

FOD-Razor®

OPERATOR'S MANUAL

2020 Revised Edition



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BEFORE YOU GET STARTED...

CONGRATULATIONS ON YOUR PURCHASE OF A FOD-RAZOR® SWEEPER.

Your new sweeper is an easy-to-use and highly effective FOD (Foreign Object Debris) collection system that will provide many hours of dependable service. In order to ensure the best results, read and follow the recommended operating procedures outlined in this manual. Please read them before operating the Sweeper and, at all times, observe the following precautions:

- **While the FOD-Razor® performs well on smooth and some rough surfaces, avoid sweeping over coarse spray chip seal, which can result in damage or excessive wear. Please contact us if you have any questions about surface wear.**
- **No tool is infallible, so stay alert! While towing the sweeper, visually monitor its performance:**
 - ▶ If the sweeper did not collect all of the FOD in a given area, sweep over it again.
 - ▶ If the equipment appears damaged, stop sweeping immediately and perform an inspection.
- **Tow no slower than 5 mph (8 kph) and no faster than 25 mph (40 kph). For best results and longest service life, stay with 10 mph (16 kph) to 15 mph (24 kph). Proceed with caution when:**
 - ▶ Sweeping around people, parked or moving aircraft or vehicles, or other sensitive equipment.
 - ▶ During windy or rotor/prop wash conditions, which can lift the mat off the ground, possibly striking nearby objects.
- **The Safety Release mechanism is designed to release the sweeper from the tow vehicle if it becomes stuck on an immovable obstruction. However, this feature may not prevent damage in all circumstances. So it is very important that you:**
 - ▶ Avoid sweeping over obstructions, such as tie-downs, that might snag the FOD-Razor®, potentially causing severe damage.
 - ▶ Avoid operating on coarse chip seal, unpaved soil, icy or snowy surfaces.
- **The Safety Release mechanism is located at the end of the Tow-Handle, which is bolted to the front of the mat. If desired, the Safety Release mechanism can be manually disabled by placing a pin into two small holes in the cams.**

BEFORE YOU GET STARTED...



THE FOD-RAZOR® IS DESIGNED TO:

- Collect over 98% of small FOD objects
- Operate at moderate to high speeds
- Sweep smooth and moderately coarse surfaces
- Sweep in both dry and wet conditions, including rain



THE FOD-RAZOR® IS NOT DESIGNED TO:

- Collect 100% of small FOD objects
- Collect large FOD objects, such as soda cans
- Operate on coarse spray chip seal, unpaved soil, or snow

If, after reading this manual, you have questions about FOD-Razor® operations or maintenance, contact your local distributor or contact the manufacturer directly at 800-425-8363 or info@fodcontrol.com.

TABLE OF CONTENTS

SECTION 1	Attaching the FOD-Razor® to a vehicle	5 - 10
SECTION 2	Sweeping with the FOD-Razor®	11
SECTION 3	Emptying the FOD-Razor®	12
SECTION 4	Maintenance	13
SECTION 5	Testing	13
SECTION 6	Transportation & Storage	14 - 15
SECTION 7	Parts List	16 - 18
SECTION 8	Specifications	19

Section 1

ATTACHING THE FOD-RAZOR® TO A VEHICLE

1. Lay the sweeper mat flat on the ground with the black metal Tow-Handle facing the back of the tow vehicle.



2.

