

Operator's Instruction Manual

Model CPU-12



Self-Propelled Concrete/Asphalt Planer



100 Thomas Johnson Drive, Frederick, MD 21702-4600 USA
Phone (301) 663-1600 • 1-800-638-3326
Fax (301) 663-1607 • 1-800-447-3326
Website: www.edcoinc.com • Email: sales@edcoinc.com

Printed in USA
©2000

READ AND UNDERSTAND THE OPERATORS INSTRUCTION MANUAL *THOROUGHLY* BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT.



Death or serious injury could occur if this machine is used improperly.



SAFETY MESSAGES

- Safety Instructions are preceded by a graphic alert symbol of DANGER, WARNING, or CAUTION.



Indicates an imminent hazard which, if not avoided, will result in death or serious injury.



Indicates an imminent hazard which, if not avoided, can result in death or serious injury.



Indicates hazards which, if not avoided, could result in serious injury and or damage to the equipment.

GASOLINE POWERED EQUIPMENT



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

- Do not operate gasoline powered equipment without adequate ventilation. Carbon monoxide is an invisible, odorless gas that can kill.



Gasoline is extremely flammable and poisonous. It should only be dispensed in well ventilated areas, and with a cool engine.

ELECTRICAL POWERED EQUIPMENT



Extreme care must be taken when operating electric models with water present: Ensure power cord is properly grounded, is attached to a Ground-Fault-Interrupter (GFI) outlet, and is undamaged.

- Check all electrical cables - be sure connections are tight and cable is continuous and in good condition. Be sure cable is correctly rated for both the operating current and voltage of this equipment.
- Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with qualified electrician or service person if there is any doubt as to whether the outlet is properly grounded. Adhere to all local codes and ordinances.
- **NOTE:** In the event of a malfunction or breakdown, grounding provides a path of least resistance for the electric current to dissipate. The motor is equipped with a grounded plug and must be connected to an outlet that is properly installed and properly grounded. DO NOT modify the plug provided on the motor. If the plug does not fit the outlet have a qualified electrician install the proper receptacle.
- Switch motor OFF **before** disconnecting power.
- Do not disconnect power by pulling cord. To disconnect, grasp the plug, not the cord.
- Unplug power cord at the machine when not in use and before servicing.

GENERAL INSTRUCTIONS

- Equipment should only be operated by trained personnel in good physical condition and mental health (not fatigued). The operator and maintenance personnel must be physically able to handle the bulk weight and power of this equipment.
- This is a one person tool. Maintain a safe operating distance to other personnel. It is the **operators' responsibility** to keep other people (workers, pedestrians, bystanders, etc.) away during operation. Block off the work area in all directions with roping, safety netting, etc. for a safe distance. Failure to do so may result in others being injured by flying debris or exposing them to harmful dust and noise.
- This equipment is intended for commercial use only.
- For the operator's safety and the safety of others, always keep all guards in place during operation.
- Never let equipment run unattended.



- Personal Protection Equipment and proper safety attire must be worn when operating this machinery. The operator must wear approved safety equipment appropriate for the job such as hard hat and safety shoes when conditions require. Hearing protection **MUST** be used (operational noise levels of this equipment may exceed 90db). Eye protection **MUST** be worn at all times.



Keep body parts and loose clothing away from moving parts. Failure to do so could result in dismemberment or death.

- Do not modify the machine.
- Stop motor/engine when adjusting or servicing this equipment.



Maintain a safe operating distance from flammable materials. Sparks from the cutting-action of this machine can ignite flammable materials or vapors.

DUST WARNING



Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects, or other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints, and
- Crystalline silica from bricks and concrete and other masonry products.

Your risk of exposure to these chemicals varies depending on how often you do this type of work. To reduce your risk: work in a well ventilated area, use a dust control system, such as an industrial-style vacuum, and wear approved personal safety equipment, such as a dust/particle respirator designed to filter out microscopic particles.

