



PACIFIC

Rhino PFS 8

8" Drum Sander

(Clamp Bar Drum)

From Serial Number
05400 (110 Volt)



OWNERS MANUAL & OPERATING INSTRUCTIONS

NORTH AMERICAN SAFETY INSTRUCTIONS



WARNING: *This floor sanding machine must be grounded.*

This floor sanding machine shall be grounded while in use to protect the operator from electric shock. The machine is provided with a three-conductor cord and a three-contact grounding type attachment plug to fit the proper grounding type receptacle. The Green (or Green and Yellow) conductor in the cord is the grounding wire. Never connect this wire to other than the grounding pin of the attachment plug.

This floor sanding machine is provided with an attachment plug as shown in sketch A. It is intended for use on a nominal 120 volt circuit. If a properly grounded receptacle as shown in sketch A is not available, an adaptor as shown in sketch 'C' should be installed as shown in sketch B if the outlet box that houses the receptacle is grounded. Be sure to fasten the grounding tab with a metal faceplate screw.



WARNING: *Risk of explosion.*

Floor sanding can result in an explosive mixture of fine dust and air. Use floor-sanding machine only in a well-ventilated area free from any flame, match or source of ignition.



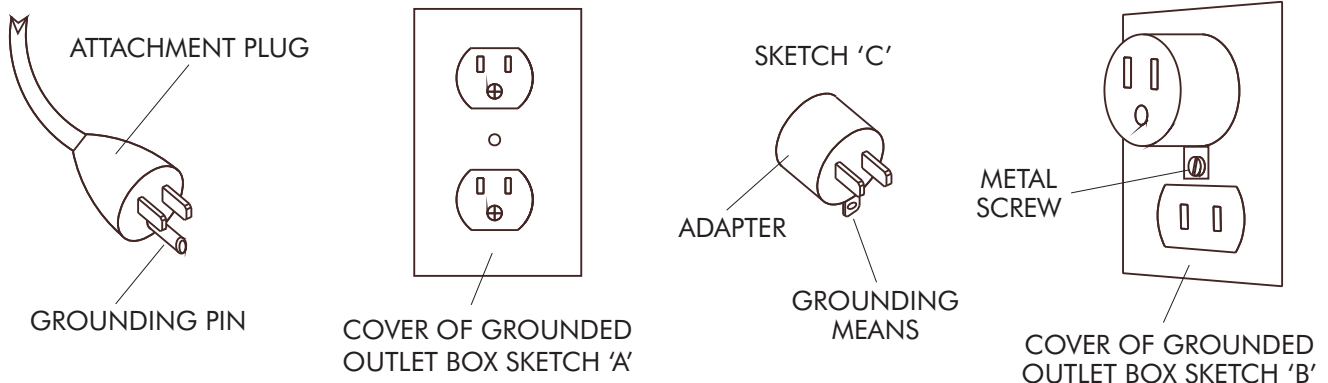
WARNING: *Risk of potential injury.*

Moving Parts - to reduce the risk of injury, unplug the machine before replacing abrasive sheets or carrying out any form of adjustment or servicing.

USE AND APPLICATION

This machine is intended for commercial use connected with the laying and maintaining of wooden floors and decks.

These types of surfaces may be found both in commercial and household environments.



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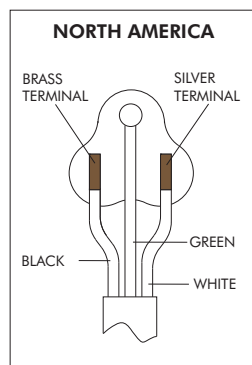
WARNING

For safe operation of this machine, read and understand all instructions. Look for the 'warning/caution' symbol.



This symbol means that if you do not follow the instructions injury can occur to the operator and damage to the machine and floor may result.

MAINS CABLE WIRING - PLUG



SPARE PARTS

Use Pacific Floor Care genuine spare parts only for service and repair. Use of non-approved parts will void the product warranty. See the back cover of this manual for the terms and conditions of the Pacific Floor Care Limited Warranty.

Pacific Floor Care reserves the right to make changes or improvements to its products without prior notice.

SPECIFICATION

The Pacific Rhino PFS 8 Drum Sander will sand hard and soft wood floors, cork and composition floors that require rapid sanding and leveling to a fine finish. A powerful motor drives a finely balanced sanding drum which is covered in a unique drum rubber providing a high quality finish to both hard and soft woods and other surfaces. Completely self contained with a high efficiency dust pickup the machine breaks down into three simple component parts for easy transport. With low voltage trip and overload protection the Rhino PFS 8 is a high performance sander suitable for professional and home owner use.

Power Supply:	110/120 V 50/60 Hz 220/240 V 50/60 Hz
Off Load Current:	110/120 V 8A 220/250 V 5A
Average Load Current:	110/120 V 15A 220/250 V 8A
Noise:	95 dBA at 1 metre (3' 3")
Vibration:	1.60 m/s ² r.m.s.
Switch:	Low voltage trip and overload protection.
Motor:	Continuous heavy duty AC/DC self cooling 4 brush.
Motor RPM:	8,500
Drum RPM:	3,300
Sanding Drum:	8" (203mm) wide aluminium extrusion with moulded rubber drum cover.
Drive:	Non-slip toothed timing belts and gear cut pulleys.
Dust Pickup:	Seated oversize vacuum fan with adjustable dust pan, disposable paper dust or cloth bag.
Moving Parts:	Sealed for life ball bearings.
Guards:	High impact injection moulded ABS.
Abrasive:	495mm (19.5") total length x 203mm (8") wide sheet with notched and angled ends 24 to 120 grit.
Power Cable:	7m (23') Non-marking outer insulation.
Weight Net:	41.5kg (91.5lbs)
Shipping Weight:	50.0kg (110.3lbs)
Shipping Dimensions:	78 x 40 x 44cm (30.75" x 15.75" x 17.5")
Warranty:	2 years



Read the following Safety and Operational notes before using your Pacific Rhino PFS 8 Drum Sander.

SAFETY

1. For safety it is recommended that a residual current circuit breaker (ground fault interrupter) is used with this machine.
2. Check the operating voltage is correct and that the machine is switched OFF ('O') before connecting to the power supply.
3. Always disconnect from the power supply when changing the abrasive paper, servicing the floor sander, replacing the dust bag or leaving the machine unattended.
4. Always replace the dust bag (paper type) or empty the dust bag (cloth type) when the dust in the bag reaches the 'MAX' line or when the machine is left unattended.
5. Never dispose of or empty the contents of the dust bag into a fire or incinerator.
6. Never reuse the paper dust bag or use a non standard bag. Cloth bags must be in good condition with no holes.
7. Always wear a dust mask when using the floor sander, handling the dust bag or cleaning the machine after use.
8. Wear ear protection when using the floor sander.
9. Ensure adequate ventilation of the work area to avoid the formation of a combustible mixture of flying dust and air.
10. Never smoke when using or servicing the floor sander or when handling the dust bag.
11. Never expose the machine to rain or damp. Always store in a dry place.
12. Stop the floor sander immediately if damage to the machine or abrasive paper is suspected.
13. Never allow the power cable to come into contact with the sanding drum when the floor sander is in operation. If the power cable becomes damaged and the inner conductors are exposed switch the power OFF and remove the plug before attempting to move the machine. The cable must be replaced by an authorized dealer or qualified electrician using Pacific Floor Care genuine spare parts only.
14. Keep hands, feet and loose clothing away from all moving parts of the machine.
15. Punch down or remove all nails, screws, tacks and other fixings from the floor before sanding to prevent contact with the sanding drum.
16. Never operate the machine without all the guards in place.
17. Keep children and pets clear at all times.
18. If the machine should fail to operate refer to the Trouble Shooting Guide on page 10.

