

CPU-2000 Modbus Registers.txt

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*** BOOLEAN REGISTERS DATA TABLE ***
*** adjust comm mode of cpu2000 under setup screens ***
*** port configurations (none, 8, 1) (even, 8, 1) (odd, 8, 1) ***
*** baudrates 300, 600, 1200, 2400, 4800, 9600, 19200, 38400 ***
***
*** READ FUNCTION 1 IS SUPPORTED FOR BOOLEAN REG 10001-10512 ***
*** READ FUNCTION 2 IS SUPPORTED FOR BOOLEAN REG 10001-10512 ***
*** FORCE FUNCTION 5 IS NOT SUPPORTED ***
*** FORCE FUNCTION 15 IS NOT SUPPORTED ***
***
*** 512 MODBUS FORMAT BOOLEANS ARE PROVIDED BY THIS STRUCTURE ***
***
*** !!! NOTE !!! NOTE !!! NOTE !!! NOTE !!! NOTE !!! ***
*** BOOLEANS MUST BE REQUESTED ONLY IN BLOCKS OF 8 BITS ***
*** valid examples: ***
*** reading 8 bits starting at 10001 is VALID ***
*** reading 8 bits starting at 10009 is VALID ***
*** reading 8 bits starting at 10017 is VALID ***
*** reading 8 bits starting at 10025 is VALID ***
*** reading 8 bits starting at 10505 is VALID ***
*** reading 16 bits starting at 10001 is VALID ***
*** reading 24 bits starting at 10009 is VALID ***
*** reading 32 bits starting at 10017 is VALID ***
*** reading 512 bits starting at 10001 is VALID ***
*** invalid examples: (will return error code 02) see ! ***
*** reading 2! bits starting at 10001 is INVALID ***
*** reading 8 bits starting at 10002! is INVALID ***
*** reading 13! bits starting at 10017 is INVALID ***
*** reading 16 bits starting at 10021! is INVALID ***
*****

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BOOLEAN_TBL:

#10001="IGN SHUTDOWN FLAG	"; latched status, may not reflect current
state of inputs	
#10002="IGN WARNING FLAG	"; able to run, warning condition present
#10003="IGN FAULT FLAG	"; not able to run, critical fault
#10004="IGN FIRED FLAG	"; fired since last reset press
#10005="IGN ALARM OUTPUT ACTIVATED	"; ign alarm output activated
#10006="IGN FIRING FLAG	"; ignition has fired since last reset press
#10007="IGN PICKUPS OK	"; pickup signals validated
#10008="IGN ENGINE ROTATING	"; engine rotation detected
#10009="SHUTDN INPUT 1=ACTIVE=GROUNDED"	
#10010="BANK CUTOFF ON NOW	"; bank b of ignition system turned off
#10011="MISC. INPUT 1=ACTIVE=GROUNDED"	
#10012="ONE STEP ACTIVE NOW	"; one step retard offset status
#10013="ENERGY LEVEL E1 NOW	
#10014="ENERGY LEVEL E2 NOW	
#10015="ENERGY LEVEL E3 NOW	
#10016="MULTI STRIKE NOW	
#10017="FAULT NO GEAR TOOTH SIGNAL	
#10018="FAULT NO RESET SIGNAL	
#10019="FAULT NO HE CYCLE SIGNAL	
#10020="FAULT WRONG NUMBER OF TEETH	
#10021="FAULT OVERSPEED SHUTDOWN	
#10022="spare	
#10023="spare	
#10024="FAULT FIRMWARE CHECKSUM ERR	

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```
#10025="WARN LOW VOLTAGE BANK A"
#10026="WARN LOW VOLTAGE BANK B"
#10027="WARN NO DI SCHARGE ON BANK A"
#10028="WARN NO DI SCHARGE ON BANK B"
#10029="WARN 4-20 LOOP OUT OF RANGE"
#10030="WARN FAIL TO DETECT DIAG UNIT"
#10031="WARN EEPROM CHECKSUM FAIL"
#10032="WARN FAIL TO DETECT DISP BOARD"

#10033="WARN NO DI SCHARGE ON (A or A1)"
#10034="WARN NO DI SCHARGE ON (C or B1)"
#10035="WARN NO DI SCHARGE ON (E or C1)"
#10036="WARN NO DI SCHARGE ON (G or D1)"
#10037="WARN NO DI SCHARGE ON (J or E1)"
#10038="WARN NO DI SCHARGE ON (L or F1)"
#10039="WARN NO DI SCHARGE ON (R or G1)"
#10040="WARN NO DI SCHARGE ON (T or H1)"

#10041="WARN NO DI SCHARGE ON (J1)"
#10042="WARN NO DI SCHARGE ON (K1)"
#10043="WARN NO DI SCHARGE ON (L1)"
#10044="WARN NO DI SCHARGE ON (M1)"
#10045="WARN NO DI SCHARGE ON (R1)"
#10046="WARN NO DI SCHARGE ON (S1)"
#10047="WARN NO DI SCHARGE ON (T1)"
#10048="WARN NO DI SCHARGE ON (U1)"

#10049="WARN NO DI SCHARGE ON (B or A2)"
#10050="WARN NO DI SCHARGE ON (D or B2)"
#10051="WARN NO DI SCHARGE ON (F or C2)"
#10052="WARN NO DI SCHARGE ON (H or D2)"
#10053="WARN NO DI SCHARGE ON (K or E2)"
#10054="WARN NO DI SCHARGE ON (M or F2)"
#10055="WARN NO DI SCHARGE ON (S or G2)"
#10056="WARN NO DI SCHARGE ON (U or H2)"

#10057="WARN NO DI SCHARGE ON (J2)"
#10058="WARN NO DI SCHARGE ON (K2)"
#10059="WARN NO DI SCHARGE ON (L2)"
#10060="WARN NO DI SCHARGE ON (M2)"
#10061="WARN NO DI SCHARGE ON (R2)"
#10062="WARN NO DI SCHARGE ON (S2)"
#10063="WARN NO DI SCHARGE ON (T2)"
#10064="WARN NO DI SCHARGE ON (U2)"

#10065="PROTECTION ENABLED EEPROM"
#10066="SERIAL RETARD ENABLED EEPROM"
#10067="RPM RETARD MAP ENABLED EEPROM"
#10068="4-20ma RET MAP ENABLED EEPROM"
#10069="BASE ENERGY E1 SELECT EEPROM"
#10070="BASE ENERGY E2 SELECT EEPROM"
#10071="BASE ENERGY E3 SELECT EEPROM"
#10072="MULTI-STRIKE SELECT EEPROM"

#10073="spare"
#10074="spare"
#10075="spare"
#10076="spare"
#10077="spare"
#10078="FW 2000 PRESENT IN IGNITION"
#10079="2 OUTPUTS PER CYLINDER MODE"
#10080="32 OUTPUT MODULE (1=32, 0=16)"
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```
#10081="DIAG MODULE DETECT TOGGLE BIT"
#10082="1=REQUEST RESET OF MIN/MAX"
#10083="1=REQUEST RESET OF ALARMS"
#10084="1=SELECT HI DIAG FREQUENCY"
#10085="1=DIAG 2000 DETECTED BY IGN"
#10086="1=DIAG MODULE ENABLE REQUEST"
#10087="1=RPM ABOVE MIN/MAX THRESHOLD"
#10088="1=DIAG READY FROM IGNITION"

#10089="DIAG MODULE DETECT REPLY BIT"
#10090="1=RESET MIN MAX CONFIRM BIT"
#10091="1=RESET ALARMS CONFIRM BIT"
#10092="1=NEW DIAG ALARM DETECTED"
#10093="1=DUAL BANK DIAGNOSTIC F/W"
#10094="1=DIAG MODULE READY BIT"
#10095="1=FIRE OVERRUN FLAG A (NO RST)"
#10096="1=FIRE OVERRUN FLAG B (NO RST)"

#10097="WARN OPEN PRIMARY (global)"
#10098="WARN SHORTED PRIMARY (global)"
#10099="WARN LO VOLTAGE (global)"
#10100="WARN HI VOLTAGE (global)"
#10101="WARN NO SECONDARY SPK (global)"
#10102="WARN HI FROM ENGINE (global)"
#10103="WARN LO FROM ENGINE (global)"
#10104="WARN HI VARIATION (global)"

