KRENDL™

The Innovator in Insulation Equipment

# OWNERS MANUAL

## GV400-IDI

QUALITY · RELIABILITY · DURABILITY · SERVICE · KRENDL Performance

## 65 YEARS OF AMERICAN INGENUITY

KRENDL MACHINE COMPANY • 1201 SPENCERVILLE RD
DELPHOS, OHIO 45833 • TELEPHONE 800-459-2069 • FAX 419-695-9301
E - MAIL: krendl@krendlmachine.com • WEB SITE: www.krendlmachine.com

**CONGRATULATIONS ON YOUR PURCHASE OF KRENDL EQUIPMENT**

# MODEL GV400-IDI
# OWNER'S MANUAL

FOR ASSURED SAFETY AND CONFIDENCE, PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLING AND OPERATING YOUR MACHINE.

**E-MAIL ADDRESS IS: krendl@krendlmachine.com**
**WEB SITE IS: www.krendlmachine.com**

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# Preface

Thank you for purchasing **KRENDL INSULATION MOVING EQUIPMENT.** With over sixty five years experience in manufacturing insulation moving equipment, we have designed and built your equipment with the highest quality to provide years of reliable service.

This manual has been prepared to help you obtain the maximum efficiency and service from your Krendl equipment. The machine is designed to move insulation with the utmost in dependable performance. Our primary objective is to build equipment which will provide complete satisfaction.

Since Krendl Machine Company does not manufacture or sell insulation, our interest lies only in the proper performance of the equipment we manufacture. We make no recommendations or guarantees concerning various insulation.

## CAUTION:

This manual contains important information regarding the **safe** assembly and operation of your machine. We urge you to read it carefully and follow the instructions provided. If your questions are not answered in this manual, please contact us. We want you to be able to operate this unit safely and confidently.

## FILL IN AND RETAIN:


Krendl Machine Company
1201 Spencerville Rd
Delphos, Ohio 45833 U.S.A.

Telephone: 800-459-2069
Fax: 419-695-9301
E-mail: krendl@krendlmachine.com
Web Site: www.krendlmachine.com


For your protection in the event of theft or loss, please fill in the information requested for your own records. This information will be needed for warranty repairs. You may also want to attach a copy of your invoice.

Machine model number_____

Serial number_____

Date of purchase_____ Supplier / Distributor_____

# General Safety Information

**Important:** Read **all** instructions **before** operating this equipment. This equipment can be potentially dangerous and must be used in strict accordance with instructions.

**Disclaimer Notice:** The manufacturer will not be legally responsible for any injury or damage resulting from the improper use of this equipment or the failure to follow instructions.

## General Safety

- Read this manual carefully and become familiar with your equipment. Know its applications, limitations, and any operational hazards.
- This equipment was designed and manufactured for specific applications. Do not attempt to modify the unit or utilize it for any application in which it was not intended. If you have any questions about your intended use or the machines suitability, ask your supplier/distributor or consult the factory. Krendl Machine Company can not anticipate every circumstance that might involve a hazard. For that reason, warnings in the manual and warning tags and decals affixed to the unit, are **not** all-inclusive. Do not handle, operate, or service the unit by a procedure or method not specifically recommended by the manufacturer.

## Electrical Safety

- The **National Electric Code** (NEC) in the United States and many international electrical codes require frame and external electrically conductive parts of this machine to be properly connected to an approved earth ground. Local electrical codes may also require proper grounding of machine. Consult with local electricians for grounding requirements in your area.
- Take care and follow these instructions when removing or installing the battery or electrical burn could occur. When removing battery, disconnect negative cable first followed by positive cable. When installing battery, connect positive cable first followed by negative cable.
- Reference NFPA 79, 70E, or OSHA safe work practices when performing energized work procedures.

## Safety/Caution

- **Be Safe** - **ALWAYS** remove key from ignition and disconnect black negative battery cable before performing any maintenace or service to vacuum.
- **Be Safe** - Keep hands, loose clothing, jewelry and hair away from moving parts.
- **Be Safe** - Make sure all guards are in proper place **before** operating vacuum. Guards and safety devices/switches should not be removed, modified or by-passed.
- **Be Safe** - Do not remove fan chamber cover when key is in the **on** position.
- **Be Safe** - Keep work area clear of debris. Do not use vacuum to move stones, nails, or any other foreign debris.
- **Be Safe** - Consult a qualified technician to answer questions **before** attempting to service unit, as injury may result.
- **Be Safe** - Wear proper safety equipment, including protective gear, such as respirators, eye and ear protection.
- **Be Safe** - Use proper and secure clamping method for all insulation hoses to prevent uncontrolled stream bursts around operator.
- **Be Safe** - Do not operate machine alone.
- **Be Safe** - Do not leave machine unattended and energized.
- **Be Safe** - Turn machine off and disconnect battery before clearing jam or attempting to remove any object in the fan chamber.
- **Be Safe** - Use proper lifting when moving insulation and loading machine.
- **Be Safe** - Violation of the Owner's Manual or safety precautions may void warranty.

## Make Sure!

- Vacuum is sitting on level surface or engine failure may occur.
- Both inlet and outlet hoses are attached and pushed on all the way to actuate safety switches, then secured with hose clamps before operating.
- Fan chamber is empty of foreign debris **before** starting as this can bind and stall your machine or damage the fan.
- Fan chamber cover is in place and properly secured before turning vacuum on.
- Vacuum is turned off **immediately** if hose is plugged.
- Vacuum is turned off **immediately** if there is excessive vibration as the fan may be out of balance.
- Vacuum is placed in an open area so that it receives "fresh air" and allows hot air from the engine to exhaust.

# Decals

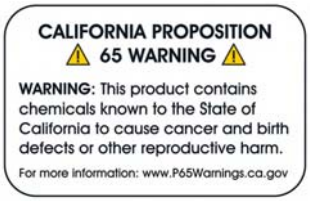
Rotating fan can be dangerous! Clothes, hair, hands, etc. can get sucked into vacuum chamber. Properly attach hoses before operation. Failure to do this could cause serious injury or death.

Rotating parts can be dangerous! You can snag clothes, hair, hands, etc. This can cause serious injury or death.

Manufacturer information is provided here along with machine model and serial number.

During operation, this machine is loud. Wear hearing protection. Failure to do this could result in hearing loss.

During operation if engine is off, key should be in off position to perserve battery.