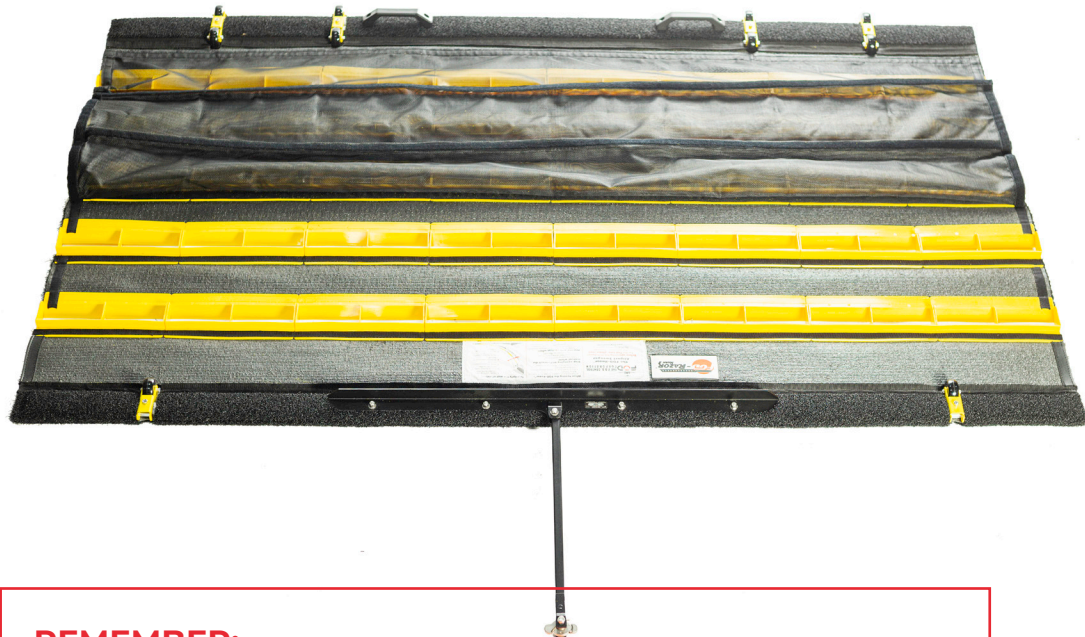
Inspect all tracking wheels. Remove any grit or sand. If damaged or worn out (wheel measures $< 3/8$ " (1cm) from edge to underside of wheel assembly) replace them.



3.

Ensure that the Retention Mesh is securely attached to the top of the sweeping mat using the hook and loop fasteners.

The Retention Mesh should not be removed during typical operation unless the Sweeper cannot be emptied through the normal "lift and shake" procedure (see section 3).



REMEMBER:

The Retention Mesh is needed to capture and collect the debris; do not operate the Sweeper without it.

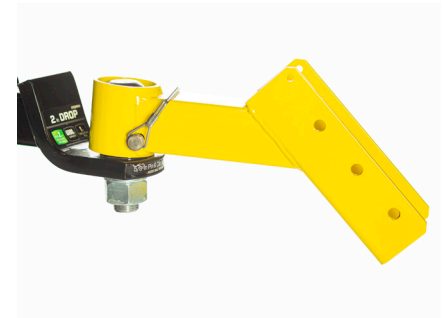
4.

Select the appropriate FOD-Razor® adapter/connector for the tow-mount on your vehicle.

- ▶ **The Straight Hitch Connector** is used when the towing vehicle has a Class III or Class IV 2 inch (50.8mm) receiver tube.



- ▶ **The Tow-Ball Adapter** is used when the towing vehicle has a tow ball in any of the following sizes: 1 7/8 in (47.6 mm), ISO & NATO 50mm (1 31/32in), or 2 inches (50.8 mm). A removable pin is used to secure the connection.



- ▶ **The Pintle Hook Adapter** is used when connecting a Duplex Tow Bar to a vehicle that has a military style Pintle-Hook. Be sure to mount the adapter securely so that it can support the weight of the additional towing equipment. The adapter should be positioned snugly against the hitch's backplate and all lateral bolts should be tightened to ensure maximum stability.



- ▶ **The Lunette Adapter** is used when towing a single sweeper with a vehicle that has a military style Pintle-Hook. This connection is fast and easy. Unlike the Straight Hitch Connector or the Tow-Ball and Pintle-Hook Adapters, the Lunette Adapter does not require a separate Adjustable Receiver connection.



5. Attach the Adjustable Receiver

Attach the Adjustable Receiver to the Adapter/Connector that was installed in the previous step. Use the stainless-steel Hitch Pins that were supplied with your purchase. Secure the Hitch Pin in place with the tether. The Adjustable Receiver can be positioned at different height intervals to fine tune the towing height.



The Adjustable Receiver is designed to accommodate the Safety Release mechanism that is located at the end of the Tow-Handle. During set-up ensure that the Safety Release mechanism is securely inserted into the hook at the end of the Adjustable Receiver.



