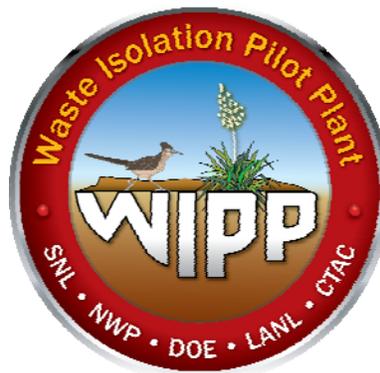


WP 08-PT.18
Revision 8

TRUPACT-III Trailer Operation and Maintenance Manual

Cognizant Section: Packaging and Information Systems

Approved by: Todd Sellmer



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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
7	10/28/2015	<ul style="list-style-type: none">• General clarification and editorial changes• Add change history summary• Changed references from line items to a table
8	10/12/2018	<ul style="list-style-type: none">• Revised to clarify Management and Operating Contractor (M&OC) contractor responsibilities for maintaining trailers when placed in extended storage.• General clarification and editorial changes. Removed superscript numerals after regulatory requirements and changed text to black.• Updated reference table.

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1.0 INTRODUCTION

The Transuranic Package Transporter Model III (TRUPACT-III) Trailer and associated tiedown system is used for transporting a single TRUPACT-III between various U.S. Department of Energy (DOE) sites within the 48 contiguous states. The TRUPACT-III is a Type B packaging, certified by the Nuclear Regulatory Commission (NRC). The trailer and tiedown system complies with all U.S. Department of Transportation (DOT) safety, identification, and regulatory requirements and has been designed and tested to meet the intent of ANSI N14.30, *Semi-Trailers Employed in the Highway Transport of Weight-Concentrated Radioactive Loads*. Throughout the rest of this document, the TRUPACT-III trailer will be simply referred to as "trailer."

This document is intended to provide guidance for operators of the trailer and associated components used for transporting the TRUPACT-III. Individual operating procedures may be used in place of this document, providing the intent and requirements of this document are met, and the trailer loading procedure for the Waste Isolation Pilot Plant (WIPP) is approved by the Trailer Cognizant Engineer (CE).

1.1 Description

The trailer and tiedown system combined weighs approximately 9,300 lbs. The complete tiedown system weighs 1,120 lbs, including the 800 lb tiedown frame. The trailer and tiedown system are designed to transport a fully loaded TRUPACT-III with a maximum weight of 54,700 lbs, while satisfying legal width and height requirements. The trailer and tiedown system complies with all DOT safety, identification, and regulatory requirements and conforms to Federal Highway Administration Weight Limits (23 CFR Part 658.17) without requiring special state or federal permits, when the maximum loaded weight of a TRUPACT-III is limited to 51,700 lbs and the trailer is hauled by a tractor weighing approximately 20,000 lbs. In cases where the TRUPACT-III will be loaded above 51,700 lbs all DOT requirements will be satisfied, but overweight permits will be necessary. The TRUPACT-III has a maximum gross weight limit of 54,700 lbs.

The trailer does not carry a spare tire and wheel; however it is designed to readily accept a spare tire holder on the gooseneck.

1.2 Trailer Chassis

The trailer chassis is a specially equipped, drop-frame trailer design. The dual axle chassis is designed to carry one fully loaded TRUPACT-III package under static and dynamic transportation loads for normal highway travel. The chassis gooseneck has a standard 2-inch diameter kingpin set 18 inches (in.) from the trailer front sill. The gooseneck design allows an 88-inch minimum tractor swing clearance.

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Hazardous material placard holders are installed on the right and left sides of the trailer and on the front and rear sills. The placard assemblies have the identification symbols required by the DOT for transporting the TRUPACT-III. The rear placard holder includes modifications to prevent placard loss and damage resulting from vibrations. Specific requirements for securing the rear placard are provided in Section 3.0.

1.3 Tiedown System

The TRUPACT-III is secured to the trailer by both the upper and lower corners of the package. The four lower corners are captured by corner brackets designed to prevent lateral and longitudinal movement. Vertical movement is controlled by an over the top tiedown system consisting of a frame which interfaces with the four upper corners of the package, and a combination of connecting rods, turnbuckles, and spring boxes which extend from the corners of the frame to the corresponding corner bracket on the trailer. The trailer is designed with a tiedown component transport box which is used for transporting the tiedown system components when the trailer is shipped without a TRUPACT-III, and for the empty transport hardware used to transport the tiedown frame when the trailer is carrying a TRUPACT-III.

1.4 Axles and Suspension

The trailer is equipped with two Hendrickson suspension systems with a 10-foot 2-inch spread axle configuration. Each axle is equipped with sealed bearing hub assemblies, as well as standard hubs, brakes, slack adjusters, drums, and wheels.

