

Operation Manual

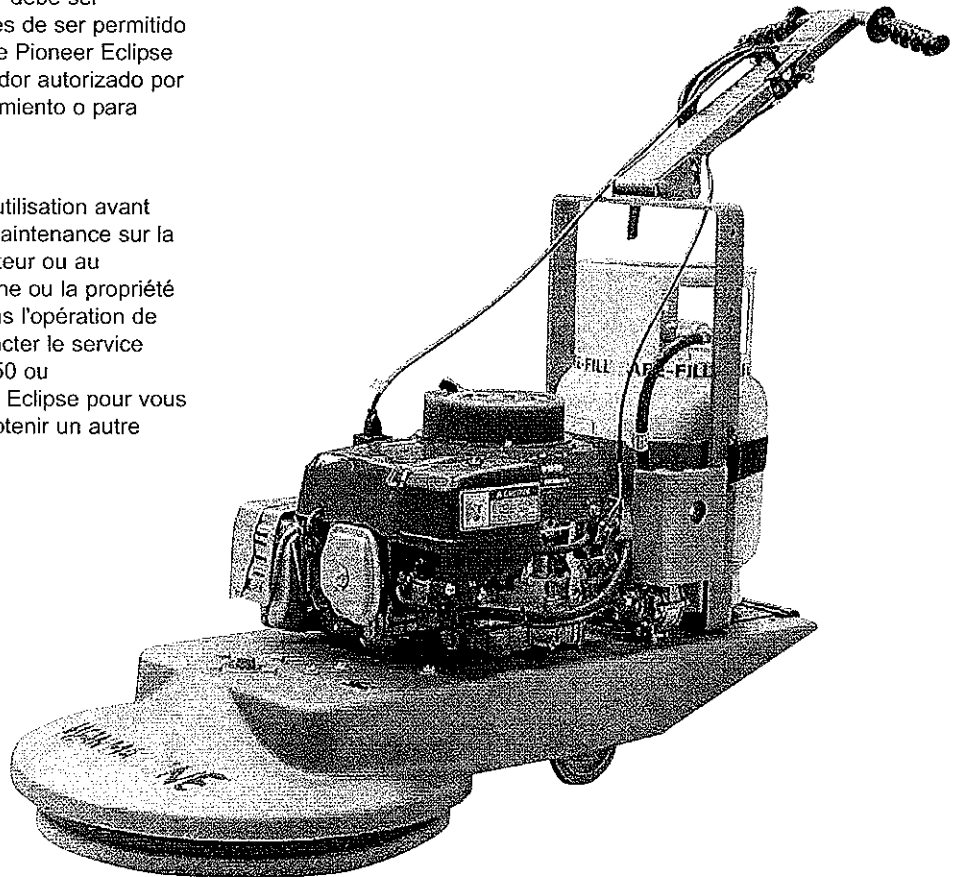
MEAN MACHINE

Propane Burnisher with Honda Engine

Failure to read and understand this manual before operating this machine or performing service on this machine may result in injury to the operator or nearby personnel or result in damage to the machine or nearby property. Each operator must be trained in the operation of this machine before being allowed to use it. Contact Pioneer Eclipse Customer Service at 1-800-367-3550 or 1-336-372-8080 or an authorized Pioneer Eclipse Distributor to inquire about training or to request a replacement manual.

La falta de leer y de entender este manual antes de usar esta máquina o de realizar servicio en esta máquina puede dar lugar a lesión al operador o al personal próximo o a resultado en daño a la máquina o propiedad próxima. Cada operador debe ser entrenado en la operación de esta máquina antes de ser permitido utilizarla. Ponerse en contacto con el servicio de Pioneer Eclipse 1-800-367-3550 o 1-336-372-8080 o un distribuidor autorizado por Pioneer Eclipse para investigar sobre el entrenamiento o para solicitar un manual.

Manquer de lire et de comprendre ce manuel d'utilisation avant l'utilisation de cette machine ou avant faire de maintenance sur la machine peut être résulter en blessure à l'opérateur ou au personnel proche ou peut endommagé la machine ou la propriété proche. Chaque utilisateur doit être entraîné dans l'opération de cette polisseuse avant l'utilisation. Veuillez contacter le service après-vente de Pioneer Eclipse à 1-800-367-3550 ou 1-336-372-8080 et/ou un distributeur de Pioneer Eclipse pour vous renseigner concernant l'entraînement ou pour obtenir un autre manuel d'utilisation.



Pioneer Eclipse

FOR YOUR SAFETY IF YOU SMELL GAS:

1. Open window.
2. Don't touch electrical switches.
3. Extinguish any open flame.
4. Immediately call your gas supplier.

FOR YOUR SAFETY

**Do not store or use gasoline
or other flammable vapors and liquids
in the vicinity of this or any other appliance.**

Record This Important Information

Date of Purchase _____

Purchased From _____

Address _____

City _____ State _____ Zip _____

Phone _____ Contact _____

Machine Model _____

Machine Serial Number _____

Engine Type _____

Engine Serial Number _____

Important Phone Numbers

Medical Emergency _____

Police _____

Fire Department _____

In this Operation Manual you will find three statements that you must read and observe to ensure safe operation of this machine.

DANGER! indicates that the possibility of severe bodily injury or death can occur if **DANGER!** statements are ignored. Read and observe all **DANGER!** statements included in the Operation Manual and attached to the machine.

WARNING! indicates that the possibility of bodily injury to the operator and other people can occur if **WARNING!** statements are ignored. Read and observe all **WARNING!** statements included in the Operation Manual and attached to the machine.

CAUTION! indicates that the possibility of damage to the machine or other property can occur if **CAUTION!** statements are ignored. Read and observe all **CAUTION!** statements included in the Operation Manual and attached to the machine.

Operator Safety Instructions

DANGER! Operate this machine only in a well-ventilated area. It is the responsibility of the machine operator, machine owner, and site manager to ensure that the air exchange system where the machine is to be used is in compliance with local building codes and is operating properly. Failure to operate this machine in a well-ventilated area could lead to sickness, injury or death from carbon monoxide (CO) exposure.

DANGER! This machine emits carbon monoxide (CO) which is a colorless, odorless, non-irritating gas. The first symptoms of CO exposure include headache, drowsiness, dizziness and nausea. If you should experience any of these symptoms while operating this machine, shut off the machine and go outside to get fresh air. Have the machine tested for CO emissions by a qualified service technician before using it again.

DANGER! Prolonged or high exposure to CO may result in vomiting, confusion, and collapse in addition to loss of consciousness and muscle weakness. If such symptoms occur, call 911 for emergency medical attention. If you have experienced these symptoms, do not operate this machine or any other propane machine again until cleared by a physician. Excessive exposure to CO can result in death.

DANGER! Propane is a highly flammable fuel. If you smell propane, shut off the machine immediately and take it outside the building. Do not use the machine again until the propane leak has been corrected by a qualified service technician. Do not use or allow another person to use an ignition source such as a cigarette lighter near the propane machine. Do not smoke near the propane machine. Do not vent a propane cylinder inside a building. Do not store propane cylinders inside a building.

DANGER! This machine has parts including the pad and pad holder that can cause severe injury if these parts are contacted while they are moving. Do not allow any part of the body or clothing to come in contact with these parts while they are moving. Do not try to change the pad while the machine is running. Do not allow other people to come near the machine while it is in operation. Do not allow the machine to run unattended. Do not leave the machine in a place where unauthorized or untrained personnel could use the machine. Do not run the machine with the pad off center, damaged or missing. Do not operate the machine if the machine has loose parts such as the drive belt.

