



	5	XXX	B	H	X	-	XX
Tool Series							
5 = 500 Series							
Speed Options (RPM)							
60 = 6,000 120 = 12,000							
90 = 9,000							
Generation							
B = Second							
Tool Type							
H = Horizontal							
Throttle							
L = Locking Lever							
X = Spade							
Wheel Type							
14 = 4" Type 1 P = Plug							
16 = 6" Type 1							

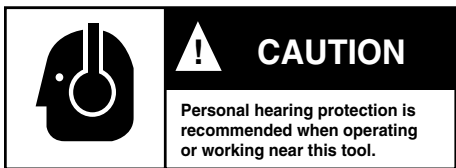
Safety Recommendations

For your safety and the safety of others, read and understand the safety recommendations before operating any grinder.

Always wear protective equipment and clothing.

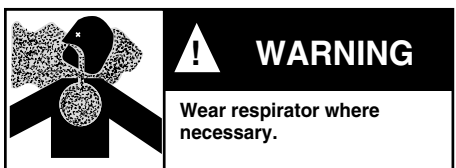


Caution: Faceshields do not provide unlimited protection against flying particles and are not to be considered as eye protection. ANSI Z87.1 states that separate eyewear shall be used. For additional information on eye protection, refer to Federal OSHA Regulations, 29 CFR, Section 1910.133, Eye and Face Protection, and ANSI Z87.1, Occupational and Educational Eye and Face Protection. This standard is available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.



Hearing protection is recommended in high noise areas (above 85 dBA). Close proximity of additional tools, reflective surfaces, process noises, and resonant structures can substantially contribute to the sound level experienced by the operator. Proper hearing conservation measures, including annual audiograms and training in the use and fit of hearing protection devices may be necessary. For additional information on hearing protection, refer to Federal OSHA Regulations, 29 CFR, Section 1910.95, Occupational Noise Exposure, and American National Standards Institute, ANSI S12.6, Hearing Protectors.

- **Gloves and other protective clothing should be worn as required, unless they create a greater hazard.**
- **Do not wear loose fitting clothing, or clothing that may restrict movement, become entangled or in any way interfere with the safe operation of the grinder.**



Grinding or other use of this tool may produce hazardous fumes and/or dust. To avoid adverse health effects utilize adequate ventilation and/or a respirator. Respirators should be selected, fitted, used and maintained in accordance with Occupational Safety and Health Administration and other applicable regulations. Read the material safety data sheet on any materials involved in the grinding process.

Cleco grinders are designed to operate on 90 psig (6.2 bar) max. air pressure. If the tool is properly sized and applied, higher air pressure is unnecessary. Excessive air pressure increases the loads and stresses on the tool parts and may result in breakage. Installation of a filter-regulator-lubricator in the air supply line is highly recommended.

Never use the air hose for supporting, lifting, or lowering the tool. Use a safety line or cable on the tool when working in elevated areas.

Before the tool is connected to air supply, check throttle for proper operation, i.e., throttle moves freely and returns to closed position. Being careful not endanger adjacent personnel, clear air hose of accumulated dust and moisture. Use protective barriers where necessary — hot sparks can burn. Barriers also help reduce noise levels. Before removing tool from service or changing accessories, make sure air line is shut off and drained of air. This will prevent tool from operating if throttle is accidentally engaged.

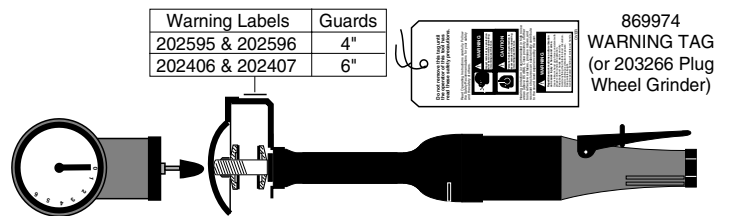
Do not use tool to drain residual air from air line, instead use of a self-relieving valve located near tool is highly recommended.

The wheel guard is designed to prevent serious injury to the operator in the event of wheel failure and must not be modified in any way. Any wheel guard that is damaged or bent must be replaced.

NOTE: The grinder must be held so that the opening in the guard is away from the operator.

Cone and plug wheels less than 3" in diameter and 5" in length are generally used for internal grinding or operations where the work piece offers protection. On internal grinding operations where the workpiece offers protection to the operator wheel guards are not required.

The guard must be securely attached to the grinder with all bolts, nuts, and lockwashers in place and torqued to 30 - 40 in-lbs.



The speed rating and warning information on the tool should be maintained or replaced for legibility in the event of damage. Before mounting a grinding wheel, after all tool repairs, and whenever a grinder is issued for use, check the free speed of the tool with a tachometer to make sure actual free speed at 90 psig (6.2 bar) does not exceed rated free speed stamped on tool. Grinders in use on the job must be checked at least once every 20 hours of operation, or once a week, whichever is most frequent. Checking the free speed after the removal of each worn wheel and before mounting a new wheel is highly recommended.



INSPECT THE GRINDING WHEEL!

Fragments from a grinding wheel that breaks or comes apart while rotating can cause serious injury or even death. Inspect grinding wheel . Check the maximum safe RPM marked on wheel or package. Never use wheels at or below actual tool speed. **Cracked, chipped or faulty grinding wheels are dangerous.** Suspect wheels should not be used and should be disposed of. Look for cracks, chips, water stains, or signs of abuse or improper storage. Causes of grinding wheel failures have been traced to such factors as:

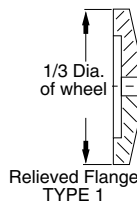
- Dropping, bumping, or abuse (careless handling of the grinder)
- Improper mounting
- Imbalance
- Improper shipment or storage, or age
- Mismatched speed ratings
- Exposure to water, solvents, high humidity, freezing, and extreme temperatures

Wheels known to have been subjected to any of the conditions above can burst violently and should be destroyed rather than risk their use by someone who may not notice that they are damaged.