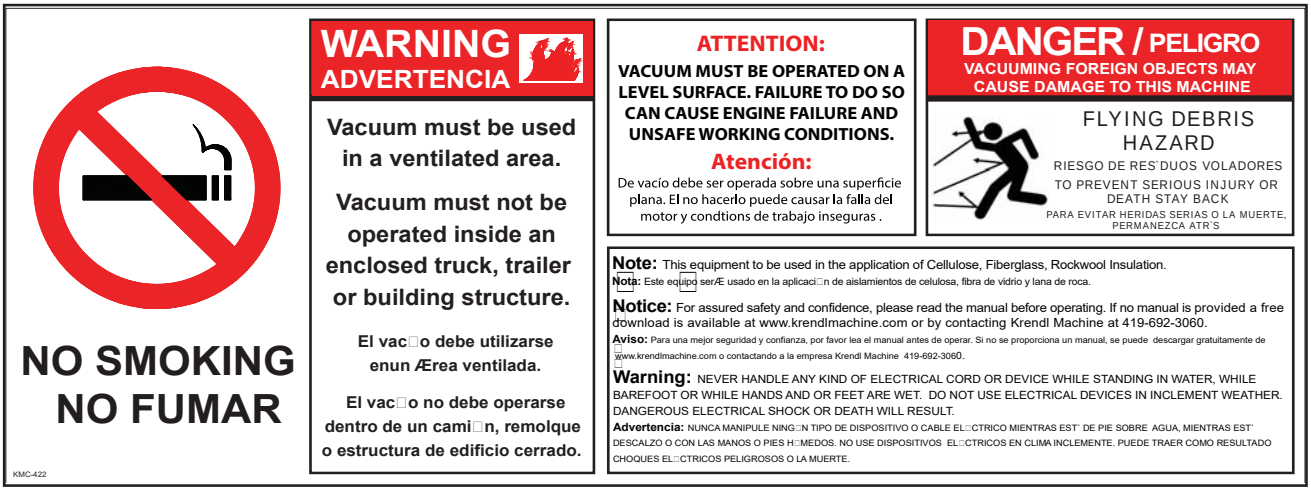



Do not breathe engine exhaust. Failure to do this could cause serious injury or death.

Indicates that the engine requires fresh air. Supplying the engine with fresh air will result in better performance and longer life.

Hoses must be against the lever to depress safety switch for machine to run.

During operation, this area of machine is hot! Be careful not to touch. This can cause serious burns.




Do not smoke around machine. Machine contains a flammable liquid. Failure to do this could cause serious injury or death.

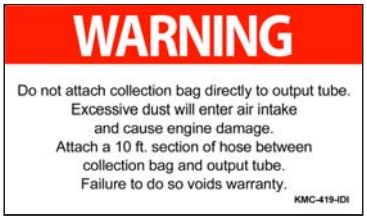
Indicates machine must be used in a ventilated area and not in an enclosed truck trailer or structure.

During operation machine must be on a level surface or engine failure may occur.

Identifies what type of insulation should be used with this machine and that the manual should be read before operating. Warns to be careful around electrical components! This can cause serious injury or death.

During operation machine can eject flying debris. Wear appropriate safety equipment.

Vacuum fan is not covered by warranty.




Collection bag must be attached properly to reduce dust or engine failure may occur.

Vacuum must be placed in an open area. Failure to do this could cause serious injury or death.

KMC-01234

Part number for identification and tracking.

Rotating parts move in this direction.

Indicates which employee inspected equipment and on what date.

Indicates that Krendl Machine Company is in compliance with EPA codes.

## Returned Goods Procedure

IF MACHINE WAS NOT PURCHASED DIRECTLY FROM KRENDL MACHINE COMPANY, CONTACT YOUR SUPPLIER / DISTRIBUTOR.

When returning products to Krendl for repair, first obtain a return goods authorization, at which time you will be given shipping instructions. The product must be shipped **PREPAID**:

**Krendl Machine Company**
1201 Spencerville Rd
Delphos, Ohio 45833 U.S.A.

Telephone: 800-459-2069
Fax: 419-695-9301
E-mail: krendl@krendlmachine.com
Web Site: www.krendlmachine.com

Once the unit is received, it will be inspected. In-warranty units will be repaired and returned immediately. An estimate of repair charges will be provided for out-of-warranty units.

## Service

See an Authorized Briggs & Stratton, Kohler or Honda Service Dealer. Each one carries a stock of Genuine Parts and is equipped with special service tools. Trained mechanics assure expert repair service on all these engines. Only dealers advertising as "Authorized" are required to meet these standards.

You may locate your nearest Authorized Service Dealer on the web at www.briggsandstratton.com, www.power.kohler.com, www.engines.honda.com or your local phone directory under "Engines, Gasoline" or "Gasoline Engines," or "Lawn Mowers" or similar category.

## Specifications

| | |
|---|---|
| **MODELS:** | GV400 |
| **HEIGHT:** | 50" (127 cm) |
| **WIDTH (DEPTH):** | 40 1/2" (103 cm) |
| **LENGTH:** | 45 1/2" (116 cm) |
| **WEIGHT:** | 478-500 pounds (217-227 kg)<br>Depending on what engine was ordered |

**BEFORE YOU RUN THIS MACHINE...*PLEASE READ THE REST OF THIS MANUAL!!***

# WARRANTY

**Krendl Machine Company (Company) warrants to each original purchaser (Buyer) of its machines that such products will be free of manufacturing defects for a period of 2 years from the date of shipment to the Buyer. (This does not include accessories, pumps, blowers, wall scrubbers, etc.)**

**No warranty is made with respect to:**

1. **Components or accessories manufactured and warranted by others. Warranties for purchased component parts as supplied from vendor such as engine, electric motor, blower, gearbox, transmission, etc., if furnished by the manufacturer of the component, are on file at the Company's main office and copies will be furnished at request of Buyer. Component(s), shipping costs prepaid, shall be sent to Company who in turn shall forward to vendor for evaluation and warranty determination.**
2. **Any defect caused by repair, alteration and/or adjustment performed by Buyer or customer/vendor of Buyer without the express written authorization of the Company.**
3. **The labor costs of replacing parts by parties other than the Company.**
4. **Any machine that has not been operated and / or maintained in accordance with normal industry practice and the written recommendations of the Company. (e.g. machine operated with an improperly sized, worn or damaged hose, improper or inattention to preventative maintenance, etc.)**
5. **The product has been subjected to misuse, negligence or accident or results of any application or use of the blowing equipment not in accordance with the Company recommendations.**

