MicroTech AUTOMOTIVE SYSTEMS

Torque Control Quick Reference Guide
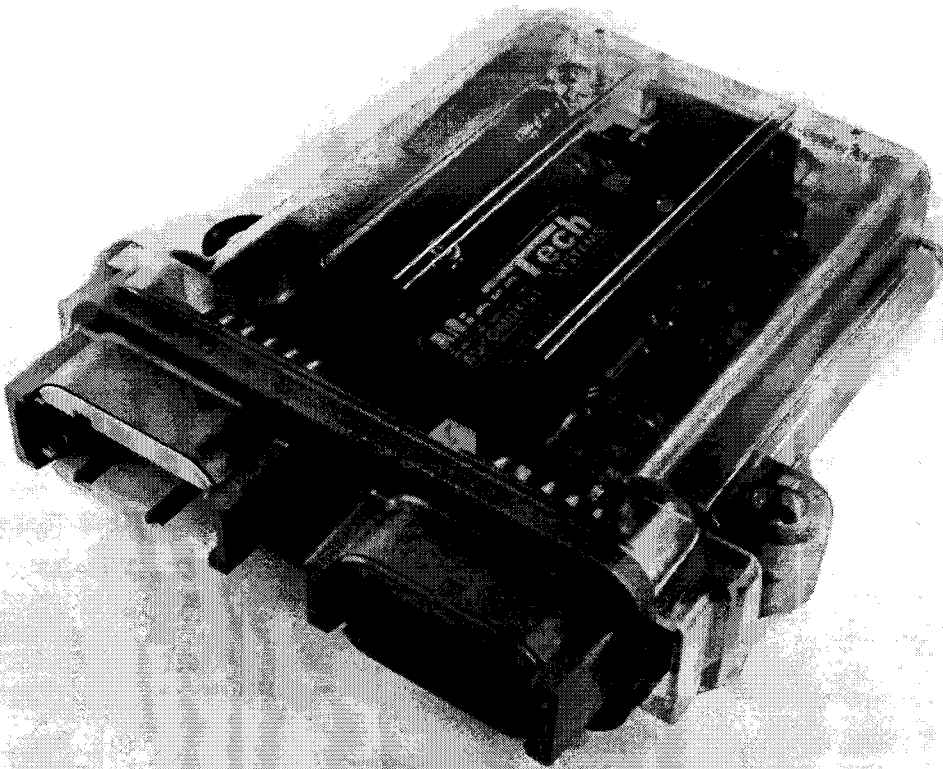
Torque Control Software Flow Chart

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          ( MicroTech Welcome Screen )
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                      ▼
   ( Page_1      Converter PWM )
                      │
                      ▼
   ( Page_2      RPM TransONpwm )
                      │
                      ▼
   ( Page_3      LockUP Air PWM )
                      │
                      ▼
   ( Page_4      MAIN CONFIG Setup )
                      │
                      ▼
   ( Page_5      ECU ID Setup )
                      ⇕
          (        DaTa_1        )
                      │
                      ▼
      ( MicroTech Auto Screen )
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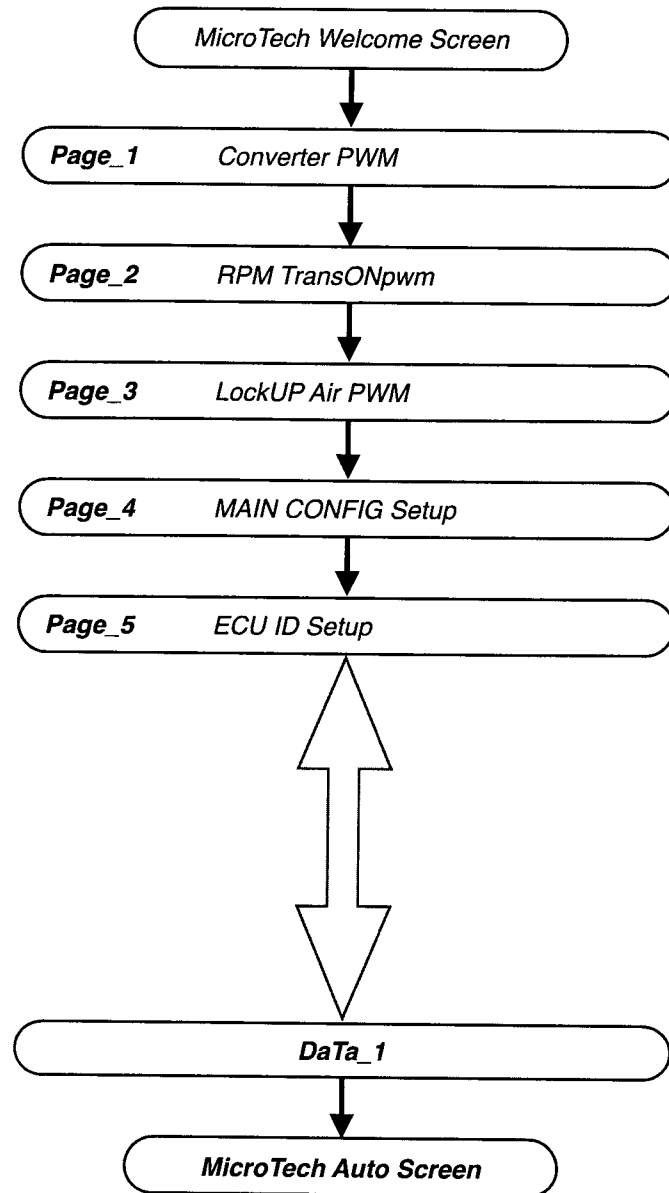
Page_1 Converter PWM   *Page_2* RPM TransONpwm

