

Power Dog™

Owner's Manual

AMBUSH

Agricultural / Commercial / Industrial



KUHNS POWER EQUIPMENT, LLC

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FOREWORD

The Power Dog Commercial, Walk-Behind, Brush Mowers have been developed for use by professional, agricultural, commercial and industrial trained individuals. The machines incorporate many safety features that should be studied by all operators and maintenance personnel before use. The list of safety precautions should receive particular attention. This manual presents the operating and maintenance instructions necessary to keep you Power Dog mower at peak efficiency. If properly operated and maintained, your Power Dog mower will give dependable and trouble-free service.

Although hazard control and accident prevention partially are dependent upon the design and configuration of the equipment, these factors are also dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance and storage of the equipment.



CAUTION: The Power Dog Commercial, Walk-Behind, Brush Mower should only be operated and maintained by thoroughly trained individuals. The machines could cause serious injury to anyone who misuses them or does not understand their operation. All operators and maintenance personnel are urged to read this entire manual for their safety.



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

SAFETY PRECAUTIONS

A. GENERAL

1. Read this Operator's Manual before starting the mower. Study the controls and learn the proper sequence of operation.
2. Do not allow anyone to operate or maintain this machine who has not read the manual. **Never permit children to operate this machine.**
3. Always have your feet and hands clear of the cutter deck when starting the engine.
4. Do not remove any shields, guards, decals or safety devices. If a shield, guard, decal or safety device is damaged or does not function, repair or replace it before operating the mower.
5. Always wear safety glasses, long pants and safety shoes when operating or maintaining this mower. Do not wear loose-fitting clothing.
6. **Never run the engine indoors without adequate ventilation. Exhaust fumes are deadly.**
7. To avoid serious burns, do not touch the engine or muffler while the engine is running or until it has cooled after it has been shut off.
8. When looking for oil leaks, never run your hand over hydraulic hoses, lines or fitting. (High-pressure oil can easily penetrate the skin.) Never tighten or adjust hydraulic hoses or fittings while the system is under pressure.

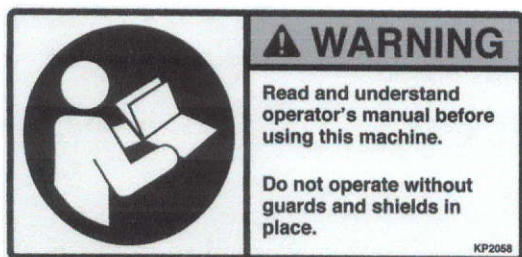
B. RELATED TO FUEL:

1. **Gasoline is highly flammable. Respect it.**
2. Do not smoke or permit others to smoke while handling gasoline.
3. Always use approved containers for gasoline.
4. Always shut off the engine and permit it to cool before removing the cap of the fuel tank.
5. If the fuel container spout will not fit inside the fuel tank opening, use a funnel.
6. When filling the fuel tank, stop when the gasoline reaches one inch from the top. This space must be left for expansion. **Do not overfill.**
7. Wipe up any spilled gasoline.

C. WHEN MOWING:

1. Keep adults, children and pets away from the area to be mowed.
2. Mow only in daylight.
3. Always check the area to be mowed and remove debris and other objects prior to mowing.
4. Watch for holes, rocks, posts, and other hidden hazards.
5. Reduce speed when making sharp turns.
6. Always have proper footing on slopes and hillsides and never operate when conditions are slippery. Be very careful in wet weeds.
7. Always keep both hands on the handles. Always walk, never run.
8. **Never engage the blade clutch when the engine is running unless you are in area that you intend to mow.**
9. Be careful when crossing gravel paths or roadways. Always disengage the blade clutch and wait until the blades stop rotating.
10. **Never leave the mower unattended without disengaging the blade clutch, shutting off the engine, taking the key from the ignition switch and closing the fuel shutoff valve.**
11. Always park the mower and start the engine on a level surface with the blade clutch disengaged.
12. If you hit a solid object while mowing, disengage the blade clutch and stop the engine. Disconnect the spark plug wire and inspect for damage. Repair any damage and make sure the blades are in good condition and the blade bolts are tight before restarting the engine.
13. Do not mow excessively steep slopes. Mow across the slope, not up and down the slope.
14. **Never raise the mower deck while the blades are rotating.**
15. **Never walk or stand on the discharge side of a mower with the engine running. Disengage the blade clutch if another person approaches while you are operating a mower.**
16. **Always disconnect the spark plug wire to prevent the engine from accidentally starting before performing any maintenance on this mower.**
17. Keep the mower and especially the engine/pump area clean and free of grease, grass and leaves to reduce the chance of fire and to permit proper cooling.
18. The operator presence control levers located at each handle are designed for your safety. Do not try to defeat their operation. If the blade clutch is engaged, releasing both handles will shut off the engine.

