#5200 & 5200-QL PANTHER®
CORDLESS RIDE-ON
FLOOR PREP SYSTEMS

INSTRUCTION MANUAL

Read Manual Before Operating Machine

National
Flooring Equipment, Inc.

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HYDRAULIC SAFE OPERATION

MAINTAINING A SAFE WORK ENVIRONMENT

Establishing a safe working environment in and around your hydraulic equipment is just common sense. The easiest and most effective way to avoid problems is to make sure associates understand their equipment, know how to operate it safely and recognize the danger it represents if handled carelessly. A few things you must be aware of include:

1. **PRESSURE:** Hydraulic fluid under pressure is dangerous and can cause serious injury.
2. **FLAMMABILITY:** When ignited, some hydraulic fluids can explode and/or cause fires.
3. **MECHANICAL:** Hydraulic fluid creates movement, which causes parts of your equipment to move or rotate. Always be aware of what you are doing.
4. **MOISTURE:** Use caution when operating in wet or high moisture conditions. Make sure all electrical fittings, switches, cords plus stain reliefs are in good condition. Always unplug when not in use and when doing any service work.
5. **ELECTRICAL:** Faulty wiring can also be an electrical hazard. A regular preventive maintenance program should always include a wiring check. Unplug power pack and/or charger before serving.
6. **TEMPERATURE:** Because this machine operates at a relatively low pressure, overheating is not common. If surface of tank becomes too hot to touch by hand (above 130º), shut off machine and allow to cool off.

PRESSURE

Our system runs at or below 2,000 psi. Never look for a leak when unit is under pressure. Using your hand could cause serious injury. A few common ways to encounter hydraulic fluid under pressure include:

1. **PINHOLE:** Fluid under pressure can cause serious injury. It can be almost invisible escaping from a pinhole, and it can pierce the skin into the body. Do not touch a pressurized hydraulic hose assembly with any part of your body. If fluid punctures the skin, even if no pain is felt, a serious emergency exists. Obtain medical assistance immediately. Failure to do so can result in loss of the injured part or death.
2. **LEAK:** Keep fittings and hoses tight. Only check and service when not under pressure. Leaking hydraulic fluid is not only unsightly, it's hazardous. In addition to making workplace floors slippery and dangerous, leaks also contaminate the environment. Before cleaning an oil spill, always check EPA, state and local regulations.

LEAK AT THREAD END/SEAT

Problem: Coupling leaks at thread or seat. This may be caused by any of the following:

a. Missing or damaged O-rings.
b. Damaged threads or seat angle.
c. Thread alignment.
d. Incompatible thread ends or seat angles.
e. Over or under torquing.

Solution: Remove the connection and inspect.

i. Certain couplings require the use of an O-ring. If it is missing, replace it. If an O-ring is used, check for damage caused by installation or possible material breakdown from heat or fluid incompatibility. Alternative O-ring materials may be required. Replace if necessary.

ii. Check the threads and/or seat angle for damage that may have occurred prior to or during installation. Any ding or burr may be a potential leak path. Replace if necessary.

HYDRAULIC SAFE OPERATION

PRESSURE (continued)

iii. If the coupling was misaligned during installation, threads may have been damaged. Replace and carefully install.

iv. Over torquing of a threaded connection can stretch and damage threads and mating seat angles. Over torquing can also damage the staking area of the nut. Under torquing does not allow proper sealing.

⚠ **CAUTION:** Never check for leaks over hose or hydraulic connections. Instead, use a piece of cardboard to locate a pressurized leak. For drips (low pressure leaks), use a rag to clean the area and determine where the leak originates.

⚠ **CAUTION:** Never touch a pressurized hose assembly. Shut down the hydraulic system before checking hose temperature.

3. **BURST:** Whether due to improper selection or damage, a ruptured hose can cause injury. If it bursts, a worker can be burned, cut, injected or may slip and fall.

4. **COUPLING BLOW-OFF:** If the assembly is not properly made or installed, the coupling could come off and hit or spray a worker, possibly resulting in serious injury. Never operate machine without guards.

FLAMMABILITY

With the exception of those comprised primarily of water, all hydraulic fluid is flammable when exposed to the proper conditions (including many “fire-resistant” hydraulic fluids).

Leaking pressurized hydraulic fluids may develop a mist or fine spray that can flash or explode upon contact with a cause of ignition. These explosions can be very severe and could result in serious injury or death.

Precautions should be taken to eliminate all ignition sources from contact with escaping fluids, sprays or mists resulting from hydraulic failures. Sources of ignition could be electrical discharges (sparks), open flames, extremely high temperatures, sparks caused by metal-to-metal contact, etc.

HYDRAULIC FLUID

Only use Texaco Rando 46 Hydraulic Oil or Compatible Fluid like IS032. Non-compatible fluids could cause damage to unit or serious injury.

⚠ **WARNING:** When using electric tools, always follow basic safety precautions to reduce the risk of electric shock and personal injury.

RULES FOR SAFE OPERATION

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE. Before use, be sure everyone operating this equipment reads and understands this manual as well as any labels packaged with or attached to the machine and components and view the instruction video. Extra copies of the manual and video are available.

1. **KNOW YOUR EQUIPMENT:** Read this manual and view instruction video carefully to learn equipment applications and limitations as well as potential hazards associated with this type of equipment.

⚠ WARNING: Disarm machine when not in use. Remove Cutting Head or lower Cutting Head to the floor. When exiting machine (getting off machine), remove lower Cutting Head to the floor. When transporting machine around job site, remove Cutting Head. Failure to follow these instructions could cause severe bodily injury.

2. **DISARM MACHINE:** Remove cutting head or drop cutting head to the floor when machine is not in use.
3. **DO NOT "SIDE HILL" MACHINE:** See Page 20.
4. **DISCONNECT CHARGER'S:** Disconnect machine from charger's before operating machine.
5. **AVOID DANGEROUS ENVIRONMENTS:** Do not use in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials). Remove materials or debris that may be ignited by sparks.
6. **KEEP WORK AREA CLEAN AND WELL LIT:** Cluttered, dark work areas invite accidents.
7. **DRESS PROPERLY:** Do not wear loose clothing. These may be caught in moving parts. Keep hands and gloves away from moving parts.
8. **USE SAFETY EQUIPMENT:** Everyone in the work area should wear safety goggles or glasses complying with current safety standards. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be worn when specified or necessary.
9. **KEEP BYSTANDERS AWAY:** Children and bystanders should be kept at a safe distance from the work area to avoid distracting the operator. Operator should be aware of who is around them and their proximity.
10. **PROTECT OTHERS IN THE WORK AREA:** Provide barriers or shields as needed to protect others from debris and machine operation.
11. **USE PROPER ACCESSORIES:** Using accessories that are not recommended may be hazardous. Be sure accessories are properly installed and maintained. Do not delete a guard or other safety device when installing an accessory, attachment or servicing.
12. **CHECK FOR DAMAGED PARTS:** Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use damaged equipment. Tag damaged machine "DO NOT USE" until repaired. A guard or other damaged parts should be properly repaired or replaced. For all repairs, insist on only identical National replacement parts.
13. **REMOVE ALL ADJUSTING KEYS AND WRENCHES:** Make a habit of checking that the adjusting keys, wrenches, etc. are removed from the tool before turning it on.

RULES FOR SAFE OPERATION

14. **GUARD AGAINST ELECTRIC SHOCK:** Prevent body contact with grounded surfaces such as pipes, battery plug connection, radiators, ranges and refrigerators. When scoring or making cuts, always check the work area for hidden wires or pipes to reduce shock hazards.

15. **AVOID ACCIDENTAL STARTING:** Be sure equipment is turned off before plugging it in. Do not use if the power switch does not turn the machine on and off properly.

16. **DO NOT FORCE EQUIPMENT:** Equipment will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear and reduced control.

17. **KEEP HANDS AND FEET AWAY FROM ALL CUTTING EDGES AND MOVING PARTS.**

18. **WEAR GLOVES WHEN CHANGING BLADES.**

19. **DO NOT ABUSE CORD:** Never unplug the battery charger by yanking the cord from the outlet or from the battery. Pull plug rather than cord to reduce the risk of damage. Keep the cord away from heat, oil, sharp objects, cutting edges and moving parts.

20. **DO NOT OVERREACH. MAINTAIN CONTROL:** Stay properly seated. Keep proper footing and balance at all times. Maintain a firm grip.

21. **STAY ALERT:** Watch what you are doing, and use common sense. Do not use when you are tired, distracted or under the influence of drugs, alcohol or any medication causing decreased control.

22. **STARTING MACHINE:** On/off switch must be in off position before connecting to power source.

23. **UNPLUG EQUIPMENT:** Disconnect battery and/or charger's before servicing or when not operating.

24. **MAINTAIN EQUIPMENT CAREFULLY:** Keep control levers dry, clean and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Periodically inspect battery, charger's and all plug connections. Have damaged parts repaired or replaced.

25. **STORE IDLE EQUIPMENT:** When not in use, store in a dry, secured place. Keep away from children. Remove blade or keep blade lowered to the floor (disarm machine).

26. **MAINTAIN LABELS AND NAME PLATES:** These carry important information. If unreadable or missing, contact National for a free replacement.

27. **MACHINE IS HEAVY, DO NOT DROP:** Counter weights are heavy. Take caution when removing or reassembling. Take caution when moving or transporting. Do not drop batteries.

28. **POWER PACKS:** Only replace power packs by the manufacturer or its servicing agent. Do not open Battery Packs. Doing so voids all warranties and could cause injury due to electric shock.

29. **COMMERCIAL APPLICATION:** Machine is intended for commercial use only.

⚠ **WARNING:** Exposure to dust may cause respiratory ailments. Use approved NIOSH or OSHA respirators, safety glasses or face shields, gloves and protective clothing. Provide adequate ventilation to eliminate dust, or to maintain dust level below the Threshold Limit Value for nuisance dust as classified by OSHA.

RULES FOR SAFE OPERATION

CHARACTERISTICS OF A DEFENSIVE OPERATOR

- Education
- Alert
- Skills
- Judgment
- Common Sense
- Recognizes the Hazards
- Understands the Defense
- Acts Correctly

A GOOD OPERATOR IS A "DEFENSIVE" OPERATOR

QUALITIES

Education: Learns about the machine and the environment.

Alert: Stays alert at all times…never lets guard down.

Skills: Only performs duties he/she are qualified to do. Always tries to improve.

Judgment: Plays it safe. Doesn't take chances.

Common Sense: Does the right thing without having to be told. Applies knowledge.

Recognizes the Hazards: Maintains alertness. Anticipates danger.

Understands the Defense: Knows that safety isn't an accident…it's a thinking person's choice.

Acts Correctly: Does not cave in to pure pressure. Performs correctly when supervised or not.

5200 & 5200QL SAFETY INSTRUCTIONS

Read and understand operators instruction manual and instructional video before operating this equipment.

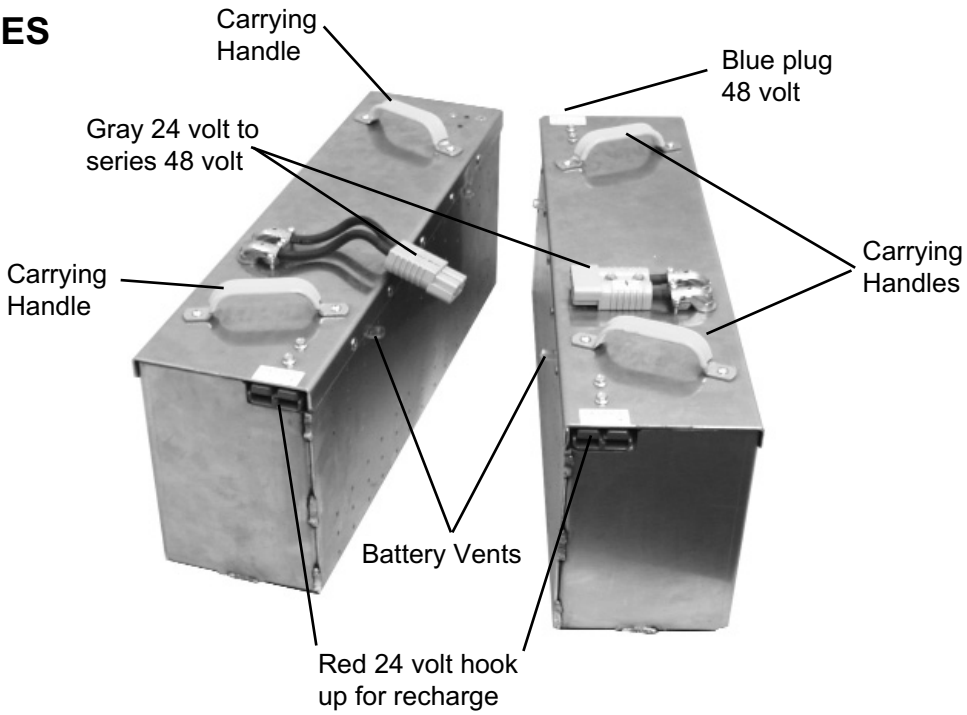
⚠ **WARNING:** Know and understand before operation. Failure to do so could cause damage to equipment or bodily injury.

- Only qualified, trained personnel should operate this unit.
- Loose or damaged parts should be replaced immediately. Failure to do so could cause equipment damage or serious injury.
- Switches and levers should be inspected. (Disconnect battery charger from wall outlet and machine from batteries before repairs to prevent electrical shock). Do not use if defective. Power on/off switch should return to off when lever is released.
- Power control box, motor and switches should be completely enclosed at all times with no exposed wiring.
- Disconnect power from unit before servicing. Failure to do so can cause electrical shock.
- Only use National components. Failure to do so could cause damage or serious injury.
- Always be aware of support personnel and their proximity when in operation. Block off work area.
- Support personnel should never stand next to machine, in front of or behind machine while machine is running. Failure to do so could cause serious bodily injury or death.
- Manual should be kept with machine in supplied holder for access by operator at all times.
- Always wear eye protection when running machine.
- Never defeat switches or guards.
- Remove blade when machine is not in use and/or lower cutting head to floor. Failure to do so could cause serious bodily injury.
- Wear gloves when changing blades. Always shut machine off when changing blades.

⚠ **WARNING:** Failure to follow any of the above instructions could cause damage to machine, damage to property or serious bodily injury or death.

5200 & 5200QL BATTERY OPERATION

BATTERIES



Each power pack contains 24 volt DC current

CAUTION: Electric shock hazard.

BLUE PLUG

Front, 48 volt hook up. Hook up to motor

GRAY PLUG

On top. 24 volt series hook up to create 48 volt pack.

RED PLUGS

Rear, right and left. 24 volt access for recharging batteries either in the machine or out of the machine.

BLUE PORT

48 volt terminal for hook up of power to motor. If charging at this port, only use approved 48 volt DC charging unit. Failure to do so could cause severe damage to battery and possible serious bodily injury.

Remove plug by holding the plug body. Never unplug by pulling on the cord.

Inspect plug connections, cords, and switches before each use. Do not use if any of these are defective. Replace or repair immediately.

Each pack contains 75 amp hours at 24 volt. Connecting to the gray plug on top of the power pack, puts pack into service for 48 volt operation.

CAUTION: Use caution when connecting or disconnecting power packs to avoid electrical shock.

BATTERIES (continued)

REMOVING POWER PACKS - 5200

Each pack weighs 140 pounds (63.50 kilos). For safe removal, additional help may be needed. Open and secure hood. Remove all three plug connections (red, blue and gray). Never try to lift packs out of machine before completely disconnecting the blue plug in front and the gray plug on top.

⚠ **WARNING:** Failure to do so could cause damage to plug connection resulting in possible electrical shock.

After plugs are free, hold power pack by handles. Lift battery clear of machine. Set down on the floor or charging cart.

Note: When lifting power pack out of machine, power pack can be momentarily rested on the sidewall of machine before lowering to the floor or cart (figure A). For two person removal of power pack, follow same procedure as above, using one person on each side. Facing each other (for good communication), each person holds on to a handle (figure B). Set the power pack down on the floor or charging cart.

REPLACING POWER PACKS - 5200

Reverse procedure from above. Set power pack straight into machine, not at an angle. Make sure power pack is nested properly into machine, between rubber bumpers and front and back stops.

Note: There is a right and left to each power pack as well as a front and back.

From a seated position, the power pack with a blue plug is the right hand pack. Blue plug to the front, red plug to the rear. Power pack with no plug in the front is the left pack. No plug to front, red plug to rear. Failure to properly install power packs correctly will not allow power hook up. Once power packs are properly installed, connect gray plug at top, blue plug at front. Failure to connect all the plugs will not allow machine to operate. Make sure plugs are connected firmly and securely together. Plug connectors are stiff. Close hood. Machine is now ready to operate.

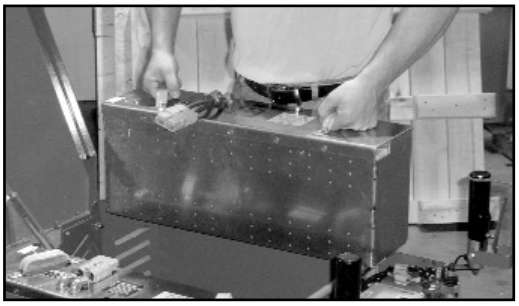


Figure A

Figure B

⚠ **CAUTION:** Hood has pinch points. Do not get hands or fingers pinched when closing hood.

⚠ **WARNING:** Remove battery charger's from machine before operating. Failure to do so could cause damage to machine or bodily injury.

⚠ **WARNING:** Disconnect battery charger from machine before servicing machine.

5200 & 5200QL BATTERY OPERATION

REMOVING POWER PACKS - 5200-QL

Each pack weighs 185 pounds (83.91 kilos). For safe removal, additional help may be needed. Open and secure hood. Remove all three plug connections (red, blue and gray). Never try to remove packs out of machine before completely disconnecting the blue plug in front and the gray plug on top.

⚠ **WARNING:** Failure to do so could cause damage to plug connection resulting in possible electrical shock.

After plugs are free connect the battery cart to the machine. Slide batteries from the machine onto the cart. Secure batteries onto the cart. Disconnect the cart from the machine.

Note: When lifting power pack out of machine, power pack can be momentarily rested on the sidewall of machine before lowering to the floor or cart (figure A). For two person removal of power pack, follow same procedure as above, using one person on each side. Facing each other (for good communication), each person holds on to a handle. Set the power pack down on the floor or charging cart.

REPLACING POWER PACKS - 5200-QL

Reverse procedure from above. Side power pack straight into machine, not at an angle. Make sure power pack is nested properly into machine between guards.

Note: There is a right and left to each power pack as well as a front and back.

From a seated position, the power pack with a blue plug is the right hand pack. Blue plug to the front, red plug to the rear. Power pack with no plug in the front is the left pack. No plug to front, red plug to rear. Failure to properly install power packs correctly will not allow power hook up. Once power packs are properly installed, connect gray plug at top, blue plug at front. Failure to connect all the plugs will not allow machine to operate. Make sure plugs are connected firmly and securely together. Plug connectors are stiff. Close hood. Secure latch. Machine is now ready to operate.

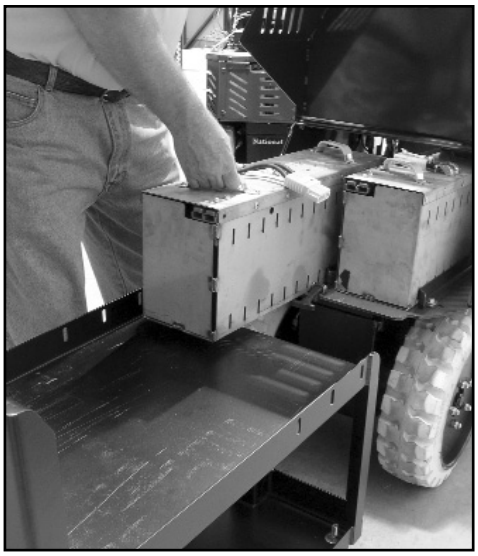


Figure A

⚠ **CAUTION:** Pinch points. Keep fingers & hands out of pinch points. Do Not let hood close or slam down on fingers or hands. Failure to do so could cause bodily injury and/or loss of a limb.

5200 & 5200QL BATTERY OPERATION

BATTERIES (continued)

PAIRING THE POWER PACKS

Power packs should be kept in their original pairs. Mixing the power packs can throw them out of balance and shorten the battery life. Mark power pack cases (as you receive them) with a code to keep them together. Example: A and A, 1 and 1, green and green.

BREAKING IN THE POWER PACKS

The power packs will not produce full 100% amperage per hour until it has been fully discharged and recharged twelve to thirteen times.

After the break in has been completed, approximately 1½ hours of run time is average on a normal working load, up to 2 hours on light duty work (ie. glue, re-scrape).

EXTENDED RUN BATTERY

National Extended Run Battery is very different from standard liquid-acid batteries that are openly vented. Operates as a sealed battery, recycling all gases internally. There is no corrosion of the positive terminal or corrosion to the surrounding area.

CONNECTING CHARGER

⚠ **WARNING:** Always find a safe place for recharging power packs with good ventilation away from spark or flame sources and away from bystanders. Rope off if necessary.

READ AND UNDERSTAND SEPARATE CHARGING MANUAL before using charger's.

Charger's can be connected to power packs in or out of the machine.

MACHINE CHARGING - 24 VOLT CHARGERS

Hooking up charger's to the machine. Remove the blue 48 volt plug from the motor. Turn the kill switch to the off position. Power packs do not need to be unhooked from series (gray plug on top of packs). Hook one charger to each power pack by connecting one red 24 volt plug from a charger into the red connection of a power pack (red to red). Charging can take up to 4 hours.

⚠ **CAUTION:** Do not attempt to charge power packs hooked in series with only one 24 volt charger. It will not hurt the pack but pack will not charge properly. It will take an extended amount of time and power pack balance will be out of sink.

If only one charger is available, disconnect power packs from series. Charge one pack at a time. If you want to only use one charger for both packs at the same time, use National's 48 volt system with the #5204 Extended Run Power Pack. Charge from the 48 volt blue port at the front of the power pack.

CHARGING TIPS - 24 VOLT CHARGERS

Nationals charging systems run off an 110 volt outlet, 20 amp preferred. In most cases, both charger's can be run off the same receptacle if on a 20 amp breaker. If you need to separate charger receptacle hook ups, use an extension cord to reach another receptacle. Grounded only, no more than 50 feet long, no lighter than 12 gauge. When turning charger's on, do one at a time to help reduce breaker trip.

⚠ **WARNING:** Electrical shock hazard. Only use Nationals approved charging system.

5200 & 5200QL BATTERY OPERATION

BATTERIES (continued)

CHARGING BATTERIES OUT OF THE MACHINE - 24 VOLT CHARGERS

For use with #5203 and/or #5204 Power Packs. Use the same procedure as in the machine. It does not make a difference if the two packs are hooked in series (gray plug) or not, either way will work. Remember one (1) charger per pack. Do not try to charge both power packs hooked in series with only one charger. It will not charge efficiently and could shorten the life of the battery. If only one charger is available, disconnect the gray series plug on top of the power pack. Charge one battery until complete, then the other. This will give maximum battery time and life.

Power packs can be recharged at any point of discharge. Packs will not memory set. Charging time will vary if power packs have been completely discharged. It will take approximately 2 hours to properly recharge to 100% or better. The green light will show on the charger when ready, allowing for 1½ to 2 hours of operating time. 80% charged will take approximately 1½ hours to charge and will allow from 45 minutes to 1 hour of operating time. The light on the charger will show orange when ready.

The red light scale on the charger shows the state of charge and approximate time left to be charged.

Remember to use common sense when working around or with electrical devices to prevent shock or fire hazard.

You will not loose a complete charge cycle when recharging packs that are partially discharged, only a portion of cycle. The power packs respond very well to be recharged when only partially discharged.

Battery Power Pack can sit unused for up to one year and will only loose 10% to 15% of original charge without harm. WARNING: Power Packs must be fully charged before allowing packs to sit for a long period of time.

Always check plugs and plug connections before each use. Replace damaged parts immediately. Do Not use if damaged or defective. Damaged or defective should be replaced by a trained technician.

Important Tip: If you “top off” the power pack before you start each morning, you will achieve longer run times. This can be done by leaving charger’s hooked up over night in maintenance mode or as soon as you arrive on the job site. Unload machine first and hook up immediately to charges while you unload and prepare the job site. It usually takes a few minutes to “top off”.

EXTENDED RUN BATTERY CHARGING - 24 VOLT CHARGING

The state of charging in the Extended Run Battery can be determined from the following chart:

Voltmeter Reading	State of Charge
12.84 Volts	100%
12.50 Volts	75%
12.18 Volts	50%
11.88 Volts	25%

For machine charging, move machine into position close to a wall receptacle. While charger is unplugged, insert red plug into charger points at rear of machine. Make sure connection is complete, one charger to each power pack. Plug charger into wall receptacle and turn on the charger. Plug second charger into wall receptacle. Turn on second charger. Note: Usually both charger’s can run off one receptacle if turned on one at a time.

Safety Tip: When charging in the machine disconnect blue power plug and shut off the kill switch. This will eliminate accidental start up.

Note: If there is a problem with circuit breakers, run a cord from another outlet to separate charger’s from the same circuit. Use 12 gauge cord or heavier, not to exceed 50 ft length.

5200 & 5200QL BATTERY OPERATION

CHARGING - 48 VOLT CHARGER

READ ALL SAFETY INSTRUCTIONS BEFORE OPERATING THIS UNIT

⚠**CAUTION:** This charger is designed ONLY to be used with National's #5204 Extended Run Power Packs. DO NOT use this charger with the #5203 lift-out style power packs or any other batteries. Failure to follow this warning may cause damage to charger, batteries and/or personal injury & will void all warranties.

Charging can be done in or out of the machine. For machine charging turn the kill switch to the off position (See Figure A). Open and secure the rear hood (see Figure B) (keep open for ventilation). Unplug the blue 48 volt plug (See Figure C). Power packs must be connected together (hooked in series, gray plugs on top of the packs). Connect the charger to the blue 48 volt plug (See Figure D). Connect the charger to a power source. Connecting to power source starts the charging automatically. Charging is complete once the LED stays solid green. Disconnect the charger from the power source. Disconnect the charger from the machine. Reconnect the blue 48 volt plug to the power pack. Turn kill switch to the on position.

Machine Charging

Figure A

Figure B

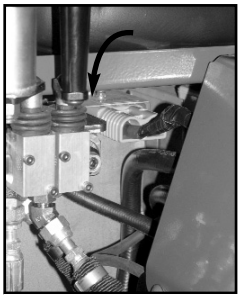


Figure C

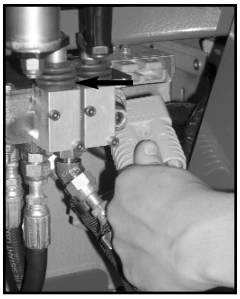


Figure D

48 VOLT CHARGER INFORMATION

Chargers are fully automatic. The input and output of the charger is microprocessor controlled. The output is current limited for the protection of your equipment.

! This Safety Alert Symbol Means Attention! Become Alert! Your Safety Is Involved

5200 & 5200QL BATTERY OPERATION

⚠WARNING: Make sure the charger to the machine connection is made before connecting charger to a power source. Failure to do so could cause damage to the power pack and/or charger and could cause bodily injury.

#5212 48 VOLT CHARGER OPERATION

Always connect the battery charger to the battery prior to connecting to the A/C source.

1) Be sure the ON/OFF switch is in the OFF position, then plug the charger into AC power having the same ratings as that of the charger.

2) Connect the connector into battery pack. The "BATTERY" LED should light on charger indicating DC continuity.

3) Move the ON/OFF switch to the ON position. The "AC POWER" LED will light, indicating AC power is present.

4) Initially, the ammeter should show a reading near the maximum output of the charger. As the battery becomes charged, the ammeter will work it's way near zero. At the gassing threshold of the battery, an electronic timer will start. After three hours of gassing to a maximum of 2.5 - 2.6 volts per cell, the charger will drop the batteries to a float voltage of 2.26 volts per cell, the charger will drop the batteries to a float voltage of 2.26 volts per cell, indicated by a zero reading on the ammeter, and an "END CYCLE" LED. Current in the float mode will be less than one amp.

BATTERIES MAY BE LEFT CONNECTED INDEFINITELY, BUT WATER LEVEL SHOULD BE CHECKED PERIODICALLY ON WET BATTERIES

5) To discontinue charging, move switch to the OFF position. Remove clamps from battery or unplug connector.

6) **When disconnecting the battery charger always disconnect the A/C before disconnecting the battery.**

! This Safety Alert Symbol Means Attention! Become Alert! Your Safety Is Involved

INSPECTION

Inspect the charger immediately upon receipt. If there is any indication of freight damage, call the carrier for an inspection and file a claim for damage.

⚠ CAUTION

! To reduce the risk of injury, before you start charging your batteries verify the charger is the correct one for the type of batteries in your machine or vehicle!

! If your equipment has any type of sealed batteries never use a charger that is not specifically designed or programmed for such batteries.

! Keep exposure of charger to moisture to a minimum.

! Use of any attachment is not recommended and may result in risk of personal injury, electrical shock or fire.

! Use of damaged or improper extension cord could result in risk of fire or electrical shock. If an extension cord must be used, make sure:

a) That the configuration of the extension cord plug and battery charger plug are identical and in good operating condition.

5200 & 5200QL BATTERY OPERATION

⚠ CAUTION (CONTINUED)

b) That the extension cord is properly wired and in good condition.
c) That the extension cord wire size is at least 12 gauge unless greater than 25 feet. If using an extension cord greater than 25 feet, it must be a minimum 10-gauge cord.

Do Not use an extension cord greater than 50 feet!

DANGER - RISK OF EXPLOSIVE GASES:

Chargers can ignite flammable materials and vapors. Do no use near fuels, grain, dust, solvents, or other flammables. Batteries generate explosive gases during normal operation. For this reason, to reduce the risk of battery explosion, it is important that each time, before using the charger, you read this manual a manufacturer of any equipment you intend to use in the vicinity of the batteries or battery charger. Review all cautionary markings.

⚠ CAUTION - PRECAUTIONS:

a) Contact with electrolytic acid can cause skin irritation and damage clothing. Wear a protective apron, gloves and goggles when working with batteries. Have plenty of fresh water and soap nearby in case battery acid contacts your skin, clothing, or eyes.
b) Remove personal metal items such as bracelets, rings, necklaces, and watches when working with batteries. A battery can produce a short circuit current sufficient enough to weld metal objects, causing severe burns.
c) Never smoke or allow a spark or flame in the vicinity of the batteries. Caution must be taken to reduce the risk of dropping metal tools onto the battery. A spark or short circuit may result in an explosion.

FIRST AID

Immediately flush eyes with cold, fresh water for a minimum of 10 minutes if electrolytic acid comes in contact with eyes. Seek professional medical attention.

VENTILATION

Blocking louvers or air flow perforations of convection or fan cooled battery chargers will result in damage to the unit. When installing the unit leave space for air to flow freely through the intake and discharge louvers and/or perforations.

GROUNDING AND A/C POWER CONNECTION INSTRUCTIONS

The charger is equipped with an electrical cord with a equipment grounding conductor and grounding plug. The plug must be attached into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ DANGER

Never alter A/C cord or plug provided. If it will not fit the outlet, have proper outlet installed by a qualified electrician. Improper connection can result in electric shock.

5200 & 5200QL SAFE OPERATION

INSTALLATION

1) To provide maximum reliability, charger must be installed in a well-ventilated area, so that free airflow is not restricted through the side intake and exhaust vents.
2) Check polarity of battery posts. Positive (POS, P, +) and Negative (NEG, N, -). Attach positive (red) charger lead to the positive battery post. Attach negative (black) charger lead to the negative battery post.

⚠ **WARNING:** Do not disconnect DC charger leads during charging. Damage to the charger could result and void the warranty.

⚠ **WARNING:** Do not connect DC charger leads if the charger is connected to AC power. DC charger leads must be connected first.

IMPORTANT TIP

These power packs can be charged when only partially discharged. Whenever stopping the machine for more than 15 minutes, hook the machine up to the charger's. A good example is when stopping for lunch. Charging during this down time will allow the batteries to be fully charged when going back to use the machine. You will find you can operate all day long without having to change the battery packs. In a normal 8 hour working day of removal and reinstalling, machine usually is in operation for approximately 3 hours of actual running time. Take advantage of charging the batteries during down time. If using machine in a heavy demolition mode (continual operation), 3 battery packs are recommended to allow for proper charging and cooling time.

COOLING TIME

Although it is not necessary, but if the batteries are allowed to cool back to room temperature after being charged, you will get more life out of the batteries and charge cycle.

POWER PACK GENERAL INFORMATION

Normally the two power packs provided will give plenty of run time for the average working day. But, if it is a heavy demo mode, continuous run all day, a third power pack may be required. This will also allow for a cool down period on charged power packs. Although not necessary, this will give packs a longer life.

Power packs are designed to withstand high continuous shock load. They can be safely laid on the side, although keeping them upright at all time is suggested. Remember packs are heavy, 120 pounds. Get help to remove packs if weight is too much or you are under lifting restrictions. Do Not drop packs.

When Power packs have used their full life, they are recyclable at locations all over the US and Europe. Call National for recycle center.

Power packs should only be maintained by certified National Technician.

Power packs are lead acid constructions. If packs are allowed to reach temperatures above 125° f, ventilation can occur and discharge explosive gases (see warning label). How is this done wrong? Improper charger's or improper connections, allowing for direct short.

