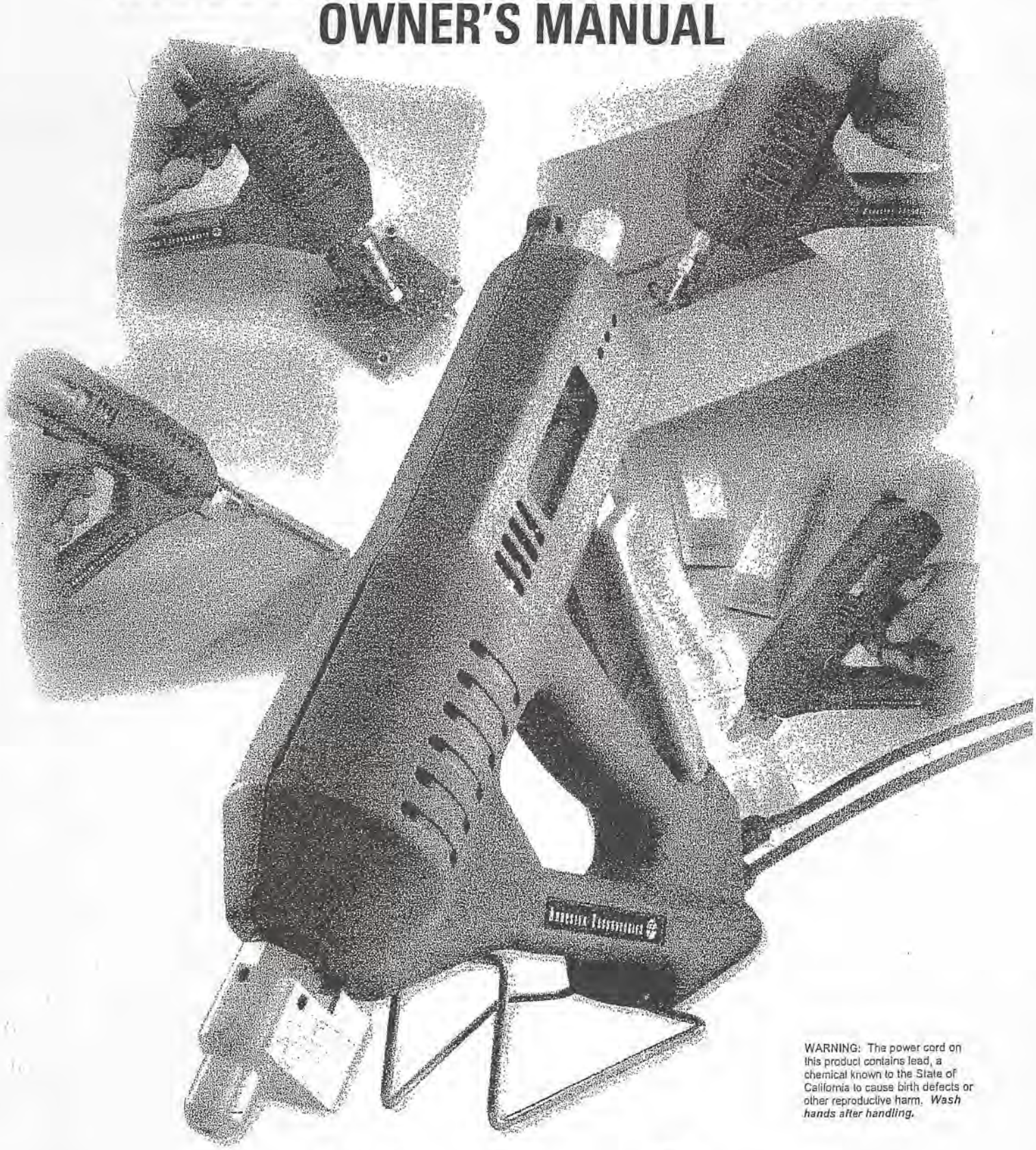
AD-TECH 500 SERIES INDUSTRIAL ADHESIVE APPLICATORS OWNER'S MANUAL



WARNING: The power cord on this product contains lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

ADHESIVE TECHNOLOGIES

USE ONLY GENUINE AD-TECH PRECISION ENGINEERED ADHESIVE STICKS
MANUFACTURED IN THE USA.

