



RoadQuake® Safety System

Temporary Portable Rumble Strip (TPRS)

Product Guide

RoadQuake® 2F TPRS | RoadQuake® T-Handle™ | RoadQuake® 2F CRIB® Cargo Carrier



Quik-Detach™ CRIB® Mounting System | RoadQuake® 2F Retrieval System



RoadQuake® Safety System

For faster, safer deployment and removal of RoadQuake® 2F Temporary Portable Rumble Strip.

RoadQuake® 2F TPRS



RoadQuake® 2F CRIB® Cargo Carrier



RoadQuake® T-Handle™



Lifting RoadQuake is easier, faster, safer:

- Reduces possibility of superficial stress caused by lifting, carrying RoadQuake TPRS.
- Sturdy, comfortable, plastic grip with galvanized steel foot for durable outdoor use.
- 4.5" W x 11" H, 22 oz. Stores in toolbox, console, or glovebox.

RoadQuake TPRS alerts distracted drivers to changing road conditions.

Ideal for work zones where daily installation and removal is required:

- Pilot car or flagging operations
- Lane closures
- Traffic safety checkpoints
- Routine maintenance projects
- Paving operations

RoadQuake Safety System Benefits:

- Workers can deploy and move TPRS arrays faster.
- Workers are less exposed to traffic.
- CRIB and T-Handle reduce potential for superficial stress caused by lifting and carrying RoadQuake TPRS.



Quik-Detach™ CRIB® Mounting System



RoadQuake® 2F Retrieval System

RoadQuake TPRS is:

Temporary - No nails or glue are needed for installation and use. Quick installation and removal, and no cleanup.

Portable - No installation equipment needed. A crew of 2 can install an array in minutes.

Durable - 3-5 year life under normal conditions. Suitable for use in rain and temperatures of 0° to 180° F and in speeds up to 80 mph.

RQ TPRS meets Section 6F.87 of the MUTCD, 2009 Edition.

RoadQuake[®] 2F TPRS

Designed to reduce accidents and save lives, RoadQuake 2F TPRS alerts distracted drivers to changing road conditions, like work zones and checkpoints.



RoadQuake 2F TPRS features a convenient, one-piece, folding design.



Folds for easy storage and transportation



Unfolds for easy deployment

RoadQuake 2F TPRS Features:

- Meets Section 6F.87 of the *MUTCD*, 2009 Edition.
- Generates the same level of sound and vibration as milled strips.
- For posted speed limits up to 80 mph and temperatures from 0° to 180° F.
- 13" W x 3/4" H x 132" L when unfolded. Covers an entire lane.
- Folds to a compact 66" length. Weighs 110 lbs.
- Ergonomic handles make installation and storage easy. Non-slip textured surface helps to keep RoadQuake 2F TPRS in place.
- Bevels on both sides take the guesswork out of installation.
- Hinge links meet ANSI Standard for master chain link, size 60-2.



US Patent No. 7,736,087. Other Patents Pending.

RoadQuake® 2F TPRS

Deployment and Unfolding Instructions:

For more information on the use of RoadQuake 2F TPRS, contact us for a complimentary copy of our *Best Practices for Optimal Use of RQ TPRS* guidebook.



Step 1:

Do not pick up the non-hinged side of RoadQuake 2F TPRS by hand. Use carrying strap, provided by PSS, for non-hinged side. Or use RoadQuake T-Handle for either side.

Use of hands for hinged side only is acceptable.



Step 2:

Once in place, remove the carrying strap from the non-hinged side.



Step 3:

Then, simply unfold the rumble strip.



Step 4:

Place in position.

CAUTION!

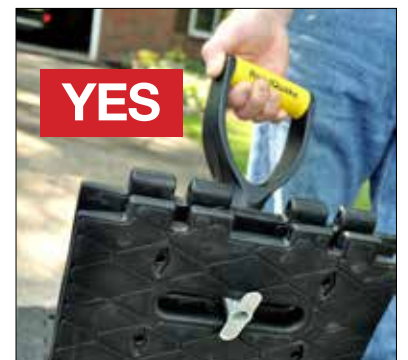
Proper Handling of RoadQuake® 2F Temporary Portable Rumble Strip (TPRS)

Do not put your hand through both handles of the non-hinged side of a folded strip when transporting RoadQuake 2F TPRS.

