

**AMP ULTREX\* 5/7.5mm Pitch Connector**

アンプ・ウルトレックス 5/7.5mm ピッチ コネクタ

**Contents**

First 5 pages following this top sheet : English version  
Next 5 pages : Japanese version

When only one of above versions is supplied to customers, this top sheet shall be attached.

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カスタマーに英語または日本語版の片方のみを提出する場合は、このトップシートが必ず添付されなければならない。

**Revision Record (改訂記録)**

Revision Letter (改訂記号)	EC number (改訂記録番号)	Date (日付)
O1	FJ00-2245-01	21 SEP 2001

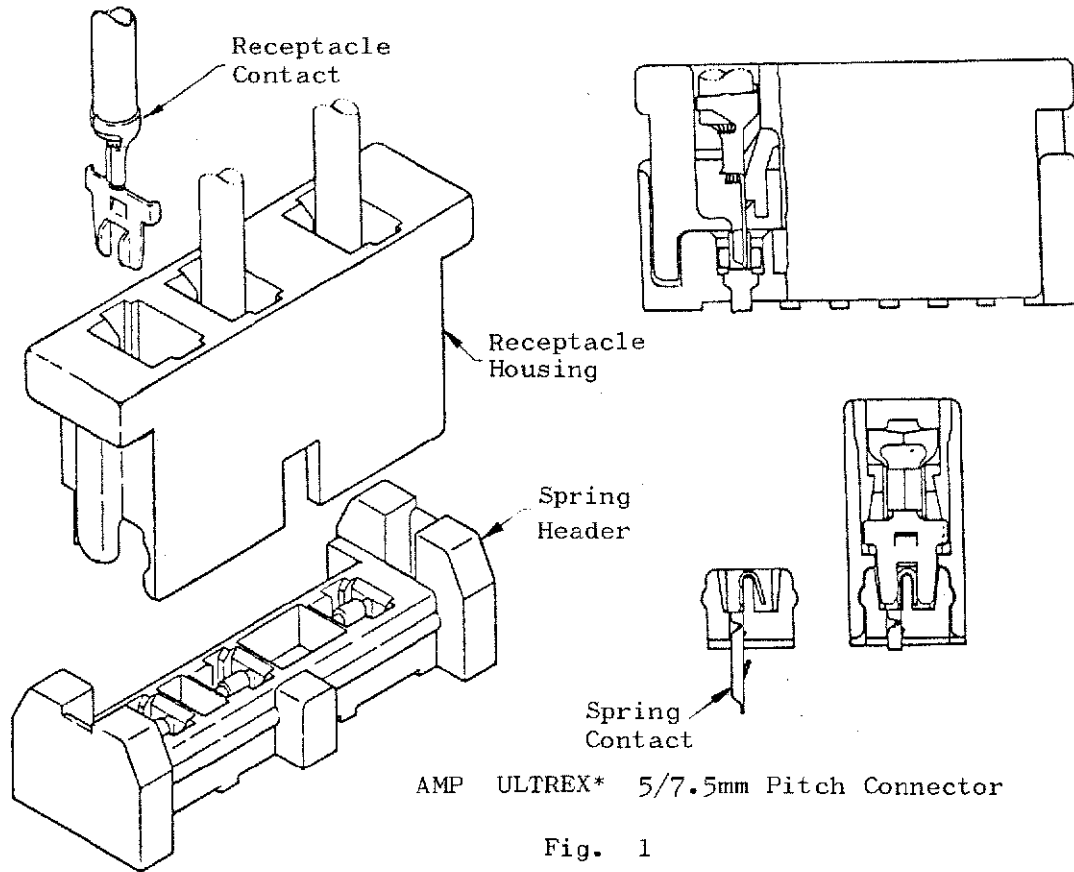
**Outline of the latest revision (最新改訂の概要)**

Combine two language versions into one document. No change was made on product specification. Change document number to current format.