Equipment Instruction Manual

EDCO Model CPU-12

Table of Contents

<u>Section</u>	<u>Page Number</u>
Safety Guidelines.....	4
Operating Instructions.....	5
Maintenance.....	8
Maintenance Schedule.....	11
Limited Equipment Warranty.....	back page

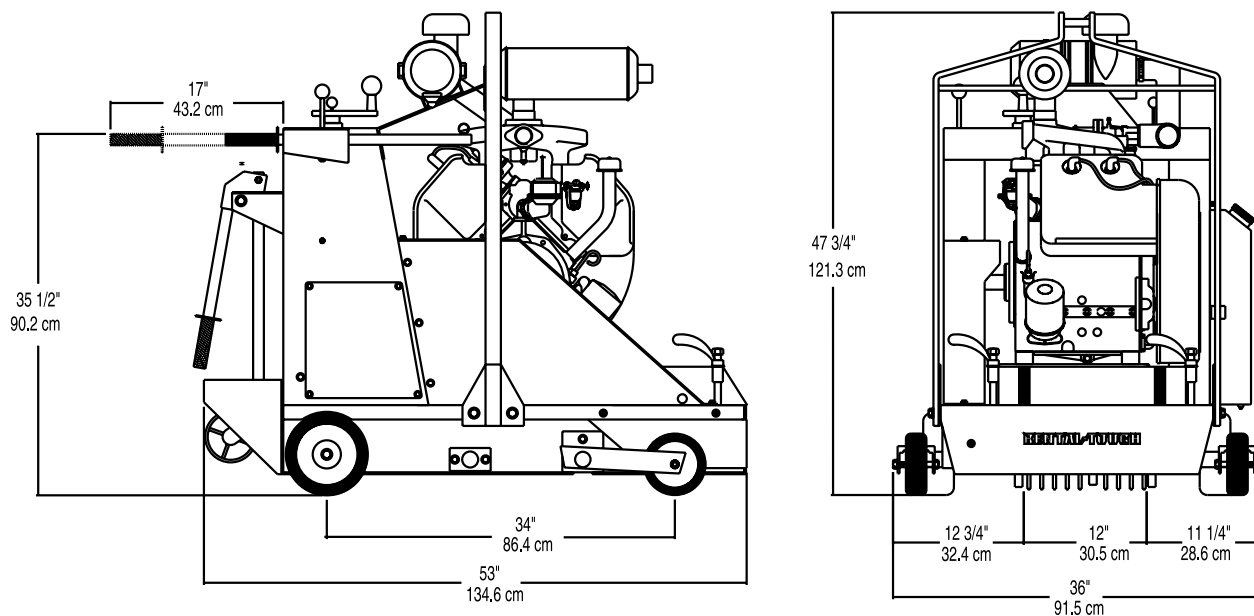


Figure 1

HOW TO ORDER REPAIR PARTS

To insure product safety and reliability, always use genuine EDCO replacement parts when making repairs to the equipment.


When ordering parts, please specify the MODEL and SERIAL NUMBER of the machine as given on the NAMEPLATE. In addition, give part number, description and quantity as listed on the parts list.

Please note: Due to improvements and changes in the equipment the illustrations shown may be different from the actual machine.

Toll Free: Voice 1-800-638-3326 • Fax 1-800-447-3326


Specifications for the CPU-12 are approximate and subject to change.

Height	47 3/4"	121.3 cm
Width	36"	91.5 cm
Length	53"	134.6cm
Weight	1110 lbs.	500 kg



**Read and understand the *Operator's Manual*, and the
Engine Manufacturer's Owner's Manual
before operating this equipment.**

Death or serious injury can result if this machine is used improperly.





Safety Guidelines



Maintain a safe operating distance from flammable materials. Sparks from the cutting-action of this machine can ignite flammable materials or vapors.



Operator must wear appropriate clothing and footwear. Do not wear loose clothing or jewelry that can get tangled or caught in moving parts. Steel toe safety shoes must be worn.



Eye and ear protection must be worn at all times when this machine is in use. During normal use, sound levels exceed 92dB. Use only ANSI approved safety glasses to help prevent eye injury. Everyday eyeglasses have only impact resistant lenses; they are NOT safety glasses.



Breathing protection is required when dry cutting.