Doing so may cause severe pinching or a more serious injury.



If carrying by hand, use the carrying strap or RoadQuake T-Handle on the non-hinged side to transport RoadQuake 2F TPRS. PSS ships 1 strap with each RoadQuake 2F unit.



RoadQuake® 2F CRIB® Cargo Carrier

CRIB is a fully integrated cargo carrier designed specifically for the transport, deployment, removal, storage and safekeeping of RoadQuake 2F TPRS.



CRIB holds a maximum of 6 each RoadQuake 2F TPRS in their folded position. That's enough to deploy 2 each 3-strip arrays. Because CRIB mounts to the exterior of a vehicle, CRIB eliminates the need to find extra space in crowded vehicles.



CRIB mounts to the vehicle receiver using a Pintle mount. PSS includes an adjustable Pintle mount with each CRIB.

Stainless steel ball-bearing rollers at both ends facilitate easier deployment and removal.

RoadQuake® 2F CRIB® XL Cargo Carrier



CRIB XL shown with CRIB Guide Markers

CRIB XL holds 12 RoadQuake 2F TPRS.

CRIB Benefits:

- Deployment and removal of an array of RoadQuake 2F TPRS can be a one person job.
- Reduces superficial stress to workers that could be caused by lifting and carrying RoadQuake 2F TPRS.
- Reduces overall deployment and removal time, when compared to RoadQuake 2 modular TPRS.
- Eliminates the need to find extra space in crowded vehicles.
- Places RoadQuake 2F TPRS in alignment with deployment location.

Use RoadQuake 2F Retrieval System with either CRIB or CRIB XL!

Feature	CRIB	CRIB XL
Dimensions, W x H x L	17.5"x13.375"x70"	17.5"x23.562"x70"
Material, Color	Tube Steel, Yellow	Tube Steel, Black
Weight, lbs., Empty	132	200
Strip Capacity	6	12
Strip Weight, lbs.	660	1,320
Total Weight, lbs.	792	1,520
Mount Required	Class IV or V Receiver	Custom, by User
Pintle Mount	Standard	n/a
Quik-Detach, 54 lbs.*	1 each, Optional	2 each, Optional
RoadQuake T-Handle, 2 each	Standard	Standard
Transport Straps, 2 each	Standard	Standard
Guide Markers, 2 each	36" L, Optional	48" L, Optional
Conspicuity Tape, 3 sides	Standard	Standard

*Not included in Total Weight.

CRIB® CARGO CARRIER MOUNTING SYSTEM

With Quik-Detach, users can now attach or remove CRIB Cargo Carrier with lifting equipment!



For faster, safer mounting and removal of RoadQuake® 2F CRIB® Cargo Carrier.

Quik-Detach is the newest component of the RoadQuake Safety System.

- Workers can deploy and move RoadQuake 2F Temporary Portable Rumble Strip arrays faster.
- CRIB with Quik-Detach reduces potential for superficial stress caused by lifting and carrying.

Quik-Detach sold separately.

Assembly Instructions



1. Install CRIB Pintle mount into vehicle receiver.
(Pintle mount shipped with each CRIB.)



2. Install Pintle mount plate with hooks facing up. Use 4 each 1/2-13 bolts and lock nuts. Adjust Pintle mount plate vertically to assure adequate ground clearance. (See also Step 4.)



3. Shown: Pintle mount plate installed.



4. Install CRIB plate on CRIB. Use 4 each 1/2-13 bolts and lock nuts. Adjust height vertically as required. (See also Step 2.)



