SPEED FILTD	rpm
TURBO WG ACT TERM	TURBO WG ACT TERM	%DC
TURBO WG ADAPT DELTA	TURBO WG ADAPT DELTA	%DC
TURBO WG AF ERR	TURBO WG AF ERR	g/s
TURBO WG AMB TERM	TURBO WG AMB TERM	%DC
TURBO WG BARO TERM	TURBO WG BARO TERM	%DC
TURBO WG BASE	TURBO WG BASE	%DC
TURBO WG DC	TURBO WG DC	%DC
TURBO WG DELTHR FROM WOT	TURBO WG DELTHR FROM WOT	v
TURBO WG I TERM	TURBO WG I TERM	%DC
TURBO WG I TERM UPDATE TMR	TURBO WG I TERM UPDATE TMR	ms
TURBO WG OVERBOOST HOLD DC	TURBO WG OVERBOOST HOLD DC	%DC
TURBO WG P TERM	TURBO WG P TERM	%DC
TURBO WG PART THR TERM	TURBO WG PART THR TERM	%DC
TURBO WG PI TERM	TURBO WG PI TERM	%DC
TURBO WG RECORD MAX TURBINE SPD	TURBO WG RECORD MAX TURBINE SPD	rpm
TURBO WG RPM TERM	TURBO WG RPM TERM	%DC
TURBO WG NV STATUS	TURBO WG NV STATUS	
TURBO WG STATUS	TURBO WG STATUS	
<b>Fuel Flows</b>		
TURBO ATMOS DENS EFFECTS FCTR	TURBO ATMOS DENS EFFECTS FCTR	Mult
TURBO PRATIO	TURBO PRATIO	PRatio
TURBO TOTAL AIR PORT MASS FLOW	TURBO TOTAL AIR PORT MASS FLOW	g/s
TURBO TOTAL AIR PORT MASS FLOW S	TURBO TOTAL AIR PORT MASS FLOW S	g/s
TURBO TOTAL VE BANK2	TURBO TOTAL VE BANK2	%/100
TURBO TOTAL VE BANK1	TURBO TOTAL VE BANK1	%/100
TURBO VE CORR BANK1	TURBO VE CORR BANK1	Mult
TURBO VE CORR BANK2	TURBO VE CORR BANK2	Mult

**07+ DCX Gas PIDS**

Acronym	Description	Default Units
<b>Accessories</b>		
Vehicle Theft Security Status	Vehicle Theft Security Status	
Vehicle Theft State	Vehicle Theft State	
Cruise Set Speed	Cruise Set Speed	mph
<b>Clutch</b>		
Torque converter slip	Torque converter slip	rpm
LR Clutch Fill Volume	LR Clutch Fill Volume	inches^3
2-4 Clutch Fill Volume	2-4 Clutch Fill Volume	inches^3
OD Clutch Fill Volume	OD Clutch Fill Volume	inches^3
UD Clutch Fill Volume	UD Clutch Fill Volume	inches^3
4C Clutch Fill Volume	4C Clutch Fill Volume	in
First 2-3 OD Clutch Fill Volume	First 2-3 OD Clutch Fill Volume	in
First N-1 UD Clutch Fill Volume	First N-1 UD Clutch Fill Volume	in
2C Clutch Fill Volume	2C Clutch Fill Volume	in
Alternate 2C Clutch Fill Volume	Alternate 2C Clutch Fill Volume	in
Normal N-1 UD Clutch Fill Volume	Normal N-1 UD Clutch Fill Volume	in
Accumulated converter clutch energy	Accumulated converter clutch energy	BTU
LC Clutch Fill Volume	LC Clutch Fill Volume	inches^3
Learned Fill Volume for the Direct Clutch	Learned Fill Volume for the Direct Clutch	inches^3
<b>Cooling</b>		
Engine Coolant Temp	ECT	F
Battery Temp	Battery Temp	F
Ambient Temp	AMB TEMP	F
AMB TEMP NEW	AMB TEMP NEW	F
AMB TEMP AVE	AMB TEMP AVE	F
CAT Modeled Temp	CAT TEMP	F
EXH TEMP	EXH TEMP	F
1/1 Heater Temp Error	1/1 Heater Temp Error	C
DES PWM RAD FAN	DES PWM RAD FAN	%
IN MAN AIR TEMP	IN MAN AIR TEMP	F
IN MAN GAS TEMP	IN MAN GAS TEMP	F
Calculated Oil Temperature	OIL TEMP CALC	F
Engine Coolant Temperature	ECT	F
Ambient Air Temperature	AMB TEMP	F
<b>Cylinder</b>		

TCYL VE MOD	TCYL VE MOD	Mult cylinder s cylinder s	AC Hi-Side Voltage	AC Hi-Side Voltage	Volts
CYLINDER ID	CYLINDER ID		S/C Switch Voltage	S/C Switch Voltage	Volts
CYLINDER SEQUENCE	CYLINDER SEQUENCE		Oil Pressure Sensor Voltage	OIL PRES V	Volts
Cylinder Which Failed	Cylinder Which Failed		APP 1 Volts	APP 1 Volts	Volts
Cylinder 1 CAT Mis-Fire Counter	Cylinder 1 CAT Mis-Fire Counter		APP 2 Volts	APP 2 Volts	Volts
Cylinder 2 CAT Mis-Fire Counter	Cylinder 2 CAT Mis-Fire Counter		TPS 1 Volts	TPS 1 V	Volts
Cylinder 3 CAT Mis-Fire Counter	Cylinder 3 CAT Mis-Fire Counter		TPS 2 Volts	TPS 2 V	Volts
Cylinder 4 CAT Mis-Fire Counter	Cylinder 4 CAT Mis-Fire Counter		S/C Switch Voltage2	S/C Switch Voltage2	Volts
Cylinder 5 CAT Mis-Fire Counter	Cylinder 5 CAT Mis-Fire Counter		TPS 1 Minimum Volts	TPS 1 MIN V	Volts