SPECIFICATIONS AND FEATURES

Specification:	AD-TECH MT-500	AD-TECH PT-500	AD-TECH PT-500-S
Type:	MANUAL PALM-FEED	PNEUMATIC FEED	PNEUMATIC – SPRAY HEAD
Service Rating:	Industrial	Industrial	Industrial
Electrical:	120 VAC, 60HZ 500 Watts	120 VAC, 60HZ 500 Watts	120 VAC, 60HZ 500 Watts
Temperature:	400°F (HT) 300°F (LT)	400°F (HT) 300°F (LT)	400°F (HT)
Thermostat:	Precision Snap Acting Disc	Precision Snap Acting Disc	Precision Snap Acting Disc
Actuation:	Manual Feed	PNEUMATIC	PNEUMATIC
Air Pressure:	none	50 to 100 PSI	70 to 100 PSI
Air Consumption:	none	1 CFM @ 50 PSI	7 CFM @ 100 PSI (continuous)
Adhesive Sticks:	5/8 Round	5/8 Round	5/8 Round
Applicator Weight:	2.2 Lbs.	2.5 Lbs.	2.5 Lbs.
Adhesive Output:	5 Lbs/hr.	Up to 7 Lbs/hr.	Up to 7 Lbs/hr.
Stroke:	Up to 1/2" / Stroke (2.5 grams per squeeze)	1" per stroke	1" per stroke
Coverage:	Up to 12 feet of 1/8" per squeeze	Up to 12 feet of 1/8" bead	Up to 3 Sq. Ft. or 12 feet of 1/8" bead
Nozzle Type:	Ball Check *	Ball Check *	Ball Check **
Removable Cap:	Yes	Yes	No ***

* Indicates this applicator is available with Optional Needle Type NON-DRIP Nozzle
** Indicates this applicator is convertible to Non-Spray type with accessory Nozzle
*** Indicates this applicator can have removable caps if converted to Non-Spray type

USER FRIENDLY FEATURES

(ALL APPLICATORS)

- Unique Palm-Actuated Trigger for more comfortable use with less hand fatigue
- Light weight and well balanced
- Excellent Nozzle Tip visibility
- Convenient continuous back-loading for high volume applications
- High Output Melt Chamber Design for continuous melt capability
- Precision Temperature Control with no wide fluctuations
- Convenient on-off switch
- Durable, easily removable wire stand
- Convenient tool balancer receptacle holds applicator at in-use position

PREVENTIVE MAINTENANCE TIPS

- For best results, use only genuine adhesive sticks manufactured by AD-TECH after July, 1996. Any adhesive sticks other than those specifically engineered for compatibility with the AD-TECH 500-Series Applicators could cause problems and may void your warranty.
- Should a problem in the sleeve area occur with a back-melted adhesive stick, do not pull the adhesive stick backward, from the rear of the tool. And, do not tilt the applicator backward trying to get the melted adhesive to flow out of the sleeve. This will make things much worse. Instead, unplug the tool. While it is cooling, use small wooden sticks to clean up the sleeve area being careful to not allow melted adhesive to fall down into the workings of the tool. When it is clean, reheat the applicator and insert a new stick and feed through until the applicator works properly.
- Once a day, clean up the nozzle with a dry rag and every few days clean up the nozzle with an abrasive pad or steel wool. If necessary, the tip of the nozzle cap can be cleaned with a medium sized paper clip or a small drill bit.

DO NOT USE SOLVENTS OF ANY KIND ON OR NEAR THE AD-TECH 500 APPLICATOR AS A FLASH FIRE COULD RESULT.

- When the applicator is cold, not plugged in, mineral spirits can be used sparingly to clean up the exterior shell of the tool. Be sure to wipe dry.
- Keep the applicator and the immediate work area clean, well lighted and as organized as possible. Use a SILICONE PAD under the nozzle. Have the adhesive sticks organized and convenient to the applicator.

MAINTENANCE AND REPAIR SECTION

Should your AD-TECH 500 APPLICATOR experience a problem beyond the scope of those issues discussed earlier in this manual, this section should help you to identify the cause of the problem and find the part(s) required to repair and take you through the repair procedure.