2ヶ国語の文書を一括管理とした。仕様内容に変更なし。

411-5202 (was IS-202J)	
Released	1-6-83
Revised	21 SEP 01
Rev.01	

1. Nomenclature of Product:



2. Applicable Product Numbers:

Product Part Number	Descriptions
171600	Receptacle Contact, AWG #24-#20
171602	Receptacle Contact, AWG #22-#18
172627, 173268	Receptacle Housing
172629, 173270	Spring Header

3. Applicable Specifications:

Specification Nos.	Descriptions
108-5171	Product Specifications
114-5074	Application Specification

#### 4. Crimping:

- 4.1 Before you start crimping operation, it is important for you to check and see if the product you are going to crimp for processing are free from defects such as deformation and discoloration.
- 4.2 For detailed requirements for crimping contact, refer to AMP Application Specification, 114-5074, which can be supplied to the customer upon request.

#### 5. Handling Crimped Wire Leads:

Try to handle crimped wire leads moderately always. After crimping, contacts often tend to entangle and are caught badly altogether. At this time, do not try to separate them only by pulling the parts with short-tempered manner, if you do so, your situation becomes worse, and the parts will be deformed. NEVER force to separate them. Do separate them with cool and calm attitude, having patient attention not to cause deformation of contact at any portion. This is very important to keep good quality of the connector after assembly.

#### 6. Mounting Contacts on Housing:

Care must be taken to insert contact into housing cavity at the correct position. To do this, hold the contact in the right direction, and push into the cavity until it butts against the bottom of the cavity, where locking lance engages to secure the contact in position.

After insertion of contact, pull back the wire lightly to see if the contact is securely locked. After the contact is seated in the cavity, contact may rattle a little there since a proper slack is given to the contact positioning.

When crimped wire is thin and soft, it may be uneasy to push contact into correct position of housing. At this time, DO NOT FORCE to push in, DO NOT TWIST the wire, since rough handling will cause damage of crimped wire strands.

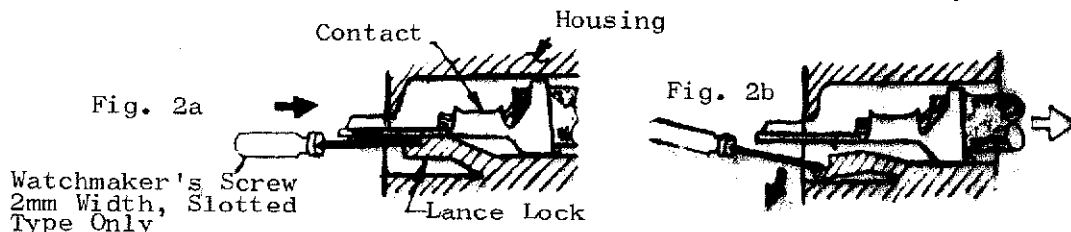
When you feel it is uneasy to load the contact, it is wise you use AMP insertion tool, P/N 724797-1 according to the instruction sheet IS-224J which is attached to the tool.

The insertion tool noted above has been designed specifically for insertion of AMP ULTREX contact. When improper insertion tool is used for this purpose, contact is often pushed out from the other side of housing, dislodging from the correct position. Once dislodged from the correct position by such mishandling, the contact is often damaged and is no longer serviceable. Such defective parts should be discarded, and replace with good parts.

#### 7. Removal of Contact from Housing:

For extraction of contact from housing, use a small watchmaker's screw driver having a end width of 2mm maximum. For this purpose, cross-point screw driver is not applicable for use.

Insert tip end of the screw driver into the housing cavity from the connector mating side along the lower surface of contact, until it reaches the lance lock of housing. Then, lightly push down the tip end of the screw driver, the contact is unlocked and it can be removed by pull from the wire entry side.

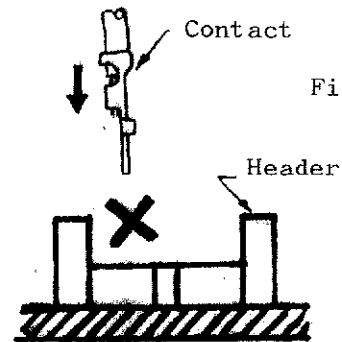


Reloading the removed contact again into the cavity will be not exceeding more than once.

