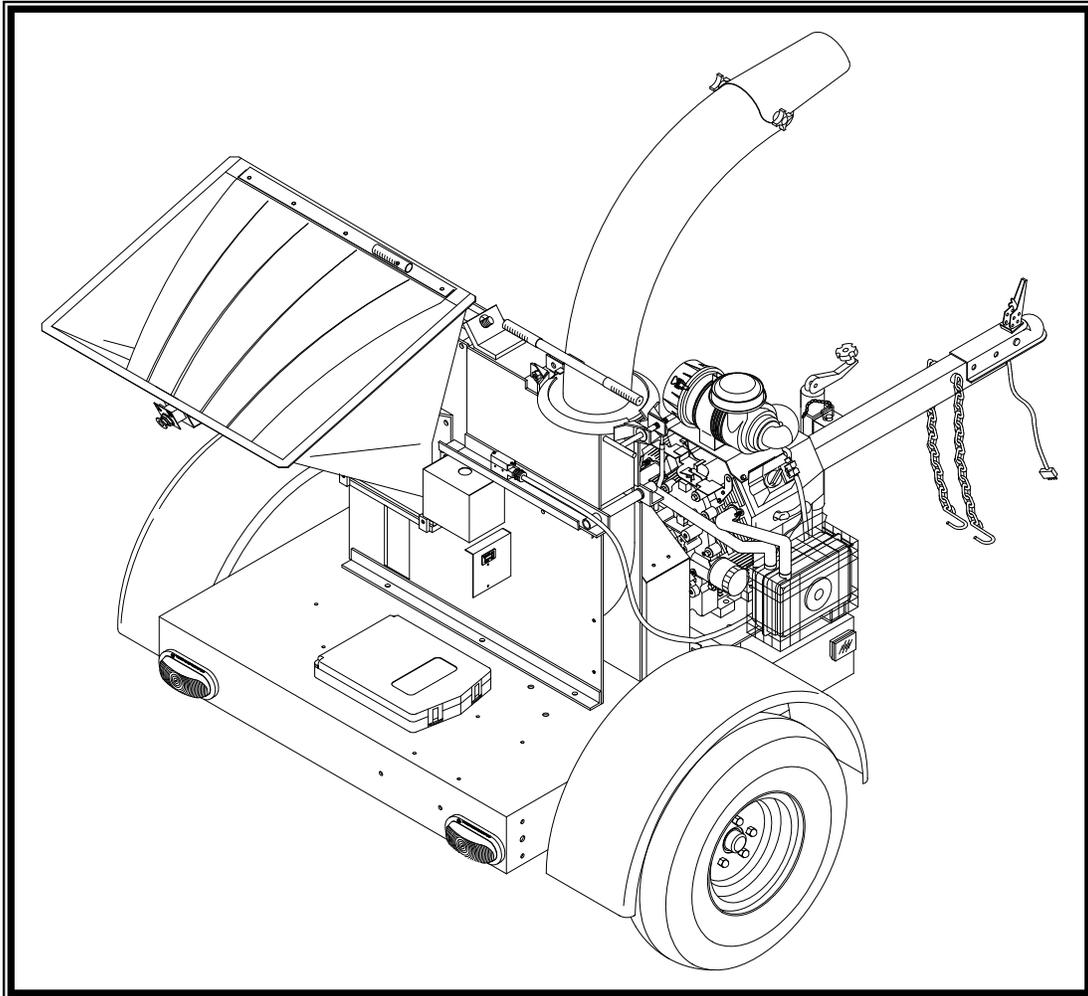


Model 520 Drop Feed Chipper Operation & Maintenance Manual



**PowerTek Inc.
P.O. Box 3
Lebanon, IN 46052
1-877-769-7835**

WARNINGS**WARNING****WARNING TO PURCHASERS OF INTERNAL COMBUSTION ENGINE
EQUIPPED MACHINERY OR DEVICES IN THE STATE OF
CALIFORNIA:**

The equipment that you have purchased does not have a spark arrester muffler. If this equipment is to be used on any forest and brush covered land or grass covered un-improved land in the state of California, the law requires that a spark arrester muffler be installed and be in effective working order. The spark arrester must be attached to the exhaust system and comply with Section 4442 of the California Public Resources Code.

The engine exhaust from this equipment contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

WARNING

This manual contains vital information for the safe use and efficient operation of this equipment. Carefully read this Operation Maintenance Manual before using this equipment, as failure to adhere to the instructions could result in death, serious bodily injury and/or property damage.

This wood chipper is to be used only for chipping wood. Using this machine for any other purpose may cause injury and or property damage. Improper use of this chipper will void the warranty.

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PREPARATION RULE

1. Always inspect the chipper before and after each use to ensure safety and optimum performance.
2. Inspect the tires, safety chains, and towing hitch for any malfunctions. Fix or replace any parts if found to be defective.
3. Check that the running lights and turn signals are working properly.
4. Inspect that all decals are legible and in place. Replace any defective decals.
5. Inspect the entire chipper for loose nuts and bolts. Properly tighten if any are found.
6. Check all chamber bolts, blade bolts and anvil bolts. Torque to the specified torque as mentioned latter in the manual.
7. Remove and store flywheel safety pin before starting the unit.
8. Grease all required and marked lubrication points.
9. Check all fluid levels in the engine. Fill if required.
10. Check all belts for wear, cracking or misalignment. Replace if required.
11. Check all belts for proper tension. If loose retighten to proper tension.
12. Inspect clutch shoes for wear. Replace if fiber pad is worn from shoe.
13. Inspect knives and make sure they are sharp and properly installed. If there are round edges or nicks that would not allow the blades to operate properly, re-sharpen them. If the blades are cracked or chipped replace them or they could cause serious injury or property damage. Torque all blade bolts to the proper torque.
14. Check that all safety devices and switches are functioning properly before use.
15. Always shut chipper engine off, allow flywheel to stop turning, disconnect the spark plug wires and remove the key from the engine: before servicing any part of the chipper.
16. Always insert safety pin into the flywheel before replacing or servicing blades and anvils.
17. Read the manual from cover to cover before using chipper.
18. Know the capabilities and limitations of the chipper before using it.
19. **THINK SAFETY!**

TOWING

1. Before towing, inspect the safety latch on the hitch coupler to make sure it is closed, latched, and pinned to prevent premature uncoupling of chipper hitch.
2. Safety chains should be crossed under the tongue of the chipper and hooked securely to the frame of the towing vehicle.
3. Before towing be sure to rotate jack stand into the transport position and make sure it is properly secured.
4. Make sure that the person who will be towing the chipper has been properly instructed about local and state rules of the road and towing procedures.
5. **DO NOT** tow chipper faster than 45 MPH or chipper may tip over when going around corners.

SAFETY RULES**DO'S**

DO make sure that anyone who operates this chipper reads and understands all operating instructions as to its proper use and operation as well as all safety instructions.

DO block the tires of chipper before using. **DO** check engine oil level before starting. **DO** wipe up spilled fuel right away from the engine and chipper before starting.

DO make sure there are no obstructions in the in feed chute before starting the engine.

DO make sure all bolts, nuts and parts are tight before starting.

DO make sure the discharge chute and deflector shield are properly adjusted to dispatch chips in a safe direction, away from pedestrians, animals, homes or other property that could be injured or damaged.

