# SyvecsLTD

V1.2

## Subura Impreza 2006-2014

This document is intended for use by a technical audience and describes a number of procedures that are potentially hazardous. Installations should be carried out by competent persons only.

Syvecs and the author accept no liability for any damage caused by the incorrect installation or configuration of the equipment.

Please Note that due to frequent firmware changes certain windows might not be the same as the manual illustrates. If so please contact the Syvecs Tech Team for Assistance.

Support@Syvecs.com



#### Contents

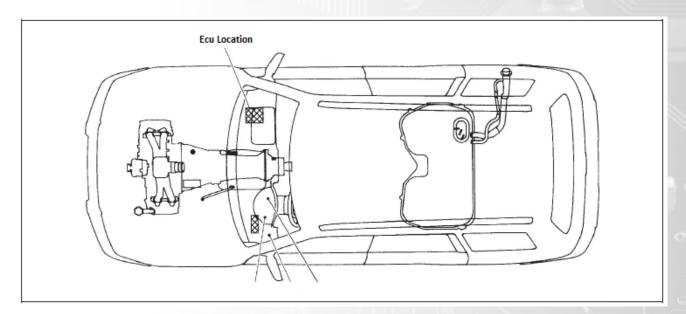
The kit comes with the following:

1 x Syvecs S7Plus

1 x 06-14 Impreza Loom Adaptor

#### Installation

- 1.) Remove the Negative Terminal from the battery on the Vehicle
- 2.) Unplug the OEM Engine control module found underneath the Glove box. There will be 4 connectors



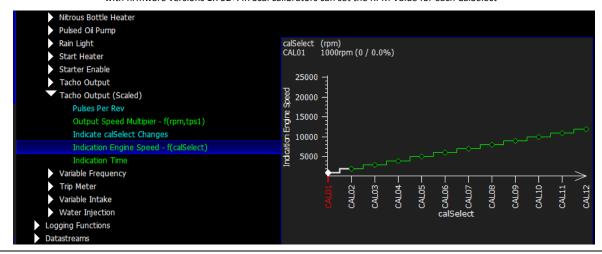
3.) Plug the 4 Connectors into the Syvecs Plug in Harness



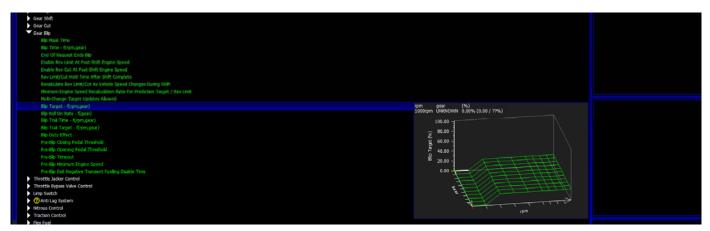
#### **06-14 Software Options**

Cal Position Shown on Dash - The Calibration Switch position can be displayed on the OEM RPM/Tacho counter

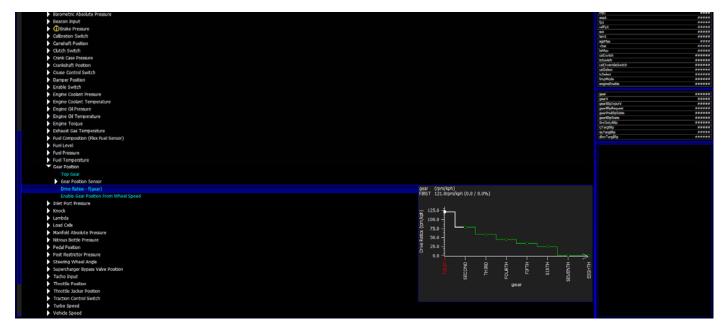
with firmware versions 1.752+. In Scal calibrators can set the RPM Value for each CalSelect



