

\*\*\*\*\*  
**FOR EDUCATIONAL PURPOSES ONLY, USE AT YOUR OWN RISK**  
**This work contains Copyrighted material.**  
**All material contained in whole or part, may not be used for any commercial purpose PERIOD !**  
**THIS IS A DIY EFFORT, FREE FOR PUBLIC PERSONAL USE**  
\*\*\*\*\*

Dis-Assembled from Stock AUJP BIN 9-26-2004  
M6811 Disassembler GDC Generated Source Code (Dewtronics)  
Reassembles and compares to original perfectly prior to additions.  
Work on Commenting Started by John Pell (JP86SS @ TGO) 11-15-2004 using ECM Guy's ANHT hac as a guide.

Lots of credit and many Thanks to  
Scott Lopez (Z69' @ TGO) for keeping this alive and moving forward.  
Much (IF not all) of the additional code was implemented or produced by his hard work.

Additional functionality and Clarifications made by many others at Thirdgen.org (DIY\_PROM board)

\*\*\*\*\* **NOT TO BE USED FOR PROFIT** \*\*\*\*\*

File assembles and will NOT compare to an original bin due to modifications added

File Version  
S\_AUJP41024.asm = Scott's version 10, John's version 24

Additions made to this file: AUJPV4 10-24 (as of 09-03-2007)

The calibration sections are still the same as a stock file with additions to the end so any editor capable of mapping the \$8D definition can be used for making changes to the calibration.

#### 1.) **Configuration**

The setup values were researched and changed per **S\_AUJP V2** (Traxion's original setup)  
Reference the document with the S\_AUJP V2 (Non-CCP) for the changes previously made  
All original documentation applies to V4 version as well.  
A copy of the original document has been provided at the end of this document.  
If you desire the IAC settings from the V3 version do a compare to find the differences (Only a few)

---

#### 2.) High RPM calculations added by Scott Lopez (Z69')

provides 31.25 multiple for 7,969 RPM Maximum (Extended PE table also uses this higher scale value)  
Note: Change ALDL word 51 = 0x0149 to display "RPM/31.25" (OEM was 0x0134)

---

#### 3.) Added Closed Loop Disable for Idle (Forced Open Loop Idle) (Z69')

RPM/25 (variable) for OL Idle .  
Default setting is 500 RPM.  
L8991, RPM Below this threshold will Force Open Loop operation  
L8992, RPM Above this threshold will Allow Closed Loop operation  
(See XDF description below for adding this item with your definition editor)

---

#### 4.) Pulse Width limit corrected for proper operation on larger displacement engines.

Code lines swapped for removal of PW limit in \$8D (Z69')

---

## 5.) Selectable options

```
L898E:      .byte  0x50      New code Default
-----
New OPTION WORD 1      Bits
-----
b7, 1 = Use Extended PE table      (0)
b6, 1 = Lock BLM at 128 in PE      (1)
b5, 1 = Use Expanded VE2 Z69 patch  (0)
b4 ,1 = Use Idle SA table L81FD      (1)

b3, 1 = Not Used in V4      (0)
b2, 1 = Not Used in V4      (0)
b1, 1 = Not Used in V4      (0)
b0, 1 = Use "Launch Retard" Table  (0)
-----
```

Setting the appropriate bit to = 1 will enable that feature  
(See XDF description below for adding this item with your definition editor)

**B7:** PE Table usage up to 8,000 RPM, Otherwise the stock table to 6400 is used  
**B6:** Locks the correction at 128 while in PE mode for consistency.  
Without this the fuel could be increased by varying BLM when PE mode is entered.  
**B5:** Expanded VE table support (Thanks to RBob for the initial concept and implementation)  
Made higher resolution and selectable usage by Scott Lopez Z69'  
**B4:** Use Idle Spark Advance table at \$81FD "Closed throttle Vs. RPM"  
If turned off, The Main Spark table is used for Idle conditions (once warm).  
**B3:** n/a  
**B2:** n/a  
**B1:** n/a  
**B0:** Use "Launch Mode" Spark Retard Table  
This will remove some SA (per the table) to reduce power under heavy throttle to  
reduce wheel spin on vehicles that could benefit from that kind of thing.  
The table is a "Retard Vs. Speed" that has a TPS% qualification to initiate.  
Basically,  
If **TPS is > "X" %** and **VSS speed** is within the table boundary,  
the indicated table cell SA will be subtracted from the actual advance.

### Launch Mode FUNCTION HAS NOT BEEN TESTED, USE CAUTION

(Like other software companies, You are the guinea pigs ☺ )

---

## 6.) Wide Band Multi-Sensor Support (Thanks to Don Dibble, 1981TTA)

```
Selectable sensor and calibrations incorporated by Scott Lopez Z69'
Made ALDL word 37 = 0035 to monitor WBAFR (OEM = 002D Was "Keep Alive IAC Steps")
COPYRIGHT MATERIAL
2000:      .byte  0x00      ;set default sensor option here
2001:      .byte  0x00      ;set default sensor option here
***** Calibration Section *****
Option Flag for WB O2 Sensor, Option Flag 2 for WB O2 Sensor

Bit 0 = DIY_TE NonLinear      Bit 0 = RAW A/D Output
Bit 1 = FJO                  Bit 1 = Innovate Linear L2H2 (vdc*2+10)
Bit 2 = AEM NonLinear        Bit 2 =
Bit 3 = TE 2.0 Linear         Bit 3 =
Bit 4 = PLXWBLin             Bit 4 =
Bit 5 = Innovate Linear       Bit 5 =
Bit 6 = AEM Linear            Bit 6 =
Bit 7 = Zeitronix             Bit 7 = Select WB Input  (0) = Pin F14
                                   (1) = Pin A3
```

Select ONLY 1 Sensor type or the "Raw Output"  
(See XDF description below for adding this item with your definition editor)

---

## 6.) SHIFT light generic operation added (original code commented out) (Z69')

Use L8365 to set shift light on RPM/31.25 (7,969 RPM Maximum)

Use L8254 to set time out for shift light to go off if above setting for x # of seconds.

(See XDF description below for adding this item with your definition editor)

---

## 7.) ALDL items changed for output of WB and other new inputs. (JP)

Original configurations and addressing shown if desired to return to Stock Data Stream.

---

8.) Idle speed limit in drive changed to a variable at L8991 (1000 rpm V4 default)

This limit was hard coded to 800 rpm in stock AUJP (Z69')

(See XDF description below for adding this item with your definition editor)

---

9.) Deleted "A/C CLUTCH HI MPH DISABLE TEST" (Mem Location 0x1B9 free now) (JP)

A/C Clutch will run at any speed if controlled by ECM.

You'll just have to remember to turn it off! (Or lower your TPS % disable A/C threshold)

---

10.) Manual or Automatic (700R4) Transmission Selection

Add MT specific code for IAC, when using V4 in the Manual Transmission mode.

User will still need to change cal to AXYC(305) or (AXCN)350 values for best results.

Tables for 305 use: TBD

Tables for 350 use: TBD

---

11.) Changed ALDL Stream item 0 and 1 from PROM ID LSB/MSB (8000 & 8001)

to display Volumetric Efficiency value "Old VE" (Tracking) 0067 & 068

Calculation for display will use 16 bit (X/512)\*100 for VE indication (JP)

---

12.) New Data word installed to monitor AE TPS, AE MAP, and PE functions

(displayed in ALDL error word 5)

```
; 7. New DATAWORD for AE and PE Status (Address "DISPWD" = 0051)
; (Was 0x0008 MALFUNCTION WORD 5 at location 88D9)
;
; b7, 1 = Knock Indicated          (Status of 003A, b1)
; b6, 1 = KS Failure Indicated     (Status of 003C, b5)
; b5, 1 = KS Enabled by Diff Cool (status of 0041, b7)
; b4, 1 = Available for suggested use
;
; b3, 1 = In TPS AE                (status of 0045, b7)
; b2, 1 = In MAP AE               (status of 0045, b3)
; b1, 1 = PE Engaged              (status of 0046, b5)
; b0, 1 = Not Used (Original code used this bit for an error check)
;-----
```

Error Word 5 still exists in functionality but is not displayed anymore.  
See ALDL description for changes if display of original Error word 5 is desired.