Troubleshooting and repair of the AD-TECH 500 requires some fundamental diagnostic tools and ability and basic electro-mechanical skills. If you are inexperienced in this area, refer the repair of the AD-TECH 500 to an authorized AD-TECH Distributor for factory trained service.

The troubleshooting chart is organized in order of simplicity. For each problem, the easiest and most likely causes are considered first. The troubleshooter should progress down the chart until the cause is identified, then refer to the Schematic to identify the part(s) required to correct the condition.

TROUBLESHOOTING CHART

Problem: NO HEAT

Step 1- Check receptacle for proper voltage - use voltmeter, test lamp or try another electrical item in the receptacle. Check circuit breakers. If OK, proceed to Step 2.

Step 2 - Check to be sure that the ON-OFF switch is in correct "ON" position. On position is "up", Off is "down". If OK, proceed to Step 3.

Step 3 - Check Resistance of Applicator. Using an Ohm Meter, set on the proper scale, place the two Ohm Meter leads on the two parallel conductor blades of the electrical cord plug. A normal resistance reading should be approximately 30 Ohms. A much higher resistance reading (infinite resistance) indicates an open circuit and the applicator will have to be disassembled for further troubleshooting. Refer to Page 8 for instructions on disassembly. Proceed to Step 4.

Step 4 - Once the applicator has been disassembled, check the function of the ON-OFF Switch. Put the leads of the Ohm Meter on each lead of the Switch. When the Switch is in the Off position, the meter should read infinite resistance. When the Switch is in the On position, the switch should read 0 ohms. Should the result be different than this, replace the switch. If the switch is OK, proceed to Step 5.

Step 5 - Check the continuity of the cordset. Check the continuity of each individual lead of the cordset by attaching the leads of the Ohm Meter to one lead at a time and testing the corresponding bare end of the conductor inside the applicator. The white (neutral) lead is checked at the bottom terminal post. The black (hot) lead is checked at the bottom lug of the Switch. The correct reading should be 0 Ohms. While the Ohm Meter lead is connected, jiggle the cordset to see if the meter will indicate an intermittent reading indicating a broken lead. If the test indicates an intermittent or broken lead, replace the cordset. If not, proceed to Step 6.

OPTIONAL NEEDLE VALVE NOZZLE - PT-500-N APPLICATOR

This nozzle is designed to overcome the annoying, incidental dripping described above as normal for the standard Ball Check Valve Type Nozzle. Should it be dripping or drooling, it is likely due to being out of adjustment, or in need of a cleaning and re-lubrication.

To Service - Applicator must be warmed, but not hot and should be unplugged with air disconnected to the applicator. Carefully wipe clean the nozzle parts with a clean, soft cloth. Rotate the Nozzle to ensure the free movement of it relative to the stationary Nozzle Body. Also, try grasping the front of the nozzle with pliers and pulling against the RETURN SPRING. If it does not move freely in both tests, it is necessary to disassemble the nozzle. Remove the ADJUSTMENT NUT and WASHER. Loosen but do not remove the three black Socket Head Screws with the 5/64" Hex Key provided with your applicator. Carefully remove the Nozzle/Nozzle Cover as an assembly. As you remove this assembly, the small NOZZLE LEVER SPRING and BACK-UP WASHER will be removable from the hex shaped, brass LINKAGE ROD. Clean the brass NOZZLE which is attached to the applicator with a soft clean cloth and mineral spirits. DO NOT USE ABRASIVES OR ABRASIVE PADS. While the NOZZLE/NOZZLE COVER assembly is warm, clean it with a soft, clean cloth and mineral spirits if necessary. Do not scrape it to clean or use abrasive materials on it. Inspect all exposed parts of the Nozzle Assembly for scratches or unusual wear as this is not normal. Check the O'ring on the Nozzle and replace it if necessary. Carefully relubricate the Nozzle and Nozzle Cover Assembly with Permatex Industrial SUPERLUBE Synthetic teflon based lubricant. Include grease on all surfaces except outside surface of Nozzle Cover. Reassemble in reverse order being sure to reinstall the NOZZLE LEVER SPRING and BACK-UP WASHER - first SPRING, then WASHER. Plug in Applicator for a few minutes to heat Nozzle, then unplug. Slide Nozzle/Nozzle Cover assembly onto Nozzle Body. Push flat, bottom, front surface of Nozzle Cover against the corner of a workbench, vise or similar edge, and while holding, tighten the three socket head screws moderately. Install Adjustment Nut and adjust until a very small movement is noticed in the NOZZLE, then back off about 1/2 turn on the nut. This adjustment should be such that all looseness is removed from linkage. Plug in applicator and re-check adjustment. Periodically, lubrication of the exposed moving parts of the Nozzle Assembly and linkage is a good idea.

