



Installation Instructions for RoadShark™ In Ground & Surface Mounted One Way Spike Systems

Please read all instructions thoroughly prior to installing

INSTALLATION – In Ground Flush Mounted 5500 RoadShark™

1. Excavate the placement area. Typically 18" to 24" inches deep (or more depending on drainage needs in your area) and by at least 12" longer and 8" wider than the units you are installing.

If you are installing a snow melting heater in your system, you will need to excavate to one side of the roadway where your thermo device and power will be located. See instructions with your heater cable.

2. Fill a portion of the excavated area with crushed rock or gravel for drainage, compact and level.
3. Position the cement blocks in the rock bed with the hollow opening facing upward as a base to support the traffic spike units and allow drainage. The concrete blocks elevate the spike system to allow for proper drainage. Use at least 3 concrete blocks per 3 foot spike section.
4. Install the spike units on top of the concrete blocks making sure the **top** of the spike systems are flush with the pavement surface. If installing several spike systems together place end to end. Leave a space in between each block for concrete.

Add or remove crushed rock to heighten or lower the concrete blocks until units are sitting flush with the existing roadway.

5. Make sure the teeth are orientated the correct way for the traffic flow. ***Note: RoadShark™ models - the arrow shaped spike path points to correct traffic direction.**

6. When satisfied with the placement, orientation and positioning, place concrete around the perimeter of the units and in between blocks, until flush to the roadways existing surface. **NOTE: Do not pour or allow concrete into the inside of the body of the spike units or inside the hollow web portion of the blocks as that will restrict the teeth movement and will affect the drainage.**
7. It is recommended to keep the teeth in the latched down position until ready to activate.
8. It is recommended to keep all traffic off the units until the concrete has cured. See concrete manufacturers instructions for curing time.
9. Maintain adequate warning barricades in place throughout the construction and curing process and until ready to activate.
10. When ready to activate make sure all warning signs and any other precautions you may have taken are in place. See page 4 for latch down instructions.

INSTALLATION – Surface Mounted 4500 RoadShark™

Surface Mounted Traffic Spikes may be installed using one of two methods of application or a combination of the two. The first is by bolting the units down to a concrete surface (not recommended for asphalt). The second is by affixing them to the road surface using a 2 part epoxy in the case of asphalt (tarmac) road surfaces. The surface should be clean, dry, level and as smooth as possible. The units should not be installed on gravel, a highly irregular surface, a severe incline or curve.

If you are installing a snow melting heater in your system, you will need to excavate to one side of the roadway where your thermo device and power will be located. See instructions with your heater cable.

Clean the area with a leaf blower, broom or other method to insure a clean and dry surface.

Mark the location with a chalk line or other suitable mark to assist in aligning and locating the units in the desired position. You may remove the toothed top plate on the RoadShark™, setting it to the side and use only the base plate to determine your placement of all spike system sections. The base plate is not as heavy as the toothed top plate and this will make it easy to position the sections and adhere or bolt in to place. Leave about a 1/4" gap between each base plate. Prior to permanent mounting, test the alignment of the base plate and top plate sections making certain they line up correctly. Once the base plates are secured to the roadway, you may place the toothed top plates on to the base plate and bolt them together.

It is recommended to keep the teeth in the latched down position until ready to activate.

Epoxy to Asphalt Surface Mounted Installation

1. If your surface is asphalt the best method of application is using Construction Grade Epoxy supplied by Monsoon Mfg LLC or your local hardware vendor.
2. Turn each spike and end cap over on to the cardboard boxes the units arrived in (this will protect the beautiful powder coated finish from becoming scratched by the road's surface) and place close to but not in the exact installation location. The epoxy has a relatively short curing time and proper positioning of the segments can be facilitated by having them aligned and positioned close to the installation location.
3. Follow the epoxy manufacturer's instructions for mixing and preparing the epoxy that will be used to affix the segments to the road's surface. It is advised that several items including rags, cardboard or the like be available for clean up of any epoxy overrun that may be encountered during installation.
4. Apply a coating of epoxy with a stiff brush or putty knife along the front edge and back edge and along each cross member coating all of the parts of the bottom plate that will contact the road surface.
5. After application of the epoxy turn the segment over and place in the previously marked position. Check the teeth position to make sure they are in the correct direction for the traffic flow. *Arrow shaped spike path points to correct traffic direction.*
6. After all the toothed segments are installed, the end caps can then be installed in a like manner.

Bolting to Concrete Surface Installation

When bolting into concrete (not recommended for asphalt) drill holes in the road surface in the corresponding hole on each segment.

