

| REVISIONS |      |                      |        |       |
|-----------|------|----------------------|--------|-------|
| REV.      | ZONE | DESCRIPTION          | DATE   | DRAWN |
| B         |      | NO CHANGE THIS SHEET | 2/96   | EJB   |
| C         |      | ADDED ECN 2869       | 9/8/97 | NTC   |
| D         |      | ADDED ECN6966        | 05/03  | JRF   |

AMP PLUG #745496-2 (ECK786)  
BACKSHELL #17-1726-2 (ECK656)  
682A1023 (ECX413)  
SIGNAL BUNDLE #24 AWG  
UNLESS OTHERWISE NOTED

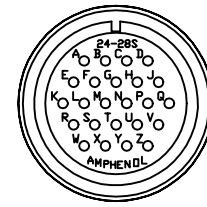
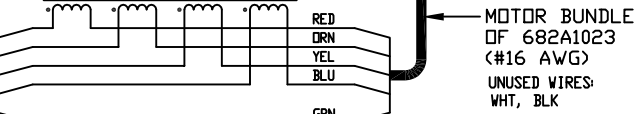
| PIN | WIRE        | SIGNAL    |
|-----|-------------|-----------|
| 13  | RED/YEL     | BRK-      |
| 12  | WHT/BLU     | CW/+ LMT  |
| 11  | -           | -         |
| 10  | -           | -         |
| 9   | -           | -         |
| 8   | WHT/BLK/RED | TACH -    |
| 7   | WHT/GRY     | MKR       |
| 6   | WHT/BRN     | MKR-N     |
| 5   | -           | -         |
| 4   | -           | -         |
| 3   | #22 YEL     | ENC +5V   |
| 2   | -           | -         |
| 1   | SHIELD      | SIG SHLD  |
| 14  | WHT/RED     | COS       |
| 15  | WHT/ORN     | COS-N     |
| 16  | #22 PINK    | LMT +5V   |
| 17  | WHT/YEL     | SIN       |
| 18  | WHT/GRN     | SIN-N     |
| 19  | GRY         | TACH+     |
| 20  | #22 BRN     | LMT COM   |
| 21  | #22 WHT/BLK | ENC COM   |
| 22  | RED/BLK     | HM LMT    |
| 23  | -           | -         |
| 24  | WHT/VID     | CCW/- LMT |
| 25  | WHT/BLK/BRN | BRK+      |

682A1023 (ECX413)  
#24 AWG UNLESS OTHERWISE NOTED

| SIGNAL    | WIRE        | PIN |
|-----------|-------------|-----|
| LMT +5V   | #22 PINK    | W   |
| LMT COM   | #22 BRN     | X   |
| TACH+     | GRY         | Y   |
| TACH-     | WHT/BLK/RED | Z   |
| CW/+ LMT  | WHT/BLU     | R   |
| CCW/- LMT | WHT/VIO     | S   |
| HM LMT    | RED/BLK     | T   |
| BRK-      | RED/YEL     | U   |
| MTR-      | #16 YEL     | V   |
| COS-N     | WHT/ORN     | K   |
| SIN-N     | WHT/GRN     | L   |
| MKR-N     | WHT/BRN     | M   |
| FRM GND   | #16 GRN     | N   |
| MTR+      | #16 ORN     | P   |
| MTR-      | #16 BLU     | Q   |
| COS       | WHT/RED     | E   |
| SIN       | WHT/YEL     | F   |
| MKR       | WHT/GRY     | G   |
| BRK+      | WHT/BLK/BRN | H   |
| MTR+      | #16 RED     | J   |
| ENC+5V    | #22 YEL     | A   |
| ENC COM   | #22 WHT/BLK | B   |
| SIG SHLD  | SHIELD      | C   |
| MTR SHLD  | SHIELD      | D   |

STR. PLUG MS3106A-24 (MCM466) (STD)  
ANGLE PLUG MS3108A-24 (DPT.)  
ANGLE PLUG MS3108B-24 (MCM470) (DPT.)  
INSERT MS24-28S (MCM469)  
CLAMP 97-3057-1016 (MCM467)  
BUSHING AN3055-28-16 (MCM474)

