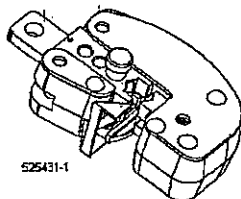


## 1. INTRODUCTION

This publication provides instructions on product application and a maintenance and inspection procedure for:



*Note: All metric wire sizes and dimensions are for reference only and are shown in parentheses.*

These tools are used to crimp:

- PIDG\* terminals and splices on wire sizes 12-10 (2.62-6.64).
- PIDG insulation restricting nylon terminals on wire sizes 12 (3) and 10 (5-6).

- PIDG Radiation Resistant terminals and splices on wire size 12 (3) and 10 (5-6).
  - PLASTI-GRIP\* terminals on wire sizes 12-10 (2.62-6.64).
  - Spare Wire Caps on wire sizes 12 (2.62) thru 10 (6.64).
- Basic instructions on the use of these tools, wire preparation, tool adjustments, etc. are provided in Section 2, "Instructions." Section 3 features terminal and splice "Crimp Inspection" procedure. Section 4 contains a "Maintenance and Inspection Procedure" which will enable you to establish and maintain a tool certification program.

These instructions may be used for tools not listed in Figure 1 but accompanied by this IS. For unlisted tools, use the wire strip dimensions given in Figure 1 for an identical size tool. Tools are coated with preservative to prevent rust and corrosion. Wipe this preservative from tool, particularly from crimping area.

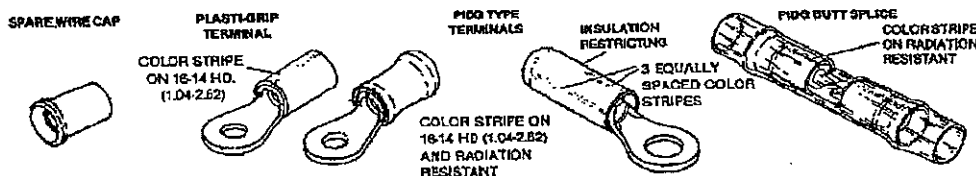


Fig 1

Fig 1

PRODUCT	TERMINAL INSULATION COLOUR AND DOT CODE	TOOL PART NO.	WIRE RANGE (mm <sup>2</sup> )	INSULATION DIAMETER RANGE (mm)	INSULATION COLOUR CODE	WIRE STRIP LENGTH (mm)			
						Terminals		Splices	
						min.	max.	min.	max.
Plasti-Grip Terminals PIDG Vinyl and Nylon Terminal or Splice	Yellow One Dot	525431-1	12-10 (2.62-6.64)	.230-.250 (5.84-6.35)	12-10 Yellow (2.62-6.64)	5-16" (7.9)	11/32" (8.7)	11/32" (8.7)	3/8" (9.5)
PIDG Insulation Restricting Nylon Terminals	Yellow One Dot	525431-1	12 (3)	.095-.200 (2.41-5.08)	Yellow Insul. W/3 Yellow Stripes	3/8" (9.5)	13/32" (10.3)	—————	
PIDG Radiation Resistant Terminals & Splices	Yellow One Dot	525431-1	12-10 (2.62-6.64)	.260 Max (6.60)	Natural Colour W/Yellow Stripe	5/16" (7.9)	11/32" (8.7)	11/32" (8.7)	3/8" (9.5)

PRODUCT	TERMINAL INSULATION COLOUR AND DOT CODE	TOOL PART NO.	WIRE RANGE (mm <sup>2</sup> )	MAXIMUM INSULATION DIAMETER (mm)	PRODUCT INSULATION COLOUR CODE	WIRE STRIP LENGTH (mm)	
						min.	max.
Spare Wire Cap	Yellow One Dot	525431-1	12-10 (2.62-6.64)	.210 (5.33)	Yellow	11/32" (8.7)	3/8" (9.5)

\* Trademark of AMP Incorporated

† Trademark for DuPont

## 2. INSTRUCTIONS

*NOTE: Refer to paragraph 2.3 for insulation crimp adjustment.*

### 2.1 WIRE STRIPPING

Strip wire to dimensions listed in Figure 1.