PWM 00 mS		RPM >1500	
PWM 200 mS		RPM 2000	
PWM 400 mS		RPM 2500	
PWM 600 mS		RPM 3000	
PWM 800 mS		RPM 3500	
PWM 1.0 S		RPM 4000	
PWM 1.2 S	Converter Pressure PWM over Time Table	RPM 4500	Transbrake ON Converter Air Pressure PWM over RPM Table
PWM 1.4 S	NOTE - Is only active once Transbrake is released and TransbrakeOFF (page_4) is set to 00%.	RPM 5000	
PWM 1.6 S		RPM 5500	
PWM 1.8 S		RPM 6000	
PWM 2.0 S		RPM 6500	
PWM 2.2 S		RPM 7000	
PWM 2.4 S		RPM 7500	
PWM 2.6 S		RPM 8000	
PWM 2.8 S		RPM 8500	
PWM 3.0S		RPM 9000	

Page_3 LockUP PWM

AIR 00 mS	
AIR 200 mS	
AIR 400 mS	
AIR 600 mS	
AIR 800 mS	
AIR 1.0 S	Lock up Air Pressure PWM over Time Table
AIR 1.2 S	NOTE - Is active once Timerdelay (page_4) has timed out after Transbrake has been released.
AIR 1.4 S	
AIR 1.6 S	
AIR 1.8 S	
AIR 2.0 S	
AIR 2.2 S	
AIR 2.4 S	
AIR 2.6 S	
AIR 2.8 S	
AIR 3.0S	

Page_4 CONFIG Setup

BrakeOFF	Transbrake off Converter Air Pressure PWM
BUMP Time	Bump time when Bump input pressed with Transbrake on.
Timer Delay	Timer delay after Transbrake released before Lockup Air PWM (page_2) is active.
RPM ON	RPM Value Arms lock up pressure valves
RPMoff	RPM Value disarms lock up pressure valves
Input1	Pressure sensor type for input#1
Input2	Pressure sensor type for input#2
Cylinders	Select engine configuration cylinders for correct rpm reading.
Timer	Factor x1 = Time correction scale 0 - 3 seconds
Laptop	
CANidH	
CANidL	
CANbus	Advance setup features for Factory use only
TXrate	
CANinp	
CANout	