DO keep children and pets away from the work area while you are operating the chipper.

DO take care when chipping dead or frozen wood in order to avoid kickback.

DO make sure that all safety decals are read and understood before operating the chipper.

DO survey work area for any potential dangers for the operators of equipment.

SAFETY GEAR

DO wear appropriate safety clothing. It is crucial to protect the operator from serious injury.

DO wear eye protection (safety glasses or helmet with safety face shield.)

DO wear hearing protection. (Ear plugs or muffs.)

DO wear gloves, heavy work shoes, and protective clothes.

DO NOT'S

DO NOT operate the chipper alone. **DO NOT** allow children to operate the chipper.

DO NOT use your feet or hands to force material into the feed chute. Use a push stick to push smaller or stuck branches into chute.

DO NOT ride or allow anyone else to ride on or in the chipper.

DO NOT override any safety devices that have been factory installed.

DO NOT operate chipper with upper chamber open.

DO NOT attempt to clear any debris from any chute or chamber while the chipper is running. Disconnect spark plug wires and remove the key before any clean out is attempted.

DO NOT smoke or use any type flame or spark near the chipper. Always refuel the engine in an open area and with the engine shut off or the fuel may explode causing serious injury or property damage.

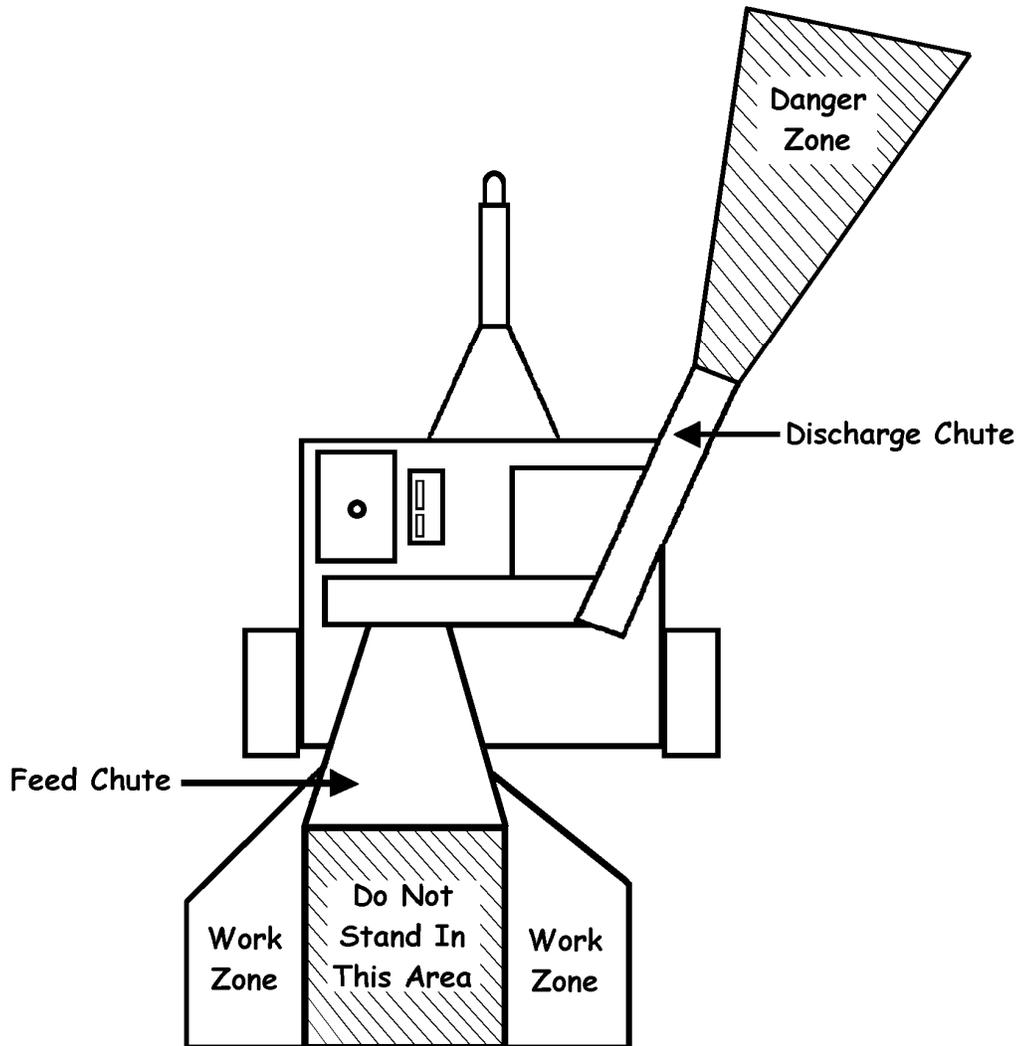
DO NOT use the chipper under the influence of alcohol or drugs or you may cause serious injury to yourself or someone else.

DO NOT for any reason, reach into feed area or chamber while chipper is running or serious injury or death can result.

DO NOT wear loose clothing that may become entangled in brush or machinery or serious injury or death may occur.

DO NOT wear any strings on clothing that may become entangled in brush or machinery or serious injury or death may occur.

DO NOT wear any jewelry that may become entangled in the brush or machinery or serious injury or death may occur.



!! WARNING !!

When operating this unit do not allow anyone to be in the danger zone while chipper is running or serious injury may occur.

Important! Upon receiving your chipper inspect and report any shipping damage to the carrier immediately. **POWERTEK** is not responsible for damage received during transport.

ENGINE

The chipper engine was shipped with the proper amount of oil. However, you should check the oil level and add to or change fluids if conditions warrant. (See engine manufacturer's manual for full details.)

TIRES

Inflation pressure may change with temperature and/or altitude. Check and adjust tire pressure to manufacturers recommended pressure when necessary. Maximum tire pressure is printed on sidewall of tire.

BLADES AND ANVIL

Examine the cutting blades and anvil for dulling or damage from previous use. Make sure the blades and anvil bolts are on tight. Insert safety pin (included with unit) when checking torque of blade bolts or removing blades.

LOOSE PARTS

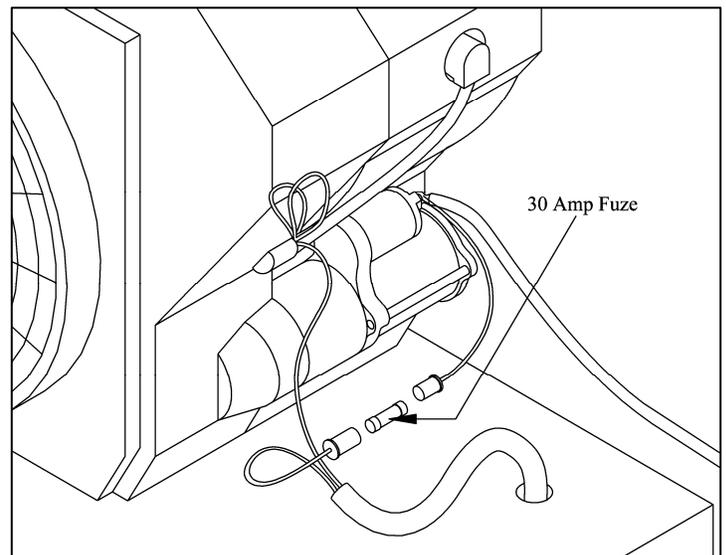
Check to make sure all nuts and bolts are tight and all safety guards are securely in place.

