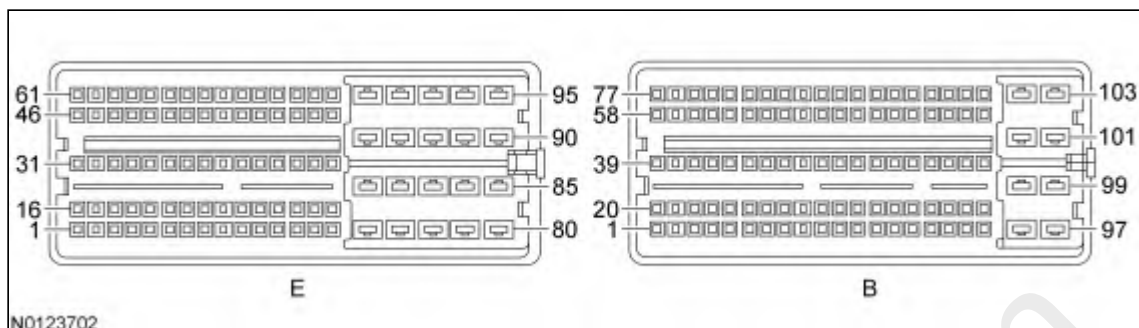


## 1.5L Fusion

## 198 Pin PCM



## Typical Diagnostic Reference Values

| Inputs        | Component/PID Only | Measured/PID Values           |                               |                               |                               | Units Measured/PID      |
|---------------|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------|
|               |                    | KOEO                          | Hot Idle                      | 48 KM/H (30 MPH)              | 89 KM/H (55 MPH)              |                         |
| AAT           | AAT Sensor         | 26 (78.8)                     | 32 (89.6)                     | 28 (82.4)                     | 25 (77)                       | DEG C (DEG F)           |
| AAT_V         | AAT Sensor         | 2.68                          | 2.38                          | 2.60                          | 2.72                          | VOLTS                   |
| AC_REQ        | PID                | NO                            | NO                            | NO                            | NO                            | YES/NO                  |
| APP           | APP Sensor         | 0                             | 0                             | 3                             | 19                            | %                       |
| APP_MODE      | PID                | NO PEDAL                      | NO PEDAL                      | PART PEDAL                    | PART PEDAL                    | NO PEDAL/<br>PART PEDAL |
| APP1          | APP Sensor         | 0.81                          | 0.81                          | 0.92                          | 1.27                          | VOLTS                   |
| APP1 (APP_D)  | APP Sensor         | 16.07                         | 16.07                         | 18.03                         | 25.49                         | %                       |
| APP2          | APP Sensor         | 0.41                          | 0.40                          | 0.46                          | 0.64                          | VOLTS                   |
| APP2 (APP_E)  | APP Sensor         | 8.23                          | 7.84                          | 9.02                          | 12.54                         | %                       |
| APP_MAXDIFF   | PID                | 0                             | 0                             | 0                             | -0.06                         | DEG                     |
| B+            | PID                | 12.26                         | 12.70                         | 12.98                         | 14.46                         | VOLTS                   |
| BARO          | PID                | 3.93/99<br>(14.36)/<br>156.11 | 3.93/99<br>(14.36)/<br>156.11 | 3.92/99<br>(14.36)/<br>156.11 | 3.92/99<br>(14.36)/<br>156.11 | VOLTS/kPa<br>(PSI)/Hz/  |
| BOO1          | BPP Switch         | OFF                           | OFF                           | OFF                           | OFF                           | ON/OFF                  |
| BOO2          | BPP Switch         | OFF                           | OFF                           | OFF                           | OFF                           | ON/OFF                  |
| BRKOV RD_POSS | PID                | 4                             | 3                             | 4                             | 4                             | NUMERIC<br>VALUE        |

