

| REVISION HISTORY | | | | |
|------------------|-------------|------|-----|-----|
| LEVEL | DESCRIPTION | DATE | DRN | APP |
| 1 | RELEASE | | | |

| C-1 Range Connector | | | |
|---------------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-2116 | |
| 1 | TPA | CON-2123 | |
| 8 | TERMINAL | CON-2120 | |

| C-2 Transmission Conn | | | |
|-----------------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-2117 | |
| 1 | TPA | CON-2124 | |
| 9 | TERMINAL | CON-2121 | |

| C-3 LAPTOP CAL CONNECTOR | | | |
|--------------------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-3416 | |
| 3 | TERMINALS | CON-1038 | |
| 1 | TPA | CON-3417 | CREAM |
| 3 | CABLE SEALS | CON-1027 | WHT |

| C-4 OPTION | | | |
|------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-0065 | |
| 4 | TERMINALS | CON-0051 | |

| C-5 CAN BUS CONNECTOR | | | |
|-----------------------|-------------|----------|--------------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-5050 | |
| 2 | TERMINALS | CON-5200 | (20-18gauge) |
| 1 | WEDGE LOCK | CON-5100 | ORN |

| C-6 THROTTLE POSITION CONNECTOR | | | |
|---------------------------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-2302 | |
| 3 | TERMINALS | CON-1006 | |
| 3 | CABLE SEALS | CON-1004 | VIO |

| C-6M THROTTLE POSITION SENSOR PIGTAIL | | | |
|---------------------------------------|-------------|----------|--------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | CONNECTOR | CON-2307 | |
| 2 | TERMINALS | CON-1011 | 20 AWG |
| 2 | CABLE SEALS | CON-1004 | VIO |
| 1 | PLUG | CON-0999 | GRN |

| SPLICE INFORMATION | | |
|--------------------|------------------|---------|
| S# | FUNCTION | COLOR |
| S1 | SWITCHED +12V DC | RED |
| S2 | GROUND | BLK |
| S3 | SENSOR GROUND | BLKWHT |
| S4 | NONE | NONE |
| S5 | CAN HIGH | WHT/RED |
| S6 | CAN LOW | WHT/BLK |

| WIRE COLOR ABBREVIATIONS | | |
|--------------------------|-------------|-------|
| TXT | COLOR | NOTES |
| BLK | BLACK | |
| BRN | BROWN | |
| RED | RED | |
| ORN | ORANGE | |
| YEL | YELLOW | |
| LT.GRN | LIGHT GREEN | |
| GRN | GREEN | |
| LT.BLU | LIGHT BLUE | |
| BLU | BLUE | |
| VIO | VIOLET | |
| GRY | GRAY | |
| WHT | WHITE | |
| PNK | PINK | |

| F# | DESCRIPTION | PCS P/N | NOTES |
|----|-------------|----------|-------------|
| 1 | CONNECTOR | CON-2200 | |
| 1 | FUSE CAP. | CON-2201 | BLK |
| 1 | TPA | CON-2202 | BLU |
| 2 | TERMINAL | CON-1020 | (18-16 AWG) |
| 1 | FUSE | CON-2221 | 10A |
| 2 | CABLE SEAL | CON-1001 | GRN |

| CHASSIS GND | | | |
|-------------|-------------|----------|-------|
| QTY | DESCRIPTION | PCS P/N | NOTES |
| 1 | RING TERM. | CON-0350 | |

APPLICABLE STANDARDS

- ASME Y14.100-200
- ASME Y14.5M-1994
- IPC/WHMA-A-620-CLASS 2
- MARK IAW MIL-STD-130.