---

13.) Added "Read" of input for Pin "B3" or "E10" on 730 (JP)

To be wired into pin selected (U6 Ch 4 or Ch 5) Reads in counts only.

Input Pin value (0-255) stored at 0x01B9

Change any word in the ALDL to display the counts and scale externally.

Best output to ALDL word # 10. (Was A/D TPS Counts 0x0094 by default) Change at location 88DF

Made selectable address definition B3 or E10 pin can be used.

Make channel selection at Address \$544D (D44D in std hex editor)

U6 Channel 04 = B3

U6 Channel 05 = E10

(See XDF description below for adding this item with your definition editor)

\*\*\* May require hardware changes to remove pull up circuit on the input \*\*\*

(See additional appendix for removal of the 5 volt pull-ups)

---

14.) Added "Read" of input for "F11" Pin 0-5V input (JP)

To be wired in at Pin "F11" on 730 (U6 Ch 2) Reads in counts only.

Input Pin value (0-255) stored at 0x012A

Change a word in the ALDL to display the counts/scale externally.

Best output to ALDL word # 9. (Was \$0060 Startup Coolant Temp by default) Change at location 88DD

\*\*\* May require hardware changes to remove pull up circuit on the input \*\*\*

(See additional appendix for removal of the 5 volt pull-ups)

-----  
15.) Add Knock light code for output on pin F5.

Made Control Word L8990 for Pin F5 Light code, See below.

(See XDF description below for adding this item with your definition editor)

16.) Added PE/AE status to control pin F5 light code. (SL)

ADDED Light function Select in Light Control Word (JP)

(See XDF description below for adding these item with your definition editor)

-----  
AUTHOR: JUNKCLTR

copyright RJT

(free for public use, not for commercial use, educational purposes only)

Pin F5 provides a ground to turn the LED/Light on

Wire the same as a check engine light (SES light)

Connect one wire of the LED/light to Ignition 12 volt power and the other wire to ECM Pin F5

If using an LED instead of a light, then use a current limiting resistor (as required)

Recommended resistor = 1K ohms, if 1K ohm not available then use 700 - 1.5K ohm in place of 1K ohm resistor

LED electrical current = 14volts/1K = 14 ma (check with LED manufacturer max. current rating)

LED has a positive and negative lead, it must be wired properly or the LED will never turn on

\*\*\* If using an LED, verify wiring by setting the "enable knock failure" bit\_1 (set bit\_1 = 1) \*\*\*

\*\*\* and disconnect knock sensor at the engine. Start engine and the LED should light within \*\*\*

\*\*\* approx. 10 seconds. This verifies the LED is wired properly. Connect the knock sensor at \*\*\*

\*\*\* the engine and set knock sensor LED/Light options in the CAL knock control word as desired. \*\*\*

\*\*\* The default setting is recommended for each type of indication. Experiment if desired. \*\*\*

\*\*\* Alternate LED wiring test, instead of disconnecting knock sensor at engine. Apply a ground \*\*\*

\*\*\* to ECM Pin F5. The LED should turn on when the ground is applied. \*\*\*

-----  
\*\*\* LED will dimly light when using the F5 pin due to leakage current flow,

\*\*\* this is not a failure \*\*\*

Light will illuminate brightly when the output is commanded on (Indicating)

-----  
**XDF address 8990: ; KNOCK LED/Light CONTROL**

```
-----  
; TPS AE LED/Light CONTROL byte, 0001_1000 (recommended setting)  
-----  
; MAP AE LED/Light CONTROL byte, 0010_1000 (recommended setting)  
-----  
; PE Mode LED/Light CONTROL byte, 0100_1000 (recommended setting)  
-----  
; KNOCK LED/Light CONTROL byte, 0000_1011 (default & recommended setting)  
-----  
; b7, 1 =  
; b6, 1 = DO PE LIGHT (on F5 pin)  
; b5, 1 = DO MAP AE LIGHT (on F5 pin)  
; b4 ,1 = DO TPS AE LIGHT (on F5 pin)  
;  
; b3, 1 = LED/Light ON for 1 second when indicating  
; 0 = LED/Light ON for 3 seconds when indicating  
;  
; b2, 1 = LED/Light Blink when indicating  
; 0 = LED/Light Full ON when indicating  
;  
; b1, 1 = enable LED/Light when knock sensor failure  
; (LED/Light is FULL ON if knock sensor is failing)  
; 0 = DO NOT turn on LED/Light when knock sensor fails  
;  
; b0, 1 = enable LED/Light when engine KNOCK present  
; 0 = DO NOT turn on LED/Light when engine knock is present  
-----  
; SELECT ONLY ONE "LIGHT CONTROL BIT"  
; b0, b6, b5, b4 IS THE PRIORITY, First one set, wins!  
-----
```

(See XDF description below for adding these item with your definition editor)

17.) THIS HAS CCP (Canister Purge) DISABLED (To re-enable the functions reinstall values) (JP)  
826E, 82EA, 82EB, 82ED, 82EE, AND 82F0 To the original AUJP BIN Values as shown below.

**Difference Tool**

Find Differences Between  and

☐ Limit search to defined items only    Start Address (Hex)     End    

7 Bytes Different

Address	Item Title	S_AUJ...	S_AUJ...
02E6	Canister Purge Duty Cycle Min. TPS	00	80
02EA	Canister Purge Enable Min. Temp.	FF	85
02EB	Canister Purge Enable Vehicle Speed	00	06
02ED	Canister Purge Enable TPS	00	04
02EE	Canister Purge Disable Vehicle Speed	00	03
02F0	Canister Purge Disable TPS	00	02

