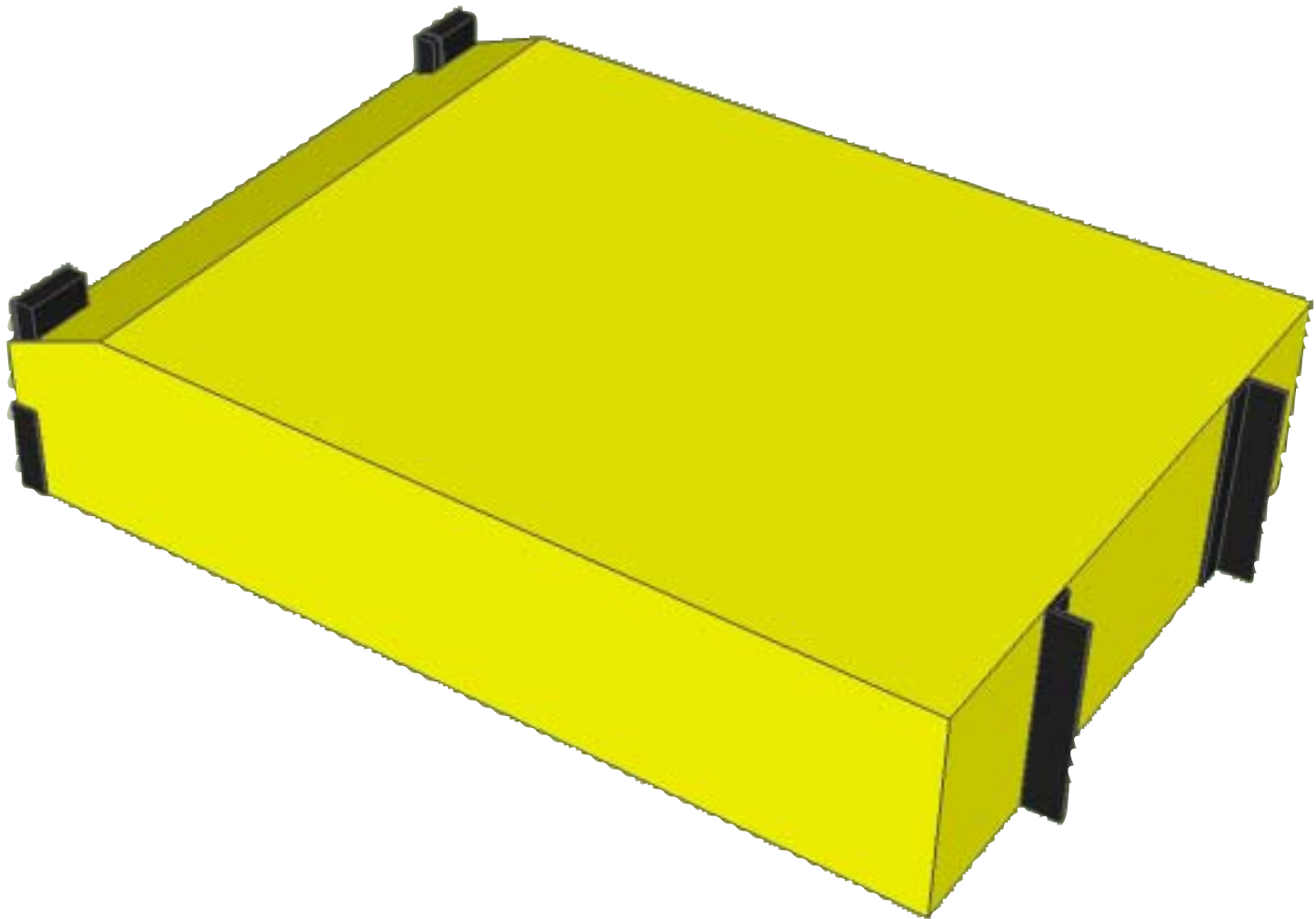


Installation and Maintenance Manual

U-MAD[®] TMA NCHRP 350 TL-2 and TL-3 Truck Mounted Attenuator



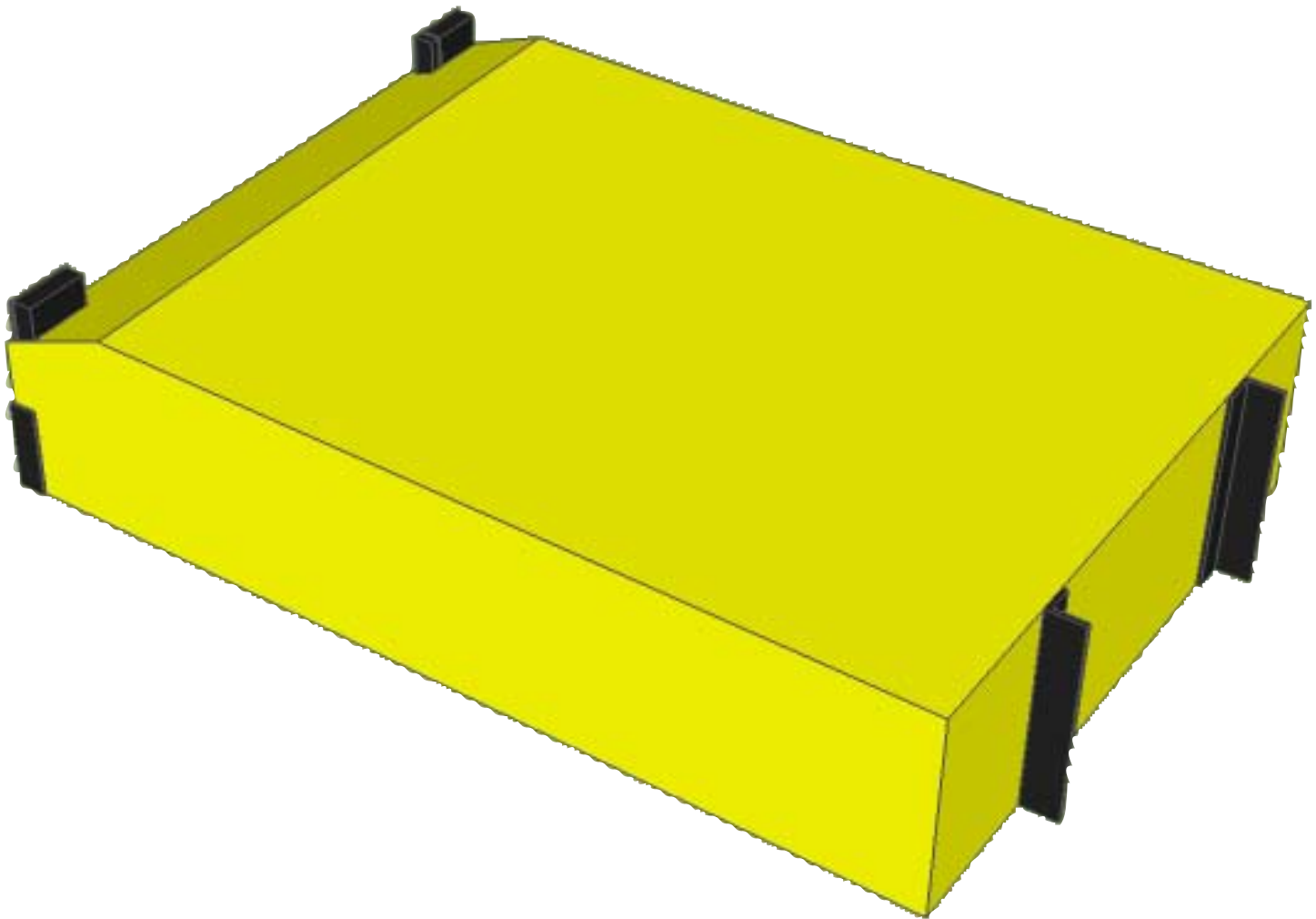
PT-UMT07
Revised 5/16/09
Copyright © 2009

BSI Customer Service Department
(888) 800-3691 [U.S. toll free] or
(707) 374-6800
Barrier Systems Sales and Service
3333 Vaca Valley Pkwy, Ste. 800
Vacaville, CA 95688
www.BarrierSystemsInc.com
email: info@barriersystemsinc.com

