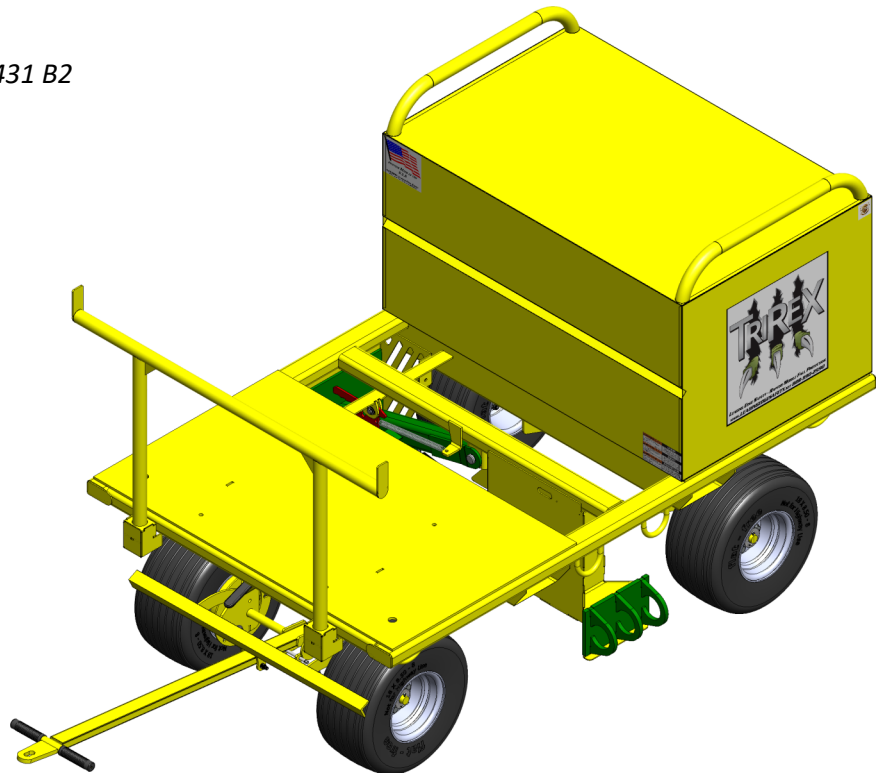


LEADING EDGE SAFETY

INSTRUCTION MANUAL

TRITMREX PATENT # US 8240431 B2
Mobile Fall Protection System



Instruction Manual

WARNING

Serious injury or death may result if this product is used for purposes other than designed. The manufacturer provides the following instructions for the use and care of this equipment. It is the responsibility of the purchaser to understand and convey explicit instruction to each user. The AES Manufacturing/Leading Edge Safety TRITMREX complies with the requirements of the Federal Occupational Safety and Health Administration (OSHA) when set up and used according to the manufacturers' instructions.

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TRIREX™ INSTRUCTION MANUAL

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LEADING EDGE SAFETY, LLC **TRIREX™ Instruction Manual**

Published by Leading Edge Safety, LLC
North Kansas City, MO

TRIREX COMPLETE MOBILE FALL PROTECTION SYSTEM

is a registered trademark of
Leading Edge Safety, LLC
1345 Taney
North Kansas City, MO 64116
www.LeadingEdgeSafety.net

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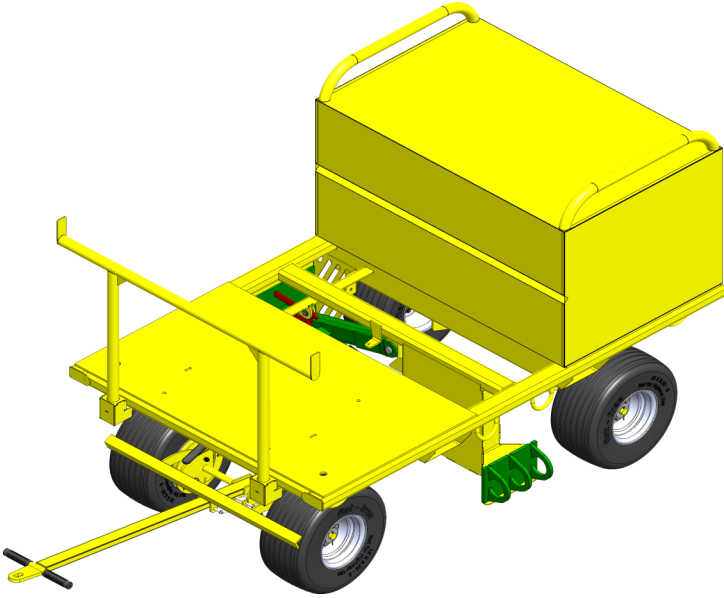
1.0 Standards and Requirements

1.1 The TRIREX™, manufactured by Leading Edge Safety LLC, is a dynamic anchor designed to dissipate the energy generated from a fall event into the surrounding substrate and arrest a fall. The TRIREX™ is capable of supporting a Maximum Arresting Force (MAF) of 1,800lbs for up to (3) workers on approved substrates. Therefore, the TRIREX™ is an acceptable component of a complete active fall arrest system and satisfies those requirements specified in: ANSI/ASSE Z359.6-2009 “Specifications and Design Requirements for Active Fall Protection Systems.”

1.2 Let it be noted that this mobile fall protection anchorage unit shall only be used as part of a complete active fall protection system. Therefore, the following criteria must be met to satisfy ANSI/ASSE Z359.6-2009:

- 1.2a** Use of full body harness(s) in compliance with Z359.1-2007 “Safety Requirements for Personal Fall Arrest Systems, subsystems, and Components”
- 1.2b** Use of Lanyard(s) In compliance with Z359.13-2009 “Personal Energy Absorbers and Energy Absorbing Lanyards”
- 1.2c** Use of Connection(s) In compliance with Z359.12-2009 “Connecting Components for Personal Fall Arrest Systems”
- 1.2d** Use of Manufacturer’s Recommendations; the TRIREX™ shall not be installed/positioned/utilized in a manner that violates the literature, instructions, technical bulletins or any other documentation produced by Leading Edge Safety LLC.
- 1.2e** Calculations by an authorized user (qualified person) to verify that the substrate, edge distance, free fall distance, and the number of workers attached to cart satisfies those requirements of ANSI Z359.6.
- 1.2f** The use of component(s) used in combination with the TRIREX™ that are not covered by ANSI/ASSE Z359 will not result in an acceptable Active Fall Protection System.

1.3 In addition to satisfying Z359.6, the TRIREX™ is also in compliance with OSHA’s “Fall protection systems criteria and practices” (CFR › Title 29 › Subtitle B › Chapter XVII › Part 1926 › Subpart M › Section 1926.502). Section 1926.502(d)(15) requires that an anchor either support 5,000 pounds per employee attached or is used as part of a complete personal fall arrest system. Note that this anchorage unit is never intended to withstand a force of 5,000 lbs per user, but rather to be used as part of a complete personal fall arrest system. Determining if this complete personal fall arrest system can maintain a safety factor of at least (2) will require an authorized user to verify the above criteria.

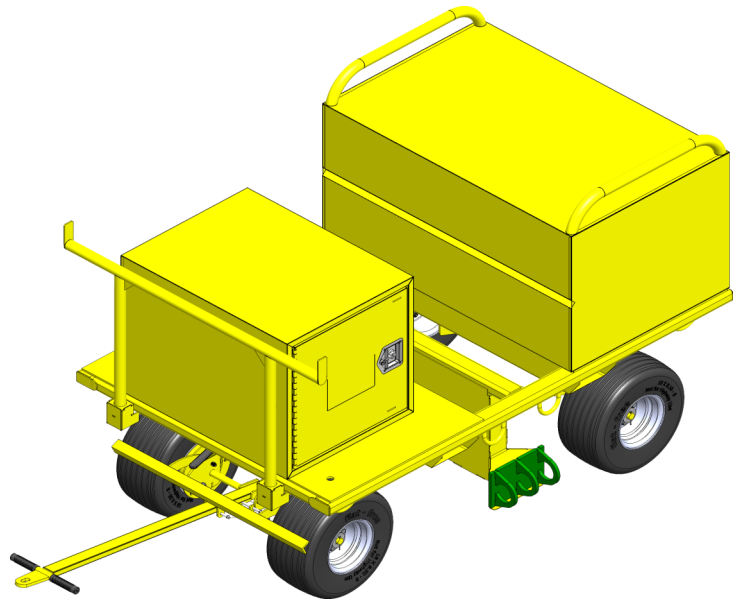


TRIREX TR-000-01-18
MOBILE FALL PROTECTION SYSTEM

- MODEL# TR-000-01-18**
- SINGLE 20 CUFT JOB BOX
- 3-PERSON FALL ARREST
2-PERSON FALL RESTRAINT

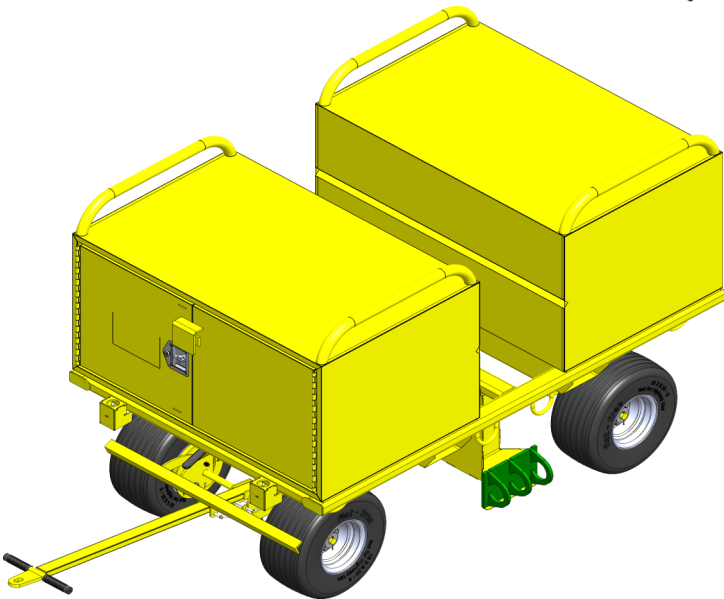
TRIREX TR-000-02-18
MOBILE FALL PROTECTION SYSTEM

- MODEL# TR-000-02-18**
- SINGLE 20 CUFT JOB BOX
 - SINGLE 10 CUFT JOB BOX
- 3-PERSON FALL ARREST
2-PERSON FALL RESTRAINT



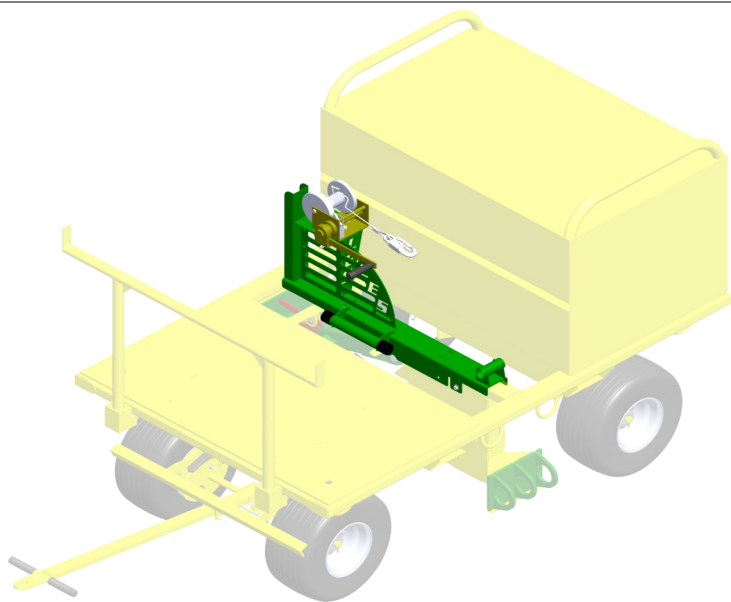
TRIREX TR-000-03-18
MOBILE FALL PROTECTION SYSTEM

- MODEL# TR-000-03-18**
- DOUBLE 20 CUFT JOB BOX
- 3-PERSON FALL ARREST
2-PERSON FALL RESTRAINT



4.0

USE AND LIMITATIONS



RAPTOR RESCUE

RMS-000-16

FALL RESCUE RETRIEVAL SYSTEM

MODEL# RMS-000-16

- 100 LF STAINLESS STEEL CABLE
- INCLUDES RETRIEVAL POLE

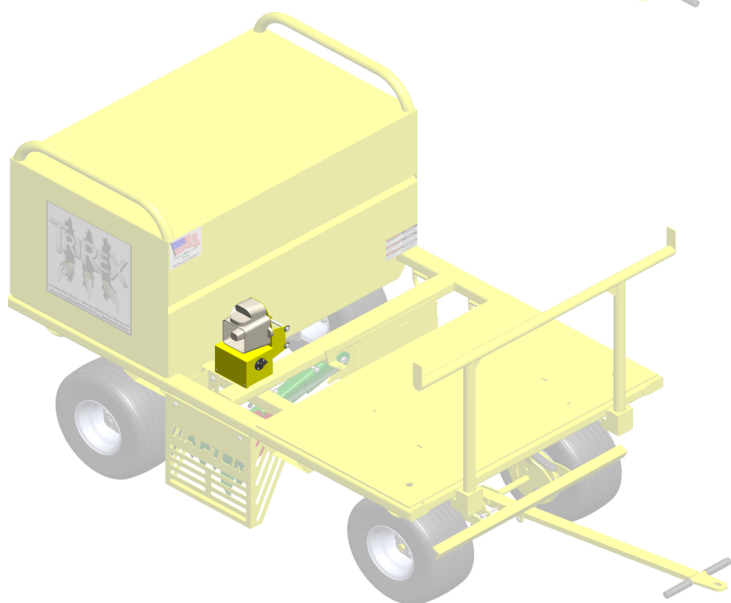
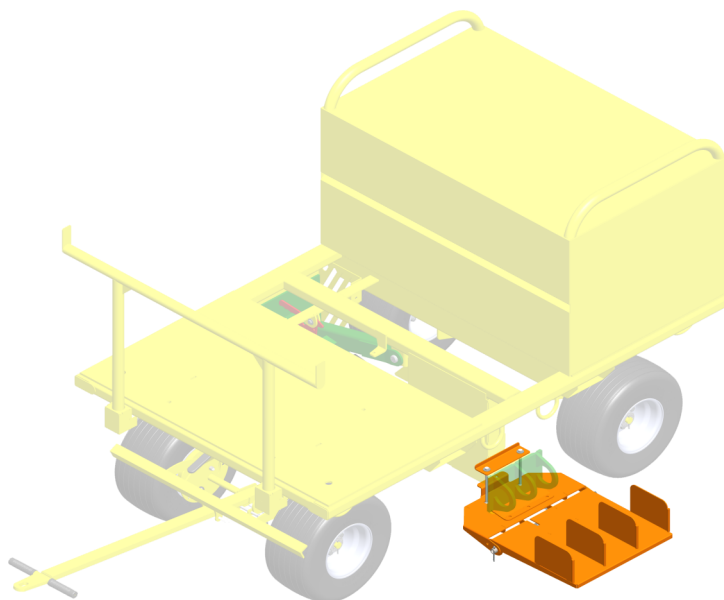
COMPATIBLE WITH ALL TRIREX MODELS AND CONFIGURATIONS, R1000, R2000 AND STINGER MODELS

SRL TRAY SRL-000-13

SRL TRAY GUIDE SYSTEM

MODEL# SRL-000-13

ORGANIZES AND GUIDES UP TO 3 SELF RETRACTING LIFELINES
COMPATIBLE WITH ALL TRIREX MODELS AND CONFIGURATIONS, R1000 AND R2000 MODELS



RAPTOR ALERT

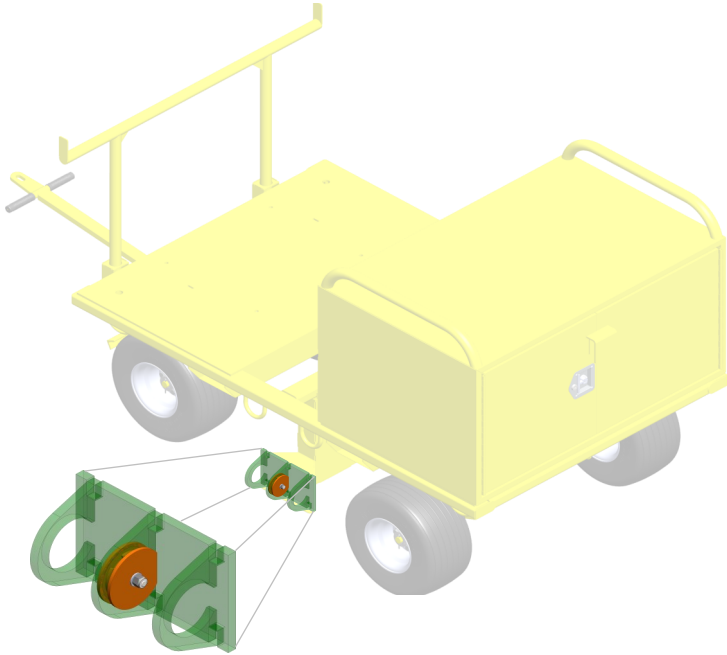
RAS-000-18

FALL ARREST ALERT SYSTEM

MODEL# RAS-000-18

- 130 DB SIREN
- STROBE LIGHT
- 12v RECHARGEABLE BATTERY

COMPATIBLE WITH ALL TRIREX MODELS AND CONFIGURATIONS, R1000, R2000 AND STINGER MODELS



ATTACHMENT POINT RESTRICTOR

APR-000-12

ATTACHMENT POINT RESTRICTOR PLATE

MODEL# APR-000-12

COMPATIBLE WITH ALL TRIREX MODELS
LIMITS THE NUMBER OF ATTACHMENT
POINTS WHEN THE SUBSTRATE REQUIRES
A REDUCTION IN NUMBER OF USERS.