- Keep a safe operating distance from other personnel and never leave the machine running unattended.
- Maintain the machine in safe operating condition with all guards in place and secure, all mechanical fasteners tight, all controls in working order and the scarifier configured for the job application.
- The CPU-12 is designed to plane flat horizontal concrete or asphalt slabs.
- The CPU-12 is to be operated by a single operator from a position at the rear of the machine.
- Avoid deck inserts, pipes, columns, openings, electrical outlets, or any objects protruding from slab surface.
- Inspect the cutters carefully before installing. Do not use **any** questionable cutters since serious personal injury and/or damage to property can result.
- Never operate this machine while under the influence of drugs, alcohol or when taking medications that impair the senses or reactions, or when excessively tired or under stress.
- Be sure all safety decals on the machine can be clearly read and understood. Replace damaged or missing decals immediately.

Safety warnings and guidelines do not by themselves eliminate danger.
They are not given as substitutes for proper accident prevention and good judgement.

Operating Instructions

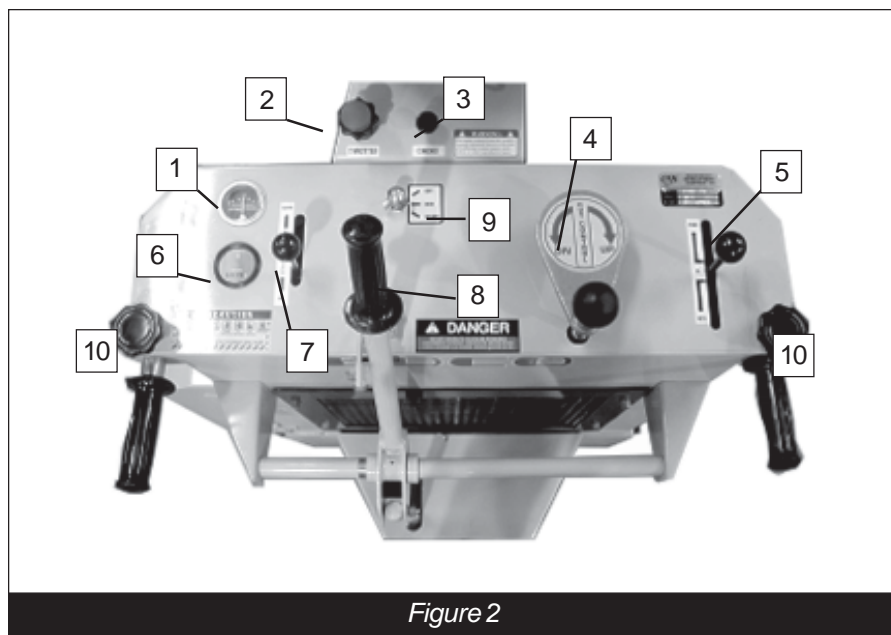


Figure 2

1. Ammeter
2. Throttle
3. Choke
4. Depth Control Knob
5. Drive Control Lever
6. Hour Meter
7. Hydraulic Drum Lift Lever
8. Cam Lift Lever
9. Ignition Switch
10. Handle Lock

Before Starting the Engine:

- Inspect machine before each use according to the *Maintenance Schedule* on page 11.
- Locate and be familiar with all engine and operating controls (Figure 2).
- Inspect cutters carefully before installing. Use the correct drum assembly configuration for the job. Make sure drum assemblies are correctly mounted.
- Adjust the extendable handles for operator comfort and safe operation. Be sure to retighten handle locks once handles are positioned. (Figure 2, Item #10)
- Be sure cutter head is raised to the full "up" position using the drum lift lever on the console. (Figure 2, Item #7) This EDCO Scarifier uses a battery powered hydraulic pump.
- Lift up on the cam lift lever to lower the rear wheel, this action raises the drive wheels. Manuver the machine into position over the work area.
- Lower the cam lift lever to raise the third wheel, engaging the drive wheels.



Never lower cutter head with rear wheel raised or raise the rear wheel while the cutter head is lowered. Death or serious personal injury and/or damage to the equipment can result.

For Gasoline Models: Units are shipped new from the factory without gasoline or oil, it will need to be added before it is used. Check the *Engine Manufacturer's Owner's Manual* for instructions on break-in, servicing and use of engine.

