

Mack
Manufacturing, inc.

2451 Lower Lk Rd.
Hastings, MI 49058
(269)945-3970

Floor Mack Ryder



Patent #
5096654

Owner's Manual

WARRANTY

Mack Manufacturing includes a one-year warranty for defects on material and workmanship affecting a machine's performance. For electrical components, including all switches, motor brushes, and plugs, the warranty period is 90 days. Shipping is not included in the warranty.



For any unit believed to be defective within warranty, write or call the dealer from which the machine was purchased. If you are unable to resolve to your satisfaction, please call Mack Manufacturing at (269)945-3970. Please give the seller's name, address, date and number of invoice, and describe the nature of the defect. If the unit was damaged during transit, file a claim with your carrier immediately!

After the one-year warranty period has expired, charges must be assessed. A Mack Manufacturing-approved technician must perform all repairs within warranty period unless directed otherwise in writing. The seal on controller box must not be broken. Failure to comply will result in a void on the unit's warranty.

ADDENDUM

Mack Manufacturing's liability under this warranty is limited to repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies, including incidental and consequential damages. There are no expressed warranties other than those specified herein.

There are no warranties that extend beyond the description of the face hereof. No warranties, including but not limited to warranty of merchantability, shall be implied. Mack Manufacturing accepts no responsibility for any direct or consequential damages or injuries, as Mack Manufacturing cannot control user's handling, end use, or effect of use.

ELECTRICAL

All electrical connections should be made by a qualified electrician. Mack Manufacturing can accept no responsibility for improper electrical connections. Improper connections can cause damage to you or your machinery.

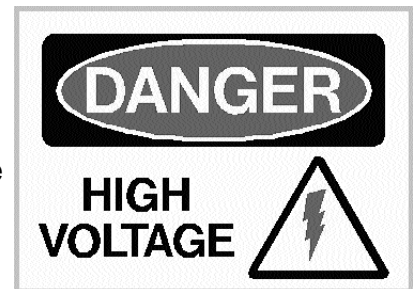
It is important for you and the longevity of your machinery that the proper electrical connections, with the proper voltage be made.

Also be sure the proper length and size of cord is used for your machinery. Improper cord size or length can damage the motor on your machine. If you are unsure, contact Mack Manufacturing for proper cord length and size.

Failure to remove electrical plug from outlet before attempting service or maintenance could result in electrocution or severe injury. Always unplug machinery before servicing.

Never leave the unit unattended while plugged in.

Inspect all cords and equipment prior to use. Do not operate this machinery with broken or frayed cords.



WARNING

Failure to follow all operating instructions and warnings can cause damage to your machinery or serious or fatal injury to yourself or others.

Do not operate this machine unless you are trained and authorized.

Do not operate a faulty machine.

Do not attempt repairs unless you are trained and authorized.

Riding sanders will tip over if not properly operated.

Slow before turning and do not turn on slopes.

Do not transport other people.

Make sure extension cables are free of obstructions and in good working condition.

Do not let hands, arms, legs or feet extend beyond the dimensions of the rider during operation.

Always do proper preventive maintenance before using the machine.

Return the pedal to the neutral position and turn machine off before getting off the machine.

Congratulations on the purchase of your new Floor Mack Ryder

You'll soon find the Floor Mack completes jobs faster, easier, and more economically than conventional methods. This unit was specifically designed for large commercial jobs where walking sanders are not practical or too time consuming.



