



KRENDL™

The Innovator in Insulation Equipment



OWNERS MANUAL MODEL #5200-D



55 YEARS OF AMERICAN INGENUITY

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CONGRATULATIONS ON YOUR PURCHASE OF KRENDL EQUIPMENT

**MODEL #5200-D
OWNER'S MANUAL**

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

WARNING: FOR ANY GAS OR DIESEL EQUIPMENT THAT IS NOT INSTALLED IN A TRUCK OR TRAILER BY KRENDL MACHINE, **WARRANTY WILL BE VOIDED IF NOT INSTALLED TO THE EXACT INSTRUCTIONS OF THIS MANUAL. (SEE INSTALLATION SECTION)**

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

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INTRODUCTION

Thank you for purchasing a **KRENDL INSULATION MOVING MACHINE**. With over fifty-five years experience in manufacturing insulation moving equipment, we have designed and built your machine with the highest quality parts and workmanship to provide years of reliable service.

This manual has been prepared to help you obtain the maximum efficiency and service from your Krendl equipment. This machine is designed to blow cellulose, fiberglass and rockwool into attics. Our primary objective is to build equipment which will provide complete satisfaction so that you may confidently recommend Krendl to others.

We do not manufacture or sell insulation. Our interest lies only in the proper performance of the equipment we manufacture. The insulation material manufacturer's instructions prevail when it comes to applying their product, since they guarantee the final results.

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

Upon receipt of this machine, check it carefully for any shipping damage. If there is damage or if any of the parts are missing, notify the delivery trucking company immediately and file a claim for damages, saving all packaging materials for inspection. Our warranty covers manufacturer's defects only. If Krendl Machine Company delivered or set up your machine and any parts are missing or damaged, notify the authorized representative before they leave.

Krendl Machine Company
1201 Spencerville Avenue
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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 in-warranty repairs. You may also want to attach a copy of your invoice.

Machine Model No. _____

Machine Serial No. _____

Engine Manufacturer _____

Engine Model No. , Serial No. _____

Blower Manufacturer _____

Blower Model No., Serial No. _____

Blower Clutch Manufacturer _____

Blower Clutch Model No., Serial No. _____

Airlock Clutch Manufacturer _____

Airlock Clutch Model No., Serial No. _____

UNPACKING AND INSPECTING EQUIPMENT

RECEIVING YOUR MODEL #5200-D KRENDL MACHINE:

Immediately check the condition of your Model #5200-D machine when it is received. It should be received in the same condition that it was shipped to you. **If there are any visible problems with your machine or any other items in the shipment, it is imperative that you place any claim with the delivery carrier.** Please save all packaging materials for inspection. The delivery carrier should also contact our office before leaving the premises to notify us of a claim. The ownership to your machine and all other items in the shipment were transferred to your name as soon as the shipment left our premises, thus it is your responsibility to contact us with any claims. Contact the truck line to arrange for an independent inspector to come out to inspect the damage and to prepare the inspection report. It is imperative that this inspection is done prior to unpacking or using any of the equipment. Please contact us for assistance or with any questions you may have regarding the claim process.


UNPACKING:


Handle all cartons with care to avoid damage from dropping or bumping. Completely remove machine from the packaging and from any shipping pallet or skid to which it might be attached. In addition, completely remove all shipping materials from inside the machine. Check that all parts are included as stated on the list below.

ACCESSORIES INCLUDED:

- 150' REMOTE CONTROL CORD
- MULTIMETER
- SPANNER WRENCH FOR BELT TENSIONERS
- #60 CHAIN MASTER LINK
- SECTION OF CHAIN FOR CHANGING SHREDDER DIRECTION
- 5/16 ALLEN WRENCH FOR ADJUSTMENT OF CHAIN IDLERS
- EXHAUST SYSTEM FOR ENGINE MODELS ONLY
- OWNERS MANUAL


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.

Unpacking

Handle cartons with care to avoid damage from dropping or bumping. Completely remove the machine from the packaging and from any shipping pallet or skid to which it may be attached. In addition, completely remove all shipping materials from the **inside** of the machine.

 **Important:** Please recheck inside the hopper for any loose items or damaged equipment. Injury may occur when equipment is started with foreign material in the hopper.

**General Safety**

1. Read this manual carefully and become familiar with your machine. It is important to know its applications, limitations, and any hazards involved prior to operating the machine.
2. This machine was designed and manufactured for blowing cellulose and fiberglass. Do not attempt to modify the unit or use it for any application it was not designed for. If you have any questions about your intended use or the machine's suitability, ask your dealer/distributor or consult the factory. The manufacturers could not possibly anticipate every circumstance that might involve a hazard. For that reason, warnings in the manual and warning tags or decals affixed to the unit, are not all-inclusive. If you intend to handle, operate, or service the unit by a procedure or a method not specifically recommended by the manufacturer, first make sure that such a procedure or method will not render this equipment unsafe or pose a threat to you and others.
3. Do not disable any of the safety features on the equipment. These features are for your protection and safety.
4. Read and obey all safety and operating instructions in the manual and on the machine.
5. Equipment is to be operated and/or maintained by TRAINED & QUALIFIED personnel ONLY!!
6. **BEFORE PERFORMING ANY MAINTENANCE ON THE MACHINE, YOU MUST FIRST:**
#1 TURN MAIN DISCONNECT SWITCH ON MACHINE TO THE "OFF" POSITION
#2 TURN THE ENGINES IGNITION TO THE "OFF" POSITION AND REMOVE KEY
#3 DISCONNECT THE BATTERY CABLE
7. Do not operate the machine without all guards and safety equipment installed in the proper location and in working order. Always follow the proper shut down procedures outlined in Item 6 when guards are removed from the machine or when compartment or electrical control doors need to be opened.
8. If a malfunction occurs while running the machine, turn it off immediately, follow the directions under item 6 and correct the problem prior to restarting the machine.
9. Keep body and all clothing away from rotating equipment. Rotating shafts can be dangerous.
10. Always wear proper safety equipment when operating the machine. This includes steel toed shoes, safety glasses and a respirator.
11. Under no circumstances should your hand, a stick or a broom be used to force material down into the hopper. The machine is a self feeding design and requires no outside assistance.
12. Stand on the floor, not a platform while operating the machine. The operator may lose balance and fall while loading bags of material.

All Model #5200 Machines are factory equipped with side, front, and main drive belt guards. The top of the machine is not guarded since it poses no safety threat for normal insulation blowing operations when mounted as shown in the installation guide. The machine is designed to be mounted in the van body of the contractor's truck and the rear of the machine against the wall of the van body.

Always turn the main power switch (located on the electrical box) to off and unplug the remote cord from the receptacle for any type of machine maintenance or adjustments. An additional safety feature is the ability to adjust the material slide gate from the outside of the machine. Rotate the adjustment handle clockwise to open the slide to the desired setting, no entrance into the machine is required.

All safety features are incorporated into the machine to protect everyone from serious injury. Operate your machine according to the outlined instructions in the manual with all guards in place and securely latched. Operation with any guards removed can result in injury to or loss of fingers, hands, arms, toes, feet, legs, hair, and even your eyes.

**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.
- Never handle any kind of electrical cord or device while standing in water, while barefoot or while hands or feet are wet. Dangerous electrical shock will result.
- Use a ground fault circuit interrupter (GFCI) in any damp or highly conductive area. (metal decking or steel work)
- Reference NFPA 79, 70E, or OSHA safe work practices when performing energized work procedures.

**Safety/Caution**

- **Be Safe** - Keep away from moving parts.
- **Be Safe** - Make sure all guards and hopper extensions are in proper place **before** operating machine. Guards and safety devices/switches should not be removed, modified or by-passed. Hands should never pass between rotating parts.
- **Be Safe** - Make sure remote control hand pendant switch is in **off** position **before** connecting the power supply to the machine.
- **Be Safe** - Make sure machine is properly grounded. Protect all electrical supply cords from sharp objects, moisture, and other potentially hazardous materials. Keep power cords in good repair. Electrical service must be performed by a qualified electrician.
- **Be Safe** - Disconnect power supply **before** inspecting or adjusting unit.
- **Be Safe** - Consult a qualified technician to answer questions **before** attempting to operate, or injury may result.
- **Be Safe** - **Emergency Kill Switch** - In case of emergencies, always use red stop button located on the front of Main Control Panel and on the side of the hopper. It will stop all feeding and agitation.
- **Be Safe** - Do not remove motors or lift hopper when unit is connected to power supply.
- **Be Safe** - Do not operate machine alone.
- **Be Safe** - Do not leave machine unattended and energized.
- **Be Safe** - Turn machine off and disconnect electricity before clearing and feeding jam or attempting to remove any object dropped in the hopper.
- **Be Safe** - Keep hands, loose clothing, jewelry and hair away from agitators, gears, chains and other moving parts.
- **Be Safe** - Use proper lifting when moving insulation and loading machine.
- **Be Safe** - Keep work area clear of debris.
- **Be Safe** - Wear proper safety equipment, including protective gear, such as respirators, eye and ear protection.
- **Be Safe** - Violation of the Owner's Manual or safety precautions may void warranty.

Make Sure!

- Hopper is empty of foreign objects **before** starting.
- Adequate electrical power is supplied or damage to unit will result.
- Machine must be on **before** adding insulation.
- Blower filter is kept clean and in place when blower is on.
- Machine is turned off **immediately** if hose is plugged, or blower will overheat.
- Blower must be on, when agitators are running, or machine will bind.
- Agitator motor is not run with hopper empty for more than a few minutes, or damage to seals will result.
- Sprockets, chains, belts and pulleys are correctly **aligned** and **tensioned**.
- Pieces of bag are **not** left in the machine as this can bind and stall your machine.
- This machine should only be used with good quality insulations that are dry, undamaged and that meet a certain industry specification or quality standards.

IF THERE ARE ANY QUESTIONS WITH YOUR KRENDL MACHINE, DO NOT HESITATE TO CONTACT US AT: 1-800-459-2069

DECALS

ALL FIBER MACHINES

IMPORTANT: READ ALL INSTRUCTIONS BEFORE OPERATING THIS UNIT. 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. (REFER TO ORIGINAL INSTRUCTIONS PROVIDED.)

SAFETY - CAUTION

- 1. BE SAFE -** KEEP AWAY FROM MOVING PARTS.
- 2. BE SAFE -** MAKE SURE ALL GUARDS AND HOOPER'S BARS ARE IN PROPER PLACE BEFORE OPERATING MACHINE. HANDS SHOULD NEVER BE BELOW HOOPER'S BARS.
- 3. BE SAFE -** MAKE SURE BLOWER MOTOR AND AGITATOR MOTOR SWITCHES ARE IN OFF POSITION BEFORE CONNECTING THE POWER SUPPLY TO THE MACHINE.
- 4. BE SAFE -** MAKE SURE MACHINE IS PROPERLY GROUNDED. PROTECT POWER CABLE FROM SHARP OBJECTS, MOISTURE, AND OTHER POTENTIALLY HAZARDOUS MATERIALS. KEEP POWER CABLE IN GOOD REPAIR. ELECTRICAL SERVICE MUST BE PERFORMED BY A QUALIFIED ELECTRICIAN.
- 5. BE SAFE -** DISCONNECT POWER BEFORE INSPECTION OR ADJUSTMENT TO UNIT.
- 6. BE SAFE -** DO NOT REWIND BLOWER OR HOOPER WHEN UNIT IS CONNECTED TO POWER SUPPLY.
- 7. BE SAFE -** CONSULT A QUALIFIED PERSON TO ANSWER QUESTIONS BEFORE ATTEMPTING TO OPERATE, OR REPAIR MAY BE NEEDED.

IMPORTANT

MAKE SURE - ADEQUATE ELECTRICAL POWER IS SUPPLIED OR DAMAGE TO UNIT WILL RESULT.

MAKE SURE - BLOWER FILTER IS KEPT CLEAN AND IN PLACE WHEN BLOWER IS ON.

MAKE SURE - BLOWER IS ON WHILE AGITATOR IS RUNNING, OR MACHINE WILL BIND.

MAKE SURE - BLOWER IS TURNED OFF IMMEDIATELY IF HOSE IS PLUGGED, OR BLOWER WILL OVERHEAT.

MAKE SURE - AGITATOR MOTOR IS NOT RUN WITH HOOPER EMPTY FOR MORE THAN A FEW MINUTES, OR DAMAGE TO SEALS WILL RESULT.

MAKE SURE - BELTS OR CHAINS ARE CORRECTLY ALIGNED AND TENSIONED.

TODAS LAS MÁQUINAS DE FIBRA

IMPORTANT: ES IMPORTANTE LEER TODAS LAS INSTRUCCIONES ANTES DE OPERAR ESTA UNIDAD. ESTE EQUIPO PUEDE SER POTENCIALMENTE PELIGROSO Y SE DEBE USAR Estrictamente de acuerdo con las instrucciones.

AVISO DE EXCLUSIÓN DE LEGAL: EL FABRICANTE NO SERÁ LEGALMENTE RESPONSABLE POR NINGÚN PERJUICIO O DAÑO RESULTANTE POR EL USO INAPROPIADO DE ESTE EQUIPO O LA INDEBERENDA DE LAS INSTRUCCIONES. (CONSULTE A LAS INSTRUCCIONES ORIGINALS SUMINISTRADAS.)

SEGURIDAD - PRECAUCIÓN

- 1. NO CORRER RIESGO -** MANTÉNGASE AJUSTADO DE LOS PARTES EN MOVIMIENTO.
- 2. NO CORRER RIESGO -** ASEGURESE DE QUE TODAS LAS PROTECCIONES Y LAS BARRAS DE LA TOLVA ESTÉN EN EL LUGAR CORRECTO Y ANTES DE OPERAR LA MÁQUINA. LAS MANOS JAMÁS DEBEN ESTAR POR DEBAJO DE LAS BARRAS DE LA TOLVA.
- 3. NO CORRER RIESGO -** ASEGURESE DE QUE LOS INTERRUPTORES DEL MOTOR DEL SOPLOADOR Y DEL AGITADOR ESTÉN EN LA POSICIÓN OFF ANTES DE CONECTAR EL SUMINISTRO DE ENERGÍA A LA MÁQUINA.
- 4. NO CORRER RIESGO -** ASEGURESE DE QUE LA MÁQUINA ESTE FUERA A TIERRA ADECUADAMENTE. PROTEJA EL CABLE DE ENERGÍA DE OBJETOS CORROSIVOS, HUMEDAD Y OTROS MATERIALES POTENCIALMENTE PELIGROSOS. CONSERVE LOS CABLES DE ENERGÍA EN BUENA FORMA. EL MANTENIMIENTO ELÉCTRICO DEBE ESTAR A CARGO DE UN ELECTRICISTA CALIFICADO.
- 5. NO CORRER RIESGO -** DESCONECTE EL SUMINISTRO DE ENERGÍA ANTES DE INSPECCIÓN O AJUSTE DE LA UNIDAD.
- 6. NO CORRER RIESGO -** NO INTENTE EL SOPLOADOR O LA TOLVA CUANDO LA UNIDAD ESTÁ CONECTADA AL SUMINISTRO DE ENERGÍA.
- 7. NO CORRER RIESGO -** CONSULTE A UNA PERSONA CALIFICADA ANTES DE INTENTAR OPERAR LA MÁQUINA O AJUSTAR PODEE LESIONARSE.

