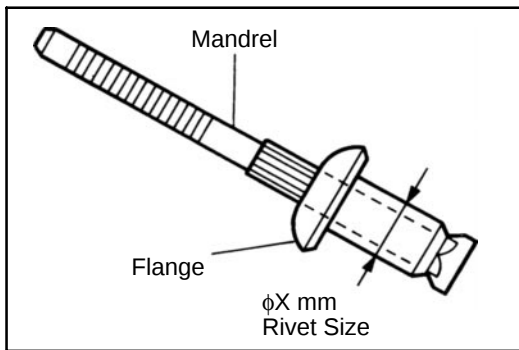
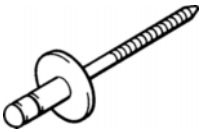
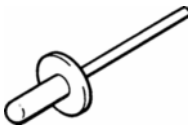
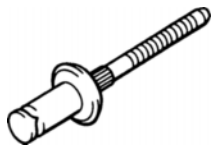
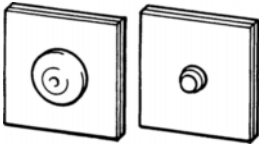
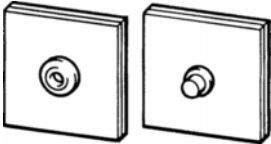
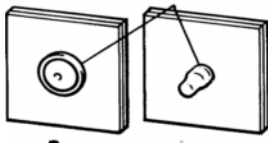
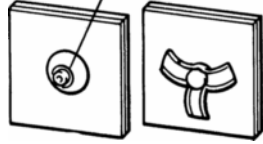




RIVET REMOVAL AND INSTALLATION

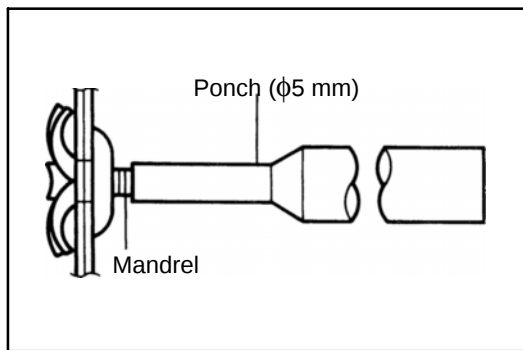
PARTS NAME AND VARIETY OF RIVET

	Aluminum-Rivet	Steel-Rivet	Waterproof-Rivet	T-Rivet
External Appearance	Before installation 	Before installation 	Before installation 	Before installation 
	After installation  Outer Inner	After installation  Outer Inner	After installation Waterproof Seal  Outer Inner	After installation Mandrel  Outer Inner
Charac- teristics	- Small nonwaterproof rivet - No magnetic adherence	- Small nonwaterproof rivet - Magnetic adherence	- Small waterproof rivet - Waterproof seal	- Large waterproof rivet - Mandrel sticks out after installation

RIVET REMOVAL

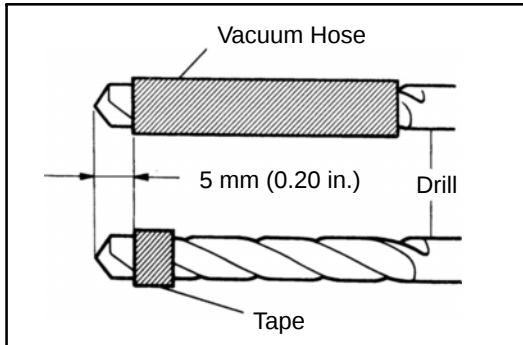
1. SELECTION OF CUTTING TOOL

	Cutting tool	Note								
Aluminum-Rivet Steel-Rivet T-Rivet with $\phi 6.4$ mm	Drill blade <table><tr><th>Rivet size</th><th>Blade size</th></tr><tr><td>$\phi 4$ mm</td><td>$\phi 4$ mm</td></tr><tr><td>$\phi 4.8$ mm</td><td>$\phi 5$ mm</td></tr><tr><td>$\phi 6.4$ mm</td><td>$\phi 6.5$ mm</td></tr></table>	Rivet size	Blade size	$\phi 4$ mm	$\phi 4$ mm	$\phi 4.8$ mm	$\phi 5$ mm	$\phi 6.4$ mm	$\phi 6.5$ mm	• Cutting can be done with drill blade or rivet cutter for an aluminum-rivet with $\phi 4.8$ mm. • When a rivet cutter is used for an aluminum-rivet (except $\phi 4.8$ mm), a steel-rivet, or a Trivet with $\phi 6.4$ mm, it is possible that the drill will spin abnormally damaging the rivet hole and breaking the rivet cutter.
Rivet size	Blade size									
$\phi 4$ mm	$\phi 4$ mm									
$\phi 4.8$ mm	$\phi 5$ mm									
$\phi 6.4$ mm	$\phi 6.5$ mm									
Waterproof special-Rivet with $\phi 4.0$ mm	Drill blade with $\phi 4.0$ mm									
Aluminum-Rivet with $\phi 4.8$ mm Waterproof-Rivet with $\phi 4.8$ mm or $\phi 6.0$ mm	Rivet Cutter (P/N 09060-60350) 	• When a ordinary cutter is used for a waterproof-rivet with $\phi 4.8$ mm or $\phi 6.0$ mm, the rivet can not be cut as it spins with the cutter.								