WARNING! Modifications or alterations to this machine can lead to personal injury or damage to the machine. Do not make unauthorized modifications or alterations to this machine. Pioneer Eclipse assumes no liabilities for injury or damage resulting from an unauthorized modification or alteration to the machine. Any unauthorized modification or alteration to this machine voids all warranties.

WARNING! The muffler and the engine become hot enough while the machine is in operation, and for a long time after the machine is shut off, to cause severe burns. Do not touch these parts of the machine until they have cooled.

WARNING! Injury can occur to the eyes and body while using the machine. Safety goggles, safety shoes, and safety clothing are recommended while operating the machine.

WARNING! Continuous exposure to high noise levels can cause hearing loss. Hearing protection is recommended while the machine is in operation.

WARNING! Machine vibration may cause tingling or numbness in the fingers or hands. Gloves are recommended to reduce machine vibration. If tingling or numbness persists, shut off the machine. If the vibration is caused by loose parts such as the drive belt or an off center pad, adjust or tighten these parts before using the machine again.

CAUTION! Overfilled cylinders can damage fuel regulators. Do not overfill the cylinder. If the regulator freezes, stop the burnisher and carry the propane cylinder outside the building.

CAUTION! Overheating can be caused by a dirty engine filter which is also known as a bonnet or top hat filter.

CAUTION! Overheating can be caused by insufficient or low oil. Check oil before each use, and fill or change as needed.

CAUTION! Never over-fill with oil. Over-filling could cause irreparable damage to the engine.

CAUTION! Overheating can be caused by dirty oil. Check oil before each use and change regularly following recommended maintenance schedule.

CAUTION! Do not engage starter for more than 10 seconds. Allow a 60 second cool-down period for second failed start-up attempt.

CAUTION! Perform all recommended scheduled maintenance. Regular maintenance of your propane powered floor machine is necessary to keep it in safe working condition.

CAUTION! Do not allow the burnisher to operate without moving the machine. It may burn the floor and damage the floor covering.

This machine is manufactured for commercial use only.

Propane powered floor burnishers are designed and manufactured for ultra high speed commercial floor burnishing only. These machines are designed to burnish most modern types of floors including composition tile, stone, marble, terrazzo, and resilient floor covering using floor coatings designed for ultra high speed burnishing.

Even though NFPA 58 8-4.5 says ..."these machines shall be permitted to be used in buildings frequented by the public, including the times when such buildings are occupied by the public," Pioneer Eclipse suggests usage when occupancy of a given work area is minimal.

These machines should not be used:

- in nursing homes, hospitals, day-care centers, etc.
- by unqualified or untrained personnel.
- unless properly maintained and adjusted.
- on areas with obstructions such as thresholds, floor outlet boxes, etc.
- in areas where loose tile or other objects are present.
- in rooms without proper ventilation.

Refueling and Storage of Fuel Cylinders

Pioneer Eclipse uses the 20 lb. capacity aluminum or steel safe-fill cylinder which meets the DOT 4E240 standards. These cylinders are also listed by UL. Filling should be done **ONLY** by a qualified propane dealer. **FILL THROUGH THE SERVICE VALVE ONLY.** A properly filled cylinder should not exceed 80% of the rated capacity.

DO NOT attempt Safe-Fill cylinder repair. Return the cylinder to your propane dealer if repair is necessary. Please note that DOT regulations prohibit shipping of cylinders after the cylinder has been filled with propane.

When not in use, they always should be stored outside in an upright position in a secure, tamper-proof, steel mesh storage cabinet. This cabinet may be located next to the building but with at least five feet (1.5 m) of space between the cabinet and the nearest building opening (door or window).

The National Fire Protection Association (NFPA) Standard for Storage and Handling of LP Gas is the appropriate authority for safe propane use. A copy of this publication is available through the National Fire Protection Association in Quincy, Massachusetts (1-800-344-3555).

Canadian Safety Regulations

1. A sign indicating "NO SMOKING" shall be permanently displayed at the storage area. The sign shall be in accordance with the sign required in Clause 10.12.3 of CAN/CGA-B149.2-M91, Propane Installation Code.
2. When the cylinder is attached to the floor maintenance machine for use, the operator shall not leave the unit unattended except for short periods of time such as rest stops, washroom or meal stops.
3. The requirements of 1.10.1 (e) and (g) do not apply in industrial buildings.
4. A floor maintenance machine shall only be used in buildings:
 - a) provided with continuous mechanical ventilation that removes the products of combustion to the outdoors of not less than 300 CFM for each 10,000 Btu-hr input or fraction thereof.
 - b) provided with natural ventilation of not less than 300 CFM for each 10,000 Btu-hr input or fraction thereof, based on a maximum of one quarter air exchange per hour for the net building volume.
5. The owner of a floor maintenance machine shall ensure that the operator has participated in a course authorized by the manufacturer of the unit on the safe handling of propane and the safe operation of the machine.
6. The owner of a floor maintenance machine shall ensure that the unit is maintained in accordance with the manufacturer's recommended maintenance procedures in a safe operating condition and the owner shall maintain a record of the maintenance for a period of two years.
7. Before transporting a floor maintenance machine, the cylinder shall be securely fastened with the system valve closed, and the cylinder shall be located in a well ventilated space.

Machine Preparation

Adding Oil

When the Burnisher is shipped by overland freight, the correct amount of oil is in the engine. Air freight shipments require the machine to be shipped without oil.

When filling a "dry" burnisher or changing oil, for the Honda engine add no more than 1.16 US quarts (1,1 L) when not changing the oil filter, or 1.48 US quarts (1,4 L) when the oil filter is changed, then check the dipstick in the fill cap. Add oil if necessary but **DO NOT OVERFILL! ALWAYS CHECK OIL BEFORE USING THE MACHINE.** Refer to the engine operator's manual.

IMPORTANT: When checking oil on Honda models, remove oil filler cap and clean dipstick with clean cloth, then insert dipstick

into tube without screwing in. Then check oil level. **ALWAYS** make sure the machine is sitting level when checking oil.

Adjusting the Handle and RokBak

The burnisher handle adjusts for comfort and optimum control. Height may be changed to suit the individual operator. The handle may also be adjusted to an full-up (about 45°) position to allow the burnisher to be rocked back for easy pad change. Rock the burnisher to the vertical position from the front of the unit. The burnisher must be off prior to using the RokBak Tilt System.

Propane Burnisher Daily Start-Up Routine

CHECK CYLINDER: Before bringing a propane cylinder indoors, always check it for over-filling.

ATTACH CYLINDER: Connect the fuel hose to the valve nozzle by turning it to the right. Hand tighten only to avoid leaks. Place the tank on the machine and secure by buckling the retaining strap. Remove slack by pulling on the loose end of the strap and securing with velcro. Connect the fuel hose coupling to the service valve by turning clockwise. **HAND TIGHTEN ONLY.** Make sure coupling is not cross threaded and check for leakage by noting any propane odors immediately after cylinder is connected. (It is sometimes easier to install if the connection to the service valve is made before strapping the cylinder in place.)

TO REMOVE THE SAFE-FILL CYLINDER, reverse procedure. Always connect or change cylinders in a well ventilated area.

ALIGN PIN: Make sure to align the locating pin with the slot in the top flange of the Safe-Fill cylinder.

ADJUST TOGGLE: Strap the Safe-Fill cylinder in place by clamping the toggle assembly to the cylinder band. Adjust the toggle assembly by screwing it in or out to keep the cylinder firmly in place.