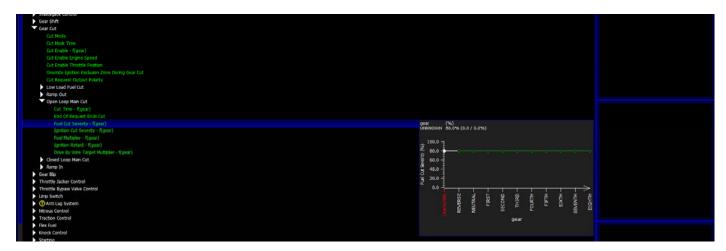
**Rev Matching** (Blip on DownShift) is active when Clutch is Pressed, Brake is Pressed and RPM is Above 2000rpm. This will send a GearBlip Request on Slave1 AN23 which is then fully adjustable via Gearblip settings to suit engine type



The Ecu calculates the correct rev matching Rpm based on the Drive Ratios. If you are using a different Ratio to Factory you can adjust these Drive Ratios here



Flat Shifting – Means users can shift gear without removing the accelerator pedal. It is adjustable via Gear Cut Settings. When the Clutch is pressed, Throttle is greater than 60% and RPM is more than 3500rpm a Gear Cut request signal is sent causing the Open loop gear cut cals to become active. When the Clutch pedal is not pressed the Cut will end and Ramp in Stage of Gearcut will become active to allow smoothing of torque cuts.



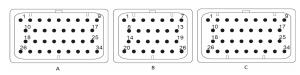
#### 06-14 FAQ and Help

#### Q) Do you control the OEM VVT

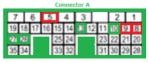
- A) Yes, this is adjustable via Variable Valve timing calibrations, Can Change Intake and Exhaust Cam Targets
- Q) Do you Supply a Base map for the Kit
- A) Yes as with all out kits we supply a very good base calibration to get everything working for you
- Q) Does the Traction Switch and VSC Sport Switch come into the ECU Via Canbus
- Q) How do we change calibrations
- A) This is done via the OEM Steering wheel Cruise buttons, Up is Cal Up, Down is Cal Down
- Q) Can I install different in tank pump?
- A) Yes, the Syvec's communicates with the OEM Fuel Pump Ecu to allow PWM Control of the Pump so it can be adjusted to suit your new pump. This is found in Output Function Fuel Pump Fuel Pump PWM 1 Control
- Q) What of the original features will now not work?
- A) None, even cruise control works
- Q) Can we use the OBD port still to Log, Read Codes and Clear them on other ecus on the car like ABS?
- A) Yes via OEM Tools or Ecutek

Email Support@syvecs.co.uk for a base map to suit your setup.