The axles are mounted to the chassis using the suspension manufacturer's procedures. The air-ride suspension is pressurized by the tractor/trailer air system which pressurizes a separate reservoir for the air springs. An air control system adjusts the ride height and the air pressure needed for varying loads. This suspension provides a cushioned ride throughout the range of loads and an excellent side-to-side and axle-to-axle load equalization.

1.5 Tires and Wheels

The trailer has eight 22.5 x 8.25-15 Drop-Center aluminum wheels fitted with 255/70R 22.5 tires. Standard 20 x 1572 (right-hand threaded) wheel studs and standard outer lug nuts are used to mount the dual wheels. A hubodometer is installed on the road side front axle.

1.6 Brake System

Each axle is equipped with 8-1/2-inch brake systems for decreased stopping distance. Spring brake air chambers operate the brakes. A two-line air system mechanically actuates the brakes. The braking system has an emergency relay valve and is fitted with reservoir hoses and standard color-coded "glad-hand" air hose couplings. The brake shoes have non-asbestos linings.

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The trailer has an antilock braking system (ABS) that works with the standard braking system. The ABS is an electronic, self-monitoring system that monitors and controls wheel speed during braking with the use of a total of four sensors, one on each wheel.

1.7 Lights

The trailer is equipped with high-count L.E.D lamps in the tail and marker positions, meeting or exceeding the requirements of state and federal regulations.

1.8 Landing Gear

Two manually actuated (crank handle), synchronized landing gear supports with standard sand shoes are mounted to the trailer chassis. The landing gear is about 12 in. above the ground during transportation and has approximately 16 in. of travel.

The landing gear has two speeds of operation, low and high. The low speed is used for raising and lowering under heavy loads; the high speed is used for raising and lowering the landing gear when trailer is empty.

1.9 Special Tool and Equipment

The trailer operates without special equipment or tools. For general storage, and to protect the Recovery Guide, a tool box has been installed on the trailer. A document holder is located on the road-side of the trailer gooseneck.

2.0 REFERENCES

REFERENCES		
DOCUMENT NUMBER AND TITLE	BASELINE DOCUMENT	REFERENCED DOCUMENT
Title 49 Code of Federal Regulations (CFR) Part 392, "Driving of Commercial Vehicles"	✓	
ANSI N14.30, "Semi-Trailers Employed in the Highway Transport of Weight-Concentrated Radioactive Loads"		✓
49 CFR Part 396, "Inspection, Repair, and Maintenance"		✓
Drawings, Reinke Manufacturing, Inc. available from Trailer CE	✓	
Specification E-I-470, Specification for the Fabrication of the TRUPACT-III Transport Trailer and Tiedown System	✓	
23 CFR Part 658.17, Federal Highway Administration Weight Limits		✓

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3.0 GENERAL OPERATION

This manual addresses only the basic requirements for operation and maintenance of the trailer.

3.1 Pre-Trip Inspections

WARNING

Failure to allow the system pressure to stabilize before moving the trailer can damage the trailer air suspension system, brake system, and tire treads. Due to the addition of the auto air dump valve for bleeding the air out of the suspension system, additional pressurization time is required.

WARNING

It is the responsibility of the driver to ensure all hazardous material placards are properly secured before moving the trailer. The rear placard shall be secured using the locking wing nut and latch bolt with the cotter pin installed in the latch bolt. Failure to ensure placards are properly secured will result in loss of the placard and could cause damage to equipment and injury to persons.

Preoperational checks shall be performed by the carrier/driver (49 CFR §392.7, "Equipment, Inspection and Use," and 49 CFR §396.13, "Driver Inspection").

Before using the trailer, the carrier/driver shall perform the basic driver vehicle inspection checks to include a review of the prior Post-Trip Inspection Report (49 CFR §396.11, "Driver Vehicle Inspection Reports"). Also, operators shall perform the manufacturer's recommended equipment inspections on brakes, lights, reflectors, suspension, landing gear, bearing lubrication levels, tires, wheels, and coupling devices. Operators shall correct any signs of low oil level, excessive wear, damage, and/or malfunction before using the unit. Also, the user shall perform a before-use visual inspection of structural members of the chassis, kingpin, and tiedown attachment points for signs of weld cracks, corroded metal, deflections, deformations, or other unusual conditions. The user shall also inspect the joints between the primary and secondary structural members. The user shall report any deficiencies to the WIPP Transportation Scheduler before using the trailer.

Prior to moving the trailer, the user shall allow sufficient time (approximately two minutes) for the air pressure to stabilize after attaching the tractor air supply to the trailer. The air system should be fully charged and the air suspension fully inflated before picking up the trailer with a hydraulic fifth wheel or cranking up the landing gear.

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4.0 Trailer Loading and Unloading

NOTE

Trailer loading and unloading operations shall be performed in accordance with the following section or other approved operating procedures. A spotter must be used at all times.

NOTE

Trailer loading and unloading operations shall be performed on level ground. The existing landing gear has 16 in. of travel, 12 in. of which are required to contact the ground. If the grade of the loading surface causes the landing gear to exceed 15 in., the use of properly rated crane outrigger pads may be necessary in order to prevent overextension of the landing gear.

