E29810-00

BETCO

CRETE Rx™

30" Concrete and Terrazzo Polishing Machine

Operator and Parts Manual

400 Van Camp Road • Bowling Green, Ohio 43402
Customer Service: 888-GO-BETCO • Fax: 800-445-5056 • Technical Service: 877-856-5954 • www.betco.com

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WARNING - CARBON MONOXIDE LETHAL EXHAUST GAS - MUST READ THIS! -

Never Run The Engine In A Closed Building Or Confined Area

Exhaust gases contain poisonous carbon monoxide.
Carbon monoxide is odorless, colorless, and can cause death if inhaled.

Carbon Monoxide Poisoning Symptoms

Train your employees to know the warning signs of carbon monoxide poisoning.

Mild carbon monoxide poisoning may cause any of the following:
Headache, drowsiness, faintness, poor coordination, nausea, and vomiting.
Turn the engine off and immediately get to fresh air if you have any of these symptoms.

Do not run the machine until it is given an emissions test and repairs made by an authorized distributor.

- Local emissions testing is available at a fork-lift service department.

Moderate or severe carbon monoxide poisoning causes confusion, unconsciousness, chest pain, shortness of breath, and coma. Thus, most victims are not able to move themselves and must be rescued. Severe poisoning is often fatal.

Carbon monoxide is dangerous because a person may not recognize drowsiness as a symptom of poisoning. Consequently, someone with mild poisoning can go to sleep and continue to breathe the carbon monoxide until severe poisoning or death occurs. Some people with long-standing, mild carbon monoxide poisoning caused by furnaces or heaters may mistake their symptoms for other conditions, such as the flu or other viral infections.

Carbon Monoxide Detectors

CO detectors are a must for safe operation of your equipment. Various types are available. A “CO” carbon monoxide detector detects carbon monoxide before it reaches dangerous levels. Detectors are a must for those who run propane powered equipment. The CO Detector is for everyone’s protection against Carbon Monoxide Poisoning.

- Carbon Monoxide Detector - Passive
  - – Effective for 30 days after package has been opened.
  - – Write the date opened on the detector.
  - – Mount with self-adhesive strip on the machine handle.
  - – Train machine operator to check detector regularly.
  - – If the **orange disk changes to gray or black** - your Carbon Monoxide Levels are at a Dangerous Level.
  - – If the **orange disk changes to gray or black** you must **turn your buffer off immediately** and return it to your nearest authorized distributor for an emissions test.
  - – **Do Not Restart** the machine until the emissions have been checked and corrected.
  - – This is for your protection as well as your customers. CO detectors are a must for safe operation and maximum efficiency of your equipment.
  - – For replacement CO detectors, contact your distributor. Ask for the **carbon monoxide detector, part# E012426.**

- Carbon Monoxide Detector - battery operated with alarm
  - – Available from various sources

SAFETY

Important Safety Information

All LPG (Liquified Petroleum Gas) powered engines, including this engine, produce Carbon Monoxide (CO). It is a **Lethal Poison** that is colorless, odorless, tasteless, and non-irritating gas. You must read “Lethal Exhaust Gas” information above. Failure to provide proper venting of CO, failure to properly maintain the engine, or failure to properly train personnel of the dangers and warning signs of carbon monoxide exposure may result in **Serious Injury Or Death** to the operator and others in the area.

Keep hands, feet, and loose clothing away from all moving parts while the machine is in operation. The exhaust system gets very hot so keep hands, clothing and any items that can burn away from the engine, engine manifold, and muffler.

- Use only as described in this manual.
- Read the labels on the machine carefully. Do not cover the labels. Replace the labels if they become damaged.
- This propane floor machine must only be operated by authorized and trained professionals.
- The operator must wear the appropriate Personal Protective Equipment (gloves, shoes, helmet, glasses, etc.)
- When operating the machine do not endanger other people.
- Workers should be trained to recognize the hazards of carbon monoxide and the early symptoms of carbon monoxide poisoning.
- Any equipment with the potential to produce carbon monoxide presents a significant hazard when used indoors. They must be used with great caution. Opening a door or window, or running an exhaust fan will not necessarily supply adequate ventilation. Avoid inhaling exhaust fumes and never run the engine in a closed building or confined area without proper ventilation. Have a carbon monoxide detector attached to machine handle or have machine operator wear a carbon monoxide detector. (See carbon monoxide detector page).
- Do not allow engine to run unattended.
- Install fuel cylinder in a well ventilated place.
- Be aware of possible leaks of propane gas if odor is present.
- If the machine is stored inside a building, remove the fuel cylinder and store properly outside.
- Never store fuel cylinders in a vehicle, building, or area where they may exposed to high temperature.
- Secure fuel cylinders when being transported.
- If tank is left attached to the machine then valve should be OFF.
- Do not operate the machine with any openings blocked.
- Keep openings free of debris that may reduce airflow.
- Do not place objects on the machine.
- Never use the machine in an explosive environment.
- Do not use the machine as a means of transportation.
- Use a dry powder fire extinguisher in case of fire or use water.
- Do not strike shelving or scaffolding.
- Never remove guards that require tools to remove.
- Use only tools furnished with the machine or those specified in the user's manual.
- If you have any indication that the engine is not running properly, immediately shut the machine off. Perform routine maintenance and if further service is required, contact your dealer or contact BETCO technical service.
- Maintenance and repairs must be done by qualified personnel.
- If the machine is not working properly, have it serviced by a BETCO authorized service center.
- Have your BETCO service center perform routine maintenance on the machine once a year.
- Remove fuel cylinder and disconnect battery before servicing.
- When replacing parts, use only ORIGINAL replacement parts from your Authorized BETCO Dealer.
- When your BETCO machine is ready to be disposed of, the machine must be disposed of properly. It contains oils and electronic components. The machine itself was built using totally recyclable materials.

SAFETY (continued)

Silica Dust and the Use of a Respirator

Silica is a sand component of concrete and its dust can cause severe medical conditions, such as; Silicosis, Lung Cancer, Tuberculosis, Autoimmune and Chronic Kidney Diseases and non-malignant respiratory diseases. BETCO® highly recommends the use of a respirator during concrete honing and polishing. For more information on Silica safe handling, storage and safety measures visit www.u-s-silica.com or call 1-800-35-NIOSH.

TANK USE AND STORAGE

Propane Tank Use

We use OPD gas cylinders designed for vapor withdrawal. The fuel lock offs, regulators, and engines are also designed for vapor withdrawal.