2. RIVET REMOVAL

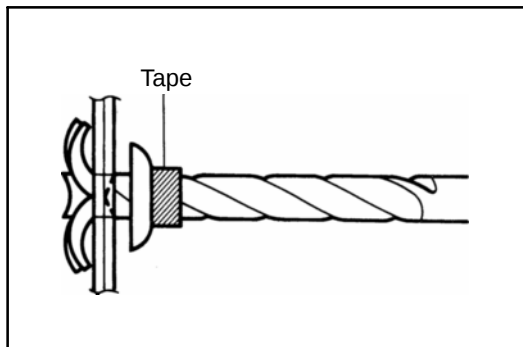
- (1) T-Rivet with $\phi 6.4$ mm:
Using a punch with $\phi 5$ mm, stamp out the mandrel.



- (2) Put tape around the drill blade 5 mm (0.20 in.) from the tip or insert a vacuum hose.

NOTE: Use of tape or a vacuum hose prevents damage to the rivet hole.

- (3) Attach the drill blade or a rivet cutter to the drill.

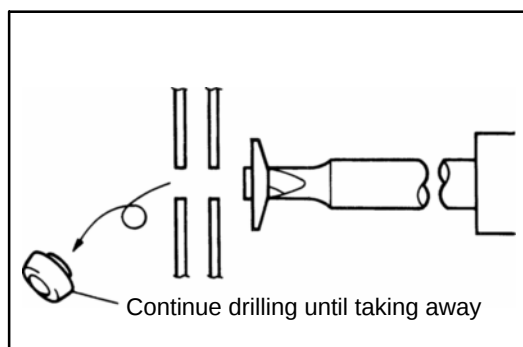


- (4) Gently and vertically put the drill to the rivet, and cut the rivets flange.

NOTE:

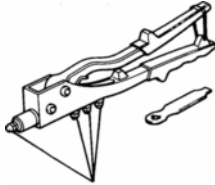
- While upward drilling, wear a protective glasses.
- If a drill is strongly pushed deeply in to a rivet, the rivet can't be cut as it spins together with the drill.
- Prizing the hole with a drill can lead to damage to the rivet hole or the breaking of the rivet cutter.
- Take care as the cut rivet is hot.

- (5) Aluminum-Rivet and Waterproof-Rivet with $\phi 4.8$ mm or $\phi 6.0$ mm:
Even if flange is taken off, continue drilling and push out remaining fragments with the drill.



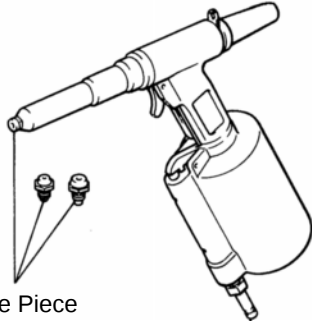
- (6) Steel-Rivet:
If the flange is taken off, stop drilling and pull out the remaining fragments with a pliers.
- (7) T-Rivet with $\phi 6.4$ mm:
If the flange is taken off, stop drilling and push out the remaining fragments with a punch with $\phi 5$ mm or pull out the remaining fragments with pliers.

Hand Riveter



Nose Piece

Air Riveter (P/N 09050 - 20010)



Nose Piece

RIVET INSTALLATION

1. RIVET INSTALLATION

- (1) Apply touch-up paint at the area.
- (2) Select an installation tool.

Item	Installation tool
Aluminum-Rivet Waterproof-Rivet with $\phi 4.8$ mm	Hand Riveter or Air Riveter
Steel-Rivet Waterproof-Rivet T-Rivet with $\phi 6.0$ mm with $\phi 6.4$ mm	Air Riveter

- (3) Select the smallest a nosepiece possible for a rivets mandrel.

NOTE: Wrong selection of a nose piece may cause the riveter to be damaged or bad tightening.