Safety Recommendations

CHECK FLANGE

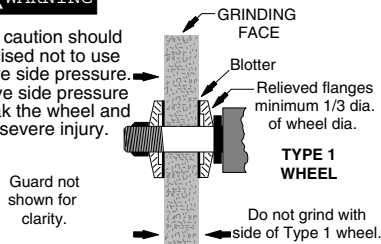
A Type 1 wheel grinder's driving flanges must be relieved, free of nicks and burrs that might cause stress concentrations on the wheel which can cause cracks. Blotters must be used and be as large in diameter as the flanges. Diameters of driving and outer flange must be equal and measure at least 1/3 dia. of the wheel. If flanges are less than 1/3 dia. of wheel, do not use grinder or select proper wheel. Spindle should be checked for damage or abuse. Spindle end nut must be tightened firmly against outer flange to insure necessary friction against blotters to drive wheel. **Caution:** Overtightening can cause wheel breakage. Type 1 breakage can also occur if:



- Outer flange is left off
- Outer flange is reversed
- A washer is used in place of either flange
- Outer and driving flange are different diameters
- Blotters are not used

WARNING

Extreme caution should be exercised not to use excessive side pressure. Excessive side pressure can break the wheel and result in severe injury.



- Wheel is side loaded (Grind on periphery only!)

Threaded hole cone/plug wheel flanges should be flat, at least 1/3 the diameter of the wheel, and not relieved (relieved flanges can pull the threaded insert out of the wheel). Always use a blotter as large as the driving flange. Do not use spacers between the cone/plug wheel and the driving flange. The grinder spindle must be shorter than the depth of the threads in the cone/plug wheel.

BEGINNING GRINDING OPERATION

Before using or after mounting a wheel, tool must be run for one minute in a protected enclosure to check the integrity of the wheel. During this time or any other time, no one should stand in front or in line of the wheel. When starting work with a cold wheel, apply it gradually to the workpiece until it becomes warm. **Do not continue to use a grinder if:**

- It is not equipped with proper wheel guard
- It starts to vibrate
- You sense changes in tool speed or an unusual increase in noise that would indicate tool is running at excessive speed
- You notice excessive end play in spindle
- You hear any unusual sound from grinder

RETURN THE TOOL TO THE TOOL CRIB FOR SERVICE IMMEDIATELY!

WARNING

Repetitive work motions and/or vibration may cause injury to hands and arms.

Use minimum hand grip force consistent with proper control and safe operation. Keep body and hands warm and dry. Avoid anything that inhibits blood circulation. Avoid continuous vibration exposure. Keep wrists straight. Avoid repeated bending of wrists and hands.

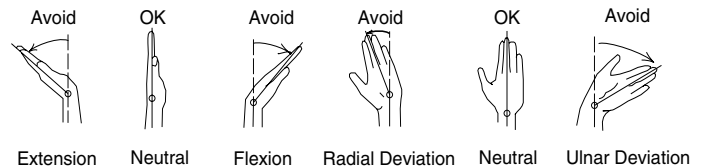
Some individuals may be susceptible to disorders of the hands and arms when performing tasks consisting of highly repetitive motions and/or exposure to extended vibration. Cumulative trauma disorders such as carpal tunnel syndrome and

tendonitis may be caused or aggravated by repetitious, forceful exertions of the hands and arms. Vibration may contribute to a condition called Raynaud's Syndrome. These disorders develop gradually over periods of weeks, months, and years. It is presently unknown to what extent exposure to vibrations or repetitive motions may contribute to the disorders. Hereditary factors, vasculatory or circulatory problems, exposure to cold and dampness, diet, smoking and work practices are thought to contribute to the conditions. Tool operators should be aware of the following warning signs and symptoms so that a problem can be addressed before it becomes a debilitating injury. Any user suffering prolonged symptoms of tingling, numbness, blanching of fingers, clumsiness or weakened grip, nocturnal pain in the hand, or any other disorder of the shoulders, arms, wrists, or fingers is advised to consult a physician. If it is determined that the symptoms are job related or aggravated by movements and postures dictated by the job design, it may be necessary for the employer to take steps to prevent further occurrences. These steps might include, but are not limited to, repositioning the workpiece or redesigning the workstation, reassigning workers to other jobs, rotating jobs, changing work pace, and/or changing the type of tool used so as to minimize stress on the operator. Some tasks may require more than one type of tool to obtain the optimum operator/tool/task relationship.

The proper selection of the correct type of grinder is an important ergonomic consideration. Each application should be carefully considered and the tool chosen that will minimize the stresses on the operator that can lead to the onset of cumulative trauma disorders. Some tasks require more than one type of tool to obtain the optimum operator/tool/task relationship. Cleco offers a complete selection of tools including vertical, straight, angle, and extended grinders that make possible the correct ergonomic match of the operator, tool, and task.