#10105="WARN OPEN PRIMARY (A or A1)"
#10106="WARN SHORTED PRIMARY (A or A1)"
#10107="WARN LO VOLTAGE (A or A1)"
#10108="WARN HI VOLTAGE (A or A1)"
#10109="WARN NO SECONDARY SPK (A or A1)"
#10110="WARN HI FROM ENGINE (A or A1)"
#10111="WARN LO FROM ENGINE (A or A1)"
#10112="WARN HI VARIATION (A or A1)"

#10113="WARN OPEN PRIMARY (B or A2)"
#10114="WARN SHORTED PRIMARY (B or A2)"
#10115="WARN LO VOLTAGE (B or A2)"
#10116="WARN HI VOLTAGE (B or A2)"
#10117="WARN NO SECONDARY SPK (B or A2)"
#10118="WARN HI FROM ENGINE (B or A2)"
#10119="WARN LO FROM ENGINE (B or A2)"
#10120="WARN HI VARIATION (B or A2)"

#10121="WARN OPEN PRIMARY (C or B1)"
#10122="WARN SHORTED PRIMARY (C or B1)"
#10123="WARN LO VOLTAGE (C or B1)"
#10124="WARN HI VOLTAGE (C or B1)"
#10125="WARN NO SECONDARY SPK (C or B1)"
#10126="WARN HI FROM ENGINE (C or B1)"
#10127="WARN LO FROM ENGINE (C or B1)"
#10128="WARN HI VARIATION (C or B1)"

#10129="WARN OPEN PRIMARY (D or B2)"
#10130="WARN SHORTED PRIMARY (D or B2)"
#10131="WARN LO VOLTAGE (D or B2)"
#10132="WARN HI VOLTAGE (D or B2)"
#10133="WARN NO SECONDARY SPK (D or B2)"
#10134="WARN HI FROM ENGINE (D or B2)"
#10135="WARN LO FROM ENGINE (D or B2)"
#10136="WARN HI VARIATION (D or B2)"
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#10137="WARN OPEN PRIMARY (E or C1)"
#10138="WARN SHORTED PRIMARY (E or C1)"
#10139="WARN LO VOLTAGE (E or C1)"
#10140="WARN HI VOLTAGE (E or C1)"
#10141="WARN NO SECONDARY SPK (E or C1)"
#10142="WARN HI FROM ENGINE (E or C1)"
#10143="WARN LO FROM ENGINE (E or C1)"
#10144="WARN HI VARIATION (E or C1)"

#10145="WARN OPEN PRIMARY (F or C2)"
#10146="WARN SHORTED PRIMARY (F or C2)"
#10147="WARN LO VOLTAGE (F or C2)"
#10148="WARN HI VOLTAGE (F or C2)"
#10149="WARN NO SECONDARY SPK (F or C2)"
#10150="WARN HI FROM ENGINE (F or C2)"
#10151="WARN LO FROM ENGINE (F or C2)"
#10152="WARN HI VARIATION (F or C2)"

#10153="WARN OPEN PRIMARY (G or D1)"
#10154="WARN SHORTED PRIMARY (G or D1)"
#10155="WARN LO VOLTAGE (G or D1)"
#10156="WARN HI VOLTAGE (G or D1)"
#10157="WARN NO SECONDARY SPK (G or D1)"
#10158="WARN HI FROM ENGINE (G or D1)"
#10159="WARN LO FROM ENGINE (G or D1)"
#10160="WARN HI VARIATION (G or D1)"

#10161="WARN OPEN PRIMARY (H or D2)"
#10162="WARN SHORTED PRIMARY (H or D2)"
#10163="WARN LO VOLTAGE (H or D2)"
#10164="WARN HI VOLTAGE (H or D2)"
#10165="WARN NO SECONDARY SPK (H or D2)"
#10166="WARN HI FROM ENGINE (H or D2)"
#10167="WARN LO FROM ENGINE (H or D2)"
#10168="WARN HI VARIATION (H or D2)"

#10169="WARN OPEN PRIMARY (J or E1)"
#10170="WARN SHORTED PRIMARY (J or E1)"
#10171="WARN LO VOLTAGE (J or E1)"
#10172="WARN HI VOLTAGE (J or E1)"
#10173="WARN NO SECONDARY SPK (J or E1)"
#10174="WARN HI FROM ENGINE (J or E1)"
#10175="WARN LO FROM ENGINE (J or E1)"
#10176="WARN HI VARIATION (J or E1)"

#10177="WARN OPEN PRIMARY (K or E2)"
#10178="WARN SHORTED PRIMARY (K or E2)"
#10179="WARN LO VOLTAGE (K or E2)"
#10180="WARN HI VOLTAGE (K or E2)"
#10181="WARN NO SECONDARY SPK (K or E2)"
#10182="WARN HI FROM ENGINE (K or E2)"
#10183="WARN LO FROM ENGINE (K or E2)"
#10184="WARN HI VARIATION (K or E2)"

#10185="WARN OPEN PRIMARY (L or F1)"
#10186="WARN SHORTED PRIMARY (L or F1)"
#10187="WARN LO VOLTAGE (L or F1)"
#10188="WARN HI VOLTAGE (L or F1)"
#10189="WARN NO SECONDARY SPK (L or F1)"
#10190="WARN HI FROM ENGINE (L or F1)"
#10191="WARN LO FROM ENGINE (L or F1)"
#10192="WARN HI VARIATION (L or F1)"
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#10193="WARN OPEN PRIMARY (M or F2)"
#10194="WARN SHORTED PRIMARY (M or F2)"
#10195="WARN LO VOLTAGE (M or F2)"
#10196="WARN HI VOLTAGE (M or F2)"
#10197="WARN NO SECONDARY SPK (M or F2)"
#10198="WARN HI FROM ENGINE (M or F2)"
#10199="WARN LO FROM ENGINE (M or F2)"
#10200="WARN HI VARIATION (M or F2)"

#10201="WARN OPEN PRIMARY (R or G1)"
#10202="WARN SHORTED PRIMARY (R or G1)"
#10203="WARN LO VOLTAGE (R or G1)"
#10204="WARN HI VOLTAGE (R or G1)"
#10205="WARN NO SECONDARY SPK (R or G1)"
#10206="WARN HI FROM ENGINE (R or G1)"
#10207="WARN LO FROM ENGINE (R or G1)"
#10208="WARN HI VARIATION (R or G1)"

#10209="WARN OPEN PRIMARY (S or G2)"
#10210="WARN SHORTED PRIMARY (S or G2)"
#10211="WARN LO VOLTAGE (S or G2)"
#10212="WARN HI VOLTAGE (S or G2)"
#10213="WARN NO SECONDARY SPK (S or G2)"
#10214="WARN HI FROM ENGINE (S or G2)"
#10215="WARN LO FROM ENGINE (S or G2)"
#10216="WARN HI VARIATION (S or G2)"

#10217="WARN OPEN PRIMARY (T or H1)"
#10218="WARN SHORTED PRIMARY (T or H1)"
#10219="WARN LO VOLTAGE (T or H1)"
#10220="WARN HI VOLTAGE (T or H1)"
#10221="WARN NO SECONDARY SPK (T or H1)"
#10222="WARN HI FROM ENGINE (T or H1)"
#10223="WARN LO FROM ENGINE (T or H1)"
#10224="WARN HI VARIATION (T or H1)"

#10225="WARN OPEN PRIMARY (U or H2)"
#10226="WARN SHORTED PRIMARY (U or H2)"
#10227="WARN LO VOLTAGE (U or H2)"
#10228="WARN HI VOLTAGE (U or H2)"
#10229="WARN NO SECONDARY SPK (U or H2)"
#10230="WARN HI FROM ENGINE (U or H2)"
#10231="WARN LO FROM ENGINE (U or H2)"
#10232="WARN HI VARIATION (U or H2)"

#10233="WARN OPEN PRIMARY ( J1)"
#10234="WARN SHORTED PRIMARY ( J1)"
#10235="WARN LO VOLTAGE ( J1)"
#10236="WARN HI VOLTAGE ( J1)"
#10237="WARN NO SECONDARY SPK ( J1)"
#10238="WARN HI FROM ENGINE ( J1)"
#10239="WARN LO FROM ENGINE ( J1)"
#10240="WARN HI VARIATION ( J1)"

