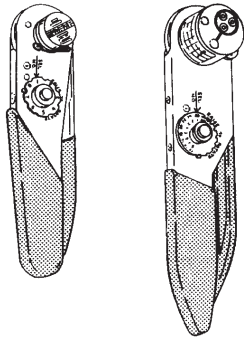


PROPER USE GUIDELINES

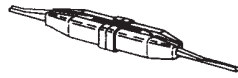
Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. Hand tools are intended for occasional use and low volume applications. A wide selection of powered application equipment for extended-use, production operations is available.

Tooling for Loose-Piece Contacts

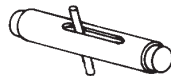
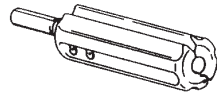
4/8-Indent Hand Crimping Tool
(Typ, Requires Positioner or
Turret Head)



Insertion/Extraction
Tool (Typ)



Extraction Tool (Typ)



Tooling for Tape Mounted Contacts

AMP-TAPETRONIC* 4/8 Indent Stripper
Terminator 599406-[] (Requires Funnel)

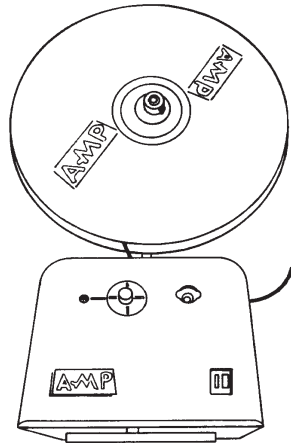


Figure 1

1. INTRODUCTION

This instruction sheet covers tooling selections for crimping, inserting, and extracting screw-machine contacts, and manual application procedures. Application procedures for the other tools are packaged with the tool. Read these instructions thoroughly before making any selections.

NOTE

Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.

Reasons for reissue of this instruction sheet are provided in Section 7, REVISION SUMMARY.

2. DESCRIPTION

The screw-machine contacts are supplied in loose-piece for manual (4/8-indent hand crimping tools) application and tape mounted for power assisted (machine) application. Insertion and extraction tools are used to insert contacts into and extract contacts from connectors. See Figure 1.

The military uses a standardized numbering system which pertains to the tools that are qualified to military specifications (spec). Refer to Figure 2 for a cross-reference of these tools.

Description	Part Number	Military Spec
4/8-Indent Hand Crimping Tool	601966-1	MIL-C-22520/2-01
	601967-1	MIL-C-22520/1-01
	608651-1	---
Positioner or Turret Head	601966-2	MIL-C-22520/2-02
	601966-4	MIL-C-22520/2-06
	601966-5	MIL-C-22520/2-08
	601966-6	MIL-C-22520/2-09
	601966-8	MIL-C-22520/2-23
	601967-1	MIL-C-22520/1-01
	601967-2	MIL-C-22520/1-02
	1-601967-2	MIL-C-22520/1-11
	Insertion/Extraction Tool	91066-1
91067-1		MIL-I-81969/1-04
91067-2		MIL-I-81969/1-02 or MS3156-20
91066-3		MIL-I-81969/1-03 or MS3156-16
Extraction Tool	445147-1	MIL-C-81969/28-02
	58284-1	MIL-C-81969/28-03
	91074-1	MIL-C-81969/28-01 or MS3178-001

Figure 2

Refer to Figure 3 for proper contact and tooling combination. Read the chart from the left page across to the right page.

Product Line	CONTACT				WIRE		TOOL SELECTOR SETTING	
	Size	Pin	Socket	Military Spec	Size (AWG)	Strip Length		
Type II Contact For Multimate Connectors	20	201607	201609	—	28	5.16 [.203]	2	
					26		2	
					24		3	
		—	201353	—	—	28	5.16 [.203]	2
						26		2
						24		3
		201582	201584-6	—	—	24	5.16 [.203]	1
						22		2
						20		3
		200334	200331	—	—	24	5.16 [.203]	1
						22		2
						20		3
		—	201589	—	—	18	6.35 [.250]	4
						16		5
		16	—	201554	—	—	32	5.16 [.203]
	30						1	
	201334		—	—	—	28	5.16 [.203]	2
	—		201332	—	—	26		2
	—		201611	—	—	28	5.16 [.203]	3
								24
	—		201613	—	—	26	5.16 [.203]	2
								24
	201578		—	—	—	22	5.16 [.203]	2
	—		201580	—	—	20		3
	200679		201328	—	—	24	5.16 [.203]	1
	201330		—	—	—	22		2
	204188		—	—	—	20		3
	200681		200333	—	—	18	6.35 [.250]	4
						16		5
	202507	—	—	—	18	6.35 [.250]	4	
—	202508	—	—	16	5			
				18	4			
200336	200333	—	—	18	6.35 [.250]	4		
				16		5		
201570	201568	—	—	14	5.16 [.203]	5		
201555	—	—	—	32		1		
—	201554	—	—	30		1		

