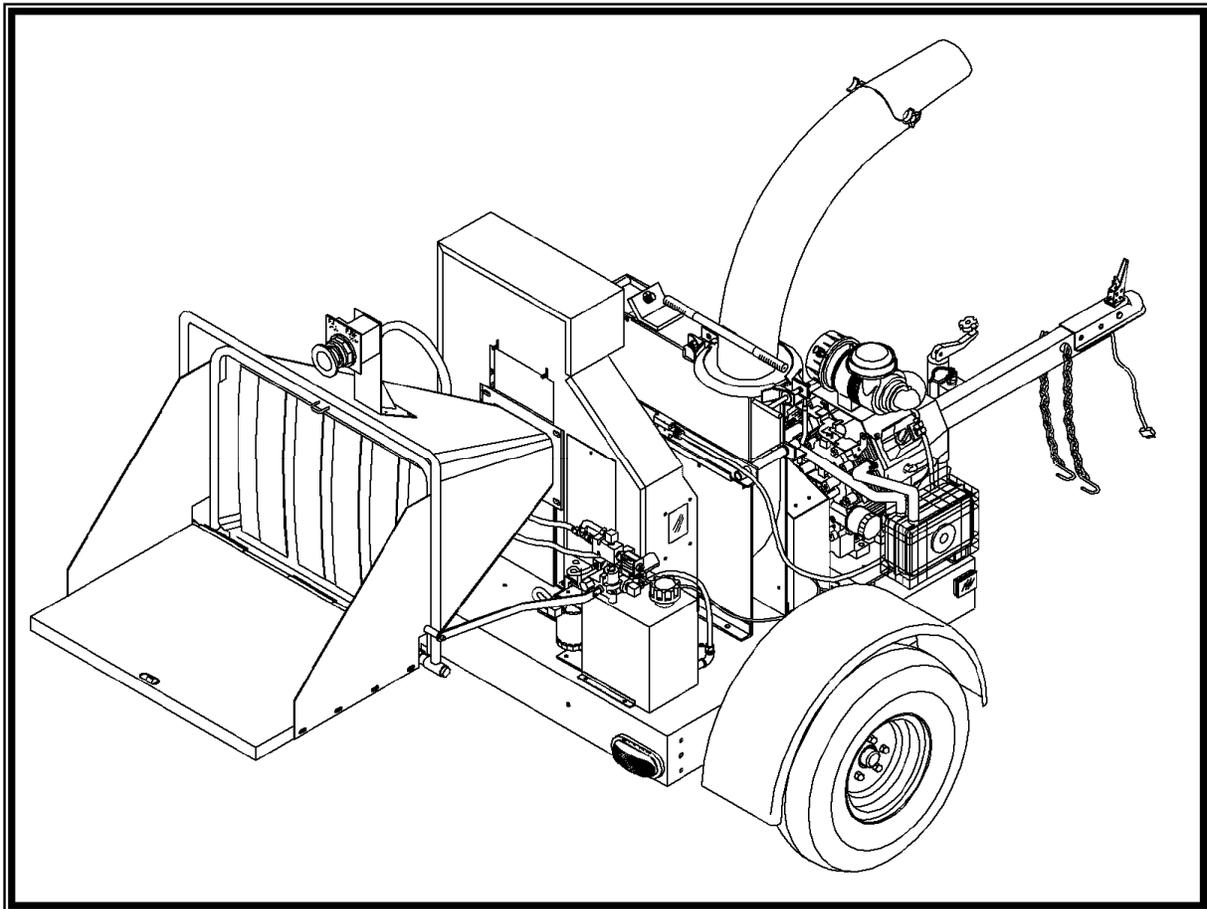


**Model 725**

**POWERTEK**

## **Model 725 Hydraulic Feed Chipper Operation & Maintenance Manual**



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

7-12-07

**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 later 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. Inspect that all hydraulic hoses are in good working order and are not cracked, worn, or leaking.
15. Check that all safety devices and switches are functioning properly before use.
16. 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.
17. Always insert safety pin into the flywheel before replacing or servicing blades and anvils.
18. Read the manual from cover to cover before using chipper.
19. Know the capabilities and limitations of the chipper before using it.
20. **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.

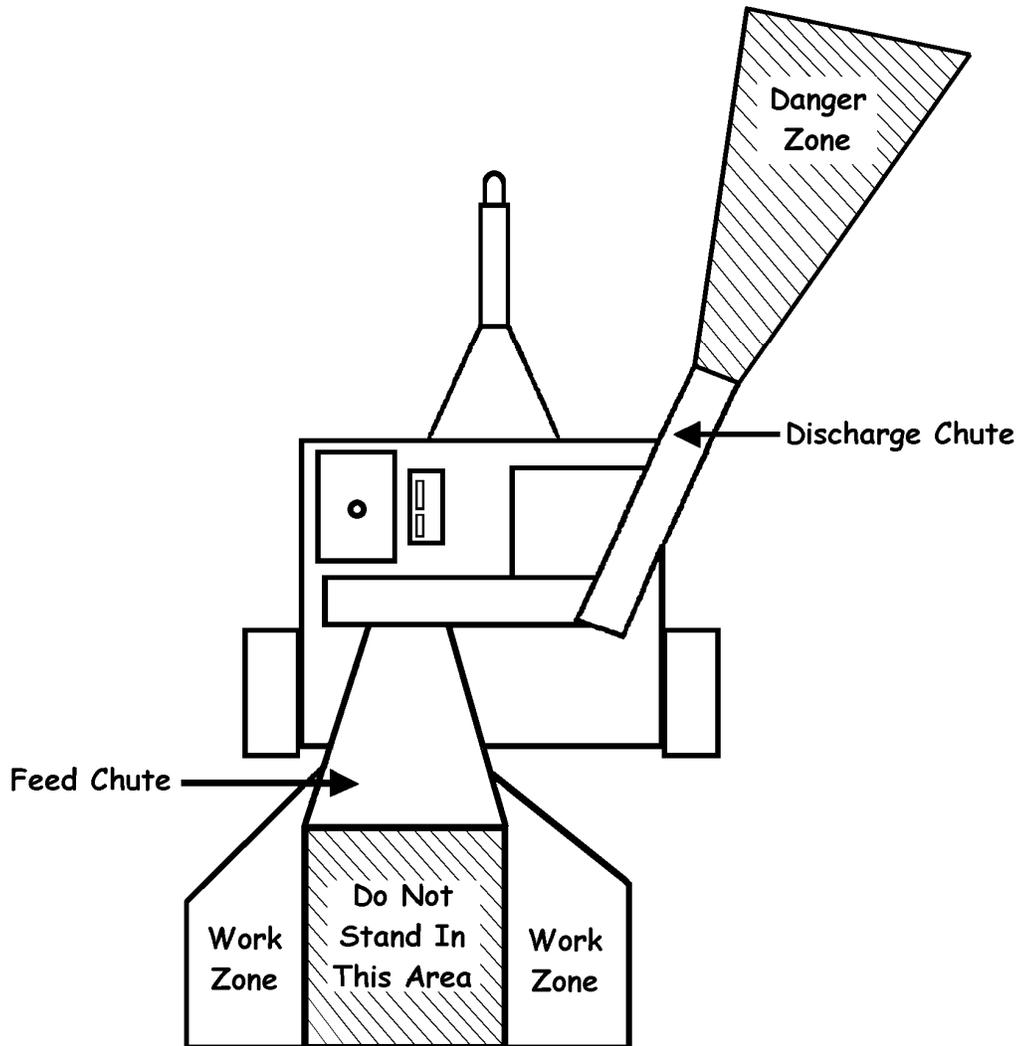
**DO NOT** use the chipper under the influence of alcohol or drugs or you may cause serious injury to yourself or someone else.

