



HG Service Manual-D SERIES



*Models: HG-201D, HG-202D,
HG-301D, HG-302D, HG-501D,
HG-502D, HG-801D*

WARNING: Disconnect heat gun power cord and allow the heat gun to cool before disassembly.
 READ THE SERVICE INSTRUCTIONS CAREFULLY. FAILURE TO EXACTLY FOLLOW THE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY OR DAMAGE TO YOUR HEAT GUN. ALL REPAIRS MUST BE PERFORMED BY A QUALIFIED REPAIR TECHNICIAN.

AVERTISSEMENT : Débrancher le cordon du pistolet thermique et laisser celui-ci refroidir avant de le démonter.
 LIRE ATTENTIVEMENT LES INSTRUCTIONS D'ENTRETIEN. OMETTRE D'OBSERVER EXACTEMENT CES INSTRUCTIONS POURRAIT ENTRAÎNER DES BLESSURES OU ENDOMMAGER VOTRE PISTOLET THERMIQUE. SEUL UN RÉPARATEUR QUALIFIÉ PEUT EFFECTUER LES RÉPARATIONS.

ADVERTENCIA: Desconecte el cable de la pistola térmica y deje que ésta se enfríe antes de desarmarla.
 LEA CON ATENCIÓN LAS INSTRUCCIONES DE SERVICIO. EL NO SEGUIR EXACTAMENTE LAS INSTRUCCIONES PUEDE RESULTAR EN DAÑO A LA PISTOLA TÉRMICA. TODAS LAS REPARACIONES DEBEN SER REALIZADAS POR UN TÉCNICO DE REPARACIONES CALIFICADO.

Available kits

- Motor Replacement- Part No's. 30073 (120V), 30074 (220-240V)
- Element Connector Replacement– 30089, 30090 (HG-801D only)
- Switch & Bezel Kits Replacement– 30075
- Cordset Replacement— 30079 (120V 15 Amp), 30080 (120V 20 Amp), 30081 (220V UL/CUL), 30097 (220-240V EU), 30098 (220-240V UK)
- Nozzle shield replacement 30077
- Handle Replacement 30091



Do not touch nozzle until cool
 Ne pas toucher la buse avant qu'elle ait refroidi
 No toque la boquilla hasta que se haya enfriado

What's in the kit

MOTOR KIT:

- MOTOR, (1)
- SCREW, #6-32 x .50 LONG (2)
- SCREW, M3 x 0.5 x 10mm LONG (1)
- CABLE TIE (2)
- SHRINK TUBE (1)

CORDSET KIT:

- CORDSET (1)
- CABLE GUARD (1)
- SCREW, #6-32 x .31 GREEN (1)
- CABLE TIE (2)
- SHRINK TUBE (1)
- CORD CLAMP, USED WITH (220 – 240 VAC) units (1)

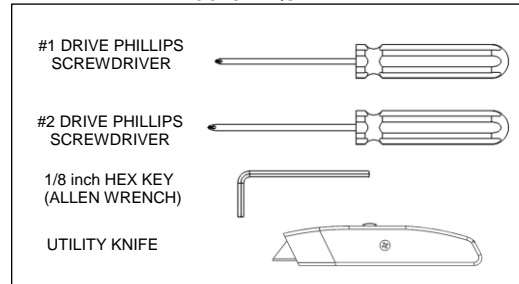
NOZZLE SHIELD KIT

- NOZZLE ASSEMBLY, (1)
- SHIELD, (1)
- SCREW, #6-32, (2)

HANDLE KIT

- HANDLE SET RT & LT (1)
- SCREWS, #6-19, (4)

TOOLS REQUIRED



ELEMENT CONNECTOR KIT:

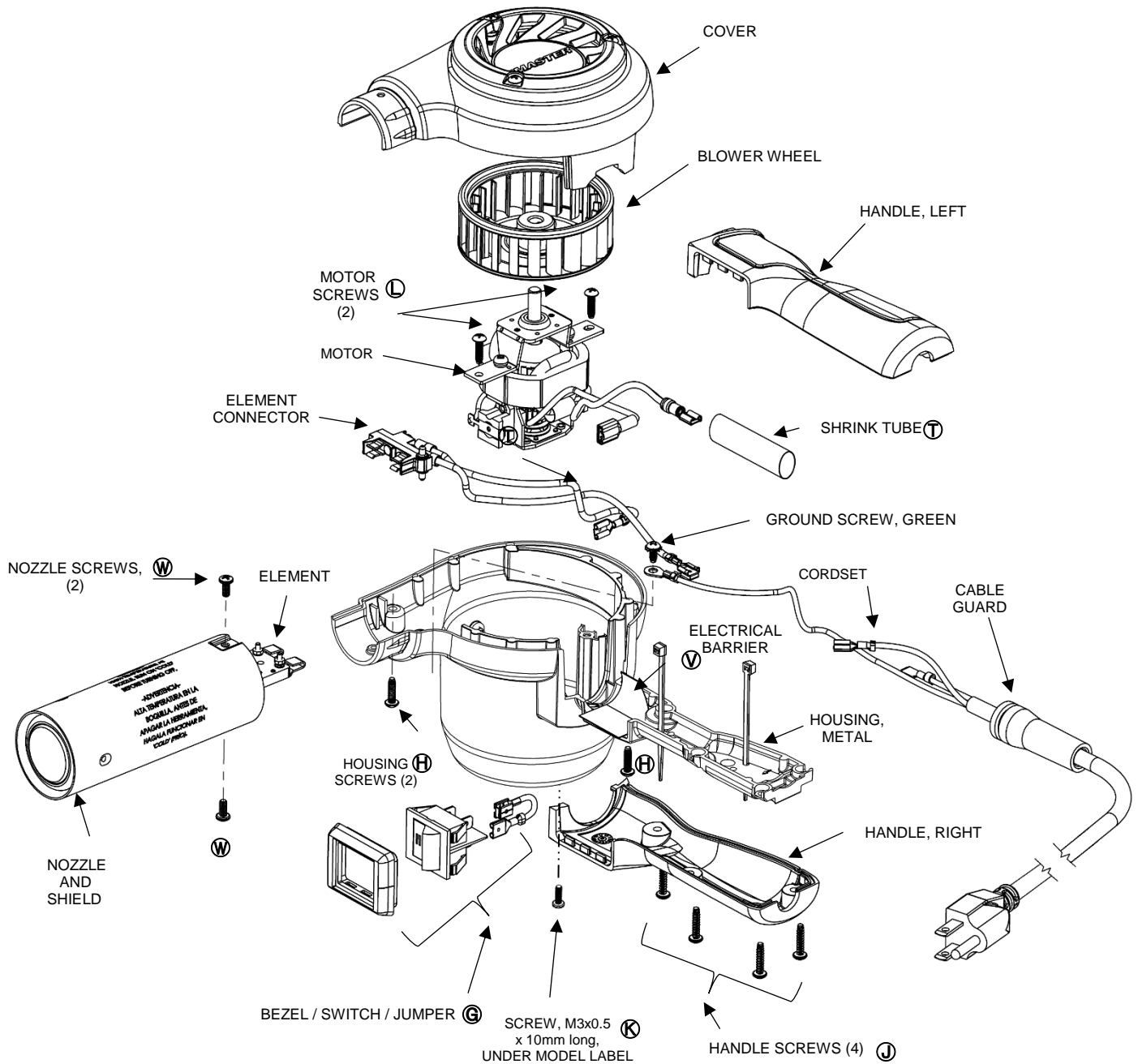
- ELEMENT CONNECTOR ASSY (1)
- CABLE TIE (2)
- SHRINK TUBE (2)

SWITCH & BEZEL KIT:

- SWITCH/BEZEL/JUMPER ASSY (1)
- BARRIER, ELECTRICAL (1)