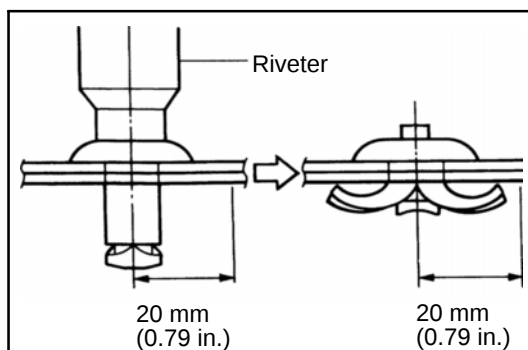
<Reference> Nose piece of Air Riveter

Parts Name	Parts Number	Color	Rivet type
Nose piece No. 1	09050-02020	Silver	$\phi 4.0$ mm Aluminum $\phi 4.0$ mm Steel $\phi 4.8$ mm Waterproof
Nose piece No. 2	09050-02030	Copper	$\phi 4.8$ mm Aluminum $\phi 4.8$ mm Steel
Nose piece No. 3	09050-02040	Black	$\phi 6.4$ mm T-Rivet
Nose piece No. 4	09050-02050	Black	$\phi 4.0$ mm Waterproof Special

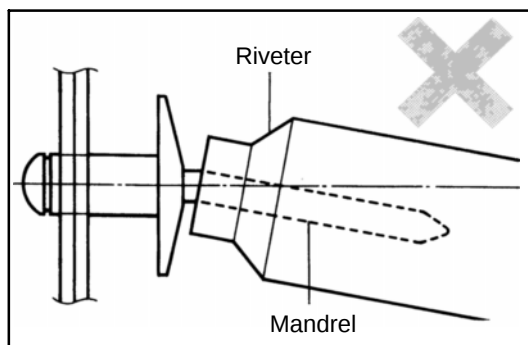
- (4) Insert the nosepiece to the riveter and then the mandrel of the new rivet into the nose piece
- (5) Vertically insert the rivet into a hole and keep place it strongly.

NOTE:

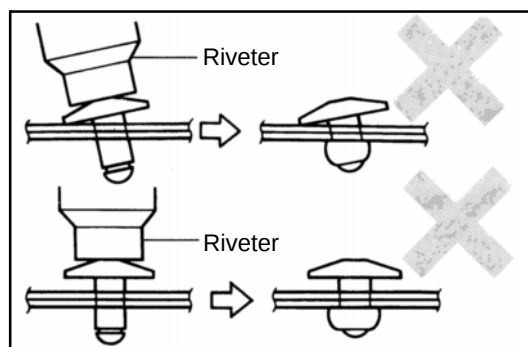
- If the tip of the rivet is not deformed or the mandrel is not cut, repeat process (5) again.



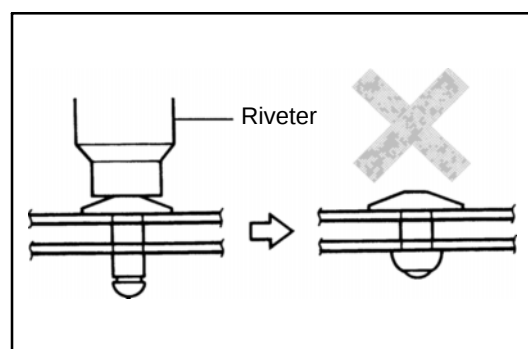
- **T-Rivet with of $\phi 6.4$ mm:**
Do not place your hands or the wire harness within a radius of 20 mm (0.70 in.) from the rivet, as the rivet is cut and opened in this area.



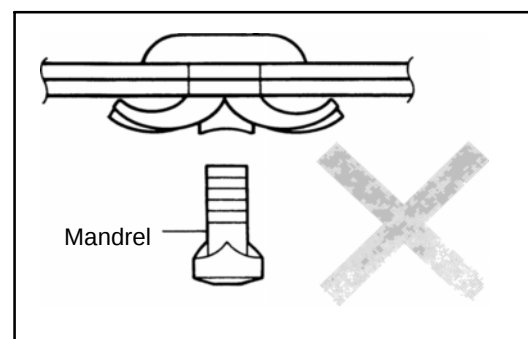
- **Prizing a riveter damages the riveter showing that it is not tightened correctly and bends the mandrel.**



- **Loose tightening may result from either tilting the riveter while handling or the riveter not connecting to the material.**



- **Loose tightening also occurs when a rivet is applied between materials without touching.**



- **T-Rivet with $\phi 6.4$ mm:**
When a mandrel of a rivet is lost, the rivet should be replaced to prevent loose tightening.