4.1 Trailer Loading

NOTE

Prior to loading the TRUPACT-III onto the trailer, all tiedown components shall be outside of the tiedown storage box, all empty transport hardware shall be inside the box, and the box lid shall be properly secured. In order for the empty transport hardware to fit in the box each tube assembly must be placed away from the protrusions on the interior of the lid and oriented with the angle brackets facing upward.

NOTE

Disassembly of the empty transport hardware may be assisted by striking the bottom block and/or the bolt with a rubber mallet or dead blow mallet to relieve the friction on the hitch pin and other components.

NOTE

The trailer may remain coupled to the yard jockey during trailer loading; however, if it is to be decoupled the air pressure shall be released from the suspension system by activating the auto air dump valve. The auto air dump valve is activated when either the trailer emergency brake is set or when the emergency glad hand is removed. The yard jockey must be allowed to roll forward as the air escapes from the trailer suspension system before the landing gear makes contact with the ground. This is to prevent damage to the landing gear and to improve the stability of the trailer during loading and unloading.

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NOTE

When loading the TRUPACT-III onto the trailer, accurate placement of the package is important for proper tiedown operation. The use of a spotter is required at all times when loading the trailer.

Before loading the TRUPACT-III onto the trailer, determine and record the gross weight of the package. The total weight of the tractor, trailer, and payload cannot exceed 80,000 lbs without an overweight permit. If the total weight of the tractor, trailer and payload is greater than or equal to 77,500 lbs, the shipment should be scaled to ensure that the 20,000 lb trailer axle weight limitation and 80,000 lbs gross weight limitation are not exceeded. An overweight shipment requires the proper permits.

- 4.1.1 Verify all four corner brackets on the trailer are free of foreign objects.
- 4.1.2 Lower the TRUPACT-III onto the trailer while ensuring the lower corners of the package line up with the corner brackets on the trailer.
- 4.1.3 Verify that the packaging is properly positioned within each corner bracket on the trailer.
- 4.1.4 Adjust position of the packaging if necessary.

WARNING

When tensioning the tiedowns components should move freely. If binding of moving parts occurs, investigate the cause and correct. Tensioning the tiedown **MUST NOT** continue until the problem is corrected.

WARNING

To avoid bodily injury or damage to equipment **DO NOT OVER TIGHTEN** the turnbuckle when tensioning the tiedown connecting rods.

NOTE

The approximate weight of the tiedown frame is 800 lbs. Properly rated rigging shall be used when lifting the tiedown frame.

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NOTE

Prior to loading the tiedown frame onto the TRUPACT-III, the operator shall inspect the tiedown frame for damage. For sites that implement the use of a forklift for handling the tiedown frame, the inspection of the tiedown frame requires a sign-off by the operations personnel performing the activity. Any damage identified shall be reported to the Nuclear Waste Partnership LLC (NWP) Cognizant Engineer.

- 4.1.5 When preparing to lift the tiedown frame, ensure that all four corners are properly engaged by the lift fixture/shackles. A spotter shall be used to ensure the frame is properly engaged.
- 4.1.6 Install the tiedown frame on the top corners of the TRUPACT-III by slowly lowering it onto the package, while ensuring the corners of the package are captured by the corners of the tiedown frame. Refer to Figure 1, Tiedown System.