IMPORTANTE

ASEGURESE DE - QUE SE SUMINISTRE LA ENERGÍA ELÉCTRICA ADECUADA O SE DAÑARÁ EL EQUIPO.

ASEGURESE DE - QUE EL FILTRO DEL SOPLOADOR SE MANTENGA LIMPIO Y EN SU LUGAR CUANDO EL SOPLOADOR ESTE EN FUNCIONAMIENTO.

ASEGURESE DE - QUE EL SOPLOADOR Y MOTOR DEBEN ESTAR EN BUENA FORMA O LA MÁQUINA SE TAPONARÁ.

ASEGURESE DE - QUE EL SOPLOADOR SE DETIENE INMEDIATAMENTE SI LA MÁQUINA HA DEJADO DE SOPLOAR O SE REALENTA.

ASEGURESE DE - QUE EL MOTOR DEL AGITADOR NO FUNCIONE ANTES DE AÑADIR FIBRA.

ASEGURESE DE - QUE EL MOTOR DEL AGITADOR NO FUNCIONE CON LA TOLVA VACÍA MÁS QUE UNOS POCOS MINUTOS O SE DAÑARÁN LOS SELLOS.

ASEGURESE DE - QUE LAS CORRIENTES O CABLES ESTÉN CORRECTAMENTE ALINEADOS Y TENSIONADOS.

Krendl Machine Co.
1201 Spencerville Ave.
Delphos, OH 45833

TYPE 1
Indoor Use

Issue No. XXXXXXXX

E314782

Indicates that the electrical box on the machine is in compliance with UL codes.

INSPECTED BY

Indicates which employee inspected equipment and on what date.

FEED BLOWER OFF BLOWER

KMC-087

Indicates if blower is off, on, or on with agitator.

General safety information intended to reduce the risk of serious injury or death

KRENDL

ELECTRICAL MAINTENANCE

Krendl Machine Company, 1201 Spencerville Ave, Delphos, OH 45833 PH: 419-662-3060 Fax 419-695-0301

Daily:

1. Make sure main disconnect is off before turning generator on.
2. Turn main disconnect switch off before turning generator off.

Monthly:

1. Check for loose wire connections on main disconnect switch and tighten with screw driver.
2. Check for loose wire connections in electrical box and tighten with screw driver.

KRENDL

MANTENIMIENTO ELÉCTRICO

Krendl Machine Company, 1201 Spencerville Ave, Delphos, OH 45833 PH: 419-662-3060 Fax 419-695-0301

Diariamente:

1. Asegúrese de que el interruptor principal esté abierto antes de conectar el generador.
2. Abra el interruptor principal antes de desconectar el generador.

Mensualmente:

1. Verificar que no haya conexiones flojas en el interruptor principal y ajustarlas con un destornillador.
2. Verificar que no haya conexiones flojas en el tablero eléctrico y ajustarlas con un destornillador.

Electrical maintenance information and schedule provided here.



Keeping the filter clean will result in longer blower life and better performances.



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



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



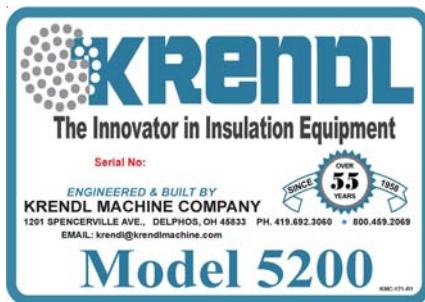
Emergency stop button for machine.



Identifies air adjustment control.



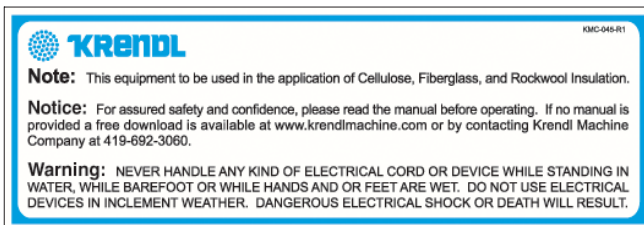
Opens and closes the material feed gate which in turn controls the production.



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



Made in the U.S.A.



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.



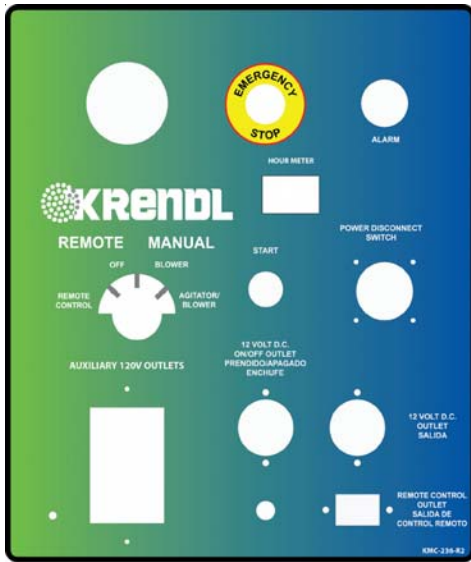
Operating machine at specified voltage will result in longer machine life and better performance.



Identifies position of material feed gate.



Part number for identification and tracking.



Indicates the controls that start, stop, and run the machine.

RECOMMENDED MACHINE SETTINGS				
*(These are recommended start settings. Settings may vary depending on material or conditions.)				
OPERATION	MATERIAL	GATE SETTINGS	SHREDDER SETUP	AIR BLEED PRESSURE
OPEN BLOW	CELLULOSE US GREENFIBER INS500-BL USG STABILIZED ATTIC INSULATION 3XLB	9"	CENTER DOWN	1.5 - 2.5 PSI
	FIBERGLASS	11"	CENTER DOWN	1.5 - 2.0 PSI
	ROCKWOOL	8 1/4"	UNI- DIRECTIONAL	2.75 - 3.25 PSI
SIDEWALL	CELLULOSE US GREENFIBER BL USG ALL BORATE STAB WALL INSULATION 3XLB	4"	CENTER DOWN	1.5 - 1.5 PSI
	FIBERGLASS	5 1/2"	CENTER DOWN	.75 - 1.25 PSI
	ROCKWOOL	6"	UNI- DIRECTIONAL	1.5 - 2.00 PSI

Indicates the settings used to achieve the desired output when using various materials.

KREN DL GENERAL MAINTENANCE				
DESCRIPTION	5200 DIESEL MACHINE			
	EACH SHIFT	40 HOURS	200 HOURS	1000 HOURS
TURN MAIN DISCONNECT SWITCH OFF BEFORE TURNING GENERATOR OFF (OPT)	X			
MAKE SURE MAIN DISCONNECT IS OFF BEFORE TURNING GENERATOR ON (OPT)	X			
CHECK GASKETS	X			
CHECK ENGINE FLUID LEVELS	X			
CHECK DRIVE ALIGNMENT & TENSION		X		
CHECK ENGINE EXHAUST HOSE		X		
SERVICE ENGINE AIR CLEANER		X		
CARTRIDGE & CLEAN ENGINE COOLING SYSTEM		X		
VISUALLY INSPECT COUPLING ELEMENTS FOR FATIGUE CRACKS (OVER 1/2")		X		
CLEAN BLOWER AIR FILTER		X		
CHECK BLOWER OIL LEVEL		X		
GREASE WHEEL BEARINGS (MOBIL MOBILITH SHC460)		X		
CHANGE ENGINE OIL (Needs to be changed after first 50 hours of operation and thereafter every 200 hours)			X	
GREASE BLOWER BEARINGS (MOBILITH AW2 (N62 grade #2))			X	
LUBRICATE DRIVE CHAINS WITH A DRY LUBRICANT			X	
GREASE SHREDDER, AIRLOCK, AGITATOR & JACK SHAFT BEARINGS (MOBILITH AW2 (N62 grade #2))			X	
CHECK FOR LOOSE WIRE CONNECTIONS ON MAIN DISCONNECT SWITCH, ELECTRICAL BOX AND TIGHTEN WITH SCREW DRIVER			X	
CHANGE BLOWER OIL (INCLUDE, refer to blower manual) (Needs to be changed after first 100 hours of operation and thereafter every 1000 hours)				X

SAFETY NOTE
WHEN MAINTENANCE IS TO BE PERFORMED ON THE MACHINE ALWAYS:
1) STOP THE ENGINE COMPLETELY.
2) TURN THE IGNITION TO THE "OFF" POSITION AND REMOVE THE KEY.

Machine maintenance information and schedule provided here.

CALIFORNIA
Proposition 65 Warning
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.
KMC-233

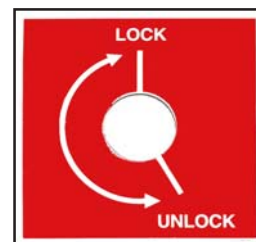
Do not breathe engine exhaust. Failure to do this could cause serious injury or death.



Rotating parts will be moving in this direction.



Keeping the door closed will keep bystanders safe from rotating parts.



Indicates if the latches on the access door are locked or unlocked



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

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.)

Warning: For any gas or diesel equipment that is not installed in a truck or trailer by Krendl Machine, warranty will be voided if not installed to the exact instructions of this manual. (See installation section).

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.

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 (RGA), at which time you will be given shipping instructions. The product must be shipped **PREPAID**:

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

Telephone: 419-692-3060
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.

SPECIFICATIONS

MODELS:	#5200-D
MACHINE:	14" Diameter x 18" Length airlock feeder electromagnetic clutches on agitator and blower in line helical gearbox (driving the machine)
HEIGHT:	83.00 inches
LOAD HEIGHT:	55.25 inches
WIDTH (DEPTH):	43.00 inches
LENGTH:	80.00 inches
WEIGHT:	2214 pounds
ELECTRICAL:	12VDC remote control system (7800 watt generator supplying 120VAC to convenience outlets & accessories)
BLOWER VOLUME:	250 CFM
BLOWER PRESSURE:	6.0 PSI maximum
HOSE OUTPUT:	4" diameter
MAXIMUM FEED RATES:	
<i>CELLULOSE:</i>	5200 lbs./hr.
<i>FIBERGLASS:</i>	2300 lbs./hr.

WARNING: Recommended hose size, type and length must be used to achieve maximum results. Krendl cannot guarantee performance of the #5200-D machine if hoses are undersized, worn, damaged, or hoses other than those we recommend are used.

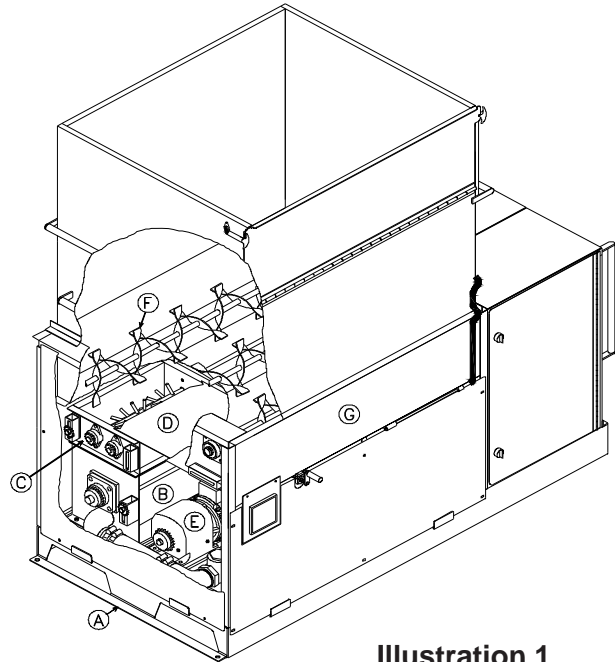
BEFORE YOU RUN THIS MACHINE...PLEASE READ THE REST OF THIS MANUAL!!

BASIC COMPONENTS

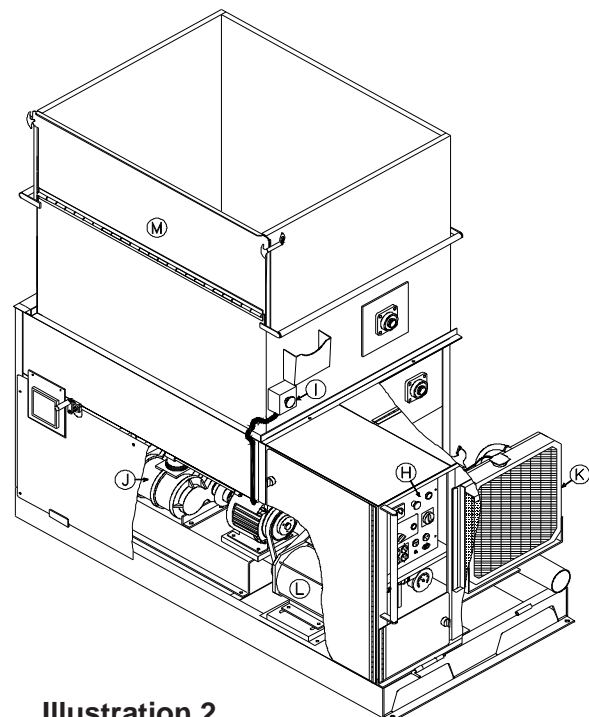
This is a view of the basic components of your Model #5200-D machine. It shows the location of each item and gives the function of each. Use this as a guide throughout the manual.

(Illustration 1)

- A) Base Unit** - Lower frame unit supporting blower box, speed reducer, motor, airlock and hopper.
- B) Airlock** - Traps air and insulation while providing a metered flow.
- C) Shredder System** - Increases production and coverage on all insulation products while reducing clumps that may exist in various insulations.
- D) Slidegate** - Meters the amount of insulation dropping into the airlock by controlling size of airlock opening.
- E) Speed Reducer** - Increases output power while decreasing speed of agitator/airlock drive motor.
- F) Agitator** - Conditions insulation in the hopper.
- G) Hopper** - Upper unit of machine holding insulation.

**Illustration 1****(Illustration 2)**

- H) Main Control Panel** - Connects with main power, allowing operation of unit at machine or Remote Cord.
- I) Kill Switch** - Safety device for immediate stopping of machine.
- J) Blower** - Provides the air necessary to move insulation from the airlock.
- K) Motor/Radiator** - Provides driving power for speed reducer, blower, generator, and agitator/airlock system.
- L) Generator** - Provides power to all auxiliary electrical components.
- M) Hopper Extension** - Increases overall hopper capacity.

