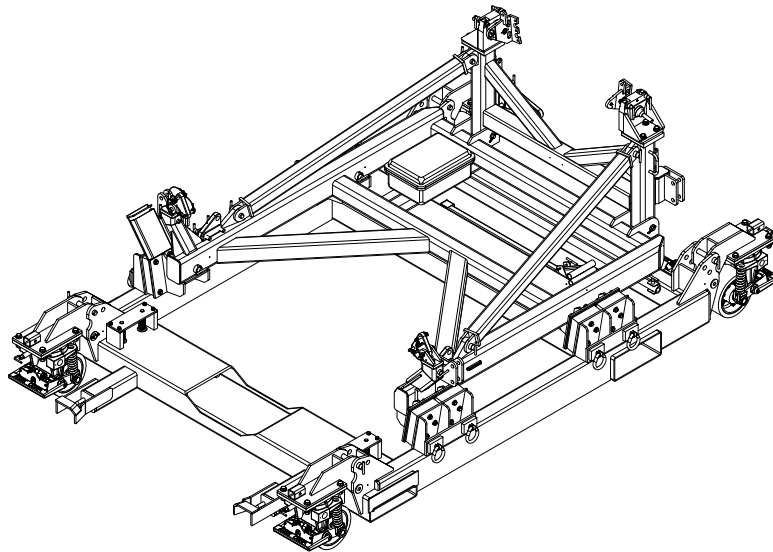




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AGSE-E240-G01 (PWA115185)

Engine Transport Stand For Pratt & Whitney PW1500 Series Engine



ORIGINAL MANUAL DATED 12/09/2015
LATEST MANUAL DATED (REVISION LEVEL).....6/19/2023 (REV J)

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NOTICE

1. Alteration, Modification, Reengineering, or Reproduction of Equipment

The alteration, modification, reengineering, or reproduction of AGSE equipment and/or parts is not permitted without prior written authorization from AGSE.

These modifications include but are not limited to:

- Structural changes to AGSE-supplied parts
- Substitution of AGSE-supplied parts, including hardware, with an alternate source or supplier
- Reverse engineering of AGSE equipment and parts.

Requests for modifications should be submitted to AGSE for review – please send modification requests to support@agsecorp.com.

Once reviewed by our Engineering team, a Customer Support Letter (Subject: No Technical Objection) will be issued for any approved modifications.

NOTE

Modifications executed without prior authorization by AGSE may result in a non-compliant product that is unsafe for operation.

Unauthorized modifications void AGSE's and the OEM's (Engine and/or Airframer) approval and authority to use the product for its intended application.

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1.0 – Revisions

The following is an itemized record of all changes from previous revision.

PAGE	REV	DESCRIPTION OF CHANGE	DATE
2.0	J	Updated Section 2.1	06/19/2023

2.0 – Specification

Follow all instructions, warnings and cautions for inspecting, maintaining and operating this engine transportation stand. The risk of personal injury or property damage may be greatly increased if proper instructions and warnings are not followed. Before using this engine stand, each operator should read and become thoroughly familiar with all warnings, cautions, instructions and recommendations in this manual. Retain this manual for future reference and use.

2.1 General

The AGSE-E240-G01 Engine Transport Stand (Cradle/Base Assembly) is designed in compliance with Pratt & Whitney Specification GSE 3023 - Full Engine Transport Stand for the PW1524G Engine and all PW1500 Series Engines. The Pratt & Whitney part number PWA115185 has been assigned to this stand. The stand has been CE marked.

The stand has the following capabilities:

1). Support of a full Quick Engine Change (QEC) configured engine (full engine, inlet, exhaust cone & nozzle) for:

- Bootstrap engine change on the Airbus A220 aircraft.
- Local towing with additional precautions.
- Temporary storage of the engine while on casters.

2). Support of a full engine with inlet removed and with or without the exhaust cone & nozzle installed for:

- Truck transport on trucks equipped with air ride suspension systems.
- Air shipment on the main deck of A300F, A310F, B747F, B767F, B777F, DC-10F, MD-11F, C-130, L-100, CL-44, AN-22, AN-124, AN-225, and IL-76 aircraft.
- Bootstrap engine change on the Airbus A220 aircraft.
- Local towing.
- Temporary storage on casters or extended storage with casters retracted.
- Forklift provisions

3). Global Positioning System (GPS) available as an option.

CAUTION

The stand has the following limitations:

The stand shall not be used for truck or air transportation of an engine with an inlet installed. There is insufficient sway space to protect the inlet with the stand in the shipping position. The stand strength and shock attenuation system are not designed for the extra weight of the inlet. Do not attempt to ship an engine with the stand supported on its casters. Do not add cribbing under the stand base structure to increase ground clearance.

The stand shall not be used for overhead lifting of an engine other than when using the Airbus bootstrap system for engine change procedures. The center of gravity of the installed engine and stand is substantially higher than the bootstrap attachment points. Attempting to lift an engine and stand using an unapproved sling or tooling can lead to instability causing property damage and/or injury to personnel.

The stand shall not be used to move or lift an engine using a forklift with the inlet installed. The inlet may not be protected in the event of any rough handling that could occur during forklift operations.

NOTE

Additional limitations, warnings, cautions and notes are included throughout this manual.

2.2 Design

The AGSE-E240-G01 (PWA115185) engine stand was designed to meet all ground handling operations as required by the P&W specifications. The stand design is intended to provide protection to the engine against loads and impact accelerations seen during shipping and ground handling and it has been qualified through analysis and stringent static and dynamics testing. The stand consists of a transportation base assembly and an engine cradle assembly that are separable during bootstrap operations.

The transportation base assembly (AGSE-E24001-S02) features:

- A rugged welded steel structural frame.
- A shock absorbing system to attenuate acceleration and impact loads protecting the engine.
- Retractable caster mount brackets to deploy the casters for towing or retract the casters for shipping or storage.
- AGSE Loadmaster casters for unsurpassed performance. Casters provide spring shock suspension and urethane tread wheels, rugged foot pedal brake for easy lock/unlock operation, 360° swivel with 4-position swivel lock and interface for steering bar use.
- Two piece collapsible tow bars that can be attached to the forward or aft end of the stand.

- Extended tow bar attachment brackets on the forward end of the stand with anti-uplift guard to help protect the inlet cowl when installed.
- Storage location for tow bars on the base frame.
- A steering bar that interfaces with the casters allowing precise positioning of the stand when towing under an aircraft pylon.
- An extra-long caster lift bar used to deploy or stow the caster mounts and casters greatly reducing the manual effort.
- Fork tube pockets allowing fork lifting of the stand with engine less inlet. The forward fork tube pocket has a collapsible feature allowing sufficient sway space to the engine during transportation. The fork pocket is spring loaded and retracts when the fork lift tines are inserted and the stand is lifted.
- Tie down rings for use during truck and air transportation.

The engine cradle assembly (AGSE-E24002-S01) features:

- A rugged welded steel structural frame.
- Stainless steel forward engine mounts for attachment to the lower fan frame. The mounts are supported by a clevis bracket that is removable and pins to the cradle frame.
- Fixed and adjustable aft mounts for ease of attachment to the turbine exit case (TEC). The mounts are supported by the AFT mount bases that are bolted to the rear frame.
- A foldable rear frame to provide clearance to roll under the engine on wing of the aircraft during installation and removal.
- Sight levels assisting operators during positioning cradle and engine.
- Durable storage container for protecting documents, engine mounts and hardware from environment and handling damage.

2.3 Characteristics

2.3.1 Weight

All weights are approximate and reference only.

Component	Weight (LB)	Weight (KG)
Cradle	1,136	515
Base	2,260	1,025
Stand without Engine	3,396	1,600
Stand with Full Engine	9,250*	4,200*

**Check engine weight with engine manufacture*

2.3.2 Dimensions

Dimensions of different stand configurations are provided in the figures below. All dimensions are approximate and reference only.

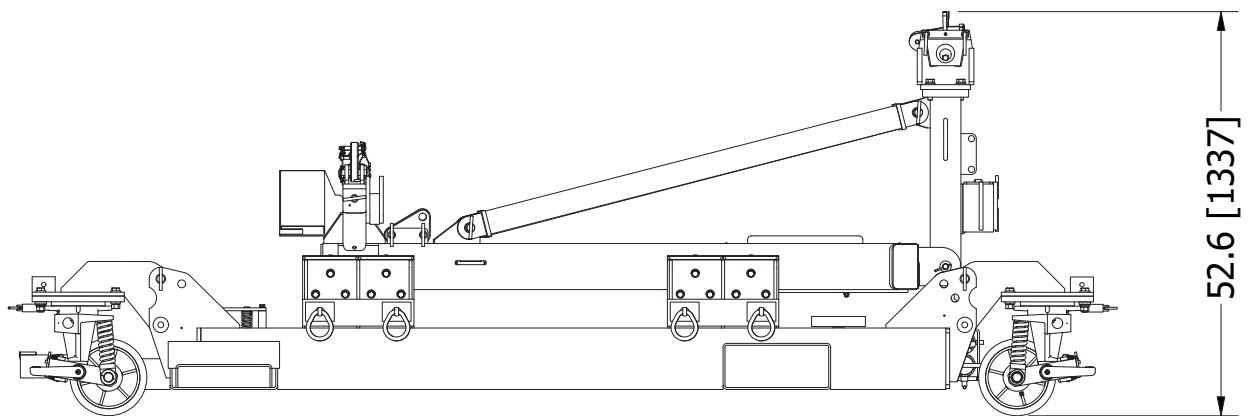
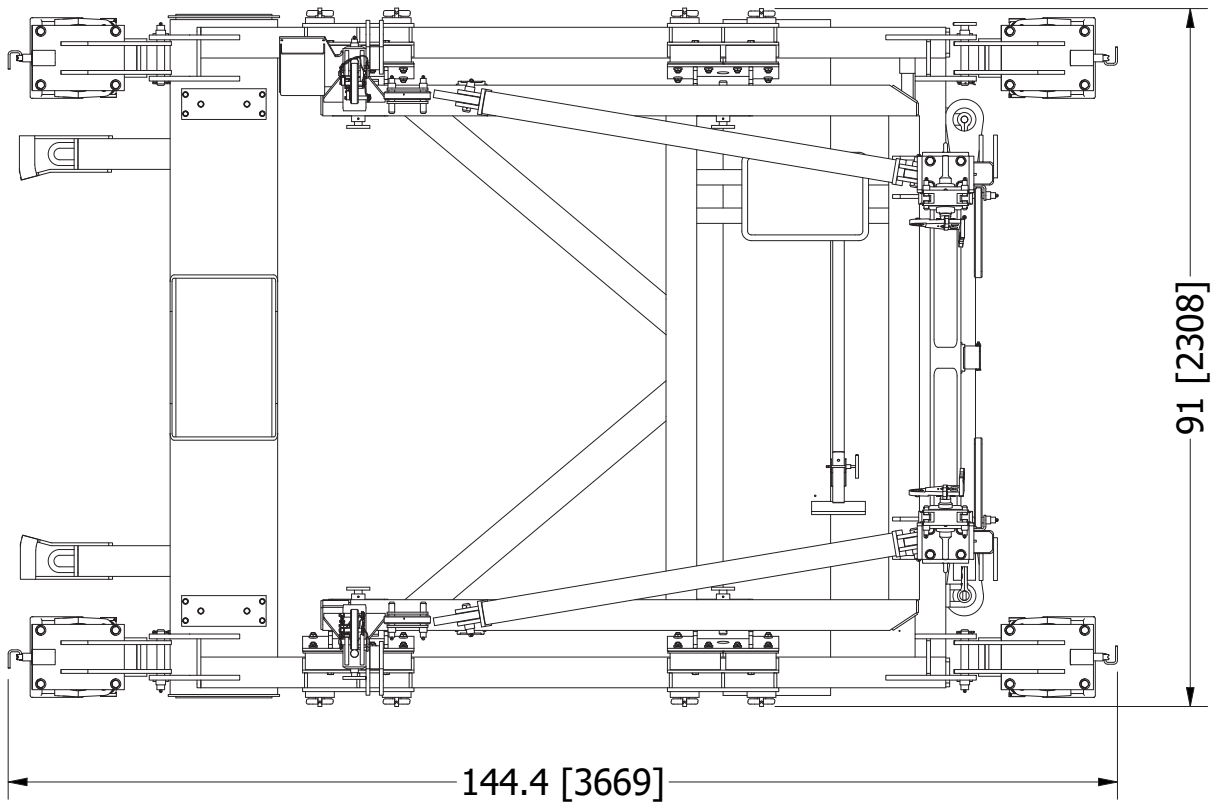


Figure 2.4-1 Dimensions of AGSE-E240-G01 Engine Transportation Stand Assembly

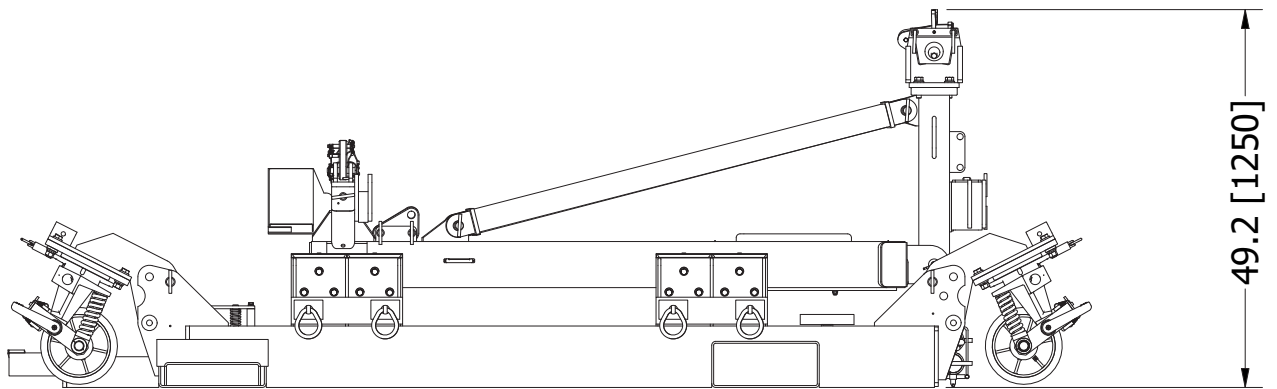
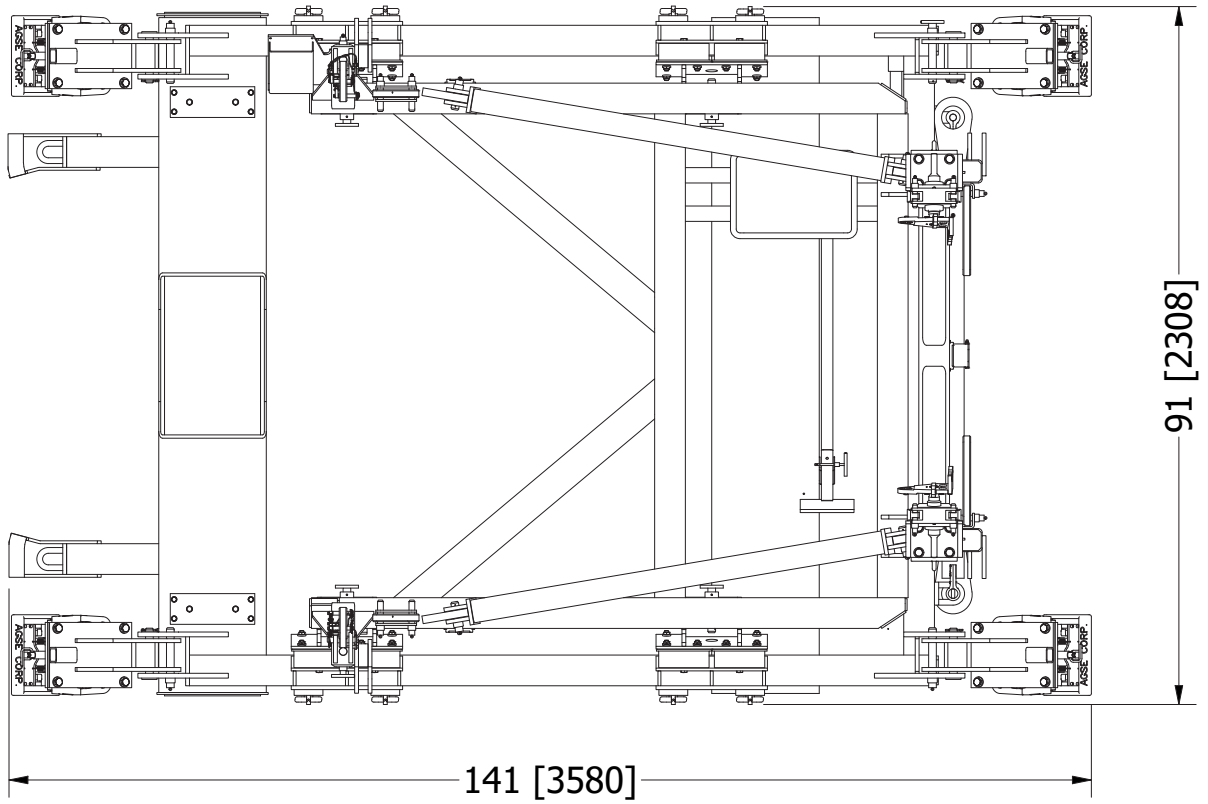


Figure 2.4-2 Dimensions of AGSE-E240-G01 in Stow Position

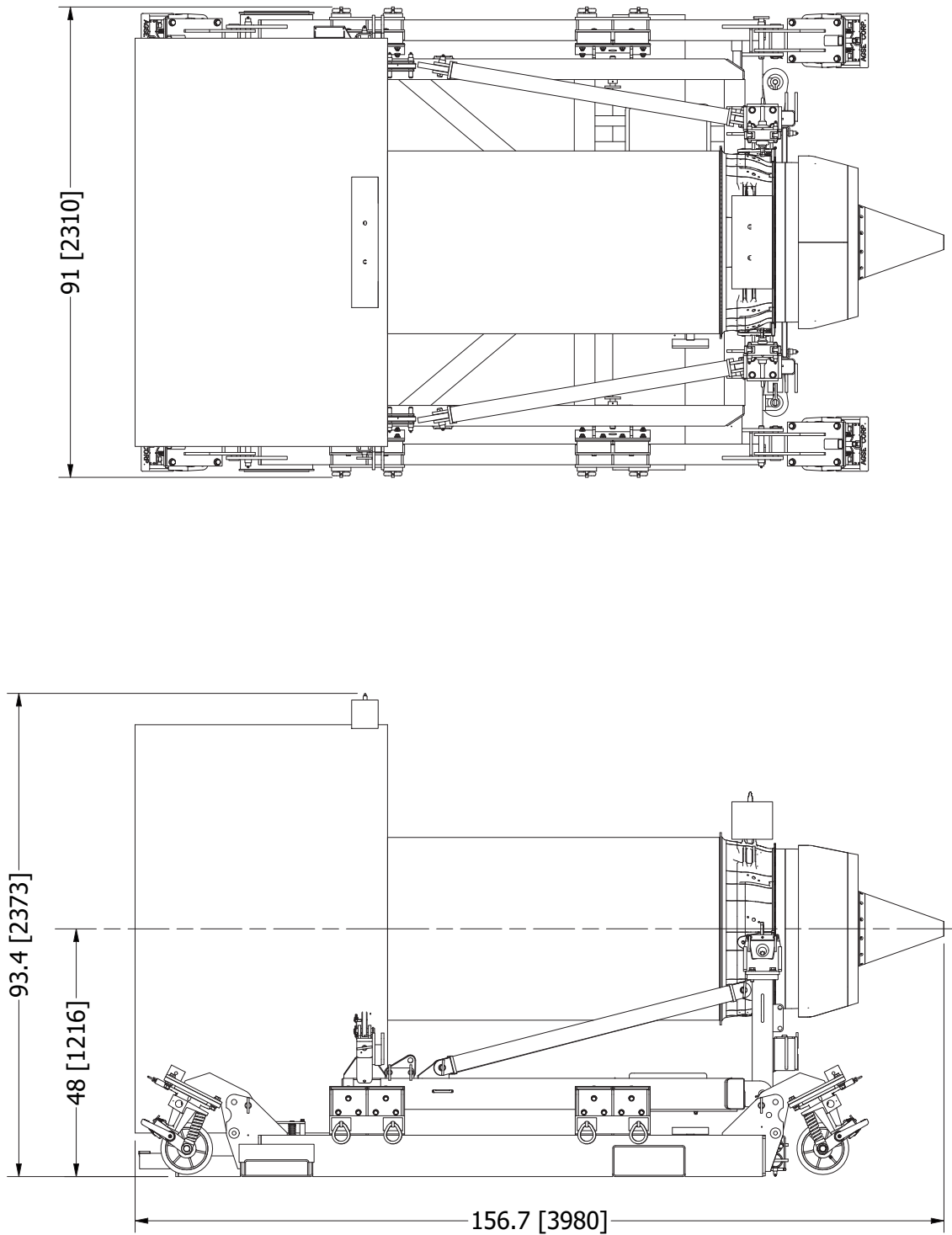


Figure 2.4-3 Dimensions of AGSE-E240-G01 with QEC Engine Minus Inlet in Stow Position