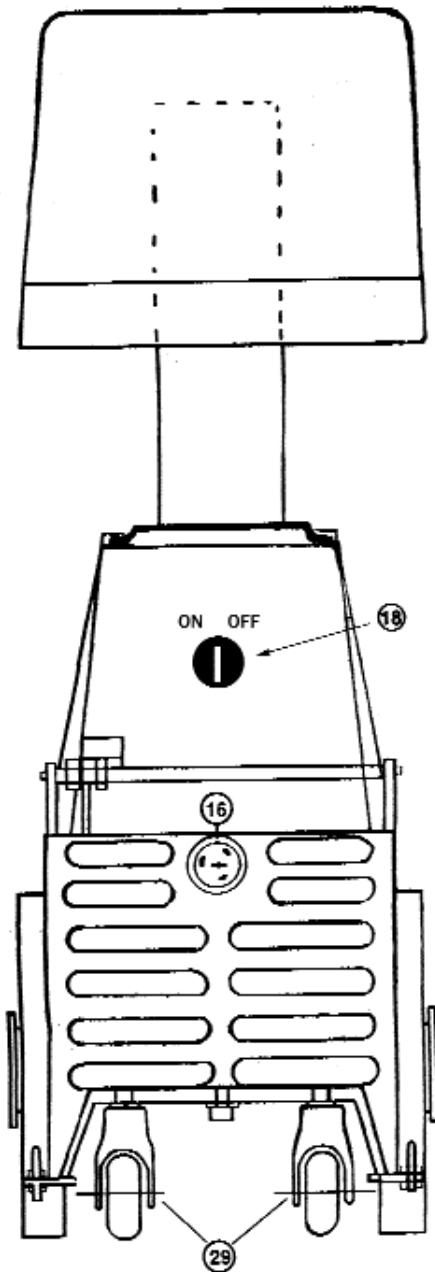
The Floor Mack Ryder is shown here with two 12" American Lincoln sanders prepared for a 15,000 square foot gymnasium

Major components to the Floor Mack Ryder

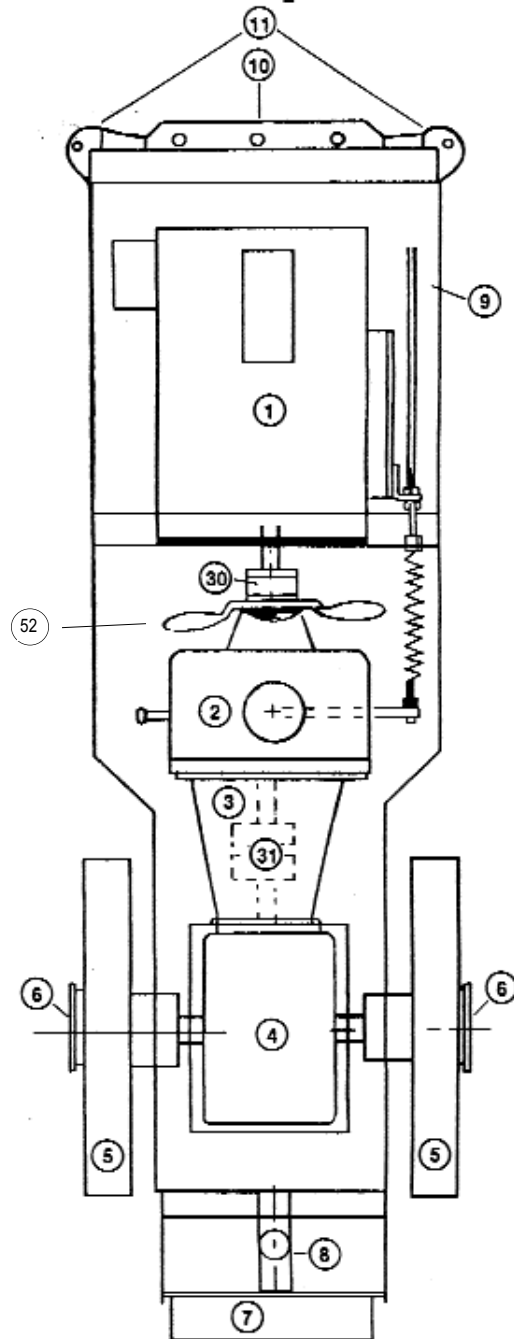
No.	Part#	Description	Quantity				
1	PFMR1	Electric Motor	1	11	PFMR5383	Sander Mounting Pins	2
2	PFMR2	Hydraulic Transmission	1	12	PFMR96	Hydraulic Seat	1
3	PFMR4-1U	Bell Housing	1	13	PFMR90	Seat Base and Tool Box	1
4	PFMR4	Rear End	1	14	PFMR91	Main Frame	1
5	PFMR23	Urethane Rear Wheels	2	16	PE2726	AC Plug (three phase)	1
6	PFMR6	Locking Hubs	2	16	PE3335C	AC Plug (single phase)	1
7	PFMR113	Bumper	1	18		AC On/Off Switch	1
8	PFMR120	Cord Holder	1	29	PFMR131	Front Wheel (s)	1 or 2
9	PFMR5	Throttle Cable	1	30	PFMR30A	Motor to Transmission Coupling	1
10	SU10	Casting, Front Mount	1	31	PFMR31A	Transmission to Rear End Coupling	1
				52	PFMR52A	Cooling Fan	1

