AM-1928

Cradle & Base Transport Shipping Storage

For CF6-80C2, CF6-80A/80A2, CF6-80E1

Manual Includes:
AM-1928-155 Transport Base Assembly
AM-1928-155-FO Transport Base Assembly with Shipping Containers
AM-1928-156-80C2 Cradle Assembly
AM-1928-156-80E1 Cradle Assembly
AM-1928-156-80A Cradle Assembly
AM-1928-156-80C2-A Cradle Assembly with AM-1928-910 Bootstrap Kit
AM-1928-156-80C2-B Cradle Assembly with AM-1928-900 Bootstrap Kit
AM-1928-156-80C2-M Cradle Assembly with AM-1928-930 Bootstrap Kit
AM-1928-156-80E1-A Cradle Assembly with AM-1928-900 Bootstrap Kit
AM-1928-156-80A-B Cradle Assembly with AM-1928-900 Bootstrap Kit

ORIGINAL MANUAL DATED 12/09/2021
LATEST MANUAL DATED (REVISION LEVEL).....01/23/2023 (REV AE)

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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
7.11	AE	Updated Item 52, 53 & 55 Part Number	01/23/23

2.0 – Specification

Follow all instructions, warnings and cautions for inspecting, maintaining and operating this Cradle & Base Transport Shipping Storage 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 AM-1928 Cradle & Base Transport Shipping Storage stand is designed in compliance with GE Specification for Shipping/Storage Stand CF6-80C2 Engine. The stand has been CE marked in compliance with the European Directives; Machinery Directive 2006/42/EC. Reference the EC Declaration of Conformity in Section 5 for a complete list of regulatory requirements and harmonized standards.

The configuration of AM-1928 has the following capabilities:

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

- Handling of engines on stands by hoisting.
- Local towing from AFT end only with additional precautions.
- Bootstrap engine change using different bootstrap kits for applicable engine.

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 B747F Combi or larger freighter.
- Bootstrap engine change using different bootstrap kits for applicable engine.
- Local towing from AFT and FORWARD ends.
- Storage on casters or extended storage with casters retracted.
- Forklift provisions.

3) An optional FADEC and oil tank storage container is available.

4) Stacking using wood beams and dunnage.

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 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 AM-1928 Cradle & Base Transport Shipping Storage stand was designed to meet all ground handling operations as required by the GE 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 AM-1928-155 Transport Base Assembly and AM-1928-155-FO Transport Base Assembly with Shipping Containers, are not designed for CF6-80A1/80A3 engines and can be combined with the following cradles:

- AM-1928-156-80C2 Cradle Assembly for CF6-802 Engine without Bootstrap Kit.
- AM-1928-156-80E1 Cradle Assembly for CF6-80E1 Engine without Boostrap Kit.
- AM-1928-156-80A Cradle Assembly for CF6-80A Engine without Boostrap Kit.
- AM-1928-156-80C2-A Cradle Assembly for CF6-80C2 Engine with Boostrap Kit (AM-1928-910) for Airbus.

- AM-1928-156-80C2-B Cradle Assembly for CF6-80C2 Engine with Boostrap Kit (AM-1928-900) for Boeing.
- AM-1928-156-80C2-M Cradle Assembly for CF6-80C2 Engine with Boostrap Kit (AM-1928-930) for MD-11.
- AM-1928-156-80E1-A Cradle Assembly for CF6-80E1 Engine with Boostrap Kit (AM-1928-910) for Airbus A330.
- AM-1928-156-80A-B Cradle Assembly for CF6-80A/80A2 Engine with Boostrap Kit (AM-1928-900) for Boeing.

The AM-1928-155 Transport Base Assemblies and AM-1928-155-FO Transport Base Assembly with Shipping Containers feature:

- 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.
- Storage location for tow bars on the base frame.
- Fork tube pockets allows 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 AM-1928-155-FO Transport Base Assembly with Shipping Containers is designed with durable storage container for protecting documents, engine mounts and harware from environment and handling damage.

The AM-1928-156 cradle assembly configurations feature:

- A rugged welded steel structural frame.
- 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 low pressure turbine (LPT). The mounts are supported by the AFT mount bases that are bolted to the rear frame.

2.3 Characteristics

2.3.1 Weight

All weights are approxiate and reference only.

Part Number	Description	Weight (LB)	Weight (KG)
AM-1928-155	Transport Base Assembly	3,000	1,361
AM-1925-155-FO	Transport Base Assembly with Shipping Containers	3,300	1,497
AM-1928-156-80C2	Cradle Assembly	1,120	508
AM-1928-156-80E1	Cradle Assembly	1,136	515
AM-1928-156-80A	Cradle Assembly	1,127	511
AM-1928-156-80C2-A	Cradle Assembly with AM-1928-910 Bootstrap Kit	1,172	532
AM-1928-156-80C2-B	Cradle Assembly with AM-1928-900 Bootstrap Kit	1,300	590
AM-1928-156-80C2-M	Cradle Assembly with AM-1928-930 Bootstrap Kit	1,120	508
AM-1928-156-80E1-A	Cradle Assembly with AM-1928-910 Bootstrap Kit	1,188	539
AM-1928-156-80A-B	Cradle Assembly with AM-1928-900 Bootstrap Kit	1,307	593

**Check engine weight with engine manufacturer*

2.3.2 Dimensions

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

Base and Cradle	Description	Length (in)	Width (in)	Height (in)
AM-1928-155 and AM-1928-156-80C2	Transport Base Assembly and Cradle Assembly	168-1/8	103-7/8	70-5/16
AM-1928-155 and AM-1928-156-80E1	Transport Base Assembly and Cradle Assembly	168-1/8	99-3/4	73-5/16
AM-1928-155 and AM-1928-156-80A	Transport Base Assembly and Cradle Assembly	168-1/8	96-3/4	70-1/8
AM-1928-155 and AM-1928-156-80C2-A	Transport Base Assembly and Cradle Assembly with AM-1928-910 Bootstrap Kit	168-1/8	103-7/8	70-5/16
AM-1928-155 and AM-1928-156-80C2-B	Transport Base Assembly and Cradle Assembly with AM-1928-900 Bootstrap Kit	186	103-7/8	70-5/16
AM-1928-155 and AM-1928-156-80C2-M	Transport Base Assembly and Cradle Assembly with AM-1928-930 Bootstrap Kit	168-1/8	103-7/8	70-5/16
AM-1928-155 and AM-1928-156-80E1-A	Transport Base Assembly and Cradle Assembly with AM-1928-910 Bootstrap Kit	168-1/8	99-3/4	73-5/16
AM-1928-155 and AM-1928-156-80A-B	Transport Base Assembly and Cradle Assembly with AM-1928-900 Bootstrap Kit	186	96-3/4	70-1/8
AM-1928-155-FO and AM-1928-156-80C2	Transport Base Assembly with Shipping Containers and Cradle Assembly	168-1/8	103-7/8	70-5/16
AM-1928-155-FO and AM-1928-156-80E1	Transport Base Assembly with Shipping Containers and Cradle Assembly	168-1/8	99-3/4	73-5/16
AM-1928-155-FO and AM-1928-156-80A	Transport Base Assembly with Shipping Containers and Cradle Assembly	168-1/8	96-3/4	70-1/8
AM-1928-155-FO and AM-1928-156-80C2-A	Transport Base Assembly with Shipping Containers and Cradle Assembly with AM-1928-910 Bootstrap Kit	168-1/8	103-7/8	70-5/16

Base and Cradle	Description	Length (in)	Width (in)	Height (in)
AM-1928-155-FO and AM-1928-156-80C2-B	Transport Base Assembly with Shipping Containers and Cradle Assembly with AM-1928-900 Bootstrap Kit	186	103-7/8	70-5/16
AM-1928-155-FO and AM-1928-156-80C2-M	Transport Base Assembly with Shipping Containers and Cradle Assembly with AM-1928-930 Bootstrap Kit	168-1/8	103-7/8	70-5/16
AM-1928-155-FO and AM-1928-156-80E1-A	Transport Base Assembly with Shipping Containers and Cradle Assembly with AM-1928-910 Bootstrap Kit	168-1/8	99-3/4	73-5/16
AM-1928-155 and AM-1928-156-80A-B	Transport Base Assembly and Cradle Assembly with AM-1928-900 Bootstrap	186	96-3/4	70-1/8

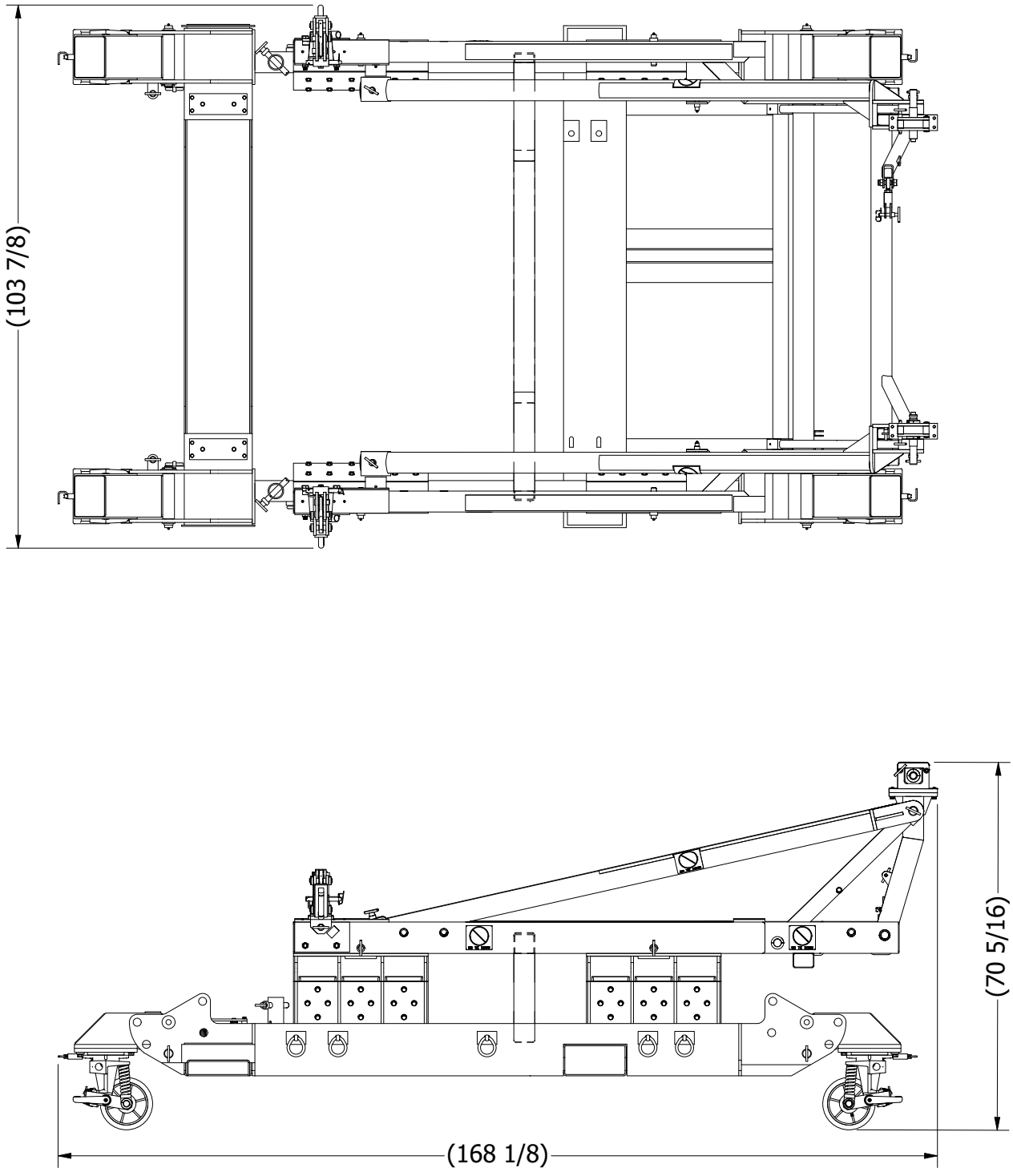


Figure 2.3-1 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80C2 Cradle Assembly without Bootstrap Kit for CF6-80C2 Engine

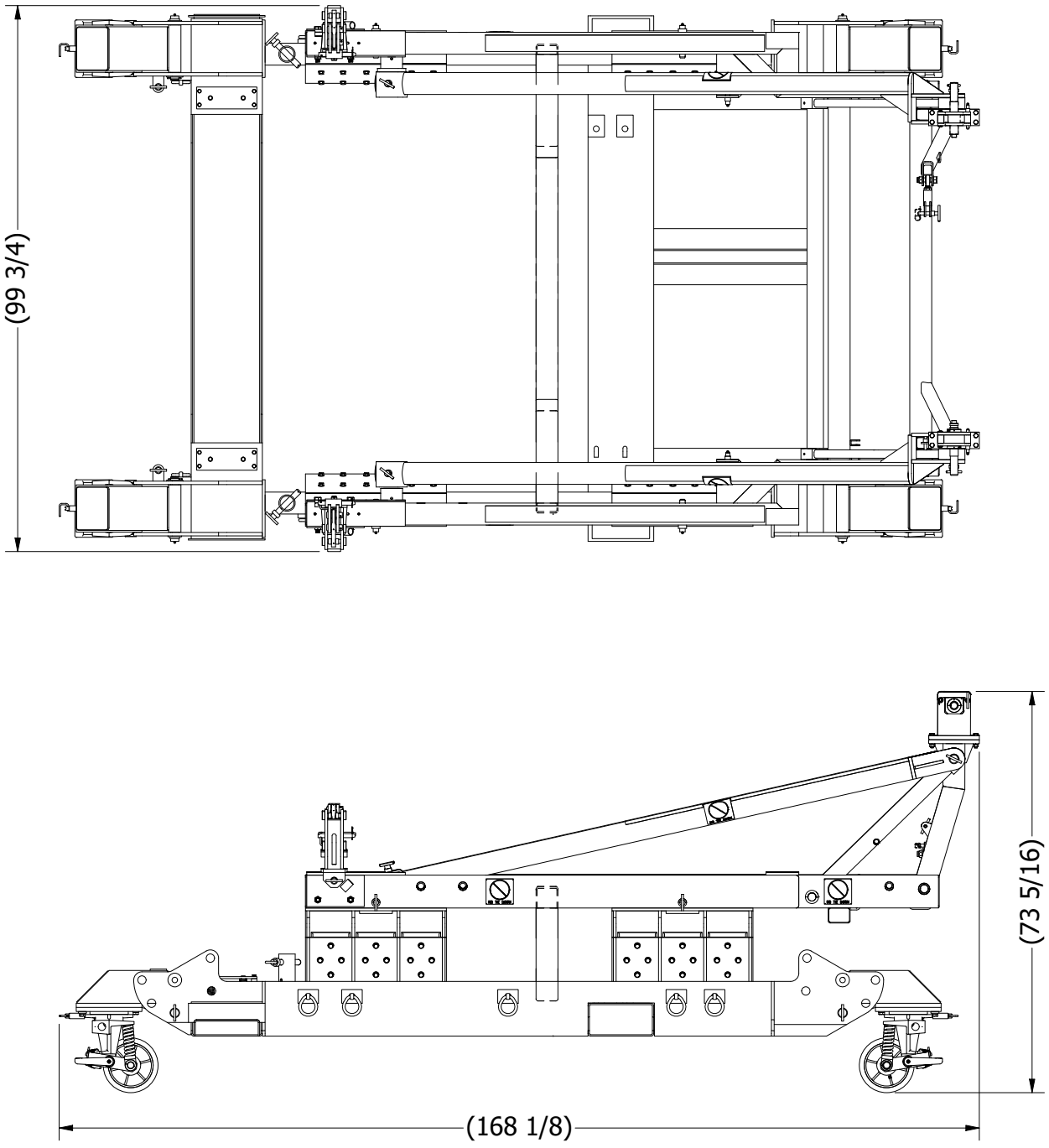


Figure 2.3-2 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80E1 Cradle Assembly without Bootstrap Kit for CF6-80E1 Engine

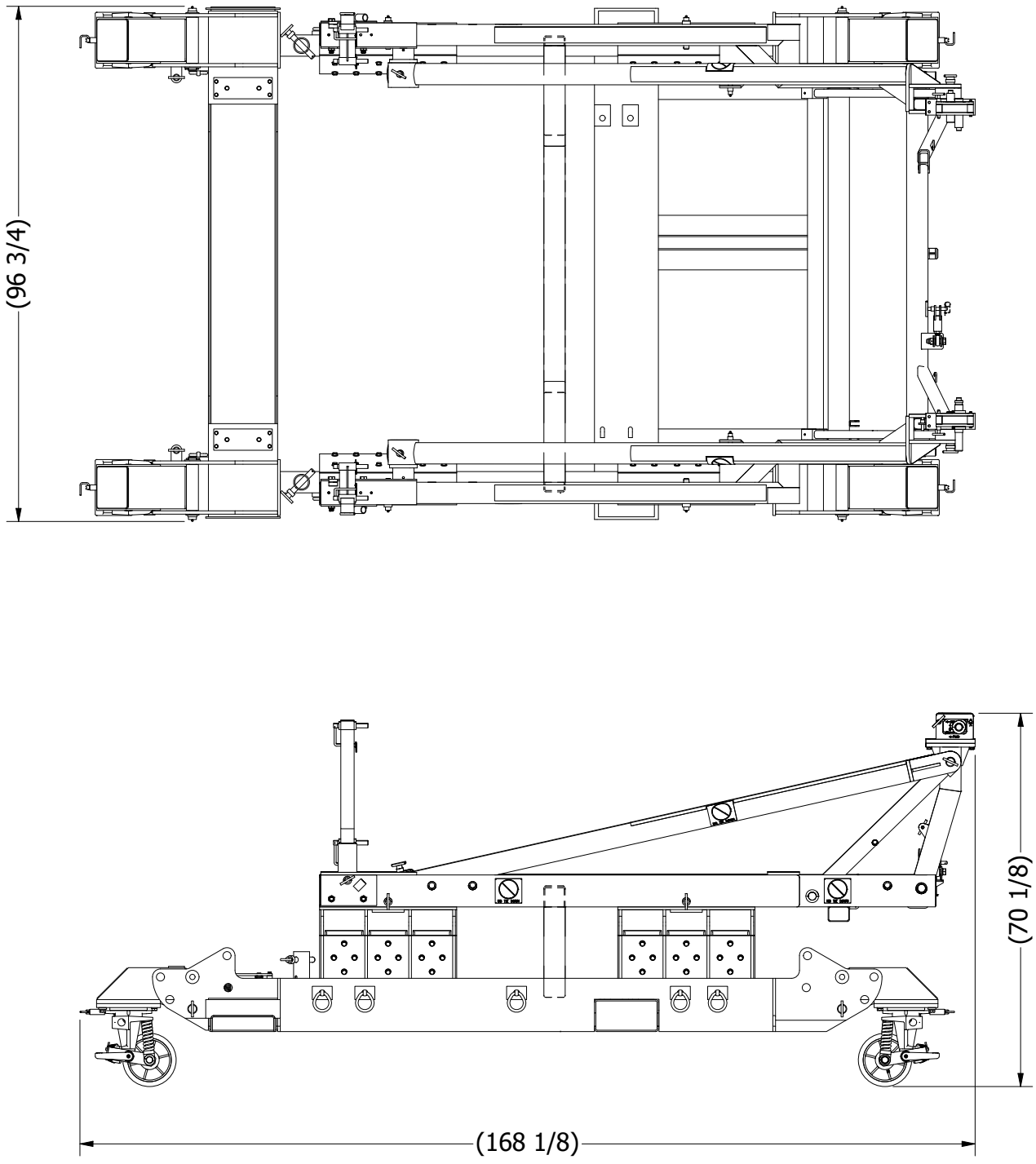


Figure 2.3-3 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80A Cradle Assembly without Bootstrap Kit for CF6-80A Engine

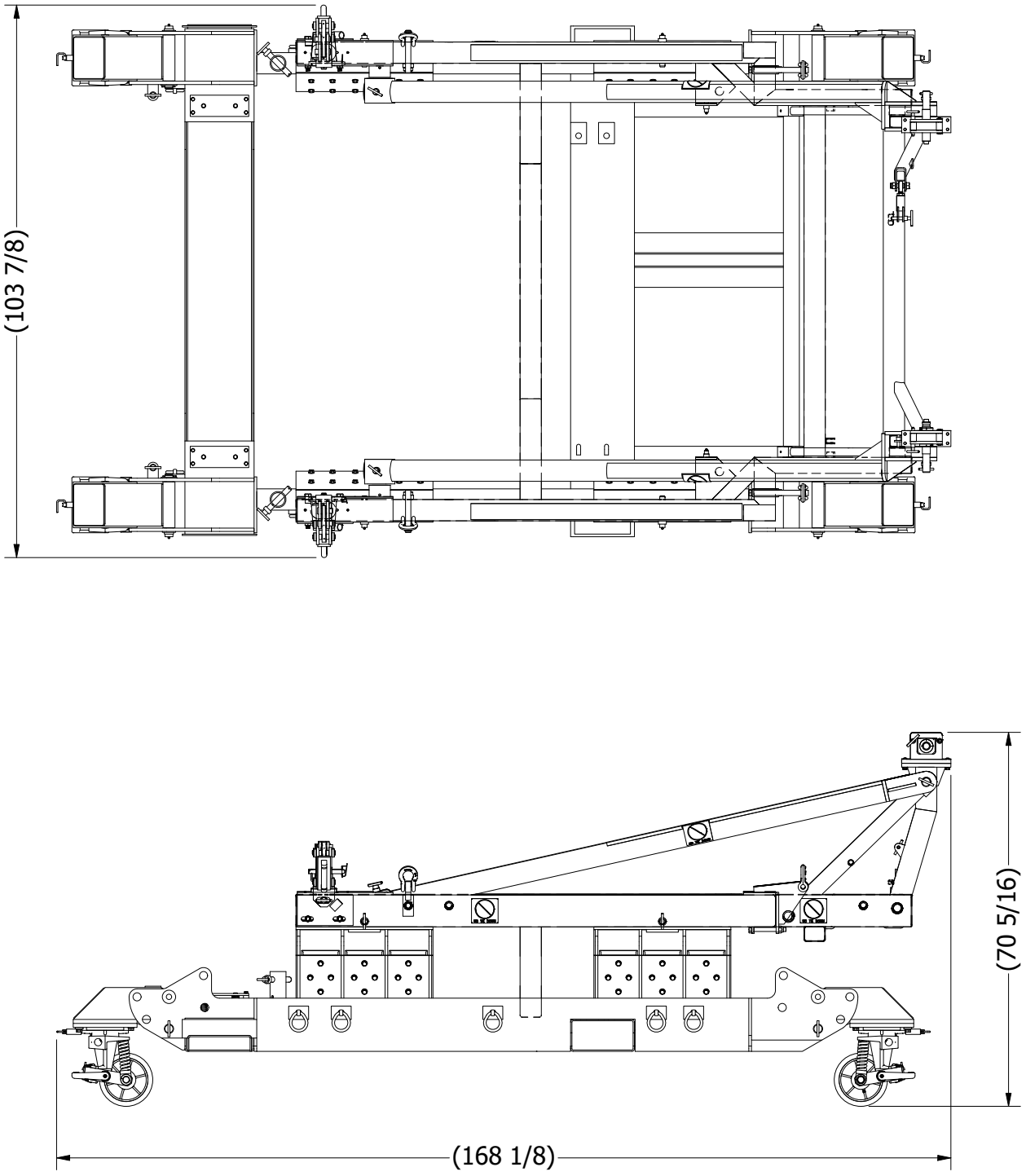


Figure 2.3-4 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80C2-A Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine

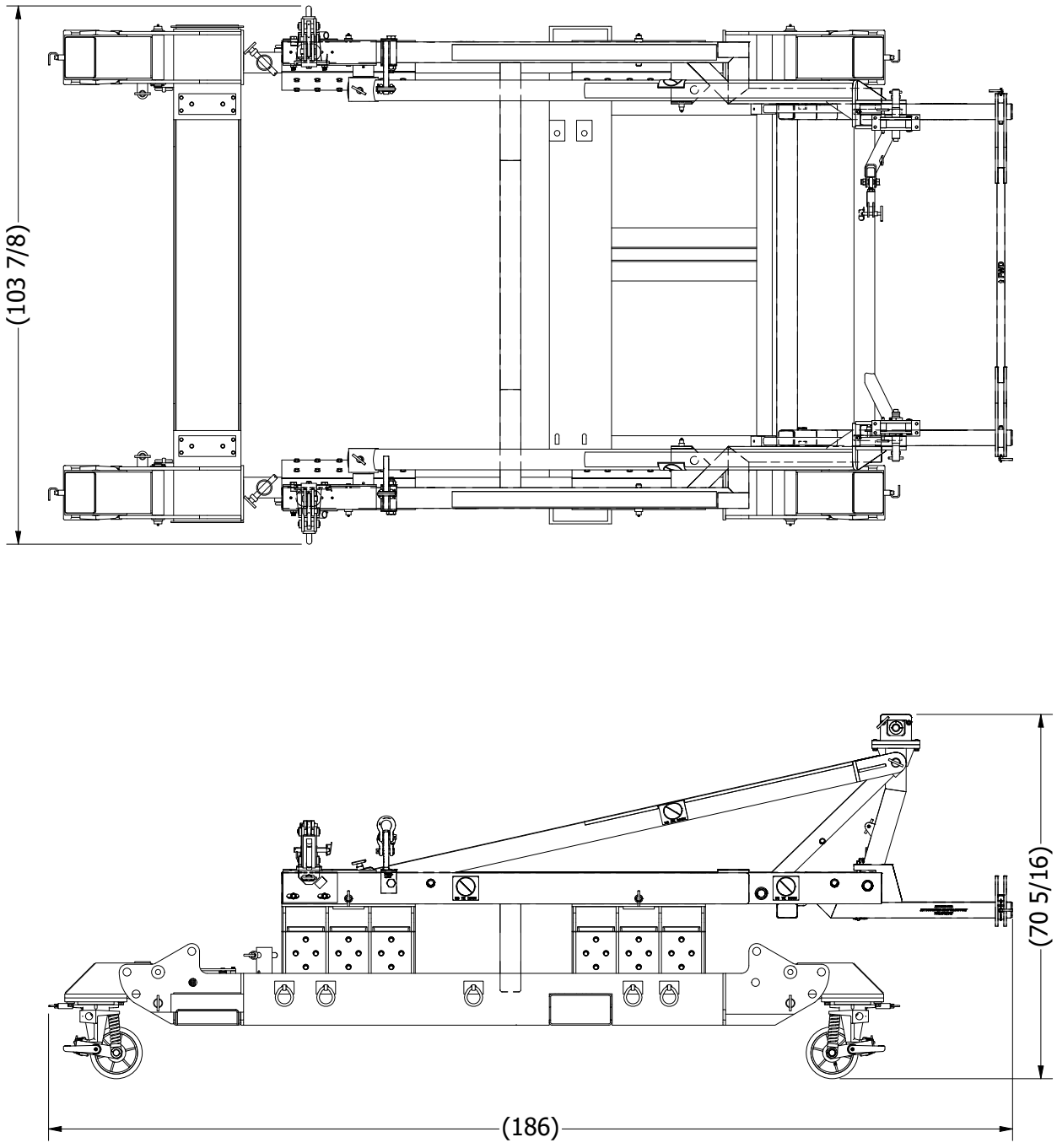


Figure 2.3-5 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80C2-B Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine

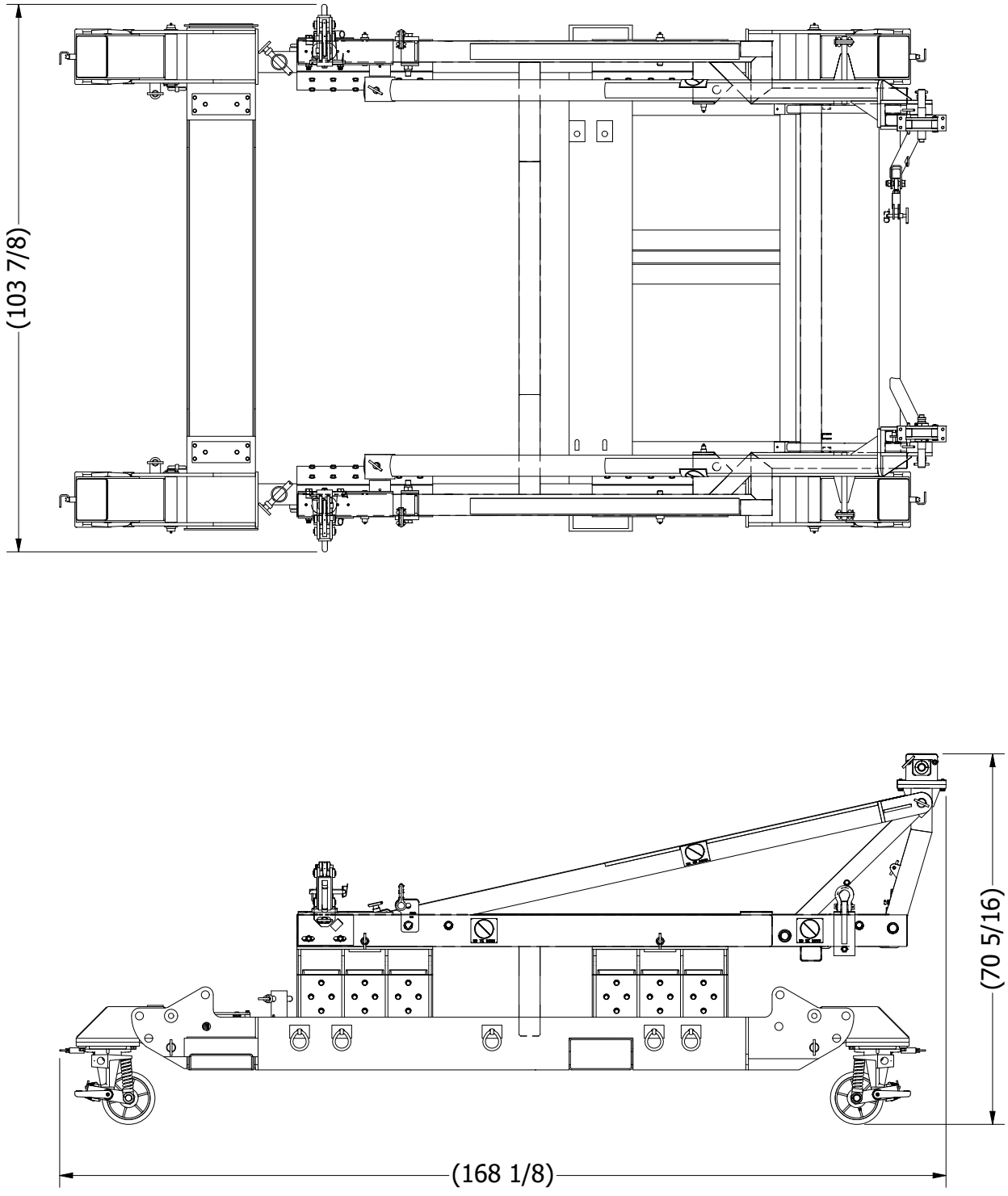


Figure 2.3-6 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80C2-M Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine

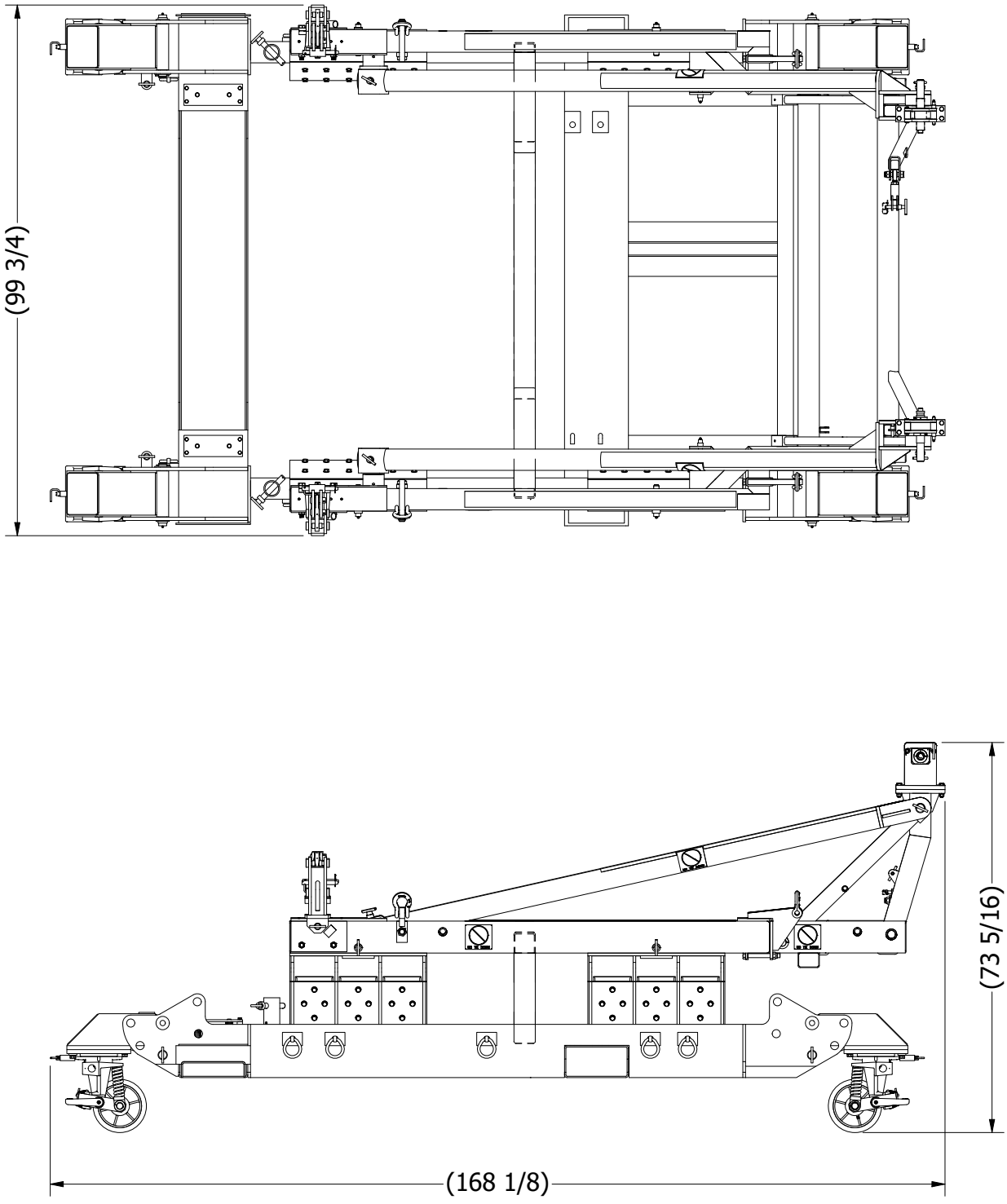


Figure 2.3-7 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80E1-A Cradle Assembly with Bootstrap Kit for CF6-80E1 Engine

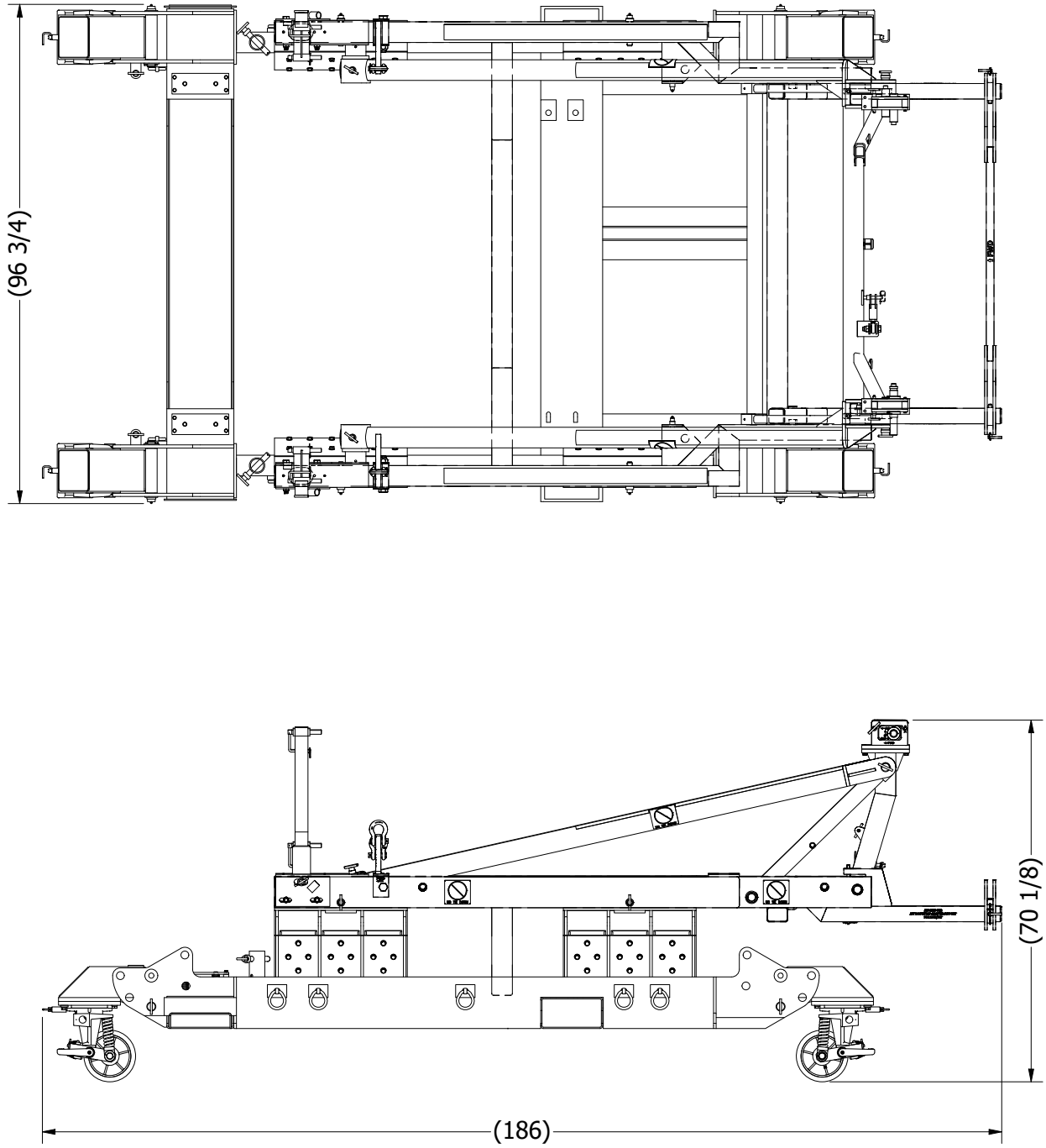


Figure 2.3-8 Dimensions of AM-1928-155 Transport Base Assembly and AM-1928-156-80A-B Cradle Assembly with Bootstrap Kit for CF6-80A Engine

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 structual 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
Hydraulic Oil	DIN 51524-2:2006-09, Grade ISO 46

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	FOD
Caster & sheave axle zerk fittings	Lubricate using extreme pressure grease	After cleaning	Not applicable
Bearings, shafts, mechanically moving parts	Lubricate using extreme pressure grease	After cleaning	Not applicable
Bare Steel Surfaces	Lubricate using dry film spray	After cleaning	Not applicable
Caster springs	Lubricate using dry film spray	After cleaning	Not applicable
Caster swivel locks	Lubricate using dry film spray	After cleaning	Not applicable
Pins (ball lock, pivot, safety, retainer, etc)	Lubricate using dry film spray	After cleaning	Not applicable
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	Visual inspection	12 months	Exposed metal, corrosion, touch up with Skydrol resistant high-grade enamel paint as needed
Lanyard	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

4.0 - Operation

4.1 General Guideline

The following symbols are used in this manual:

WARNING *describes a possibility dangerous situation. Disregard can lead to death or severe injury.*

CAUTION *describes a possibility dangerous situation. Disregard can lead to injury.*

NOTICE *describes a possibility harmful situation. Disregard can damage this device or other material assets in its working range. This sign also marks useful operating hints.*

CAUTION

Severe pinch may cause harm to personnel while operating the following procedures:

1. **Caster rotation during caster stowage and deployment**
2. **Engine loading and unloading**
3. **Bootstrapping attachment**
4. **Pinning cradle to base**
5. **Installing tow bars**
6. **Attaching slings**

WARNING

Stand clear from the cradle and base while operating the following procedures to avoid physical injury:

1. **Forklifting**
2. **Towing**
3. **Bootstrapping**
4. **Lifting Casters**

4.2 Forklifting

The empty stand or stand with engine minus inlet can be moved with forklift from either side of the base using the minimum dimensions shown in Figure 4.2-1. 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 24,000 lbs or 46-1/4” from mast. Refer to forklift manufacturer specification for forklift capability.

WARNING

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.

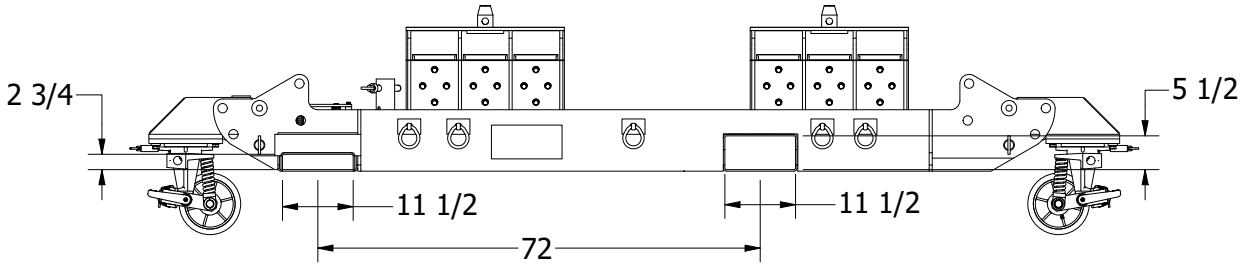


Figure 4.2-1 Dimensions for Forklifting

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.

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.

4.3 Caster Deployment & Stowage

CAUTION

The caster assemblies are heavy and MUST BE ROTATED BY TWO OR MORE PERSONS, one to pull and insert pins, the other to rotate the caster mount.

4.3.1 Caster Deployment

1). Raise the stand approximately 10” above ground.

2). While one person pushes up on the caster, another person removes the AM-91000-96T-H900 safety pin from the caster assembly.

3). Rotate the caster assembly to the desired position.

4). Re-insert the AM-91000-96T-H900 safety pin and retainer pin to secure the caster assembly in the deploy position (Figure 4.3-1).

5). Repeat steps 2 through 4 for all casters.

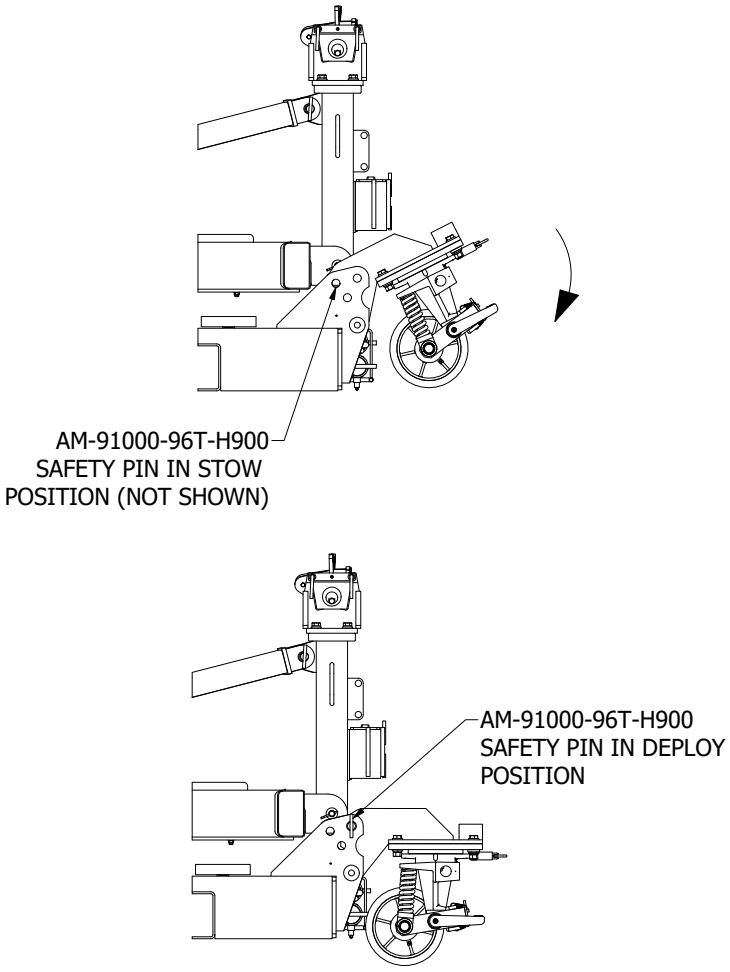


Figure 4.3-1

4.3.2 Caster Stowage

1). Raise the stand approximately 10” above ground.

2). While one person pushes up on the caster lift bar, another person removes the AM-91000-96T-H900 safety pin from the caster assembly.

3). Rotate the caster assembly to the desired position.

4). Re-insert the AM-91000-96T-H900 safety pin and retainer pin to secure the caster assembly in the stowage position (Figure 4.3-2).

5). Repeat steps 2 through 4 for all casters.

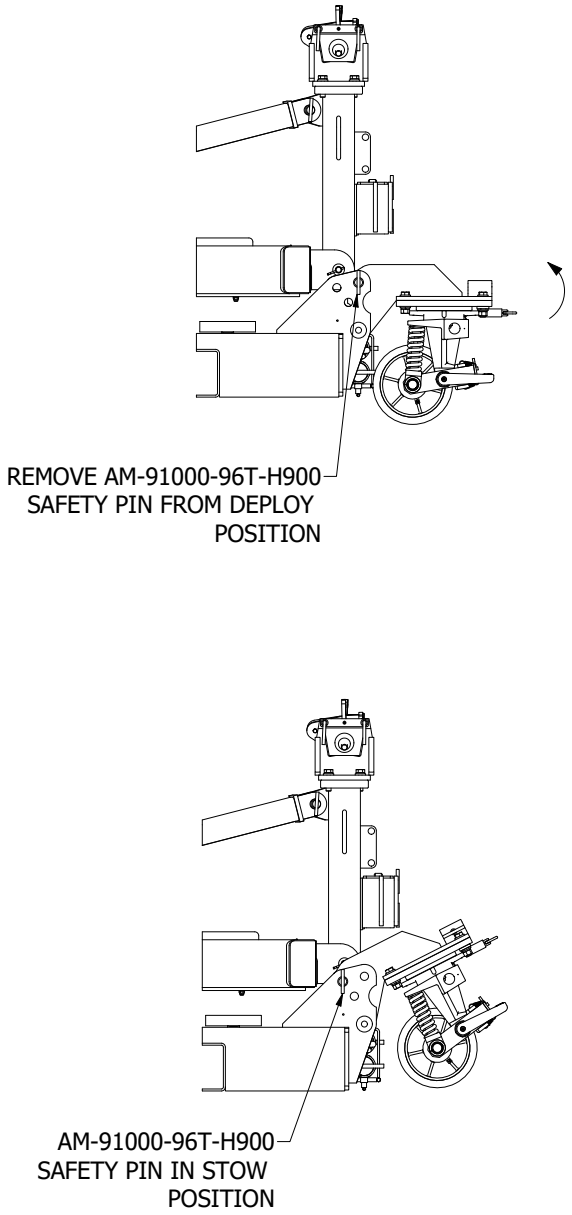


Figure 4.3-2

4.4 Tow Bar Deployment and Stowage

The empty stand or stand with full engine minus inlet may be towed from either the FORWARD or AFT end. The stand with a full QEC (including full engine, inlet, exhaust cone & nozzle) can only be towed from the 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. Dropping the tow bars can cause injury and damage the tow bars.

NOTICE

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.

NOTICE

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

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

1). Deploy casters.

2). Locate two removable telescoping tow bar assemblies that are on the base. Remove the safety pins and retainer pins to remove the tow bar assemblies from storage position. (Figure 4.3-1).

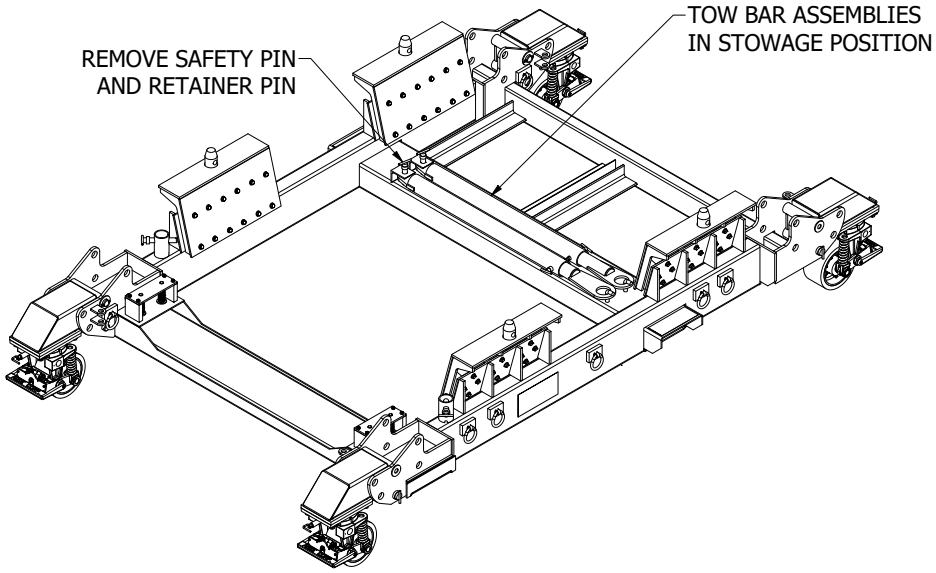


Figure 4.3-1

3). Move two tow bar assemblies to the AFT end of the stand and attach the tow bars to the AFT end of the base.

4). Rotate each tow bar assembly outward. (Figure 4.3-2).

5). To extend the tow bars, remove the safety pin and retainer pin closest to the towing end and pull the inner section outward.

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. (Figure 4.3-3)

8). Reverse these steps for stowing tow bars.

NOTICE

Do not tow the engine stand with retracted tow bars. Tow bars must be extended to avoid damaging the tow bars or the engine. This is most likely to occur when towing around a corner with a tow vehicle.

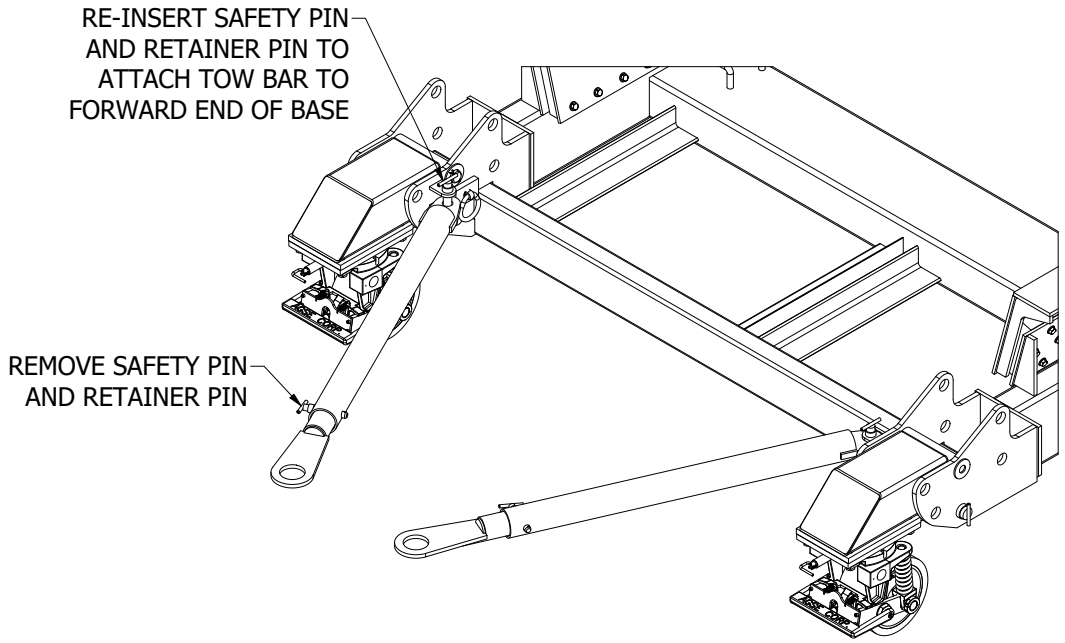


Figure 4.4-2

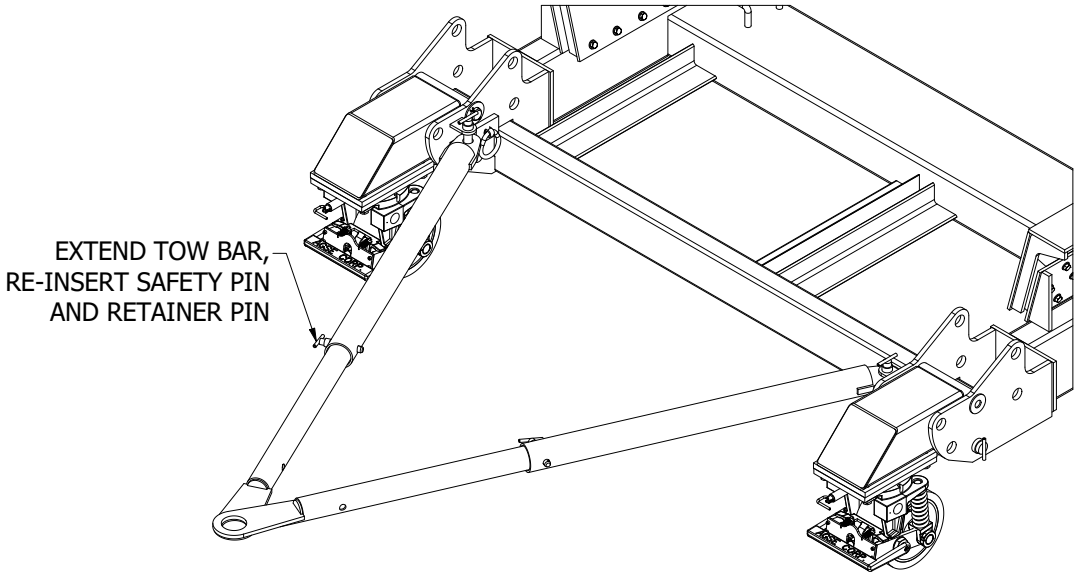


Figure 4.4-3

4.4.2 Deploying Tow Bar for Towing from the FORWARD End of the Stand

1). Deploy casters as shown in Section 4.3-1.

2). Locate two removable telescoping tow bar assemblies that are on the base. Remove the safety pins and retainer pins to remove the tow bar assemblies from storage position. (Figure 4.4-1).

3). Move two tow bar assemblies to the FORWARD end of the stand and attach the tow bars to the FORWARD end of the base.

4). Rotate each tow bar assembly outward. (Figure 4.4-4).

5). To extend the tow bars, remove the safety pin and retainer pin closest to the towing end and pull the inner section outward.

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. (Figure 4.4-5)

8). Reverse these steps for stowing tow bars.

NOTICE

Release all casters 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.