**Illustration 2**

INSTALLATION**MACHINE DRIVE AND TRUCK SPECIFICATIONS:**

Your Model #5200-D Krendl Machine can be mounted in any truck and chassis configuration. We recommend a minimum chassis rating of 26,000 GVWR. We also recommend a minimum 22 feet van body. The body should have a full width rear door. The Krendl Model #5200-D Machine can be mounted anywhere in the truck body. The factory recommended position is shown in Illustration 3.

*****INSTALLATION NOTE: It is very important that all of the doors be open for all engine powered machines. This is to provide proper ventilation to the engine. If unit location is different than the factory recommended location, engine cooling problems may occur. This will void the warranty on the machine and the engine!**

TOOLS NEEDED:

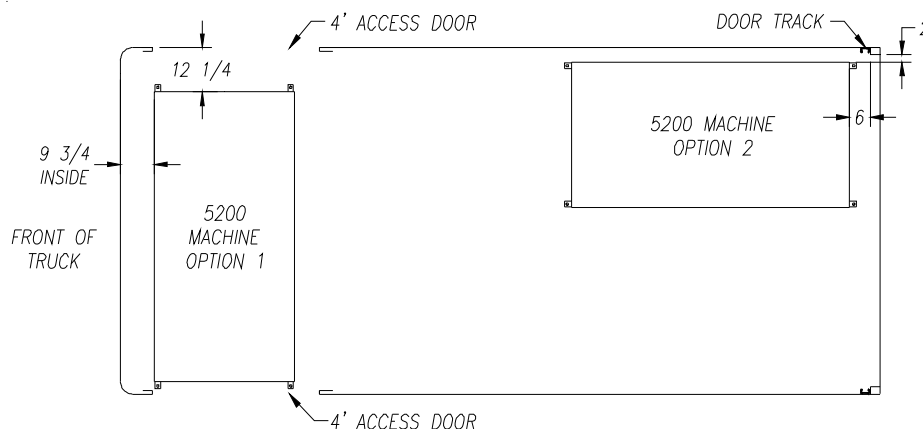
1/2" Heavy Duty Drill
Drill Bits: 9/16" for bolts
Fork Lift (means to lift the machine)
Pry Bars
Basic Wrenches
5" hole saw, 2-1/2" hole saw & 1 1/2" hole saw

CUSTOMER SUPPLIED ITEMS:

1/2" Bolts, washers, locknuts for fastening machine
3/16, 5/16 fuel lines for pick-up & return fuel (diesel)
fuel pump for diesel fuel

INSTALLATION INSTRUCTIONS:

- 1) Place the machine in the truck to locate the correct position so the machine will not be in the way of the truck's back door and you are still able to open the hood of the machine.
- 2) Using illustration 3 as a reference, check under the truck body that the opening will not interfere with any truck components underneath. If there is any interference with any of the truck parts, then you will need to adjust the position of the machine to clear the obstruction. The holes for the blower inlet and machine hold down do not have much room for adjustment. However, the holes for the exhaust and fuel lines do have room for slight adjustments.

**Illustration 3**

- 3) Remove the machine after the holes are located.
- 4) Cut the following holes: (Using illustration 4 as reference ONLY)
 - a. Blower Inlet: 5"
 - b. Engine Exhaust: 5"
 - c. Fuel Lines: 2 1/2"

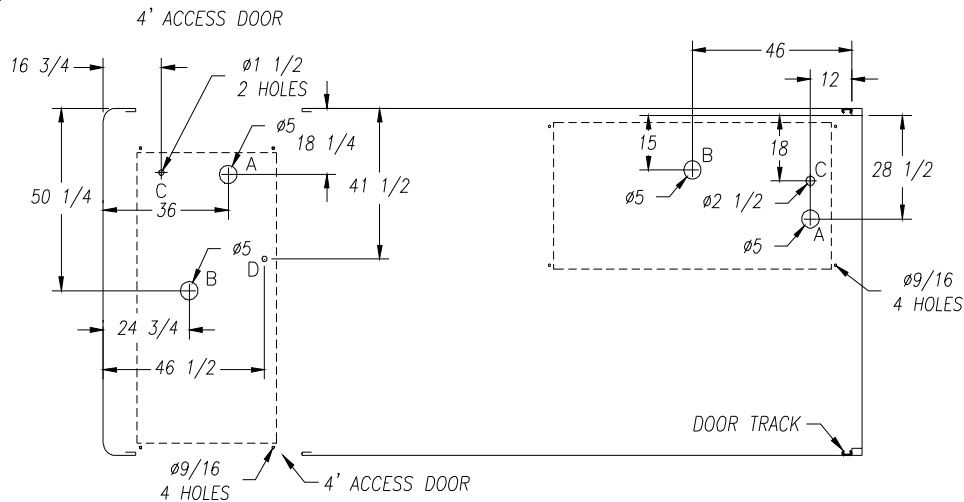


Illustration 4

- 5) Place the machine in the truck lining it up with the holes.
- 6) Locate and drill 9/16" holes for the four hold down holes located in the bottom of the base flange. Again, check the underside of the truck body for any obstructions. Use 1/2" bolts and nuts to bolt the base to the truck floor.
- 7) Run fuel lines from the tank to the machine 5/16" ID for fuel supply, 3/16" ID for return, placing a fuel pump in-line close to the truck's diesel fuel tank.

In-line Fuel Pump



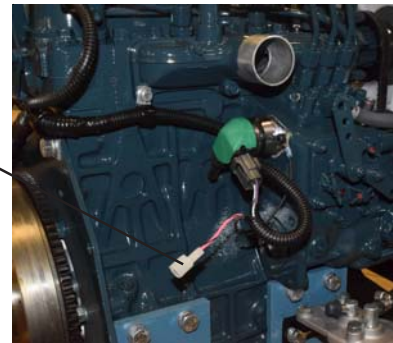
Fuel Lines From Tank



- 8) Attach fuel lines to the engine.



- 9) Wire fuel pump to the engine. Connect the positive red wire from fuel pump to the red wire with black stripe on the injection pump of engine. Connect the negative black wire from fuel pump to terminal S2 inside the machines panel box. Refer to page 22. (Red Wire w/Black Stripe)



- 10) Mount engine's muffler under the truck so that the muffler's inlet lines up with the 5" hole.
- 11) Run supplied flexible exhaust from the engine to the muffler using a supplied muffler clamp on both ends.
- 12) Make sure that exhaust pipe and flexhaust hose are not in contact.
- 13) Attach 4" hose to the filter box inlet so that the hose sticks through the 5" hole cut into the floor of the truck.



If you need more information, please call your sales agent. Your Krendl Model #5200-D Machine is now ready for operation.

Your Krendl Model #5200-D Machine was checked and thoroughly run before it was shipped but it is always a good idea to check all belts and chains for proper tension and that all fluid levels are checked and topped off where required.

WARNING: For any gas or diesel equipment that is not installed in a truck or trailer by Krendl Machine, warranty will be voided if not installed to the exact instructions of this manual. (See installation section).

OPERATING INSTRUCTIONS

Starting Your Krendl Model 5200-D Machine:

- 1) After installing your Model #5200-D according to the installation instructions, it is now time to start your machine. Again, check all fluid levels, belt tension, and that all guards are installed properly.
- 2) Attach the blowing hose to the machine and run the hose into the building.
- 3) Run the remote control cord into the building.
- 4) Make sure the control switch on the remote control cord is in the "off" position. Now, you may plug in the remote control cord.
- 5) When starting engine in cold conditions first turn the key switch counter clockwise for thirty seconds or until engine warming light goes off. Turning key clockwise to the start position and hold until the engine starts. Release the key, the machine will automatically return to the run position.
- 6) Let the engine run at full speed until the engine warms up, approximately 5 minutes.
- 7) Your machine is now ready for operation.

Note: When using extension cords, wire gauge size should not be less than input cord on unit and not exceed 50' in length. **(See Voltage Drop Chart Below.)**

VOLTAGE DROP CHART									
Typical voltage drop values based on conductor size and one-way length* (60 C termination and insulation)									
25 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	1.98	1.24	0.78	0.49	0.31	0.25	0.19	0.15
	30		1.86	1.17	0.74	0.46	0.37	0.29	0.23
	40			1.56	0.98	0.62	0.49	0.39	0.31
	50				1.23	0.77	0.61	0.49	0.39
	60					0.93	0.74	0.58	0.46
50 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	3.95	2.49	1.56	0.98	0.62	0.49	0.39	0.31
	30		3.73	2.34	1.47	0.93	0.74	0.58	0.46
	40			3.13	1.97	1.24	0.98	0.78	0.62
	50				2.46	1.55	1.23	0.97	0.77
	60					1.85	1.47	1.17	0.92
75 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	5.93	3.73	2.34	1.47	0.93	0.74	0.58	0.46
	30		5.59	3.52	2.21	1.39	1.1	0.87	0.69
	40			4.69	2.95	1.85	1.47	1.17	0.92
	50				3.69	2.32	1.84	1.46	1.16
	60					2.78	2.21	1.75	1.39
100 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	7.90	4.97	3.13	1.97	1.24	0.98	0.78	0.62
	30		7.46	4.69	2.95	1.85	1.47	1.17	0.92
	40			6.25	3.93	2.47	1.96	1.56	1.23
	50				4.92	3.09	2.45	1.94	1.54
	60					3.71	2.94	2.33	1.85
125 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	9.88	6.21	3.91	2.46	1.55	1.23	0.97	0.77
	30		9.32	5.86	3.69	2.32	1.84	1.46	1.16
	40			7.81	4.92	3.09	2.45	1.94	1.54
	50				6.15	3.86	3.06	2.43	1.93
	60					4.64	3.68	2.92	2.31
150 FEET									
AMPERES	20	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG
	20	11.85	7.46	4.69	2.95	1.85	1.47	1.17	0.92
	30		11.18	7.03	4.42	2.78	2.21	1.75	1.39
	40			9.38	5.90	3.71	2.94	2.33	1.85
	50				7.37	4.64	3.68	2.92	2.31
	60					5.56	4.41	3.50	2.77

Ex: A two-wire 20-ampere circuit using 12 AWG with a one-way distance of 25 feet will drop 1.98 volts; 240 volts - 1.98 volts = 238.02 volts as the load voltage.

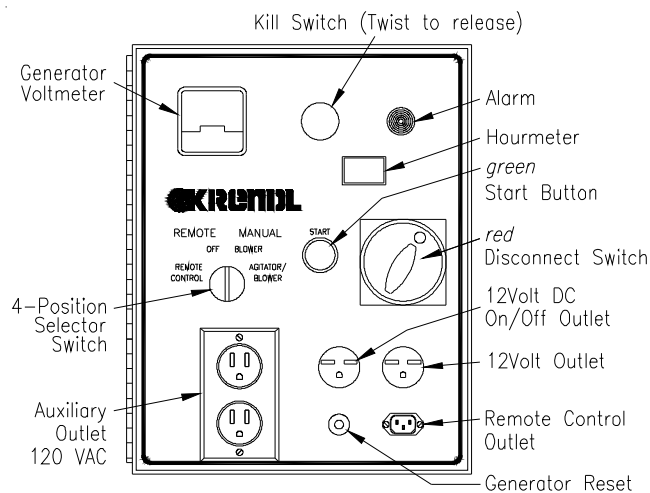
Electrical Operation:

NOTE: PRESS KILL SWITCH TO IMMEDIATELY STOP MACHINE AT ANY TIME!

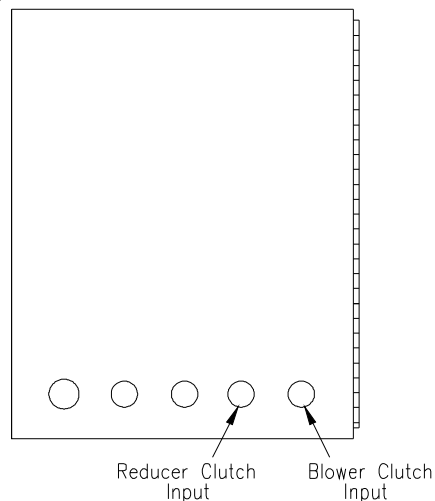
1. Make sure Kill Switch is out by twisting clockwise/right. (See illustration 5)
2. Turn *red* Main Disconnect Switch to ON position. (See illustration 5)
3. Set 4-Position Selector Switch to OFF. (See illustration 5)
4. Press *green* start Button. **Machine will not run unless start button is pressed after Kill Switches are out and red Main Disconnect Switch is on.** (See illustration 5)
5. Select operating mode on 4-Position Selector Switch from one of the following options:

- Remote:** Remote control hand pendant will control machine.
- Off:** Machine will not run. (overrides remote hand pendant)
- Blower:** Only the blower will run continuously. (manual control at machine)
- Agitator-Feed/Blower:** Both the blower and the agitator-feed will run continuously. (manual control at machine)

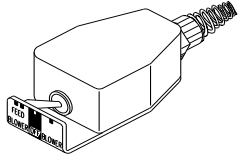
**Main Control Panel (lid closed)
Illustration 5**



**Main Control Panel (back)
Illustration 6**



- When operating in **Remote mode**, the 4-Position Selector Switch must be set to **Remote** position. (See illustration 5 on page 15.)
- Remote control hand pendant positions will be selected from the following:



- BLOWER-FEED** - operates both **blower** and **agitator-feed** simultaneously
- OFF** - (middle position) all functions stop
- BLOWER** - operates the **blower** only

- Use the Auxiliary Outlet on the Main Control Panel for supplying **continuous** power (while *red* Main Disconnect Switch is ON) to accessories.

Stopping Your Machine:

- Switch the remote switch to “AIR ONLY” and wait until the hose is clear of all material.
- Let the engine run for a couple of minutes to cool down.
- Turn the control switch on the remote control cord to the “off” position and unplug the remote control cord from the panel.
- Turn the key switch to the “off” position.



SAFETY NOTE:

DO NOT FILL THE HOPPER TO CAPACITY AT THE END OF THE DAY. THE MATERIAL WILL COMPRESS AND CAN CAUSE MACHINE LOCKUP DURING THE NEXT START-UP.

Mechanical Settings:

The controls of your machine contain the blower and slidegate controls to adjust your machine for each application and type of insulation. (See illustration 7 on page 17.) **Blower control** (air) and **slidegate** (material feed) are adjusted according to:

- TYPE OF MATERIAL: Cellulose and fiberglass have different textures and densities that respond to machine settings.
- HOSE: Corrugations or roughness of interior surface, diameter, length and elevation of hose will also require varying adjustments.
- WEATHER CONDITIONS: Temperature and humidity may require day to day adjustment of machine settings.

Blower Control and Slidegate General Settings:

Blower control can increase or decrease the amount of air in the system, affecting the velocity (speed) and spread rate (coverage) of insulation. (See illustration 7 on page 17.) The blower control valve is used for controlling air pressure and amount of air flow.