Diagram 1

Front

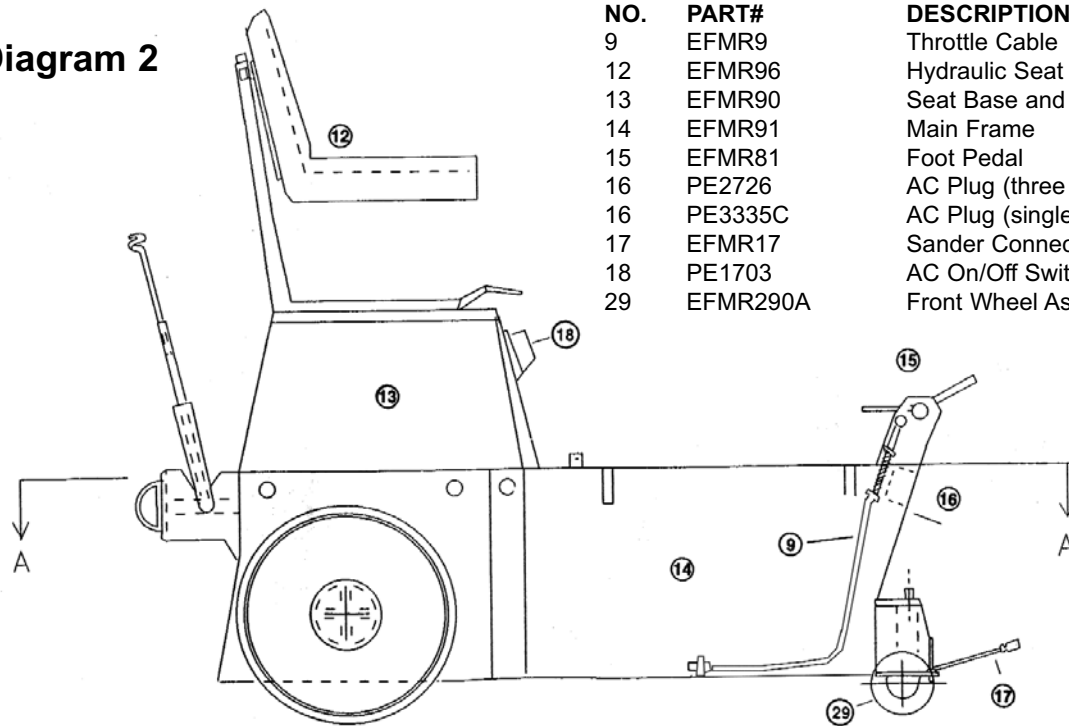


Top



Side View

Diagram 2



NO.	PART#	DESCRIPTION	QTY.
9	EFMR9	Throttle Cable	1
12	EFMR96	Hydraulic Seat	1
13	EFMR90	Seat Base and Tool Box	1
14	EFMR91	Main Frame	1
15	EFMR81	Foot Pedal	1
16	PE2726	AC Plug (three phase)	1
16	PE3335C	AC Plug (single phase)	1
17	EFMR17	Sander Connecting Rods	2
18	PE1703	AC On/Off Switch	1
29	EFMR290A	Front Wheel Assembly	1 or 2