The following suggestions will help reduce or moderate the effects of repetitive work motions and/or extended vibration exposure:

- Use a minimum hand grip force consistent with proper control and safe operation
- Keep body and hands warm and dry (cold weather is reported to be a major factor contributing to Raynaud's Syndrome)
- Avoid anything that inhibits blood circulation
 - Smoking Tobacco (another contributing factor)
 - Cold Temperatures
 - Certain Drugs
- Tasks should be performed in such a manner that the wrists are maintained in a neutral position, which is not flexed, hyperextended, or turned side to side



- Stressful postures should be avoided — select a tool appropriate for the job and work location
- Avoid highly repetitive movements of hands and wrists, and continuous vibration exposure (after each period of operation, exercise to increase blood circulation)
- **Use quality abrasive wheels** (the primary source of vibration when using a grinder is a wheel that is out of balance, out of round, untrue, or possibly any combination of all three)
- Keep tool well maintained and replace worn parts (a preventive maintenance program with scheduled inspections is highly recommended)

Safety Recommendations

Work gloves with vibration reducing liners and wrist supports are available from some manufacturers of industrial work gloves. Tool wraps and grips are also available from a number of different manufacturers. These gloves, wraps, and wrist supports are designed to reduce and moderate the effects of extended vibration exposure and repetitive wrist trauma. Since they vary widely in design, material, thickness, vibration reduction, and wrist support qualities, it is recommended that the glove, tool wrap, or wrist support manufacturer be consulted for items designed for your specific application. **WARNING! Proper fit of gloves is important. Improperly fitted gloves may restrict blood flow to the fingers and can substantially reduce grip strength.**

USE QUALITY ABRASIVE WHEELS

The primary source of vibration when using a portable grinder is an abrasive wheel that is out of balance, out of round, untrue, or possibly any combination of all three.

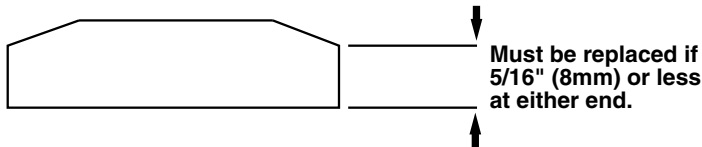
The use of quality abrasive wheels which are well balanced, round, and true is highly recommended as they have been found to significantly reduce vibration. Some abrasive wheels lose their balance, roundness, and truth as they wear from use. Because of the abusive nature of the vibration caused by out of balance, out of round, and untrue condition of some abrasive wheels, it is felt that these wheels are more susceptible to failure. Excessive vibration may signal eminent wheel failure. Out of balance abrasive wheels are dangerous. Flat spotting of the abrasive wheel, caused by grinding the wheel to a stop after the power has been shut off can result in changes to the balance and shape of the wheel. Be sure the grinding wheel has stopped before setting the tool down. Set the tool in a tool rest or tool holder when not in use.

WIRE BRUSHES

If a grinder is used for wire brushing applications the same problems of balance, roundness, and truth as experienced with abrasive wheels prevail. Use quality wire brushes.

USE A PREVENTIVE MAINTENANCE PROGRAM

Tool abuse or poor maintenance procedures can amplify and contribute to the vibration produced by the abrasive wheel. A preventive maintenance program featuring scheduled periodic inspections and proper maintenance is the best way to assure safety in your portable grinding operations. A well managed program can, for example, detect such things as speed variations due to wear, flanges or spindles that have been damaged from abuse, or bad bearings damaged by foreign matter or lack of lubrication. Problems such as these can affect the wheel trueness when the grinder is running and contribute to the vibration. Rotor blades that are worn or chipped can lock up the motor and damage motor components. Rotor blades should be checked periodically and replaced if they measure less than 5/16" (8 mm) at either end.



Proper repair procedures and the use of original Cleco service parts and bearings rather than substitutes will return the tool to factory specifications of precision and balance, and minimize vibration.

PROPER LUBRICATION

An automatic in-line filter-regulator-lubricator is recommended as it increases tool life and keeps the tool in sustained operation. The in-line lubricator should be regularly checked and filled with a good grade of 10W machine oil. Proper adjustment of in-line lubricator is performed by placing a sheet of paper next to exhaust ports and holding throttle open approximately 30 seconds. Lubricator is properly set when a light stain of oil collects on paper. Excessive amounts of oil should be avoided.

STORAGE

In the event it becomes necessary to store tool for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time and run for several seconds to distribute oil before disconnecting from air supply. This will reduce corrosion and displace water that may be trapped in tool. Water trapped in the tool could cause the governor to freeze and malfunction if tool is exposed to freezing temperatures.

The governor should be checked periodically to be sure the governor mechanism is clean, in good operating condition, and functioning properly.

This information is a compilation of general safety practices obtained from various sources available at the date of production. However, our company does not represent that every acceptable safety practice is offered herein, or that abnormal or unusual circumstances may not warrant or require additional procedures. Your work may require additional specific safety procedures. Follow these procedures as required by your company. For more information, see the latest edition of ANSI B186.1, Safety Code for Portable Air Tools, and ANSI B7.1, Safety Requirements for the Use, Care, and Protection of Abrasive Wheels, available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.

OPERATING INSTRUCTIONS

READ SAFETY RECOMMENDATIONS BEFORE CONNECTING TOOL.

The 500B Series Grinders are designed to operate on 90psig (6.2 bar) maximum air pressure, using a 1/2" hose up to 8' in length. If additional length is required, the next larger hose size may be connected to the 8' whip hose.

