



## **HTS-20S Swing Mount Owner's Installation Manual** **Ford Van E250 E350 and Sprinter van models - commercial cargo vans**

**HTS Systems Lock N Roll, LLC. Hand Truck Transport Solutions**  
**Hand Truck Sentry System HTS Ultra-Rack (Owner's Manual)**

**09/18/08**

This HTS-20S Ford and Sprinter van installation manual was published by HTS Systems Lock N Roll, LLC.

### **CONGRATULATIONS ON YOUR NEW PURCHASE OF AN HTS ULTRA-RACK!**

It has been designed, engineered and manufactured to give you the best possible dependability and performance. Should you experience any problems you cannot easily remedy, please contact your nearest HTS Systems Lock N Roll distributor or installation facility. Authorized HTS Systems service centers have competent, well-trained technicians and the proper tools to service or repair this unit. Please read and retain this manual for future reference. The instructions will enable you to assemble, install and maintain your HTS System properly. Always observe the "Safety Rules."

#### **CUSTOMER RESPONSIBILITIES: PRINT THIS MANUAL AND CARRY IN VEHICLE**

- Read and observe all safety rules.
- Follow a scheduled maintenance; complete a damage inspection before using your HTS unit.
- Follow the instructions under "Customer Responsibilities" sections of this owner's manual.

#### **ATTENTION: OWNER'S MANUAL INTRODUCTION**

This **HTS Systems Lock N Roll Hand Truck Sentry System OWNER'S MANUAL** is intended to act as a guide for operation and routine maintenance but is in no way intended to encourage usage or repair of this hand truck locking unit by those who are not qualified to do so.

The contents of this manual include, but are not limited to general operation, installation procedures, parts list and an outline of things that should be checked but may not be obvious to those not technically qualified. This manual assumes the HTS unit is installed, undamaged and operating correctly. Improper installation, improper operation or damage should be immediately corrected by a qualified person. If the owner or operator observes improper installation, improper operation or damage or has any doubts as to the installation, condition, use or operation of the HTS unit, he or she should immediately contact a qualified person for assistance and correction.

We strongly urge anyone that has questions regarding the installation, operation, usage, maintenance or repair (as it relates to the HTS) to contact our PENNSYLVANIA facility where we have qualified personnel that will be happy to assist you. You may contact our customer support center at: [customerservice@handtrucksystems.com](mailto:customerservice@handtrucksystems.com) Telephone numbers and address of this location has been listed within your HTS Systems Lock N Roll owner's manual and installation instructions are listed below.

**HTS Systems Lock N Roll, LLC.**  
**Hand Truck Transport Solutions**  
**5 West Olive Plaza**  
**Scranton, PA. 18508-2531**

[www.handtrucksystems.com](http://www.handtrucksystems.com)

[customerservice@handtrucksystems.com](mailto:customerservice@handtrucksystems.com)

Customer Service Department: (1-866) 388-2102

Product Sales Department: (570) 342-2102 Fax (570) 347-3878

**IMPORTANT: TO BE KEPT IN VEHICLE / GENERAL OPERATION INSTRUCTIONS**

For the operation of this HTS unit, please refer to the "OPERATIONS INSTRUCTIONS" inside of this owner's manual.

**DO AND DO NOT SAFETY LIST / INSTRUCTIONS FOR SAFE OPERATION**

- DO:** Read and follow all warning decals, assembly, installations and operating instructions found within your HTS Systems Hand Truck Sentry System owner's manual.
- DO:** Be sure the area in which the HTS will open and close is clear before opening, closing or activating the dash release switch of this unit.
- DO:** Visually inspect your HTS unit frequently for damage, wear or abuse.
- DO:** Repair or replace this device when it is found to be faulty or damaged to prevent accidents and/or injuries.
- DO:** Be sure the vehicle is properly and safely braked before using this unit. Vehicle must be parked on a dry level road surface before attempting to release and tilt unit forward.
- DO:** Be alert when removing or attaching the hand truck to the HTS unit. Observe traffic flow and watch for stopped or parked vehicles that may depart without warning. Be careful!
- DO:** Keep all decals in place and legible, we recommend the HTS owner's manual be kept inside the vehicle for new drivers and future reference.
- DO:** Read and follow all instructions, **comply with** all safety information, including **unit weight restrictions or all warranties are void.**

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- DO NOT:** allow your HTS Ultra-Rack to be assembled, installed or used by persons who have not read this installation manual or become familiar with its operation.
  - DO NOT:** use your HTS Ultra-Rack unit for climbing, stepping or as a ladder device.
  - DO NOT:** overload your HTS unit, it is designed to retain up to 50 lbs. (22.5 kg), **one** extrusion aluminum or cart conversion hand truck or standard tubular steel, tubular aluminum.
  - DO NOT:** use your HTS unit for pushing, towing or as a negative ground circuit when jump starting a disabled vehicle, **any abuse voids warranties.**
  - DO NOT:** attempt to splice, connect, wire, hook into or attach the HTS Micro-cable wiring harness to any other electrical components. This electrical harness is a closed wiring system.
  - DO NOT:** attempt to modify any part of your HTS unit to accommodate larger unapproved hand trucks or to allow untested and/or unapproved vehicle attachments.
  - DO NOT:** attempt to interchange electrical components, designs or brands without the express written authorization of HTS Systems Lock N Roll LLC.
  - DO NOT:** use your HTS device if the unit shows signs of abuse or fails to operate properly.