- We recommend that you use the OPD (Overflow Protection Device) vapor withdrawal type cylinder. These style tanks have a triangle shaped valve handle.
- Do not overfill - the best gauge is a scale - never allow tank to weigh over **36 pounds** for an aluminum tank and **43 pounds** for a steel tank.
- Connect fuel cylinder to machine in a well ventilated place.
- Be aware of possible leaks of propane gas if odor is present.
- Use propane tanks designed for vertical use only.

Propane Tank Storage

- Store tanks outside in a well-ventilated area.
- Never store fuel cylinders in a vehicle, building, or area where they may exposed to high temperature.
- If the machine is stored inside a building, remove the fuel cylinder and store properly outside.
- Secure fuel cylinders when being transported.
- If tank is left attached to the machine then valve should be OFF.
- Store tanks in the upright position (valves up).
- Be aware of possible leaks of propane gas if odor is present.
- New tanks must be purged of air at first fill.

TECHNICAL DESCRIPTION	Measurement Unit	Crete Rx™ CP30
Working width	in (mm)	30 (762)
Work productivity	ft²/h (m²/h)	2,250 (209)
Run Time	hours	Up to 8
Deck Speed	RPM	1470
Satellite Speed	RPM	735 clockwise
Satellite Diameter	in (mm)	12.9 (327)
Propane Tank (D.O.T. 4E240)	lbs	20
Head Pressure	Lbs. (Kg)	Up to 715 (324)
Weight of Machine	Lbs. (Kg)	870 (395)
Machine dimensions, operating configuration (Length / Height / Width)	in x in x in (mm/mm/mm)	79 x 46 x 30 (2007 / 1168 / 762)

RECEIVING THE MACHINE

Immediately check, when receiving the machine, that all the materials indicated on delivery documents have been received and also that the machine has not been damaged in transit. If it has been damaged, this damage must be immediately reported to the shipper and also to our customer service department or a claim may not be made.

Introduction

This machine is designed to work with BETCO's Crete Rx™ and CRMX® Concrete Systems. This floor machine Grinds, Hones, and Polishes concrete and terrazzo floors through the action of its counter rotating deck and satellites, and the properly installed BETCO Crete Rx and CRMX tools.

Only use this machine for its intended purpose. Please keep the machine in good working order by performing routine maintenance. Read this instruction manual and refer back to it when machine questions arise. The BETCO technical customer service representatives should be contacted with machine questions not answered by this manual.

UNPACKING THE MACHINE

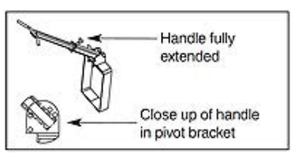
This machine arrives securely fastened to a reinforced pallet and must be removed in the following fashion to ensure no damage occurs to the machine, property or personnel.

1. It is vital that this machine and crate be placed on a level surface prior to unpacking the machine.
2. Remove the top panel using a #2 phillips screwdriver, power drill, or impact driver.
3. Remove the side panels and the two securing boards.
4. Unfold the handle from the stored position to the transport position.
5. Install the transport wheel following the instructions in the "Transport Wheel Installation" section.
   Caution: Transport wheel installation requires two people!
6. Slowly push the machine forward in the transport position towards the front of the pallet.
7. Keeping the transport wheel raised slightly off the pallet deck push it past the edge of the pallet ensuring enough clearance is given for the front edge of the deck to not touch the pallet deck.
8. Slowly lower the transport wheel onto the ground.
9. Continue to slowly push the machine forward until the back wheels come to the edge of the pallet.
10. Ensure no personnel or obstructions are in the path of the machine and carefully push the machine off the pallet.
    Warning: The machine is very heavy and will drop rapidly off the pallet onto the ground.
11. Check machine for damage.
12. Install the tool drivers following the instructions in the "Tool Installation" section.
13. Properly dispose of shipping crate and all shipping material.

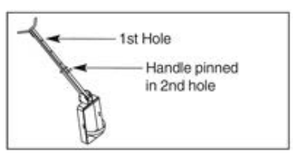
Adjusting the Handle

The machine is equipped with a telescoping and adjustable handle. See diagrams for detailed position placement.

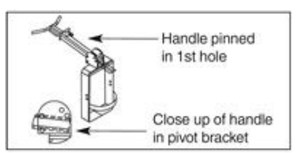
Tool Change Handle Position



Transport Handle Position



Operating Handle Position



MACHINE AND WORK AREA PREPARATIONS

Caution: Before performing any maintenance or machine preparation, turn off the engine and disconnect the fuel tank and battery.

Perform all engine and machine checks and maintenance as needed.

Transport Wheel Installation

Caution: Do not install the transport wheel with the engine running.

Warning: Transport Wheel Installation Requires two people!

To install the Transport Wheel Support Arm follow these steps:

1. Extend the handle to the Tool Change Position. Press downward on the handle bar until the back of machine rests on the ground.
2. While holding the handle down, have an assistant release the locking pin on the Transport Receiver and slide the Transport Wheel Support Arm into the Transport Receiver.
3. Slowly lower the machine back onto the level surface.
4. Collapse the handle back into the Transport Position.

Transport Wheel Removal

Caution: The transport wheel must be removed before starting the engine.

Warning: Transport Wheel Removal Requires two people!

To remove the Transport Wheel Support Arm follow these steps:

1. Extend the handle to the Tool Change Position. Press downward on the handle bar until the back of machine rests on the ground.
2. While holding the handle down, have an assistant release the locking pin on the Transport Receiver and remove the Transport Wheel Support Arm.
3. Slowly lower the machine back onto the level surface.
4. Collapse the handle back into the Operating Position.

TOOL DRIVE PLATE INSTALLATION

Betco Crete Rx and CRMX Tool Installation

The drive plates provided with this machine are specifically designed for the BETCO® Crete Rx™ and CRMX® Concrete Floor Systems. The use of a different system may cause injury or damage to the machine or floor.

Image 1

With the machine tipped back:

1. Install the 12 tool holders (E84130) into the driver plates as shown. The tool holders are secured via the magnets in the driver plate (**Image 1**).
2. Determine the proper tool that is to be used on the floor.
   NOTE: Use tools that have similar amount of wear and remaining thickness.
3. Check the Velcro on both the tool holder and tools to be installed.
4. Install the tools by firmly pressing a single tool into each of the tool holders and slightly twisting to ensure the Velcro properly adheres (**Image 2**).

Image 2

Before Starting the Machine

Read the Owner's Manual and the Engine Operation Manual.

Your machine is shipped ready for operation; however there is no fuel in the tank. When having the tank filled, you must make sure the tank is never over-filled.

The best way to do this is to tell the filling station to weigh the tank full. On an aluminum tank, it should weigh no more than 36 pounds and on a steel tank no more than 43 pounds. (See more information at "Tank Storage and Maintenance" page.)

