

**TS2 L 7 M 26 B - K**

TS2 Series  
 Connector Type:  
 L - Cable-to-Cable

Options:  
**K** - Kit Packaging (one unit/bag)  
**[blank]** - Bulk Packaging  
 Consult factory for other options

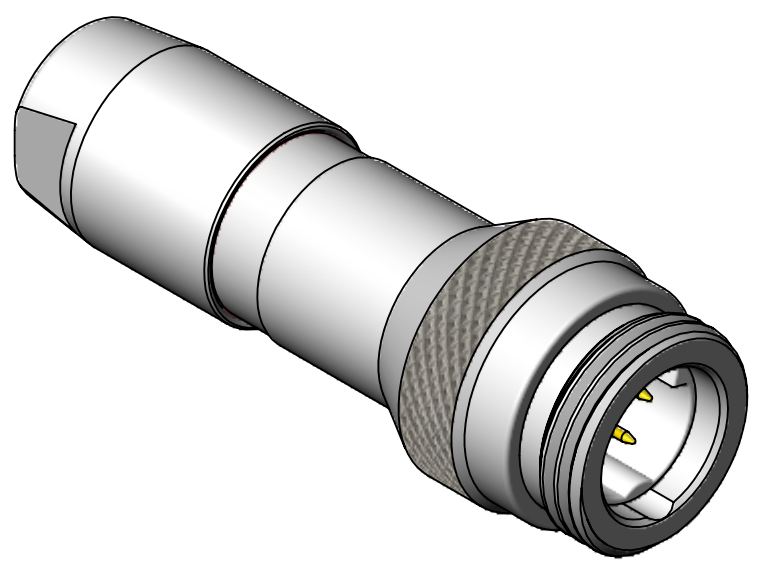
# of contacts:  
**2-5** for #20  
**6-9** for #26

Gender:  
**M** - Male (Pin)  
**F** - Female (Socket)

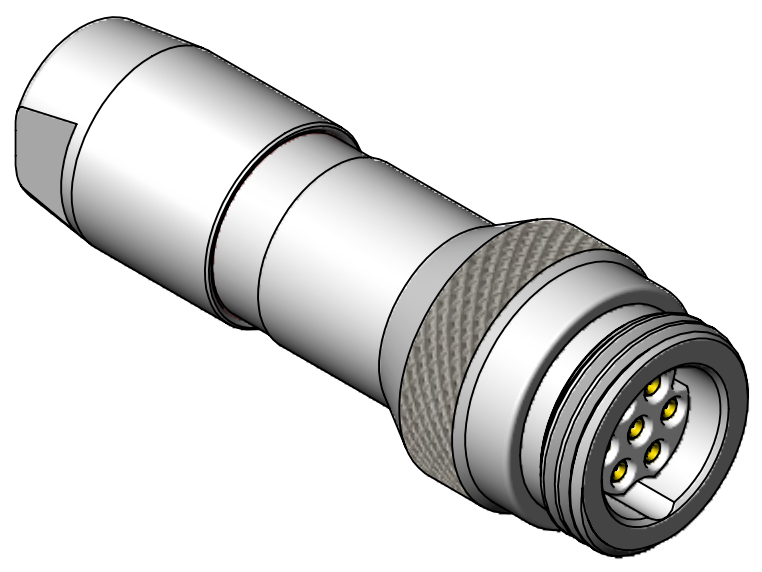
Refer to TS2P SERIES drawing for Panel-mount connectors.  
 Refer to TS2C SERIES drawing for mating Cable-End connectors.

Clamp Set per Cable O.D. Range  
 for Cable-End and Cable-to-Cable only:  
**A** - 0.110 - 0.140 [2.8 - 3.6]  
**B** - 0.140 - 0.180 [3.6 - 4.6]  
**C** - 0.180 - 0.216 [4.6 - 5.5]

Contact Size:  
**20** - 20, 22, 24, 26 AWG wires  
**26** - 26, 28, 30 AWG wires