**This limited warranty does not cover the free replacement of component parts that become inoperative due to wear and usage and need to be replaced on a regular basis, including but not limited to: airlock seal(s), agitator(s), shredder(s), auger(s), fuse(s), switch(es), clutch(es), hose(s), shaft seal(s), chain(s), belt(s), sprocket(s), pulley(s), bearing(s), cable(s), battery(ies), filter(s), fan(s), etc.**

**The Company's obligation under this warranty is limited to repairing or replacing (at Company option) any part that is determined by the Company to be suffering from a manufacturing defect. The Company (at Company option) will provide any required parts and labor to the Buyer. If the equipment or parts must be returned to the Company for repair, all transportation costs shall be the Buyer's responsibility.**

**THIS LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER GUARANTEES AND / OR WARRANTIES, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY. NO WARRANTY, EXPRESS OR IMPLIED, OTHER THAN THE AFORESAID WARRANTY IS MADE OR AUTHORIZED BY COMPANY. COMPANY SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES TO PROPERTY OR INJURY TO ANY PERSON OR COSTS ASSOCIATED WITH LOSS OF PRODUCTION RESULTING IN LOSS OF REVENUE, PROFITS OR LOSS OF EQUIPMENT THROUGH THE USE OF THIS EQUIPMENT.**

**Note: Special job circumstances incurring costs for specialized repair and next day delivery of parts will not be reimbursed by the manufacturer unless authorized by factory.**

# Basic Components

This is a view of the basic components of your vacuum. It shows the location of each item and gives the function of each. Use this as a guide throughout the manual. (See Illust. A)

**A) STAND** — Mobile frame unit that supports the motor, battery, and fan chamber.

**B) ENGINE** — 38-40HP engine provides power to the fan.

**C) FAN** — Unit that produces air current or vacuum.

**D) FAN CHAMBER** — Protective housing that provides an enclosed air space for the fan to create a vacuum.

**E) FAN CHAMBER COVER** — Provides access to the fan for general maintenance.

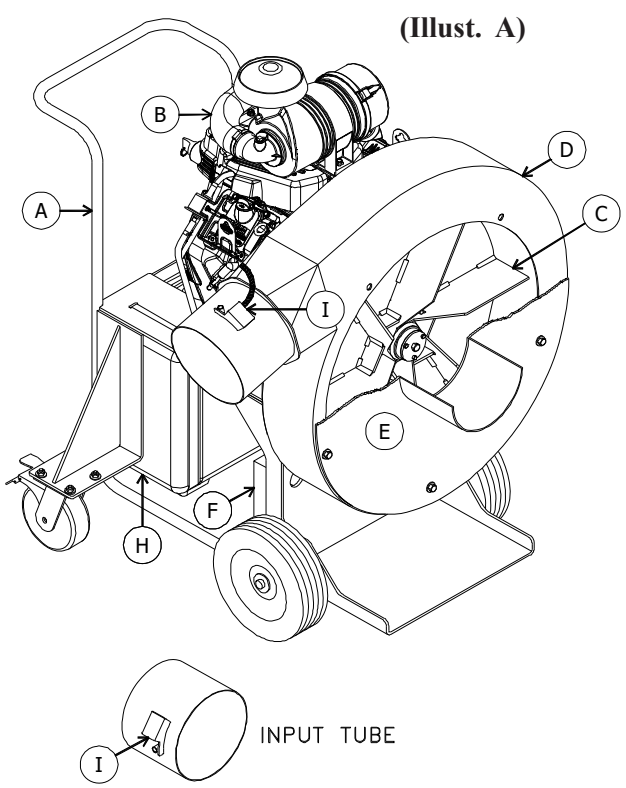
**F) BATTERY** — Supplies power for the electric start on the engine.

**G) HOUR METER / TACHOMETER** — Monitors the use and speed of the engine. (Not Shown)

**H) FUEL TANK** — Provides the fuel necessary to run the machine.

**I) LIMIT SWITCHES (2)** — Safety devices located on the input and output tubes to ensure hoses are attached properly. These switches must be engaged to allow engine to start.

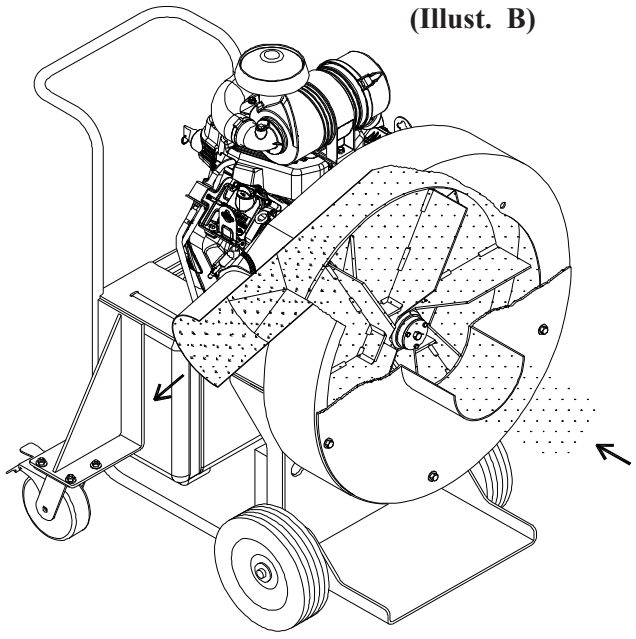
**(Illust. A)**




# Theory of Operation

This unit is designed to move all existing attic loose fill insulation, batt insulation and new insulation materials from the job site and deliver them directly to a designated area such as a filter bag, dumpster, etc. (See Illust. B)