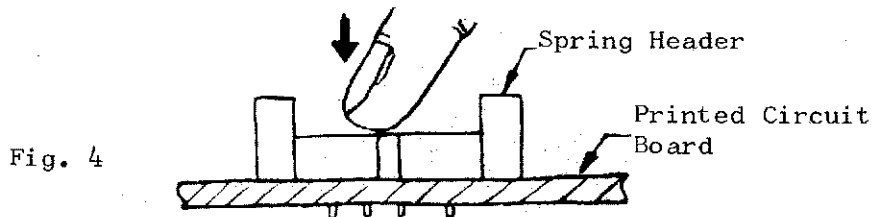
### 8. Handling of Spring Header:

Spring header should be kept intact before putting into practical use, in order to maintain predesignated performance capability. Avoid inserting parts other than designated such as:

- (1) Receptacle contact which is not loaded in housing
- (2) Probe of tester etc.



When to mount spring header onto printed circuit board, apply the header on PCB flatly, and press the middle part of the header with the fingers, so that it will fit closely over the PCB.



### 9. Mated Condition of Connector with Post Header:

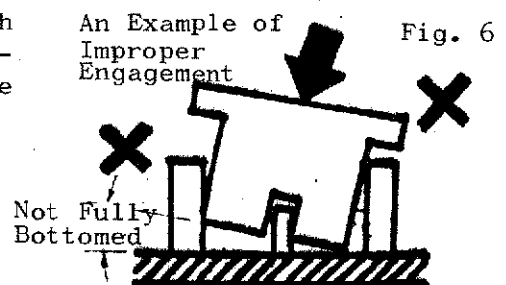
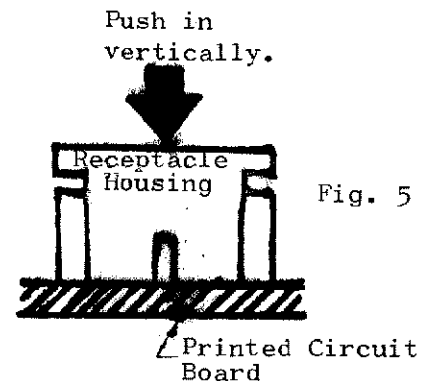
Connector housing should be mated with post header completely in parallel without gap. The fully bottomed condition is automatically obtained, only if the connector housing is placed to engage and pushed down straight vertically, until it bottoms.

When the connector bottomed and seated in place rightly, a clear clicking sound is heard to show that positive locking is completed.

Note: It is advised that connector insertion must be always done in the manner to push down straight and vertically.

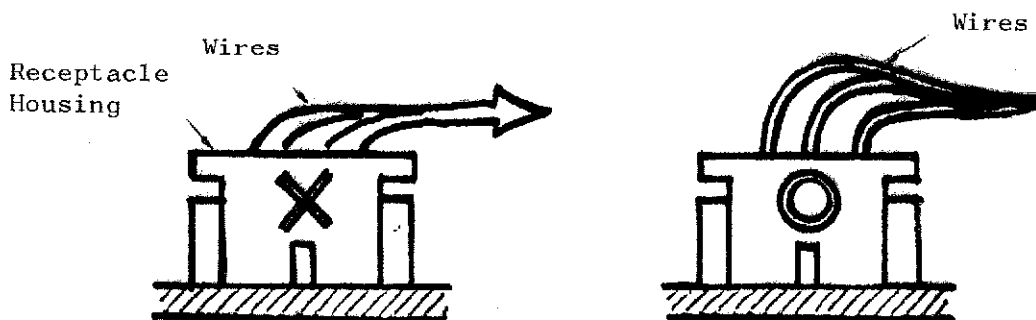
In some cases, however, bias insertion may occur by careless operation handling, which often causes insufficient mating of connector, since the edge of connector may become conflicting against the side wall of post header, and the connector is held aside from the fully bottomed engagement.

The clicking sound may be or may be not heard clearly at the full engagement of connector, depending upon the condition of product in addition to the assembly method of application. No matter whether it is heard or not, there is no difference of function of connector has been experienced.



### 8. Leading Out of Crimped Wires from Housing:

Wires leading out of connector housing must have slack properly, at the portion next to housing outlet. During practical wiring instrumentation, always pay attention to avoid direct affection of wire tension by taking proper amount of slack as well as clamping wire bundles at the proper lengths. Try to carry harness assemblies by holding total termination of connector and wire bundles at the same time, eliminating undue jerking load to attack the connector wiring.



Excessive tension attacking wire termination of connector, will often cause a halfway mating depth of connector, or disengagement of connector.

It is important to give slack to the wires of the portion, leading out of connector housing as shown above.