UNUSED WIRES:  
TAN, VID, RED/GRN



DETAIL "B"  
INSERT MS24-28S (MCM469)  
VIEWED FROM WIRE SIDE OF CONNECTOR

2

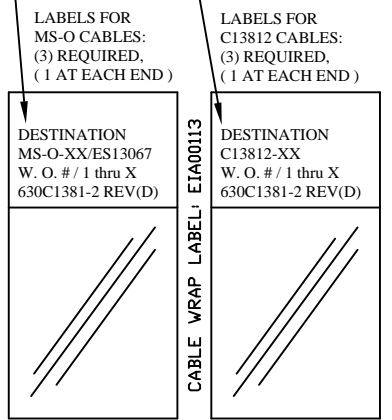
1

USE 2" LENGTHS OF THICK WALL HEATSHRINK TUBING TO BUILD UP CABLE DIAMETER FOR PROPER STRAIN RELIEFING. STRAIN RELIEFING MUST WITHSTAND 35 LB. PULL.

CUT THICK WALL HEATSHRINK TUBING WITH CABLE CUTTER SUCH THAT ENDS ARE PERPENDICULAR TO CABLE AND CUT IS SMOOTH. THICK WALL HEATSHRINK TUBING:  
AMP # 53701-1 (EIW00112) MAX INSIDE DIA = .750" (EXPANDED), MIN INSIDE DIA = .220" (RECOVERED)  
AMP # 53700-1 (EIW00113) MAX INSIDE DIA = .400" (EXPANDED), MIN INSIDE DIA = .150" (RECOVERED)

STARTING CABLE LENGTH = 18 FT

SEE LABELS 1, 2 & 3 FOR DESTINATION



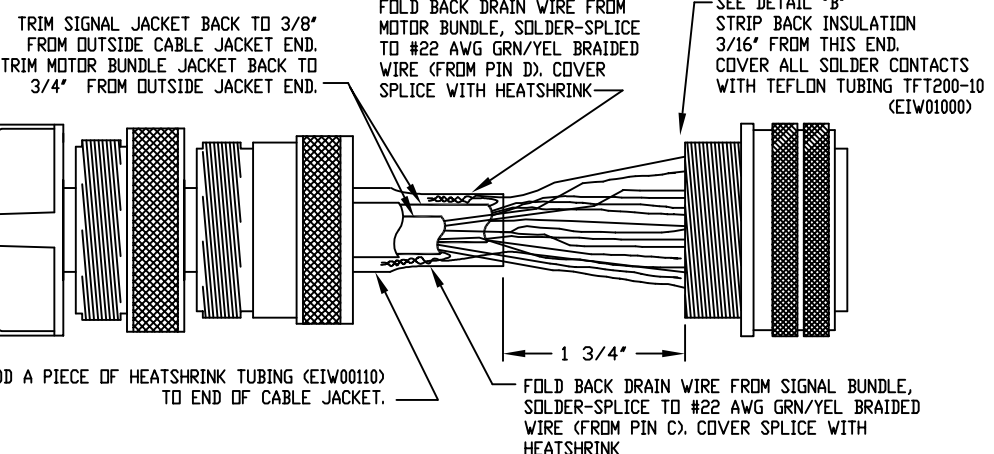
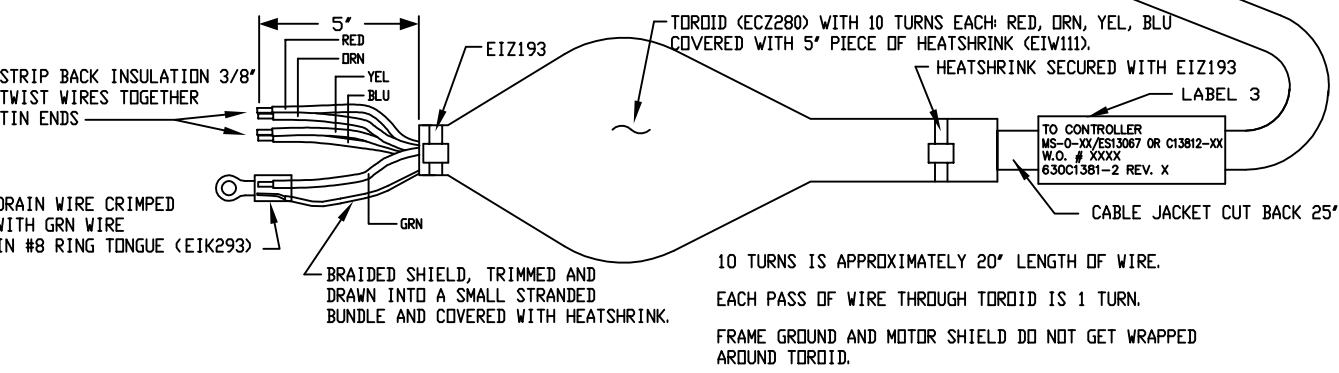
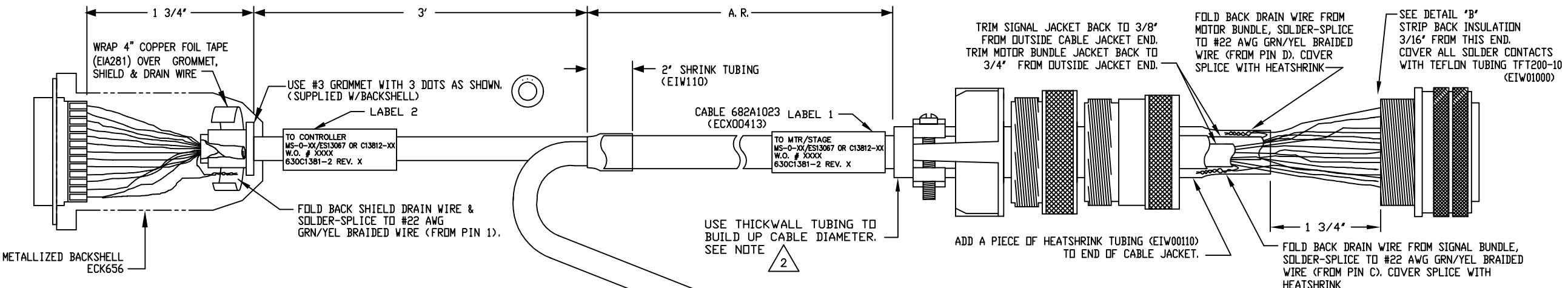
FOR CRIMP TOOL USE AMP HANDLE ASSY 58074-1 WITH AMP HEAD ASSY 58063-2