**ATTENTION:** The success or failure of this equipment could very well depend on the thorough and proper installation. Please read and understand the contents of these instructions before proceeding.

**IMPORTANT:** When installed, the HTS unit must not alter or prevent any vehicle compliance to existing state or federal standards, especially FMVSS 105. Each chassis and/or truck body manufacturer's recommendations should be consulted for installation and compliance.

## **HTS SYSTEMS LOCK N ROLL LLC. PRODUCTS COMMERCIAL / CONSUMER LIMITED WARRANTY INFORMATION**

### **Limited Warranty Information:**

HTS Systems Lock N Roll LLC. warranty covers the mechanical components of each new **HTS Hand Truck Sentry System** commercial front mount and rear mount designs to be free from defects in material and workmanship for the lifetime of the HTS device. All electrical components and mounting hardware carry a one (1) year limited warranty against defects in material and workmanship. An optional two (2) year limited warranty protection for all electrical components may be purchased from HTS Systems Lock N Roll within one year of purchase.

**Color Select Option** is warranted for one (1) year against manufacturing defects. Any scratching or wear caused by normal use, hand truck contact, vehicle collision or any type of abuse, is not covered by warranty. Color Select includes UV inhibitors that help stabilize the glass filled Nylon polymer to reduce sun damage and color fading. However; some extreme environments or cleaning agents may cause premature or adverse reactions to the frame surfaces. Please consult your owner's manual for additional information. Color Select is a customer expense option.

Warranty registration must be submitted to HTS Systems Lock N Roll within thirty (30) days of purchase via [www.handtrucksystems/warranty/registration.com](http://www.handtrucksystems/warranty/registration.com) from our web site. Warranty is valid for the original purchaser of the HTS Systems unit only.

### **WARRANTY GENERAL INFORMATION**

The obligation under this warranty, statutory or otherwise, is limited to the replacement or repair at the manufacturer's factory or at a point designated by the manufacturer, of such part, that shall appear to the manufacturer, upon inspection of such parts to have been defective in materials or workmanship. This warranty does not obligate HTS Systems Lock N Roll LLC. to hold the cost of labor or transportation charges in connection with repair of defective parts, nor shall it apply to a product upon which repairs or alterations have been made unless authorized by the manufacturer, or for equipment which has been misused or neglected or which has not been installed correctly. HTS Systems Lock N Roll obligation shall be limited to such repairs or replacement and shall be further conditioned upon HTS Systems receiving written notice of any alleged defect and proof of original purchase within ten (10) days after its discovery and, at HTS Systems' option, the return of the allegedly defective part to HTS Systems Lock N Roll manufacturing facility or authorized distributor. If the authorized distributor requests, the purchaser may return the HTS unit, with all transportation charges prepaid, to the authorized distributor. Any damage in transit will be the responsibility of the carrier or at the risk of the purchaser.

**Attention:** There will be no transit reimbursement to purchaser without proper written authorization from HTS Systems Lock N Roll, LLC. 5 West Olive Plaza Scranton, Pennsylvania 18508, please provide confirmation number and date of authorization.

Attachment of an HTS Hand Truck Sentry System hand truck retaining device to motor vehicles is the risk and expense of the purchaser. Compliance with applicable motor vehicle regulations is the responsibility of the installer. HTS Systems Lock N Roll LLC. will not assume any liability for any damage to a motor vehicle resulting from the attachment or from the use of an HTS device. Although HTS Systems' Hand Truck Sentry Systems hand truck locking units are designed to fit specific vehicle models, HTS Systems does not assume any liability for the cost of modification of the unit or the vehicle required to attach, install or mount the Hand Truck Sentry System.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF OTHER EXPRESS AND IMPLIED WARRANTIES (EXCEPTOFTITLE), INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

HTS SYSTEMS LOCK N ROLL LLC. PRODUCT LIABILITY IS EXPRESSLY LIMITED TO THE REPAIR AND REPLACEMENT OF DEFECTIVE PARTS AS HEREIN PROVIDED. HTS SYSTEMS LOCK N ROLL SHALL NOT LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER TORT, OR ON ANY STRICT LIABILITY THERORY.

**IMPORTANT NOTICE: Limited Warranty Information Continued**

To the fullest extent permitted by applicable law, the following are hereby excluded and disclaimed:

- 1.) All warranties of fitness for a particular purpose;
- 2.) All warranties of merchantability;
- 3.) All claims for consequential or incidental damages. There are no warranties that extent beyond the description that appears in the owner's manual. Some states do not allow the above exclusions or disclaimers in consumer transactions, and as such, this disclaimer/exclusion may not apply.