ICE PLATFORM

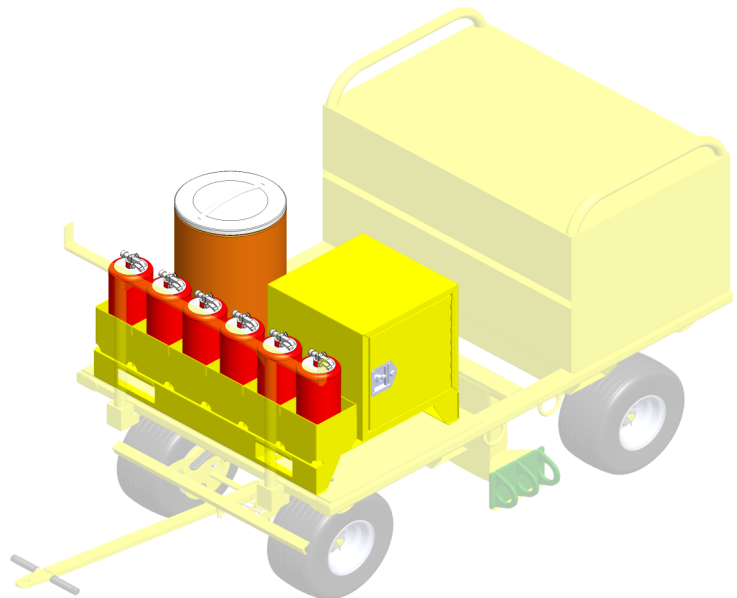
ICE-PE-000-12

IN CASE OF EMERGENCY SAFETY PLATFORM
(FULLY STOCKED)

MODEL# ICE-PE-000-12

- 24 PC FIRST AID KIT
- (1) HEAT STRESS KIT
- (1) BLOODBORNE PATHOGEN KIT
- (1) SINGLE EYE WASH STATION
- (1) 5 GL WATER COOLER
- (6) ABC FIRE EXTINGUISHERS

COMPATIBLE WITH ALL TRIREX MODELS AND
R2000 MODELS IN SINGLE JOB BOX
CONFIGURATION



ICE PLATFORM

ICE-P-000-12

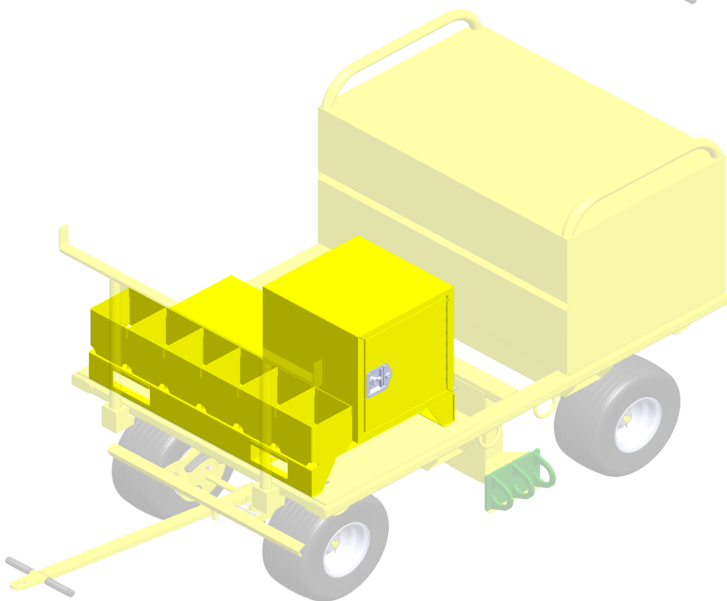
IN CASE OF EMERGENCY SAFETY PLATFORM
(PLATFORM ONLY)

MODEL# ICE-P-000-12

STORAGE FOR:

- FIRST AID & MEDICAL SUPPLIES
- (1) 5 GL WATER COOLER
- (6) ABC FIRE EXTINGUISHERS

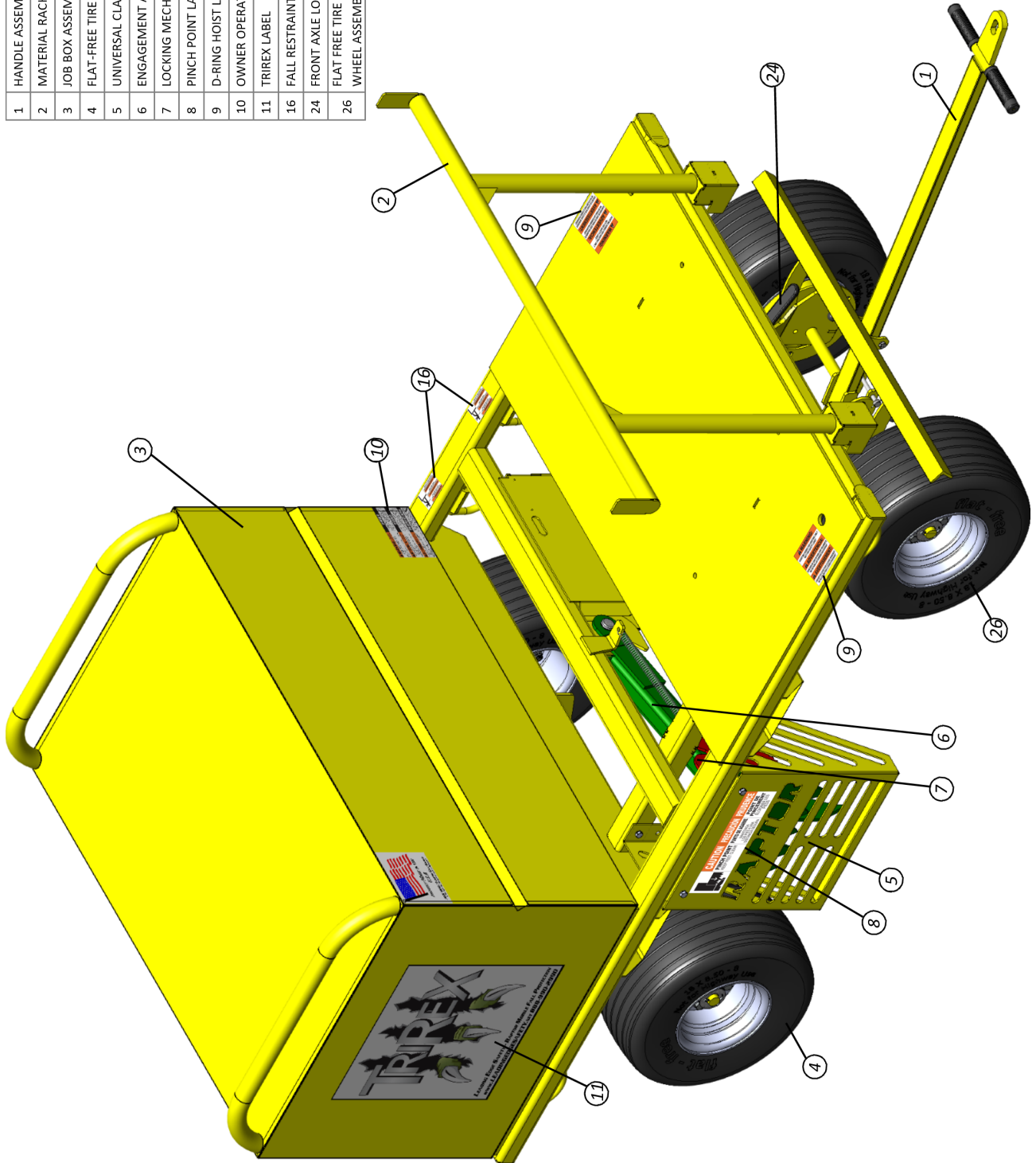
COMPATIBLE WITH ALL TRIREX MODELS AND
R2000 MODELS IN SINGLE JOB BOX
CONFIGURATION.



TriREX™ INSTRUCTION MANUAL

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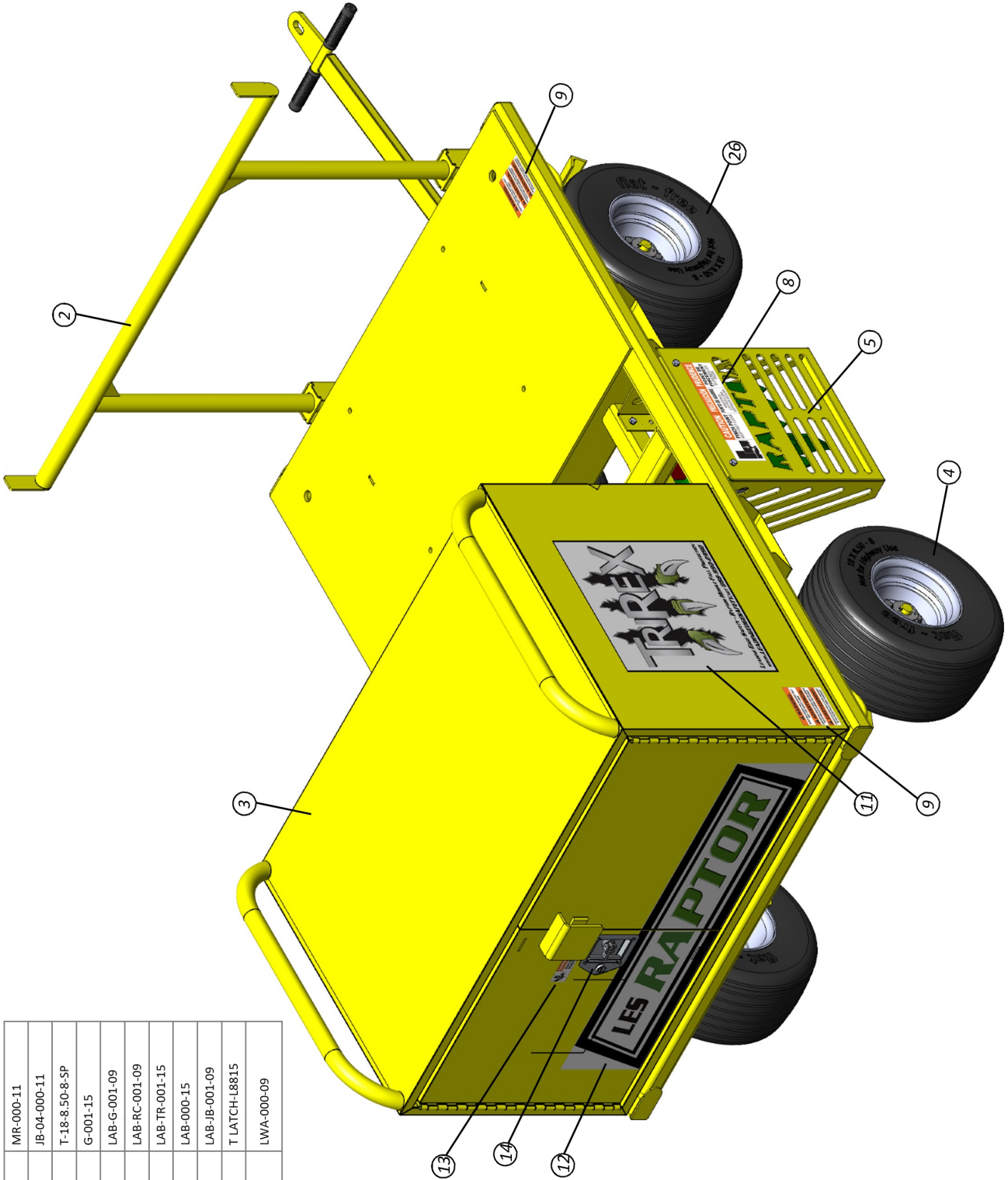
1	HANDLE ASSEMBLY	HND-000-17
2	MATERIAL RACK	MR-000-11
3	JOB BOX ASSEMBLY	JB-04-000-11
4	FLAT-FREE TIRE	T-18-8.50-8-SP
5	UNIVERSAL CLAW GUARD	G-001-15
6	ENGAGEMENT ARM ASSEMBLY	SEA-000-11
7	LOCKING MECHANISM	SEA-LA-001-11
8	PINCH POINT LABEL (FOOT)	LAB-G-001-09
9	D-RING HOIST LABEL	LAB-RC-001-09
10	OWNER OPERATOR LABEL	LAB-JB-002-09
11	TRIREX LABEL	LAB-TR-001-15
16	FALL RESTRAINT LABEL	LAB-APX-001-09
24	FRONT AXLE LOCK	HBA-103-17
26	FLAT FREE TIRE W/ LOCKING WHEEL ASSEMBLY	LWA-000-09



TriREX™ INSTRUCTION MANUAL

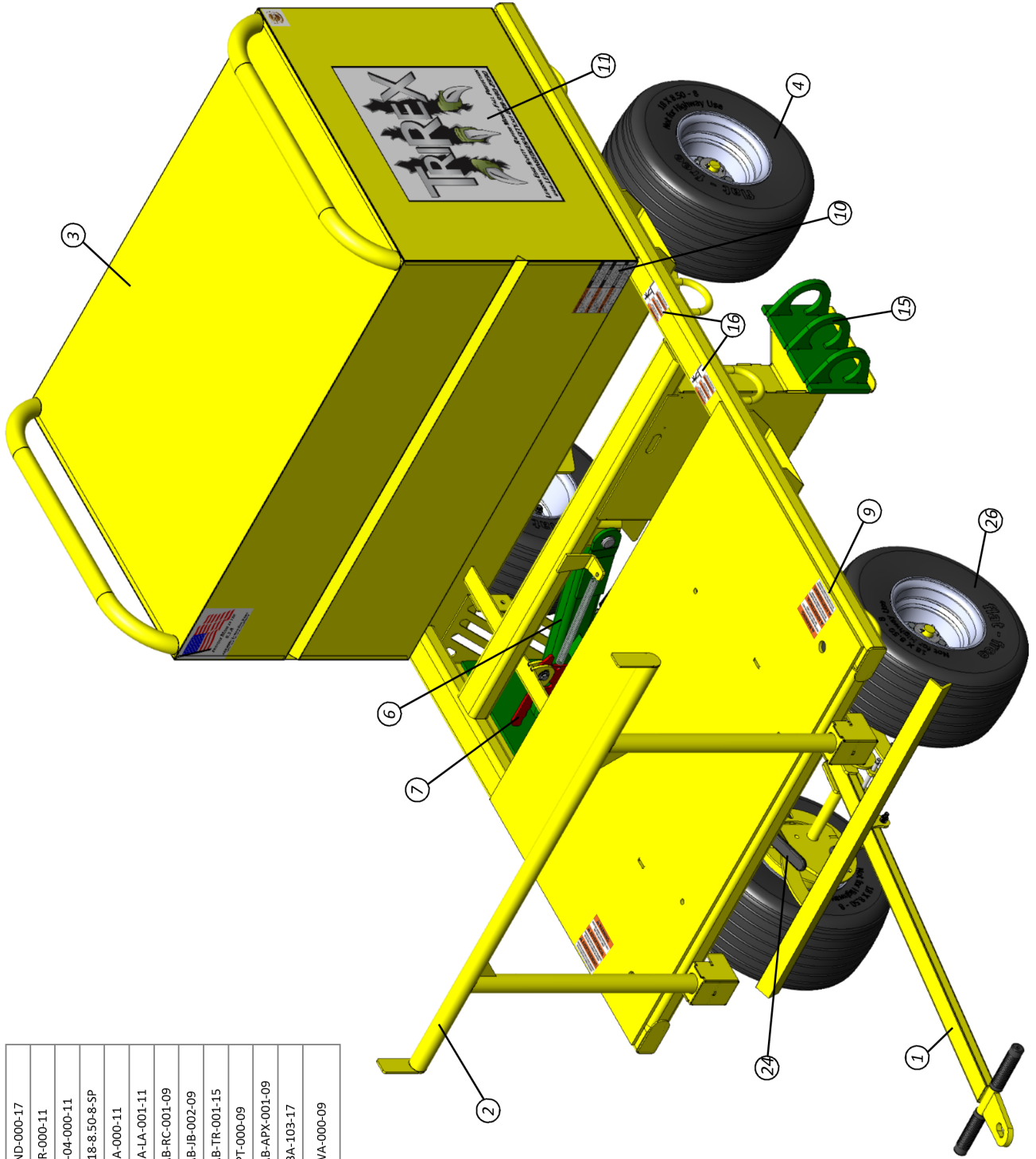
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2	MATERIAL RACK	MR-000-11
3	JOB BOX ASSEMBLY	JB-04-000-11
4	FLAT-FREE TIRE	T-18-8.50-8-SP
5	UNIVERSAL CLAW GUARD	G-001-15
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9	D-RING HOIST LABEL	LAB-RC-001-09
11	TRIREX LABEL	LAB-TR-001-15
12	LES RAPTOR LABEL	LAB-000-15
13	PINCH POINT LABEL (HAND)	LAB-JB-001-09
14	T-HANDLE LOCK ASSEMBLY	T LATCH-L8815
26	FLAT FREE TIRE W/ LOCKING WHEEL ASSEMBLY	LWA-000-09