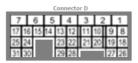
### 06-14 Pinouts











	DESCRIPTION	CONNECTOR A		4
	PART NUMBER	4-1437290-0		
	NOTES:	34 Way - Key1		
Syvecs Description	Syvecs Pinout	Impreza	Impreza Notes	Notes
PWR CTR OUT	A1	B23	Main Relay	+
H-Bridge1	A2	D25	DBW+	H-BRIDGE OUTPUTS, CAN BE DRIVEN HIGH OR LOW. USED GENERALLY
H-Bridge2	A3	D5*	DBW-	MOTOR CONTROL, PWM OUTPUT, VANOS
H-Bridge3	A4	B20	Starter Relay	
H-Bridge4 H-Bridge5	A5 A6	B22 D12	Tacho Tumble Generator Open LH	-
H-Bridge6	A7	D13	Tumble Generator Close LH	
H-Bridge7	A8	D22	Tumble Generator Open RH	
H-Bridge8 FUEL1	A9 A10	D23 D8	Tumble Generator Close RH Injector 1	FUEL INJECTOR OUTPUTS CAPABLE OF HIGH IMPENDANCE INJECTORS O
FUEL2	A11	D9	Injector2	FUEL INJECTOR OUTPUTS CAPABLE OF HIGH IMPENDANCE INJECTORS OF USED AS OUTPUTS FOR DEVICES, SUPPORTS PWM AND CAN HANI 10AMP MAX
FUEL3	A12	D10	Injector 3	TOAMP MAX
FUEL4 FUEL5	A13 A14	D11	Injector 4	-
FUEL6	A15			
FUEL7	A16			
FUEL8 PWM1 *FUEL9-SB20 (12v 470R Pullup)	A17 A18	B18	Rad Fan	PWM OUTPUTS CAPABLE OF UP TO 10AMPS MAX. HAVE OPTION VI
PWM2 *FUEL10-SB23 (12v 470R Pullup)	A19	B18 B29	Rad Fan 2	HARDWARE JUMPER TO APPLY 12V PULLUP USED FOR SOME TACHO
PWM3 *FUEL11-SB24 (5v 470R Pullup)	A20	B10 - (5v Pullup)	Alternator	PWM OUTPUTS CAPABLE OF UP TO 10AMPS MAX, HAVE OPTION V
PWM4 *FUEL12-SB26 (5v 470R Pullup)	A21	B9	A/C Relay	HARDWARE JUMPER TO APPLY SV PULLUP USED FÖR OEM FUEL PUI  CONTROLLERS  PWM OUTPUTS CAPABLE OF UP TO 10AMPS MAX, HAVE OPTION VI
PWM5-SB27 (Flyback Diode) PWM6-SB29 (Flyback Diode)	A22 A23	D14 – (Diode)	VVT OCV - LH Inlet  VVT OCV - RH Inlet	HARDWARE JUMPER TO FLYBACK DIODE, WISE TO USE WITH VARIAB
PWM7-SB32(Flyback Diode)	A24	D16 – (Diode) D30 – (Diode)	VVT OCV – RH Inlet  VVT OCV – LH Exhaust	VALVE SOLENÓIDS
PWM8-SB35(FlyBack Diode)	A25	D24 – (Diode)	VVT OCV – RH Exhaust	
IGN1	A26	D18	Ignition Coil 1	
IGN2 IGN3	A27 A28	D19 D20	Ignition Coil 2 Ignition Coil 3	+
IGN4	A29	D21	Ignition Coil 4	
IGN5	A30	B12	Fuel Pump Control	
IGN6 PWRGND	A31 A32	D27 A35, B6	Wastegate AirFlow Shield, PPS Shield	IGBTIIIII LINKED POWER GROUND
PWRGND PWRGND	A32 A33	A35, 86 D1, D2, D3	AirFlow Shield, PPS Shield PwrGnd	LINKED POWER GROUND LINKED POWER GROUND
PWRGND	A34	D6, D7, D26, C24, C25	PwrGnd	LINKED POWER GROUND
	-		•	•
	DESCRIPTION	CONNECTOR B		
	PART NUMBER	3-1437290-7		7
	NOTES:	26 Way - Key1		+
	INOTES.	20 Way - Rey I		
PWRGND	B1	A1, C5	PwrGnd	LINKED POWER GROUND
EGT2 +	B2 B3	+		+
KNOCK	B4	C15	Knock Signal	
KNOCK 2	B5			
PVBAT	B6	A5		CONSTANT 12V POWER SUPPLY LINKED 12V FEED - NORMALLY COME FROM MAIN RELAY
IVBAT LAM1A	B7 B8	A2 Grey NTK	Denso Lambda	Nernst Cell
LAM1B	B9	White NTK	Denso Lambda	Ion Pump
LAM1C	B10	A20	Brake Switch 1	Cal Trim Resistor
LAM1D	B11	Black NTK		Virtual Ground
LAM1HEATER IVBAT	B12 B13	Blue NTK Yellow NTK	Denso Lambda	
LAM2A (	B14	C16	Tumble Generator Signal LH	SOLDER BRIDGE
LAM2B	B15			
LAM2C LAM2D	B16	C26*		SOLDER BRIDGE
LAM2HEATER	818	B4		
IVBAT	B19	D15, D17, D25, D31	VVT OCV + LH Inlet, VVT OCV + RH Inlet	LINKED 12V FEED - NORMALLY COME FROM MAIN RELAY
KLINE	B20	B16		KLINE INTERFACE FOR OBDII
RS232RX RS232TX	B21 B22			RS232 RECEIVE RS232 TRANSMIT
LANRX-				Orange/White
LANRX+	B23			
	B23 B24			White/Orange
LANTX-	B24 B25			Green/White
	B24			
LANTX-	B24 B25			Green/White
LANTX-	824 825 826	CONNECTOR C		Green/White
LANTX-	824 825 826	CONNECTOR C 4-1437290-1		Green/White
LANTX-	824 825 826			Green/White
LANTX-	B24 B25 B26  DE SCRIPTION PART NUMBER	4-1437290-1		Green/White
LANTX- LANTX+  KNOCK GROUND	B24 B25 B26 DESCRIPTION PART NUMBER NOTES:	4-1437290-1	Knock Ground	Green/White White/Green  KNOCK GROUNDS