To the extent such warranties of fitness for a particular purpose or merchantability are deemed to apply to this product, they exist for only as long as the express limited warranty elsewhere set forth is in existence.

HTS Systems Lock N Roll, LLC. whose policy is one of continuous product improvement, reserves the right to improve any product through changes in design or materials as it may deem desirable. HTS Systems Lock N Roll is not obligated to incorporate such changes in products of previous manufacturer.

If field service at the request of the buyer is rendered and the fault is found not to be the HTS product, the **buyer shall pay the time and expense cost of the field representative**. Invoices for service, labor or other expenses which have been incurred by the buyer without express approval or authorization by HTS Systems Lock N Roll will not be accepted.

This product warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.



**WARRANTY REGISTRATION WEB PAGE** (example)

MODEL NUMBER	<b>HTS-20S - BL</b>	<b>PURCHASER NAME AND ADDRESS</b>
SERIAL NUMBER	<b>002 337426</b>	<u>ABC Company Bottling Group</u>
COLOR SELECT OPTION	YES / NO	<u>123 Main Street</u>
CODE	<b>BL RD GN YW BN</b>	<u>Anywhere USA</u>
DATE OF PURCHASE	<b>07/23/08</b>	<b>DISTRIBUTOR NAME AND ADDRESS</b>
ELECTRICAL COMPONENTS EXTENDED 2YR. LIMITED WARRANTY	YES / <b>NO</b>	<u>Material Handling Company</u>
		<u>123 Avenue</u>
		<u>Anywhere, USA</u>

**WARNING:** WARRANTY REGISTRATION PAGE MUST BE COMPLETED AND FILED WITH OUR WARRANTY SUBMIT PAGE VIA HTS WEB SITE TO HTS SYSTEMS LOCK N ROLL, LLC. CORPORATE OFFICE, NO LATER THAN THIRTY (30) DAYS OF DATE OF PURCHASE/DELIVERY DATE TO VALIDATE PRODUCT WARRANTY AND TO DOWNLOAD OUR ADOBE (PDF) INSTALLATION MANUAL.

**ATTENTION:** THE MODEL AND SERIAL NUMBER CAN BE FOUND ON A LABEL AFFIXED TO THE SIDE PANEL OF THE HTS SHIPPING BOX. YOU SHOULD RECORD BOTH THE SERIAL NUMBER AND DATE OF PURCHASE AND KEEP THEM IN A SAFE PLACE FOR FUTURE REFERENCE.

**CUSTOMER / RESPOSIBILITIES SECTION  
DELIVERY / RECEIVING INSTRUCTIONS:**

Conduct a careful inspection of product shipping carton. Examine cardboard container for puncture holes, tears, collapsed or crushed walls which may indicate shipping damage or the possibility of lost parts.

When consignee/purchaser accepts delivery of damaged freight the receiver must immediately perform an open container inspection. Receiver must open product shipping box and carefully evaluate the condition of the product and check for the proper contents. The receiver must note and record on the shipping bill all damage to the product container and report the condition of the freight to the carrier.

**ASSEMBLY INSTRUCTIONS:**

Remove HTS Ultra-Rack unit from shipping carton by opening side panel flaps of shipping carton and removing corrugated triangle insert. To remove the HTS, grab frame and pull upward to clear side wall of carton. Remove wiring package and fastener hardware before lifting the Hand Truck Sentry System from packaging.

Identify all contents by reviewing the Assembly Parts List Section located within your HTS Systems owner's manual. Carefully inspect all parts and complete a thorough parts inventory before beginning assembly and installation procedures.

## **Tools Required for HTS Ultra-Rack Assembly and Vehicle Installation**



Mechanics creeper



Extension cord



15/16" socket



3/4" socket



3/4" Ratchet wrench



Phillips driver



3/8" Ratchet



Wire cutters



Crescent wrench



Pliers



Utility knife



Drop light



Power Drill



1/8" inch drill bit



15/16" box wrench



7/8" hole drill bit

**Caution:** The HTS Systems' Hand Truck Sentry System must be mounted vertically straight and to the highest mounting position as possible without conflicting with the vehicle body.

**WARNING:** Inspect your HTS unit for shipping damage and/or lost parts. Select the location for mounting your HTS unit to the delivery vehicle. Tilt Mount models are designed for the vehicle front, Direct Mount model and Swing Mount model for the vehicle rear. The unit must be mounted to the center of the front or rear bumper, between the bumper mounting bolts. When installing two HTS units to the same bumper surface, span evenly over both sides of the bumper mounting bolts for each unit. Caution, do not cover marker lights, electrical outlets, placards, license plates or tax stickers when installing your HTS unit. Blocking or covering these components is a DOT violation and subject to fines and out of service penalties.