Checking Oil Levels and Filters

Check Oil Level: Starting the engine without the proper amount of oil will cause severe engine damage. Always keep the engine oil level between the full and add marks on the dipstick. Do not loosen oil fill cap or remove dipstick while engine is running.

- Park your machine on a level surface.
- Turn the oil fill cap counter clockwise and then lift from the fill tube.
- Wipe the dip stick clean and push it back into the oil fill tube until the cap seats and then withdraw it to check: the oil level. (Do not screw cap on to check oil). Add if necessary. If the oil level is low, add API Class SM oil having a SAE viscosity grade appropriate for the expected temperatures as indicated in the Operators Manual (Usually a HD30 or 10W30).
- Important Note: **Do Not Overfill**
- Replace oil cap.

Inspect fuel hoses and fittings for wear and leaks. Have all worn hoses and leaks repaired before operating.

Look and listen for exhaust leaks. Have all leaks repaired before operating.

Check the carburetor filter and air filter for debris. Clean and replace if necessary.

Connect fuel hose to tank by screwing the hose fitting to tank. You must tighten all the way down to make fuel connection. Turn tank knob slowly until you hear the flow of fuel into fuel system.

TOOL DRIVE PLATE INSTALLATION

Installing the Propane Cylinder

1. Take machine to a well ventilated area.
2. Check cylinder for overfill.
3. Place cylinder on the machine in tank holding area and secure strap.
4. Attach the propane hose coupling and fully tighten.
5. Open service valve slowly. Be alert for the odor of propane that may indicate a leak.
6. To remove the cylinder, reverse the procedure.

Area Preparation

This floor machine is designed to be used only on concrete and terrazzo floors. Use on any other surface may cause personal harm, damage to property, or damage to the machine. Work areas should be prepared following these steps:

1. Ensure that the area is free of objects protruding from the floor and loose pieces of flooring.
2. The area to be worked on should allow adequate room for machine operation.
3. Proper ventilation must be used to prevent harmful gases from building up.
4. Do not use the machine in a work area where others are present and may be harmed.
5. Clean the floor of any loose debris and dirt.

MACHINE OPERATIONS

Starting the Engine

Before starting the engine, read the Owner's Manual and the Engine Operation Manual.
The engine is equipped with a 12 volt starter and a key switch start.

1. Install the propane cylinder following the instructions in the “Installing the Propane Cylinder” section
   Warning: Start the machine with the floor tools in the running position, flat on the floor.
2. Put throttle cable into the “slow” position. (Note: If starting is difficult, you can place throttle in the fast” position).
3. Turn the ignition - start switch to the “start” position and hold it there until the engine starts. Do not crank for more than 20 seconds at a time and wait at least one minute between tries when cranking. See troubleshooting guide if the engine does not start after several tries.
4. After engine starts, set throttle to a slow operating speed until the motor warms up. Engine speed may be increased after 3 to 5 minutes.
5. Check for frost on the regulator and fuel line. Frost will indicate that the machine is drawing liquid propane from an overfilled or incorrect tank.
6. If frost is present on the regulator or fuel line, turn off the machine and have the tank inspected by a certified technician.

Stopping the Engine

1. Set the throttle to the lowest position.
2. Turn propane tank valve to the closed position (turn clockwise) and allow the engine to continue running until it runs out of fuel.
3. Turn key to the off position.

In an emergency, immediately press and hold the kill switch and turn the key to the 'off' position. Backfiring may occur when using this method.

Caution: <u>Never</u> tip the machine back while the engine is running.

Honing Process

1. Ensure work area is a level surface and free from loose debris.
2. Adequately soak the work area with BETCO Liquigrind solution.
3. Start the engine following the instructions in the “Starting the Engine” section.
4. Increase the engine to full throttle.
5. Slowly walk forward as the deck and satellites spin up to full speed.
6. Progress through the work area at **12-15 ft/min** using the BETCO® Crete Rx™ Honing Tool.
7. Ensure to overlap each pass by at least 1/3 of the deck’s width.
8. Multiple passes over the working area may be required.
9. Stop the engine following the instructions in the “Stopping the Engine” section.
10. Follow the Honing process with proper slurry removal steps.

MACHINE OPERATIONS (continued)

Polishing Process

1. Ensure work area is a level surface and free from loose debris.
2. Start the engine following the instructions in the “Starting the Engine” section.
3. Increase the engine to full throttle.
4. Slowly walk forward as the deck and satellites spin up to full speed.
5. Progress through the work area at **12-15 ft/min** using the BETCO Crete Rx Polishing Tool.
   Note: The Betco Crete Rx Polishing step is performed dry with no solution on the work area.
6. Ensure to overlap each pass by at least 1/3 of the deck’s width.
7. Multiple passes over the working area may be required.
8. Stop the engine following the instructions in the “Stopping the Engine” section.
9. Follow the Polishing process with proper dust removal steps.

After Operation

Caution: Allow the machine to cool before storing, transporting, or cleaning the machine.

Caution: Disconnect the battery and propane tank after operation and before any maintenance, transport, storage, or cleaning of the machine.

In order to ensure the best results the machine must be cleaned after each use. Buildup of concrete dust and dried slurry on the underside of the deck can cause excessive dust during the next operation and has the potential to diminish the quality of the polish.

Use of a hose or pressure washer (using a low pressure nozzle) on the deck is recommended. It is important to avoid spraying water onto the engine, exhaust, and battery box. Use a towel to wipe the machine down and dislodge any buildup.

KAWASAKI ENGINE MAINTENANCE SCHEDULE

MAINTENANCE	INTERVAL						
	Daily	First 8 hrs.	Every 25 hrs.	Every 50 hrs.	Every 100 hrs.	Every 200 hrs.	Every 300 hrs.
Lubricate Pillow Block Bearings	●						
Check and add engine oil	●						
Check for loose or lost nuts and screws	●						
Check for fuel and oil leakage	●						
Check or clean air intake screen	●						
Clean air cleaner foam element			●				
Clean air cleaner paper element				●			
Clean dust and dirt from cylinder and cylinder head fins					●		
Tighten nuts and screws					●		
Change engine oil		●		●			
Clean and gap spark plugs					●		
Change oil filter					●		
Replace air cleaner paper element					●		
Clean combustion chambers							●
Clean and adjust valve clearance				●*			●
Clean and lap valve seating surface							●

*After the 1st 50 hours

IMPORTANT NOTES:

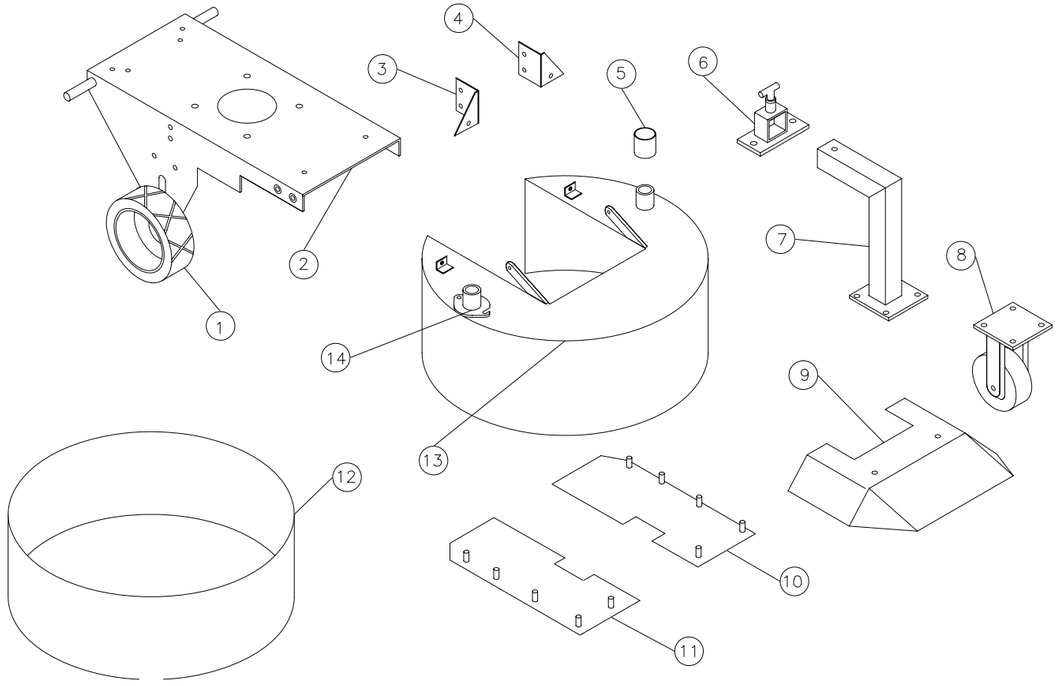
1. Before performing any maintenance, turn off the engine and disconnect the fuel tank and battery.
2. Change engine oil and oil filter (Part Number: **E88475**) after first 8 hours of operation.
3. Maintenance should be done by qualified personnel only.
4. Change foam and paper air intake filters (Part Number: **E88478** & **E88325**) after first 25 hours of operation.
5. Replace spark plugs (Part Number: **E88326**) after first 25 hours of operation.

TROUBLESHOOTING

PROBLEM	CAUSE	POSSIBLE SOLUTION
Engine will not turn over	Battery is dead	Recharge battery or replace if necessary
	Loose wire or bad connection	Check wires and connections
	Bad electrical component	Replace bad component
	Fuel system problem	Refer to engine owner's manual and read IMPORTANT below
Engine turns over, but will not start	Propane tank shut off valve in off position	Open propane tank shut off valve completely
	Low oil	Add oil
	Fuel system problem	Refer to engine owner's manual and read IMPORTANT below
	Propane tank empty	Fill propane tank
	Engine problem	Refer to engine owner's manual and read IMPORTANT below
Hard to start	Throttle lever in slow position	Push throttle lever to fast position
	Propane tank shut off valve not fully open	Open propane tank shut off valve completely
	Some type of engine problem	Refer to engine owner's manual and read IMPORTANT below
Engine stops suddenly and will not restart	Out of propane	Replace propane tank with full propane tank
	Low oil	Add oil
Engine overheats	Intake air filter is dirty	Remove air intake filter and clean
	Incorrect oil level	Add or remove oil to achieve proper oil level
Lacks power	Some type of engine problem	Refer to engine owner's manual and read IMPORTANT below
Engine stops and will restart, but stops again	Emission shut-down system engaged	Refer to engine owner's manual and read IMPORTANT below
Nothing here fixes the problem	Problem could have several causes	Read IMPORTANT below
Excessive vibration	Loose bolts on engine or deck	Inspect and tighten all bolts
	Improperly installed tools	With help, check and reinstall tools if needed.
	Incorrect oil level	Add or remove oil to achieve proper oil level
	Engine overloaded	See engine owner's manual for servicing
	Some type of engine problem	Refer to engine owner's manual and read IMPORTANT below

IMPORTANT: Propane fueled combustion engines produce dangerous gases and must be serviced by authorized service personnel trained specifically to service propane fueled engines and fuel systems. The troubleshooting tips are not intended to take the place of authorized service personnel. If you are unsure of what to do contact an authorized service personnel. Before working on this machine you must be familiar with the safety instructions in this manual.