LANTX- LANTX+  KNOCK GROUND  ANGND	B24 B25 B26 B26 DESCRIPTION PART NUMBER NOTES:	4-1437290-1 34 Way - Key2	PPS Ground, Maf Ground	Green/White White/Green  KNOCK GROUNDS SENSOR GROUND CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND  ANGND	B24   B25   B26   B26	4-1437290-1 34 Way - Key2	PPS Ground, Maf Ground Crank Ground	KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND	B24 B25 B26 B26 DESCRIPTION PART NUMBER NOTES:	4-1437290-1 34 Way - Key2 A29,A30,A34 C14,C22,C29	PPS Ground, Maf Ground	Green/White White/Green  KNOCK GROUNDS SENSOR GROUND CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  SYOUT  SYOUT	B24   B25   B26	4-1437290-1 34 Way - Key2	PPS Ground, Maf Ground Crank Ground	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  ANGND  SV OUT  SV OUT	B24   B25   B26   B26	4-1437290-1 34 Way - Key2 A29,A30,A34 C14,C22,C29 A21,A22 C19	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SON OUT CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  SY OUT  SY OUT  CAN L	B24   B25   B26	4-1437290-1 34 Way - Key2 A29,A30,A34 C14,C22,C29 A21,A22 C19 B35	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT
LANTX- LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  ANGND  SV OUT  SV OUT	B24   B25   B26   B26	4-1437290-1 34 Way - Key2 A29,A30,A34 C14,C22,C29 A23,A22 C19 B35 B27	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS 5v	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT
LANTX- LANTX+  KNOCK GROUND ANGND ANGND ANGND ANGND SV OUT SV OUT CAN L CAN H ANOL ANOL	B24 B25 B26 B26 B26 DESCRIPTION PART NUMBER NOTES: C1 C2 C3 C4 C5 C5 C6 C7 C7 C8 C9 C10 C11	4-1437290-1 34 Way - Key2  A29, A30, A34 C14, C22, C29  A21, A22 C19  B35 B27 C13 C6	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS 5v  Crank Signal Map Signal	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SV OT SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software
LANTX- LANTX+  KNOCK GROUND  ANGAID  ANGAID  ANGAID  SV OUT  SV OUT  SV OUT  CAN L  CAN H  ANGOI	B24 B25 B26 B26 B26 B26 B26 B27 B27 B27 B27 B27 B27 B27 B27 B27 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS Sv  Crank Signal Map Signal Rear O2	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY or SPEED, FREQUENCY INPUT - Pull Up Available in Software
LANTX- LANTX+  KNOCK GROUND  ANGHD  ANGHD  ANGHD  ANGHD  SY OUT  SY OUT  CAN L  CAN L  CAN L  ANO1  ANO2  ANO3  ANO3	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26	PPS Ground, Maf Ground Crank Ground Accelerator pedd Shield/ECU GND TPS 5v  Crank Signal Map Signal Rear O2 Air How Signal	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SO OUT CIRCUIT  SV OUT CIRCUIT  SV OUT CIRCUIT  O-SV Or SPEED, FREQUENCY INPUT - Puil Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Puil Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Puil Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Puil Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Puil Up Available in Software
LANTX- LANTX+  LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  ANGND  SY OUT  SY OUT  CAN I  CAN I  CAN I  ANG1  ANG2  ANG3  ANG4  ANG5  ANG6  ANG6	B24 B25 B26 B26  DESCRIPTION PART NUMBER NOTES:  C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS 5v  Crank Signal Map Signal Rear 0.2 Air Flow Signal Intake Cam Signal H	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software
LANTX- LANTX+  KNOCK GROUND  ANGMD  ANGMD  ANGMD  ANGMD  SV OUT  SV OUT  SV OUT  CAN I.  CAN I.  CAN I.  ANGI	B24 B25 B26 B26 B26 B26 B26 B27 B27 B27 B27 B27 B27 B27 B27 B27 B27	4-1437290-1 34 Way - Key2  A29, A30, A34 C14, C22, C29  A21, A22 C19  B35 B27 C13 C6 A4 A26 C21 C11 C31	PPS Ground, Maf Ground Crank Ground Accelerator pedd Shield/ECU GND TPS 5v  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Cam Signal LH intake Cam Signal RH Exhaust Cam Signal RH Exhaust Cam Signal HH	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Puill Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Puill Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Puill Up Available in Software O-SY OR FREQUENCY INPUT IN Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHIT Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHIT Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHIT Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHIT Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHITE Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHITE Freed Thresholds - Puill Up Available in Sensor OF FREQUENCY INPUT WHITE Freed Thresholds - Puill Up Available in Sensor OF FREED