**Please start here to begin van installations:**



## **Ford E250 E350 and Sprinter van HTS-20S Ultra-Rack Installation Manual**

### **MOUNTING THE HTS-20S ULTRA-RACK TO FORD AND SPRINTER BODY**

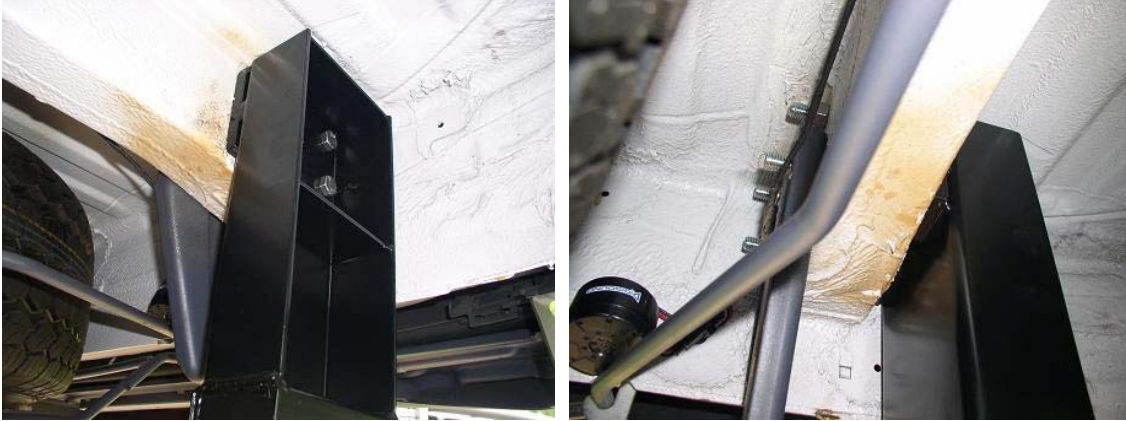
#### **Step 1.**

Locate the (3) three vertical holes under the rear, left side of the Ford van chassis. The last (3) three holes in the van body are the attachments points for the HTS-20S. Use all three holes in the back of the Ford chassis to attach the HTS-20S frame. The Sprinter van model attachment point is the (4) four bolts securing the rear step bumper (left side) support to the chassis body. Spray a light coat of lithium grease to the shanks of the provided attachment bolts to prevent seizing. Place a temporary support under the left side of the Sprinter rear step bumper and remove all (4) four factory bolts attaching the left side step bumper support bracket. Install the HTS-20 Sprinter frame on the outside frame rail by inserting the (provided) longer stainless steel fasteners through both the HTS frame and van body. With the help of a second person, holding the HTS-20S unit, align the HTS-20S holes to the van body holes and carefully insert all stainless steel fasteners and tighten properly.

Do not use pneumatic air wrenches when installing this unit. High speed air wrenches will cause the stainless steel fasteners to gall and seize up! Carefully adjust the HTS-20 Swing Mount frame straight and parallel to the vehicle's rear bumper to align the unit properly. Use all (3) three stainless steel fasteners for the Ford or the (4) fasteners for the Sprinter, secure all bolts using the supplied flat washers, nylon lock nuts and properly tighten the frame securely to the chassis.



**See existing mounting holes in van body. Securing the HTS frame to Ford van chassis.**



**Attach the HTS frame against the outside body rail and through the bumper support using the longer stainless steel bolts provided in the HTS installation kit and tighten securely.**

### **INSTALLING THE HTS ELECTRICAL HARNESS**

#### **Step 5.**

Secure the black HTS electrical wiring harness (Homerun Cable) on the inside, between the HTS swing frame and the rear bumper, guiding the cable through one cushion clamp (provided) at the bottom edge of the vehicle bumper using one the self drilling screws. A pilot hole is necessary to start screw. Make certain the Micro-cable harness is above and slightly to the right of the hand truck plate slot and still concealed behind the HTS Ultra-Rack frame.

**Note:** Allow 2-3 inches of pivoting slack for the Swing Mount to open.



Secure the harness tightly by placing black nylon lock ties every 10"-12" inches. Swing Mount units require a 2"-3" inch slack on the Micro-cable harness. This prevents the harness cable from pulling and binding when swinging the unit away from the vehicle bumper. Follow the existing electrical wire harness along the vehicle frame towards the engine firewall or driver area. Be careful not to cross over steering, brakes or suspension components. Do not contact vehicle engine or any moving components within the engine compartment. Always route the HTS electrical harness away from heat sources such as the engine, transmission and radiator components.





### Step 6.

Inspect the engine compartment firewall and inside cab under-dash area for possible harness entry locations. Many truck manufacturers have existing holes (pre-punched) with grommet plugs covering the holes used for additional hoses, lines or vehicle options. If an existing hole is available, use it to enter the under-dash cab location. Do not drill or cut an additional hole if one is already available. If an entry location is unavailable, one must be created by drilling a small 1/8" pilot hole, then a larger 11/16" hole through the firewall.