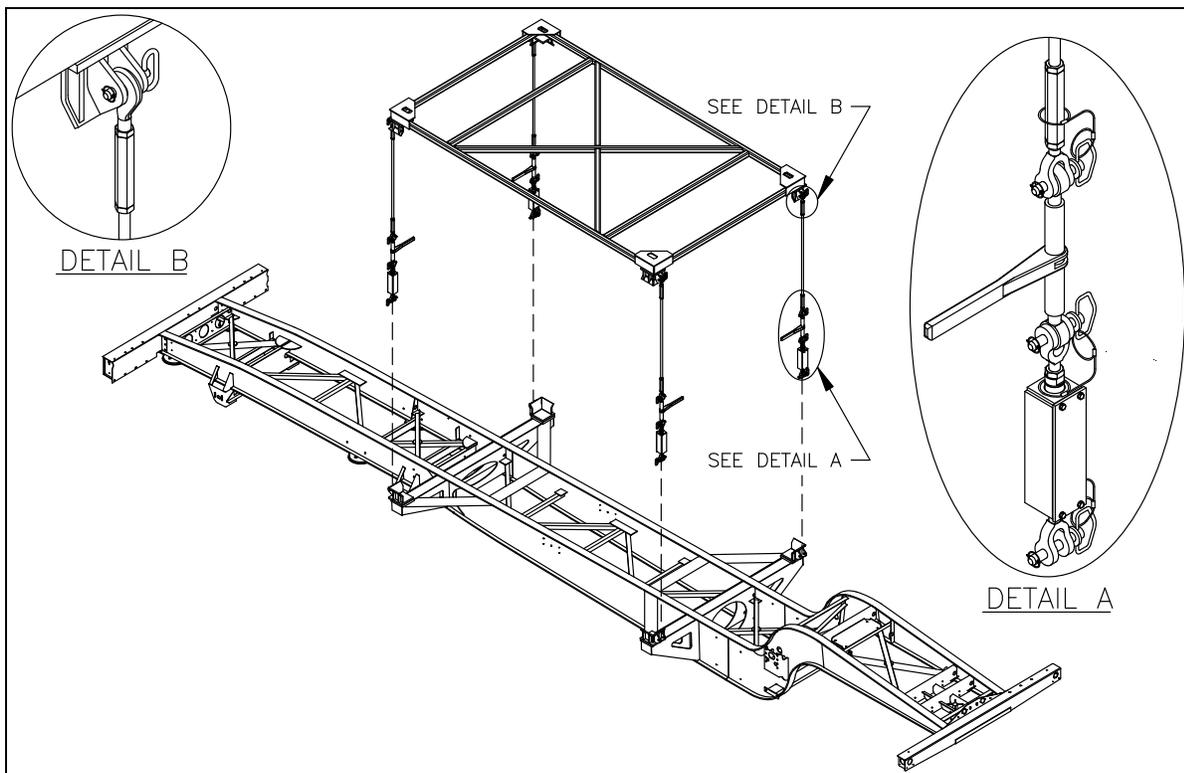


Figure 1. Tiedown System

- 4.1.7 Engage the hook end of the upper connecting rod with the hitch pin in the corner of the tiedown frame as shown in Figure 1, Detail B. Repeat at each corner of the tiedown frame.

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NOTE

All lanyards must be connected to the hitch and retaining pins. At each connection of the tiedown system, hitch pins shall be oriented with the handle toward the center of the trailer, retaining pins (double-loop pin) shall be installed from the top of the hitch pins, and inserted only to the first catch.

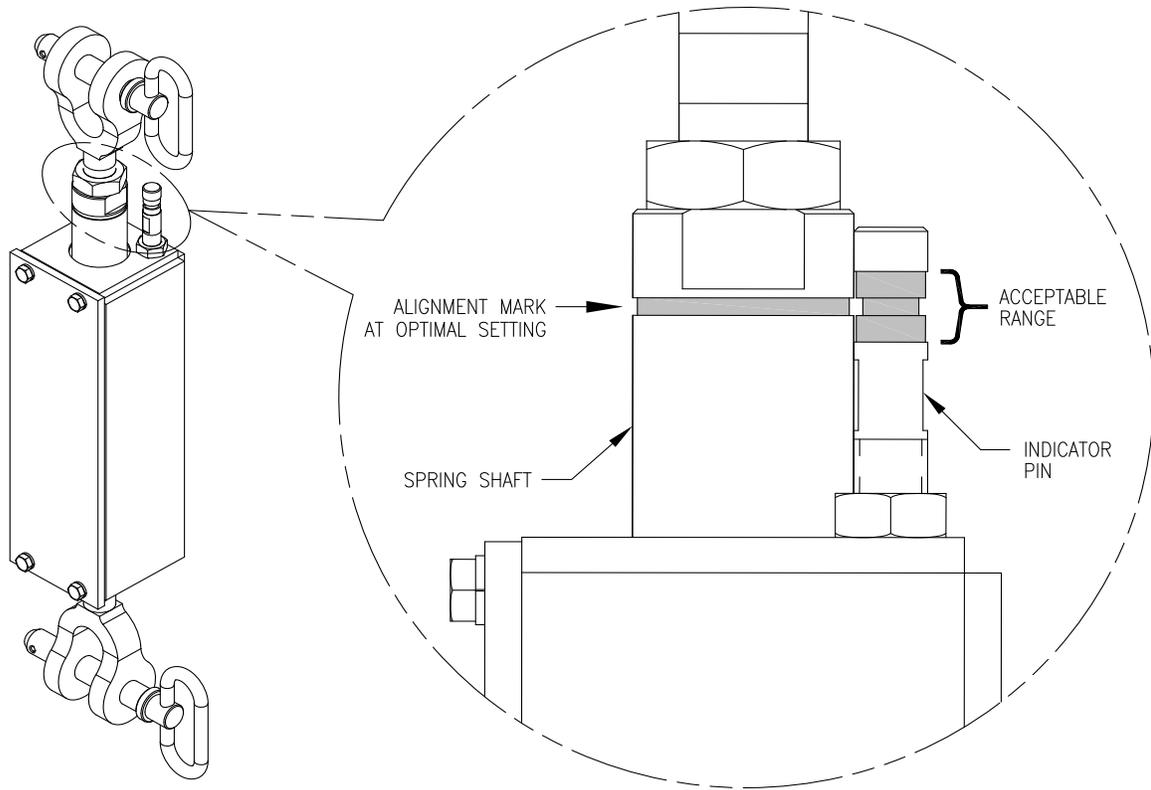
- 4.1.8 Install the turnbuckle eyebolt end into the jaw-end of the connecting rod, align the holes, insert the hitch pin through the holes, and the retaining pin through the hitch pin as shown in Figure 1, Detail A. Repeat for each connecting rod.
- 4.1.9 Install spring box in each corner bracket of the trailer with indicator pin oriented up and cover plate oriented outward. Align the springbox lower jaw end holes with the holes in the corner bracket tabs; insert the hitch pin through the holes, and retaining pin through hitch pin.
- 4.1.10 Install the spring box to the eyebolt-end of the turnbuckle and insert the hitch pin through the holes and retaining pin through the hitch pin.
-