5. Install head of bolts on inside of CRIB plate. Shown: Lock nuts on outside of CRIB plate.



6. Shown: CRIB plate installed.



7. Attach CRIB to the hooks of the Pintle mount plate. (Can be attached manually, or with lifting equipment.)



8. Insert locking pins in two places, one on each side.



9. Shown: CRIB attached to vehicle using Quik-Detach, with two locking pins in place.

RoadQuake® 2F Retrieval System

Retrieval System pulls RoadQuake 2F Temporary Portable Rumble Strips into CRIB Cargo Carrier with little manual effort.



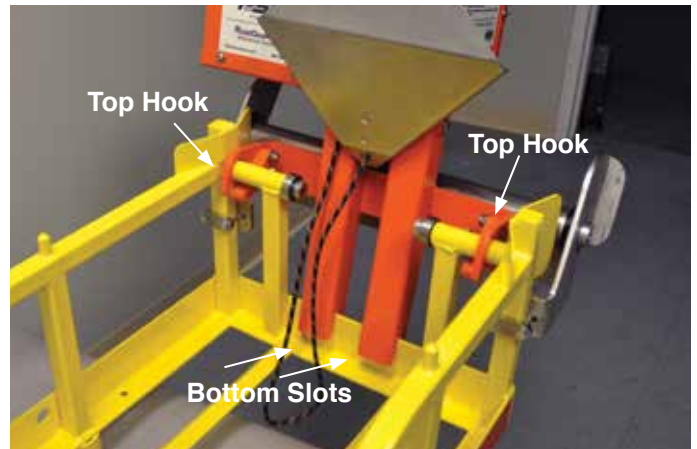
Retrieval System:

- Reduces workers' exposure to live traffic.
 - Reduces manual exertion, possible injury.
- With Retrieval System, removal of RoadQuake 2F Rumble Strips is a one person operation.

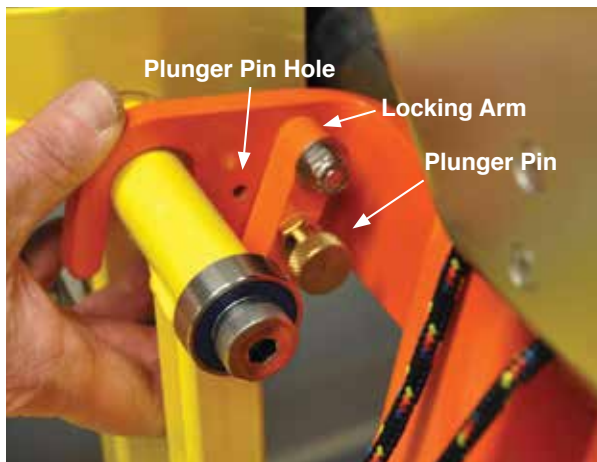
Retrieval System mounts easily to CRIB® devices!



Mounting Hooks and slots attach quickly to either end of CRIB. Rumble Strips can be retrieved from driver or passenger side.



Mounting Hooks and Slots engage with CRIB frame. Hooks and slots provide stability during retrieval process.



Lock Retrieval System onto CRIB.

- Locate the Locking Arms on the Retrieval System, near the top hooks.
- Simultaneously pull the Plunger Pin out, and rotate the Locking Arm towards you until the Plunger Pin fully engages with the Plunger Pin Hole.



Locking Arm is now in the locked position.

RoadQuake® 2F Retrieval System

COMPONENT FEATURES



Hook attaches to RoadQuake 2F Rumble Strips. No fasteners required.

Angular design of Retrieval Hook aids in alignment of rumble strips during retrieval.

See following pages for instructions on use of Retrieval System.



Wireless remote stores safely, conveniently, ready for the next retrieval.



Power Pack:

- Self-contained, charging electrical system
- Charges from a 12 Volt automotive system
- Maintains charge when plugged into running host vehicle
- Weather resistant

RoadQuake® 2F Retrieval System

Overview: How to retrieve RoadQuake 2F TPRS from the roadway using our Retrieval System!

(Pictures used on pages 9 and 10 show a pre-production model.)

WARNING!