FREIGHT DAMAGE INSPECTION

Upon receiving your chipper, inspect and report any shipping damage to the carrier immediately.

BATTERY & IN-LINE FUZE

For your convenience the battery is shipped fully energized. However, as a safety precaution the in-line fuze has been disconnected. After removing the unit from its pallet, remove the tape holding the 30A fuze into one side of the fuze holder and reconnect. (See Fig. 1)



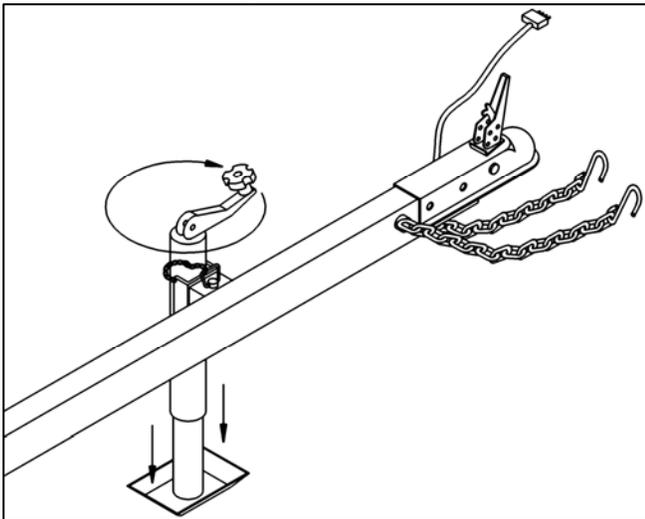
(Fig 1)

BELTS

Check the flywheel belts for proper tension. They should have a proper deflection, set at the factory. (See maintenance section for details.)

JACK STAND

Once at your destination the chipper can be uncoupled from or left attached to the towing vehicle. In either case, the weight should be transferred from the vehicle by lowering the jack stand. The wheels should be blocked front & back as a safety precaution or machine may move causing damage to property or bodily harm. (See Fig. 2)



(Fig. 2)

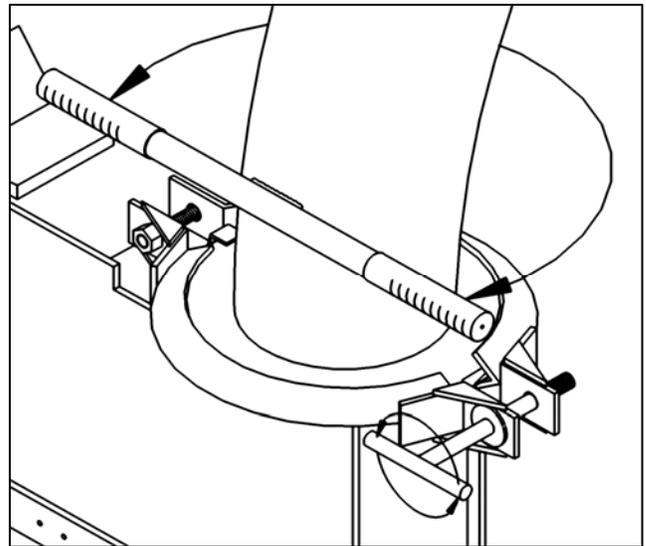
ENGINE

Check the level of engine crankcase oil. If necessary, add oil following the instructions in the maintenance section of engine manual.

Check air filters for excessive dirt and oil and clean as required following the instructions in the maintenance section of engine manual.

DISCHARGE CHUTE

Loosen the discharge chute clamp and rotate the chute to the desired position. Then tighten the chute clamp to lock it into place. (See Fig. 3)



(Fig. 3)

!! CAUTION: !!

Make sure discharge chute is directed away from pedestrians, homes, or other potential safety hazards or injury or property damage may occur.

STARTING GAS ENGINE

Set the throttle to idle speed. If the engine is cold set the choke, then turn the key to “START” position. If the engine does not start within 10 seconds allow a 60 second cool down period between attempts. When the engine starts let the key return to “RUN” position.

Allow the engine to warm up at an idle speed, for 30 seconds then open the throttle. As the centrifugal clutch engages the flywheel will gradually come up to speed, the process should take 30-35 seconds. Run the engine at full RPMS.

Important! If engine is allowed to idle for long periods, clutch damage will occur.

FEEDING MATERIAL

When feeding material into the hopper avoid pieces larger than 5” in diameter or limbs that are not easily handled. Stand to either side of the intake and feed limbs and branches large end first.

If brush tends to hang in hopper alternate with small branches and limbs, **do not** attempt to push brush into the cutter by hand.

If the flywheel speed slows, stop feeding until unit regains momentum.

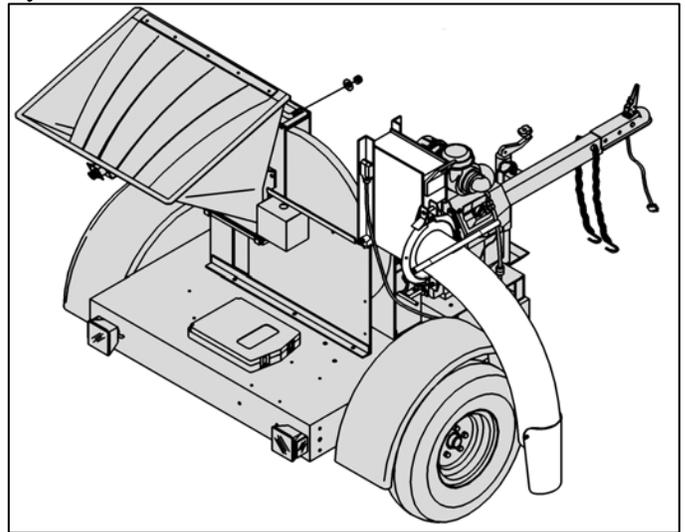
CLEARING OUT DEBRIS

!! WARNING !!

Always shut down the unit and wait for all moving parts to fully stop before clearing or adjusting the discharge chute, flywheel or feedbox. Remove key from engine before clearing machine and remove wires from spark plug.

To clear the discharge chute: Remove the chute clamp, take the chute off, and clear out any debris.

To clear the flywheel housing: First rotate the chute around until it is pointing away from the chipper and is parallel to the flywheel. Then remove the lock nut from the housing with a 1 1/16” box wrench and tilt the chute back slowly. (See Fig. 6) Check the housing and clear out any debris.



(Fig. 6)

STOPPING

Always allow the chipper to run at full speed for a few minutes before shutting down to clear chips so machine is clean for next use. Do not leave any chips in chipper because they may cause a hazard on the next start up.

Turn key to the “off” position while at full throttle. An electronic fuel shut off will automatically stop fuel from entering engine. Allow flywheel to stop turning before working on the chipper. As a safety precaution always remove the key before working on the machine or leaving it unattended.

EMERGENCY STOP SWITCH

An emergency stop switch is supplied with this unit. The red safety button is located at the top of the feed hopper. Push the button to shut the chipper down. When button is pushed the engine and feed roller will stop. The engine will not restart until button is reset.