**READ THIS FIRST
LEER ESTA PRIMERA**

U-MAD[®] TMA

Unpacking Instructions Instrucciones de Desembalaje



PT-UMT06
Revised 5/16/09
Copyright © 2009

BSI Customer Service Department
(888) 800-3691 [U.S. toll free] or
(707) 374-6800
Barrier Systems Sales and Service
3333 Vaca Valley Pkwy, Ste. 800
Vacaville, CA 95688
www.BarrierSystemsInc.com
email: info@barriersystemsinc.com

Unpacking Instructions

U-MAD TMA

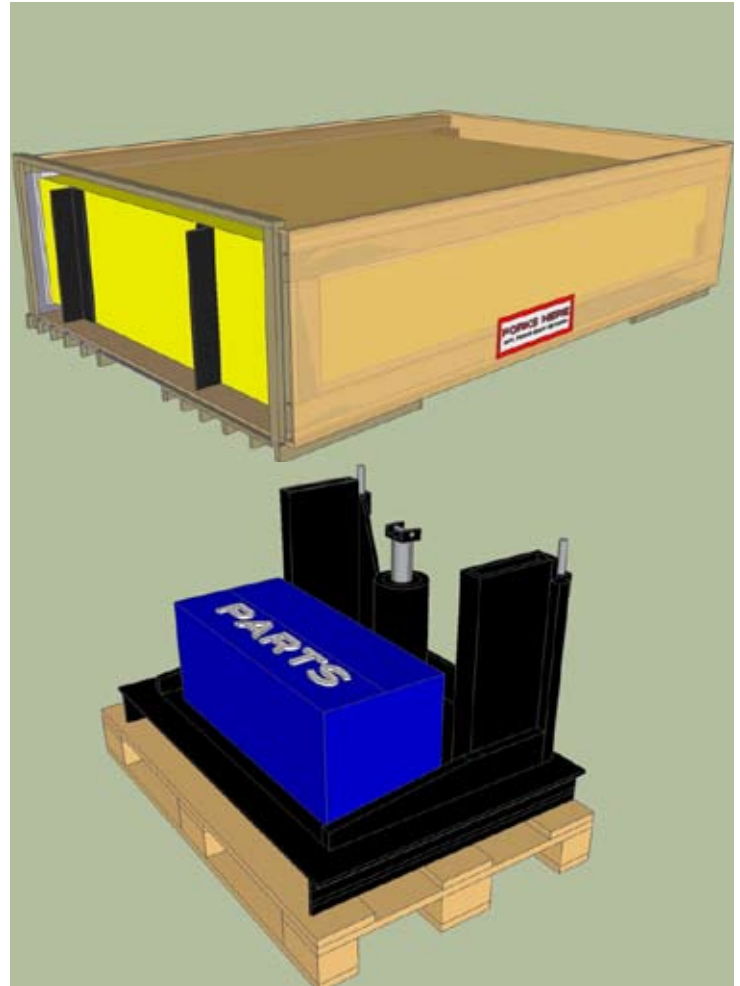
Introduction

The UMAD system packaging consist of a large crate which holds the TMA Cartridge and a second pallet which holds the L-Lift and a box of additional components.

Contact Information

If you need additional information, or have questions about the U-MAD TMA, please call the BSSS Customer Service Department at (888) 800-3691 (U.S. toll free) or (707) 374-6800.