POWER PACK FREEZING

Freezing of the power packs will not be covered by warranty. Even though there is no liquid in the batteries, allowing power packs that are discharged below 75% to sit in temperatures below 20° F for more than twenty four hours can freeze. The colder the temperature the faster they will be damaged. Always recharge Power pack before allowing to sit in cold temperatures or, hook to charger when conditions permit. This charging system can be left on the power packs (maintenance mode) for long periods without damaging the power packs.

5200 & 5200QL SAFE OPERATION

SHIPPING

Unlike flooded cell or gel cell batteries, these power packs have no liquid in them so they can be shipped by air freight.

POWER PACK WARRANTY

One year warranty stamped on power pack case and on label. All warranty is null and void if power pack container is tampered with or opened. Replace/maintain only by a National certified technician.

⚠ **CAUTION:** Remove battery when not in use, servicing and/or lifting/transporting machine. Failure to do so could cause machine to accidentally start causing serious injury.

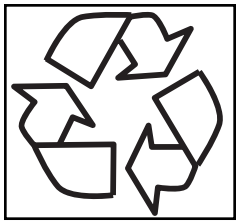
⚠ **WARNING:** Do not put battery near fire.
Must be recycled or disposed of properly.
Do not touch terminals with metal objects.

BATTERY DISPOSAL

Battery must be recycled or disposed of in an environmentally sound manner.

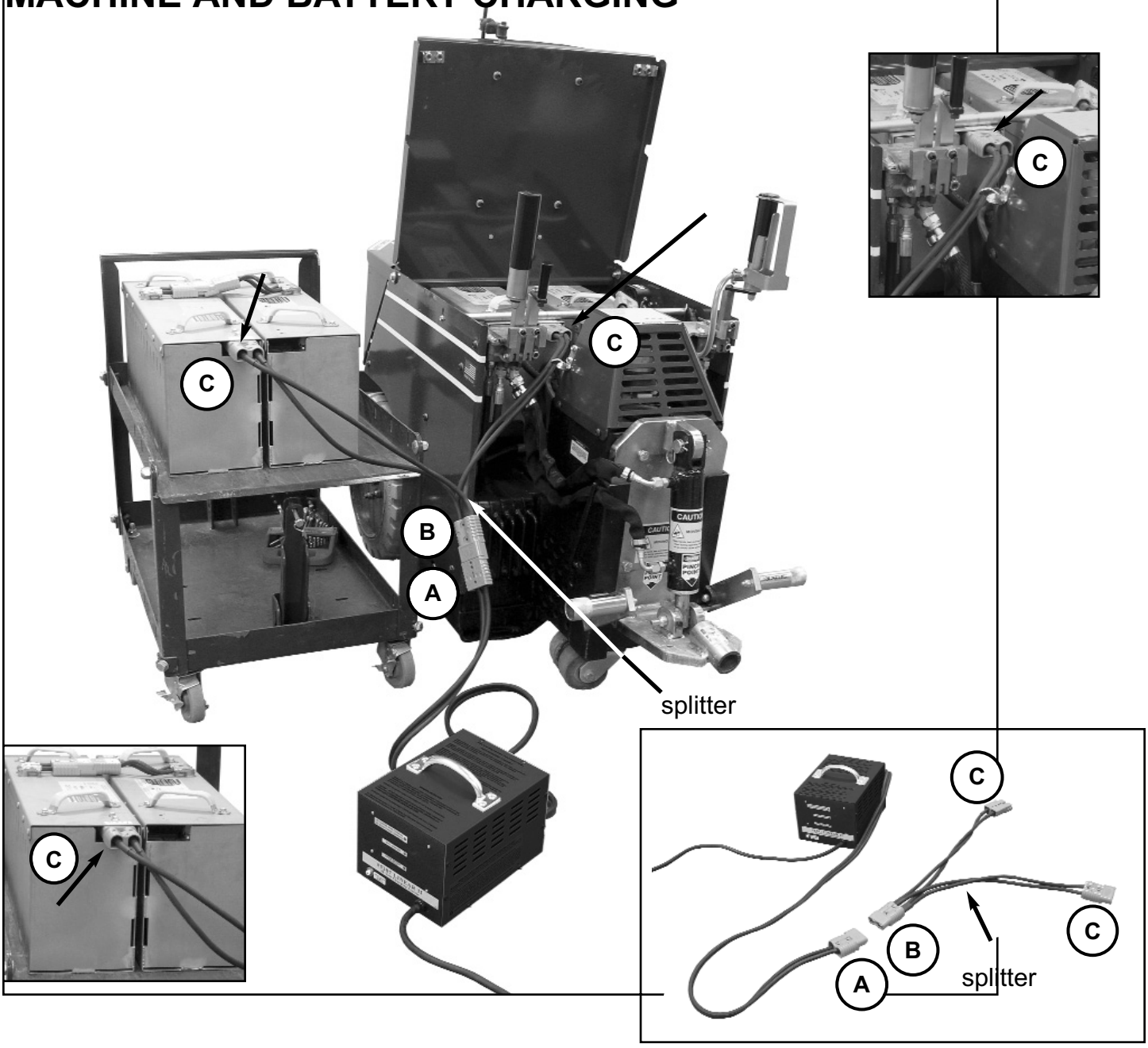
Do not place used batteries in regular trash.

Do not expose the battery to fire or high heat as batteries may explode. Care must be taken not to short terminals together with metal objects: jewelry, keys, nails, screws, tools, etc. Do not attempt to disassemble battery, fire or injury may result. Prior to disposal, protect terminals with heavy insulating tape to prevent shorting.



5200 & 5200QL BATTERY CHARGER INSTRUCTION

MACHINE AND BATTERY CHARGING



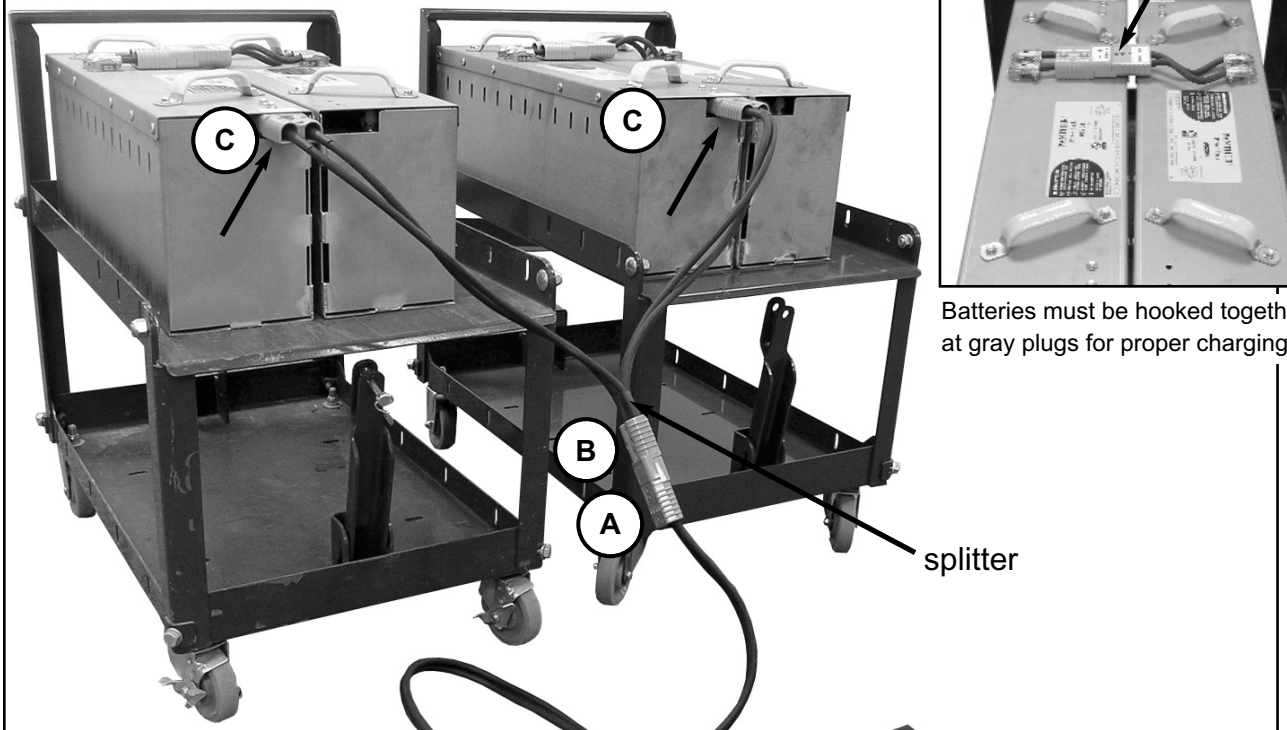
When charging in this manner, it works best when both 48 volt power packs are at the same level of discharge. Connect splitter plug (B) to charger plug (A). Connect splitter (plugs) (C) to each power pack - one in machine and one on cart. Connect charger to power source. Complete the charging sequence. Charging will take 4 to 8 hours depending on the level of discharge of each power pack. The lower the voltage, the longer it will take to restore the power pack.

⚠ **WARNING:** Remove battery charger's from machine before operating. Failure to do so could cause damage to machine or bodily injury

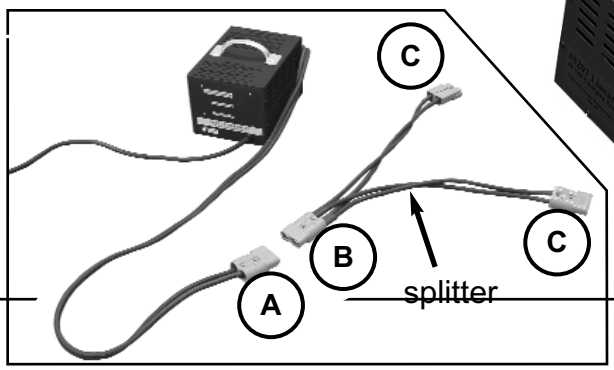
⚠ **WARNING:** ONLY use splitter with National's #5212 charger. DO NOT use splitter with any other charger. Failure to follow this warning could cause damage to charger, property and/or bodily injury.

5200 & 5200QL BATTERY CHARGER INSTRUCTION

TWO CART BATTERY CHARGING



Batteries must be hooked together at gray plugs for proper charging



When charging in this manner, it works best when both 48 volt power packs are at the same level of discharge. Connect splitter plug (B) to charger plug (A). Connect splitter (plugs) (C) to each power pack. Make sure all connections are fastened securely. Once charger and splitter are connected to both power packs, connect charger to power source. Complete the charging sequence.

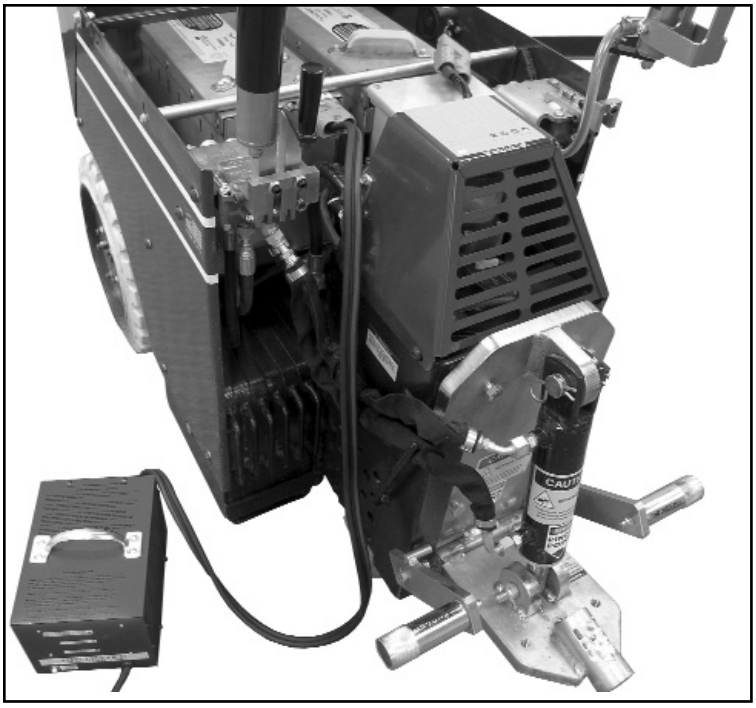
NOTE: Make sure all connections are securely fastened.

⚠ **WARNING:** Remove the power cord from power source before disconnecting the power pack and/or the splitter from the charger.

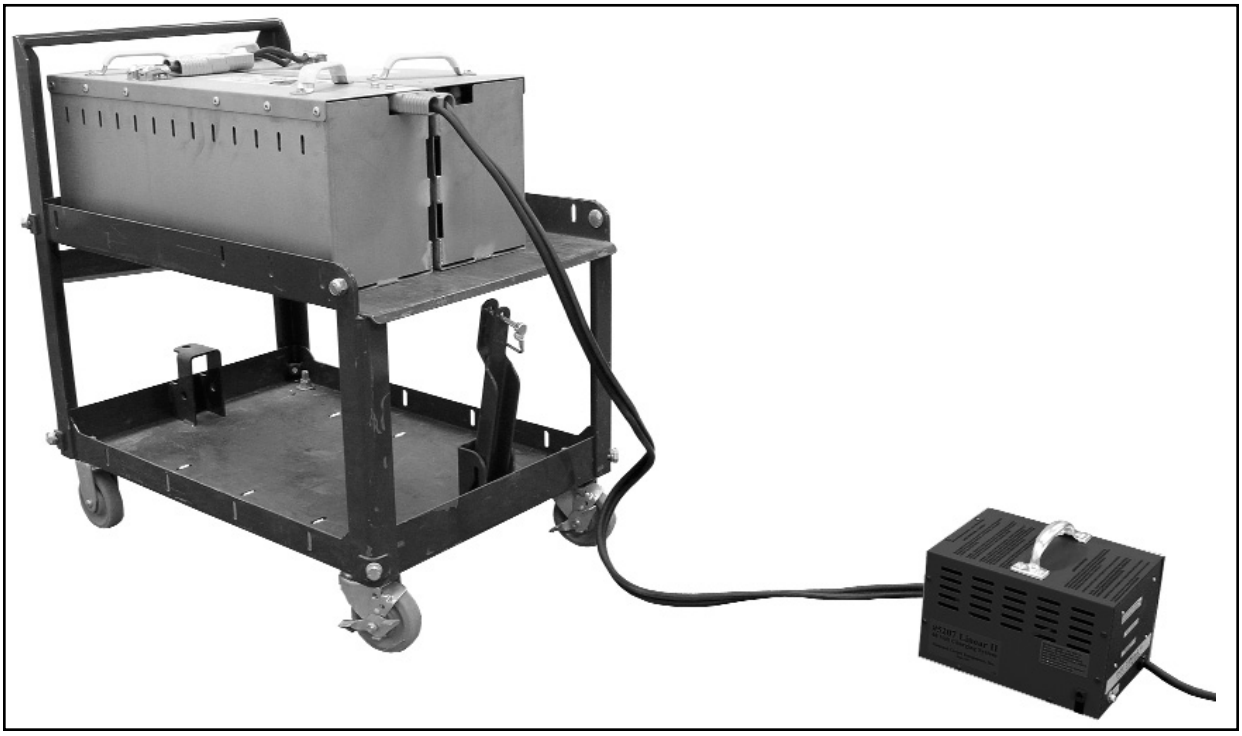
⚠ **WARNING:** ONLY use splitter with National's #5212 charger. DO NOT use splitter with any other charger. Failure to follow this warning could cause damage to charger, property and/or bodily injury.

5200 & 5200QL BATTERY CHARGER INSTRUCTION

SINGLE CHARGING



Charging time: range 2 to 4½ hours depending on the level of discharge of the power pack.



5200 & 5200QL BATTERY OPERATION

COMMONLY ASKED QUESTION

1. **Question:** When the charging battery has been fully discharged will it take a memory set?
   Answer: No, the design of this battery allows charging at any stage of discharge without memory problems.

2. **Question:** Do I lose a complete cycle when I charge batteries that are only partially discharged?
   Answer: No, battery design allows for recharge but only loses one complete cycle when fully discharged.

3 . **Question:** Does the battery slow down as it discharges?
   Answer: No, this design will give full power to 90% of the battery cycle. This drop off in the last 10% allows extra time to get back to your charger or extra packs.

4. **Question:** Can the battery spill?
   Answer: No, unlike other batteries, there is no liquid to spill out which allows for high shock load applications.

5. **Question:** Will batteries go dead sitting on the floor?
   Answer: No, the battery design will hold up to 90% of its' charge up to 2 years without being used or charged.

6. **Question:** Does severe cold effect the batteries?
   Answer: If fully charged, no. If allowed to warm up (room temperature) battery will perform better. If battery is under 75% charge, severe cold will destroy the battery.

7. **Question:** Can I charge both batteries at one time (connected)?
   Answer: Yes, but you have to have a 48 volt charger approved for the system, and you charge from the blue plug or use two chargers from the red plug.

8. **Question:** Do I have to let batteries cool down after charge?
   Answer: No, but if you do, you will get more life out of the battery.

9. **Question:** Can the battery overheat and discharge gases?
   Answer: Yes, if improper charge is used or the battery heats to over 125° FH, gases off the vents inside of the power packs is possible. Caution must always be taken when charging batteries. Charge in a good ventilated area, away from sparks and open flame and away from bystanders.

5200 & 5200QL BATTERY OPERATION

COMMONLY ASKED QUESTION (CONTINUED)

10. **Question:** Can I plug in the batteries wrong?
    Answer: Almost impossible. Each plug is color coded as well as keyed red to red, blue to blue, gray to gray. Red to gray won't work. Inspect plugs and cords regularly. Never use damaged cords. Repair or replace as needed. Colored plugs can not be intermixed.

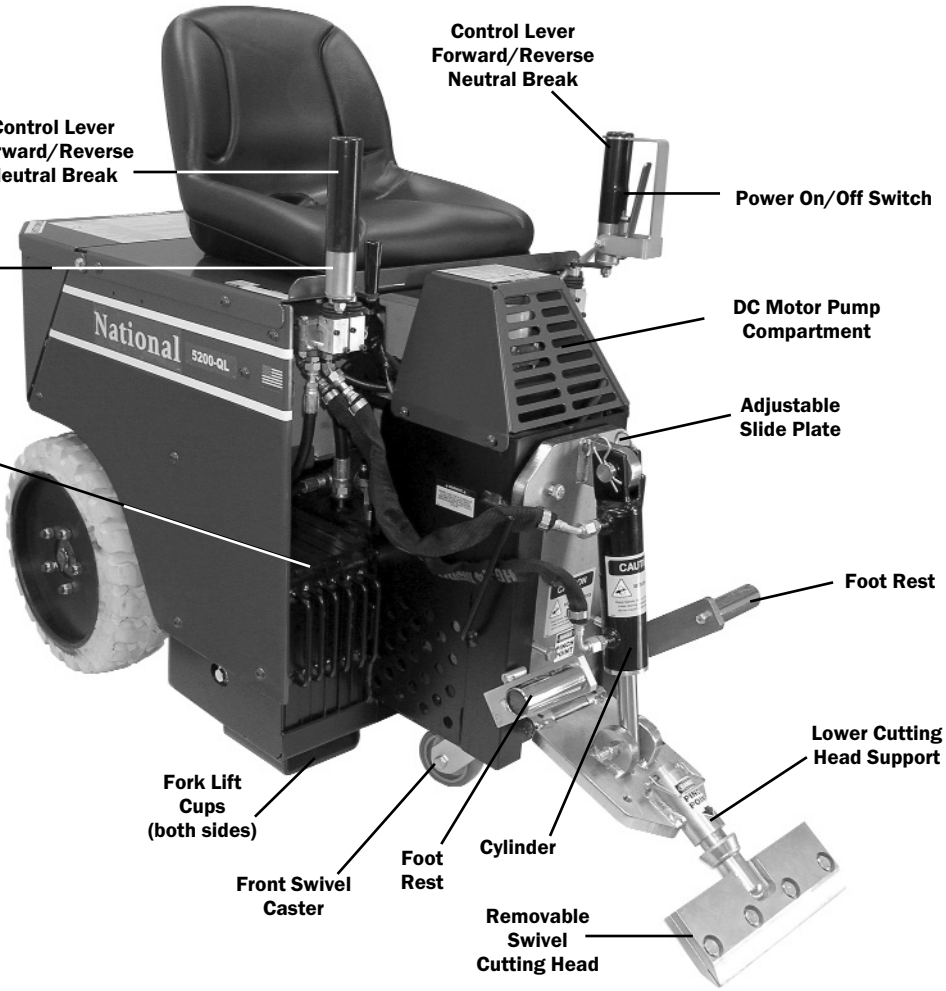
11. **Question:** Can the batteries be replaced in packs?
    Answer: Yes, but only by a qualified National technician or service center. Never try to replace yourself.

12. **Question:** Can I leave the charger on too long?
    Answer: No, our charging system is designed to read batteries state of charge constantly if left on for long periods of time (over the weekend) it will not heat batteries or cause over charging problem.

13. **Question:** Can I leave the charger running while I am running the machine?
    Answer: No, the charger must be removed from the machine before using.

5200QL FEATURES/SPECIFICATIONS

#5200-QL



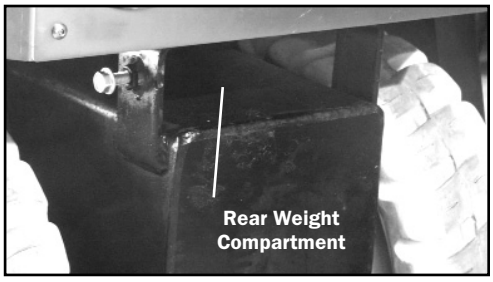
#5200-QL

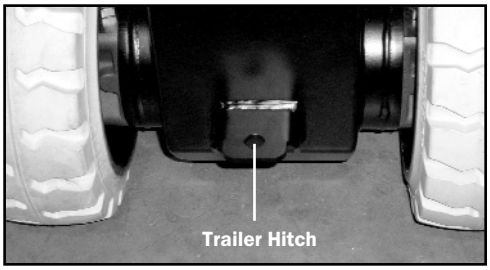
Flip-up back lid for quick and easy battery changing.

SPECIFICATIONS	#5200	#5200-QL
Width:	24-1/2"	24-1/2"
Height:	30-3/8"	30-3/8"
Height with seat:	44"	44"
Length without Jaw:	53"	53"
Weight (machine only):	1150 lbs.	1303lbs.
Added Weight:		
Pocket Weight:	432 lbs.	464 lbs.
Rear Weight:	83 lbs.	83 lbs.
Gross Weight:	1665 lbs.	1850 lbs.
Speed:	Up to 120 feet per minute	Up to 120 feet per minute

MOTOR INFORMATION (#5200 & #5200-QL)

RPM:	2800
Volts:	48 VDC
HP:	5
Amps-Full Load:	100
Continuous Duty	





⚠ **WARNING:** Trailer hitch is only intended to move small trailers on the job site.

5200QL FEATURES/SPECIFICATIONS

VIBRATION/SOUND DATA

VIBRATION DATA:

Axis	Stationary	Moving
X	>0.1	0.5
Y	0.3	0.3
Z	0.4	0.1
Vector Sum	>0.1	0.6

Whole Body
Vibration Levels in m/s^2

Axis	Left	Right
X	0.5	1.4
Y	0.3	1.4
Z	0.6	0.5
Vector Sum	0.9	2.0

Hand/Arm
Vibration Levels in m/s^2

SOUND DATA:

	dBA
Stationary	77.0
Moving	73.0

Operator Sound Level
dBA ref. 20 Pa

5200 & 5200QL OPERATING CONTROLS

POWER ON/OFF SWITCH (FIGURE A)

Never use the power on/off switch as a method for speed control. Speed control is achieved by the hydraulic valve only. Using the on/off switch repeatedly will cause excessive wear, causing premature replacement of electrical components. A power kill switch is provided under hood on the back of the power control box (see figure C).

HYDRAULIC LEVERS (FIGURE B)

The hydraulic levers steer the machine. They are feathered spool valves. For smooth even movement, always move **levers slowly**. Fast movement on control levers will result in jerky, uneven movement.

- Move levers slowly.
- Both levers forward ⬆⬆ move the machine forward.
- Both levers backward ⬇⬇ move the machine backward.
- The left lever forward and the right lever backward ⬆⬇ turn the machine quickly to the right.
- The left lever backward and the right lever forward ⬇⬆ turn the machine quickly to the left.
- Only using the left or right lever forward ⬆, turns the machine slowly to the right or left.
- Only using the left or right lever backwards ⬇, turns the machine slowly to the left or right.
- Correcting direction while moving forward is accomplished by slightly reducing pressure on one lever or the other while moving.
- The center position on levers causes wheels to lock-up.
- Always chock wheels and tie down machine when transporting.

Control levers are low in vibration.

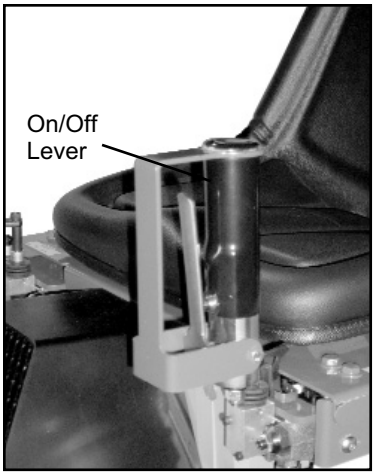


Figure A

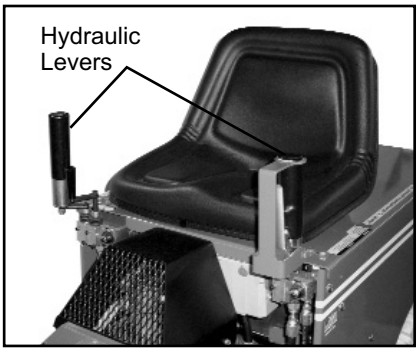


Figure B

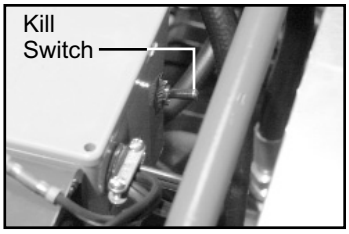


Figure C

5200 & 5200QL OPERATING CONTROLS

POWER KILL SWITCH (FIGURE A)

The power kill switch is designed to kill the power to the system when the machine is in storage. Also removing the blue plug is a good idea. This will help to keep someone from operating the machine when it shouldn't be.

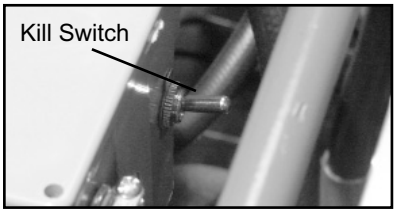


Figure A

CYLINDER LIFT (FIGURE B)

The cylinder lift lever raises and lowers the cylinder and cutting head. After setting slide plate to proper height, use the cylinder lift lever to set blade to proper cutting angle. Pull back ⬇ on the cylinder lift lever to raise the cutting head. Push the cylinder lift lever forward ⬆ to lower the cutting head. Continuing to push the cylinder lift lever forward and it will adjust the angle of the cutting head. This will also jack up the front of the machine (See Figure C). This will need to be done when doing maintenance on the machine (ie: wheel changing, front caster maintenance etc). When doing machine maintenance, besides raising the cutting head angle, place blocks under the machine See Figure D). Never use the cutting head only.

⚠ **WARNING:** Disarm machine by removing the cutting head or dropping the cutting head to the floor when the machine is not in use.

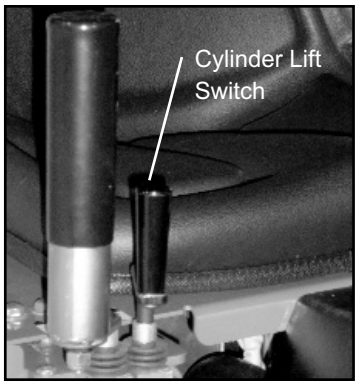


Figure B

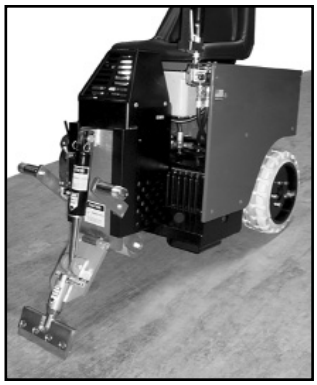


Figure C

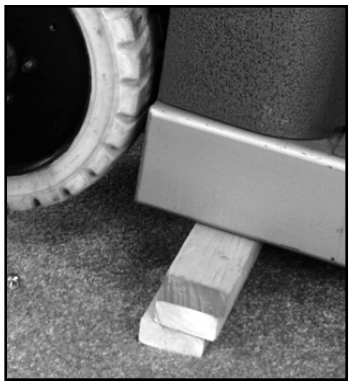


Figure D

⚠**CAUTION:** When running the machine, only depress the lever on the left hydraulic control to run the motor (figure E). Never use the on/off lever as a speed control. Only use the hydraulic valve. Repeated use of the on/off switch will cause excessive wear on electrical components.

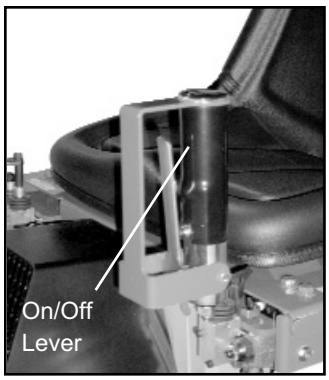


Figure E

5200 & 5200QL OPERATING CONTROLS

LOWERING HOOD - 5200

To lower hood, stabilize hood with one hand and pull on the hood stop slide with other hand (See Figure A). Note: hood may need to be positioned before hood stop will release.

Carefully lower hood removing hands out of the way before the hood is completely closed. Keep fingers & hands out of pinch points. Pinch points are on sides & front of hood.

⚠ **CAUTION:** Pinch points. Keep fingers & hands out of pinch points. Do Not let hood close or slam down on fingers or hands. Failure to do so could cause bodily injury and/or loss of a limb.

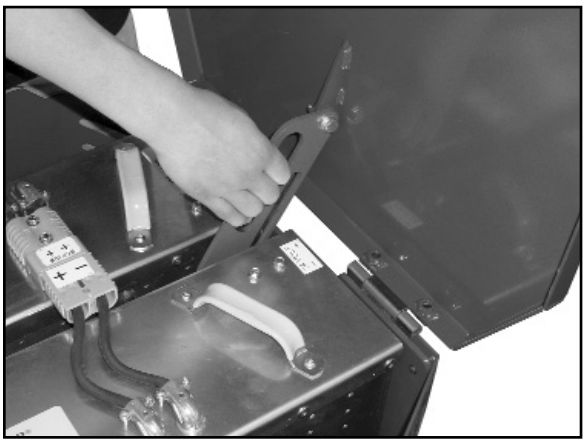


Figure A

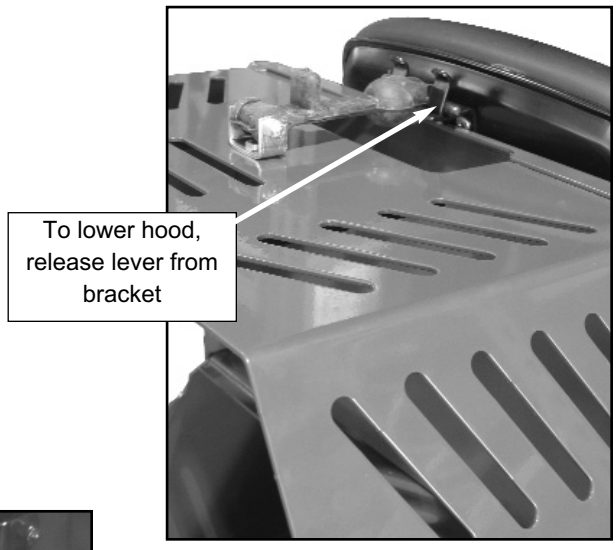


Figure B

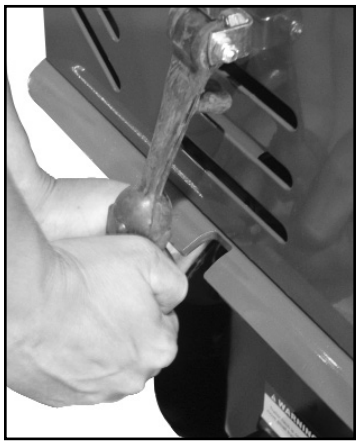


Figure C

LID CLOSURE - 5200-QL

To lower hood, release hood lever from the hood lever bracket (See Figure B).

Carefully lower hood removing hands out of the way before the hood is completely closed. Keep fingers & hands out of pinch points. Pinch points are on sides & front of hood.

Once lid is closed, firmly pull down on hood lever and secure into notch (See Figure C).

⚠ **CAUTION:** Pinch points. Keep fingers & hands out of pinch points. Do Not let hood close or slam down on fingers or hands. Failure to do so could cause bodily injury and/or loss of a limb

5200 & 5200QL OPERATIONAL TIPS

CASTER

Keep clean and free of debris, make sure it can move freely. Clean as needed. Inspect before each use. Grease once a month.

Moving a "weighted" machine only on the front caster and not on the cutting head or the Front Wheel Assembly can seem to make the machine turn sluggish. It might turn hard to the right or the left. This is normal.