#10241="WARN OPEN PRIMARY ( J2)"
#10242="WARN SHORTED PRIMARY ( J2)"
#10243="WARN LO VOLTAGE ( J2)"
#10244="WARN HI VOLTAGE ( J2)"
#10245="WARN NO SECONDARY SPK ( J2)"
#10246="WARN HI FROM ENGINE ( J2)"
#10247="WARN LO FROM ENGINE ( J2)"
#10248="WARN HI VARIATION ( J2)"
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```
#10249="WARN OPEN PRIMARY ( K1)"
#10250="WARN SHORTED PRIMARY ( K1)"
#10251="WARN LO VOLTAGE ( K1)"
#10252="WARN HI VOLTAGE ( K1)"
#10253="WARN NO SECONDARY SPK ( K1)"
#10254="WARN HI FROM ENGINE ( K1)"
#10255="WARN LO FROM ENGINE ( K1)"
#10256="WARN HI VARIATION ( K1)"

#10257="WARN OPEN PRIMARY ( K2)"
#10258="WARN SHORTED PRIMARY ( K2)"
#10259="WARN LO VOLTAGE ( K2)"
#10260="WARN HI VOLTAGE ( K2)"
#10261="WARN NO SECONDARY SPK ( K2)"
#10262="WARN HI FROM ENGINE ( K2)"
#10263="WARN LO FROM ENGINE ( K2)"
#10264="WARN HI VARIATION ( K2)"

#10265="WARN OPEN PRIMARY ( L1)"
#10266="WARN SHORTED PRIMARY ( L1)"
#10267="WARN LO VOLTAGE ( L1)"
#10268="WARN HI VOLTAGE ( L1)"
#10269="WARN NO SECONDARY SPK ( L1)"
#10270="WARN HI FROM ENGINE ( L1)"
#10271="WARN LO FROM ENGINE ( L1)"
#10272="WARN HI VARIATION ( L1)"

#10273="WARN OPEN PRIMARY ( L2)"
#10274="WARN SHORTED PRIMARY ( L2)"
#10275="WARN LO VOLTAGE ( L2)"
#10276="WARN HI VOLTAGE ( L2)"
#10277="WARN NO SECONDARY SPK ( L2)"
#10278="WARN HI FROM ENGINE ( L2)"
#10279="WARN LO FROM ENGINE ( L2)"
#10280="WARN HI VARIATION ( L2)"

#10281="WARN OPEN PRIMARY ( M1)"
#10282="WARN SHORTED PRIMARY ( M1)"
#10283="WARN LO VOLTAGE ( M1)"
#10284="WARN HI VOLTAGE ( M1)"
#10285="WARN NO SECONDARY SPK ( M1)"
#10286="WARN HI FROM ENGINE ( M1)"
#10287="WARN LO FROM ENGINE ( M1)"
#10288="WARN HI VARIATION ( M1)"

#10289="WARN OPEN PRIMARY ( M2)"
#10290="WARN SHORTED PRIMARY ( M2)"
#10291="WARN LO VOLTAGE ( M2)"
#10292="WARN HI VOLTAGE ( M2)"
#10293="WARN NO SECONDARY SPK ( M2)"
#10294="WARN HI FROM ENGINE ( M2)"
#10295="WARN LO FROM ENGINE ( M2)"
#10296="WARN HI VARIATION ( M2)"

#10297="WARN OPEN PRIMARY ( R1)"
#10298="WARN SHORTED PRIMARY ( R1)"
#10299="WARN LO VOLTAGE ( R1)"
#10300="WARN HI VOLTAGE ( R1)"
#10301="WARN NO SECONDARY SPK ( R1)"
#10302="WARN HI FROM ENGINE ( R1)"
#10303="WARN LO FROM ENGINE ( R1)"
#10304="WARN HI VARIATION ( R1)"
```

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```
#10305="WARN OPEN PRIMARY ( R2)"
#10306="WARN SHORTED PRIMARY ( R2)"
#10307="WARN LO VOLTAGE ( R2)"
#10308="WARN HI VOLTAGE ( R2)"
#10309="WARN NO SECONDARY SPK ( R2)"
#10310="WARN HI FROM ENGINE ( R2)"
#10311="WARN LO FROM ENGINE ( R2)"
#10312="WARN HI VARIATION ( R2)"

#10313="WARN OPEN PRIMARY ( S1)"
#10314="WARN SHORTED PRIMARY ( S1)"
#10315="WARN LO VOLTAGE ( S1)"
#10316="WARN HI VOLTAGE ( S1)"
#10317="WARN NO SECONDARY SPK ( S1)"
#10318="WARN HI FROM ENGINE ( S1)"
#10319="WARN LO FROM ENGINE ( S1)"
#10320="WARN HI VARIATION ( S1)"

#10321="WARN OPEN PRIMARY ( S2)"
#10322="WARN SHORTED PRIMARY ( S2)"
#10323="WARN LO VOLTAGE ( S2)"
#10324="WARN HI VOLTAGE ( S2)"
#10325="WARN NO SECONDARY SPK ( S2)"
#10326="WARN HI FROM ENGINE ( S2)"
#10327="WARN LO FROM ENGINE ( S2)"
#10328="WARN HI VARIATION ( S2)"

#10329="WARN OPEN PRIMARY ( T1)"
#10330="WARN SHORTED PRIMARY ( T1)"
#10331="WARN LO VOLTAGE ( T1)"
#10332="WARN HI VOLTAGE ( T1)"
#10333="WARN NO SECONDARY SPK ( T1)"
#10334="WARN HI FROM ENGINE ( T1)"
#10335="WARN LO FROM ENGINE ( T1)"
#10336="WARN HI VARIATION ( T1)"

#10337="WARN OPEN PRIMARY ( T2)"
#10338="WARN SHORTED PRIMARY ( T2)"
#10339="WARN LO VOLTAGE ( T2)"
#10340="WARN HI VOLTAGE ( T2)"
#10341="WARN NO SECONDARY SPK ( T2)"
#10342="WARN HI FROM ENGINE ( T2)"
#10343="WARN LO FROM ENGINE ( T2)"
#10344="WARN HI VARIATION ( T2)"

#10345="WARN OPEN PRIMARY ( U1)"
#10346="WARN SHORTED PRIMARY ( U1)"
#10347="WARN LO VOLTAGE ( U1)"
#10348="WARN HI VOLTAGE ( U1)"
#10349="WARN NO SECONDARY SPK ( U1)"
#10350="WARN HI FROM ENGINE ( U1)"
#10351="WARN LO FROM ENGINE ( U1)"
#10352="WARN HI VARIATION ( U1)"

#10353="WARN OPEN PRIMARY ( U2)"
#10354="WARN SHORTED PRIMARY ( U2)"
#10355="WARN LO VOLTAGE ( U2)"
#10356="WARN HI VOLTAGE ( U2)"
#10357="WARN NO SECONDARY SPK ( U2)"
#10358="WARN HI FROM ENGINE ( U2)"
#10359="WARN LO FROM ENGINE ( U2)"
#10360="WARN HI VARIATION ( U2)"
```

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```
#10361="LO ORDER BAUD SCALER BIT"
#10362="MID ORDER BAUD SCALER BIT"
#10363="HI ORDER BAUD SCALER BIT"
#10364="1=PARITY OFF 0=PARITY ON"
#10365="1=PARITY ODD 0=PARITY EVEN"
#10366="spare"
#10367="1=BANK CUTOFF TYPE CONFIG"
#10368="1=2 CYCLE 0=4CYCLE CONFIG"

#10369="AD INTERRUPT PIN"
#10370="MISFIRED DETECTION BITA"
#10371="MISFIRED DETECTION BITB"
#10372="CHKPAGE 2 BIT"
#10373="MISC_INPUT BIT"
#10374="TEST DENY BIT"
#10375="TEST ACTIVE BIT"
#10376="TEST REQUEST BIT"

#10377="FIRE CNFRM OUT 1=CLOSED 0=OPEN"
#10378="SHUTDOWN OUT 1=CLOSED 0=OPEN"
#10379="ALARM OUT 1=CLOSED 0=OPEN"
#10380="SPARE OUT 1=CLOSED 0=OPEN"
#10381="spare"
#10382="SKIP CONTROL BIT"
#10383="CMDPAGE2 BIT"
#10384="TWO CYCLE CONTROL BIT"

#10385="spare"
#10386="spare"
#10387="spare"
#10388="spare"
#10389="spare"
#10390="spare"
#10391="spare"
#10392="spare"

