



# HOSE COMPANY 2 - WESTBURY FIRE DEPT.

## TRAINING EXERCISE

### Paratech Twistlock Vehicle Stabilizers

#### TWISTLOCK VEHICLE STABILIZER (TVS) SYSTEM

22-797010, 22-797020, 22-796161

#### INSTRUCTIONS

##### COMPONENTS:

1. TVS-100, PN 22-797010: 47" – 60" (119 cm – 152 cm) stroke TwistLock Vehicle Stabilizer. Component weight, 29.2 lbs. (13.2 kg).
2. TVS-200, PN 22-797020: 68" – 96" (173 cm – 244 cm) stroke TwistLock Vehicle Stabilizer. Component weight, 41.1 lbs. (18.6 kg).
3. Tie-Down Keys, PN 22-796161: Two sets included; used for attaching the components of a vehicle to the ratchet belt. Component weight, 1.5 lbs. (.7 kg).

FIGURE-1

TVS-100 RETRACTED & FULL EXTENSION

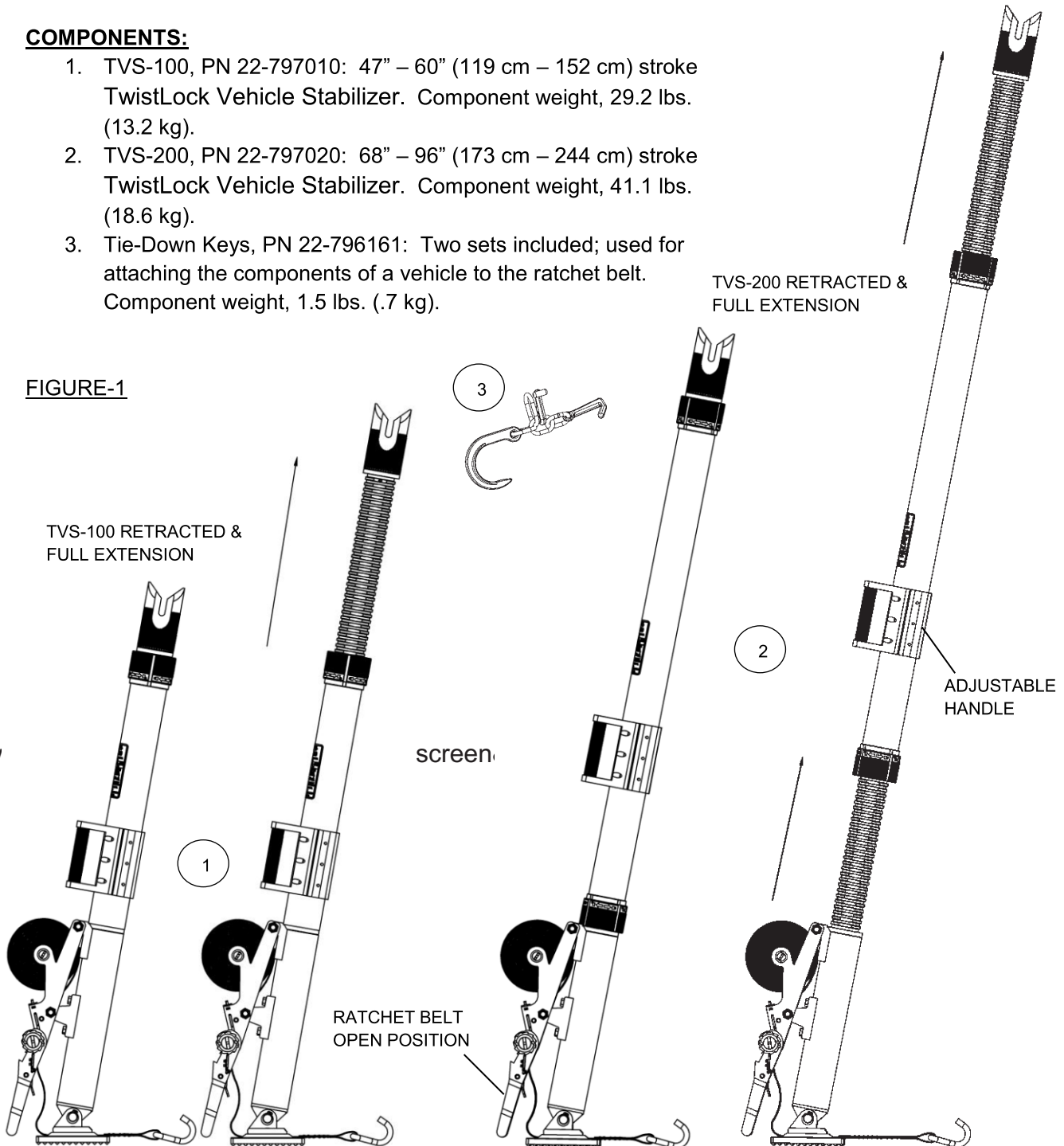
TVS-200 RETRACTED & FULL EXTENSION

<http://w>

screen.