MASTER HEAT GUN REPLACEMENT PARTS AND ACCESSORIES ARE ENGINEERED AND MANUFACTURED TO PRECISE MASTER APPLIANCE SPECIFICATIONS. REPLACEMENT PARTS AND ACCESSORIES FROM OTHER MANUFACTURERS ARE NOT PRODUCED TO THESE PRECISE SPECIFICATIONS. FAILURE TO USE MASTER APPLIANCE REPLACEMENT PARTS OR FAILURE TO INSTALL MASTER APPLIANCE REPLACEMENT PARTS EXACTLY AS INSTRUCTED MAY CAUSE PHYSICAL INJURY OR DAMAGE TO THE HEAT GUN. MASTER APPLIANCE CANNOT ASSUME RESPONSIBILITY FOR PHYSICAL INJURY OR DAMAGE TO THE HEAT GUN RESULTING FROM THE USE OF ANY OTHER BRAND OF REPLACEMENT PART OR IMPROPER INSTALLATION OF MASTER APPLIANCE REPLACEMENT PARTS OR ACCESSORIES.

Figure 1



DISASSEMBLY INSTRUCTIONS

UNPLUG HEAT GUN. TAKE NOTE OF WIRING LAYOUT.

To remove cover and handle halves (Figure 1)

1. Remove two (2) nozzle mounting screws **W** at the rear of the shield. If nozzle mounting screws are lost or damaged, replace only with #6-32 steel machine screws, 3/16-inch minimum length to 1/2-inch maximum length.
2. Gently pull shield from gun housing. Shield, nozzle and mica insulator may come apart as one unit. Pull element out of housing.
3. Remove (2) housing screws (#6-32 x .50) **H** and remove cover.
4. Remove (4) handle screws (#6-19 x .63 long) **D** and remove handles from housing.

To remove the motor (Figure 1)

1. Loosen the set screw in the blower wheel with a 1/8 hex key wrench, then remove the blower wheel from the motor. Carefully lift label and remove screw **K** from the bottom of the housing.
2. Place the heat gun on a flat surface with the motor facing upward. Remove (2) outer screws **L** on the top flange of the motor. Gently pull the motor straight up and out of the housing.
3. Cut and remove the existing cable ties and shrink tube to expose the quick-connect terminals (Figure 3).
4. Disconnect the white lead wire of the motor from the piggyback terminal on the white wire from the element connector (Figure 3).
5. Disconnect the black lead wire of the motor from the switch (Figure 4).

To remove the element connector:

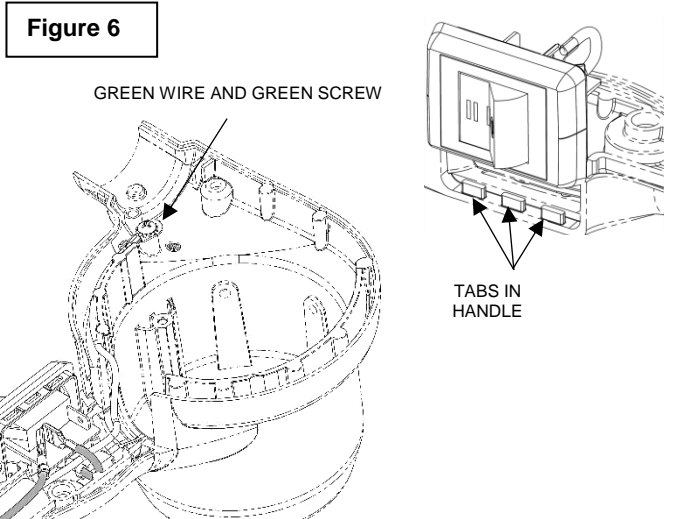
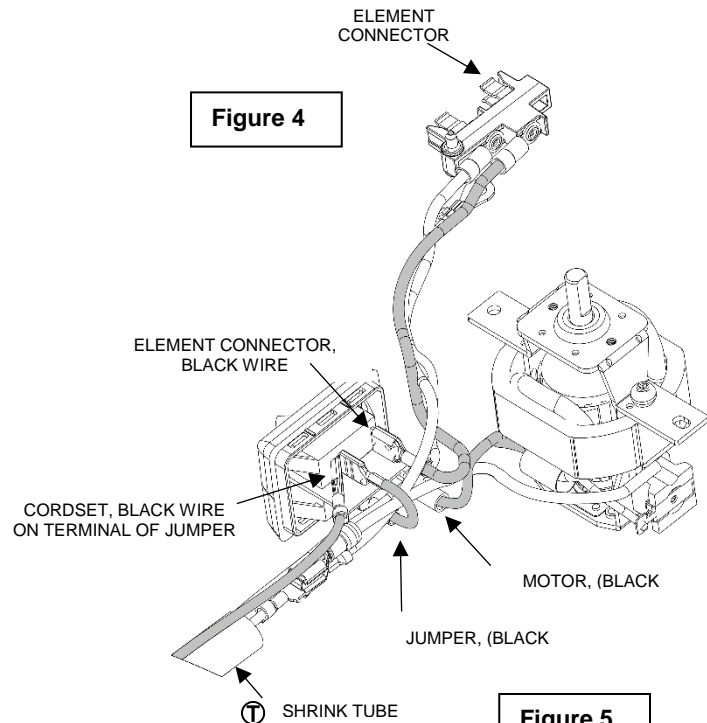
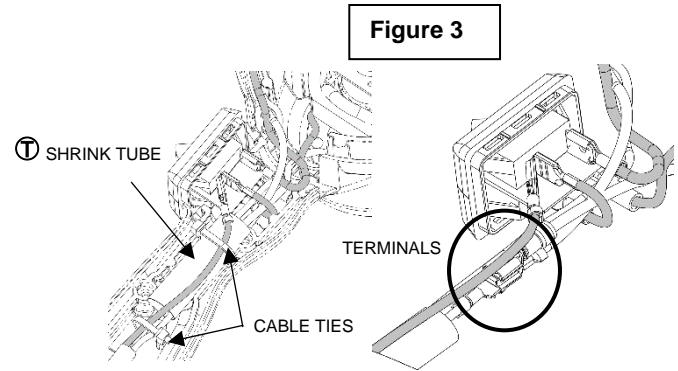
1. Cut and remove the existing cable ties and shrink tube to expose the quick-connect terminals (Figure 3).
2. Disconnect the white lead wire of the element connector (with piggyback terminal) from both the white wire of the motor and the white wire of the cordset (Figure 3).
3. Disconnect the black lead wire of the element connector from the switch (Figure 4).

To remove the switch/bezel assembly:

1. Lift the switch/bezel assembly away from the handle, being careful not to break the tabs of the handle (Figure 5). Disconnect all wires from the switch.

To remove the cordset:

1. Remove the green ground screw located near the nozzle of the housing (Figure 6).
2. Cut and remove the existing cable ties and shrink tube to expose the quick-connect terminals (Figure 3).
3. Remove the black cordset wire from the piggyback terminal of the jumper, (Figure 4).
4. Remove the white cordset wire from the piggyback terminal on the white wire from the element connector (Figure 3).
5. Lift the cable guard out of the handle and remove the cordset.



INSTALLATION INSTRUCTIONS

To install the MOTOR:

1. Connect the black wire from the motor to the switch **(S)** (Figure 8).
2. Connect the white motor wire to the piggyback terminal of the white element connector wire (Figure 8).
3. Slide shrink up over both white wires and connect white wire from cordset. Position shrink tube **(T)** over all 3 terminals (Figure 8).