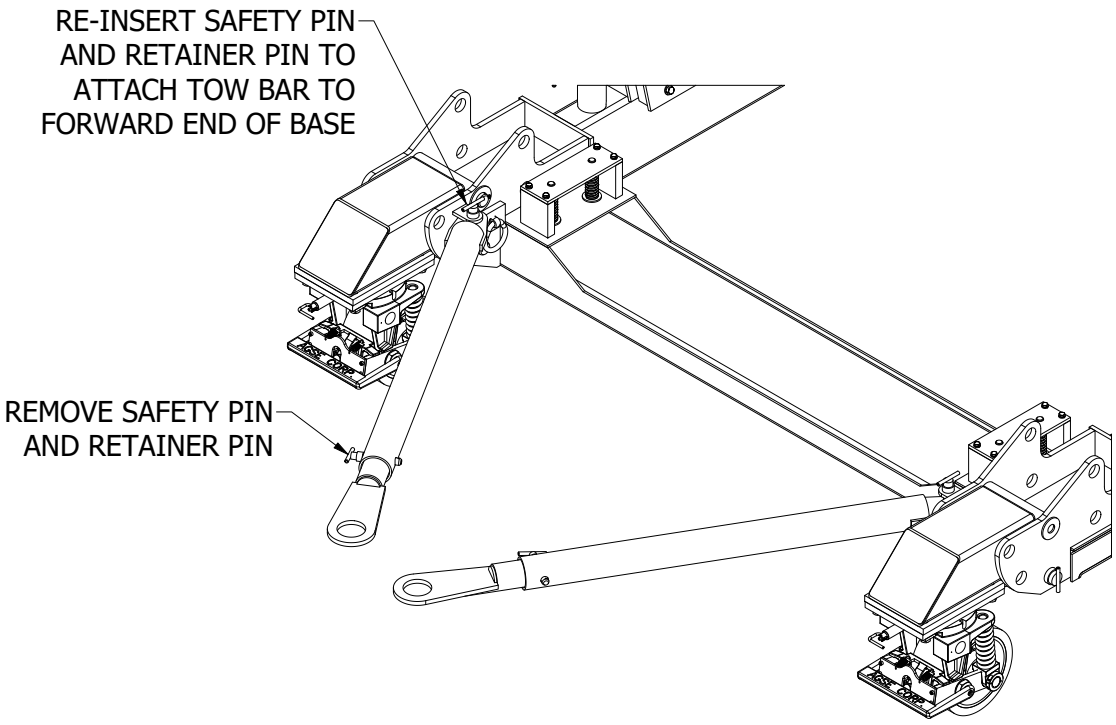


Figure 4.4-4

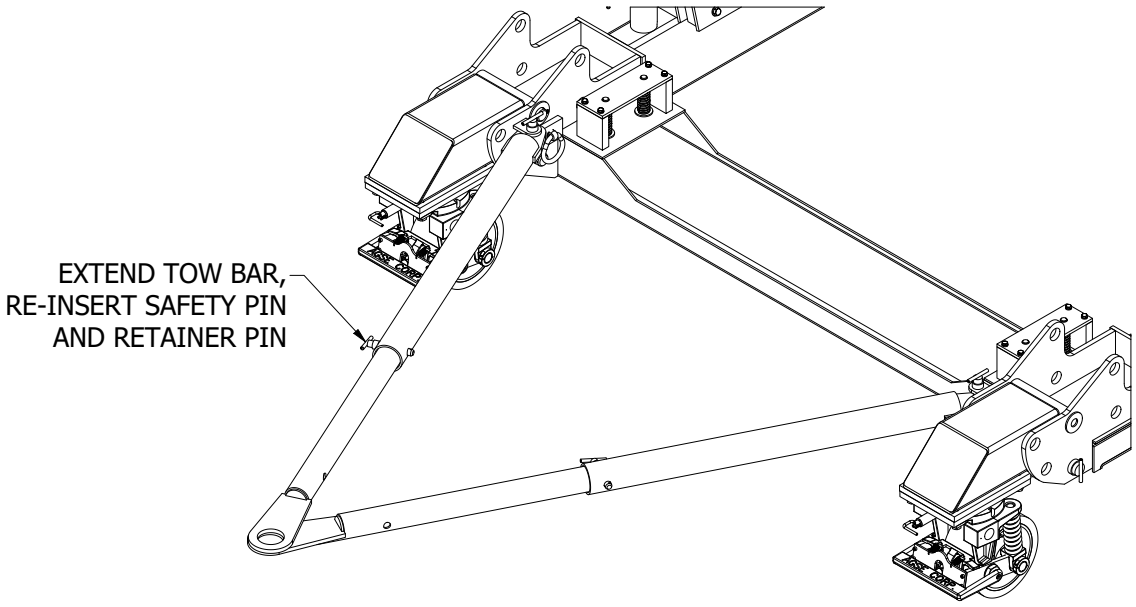


Figure 4.4-5

4.5 Engine Installation onto Stand and Engine Removal

WARNING

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

CAUTION

Care must be taken when handling parts to avoid potential falling, dropping, and crushing which can cause injury.

NOTICE

Minimum clearnace 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.

4.5.1 Engine Installation onto Stand

1). Configure the engine for shipping in accordance with the General Electric Shipping Manual.

2). This procedure outlines the CF6-80C2 engine and will require a minimum of five people. The CF6-80A and CF6-80E1 engines will follow the same procedure with exception of adapter part numbers.

3). Configure the AM-1928 transportation stand to install engine. Remove the aft mount support adapters AM-1928-E10 (LH) and AM-1928-F10 (RH) by removing the safety pin retaining the AM-1928-D10 saddle hold down bars and swing them aft for adapter clearance. Figure 4.5-1. Next remove forward adapters AM-1928-A34 (LH) and AM-1928-B34 (RH) from the cradle. pin to the aft fan case engine handling points H5-2 and H5-1.

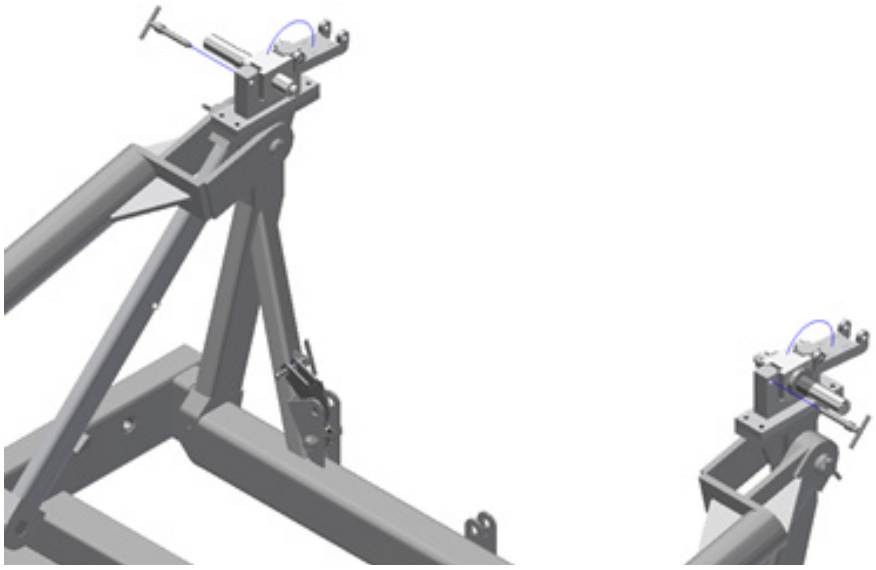


Figure 4.5-1

4). Pin the AM-1928-A34 (LH) and AM-1928-B34 (RH) to the aft fan case engine handling points H5-2 and H5-1.

5). Suspend the engine with an overhead crane about 24-inches above the installed position with Forward adapters aligned with the cradle dagger holes. Figure 4.5-2.

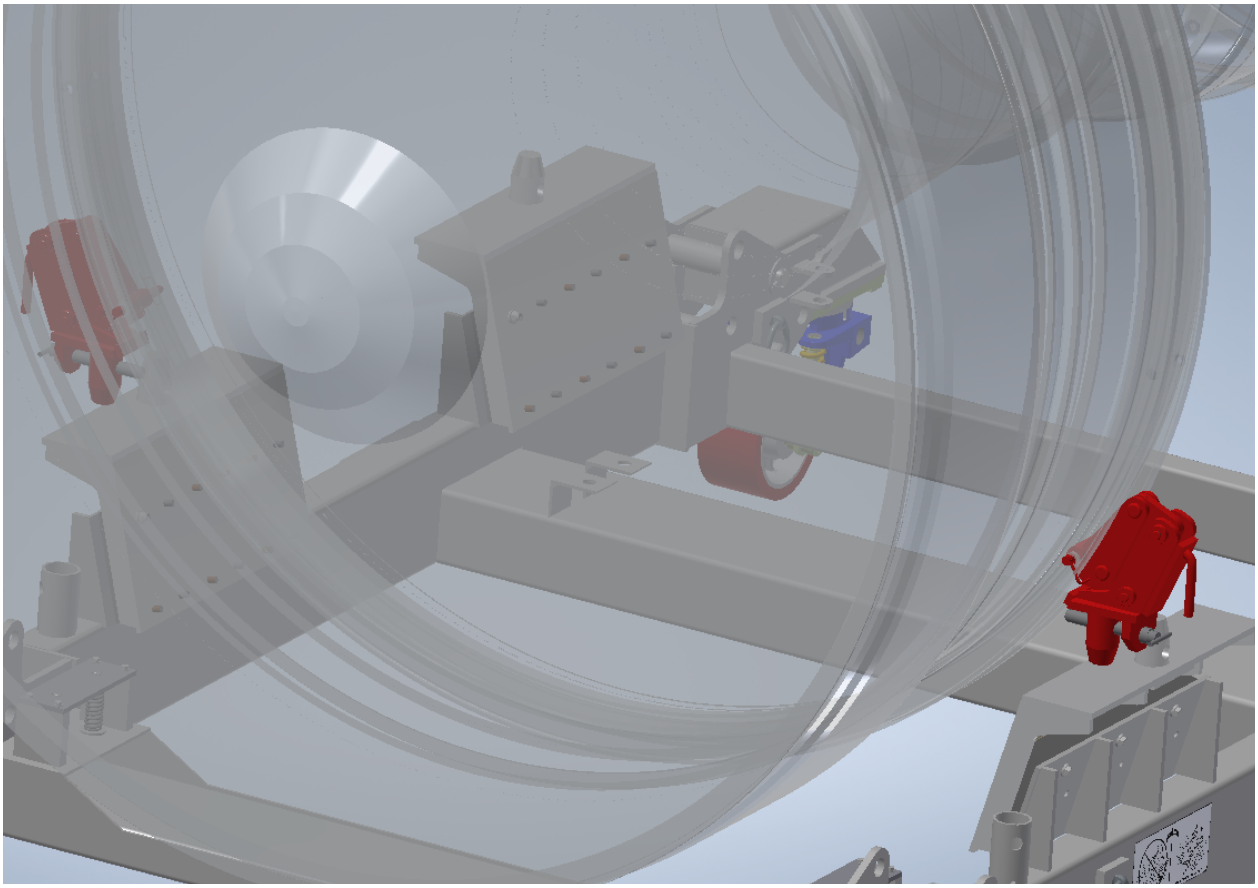


Figure 4.5-2

6). Insert the aft pin adapters AM-1928-E10 (LH) and AM-1928-F10 (RH) into the LPT engine handling points H1-2 and H1-1. The aft adapters will need to be held in this position and guided into the aft support saddles. The forward engine adapters AM-1928-A34 (LH) and AM-1928-B34 (RH) will need to be held with the support daggers vertical. Figure 4.5-3.

Figure 4.5-3

7). Lower and adjust the engine guiding the aft pin adapter V-Blocks into the V-Shaped support saddles first. Once aligned while lowering the engine guide the forward daggers into the sockets of the cradle. Continue lowering the engine until all adapters are installed and supporting some of the engine weight. Figure 4.5-4.

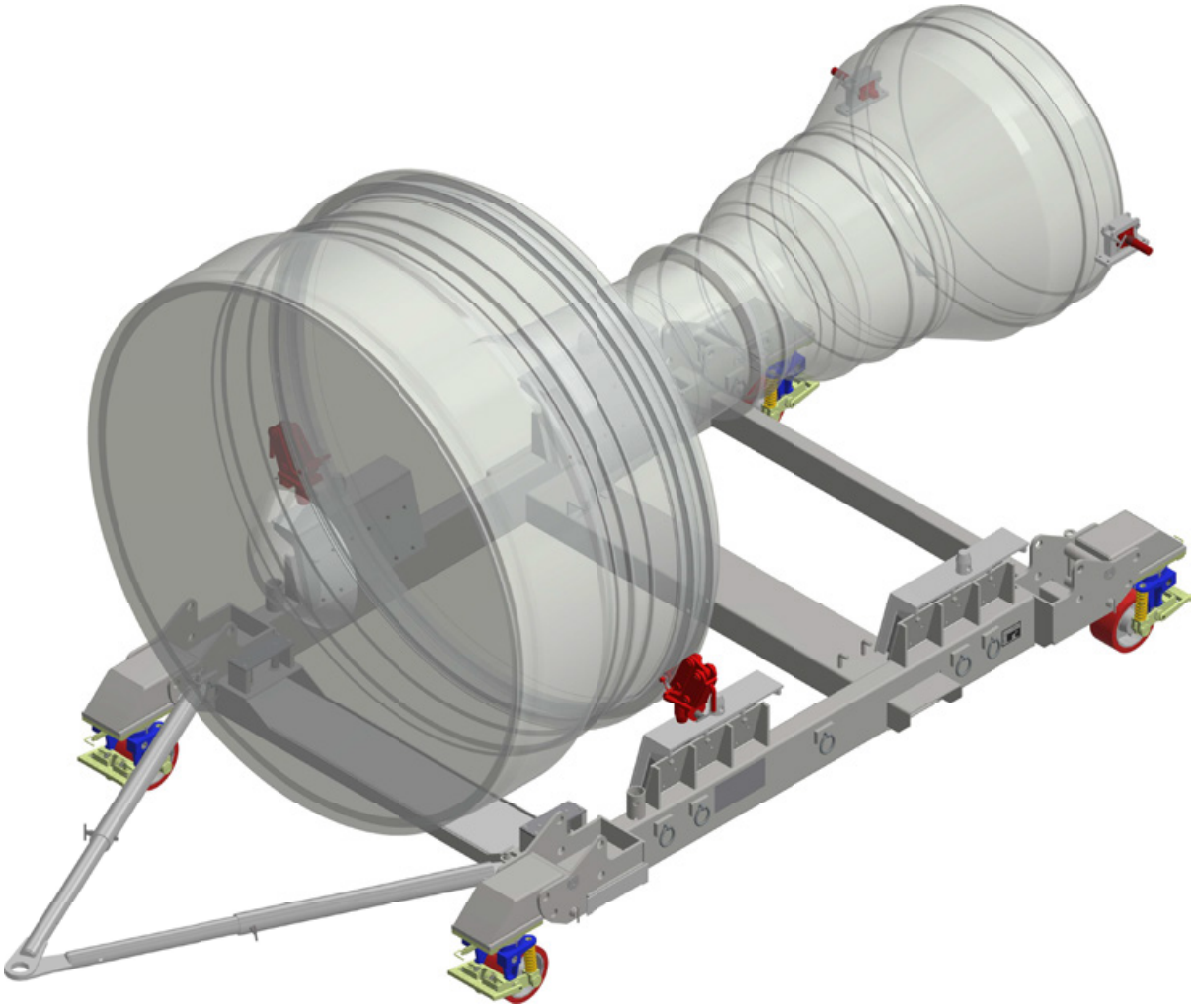


Figure 4.5-4

8). Install the forward adapter safety pins previously removed and swing the aft adapter, AM-1928-D10, saddle hold down bars forward to secure the adapter and lock with safety pins.

9). Install the H3 aft sway link adapter AM-1928-F11 by removing the securing pin rotating the sway link to align with the engine mount position. The sway link can be adjusted by loosening the jam nut and rotating the link to increase or decrease the reach. Figure 4.5-5.

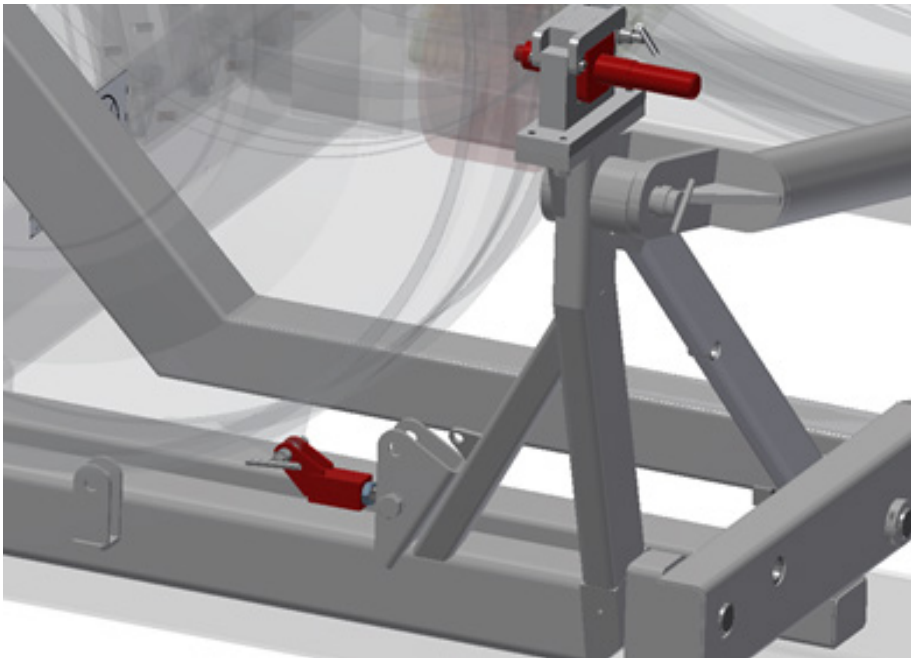


Figure 4.5-5

4.5.2 Engine Removal

1). Attach a suitable sling to engine GSE lifting points.

2). Remove the forward AM-1928-A34 (LH) and AM-1928-B34 (RH) adapter dork pin securing pins at the cradle. Figure 4.5-2. The aft support adapter saddle hold down bars, AM-1928-D10, safety pins are removed allowing them to be swung clear for adapter clearance. Figure 4.5-1

3). Disconnect the aft H3 sway link from the engine, rotate into the storage position and secure. Figure 4.5-6.

4). Each of the forward and aft adapters will need to be guided and supported by personnel while the engine is lifted from the stand. Once the aft shaft adapters are clear of the saddles they can be removed and placed aside. The forward adapters have rubber pads that allow them to rest against the fan case flanges for engine movement. They can be removed and placed in storage receptacles on the base once the engine is clear from the stand.

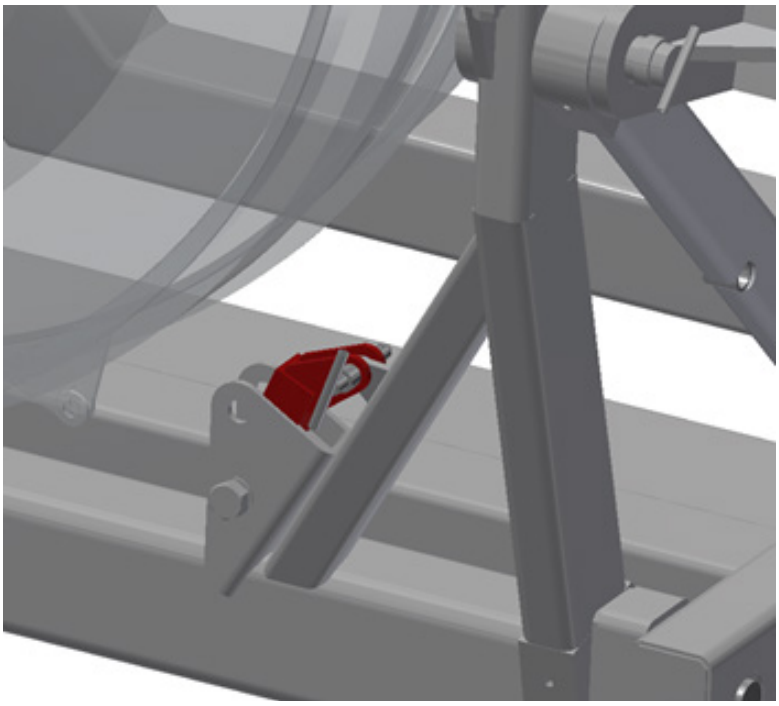


Figure 4.5-6

4.6 Stand Preparation for Bootstrapping

CAUTION

This procedure is intended to supplement the Boeing AMM and GE EMM for the correct bootstrap procedure and tooling to be used. It identifies the required steps to configure and use AGSE equipment during engine boostrapping. 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 and unlock the forward casters to allow swiveling and positioning.

3). Remove the safety pins between the cradle and base.

4). For the cradles AM-E1928-156-80C2-B and AM-1928-156-80A-B, install the AM-1928-900 bootstap kits as shown in Figure 4.6-1.

5) For the cradles AM-E1928-156-80C2-A and AM-1928-156-80E1-A, install the AM-1928-910 bootstap kits as shown in Figure 4.6-2.

6) For the cradles AM-E1928-156-80C21-M and AM-1928-156-80A-B, install the AM-1928-930 bootstap kits as shown in Figure 4.6-3.

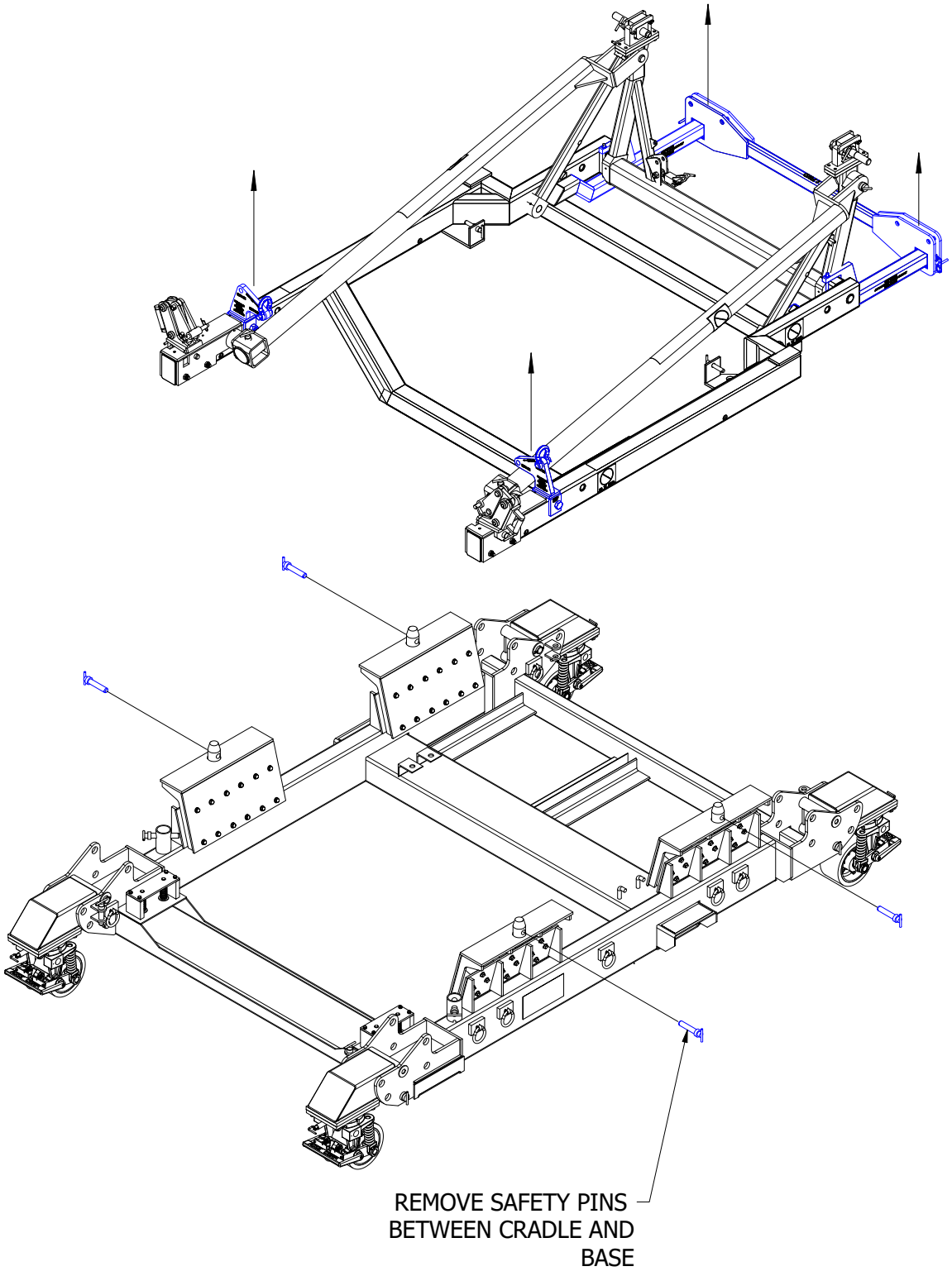


Figure 4.6-1 AM-1928-900 Bootstrap Kit for Boeing B747/767, 80C2/80A, 80A2 Engine

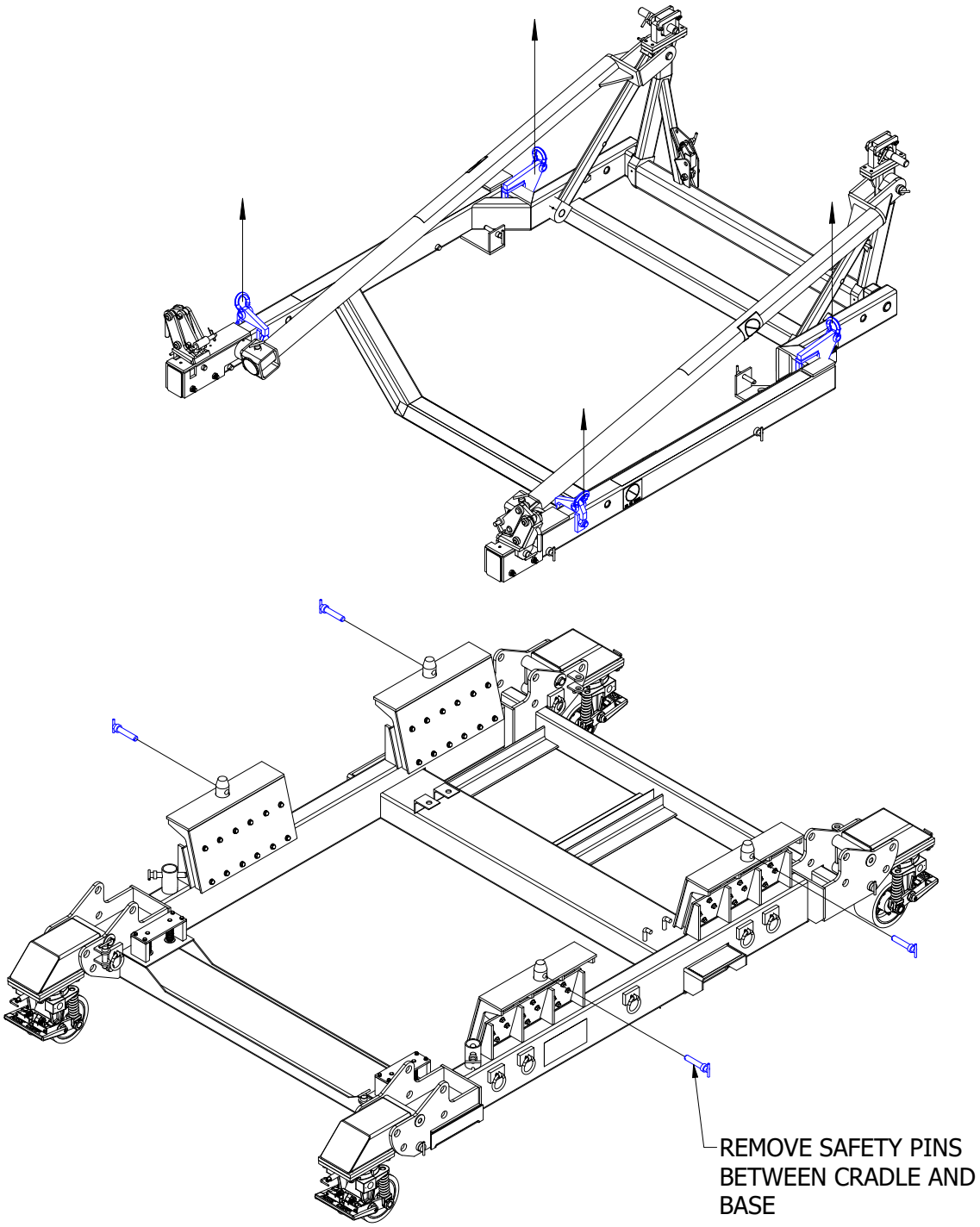


Figure 4.6-2 AM-1928-910 Bootstrap Kit for Airbus, 80C2/80E1 Engine

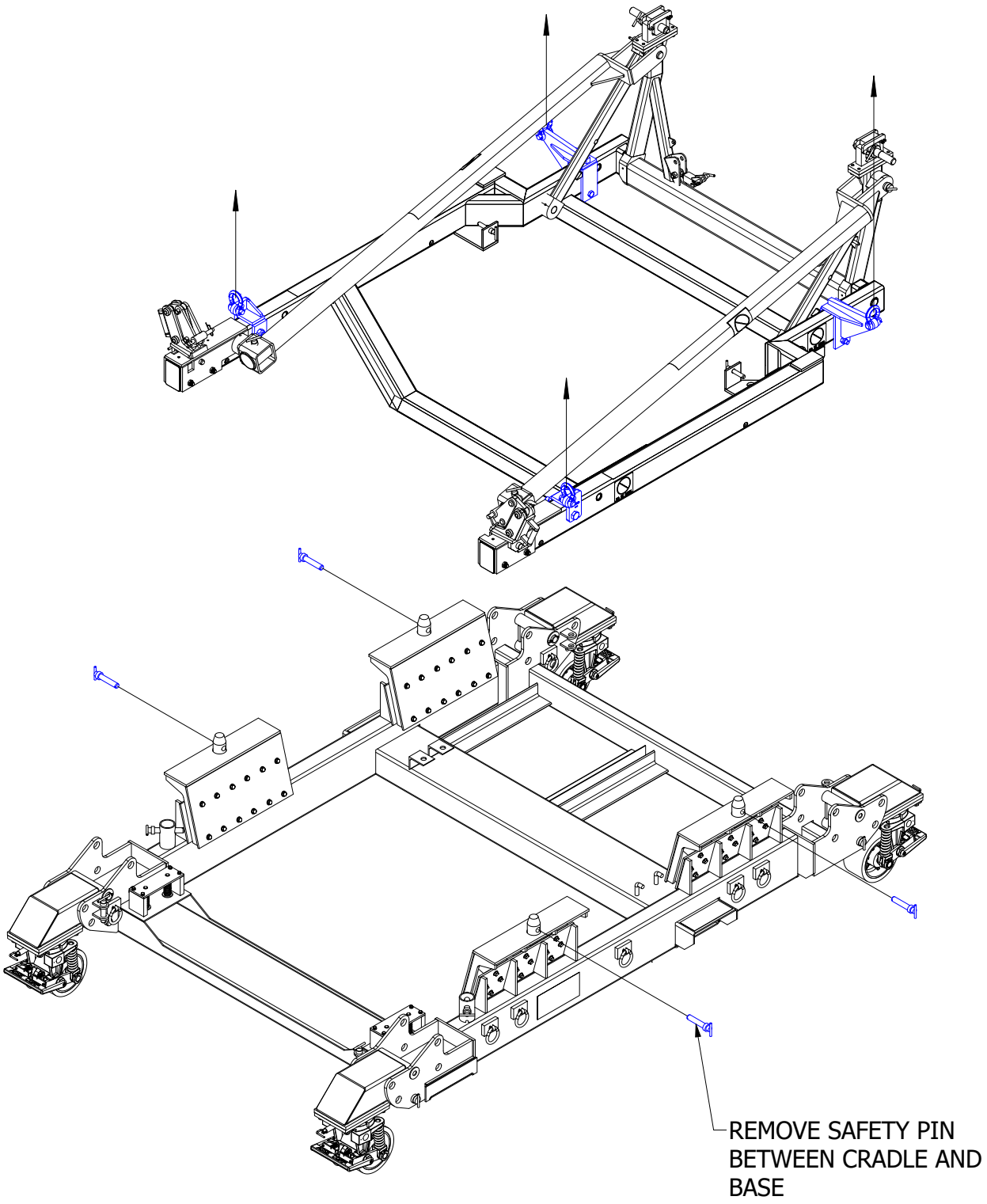


Figure 4.6-3 AM-1928-930 Bootstrap Kit for MD-11, 80C2 Engine

4.7 Truck Transport

Truck transport of the empty stand or stand with full engine minus inlet MUST be air ride suspension equipped tractor/trailers. It is not recommended that a full QEC (including full engine, inlet, exhaust cone & nozzle) be truck shipped due to the large overall dimensions/weight/CG location and limited sway space clearance between the inlet and truck bed.