LUBRICATION

An automatic in-line filter-lubricator is recommended as it increases tool life and keeps the tool in sustained operation. The in-line lubricator should be regularly checked and filled with a good grade of 10W machine oil. Proper adjustment of the in-line lubricator is performed by placing a sheet of paper next to the exhaust ports and holding the throttle open approximately 30 seconds. The lubricator is properly set when a light stain of oil collects on the paper. Excessive amounts of oil should be avoided.

STORAGE

In the event that it becomes necessary to store the tool for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time and again when returned to service. The tool should be stored in a clean and dry environment.

SERVICE INSTRUCTIONS

DISASSEMBLY

Slip the rubber grip, No. 867370, forward to expose the flats on the housing, No. 867378. Clamp the housing in a soft-jawed vise with the handle up and unscrew the handle assembly. The complete motor unit may now be slipped out the rear of the housing. Remove the housing from the vise and unscrew the arbor nut. This will allow the arbor washer, collar retainer, arbor collar, and arbor key to be removed from the arbor. This completes disassembly of the tool into three major assemblies. See the following paragraphs for complete disassembly instructions.

HOUSING: Clamp the housing in the vise and unscrew (left hand threads) the arbor bearing retainer, No. 864510. This will allow the arbor with attached components to be removed from the front of the housing. Remove the coupling, No. 867371, from the rear of the arbor. If replacement of the arbor bearings is necessary, they may be pressed off the arbor shaft.

MOTOR: Clamp the rotor lock nut, No. 842627, in the vise with the governor assembly up. Push the governor adjusting ring, No. 867214, down and slip the lock pin, No. 867187, out of the assembly. This will allow the adjusting ring and governor spring, No. 867186 to be removed. Unscrew (left hand threads) and remove the governor spider and pin retainer, No. 864532, from the motor unit. Push the governor weight pins, No. 867184, out of the spider to remove the governor weights.

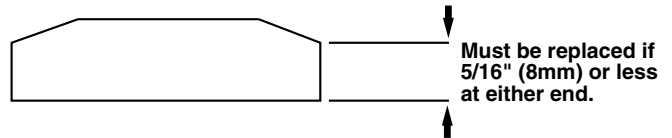
Remove the motor unit from the vise and clamp on the cylinder with the threaded end of the rotor up. Drive the rotor, No. 867367, out of the rear rotor bearing, No. 864522, being careful not to damage the threads. Remove the cylinder, No. 867377, and three rotor blades, No. 864562, from the rotor. Clamp the body of the rotor in the vise with the splined end up and unscrew the rotor lock nut. This will allow the rotor to be driven out of the front rotor bearing, No. 844363.

HANDLE: Unscrewing the inlet bushing, No. 847679, will allow the bushing and oiler assembly to come out as a unit for cleaning and inspection of the inlet screen, No. 864533. Should the screen need replacing, the oiler body, No. 867192, may be pressed out of the inlet bushing using a 1/2" rod.

The throttle valve assembly on the spade and lever handles may be removed by unscrewing the throttle valve cap.

REASSEMBLY

The tool is reassembled in the reverse order of disassembly. All parts should be thoroughly cleaned and inspected for wear before reassembly. Particular attention should be paid to the governor assembly, replacing any of its' parts that show wear or damage. It is recommended that new rotor blades be installed at each repair cycle. If not replaced, the used ones must measure a minimum of 5/16" (8mm) at both ends. Failure of these parts could cause damage to more expensive components.



Ball bearings should be replaced if they are rough or show excessive looseness. Pack bearings with a generous amount of NLGI 2-EP grease before reassembly. All bearings should be installed with the shielded side to the rear of the tool.

HOUSING: Install the front arbor bearing, No. 864524, so that the shielded side of the bearing face toward the rear of the housing. If the felt retainer ring, No. 617726, is removed, a new one should be used during reassembly. When installing the arbor bearing retainer, No. 864510, apply grade "271" Loctite (red) to the threads (left hand) before screwing it into the housing. The retainer should then be torqued to 75-85 ft. lbs.

MOTOR: During reassembly of the motor, the rotor must be positioned by the rotor collar, No. 864515, so that when assembled, the rotor will have .0015" clearance between it and the front bearing plate. To set the rotor collar, assemble the front rotor bearing (shield toward rear) into the front bearing plate and measure the depth of the inner race from the face of the bearing plate. Select, or fit by sanding, a rotor collar .0015" larger than this dimension. Clamp the rotor body in the vise (spline end up) and slip the rotor collar, chamfered side first, on the rotor shaft and drive the bearing plate and bearing (drive on the inner race) down on the rotor collar. Screw the rotor lock nut, No. 842627, down and torque to 40-60 ft. lbs. When installing the rear rotor bearing, No. 864522, the shielded side must be to the rear of the tool.

Caution: The governor pin retainer, No. 864532, must be installed under the governor to prevent the pins from coming out. The governor (left hand threads) should be torqued to 15-20 ft. lbs. during reassembly.

HANDLE: The handle is assembled in the reverse order of disassembly. Inspect all seals, replacing those that have deteriorated in any way. The governor valve seat No. 867170 should be tightened to 25 ft. lbs. when installing into handle. The inlet bushing No. 847679 should be tightened to 70-80 ft. lbs. When assembling the handle to the motor housing, it must be torqued to 130-150 ft. lbs.