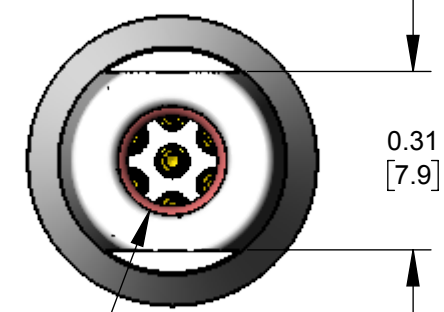
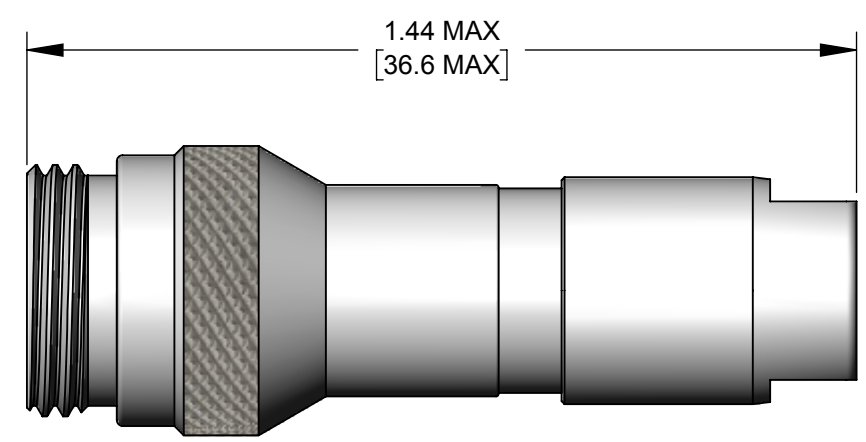
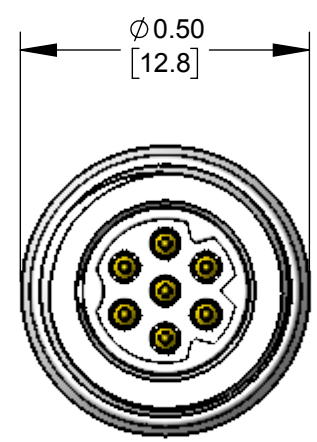


TYPICAL CABLE-TO-CABLE PIN (MALE)  
 (TS2L7M26B SHOWN HERE)



TYPICAL CABLE-TO-CABLE SOCKET (FEMALE)  
 (TS2L7F26B SHOWN HERE)

| SPECIFICATIONS:                  |   |
|----------------------------------|---|
| <b>MECHANICAL</b>                |   |
| Mating / Locking Type:           | Threaded Coupling   |
| Life                             | 5,000 cycles minimum  |
| Operating Forces                 | 10 lb. [44.5 N] maximum Insertion or Withdrawal                                     |
| Vibration                        | Mil-Std 202G Method 201A  |
| Panel-Mount Hex Nut Tongue       | 40 in-lb [4.5 Nm] maximum   |
| Cable Securing System:           | Threaded on metal Clamp   |
| <b>ELECTRICAL</b>                |   |
| Voltage Rating                   | 125 V AC/DC for 2-5 contact arrangements<br>30 V AC/DC for 6-9 contact arrangements |
| Current Rating                   | Refer to Current Carry Capacity Table   |
| Insulation Resistance            | 1000 MΩ minimum   |
| Contact Resistance               | 10 mΩ typical   |
| EMI Shielding                    | 360°  |
| <b>ENVIRONMENTAL</b>             |   |
| Temperature Limits               | -40°C to +135°C (-40°F to +275°F)   |
| Operating Temperature Range      | Refer to Current Carry Capacity Table   |
| Moisture Resistance              | Mil-Std 202G Method 106G  |
| Insulation Resistance            | Mil-Std 202G Method 302   |
| Thermal Shock                    | Mil-Std 202G Method 107G  |
| Salt Atmosphere (Corrosion)      | Mil-Std 202G Method 101E  |
| Ingress Protection Ratings       | IP66, IP67, IP68 (6 ft. for 24 hours) per IEC60529, NEMA 250 6P                     |
| <b>MATERIAL</b>                  |   |
| Outer Shell Metal components     | Copper Alloy, electroless nickel plated   |
| Hex Nut & Inner Metal components | Copper Alloy, nickel plated   |
| Electrical Insulator             | Medical Technology LCP, natural   |
| Seal O-rings                     | Thermoplastic Elastomer   |
| Contacts Assembly                | Copper Alloy, gold plated with Stainless Steel locking clip                         |



BACK NUT DIA.  
 SIZE A: 0.150 [3.81] DIA.  
 SIZE B: 0.190 [4.83] DIA.  
 SIZE C: 0.230 [5.84] DIA.

