HAKKO 394

Vacuum pick-up tool

- Battery-powered suction pick-up tool with built-in vacuum pump
- Max. pick-up suction capacity is 120gf
- Antistatic material is used

Specifications

Model No.	**394-01**
Power supply	Two size AAA batteries
Pad	Conductive silicone rubber
Battery life	Approx. 30,000suction (with alkaline batteries)
Suction capacity	120gf (with padΦ10mm)
Dimensions	130(W)×29(H)×22(D)mm
Weight	43g

* Weight (w/o batteries, nozzle, pad)

Service life of battery

Pickup repetition limit *1	Continuous pickup time *2
Approx, 30,000 pickup times (With alkaline batteries)	Approx, 15 hours

*1. 26 mm x 26 mm QFP is pickup for 2 seconds using a 10 mm dia pad and then released for 1 second. This cycle is repeated cominuously unit the QFP is no longer picked up.

*2. This is the time perlod from the moment 26 mm x 26 mm QFP starts being pickup using a 10 mm dia pad to the moment the QFP drops.

Packing List

Name	Contents	Accessories
HAKKO 394	Unit	Bent Nozzle/1.1mm(with stopper) Pad/5 mm Pad/10 mm AAA alkaline battery

Features

Cordless suction pick-up tool

- Ultra-compact high powered pump eliminates need for a power cord and an air tube.
- Continuous suction allows easy handling of objects.
- Soft touch switch
- Pen-type body is easy to fit into your hand.
- Utilizes antistatic material
- Nozzle with a stopper
  · The stopper prevents the nozzle nib from shooting through the pad, damaging components, and causing suction failures.

- Intended works

Semiconductor-related works
Pick-up of SMDs
Surface mount PCB assembly
Conveyance of ICs

The pick-up tool is designed to suck up micro components used for PCBs, etc. and not to absorb dust. If used to absorb dust, it may become inoperable due to the clogging of filters mounted inside.

- Specifications of pad

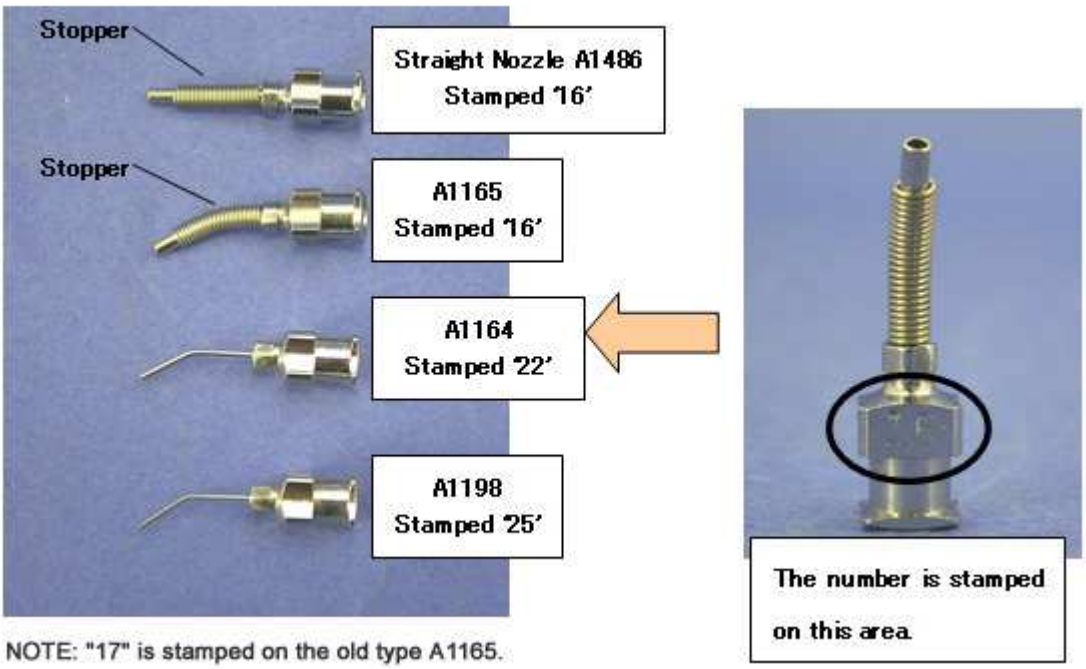
Material	Electrically conductive silicone rubber
Heatproof temperature	Approximately 150℃
Resistance value	$10^4\Omega$ to $10^6\Omega$
Indication of pad replacement	When any crack or tear is found during a visual check, or objects cannot be sucked up effeciently

- Nozzle Single Use

Nozzle Part	Name/Description	Shape	Applications Stamped*

No.				
A1164	Bent nozzle /0.4mm (OD 0.7mm)		22	Chip resistors, other tiny components
A1198	Bent nozzle /0.26mm (OD 0.5mm)		25	Usable for 0603 chip

*Only these 2 shapes are avilable for single use.