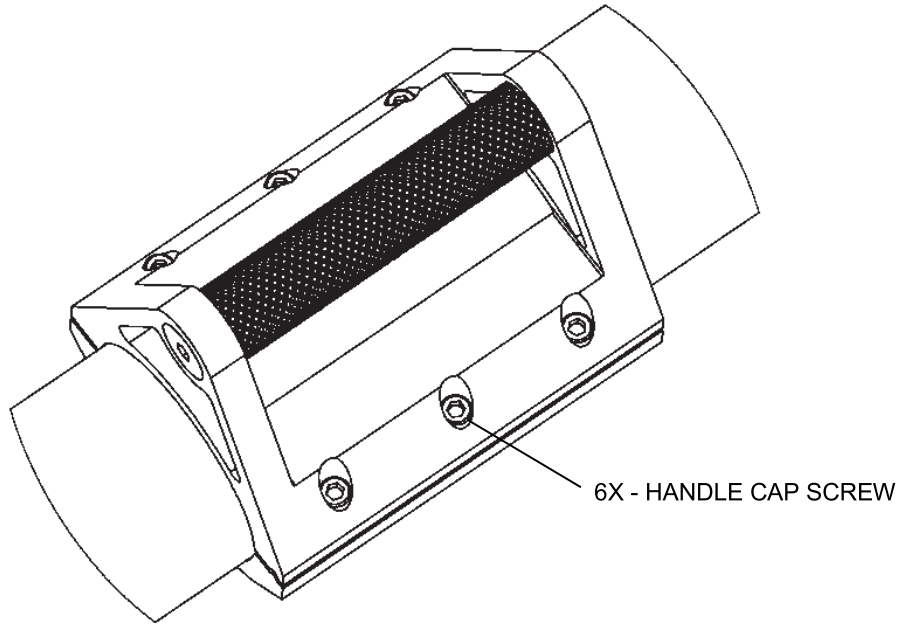
ADJUSTABLE HANDLE

RATCHET BELT OPEN POSITION



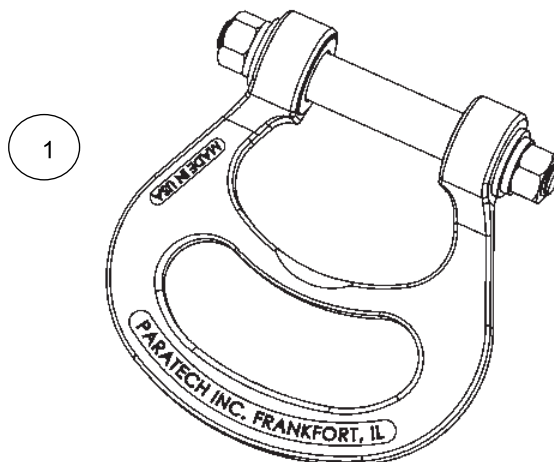
### **HANDLE ADJUSTMENT:**

The handle is set at the factory approximately at the TVS's center of gravity to assist with easy transport. To adjust the position of the handle, simply loosen the 6-socket head cap screws (3/16" Allen Wrench) holding the handle onto the tube, reposition to the desired location, and retighten screws evenly. The handle should not block the product label. Note: The screws do not have to be completely removed, only loosened, for the handle to slide along the body tube.