**(Illust. B)**

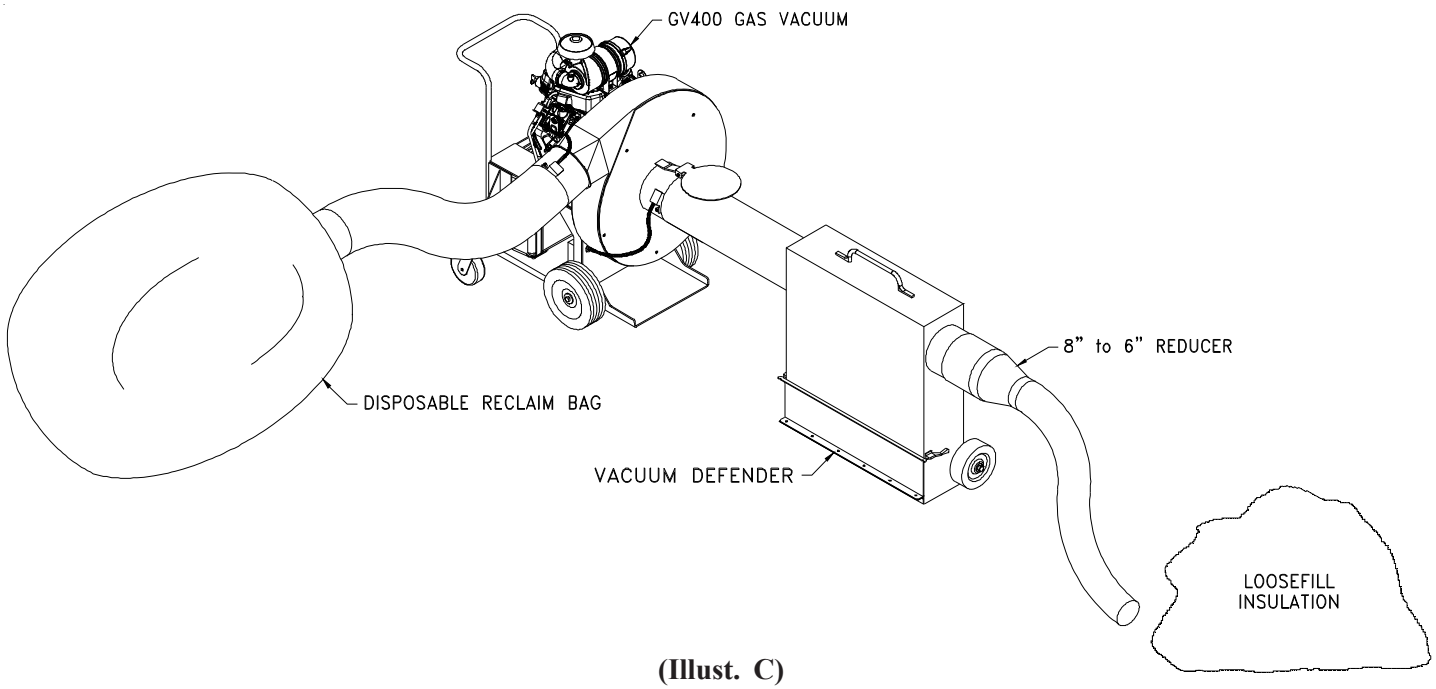


## Machine Hook-up

### Hook-up for Loosefill Insulation Removal:

This unit comes ready for connection to the Vacuum Defender and 6" insulation hose when used for loosefill insulation removel with the use of a 8" to 6" reducer shown in (Illust. C). **Note: Hose clamps are to be utilized with all hose connections to prevent air leakage and insure operator safety. Correct use of clamps also helps to prevent hose plugging.**

1.) **For hook-up to the Vacuum Defender and GV100 (bag removal).** Connect 12 1/2' of hose from gas vacuum outlet to reclaim bag inlet. Connect 12 1/2' of hose from gas vacuum inlet to vacuum defender outlet. Connect hose to the vacuum defender inlet. Secure all hose connections with hose clamps. (See Illust. C)

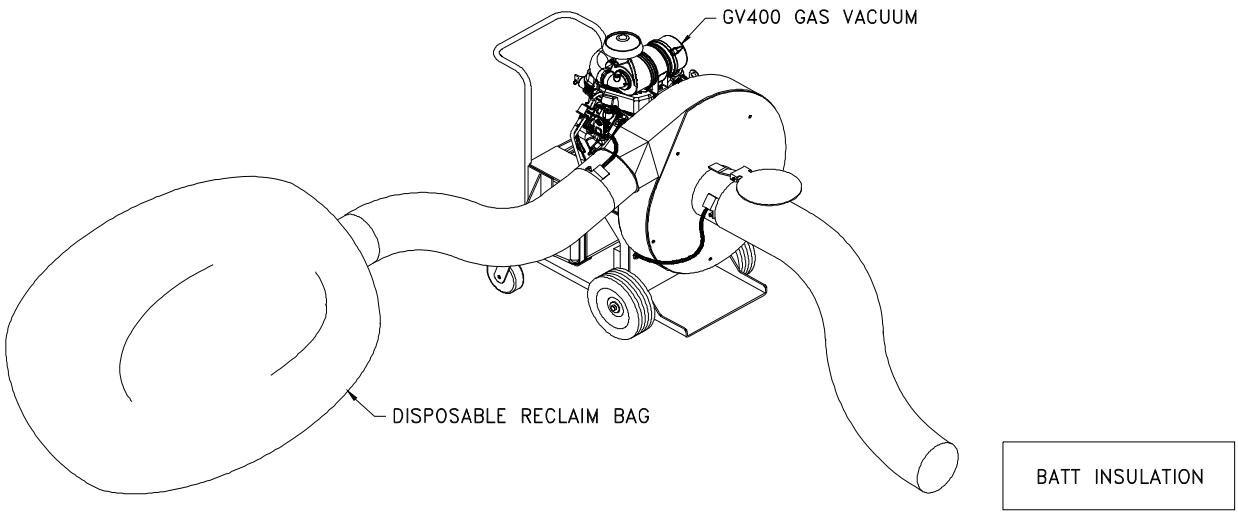



**(Illust. C)**

### Hook-up for Batt Insulation Removal:

This unit provides a direct connection to 8" insulation hose when used for batt insulation removal. (Illust. D). **Note: Hose clamps are to be utilized with all hose connections to prevent air leakage and insure operator safety. Correct use of clamps also helps to prevent hose plugging.**

1.) **For hook-up to the GV100 (bag removal).** Connect 12 1/2' of hose from gas vacuum outlet to reclaim bag inlet. Connect hose to the gas vacuum inlet. Secure all hose connections with hose clamps. (See Illust. D)




**(Illust. D)**

⚠ At all times keep your hands, clothing, foreign objects, etc. away from inlet and discharge of your gas vacuum.

⚠ Never operate vacuum without hoses attached.

