



## **KODIAK STABILIZATION SYSTEM USER GUIDE**





# **GENERAL INFORMATION**

## **About the operating manual**

This operating manual provides important information on using KODIAK STABILIZATION SYSTEMS. Proper compliance with all specified safety instructions and guidelines is a prerequisite for safe work.

Furthermore, adhere to the local accident prevention guidelines and general safety regulations for the region in which the devices are used.

These operating instructions must be carefully read prior to starting any work! They are an inherent part of the product and must be kept in a place that is known and accessible to personnel at all times.

This documentation contains information for operating your equipment. However, you may also find information which may not directly apply to your specific equipment.

All information, technical data, graphics and diagrams contained in these operating instructions are based on the latest data available at the time of the document's creation.

We recommend that, in addition to carefully reading through the operating manual, you be trained on handling the rescue equipment (possible applications, application tactics, etc.) by our qualified trainers.

# EXPLANATION OF SYMBOLS

## Warnings

Warnings are marked by symbols in this operating manual. The individual instructions are introduced by signal words that express the severity of the hazard.

It is essential to comply with the instructions in order to prevent accidents, injuries and damage to property.



### **DANGER!**

... indicates an imminently dangerous situation that can result in death or serious injury if not avoided.



### **WARNING!**

... indicates a potentially dangerous situation that can result in death or serious injury if not avoided.



### **CAUTION!**

... indicates a potentially dangerous situation that can result in minor or light injuries if not avoided.

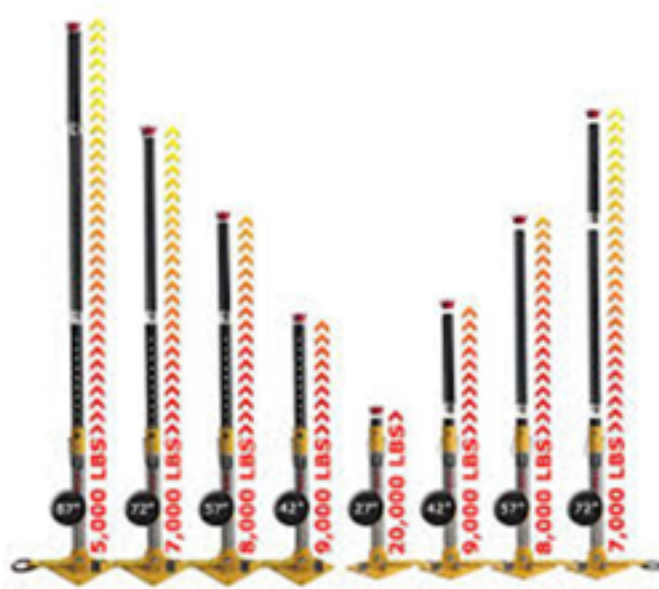


### **ATTENTION!**

... indicates a potentially dangerous situation that can result in material damage if not avoided.

# INTRODUCTION

The Kodiak Vehicle Stabilization System, uses adjustable struts, and polyester webbing to prevent unplanned movement and aid in victim stabilization while conducting a vehicle rescue.



**Strength and Height Chart for struts and extensions.**

## The Struts

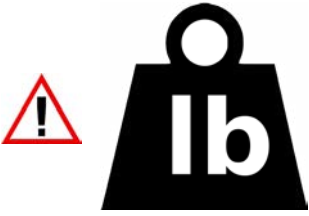
The range of adjustment is 27 inches to 87 inches. The Working Load Limit (WLL) ranges from 20,000 pounds (27 inches) to 5,000 pounds at 87 inches. Average weight of the average car, is about 3,500 pounds, not accounting for passengers or cargo.

The 2-inch-wide polyester ratchet strap is 18 feet long and has a WWL of 1,600 pounds, large "C" hook for attaching to the vehicle (anchoring the strut), and a hook with a safety catch connecting it to the strut.

The objective of shoring is to:

- A. Capture the load
- B. Support the load
- C. Distribute the load

# BASIC OPERATIONS



## Assess Load

Estimation of weight, and center of gravity of the load should be considered when selecting a stabilization/lifting system. Assess the ground conditions, and rescue techniques when applying the Kodiak strut system.