Wheel Assembly

NO.	PART#	DESCRIPTION	QTY	NO.	PART#	DESCRIPTION	QTY
6	PFMR 6	Locking Plate	2	24	PFMR24	Hub	2
19	HSR11/8	Exterior Snap Ring	2	25	HBA3/816X3/4	3/8" x 3/4" Allen Head Bolt	2
20	HSR123/16	Interior Snap Ring	2	26	HKS1/4	1/4" Key	2
21	PB6006	Bearings	4	27	PFMR27	Spring	2
22	PFMR22	Spacer	2	28	HBS3/8X2	3/8" Shoulder Bolt	2
23	PFMR23	Aluminum Wheel	2	Entire Assembly		PFMR5	

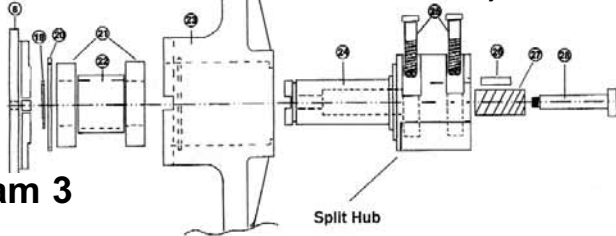
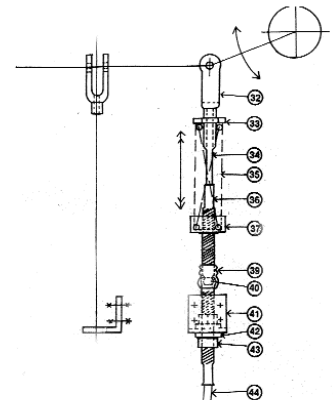


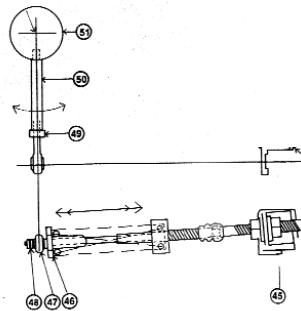
Diagram 3

Diagram 4



Throttle Assembly Cable

NO.	PART#	DESCRIPTION	QTY
32	PFMR32	Clevis	1
33	PFMR33	Upper Adjusting Spring Holder	1
34		Inner Rods	1
35	PFMR35	Centering Springs	1
36		Outer Casing	1
37	PIC1/4	Pinch Collar	2
39		Dust Boots	2
40		8 degree Flex Joint	2
41	PFMR41	Upper Bracket	1
42	HWL7/16	7/16" Lock Washer	4
43	HN7/16/20	7/16" - 20 Adjusting Nut	4
44	PFMR44	Flex Casing	1
45	PFMR41	Lower Bracket	1
46	PFMR46	Lower Adjustable Spring	1



NO.	PART#	DESCRIPTION	QTY
47	SVSPM4	1/4" x 1/4" - 28 Rod Ends	1
48	HNI10	10 - 32 Jam Nuts	2
49	HNI1/4	1/4" - 28 Jam Nut	1
50	PFMR50	Transmission Pivot Rod	1
51	PFMR51	Transmission Slug	1

SPECIFICATIONS

Width - 16 ½"
Length - 45"
Overall height - 54"
Seat height - 33 ½ - 37 ½"
Weight - 260 lbs.
Pulling capacity - 400 lbs.
Gearbox supporting capacity - 638 lbs.
Speed - 60 ft/min. infinite variable forward/reverse
Motor - 2 h.p. 230V
(optional 3 phase 230V) (480 convertible)
Drive - hydrostatic
Gearbox type - worm gear
Rear wheels - 12' X 2 5/8" polyurethane w/ cast aluminum center
Front wheels - dual setup poly/steel center 3 1/8" diameter X approx. 1 ½" width
single setup poly/steel center 4" diameter X approx. 1 ½" width
Frame - welded aluminum 3/16"-3/8"



Floor Mack with Dual Buffer Attachment

OPERATION

Initial Inspection

Please make sure you have read this owner's manual before operating the machine. If you lose your owner's manual, call 1-800-767-8953 and Mack Manufacturing will send you another.