**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

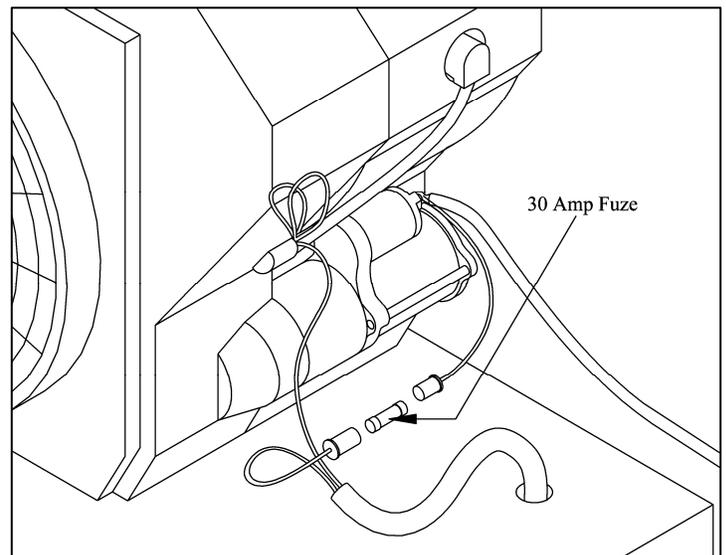
Check to make sure all nuts and bolts are tight and all safety guards are securely in place.

## 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)



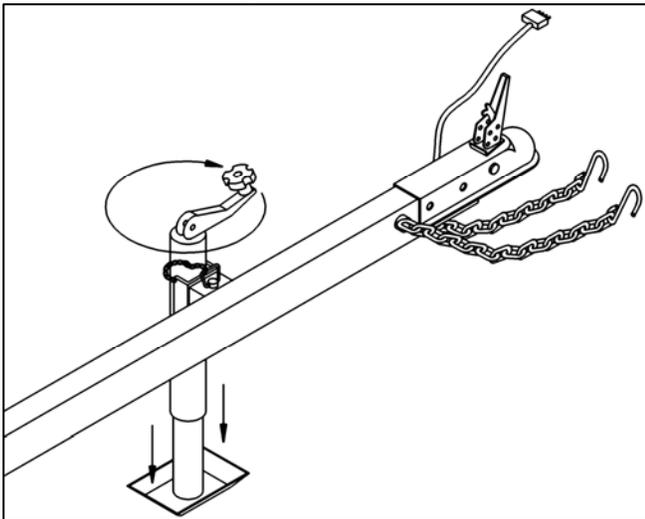
**(Fig 1)**

## 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)**

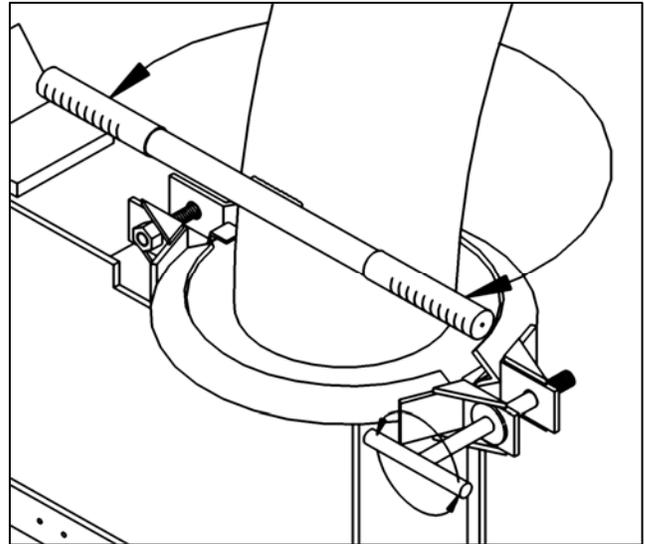
**ENGINE**

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 7” 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. If speed is not regained shut the unit down by putting feed bar in neutral and turning key to the off position and inspect for clogging in the chute and flywheel chambers as described in following section. Also check the automatic feed control system to see if it is operating properly.

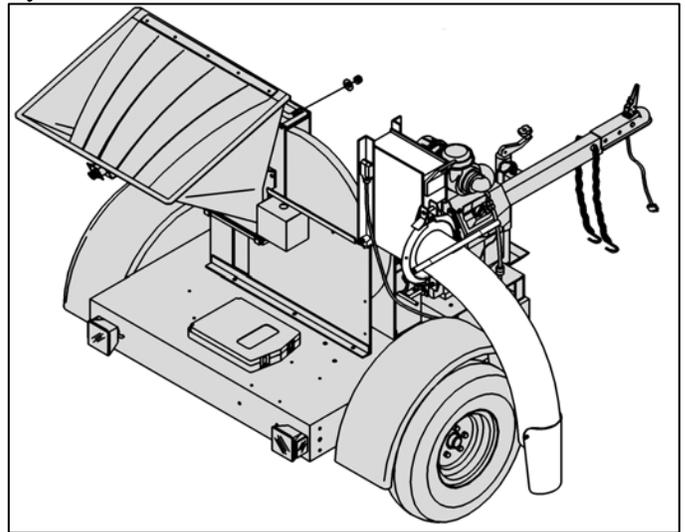
## CLEARING OUT DEBRIS

### !! 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. 4) Check the housing and clear out any debris.



(Fig. 4)