BODY ASSEMBLY PARTS

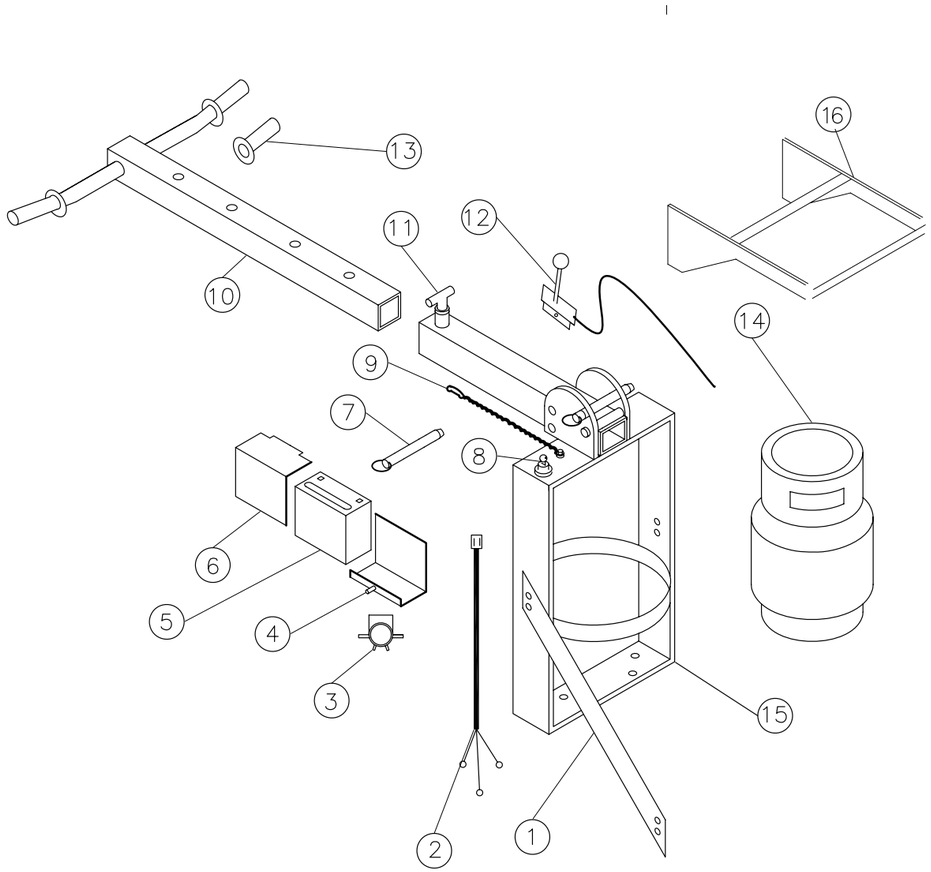


BODY ASSEMBLY PARTS LISTING

Number	Part#	Description	Qty.
1	E13250	Assembly, Wheel	2
2	E13251	Assembly, Body Frame	1
3	E13252	Plate, Right End	1
4	E13253	Plate, Left End	1
5	E13254	Cap, Vacuum	2
6	E13255	Bracket, Wheel Base	1
7	E13256	Bracket, Transport Wheel	1

Number	Part#	Description	Qty.
8	E13257	Wheel, Transport	1
9	E13258	Cover, Belt	1
10	E13259	Shield, Left	1
11	E13260	Shield, Right	1
12	E13261	Splash Skirt	1
13	E13262	Assembly, Drive Cover	1
14	E13263	Cover, Access	1

HANDLE ASSEMBLY PARTS

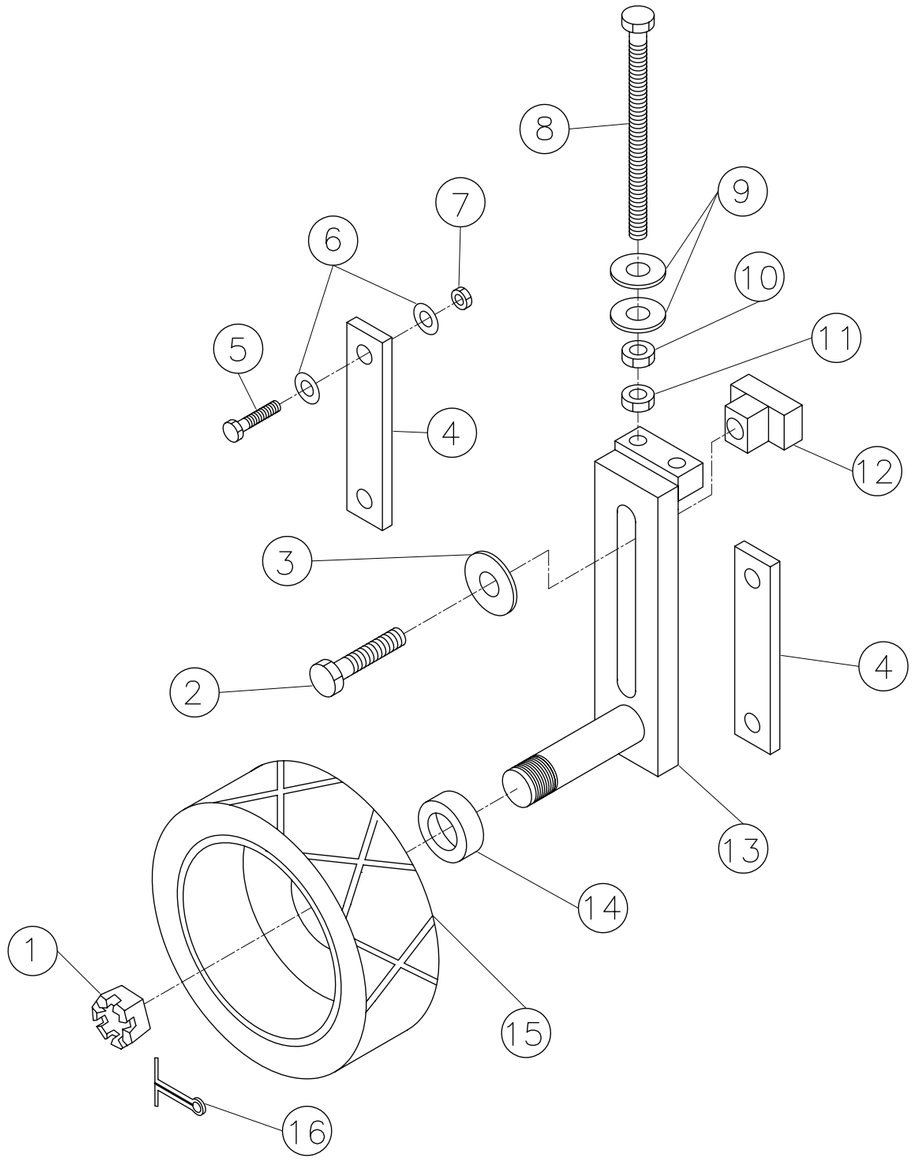


HANDLE ASSEMBLY PARTS LISTING

Number	Part#	Description	Qty.
1	E13264	Support, Handle	2
2	E13265	Wire Harness	1
3	E13266	Solenoid, Starter	1
4	E13267	Battery Box Bottom	1
5	E13268	Battery, 12V	1
6	E13269	Battery Box Top	1
7	E13270	Pin, Quick Release	2
8	E13271	Switch, Key	1

Number	Part#	Description	Qty.
9	E13272	Lanyard, Kill Switch	1
10	E13273	Handle Extension	1
11	E13274	Pin, T-Knob	1
12	E13275	Throttle Cable	1
13	E13276	Grip, Handle	2
14	E88550	Propane Tank	1
15	E13278	Assembly, Handle Base	1
16	E13333	Bracket, Tool Shelf	1