WARNING

Do not attempt to perform any maintenance procedures while engine or any other parts are in motion or while keys are in the ignition. Always remove wires from spark plugs or serious injury may occur.

ENGINE

Check engine crankcase oil before each start. Make sure unit is filled with proper type and quantity of oil. Refer to engine manufacturers manual. Use high-quality detergent oil of API service class SF. Viscosity should be the same as oil currently in engine.

To check oil, park unit on a level surface and allow oil time to drain into sump. Wipe dirt and debris from around fill cap and tube. Remove the dipstick and wipe clean. Return the dipstick fully into the tube. Pull it out again and check the fluid level registering on the stick. If necessary add oil to keep it in the engine's operating range.

In a new engine oil should be replaced after the first 5 hours of operation. For subsequent changes see engine manual.

For best results drain oil when engine is warm. Remove the oil drain plug and dipstick. Allow oil to drain into a clean resealable container to facilitate recycling. Reinstall drain plug and fill to the "F" mark with the appropriate type of oil. See manufacturer's specifications. Discard oil according to local codes

FUEL

For best results, use regular grade unleaded gasoline with octane rating of 87 or higher. When refueling do not overfill the tank, leave room for expansion. Due to its extreme flammability never add gasoline to a hot or running engine.

BATTERY

Each week or every 25 hours of operation check the electrolyte level of each battery cell. If a cell is low add distilled water to bring it up to the level indicator.

If battery is sealed disregard this instruction. When replacing or recharging the battery use extreme care to avoid shorting between positive and negative terminals. To reduce risk of accidental shorting, disconnect the negative cable first when removing and reconnect it last when installing.

IGNITION

The gas engine is equipped with a electronic ignition system which requires very little maintenance. However, every 100 hours of operation the spark plug should be removed for inspection.

Before removing, clean the area around the plug to prevent dirt and debris from falling into the cylinder. Remove and check for fouling, cracked porcelain, or incorrect electrode gap. If necessary replace the plug with manufacturer recommended plug and gap as needed.

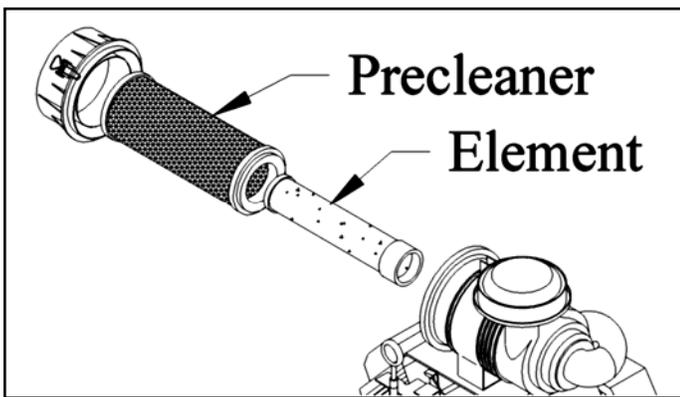
COOLING

To prevent overheating and excessive wear, cooling fins should be cleaned every 25 hours or sooner if plugged. Fins can be cleaned by removing cooling shrouds and scraping away dirt and matted material. It is important to reinstall shrouds to insure proper airflow.

AIR CLEANERS

Combustion air is supplied to the engine via a high-density air cleaner element and its surrounding precleaner. To ensure a sufficient air supply to the carburetor, remove and rinse the precleaner every 25 hours of operation. Check engine manual.

Every 25 operating hours inspect the paper element while cleaning the prefilter. Gently tap the flat side of the paper element to dislodge surface dirt. If unit is excessively dirty, bent, or damaged replace element. Re-install both paper filters and secure. (Fig 9)



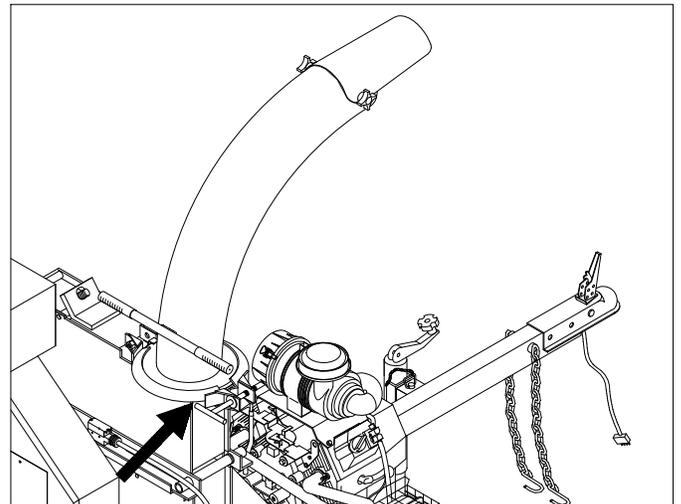
(Fig. 9)

WHEEL BEARINGS

To prevent wheel bearings from burning out or locking up during transport, check and repack wheel bearings every 3 months.

DISCHARGE CHUTE

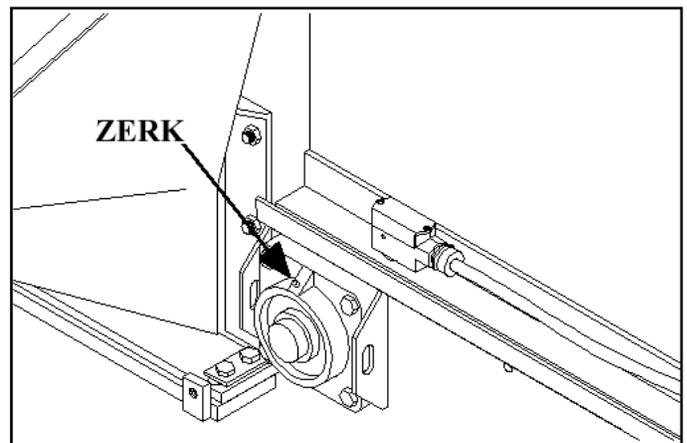
If the discharge chute becomes difficult to rotate, grease at the fitting on the underside of the chute base do not over grease or chute will collect dirt. (Fig. 10)



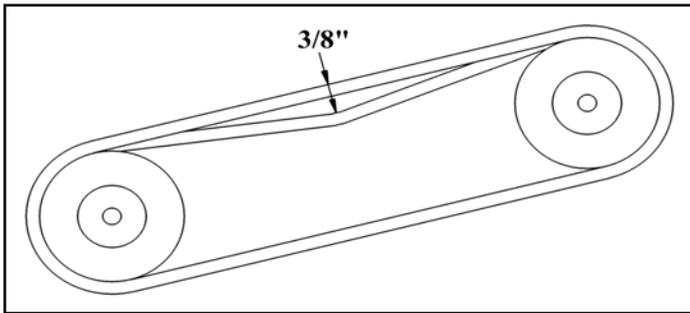
(Fig. 10)

FLYWHEEL BEARINGS

To prevent excessive friction and wear, grease flywheel-bearing blocks on each side of the flywheel every 5 hours of operation. Do not over grease or bearings will collect dirt and wear out prematurely (Fig. 11).