LANTX- LANTX+  LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  SY OUT  SY OUT  SY OUT  CAN L  CAN H  ANO1  ANO2  ANO3  ANO4  ANO5  ANO6  ANO7  ANO6	B24 B25 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29, A30, A34  C14, C22, C29  A21, A22  C19  B35  B27  C13  C6  A4  A26*  C21  C11  C31  C31  C31	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS Sv  TPS Sv  Crank Signal Map Signal Rear 0.2 Air How Signal Intake Cam Signal IH intake Cam Signal IH Exhaust Cam Signal IH Exhaust Cam Signal IH	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S-SV or FREQUENCY INPUT wi
LANTX- LANTX+  KNOCK GROUND  ANGAID  ANGAID  ANGAID  ANGAID  SV OUT  SV OUT  SV OUT  CAN I  CAN I  CAN I  ANGI	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C31 C32 A23	PPS Ground, Maf Ground Crank Ground Accelerator pedd Shield/ECU GND TPS 5v  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Cam Signal UH Intake Cam Signal UH Exhaust Cam Signal H Exhaust Cam Signal RH Pedd Sensor 1	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF FREQUENCY INPUT WHAT Free Third Software  SY OF FREQUENCY INPUT WHAT Free Thirdsholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Free Thirdsholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Free Thirdsholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Free Thirdsholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT WHAT Fixed Thresholds - Pull Up Available in S
LANTX- LANTX+  LANTX+  KNOCK GROUND  ANGND  ANGND  ANGND  SY OUT  SY OUT  SY OUT  CAN L  CAN H  ANO1  ANO2  ANO3  ANO4  ANO5  ANO6  ANO7  ANO6	B24 B25 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29, A30, A34  C14, C22, C29  A21, A22  C19  B35  B27  C13  C6  A4  A26*  C21  C11  C31  C31  C31	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS Sv  TPS Sv  Crank Signal Map Signal Rear 0.2 Air How Signal Intake Cam Signal IH intake Cam Signal IH Exhaust Cam Signal IH Exhaust Cam Signal IH	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in Software SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in Software SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in Software SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in Software
LANTX- LANTX+  LANTX+  KNOCK GROUND  ANGAID  ANGAID  ANGAID  ANGAID  ANGAID  SV OUT  SV OUT  SV OUT  CAN L  CAN L  CAN L  ANO1  ANO2  ANO3  ANO4  ANO5  ANO6  ANO7  ANO6  ANO7  ANO8  ANO9  ANI1  ANI1  ANI1  ANI1	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34  C14,C22,C29  A21,A22  C19  B35  B27  C13  C6  A4  A26*  C21  C11  C31  C31  C31  C31  C31  C31	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS SV  TPS SV  Crank Signal Map Signal Rear O2 Air How Signal Intake Can Signal LH Intake Can Signal LH Exhaust Can Signal HE Exhaust Can Signal HP Pedal Sensor 1 Pedal Sensor 1 Pedal Sensor 1	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SY OF SPEED, FREQUENCY INPUT - Pull Up Available in Software  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  O-SY INPUT  O-SY INPUT  O-SY INPUT  O-SY INPUT  O-SY INPUT  O-SY INPUT