WARNING: Failure to cover the terminals with shrink tubing **(T)** could result in electrical short

4. Assemble motor into housing and with (2) #6-32 x .50 long screws **(D)** (Figure 1). Torque to 16 – 20 in-lbs.
5. Assemble (1) M3 x 0.5 **(K)** (Figure 1) through back side of housing and into motor frame at a torque of 2-5 in-lbs. Excessive torque will warp the motor frame, resulting in reduced air flow and damage to the motor.
6. Assemble blower wheel onto shaft of motor and tighten set screw with 1/8 inch hex key. Top of blower wheel hub must be flush with top of motor shaft. Must not rub against frame of motor and must not rub against wiring (Figure 9).
7. Ensure electrical barrier **(V)** is between wiring terminals and metal enclosure (Figure 8).



WARNING: Failure to insulate switch & wire terminals from metal enclosure could result in electrical short

To install the ELEMENT CONNECTOR:

1. Connect the black wire from the new element connector to the switch **(N)** (Figure 7 & 8).
2. Connect the white motor wire to the piggyback terminal of the white element connector wire (Figure 8).
3. Slide shrink tube up over both white wires and connect white wire from cordset (Figure 8). Position shrink tube **(T)** over all 3 terminals.



WARNING: Failure to cover the terminals with shrink tubing **(T)** could result in electrical short

To install the CORDSET:

1. Install new cable ties in metal housing (figure 1).
2. Connect the green cordset wire to the enclosure's ground post using the green screw (Figure 6).
3. Connect the black cordset wire to the jumper's piggyback terminal attached to the switch (Figure 8).
4. Connect the white motor wire to the piggyback terminal of the white element connector wire (Figure 8).
5. Slide shrink tube up over both white wires and connect white wire from cordset (Figure 8). Position shrink tube **(T)** over all 3 terminals.



WARNING: Failure to cover the terminals with shrink tubing **(T)** could result in electrical short

6. On 220-240V cordsets use supplied cord clamp (figure 10).

To install the SWITCH / BEZEL ASSEMBLY:

1. Connect the wires to the appropriate switch terminals per instructions above (Figure 8). The black jumper wire is to wrap around the white wires from the motor and element connector, and the green wire from the cordset.

Figure 7

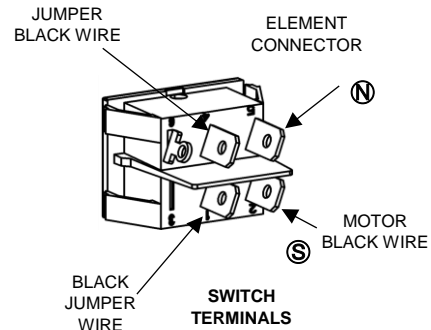


Figure 8

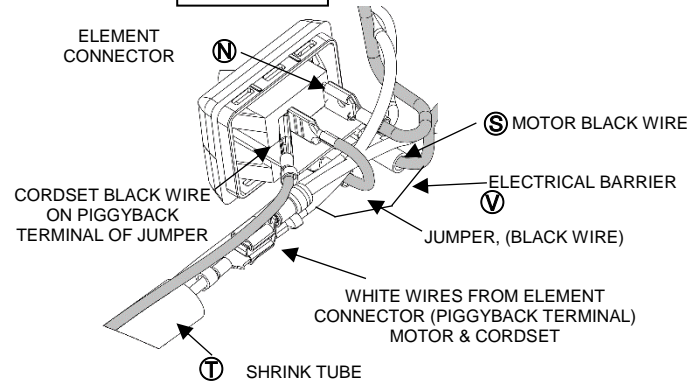
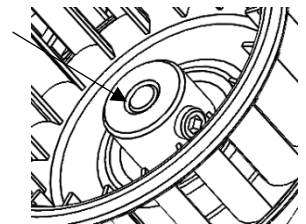


Figure 9

SHAFT FLUSH WITH TOP OF FAN HUB



2. Attach the piggyback terminal of the jumper to the switch, and the other end of the jumper to the switch (Figure 8).
3. Place the electrical barrier **(V)** between the switch and the housing.