\*\*\*\*\*

## S\_AUJP V4 XDF Definition Details

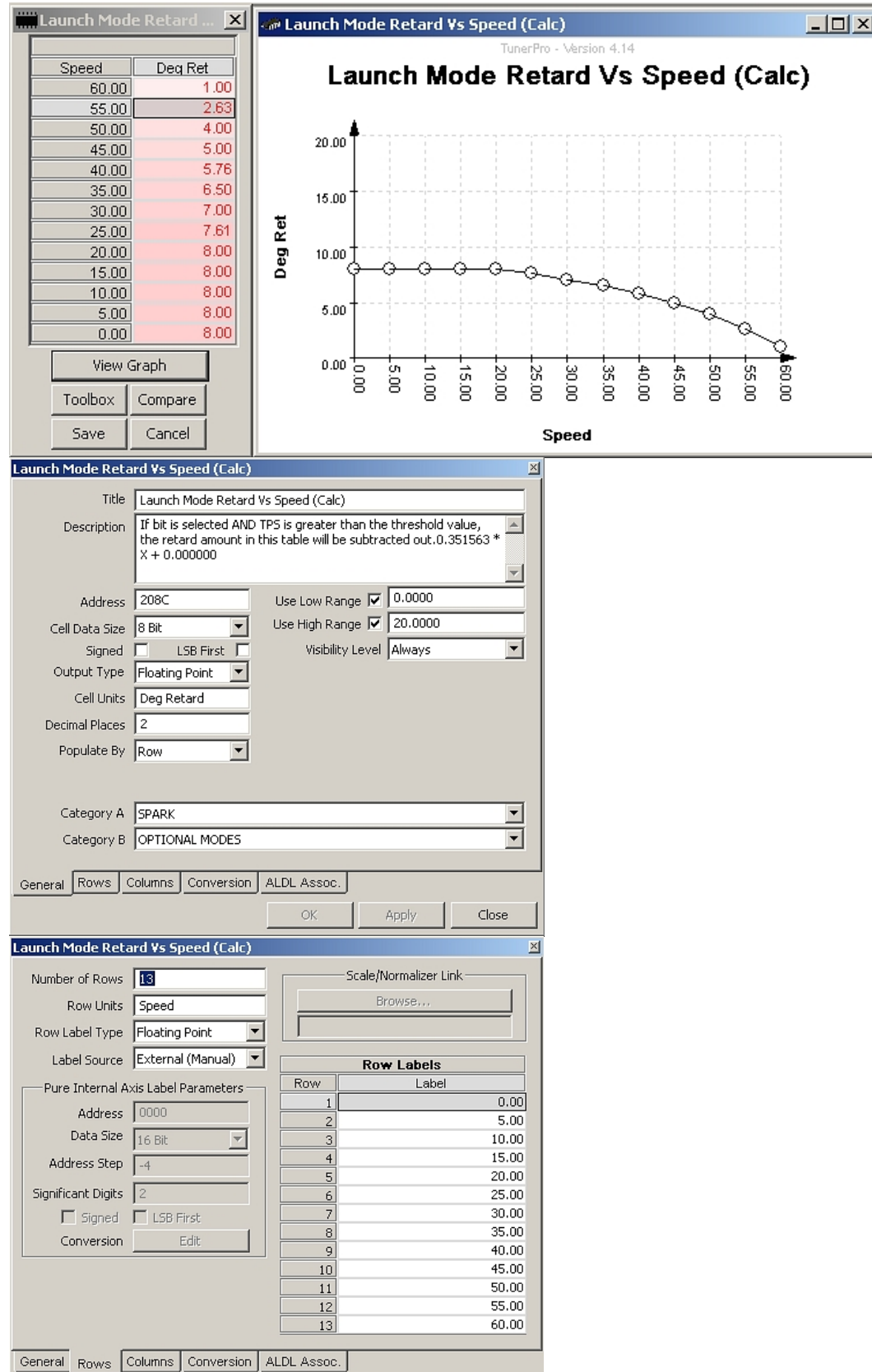
Item Summary List				
Item Name	Location	Hex	Calculated	Adj. ▲
TCC Coast Release Disable (S_AUJP V4 ONLY)	61C3-->61C4	E255	0xE255	
U6 Channel Read	544D	04	0x04	
Launch Mode Retard Vs Speed (Calc)	208C->2098	(Table)	(Table)	
PE , % Change to AFR Vs. RPM Extended Table (Z69)	207B->208B	(Table)	(Table)	
WB OPT 2, bit 0, RAW A/D Output	2001	(Flag)	Not Set	
WB OPT 2, bit 1, Innovate Linear L2H2 (vdc*2+10)	2001	(Flag)	Not Set	
WB OPT 2, bit 7, Input "A3", Else "F14"	2001	(Flag)	Not Set	
WB OPT 1, b0, DIY_TE NonLinear	2000	(Flag)	Not Set	
WB OPT 1, b1, FJO	2000	(Flag)	Not Set	
WB OPT 1, b2, AEM NonLinear	2000	(Flag)	Not Set	
WB OPT 1, b3, TE 2.0 Linear	2000	(Flag)	Not Set	
WB OPT 1, b4, PLXWBLin	2000	(Flag)	Not Set	
WB OPT 1, b5, Innovate LC-1 (1-2 V)	2000	(Flag)	Not Set	
WB OPT 1, b6, AEM Linear	2000	(Flag)	Not Set	
WB OPT 1, b7, Zeitronix	2000	(Flag)	Not Set	
VE Upper Table Extended to 6400 RPM (Z69)	1127->1247	(Table)	(Table)	
VE Upper Table Extended to 6400 RPM (RBob)	1003->1077	(Table)	(Table)	
Launch Mode TPS Qualifier	998	00	0.00 TPS%	
IDLE Open loop RPM Threshold (S_V4 only) OL Qual	993	0E	350 RPM	
IDLE Open loop RPM Threshold (S_V4 only) CL Qual	992	14	500 RPM	
Knock Light Control, b0, KNOCK LIGHT	990	(Flag)	Not Set	
Knock Light Control, b1, KL Indicate Fail KS	990	(Flag)	Not Set	
Knock Light Control, b2, Blink	990	(Flag)	Not Set	
Knock Light Control, b3, 1 second, else 3	990	(Flag)	Not Set	
Knock Light Control, b4, TPS AE LIGHT	990	(Flag)	Not Set	
Knock Light Control, b5, MAP AE LIGHT	990	(Flag)	Not Set	
Knock Light Control, b6, PE LIGHT	990	(Flag)	Set	
Knock Light Control, b7, Not Used	990	(Flag)	Not Set	
V4 OPT 1, b0, Use Launch Retard Table	98E	(Flag)	Not Set	
V4 OPT 1, b1, Not Used	98E	(Flag)	Not Set	
V4 OPT 1, b2, Not Used	98E	(Flag)	Not Set	
V4 OPT 1, b3, Use External A2 Qual (future use)	98E	(Flag)	Not Set	
V4 OPT 1, b4, Use Idle SA Table 81FD	98E	(Flag)	Set	
V4 OPT 1, b5, Use Z69 Extended VE Table	98E	(Flag)	Not Set	
V4 OPT 1, b6, Lock BLM to 128 in PE mode	98E	(Flag)	Set	
V4 OPT 1, b7, Use Z69 Extended PE Table	98E	(Flag)	Not Set	

Setting up the XDF for the V4 options.

Definition addresses shown start at \$8000

TunerPro screen shot does not indicate this and must be taken into account when entering definition locations.

# Launch Mode Definition



**Launch Mode Retard Vs Speed (Calc)**

Number of Columns: 1  
 Column Units: Deg Ret  
 Column Label Type: Floating Point  
 Label Source: External (Manual)

Scale/Normalizer Link  
 Browse...

Pure Internal Axis Label Parameters

Address: 0000  
 Data Size: 16 Bit  
 Address Step: -4  
 Significant Digits: 2  
☐ Signed ☐ LSB First  
 Conversion: Edit

**Column Labels**

Column	Label
1	0.00

General Rows Columns Conversion ALDL Assoc.

Conversion =  $X / (256 / 45)$

Argument = This items raw data

- ✘ Launch Mode TPS% Qualifier at address 8998
- ✘ ("X" no conversion) Best with value like 85% to be sure when you want the feature to engage

Z69' Extended PE (Power Enrichment) Table

Not to be confused with the Extended VE table

**PE, % Change to AFR ...**

RPM	Lambda W
8000	-6.0000
7500	0.0000
7000	0.0000
6500	0.0000
6000	0.0000
5500	8.0000
5000	11.0000
4500	14.0000
4000	20.0000
3500	12.0000
3000	4.0000
2500	0.0000
2000	0.0000
1500	16.0000
1000	8.0000
500	8.0000
00	8.0000

View Graph

Toolbox Compare

Save Cancel

**Item Summary List**

Item Name	Location
PE, % Change to AFR Vs. RPM Extended Table (Z69)	207B->208B

**PE , % Change to AFR Vs. RPM Extended Table (Z69)**

Title: **PE , % Change to AFR Vs. RPM Extended Table (Z69)**

Description: Uses RPM/31.25 for function, extends PE adjustment to 8000 RPM. Can only be used with S\_AUJP v4

Address: 207B

Cell Data Size: 8 Bit

Signed: ☐ LSB First: ☐

Output Type: Floating Point

Cell Units: Lam W

Decimal Places: 4

Populate By: Row

Use Low Range: ☒ -10.0000

Use High Range: ☒ 40.0000

Visibility Level: Always

Category A: P.E.