6. Attach the Tow-Handle

The Tow-Handle has a spring activated cam release that can safeguard your mat if it becomes snagged on an immovable object during operation. Under such conditions, the spring-mounted cams will swivel, allowing the Tow-Handle to safely detach from the Receiver.



Note: The Tow-Handle safety release mechanism can be manually disabled by placing a pin through the two small overlapping holes in the cams.

7. Duplex/Triplex Assembly

DUPLEX (TWO-MAT) ASSEMBLY

- ▶ When setting up a Duplex (two-mat) Assembly, attach the Duplex Bar to your Hitch Adapter (Straight Hitch Connector, Tow-Ball, or Pintle-Hook). Use the stainless-steel Hitch Pins that were supplied with your purchase. As with the Adjustable Receiver (shown above), the Duplex Bar can be positioned at different height intervals.



- ▶ Attach the Tow-Handles to the Receiver hooks located at the ends of the lateral arms.



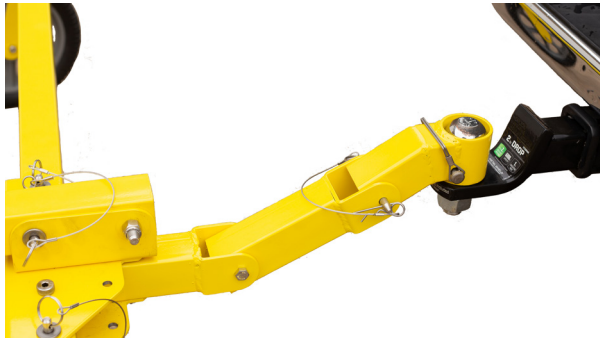
- ▶ The Duplex Assembly has a width of 16ft (4.9m) for more efficient collection.

TRIPLEX (THREE-MAT) ASSEMBLY

- ▶ When setting up a Triplex (three-mat) Assembly, secure the lateral arms and the extension arm in their unfolded positions using the included hitch pins. Inspect the wheel assemblies to ensure proper movement and rotation.



- ▶ The Triplex Assembly comes pre-configured with an integrated lunette or tow-ball connector.



- ▶ Attach the Tow-Handles to the Receiver hooks located at the ends of the lateral and rear-facing extension arms.



- ▶ The Triplex Assembly has a width of 23ft (7.0m) for maximal collection.

Section 2

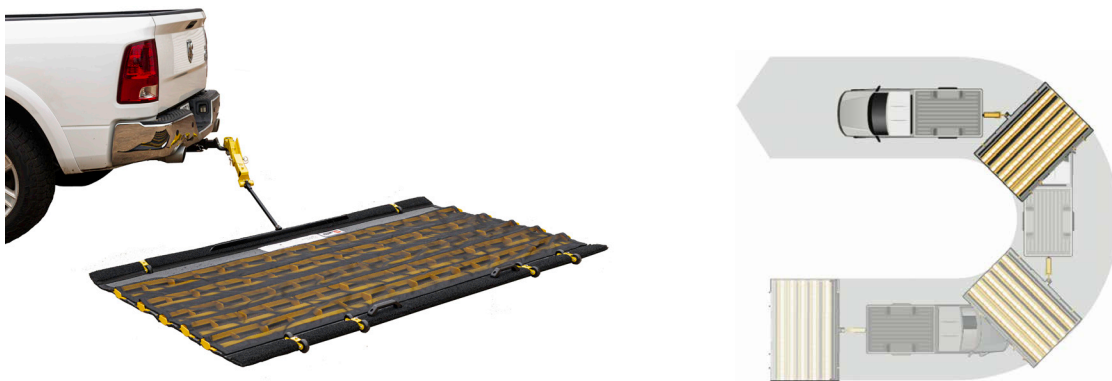
SWEEPING WITH THE FOD-RAZOR®

The FOD-Razor® is designed for simplicity and one-person operation. As you sweep, FOD will be trapped under the mat and collected in the debris collection scoops.