## 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.

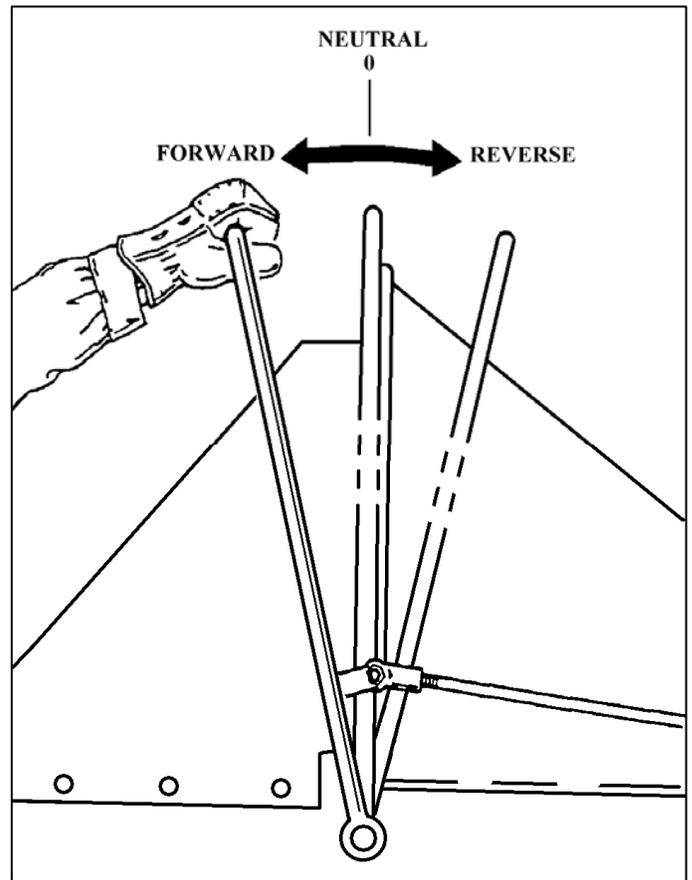
## STARTING HYDRAULIC FEED

When chipping always run the engine at full throttle. Auto feed will not work at a lower RPM.

When the control bar is in the upright position it is in neutral and the feed rollers should not be turning.

To engage the feed roller, pull the bar towards you. Now you may start feeding brush into the hopper. To reverse the feed roller, push the control bar away from you. (See Fig. 5)

The hydraulic feed system will not work unless engine is running 3200-3600 RPM. 3600 RPM is the recommended speed. In reverse feed rollers will operate at any engine RPM.



(Fig. 5)

## 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.

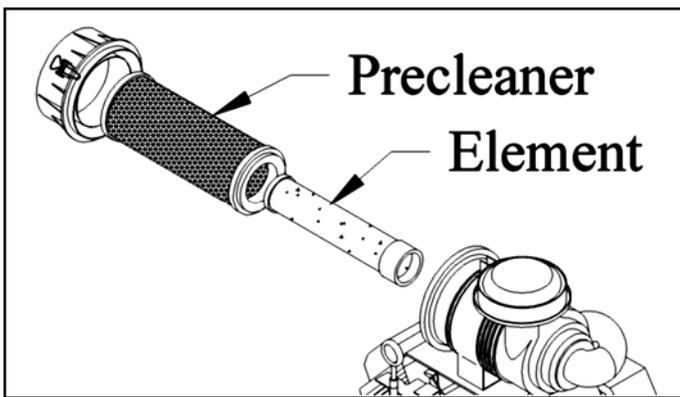
### COOLING

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.



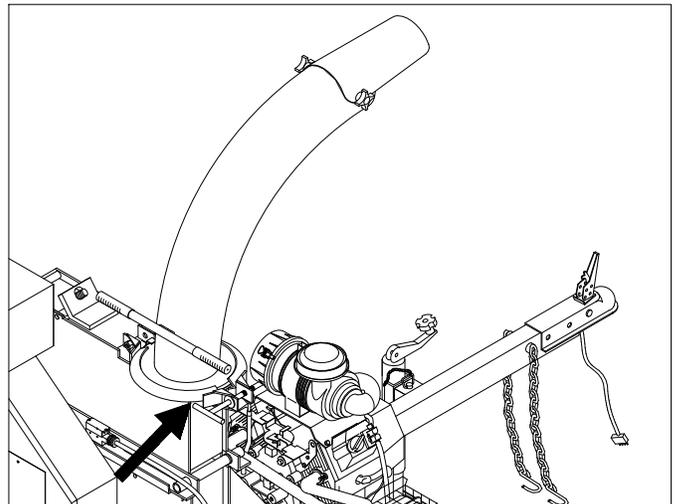
(Fig. 6)

**WHEEL BEARINGS**

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

**DISCHARGE CHUTE**

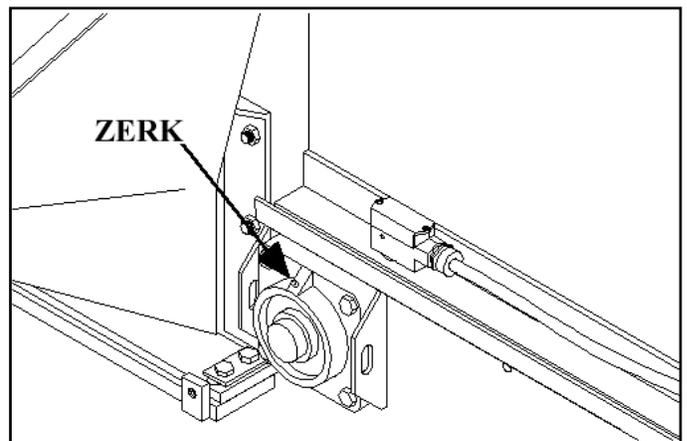
If the discharge chute becomes difficult to rotate, grease at the fitting on the underside of the chute base do not over grease or chute will collect dirt. (Fig. 7)



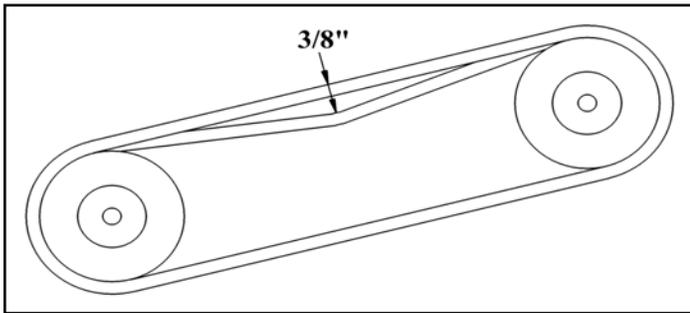
(Fig. 7)

**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. 8).



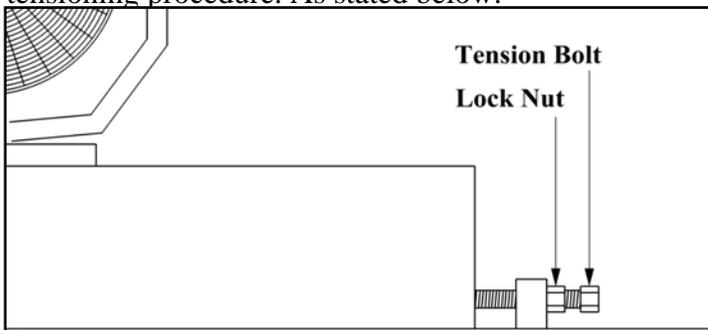
(Fig. 8)



(Fig. 9)

**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. 10)

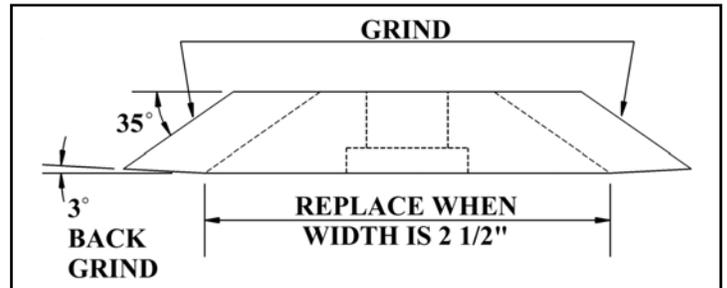
After loosening tension bolts lock nuts, unscrew bolts and slide engine towards the flywheel until belts can be removed. Install new belts then finish tensioning procedure.