The empty stand can be shipped in different configurations as shown in Figures 4.7-1 and 4.7-2.

Loading and unloading the empty stand or stand with engine onto and off a truck may be by forklifting. See Section 4.2 for forlifting procedure.

NOTICE

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

NOTICE

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 as the casters may be wider than the truck bed creating instability and safety concerns.

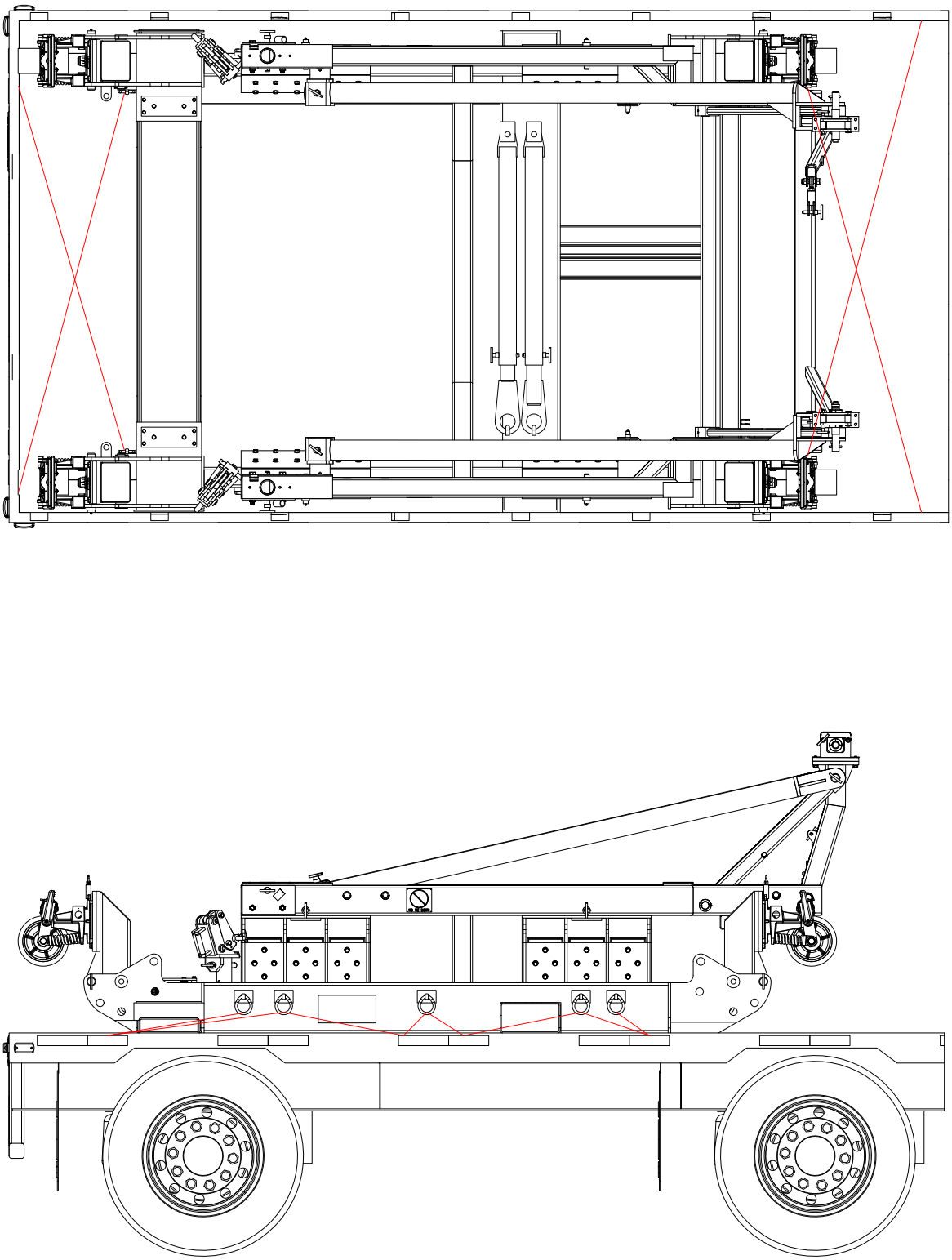


Figure 4.7-1 Truck Transport

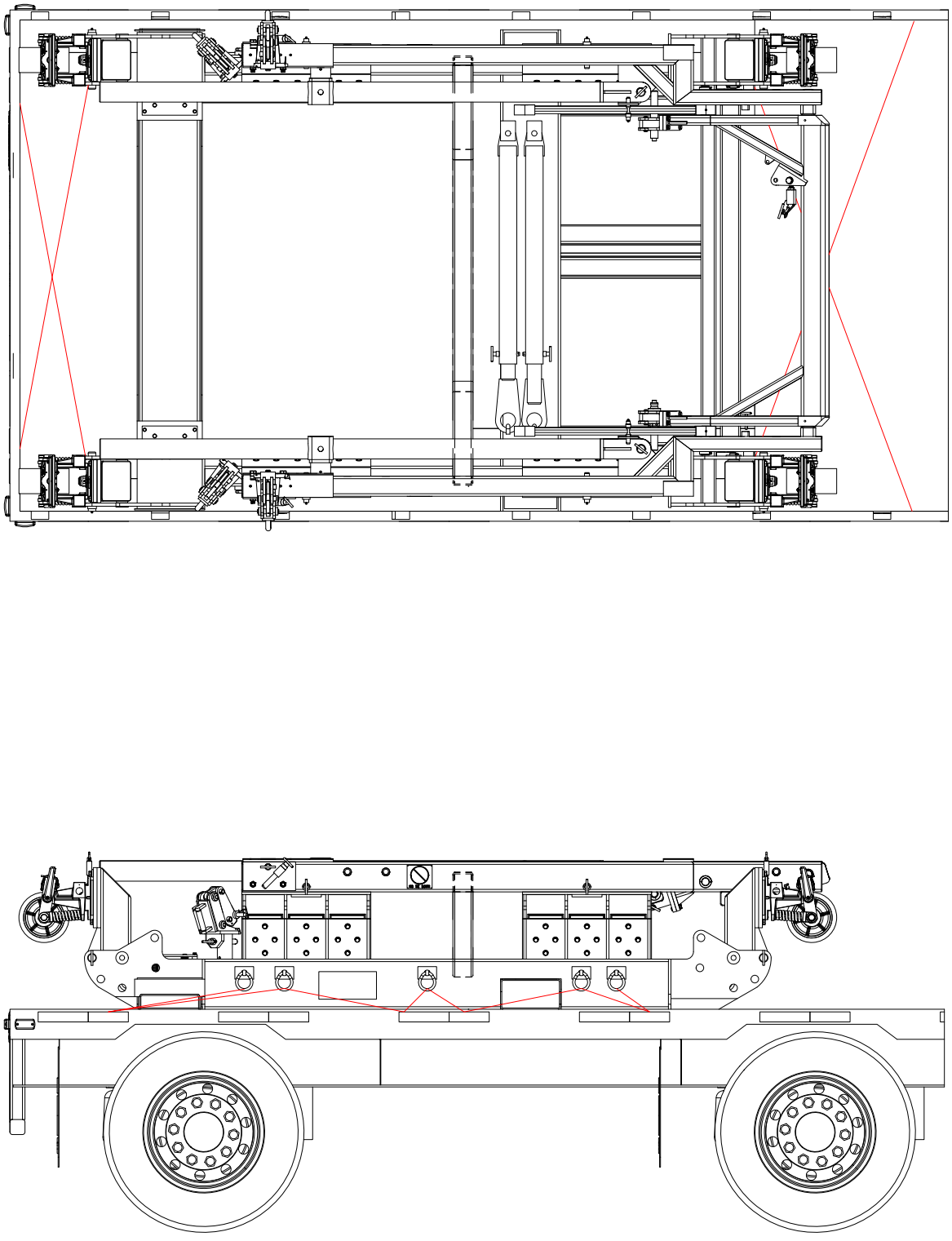


Figure 4.7-2 Truck Transport - Empty Stand Fully Stowed

4.8 Air Transport

The empty stand or stand with full engine minus inlet can be air shipped in Center Load Position. It is not recommended that a full QEC (including full engine, inlet, exhaust cone & nozzle) be air shipped due to the large overall dimensions/weight/CG location and limited sway space clearance between the inlet and aircraft.

1). Install engine onto stand as described in Section 4.4.

2). Configure the engine for air shipment in accordance with GE EMM and/or Transportation Manual for the correct procedure. This may require the removal of some engine components.

NOTICE

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.

NOTICE

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

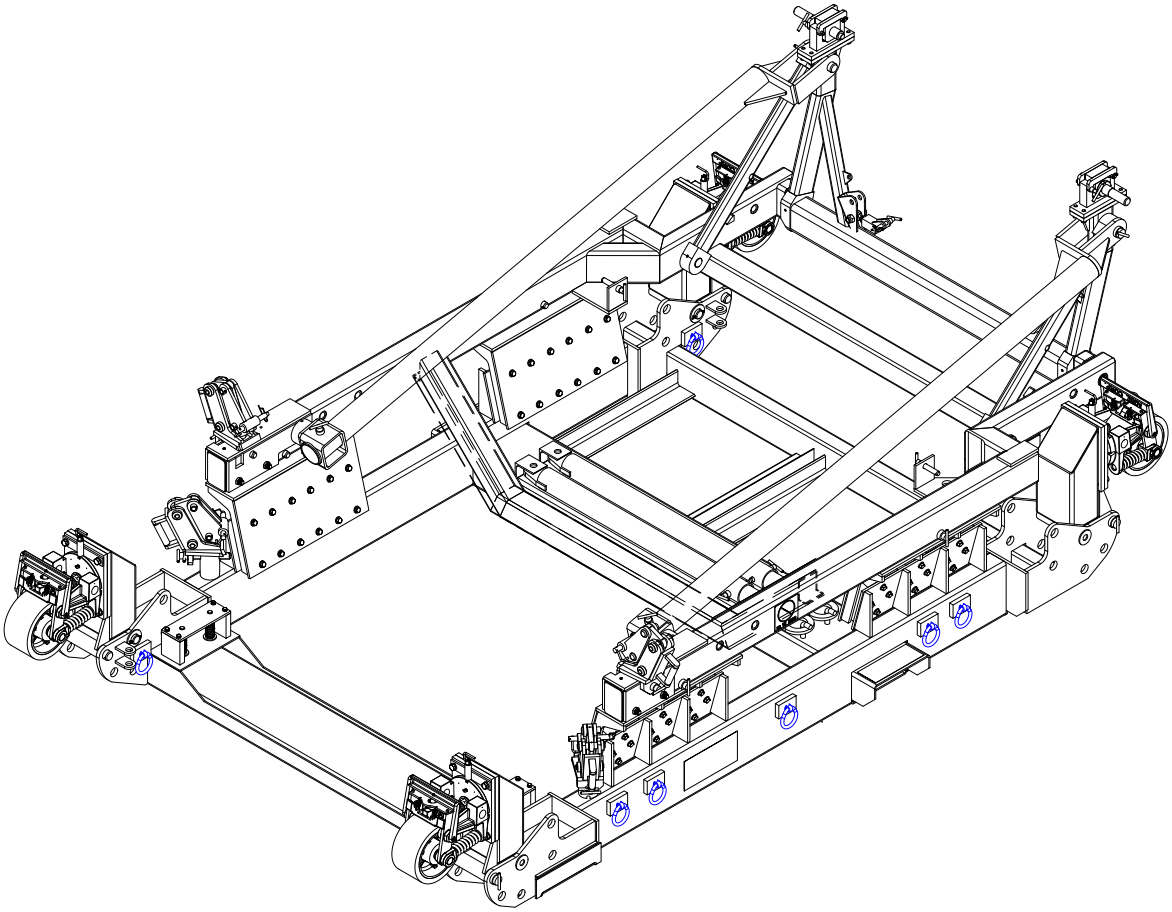


Figure 4.8-1 Air Transport

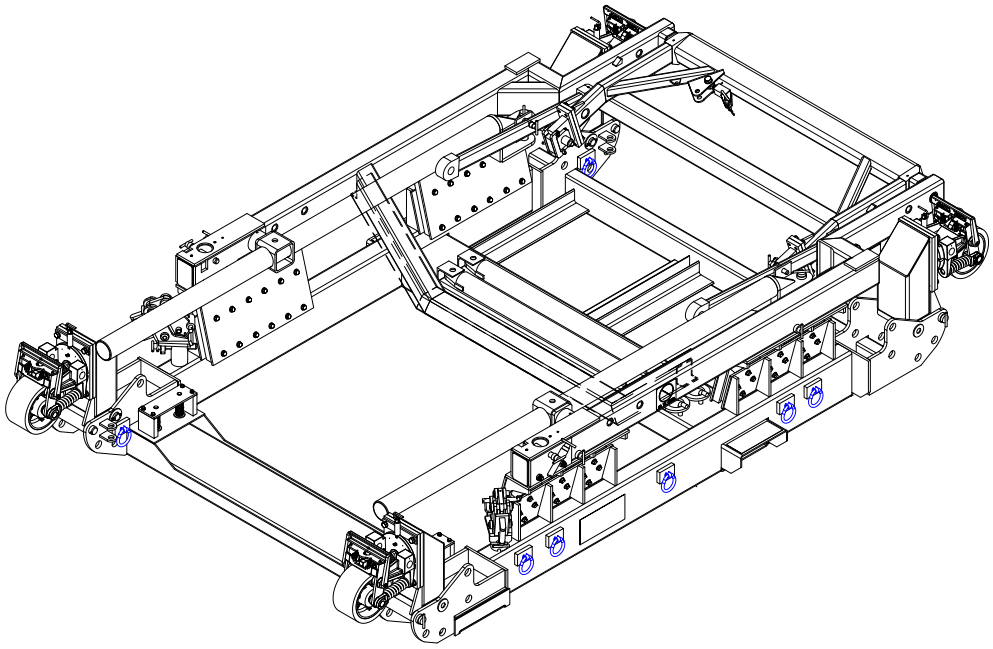


Figure 4.8-2 Air Transport - Empty Stand Fully Stowed

4.9 Stowing and Deploying Empty Stand

NOTICE

Components on stand are HEAVY and must be handled by least two persons when removing and stowing these components.

Prior to stowing an empty stand, bootstrap kit must be removed.

1). Remove the left and right hand AFT Spindles.

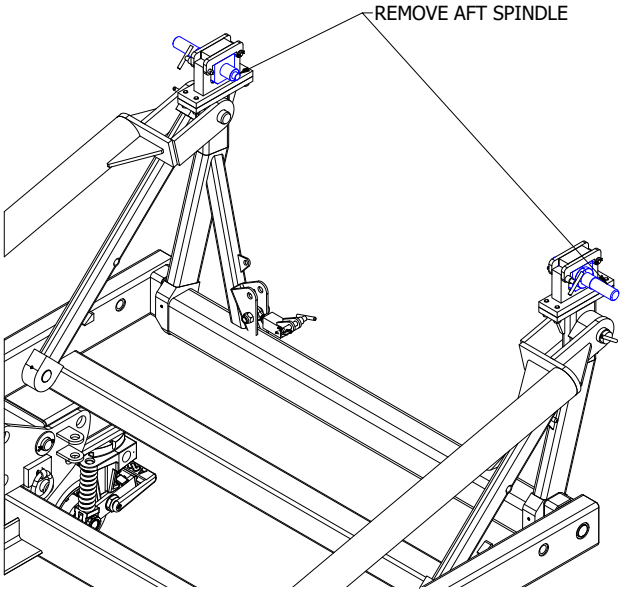


Figure 4.9-1

2). Remove six (6) Safety Pins (Figure 4.9-2) and stow two (2) Safety Pins in stowage position (Figure 4.9-3).

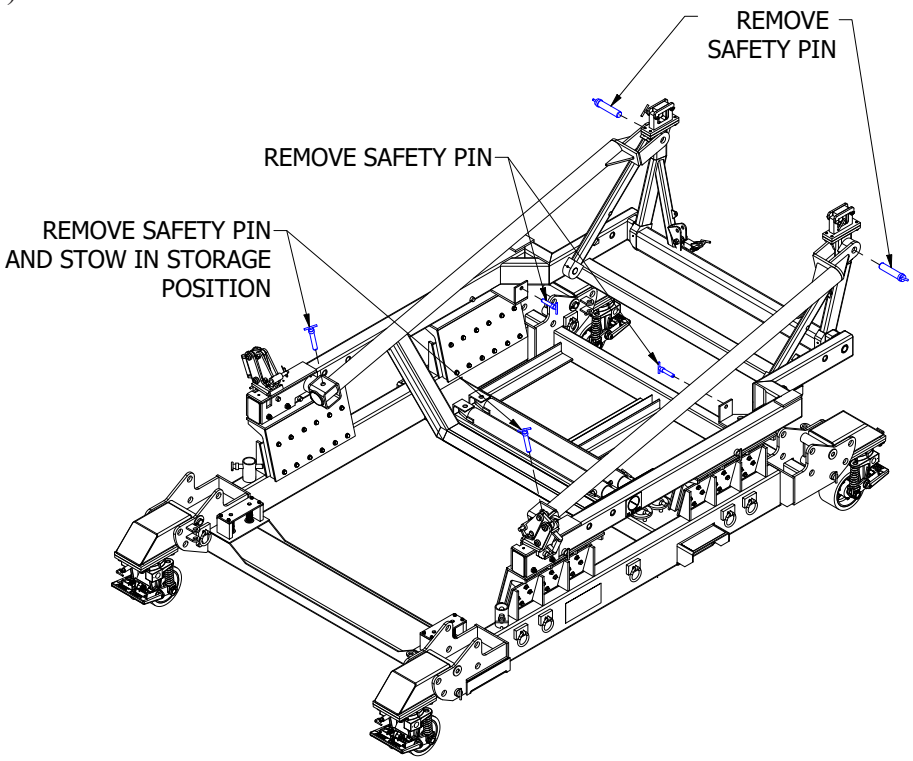


Figure 4.9-2

3). Slide the Brace forward while rotating clockwise. Align the Brace with the hole on Cradle and re-insert the Safety Pin.

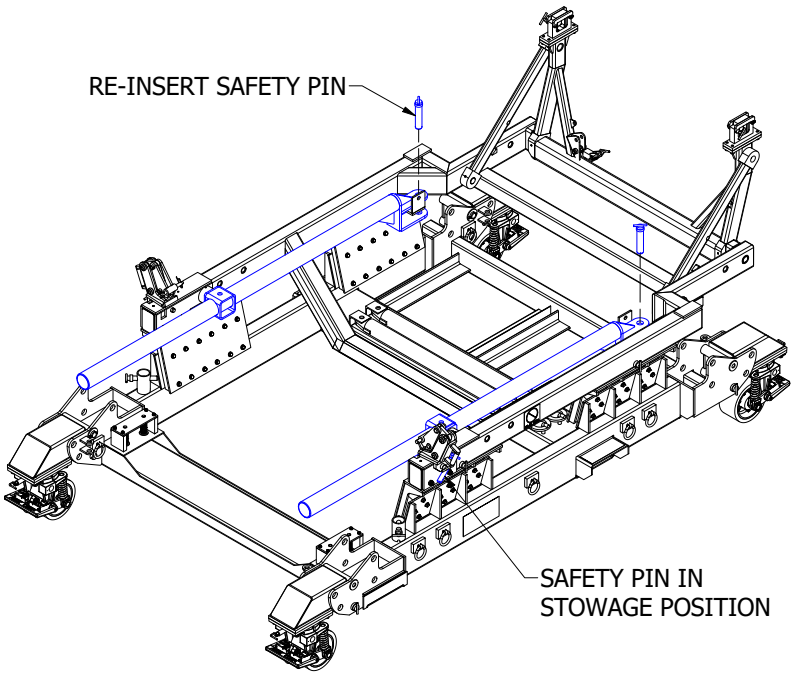


Figure 4.9-3

4). Rotate the Support Tube counterclockwise and place into stowage position. Re-insert the Safety Pins.

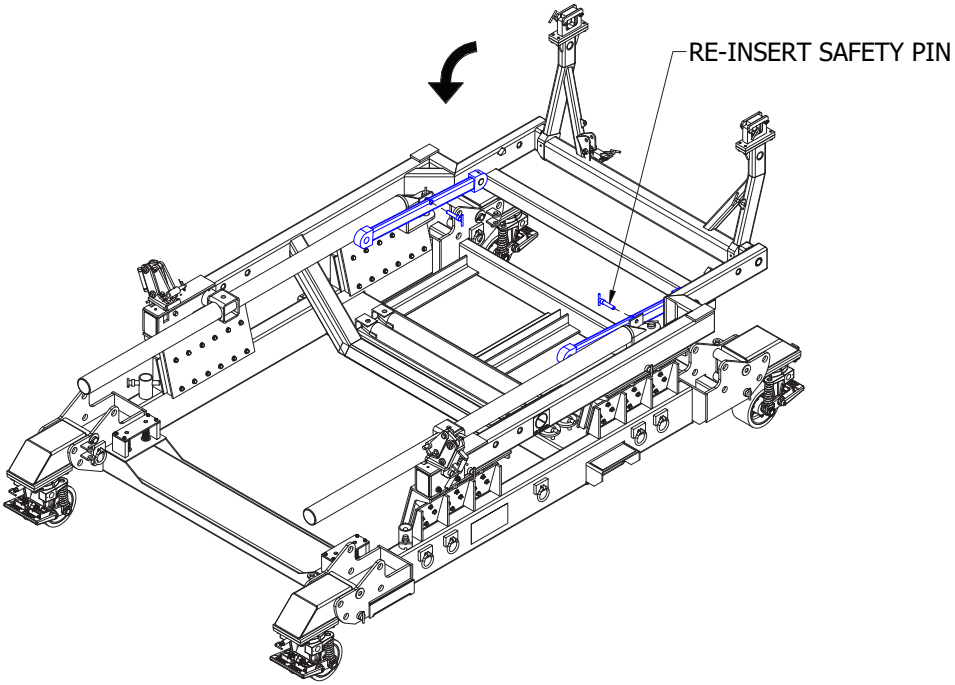


Figure 4.9-4

5). Remove Safety Pin on the AFT Mount Support, and rotate the Aft Mount Support into stowage position.

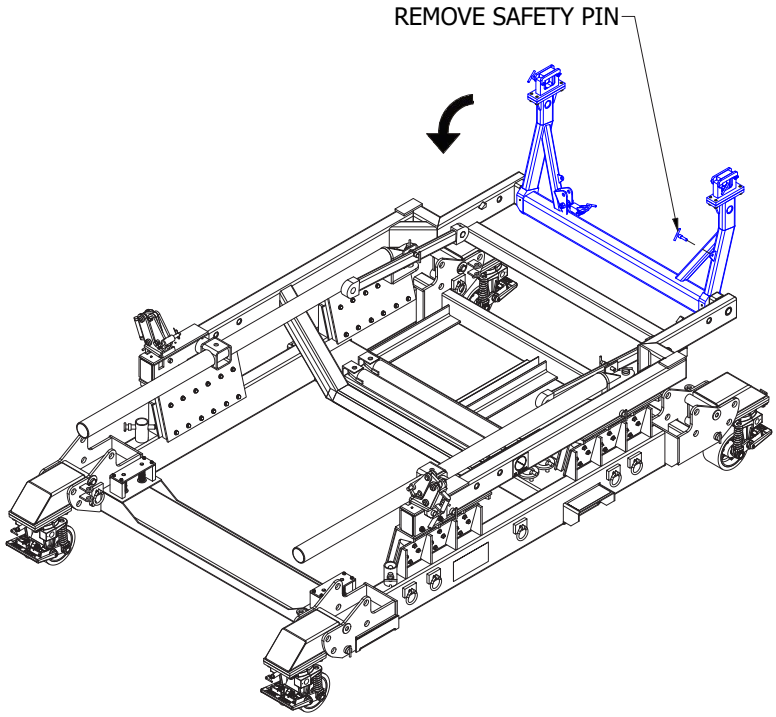


Figure 4.9-5

6). Re-insert Safety Pin and re-install AFT Spindles as shown.