WARNING: Failure to insulate switch & wire terminals from metal enclosure could result in electrical short

4. Align the three holes of the bezel with the three tabs in the handle and gently press the switch / bezel assembly into position as shown (Figure 4).
5. Position the shrink tube over the piggyback terminal and over the white wire terminals from the motor and from the cordset. Use cable ties to hold in place (Figure 10).

To install the HANDLES and COVER: (Figure 10)

1. Hook the left handle onto the handle portion of the metal housing.
2. Install switch bezel assembly per above.
3. Ensure the electrical barrier **(V)** is positioned between the terminals of the switch and the housing.



WARNING: Failure to insulate switch & wire terminals from metal enclosure could result in electrical short

4. Align the three holes of the switch bezel with the three tabs in the handle and gently press the switch / bezel assembly into position as shown (Figure 5).
5. Route wires in channels (Figure 10) and tighten cable ties to hold wiring in place.
6. Ensure all wiring clears the screw holes of the handles and gently assemble the right handle onto the housing (Figure 10). Retain with #6-19 x .63 screws **(J)** (4) (Figure 1). Tighten to 12 – 15 in-lbs torque.
7. Assemble cover onto housing and retain with housing screws, #6-32 x .50 screws, **(H)** (2) (Figure 1). Tighten to 16 - 20 in-lbs torque.

To install element nozzle and shield: (Figures 11 & 12)

1. Gently insert new element into housing, with contacts of element contacts inserted fully into the contacts in the housing.
2. Wrap the mica insulator around coils of heater element, ensuring all coils are covered.



WARNING: Failure to properly cover coils with mica insulator could result in electrical short

3. Gently slide nozzle straight on, aligning ceramic element wings with front nozzle indents and two (2) nozzle screw holes.
4. Slide shield over nozzle, aligning mounting holes.
5. Install two (2) nozzle screws **(W)** loosely until started, and then tighten.

AFTER HEAT GUN IS COMPLETELY ASSEMBLED, CONDUCT FINAL ADJUSTMENT AND TEST:

1. Plug your Master heat gun® into a properly rated electrical outlet.
2. Run in cool mode, gently tap bottom of unit to align motor bearings unit until motor noise stabilizes.
3. Switch unit to “Hot”. Hot air should be blowing from nozzle.

