

DAREX

WORLD'S BEST SELLING INDUSTRIAL DRILL SHARPENERS

XT-3000

Automated Sharpening System



Operating Instructions

Table of Contents

Safety Instructions	page 4-5
Material Safety Data Sheet	page 6
Auto Specification Sheet	page 7
Quick Start Instructions	page 8
Connecting Auto Sharpening System to XT-3000	page 9-14
Auto Controller/Display Details	page 15-18
Auto Sharpening Fixture Details	page 19-23
Auto Sharpening Fixture Parts List	page 24
Auto Sharpening Fixture Schematic	page 25
Geared Chuck Parts List	page 26
Geared Chuck Schematic	page 27
Auto Controller/Display Parts List	page 28
Auto Controller/Display Schematic	page 29
Maintenance	page 31-32
Trouble Shooting Guide	page 33

*For Technical Service visit our web site at <http://www.darex.com>
Or call Darex at 800-547-0222
Or contact your Darex Distributor

PP17296KF Rev 0

Safety Instructions

Safety Instructions

FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING MACHINE!

Caution:

- WE DO NOT RECOMMEND OPERATING MACHINE WITHOUT A VACUUM SYSTEM RUNNING
- GRINDING DUST INHALED/INGESTED CAN BE HARMFUL TO YOUR HEALTH.
- GRINDING PARTICLES WILL CAUSE DAMAGE TO THE INTERNAL COMPONENTS

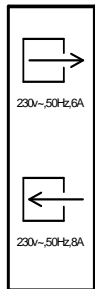
Caution:

WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO PREVENT THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

- WHEN MAINTENANCE OR MACHINE ADJUSTMENTS ARE PERFORMED ON SHARPENER ALWAYS: Push the emergency stop button, unplug unit from power supply and use a "LOCK OUT" "TAG OUT" procedure.
- FOLLOW INSTRUCTIONS ENTITLED "DAREX XT-3000 Maintenance" in this Instruction Manual.
- NEVER TOUCH INTERNAL PARTS OF THE SHARPENER WHEN THE SHARPENER IS ON The rotating grinding wheel can cause injury.
- USE CAUTION WHEN REPLACING THE GRINDING WHEEL Follow instructions entitled "How to change a wheel", on page 21 of the XT-3000 Instruction Manual.
- KEEP GUARDS IN PLACE and in working order. See Decal at left.
- REMOVE WRENCHES Always check to see that any tools have been removed from sharpener before turning it on.
- KEEP WORK AREA CLEAN Cluttered areas and benches invite accidents.
- DON'T USE IN DANGEROUS ENVIRONMENT Do not use power tools in damp or wet locations, or expose them to rain. Do not use tools in the presence of flammable liquids or gases.
- KEEP WORK AREA WELL LIT
- STORE EQUIPMENT in a safe place when not in use.
- DON'T FORCE TOOL It will do the job better and safer at the rate for which it was designed.
- USE THE RIGHT TOOL Don't force tool or attachment to do a job it was not designed for.
- ALWAYS USE SAFETY GLASSES Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistance lenses and they are NOT safety glasses. See Decal at left.
- AVOID ACCIDENTAL STARTING Make sure switch is in the "OFF" position before plugging it in.
- USE RECOMMENDED ACCESSORIES Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards. See Decal at left.
- CHECK FOR DAMAGED PARTS Before further use of the tool, a guard or other part that is damaged should be carefully checked to assure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- NEVER LEAVE TOOL RUNNING UNATTENDED Turn power off.
- USE PROPER EXTENSION CORD Make sure extension cord is in good condition. When using an

extension cord be sure to use one heavy enough to carry the current the Drill Sharpener will draw. An undersize cord will cause a drop in line voltage, resulting in a loss of power and/or overheating.

- DO NOT USE DAMAGED OR UNSHAPED WHEELS Use grinding wheels suitable for speed of grinder.
- THE CONTINUOUS A-WEIGHTED sound pressure level at the operator's ear is not over 60dB (A).
- RISK OF INJURY DUE TO ACCIDENTAL STARTING. Do not use in an area where children may be present.
- THE WEIGHTED ROOT MEAN SQUARE ACCELERATION VALUE to which the arms are subjected to does not exceed 2.5 m/s².
- KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
- MAKE WORKSHOP KID PROOF with padlocks or master switches.
- WEAR PROPER APPAREL. Do not wear loose clothing, neckties, rings, bracelets or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- DON'T OVERREACH. Keep proper footing an balance at all times.
- MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- DISCONNECT TOOLS before servicing, when changing accessories, such as blades and the like.
- NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the grinding tool is unintentionally contacted.



Safety Instructions

GROUNDING INSTRUCTIONS

- **FOR ALL GROUNDED CORD CONNECTED TOOLS:**
- In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided if it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation, having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cord immediately.
- **GROUNDED, CORD-CONNECTED TOOLS INTENDED FOR USE ON A SUPPLY CIRCUIT HAVING A NOMINAL RATING LESS THAN 150 VOLTS:** See Table 1 for minimum gauge cords.

Table 1 Minimum Gauge Cords

		Volts	Total length of cord (feet / meters)			
Ampere Rating		120 V	25 / 7.5	50 / 15	100 / 30	150 / 45
		240 V	50 / 15	100 / 30	200 / 60	300 / 90
More than	Not more than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Material Safety Data Sheet

US DEPARTMENT OF LABOR
Administration

Form Approved Occupational Safety and Health
OMB No 44-Ri 367

MATERIAL SAFETY DATA SHEET

Required under USDL Safety & Health Regulations for Ship Repairing, Shipbuilding and Chip breaking
129 CFR 1915, 1916.19171

SECTION I

MANUFACTURERS NAME: Darex LLC
EMERGENCY PHONE NO: (541) 488-2224
ADDRESS: 210 E. Hersey Street Ashland, Oregon 97520
CHEMICAL NAME & SYNONYMS Diazon-Electroplated Diamond/CBN Products, Diamond (uncoated)
Man-Made Diamond. RVG. MBG. MBS Product Families. Standard Series and 300 Series Diamond Micron Powder
TRADE NAME & SYNONYMS: Electroplated CBN Wheels, Electroplated Diamond Wheels
CHEMICAL FAMILY: Abrasive Any Grade
FORMULA: n/a

SECTION II COMPOSITION

CHEMICAL NAME	Nickel	Industrial Diamond
REGULATED	Yes	No
CAS#:	7440-02-0	7882-40-3
AGIH TLV	1 0 mgm3	10.0 mg m3 (PNOC)
CARCINOGEN	Yes	No

Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard

SECTION III - PHYSICAL AND CHEMICAL DATA

BOILING POINT (F)	n/a	MELTING POINT	n/a
SPECIFIC GRAVITY	n/a	VAPOR PRESSURE	n/a
VAPOR DENSITY	n/a	EVAPORATION RATE	n/a
SOLUBILITY IN WATER	n/a	SOLUBILITY IN ALCOHOL	n/a
SOLVENT	n/a	SOLUBILITY IN OTHER PERCENT VOLATILE BY VOLUME (%)	n/a

APPEARANCE AND ODOR Solid, Clear, White To Yellow To Dark Crystals Silver Color.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)	n/a	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA			n/a	
SPECIAL FIRE FIGHTING PROCEDURES:			n/a	
UNUSUAL FIRE AND EXPLOSION HAZARDS:			n/a	

SECTION V - HEALTH, FIRST AID AND MEDICAL DATA

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Ingestion, Skin, Eye(s)

EFFECTS OF OVEREXPOSURE

INHALATION: Difficulty in breathing (Dust from wheel use).

INGESTION: If a dust, symptoms are variable.

SKIN: Irritation (especially if sensitive to Ni).

EYE(S): Irritation (from Ni or diamond particle).

FIRST AID AND MEDICAL INFORMATION:

INHALATION: Move to fresh air. Give oxygen if necessary

INGESTION: Obtain medical attention.