CLEAN FILTER: The recoil dust filter should be cleaned or replaced after each use of the burnisher and after each hour of continuous operation. A dirty filter can cause the engine to overheat and carbon monoxide emissions could elevate.

CHECK OIL: Make sure the burnisher is level when checking the oil. Follow engine manufacturer's procedure for checking the oil as detailed in the operation manual. The oil level should always be within the safe levels indicated on the dip stick. Add oil if necessary, but never over-fill. Over-filling could cause irreparable damage to the engine.

CHECK PAD: Clean the pad if it is dirty or replace it if it is torn or worn thin (less

than 1/8" or 32mm). Having a clean pad in good condition is essential to burnishing performance.

CHECK STUDS: Check the velcro studs.

Clean if necessary and replace worn or broken studs.

CHECK PAD HOLDER: Check the pad holder for cracks. Replace if necessary.

DEFLECTOR: Check the exhaust deflector. Make sure the deflector is aligned correctly and functioning properly to prevent hot motor exhaust from damaging merchandise.

BELT TENSIONER: Check the tensioner belt. Replace belt if it is frayed or cracked.

MAINTENANCE LOG: Record the daily maintenance routine. Fill in the date in the left hand column, put your initials in the next column and use check marks in all columns which correspond to the maintenance procedures performed.

Operating Instructions

Starting Instructions

1. Check oil and fuel levels.
2. Check and clean engine air filter.

CAUTION! Never run continuously for more than 1 hour without cleaning or changing engine dust filter.

3. Check carburetor air filter. Change if necessary. (See "Scheduled Maintenance")
4. Turn propane service valve counterclockwise to open.

CAUTION! Always open service valve slowly to allow pressure to equalize in hoses. Opening quickly may cause the flow check valve to engage, limiting fuel flow.

5. Allow machine to tilt backward (pad off floor) and move throttle to SLOW position.
6. Plug electric cord into 110 volt wall receptacle and onto starter switch.
7. Engage starter by pushing the RED starter button.

If the machine fails to start, wait approximately 5 seconds and try again for another 5 seconds.

CAUTION! Do not engage starter for more than 10 seconds. Allow a 60 second cool-down period for second failed start-up attempt. Continue cycling through Step 7 until engine starts.

Operation

After engine has started, allow approximately 30 seconds for the engine to warm up. Advance the throttle to operating speed.

On machines with a clutch, grasp either one of the handle levers to engage the clutch. When the pad begins to spin, lower the burnishing head to the floor while moving the machine forward slowly.

CAUTION! Do not run the burnisher without moving the machine. If the machine is allowed to run in one spot damage to the floor may occur.

To stop burnishing, push down on handle to raise the burnishing head off the floor and disengage the clutch if equipped by releasing the handle levers.

It is recommended to start burnishing on the right side of the aisle, turn and come back down the aisle in the opposite direction, overlapping the previous path slightly. Continue this pattern until the floor area to be burnished has been covered with the last pass being on the right side of the machine. The forward speed is generally at normal walking speed.

Idling and Stopping the Machine

On machines equipped with a clutch, if for any reason the machine needs to idle for a short period of time, simply raise the burnishing head and disengage the clutch by releasing the handle levers.

DANGER! Allowing the engine to idle excessively will increase carbon monoxide emissions!

To stop the engine, close the service valve on the fuel cylinder by turning it clockwise (the engine will stop when the fuel in the lines is used up).

Installing/Changing Burnishing Pad

For 21" and 24" models with RokBak:

1. With engine OFF and in the operating position, tilt the machine to the RokBak position.
2. Remove pad centering device and carefully pull the old pad off the velcro pad holding material.
3. **CAREFULLY INSPECT THE PAD HOLDER FOR CRACKS OR DAMAGE!** Replace if necessary.
NOTE: A damaged pad holder rotating at high speeds may be an extreme hazard if it should come apart.
4. Pull center from new pad, center pad on pad holder and secure with centering device.
5. Press pad onto velcro.
6. Return machine to upright position.

For 17" models:

1. With engine OFF, turn the machine over on the RIGHT or starter side by pushing down on the right handle grip with some force while the machine is tilted back. Do not turn the machine over on the carburetor side as this will fill the carburetor with oil.
2. Carefully pull old pad off the pad holding material.
3. **CAREFULLY INSPECT THE PAD HOLDER FOR CRACKS OR DAMAGE!** Replace if necessary.

NOTE: A damaged pad holder rotating at high speeds may be an extreme hazard if it should come apart.

4. Pull center from new pad, align pad on pad holder and secure with centering device.
5. Press pad onto velcro.
6. Return machine to upright position.

Storage

Only authorized, trained personnel should have access to propane cylinders and machines.

1. Remove propane fuel cylinder when not in use and store it outside in a storage cage in accordance with NFPA Section 5 or Subsection 9.5.2 of CAN/CGA B149.2. Do not release or bleed propane inside the building. Please consult your local Fire Marshal to ensure that you are in compliance with local fire codes.
2. Store machine away from objects that may fall and damage it.
3. Never store burnisher or fuel cylinders near an open flame or heat producing device.
4. Make sure burnisher is cleaned properly before storing.
5. Never store burnisher with cylinders installed, or store spare cylinders in an enclosed van or trailer.

Repacking

1. Use shipping and package information attached to packing slip to repack machine.
2. Store machine in a dry location, temperature not to exceed 120°F (50° C).

Transportation

When transporting a propane powered floor burnisher with the fuel cylinder installed, the cylinder should be securely fastened with the service valve closed and the burnisher should be secured in the vehicle. Any propane fuel cylinders not installed should be securely fastened to avoid movement and damage. The service valves should be closed. Never store burnishers with cylinders installed, or store spare cylinders in an enclosed van or trailer. It is a good practice to check propane cylinders for overfilling before transporting them. If overfilled, correct before loading them in the vehicle by venting the excess propane outside in a safe area using the fixed liquid level gauge.

Scheduled Maintenance

Following proper scheduled maintenance procedures as outlined below will provide years of uninterrupted service.

Honda Engine		Regular Service Period				
		Each Use	20 hrs.	50 hrs.	100 hrs.	300 hrs.
Engine Oil	Check Level	1				
	Change		✓	✓		
Oil Filter	Change					✓
Air Filter	Inspect	1				
	Clean			2		
	Change					paper element
Cooling Air Filter	Clean	2				
Spark Plug	Clean-Adjust				✓	
	Replace		2			✓
Idle Speed	Check-Adjust					2
Valve Clearance	Check-Adjust					2
Fuel Tank and Filter	Clean					2
Fuel hose	Check	1				

1. Perform daily or after each use.
2. Service more frequently when used in dusty areas.
3. These items should be serviced by an authorized Pioneer Eclipse Service Center.
4. For commercial use, log hours of operation to determine proper maintenance intervals.

Always enter maintenance performed in Service Log Book.

General Maintenance Procedures

Fuel System

The fuel system works from vacuum created by the engine running. Turning the fuel cylinder service valve ON pressurizes the system for flow to the carburetor once the engine starts to crank.

Adjusting the Regulator

NOTE: The regulator and carburetor have been factory preset and should not require any modification. Only Pioneer Eclipse authorized personnel, trained and certified in propane systems, should modify or adjust the system or its setting.

NFPA 58 8-1.4 states, "In the interest of safety, each person engaged in installing, repairing, filling, or otherwise servicing an LP-Gas engine fuel system shall be properly trained in the necessary procedures."