DISASSEMBLING THE AD-TECH 500 APPLICATORS

1. Unplug Applicator and disconnect air source on PNEUMATIC models. Allow to cool to the touch.
2. Remove wire stand.
3. Lay applicator on its side, with the screw side facing you.
4. Remove (6) #6 x 5/8 Self-Tapping Screws completely.
5. Using a 1/8" diameter drift, small screwdriver or drill bit, carefully push the dowel pin at the base of the trigger down through the handle and out the bottom. The trigger will now pivot out of the way. On the PNEUMATIC models, the trigger is not pinned to the mechanism at the top and will be free to remove.
6. On models which utilize the Needle Valve Nozzle it is now necessary to back off the nozzle adjusting nut about 5 turns. Then, loosen, but do not remove the three black socket head screws which hold the nozzle cover in place. This part is spring loaded, so loosening it will provide the freedom of movement of 1/8 backward which is sufficient to disassemble the applicator. It is not necessary to remove or loosen the nozzle on models with Ball Check Type Nozzles.
7. Carefully separate the handle assembly at the point just below the nozzle and remove the top half facing you.

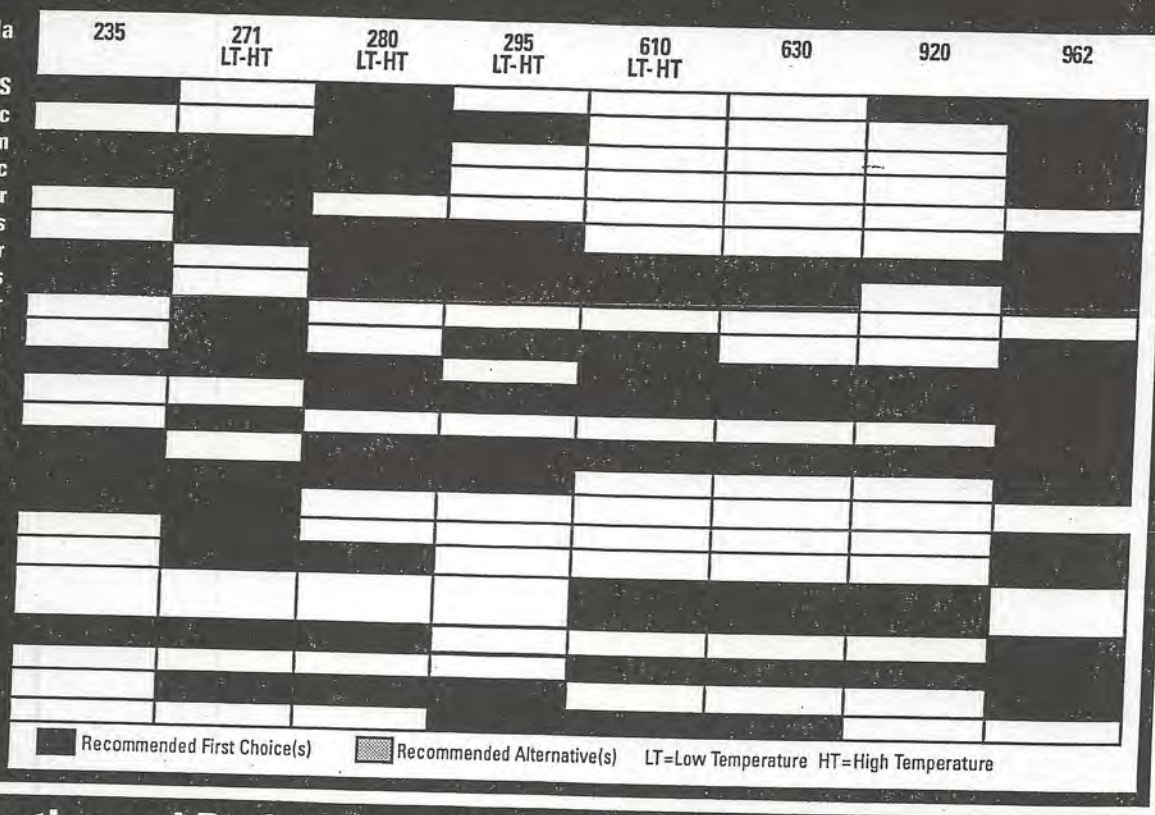
The inner workings of the AD-TECH 500 applicator are now accessible for troubleshooting, repair or replacement of parts. Please refer to the Repair/Replacement Parts and the Schematic Diagram as necessary. Order Replacement Parts through your authorized AD-TECH Distributor.