Correct power supply must be confirmed before a qualified individual connects the unit. All Floor Mack Ryders are available in either three-phase or single-phase 220V operation. (They can be converted to 480V service)

Power cords must be of sufficient length and secured in the cord holder, away from the wheels as well as other moving parts, before operating the unit.

Assembly

Your cord holder is the only part that will need to be installed upon delivery of your Floor Mack. (Figure 1) Slide the small end into the pivoting bracket at the rear of your machine. Tighten the thumbscrews to secure the cord holder.

Follow the proper hook-up procedure for the equipment you will be attaching.

Verify that BOTH the rear wheel hubs are unlocked at this time.



Figure 1

Transporting

Your locking hubs (part #PFMR6) are located in the center of each rear wheel. (Figure 3) If the hubs are locked in place, you will need to disengage them. Pull the spring-loaded hub away from the machine and rotate ½ turn. Release the hub and it should not snap back in place, hub should now be in the locked out position. After performing this on both rear wheels, the machine should roll freely allowing you to easily push the Floor Mack.

IMPORTANT

When transporting, the Ryder must remain vertical at all times. Do not transport it on its side. Do not move your unit when attached to other machines. Use blocks and straps secure the unit so it cannot roll, tip or bounce.

Caution

Damage to internal components will occur if BOTH hubs are not properly engaged prior to operation of the Floor Mack Ryder

ELECTRICAL HOOK UP

Power is fed to the Floor Mack Ryder by a pig tail from the floor sanding machine. Be sure the sander is set up for Ryder use and all electrical cords and extensions are in good working order. The proper wire size is 14 gauge 4 wire for 3-phase. If you have any questions, call Floor Style.

Startup

1. Verify BOTH hubs are unlocked and the AC On/Off switch on the front of the seat box is in the "OFF" position. (Figure 2) Also make sure the oil level is at the full "cold" level mark. (Figure 4) Use only SAE 20W or 30W **non-detergent oil**.



Figure 3

2. Using your hand, make sure the foot pedal operates freely and returns to the neutral position. **The pedal can be moved to either the left or right side of the machine.**

3. With the sanding or buffing machine(s) hooked to your Ryder according to the proper hook-up procedure, sit in the seat. Check your arm, leg, and height distance to your sander(s) and controls. Make the necessary adjustments to the seat, linkage, and handles. Make sure everything is within comfortable reach.



Figure 2

4. Once comfortable, turn the switch to the "on" position. Look at both hubs. There should be no rotation of the hubs. If there is rotation, call Floor Style.
5. Turn your Floor Mack off. Pull each hub out, rotate 1/2 turn, tilting the machine slightly and rotating the wheel until the hub locks in place.

Do not lock in the hubs with the machine running. Damage can occur.

6. Sitting on the Floor Mack without your foot on the foot pedal, turn the machine on.

7. Then, gently press the toe of your shoe to the top of the foot pedal to move forward. Press your heel to the pedal to move in reverse.

On the three-phase model, make sure your wheels rotate in the proper direction in accordance with the pedal. It is possible to reverse the direction with improper electrical hook-up.

IMPORTANT

To reduce the chance of drum rubber separation with sanders having heavy-duty motors and weights, increasing speed and making more passes on the floor will lessen the chance of drum damage.

Slower operation under these conditions can burn the finish, generate extreme heat and damage the drum rubber.

Maintenance

Check oil regularly. If the level is lower than the reservoir, add a high grade SAE30W non-detergent oil until filled to the the cold level.

Run for five minutes then recheck.



Figure 4

Cleaning

Blow the dust off from the transmission cooling fins and transmission casing after every 12 hours of use.

Do not tip machine more than 45 degrees from the upright position.

Perform a daily check of all cords, tires and equipment to ensure proper working order.

The Floor Mack Ryder should be cleaned regularly. The finishing process of wood floor creates wood dust that can build up over time inside your machine. This may cause overheating or excessive mechanical wear. Dust can be removed with an air nozzle. Eye protection is highly recommended. The following is a caution advisory by OSHA standards regarding wood dust.

