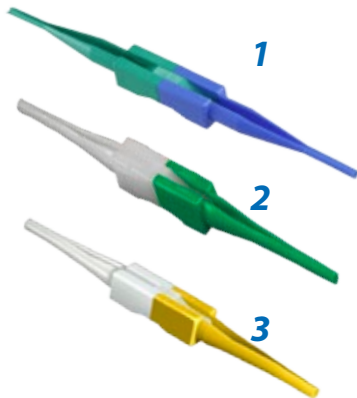


### CONTACT INSERTION AND REMOVAL TOOLS



**1** Insertion/Extraction Tool for #20 contacts. This plastic tool features green insertion tip and blue extraction tip.

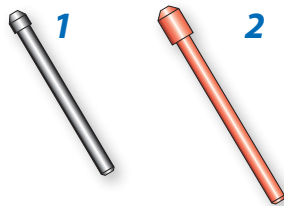
**2** Insertion/Extraction Tool for #22 contacts. This plastic tool features green insertion tip and white extraction tip.

**3** Insertion/Extraction Tool for #8 Combo HiPer-D® contacts. This plastic tool features yellow insertion tip and white extraction tip.

Figure	Size	Part Number	Military Part Number
1	#20	<b>809-203D</b>	(none)
2	#22	<b>859-020</b>	M81969/14-01
3	#12*	<b>809-132</b>	M81969/14-04

\*Size 12 tool fits Combo HiPer-D® size #8 connectors and contacts

### GROMMET SEALING PLUGS FOR SIZE #22 AND #20HD CONNECTORS



Grommet sealing plugs are used to seal unwired contact cavities. These plugs conform to MS27488 requirements. After installing unwired contacts into unused cavities, insert knob end of sealing plug into grommet until it bottoms against the unwired contact per illustration. Install sealing plugs with standard contact insertion/extraction tools.

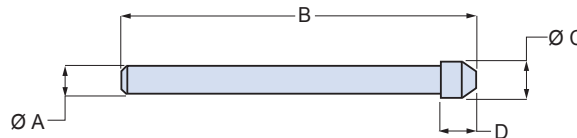


Fig.	Size	Color	Part Number	Military Part Number	Insertion/Removal Tool	A Ref.		B Ref.		C Ref.		D Ref.	
						in.	mm	in.	mm	in.	mm	in.	mm
1	#22	Black	<b>859-021</b>	MS27488-22-2	859-020	.042	1.07	.51	13.0	.062	1.57	.125	3.18
2	#20	Red	<b>859-012</b>	MS27488-20-2	809-203D	.053	1.35	.82	20.8	.085	2.16	.125	3.18

### SEALING BOOT FOR COMBO HIPER-D

Sealing boot prevents moisture and contamination from entering combo HiPer-D® connectors. Slide onto wire before terminating contact. Install contact into connector, then slide sealing boot into connector grommet. Fluorosilicone grommet, thermoset epoxy follower. -65°C to +200°C.



Wire Dia. (in.)	Wire Dia. (mm.)	Part Number
.050 - .090	1.27 - 2.29	<b>859-093-01</b>
.090 - .130	2.29 - 3.30	<b>859-093-02</b>
.130 - .170	3.30 - 4.32	<b>859-093-03</b>