ALL DIMENSIONS FOR REFERENCE ONLY

| Contacts | Wire (awg) | Current Rating (A) at Operating Temperature (°C) |           |           |            |            | Minimum Test Voltage (V rms) | Voltage (V rms) tested per UL2238 |
|----------|------------|--|-----------|-----------|------------|------------|------------------------------|-----------------------------------|
|          |            | 45°C max.  | 65°C max. | 85°C max. | 100°C max. | 110°C max. |                              |                                   |
| 2 #20    | 20         | 10   | 9         | 8         | 7*         | 6          | 1300                         | 125                               |
|          | 22         | 8.5  | 7.5       | 7.5       | 5.5*       | 4.5        |                              |                                   |
|          | 24         | 7  | 6         | 5         | 4.5*       | 3.5        |                              |                                   |
|          | 26         | 4  | 4         | 3.5       | 3.5*       | 2.5        |                              |                                   |
| 3 #20    | 20         | 9.5  | 8.5       | 7.5       | 6.5*       | 5          |                              |                                   |
|          | 22         | 8  | 7         | 6         | 5*         | 4          |                              |                                   |
|          | 24         | 6  | 5.5       | 4.5       | 4*         | 3          |                              |                                   |
|          | 26         | 3.5  | 3.5       | 3         | 3*         | 2.5        |                              |                                   |
| 4 #20    | 20         | 9  | 8         | 7         | 6*         | 5          |                              |                                   |
|          | 22         | 7.5  | 6.5       | 5.5       | 4.5*       | 3.5        |                              |                                   |
|          | 24         | 5  | 4.5       | 4         | 3.5*       | 2.5        |                              |                                   |
|          | 26         | 3  | 3         | 2.5       | 2.5*       | 2          |                              |                                   |
| 5 #20    | 20         | 8  | 7.5       | 6.5       | 5.5*       | 4.5        |                              |                                   |
|          | 22         | 6.5  | 5.5       | 5         | 4*         | 3          |                              |                                   |
|          | 24         | 4.5  | 4         | 3.5       | 3*         | 2.5        |                              |                                   |
|          | 26         | 2.5  | 2.5       | 2         | 2*         | 1.5        |                              |                                   |
| 6-7 #26  | 26         | 2.5  | 2.5       | 2         | 2*         | 1.5        |                              |                                   |
|          | 28         | 2  | 2         | 1.5       | 1.5*       | 1          |                              |                                   |
|          | 30         | 1.5  | 1.5       | 1         | 1*         | .5         |                              |                                   |
|          | 26         | 2  | 2         | 1.5       | 1.5*       | 1          |                              |                                   |
| 8-9 #26  | 28         | 1.5  | 1.5       | 1         | 1*         | .5         |                              |                                   |
|          | 30         | 1  | 1         | .5        | .5*        | .5         |                              |                                   |

\*Temperature Rise does not exceed 30°C when tested according to UL2238. All other recommended current ratings are based on the Relative Thermal Index of the insulating material.

| TOOL      | TOOL TYPE                   | POSITIONER | CONTACT SIZE | WIRE SIZES             |
|-----------|-----------------------------|------------|--------------|------------------------|
| EN3CR     | HAND CRIMP TOOL             | EN2POS20   | 20 and 22    | 20 and 22 AWG          |
| EN3CRAUTO | PNEUMATIC CRIMP TOOL        | EN3POS26   | 26           | 26, 28, and 30 AWG     |
|           |                             | EN2POS20   | 20 and 22    | 20 and 22 AWG          |
| EN2CRL    | HAND CRIMP TOOL LARGE FRAME | EN3POS26   | 26           | 26, 28, and 30 AWG     |
|           |                             | EN2POS20L  | 20 and 22    | 20, 22, 24, and 26 AWG |
| INSTOOL20 | CONTACT INSERTION           | --         | 20           | 20, 22, 24, and 26 AWG |
| INSTOOL26 | CONTACT INSERTION           | --         | 26           | 26, 28, and 30 AWG     |
| REMT00L20 | CONTACT EXTRACTION          | --         | 20           | 20, 22, 24, and 26 AWG |
| REMT00L26 | CONTACT EXTRACTION          | --         | 26           | 26, 28, and 30 AWG     |