Category B: Tuning View

General Rows Columns Conversion ALDL Assoc.

OK Apply Close

**PE , % Change to AFR Vs. RPM Extended Table (Z69)**

Number of Rows: 17

Row Units: RPM

Row Label Type: Integer

Label Source: External (Manual)

Scale/Normalizer Link: Browse...

Pure Internal Axis Label Parameters

Address: 0000

Data Size: 16 Bit

Address Step: -4

Significant Digits: 2

Signed: ☐ LSB First: ☐

Conversion: Edit

Row	Label
1	00
2	500
3	1000
4	1500
5	2000
6	2500
7	3000
8	3500
9	4000
10	4500
11	5000
12	5500
13	6000

General Rows Columns Conversion ALDL Assoc.

Be sure to define the table to 8K as shown (pic only shows to 6000 rpm)  
 Conversion = ("X"-128)

RBob's extended table implementation has been enhanced in V4. It's usage is selectable by an option bit. This version does NOT support the original version of the "Patch" so you will need to re-enter your existing values if you were using it previously. The address area of the original patch has been maintained so you can copy your existing calibration values if desired into the V4 bin, the table is not used in the program though.

VE Upper Table Extended to 6400 RPM (Z69)

VE Upper Table Extended to 6400 RPM (Z69)																	
	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
6400	53.13	57.03	60.94	64.45	68.36	69.92	71.09	71.88	72.66	73.44	74.22	74.61	75.00	75.78	76.56	77.73	78.91
6000	53.52	57.42	61.33	65.23	68.75	70.31	71.48	72.27	73.05	73.83	74.61	75.00	75.39	76.17	76.95	78.13	79.30
5600	53.91	58.20	62.11	65.63	68.75	70.31	71.88	73.05	74.22	75.39	76.17	76.56	76.95	77.73	78.52	79.30	79.69
5200	56.25	60.55	64.84	67.97	71.09	72.27	73.44	74.61	75.78	76.95	77.73	78.13	78.52	79.30	80.08	80.86	81.25
4800	58.59	62.89	67.19	70.31	73.44	74.22	75.00	76.17	77.34	78.13	78.91	79.30	79.69	80.47	81.25	82.03	82.81
4400	62.89	67.19	71.48	74.22	76.95	77.73	78.52	79.69	80.47	81.64	82.42	82.81	83.20	84.38	85.16	85.94	86.33
4000	66.80	71.48	75.78	78.13	80.08	80.86	81.64	82.81	83.59	84.77	85.94	86.33	86.72	87.89	88.67	89.06	89.45
3600	68.36	72.66	76.95	79.30	81.25	82.03	82.81	83.98	85.16	85.94	86.72	87.11	87.50	88.67	89.45	90.63	91.41
3200	69.53	73.83	78.13	80.08	82.03	82.81	83.59	85.16	86.72	87.11	87.11	87.50	87.89	88.67	89.45	90.63	91.80
3000	68.75	73.05	77.34	79.69	81.64	82.81	83.98	85.16	85.94	87.11	87.89	88.67	89.06	89.45	90.63	91.80	92.58
2800	66.80	68.36	71.48	73.44	75.00	77.34	79.69	81.64	83.59	83.98	84.38	85.16	85.55	87.11	88.28	89.06	89.84
2600	60.16	63.67	66.80	69.92	72.66	73.83	75.00	76.17	76.95	78.52	79.69	80.86	81.64	82.42	82.81	83.59	83.98
2400	58.59	58.20	60.94	64.06	67.19	68.75	69.92	71.48	73.05	74.61	76.17	76.56	76.95	77.34	77.73	78.13	78.13
2200	53.52	56.25	58.98	62.11	65.23	66.41	67.58	69.14	70.70	72.27	73.83	74.22	74.61	75.00	75.39	75.78	75.78
2000	53.91	56.25	58.98	62.11	65.23	66.41	67.58	69.14	70.70	72.27	73.83	74.22	74.61	75.00	75.39	75.78	75.78
1800	53.52	56.25	58.98	62.11	65.23	66.41	67.58	69.14	70.70	72.27	73.83	74.22	74.61	75.00	75.39	75.78	75.78
1600	53.13	56.25	58.98	62.11	65.23	66.41	67.58	69.14	70.70	72.27	73.83	74.22	74.61	75.00	75.39	75.78	75.78

View Graph

Toolbox

Compare

Save

Cancel

#### Expanded Upper VE tables Definition

Title		VE Upper Table Extended to 6400 RPM (Z69)	
Description		This is the table to use if you have set the option bit to use Z69's extended VE table otherwise use the Original Upper VE table to 5600 RPM.	
Address	1127	Use Low Range	<input type="checkbox"/> 0.0000
Cell Data Size	8 Bit	Use High Range	<input type="checkbox"/> 255.0000
Signed	<input type="checkbox"/> LSB First <input type="checkbox"/>	Visibility Level	Always
Output Type	Floating Point		
Cell Units			
Decimal Places	2		
Populate By	Row		
Category A	FUEL		
Category B	Tuning View		

**VE Upper Table Extended to 6400 RPM (Z69)**

Number of Rows:   
 Row Units:   
 Row Label Type:   
 Label Source:   
 Scale/Normalizer Link:   
 Pure Internal Axis Label Parameters:  
 Address:   
 Data Size:   
 Address Step:   
 Significant Digits:   
☐ Signed ☐ LSB First  
 Conversion:   
**Row Labels**

Row	Label
1	1600
2	1800
3	2000
4	2200
5	2400
6	2600
7	2800
8	3000
9	3200
10	3600
11	4000
12	4400
13	4800

General Rows Columns Conversion ALDL Assoc.

**VE Upper Table Extended to 6400 RPM (Z69)**

Number of Columns:   
 Column Units:   
 Column Label Type:   
 Label Source:   
 Scale/Normalizer Link:   
 Pure Internal Axis Label Parameters:  
 Address:   
 Data Size:   
 Address Step:   
 Significant Digits:   
☐ Signed ☐ LSB First  
 Conversion:   
**Column Labels**

Column	1	2	3	4	5	6	7	8
Label	20	25	30	35	40	45	50	

General Rows Columns Conversion ALDL Assoc.

Conversion =  $0.390625 * X + 0.000000$  (Either VE table)

Be sure to observe the full table layout when entering the row and column values.

\*\*\*\*\*

IDLE Open loop RPM Threshold (S\_V4 only) Use "X" \* 25 for RPM calculation

First value is for coming down and going into Open Loop

Second Value is for going up into Closed Loop

Having some separation in values can keep from cycling in/out of Open Loop

TCC Coast Release (Tested OK)

User discretionary adjustment to remove releasing and always maintain Lockup during Coasting

Adjust the location shown to enable the function, return value to the default \$E255 to restore stock operation.

Change value at location \$61C3 to indicate \$E1C5

**This is very hard on the trans parts but some desire the function so use at your own risk.**

TCC Coast Release Disable (S\_AUJP V4 ONLY)

Title: TCC Coast Release Disable (S\_AUJP V4 ONLY)

Description: Change to \$E1C5 for Coast Release Disable, Set \$E255 to Restore Functionality (E1A2 actual Address but was relocated by the assembler)

Units: Hex Address

Address (Hex): 61C3

Size: 16 Bit

Signed: ☐ LSB First: ☐

Output Type: Hex Digits

Significant Digits: 4

Category A: SHIFT LIGHT / TCC

Category B: Any Category

Use Low Range: ☐ 0.0000

Use High Range: ☐ 255.0000

Visibility Level: Always

General Conversion ALDL Assoc.

There are easier ways to accomplish this by setting two variables to zero but I couldn't find them fast enough and just did it this way. A quick search on the subject will reveal the variables to zero out if this method isn't to your liking.