SKIN: Wash thoroughly with water Obtain medical help if necessary

EYE(S): Flush thoroughly with water. Obtain medical assistance

OTHER POTENTIAL HEALTH RISKS

Nickel (Ni) is listed as a carcinogen Avoid long exposure. Consult medical personnel for first aid and medical information

SECTION VI - CORROSIVELY AND REACTIVITY DATA

STABILITY:	Unstable ()	Stable (x)
POLYMERIZATION:	May occur ()	Will not occur (x)
INCOMPATIBILITY: (Materials to avoid)		n/a
HAZARDOUS COMPOSITIONS PRODUCTS:		n/a

CONDITIONS TO BE AVOIDED: Contact with strong acids/caustics, enclosed areas.

SECTION VII - SPILL, LEAK AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Normal clean up procedure

WASTE DISPOSAL METHOD:

Waste will contain nickel. Dispose in accordance with all applicable Federal, state, and local regulations.

SECTION VIII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Respiratory protection as needed see OSHA-29 CFR 1910.134

VENTILATION: LOCAL EXHAUST: strongly preferred

MECHANICAL (GENERAL): Use only if adequate to maintain below TLV's.

PROTECTIVE GLOVES: As desired by user.

EYE PROTECTION: Recommended see OSHA29 CFR 11910.215

OTHER PROTECTIVE EQUIPMENT: Use standard precautions for grinding operations.

SECTION IX - STORAGE AND HANDLING PROCEDURES

NORMAL STORAGE AND HANDLING:

Store in clean, dry area, away from chemicals.

NORMAL USE: Use adequate ventilation (See Section VIII)

Auto Sharpening System Specification Sheet



XT-3000 Auto Sharpening System Specifications

Warranty - 1 year on defective parts

- A) Geared Chuck:
Chuck Body Material - 303 Stainless
Knob and Cam Material - 12L14
Capacity - 3mm - 12mm or 12mm - 21mm
Gear Spline - 45 Tooth
Weight - 2.1lbs each (0.95kg)
- B) Sharpening Fixture:
Gear Material - Acetal;
Gear Motor - 12 VDC, rated current 350 mA, typical current 150 mA
Home switch - Slotted Optical
Weight - 6.0 lbs (2.72 kg)
- C) Controller/Display:
Housing Material - Glass filled, Acrylonitrile Butadiene Styrene (ABS)
STN Graphic LCD w/ Green LED back light
Weight - 1.5lbs (0.68 kg)

Power Inlet:

Voltage: 115v~

Frequency: 60hz

Current:

Grind Motor: 3.2A

Accessory: 8.0A

Power Outlet:

Voltage: 115v~

Current : 8A Max

Fusing : 8A Time Lag

Quick Start Set Up

The Auto Sharpening System comes equipped with a sharpening fixture, a Controller/Display and a chuck/chucks. Available chuck options listed below. **The Automated Sharpening System is for use with the XT-3000 Expandable Tool Sharpener *only* and not for use with other sharpeners.**

LEX400 - 115v w/3-12mm Chuck
LEX400i - 230v w/3-12mm Chuck
LEX450 - 115v w/12-21mm Chuck
LEX451i - 230v w/12-21mm Chuck
LEX500 - 115v w/3-21mm Chucks
LEX500i - 230v w/3-21mm Chucks

Detailed set up instructions begin on page 9.

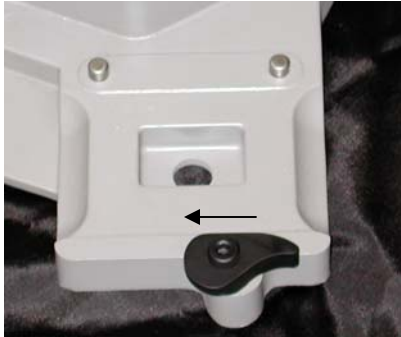
1. Remove from shipping box and remove all packaging material.
2. Attach sharpening fixture to XT base, making sure the sharpening fixture is secure. For more information on mounting the sharpening fixture, see page 9.
3. Attach Controller/Display with mounting bracket provided, see page 10.
4. Connect DIN cable from sharpening fixture to Controller/Display, see page 12.
5. Connect power from outlet source to back of Controller/Display inlet, see page 13.
6. Connect Pigtail Jumpers from the back of Controller/Display to XT-3000 Base casting inlet. For detailed set up information, see page 13.
7. The accessory receptacle is located at the top of the power receptacle on the back of the Controller/Display and will allow you to use a dust extraction system in conjunction with the use of the XT3000. ***We highly recommend the use of a vacuum when the machine is in use.**
8. Make sure the grit tray is in place and secure.
9. Un-box the chuck.
10. Align and secure the drill in the chuck. (XT-3000 Instruction Manual PP16180KF for Alignment details)
11. Insert chuck into Sharpening fixture. Secure chuck in sharpening fixture, see page 21.
12. Power on the machine by pushing the rocker switch into the ON position, ***this will immediately start the grinding wheel in motion*** and power up the Controller/Display screen.
13. Set up the LCD screen on the Controller/Display, see pages 15-18.
14. **(THIS STEP IS NOT NECESSARY WHEN PURCHASING AND XT-3000 A COMPLETE)** Calibrate Final Grind - Drill Stick Out on sharpening fixture, see pages 22-23.
15. Press Start on the Controller/Display screen to begin sharpening. **NOTE:** The sharpening fixture will immediately begin to rotate and sharpen the drill. Make sure hands and clothing are free of the sharpening fixture.
16. Once the chuck has stopped, release the chuck and remove from sharpening fixture.
17. If a split point drill is desired, insert chuck into splitting port. DO NOT remove drill from chuck until split is complete. (See XT-3000 Instruction Manual, PP16180KF, for Split Point details)

Automated Sharpening System

Attaching Sharpening Fixture to Base Casting:

Make sure all contact areas are clean and free of metal dust.

1. Rotate the locking lever so the flat edge is on top, horizontal and in a straight line with the base casting.



2. Position the sharpening fixture so that the 2 location holes on the base of the alignment fixture are aligned with the 3/8 dowel pins.



3. After sharpening fixture is in place, rotate the locking lever clockwise until snug. This will secure the sharpening fixture to the base.



Automated Sharpening System

Mounting Auto Controller/ Display to Base Casting:

1. Install and tighten the two, 6mm BSHC screws from the stamped bracket to the control box.



2. Align control box to main casting and transfer punch or mark for drilling mounting screw holes.

3. Drill through casting.



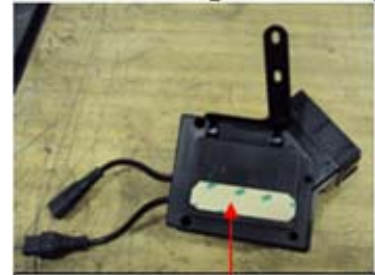
Caution don't drill into motor housing.