Opening or closing slidegate (material feed) controls the amount of insulation dropping into the airlock which changes the production rate (lbs. per hour). (See illustration 7 on page 17.) For calibration purposes the scale located on the machine indicates how many inches the airlock slidegate is opened.

The blower and slidegate controls **working together** affect the distance insulation can be blown through a hose without plugging. These controls also affect the accurate blowing of insulation for spraying applications.

These settings control the following:

- **Density** of insulation blown in application.
- **Velocity** of material impact when spraying.
- **Dust** on open blow.
- Material **spread rate** or coverage.
- **Production** rate (lbs. per hour blown).

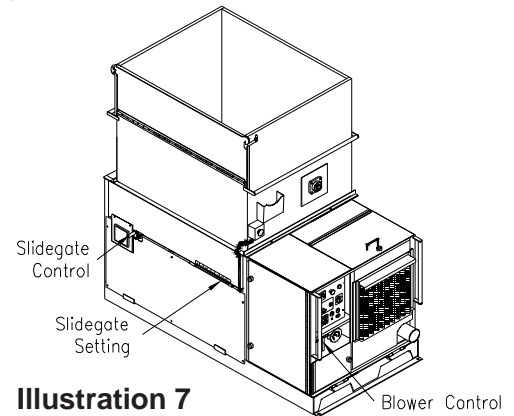


Illustration 7

General Blower Control and Slidegate Settings for Open Blow:

With the **slidegate** closed and blower control valve on low (valve open), turn **agitator-feed and blower on**. Fill hopper with insulation and adjust **blower valve** and **slidegate**. Move controls proportional to each other. (i.e. If **blower valve** is half open, **slidegate** should be half open.) As hose length is increased, air pressure/volume is increased by closing off the **blower valve** while closing the slidegate proportionally. This will increase the distance insulation can be blown through the hose, while decreasing the blowing production rate (lbs. per hour blown). (See illustration 7)

Shredder Assembly:

This unit is supplied with a shredder assembly; airlock/agitator speeds are preset at the factory. **No** further sprocket setting speeds are needed, as this system will accommodate most insulations and applications. However, the shredder and agitator **direction** can be adjusted as described below.

Shredder & Agitator Adjustment:

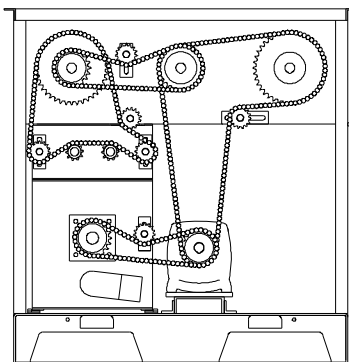


Illustration 8

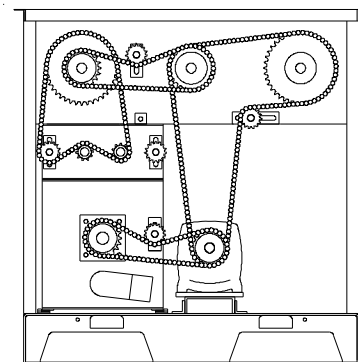


Illustration 9

Unidirectional Rotation (See illustration 8) is preferred as an all-around setting for a combination of materials and applications. This setting provides the greatest **coverage** and **best control** for internal wetting (stabilized) and open blow applications.

Center-Down Rotation (See illustration 9) force feeds the insulation into the airlock at a faster rate. This direction provides the greatest **production** for cellulose fibers in an open attic blow application although coverage may decrease.

GENERAL MAINTENANCE

Your Krendl Model #5200-D Machine is designed to be used with minimal maintenance for all its components. The following is only a guide; experience is the best guide for the right maintenance schedule for you.

DESCRIPTION	EACH SHIFT	40 HOURS	80 HOURS	200 HOURS	1000 HOURS
CHECK GUARDS	X				
CHECK ENGINE FLUID LEVELS	X				
CHECK DRIVE ALIGNMENT & TENSION		X			
CHECK ENGINE EXHAUST HOSE		X			
SERVICE ENGINE AIR CLEANER CARTRIDGE & CLEAN ENGINE COOLING SYSTEM		X			
VISUALLY INSPECT COUPLING ELEMENTS FOR FATIGUE CRACKS (OVER 1/2")		X			
CLEAN BLOWER AIR FILTER		X			
CHECK BLOWER OIL LEVEL		X			
GREASE BLOWER BEARINGS			X		
GREASE VACUUM BEARINGS			X		
CHANGE ENGINE OIL (See engine manufacturer's manual for recommended maintenance schedule of when oil and filter should be changed)					
LUBRICATE DRIVE CHAINS WITH A DRY LUBRICANT				X	
GREASE SHREDDER, AIRLOCK, AGITATOR, & JACK SHAFT BEARINGS				X	
CHANGE BLOWER OIL (needs to be changed after first 100 hours of operation and thereafter every 1000 hours)					X

NOTE: When further maintenance is needed, please refer back to other manufacturer's manuals for additional assistance!



SAFETY NOTE



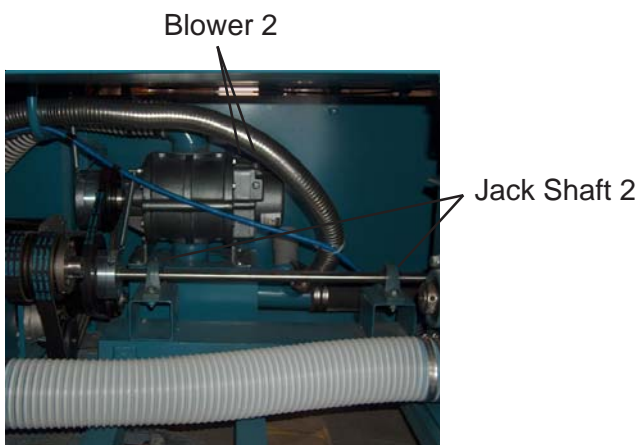
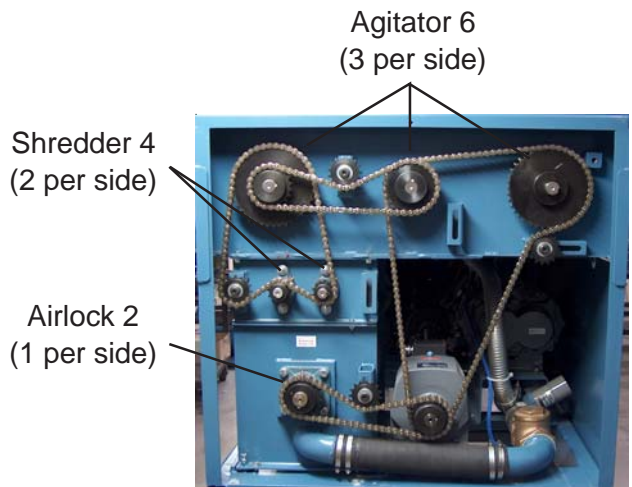
WHEN MAINTENANCE IS TO BE PERFORMED ON THE MACHINE ALWAYS:

- 1) STOP THE ENGINE COMPLETELY.
- 2) TURN THE IGNITION TO THE "OFF" POSITION AND REMOVE THE KEY.
- 3) DISCONNECT BATTERY CABLE

RECOMMENDED LUBRICATION

VACUUM BEARINGS:	GREASE: MOBIL MOBILITH SHC460								
ALL OTHER BEARINGS:	GREASE: MOBILITH AW-2 (NLGI grade #2)								
DRIVE CHAIN:	DRY LUBRICANT (EG: DRY GRAPHITE)								
BLOWER:	OIL: PNEULUBE (Refer to blower manual) GREASE: MOBILITH AW-2 (NLGI grade #2)								
ENGINE:	SAE MOTOR OIL <table border="0"> <tr> <td><i>AMBIENT TEMP.</i></td> <td><i>OIL TYPE</i></td> </tr> <tr> <td>Above 77°</td> <td>SAE 30 OR SAE 10W-30 / SAE 15W-40</td> </tr> <tr> <td>14° to 77°</td> <td>SAE 10W-30 / SAE 15W-40</td> </tr> <tr> <td>Below 14°</td> <td>SAE 10W-30 /</td> </tr> </table>	<i>AMBIENT TEMP.</i>	<i>OIL TYPE</i>	Above 77°	SAE 30 OR SAE 10W-30 / SAE 15W-40	14° to 77°	SAE 10W-30 / SAE 15W-40	Below 14°	SAE 10W-30 /
<i>AMBIENT TEMP.</i>	<i>OIL TYPE</i>								
Above 77°	SAE 30 OR SAE 10W-30 / SAE 15W-40								
14° to 77°	SAE 10W-30 / SAE 15W-40								
Below 14°	SAE 10W-30 /								
AIRLOCK REDUCER:	OIL: KLUBERSYNTH UH1 6-460								

Bearing Grease Zerks



Airlock: (Seal Replacement)

The purpose of the airlock seal is to trap air and insulation until it rotates 180° to the 6:00 o'clock position. At this point, insulation is pushed by air from the blower, out of the chamber. Worn or damaged seals allow air and insulation to escape back into hopper, thus reducing production and coverage. When it is necessary to replace seals, follow these directions:

Remove chain and air hoses from both input and output of airlock. Using a 5/8" socket, remove hold down bolts from airlock. Lower the front of the airlock down by loosening the jamb nuts and turning the liftbolts counter clockwise. Slide the airlock out of the machine. (See illustration 10) Airlock rotor plates that are damaged (bent) will need replaced. (Refer to Rotor Plate Replacement below.) Take out rubber seal by removing seven plate fastening bolts and nuts and top plate. The base plate will remain attached to airlock shaft. To install a new seal, reverse procedure. Seal should be inserted tight against the back base plate, pressing the lower tabs of the seal down under the adjacent seal with a flat blade screwdriver. Make sure all bolt holes are aligned while each side of seal is equally pressed against the end plates, before tightening bolts. Seal should be bent forwards for **counter clockwise** rotation. (See illustration 12)

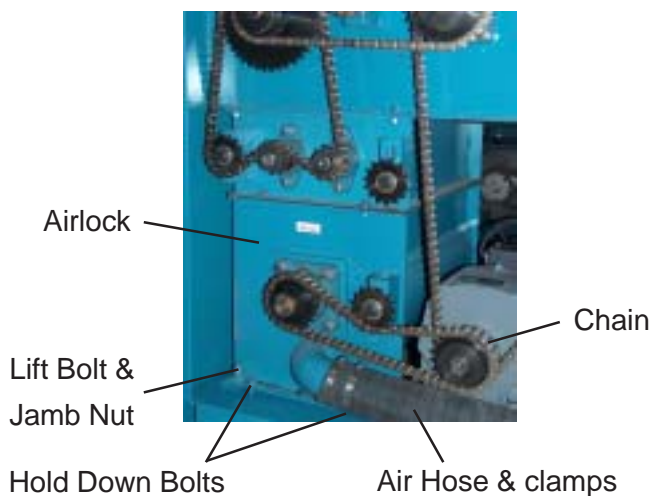


Illustration 10

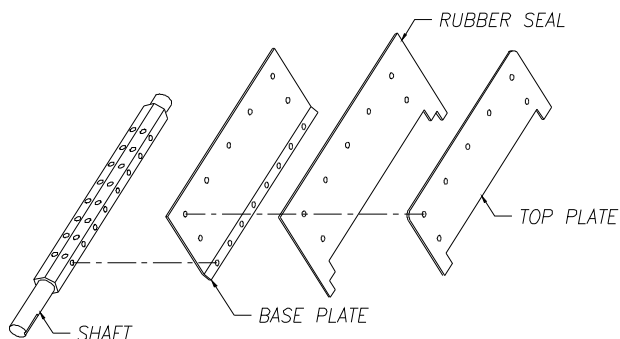


Illustration 11

Base Plate Replacement:

1. Remove damaged baseplate assembly from shaft using ratchet drive wrench with extension and 9/16" socket.
2. Check seal for wear and damage. (Installing seal and top plate on the bench is quick and easy). Remove bolts from plate assembly and replace with new seal. Make sure seal and top plate are assembled on **correct** side of base plate before assembling in airlock. Seal should press backward towards top plate when installed correctly into airlock chamber. (Illustration 12)
3. Install the rotor plate assembly into the airlock. The airlock runs **counter clockwise** viewing it from the sprocket drive shaft. (Illustration 12) Align the base plate with holes on airlock shaft using a tapered punch. **Caution:** Do not mount rotor plate backwards. If installed

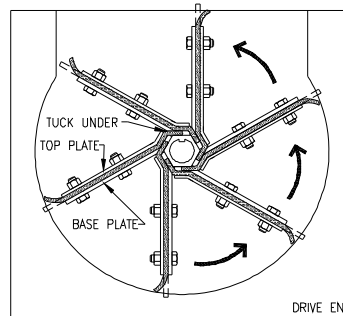


Illustration 12

(Note: Entire rotor plate assembly may be removed and replaced. This procedure maybe easier than replacing just the seals.)



improperly, damage to seals will result and put undue stress on agitator motor. This causes overheating and poor production. Seal should be bent backward to allow for a **clockwise** rotation of rotor.

4. As rotor plate is installed, press bottom tab of seal under adjacent seal with flat blade screwdriver. (See illustration 12 on page 20)

Chain: (Adjustment) (#60 Nickel Plated)

A smooth operating chain drive should have a slight sag on the idler side of the chain. New chains should be installed under slight tension as they will elongate a small amount due to seating of pins and bushings during the first few days of operation. Chain should be kept in good condition by proper lubrication (use dry film lubricant Dow 321) and occasional cleaning. Soaking chain in container of 10 weight oil will provide for internal lubrication of pins and bushings. However, excess oil must be drained and wiped away as excessive lubrication will cause insulation accumulation on chain. Worn out chain should be replaced. When chain is replaced, worn sprockets should also be replaced, preventing further damage to new chain.

Sprockets:

Check Sprockets For Wear. Misalignment and/or loose sprockets and improper chain tension causes the premature wear of chain and sprockets. All sprockets, except speed reducer and idler sprockets, have been secured with a medium grade Loctite (general purpose thread locker), to prevent gradual movement. The set screws and key are also inserted with a medium grade Loctite. If sprocket is difficult to remove, it may be heated with a propane torch to loosen.



Caution: Do not overheat sprocket or damage to bearing will result. A pulley or bearing puller can then be used to remove the sprocket and key. Replace new sprocket on shaft with key and medium grade Loctite applied to shaft. Align sprocket with corresponding sprocket, using a straightedge placed along face of teeth and tighten set screws.

Bearings:

Agitator Bearings in hopper are double-sealed, self aligning ball bearings. They have grease fittings and should be periodically lubricated. At least every 3 months. If bearings produce noise or heat (*too-hot-to-touch*), the bearings should be replaced.