#10393="spare"
#10394="spare"
#10395="spare"
#10396="spare"
#10397="spare"
#10398="spare"
#10399="spare"
#10400="spare"

#10401="spare"
#10402="spare"
#10403="spare"
#10404="spare"
#10405="spare"
#10406="spare"
#10407="spare"
#10408="spare"

#10409="spare"
#10410="spare"
#10411="spare"
#10412="spare"
#10413="spare"
#10414="spare"
#10415="spare"
#10416="spare"
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CPU-2000 Modbus Registers.txt

#10417=" spare
 #10418=" spare
 #10419=" spare
 #10420=" spare
 #10421=" spare
 #10422=" spare
 #10423=" spare
 #10424=" spare

 #10425=" spare
 #10426=" spare
 #10427=" spare
 #10428=" spare
 #10429=" spare
 #10430=" spare
 #10431=" spare
 #10432=" spare

 #10433=" spare
 #10434=" spare
 #10435=" spare
 #10436=" spare
 #10437=" spare
 #10438=" spare
 #10439=" spare
 #10440=" spare

 #10441=" spare
 #10442=" spare
 #10443=" spare
 #10444=" spare
 #10445=" spare
 #10446=" spare
 #10447=" spare
 #10448=" spare

 #10449=" spare
 #10450=" spare
 #10451=" spare
 #10452=" spare
 #10453=" spare
 #10454=" spare
 #10455=" spare
 #10456=" spare

 #10457=" spare
 #10458=" spare
 #10459=" spare
 #10460=" spare
 #10461=" spare
 #10462=" spare
 #10463=" spare
 #10464=" spare

 #10465=" spare
 #10466=" spare
 #10467=" spare
 #10468=" spare
 #10469=" spare
 #10470=" spare
 #10471=" spare
 #10472=" spare

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CPU-2000 Modbus Registers.txt

#10473=" spare
#10474=" spare
#10475=" spare
#10476=" spare
#10477=" spare
#10478=" spare
#10479=" spare
#10480=" spare

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#10481=" spare
#10482=" spare
#10483=" spare
#10484=" spare
#10485=" spare
#10486=" spare
#10487=" spare
#10488=" spare

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#10489=" spare
#10490=" spare
#10491=" spare
#10492=" spare
#10493=" spare
#10494=" spare
#10495=" spare
#10496=" spare

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#10497=" spare
#10498=" spare
#10499=" spare
#10500=" spare
#10501=" spare
#10502=" spare
#10503=" spare
#10504=" spare

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#10505=" spare
#10506=" spare
#10507=" spare
#10508=" spare
#10509=" spare
#10510=" spare
#10511=" spare
#10512=" spare

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. ****
/
. ****  ANALOG REGISTERS DATA TABLE  ****
/
. ****      adjust comm mode of cpu2000 under setup screens  ****
/
. ****      port configurations (none, 8, 1)(even, 8, 1)(odd, 8, 1)  ****
/
. ****      baudrates 300, 600, 1200, 2400, 4800, 9600, 19200, 38400  ****
/
. ****
/
. ****  READ FUNCTION 3 SUPPORTS READ OF REG 30001-30256  ****
/
. ****  READ FUNCTION 4 SUPPORTS READ OF REG 30001-30256  ****
/
. ****  WRITE FUNCTION 6 IS SUPPORTED FOR SPECIFIC REG'S 40xxx  ****
/
. ****  WRITE FUNCTION 16 IS SUPPORTED FOR SPECIFIC REG'S 40xxx  ****
/
. ****
/
. ****  256 MODBUS 16BIT REGISTERS ARE PROVIDED BY THIS STRUCTURE  ****
/
. ****  BUFFER LENGTH PERMITS UPTO 32 REGISTERS IN A SINGLE READ  ****
/
. ****
/
. ****  READ FUNCTIONS 3&4 ALSO SUPPORT DIRECT MEMORY READS  ****
/
. ****  example 0B000h - 0B0FFh = APPLICATION COMMENTS TEXT  ****
/

```

CPU-2000 Modbus Registers.txt

```

. ***
/
/ *****
REGI STER
; ; "123456789012345678901234567890"
#30001="ENGINE RPM 1RPM/BI T "
#30002="MAX SEEN RPM 5RPM/BI T "
#30003="ENGINE OVERSPEED SETTING 5/BI T"
#30004="FAULT GEAR TEETH 0.25/BI T "
#30005="4-20 ANALOG INPUT 0.10ma/bi t "
#30006="COUNTS TO DEGREES SCALER "
#30007="GLOGAL TIMING DI SPLAY VALUE "
#30008="MANUAL RETARD SETTING "
#30009="ONESTEP RETARD SETTING "
#30010="ANALOG RETARD FROM TABLE "
#30011="RPM RETARD FROM TABLE "
#30012="SERIAL RETARD FROM REMOTE "
#30013="MAX I NDI VI DUAL OFFSET "
#30014="STANDARD I NDI VI DUAL OFFSET "
#30015="REFERENCE ANGLE OF RESET PIN "
#30016="NUMBER OF CYLI NDERS "
#30017="ENGINE AVERAGE DI AG "
#30018="ENGINE AVERAGE DI AG BANK B "
#30019="LO SPARK DI AG THRESHOLD "
#30020="HI SPARK DI AG THRESHOLD "
#30021="NO SPARK DI AG THRESHOLD "
#30022="LO FROM ENGINE THRESHOLD "
#30023="HI FROM ENGINE THRESHOLD "
#30024="HI VARI ATI ON THRESHOLD "
#30025="E2 ENABLE THRESHOLD "
#30026="E2 DI SABLE HYSTERI SI S "
#30027="E3 ENABLE THRESHOLD "
#30028="E3 DI SABLE HYSTERI SI S "
#30029="LO SPARK BANKB THRESHOLD "
#30030="HI SPARK BANKB THRESHOLD "
#30031="LO FROM ENG B THRESHOLD "
#30032="HI FROM ENG B THRESHOLD "
; ; "123456789012345678901234567890"