Drill two holes using a #17 drill or (4.4mm)

4. Using an alcohol wipe, thoroughly clean the XT base casting surface where the adhesive will make contact.

5. Peel adhesive backing from dual-lock tape.



Peel adhesive backing

6. Carefully align Controller/ Display to XT base casting and press firmly.



Align control bracket with drilled holes and press control box firmly to main casting

5. Using 2, 10-24 thread forming screws, insert into mounting bracket. While pushing hard, drive in screws until seated.



Drive two 10-24 screws until seated

Automated Sharpening System

Connecting Sharpening Fixture to Controller/Display:

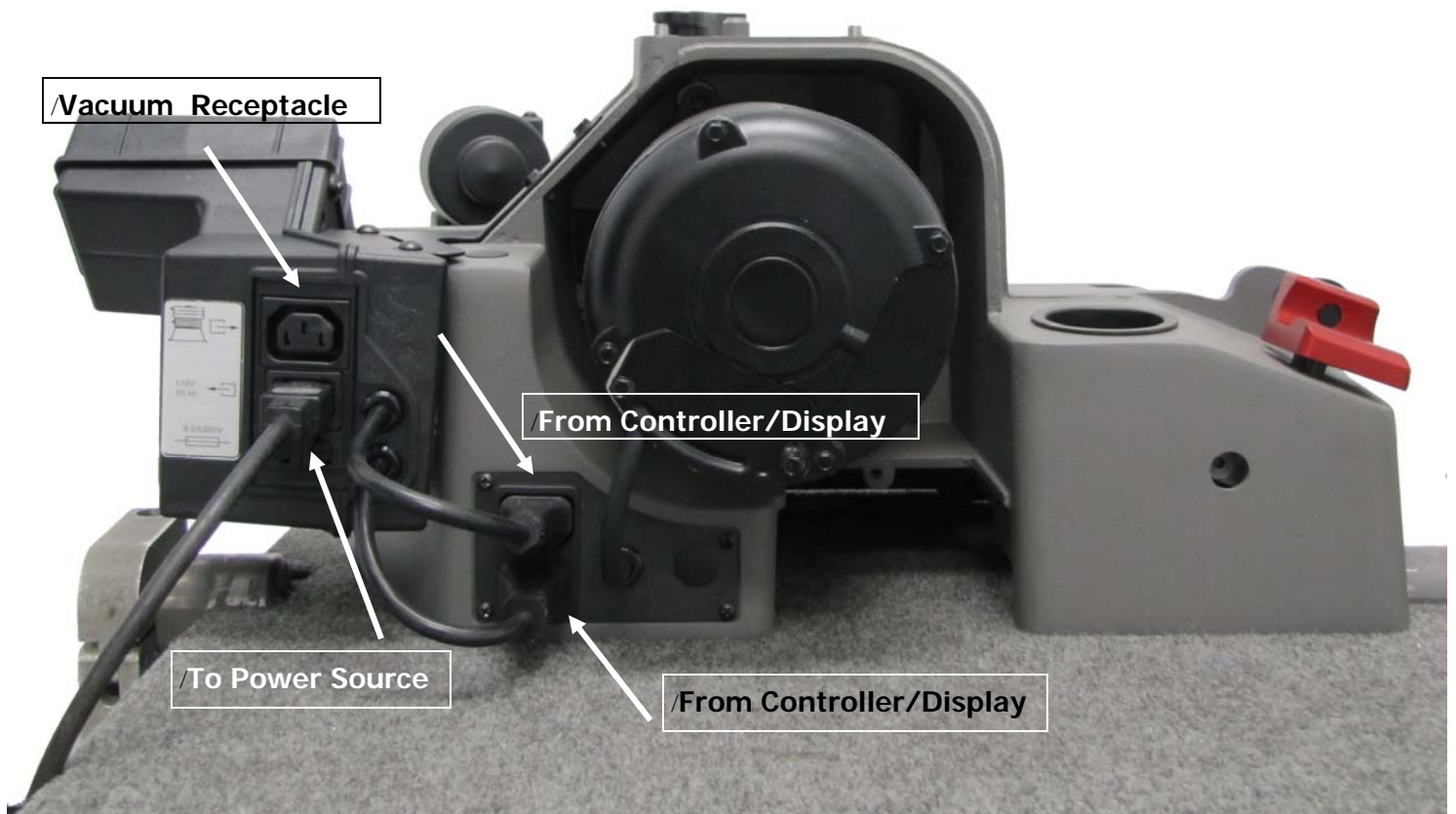
1. Connect the mini DIN power cable coming from the Sharpening Fixture to the mini DIN receptacle located slightly underneath the bottom of the Controller/Display.



Important: Be sure you have the DIN pins and receptacle aligned correctly before engaging. Improper connection can result in a blown optical switch in the sharpening fixture which will make the unit nonfunctional.



Power Connections - Back view Automated Sharpening System



Automated Sharpening System

Connecting Auto Controller/Display to XT-3000:

1. Located on the back of the XT-3000 base casting is the secondary power receptacle.



Caution: Do not connect a separate power source to this Inlet!

2. The secondary accessory receptacle is located on the top and the secondary power inlet is located on the bottom of the receptacle.



3. Connect both pigtail jumpers coming from the Controller/Display to the appropriate positions in the secondary receptacle located at the back of the XT-3000.



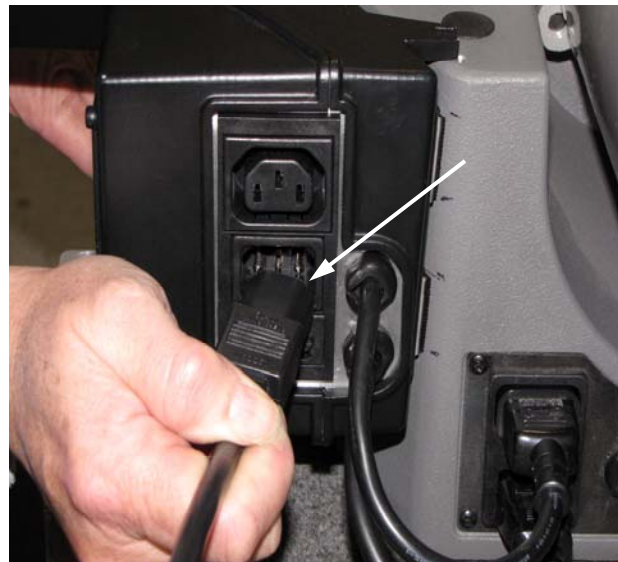
Connecting AC Power to Auto Controller/Display:

1. Located on the back of the Controller/Display is the primary power receptacle. Within this receptacle you will find a power inlet and accessory receptacle.



2. Provided with the XT-3000 is a power cord. Plug the cord into to a power outlet and into the power inlet located on the back of the Controller/Display.

Caution: Only one supply source can be connected to this equipment!



Automated Sharpening System

Connecting Vacuum:

The accessory receptacle on the back of the Controller/Display is located in the top position on the receptacle. This will allow you to connect a dust extraction system to be used during sharpening.



***We highly recommend the use of a dust extraction system when the auto sharpening system is in use. DAREX offers a vacuum system compatible with your XT3000.**

Call DAREX for pricing.

- SA12075EA - 115V Vacuum
- SA12072EA - 230V Vacuum

Grit Tray/Vacuum Port Connection:

Grit tray

At the back of the machine, located underneath the grinding motor is the grit tray. Drill grindings will accumulate inside the grit tray. The grit tray has a magnetic liner to attract and hold these dust particles. Do not let the tray become more than 1/3 full.



To remove tray, unscrew brass thumb screw. Remove tray and dump contents. Wipe excess dust from the tray with a rag.

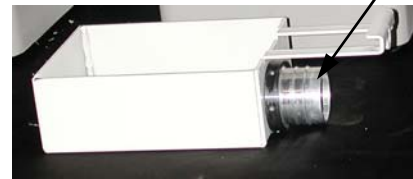


Vacuum Port Connector (Optional)

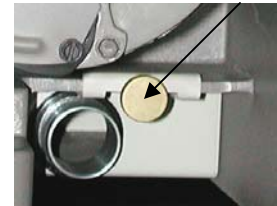
The grit tray has a knock out plug that can be removed by hand and replaced with the vacuum tube (SA16030TA).



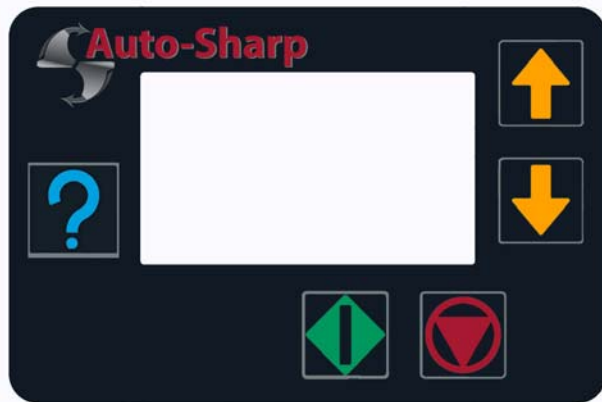
Use this port to connect a vacuum hose to the XT3000. This method of extracting dust particles from the machine will keep it cleaner and is recommended.