**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 11)

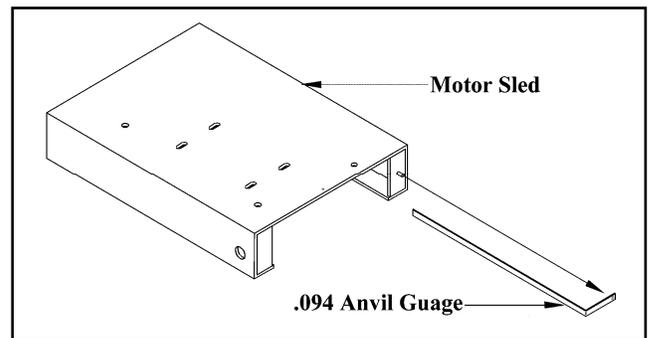
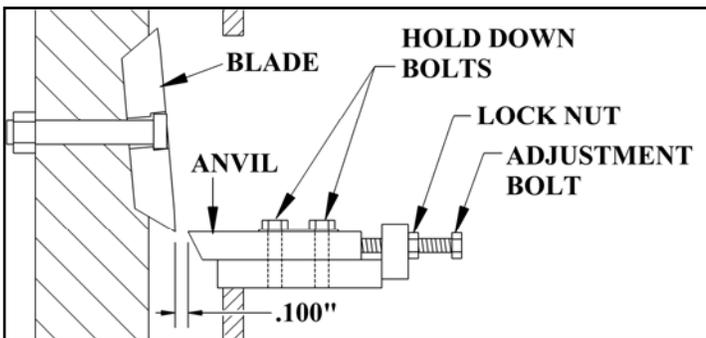
- 3a. If blades need rotating:
  - Blades may be rotated so that the other edges of the knife may be used. To rotate, simply turn the blade and reinstall.
- 3b. If blades need sharpening: it is important to maintain the original angle of 35° and the backgrind angle of 3°. Remove equal amounts of material 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	MONTHLY	YEARLY OR AS REQUIRED
Check engine oil	X			
Check machine tire pressure	X			
Inspect/Check engine cooling fins or radiator	X			
Check for loose hydraulic fittings or hoses	X			
Check for loose bolts and nuts	X			
Check hitch and safety chains	X			
Check blades and anvil for sharpness	X			
Check hydraulic fluid level	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		
Grease hydraulic motor shaft			X	
Check hydraulic filter				X
Check and gap spark plugs				X

## SPECIFICATIONS

### GENERAL

Length.....120"  
 Width.....68"  
 Height.....76"  
 Weight.....1680 lb.  
 Input Feed.....Hydraulic  
 Hopper Opening.....31 1/2" x 23 3/8"  
 In-Feed Angle to flywheel.....90°  
 Feed Throat.....9" x 7"  
 Blade Bolt Torque.....135 ft. lbs.  
 Engine.....25 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.....7" Dia.  
 Discharge Distance.....Up to 20 ft.

**CLEANING HYDRAULIC SYSTEM**

Keep the system clean. The hydraulic pump will last longer with few repairs if the system is kept clean. Keep the oil clean. Debris and dirt in the oil can clog the relief valves and other parts resulting in poor pump performance. Replace the hydraulic oil filter after the first 100 hours of operation and then every 200 hours of operation thereafter. The canister is replaceable.

**HYDRAULIC OIL**

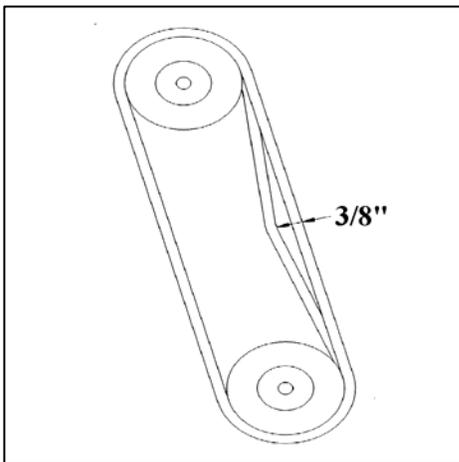
Do not operate the chipper if the hydraulic oil level is too low. This will cause the pump to overheat. Use a hydraulic oil equivalent to Dextron III ATF. Oil level is 1" from top of reservoir.

**HYDRAULIC MOTOR SHAFT**

The spline on the end of the hydraulic motor shaft needs to be greased about every 100 hours of operation. Remove the motor and apply 3-4 squirts from a grease gun inside the shaft then replace the motor.

**PUMP DRIVE BELTS**

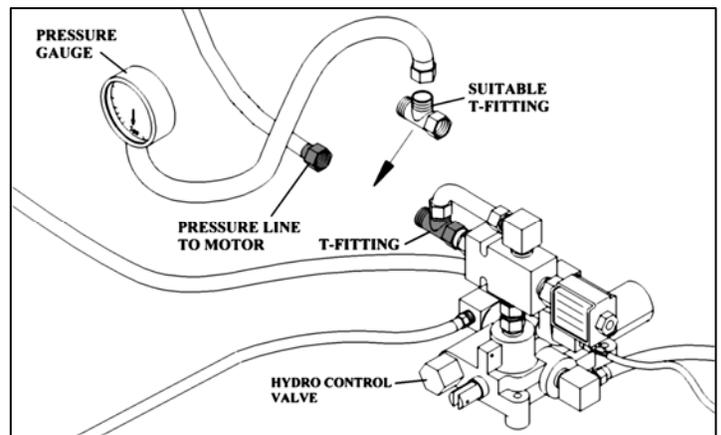
The pump is driven by a belt directly from the flywheel shaft. The belt must be kept properly tensioned. When properly tensioned, the belts should give a 3/8" deflection under fifteen lbs. of pressure (approx.) at the center.



**(Fig. 12)**

**HYDRAULIC SYSTEM PRESSURE**

The hydraulic system on the Model 725 Chipper runs approximately 200 PSI, at this pressure the feed roller should be turning at 65 RPM when turning in the "feed" position. A suitable inline T-fitting and pressure gauge put inline between the first T-fitting off the solenoid block and the pressure line to the feed roller motor is where pressure should be tested (fig. 13).