NOTE

The tiedown spring box is designed to apply optimum preload when the mark on the spring shaft lines up with the deepest indentation (1/8 in. wide) on the spring box indicator pin. Refer to Figure 2, Spring Box and Indicator Pin. When the mark on the spring shaft is between the two intermediate indentations (3/16 in. above and below the optimum preload setting), the preload applied is within the acceptable range and meets DOT requirements.

- 4.1.11 To tighten the tiedown and apply tension to the connecting rod, turn the handle of the ratcheting turnbuckle to the left. To change the direction of the ratchet, flip the ratchet lever to the opposite position.
- 4.1.12 Apply partial tension to each tiedown initially. Rotate the ratcheting turnbuckle handle to the left until the spring shaft begins to move, and the slack is removed from the tiedown linkages. Repeat on tiedown at opposite corner, followed by the remaining tiedowns.

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SPRINGBOX TIEDOWN
REFERENCE VIEW

Figure 2. Spring Box and Indicator Pin

- 4.1.13 Apply tension to each tiedown using the ratcheting turnbuckle until the indicator mark on the spring shaft lines up with the optimal tension setting on the spring box indicator pin as shown in Figure 2.
- 4.1.14 Ratchet clips shall remain in the tightening position to prevent the turnbuckles from loosening during transport.
- 4.1.15 Attach both fore and aft ratcheting turnbuckle handle restraints to prevent movement of the handles during transport. Insert the fixed end of the restraint onto the turnbuckle handle until seated, and insert retaining pin through both restraint and turnbuckle handle.

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NOTE

The Ratcheting turnbuckle handle restraints are secured in place by a series of retaining pins. The retainer pin for each end of the restraint is connected to the upper turnbuckle hitch pin by a lanyard, and the retainer pin for securing the restraint tubes are connected to the restraint by a lanyard.

4.1.16 Insert the other turnbuckle handle into the other end of the handle restraint. Slide the tubes outward toward each handle until seated. Install retainer pin through both restraint and turnbuckle handle. Secure the restraint tubes together using the retainer pin.

4.2 Trailer Unloading

NOTE

Prior to unloading the trailer, the air pressure needs to be released from the suspension system by operating the auto air dump valve. The auto air dump valve is activated when either the trailer emergency brake is set or when the emergency glad hand is removed. This is to prevent damage to the equipment, and to improve the stability of the trailer during loading and unloading.

NOTE

It is recommended that the tension is released from each of the tiedown connecting rods BEFORE disengaging any of the tiedown connecting rods from the hitch pin in the corner of the tiedown frame.

4.2.1 Remove both fore and aft ratcheting turnbuckle handle restraints by removing the retaining pins and sliding the tubes toward the center of the trailer.

4.2.2 To release the tension on the connecting rod, turn the handle of the ratcheting turnbuckle to the right. To change the direction of the ratchet, flip the ratchet lever to the opposite position.

4.2.3 Partially release the tension on each tiedown initially. Rotate the ratcheting turnbuckle to the right until the indicator mark on the spring shaft is at the bottom edge of the acceptable range. Refer to Figure 2. Repeat on tiedown at opposite corner, followed by the remaining tiedowns.

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NOTE

When removing the tiedowns, to prevent damage or deformation to the rear fenders, the rear tiedowns will need to be removed completely from the trailer, rather than allowing them to rest on the rear fenders.

- 4.2.4 Remove the clevis pin joining the jaw end of the connecting rod to the eye bolt end of the turnbuckle and allow the turnbuckle and spring box to pivot downward and hang freely (for front tiedowns only). On the rear tiedowns, remove the hitch pin that secures the spring box to the trailer and remove the spring box and turnbuckle completely from the trailer. Repeat for each tiedown.
- 4.2.5 Disengage the hook end of the upper connecting rod from the hitch pin in the corner of the tiedown frame and stage the connecting rod out of the way. Repeat for each connecting rod.
-

NOTE

The approximate weight of the tiedown frame is 800 lbs. Properly rated rigging shall be used when lifting the tiedown frame.