Page_5   *ECU ID Setup*

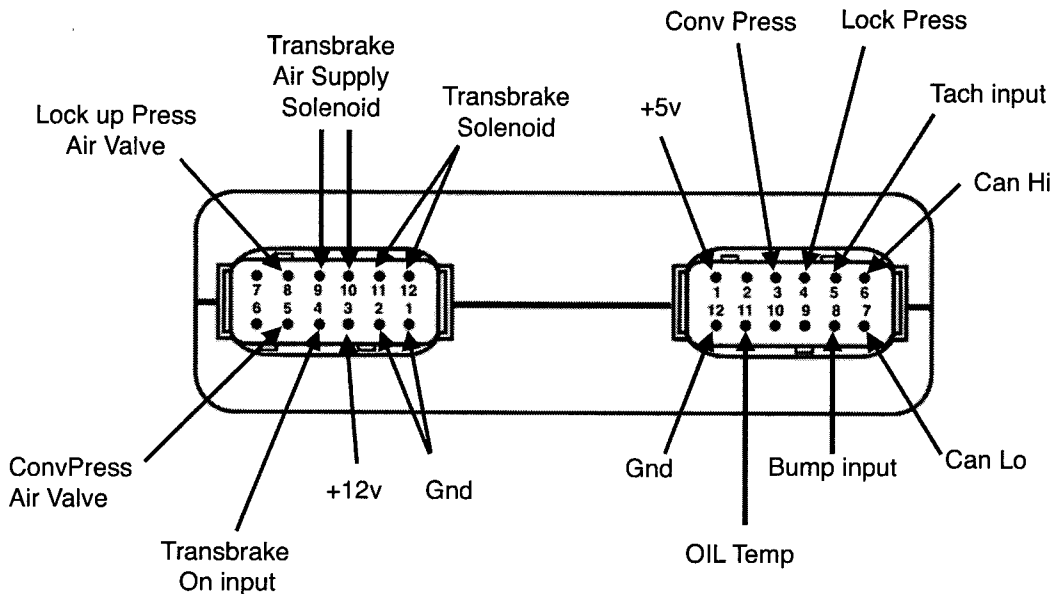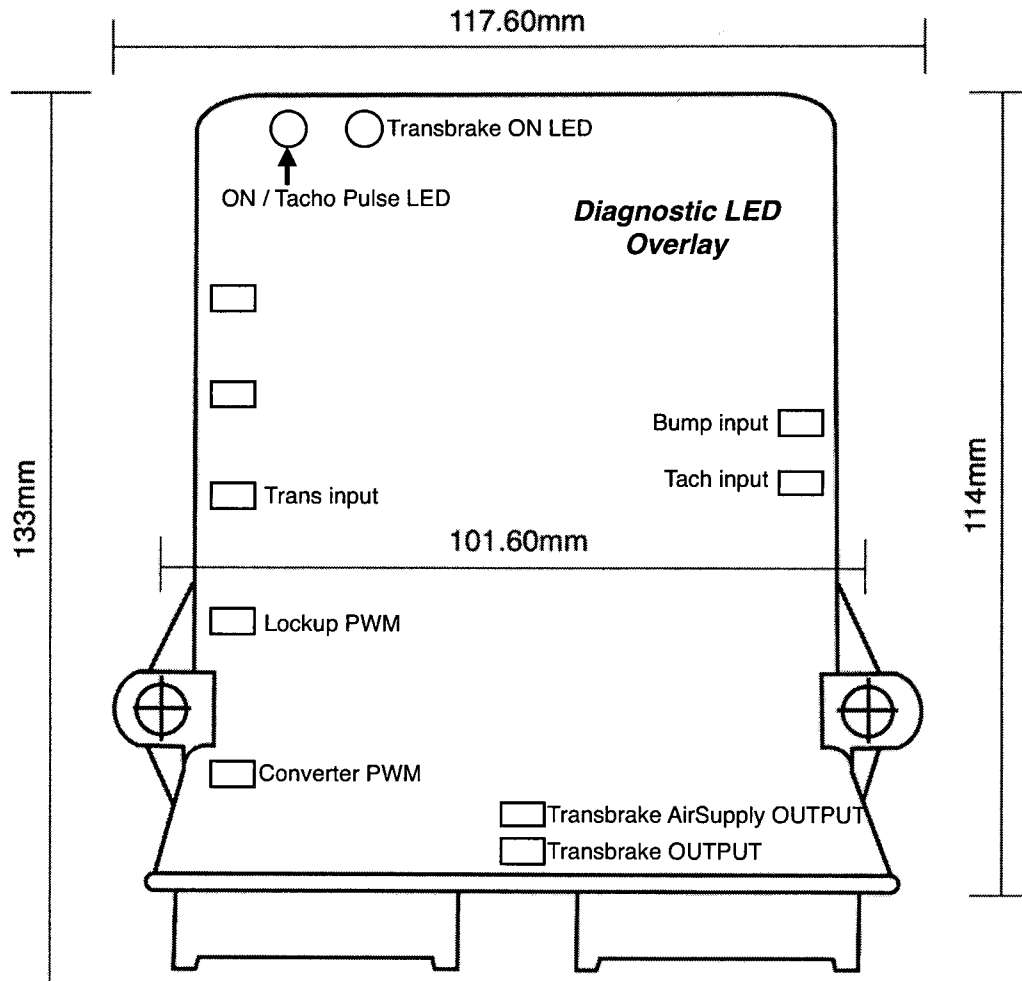|	
PROG	Standard or advanced programming type. (Factory default = standard.)
E.C.U	Enables configuration programming or lock editing
Char1=T **Char2=o** **Char3=r** **Char4=q** **Char5=u** **Char6=e** **Char7=-** **Char8=1**	These screens allow you to give an 8-characters name to your program; this is the name that appears in the ID screen when the controller is turned on. Naming a program makes identifying your different set-ups simple. To edit your program name scroll to the characters you wish to alter and use the ADJ buttons/up or down arrows to set the desired character. For example, to name a program "4cyl_tur", scroll to the Char1 screen, switch to program mode and use the up/down buttons to set the first character i.e.: "4". Now scroll rights to the Char2 screen and set the second character, "c". Set the rest of the characters in the same way (Screens Char3 to Char8), then switch back to view mode. The name you have entered will now appear as the program description in the ID screen.
Pin#1 **Pin#2** **Pin#3** **Pin#4** **Pin#5** **Pin#6**	These screens allow you to set the 6-digit security number for the controller, and are set in the same ways as the Char screens (above). If all six of these screens are set to "0" (i.e. the PIN number = "000000"), the security lock features of the controller will be switched off. <table><tr><td>**IMPORTANT NOTE: If you set a PIN number for your controller, make sure you write the number down keep it in a safe place as you will not be able to program your controller!**</td></tr></table>