**(Fig. 13)**

**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.**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Feed roller turns at normal speed but does not feed brush properly.	<ol style="list-style-type: none"> <li>1. Low oil level</li> <li>2. Worn pump</li> <li>3. Worn feed teeth</li> <li>4. Low pressure setting</li> </ol>	<ol style="list-style-type: none"> <li>A. Add hydraulic oil</li> <li>B. Replace pump</li> <li>C. Grind teeth to sharpen or replace</li> <li>D. Check pressure setting</li> </ol>
Feed roller turns at normal speed but slows down or stops when brush is fed.	<ol style="list-style-type: none"> <li>1. Pump belt not properly tensioned</li> <li>2. Relief valve worn or dirty</li> <li>3. Worn pump</li> <li>4. Worn hydraulic motor</li> <li>5. Low oil level</li> </ol>	<ol style="list-style-type: none"> <li>A. Tighten or replace belt.</li> <li>B. Clean valve or replace</li> <li>C. Replace pump</li> <li>D. Replace motor</li> <li>E. Add hydraulic oil</li> </ol>
Hydraulic temperature is very hot and slows the system down	<ol style="list-style-type: none"> <li>1. Low oil level</li> <li>2. Worn pump</li> <li>3. Relief valve stuck open or opens too easily</li> <li>4. Worn or damaged hose</li> <li>5. Clogged oil filter</li> <li>6. Worn hydraulic motor</li> </ol>	<ol style="list-style-type: none"> <li>A. Add hydraulic oil</li> <li>B. Replace pump</li> <li>C. Clean, readjust or replace relief valve</li> <li>D. Replace hose</li> <li>E. Replace filter</li> <li>F. Replace motor</li> </ol>

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

**CHIPPING SYSTEM**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Chipper feeds poorly or chips unevenly	<ol style="list-style-type: none"> <li>2. Dull blades</li> <li>3. Anvil is misaligned</li> <li>4. Anvil is worn</li> </ol>	<ol style="list-style-type: none"> <li>A. Rotate or sharpen blades</li> <li>B. Check anvil and blade clearance</li> <li>C. Remove and re-grind anvil</li> </ol>
Discharge chute plugs	<ol style="list-style-type: none"> <li>1. Engine speed is low</li> <li>2. Material bridge in chute</li> <li>3. Over-Feeding</li> </ol>	<ol style="list-style-type: none"> <li>A. Increase engine RPM</li> <li>B. Remove obstruction</li> <li>C. Mix small and large material</li> </ol>
Chipper blade hits anvil	<ol style="list-style-type: none"> <li>1. Insufficient clearance</li> </ol>	<ol style="list-style-type: none"> <li>A. Reset blade clearance</li> </ol>
High bearing temperature	<ol style="list-style-type: none"> <li>1. Improper lubrication</li> <li>2. Worn bearings</li> </ol>	<ol style="list-style-type: none"> <li>A. Grease bearing blocks</li> <li>B. Replace bearings</li> </ol>

**ELECTRONIC FEED CONTROL SYSTEM**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Feed roller does not turn	<ol style="list-style-type: none"> <li>1. Feed control handle in neutral</li> <li>2. Unit is not at full speed</li> <li>3. Loose wire connection</li> <li>4. Dump solenoid valve bad</li> <li>5. Feed control board bad</li> </ol>	<ol style="list-style-type: none"> <li>A. Position handle in feed position</li> <li>B. Increase engine throttle</li> <li>C. Check all spade connections on the feed board and check all splices and ground connections on the engine</li> <li>D. Replace valve</li> <li>E. Replace board</li> </ol>

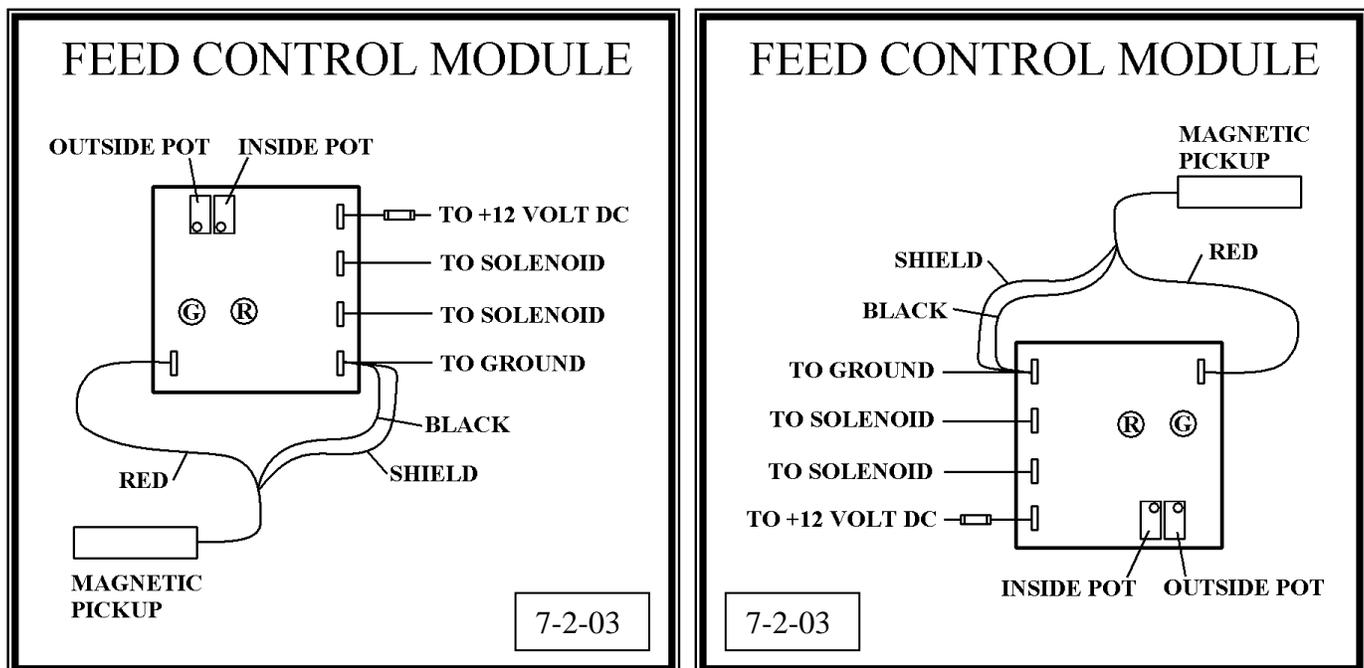
**ELECTRONIC FEED CONTROL CHECK**

If the GREEN LED on the feed control board is lit when engine is at full RPM then feed control board should be operating properly. The light will not go on if the engine is not at full RPM. The RED LED indicates the board has power and should be lit at all times when engine is running. Also, another indication that the board is working correctly is to check the screwdriver and place it in the coil's center. IF it grabs the screwdriver the board is working properly. It will drop the screwdriver when the engine RPM's are reduced.

To check the wiring follow the diagram on the following pages.

**SETTING ELECTRONIC BOARD**

1. Set magnetic pickup at .030 airgap between pickup and gear.
2. Set engine RPM at 3000.
3. If green light is on turn outside pot clockwise until green light goes off.
4. If green light is off turn outside pot counterclockwise just enough to turn green light on. Then adjust outside pot clockwise “slowly” until green light goes off.
5. Set engine RPM to 2800.
6. If green light is on adjust inside pot counterclockwise until green light goes out.
7. If green light is off adjust inside pot clockwise 4 turns, raise rpm until green light comes on and repeat from step 5.
8. Red light is always on, provided there is power to the system.