⚠ **Note: The end user should perform a risk assessment when first using this equipment. The end user has knowledge of conditions the equipment is used in. Therefore, the end user can ensure that necessary control measures be implemented before equipment use. (Follow all local, state, federal, and/or DSEAR requirements.)**

## Machine Start-up

1.) Place vacuum on level surface outside where the engine can receive fresh air and expel hot exhaust.
2.) Check the engine oil level
3.) Hook up hoses to the inlet and discharge, secure with clamps before operation.
4.) Move throttle control to idle (slow) position.
5.) Turn fuel shut-off valve on.
6.) Turn key to start position (repeat until engine starts).
7.) Move throttle to appropriate operating speed.

## Machine Shutdown

1.) Allow plenty of time for insulation hose to empty.
2.) Move throttle control to slow position (give the fan time to slow down).
3.) Let engine cool down for 2 minutes before shutting off.
4.) Turn key to off position and remove from switch.
5.) Close fuel shut-off valve. **Note: If fuel shut-off valve is not closed, leakage may occur especially when transporting unit.**

See engine operation manual for additional starting and stopping instructions.

# TROUBLE SHOOTING

**Note: Whenever vacuum chamber cover is off, make sure key is taken out of the ignition switch and red positive cable is disconnected from battery.**

| Problem | Corrective Action |
|---|---|
| 1) Gas vacuum will not start. | • Check engine oil level - (if low, unit will not start).<br>• Check engine fuel level.<br>• Make sure there is no debris in the fan chamber impeding the motion of the fan.<br>• Battery is low or dead. Battery may need charged or replaced. If the battery is ok, electric starter may need serviced. (See engine operations manual.)<br>• Make sure spark plug wires are attached.<br>• Make sure fuel shut off valve is open.<br>• Verify hoses are installed and limit switches are engaged.<br>• Make sure spark plugs are clean and the correct plug for the appropriate engine is used. (If engine is not running properly, refer to engine owner's manual for proper troubleshooting.) |
| 2) Excessive vibration. | • Make sure unit is sitting on a level surface.<br>• Make sure fan is properly secured to motor shaft.<br>• Check fan for damaged fins.<br>• Make sure there is no major insulation build up on the fan and in the chamber.<br>• Fan may be out of balance and need replaced.<br>• Loose bolts on fan chamber cover. |
| 3) Loud knocking or squealing. | • Make sure fan is properly secured to motor shaft.<br>• Make sure there is no foreign debris or insulation build up in the fan chamber. |
| 4) Gas vacuum loses horsepower. | • Make sure there is no debris in fuel tank and fuel filter. Clean or replace.<br>• Make sure there is no major insulation build up on the fan and in chamber.<br>• Make sure air filter is clean, replace if necessary. |
| 5) Gas vacuum engine is stalling, smoking, or running irregularly. | • Check engine fuel level - (Low fuel or no fuel).<br>• Make sure fuel shut off is completely open.<br>• Make sure gas vacuum is setting on level ground.<br>• Improper fuel may have been used. **Use lead free gasoline with a minimum of 87 octane. Do not use gasoline which contains Methanol. This will deteriorate the fuel line. Refer to owners manual.**<br>• Check for corrosion, build up, or foreign debris lodged in the float, pin, or seat.<br>• Make sure engine oil level is not overfilled.<br>• Make sure air filter is clean, replace if necessary. |

Periodic preventive maintenance will add years of life to your equipment. Reviewing the information in this manual will go a long way in reducing downtime and lost income.

## Krendl Machine Maintenance:
## Daily

See engine operation manual for additional engine maintenance instructions and illustrations.

- Clear insulation away from engine and muffler to avoid fire, ensure proper ventilation and reduce the chance of insulation getting in the fuel tank.
- Do not run vacuum inside of an enclosed box truck, trailer or building. Doing this will result in engine damage, exposure to carbon monoxide or fire.
  **Note: Debris can be sucked into the engine through the air intake and clog the cooling fins. (See Illust. E)**

**Briggs & Stratton**

Air Intake

Access clean out cover

**Kohler**

Air Intake

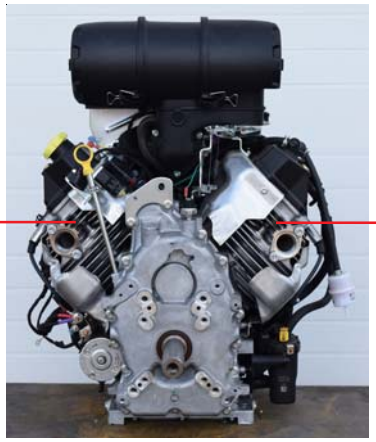
**Illust. E**

- Blow out engine cooling fins with compressed air. (See Illust. F) **Note: Failure to keep motor cooling fins clear of debris could result in castastrophic engine failure and voids warranty. (See Illust. G)**

**Briggs & Stratton**

Cooling Fins

**Kohler**



Cooling Fins

Cooling Fins

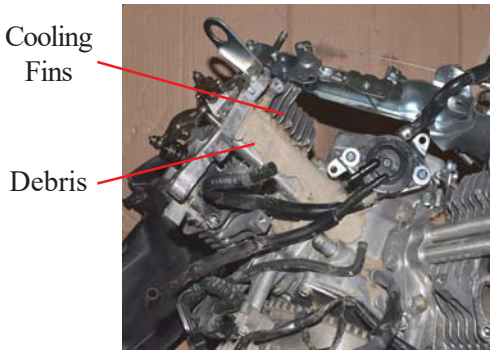
**Illust. F**

- Make sure vacuum is on a level surface **outside** where the engine can receive fresh air and expel hot exhaust.

## Weekly

- Remove air filter and blow with compressed air.
- Clean out fan chamber and remove insulation build up on fan.
- Inspect fan for wear and bent blades.

  **Note: Do not remove fan for general maintenance.**




**Illust. G**

## Monthly

- Check fuel tank and filter for debris and clean if necessary.
- Verify torque ratings on capscrews of taper lock bushing (192 inch pounds).

## Engine Maintenance:

## Important

- See engine manufacturer's manual for recommended maintenance schedule.

## Every 8 Hours or Daily (Refer to operator's manual)

- Check oil level (Use SAE SYNTHETIC MOTOR OIL 5W-30).
- Clean around muffler, springs and linkages.
- Inspect and blow out around cooling fins on cylinder heads.