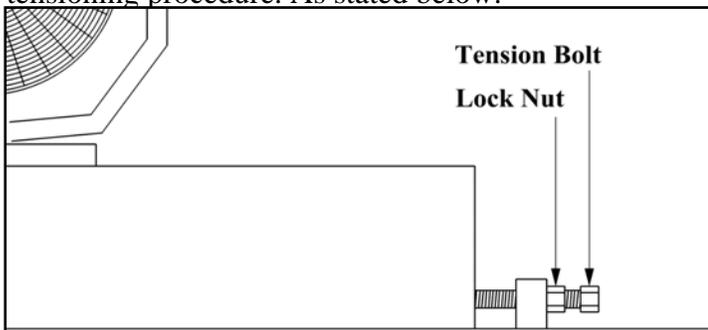
(Fig. 11)



(Fig. 11)

DRIVE BELTS

The flywheel is driven by belts directly from the clutch. The belt must be kept properly tensioned. When properly tensioned, the belts should give a 3/8" deflection under fifteen lbs. of pressure (approx.) at the center span. To adjust belt tension, loosen the four engine sled bolts. Loosen lock nuts on the two tension bolts and adjust the bolts equally to keep the clutch and flywheel pulleys aligned. When the correct tension is achieved secure the lock nuts and mounting bolts. If the belts are excessively worn or can no longer be adjusted to the proper tension they must be replaced. It is extremely important to replace belts in matched sets to ensure uniform power transfer between engine and the flywheel. To replace belts follow the belt tensioning procedure. As stated below.



(Fig. 12)

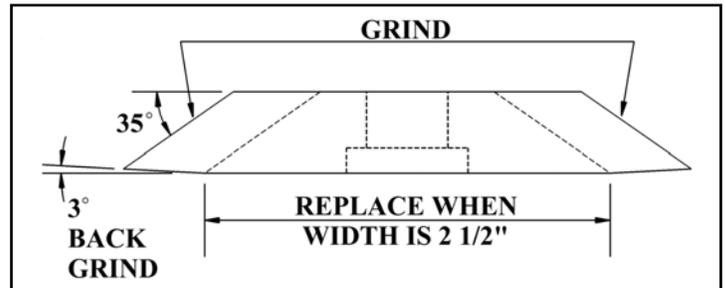
After loosening tension bolts lock nuts, unscrew bolts and slide engine towards the flywheel until belts can be removed. Install new belts then finish tensioning procedure.

CHIPPER BLADES

For optimum cutting potential chipper blades must be kept sharp. To inspect the blades open the flywheel housing using the procedures for clearing the housing. Rotate the flywheel around by hand and check the blades for dulling. If the blades need sharpening or replacing use the following procedures:

1. Insert safety pin to keep flywheel from rotating
2. Remove cutter blades by using a 3/4" box wrench on the lock nuts and a 3/4" socket on the bolt and turn simultaneously.

Note: Anytime you remove blades, check hardware for wear and damage. Replace if needed. When a new set of blades is installed, replace the old hardware with new hardware kit part number 72506A.



(Fig 13)

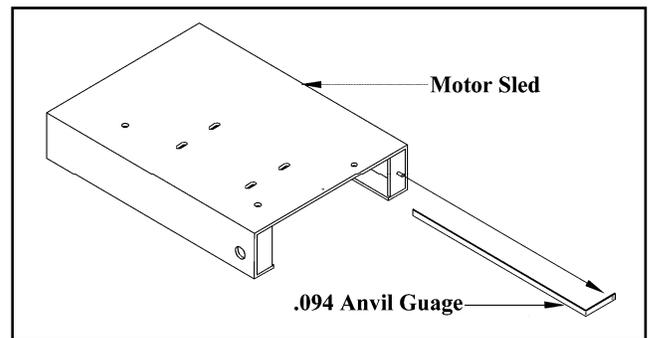
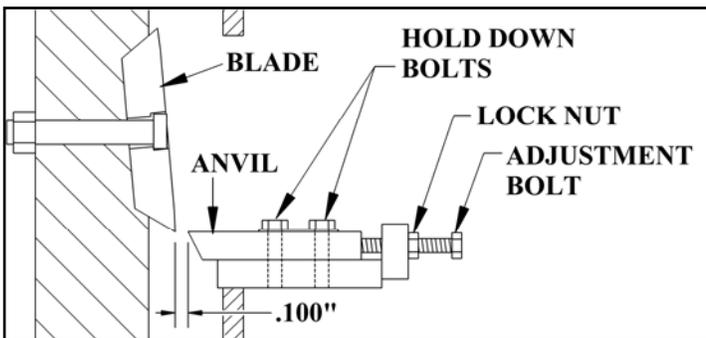
- 3a. If blades need rotating:
 - Blades may be rotated so that the other edges of the knife may be used. To rotate, simply turn the blade and reinstall.
- 3b. If blades need sharpening: it is important to maintain the original angle of 35° and the backgrind angle of 3°. Remove equal amounts of material from each blade to avoid vibrations caused by an unbalanced flywheel (blades should weigh within 1/10 oz. of each other).
- 3c. If blades need replacing:
 - Replace blades when they become damaged or repeated sharpening has reduced their width to 2 1/2". Simply remove the old blades and replace with new ones.
4. Once you have reinstalled the blades make sure the bolts have been torqued to 135 ft.lbs. Then adjust the clearance between the anvil and blades using the procedures in the Anvil Adjustment section.

ANVIL ADJUSTMENT

IMPORTANT! You must adjust the clearance between the anvil and blades every time you sharpen or replace the blades. At this time you must also re-torque all anvil bolts to the proper torque setting of 135-ft.lbs.

Steps in anvil adjustment:

1. Remove the 3/4" nylock nut from the upper chamber, and rotate the upper chamber open.
2. Loosen the anvil adjustment bolts and all four of the anvil hold down bolts.
3. Lock flywheel using the locking pin provided with unit.
4. Remove and sharpen or replace blades as required. Re-torque all blade bolts to 135-ft. lbs.
5. Remove the locking pin. Rotate the flywheel so that the flat of the blade is parallel with the Anvil edge at the inside edge of the blade.
6. Slide the gauge, located under engine sled as shown below, into the opening of the upper housing and or through the anvil slot in the side of the chamber. Position the gauge between the blade and anvil.
7. Push the Anvil up against the gauge and tighten down the anvil mounting bolt. Set anvil-blade gap at no less than .075" and no more than .125". The optimum gap is .100". The anvil gauge supplied with the chipper is .094".
8. Rotate the flywheel to see if the opposite blades gap is less than .075" or more than .100". If so repeat steps 6 & 7 for gapping this side as well.
9. Rotate the flywheel so that the blade is parallel with the anvil on the outside edge of the blade. Repeat steps 6 thru 8 for outer edge of blade.
10. Double check anvil-blade gap so that the gap is more than .075" but less than .125".
Remove gauge. Rotate flywheel to make sure everything is assembled correctly.
11. Torque anvil hold down bolts to 135-ft. lbs. each.
12. Tighten the anvil adjusting bolt lock nuts.
13. Close the upper chamber and tighten the 3/4" nylock nut.