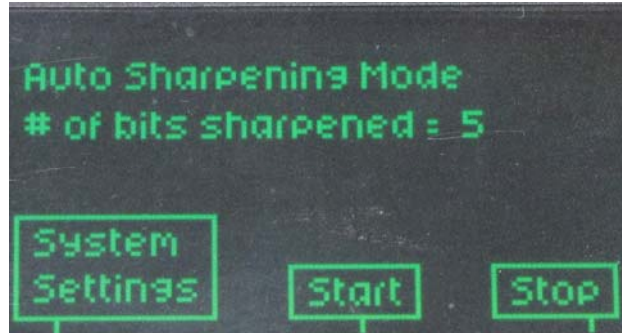
Make sure the grit tray is in place and secure before connecting the vacuum hose.




Display Details



To operate the Auto Attachment you must first power up the XT-3000 sharpener. Once powered up, the grinding wheel on the XT-3000 will begin to turn at full speed and the Controller/Display screen will illuminate.




 CYCLE START/SELECT/SAVE:

 CYCLE STOP/STOP/EXIT:

 ARROW UP:

 ARROW DOWN:

 SYSTEM SETTING:

To access the complete menu, touch the System Settings button located on the left of the screen.



This will display the full menu:


- Clean Up Turns
- Auto/Manual Select
- Reset Bit Count
- Language Selection
- Motor Stall Delay
- Grind Sensitivity
- Factory Bit Count
- Software Version

Use the Arrow up and Arrow down buttons to view the entire menu. When the text of the menu option has changed to bold, the secondary menu option can be accessed.



To select and enter into each secondary menu

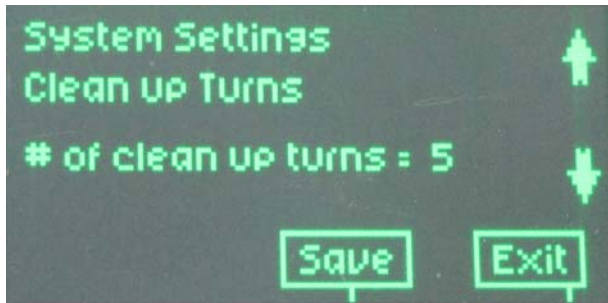
touch 

Pressing  will allow you to exit the screen you are working in.


Display Details

CLEAN UP TURNS:

By selecting "Clean up turns",
The display shows:



The "Clean up turns" is active only when in "Auto" Sharpening mode.

Pressing "Arrow up"  advances clean up pass by one.

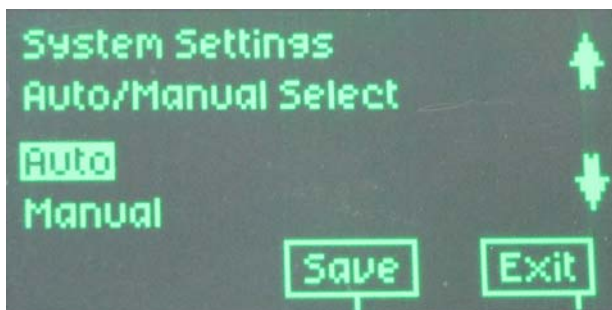
Pressing "Arrow down"  reduces pass by one.

Pressing "Save",  stores and exits.

Pressing "Exit",  exits without saving.

AUTO/MANUAL SELECT:

By selecting "Auto/Manual",
The display shows:



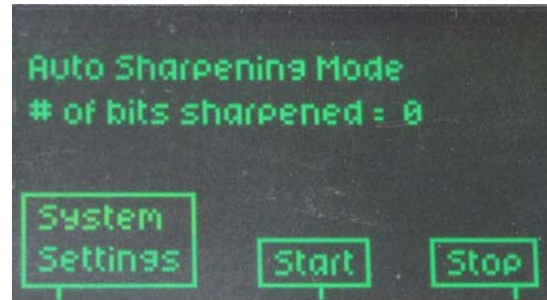
Pressing "Arrow up"  or "Arrow down"  will highlight each menu option.


Pressing "Save",  stores and exits.

Pressing "Exit",  exits without saving.

AUTO:

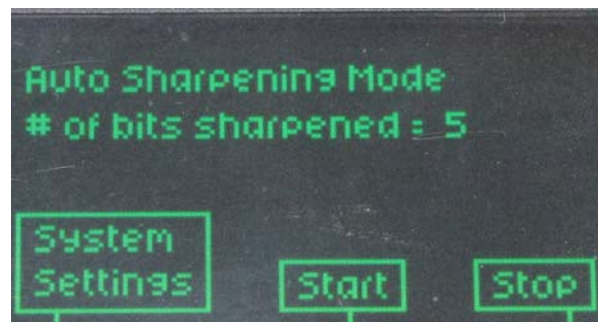
By selecting "Auto",
The display shows:



When "start"  is pressed, the sharpening fixture will begin to sharpen.

During sharpening, you will see the number of rotations on the screen increase. When the grind is complete, the programmed cleanup passes will appear and begin to count down to 0. The sharpening port will rotate to the home position and stop.

At the end of each sharpening, the Bit Count increases.



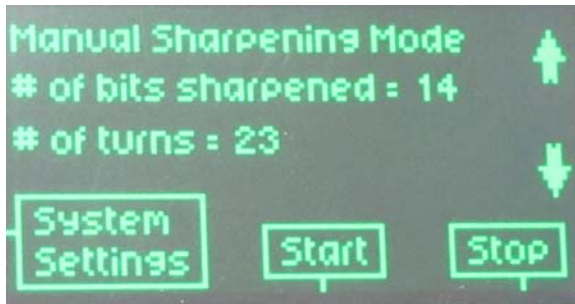
By pressing "stop"  during the Auto


Cycle the unit stops and returns home.


Display Details


MANUAL:

By selecting "Manual",
The display shows:



By pressing "Arrow up",  the number of Manual turns increases.

By pressing "Arrow Down",  the number of Manual turns is decreased. This automatically saves the new setting.

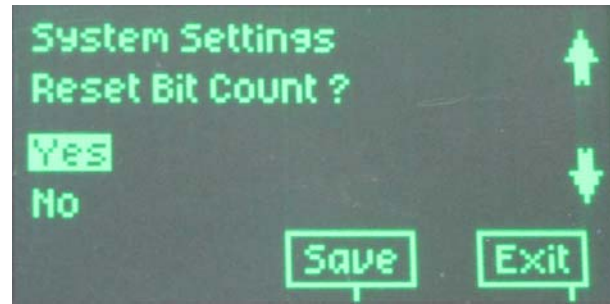
After pressing "Start",  the manual sharpening begins.

The display starts counting down the number of turns. At the end of sharpening, the Bit Count increases.

By pressing "Stop",  the manual sharpening ends.

RESET BIT COUNT:

By selecting "Reset Bit Count",
The display shows:



Pressing "Arrow up",  or

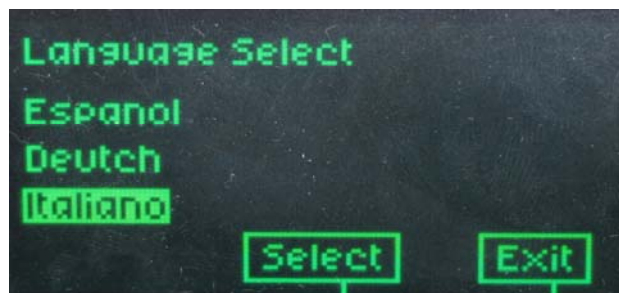
"Arrow down",  will highlight each menu option.