. *****
/
/ *** THE BELOW REGISTERS REPRESENT THE I NDI VI DUAL CYLINDER TIMING DATA ***
/
/ *** THEY CAN BE CONVERTED TO DEGREES AS DESCRIBED HERE ***
/
/ *****
/
/ *** EXAMPLE: neg result=retard offset : pos result=advance offset ***
/
/ *** offset(cyl A) = ( REG(30014) - REG(30033) ) * REG(30006) / 2560 ***
/
/ *****
/
/ *** REG(33-64) HOLD THE I NDI VI DUAL OFFSET DATA VALUES ***
/
/ *** A VALUE OF (0) REPRESENTS MAX ADVANCE (TYPI CAL 3 DEG) ***
/
/ ***
/
/ *** REG(30013) HOLDS THE STANDARD I NDI VI DUAL OFFSET COUNTS ***
/
/ *** REG(30012) HOLDS THE MAX I NDI VI DUAL OFFSET COUNTS ***
/
/ *** REG(30005) HOLDS THE CONVERSION CONSTANT FOR DEGREES ***
/
/ *****
#30033="CYL TIMING OFFSET (A or A1) "
#30034="CYL TIMING OFFSET (B or A2) "
#30035="CYL TIMING OFFSET (C or B1) "
#30036="CYL TIMING OFFSET (D or B2) "
#30037="CYL TIMING OFFSET (E or C1) "
#30038="CYL TIMING OFFSET (F or C2) "
#30039="CYL TIMING OFFSET (G or D1) "
#30040="CYL TIMING OFFSET (H or D2) "
#30041="CYL TIMING OFFSET (J or E1) "
#30042="CYL TIMING OFFSET (K or E2) "
#30043="CYL TIMING OFFSET (L or F1) "

```

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```
#30044="CYL TIMING OFFSET (M or F2)  "
#30045="CYL TIMING OFFSET (R or G1)  "
#30046="CYL TIMING OFFSET (S or G2)  "
#30047="CYL TIMING OFFSET (T or H1)  "
#30048="CYL TIMING OFFSET (Y or H2)  "
#30049="CYL TIMING OFFSET (      J1)  "
#30050="CYL TIMING OFFSET (      J2)  "
#30051="CYL TIMING OFFSET (      K1)  "
#30052="CYL TIMING OFFSET (      K2)  "
#30053="CYL TIMING OFFSET (      L1)  "
#30054="CYL TIMING OFFSET (      L2)  "
#30055="CYL TIMING OFFSET (      M1)  "
#30056="CYL TIMING OFFSET (      M2)  "
#30057="CYL TIMING OFFSET (      R1)  "
#30058="CYL TIMING OFFSET (      R2)  "
#30059="CYL TIMING OFFSET (      S1)  "
#30060="CYL TIMING OFFSET (      S2)  "
#30061="CYL TIMING OFFSET (      T1)  "
#30062="CYL TIMING OFFSET (      T2)  "
#30063="CYL TIMING OFFSET (      U1)  "
#30064="CYL TIMING OFFSET (      U2)  "
```

```
. *****
; *** NOTE THE FOLLOWING 32 REGISTERS ARE READ ONLY ***
; *** THESE ARE THE EEPROM DEFAULT TIMING OFFSETS ***
; *** A KEYCMD CAN BE EXECUTED COPY INDIVIDUAL TO DEFAULT ARRAY ***
; *** A KEYCMD CAN BE EXECUTED TO RESET THIS ARRAY TO 0 OFFSET ***
; *****
```

```
#30065="DEFAULT OFFSET (A or A1)  "
#30066="DEFAULT OFFSET (B or A2)  "
#30067="DEFAULT OFFSET (C or B1)  "
#30068="DEFAULT OFFSET (D or B2)  "
#30069="DEFAULT OFFSET (E or C1)  "
#30070="DEFAULT OFFSET (F or C2)  "
#30071="DEFAULT OFFSET (G or D1)  "
#30072="DEFAULT OFFSET (H or D2)  "
#30073="DEFAULT OFFSET (J or E1)  "
#30074="DEFAULT OFFSET (K or E2)  "
#30075="DEFAULT OFFSET (L or F1)  "
#30076="DEFAULT OFFSET (M or F2)  "
#30077="DEFAULT OFFSET (R or G1)  "
#30078="DEFAULT OFFSET (S or G2)  "
#30079="DEFAULT OFFSET (T or H1)  "
#30080="DEFAULT OFFSET (      H2)  "
#30081="DEFAULT OFFSET (      J1)  "
#30082="DEFAULT OFFSET (      J2)  "
#30083="DEFAULT OFFSET (      K1)  "
#30084="DEFAULT OFFSET (      K2)  "
#30085="DEFAULT OFFSET (      L1)  "
#30086="DEFAULT OFFSET (      L2)  "
#30087="DEFAULT OFFSET (      M1)  "
#30088="DEFAULT OFFSET (      M2)  "
#30089="DEFAULT OFFSET (      R1)  "
#30090="DEFAULT OFFSET (      R2)  "
#30091="DEFAULT OFFSET (      S1)  "
#30092="DEFAULT OFFSET (      S2)  "
#30093="DEFAULT OFFSET (      T1)  "
#30094="DEFAULT OFFSET (      T2)  "
#30095="DEFAULT OFFSET (      U1)  "
#30096="DEFAULT OFFSET (      U2)  "
```

```
. *****
; *** NOTE THE FOLLOWING 32 REGISTERS ARE READ ONLY ***
```

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. *** THESE ARE THE CYLINDER AVERAGE DIAGNOSTIC VALUES ***
 /
 , *****

```
#30097="CAVG (A or A1)      "
#30098="CAVG (B or A2)      "
#30099="CAVG (C or B1)      "
#30100="CAVG (D or B2)      "
#30101="CAVG (E or C1)      "
#30102="CAVG (F or C2)      "
#30103="CAVG (G or D1)      "
#30104="CAVG (H or D2)      "
#30105="CAVG (J or E1)      "
#30106="CAVG (K or E2)      "
#30107="CAVG (L or F1)      "
#30108="CAVG (M or F2)      "
#30109="CAVG (R or G1)      "
#30110="CAVG (S or G2)      "
#30111="CAVG (T or H1)      "
#30112="CAVG (U or H2)      "
#30113="CAVG (      J1)      "
#30114="CAVG (      J2)      "
#30115="CAVG (      K1)      "
#30116="CAVG (      K2)      "
#30117="CAVG (      L1)      "
#30118="CAVG (      L2)      "
#30119="CAVG (      M1)      "
#30120="CAVG (      M2)      "
#30121="CAVG (      R1)      "
#30122="CAVG (      R2)      "
#30123="CAVG (      S1)      "
#30124="CAVG (      S2)      "
#30125="CAVG (      T1)      "
#30126="CAVG (      T2)      "
#30127="CAVG (      U1)      "
#30128="CAVG (      U2)      "
```

. *****
 /
 . *** NOTE THE FOLLOWING 32 REGISTERS ARE READ ONLY ***
 . *** THESE ARE THE CYLINDER COEFFICIENT OF VARIATION VALUES ***
 /
 , *****

```
#30129="COV (A or A1)      "
#30130="COV (B or A2)      "
#30131="COV (C or B1)      "
#30132="COV (D or B2)      "
#30133="COV (E or C1)      "
#30134="COV (F or C2)      "
#30135="COV (G or D1)      "
#30136="COV (H or D2)      "
#30137="COV (J or E1)      "
#30138="COV (K or E2)      "
#30139="COV (L or F1)      "
#30140="COV (M or F2)      "
#30141="COV (R or G1)      "
#30142="COV (S or G2)      "
#30143="COV (T or H1)      "
#30144="COV (U or H2)      "
#30145="COV (      J2)      "
#30146="COV (      J2)      "
#30147="COV (      K2)      "
#30148="COV (      K2)      "
#30149="COV (      L2)      "
#30150="COV (      L2)      "
```

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```
#30151="COV ( M2) "
#30152="COV ( M2) "
#30153="COV ( R2) "
#30154="COV ( R2) "
#30155="COV ( S2) "
#30156="COV ( S2) "
#30157="COV ( T2) "
#30158="COV ( T2) "
#30159="COV ( U2) "
#30160="COV ( U2) "

. ****
/ *** NOTE THE FOLLOWING 32 REGISTERS ARE READ ONLY ****
/ *** THESE THE CYLINDER DIAGNOSTIC OFFSET VALUES RANGE ****
/ *** KEY COMMAND FUNCTIONS ARE AVAILABLE TO ADJUST THESE ****
/ ****
/ ****
/ **** EXAMPLE: (single byte signed number) 0-16 or 240-255 ****
/ **** if value > 127 then it is negative value = 256-value ****
/ **** if REG(30161) > 127 then display = 256 - REG(30161) ****
/ **** el se di spl ay = REG(30161) ****
/ ****
/ ****
#30161="DI AG OFFSET (A or A1) "
#30162="DI AG OFFSET (B or A2) "
#30163="DI AG OFFSET (C or B1) "
#30164="DI AG OFFSET (D or B2) "
#30165="DI AG OFFSET (E or C1) "
#30166="DI AG OFFSET (F or C2) "
#30167="DI AG OFFSET (G or D1) "
#30168="DI AG OFFSET (H or D2) "
#30169="DI AG OFFSET (J or E1) "
#30170="DI AG OFFSET (K or E2) "
#30171="DI AG OFFSET (L or F1) "
#30172="DI AG OFFSET (M or F2) "
#30173="DI AG OFFSET (R or G1) "
#30174="DI AG OFFSET (S or G2) "
#30175="DI AG OFFSET (T or H1) "
#30176="DI AG OFFSET (U or H2) "
#30177="DI AG OFFSET ( J1) "
#30178="DI AG OFFSET ( J2) "
#30179="DI AG OFFSET ( K1) "
#30180="DI AG OFFSET ( K2) "
#30181="DI AG OFFSET ( L1) "
#30182="DI AG OFFSET ( L2) "
#30183="DI AG OFFSET ( M1) "
#30184="DI AG OFFSET ( M2) "
#30185="DI AG OFFSET ( R1) "
#30186="DI AG OFFSET ( R2) "
#30187="DI AG OFFSET ( S1) "
#30188="DI AG OFFSET ( S2) "
#30189="DI AG OFFSET ( T1) "
#30190="DI AG OFFSET ( T2) "
#30191="DI AG OFFSET ( U1) "
#30192="DI AG OFFSET ( U2) "