**Warning:** Before drilling hole through the firewall, carefully inspect the entire drilling area for obstructions, such as heater hoses, electrical harnesses, cables, pneumatic lines and other components. In some cases it is safer and easier to drill from within the cab area towards the engine compartment. Either method, check carefully for possible obstructions on the firewall and within the engine compartment to avoid possible damage and costly repairs to engine components.



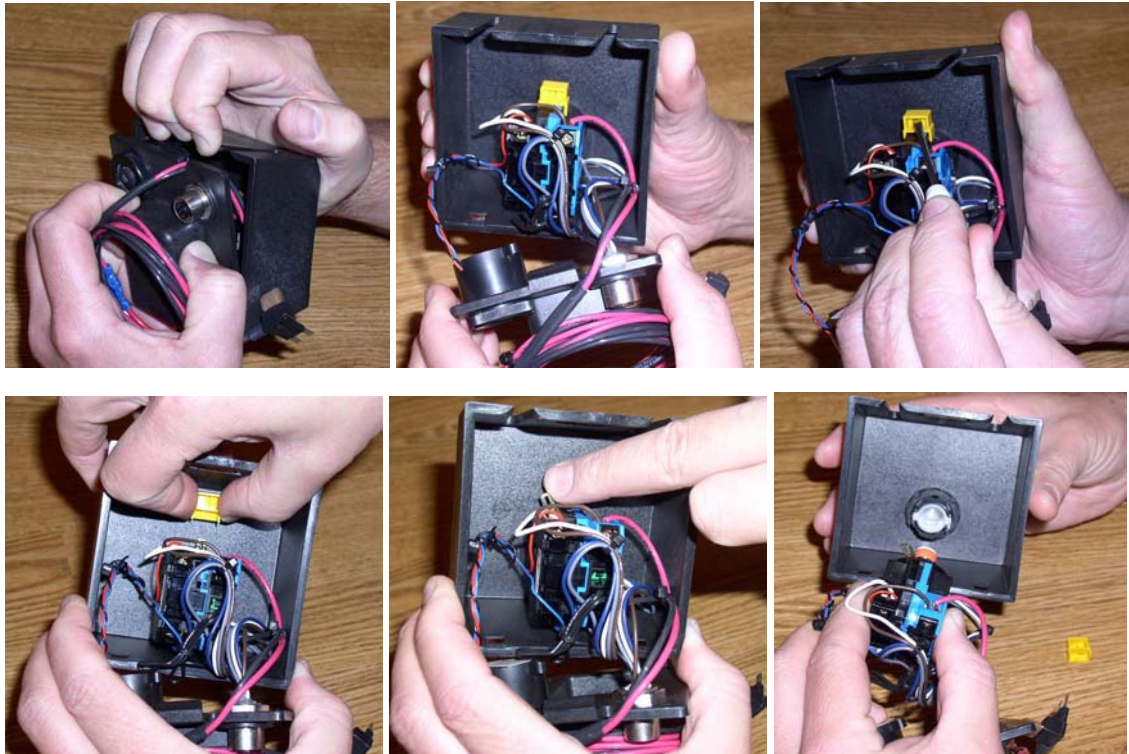
### Step 7.

Insert the HTS wiring harness through the firewall and into the cable area. Push wire grommet into 5/8" hole and lock in place. Grommet through grommet is acceptable. Slowly slide (pull) Homerun cable through grommet to reach the center lower dash area.

## MOUNTING THE DASH RELEASE SWITCH BRACKET

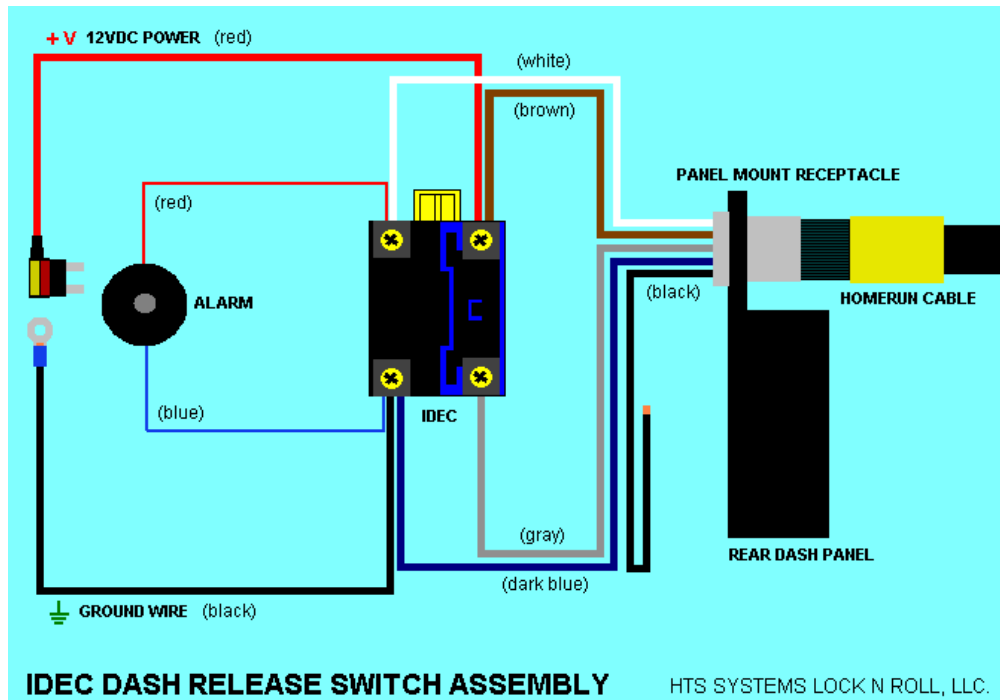
### Step 8.

