## PANDROL

25 Interstate Drive P.O. Box 69 • Napolean OH, 43545 +1 (419) 592-5050 Fax: (419) 599-3630 Website: www.pandrol.com

#### 00600 & 00600C CUP STONE GRINDER

The Pandrol 8" Cup Stone Grinder is designed for use in grinding the tops of frogs and rail. The unique stone adjustment feature allows the operator to easily adjust the guard as the stone wears without the need for wrenches. The double handles give the operator complete control of the tool.







FLOW	PRESSURE	RPM	DIMENSIONS	WEIGHT
10 gpm (38 lpm)	2000 psi (140 bar)	4000	A - 16 1/2" (419mm) B - 10" (254mm) C - 9" (229mm)	28 lbs (12.7 kg)

#### **ACCESSORIES:**

00799 8" x 2" x 4" PLATE MOUNTED CUP STONE

00733-KIT TYPE 6 STONE ADAPTER KIT 00797 8" x 2" x 1 1/2" TYPE 6 CUP STONE

**PANDROL** 

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### **GENERAL SAFETY PRECAUTIONS:**

TOOL OPERATORS AND MAINTENANCE PERSONNEL MUST ALWAYS COMPLY WITH THE SAFETY PRECAUTIONS GIVEN IN THIS MANUAL, AND WITH ALL STICKERS AND TAGS ATTACHED TO THE TOOL AND HOSE. ALL SAFETY PRECAUTIONS ARE GIVEN FOR YOUR SAFETY. READ TO UNDERSTAND AND FOLLOW ALL SAFETY, MAINTENANCE AND OPERATION INSTRUCTIONS BEFORE YOU USE OR MAINTAIN THE TOOL. REVIEW THE MANUAL DAILY BEFORE USING THE TOOL. IN ADDITION, FOLLOW ALL SAFETY GUIDELINES GIVEN TO YOU BY YOUR SUPERVISOR. DO NOT USE THE TOOL IF YOU HAVE ANY QUESTIONS ABOUT THE OPERATION, SAFETY OR MAINTENANCE OF THIS TOOL. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY OR EQUIPMENT DAMAGE.

PANDROL HAS NO CONTROL OVER TOOL USE OR OPERATION ONCE IT LEAVES THE PANDROL PLANT. PANDROL HAS NO CONTROL OVER OPERATOR OR MAINTAINER SELECTION. THE CUSTOMER MUST ASSUME RESPONSIBILITY FOR THE TOOL'S SUITABILITY FOR A PARTICULAR FUNCTION. DURING USE OF TOOL, GOOD JUDGEMENT MUST BE USED TO WORK SAFELY AND EFFICIENTLY WITHOUT ENDANGERING THEMSELVES OR BYSTANDERS. UNDERSTANDING OF THE OPERATION AND MAINTENANCE MANUAL IS ESSENTIAL FOR ANYONE USING OR MAINTAINING THE TOOL.

- DO NOT OPERATE THE TOOL UNTIL YOU HAVE BEEN THOROUGHLY AND PROPERLY TRAINED OR UNDER THE SUPERVISION OF AN INSTRUCTOR.
- CHECK POWER SOURCE DAILY TO DETERMINE IF CORRECT FLOW AND PRESSURE ARE AVAILABLE. NEVER EXCEED FLOWS OR PRESSURES FOR THE TOOL BEING USED. PER-SONAL INJURY OR DAMAGE TO THE TOOL CAN RESULT.
- OPERATORS MUST CLEAR THE WORK AREA OF NONESSENTIAL PERSONNEL. FLYING DE-BRIS CAN CAUSE SERIOUS INJURY.
- THE OPERATOR MUST BE FAMILIAR WITH ALL PROHIBITED WORK AREAS SUCH AS UNSAFE GRADES, POOR FOOTING AREAS AND OVERHEAD HAZARDS.
- MAINTAIN BALANCE AND PROPER FOOTING AT ALL TIMES. NEVER OVERREACH TO THE EX-TENT THAT A BROKEN PART OR SUDDEN MOVEMENT OF THE TOOL CAN CAUSE YOU TO LOSE YOUR BALANCE AND FALL, OR CAUSE INJURY TO YOUR SELF OR SOMEONE ELSE.