Engine Dust Filter

The engine dust filter should be cleaned each hour and after each use by shaking out the dust and then rinsing with mild detergent. Squeeze out the excess water (do not wring). Allow the filter to air dry. Failure to maintain a clean engine filter will cause the engine to overheat. Also, it may cause the exhaust emissions to elevate to harmful levels.

Carburetor Air Filter

- a. Loosen toggle clamps on each side of the air cleaner cover.
- b. Remove foam pre-cleaner and paper filter element.
- c. Clean foam pre-cleaner.
- d. Clean filter seal, making sure no dust is allowed in the carburetor inlet.
- e. Inspect paper element. Replace if dirty, bent or damaged.
- f. Install the clean paper element, pre-cleaner, air filter cover and reclamp.

Fuel Hose and Connections

- a. Inspection
 - 1) Inspect hoses for abrasions and other signs of wear; replace all worn or damaged hoses.
 - 2) Check for gas leaks by spreading soapy water solution around all the connections while the service valve is turned ON and the fuel system is pressurized.
- b. Fixing Leaking Joints
 - 1) Uncouple bad joint and clean it. Then apply pipe sealing compound (Loc-Tite Pipe Sealant with Teflon or equivalent) to the clean joint.
 - 2) Recouple the joint finger tight plus 1/2 turn.
 - 3) Recheck for leaks using soapy water solution. Watch for bubbles at the joint with the fuel cylinder service valve turned on and the fuel system pressurized.

Engine Maintenance

Cooling Fin Maintenance

- a. Remove the blower housing and other cooling shrouds.
- b. Clean the cooling fins as necessary using compressed air or pressure washer.
- c. Reinstall all housings and shrouds.

Head Bolt Maintenance

Refer to Engine Manufacturer's Service Manual.

Changing Oil

- a. Run engine for 5 minutes to warm oil, then stop the engine by closing the fuel service valve, allowing the engine to stop by itself.
- b. Locate the oil drain pipe located on the right side of the machine.
- c. Remove the cap by turning it counterclockwise with a wrench.
- d. Allow oil to drain completely into the receptacle.
- e. Replace the cap by turning clockwise.
- f. Remove oil fill cap. Slowly add no more than 1.6 quarts (1,5 L) of motor oil when not changing the oil filter, or 1.8 quarts (1,7 L) when the oil filter is changed. Refer to engine manual for recommended oil.
- g. Check oil level with dipstick in oil fill cap. Add additional oil if necessary.
- h. Replace fill cap. Hand tighten only.

CAUTION! Do not overfill and never run engine low on oil.

WARNING! Always make sure the machine is sitting level when checking the oil.

Belt Maintenance

To inspect the belt it is necessary to turn the machine over. The machine should be rocked back to the vertical position. If the belt is badly cracked or worn it should be replaced.

To check for the proper tightness squeeze the belt together. The belt should depress between 1/4" (0,6 cm) and 1/2" (1,3 cm). Always use the recommended belt size.

To change belt:

1. Remove the pad holder by holding the end of the shaft on the top of the machine with a 3/4" wrench and turn the pad holder counterclockwise.
2. Use the 3/4" wrench to turn the end of the spindle shaft on top of the machine while removing the old belt from the spindle pulley.
3. Finish removing the belt from the engine pulley, if necessary.
4. Check engine pulley for correct alignment with the spindle pulley. Check hardware attaching pulleys for proper tightness.
5. Install the new belt onto the engine pulley.
6. Reinstall the new belt onto the spindle pulley using the 3/4" wrench to turn the

spindle clockwise. Make sure the belt is correctly placed on the idler pulley.

7. Reinstall the pad holder onto the spindle shaft.
8. Turn the machine upright in the burnishing position.
9. Check belt for correct operation. Check all hardware for proper tightness.

Adjusting the Handle and RokBak

For 21" and 24" models:

1. With the engine OFF, loosen the handle adjustment lever on the side of the handle.
2. Move the handle to the full-up position (about a 45° angle) and retighten handle adjustment lever securely.
3. Lift up on the front of the deck, rocking the machine back until it rests on the handle grips.

Adjusting the Wheel Brackets

The burnisher is equipped with wheel brackets that allow the wheels to be moved forward or backward. To reduce weight on the pad, the wheels can be moved forward or to add weight, moved to the rear.

This feature aids the operator in adjusting the machine for different types of floor finish. It can also help in balancing the machine if a steel tank is used in place of an aluminum cylinder.

NOTE: Aluminum cylinders with safety devices for overfill prevention are recommended.

Troubleshooting

Symptom: Hard to start

Possible Causes:

Opening propane cylinder too quickly (OPEN SLOWLY)

Low oil

Insufficient vacuum

Coil, air gap needs adjusting

Spark plug or head bolts loose

Blown head gasket

Symptom: Will not start

Possible Causes:

No fuel

Low oil

Wires broken or disconnected

Incorrect spark plug gap (Gap should be .025)

Insufficient vacuum

Defective spark plug

Defective coil

Blown head gasket

Symptom: Engine lacks power

Possible Causes:

Insufficient vacuum

Dirty air filters

Governor needs adjusting

Leaking head gasket

No compression - worn rings

Symptom: Smell of burned rubber

Possible Cause: Belt out of adjustment - check automatic tensioner

Symptom: Machine vibrates

Possible Causes:

Loose nuts

Pad not centered

Symptom: Machine "Bogs Down" when in use

Possible Causes:

Operator bearing down too hard

Dirty air filters

Symptom: Machine pulls to one side

Possible Causes:

Bent wheel bracket or worn wheel

Adjust wheels forward

Symptom: Engine stops running

Possible Causes:

Out of fuel

Low oil

Dirty air filter

Machine Specifications

Starting	110 V Electric
Deck	Cast Aluminum
Sound Level	87 dB(A)
Engine	Honda 11 HP or Honda 13 HP
Engine Speed	3400 rpm

17" Machines

Pad Size	17" (43,2 cm)
Pad Speed	2100 RPM
Width	20" (50,8 cm)
Length	34" (86,4)