- Read full instructions prior to use.
- Always use caution when working in and around live traffic. Pull Retrieval hook out to the rumble strip array.
- RoadQuake® 2F Retrieval System is designed to only retrieve PSS RoadQuake 2F Temporary Portable Rumble Strip from the roadway.
- Inspect Retrieval System before use. Replace worn or damaged parts.
- Keep away from all moving parts. Personal injury could result.
- Do not operate Retrieval System unless it is properly mounted to RoadQuake 2F CRIB® Cargo Carrier.
- Upon work completion, remove Retrieval System from CRIB. Stow safely.



The pictures here are from our "Introducing RoadQuake 2F Retrieval System" video. Watch the video on the PSS YouTube Channel!

Use QR Bar Code or <http://bit.ly/2I4Tlhw> to watch videos.



1. Mount Retrieval System to CRIB® Cargo Carrier. Verify that the Retrieval System is fully engaged.



2. With Power Pack stored safely in the truck, connect the power.



3. Always use caution when working in and around live traffic. Pull Retrieval hook out to the rumble strip array.

RoadQuake® 2F Retrieval System

Overview: How to use Retrieval System, continued...



4. Attach the Retrieval Hook to the handle of the rumble strip. Attach the hook underneath the rumble strip.



5. Press the "In" button on the Remote to return the rumble strip to CRIB Cargo Carrier.



6. Retrieval System will pull rumble strip into CRIB. Repeat sequence as necessary until all RoadQuake 2F TPRS have been removed from the roadway.



7. Retrieval System automatically stops when strap is fully rewrapped. Remove Hook from rumble strip in CRIB to repeat the process.



8. When all rumble strips have been returned to CRIB, and the job is complete, turn off Power Pack, disconnect from motor, and place Retrieval System in the truck for safe storage and transport.

RoadQuake® 2 TPRS

Designed to reduce accidents and save lives, RoadQuake 2 TPRS alerts distracted drivers to changing road conditions, like work zones and check points.



Ergonomic handles

- RoadQuake 2 is 13" W x 3/4" H x 45" L. Weighs only 35 lbs.
- Generates the same level of sound and vibration as milled strips, and higher levels than glue-down strips.
- For posted speed limits up to 80 mph, and temperatures from 0° to 180° F.



- RoadQuake 2 is easy to transport and store.
- Ideal when transport and storage space is limited.
- Fits in virtually any vehicle.



- Assembles in minutes. No tools required.
- Features beveled edges on both sides for easy installation.
- For complete assembly instructions, see pages 8 & 9.



- 3 sections make 1 strip, 11' long, that traverses an entire lane.



- Installs in minutes.
- No glue, adhesives or nails required.
- No tools or equipment needed.

RoadQuake 2 meets
Section 6F.87 of the
MUTCD, 2009 Edition.

Watch our YouTube
RoadQuake 2 Assembly Video.



US Patent No. 7,736,087. Other Patents Pending.

RoadQuake[®] 2 TPRS

RoadQuake 2 TPRS Assembly Instructions.



RoadQuake 2 is a temporary device; no glue, adhesives or other fasteners are required for installation. RoadQuake 2 simply conforms to the surface of the road.



Prior to assembly or installation, sweep areas clear of gravel and other debris that may cause strips to move.

The only tool you will need for assembly is a 4x4 piece of wood, or an object of similar size.



The goal of assembly is to properly engage tabs with slots.



Tabs and Slots:

RoadQuake 2 is ready-to-assemble. No hardware is required.

In the picture to the left, the section on the left is the “tabbed” section; the section on the right is the “slotted” section.

Note that both long edges are beveled, so that either edge can face traffic.



The channel under the tabs, shown here...



...must engage the rod on the slotted end, shown here.

RoadQuake® 2 TPRS

RoadQuake 2 TPRS Assembly Instructions, continued.



Put the 4x4 under the slotted end of the first section.
The wood will **ELEVATE** the slotted end.
Next, pick up the second section with the tabbed end down and nameplate facing you.
Straddle or stand next to the elevated section.



INSERT the tabbed end into the elevated slotted section.



ENGAGE the rod on the slotted end.