FOOT PEG

Keep feet resting and secured on foot pegs when operating machine.

SEAT

Always be properly seated before operating machine.

DISARM MACHINE

Remove blade or drop cutting head to the floor when machine is not in use.

TURN MACHINE OFF

Never change cutting head or service blade while machine is running.

LEAKAGE

Keep fittings and hoses tight. If a leak is noticeable, retighten fitting. If leakage persists, remove the connection and inspect.

POWER PACK CHANGING

Power packs are heavy. For safe removal, use more then one person when lifting.

HOOD

When closing hood, take caution of pinch points.

⚠ **WARNING:** Always remove charger before operating machine.

BATTERY CHARGER Turn battery charger on one at a time if they are on the same circuit. Take advantage of charging the batteries when the machine is stopped for more then fifteen minutes.

ANGLE OF THE HEAD IS SET STEEP

When raising the front of the machine to a steep angle, the bottom of the slide plate should be raised so it is higher or even with the bottom of the guide channels, 6” to 7” off the floor. This will allow for a steep blade angle without tipping the machine too far back (usually used for re-scrape). The most common mode for take up, is the slide plate is almost to the floor (1/4” to 1/2” from the floor).

5200 & 5200QL LOADING/UNLOADING

- Always remove blade and cutting head when machine is being moved or transported
- Cutting head and slide plate can be removed to make the machine more compact.
- NEVER leave machine unattended on an incline.
- Removing added weights help to make the machine easier and safer to move in and out of a vehicle.

⚠ **WARNING:** Machine has a swivel front caster. **Never** side hill (See Figure A). The machine on a incline without power, the front caster will cause machine to swing to the lowest point. If it is necessary to run machine on an incline, run machine on cutting head. Place at least a 8" cutting head in machine. To keep from damaging floor, clamp a piece of carpet into cutting head to slide on the floor. This will give positive contact with the floor when power is disengaged from the wheels.

DOCK HEIGHTS

It is best to load or unload the machine from a level/equal dock height (a van from a van dock height, a truck/semi from a regular dock height).

POWER-GATE

A power-gate can be used when the dock height is not available. Make sure gate is properly rated for 1750 lbs. Make certain the machine is secure so it does not roll off the power-gate. To better secure machine, raise machine onto the lowered cutting head, raising machine off the caster. Tie machine down, chock wheels.

RAMPS

To be safe, the ramp needs to be very long to accommodate the machine being loaded/unloaded. Remove added weight. Make sure ramp is secured. Do not have at a steep incline. The use of a power winch or hand come-a-long is much safer. For a van, the ramp should be 12 to 18 feet in length depending on the depth of the incline. For truck height taller than a van, longer ramps will be needed. See OSHA guidelines. It is not recommended to drive the machine, connected with power, on a ramp. Make sure ramp is secure and has good contact before using. Failure to do so could cause ramp to fall away from the vehicle.

Note: See correct and safe operating angels and center of gravity on page 22.

CAUTION: DO NOT "SIDEHILL"

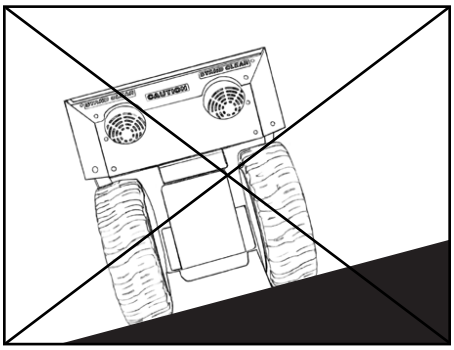


Figure A

5200 & 5200QL LOADING/UNLOADING

FORKLIFT CUPS

There are two forklift cups mounted under the front of the machine (See Figure A). Slide fork lift forks through forklift cups. Slide forks all the way back to touch the rear tire (See Figure B). Before lifting machine, secure machine to fork lift with heavy 3000 lb. or heavier rope or chain. Tilt forks back to lift machine (See Figure C).

⚠ **WARNING:** Never tilt machine forward. It could slide off fork lift forks.

WINCHES

Winches should be used for safety when loading or unloading with ramps. 2000 lb. winch minimum.

TRANSPORTING

Secure machine down with ratchet straps when transporting the machine. Chock wheels to keep machine from rolling, hydraulic levers should **not** be locked in the forward or backward position. Hydraulic levers should be straight up in the "neutral" position. This helps to lock drive wheels. Lift machine off swivel caster by lowering cutting head for better stabilization. Proper securing straps need to be rated at least twice the weight of the machine.

WHEEL CHOCKS

Wheel chocks will help to secure the machine but DO NOT use wheel chocks alone to secure the machine.

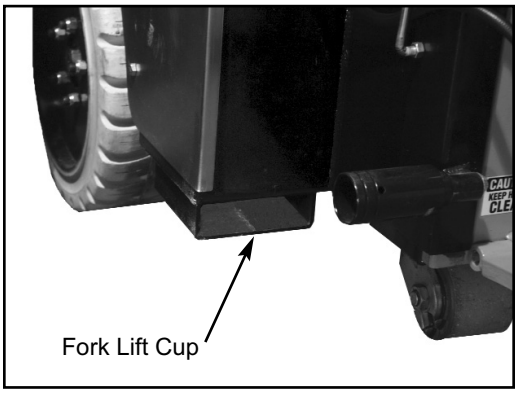


Figure A

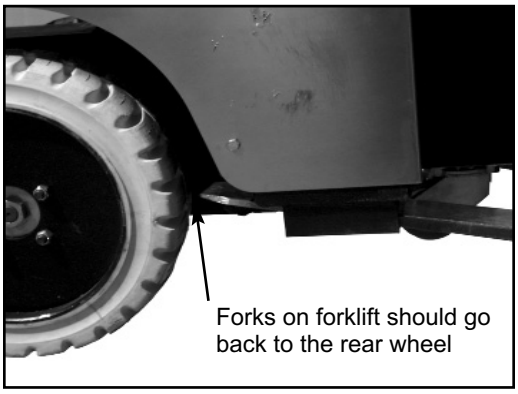


Figure B

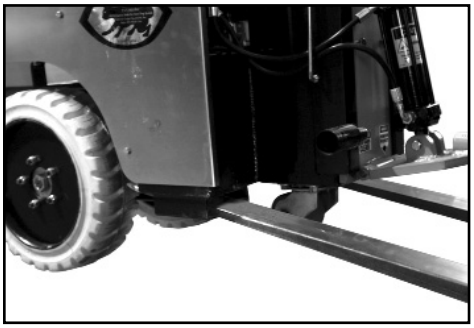
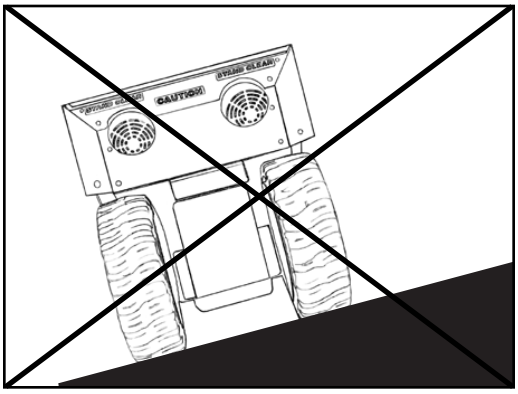
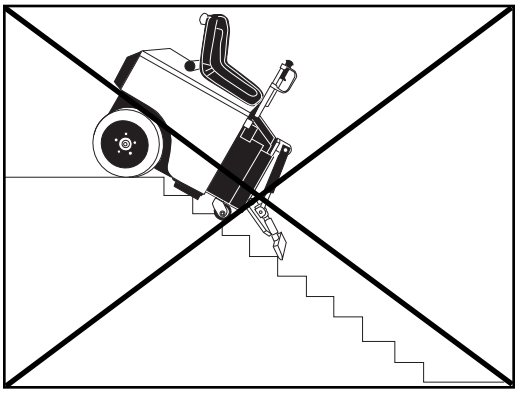


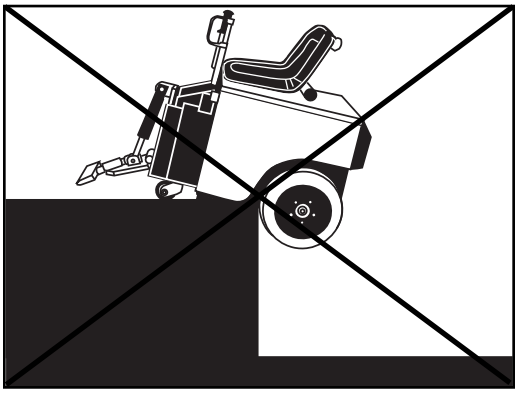
Figure C

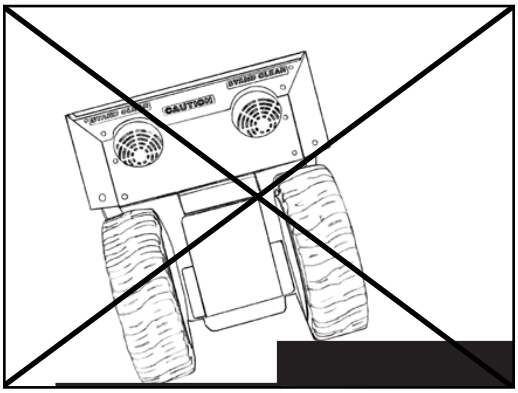
5200 & 5200QL CENTER OF GRAVITY

Be aware of your surroundings and machines operating angels. When changing from a low slide plate to a high slide plate setting or a low cutting head angle to a high cutting head angle, the operating “attitude” of the machine changes. When a floor surface is not level (ramps, inclines, large amounts of debris which would lift the drive wheel of the machine, etc.), the center of gravity changes. Too much of an angle could make the machine unsafe (a cause for tip-over). **Do Not** run the machine in unsafe environments.









5200 & 5200QL JOB SITE MOVEMENT

- Always remove blade and cutting head when machine is being moved or transported
- Cutting head and slide plate can be removed to make the machine more compact.
- NEVER leave machine unattended on an incline.
- Removing added weights help to make the machine easier to move.

TAPING WHEELS

Taping the wheels with a wide like masking tape helps to prevent damage and dirt to floors during move-in and move-out.

LEAP FROGGING BOARDS

Leap frogging boards help to protect floors from damage. Use two or three ¼" luan or plywood sheets, approximately 27" wide by 6' long. Cover one side of the board with a thin a carpet. With the carpet side to the floor, place a board in front of the machine. Drive onto the board. Set the next board in front of the machine. As you drive off one board, pick it up and set it in front of the machine.

PALLETIZING

Only use a solid platform pallet. If a solid platform pallet is not available, place a piece of ¾" plywood on top of a pallet. Using a forklift with the forks inserted in the forklift cups, place machine on pallet. Use ratchet straps to secure machine to pallet.

FRONT WHEEL ASSEMBLY (FIGURE A)

The Front Wheel Assembly is an optional attachment (#5110-100) that is very helpful when moving the machine around on a job-site or loading the machine that is not on a pallet. It allows machine stability and safe transportation over most surfaces. It is easy and quick to attach or detach. Raise slide plate so the bottom of the slide plate is higher or even with the bottom of the guide channels. Raise cylinder, insert Front Wheel Assembly into cutting head. Secure with securing pin.

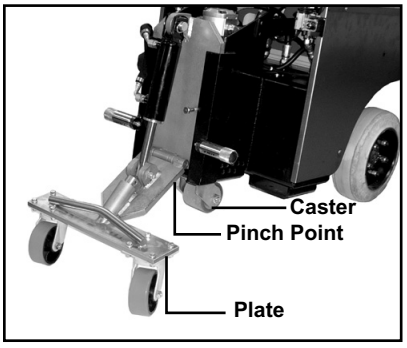


Figure A

Note: Make sure the plate is parallel with the floor so the caster swivels freely.

⚠ **CAUTION:** When moving the slide plate, be aware of pinch point at the bottom of the plate.Failure to do so could cause serious bodily injury.

⚠ **WARNING:** Protect others in work area. Provide barriers or shields as needed to protect others from debris and machine operation. Operator should be aware of who is around them and their proximity.

5200 & 5200QL JOB SITE MOVEMENT

TO MOVE MACHINE WITHOUT POWER (PUSHING MACHINE)

Forward: To move the machine forward, levers need to be pushed forward. To lock levers in place, connect a bungee-strap from each lever (pushing levers forward), pulling straps down to and connecting to the front plate (See Figure A). Never leave machine unattended with strap holding levers open.

Backward: To move machine backward, levers need to be pulled backwards. To lock levers in place, connect a bungee-strap from each lever (pushing levers backward), Pulling straps to the back of the machine and connecting behind the seat or the rear of the machine (See Figure B). Never leave machine unattended with strap holding levers open.

MOVING MACHINE ON CASTER

Moving a "weighted" machine only on the front caster and not on the cutting head or the Front Wheel Assembly can seem to make the machine turn sluggish. It might turn hard to the right or the left. This is normal.

⚠ **WARNING:** Always remove straps before starting motors. Failure to do so will make machine move and may cause property damage and/or bodily injury.

FORWARD

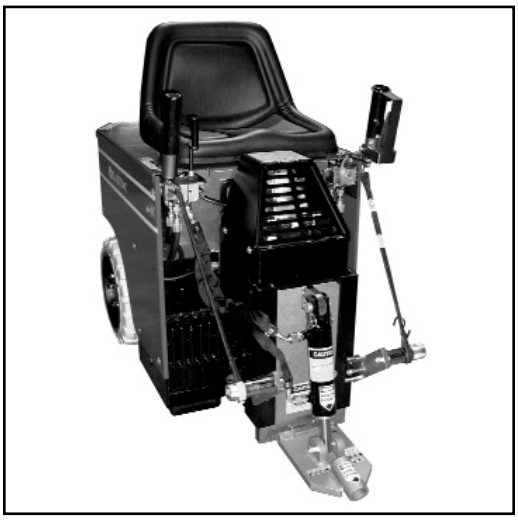


Figure A

BACKWARD

Figure B

5200 & 5200QL WHEEL SIZES

WHEEL SIZE(FIGURE A)

The 18" wheel comes standard on the machine. This wheel will work on all job types of application and heavy debris build-up (vct, ceramic etc.). It also works best for slippery/slimy residue, ie. double stick.

The 13" and 16" wheels are used to slow the speed of the machine, lower the amperage and increase torque.

Keep wheels clean and free of debris, make sure it can move freely. Clean as needed. Inspect before each use.

To change wheels, see Wheel Changing on page 40.

⚠ **WARNING:** When doing maintenance or changing a wheel, make sure machine is supported properly or serious injury could occur.

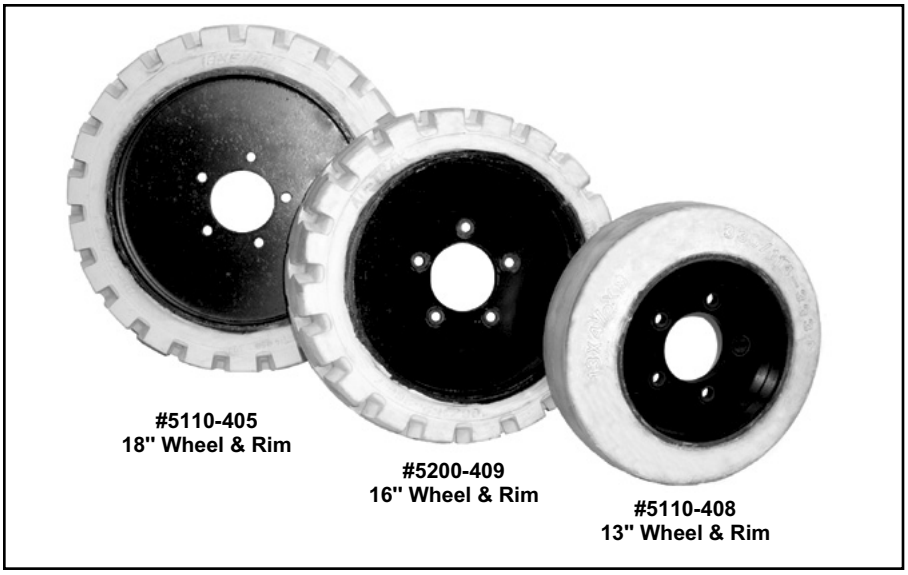


Figure A

5200 & 5200QL ADDING ADDITIONAL WEIGHT

FRONT WEIGHT

Adding weight to the front of the machine is necessary for difficult to remove goods such as, VCT, VAT, ceramic, thin-set, wood or increase traction on wet, dusty or slick surfaces. Machine includes twelve 36 lb. front weights with handles. Set front weights in front weight compartment (See Figure A). Maximum of six weights per compartment. Use proper bolt length to hold weights securely in place (bolt length used depends on amount of weights used. 1/2-13 SAE.

REAR WEIGHT

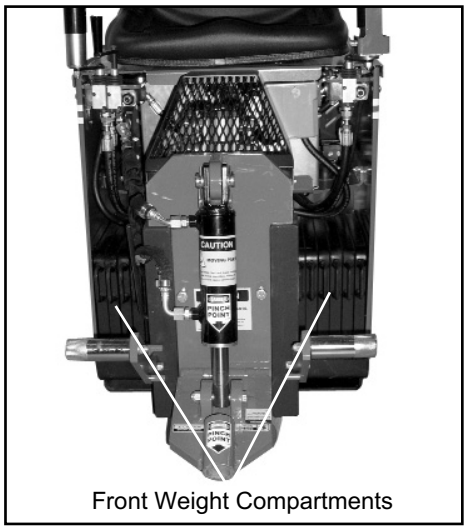
Adding rear weight creates more traction. The heavier the machine, usually the better it will work, especially on hard to remove goods.

Machine includes one 100 lb. rear weight. Slide back weight in provided pocket under rear cowl (See Figure B). Secure locking bolt with either a 9/16 or 3/4 wrench (size varies).

⚠ **CAUTION:** A heavy machine cannot be used on wood subfloors or raised panel computer floors, (keep machine light). Always check floor for proper strength to support the weight of the machine.

⚠ **CAUTION:** Remove added weight from machine before transporting or loading machine. Failure to do so could cause loss of control of machine, damage to machine or property and bodily injury.

⚠ **CAUTION:** When using a elevator, always check the elevator weight limitations. Remove counter weights and power packs if necessary.



Front Weight Compartments

Figure A

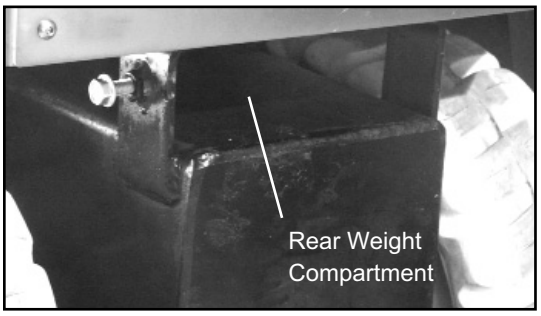


Figure B

5200 & 5200QL CUTTING HEAD & BLADES

DIALING IN THE MACHINE

Dialing in the machine is matching the correct cutting head, blade size, blade angle and added weight to the machine to make the material removal as easy as possible. For every material being removed, there is an optimum blade width, thickness, sharpness, angle and bevel (bevel up or bevel down).

SAVING TIME WITH EXTRA CUTTING HEADS

The machine is supplied with one cutting head. Having additional cutting heads will save time on the job. Insert blades into the extra cutting heads before starting a job. When the blade is dull, instead of taking the time to replace it or sharpen it on the job, take out the cutting head and replace it with another. Or when a different type or size of blade is needed, you have them ready to use.

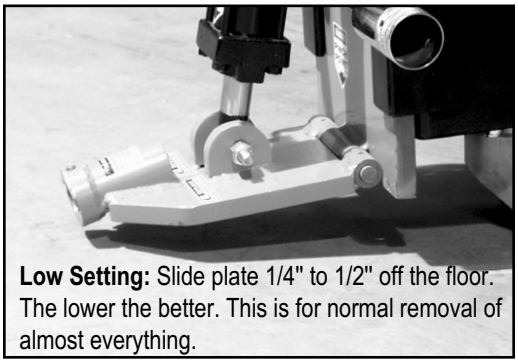
ADJUSTING SLIDE PLATE AND CUTTING HEAD (FIGURE A & B)

Caution: Pinch point. When adjusting slide plate, keep feet and hands out from underneath the cutting head and slide plate. Failure to do so could cause severe bodily injury. When bolts are removed from the slide plate, the cutting head and the slide plate will drop down to the floor.

- Loosen the two bolts on the front of the slide plate with a 3/4" wrench (See Figure C).
- Slide plate up or down to achieve the desired height of the cutting head.
- Firmly retighten both bolts.

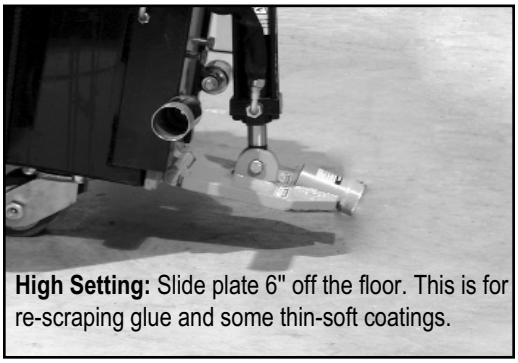
SHEAR POINT

The shear point is the point where material to be removed will cut cleanly from the floor. If the blade is too wide, too dull, or too steep, the shear point is lost.



Low Setting: Slide plate 1/4" to 1/2" off the floor. The lower the better. This is for normal removal of almost everything.

Figure A



High Setting: Slide plate 6" off the floor. This is for re-scraping glue and some thin-soft coatings.

Figure B

Figure C

⚠ CAUTION: Blades are sharp, use extreme caution.

⚠ CAUTION: Never change cutting head or service blades while machine is running.

⚠ WARNING: Disarm machine when machine is not in use. Remove the cutting head or drop cutting head to the floor. Failure to do so could cause severe bodily injury.

5200 & 5200QL CUTTING HEAD & BLADES

WEIGHT VS. SHARPNESS

The most common way to compensate for a dull blade is to add more weight and raise the blade angle (see re-scrape setting). Weight allows dull blades to be used to a point. Weight also causes blades to dull and break easier. Blades of any thickness tend to catch cracks and expansion joints and will bend or break the blade if set at a high angle. For best results, run a small ditching blade at a low angle to identify as many cracks and joints as possible. If blades are breaking, you are misunderstanding the conditions.

CUTTING HEAD ANGLE

Set the cutting head angle to where the material comes up the easiest. The lowest is usually the best.

STEEP CUTTING HEAD ANGLE

A steep angle is only used for re-scraping. The slide plate has to be raised so the bottom of the slide plate is higher or even with the bottom of the guide channels (See Figure A). Not raising the slide plate when operating the machine at a steep angle will cause the machine to jump and buck. It does not give the operator a clear vision of the cutting head and it raises the machine to operate at a unsafe operating height (See Figure B). Failure to raise the slide plate could cause machine damage and/or bodily injury.

SWIVEL HEAD

The swivel head keeps the blade in contact with the floor even when the floor is uneven. When using a flat blade, by swiveling the head over 180° allows another sharp edge on the blade without having to replace the blade.

SAVING TIME WITH EXTRA CUTTING HEADS

The machine is supplied with one cutting head. Having additional cutting heads will save time on the job. Insert blades into the extra cutting heads before starting a job. When the blade is dull, instead of taking the time to replace it or sharpen it on the job, take out the cutting head and replace it with another. Or, when a different type or size of blade is needed, you have them ready to use.

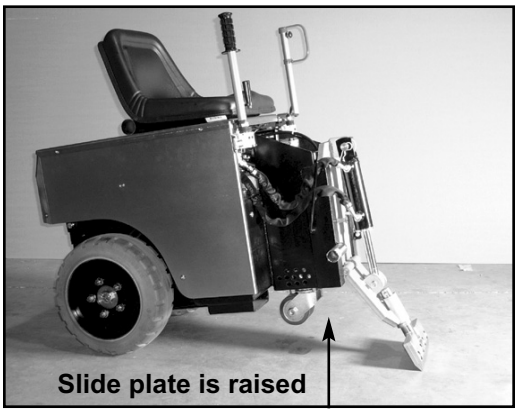


Figure A

Correct slide plate setting with a steep cutting head angle.

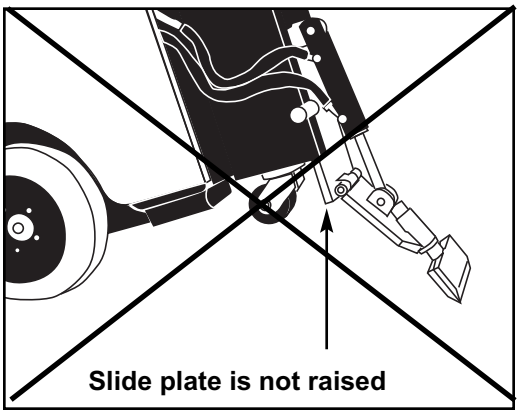


Figure B

Incorrect slide plate setting with a steep cutting head angle.

⚠ **CAUTION:** Watch out for obstructions in the floor (ie. expansion joints, nails, bolts, receptacles). They will break blades.

5200 & 5200QL CUTTING HEAD & BLADES

CUTTING HEAD INSERTION

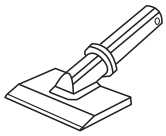
With machine off, insert desired cutting head into cutting head holder. Secure with cutting head clip.

SHANK BLADE INSERTION

Shank blades do not require a cutting head. Insert desired shank blade into cutting head holder. Secure with cutting head clip.

BLADE SETTING

- Dull blades greatly reduce cutting ability. Re-sharpen or replace as needed.
- Proper blade size and placement, depending on material and sub-floor type, affects performance.
- The harder a job comes up, for best results, use a smaller blade.
- Start with a narrow blade, then increase blade size to optimize cutting pass. Narrower blades work easier than wider blades and usually clean the floor better. Wider is not always better or faster.
- Normally bevel on blade is up for concrete. Bevel down for wood and shoe blades for soft sub-floors.



- KEEP BLADES SHARP.
- Dull blades greatly affect the performance of the machine and reduce cutting ability, resharpen or replace as needed.
- Keep your work area clean and clear of debris.
- After you have removed a portion of material, remove it out of the way. This will give the machine maximum performance and help to keep the work area safe.
- Always wear gloves when handling blades.
- Everyone in work area should wear eye protection.

SELF-SCORING BLADES

Instead of pre-scoring a job, for soft goods (carpet, vinyl, linoleum, membrane) the self-scoring blades automatically do the scoring.

BLADE INSERTION OR BLADE CHANGING

Using a 3/4" socket wrench, loosen bolts on cutting head. Quantity of bolts will very depending upon cutting head size. Insert blade into the cutting head to back of notch (See Figure A). Tighten firmly.

Note: A cordless 3/8" drive impact wrench will speed up this process especially out on the job.

- Sharp blades are imperative for good performance. • Always wear gloves when handling blades.

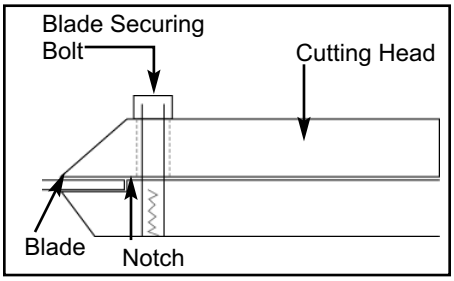


Figure A

⚠ **CAUTION:** Blades are sharp, use extreme caution.

⚠ **CAUTION:** Never change cutting head or service blades while machine is running.

⚠ **WARNING:** Disarm machine when machine is not in use. Remove the cutting head or drop cutting head to the floor. Failure to do so could cause severe bodily injury.

5200 & 5200QL BLADE APPLICATION/SET-UP

CERAMIC SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. Use a Shank Blade or a Shank Blade with a carbide tip.

WOOD SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. Use Shank Blades, Shank Blades with carbide tips or a 6"or 8" Cutting Head with Shoe Blades, Bent Shoe Blades or Heavy Duty Blades. Note: run machine 45° to the grain of the wood.

SECONDARY BACKING CARPET SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. Use a Cutting head from 10" to 27" with Heavy Duty Blades or a Cutting Head from 10" to 14" with a Self-Scoring Blade.

FOAM BACK CARPET SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. Use Cutting Heads from 10" to 14" with Self-Scoring Blades. If it is not stuck tight, use a Cutting Head from 14" to 27" with a Standard Blade.

DOUBLE STICK CARPET SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. It is best to test to see which is the easiest way to remove double stick. Start with a Cutting Head from 10" to 14" with Self-Scoring Blades. If self-scoring blades do not work, score thru the carpet (See Figure A) the width of the blade (Standard Blade) and scrape up. In some cases, carpet might pull off the pad and then scrape up the pad separately. Usually leaving carpet connected to the pad works the best. Sharp blades are necessary for proper operation.

VCT TILE SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. If goods come up easily, change to a larger Cutting Head. If goods come up harder, use a Cutting Head from 6" to 8" with a Premium High Tempered Blade (.062) to match cutting head size. Sometimes a .094 blade may work better. If goods remove easily, a Tile Box #7074 can be used. A tile box also works for wind rowing, assists for a fast clean-up and collection of tile debris for quick removal.

DITCHING **(see page 32)**

RUBBER TILE SET-UP

Slide plate should be set low, 1/4" to 1/2" off the floor. Use a Cutting Head from 6" to 14" with self-scoring blades or use ditching method with a flat blade (see page 32).

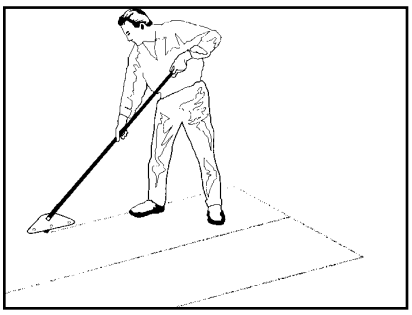


Figure A

⚠ **CAUTION:** Blades are sharp, use extreme caution.

⚠ **CAUTION:** Never change cutting head or service blades while machine is running.

⚠ **WARNING:** Disarm machine when machine is not in use. Remove the cutting head or drop cutting head to the floor. Failure to do so could cause severe bodily injury.

5200 & 5200QL BLADE APPLICATION/SET-UP

RE-SCRAPING SET-UP

Slide plate should be set high, 6" to 8" off the floor. Use a Cutting Head from 8" to 27" with Scraper Blades to match cutting head size. A 15" scrapper blade would use a 14" Cutting Head. Razor Blades are faster but a Cutting Head from 8" to 14" can be used with a Standard Blade. Flip head regularly.

THIN COATING SET-UP

Slide plate could be set high, 6" to 8" or low 1/4" to 1/2" off the floor. Test to see which works best. Use a Cutting Head from 8" to 27" with Razor Blades to match cutting head size.

WORKING OVER CONCRETE

Blade should be bevel up when working over concrete. Pretty much anything over concrete works. Try different set-ups to see which works best. If goods come up difficult, slide plate should be at a low setting, 1/4" to 1/2" off the floor. Use a smaller size blade. If goods come up easily, a wider blade can be used.

WORKING OVER WOOD

A heavy machine cannot be used on wood subfloors or raised panel computer floors. Keep machine light, remove all weights. A weighted machine could break through the floor. Slide plate should be set low, 1/4" to 1/2" off the floor. Blades should be as flat of an angle as possible. Use a "shoe blade", Extra Heavy Duty Blade (these blades have a bend to them) or a regular blade, bevel up. When using a regular blade, bending up the corners of the blade will help from the blade digging into the floor. Sometimes a shank blade or a shank blade with a carbide tip will work. Allow blade to shear material from the floor. The trick on wood floors is to run the blade flat. Approach should be at a 45° angle to the board. This keeps from digging into the board and hanging up at the seams.

WORKING OVER SOFT SUB-FLOOR

Slide plate should be set low, 1/4" to 1/2" off the floor. Blades should be as flat of an angle as possible. Use a "shoe blade", Extra Heavy Duty Blade (these blades have a bend to them) or a regular blade, bevel up. When using a regular blade, bending up the corners of the blade will help from the blade digging into the floor. Sometimes a shank blade or a shank blade with a carbide tip will work.

⚠ **CAUTION:** Blades are sharp, use extreme caution. 

⚠ **CAUTION:** Never change cutting head or service blades while machine is running.

⚠ **WARNING:** Disarm machine when machine is not in use. Remove the cutting head or drop cutting head to the floor. Failure to do so could cause severe bodily injury.

Note: When removing carpet from over VCT Tile and the tile needs to be saved, run the machine at a 45° angle over the tile. This should help to save the tile.

5200 & 5200QL BLADE APPLICATION/SET-UP

DITCHING

CROSS ROOM DITCHING

When removing hard to remove ceramic, Vct or vat, cross-room ditching will help to make the removal easier. Using a blade 2" to 6" in width, make ditches 1' to 2' apart in the same direction the machine will be removing the goods (See Figure A). This "relieves" the pressure holding the tiles together. If ditching helps and the goods are coming up easy, try using a wider blade to ditch with.

CHECKER BOARD DITCHING

To make carpet removal and debris cleanup easier, checker board ditching is very helpful. Using as wide of a self-scoring blade as possible, make ditches 4' to 6' apart crossways from the way the machine will be removing the goods (See Figure B). Running the machine crossways from the ditches will make smaller pieces of debris to be hauled away. Instead of large gummy rolls of carpet, there are small squares that can be rolled, palletized, put on a dolly or folded with the sticky side in. This makes removing the debris easier and reduces the amount of debris.