Pressing "Save",  resets the bit count, only, if the "yes" is highlighted.


Pressing "Exit",  exits without saving.

LANGUAGE SELECTION:

By selecting "Language Option",
The display shows:



Pressing "Arrow up"  or "Arrow down"

 will highlight each language option.

Display Details

Pressing "Select",  displays language selection and exits.

Pressing "Exit",  exits without saving.

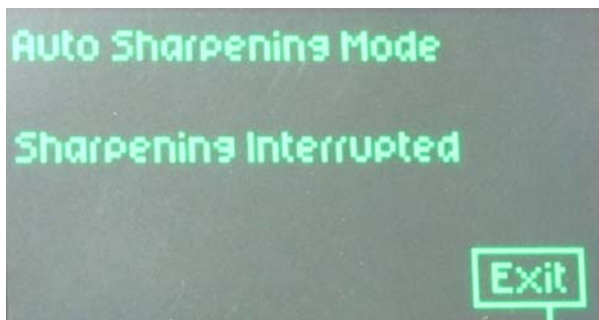
MOTOR STALL DELAY:

This screen will appear on the display:



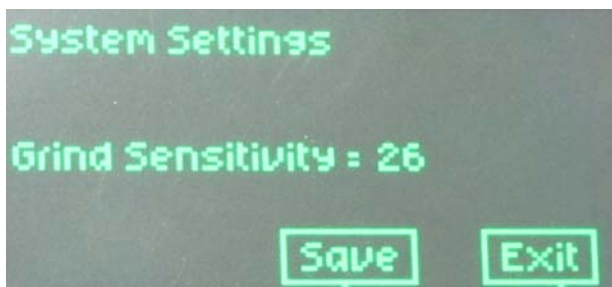
"Motor Stall Delay is used to detect a prolonged period of the Gear Motor not turning, sensing a blocked or jammed condition. The available settings are 2, 3 or 4 seconds; the factory default is 3 seconds.

If the unit detects a 3 seconds lapse and the chuck has not rotated at least a half turn, the unit will shut itself off and "Sharpening Interrupted" will appear.



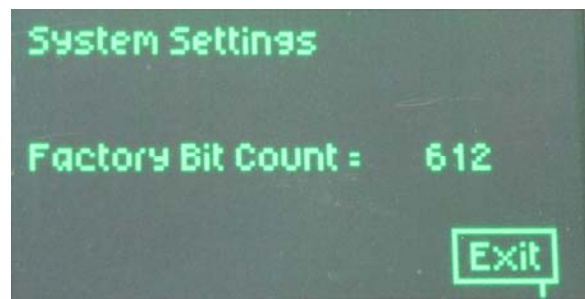
The system will reset itself.

GRIND SENSITIVITY:



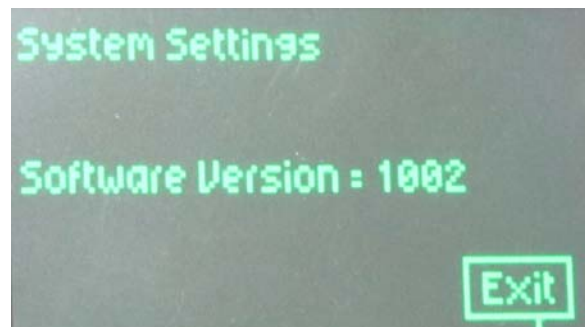
The Grind Sensitivity is a measure of how quickly the controller responds to the material take off during AUTO grinding. A lower number generally creates more turns, a higher number means fewer turns before the controller decides it has reached the proper material removal. This variable is set at a factory default of 25. When Darex CBN and Diamond wheels are used, the setting of 25 is appropriate and will not need to be changed.

FACTORY BIT COUNT:



This screen displays the accumulative number of times the cycle start button has been pressed. This number cannot be reset and will be used for warranty evaluations.

SOFTWARE VERSION:



This screen displays the current version of software. You will need to know the software version for upgrade status and troubleshooting.

Alignment Instructions

Each chuck has an orientation line scribed on the chuck dog of the cam.



To achieve the highest level of concentricity, in the alignment step, insert the chuck into the alignment port with the white line in the 12 o'clock position.

Auto Sharpening Fixture

SECURE CHUCK IN SHARPENING FIXTURE

After the drill has been properly aligned and secured in the chuck, be sure to lock the chuck into the automated sharpening fixture.

Insert chuck into sharpening port with the white line on the dog, aligned



Located on the front of the sharpening fixture is a spring loaded handle assembly. This is the "Cam Follower" assembly.



Grip the Cam Follower "Knob", rotate the assembly as far clockwise as possible.



with the locating mark on the face of the sharpening tube housing.



This will allow you to insert the chuck into the sharpening tube without interference.



Auto Sharpening System

Gripping the follower "Knob", gently pull back and rotate the "Cam Follower" assembly as far counterclockwise as possible.



Release the "Knob".



This will secure the chuck in the sharpening fixture.



To remove the chuck, wait for the sharpening fixture to come to a complete stop. Simply rotate the "Cam Follower" assembly as far clockwise as possible.
NOTE: It is not necessary to pull back when rotating the "Cam Follower" assembly clockwise.



DRILL STICK OUT- FINAL GRIND:
IMPORTANT: This step is NOT necessary for the XT-3000-A & XT-3000I-A Complete.

The Drill Stick Out - Final Grind amount on the Auto Sharpening system must be calibrated to produce the same Drill Stick Out - Final Grind amount as produced on your existing Manual

Before you begin sharpening with your Auto system, take the time to calibrate Final Grind-Drill Stick Out. This will help retain your current point split depth calibration.

Verify Final Grind Drill Stick Out On Manual System First:

1. Rotate material removal knob to minimum take off setting.
2. Align drill in chuck. Once drill is set to length, aligned and securely captured in the chuck, remove from alignment port.



3. Using a height gauge, measure the amount of drill protruding from the end of the chuck to the tip of the drill. (Drill Stick Out - Before Grind)



4. Sharpen the drill until spark out has been achieved. Remove chuck from sharpening port. Without removing the drill, re-measure the amount of Drill Stick Out after grinding. Your Auto system must be adjusted to produce the same Final Grind - Drill Stick Out measurement as the manual system.

5. Remove the Manual System and install the Auto Sharpening System.

6. Using the same drill bit, repeat steps 1-4 to determine the Final Grind - Drill Stick Out measurement currently produce by the Auto Sharpening System.

You will need to adjust the Swing Bearing assembly on your Auto sharpening attachment to duplicate the Final Grind - Drill Stick Out measurement produced by the Manual system, see page 23 for calibration details.

Auto Sharpening System

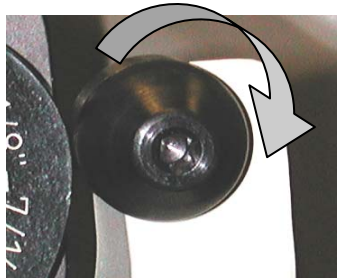
CALIBRATING DRILL STICK OUT - FINAL GRIND :

The swing cam on the chuck rests and rides on the Swing Bearing assembly. This bearing assembly is eccentric. The Auto Sharpening Fixture will arrive with this bearing positioned so that the drill will NOT make contact with the grinding wheel. By repositioning the bearing, the amount of material removed from the end of the drill will change, changing the Final Grind - Drill Stick Out amount.

1. Using a 3mm hex wrench, loosen the Swing Bearing Assembly, located on the back of the Pivot Base Casting.



2. To increase the amount of material removed from the end of the drill and reduce the Drill Stick Out amount, slightly rotate the bearing clockwise.



3. After repositioning the bearing, be sure to retighten the assembly bolt, securing the new position of the Swing Bearing Assembly.