Cylinder 6 CAT Mis-Fire Counter	Cylinder 6 CAT Mis-Fire Counter		TPS 2 Minimum Volts	TPS 2 MIN V	Volts
Cylinder 7 CAT Mis-Fire Counter	Cylinder 7 CAT Mis-Fire Counter		Secondary Air MAP Volts	Secondary Air MAP Volts	Volts
Cylinder 8 CAT Mis-Fire Counter	Cylinder 8 CAT Mis-Fire Counter		ESW BATT VOLTAGE	ESW BATT VOLTAGE	Volts
Cylinder 1 Pre-Cubed Data	Cylinder 1 Pre-Cubed Data		LV1 TPS1 HI RES VOLT	LV1 TPS1 HI RES VOLT	Volts
Cylinder 2 Pre-Cubed Data	Cylinder 2 Pre-Cubed Data		BATTERY DISCONNECT STATUS REG	BATTERY DISCONNECT STATUS REG	
Cylinder 3 Pre-Cubed Data	Cylinder 3 Pre-Cubed Data		DM BAT VOLT LO LIM	DM BAT VOLT LO LIM	Volts
Cylinder 4 Pre-Cubed Data	Cylinder 4 Pre-Cubed Data		ESW BATT EE SLOPE	ESW BATT EE SLOPE	Counts
Cylinder 5 Pre-Cubed Data	Cylinder 5 Pre-Cubed Data		No. of Starts From Quick Learn or Battery Disconnect	No. of Starts From Quick Learn or Battery Disconnect	Counts
Cylinder 6 Pre-Cubed Data	Cylinder 6 Pre-Cubed Data		Filtered switched battery voltage (VSBf)	Filtered switched battery voltage (VSBf)	Volts
Cylinder 7 Pre-Cubed Data	Cylinder 7 Pre-Cubed Data				
Cylinder 8 Pre-Cubed Data	Cylinder 8 Pre-Cubed Data				
Cylinder 1 FTP Mis-Fire Counter	Cylinder 1 FTP Mis-Fire Counter				
Cylinder 2 FTP Mis-Fire Counter	Cylinder 2 FTP Mis-Fire Counter				
Cylinder 3 FTP Mis-Fire Counter	Cylinder 3 FTP Mis-Fire Counter				
Cylinder 4 FTP Mis-Fire Counter	Cylinder 4 FTP Mis-Fire Counter				
Cylinder 5 FTP Mis-Fire Counter	Cylinder 5 FTP Mis-Fire Counter				
Cylinder 6 FTP Mis-Fire Counter	Cylinder 6 FTP Mis-Fire Counter				
Cylinder 7 FTP Mis-Fire Counter	Cylinder 7 FTP Mis-Fire Counter				
Cylinder 8 FTP Mis-Fire Counter	Cylinder 8 FTP Mis-Fire Counter				
	<b>Electrical</b>			<b>Emissions</b>	
O2S 11 DEF GOAL VOLT	O2S 11 DEF GOAL V	Volts	EGR Control Status Register	EGR Control Status Register	
O2S 21 DEF GOAL VOLT	O2S 21 DEF GOAL V	Volts	EGR Duty Cycle	EGR Duty Cycle	%
O2S 12 GOAL VOLT	O2S 12 GOAL V	Volts	EGR CTRL PROP DC	EGR CTRL PROP DC	%DC
O2S 22 GOAL VOLT	O2S 22 GOAL V	Volts	EGR CTRL INT DC	EGR CTRL INT DC	%DC
TPS Calculated Voltage	TPS CALC V	Volts	EGR CTRL DERIV DC	EGR CTRL DERIV DC	%
BATTERY STATUS REGISTER	BATTERY STATUS REGISTER		EGR CTRL FF DC	EGR CTRL FF DC	%DC
Target Charging Voltage	Target Charging Voltage	Volts	EGR SP RAW A2D	EGR SP RAW A2D	mV
Voltage Sense	Voltage Sense	Volts	EGR SP FILT A2D	EGR SP FILT A2D	mV
BATTERY VOLTAGE FILTERED	BATT V FILT	Volts	EGR ZREF A2D	EGR ZREF A2D	Volts
Battery Volt	BATT V	Volts	EGR A2D STATUS	EGR A2D STATUS	
SCALED BATTERY VOLTAGE FILTERED	BATT V SCALED	Volts	EGR A2D STATUS	EGR A2D STATUS	
			EGR Mass flow rate des	EGR MASS FLOW	g/s
			EGR EXH PRESS FILTD	EXH PRES	kPa
			EGR EXH PRESS RATIO	EGR EXH PRESS RATIO	Ratio
			EGR EXH TEMP	EGR EXH TEMP	F
			EGR PORT FLOW FILTD	EGR PORT FLOW FILTD	g/s
			EGR Flow	EGR Flow	g/s
			EGR PRATIO	EGR PRATIO	PRatio
			EGR SONIC FLOW	EGR SONIC FLOW	g/s
			IN MAN EGR FRAC	IN MAN EGR FRAC	Mult
			IN MAN EGR MASS	IN MAN EGR MASS	g
			Total port egr flow	Total port egr flow	g/s

PORT EGR FLOW BANK1	PORT EGR FLOW BANK1	g/s	Fuel Level Percent	Fuel Level Percent	%
PORT EGR FLOW BANK2	PORT EGR FLOW BANK2	g/s	Fuel Tank Vapor Volume	Fuel Tank Vapor Volume	gal
EGR Sensed Volts	EGR Sensed Volts	Volts	Current Fuel Shutoff	Current Fuel Shutoff	
EGR Position A2D	EGR Position A2D	Volts	Fuel control status	Fuel control status	
EGR Monitor Status	EGR Monitor Status				mg/charge
Number Of EGR Test Times	Number Of EGR Test Times		FUEL MASS CYL1	FUEL MASS CYL1	mg/charge