Address:
Barrier Systems Sales and Service
3333 Vaca Valley Pkwy, Ste. 800
Vacaville, CA 95688
www.BarrierSystemsInc.com
email: info@barriersystemsinc.com



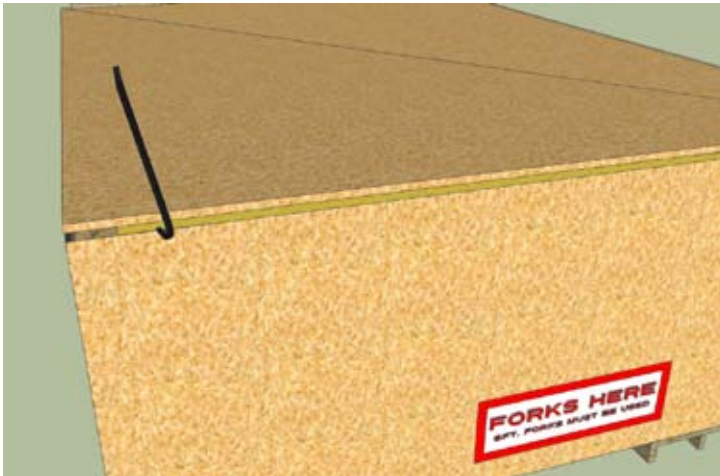
Step 1

Place the cartridge crate in an open area that will allow for access all the way around the crating. When the cartridge is being moved a fork lift with 6 ft. (2m) fork extension should be used so as not to damage the cartridge. **Only lift from marked points on the crate.**



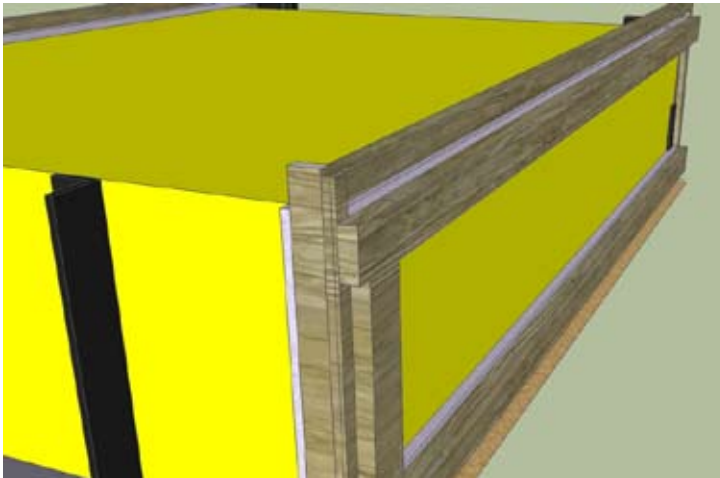
Unpacking Instructions

U-MAD TRAILER TMA



Step 2

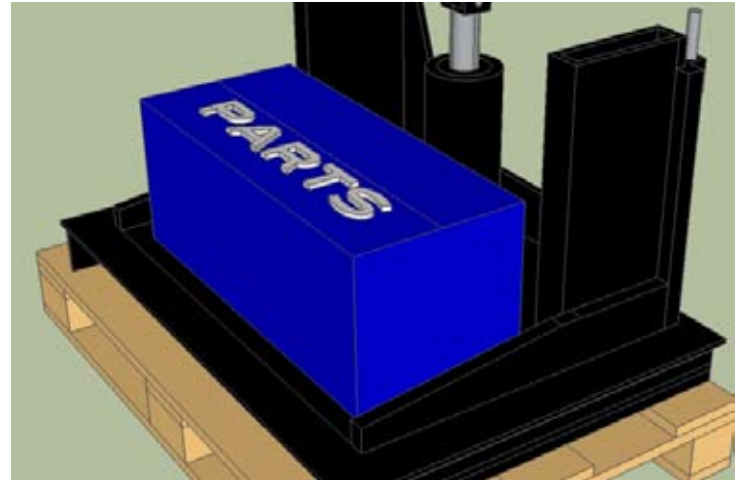
Carefully remove the plywood shell using a crowbar and hammer.



Step 3

Carefully remove padded lumber from around the cartridge. ***Do not pry against the cartridge as this will cause denting and scratching which will impede crash performance.***

If necessary, use an automotive grade polishing compound to lift minor scratches



Step 4

Once the cartridge is uncrated, remove the box of additional components and verify inventory of that box. The box will contain electrical controls, two decals to be placed in the cab of the truck as reminders for proper operation, and hardware for mounting unit to the truck (ie. bolts, brackets).



Step 5

Once verification and uncrating of Cartridge, L-Lift, and Hardware, please proceed to the Mounting Instructions in the installation manual.

