



T-21 DUAL ACTION POLISHER™



MODEL NO: T-21

SAFETY & OPERATING INSTRUCTION MANUAL

T-21 DUAL ACTION POLISHER

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TECHNICAL DATA

TYPE	T-21 DA POLISHER
PROTECTION CLASS	II
ABSORBED POWER	900W
ELECTRONIC SPEED CONTROL	YES
ROTATION	1700/4200 RPM
BACKING PLATE FIXING THREAD	M8
PLATE DIAMETER	150mm
BUFFING PAD MAX DIAMETER	180mm
PAD TYPE	HOOK & LOOP FACED
WEIGHT	2.8Kg

The values shown are based on a nominal voltage of 120V/60Hz. In the case of voltages and frequencies of different power, values may vary. Refer to the label technical specifications to the nominal values of the T-21 Dual Action Polisher.

GENERAL WARNINGS

The safety and accident prevention instructions are reported in the "SAFETY INSTRUCTION" booklet which forms an integral part of these documents. This OPERATING INSTRUCTIONS MANUAL indicates the additional information required specifically for use of the T-21 Dual Action Polisher.

CORRECT USAGE

The T-21 Dual Action Polisher (herefore referred to as T-21 DA) is designed to be used as a polisher. Read all the warnings, instructions, indications provided on drawings and specifications supplied with this tool. Failure to comply with all the instructions provided below may cause electrical shocks, fire and/or serious injuries.

The T-21 DA is not intended to be used for smoothing, metal brushing and cutting operations. The use of this tool for unintended applications may cause hazards and injuries to people.

The T-21 DA must be used with accessories that have been specifically designed or recommended by the manufacturer. The fixing of the accessory to the tool does not guarantee a safe operation.

The rated speed of the accessories must be at least equivalent to the maximum speed specified on the tool. Using the accessories at speeds above the rated maximum, may cause them to break or be projected into the air.

The external diameter and thickness of the accessories must match the specifications of the tool. Accessories with incorrect dimensions cannot be adequately protected or controlled.

The configuration of accessories must match the tool. The use of accessories that cannot be perfectly fitted on the T-21 DA may result in imbalance, excessive vibrations and the impossibility of controlling the tool.

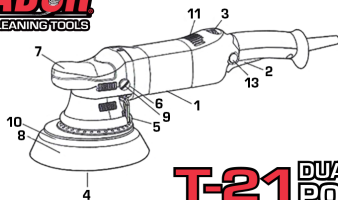
Do not use damaged accessories. Before use, inspect all of the accessories. Inspect the supporting pads and verify that there are no cracks, tears or excessive wear. If the tool or accessory has been dropped, verify that it is not damaged or install a new accessory. After inspecting or installing an accessory, test the operation of the T-21 DA at maximum speed and without load for one minute, keeping at a safe distance. If the accessories are damaged, they will break during this test.

SAFETY WARNING APPLICABLE TO POLISHING OPERATIONS

Verify that no loosened part of the polishing tool shroud or the locking ties can rotate freely. Safely position or cut all of the loosened fixing wires. Loosened or revolving fixing wires may twist around the operator's fingers or get caught by the work piece being machined.

PARTS OF THE TOOL

- 1 - Identification plate
- 2 - ON/OFF switch
- 3 - Electrical speed control
- 4 - Backing plate fixing screw
- 5 - Backing plate Allen wrench
- 6 - D-Handle (not shown)
- 7 - Handle
- 8 - Buffing pad (not supplied)
- 9 - Handle fixing screws
- 10 - Hook & loop backing plate
- 11 - Motor ventilation slots
- 12 - Auxiliary protection (optional)
- 13 - Switch locking button



T-21 DUAL ACTION
POLISHER

FIG. 1



FIG. 2

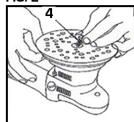


FIG. 3

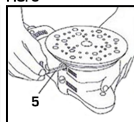
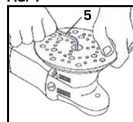


FIG. 4



STARTING UP

Before starting-up the T-21 DA ensure that:

- The packaging is complete and does not show signs of having been damaged during storage or transport;
- The T-21 DA is complete; check that the number and type of components comply with that reported in this instruction booklet;
- The power supply and socket outlet can support the load reported in the table and that indicated on the T-21 DA identification plate reproduced.

ASSEMBLING THE TOOL

- Position the handle (7) on the gearbox such that the holes for mounting the screws (9) are aligned with those on the gearbox.

MOUNTING THE BACKING PLATE

- Place the backing plate (10) with the screw (4) in the center (fig.1);
- Slightly turn the backing plate (10) until it is fixed to the screw as in fig 2;
- Tighten the screw using the supplied Allen wrench (5) (fig.4).
- Do not tighten the backing plate screw if it is in the wrong position;

- To remove, follow the same procedure in reverse order; assemble the buffer pad on the hook & loop surface of the pad.

ASSEMBLING THE BUFFING PAD

- Press the buffing pad to attach it to the disc pad.

BEFORE STARTING THE TOOL

Ensure that:

- The power supply conforms with the characteristics of the tool;
- The power supply cable and plug are in perfect condition;
- The ON/OFF switch works properly though with the power supply disconnected;
- All the parts of the T-21 DA have been assembled in the proper manner and that there are no signs of damage;
- The ventilation slots are not obstructed.

STARTING AND STOPPING

- Starting: push the lever of the switch (2) towards the body of the tool; if the T-21 DA is to be locked in the ON position, press button (13) at the same time and keep it pressed while releasing lever (2), thus locking the switch.
- Stopping: release the lever of the switch, or if locked in position, push the lever to release the lock button.