21" Machines

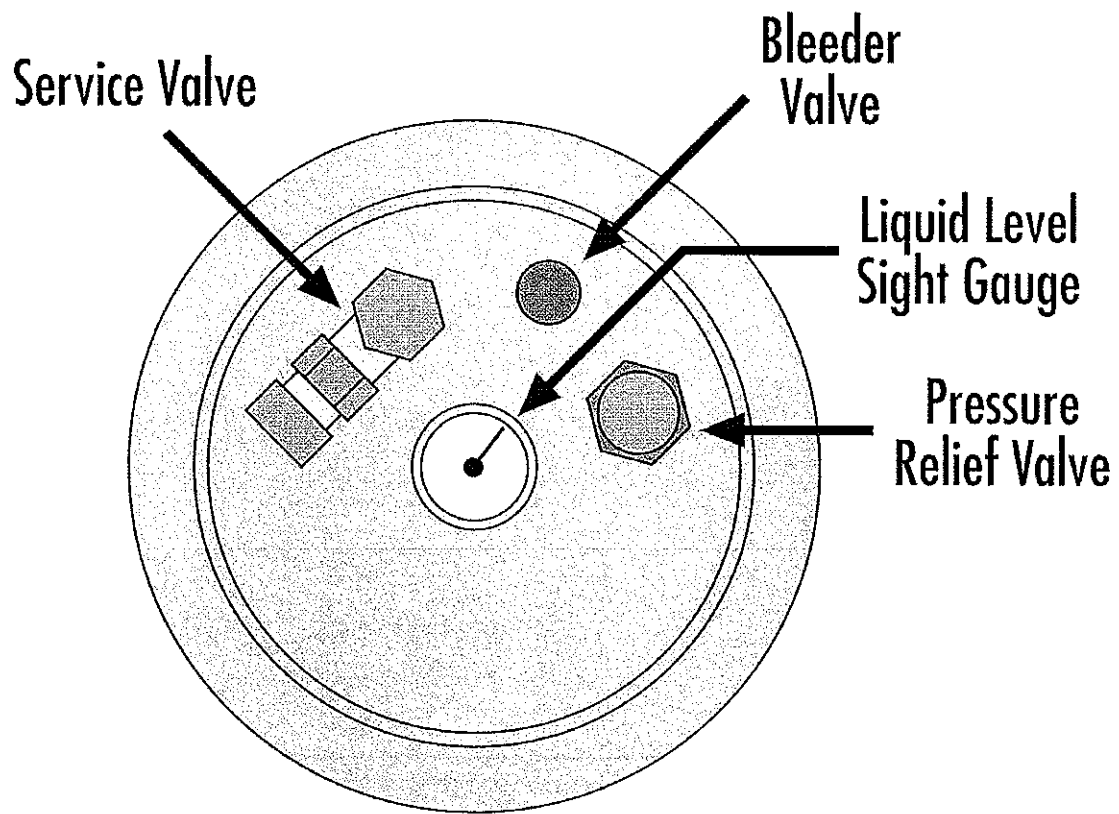
Pad Size	21" (53,3 cm)
Pad Speed	2000 RPM
Width	24.5" (62,2 cm)
Length	56" (142,4 cm)

24" Machines

Pad Size	24" (61 cm)
Pad Speed	1800 RPM
Width	27.5" (69,9 cm)
Length	58.5" (148,6 cm)