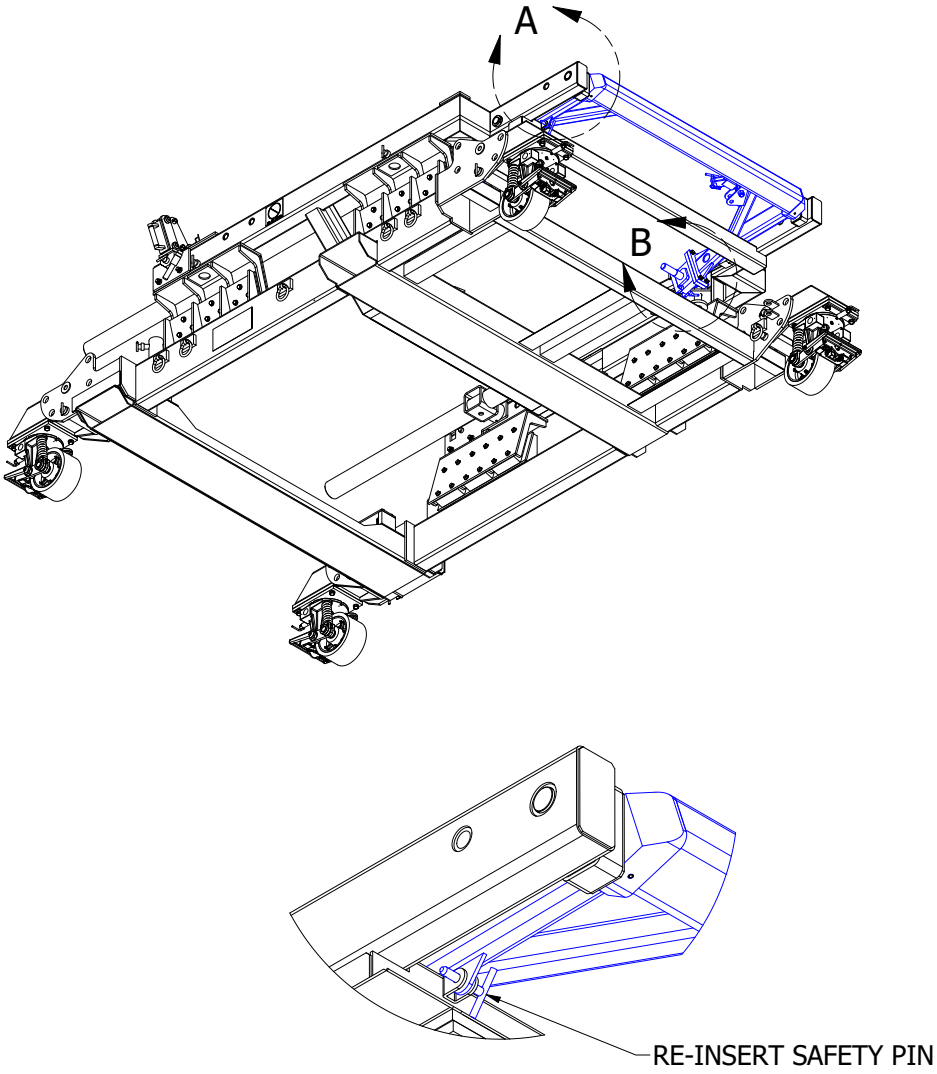


Figure 4.9-6

7). Remove the Forward Mount and store in storage position. Secure the Forward Mount with Safety Pin.

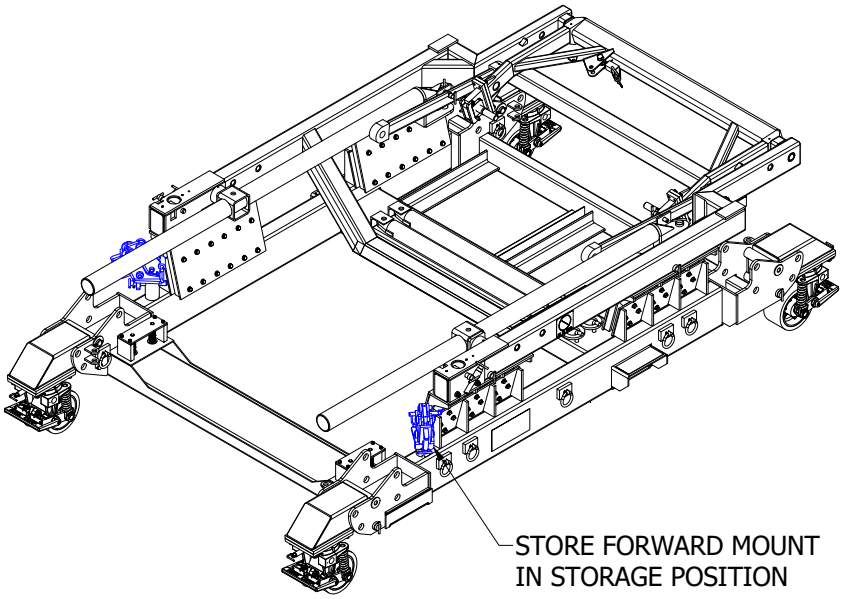


Figure 4.9-7

8). Put casters in stowage position.

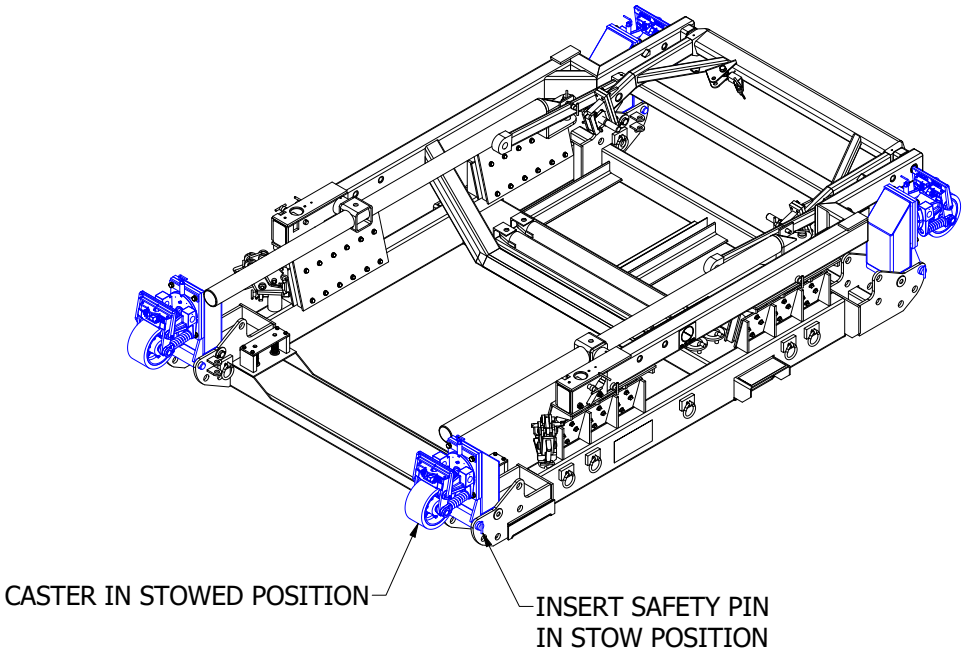


Figure 4.9-8

4.10 Stacking

The empty stands in stowage position with bootstrap kit removed, can be stacked up to four stands using wood beams and/or dunnage for transportation.

Prior to stacking the empty stands, each unit must be stowed in addition to removing bootstrap kit and components that cause the unit to exceed the maximum allowable height shown below. Refer to Section 4.9 for stowing empty stand procedure.

- Length: 163-1/8”
- Width: 96-3/4”
- Height: 31-1/2”

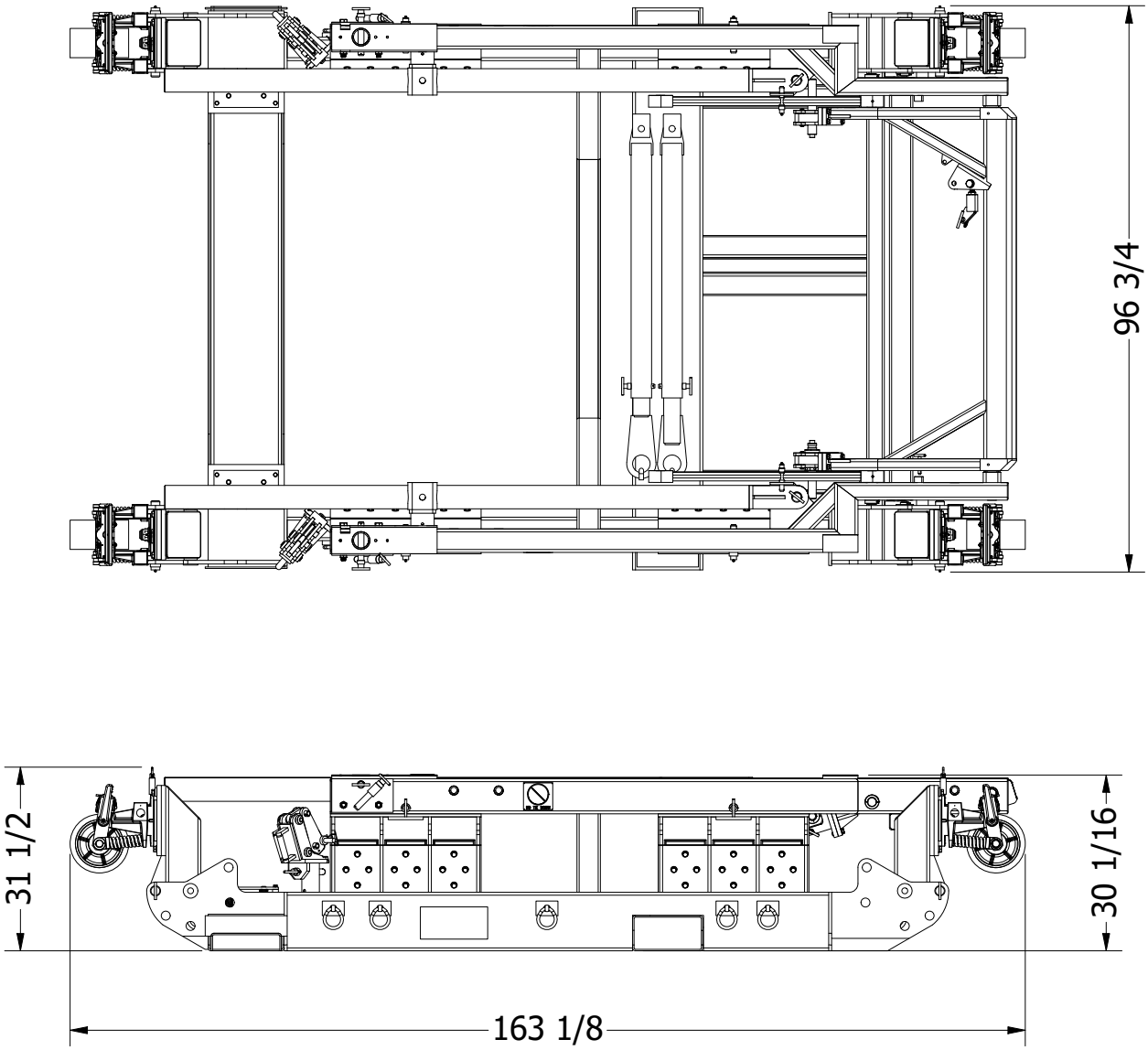


Figure 4.10-1 Maximum Dimensions per Stand

NOTICE

The units, which are stacked, must be strapped or fasten together in a secured manner when moving or transporting two or more units.

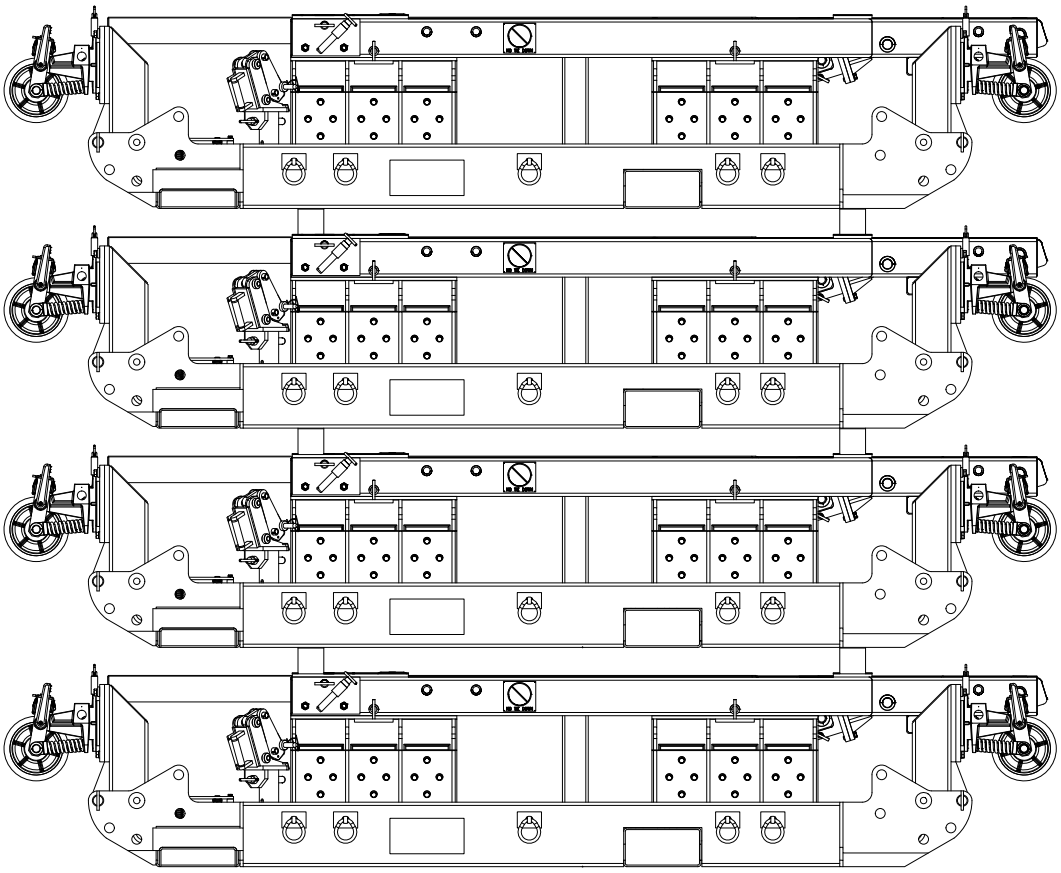


Figure 4.10-2 Stacking Maxium of Four Stands

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 AM-1928 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 AM-1928 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.

CE

ADVANCED GROUND SYSTEMS ENGINEERING LLC

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:	Transport-Shipping-Storage, CF6-80
Model:	AM-1928
Part Number:	AM-1928-155 Base
	AM-1928-156 Cradle
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:

- GE Specification 1932Q for Shipping/Storage Stand, 1985/05/07
- 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 manufacturers 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 - AM-1928-155
Transport Base Assembly

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-155	-	Transport Base Stand (Illustrated in Figure 7.1-1)		
1	AM-1928-A15	1	Transport Base Weldment	-	-
2	AM-1928-A18	4	Caster Mount Weldment	-	-
3	AM-1928-A20	2	Shock Mount Weldment	-	-
4	AM-1928-B20	2	Shock Mount Weldment	-	-
7	AM-1928-E20	1	Fork Channel	-	-
8	AM-1928-C13	4	Spring Guide	-	-
9	AM-1928-D13	2	Cap Plate	-	-
10	AM-1803-732	4	Pivot Pin	2	5 Years
11	AM-2079-2	4	Caster Assembly	1	5 Years
12	AM-2287	2	Placard - Tiedown	-	-
14	AM-91000-58T	2	Safety Pin	1	5 Years
15	AM-91500-160T	4	Safety Pin	2	5 Years
16	811	4	Compression Spring	-	-
17	AGSE-S00304-P04	12	Shock Mount	-	5 Years
18	PMP-10111	14	Tie Down Ring 10,000 Lbs Cap.	-	-
19	Commercial	8	Hex Head Cap Screw - 5/8”-11 UNC x 1-1/2” Lg. Gr. 5 - Zinc Plt	-	-
20	Commercial	8	Hex Head Cap Screw 5/8”-11 UNC x 1-3/4”Lg. Gr. 5 - Zinc Plt	-	-
21	Commercial	16	Lock Washer - 5/8” ID - Zinc Plt	-	-
22	S00105-08F016A01	96	Hex Head Cap Screw w/ Nylon Patch, 1/2”-20 UNF Gr. 5 - Zinc Plt	-	-
24	Commercial	96	Flat Washer - 1/2” ID x 1.06” OD x .095” Thk, Zinc Plt	-	-
25	Commercial	8	Hex Head Cap Screw 3/8”-16 UNC x 1” Lg. Gr. 5 - Zinc Plt	-	-

IPB Figure 1 - AM-1928-155
Transport Base Assembly (Cont.)

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
26	Commercial	8	Lock Washer - 3/8” ID - Zinc Plt	-	-
27	Commercial	4	Flat Washer - 1-1/2” ID - Zinc Plt	-	-
28	Commercial	4	Cotter Pin - 3/16” Dia x 2” Lg. Zinc Plt	-	-
29	6970T51	A/R	Non-Skid Tape	-	-
30	AM-91000-82T	2	Safety Pin	1	5 Years
31	AM-1928-G20	2	Telescoping Tow Bar Assembly	-	

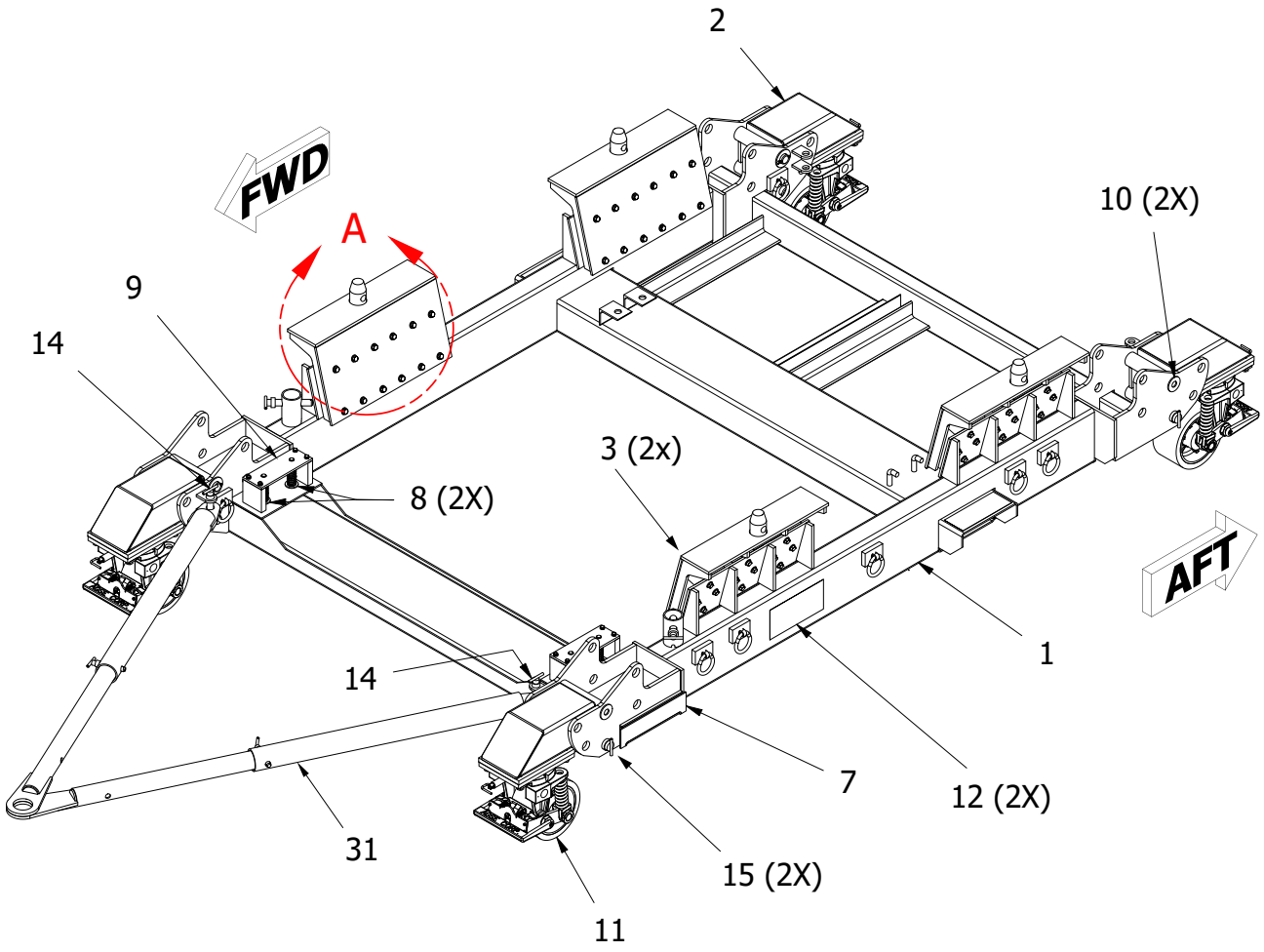
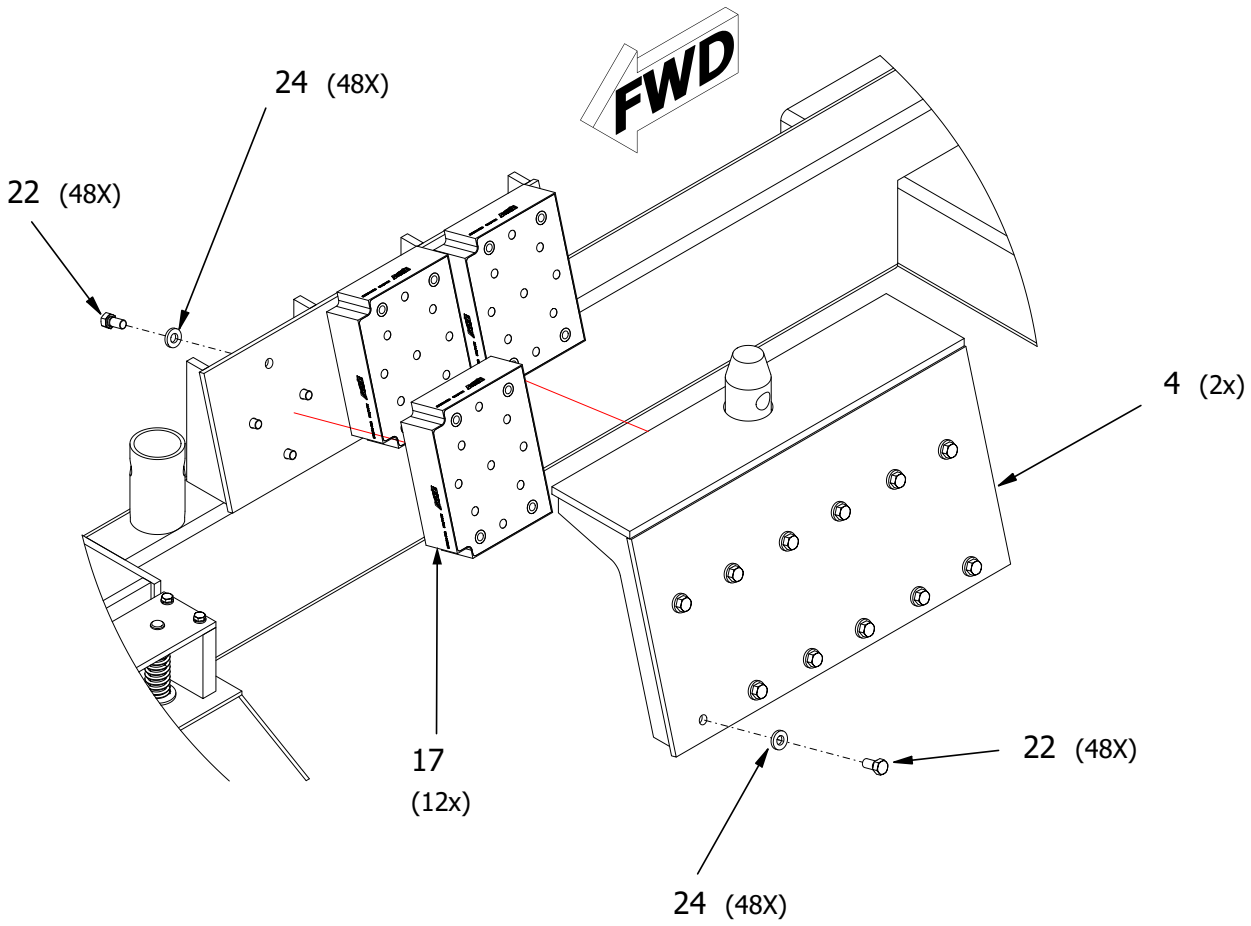


Figure 7.1-1 AM-1928-155 Transport Base Assembly



DETAIL A

Figure 7.1-2 AM-1928-155 Shock Mount

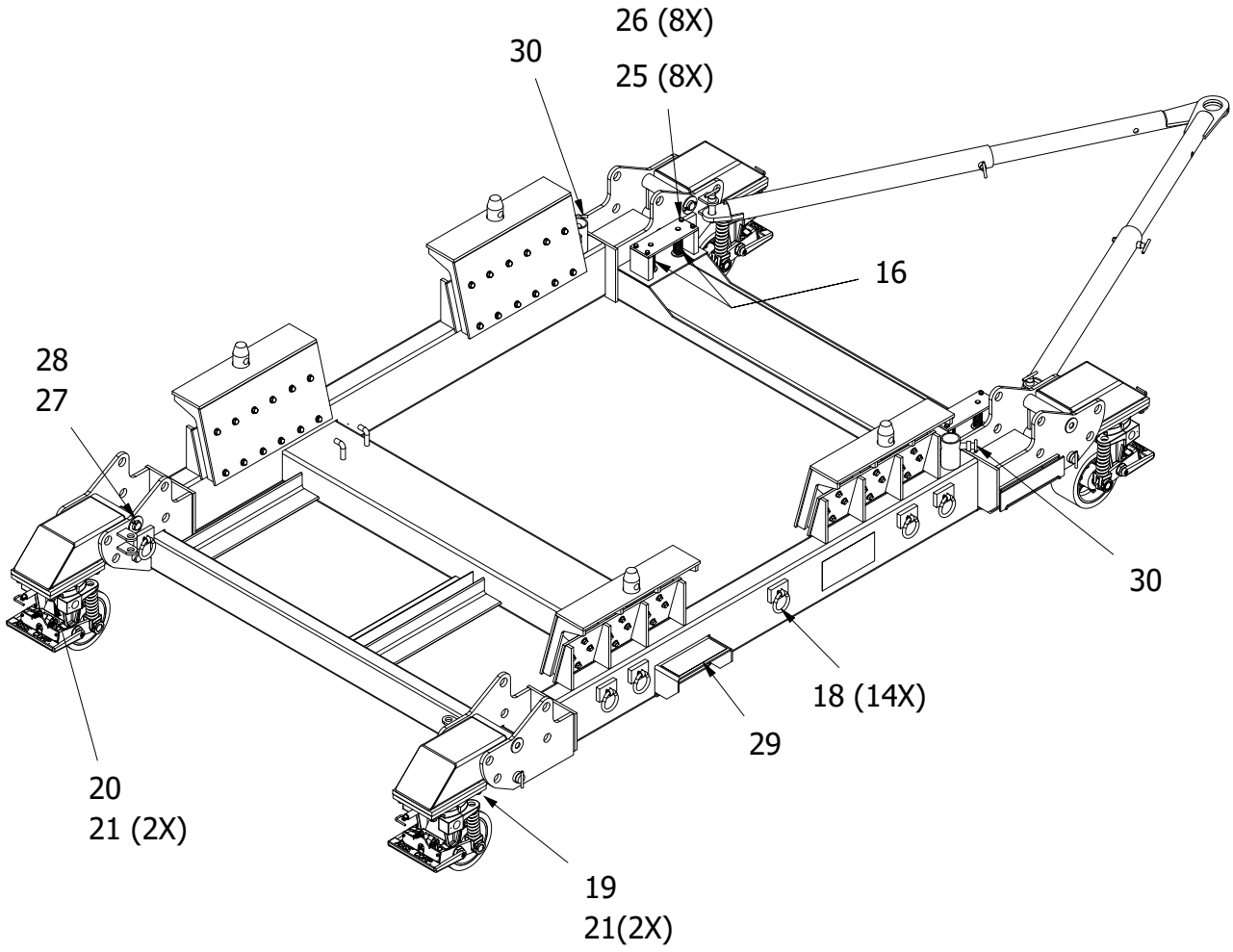


Figure 7.1-2 AM-1928-155 Transport Base Assembly

IPB Figure 2 - AM-1928-155-FO
Transport Base Assembly with Shipping Containers

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-155-FO	-	Transport Base Assembly with Shipping Containers (Illustrated in Figure 7.2-1)		
1	AM-1928-155	1	Transport Base Assembly	-	-
2	AM-2389-3	1	FADEC Shipping Container	-	-
3	AM-2390-3	1	Oil Tank Shipping Container	-	-