TriREX™ INSTRUCTION MANUAL

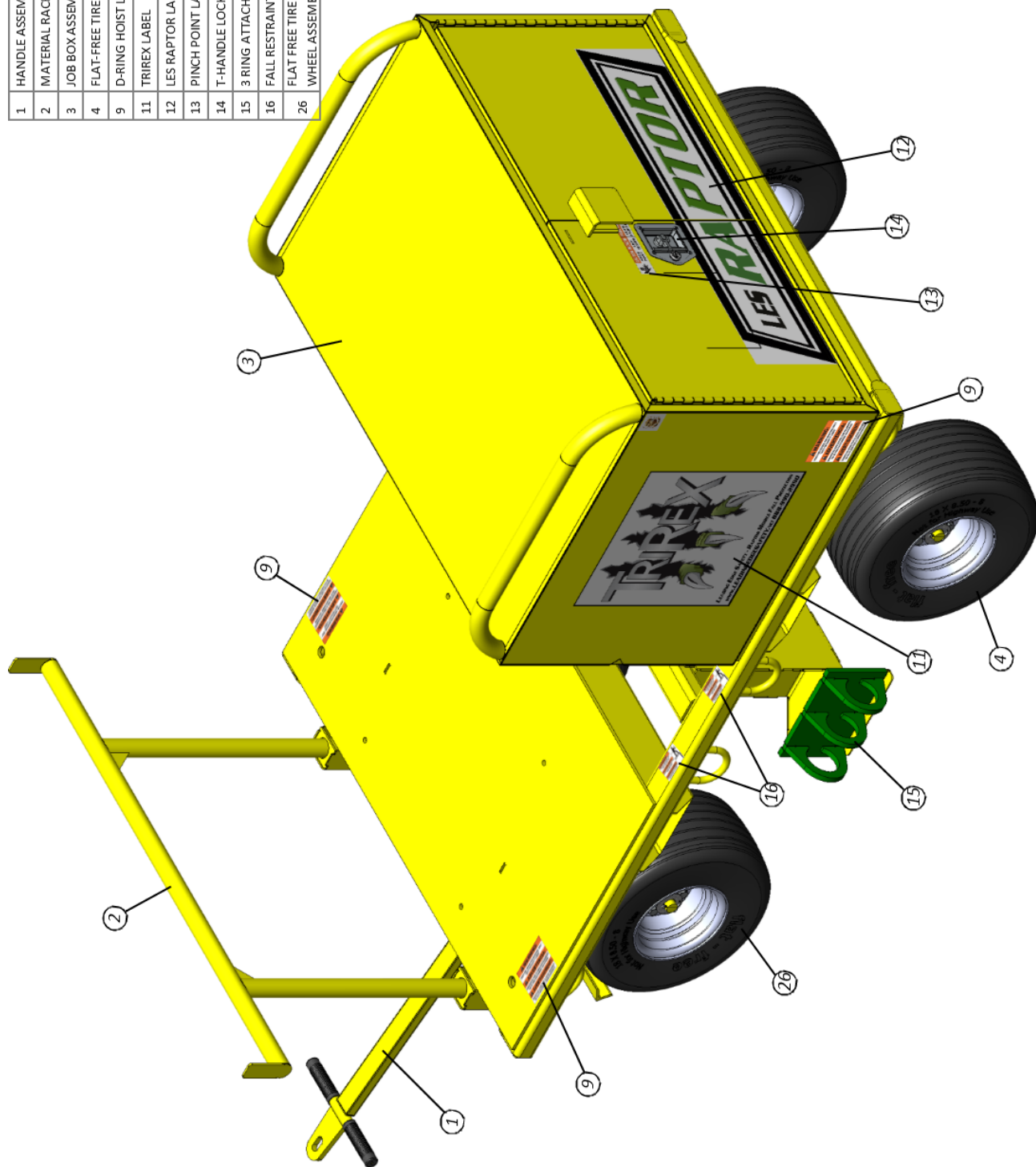
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1	HANDLE ASSEMBLY	HND-000-17
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10	OWNER OPERATOR LABEL	LAB-JB-002-09
11	TRIREX LABEL	LAB-TR-001-15
15	3 RING ATTACHMENT POINT	APT-000-09
16	FALL RESTRAINT LABEL	LAB-APX-001-09
24	FRONT AXLE LOCK	HBA-103-17
26	FLAT FREE TIRE W/ LOCKING WHEEL ASSEMBLY	LWA-000-09

TriREX™ INSTRUCTION MANUAL

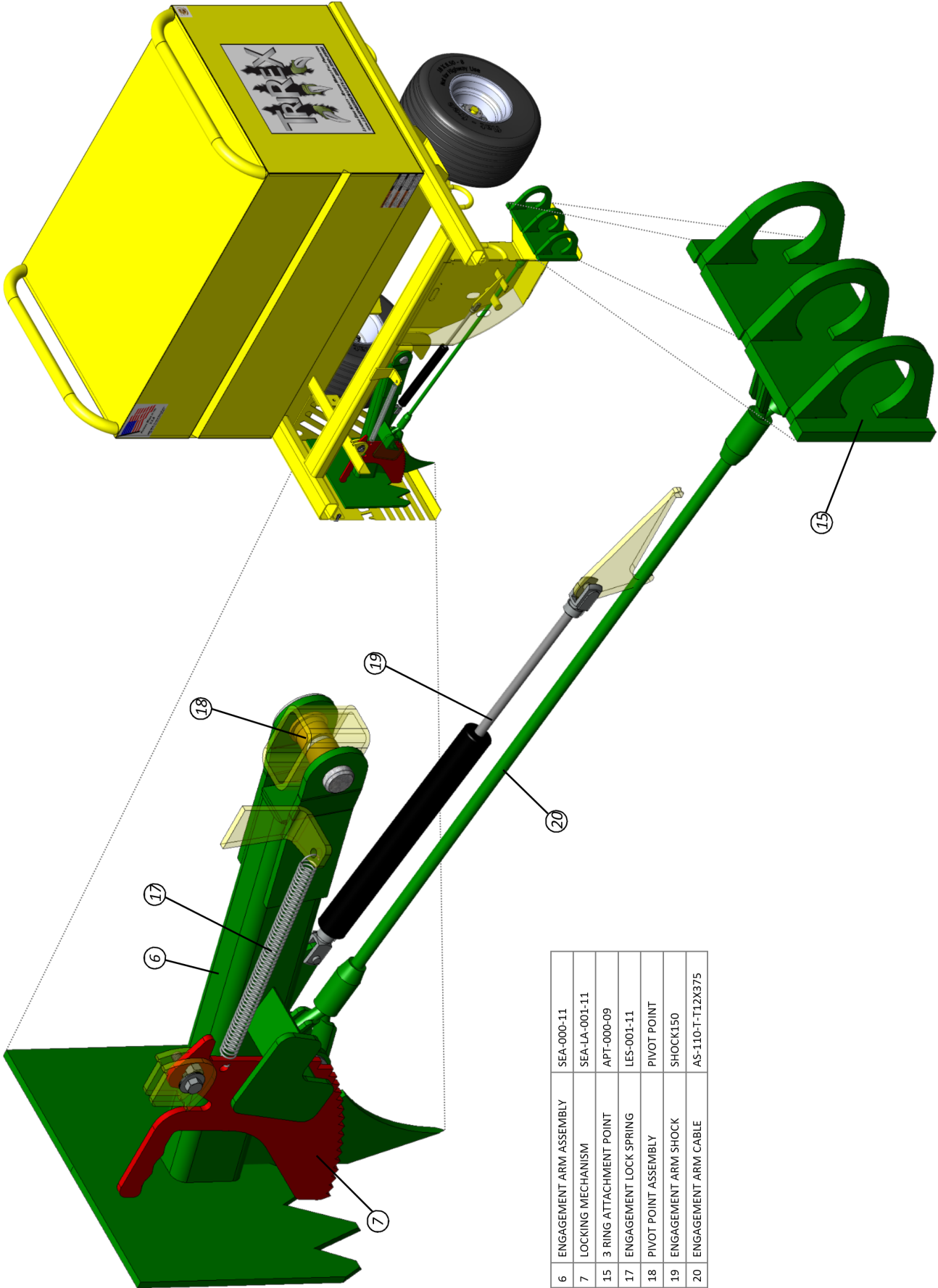
1	HANDLE ASSEMBLY	HND-000-17
2	MATERIAL RACK	MR-000-11
3	JOB BOX ASSEMBLY	JB-04-000-11
4	FLAT-FREE TIRE	T-18-8.50-8-SP
9	D-RING HOIST LABEL	LAB-RC-001-09
11	TRIEX LABEL	LAB-TR-001-15
12	LES RAPTOR LABEL	LAB-000-15
13	PINCH POINT LABEL (HAND)	LAB-JB-001-09
14	T-HANDLE LOCK ASSEMBLY	T LATCH-L8815
15	3 RING ATTACHMENT POINT	APT-000-09
16	FALL RESTRAINT LABEL	LAB-APX-001-09
26	FLAT FREE TIRE W/ LOCKING WHEEL ASSEMBLY	LWA-000-09



ENGLISH

TriREX™ INSTRUCTION MANUAL

ENGLISH

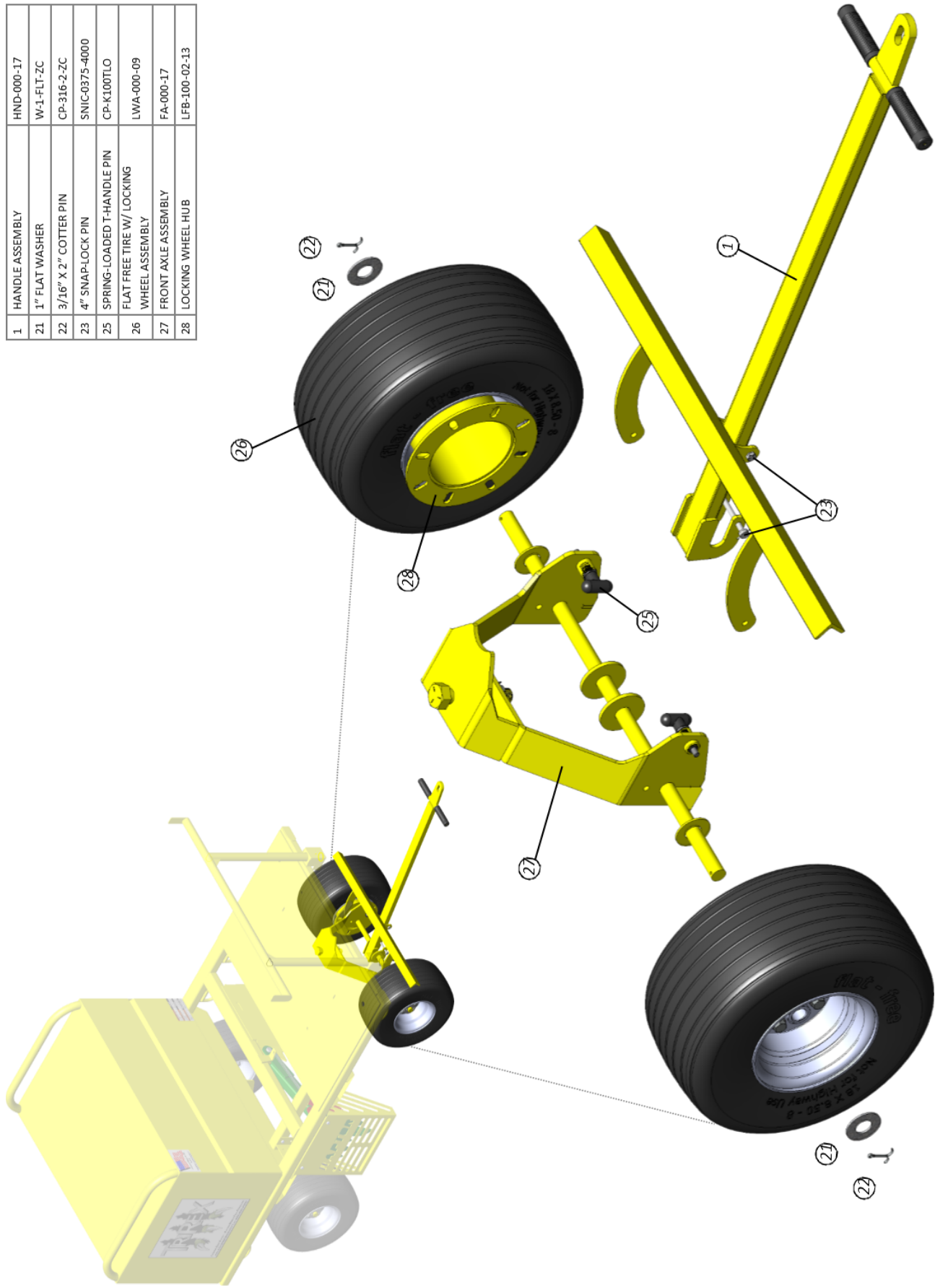


6	ENGAGEMENT ARM ASSEMBLY	SEA-000-11
7	LOCKING MECHANISM	SEA-LA-001-11
15	3 RING ATTACHMENT POINT	APT-000-09
17	ENGAGEMENT LOCK SPRING	LES-001-11
18	PIVOT POINT ASSEMBLY	PIVOT POINT
19	ENGAGEMENT ARM SHOCK	SHOCK150
20	ENGAGEMENT ARM CABLE	AS-110-T-112X375

TriREX™ INSTRUCTION MANUAL

ENGLISH

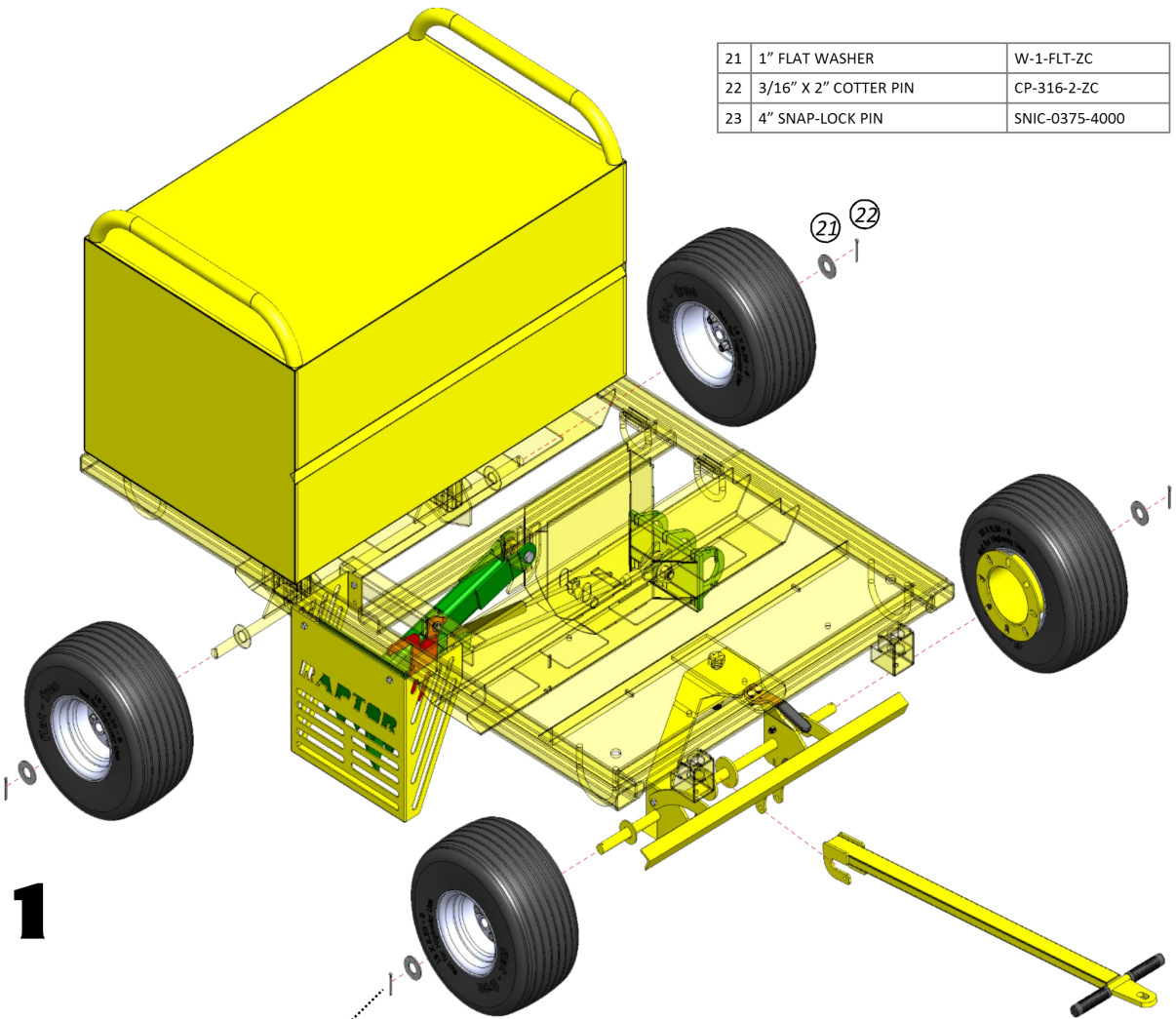
1	HANDLE ASSEMBLY	HND-000-17
21	1" FLAT WASHER	W-1-FLT-ZC
22	3/16" X 2" COTTER PIN	CP-316-2-ZC
23	4" SNAP-LOCK PIN	SNIC-0375-4000
25	SPRING-LOADED T-HANDLE PIN	CP-K100TLO
26	FLAT FREE TIRE W/ LOCKING WHEEL ASSEMBLY	LWA-000-09
27	FRONT AXLE ASSEMBLY	FA-000-17
28	LOCKING WHEEL HUB	LFB-100-02-13