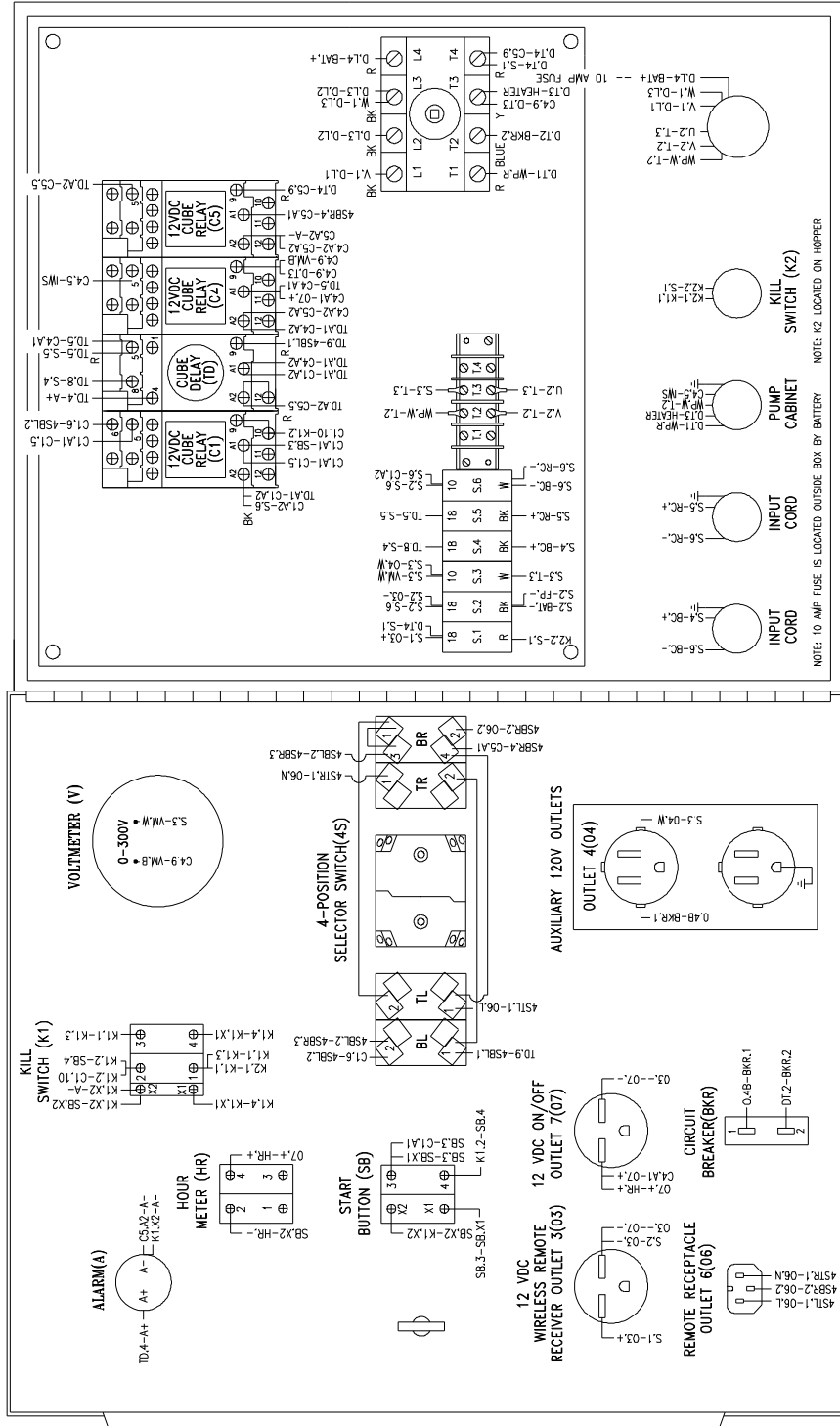
Agitator Bearing Replacement:

Spray area with rust penetrant (WD-40). Remove sprocket (See SPROCKET section above). Remove the four bolts from bearing flange. Loosen set screws on bearing hub at each end of agitator shaft. Since all set screws are installed with a medium grade Loctite, a propane torch may be used to assist in removing them. Do not overheat unit, causing shaft to expand. Using a rubber mallet, drive agitator shaft an inch in one direction, creating a space between hopper and bearing unit. A bearing puller can then be used to remove the bearing. Eliminate any metal burrs from shaft with file and install new bearings with felt seals. Use a medium grade Loctite on set screws before securing bearing to shaft. (Check shaft diameter before ordering bearings)

ELECTRICAL SYSTEM

ELECTRICAL DIAGRAM: Periodically, disconnect machine from power source and check all electrical connections and components for broken or loose wires, disconnect machine from power source and check all electrical connections and components for broken or loose wires, disconnect machine from power source and check all electrical connections and components for broken or loose wires, disconnect machine from power source and check all electrical connections and components for broken or loose wires. Machine Vibration can cause fasteners to loosen.

MODEL #5200-D 12 V.D.C. with 120V Generator



4-POSITION SELECTOR SWITCH(4S)

CONTACT ACTION	BOTTOM		TOP	
	LEFT	RIGHT	LEFT	RIGHT
REMOTE	+	-	+	-
OFF	+	-	+	-
BLOWER	+	-	+	-
BLOWER/AGITATOR	+	-	+	-

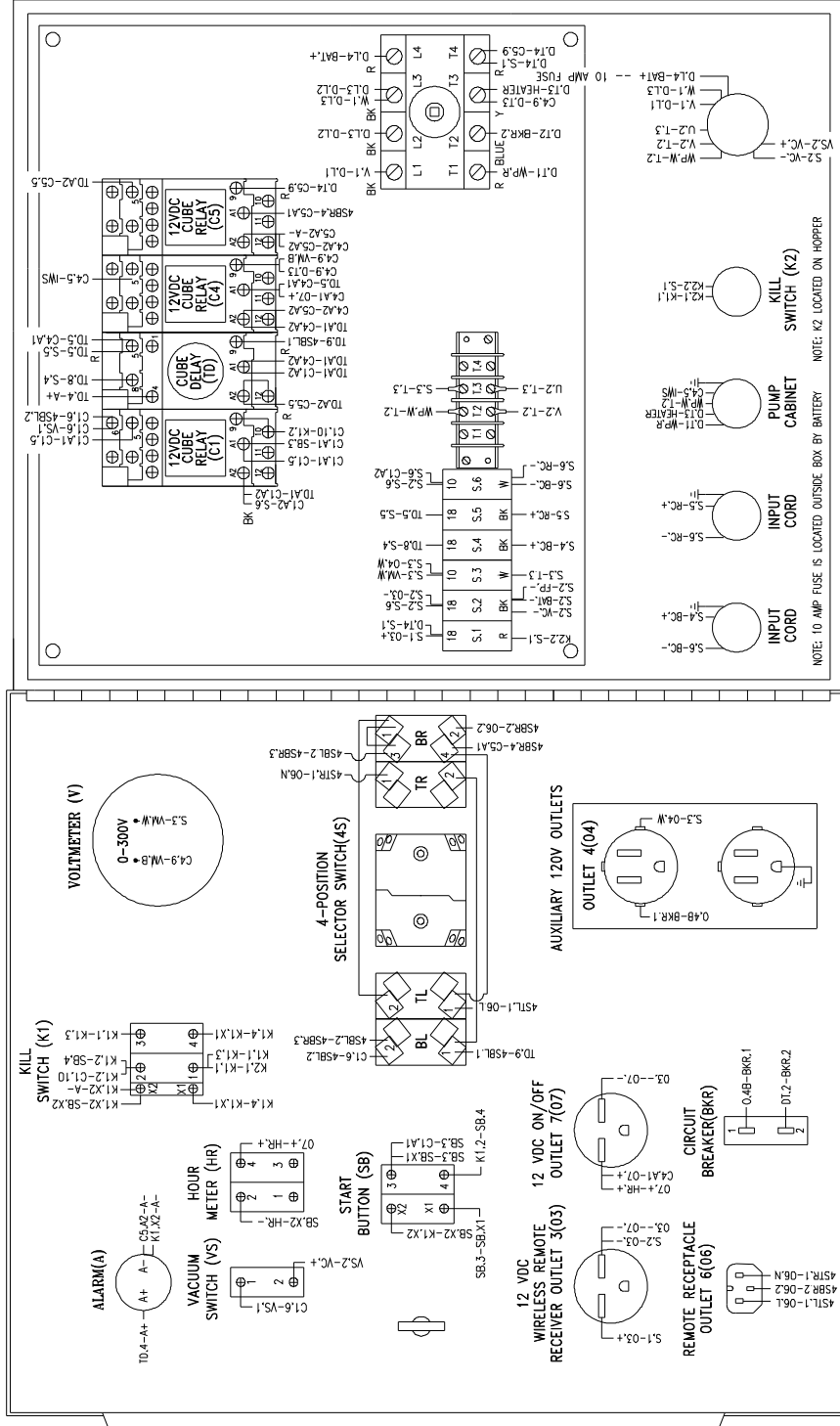
WIRE COLOR CODE

G	=	GREEN	-	Earth Ground
W	=	WHITE	-	Common (120 volt)
BK	=	BLACK	-	Negative (12 volt)
R	=	RED	-	Hot (120 volt)
BLUE	=	BLUE	-	Hot (120 volt)

Illustration 13

ELECTRICAL DIAGRAM: Periodically, disconnect machine from power source and check all electrical connections and components for broken or loose wires, loose screws or fasteners. Machine Vibration can cause fasteners to loosen.

MODEL #5200-D 12 V.D.C. (Optional Vacuum System)



**4-POSITION SELECTOR SWITCH(4S)
CONTACT ACTION**

	BOTTOM	TOP	LEFT	RIGHT
REMOTE	+	+	+	+
OFF	+	+	+	+
BLOWER	+	+	+	+
BLOWER/ AGITATOR	+	+	+	+

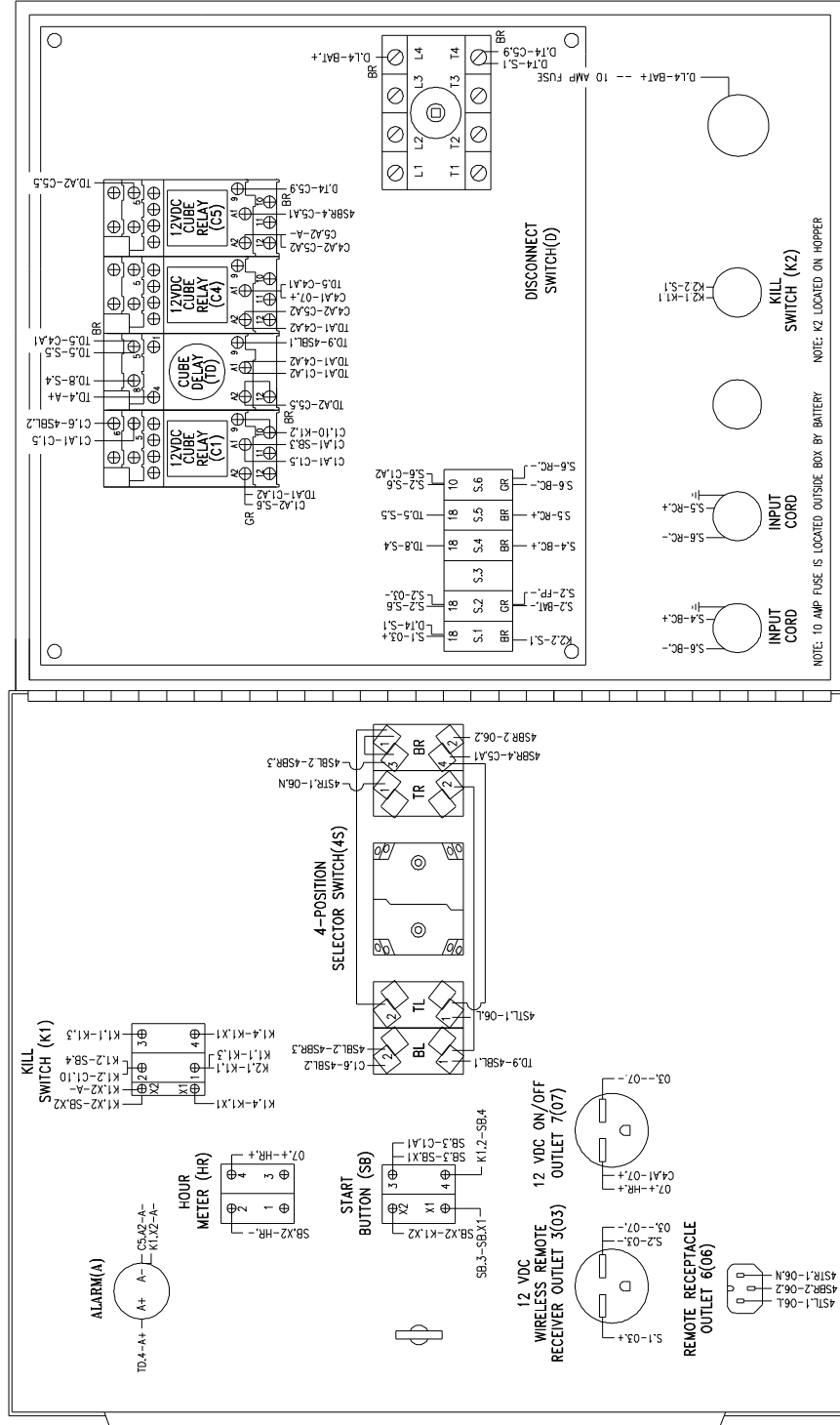
WIRE COLOR CODE

- G = GREEN - Earth Ground
- W = WHITE - Common (120 volt)
- BK = BLACK - Negative (12 volt)
- R = RED - Hot (120 volt)
- BLUE = BLUE - Hot (120 volt)

Illustration 14

ELECTRICAL DIAGRAM: Periodically, disconnect machine from power source and check all electrical connections and components for broken or loose wires, loose screws or fasteners. Machine Vibration can cause fasteners to loosen.

**MODEL #5200-D
12 V.D.C. with No Generator (Overseas)**



4-POSITION SELECTOR SWITCH(4S)

CONTACT ACTION	BOTTOM LEFT	TOP LEFT	TOP RIGHT	BOTTOM RIGHT
REMOTE	+	+	+	+
OFF	+	+	+	+
BLOWER	+	+	+	+
BLOWER/AGITATOR	+	+	+	+

Illustration 15

WIRE COLOR CODE

G/Y	= GREEN/YELLOW - Earth Ground
GR	= GREY - Negative (12 volt)
BR	= BROWN - Hot (12 volt)

TROUBLESHOOTING**WARRANTY**

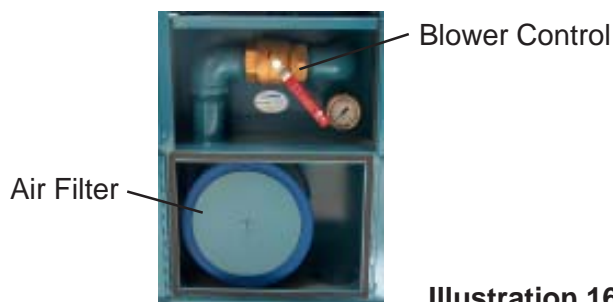
This unit is backed by a warranty for manufacturer's defects. If your machine needs service during the warranty time period, call your supplier immediately. DO NOT attempt to service the machine, as this voids the warranty!