*Note: Do not use wire with nicked or missing conductor strands.*

## 2.2 CRIMPING PROCEDURES

### 2.2.1 Terminals (Refer to Figure 2)

- Be sure terminal insulation colour code matches tool part number.
- Place terminals in dies so that wire barrel butts against locator.
- Ensure terminal is held firmly in place by the dies.
- Insert stripped wire until end of conductor butts against locator.
- Cycle tool.
- Observe dot code on finished crimp to insure that correct terminal and tool combination was used. See Figure 1.
- Refer to Figure 5 or 6 for terminal crimp inspection procedure.

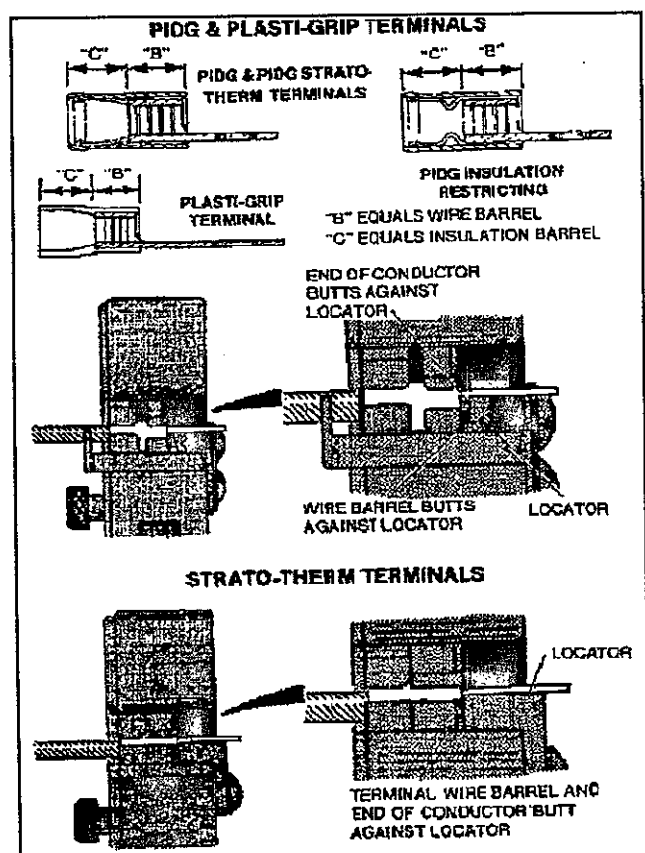


Fig 2

### 2.2.2 Butt Splices (Refer to Figure 3)

- Be sure splice insulation colour code matches tool part number. See Figure 1.
- Depress locator. Position splice in dies so that locator seats in window indent of splice.
- Ensure splice is held firmly in place by the dies.
- Insert stripped wire unit end of conductor butts against splice without stop.
- Cycle tool.
- To crimp other half of splice, turn splice or tool around. Position uncrimped half in dies and follow same procedure used to crimp first half of splice.
- Observe dot code on finished crimp to insure that correct splice and tool combination was used. See Figure 1.
- Refer to Figure 5 for splice crimp inspection procedure.

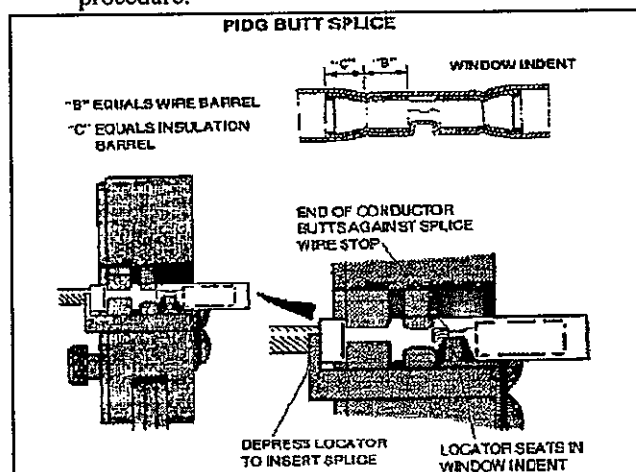


Fig 3

### 2.2.3 Spare Wire Caps (Refer to Figure 4)

- Strip wire to dimensions listed in Figure 1.  
*NOTE: Do not use wire with nicked or missing conductor strands.*
- Place tool insulation adjustment pin in the No.3 position.
- Insert cap between crimping dies.
- Depress locator so that end of cap resets against the recessed surface of the locator as shown in Figure 4.
- Close dies until cap is held firmly in place. Do not deform cap wire barrel.
- Insert stripped wire into cap until conductor bottoms.
- Hold wire in position and complete crimp by cycling the tool.
- Refer to Figure 6 for spare wire cap crimp inspection procedure.