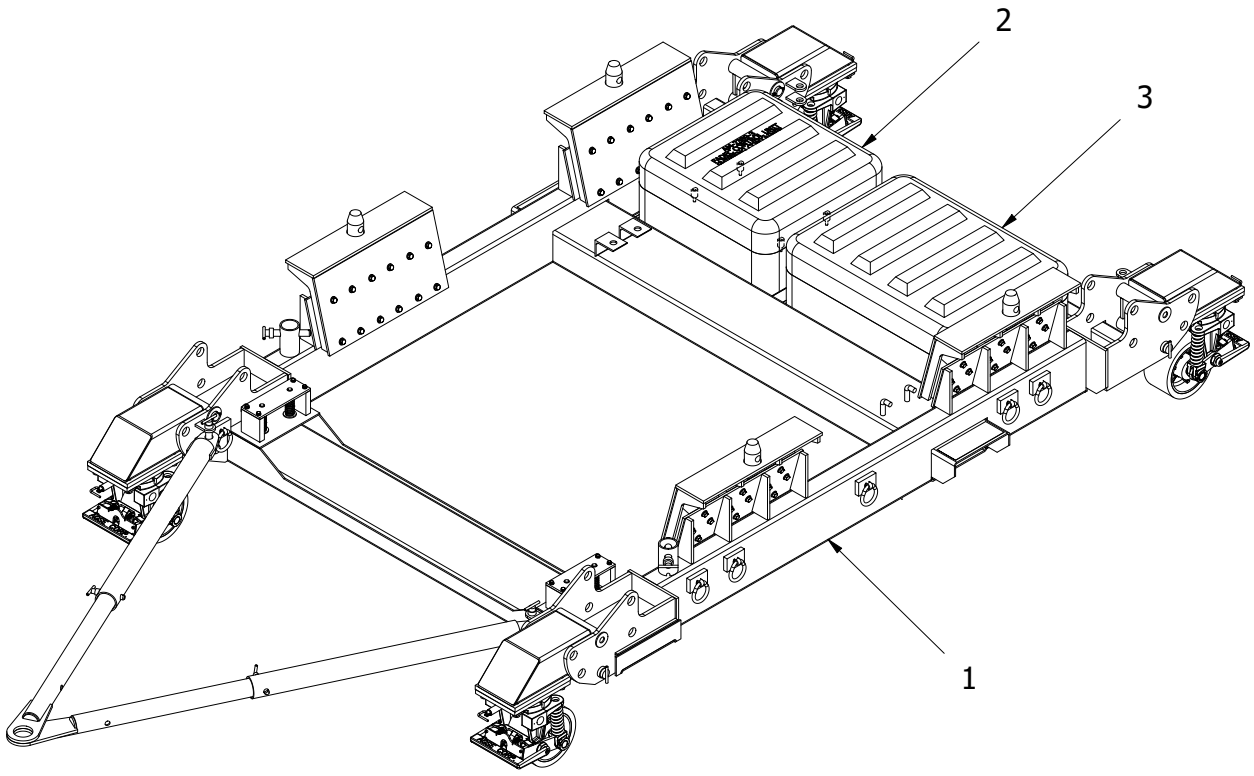


Figure 7.2-1 AM-1928-155-FO Transport Base Assembly with Shipping Containers

IPB Figure 3 - AM-1928-156-80C2
Cradle Assembly without Bootstrap Kit for CF6-80C2

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80C2	-	Cradle Assembly without Bootstrap Adapters for CF6-80C2 (Illustrated in Figure 7.3-1 through 7.3-3)		
1	AM-1928-A6	1	Cradle Weldment	-	-
3	AM-1928-A8	1	Aft Mount Support	-	-
4	AM-1928-B7	2	Pivot Pin, Aft Mount Support	1	5 Years
5	AM-1928-A11	2	Brace	-	-
6	AM-1928-B11	2	Pivot Block	-	-
7	AM-1928-C11	2	Aft Brace	-	-
8	AM-1928-D11	1	Bracket, LH	-	-
9	AM-1928-E11	1	Bracket, RH	-	-
10	AM-1928-G11	2	Pivot Pin, Aft Brace	1	5 Years
11	AM-1928-H11	1	Sway Bar Assembly	-	-
12	AM-90500-20T	1	Safety Pin	1	5 Years
13	AM-90750-40T	2	Safety Pin	1	5 Years
14	AM-91000-66T	4	Safety Pin	2	5 Years
15	AM-91000-80T	2	Safety Pin	1	5 Years
16	AM-91500-88T	2	Safety Pin	1	5 Years
17	AM-2260	6	Placard “No Tie Down”	-	-
18	10595K12	4	Grease Fitting	-	-
19	91247A859	4	Hex Head Cap Screw - 3/4”-10 UNC x 6” Lg. Gr. 5 - Zinc Plt	-	-
20	91342A230	4	Thin Nylon-Insert Lock Nut 3/4”-10 UNC - Gr. 5 - Zinc Plt	-	-
21	93839A865	2	Hex Jam Nut - 1-1/2”-12 UNF Gr. 8 - Zinc Plt	-	-
22	97063A145	2	Flat Washer - 1-1/2” ID - Zinc Plt	-	-
23	CL-24-SS	2	Shaft Collar - 1-1/2” Bore x 2-3/8” OD x 9/16” Width	-	-
24	Commercial	4	Spring Pin - 5/16” Dia. x 4” Lg. Zinc Plt	-	-

IPB Figure 3 - AM-1928-156-80C2 Cradle Assembly without Bootstrap Kit for CF6-80C2 (Cont.)

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
25	Commercial	1	Nylon Insert Lock Nut 3/4-10 UNC Gr. 5 - Zinc Plt	-	-
27	Commercial	1	Flat Washer - 3/4” ID - Zinc Plt	-	-
29	Commercial	8	Hex Head Cap Screw 1/2”-13 UNC x 1-3/4” Lg. Gr. 5 - Zinc Plt	-	-
30	Commercial	8	Lock Washer - 1/2” ID - Zinc Plt	-	-
31	6970T51	A/R	Non-Skid Tape	-	-
32	Commercial	1	Hex Head Cap Screw 3/4”-10 UNC x 3-1/2” Lg. Gr. 5 - Zinc Plt	-	-
40	AM-1928-A34	1	Forward Mount Assembly, LH	-	10 Years
41	AM-1928-B34	1	Forward Mount Assembly, RH	-	10 Years
42	AM-1928-A10	1	Aft Mount Subassembly, LH	-	10 Years
43	AM-1928-B10	1	Aft Mount Subassembly, RH	-	10 Years

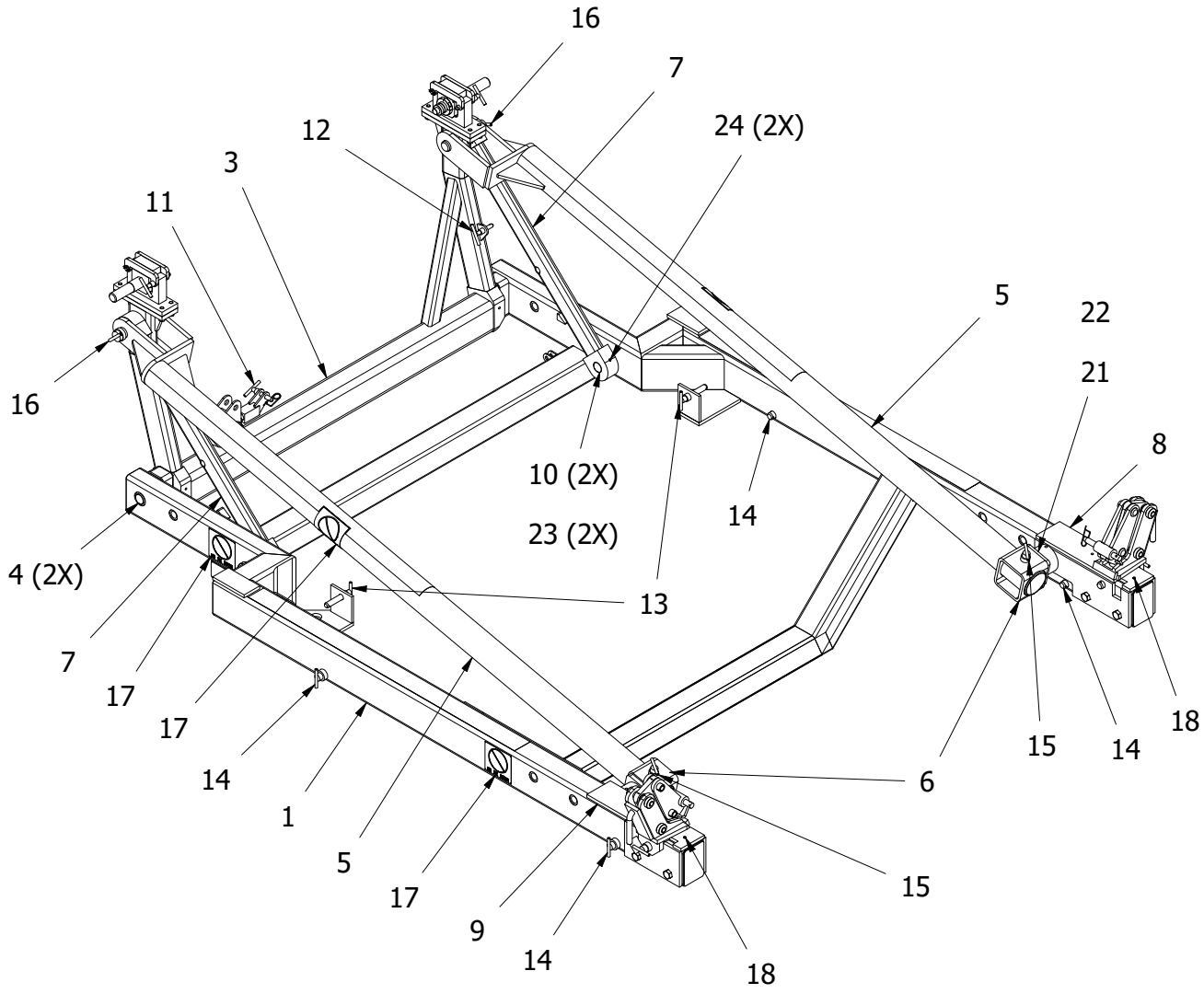


Figure 7.3-1 AM-1928-156-80C2 Cradle Assembly w/o Bootstrap Adapter for CF6-80C2

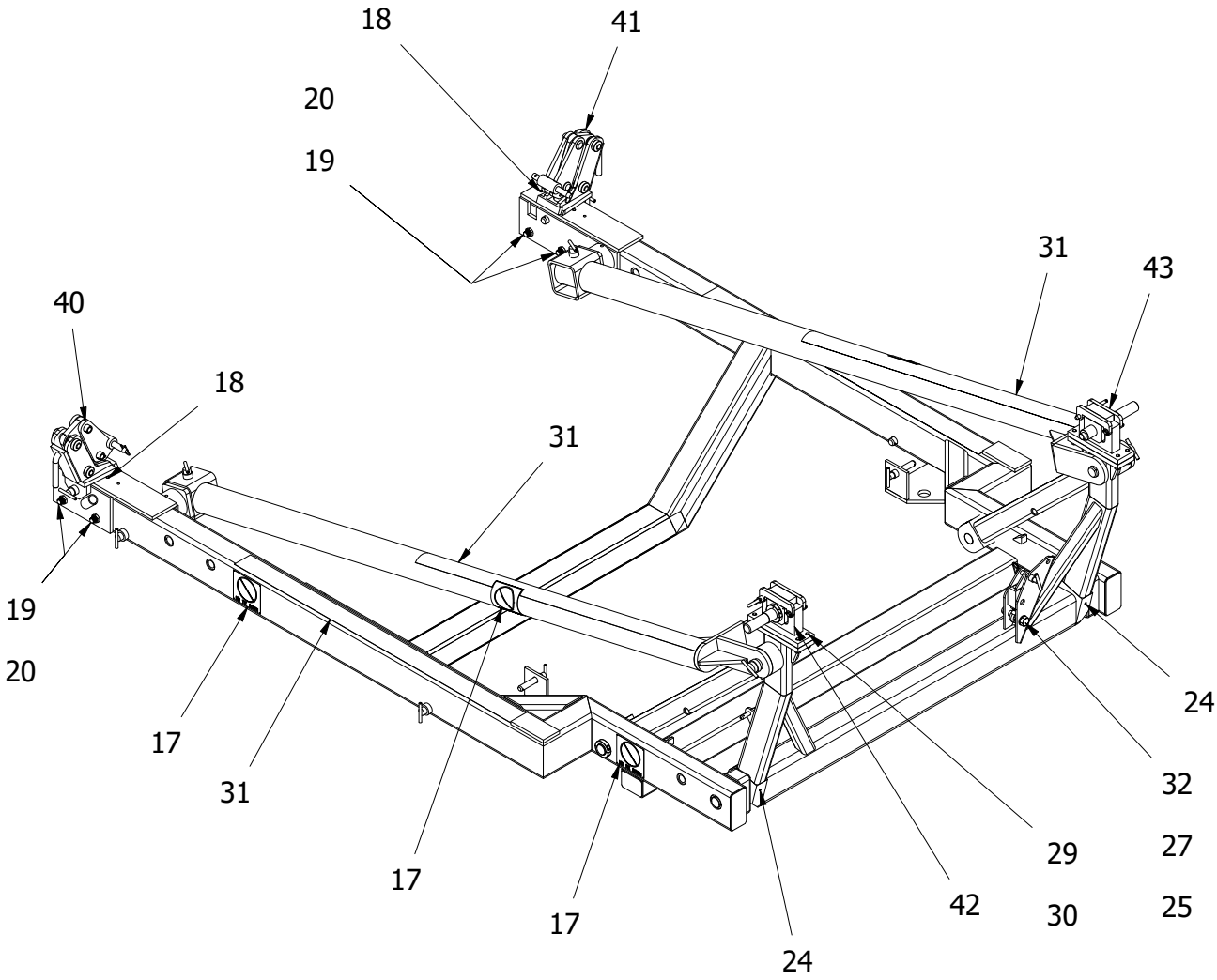


Figure 7.3-2 AM-1928-156-80C2 Cradle Assembly w/o Bootstrap Adapter for CF6-80C2

IPB Figure 4 - AM-1928-156-80E1
Cradle Assembly without Bootstrap Kit for CF6-80E1

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80E1	-	Cradle Assembly without Bootstrap Adapters for CF6-80E1 (Illustrated in Figure 7.4-1 through 7.4-3)		
1	AM-1928-A6	1	Cradle Weldment	-	-
3	AM-1928-A8	1	Aft Mount Support	-	-
4	AM-1928-B7	2	Pivot Pin, Aft Mount Support	1	5 Years
5	AM-1928-A11	2	Brace	-	-
6	AM-1928-B11	2	Pivot Block	-	-
7	AM-1928-C11	2	Aft Brace	-	-
8	AM-1928-D11	1	Bracket, LH	-	-
9	AM-1928-E11	1	Bracket, RH	-	-
10	AM-1928-G11	2	Pivot Pin, Aft Brace	-	-
11	AM-1928-H11	1	Sway Bar Assembly	-	-
12	AM-90500-20T	1	Safety Pin	1	5 Years
13	AM-90750-40T	2	Safety Pin	1	5 Years
14	AM-91000-66T	4	Safety Pin	2	5 Years
15	AM-91000-80T	2	Safety Pin	1	5 Years
16	AM-91500-88T	2	Safety Pin	1	5 Years
17	AM-2260	6	Placard “No Tie Down”	-	-
18	10595K12	4	Grease Fitting	-	-
19	91247A859	4	Hex Head Cap Screw 3/4”-10 UNC x 6” Lg. Gr. 5 - Zinc Plt	-	-
20	91342A230	4	Thin Nylon-Insert Lock Nut 3/4”-10 UNC - Gr. 5 - Zinc Plt	-	-
21	93839A865	2	Hex Jam Nut - 1-1/2”-12 UNF Gr. 8 - Zinc Plt	-	-
22	97063A145	2	Flat Washer - 1-1/2” ID - Zinc Plt	-	-
23	CL-24-SS	2	Shaft Collar - 1-1/2” Bore x 2-3/8” OD x 9/16” Width	-	-
24	Commercial	4	Spring Pin - 5/16” Dia. x 4” Lg. Zinc Plt	-	-

IPB Figure 4 - AM-1928-156-80E1
Cradle Assembly without Bootstrap Kit for CF6-80E1 (Cont.)

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
25	Commercial	1	Nylon Insert Lock Nut 3/4”-10 UNC Gr. 5 - Zinc Plt	-	-
27	Commercial	1	Flat Washer - 3/4” ID - Zinc Plt	-	-
31	6970T51	A/R	Non-Skid Tape	-	-
32	Commercial	1	Hex Head Cap Screw 3/4”-10 UNC x 3-1/2” Lg. Gr. 5 - Zinc Plt	-	-
50	AM-1928-A41	1	Forward Mount Assembly, LH	-	10 Years
51	AM-1928-B41	1	Forward Mount Assembly, RH	-	10 Years
52	AM-2620-B1	1	Aft Mount, LH, No Spindle	-	10 Years
53	AM-2620-C1	1	Aft Mount, RH, No Spindle	-	10 Years
54	AM-1928-E10	1	Aft Mount Spindle Assembly, LH	-	10 Years
55	AM-1928-F10	1	Aft Mount Spindle Assembly, RH	-	10 Years

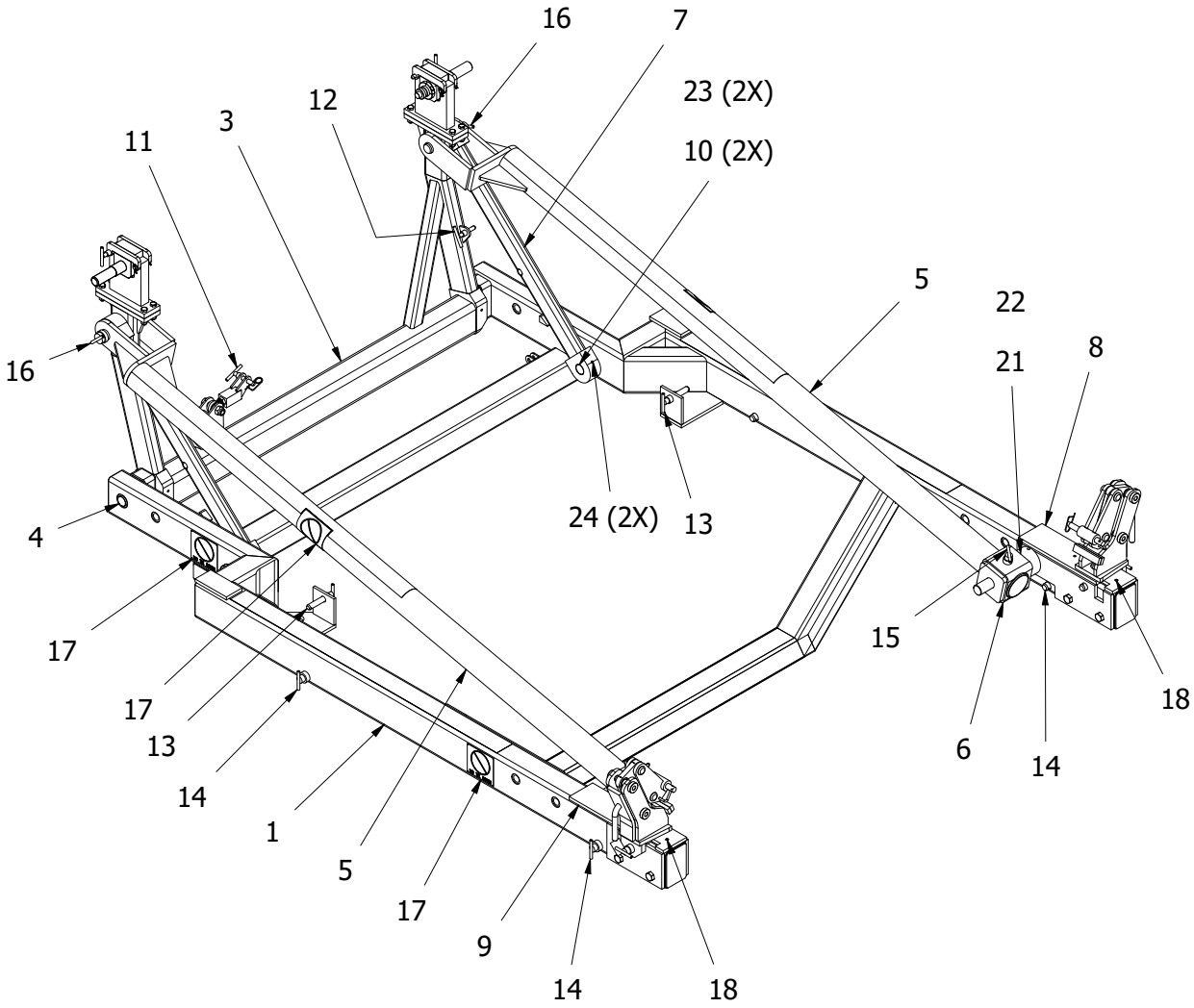


Figure 7.4-1 AM-1928-156-80E1 Cradle Assembly w/o Bootstrap Adapter for CF6-80E1

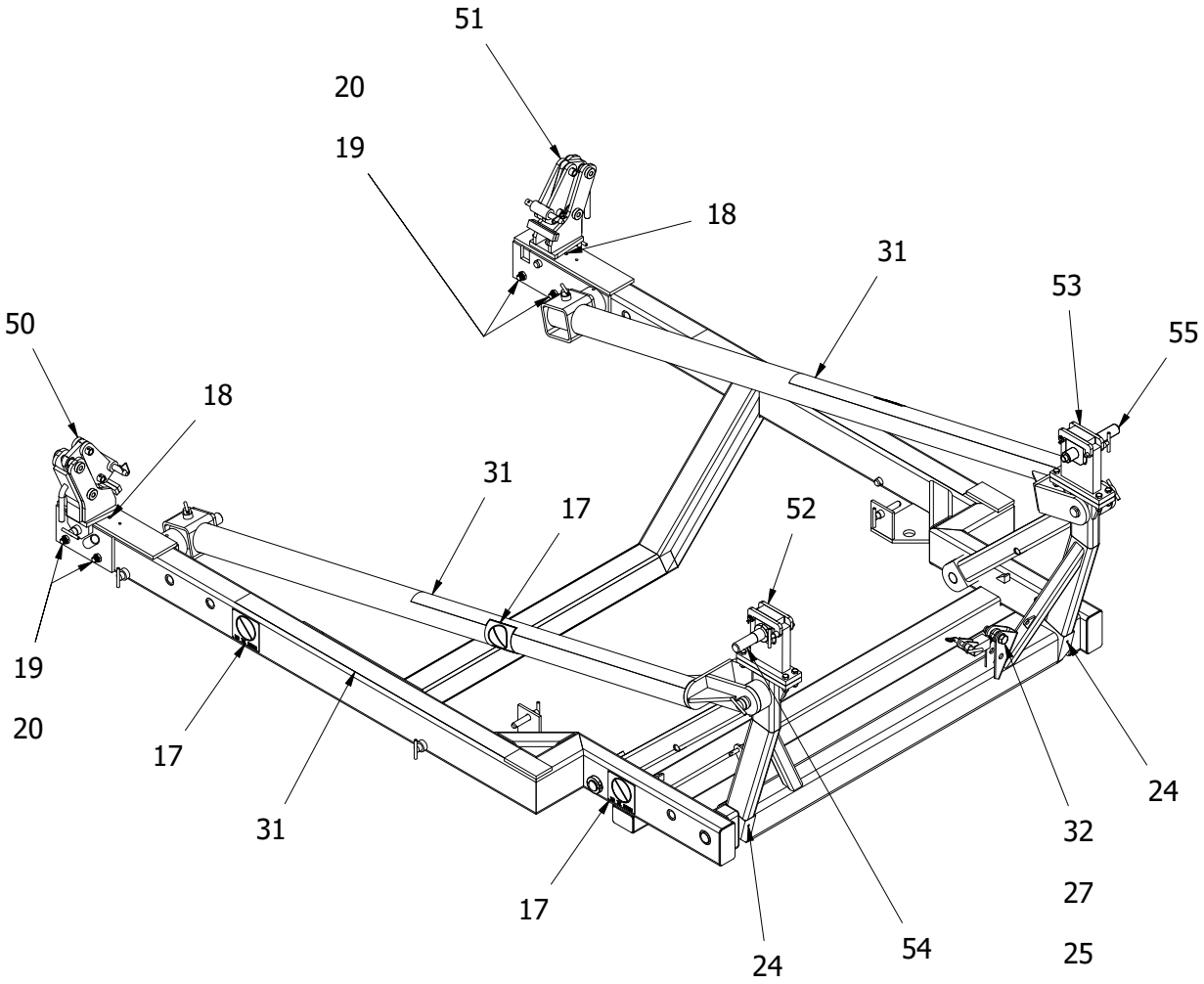


Figure 7.4-2 AM-1928-156-80E1 Cradle Assembly w/o Bootstrap Adapter for CF6-80E1

IPB Figure 5 - AM-1928-156-80A
Cradle Assembly without Bootstrap Kit for CF6-80A/80A2

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80A	-	Cradle Assembly without Bootstrap Adapters for CF6-80A/80A2 (Illustrated in Figure 7.5-1 through 7.5-3)		
1	AM-1928-A6	1	Cradle Weldment	-	-
2	AM-1928-A7	1	Aft Mount Support		
4	AM-1928-B7	2	Pivot Pin, Aft Mount Support	1	5 Years
5	AM-1928-A11	2	Brace	-	-
6	AM-1928-B11	2	Pivot Block	-	-
7	AM-1928-C11	2	Aft Brace	-	-
8	AM-1928-D11	1	Bracket, LH	-	-
9	AM-1928-E11	1	Bracket, RH	-	-
10	AM-1928-G11	2	Pivot Pin, Aft Brace	1	5 Years
11	AM-1928-H11	1	Sway Bar Assembly	-	-
12	AM-90500-20T	1	Safety Pin	1	5 Years
13	AM-90750-40T	2	Safety Pin	1	5 Years
14	AM-91000-66T	4	Safety Pin	2	5 Years
15	AM-91000-80T	2	Safety Pin	1	5 Years
16	AM-91500-88T	2	Safety Pin	1	5 Years
17	AM-2260	6	Placard “No Tie Down”	-	-
18	10595K12	4	Grease Fitting	-	-
19	91247A859	4	Hex Head Cap Screw 3/4”-10 UNC x 6” Lg. Gr. 5 - Zinc Plt	-	-
20	91342A230	4	Thin Nylon-Insert Lock Nut 3/4”-10 UNC Gr. 5 - Zinc Plt	-	-
21	93839A865	2	Hex Jam Nut - 1-1/2”-12 UNF Gr. 8 - Zinc Plt	-	-
22	97063A145	2	Flat Washer - 1-1/2” ID - Zinc Plt	-	-
23	CL-24-SS	2	Shaft Collar, 1.5” Bore x 2-3/8” OD x 9/16” Width	-	-
24	Commercial	4	Spring Pin - 5/16” Dia. x 4” Lg. Zinc Plt	-	-

IPB Figure 5 - AM-1928-156-80A
Cradle Assembly without Bootstrap Kit for CF6-80A/80A2 (Cont.)