Locate the desired mounting location for the Dash Release Switch. The Dash Bracket should be mounted within arms length of the driver or centered on the bottom edge of the vehicle dash board. The dash switch can be mounted under the dash area or inside the vehicle dash. The HTS LED push button switch separates from the housing and can be easily installed into the vehicle control panel. An entry hole (5/8") must be drilled into the vehicle dash to complete an in dash install. Snap open the rear cover panel of the Dash Release Bracket. Remove the yellow lock block on the rear of the IDEC switch by prying upward with a small screwdriver and slide metal lever to the left. The wiring assembly will separate from the front section of the Dash Bracket.



Mark the (2) two hole locations for the 3/16" fastener slots on the front section of the Dash Bracket. The (2) two holes should be exactly 2" inches apart. Drill the two (provided) self tapping drill screws into the bottom of the vehicle's lower dash board and leave approximately 1/8" of an inch between the screw head and the dash surface. Mount Front Release Bracket section to under dash by gently sliding or tapping the dash bracket front panel slots in between the screw heads and the dash surface with a light hammer. Insert switch into lens assembly, move metal lever from the left (unlocked) position to the straight-up (locked) position and then snap-on yellow retainer lock cap onto switch assembly. Re-assemble rear section of dash bracket to mounted front section by tucking in wires and locking lower panel tabs into front section.

If for any reason a wire becomes loose and disconnects from the back of the IDEC dash release switch, you can view the IDEC wiring diagram below to properly reconnect the wire using a small Phillips screw driver. Remember to turn off the vehicles ignition and disconnect the power circuit wire before connecting any loose wires. Reconnect the HTS power wire to test wire connections.



HTS Dash Release Switch – standard under dash install



HTS Dash Release Switch – optional in dash install  
(Note: Many installers chose this option for vans.)

## CONNECTING THE HTS ELECTRICAL HARNESS

### Step 9.

Take the Micro-cable (Homerun cable) female plug and align the key to the inside of the rear dash receptacle and push together to insert connecting pins. Then slowly turn and tighten the harness collar to the inside of the receptacle. Take caution not to cross-thread the Micro-cable connectors. Do not use pliers, channel locks or any tools to connect harness! This wire connection is a hand-tighten operation only! Tightening the connection by hand compresses the O-ring sufficient to prevent water and moisture from entering the electrical contacts.



**Step 10.**

Locate a clean metal section of the under-dash or floor area of the cab compartment to anchor the ground connection wire. Place the self tapping drill screw into the small eyelet hole of the ground wire and into the metal surface or locate an existing metal fastener to use. Carefully inspect area for other wires and lines before drilling into any location to avoid damage to the vehicle! Use the provided self tapping drill screws (provided) or existing vehicle fastener to securely tighten the ground connection wire. Some vehicles require a small pilot hole for the drill screw to start drilling.



**HTS common ground eyelet**



**Mount the ground wire to metal surface.**

Locate the vehicle fuse panel and select a circuit connection to plug the HTS power wire into the vehicle electrical system. The HTS Ultra-Rack electrical harness is equipped with an Add-A-Circuit or Tap-A-Circuit plug-in assembly. The Add-A-Circuit also has the proper 5 amp HTS fuse.



**ATO Standard fuse Add-A-Circuit**



**ATM Mini fuse Add-A-Circuit**

There is no need to splice or cut the existing vehicle wires or fuse panel to install the HTS power supply plug. The HTS dash control plugs directly into the vehicle's fuse panel. Positioning the metal terminals blades of the plug assembly downward and facing the Mini-fuse towards you, you will see two fuse ports. The top port is for the 5 amp (HTS) fuse and the lower (2<sup>nd</sup>) fuse port is for the fuse you will remove from the fuse panel to make space for the Add-A-Circuit plug assembly. The plug-in location should be no more than 20 amps and no less than 5 amps! HTS Systems recommends utilizing a non-essential option accessory circuit, such as the radio, heater fan,

power windows or heated mirrors. The selected circuit must be part of the vehicle accessory circuit, heated mirrors, heater fan, radio etc. The fuse port should be apart of the vehicle's accessory circuit, such as the radio, heated mirrors or heater fan. This will allow the HTS to only function when the ignition key is turned on and prevent the HTS from operating when the key or vehicle is off. If the HTS Ultra-Rack operates when the vehicle is off, the HTS alarm will remain on, distracting the driver and anyone would be able to release the hand truck without the ignition key. The fuse port should not exceed higher than 20 amps and no lower than 5 amps! Many van manufacturers equip their vehicles with extra accessory fuse ports for additional truck options. These extra fuse plug ports should be utilized first before sharing other fuse circuits. The HTS Hand Truck Sentry System electrical and wiring harness is rated for 5 amps or less!