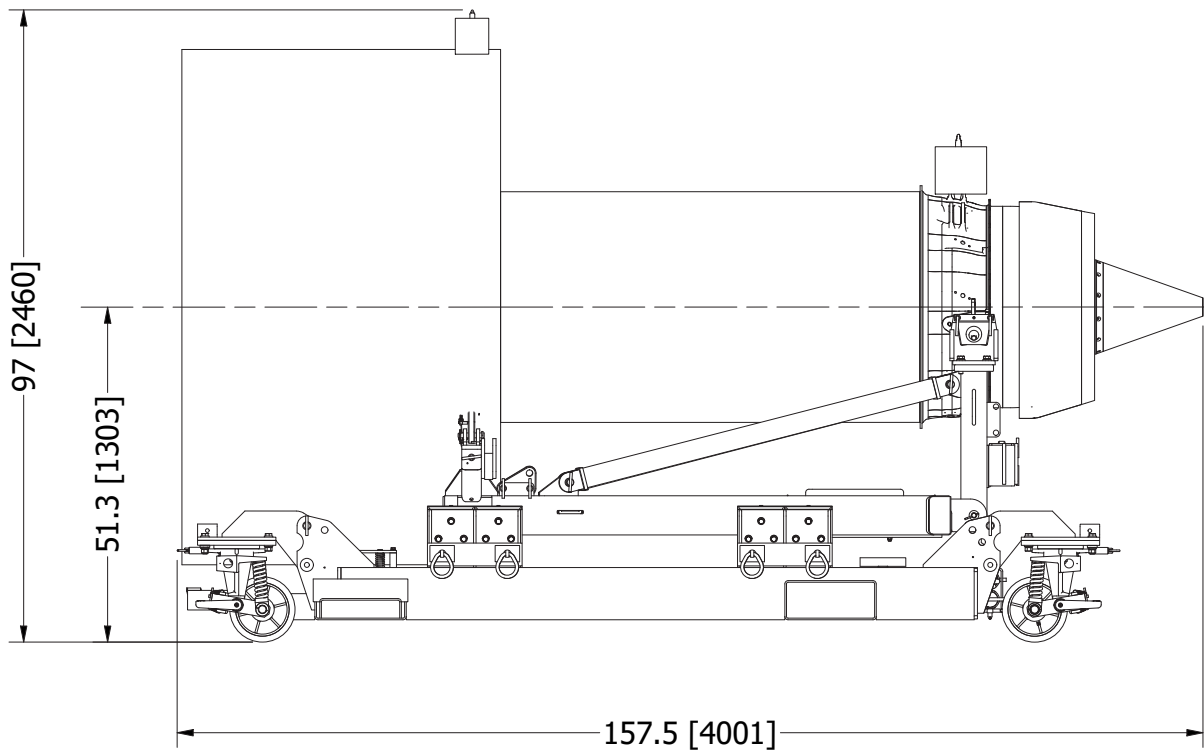
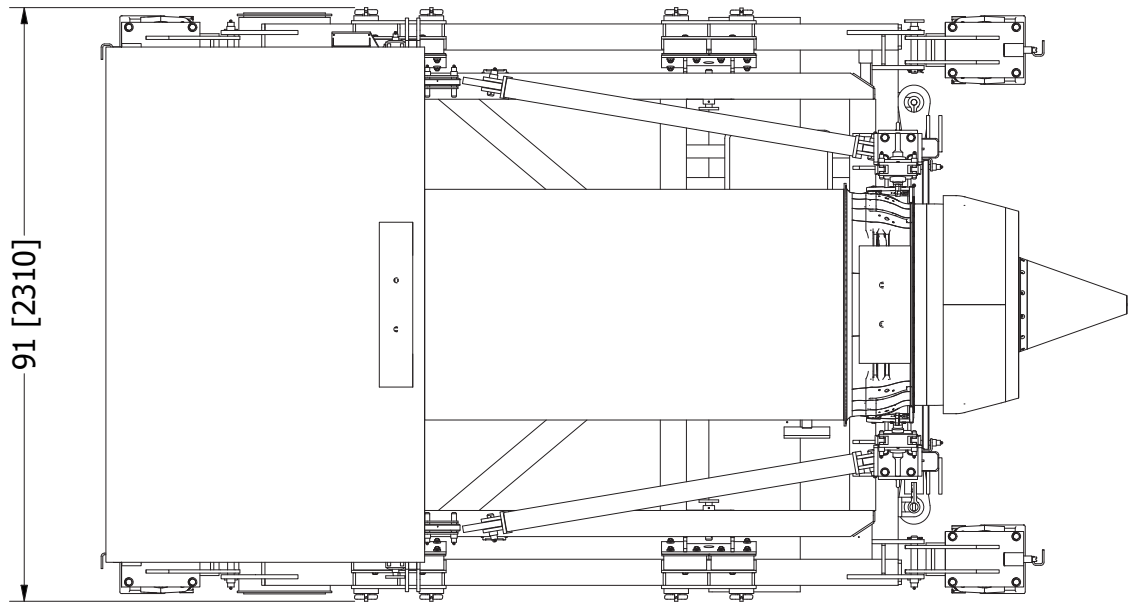


Figure 2.4-4 Dimensions of AGSE-E240-G01 with QEC Engine Minus Inlet in Operation Position

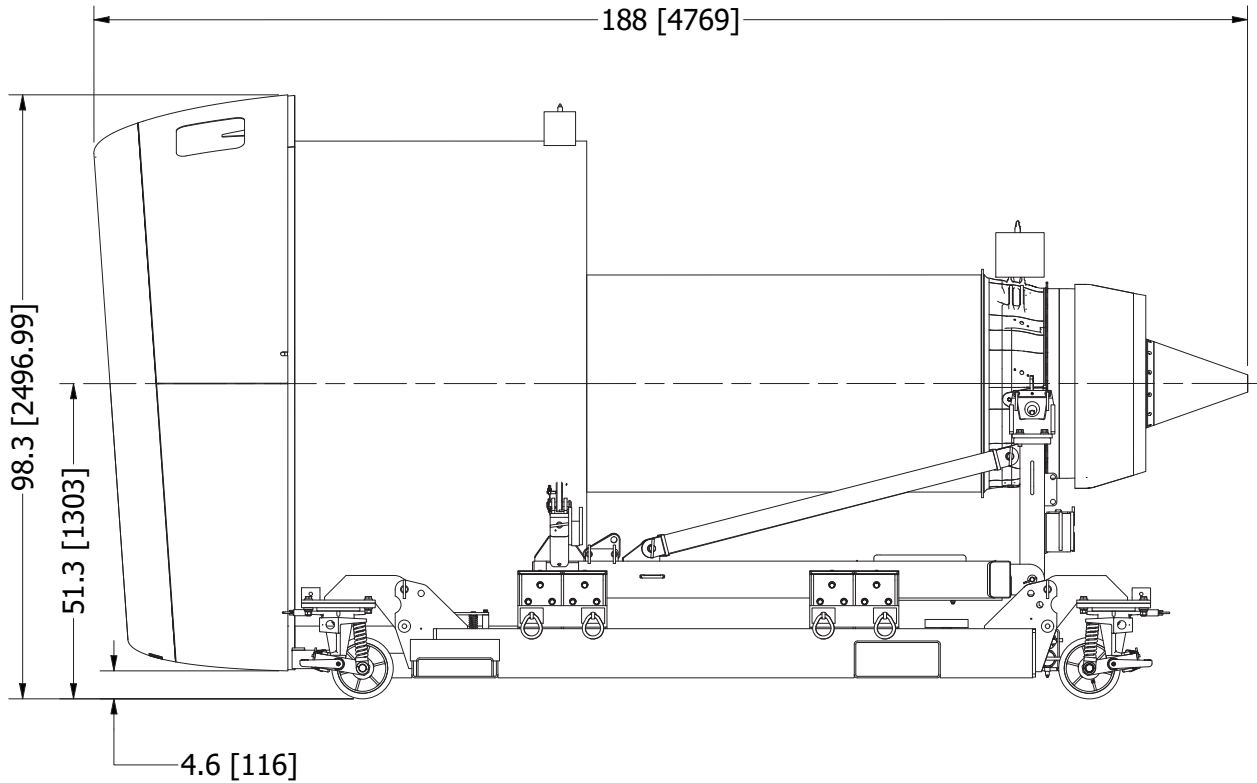
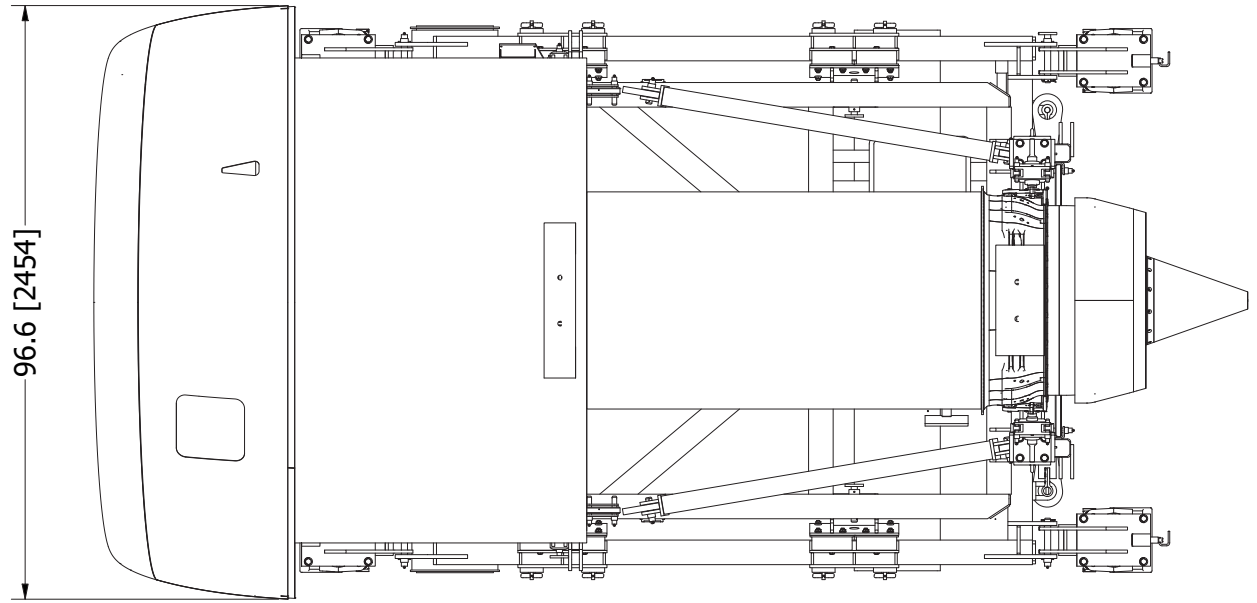


Figure 2.4-5 Dimensions of AGSE-E240-G01 with QEC Engine

3.0 – Maintenance and Inspection

3.1 General

Periodic maintenance and inspection of the stand are required to keep product safe, prevent equipment downtime, and extend its lifespan. Prior to each use, the stand should be inspected for obvious signs of abuse or shipping damage. Observed damage should require complete inspection of the affected area to ensure stand integrity is not compromised. Action is to be taken immediately if areas are determined to be potentially dangerous to operating personnel, or a detriment to the equipment. Detailed maintenance and inspection criteria is provided in the checklist in Section 3.5.

3.2 Prevention

A good preventive maintenance program should include periodic lubrication, adjustment, and immediate correction of defects revealed through inspections. Preventive maintenance will not only contribute to safe operation, but will also extend useful service life as well.

3.3 Actions

3.3.1 Cleaning: the stand should be cleaned with soluble solution and rinsed thoroughly. Dry using a lint-free cloth or low air pressure. Clean in a well ventilated area.

3.3.2 Visual Inspection: inspections for wear, damage, weld cracks, or corrosion are recommended. Inspect all structural members for distortion, breaks, cracks, fractures, fatigue, or other signs of damage. Superficial scratches are expected during normal usage and will not affect function.

3.3.3 Shock Mount Replacement and Inspection: AGSE recommends that shock mounts be replaced every five (5) years. Additionally, periodic inspections should be performed and any of the following conditions are proper cause for replacement of the shock mounts prior to their expiration:

- 1. Visible evidence of cracks.**
- 2. Discoloration: visible damage caused by solvents.**
- 3. Permanent deformation.**
- 4. Mount does not flex during engine loading/unloading.**
- 5. Significant corrosion on shock attach-plate.**

The following exposures can reduce the life of shock mounts and it is recommended to avoid them where possible.

- High humidity and/or salty air
- Direct sunlight
- Solvents, corrosive liquids, and fumes
- Oils, jet fuel, or Skydrol hydraulic fluid
- Extreme temperatures
- Ozone or engine exhaust

3.4 Consumables

Consumables	Specifications
Extreme Pressure Grease	NLGI Grade 1
Dry Film Spray	MIL-A-907
Rust Inhibitor	AIMS 09-08-000 Type I Grade 2, MIL-C-0083933A, MIL-C-16173D-Grade 2

3.5 Maintenance Checklist

This Maintenance Schedule does not supersede the maintenance described by Customer's Company Maintenance Policy. Intervals indicated are recommendations only and should be altered to take into consideration usage factors and environment conditions. Items listed below may not be applicable to the unit. If an accident occurs, all items must be re-inspected.

Item	Action	Interval	Look For
Equipment	Clean using low pressure wash with water soluble detergent	As needed	Dirt
Caster & sheave axle zerk fittings	Lubricate using extreme pressure grease	After cleaning	
Bearings, shafts, mechanically moving parts	Lubricate using extreme pressure grease	After cleaning	
Bare Steel Surfaces	Lubricate using dry film spray	After cleaning	
Caster springs	Lubricate using dry film spray	After cleaning	
Caster swivel locks	Lubricate using dry film spray	After cleaning	
Pins (ball lock, pivot, safety, retainer, etc)	Lubricate using dry film spray	After cleaning	
Equipment	Visual inspection	Each use	Abuse, damage, missing parts
Pins (ball lock, pivot, safety, retainer, etc.)	Visual inspection	Each use	Cracks, missing, damage, wear, corrosion, broken lanyard, cracked handle
Engine mount	Visual inspection	Each use	Damage affecting engine, nickel plating, stainless steel wear, weld cracks

Item	Action	Interval	Look For
Caster assembly	Visual inspection	Each use	Inspect wheel assembly for cracks, wear on brake pads, damaged or broken parts, missing hardware, flat spot on caster tread, swivel lock condition, loose fasteners
Tow bar	Visual inspection	Each use	Missing component
Shock mounts	Visual inspection	Each use	Damage, deteriorating, debonding, permanent deformation
Caster & sheave axle zerk fittings	Lubricate using extreme pressure grease	6 months	Wipe away excess grease
Caster bearings	Lubricate using extreme pressure grease	6 months	Wipe away excess grease
Bare steel surfaces	Lubricate using dry film spray	6 months	Corrosion
Painted Surfaces	Visual inspection	12 months	Exposed metal, corrosion, touch up with Skydrol resistant high-grade enamel paint as needed
Lanyards	Visual inspection	12 months	Broken
Fasteners	Visual inspection	12 months	Cracks, damage, corrosion, loose
Structure, fork tubes, caster mounts	Visual inspection	12 months	Damage, weld cracks, corrosion
Tie downs	Visual inspection	12 months	Distortion, weld cracks
Shock mounts	Visual inspection	12 months	Damage, deteriorating, debonding, permanent deformation
Equipment	Function test	12 months	Storage, operation
Non-skid surfaces	Visual inspection	12 months	Missing, damaged
Stencils	Visual inspection	12 months	Missing, damaged

3.6 Proof Load

It is recommended that the bootstrap adapters be periodically tested to 200% of the rated load as shown in Figure 3.6-1. The testing interval is generally determined by each customer and depends on usage frequency.

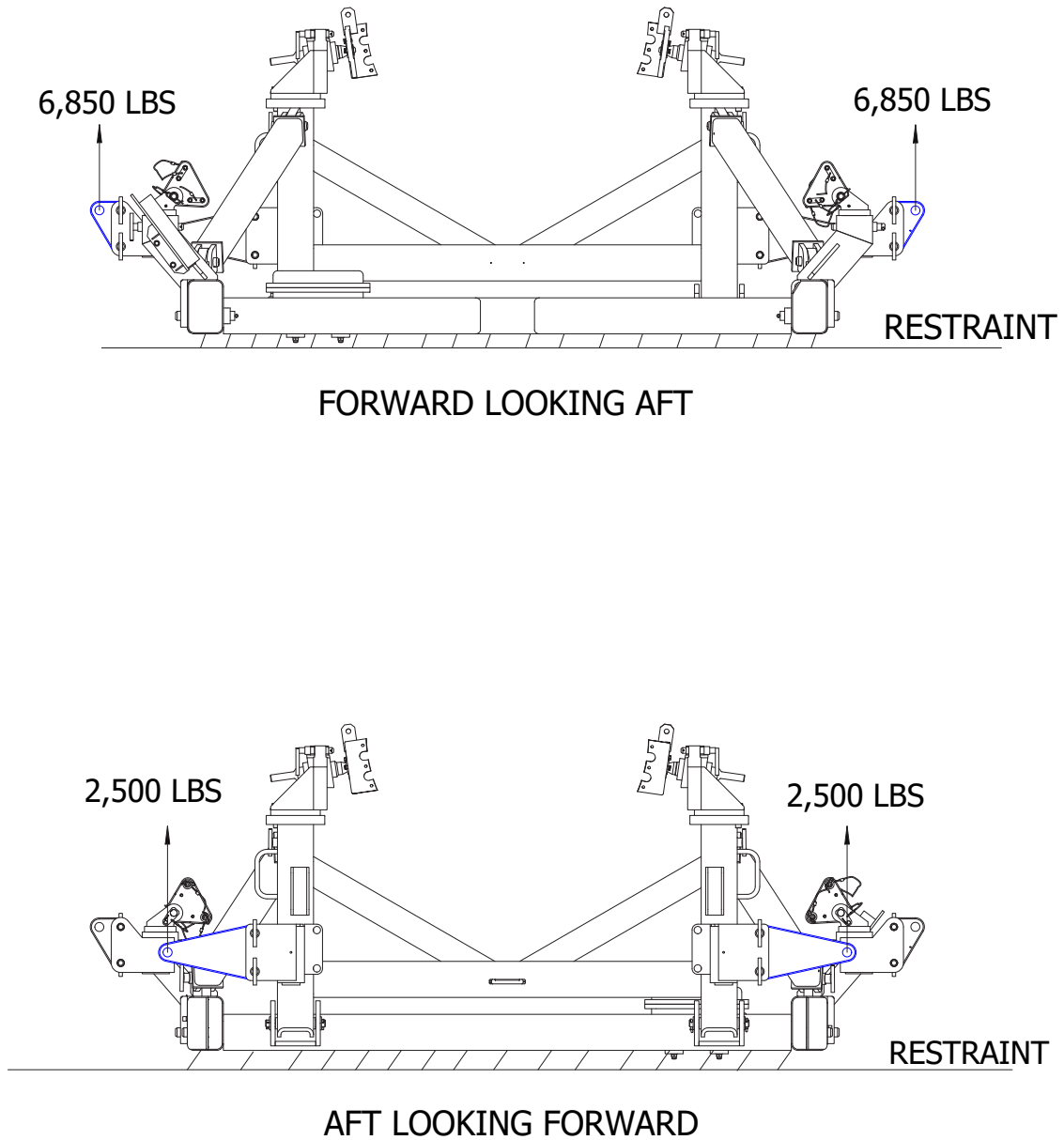


Figure 3.6-1 Proof Load

4.0 - Operation

4.1 Forklifting

The empty stand or stand with engine minus inlet can be moved with forklift from either side of the base using 12" x 2.75" (minimum inside dimensions) fork tube openings. The tubes are spaced 72" on centers shown in Figure 4.1-1. The minimum fork tine length must be 96" to completely pass through the stand base frame.

Based on the load center, a typical forklift capacity may be 18,000 lbs or more at 46.25" from mast. Refer to forklift manufacturer specification for forklift capability.

RECOMMENDATION

During the transport of the cradle with engine installed using a forklift, spotters are recommended to establish a safety zone to avoid potential injuries due to limited vision.

CAUTION

Care must be taken when lifting or lowering the stand with engine to avoid fork tines slipping, crushing, or smashing accidents that may cause injury.

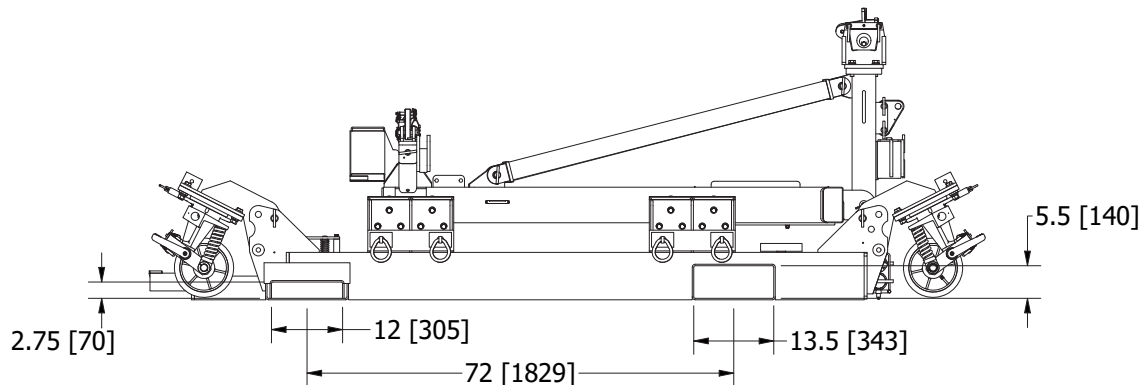


Figure 4.1-1 Dimensions for Forklifting

NOTE

Fork lifting can be done while casters are in stow or tow position.

- 1). If engine is loaded on the stand, visually check distance between the engine and the upper surface of the forward fork tube to ensure enough clearance as shown in Figure 4.1-2.
- 2). Insert fork tines carefully into the fork tube openings. Ensure the fork tines extend the entire width of the stand.
- 3). Maintain level position when raising and lowering the stand with engine.
- 4). Maximum travel speed while moving the engine is 3 MPH (5 KM/H) on paved smooth surfaces over limited distances.

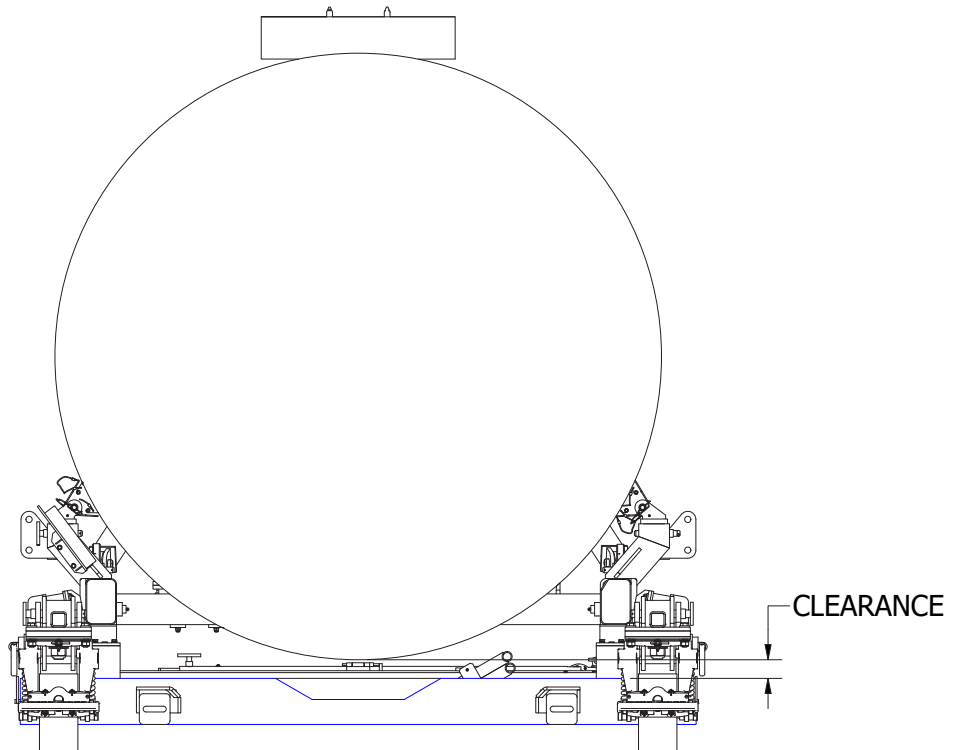


Figure 4.1-2

4.2 Caster Deployment, Stowage & Steering

CAUTION

The caster assemblies are heavy and **MUST BE HANDLED BY TWO PERSONS.**

4.2.1 Caster Deployment

- 1). Retrieve the AGSE-E22115-P01 caster lift bar by removing the AM-90500-32T safety pin and its retainer pin securing the caster lift bar to the base (Figure 4.2-1).
- 2). Raise the stand approximately 10” above ground.
- 3). Install the caster lift bar into the caster socket and insert the AM-90500-32T safety pin to retain the caster lift bar to the caster assembly (Figure 4.2-2).
- 4). While one person pushes up on the caster lift bar, another person removes the AM-91000-96T-H900 safety pin from the caster assembly.
- 5). Using the caster lift bar rotate the caster assembly to the desired position.
- 6). Re-insert the AM-91000-96T-H900 safety pin and retainer pin to secure the caster assembly in the deploy position (Figure 4.2-2).
- 7). Repeat steps 3 through 6 for all casters.
- 8). Detach the AGSE-E22115-P01 caster lift bar, AM-90500-32T safety pin and retainer pin from caster socket. Return caster lift bar to storage position and secure with safety pin.