### **OPTIONAL COMPONENTS:**

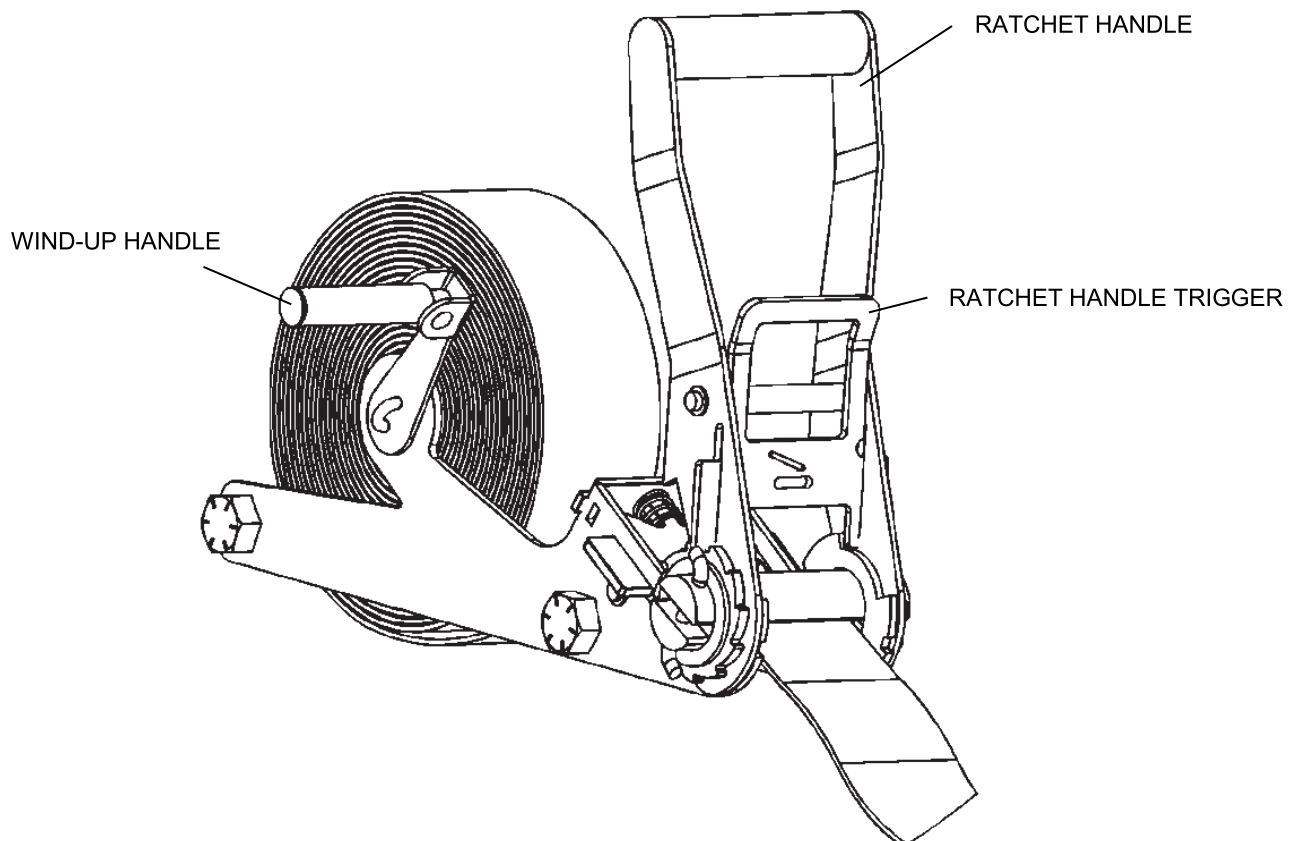
1. Anchor Ring Field Replacement Kit, PN 22-796188: Assembles onto to the base/clevis and is used as a connection point for ratchet belts, j-hooks, etc. Component weight, 2.5 lbs. (1.1 kg). Note: addition of the optional Anchor Ring will hinder the TVS base from folding flat when in storage.
2. Carrying Bags, PN'S 22-797096 (TVS-100) & 22-797098 (TVS-200): Made from reinforced black ballistic nylon; features internal pouches to store Tie-Down Keys a full length zipper, and strap-type handles. Bags not pictured in this document.



## **RATCHET BELT OPERATION:**

1. Pull the ratchet handle trigger, open the ratchet handle fully and release the trigger. This locks the ratchet handle in the open position and allows the belt to move freely through the ratchet mechanism, see Figure-1.
2. Pull out the desired length of belt and attach the wire hook end to the vehicle, Tie-Down Key, or opposing TVS as required.
3. Remove excess slack in the belt with the wind-up handle located in the center of the belt coil, see Figure-2.
4. Release the ratchet handle from the open position by pulling the trigger and lifting until the handle begins to rotate, and then release the handle trigger. The ratchet is now functional and can tighten the belt.
5. Move the ratchet handle up and down until the strut draws in tight between the vehicle and ground.
6. Lock the ratchet handle into place by pulling the trigger, rotating the handle toward the belt until it stops, and releasing the trigger; see Figure-4.
7. Release tension on the belt by placing the handle in the open position as shown in Figure-1.