LANTX- LA	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34  C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26 C21 C11 C31 C31 C12 A23 A31 C18 C28 C34	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND  TPS 5v  TPS 5v  Crank Signal Map Signal Map Signal Rear O2 Air flow Signal Intake Can Signal IH Intake Can Signal IH Exhaust Can Signal IH Exhaust Can Signal IH Pedal Sensor 1 Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Ccolant Temp	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT WHEN SHOULD SHOULD Available in Software  SY or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  O-SV INPUT  O-SV INPUT  O-SV INPUT  O-SV INPUT  RESISTIVE O-SV INPUTS WITH SY PULLUP BUILT IN
LANTX- LA	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C31 C12 A23 A31 C18 C28 C34 A18	PPS Ground, Maf Ground Crank Ground Accelerator pedal Sheid/ECU GND TPS Sv  Crank Signal Map Signal Rear O2 Air Flow Signal intake Can Signal BH Exhaut Can Signal BH Exhaut Can Signal BH Exhaut Can Signal BH Cohaut Can Signal BH Cohaut Can Signal CH Exhaut Can Signal BH Cohaut Can Signal CH Exhaut Can Signal CH Cohaut Can Signal CH Achaut Can Signal CH Cohaut Can Signal CH Achaut Character C	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT WITH Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT with Fried Thresholds - Pull Up Available in S-SY OF FREQUENCY INPUT WITH SY PULLUP BUILT IN RESISTIVE O-SY INPUTS WITH SY PULLUP BUILT IN
IANTX- LANTX- LANG LANG LANG LANG LANG LANG LANG LANG	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27 B28	4-1437290-1 34 Way - Koy2  A29, A30, A34 C14, C22, C29  A21, A22 C19  B35 B27 C13 C5 A4 A26* C21 C11 C31 C31 C12 A23 A31 C12 C12 A23 A31 A31 C18 C28 C28 C34 A18 B31	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS 5v  TPS 5v  Crank Signal Map Signal Rear O2 Air flow Signal Intake Cam Signal LH Intake Cam Signal LH Exhaust Cam Signal LH Exhaust Cam Signal RH Pedal Sensor 1 Pedal Sensor 1 Pedal Sensor 1 Pedal Sensor 1 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT WHEN SHOULD SHOULD Available in Software  SY or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  O-SV INPUT  O-SV INPUT  O-SV INPUT  O-SV INPUT  RESISTIVE O-SV INPUTS WITH SY PULLUP BUILT IN
LANTX- LANGE	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C31 C12 A23 A31 C18 C28 C34 A18	PPS Ground, Maf Ground Crank Ground Accelerator pedal Sheid/ECU GND TPS Sv  Crank Signal Map Signal Rear O2 Air Flow Signal intake Can Signal BH Exhaut Can Signal BH Exhaut Can Signal BH Exhaut Can Signal BH Cohaut Can Signal BH Cohaut Can Signal CH Exhaut Can Signal BH Cohaut Can Signal CH Exhaut Can Signal CH Cohaut Can Signal CH Achaut Can Signal CH Cohaut Can Signal CH Achaut Character C	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT WILD Available in SOFTWARE O-SY OR FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S O-SY INPUT  O-SY INPUT  O-SY INPUT  RESISTIVE O-SY INPUTS WITH SY PULLUP BUILT IN
LANTX- LA	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29, A30, A34 C14, C22, C29  A21, A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C31 C12 A23 A23 A31 C18 C28 C34 A18 B31 C33 C33 C33	PPS Ground, Maf Ground Crank Ground Accelerator pedd Shield/ECU GND  TPS 5v  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Cam Signal UH Intake Cam Signal H Exhaust Cam Signal H Exhaust Cam Signal RH Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch Power Steering Sw	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  SY OUT CIRCUIT  O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SY OR FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SY OF FREQUENCY INPUT WITH FIXED THRESHORD - PULL UP BUILT IN RESISTIVE O-SY INPUTS WITH SY PULLUP BUILT IN