Please notify if any function or calculation/display is incorrect or future enhancements desired.

Contacts:

Scott Lopez (Z69') at Thirdgen.org

John Pell (JP86SS) at Thirdgen.org or (JP86SS) at MonteCarloSS.com

**Happy Tuning !**

```

*****
; S_AUJP V4 Datastream definition has some changes made to it
;   Output data can be changed using the location shown that holds the value to be output.
; Ex: 88DD Value = $0060 will show startup coolant temp (default),
; Changing the "value" at the address 88DD will show the value at the location specified.
; Changed to 0033 would output the current "value" at memory location 0033.
;
; All data output locations are shown, You may wish to experiment to display different things
; shown in the memory locations listed in the hac files.
;
; Items marked "V4" are changes incorporated into the S_AUJP_V4.bin file
; You can confirm your datastream definition file matches with the definition below.
;
; *****
; * MODE 1 FIXED DATA DATA STREAM
; * ALDL DEV MUST REQUEST MODE 1 BY
; * XMITING THE FOLLOWING MSG TO
; * THE ECM:
; *
; * DEVICE ID = $F4
; * MSG LEN 1+85 = $56
; * MODE = $01
; * CKSUM = $29
; *
; * THE ECM WILL RESPOND WITH:
; *
; * DEVICE ID = $F4
; * MSG LEN 64+85 = $95
; * MODE = $01
; * DATA BYTE 1 = $XX
; * .
; * .
; * BATA BYTE 63 = $XX
; * CKSUM = $29
; *
; *****
;-----
88CD   Value = $3067 (V4)      ; 1 VE Calc MSB (was 0x8000 PROM ID MSB)
88CF   Value = $3068 (V4)      ; 2 VE Calc LSB (was 0x8001 PROM ID LSB)
;                               ; Use 16 bit Display Calculation (X/512)*100
;-----
88D1   Value = $0004           ; 3 MALFUNCTION WORD 1
;                               ;
; b7, 1= ERROR 12, No Distributor Reference Pulses
; b6, 1= ERROR 13, Oxygen Sensor
; b5, 1= ERROR 14, CTS HIGH
; b4, 1= ERROR 15, CTS LOW
;
; b3, 1= ERROR 16, Not used
; b2, 1= ERROR 21, TPS HIGH
; b1, 1= ERROR 22, TPS LOW
; b0, 1= ERROR 23, MAT Sensor LOW
;-----
88D3   Value = $0005           ; 4 MALFUNCTION WORD 2
;                               ;
; b7, 1= ERROR 24, Vehicle Speed Sensor (VSS)
; b6, 1= ERROR 25, MAT Sensor HIGH
; b5, 1= ERROR 26, Not used
; b4, 1= ERROR 31, Not used
;
; b3, 1= ERROR 32, EGR Diagnostic
; b2, 1= ERROR 33, MAP Sensor HIGH
; b1, 1= ERROR 34, MAP Sensor LOW
; b0, 1= ERROR 35, Not used
;-----

```

88D5 Value = \$0006

```

;-----
; 5 MALFUNCTION WORD 3
;
; b7, 1= ERROR 36, Not used
; b6, 1= ERROR 41, Cylinder Select Error
; b5, 1= ERROR 42, EST Monitor Failure
; b4, 1= ERROR 43, ESC Failure
;
; b3, 1= ERROR 44, o2 Sensor LEAN
; b2, 1= ERROR 45, o2 Sensor RICH
; b1, 1= ERROR 46, VATS Failed
; b0, 1= ERROR 51, PROM Error
;-----

```

88D7 Value = \$0007

```

;-----
; 6 MALFUNCTION WORD 4
;
; b7, 1= ERROR 52, Oil Temp Sensor LOW
; b6, 1= ERROR 53, Battery Over Voltage Detected
; b5, 1= ERROR 54, Fuel Pump Low Voltage
; b4, 1= ERROR 55, Not used
;
; b3, 1= ERROR 56, Not used
; b2, 1= ERROR 61, Not used
; b1, 1= ERROR 62, Oil Temp Sensor HIGH
; b0, 1= ERROR 63, Not used
;-----

```

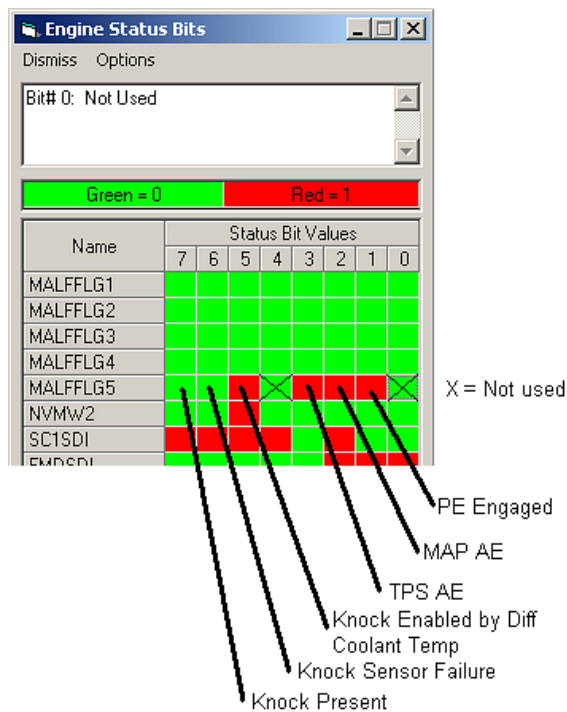
88D9 Value = \$0051 (V4)

```

;-----
; 7. New DATAWORD for AE and PE Status (Address 0051)
;      (Was 0x0008 MALFUNCTION WORD 5)
; b7, 1 = Knock Indicated      (Status of 003A, b1)
; b6, 1 = KS Failure Indicated (Status of 003C, b5)
; b5, 1 = KS Enab by Diff Cool (status of 0041, b7)
; b4, 1 = Open for suggested use
;
; b3, 1 = In TPS AE            (status of 0045, b7)
; b2, 1 = In MAP AE           (status of 0045, b3)
; b1, 1 = PE Engaged          (status of 0046, b5)
; b0, 1 = (Original code used this bit for an error check)
;-----

```

These will also display in standard data logging software packages such as TTS DataMaster because they are located in the Error word 5 spot that is not used in most applications.