For Electric Models: Be sure the "off" button is depressed before hooking up power source. If the cord does not mate with the connector provided, consult a qualified licensed electrician before continuing. Do not alter the plug or force it to fit. Verify that the equipment is properly grounded.

Starting the Engine/Motor and Controlling the Cut:

- Be sure drum is clear of the ground.
- Start the engine according to the manufacturer's instructions. For electric models, depress "On" switch.
- Engine must be at FULL THROTTLE.
- Slowly lower the cutter head to the slab surface with the hydraulic drum lift lever. Lift the depth control handwheel knob to unlock and turn to the handwheel until the cutter head reaches the desired depth.

CAUTION - Never plane deeper than the maximum depth of surface removal for the assembly being used. If it is necessary to remove a deep layer of material, make several shallow passes to achieve desired depth.

- Only cut in a forward direction.
- Always cut with the engine at full throttle.

NOTE: The engine/motor should not labor. Adjust forward speed to fit the work being performed. Very hard concrete will have to be planed at a slower pace than asphalt or deteriorated surfaces. If it is necessary to make deep passes, make several shallow cuts to achieve the desired depth.

- If front wheels are not in contact with slab surface when planing, you are bottoming the cutter head. You are riding on the drum & cutter wheels. Cutter wheels will wear uneven or break if this is continued. Readjust depth - turn fine adjustment in "up" direction until cutters are free and cutting is being accomplished by "hammering" action only.

CAUTION Failure to follow these instructions will cause undue cutter wear, breakage, bearing failure or excessive vibration that will be transmitted back to the machine frame and engine eventually causing a virtual self-destruction of the unit.

Controlling Speed:

- The CPU-12 uses a hydrostatic transmission and positive chain drive mechanism to power both rear wheels to achieve forward and reverse movement. Machine speed is controlled by using the speed control lever. The lever is spring loaded and returns to neutral when released. Actual cutting speed is determined by hardness of the material and depth of desired removal. Adjust forward speed to meet working conditions.

To Stop Cutting:

- Move drive control lever to neutral.
- Raise cutter head assembly using the hydraulic drum lift lever to clear the slab surface.

For Gasoline Models: Close throttle and turn the ignition switch to the "off" position.

For Electric Models: Depress the "off" button.

After Operation:

- Clean the entire machine after it has cooled. Check for worn or damaged cutters and perform any required maintenance. See maintenance instructions.

Additional Information:

- Since cutter wheels wear, the cutting depth will change. Compensate for wear by adjusting the depth control. To reach greater depth in the concrete it is best to make several passes at increments of 1/8" to 3/16" per pass. Never use a fine spaced cutter head to cut deeper than 1/8". All deep cuts should be started from a stationary position. When the cutting depth is reached the plane should then move forward.
- The cutter wheels have an oversized arbor hole (1/4" larger diameter than the shaft diameter on which it is mounted). This "play" is needed to absorb some of the shock of the cutter contacting the concrete. If the cutting depth is set too deep the cutter wheels will not be able to absorb the shock and damage to the equipment will result.
- For general use, EDCO recommends the use of tungsten carbide cutter wheels (CP-408-TV).

Concrete:

- Some concrete slabs, especially if they are covered with water a good deal of time or if they have been treated with hardeners, develop an extremely hard surface. Material removal depth should not exceed 1/8" per pass thus may require several passes to reach the desired depth of cut.

Asphalt:

- When cutting asphalt, depths of 1/4" per pass can be reached using a medium set up. Let the job requirements guide your selection of cutter spacing. Deep cuts require wide cutter spacing. Asphalt will usually break out between cutters and a fairly uniform clean cut is the result. Specific information on asphalt cutting is available from EDCO upon request.

Thermoplastic Lines:

- The EDCO CPU-12 model is ideally suited to remove thermoplastic lines - the upcut feature removes the plastic from the surface by "milling" or lifting. In excessively hot weather it may be necessary to sweep the plastic away from in front of the planer. Hot plastic can build up on the wheels changing the cutting depth setting. To keep the thermo plastic from heating up, we recommend that whenever possible water be sprayed on the work surface.