## Briggs & Stratton Maintenance Schedule

| Intervals of 8 Hours or Daily |
|---|
| • Check the engine oil level.<br>• Clean the area around the muffler and controls. |
| **Intervals of 100 Hours or Annually** |
| • Clean or replace the air filter [1, 2].<br>• Clean the pre-cleaner (if installed)[1]<br>• Change the engine oil and filter.<br>• Replace the oil filter (if installed).<br>• Replace the spark plugs.<br>• Check the muffler and spark arrester (if installed).<br>• Service the exhaust system. |
| **Intervals of 250 Hours or Annually** |
| • Check the valve clearance. Adjust if necessary. |
| **Intervals of 400 Hours or Annually** |
| • Change the air filter[2].<br>• Replace the fuel filter, if installed.<br>• Service the air cooling system[1].<br>• Clean the oil cooler fins[1]. |
| **Intervals of 600 Hours** |
| • Replace the safety filter, if installed. |

1 Clean more frequently in dusty conditions or when many particles are in the air.

2 Every third air filter change, replace the inner safety filter (if installed)

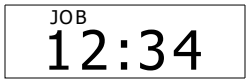
## Kohler Maintenance Schedule

| Maintenance Schedule |
|---|
| Weekly |
| • Check filter minder. |
| Every 25 Hours or Annually[1] |
| • Service/replace low-profile precleaner. |
| Every 100 Hours or Annually[1] |
| • Change oil. Oil filter is recommended. |
| • Remove cooling shrouds and clean cooling areas. Inspect for any debris visible through flywheel cooling holes (if equipped) and clean as necessary. |
| Every 150 Hours[1] |
| • Check heavy-duty air cleaner element. |
| • Replace low-profile air cleaner element. |
| • Replace unique Electronic Fuel Injection (EFI) fuel filter. |
| • Check oil cooler fins, clean as necessary. |
| Every 200 Hours |
| • Change oil filter. |
| Every 300 Hours |
| • Replace heavy-duty air cleaner element and check inner element. |
| Every 300 Hours[2] |
| • Change oil and filter (KOHLER PRO 10W-50 oil and KOHLER PRO filter only). |
| Every 500 Hours or Annually[1] |
| • Replace spark plugs and set gap. |
| Every 600 Hours |
| • Replace heavy-duty inner air cleaner element. |
| [1] Perform these procedures more frequently under severe, dusty, dirty conditions.<br>[2] Option only if using KOHLER® PRO oil and PRO filter. |

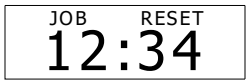
## Hour / Tachometer Job Timer Reset Instructions:

**Note: The total time of the hourmeter cannot be reset. Only the job timer of the hourmeter can be reset.**

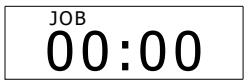
1) Press "Select" to toggle to "JOB" display




2) Press and hold "SELECT" button until display shows " RESET".

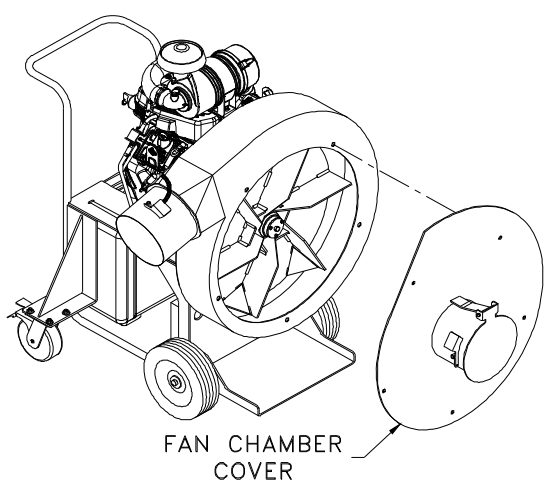



3) Release the "SELECT" button. The "JOB" display will reset to "00:00".

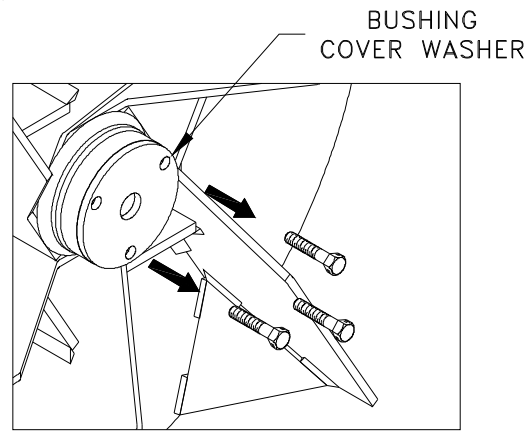


## Fan Removal for Replacement:

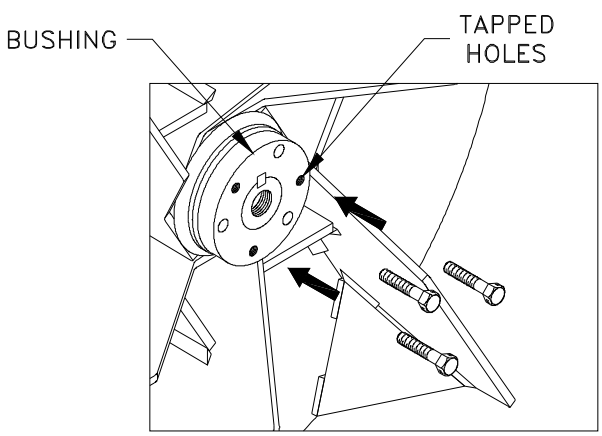
1. Remove fan chamber cover. (See Illust. H)
2. Remove the center crankshaft bolt. (See Illust. L)
3. Remove the three bolts from the bushing and remove the bushing cover washer. (See illust. I)
4. Insert the three previously removed bolts into the tapped holes in bushing. (See illust. J)
5. Tighten bolts progressively in a clockwise rotation placing equal amounts of torque until bushing disengages. **Note: Use a wrench or socket to tighten bolts. DO NOT USE AN IMPACT, FASTENER DAMAGE MAY RESULT. Note: You may need to smack fan blade near center with a hammer to help disengage bushing.**
6. Remove fan from crankshaft.