IANTX- LANTX- LANGN LANGN LANGN LANGN LANGN LANG LANG	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29, A30, A34  C14, C22, C29  A21, A22  C19  B35  B27  C13  C6  A4  A26*  C21  C11  C31  C12  A23  A31  C18  C28  C34  A18  B31  C33	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS Sv  TPS Sv  Crank Signal Map Signal Rear 02 Air How Signal Intake Cam Signal LH intake Cam Signal H Exhaust Cam Signal H Exhaust Cam Signal RH Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch Power Steering Sw	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SOUT CIRCUIT  SOUT CIRCUIT  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  O-SV or SPEED, FREQUENCY INPUT - Pull Up Available in Software  SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  SV or FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S  O-SV INPUT  O-SV INPUT  O-SV INPUT  O-SV INPUT  RESISTIVE O-SV INPUTS WITH SV PULLUP BUILT IN
KNOCK GROUND ANGND ANGND ANGND ANGND ANGND ANGND SV OUT SV OUT SV OUT CANL CANH ANOI ANO3 ANO3 ANO4 ANO5 ANO6 ANO7 ANO8 ANO9 ANI1 ANI2 ANI3 ANI4 ANI5 ANI6 EGTI- EGTI- EGTI- EGTI- EGTI- VWCTRIN	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27 B28	4-1437290-1 34 Way - Key2  A29, A30, A34 C14, C22, C29  A21, A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C12 A23 A31 C12 A23 A31 C18 C28 C34 A38 A31 C38 C38 C34 A48 A38 B31 C33 C33 C33 A19 B31 C33 A19 B31 C33	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND  TPS 5v  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Can Signal LH Intake Can Signal LH Exhaust Cam Signal LH Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch Power Steering Sw	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT WITH Fixed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT WITH SEND THE
KNOCK GROUND ANGND ANGND ANGND ANGND ANGND SVOUT SVOUT SVOUT CANL CANL CANL ANO1 ANO2 ANO3 ANO4 ANO5 ANO6 ANO7 ANO8 ANO6 ANO7 ANO8 ANO9 AN11 AN11 AN11 AN12 AN13 AN14 AN15 AN16 EGT1-	B24 B25 B26 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29,A30,A34 C14,C22,C29  A21,A22 C19  B35 B27 C13 C6 A4 A26* C21 C11 C31 C12 A23 A31 C12 A23 A31 C13 C38 C38 A31 A31 C38 A31 A31 C38 A31 A31 C38 A31	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND  TPS 5v  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Can Signal LH Intake Can Signal LH Exhaust Cam Signal LH Exhaust Cam Signal LH Exhaust Cam Signal LH Exhaust Cam Signal LH Can Signal LH Exhaust Cam Signal LH Pedal Sensor 1 Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch Power Steering Sw  Ignition Switch Clutch Switch Clutch Switch Cruise Main Switch Brake Switch 2	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OF FREQUENCY INPUT with Fixed Thresholds - Pull Up Available in S SENSOR SEN
KNOCK GROUND ANGND ANGND ANGND ANGND ANGND ANGND SV OUT SV OUT SV OUT CANL CANH ANOI ANO3 ANO3 ANO4 ANO5 ANO6 ANO7 ANO8 ANO9 ANI1 ANI2 ANI3 ANI4 ANI5 ANI6 EGTI- EGTI- EGTI- EGTI- EGTI- VWCTRIN	B24 B25 B26 B26 B26 B26 B26 B26 B26 B27	4-1437290-1 34 Way - Key2  A29, A30, A34  C14, C22, C29  A21, A22  C19  B35  B27  C13  C6  A4  A26*  C21  C11  C31  C31  C12  A23  A31  C18  C28  C34  A18  B31  C38  C39  A19  B31  C33	PPS Ground, Maf Ground Crank Ground Accelerator pedal Shield/ECU GND TPS SV  TPS SV  Crank Signal Map Signal Rear O2 Air Flow Signal Intake Cam Signal LH Intake Cam Signal H Exhaust Cam Signal H Exhaust Cam Signal RH Pedal Sensor 1 Pedal Sensor 2 TPS1 TPS2 Coolant Temp Air Charge Temp Neutral Switch Power Steering Sw	KNOCK GROUNDS  KNOCK GROUNDS  SENSOR GROUND CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  SO OUT CIRCUIT  O-SV OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OR SPEED, FREQUENCY INPUT - Pull Up Available in Software O-SV OR SPEED, FREQUENCY INPUT WHIT Freed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Freed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Freed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Freed Thresholds - Pull Up Available in S SV OF FREQUENCY INPUT with Freed Thresholds - Pull Up Available in S O-SV INPUT O-SV INPUT O-SV INPUT O-SV INPUT RESISTIVE O-SV INPUTS WITH SV PULLUP BUILT IN