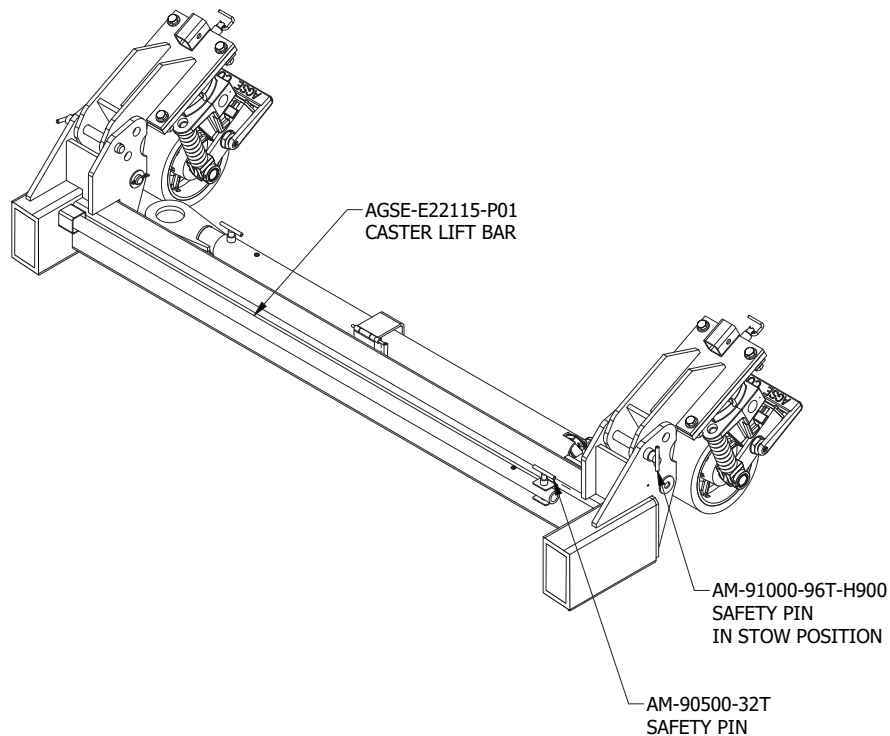


Figure 4.2-1

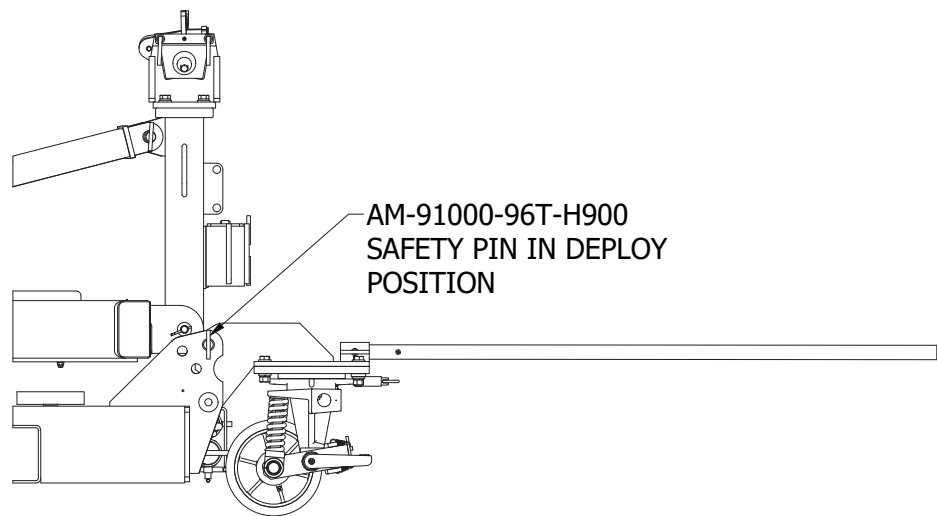
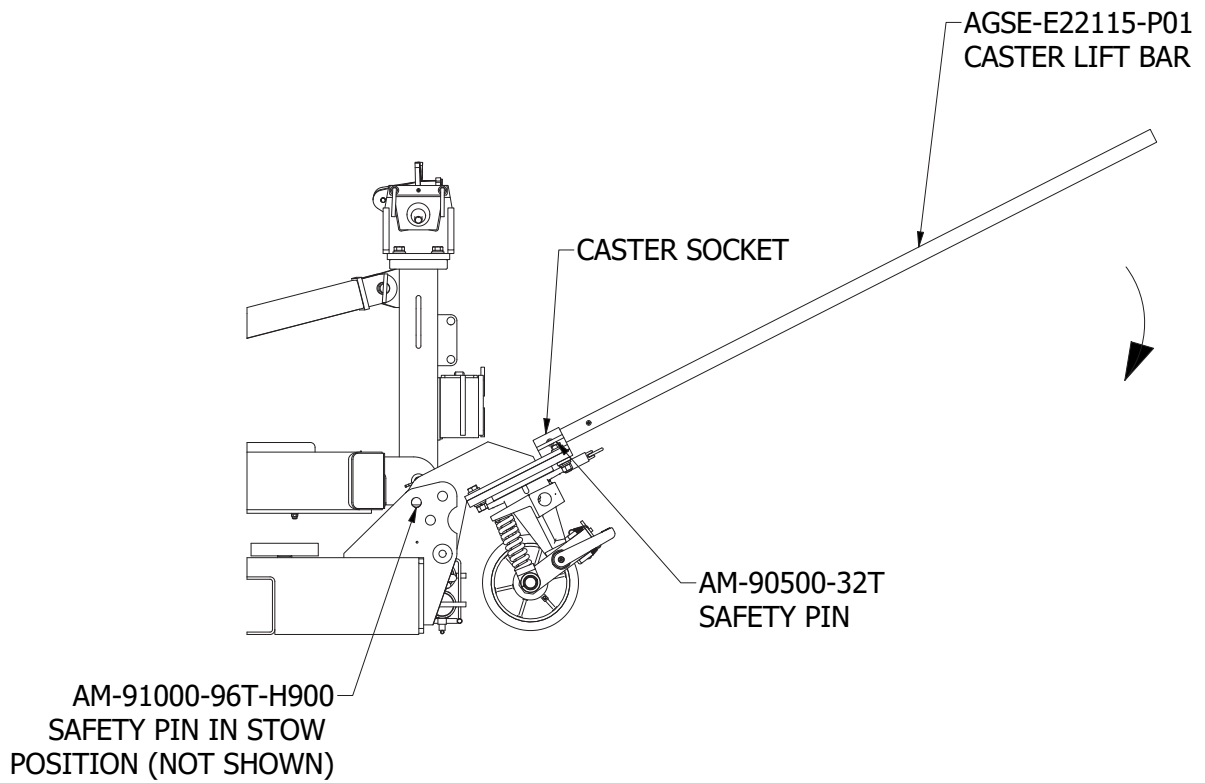


Figure 4.2-2

4.2.2 Caster Stowage

- 1). Remove the AGSE-E22115-P01 caster lift bar by removing the AM-90500-32T safety pin and its retainer pin securing the caster lift bar to the base (Figure 4.2-1).
- 2). Raise the stand approximately 10” above ground.
- 3). Install the caster lift bar into the caster socket and insert the AM-90500-32T safety pin to retain the caster lift bar to the caster assembly (Figure 4.2-3).
- 4). While one person pushes up on the caster lift bar, another person removes the AM-91000-96T-H900 safety pin from the caster assembly.
- 5). Using the caster lift bar rotate the caster assembly to the desired position.
- 6). Re-insert the AM-91000-96T-H900 safety pin and retainer pin to secure the caster assembly in the stowage position (Figure 4.2-3).
- 7). Repeat steps 3 through 6 for all casters.
- 8). Detach the AGSE-E22115-P01 caster lift bar, AM-90500-32T safety pin and retainer pin from caster socket. Return caster lift bar to storage position and secure with safety pin.

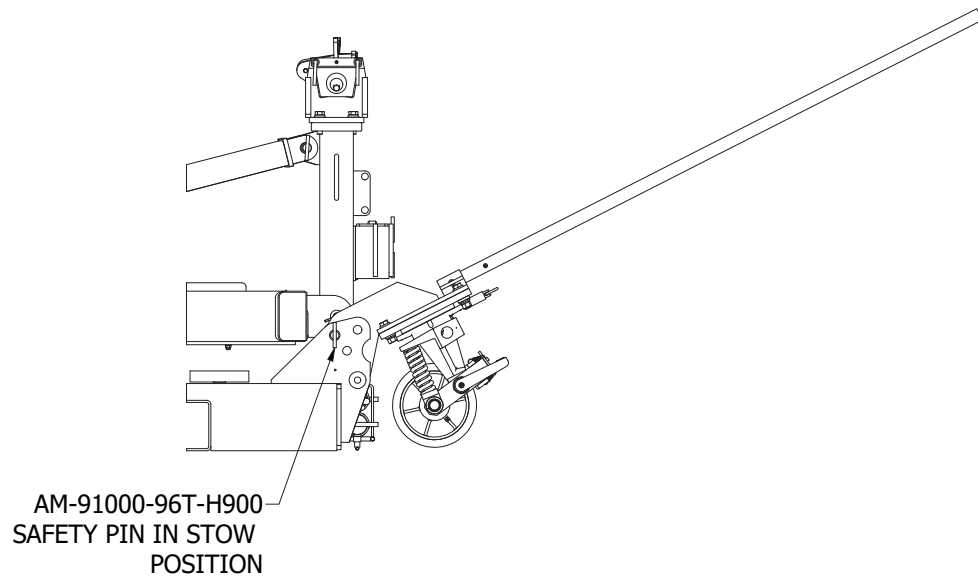
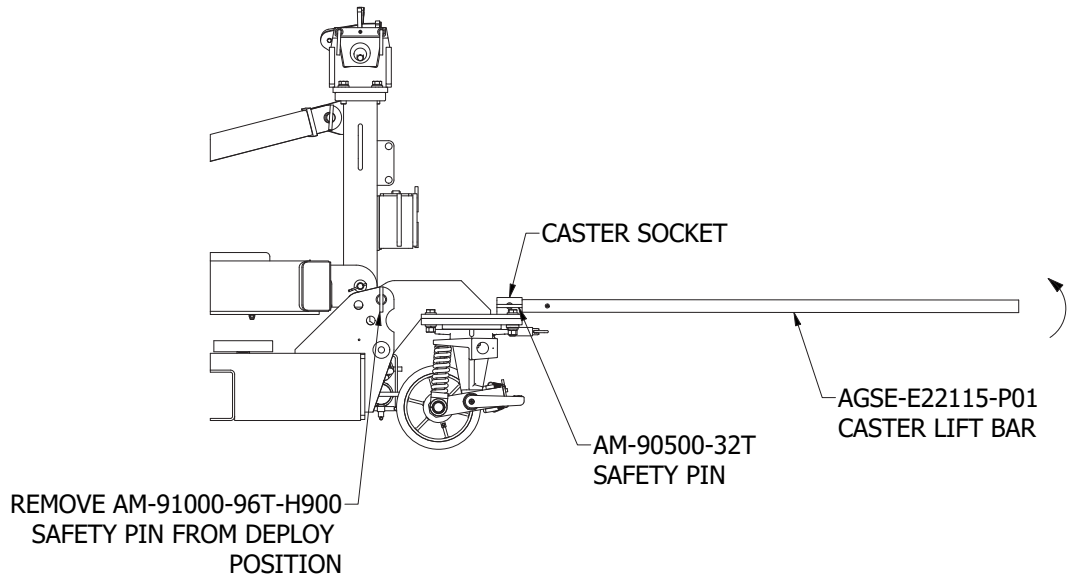


Figure 4.2-3

4.2.3 Steering Caster

This operation can be done when casters are deployed and the stand is loaded with the full QEC configured engine.

- 1). Retrieve at least one (1) AGSE-E16911-P01 steering bar by removing the AM-90250-32T safety pin and its retainer pin securing the steering to the base (Figure 4.2-4).

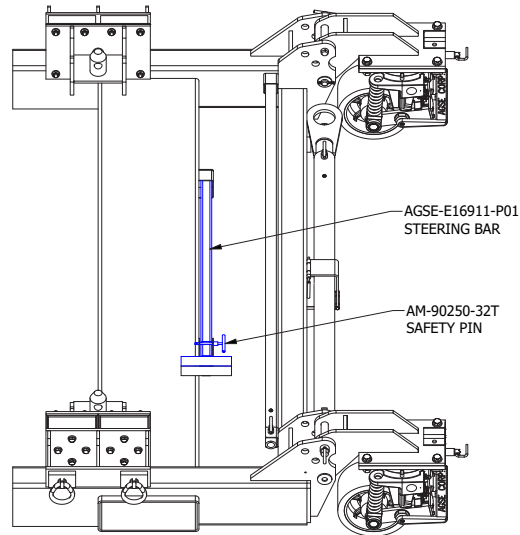


Figure 4.2-4

- 2). Insert one end of the steering bar handles into a rounded slot on the side of the caster wheel (Figure 4.2-5)
- 3). Release swivel handle and turn in any direction. When complete, re-engage swivel lock.
- 4). Return the steering bar to storage position and secure with the AM-90250-32T safety pin and retainer pin.

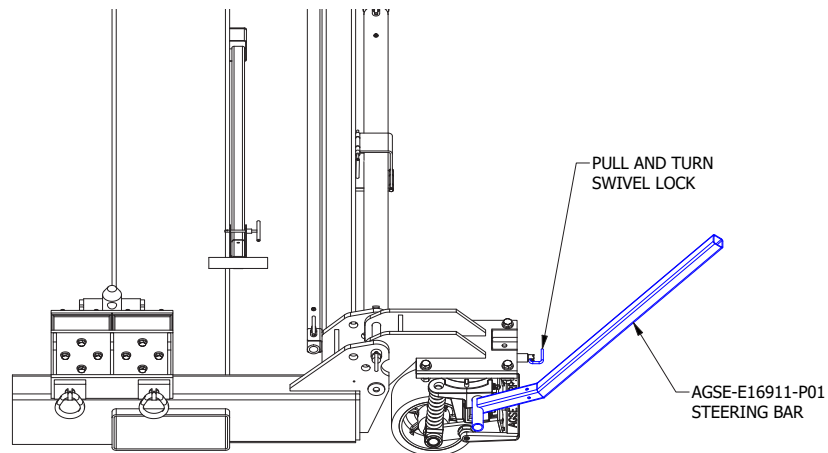


Figure 4.2-5

4.3 Tow Bar Deployment and Stowage

The empty stand or stand with a full QEC configured engine may be towed from either the FORWARD or AFT end. Maximum towing speed is 3 MPH (5 KM/H).

CAUTION

The tow bar assemblies are heavy and **MUST BE HANDLED BY AT LEAST TWO PERSONS.**

WARNING

Failure to unlock swivel lock on lead casters and/or foot brakes on all casters during towing of the stand will result in flat spots damage to the tread surface of the caster.

CAUTION

DO NOT attach tow bars to a forklift. Otherwise tow bars and casters will be damaged

4.3.1 Deploying Tow Bars for Towing from the AFT End of the Stand and Stowage

- 1). Deploy casters as shown in Section 4.2-1.
- 2). Locate two removable telescoping tow bar assemblies that are attached to the AFT base cross member. Remove the AM-90250-48L safety pin and retainer pin to open the storage clamp bracket as shown in Figure 4.3-1.

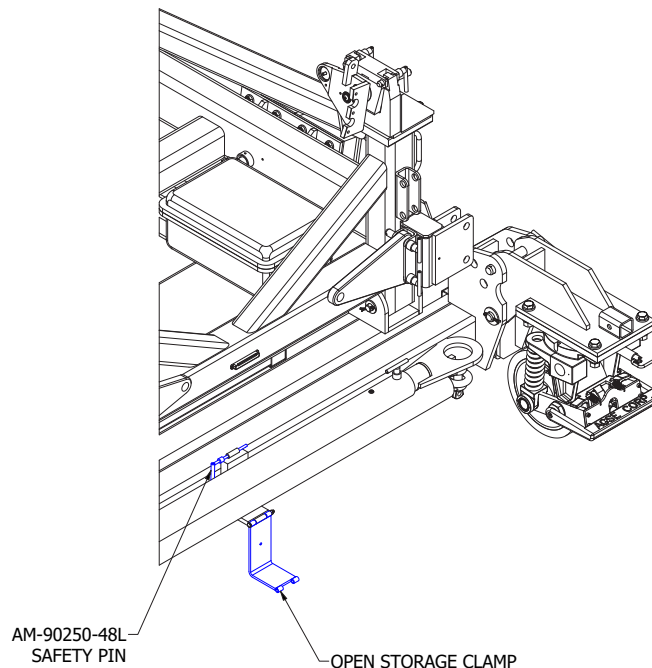


Figure 4.3-1

- 3). Rotate each AGSE-E22117-S01 tow bar assembly (approximately 41 lbs) outward. The safety pin to extend or retract tow bar should be facing upward.
- 4). Close storage clamp and pin in place to prevent component from dragging along ground while towing the stand. (Figure 4.3-2)
- 5). To extend the tow bars, remove the AM-90625-46T pin closest to the towing end and pull the inner section outward until a red stripe becomes visible. (Figure 4.3-2)
- 6). Align the pin holes between the outer and inner sections and insert the pin.
- 7). Bring the two tow bars together to attach to a tow vehicle.
- 8). Reverse these steps for storage tow bars.

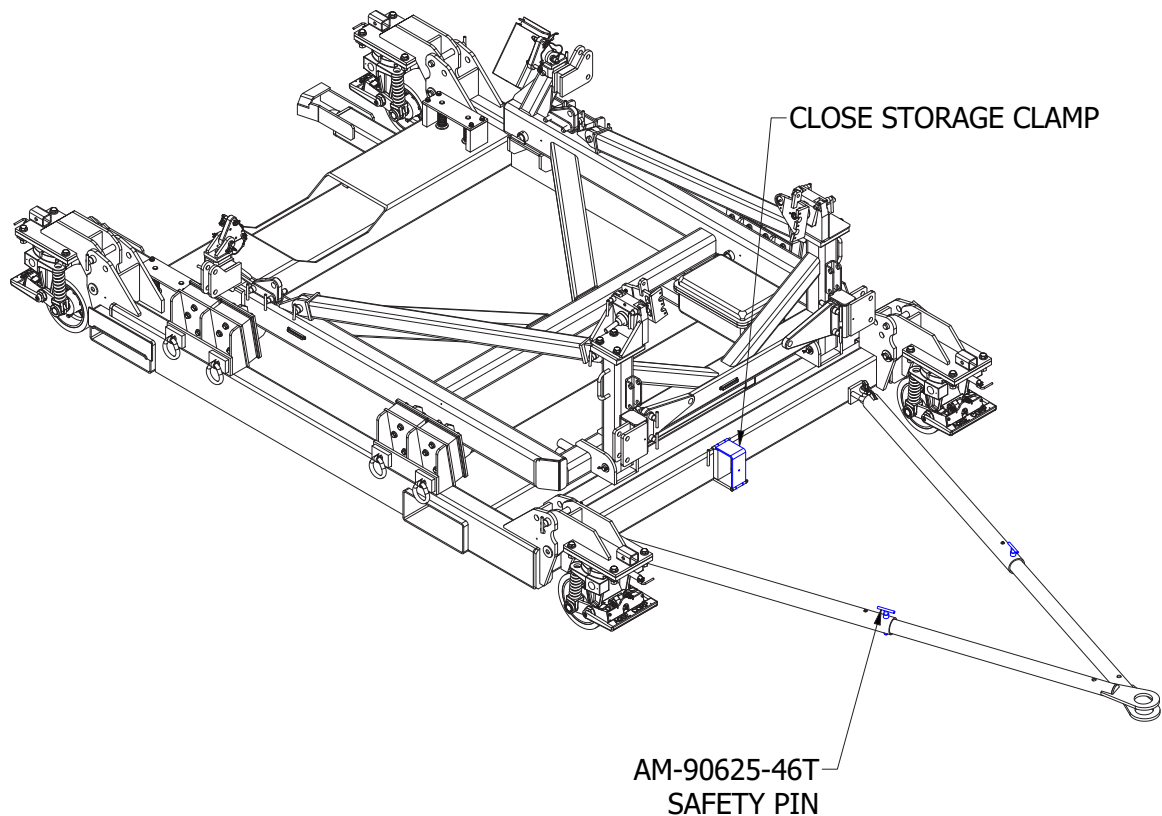


Figure 4.3-2

4.3.2 Deploying Tow Bar for Towing from the FORWARD End of the Stand and Stowage

- 1). Deploy casters as shown in Section 4.2-1.
- 2). Locate two removable telescoping tow bar assemblies that are attached to the AFT base cross member. Remove the AM-90250-48L safety pin and retainer pin to open the storage clamp bracket as shown in Figure 4.3-1.
- 3). Move two (2) AGSE-E22117-S01 tow bars (41 lbs each) to the forward end of the stand.
- 4). Attach the tow bars to the brackets on the forward end of the base (Figure 4.3-3).
- 5). Extend the tow bars by removing the AM-90625-46T pin closest to the towing end and pull the inner section outward until a red stripe becomes visible.
- 6). Align the pin holes between the outer and inner sections and insert the pin.
- 7). Bring the two tow bars together to attach to a tow vehicle.

CAUTION

For tight turns and maneuvering use the provided caster steering bar. Release all caster brakes and engage the swivel locks of the trailing casters. Do not engage the swivel locks of the casters closest to the tow vehicle or this will damage the casters.

- 8). Reverse these steps for stowing tow bars at AFT end of the Stand.

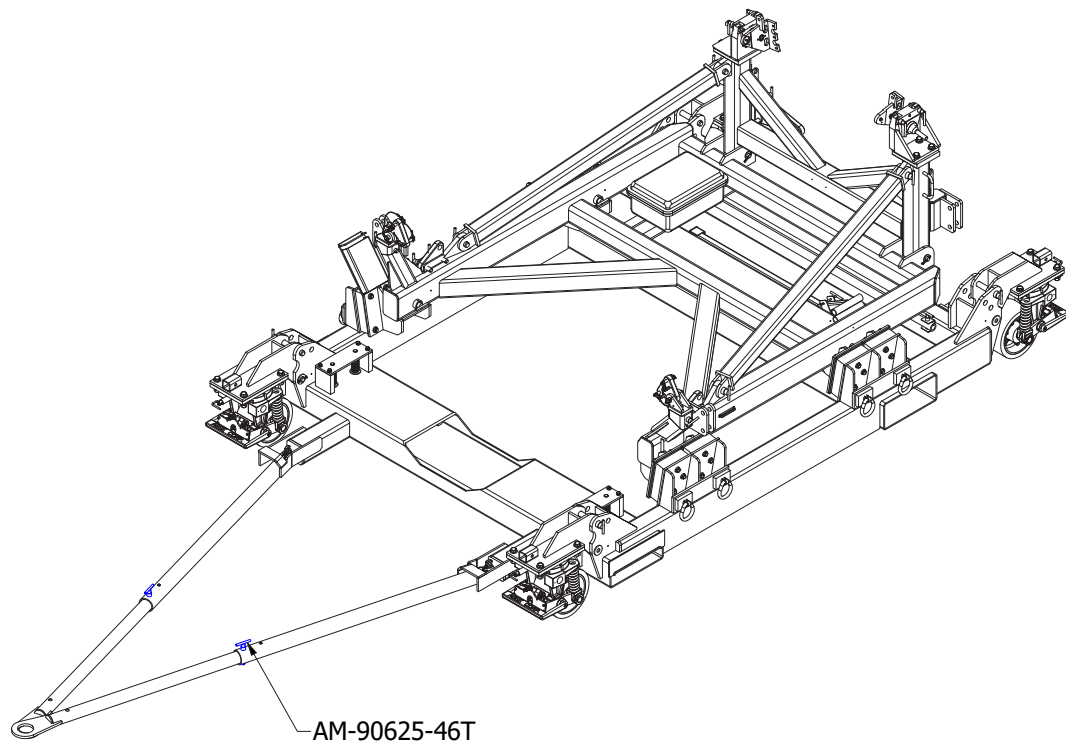


Figure 4.3-3

4.4 Engine Installation onto Stand

CAUTION

Care must be taken when working near suspended loads. Personnel should never stand beneath the suspended load.