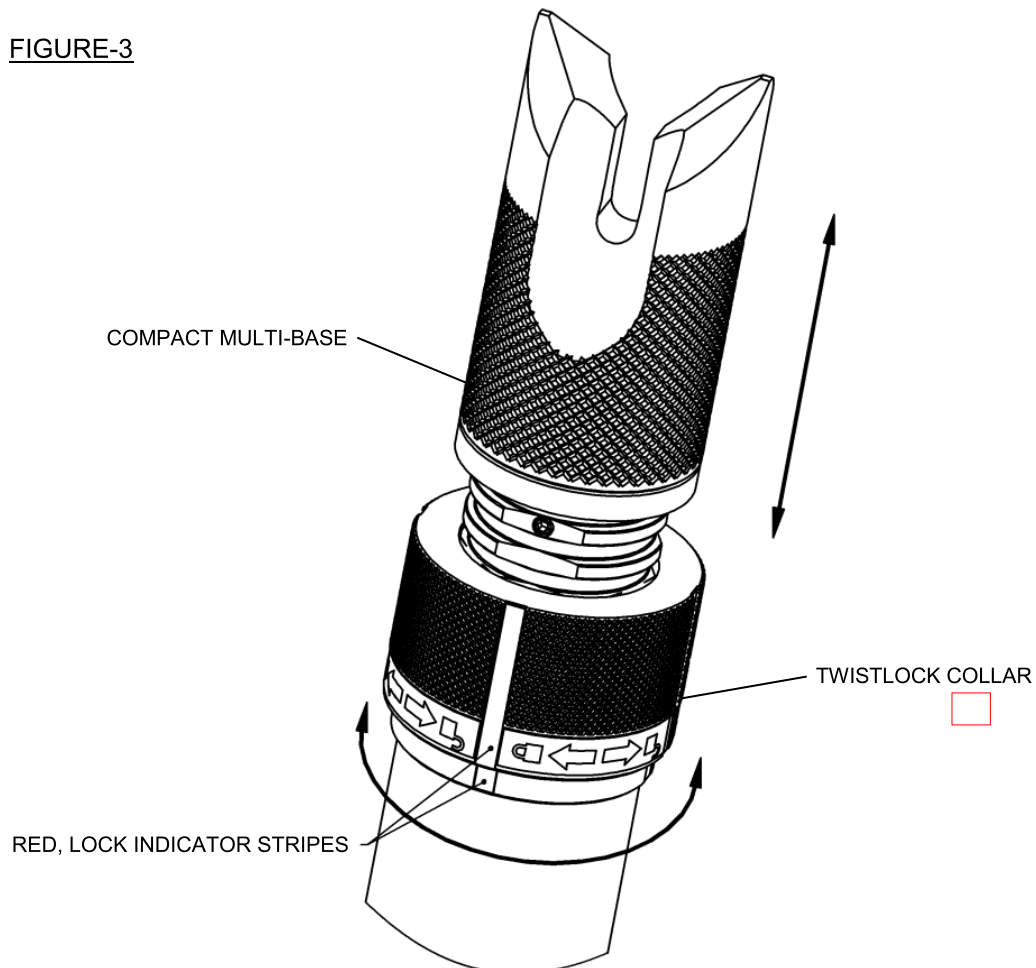
**FIGURE-2**



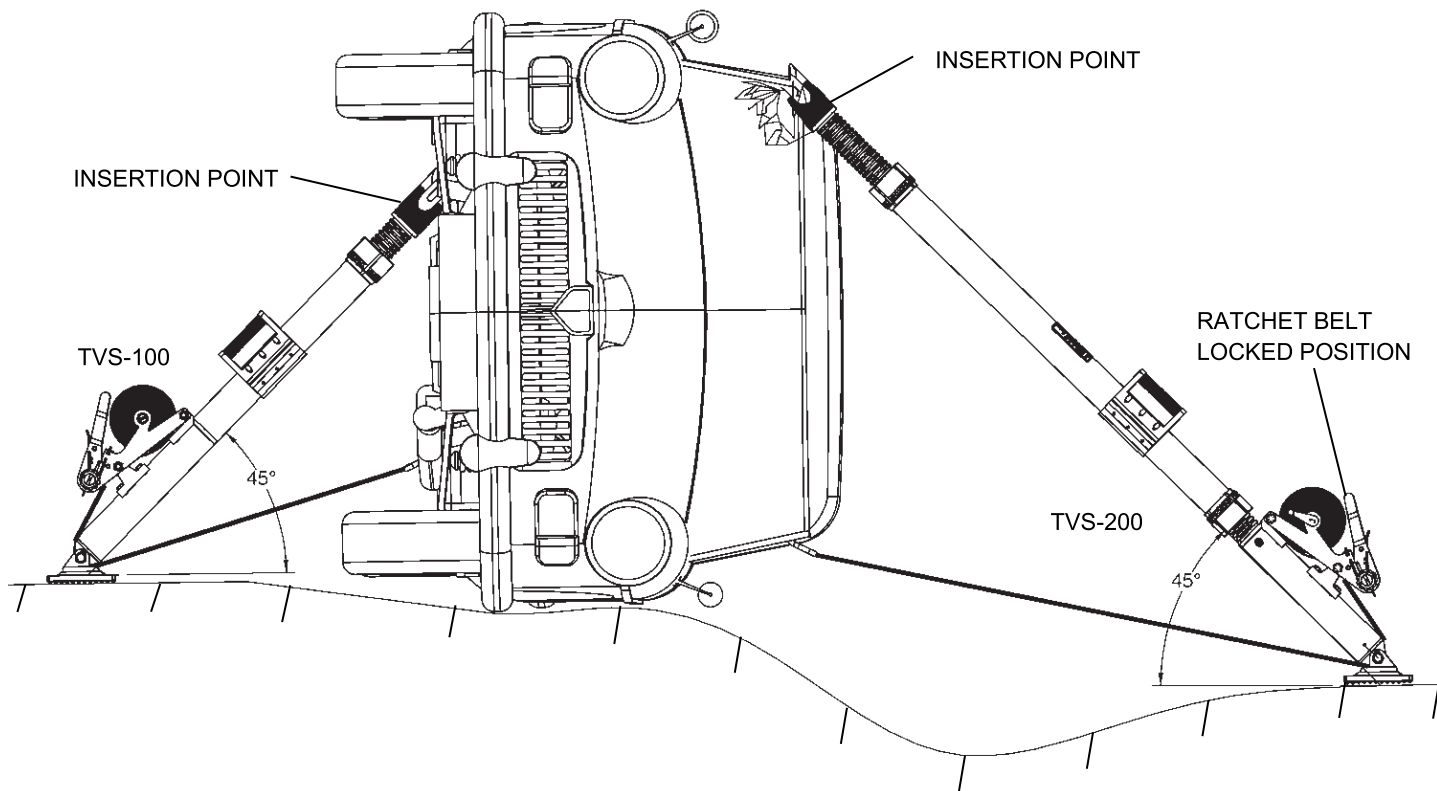
### **STABILIZER OPERATION:**

1. Place one hand on the knurled TwistLock Collar and another hand on the knurled portion of the Compact Multi-Base, see Figure-3. Note: The TVS-200 has 2-Twistlock Collars, one at each end of the body tube; any combination of extension length can be used on either side of the strut, see Figure-1.
2. Unlock the TwistLock Collar by rotating it counter-clockwise (↺ - label direction) until it stops, approximately 45°. This disengages interlocking teeth on the shaft.
3. Adjust the strut length (extending/retracting the shaft) to position the Compact Multi-Base at the designated point of contact on the vehicle. Note: The strut length only needs to be approximate to the insertion point on the vehicle with the TVS leaning into the vehicle at roughly 45° - 60° (45° being ideal); see Figure-4.
4. With both hands still in place, turn back the TwistLock mechanism clockwise (↻ - label direction) until the red, lock indicator stripes are aligned. **WARNING:** The TwistLock mechanism is spring loaded and may return on its own; however, the operator must always physically rotate the mechanism back to be sure the interlocking teeth have fully re-engaged.