- Use Nozzle with Pad

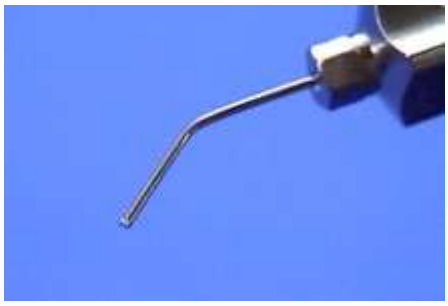
Nozzle								
Part No.	A1165				A1486			
Name/ Description	Bent nozzle /1.1mm				Straight nozzle /1.1mm			
Outside Diameter	1.65mm				1.65mm			
Figure								
	+		+		+		+	
Pad								
Part No.	A1166	A1312	A1167	A1311	A1166	A1312	A1167	A1311
Name/ Description	Pad /o3	Pad /o5	Pad /o7	Pad /o10	Pad /o3	Pad /o5	Pad /o7	Pad /o10

Figure							
Pick-up Performance	6g	40g	80g	120g	6g	40g	80g	120g
	‖		‖		‖		‖	
Set Examples (using 392 as an example)								

*The pick-up performance shown above slightly differs depending on the surface of the object.

Usage / Applications

With the bent nozzle accessory, 0603-size components can be suctioned.



0603-sized chip resistors are extreme micro-components that are often incorporated into devices such as mobile phones.
If they are manually picked up with tweezers, it requires high-precision manual dexterity so that they will not be flicked and lost.
For the HAKKO 394, a very fine bent nozzle with 0.26mm hole diameter (A1198) which can be used for 0603-sized components is available. The nozzle ensures safe pick-up operation in continuous suction mode.

With the best suited pad selectable from a wide variety of pads, delicate bulb-shaped components can be safely picked up
Four types of pads in sizes of φ3, φ5, φ7 and φ10 respectively are available for HAKKO 394.
Suction pick up can be continuously and easily performed only by matching the pad to the size of the suction object.
Also, the stopper function of the HAKKO 394, which is enabled when a pad is used, prevents the suction object from being damaged.

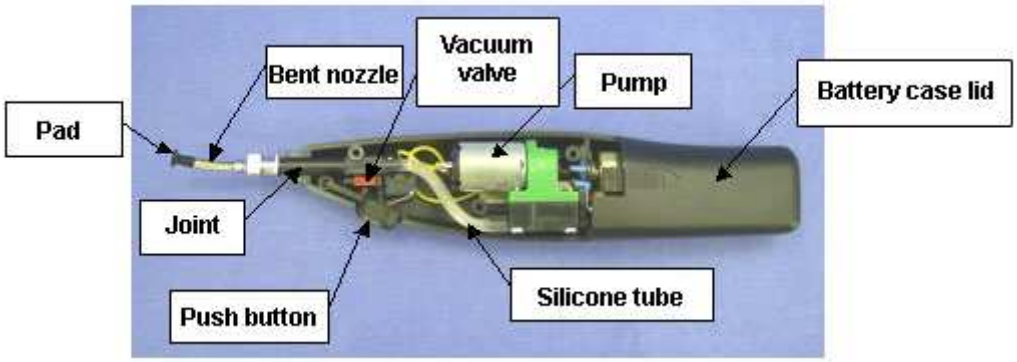
Replacement Parts

	Part No.	Name	Specifications
	A1165	Bent nozzle	w/ stopper, Φ1.1mm
	A1312	Pad	Φ5mm
	A1311	Pad	Φ10mm
	A1164	Bent nozzle	Φ0.4mm
	A1198	Bent nozzle	Φ0.26mm
	A1486	Straight nozzle	w/ stopper, Φ1.1mm
	A1166	Pad	Φ3mm
	A1167	Pad	Φ7mm
	B2690	Joint	w/ filter
	B2692	Silicone tube	w/ filter

Maintenance / Troubleshooting

HAKKO 394 Names of Parts & Overhaul Procedure

Names of Parts



Overhaul procedure

If the battery is running low, the suction force will decrease.
Replace the batteries with new ones and then check that the suction force is sufficient.
If the suction force is not recovered even after replacement of batteries, overhaul the unit according to the following procedures.