**(Illust. H)**




**(Illust. I)**

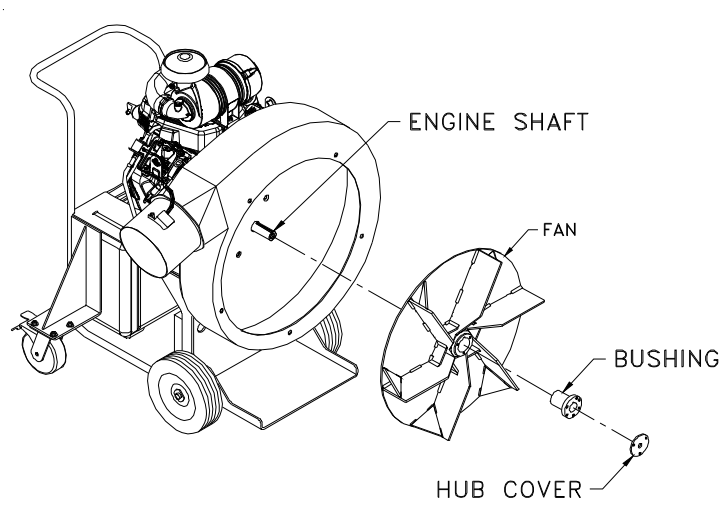



**(Illust. J)**

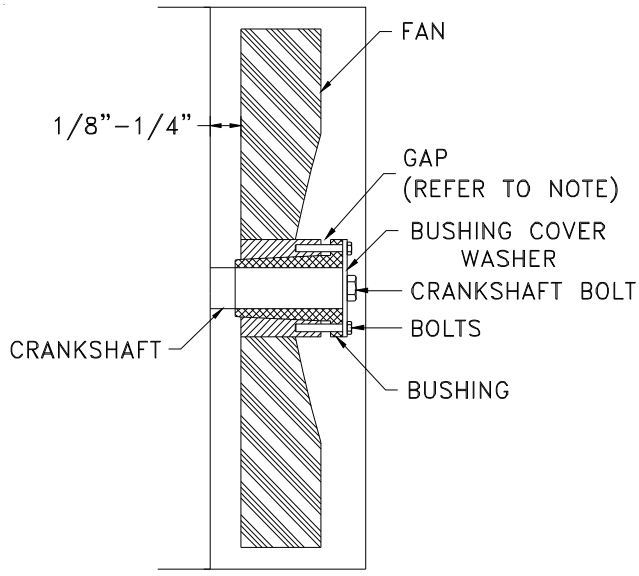
## Fan Installation for Replacement:

1. Remove bushing from fan hub and clean any debris or oil from bushing and hub center.
2. Rotate crankshaft so the keyway is in the 12 o'clock position and install crankshaft key.
3. Place new fan on crankshaft without bushing installed. (See illust. K)
4. Line up keyway slots on the bushing for the fan and crankshaft. Insert bushing into fan hub.
   **Note: Make sure fan blades are facing outward. There should be approximately an 1/8" to 1/4" gap between the fan and chamber so they don't rub. Check this in multiple locations around fan and chamber.** (See Illust. L)
5. Place bushing cover washer on hub of fan and start three bolts with lock washers by hand, turning them just enough to engage the threads. **Note: Apply a thin layer of red loctite on the bolt threads before installing and do not tighten at this time.** (See Illust. L)
6. Install the center crankshaft bolt and tighten to 80-100 foot pounds. **Note: Apply a thin layer of red loctite on the bolt threads before installing.** (See Illust. L)

7. Tighten all three bolts to 20-25 foot pounds progressively in a clockwise rotation until the bushing is fully seated in the fan hub. **Note: Use a wrench or socket to tighten bolts. DO NOT USE AN IMPACT, FASTENER DAMAGE MAY RESULT. Note: It may take several passes around to fully tighten bolts and seat bushing. Note: Do not attempt to pull bushing flange flush with hub end; some gap must remain between flange and hub after tightening.**
8. Install fan chamber cover and secure with bolts. (See Illust. H) **Note: One bolt is longer for the wiring harness retaining clamp.**