- 4.2.6 Remove the tiedown frame from the TRUPACT-III by slowly lifting it vertically off of the package. Stage the tiedown frame out of the way in a manner that will prevent damage to the tiedown frame.
- 4.2.7 Remove the TRUPACT-III from the trailer by lifting it vertically until all four lower corners clear the corner brackets on the trailer.
- 4.3 Empty Trailer Shipment
- 4.3.1 Remove the tiedown frame transport hardware, fasteners, and blocks from the tiedown storage box on the trailer.
- 4.3.2 Place each spring box, turnbuckle, and connecting rod in the tiedown storage box, and secure the tiedown component transport box lid.
- 4.3.3 Install empty transport hardware in each corner bracket on the trailer such that the angle bracket protrudes downward beyond the outer edge of each corner bracket, and the bottom block assembly is positioned between the tabs on the exterior of the corner bracket with the bolt head oriented upward. Refer to Figure 3, Empty Transport Hardware.

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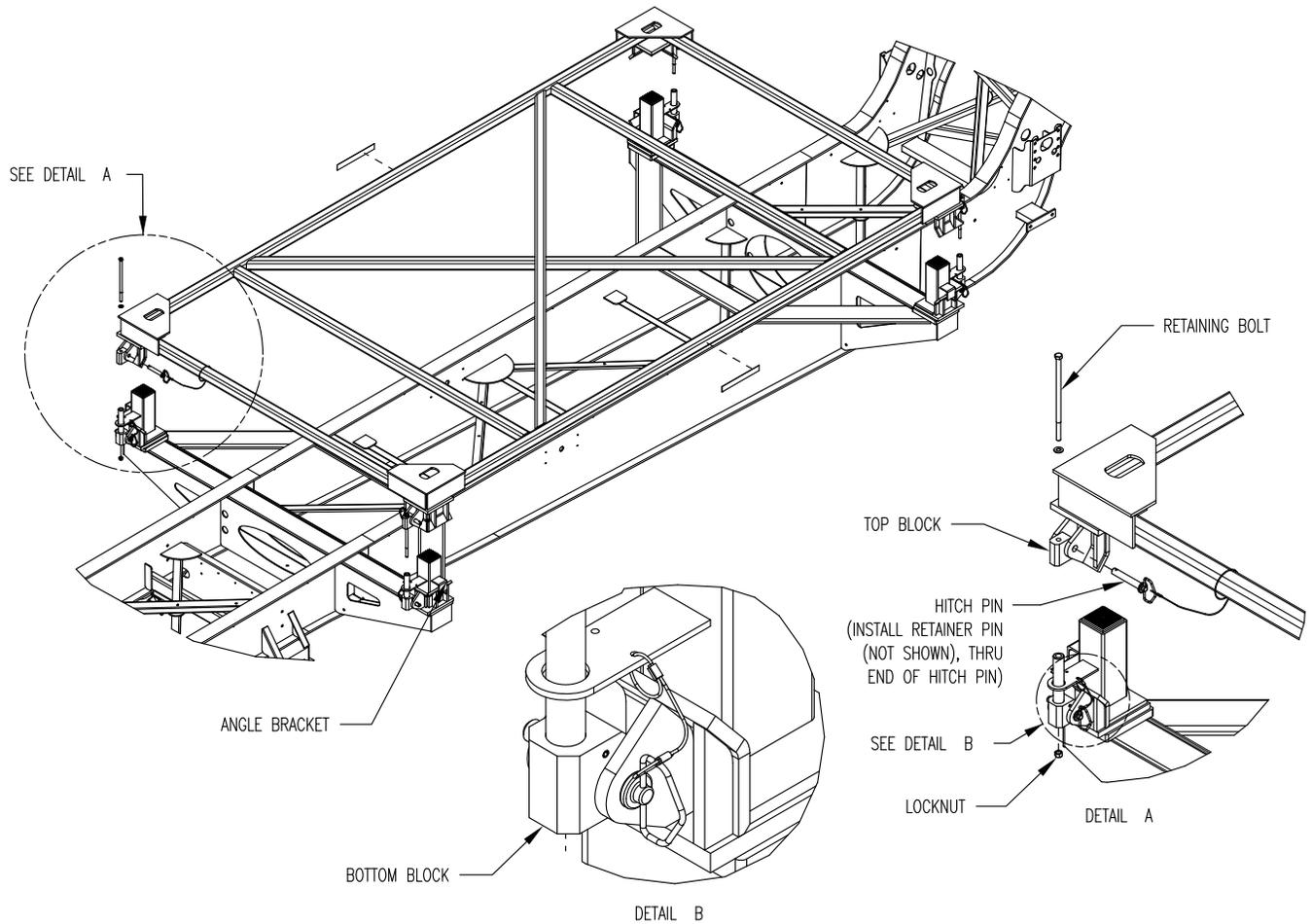


Figure 3. Empty Transport Hardware

- 4.3.4 Install the hitch pin through each of the corner bracket tabs, and through the bottom block to secure it to the trailer. Secure each hitch pin with the retaining pin provided.