Instrucciones de Desembalaje

U-MAD TMA

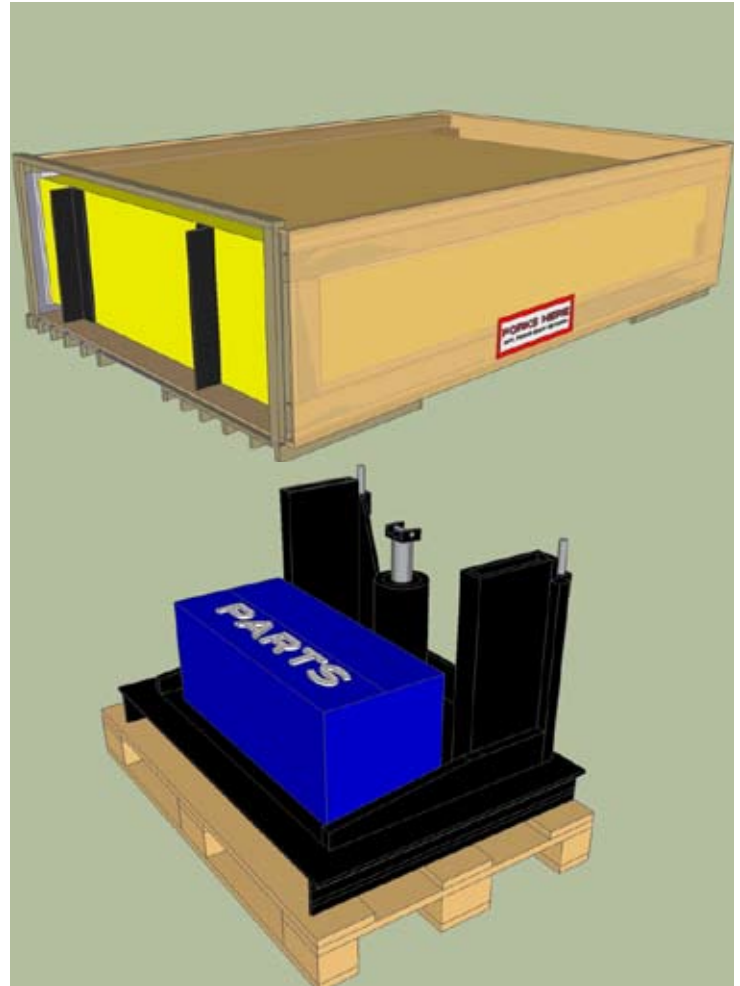
introducción

El sistema de embalaje UMAD consisten de una gran caja que contiene el cartucho de la TMA, y una segunda paleta que contiene el L-Levante y una caja de componentes adicionales.

Información de Contacto

Si necesita información adicional, o tiene preguntas acerca de la U-MAD TMA, por favor llame al Departamento de Servicio al Cliente BSSS en (888) 800-3691 (llamada gratuita) (707) 374-6800.

Dirección:
Barrera de Sistemas de Ventas y Servicio
3333 Vaca Valle Pkwy, Ste.. 800
Vacaville, CA 95688
www.BarrierSystemsInc.com
correo electrónico: info@barriersystemsinc.com”