SET UP

Assembly and Transport

1. The Pacific Rhino PFS 8 Drum Sander breaks down into three component parts, the main body, handle assembly and dust tube for easy handling and transport. To assemble loosen the Clamp Bracket Ref.21 and slide the handle assembly into the Handle Bracket Ref.51. Adjust the height of the handle so that your arms are slightly bent when standing upright behind the machine. This will provide you with maximum control in operation. Tighten the clamp bracket firmly. Always ensure that the clamp bracket is tight, check periodically during use.
2. Connect the Cable Handle Ref.20 to the Body Twist Lock Ref.24 at the rear right hand side of the floor sander body. Align the plug with the pins, push in and twist clockwise to lock.
3. Slide the Exhaust Tube Ref.59 into the Exhaust Bracket Ref.56 and push fully home.
4. Fit a paper dust bag following the instructions printed on the bag. If a cloth bag is used ensure that it is tied securely around the dust tube neck and that the bag is in good condition with no holes.
5. To prepare the floor sander for use place the machine on the floor and remove the main cable from it's storage position on the handle assembly. Check that the cable is in good condition and that all fittings are secure.
6. To dismantle the floor sander reverse procedure 1 to 5 above.
7. Always ensure that the floor sander is secure and cannot move when being transported in a vehicle. The floor sander is heavy. Take care when lifting and carrying the machine.

Installing Abrasive Paper

1. Ensure the power cable is disconnected from the power supply.
2. Tip the floor sander back so that it rests on the handle.
3. Lift the Drum Guard Ref.35 and turn the Drum Ref.168 to expose the Paper Clamp Bar Ref.175. Take care not to trap your fingers when turning the drum.
4. Loosen the 2 Paper Clamp Screws Ref.174 with a coin or suitable screw driver so that the clamp bar raises about 1/2" only. DO NOT remove the screws completely.
5. Select a suitable grade of abrasive paper (see Abrasive Paper Guide on page 5). To help install course grit abrasive papers draw the smooth side

(back) of the paper over the edge of a work bench to make it curl.

6. Kneeling in front of the machine place one end of the abrasive paper under the clamp bar so that the notches align with the clamp bar screws and clamp bar.

Carefully holding the abrasive paper in place rotate the drum 1 revolution. Tuck the other end of the abrasive paper under the clamp bar and use both hands to squeeze the sheet tight around the drum. Make sure it is square to the edges of the drum with no overlap and both ends of the abrasive sheet are equal distance under the paper clamp bar.

Firmly tighten the two clamp bar screws. Check the abrasive sheet is skin tight around the drum. If in doubt repeat the above procedure. Loose or damaged abrasive sheets will tear during sanding and can be expensive to keep replacing. Damage may also occur to the floor and floor sander.

7. Lower the drum guard and stand the machine up. The floor sander is now ready for use.

Note: Use Pacific Floor Care genuine floor sander abrasives for the best sanding performance and finish. They will also reduce the risk of tearing due to poor fit which is a common problem with generic and non standard abrasives.

PREPARATION

1. Where possible remove all furniture from the area or room. The Pacific RhinoPFS 8 Drum Sander features an efficient dust pickup, however, some dust will escape.
2. Remove all tacks, staples and other unwanted fixings from the floor. Failure to do so will result in damage to the abrasive paper and sanding drum.
3. Punch all nails below the surface of the floor using a suitable nail punch and hammer. Any screws used to fix boards should be counter sunk below the surface. During sanding any nails or screws that become exposed must be punched or counter sunk further.
4. Firmly fix all loose boards or blocks.
5. Remove heavy wax, grease and dirt deposits by hand.
6. Sweep and vacuum the floor thoroughly to remove dirt and discarded fixings.
7. Ensure good ventilation by opening windows.

OPERATION

1. Move the floor sander to the location of your work.
2. Connect the power cable to a suitable power supply ideally located behind or to one side of the machine and work area.
3. Wear a dust mask and ear protection.
4. Hold both handles with the main cable held in a small loop in the left hand and then passed over the left shoulder.
5. Apply light downwards pressure on the handles to tip the floor sander back to raise the sanding drum off the floor. Switch on by pushing the ON/OFF switch to the 'I' position.



CAUTION - the Pacific Rhino PFS 8 Drum Sander is a powerful machine. Always ensure that you have a firm grip before switching on.

6. Now move the floor sander slowly forward and at the same time release the pressure on the handles to gently lower it so that the sanding drum comes into contact with the floor.
7. Guide the floor sander in a straight line at a slow walking pace. Do not force or hold the floor sander back. Allow the machine to do the work and always move at an even pace.
8. At the end of the pass while still moving forward tilt the floor sander back so that the sanding drum comes clear of the floor. Now moving backwards lower the floor sander again and pull it backwards over the area just sanded moving at a steadily even pace. Take care to ensure that the power cable is kept clear of the sanding drum at all times. At the end of the sanding pass and while still moving backwards tilt the floor sander back so once again the sanding drum comes clear of the floor.

Move the machine over so that it overlaps the area just sanded by 3" and start to sand the next pass repeating the above technique.



CAUTION - to prevent damage to the floor surface, work piece or machine follow these rules.

- i. Always ensure that the floor sander is moving when in operation and the sanding drum is in contact with the floor.
- ii. Never lift the back of the machine when sanding.

- iii. Never apply pressure to try to increase the rate of sanding. Damage to the floor and machine will occur.
 - iv. Never bounce or drop the floor sander on to the floor. Always lower the machine gently.
 - v. Never dwell in one place, move steadily at all times.
 - vi. Never allow the power cable to come into contact with the sanding drum.
9. When the dust in the dust bag reaches the 'MAX' line stop sanding. Disconnect the power cable from the power supply and remove the paper dust bag. Turn the top of the paper dust bag over to stop the escape of dust and dispose of into a suitable container. Dampen the dust bag down with water to reduce the risk of fire. Never reuse the paper dust bag or empty it or dispose of it into a fire. If a cloth bag is used empty into a suitable container being careful to contain the dust. Do not dispose of the contents into a fire.
 10. Fit a new paper dust bag or refit the cloth bag. Reconnect the floor sander to the power supply and continue sanding.
 11. When taking a break from work disconnect the power cable from the supply, remove and dispose of the paper dust bag, or empty the cloth bag as detailed in 9. above. Never leave the floor sander unattended with the dust bag in place containing dust.
 12. On completion disconnect the power cable from the supply. Remove and dispose of the paper dust bag, or empty the cloth bag as detailed in 9. above. Stow the cable on the handle assembly and if required dismantle for transportation. Carry out maintenance as recommended in Maintenance and Servicing.



DANGER - never leave the floor sander unattended with dust in the dust bag. Always remove the dust bag and dispose of into a suitable container.

FLOOR SANDING TECHNIQUE

Pacific Rhino PFS 8 Drum Sander - a powerful floor sander designed for the rapid leveling and sanding of all types of wood flooring excluding thin laminated or veneered floors. Load the sander with abrasive making sure that it is skin tight around the drum. Loose sheets will tear. Place the sander on the right hand wall (unless you are making an angled cut on uneven floors) with about two thirds of the floor in front of you. Start the sander with the drum off the floor then walk forward at an even pace and ease the drum on to the floor. As you near the end of the pass, gradually raise the drum off the floor. Practice this technique before turning on the sander.

Cover the same path you made on the forward cut by pulling the machine backwards and easing the drum to the floor as you begin the backward pass until you reach the original starting point, then ease the drum off the floor.

When two thirds of the floor is sanded, turn the floor sander around and sand the remaining third in the same way. Overlap the one third area by 2 to 3 feet with the two thirds area to blend the two areas together.



WARNING - never bounce the sanding drum or dwell in one place as this will sand dips and hollows in the floor.

Pacific Wolverine Edger Sander - a powerful edger sander designed for sanding along the edges of a floor without damaging the baseboards or moldings. Also suitable for smaller areas where the Pacific Rhino PFS 8 Drum Sander will not reach like stair treads and closets. Load the abrasive disc making sure the retaining bolt is tight. Start the edger with the disc off the floor then lower the disc to the floor as you move the sander. Work progressively moving the sander in a sweeping motion from side to side.