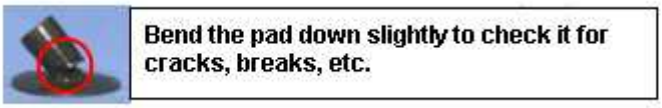
1. Remove the bent nozzle and pad. (Refer to Photo 1.)

Photo 1

2. Check the hose and pad for cracks, breaks, etc.

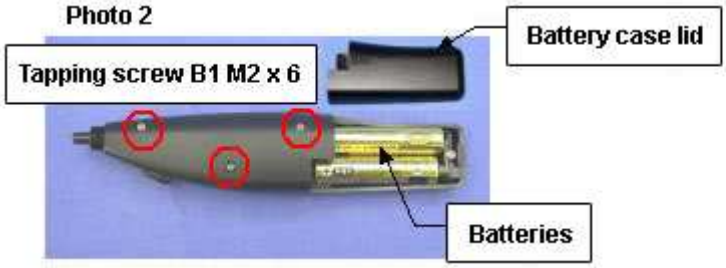
- If a crack, break, etc. are observed in the pad: Replace the pad with a new one.

HAKKO 394 Replacement Parts



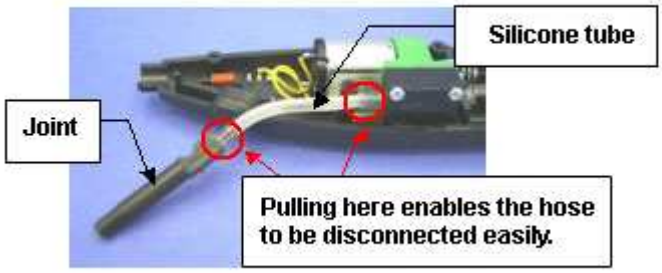
3. Remove the battery case lid to remove the batteries and then loosen the 3 screws to open the handle. (Refer to Photo 2.)

Photo 2



4. Remove the joint and silicon tube from the pump. (Refer to Photo 3.)

Photo 3



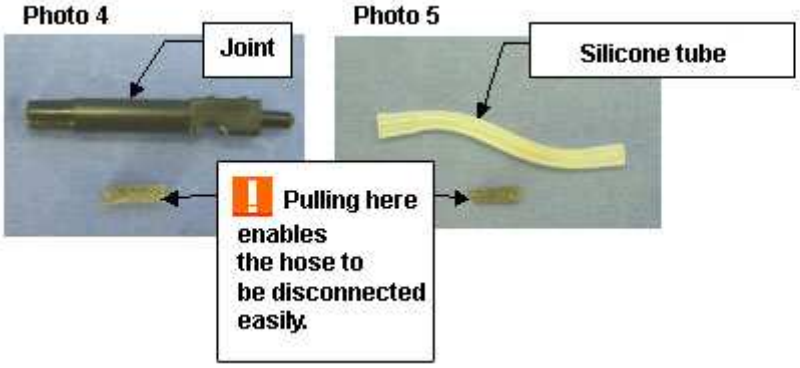
5. Remove the filters from the silicon tube and the joint and remove dirt and dust with an air blower, etc..
In addition, clean the inside of the joint and silicon tube.

- If cracks, breaks, etc. are observed in the joint or silicon tube: Replace the joint and silicon tube with new ones.

HAKKO 394 Replacement Parts

Photo 4

Photo 5



6. Replace the cleaned filters into the joint and silicon tube.

Insert the filters so that they are positioned in the centers of the joint and silicon tube. (Refer to Photos 6, 7 and 8.)
When inserting the filter into the joint and silicon tube, be careful not to crush the filter. (Refer to Photos 7 and 8.)