#30193="spare returns reg addr "
#30194="spare returns reg addr "
#30195="spare returns reg addr "
#30196="spare returns reg addr "
#30197="spare returns reg addr "
#30198="spare returns reg addr "
#30199="spare returns reg addr "
#30200="spare returns reg addr "
```

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```

#30201="spare returns reg addr      "
#30202="spare returns reg addr      "
#30203="spare returns reg addr      "
#30204="spare returns reg addr      "
#30205="spare returns reg addr      "
#30206="spare returns reg addr      "
#30207="spare returns reg addr      "
#30208="spare returns reg addr      "

#30209="spare returns reg addr      "
#30210="spare returns reg addr      "
#30211="spare returns reg addr      "
#30212="spare returns reg addr      "
#30213="spare returns reg addr      "
#30214="spare returns reg addr      "
#30215="spare returns reg addr      "
#30216="spare returns reg addr      "
#30217="spare returns reg addr      "
#30218="spare returns reg addr      "
#30219="spare returns reg addr      "
#30220="spare returns reg addr      "
#30221="spare returns reg addr      "
#30222="spare returns reg addr      "
#30223="spare returns reg addr      "
#30224="spare returns reg addr      "

#30225="spare returns reg addr      "
#30226="spare returns reg addr      "
#30227="spare returns reg addr      "
#30228="spare returns reg addr      "
#30229="spare returns reg addr      "
#30230="spare returns reg addr      "
#30231="spare returns reg addr      "
#30232="spare returns reg addr      "
#30233="spare returns reg addr      "
#30234="spare returns reg addr      "
#30235="spare returns reg addr      "
#30236="spare returns reg addr      "
#30237="spare returns reg addr      "
#30238="spare returns reg addr      "
#30239="spare returns reg addr      "
#30240="spare returns reg addr      "

#30241="spare returns reg addr      "
#30242="spare returns reg addr      "
#30243="spare returns reg addr      "
#30244="spare returns reg addr      "
#30245="spare returns reg addr      "
#30246="spare returns reg addr      "
#30247="spare returns reg addr      "
#30248="spare returns reg addr      "
#30249="spare returns reg addr      "
#30250="spare returns reg addr      "
#30251="spare returns reg addr      "
#30252="spare returns reg addr      "
#30253="2/4CYCLE AND COM CONFIG DATA"

;      PP  b
;      oo  a
;      df  u
;      df /d\
; 00 0000000B ModBusRTU 300e81
; 01 0000001B ModBusRTU 600e81
; 02 0000010B ModBusRTU1200e81

```

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```

; 03 00000011B ModBusRTU2400e81
; 04 00000100B ModBusRTU4800e81
; 05 00000101B ModBusRTU9600e81
; 06 00000110B ModBusRTU19. 2e81
; 07 00000111B ModBusRTU38. 4e81
;
; 08 00001000B ModBusRTU 300o81
; 09 00001001B ModBusRTU 600o81
; 10 00001010B ModBusRTU1200o81
; 11 00001011B ModBusRTU2400o81
; 12 00001100B ModBusRTU4800o81
; 13 00001101B ModBusRTU9600o81
; 14 00001110B ModBusRTU19. 2o81
; 15 00001111B ModBusRTU38. 4o81
;
; 16 00010000B ModBusRTU 300n81
; 17 00010001B ModBusRTU 600n81
; 18 00010010B ModBusRTU1200n81
; 19 00010011B ModBusRTU2400n81
; 20 00010100B ModBusRTU4800n81
; 21 00010101B ModBusRTU9600n81
; 22 00010110B ModBusRTU19. 2n81
; 23 00010111B ModBusRTU38. 4n81
;
; 24 00011000B Al troni c 9bi t

```

```

#30254="ID CODE FOR LOGIC SER PORT  "
#30255="KEYCMD REQUEST REGI STER  "
#30256="KEYCMD DATA REGI STER  "

```

```

. ****
. ONLY THE BELOW REGI STERS WRITTEN ****
. ****
. (40012) ; remote GLOBAL retard offset via serial data ****
. **** ; can use function 006 (si ngle) ****
. **** ; must have start register 40012 ****
. **** ; may have data range 00000-00255 ****
. **** ; OR ****
. **** ; can use functi on 016 (mul ti ple) ****
. **** ; must have start register 40012 ****
. **** ; must have num registers 00001 ****
. **** ; must have num bytes 002 ****
. **** ; may have data range 00000-00255 ****
. ****
. (40033 thru 40064); indi vidual cyl timing offset array ****
. **** ; can use function 006 (si ngle) ****
. **** ; may have start register 40033 - 40064 ****
. **** ; may have data range 00000 - maxoffset ****
. **** ; OR ****
. **** ; can use functi on 016 (mul ti ple) ****
. **** ; may have start register 40033 - 40064 ****
. **** ; may have num registers 00001 - 00032 ****
. **** ; may have num bytes 002 - 064 ****
. **** ; may have data range 00000 - maxoffset ****
. ****
. (40255+40256) ; key command function and data registers ****
. **** ****
. **** ; must be function 016 (mul ti ple) ****
. **** ; must have start register 40255 ****
. **** ; must have num registers 00002 ****

```



```

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***
; must have num bytes 004 ***
; data bytes must be consistant with command list ***
***
NO OTHER WRITE FUNCTIONS SUPPORTED. ... ***
*****
*****
*** THE BELOW REGISTER CAN BE CONVERTED TO DEGREES RETARD AS FOLLOWS ***
*****
*** EXAMPLE: serial retard degrees = REG(30010) * REG(30005) / 2560 ***
*****
*** REG(30012) HOLDS THE SERIAL RETARD IN COUNTS ***
*** REG(30005) HOLDS THE CONVERSION CONSTANT FOR DEGREES ***
*****
; ; address equates hard coded ; #40012="SERIAL RETARD FROM REMOTE "
; ;
*****
*** THE BELOW REGISTERS CAN BE CONVERTED TO DEGREES AS DESCRIBED HERE ***
*****
*** EXAMPLE: neg result=retard offset : pos result=advance offset ***
*** offset(cyl A) = ( REG(30013) - REG(30033) ) * REG(30005) / 2560 ***
*****
*** REG(33-64) HOLD THE INDIVIDUAL OFFSET DATA VALUES ***
*** A VALUE OF (0) REPRESENTS MAX ADVANCE (TYPICAL 3 DEG) ***
***
*** REG(30013) HOLDS THE STANDARD INDIVIDUAL OFFSET COUNTS ***
*** REG(30012) HOLDS THE MAX INDIVIDUAL OFFSET COUNTS ***
*** REG(30005) HOLDS THE CONVERSION CONSTANT FOR DEGREES ***
*****
#40033="CYL TIMING OFFSET (A or A1) "
#40034="CYL TIMING OFFSET (B or A2) "
#40035="CYL TIMING OFFSET (C or B1) "
#40036="CYL TIMING OFFSET (D or B2) "
#40037="CYL TIMING OFFSET (E or C1) "
#40038="CYL TIMING OFFSET (F or C2) "
#40039="CYL TIMING OFFSET (G or D1) "
#40040="CYL TIMING OFFSET (H or D2) "
#40041="CYL TIMING OFFSET (J or E1) "
#40042="CYL TIMING OFFSET (K or E2) "
#40043="CYL TIMING OFFSET (L or F1) "
#40044="CYL TIMING OFFSET (M or F2) "
#40045="CYL TIMING OFFSET (R or G1) "
#40046="CYL TIMING OFFSET (S or G2) "
#40047="CYL TIMING OFFSET (T or H1) "
#40048="CYL TIMING OFFSET (U or H2) "
#40049="CYL TIMING OFFSET ( J1) "
#40050="CYL TIMING OFFSET ( J2) "
#40051="CYL TIMING OFFSET ( K1) "
#40052="CYL TIMING OFFSET ( K2) "
#40053="CYL TIMING OFFSET ( L1) "
#40054="CYL TIMING OFFSET ( L2) "
#40055="CYL TIMING OFFSET ( M1) "
#40056="CYL TIMING OFFSET ( M2) "
#40057="CYL TIMING OFFSET ( R1) "
#40058="CYL TIMING OFFSET ( R2) "
#40059="CYL TIMING OFFSET ( S1) "
#40060="CYL TIMING OFFSET ( S2) "
#40061="CYL TIMING OFFSET ( T1) "
#40062="CYL TIMING OFFSET ( T2) "
#40063="CYL TIMING OFFSET ( U1) "
#40064="CYL TIMING OFFSET ( U2) "
;
;
;

```