EGR Monitor Test Timer	EGR Monitor Test Timer	ms	FUEL MASS CYL2	FUEL MASS CYL2	mg/charge
EGR High Fail Counter Spec	EGR High Fail Counter Spec		FUEL MASS CYL3	FUEL MASS CYL3	mg/charge
Last EGR Fail Counter	Last EGR Fail Counter		FUEL MASS CYL4	FUEL MASS CYL4	mg/charge
EGR Low Fail Counter Spec	EGR Low Fail Counter Spec		FUEL MASS CYL5	FUEL MASS CYL5	mg/charge
SID6 EGRM BELOW STATUS	SID6 EGRM BELOW STATUS		FUEL MASS CYL6	FUEL MASS CYL6	mg/charge
Last EGR Bank 1 Result	Last EGR Bank 1 Result	%	FUEL MASS CYL7	FUEL MASS CYL7	mg/charge
EGR Fuel Shift Low Spec	EGR Fuel Shift Low Spec	%	FUEL MASS CYL8	FUEL MASS CYL8	mg/charge
EGR Fuel Shift High Spec	EGR Fuel Shift High Spec	%	FUEL MASS FROM PW1 CYL1	FUEL MASS FROM PW1 CYL1	mg/charge
EGR Mon Threshold Type	EGR Mon Threshold Type		FUEL MASS FROM PW1 CYL2	FUEL MASS FROM PW1 CYL2	mg/charge
Last EGR Bank 2 Result	Last EGR Bank 2 Result	%	FUEL MASS FROM PW1 CYL3	FUEL MASS FROM PW1 CYL3	mg/charge
EGR Monitor Ratio	EGR Monitor Ratio	Ratio	FUEL MASS FROM PW1 CYL4	FUEL MASS FROM PW1 CYL4	mg/charge
EGR Monitor Numerator	EGR Monitor Numerator		FUEL MASS FROM PW1 CYL5	FUEL MASS FROM PW1 CYL5	mg/charge
EGR Monitor Denominator	EGR Monitor Denominator		FUEL MASS FROM PW1 CYL6	FUEL MASS FROM PW1 CYL6	mg/charge
EGR SPK ADJ MULT	EGR SPK ADJ MULT	Deg	FUEL MASS FROM PW1 CYL7	FUEL MASS FROM PW1 CYL7	mg/charge
<b>Engine</b>			FUEL MASS FROM PW1 CYL8	FUEL MASS FROM PW1 CYL8	mg/charge
Engine Runtime	ENGINE RUNTIME	s	FUEL MASS FROM PW2 CYL1	FUEL MASS FROM PW2 CYL1	mg/charge
Coil 1 Burn Time	Coil 1 Burn Time	us	FUEL MASS FROM PW2 CYL2	FUEL MASS FROM PW2 CYL2	mg/charge
Coil 2 Burn Time	Coil 2 Burn Time	us	FUEL MASS FROM PW2 CYL3	FUEL MASS FROM PW2 CYL3	mg/charge
TOTAL COIL DWELL1	TOTAL COIL DWELL1	us	FUEL MASS FROM PW2 CYL4	FUEL MASS FROM PW2 CYL4	mg/charge
TOTAL COIL DWELL2	TOTAL COIL DWELL2	us	FUEL MASS FROM PW2 CYL5	FUEL MASS FROM PW2 CYL5	mg/charge
Oil Pressure Sensor PSI	OIL PRES	kPa	FUEL MASS FROM PW2 CYL6	FUEL MASS FROM PW2 CYL6	mg/charge
ESIM Last Trip Engine On Time	ESIM Last Trip Engine On Time	min	FUEL MASS FROM PW2 CYL7	FUEL MASS FROM PW2 CYL7	mg/charge
This Engine On Time	This Engine On Time	min	FUEL MASS FROM PW2 CYL8	FUEL MASS FROM PW2 CYL8	mg/charge
MAP at Which Engine is Misfiring	MAP at Which Engine is Misfiring	kPa			
ENV STABLE ENGINE RUNTIME MIN	ENV STABLE ENGINE RUNTIME MIN	s			
DTS CORE ENGINE FUNCTIONS 1 4	DTS CORE ENGINE FUNCTIONS 1 4	Counts			
DTS CORE ENGINE FUNCTIONS 5 6	DTS CORE ENGINE FUNCTIONS 5 6	Counts			
Engine Position	Engine Position	deg			
Unlock Engine Position	Unlock Engine Position	deg			
<b>Fuel</b>					
Time Fuel System in Run Mode	Time Fuel System in Run Mode	s			
SCALED BATTERY VOLTAGE TRIMMED	SCALED BATTERY VOLTAGE TRIMMED	Volts			
PRG CAN FUEL FLOW	PRG CAN FUEL FLOW	g/s			
FUEL LVL FILTERED	FUEL LVL FILTERED	Volts			
Fuel Level Sensor #1 Volts	Fuel Level Sensor #1 Volts	Volts			



O2 LOC 22 A2D W	O2 LOC 22 A2D W	Volts	2/1 O2 Heater Monitor Status	2/1 O2 Heater Monitor Status	
O2 HTR22 FLAGS	O2 HTR22 FLAGS		2/2 O2 Heater Monitor Status	2/2 O2 Heater Monitor Status	
2/2 Pulse Width O2 Heater	2/2 Pulse Width O2 Heater	%	O2 HTR11 ID	O2 HTR11 ID	
2/2 O2 Heater Temp	O2 HTR22 TEMP	F	O2 HTR11 OVER TEMP TMR	O2 HTR11 OVER TEMP TMR	s
O2 HTR22 RESISTANCE	O2 HTR22 RESISTANCE	Ohms	O2 HTR11 REF VOLT	O2 HTR11 REF V	Volts
O2 SENSOR CIRCUIT COMPENSATION	O2 SENSOR CIRCUIT COMPENSATION		O2 HTR11 RT LINE NUM	O2 HTR11 RT LINE NUM	index
Purge AirFlow	Purge AirFlow	g/s	O2 HTR11 SENSE VOLT	O2 HTR11 SNS V	Volts
Mass Airflow	MAF	g/s	O2 HTR12 ID	O2 HTR12 ID	index