Maximum Depth of Cutter Wheels
CP-405 cutter wheels have a maximum depth of 3/4" when new (hi-carbon).
CP-404 cutter wheels have a maximum depth of 1/2" when new (hi-carbon)



Remove all rings, watches and jewelry prior to doing maintenance near the hydraulic pump.



Maintenance

Refer to the engine manual for maintenance information specific to the engine used.



Disconnect the machine from the power source. Remove the spark plug lead on the gasoline engine models or disconnect the supply voltage connector on the electric models, before performing any maintenance. All maintenance should be performed regularly by qualified personnel.



Never work under equipment without first placing chocks on the wheels and support device under the equipment to prevent it from moving or falling. Always work on a flat and level surface.

Before Each Operation:

- Perform a visual inspection of the entire machine before operation.
- Verify all fasteners are tight and secure; check for signs of metal cracking or fatigue.
- Inspect for damage to electrical wiring or damage to fuel lines.
- Check bearings and inspect to be sure proper guards are in place and secure.
- Check oil level - fill if necessary.

Important!

- Grease cutter bearings after every 4 hours of use, grease remaining bearings every 40-50 hours of use.

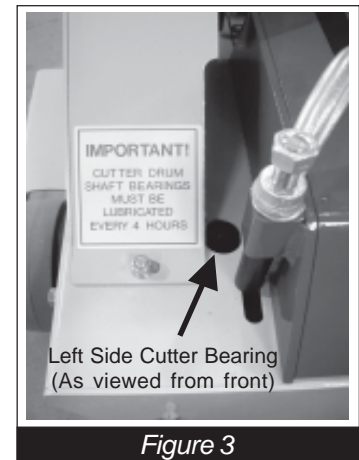


Figure 3

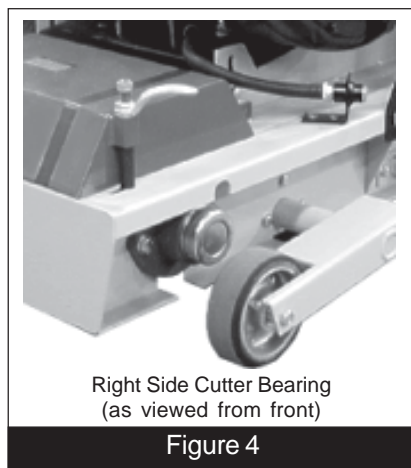


Figure 4

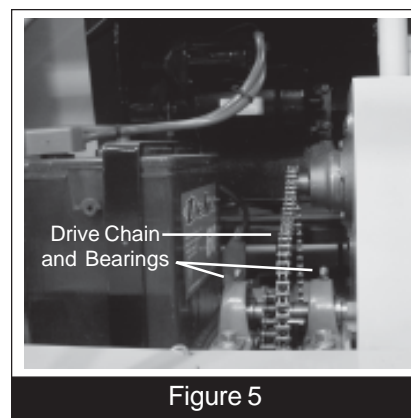
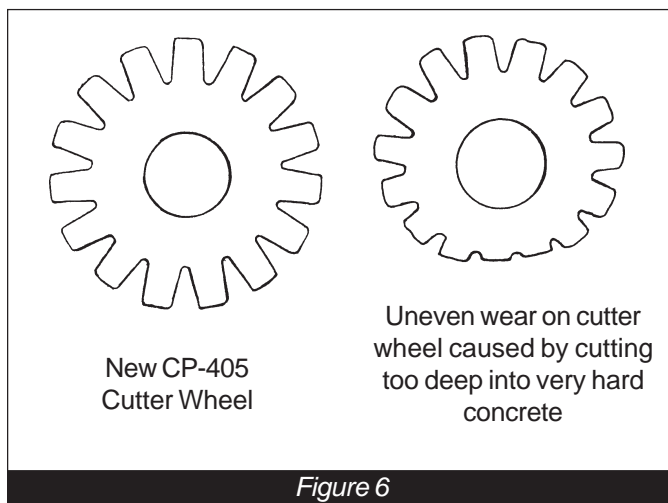


Figure 5

Cutter Wheel Inspection:

- The steel cutter wheels can be used as long as the teeth can be clearly seen on each cutter wheel and the cutter wheel edge must be clearly above the drum flange edge when pushed towards the drum center. Replace worn out cutter wheels as a complete set.
- When changing cutters, check drum assembly for cracks or other damage. Replace bent or worn cutter shafts or cracked drum assemblies. A maximum of 30% wear on shafts before they must be replaced. Excessive vibration caused by an out of balance cutter head will cause premature failure of the bearings and fatigue cracks in weld joints and frames. Do not use damaged or unsafe equipment; repair or replace all damaged parts before proceeding with operations.