| Inputs                     | Component/PID Only             | Measured/PID Values  |                    |                     |                    | Units Measured/PID  |
|----------------------------|--------------------------------|----------------------|--------------------|---------------------|--------------------|---------------------|
|                            |                                | KOEO                 | Hot Idle           | 48 KM/H (30 MPH)    | 89 KM/H (55 MPH)   |                     |
| BRKOV <sub>R</sub> _ACTION | PID                            | 0                    | 0                  | 0                   | 0                  | NUMERIC VALUE       |
| CACCT                      | CAC Coolant Temperature Sensor | 38 (100.4)           | 41 (105.8)         | 39 (102.2)          | 32 (89.6)          | DEG C (DEG F)       |
| CACCT_V                    | CAC Coolant Temperature Sensor | 2.39                 | 2.24               | 2.34                | 2.69               | VOLTS               |
| CAC_T                      | CACT Sensor                    | 47 (116.6)           | 39 (102.2)         | 49 (120.2)          | 46 (114.8)         | DEG C (DEG F)       |
| CAC_V                      | CACT Sensor                    | 1.29                 | 4.53               | 1.21                | 1.30               | VOLTS               |
| CRNKCAS_PR <sub>S</sub>    | Crankcase Pressure Sensor      | 0                    | 2 (0)              | 141 (0.02)          | 691 (0.10)         | Pa (PSI)            |
| CRNKCAS_P_V                | Crankcase Pressure Sensor      | 3.94                 | 3.93               | 3.99                | 4.24               | VOLTS               |
| DECHOKE                    | PID                            | YES                  | NO                 | NO                  | NO                 | YES/NO              |
| DIST_ <sub>BRKOV</sub> RD  | PID                            | 34.97 (21.73)        | 7.99 (4.96)        | 15.49 (9.63)        | 13.49 (8.38)       | KM (MILES)          |
| ECT                        | ECT Sensor                     | 0.59/90 (194)        | 0.51/95 (203)      | 0.66/86 (186.8)     | 0.60/90 (194)      | VOLTS/DEG C (DEG F) |
| EQ_RAT11                   | PID                            | 0/0:1                | 0.99/14.48:1       | 0.99/14.47:1        | 1.01/14.72:1       | RATIO               |
| ETC_ACT                    | PID                            | 10.44                | 1.99               | 9.24                | 9.24               | DEG                 |
| ETC_TRIM                   | PID                            | 0.42                 | 0.09               | 0.10                | 0.10               | DEG                 |
| FLI                        | Fuel Level Sensor              | 46.27 (H)            | 54.90 (H)          | 54.11 (H)           | 49.02 (H)          | %                   |
| FLP                        | Fuel Pressure Sensor           | 684.50 (99.28)       | 563 (81.66)        | 592 (85.86)         | 606 (87.89)        | kPa (PSI)           |
| FLP_V                      | Fuel Pressure Sensor           | 4.43                 | 3.78               | 3.84                | 3.81               | VOLTS               |
| FPM                        | PID                            | 39.99                | 40.39              | 40                  | 40.99              | %                   |
| FRP                        | FRP Sensor                     | 2.17/11740 (1702.74) | 1.05/3910 (567.10) | 1.67/8360 (1212.52) | 1.31/5760 (835.41) | VOLTS/kPa (PSI)     |
| FTP                        | FTP Sensor                     | 2.64/46 (0.01)       | 2.27/-607 (-0.09)  | 2.08/-950 (-0.14)   | 2.15/-830 (-0.12)  | VOLTS/Pa (PSI)      |
| FTP_H2O                    | FTP Sensor                     | 0.17                 | -3.34              | -3.86               | -3.34              | in-H <sub>2</sub> O |
| HTRCM12                    | HO2S12 Sensor                  | 0                    | 1.74               | 1.74                | 1.74               | A                   |
| IAT                        | IAT Sensor                     | 1.41/49 (120.2)      | 1.92/34 (93.2)     | 1.94/34 (93.2)      | 2.08/31 (87.8)     | VOLTS/DEG C (DEG F) |
| IAT2                       | IAT2 Sensor                    | 1.88/54 (129.2)      | 2/51 (123.8)       | 2/51 (123.8)        | 1.64/61 (141.8)    | VOLTS/DEG C (DEG F) |
| KEYST                      | Ignition Switch                | ON                   | ON                 | ON                  | ON                 | ON/OFF              |
| KNK_CNTR_CYL1              | PID                            | 0                    | 0                  | 0                   | 0                  | COUNT               |
| KNK_CNTR_CYL2              | PID                            | 0                    | 0                  | 0                   | 0                  | COUNT               |
| KNK_CNTR_CYL3              | PID                            | 0                    | 0                  | 0                   | 0                  | COUNT               |