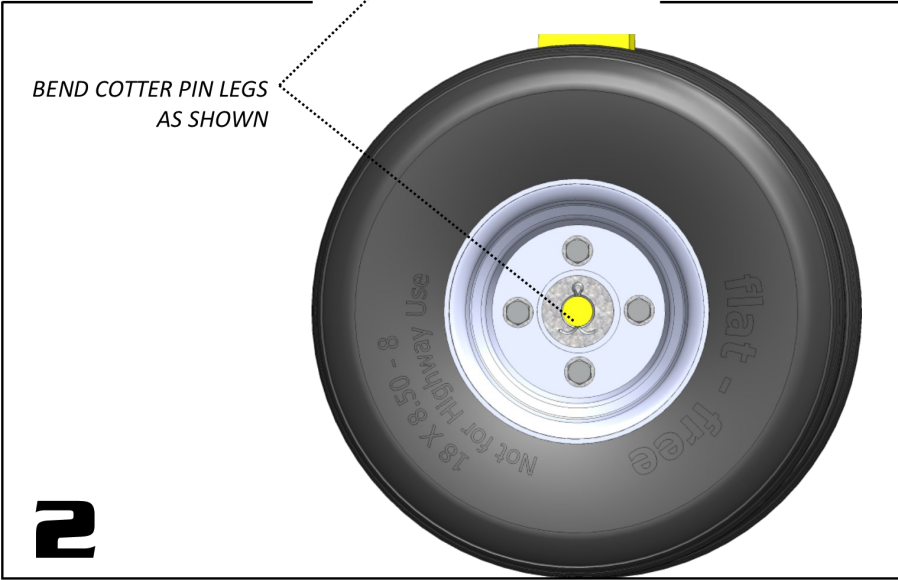
TriRex & R-2000 Handle & Wheel Assembly

REMOVE WHEELS AND HANDLE FROM JOB BOX

21	1" FLAT WASHER	W-1-FLT-ZC
22	3/16" X 2" COTTER PIN	CP-316-2-ZC
23	4" SNAP-LOCK PIN	SNIC-0375-4000



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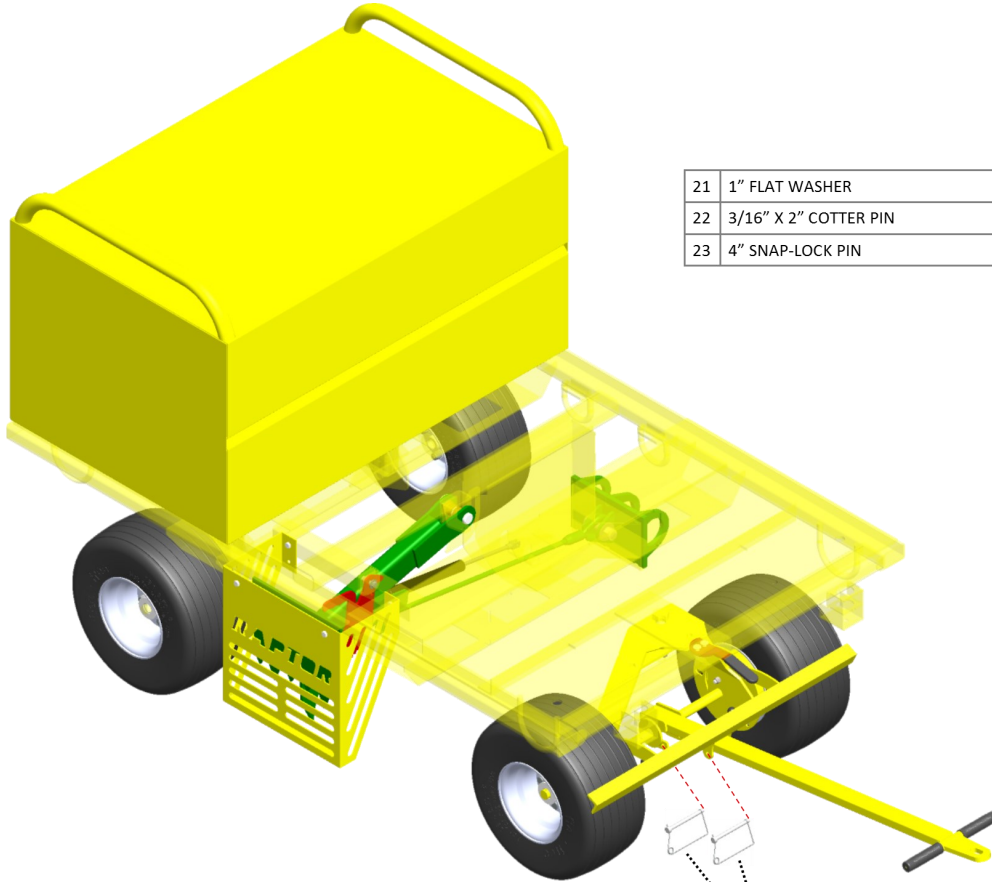
BEND COTTER PIN LEGS
AS SHOWN

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TriREX™ INSTRUCTION MANUAL

21	1" FLAT WASHER	W-1-FLT-ZC
22	3/16" X 2" COTTER PIN	CP-316-2-ZC
23	4" SNAP-LOCK PIN	SNIC-0375-4000

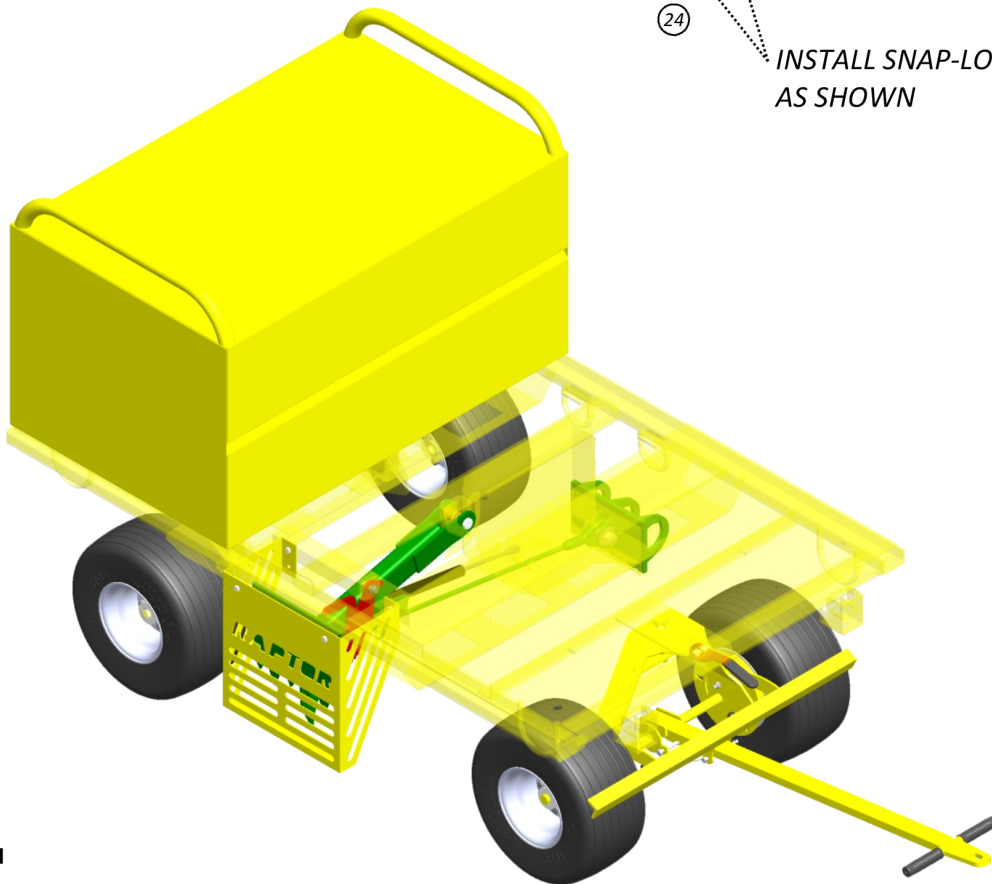
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(24)

INSTALL SNAP-LOCK PINS
AS SHOWN

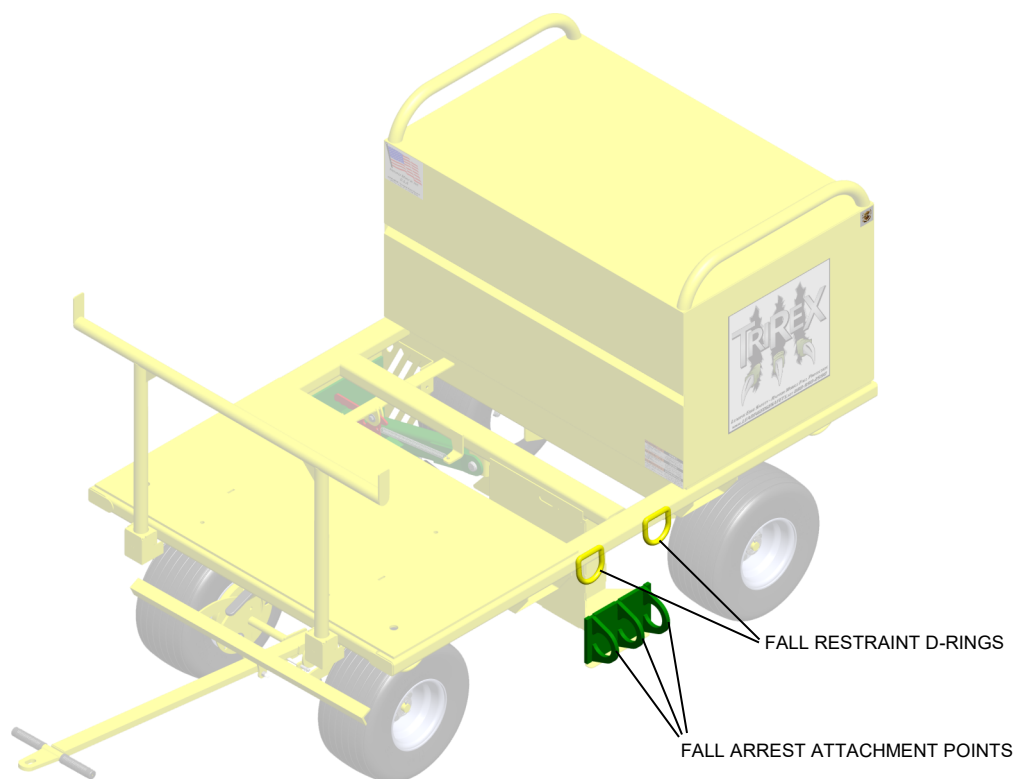
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TRIEX™ INSTRUCTION MANUAL

2.0 APPLICATIONS

- 2.1 The TRIEX™ is designed to be used as an anchorage as part of a complete mobile fall protection system. The TRIEX™ may be used where worker mobility and fall protection are required. See WWW.OSHA.GOV for all regulations and standards.
- 2.2 The TRIEX™ allows for up to three workers to be tied-off simultaneously for fall arrest to the *Fall Arrest Attachment Points* and an additional two workers tied-off simultaneously for fall restraint to the *Fall Restraint D-Rings*. See the following definitions (Section 3.0):



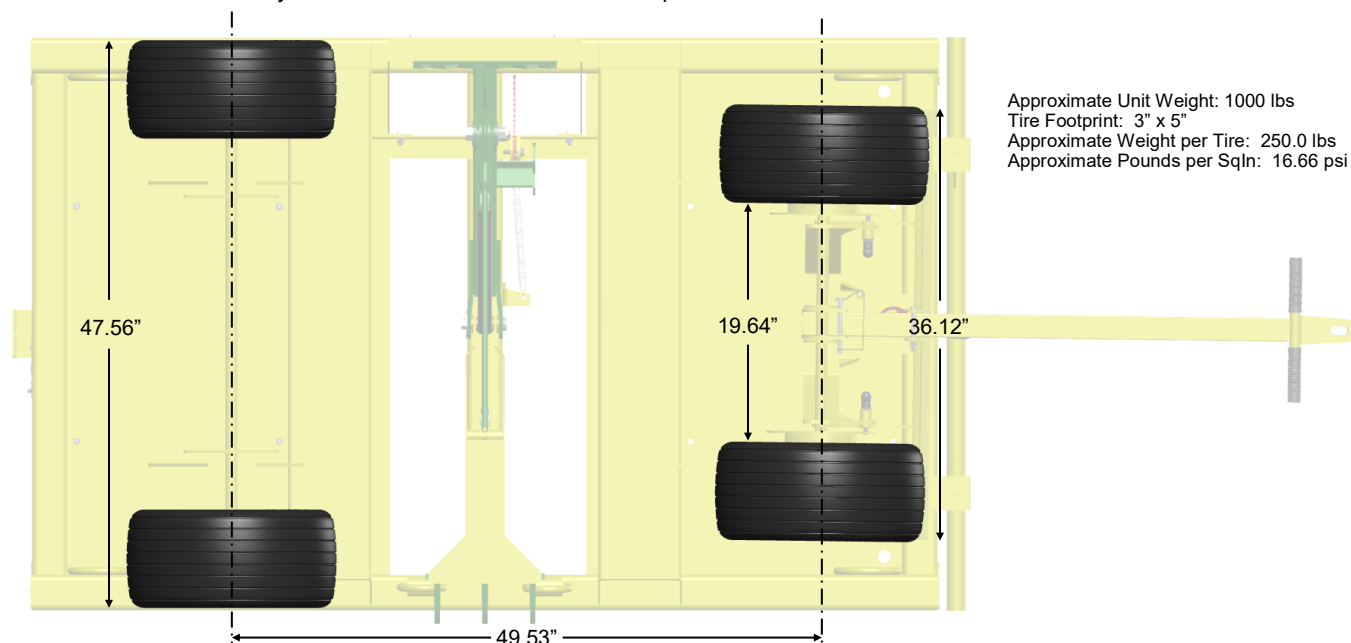
3.0 DEFINITIONS:

- 3.1 **Fall Restraint System** – A fall restraint system (FRS) *prevents* the user from falling. The system is comprised of a body harness along with an anchorage, connectors and other necessary equipment. The components typically include a lanyard and also may include a lifeline and other devices. The TRIEX™ can be used as an anchorage in a fall restraint system for up to two workers.
- 3.2 **Personal Fall Arrest System** – A personal fall arrest system (PFAS) arrests a fall *after* a fall has begun. The system is comprised of an anchorage, connectors, and a body harness and may include a deceleration lifeline, or suitable combinations. Note that a PFAS does NOT prevent a fall from occurring. The TRIEX™ can be used as an anchorage in a PFAS for up to three workers. A Personal Fall Arrest System must meet the following OSHA requirements:
- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness;
 - Be rigged so that an employee can neither free-fall more than 6 feet (1.8 meters) nor contact any lower level;
 - Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 meters); and
 - Have sufficient strength to withstand twice the potential impact energy of an employee free-falling a distance of 6 feet (1.8 meters) or the free-fall distance permitted by the system, whichever is less.
- 3.3 **Anchorage** — An anchorage is a secure point of attachment for lifelines, lanyards, or deceleration devices. The TRIEX can be used as an anchorage.

TriREX™ INSTRUCTION MANUAL

4.0 USE AND LIMITATIONS

4.1 LOAD REQUIREMENTS—Before the TriREX is hoisted to any roof surface, the user must verify that the deck assembly can accommodate the live load requirements of the TriREX.