Figure 3 (Cont'd)

	Tooling for Loose Piece Contacts		Tooling for Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
→	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
→	1-601967-5						
	1-601967-6	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						
	1-601967-6	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6						
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6	90136-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
						—	
	1-601967-6	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						

Figure 3 (Cont'd)

Product Line	Size	CONTACT			WIRE		TOOL SELECTOR SETTING
		Pin	Socket	Military Spec	Size (AWG)	Strip Length	
Type II Contact For Multimate Connectors	16	—	201609	—	28	5.16 [.203]	2
					26		2
					24		3
		—	201332	—	26	5.16 [.203]	2
					24		3
		200679	201328	—	24	5.16 [.203]	1
					22		2
					20		3
		200681	200333	—	18	5.16 [.203]	4
		200336	—	—	16		5
		204274	—	—	18	5.16 [.203]	4
		202507	—	—	18		4
		204219	202508	—	16		5
		202725	202726	—	18②	5.16 [.203]	5
		201570	—	—	14	5.16 [.203]	5
201645	—	—	5				
—	201568	—	5				
Type VII Contact For Subminiature Connectors	22	202123	202124	—	32①	3.18 [.125]	1
					30①		1
					28		2
					26		2
		204092	—	—	30①	3.18 [.125]	1
					28		2
					26		3
					24		4
Type XIII Contact For Terminal Junction (TJG) Modules	20	203669-4	—	—	24	4.78 [.188]	5
					22		6
					20		7

Figure 3 (Cont'd)

① This wire size is not recommended for use in the machine.

② Refer to the instruction sheet (408-series) packaged with the contact for wire strip length.

	Tooling for Loose Piece Contacts		Tooling for Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
→	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5	58305-1 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						
	1-601967-6	45098 or 601967-1	—	—	—	200893-2 or 91002-1	305183
	1-601967-5						
→	1-601966-0	601966-1	599406-7	1-125905-1	—	91005-2	91004-2
	1-601966-0	601966-1	599406-7	—	—	—	—
	601966-2	601966-1	599406-7	—	—	—■	—■

Figure 3 (Cont'd)

■ Military Spec MIL-I-81969/14

Product Line	CONTACT				WIRE		TOOL SELECTOR SETTING	
	Size	Pin	Socket	Military Spec	Size (AWG)	Strip Length		
Type XV For ARINC Front Release AM, AD, and AAP Connectors	20	203840	—	—	24	4.78 [.188]	2	
					22		3	
					20		4	
		—	203841	—	24	4.78 [.188]	2	
					22		3	
					20		4	
	16	203884	—	—	20	6.35 [.250]	4	
					18		5	
					16		5	
Type XVII For ARINC Rear Release RM Connectors	22	204873	—	MIL-C-39029/11-144	26	3.96 [.156]	3	
					24		3	
					22		4	
		—	205103	MIL-C-39029/12-148	26	3.96 [.156]	3	
					24		3	
					22		4	
		—	205904	—	30 ^①	3.96 [.156]	4	
					28		5	
					26		6	
	20	204938	—	MIL-C-39029/11-145	24	3.96 [.156]	5	
					22		6	
					20		7	
		—	205116	MIL-C-39029/12-149	24	3.96 [.156]	5	
					22		6	
					20		7	
		—	205791	206887	—	30 ^①	3.96 [.156]	4
						28		5
						26		6
	16	204978	—	MIL-C-39029/11-146	20	6.35 [.250]	4	
					18		5	
					16		6	
		—	205117	MIL-C-39029/12-150	20	6.35 [.250]	4	
					18		5	
					16		6	
12	205763-5	—	—	14	6.35 [.250]	7		
				12		8		
	—	205851-2	—	14	6.35 [.250]	7		
				12		8		

Figure 3 (Cont'd)

① This wire size is not recommended for use in the machine.