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
25	Commercial	1	Nylon Insert Lock Nut 3/4”-10 UNC Gr. 5 - Zinc Plt	-	-
26	Commercial	1	Hex Head Cap Screw 3/4”-10 UNC x 3” Lg. Gr. 5 - Zinc Plt	-	-
27	Commercial	1	Flat Washer - 3/4” ID - Zinc Plt	-	-
28	Commercial	8	Hex Head Cap Screw 1/2-13 UNC x 1.5” Lg. Gr. 5 - Zinc Plt	-	-
30	Commercial	8	Lock Washer - 1/2” ID - Zinc Plt	-	-
31	6970T51	A/R	Non-Skid Tape	-	-
60	AM-1928-A12	2	Forward Mount Assembly	-	10 Years
61	AM-1928-A9	1	Aft Mount Assembly, LH	-	10 Years
62	AM-1928-B9	1	Aft Mount Assembly, RH	-	10 Years
63	AM-1928-B12	4	Safety Pin	2	5 Years
65	AM-2412-A1	2	FWD Adapter	-	10 Years
66	AM-2412-B1	2	AFT Adapter	-	10 Years

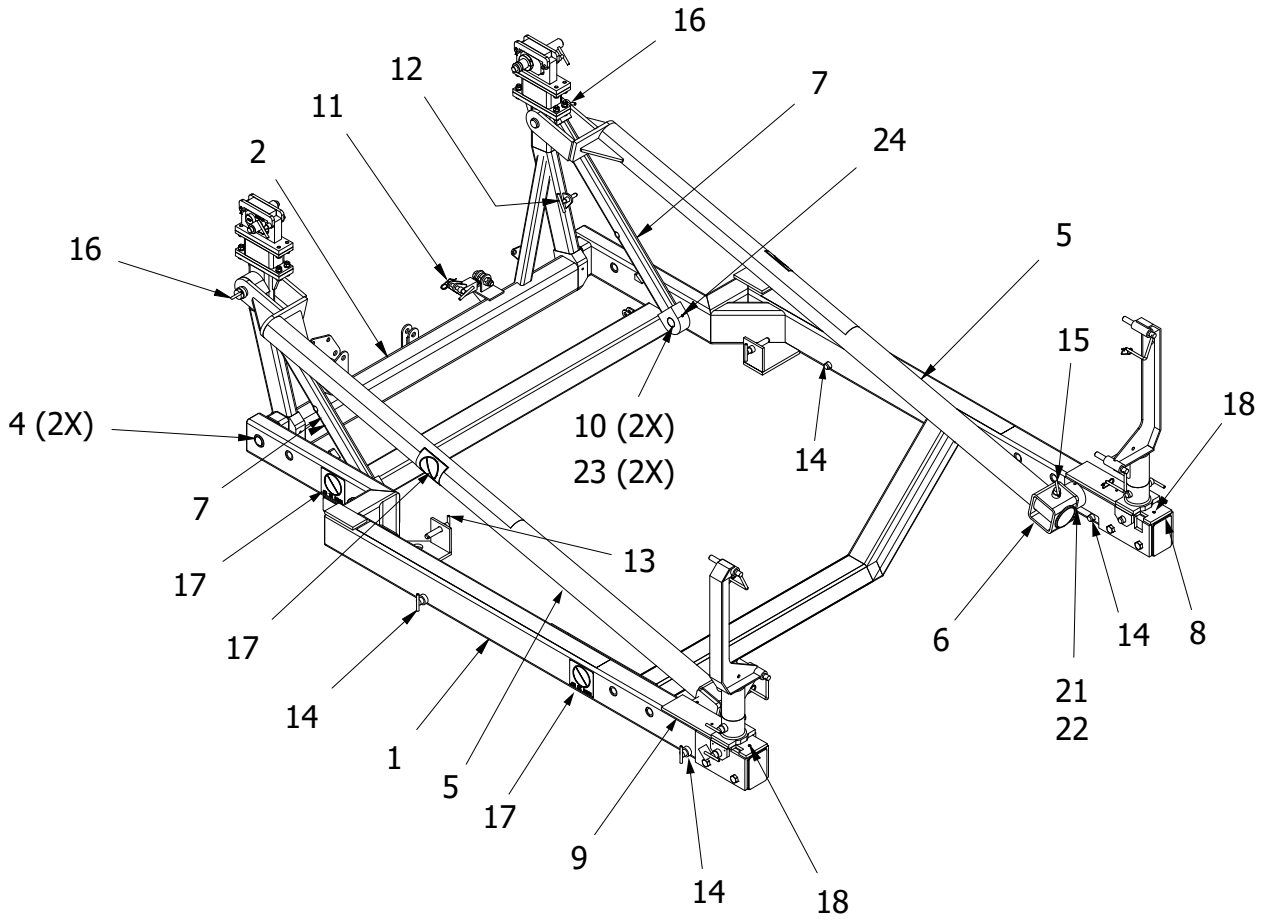


Figure 7.5-1 AM-1928-156-80A Cradle Assembly w/o Bootstrap Adapter for CF6-80A

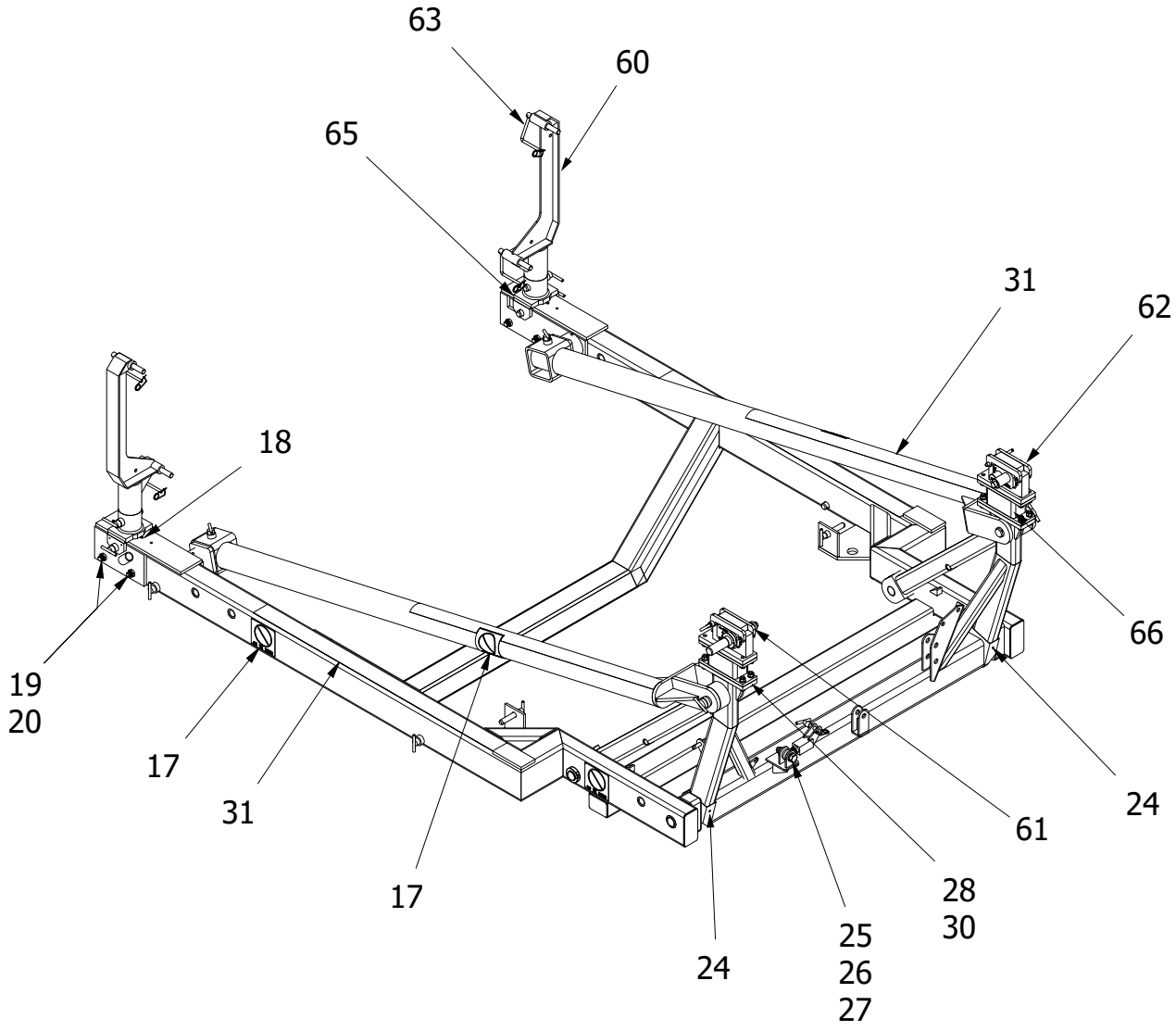


Figure 7.5-2 AM-1928-156-80A Cradle Assembly w/o Bootstrap Adapter for CF6-80A

IPB Figure 6 - AM-1928-156-80C2-A
Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine used on Airbus

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80C2-A	-	Cradle Assembly with Bootstrap Adapters for CF6-80C2 used on Airbus (Figure 7.6-1)		
1	AM-1928-156-80C2	1	Cradle Assembly without Bootstrap Adapters for CF6-80C2 Engine	-	-
2	AM-1928-910	1	Bootstrap Adapter Kit for Airbus, CF6-80C2/80E1 Engine	-	-

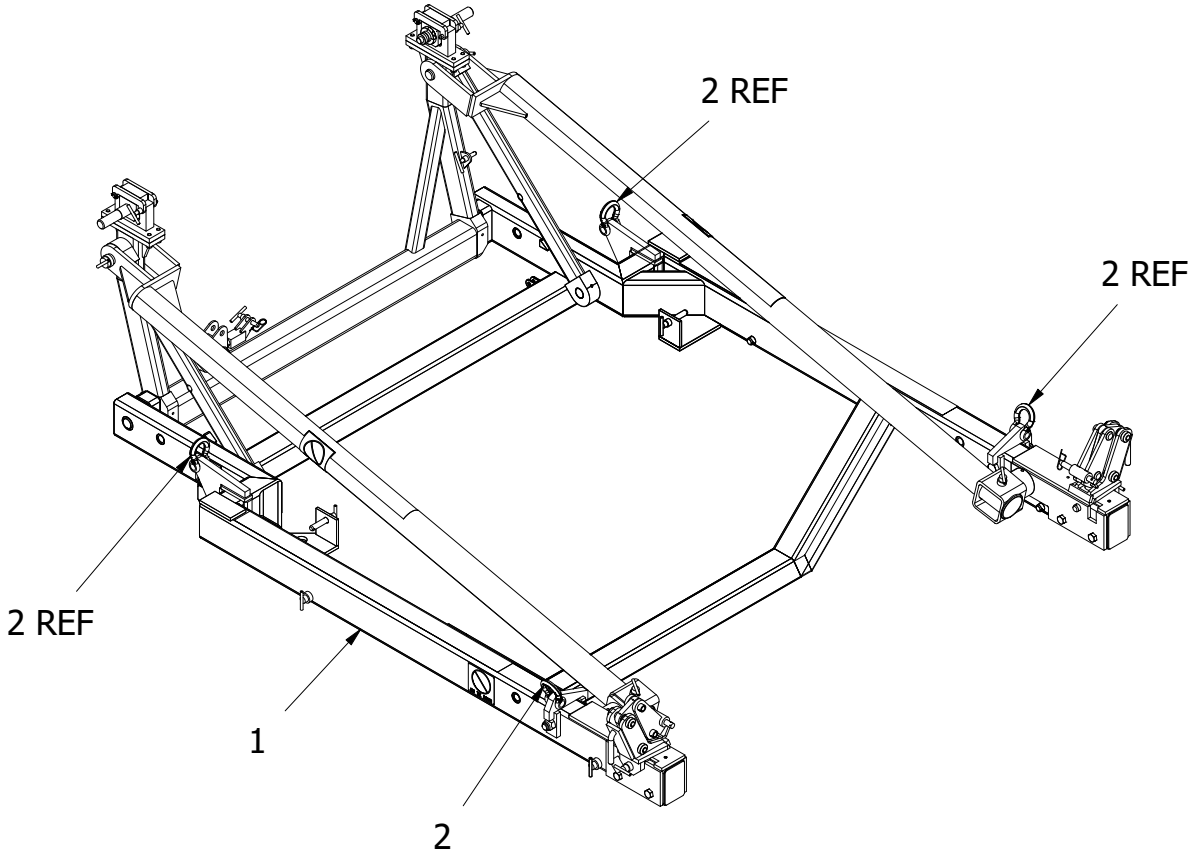


Figure 7.6-1 AM-1928-156-80C2-A Cradle Assembly with Bootstrap Adapters for CF6-80C2

IPB Figure 7 - AM-1928-156-80C2-B
Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine used on Boeing

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80C2-B	-	Cradle Assembly with Bootstrap Adapters for CF6-80C2 used on Boeing (Illustrated in Figure 7.7-1)		
1	AM-1928-156-80C2	1	Cradle Assembly without Bootstrap Adapters for CF6-80C2 Engine	-	-
2	AM-1928-900	1	Bootstrap Adapter Kit for Boeing, CF6-80C2/80A/80A2 Engine	-	-

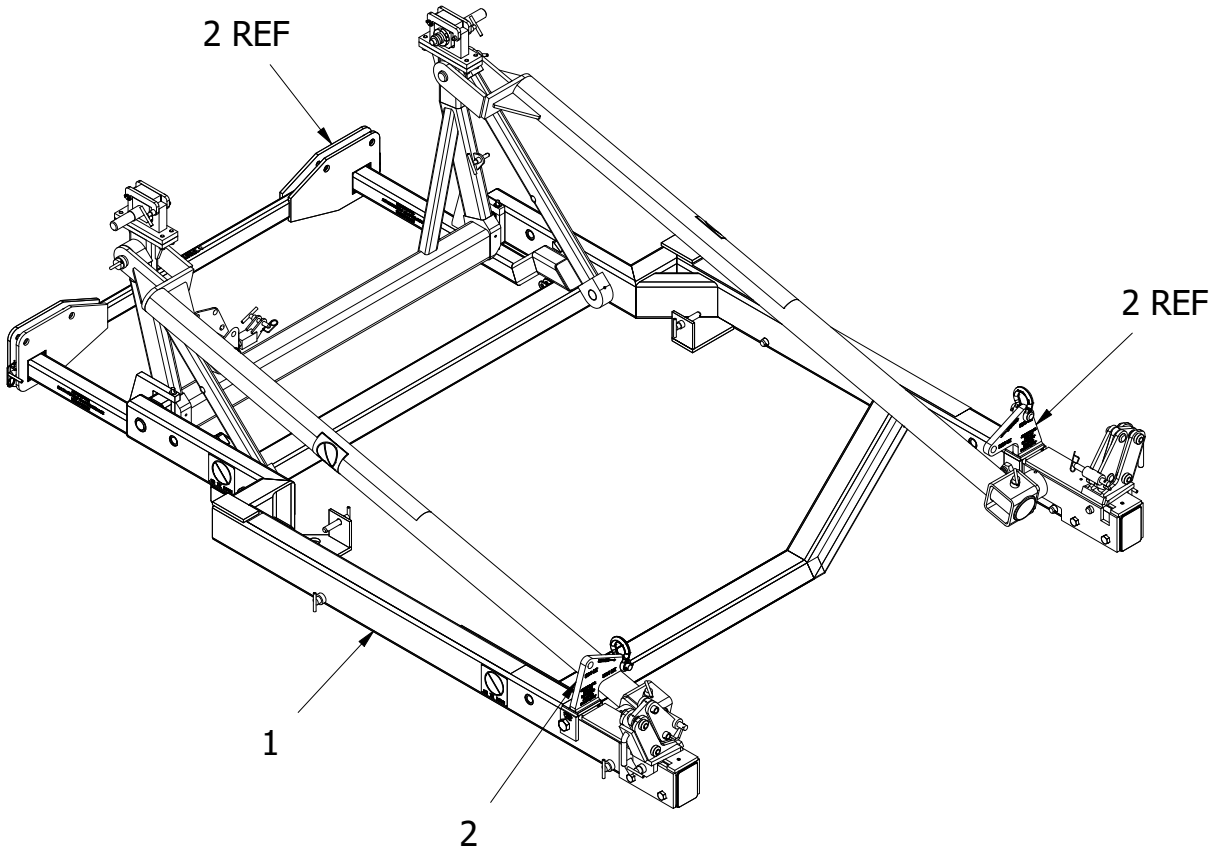


Figure 7.7-1 AM-1928-156-80C2-B Cradle Assembly with Bootstrap Adapters for CF6-80C2

IPB Figure 8 - AM-1928-156-80C2-M
Cradle Assembly with Bootstrap Kit for CF6-80C2 Engine used on MD-11

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80C2-M	-	Cradle Assembly with Bootstrap Adapters for CF6-80C2 used on MD-11 (Illustrated in Figure 7.8-1)		
1	AM-1928-156-80C2	1	Cradle Assembly without Bootstrap Adapters for CF6-80C2 Engine	-	-
2	AM-1928-930	1	Bootstrap Adapter Kit for MD-11 CF6-80C2 Engine	-	-

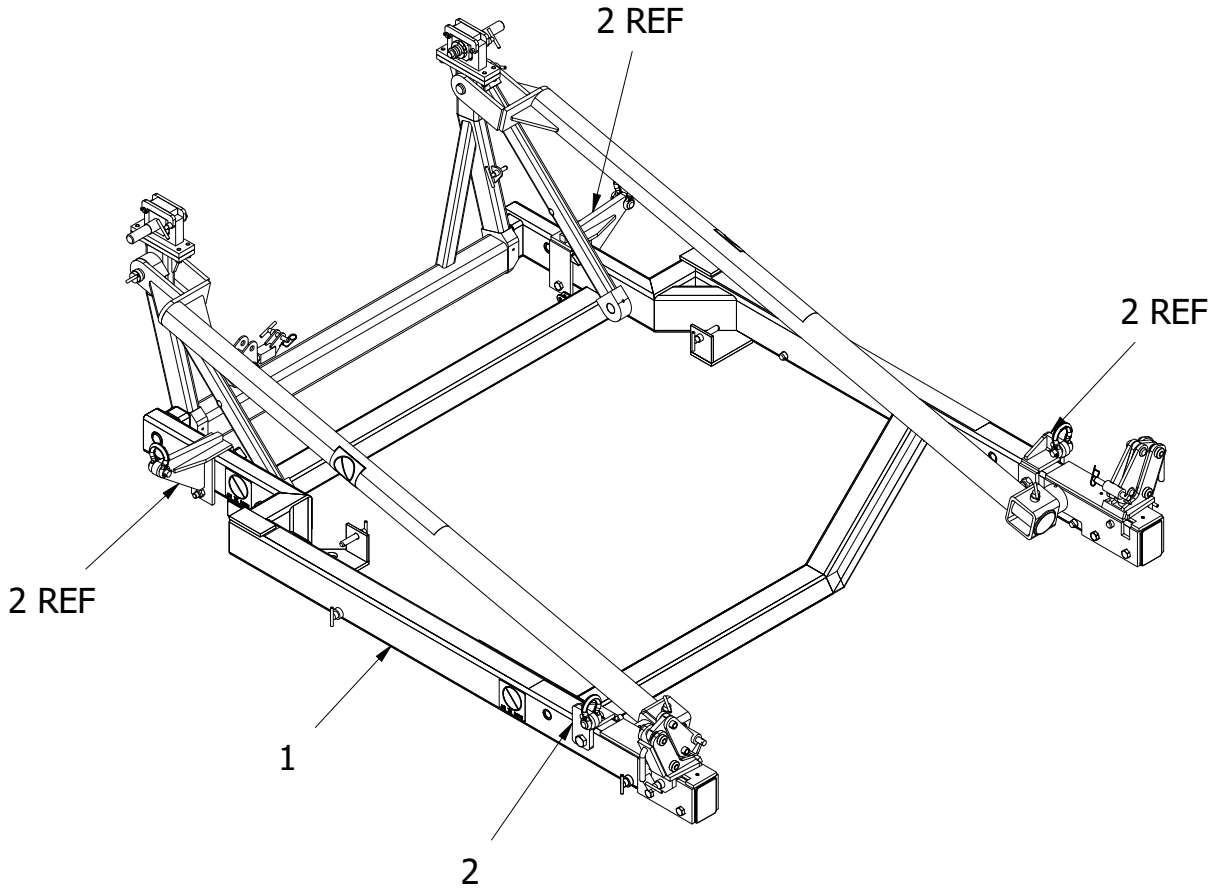


Figure 7.8-1 AM-1928-156-80C2-M Cradle Assembly with Bootstrap Adapters for CF6-80C2

IPB Figure 9 - AM-1928-156-80E1-A
Cradle Assembly with Bootstrap Kit for CF6-80E1 Engine used on Airbus

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80E1-A	-	Cradle Assembly with Bootstrap Adapters for CF6-80E1 used on Airbus (Illustrated in Figure 7.9-1)		
1	AM-1928-156-80E1	1	Cradle Assembly without Bootstrap Adapters for CF6-80E1 Engine	-	-
2	AM-1928-910	1	Bootstrap Adapter Kit for Airbus CF6-80C2/80E1 Engine	-	-

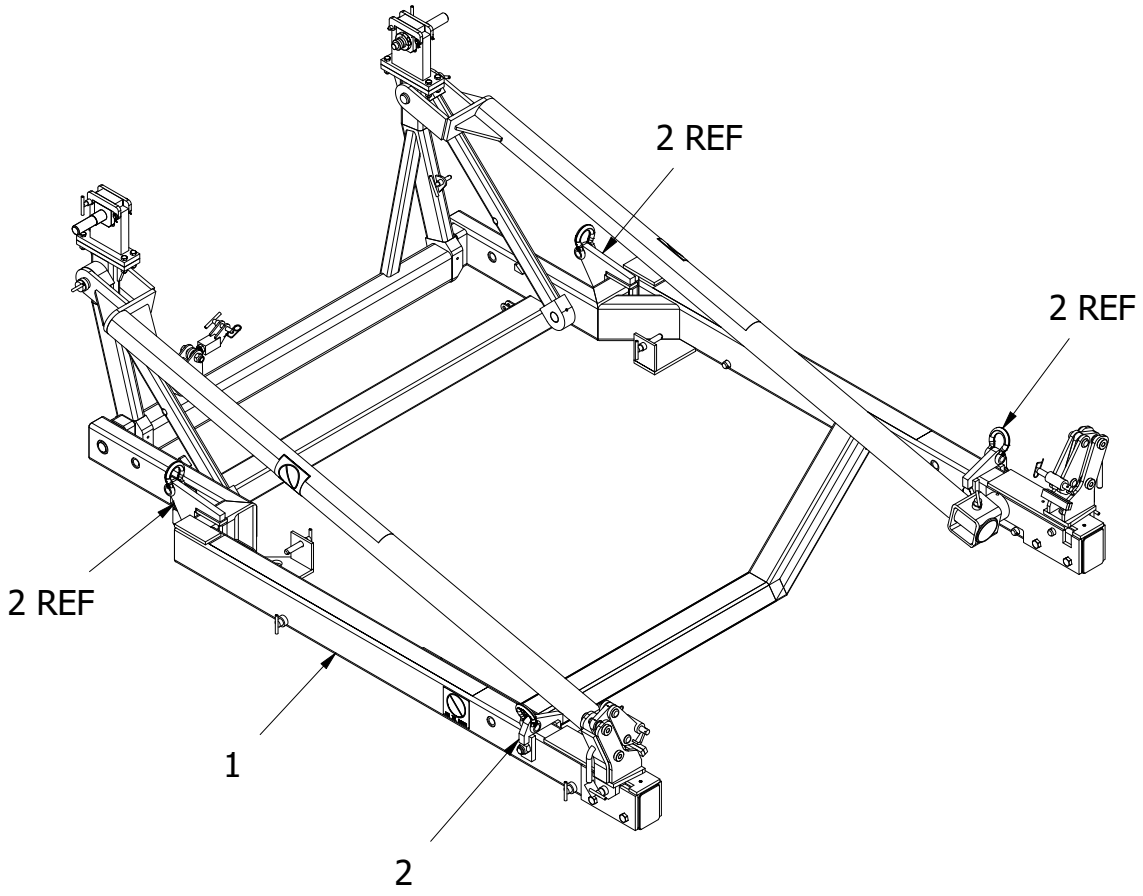


Figure 7.9-1 AM-1928-156-80E1-A Cradle Assembly with Bootstrap Adapters for CF6-80E1

IPB Figure 10 - AM-1928-156-80A-B Cradle Assembly with Bootstrap Kit for CF6-80A/80A2 Engine used on Boeing

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-156-80A-B	-	Cradle Assembly with Bootstrap Adapters for CF6-80A/80A2 used on Boeing (Illustrated in Figure 7.10-1)		
1	AM-1928-156-80A	1	Cradle Assembly without Bootstrap Adapters for CF6-80A/80A2 Engine	-	-
2	AM-1928-900	1	Bootstrap Adapter Kit for Boeing CF6-80C2/80A/80A2 Engine	-	-

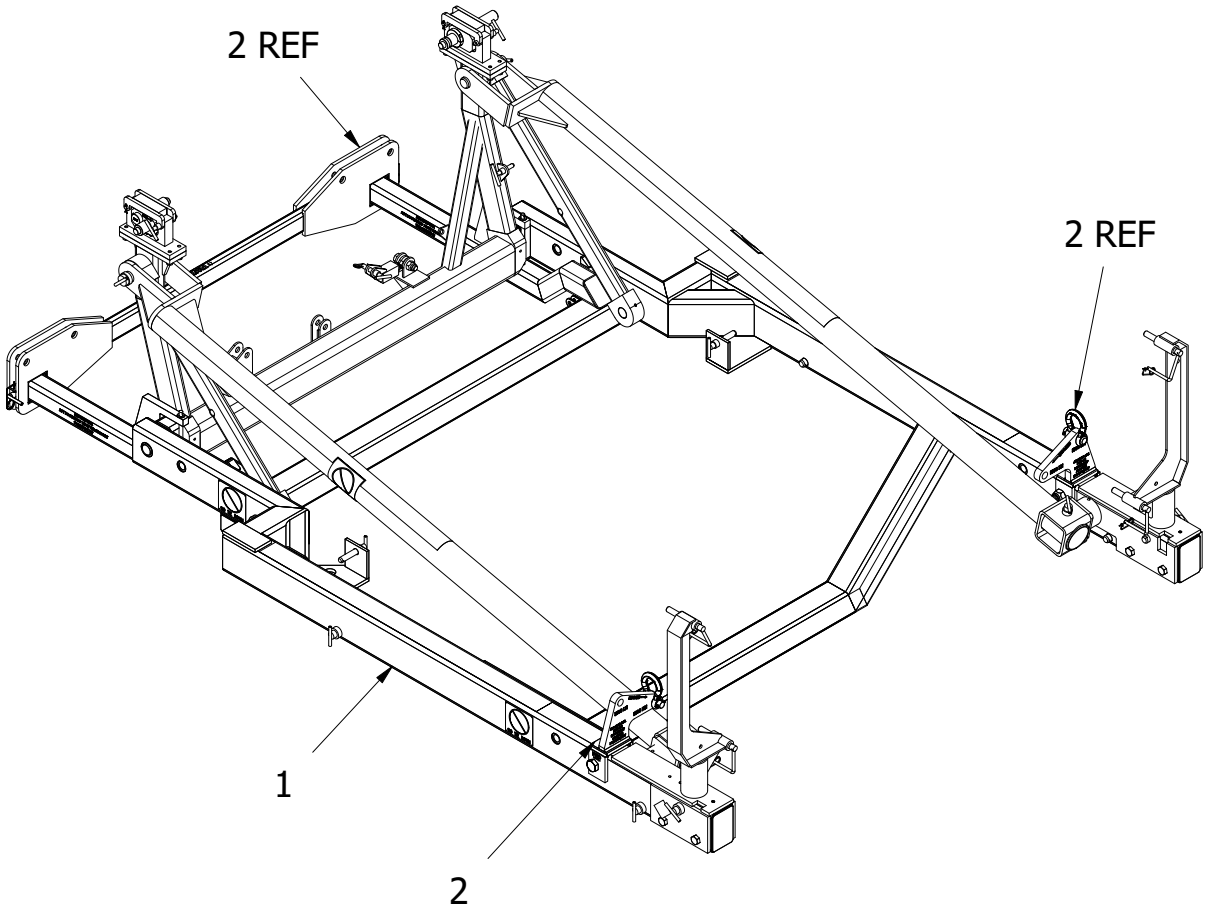


Figure 7.10-1 AM-1928-156-80A-B Cradle Assembly with Bootstrap Adapters for CF6-80A