Hand Sanding - to sand difficult to reach areas scrape and sand the floor by hand. Use a scraper to remove old finishes, always scraping in the direction of the grain, and then sand by hand using the same grit abrasive as you finished with when machine sanding. See Floor Sanding Technique diagrams on page 5.

FLOOR TYPES

PLANK & STRIP FLOORS

Old floors in good condition - when the floor is in good condition - no uneven edges, cupping or crowning of planks and strips - and you want to re-surface the floor, sanding back to new wood, start sanding in the direction of the planks or strips - with the wood grain. Start with a medium grit abrasive. Complete the first cut with the Pacific Rhino PFS 8 Drum Sander then sand up to the baseboards and door thresholds with the Pacific Wolverine Edger, using a medium grit abrasive, blending the edges in with the main floor area. Sweep the floor. Using a medium/fine grit abrasive, sand the main floor area with the drum sander and then complete the floor with the edger using a fine grit abrasive. Sweep the floor. Finish sanding the main floor area with the drum floor sander using a fine grit abrasive.

Uneven floors - when the floor is uneven sand diagonally at 45° across the room in both directions using the Pacific Rhino PFS 8 Drum Sander with a coarse grit abrasive. Only make one cut on both diagonals, this will achieve a basic level. Now complete the floor as for a level strip or plank floor. Use the same grit abrasive as was used on the 45° cut for the first cut parallel to the planks or strips.

Floors with an existing finish - when re-finishing a floor remove as little of the existing surface as possible. If the floor is badly marked and scratched and has to be sanded back to new wood use the Pacific Rhino PFS 8 Drum Sander and Pacific Wolverine Edger Sander. Always try a medium grit paper first, particularly on a diagonal cut. If 90% of the old finish is removed and the floor is generally leveled, you do not need to use a coarse grit abrasive.

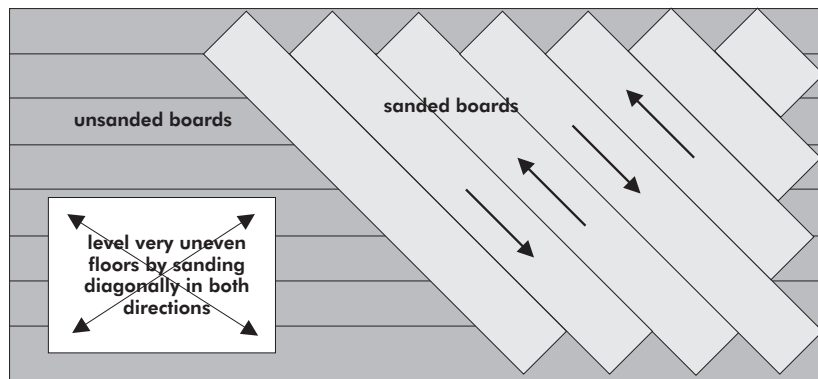
PARQUET & BLOCK FLOORS

The grain of the wood will run in a number of directions so sand the floor in the direction of the main source of natural light in the room. If there is no source of natural light sand in the direction of the longest side of the room or, if the room is square, in the direction the furniture is laid out and how people normally use and view the room.

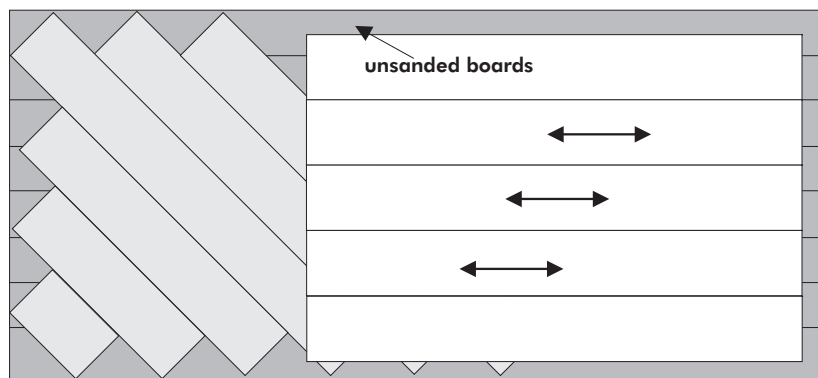
This technique will help mask any imperfections in the floor. Complete the sanding operation as detailed for plank or strip floors.

FLOOR SANDING TECHNIQUE

Level uneven floors.



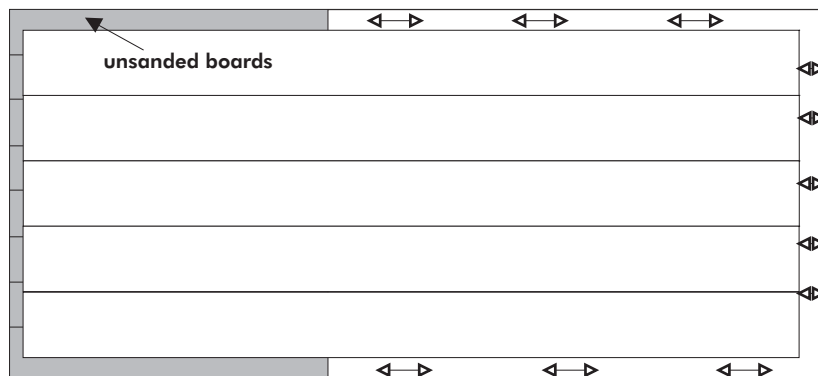
Sand main floor area.



Plank and Strip Floors - sand in the direction the boards are laid, with the wood grain.

Parquet and Wood Block Floors - sand in the direction of the main source of natural light. If there is no natural source of light, sand in the direction of the longest side of the room. If the room is square, sand in the direction the furniture is laid out and how people normally use the room.

Sand and blend edges in with main floor area.



FLOOR SANDER ABRASIVE GUIDE

Abrasive Grade	Floor Type and Condition
Grit P24 Open Coat (Very Coarse non-glogging)	For removing surface coatings from old floors such as varnish, stains and wax polishes. For the rapid sanding and removal of scratches and marks. Sanding level the joints of sub-flooring like particle board and masonite.
Grit P24 (Very Coarse)	For the rapid sanding and removal of scratches and marks. Sanding level the joints of sub-flooring like particle board and masonite.
Grit P36 to P50 (Coarse/Medium)	For removing surface coatings from old floors such as varnish, stains and wax polishes. For the rapid sanding and removal of scratches and light marks. Sanding level the joints of sub-flooring like particle board and masonite.
Grit P60 to P80 (Medium)	For the rapid sanding and removal of scratches and light marks. Sanding level the joints of sub-flooring like particle board and masonite.
Grit P100 to P120 (Medium/Fine)	Intermediate sanding of all types of wood floor. For final sanding of all types of wood floor.
Grit P150 - P180 (Fine/Very Fine)	For final sanding of all types of wood floor. First sanding of cork or composition floors. For sanding between coats of solvent based and 2 pack varnishes.

DO NOT OVER-SAND USE ONLY AS HEAVY GRADE ABRASIVE AS IT TAKES TO DO THE JOB. PROGRESS FROM FIRST GRADE USED THROUGH FOLLOWING GRADES TO REMOVE ALL VISIBLE SANDING MARKS. DO NOT MISS A GRADE.

SERVICE & ROUTINE MAINTENANCE



CAUTION - maintenance and repairs must be carried out by authorized personnel only. To prevent injury, always remove the power cable from the power supply before undertaking any work on the machine. Do not operate the floor sander unless it is fully assembled and all guards are in place. Use Pacific Floor Care genuine spare parts only.