## Tips

Standard strut tip, pushes on/pulls off. Keep rubber "O" ring lubricated with a clear silicone grease/PTFE. Keep all parts clean with mild soap/water, air dry before storage.



## Height Adjustments

Removable pin that adjusts the height of the telescoping strut, works by depressing the mushroom button (on right), releasing the ball bearing catch.



## Deployment

For a vehicle on it's side the struts should be installed between 45° and 75° as measured from the base of the strut and angled up to the car, adjust length as needed. Place the tip of the strut into a place that will capture the weight of vehicle, inhibiting it from rotating/kicking out, and won't punch through. Insert the hook on a substantial part of the vehicle (nearer ground level), and pull the excess webbing through the ratchet, crank the ratchet handle several times to draw it in tight. To connect the webbing to the strut base; insert the free end of the webbing into the ratchet in the closed position, pull tight. It should not take more than 5 or 6 cranks of the ratchet to get tight. Do not allow the ratchet drum to get overloaded with webbing.



## Useful Tip

Many crews find it efficient to store the ratchet strap connected, ready for use. Always apply a well planned "Risk-Benefit" size-up to your rescue, including stabilization. It may be appropriate to apply some initial stabilization (such as using step-chocks) to help create a "safer" area so a better stabilization plan using Kodiak struts can be put in place.



Note the rounded surface of the car body, install the strut on this side first when possible.

## STABILIZATION

Vehicles resting on their roof (flipped over) will typically be tilted down by the weight of the engine leaving the rear of vehicle slightly elevated. This rear end area can be stabilized using the Kodiak struts. There are two primary applications, one is placing the struts exterior of the car rear quarter panels, the other is to open the trunk hood and crossing the struts interior to the trunk. Making this choice involves a couple of considerations:

1. Is there enough space on the sides of the car to angle the struts?
2. Do you need to access the interior space of the vehicle through the trunk or rear window and will the struts be in the way?



Stabilized exterior and interior of the trunk





*Tip could be inserted in the fuel cap opening, trunk vent, tail light assembly, or you may need to create an insertion point. Access the condition of the ground to hold the strut in position, supplement base with cribbing under the base, or pin down as needed..*

Making the triangle here also has a couple of options. Connect the ratchet strap of one strut directly to the other strut, works well and saves a step, or keeping the strut independent.

### **Kodiak Strut-Lifting Device**

This optional tool gives the user the ability to raise loads (up to 5000 pounds) 14 inches, using the rotating handle that pushes an extendable rod. Always remember to lift an inch, crib an inch to capture progress. As you lift, the center of gravity changes and an object that was stable can shift/fall. The lifting device should not be used with more than one extension tube. The Lifting Device de-rates the struts capacity equivalent of using a long extension tube. Do not apply a single lifting device to a load heavier than 5,000 pounds, keep in mind the longer the struts (or telescoping tube of the lifting device) the lower the capacity of the strut assembly. When used in parallel the devices will lift more than 5,000 pounds depending on the angle.

The telescoping tube is marked with graduations (inches), to help the operators keep the load balanced. It is not recommended, nor typically required to suspend the entire weight of a vehicle on this strut system.

# KODIAK ACCESSORY KIT



Contains 3 tips, 8 spikes, and a dead blow hammer in a heavy-duty bag.

“Chain Wedge Head” is notched to fit a 3/8 chain to provide an additional option to either lift or stabilizing a load.

“V Head” is used to capture loads with a more defined angle.

“Spike Head” secures the tip of the strut into sheet metal, or a circular opening.

13-inch spike is used with the dead blow hammer to secure the base of the strut (holes provided) to the ground when additional stabilization is needed.

Please watch these training videos to fully understand the application and proper use of these tools.

**<https://www.youtube.com/watch?v=srExyQUsWck>**

*Video on using the Kodiak Strut System*

**<https://www.youtube.com/watch?v=ur96tmMK8QM>**

*Video on using the Lifting Device*

# KODIAK LIFTING DEVICE



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Stabilized exterior and interior of the trunk

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