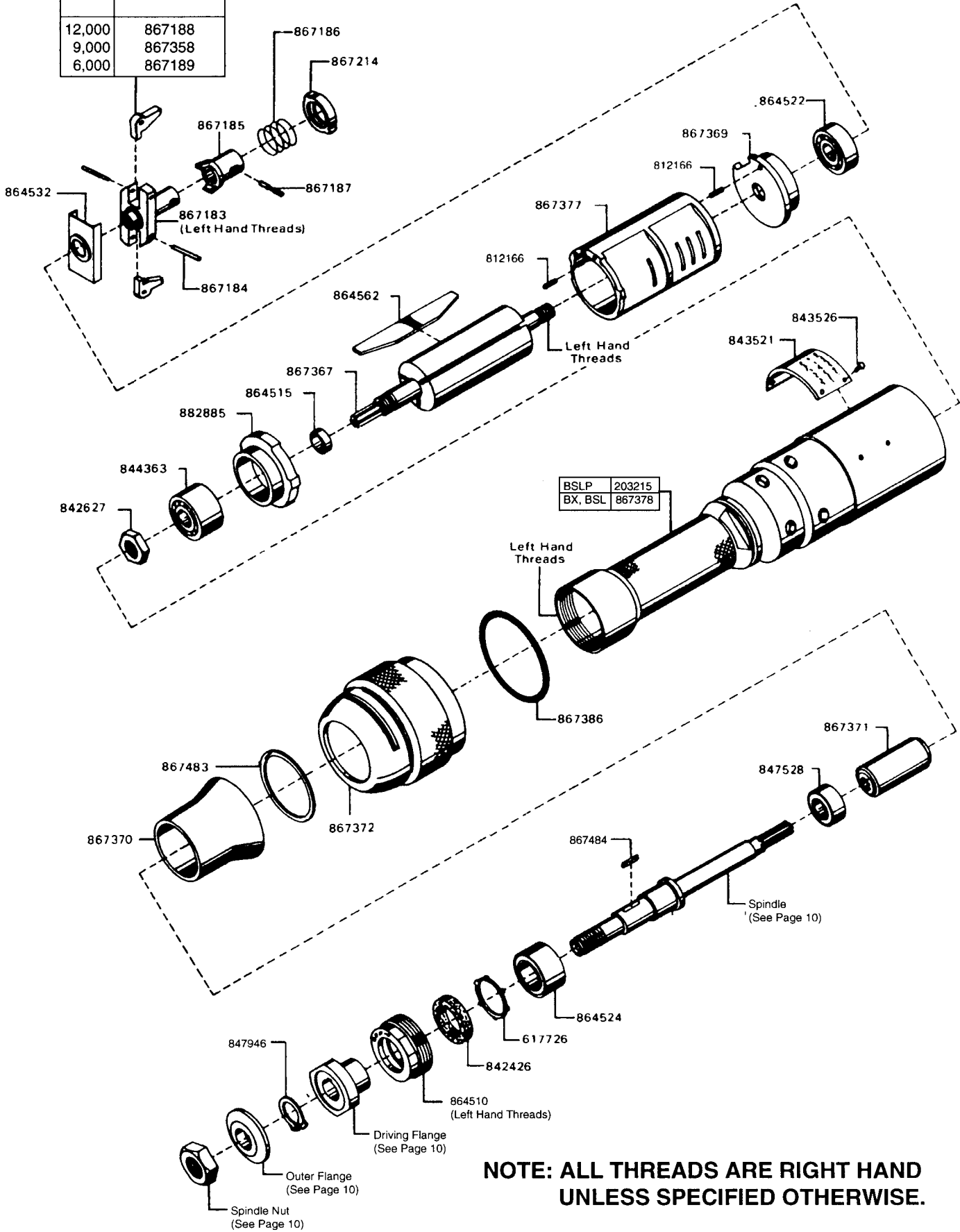
After reassembly of the complete tool, the RPM must be checked.

Caution: Be sure to check the tool for proper speed with a dependable tachometer before returning it to service.

To adjust the RPM, rotate the governor adjusting ring, No. 867214, in a clockwise direction to increase the RPM and counterclockwise direction to lower the RPM.