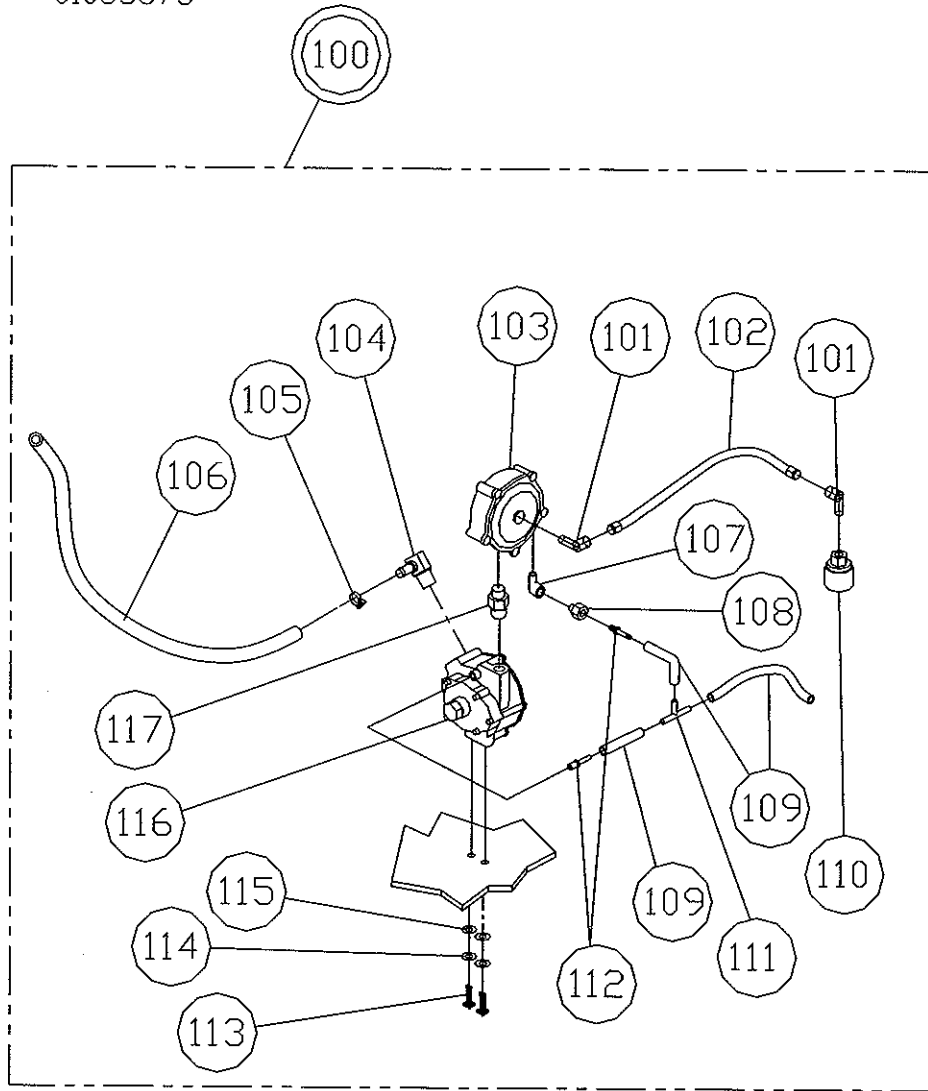
Machine Drawings & Parts Lists

Safe Fill Cylinder Head



Regulator Sub-Assembly: Honda Mean Machine

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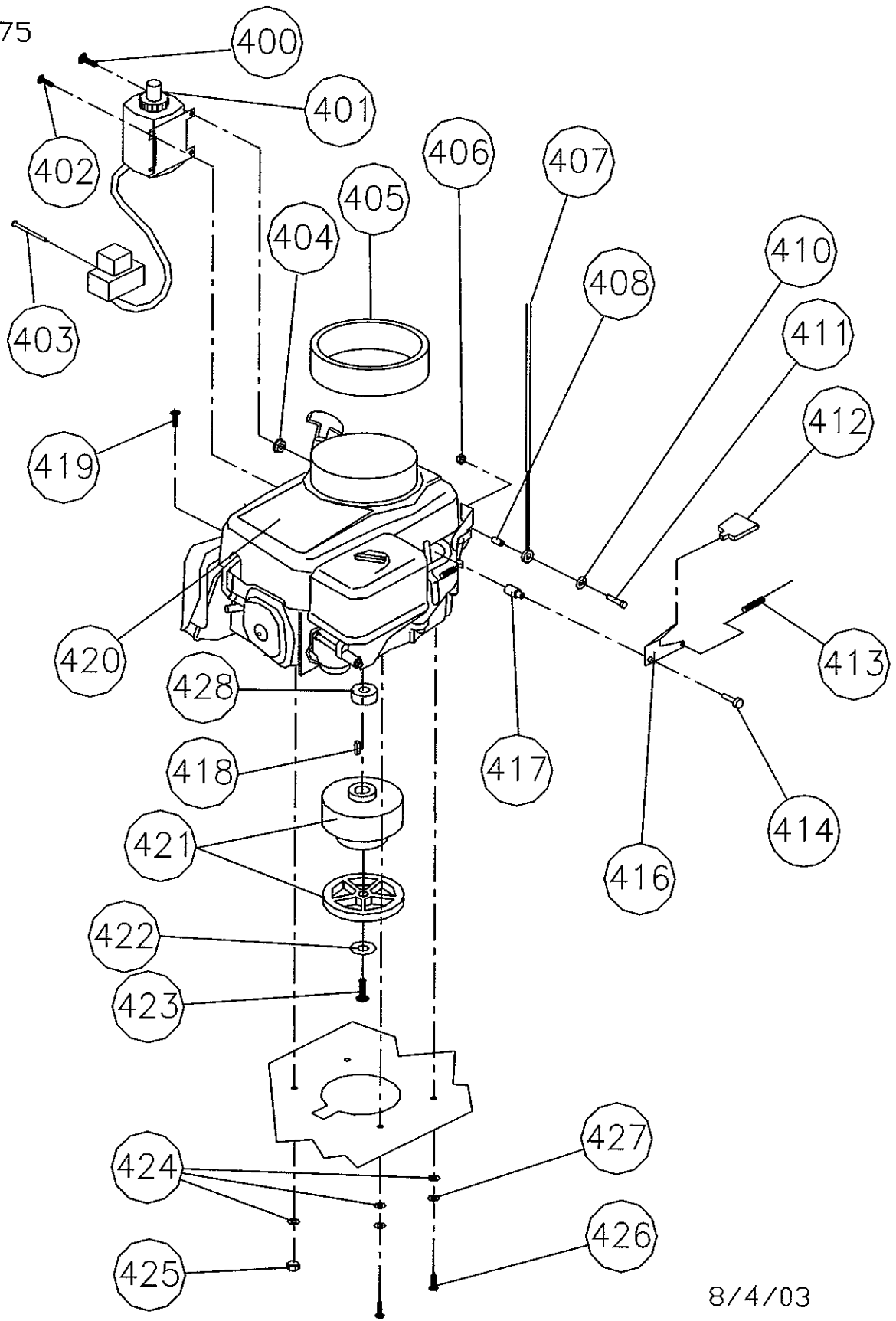
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REF	PART#	DESCRIPTION	QTY
100	MP114300	Regulator Nolfé, Deck Mnt, w/o Adj., Assembly	1
101	MP4330	Fitting, 49 x 6, Reg to Fuelock	2
102	MP4340	Hose, 12\", Regulator	1
103	MP4750	Fuelock, Fuel Filter	1
104	MP3375	Elbow, Brass, Large, Reg to Fuelock	1
105	NB7282	Clamp, Hose, No. 38	2
106	NB2470	Fuel Line, 3/8"	1
107	MP098900	Fitting, 1/8" MPT x 1/8" FPT 90	1
108	MP021600	Ballcheck, 1/8 NPT	1
109	NB2460	Hose, Vacuum, 5/32	3
110	MP4500	Coupler, Quick Rego, Female	1

REF	PART#	DESCRIPTION	QTY
111	NB2300	Tee, 3/16 x 3/16 x 3/16, Nylon	1
112	MP019500	Hose Barb, 1/8 NPT, 1/4 BARB	2
113	NB6530	Screw, HH Cap, 1/4 - 20 x 1	2
114	NB6110	Washer, Lock, 1/4"	2
115	NB3350	Washer, Flat, 1/4"	2
116	MP037900	Regulator, Nolfé, N5I-A-C	1
117	MP4325	Fitting, 3325 x 4, Reg to Fuelock	1

Engine Sub-Assembly: Honda Mean Machine

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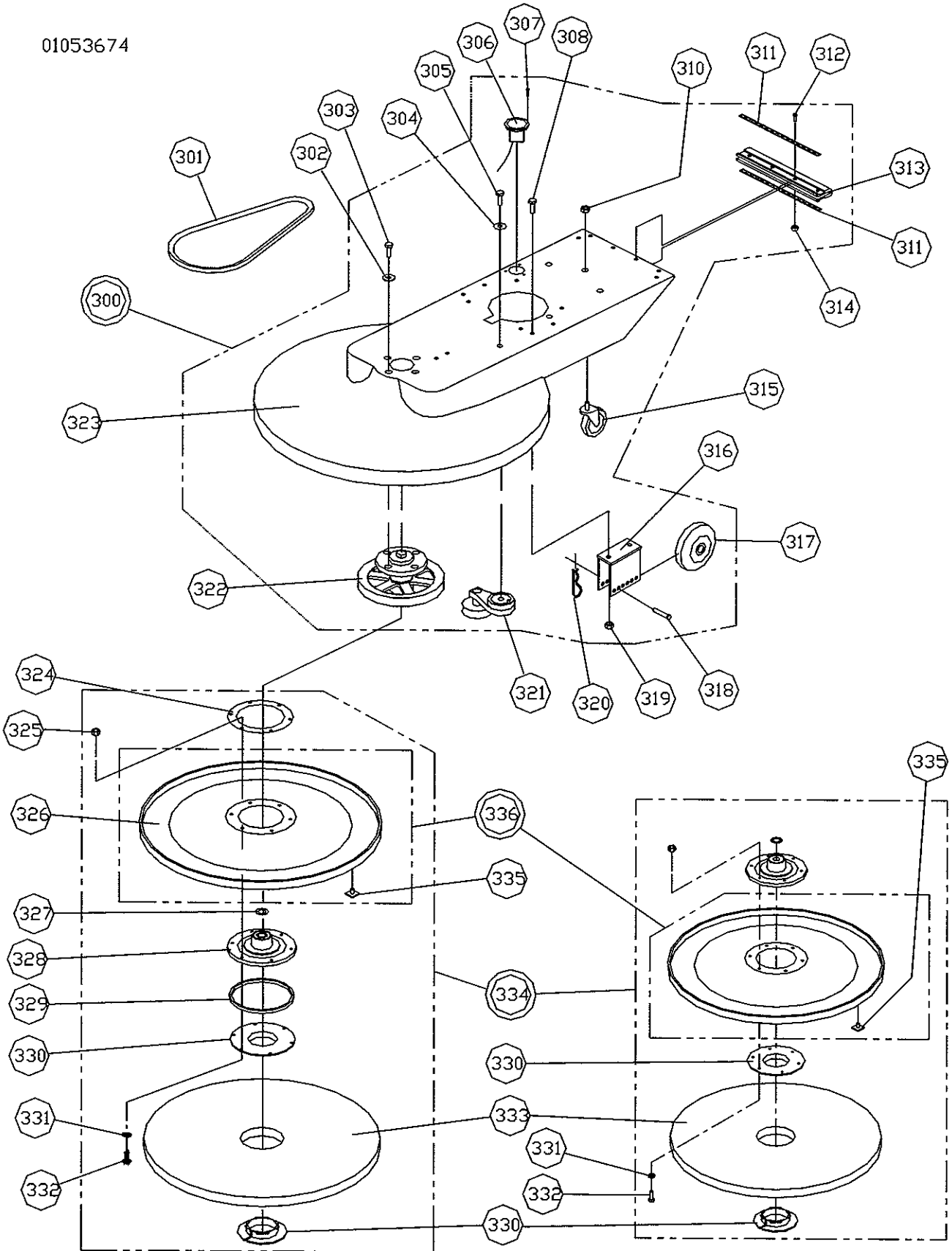
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Engine Sub-Assembly: Honda Mean Machine