- Before sweeping, check the pavement for raised or sharp objects, such as tie-downs, that can snag and damage the mat. Avoid sweeping over these objects.
- With the mat attached to the tow vehicle per the instructions in Section 1, drive over areas where you wish to collect FOD.
- Drive in straight lines, except when turning.
- Watch the edges of the mat to prevent gaps in your sweeping pattern.
- Drive at speeds between 5 mph (8 kph) and 25mph (40 kph). For best results, stay between 10 mph (16 kph) and 15 mph (24 kph).
- If debris starts accumulating on top of the mat, raise the angle of the Tow-Handle by raising the Adjustable Receiver and/or Hitch Adapter. If the mat starts “flying” above the ground, reduce the angle of the Tow-Handle by lowering the Adjustable Receiver and/or Hitch Adapter.

1.

If you need to turn the vehicle around, make a U-turn. Do not back up, or you will damage the sweeper and spill the collected FOD back onto the ground.



2.

When you sweep with the FOD-Razor® for the first time, the yellow scoops will immediately start wearing down to conform to the general shape of the ground surface; this “break-in” process is normal and actually improves performance. Then, after a few hours of use, the scoops will begin to wear down more slowly, and should continue to perform well even after considerable wear.

Section 3

EMPTYING THE FOD-RAZOR®

If you see FOD spilling out of the FOD-Razor®, then the mat may be overloaded and should be emptied immediately. But don't wait for it to overload! Stop and empty it when it is no more than one-quarter full, in order to improve performance and extend the mat's service life.

To empty the mat of FOD:

1. Stop the tow vehicle; do not back up. Leave the mat attached to the vehicle and the mesh attached to the mat.
2. Using the black "shake handles" (at the rear, furthest from the vehicle), pick up the mat so that it sits a few inches above the ground.
3. Keeping it low to the ground, walk the mat around to the side, at right-angles to the vehicle.
4. Raise the mat to a comfortable height, then shake it until all of the FOD falls to the ground.



5. Walk the mat around to the other side of the vehicle and set it down, out of the way.
6. Using a broom or vacuum, sweep the pile of FOD from the ground and dispose of it.
 - Alternatively, and only if it is safe to do so, you can temporarily leave the FOD on the ground while collecting even more FOD, until you have a large pile ready for disposal.
 - After disposing of the accumulated FOD, inspect the immediate area for any debris that you might have left behind.

Section 4

MAINTENANCE

FOD-Razor® will perform even when dirty, but from time to time you may wish to wash it down.

- Clean with water and a water-based detergent.
- If you remove the mesh and it gets wet, it might shrink while drying. In that case, soak it in a bucket of water for 30 minutes, then re-install it on the mat while still wet.

Section 5

TESTING

If you are concerned about the ability of an old or damaged FOD-Razor® mat to sweep adequately, conduct this simple sweeping test (known as the “Coin Test”):

1. Designate a testing area where you can spread FOD on the ground temporarily.
2. Attach The FOD-Razor® to a tow vehicle.
3. Place several coins or washers — because this is the most difficult kind of small FOD for any sweeper to collect — directly in the path of the mat, but not directly in front of the vehicle’s tires.
4. Sweep the mat over the FOD.
5. If the mat picked up all of the FOD, continue using it during normal sweeping operations. If not, please contact us to discuss how to improve performance, perform maintenance or order replacement parts.
6. When finished, inventory the sample pieces of FOD and remove them from the test area.

Section 6

TRANSPORTATION & STORAGE

There are only two ways to store a FOD-Razor® mat:

- Lay it flat on the ground. This is also the only way to store it when wet.
- Roll it up and place it in the carrying bag.

To roll up the mat:

- ▶ Lay the mat flat on the ground.
 - ▶ If damp, wait until dry.
 - ▶ Begin folding from the rear of the mat (opposite side from the tow point).
-
- The safest way to store a mat is to dry it out, roll it up and stow it in the carrying bag, then store it dry and under cover in temperatures above 32 degrees Fahrenheit (0 degrees Celsius).
 - The safest way to carry a mat is in the carrying bag, by the center handle. If you carry the mat without the harness, make sure that someone is holding it at each end plus the middle; this prevents sagging, which can deform its shape over time.