1. Avoid dust contact with ignition source.
2. Sweep or vacuum dust for recovery or disposal.
3. Avoid prolonged or repeated breathing of wood dust in the air.
4. Avoid dust contact with eyes and skin.
5. First Aid: In case of contact, Flush eyes and skin with water. If irritation persists, call a physician.

ATTACHMENT HOOK-UP

To attach you Floor Mack Ryder to specific equipment, any of the following pieces may be required. Please call for your specific Floor Mack Ryder questions

PFMR17	Sander connecting rod
PFMR17H	Hummel connecting rod
PFMR300	Dual tow bar
PFMR53R	AL12 sander right bracket
PFMR53L	AL12 sander left bracket
PFMR53B	AL8, CF12, 504 bracket
PFMR53HA	Hummel bracket
PFB1	Dual Buffer hook-up bracket

AL12 Drum Sanders

The parts needed for each of your AL12 sanders are PFMR53L and PFMR53R. Some sanders from Mack Manufacturing already have the right and left brackets installed. Depending upon whether you are connecting one or two sanders, you will need either a PFMR300 or a PFMR300T. PFMR17 connecting rods are included with your Ryder.

Right and left rear brackets require drilling in the lower rear portion of your sanders' frames. (Figure 5) The pins on your brackets pointing upward, they must measure 8 ½" apart from each other after installation. The bottom of your brackets must measure 3 ¼" from the floor. If you have any questions, contact Floor Style.



Figure 5

With the bumpers against a straight wall, line up your sanders with approximately two to six inches between the machines. Four inches is the industry standard. Make sure both units are on a level surface. Loosen the bolts connecting the tow bar ears to the tow bar. If you find it necessary to remove the ears, note the hole from which each was removed.

AL12 cont.

Attach the mounting ears to the sanders. Snug ear bolts to the tow bar. (Figure 6) Be sure each set of tow bar ears are at approximately opposite angles. (Tow bar ears are mounted below the tow bar) with the on the pins on your sanders. Center the bar so the ears on each sander are at approximate opposite angles.

Snug the ear bolts slightly.

Place the springs on the sanders' pins. Slowly pull your sanders backward for a short distance. This will align them. Tighten the ear bolts completely now. The sanders are now ready to be connected to the Floor Mack.

Put the sander connecting rods on the tow bar then add springs and clips. Back the sanders up to the Ryder and put on springs first, rods second, and clips third. The rods should appear parallel to the floor.

Your leading machine (first machine engaged in cutting) should run it's own cord through the cord holder. The other machine can be plugged directly into the front of your Ryder to complete the connections.

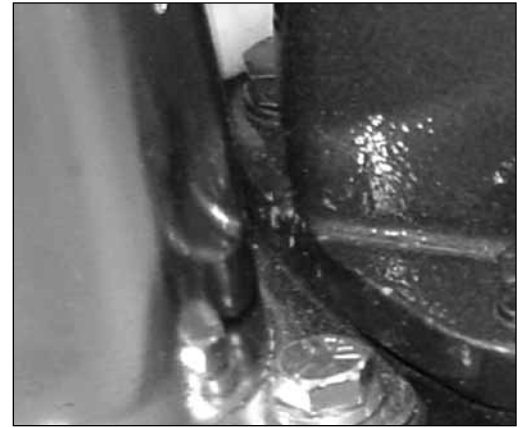


Figure 6

Clarke/Galaxy CF-12/504 & American/Alto AL8

These sanders can be attached in the same manner as the AL12 machines. The only difference is they require PFMR53B brackets on each side of each sander instead of the PFMR53R and PFMR53L. On Clarke/Galaxy models, the brackets are installed with pins pointing down.

NOTICE

It may be necessary to shorten the tow bar when using eight-inch sanders in order to sand closer to walls. If you have any questions, call an FSP technician for procedure details.