(FIG. 14)

## NOTES:

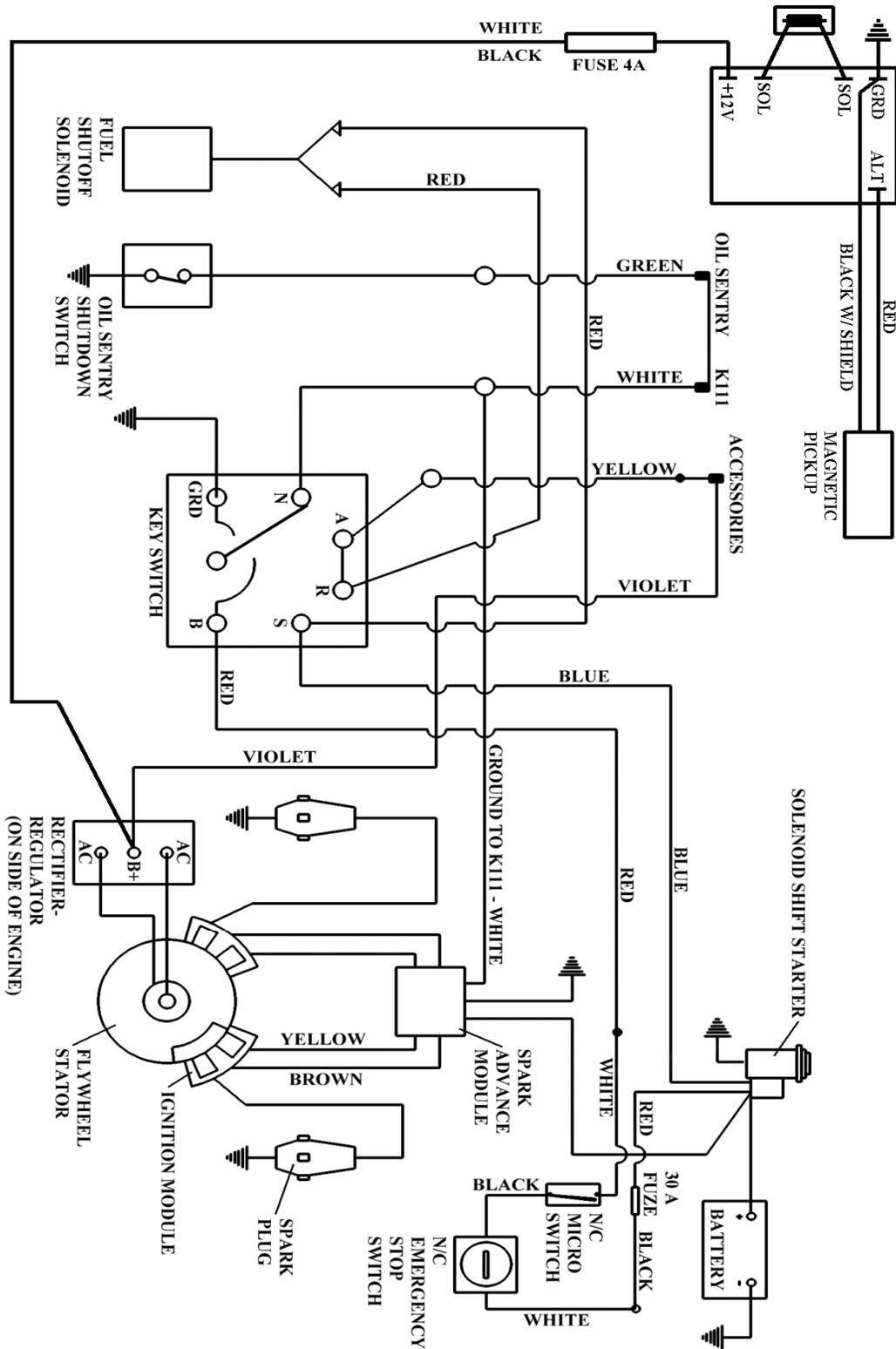
1. 4 AMP IN-LINE FUSE REQUIRED
2. TRIM TOTAL LEAD LENGTH OF MAG PICKUP TO MINIMUM REQUIRED
3. SET GAP BETWEEN MAG PICKUP AND GEAR TO APPROXIMATELY .030"
4. REMEMBER TO REMOVE ALL POWER BEFORE WIRING
5. PRIOR TO INSTALLING FEED CONTROL MODULE CHECK SOLENOID VALVE FOR SHORTS USE A 4 AMP FUSED MODULE USE 4 AMP IN-LINE 12 VOLTS
6. AFTER INSTALLATION CHECK UNIT FOR PROPER OPERATION