4.2 APPROVED SUBSTRATES:

BUILT-UP ROOFING (BUR) ⁴	MODIFIED BITUMEN ⁴
THERMOPLASTIC POLYOLEFIN (TPO) ⁴	ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ⁴
POLYVINYL CHLORIDE (PVC) ⁴	BALLASTED SINGLE-PLY MEMBRANES ⁴
BUILT-UP ROOFING (BUR) AND GRAVEL ⁴	INVERTED ROOF MEMBRANE ASSEMBLY (IRMA) ⁴
ROOF COATINGS ⁴	

PLYWOOD	HIGH DENSITY FIBERBOARD ^{3,6}
DENSDECK® ^{3,6}	GYPSUM BOARD ^{3,6}
POLYISOCYANURATE (ISO) ^{3,6}	EXPANDED POLYSTYRENE (EPS) ^{3,6}
EXTRUDED POLYSTYRENE (XPS) ^{3,6}	SPRAY-APPLIED POLYURETHANE ^{3,6}

METAL DECK (22GA AND 20GA)	METAL DECK (18GA) ^{1,2,6,8}
LIGHTWEIGHT CONCRETE	CONCRETE DECK ^{1,2,8} (4000-9000psi)
TOPSOIL—COMPACTED	GYPSUM DECK
ASPHALT PAVEMENT	GRAVEL—COMPACTED
PANELIZED SLAB FORMWORK ^{7,8}	

FLAT SURFACES AND UP TO 2:12 SLOPE.

DO NOT USE THE TRIREX™ ON THE FOLLOWING SUBSTRATES:

- ICE
- SNOW
- TECTUM DECK⁵
- METAL DECKS LESS THAN 22GA⁵ OR GREATER THAN 18GA^{5,6}

1 REDUCE MAXIMUM NUMBER OF USERS IN FALL ARREST TO 2 (TWO).
 2 REDUCTION IN NUMBER OF USERS IN FALL ARREST DOES NOT APPLY IF AN APPROVED INSULATION(S) THICKNESS IS 3.875" OR GREATER. FIG 4-1
 3 WHEN MECHANICALLY FASTENED OR ADHERED TO AN APPROVED SUBSTRATE.
 4 WHEN USED AS PART OF A COMPLETE ROOF ASSEMBLY.
 5 SUBSTRATE IS ALLOWABLE WHEN COVERED WITH 3/4" PLYWOOD SECURED WITH A MINIMUM OF EIGHT (8) FASTENERS. FIG 4-2
 6 SUBSTRATE IS ALLOWABLE WHEN TOTAL INSULATION THICKNESS IS GREATER THAN 3.875" OR USED WITH AN APPROVED METAL DECK. FIG 4-2
 7 FALL RESTRAINT ONLY—MAXIMUM 2 USERS
 8 UTILIZE ATTACHMENT POINT RESTRICTOR PLATES TO ELIMINATE OR LIMIT THE NUMBER OF USERS IN FALL ARREST

DensDeck® is a registered trademark of Georgia-Pacific Gypsum, LLC.

TRIREX™ INSTRUCTION MANUAL

ENGLISH

FIG. 4-1

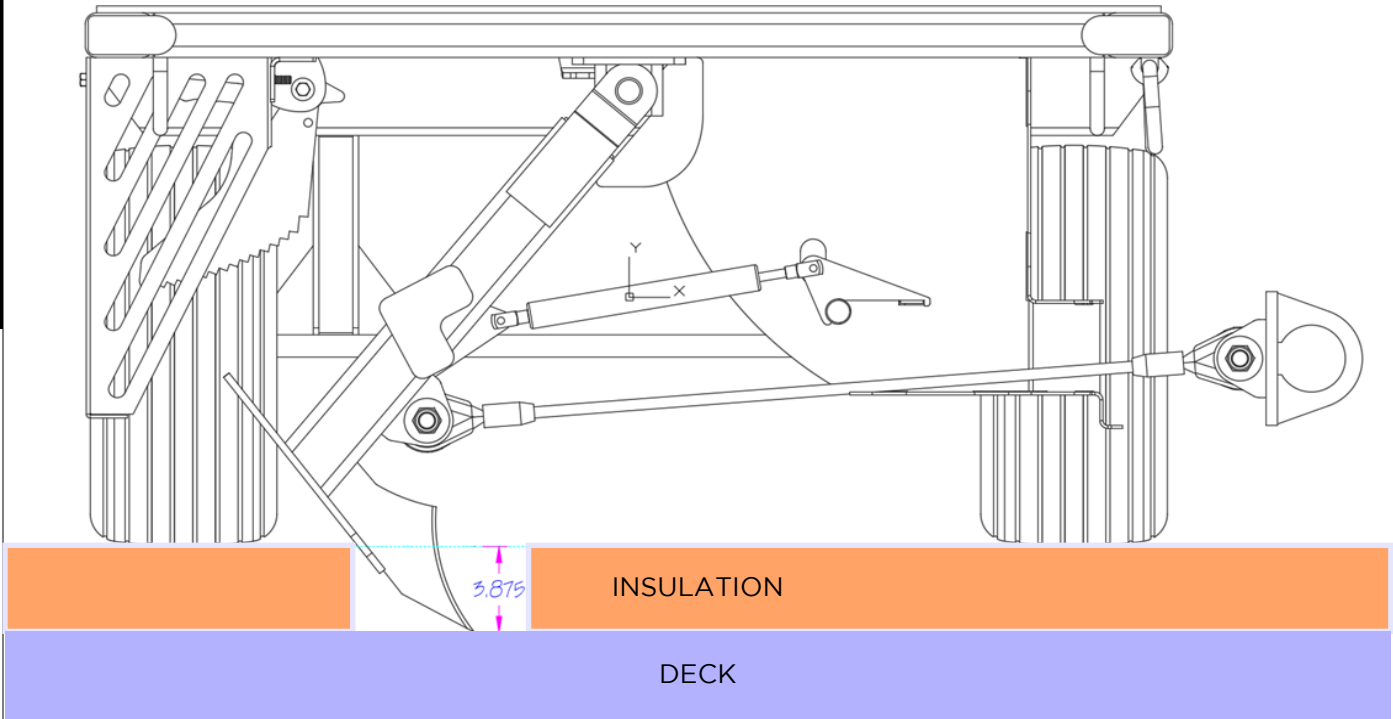
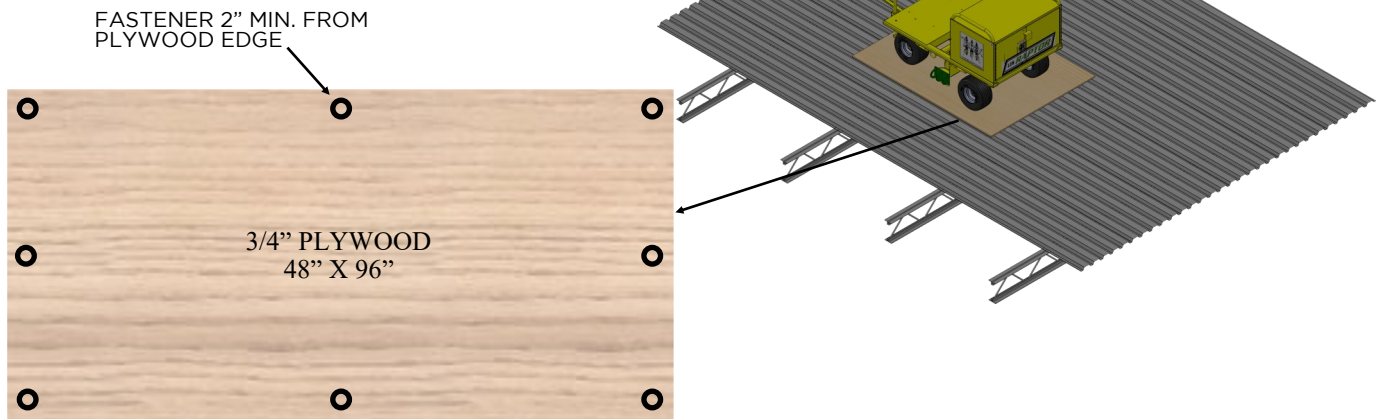


FIG. 4-2



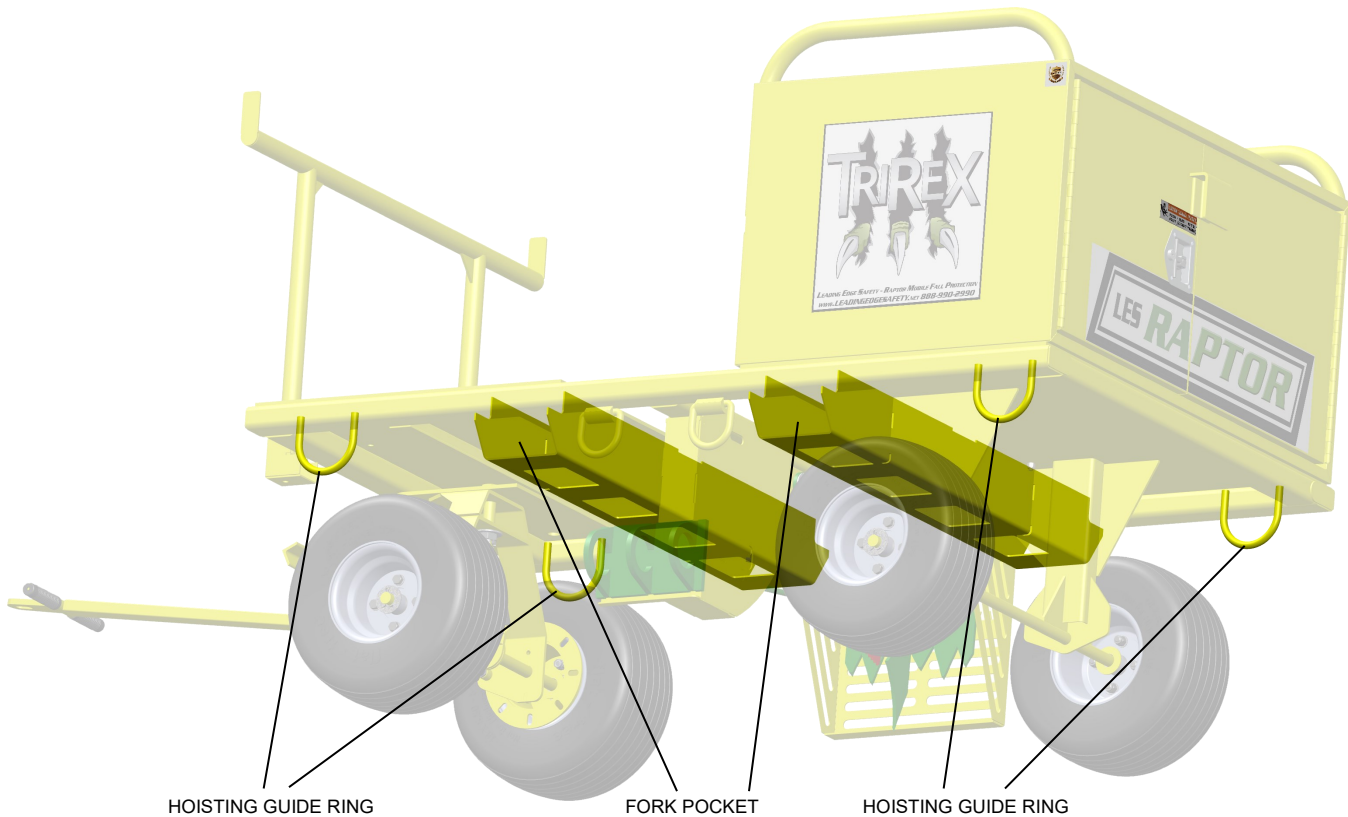
4.3 CAPACITY: The TRIREX™ Mobile Fall Protection System is designed for a maximum of three persons for fall arrest and two for fall restraint with a combined weight (clothing, tools) of no more than 310 lbs. per person. No more than five persons may be connected to the TRIREX™ at any time.

IMPORTANT: DO NOT begin work for which fall protection is required until the TRIREX™ unit and corresponding Fall Restraint System (FRS) or Personal Fall Arrest Systems (PFAS) have been completely installed. Do NOT disable any part of the FRS or PFAS, including the TRIREX™ unit, or reposition the TRIREX™ unit, until work for which fall protection is required has ceased.

TriREX™ INSTRUCTION MANUAL

5.0 HOISTING OR LIFTING

- 5.1 Loads may slip or fall if the TriRex is not hoisted or lifted properly and may result in injury or death.
- 5.2 Never hoist or lift the TriRex if any of the hoisting rings or fork pockets are damaged.
- 5.3 Never hoist or lift the TriRex with unsecured materials on the unit.
- 5.4 Ensure any auxiliary equipment is properly and securely attached to the TriRex before hoisting or lifting.
- 5.5 The TriRex shall be hoisted or lifted following good industry practices, State and Federal Regulations, and hoisting and lifting equipment manufacturer's guidelines.
- 5.6 The TriRex was designed to be hoisted by a crane or lifted by a forklift and is equipped with both hoisting guide rings and fork pockets.



6.0 GENERAL SAFETY

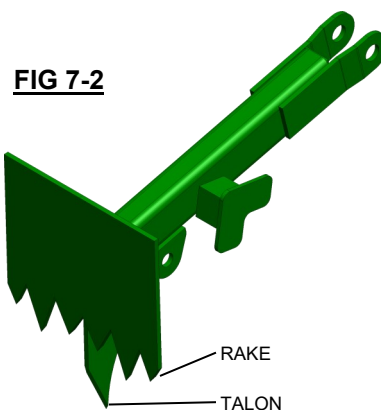
- 6.1 **USE COMMON SENSE!** Most accidents can be avoided by using common sense and focusing on the job at hand.
- 6.2 The TriRex should not be used by persons whose ability or alertness is impaired by fatigue, intoxication, prescription or illegal drugs, or any other physical or mental cause that may expose the user or others to injury.
- 6.3 Always wear proper Personal Protective Equipment.
- 6.4 Keep hands and feet clear of moving parts including the Engagement Arm.
- 6.5 Do not use the equipment near electrical lines.
- 6.6 Do not allow passengers to ride on the safety cart.
- 6.7 Do not use on wet, slippery or icy substrates.

6.0 GENERAL SAFETY (Continued)

- 6.8 Only use the TriRex on substrates and assemblies for which it has been tested. (Reference Sect 4.2 Approved Substrates)
- 6.9 Always lower the handle to engage the brake when the unit is not being moved.
- 6.10 Always uses caution and common sense when moving the unit. Additional workers may be needed to safety move the unit when additional materials, tools or equipment have been added to the unit.

7.0 BEFORE EACH USE

- 7.1 Before using this unit, a rescue plan and procedure in accordance with OSHA Standards must be in place to ensure prompt rescue in the event of a fall.
- 7.2 Inspect the unit for any damage. *A maintenance log has been provided in this manual that may be copied and used to track inspections and damage.*
 - 7.2.A Check for loose, bent or damage parts, including the talon and rake tips of the engagement arm. FIG 7-2
 - 7.2.B Check welded connections for visible distortion, cracks or other damage.
 - 7.2.C Check Tie-off Rings for distortion or damage.
 - 7.2.D Check cables for rusting and wear. DO NOT use if cable or cable connections have been damaged.
 - 7.2.E Ensure all safety labels are present and fully legible. (Reference parts list pages 7-10)
 - 7.2.F Check for corrosion on entire unit.
 - 7.2.G Check Engagement Arm for freedom of movement.
 - 7.2.H Check 3-Ring Attachment Point for freedom of movement.
 - 7.2.I Ensure the Engagement Arm Locking Mechanism is in the proper spring loaded position.
 - 7.2.J **DO NOT USE DAMAGED EQUIPMENT OR EQUIPMENT THAT HAS BEEN MODIFIED.**



8.0 POSITIONING THE UNIT

- 8.1 Verify that the substrate the unit is to be used on is acceptable (Reference Sect 4.2 Approved Substrates) and the entire working surface has the strength and structural integrity to safety support both the workers and the unit.
- 8.2 Position the unit with the Fall Arrest Attachment Point side 12' - 15' away and parallel to the working edge to maximize the work zone. FIG 8-2a

The unit may be used a minimum of 4' from the leading edge, maintaining a maximum work zone of 45° or 2' from the center of the attachment point. FIG 8-2b

The unit may be used a maximum of 30' from the leading edge, however the work zone may not exceed 15' from the center of the attachment point. FIG 8-2b