IAC total AirFlow	IAC TOT AIRFLOW	g/s	O2 HTR12 OVER TEMP TMR	O2 HTR12 OVER TEMP TMR	s
GAS MASS IN MANIFOLD	GAS MASS IN MANIFOLD	g/s	O2 HTR12 REF VOLT	O2 HTR12 REF V	Volts
Cranking Injector Pulse Width	Cranking Injector Pulse Width	us	O2 HTR12 RT LINE NUM	O2 HTR12 RT LINE NUM	index
Injector Pulse Width Cylinder 1	Injector Pulse Width Cylinder 1	us	O2 HTR12 SENSE VOLT	O2 HTR11 SNS V	Volts
Injector Pulse Width Cylinder 2	Injector Pulse Width Cylinder 2	us	O2 HTR12 TEMP ERROR	O2 HTR12 TEMP ERROR	C
Injector Pulse Width Cylinder 3	Injector Pulse Width Cylinder 3	us	O2 HTR21 ID	O2 HTR21 ID	index
Injector Pulse Width Cylinder 4	Injector Pulse Width Cylinder 4	us	O2 HTR21 OVER TEMP TMR	O2 HTR21 OVER TEMP TMR	s
Injector Pulse Width Cylinder 5	Injector Pulse Width Cylinder 5	us	O2 HTR21 REF VOLT	O2 HTR21 REF V	Volts
Injector Pulse Width Cylinder 6	Injector Pulse Width Cylinder 6	us	O2 HTR21 RT LINE NUM	O2 HTR21 RT LINE NUM	index
Injector Pulse Width Cylinder 7	Injector Pulse Width Cylinder 7	us	O2 HTR21 SENSE VOLT	O2 HTR21 SNS V	Volts
Injector Pulse Width Cylinder 8	Injector Pulse Width Cylinder 8	us	O2 HTR21 TEMP ERROR	O2 HTR21 TEMP ERROR	C
MASS ALREADY INJECTED CYL1	MASS ALREADY INJECTED CYL1	mg/charge	O2 HTR22 ID	O2 HTR22 ID	index
MASS ALREADY INJECTED CYL2	MASS ALREADY INJECTED CYL2	mg/charge	O2 HTR22 OVER TEMP TMR	O2 HTR22 OVER TEMP TMR	s
MASS ALREADY INJECTED CYL3	MASS ALREADY INJECTED CYL3	mg/charge	O2 HTR22 RT LINE NUM	O2 HTR22 RT LINE NUM	index
MASS ALREADY INJECTED CYL4	MASS ALREADY INJECTED CYL4	mg/charge	O2 HTR22 SENSE VOLT	O2 HTR22 SNS V	Volts
MASS ALREADY INJECTED CYL5	MASS ALREADY INJECTED CYL5	mg/charge	O2 HTR22 TEMP ERROR	O2 HTR22 TEMP ERROR	C
MASS ALREADY INJECTED CYL6	MASS ALREADY INJECTED CYL6	mg/charge	O2 HTR COLD START VALID FLAG	O2 HTR COLD START VALID FLAG	
MASS ALREADY INJECTED CYL7	MASS ALREADY INJECTED CYL7	mg/charge	O2 HTR SENSE VOLT	O2 HTR SNS V	Volts
MASS ALREADY INJECTED CYL8	MASS ALREADY INJECTED CYL8	mg/charge	1/1 O2 Ratio	1/1 O2 Ratio	%
O2 Monitor 1/1 Status	O2 Monitor 1/1 Status		1/1 O2 Ratio Low Threshold	1/1 O2 Ratio Low Threshold	%
O2 Monitor 2/1 Status	O2 Monitor 2/1 Status		1/1 O2 SOC Mon Status	1/1 O2 SOC Mon Status	
O2 Monitor 1/2 Status	O2 Monitor 1/2 Status		1/1 O2 SOC Mon Threshold Type	1/1 O2 SOC Mon Threshold Type	
O2 Monitor 2/2 Status	O2 Monitor 2/2 Status		2/1 O2 Ratio	2/1 O2 Ratio	%
OBD2 O2 LEAN VOLT 12 STATUS	OBD2 O2 LEAN VOLT 12 STATUS		2/1 O2 Ratio Low Threshold	2/1 O2 Ratio Low Threshold	%
OBD2 O2 RICH VOLT 22 RESULT	OBD2 O2 RICH VOLT 22 RESULT	Volts	2/1 O2 SOC Mon Status	2/1 O2 SOC Mon Status	
1/1 O2 Heater Monitor Status	1/1 O2 Heater Monitor Status		2/1 O2 SOC Mon Threshold Type	2/1 O2 SOC Mon Threshold Type	
1/2 O2 Heater Monitor Status	1/2 O2 Heater Monitor Status		Last 1/2 O2 High Volt	Last 1/2 O2 High Volt	Volts
			Last 1/2 O2 High Volt Spec	Last 1/2 O2 High Volt Spec	Volts
			1/2 O2 Mon Max Status	1/2 O2 Mon Max Status	
			1/2 O2 Mon Max Threshold Type	1/2 O2 Mon Max Threshold Type	
			Last 1/2 O2 Low Volt	Last 1/2 O2 Low Volt	Volts
			1/2 O2 Low Volt Spec	1/2 O2 Low Volt Spec	Volts
			1/2 O2 Mon Min Status	1/2 O2 Mon Min Status	

1/2 O2 Min Threshold Type	1/2 O2 Min Threshold Type		O2 HEAT SENSOR 4 OFFSET COMP	O2 HEAT SENSOR 4 OFFSET COMP	Counts
Last 2/2 O2 High Volt	Last 2/2 O2 High Volt	Volts	O2 HEAT SENSOR 4 SLOPE COMP	O2 HEAT SENSOR 4 SLOPE COMP	Counts
Last 2/2 O2 High Volt Spec	Last 2/2 O2 High Volt Spec	Volts	Manifold absolute pressure	MAP ABS	in Hg
2/2 O2 Mon Max Status	2/2 O2 Mon Max Status		<b>Miscellaneous</b>		