General

1. Always make a list when first examining the machine, to remind you of parts or action needed on completion of repair/service.
2. The Pacific Rhino PFS 8 Drum Sander is subject to high speeds. All screws should be fitted using a suitable thread lock compound.
3. On completion of any work or service on an electrical tool or appliance statutory safety tests must be carried out by a competent person and recorded (see Testing for Electrical Safety page 8).
4. The Pacific Rhino PFS 8 Drum Sander needs no lubrication during routine servicing.
5. Always ensure that the electrical supply is disconnected before starting any routine servicing or repair.

Visual Inspection

1. Check that the drum guard Ref.35 is in good condition and functioning correctly. Ensure that the Warning Label Ref.36 is present and legible.
2. Check all other guards and mechanical parts are in good condition.
3. Examine the power cable Ref.39 and the handle cable Ref.20. If the outer insulation shows the slightest of abrasions or the inner conductors are exposed, then the cable must be replaced. The cable must not be repaired with tape or insulation sleeve
4. Examine both the mains plug and the interconnecting socket, Body Twist Lock Ref.24. The plugs must be opened and examined (see Electrical Testing page 8).
5. If a cloth type bag is in service check the condition, old clogged cloth dust bags make for an inefficient dust pickup.
6. Ensure that all labels are present and in good condition.

Drive Belts

1. To examine the condition of the Drive Belts Ref.164 and Ref.165 remove the four screws Ref.83 and the Belt Guard Ref.81.
2. Lift the Fan Belt Ref.165 while rotating the pulley remove the fan belt. Repeat for the Drum Belt Ref.164.



CAUTION - take care to avoid trapping your fingers when removing or replacing the drive belts.

3. Examine the pulleys for wear, worn or damaged pulleys should be replaced
4. To reduce the instance of belt breakage, examine the drive belts, look for cracks or fraying and replace if necessary with new belts. To replace reverse the above procedure taking care to avoid bending the belts tighter than the pulley diameter as this can result in damaged belts. Refit the belt guard.

Dust Control System

1. For efficient dust pick up ensure that cloth type dust bags are clean and unclogged and that the intake is clear and properly adjusted.
2. Turn the machine on to its side and loosen the three Screws Ref.71 and remove the Dust Shoe Ref.72 and clear any obstruction. The grit from the abrasive paper can wear away the leading edge of the dust shoe, if this has occurred then file or grind the leading edge level before refitting.

Install the dust shoe ensuring that the clearance between the shoe and the drum is maintained at 3/8" (10mm).

Lubrication

1. The Pacific Rhino PFS 8 Drum Sander is completely lubricated. The bearings are sealed and do not require lubrication. In the unlikely event that a bearing requires replacement use a Pacific Floor Care genuine spare part only as the grease contained in these bearings is special. A standard bearing is not suitable and may result in further damage.

Care of Motor

1. The motor must be kept free from grease and dust.
2. The motor brushes must be checked regularly, inspect the brushes every three months or every 500 hours of use, whichever comes first.
3. Replace ALL FOUR motor brushes when any one brush has worn to 1/2" or less in length. Brushes

MUST slide freely in the brush holders.

4. To inspect and replace motor Brushes Ref.104, with the brush block assembly removed.

- i. Remove the three Screws Ref.82 and remove the Wall End Guard Ref.84 to expose the motor brush assembly.
- ii. Remove the four retaining Screws Ref.31 from the Shield Wall End Ref.30, insert two of the screws into the 'jacking holes' situated adjacent to the countersunk retaining holes.
- iii. Carefully tighten these screws until the shield wall end is jacked clear of the outer casting. Withdraw the shield-wall end.
- iv. With the brush block assembly complete and the connecting leads still attached. You will note that as the brush block assembly is withdrawn the brushes spring towards the center and often the brush springs fall clear as the brushes are no longer at the height to retain them. Take care not to lose any springs.
- v. To remove a brush spring with a brush in the operating position push the brush spring down and towards the brush and lift out.
- vi. Using a cross recess screwdriver remove the four brush shunt (pigtail) retaining Screws Ref.105 and lock Washers Ref.100.
- vii. Remove the four brushes. Remove the two 'jacking' screws.
- viii. Thoroughly clean the brush assembly and housing using a soft brush and a suitable vacuum cleaner.
- ix. Inspect the four brushes for damage or wear and if any one brush is found to be damaged or worn to a length of 1/2" or less in length then replace all four brushes.
- x. When replacing brushes ensure free movement in each brush holder and fit the brush with the shunt (pigtail) towards the field coil. Ensure that each brush shunt is connected securely with the screw, and lock washer, two spare screws and lock washers are provided with each pack of brushes. Do not fit the brush springs at this stage.
- xi. Pull each brush up to the top of the holder using the shunt wire to retain it in this position for the next stage.
- xii. Enter the assembly into the main frame taking care to avoid contact between the brushes and the commutator of the armature, that the shield wall end is

correctly aligned with the main frame and that no leads are trapped. There is a depressed pattern on the shield wall end and on the main frame to assist alignment. Both the bearing fit and the main frame fit are 'light contact' and may require lightly tapping into position using a soft mallet. DO NOT FORCE.

- xiii. Replace and tighten the four countersunk Screws Ref.31.
- xiv. Remove the four brush block retaining Screws Ref.31 and the single timing Screw Ref.34 from the Shield-Wall End Ref.30. The brush block assembly is now free to rotate. To fit the brush springs rotate the brush block assembly counter clockwise (over towards the rear of the machine) until the lower brush holder is accessible, fit the brush spring by inserting into the holder with the coil spring over the brush then push down until the tag comes into contact with the holder, slide the tag away from the brush and release. The brush spring will clip into position. Check the spring and brush for correct alignment and free movement.
- xv. Rotate the brush block assembly clockwise and repeat to fit the remaining three springs. The switch and field cables restrict the movement of the brush block assembly, take care not to loosen or damage these cables.
- xvi. Return the brush block assembly to its original position and align the timing notch in the block with the timing hole, screw the timing Screw Ref.34 into position.
- xvii. Secure the brush block assembly using the remaining four screws Ref.34. DO NOT OVERTIGHTEN.
- xviii. Finally check that all cables are well clear of moving parts before refitting the guard wall and securing with the 3 Screws Ref.82..

Note: To inspect and replace the motor brushes while retaining the brush block assembly in place repeat the procedure xiv. to xviii. above.

Electrical Testing



CAUTION - testing for electrical safety should be undertaken by a competent person and all results recorded. Do not exceed 1250 volt insulation test duration of 3 seconds.

1. Examine the power cable and handle cable for damage, if the outer insulation shows more than the slightest of abrasions or the inner conductors are exposed then the cable must be replaced. The cables must not be repaired with tape or insulation sleeve.
2. Open and check mains plug and interconnecting socket Ref.24 for condition, loose connections, damaged wires etc. Ensure that the strain relief of the power cable plug is correctly secured to the outer cable insulation.
3. Open and examine the Switch Housing Ref.11 for loose connections, damaged wires, and general condition. Pay special attention to any gaskets, 'O' rings and seals intended to exclude dust from the switch and switch housing area, these must be maintained in good condition.
4. Ensure that the Strain Relief Ref.5 is correctly secured to the outer cable insulation.

Note: The Pacific Rhino PFS 8 Drum Sander features a fully protected circuit breaker which incorporates 'Low Volt Protection'. This means that should the mains supply be interrupted during use the switch will

immediately return to the 'OFF' position to protect the operator. This feature, by preventing a circuit through the switch unless mains voltage is present, also prevents a full insulation (flash) test unless the test instrument has 'test on run' facility.

If your instrument has this facility then:- replace the switch cover 'A' taking care to avoid trapping leads and ensuring that all dust gaskets are correctly positioned. Check that the circuit breaker 'ON' button does not lock in the 'ON' position when depressed. The button must only lock 'ON' when current is present. Before carrying out test ensure that the motor is connected by the twist lock socket Ref. 24 and that all safety measures have been taken.