```

*****
*** THE BELOW REGISTERS ARE USED TO HANDLE REMOTE KEY COMMANDS ***
*****

```

```
;; xx.yy.zz format description
;;   xx-command code 1-47
;;   yy-command vector (used for commands 31, 32, 33, 35, 36, 37)
;;   zz-command value  (used for commands --, --, 33, --, --, 37)
```

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```

; ! 31. 14. 00 ="INC LO FROM ENG B THRESH " ; @40255=08160, 03584
; ! 31. 15. 00 ="INC HI FROM ENG B THRESH " ; @40255=08160, 03840
;
; ! 32. 02. 00 ="DEC LO SPARK DI AG THRESH " ; @40255=08415, 00512
; ! 32. 03. 00 ="DEC HI SPARK DI AG THRESH " ; @40255=08415, 00786
; ! 32. 04. 00 ="DEC NO SPARK DI AG THRESH " ; @40255=08415, 01024
; ! 32. 05. 00 ="DEC LO FROM ENGINE THRESH " ; @40255=08415, 01280
; ! 32. 06. 00 ="DEC HI FROM ENGINE THRESH " ; @40255=08415, 01536
; ! 32. 07. 00 ="DEC HI VARI ATI ON THRESH " ; @40255=08415, 01792
; ! 32. 08. 00 ="DEC E1 ENABLE THRESHOLD " ; @40255=08415, 02048
; ! 32. 09. 00 ="DEC E2 DI SABLE HYSTERI SI S " ; @40255=08415, 02304
; ! 32. 10. 00 ="DEC E3 ENABLE THRESHOLD " ; @40255=08415, 02560
; ! 32. 11. 00 ="DEC E3 DI SABLE HYSTERI SI S " ; @40255=08415, 02816
; ! 32. 12. 00 ="DEC LO SPARK BANKB THRESH " ; @40255=08415, 03072
; ! 32. 13. 00 ="DEC HI SPARK BANKB THRESH " ; @40255=08415, 03328
; ! 32. 14. 00 ="DEC LO FROM ENG B THRESH " ; @40255=08415, 03584
; ! 32. 15. 00 ="DEC HI FROM ENG B THRESH " ; @40255=08415, 03840
;
; ; COMMAND 33 VALID VALUES TO BE DIRECTLY WRITTEN ARE 0-255
; ! 33. 02. zz ="NEW LO SPARK DI AG THRESH " ; @40255=08670, 00512+zz
; ! 33. 03. zz ="NEW HI SPARK DI AG THRESH " ; @40255=08670, 00786+zz
; ! 33. 04. zz ="NEW NO SPARK DI AG THRESH " ; @40255=08670, 01024+zz
; ! 33. 05. zz ="NEW LO FROM ENGINE THRESH " ; @40255=08670, 01280+zz
; ! 33. 06. zz ="NEW HI FROM ENGINE THRESH " ; @40255=08670, 01536+zz
; ! 33. 07. zz ="NEW HI VARI ATI ON THRESH " ; @40255=08670, 01792+zz
; ! 33. 08. zz ="NEW E1 ENABLE THRESHOLD " ; @40255=08670, 02048+zz
; ! 33. 09. zz ="NEW E2 DI SABLE HYSTERI SI S " ; @40255=08670, 02304+zz
; ! 33. 10. zz ="NEW E3 ENABLE THRESHOLD " ; @40255=08670, 02560+zz
; ! 33. 11. zz ="NEW E3 DI SABLE HYSTERI SI S " ; @40255=08670, 02816+zz
; ! 33. 12. zz ="NEW LO SPARK BANKB THRESH " ; @40255=08670, 03072+zz
; ! 33. 13. zz ="NEW HI SPARK BANKB THRESH " ; @40255=08670, 03328+zz
; ! 33. 14. zz ="NEW LO FROM ENG B THRESH " ; @40255=08670, 03584+zz
; ! 33. 15. zz ="NEW HI FROM ENG B THRESH " ; @40255=08670, 03840+zz
;
; ! 34. 00. 00 ="LOAD DEFAULT THRESHOLDS " ; @40255=00000, 08925
;
; ! 35. 00. 00 ="INC DI AG OFFSET (A or A1) " ; @40255=09180, 256*00
; ! 35. 01. 00 ="INC DI AG OFFSET (B or A2) " ; @40255=09180, 256*01
; ! 35. 02. 00 ="INC DI AG OFFSET (C or B1) " ; @40255=09180, 256*02
; ! 35. 03. 00 ="INC DI AG OFFSET (D or B2) " ; @40255=09180, 256*03
; ! 35. 04. 00 ="INC DI AG OFFSET (E or C1) " ; @40255=09180, 256*04
; ! 35. 05. 00 ="INC DI AG OFFSET (F or C2) " ; @40255=09180, 256*05
; ! 35. 06. 00 ="INC DI AG OFFSET (G or D1) " ; @40255=09180, 256*06
; ! 35. 07. 00 ="INC DI AG OFFSET (H or D2) " ; @40255=09180, 256*07
; ! 35. 08. 00 ="INC DI AG OFFSET (J or E1) " ; @40255=09180, 256*08
; ! 35. 09. 00 ="INC DI AG OFFSET (K or E2) " ; @40255=09180, 256*09
; ! 35. 10. 00 ="INC DI AG OFFSET (L or F1) " ; @40255=09180, 256*10
; ! 35. 11. 00 ="INC DI AG OFFSET (M or F2) " ; @40255=09180, 256*11
; ! 35. 12. 00 ="INC DI AG OFFSET (R or G1) " ; @40255=09180, 256*12
; ! 35. 13. 00 ="INC DI AG OFFSET (S or G2) " ; @40255=09180, 256*13
; ! 35. 14. 00 ="INC DI AG OFFSET (T or H1) " ; @40255=09180, 256*14
; ! 35. 15. 00 ="INC DI AG OFFSET (U or H2) " ; @40255=09180, 256*15
; ! 35. 16. 00 ="INC DI AG OFFSET ( J1) " ; @40255=09180, 256*16
; ! 35. 17. 00 ="INC DI AG OFFSET ( J2) " ; @40255=09180, 256*17
; ! 35. 18. 00 ="INC DI AG OFFSET ( K1) " ; @40255=09180, 256*18
; ! 35. 19. 00 ="INC DI AG OFFSET ( K2) " ; @40255=09180, 256*19
; ! 35. 20. 00 ="INC DI AG OFFSET ( L1) " ; @40255=09180, 256*20
; ! 35. 21. 00 ="INC DI AG OFFSET ( L2) " ; @40255=09180, 256*21
; ! 35. 22. 00 ="INC DI AG OFFSET ( M1) " ; @40255=09180, 256*22
; ! 35. 23. 00 ="INC DI AG OFFSET ( M2) " ; @40255=09180, 256*23
; ! 35. 24. 00 ="INC DI AG OFFSET ( R1) " ; @40255=09180, 256*24
; ! 35. 25. 00 ="INC DI AG OFFSET ( R2) " ; @40255=09180, 256*25
; ! 35. 26. 00 ="INC DI AG OFFSET ( S1) " ; @40255=09180, 256*26

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```
; ! 35. 27. 00 ="INC DI AG OFFSET ( S2) " ;@40255=09180, 256*27
; ! 35. 28. 00 ="INC DI AG OFFSET ( T1) " ;@40255=09180, 256*28
; ! 35. 29. 00 ="INC DI AG OFFSET ( T2) " ;@40255=09180, 256*29
; ! 35. 30. 00 ="INC DI AG OFFSET ( U1) " ;@40255=09180, 256*30
; ! 35. 31. 00 ="INC DI AG OFFSET ( U2) " ;@40255=09180, 256*31
```

```
; ! 36. 00. 00 ="DEC DI AG OFFSET (A or A1) " ;@40255=09435, 256*00
; ! 36. 01. 00 ="DEC DI AG OFFSET (B or A2) " ;@40255=09435, 256*01
; ! 36. 02. 00 ="DEC DI AG OFFSET (C or B1) " ;@40255=09435, 256*02