TEST RUN

Start the T-21 DA and check that there are no unusual vibrations, or no mismatching of the buffing pad. Otherwise switch-off the tool immediately and eliminate the fault.

ELECTRONIC RPM REGULATION

The rpm can be adjusted by rotating the wheel (3). The choice of speed depends on the characteristics of the buffers and the material to be worked.

REPLACING THE BUFFING PAD

Pull the used pad off and apply the new one, pressing it onto the disc pad.

MAINTENANCE

All maintenance operations are carried out with the power supply disconnected.

At the end of each work session, or when required, remove any dust from the body of the tool using a jet of compressed air, paying particular-attention to the motor ventilations slots. No other maintenance operations must be undertaken by the user.

Maintenance and cleaning of the inner parts, like brushes, ball bearings, gears etc. or others, must be carried out only by an authorized customer service workshop.

T-21 DUAL ACTION POLISHER IDENTIFICATION PLATE

POSITION AND MEANING OF INFORMATION

- 1 - Type of tool.
- 2 - Nominal working voltage in volts (V).
- 3 - Working frequency in hertz (Hz).

- 4 - Absorbed current in Amperes (A). Ensure that the power supply to which the tool is connected can easily tolerate the indicated current as a minimum.
- 5 - Absorbed power expressed in Watts (W).
- 6 - Tool code or serial number.
- 7 - Technical data of the tool.
- 8 - Maximum rpm
- 9 - The double square indicates that the tool is double insulated and therefore does not require earthing through the power supply cable.
- 10 - Read all instructions before operating this product and save these instructions.
- 11 - Personal safety devices.

GENERAL SAFETY INSTRUCTIONS

NON-OBSERVANCE OF THE SAFETY RULES CAN LEAD TO ELECTRIC SHOCK, FIRE AND/OR INJURIES.

SAVE THESE INSTRUCTIONS

WARNING! When using electric or pneumatic tools, basic safety precautions including the following, should always be followed to reduce the risk of the fire, electric shock and personal injury.

Work and Safety

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electrical shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electrical shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electrical shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electrical shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electrical shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electrical shock.

Personal Safety

- Stay alert, watch what you are doing and use common sense when operating a tool. Do not use a tool while you are tired or under the influences of drugs, alcohol or medication. A moment of inattention, while operating tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective equipment. Such as a mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying tools with a finger on the switch or emerging power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the tool on. A wrench or a key left attached to a rotating part of the tool may result in personal injury.
- Do not overreach. Always maintain proper footing and balance. This will enable better control of the tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust can reduce dust-related hazards.

T-21 Dual Action Polisher Use and Care

- Use the T-21 DA for purposes that it was intended for.
- Do not use the tool if the switch does not turn it on or off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect from the power source and/or the battery pack from the power tool before making any adjusting, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle tools out of the reach of children and do not allow persons unfamiliar with the tool or these instructions to operate the power tool. Tools are dangerous in the hands of untrained users.
- Maintain tools. Check for misalignment binding of moving parts, breakage of parts and any other conditions that may affect the tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained tools.
- Use the tool, accessories and tool bits etc. In accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the tool for operations different from those intended could result in a hazardous situation.

Service

- Have your tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Additional Safety Instructions for all Operations

Kickback and Related Warning

Kickback is a sudden reaction to pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes uncontrolled tool to be forced in the direction opposite of the accessory's rotation at the point of the binding. For example, if an abrasive wheel is snagged or pinched by the work piece, the edge of the

wheel that is entering into the pinch can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on the direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions. Kickback is a result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- Maintain a firm grip on the tool and position your body and arm to allow you to resist kickback forces.
- Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions taken.
- Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- Do not position your body in the area where tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

WARRANTY

1 year internal parts only, not wearable parts. Warranty starts from the date of sale to the end user.

End user or distributor sends the unit back to Tornador® at the end user/distributor's expense. Include the bill of sale to help with determining the 1 year as well as contact name, phone number and return address. **ALSO INCLUDE A BRIEF DESCRIPTION OF WHAT IS WRONG WITH THE UNIT.**

If covered under warranty, it will be fixed and returned freight prepaid.

If it is not covered under warranty, Tornador® will contact the end user/distributor with an estimate of the repair cost. The end user/distributor is responsible for paying the repair charges if they authorize the unit to be repaired. The unit will also be shipped back at the end user/distributors expense.

Please note that any prior attempt at a repair by the end user or unauthorized repair facility will void the warranty.

Send to: **Tornador®**
Attn: Vehicle Care Repair Team
11210 Katherine's Crossing
Suite 100
Woodridge, IL 60517



Thank you for the purchase of your new Tornador® T-21 Dual Action Polisher. We are very happy to welcome you into the Tornador® family! Thank you for your support!

The Tornador® T-21 Dual Action Polisher is the perfect tool for all professional detailers that desire the best results. The T-21 levels, polishes, and finishes automotive paint resulting in that deep gloss and shine without swirling and scratching. Whatever the job is, the T-21 DA Polisher is your answer!

Phone: **1-972-380-2906**

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For Product Info: **www.tornador.us**

For Ordering Info: **www.tornadortools.com**

For Repair Info: **www.tornador-repairs.com**

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Serving the automotive industry since 1969
Innovations in chemistry since 1935

Tornador® covered by one or more of the following: U.S. Patent Nos. 6,883,732; 8,480,011; 8,690,077; 9,475,071; 10,189,034; 10,182,696 and U.S. Patent Application Nos. 20150000705; 20150375272; and Taiwan Application No. 103135808.

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