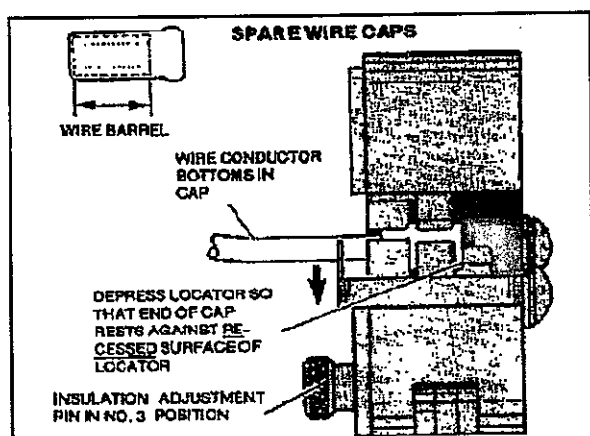


Fig 4

## 2.3 INSULATION CRIMPING ADJUSTMENT

### 2.3.1 PIDG Terminals and Splices

*NOTE: PIDG terminals and splices feature an insulation grip.*

The insulation crimping section of the heavy head has three position: 1 - Tight, 2 - Medium, 3 - Loose.

- Insert insulation crimp adjustment pin in No.3 position. See Figure 5.
- Position terminal or splice in crimping dies as shown in Figure 2 or 3 to hold terminal or splice in place.
- Insert UNSTRIPPED wire into ONLY the insulation barrel (see Figure 2 or 3) of the terminal or splice.
- Cycle tool to complete the crimp. Remove crimped terminal or splice and check insulation support as follows: bend the wire back and forth once. The terminal or splice should retain grip on wire insulation.
- If the wire pulls out, set insulation crimp adjustment pin in next tighter position (No.2).
- Perform another crimp and repeat adjustment as necessary until desired insulation grip is obtained. Do not use a tighter setting than required. Ensure both insulation crimp adjustment pins are in the same position.

### 2.3.2 PLASTI-GRIP Terminals

*NOTE: PLASTI-GRIP terminals feature a wire insulation support only.*

The insulation crimping section of the heavy head has three positions: 1 - Tight, 2 - Medium, 3 - Loose.

- Position No.3 is for wire having a large insulation diameter.
- Position No.2 is for wire having a medium insulation diameter.
- Position No.1 is for wire having a small insulation diameter.

Terminal insulation should ideally be in contact with wire insulation after crimping.

## 3. CRIMP INSPECTION

Inspect crimped terminals, splices and spare wire caps by checking the features described in Figures 5 and 6. Use only the terminals, splices and caps that meet the conditions shown in the "ACCEPT" column.

"REJECT" terminals, splices and caps can be avoided through careful use of instructions in Section 2, and by performing regular tool maintenance as instructed in Section 4.

## 4. MAINTENANCE/INSPECTION PROCEDURE

AMP recommends that a maintenance/inspection program be performed periodically to ensure dependable and uniform terminations. Tools should be inspected at least once a month. Frequency of inspection may be adjusted to suit your requirements through experience. Frequency of inspection is dependent upon:

1. The care, amount of use, and handling of the tool.
2. The type and size of the products being crimped.
3. Skill level of the operator.
4. Presence of abnormal amounts of dusts and dirt.
5. Your own established standards.

All tools are thoroughly inspected prior to shipment. Because of the possibility of damage during shipment, new tools should be inspected in accordance with insertions in Section 4 when the tools are received in your plant.

Due to the precision design, it is important that no parts of these tools be interchanged expect those replacement parts listed in Figure 11.

### 4.1 Cleaning

- Immerse heavy head in degreasing compound to remove accumulated dirt, grease and foreign matter. Ensure degreasing compound does not attack paint or plastic.  
*NOTE: When suitable degreasing compound is not available, tool may be wiped clean with a lint-free cloth.*
- Remove remaining degreasing compound with a lint-free cloth.
- Relubricate tool as instructed in paragraph 4.3 before placing it back in service.