WARNING

THIS PROCEDURE MUST BE FOLLOWED TO ENSURE THE WOOD DOES NOT GET WRAPPED AROUND THE FLYWHEEL AND JAM THE MACHINE AND CAUSE SERIOUS INJURY OR DAMAGE TO PROPERTY

MAINTENANCE SCHEDULE

POWERTEK

	MAINTENANCE SCHEDULE		
	DAILY	WEEKLY	YEARLY OR AS REQUIRED
Check engine oil	X		
Check machine tire pressure	X		
Inspect/Check engine cooling fins or radiator	X		
Check for loose bolts and nuts	X		
Check hitch and safety chains	X		
Check blades and anvil for sharpness	X		
Check tail lights and turn signals	X		
Check anvil and blade gap (.100)	X		
Check that guards are in place	X		
Check Air Cleaner		X	
Grease bearings		X	
Check belts for proper tension		X	
Check clutch shoes for wear		X	
Check rubber guards		X	
Grease discharge chute		X	
Check and gap spark plugs			X

SPECIFICATIONS

GENERAL

Length.....110"
 Width.....68"
 Height.....76"
 Weight.....1460 lb.
 Input Feed.....Gravity Feed
 Hopper Opening.....32" x 24 1/2"
 In-Feed Angle to flywheel.....50°
 Feed Throat.....7" x 7"
 Blade Bolt Torque.....135 ft. lbs.
 Engine.....20 hp elect. start, ovhd valve
 Fuel Tank Capacity.....8 gal.

Clutch.....centrifugal
 Tires.....205/75R14
 Suspension.....Rubber Torsion
 Hitch.....(class 2) 2" Ball-3500 lb. cap.
 Hub.....5 Lug
 Tail Lights.....Standard
 Flywheel.....30" Dia, 1 1/2" Thick (312 lb.)
 Knives.....Two 10" Reversible
 Anvil.....1/2" x 3 7/16" x 12 1/2"
 Anvil Bolt Torque.....135-ft.lbs.

PERFORMANCE

Cutting Capacity.....5" Dia.
 Discharge Distance.....Up to 20 ft.

DIAGNOSTIC PROCEDURES

Trouble shooting procedures are provided in the chart below. To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time. Correct any problems that are found and operate the brush chipper again to verify that you have eliminated the problem.

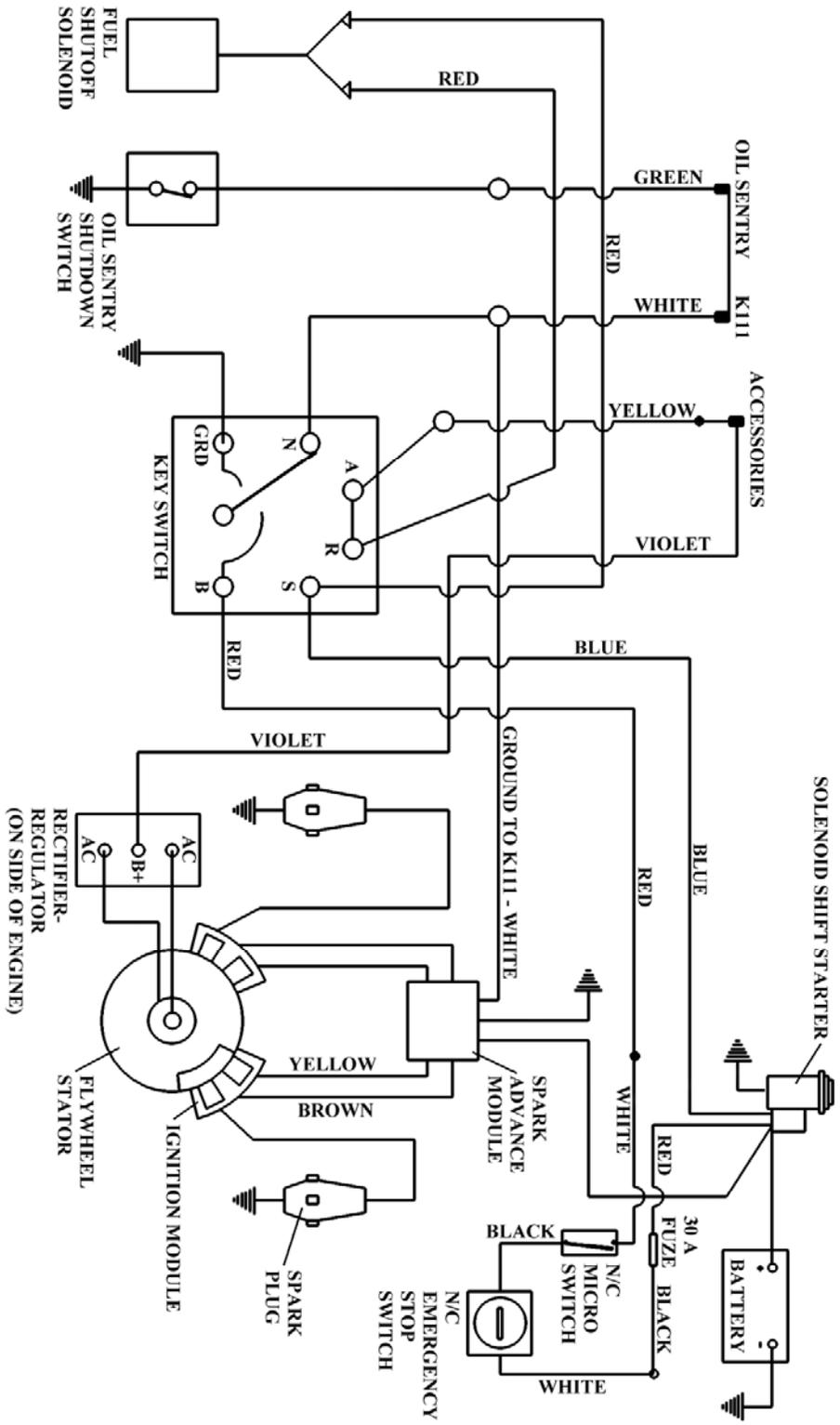
CAUTION

SHUT OFF THE ENGINE, WAIT UNTIL ALL MOVING PARTS HAVE COMPLETELY STOPPED, AND REMOVE KEY FROM THE IGNITION BEFORE TROUBLE SHOOTING OR PERFORMING MAINTENANCE.

PROBLEM	CAUSE	SOLUTION
Chipper feeds poorly or chips unevenly	<ol style="list-style-type: none"> 1. Dull blades 2. Anvil is misaligned 3. Anvil is worn 	<ol style="list-style-type: none"> A. Rotate or sharpen blades B. Check anvil and blade clearance C. Remove and re-grind anvil
Discharge chute plugs	<ol style="list-style-type: none"> 1. Engine speed is low 2. Material bridge in chute 3. Over-Feeding 	<ol style="list-style-type: none"> A. Increase engine RPM B. Remove obstruction C. Mix small and large material
Chipper blade hits anvil	<ol style="list-style-type: none"> 1. Insufficient clearance 	<ol style="list-style-type: none"> A. Reset blade clearance
High bearing temperature	<ol style="list-style-type: none"> 1. Improper lubrication 2. Worn bearings 	<ol style="list-style-type: none"> A. Grease bearing blocks B. Replace bearings

Note: If help is needed to perform repairs contact PowerTek customer service.