New DATAWORD Display Bits Definition

```

88DB Value = $005F      ; -----
                        ; 8. COOLANT TEMP, (DEG C + 40) * (256/192)
                        ;           , Deg C = (N * 0.75) -40)
                        ; -----
88DD Value = $0060      ; 9. Startup COOLANT TEMP (Value =0x0060)
                        ;           (DEG C + 40) * (256/192)
                        ;           (Deg C = (N * 0.75) -40)
(V4) Value = $012A (User); Alternate Use (Pin F11, U6 Ch 2 input) Use 012A
                        ; To change: Use Address L88DD 16 bit, 4 significant digits
                        ; -----
88DF Value = $0094      ; 10. A/D TPS Volts
                        ;           , Volts = N *(5/255)
(V4) Value = $01B9 (User); Alternate Use (Pin B3, U6 Ch 4 input) Use 01B9
                        ; To change: Use Address L88DF 16 bit, 4 significant digits
                        ; -----
88E1 Value = $0058      ; 11. RPM, RPM/25,           (RPM = N * 25)
                        ; -----
88E3 Value = $30B3      ; 12. NEW REF PER + 0x3000, (65536 * 15)/RPM
88E5 Value = $30B4      ; 13. NEW REF PER + 0x3001, (65536 * 15)/RPM
                        ;           , uSec = ([N13]*256 + [N14])*15.26
                        ; -----
88E7 Value = $0081      ; 14. MPH           , MPH = N
                        ; -----
88E9 Value = $0003      ; 15. FUEL/AIR MODE WORD 1
                        ;
                        ; b7, 1= ESC Enabled by Delta Coolant
                        ; b6, 1= Not used
                        ; b5, 1= VATS OK, 0= VATS Failed
                        ; b4, 1= Not used
                        ;
                        ; b3, 1= Memory Failure (MALF 51)
                        ; b2, 1= Not used
                        ; b1, 1= Not used
                        ; b0, 1= Not used
                        ; -----
88EB Value = $0140      ; 16. Engine/Vehicle Speed Ratio
                        ;           , N = RPM / MPH
                        ; -----
88ED Value = $008E      ; 17. FILTERED o2 A/D VAL
                        ;           , Volts = N * 4.42
                        ; -----
88EF Value = $00FC      ; 18. o2 Rich/Lean Transition Counter
                        ;           , N = # of Transitions
                        ; -----
88F1 Value = $00E8      ; 19. BLM Fine Adjust
                        ; -----
88F3 Value = $00E0      ; 20. BLM Coarse Adjust (Main BLM Value)
                        ;           Min to 127 = Removing Fuel
                        ;           128      = No Fuel Correction
                        ;           129 to Max = Adding Fuel
                        ; -----
88F5 Value = $00DF      ; 21. BLM CELL NUMBER
                        ;           , N = Cell Number (0-16)
                        ; -----
88F7 Value = $00EB      ; 22. INTEGRATOR
                        ;           Min to 127 = Removing BLM Value
                        ;           128      = No BLM Correction
                        ;           129 to Max = Adding BLM Value
                        ; -----
88F9 Value = $002B      ; 23. CURRENT IAC
                        ;           , N = IAC STEPS
                        ; -----
88FB Value = $0095      ; 24. TPS = 0-100%,
                        ;           , N / 2.55
                        ;           or , N * 0.39216
                        ; -----

```

```

;-----
88FD Value = $0112      ; 25. COMMANDED IDLE SPEED RPM/12.5      , N * 12.5
;                        ; Alt Use High RPM Range to 7,968.75 , N * 31.25
(V4) Value = $0149 (User); 8K RPM, Make val = 0149 to monitor
; To change: Use Address L88FD 16 bit, 4 significant digits
;-----
88FF Value = $0075      ; 26. MAP A/D VALUE
;                        ; , Volts = N * (5/255)
;                        ; or , N * 0.019608
;-----
8901 Value = $0030      ; 27. SC1 INPUT STATUS
;                        ; OEM val=0030
; b7, 1= 2nd Fan Request
; b6, 1= Not Used
; b5, 1= A/C Not Request (0 = Requested)
; b4, 1= Not Used
;
; b3, 1= Not Used
; b2, 1= Second Gear
; b1, 1= A/C Low Pressure Switch
; b0, 1= Not Used
;-----
8903 Value = $0033      ; 28. Input States to FMD Via SSR
;
; b7, 1= DATA Steering (0=BYTE 1, 1=BYTE 2)
; b6, 1= IRQ Enable
; b5, 1= OSDC ??? Not Used
; b4, 1= Fuel Pump Enable
;
; b3, 1= Port, Pin 8
; b2, 1= EST Enable
; b1, 1= COP2 (<54 mSec between Falling Edges)
; b0, 1= Coolant Sensor Select (1=348 Ohms, 0= 4 KOhms)
;-----
8905 Value = $0002      ; 29. Non-Vol MODE WORD 1
;
; b7, 1 EST ERROR 43B BIT (FAILED TEST)
; b6, 1 Err 43B SPARK TEST DONE THIS START UP
; b5, 1
; b4, 1 SKIP IAC MOTOR RESET BIT
;
; b3, 1
; b2, 1
; b1, 1
; b0, 1 ERR 43 EST TEST IN PROGRESS FLAG
;-----
8907 Value = $013C      ; 30. MAT A/D
;                        ; OUTPUT MUST BE LOOKED UP FROM TABLE
;                        ; A/D COUNTS      DEGREES 'C'
;                        ; -----
;                        ; 0              -40
;                        ; 4              -30
;                        ; 5              -25
;                        ; 8              -20
;                        ; 10             -15
;                        ; 14             -10
;                        ; 18             -5
;                        ; 24              0
;                        ; 30              5
;                        ; 37             10
;                        ; 46             15
;                        ; 56             20
;                        ; 66             25
;                        ; 78             30
;                        ; 90             35
;                        ; 103            40
;                        ; 116            45
;                        ; 129            50
;                        ; 141            55
;                        ; 153            60
;                        ; 163            65
;                        ; 174            70

```

```

;                                     183                                     75
;                                     191                                     80
;                                     199                                     85
;                                     205                                     90
;                                     211                                     95
;                                     216                                     100
;                                     221                                     105
;                                     225                                     110
;                                     229                                     115
;                                     232                                     120
;                                     234                                     125
;                                     237                                     130
;                                     239                                     135
;                                     241                                     140
;                                     242                                     145
;                                     243                                     150
;                                     255                                     200
;-----
8909 Value = $0123      ; 31. EGR % DUTY CYCLE
;                       ; N / 2.55
;                       or , N * 0.39216
; To change: Use Address L8909 16 bit, 4 significant digits
;-----
890B Value = $0125      ; 32. CANISTER PURGE % DUTY CYCLE
;                       ; N / 2.55
;                       or , N * 0.39216
; To change: Use Address L890B 16 bit, 4 significant digits
;-----
890D Value = $0041      ; 33. DIAGNOSTIC MODE WORD 3
;
; b7, 1= ESC Enabled (By Coolant and Delta Startup Coolant)
; b6, 1= ERROR 54A Passed
; b5, 1= ERROR 54, Present this Loop
; b4, 1= ERROR 54, Locked In (Low Fuel Pump Voltage)
;
; b3, 1= REF Pulse in Previous 100 mS
; b2, 1= REF Pulse in Current 100 mS
; b1, 1= ERROR 25, MAT Sensor High (This Pass Indicated)
; b0, 1= ERROR 41, Cylinder Select Error
;-----
890F Value = $0103      ; 34. BATTERY A/D VALUE
;                       ; Volts = N / 10
;                       or , Volts = N * 0.10
; To change: Use Address L890F 16 bit, 4 significant digits
;-----
8911 Value = $0104      ; 35. PUMP A/D/ VALUE
;                       ; Volts = N / 10
;                       or , Volts = N * 0.10
; To change: Use Address L8911 16 bit, 4 significant digits
;-----
8913 Value = $0043      ; 36. DIAGNOSTIC MODE WORD 4
;
; b7, 1= ERROR 52(LOW)or 62(HIGH), OIL TEMP Sensor Error
; b6, 1= A/C Clutch Disabled Due to HIGH MPH
; b5, 1= A/C First Pass with High MPH
; b4, 1= Cycle Time Test Flag
;
; b3, 1= Option for 1 Pass
; b2, 1= EGR Diagnostic Test In Progress
; b1, 1= Not Used
; b0, 1= ERROR 32, EGR DIAGNOSTIC
;-----
8915 Value = $0035 (V4) ; 37. WB AFR New Code
; Selectable Sensor Range or Raw Counts Output
; KEEP ALIVE IAC MIN MOTOR STEPS, OEM value = 002D
; N = IAC Steps
; To change: Use Address L8915 16 bit, 4 significant digits
;-----
8917 Value = $01BD      ; 38. OIL A/D VALUE (Linearized)
;                       ; Deg C = (N * 0.75) -40
; To change: Use Address L8917 16 bit, 4 significant digits
;-----