	Tooling For Loose Piece Contacts		Tooling For Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
→	601967-2	601967-1	599406-5	125905-8	MIL-C-81659	91039-1	91040-1
	601967-2	601967-1	599406-5	125905-8	MIL-C-8165	91039-1	91040-1
	601967-2	601967-1	599406-5	125905-6	MIL-C-81659	91039-3	91040-3
	601966-8	601966-1	599406-7	1-125905-2	MIL-C-81659	91066-1	91066-1
	601966-8	601966-1	599406-7	1-125905-2	—	91066-1	91066-1
	601966-8	601966-1	599406-7	1-125905-2	—	91066-1	91066-1
→	601966-5	601966-1	599406-7	125905-1 (Max Insulation Dia 1.98 [.078])	MIL-C-81659	91067-2	91067-2
	601966-5	601966-1	599406-7	125905-1 (Max Insulation Dia 1.98 [.078])	—	91067-2	91067-2
	601966-5	601966-1	599406-7	—	—	91067-2	91067-2
	601967-2	601967-1	599406-5	125905-6	MIL-C-81659	91066-3	91066-3
	601967-2	601967-1	599406-5	125905-6	—	91066-3	91066-3
	601967-2	601967-1	—	—	MIL-C-81659	—	445147-1
	601967-2	601967-1	—	—	MIL-C-81659	—	445147-1

Figure 3 (Cont'd)

Product Line	CONTACT				WIRE		TOOL SELECTOR SETTING	
	Size	Pin	Socket	Military Spec	Size (AWG, See Note)	Strip Length		
COAXICON* Contact For ARINC Coaxial Connectors	0	—	51781-1	—	RG 214/U	—	—	
	1	225837-1	—	—	Semi-Rigid 141	② (408-2348-02)	8	
		—	225831-1	—	—	RG 214/U	② (408-2348-02)	—
	3	226053-1	—	—	RG 141/U, 58C/U	② (408-2348-01)	8	
		—	225792-1	—	RG 214/U, 213/U	② (408-2348-01)	—	
		—	225792-3	—	RG 58C/U, 141A/U	② (408-2348-01)	8	
	5	225790-1	225791-1	—	RG 58C/U, 141/U	② (408-2348)	5	
		225790-2	225791-2	—	RG 233/U, 142/U	② (408-2348)	5	
		225790-3	—	—	Semi-Rigid 141	② (408-2348)	5	
		225790-4	—	—	RG 180B/U	② (408-2348)	5	
	7	—	225796-1	—	RG 58C/U	② (408-2348-01)	5	
		—	225796-2	—	RG 233/U		5	
	9	225935-1	—	—	RG 58C/U, 141A/U	② (408-2348-03)	5	
		—	225936-1	—	Semi-Rigid 141		② (408-2348-03)	5
	ARINC 600	22	208262	—	—	26	3.96 [.156]	3
						24		3
						22		4
		—	208264	—	—	—	26	3.96 [.156]
24							3	
22							4	
20		208265	—	—	—	24	3.96 [.156]	5
						22		6
						20		7
—		208267	—	—	—	24	3.96 [.156]	5
						22		6
						20		7

Figure 3 (Cont'd)

② Refer to the instruction sheet (408-series) packaged with the contact for wire strip length.

Note: Unless otherwise specified

→	Tooling for Loose Piece Contacts		Tooling for Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
	—	69646	—	—	—	—	91040-7
	—	601966-1④ and 220066-1⑤	—	—	—	—	—
	—	220015-1	—	—	—	—	—
	1-601966-8③	601966-1④ and 220066-1⑤	—	—	—	—	—
	—	220015-1	—	—	—	—	—
	—	601966-1④ and 220066-1⑤	—	—	—	—	—
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	2-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	—
→	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	—
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	1-601966-6③	601966-1④ and 220066-1⑤	—	—	—	—	91074-1
	601966-8	601966-1	599406-7	1-125905-2	—	91066-1	91066-1
	601966-8	601966-1	599406-7	1-125905-2	—	91066-1	91066-1
	601966-5	601966-1	599406-7	125905-1	—	91067-2	91067-2
	601966-5	601966-1	599406-7	125905-1 (Max Insulation Dia 1.98 [.078])	—	91067-2	91067-2

Figure 3 (Cont'd)