It is not necessary to completely disassemble the applicator to work on a specific problem. And, most problems should appear obvious once the tool is opened.

TO REASSEMBLE:

1. Be sure all of the parts are neatly fitted into the handle or reassembly will be very difficult.
2. Place Feed Mechanism Return Spring between upper receptacle pin of feed mechanism and the front retaining rib. Use a small piece of plastic electrical tape to temporarily hold the spring down while you reassemble the applicator.
3. Insert the silicone rubber Drag Ring oriented to provide free movement forward and restricted movement backward.
4. Install Handle with 6 screws and complete assembly in reverse order of disassembly. Do not over-tighten screws.

Substrate Reference Chart



Physical Properties and Performance Characteristics

Ad-Tech Adhesive		Heat Resistance °F	Viscosity at 375°F Centipoise	Viscosity at 425°F Centipoise	Shear Tensile Pine, P.S.I.	Bonding Time Range**	Cross Reference Guide 3M	Fuller	Bostik	Dexter Hysol
235 Clear	General purpose clear adhesive for many non-porous and porous substrates.	145	7,625 at 280°F: 33,000	4,500	377	Medium	3764	2125	6374	232
271 Clear	Exceptionally versatile adhesive for bonding metals, glass, and most plastics with outstanding shock resistance, even at low temperatures.	134	6,125	4,000	580	Long	3755	2123 0130	6370	
280 Clear	An extended-working-time, production quality clear adhesive for most plastics and wood-based substrates.	145	6,500	3,000	640	Long	3792			1238
295 Amber	Low-temperature, hot melt. Reduces the risk of serious burns. Specifically for applications where extended tack time is required.	130	5,000		450	Long				SP450
610 Tan	Superior carton closing adhesive – low viscosity, excellent wetting, and rapid set under compression.	145	2,600	800	680	Short 1-3 sec. under compression	3762	2107 2109	6368	6002 1X
630 Clear	Superior for carton closing, bonding paper & cardboard – high output, low viscosity, instant set.	160	1,000		725	1 Second	3762 LM		8387	QuikPak
920 Tan	Good product assembly and packaging adhesive, low viscosity with excellent penetration into porous substrates – i.e. paper, leather, fabric, wood products.	135	1,875 at 280°F: 10,625	600	600	Medium	3762	2103	9013	1X
962 Amber	An excellent hot-tack adhesive for woodworking and product assembly applications. High delivery rate, high strength bond, excellent green strength. Can be used for specially coated boxboard packages.	158	4200	1,500	690	Medium	3759 3738	2114 0120	6363 6390	1942

All adhesives listed are .625 inches diameter. *All adhesives listed are certified NON-TOXIC and meet FDA CFR 175.105 requirements for intermittent food contact.
**Short = 3-10 seconds, Medium = 11-30 seconds, Long = More than 30 seconds.