DaTa_1

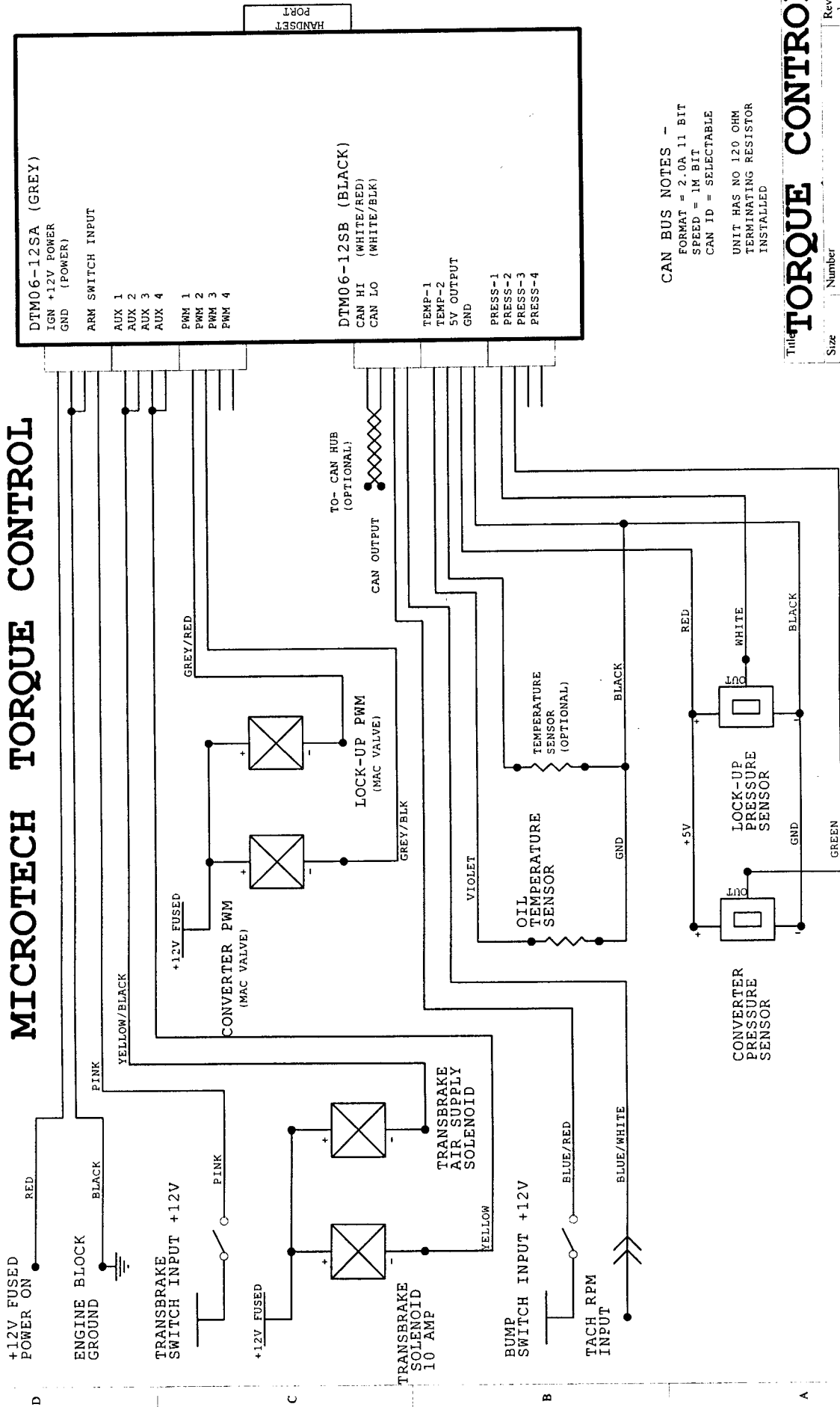|	
Data 1_01	Displays real time live data for - Lock Press, Conv Press, RPM CRK, Oil Temp
Data 1_02	Displays real time live data for - Lock, Conv, Oil Temp, Timer
Data 1_03	Display LOG Minimum/maximum for Lock and Conv
Data 1_04	Display LOG Minimum/maximum for R.P.M. & Oil Temp