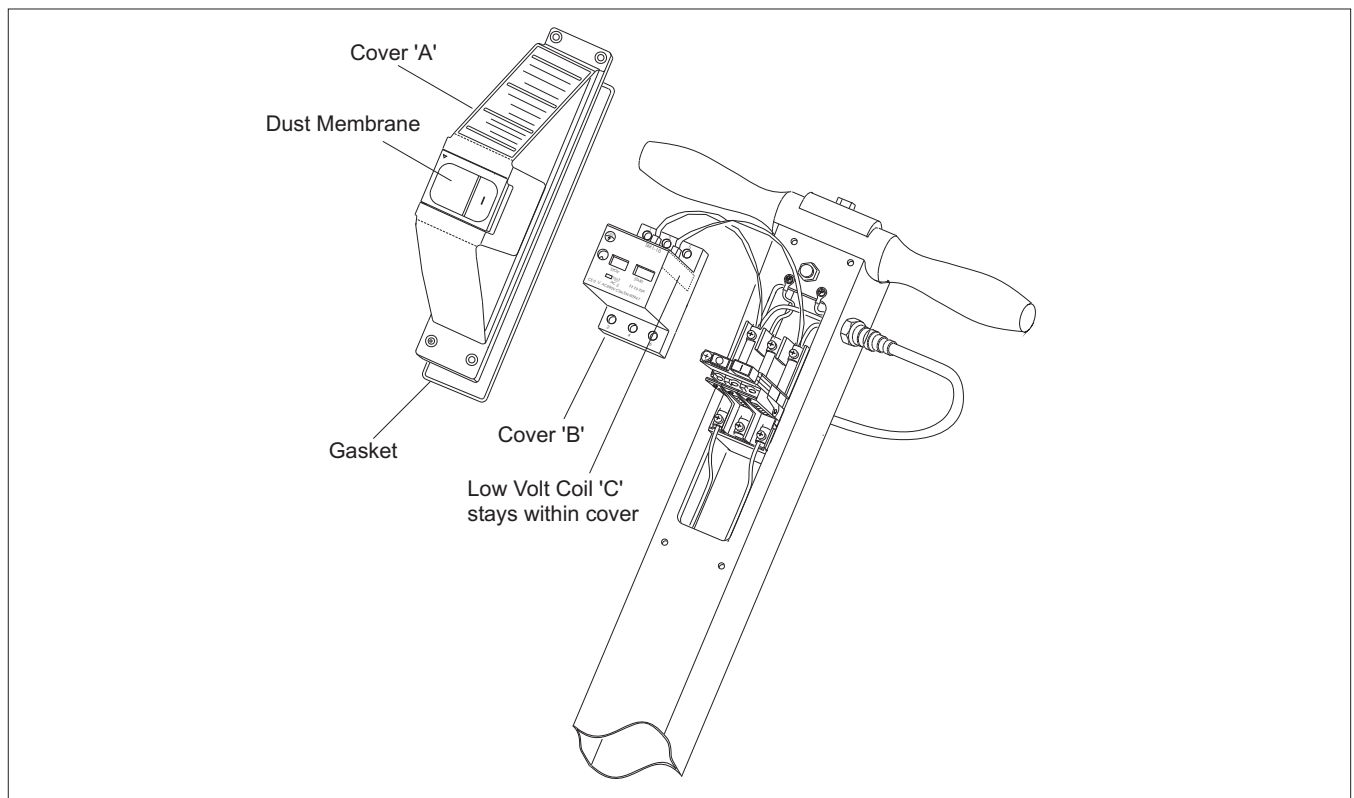
Carry out 'test on run' procedure.

If your instrument does not have 'test on run' facility then Continue as follows:-

5. While you have the switch housing open for visual inspection remove the circuit breaker cover 'B' together with the 'low volt coil 'C'(see below). Do not disconnect or disturb any cables. The 'low volt coils will remain within the cover 'B'.

The circuit breaker will now lock into the 'ON' position without current present. Before carrying out an insulation (flash) test ensure that the motor is connected by the twist lock socket Ref. 24 and that all safety measures have been taken.

Rhino PFS 8 Low Voltage Switch.



6. Use the standard test for electrical safety for a grounded (earthed) appliance. Do not exceed 1250 volt insulation test duration of 3 seconds
7. Record the test results.
8. Complete a functional (run) test and record results.



CAUTION - when undertaking a functional test ensure that the machine is secure, remember the sanding drum will rotate, ensure that the drum cannot come into contact with the work bench/service area.

9. After carrying out the tests disconnect the machine from the test station and snap the 'Low Volt Coil' 'C' back into position and replace cover 'B'.
10. Replace the switch cover 'A' taking care to avoid trapping leads and ensuring that all dust gaskets are correctly positioned. Check that the circuit breaker 'ON' button does not lock in the 'ON' position when depressed. The button must only lock 'ON' when current is present.
11. Finally test the machine once again to ensure good earth and insulation of the mains cable and switch. Do not exceed 1250 volt flash duration of 3 seconds.

Sanding Drum.

1. Check that power supply is disconnected. Tilt the machine back and rest the handle on the floor. Open the drum guard and examine the drum cover. A damaged or worn cover must be replaced to maintain machine performance. A damaged or worn cover can result in poor sanding with subsequent damage to the floor surface and can be dangerous in operation. A cover that is worn to 1/4" or less in thickness must be replaced.
2. To replace the drum cover see the detailed instructions included in each genuine Pacific Floor Care Drum Cover Kit Ref.167 Part # R162312. The use of an impact screwdriver may assist.
3. It is recommended that at each service interval the drum cover is checked and trimmed (dressed) if necessary to provide a true uniform diameter.
4. First check that the condition of the rear castors. These must be in good condition and free from dust and dirt. Check that the casters rotate freely and are not worn with any flat spots. Check that the axle between the castors is not bent by using a straight edge along its length.

5. Fit a sheet of fine grit abrasive paper (120 grit), abrasive side up on to a level floor surface. Remove any abrasive paper from the drum and re-tighten the clamp bar screws. Make sure the clamp bar screws are tight.

Position the floor sander over the abrasive paper and connect the power cable to the power supply. Tip the floor sander back to raise the sanding drum off the floor and switch on.

Gently lower the floor sander so the sanding drum 'just' touches the abrasive paper. Hold the sander in position for a few seconds then tip back and switch off.

Disconnect the power cable and tip the floor sander back so that it rests on it's handle. Lift the drum guard and check the condition of the drum cover. If it is uniform an even surface will be witnessed, if not, continue to dress the drum until all high and low spots are removed. Take care not to remove too much material as this will reduce the life of the drum cover.

6. When a uniform surface is achieved it is advisable to slightly 'feather' both edges of the drum cover. Switch off and disconnect the power cable from the power supply. Tilt the machine back and lift the drum guard to expose the drum cover. Using a medium to fine grit abrasive paper carefully feather the edge of both sides of the drum cover by holding the abrasive paper against the edge and rotating the drum. Be careful not to trap your fingers. The softer edge provided will help prevent 'cut' lines witnessed on the floor surface when sanding particularly in softer woods. Always feather the edges of a new drum cover.