WHEEL AXLE ASSEMBLY PARTS

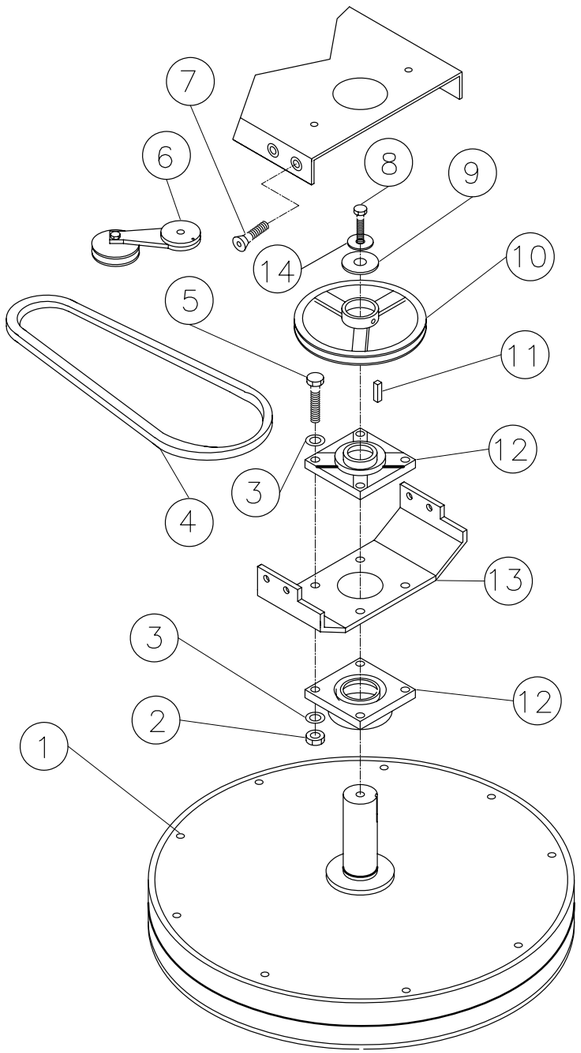


WHEEL AXLE ASSEMBLY PARTS LISTING

Number	Part#	Description	Qty.
1	E13279	Nut, Axle	2
2	E13280	Screw, Hex Cap, 1/2"-13 x 2"	2
3	E13281	Washer, Flat, 1/2"	2
4	E13282	Bar, Adjustment Side	4
5	E13283	Screw, Hex Cap, 3/8"-16 x 1"	8
6	E81062	Washer, Flat, 5/16"	16
7	E13284	Nut, Stover Lock, 3/8"-16	8
8	E13285	Bolt, Tap, 1/2"-13 x 5"	2

Number	Part#	Description	Qty.
9	E13281	Washer, Flat, 1/2"	4
10	E13286	Nut, Stover Lock, 1/2"-13	2
11	E13287	Nut, Hex, 1/2"-13	2
12	E13288	Nut, T-Slot	2
13	E13289	Assembly, Axle Bracket	2
14	E13290	Spacer, Axle	2
15	E13250	Assembly, Wheel	2
16	E13291	Pin, Cotter	2

DRIVE ASSEMBLY PARTS

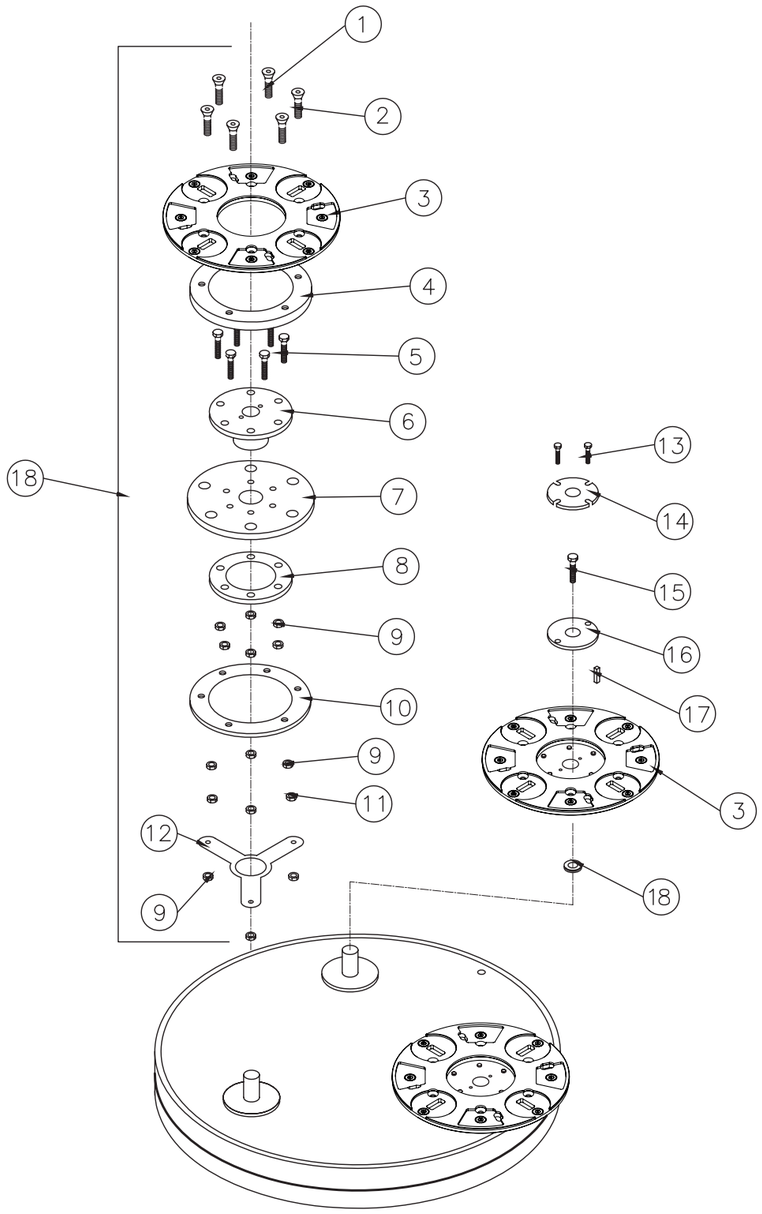


DRIVE ASSEMBLY PARTS LISTING

Number	Part#	Description	Qty.
1	E13292	Assembly, Gear Drive	1
2	E13286	Nut, Stover Lock, 1/2"-13	4
3	E13281	Washer, Flat, 1/2"	8
4	E13293	Belt	1
5	E13280	Screw, Hex Cap, 1/2"-13 x 2"	4
6	E13294	Tensioner, Belt	1
7	E13295	Screw, Flat Hd Soc, 1/2"-13 x 1.25"	4

Number	Part#	Description	Qty.
8	E13296	Screw, Hex Cap, 7/16"-20 x 1"	1
9	E13297	Washer	1
10	E13298	Pulley, Drive	1
11	E13299	Key, 1/8"	1
12	E13300	Bearing Flange	2
13	E13301	Bracket, Support	1
14	E13281	Washer, Flat, 1/2"	1