LIMITED WARRANTY

The AD-TECH 500 Applicators are warranteed by Adhesive Technologies, Inc. for a period of 1 year from the date of purchase against defects in materials and workmanship when used in accordance with the instructions provided in this Owner's Manual. During the Warranty period, repairs or replacement(s) will be made free of charge at the option of the warrantor. This warranty does not cover damages caused by accident, misuse, or the use of adhesive sticks which do not conform to AD-TECH quality control standards. A tool so claimed to be defective should be returned at the owner's expense and risk to:

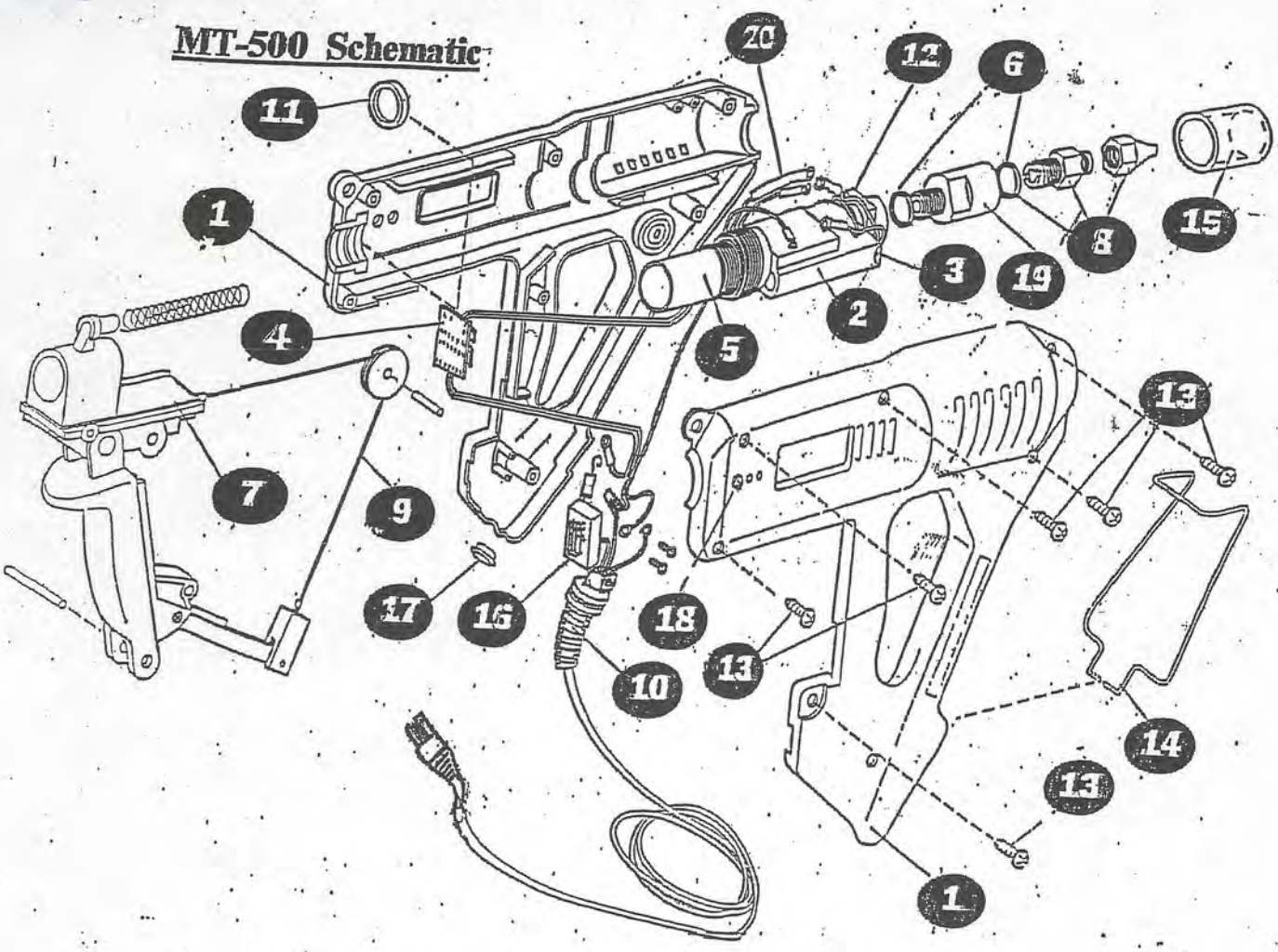
AD-TECH, Inc.
3 Merrill Industrial Drive
Hampton, NH 03842-1995

The foregoing warranty is exclusive and Adhesive Technologies, Inc. disclaims any other warranty expressed or implied. No warranty of merchantabililty or fitness for purpose shall apply. AD-TECH's limit of liability and the user's exclusive remedy shall be the repair or replacement of the tool. Under no circumstance shall AD-TECH, Inc. be liable for any incidental or consequential damages arising from the use of or inability to use the AD-TECH 500.