2/2 O2 Max Threshold Type	2/2 O2 Max Threshold Type		MAP V	MAP V	Volts
Last 2/2 O2 Low Volt	Last 2/2 O2 Low Volt	Volts	ACCUM AIR PORT MASS FLOW	ACC AIR PORT MASS FLOW	g
2/2 O2 Low Volt Spec	2/2 O2 Low Volt Spec	Volts	MAP Vacuum	MAP VAC	in Hg
2/2 O2 Mon Min Status	2/2 O2 Mon Min Status		P-Ratio MAP/BARO	P-RAT MAP BARO	PRatio
TM O2 MON 1 IN USE REG	TM O2 MON 1 IN USE REG		TOTAL PORT MASS FLOW SCALED	TOT PORT MASS FLOW SCALED	g/s
O2 Monitor Bank 1 Ratio	O2 Monitor Bank 1 Ratio	Ratio	Minimum TPS	Minimum TPS	Volts
O2 Monitor Bank 1 Numerator	O2 Monitor Bank 1 Numerator		DELTHR	DELTHR	Volts
O2 Monitor Bank 1 Denominator	O2 Monitor Bank 1 Denominator		THR POSN 10BIT	THR POSN 10BIT	Volts
TM O2 MON 2 IN USE REG	TM O2 MON 2 IN USE REG		START ECT	START ECT	F
O2 Monitor Bank 2 Ratio	O2 Monitor Bank 2 Ratio	Ratio	ECT PREVIOUS	ECT PREVIOUS	F
O2 Monitor Bank 2 Numerator	O2 Monitor Bank 2 Numerator		SHUT DOWN ECT	SHUT DOWN ECT	F
O2 Monitor Bank 2 Denominator	O2 Monitor Bank 2 Denominator		NUMBER OF EPPS	NUMBER OF EPPS	Counts
ENV MAX ARM O2 FACTOR	ENV MAX ARM O2 FACTOR	Mult	Time From Start Run	Time From Start Run	s
ENV MAX O2 SIGNAL 1	ENV MAX O2 SIGNAL 1	Volts	Closed Loop Timer	Closed Loop Timer	s
ENV MAX TEST O2 FACTOR	ENV MAX TEST O2 FACTOR	Mult	O2S 11 DELAY AFTER OPEN LOOP TMR	O2S 11 DELAY AFTER OPEN LOOP TMR	s
ENV MIN ARM O2 FACTOR	ENV MIN ARM O2 FACTOR	Mult	O2S 11 KICK	O2S 11 KICK	Mult
ENV MIN O2 SIGNAL 1	ENV MIN O2 SIGNAL 1	Volts	O2S 11 KICK LEAN	O2S 11 KICK LEAN	Mult
ENV MIN TEST O2 FACTOR	ENV MIN TEST O2 FACTOR	Mult	O2S 11 PROP	O2S 11 PROP	Mult
ENV O2 F2 OUT OF RANGE TIME	ENV O2 F2 OUT OF RANGE TIME	s	O2S 11 PROP GAIN	O2S 11 PROP GAIN	1/V
ENV O2 FACTOR LOOP TIME	ENV O2 FACTOR LOOP TIME	s	O2S 11 INTGL GAIN	O2S 11 INTGL GAIN	1/kV
ENV O2 FILTER CONSTANT	ENV O2 FILTER CONSTANT	Mult	O2S 11 DERIV	O2S 11 DERIV	Mult
ENV O2 LOC 11 OUT OF RANGE TIME	ENV O2 LOC 11 OUT OF RANGE TIME	s	O2S 11 DERIV ERROR	O2S 11 DERIV ERROR	Volts
Purge #2 AirFlow	Purge #2 AirFlow	g/s	O2S 21 SIGNAL LIN	O2S 21 SIGNAL LIN	Volts
O2 SENSOR 1 A2D OFFSET	O2 SENSOR 1 A2D OFFSET	Counts	O2S 21 CLOOP TIME FROM START	O2S 21 CLOOP TIME FROM START	s
O2 SENSOR 1 A2D SLOPE	O2 SENSOR 1 A2D SLOPE	Counts	O2S 21 DELAY AFTER OPEN LOOP TMR	O2S 21 DELAY AFTER OPEN LOOP TMR	s
O2 SENSOR 2 A2D OFFSET	O2 SENSOR 2 A2D OFFSET	Counts	O2S 21 KICK	O2S 21 KICK	Mult
O2 SENSOR 2 A2D SLOPE	O2 SENSOR 2 A2D SLOPE	Counts	O2S 21 KICK LEAN	O2S 21 KICK LEAN	Mult
O2 SENSOR 3 A2D OFFSET	O2 SENSOR 3 A2D OFFSET	Counts	O2S 21 KICK RICH	O2S 21 KICK RICH	Mult
O2 SENSOR 3 A2D SLOPE	O2 SENSOR 3 A2D SLOPE	Counts	O2S 21 PROP	O2S 21 PROP	Mult
O2 SENSOR 4 A2D OFFSET	O2 SENSOR 4 A2D OFFSET	Counts	O2S 21 PROP GAIN	O2S 21 PROP GAIN	1/V
O2 SENSOR 4 A2D SLOPE	O2 SENSOR 4 A2D SLOPE	Counts	O2S 21 INTGL GAIN	O2S 21 INTGL GAIN	1/kV
O2 HEAT SENSOR 1 OFFSET COMP	O2 HEAT SENSOR 1 OFFSET COMP	Counts	O2S 21 DERIV	O2S 21 DERIV	Mult
O2 HEAT SENSOR 1 SLOPE COMP	O2 HEAT SENSOR 1 SLOPE COMP	Counts	O2S 21 DERIV ERROR	O2S 21 DERIV ERROR	Volts
O2 HEAT SENSOR 2 OFFSET COMP	O2 HEAT SENSOR 2 OFFSET COMP	Counts	O2S 12 SIGNAL LIN	O2S 12 SIGNAL LIN	Volts
O2 HEAT SENSOR 2 SLOPE COMP	O2 HEAT SENSOR 2 SLOPE COMP	Counts	O2S 12 DELAY AFTER OPEN LOOP TMR	O2S 12 DELAY AFTER OPEN LOOP TMR	s
O2 HEAT SENSOR 3 OFFSET COMP	O2 HEAT SENSOR 3 OFFSET COMP	Counts	O2S 12 ADAP	O2S 12 ADAP	Volts
O2 HEAT SENSOR 3 SLOPE COMP	O2 HEAT SENSOR 3 SLOPE COMP	Counts	DS ADAP TIME FROM START TIMER	DS ADAP TIME FROM START TIMER	s

DS CLOSED LOOP TIME FROM START	DS CLOSED LOOP TIME FROM START	s			mg/cha
O2S 12 LO RES VALUE SCALED	O2S 12 LO RES VALUE SCALED	Volts	CORR MASS RMNG TO DELIV CYL6	CORR MASS RMNG TO DELIV CYL6	rge