Figure 10

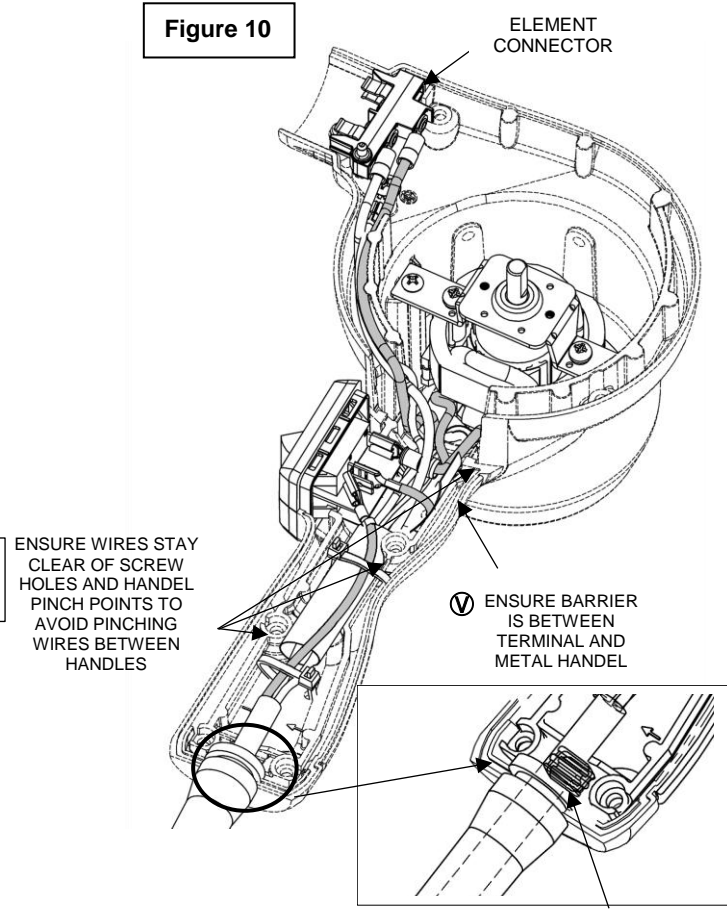


Figure 11

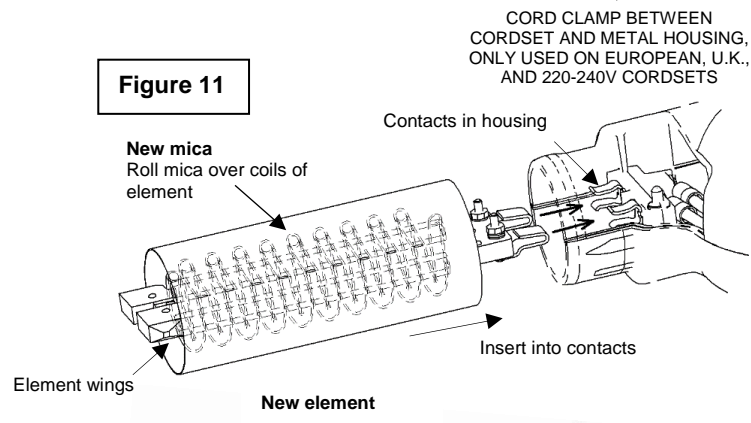
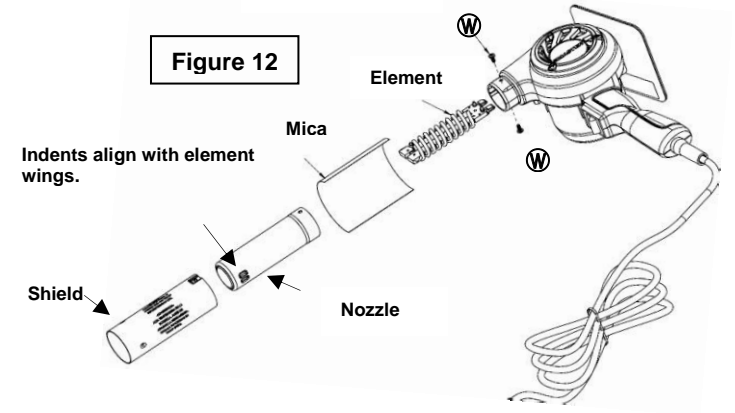


Figure 12



TROUBLESHOOTING GUIDE

SYMPTOM	CAUSE	SOLUTION
Excessive Vibration	Motor screw not tight or missing	Recheck that all screws are present and tighten to correct torque
	Blower wheel loose or damaged	Tighten or replace blower wheel if damaged
Unusual Noise	Blower wheel not positioned correctly on motor shaft	Ensure top of motor shaft is flush with top of blower wheel hub
	Wires rubbing on blower wheel	Ensure wires are in proper position and out of way of blower wheel
Motor does not run and element does not heat	Unit is not plugged in	Plug in unit
	Outlet is non-functional	Ensure outlet is live
	Switch is not wired properly	Ensure switch is wired properly
	Switch is damaged	Test switch and replace if defective
Motor does not run but element heats	Switch is not wired properly	Ensure switch is wired properly
	Switch is damaged	Test switch and replace if defective
	Motor is damaged	Replace motor
Motor runs but no heat	Heating element not install properly	Ensure male terminals of element were fully seated in female contacts of element connector
	Heating element damaged	Check element to see if coils are open, replace if defective
	Element connector damaged	Inspect element connector to see if damaged, if damaged replace
	Element connector or switch not wired correctly	Ensure element connector and switch are wired properly
	Switch damaged	Test switch and replace if defective