GOVERNOR WEIGHT	
RPM	PART NO.
12,000	867188
9,000	867358
6,000	867189

HOUSING & MOTOR UNIT

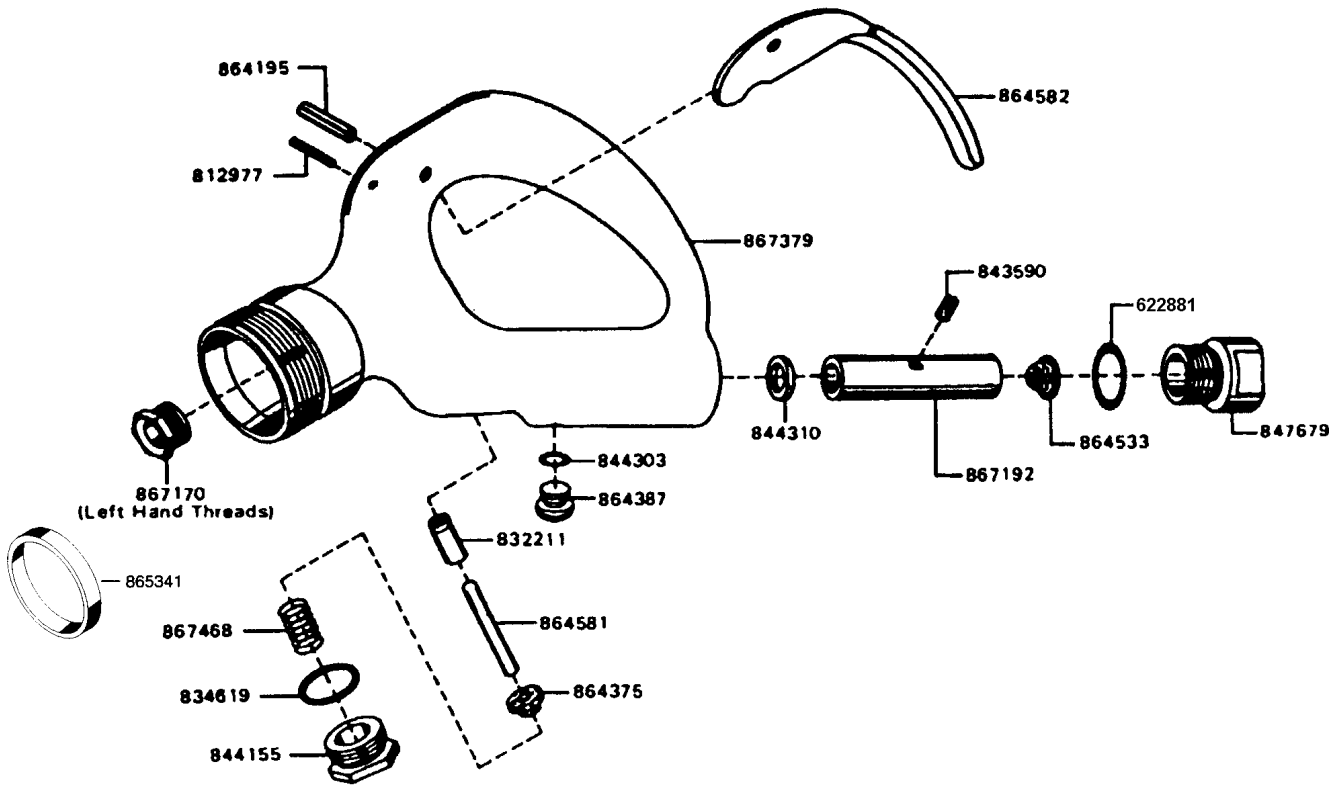


NOTE: ALL THREADS ARE RIGHT HAND UNLESS SPECIFIED OTHERWISE.