Place your anchors per manufacturer's instructions. Do not use an anchor that will stick up above the traffic control unit. The recommended product is a ½" Large Diameter Tapcon Concrete Anchor or "LDT" by SIMPSON STRONG TIE, REDHEAD or similar. The length should be between 4" and 6". Length will depend on the thickness of the roads surface. We recommend a Stainless Steel LDT to ensure a long lasting rust free anchor. *(RoadShark™ models - bolt bottom base to concrete*

using the 8 bolt holes. After the bottom base unit is secured to the concrete, replace toothed top plate section and bolt to bottom base unit)



Latch down procedure: Depress the spikes with one hand while rotating the security bolt counter-clockwise approximately 1/4" (using the security tool that is provided with each order) then stop, checking to make sure that the spikes stay down when releasing your hand.

Reverse the procedure to return the spikes to an upright, functioning position. Rotate the security bolt clock-wise to a tightened position. This will allow the spikes to travel upward. For heightened security, remove the security bolt and store with the security tool. This will prevent anyone with a matching security tool from utilizing the latch down system.

This latch down procedure takes just a couple of minutes to perform to your entire traffic spike system. This will allow traffic to travel in both directions over the spike system. (Patent Pending)

MAINTENANCE

It is necessary to maintain your RoadShark™ Traffic Spikes and all other brands consisting of periodic inspection insuring proper tooth and shaft movement and cleaning of any debris that may have settled or lodged inside the controller. Accumulated debris can be vacuumed, blown or manually cleaned out by unbolting the top-plate, which gives free access to the inner cavity of the unit. If debris is allowed to build up the unit will malfunction which could cause damage to the unit or to vehicle tires traveling in the correct direction. The accumulation of organic matter and debris may cause premature rusting and deterioration of steel components.

With proper installation and maintenance, you will benefit from many years of cost-effective and reliable directional access control.

If you have any questions please visit our web site www.TrafficSpikesUSA.com or call 520-303-4444 or E-mail us at Christine@TrafficSpikesUSA.com

SAFETY

***Signage** - Warning signs are imperative to provide sufficient notice of the danger to drivers and to pedestrians and may be required by local ordinance. Illumination of the teeth, especially in areas adjacent to pedestrian traffic, is also important if the area will be accessible after daylight.*



***Ninety Degree Rule** - Traffic Spike Systems must be installed in such a manner that traffic flows over the teeth at a strict 90-degree angle (tire parallel to the teeth). Complete vehicle alignment and perpendicular passage over the units must be assured for front and rear axles. Allow a minimum of 15' to 20' in either direction of the traffic spike units between any turns required of vehicles. Under no circumstances should traffic controllers be installed on a curve, or in an area where vehicles will not be assured of complete perpendicular passage over the traffic controller for front and rear axles.*

***Five MPH Rule** - It is absolutely essential that traffic over the spike units be slowed to a maximum speed of 5 miles per hour as traffic cannot exceed 5 MPH when traveling over the traffic spike system. It is recommended to employ speed bumps as necessary to slow traffic.*

MONSOON MFG LLC

3 Year Warranty

MONSOON MFG LLC WARRANTS FOR A PERIOD OF 3 YEARS TO THE ORIGINAL PURCHASER THAT EVERY ROADSHARK™ PRODUCT IS FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL, UNDER NORMAL USE AND SERVICE. ALL MOVING PARTS, TO INCLUDE BUT NOT LIMITED TO TEETH, SHAFTS, STEEL PLATE ETC. ARE WARRANTED FOR 3 YEARS AGAINST DEFECTS IN WORKMANSHIP OR MANUFACTURE UNDER NORMAL USE AND SERVICE. MONSOON'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO THE REPLACEMENT OR REPAIR, AT MONSOON'S OPTION, COMPLETELY WITHOUT CHARGE FOR MATERIAL OR LABOR, OF ANY PART FOUND DEFECTIVE BY MONSOON. SHIPPING CHARGES REMAIN THE RESPONSIBILITY OF THE PURCHASER. NORMAL WEAR PARTS, SUCH AS, SPRINGS MAY NEED TO BE REPLACED ON OCCASION AND ARE NOT COVERED UNDER WARRANTY.

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Monsoon Mfg LLC will not be responsible for property, vehicles, tires, or personal damage resulting from improper/proper installation, abuse or wrong way vehicles. Monsoon Mfg LLC will not be responsible for repairing malfunctions or replacing parts resulting from improper installation, abuse or wrong way vehicles. Replacement parts needed in order to repair damage or malfunction caused by improper installation, wrong way vehicles or abuse is not covered under this warranty.

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