5. Move the TVS into the desired position on the vehicle placing the Compact Multi-Base in place first.
6. As shown in the "RATCHET BELT OPERATION" section above; release the ratchet belt and attach the hook end to the bottom of the vehicle or opposing TVS. Tie-Down Keys can be used to facilitate a connection between the vehicle and ratchet belt hook as required.
7. Tighten the ratchet belt until the stabilizer is securely in place and lock the ratchet handle.
8. If necessary, repeat this operation on the opposite side of the vehicle.
9. To remove the TVS, reverse steps 1–6.

**FIGURE-3**



**FIGURE-4:** This is an illustration of an ideal vehicle stabilization using the TVS-100 and TVS-200. Note the optimal 45° angle between the stabilizers, ground, and vehicle. Insertion points and ratchet belt hooks are attached to the vehicle frame and A-post. The ratchet belt is in the locked position.



**TOOL MAINTANENCE:**

Periodically lubricate the stabilizer shaft and TwistLock mechanism with a dry spray lubricant and keep free of dirt and debris.

Replace worn, frayed, or cut ratchet belt as required.

To clean, wipe all exposed surfaces with warm water and soft cloth.

**Link to demo:**

<http://www.youtube.com/watch?feature=endscreen&NR=1&v=wFVk7we1ICg>