| Inputs         | Component/PID Only | Measured/PID Values |                   |                   |                   | Units<br>Measured/PID                    |
|----------------|--------------------|---------------------|-------------------|-------------------|-------------------|------------------------------------------|
|                |                    | KOEO                | Hot Idle          | 48 KM/H (30 MPH)  | 89 KM/H (55 MPH)  |                                          |
| KNK_CNTR_CYL4  | PID                | 0                   | 0                 | 0                 | 0                 | COUNT                                    |
| KNOCK_1        | KS1 Sensor         | 167                 | 123               | 147               | 153               | N/A                                      |
| KNOCK_2        | KS2 Sensor         | 167                 | 136               | 141               | 140               | N/A                                      |
| LOAD           | PID                | 0.00 (I)            | 29.41             | 35.68             | 32.15             | %                                        |
| LONGFT1        | PID                | (I)                 | -20 TO +20        | -20 TO +20        | -20 TO +20        | %                                        |
| MAP            | MAP Sensor         | 1.60/99<br>(14.36)  | 0.66/37<br>(5.37) | 0.85/50 (7.25)    | 0.86/49<br>(7.11) | VOLTS/kPa<br>(PSI)                       |
| MAP_GAUGE      | MAP Sensor         | 2 (0.29)            | 64 (9.28)         | 51 (7.40)         | 52 (7.54)         | kPa (PSI)                                |
| MISFIRE        | PID                | NO                  | NO                | NO                | NO                | YES/NO                                   |
| MP_LRN         | PID                | YES                 | YES               | YES               | YES               | YES/NO                                   |
| NUM_MISFIRE    | PID                | 0                   | 0                 | 0                 | 0                 | COUNT                                    |
| O2S11_CUR      | HO2S11 Sensor      | 0.00 (I)            | switching         | switching         | switching         | mA/uA                                    |
| O2S11_IMP      | HO2S11 Sensor      | 4.93                | 1                 | 1                 | 1                 | VOLTS                                    |
| O2S11_READY    | HO2S11 Sensor      | NO                  | YES               | YES               | YES               | YES/NO                                   |
| O2S11_TR       | HO2S11 Sensor      | 0                   | 0                 | 0                 | 0                 | Kohm                                     |
| O2S12          | HO2S12 Sensor      | (I)                 | switching<br>(D)  | switching (D)     | switching (D)     | VOLTS                                    |
| OCTADJ_R_LRND  | PID                | 22.28               | 22.28             | 22.28             | 22.28             | %                                        |
| RO2FT1         | PID                | 0                   | -1.52             | -1.47             | 1.50              | %                                        |
| RPM            | CKP Sensor         | 0                   | 782.50            | 1841.50           | 1669.75           | RPM                                      |
| SHRTFT1        | PID                | (I)                 | -10 TO +10        | -10 TO +10        | -10 TO +10        | %                                        |
| SYNC           | PID                | NO                  | YES               | YES               | YES               | YES/NO                                   |
| TCBP           | TCBP Sensor        | 99.71 (14.46)       | 100.02<br>(14.51) | 100.02<br>(14.51) | 100.64<br>(14.60) | kPa (PSI)                                |
| TCBP_V         | TCBP Sensor        | 1.55                | 1.55              | 1.55              | 1.56              | VOLTS                                    |
| TP1            | ETBTPS             | 4.06/18.43          | 4.45/10.58        | 4.12/17.25        | 3.59/27.84        | VOLTS/%                                  |
| TP1_LRN_TRIM   | ETBTPS             | 9.37                | 9.37              | 9.37              | 9.37              | DEG                                      |
| TP2            | ETBTPS             | 0.96/19.21          | 0.57/11.37        | 0.90/18.03        | 1.43/28.23        | VOLTS/%                                  |
| TP2_LRN_TRIM   | ETBTPS             | 9.87                | 9.87              | 9.87              | 9.87              | DEG                                      |
| TPMODE         | PID                | CT                  | CT                | PT                | PT                | CLOSED/<br>PART/WIDE<br>OPEN<br>THROTTLE |
| TURBO_BP1_STAT | TCBY Valve         | NO FAULT            | NO FAULT          | NO FAULT          | NO FAULT          | FAULT/<br>NO FAULT                       |

| Inputs       | Component/PID Only | Measured/PID Values |             |                  |                  | Units Measured/PID        |
|--------------|--------------------|---------------------|-------------|------------------|------------------|---------------------------|
|              |                    | KOEO                | Hot Idle    | 48 KM/H (30 MPH) | 89 KM/H (55 MPH) |                           |
| TURBO_INLET  | TCIP Sensor        | NO FAULT            | NO FAULT    | NO FAULT         | NO FAULT         | FAULT/<br>NO FAULT        |
| VCTSYS       | PID                | OPEN LOOP           | CLOSED LOOP | CLOSED LOOP      | CLOSED LOOP      | OPEN LOOP/<br>CLOSED LOOP |
| VCT_EXH_ACT1 | PID                | 0                   | -0.12       | 27.43            | 21.75            | DEG                       |
| VCT_EXH_DIF1 | PID                | 0                   | 0.12        | 0.50             | -1.31            | DEG                       |
| VCT_INT_ACT1 | PID                | 0                   | -0.12       | -0.31            | -0.25            | DEG                       |
| VCT_INT_DIF1 | PID                | 0                   | 0.12        | 0.31             | 0.25             | DEG                       |
| VSS          | PID                | 0                   | 0           | 48 km/h (30 MPH) | 89 km/h (55 MPH) | km/h / MPH                |