REF	PART#	DESCRIPTION	QTY
400	NB3104	Bolt, Flange, M8 x 1.25 x 30	2
401	MP2310	Starter, 110 V, Electric	1
402	NB6012	Screw, 6mm x 20mm	2
403	NB5370	Screw, Sheet Metal, 8 x 2 1/2	2
404	NB3105	Nut, Flange, M8 x 1.25	2
405	MP9600	Filter, Recoil, Dust, Honda	1
406	NB007000	Nut, Lock, Nylon, 4 - 40 (models w/cent. clutch)	1
407	MP106500	Cable, Throttle, Control (models w/cent. clutch)	1
408	NB012400	Spacer, 1/4 O.D. x 12 I.D. x 1/4 long, Steel (models w/cent. clutch)	1
410	NB007100	Washer, Flat, #6 (models w/cent. clutch)	1
411	NB9625	Screw, Mach, Round Hd, 4 - 40 UNF x 3/4 (models w/cent. clutch)	1
412	MP110700	Knob, Lever, Choke	1
413	NB032000	Spring, Extension, Choke	1
414	HC2298396	Bolt, Flange, 8mm x 16	1
416	MP110900	Lever, Choke	1
417	MP110800	Bushing, Lever, Choke	1
418	MP7802	Key, 1/4 x 1 1/2	1
419	NB3003	Screw, BH, 5/16 - 18 x 1 3/4"	1
420	MP004800	Engine, Honda, 11 HP	1
	MP108200	Engine, Honda, 13 HP	1
421	RV002100	Clutch, Centrifugal (models w/ clutch)	1
	MP023500	Pulley, 4", AB Sheave (21" & 24" models w/out clutch)	1
422	MP4805	Spacer, Clutch, Bottom, Hub Base	1
423	NB005800	Screw, Hex, 7/16 - 20 x 1 1/2	1
424	NB9267	Washer, Flat, 9/16	4
425	NB3265	Nut, Lock, 5/16 - 18 NC	2
426	NB9500	Screw, Cap, 5/16 - 24 x 1 1/4	2
427	NB6111	Washer, Lock, 5/16	2
428	MP111000	Spacer, Top, Clutch, Centrifugal	1

Deck Sub-Assembly: Honda Mean Machine

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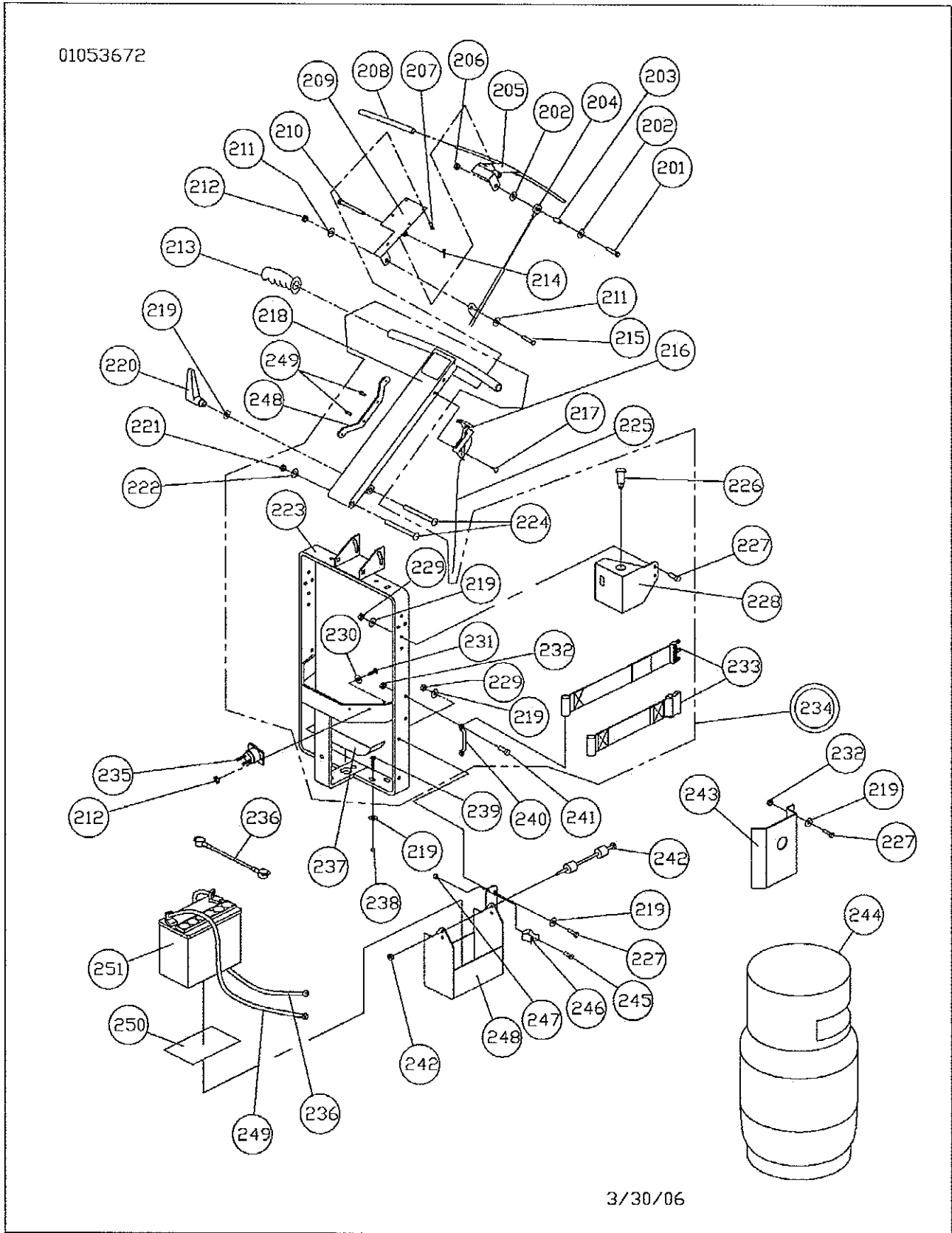


3/25/03

Deck Sub-Assembly: Honda Mean Machine

REF	PART#	DESCRIPTION	QTY
300	MM001700	Deck Assy. (17" models)	1
	MM000800	Deck Assy. (21", 13 HP models)	1
	MM002000	Deck Assy. (21", 11 HP models)	1
	MM001300	Deck Assy. (24" models)	1
301	MP107600	Belt, BX-47 (21" 11 HP & 17" 11 HP models)	1
	MP041000	Belt, BX-56 (21" 13 HP models)	1
	MP8049	Belt, BX-49 (24" 13 HP models)	1
302	NB9269	Washer, Flat, 7/16	4
303	NB6864	Bolt, Hex, 1/2 x 1 1/4, NC	4
304	NB3450	Washer, Flat, 3/8	1
305	NB6044	Screw, Cap, 3/8 x 1 1/4	1
306	MP9610	Meter, Hour	1
307	NB2643	Rivet, Pop 1/8 x 1/4	5
308	NB5282	Screw, BH, 5/16 - 18 x 1	4
310	NB003100	Nut, Hex, 1/2" - 13, JAM	1
311	MP035300	Band, Clamp, Skirt	2
312	NB020700	Screw, Phillips, Pan 6 - 32 x 1	4
313	MP084700	Molding, Bumper, RokBak	1
314	NB020800	Nut, Lock, Nylon, 6 - 32	4
315	MP012801	Caster, 2 1/2", Rear	1
316	MP068300	Bracket, Wheel (17" & 21" models)	2
	MP069000	Bracket, Wheel (24" models)	2
317	MP105300	Wheel, 5", Performa	2
318	MP038100	Pin, Clevis, 3/8 x 2 1/8	2
319	NB3265	Nut, Lock, 5/16 - 18 NC	6
320	LX2105	Clip, Hitch Pin, Strain Relief	2
321	MP071800	Tensioner, Belt, w/4" Pulley	1
322	MP7231	Spindle, w/5.54" Pulley (17" models)	1
	MP107700	Spindle, w/6.75" Pulley (21" models)	1
	MP7235	Spindle, w/7.25" Pulley (24" models)	1
323	MM001800	Deck, 17"	1
	MM000400	Deck, 21"	1
	MM001400	Deck, 24"	1
324	MP081300	Ring, Relief, Stress, Padholder	1
325	NB3275	Nut, Lock, 1/4	6
326	MP086000	Padholder, 17"	1
	MP8275D	Padholder, 21"	1
	MP048300	Padholder, 24"	1
327	NB5700	Washer, 0.755 x 1.005 x 0.060, SS	1
328	MP195800	Flexi Disc, w/o Lip, yellow, 80 duro	1
329	MP066300	Ring, Spacer, Center Loc II (24" models)	1
330	MP012700	Retainer, Pad, Center Loc II (24" models)	1
	MP8505	Pad Grab III (17" & 21" models)	1
331	NB3350	Washer, Flat, 1/4	6
332	NB9319	Screw, BH, 1/4 - 20 x 1 1/4	6
333	PD006017	Pad, 17", Blue Blend	1
	PD006021	Pad, 21", Blue Blend	1
	PD006024	Pad, 24", Blue Blend	1
334	MP115100	Padholder, 17", Complete Asm.	1
	MP095200	Padholder, 21", Complete Asm.	1
	MP047500	Padholder, 24", Complete Asm.	1
335	MP8310	Velcro, Hook, Studs (17" & 21" models)	50
		(24" models)	76
336	SA010800	Padholder, w/studs, 17"	1
	SA003900	Padholder, w/studs, 21"	1
	SA007800	Padholder, w/studs, 24"	1