MicroTech Auto Screen

Save to memCAL#1 **Save to memCAL#2**	When the DASH is unlocked, the left/right arrows scroll through the program selection options. The DASH software has four memories called memCALs, which allow for the storage and retrieval of different set-ups. These memories are stored on a DASH memory chip. Note that these memories cannot be accessed, when DASH is locked.
Save to memCAL#3 **Save to memCAL#4** **LOAD memCAL #1** **LOAD memCAL #2** **LOAD memCAL #3** **LOAD memCAL #4**	The memCALs are accessed by using the left/right arrows to scroll to the desired memory area (memcal 1-4) then pressing the MODE button twice, e.g. pressing the MODE button twice when the display reads "Save to memCAL#3" would store the current settings in memCAL 3. While a program is saved or loaded, the display will read "Programming Please Wait". The memCALs can also be most useful for temporarily storing data while working on programs; if you want to try an adjustment but don't want to lose the data you already have, save your settings in one of the memCAL areas and it can be retrieved later if your adjustments don't work.
ReSET Settings	Factory Use Only

Torque Control Diagrams

117.60mm

Transbrake ON LED

ON / Tacho Pulse LED

Diagnostic LED Overlay

Bump input

Tach input

Trans input

101.60mm

133mm

114mm

Lockup PWM

Converter PWM

Transbrake AirSupply OUTPUT

Transbrake OUTPUT

Lock up Press Air Valve

Transbrake Air Supply Solenoid

Transbrake Solenoid

Conv Press

Lock Press

+5v

Tach input

Can Hi

| 7 | 8 | 9 | 10 | 11 | 12 |
| 6 | 5 | 4 | 3 | 2 | 1 |

| 1 | 2 | 3 | 4 | 5 | 6 |
| 12 | 11 | 10 | 9 | 8 | 7 |

ConvPress Air Valve

+12v

Gnd

Gnd

Bump input

Can Lo

Transbrake On input

OIL Temp

MICROTECH TORQUE CONTROL

HANDSET PORT

DTM06-12SA (GREY)
IGN +12V POWER
GND (POWER)
ARM SWITCH INPUT
AUX 1
AUX 2
AUX 3
AUX 4
PWM 1
PWM 2
PWM 3
PWM 4

DTM06-12SB (BLACK)
CAN HI (WHITE/RED)
CAN LO (WHITE/BLK)
TEMP-1
TEMP-2
5V OUTPUT
GND
PRESS-1
PRESS-2
PRESS-3
PRESS-4

TO- CAN HUB (OPTIONAL)
CAN OUTPUT

GREY/RED
LOCK-UP PWM (MAC VALVE)
GREY/BLK
+12V FUSED
CONVERTER PWM (MAC VALVE)

YELLOW/BLACK
PINK

+12V FUSED POWER ON — RED
ENGINE BLOCK GROUND — BLACK
TRANSBRAKE SWITCH INPUT +12V — PINK
PINK
+12V FUSED
TRANSBRAKE AIR SUPPLY SOLENOID
TRANSBRAKE SOLENOID 10 AMP
YELLOW
BUMP SWITCH INPUT +12V — BLUE/RED
TACH RPM INPUT — BLUE/WHITE

TEMPERATURE SENSOR (OPTIONAL)
BLACK
VIOLET
OIL TEMPERATURE SENSOR
GND

RED
WHITE
BLACK
+
OUT
LOCK-UP PRESSURE SENSOR
GND
GREEN
+5V
+
OUT
CONVERTER PRESSURE SENSOR

CAN BUS NOTES -
FORMAT = 2.0A 11 BIT
SPEED = 1M BIT
CAN ID = SELECTABLE

UNIT HAS NO 120 OHM
TERMINATING RESISTOR
INSTALLED