## TESTING THE ULTRA-RACK UNIT AND ELECTRICAL CONNECTIONS

### Step 11.

Push the HTS button, it should not release until the vehicle ignition or accessory is turned on. If it does operate, simply select another fuse slot on the vehicle's accessory circuit.

Start the vehicle by turning the key (ignition) switch, the HTS dash release should remain silent. Push the HTS dash release button. If installed and wired properly the HTS head assembly should open and release the hand truck. The LED light should remain on and the audio alarm (buzzer) should sound. If the HTS is installed properly the LED light and alarm will cease once the vehicle ignition is turned off.

If desired you can increase the audio alarm volume by lifting and removing the rubber grommet.

**Congratulations your installation is complete and your HTS unit is functioning properly!**

If the HTS Ultra-Rack does not activate and open when the vehicle ignition is on or when the vehicle's accessory key position is switched on, check the HTS ground wire. If you are certain the ground connection is good, then re-check the Micro-cable connection going into the rear of the dash release switch. The HTS Add-A-Circuit will not send power from the fuse port to the unit unless both the HTS 5 amp fuse and the accessory (host) fuse, radio, heater fan, etc. is inserted into the Add-A-Circuit plug. This HTS Ultra-Rack was inspected and tested several time at our quality control stations with its assigned dash control switch prior to packaging and shipping.

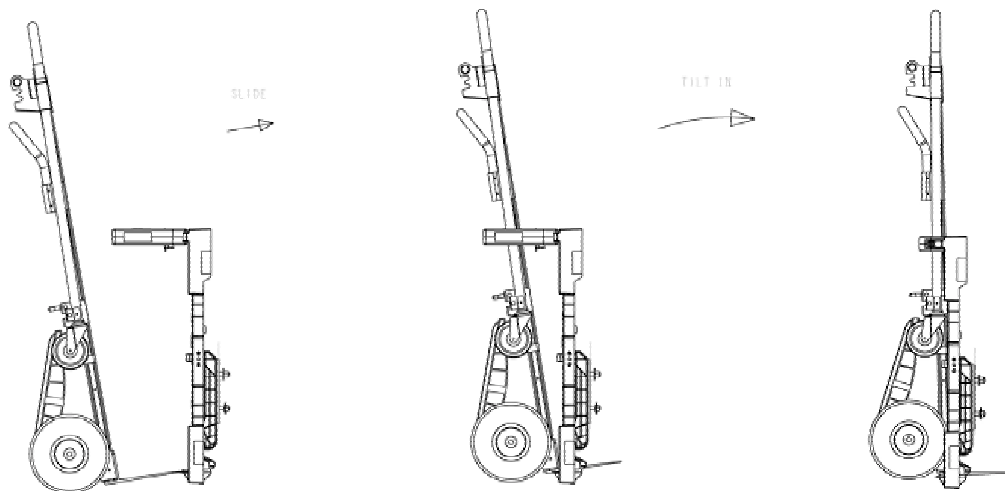


## OPERATING THE HAND TRUCK SENTRY SYSTEM

### Step 12.

#### Locking and securing the hand truck properly into the HTS Ultra-Rack:

1. Lift the hand truck and center it to the HTS frame and slide the hand truck load plate fully into the lower receiving chute of the HTS unit. Make sure the hand truck load plate is completely inside the HTS receiving chute, so the hand truck side rails are contacting the HTS lower horizontal cross member just above the receiving chute.
2. Move the hand truck forward slightly to contact the Push-Bar. (When using a convertible or platform hand truck, such as the B&P Liberator, Wesco-Cobra or Magliner-Gemini remember to position the smaller caster wheel outward, simply **rotate the smaller caster wheels** by hand.) When using larger platform hand trucks it is easier to squeeze the HTS push-bar and housing frame together by placing your hand through the hand truck frame. When the hand truck contacts the Push-Bar assembly, firmly rock the hand truck forward until the push-bar assembly meets the latch assembly and both claw tabs rest inside the main frame of the rib locks. Some drivers place one foot on the hand truck axle to hold the hand truck against the HTS lower cross member. Use medium force when rocking forward. The hand truck is now locked, secured safely and ready for travel!