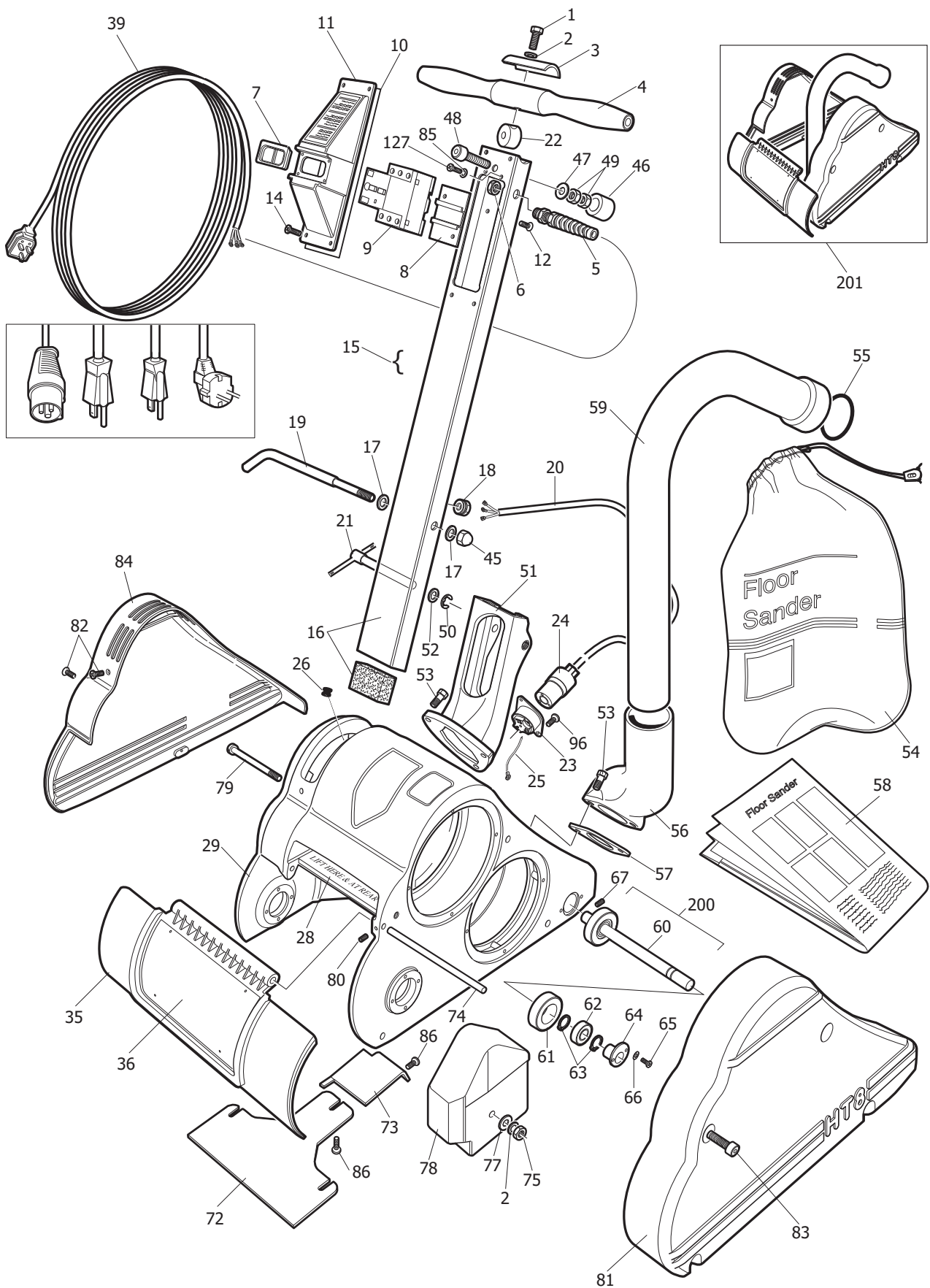


WARNING - the sanding drum and drum cover must be correctly adjusted and maintained to ensure the best sanding performance. Failure to do so can result in damage to the floor surface and can be dangerous.