### 9. Extraction of Connector:

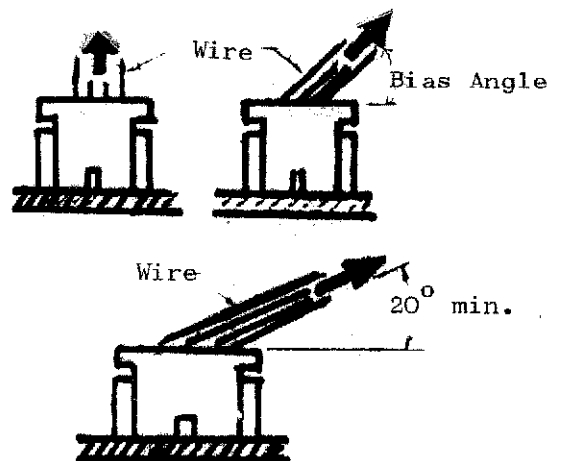
Be sure to disengage connector from post header, by holding more than two wires and pulling moderately at the same time.

When connector disengagement is felt tight, pull the wires in a bias direction to the connector working axis. The housing will be easily disengaged.

For extraction of connectors the bias angle for pulling the wire should be  $20^{\circ}$  approximately to the upper edge line of connector, as shown.

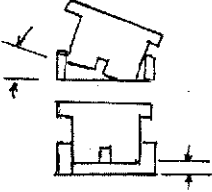
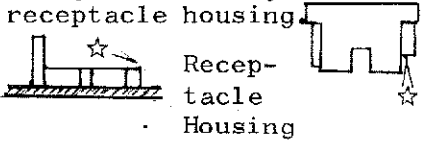
Tight,  
Uneasy to  
Disengage

Easy to Disengage



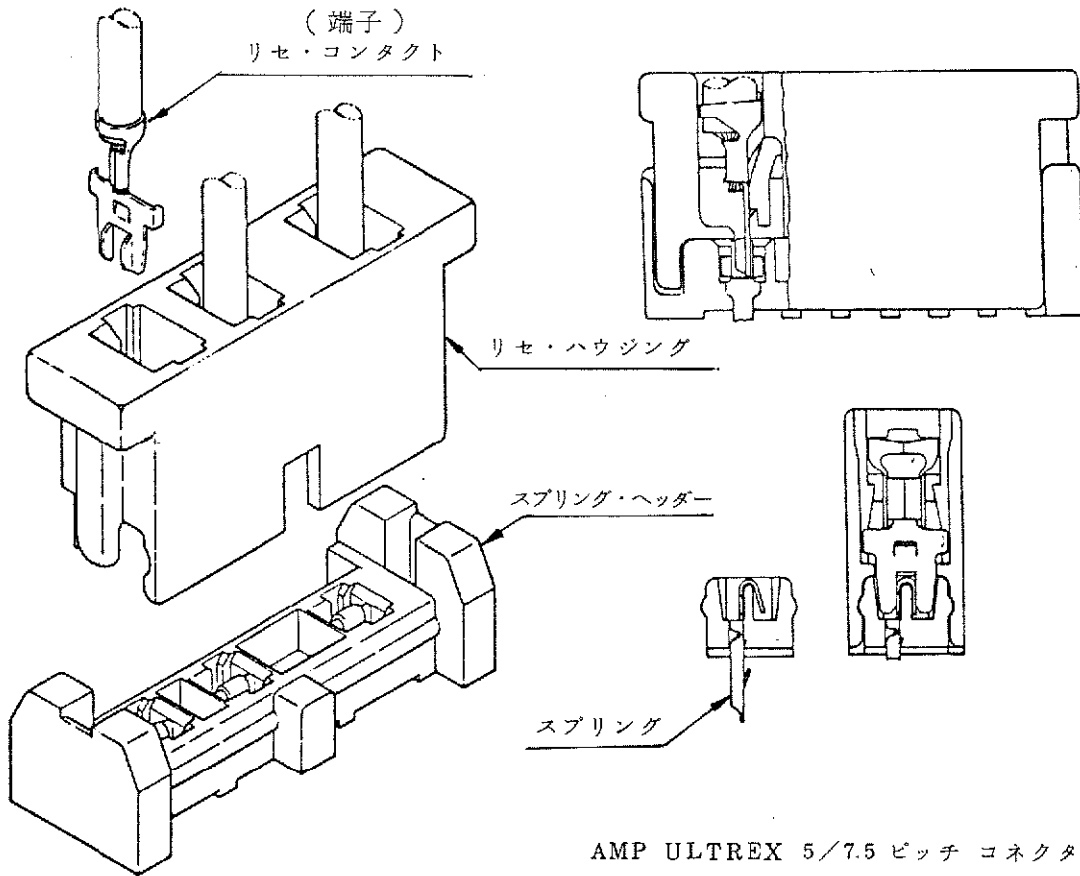
12. Factors to Cause Contact Failure:

Most contact failures will attribute to possible cause as the reason.  
The major reasons to result failure are listed in the following chart.

Possible Cause of Contact Failure	Symptom	Remedy
<p>1. Shortage of Contact Insertion Depth into Receptacle Housing:</p> <p>(Refer to Para. 8 in Sheet 3 of 5.)</p>	<p>Connector fails to make termination contact with spring header, since the insertion depth of receptacle contact is short and insertion of contact into housing is incomplete.</p> <p>When contacts crimped on thin and soft wire are used for insertion, insertion depth often becomes short.</p>	<p>When shortage of contact insertion is found, push the contact further into the connector cavity by finger or by using insertion tool. For insertion of thin or soft wire crimped contact, use AMP specified insertion tool.</p>
<p>2. Insufficient Mating of Connector with Post Header:</p> <p>(Refer to Para. 9 in Page 3 of 5.)</p> 	<p>(1) Halfway Mating Depth: (Mode: "A") All or some of contacts fail to make circuit continuity since the connector insertion is in bias direction to working axis.</p> <p>(2) Halfway Mating Depth: (Mode: "B") All or some of contacts fail to make circuit continuity since the connector is not fully mated, being short in connector mating depth.</p>	<p>When halfway mating depth of connector is found, push down the connector to bottom in the place over the post header.</p> <p>Confirm if the lower edge of connector is just flush with the edge of post header.</p>
<p>3. Disengagement or Halfway Depth Engagement:</p> <p>(Refer to Para. 9 in Sheet 3 of 5.)</p>	<p>After mating connector with post header with the right way of insertion, disengagement or halfway depth engagement takes place resulting contact discontinuity by a jerk applied to the crimped wire bundle.</p>	<p>When halfway mating depth or disengagement of connector is found, apply rightly onto the post header and push down in the place until the connector bottoms.</p> <p>Confirm if the lower edge of connector is just flush with the edge of post header.</p>
<p>4. Deformation and/or Damage of Product Connector and Header</p>	<p>(1) Deformation of Contact (2) Deformation of spring contact in post header. (3) Damage or breakage of header or receptacle housing</p>  <p>Receptacle Housing</p>	<p>When abnormal parts are found, discard them and use new, good parts.</p> <p>Reworking defective parts will spoil reliability of total product functional application.</p> <p><u>Never use defective parts after reworking.</u></p> <p>They will not pay for it.</p>

411-5202 (was IS-202J)	
作成年月日	1-6-83
改訂年月日	21 SEP 01

1. 製品の名称



AMP ULTREX 5/7.5 ピッチ コネクタ

2. 適用製品

製品名	型番	備考
リセ・コンタクト	171600	AWG#24-#20
リセ・コンタクト	171602	AWG#22-#18
リセ・ハウジング	172627, 173268	2P~6P
スプリング・ヘッダー	172629, 173270	2P~6P

3. 適用規格

規格値	No.
製品仕様書	108-5171
取付適用仕様書	114-5074

《アンプ・ウルトレックス作業注意事項》

4. 圧着

- ① 圧着作業を始める時、圧着後の端子に変形がないことを確認して下さい。
- ② 圧着仕様については、AMP 取付適用仕様書 114-5074 を参照願います。