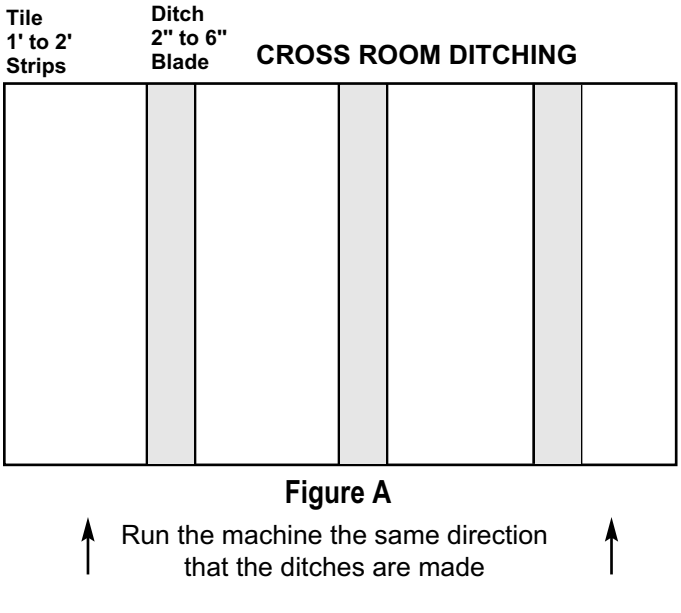


Figure A

Run the machine the same direction that the ditches are made

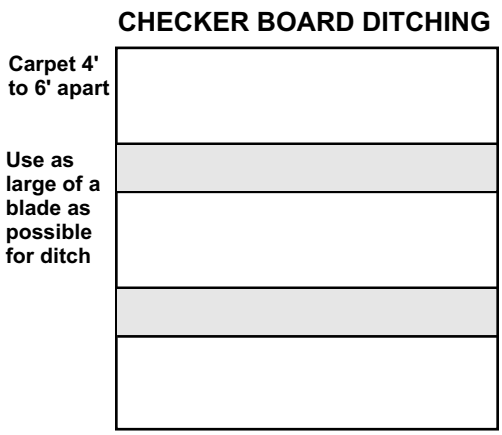


Figure B

Run the machine crossways from the directions that the ditches are made

5200 & 5200QL BLADES

TYPES OF BLADES

PREMIUM HIGH TEMPERED BLADES (.062)

Works on all glued down carpets, VCT, VAT, rubber tile, cork, re-scraping adhesive, elastomeric coatings. Great for floor accumulations. Ultra high quality spring steel is extra hard for long blade life between sharpening.

HEAVY DUTY BLADES (.094)

Works on VCT, VAT, wood, tile, rubber epoxy, thin-set, elastomeric coatings, scraping, thin set and glued ceramic. A heavy-duty blade that still gives a little flex. Blade sharpening process helps these blades to stay sharper longer.

EXTRA HEAVY DUTY BLADES (.187 & .250)

Works on VCT, VAT, wood, tile, thin ceramic, re-scraping thin set, all carpets, cork, elastomeric coatings re-scraping rubber and urethane coatings. Extremely hard, high abrasion alloy for though tear-up situations. Holds the edge extremely well.

SHOE BLADES/ANGLE SHANK BLADES (.500)

Works well for ceramic, wood, thick epoxy, thin-set, mud set, decorative concrete topping and much more. Blade is mounted at an angle to achieve the optimum shear point for optimum performance. Made from an ultra tough alloy, which is put through special processing to achieve an unbelievable edge holding ability.

SHOE BLADES/ANGLE SHANK BLADES WITH CARBIDE TIPS (.500)

Works well for ceramic, wood, thick epoxy and elastomeric coatings. Carbide tipped for holding a sharp edge for long periods. Nothing else performs like carbide when no other blade will work. Blade is mounted at an angle to achieve the optimum shear point for optimum performance. Made from an ultra tough alloy, which is put through special processing to achieve an unbelievable edge holding ability.

SELF-SCORING BLADES (.062 & .094)

Works on attached cushion, Unitary or secondary backing, vinyl back, soft to medium PVC, linoleum, carpet tiles, soft cork, Enhancer and Unibond hot melts. Instead of pre-scoring a job, the self-scoring blades have "wings" that automatically do the scoring. Blade hardening process makes these blades tough and long lasting.

RAZOR/SCRAPER BLADES (.032 & .045)

Used for re-scraping thin epoxies, thin mil coatings like; urethane paint, poured elastomeric coatings up to 60 mil, hard to remove adhesive and much more.

TILE BOX

Assists for a fast cleanup and collection of tile debris for quick removal. Can be used to remove easy to remove tile. Extremely high abrasion alloy for a long lasting edge. Edge can be re-sharpened.

5200 & 5200QL BLADES

BLADE SHARPENING

Dull blades greatly reduce cutting ability. Re-sharpen or replace as needed. In use, blades develop a back-bevel (See Figure A). When re-sharpening, blade will not be truly sharp until all back-bevel is gone.

Note: Thinner blades are easier to sharpen, but they also break easier.

- Always wear gloves and safety glasses.
- Grind blade using a 4" diameter disk with 120 or finer grit. Be careful not to catch disk on edge or corner of blade.
- Pass grinder back and forth along blade edge being careful to hold grinder at proper angle of blade. Grind until sharp.
- Using a good quality fine tooth hand file, use same procedure as above.
- Blades are sharp. Use extreme caution.
- Have plenty of sharp blades on each job so on-the-job blade sharpening is eliminated.
- It is best to resharpen dull blades on proper bench or belt grinder in the shop, so the blades are ready for the next job.

SELF-SCORING BLADE SHARPENING

It is important to keep the “wings” on a self-scoring blade sharp (See Figure B). Use a file on the “wing” edge. Sharpen the flat part of the blade, the same way as described above.

CARBIDE TIPPED BLADE SHARPENING

To sharpen carbide tipped blades, a wheel to grind carbide is necessary, ie: green wheel or diamond wheel.

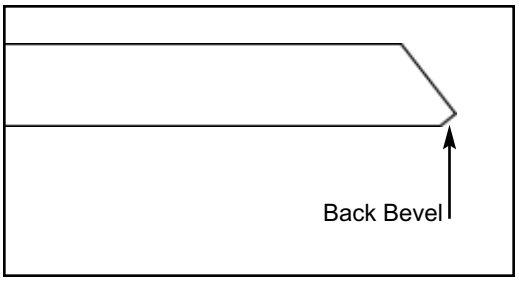


Figure A

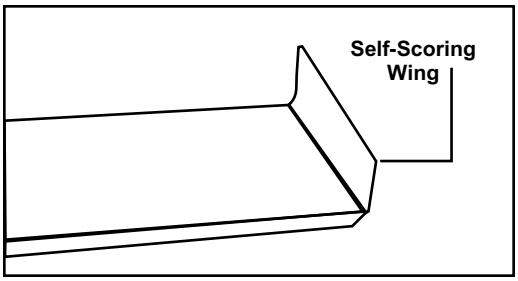


Figure B

⚠ CAUTION: Blades are sharp, use extreme caution.

⚠ CAUTION: Never change cutting head or service blades while machine is running.

⚠ WARNING: Disarm machine when machine is not in use. Remove the cutting head or drop cutting head to the floor. Failure to do so could cause severe bodily injury.

5200 & 5200QL BLADES

Part #	Description	Application	Thickness
#135	5" x 16" Blade	Rubber back carpet on wood or concrete floors, excellent for cleanup and longer durability	.062
#147	4" x 6" Blade	Tile or linoleum on concrete floors	.062
#148	5" x 6" Blade	Tile or linoleum on wood floors	.062
#363-2	3/4" x 8" Razor/Scraper Blade (50/pkg)	Razor sharp, super hard for scraping thin epoxies, thin mil coatings like; urethane paint, poured elastomeric coatings up to 60 mil, hard to remove adhesive and much more.	.032
#368-8	7/8" x 8" Razor/Scraper Blade (50/pkg)		.045
#368-12	7/8" x 12" Razor/Scraper Blade (50/pkg)		.045
#368-15	7/8" x 15" Razor/Scraper Blade (50/pkg)		.045
#6258-BU	3" x 12" Self-Scoring Blade - Bevel Up	Works on attached cushion, Unitary or secondary backing, vinyl backing, soft to medium PVC, linoleum, carpet tiles, soft cork, Enhancer and Unibond hot melts.	.062
#6259-BU	3" x 14" Self-Scoring Blade - Bevel Up		.062
#6260-BD	3" x 6" Heavy Duty Ditching		.094
#6276-BU	3" x 10" Self-Scoring Blade	Same application as the .062 blade. The 45° angle, self-scoring wings for easy sharpening. The thickness greatly reduces breakage, especially on heavily weighted machines.	.094
#6277-BU	3" x 12" Self-Scoring Blade		.094
#6278-BU	3" x 14" Self-Scoring Blade		.094
#6281	3" x 8" Heavy Duty Blade	A heavy duty blade that still gives a little flex. Made with Nationals proven blade hardening process, these blades will stay sharper longer with better overall performance than any other blade on the market. Works on Vct, Vat, wood, tile, rubber epoxy, thin-set, elastomeric coatings, scraping thin-set, glued ceramic.	.094
#6282	3" x 14" Heavy Duty Blade		.094
#6283	3" x 27" Heavy Duty Blade		.094
#6284	3" x 12" Heavy Duty Blade		.094
#6285	3" x 6" Heavy Duty Blade		.094
#6286	3" x 10" Heavy Duty Blade		.094
#6290	3" x 6" Extra Heavy Duty Blade	Extremely hard, high abrasion alloy for tough tear-up situations. Vct, Vat, wood, tile, thin ceramic, re-scraping thin-set, all carpets, cork, elastomeric coatings, re-scraping rubber and urethane coatings. Holds the edge extremely well.	.187
#6291	3" x 8" Extra Heavy Duty Blade		.187
#6292	3" x 12" Extra Heavy Duty Blade		.187
#6293	3" x 14" Extra Heavy Duty Blade		.187
#6294	3" x 27" Extra Heavy Duty Blade		.187
#7050-200	3" x 6" Premium High Tempered Blade	Ultra high quality spring steel is extra hard for long blade life between sharpening. Works on all glue down carpets, Vct, Vat, rubber tile, cork, re-scraping adhesive, elastomeric coatings. Great for floor accumulations.	.062
#7050-201	3" x 8" Premium High Tempered Blade		.062
#7050-202	3" x 10" Premium High Tempered Blade		.062
#7050-203	3" x 12" Premium High Tempered Blade		.062
#7050-204	3" x 14" Premium High Tempered Blade		.062
#7050-205	3" x 27" Premium High Tempered Blade		.062
#7070-2	4" x 2" Straight Shank Blades	Works well for ceramic and thick epoxy. Made from an ultra tough alloy, which is put through special processing to give these blades unbelievable edge holding ability for ceramic, epoxy, thin-set, mud-set, decorative concrete toppings and much more.	.500
#7070-3	4" x 3" Straight Shank Blades		.500
#7070-4	4" x 4" Straight Shank Blades		.500
#7070-6	4" x 6" Straight Shank Blades		.500
#7071-2	4" x 2" Angle Shank Blades	Works well for ceramic and thick epoxy. The same application as the #7070 Blades except mounted at an angle to achieve the optimum shear point for optimum performance.	.500
#7071-3	4" x 3" Angle Shank Blades		.500
#7071-4	4" x 4" Angle Shank Blades		.500
#7071-6	4" x 6" Angle Shank Blades		.500
#7072-2	4" x 2" Straight Shank w/Carbide Tip	Works well for ceramic and thick epoxy. The same application as the #7070, includes the angle like the #7071 and carbide tipped like the #7072. Works well on elastomeric coatings.	.500
#7072-3	4" x 3" Straight Shank w/Carbide Tip		.500
#7072-4	4" x 4" Straight Shank w/Carbide Tip		.500
#7072-6	4" x 6"Straight Shank w/Carbide Tip		.500

5200 & 5200QL BLADES

Part #	Description	Application	Thickness
#7075-8	2" x 8" Tapered Cutting Head Shank	The long taper works great on tough wood floors (glued & nailed). The long length allows the blade to easily slide under tough material. Works well on most ceramics and VCT.	.300
#7075-11	2" x 11" Tapered Cutting Head Shank		.300
#7077-8	3.5" x 8" Tapered Cutting Head Shank		.300
#7077-11	3.5" x 11" Tapered Cutting Head Shank		.300
#7076-8	2" x 8" Tapered w/Carbide Tip	The long taper works great on tough wood floors (glued & nailed). The long length allows the blade to easily slide under tough material. Works well on most ceramics and VCT. Carbide tipped for holding a sharp edge for long periods.	.300
#7076-11	2" x 11" Tapered w/Carbide Tip		.300
#7078-8	3.5" x 8" Tapered w/Carbide Tip		.300
#7078-11	3.5" x 11" Tapered w/Carbide Tip		.300
#7079-2	2" x 6" Ultra HD Ceramic Epoxy Blade	Designed for ceramic removal & thin-set re-scraping. 1/2" of carbide which is twice the carbide of the #7072 & #7073 series blades. The extra carbide allows for maximum re-sharpening. Strong enough to work on machines up to 3500 lbs.	.500
#7079-4	4" x 6" Ultra HD Ceramic Epoxy Blade		.500
#7079-6	6" x 6" Ultra HD Ceramic Epoxy Blade		.500
#7074	5" x 27" Tile Box with 6" High Box	Mainly used for VCT but can be used on most other applications. Supplies more of an angle when needed. Prevents machine from jumping off material.	.187
#7081	3" x 10" Increased Angle Blade		.062
#7083	3" x 8" Increased Angle Blade	Extremely high abrasion alloy for a long lasting edge. Box assists for a fast clean-up and collection of tile debris for quick removal.	.062

5200 & 5200QL MACHINE MAINTENANCE

SLIDE PLATE

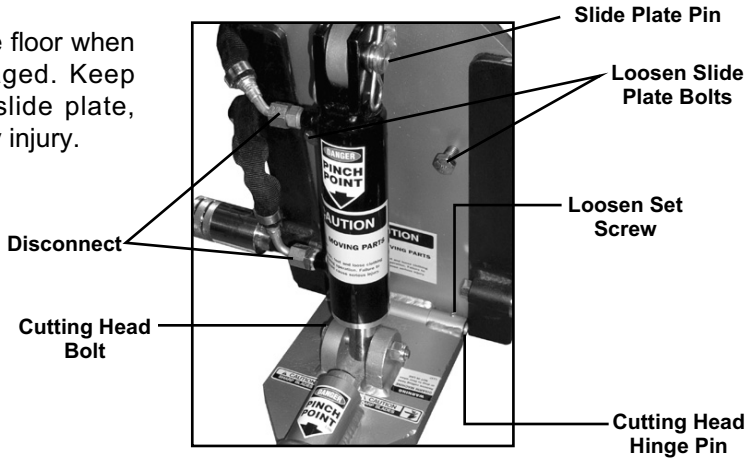
To Remove Slide Plate

1. Disconnect machine from power.
2. Remove slide plate pin. Remove cutting head bolt. Remove cylinder from slide plate. Remove slide plate.

OR

1. Disconnect machine from power.
2. Unplug hydraulic lines from cylinder. A small amount of oil leak out of lines. Cap lines or bleed into a container. Wipe up spillage immediately.
3. With lines removed, loosen slide plate securing bolts. Hold slide plate at the top of the cylinder. Take Caution: slide plate will drop to the floor when slide plate securing bolts are disengaged. Keep hands and feet out from underneath slide plate.
4. Remove slide plate, cylinder and lower cutting head support.

Take Caution: slide plate will drop to the floor when slide plate securing bolts are disengaged. Keep hands and feet out from underneath slide plate, failure to do so could cause severe bodily injury.



LOWER CUTTING HEAD SUPPORT

To Remove Lower Cutting Head Support

1. Lower slide plate so cutting head hinge pin is below machine bottom. Retighten.
2. Loosen both cutting head pin set screws at the base of the lower cutting head support (hinge area).
3. Drive cutting head pin out using a punch and hammer.
4. Remove cylinder securing hex head bolt.

LEAK MAINTENANCE

All fittings on this machine are O-ring style.

1. Disconnect machine from power.
2. If a leak is detected, tighten fitting with the proper wrench size. DO NOT over tighten. Over tightening could damage O-rings.
3. If a leak still persists, remove fitting and replace O-ring.

5200 & 5200QL MACHINE MAINTENANCE

SIDE AND REAR PANELS

To Remove A Panel

1.Lift hood and secure in place.

2.Using proper wrench size, remove desired side or rear panel.

OIL LEVEL

To Check Oil Level

1. Remove Breather Dip Stick (See Figure A)
2. Check to see that Hydraulic Fluid is visible on Dip Stick

OR

1.Remove Filler plug (See Figure B).

2.Oil should be visual 2” below hole.

3.Reinsert plug.

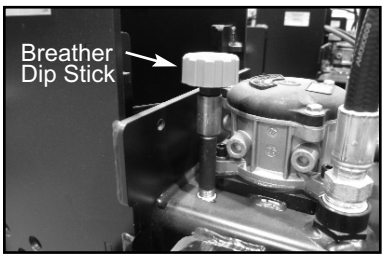


Figure A

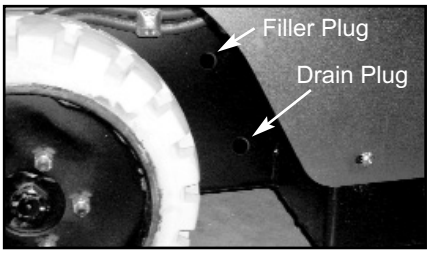


Figure B

OIL CHANGE OUT

1. Disconnect machine from power (charger or battery).
2. Drain fluid by removing the drain plug from side of tank (See Figure B). **Take Caution:** this unit contains twelve gallons of fluid. Make sure you have the proper amount of containers to catch fluid.
3. Replace drain plug.
4. Remove filler plug (See Figure B).
5. Add oil into the filler plug hole until visual 2” below hole.

WHEEL MOTOR CHANGE OUT

1. Disconnect machine from power.
2. Block up machine to remove wheel. See wheel changing on page 40.
3. Remove wheel.
4. Remove oil lines from wheel motor. A small amount of oil will run out of the lines. Drain into a container. Wipe up spills immediately.
5. Remove four ½" wheel motor securing nuts.
6. Pull out on wheel motor to remove.

5200 & 5200QL MACHINE MAINTENANCE

HOSE CHANGE OUT

To Remove Or Change A Hose

1. Disconnect machine from power.
2. Remove hood.
3. Using proper wrench size, remove hose from fitting.
4. When replacing, make sure O-ring is properly seated on hose fitting.

FOOT PEG

To Remove Or Replace Foot Peg

1. Insert a socket wrench into foot peg and secure bolt head.
2. Remove nut and washer.
3. Remove bolt and foot peg.
4. Replace foot peg before operating machine. DO NOT use machine without foot pegs.

PUMP CHANGE OUT

1. Remove doghouse to expose pump.
2. Disconnect hydraulic lines.
3. Remove two 5/16" pump securing bolts.
4. Remove pump by pulling pump straight out from pump motor.

VALVE CHANGE OUT

1. Disconnect machine from power (charger or battery).
2. Lift hood and secure in place.
3. Remove hoses from valve body. have a container ready to catch leakage from lines.
4. Take notice of angle of valve fittings.
5. Remove two ¼" bolts securing valve body.

MOTOR CHANGE OUT

1. Disconnect motor from power.
2. Lift hood and secure in place.
3. Remove pump (see pump change out).
4. Loosen the bracket holding the motor.
5. Remove motor.

5200 & 5200QL MACHINE MAINTENANCE

HYDRAULIC CYLINDER CHANGE OUT

1. Disconnect machine from power.
2. Disconnect cylinder lines. Have a container ready to catch oil from lines.
3. Remove cylinder securing hexhead bolt from lower cutting head support.
4. Remove clips and pin from cylinder and slide plate.
5. Remove cylinder upper pin.
6. Remove cylinder.

BATTERY PACK

If the Battery Pack is damaged, it must be replaced by the manufacturer or its service agent in order to avoid a hazard.

WHEEL CHANGING

1. Jack machine up by pushing the cylinder lift forward to lower and adjust the angle of the cutting head to raise machine.
2. Place blocks under Forklift Cups on the side of the machine that wheel is being changed. **Take Caution:** Make sure machine is supported properly or serious injury could occur.
3. Let cylinder down resting machine on blocks allowing rear wheel to be lifted off the floor.
4. Remove five 1/2" lug nuts with an extended arm wrench, remove wheel.
5. Replace wheel.
6. Replace five lug nuts and tighten, making sure lug nuts are very tight.
7. Raise cylinder to raise machine off of blocks. Remove blocks and lower machine.
8. Repeat to other side if necessary.

5200 & 5200QL MACHINE MAINTENANCE

CHANGING FILTER-Filter should be replaced yearly.

1. Remove the three filter cover bolts (See Figure A).
2. Lift out the filter (See Figure B).
3. Replace with new filter.
4. Replace cover spring.
5. Replace and firmly tighten bolts.

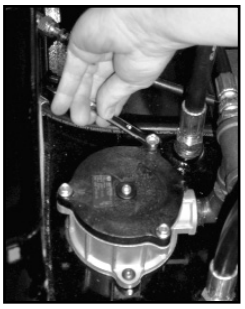


Figure A

Figure B

CASTER MAINTENANCE

1. Keep clean and free of debris, make sure it can move freely.
2. Give a shot of grease in grease zerc on caster every six months to keep moving freely.
3. To remove caster, machine will need to be raised. Push the cylinder lift lever forward to lower and adjust the angle of the cutting head to jack up the machine (See Figure C). Block up machine (See Figure D). Remove four bolts, pull caster off, clean/replace as needed.
4. Replace caster.
5. Replace and firmly tighten the four bolts.
6. Lower the machine.

*Note: A spacer is needed with caster when using an 18 inch wheel.

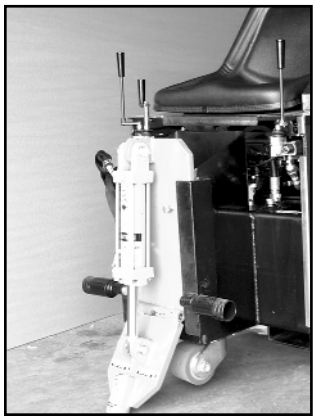


Figure C

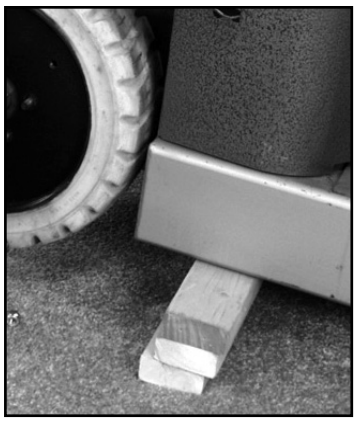


Figure D

⚠ **WARNING:** Do Not alter a switch or lever. Do No defeat a safety device.

⚠ **WARNING:** The Back Up Beeper is on the machine for safety. It is important to keep it in good working condition. Failure to do so could cause bodily injury.

5200 & 5200QL MACHINE MAINTENANCE

SEAT REPLACEMENT

1. Remove two button hexhead screws on each side of the hood (4 times).
2. Lift hood off.
3. Remove seat.
4. To replace seat, set seat on top of hood.
5. Replace the four 5/16 button hexhead screws from underneath the hood.
6. Firmly tighten.
7. Reconnect back-up beeper and seat switch wires.
8. Replace hood and screws.

FUSE REPLACEMENT

⚠ **WARNING:** Always disconnect from power pack before maintaining. ⚠

The 5200 & 5200-QL has two fused lines. The first is contained in the power box, 15 amp. Open the power box to replace the fuse. The second fuse is in the positive line on the top of the motor, 100 amp. To replace, remove the pump guard housing four screws (2 on each side). Pull fuse from the fuse holder, replace fuse. It only fits one way.

***Note:** KEEP ELECTRIC BOX CLEAN. During heavy use, open the electric box and clean thoroughly.

⚠ **WARNING:** Never operate machine without pump guard housing in place.

SWITCHES

There are three switches:

1. Operation Switch in handle
2. Kill Switch located on the outside of the power box
3. Motor Starter Switch on connector located inside power box.

#5200-258

DEBRIS DEFLECTOR MOUNTING INSTRUCTIONS

•Insert and secure a cutting head, making sure cutting head is **all the way in**.

•**If there are holes on your lower cutting head support,** place debris deflector under the lower cutting head support and bolt in place.

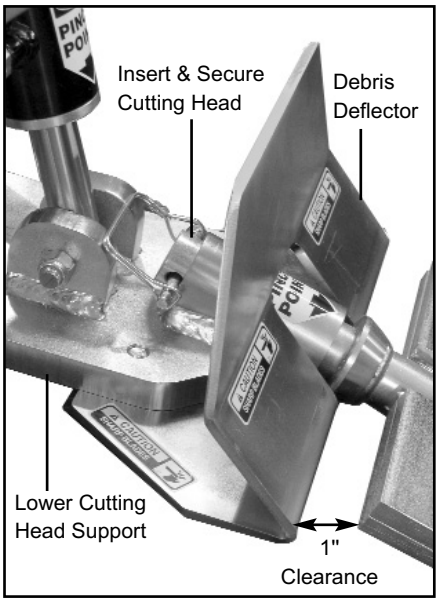
•**If there are not holes on the lower cutting head support,** place debris deflector on the lower cutting head support, measuring a 1" clearance between the cutting head and the front of the debris deflector. This clearance will reduce a "pinch point".

•Secure with C-clamps.

•Mark the holes from the debris deflector on the lower cutting head support.

•Either drill a 1/2" hole on each mark and secure debris deflector with a bolt and lock nut **OR** drill a 27/64" hole and tap 1/2-13.

•Firmly secure debris deflector under the cutting head.



Note: **Number in parenthesis ( ) is the amount needed on each machine. Parts are sold individually therefore order the number of parts needed.**

5200 & 5200QL COMPLETE PARTS LIST

PART #	DESCRIPTION
5110-111	SEAT
5110-114	HYDRAULIC WHEEL MOTOR (2)
5110-114A	HIGH SPEED HYDRAULIC WHEEL MOTOR (2)
5110-114-2	WHEEL MOTOR FITTING (4)
5110-114-5	WHEEL MOTOR SET OF SEALS (NOT SHOWN)
5110-115	SINGLE SPOOL CONTROL
5110-115-1	SINGLE SPOOL SEAL KIT (NOT SHOWN)
5110-115-2	3/16" VALVE PIN (3)
5110-116	DOUBLE SPOOL CONTROL
5110-116-3	DOUBLE SPOOL SEAL KIT ONLY (NOT SHOWN)
5110-116-4	HANDLE HOUSING (3)
5110-116-5	SOCKET HEAD CAP SCREW(6)
5110-117	WHEEL HUB (2)
5110-117-2	HUB NUT (2)
5110-164A	TANK HOSE
5110-164B	TANK HOSE CLAMP
5110-165-3L	FOOTREST EXTENSION BRACKET, LEFT
5110-165-3R	FOOTREST EXTENSION BRACKET, RIGHT
5110-166	SLIDE PLATE
5110-167	LOWER CUTTING HEAD SUPPORT
5110-170	CUTTING HEAD PIN
5110-180	FOOT PEG (2)
5110-218	BACK-UP BEEPER SWITCH
5110-233	BREATHER ASSEMBLY
5110-235	FILTER “T” FITTING ASSEMBLY
5110-235-1	FILTER HOSE FITTING ONLY (2)
5110-235-2	FILTER “T” ONLY
5110-235-3	FILTER COUPLER ONLY
5110-236	FILTER HOUSING ASSEMBLY
5110-236-1	REPLACEMENT FILTER RETURN
5110-237	SUCTION FILTER SCREEN
5110-237-1	FILTER SUCTION LINE ASSEMBLY (2)
5110-237-1A	FILTER HOSE ONLY (2)
5110-237-1B	FILTER HOSE FITTING ONLY (4)
5110-238	FILTER O-RING SEAL
5110-250	CYLINDER
5110-250-3	CYLINDER SEAL KIT REPLACEMENT
5110-251	CYLINDER CONNECTING ROD
5110-252	CYLINDER CLIP (2)
5110-253	HYDRAULIC HOSE CONNECTOR
5110-253R	CYLINDER RESTRICTER FITTING
5110-264	45° VALVE FITTING (2)
5110-270-2	5/16 LEVER JAMB NUT
5110-271	LEVER BRACKET (3)
5110-272	CYLINDER LIFT LEVER ONLY
5110-404	REAR WEIGHT
5110-402	WRENCH SET (NOT SHOWN)
5110-405	18" WHEEL & RIM (STANDARD)
5110-408	13" WHEEL & RIM
5200-1C	MOTOR FAN COVER
5200-1F	MOTOR FAN

5200 & 5200QL COMPLETE PARTS LIST

PARTS LIST (continued)

PART #	DESCRIPTION
5200-1G	DOUBLE PUMP GASKET
5200-3	FUSE BRACKET
5200-4	FUSE HOLDER
5200-5	100 AMP MOTOR FUSE
5200-6	FUSE COVER
5200-7	SHOCK PAD
5200-10-3	HOOD STOP SLIDE
5200-10-4	HOOD SLIDE SPACER
5200-11-LH	SINGLE SPOOL MOUNT
5200-11-RH	DOUBLE SPOOL MOUNT
5200-18	MOTOR CLAMP (2)
5200-24	HOOD HINGE (2)
5200-25-LH	LEFT SIDE PANEL (NOT SHOWN)
5200-25-RH	RIGHT SIDE PANEL
5200-26	HOOD
5200-27	HOOD GUIDE (2)
5200-28	SIDE SUPPORT ROD
5200-29	BATTERY BUMPER (6)
5200-30	BASE ASSEMBLY (DOG HOUSE)
5200-105	TOOL KIT (NOT SHOWN)
5200-111	90° PUMP FITTING
5200-116	BACK-UP BEEPER ASSEMBLY
5200-117	WIRE CLAMP
5200-118	ELECTRIC CONTROL BOX ASSEMBLY
5200-118A	CONTROL BOX SPACER (NOT SHOWN)
5200-118-1	ELECTRIC BOX COVER ONLY W/ GASKET
5200-118-1A	ELECTRICAL BOX SHELL ONLY
5200-118-3	BACK UP BEEPER CORD
5200-118-4	BACK UP SWITCH CORD
5200-118-5	CONNECTOR BAR TO PLUG CORD
5200-118-6	CONNECTOR PLUG CORD
5200-118-7	FUSE CORD
5200-118-8	BLUE 48 VOLT BATTERY CONNECTOR (2)
5200-118-9	BATTERY CONNECTOR (16)
5200-118-10	GRAY CORD CONNECTOR ASSEMBLY (STANDARD RUN) (4)
5200-118-11	RED 24V CORD CONNECTOR ASSEMBLY (4)
5200-118-13	CORD CONNECTOR STRAIN RELIEF (3)
5200-118-16	YELLOW CORD CONNECTOR ASSEMBLY (EXTENDED RUN) (4) (NOT SHOWN)
5200-118-17	ELECTRIC BOX GASKET ONLY
5200-119	CONTACTOR KIT
5200-119-1	CONTACTOR ASSEMBLY
5200-120	KILL SWITCH ASSEMBLY
5200-120-1	RUBBER BOOT
5200-125	FUSE HOLDER ASSEMBLY
5200-126	ELECTRIC BOX FUSE
5200-127	ELECTRICAL STRIP
5200-128	SNUBBER
5200-129	LOW VOLTAGE SENSOR (FOR 5200)
5200-157	DRAIN/FILLER PLUG (3)
5200-166G	SWITCH PLATE
5200-166H	CONTROL LEVER
5200-166L	LEFT HANDLE
5200-166L2	LEFT HANDLE WIRED COMPLETE (NOT SHOWN)

5200 & 5200QL COMPLETE PARTS LIST

PARTS LIST (continued)