③ This positioner is used with Tool 601966-1

④ This tool crimps only the center contact of the pin or socket

⑤ This tool crimps only the ferrule of the pin or socket

Product Line	Size	CONTACT			WIRE		TOOL SELECTOR SETTING	
		Pin	Socket	Military Spec	Size (AWG, See Note)	Strip Length		
ARINC 600	16	204978	—	—	20	6.35 [.250]	4	
		208268	—	—	18		5	
		213122	—	—	16		6	
		—	208270	—	—	20	6.35 [.250]	4
						18		5
						16		6
	12	208271	—	—	14	6.35 [.250]	7	
		213123	—	—	12		8	
		—	208273	—	—	14	6.35 [.250]	7
						12		8
TRIAXIAL	8	222190	222191	MIL-C-39029-95 and MIL-C-39029-96	—	—	—	
Type XVII For AMPLIMITE* HDD Connectors	22D	206496	—	—	28	3.96 [.156]	3	
					26		4	
		—	206496	—	—	28	3.96 [.156]	3
						26		4
		204370	—	—	MIL-C-39029/58-360	28	3.96 [.156]	1
						26		2
						24		3
						22		4
		—	204351	—	MIL-C-39029/57-354	28	3.96 [.156]	1
						26		2
						24		3
						22		4
	—	206071	—	—	28	3.96 [.156]	1	
					26		2	
					24		3	
					22		4	
	20	206794	206795	—	28	3.96 [.156]	5	
					26		6	
		205089	—	—	MIL-C-39029/64-369	24	3.56 [.140]	5
						22		6
				20		7		

Figure 3 (Cont'd)

Note: Unless otherwise specified

	Tooling for Loose Piece Contacts		Tooling for Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
→	601967-2	601967-1	599406-5	125905-6	—	91066-3	91066-3
	601967-2	601967-1	599406-5	125905-6	—	91066-3	91066-3
	1-601967-2	601967-1	—	—	—	—	445147-1
	1-601967-2	601967-1	—	—	—	—	445147-1
	—	608650-1	—	—	MIL-C-83527	—	58284-1
	601966-6	601966-1	599406-7	125905-2	—	91067-1	91067-1
	601966-4	601966-1	599406-7	125905-2	—	91067-1	91067-1
→	601966-6	601966-1	599406-7	125905-2	MIL-C-24308	91067-1	91067-1
	601966-4	601966-1	599406-7	125905-2	MIL-C-24308	91067-1	91067-1
	601966-4	601966-1	599406-7	125905-2	—	91067-1	91067-1
	601966-5	601966-1	599406-7	—	—	91067-2	91067-2
	601966-5	601966-1	599406-7	125905-1	MIL-C-24308	91067-2	91067-2

Figure 3 (Cont'd)

Product Line	CONTACT				WIRE		TOOL SELECTOR SETTING
	SIZE	Pin	Socket	Military Spec	Size (AWG)	Strip Length	
Type XVII For AMPLIMITE HDD Connectors	20	—	205090	MIL-C-39029/63-368	24	3.56 [.140]	5
					22		6
					20		7
		1218266-1	1218267-1	—	18 ^⑥	3.56 [.140]	7
					18 ^⑥		7
		—	206793	—	24	3.56 [.140]	5
					22		6
					20		7
		AMPLIMITE Power 8 Contact	8	211159-1	211161-1	—	8
211159-2	211161-2			—	10	6	
212007-1	212008-1			—	12	9.53 [.375]	1
					14		1
212013-1	212014-1			—	16	9.53 [.375]	8
					18		6
213552	—			—	8	9.53 [.375]	7
					10		6
LGH* Contact	22			—	204351-1	MIL-C-39029/57-354	28
		26	2				
		24	3				
		22	4				
		861211 or 863260	—	—	28	3.18 [.125]	4
					26		5
					24	3.96 [.156]	5
					22		6
	—	867782	—	—	24	3.96 [.156]	5
					22		6
					20	6.35 [.250]	7
	16	—	867328	MIL-C-39029/12-150	20	6.35 [.250]	4
					18		5
					16		6
		—	861080	—	—	22 (2) ^⑦	4.78 [.188]
16						7	

Figure 3 (Cont'd)

⑥ 19-strand wire

⑦ Use two size 22 AWG wires

	Tooling for Loose Piece Contacts		Tooling for Tape Mounted Contacts		CONNECTOR Military Spec	INSERTION TOOL	EXTRACTION TOOL
	Positioner or Turret Head	Hand Crimping Tool	Machine	Funnel			
→	601966-5	601966-1	599406-7	125905-1	—	91067-2	91067-2
	601966-5	601966-1	—	—	—	91067-2	91067-2
	601966-5	601966-1	599406-7	125905-1	—	91067-2	91067-2
	608651-2	608651-1	—	—	—	—	318813-1
	608651-2	608651-1	—	—	—	—	318813-1
	608668-2	608668-1	—	—	—	—	318813-1
	608651-3	608651-1	—	—	—	—	318813-1
→	601966-4	601966-1	—	—	—	—	—
	—	601966-1	—	—	—	—	—
	—	601966-1	—	—	—	—	—
	601967-2	601967-1	—	—	—	91067-1	91067-1
	—■	601967-1	—	—	—	91066-3	91066-3

Figure 3 (End)

■ Military Spec MIL-C-22520/1-05