- WHEN WORKING NEAR ELECTRICAL CONDUCTORS, ALWAYS ASSUME THAT THE CONDUCTORS ARE ENERGIZED AND THAT HOSES AND CLOTHING CAN CONDUCT HARMFUL ELECTRICITY. USE HOSES LABELED AND CERTIFIED AS NONCONDUCTIVE.
- DO NOT OPERATE THE TOOL AT EXCESSIVE FLUID TEMPERATURES OPERATOR DISCOM-FORT AND POTENTIAL BURNS CAN RESULT AT HIGH OIL TEMPERATURES.
- NEVER WEAR LOOSE CLOTHING THAT CAN GET ENTANGLED IN THE WORKING PARTS OF THE TOOLS OR BE CARELESS WITH HANDS, FEET OR OTHER BODY PARTS AROUND THE WORK-ING PARTS OF THE TOOLS. HYDRAULIC TOOLS EXERT HIGH TORQUE AND FORCE AND CAN CAUSE SERIOUS INJURY OR DEATH IF IMPROPERLY USED.
- TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR, MAINTENANCE OR SERVICE MUST ONLY BE PERFORMED BY AUTHORIZED AND PROPERLY TRAINED PERSON-NEL.
- ALWAYS WEAR SAFETY EQUIPMENT SUCH AS OIL INJECTION RESISTANT WORK GLOVES, SAFETY GLASSES, SAFETY BOOTS, EAR PROTECTION AND OTHER SAFETY APPAREL DIC-TATED BY YOUR SUPERVISOR APPLICABLE FOR THE JOB YOU ARE DOING AND THE TOOL YOU ARE USING.
- DO NOT CLEAN INSPECT OR REPAIR THE TOOL WHILE CONNECTED TO THE POWER SOURCE. ACCIDENTAL ENGAGEMENT OF THE TOOL CAN CAUSE SERIOUS PERSONAL INJURY.
- OIL INJECTION HAZARD EXISTS WITH THIS TOOL. OIL INJECTION IS A CONDITION WHERE HYDRAULIC OIL IS INJECTED UNDER THE SKIN FROM PRESSURE IN THE LINE. ALWAYS WEAR GLOVES AND REPAIR ANY LEAKS IMMEDIATELY. NEVER CARRY A TOOL BY THE HOSES.
- DO NOT USE DAMAGED EQUIPMENT. IMMEDIATELY REPLACE ANY DAMAGED HOSES, FIT-TINGS, OR OTHER COMPONENTS SHOWING WIRE BRAID, NICKS, CUTS, DAMAGE OR ABRA-SIONS. FAILURE TO DO SO MAY RESULT IN EQUIPMENT DAMAGE AND / OR PERSONAL INJURY OR DEATH.
- CLEAN UP ANY OIL OR FLUID SPILLS IMMEDIATELY.

	AND LOCAL SAFETY REGULATIONS BELOW:
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HAVE SUPERVISOR ADD ADDITIONAL PRECAUTIONS RELATING TO THE SPECIFIC WORK AREA

