

# AMPHENOL LIMITED

## Assembly Instructions

### HOW TO CRIMP 602 SERIES CONTACTS

Strip insulation from end of wire as per table. Do not crush or abrade remaining insulation. Do not nick wire strands. Twist them back to their original lay. Hot wire stripping is recommended.

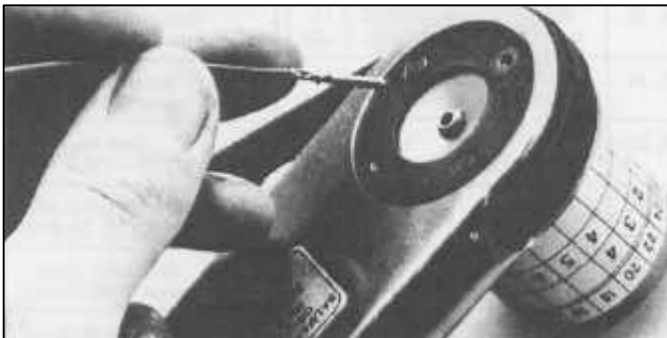
### STRIPPING DIMENSIONS

Contact Size	Wire Size	
20	20-22-24	3.6 - 5.1
	26-28-30 AWG	(0.140 - 0.200)
16	16-18-20 AWG	5.6 - 7.1
		(0.220 - 0.280)
12	12-14 AWG	5.6 - 7.1
		(0.220 - 0.280)

Insert wire into crimp barrel of contact and inspect the contact for wire visibility through the inspection hole.



Fully seat the uncrimped contact and wire into the crimp tool positioner, and crimp the contact.



### CRIMPING TOOL

#### AMPHENOL PART No.

294-542 -M22520/1-01 Crimping Tool  
294-1889-01 -M22520/1-02 Turret Head

Contacts are crimped using Amphenol crimp tool as per table. For wire size 20-22-24 AWG use a 20 size contact which is colour coded red. The proper positioner for the crimp tool is also colour coded red. An approved semi-automatic crimp machine with proper crimp settings and contact carriers can also be used.

#### CRIMPING JAW SETTING

Contact Size	Wire Size	Crimp Jaw Setting
20	24 & 30	No. 2
	22 & 28	No. 3
	20 & 26	No. 4
16	20	No. 4
	18	No. 5
	16	No. 6
12	14	No. 7
	12	No. 8

### HOW TO INSERT CONTACTS

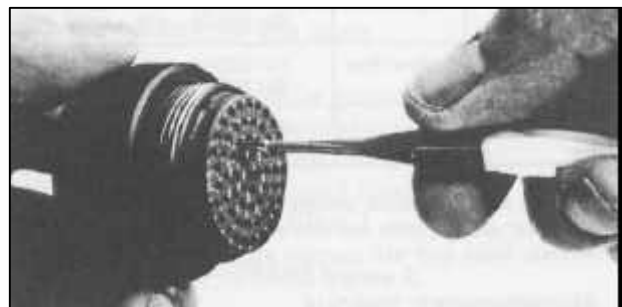
- If a wire support accessory is to be used, thread all wire through the accessory in the proper direction.
- Hold the coloured half of the appropriate insertion/removal tool between the thumb and forefinger. Lay the wire to be inserted along the slot leaving about 12mm (½ inch) of wire protruding.



- Then snap the wire into the tool. Pull the wire back through the tool until tip of tool seats against contact shoulder



- Slowly push the contact straight into the appropriate cavity in the rear of the connector insert until positive resistance is felt. Contact is fully seated. Release wire and pull out the tool. Check the retention by pulling gently on the wire.



### ASSEMBLY TOOLS (INSERTION & EXTRACTION)

Insertion tools are coded with the same colour as the contacts. All removal tools are white.

Contact Size	20	16	12
Amphenol Number	294-108	294-109	294-110

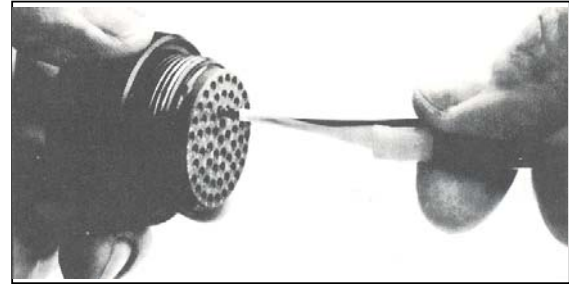
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## HOW TO REMOVE CONTACTS

- A. Remove wire support, if used, and slide back on wire bundle.