Handle Sub-Assembly: Honda Mean Machine



Handle Sub-Assembly: Honda Mean Machine

REF	PART#	DESCRIPTION	QTY
201	NB019500	Screw, BH, 10 - 24 x 3/4	1
202	NB9645	Washer, Flat, #10	2
203	NB028300	Bushing, Cable, Bail	1
204	MP106500	Cable, Throttle Control	1
205	MP110500	Bail, Throttle	1
206	NB9735	Nut, Lock, 10 - 24, Nylon	1
207	NB5366	Screw, Sheet Metal, 8 x 1 1/4	4
208	MP114600	Grip, Handle, Bail	2
209	MP110600	Plate, Mount, Bail	1
210	NB031900	Pin, Clevis, 1/4 x 2 1/2	1
211	NB3350	Washer, Flat, 1/4"	2
212	NB3275	Nut, Lock, 1/4	3
213	MP6300	Grip, Handle (models w/out clutch)	2
	MP122000	Grip, Foam, Handle (models w/clutch)	2
214	NB022700	Pin, Cotter 3/32 x 1"	1
215	NB9308	Screw, BH, 1/4 - 20 x 1	1
216	MP013800	Knob, Handle, Tee	1
217	NB4382	Screw, Drill Kwik, 8 - 18 x 1/2	2
218	MP022500	Handle, Top, 12 V Start	1
219	NB9267	Washer, Flat, 5/16	1
220	NB5950	Handle, Adjustable Lever	1
221	NB9470	Nut, Acorn, 3/8 - 16	1
222	NB3450	Washer, Flat, 3/8	1
223	MP105500	Handle, Painted Complete	1
224	NB9460	Bolt, Carriage, 3/8 - 16 x 4	2
225	MP044600	Cable, Throttle, 46"	1
230	MX1115	Washer, Star Lock, 1/4"	2
231	NB52816	Screw, BH, 1/4 - 20 x 1/2"	2
232	NB9510	Nut, Spin Lock, 10 - 24	4
233	MP108100	Strap, Tank	1
234	MP105800	Handle Assy.	1
237	MP6600	Velcro, Felt, Black	1
238	NB3267	Nut, Lock, 3/8 NC	5
239	NB5520	Bolt, Carriage, 3/8 - 16 x 1 1/4	5
240	RV009500	Footman Loop	2
241	NB033200	Screw, Socket, 10 - 24 x 3/4	4
244	MP021702	Cylinder, Safety Fill, Aluminum	1
	MP106000	Cylinder, Safety Fill, Steel	1
245	NB9200	Screw, Machine 6 - 32 x 5/8	1
246	MP4511	Clip, Oil Drain	1
247	NB9530	Nut, Lock/Washer, 6 - 32	1
248	MP262201	Bracket, Cord Wrap, Black, Formed	1
	MP262202	Bracket, Cord Wrap, Hammer-Tone, Formed	1
249	NB4381	Screw, Drill Kwik, 8 x 3/4	2

Limited Warranty

Mean Machine Burnishers

To Qualify for this warranty:

- 1) Machine must be registered at the time of purchase on a form provided by Pioneer Eclipse® Corporation. Your Pioneer Eclipse Distributor is responsible for the registration of your machine. Please cooperate with your Distributor in supplying necessary information on the card.
- 2) The machine must have been purchased from Pioneer Eclipse or an authorized Pioneer Eclipse Distributor.
- 3) This warranty extends to the original purchaser only and is not transferable to subsequent owners.

TIME PERIODS

ONE (1) YEAR WARRANTY - For the models MM and MB.
Warranted to be free from defects in material and workmanship for a period of one (1) year from the date of purchase by the original owners. (See Exclusions.)

EXCLUSIONS (Not Covered by Warranty)

- 1) Parts that fail through normal wear by reason of their characteristics (cords, pads, brushes, belts, bumpers, body molding, skirting, squeegees or other consumable parts).
- 2) This warranty does not extend to parts affected by misuse, neglect, abuse or improper maintenance. All defective parts must be returned to the Distributor for credit.
- 3) Batteries warranted by battery manufacturer for (1) year.
- 4) Propane Engine warranted by engine manufacturer for 2 years.
- 5) Valve train warranted by Pioneer Eclipse for (1) year.
- 6) Electric motors warranted by motor manufacturer.
- 7) Deck Frame warranted by Pioneer Eclipse for (5) years.

THE OBLIGATION OF PIONEER ECLIPSE CORPORATION

- 1) The obligation of Pioneer Eclipse under this warranty is limited to repairing or replacing, at its option, any part which is proven to be defective in material or workmanship under normal use for the applicable period stated above.
- 2) Warranty repairs will be made by your Pioneer Eclipse Distributor without charge for parts and labor.
- 3) Parts repaired or replaced under this warranty are warranted only during the balance of the original warranty period. All defective parts replaced under these warranties become the property of Pioneer Eclipse.

WARRANTY SERVICE

To obtain warranty service, take your machine and proof of purchase to any authorized Pioneer Eclipse Distributor. Pioneer Eclipse will not reimburse expenses for service calls or travel. For the Distributor in your area, call Pioneer Eclipse Customer Service Department at 800-367-3550 or 1-336-372-8080. If you are dissatisfied with the service that you receive, call or write Pioneer Eclipse Customer Service Department for further assistance.

DISCLAIMER OF CONSEQUENTIAL

PIONEER ECLIPSE DISCLAIMS ANY RESPONSIBILITY FOR LOSS OF USER TIME OF THE PIONEER ECLIPSE MACHINE OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE EXCEPT AS STATED IN THE WARRANTY APPLICABLE TO EACH MACHINE. EXCEPT AS STATED IN SUCH WARRANTIES, THE COMPANY DOES NOT OTHERWISE WARRANT ANY MACHINE AND NO WARRANTY, EXPRESS, IMPLIED OR STATUTORY IS MADE BY THE COMPANY.

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LT037400 - J; 042006