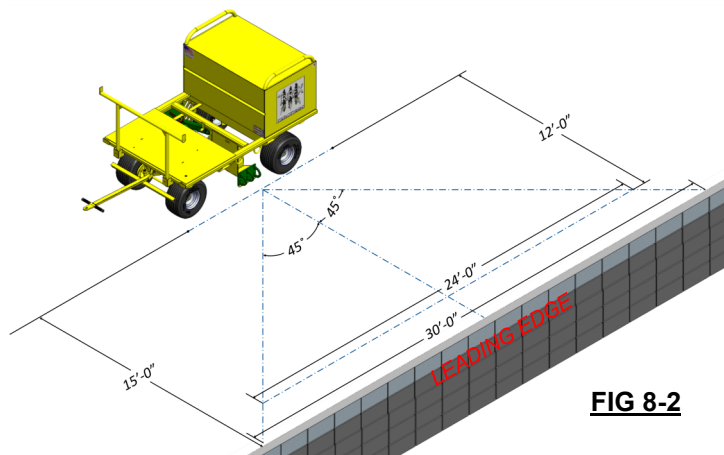
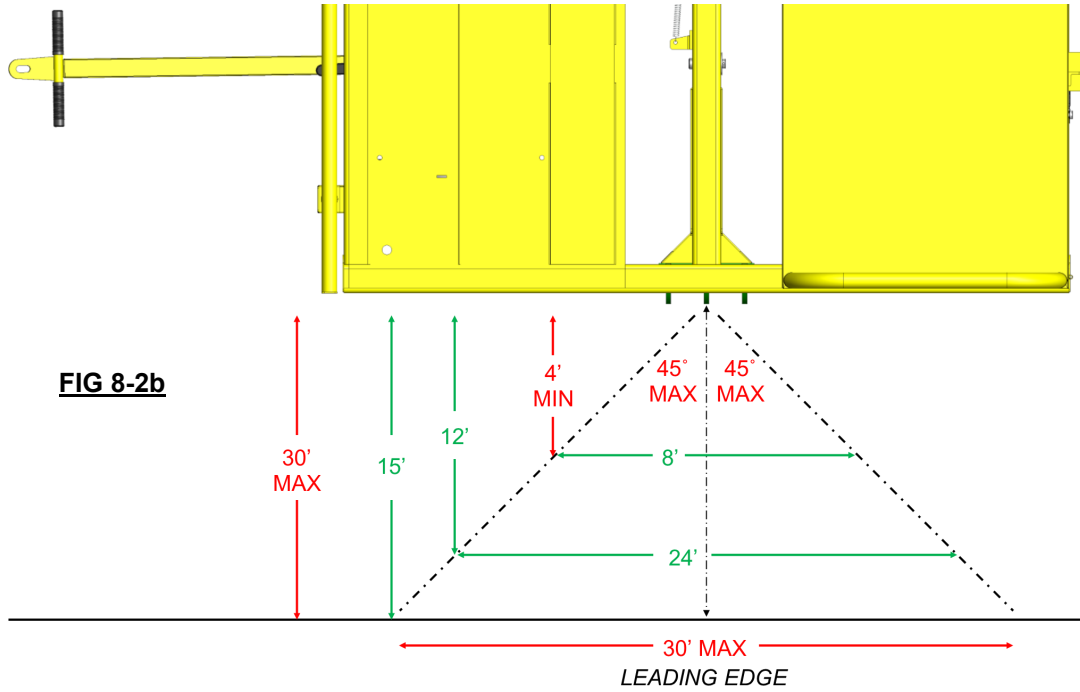


FIG 8-2

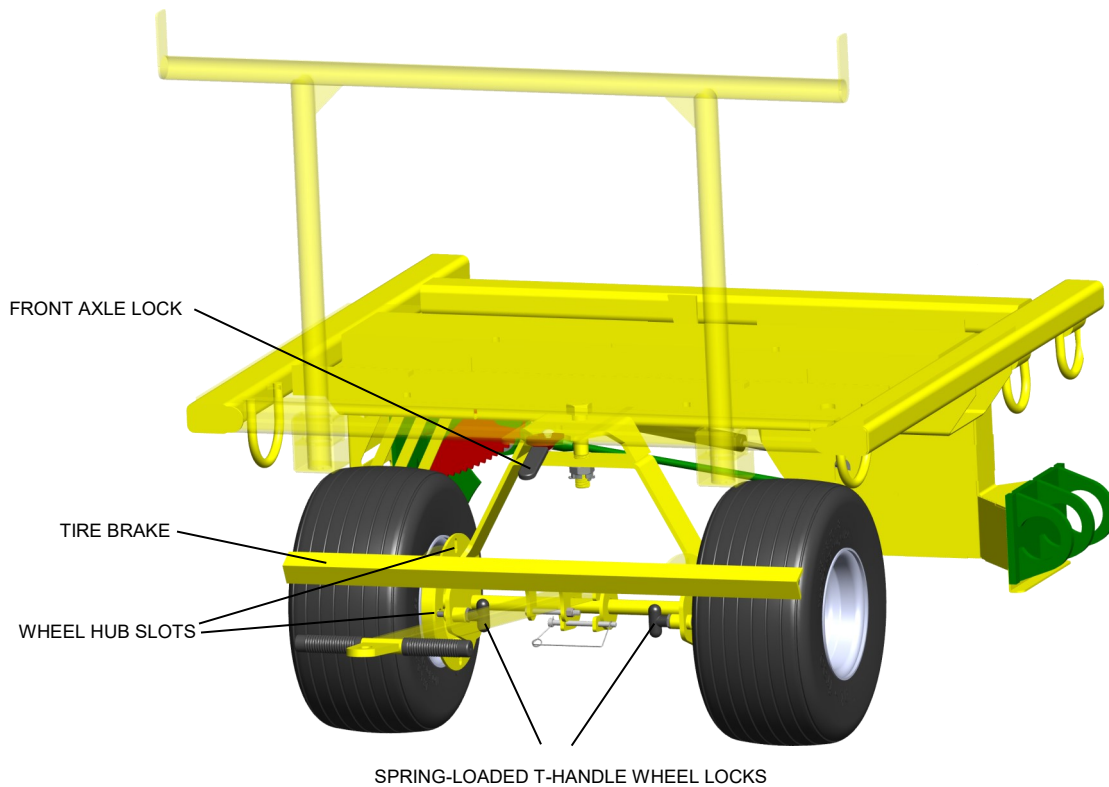
8.0 POSITIONING THE UNIT (Continued)



8.3 Once the unit is properly positioned, ensure front axle is perpendicular to the leading edge and the Tire Brake rests firmly against the front tires. FIG 8-3

Lock the front axle in place by turning the Front Axle Lock to the locking position.

Lock the front wheel hubs in place with the Spring-Loaded T-handle Wheel Locks to the nearest slot on the wheel hubs.



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9.0 SPECIAL APPLICATIONS

9.1 DISSIMILAR HEIGHT WALKING/WORKING SURFACES

9.1.A The TriRex may be used for fall arrest and fall restraint in dissimilar height applications where worker(s) are located on a surface lower than the surface the TriRex is positioned on and when properly set up and used with an SRL ANSI approved for leading edge conditions. FIG 9-1

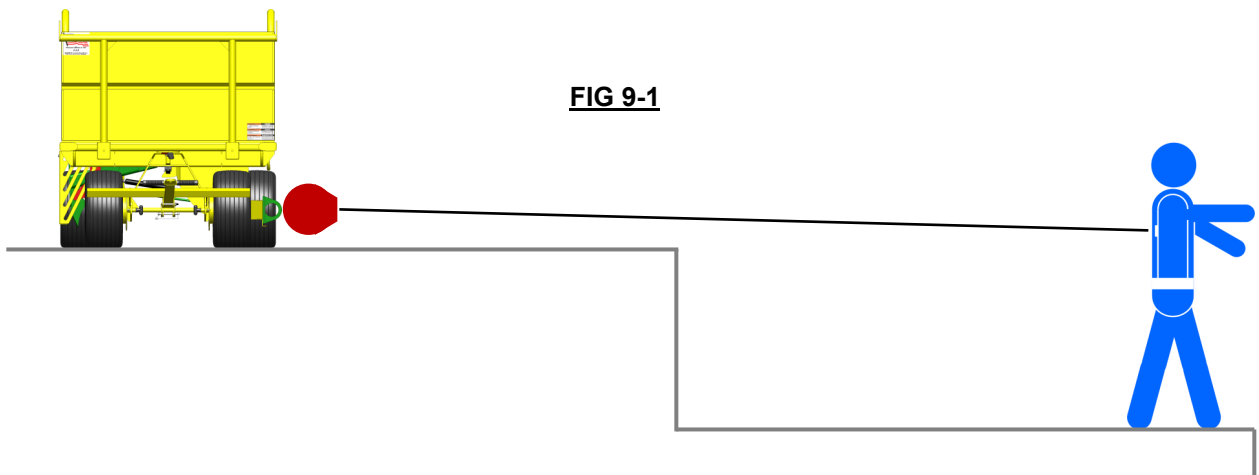
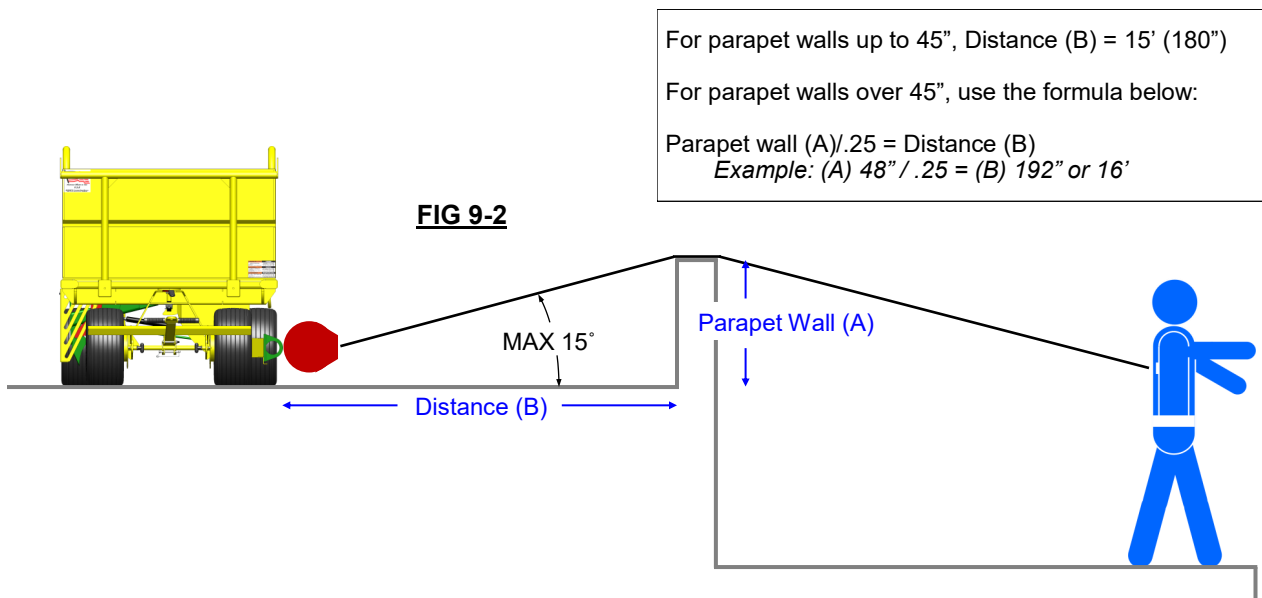


FIG 9-1

9.2 USE AT PARAPET WALLS

9.2.A The TriRex may be used at parapet walls up to 42" in height when properly set up 12' - 15' from the leading edge and used with an SRL ANSI approved for leading edge conditions. FIG 9.2

9.2.B The TriRex may be used at parapet walls in excess of 42" in height when the SRL cable angle is 15 degrees or less. The distance between the TriRex and the leading edge may be increased beyond 15' to reduce the angle of the cable to 15 degrees or less. However, the leading edge work zone shall never exceed 30' in width. FIG 9-2

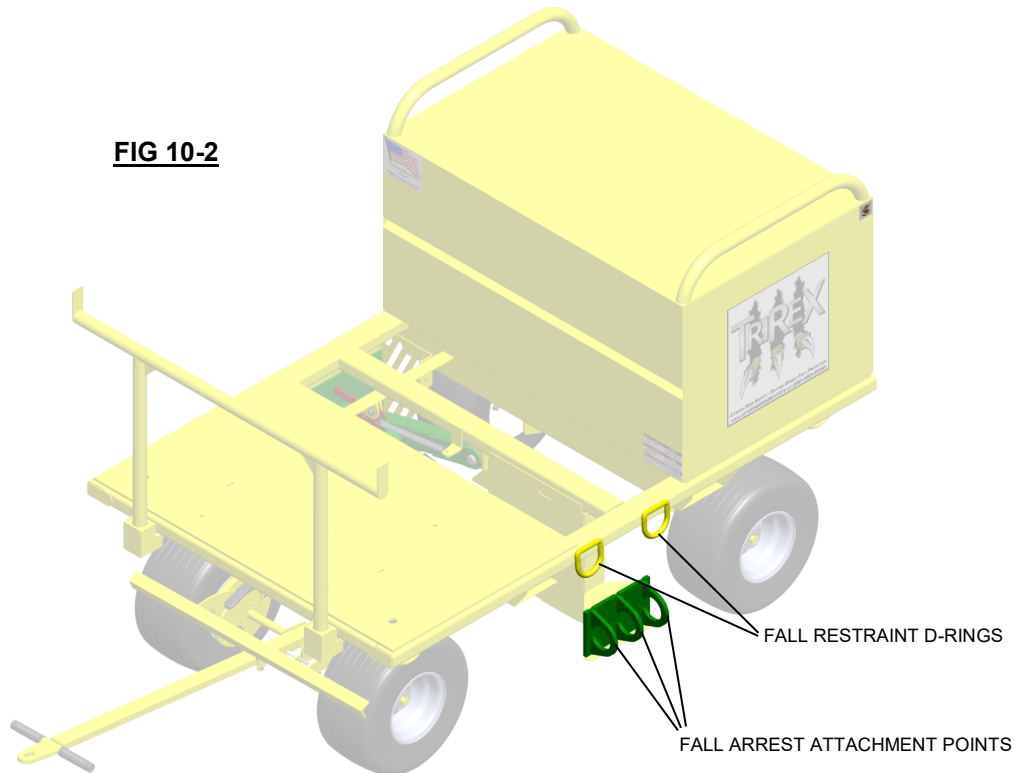


For parapet walls up to 45", Distance (B) = 15' (180")
For parapet walls over 45", use the formula below:
Parapet wall (A) / .25 = Distance (B)
Example: (A) 48" / .25 = (B) 192" or 16'

FIG 9-2

10.0 MAKING CONNECTIONS

- 10.1 Only connect to Fall Arrest Attachment Points for use as fall arrest. Only connect to Fall Restraint D-Rings for use as fall restraint.
- 10.2 SRL's and lifelines shall only be connected to the 3-Ring Fall Arrest Attachment Points or to Fall Restraint D-Rings. FIG 10-2



- 10.3 Only use self-locking snap hooks and self-locking carabiners when connecting SRL and lifelines to the TriREX. Only use connectors that are suitable to each application. Ensure connections are compatible in size, shape and strength. Do not use equipment that is not compatible with the TriREX connection points.
- 10.4 Ensure that all connections are fully closed, locked and secure prior to use.
- 10.5 When connecting to the Fall Restraint D-Rings, ensure that the fall restraint system, including lanyards, lifelines, harnesses, etc., do not allow the user to travel close enough to a leading edge to experience a fall.

11.0 MAINTENANCE, CARE & STORAGE

- 11.1 If the Engagement Arm has been activated by a fall, the Pivot Point Assembly (18) must be replaced before using the unit in fall arrest. Refer to assembly drawings for the location and part number and Appendix C for replacement instructions.
- 11.2 Keep tires free from build up and debris. Asphalt or adhesive build up on the tires can cause the wheel brake to function improperly.
- 11.3 Inspect all bolts, pins, springs, welds and paint for visible damage. Damaged or missing parts can prevent the TriRex from working properly.
- 11.4 Maintain the paint finish to prevent corrosion. Use rust inhibitive paint compatible with the powder coat finish.
- 11.5 Store the TriRex in a place protected from the weather. Vinyl Weather Covers are available for long-term outdoor storage. Contact your local distributor or Leading Edge Safety for pricing and availability.
- 11.6 Rotate the tires or block the axles to avoid flat spots on the tires during long-term storage.

12.0 IN THE EVENT OF A FALL

- 12.1 Call 911 and report the fall emergency immediately.
- 12.2 Follow your company policy and site-specific rescue plan.
- 12.2 Before attempting to rescue a fall victim connected to the TriRex, ensure the TriRex is stable with the claw engaged into the substrate and/or all four tires are contacting the walking/working surface.
- 12.3 Rescuers should attach themselves in fall restraint to a secondary TriRex not involved in the fall or other certified anchor point before attempting to rescue a fall victim. In the event a secondary TriRex or certified anchor point is not available, rescuers may use the TriRex involved in the fall for fall restraint only.
- 12.4 If your TriRex is equipped with the Raptor Rescue Retrieval System, the fall victim should be lowered to the ground to await emergency services. In the event the fall victim cannot be lowered to the ground, they may be raised to the roof to await emergency services. Refer to the Raptor Rescue manual for complete instructions on its use.
- 12.5 Once a fall victim has been recovered, the TriRex may be disengaged from the substrate. Use caution when disengaging the unit, keep hands and feet clear of moving parts and pinch points. In some cases, the Engagement Arm may become wedged into the substrate. Disengage the Locking Mechanism by pulling up on the Locking Mechanism handle. Use a wooden or metal beam to apply leverage against the underside of the Engagement Arm to disengage the rake and/or talon from the substrate.
- 12.6 Remove the unit from fall arrest service by appropriate lock out/tag out procedures until the Pivot Point has been replaced.
- 12.7 If no damage has occurred to the unit as a result of the fall, the unit may be used in fall restraint only until Pivot Point is replaced.

APPENDIX A—TROUBLESHOOTING

If any of the following issues are the result of a user falling while connected to the TriRex, the Pivot Point Assembly must be replaced before returning the unit to service.

PROBLEM

Engagement Arm (6) assembly is resting on the ground (not engaged in the substrate). (FIG A-1)

POSSIBLE CAUSE

Locking Mechanism (7) is engaged and holding the Engagement Arm (6) down.