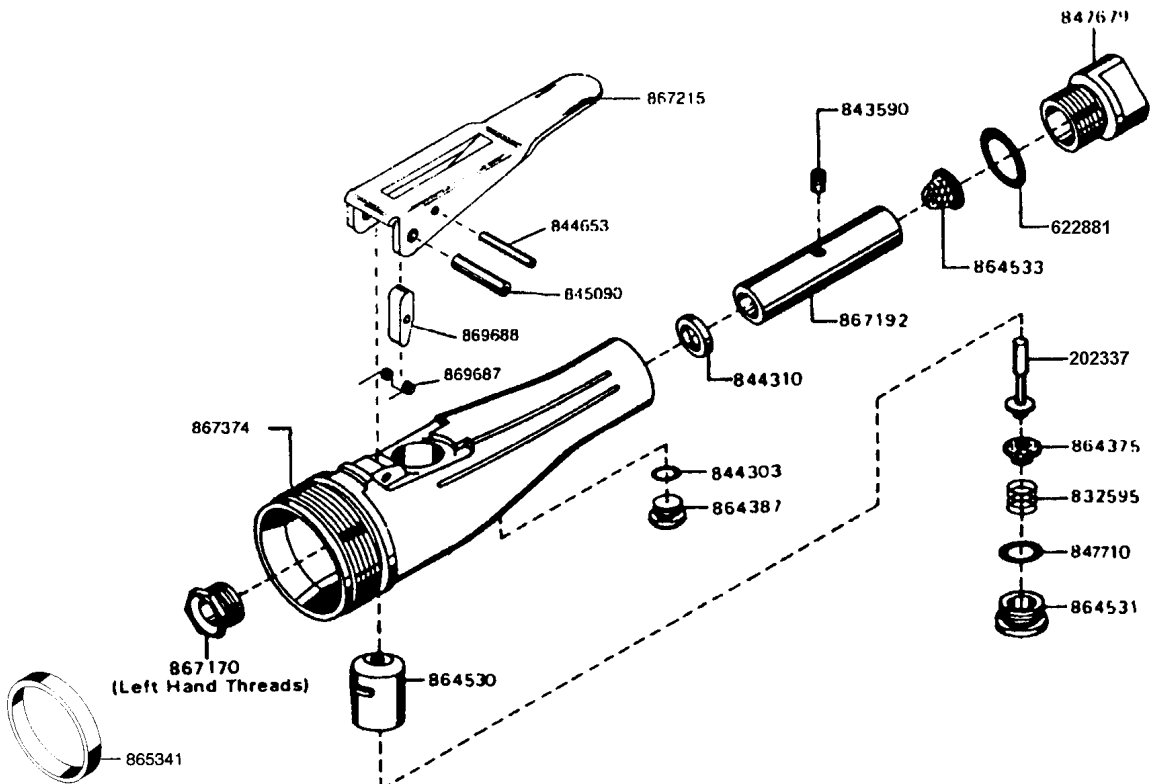
PARTS LIST—HOUSING & MOTOR UNIT

PART NO.	NAME OF PART	QTY.
203215	HOUSING (BSLP ONLY) (INCL. 843521, 843526)	1
203495	INSTRUCTION PLATE (BSLP)	1
617726	FELT RETAINER RING	1
812166	CYLINDER PIN	2
842426	FELT RING	1
842627	ROTOR LOCK NUT	1
843521	INSTRUCTION PLATE (BX, BSL)	1
843526	DRIVE SCREW	4
844363	FRONT ROTOR BEARING	1
847528	REAR SPINDLE BEARING	1
847946	COLLAR RETAINER (5/8" SPINDLE)	1
864510	SPINDLE BEARING RETAINER	1
864515	ROTOR COLLAR	1
864522	REAR ROTOR BEARING	1
864524	FRONT ARBOR BEARING	1
864532	PIN RETAINER	1
864562	ROTOR BLADE	3
867183	GOVERNOR SPIDER	1
867184	GOVERNOR WEIGHT PIN	2
867185	GOVERNOR VALVE	1
867186	GOVERNOR SPRING	1
867187	LOCK PIN	1
867188	GOVERNOR WEIGHT (12,000 RPM)	2
867189	GOVERNOR WEIGHT (6,000 RPM)	2
867214	GOVERNOR ADJUSTING RING	1
867358	GOVERNOR WEIGHT (9,000RPM)	2
867367	ROTOR	1
867369	REAR BEARING PLATE	1
867370	RUBBER GRIP	1
867371	COUPLING	1
867372	EXHAUST DEFLECTOR	1
867377	CYLINDER (INCL. 812166)	1
867378	HOUSING (BX,BSL) (INCL. 843521, 843526)	1
867386	141B00 "O"-RING 2-5/16" X 2-1/2"	1
867483	RETAINER RING	1
867484	KEY	1
882885	FRONT BEARING PLATE	1

SPADE HANDLE



LOCK-OFF LEVER HANDLE



PARTS LIST—HANDLE SUBASSEMBLIES

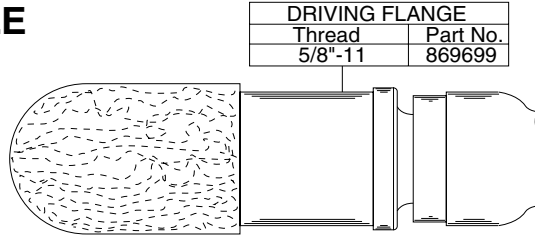
PART NO.	NAME OF PART	LOCK-OFFLEVER QTY.	SPADE QTY.
202337	THROTTLE VALVE	1	
622881	"O"-RING 7/8" X 1-1/8"	1	1
812977	TRIGGER STOP PIN		1
832211	THROTTLE STEM BUSHING		1
832595	THROTTLE VALVE SPRING	1	
834619	"O"-RING 13/16" X 5/ 6"		1
843590	OILER VALVE	2	2
844155	THROTTLE VALVE CAP		1
844303	"O"-RING 3/16" X 5/16"	1	1
844310	"O"-RING 1/2" X 11/16"	1	1
844653	PAWL PIN	1	
845090	LEVER PIN	1	
847679	INLET BUSHING	1	1
847710	"O"-RING	1	
864195	TRIGGER PIN		1
864375	THROTTLE VALVE SEAL	1	1
864387	OIL PLUG	1	1
864530	THROTTLE VALVE BUSHING	1	
864531	THROTTLE VALVE CAP	1	
864533	INLET SCREEN	1	
864581	THROTTLE VALVE STEM		1
864582	TRIGGER		1
865341	NYLON LOCKING RING	1	1
867170	GOVERNOR VALVE BUSHING	1	1
867192	OILER BODY	1	1
867215	LOCK-OFF LEVER	1	1
867374	HANDLE (INCL. 864530, 865341)	1	
867379	HANDLE (INCL. 832211, 865341)		
867468	THROTTLE VALVE SPRING		1
869687	PAWL SPRING	1	1
869688	LOCK-OFF PAWL	1	

THE COMPLETE HANDLE CAN BE PURCHASED AS A SUBASSEMBLY.

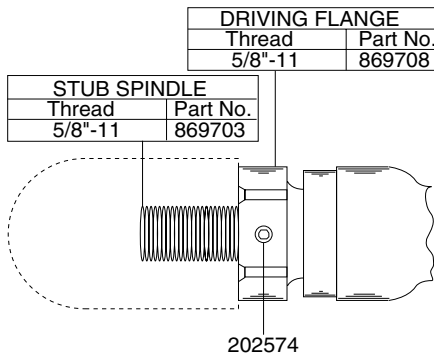
SPADE — CODE NO. 861437

LOCK-OFF LEVER — CODE NO. 861839

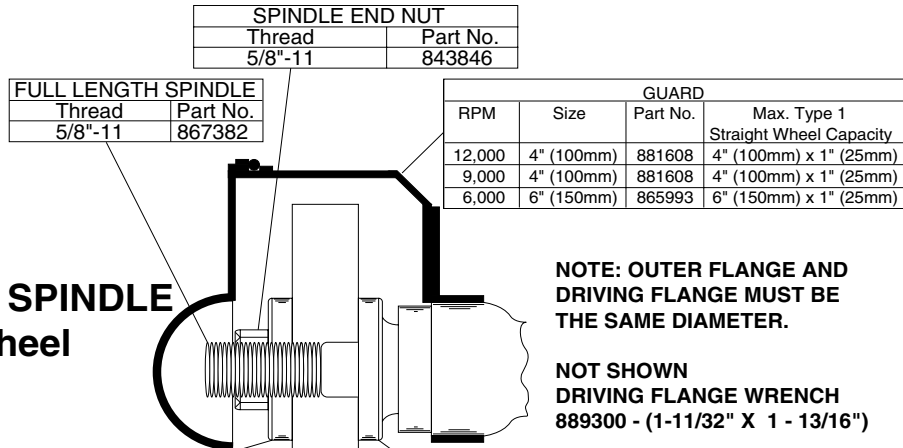
**FULL LENGTH SPINDLE
WITH CONE/PLUG
WHEEL DRIVING
FLANGE**



**CONE GRINDER
(Stub Spindle)**



**FULL LENGTH SPINDLE
Radial Wheel**



OUTER FLANGE				
RPM	Spindle Size	Flange Dia.	Wheel Size	Part No.
12,000 & 9,000	5/8" X 11	1-17/32" (39mm)	4" (100mm)	864561
6,000	5/8" X 11	2" (50mm)	6" (150mm)	847047