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## **SAFETY PRECAUTIONS:**

- 1. **ALWAYS** WEAR PROTECTIVE EQUIPMENT SUCH AS GLOVES, SAFETY GLASSES, EAR PROTECTION AND SAFETY SHOES.
- 2. DO NOT WEAR CLOTHING WHICH MAY BECOME ENTANGLED IN THE TOOL.
- 3. **ALWAYS** KEEP WORK AREA FREE OF TOOLS OR ANY OTHER OBJECTS WHICH MAY IMPAIR SOUND FOOTING.
- 4. **CAUTION** OIL INJECTION HAZARD EXISTS WITH THIS TOOL. OIL INJECTION IS A CONDITION WHERE THE HYDRAULIC OIL IS FORCED UNDER THE SKIN THROUGH PRESSURE IN THE LINE. ALWAYS WEAR GLOVES, DO NOT CARRY THE TOOL BY HYDRAULIC HOSES, AND REPAIR LEAKS IMMEDIATELY.
- 5. **NEVER** CHANGE STONES WITH THE POWER SOURCE VALVE(S) IN THE "**ON**" POSITION, TURN THE POWER SOURCE "**OFF**".
- 6. **NEVER** ATTEMPT TO CARRY THE GRINDER WITH THE POWER SOURCE IN THE "**ON**" POSITION. TURN THE POWER SOURCE "**OFF**".
- 7. **NEVER** TOUCH OR TRY TO STOP A MOVING STONE.
- 8. ALWAYS CHECK THE WORK AREA FOR ANY TRASH WHICH MAY IGNITE FROM SPARKS.
- 9. ALWAYS CHECK THE AREA FOR SMOLDERING TIES OR TRASH BEFORE LEAVING THE SITE.
- 10. WHEN CHANGING STONES, FOLLOW ALL GRINDING STONE MANUFACTURERS INSTRUCTIONS FOR SAFETY AND OPERATION. USE ONLY STONES THAT COMPLY WITH ANSI STANDARDS. BEFORE USING, RUN NEW GRINDING STONE FOR ONE MINUTE AT FULL SPEED TO CHECK FOR DEFECTS OR VIBRATION.
- 11 MOST HYDRAULIC OILS HAVE A FLASH POINT OF APPROXIMATELY 450 DEGREES (F). MAKE SURE HOSES ARE COMPLETELY CLEAR OF SPARKS AND HOT DEBRIS. HAVE ANOTHER PERSON STAND CLOSE TO HYDRAULIC POWER SOURCE CONTROLS TO OBSERVE OPERATION AND FOR EMERGENCY SHUTDOWN IF NECESSARY.

**FLOW:** 10 GPM (38 LPM)

PRESSURE: 2000 PSI (140 BAR)
MAX BACK PRESSURE: 250 PSI (17 BAR)

**RPM**: 4000

#### **OPERATION:**

- 1. WITH THE POWER SOURCE IN THE "OFF" POSITION, CONNECT THE HOSES. DO NOT DRAGE THE SERVICE HOSE BY PULLING WITRH THE TOOL. LOOP THE SERVICE HOSE IN THE WORK AREA IN SUCH A WAY TO RELIEVE STRESS ON THE HOSE. AND QWUICK DISCONNECT FITTINGS WHILE WORKING. BE AWARE OF HOSE LOCATION AT ALL TIMES.
- 2. CONNECT THE TOOL TO THE POWER SOURCE.
- GRASP THE TOOL FIRMLY BEFORE TURNING ON THE VALVE. THERE WILL BE A SLIGHT TORQUE WHEN THE STON IS ACTIVATED.

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#### **MAINTENANCE:**

- 1. CHECK TOOL DAILY FOR PROPER OPERATION, LEAKS, OR DAMAGE.
- 2. INSPECT HOSES **DAILY**. REPLACE CUT, BURNED, OR OTHERWISE DAMAGED HOSES.
- KEEP QUICK DISCONNECT COUPLERS CLEAN AND LUBRICATED.
- 4. USE HYDRAULIC FLUIDS THAT COMPLY WITH HTMA SPECIFICATION 5.7, THE HYDRAULIC FLUID SHOULD HAVE A VISCOSITY BETWEEN 100 AND 400 SSU (20-82 CENTISTOKES) AT THE MAXIMUM AND MINIMUM EXPECTED OPERATING TEMPERATURES. PETROLEUM BASED HYDRAULIC FLUIDS WITH ANTI-WEAR PROPERTIES AND A VISCOSITY INDEX OF OVER 140 WORK FOR A WIDE RANGE OF OPERATING CONDITIONS.

#### THE FOLLOWING OILS MEET HTMA SPECIFICATION 5.7:

AMOCO RYKON MV CITGO A/W ALL TEMP

SUNVIS 706 MOBIL D.T.E. 13

CHEVRON EP-MV TEXACO "RANDO" HDAZ

OTHER FLUIDS THAT MEET OR EXCEED THIS SPECIFICATION CAN BE USED.