SOLUTION

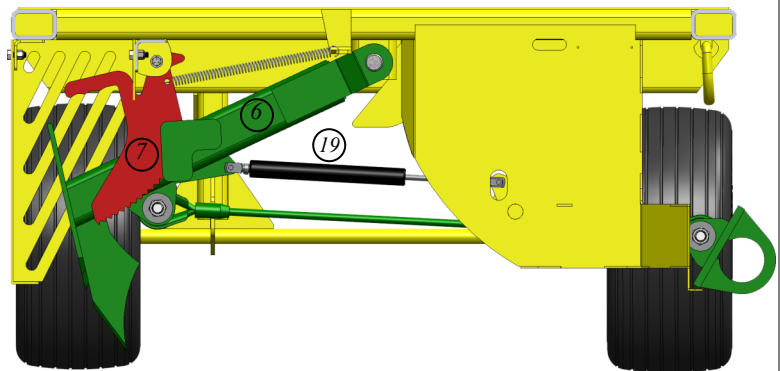
Press down on the Engagement Arm (6) and lift up on the Locking Mechanism (7) to allow the Engagement Arm (6) to return to its resting position. If the Engagement Arm (6) does not have upward pressure from the Engagement Arm Shock (19), see next step.

POSSIBLE CAUSE

Engagement Arm Shock (19) is bad.

SOLUTION

Replace the Engagement Arm Shock (19).



PROBLEM

3 Ring Attachment Point (15) for fall arrest is not resting flush with the guide box. (FIG A-2)

POSSIBLE CAUSE

Locking Mechanism (7) is engaged.

SOLUTION

Press down on the Engagement Arm (6) and lift up on the Locking Mechanism (7) to allow the Engagement Arm (6) to return to its resting position.

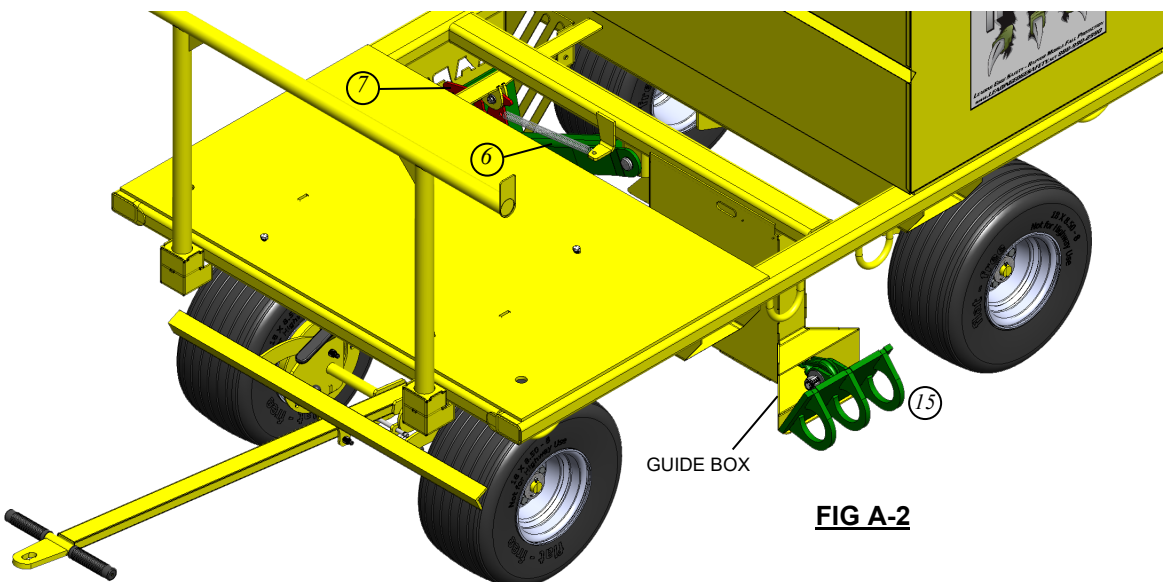


FIG A-2

APPENDIX A—TROUBLESHOOTING

PROBLEM

Locking Mechanism (7) stuck and will not release.

POSSIBLE CAUSE

Locking Mechanism (7) is jammed against the Rake (FIG A-3) portion of the Engagement Arm Assembly (6).

SOLUTION

Hoist or lift the TriRex off the walking surface to allow extended movement of the Engagement Arm Assembly (6). Press downward on the Engagement Arm Assembly (6) until the Locking Mechanism (7) is able to clear the Rake and return to its proper resting position. (FIG A-3-1)

FIG A-3

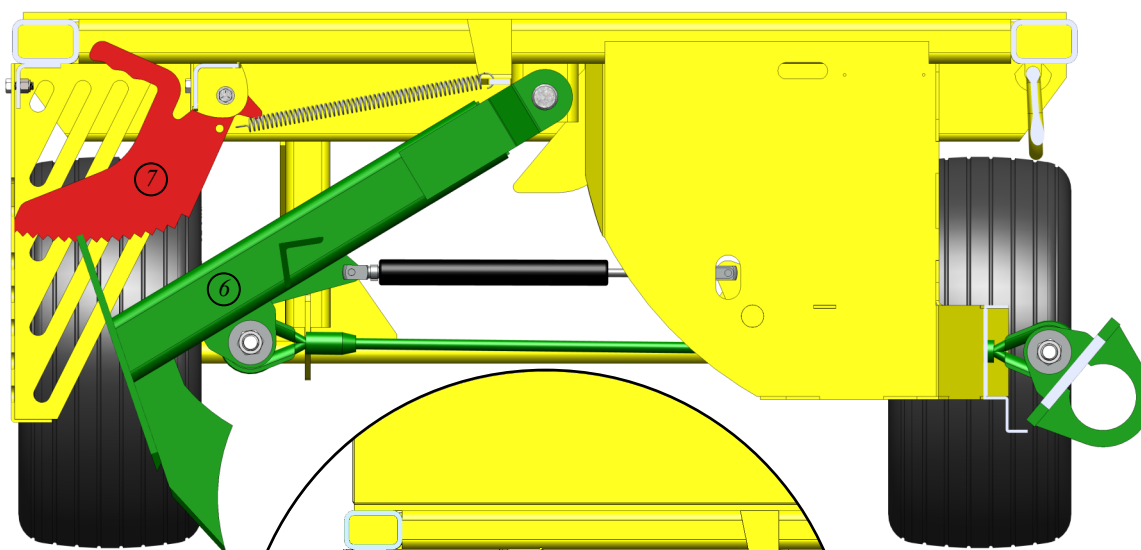
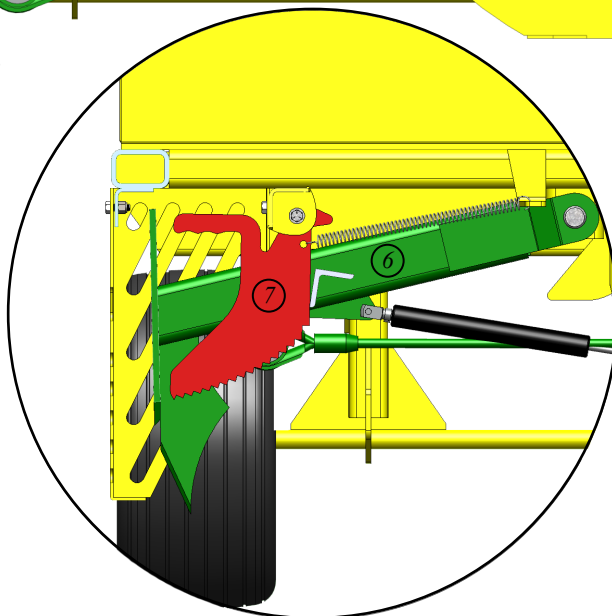


FIG A-3-1



PROBLEM

TriRex does not roll easily or bounces when traveling due to flat spots on tires.

POSSIBLE CAUSE

Leaving the unit stationary in one location for too long a period of time.

SOLUTION

Rotate the tires or block the axles off the ground during long-term storage. Replace tires if flat spots prevent the unit from being moved easily.

APPENDIX B—ENGAGEMENT ARM SHOCK REMOVAL

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

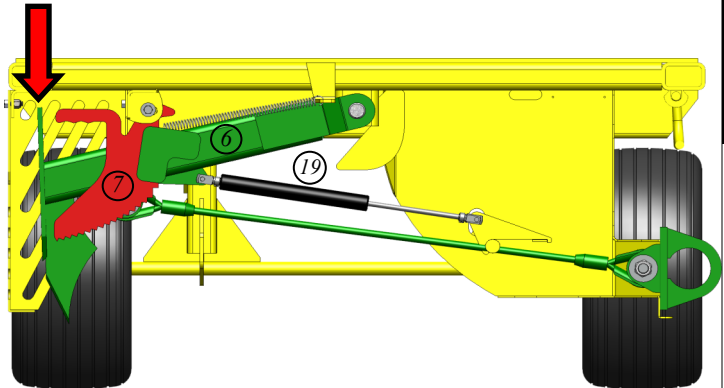
TOOLS NEEDED: Side cutting pliers, pliers, baling wire

Shock Removal

STEP 1

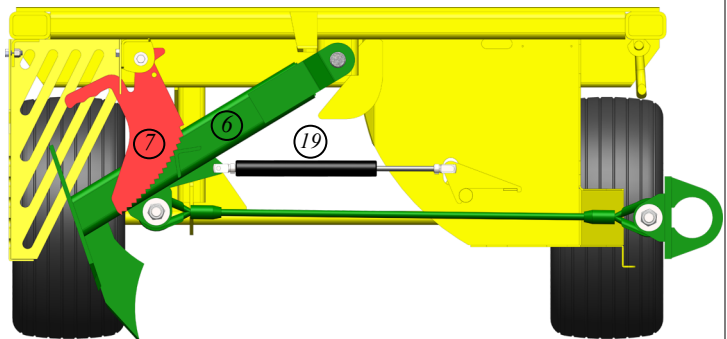
Press downward on the *Engagement Arm Assembly (6)* approximately 4 inches to compress the shock. The *Locking Mechanism (7)* will engage, making a “BONG” sound, keeping the *Engagement Arm Shock (19)* in a compressed position.

***Note, the *Locking Mechanism (7)* may be Red, Yellow or Green depending on the manufacture date.



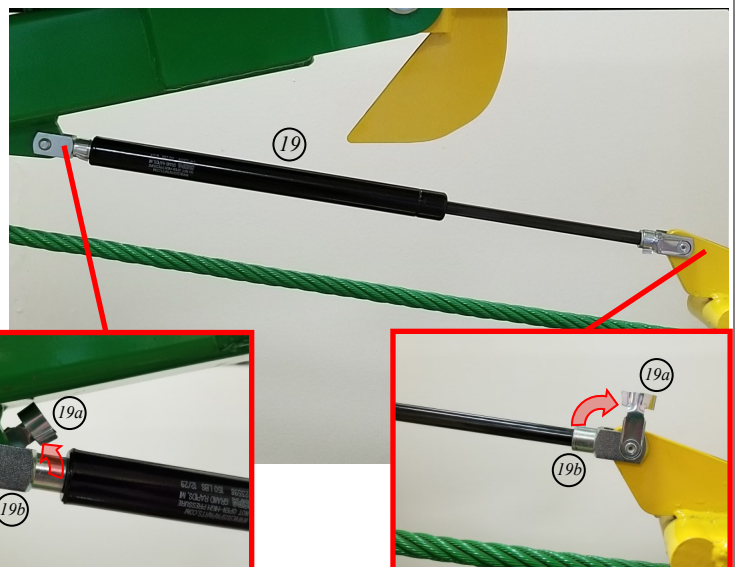
STEP 2

The *Engagement Arm Assembly (6)* should be locked in a downward position to compress the *Engagement Arm Shock (19)*.



STEP 3

While the *Engagement Arm Shock (19)* is still mounted, turn the *Clevis Joint Snap-In Pin (19a)* to release the spring end from the *Yoke End Linkage (19b)*. **DO NOT ATTEMPT TO REMOVE THE PINS!** Repeat for both ends of the *Engagement Arm Shock (19)*.

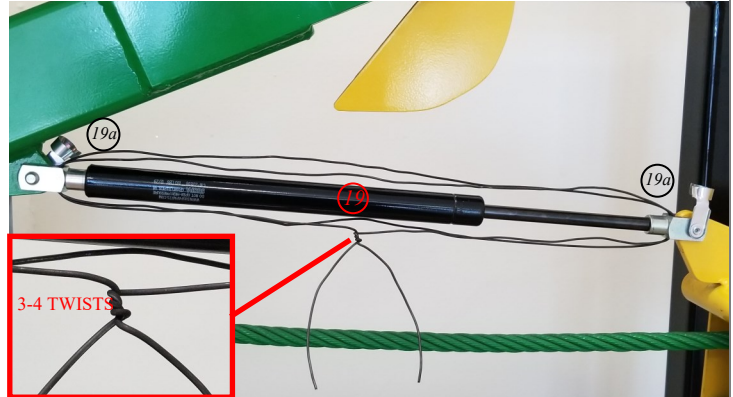


APPENDIX B—ENGAGEMENT ARM SHOCK REMOVAL (CONT.)

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

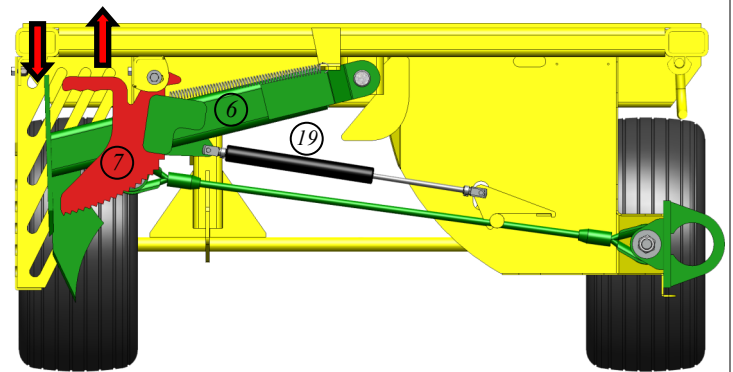
STEP 4

While the *Engagement Arm Shock (19)* is still mounted to the machine and before removing any *Clevis Joint Snap-In Pin (19a)* from the *Engagement Arm Shock (19)*, tightly wind baling wire around the compressed *Engagement Arm Shock (19)*, two times and twist baling wire ends together 3 - 4 times.



STEP 5

Press downward slightly the *Engagement Arm Assembly (6)* and hold, lift upward on the *Locking Mechanism (7)* handle to disengage, release hold of the *Engagement Arm Assembly (6)*. Completing this step will release any tension from the *Clevis Joint Snap-In Pins (19a)* that hold the *Engagement Arm Shock (19)* in place.



STEP 6

WARNING—THE CLAW ASSEMBLY CAN DROP AT THIS STEP—BE SURE TO SECURE THE CLAW FROM DROPPING OR HAVE ANOTHER PERSON HOLD THE CLAW FROM MOVING.

Remove the *Clevis Joint Snap-In Pins (19a)* from both ends of the damaged *Engagement Arm Shock (19)* and remove the *Engagement Arm Shock (19)*.



APPENDIX B—ENGAGEMENT ARM SHOCK REMOVAL (CONT.)

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

Shock Installation

STEP 7

Install new *Engagement Arm Shock (19)* to mounting points, securing with *Clevis Joint Snap-In Pins (19a)*.



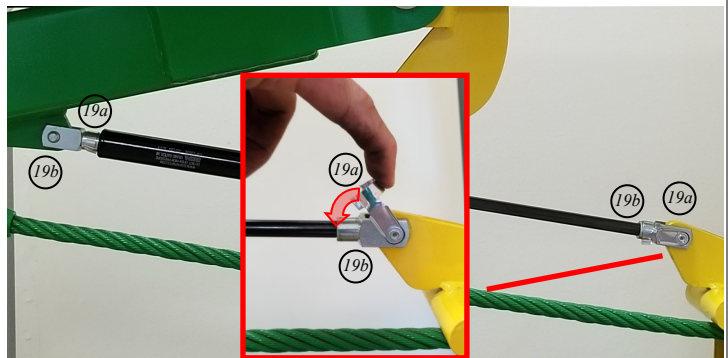
STEP 8

Cut and remove the baling wire from the *Engagement Arm Shock (19)*.



STEP 9

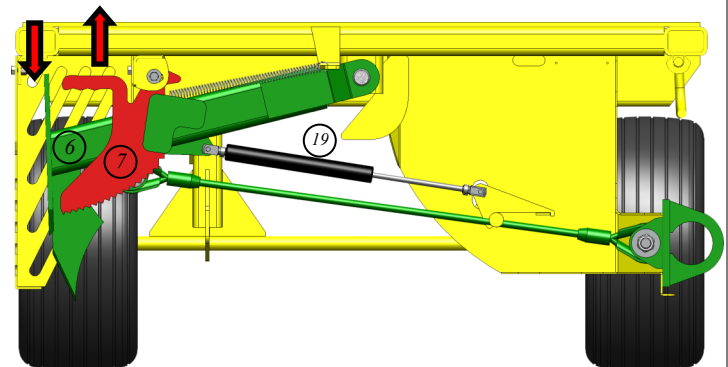
Press the *Clevis Joint Snap-In Pins (19a)* to their locked position on the *Yoke End Linkage (19b)*.