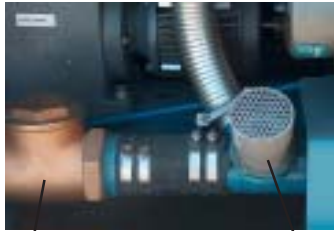
IMPORTANT

At any signs of trouble with your machine, stop immediately, disconnect power and call your supplier. Refer to the GENERAL MAINTENANCE section of this manual for further details. Always disconnect the electrical power before making any inspections or repairs.

TROUBLESHOOTING

PROBLEM	CORRECTIVE ACTION
1.) Engine will not start	<ul style="list-style-type: none"> A. Check if battery charge is low. B. Check terminals on battery for good connection. C. See Engine Manufacturer's Manual.
2.) Engine starts but there are no other machine functions - no electrical power to the front panel	<ul style="list-style-type: none"> A. Check for loose or damaged wires, ground shorts which may be caused from machine vibration. B. Turn off all power to machine before opening the panel box.
3.) Engine starts - but the blower will not operate	<ul style="list-style-type: none"> A. Check to see if the blower clutch is operating B. Check clutch electrical connections. C. Check belts, adjust or replace as required. D. Check battery, clutch will not cycle or will slip if battery is not fully charged. E. Check that blower can be turned by hand. If not, blower may be tied up. F. Weak/Worn clutch- replace or rebuild as required.
4.) Insufficient air - clutch is operating	<ul style="list-style-type: none"> A. Check that the blower control valve isn't fully open. Close or adjust the handle control as needed. You should be able to get over 4 p.s.i. of air on gauge. See illustration 16. B. Check that the blower relief valve is not stuck open. See illustration 17 on page 26. C. Check if blower air filter and intake hose is clogged. See illustration 16. D. Check airstream and bypass air hose connections, clamps, etc.





Check Valve

Relief Valve

Illustration 17

5.) No material flow - clutch is operating

- E. Check that the one way air check valve isn't stuck closed. See illustration 17
- F. Check belts, adjust /replace as required and check for missing keys under drive pulleys.
- G. Insulation hose plugged. Make sure the air bypass valve is completely closed, then switch machine to blower only to blow out the hose. If problems still occur, try hitting the hose where it is plugged to release the material.
- H. If the airlock seals and/or airlock components are worn or damaged, replace all the parts as needed.

- A. Check material level in main hopper.
- B. If the material slide gate is closed or adjusted in too far for material feed rate, open the slidegate.
- C. Check the belts coming from the main drive shaft pulley to the reducer shaft drive pulley and blower shaft drive pulley. Adjust or replace belts as required. Check for missing keys under the drive pulleys.
- D. Check chains, adjust or replace as required. Check for missing keys under drive sprockets.
- E. Insulation hose plugged. Make sure the air bypass valve is completely closed, then switch machine to blower only to blow out the hose. If problems still occur, try hitting the hose where it is plugged to release the material.

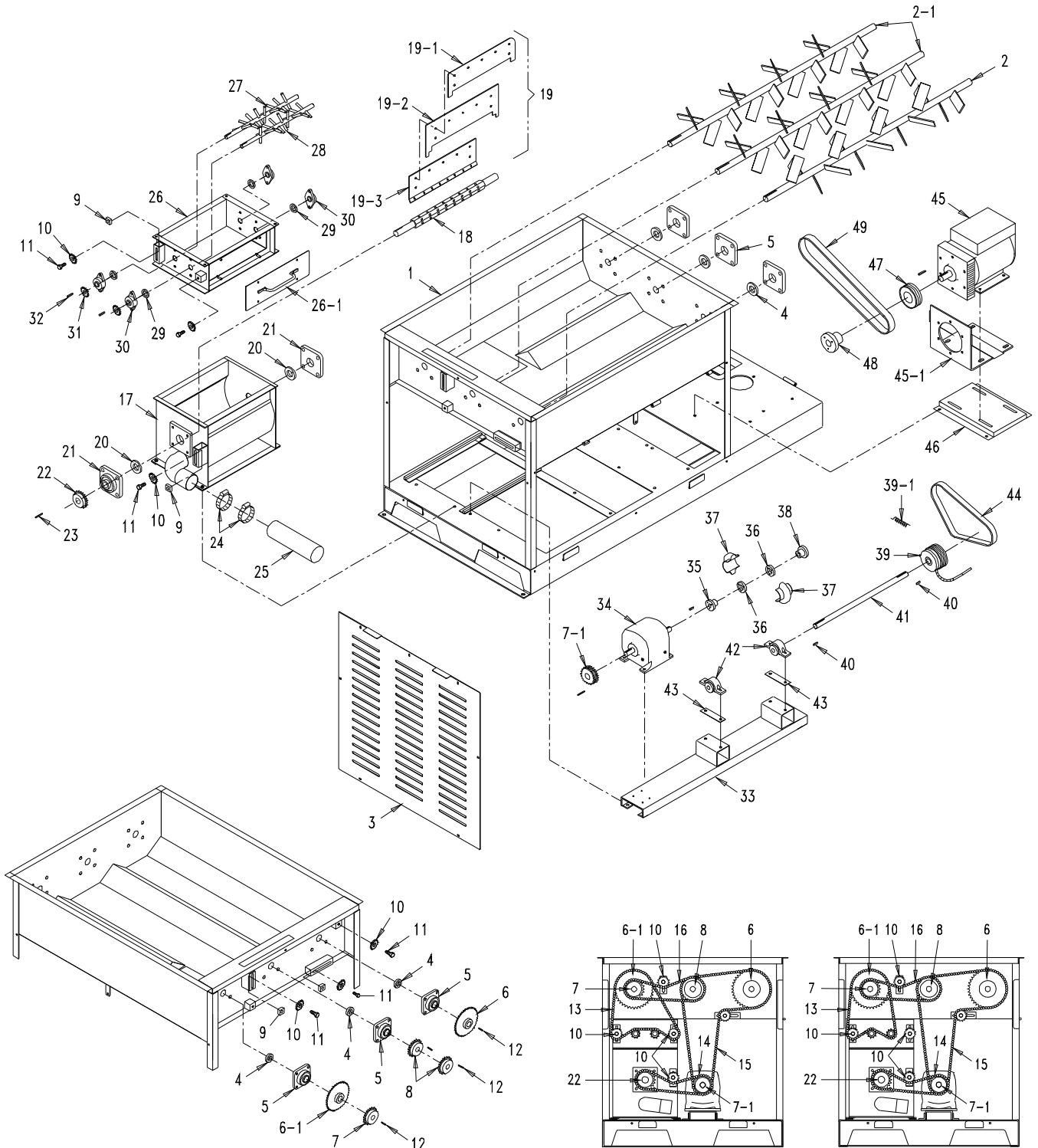
SPARE PARTS LIST

The following is a recommended spare parts list. To keep your machine up and running, these are the parts we suggest you keep on hand for your Model #5200-D Krendl Machine.

PART NUMBER	DESCRIPTION	QUANTITY REQUIRED
250503-8	AGITATOR BEARINGS	8
8036-2	SHREDDER BEARINGS	4
8065-2	AIRLOCK BEARINGS	2
1032	JACK SHAFT BEARINGS	2
5200-71	V-BELT ENGINE TO GENERATOR	1
5200-39	V-BELT ENGINE TO JACKSHAFT	1
5200-37	V-BELT JACKSHAFT TO BLOWER	1
5200-9M	AIRLOCK SEALS	6
ML-60NP	#60 MASTER LINK	4