```

```

8919 Value = $3128      ; -----
891B Value = $3129      ; 39. SA + BASE (Reletive to TDC, MSB)
                        ; 40. SA + BASE (Reletive to TDC, LSB)
                        ;
                        ;          DEGREE SA = "Value" * (90 / 256)
                        ;          Double Byte Value in 2's Complement representation
                        ;          If Bit 7 of MSB = 0, Then Result is Positive Value
                        ;          Value = ([N39] * 256 + [N40])
                        ;          If Bit 7 of MSB = 1, Then Result is Negative Value
                        ;          Value = 65536 - ([N39] * 256 + [N40])
                        ; -----
891D Value = $30BD      ; 41. SA + BASE (Reletive to REF PULSE, MSB)
891F Value = $30BE      ; 42. SA + BASE (Reletive to REF PULSE, LSB)
                        ;
                        ;          DEGREE SA = "Value" * (90 / 256)
                        ;          Double Byte Value in 2's Complement representation
                        ;          If Bit 7 of MSB = 0, Then Result is Positive Value
                        ;          Value = ([N41] * 256 + [N42])
                        ;          If Bit 7 of MSB = 1, Then Result is Negative Value
                        ;          Value = 65536 - ([N41] * 256 + [N42])
                        ; -----
8921 Value = $00C1      ; 43. OLD PA3 COUNTER (Knock Counter)
                        ;          , N = Knock Counts
                        ; -----
8923 Value = $00C4      ; 44. KNOCK RETARD
                        ;          , Deg Retard = N * (45/256)
                        ;          or , Deg Retard = N * 0.17578125
                        ; -----
8925 Value = $30E4      ; 45. INJECTOR PULSE WIDTH (MSB),
8927 Value = $30E5      ; 46. INJECTOR PULSE WIDTH (LSB),
                        ;          , mSec = ([N45] * 256 + [N46]) / 65.536
                        ;          Confirmed , mSec = N * 0.0152587890625
                        ; -----
8929 Value = $30F3      ; 47. AFR, MSB, (445 = 14.7)
892B Value = $30F4      ; 48. AFR, LSB
                        ;          A100 Wrong: A/F Ratio = 6553.6 / ([N47] * 256) + 6553.6 / [N48]
                        ;          per RBob, A/F Ratio = 6553.6 / ([N47] * 256 + [N48])
                        ;          Just use 6553.6 / "ALDL "X" Confirmed OK
                        ; -----
892D Value = $3130      ; 49. IP FUEL, Msec * 0.256
892F Value = $3131      ; 50. IP FUEL, Msec * 0.256
                        ;          , Total Accumulated Fuel,
                        ;          uSec = ([N49] * 256 + [N50]) * 15.26
                        ;          Use Time Vs. Injector Constant (Lbs/Hour)
                        ; -----
8931 Value = $0134      ; 51. ACCUMULATED DISTANCE TRAVELED
                        ;          Miles = N / 2000
                        ; -----
8933 Value = $3019      ; 52. ENGINE RUN TIME, SECONDS, MSB
8935 Value = $301A      ; 53. ENGINE RUN TIME, SECONDS, LSB
                        ;          , Seconds = ([N52] * 256 + [N53])
                        ; -----
8937 Value = $0038      ; 54. MODE WORD 2
                        ;
                        ; b7, 1= Shift Light ON (ENGINE LIGHT ???)
                        ; b6, 1= High BATTERY Voltage Error SET
                        ; b5, 1= Diagnostic Switch In ALDL Position
                        ; b4, 1= Diagnostic Switch In DIAGNOSTIC Position
                        ;
                        ; b3, 1= IN CCM MODE
                        ; b2, 1= DRP OCURRED This 6.25 ms PERIOD FLAG
                        ; b1, 1= ERROR 14 or 15, This Startup (CTS High/Low)
                        ; b0, 1= Not Used
                        ; -----

```

```

8939 Value = $004A      ;-----
                        ; 55. TCC MODE WORD
                        ;
                        ; b7, 1= Not Used
                        ; b6, 1= Not Used
                        ; b5, 1= Not Used
                        ; b4, 1= TCC LOCKED FOR PASSBY Noise
                        ;
                        ; b3, 1= IN 4TH GEAR LAST PASS
                        ; b2, 1= 4-3/4-2 Downshift Release in Progress
                        ; b1, 1= IN COAST (TPS release threshold in use (Hi MPH)
                        ; b0, 1= TCC LOCKED
                        ;-----
893B Value = $0031      ; 56. FMD BYTE 1      (Generic ALDL Byte = 44)
                        ;
                        ; b7, 1= A/C CLUTCH Engaged
                        ; b6, 1= A/C High Head Pressure (If N.O. Switch)
                        ; b5, 1= Not Used
                        ; b4, 1= Not Used
                        ;
                        ; b3, 1= Power Steering Switch, (CRAMP)
                        ; b2, 1= In 4th Gear
                        ; b1, 1= In 3rd or 4th GEAR
                        ; b0, 1= In Gear, 0= Park/Neutral
                        ;-----
893D Value = $0037      ; 57. MODE WORD 1
                        ;
                        ; b7, 1= ENGINE RUNNING
                        ; b6, 1= BYPASS CHECK ENABLED
                        ; b5, 1= A/C CLUTCH OFF, (0= Clutch ON)
                        ; b4, 1= 1st PASS W/Vss PULSE
                        ;
                        ; b3, 1= All FAN 1 PID STEPS DONE
                        ; b2, 1= INTERRUPT G.T. 6.25 Msec (timing error already flagged)
                        ; b1, 1= HIWAY FUEL TIMER RUNNING
                        ; b0, 1= SPARK RETARD FLAG, 0= SPARK ADVANCE
                        ;-----
893F Value = $0001      ; 58. NON-VOL MODE WORD 0
                        ;
                        ; b7, 1= ERROR 42, EST (Monitor)
                        ; b6, 1= WARM KICK DOWN ENABLED BIT
                        ; b5, 1= IAC KICK DOWN ENABLE FLAG
                        ; b4, 1= ENABLE VATS
                        ;
                        ; b3, 1= Abnormal/Improper Shut Down
                        ; b2, 1= Not Used
                        ; b1, 1= CLOSED LOOP TIMER DONE
                        ; b0, 1= SET o2 SENSOR ACTIVE/READY
                        ;-----
8941 Value = $004B      ; 59. C.A.R.S. MODE WORD
                        ;
                        ; b7, 1= Not Used
                        ; b6, 1= Wait FOR Vss RESET
                        ; b5, 1= Transmission In 1ST GEAR BIT
                        ; b4, 1= Transmission In 4TH GEAR
                        ;
                        ; b3, 1= Not Used
                        ; b2, 1= Not Used
                        ; b1, 1= CARS ACTIVE, 0= TCC Active
                        ; b0, 1= CARS OFF DUE TO LOW BARO Pressure BIT
                        ;-----
8943 Value = $003E      ; 60. CLCC MODE WORD
                        ;
                        ; b7, 1=Has Been in Closed Loop At Least Once Since Restart
                        ; b6, 1= NON-VOL RAM FAIL
                        ; b5, 1= Using KF93 Mult Trim to D-MAP A.E. Enable Threshold
                        ; b4, 1= IN DFCO STALL SAVER
                        ; b3, 1= UNDERSPEED Idle Spark, 0 = OVERSPEED
                        ; b2, 1= IDLE
                        ; b1, 1= < 16 DIST ref's, Use F69 Alt Table
                        ; b0, 1= BookKeeping Flip/Flop
                        ;-----