\*SEE COLD WEATHER OPERATION HYDRAULIC OIL NOTE.

- 5. HAVE TOOL INSPECTED, AT LEAST ANNUALLY, BY PANDROL OR A PANDROL QUALIFIED SER-VICE REPRESENTATIVE TO DETERMINE IF TOOL IS IN NEED OF SAFETY CHANGES OR WORN PART REPLACEMENT.
- 6. CONTACT PANDROL ON A PERIODIC BASIS, AT LEAST ANNUALLY, FOR SERVICE BULLETINS, SAFETY NOTICES, OR OTHER IMPORTANT INFORMATION PERTAINING TO THIS TOOL.

#### **COLD WEATHER OPERATION:**

HYDRAULIC SYSTEM PERFORMANCE IS AFFECTED WHEN THE TEMPERATURE DROPS BELOW 50° F. THEREFORE MEASURES SHOULD BE TAKEN TO PRE-WARM TOOLS AND FLUIDS BEFORE OPERATING.

#### **CHANGING THE GRINDING STONE:**

- 1. TURN THE POWER SOURCE "OFF" AND DISCONNECT HOSES OR CABLE FROM THE TOOL, LAY THE TOOL ON ITS SIDE.
- 2. ROTATE THE STONE SLOWLY BY HAND WHILE **DEPRESSING** THE SHAFT LOCKING PIN (LOCATED ON THE SIDE OF THE DRIVE PLATE CASTING).

#### **PLATE MOUNTED CUP STONE:**

WHEN THE PIN ENGAGES, LOCKING THE SHAFT, REMOVE THE 4 BOLTS HOLDING THE STONE ON AND REPLACE WITH A NEW STONE. **DO NOT OVER TIGHTEN THE BOLTS**.

#### **TYPE 6 STONES:**

WHEN THE PIN ENGAGES, USE A 3/8" HEX KEY WRENCH TO REMOVE RETAINER NUT AND STONE. INSTALL NEW GRINDING STONE AND TIGHTEN RETAINER NUT. **DO NOT OVER TIGHTEN RETAINER NUT.** 