4. Sharpen the drill and verify the amount of Final Grind - Drill Stick Out.

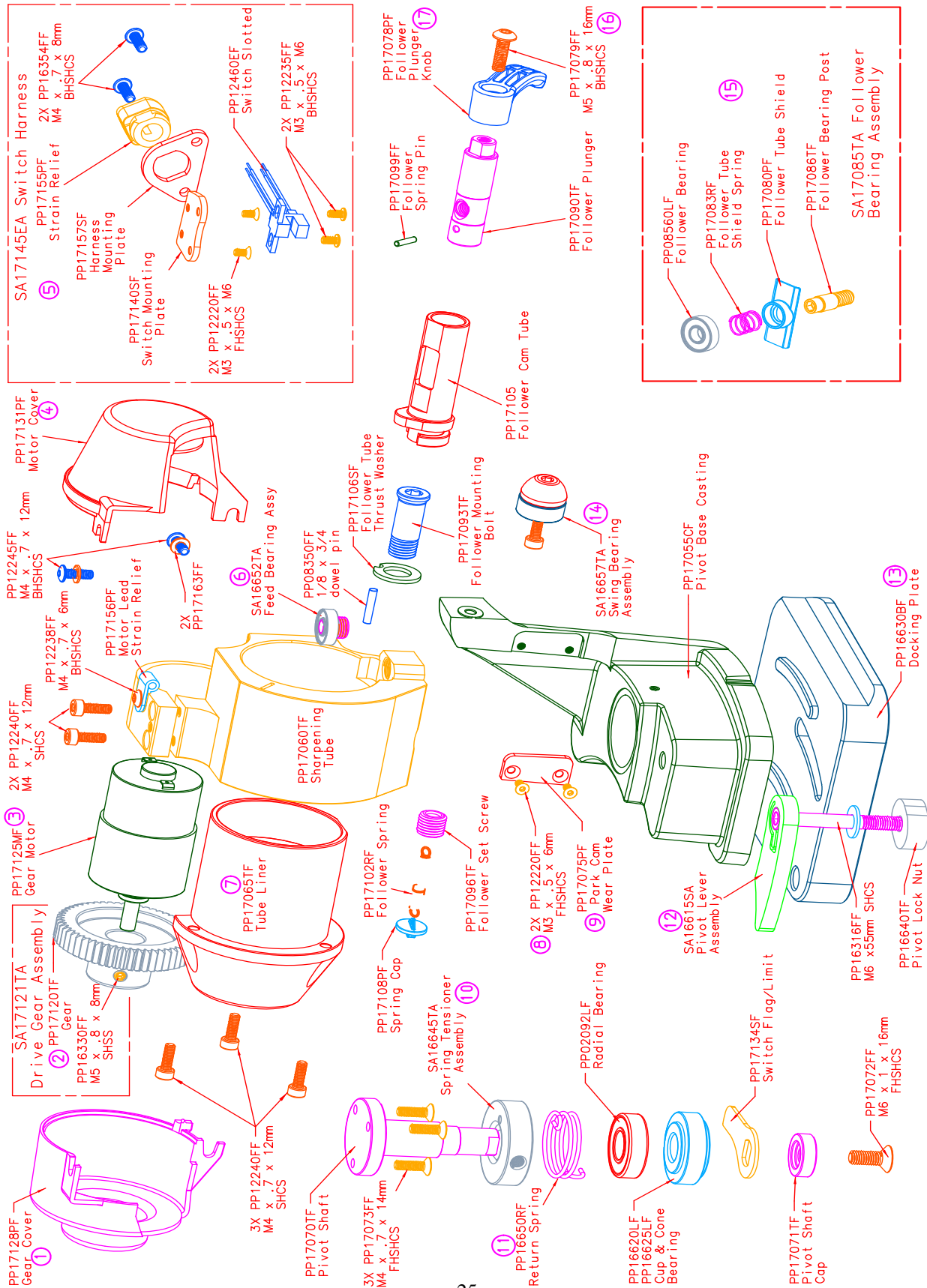
Repeat this procedure until the Final Grind - Drill Stick Out amount measures the same as produced with the Manual system.

Once the Final Grind - Drill Stick Out has been calibrated, it will not be necessary to make this adjustment again.

Auto Sharpening Fixture Parts List

SA17050TA	Auto Sharpening Fixture Complete
1) - PP17128PF	Gear Cover
2) - SA17121TA	Drive Gear Assembly
3) - PP17125MF	Gear Motor
4) - PP17131PF	Motor Cover
5) - SA17145EA	Switch Harness
6) - SA16652TA	Feed Bearing Assembly
7) - PP17065TF	Gear Chuck Tube Liner
8) - PP12220FF	3mm x .5 x 6mm
9) - PP17075PF	Park Cam Wear Plate
10) - SA16645TA	Spring Tensioner Assembly
11) - PP16650RF	Return Spring
12) - SA16615SA	Pivot Lever Assembly
13) - PP16630BF	Docking Plate
14) - SA16657TA	Swing Bearing Assembly
15) - SA17085TA	Follower Bearing Assembly
16) - PP17079FF	5mm x .8 x 16mm
17) - PP17078PF	Follower Plunger Knob