PART #	DESCRIPTION
5200-166R	RIGHT HANDLE
5200-191	SWITCH ASSEMBLY
5200-191A	SWITCH SECURING NUT
5200-194	DOUBLE WHEEL CASTER ASSEMBLY (GREY)
5200-194A	WHEEL ONLY (2) (NOT SHOWN)
5200-217	BACK-UP BEEPER BRACKET
5200-254	LOWER CYLINDER LINE
5200-255	UPPER CYLINDER LINE
5200-258	DEBRIS DEFLECTOR
5200-261	WHEEL MOTOR LINE (4)
5200-261-1	WHEEL MOTOR HOSE CLAMP ASSEMBLY (2)
5200-262	PRESSURE LINE (4)
5200-263	SUCTION LINE (4)
5200-266	RETURN LINE (2)
5200-270-1	CONTROL LEVER GUARD
5200-400-2	FRONT WEIGHT INDIVIDUALLY (12)
5200-400-4	USS 5/8 FLAT WASHER, WEIGHT (2)
5200-400-5	SAE 5/8 FLAT WASHER, WEIGHT (2)
5200-409	16" WHEEL & RIM
5200QL-1A	HYDRAULIC PUMP MOTOR PLATE
5200QL-1C	MOTOR FAN COVER (NOT SHOWN)
5200QL-1F	MOTOR FAN (NOT SHOWN)
5200QL-11-LH	SINGLE SPOOL VALVE
5200QL-11-RH	DOUBLE SPOOL VALVE
5200QL-12	VALVE LEVER W/ BOLT (3)
5200QL-13	VALVE LEVER SPACER
5200QL-14	BACKUP BEEPER PIN ASSEMBLY
5200QL-25	RIGHT SIDE PANEL
5200QL-26	LEFT SIDE PANEL (NOT SHOWN)
5200QL-27	MAIN BASE
5200QL-28	BATTERY HINGED COVER
5200QL-28A	BATTERY COVER FOAM PAD (2) (NOT SHOWN)
5200QL-29	TOP COVER
5200QL-30	HOOD LEVER ASSEMBLY
5200QL-31	HOOD LEVER ONLY
5200QL-32	HOOD LEVER BRACKET ONLY
5200QL-33	LATCH SECURE MOUNT
5200QL-34	REVERSE CATCH
5200QL-40	BATTERY GUIDE RIGHT & LEFT (2)
5200QL-41	BATTERY GUIDE CENTER
5200QL-42	HINGED TOP COVER ONLY
5200QL-50	FOAM
5200-QL-129	LOW VOLTAGE SENSOR (FOR 5200QL)
5200-QL-500	BATTERY CART
5200-QL-500F	1/2-13 X 1 BOLT, CARRIAGE LG. (2)
5200-QL-500G	WHEEL FIXED (2)
5200-QL-500H	WHEEL SWIVEL (2)
5200QL-501	FRONT ANGLE, RIGHT
5200QL-502	FRONT ANGLE, LEFT
5200QL-503	TOP TRAY
5200QL-504	BOTTOM TRAY
5200QL-505	HANDLE ANGLE
5200QL-506	TONGUE
5200QL-507	BENT WASHER

PARTS LIST (continued)

PART #	DESCRIPTION
5200QL-600	SHROUD UPGRADE KIT (NOT SHOWN)
5200QL-700	FRONT HOOD UPGRADE KIT
5200QL-710	VALVE UPGRADE KIT ASSEMBLY
5200-VI	INSTRUCTION VIDEO (NOT SHOWN)
5205	24 VOLT CHARGER
5212	48 VOLT CHARGER, 50/60 CYCLE, 100 TO 240 VOLT
70602	INSTRUCTION MANUAL TUBE
70603	INSTRUCTION TUBE CAP
70651	VALVE BODY PLUG (8)
70905-D4	DOUBLE GEAR PUMP
72385	5 HP MOTOR (ADVANCED) (NOT SHOWN)
72391	5 HP MOTOR (BALDOR)
72816	3/8 90° PUMP FITTING (NOT SHOWN)
73005	1/4-20 X 1/2 HEXHEAD BOLT (3)
73006	1/4-20 X 3/4 BUTTON HEAD CAP SCREW (8)
73007	1/4 FLAT WASHER (9)
73008	1/4-20 NYLON LOCK NUT (25)
73014	1/4-20 X 1-1/2 HEXHEAD BOLT (7)
73020	1/4-20 X 5/8 WIZLOCK BOLT (3)
73021	1/4-20 X 2-1/4 HEXHEAD BOLT (8)
73023	1/4-20 X 2 HEXHEAD BOLT
73025	1/4 BUTTON HEAD RIVET (3)
73029	1/4-20 X 3/4 FLATHEAD CAP SCREW (2)
73035	1/4-20 X 1 FLAT HEAD SCREW (2)
73047	1/4 X 1 WOODRUFF KEY (2)
73082	1/4-20 X 1¼ PHILLIPS HEAD SCREW (2 PER ASSEMBLY)
73087	1/4-20 X 1½ FLANGE BOLT
73131	3/32 X 1¾ KOTTER PIN (2)
73201	3/8-16 X 1 HEXHEAD BOLT (5)
73202	3/8 INTERNAL/EXTERNAL WASHER (26)
73203	3/8 FLAT WASHER (7)
73204	3/8 SPLIT LOCK WASHER (6)
73207	3/8-16 NYLON LOCK NUT (8)
73208	3/8-16 X 1½ HEXEAD CAP SCREW (2)
73212	3/8-16 X 1/2 BUTTON HEAD CAP SCREW (16)
73213	3/8-16 X 3/4 BUTTON HEAD CAP SCREW (11)
73214	3/8-16 X 1 BUTTON HEAD CAP SCREW (6)
73227	3/8-24 X 1 SET SCREW (3)
73233	3/8-16 X 3-1/2 HEXHEAD BOLT (NOT SHOWN)
73235	3/8-24 JAMB NUT (3)
73260	3/8 90° CONNECTOR
73302	5/16 FLAT WASHER, SEAT (4) (NOT SHOWN)
73305	5/16-18 X 3/4 HEXHEAD BOLT, SEAT (4) (NOT SHOWN)
73308	5/16-18 X 3/4 BUTTON HEAD CAP SCREW (6)
73320	5/16-18 X 2 SOCKET HEAD CAP SCREW
73321	5/16-18 X 3½ SOCKET HEAD CAP SCREW
73322	5/16 NYLON LOCK NUT (2)
73324	5/16-18 X 3-1/4 SOCKET HEAD CAP SCREW (NOT SHOWN)
73330	SECURING PIN
73340	5/16-18 X 1/4 SET SCREW, CUTTING HEAD PIN (2)
73345	5/16-18 X 1 BUTTON HEAD SCREW (24)
73402	1/2-13 NYLON LOCK NUT (9)
73403	1/2 SPLIT LOCK WASHER (10)
73404	1/2 SAE FLAT WASHER (8)

5200 & 5200QL COMPLETE PARTS LIST

PARTS LIST (continued)

PART #	DESCRIPTION
73406	1/2-13 X 1-1/4 HEXHEAD BOLT (5)
73407	1/2-13 X 1-1/2 HEXHEAD BOLT (8)
73408	1/2-13 X 1 HEXHEAD BOLT (2)
73410	1/2-13 X 3-1/2 HEXHEAD BOLT
73414	1/2-13 X 7 HEXHEAD BOLT (2)
73430	1/2-20 NYLON LOCK NUT (10)
73506	3/8 90° STRAIN RELIEF
74412	10-32 X 3/4 SLOTTED HEAD SCREW (4)
74429	10/32 KEPS WASHER (2)
74433	10-32 X 1/2 PHILLIPS PAN HEAD SCREW (2)
74501	6 FLAT WASHER (2)
74510	6-32 X 3/8 PAN HEAD SCREW (2)
74513	6-32 X 3/4 PAN HEAD SCREW (2)
80110	GRIP (2)

ACCESSORIES

PART #	DESCRIPTION
5110-100	FRONT WHEEL ASSEMBLY
5110-100W	REPLACEMENT WHEEL ONLY
5110-111-3	OPTIONAL ARM REST/SET - LEFT & RIGHT ARMREST W/ MOUNTING HARDWARE INCLUDED
5203	PANTHER POWER PACK-STANDARD RUN (SET OF 2)
5203-1	DEEP CYCLE BATTERY ONLY
5203-2L	SINGLE BATTERY PACK LEFT (2 PLUG) (+, -)
5203-2R	SINGLE BATTERY PACK RIGHT (3 PLUG) (+, +)
5204	PANTHER POWER PACK-EXTENDED RUN (SET OF 2)
5204-2L	EXTENDED RUN SINGLE BATTERY PACK LEFT (2 PLUG) (+, -)
5204-2R	EXTENDED RUN SINGLE BATTERY PACK RIGHT (3 PLUG) (+, +)
5205	24 VOLT BATTERY CHARGER
5205-W	24 VOLT BATTERY CHARGER 220/240, CE APPROVED
5205-1	110/220 VOLT REPLACEMENT SWITCH
5205-2	REPLACEMENT STRAIN RELIEF
5205-3	PLUG OUTLET
5205-4	REPLACEMENT POWER CORD
5205-6	REPLACEMENT 6 FT. BATTERY CABLE W/CONNECTOR
5207-4	SPLITTER
5208-1	EXTENDED RUN BATTERY ONLY
7050-15	CUTTING HEAD EXTENSION
7074	TILE BOX

BLADES & CUTTING HEADS

PART #	DESCRIPTION
135	5" X 16" BLADE
147	4" X 6" BLADE
148	5" X 6" BLADE
363-2	3/4" X 8" RAZOR/SCRAPER BLADE (50/PKG)
368-8	7/8" X 8" RAZOR/SCRAPER BLADE (50/PKG)
368-12	7/8" X 12" RAZOR/SCRAPER BLADE (50/PKG)
368-15	7/8" X 15" RAZOR/SCRAPER BLADE (50/PKG)
6258-BU	3" X 12" SELF-SCORING BLADE - BEVEL UP
6259-BU	3" X 14" SELF-SCORING BLADE - BEVEL UP

5200 & 5200QL COMPLETE PARTS LIST

BLADES & CUTTING HEADS (continued)

PART #	DESCRIPTION
6260-BD	3" X 6" HEAVY DUTY DITCHING
6281	3" X 8" HEAVY DUTY BLADE
6282	3" X 14" HEAVY DUTY BLADE
6283	3" X 27" HEAVY DUTY BLADE
6284	3" X 12" HEAVY DUTY BLADE
6285	3" X 6" HEAVY DUTY BLADE
6286	3" X 10" HEAVY DUTY BLADE
6290	3" X 6" EXTRA HEAVY DUTY BLADE
6291	3" X 8" EXTRA HEAVY DUTY BLADE
6292	3" X 12" EXTRA HEAVY DUTY BLADE
6293	3" X 14" EXTRA HEAVY DUTY BLADE
6294	3" X 27" EXTRA HEAVY DUTY BLADE
7050-6	6" CUTTING HEAD
7050-8	8" CUTTING HEAD
7050-8RBH	8" RAZOR BLADE HEAD
7050-10	10" CUTTING HEAD
7050-12	12" CUTTING HEAD
7050-12RBH	12" RAZOR BLADE HEAD
7050-14	14" CUTTING HEAD
7050-14RBH	14" RAZOR BLADE HEAD
7050-27	27" CUTTING HEAD
7050-200	3" X 6" PREMIUM HIGH TEMPERED BLADE
7050-201	3" X 8" PREMIUM HIGH TEMPERED BLADE
7050-202	3" X 10" PREMIUM HIGH TEMPERED BLADE
7050-203	3" X 12" PREMIUM HIGH TEMPERED BLADE
7050-204	3" X 14" PREMIUM HIGH TEMPERED BLADE
7050-205	3" X 27" PREMIUM HIGH TEMPERED BLADE
7070-2	4" X 2" STRAIGHT SHANK BLADE
7070-3	4" X 3" STRAIGHT SHANK BLADE
7070-4	4" X 4" STRAIGHT SHANK BLADE
7070-6	4" X 6" STRAIGHT SHANK BLADE
7071-2	4" X 2" ANGLE SHANK/SHOE BLADE
7071-3	4" X 3" ANGLE SHANK/SHOE BLADE
7071-4	4" X 4" ANGLE SHANK/SHOE BLADE
7071-6	4" X 6" ANGLE SHANK/SHOE BLADE
7077-8	3.5" X 8" TAPERED CUTTING HEAD SHANK
7072-2	4" X 2" STRAIGHT SHANK BLADE W/CARBIDE TIP
7072-3	4" X 3" STRAIGHT SHANK BLADE W/CARBIDE TIP
7072-4	4" X 4" STRAIGHT SHANK BLADE W/CARBIDE TIP
7072-6	4" X 6" STRAIGHT SHANK BLADE W/CARBIDE TIP
7074	5" X 27" TILE BOX WITH 6" HIGH BOX
7075-8	2" X 8" TAPERED CUTTING HEAD SHANK
7075-11	2" X 11" TAPERED CUTTING HEAD SHANK
7076-8	2" X 8" TAPERED CUTTING HEAD SHANK W/CARBIDE TIP
7076-11	2" X 11" TAPERED CUTTING HEAD SHANK W/CARBIDE TIP
7077-11	3.5" X 11" TAPERED CUTTING HEAD SHANK
7078-8	3.5" X 8" TAPERED CUTTING HEAD SHANK W/CARBIDE TIP
7078-11	3.5" X 11" TAPERED CUTTING HEAD SHANK W/CARBIDE TIP
7079-2	2" X 6" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP
7079-4	4" X 6" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP
7079-6	6" X 6" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP
7081	3" X 10" INCREASED ANGLE BLADE
7083	3" X 8" INCREASED ANGLE BLADE
73270	3/8 X 3 PIN

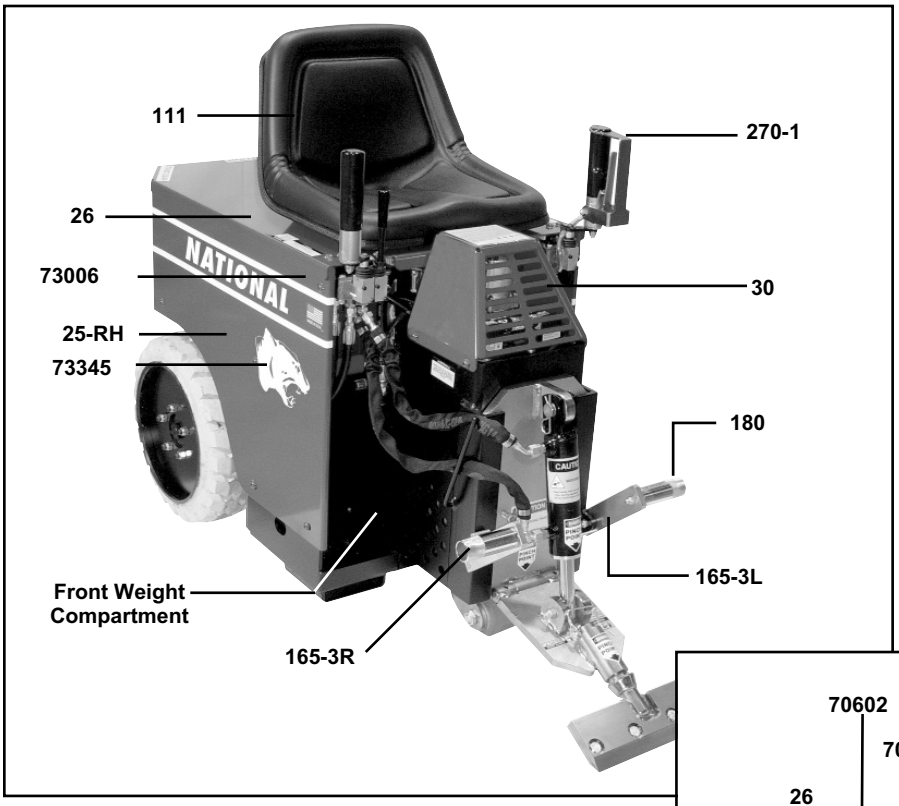
5200 & 5200QL COMPLETE PARTS LIST

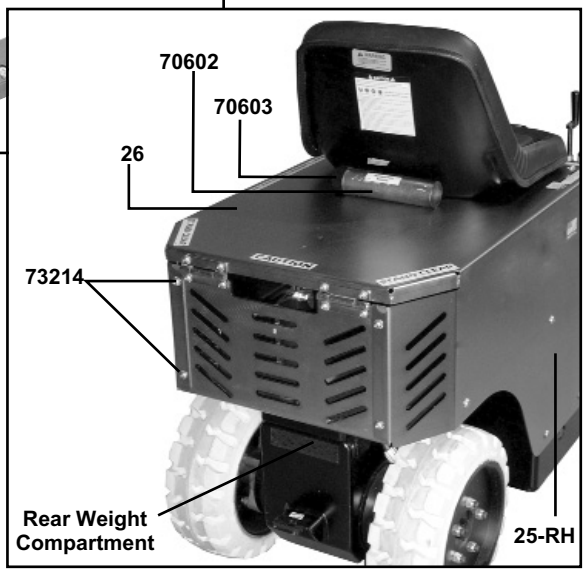
LABELS

PART #	DESCRIPTION
L08-1	STAND CLEAR LABEL (2)
L33B	CAUTION MOVING PARTS LABEL (2)
L33C	INSTRUCTION MANUAL LABEL
L33D	AUTHORIZED PERSONNEL LABEL
L37	CAUTION SHARP BLADES LABEL (2)
L38	DISCONNECT BEFORE SERVICE (2)
L66	LARGE CAUTION LABEL
L98	BLADE LIFT LABEL
L101	KILL SWITCH LABEL
L106	PINCH POINT LABEL (6)
L118	OPERATOR MUST BE SEATED LABEL (2)
L137	DISARM MACHINE LABEL (3)
L141	FLAG MADE IN USA LABEL (2)
L142	TRAILER HITCH LABEL (2)
L148	CAUTION GENERAL INFO LABEL
L153	POWER PACK LABEL
L155	GENERAL INFO LABEL
L156	48 VOLT LABEL
L157	24 VOLT LABEL
L159	+/- LABEL
L161	+/+ LABEL
L162	48 VOLT VDC LABEL
L165	BLADE APPLICATION LABEL
L168	INSTRUCTION LABEL
L169	PRODUCT NUMBER LABEL
L172	LOWERING HOOD INSTRUCTIONS LABEL
L174C	5200-QL LABEL
L176	NATIONAL LABEL, LARGE
L311	BATTERY LABEL
L316	OIL/TEMP ON LABEL
L317	THROTTLE LABEL

PART NUMBERS & DIAGRAMS (5200 ONLY)

EXTERNAL PARTS

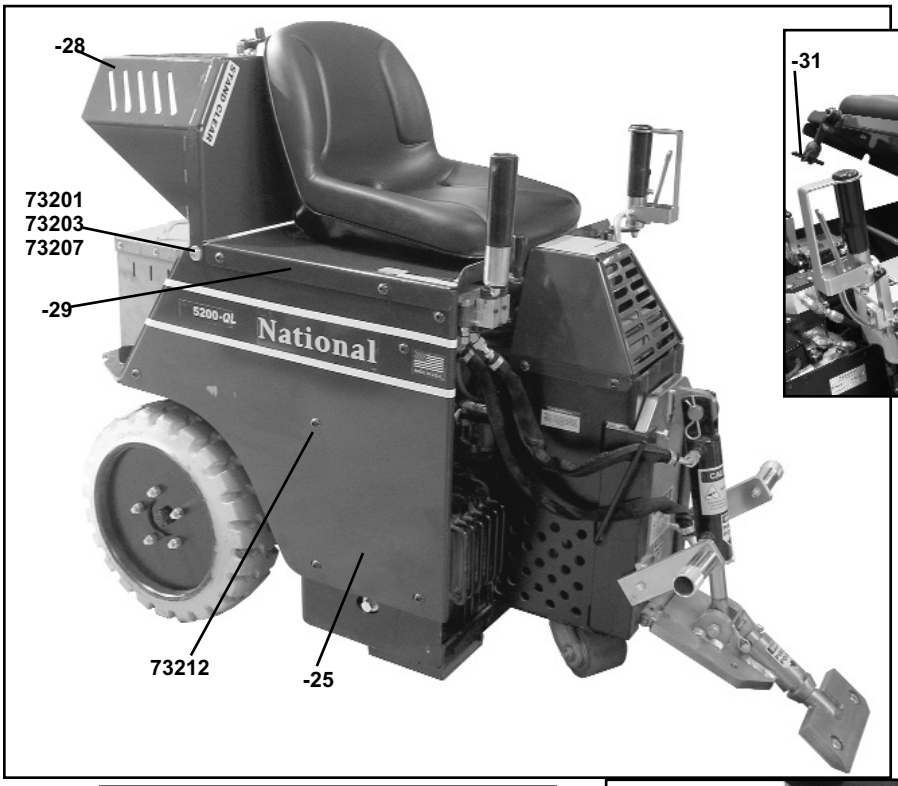


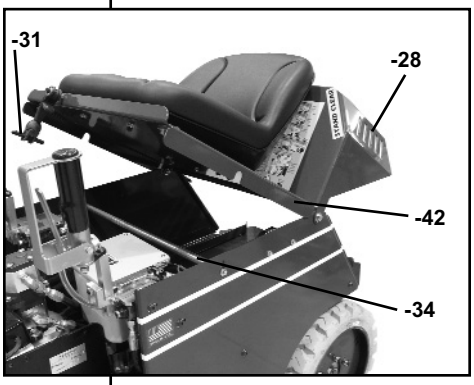


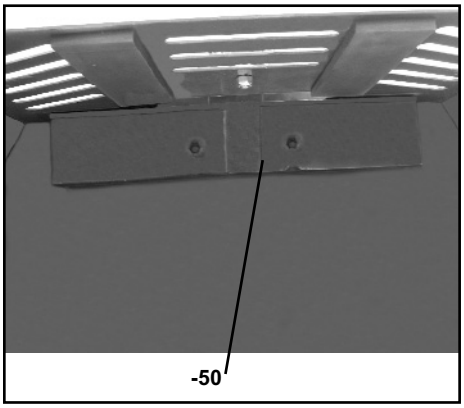
PART #	DESCRIPTION
5110-111	Seat
5110-165-3L	Footrest Extension Bracket, Left
5110-165-3R	Footrest Extension Bracket, Right
5110-180	Foot Peg (2)
5200-25-LH	Left Side Panel (Not Shown)
5200-25-RH	Right Side Panel
5200-26	Hood
5200-30	Base Assembly (Dog House)
5200-270-1	Control Lever Guard
70602	Instruction Manual Tube
70603	Instruction Tube Cap
73006	1/4-20 x 3/4 Button Head Cap Screw (4)
73214	3/8-16 x 1 Button Head Cap Screw (4)
73302	5/16 Flat Washer (4) (Not Shown)
73305	5/16-18 x 3/4 Hexhead Bolt (4) (Not Shown)
73345	5/16-18 x 1 Button Head Cap Screw (20)

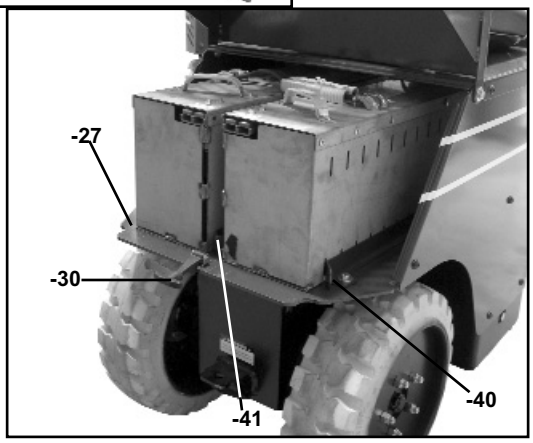
PART NUMBERS & DIAGRAMS (5200-QL ONLY)

HOOD & EXTERNAL PARTS





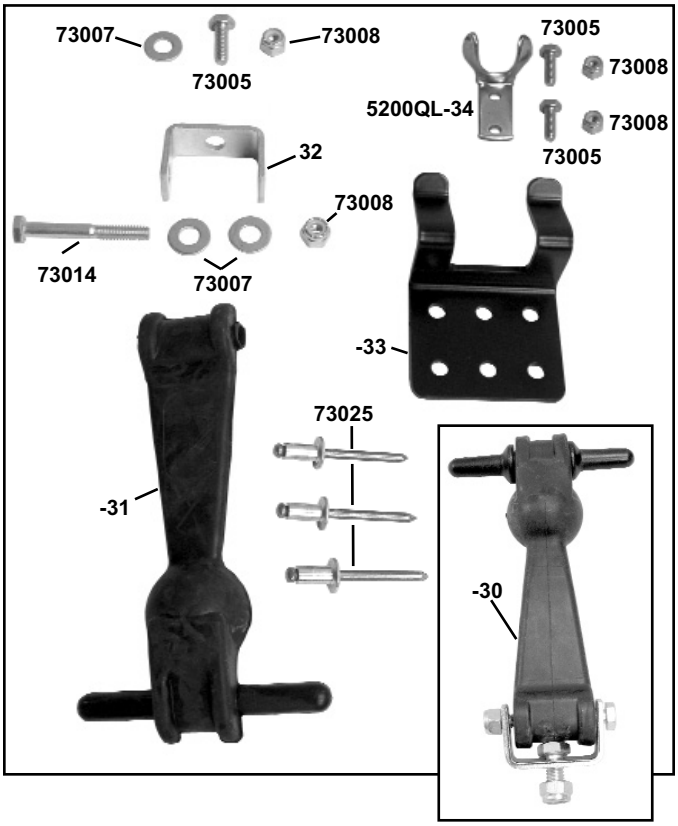


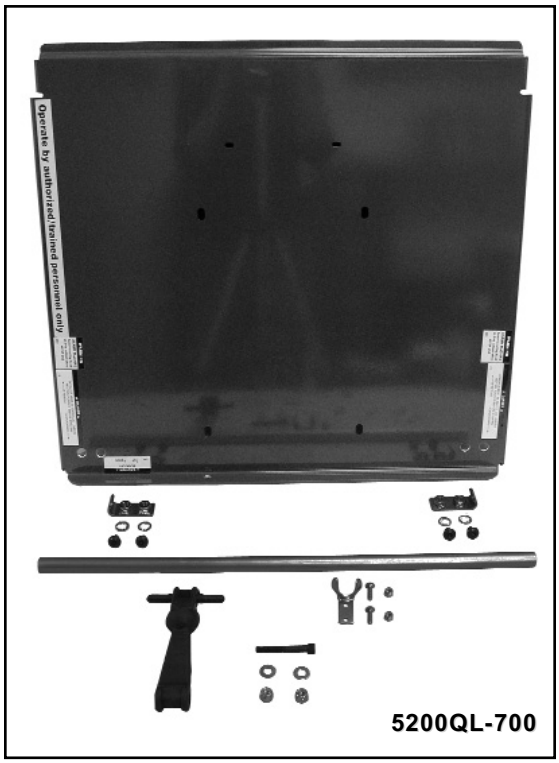


PART #	DESCRIPTION	PART #	DESCRIPTION
5200QL-25	Right Side Panel	5200QL-40	Battery Guide, Right & Left (2)
5200QL-26	Left Side Panel (Not Shown)	5200QL-41	Battery Guide Center
5200QL-27	Main Base	5200QL-42	Hinged Top Cover Only
5200QL-28	Battery Hinged Cover	5200QL-50	Foam
5200QL-28A	Battery Cover Foam Pad (2) (Not Shown)	5200QL-600	Shroud Upgrade Kit (Not Shown)
5200QL-29	Top Cover	73201	3/8-16 x 1 Hexhead Bolt (2)
5200QL-30	Hood Lever Assembly	73203	3/8 Flat Washer (4)
5200QL-31	Hood Lever Only	73207	3/8-16 Nylon Lock Nut (2)
5200QL-34	Reverse Catch	73212	3/8-16 x 1/2 Button Head Cap Screw (16)

PART NUMBERS & DIAGRAMS (5200-QL ONLY)

HOOD LEVER PARTS & FRONT HOOD UPGRADE KIT



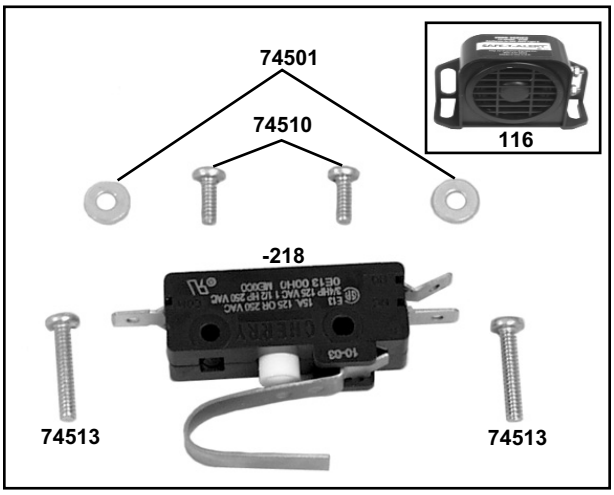


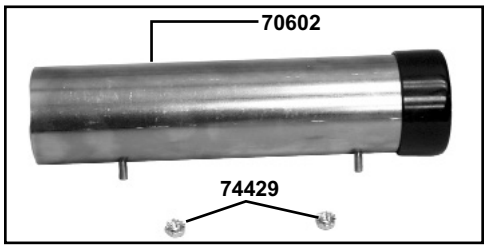
PART #	DESCRIPTION
5200QL-30	Hood Lever Assembly
5200QL-31	Hood Lever Only
5200QL-32	Hood Lever Bracket Only
5200QL-33	Latch Secure Mount
5200QL-34	Reverse Catch
5200QL-700	Front Hood Upgrade Kit

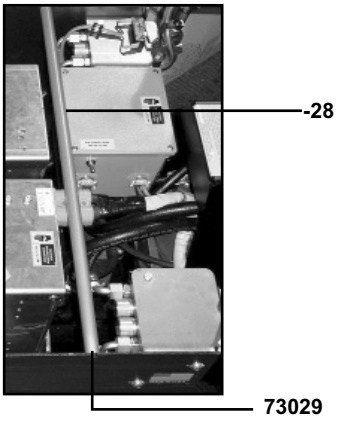
PART #	DESCRIPTION
73005	1/4-20 x 1/2 Hexhead Bolt (3)
73007	1/4 Flat Washer (3)
73008	1/4-20 Nylon Lock Nut (4)
73014	1/4-20 x 1-1/2 Hexhead Bolt
73025	1/4 Button Head Rivet (3)

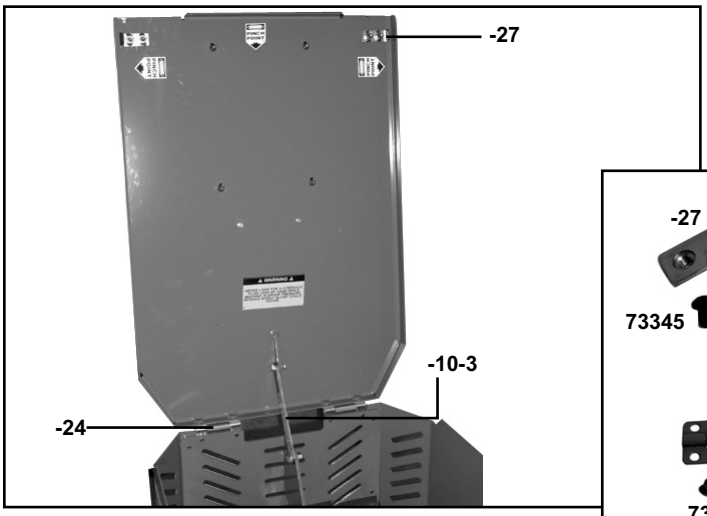
5200 & 5200QL PART NUMBERS & DIAGRAMS

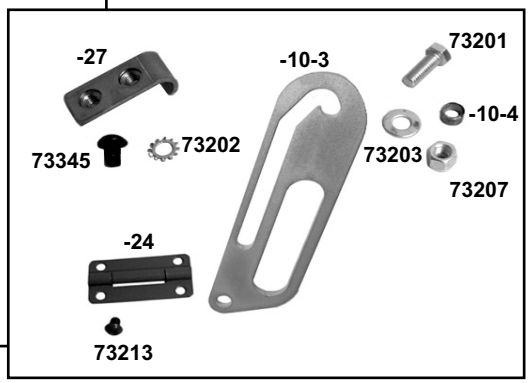
BEEPER & HOOD PARTS









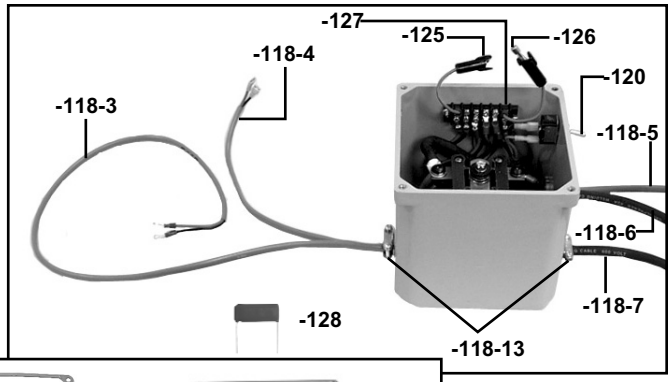


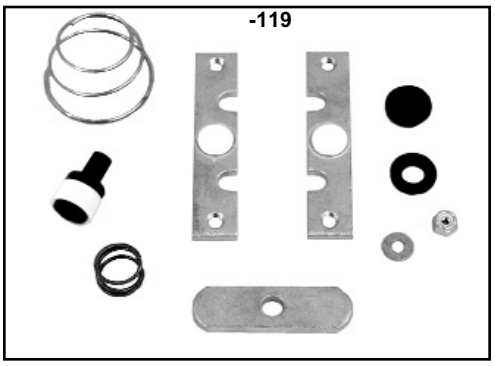
PART #	DESCRIPTION
5110-218	Back-Up Beeper Switch
5200-10-3	Hood Stop Slide
5200-10-4	Hood Slide Spacer
5200-24	Hood Hinge (2)
5200-27	Hood Guide (2)
5200-28	Side Support Rod
5200-116	Back-Up Beeper Assembly
70602	Instruction Manual Tube
73029	1/4-20 x 3/4 Flathead Cap Screw (2)
73201	3/8-16 x 1 Hexhead Bolt