NOTES:

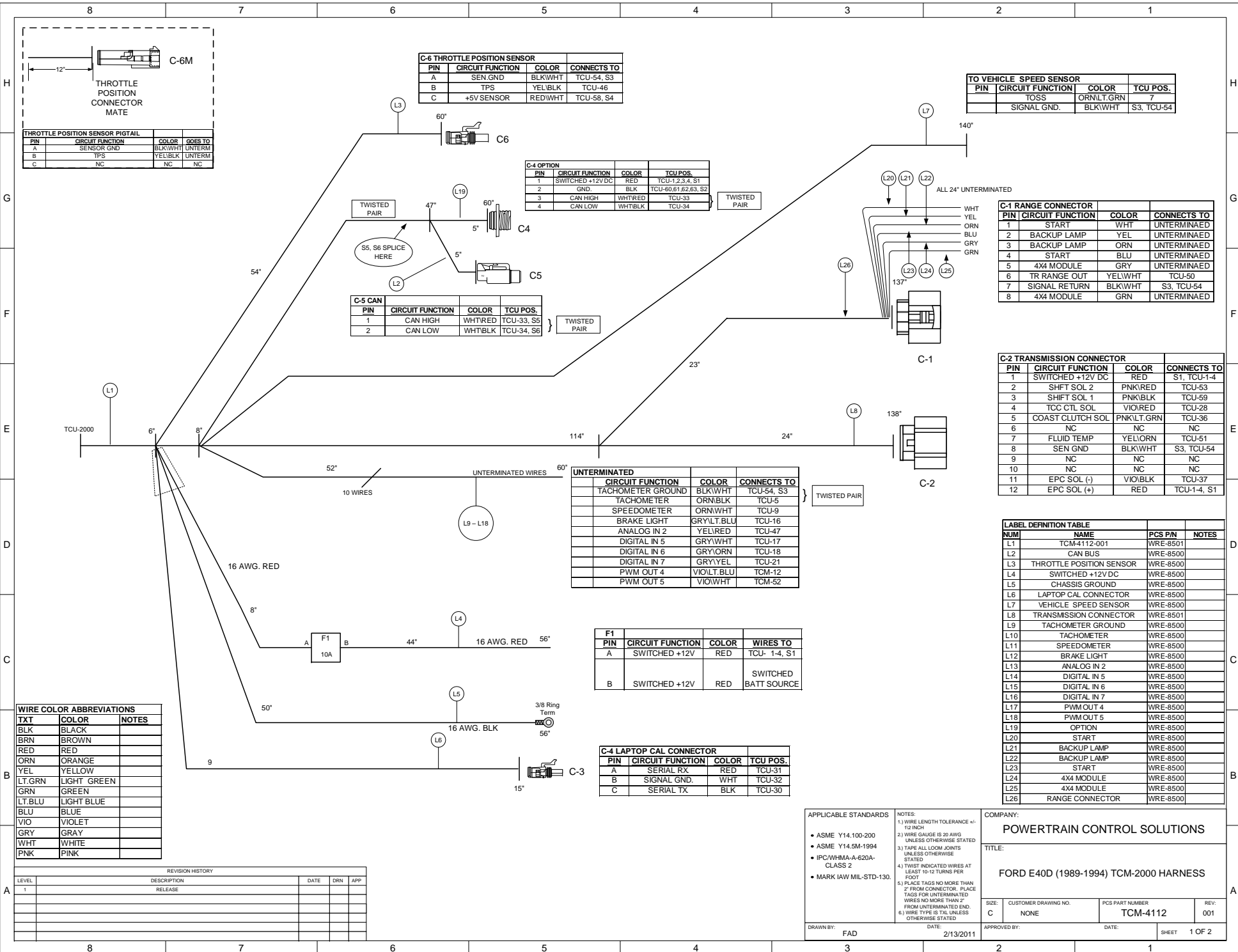
- 1.3 WIRE LENGTH TOLERANCE +/- .12 INCH
2. WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
3. TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
4. TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
5. PLACE TAGS NO MORE THAN 2" FROM UNTERMINATED END. WIRES NO MORE THAN 2" FROM UNTERMINATED END.
6. WIRE TYPE IS TXL UNLESS OTHERWISE STATED