DIAMOND DRIVER PARTS

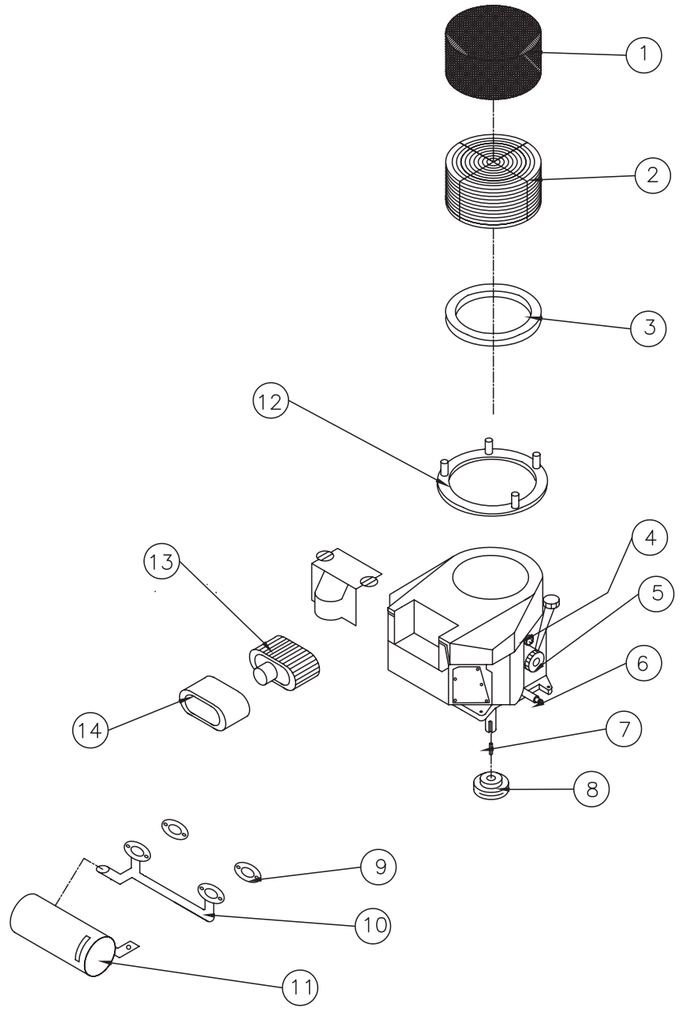


DIAMOND DRIVER PARTS LISTING

Number	Part#	Description	Qty.
1	E13316	Screw, Flat Hd Soc, 3/8"-16 x 2.25"	3
2	E13317	Screw, Flat Hd Soc, 3/8"-16 x 2.50"	3
3	E84129	Plate, Drive	3
4	E13319	Spacer, Mount	3
5	E13036	Screw, Hex Cap, 3/8"-16 x 1.25"	18
6	E13320	Hub	3
7	E13321	Plate, Flex	3
8	E13322	Ring, Hub	3
9	E13284	Nut, Stover Lock, 3/8"-16	36

Number	Part#	Description	Qty.
10	E13324	Ring, Mount	3
11	E87643	Nut, Hex, 3/8"-16	9
12	E13325	Strap, Safety	3
13	E13326	Screw, Hex Cap, 5/16"-18 x 1"	6
14	E13327	Plate, Shaft Lock	3
15	E13036	Screw, Hex Cap, 3/8"-16 x 1.25"	3
16	E13328	Plate, Shaft End	3
17	E13308	Key, 1/4"	3
18	E13330	Seal, Shaft	3

KAWASAKI 603CC ENGINE PARTS

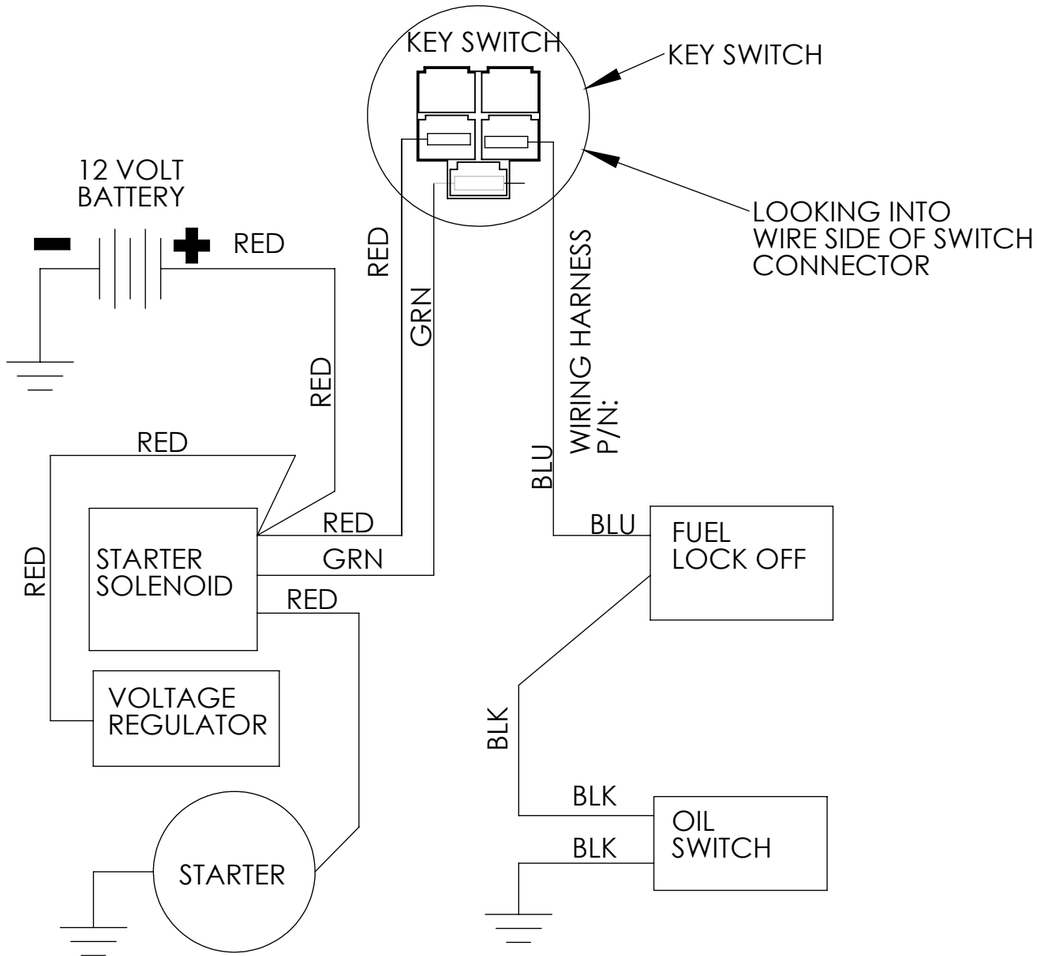


KAWASAKI 603CC ENGINE PARTS LISTING

Number	Part#	Description	Qty.
1	E12360	Filter, Foam Hat	1
2	E13303	Screen, Debris	1
3	E13304	Seal, Foam Hat	1
4	E85481	Switch, Oil Pressure	1
5	E88475	Filter, Oil	1
6	E85461	Valve, Oil Drain	1
7	E13308	Key, 1/4"	1