## APPROXIMATE SETTINGS:

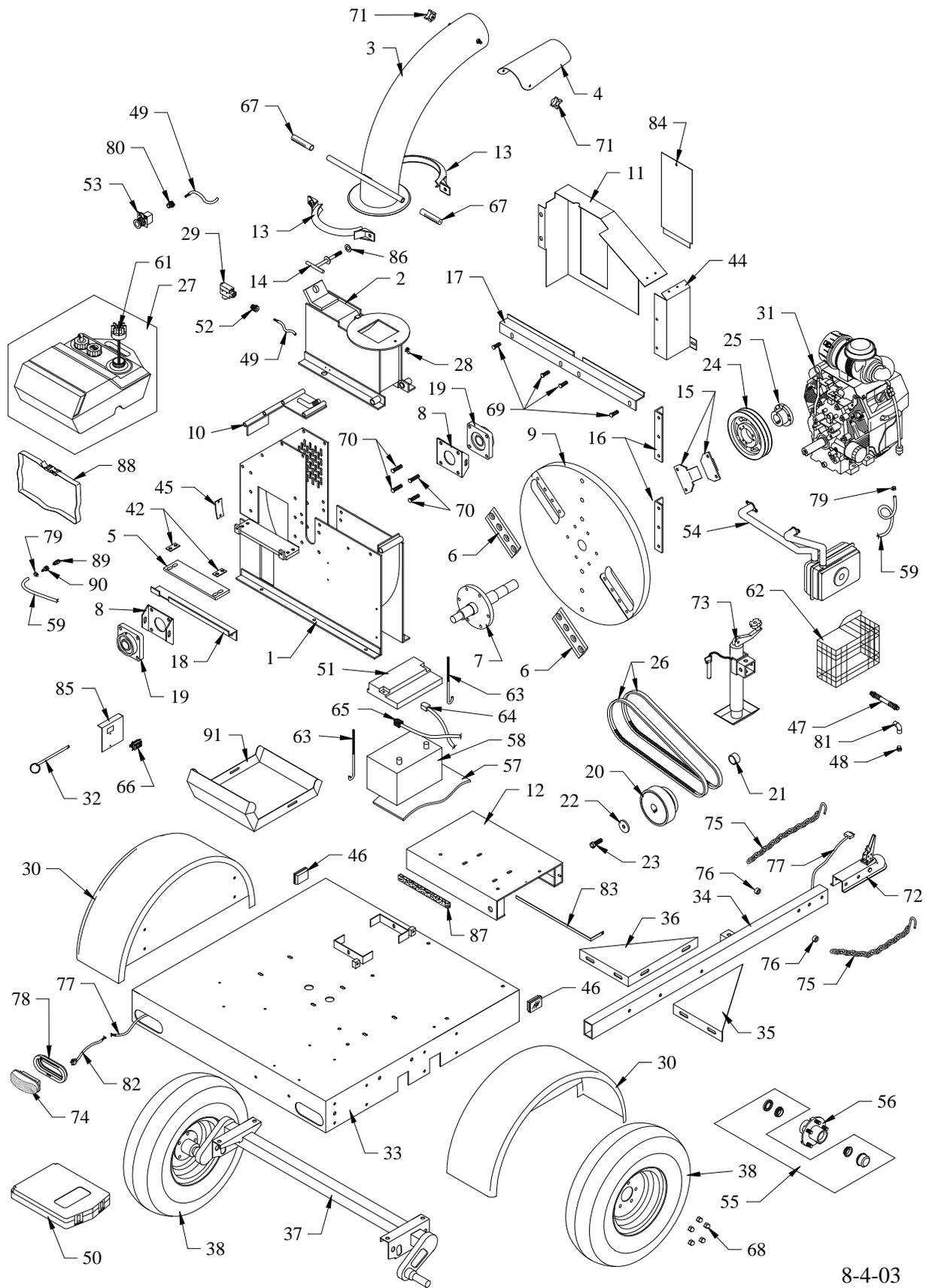
FEED TURN ON @ 3000 RPM'S

FEED TURN OFF @ 2800 RPM'S

# ELECTRICAL SCHEMATIC (725) POWERTEK



# PARTS BREAKDOWN (725 GENERAL PARTS)

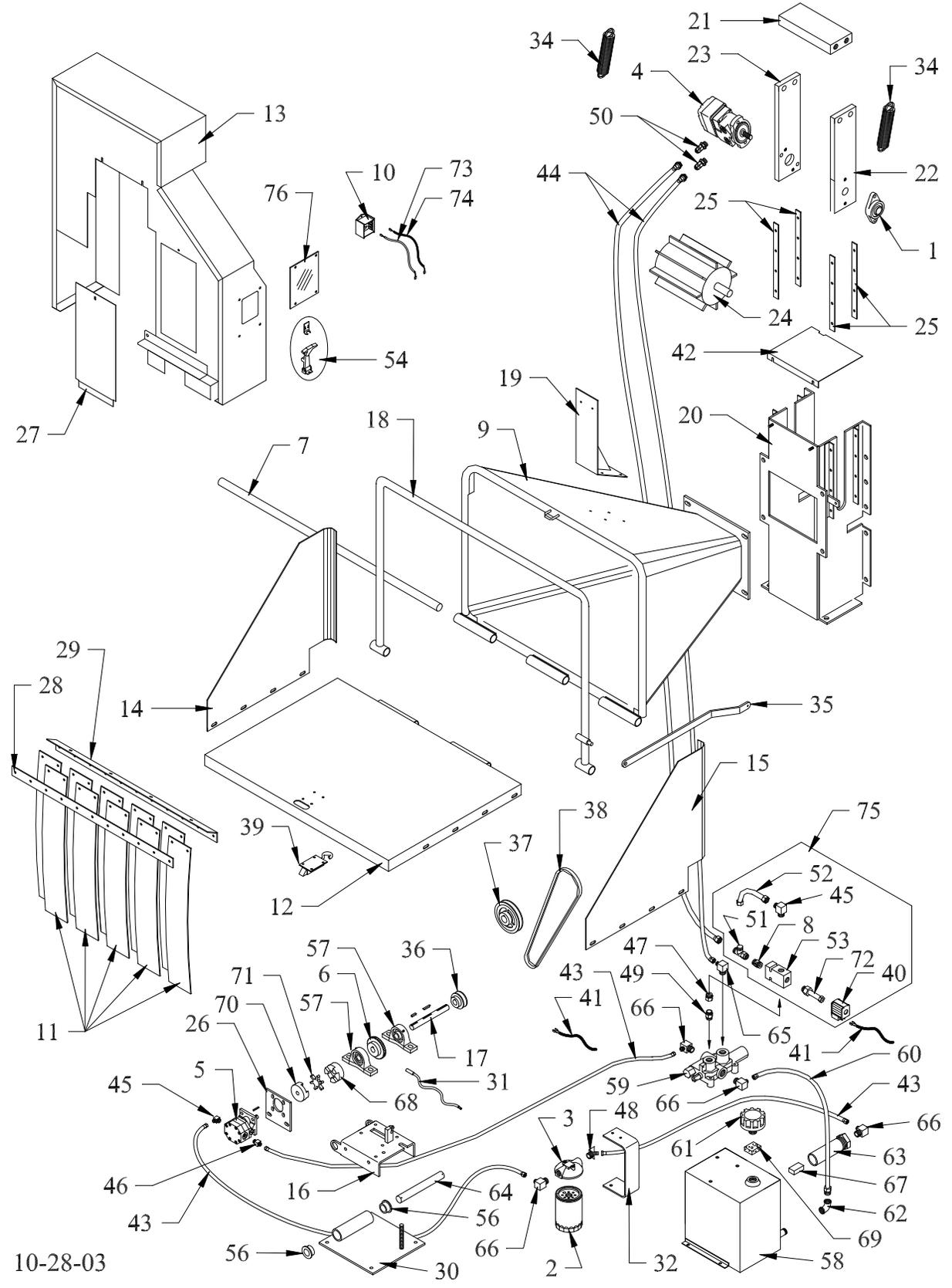


8-4-03

**PARTS LIST (725 GENERALPARTS)****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	50	72550	Manual Pak
2	72502	Upper Housing	51	72551	Battery Hold Down Cap
3	72503	Discharge Chute	52	72552	Wire Clamp Nut
4	72504	Discharge Chute Deflector	53	72553	Stop Switch
5	72505	Anvil	54	72554	Muffler Ass'y
6	72506	Chipper Knife	55	72555	Bearing Kit
7	72507	Flywheel Hub & Shaft Ass'y	56	72556	Hub
8	72508	Bearing Bracket	57	72557	Battery Pad
9	72509	Flywheel	58	72558	Battery
10	72510	Removable Casing Ass'y	59	72559	Fuel Line
11	72511	Pulley Guard thru s/n 62561	61	72609	Gas Cap thru s/n 625xx
	72647	Pulley Guard s/n 62562/up		16216	Gas Cap s/n 625xx/up
12	72512	Motor Sled	62	72621	Muffler Guard
13	72513	Discharge Clamp Half	63	16211	J-Bolts, Battery Hold Down
14	72514	T-Handle, Discharge Chute	64	72642	Positive Cable, Red
15	72515	Anti Wrap Guard	65	72643	Negative Cable, Black
16	72516	Impeller	66	16215	Hourmeter/Tach, thru s/n 62549
	72687	Impeller, Honda		72646	Hourmeter/Tach, Flushmount s/n 62550/up
17	72517	Angle Flange, Power Side			Hand Grip, 3/4" Handle
18	72518	Angle Flange, Feed Side	67	45107	1/2" Lug Nut
19	72519	Bearing	68	5001002	1/2" x 1 1/2" Stud
20	72520	Clutch thru s/n 62581	69	5001225	1/2" x 2" Stud (Bearings)
	72649	Clutch s/n 62582/up	70	5002516	Knob
21	72521	Clutch Spacer	71	506026	2" Ball Coupler
22	72522	Clutch Retainer	72	51601	Jack
23	72523	Clutch Retainer Bolt	73	51602	Recessed Taillight
24	72524	Pulley	74	72640A	Safety Chain
25	72525	Pulley Bushing	75	51624	Safety Chain Spacer
26	72526	Belt	76	51625	Trailer Connector
27	72527	Gas Tank, Includes Cap thru s/n 62581	77	28907	Grommet, Recessed Taillight
	72654	Gas Tank, Includes Cap s/n 62582/up	78	72640B	Fuel Line Clamps
28	72528	Grease Fitting	79	28839	1/2" Romex Connector
29	72529	Safety Switch	80	72623	Fitting 90° 3/8 FP- 3/8 FP
30	72530	Fender Ass'y	81	72624	Pigtail/Plug, Recessed Taillight
31	72531	Engine, 25HP Kohler Elect.	82	72640C	Anvil Gauge
32	72532	Flywheel Safety Pin	83	72636	Guard Access Panel
33	72533	Trailer Frame	84	72587	Mount, Hour/Tach s/n 62550/up
34	72534	Trailer Tongue	85	72645	Nylon Washer
35	72535	Trailer Tongue Brace, R.H.	86	45061	Foam Seal, Anti-Vibration
36	72536	Trailer Tongue Brace, L.H.	87	46219	Gas Tank Strap s/n 625xx/up
37	72537	Suspension Axle w/ hub	88	16233	Male Fuel Coupler s/n 625xx/up
38	72538	Wheel	89	16236	Female Fuel Coupler s/n 625xx/up
42	72542	Anvil Support Spacer	90	16237	Gas Tank Mount s/n 62582/up
44	72544	Pulley Guard Front thru s/n 62561	91	725338	Decal, Danger Stop Engine
	72648	Pulley Guard Front s/n 62562/up		51650	Decal, Caution Safety Chains
	72690	Pulley Guard Front, Honda		51660	Decal, Caution Read Owner Man.
45	72545	Gauge Cover		51662	Decal, Warning Flying Wood