COMPANY: **POWERTRAIN CONTROL SOLUTIONS**

TITLE: **FORD E40D (1989-1994) TCM-2000 HARNESS**

SIZE: C CUSTOMER DRAWING NO. NONE PCS PART NUMBER TCM-4112 REV: 001

DATE: 2/13/2011 SHEET 1 OF 2



| PIN | CIRCUIT FUNCTION | COLOR | CONNECTS TO |
|-----|------------------|--------|-------------|
| A | SEN GND | BLKWHT | TCU-54, S3 |
| B | TPS | YELBLK | TCU-46 |
| C | +5V SENSOR | REDWHT | TCU-58, S4 |

| TO VEHICLE SPEED SENSOR | | | |
|-------------------------|------------------|------------|------------|
| PIN | CIRCUIT FUNCTION | COLOR | TCU POS. |
| | TOSS | ORN/LT.GRN | 7 |
| | SIGNAL GND. | BLKWHT | S3, TCU-54 |

| THROTTLE POSITION SENSOR PIGTAIL | | |
|----------------------------------|------------------|--------|
| PIN | CIRCUIT FUNCTION | COLOR |
| A | SENSOR GND | BLKWHT |
| B | TPS | YELBLK |
| C | NC | NC |

| C-4 OPTION | | | |
|------------|------------------|--------|---------------------|
| PIN | CIRCUIT FUNCTION | COLOR | TCU POS. |
| 1 | SWITCHED +12V DC | RED | TCU-1,2,3,4, S1 |
| 2 | GND. | BLK | TCU-60,61,62,63, S2 |
| 3 | CAN HIGH | WHTRED | TCU-33 |
| 4 | CAN LOW | WHTBLK | TCU-34 |

| C-5 CAN | | | |
|---------|------------------|--------|------------|
| PIN | CIRCUIT FUNCTION | COLOR | TCU POS. |
| 1 | CAN HIGH | WHTRED | TCU-33, S5 |
| 2 | CAN LOW | WHTBLK | TCU-34, S6 |

| C-1 RANGE CONNECTOR | | | |
|---------------------|------------------|---------|-------------|
| PIN | CIRCUIT FUNCTION | COLOR | CONNECTS TO |
| 1 | START | WHT | UNTERMINAED |
| 2 | BACKUP LAMP | YEL | UNTERMINAED |
| 3 | BACKUP LAMP | ORN | UNTERMINAED |
| 4 | START | BLU | UNTERMINAED |
| 5 | 4X4 MODULE | GRY | UNTERMINAED |
| 6 | TR RANGE OUT | YEL/WHT | TCU-50 |
| 7 | SIGNAL RETURN | BLK/WHT | S3, TCU-54 |
| 8 | 4X4 MODULE | GRN | UNTERMINAED |

| C-2 TRANSMISSION CONNECTOR | | | |
|----------------------------|------------------|------------|-------------|
| PIN | CIRCUIT FUNCTION | COLOR | CONNECTS TO |
| 1 | SWITCHED +12V DC | RED | S1, TCU-14 |
| 2 | SHFT SOL 2 | PNK/RED | TCU-53 |
| 3 | SHFT SOL 1 | PNK/BLK | TCU-59 |
| 4 | TCC CTL SOL | VIO/RED | TCU-28 |
| 5 | COAST CLUTCH SOL | PNK/LT.GRN | TCU-36 |
| 6 | NC | NC | NC |
| 7 | FLUID TEMP | YEL/ORN | TCU-51 |
| 8 | SEN GND | BLK/WHT | S3, TCU-54 |
| 9 | NC | NC | NC |
| 10 | NC | NC | NC |
| 11 | EPC SOL (-) | VIO/BLK | TCU-37 |
| 12 | EPC SOL (+) | RED | TCU-1,4, S1 |

| UNTERMINATED | | | |
|-------------------|------------|-------------|----------------|
| CIRCUIT FUNCTION | COLOR | CONNECTS TO | |
| TACHOMETER GROUND | BLK/WHT | TCU-54, S3 | } TWISTED PAIR |
| TACHOMETER | ORN/BLK | TCU-5 | |
| SPEEDOMETER | ORN/WHT | TCU-9 | |
| BRAKE LIGHT | GRY/LT.BLU | TCU-16 | |
| ANALOG IN 2 | YEL/RED | TCU-47 | |
| DIGITAL IN 5 | GRY/WHT | TCU-17 | |
| DIGITAL IN 6 | GRY/ORN | TCU-18 | |
| DIGITAL IN 7 | GRY/YEL | TCU-21 | |
| PWM OUT 4 | VIO/LT.BLU | TCM-12 | |
| PWM OUT 5 | VIO/WHT | TCM-52 | |