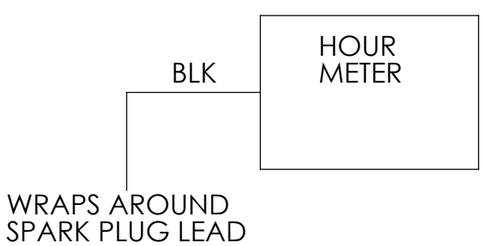
Number	Part#	Description	Qty.
8	E13309	Clutch, Centrifugal	1
9	E13310	Gasket, Exhaust Manifold	2
10	E13311	Manifold, Exhaust	1
11	E13312	Muffler, Catalytic	1
12	E13313	Adapter, Debris Screen	1
13	E88325	Element, Air Filter	1
14	E88478	Pre-Filter, Foam	1

ELECTRICAL WIRING DIAGRAM



REFER TO KAWASAKI
OWNERS MANUAL FOR
IGNITION AND CHARGING
CIRCUIT SCHEMATIC

LEGEND:
GRN = GREEN
BLK = BLACK
BLU = BLUE
RED=RED



EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Betco Corporation are pleased to explain the emissions control system warranty on your small off-road engine (SORE). In California and the other 49 States, new SORE must be designed, built and equipped to meet stringent anti-smog standards. Betco Corporation must warrant the emission control system on your SORE for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your SORE.
Your emission control system may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated emission-related components.
Where a warrantable condition exists, Betco Corporation will repair your SORE at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE

The emission control system is warranted for two years. If any emission-related part on your equipment is defective, the part will be repaired or replaced by Betco Corporation.

OWNER'S WARRANTY RESPONSIBILITIES

As the small off-road engine (SORE) owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Betco Corporation recommends that you retain all receipts covering maintenance of your SORE engine, but Betco Corporation cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.
As the SORE owner you should however be aware that Betco Corporation may deny your warranty if your SORE or its part has failed due to abuse, neglect, improper maintenance or unapproved modification.
You are responsible for presenting your utility equipment engine to a Betco Corporation distribution center as soon as the problem exists. The warranty repairs should be completed within a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact Betco Corporation at 1-888-GO-BETCO (1-888-462-3826).

Betco Corporation
400 Van Camp Road
Bowling Green, Ohio 43402
USA

GENERAL EMISSIONS WARRANTY COVERAGE

Betco Corporation warrants to the ultimate purchaser and each subsequent purchaser that the equipment is designed, built and equipped so as to conform with all applicable regulations; and free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in Betco Corporation's application for certification.
The warranty period begins on the date the equipment is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.
Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

1. Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by Betco Corporation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.
2. Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

EMISSION CONTROL WARRANTY STATEMENT

3. Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by Betco Corporation according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
4. Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.
5. Notwithstanding the provisions herein, warranty services or repairs will be provided at all of our distribution centers that are franchised to service the subject engines or equipment.
6. The SORE owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.
7. Betco Corporation is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.
8. Throughout the SORE warranty period stated above, Betco Corporation will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.
9. Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of Betco Corporation.
10. Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. Betco Corporation will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

WARRANTED PARTS

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if Betco Corporation demonstrates that the SORE has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts are covered:

1. Fuel system: carburetor, pressure regulator, and fuel lock off
2. Ignition system: spark plug, ignition coil assembly, and voltage regulator
3. Intake system: intake manifold and air filter
4. Exhaust system: exhaust manifold and catalytic converter
5. Miscellaneous items used in above systems: hoses, connectors, and assemblies.

BETCO US WARRANTY POLICY

10 year coverage

Subject to the conditions stated below, Betco warrants parts and labor on rotationally molded polyethylene tanks/housings and injection molded vacuum head assemblies to be free from defects in materials and workmanship for a period of ten years to the original purchaser.

3 Year Coverage

Subject to the conditions stated below, Betco warrants parts and labor on all other Betco components to be free from defects in materials and workmanship for a period of three years to the original purchaser.

- Lithium Ion battery for MotoMop™ is a full 3 years

1 Year Coverage

Subject to the conditions stated below, Betco offers a limited warranty on parts and labor on the following equipment: parts and accessories to be free from defects in materials and workmanship for a period of one year to the original purchaser.

- PowerUp™ 14 Upright Vacuum: #E29990-00
- Bac Pac Lite Vacuum: #85903-00
- FiberPRO® Floor Dryer: #85507-00
- WORKMAN™ Series Vacuums: #85024-00, #85025-00, #83012-00, #85027-00
- All Tools and Accessories
- All Battery Chargers
- Deep cycle batteries are pro-rated for 1 year

Allowable Travel Time Warranty Reimbursement:
Eligible equipment: All battery and propane powered equipment products. Warranty period: 90 days from date of sale to the original purchaser. A maximum 180 mile round trip at 50 cents per mile will be allowed for warranty consideration.

Propane Machine Warranty:
Kawasaki/Subaru engines are warranted by Kawasaki/Subaru for a period of 2 years against manufacturer defects. All other components (except wear items)* are warranted by Betco for a period of 3 years.

***Wear Items exempt from Warranty consideration include but may not be limited to: power cords, transport wheels, vacuum bags, belts, squeegee blades, pad drivers, clutch plates, handle grips, filters, screens, throttle cables, brushes and carbon brushes.**

Subject to the conditions and exceptions stated in this warranty, Betco warrants the Betco products to be free from defects in material and workmanship, under normal use and service, for the periods listed under the warranty policy to the original purchaser. At any time during the warranty period, Betco will furnish replacement parts for the Betco parts to the original purchaser. Such parts will be furnished and charged including transportation costs, to the original owner through any Betco authorized Service Distributor. If the original part is returned within the warranty policy period from date of delivery for inspection by Betco and is found to be defective the owner will be credited for the cost of replacement parts plus shipping and handling. Replacement parts that have become defective through wear or abuse are not included in this warranty.

This warranty does not apply to damage or defect caused by accident, misuse. Negligence, fire, or to any Betco product which has been serviced or repaired by other than an authorized Betco Service Distributor or Betco factory personnel. This warranty is void if products are used for any purpose other than that which was intended. There are no other warranties expressed or implied. In no event shall Betco be liable for incidental or consequential damages or any damage to person or property. (Please note some states do not allow the exclusion or limitations for incidental and consequential damages).

400 Van Camp Road • Bowling Green, Ohio 43402
Customer Service: 888-GO-BETCO • Fax: 800-445-5056 • Technical Service: 877-856-5954 • www.betco.com
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