| REV | ECO NUMBER     | DATE     | BY  | APVD |
|-----|----------------|----------|-----|------|
| OB  | 10 lb WAS 5 lb | 09/22/16 | PNK | SRC  |
| OA  | PRELIMINARY    | 04/20/16 | PNK | SRC  |

UNLESS OTHERWISE SPECIFIED  
 1. ALL DIMENSIONS IN INCHES [mm]  
 - TWO PLACE DECIMALS ±0.02 [0.5]  
 - THREE PLACE DECIMALS ±0.005 [0.13]

DO NOT SCALE DRAWING

**SolidWorks CAD File**

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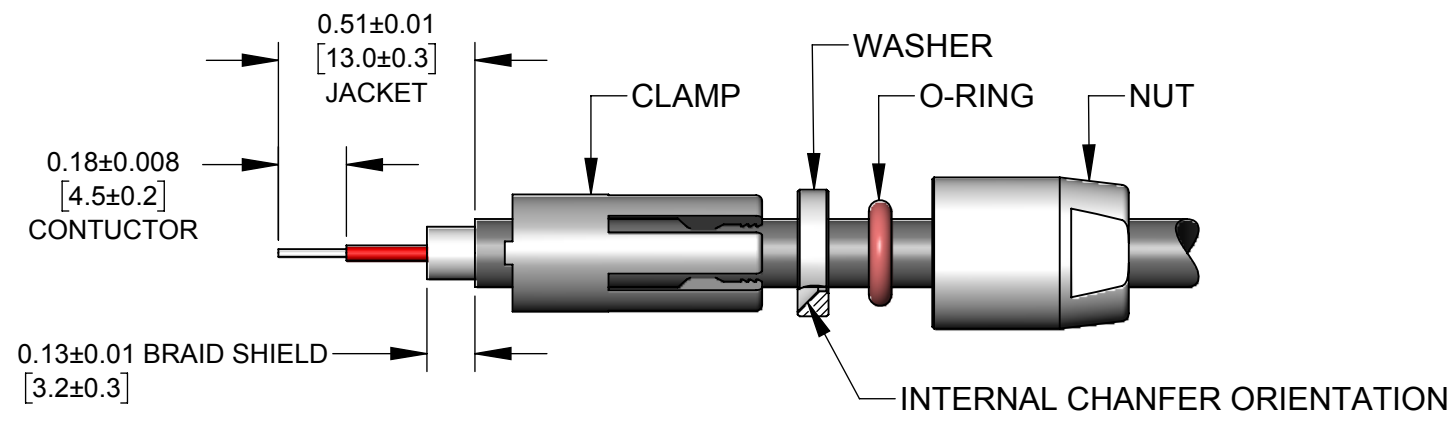
|                |               |             |       |        |
|----------------|---------------|-------------|-------|--------|
| SIZE           | WIDTH         | MULT        | LBS/M | TEMPER |
| FINISH         | FIRST USED ON |             | SCALE |        |
| SPEC No.       |               |             | 3:1   |        |
| DATE DRAWN     | BY            | CHKD        | APVD  |        |
| 04/20/16       | PNK           | PNK         | SRC   |        |
| NAME           |               | PART No.    |       | REV    |
| CABLE-TO-CABLE |               | TS2L SERIES |       | 0B     |