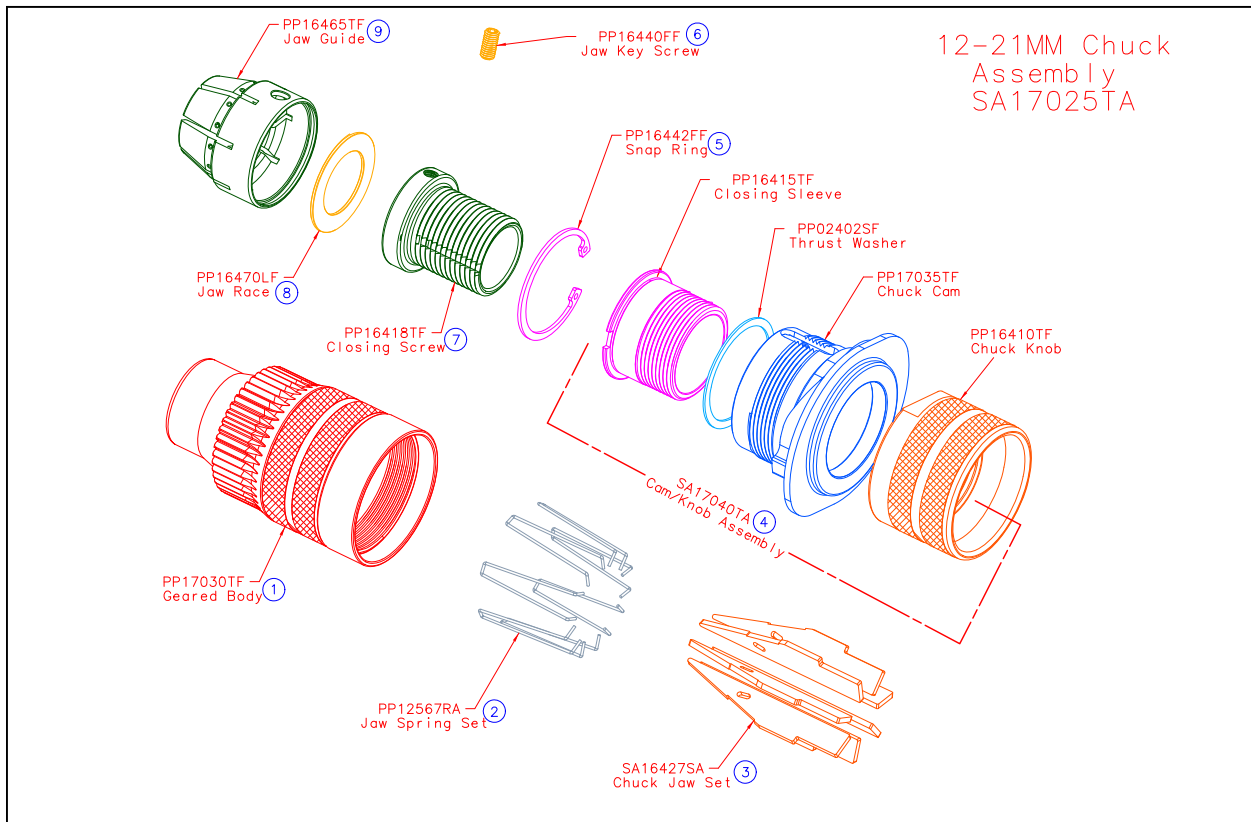
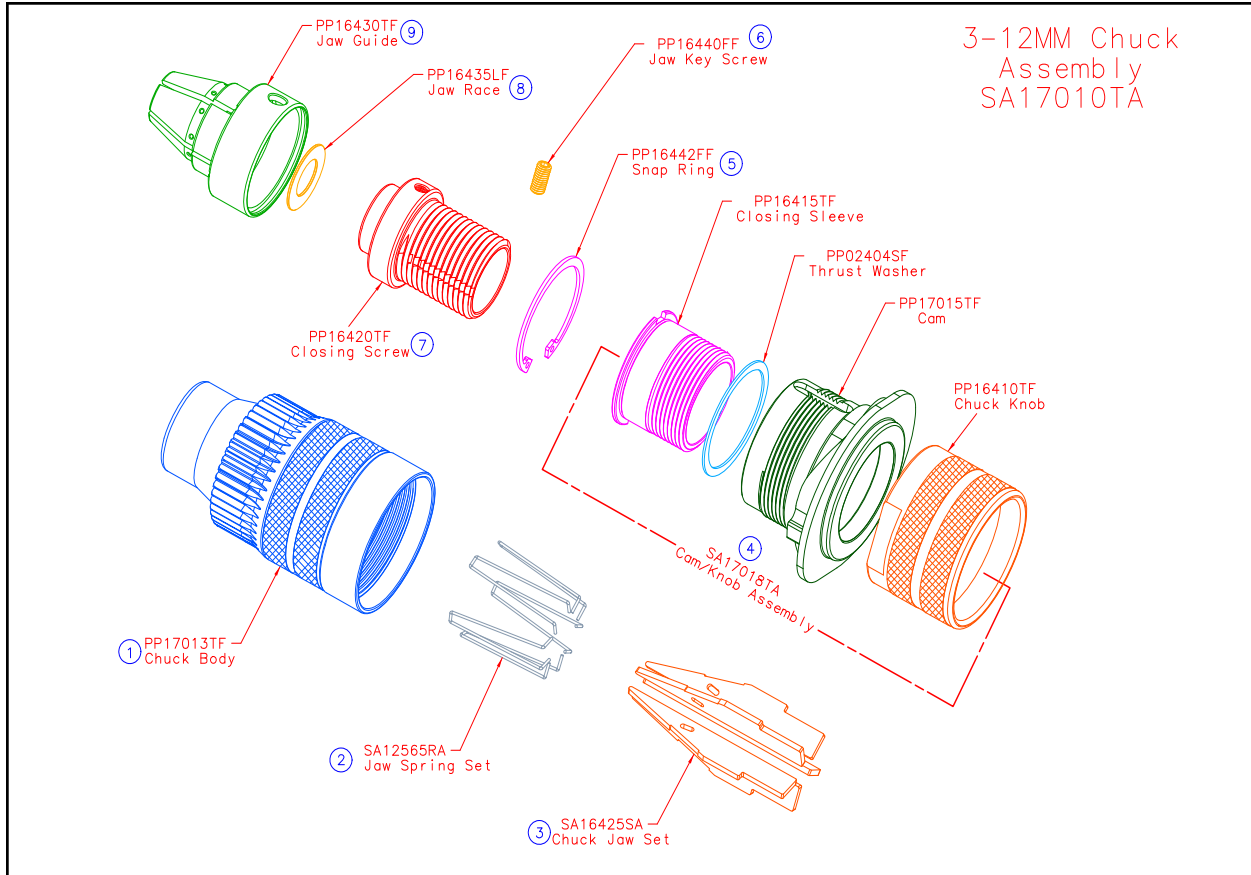
Auto Sharpening Fixture



Geared Chuck - Auto

ITEM	ITEM_DESC
SA17010TA	3-12MM GEARED CHUCK (OPTIONAL)
1) - PP17013TF	3-12MM GEARED CHUCK BODY (B BP S N)
2) - SA12565RA	CHUCK JAW SPRINGS (5 PIECES)
3) - SA16425SA	JAW SET (5 PIECES)
4) - SA17018TA	3-12MM GEARED CHUCK CAM/KNOB ASSEMBLY
5) - PP16442FF	3-21MM SNAP RING
6) - PP16440FF	JAW KEY SCREW
7) - PP16420TF	3-12MM CLOSING SCREW
8) - PP16435LF	JAW RACE
9) - PP16430TF	3-12MM JAW GUIDE (B BP S N)
ITEM	ITEM_DESC
SA17025TA	12-21MM GEARED CHUCK (OPTIONAL)
1) - PP17030TF	12-21MM GEARED CHUCK BODY (B BP S N)
2) - SA12567RA	CHUCK JAW SPRINGS (7 PIECES)
3) - SA16427SA	JAW SET (7 PIECES)
4) - SA17040TA	12-21MM GEARED CHUCK CAM/KNOB ASSEMBLY
5) - PP16442FF	3-21MM SNAP RING
6) - PP16440FF	5MM X .8MM X 10MM SSS
7) - PP16418TF	12-21MM CLOSING SCREW (B BP S N)
8) - PP16470LF	12-21MM JAW RACE
9) - PP16465TF	12-21MM JAW GUIDE (B BP S N)