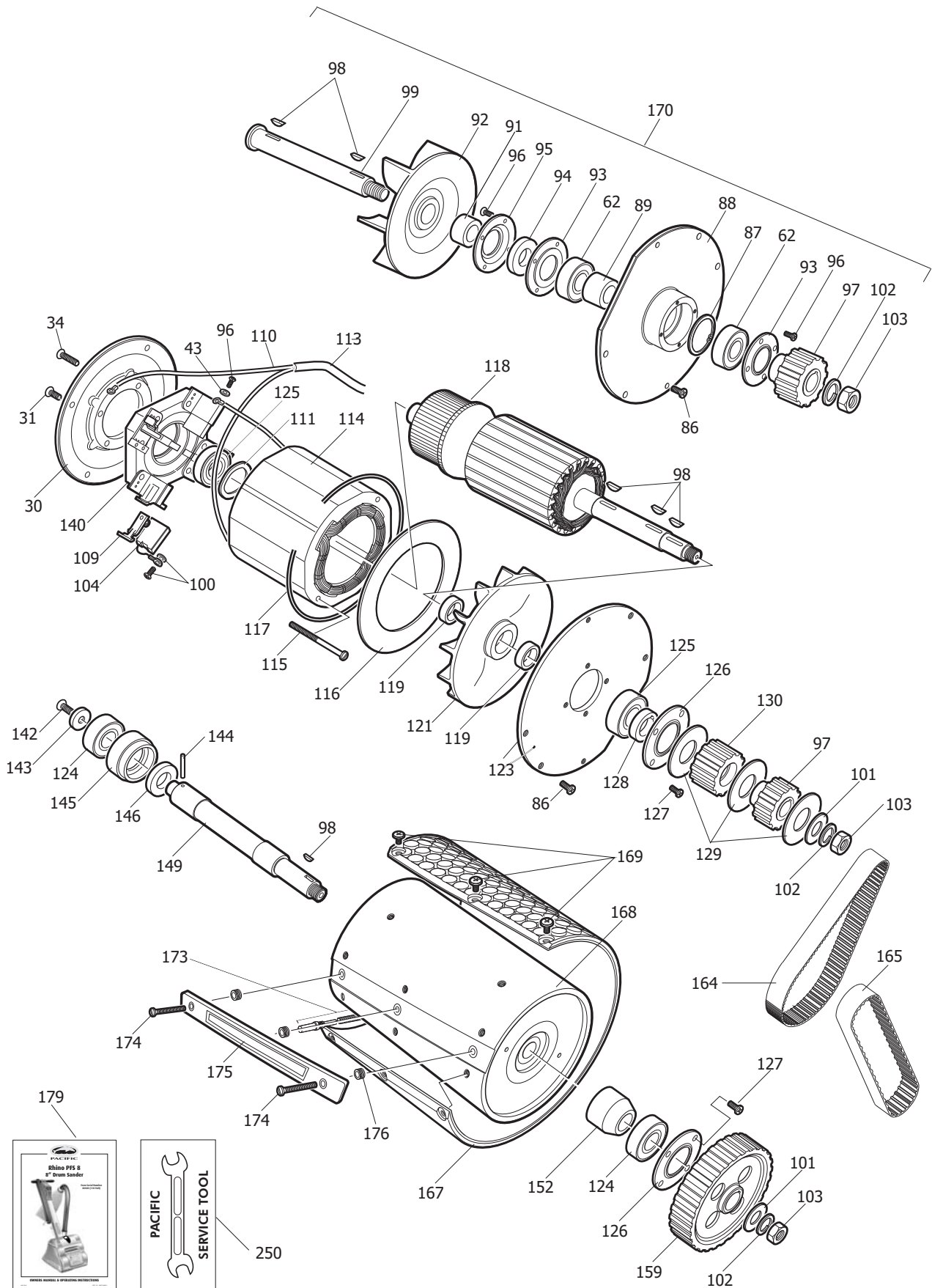
TROUBLE SHOOTING

PROBLEM	CAUSE	ACTION
The machine does not run.	<p>The power cable is not connected to the power supply.</p> <p>The overload protection has been activated.</p> <p>The motor brushes are worn.</p> <p>The voltage is too low.</p>	<p>Connect the power cable to the power supply.</p> <p>Allow to cool, switch on.</p> <p>Replace the motor brushes.</p> <p>Check main power supply complies with the machine serial plate data.</p>
The overload protection activates frequently.	<p>The drum motor is stopped.</p> <p>A bearing has failed.</p> <p>The voltage is too low.</p> <p>The pressure on the sanding drum is too high.</p> <p>The sanding drum will not rotate.</p>	<p>Contact an authorized repair agent.</p> <p>Contact an authorized repair agent.</p> <p>Check the main power supply complies with the machine's serial plate data.</p> <p>Fit a finer grit abrasive paper, make sure the voltage is correct.</p> <p>Disconnect from the power and check the sanding drum for obstruction. If overload still operates contact an authorized repair agent.</p>
The machine will not pick-up dust.	<p>The dust bag is full.</p> <p>The dust shoe is out of adjustment.</p> <p>There is an obstruction in dust pickup.</p> <p>The fan belt has broken.</p>	<p>Replace the dust bag.</p> <p>Adjust the dust shoe.</p> <p>Remove the dust shoe and check for obstruction. Clear as necessary.</p> <p>Replace the fan belt.</p>
The machine does not sand evenly.	<p>The drum cover is not round.</p> <p>The Floor Roller assembly (adjustable type) is out of adjustment.</p> <p>The Floor Roller assembly is worn or damaged.</p>	<p>Redress or replace the drum cover.</p> <p>Adjust the Floor Roller assembly see page 11.4</p> <p>Repair/replace the Floor Roller Assembly.</p>
The sanding drum will not rotate.	<p>The machine is not being operated properly.</p> <p>The drum belt is broken.</p> <p>The drum bearing has failed.</p> <p>The shear pin Ref.144 has operated.</p> <p>There is an obstruction.</p>	<p>Read 'Operation' section of this manual.</p> <p>Replace the drum belt.</p> <p>Contact an authorized repair agent.</p> <p>Contact an authorized repair agent.</p> <p>Disconnect from power supply and clear the obstruction.</p>

RHINO PFS 8 PARTS DIAGRAM



RHINO PFS 8 PARTS DIGRAM



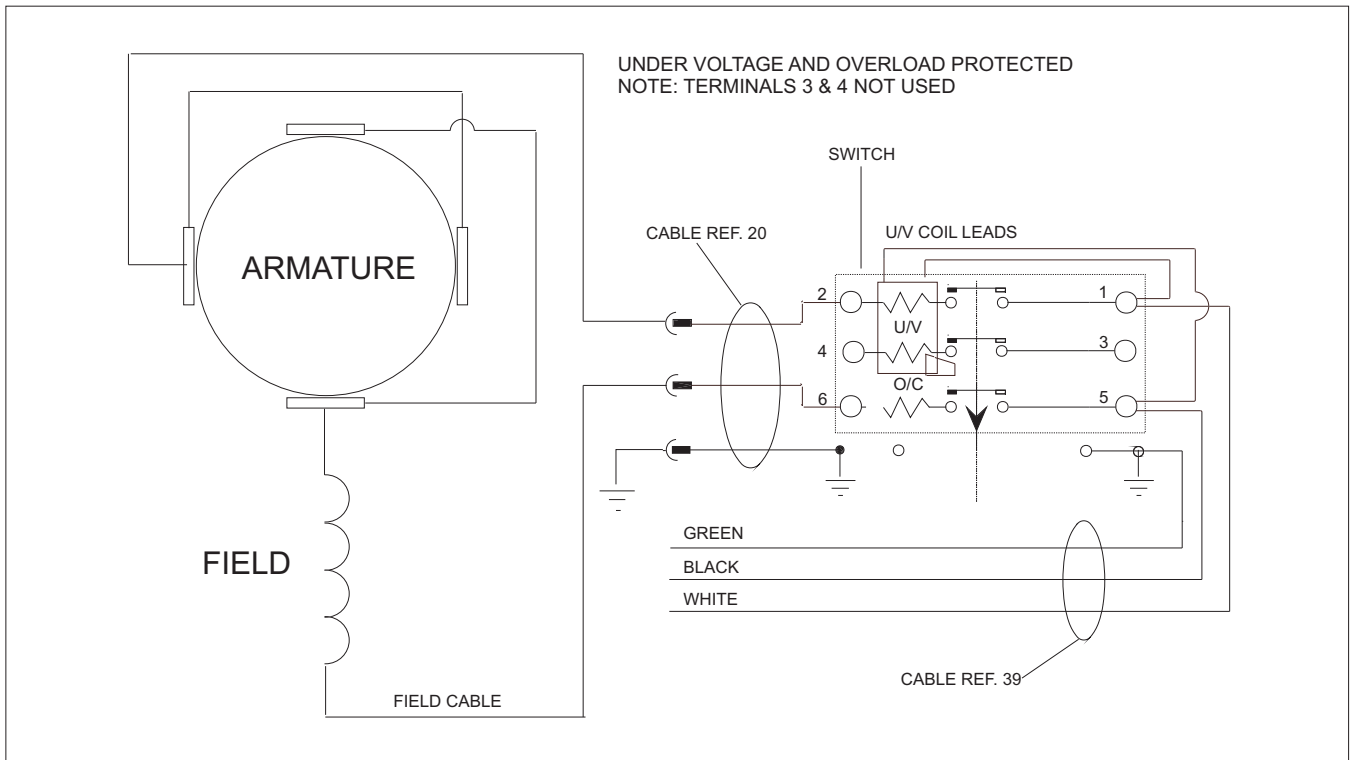
RHINO PFS 8 PARTS LIST

Ref.	PSTK	Pack Qty.	Description	Ref.	PSTK	Pack Qty.	Description
1	R962308	1	Screw	59	R163790	1	Tube Exhaust (Grey)
2	R980652	2	Washer	60	R167708	1	Shaft Floor Roller
3	R162019	1	Clamp Handle	61	R169704	2	Roller Floor Assembly (with bearing)
4	R163907	1	Handle Cross	62	R902567	4	Bearing (Fan & Floor Roller)
5	R101205	1	Strain Relief	63	R467308	4	Ring Retaining
5	R163691	1	Strain Relief (NA)	64	R160504	1	Adjuster Floor Roller
6	R101206	1	Nut Lock	65	R962139	2	Bolt
7	R163849	1	Dust Cover Kit	66	R980646	2	Washer
8	R163837	1	Bracket Switch Mounting	67	R962103	1	Screw
9	R163839	1	Switch 110/120V	72	R167902	1	Shoe Intake
10	R163870	1	Gasket Switch Housing	73	R163636	1	Cover Inlet
11	R163840	1	Cover Switch	74	R167404	1	Rod Drum Guard
12	R163838	2	Screw	75	R920256	1	Nut
14	R163871	4	Screw	77	R980629	1	Washer
15	R020320	1	Multi-Speed Conversion Kit HT8/DU8 110 Volt (NA)	78	R169504	1	Weight Balance
15	R163844	1	Handle Assembly Complete 110 Volt (NA)	79	R962409	1	Screw
16	R169012	1	Tube Handle	80	R962170	1	Screw
17	R980615	2	Washer	81	R163791	1	Guard Belt (Grey)
18	R163804	1	Strain Relief Handle Cable (NA)	82	R163814	3	Screw
19	R164508	1	Hook Cable	83	R163869	4	Screw Guard Belt
20	R519510	1	Cable Handle (NA)	84	R163792	1	Guard Wall End (Grey)
21	R960180	1	Clamp Handle Bracket	85	R980623	2	Washer
22	R960183	1	Bracket Handle Cross	86	R962109	8	Screw
23	R911045	1	Base Twist Lock	87	R167312	1	Ring Retaining
24	R911046	1	Body Twist Lock	88	R164202	1	Housing Fan
25	R163867	1	Lead Earth Base Twist Lock	89	R168203	1	Spacer Fan Bearing
26	R163808	1	Grommet	90	R163813	2	Screw
28	R165103	1	Label 'Lift Here & At Rear' (Metal)	91	R008212	1	Spacer Fan
29	R163201	1	Main Frame	92	R163004	1	Fan Intake
30	R167804	1	Shield Wall End	93	R162021	2	Clamp Bearing
31	R962084	4	Screw	94	R167608	1	Seal fan
34	R962204	5	Screw	95	R167210	1	Retainer Seal
35	R163795	1	Guard Drum Assembly	96	R010210	4	Screw
36	R121252	1	Label Guard Drum	97	R166906	2	Pulley Fan
39	R519501	1	Cable Main Assembly 110 Volt (NA)	98	R915028	6	Key
43	R010200	4	Washer	99	R167704	1	Shaft Fan
46	R024600	1	Buffer Rubber	100	R010220	4	Screw and Washer Set
47	R980197	1	Washer	101	R980648	2	Washer
48	R024605	1	Bolt	102	R980626	3	Washer Lock
49	R030850	2	Nut	103	R920132	3	Nut
50	R167308	1	Ring Retaining	104	R010180	4	Brush Motor
51	R160815	1	Bracket Handle	105	R962003	4	Screw
52	R980196	1	Washer	109	R010230	4	Brush Spring
53	R962244	5	Bolt	110	R911662	1	Lead Motor Assembly
54	R163796	1	Bag Dust Cloth	111	R167302	1	Ring Retaining
55	R163823	1	Retainer Dust Bag Disposable	113	R168104	1	Sleeve
55	R163826	6	Retainer Dust Bag Disposable	114	R163104	1	Field 110/120 Volt
56	R160809	1	Bracket Exhaust	115	R962401	2	Screw
57	R163403	1	Gasket Exhaust	116	R166172	1	Baffle Motor
58	R07037	25	Disposable Paper Dust Bag PFS 8 Pack 2 (box 25)	117	R167204	1	Retainer Baffle
58	R07039	50	Disposable Paper Dust Bag PFS 8 (box 50)	118	R160408	1	Armature 110/120 Volt
				119	R980004	2	Spacer
				121	R163008	1	Fan Motor