Keep safety decals clean. Replace any safety decal that is damaged, destroyed, missing, painted over or can no longer be read. Replacement safety decals are available through your dealer.



Located on Control Panel,
Front cover, Rear cover

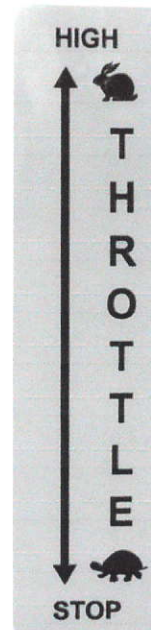


Located on
Control Panel



Located on Deck

Located on
Control Panel



SPECIFICATIONS

AMEUSH	
Engine:	Honda 390V
Transmission:	Hydro Transaxle w/ETC
Blade Drive:	V-belt
Engagement:	Manual Clutch (self adj.)
Cutting Width:	26"
Blade:	Dual sided
Deck:	10 guage steel
Tire Size:	4.80/4.00-8
Ground Speed:	Variable, max. 4 m.p.h.
Forward/Reverse:	Instant
Operator Present Safety:	Yes
Engine Start:	Recoil
Length:	70"
Width:	29"
Height:	41"
Weight:	300#
Warranty:	6 mo. commercial

OPERATING INSTRUCTIONS

A. CONTROLS

1. Fuel Shutoff Valve:

Located under the air filter. The handle turns 90 degrees. Anytime the mower is being trailered or, if the mower will not be in use for 30 minutes or more, close the fuel shutoff valve to prevent flooding the engine.

2. Engine Throttle:

Located on the control panel. Moving the throttle lever from the rear to the front will increase the engine speed from slow to fast. To start the engine, set the throttle halfway between slow and fast.

3. Recoil Starter:

Located on top of the engine. To start the engine, pull out choke lever, set the throttle halfway between slow and fast and grasp the starter grip and pull slowly until the starter engages. Then pull the cord rapidly to overcome compression, prevent kickback and start the engine. Repeat if necessary with the throttle pushed halfway back to the "slow" position.

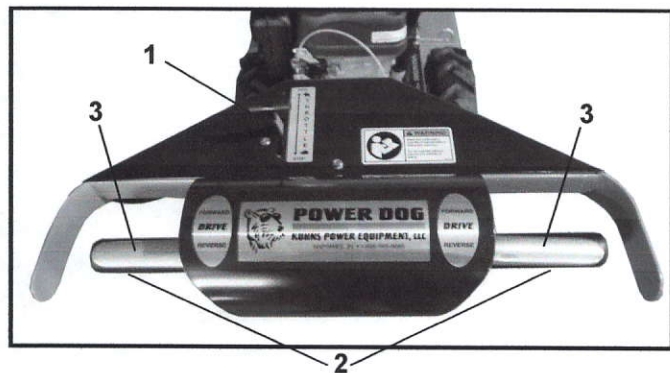


Figure 1 - The Control Panel

1. Throttle
2. Twist Forward - Reverse
3. Operator Present Safety

4. Blade Engagement:

Located on the main frame back plate. Blade will engage when engagement lever is pulled "up" while operator safety paddles are activated. To stop blade, release engagement lever down. Engine should be running at 3/4 speed before engaging blade.