OUT OF WARRANTY REPAIRS AND EXCHANGES

Should your AD-TECH 500 require repairs beyond your ability to handle, the applicator can be returned to the Adhesive Technologies' manufacturing plant at the address above or to an authorized distributor who performs such repairs. The applicator will be repaired using genuine OEM repair parts and tested to "new applicator" standards. If the applicator is beyond repair, then it will be replaced with a reconditioned applicator. The charge for this service varies, so consult the Customer Service Department for more information.

MT-500 Schematic



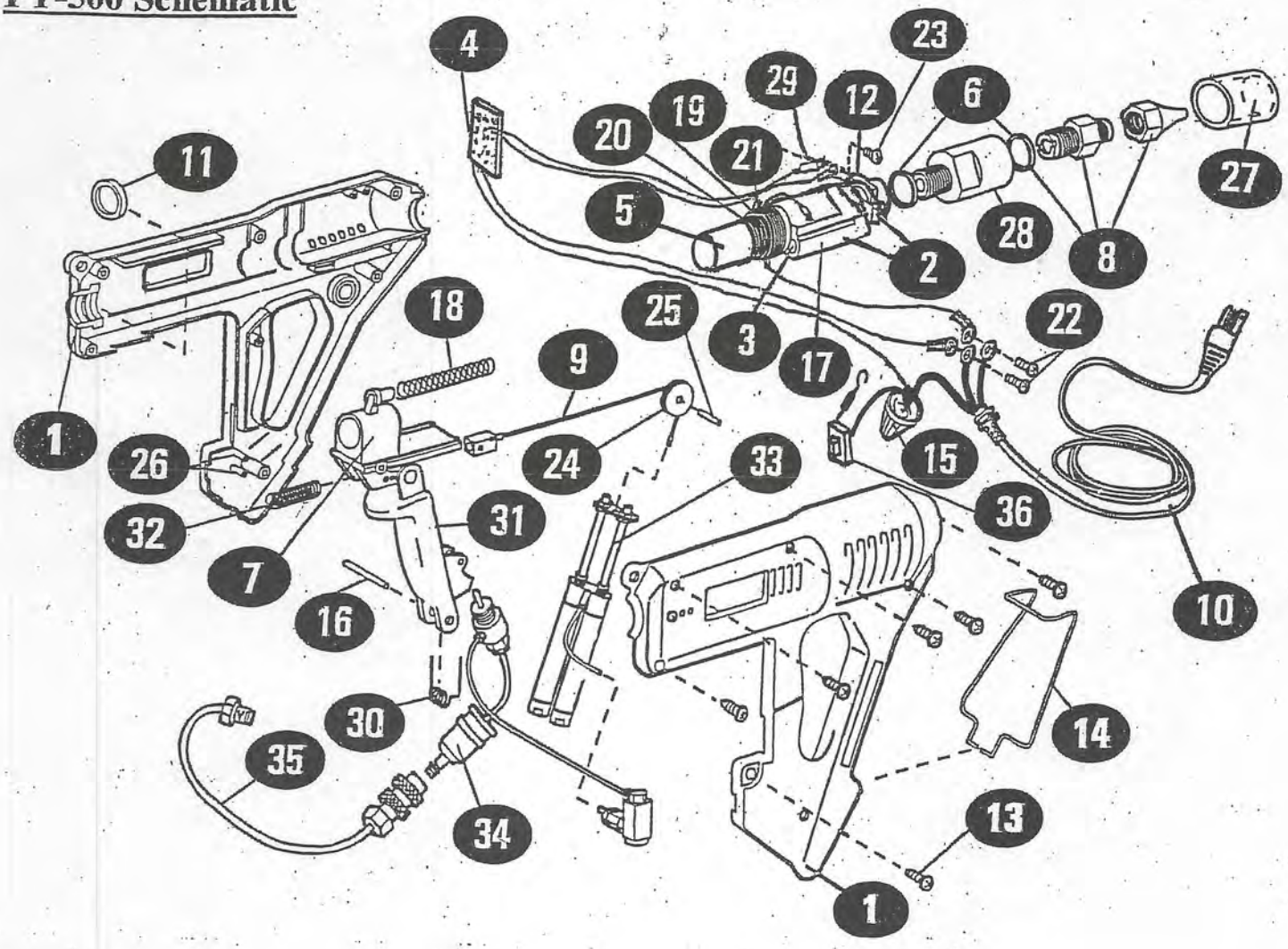
ADHESIVE-TECH MT-500 APPLICATOR REPAIR/REPLACEMENT PARTS

Ref.	Description	Part Number
1.	Handle Set	1034
2.	Melt Chamber Assy Includes: Casting, Heaters (2), Teflon Sleeve, O'Rings and Wiring	3391
3.	Cartridge Heater Assy - 400°	3346
	Cartridge Heater Assy - 300°	3351
4.	Temperature Control Board 400°	6520
	Temperature Control Board 300°	6521
5.	Teflon Sleeve	4046
6.	Viton O'Ring	6021
7.	Feed Mechanism Assembly	2504
8.	Nozzle Assy (BALL CHECK) includes: Std. .080 cap (3826) and O'Ring (6021)	3630
9.	Glue Feed Cable Assy.	6160
10.	Cordset 120 Volt	3938
11.	Rear Drag Ring	1627
12.	Insulator (2 pieces)	1663
13.	Screws, Handle (6 req'd.)	6028
14.	Wire Stand	1656
15.	Insulator Silicon Sleeve	6143
16.	Pilot Light Assy	3390
17	Hole Plug	6144
18.	Stroke Adjust Screw	6148
19.	Adapter, Gun to Nozzle	3734
20.	Fuse, Thermal	6510

Accessory Parts - MT & PT Guns

Description	Part Number
Fluted Nozzle Cap, .080	3826
Fluted Nozzle Cap, .060	3827