O2S 12 PROP	O2S 12 PROP	Volts	CORR MASS RMNG TO DELIV CYL8	CORR MASS RMNG TO DELIV CYL8	mg/cha
O2S 12 INTGL	O2S 12 INTGL	Volts	CORR PW REMAINING TO DELIV CYL1	CORR PW REMAINING TO DELIV CYL1	rge
O2S 12 INTGL GAIN	O2S 12 INTGL GAIN	Counts	CORR PW REMAINING TO DELIV CYL2	CORR PW REMAINING TO DELIV CYL2	us
O2S 22 SIGNAL LIN	O2S 22 SIGNAL LIN	Volts	CORR PW REMAINING TO DELIV CYL3	CORR PW REMAINING TO DELIV CYL3	us
O2S 22 DELAY AFTER OPEN LOOP TMR	O2S 22 DELAY AFTER OPEN LOOP TMR	s	CORR PW REMAINING TO DELIV CYL4	CORR PW REMAINING TO DELIV CYL4	us
O2S 22 ADAP	O2S 22 ADAP	Volts	CORR PW REMAINING TO DELIV CYL5	CORR PW REMAINING TO DELIV CYL5	us
O2S 22 LO RES VALUE SCALED	O2S 22 LO RES VALUE SCALED	Volts	CORR PW REMAINING TO DELIV CYL6	CORR PW REMAINING TO DELIV CYL6	us
O2S 22 PROP	O2S 22 PROP	Volts	CORR PW REMAINING TO DELIV CYL7	CORR PW REMAINING TO DELIV CYL7	us
O2S 22 INTGL GAIN	O2S 22 INTGL GAIN	Counts	CORR PW REMAINING TO DELIV CYL8	CORR PW REMAINING TO DELIV CYL8	us
Generator Duty Cycle	Generator Duty Cycle	%DC			mg/cha
TCYL	TCYL	K	MASS REMAINING TO DELIV CYL1	MASS REMAINING TO DELIV CYL1	rge
GASFLOW MAP	GASFLOW MAP	kPa	MASS REMAINING TO DELIV CYL2	MASS REMAINING TO DELIV CYL2	mg/cha
DISTANCE PULSES PER KILOMETER	DISTANCE PULSES PER KILOMETER	Counts	MASS REMAINING TO DELIV CYL3	MASS REMAINING TO DELIV CYL3	rge
PRIME SHOT PATTERN	PRIME SHOT PATTERN	Counts	MASS REMAINING TO DELIV CYL4	MASS REMAINING TO DELIV CYL4	mg/cha
AVG TOTAL WORKING PW	AVG TOTAL WORKING PW	us	MASS REMAINING TO DELIV CYL5	MASS REMAINING TO DELIV CYL5	rge
MIN WORKING PW	MIN WORKING PW	us	MASS REMAINING TO DELIV CYL6	MASS REMAINING TO DELIV CYL6	mg/cha
TOTAL MASS TO DELIV CYL1	TOTAL MASS TO DELIV CYL1	mg/cha	MASS REMAINING TO DELIV CYL7	MASS REMAINING TO DELIV CYL7	rge
TOTAL MASS TO DELIV CYL2	TOTAL MASS TO DELIV CYL2	mg/cha	MASS REMAINING TO DELIV CYL8	MASS REMAINING TO DELIV CYL8	mg/cha
TOTAL MASS TO DELIV CYL3	TOTAL MASS TO DELIV CYL3	mg/cha	PW1 CYL1	PW1 CYL1	rge
TOTAL MASS TO DELIV CYL4	TOTAL MASS TO DELIV CYL4	mg/cha	PW1 CYL2	PW1 CYL2	mg/cha
TOTAL MASS TO DELIV CYL5	TOTAL MASS TO DELIV CYL5	mg/cha	PW1 CYL3	PW1 CYL3	rge
TOTAL MASS TO DELIV CYL6	TOTAL MASS TO DELIV CYL6	mg/cha	PW1 CYL4	PW1 CYL4	mg/cha
TOTAL MASS TO DELIV CYL7	TOTAL MASS TO DELIV CYL7	mg/cha	PW1 CYL5	PW1 CYL5	rge
TOTAL MASS TO DELIV CYL8	TOTAL MASS TO DELIV CYL8	mg/cha	PW1 CYL6	PW1 CYL6	mg/cha
CORR MASS RMNG TO DELIV CYL1	CORR MASS RMNG TO DELIV CYL1	mg/cha	PW1 CYL7	PW1 CYL7	rge
CORR MASS RMNG TO DELIV CYL2	CORR MASS RMNG TO DELIV CYL2	mg/cha	PW1 CYL8	PW1 CYL8	mg/cha
CORR MASS RMNG TO DELIV CYL3	CORR MASS RMNG TO DELIV CYL3	mg/cha	PW2 CYL1	PW2 CYL1	rge
CORR MASS RMNG TO DELIV CYL4	CORR MASS RMNG TO DELIV CYL4	mg/cha	PW2 CYL2	PW2 CYL2	mg/cha
CORR MASS RMNG TO DELIV CYL5	CORR MASS RMNG TO DELIV CYL5	mg/cha	PW2 CYL3	PW2 CYL3	rge
		mg/cha	PW2 CYL4	PW2 CYL4	mg/cha
		mg/cha	PW2 CYL5	PW2 CYL5	rge
		mg/cha	PW2 CYL6	PW2 CYL6	mg/cha
		mg/cha	PW2 CYL7	PW2 CYL7	rge
		mg/cha	PW2 CYL8	PW2 CYL8	mg/cha

PW3 CYL1	PW3 CYL1	us	Cam Crank Difference	Cam Crank Difference	Deg
PW3 CYL2	PW3 CYL2	us	FIRST CAM COUNT	FIRST CAM COUNT	Counts
PW3 CYL3	PW3 CYL3	us	AC Output Current	AC Output Current	mA
PW3 CYL4	PW3 CYL4	us	AC Hi-Side Pressure	AC Hi-Side Pressure	kPa
PW3 CYL5	PW3 CYL5	us	Desired TPS Position	Desired TPS Position	Volts
PW3 CYL6	PW3 CYL6	us	LV1 5VREF AUX ERR AVG	LV1 5VREF AUX ERR AVG	Volts
PW3 CYL7	PW3 CYL7	us	RAW AUX 5V	RAW AUX 5V	Volts
PW3 CYL8	PW3 CYL8	us	RAW OUT 5V	RAW OUT 5V	Volts
PULSE MODE	PULSE MODE	mode	ETC Directional Duty Cycle	ETC Directional Duty Cycle	%