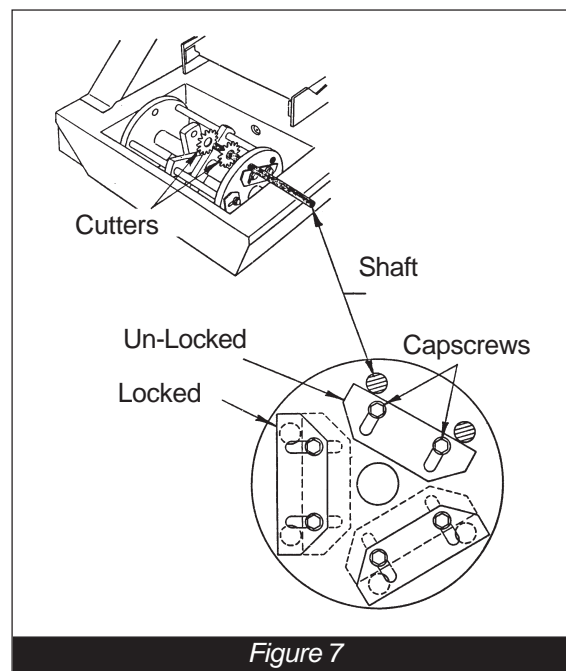


Cutter Shaft Installation:

CAUTION

Be sure to disconnect spark plug wires or the electrical power before changing cutters.

- Rotate Drum Assembly to expose shaft opening above frame.
- Insert shaft thru hole and install cutters as required.
- Rotate drum again to expose the next hole and repeat process.
- Position lock plate over two shafts and tighten down with capscrews and lockwashers.

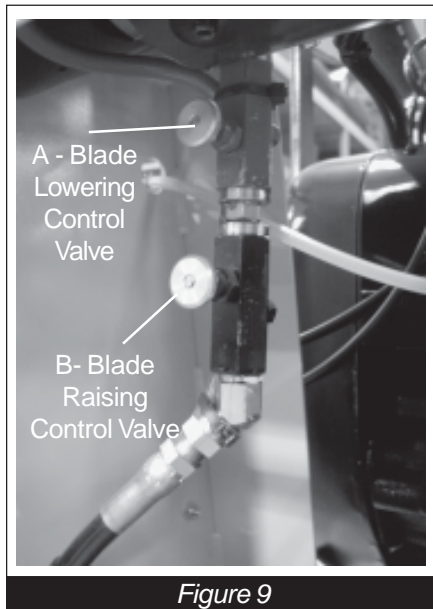
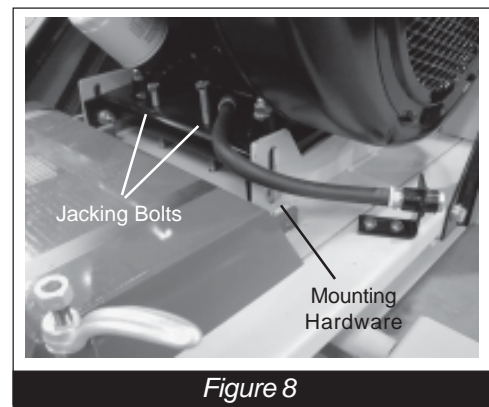


Inspect Belts:

- Periodically check belt tension. Factory new equipment or replacement belts should be re-tensioned after the first four hours of use. Damaged, stretched or excessively worn belts should be replaced with a new matched set.
- Proper belt tension must be maintained to transmit the engine power to the cutting drum. Slipping belts will over heat, the blade life will be shortened and the cutting speed limited. Over tensioned belts will shorten the belt and bearing life.