CAUTION

Failure to loosen the lock nut before loosening the retaining bolt will result in shearing the retaining bolt.

- 4.3.5 Loosen the lock nut as necessary to loosen the retaining bolt attaching the upper and lower sections of the empty transport hardware.

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NOTE

A conventional forklift may be used to handle the tie down frame when positioning it onto the empty transport blocks. The operator shall be responsible for ensuring the forklift has tines that are of adequate length to support the load, the load is properly balanced on the tines.

- 4.3.6 Lower the tiedown frame over the trailer until the frame rests on the square tube assemblies while ensuring each tube assembly remains vertical.
 - 4.3.7 Install the hitch pin through each of the corner bracket tabs on the tiedown frame, and through the top block to secure it to the trailer. It may be necessary to further loosen the bolt/lock nut to align the holes in the top block with the holes in the tiedown frame. Secure each hitch pin with the retaining pin provided.
 - 4.3.8 With the retaining bolt installed through the top block, tube, and threaded through the bottom block, tighten to 70 lb-ft +/- 5 lb-ft.
 - 4.3.9 Tighten the lock nut wrench tight against the bottom block.
-

NOTE

When preparing an empty trailer for loading a TRUPACT-III, the empty transport hardware and tiedown frame will need to be removed in reverse order of the above steps. Prior to placing the TRUPACT-III on the trailer, the tiedown components need to be removed from the tiedown storage box, and the empty transport hardware placed in the box. In order for the empty transport hardware to fit in the box, each tube assembly must be placed away from the protrusions on the interior of the lid and oriented with the angle brackets facing upward.

5.0 OVER-THE-ROAD OPERATION

Operation of the combined tractor/trailer should be done with approved procedures for using over-the-road vehicles (49 CFR §396.7, "Unsafe Operations Forbidden"). When the TRUPACT-III package is in place, the trailer has a high profile. Therefore, it should not be towed when load and road conditions might cause a rollover.

The trailer has an 88-inch gooseneck clearance. To get the best braking and handling capabilities of the tractor/trailer and reduce equipment damage, **DO NOT** operate the trailer with the fifth wheel positioned further than 12 in. forward of the centerline of the tandem axles.

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6.0 POST-TRIP INSPECTIONS

When the trailer is in use, the carrier/driver shall complete a post-trip inspection for the items discussed in Subsection 3.1 at the end of each day. Inspection and reporting shall be according to 49 CFR §396.11.

7.0 PREVENTIVE MAINTENANCE

This section describes the preventive maintenance that shall be performed by the subcontracted carrier(s). Additional information may be found in the service manuals for each component.

Routine maintenance is the responsibility of the carrier for trailers that are in service, and are under a maintenance contract. Routine maintenance consists of maintaining the trailers in a condition free of defects in order to pass a Commercial Vehicle Safety Alliance (CVSA) Level VI inspection in addition to all of the applicable Department of Transportation (DOT) and Federal Motor Carrier regulations.

Non-routine maintenance for trailers that have been taken out of service and placed in extended storage falls under the responsibility of the Management and Operating Contractor (M&OC) as government property. Refer to Section 9.0, Extended Storage.

7.1 Chassis

The trailer chassis does not need routine maintenance however, it shall be inspected for weld cracks, evidence of corrosion, and/or damage on a regular basis (Subsection 3.1 and Section 6.0). The user shall report any evidence of weld cracks or other abnormalities to the WIPP Transportation Scheduler before using the trailer. The chassis main beams are made of heat-treated steel. This material **SHALL NOT** be welded or drilled by unauthorized personnel. If welding or drilling is needed, the Cognizant Engineer shall be notified, and will make arrangements for the repairs to be made by an authorized facility. If areas on the chassis show signs of significant corrosion and/or paint chipping, these shall be re-primed and repainted.

Belting material ("Fabreeka" or approved equivalent) is to be tightly bound to the corner brackets on the trailer chassis, and should show no signs of wear or separation. If the belting material shows signs of separation, it shall be reattached to the chassis with an approved rubberized contact cement. Belting material showing signs of excessive wear shall be replaced.

7.2 Tiedown System and Empty Transport Hardware

Inspect the tiedown system components (turnbuckles, connecting rod hooks, clevis pins, tiedown frame, corner brackets) for reliable operation, signs of wear or stress. If tiedown components need repair or replacement, notify the Cognizant Engineer. The

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empty transport hardware is used to transport the tiedown frame on the trailer when the trailer is transported without a TRUPACT-III package (Figure 3). During annual trailer maintenance inspect the condition of the empty transport hardware on each corner of the tiedown frame (blocks, angle brackets, hitch pins, retaining pins, and lanyards). Remove lock nut and retaining bolt, and apply a liberal amount of anti-seize compound to retaining bolt threads. Install the bolt and tighten to 70 lb-ft +/- 5 lb-ft. Install lock nut wrench tight.

7.3 Axles/Brakes

Comply with the service instructions carefully when working on the axles and brakes.