**Switchcraft®**

SHEET 1 OF 2

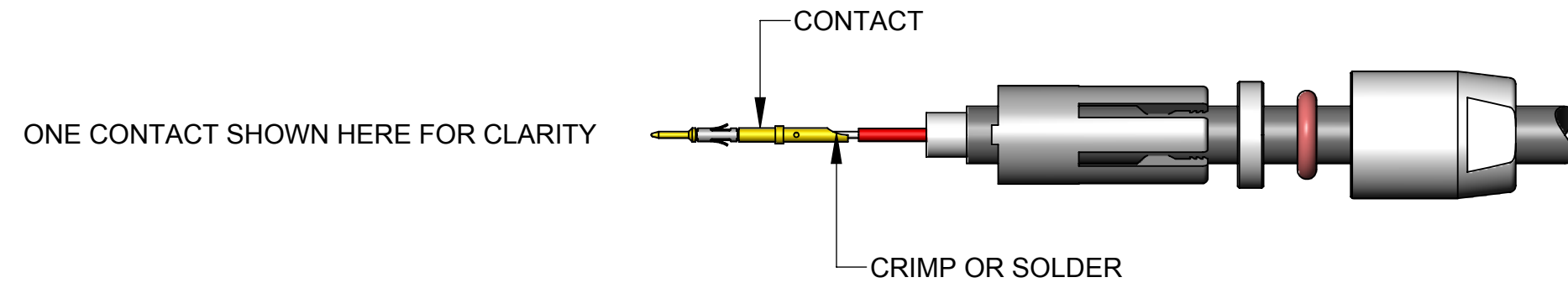
CUSTOMER DRAWING

STEP 1



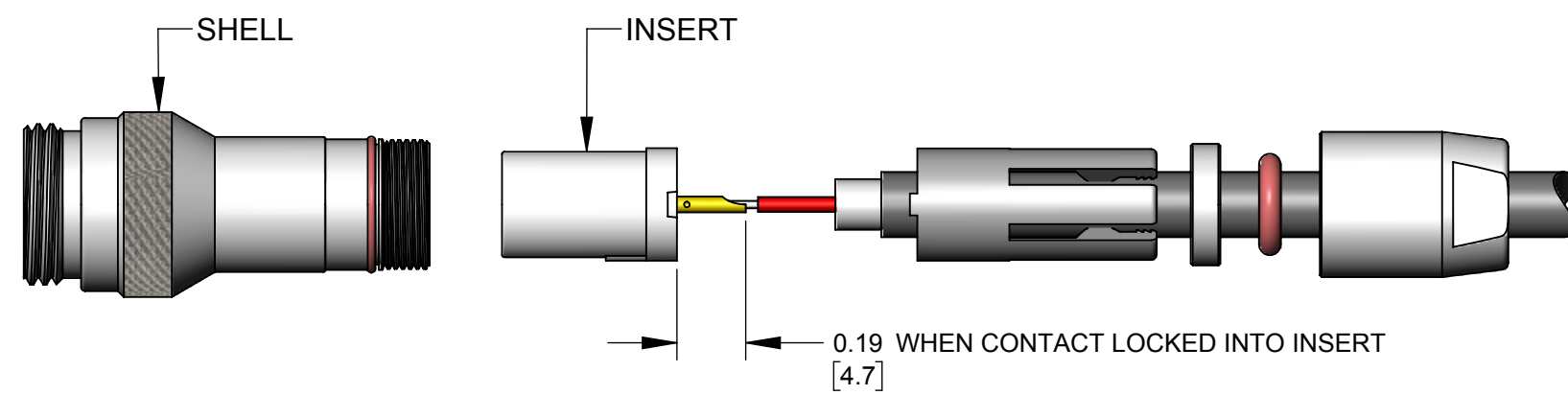
FEED THE FREE END OF CABLE THROUGH THE NUT, O-RING, WASHER, AND CLAMP IN THE ORDER SHOWN.  
STRIP THE CABLE JACKET, THE CONDUCTORS, AND THE CABLE SHIELDING AS SHOWN.