- 1). Configure engine for shipping in accordance with Pratt & Whitney Engine Shipping Manual.
- 2). Install two (2) AGSE-E24007-P04 forward mount blade in between the fan exit case brackets.
 - a. Insert four (4) forward mount pins (part of AGSE-E27719-S01 assembly) from FORWARD to AFT while aligning the anti-rotation pins to the forward mount blades (Figure 4.4-1).
 - b. Insert four (4) washers (part of AGSE-E27719-S01 assembly) (Figure 4.4-1).
 - c. Use cotter pins (part of AGSE-E27719-S01 assembly) to retain the forward mount pins in place (Figure 4.4-1).
- 3). Remove the forward adapter supports AGSE-E22110-P01, from the cradle assembly by removing the AM- 90750-64T safety pins.
 - a. Assemble the adapter supports to the AGSE-E24007-P04 adapter blades.
 - b. Insert two (2) forward adapter pins (part of AGSE-E27716-S01 assembly) from AFT to FORWARD while aligning the anti-rotation pins
 - c. to the forward mount blades (Detail A of Figure 4.4-4). Insert two (2) washers (part of AGSE-E27716-S01 assembly) (Detail A of Figure 4.4-4).
 - d. Use cotter pins (part of AGSE-E27716-S01 assembly) to retain the forward mount pins in place (Detail A of Figure 4.4-4)

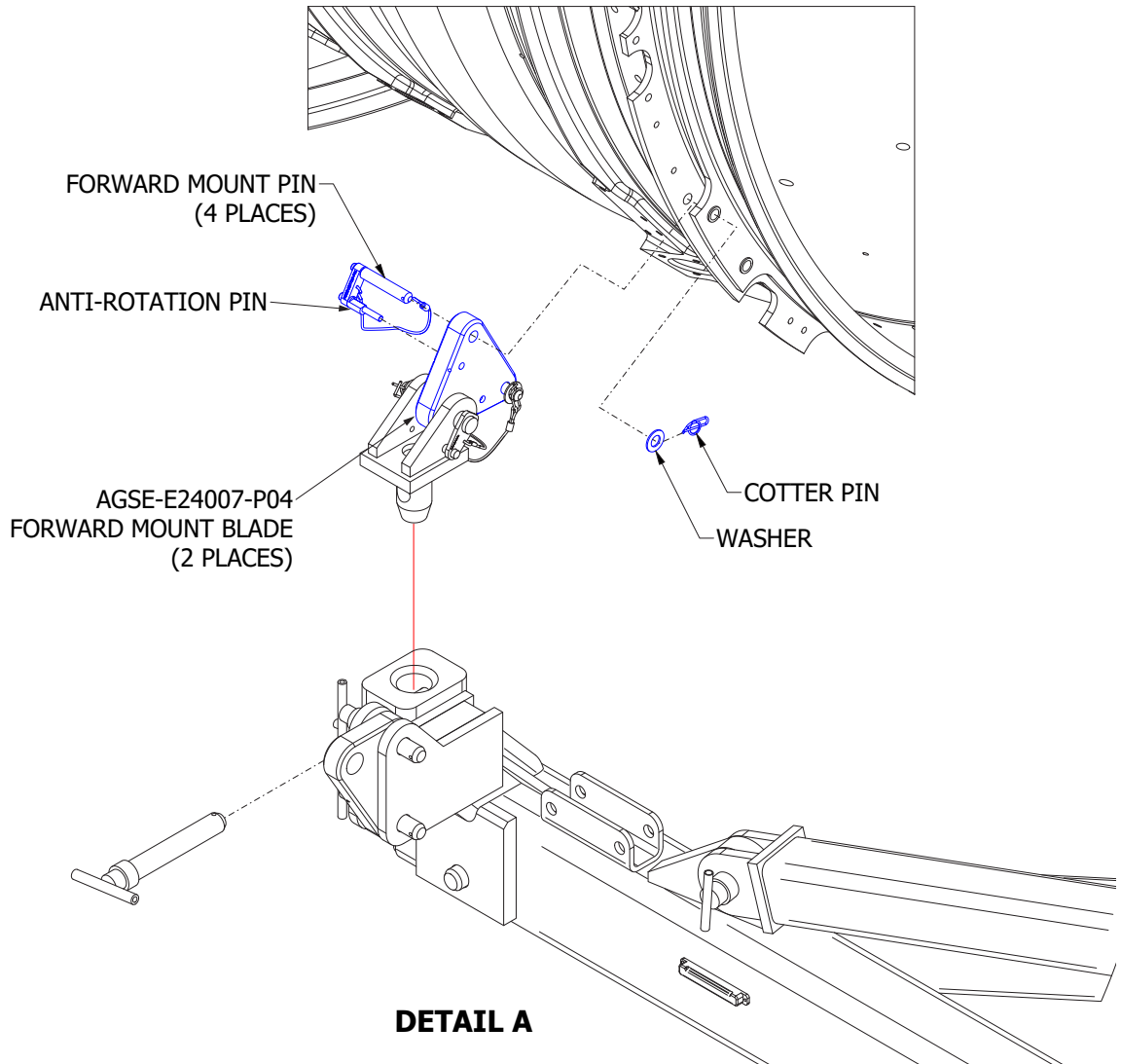
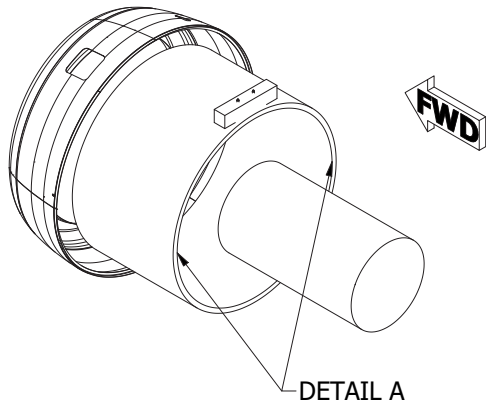


Figure 4.4-1

- 4). Retrieve Pratt and Whitney PWA109790 AFT shipping adapter set, AGSE-E22102-S03 LH spindle assy and AGSE-E22102-S05 RH spindle assy from the storage container mounted on the cradle.
- 5). Install Pratt & Whitney PWA109790 AFT shipping adapter set on turbine exit case (TEC) with provided hardware (Figure 4.4-2). Torque bolts to 100-120 in-lbs.
- 6). Hand tighten AGSE-E22102-S03 LH spindle assy and AGSE-E22102-S05 RH spindle assy into the PWA109790 AFT shipping adapter set. Install four (4) 97345A567 shoulder bolts to hold spindle assemblies in place (Figure 4.4-2). Torque the shoulder bolts to 100-120 in-lbs.

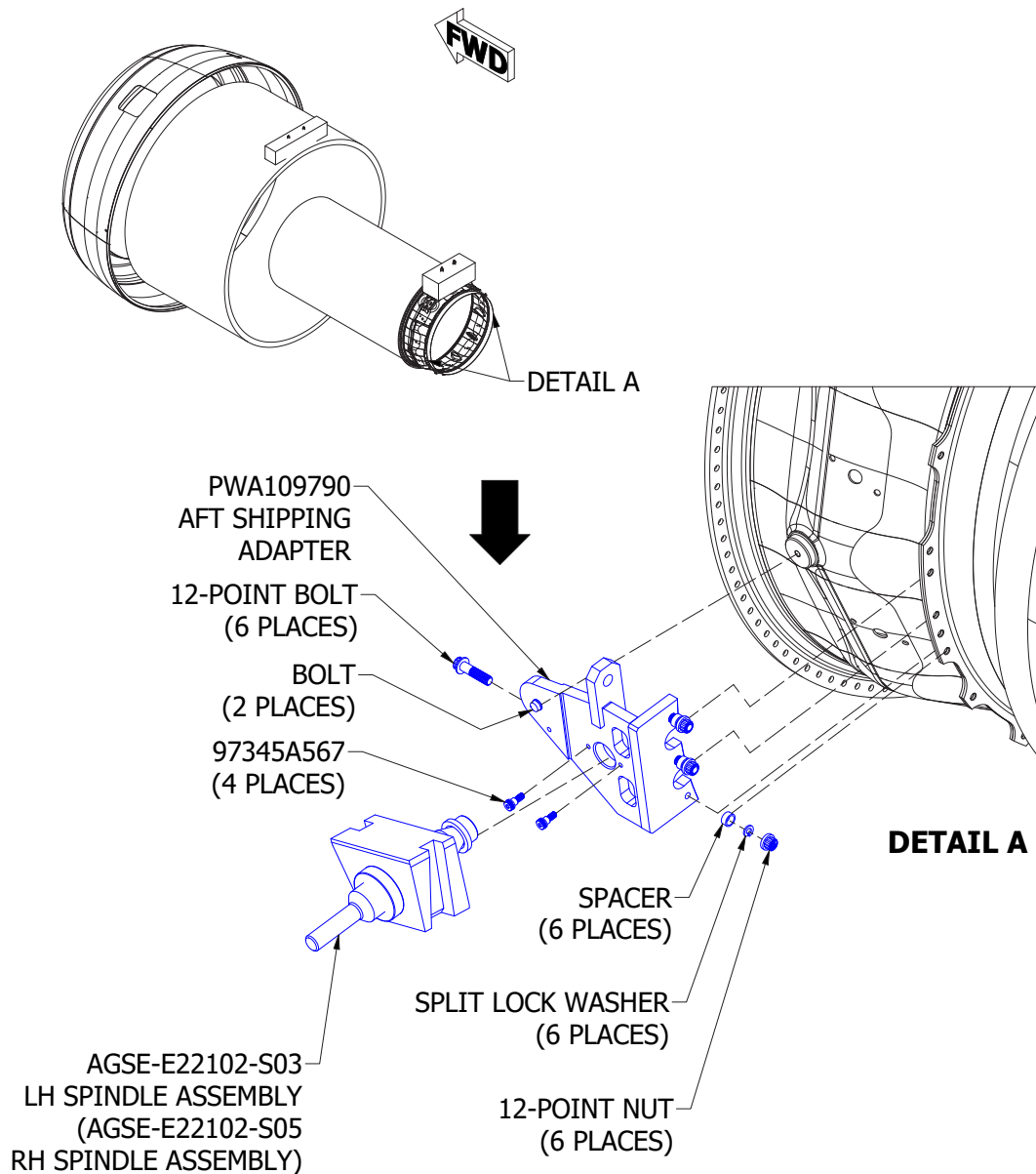


Figure 4.4-2

7). Temporarily remove four (4) AM-90625-L-SPCL safety pins and two (2) AGSE-E20329-P02 rear mount caps from the LH and RH AFT mounts.

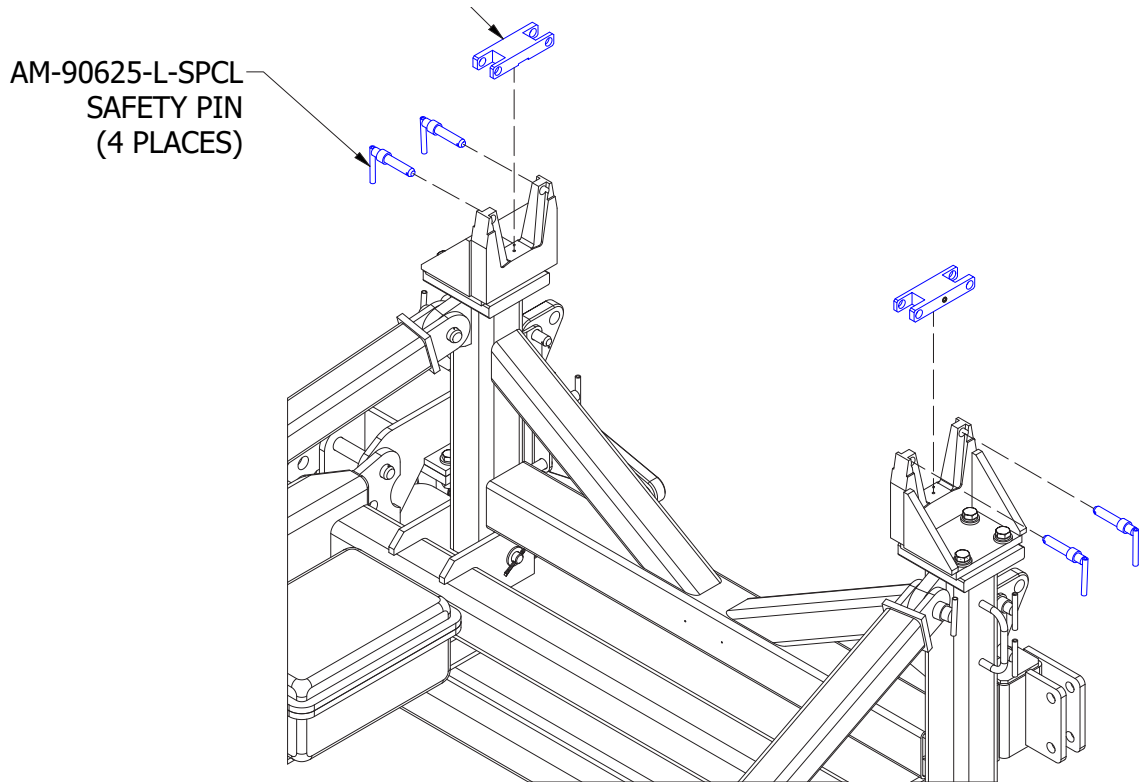


Figure 4.2-3

- 8). Slowly lower engine onto the stand.
- 9). Once all adapters are engaged in the cradle supports, adjust the AGSE-E22102-S05 RH Spindle Assembly to align with the cradle support saddle, AGSE-E20329-P01.
- 10). Secure the spindles with the AGSE-E20329-P02 rear mount caps and AM-90625-L-SPCL safety pins (Detail B of Figure 4.4-4).
- 11). Lower engine completely until the stand supports the full weight of the engine.
- 12). Disconnect hoisting system from engine.
- 13). Ensure Pratt and Whitney engine preparation is complete before transport or storage.

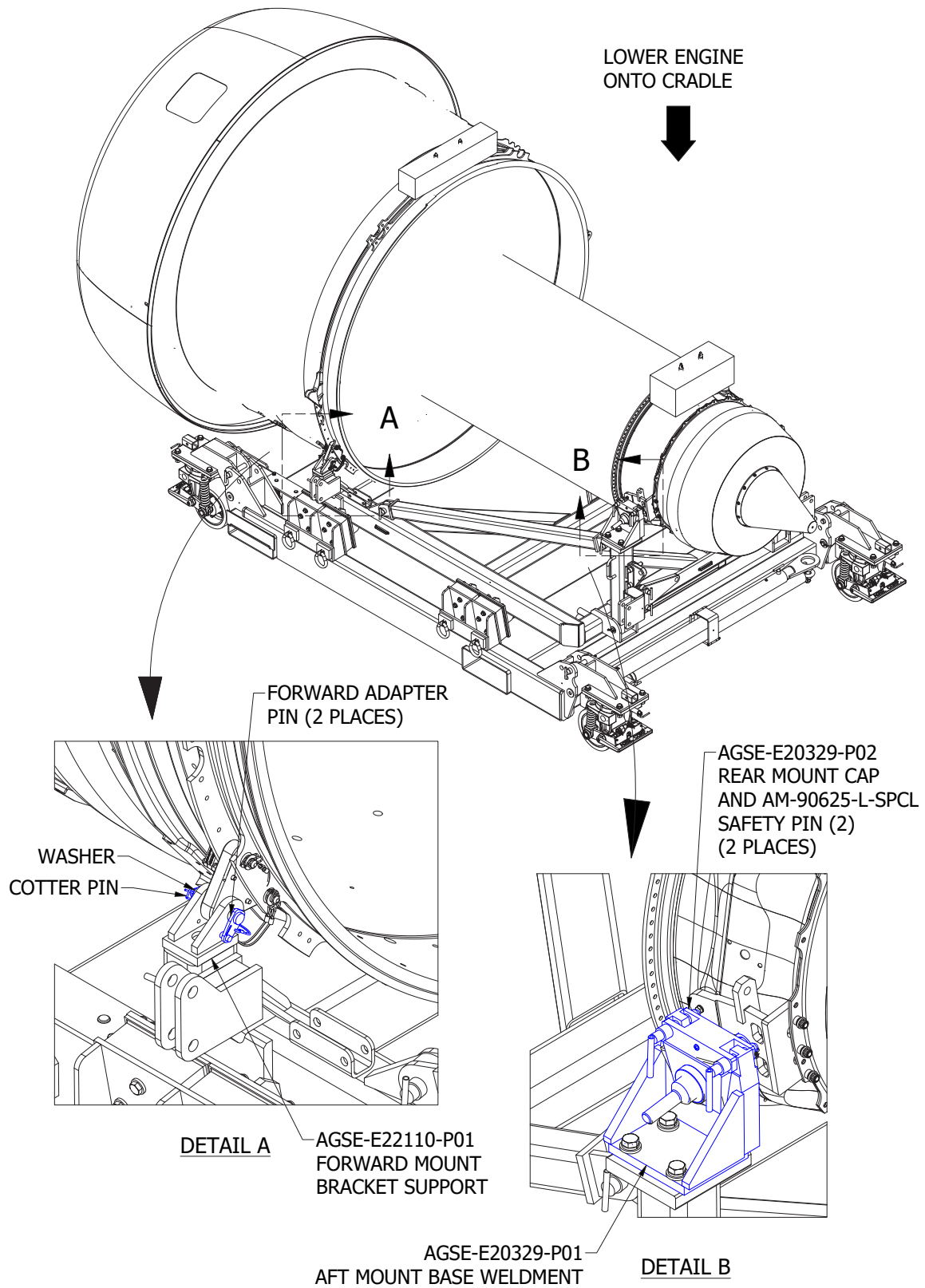


Figure 4.4-4

4.5 Engine Removal

CAUTION

Care must be taken when working near suspended loads. Personnel should never stand beneath the suspended load.

- 1). Attach sling to pylon adapter with a suitable capacity sling attached to engine ground handling points per Pratt and Whitney engine removal preparation.
- 2). Remove and retain two (2) AGSE-E27716-S01 forward adapter pin assemblies at the FORWARD end of the cradle by removing the cotter pins and washers. (Figure 4.5-1).
- 3). Remove and retain four (4) AM-90625-L-SPCL safety pins with two (2) AGSE-E20329-P02 rear mount caps from the LH and RH AFT mounts. (Figure 4.5-1).

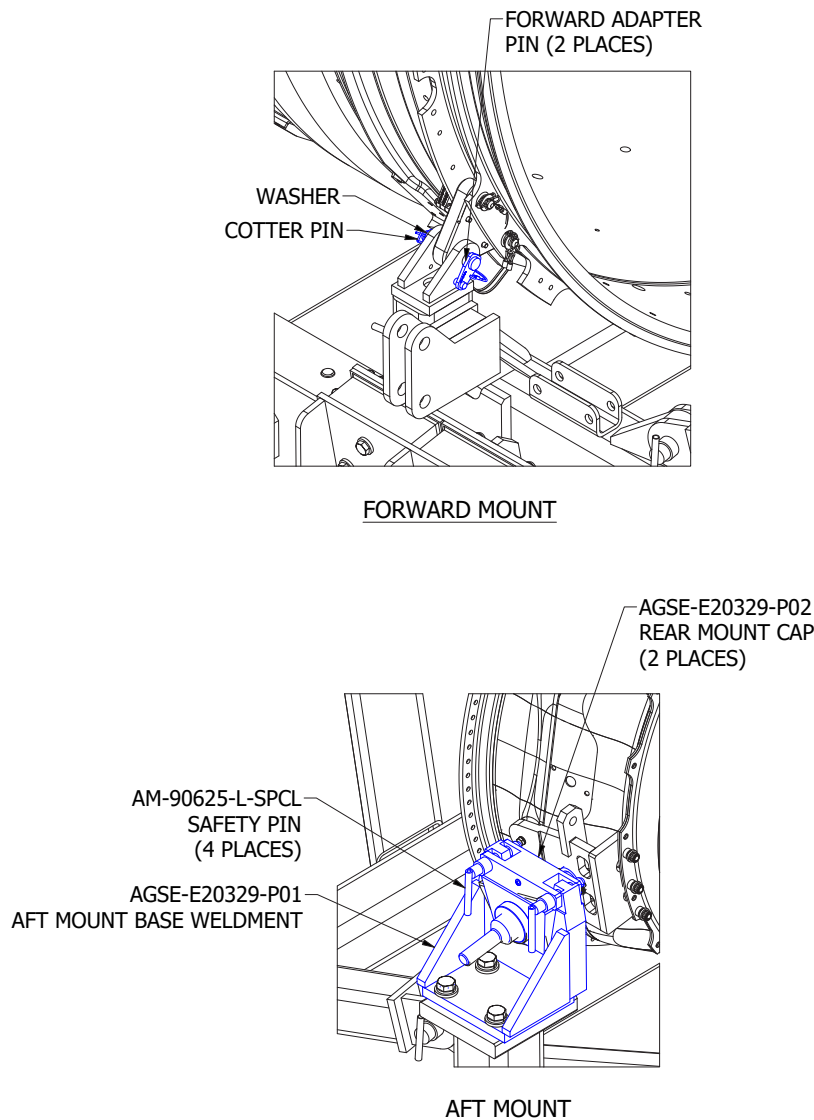


Figure 4.5-1

- 4). Lift the engine from the stand.
- 5). Re-install four (4) AM-90625-L-SPCL safety pins with two (2) AGSE-E20329-P02 rear mount caps onto the LH and RH AFT mounts. (Figure 4.5-2).
- 6). Remove four (4) 97345A567 shoulder bolts, AGSE-E22102-S03 LH spindle assy and AGSE-E22102-S05 RH spindle assy from PWA109790 AFT mount bracket set. (Figure 4.5-2)
- 7). Remove PWA109790 AFT shipping adapter set and hardware from turbine exit case (TEC). (Figure 4.5-2).
- 8). Re-assemble AGSE-E22102-S03 LH spindle assy and AGSE-E22102-S05 RH spindle assy with hardware onto PWA109790. Store them in storage box located on the cradle.
- 9). Remove two (2) AGSE-E24007-P04 forward mount blade by removing the AGSE-E27719-S01 forward adapter pin assembly. (Figure 4.5-2). Store them back in position on the cradle at AGSE-E22110-P01 forward mount bracket supports and secure with the AGSE-E27716-S01 forward adapter pin assemblies. (Figure 4.5-3).