Photo 6

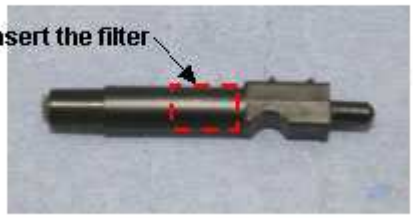


Photo 7

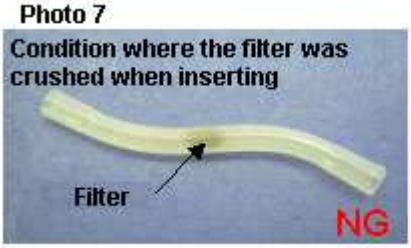
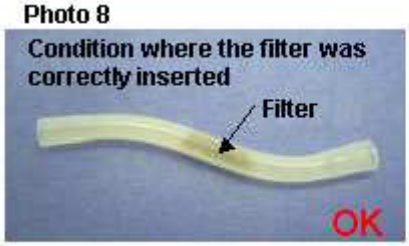


Photo 8



7. Press-fit the silicon tube fully into the joint and pump to the end. (Refer to Photos 9 and 10.)

Photo 9

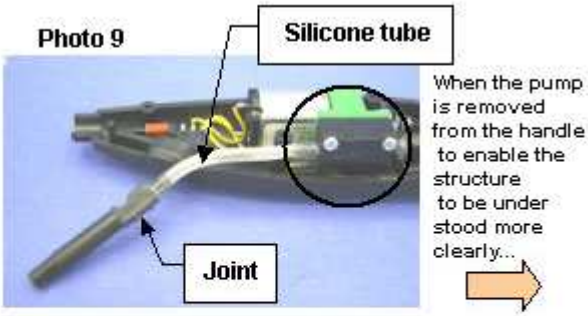
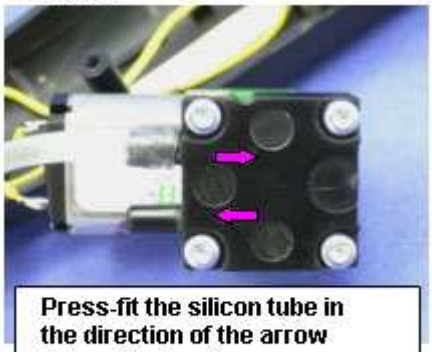


Photo 10

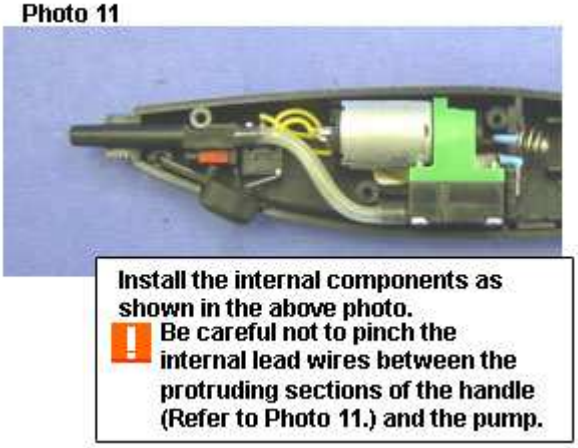


Press-fit the silicon tube in the direction of the arrow (→) printed on the pump.

If it is press-fit backwards, the unit will not suck.

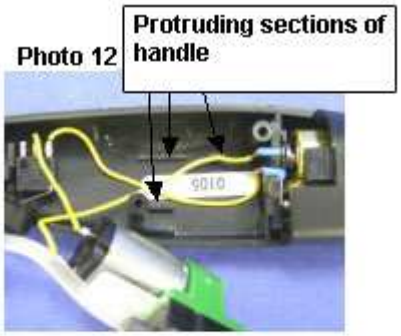
8. Install the joint and silicon tube into the handle. (Refer to Photos 11 and 12.)

Photo 11



Install the internal components as shown in the above photo.
Be careful not to pinch the internal lead wires between the protruding sections of the handle (Refer to Photo 11.) and the pump.

Photo 12



9. Close the handle and tighten the 3 screws. (Refer to Photo 2.)

- Install batteries in the handle and close the battery case lid.
- Attach the bent nozzle and pad. (Refer to Photo 1.)

If the suction force is not recovered even after overhauling, it can be assumed that the pump has deteriorated. In this case, it is recommended to send the unit in for **repair.**

Note

Send it to the place of purchase for repair.

***We recommend that you should make sure that no abnormalities are found in the wrist strap before sending it in for repair.**

***Clearly stipulate “repair only” or “repair and calibration” when sending it in for repair.**