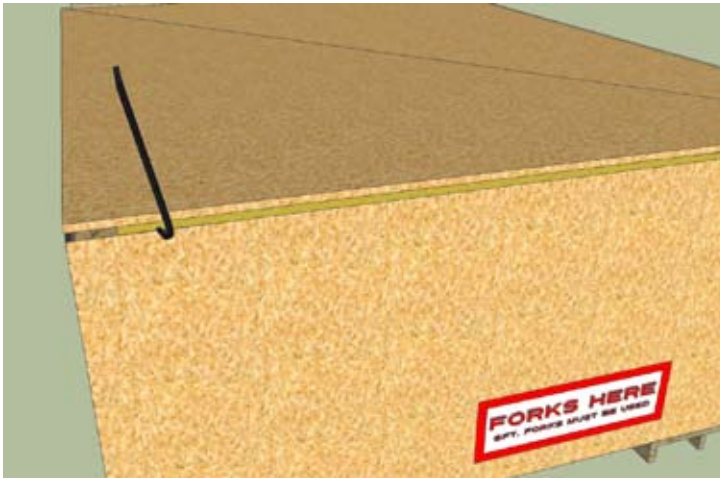
Paso Uno

Coloque el cartucho de la caja en una zona abierta que permitirá acceder a todas las jaulas en todo el camino. Cuando el cartucho se está moviendo con un tenedor levantar 6 pies (2m) tenedor extensión deben utilizarse a fin de no dañar el cartucho. **Sólo el ascensor de los puntos marcados en la caja.**



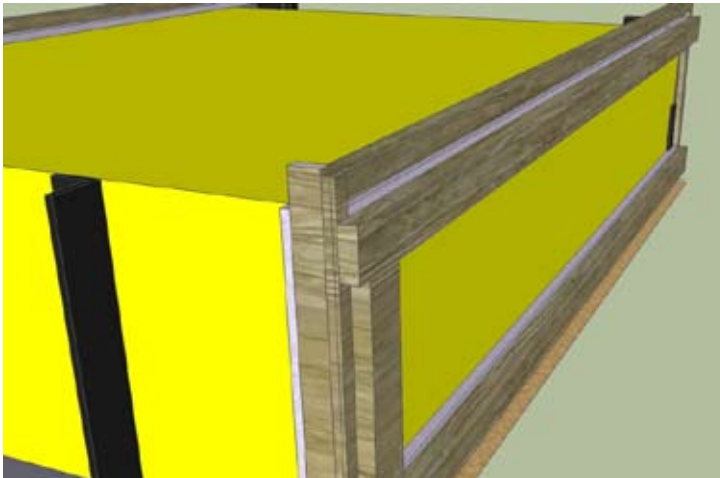
Instrucciones de Desembalaje

U-MAD TRAILER TMA



Paso Dos

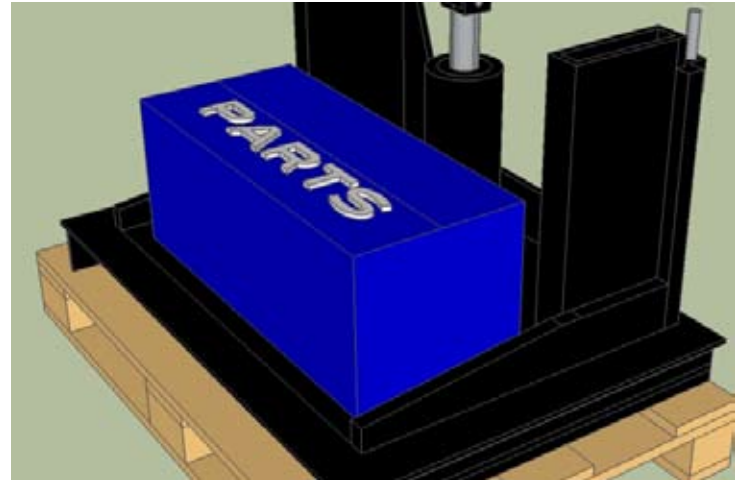
Retire con cuidado la cáscara de madera contrachapada utilizando una palanca y un martillo.



Paso Tres

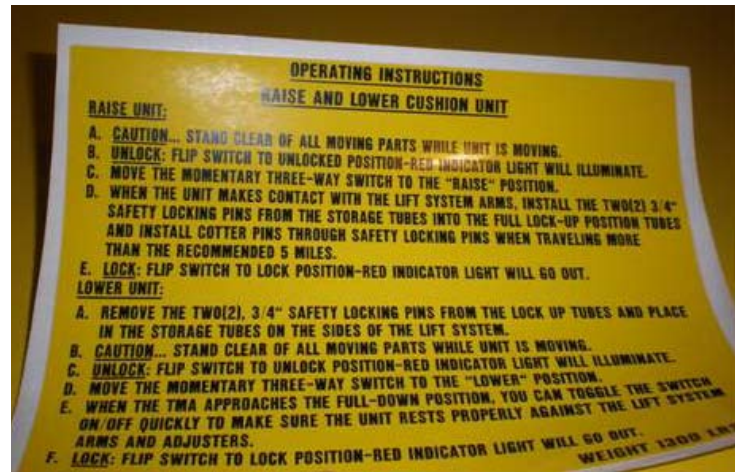
Retire con cuidado la madera acolchada de todo el cartucho. **No contra la palanca del cartucho, ya que esto causa abolladuras y arañazos que impidan el desempeño de choque.**

Si es necesario, use un automóvil grado de pulido compuesto para levantar ralladuras menores.