5. 圧着品の取扱い

圧着品において、端子どろしがからんでしまった場合、無理に引き離すと端子が変形することがあります。

➡ からんだ時は端子を変形させない様ほぐして下さい。

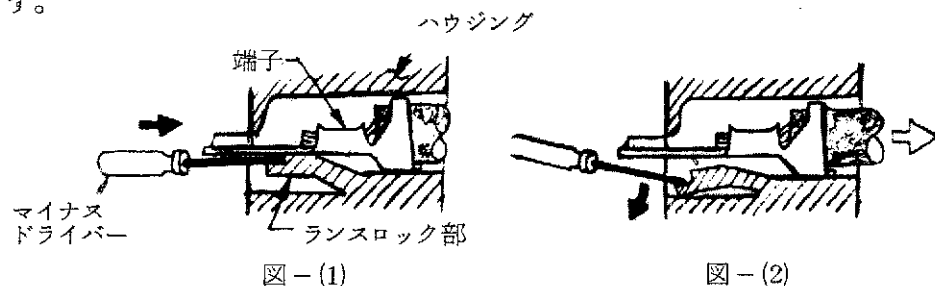
6. ハウジングへの端子装着

圧着された端子をハウジングに装着する際は、端子が挿入方向において止まるまで確実に押し込んで下さい。

➡ ハウジングの装着後端子の挿入不足をチェックするため、電線を軽く引張るか、あるいは電線を前後に動かして、ハウジング内で、端子のガタがある事を確認して下さい。

7. ハウジングからの端子の取り出し

- ① 取り出し治具として先端幅が 2mm 以下のマイナスドライバーを準備願います。
- ② ドライバー先端を図- (1) の様に押し込みランスロック部先端を下方に押し下げながら電線を引き抜くと端子は取り出せます。
- ③ 取り出した端子の再使用回数は 1 回とします。

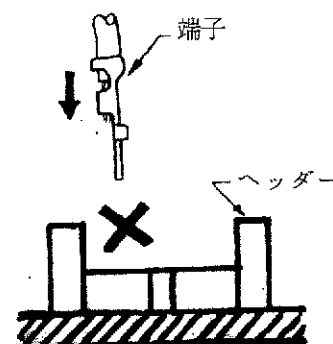




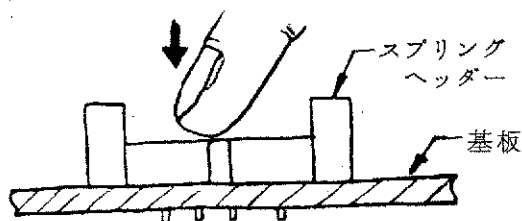
## 8. スプリングヘッダーの取扱い

ヘッダーのスプリング部に、次の様なものを差し込まないで下さい。

- ① ハウジングに装着されていない状態の裸の端子
- ② テスターのプローブ等



スプリングヘッダーを基板へ装着する際は、スプリングヘッダーの中央部を指で押し付けて、スプリングヘッダー底面が基板面に密着する様に取り付けて下さい。

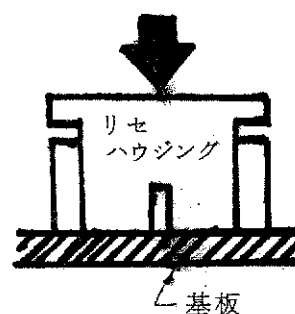


## 9. コネクタの嵌合

コネクタを嵌合する際は、リセ・ハウジングの中復部を持ち、基板面に対し垂直に押し込む様にヘッダーに嵌合させて下さい。

コネクタ嵌合完了の際「カツッ」というロック音で作業完了の確認ができます。

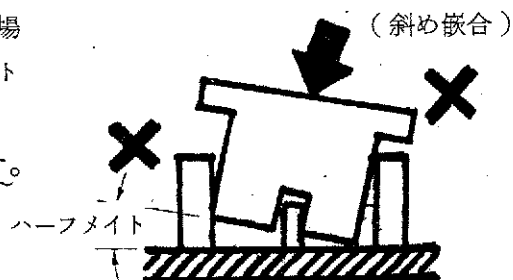
(垂直に押し込む)