| F1 | | | |
|-----|------------------|-------|----------------------|
| PIN | CIRCUIT FUNCTION | COLOR | WIRES TO |
| A | SWITCHED +12V | RED | TCU- 1,4, S1 |
| B | SWITCHED +12V | RED | SWITCHED BATT SOURCE |

| C-4 LAPTOP CAL CONNECTOR | | | |
|--------------------------|------------------|-------|----------|
| PIN | CIRCUIT FUNCTION | COLOR | TCU POS. |
| A | SERIAL RX | RED | TCU-31 |
| B | SIGNAL GND. | WHT | TCU-32 |
| C | SERIAL TX | BLK | TCU-30 |

| LABEL DEFINITION TABLE | | | |
|------------------------|--------------------------|----------|-------|
| NUM | NAME | PCS P/N | NOTES |
| L1 | TCM-4112-001 | WRE-8501 | |
| L2 | CAN BUS | WRE-8500 | |
| L3 | THROTTLE POSITION SENSOR | WRE-8500 | |
| L4 | SWITCHED +12V DC | WRE-8500 | |
| L5 | CHASSIS GROUND | WRE-8500 | |
| L6 | LAPTOP CAL CONNECTOR | WRE-8500 | |
| L7 | VEHICLE SPEED SENSOR | WRE-8500 | |
| L8 | TRANSMISSION CONNECTOR | WRE-8501 | |
| L9 | TACHOMETER GROUND | WRE-8500 | |
| L10 | TACHOMETER | WRE-8500 | |
| L11 | SPEEDOMETER | WRE-8500 | |
| L12 | BRAKE LIGHT | WRE-8500 | |
| L13 | ANALOG IN 2 | WRE-8500 | |
| L14 | DIGITAL IN 5 | WRE-8500 | |
| L15 | DIGITAL IN 6 | WRE-8500 | |
| L16 | DIGITAL IN 7 | WRE-8500 | |
| L17 | PWM OUT 4 | WRE-8500 | |
| L18 | PWM OUT 5 | WRE-8500 | |
| L19 | OPTION | WRE-8500 | |
| L20 | START | WRE-8500 | |
| L21 | BACKUP LAMP | WRE-8500 | |
| L22 | BACKUP LAMP | WRE-8500 | |
| L23 | START | WRE-8500 | |
| L24 | 4X4 MODULE | WRE-8500 | |
| L25 | 4X4 MODULE | WRE-8500 | |
| L26 | RANGE CONNECTOR | WRE-8500 | |

| TX | COLOR | NOTES |
|--------|-------------|-------|
| BLK | BLACK | |
| BRN | BROWN | |
| RED | RED | |
| ORN | ORANGE | |
| YEL | YELLOW | |
| LT.GRN | LIGHT GREEN | |
| GRN | GREEN | |
| LT.BLU | LIGHT BLUE | |
| BLU | BLUE | |
| VIO | VIOLET | |
| GRY | GRAY | |
| WHT | WHITE | |
| PNK | PINK | |

| REVISION HISTORY | | | | |
|------------------|-------------|------|-----|-----|
| LEVEL | DESCRIPTION | DATE | DRN | APP |
| 1 | RELEASE | | | |
| | | | | |
| | | | | |
| | | | | |

APPLICABLE STANDARDS
 • ASME Y14.100-200
 • ASME Y14.5M-1994
 • IPC/WHMA-A-620A-CLASS 2
 • MARK IAW MIL-STD-130.

NOTES:
 1.) WIRE LENGTH TOLERANCE +/- .12 INCH
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 3.) TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
 4.) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
 5.) PLACE TAGS NO MORE THAN 2" FROM UNTERMINATED END.
 6.) WIRE TYPE IS TX UNLESS OTHERWISE STATED

COMPANY:
POWERTRAIN CONTROL SOLUTIONS
TITLE:
FORD E40D (1989-1994) TCM-2000 HARNESS

| | | | |
|---------------|---------------------------|--------------------------|----------|
| SIZE: C | CUSTOMER DRAWING NO. NONE | PCS PART NUMBER TCM-4112 | REV: 001 |
| DRAWN BY: FAD | DATE: 2/13/2011 | APPROVED BY: | DATE: |

SHEET 1 OF 2