Paso Cuatro

Una vez que el cartucho es uncrated, quite la caja de componentes adicionales y verificar el inventario de la caja. La caja contendrá los controles eléctricos, dos calcomanías que se colocarán en la cabina del camión como los recordatorios para el correcto funcionamiento, y el hardware para el montaje de la unidad al camión (es decir, los pernos, entre paréntesis).



Paso Cinco

Una vez que la verificación y uncrating de cartucho, L-Levante, y hardware, por favor, proceda a la Instrucciones de montaje en el manual de instalación.

U-MAD® Installation and Operations Manual

Table of Contents

Introduction.....	3
Contact Information	3
Safety Instructions	3
Required Installation Tools	4
Installation Mounting Instructions	5
Operating Instructions	12
General Maintenance and Adjustments	12
Repair Policy / Limited Warranty	14

Appendix

A. Drawings	15
B. Wiring Information	15
C. Cab Control Mounting Instructions	16

U-MAD® Installation and Operations Manual

Introduction

The U-MAD Truck Mounted Attenuator (TMA) offers outstanding performance, excellent life cycle costs and quick, simple refurbishment. The U-MAD TMA is available in various sizes for workzones with speed capacities from 45 mph to 62 mph (70 km/h to 100 km/h) to supply a wide range of protection for workers, motorists and equipment. The TMAs are designed to absorb collision energy during rear-end impacts, prevent impacting vehicles from underriding the truck and reducing expensive damage to equipment.

The system offers many flexible options in lifts, mounting systems, hydraulics, and controllers to make installation, use, and maintenance as simple and cost-effective as possible.

Applications for the U-MAD TMA include stationary and slow-moving operations such as striping, sweeping, marking, road plowing, and roadside maintenance operations such as repairing crash cushions, guardrails, and road surfaces.

Contact Information

If you need additional information, or have questions about the U-MAD TMA, please call the BSI Customer Service Department at (888) 800-3691 (U.S. toll free) or (707) 374-6800.

Address:
Barrier Systems Sales and Service
180 River Road
Rio Vista, CA 94571

www.BarrierSystemsInc.com
email: Info@barriersystemsinc.com

Safety Instructions

The TMA support structure and cartridge should be rigidly attached to the frame rails of the truck, **after the support vehicle has been properly equipped with ballast and counterweights (if needed) to meet its' fully designated weight (including amenities such as an arrow panel)**. The cartridge must be a minimum of 11" (280 mm) and a maximum of 13" (330 mm) from the ground and level when in the full-down position. The U-MAD TMA must be in the full-down position whenever the unit is "in service" as either a parked protection device or as a moving protective shadow vehicle.

- All personnel should stand clear of the TMA before a qualified operator raises or lowers it.
- Lock pins must be in place when the TMA is in the travel (up) position or when traveling more than 5 miles (8 km).
- When traveling less than 5 miles with the TMA in the up position without the pins inserted, the maximum speed should not exceed 25 mph (40 km/h).
- The maximum speed in the deployed (down) position should not exceed 25 mph (40 km/h).
- Caution must be observed when attaching or detaching the TMA cartridge. Never attempt to use the force of the hydraulic power mechanism to align the pins or bolts.
- Never stand, sit, or place any objects onto a lowered U-MAD TMA. The top of the TMA should never be used for a work surface.
- Safety warning labels have been provided for the cab of the truck and the area where the control box is being mounted on the outside of the truck. Always have a qualified operator that is familiar with all of the warning labels located throughout the lift and cushion areas.