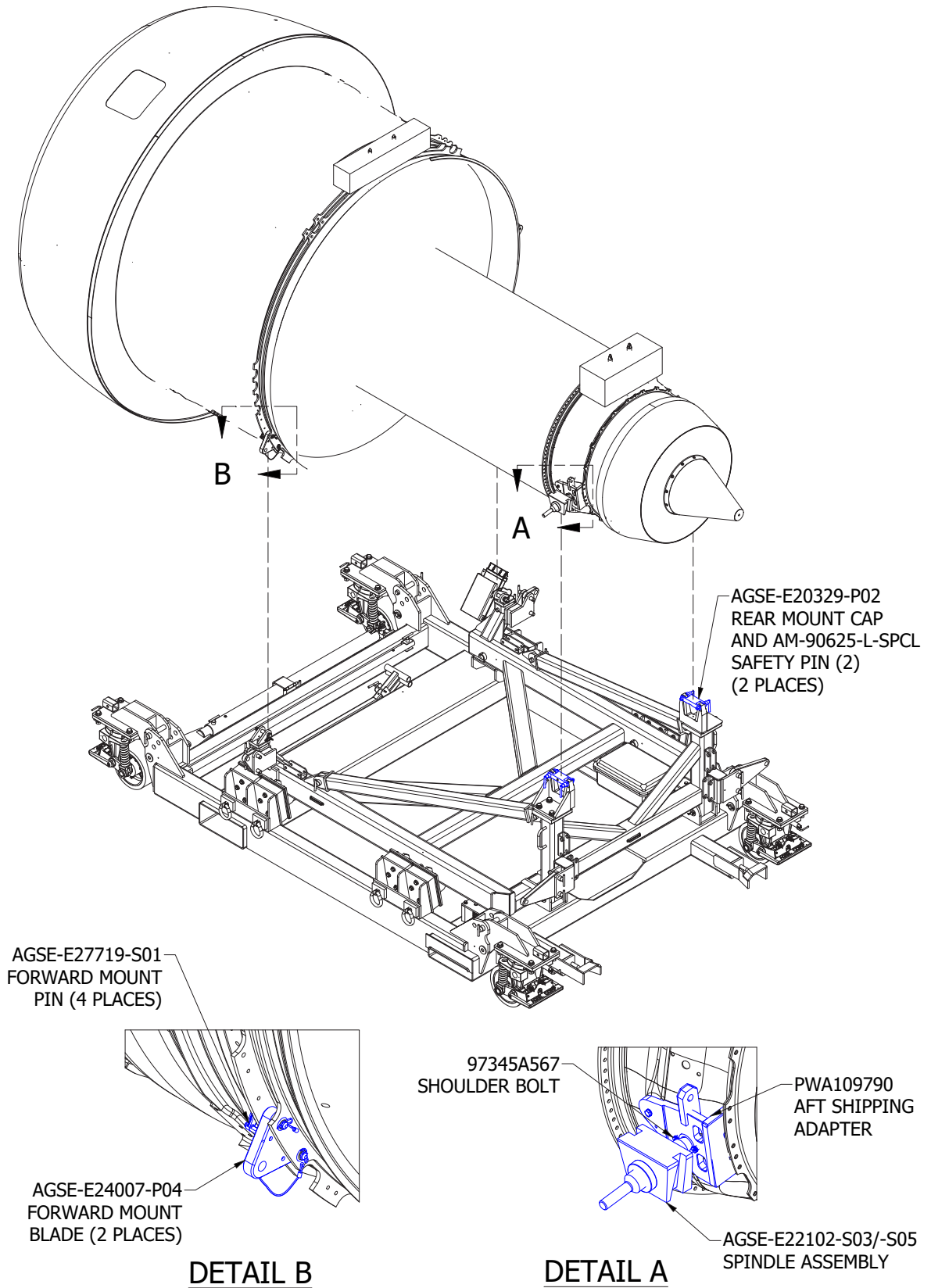


Figure 4.5-2

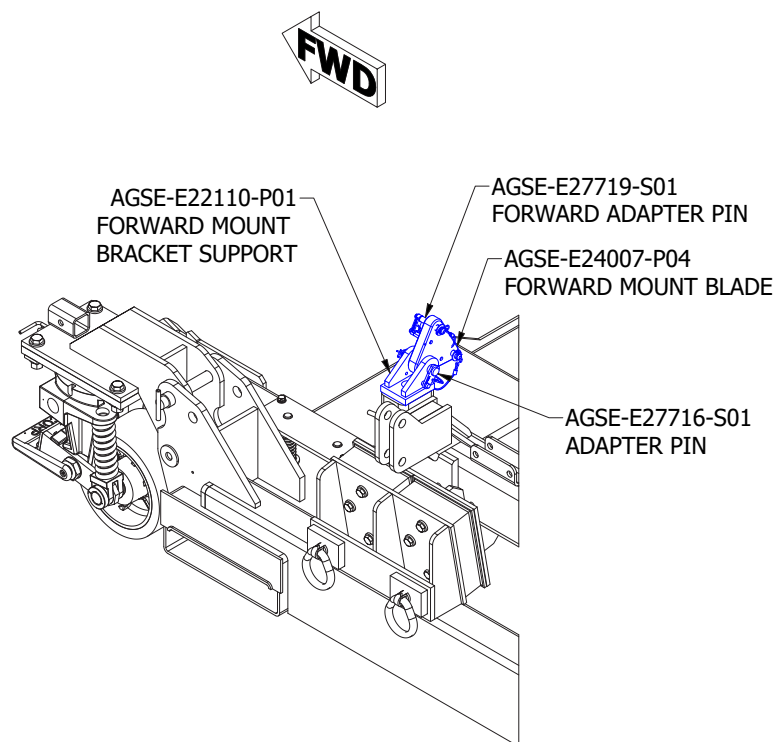


Figure 4.5-3

4.6 Stand Preparation for Bootstrapping

WARNING

Failure to configure the engine stand properly before bootstrapping can result in engine and aircraft damage.

- 1). Ensure casters are deployed.
- 2). Engage the swivel locks on the AFT end casters (with caster wheels swiveled to travel towards the rear direction to be positioned under the pylon for bootstrap. The rear caster's swivel should be locked and the forward casters allowed to swivel to allow positioning).
- 3). Remove two (2) AGSE-E24007-P02 FWD bootstrap adapters from their storage by removing four (4) AM-90750-40T safety pins and retainer pins.
- 4). Install two (2) FWD bootstrap adapters with four (4) safety pins and retainer pins on the FWD bootstrap mounts (Figure 4.6-1).
- 5). Remove the AGSE-E24007-P03 AFT bootstrap adapters (2) from their storage by removing four (4) AM-90750-40T safety pins and retainer pins.
- 6). Install AGSE-E24007-P03 (2) with safety pins (4) and retainer pins on the AFT bootstrap mounts (Figure 4.6-1).

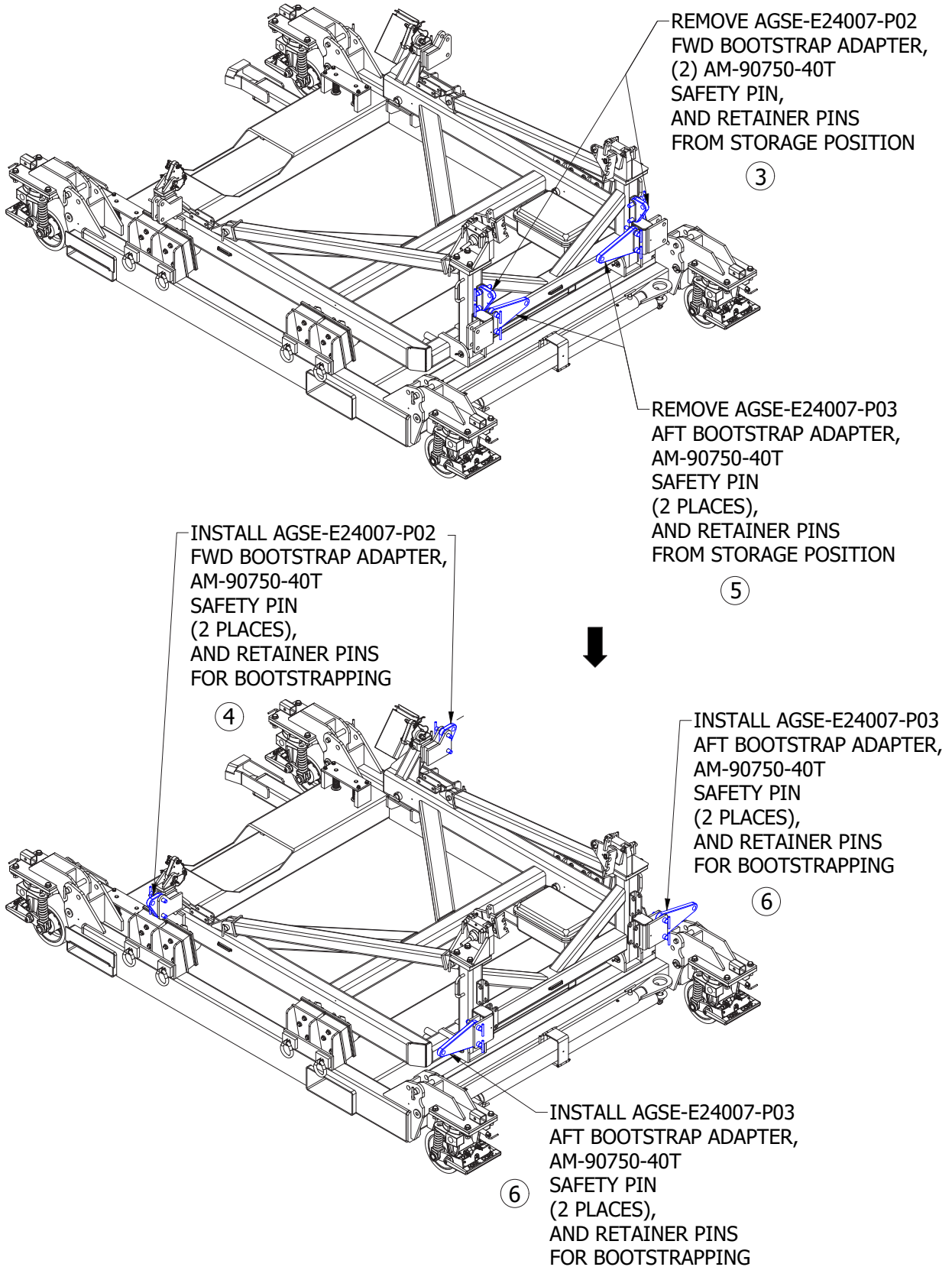


Figure 4.6-1

- 7). Attach slings to bootstrap adapters (Figure 4.6-2).
- 8). Remove the two (2) AGSE-E22114-P03 safety pins at the FWD end of the cradle.
- 9). Remove the two (2) AGSE-E22114-P02 safety pins at the AFT end of the cradle.
- 10). Lift the cradle upward and store two (2) AGSE-E22114-P03 and two (2) AGSE-E22114-P02 safety pins on the cradle.

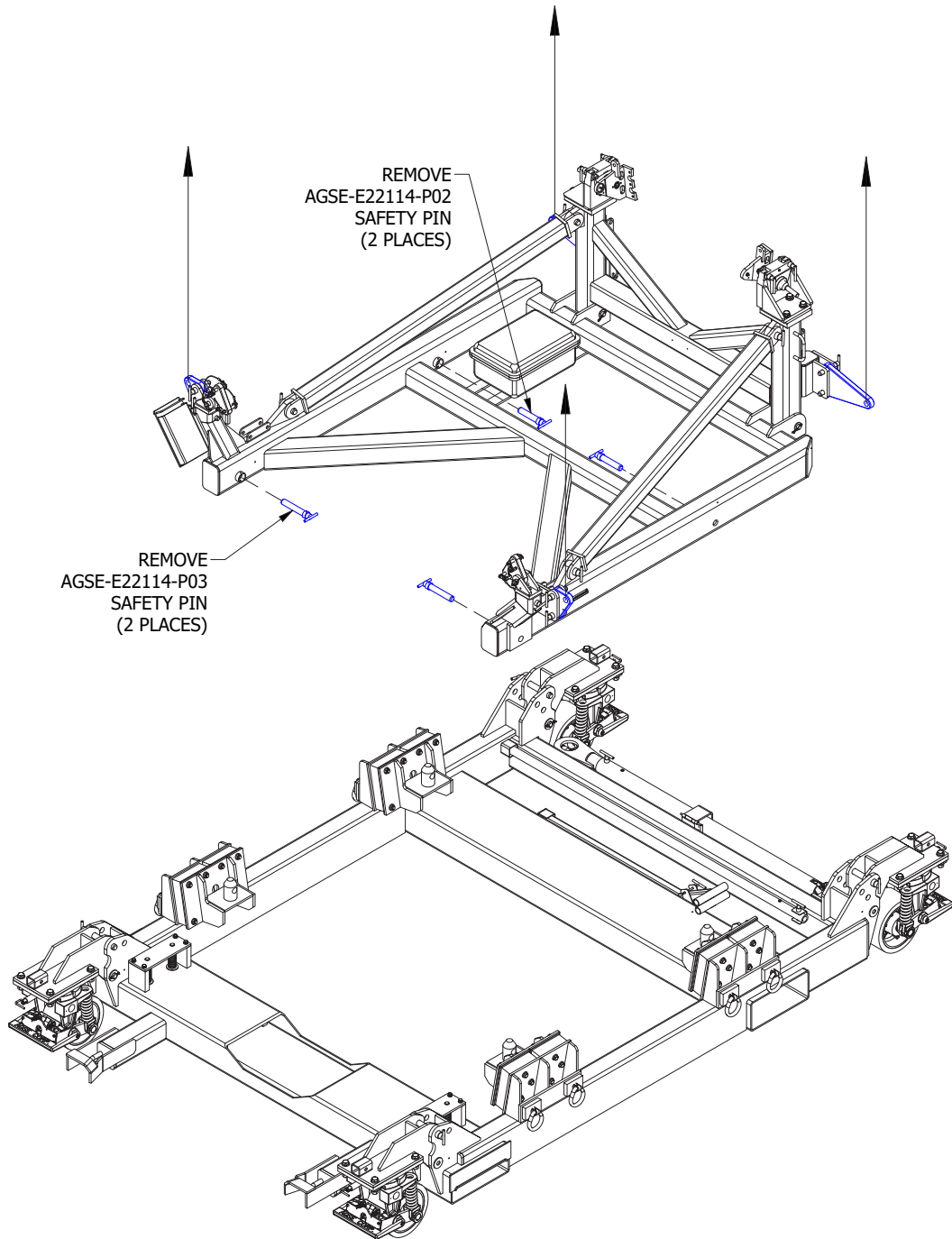


Figure 4.6-2

4.7 Truck Transport

Truck transport of the empty stand or stand with engine **MUST** be air ride suspension equipped tractor/trailers. It is not recommended that a full engine including fan case be truck shipped due to the large overall dimensions/weight/CG location and limited sway space clearance between the fan case and truck bed.

Loading and unloading the empty stand or stand with engine onto and off a truck may be by fork lift. See Section 4.1 for forklifting procedure.

CAUTION

Do not use an overhead crane to load or unload the empty stand or stand with engine onto and off a truck.

WARNING

The securing straps or chain **MUST NOT be attached/wrapped around any part of the cradle. Doing so will disable the shock mount system and will result in engine damage. Use tie down rings located on the base to secure the stand onto the truck.**

CAUTION

Do not ship the stand with casters deployed or it will damage the stand, engine, and casters.

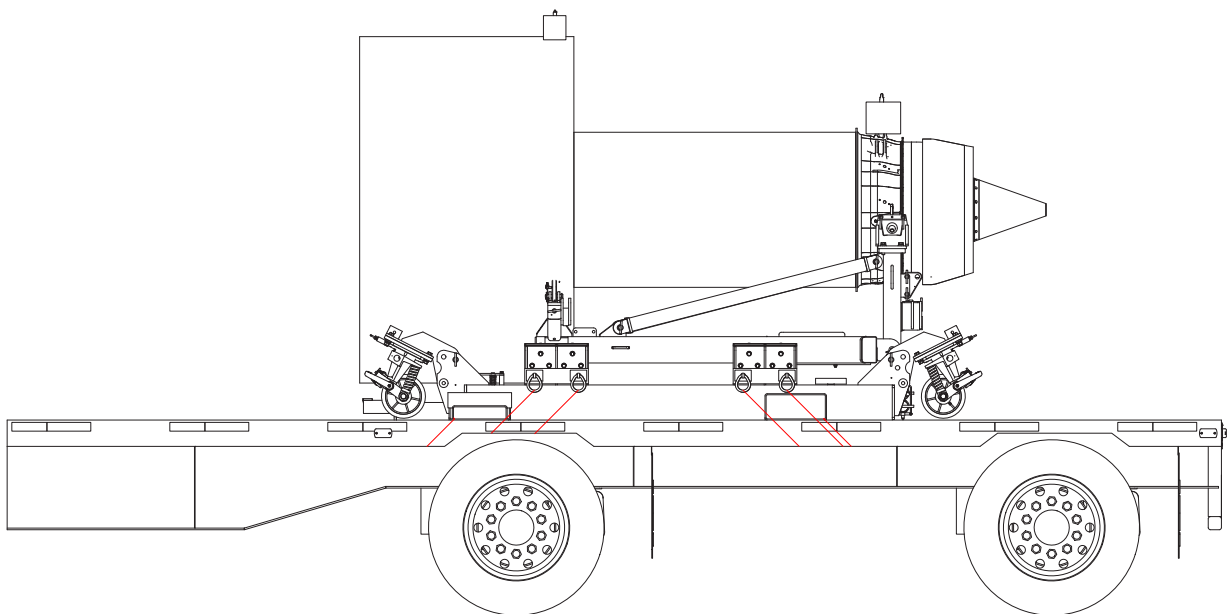


Figure 4.7-1 Truck Shipping

4.8 Air Transport

AGSE-E240-G01 and PW1524G engine can be air shipped in Center Load Position

- 1). Install engine onto stand as described in Section 4.4.
- 2). Configure the engine for air shipment in accordance with the applicable Pratt & Whitney Engine Shipping Manual. This will require the removal of some engine components.

CAUTION

Minimal clearance exists between the engine and stand. The operator is responsible to ensure the engine does not contact the stand. This may require the removal or adjustment of engine components.

CAUTION

The stand must not be fork lifted in air shipped position as fork stops are engaged to prevent fork tines from being inserted into the fork tubes and causing damage to the engine.

CAUTION

AGSE Stand or AGSE Stand/Engine is not defined as a Unit Load Device (ULD) and must be strapped to aircraft structure.

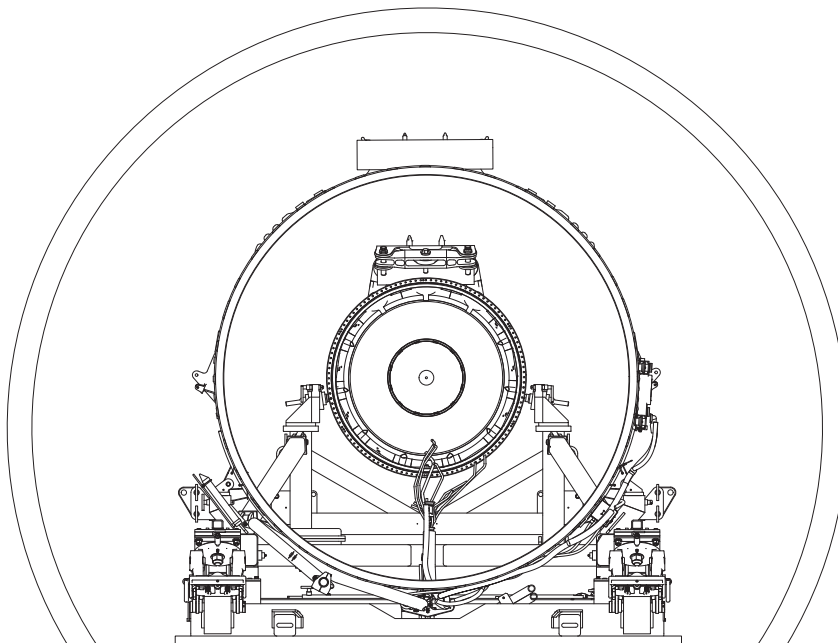


Figure 4.8-1 Air Shipping Stand - Center Load Position

5.0 - Safety

5.1 General

Most accidents are the result of violating standard safety rules in operation or improper servicing and maintenance of equipment. Many safety features have been incorporated into the design to assist in safe operation of this equipment. These items do not fool-proof the equipment nor do they replace the operator's responsibility to operate the equipment in a safe manner.

The equipment is to be used only by trained mechanics free from physical impairment and who are familiar with this or similar fixture. The equipment is not to be used or made available to the general public.

5.2 Risk Assessment

5.2.1 Risk Assessment and Residual Risk

The risk evaluation performed was based on objective observation based on the experience of AGSE with similar equipment. Necessary Warning and Caution Notes have been incorporated into the Operation Section of the PW1524G Engine Transport Stand Operation Manual along with instructions. Stencils also have been put on the equipment to identify hazardous and/or potential risk areas.

The operation of the AGSE-E240-G01 (PWA115185) Engine Transport Stand can be with medium risk of injury and is considered safe to use under supervision. Low residual risks include potential pinch points during operation of the equipment.

Equipment detailed in this manual has undergone stringent safety analyzing using methods and standards set forth within European Standard EN 1050 and is considered to be safe for its intended use.

Reports on risk analysis and evaluation according to 2006/42/EC Machinery Directive (17 May 2006) are available upon request.



EC DECLARATION OF CONFORMITY

The machinery listed below fulfills all relevant provisions of the directives listed:

- 2006/42/EC Machinery Directive (2006/05/17)

Machinery covered by this Declaration:

Description: Engine Transport Stand, PW 1524G
Model: AGSE-E240
Part Number: AGSE-E240-G01 (PWA115185)
Serial Number: _____

Harmonized Standards:

- ISO 12100:2010 Safety of Machinery - General Principles for Design - Risk Assessment and Risk Reduction
- ISO/TR 14121-2:2012 Safety of Machinery - Risk Assessment - Part 2: Practical Guidance and Examples of Methods

Standards and Specifications:

- Pratt & Whitney GSE Specifications No. 3023
- AGSE Quality System Procedure Number QSP-006
- Aerospace Recommended Practice Standard, SAE ARP 1840, 2007/02 Rev B

Place: Santa Fe Springs, California, USA

Date: _____

Signed: _____
Quality Representative

Technical File: Pedro Fernandes
Advanced Ground Systems Engineering
Pct Ana Maria Bastos, N20
A-dos-Cunhados, Portugal 2560-005
+351-96-520-4851

6.0 - Warranty

6.1 Statement of Warranty

Advanced Ground Systems Engineering LLC (AGSE) warrants to original purchasers that its products will be free of defects in material and workmanship under normal use and conditions for claims received within a period of one year from date of purchase (final billing date), and to the extent that if any AGSE product fails in operation because of such defect, the company will replace or repair, at its option, the defective article. Prior to the repair or replacement of any defective product, the company shall be notified in writing as to the nature of the defect. The company shall assume no liability for freight, disassembly, removal, refitting and installation charges on any article returned unless such charge(s) is approved by AGSE in writing prior to the return. On component items purchased by AGSE for incorporation into an AGSE manufactured product, only the component manufacturer's warranty (if any) shall apply to that component. Said manufacturer's warranty shall be passed on to AGSE's customer to the extent permitted. This warranty is applicable only when AGSE products are operated for intended purposes within the recommended procedures, load limits, properly maintained, not damaged or abused, etc., including as indicated in company manuals, catalogs, and drawings. All warranty claims must be applied for within sixty days from when the defect becomes known. The foregoing warranty is in lieu of all other warranties, or liabilities, either expressed or implied, and AGSE expressly excludes all implied warranties of merchantability and fitness for a particular purpose and all non-infringement warranties as well as disclaims all liabilities to third parties. In no event shall AGSE be liable for any amounts in excess of the purchase price of the product.