PARTS LIST

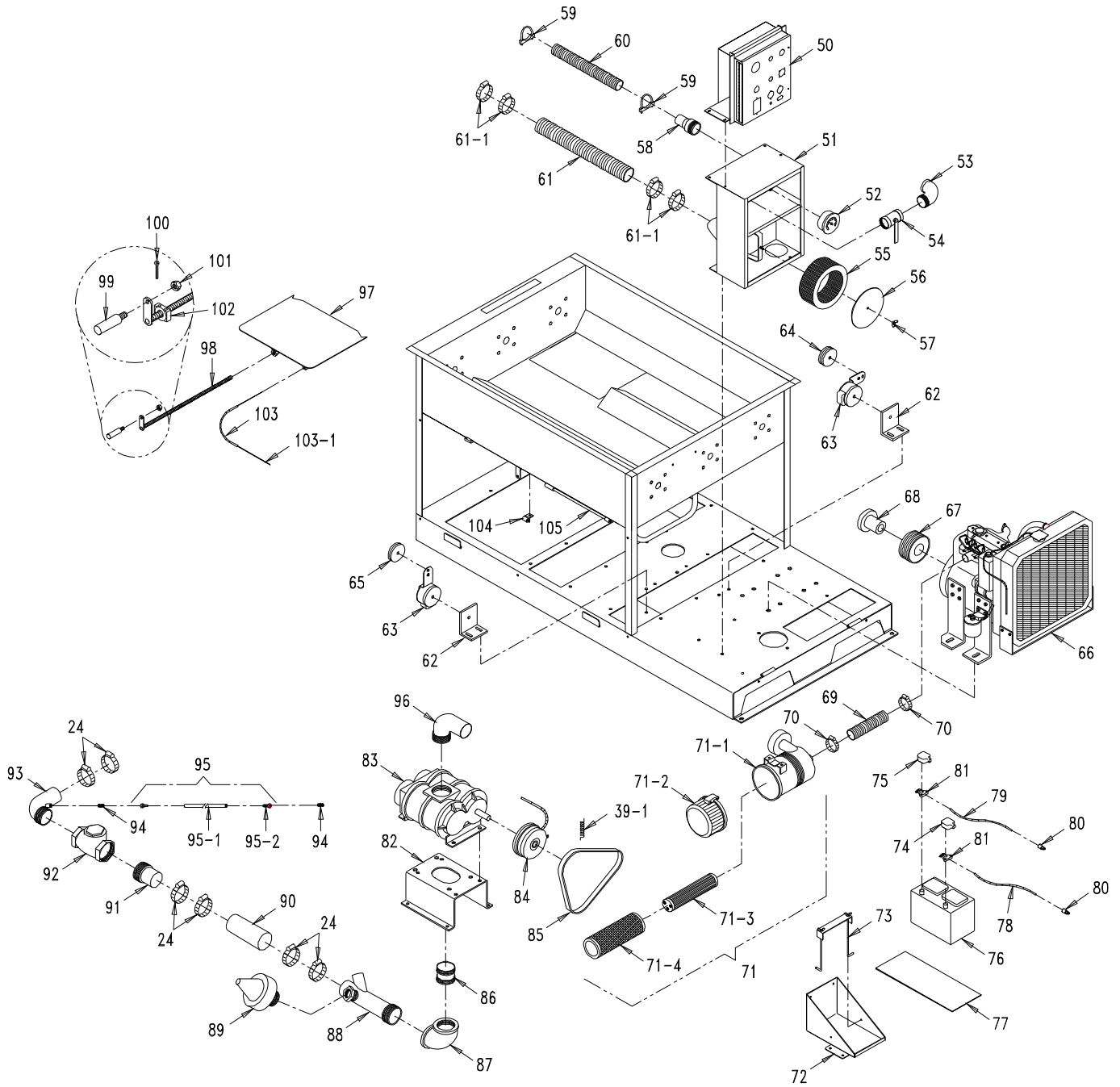
#5200-D Exploded Parts View



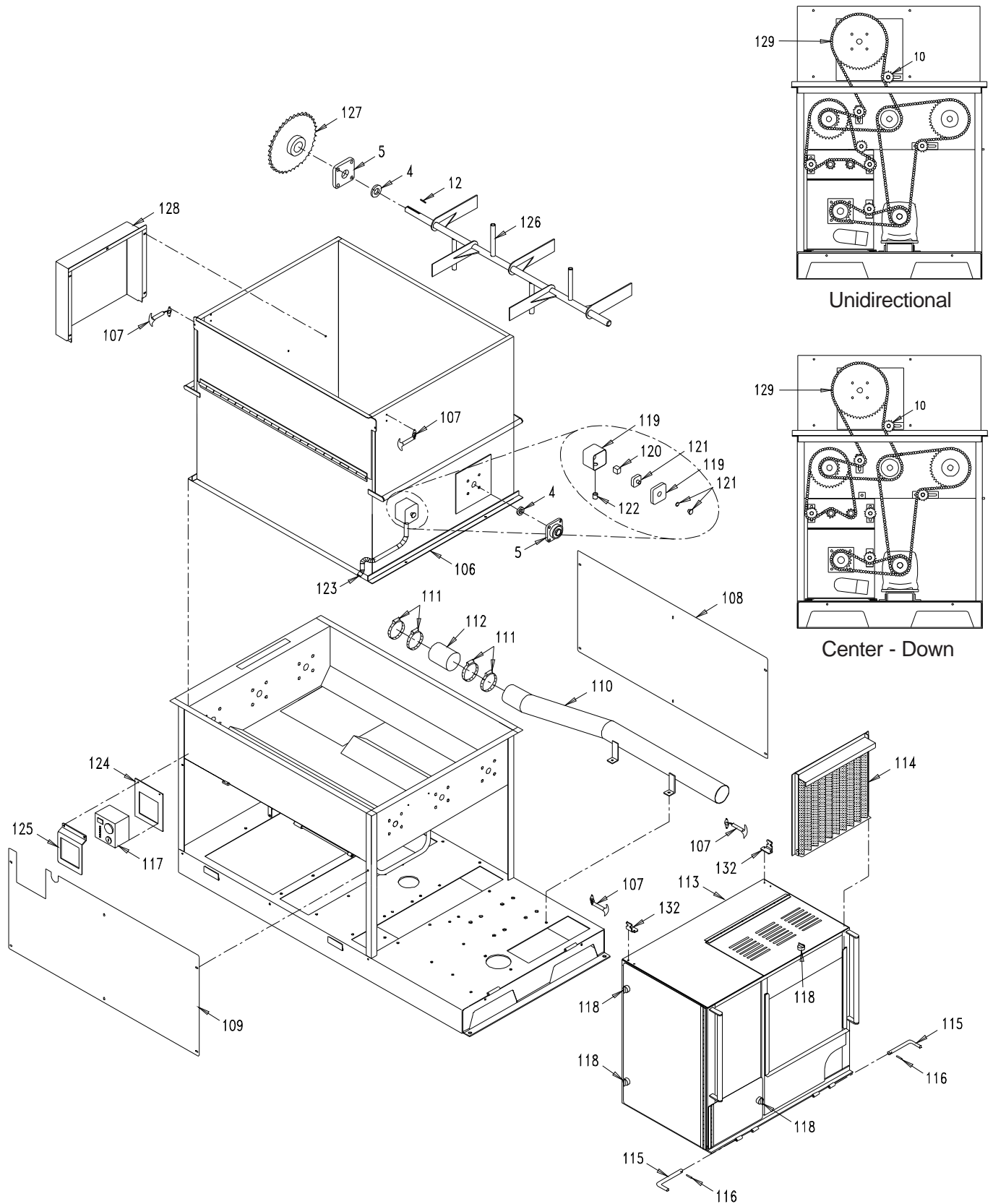
Unidirectional

Center - Down

#5200-D Exploded Parts View



#5200-D Exploded Parts View



#5200-D Exploded Parts List

Item#	Part#	Description
1	5200-1-R2	Base, (Upper&Lower Portion)
2	4000-15	Agitator, Hopper, 16 Tine
2-1	4000-29	Agitator, Middle & Shredder, 17 Tine (2)
3	5200-47-1-R2	Guard, Chain
4	250503-7	Seal, Felt, 1 1/4" (10)
5	250503-8	Bearing, Flange, 4-Bolt, 1 1/4" (10)
6	S-H60B40F-1.25	Sprocket, #60 40T x 1 1/4"HT
6-1	5200-121	Sprocket, #60 40T x 1 1/4"HT (Turned Down)
7	S-H60B20F-1.25	Sprocket, #60 20T x 1 1/4"
7-1	5200-122	Sprocket, #60 20T x 20T x 1 1/4"
8	S-H60B25F-1.25	Sprocket, #60 25T x 1 1/4" (2)
9	40052	Nut, 1" x 1" x 1/2" (Plated)
10	60BB13H	Sprocket #60, Idler, 13HT x 5/8" (7)
11	FSB120	5/8" X 3/4" Shoulder Bolt (7)
12	561Z	1/4" x 1/4" x 1" Key (7)
13	60NP-51	Chain, #60 x 51"Long (Center Down)
13	60NP-55	Chain, #60 x 55" Long (Unidirectional)
14	60NP-40.5	Chain, #60 x 40 1/2" Long
15	60NP-88.5	Chain, #60 x 88 1/2" Long
16	60NP-45	Chain, #60 x 45" Long
17	5200-5	Chamber, Airlock, 5200
18	5200-6	Shaft, Airlock, 5200
19	5200-9-ASSY	Seal Assy, 5200, 18" (2 PLY/FAB)
19-1	5200-7	Plate, Top, Airlock
19-2	5200-9M-2PLYF	Seal, Airlock
19-3	5200-8	Plate, Bottom, Airlock
20	8065-3	Felt Seal, 1 1/2"
21	8065-2	Bearing, 4-Bolt, 1 1/2"
22	S-H60BS20-1.5	Sprocket, #60 20T x 1 1/2"
23	556	3/8" Square Stock, 1 1/4" Long
24	339A	Clamp, Hose, 3" (4)
25	RM-OTH095-MI	Hose, Radiator, 3" x 16"
26	5200-10-R1	Shredder Box
26-1	5200-129	Access Cover, Shredder Box
27	5200-11-A	Shredder Agt., Short (18 Tine)
28	5200-11-B	Shredder Agt., Long (20 Tine)
29	517-7	Seal, Felt Airlock 1" Bore
30	8036-2	Bearing, 2-Bolt, 1"
31	H60B11F-1	Sprocket, #60, 11T x 1"
32	448Z	Key, 3/16" x 3/16" x 7/8"
33	5200-3-R1	Mount, Reducer, 5200
34	5200-98	Reducer, 5200
35	5200-102	Bushing, JA 3/4"
36	5200-87	Hub, F/E4 Element (2)
37	5200-86	Element, Coupling, E4
38	5200-89	Bushing, JA 1"
39	5200-99	Clutch, Shaft Mount, 5 Groove
39-1	5200-114	Spring, 9/16 x 6 x .072 (2)
40	109080	Key, 1/4" x 1/4" x 2 1/8" Long (5)
41	5200-111	Jack Shaft, Reducer

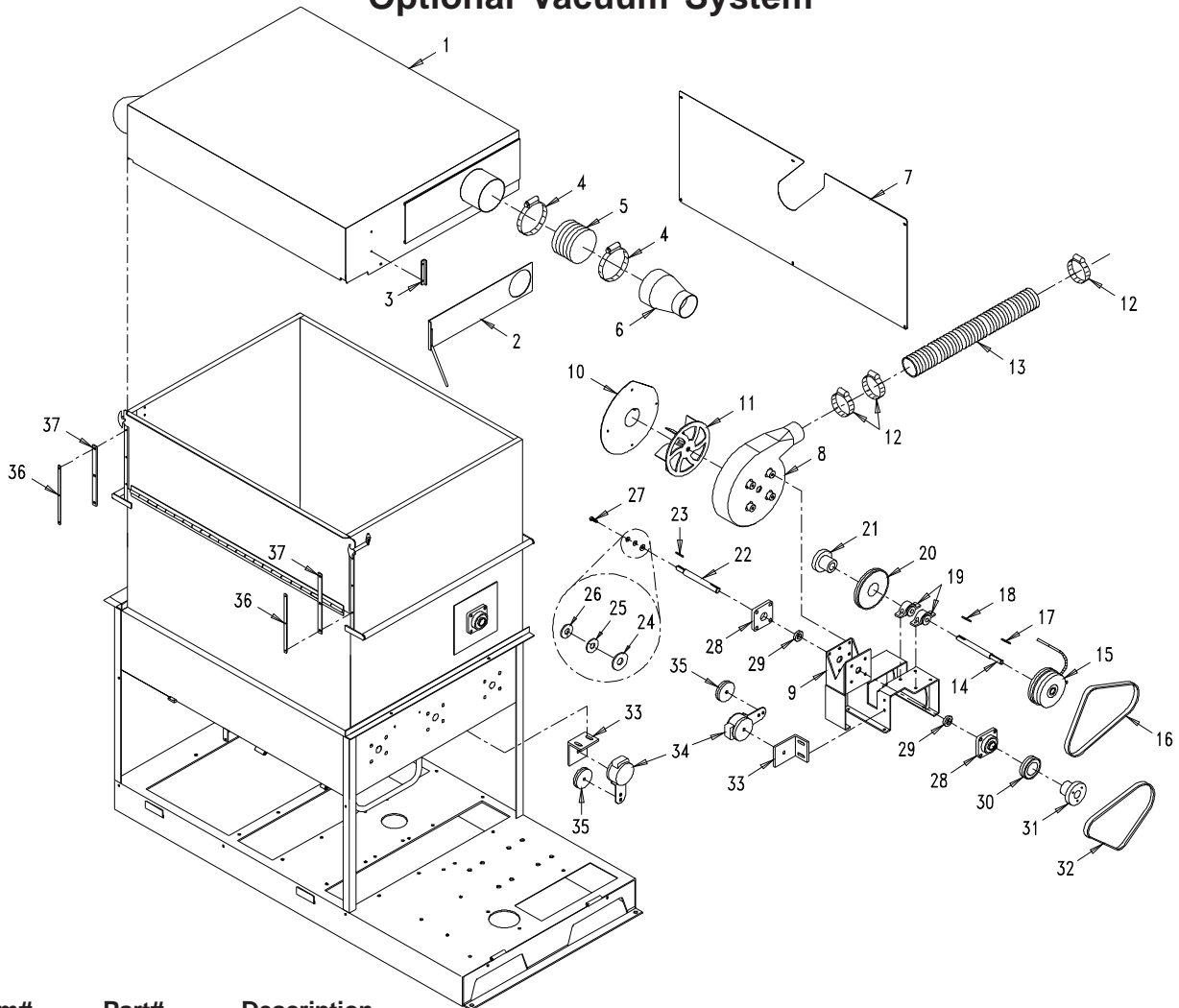
#5200-D Exploded Parts List

Item#	Part#	Description
42	1032	Bearing, 1" P.B. (2)
43	5200-51	Shim, Bearing (2)
44	5200-39	Belt, 3/3VX450
45	5200-20B	Generator, 7800 watt
45-1	5200-128	Generator, Bracket
46	2100-8	Mount, Motor
47	2/3V365SH	Pulley, 2GR3V3.65 SH
48	SH24MMIDC	Bushing, SH 24mm
49	28-52	V-Belt, 2/3VX500
50	5200-57-A-R4	Panel Box Assy, 12 VDC w/120V Generator (U.S.)
50	5200-57-A-OS	Panel Box Assy, 12 VDC w/No Generator (Overseas)
51	5200-56	Filter Box
52	5200-59	Guage, Pressure, 0-10 PSI
53	5200-64	Elbow, 2", 90 Street
54	8051	Ball Valve, 2"
55	81-1063	Filter, F/250300-2-R1 (Blue)
56	5200-63	Cover, Filter
57	FN014	5/16-18 Locknut-Crimped
58	5200-81	Adapter, 2" Barb
59	5200-106	Muffler Clamp (2)
60	RM-OTH103-MI	Pipe, Exhaust Flex (70")
61	RM-OTH097-MI	Pipe, Exhaust, Flex Tube 3" (30")
61-1	5200-106-3	Clamp, Muffler, 3" (2)
62	5200-105-R1	Idler Bracket
63	5200-22	Tensioner, H.D., Rotary
64	5200-97	Idler, 3GR3V3.35
65	5200-96	Idler, 2GR3V3.35
66	5200-44	Engine, 5200 (Diesel, Kubota)
67	5200-25	Pulley, 8GR3V4.75
68	5200-29	Bushing, SK 1 7/16"
69	RM-OTH085-MI	Hose, 2" Radiator (10")
70	337	Clamp, Hose, 2" (2)
71	5200-44-31	Air Cleaner Assy
71-1	2FW-E2-BODY	Air Cleaner Body
71-2	2FW-E2-CAP	Air Cleaner Cap
71-3	2-E2	Air Cleaner Safety Element
71-4	2-E1	Air Cleaner Primary Element
72	5200-55	Battery Tray
73	5200-79-R	Bracket, Battery Hold Down
74	4000-50	Cover, Battery Terminal, Red
75	4000-51	Cover, Battery Terminal, Blk
76	5200-75	Battery
77	5200-124	Battery Pad
78	RM-OTH002-BK	5 ft. Black Battery Cable
79	RM-OTH002-RD	5 ft. Red Battery Cable
80	ST301-4	Battery Connector
81	ST301-3	Battery Terminal Connector
82	4200-4	Blower Mount
83	250300-1	Blower, Rotary, 10HP, #4007
84	5200-101	Clutch, Shaft Mount, 2 Groove (Current)
84	5200-84-A	Clutch, Blower (Sterns) (Old Style)
85	5200-37	Belt, 2/3VX450

#5200-D Exploded Parts List

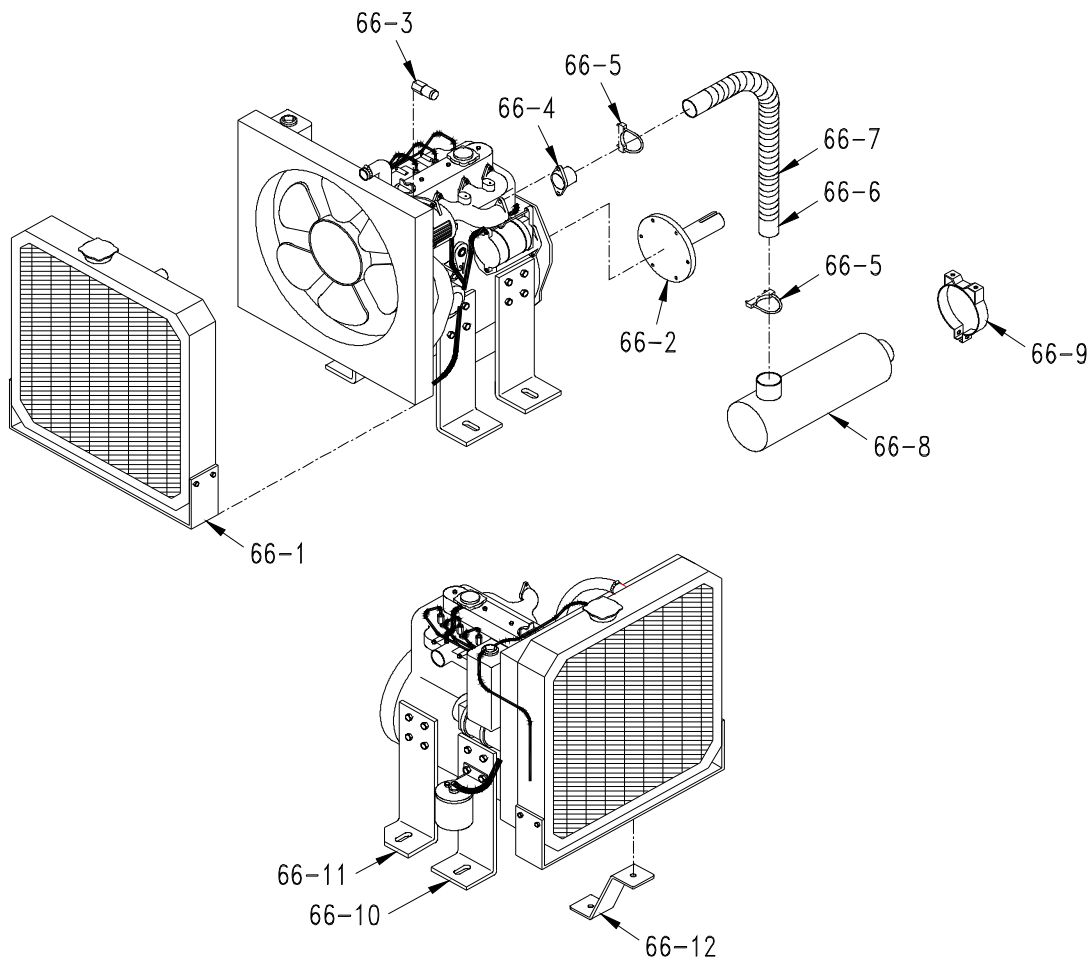
Item#	Part#	Description
86	8306SB-1	Nipple, 3"x4" (Painted)
87	5200-76	Elbow, 3" 90 Black Pipe (Painted)
88	5200-61	Pressure Relief Tube
89	4200-12	Pressure Relief Valve
90	RM-OTH095-MI	3" Heater Hose, 19" long
91	5200-62	Adapter, 2" Long, Male
92	250539	Check Valve, 3"
93	5200-66	Elbow, Pressure Guage
94	IWS-32	Male Connector (2)
95	IWS-25B	Water Line, 1/4" x 6.5' w/swivel
95-1	IWS-H-1/4	1/4" Hose
95-2	IWS-29	Swivel, SAE 37
96	5200-65	Elbow, Inlet
97	5200-45	Slidegate, 5200
98	5200-46	Crankrod w/ Handle Bracket
99	5200-60	Handle
100	FSB078	Pin, Cotter, 1/8" x 1"
101	FN015	N 3/8-16 Lock Nut-Crimped
102	5200-58	Support, Crankrod
103	5200-74	Cover, Slidegate Cable 18 1/4"
103-1	5200-67	Cable, Slidegate, Indicator, 33"
104	5200-69	Mount, Indicator Cable
105	5200-68	Cover, Slidegate Indicator
106	5200-2-R4	Hopper Extension, 5200
107	23-99	Latch, Pull (4)
108	5200-49-R1	Guard, Side (Back Side)
109	5200-48-R2	Guard, Side (Crankrod Side)
110	5200-50	Tube, Output
111	340	4" Hose Clamp (4)
112	RM-OTH108-MI	4 1/4" Radiator Hose, 5" Long
113	5200-12-A-R1	Hood, Engine, Diesel
114	5200-73	Guard, Screen, Radiator
115	541	Hinge Pin (2)
116	FSB080	Roll Pins
117	--	Engine Control Box
118	8065-6	Compression Latch (4)
119	8076	Enclosure
120	8075-1	Contact Block
121	508-2	Killswitch
122	543-M-18	Connector, Conduit, 1/2" Straight
123	543-M-75	Conduit, Flexible 1/2", 5ft long
124	5200-127	Bracket, Mounting, Engine Control Box
125	5200-127-G	Guard, Engine Control Box
126	5200-131-R1	Hopper Agitator
127	S-H60B60F-1-1/4	Sprocket,#60 60T x 1 1/4" Bore
128	5200-133	Guard, Chain, Hopper
129	60NP-92.5	Chain, #60 x 90-1/2" Long
130	HL-60NP	Link, Chain, 1/2 #60 NP (Not Shown)
131	ML-60NP	Link, Chain, Master #60 NP (Not Shown)
132	5200-142	Latch Holder (2)