To Tension Drive Belts:

- Loosen engine/motor mounting hardware slightly. (Figure 8)
- Use the two jack-screw belt tensioning bolts to adjust the engine/motor until the belts are tight. Re-torque the mounting hardware.



Remember to remove all rings, watches and jewelry prior to doing maintenance near hydraulic pump!

Blade Lift Controls: (Figure 9) (Controls Hydraulic Fluid Flow)

A- (Red) Blade Lowering Control Valve

To re-adjust:

- Loosen lock nut
- Turn Knob
 out-fast
 in-slow
- Retighten lock nut

B- (Black) Blade Raising Control Valve



Repairs are to be done by authorized EDCO DEALERS only.



Read and follow instructions in the Engine Manufacturer's Manual

Maintenance Schedule

Follow Engine Manufacturer's Maintenance Schedule	Before Operation	Every 4 Hours	Daily	Every 50 Hours	As Required
Visual Inspection of Entire Machine	X				
Check Engine Oil	X				
Inspect Cutter Shafts & Wheels	X				
Inspect Drum Bushings	X				
Grease Cutter Assembly Bearings		X			
Clean Off Machine			X		
Clean Air Filter Element			X		
Grease All Other Bearings				X	
Change Engine Oil (Refer to engine manual)				X	
Inspect Belts (Tension after the first 4 hours, then)					X

LIMITED EQUIPMENT WARRANTY

Equipment Development Company, Inc. herein referred to as EDCO warrants that each new unit manufactured by EDCO to be free from defects in material and workmanship in normal use and service for a period of (1) one year (except in the case of the cutter drum assembly on all model concrete asphalt planes, in which case the warranty period shall be 90 days) from date of shipment to the original retail or equipment rental center owner.

EDCO will, at its option, repair or replace, at the EDCO factory or at a point designated by EDCO any part, which shall appear to the satisfaction of EDCO inspection to have been defective in material or workmanship.

This warranty, does not apply to failure occurring as a result of abuse, misuse, negligent repairs, corrosion, erosion, normal wear and tear, alterations or modifications made to the product without express written consent of EDCO: or failure to follow the recommended operating practices and maintenance procedures as provided in the products operating and maintenance manuals.

This warranty does not obligate EDCO to bear any transportation charges in connection with the replacement or repair of defective parts. This warranty does not obligate EDCO to bear any expense for travel time or of personnel in connection with any service calls.

Accessories or equipment furnished and installed on the product by EDCO but manufactured by others, including but not limited to engines, motors, electrical equipment, transmissions, etc., shall carry the accessory manufacturers' own warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

LIABILITY LIMITATIONS

The remedies of the user set forth under provisions of warranty outlined above are the exclusive and total liability of EDCO with the respect to their sale or the equipment and service furnished hereunder, in connection with the performance or breach thereof, or from the sale, delivery, installation, repair or technical direction covered by or furnished under the sale, whether based on contract, warranty, negligence, indemnity, strict liability, or otherwise shall not exceed the purchase price of the unit of equipment upon which such liability is based.

EDCO will not in any event be liable to the user, any successors in interest or any beneficiary or assignee relating to this sale for any consequential, incidental, indirect, special or punitive damages arising out of this sale or any breach thereof, or any defects on, or failure of, or malfunction of the equipment under this sale based upon loss of use, lost profits or revenue, interest, lost goodwill, work stoppage, impairment of other goods, loss by reason of shutdown or non-operation, increased expenses of operation of the equipment, cost of purchase or replacement power of claims of users or customers of the user for service interruption whether or not such loss or damage is based on contract, warranty, negligence, indemnity, strict liability, or otherwise.

EDCO reserves the right to modify, alter and improve any part or parts without incurring any obligation to replace any part or parts previously sold without such modified, altered or improved part or parts.

No person is authorized to give any other warranty or to assume any additional obligation on EDCO's behalf unless made in writing and signed by an officer of EDCO.

Equipment Development Company, Inc.

USE ONLY GENUINE EDCO PARTS AND ACCESSORIES

For your own safety, the safety of others and the life of your machine