Hummel

Hummel sanders require the use of longer connecting rods. (PFMR17H) Remove the carry handles from the lower rear part of your Hummel's frame. Replace these with a PFMR53HA bracket on the right and left of each sander. The connecting pin should point upward. The rest of the connection procedure is similar to the AL12 hook-up.

Dual Buffer

Remove your Mini Mack's front wheels using an Allen wrench. Install the lower bracket plate using the 1 1/2" Allen bolts through the threaded caster wheel holes, pinching it between the castor wheels and the front cross member. (See instructions that came with the Dual Buffer)

Connect your Dual Buffer hook up bracket (PMM125DB) to your Mini Mack with the 4 1/4" shoulder bolt provided. Lift the front of the Mini Mack and slide the mounting bracket on to the Dual Buffer mounting pins. Tighten the 3/8" Allen bolts, pinching on the pins. Now you can

connect the power cord from the Dual Buffer to the Mini Mack.

When using the Mini Mack with a Dual Buffer, two weights are required for each machine. The Dual buffer requires a PFB90 weight on top of each motor. The Mini Mack requires two PMM21 wheel weights, two PMM22 retainer washers, and two HABNF1/4-20X1 screws.

The system will not operate properly without the weights.





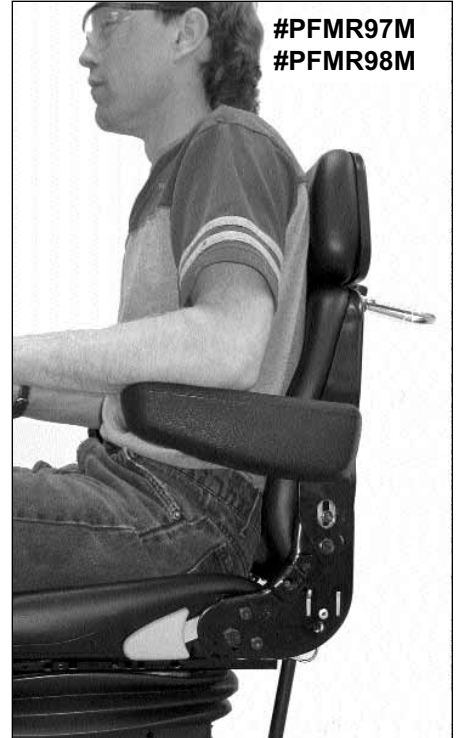
#PF62800R

Ram Horn



#EFRPC

Rotary Phase Converter



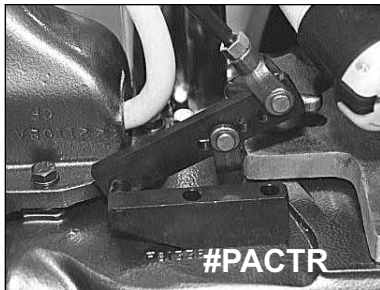
#PFMR97M
#PFMR98M

Arm Rests



#PFMR54SA

Weights



#PACTR

Easy Hand



#PACTF
#PFHA or
#PFG092F

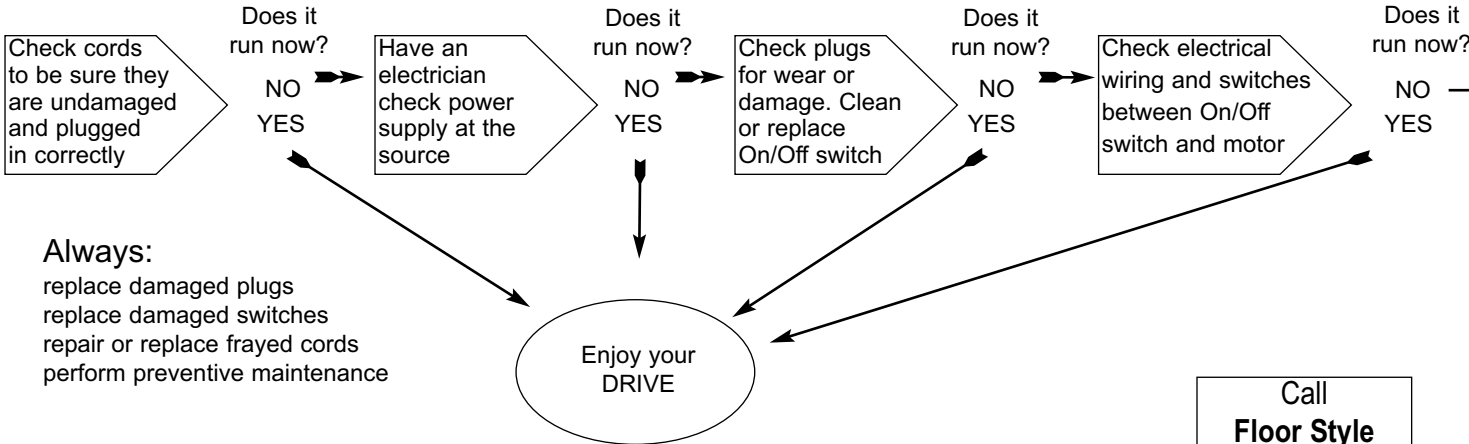
Feathering Handle

You can also order the proper cords for all your equipment directly from Floor Style. Plugs and breakers are also available.

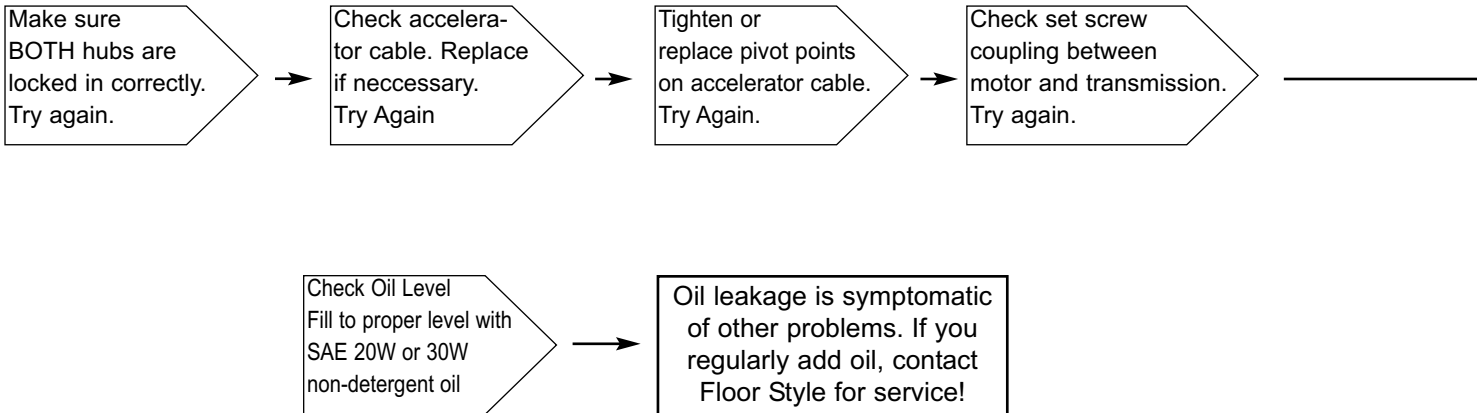
Troubleshooting Instructions

This fault-logic troubleshooting section is designed as a diagnostic aid in locating and resolving Floor Mack Ryder issues and problems. If you encounter a problem you can not correct, call one of the expert equipment technicians at Mack Manufacturing at (269)945-3970.

System does not start No motor or fan movement



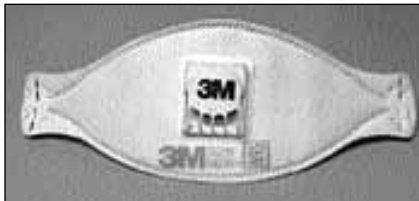
System does not move motor and fan operate



Recommended Safety Equipment available from Floor Style



Dust Masks



Ear Plugs



Safety Glasses

For all your safety equipment needs, contact Mack Manufacturing at 1-800-767-8953