WARNING

Failure to conduct periodic inspections, routine maintenance, or improper operation will result in the voiding of the warranty.

7.0 - Parts Breakdown

7.1 General

The following pages can be used in the identification of components used in the product described in this manual. Parts Lists are broken down by “ITEM,” “PART NUMBER,” “QTY,” “DESCRIPTION,” “SPARES,” and “RECOMMENDED REPLACEMENT.” The number in SPARES column represents the recommended quantity on hand in case of loss or damage. The number in RECOMMENDED REPLACEMENT column represents the replacement interval.

NOTICE

“ITEM” numbers are for reference to the Illustrated Parts Breakdown (IPB) only. Do not order replacement parts by “ITEM” number. Order parts by “PART NUMBER” only.

AGSE does not typically stock all components used with the equipment, so immediate shipment of “critical” items may not always be possible. AGSE will respond to customer requests for quotation on any spare parts, and expedite orders for spare parts as required. The customer should never assume immediate delivery is always possible.

It is the responsibility of the operator of the equipment to review the recommended spare parts and balance costs against equipment down-time. The list can be adjusted by the operator based on the actual service life of components experienced during equipment usage.

7.2 Illustrated Parts Breakdown

IPB Figure 1 - AGSE-E240-G01 Transport Stand Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E240-G01	-	Engine Transport Stand (Figure 7.1-1)	-	-
1	AGSE-E24002-S01	1	Cradle Assembly	-	-
2	03-1033-01	1	GPS Transmitter	-	-
3	AGSE-E24001-S02	1	Base Assembly - Manual Caster	-	-
4	AGSE-E23316-S01	1	U-bolt Assembly	-	-

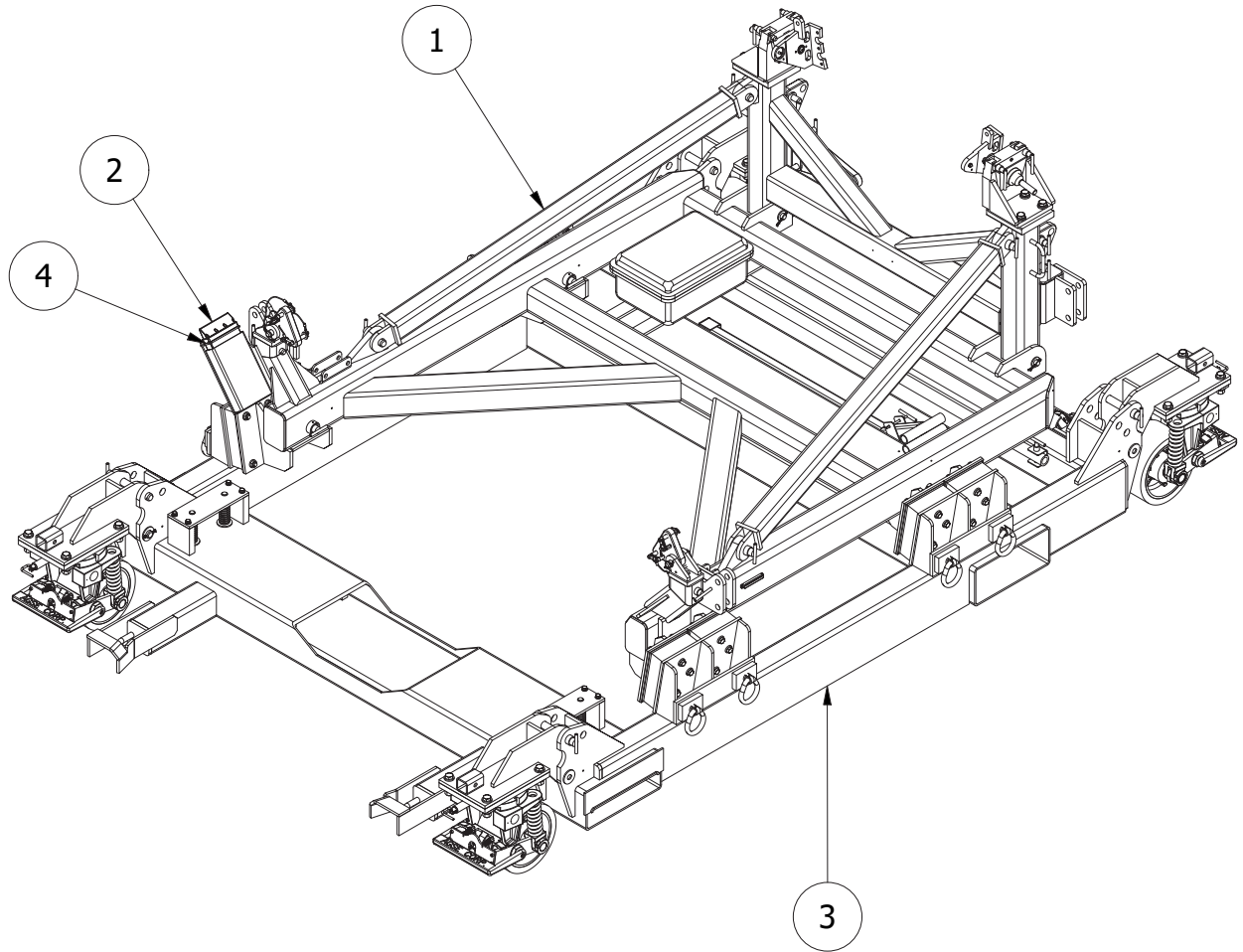


Figure 7.1-1 AGSE-E240-G01 Engine Transport Stand

IPB Figure 2 - AGSE-E24001-S02 Base Assembly - Manual Casters

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E24001-S02	-	Base Assembly - Manual Casters (Figure 7.2-1)	-	-
301	AGSE-E24004-P02	1	Base Weldment - Manual Caster	-	-
302	AGSE-E22105-P01	4	Caster Mounting Bracket	-	-
303	AGSE-E24011-P01	1	Fork Channel	-	-
304	AGSE-E24014-P02	4	Shock Mount Weldment	-	-
306	AGSE-E22105-P02	4	Caster Pivot Pin	-	-
307	AGSE-E22116-P01	1	Towbar Storage Pin Clamp	-	-
308	AGSE-E22117-S01	2	Towbar Assembly	2	5 Years
310	AGSE-E22115-S01	1	Caster Lift Bar Assembly	1	5 Years
314	AGSE-E16911-P01	1	Steering Bar Assembly	1	5 Years
315	AM-2079-2	4	Caster Assembly	1	5 Years
316	AM-1928-C13	4	Spring Guide	-	-
317	AM-1928-D13	2	Cap Plate	-	-
318	AM-90250-32T	1	Safety Pin	-	-
319	AM-90250-48L	1	Safety Pin	-	-
320	AM-91000-96T-H900	4	Safety Pin	2	5 Years
321	S00105-08F016A01	64	Hex Head Cap Screw 1/2"-20 UNF x 1" Lg, Gr.5 - ZP with Nylon Patch	-	-
322	AGSE-S00304-P04	8	Shock Mount	-	5 Years
324	811	4	Compression Spring	-	5 Years
325	Commercial	4	Flat Washer - 1.06" ID - ZP	-	-
328	Commercial	8	Lock Washer - 3/8" ID - ZP	-	-
329	Commercial	8	Flat Washer - 3/8" ID - ZP	-	-
330	Commercial	4	Cotter Pin - 3/16" Dia. x 1-1/2" Lg - ZP	-	-
332	Commercial	64	Flat Washer - 1/2" ID - ZP	-	-
333	Commercial	32	Flat Washer - 5/8" ID - ZP	-	-

**IPB Figure 2 - AGSE-E24001-S02
Base Assembly - Manual Casters (Continued)**

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
334	Commercial	16	Lock Washer - 5/8" ID - ZP	-	-
335	Commercial	16	Hex Nut - 5/8"-11 UNC - ZP	-	-
336	Commercial	8	Hex Head Cap Screw - 5/8"-11 UNC x 2-3/4" Lg - Gr. 5 - ZP	-	-
337	Commercial	8	Hex Head Cap Screw - 5/8"-11 UNC x 2-1/4" Lg - Gr. 5 - ZP	-	-
338	Commercial	1	Hex Head Cap Screw - 1/4"-20 UNC x 3-1/2" Lg - Gr. 5 - ZP	-	-
339	Commercial	1	Lock Nut - 1/4"-20 UNC - ZP	-	-
340	Commercial	8	Hex Head Cap Screw 3/8"-16 UNC x 1" Lg - Gr. 5 - ZP	-	-
341	PMP10111	8	Ring Assy.	-	10 Years

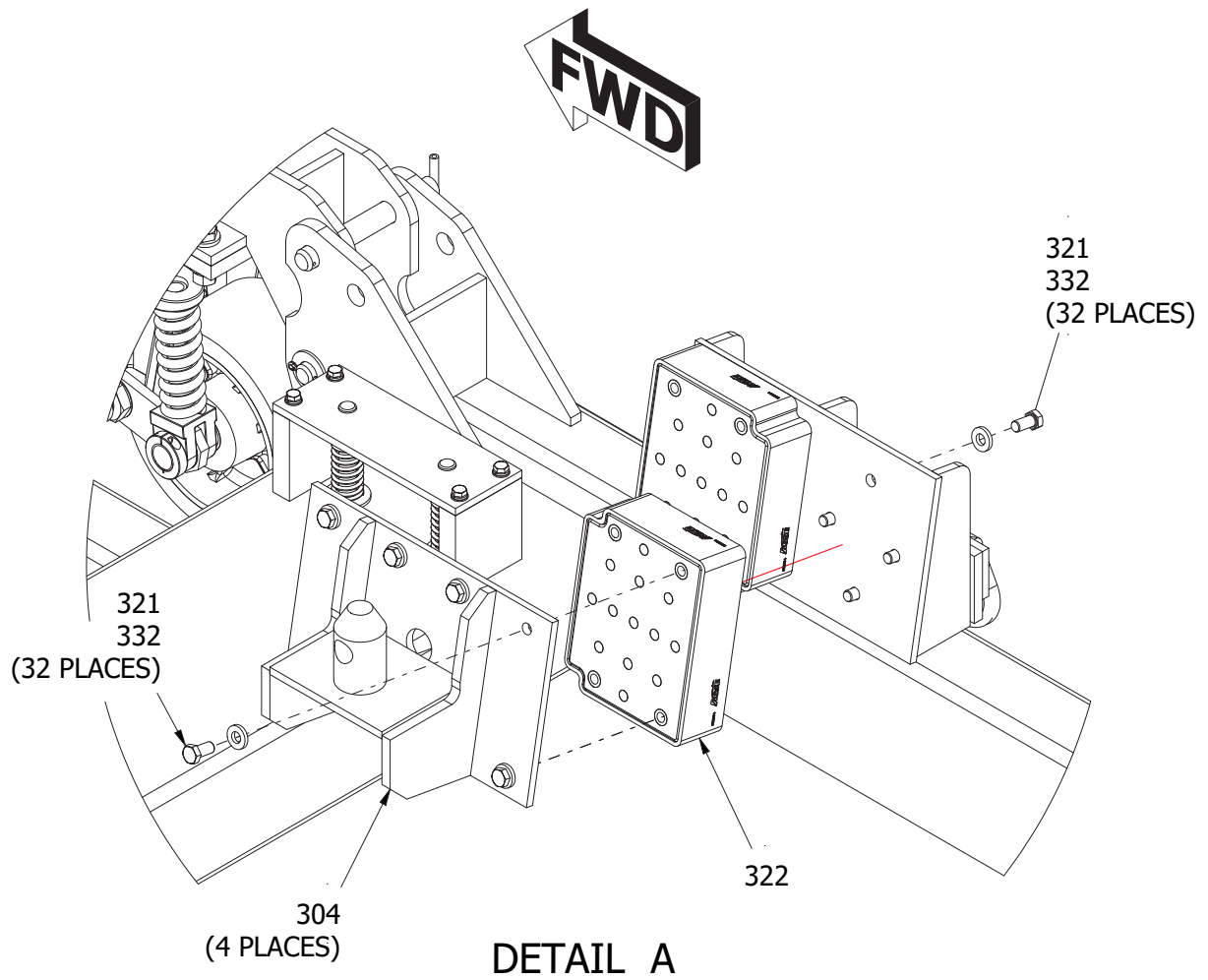


Figure 7.2-2 AGSE-E24001-S02 Base Assembly - Shock Mount

IPB Figure 3 - AGSE-E24002-S01 Cradle Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E24002-S01	-	Cradle Assembly (Figure 7.3-1 through 7.3-3)	-	-
1	AGSE-E24003-P01	1	Cradle Weldment	-	-
2	AGSE-E24006-P01	1	Frame Weldment	-	-
3	AGSE-E24007-P04	2	Front Mount Blade	-	-
4	AGSE-E24007-P02	2	FWD Bootstrap Adapter	-	-
5	AGSE-E24007-P03	2	AFT Bootstrap Adapter	-	-
6	AGSE-E24008-P01	2	AFT Brace Assembly	-	-
7	AGSE-E20329-S01	2	AFT Mount Base Assembly	-	10 Years
8	AGSE-E22102-S03	1	LH Spindle Assembly - Fixed	1	10 Years
9	AGSE-E22102-S05	1	RH Spindle Assembly - Adjusted	1	10 Years
11	AGSE-E22110-P01	2	FWD Mount Bracket Support	-	-
12	AGSE-E22112-P02	2	Round Bar	-	-
13	AGSE-E22114-P02	2	Safety Pin	1	5 Years
14	AGSE-E22114-P03	2	Safety Pin	1	5 Years
16	AM-90750-40T	8	Safety Pin	2	5 Years
17	AM-90750-64T-H1150	2	Safety Pin	1	5 Years
18	AM-91000-34T	4	Safety Pin	2	5 Years
19	PWA109790	1	Shipping Adapter, Turbine Exhaust, LH	1	10 Years
21	SR15106	1	Storage Container	-	-
22	97345A567	4	Shoulder Bolt - 5/16" OD x 1/4" Lg x 1/4"-20 UNC x 7/16" Lg, 316 SS	-	-
23	Commercial	8	Hex Head Cap Screw - 5/8"-11 UNC x 1-3/4" Lg - Gr. 5 - ZP	-	-
24	Commercial	8	Flat Washer - 5/8" ID - ZP	-	-
25	Commercial	8	Lock Washer - 5/8" ID - ZP	-	-
26	Commercial	4	Flat Washer - 3/4" ID - ZP	-	-
27	Commercial	4	Cotter Pin - 3/16" Dia. x 1-1/2" Lg	-	-
28	Commercial	8	Flat Washer - 3/8" ID - ZP	-	-

IPB Figure 3 - AGSE-E24002-S01 Cradle Assembly (Continued)

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
29	Commercial	4	Lock Nut - 3/8" - 16 UNC - ZP	-	-
30	Commercial	4	Hex Head Cap Screw - 3/8" - 16 UNC x 1-1/4" Lg - Gr. 5 - ZP	-	-
32	2209A76	3	Tubular Level	-	-
33	Commercial	6	Machine Screw - #6-32 UNC x 1/2" Lg - ZP	-	-
34	Commercial	6	Lock Washer - .156" ID - ZP	-	-
35	AGSE-E27719-S01	4	Forward Mount Anti-Rotation Pin Assembly	2	10 Years
36	AGSE-E26260-P01	1	GPS Bracket Weldment	-	-
37	Commercial	2	Flat Washer - 1/4" ID - ZP	-	-
38	Commercial	2	Hex Head Cap Screw - 1/4"-20 UNC x 1/2" Lg - Gr. 5 - ZP	-	-
39	AGSE-E27716-S01	2	Adapter Pin	-	-

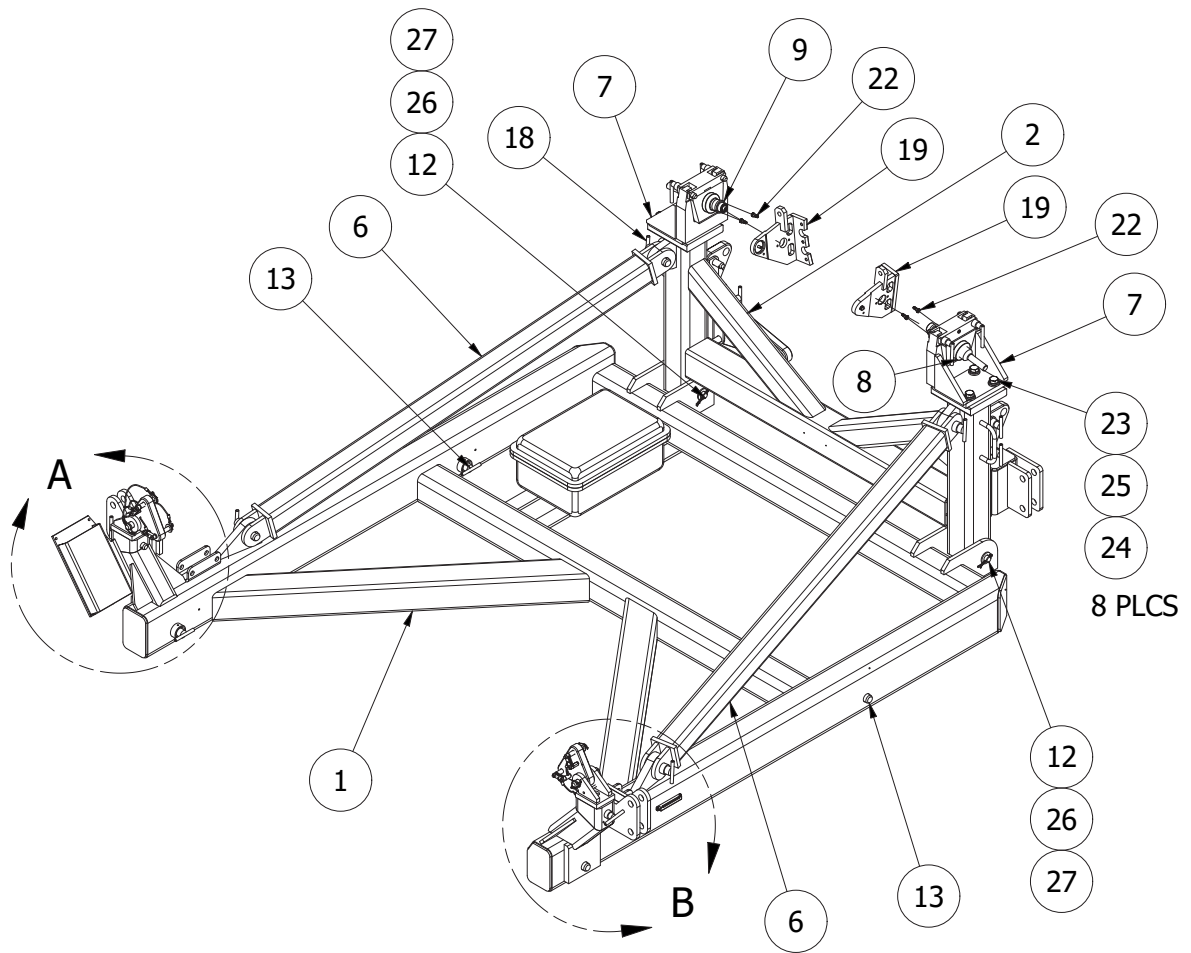
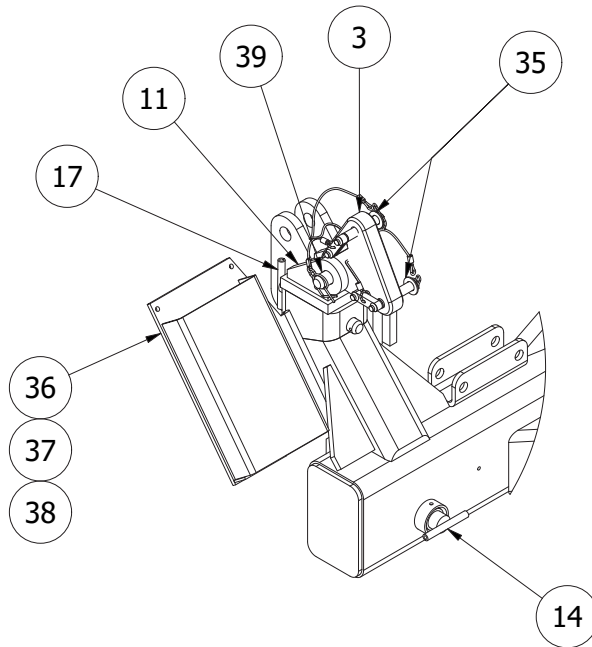
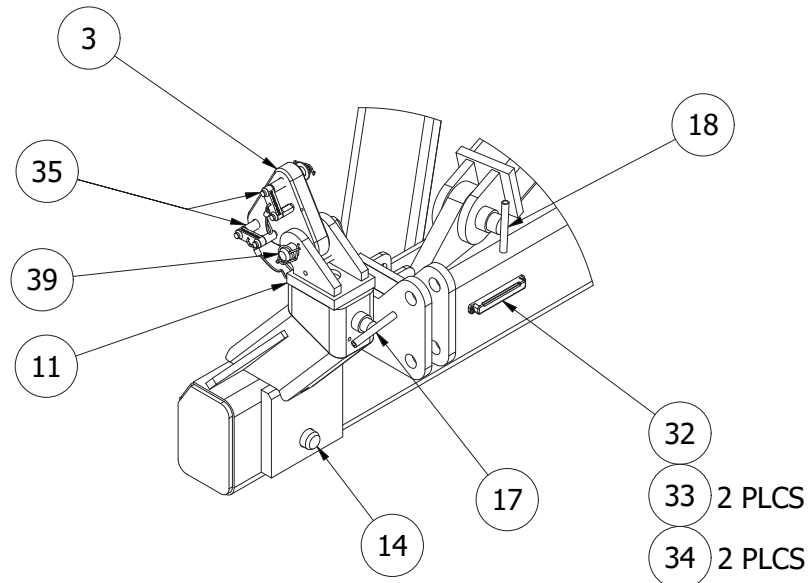