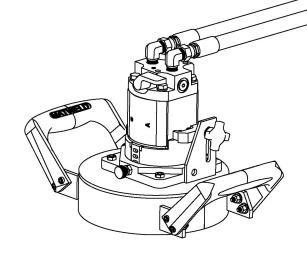
• REFER TO MANUFACTURER'S SPECIFICATIONS FOR TORQUE SETTINGS ON STONE

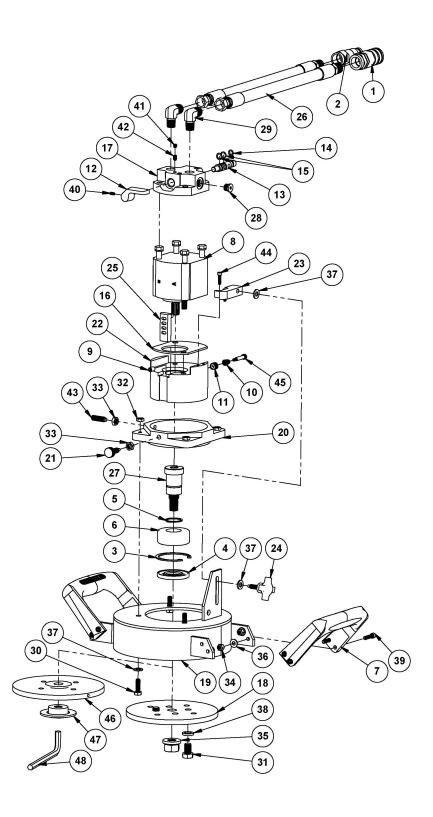
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	00145	QUICK DISCONNECT COUPLER	1
2	00146	QUICK DISCONNECT NIPPLE	1
3	00403	INTERNAL RETAINING RING	1
4	00404	OIL SEAL	1
5	00405	EXTERNAL RETAINING RING	1
6	00406	DRIVE SHAFT BEARING	1
7	00409	CAST HANDLE	2
8	00410B	TOP PORT MOTOR	1
9	00412	LOCKING PIN	1
10	00413	SPRING	1
11	00415	PLUG	1
12	00416	VALVE HANDLE	1
13	00417A	ULTRA MOTOR VALVE SPOOL	1
14	00419	-011 O-RING	1
15	00420	-012 O-RING	2
16	00422	STRAIGHT STONE MOTOR ADAPTOR PLATE	1
17	00423A	VALVE BLOCK	1
18	00604	STONE ADAPTER PLATE	1
19	00605	8" STONE GUARD	1
20	00606A	GUARD COLLAR	1
21	00608	SPRING LOCK	1
22	00610	BEARING HOUSING	1
23	00611	TORQUE STOP BASE	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
24	00612	TORQUE STOP KNOB	1
25	00615	HEIGHT ADJUSTMENT INSERT	1
26	00816	PIG TAIL ASSEMBLY	2
27	048001	CCW DRIVE SHAFT	1
28	231P-05	-05 O-RING PLUG	1
29	405-08-06	-8 JIC x 3/8 NPT 90 ELBOW	2
30	A1022	5/16-18 x 1 HEX HEAD BOLT	4
31	A1081	1/2-20 x 3/4 HEX HEAD BOLT	2
32	A1452	5/16-18 HEX JAM NUT	4
33	A1454	3/8-16 HEX JAM NUT	2
34	A 2046	1/4-20 NYLOCK NUT	8
35	A2063	5/8-11 FLANGE NUT	1
36	A2190	1/4 SAE FLAT WASHER	8
37	A2191	5/16 SAE FLAT WASHER	6
38	A3813	1/2 LOCK WASHER	2
39	A5435	1/4-20 x 1 SHCS	8
40	A5592	#10-32 x 3/8 SET SCREW	1
41	A5601	1/4-28 x 1/4 SET SCREW	1
42	A5605	1/4-28 x 3/8 DOG POINT SET SCREW	1
43	A5628	3/8-16 X 1 1/4 DOG POINT SET SCREW	1
44	A6551	#10-24 X 3/4 SHCS	2
45	A6910	DIA. 1/4 x 1 SHOULDER BOLT	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
46	00733	TYPE 6 STONE FLANGE	1
47	00734	TYPE 6 STONE FLANGE RETAINER	1
48	02718	3/8 HEX WRENCH	1





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#### **REVIEW OF HYDRAULIC PRINCIPLES**

#### **A** TOOL CIRCUIT

#### 1. HYDRAULIC FORMULAS:

Example: HP required to deliver 10 GPM at 1500 PSI.

#### Estimated HP delivered by pump or used by tool.

	PSI					
GPM	500	1,000	1,500	2,000	2,500	3,000
3	1.03	2.06	3.09	4.12	5.15	6.18
5	1.72	3.43	5.15	6.86	8.58	10.30
10	3.43	6.86	10.3	13.70	17.20	20.60
15	5.15	10.30	15.40	20.60	25.70	30.90

#### 2. BACK PRESSURE

BACK PRESSURE MEASURED AT THE TOOL RETURN PORT MUST NOT EXCEED THE MANUFACTURERS BACK PRESSURE RATING. MOST MANUFACTURERS LIST THE MAXIMUM BACK PRESSURE FOR THEIR HYDRAULIC TOOLS AT 250 PSI. BACK PRESSURE MEASURED ON THE RETURN SIDE OF THE TOOL IS THE FORCE REQUIRED TO GET THE OIL BACK TO THE TANK. IN ALMOST ALL CASES THE LOWER THE BACK PRESSURE THE BETTER THE TOOL PERFORMANCE. FIRST, THE BACK PRESSURE IS SUBTRACTED FROM THE MAXIMUM TOOL PRESSURE TO ARRIVE AT A MAXIMUM TOOL OPERATING PRESSURE. FOR EXAMPLE, TOOLS WITH 2000 PSI OPERATING PRESSURE ARE INSTALLED ON A SYSTEM WITH 250 PSI BACK PRESSURE. THIS LEAVES 1750 PSI AS A MAXIMUM TOOL PRESSURE. IMAGINE A SYSTEM WITH 500 PSI BACK PRESSURE. 2000 MINUS 500 PSI BACK PRESSURE LEAVES ONLY 1500 PSI FOR THE TOOL. SECOND, TOOLS ARE DESIGNED FOR PRESSURE TO BUILD ON THE PRESSURE SIDE OF THE TOOL. IF TOO MUCH PRESSURE BUILDS ON THE RETURN SIDE, NOT ONLY IS PERFORMANCE EFFECTED, BUT SEALS MAY BLOW. THIS IS WHY IT IS VERY IMPORTANT TO DIRECT THE FLOW INTO THE TOOL CORRECTLY. REVERSING THE HOSES TO TEST MAY RESULT IN BLOWN SEALS, DAMAGE TO THE TOOL, AND PERSONAL INJURY.