5. Operator Presence Levers:

Located above the outer ends of the right and left handles, these levers must be held down on the handles against spring pressure in order to engage the blade clutch. Releasing the operator presence levers with the blade clutch engaged will shut off the engine.

6. Free Wheel:

To manually push mower without start engine pull free wheel rod out (located in front of right hand side wheel).

B. INITIAL ADJUSTMENTS

1. Disconnect the spark plug wire.
2. Check the tire pressure. Drive wheels should be inflated to 39 psi. NOTE: New tires are overinflated in order to properly seat the bead to the rim.
3. Check that all nuts, bolts and screws are tight.
4. Check the tension of the deck drive belts:
 - * Remove the deck cover shield and engage the blade clutch.
 - * The tension of the deck drive belts should be adjusted so that a ten-pound pull between two pulleys deflects each belt about 1/2". Do not over-tighten these belts. The blade clutch should engage with only moderate force.
 - * Replace the deck cover shield and disengage the blade clutch.
5. The tension of the transmission drive belt should be adjusted so that a five-pound pull between the engine traction drive pulley and the transmission drive pulley deflects the belt about 3/16".

C. BREAK-IN AND OPERATION

1. Make certain you thoroughly understand all of the safety precautions before you attempt to operate this machine.
2. Check the engine oil level. Fill to the proper level with SAE-30 engine oil rated for service SE or SF.
3. Move the mower outdoors. Check the engine gasoline level. When filling the tank, stop when the gasoline reaches one inch from the top. This space must be left for expansion. Use fresh, clean, unleaded, regular gasoline.
4. Move the mower to a "test area" where you can operate the mower for about half an hour without being disturbed.
5. To start the engine:
 - a. Disengage the blade clutch.
 - b. Connect the spark plug wire.
 - c. Open the fuel shutoff valve.
 - d. Move the throttle lever to the half-way position.
 - e. Grasp the starter grip and pull slowly until the starter engages and then pull the cord rapidly to overcome compression, prevent kickback and start the engine. Allow the cord to recoil slowly. Repeat if necessary.
 - f. Set the throttle at 50% of full engine RPM and allow the engine to warm up. Then, adjust the throttle to full engine RPM.

OPERATING INSTRUCTIONS

C. BREAK-IN AND OPERATION con'd

6. After the engine has warmed up, shut off the ignition and check the operation of the safety switches. Disengage the blade clutch
7. Restart the engine.
8. Pull the blade clutch lever up until it engages and the cutter blades start rotating.
9. Slowly twist the handle bar forward and the mower will move ahead in a straight line.
10. To stop the mower's forward motion, twist the handle bar backward.
11. For reverse, slowly twist the handle bar backward and the mower will move back. To stop, twist the handle bar forward until the mower stops.
12. To stop and shut off the mower, disengage the blade clutch, turn off the ignition to stop the engine, close the fuel shutoff valve and disconnect the spark plug wire.
13. Check that all nuts, bolts and screws are still tight.
14. Check and adjust if necessary, the tension of the deck drive belts and the pump drive belt as described in items 4 and 5 of the initial adjustment section.
15. After the first full day of mowing, all nuts, bolts and screws should be rechecked for proper tightness and the belts should be rechecked for proper tension.

MAINTENANCE

MAINTENANCE SCHEDULE						SERVICE DATES														
	BEFORE EACH USE	EVERY 5 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY SEASON															
FILL IN DATES AS YOU COMPLETE REGULAR SERVICE																				
Check Engine Oil Level	X	X																		
Change Engine Oil			X _{1,2}																	
Inspect Spark Arrester/Muffler				X																
Inspect Air Screen	X	X																		
Clean or Replace Air Cleaner Cartridge			X ₂																	
Clean Engine Cylinder Fins			X																	
Replace Spark Plug				X																

1 - Change more often when operating under a heavy load or in high ambient temperatures.
 2 - Service more often when operating in dirty or dusty condition.



WARNING: Disconnect the spark plug wire to prevent the engine from accidentally starting before performing any maintenance on this mower.