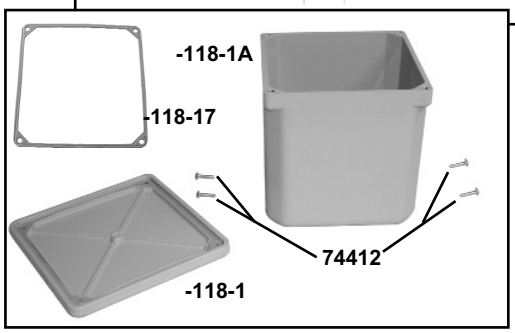
PART #	DESCRIPTION
73202	Button Head Star Washer (20)
73203	3/8 Flat Washer
73207	3/8 Nylon Lock Nut
73213	Hood Hinge Bolt (8)
73345	Hood Guide Bolt (4)
74429	10/32 Keps Washer (2)
74501	6 Flat Washer, Beeper Switch (2)
74510	6-32 x 3/8 Pan Head Screw (2)
74513	6-32 x 3/4 Pan Head Screw (2)

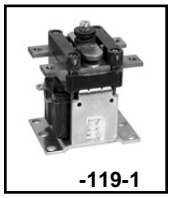
5200 & 5200QL PART NUMBERS & DIAGRAMS

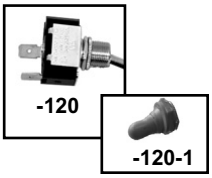
ELECTRIC BOX & BATTERY CONNECTOR PARTS

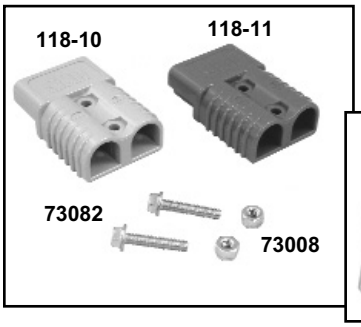


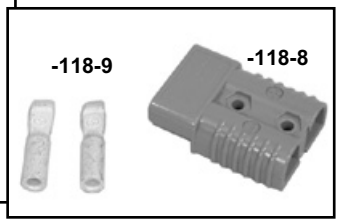


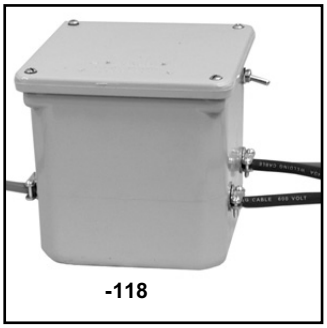










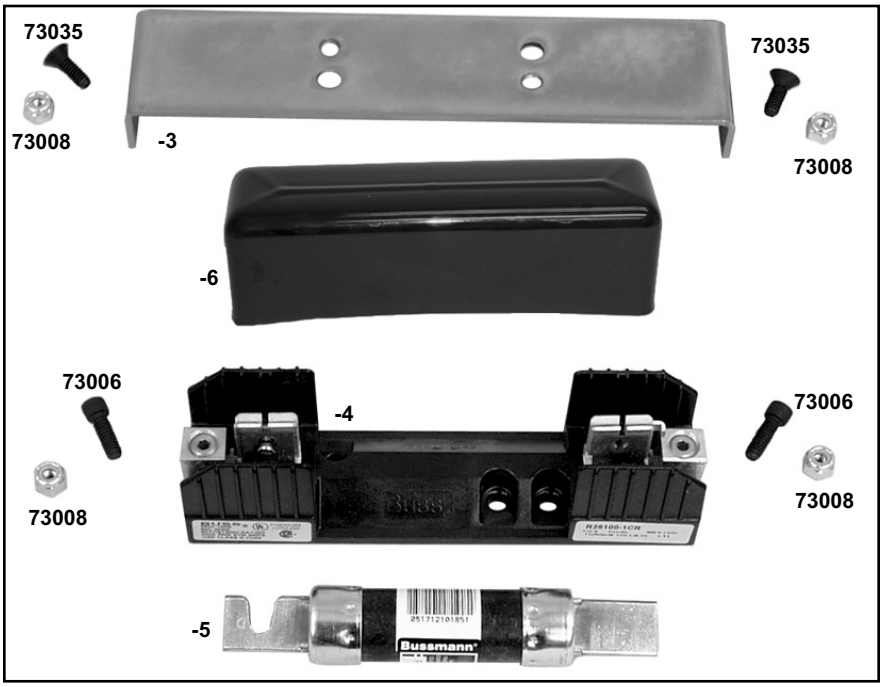


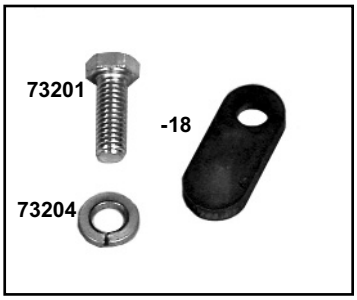
PART #	DESCRIPTION
5200-118	Electric Control Box Assembly
5200-118A	Control Box Spacer (Not Shown)
5200-118-1	Electric Box Cover Only w/ Gasket
5200-118-1A	Electrical Box Shell Only
5200-118-3	Back Up Beeper Cord
5200-118-4	Back Up Switch Cord
5200-118-5	Connector Bar to Plug Cord
5200-118-6	Connector Plug Cord
5200-118-7	Fuse Cord
5200-118-8	Blue 48 V Battery Connector (2)
5200-118-9	Battery Connector (2)
5200-118-10	Gray Cord Connector Assembly (Standard Run)(4)
5200-118-11	Red Cord Connector Assembly (4)
5200-118-13	Cord Connector Strain Relief (3)
5200-118-16	Yellow Cord Connector Assembly (Extended Run) (Not Shown)

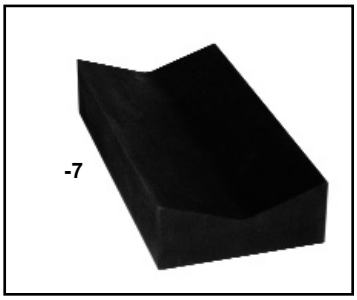
PART #	DESCRIPTION
5200-118-17	Electric Box Gasket Only
5200-119	Contactor Kit
5200-119-1	Contactor Assembly
5200-120	Kill Switch Assembly
5200-120-1	Rubber Boot Only
5200-125	Fuse Holder Assembly
5200-126	Electric Box Fuse
5200-127	Electrical Strip
5200-128	Snubber
5200-129	Low Voltage Sensor (For 5200)
5200-QL-129	Low Voltage Sensor (For 5200QL)
73008	1/4-20 Nylon Lock Nut (2)
73082	1/4-20 x 1¼ Phillips Head Screw (2 Per Assembly)
74412	10-32 x 3/4 Slotted Pan Head Screw (4)

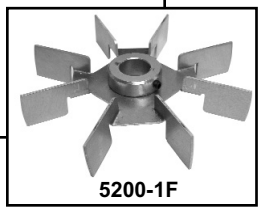
5200 & 5200QL PART NUMBERS & DIAGRAMS

MOTOR & FUSE PARTS





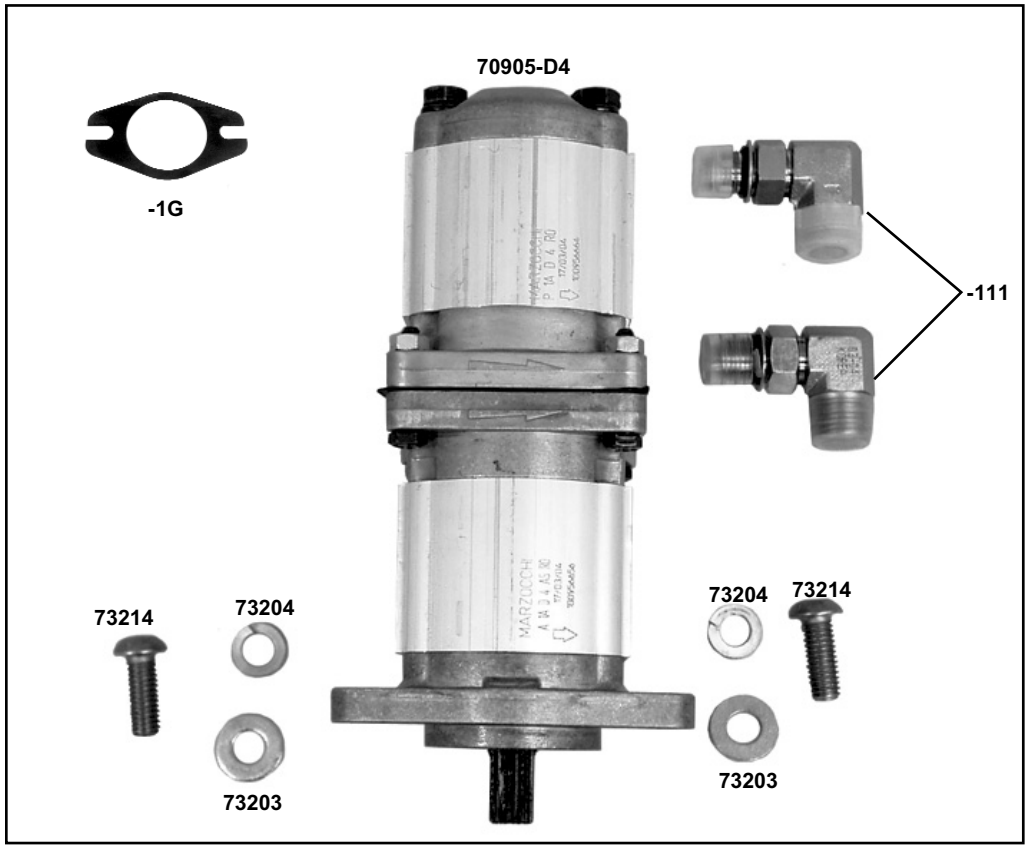




PART #	DESCRIPTION
5200-1C	Motor Fan Cover
5200-1F	Motor Fan
5200-3	Fuse Bracket
73008	1/4 Nylon Lock Nut (4)
5200-4	Fuse Holder
5200-5	100 Amp Motor Fuse
5200-6	Fuse Cover
5200-7	Shock Pad
5200-18	Motor Clamp (2)
5200QL-1A	Hydraulic Pump Motor Plate
5200QL-1C	Motor Fan Cover (Not Shown)
5200QL-1F	Motor Fan (Not Shown)
72385	5 HP Motor (Advanced) (Not Shown)
72391	5 HP Motor (Baldor)
73006	1/4-20 x 3/4 Button Head Cap Screw (4)
73008	1/4 Nylon Lock Nut (4)
73035	1/4-20 x 1 Flat Head Screw, Fuse Bracket (2)
73201	3/8-16 x 1 Hexhead Bolt (2)
73204	3/8 Split Lock Washer (2)

5200 & 5200QL PART NUMBERS & DIAGRAMS

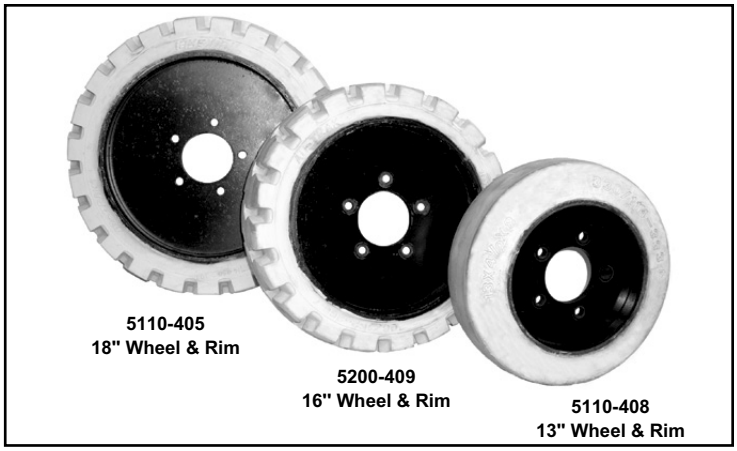
GEAR PUMP PARTS

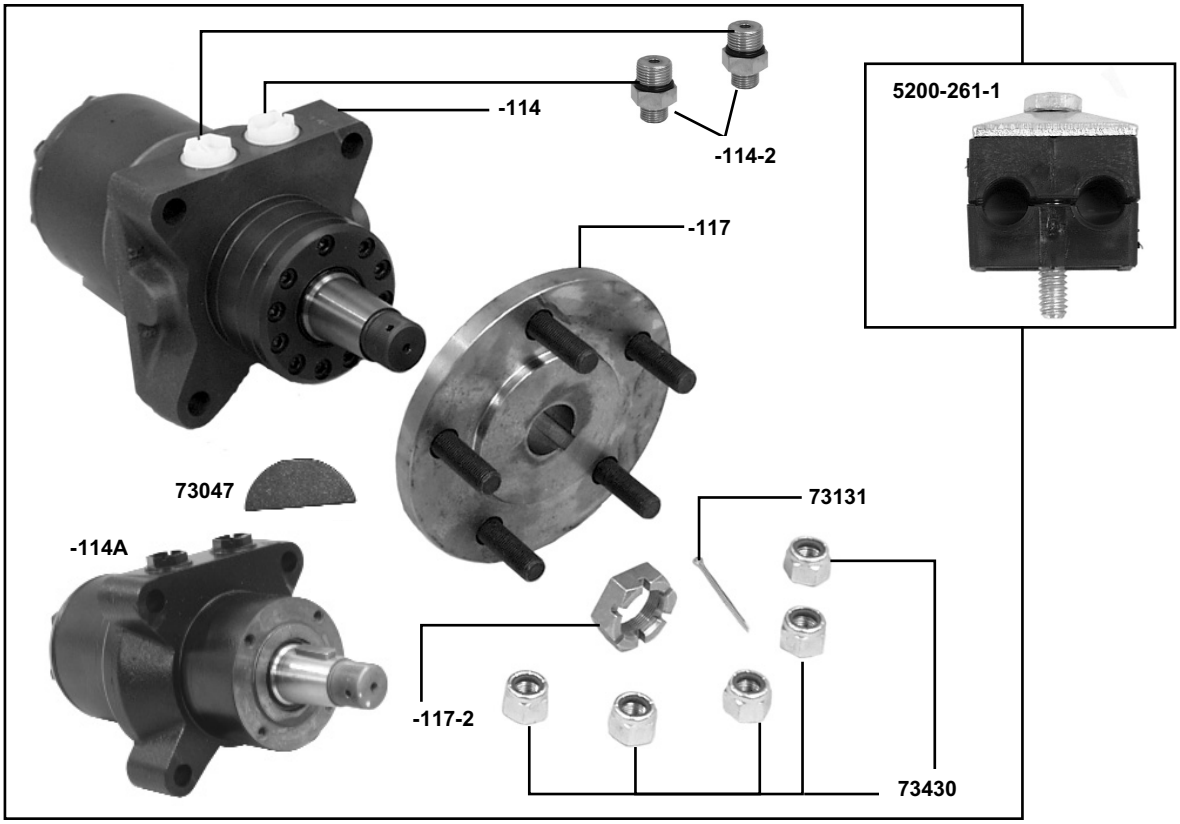


PART #	DESCRIPTION
5200-1G	Double Pump Gasket
5200-111	90° Pump Fitting
70905-D4	Double Gear Pump
73203	3/8 SAE Flat Washer (2)
73214	3/8-16 x 1 Button Head Cap Screw (2)
73204	3/8 Split Lock Washer (2)

5200 & 5200QL PART NUMBERS & DIAGRAMS

WHEEL PARTS

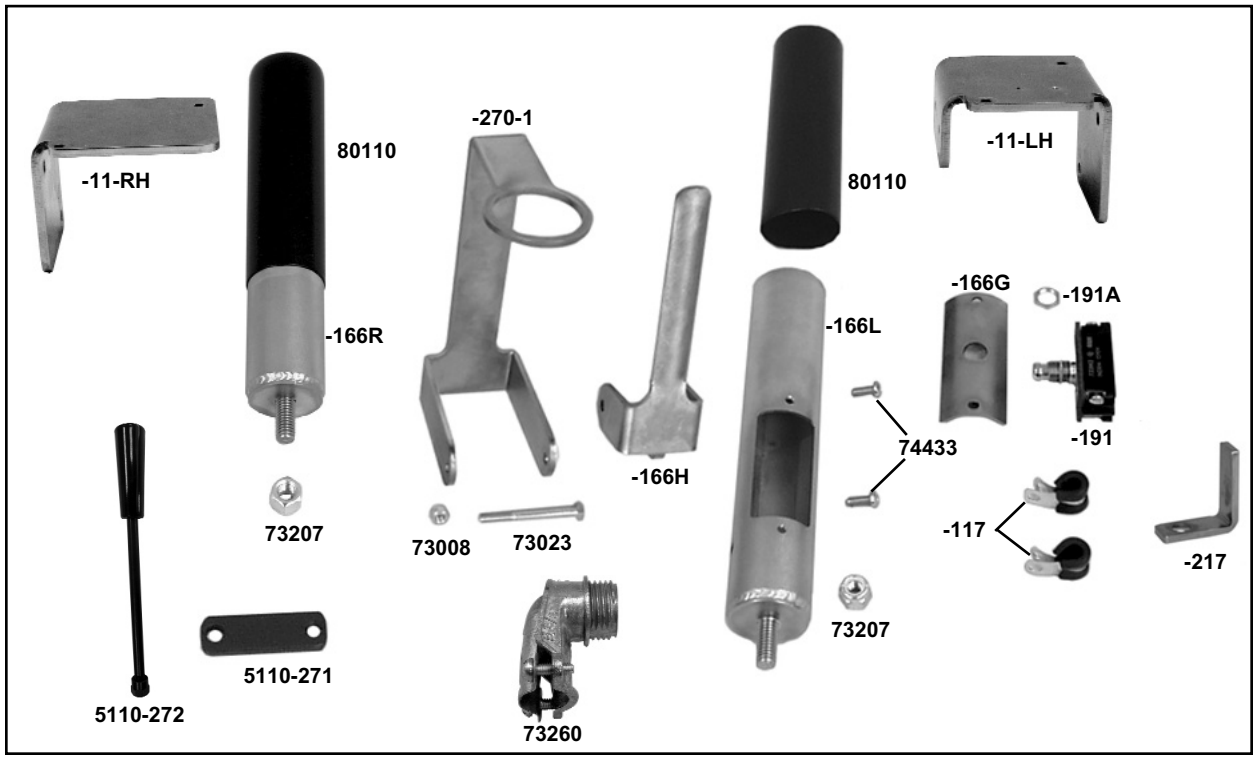




PART #	DESCRIPTION	PART #	DESCRIPTION
5110-114	Hydraulic Wheel Motor (2)	5110-408	13" Wheel & Rim
5110-114A	High Speed Hyd. Wheel Motor (2)	5200-261-1	Wheel Motor Hose Clamp Assembly (2)
5110-114-2	Wheel Motor Fitting (4)		
5110-114-5	Wheel Motor Set of Seals (Not Shown)	5200-409	16" Wheel & Rim
		73047	¼ x 1 Woodruff Key (2)
5110-117	Wheel Hub (2)	73131	3/32 x 1¾ Kotter Pin (2)
5110-117-2	Hub Nut (2)	73430	1/2-20 Nylon Lock Nut (10)
5110-405	18" Wheel & Rim (Standard)		

5200 & 5200QL PART NUMBERS & DIAGRAMS

CONTROL LEVER PARTS (OLD STYLE)

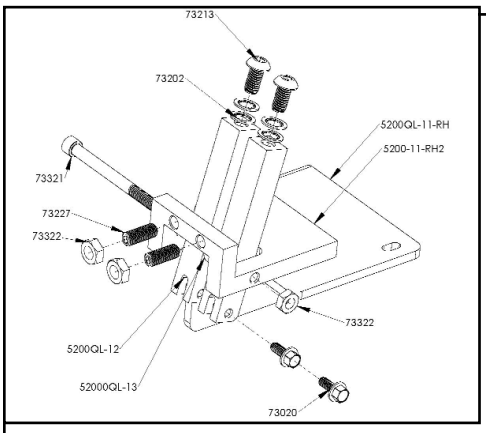


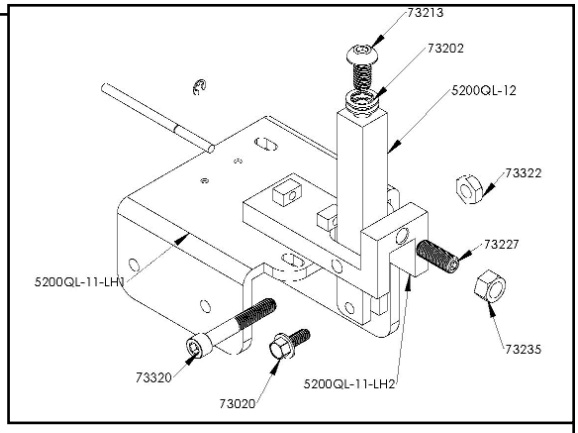
PART #	DESCRIPTION
5110-271	Lever Bracket (3)
5110-272	Cylinder Lift Lever Only
5200-11-LH	Single Spool Mount
5200-11-RH	Double Spool Mount
5200-117	Wire Clamp
5200-166G	Switch Plate
5200-166H	Control Lever
5200-166L	Left Handle
5200-166L2	Left Handle Wired Complete (Not Shown)
5200-166R	Right Handle

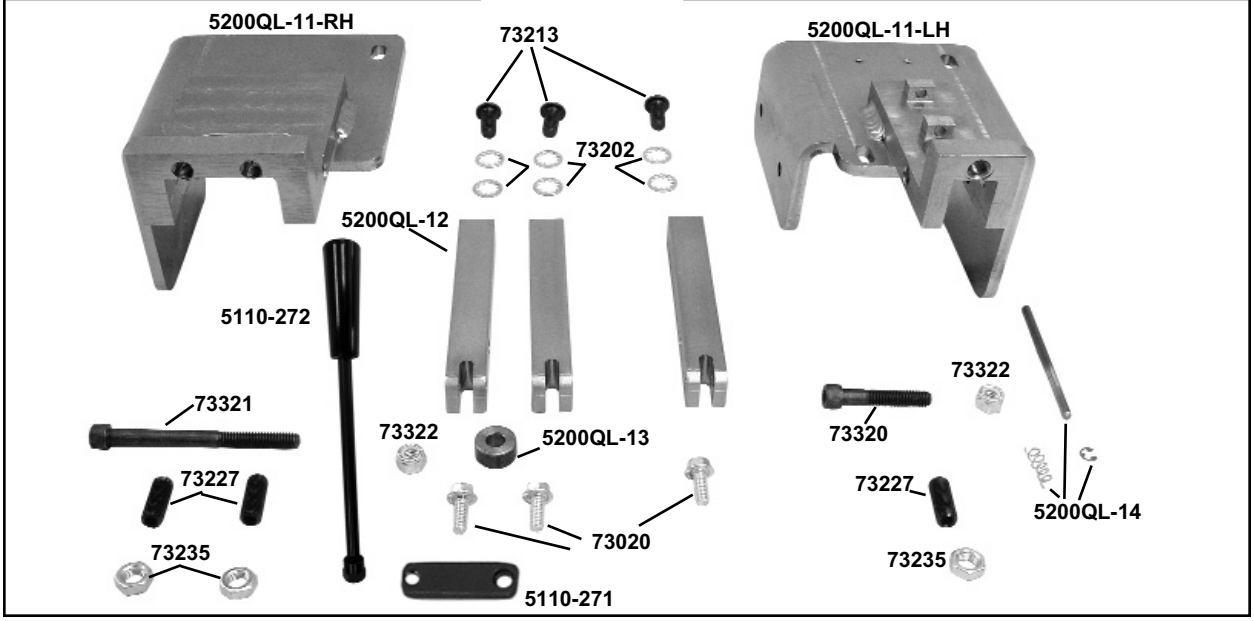
PART #	DESCRIPTION
5200-191	Switch Assembly
5200-191A	Switch Securing Nut
5200-217	Back-Up Beeper Bracket
5200-270-1	Control Lever Guard
73008	¼-20 Nylon Lock Nut Securing
73023	1/4-20 x 2 Hexhead Bolt
73207	3/8-16 Nylon Lock Nut, Handle (2)
73260	3/8 90° Connector
74433	10-32 x 1/2 Phillips Pan Head Screw (2)
80110	Handle Grip (2)

5200 & 5200QL PART NUMBERS & DIAGRAMS

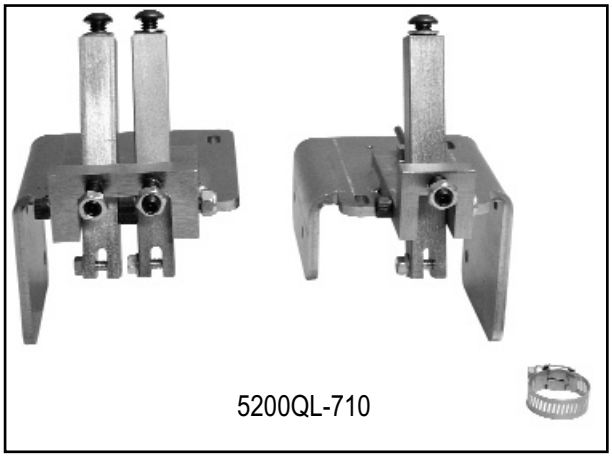
CONTROL LEVER PARTS (NEW STYLE)







PART #	DESCRIPTION
5110-271	Lever Bracket (3)
5110-272	Cylinder Lift Lever Only
5200QL-11-LH	Single Spool Valve
5200QL-11-RH	Double Spool Valve
5200QL-12	Valve Lever w/ Bolt (3)
5200QL-13	Valve Lever Spacer
5200QL-14	Backup Beeper Pin Assembly
5200QL-710	Valve Upgrade Kit Assembly
73020	1/4-20 x 5/8 Wizlock Bolt (3)
73202	3/8 Internal Lock Washer (6)
73213	3/8-16 x 3/4 Button Head Cap Screw (3)
73227	3/8-24 x 1 Set Screw (3)
73235	3/8-24 Jamb Nut (3)
73320	5/16-18 x 2 Socket Head Cap Screw

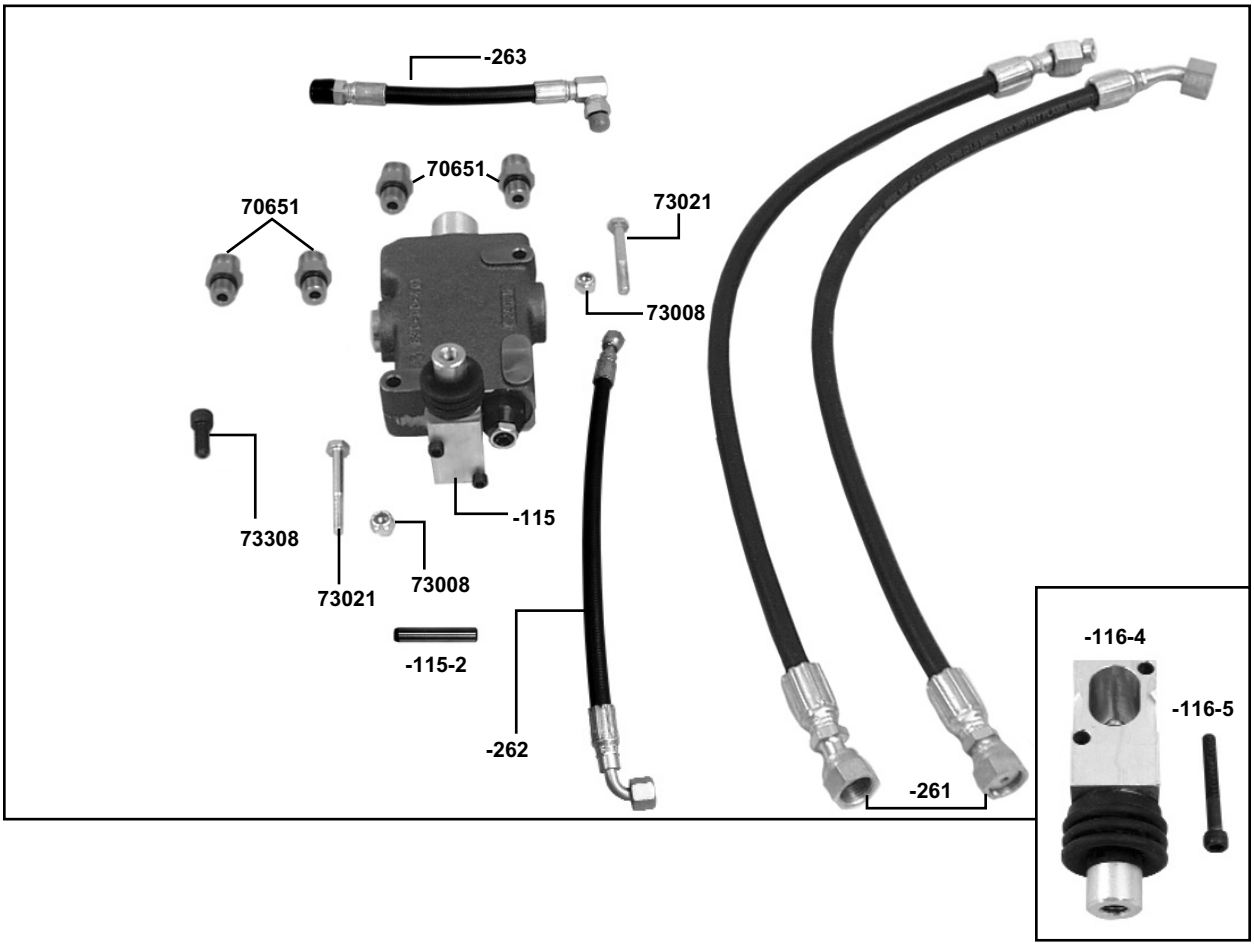


5200QL-710

PART #	DESCRIPTION
73321	5/16-18 x 3½ Socket Head Cap Screw
73322	5/16 Nylon Lock Nut (2)

5200 & 5200QL PART NUMBERS & DIAGRAMS

SINGLE SPOOL & HOSE PARTS

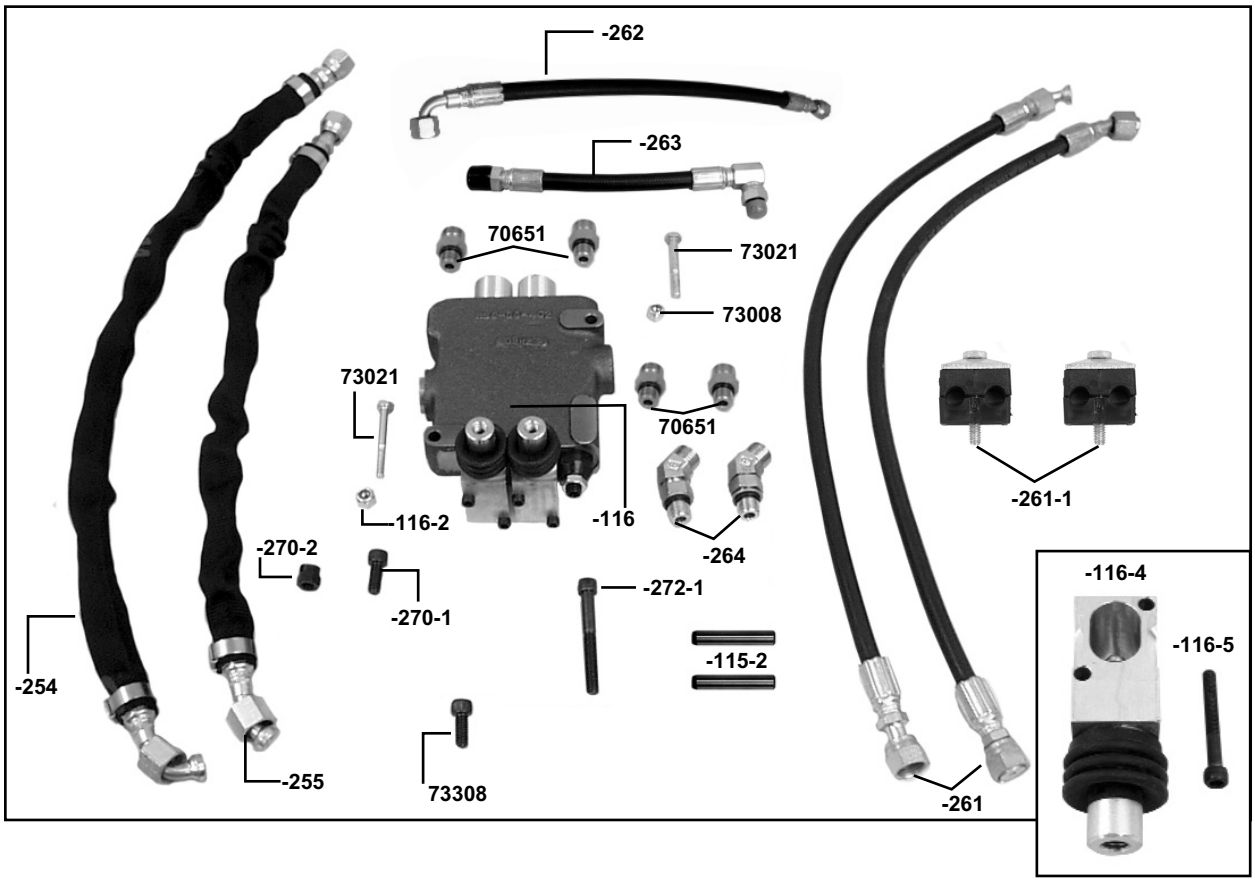


PART #	DESCRIPTION
5110-115	Single Spool Control
5110-115-1	Single Spool Seal Kit (Not Shown)
5110-115-2	3/16" Valve Pin
5110-116-4	Handle Housing (1)
5110-116-5	Socket Head Cap Screw (2)
5200-261	Wheel Motor Line (2)
5200-262	Pressure Line (2)