Figure 7.3-1 AGSE-E24002-S01 Caster Assembly



DETAIL A



DETAIL B

Figure 7.3-2 AGSE-E24002-S01 Cradle Assembly

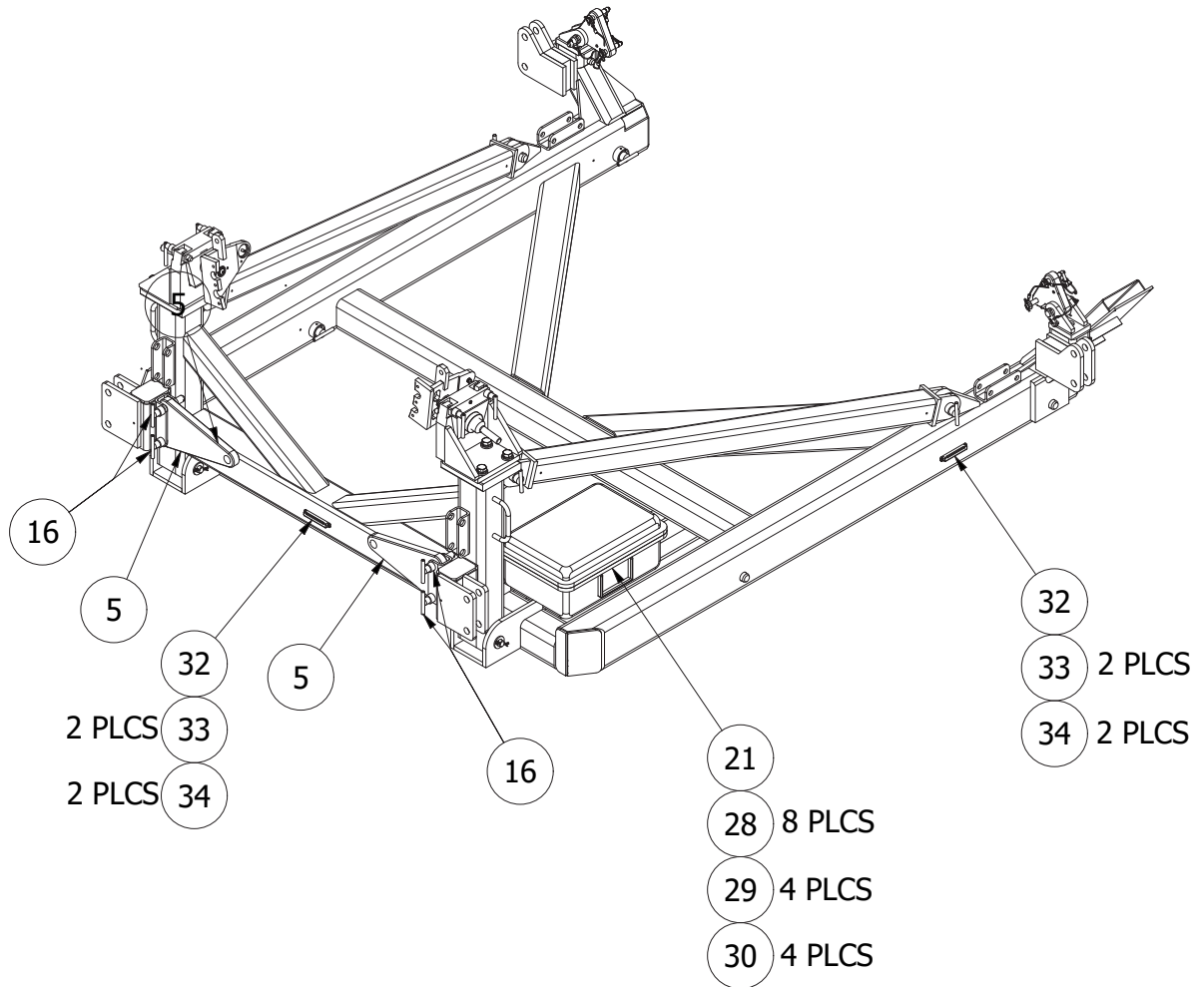


Figure 7.3-3 AGSE-E24002-S01 Cradle Assembly

IPB Figure 4 - AGSE-E22102-S03 LH Spindle Assembly - Fixed

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E22102-S03	-	LH Spindle Assembly - Fixed (Figure 7.4-1)	-	-
15	AGSE-E22107-P01	1	Aft Mount Block	-	-
16	AGSE-E22107-P03	1	Trunnion (Fixed)	-	-
18	6438K94	1	Threaded Collar 1-1/2"-12 UNF - 18-8 SS	-	-
19	AGSE-E22108-P02	1	Retainer	-	-
20	AGSE-E22108-P03	1	Spherical Socket Seat	-	-
21	AGSE-E22108-P01	1	Spherical Bearing	-	-
22	Commercial	1	Round Socket Head Machined Screw - 3/8"-16 UNC x 1/2" Lg - SS	-	-

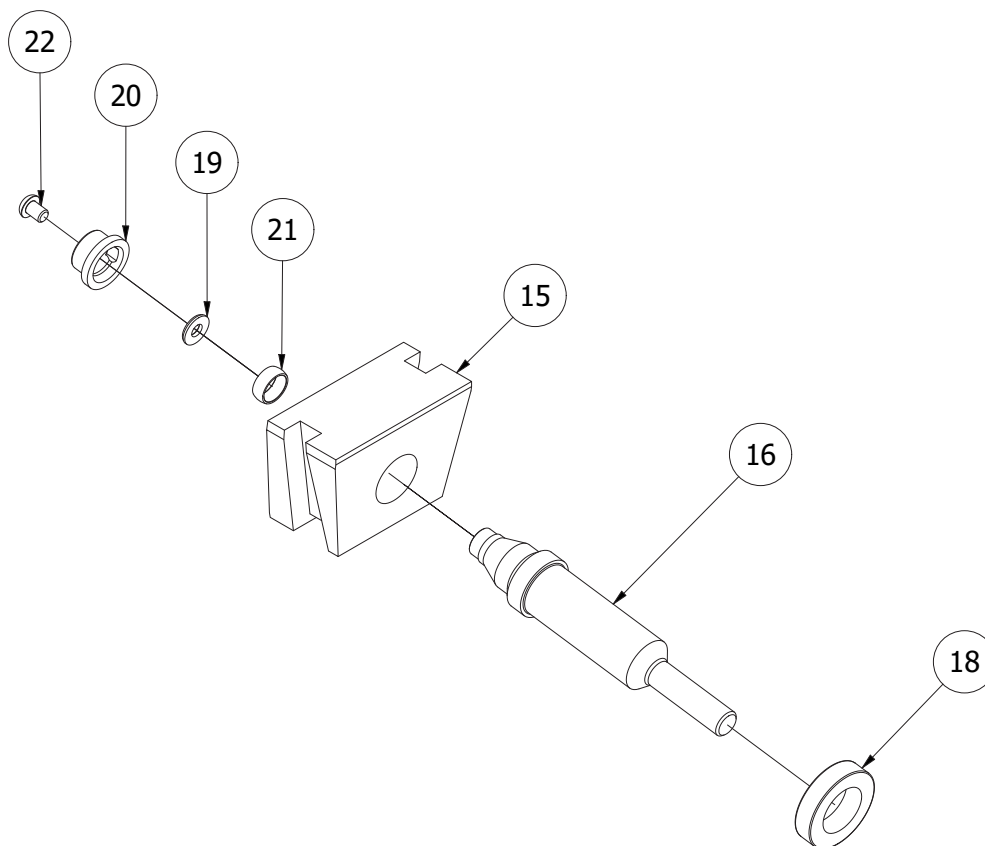


Figure 7.4-1 AGSE-E22102-S03 LH Spindle Assembly (Fixed)

IPB Figure 5 - AGSE-E22102-S05 RH Spindle Assembly - Adjustable

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E22102-S05	-	RH Spindle Assembly - Adjustable (Figure 7.5-1)	-	-
15	AGSE-E22107-P01	1	Aft Mount Block	-	-
16	AGSE-E22107-P02	1	Trunnion (Adjustable)	-	-
18	6438K94	2	Threaded Collar 1-1/2"-12 UNF - 18-8 SS	-	-
19	AGSE-E22108-P02	1	Retainer	-	-
20	AGSE-E22108-P03	1	Spherical Socket Seat	-	-
21	AGSE-E22108-P01	1	Spherical Bearing	-	-
22	Commercial	1	Round Socket Head Machined Screw - 3/8"-16 UNC x 1/2" Lg - SS	-	-

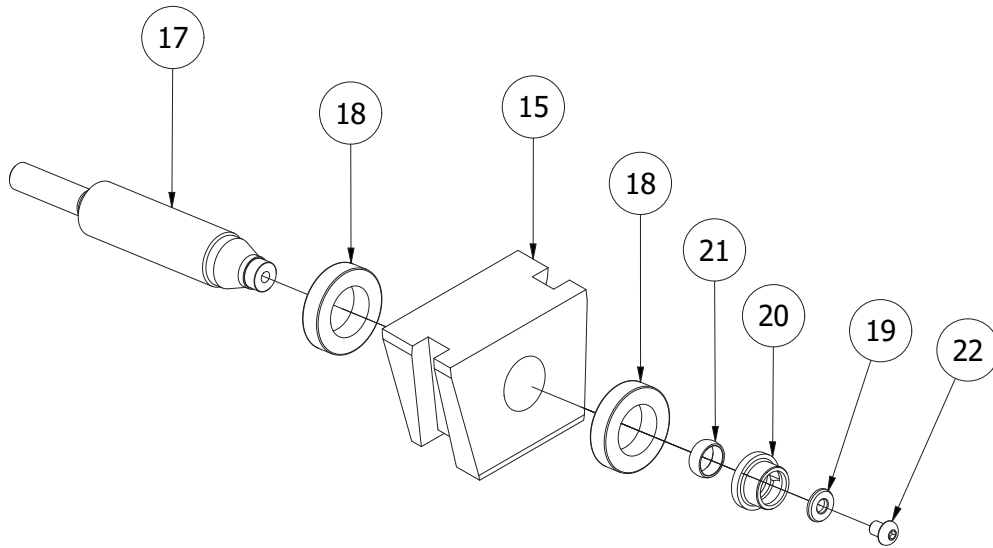


Figure 7.5-1 AGSE-E22102-S05 RH Spindle Assembly (Adjustable)

IPB Figure 6 - AGSE-E20329-S01 AFT Mount Base Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E20329-S01	-	Aft Mount Base Assembly (Figure 7.6-1)	-	-
1	AGSE-E20329-P01	1	Aft Mount Base Weldment	-	-
2	AGSE-E20329-P02	1	Cap - Rear Mount	1	10 Years
3	AM-90625-L-SPCL	2	Safety Pin	1	5 Years
4	Commercial	1	Pan Head Machined Screw #10-24 UNC x 1/2" Lg - ZP	-	-

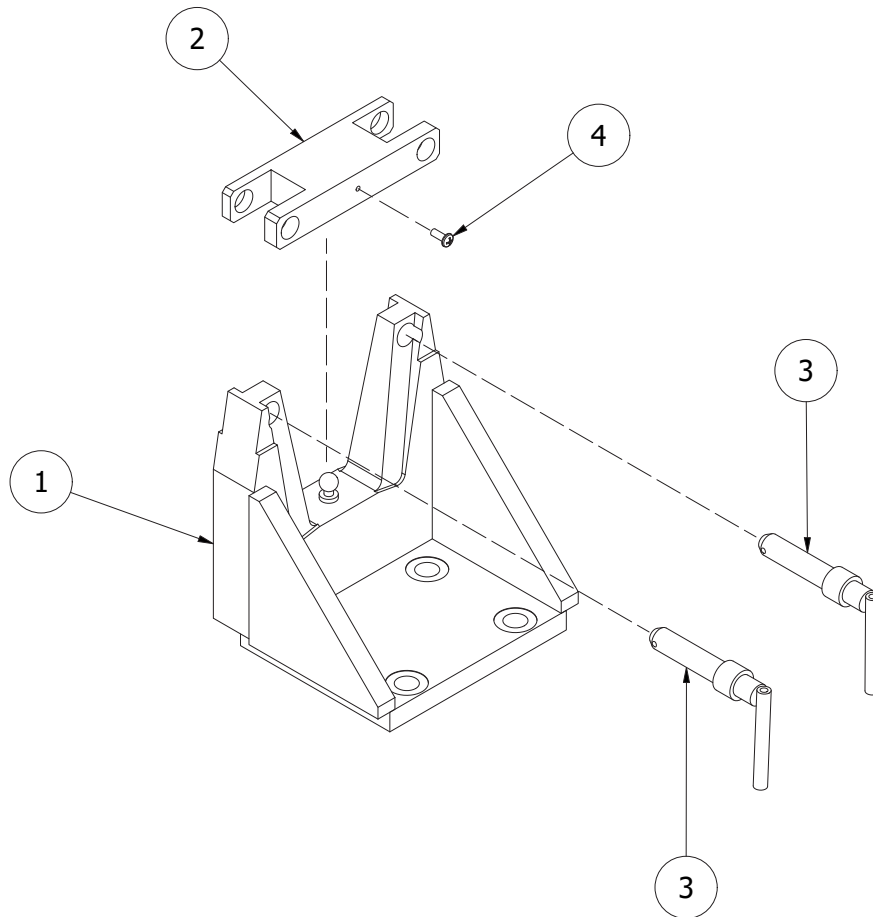


Figure 7.6-1 AGSE-E20329-S01 AFT Mount Base Assembly

IPB Figure 7 - AGSE-E24018-S01 Hydraulic System

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E24018-S01	-	Hydraulic System (Figure 7.7-1)	-	-
1	AGSE-E24018-01	4	Flat Bar	-	-
5	AGSE-E14910-S01	1	Hand Pump	-	-
6	N5C-2.50x5.00-N 1.00-2-N-H-N-1-1	4	Double Acting Hydraulic Cylinder	-	-
7	0690910000	4	Knuckle	-	-
8	6902R3HC3	2	Valve - 4 Way	-	-
9	CKCB-XAN-YEA	2	Dual Check Valve	-	-
10	6-6-6SBTX-S	2	Tee Fitting	-	-
11	6-6CBTX-S	10	Elbow, Male Fitting	-	-
12	6-6FBTX-S	4	Adapter	-	-
13	6-8CBTX-S	8	Male Elbow	-	-
14	6CCCBTX-X	2	Long Male Elbow	-	-
15	6JBTX-S	2	Tee, Union	-	-
16	6WBTX-S	6	Bulkhead Union	-	-
17	6WJJTX-S	2	Bulkhead Tee	-	-
18	R30206060606-31	4	Hose Assembly	-	-
19	R30206060606-36	2	Hose Assembly	-	-
20	R30206060606-50.75	2	Hose Assembly	-	-
21	Commercial	A/R	Hydraulic Tubing 3/8" ID X .035W	-	-
22	Commercial	8	Socket Head Cap Screw 5/16"-18UNC - 3/4" Lg - Gr. 5 - ZP	-	-
23	Commercial	8	Lock Washer - 5/16" ID - ZP	-	-
24	Commercial	8	Flat Washer - 5/16" ID - ZP	-	-
25	Commercial	4	Hex Bolt - 3/8"-16 UNC x 1-1/2" Lg - Gr. 5 - ZP	-	-
26	Commercial	4	Hex Nut - 3/8"-16 UNC - ZP	-	-
27	Commercial	4	Flat Washer - 3/8" ID - ZP	-	-
28	Commercial	4	Lock Washer - 3/8" ID - ZP	-	-

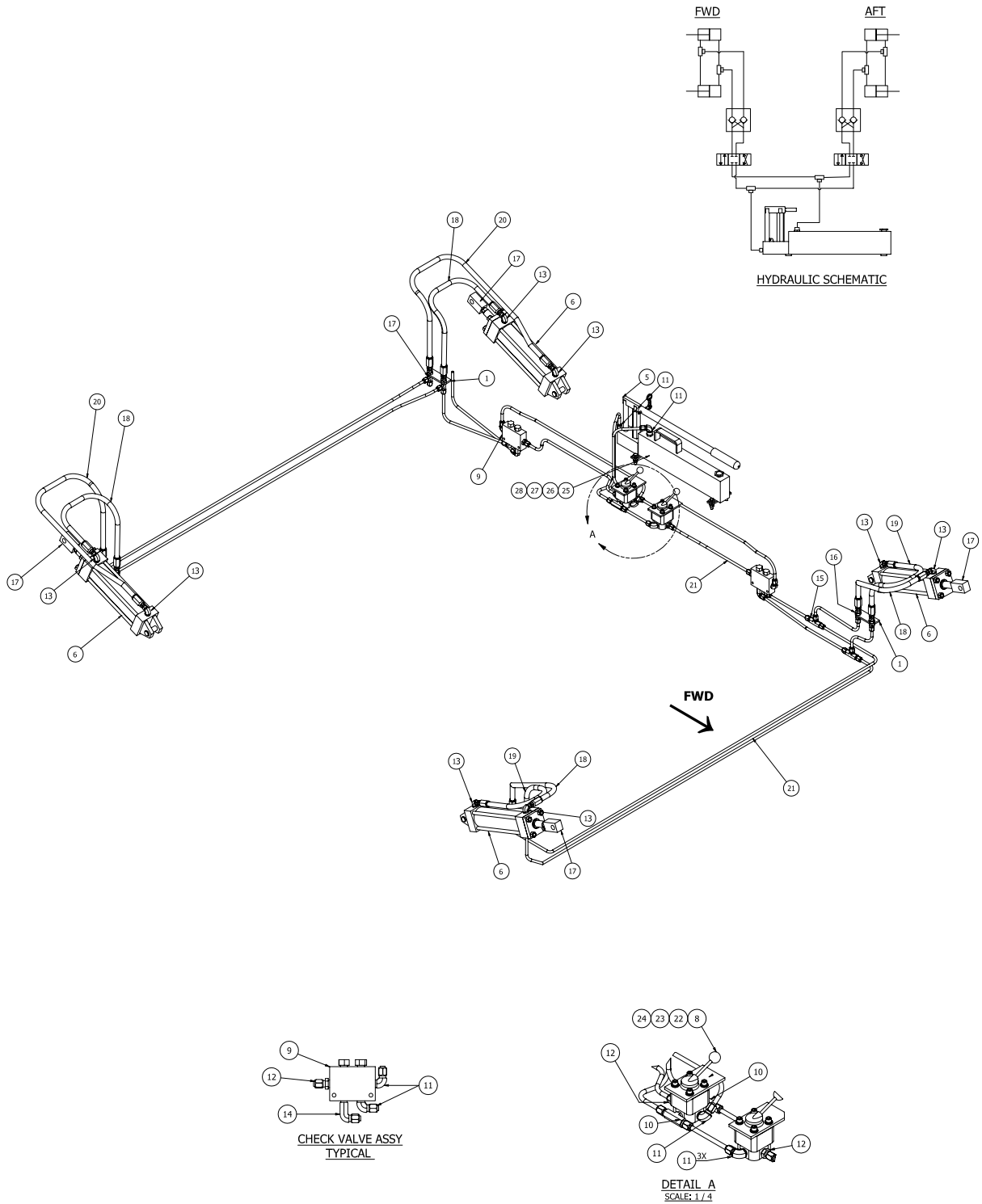


Figure 7.7-1 AGSE-E24018-S01 Hydraulic System

IPB Figure 8 - AGSE-E22115-S01 Caster Lift Bar Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E22115-S01	-	Caster Lift Bar Assembly (Figure 7.8-1)	-	-
1	AGSE-E22115-P01	1	Caster Lift Bar	-	-
2	AM-90500-32T	1	Safety Pin	-	-
3	Commercial	1	Cross Recessed Pan Head Screw 1/4"-20 UNC x 3/8" Lg - ZP	-	-

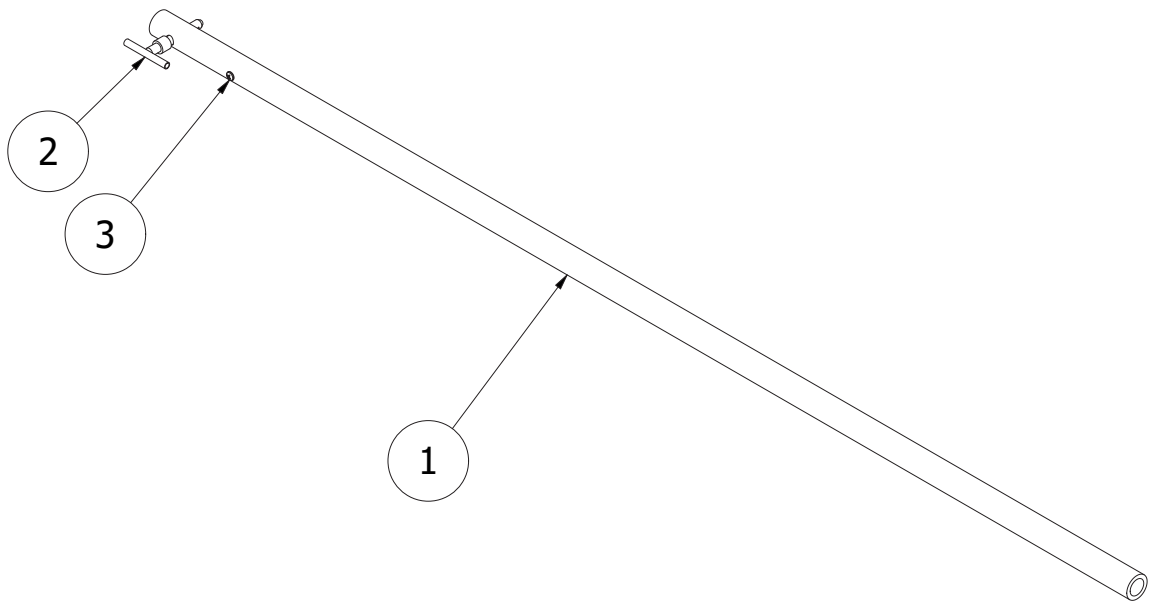


Figure 7.8-1 AGSE-E22115-S01 Caster Lift Bar Assembly

IPB Figure 9 - AGSE-E22117-S01 Tow Bar Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	RECOMMENDED SPARES	REPLACEMENT CYCLE
	AGSE-E22117-S01	-	Tow Bar Assembly (Figure 7.9-1)	-	-
1	AGSE-E22118-P01	1	Tow Bar Outer Tube Assembly	-	-
2	AGSE-E22118-P02	1	Tow Bar Inner Tube Assembly	-	-
3	AM-90625-46T	1	Safety Pin	-	-
4	Commercial	1	Cross Recessed Pan Head Screw 1/4"-20 UNC x 3/8" Lg - ZP	-	-

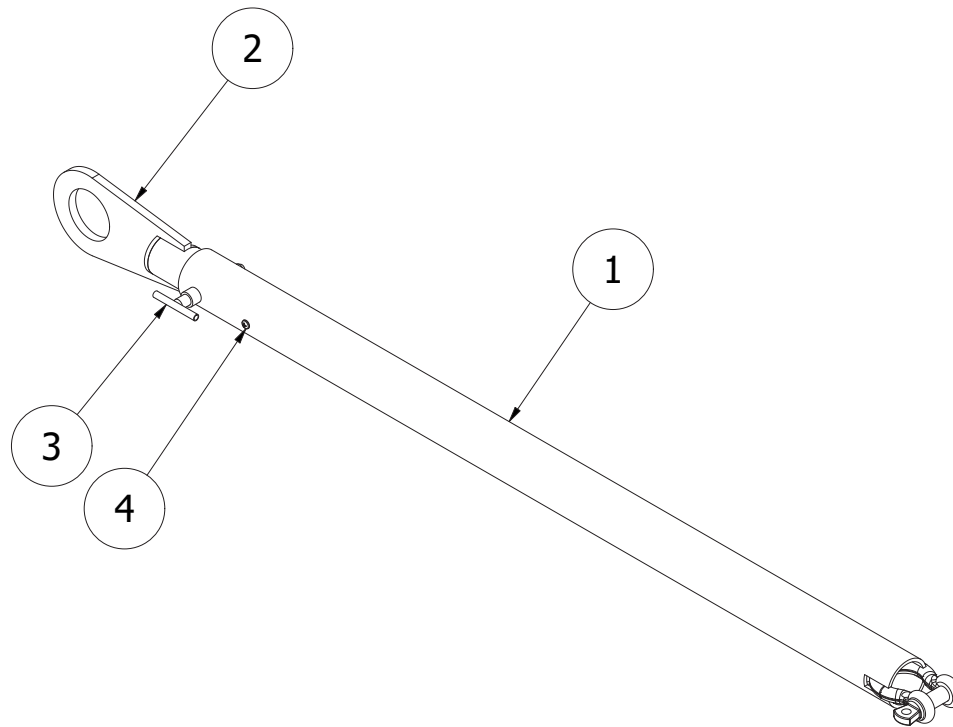


Figure 7.9-1 AGSE-E22117-S01 Tow Bar Assembly

IPB Figure 10 - PWA109790 Turbine Exhaust Case Shipping Adapter Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION
	PWA109790	-	Shipping Adapter Assy - Turbine Exhaust Case (Figure 7.10-1)
1	PWA99502-1	1	Bracket - Left
2	PWA99502-2	1	Bracket - Right
3	S00155-04F012A21	2	12 Point Bolt - 1/4"-28 UNF x 3/4" Long - SS
4	S00135-04A06	8	Split Lock Washer - 1/4" ID - SS
5	400-8300	6	12 Point Nut - 1/4"-28 UNF - SS
6	92320A662	6	Spacer - 1/4" ID x 1/2" OD x 1/4" Long - SS
7	S00155-04F024A21	6	12 Point Bolt - 1/4"-28 UNF x 1-1/2" - Long - SS
8	97345A567	4	Shoulder Bolt - 5/16" OD x 1/4"