; ! 36. 03. 00 ="DEC DI AG OFFSET (D or B2) " ;@40255=09435, 256*03
; ! 36. 04. 00 ="DEC DI AG OFFSET (E or C1) " ;@40255=09435, 256*04
; ! 36. 05. 00 ="DEC DI AG OFFSET (F or C2) " ;@40255=09435, 256*05
; ! 36. 06. 00 ="DEC DI AG OFFSET (G or D1) " ;@40255=09435, 256*06
; ! 36. 07. 00 ="DEC DI AG OFFSET (H or D2) " ;@40255=09435, 256*07
; ! 36. 08. 00 ="DEC DI AG OFFSET (J or E1) " ;@40255=09435, 256*08
; ! 36. 09. 00 ="DEC DI AG OFFSET (K or E2) " ;@40255=09435, 256*09
; ! 36. 10. 00 ="DEC DI AG OFFSET (L or F1) " ;@40255=09435, 256*10
; ! 36. 11. 00 ="DEC DI AG OFFSET (M or F2) " ;@40255=09435, 256*11
; ! 36. 12. 00 ="DEC DI AG OFFSET (R or G1) " ;@40255=09435, 256*12
; ! 36. 13. 00 ="DEC DI AG OFFSET (S or G2) " ;@40255=09435, 256*13
; ! 36. 14. 00 ="DEC DI AG OFFSET (T or H1) " ;@40255=09435, 256*14
; ! 36. 15. 00 ="DEC DI AG OFFSET (U or H2) " ;@40255=09435, 256*15
; ! 36. 16. 00 ="DEC DI AG OFFSET ( J1) " ;@40255=09435, 256*16
; ! 36. 17. 00 ="DEC DI AG OFFSET ( J2) " ;@40255=09435, 256*17
; ! 36. 18. 00 ="DEC DI AG OFFSET ( K1) " ;@40255=09435, 256*18
; ! 36. 19. 00 ="DEC DI AG OFFSET ( K2) " ;@40255=09435, 256*19
; ! 36. 20. 00 ="DEC DI AG OFFSET ( L1) " ;@40255=09435, 256*20
; ! 36. 21. 00 ="DEC DI AG OFFSET ( L2) " ;@40255=09435, 256*21
; ! 36. 22. 00 ="DEC DI AG OFFSET ( M1) " ;@40255=09435, 256*22
; ! 36. 23. 00 ="DEC DI AG OFFSET ( M2) " ;@40255=09435, 256*23
; ! 36. 24. 00 ="DEC DI AG OFFSET ( R1) " ;@40255=09435, 256*24
; ! 36. 25. 00 ="DEC DI AG OFFSET ( R2) " ;@40255=09435, 256*25
; ! 36. 26. 00 ="DEC DI AG OFFSET ( S1) " ;@40255=09435, 256*26
; ! 36. 27. 00 ="DEC DI AG OFFSET ( S2) " ;@40255=09435, 256*27
; ! 36. 28. 00 ="DEC DI AG OFFSET ( T1) " ;@40255=09435, 256*28
; ! 36. 29. 00 ="DEC DI AG OFFSET ( T2) " ;@40255=09435, 256*29
; ! 36. 30. 00 ="DEC DI AG OFFSET ( U1) " ;@40255=09435, 256*30
; ! 36. 31. 00 ="DEC DI AG OFFSET ( U2) " ;@40255=09435, 256*31
```

```
; ; ; COMMAND 37 VALID VALUES TO BE DIRECTLY WRITTEN ARE -15 TO +15
; ; ; zz( 241 ... 253 254 255 000 001 002 ... 015 )
; ; ;
```

```
; ! 37. 00. zz ="NEW DI AG OFFSET (A or A1) " ;@40255=09690, 256*00+zz
; ! 37. 01. zz ="NEW DI AG OFFSET (B or A2) " ;@40255=09690, 256*01+zz
; ! 37. 02. zz ="NEW DI AG OFFSET (C or B1) " ;@40255=09690, 256*02+zz
; ! 37. 03. zz ="NEW DI AG OFFSET (D or B2) " ;@40255=09690, 256*03+zz
; ! 37. 04. zz ="NEW DI AG OFFSET (E or C1) " ;@40255=09690, 256*04+zz
; ! 37. 05. zz ="NEW DI AG OFFSET (F or C2) " ;@40255=09690, 256*05+zz
; ! 37. 06. zz ="NEW DI AG OFFSET (G or D1) " ;@40255=09690, 256*06+zz
; ! 37. 07. zz ="NEW DI AG OFFSET (H or D2) " ;@40255=09690, 256*07+zz
; ! 37. 08. zz ="NEW DI AG OFFSET (J or E1) " ;@40255=09690, 256*08+zz
; ! 37. 09. zz ="NEW DI AG OFFSET (K or E2) " ;@40255=09690, 256*09+zz
; ! 37. 10. zz ="NEW DI AG OFFSET (L or F1) " ;@40255=09690, 256*10+zz
; ! 37. 11. zz ="NEW DI AG OFFSET (M or F2) " ;@40255=09690, 256*11+zz
; ! 37. 12. zz ="NEW DI AG OFFSET (R or G1) " ;@40255=09690, 256*12+zz
; ! 37. 13. zz ="NEW DI AG OFFSET (S or G2) " ;@40255=09690, 256*13+zz
; ! 37. 14. zz ="NEW DI AG OFFSET (T or H1) " ;@40255=09690, 256*14+zz
; ! 37. 15. zz ="NEW DI AG OFFSET (U or H2) " ;@40255=09690, 256*15+zz
; ! 37. 16. zz ="NEW DI AG OFFSET ( J1) " ;@40255=09690, 256*16+zz
; ! 37. 17. zz ="NEW DI AG OFFSET ( J2) " ;@40255=09690, 256*17+zz
; ! 37. 18. zz ="NEW DI AG OFFSET ( K1) " ;@40255=09690, 256*18+zz
; ! 37. 19. zz ="NEW DI AG OFFSET ( K2) " ;@40255=09690, 256*19+zz
; ! 37. 20. zz ="NEW DI AG OFFSET ( L1) " ;@40255=09690, 256*20+zz
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```
; ! 37. 21. zz ="NEW DI AG OFFSET ( L2) " ;@40255=09690, 256*21+zz
; ! 37. 22. zz ="NEW DI AG OFFSET ( M1) " ;@40255=09690, 256*22+zz
; ! 37. 23. zz ="NEW DI AG OFFSET ( M2) " ;@40255=09690, 256*23+zz
; ! 37. 24. zz ="NEW DI AG OFFSET ( R1) " ;@40255=09690, 256*24+zz
; ! 37. 25. zz ="NEW DI AG OFFSET ( R2) " ;@40255=09690, 256*25+zz
; ! 37. 26. zz ="NEW DI AG OFFSET ( S1) " ;@40255=09690, 256*26+zz
; ! 37. 27. zz ="NEW DI AG OFFSET ( S2) " ;@40255=09690, 256*27+zz
; ! 37. 28. zz ="NEW DI AG OFFSET ( T1) " ;@40255=09690, 256*28+zz
; ! 37. 29. zz ="NEW DI AG OFFSET ( T2) " ;@40255=09690, 256*29+zz
; ! 37. 30. zz ="NEW DI AG OFFSET ( U1) " ;@40255=09690, 256*30+zz
; ! 37. 31. zz ="NEW DI AG OFFSET ( U2) " ;@40255=09690, 256*31+zz
;
; ! 38. 00. 00 ="ZERO DI AG OFFSETS " ;@40255=09945, 00000
; ! 39. 00. 00 ="INC MINMAX RPM THRESHOLD " ;@40255=10200, 00000
; ! 40. 00. 00 ="DEC MINMAX RPM THRESHOLD " ;@40255=10455, 00000
; ! 41. 00. 00 ="ENABLE DIAGNOSTIC MODULE " ;@40255=10710, 00000
; ! 42. 00. 00 ="DISABLE DIAGNOSTIC MODULE " ;@40255=10965, 00000
; ! 43. 00. 00 ="RESET MIN MAX LIMITS " ;@40255=11220, 00000
; ! 44. 00. 00 ="SELECT HI DI AG FREQUENCY " ;@40255=11475, 00000
; ! 45. 00. 00 ="SELECT LO DI AG FREQUENCY " ;@40255=11730, 00000
; ! 46. 00. 00 ="INCREMENT SERIAL PARAM " ;@40255=11985, 00000
; ! 47. 00. 00 ="DECREMENT SERIAL PARAM " ;@40255=12240, 00000
, *****
/
```