46	72546	Side Marker, Amber		51665	Decal, Warning Operator w/i 10ft.
47	72547	Oil Drain Tube		72595	Decal, Danger Feed From Side
48	72548	Oil Drain Tube Plug		72596	Decal, Danger Do Not Open...
49	72549	Wire Harness, Safety Switch		72597	Decal, Warning Torque Anvil...
				72598	Decal, Warning Do Not Sit-Ride
				72599	Decal, Grease Fitting
				51669	Decal, Powertek <b>7-19-07</b>

# PARTS BREAKDOWN (725 HYDRO PARTS)



10-28-03

**PARTS LIST (725 HYDRO PARTS)****POWERTEK**

<u>Key</u>	<u>Part No.</u>	<u>Description</u>	<u>Key</u>	<u>Part No.</u>	<u>Description</u>
1	72561	Flange Bearing	51	72618	Fitting-T,1/2" FJIC-1/2" MJIC x 2
2	72562	Filter Element	52	72619	Hydro Return Line
3	72563	Filter Head	53	72620	Solenoid Block
4	72564	Hyd. Motor, Roller	54	72638	Latch and Strike
	72693	Hyd. Motor, Roller s/n	56	65032	Bearing 1" Nylon
5	72565	Hyd. Pump, Speed Ass'y	57	85009	Bearing, 3'4" Pillow Block
6	72566	Speed Switch Gear	58	51605	Hyd. Tank
7	72567	Door Hinge Pin	59	51613	Hyd. Control Valve
8	72568	Check Valve	60	51619	Hose, 1/2"FJIC-1/2MP x 15"
9	72569	Hyd. Feed Chute	61	51620	Hyd. Tank Breather
10	72570	Speed Control Module	62	51621	1/2" Pipe Elbow
11	72571	Rubber Flap	63	51630	Strainer
12	72572	Chute Door	64	51634	Pivot Pin, 1"
13	72573	Guard Box Ass'y	65	51639	Fitting-90°, 1/2" FP-1/2" MP
14	72574	L.H. Chute Guide	66	51641	Fitting-90°, 1/2" MJIC-3/4" MP
15	72575	R.H. Chute Guide	67	51643	Magnet
16	72576	Pivot Plate, Speed Ass'y	68	51648	Coupling Jaw, 3/4"
17	72577	Shaft, Speed Ass'y	69	51677	Cap Foam
18	72578	Chute, Lever Ass'y	70	82512B	Coupling Jaw 1/2"
19	72579	Mount, Stop Switch	71	72695	Spider Coupling
20	72580	Hyd. Feed Housing	72	72637	Solenoid Plunger, Speed Ass'y
21	72581	Stabilizer Plate	73	72625	Hot Wire, Speed Ass'y (Red)
22	72582	R.H. Bearing Guide	74	72626	Ground Wire, Speed Ass'y (Green)
23	72583	L.H. Bearing Guide	75	72627	Solenoid Valve Ass'y
24	72584	Roller, Hyd. Feed	76	46105	Plexiglass s/n 62550/up only
	72692	Roller, Hyd. Feed s/n			
25	72585	U.H.M.W. Roller Guide			
26	72586	Motor Mount, Speed Ass'y			
27	72587	Guard Access Panel			
28	72588	Guard Strip			
29	72589	Guard Bracket			
30	72590	Mount Plate, Speed Ass'y			
31	72591	Magnetic Sensor			
32	72592	Filter Mount			
34	72594	Spring, Roller Guide			
35	72601	Activator Lever			
36	72602	Pulley, Speed Ass'y			
37	72603	Pulley, Speed Ass'y Drive			
38	72604	Belt, Speed Ass'y			
39	72605	Door Latch			
40	72606	Solenoid Coil, Speed Ass'y			
41	72607	Solenoid Wire, Speed Ass'y			
42	72608	Chamber Cover			
43	72610	Hose, 1/2" FJIC-1/2"FJIC x 13"			
44	72611	Hose, 1/2" FJIC-1/2"FJIC x 48"			
45	72612	Fitting-90°, 1/2" MJIC-3/4" o-ring			
46	72613	Fitting, 1/2" MJIC-3/4" o-ring			
47	72614	Fitting, 1/2" FJIC-3/4" o- ring			
48	72615	Fitting-45°, 1/2" MJIC-3/4" MP			
49	72616	Fitting, 1/2" MJIC-1/2" MP			
50	72617	Fitting-90°, 1/2" MJIC-7/8" o-ring			

7-12-07

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

## **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.***