### Unlocking and removing the hand truck from the HTS Ultra-Rack:

1. When the driver arrives at the delivery location and the vehicle comes to a complete stop, apply the vehicle parking brake. Be alert when removing or attaching the hand truck to the HTS-20S unit. Observe the traffic flow and watch for stopped or parked vehicles that may depart without warning. Be careful when working outside the van!
2. Push down on the red dash release button, the HTS will then release and the hand truck will pivot forward slightly, the hand truck is now released. The HTS alarm and LED light will activate and remain on until the vehicle's (ignition) engine is turned off.
3. Exit the vehicle and grab the side rails of the hand truck, move the hand truck forward slightly to level the hand truck load plate and remove the hand truck from the plate slot. You can release the hand truck by activating (pushing) the dash release (button) switch or by using the manual override key located at the bottom of the HTS component housing, outside the vehicle. Remember to turn the key back to the reset position before removing the key from the cam, when using the exterior override key. You must reset the manual override key back to the rest position or the HTS will not lock!

### HTS-20S ULTRA-RACK SIX MONTH MAINTENANCE



If the HTS unit fails to open or sticks because of road dirt, simply spray and flush area with Permatex Silicone Lubricant. Simply use the override key and pull the unit open. Spray silicone lubricant on the inside of the push-bar rail and on the push-bar train. Manually slide system open and closed several times till push-bar moves more freely. Once the dirt is clear, apply a thin layer of silicone grease to both ends of the Push-Bar.

### Swinging the HTS-20S outward to 90° degrees to open left rear door:

1. Make certain the vehicle's emergency brake is properly engaged and the cargo van is parked safely. Release the hand truck by activating the HTS dash switch, alarm will sound and LED light will turn on. Turn off the vehicle's ignition, exit the van and walk to the rear of the van. Move hand truck vertically straight, pull hand truck straight out.
2. Remove the hand truck from HTS unit and place on the ground. Using one index finger, pull upward on the metal ring attached to the main safety pin and remove safety pin from frame. Pull upward on the ramp holding pin to release and pivot the HTS frame fully outward to 90 degrees until unit locks open, ramp pin will lock into position.



Remove the main safety pin from frame and pull upward on ramp holding pin to release unit.



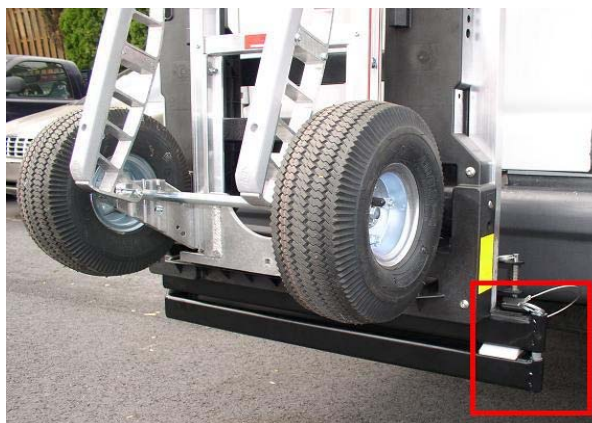
Swing HTS frame fully outward to 90 degrees until unit locks open.

3. Open the vans secondary (left) door (if required) to access cargo and load cargo on hand truck. Close rear doors and swing the HTS unit frame into travel position before making delivery. Simply pull upward on the holding pin ring to release and close unit.





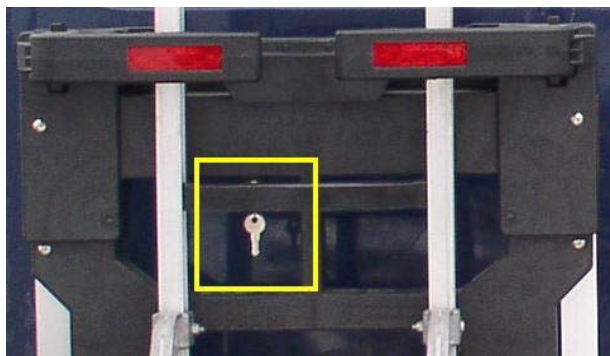
4. To safely lock the HTS-20S unit into the closed (travel) position, replace the main safety pin back into the frame sleeve before starting vehicle. **Never operate van and drive vehicle without first replacing the safety pin back into the proper travel position!**



**Return safety pin into sleeve before driving!**

**Driver Training Notes:**

It usually takes 2-3 days for the route driver to be accustomed to the HTS and to become familiar with the HTS operation. The HTS dash release button action becomes routine after three days.



HTS Ultra-Rack manual override key is below frame housing.



Turn the key ¼ left to unlock unit.

Some drivers chose to insert and leave the spare release key in the HTS override cam for several days for training only. Many drivers add the spare override key to their personal keys and simply carry the HTS Ultra-Rack key in their pocket. The second key should be stored on the ignition key ring for easy access. If a driver forgets to push the HTS release switch before exiting the cab, they can simply turn the key to release and remove the hand truck. You must reset the manual override key by allowing it to return back to the first position or the HTS Ultra-Rack will not relock!



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