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#### **DECAL LEGEND:**

# **PANDROL**



## **A** DANGER

- Grinding produces sparks do not use near flammable materials or where explosive vapors are present.
- \* Keep hands and feet clear of moving parts.
- Always wear proper safety apparel and eye and ear protection when operating grinder. DCL-1016







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**GENERAL NOTES:** 

#### **LIMITED WARRANTY**

PANDROL, NAPOLEAN, OH., WARRANTS TO THE ORIGINAL PURCHASE OF THIS PRODUCT THAT THE PRODUCT WILL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR THE PERIOD OF ONE (1) YEAR AFTER THE DELIVERY OF SUCH PRODUCT TO THE CUSTOMER. OTHER EQUIPMENT AND PARTS USED, BUT NOT MANUFACTURED BY PANDROL ARE COVERED DIRECTLY BY THE WARRANTY OF THE MANUFACTURER OF THOSE PRODUCTS. PROOF OF PURCHASE MUST BE DOCUMENTED INCLUDING REFERENCE TO A SERIAL NUMBER LOCATED ON EACH TOOL. THE PURCHASER'S ONLY REMEDIES UNDER THIS LIMITED WARRANTY SHALL BE LIMITED AT PANDROL'S SOLE OPTION TO THE FOLLOWING: REPAIR, REPLACEMENT OR REFUND OF THE PURCHASE PRICE OF THE DEFECTIVE PRODUCTS. EACH OF THESE REMEDIES REQUIRES TIMELY NOTIFICATION OF THE DEFECT IN THE PRODUCT AND SUBSTANTIATION THAT THE PRODUCT HAS BEEN PROPERLY STORED, MAINTAINED AND USED. PANDROL'S OBLIGATIONS HEREUNDER EXTEND ONLY TO THE PURCHASER OF THE PRODUCT AND NOT TO ANY THIRD PARTY.

AS A CONDITION PRECEDENT TO PANDROL'S OBLIGATION HEREUNDER, THE DEFECTIVE PRODUCT MUST NOT HAVE BEEN ALTERED OR MODIFIED WITHOUT THE EXPRESS WRITTEN APPROVAL OF PANDROL. THE PRODUCT MUST NOT HAVE BEEN SUBJECTED TO DELIBERATE DAMAGE, SHIPPING DAMAGE, NEGLECT, TAMPERING BY UNAUTHORIZED PERSONNEL OR DAMAGE BY IMPROPER USE, STORAGE OR MAINTENANCE. SERIAL NUMBERS MUST NOT HAVE BEEN ALTERED, DEFACED OR REMOVED. SUCH ACTION VOIDS LIMITED WARRANTY.

#### **EXCLUSIONS TO LIMITED WARRANTY**

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

LIMITED WARRANTY DOES NOT COVER NORMAL WEAR AND TEAR ITEMS SUCH AS FILTERS, HOSES, COUPLERS, BITS, SOCKETS, AUGERS, AND BATTERIES.