STEP 2



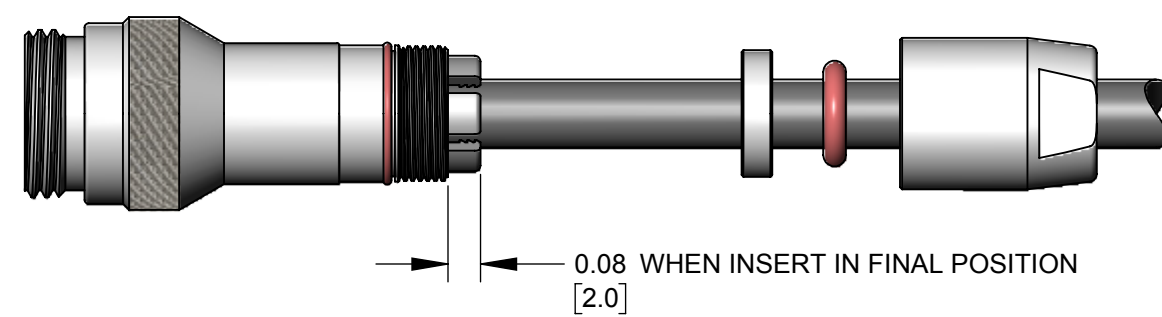
CRIMP CONDUCTORS TO CONTACTS USING HAND OR PNEUMATIC CRIMP TOOL\* WITH CRIMP POSITIONER\* SET PER CONTACT SIZE AND WIRE GAGE.  
IF SOLDERING, IT IS RECOMMENDED TO SOLDER CONDUCTORS TO CONTACTS BEFORE INTALLATION.

STEP 3



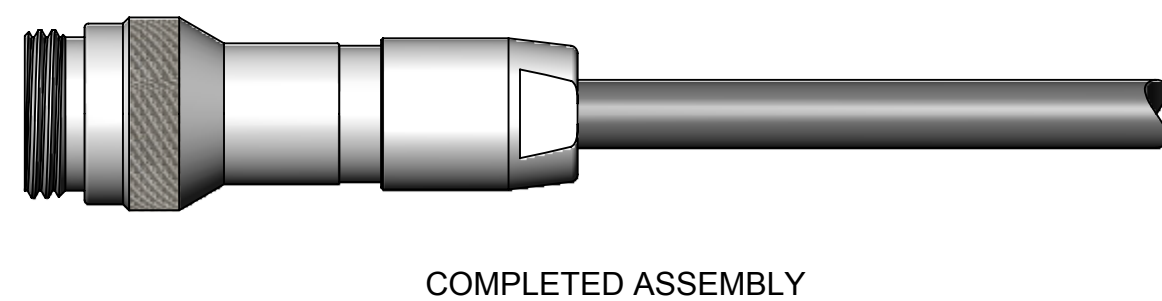
GUIDE EACH WIRED CONTACT INTO INSERT HOLE AND PUSH UNTIL CONTACT SNAPS IN PLACE. USE INSERTION TOOL\* IF NECESSARY.  
COLORED CONDUCTORS CAN BE ASSIGNED TO CONTACT POSITION NUMBERS AS DESIRED.  
TO REMOVE A CONTACT, INSERT THE EXTRACTION TOOL\* FROM THE FRONT OF INSERT AND LIGHTLY PRESS THE SPRING LOADED PLUNGER INWARD TO PUSH THE CONTACT OUT.

STEP 4



ALIGN INSERT ASSEMBLY INTO SHELL FOLLOWED BY THE CLAMP. PUSH CLAMP LIGHTLY FORWARD AND ROTATE UNTIL THE ASSEMBLY SNAPS IN THE FINAL POSITION SHOWN.

STEP 5



SLIDE WASHER, O-RING, AND NUT AGAINST CLAMP AND THREAD NUT ON UNTIL TIGHT - NOT TO EXCEED 9 IN-LB [1 Nm] TORQUE. A 5/16" [8mm] WRENCH CAN BE USED, IF NECESSARY.

\*REFER TO TOOLS TABLE ON THIS DRAWING FOR SELECTION OF TOOLS PER CONTACT AND WIRE SIZE.

**TS2 SERIES CABLE-TO-CABLE  
FIELD ASSEMBLY INSTRUCTIONS**

|                        |                            |           |
|------------------------|----------------------------|-----------|
| SCALE<br>2:1           | Switchcraft®               |           |
| DATE DRAWN<br>04/20/16 |                            |           |
| DRAWN BY<br>PNK        | PART No.<br>TS2L SERIES_CD | REV<br>0A |

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