DESIRED FA CYL1	DESIRED FA CYL1	FAR	LV2 TRQ DLYD RLIM DRVR FW REQ	LV2 TRQ DLYD RLIM DRVR FW REQ	N*m
DESIRED FA CYL2	DESIRED FA CYL2	FAR	LV2 TRQ FW ACT	LV2 TRQ FW ACT	N*m
DESIRED FA CYL3	DESIRED FA CYL3	FAR	PTC FW TRQ REQ SLW	PTC FW TRQ REQ SLW	N*m
DESIRED FA CYL4	DESIRED FA CYL4	FAR	LV1 ECT SLOW	LV1 ECT SLOW	F
DESIRED FA CYL5	DESIRED FA CYL5	FAR	ETC PWM	ETC PWM	%DC
DESIRED FA CYL6	DESIRED FA CYL6	FAR	LV1 TPS MODE	LV1 TPS MODE	mode
DESIRED FA CYL7	DESIRED FA CYL7	FAR	PTC DELPVS CALCULATED	PTC DELPVS CALCULATED	Volts
DESIRED FA CYL8	DESIRED FA CYL8	FAR	DISTANCE PULSE COUNTER	DISTANCE PULSE COUNTER	Counts
Current ADAP Cell ID	Current ADAP Cell ID		AV TIP READ	AV TIP READ	Volts
1/1 Short Term ADAP	1/1 Short Term ADAP	%	DEF READ TIP KPA	DEF READ TIP KPA	kPa
2/1 Short Term ADAP	2/1 Short Term ADAP	%	READ MAP KPA	READ MAP KPA	kPa
1/1 Long Term ADAP	1/1 Long Term ADAP	%	READ TIP KPA	READ TIP KPA	kPa
2/1 Long Term ADAP	2/1 Long Term ADAP	%	BARO MULT	BARO MULT	Ratio
O2S 11 AVG FACTOR	O2S 11 AVG FACTOR	Mult	BARO READ DELAY TMR	BARO READ DELAY TMR	ms
O2S 21 AVG FACTOR	O2S 21 AVG FACTOR	Mult	FILTD TIP FOR BARO	FILTD TIP FOR BARO	kPa
BASE VE BANK1	BASE VE BANK1	%/100	PRG VAC	PRG VAC	kPa
BASE VE BANK2	BASE VE BANK2	%/100	Sensed TIP	Sensed TIP	kPa
TOTAL VE BANK1	TOTAL VE BANK1	%/100	PCM Odometer	PCM Odometer	mile
TOTAL VE BANK2	TOTAL VE BANK2	%/100	TMAP	TMAP	kPa
OPEN LOOP FA	OPEN LOOP FA	FAR	Wastegate Solenoid	Wastegate Solenoid	%
PHI ADAP	PHI ADAP	Mult	Air Pump Relay	Air Pump Relay	
PHI MULT	PHI MULT	Mult	Secondary Air MAP Sensor	Secondary Air MAP Sensor	g/s
DCFC ENABL TIME	DCFC ENABL TIME	s	MF COUNTS CURRENT1	MF COUNTS CURRENT1	Counts
		kCount	MF COUNTS CURRENT2	MF COUNTS CURRENT2	Counts
DCFC P TERM	DCFC P TERM	s	MF COUNTS CURRENT3	MF COUNTS CURRENT3	Counts
		kCount	MF COUNTS CURRENT4	MF COUNTS CURRENT4	Counts
DCFC I TERM	DCFC I TERM	s	MF COUNTS CURRENT5	MF COUNTS CURRENT5	Counts
		kCount	MF COUNTS CURRENT6	MF COUNTS CURRENT6	Counts
DCFC D TERM	DCFC D TERM	s	MF COUNTS CURRENT7	MF COUNTS CURRENT7	Counts
DCFC PID SUM	DCFC PID SUM	Counts	MF COUNTS CURRENT8	MF COUNTS CURRENT8	Counts
DCFC COLD LAUNCH MULT	DCFC COLD LAUNCH MULT	Mult	MF COUNTS PREVIOUS1	MF COUNTS PREVIOUS1	Counts
DCFC DES FA MULT	DCFC DES FA MULT	Counts	MF COUNTS PREVIOUS2	MF COUNTS PREVIOUS2	Counts
DCFC RAMP OUT FCTR	DCFC RAMP OUT FCTR	Mult			

MF COUNTS PREVIOUS3	MF COUNTS PREVIOUS3	Counts	Line pressure correction factor	Line pressure correction factor	
MF COUNTS PREVIOUS4	MF COUNTS PREVIOUS4	Counts	Partial lock duty cycle on time	Partial lock duty cycle on time	%
MF COUNTS PREVIOUS5	MF COUNTS PREVIOUS5	Counts		<b>Misfire</b>	
MF COUNTS PREVIOUS6	MF COUNTS PREVIOUS6	Counts	Knock Sensor 1 Volts	KNK SNS 1V	mV
MF COUNTS PREVIOUS7	MF COUNTS PREVIOUS7	Counts	Knock Sensor 2 Volts	KNK SNS 2V	mV
MF COUNTS PREVIOUS8	MF COUNTS PREVIOUS8	Counts	KNK FUEL RETARD	KNK FUEL RETARD	deg
LV1 TPS1 MAX	LV1 TPS1 MAX	Volts	KNK ST RETARD	KNK ST RETARD	Deg
LV1 TPS1 MIN	LV1 TPS1 MIN	Volts	KNK LT RETARD	KNK LT RETARD	deg
LV1 TPS2 MAX	LV1 TPS2 MAX	Volts	KNK WINDOW START	KNK WINDOW START	deg
LV1 TPS2 MIN	LV1 TPS2 MIN	Volts	KNK 1 ENABLE	KNK 1 ENABLE	
LV1 TPS1 TPS2 DELTA	LV1 TPS1 TPS2 DELTA	Volts	KNK 2 ENABLE	KNK 2 ENABLE	
LV1 PV1 MIN	LV1 PV1 MIN	Volts	Status knk lt retard	Status knk lt retard	
LV1 PV1 MAX	LV1 PV1 MAX	Volts	KNK WOT FA MUL	KNK WOT FA MUL	FAR
LV1 PV2 MIN	LV1 PV2 MIN	Volts		<b>Performance</b>	
LV1 PV2 MAX	LV1 PV2 MAX	Volts	Read Engine RPM	RPM	rpm
LV1 PV2 SLOPE	LV1 PV2 SLOPE				RPM/M