DRIVING FLANGE				
RPM	Spindle Size	Flange Dia.	Wheel Size	Part No.
12,000 & 9,000	5/8" X 11	1-17/32" (39mm)	4" (100mm)	864555
6,000	5/8" X 11	2" (50mm)	6" (150mm)	864525

PARTS LIST — 500B EQUIPMENT

PART NO.	NAME OF PART	QTY.
202574	SET SCREW	1
843846	5/8"- 11 SPINDLE END NUT	1
847047	2" OD (50mm) OUTER FLANGE	1
864525	2" OD (50mm) DRIVING FLANGE	1
864555	1-17/32" OD (39mm) DRIVING FLANGE	1
864561	1-17/32" OD (39mm) OUTER FLANGE	1
865993	6" (150mm) WHEEL GUARD (6,000RPM)	1
867382	5/8"- 11 SPINDLE	1
869699	5/8" X 11 CONE/PLUG WHEEL DRIVING FLANGE	1
869703	5/8" X 11 STUB SPINDLE	1
869708 †	5/8" - 11 STUB SPINDLE DRIVING FLANGE	1
881608	4" (100mm) WHEEL GUARD (9,000 & 12,000RPM)	1
	† INCLUDES 202574	

Sales & Service Centers

Note: All locations may not service all products. Please contact the nearest Sales & Service Center for the appropriate facility to handle your service requirements.

Dallas, TX
**Apex Tool Group
Sales & Service Center**
1470 Post & Paddock
Grand Prairie, TX 75050
Tel: 972-641-9563
Fax: 972-641-9674

Detroit, MI
**Apex Tool Group
Sales & Service Center**
2630 Superior Court
Auburn Hills, MI 48326
Tel: 248-391-3700
Fax: 248-391-7824

Houston, TX
**Apex Tool Group
Sales & Service Center**
6550 West Sam Houston
Parkway North, Suite 200
Houston, TX 77041
Tel: 713-849-2364
Fax: 713-849-2047

Lexington, SC
Apex Tool Group
670 Industrial Drive
Lexington, SC 29072
Tel: 800-845-5629
Tel: 803-951-7544
Fax: 803-358-7681

Los Angeles, CA
**Apex Tool Group
Sales & Service Center**
15503 Blackburn Avenue
Norwalk, CA 90650
Tel: 562-623-4457
Fax: 562-802-1718

Seattle, WA
**Apex Tool Group
Sales & Service Center**
2865 152nd Avenue N.E.
Redmond, WA 98052
Tel: 425-497-0476
Fax: 425-497-0496

York, PA
**Apex Tool Group
Sales & Service Center**
3990 East Market Street
York, PA 17402
Tel: 717-755-2933
Fax: 717-757-5063

Canada
**Apex Tool Group
Sales & Service Center**
5925 McLaughlin Road
Mississauga, Ont. L5R 1B8
Canada
Tel: 905-501-4785
Fax: 905-501-4786

Germany
Cooper Power Tools
GmbH & Co. OHG
a company of
Apex Tool Group, LLC
Industriestraße 1
73463 Westhausen
Germany
Tel: +49 (0) 73 63 81 0
Fax: +49 (0) 73 63 81 222

England
Cooper Power Tools
GmbH & Co. OHG
a company of
Apex Tool Group, LLC
C/O Spline Gauges
Piccadilly, Tamworth
Staffordshire B78 2ER
United Kingdom
Tel: +44 1827 8741 28
Fax: +44 1827 8741 28

France
Cooper Power Tools SAS
a company of
Apex Tool Group, LLC
25 rue Maurice Chevalier
77330 Ozoir-La-Ferrière
France
Tel: +33 1 6443 2200
Fax: +33 1 6443 1717

China
Cooper (China) Co., Ltd.
a company of
Apex Tool Group, LLC
955 Sheng Li Road,
Heqing Pudong, Shanghai
China 201201
Tel: +86-21-28994176
Fax: +86-21-51118446

Mexico
Cooper Tools
de México S.A. de C.V.
a company of
Apex Tool Group, LLC
Vialidad El Pueblito #103
Parque Industrial Querétaro
Querétaro, QRO 76220
Mexico
Tel: +52 (442) 211-3800
Fax: +52 (442) 103-0443

Brazil
Cooper Tools Industrial Ltda.
a company of
Apex Tool Group, LLC
Av. Liberdade, 4055
Zona Industrial - Iporanga
SP Brazil
Tel: +55 15 2383929
Fax: +55 15 2383260

Hungary
Cooper Tools Hungaria Kft.
a company of
Apex Tool Group, LLC
Berkenyefa sor 7
Pf: 640
9027 Győr
Hungary
Tel: +36 96 66 1383
Fax: +36 96 66 1135

Apex Tool Group, LLC
1000 Lufkin Road
Apex, NC 27539
Phone: 919-387-0099
Fax: 919-387-2614
www.apextoolgroup.com

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