STEP 10

TESTING THE OPERATION OF THE CLAW

Lift upward on the *Locking Mechanism (7)* and press downward 1-2 inches on the *Engagement Arm Assembly (6)*, release the *Engagement Arm Assembly (6)* and the *Engagement Arm Shock (19)* should return the *Engagement Arm Assembly (6)* to its raised position. Repeat application of downward pressure and allowing the *Engagement Arm Assembly (6)* to return to its raised position 3-4 times to ensure the assembly is moving freely.



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APPENDIX C—ENGAGEMENT ARM INSTALLATION

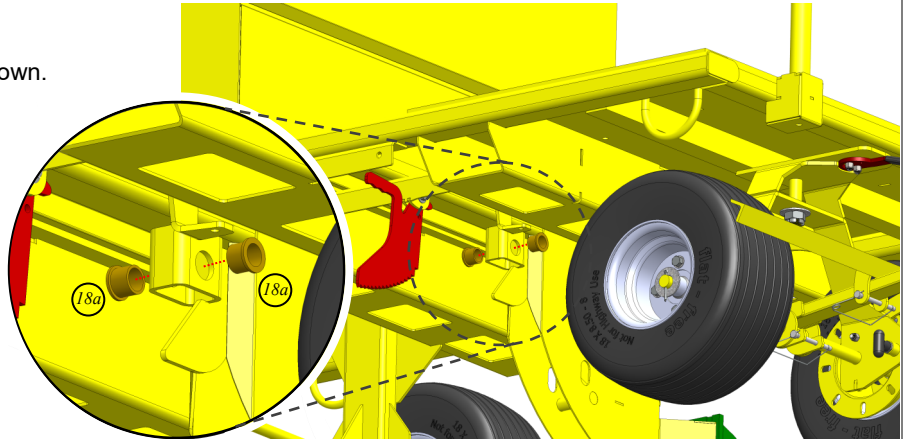
READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

TOOLS NEEDED: Side cutting pliers

Follow steps 1– 6 of APPENDIX B to remove the Engagement Arm Shock prior to removal of the Engagement Arm Assembly.

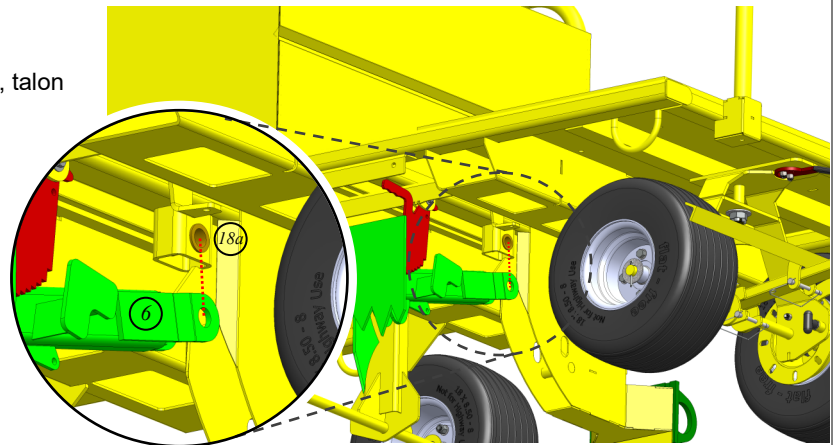
STEP 1

Insert the *Bronze Bushings (18a)* holes as shown.



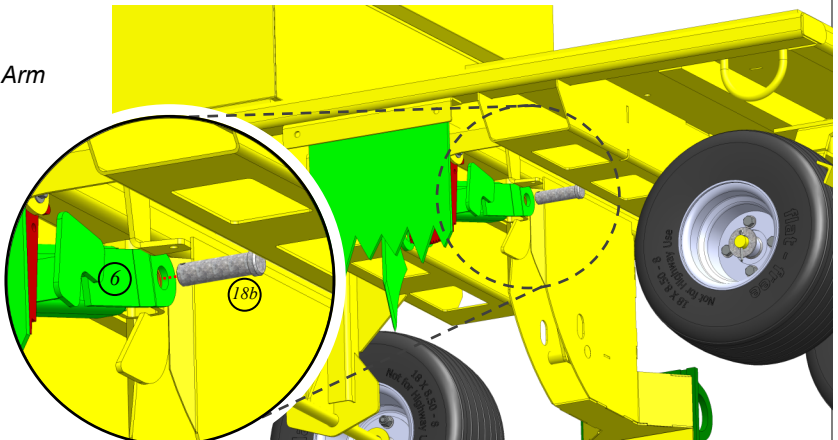
STEP 2

Raise the *Engagement Arm Assembly (6)* into place, talon side down, and align mounting holes with *Bronze Bushings (18a)* as shown.



STEP 3

Insert the *Clevis Pin (18b)* through the *Engagement Arm Assembly (6)* holes, through the *Bronze Bushings (18a)* until the *Clevis Pin (18b)* extends through the opposite side.

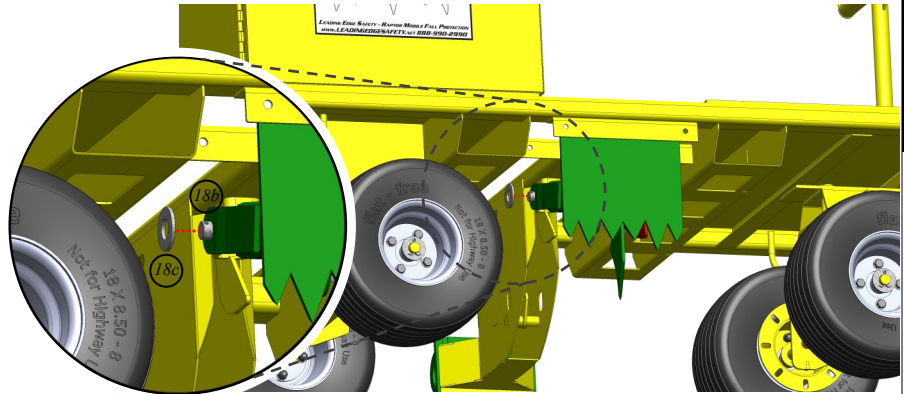


APPENDIX C—ENGAGEMENT ARM INSTALLATION (CONT.)

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

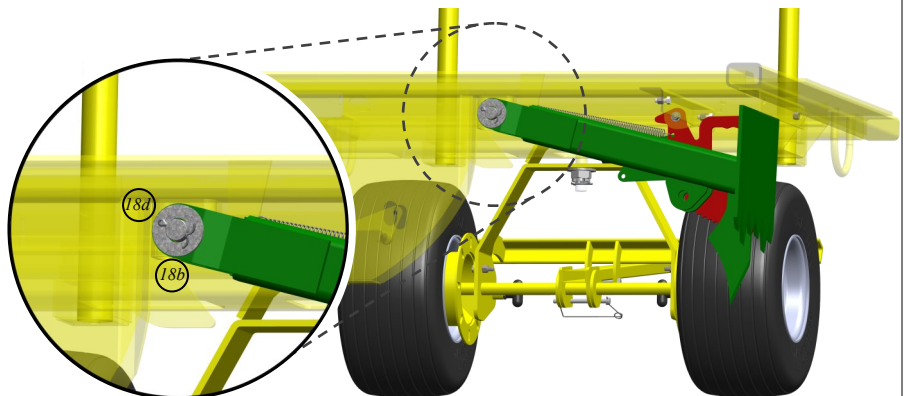
STEP 4

Place the 1" Flat Washer (18c) over the Clevis Pin (18b).



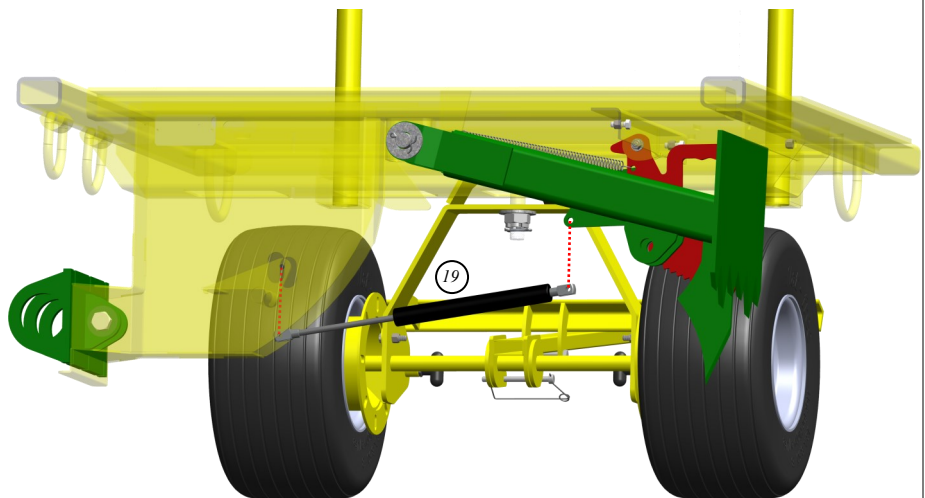
STEP 5

Insert and secure 3/16" x 2" Cotter Pin (18d) into the Clevis Pin (18b) by bending the legs outward in each direction as shown.



STEP 6

Position Engagement Arm Shock (19) at attachment points as shown.

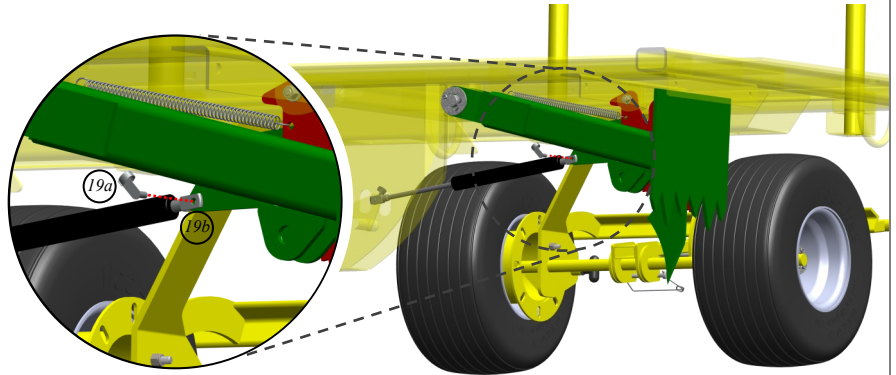


APPENDIX C—ENGAGEMENT ARM INSTALLATION (CONT.)

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

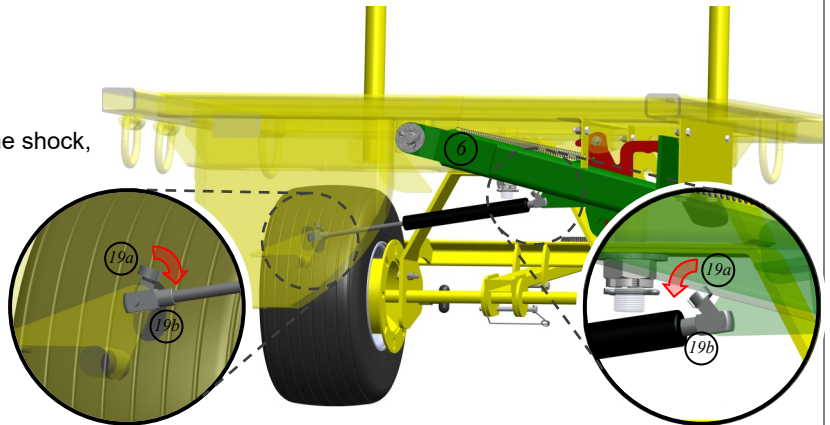
STEP 7

Insert the *Clevis Joint Snap-In Pins (19a)* through *Yoke End Linkage (19b)* and mounting points as shown. Repeat for both ends.



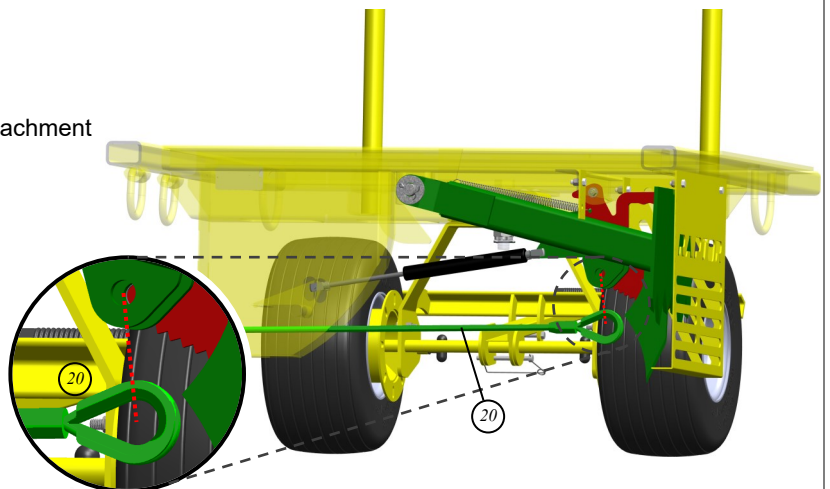
STEP 8

Cut and remove any baling wire used to compress the shock, allowing the *Engagement Arm Assembly (6)* to return to its upward resting position. Rotate *Clevis Joint Snap-In Pins (19a)* to snap on to *Yoke End Linkage (19b)*. Repeat for both ends.



STEP 9

Position the *Engagement Arm Cable (20)* with the attachment point as shown.

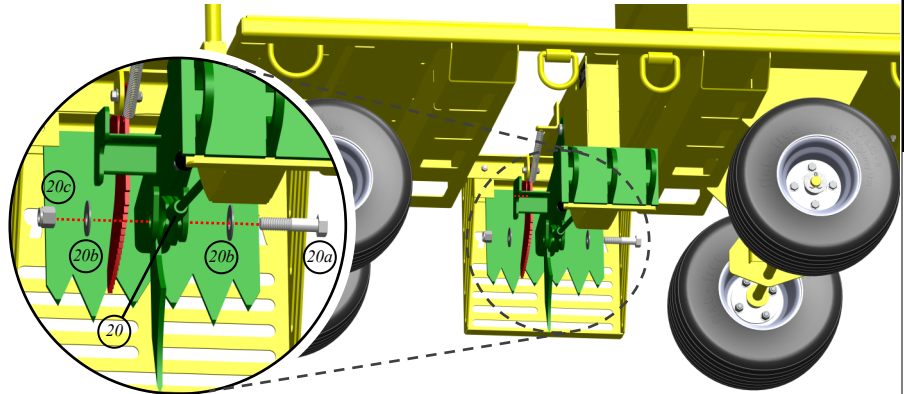


APPENDIX C—ENGAGEMENT ARM INSTALLATION (CONT.)

READ AND UNDERSTAND THE ENTIRE SET OF INSTRUCTIONS BEFORE PERFORMING ANY STEP IN THIS PROCESS

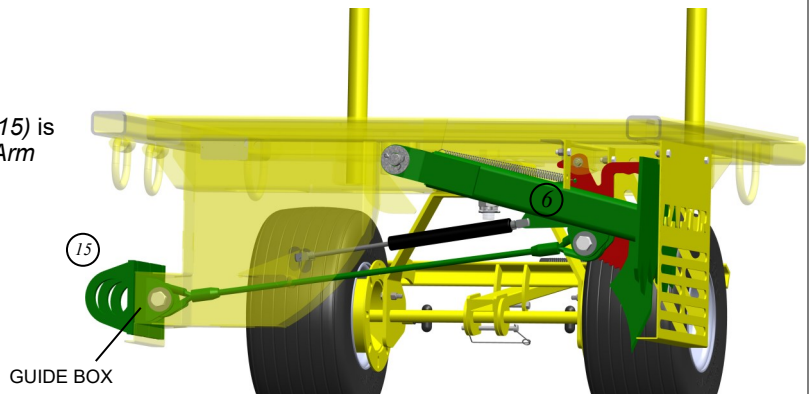
STEP 10

Secure the *Engagement Arm Cable (20)* through the attachment point as shown with *3/4-10 x 3.25" Hex Bolt (20a)*, two *1" Flat Washers (20b)*, and *3/4-10 Locknut (20c)*.



STEP 11

Ensure all bolts are secure, *3-Ring Attachment Point (15)* is resting flush against the guide box, and *Engagement Arm Assembly (6)* is at its upward resting position.



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MOBILE FALL CART INSPECTION AND MAINTENANCE LOG

PLEASE COPY THIS LOG, FILL IT OUT BEFORE EACH USE, AND KEEP IT IN YOUR RECORDS.

EQUIPMENT MODEL #: _____

EQUIPMENT SERIAL #: _____

DATE OF PURCHASE: _____

INSPECTION DATE: _____

Inspection Item	Corrective Action Needed?		Maintenance Performed
Overall Cart Parts	Yes	No	_____
Inspected By: _____			_____
Welded Connections	Yes	No	_____
Inspected By: _____			_____
Attachment Point Rings and Hoisting Rings	Yes	No	_____
Inspected By: _____			_____
Engagement Arm Cable	Yes	No	_____
Inspected By: _____			_____
Engagement Arm Freely Moving	Yes	No	_____
Inspected By: _____			_____
Warning Labels	Yes	No	_____
Inspected By: _____			_____
Overall Cart Corrosion	Yes	No	_____
Inspected By: _____			_____



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