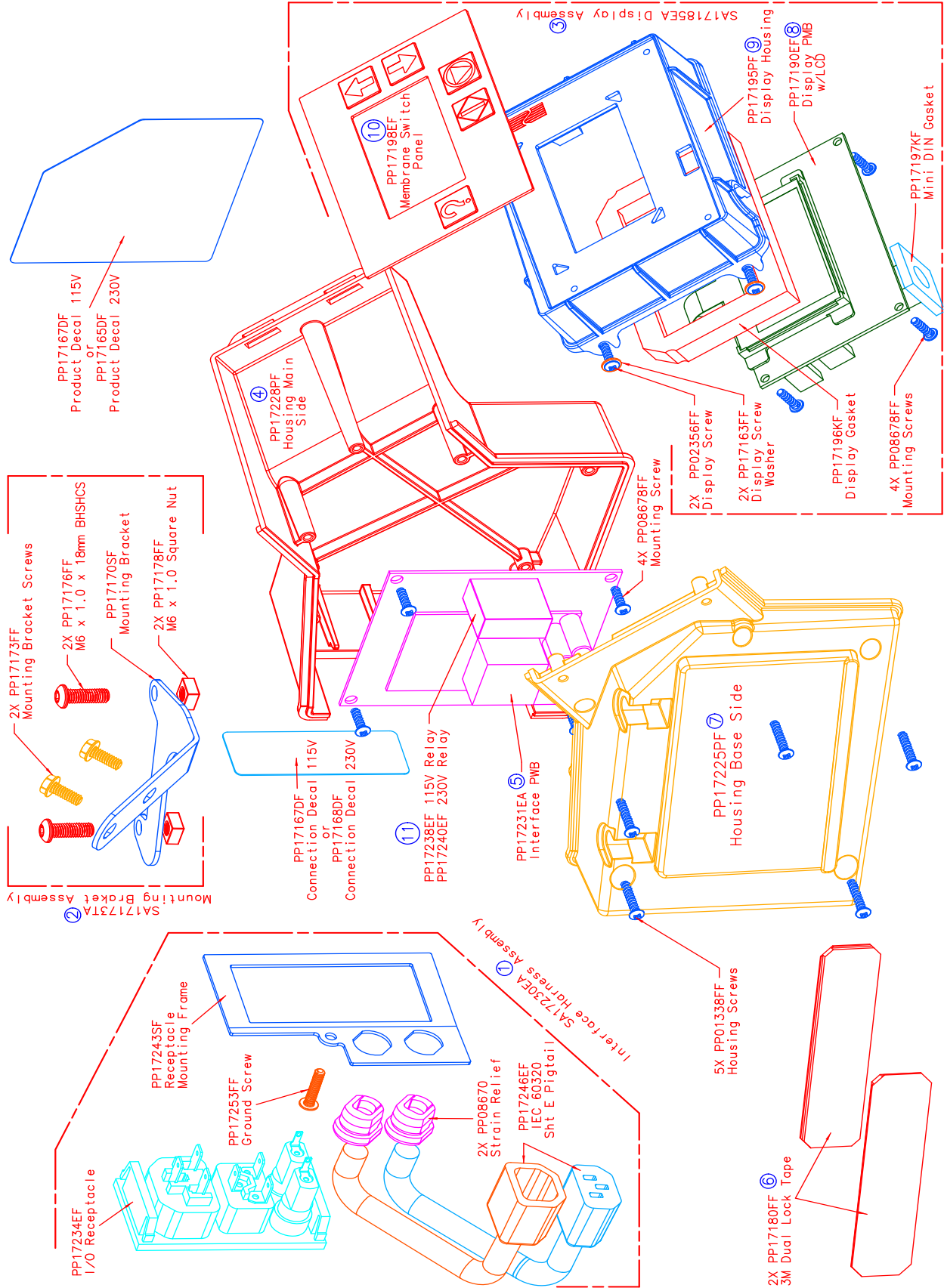
Geared Chuck - Auto



Controller/Display Parts List

SA17060TA	Auto Controller/Display 115V Complete
SA17061TA	Auto Controller/Display 230V Complete
1) - SA17230EA	Interface Harness Assembly
2) - SA17173TA	Mounting Bracket Assembly
3) - SA17185EA	Display Assembly
4) - PP117228PF	Housing Main Side
5) - PP17231EA	Interface PWB
6) - PP17180FF	Dual Lock Mounting Tape
7) - PP17225PF	Housing Base Side
8) - PP17190EF	Display PMB w/LCD
9) - PP17195PF	Display Housing
10) - PP17198EF	Membrane Switch Panel
11) - PP17238EF	115V Relay
11) - PP17240EF	230V Relay
Not Shown - PP17250FF	Vac. Fuse 115V
Not shown - PP12057EF	Vac. Fuse 230V

Controller/Display



Maintenance

This unit will display a "Maintenance Alert" when maintenance is required. The screen will display:



Every 100 sharpenings this alert will appear as a reminder to perform the required routine maintenance listed below. Performing this maintenance will keep the auto sharpening fixture running properly and extend the life of the components. It will also help prevent excessive grit build up which will cause premature sharpening interruptions.

1. Power off the machine, waiting to perform the maintenance only once the grinding wheel has come to a complete stop. **Disconnect the power from the machine using a lock out tag out procedure.**
2. Vacuum any grit found on the machine. Pay special attention to the electronic controller, the Follower Cam Tube Assembly and Chuck Tube Liner.

NOTE: Do not use an air gun, as this can blow grit into the Controller/Display housing or the Follower Cam Tube Assembly on the sharpening port.

3. Use a clean, dry cloth to wipe down the chuck bodies and the inside liner of the chuck port. After using a dry cloth to clean these, use the lubricated cloth, (gun cloth or similar) provided, to re-apply a very fine lubrication to these surfaces. (You can also use a clean cloth with a light spray of silicone. Avoid aggressive solvent based lubricants like WD-40.)

This is a good time to inspect the rest of the XT machine and perform any other necessary maintenance, see page 32.

For best performance and longevity of the Auto Sharpener we highly recommend the use of a dust extraction system.

For more information contact DAREX @ 800-547-0222.

Once maintenance has been completed, using the "Arrow up" "Arrow down" buttons, highlight "Yes".



To select yes press the select button. This will clear the "Maintenance Alert" and you may resume sharpening.



Maintenance

WHEEL MAINTENANCE

These wheels are maintenance free from truing and dressing but will need to be cleaned periodically. **Disconnect the power from the machine using a lock out tag out procedure.** After removing the wheel from the sharpener, saturate the wheel with any type of oil-less solvent, such as Automotive Brake Cleaner. It is helpful to use a soft bristle brush and lightly brush the saturated wheel, loosening the impacted grinding particles. Re-saturate the wheel to flush out any loosened debris. Do not use any type of dressing tool on these wheels. Damage to surface will occur and greatly shorten the wheel life.

NOTE: If after cleaning wheel, the drills still discolor or burn, the wheel life may be exhausted and the wheel will need to be replaced.

CHUCK MAINTENANCE

The use of a dust extraction system during grinding will help reduce the amount of maintenance, however, the chuck assembly should be disassembled and cleaned periodically. See XT-3000 instruction manual for detailed disassembly instructions.

GRIT TRAY

At the back of the XT-3000 machine, located underneath the grinding motor is the grit tray. Drill grindings will accumulate inside the grit tray. The grit tray has a magnetic liner to attract and hold these dust particles. Do not let the tray become more than 1/3 full. To remove tray, unscrew brass thumb screw. Remove tray and dump contents. Wipe excess dust from the tray with a rag.



Darex recommends the use of a dust extraction system when the Auto Attachment is in use.

Trouble Shooting

The unit stopped working and the screen displays “Sharpening Interrupted”:

- This message will appear if the user presses the “Stop” button during sharpening. It will also appear if the controller detects a large load on the chuck turning motor. This is typically caused by dirt or grit accumulating on the Chuck Body, Chuck Tube Liner, or the Cam Follower Assembly. Turn the machine off and perform the standard maintenance procedures listed on pages 31 & 32. Restart the machine and see if it runs without interruption. If the controller continues to show this message, call Darex customer service for assistance.

The display does not come on when I plug the unit it:

- The auto controller receives its power through the AC plugs in the rear of the unit. Make sure there is power to the outlet you are using.
- Make sure the wiring on the back of the unit matches that of the user manual (power comes in to the controller, and both pigtails are firmly seated between the controller and the XT unit).
- Try unplugging and re-plugging these cords to ensure they are well seated.
- Finally, make sure the on/off switch on the XT-3000 machine is powered on. The display will not come on until you power up the XT-3000. If unsuccessful, call Darex customer service for assistance @ 800-547-0222.

The unit powers up, the display is on, but pushing the “Start” button to sharpen nothing happens:

- There is a cord that connects the sharpening port to the Auto Controller/Display, see page 11. Be sure that the 5 pin DIN connector on this cord is firmly seated into the connector on the Controller/Display, paying careful attention to cord/connector orientation. **Important:** See information on page 11. Inspect the cable, coming from the controller to the sharpening port,

- The optical switch in the Sharpening Fixture is faulty, call Darex customer service for assistance.
- Check the small cable coming from the sharpening port to the Gear Motor.
- Finally, remove both covers on the Gear Motor and Gear located on the Sharpening Fixture. Verify the Drive Gear is secured to the Gear Motor.

The unit powers up and runs the sharpening system, but the vacuum does not come on:

- The vacuum receptacle for the Auto sharpening system is located on the back of the Controller/Display housing, see page 14. Make sure this connector is firmly seated.
- The connector is fused with two 8A time delay fuses (1.6A on the 230V international model). Make sure these fuses are intact. If a fuse is found to be blown, then both fuses should be replaced with the appropriate capacity. You can find the part numbers for these fuses listed on page 28.

Note: Using fuses not supplied by DAREX is not recommended and may cause damage to the Controller/Display.

If the grind motor starts but the Auto Display is off:

- The internal relay may be defective. This can be detected by checking for voltage at the vacuum output receptacle with an electrical meter.



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800-547-0222
541-488-2224

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