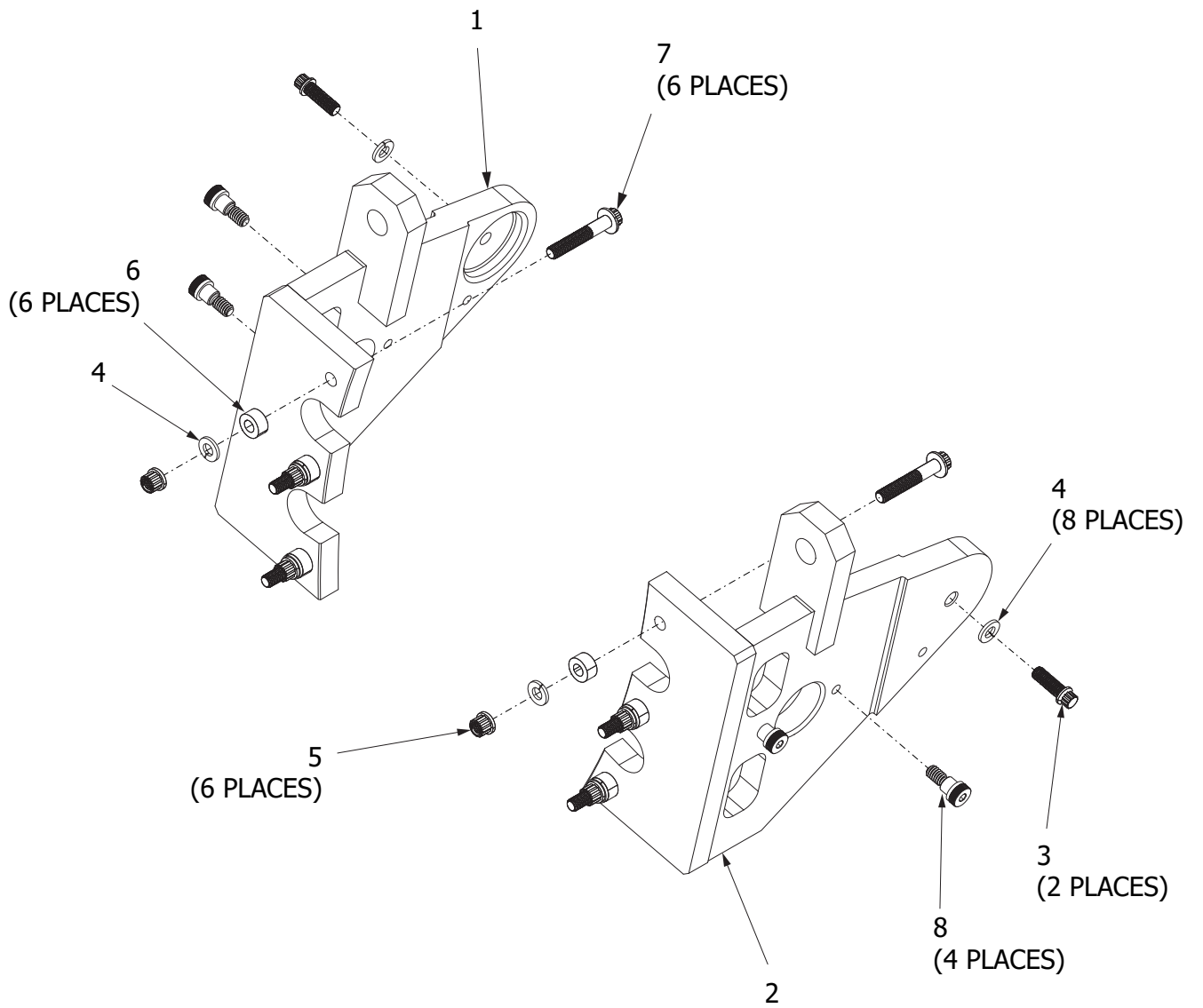


Figure 7.10-1 PWA109790 -Turbine Exhaust Case Shipping Adapter Assembly

IPB Figure 11 - AGSE-E27719-S01 FWD ANTI-ROTATION MOUNT PIN

ITEM	PART NUMBER	QTY	PART DESCRIPTION
	AGSE-E27719-S01	-	FWD Mount Anti-Rotation Mount Pin Assy (Figure 7.11-1)
1	AGSE-27718-P01	1	FWD Anti-Rotation Pin at Engine
2	98335A650	1	Locking Cotter Pin - 1/2" Pin DIA x 1-1/2" Lg - Zinc Plt
3	CL-3-F	2	Ferrules
4	CL-3-C	1	Coated Lanyard Cable .094" DIA x 12" - Lg
5	AGSE-S00175-08A05	1	Flat Washer - Mil-Spec - 1/2"- 18-8 SS

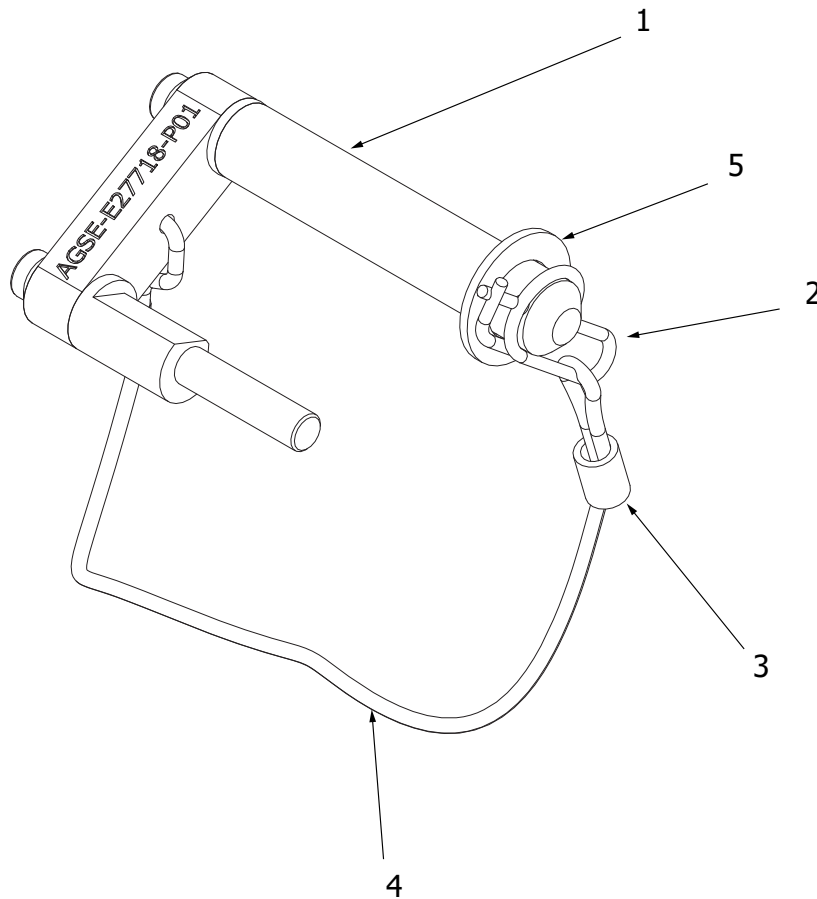


Figure 7.11-1 AGSE-E27719-S01 - FWD Anti-rotation Mount Pin Assembly

IPB Figure 12 - AGSE-E27716-S01 FWD ADAPTER PIN

ITEM	PART NUMBER	QTY	PART DESCRIPTION
	AGSE-E27716-S01	-	Adapter Pin (Figure 7.12-1)
7	AGSE-E27716-P01	1	FWD Adapter Pin
8	92391A790	1	Locking Pin - 3/4" DIA - SS
10	CL-3-C	1	Coated Lanyard Cable .094" DIA x 12" - Lg
11	CL-3-F	2	Ferrules

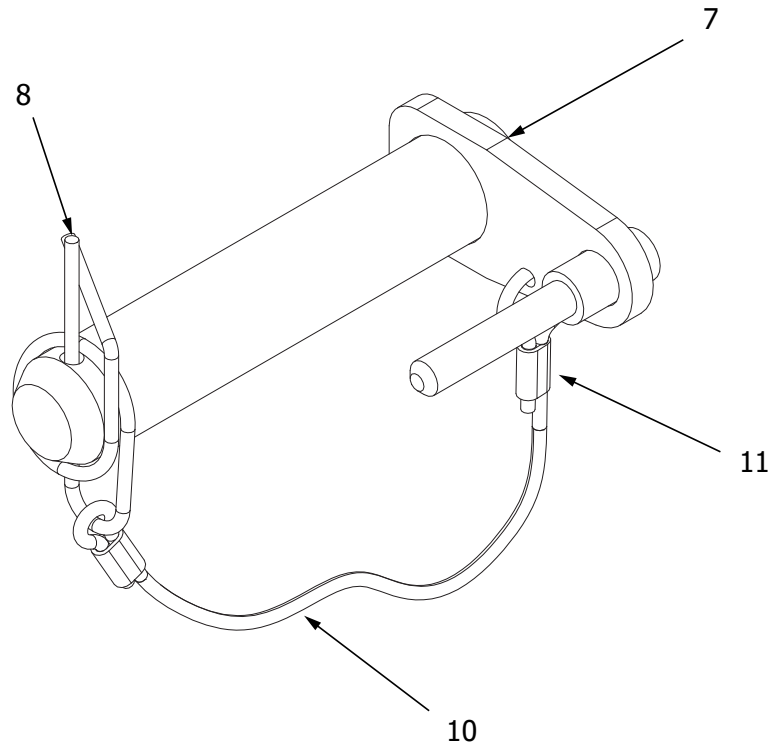


Figure 7.12-1 AGSE-E27716-S01 - FWD Adapter Pin

8.0 – Stencils, Decals, and Placards

8.1 General

Various stencils, decals, and placards are added to the equipment to provide warnings, cautions, and general information. These items should be reviewed and understood by maintenance and user personnel.

8.2 Stencils and Placards

ITEM	PART NUMBER	DESCRIPTION
1	AGSE-E24020-01	PWA115185
3	AGSE-E24020-03	FWD
5	AGSE-E24020-05	FORK LIFT
7	AGSE-E24020-07	TRUCK & AIR TIEDOWN
9	AGSE-E24020-09	SERIAL NUMBER
11	AGSE-E24020-11	CG BASE 2,260 LBS (1,100 Kg)
15	AGSE-E24020-15	CG BASE, CRADLE & ENGINE 9,250 LBS (4,200 Kg)
17	AGSE-E24020-17	CG BASE & CRADLE 3,396 LBS (1,600 Kg)
19	AGSE-E24020-19	MAX SPEED 3 MPH
21	AGSE-E24020-21	AGSE-E22117-S01 TOW BAR ASSY.
23	AGSE-E24020-23	3 MPH MAX SPEED
25	AGSE-E24020-25	CASTER LIFT BAR STORAGE TOW BAR STORAGE
27	AGSE-E24020-27	AGSE-E22115-S01 CASTER LIFT BAR
29	AGSE-E24020-29	AGSE-E16911-P01 STEERING BAR
31	AGSE-E24020-31	STEERING BAR STORAGE

ITEM	PART NUMBER	DESCRIPTION
33	AGSE-E24020-33	AGSE-E240-G01 PW1524G ENGINE
35	AGSE-E24020-33	TOW BAR MOUNT
37	AGSE-E24020-37	ARROW
39	AGSE-E24020-39	PROPERTY OF "CUSTOMER NAME"
41	AGSE-CE	CE PLACARD
43	AM-2207	AGSE PLACARD
45	AGSE-N198-S02	AGSE LOGO PLACARD, LARGE
47	AGSE-V122-P01	DECAL, MADE IN THE USA
49	IS2020-2	FOOT CRUSH - 2"
51	AGSE-N19802-P01	AGSE LOGO

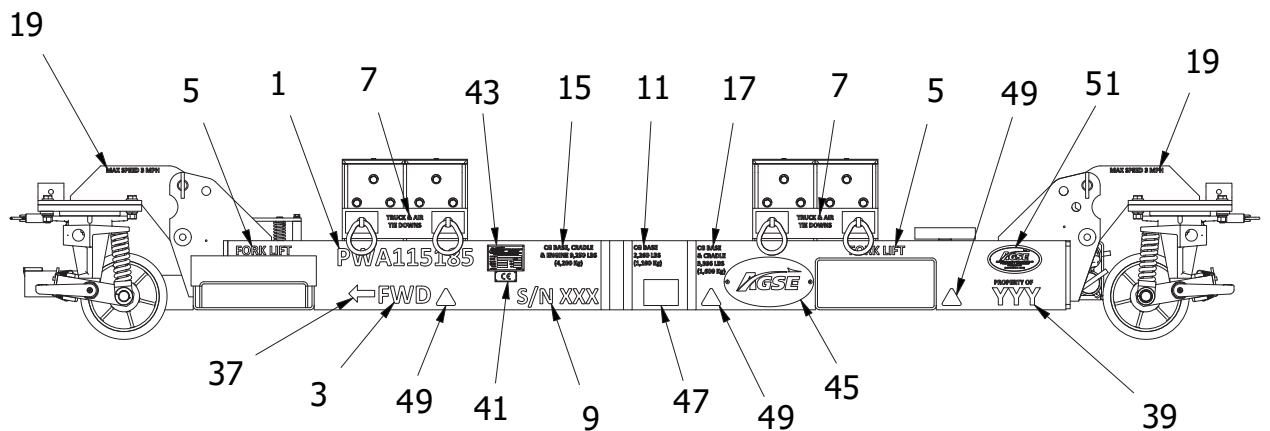
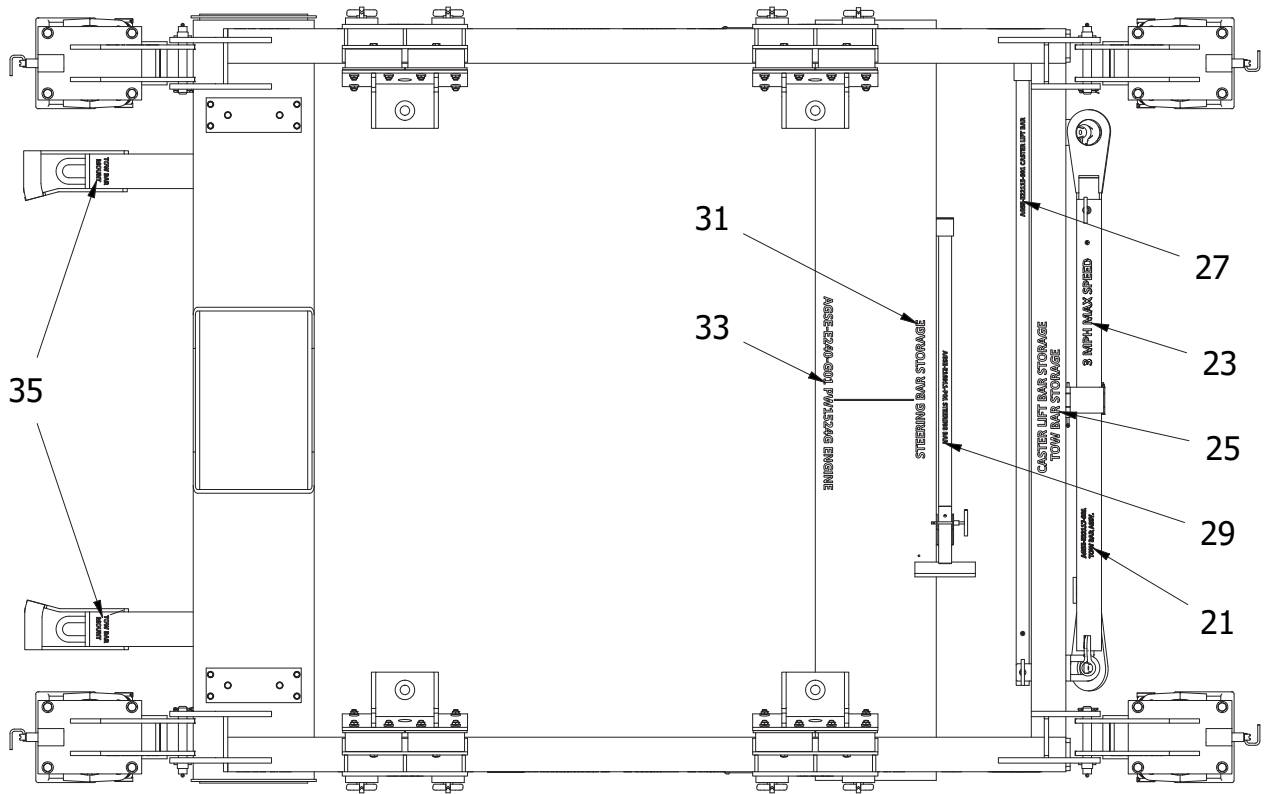


Figure 8.1-1 AGSE-E24001-S02 Base Stencils

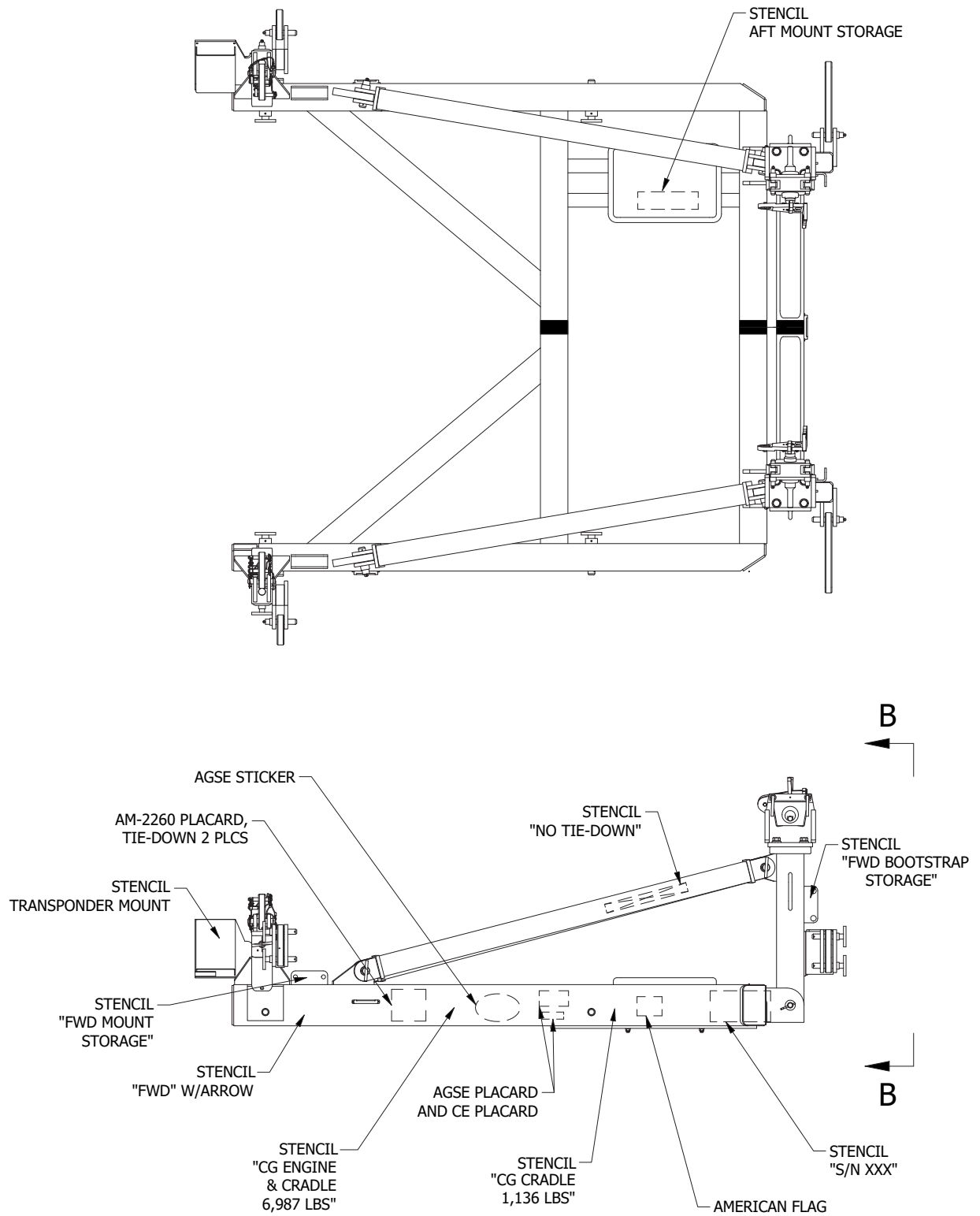


Figure 8.1-2 AGSE-E24002-S01 Cradle Stencils

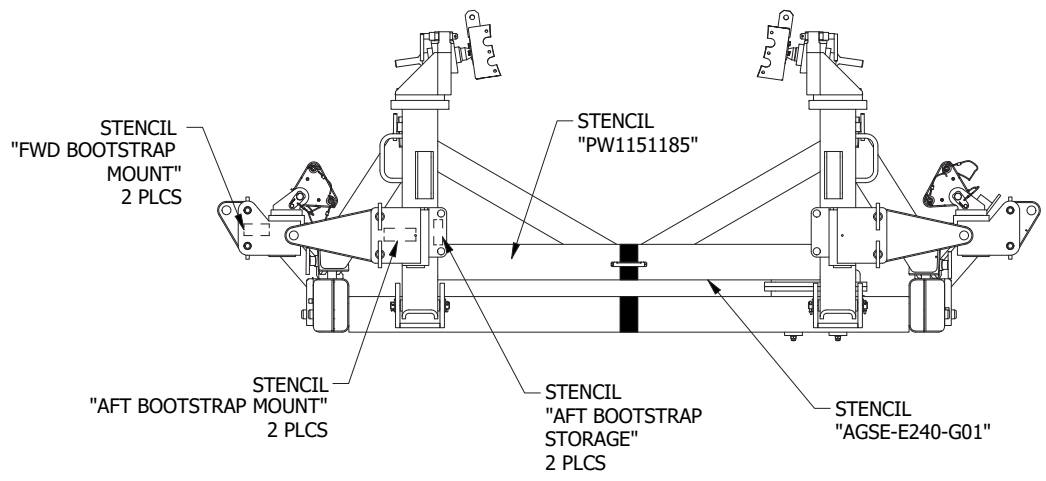


Figure 8.1-3 AGSE-E24002-S01 Cradle Stencils