PART #	DESCRIPTION
5200-263	Suction Line (2)
70651	Valve Body Plug (4)
72816	3/8 90° Pump Fitting (Not Shown)
73008	1/4-20 Nylon Lock Nut (4)
73021	1/4-20 x 2¼ Hexhead Bolt (4)
73308	5/16-18 x 3/4 Button Head Cap Screw (2)

5200 & 5200QL PART NUMBERS & DIAGRAMS

DOUBLE SPOOL & HOSE PARTS

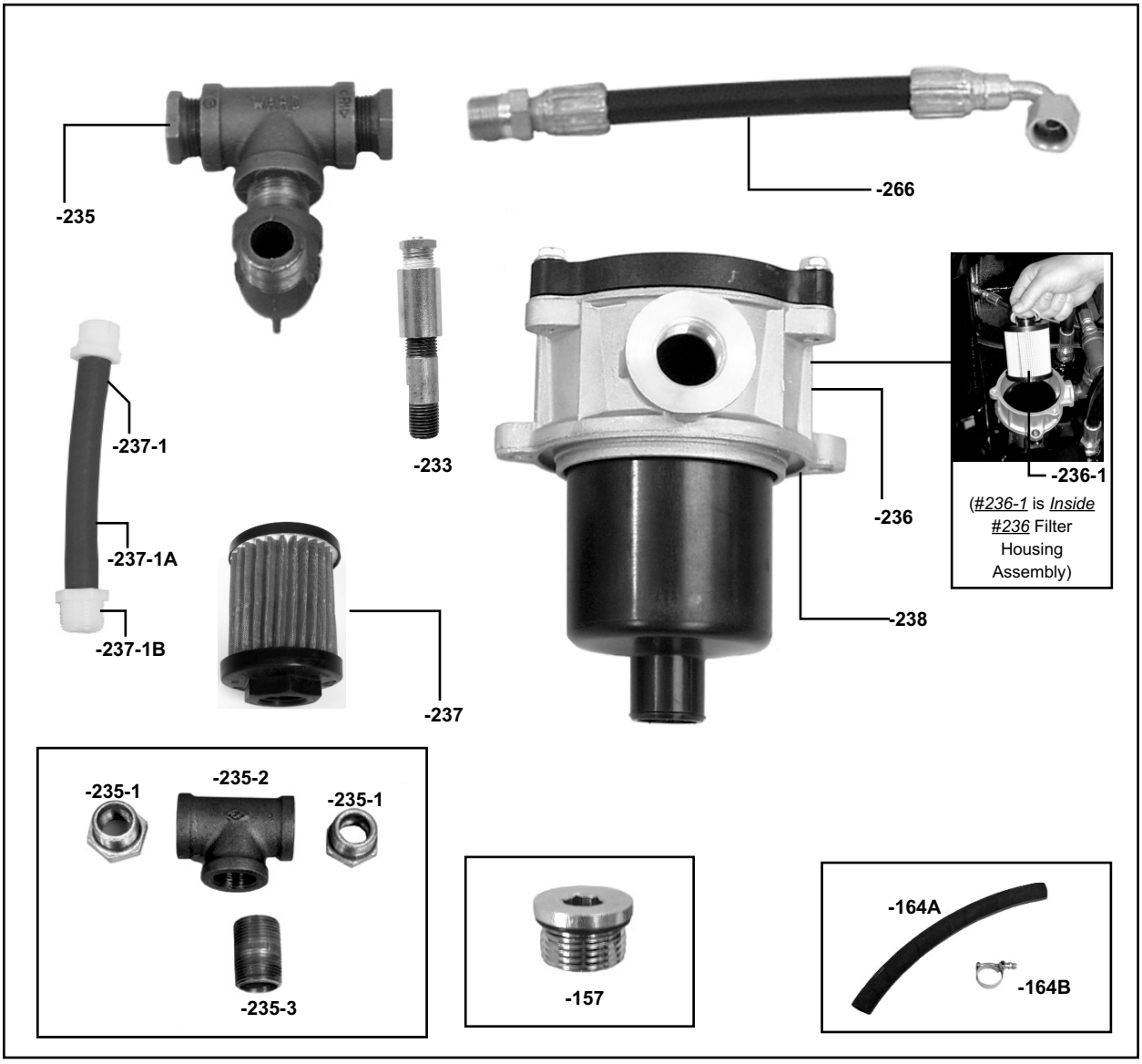


PART #	DESCRIPTION
5110-115-2	3/16" Valve Pin (2)
5110-116	Double Spool Control
5110-116-3	Double Spool Seal Kit Only (Not Shown)
5110-116-4	Handle Housing (2)
5110-116-5	Socket Head Cap Screw, Handle Housing (4)
5110-264	45° Valve Fitting (2)
5110-270-2	5/16 Lever Jamb Nut
5200-254	Lower Cylinder Line
5200-255	Upper Cylinder Line

PART #	DESCRIPTION
5200-261	Wheel Motor Line (2)
5200-261-1	Wheel Motor Hose Clamp Assembly (2)
5200-262	Pressure Line (2)
5200-263	Suction Line (2)
70651	Valve Body Plug (4)
73008	1/4-20 Nylon Lock Nut (4)
73021	1/4-20 x 2-1/4 Hexhead Bolt (4)
73308	5/16-18 x 3/4 Button Head Cap Screw (2)
73324	5/16-18 x 3-1/4 Socket Head Cap Screw (Not Shown)

5200 & 5200QL PART NUMBERS & DIAGRAMS

FILTER & TANK PARTS

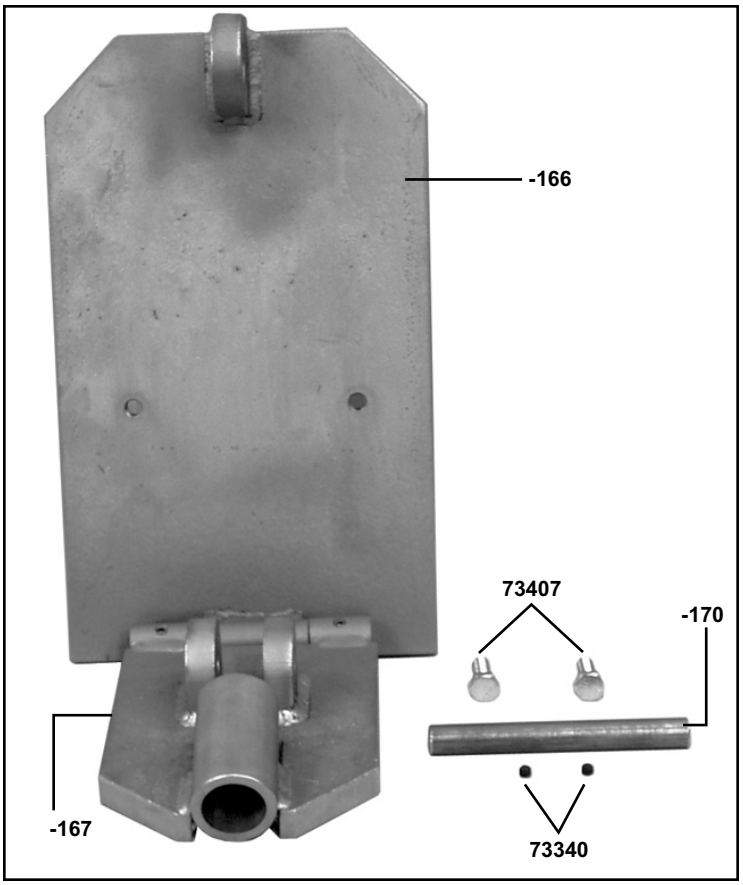


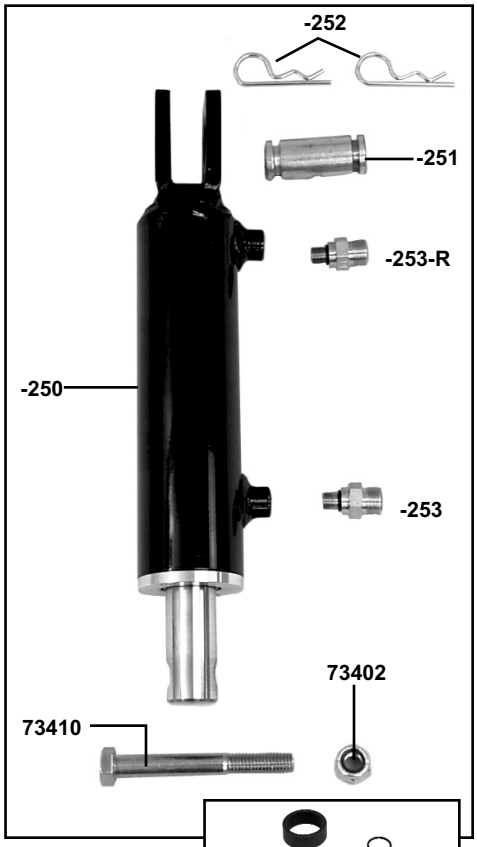
PART #	DESCRIPTION
5110-164A	Tank Hose
5110-164B	Tank Hose Clamp
5110-233	Breather Assembly
5110-235	Filter “T” Fitting Assembly
5110-235-1	Filter Hose Fitting Only (2)
5110-235-2	Filter “T” Only
5110-235-3	Filter Coupler Only
5110-236	Filter Housing Assembly

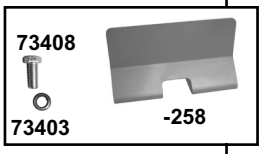
PART #	DESCRIPTION
5110-236-1	Replacement Filter Return
5110-237	Suction Filter Screen
5110-237-1	Filter Suction Line Assembly (2)
5110-237-1A	Filter Hose Only (2)
5110-237-1B	Filter Hose Fitting Only (4)
5110-238	Filter O-Ring Seal
5200-157	Drain/Filler Plug (3)
5200-266	Return Line (2)

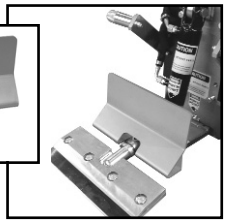
5200 & 5200QL PART NUMBERS & DIAGRAMS

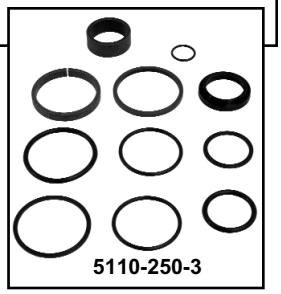
SLIDE PLATE, CYLINDER & DEFLECTOR PARTS









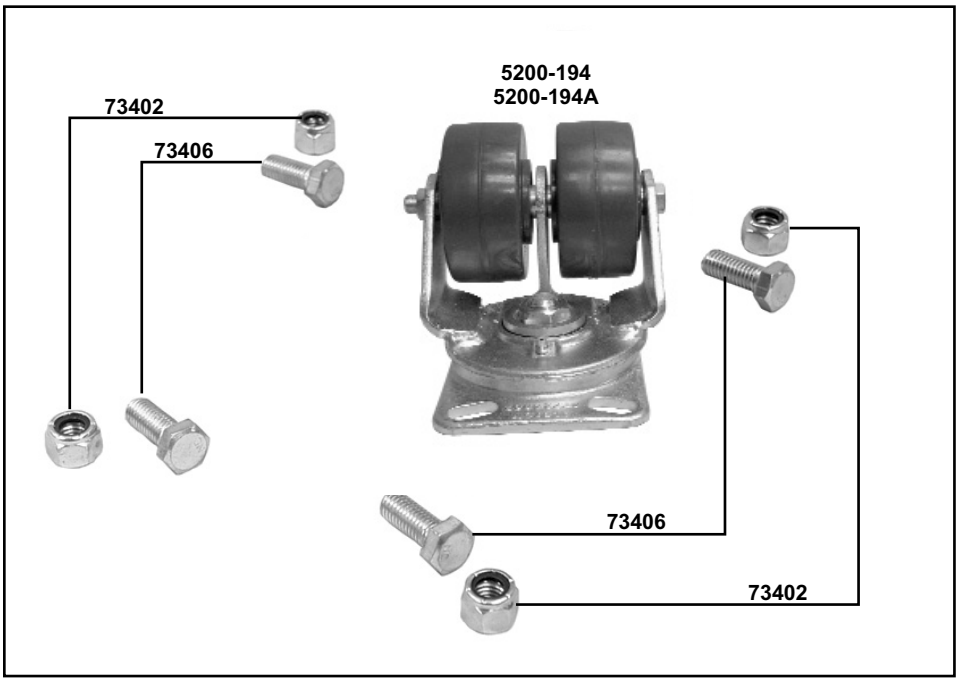


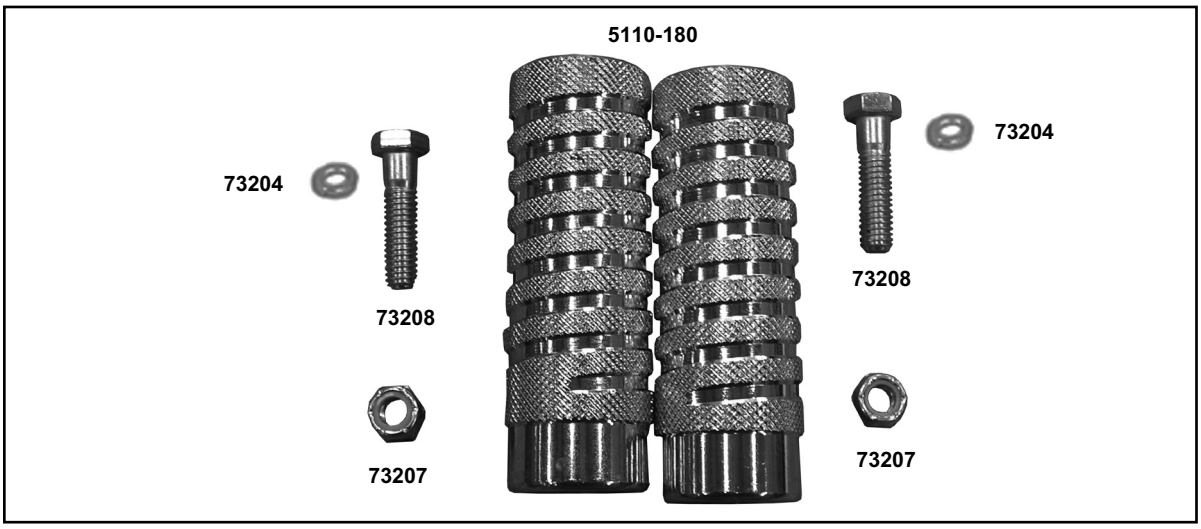
PART #	DESCRIPTION
5110-166	Slide Plate
5110-167	Lower Cutting Head Support
5110-170	Cutting Head Pin
5110-250	Cylinder
5110-250-3	Cylinder Seal Kit Replacement
5110-251	Cylinder Connecting Rod
5110-252	Cylinder Clip (2)
5110-253	Hydraulic Hose Connector

PART #	DESCRIPTION
5110-253R	Cylinder Restricter Fitting
5200-258	Debris Deflector
73340	5/16-18 x 1/4 Set Screw (2)
73402	1/2-13 Nylon Lock Nut
73403	1/2 Split Washer (2)
73407	1/2-13 x 1-1/2 Hexhead Bolt (2)
73408	1/2-13 x 1 Hexhead Bolt (2)
73410	1/2-13 x 3-1/2 Hexhead Bolt

5200 & 5200QL PART NUMBERS & DIAGRAMS

CASTER & FOOT PEG PARTS



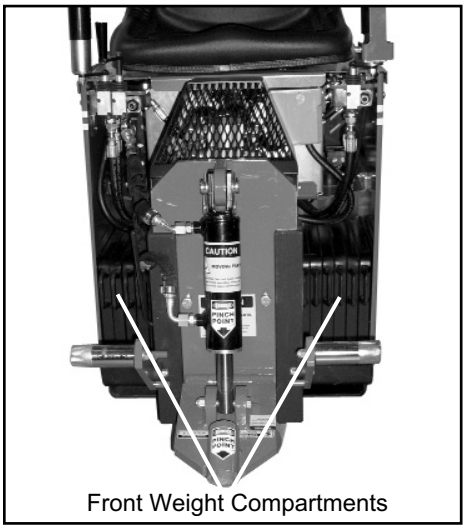


PART #	DESCRIPTION
5110-180	Foot Peg (2)
5200-194	Double Wheel Caster Assembly (Grey)
5200-194A	Wheel Only (2) (Not Shown)
73204	3/8 Split Lock Washer (2)

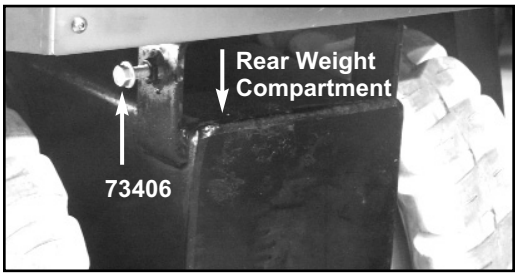
PART #	DESCRIPTION
73207	3/8-16 Nylon Lock Nut (2)
73208	3/8-16 x 1½ Hexhead Cap Screw (2)
73402	1/2-13 Nylon Lock Nut (4)
73406	1/2-13 x 1-1/4 Bolt (4)

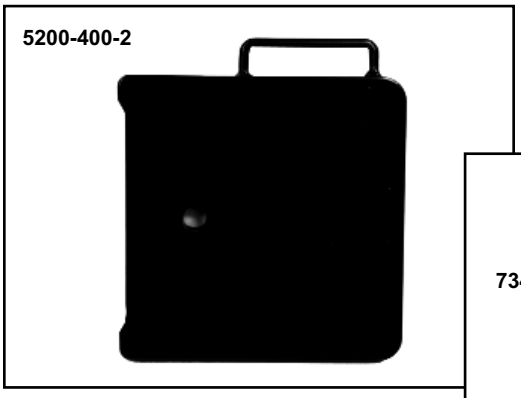
5200 & 5200QL PART NUMBERS & DIAGRAMS

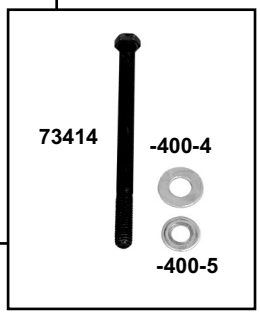
WEIGHTS



Front Weight Compartments



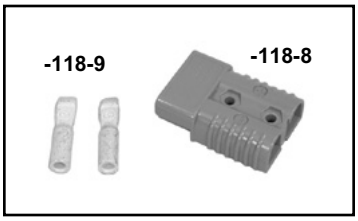


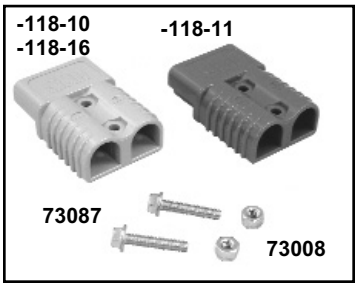


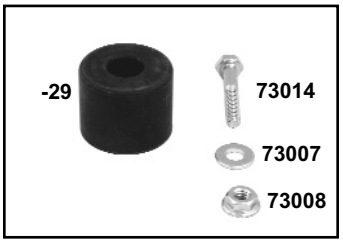
PART#	DESCRIPTION	PART #	DESCRIPTION
5110-404	Rear Weight	5200-400-5	SAE 5/8 Flat Washer, Weight (2)
5200-400-2	Front Weight Individually (12)	73406	1/2-13 x 1-1/4 Hexhead Bolt
5200-400-4	USS 5/8 Flat Washer, Weight (2)	73414	1/2-13 x 7 Hexhead Bolt (2)

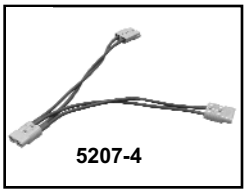
5200 & 5200QL PART NUMBERS & DIAGRAMS

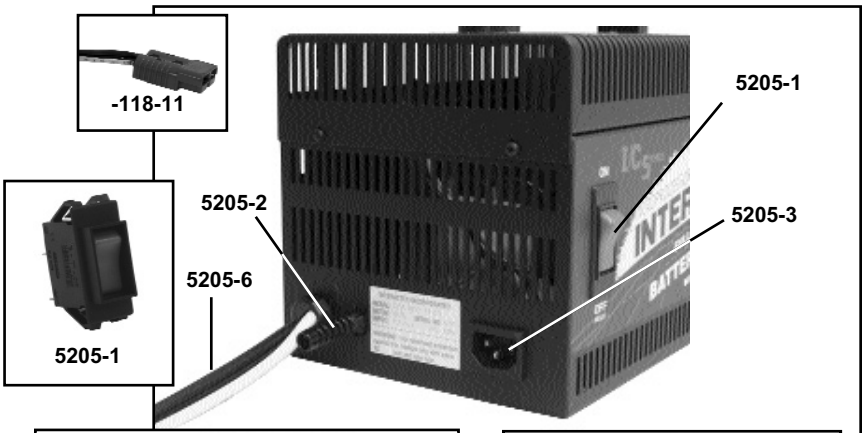
CHARGER PARTS

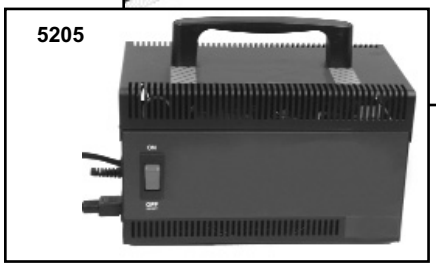


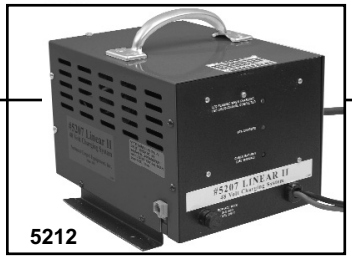


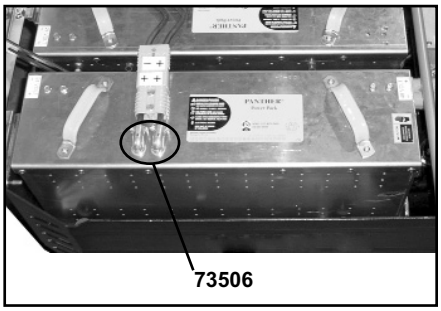












PART #	DESCRIPTION
5200-29	Battery Bumper (6)
5200-118-8	Blue 48V Battery Connector (2)
5200-118-9	Battery Connector (2)
5200-118-10	Gray Series Cord Connector Assembly (4)
5200-118-11	Red 24V Cord Connector Assembly (4)
5200-118-16	Yellow Series Cord Connector Assembly (4) (Extended Run) (Not Shown)
5205	24 Volt Battery Charger
5205-1	110/220 Volt Replacement Switch

PART #	DESCRIPTION
5205-2	Replacement Strain Relief
5205-3	Plug Outlet
5205-4	Replacement Power Cord
5205-6	Replacement 6 ft. Battery Cable w/ Connector
5207-4	Splitter
5212	48 Volt Charger, 50/60 Cycle, 100 to 240 Volt
73506	3/8 90° Strain Relief
73007	1/4 Flat Washer (6)
73008	1/4-20 Nylon Lock Nut(6)
73014	1/4-20 x 1-1/2 Hexhead Bolt (6)
73087	1/4-20 x 1½ Flange Bolt, Connector Assembly (2 Per Assembly)

EXTERNAL PARTS

5203 POWER PACK

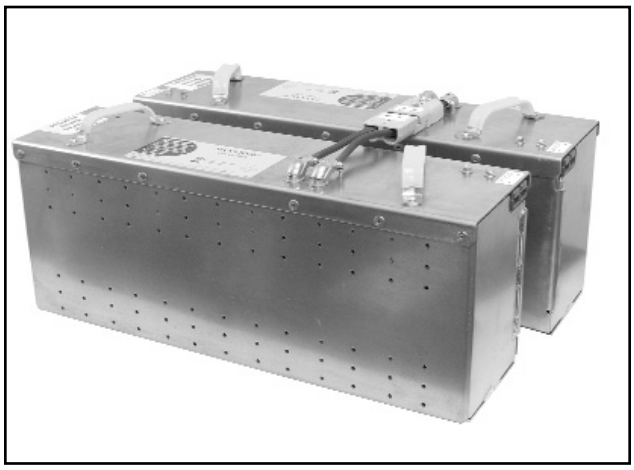
Standard Power Pack • Recharges quickly

5203-1 DEEP CYCLE BATTERY ONLY

5204 EXTENDED RUN POWER PACK

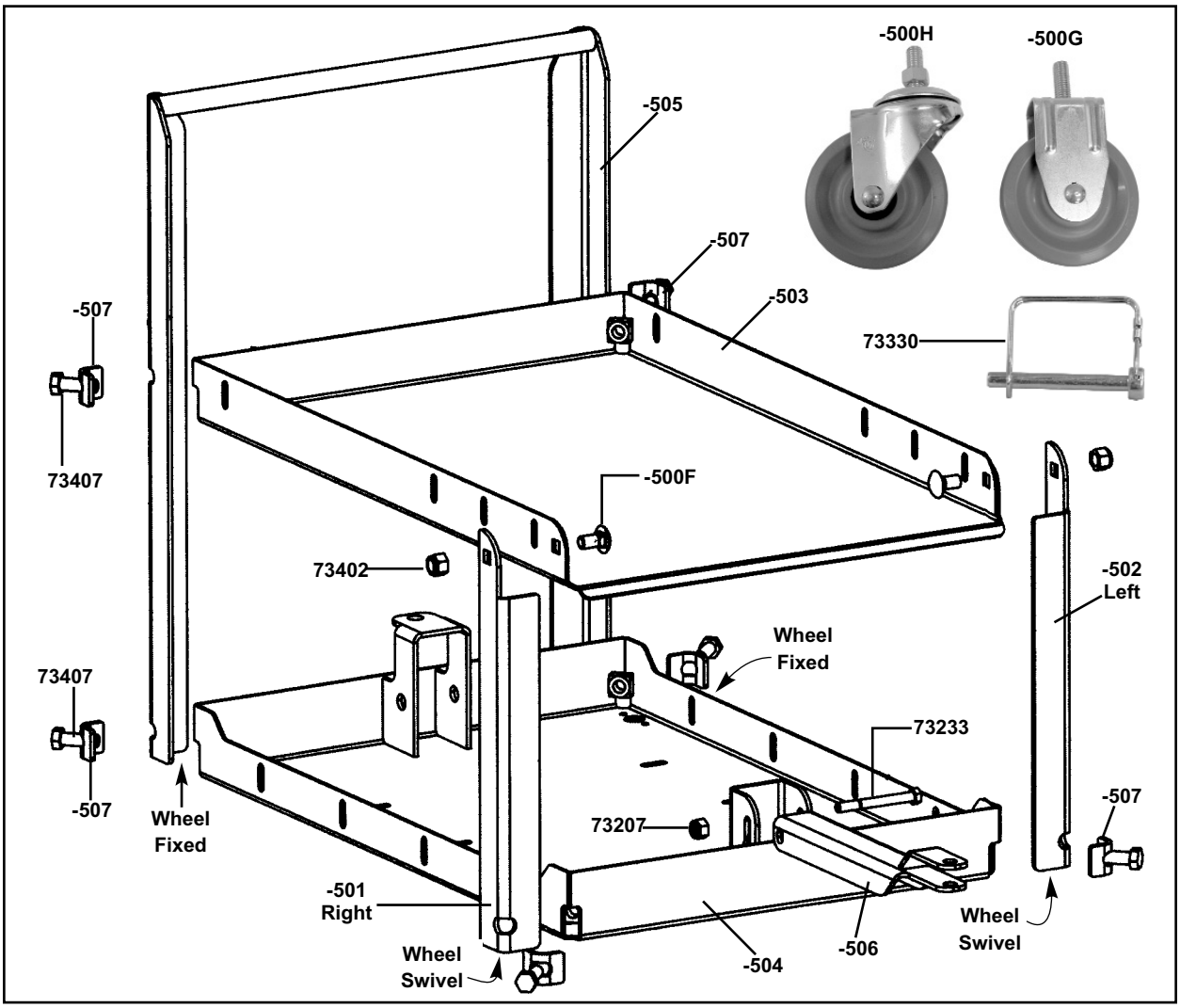
Twenty five percent more cycle life • Up to fifty percent more run time • Has the ability to take a rapid charge without affecting the cycle life • Runs to a deeper discharge

5208-1 EXTENDED RUN BATTERY ONLY



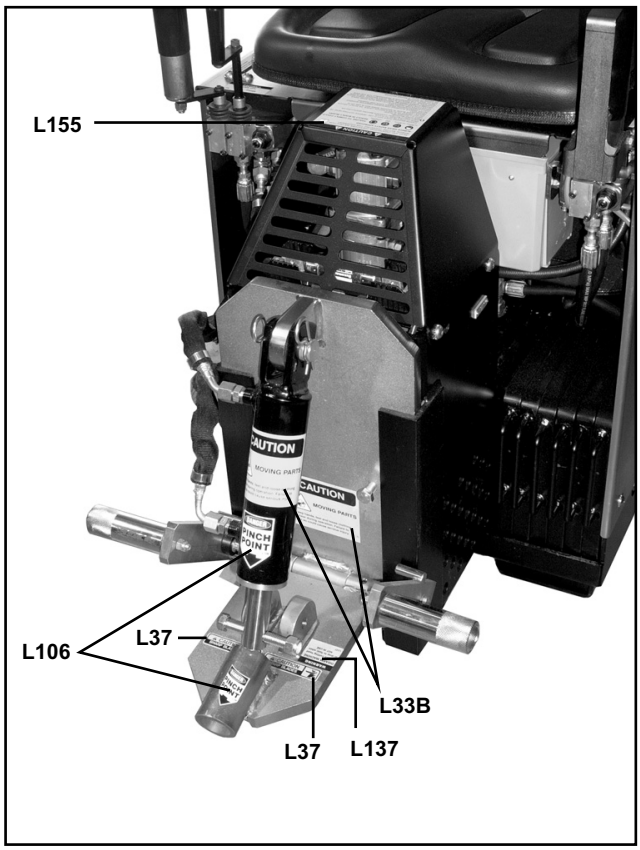
5200QL PART NUMBERS & DIAGRAMS

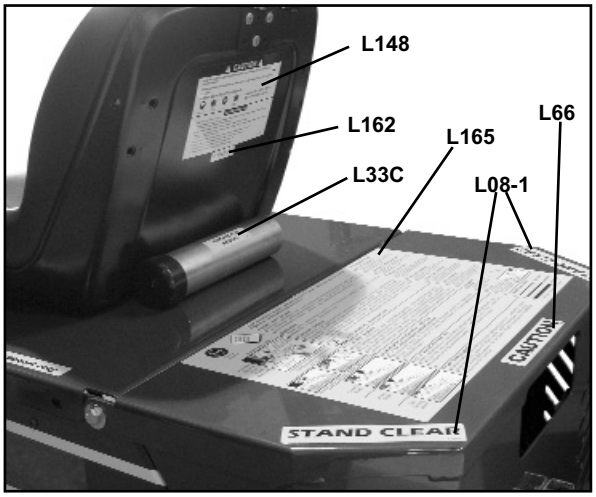
#5200-QL-500 BATTERY CART ASSEMBLY

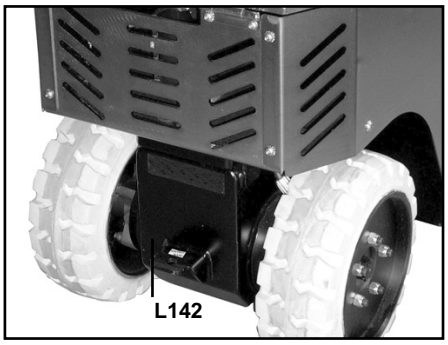


PART #	DESCRIPTION	PART #	DESCRIPTION
5200-QL-500	Battery Cart	5200QL-507	Bent Washer
5200-QL-500F	1/2-13 x 1 Bolt, Carriage Lg. (2)	73207	3/8-16 Nylon Lock Nut
5200-QL-500G	Wheel Fixed (2)	73233	3/8-16 x 3-1/2 Hexhead Bolt
5200-QL-500H	Wheel Swivel (2)		(Not Shown)
5200QL-501	Front Angle, Right	73330	Securing Pin
5200QL-502	Front Angle, Left	73402	1/2-13 Nylon Lock Nut (4)
5200QL-503	Top Tray	73403	1/2 Split Lock Washer (8)
5200QL-504	Bottom Tray	73404	1/2 Flat Washer For Wheels (8)
5200QL-505	Handle Angle	73407	1/2-13 x 1-1/2 Hexhead Bolt (6)
5200QL-506	Tongue		