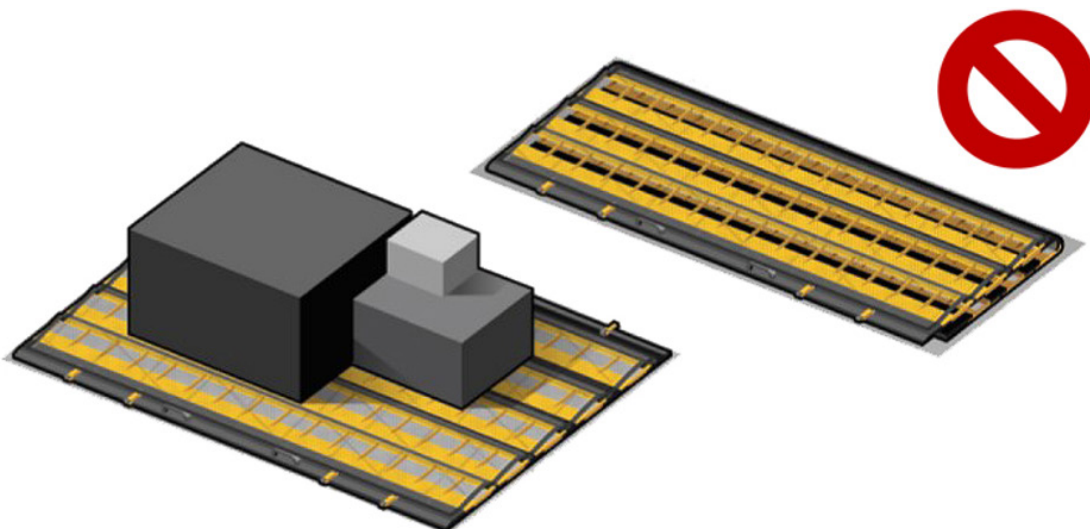
- Wheels can be provided with the carrying bag for easier transporting. These wheels can be affixed to the end of the bag, allowing you to roll the wrapped mat without risk of strain.



- Optionally, you can also use the heavy cardboard box that the mat was originally shipped in for long-term transport or storage. Before placing it in the box, roll it up and stow it in the carrying bag.

To prevent deforming a mat's shape, never do the following:







- Hang it up in the air like a piece of laundry.
- Hang it against a wall on a nail or other protrusion.
- Store heavy objects on top of it.
- Leave it without first laying it flat or rolling it



Section 7

PARTS LIST

- To order replacement parts, new sweepers or upgraded configurations, please contact your local distributor or contact the manufacturer directly at 800-425-8363 or info@fodcontrol.com and reference this parts list. If you have trouble determining which specific part(s) you need, get in touch and we'll provide you with guidance.

DESCRIPTION	PN #	
Single Package	RZR-8SP-001	
Duplex Package	RZR-DPX-001	
Triplex Package	RZR-TPX-001	
Replacement Mat	RZR-RMT-001	
Replacement Mat with FOD Boss Tow-Arm	RZR-BRM-001	
Replacement Mesh	RZR-ACS-RMS-001	

<p>Carrying Roller Bag</p>	<p>RZR-ACS-CRB-001</p>	
<p>Carrying Bag (No Rollers)</p>	<p>RZR-ACS-CRB-002</p>	
<p>Tow Ball Adapter</p>	<p>RZR-ACS-TBA-001</p>	
<p>Straight Hitch Connector</p>	<p>RZR-ACS-SHC-001</p>	
<p>Pintle Hook Adapter</p>	<p>RZR-ACS-PHA-001</p>	
<p>Coupler Adapter</p>	<p>RZR-ACS-CAD-001</p>	
<p>Lunette</p>	<p>RZR-ACS-LUN-001</p>	
<p>Adjustable Receiver</p>	<p>RZR-ACS-ARC-001</p>	

Tow Handle	RZR-ACS-TOH-001	
Dual Wheel Bracket (wheel not included)	RZR-DWB-001	
Single Wheel Bracket (wheel not included)	RZR-SWB-001	
Tracking Wheel	RZR-TWH-001	
Triplex Wheel Assembly	RZR-ACS-TWA-001	
Triplex Wheel (Tire Only)	RZR-ACS-TWA-002	



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