#### LIMITATION OF LIABILITY

EXCEPT AS PROVIDED ABOVE, PANDROL SHALL IN NO EVENT BE LIABLE OR RESPONSIBLE FOR ANY INJURY, LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OR MISUSE OR INABILITY TO USE THE PRODUCT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY INCLUDING, WITHOUT LIMITATIONS, BREACH OF CONTRACT, TORT, (INCLUDING NEGLIGENCE OR STREET LIABILITY) AND NOT WITHSTANDING ANY FAILURE OF ANY REMEDY HEREIN OF ITS ESSENTIAL PURPOSE, EVEN IF PANDROL WAS AWARE OF THIS POSSIBILITY OF SUCH DAMAGE. PANDROL'S LIMITED WARRANTY AS SET FORTH ABOVE SHALL NOT BE ENLARGED, DIMINISHED OR AFFECTED BY, AND NO OBLIGATION OR LIABILITY SHALL ARISE OR GO OUT OF THE RENDERING OF TECHNICAL ADVICE OR SERVICE BY PANDROL OR ITS AGENTS. THE FOREGOING MAY NOT BE CHANGED EXCEPT BY WRITTEN AGREEMENT SIGNED BY AN AUTHORIZED OFFICER OF PANDROL, THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.

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## **CUSTOMER INFORMATION:**

Name	
Company	_
Serial # of your Pandrol tool	_
(Upon receiving your Pandrol tool, make sure to list serial number above order information.)	so that a good record is kept for
DANDROL HYDRAILIC TOOL LIS	)T

#### PANDROL HYDRAULIC TOOL LIST

All Pandrol Hydraulic Tools operate at 5 or 10 GPM @ 2000 PSI

#### **POWER UNITS:**

00100K - GASOLINE POWERED (1) 10 GPM OR (2) 5 GPM CIRCUITS

02900A - DIESEL (1) 10 GPM OR (2) 5 GPM CIRCUITS

(OPTIONAL CATALYTIC EXHAUST AND/OR MSHA CERTIFIED)

05500 - TWIN POWER DUAL CIRCUIT (1) 10 GPM OR (2) 5 GPM CIRCUITS & 5000 WATT GENERATOR

02050K - GASOLINE POWERED (1) 5 GPM

03700A - ELECTRIC POWER (1) 10 GPM OR (2) 5 GPM CIRCUITS

#### **GRINDERS:**

09200A - PRECISION FROG GRINDER

06000 - PROFILE GRINDER

06900 & 06900A - MULTI-PURPOSE GRINDER (TRIGGER VERSION AVAILABLE)

05900 - FROG/PROFILE GRINDER (TRIGGER VERSION AVAILABLE)

00700 - RAIL SURFACING GUIDE

04600 - STRAIGHT STONE CW ROTATION (TRIGGER VERSION AVAILABLE)

04700 - STRAIGHT STONE CCW ROTATION (TRIGGER VERSION AVAILABLE)

07500 - CHAMFER TOOL

04800 - CUP STONE GRINDER (TRIGGER VERSION AVAILABLE)

00600C - CUP STONE GRINDER

05400 - ANGLE GRINDER

05600 - BULL NOSE GRINDER

02400 - 10" OR 14" FROG AND SWITCH GRINDER

#### TRACK TOOLS:

03900A - REVERSING RAIL SAW

05100A & 05100B – POWER WELD SHEAR 00800A – 16" RAIL SAW

03500 - SELF FEED RAIL DRILL 05000 - HAND PUMP WELD SHEAR

01600A – 5 GPM 1" IMPACT WRENCH 01500 – RAIL DRILL

04500D - 1/2" HYDRAULIC DRILL IMPACT WRENCH 02500 - 10 GPM 1" IMPACT WRENCH

08200 – TAMPER 03100C – RAIL PULLER

02800 – 60 TON BRIDGE SPREADER 08300 – SPIKE DRIVER

01200 – SPRING ANCHOR APPLICATOR 07650 – HYDRAULIC CLIP TOOL

01100A - SPIKE PULLER (SINGLE, 2 STAGE &TRIGGER VERSIONS AVAILABLE)

#### **OTHER PRODUCTS:**

HYDRAULIC MANIFOLDS
HYDRAULIC TEST GAUGES
HOSE REELS
HYDRAULIC HOSES
ACCESSORIES

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