RHINO PFS 8 PARTS LIST

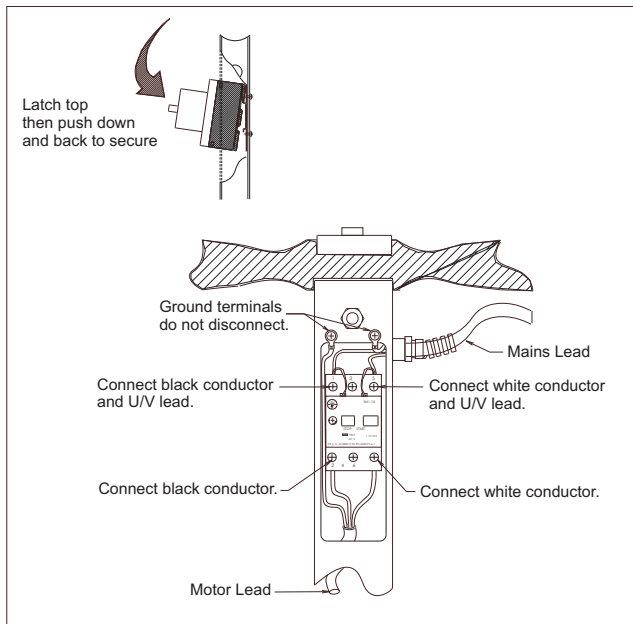
Ref.	PSTK	Pack Qty.	Description	Ref.	PSTK	Pack Qty.	Description
123	R167802	1	Shield Pulley	176	R164607	3	Insert Drum Kit
124	R902550	2	Bearing Drum Shaft	179	R000511	1	Owners Manual & Operating Instructions
125	R163682	2	Bearing Armature	200	R101219	1	Floor Roller Assembly
126	R062003	2	Clamp Bearing	201	R163827	1	Kit Moulded Guards (Grey)
127	R962345	10	Screw	201	R163873	1	Kit Moulded Guards (Grey, excl. Tube Exhaust)
128	R168212	1	Spacer Motor Pulley	<i>The following items are not illustrated.</i>			
129	R163304	3	Flange Pulley	Special Tools			
130	R166909	1	Pulley Motor	250	R011860	2	Service Tool - Extractor Seal
140	R163789	1	Brush Block Assembly	250	R100325	1	Service Tool - Clamp Drum Cover
142	R962411	1	Screw	250	R163822	1	Service Tool - Drum Insert Removal
143	R162006	1	Clamp Bearing	250	R163857	1	Service Tool - Adjuster Floor Roller
144	R925113	1	Pin Drum Shaft	250	R163865	1	Service Tool - Locking Drum
145	R161108	1	Bush Bearing	250	R024500	1	Test Lead
146	R168206	1	Spacer Bearing				
149	R167716	1	Shaft Drum				
152	R168209	1	Spacer Bearing				
159	R166916	1	Pulley Drum				
164	R903260	1	Belt Drum 3/4" (19mm) Wide				
165	R903273	1	Belt Fan 1/2" (13mm) Wide				
167	R162312	1	Drum Cover Kit				
168	R162532	1	Drum Assembly Complete				
169	R100327	13	Screw				
170	R163012	1	Assembly Fan Intake				
173	R163668	1	Lifting Pin Assembly				
174	R000920	2	Screw Clamp Bar (screwdriver slot)				
174	R163657	2	Screw Clamp Bar (coin slot)				
175	R020045	1	Clamp Bar Paper (reversible)				

RHINO PFS 8 CIRCUIT DIAGRAM



FITTING A REPLACEMENT SWITCH

INSTRUCTION FOR NORTH AMERICA



SERVICE & REPAIR

Contact your reseller for the name of your local service agent. Service and repairs undertaken by non-approved service agents will void the product warranty. If you should have difficulty in obtaining service please contact Pacific Floor Care at the following address.

Pacific Floor Care
2259 S. Sheridan Road
MUSKEGON
MI 49442-6252

Tel: 1-800-968-1332 , 1-231-773-1330

Fax: 1-800-863-9536

Web: www.pacificfloorcare.com

PACIFIC LIMITED WARRANTY

Pacific Floor Care warrants to the original purchaser that the Pacific Floor Care machine covered by this warranty is free from defects in workmanship and materials. Should any part fail in the period of two years from the date of the original purchase as a result of a defect, Pacific Floor Care will (at it's option) either repair or replace the part without charge provided that the machine has been operated in accordance with the Owners Manual and Operating Instructions.

Should any such defect arise, please contact your nearest authorized repair agent. Standard service over land mainland freight costs will be refunded on warranty repairs at the sole discretion of Pacific Floor Care or the authorized repair agent. If the repair is non-warranty, the customer will be advised before any work is undertaken.

This warranty is the sole warranty by Pacific Floor Care and is in lieu of all other warranties express or implied and releases Pacific Floor Care from all other obligations and liabilities.

This warranty does not apply to normal wear and tear to the machine, and in particular does not cover normal wear parts such as mains cable, wheels, switches, relays, brushes, rubber parts, hoses and bearings. This warranty also does not cover, and Pacific Floor Care will not be liable for, excessive wear caused by abnormal use.

Pacific Floor Care will under no circumstances be liable for alterations to the machine or for damage caused by third persons, or for misuse or abuse of the machine, or damage caused during transportation. Repairs of the machine made or attempted by persons other than those specifically authorized by Pacific Floor Care shall render this warranty void and Pacific Floor Care will not be liable for such repairs, the cost of such repairs, or the consequences of such repairs. Where spare parts are used on the machine and they do not conform to Pacific Floor Care specifications, this warranty will be rendered void and Pacific Floor Care will not be liable.

Pacific Floor Care will not be liable for any indirect or consequential loss, damage, cost or expense of any kind whatever and however caused whether arising under contract, tort (including negligence) or otherwise including (without limitation) loss of production, loss of profits or contracts or of operating time or goodwill or anticipated savings.

Every effort has been made to present all information in this publication accurately, however no liability is accepted for any inclusions or advice given or for omissions from this publication. Pacific Floor Care reserves the right to make changes or improvements to its products without prior notice.

PACIFIC FLOOR CARE
2259 South Sheridan, Muskegon, MI 49442
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