5200 & 5200QL LABELS

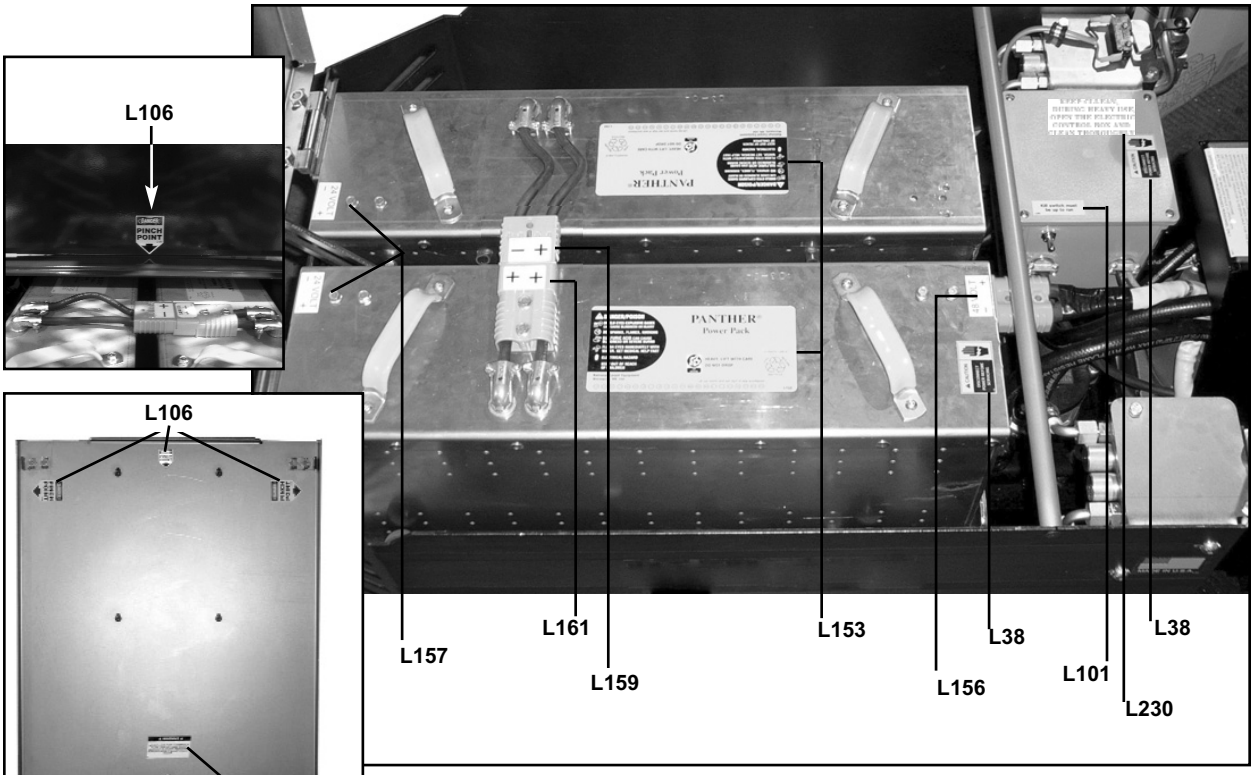


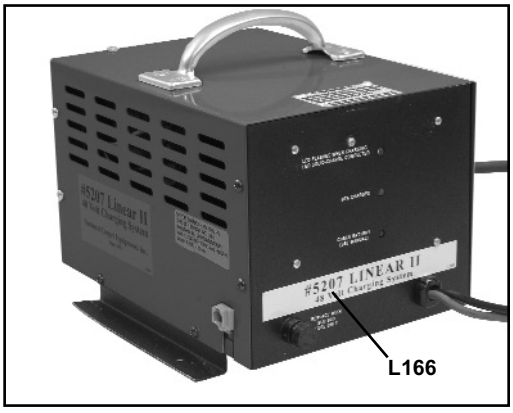


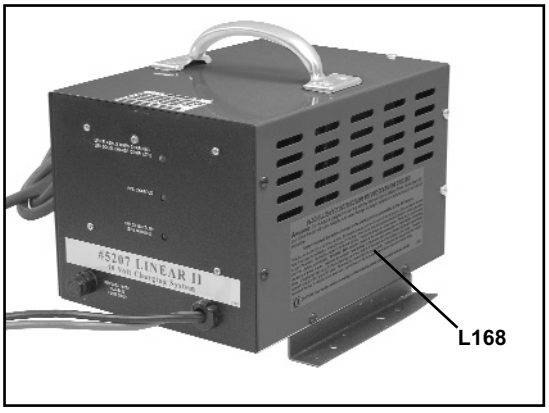


PART #	DESCRIPTION	PART #	DESCRIPTION
L08-1	Stand Clear Label (2)	L137	Disarm Machine Label
L33B	Caution Moving Parts Label (2)	L142	Trailer Hitch Label
L33C	Instruction Manual Label	L148	Caution General Info Label
L37	Caution Sharp Blades Label (2)	L155	General Info Label
L66	Large Caution Label	L162	48 Volt VDC Label
L106	Pinch Point Label (2)	L165	Blade Application Label

5200 & 5200QL LABELS

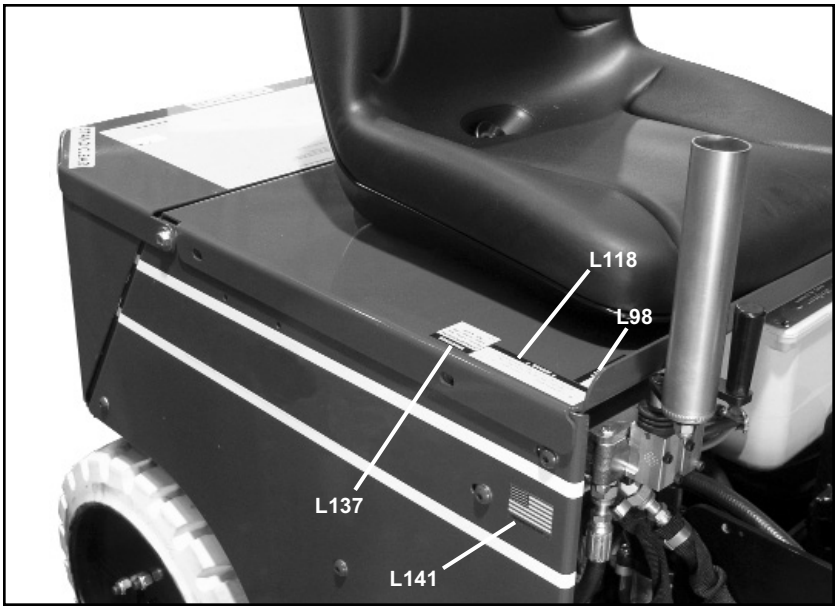


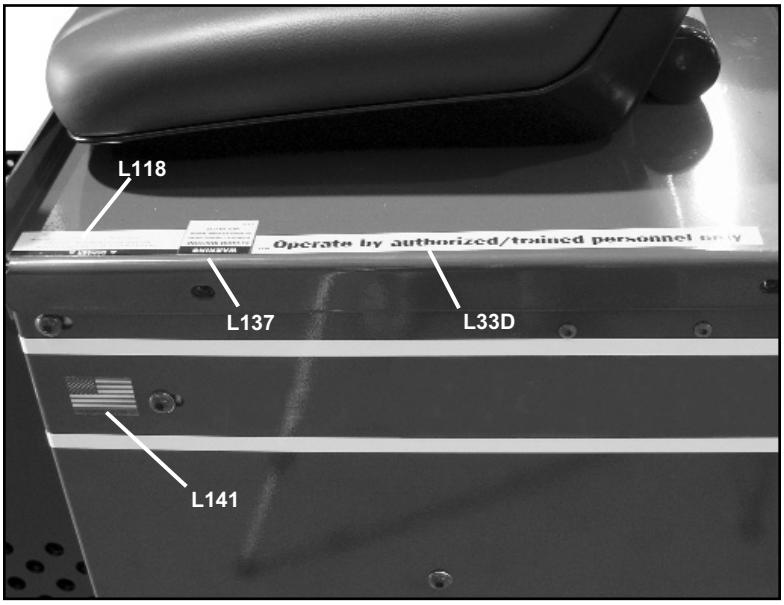




PART #	DESCRIPTION	PART #	DESCRIPTION
L38	Disconnect Before Service (2)	L161	+/+ Label
L101	Kill Switch Label	L168	Instruction Label
L106	Pinch Point Label (4)	L169	Product Number Label
L153	Power Pack Label	L172	Lowering Hood Instructions Label
L156	48 Volt Label		
L157	24 Volt Label		
L159	+/- Label		

5200 & 5200QL LABELS

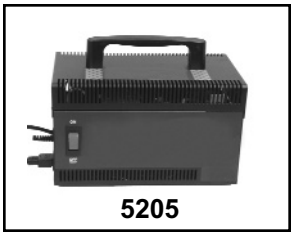




PART #	DESCRIPTION
L33D	Authorized Personnel Label
L98	Blade Lift Label
L118	Operator Must Be Seated Label (2)
L137	Disarm Machine Label (2)

PART #	DESCRIPTION
L141	Flag Made In USA Label (2)
L174C	5200-QL Label
L176	National Label, Large

5200 & 5200QL ACCESSORIES


5205

5205 BATTERY CHARGER

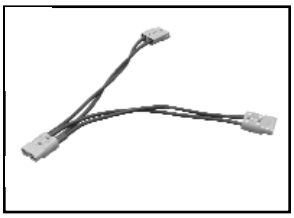
5205 **Battery Charger 24 Volt, 110 V**
5205-W **Battery Charger 24 Volt, 220/240, CE Approved**

For use with #5203 and/or #5204 Power Packs


5212

5212 **Battery Charger 48 Volt, 50/60 Cycle, 100 to 240 Volt**

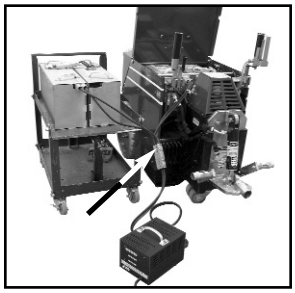
NOTE: ONLY USE WITH #5204 POWER PACKS

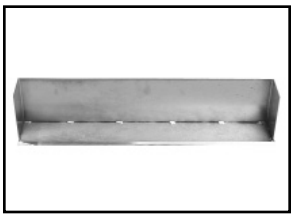


5207-4 SPLITTER

To use with #5212 48 volt charger.

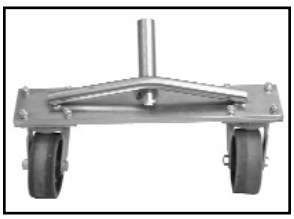
NOTE: DO NOT use with any other charger.





7074 TILE BOX

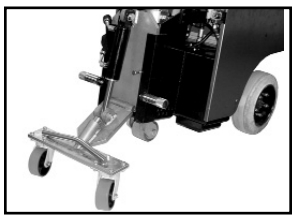
The Tile Box works for wind rowing and assists for a fast clean-up and collection of tile debris for quick removal. High abrasion alloy for a long lasting edge. Resharpens just like a blade. 5" x 27" x 6" box. Attaches to the #7050-27 Cutting Head (required).

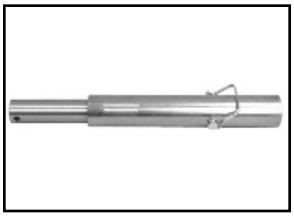


5110-100 FRONT WHEEL ASSEMBLY

Allows stability and safe transportation over any surface. Easy and quick to attach.

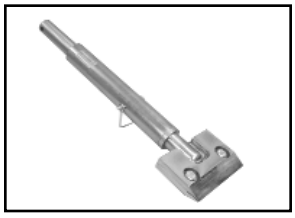
5110-100W Replacement Wheel Only





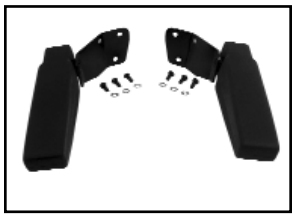
7050-15 CUTTING HEAD EXTENSION

Extension for cutting heads to reach under tight areas.



5110-111-3 OPTIONAL ARM RESTS/ SET

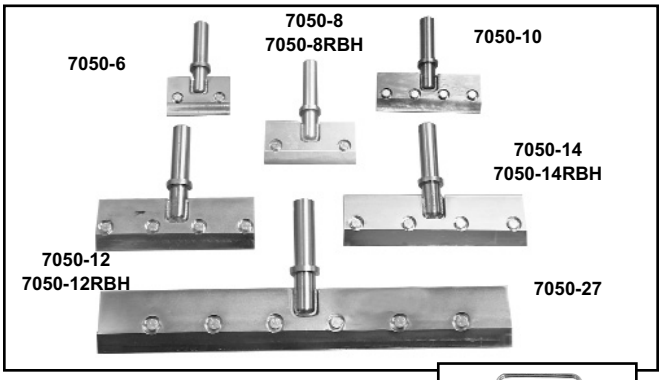
Optional Arm Rests for added comfort. Set includes left and right arm rest and mounting hardware.

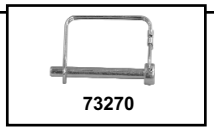


5200 & 5200QL BLADES & CUTTING HEADS

CUTTING HEADS

Swivel heads rotate to use the second sharp edge of the blade without having to remove the blade. Swivel head allows blade to stay in contact with the floor.

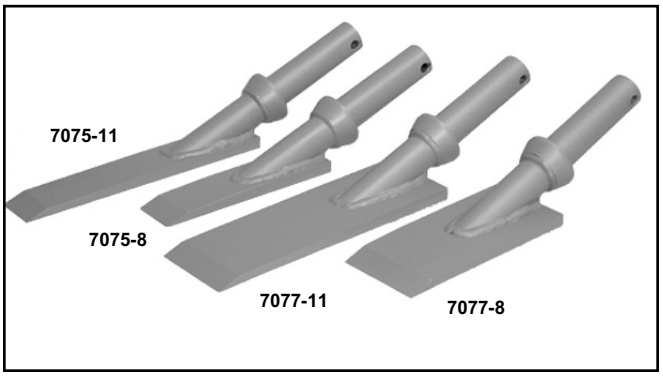




7050-6	**6" CUTTING HEAD**
7050-8	**8" CUTTING HEAD**
7050-10	**10" CUTTING HEAD**
7050-12	**12" CUTTING HEAD**
7050-14	**14" CUTTING HEAD**
7050-27	**27" CUTTING HEAD**
7050-8RBH	**8" RAZOR BLADE HEAD**
7050-12RBH	**12" RAZOR BLADE HEAD**
7050-14RBH	**14" RAZOR BLADE HEAD**
73270	**3/8 X 3 PIN** Secures cutting head assemblies

TAPERED CUTTING HEAD SHANK BLADES

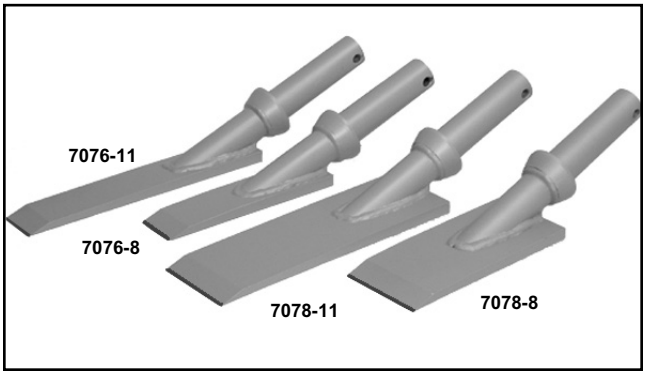
Designed for removing wood and the toughest removals. Blades are mounted at an angle to achieve the optimum shear point for the best performance.



7075-8	**2" X 8" TAPERED CUTTING HEAD SHANK**
7075-11	**2" X 11" TAPERED CUTTING HEAD SHANK**
7077-8	**3.5" X 8" TAPERED CUTTING HEAD SHANK**
7077-11	**3.5" X 11" TAPERED CUTTING HEAD SHANK**

TAPERED CUTTING HEAD SHANKS WITH CARBIDE TIPS

Works on wood and ceramic. Blades are mounted at an angle to achieve the optimum shear point for the best performance. Nothing else performs like carbide when no other blade will work.



7076-8	**2" X 8" TAPERED CUTTING HEAD SHANK W/ CARBIDE TIP**
7076-11	**2" X 11" TAPERED CUTTING HEAD SHANK W/ CARBIDE TIP**
7078-8	**3.5" X 8" TAPERED CUTTING HEAD W/ CARBIDE TIP**
7078-11	**3.5" X 11" TAPERED CUTTING HEAD SHANK W/ CARBIDE TIP**

5200 & 5200QL BLADES & CUTTING HEADS

STRAIGHT SHANK BLADES

The ultimate for tough removals. Works well for ceramic, wood and thick epoxy.

7070-2	**2" STRAIGHT SHANK BLADE**
7070-3	**3" STRAIGHT SHANK BLADE**
7070-4	**4" STRAIGHT SHANK BLADE**
7070-6	**6" STRAIGHT SHANK BLADE**

ANGLE SHANK/SHOE BLADES

The same application as the #7070 blades, but is mounted at an angle to achieve the optimum shear point for optimum performance. Works well for ceramic and thick epoxy.

7071-2	**2" ANGLE SHANK/SHOE BLADE**
7071-3	**3" ANGLE SHANK/SHOE BLADE**
7071-4	**4" ANGLE SHANK/SHOE BLADE**
7071-6	**6" ANGLE SHANK/SHOE BLADE**

STRAIGHT SHANKS WITH CARBIDE TIP

The same application as the #7070 blades, but are carbide tipped for holding a sharp edge for long periods. Works well for ceramic and thick epoxy.

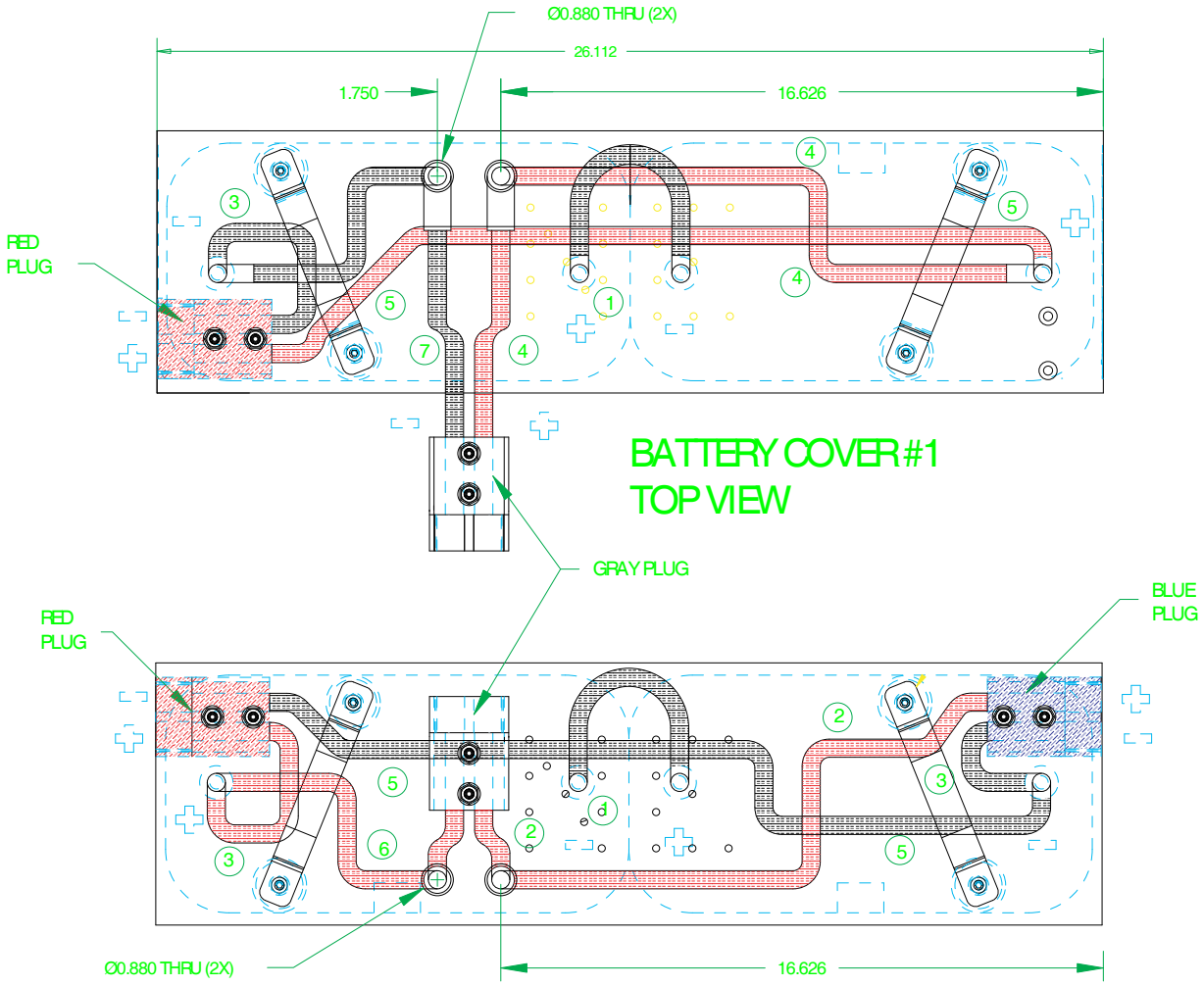
7072-2	**2" STRAIGHT SHANK W/ CARBIDE TIP**
7072-3	**3" STRAIGHT SHANK W/ CARBIDE TIP**
7072-4	**4" STRAIGHT SHANK W/ CARBIDE TIP**
7072-6	**6" STRAIGHT SHANK W/ CARBIDE TIP**

EXTRA HEAVY DUTY CERAMIC EPOXY SHANKS WITH CARBIDE TIP

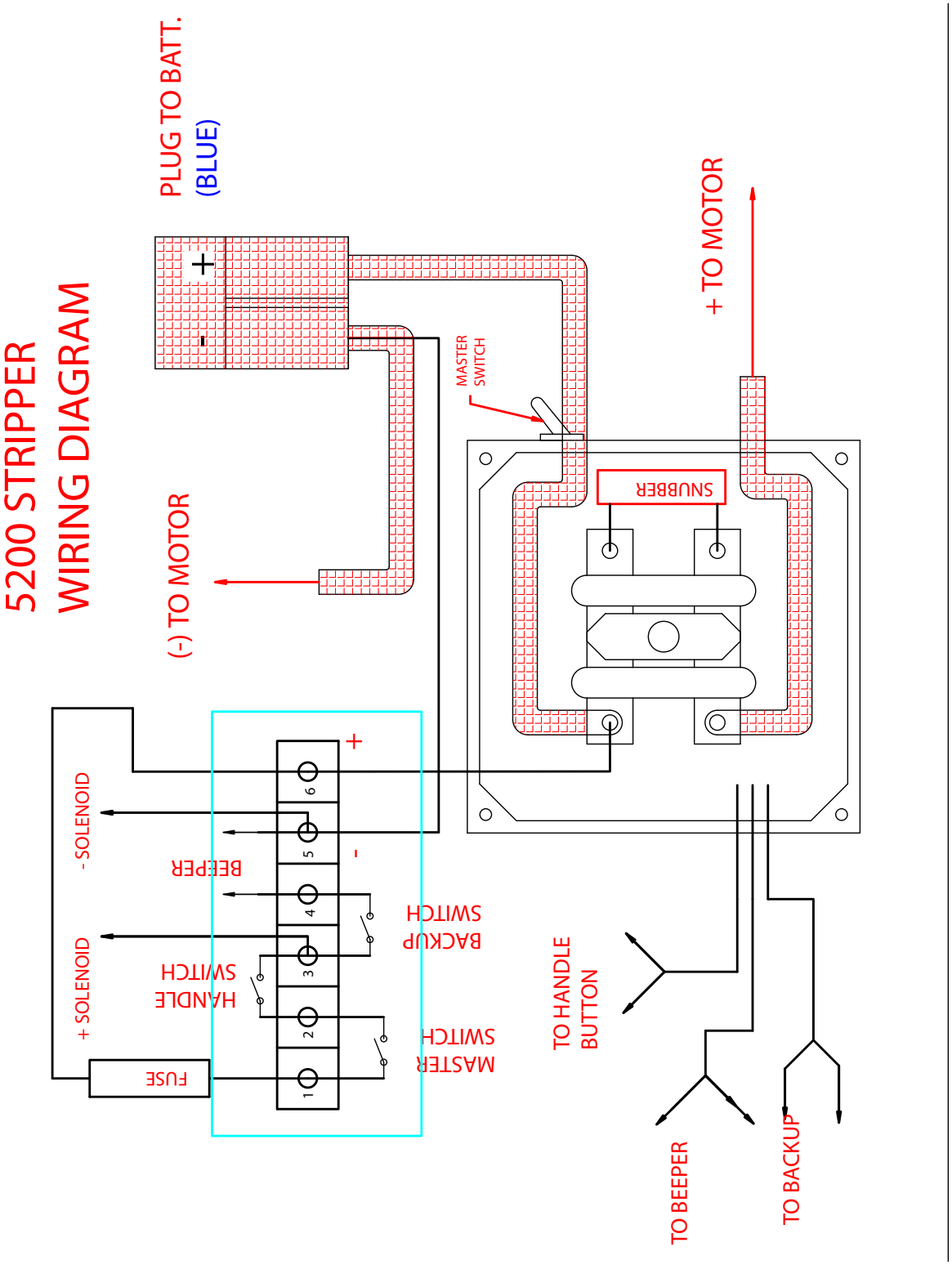
Designed for ceramic removal and thin-set rescraping. 1/2**"** of carbide which is twice the carbide of the #7072 & #7073 series blades. The extra carbide allows for maximum resharpening. Strong enough to work on machines up to 3500 lbs.

7079-2	**2" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP**
7079-4	**4" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP**
7079-6	**6" EXTRA HD CERAMIC EPOXY SHANK W/ CARBIDE TIP**

5200 BATTERY BOX WIRING



5200 CONTACTOR & ON/OFF SWITCH WIRING



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Texaco Rando® HD 22 - 68

Product Number(s): CPS221655, CPS221657, CPS221658, CPS221659
Synonyms: Texaco Rando® HD 22, Texaco Rando® HD 32, Texaco Rando® HD 46, Texaco Rando® HD 68
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 800-LUBE-TEK
MSDS Requests: 800-414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	90 - 100 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.
Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: (Cleveland Open Cup) 150 °C (302 °F) (Min)
Autoignition: No Data Available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible

Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.
Respiratory Protection: No respiratory protection is normally required.
If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Yellow
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Boiling Point: >315.6°C (600°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.86 - 0.87 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Density: 0.86 kg/l - 0.9 kg/l @ 15°C (59°F)
Viscosity: 22 cSt - 61.2 cSt @ 40°C (104°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS
Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: No product toxicology data available.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIRONMENTAL FATE
This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.
DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR
Additional Information:NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: 1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen0	6=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required.

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 2.
Revision Date: January 15, 2007

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet

CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

5200 & 5200QL GUARANTEE

National Flooring Equipment, Inc. (National) warrants to the first consumer/purchaser that this National brand product (the #5200 & #5200-QL Panther® Cordless Ride-On), when shipped in its original container, will be free from defective workmanship and materials and agrees that it will, at its option, either repair the defect or replace the defective product or part thereof at no charge to the purchaser for parts or labor for the period(s) set forth below.

This warranty does not apply to any appearance items of the product, to the additional excluded items set forth below, or to any product, the exterior of which has been damaged or defaced, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the steps set forth below and provide proof of purchase to National.

The limited warranty described herein is in addition to whatever implied warranties may be granted to purchasers by law. ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE PERIODS FROM THE DATE OF PURCHASE AS SET FORTH BELOW. Some states do not allow time limitations on an implied warranty, so the above limitation may not apply to you.

Neither the sales person of the seller, nor any other person, is authorized to make any other warranties other than those described herein, or to extend the duration of any warranties beyond the time period described herein on behalf of National.

The warranties described herein shall be the sole and exclusive warranties granted by National and shall be the sole and exclusive remedy available to the purchaser. Correction of defects in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of National to the purchaser with respect to the product and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall National be liable, or in any way responsible for any damage or defects in the product which were caused by repairs or attempted repairs performed by anyone other than National. Nor shall National be liable, or in any way responsible, for any incidental or consequential, economics or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

WARRANTY PERIOD

The #5200 & #5200-QL Panther®Cordless Ride-On are guaranteed to be free of manufacturer defective workmanship and in quality of materials for a period of one year.

Items excluded from warranty coverage, unless found and reported defective immediately upon removal from the original shipping container and before being used by the original purchaser.

A freight damage claim must be filed with the carrier by the purchaser, the shipper cannot file the freight claim.

To obtain service contact National Flooring Equipment, Inc. toll free at 800-245-0267 for a repair authorization number. COD freight returns will not be accepted. Freight collect shipments will not be accepted. Warranty repairs must be accompanied by date of purchase receipt and a return/repair authorization number.

5200 & 5200QL RETURN SHEET

Company Name _____

Contact Name _____

Telephone Number _____

Approximate Usage (hours) _____

Problems Encountered _____

_____

_____

_____

_____

Check One: ❑ Repair

Do you wish to be contacted before repairing ❑ Yes ❑ No

❑ Return

Contact National if a loaner is needed

Return Authorization Number _____ Date _____

required, contact National

Customer Number _____

if known

Purchased From _____

if not directly from National

INTERNAL USE ONLY

Date Received _____

Unit Serial Number _____

Subject To Warranty _____

5200 & 5200-QL BLADE ORDER FORM

Part #	Description	Thickness	Quantity
#135	5" x 16" Blade	.062	
#147	4" x 6" Blade	.062	
#148	5" x 6" Blade	.062	
#363-2	3/4" x 8" Razor/Scraper Blade (50/pkg)	.032	
#368-8	7/8" x 8" Razor/Scraper Blade (50/pkg)	.045	
#368-12	7/8" x 12" Razor/Scraper Blade (50/pkg)	.045	
#368-15	7/8" x 15" Razor/Scraper Blade (50/pkg)	.045	
#6258-BU	3" x 12" Self-Scoring Blade - Bevel Up	.062	
#6259-BU	3" x 14" Self-Scoring Blade - Bevel Up	.062	
#6260-BD	3" x 6" Heavy Duty Ditching	.094	
#6281	3" x 8" Heavy Duty Blade	.094	
#6282	3" x 14" Heavy Duty Blade	.094	
#6283	3" x 27" Heavy Duty Blade	.094	
#6284	3" x 12" Heavy Duty Blade	.094	
#6285	3" x 6" Heavy Duty Blade	.094	
#6286	3" x 10" Heavy Duty Blade	.094	
#6290	3" x 6" Extra Heavy Duty Blade	.187	
#6291	3" x 8" Extra Heavy Duty Blade	.187	
#6292	3" x 12" Extra Heavy Duty Blade	.187	
#6293	3" x 14" Extra Heavy Duty Blade	.187	
#6294	3" x 27" Extra Heavy Duty Blade	.187	
#7050-200	3" x 6" Premium High Tempered Blade	.062	
#7050-201	3" x 8" Premium High Tempered Blade	.062	
#7050-202	3" x 10" Premium High Tempered Blade	.062	
#7050-203	3" x 12" Premium High Tempered Blade	.062	
#7050-204	3" x 14" Premium High Tempered Blade	.062	
#7050-205	3" x 27" Premium High Tempered Blade	.062	
#7070-2	4" x 2" Straight Shank Blades	.500	
#7070-3	4" x 3" Straight Shank Blades	.500	
#7070-4	4" x 4" Straight Shank Blades	.500	
#7070-6	4" x 6" Straight Shank Blades	.500	
#7071-2	4" x 2" Angle Shank Blades	.500	
#7071-3	4" x 3" Angle Shank Blades	.500	
#7071-4	4" x 4" Angle Shank Blades	.500	
#7071-6	4" x 6" Angle Shank Blades	.500	
#7072-2	4" x 2" Straight Shank w/Carbide Tip	.500	
#7072-3	4" x 3" Straight Shank w/Carbide Tip	.500	
#7072-4	4" x 4" Straight Shank w/Carbide Tip	.500	
#7072-6	4" x 6"Straight Shank w/Carbide Tip	.500	
#7075-8	2" x 8" Tapered Cutting Head Shank	.300	
#7075-11	2" x 11" Tapered Cutting Head Shank	.300	

5200 & 5200-QL BLADE ORDER FORM

Part #	Description	Thickness	Quantity
#7077-8	3.5" x 8" Tapered Cutting Head Shank	.300	
#7077-11	3.5" x 11" Tapered Cutting Head Shank	.300	
#7076-8	2" x 8" Tapered w/Carbide Tip	.300	
#7076-11	2" x 11" Tapered w/Carbide Tip	.300	
#7078-8	3.5" x 8" Tapered w/Carbide Tip	.300	
#7078-11	3.5" x 11" Tapered w/Carbide Tip	.300	
#7079-2	2" x 6" Ultra HD Ceramic Epoxy Blade	.500	
#7079-4	4" x 6" Ultra HD Ceramic Epoxy Blade	.500	
#7079-6	6" x 6" Ultra HD Ceramic Epoxy Blade	.500	
#7074	5" x 27" Tile Box with 6" High Box	.187	
#7081	3" x 10" Increased Angle Blade	.062	
#7083	3" x 8" Increased Angle Blade	.062	

BILL TO:
Attn:_____
Company:_____
Address:_____
_____
_____
Phone:_____

SHIP TO:
Attn:_____
Company:_____
Address:_____
_____
_____
Phone:_____

TO ORDER:
Phone: 800-245-0267 or 763-535-8206
Fax: 800-648-7124 or 763-535-8255
Online: www.nationalequipment.com

All orders and payment terms to be verified prior to shipping.

National Flooring Equipment, Inc. • 9250 Xylon Avenue North • Minneapolis, MN 55445 U.S.A.
Phone 800-245-0267 or 763-535-8206 • Fax 800-648-7124 or 763-535-8255
Web Site: www.nationalequipment.com • E-Mail: info@nationalequipment.com