| Outputs       | Component/PID Only       | Measured/PID Values |                |                  |                  | Units Measured/PID        |
|---------------|--------------------------|---------------------|----------------|------------------|------------------|---------------------------|
|               |                          | KOEO                | Hot Idle       | 48 KM/H (30 MPH) | 89 KM/H (55 MPH) |                           |
| AEIS_ACTION   | PID                      | 0                   | 0              | 0                | 0                | NUMERIC<br>VALUE          |
| AEIS_POSS     | PID                      | 0                   | 0              | 0                | 0                | NUMERIC<br>VALUE          |
| ETC [TAC_PCT] | PID                      | 9.80                | 2.35           | 11.37            | 11.37            | %                         |
| EVAP020C      | PID                      | NO                  | NO             | NO               | NO               | YES/NO                    |
| EVAPCP        | EVAPCP Valve             | 0                   | 44.31          | 97.48            | 97.51            | %                         |
| EVAPCV        | CANV Valve               | 0/OFF               | 0/OFF          | 0/OFF            | 0/OFF            | %/ON-OFF                  |
| EVAPSOAK      | PID                      | NO                  | NO             | NO               | NO               | YES/NO                    |
| EVAPSTA       | PID                      | NOT<br>RUNNING      | NOT<br>RUNNING | NOT<br>RUNNING   | NOT<br>RUNNING   | STATUS                    |
| FP            | Fuel Pump Control Module | 75/OFF              | 35.35/ON       | 32.20/ON         | 32.42/ON         | %/ON/OFF                  |
| FUELSYS       | PID                      | OPEN LOOP           | CLOSED LOOP    | CLOSED LOOP      | CLOSED LOOP      | OPEN LOOP/<br>CLOSED LOOP |
| HFC           | PID                      | OFF                 | OFF            | OFF              | OFF              | ON/OFF                    |
| HTR11         | HO2S11 Sensor            | OFF                 | ON             | ON               | ON               | ON/OFF                    |
| HTR12         | HO2S12 Sensor            | OFF                 | ON             | ON               | ON               | ON/OFF                    |
| INJ1-4_OFF    | Injector 1-4             | -----               | -----          | -----            | -----            | -----/<br>DISABLE         |
| LFC           | PID                      | OFF                 | OFF            | ON               | ON               | ON/OFF                    |

| Outputs         | Component/PID Only                               | Measured/PID Values |                    |                  |                  | Units Measured/PID |
|-----------------|--------------------------------------------------|---------------------|--------------------|------------------|------------------|--------------------|
|                 |                                                  | KOEO                | Hot Idle           | 48 KM/H (30 MPH) | 89 KM/H (55 MPH) |                    |
| MIL             | PID                                              | OFF                 | OFF                | OFF              | OFF              | ON/OFF             |
| O2S11_HTR       | HO2S11 Sensor                                    | 0                   | 54.41              | 37.64            | 35.29            | %                  |
| O2_DS_<br>DISBL | PID                                              | YES                 | NO                 | NO               | NO               | YES/NO             |
| SPARKADV        | PID                                              | 10                  | -3.50              | 33.25            | 30               | DEG                |
| TQ_CNTRL        | PID                                              | NONE REQUESTED      | IDLE SPEED CONTROL | NONE REQUESTED   | NONE REQUESTED   | STATUS             |
| TURBO_<br>BPASS | TCBY Valve                                       | OFF                 | OFF                | OFF              | OFF              | ON/OFF             |
| TURBO_<br>WGATE | Turbocharger Wastegate Regulating Valve Solenoid | 29.49               | 100                | 26.95            | 26.82            | %                  |
| VCT_EXH_<br>DC1 | VCT12 Solenoid                                   | 0                   | 0                  | 46.59            | 43.76            | %                  |
| VCT_INT_<br>DC1 | VCT11 Solenoid                                   | 0                   | 0                  | 0                | 0                | %                  |

| Other | Component/PID Only | Measured/PID Values |          |                  |                  | Units Measured/PID |
|-------|--------------------|---------------------|----------|------------------|------------------|--------------------|
|       |                    | KOEO                | Hot Idle | 48 KM/H (30 MPH) | 89 KM/H (55 MPH) |                    |
| VPWR  | PID                | VBAT                | VBAT     | VBAT             | VBAT             | VOLTS              |
| VREF  | PID                | 5                   | 5        | 5                | 5                | VOLTS              |