### 4.2 Visual Inspection

- Visually inspect tool for missing pins or retaining rings. If parts are missing or defective, refer to Figure 11 for customer replaceable parts.
- Inspect the die closure surfaces for flattened, pitted or chipped conditions. Although dies may gauge within permissible limit, worn or damaged die closure surfaces are objectionable and can affect crimp quality. Examples of possible damage to die closure surfaces are shown in Figure 7.

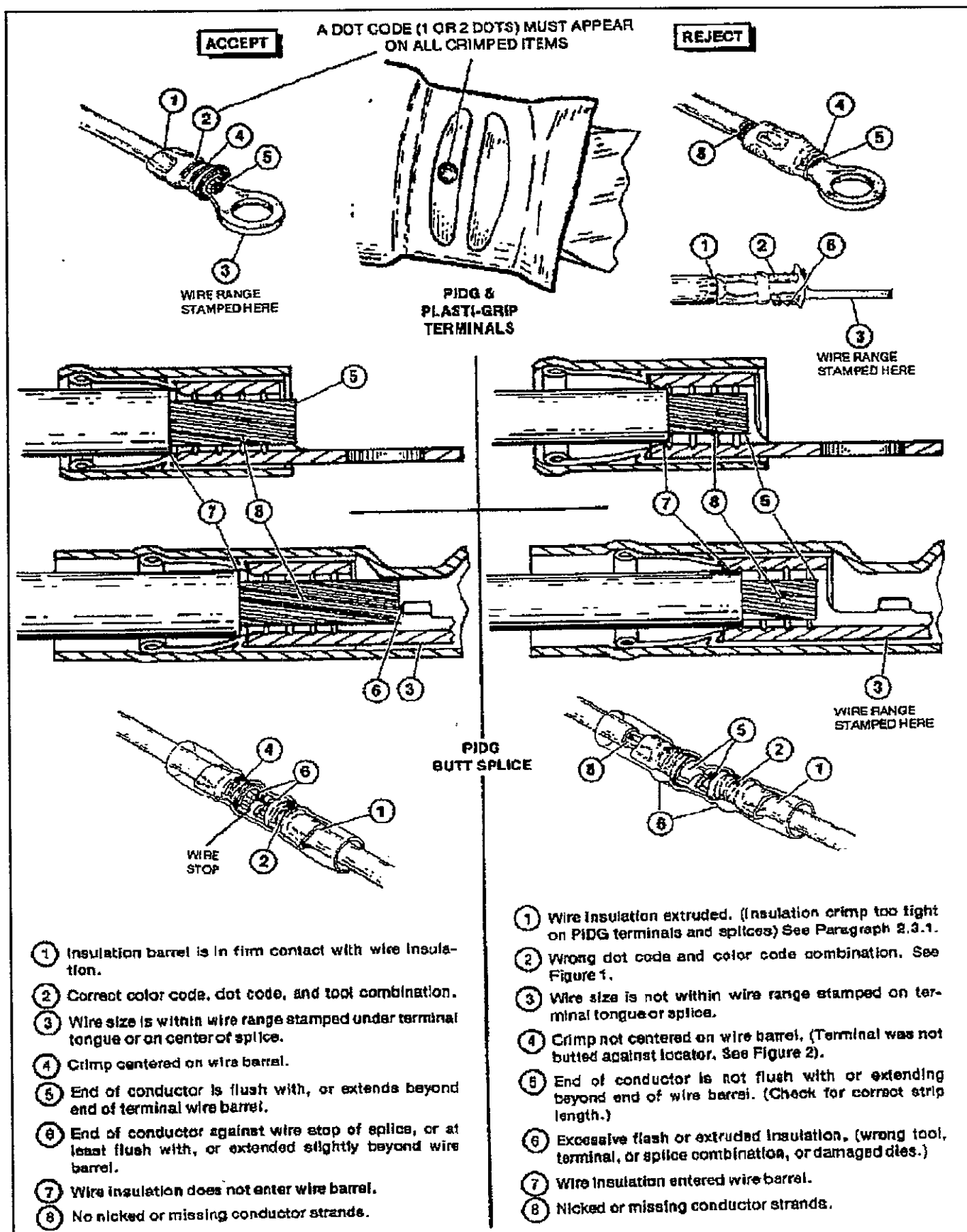


Fig 5

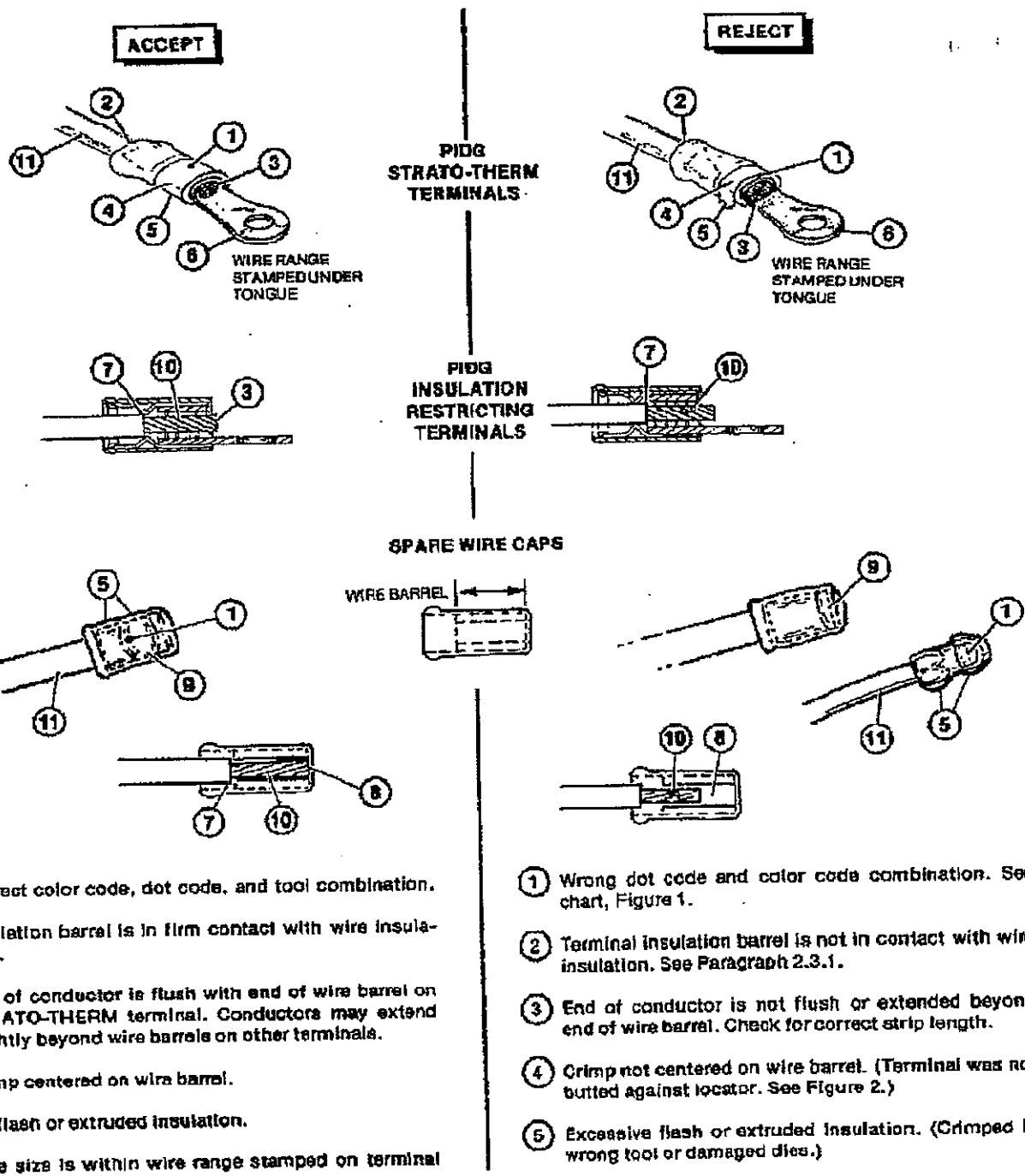


Fig 6

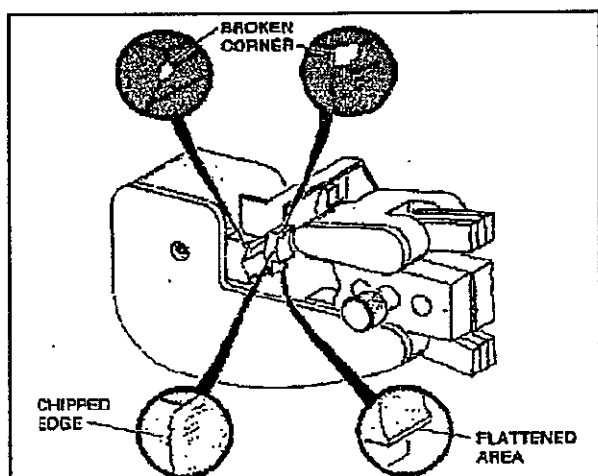


Fig 7

#### 4.3 Lubrication

Lubricate all pins, pivot points and bearing surfaces with a good grade S.A.E. #20 non detergent motor oil as follows:

- Tools used in daily production - Lubricate daily
- Tools used daily (occasional) - Lubricate weekly
- Tools used weekly - Lubricate monthly

Wipe excess oil from tool, particularly from die closure area. Oil transferred from die closure area onto certain terminations may affect electrical characteristics of an application.

#### 4.4 Die closure inspection

Each tool is inspected for proper die closure before shipment. However, inspection of die closure for excessive wear is required periodically.

NOTE: The following plug gauging information for insulation crimp die closures is provided for customers specifically requiring this information. If plug gauging is not required, inspect the die closures using an alternate procedure, i.e., performing the "Insulation Crimp Adjustment" (see para 2.3) and "Visual Inspection" (see para 4.2).

Die closure inspection is accomplished using GO/NO-GO plug gauges. AMP neither manufactures nor sells plug gauges. A suggested plug gauge design and GO/NO-GO dimensions for plug gauge members are given in Figures 8 and 9. The following procedure is recommended for inspecting die closures.

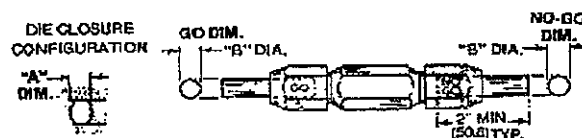
- (a) Clean oil or dirt from the die closures and plug gauge members.
- (b) Close crimping dies until the wire barrel die has bottomed. Do not apply additional excessive pressure.
- (c) With wire barrel dies bottomed, inspect the wire barrel crimp die closure using the proper plug gauge. Press the spring-loaded locator down and hold gauge in alignment with the die closure.

NOTE: On the PIDG STRATO-THERM terminal crimping tool, it will be necessary to remove the locator to insert gauge in wire barrel crimp die closure.

Carefully try to insert, without forcing, the GO member. See Figure 10, Detail A. The GO member must pass completely through the die closure.

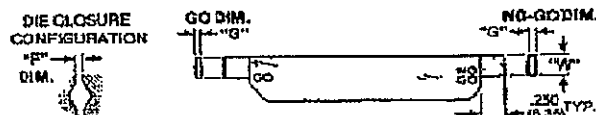
- (d) Try to insert the NO-GO member. The NO-GO member may enter partially, but must not pass completely through the die closure. See Figure 10, Detail A.
- (e) Insert insulation crimp adjustment pin in the No.1 position.
- (f) Inspect the insulation crimp die closure using the proper plug gauge in the same manner as steps (c) and (d). See figure 10, detail B.
- (g) Reinstall locator on the PIDG STRATO-THERM terminal crimping tool.
- (h) If both wire barrel and insulation crimp die closures meet the GO/NO-GO gauge conditions, die closures are considered dimensionally correct. If die closures do not conform with GO/NO-GO gauge conditions, contact your local AMP field representative.

#### Suggested Plug Gauge Design - Wire Barrel Crimp



TOOL PART No.	DIE CLOSURE DIMS "A"†		GAUGE MEMBER †† DIMS "B" DIA.	
	GO	NO-GO	GO	NO-GO
525430	.1690 (4.293)	.1750 (4.445)	.1690-.1693 (4.293-4.300)	.1749-.1750 (4.442-4.445)

Fig 8



TOOL PART No.	DIE CLOSURE DIMS "F" † (Set) Insulation Adjustment Pin at No. 1 Position		GAUGE MEMBER †† DIMS "G"		WIDTH "W" (Max.)
	GO	NO-GO	GO	NO-GO	
525431-1	.0640 (1.626)	.0640 (2.134)	.0640-.0643 (1.626-1.633)	.0839-.0840 (2.131-2.134)	.171 (4.34)

† Die closure dimensions apply when wire barrel dies are bottomed, but not under pressure.

†† Material - Tool Steel.