```

```

8945 Value = $003F      ;-----
                        ; 61. AIR MODE WORD      (Generic ALDL Byte = 18)
                        ;
                        ; b7, 1= Decell Enleanment Active
                        ; b6, 1= All FAN 2 PID STEPS DONE (FAN 2 Enabled)
                        ; b5, 1= "Old" Fan 1 State was ON
                        ; b4, 1= FAN 2 Requested
                        ;
                        ; b3, 1= FAN 1 Requested
                        ; b2, 1= AIR Switched to PORT (If Controlled)
                        ; b1, 1= AIR Controlled, 0= AIR Diverted
                        ; b0, 1= 100 mSec Old CCP Purge ON Flag (0= OFF)
                        ;-----
8947 Value = $003C      ; 62. LCC PWM
                        ;
                        ; b7, 1= F82 Timeout Finished
                        ; b6, 1= Warm Kickdown Request
                        ; b5, 1= Error 43A, (Voltage Presence Check) Indicated
                        ; b4, 1= 2nd Time Coolant
                        ;
                        ; b3, 1= In 8192, Mode 4, Bypass Fuel Mode
                        ; b2, 1= ERROR HAS OCCURRED
                        ; b1, 1= Time 1st REF to Engine Run
                        ; b0, 1= Canister Purge Active
                        ;-----
8949 Value = $0047      ; 63. FUEL/AIR MODE WORD 1
                        ;
                        ; b7, 1= Closed Loop Flag (0= Open Loop)
                        ; b6, 1= Rich Flag, (0= Lean)
                        ; b5, 1= EECC Slow o2 RICH, (0= Slow o2 LEAN)
                        ; b4, 1= ERROR 24, VSS Failure
                        ;
                        ; b3, 1= Allow Single Fire Disable
                        ; b2, 1= Deliver 0 Fuel (Single Fire Mode)
                        ; b1, 1= Enable Storage Learn Control Flag, (0= Disable)
                        ; b0, 1= In Single Fire Mode
                        ;-----

```

And just to see if everyone is reading the document, VATS is ENABLED in this bin ! JP86SS

\*\*\*\*\*

## Original S\_AUJP V2 (Non-CCP) Documentation

This binary was created by Timothy Siford (aka TRAXION) as a new starting point for tuners.  
This binary does NOT use Charcoal Canister Purge.

Last Modified: 6/13/04

### VARIOUS CONSTANT CHANGES:

PROM ID Set to 2 from 571.  
Fuel Cutoff decreased to 6600rpms from 10031rpms.  
Fuel Resume decreased to 6500rpms from 9544rpms.  
Fan on temps decreased to 97d C from 108d C  
Fan off temps decreased to 94d C from 105d C  
Cold O2 Closed loop delay timer reduced to 120 seconds from 190 seconds.  
Warm O2 Closed loop delay timer reduced to 90 seconds from 150 seconds.  
Hot O2 closed loop delay timer reduced to 20 seconds from 30 seconds.  
Min Coolant temp for Closed loop fuel reduced to 20d C from 45d C.  
Minimum BLM reduced to 96 from 108.  
BLM update rate reduced to 2 seconds from 2.4 seconds.  
Force BLM idle Cell CCP % Duty Cycle Threshold reduced to 0% from 23.4% in order to combat a BL Cell of 4 all the time.

### IAC CHANGES:

IAC learn Min temp decreased to 60d C from 88d C.  
IAC Max Steps (Absolute) changed to 231 from 160.  
IAC Max Steps in Drive changed to 230 from 40.  
IAC Throttle Follow gain decreased to 50 from 192 (~25% of original value).  
IAC Steps vs. MPH zeroed out.

### SPARK ADVANCE CHANGES

Main spark tables changed to be more inline with a stock ANHT binary. Massaged somewhat also.  
Spark Tables modified to include PE Spark advance in the main spark tables.  
PE Spark advance zeroed out.  
95kPa and 100kPa columns set to be identical.  
Closed TPS Spark Advance increased slightly from 20d to 25d in the very low RPM range.  
Knock Recovery rate table increased threefold.  
Maximum Knock retard vs. RPM (In PE) set across the board to a maximum of 10d.  
Target Idle RPM vs. Coolant massaged slightly with 2 values increased.

### FUEL CHANGES:

Pump Shot vs. TPS which was increased by 5%.  
BLM MAP and RPM boundaries changed SLIGHTLY for better cell traversing with a stock cam (900, 1500, 2000rpms and 30, 50, and 75kPa).

### HIGHWAY MODE SETTINGS

Highway Mode spark advance vs. MAP set to 4d across the board.  
Min Coolant temp for highway spark advance decreased to 60d C from 151d C.  
Min RPM for Highway Spark Advance decreased to 1200rpms from 3175rpms  
Min Coolant temp for Highway Mode fuel reduced to 60d C from 85.25d C.  
Min Vehicle speed for Highway Mode fuel reduced to 53mph from 255mph.  
Unchecked flag for 4th gear highway mode spark check. Can now obtain full Highway spark advance in third gear.

### TCC SETTINGS

TCC Lock speed (low and not low gears) increased to 43mph from 38mph.  
TCC Unlock speed (low and not low gears) increased to 41mph from 36mph.  
TCC Unlock prevention speed threshold increased to 120mph from 75mph.  
TCC enable coolant temp decreased to 20d C from 50d C.  
ALL TCC unlock and lock tables modified to match ANHT tables to allow for earlier TCC disengagement based on less throttle.  
Unchecked flag for Unlock TCC in DFCO. TCC will now stay locked in DFCO.

### CCP DISABLED:

Canister Purge when output energized flag unchecked.  
Canister Purge Coolant Temp enable increased to 151d C. from 59.75d C.  
Canister Purge Vehicle Speed enable decreased to 0mph from 1.875mph.  
Canister Purge Vehicle Speed disable decreased to 0mph from 0.9375mph.  
Canister Purge TPS Enable decreased to 0% from 1.6%.  
Canister Purge TPS Disable decreased to 0% from 0.8%.

Minumum Canister Purge Duty Cycle (Low TPS) decreased to 0% from 50%.

LOW OCTANE KNOCK RETARD DISABLED...

Low Octane MAP retard Threshold increased to 100kPa from 70kPa.  
Low Octane Retard Diff MAP Threshold decreased to 0kPa from 0.625kPa  
Low Octane Knock Retard increase amount decreased to 0d from 17.6d  
Low Octane Knock Retard decrease amount decreased to 0d from 0.7d  
Low Octane Knock Retard amount decreased to 0d from 4.9d.  
Low Octane Knock Retard Multiplier vs. RPM table set to zero across the board.  
Low Octane Knock Retard Multiplier vs. MAP table set to zero across the board.

EGR DISABLED...

Min MAT for EGR enable increased to 255 counts from 30 counts.  
EGR % TPS Enable Threshold decreased to 0% from 2.3%  
EGR % TPS Disable Threshold decreased to 0% from 2%.  
EGR Diagnostic Disabled.  
EGR Diagnostic minimum Vehicle Speed increased to 255mph from 30mph.  
EGR % Duty Cycle vs. Vacuum vs. MAP table decreased to 0% across the board.  
EGR Duty Cycle Multiplier vs. Coolant temp decreased to 0 across the board.

AIR DISABLED...

Minimum Temp for AIR Enable increased to 151d C from 14.75d C.  
Rich / Lean Difference decreased to 0mV from 100mV.

HARDCODE:

- 1) Removed Dependency of Highway Mode on a Minimum Canister Purge Duty Cycle.
- 2) Removed adjustment of WOT Pulse Width due to Lean BLMS.
- 3) Removed possible use of Open Loop target Air/Fuel Ratios at WOT.
- 4) Removed 800rpm idle limit when in gear. Now set to 1200rpms.

VERSION DESCRIPTIONS:

V1: First 'Super' BIN posted  
v2: Changed how the IAC works during normal driving. The IAC will now open MORE at WOT, but follow the throttle LESS  
during normal driving. This is especially nice for those who have upgraded their throttle bodies to bigger versions (52mm or 58mm).

\*\*\*\*\*

This page intentionally left blank