#5200-D Exploded Parts List Optional Vacuum System



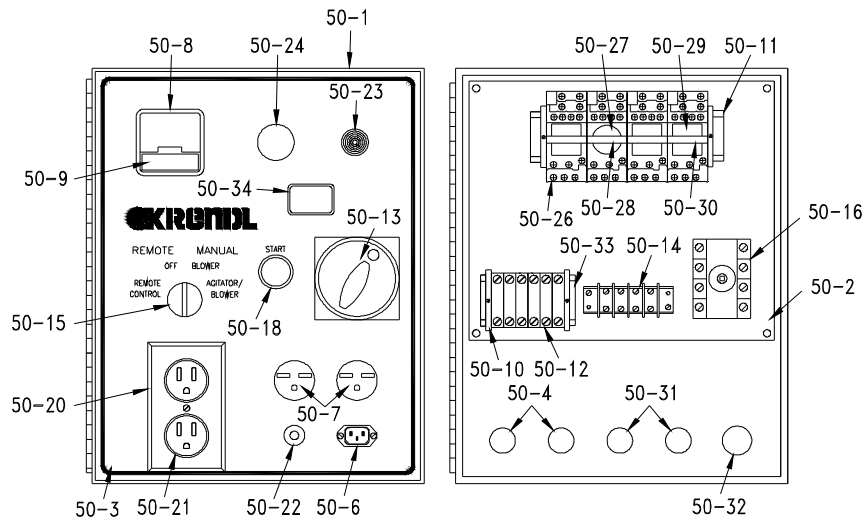
Item#	Part#	Description	Item#	Part#	Description
1	5200RH-1	Recycle Hood	20	5200-152	Sheave, 6 1/2"
2	5200RH-2	Slidegate, Recycle Hood	21	4000-53	Bushing, Taper Loc 1"
3	5200RH-3	Slidegate Stop	22	5200-140	Shaft, Fan, Vacuum
4	341	Clamp, Hose, 6" (2)	23	150311Z	Key, 1/4" x 1/4" x 1 3/4"
5	H430	Hose, 6" Flexhaust, 4" Long	24	FW011	7/16" Flat Washer
6	371P	Reducer, 6" to 4" Connector	25	FW007	5/16" Flat Washer
7	5200-49-R2	Guard, Back	26	FW008	5/16" Lock Washer
8	5200-136	Chamber, Vacuum	27	FSB038	SB 5/16 - 18 x 2" HMS
9	5200-137	Mount, Vacuum	28	GV230-16	Bearing, 4-Bolt, 1 1/8" Flange (2)
10	5200-138	Cover Plate, Vacuum	29	250503-7	Seal, Felt, 1 1/4" (2)
11	5200-139	Fan, Vacuum	30	5200-150	Sheave, 3"
12	340	Clamp, Hose, 4" (3)	31	5200-151	Bushing, Sheave, 3"
13	H330	Hose, 4" Flexhaust, 11' Long	32	5200-40	Belt 2/3VX, 37 1/2" Long
14	5200-141	Shaft, Belt Driven	33	5200-105-R1	Bracket, Pulley Mounting (2)
15	5200-101	Clutch, Shaft Mount, 2 Groove	34	5200-22	Tensioner, H.D., Rotary
16	5200T16	Belt 2/3VX, 35 1/2" Long	35	5200-96	Idler, 2GR3V3.35 (2)
17	449-R1	Key, 3/16" x 3/16" x 1 7/8"	36	5200RH-4	Strip, Cover, 1/2" x 12 1/2" (2)
18	562Z	Key, 1/4" x 1/4" x 1 1/4"	37	5200RH-5	Strip, Rubber, 7/8" x 12 5/8" (2)
19	1032	Bearing, 1" P.B. (2)			

**KUBOTA DIESEL ENGINE
EXPLODED PART VIEW**



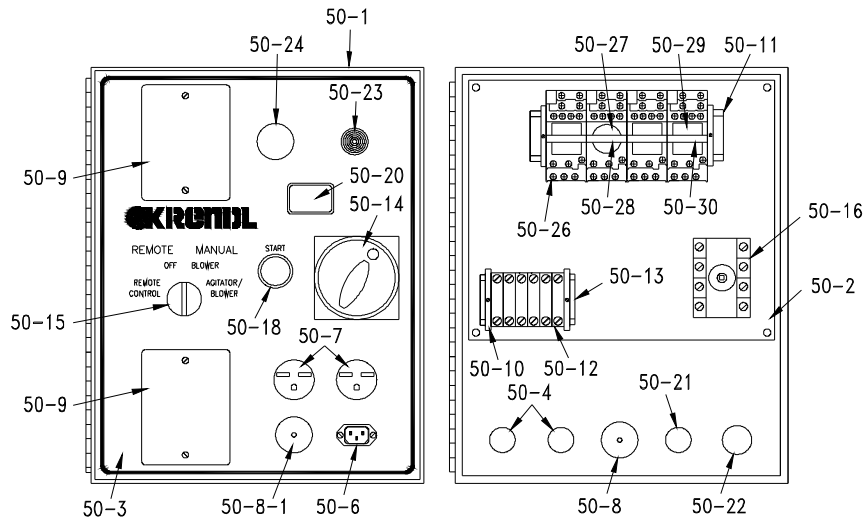
Item#	Part#	Description
66-1	79000076	Radiator, (5200-44)
66-2	P03	Stubshaft (5200-44)
66-3	TM9A230RQCG	Temperature Switch (5200-44)
66-4	5200-107	Muffler Flange
66-5	5200-106	Muffler Clamp (2) (5200-44)
66-6	RM-OTH103-MI	Pipe, Exhaust Flex, 5 Ft.
66-7	RM-OTH022-MI	Heat Wrap, Exhaust, 33 Ft.
66-8	M045193	Muffler (5200-44)
66-9	15371-11252	Muffler Band
66-10	5200-70	Bracket, Engine Mounting (3)
66-11	5200-120	Bracket, Engine Mounting, Front
66-12	5200-44-22	Bracket, Engine Support
66-13	HC02-05 HARNESS	Harness (5200-44) (Not Shown)

12 V.D.C Electrical w/120V Generator Exploded Parts View (U.S.)


12 V.D.C.

Item #	Part #	Description
50-1	5200-57-1	Box, Electrical
50-2	1563	Plate, Backing, 9" x 11 1/8"
50-3	KMC-236-R1	Decal, Electrical Box
50-4	391N-A-2	Connector, Cord, Liquid Tite, 1/2" White (2)
50-5	391N-A-3	Locknut, Steel, Conduit, 1/2" (2) (not shown)
50-6	543-M-2	Receptacle, RC Plug #509-1050 (remote)
50-7	132-B	Receptacle, NEMA# 6-15R (2)
50-8	1531-B	Voltmeter, 0-300V
50-9	KMC-022	Decal, Do Not Operate Below 120V
50-10	151080-49	Clamp, f/1 3/8" Din Rail (4)
50-11	ELU07-C	Dinrail, 1 3/8", 8 1/2" Long
50-12	151080-61	Terminal Block, Small (6)
50-13	600-R-01	Disconnect Switch Assembly
50-14	1534	Terminal Board
50-15	543-M-22	Switch, 4-position Selector
50-16	543-M-15	Contact Block, for Selector Switch(white) #KA-1 (not shown)
50-17	543-M-16	Contact Block for Selector Switch(red) #KA-3 (3) (not shown)
50-18	543-O-01	Switch, Pushbutton ON, Green, 12 VDC
50-19	543-O-02	Block, Switch, 12 VDC (not shown) (2)
50-20	260302-4	Cover Plate, Weatherproof
50-21	250700-17	GFCI Outlet
50-22	433-E	Manual Reset, 15 AMP
50-23	543-M-38	Alarm for Pre-Alarm System, 24V
50-24	543-O-04	Switch, Kill
50-25	8075-1	Contact, Kill Switch (not shown)
50-26	4000-32-3	Socket, (4)
50-27	4000-32-7	Timer, On Delay
50-28	4000-32-8	Clip, Timer Relay
50-29	4000-32-2	Relay, 12VDC Cube (3)
50-30	4000-32-4	Relay Clips (3)
50-31	543-M-18	Connector, Conduit, 1/2" Straight (2)
50-32	121	Cord Clamp, 3/4"
50-33	ELU07-F	Dinrail, 1 3/8", 2 3/4" Long
50-34	543-M-77	Hour Meter
50-35	1536-3	Switch, Toggle, SPST (Not Shown) (Switch for optional vacuum system)
50-36	1536-8	On/Off Plate (Not Shown) (On/Off plate for optional vacuum system)

**12 V.D.C Electrical w/No Generator
Exploded Parts View (Overseas)**



12 V.D.C.

Item #	Part #	Description
50-1	5200-57-1	Box, Electrical
50-2	1563	Plate, Backing, 9" x 11 1/8"
50-3	KMC-236-R1	Decal, Electrical Box
50-4	391N-A-2	Connector, Cord, Liquid Tite, 1/2" White (2)
50-5	391N-A-3	Locknut, Steel, Conduit, 1/2" (2) (not shown)
50-6	543-M-2	Receptacle, RC Plug #509-1050 (remote)
50-7	132-B	Receptacle, NEMA# 6-15R (2)
50-8	543-M-50	Cover Plate, Tapped Hole, Round (2)
50-8-1	543-M-56	Cover Plate, Clearance Hole, Round (2)
50-9	532	Plate, Block-Off (2)
50-10	151080-49	Clamp, f/1 3/8" Din Rail (4)
50-11	ELU07-C	Dinrail, 1 3/8", 8 1/2" Long
50-12	151080-61	Terminal Block, Small (6)
50-13	ELU07-F	Dinrail, 1 3/8", 2 3/4" Long
50-14	600-R-01	Disconnect Switch Assembly
50-15	543-M-22	Switch, 4-position Selector
50-16	543-M-15	Contact Block, for Selector Switch(white) #KA-1 (not shown)
50-17	543-M-16	Contact Block for Selector Switch(red) #KA-3 (3) (not shown)
50-18	543-O-01	Switch, Pushbutton ON, Green, 12 VDC
50-19	543-O-02	Block, Switch, 12 VDC (not shown) (2)
50-20	543-M-77	Hour Meter
50-21	543-M-18	Connector, Conduit, 1/2" Straight (2)
50-22	121	Cord Clamp, 3/4"
50-23	543-M-38	Alarm for Pre-Alarm System, 24V
50-24	543-O-04	Switch, Kill
50-25	8075-1	Contactor, Kill Switch (not shown)
50-26	4000-32-3	Socket, (4)
50-27	4000-32-7	Timer, On Delay
50-28	4000-32-8	Clip, Timer Relay
50-29	4000-32-2	Relay, 12VDC Cube (3)
50-30	4000-32-4	Relay Clips (3)

GLOSSARY

BRIDGING	A tendency for insulation to cling in the hopper forming an air pocket above the airlock. This hinders the normal feeding process of the machine.
CFM	(Cubic feet per minute). A measurement of volume or quantity of air flowing at a certain rate, or air moving capability, of a blower. It is the volume of air moved per minute. Higher volume provides increased coverage and velocity of insulation as it leaves the hose.
CHECK VALVE	A valve that allows air to flow in one direction only. When mounted on the outlet of the blower, it protects the blower from insulation contamination through the air hose when using one blower. When the blower stops, the valve closes.
COMMERCIAL SPRAY-ON	The application of insulation with adhesive to a surface which will remain exposed. The application must therefore be impacted in a smooth, uniform manner.
COVERAGE	Refers to the amount of insulation coverage, usually measured in square feet, according to the R-value desired. This information is given on the insulation package.
NEW CONSTRUCTION WALL CAVITY SPRAY	The spray application of insulation with water or adhesive into an exposed wall cavity to later be covered with drywall sheathing, etc.
PSI	Pounds of pressure per square inch of force exerted on a surface by air or liquid. High-pressure blowers push the insulation through the hose. Higher pressure provides less hose plugging and increased compaction in side wall.
PRODUCTION RATE	Pounds of insulation blown per hour.
RPM	(Revolutions per minute). Speed at which the shaft of a rotating device (i.e. blower fan, agitator) is moving.
R-VALUE	Resistance value. A precise measurement of the insulation's resistance to heat transfer. The higher the resistance value, the slower the heat will transfer through the insulating material.
RETRO-SIDEWALL	This refers to the installation of insulation into an unexposed wall cavity. Insulation is usually installed through holes drilled into the exterior siding.
SETTLED DENSITY	The point at which the insulation will not continue to settle further. Any insulation blown will have a certain amount of progressive settling that occurs over a period of time. Following the insulation manufacturer's recommendations for bag rate coverage will provide useful information to accommodate for settling.
SETTLING	Compression or compaction of insulation fibers caused by the weight of the material, vibration of structure, temperature, and humidity cycles.

SERVICE RECORD

DATE	MAINTENANCE PERFORMED	COMPONENTS REQUIRED



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