ELECTRICAL SCHEMATIC (520) POWERTEK



Additional or replacement manuals may be obtained from your local PowerTek distributor. When chipper is received, complete the following record.

SERIAL NUMBER: _____

DATE OF PURCHASE: _____

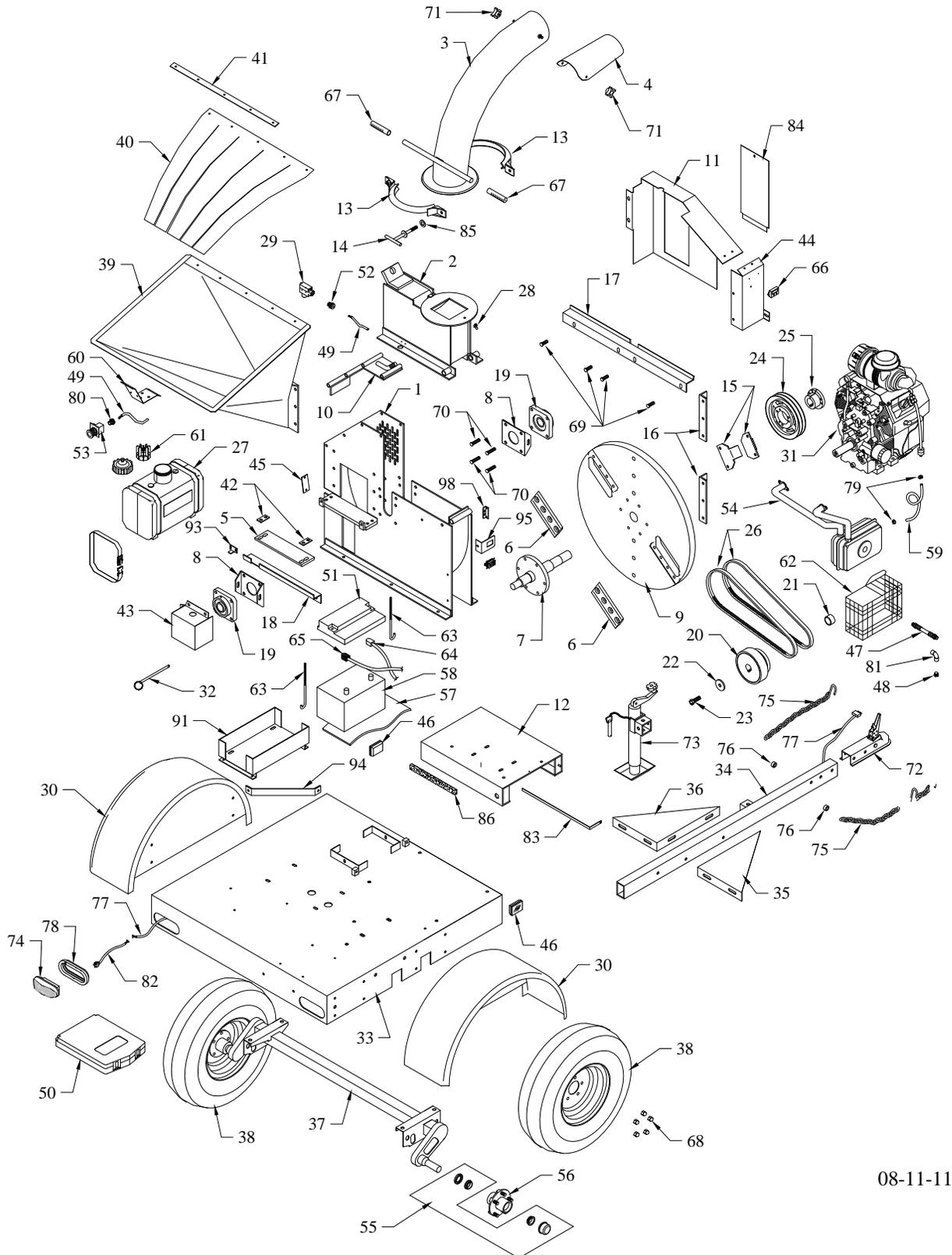
WHERE PURCHASED: _____

Always mention the machine's model and serial number when ordering or writing about parts.

For convenience in ordering, parts are listed by part number, description and quantity. Always supply part number and complete description when ordering. When assemblies can be used, order them to save time assembling individual parts. Prior arrangements must be made before returning chipper for warranty service. Service calls should be directed to Customer Service at 1-877-769-7835.

To insure correct and prompt shipment of parts, always provide the following information when ordering.

1. Quantity of each part wanted
2. Part number and description
3. Model and serial number of chipper
4. Preferred method of shipment: by mail, UPS, or airfreight



08-11-11

PARTS LIST (520)**POWERTEK**

<u>Key</u>	<u>Part No.</u>	<u>Description</u>	<u>Key</u>	<u>Part No.</u>	<u>Description</u>
1	72501	Lower Housing	54	72554	Muffler
2	72502	Upper Housing	55	72555	Bearing Kit
3	72503	Discharge Chute	56	72556	Hub
4	72504	Discharge Chute Deflector	57	72557	Battery Pad
5	72505	Anvil	58	72557	Battery
6	72506	Chipper Knife	59	72559	Fuel Line
7	72507	Flywheel Hub & Shaft Ass'y	60	72560	Mount Plate Kill Switch
8	72508	Bearing Bracket	61	72609	Gas Cap thru s/n 62581
9	72509	Flywheel		16216	Gas Cap s/n 62582 thru 62931
10	72510	Removable Casing Ass'y	62	72621	Muffler Guard
11	72511	Pulley Guard thru s/n 62561	63	16211	J-Bolts, Battery Hold Down
	72647	Pulley Guard s/n 62562/up	64	72642	Positive Cable, Red
12	72512	Motor Sled	65	72643	Negative Cable, Black
13	72513	Discharge Clamp Half	66	16215	Tach/Hour meter thru s/n 82549
14	72514	T-Handle, Discharge Chute		72646	Tach/Hour meter s/n 82550/up
15	72515	Anti Wrap Guard	67	45107	Hand Grip, 3/4" Handle
16	72516	Impeller	68	5001002	1/2" Lug Nut
17	72517	Angle Flange, Power Side	69	5001225	1/2" x 1 1/2" Stud
18	72518	Angle Flange, Feed Side	70	5002516	1/2" x 2" Stud (Bearings)
19	72519	Bearing	71	506026	Knob
20	72520	Clutch thru s/n 62581	72	51601	2" Ball Coupler
	72649	Clutch s/n 62582/up	73	51602	Jack
21	72521	Clutch Spacer	74	72640A	Recessed Tail Light
22	72522	Clutch Retainer	75	51624	Safety Chain
23	72523	Clutch Retainer Bolt	76	51625	Safety Chain Spacer
24	72524	Pulley	77	51626	Wiring Harness, Lights
25	72525	Pulley Bushing	78	72640B	Grommet, Recessed Tail Light
26	72526	Belt	79	28839	Fuel Line Clamps
27	72527	Gas Tank & Cap thru s/n 62581	80	72623	1/2" Romex Connector
	72654	Gas Tank & Cap s/n 62582/62931	81	72624	Fitting, 90° 3/8 FP-3/8 FP
	28807	Gas Tank & Cap s/n 62932/up	82	72640C	Pigtail/Plug, Recessed Tail Light
28	72528	Grease Fitting	83	72636	Anvil Guage
29	72529	Safety Switch	84	72587	Guard Access Panel
30	72530	Fender Ass'y	85	45061	Nylon Washer
31	20118	Engine, 20HP Kohler Elect.	86	46219	Foam Seal, Anti-Vibration
32	72532	Flywheel Safety Pin	87	72645	Mount, Hourmeter/Tach, Flush
33	72533	Trailer Frame	88	16233	Gas Tank Strap s/n 62582/up
34	72534	Trailer Tongue	89	16236	Male Fuel Coupler s/n 62582/up
35	72535	Trailer Tongue Brace, R.H.	90	16238	Female Fuel Coupler s/n 62582/up
36	72536	Trailer Tongue Brace, L.H.	91	725338	Gas Tank Mount s/n 62582/up
37	72537	Axle w/ Suspension	93	72680	Anti Wrap Angle
38	72538	Wheel	94	72681	Fender Brace
39	72539	Feed Chute, Drop Feed	95	72701	Hour Meter Bracket
40	72540	Curtain	98	72703	Grease Hose Bracket
41	72541	Curtain Mount		51656	Decal, Caution Safety Chains
42	72542	Anvil Support Spacer		51660	Decal, Caution Read Owner Man.
43	72543	Shaft Guard		51662	Decal, Warning Flying Wood
44	72544	Pulley Guard Front thru s/n 62561		51665	Decal, Warning Operator w/i 10ft.
	72648	Pulley Guard Front s/n 62562/up		72595	Decal, Danger Feed From Side
				72596	Decal, Danger Do Not Open...
				72597	Decal, Warning Torque Anvil...
				72598	Decal, Warning Do Not Sit-Ride
				72599	Decal, Grease Fitting
45	72545	Gauge Cover		51669	Decal, Powertek
46	72546	Side Marker, Amber		51650	Decal, Danger Stop Engine
47	72547	Oil Drain Tube			
48	72548	Oil Drain Tube Plug			
49	72549	Wire Harness, Safety Switch			
50	72550	Manual Pak			
51	72551	Battery Hold Down Cap			
52	72552	Wire Clamp Nut			
53	72553	Stop Switch			