DETAIL "A"  
AMP PLUG 745496-2 (ECK786)  
VIEWED FROM WIRE SIDE OF CONNECTOR

| BA SERIES AMP (REF) | FLYING LEAD          | WIRE   | SIGNAL   |
|---------------------|----------------------|--------|----------|
| MOTOR A             | (1/2)                | RED    | MTR+     |
|                     | (2/2)                | ORN    | MTR+     |
| MOTOR C             | (1/2)                | YEL    | MTR-     |
|                     | (2/2)                | BLU    | MTR-     |
| SHIELD              | #8 RING TONGUE (1/2) | SHIELD | MTR SHLD |
|                     | (2/2)                | GRN    | FRM GND  |

CABLE 682A1023 MOTOR BUNDLE #16 AWG



| PART CODE:      |   |
|-----------------|---|
| C13812-XX       | C13812-1 TO -107 MAX LENGTH (DECIMETERS)        |
| MS-O-XX/ES13067 | MS-O-1/ES13067 TO -35/ES13067 MAX LENGTH (FEET) |

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| TOLERANCES ON FRACTIONS DECIMALS ANGLES |                 |         |
|---|-----------------|---------|
| 0 TO 6 ± 1/32                           | .XX ± .01       | ± 0-30' |
| OVER 6 ± 1/16                           | .XXX ± .005     |         |
| RMS FINISH                              | EXCEPT AS NOTED |         |
| DRAWN                                   | EJB             | 2/96    |
| CHECKED                                 | WG              | 9/97    |
| APPD.                                   | WG              | 9/97    |

| MS-O-XX/ES13067 OUTPUT CABLE              |                  |       |            |
|---|------------------|-------|------------|
| 107 DECIMETERS (35') MAX LENGTH           |                  |       |            |
| CABLE: DC MTR & FB-25DU FLT-24MS-MAX107DM |                  |       |            |
| PART CODE                                 | SIZE             | REV.  |            |
| SEE ABOVE                                 | C                | D     | 630C1381-2 |
| SCALE NTS                                 | FILE NAME        | SHEET | 1 OF 1     |
|   | 630C1381-2D1.dwg |       |            |

10 TURNS IS APPROXIMATELY 20" LENGTH OF WIRE. EACH PASS OF WIRE THROUGH TOROID IS 1 TURN. FRAME GROUND AND MOTOR SHIELD DO NOT GET WRAPPED AROUND TOROID.