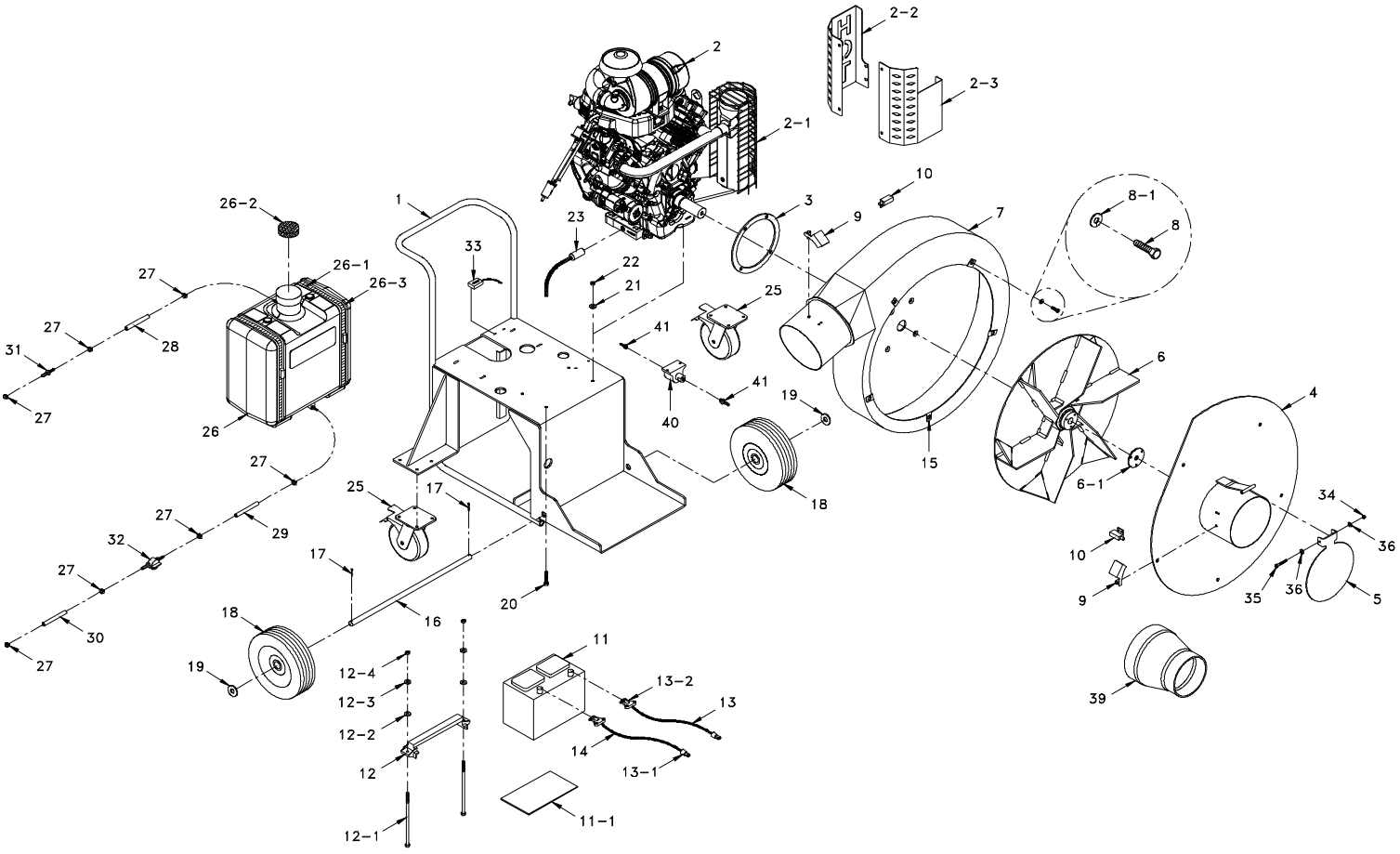



**(Illust. K)**




**(Illust. L)**

## GAS VACUUM




| Item# | Part# | Description |
|---|---|---|
| 1 | GV400-1 | Gas Vacuum Stand |
| 2 | GV400-5 | Motor, Gas Vacuum, 40HP (Briggs) |
| 2 | GV400-5K | Motor, Gas Vacuum, 38HP (Kohler) |
| 2-1 | GV400-5-1 | Muffler Kit (Briggs) |
| 2-1 | GV400-5K-1 | Muffler Kit (Kohler) |
| 2-2 | GV400-8-K | Guard, Muffler, Back (Kohler) |
| 2-3 | GV400-9-K | Guard, Muffler, Front (Kohler) |
| 3 | GV180-25 | Spacer, Chamber, Fan, Gas Vacuum (Kohler) |
| 4 | GV400-4-IDI | Cover, Fan Chamber |
| 5 | GV180-18-R1-IDI | Guard, Inlet |
| 6 | GV400-3-R4 | 24" Fan f/Gas Vacuum, Solid Back |
| 6-1 | GV400-11 | Bushing Cover Washer |
| 7 | GV400-2-IDI | Chamber, Fan, Gas Vacuum |
| 8 | FSB050 | 3/8-16 x 1" Hex Head (5) |
| 8-1 | FW006 | W 3/8" Lock Washer (3) |
| 9 | GV180-13-R1 | Actuator Lever, Safety (2) |
| 10 | LS200 | Switch, Limit (2) |

| Item# | Part# | Description |
|---|---|---|
| 11 | GV230-28 | Battery |
| 11-1 | GV230-17-R1 | Battery Pad |
| 12 | GV230-BHD | Bracket, Hold Down, Battery |
| 12-1 | FSB230 | Hold Down Bolt, SB 1/4-20 x 9" (2) |
| 12-2 | FW003 | 1/4 Flat Washer (2) |
| 12-3 | FW004 | W 1/4" Lock Washer (2) |
| 12-4 | FN007 | N 1/4-20 Nut (2) |
| 13 | GV230-18-R1 | Battery Cable, Black, 13" |
| 13-1 | ST301-6 | Ring Terminal (2) |
| 13-2 | ST301-3 | Connector, Battery Terminal, Negative |
| 14 | GV230-19-R1 | Battery Cable, Red, 27" |
| 14-1 | ST301-3-P | Connector, Battery Terminal, Positive |
| 15 | FC001 | U-Nut Spring Clip Steel (5) |
| 16 | GV400-6 | Wheel Axle |
| 17 | 150310 | Pin, Cotter, 1/8" x 2" (2) |
| 18 | W-10-SR | Wheel, 10", Solid Rubber (2) |
| 19 | FW030 | 3/4" Flat Washer-SAE (2) |
| 20 | FSB045 | SB 5/16-18 x 2" HMS (4) |
| 21 | FW003 | 1/4" Flat Washer (4) |
| 22 | FN014 | N 5/16-18 Lock Nut-Crimped (4) |
| 23 | GV400-5-4 | Oil Drain Hose (Briggs) |
| 23 | GV400-5K-2 | Oil Drain Hose (Kohler) |
| 24 | FSB011 | SB 7/16-14 x 1 3/4" FHSCS (4) (Not Shown) Note: Bolts connect the chamber to the motor. |
| 25 | W-6-SWDL | Wheel, 6" Swivel, Double Lock (2) |
| 26 | GV400-5-5 | Tank, 8 Gallon |
| 26-1 | KP1000-46 | Fuel Tank Hold Down Strap (2) |
| 26-2 | 28-57 | Strainer, Fuel |
| 26-3 | GV230-34 | Strap, Rubber (2) |
| 27 | 104 | Clamp, Pinch (7) |
| 28 | RM-OTH202-EPA | 1/4" Fuel Line, 41" Long |
| 29 | RM-OTH202-EPA | 1/4" Fuel Line, 31" Long |
| 30 | RM-OTH202-EPA | 1/4" Fuel Line, 4" Long |
| 31 | 23001 | Barb, 1/4" x 3/16" Splicer, Plastic |
| 32 | BS-230 | Fuel Shut Off, Inline 1/4" |
| 33 | GV400-5K-4 | Hour Meter / Tach (Kohler Only) |
| 34 | FN005 | N 1/4-20 Lock Nut-Crimped |
| 35 | FSB067 | SB 1/4-20 x 3 1/4" HMS |
| 36 | FW003 | 1/4" Flat Washer (2) |
| 37 | RM-OTH205-MI | Tubing, Flex/Split 3/8", 93" Long (Not Shown) |
| 38 | GV230-35 | Rubber Grommet, 1" (2) (Not Shown) |
| 39 | 681P-BLK | Reducer, 8" to 6", Black Plastic |
| 40 | GV400-5K-9 | Fuel Pump (Kohler) |
| 41 | GV400-5K-11 | Barb Hose 1/4-1/8 NPT Male (2) (Kohler) |

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