The trailer's axle/brake assemblies are standard commercial components. Comply with the manufacturer's recommended procedure for maintaining these components. A schedule for the periodic adjustment, cleaning, inspection, and lubrication of the axle and brake equipment shall be prepared based on experience and the type of operation. Brakes shall be adjusted as often as needed for correct operation and safety. Brake adjustments shall give correct clearance between the lining and drum, correct push rod travel, and balance between the brakes. Brakes shall be cleaned, inspected, lubricated, and adjusted each time the wheel hubs are removed (49 CFR §396.25, "Qualifications of Brake Inspectors").

Debris entering the brake system air lines can clog the relay valves. To prevent debris from entering the brake system air lines when a trailer is disconnected from the tractor, "glad-hand" covers shall be used on all trailers that are equipped with them.

7.4 Suspension

WARNING

If the trailer is to be raised with jacks, work under the trailer **MUST NOT** take place if supported by jacks only. Jacks can fail and cause death, or tip over and cause serious personal injury. The trailer **MUST** be properly supported with appropriately rated blocking or jack stands prior to beginning work under a raised trailer.

The suspension has a specific ride height. The height is controlled by a height control valve. This maintains an even trailer height. Perform a maintenance inspection by inspecting the unit. Verify the suspension is fully operational daily (or before each trip).

NOTE

Grease is not to be applied to the height control valves. No external lubrication is required.

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The height control valve on each side controls all air springs on its respective side. The height control valves shall be inspected regularly. Look for proper clearance around, or damage to, the valve control arms or adjusting blocks.

Drain the air tank periodically to remove water from the air system tank.

7.5 Tires/Wheels

Routine tire maintenance is to verify the cold air pressure is at the manufacturer's recommended pressure. The tires shall be routinely inspected for excessive wear, bulges, cracks, cuts, or penetrations.

Clean the wheels often with a high-pressure washer and a mild detergent. Inspect the metal surfaces of the wheels thoroughly for excessive corrosion buildup, metal cracks, bent or broken flanges, etc. This includes the areas between the dual wheels. Report abnormalities to the WIPP Transportation Scheduler before using the trailer.

7.6 Landing Gear

Inspect the landing gear routinely for bolt tightness and for lubrication. The specific maintenance items are listed in the manufacturer's service manual.

Any repair of the attachment welds to the chassis shall be performed by authorized personnel listed in Section 9.0.

7.7 Tiedown System

Inspect the tiedown system components including the tiedown frame for signs of wear or stress. If tiedown components need repair or replacement, or show signs of wear or stress, notify the Cognizant Engineer to make arrangements for repairs or replacement, as applicable. There are no user serviceable parts within the tiedown system.

8.0 INSPECTIONS

In the trailer preventive maintenance program, regularly scheduled inspections shall be performed. These inspections are needed to comply with DOT requirements.

8.1 Interval Inspections

In addition to pre-trip and post-trip inspections, trailer inspections are required, at a minimum, annually, as stated in Subsection 10.2. The carrier's contractual agreement and/or regulatory agencies may require more frequent and/or additional inspections to those stated in Section 3.0.

8.2 Annual Inspections

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8.2.1 DOT Requirements

To comply with the DOT requirements, the trailer shall be inspected annually. This annual inspection includes (at a minimum) all points covered in the vehicle inspection report (49 CFR §396.11). It also requires an inspection of the critical weld areas. Carry proof of a satisfactory inspection either in the vehicle, or on an affixed decal (49 CFR §396.17, "Periodic Inspection").

8.3 Recordkeeping

Reports shall be prepared and kept by the carrier using the recordkeeping requirements of 49 CFR Part 396, *Inspection, Repair, and Maintenance*, and in accordance with the individual carrier's contractual agreement:

- Pre-trip inspection
- Post-trip inspection
- Annual inspection (49 CFR §396.21, "*Periodic Inspection Recordkeeping Requirements*")

9.0 EXTENDED STORAGE

For trailers that are to be taken out of service for an extended period of time (twelve months or more), and are no longer included on the subcontracted carrier's maintenance contract, the M&OC shall perform the following at the start of each fiscal year:

Provide recommendations for storage to preserve the condition of the trailers to the DOE CBFO Technical Monitor and DOE CBFO Contracting Officer in writing (email or interoffice correspondence). These recommendations will be implemented commensurate upon funds availability under the applicable annual fiscal year's Integrated Priority List (FY IPL), or as otherwise directed by the DOE CBFO Contracting Officer as recommended by the DOE CBFO Technical Monitor.

Based on current priority and needs for the mission, the direction provided by the DOE CBFO may indicate that no action is required. Direction indicating that no action is required may be documented by one of the following methods:

- Letter of authorization from CBFO Contracting Officer
- IPL
- PCR

This documentation shall be kept on file by the M&OC.

Checks and maintenance according to 49 CFR §392.7, shall be done before using a trailer from storage.