LV1 PV1 MIN NORM	LV1 PV1 MIN NORM	Volts	RPM vs. Vehicle Speed Ratio	RPM vs. Vehicle Speed Ratio	PH
LV1 PV2 MIN NORM	LV1 PV2 MIN NORM	Volts	Engine Speed	ENG RPM	rpm
DTS ETC RELIABILITY 1 4	DTS ETC RELIABILITY 1 4	Counts	RPM ERR	RPM ERR	rpm
DTS ETC RELIABILITY 5 6	DTS ETC RELIABILITY 5 6	Counts	DCFC DESIRED RPM ROUGH	DCFC DESIRED RPM ROUGH	rpm
Etrq Losses	Etrq Losses	N*m	DCFC SCALED RPM ROUGH	DCFC SCALED RPM ROUGH	rpm
		mg/cha	DCFC RPM ROUGH	DCFC RPM ROUGH	rpm
Port Flow Per Stroke	PORT FLOW PER STROKE	rge	DCFC RPM0	DCFC RPM0	rpm
Actual Line Pressure 1	Actual Line Pressure 1	psi	DCFC RPM ROUGH ERROR	DCFC RPM ROUGH ERROR	rpm
Desired Line Pressure	Desired Line Pressure	psi	Vehicle Speed	VEH SPEED	mph
Line Pressure Duty-Cycle (RFE)	Line Pressure Duty-Cycle (RFE)	%	RPM at Which Engine is Misfiring	RPM at Which Engine is Misfiring	rpm
Line Pressure A/D Input Reading	Line Pressure A/D Input Reading	Volts	Actual Torque	TRQ ACT	N*m
		inches^A	LV2 RPM	LV2 RPM	rpm
LR Instantaneous Volume	LR Instantaneous Volume	3	LV2 RPM LIMIT	LV2 RPM LIMIT	rpm
		inches^A	Actual Torque	TRQ ACT	N*m
24 Instantaneous Volume	24 Instantaneous Volume	3	Raw Engine Speed	ENG SPD RAW	rpm
		inches^A	Turbine Speed	Turbine Speed	rpm
OD Instantaneous Volume	OD Instantaneous Volume	3	Output Shaft Speed	Output Shaft Speed	rpm
		inches^A	Target Turbine Speed	Target Turbine Speed	rpm
UD Instantaneous Volume	UD Instantaneous Volume	3	Previous Turbine Speed	Previous Turbine Speed	rpm
2C Instantaneous Volume	2C Instantaneous Volume	in	Instantaneous Output Speed	Instantaneous Output Speed	rpm
4C Instantaneous Volume	4C Instantaneous Volume	in	Current Vehicle Speed	VEH SPD	mph
Line Pressure Correction for 1st N-1 1	Line Pressure Correction for 1st N-1 1		Flywheel Potential Torque	Flywheel Potential Torque	N*m
Line Pressure Correction for 1st N-1 2	Line Pressure Correction for 1st N-1 2		Delta Torque	Delta Torque	N*m
Line Pressure Correction for 1st N-1 3	Line Pressure Correction for 1st N-1 3		Engine flywheel torque	ENG FLY TRQ	lbft
Line Pressure Correction for 1st N-1 4	Line Pressure Correction for 1st N-1 4		Engine Torque (45RFE/62TE)	ENG TRQ RFE	lbft
Line Pressure Correction for 1st N-1 5	Line Pressure Correction for 1st N-1 5				

Engine Torque (40TE/41TE/42RLE)	ENG TRQ RLE	lbft
<b>Status</b>		
MDS Status	MDS Status	
<b>Throttle</b>		
BASE IDLE SPD	BASE IDLE SPD	rpm
DES PID IDLE SPD	DES PID IDLE SPD	rpm
Throttle Position Sensor Voltage	THR POS V	Volts
Throttle Position Sensor Percent	THR POS %	%
Target Idle Speed	Target Idle Speed	rpm
Throttle Blade Position	THR BLADE	%
Accelerator Pedal Position	ACC PDL POS	%
Change in Pedal Position Voltage above its Minimum Threshold	Change in Pedal Position Voltage above its Minimum Threshold	Volts
HEV Target Idle Speed	HEV Target Idle Speed	rpm
TA IDLE LOOP FIN AVG TIME	TA IDLE LOOP FIN AVG TIME	ns
TA IDLE LOOP FIN MAX TIME	TA IDLE LOOP FIN MAX TIME	ns
TA IDLE LOOP FIN MIN TIME	TA IDLE LOOP FIN MIN TIME	ns
Pedal Value Sensor 1 Max Value Stored	Pedal Value Sensor 1 Max Value Stored	Volts
Pedal Value Sensor 2 Max Value Stored	Pedal Value Sensor 2 Max Value Stored	Volts
Raw throttle input	Raw throttle input	Volts
Throttle Angle Data	THR ANGLE	Deg
Throttle Error Intermittent Counter	Throttle Error Intermittent Counter	Counts
Throttle Input Signal High Fault Counter	Throttle Input Signal High Fault Counter	Counts
Throttle Input Signal Low Fault Counter	Throttle Input Signal Low Fault Counter	Counts
<b>Transmission</b>		
Trans Oil Temperature	TRANS OIL TEMP	F
Trans Engine Speed	Trans Engine Speed	rpm
Turbine Torque I-Gear	Turbine Torque I-Gear	lbft