- 〔注1〕 リセ・ハウジングを斜めに嵌合させた場合、押し込みにくいいため、ハーフメイト（中途嵌合）発生の恐れがあります。

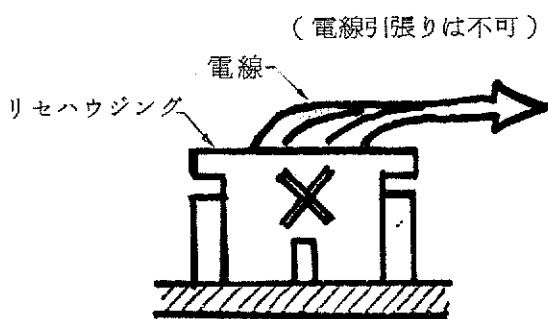
→ ハーフメイトは導通不良の原因です。

- 〔注2〕 製品の状態や作業方法により、コネクタ嵌合完了時のロック音が弱い場合もありますが、機能上何ら問題はありません。

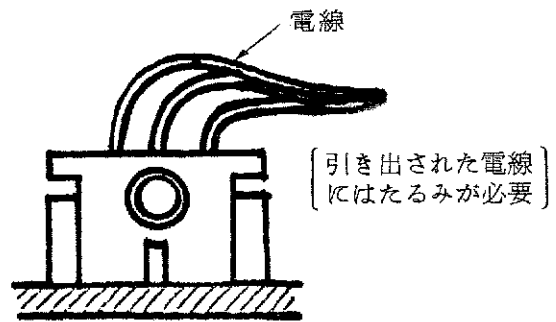


10. コネクタからの電線の引き出し

- ① コネクタの嵌合状態において、電線が常に引張られるような実装は避けて下さい。
- ② また、ハーネス実装時においても、嵌合後のコネクタの電線引張荷重がかゝらない様作業して下さい。



→ 電線の引張りは、ハーフメイトやコネクタ抜け発生の原因です。

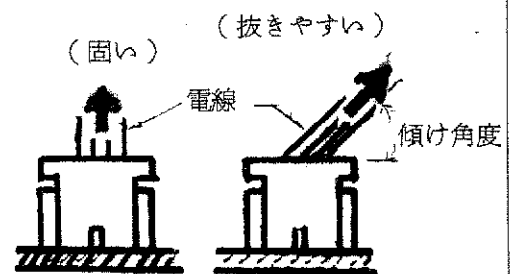


→ 実装状態において、電線にたるみを持たせること。

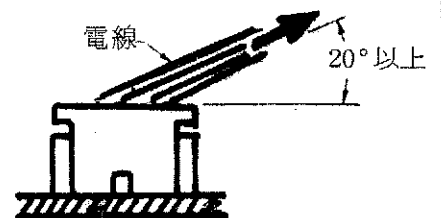
11. コネクタ引抜作業

コネクタを離脱する際は、必ず2本以上の電線を同時につかんで引抜いて下さい。

抜きづらい場合は電線を傾けて引抜くと比較的容易に抜けます。

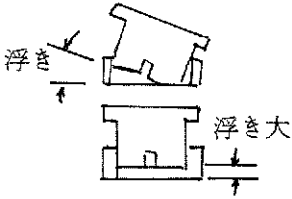




[注1] 電線を傾けてコネクタを引抜く場合は必ず傾け角度 20°以上 で抜いて下さい。



## 12. 接 触 不 良 要 因

コネクタの接触不良の発生要因として下記内容が考えられますので、本内容に関しては特に注意する様にして下さい。

No.	接触不良要因	内 容	処 置
1	リセ・ハウジングへの端子の挿入不足	リセ・ハウジングへ端子が完全に挿入されていない場合、その箇所の接点が接触しない。	挿入不足品は、手でそのままの状態から更に押し込んで下さい。
2	コネクタの嵌合不良 	(1) <u>ハーフメイト①</u> ヘッダーにリセ・ハウジングが傾斜して嵌合されている場合、ハウジングの浮いている箇所の接点が接触しない。  (2) <u>ハーフメイト②</u> ヘッダーにリセ・ハウジングを充分押し込んでいない場合、全極の接点が接触しない。	ハーフメイトの製品は、そのままの状態からリセ・ハウジングをさらに押し込んで、嵌合完了を確認して下さい。
3	コネクタ抜け	コネクタを正規に嵌合させた後引き出されている電線を強く引張ると、上記No.2に示すハーフメイトまたはコネクタ抜けが発生し接点が外れる。	同 上
4	製品の変形・破損	(1) 端子の変形 (2) ヘッダー内のスプリングの変形。 (3) ヘッダーまたはリセ・ハウジングの破損。  (ヘッダー)  (リセハウジング) 	万一、製品に異常が見受けられた場合は、その製品は使用しないで下さい。 また変形品を手直ししての使用は絶対にしないで下さい。