- B. Snap white end of appropriate insertion/extraction tool over the wire of the contact to be removed. Slide tool along wire into the insert cavity until it engages the contact rear and a positive resistance is felt. At this time, the contact retaining clip is in the unlocked position.



- C. Press the wire of the contact to be removed against the serrations of the plastic tool and pull both the tool and the contact wire assembly out of the connector.

Contact Size	Colour Code	Contact Part Number	Suitable Wire Size		Insulation O.D. for grommet sealing mm inches	Seal Plug Part Nos and additional contact data
			AWG	mm inches		
20	Red	Pin 602GB-111-20000-03 Skt 602GB-112-20000-03	20, 22, 24	0.51 – 0.81 0.020-0.032	1.02-2.11 0.040-0.083	Seal Plug 602GB-116-20000
20	Red/Black	Pin 602GB-220-20000-03 Skt 602GB-221-20000-03	26, 28, 30	0.25-0.40 0.010-0.016	1.02-2.11 0.040-0.083	Reduced Crimp Barrel for 26, 28, 30 AWG
20	Black	Pin 602GB-146-20000-03 Skt 602GB-297-20000-03	20, 22, 24	0.51-0.81 0.020-0.032	1.02-2.11 0.040-0.083	Extended Crimp Barrel 0.346 length
16	Blue/Red	Pin 602GB-111-16000-03 Skt 602GB-112-16000-03	16, 18, 20	0.81-1.30 0.032-0.051	1.35-2.62 0.053-0.103	Seal Plug 602GB-116-16000
16	Blue/Red	Pin 602GB-111-16020-03 Skt 602GB-112-16020-03	20, 22, 24	0.51-0.81 0.020-0.032	1.35-2.62 0.053-0.103	Reduced Crimp Barrel for 20, 22, 24 AWG
16		Pin 602GB-146-16000-03 Skt 602GB-297-16000-03	16, 18, 20	0.81-1.30 0.032-0.051	1.35-2.62 0.053-0.103	Extended Crimp Barrel 0.346 Length
12	Yellow	Pin 602GB-111-12000-03 Skt 602GB-112-12000-03	12, 14	1.63-2.05 0.064-0.081	2.51-4.01 0.099-0.158	Seal Plug 602GB-116-12000
12	Yellow/Blue	Pin 602GB-111-12016-03 Skt 602GB-112-12016-03	16, 18, 20	0.80-1.30 0.032-0.051	2.51-4.01 0.099-0.158	Reduced Crimp Barrel for 16, 18, 20 AWG
12	Yellow/Red	Pin 602GB-111-12020-03 Skt 602GB-112-12020-03	20, 22, 24	0.51-0.81 0.020-0.032	2.51-4.01 0.099-0.158	Reduced Crimp Barrel For 20, 22, 24 AWG
12		Pin 602GB-146-12000-03 Skt 602GB-297-12000-03	12, 14	1.63-2.05 0.064-0.081	2.51-4.01 0.099-0.158	Extended Crimp Barrel 0.346 Length

Use seal plug to ensure proper connector whenever all contacts are not employed. For ease of removal, leave end bell portions exposed.

Removal of unwired contacts: Remove contact with MS3448-001 tool by referring to instruction enclosed with tool.

## RECOMMENDED TORQUE

	Shell Size	8	10	12	14	16	18	20	22	24
Single Hole Fixing Receptacles	Nm	3.73	4.07	6.78	7.34	8.25	9.26	11.98	13.90	15.03
	lbf.ins	33	36	60	65	73	82	106	123	133
Accessories	Nm	3.39-3.96	3.96-4.52	4.52-5.09	5.09-5.65	5.65-6.78	6.78-7.91	8.48-9.04	9.61-10.17	10.74-11.3
	lbf.ins	30-35	35-40	40-45	45-50	55-60	65-70	75-80	85-90	95-100

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