Fluted Nozzle Cap, .125	3828
1 ½" Extension Cap	3829
L-Type Nozzle Cap for FOL. Cartons requires adapter #3836	3831
T Type 3 Hole Spreader Nozzle requires adapter #3836	3833
T Type Nozzle Cap with 1" wide slot requires adapter #3836	3834
Adapter, Male Nozzle for PT-500	3836
T Type Nozzle Cap for RCS Cartons requires adapter #3836	3838
Pneumatic Filter/Regulator/Gauge	6069

PT-500 Schematic



ADHESIVE-TECH PT500 APPLICATOR REPAIR/REPLACEMENT PARTS

Ref.	Description	Part Number
1.	Handle Set	1034
2.	Melt Chamber Assy	3392
3.	Cartridge Heater Assy - 400°	3346
	Cartridge Heater Assy - 300°	3351
4.	Temperature Control Board 400°	6520
	Temperature Control Board 300°	6521
5.	Teflon Sleeve	4046
6.	O'ring, Viton	6021
7.	Feed Mechanism Assy	2506
8.	Nozzle Assembly	3630
9.	Cable, 6.19" Long Stroke	6164
10.	Cordset 120 Volt	3938
11.	Drag Ring	1627
12.	Insulator (2 Pieces)	1663
13.	Screws, Handle (6 Req'd)	6028
14.	Wire Stand	1656
15.	Wire Nut	6500
16.	Dowel Pin, Trigger	6109
17.	Melt Chamber Casting	3552
18.	Spring, Gripper Housing Return	6006

Ref.	Description	Part Number
19.	Spring, Large Retainer	4047
20.	Spring, Small Retainer	4048
21.	O'ring, Viton (2 Req'd)	6064
22.	Screw	6053
23.	Screw	6050
24.	Pulley	2714
25.	Dowel Pin, Pulley	6145
26.	Threaded Insert	6054
27.	Insulator Silicon Sleeve	6143
28.	Adapter, Gun to Nozzle	3734
29.	Fuse, Thermal	6510
30.	Springs, Trigger	6007
31.	Trigger	2053
32.	Spring, Gripper Return	6139
33.	Air Cylinder Assembly	2549
34.	PT500 Trigger Valve Assy	2552
35.	Quick-Connect Airline Assy	2551
36.	Pilot Light Assembly	3390