Fig 9

#### 4.5 Replacement Parts

It may be advantageous to stock certain replaceable parts to prevent loss of production time. Figure 12 lists the customer replaceable parts that can be purchased from : AMP Great Britain Ltd  
Terminal House  
Stanmore, Middx  
HA7 4RS

When repair is necessary, return heavy head (along with a written description of the problem) to:

AMP of Great Britain Ltd  
Barton Tors  
Bideford, North Devon  
EX39 4HE  
Tel: 01237 428640

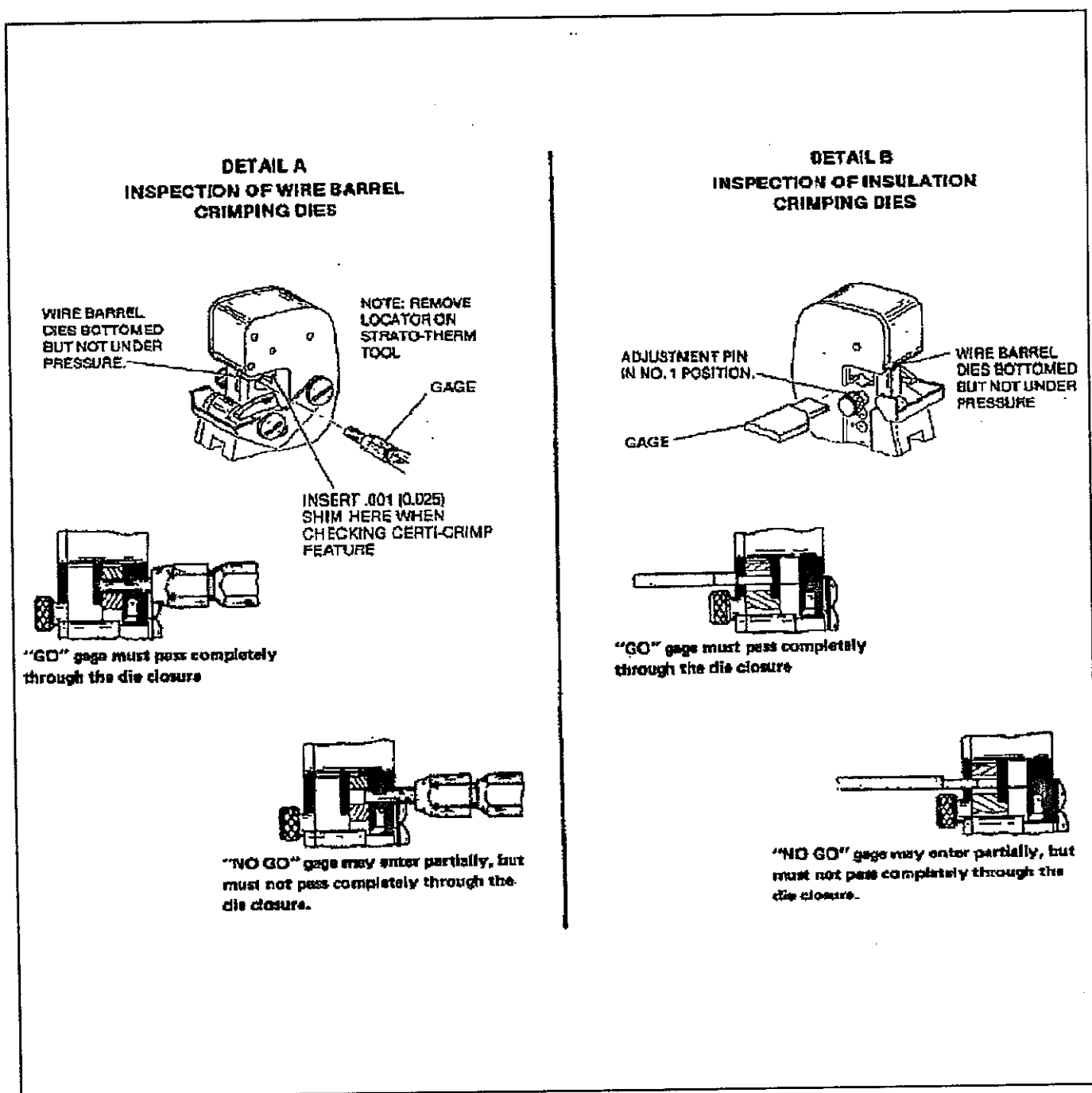
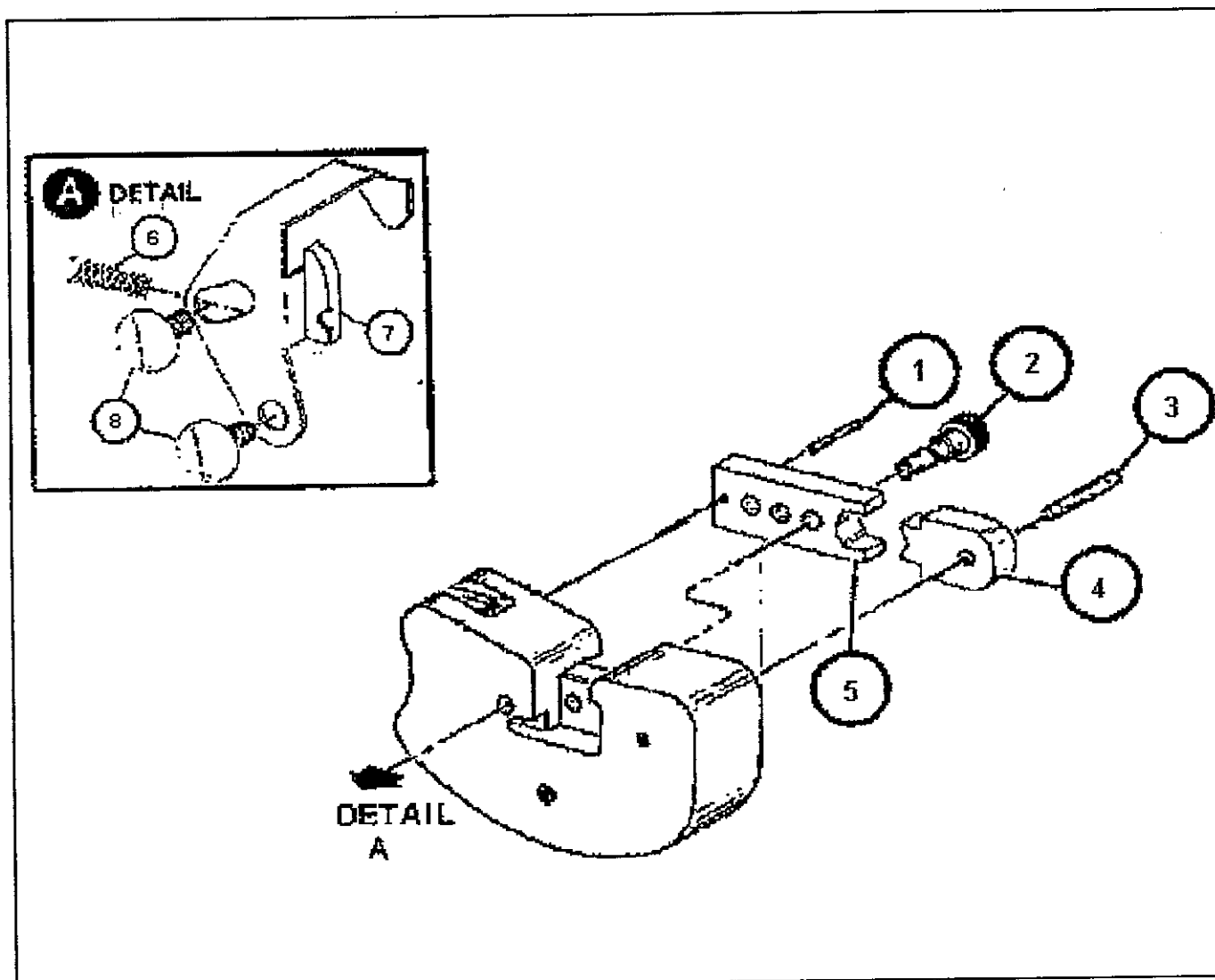


Fig 10



Item	Description	Qty.	Tool Numbers and Component Part Numbers
			525431-1 Detail A
1	Pin	1	21028-4
2	Pin, Assy. Adj.	1	303848-2
3	Pin	1	5-21028-7
4	Stationery Die - Insul.	1	306106-2
5	Moving Die - Insul.	1	306107-2
6	Spring	1	7-59683-6
7	Locator, Stop	1	306110-9
8	Screw	2	6-306131-4

*Fig 11*