WARRANTY INFORMATION

Each new product is warranted against manufacturing defects in workmanship and/or materials under normal use and service for a period of 12 months from the date of delivery of the product to the original purchaser. PowerTek Inc.'s obligation under this warranty shall be limited to the replacement to the original purchaser of any part which, as delivered to the original purchase, and upon PowerTek Inc.'s examination, is shown to PowerTek Inc.'s satisfaction, to be defective due to faulty workmanship or materials at the factory.

This warranty does not apply to damage in transit, damage caused by user misuse, negligence, accident, normal wear, or alterations or repairs done outside the factory and/or authorized service stations as determined by PowerTek Inc.

All parts claimed to be defective must be returned to PowerTek Inc.'s factory for inspection, repair or replacement, with all transportation or mailing charges prepaid. It is the exclusive responsibility of the purchaser to bear the transportation or mailing charges on any warranty claim.

This warranty specifically excludes engines or batteries, which are warranted separately by their respective manufacturers, all claims for defective batteries, engines or engine parts must be made in accordance with the battery and /or engine manufacturer's warranty. This warranty also specifically excludes costs of regular maintenance and replacement of service items such as belts, hoses, blades, and similar items.

PowerTek Inc. reserves the right to make changes upon PowerTek Inc.'s products without imposing any obligation upon PowerTek Inc. to install the same on a product manufactured prior to the change.

PowerTek Inc. makes no other warranties, representations or promises other than those set forth herein. **PowerTek Inc. specifically disclaims any and all implied warranties of fitness for particular purpose and merchantability.**

The remedies available to a distributor, dealer, and/or purchaser in connection with PowerTek Inc.'s warranty are set forth above. In no event will PowerTek Inc. be liable for special, incidental or consequential damages.

POWERTEK INC. WARRANTY PROCEDURE

- A. All requests for warranty must have approval from PowerTek Inc. and/or distributor before work starts, or the warranty claim will be denied.
- B. All requests for warranty must be made on an OPEI or equivalent warranty claim form. This form is available from PowerTek Inc. or an authorized PowerTek Inc. distributor or dealer on a no charge basis.
- C. It is the responsibility of the distributor or dealer to complete the form warranty claim and submit it to PowerTek Inc..
 1. The form must be filled out completely. Claims received without serial numbers, model numbers, replacement part numbers, purchase dates, repair dates, purchaser's correct address, signature or other information requested by PowerTek Inc. shall be denied.
 2. Warranty claims that are illegible will be returned without service. Please type or print in black ink.
 3. PowerTek Inc.'s warranty makes no allowance for the time spent to fill out the warranty claim. Any such claim will be denied.

WARRANTY PROCEDURE (CONTINUED)

4. All parts shall be retained and tagged for a period of 60 days or until credit is issued.
 5. The factory may request parts to be returned for examination or analysis. These parts shall be sent by prepaid freight to PowerTek Inc. Returns sent freight collect, without express, written permission from PowerTek Inc. shall not be accepted.
 6. It is the responsibility of the dealer to review the claim and to comply fully with all procedures set forth herein. Failure to do so shall result in the denial of the warranty claim.
- D. Any warranty payments by PowerTek Inc. will be paid by credit memo to the distributor, dealer.
- E. All warranty claims, which are denied, will be returned with a reason for denial.
- F. Labor Allowance.
1. The warranty labor rate is \$35.00 per hour.
 2. The actual time is divided into tenths of an hour. The warranty form should show the time to the nearest tenth of an hour.
 3. Labor credit is based on the actual time required only to make the repair.
- G. Items not covered by warranty.
1. Mileage and transportation costs of any kind. All warranty is "Bench Work" only. The warranty specifically states that any transportation charges in connection with a warranty repair is the exclusive responsibility of the purchaser.
 2. Postage, delivery, telephone calls or similar communications.
 3. Normal maintenance or adjustments. This includes set up and service.
 4. Battery, engine or engine parts. Warranty on batteries, engines, engine parts or other vendor parts is covered by the component manufacturer's warranty and must be handled by that component manufacturer's representative.
 5. Failure caused by neglect, normal wear, or abuse. PowerTek Inc. depends on its distributor and dealer network to accurately determine when such conditions occur.
 6. Any alteration of the original design of the unit or the use of unauthorized or non-PowerTek Inc. parts. Any claim submitted containing such unauthorized alteration repairs shall be rejected.
 7. Freight or transportation damage. All such damage is the responsibility of the carrier and any claim for damages must be made with the carrier.
 8. Compound or repeat warranties caused by negligent/improper repair.
 9. Any claim for warranty where the date of repair exceeds sixty (60) days from the submission of the warranty claim.
 10. Any claim for warranty on the entire unit.
 11. Warranty claims involving oils or fluids of any kind.
 12. Any warranty claims for leaking, punctured, blown, flat, or otherwise damaged tires on units that have been placed in service.
 13. Lost time, lost rentals, lost profits, or other economic loss due to warranty work.

Voluntary cooperation with the entire warranty procedure will make the program work better for both the purchaser and PowerTek Inc.