KICK the section in your hand to fully engage the channel on the rod.

Kicking Style

Picture 4 shows a sideways, soccer-style kick, using the instep of the foot. Straight-on, football-style is also acceptable. Simply straddle the section on the ground, insert and engage the section in hand, and kick straight-on, in football-style. Then proceed to Steps 5, 6 and 7.



Slowly **DROP** the section...



REMOVE the wood and...



STOMP on it, to complete the assembly.
You can now add a third section to make a full 11 foot strip that spans an entire lane.

Incorrect assembly



These sections have not been assembled correctly. Please repeat the assembly steps. But first, watch the YouTube RoadQuake 2 Assembly Video!

Correct assembly



Properly assembled sections should be smooth and flat, as shown in the picture above.

RoadQuake[®] 2 RetroFit[™]

Converts RoadQuake 2 TPRS to RoadQuake 2F TPRS.

RetroFit Unit



Complete RoadQuake[®] 2F TPRS RetroFit unit assembled



Unfolds for easy deployment

Alerts drivers to changing road conditions...

- For posted speed limits up to 80 mph and temperatures from 0° to 180° F.
- RoadQuake 2 RetroFit is 132" long when unfolded. Covers an entire lane.
- Folds to a compact 66" length. Weighs 107 lbs.
- Meets Section 6F.87 of the *MUTCD*, 2009 Edition.



Folds for easy storage and transportation

Ideal for Work Zones where daily installation and removal is required

- At 13" W and 3/4" H, RoadQuake 2 RetroFit generates the same level of sound and vibration as milled strips.
- Ergonomic handles make installation and storage easy. Non-slip textured surface helps to keep RoadQuake 2 RetroFit in place.
- Bevels on both sides take the guesswork out of installation.
- Hinge links meet ANSI Standard for master chain link, size 60-2.

US Patent No. 7,736,087. Other Patents Pending.

RoadQuake® 2 RetroFit™

Assembly instructions:

Simply attach RoadQuake 2 units to our RetroFit device, and apply pavement marking tape.



1.

RoadQuake 2 RetroFit Folding Rumble Strip.



2.

Elevate each end of RetroFit to connect RoadQuake 2 modular units.



3.

Install RoadQuake 2 units to both sides of RetroFit.



4.

Before applying tape, clean 4" around the assembled joints. Use soap and water or degreaser detergent to remove all dirt and debris. Rinse with clean water. Allow to dry.



5.

Use a brush or coarse rag to apply a generous coating of denatured alcohol to the clean tape application surface. Allow to dry.



6.

Apply flame treatment to tape application surface. For best results, use the tip of the torch across the entire application surface, constantly moving back and forth. Do not overheat or burn the rubber surface. Flame treatment will warm the surface of the rubber and burn off all remaining contamination to maximize adhesion.



7.

Center the 12.5" long tape at equal distances from the outside edges. Apply tape about 1/2" from the inside edge of the RoadQuake 2 handle. Make sure tape is properly aligned prior to final application.

White reflective tape shown for demonstration purposes. Standard color for RetroFit shipments is black.



8.

Once tape is properly positioned, apply firm pressure along the complete tape surface to eliminate trapped air pockets and assure good adhesive bond. For best results, allow minimum 24 hour adhesive cure time prior to rumble strip deployment.



9.

Assembled RoadQuake 2 RetroFit Rumble Strip.

Periodically examine the reflective tape for excessive wear or loss of adhesion.

Watch the YouTube RoadQuake 2 Assembly Video.



Custom Training Improves Safety.



START Group and PSS, innovators in their respective fields, have united to provide custom training - training designed specifically to improve the safety of your employees.

Beginning with a training audit or needs assessment, we create practical training programs that support and enhance your safety and training requirements.



Results of our custom training will exceed your expectations. Our trainers, experts in their life's work, will teach your employees how to perform their jobs more safely and efficiently.

To discuss your training needs further, contact Glenda Bleau, PSS Roadway Safety Consultant, at 216-409-6842 or Glenda. Bleau@PSS-Innovations.com.