A. GENERAL MAINTENANCE:

1. If the mower must be tipped on its side for maintenance, first drain the fuel from the fuel tank and the oil from the engine's crankcase.
2. Be careful not to spill lubricant on the drive belts.
3. Do not tamper with the engine's governor settings. They are adjusted to provide the proper maximum engine speed.

4. If the mower is to be in storage for more than 30 days, drain the fuel tank, run the engine to drain the carburetor dry, change the oil, remove the spark plug and pour a teaspoonful of oil into the cylinder. Pull the starter cord slowly to crank the engine and distribute the oil then replace the spark plug and loosen blade drive belt (remove from idler pulley).

B. DAILY MAINTENANCE AFTER MOWING:

1. Park the mower outside the storage facility with the engine shut off.
2. Close the fuel shutoff valve.
3. Permit the mower to cool.
4. Disconnect the spark plug wire.

MAINTENANCE

5. Wash the mower off with water. Be sure to clean out grass clippings from under the cutter deck and also under the deck cover. Allow the mower to dry before storing.
6. Check that the blade mounting bolts are tight.
7. Check that the blades are sharp. NOTE: Never mow with dull blades.
8. Check the fuel level, the engine oil level and clean the cooling-air intake (the rotating screen).
9. Clean the air cleaner elements (foam and paper).
10. After the first 5 hours of use, change the engine oil. (Change the oil every 40 hours thereafter.)
11. Place the mower in locked storage to avoid tampering or use by an untrained operator.

C. MAINTENANCE EVERY 40 HOURS:

1. Change the engine oil. (Change the engine oil more frequently under severe operating conditions.)
2. Check that all nuts, bolts and screws are tight.
3. Check the condition and tension of all belts.
4. Clean the spark plug and check the spark plug gap.
5. Check condition and operation of all safety switches.

D. ENGINE MAINTENANCE:

For detailed maintenance instructions for the engine on your mower, see the separate engine manual packed with your mower.

F. MOWER MAINTENANCE:

1. TO CHANGE A BLADE: (See Figure 2)

- A. Tip the mower back and block up the front of the deck.
- B. Place one wrench on the hex nut under the blade.
- C. Place wooden block between blade tip and side of deck to keep blade from rotating.
- D. NOTE: Blade nut has right hand thread.
- E. To replace the blade, reverse the above procedure.

2. TO SHARPEN BLADE:

- A. To sharpen a blade, clamp the blade in a vise and, using a flat mill file, carefully file the cutting surface on each end of the blade to a sharp edge.
- B. Blades with severe nicks or dents that cannot be removed by filing should be replaced.
- C. After sharpening, check the balance of the blade by placing the blade on a blade balancer fulcrum device.



Figure 2

3. TO CHANGE THE BLADE DRIVE BELTS:

- A. Make sure the blade is disengaged.
- B. Remove the front cover.
- C. Slip the long blade drive belt off of the pulleys.
- D. Place a new blade drive belt on the engine clutch pulley first and then on the spindle pulley. The belt's back side should ride on the idler pulley.
- E. Replace the front cover.

4. TO CHANGE SPINDLE BEARINGS:

- A. On top of spindle, remove front guard, belt, spindle nut, pulley, key.
- B. On bottom of spindle, remove blade nut, lower chuck, blade.
- C. Remove 4 bolts from spindle housing, and remove housing.
- D. Using hydraulic press, press shaft from top down.
- E. Remove top bearing from spindle housing.
- F. Remove bearing and lower chuck from spindle shaft.
- G. To reinstall, repeat above steps backwards.

TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
Will not start	<ol style="list-style-type: none"> 1. Out of fuel. 2. Engine not "CHOKED" properly. 3. Engine flooded. 4. Dirty air cleaner. 5. Water in fuel. 6. Clogged fuel tank. 7. Loose spark plug wire. 8. Bad spark plug or improper gap. 9. Carburetor out of adjustment. 10. Engine oil too low. 11. Clutch engaged. 	<ol style="list-style-type: none"> 1. Fill fuel tank. 2. See "TO START ENGINE" in Operation section. 3. Wait several minutes before attempting to start. 4. Clean or replace air cleaner cartridge. 5. Empty fuel tank and carburetor, and refill tank with fresh gasoline. 6. Remove fuel tank and clean. 7. Make sure spark plug wire is sealed properly on plug. 8. Replace spark plug or adjust gap. 9. Make necessary adjustments. 10. Add engine oil. 11. Make sure clutch is fully disengaged.
Hard to start	<ol style="list-style-type: none"> 1. Throttle control not set properly. 2. Dirty air cleaner. 3. Bad spark plug or improper gap. 4. Stale or dirty fuel. 5. Loose spark plug wire. 6. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Place throttle control in "FAST" position. 2. Clean or replace air cleaner cartridge. 3. Replace spark plug or adjust gap. 4. Empty fuel tank and refill tank with fresh, clean gasoline. 5. Make sure spark plug wire is seated properly on plug. 6. Make necessary adjustments.
Loss of power	<ol style="list-style-type: none"> 1. Dirty air cleaner. 2. Low oil level/dirty oil. 3. Faulty spark plug. 4. Oil in fuel. 5. Stale or dirty fuel. 6. Water in fuel. 7. Clogged fuel tank. 8. Spark plug wire loose. 9. Dirty engine air screen. 10. Dirty/clogged muffler. 11. Carburetor out of adjustment. 12. Poor compression. 13. Transmission belt loose. 	<ol style="list-style-type: none"> 1. Clean or replace air cleaner cartridge. 2. Check oil level/change oil. 3. Clean and regap or change spark plug. 4. Empty and clean fuel tank and refill, and clean carburetor. 5. Empty fuel tank and refill fuel tank with fresh gasoline. 6. Empty fuel tank and carburetor, and refill tank with fresh gasoline. 7. Remove fuel tank and clean. 8. Connect and tighten spark plug wire. 9. Clean engine air screen. 10. Clean/replace muffler. 11. Make necessary adjustments. 12. Contact an authorized service center department. 13. Loosen engine plate bolt and slide engine back to tighten belt, retighten engine plate bolts.
Engine overheats	<ol style="list-style-type: none"> 1. Low oil level/dirty oil. 2. Dirty engine air screen 3. Dirty engine. 4. Partially plugged muffler. 5. Improper carburetor adjustment. 	<ol style="list-style-type: none"> 1. Check oil level/change oil. 2. Clean engine air screen. 3. Clean cylinder fins, air screen, and muffler area. 4. Remove and clean muffler. 5. Adjust carburetor to richer position.
Engine runs but mower won't move	<ol style="list-style-type: none"> 1. Freewheel is engaged. 2. Clogged oil filter. 3. Belt off of pulley. 4. Control rod disconnected. 5. Park brake is engaged. 	<ol style="list-style-type: none"> 1. Disengage freewheel. 2. Replace oil filter. 3. Replace belt. 4. Reconnect control rod. 5. Disengage park brake.
Engine runs but labors when mowing	<ol style="list-style-type: none"> 1. Mowing too fast. 2. Throttle control not properly adjusted. 3. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Slow your drive speed. 2. Check throttle control setting. 3. Make necessary adjustments.
Blade will not rotate	<ol style="list-style-type: none"> 1. Engagement disconnected. 2. Belt off of pulley. 	<ol style="list-style-type: none"> 1. Connect all connections. 2. Replace belt.
Blade turns to the right instead of left	<ol style="list-style-type: none"> 1. Blade drive belt is twisted 	<ol style="list-style-type: none"> 1.
Blade comes loose	<ol style="list-style-type: none"> 1. Blade drive belt is twisted wrong way. 	<ol style="list-style-type: none"> 1.
Belt frays or rolls over in pulley	<ol style="list-style-type: none"> 1. Pulley groove is nicked or belt was broken in too tightly and broke the cords. 	<ol style="list-style-type: none"> 1. Replace belt.