IPB Figure 11 - AM-1928-900
Bootstrap Kit for Boeing

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-900	-	Bootstrap Kit for Boeing, CF6-80C2/80A/80A2 Engine Boeing (Illustrated in Figure 7.11-1)		
1	AM-1928-A22	1	Forward Bootstrap Adapter, LH	-	10 Years
2	AM-1928-B22	1	Forward Bootstrap Adapter, RH	-	10 Years
3	AM-1928-C22	1	Aft Bootstrap Adapter	-	10 Years

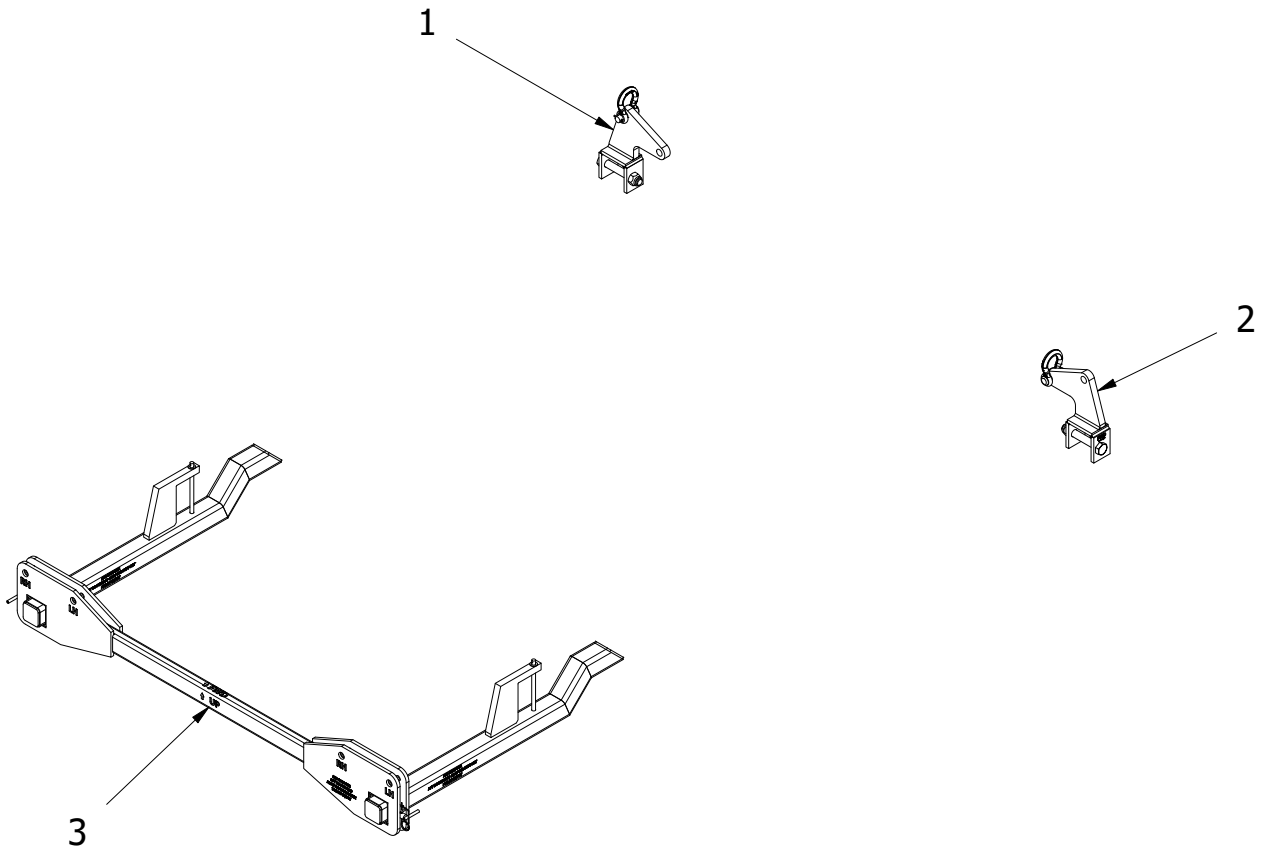


Figure 7.11-1 AM-1928-900 Bootstrap Adapter Kit for Boeing

IPB Figure 12 - AM-1928-910
Bootstrap Kit for Airbus

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-910	-	Bootstrap Kit for Airbus, CF6-80C2/80E1 Engine (Illustrated in Figure7.12-1)		
1	AM-1928-A23	1	Forward Bootstrap Adapter	-	10 Years
2	AM-1928-B23	1	Aft Bootstrap Adapter	-	10 Years

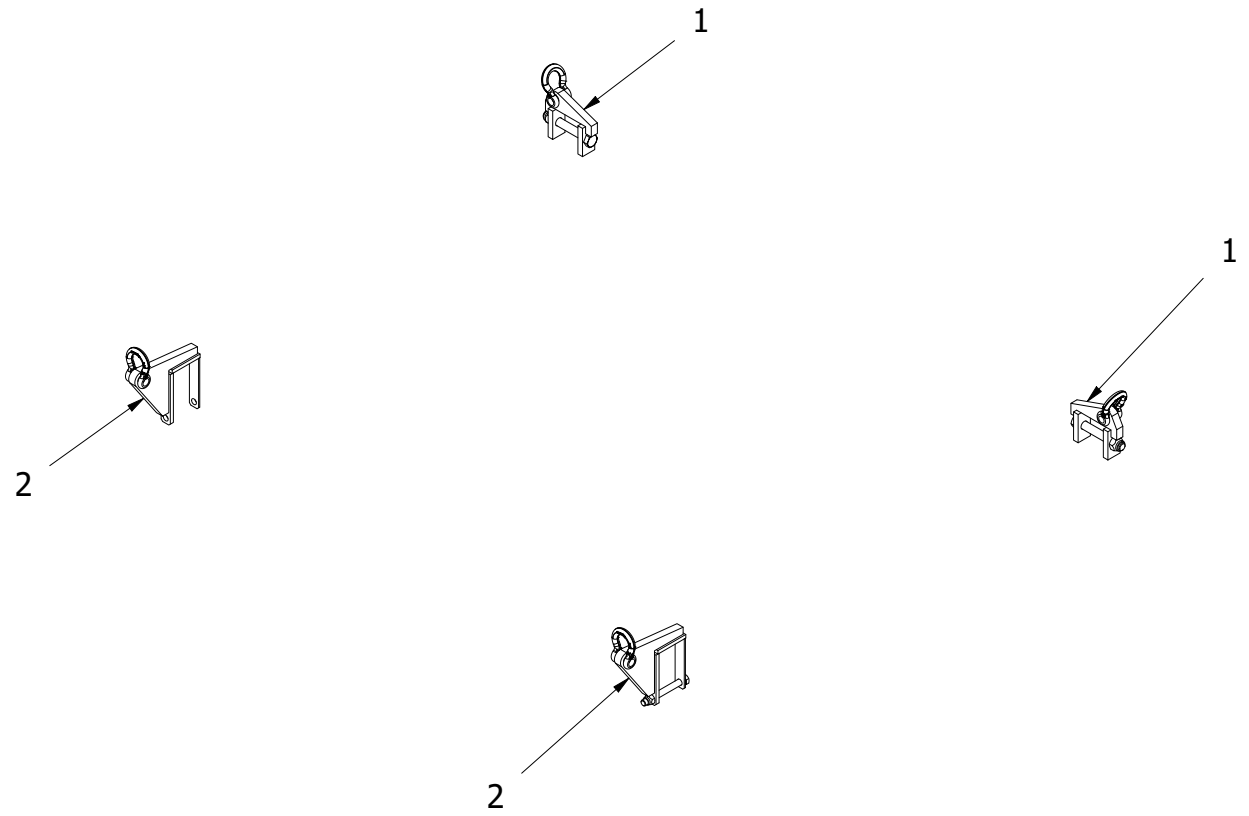


Figure 7.12-1 AM-1928-900 Bootstrap Adapter Kit for Airbus

IPB Figure 13 - AM-1928-930
Bootstrap Kit for MD-11

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-930	-	Bootstrap Kit for MD-11, CF6-80C2 Engine (Illustrated in Figure 7.13-1)		
1	AM-1928-B21	1	Forward Bootstrap Adapter, LH	-	10 Years
2	AM-1928-A21	1	Forward Bootstrap Adapter, RH	-	10 Years
3	AM-1928-C21	2	Aft Bootstrap Adapter	-	10 Years

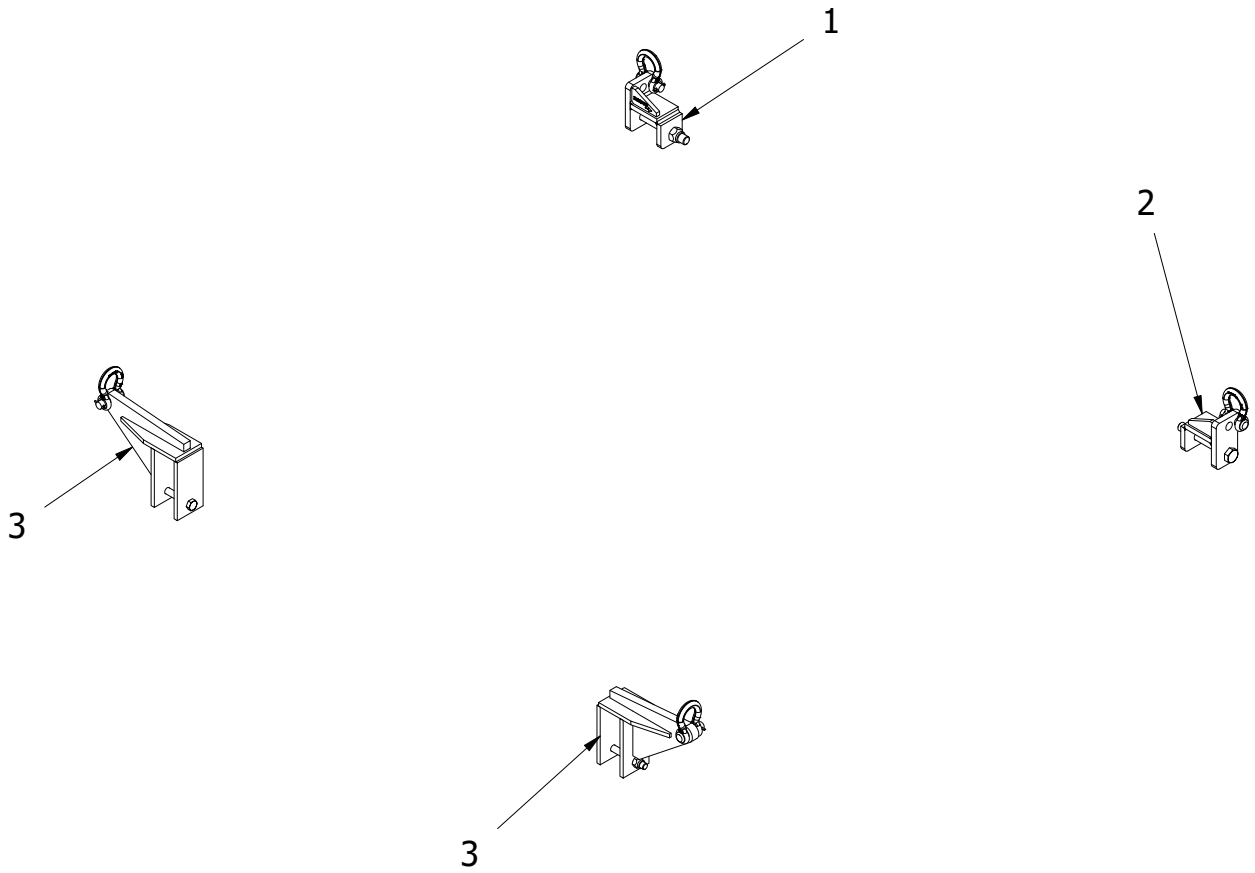


Figure 7.13-1 AM-1928-930 Bootstrap Adapter Kit for MD-11

IPB Figure 14 - AM-2389-3
FADEC SHIPPING CONTAINER

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-2389-3	-	FADEC Control Unit Shipping Container (llustrated in Figure 7.14-1)		
1	90131A552	8	Rubber Washer	-	-
2	AL2624-0805	1	Storage Case Cover	-	-
3	AM-2389-102	1	Foam	-	-
4	AM-2389-110	REF	Angle	-	-
5	AM-2389-112	4	Wood	-	-
6	AM-2389-3-S01	1	Support Frame Assembly	-	-
7	Commercial	4	Hex Head Cap Screw 3/8-16 UNC x 5” Lg. Gr. 5 - Zinc Plt	-	-
8	Commercial	4	Hex Nut 3/8”-16 UNC Gr. 5 - Zinc Plt	-	-
9	Commercial	4	Lock Washer - 3/8” STL - Zinc Plt	-	-
10	Commercial	8	Flat Washer - 3/8” STL - Zinc Plt	-	-
11	AM-2389-3-P06	1	Stencil Kit	-	-

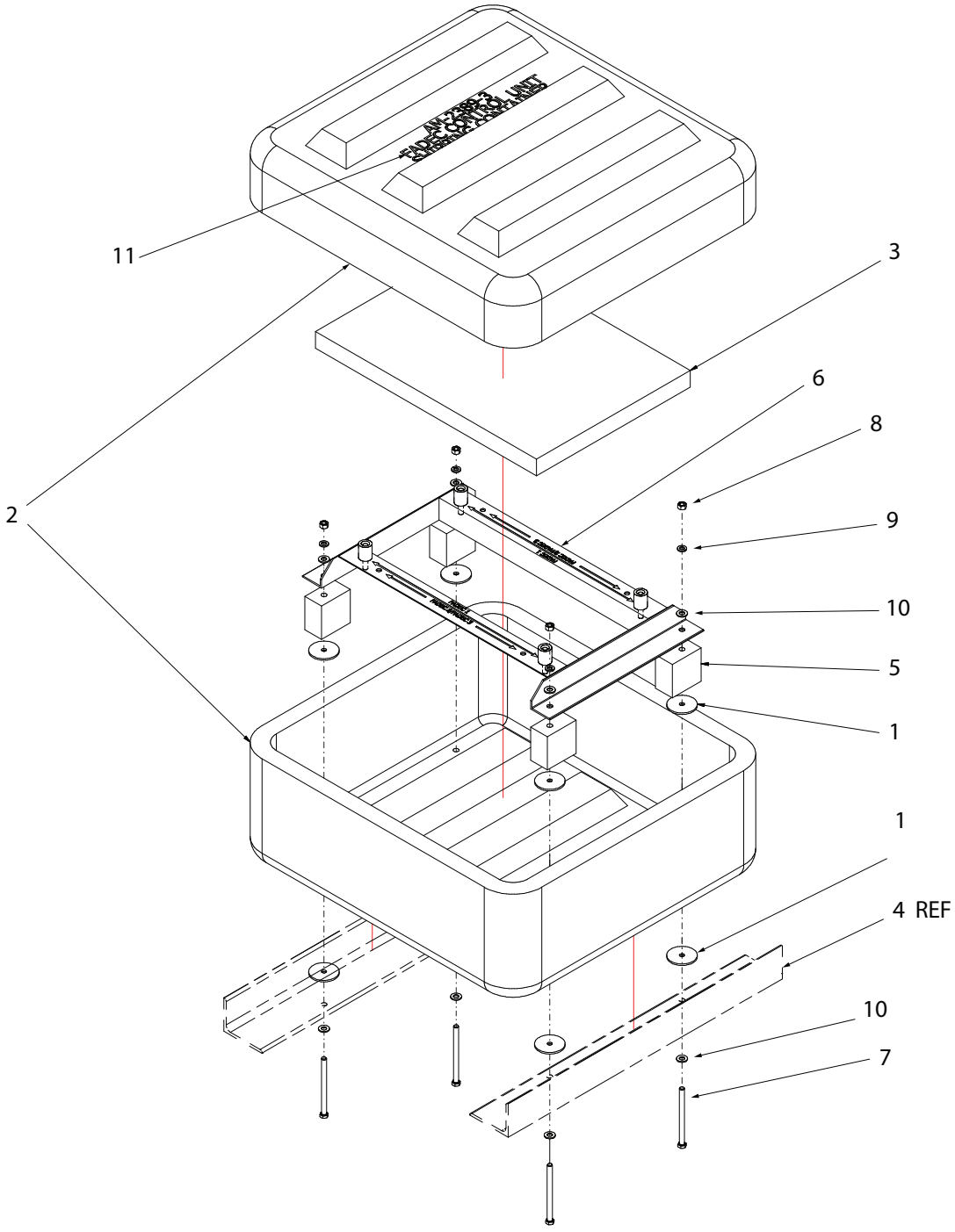


Figure 7.14-1 AM-2389-3 FADEC Shipping Container

IPB Figure 15 - AM-2390-3
OIL TANK SHIPPING CONTAINER

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-2390-3	-	Oil Tank Shipping Container (llustrated in Figure 7.15-1)		
1	AM-2390-101	1	Container	-	-
2	AM-2390-102	1	Foam	-	-
3	AM-2390-103	1	Vacuum Formed Seat	-	-
4	AM-2390-104	REF	Angle	-	-
5	Commercial	4	Hex Head Bolt - 1/4-20 UNC x 4-1/2” Lg. Gr. 5 - Zinc Plt	-	-
6	Commercial	4	Hex Nut - 1/4-20 UNC Gr. 5 - Zinc Plt	-	-
7	Commercial	4	Hex Head Bolt - 3/8-16 UNC x 2” Lg. Gr. 5 - Zinc Plt	-	-
8	Commercial	4	Hex Nut - 3/8-16 UNC Gr. 5 - Zinc Plt	-	-
9	Commercial	4	Lock Washer - 3/8” ID - Zinc Plt	-	-
10	Commercial	4	Flat Washer - 3/8” ID - Zinc Plt	-	-
11	Commercial	4	Lock Washer - 1/4” ID - Zinc Plt	-	-
12	Commercial	4	Flat Washer - 1/4” ID - Zinc Plt	-	-
13	90131A552	16	Rubber Washer	-	-
14	AM-2390-114	4	Wood	-	-
15	91090A116	4	Fender Washer	-	-
16	91090A117	4	Fender Washer	-	-

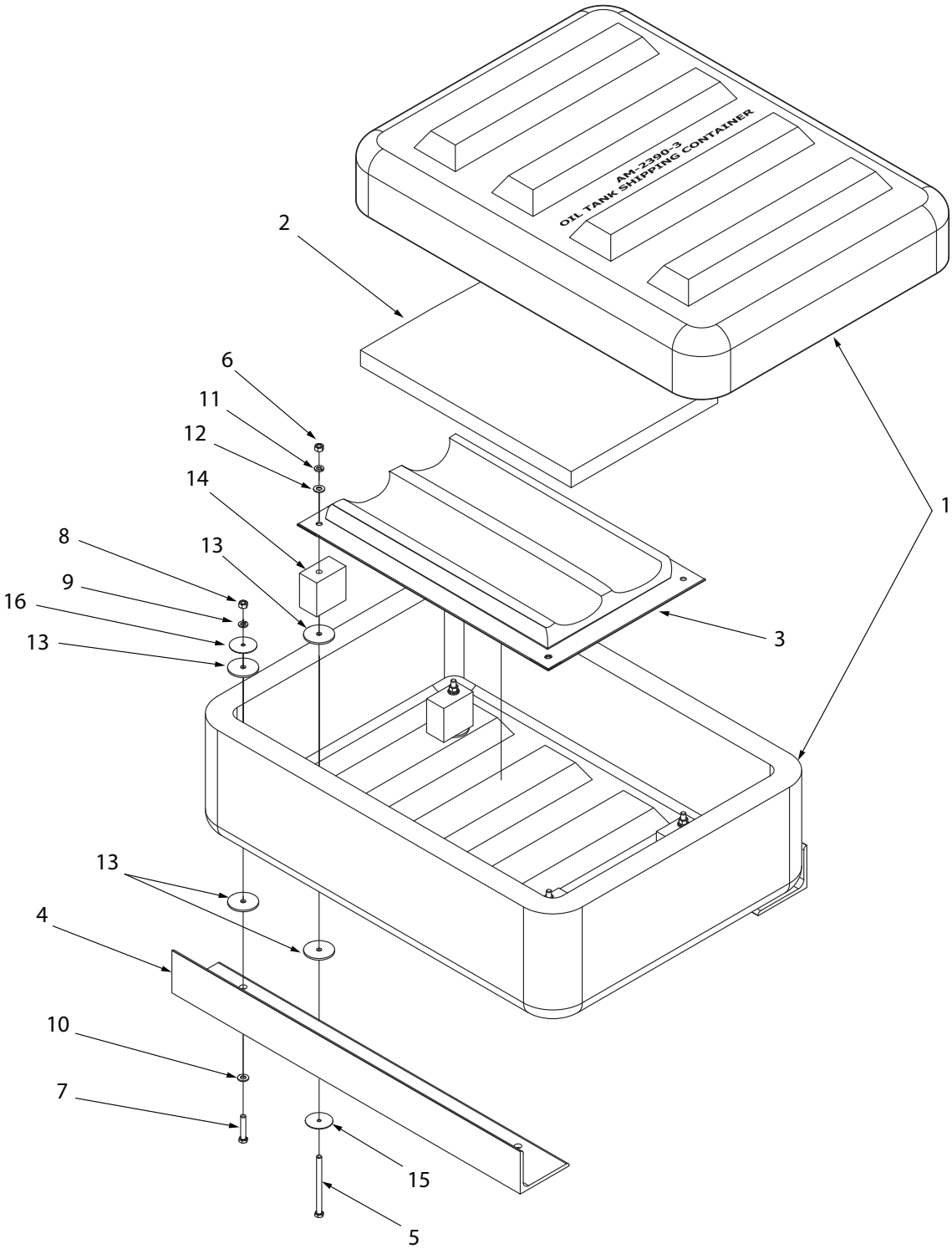


Figure 7.15-1 AM-2390-3 Oil Tank Shipping Container

IPB Figure 16 - AM-1928-A34
Forward Mount Assembly, LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A34	-	Forward Mount Assembly, LH (Illustrated in Figure 7.16-1)		
1	AM-1928-A37	1	Forward Mount Adapter Weldment	-	-
2	AM-1928-D37	1	Bearing Plate	-	-
3	AM-1928-B37	1	Forward Mount Adapter Weldment	-	-
5	AM-1928-E37	2	Shaft	-	-
6	AM-1928-G37	4	Spacer	-	-
7	AM-1928-F37	2	Shaft	-	-
8	AM-1928-H37	4	Spacer	-	-
9	AM-1928-J37	2	Collar	-	-
10	Commercial	2	Roll Pin - 1/4” Dia. x 1” Lg. Cres	-	-
11	AM-9000-B	1	Retaining Clip	-	-
12	AM-91000-96T	1	Safety Pin Assembly	-	-
13	6438K55	4	Threaded Lock Collar	-	-
14	92311A190	4	Cup Point Set Screw	-	-
15	LHSS12	4	Spherical Bearing	-	-
16	AM-1928-K37	1	Forward Mount Pin, RH	-	-

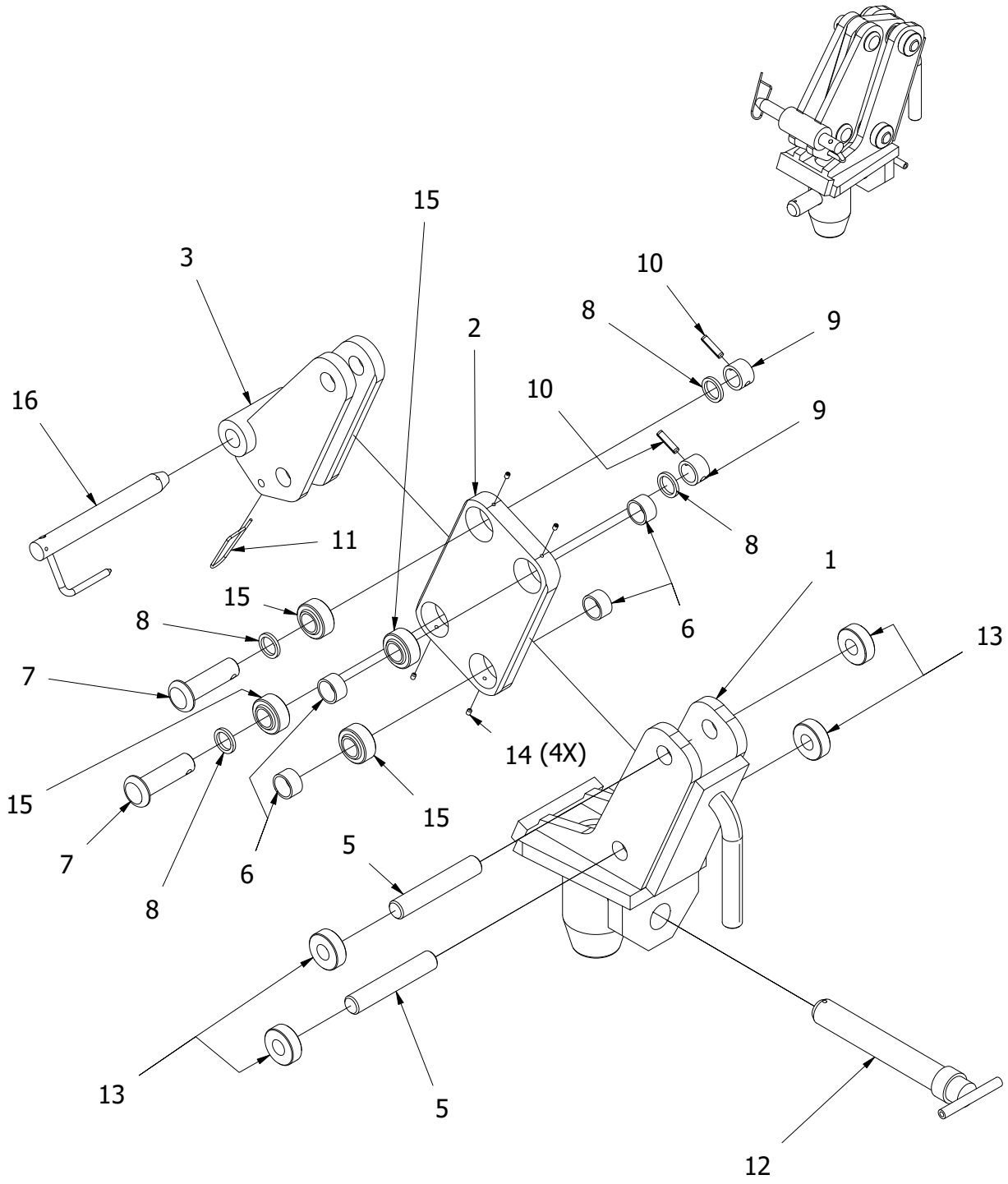


Figure 7.16-1 AM-1928-A34 Forward Mount Assembly, LH

IPB Figure 17 - AM-1928-B34
Forward Mount Assembly, RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B34	-	Forward Mount Assembly, LH (Illustrated in Figure 7.17-1)		
1	AM-1928-A37	1	Forward Mount Adapter Weldment	-	-
2	AM-1928-D37	1	Bearing Plate	-	-
3	AM-1928-B37	1	Forward Mount Adapter Weldment	-	-
4	AM-1928-C37	1	Forward Mount Pin, LH	-	-
5	AM-1928-E37	2	Shaft	-	-
6	AM-1928-G37	4	Spacer	-	-
7	AM-1928-F37	2	Shaft	-	-
8	AM-1928-H37	4	Spacer	-	-
9	AM-1928-J37	2	Collar	-	-
10	Commercial	2	Roll Pin - 1/4” Dia. x 1” Lg. Cres	-	-
11	AM9000-B	1	Retaining Clip	-	-
12	AM91000-96T	1	Safety Pin Assembly	-	-
13	6438K55	4	Threaded Lock Collar	-	-
14	92311A190	4	Cup Point Set Screw	-	-
15	LHSS12	4	Spherical Bearing	-	-

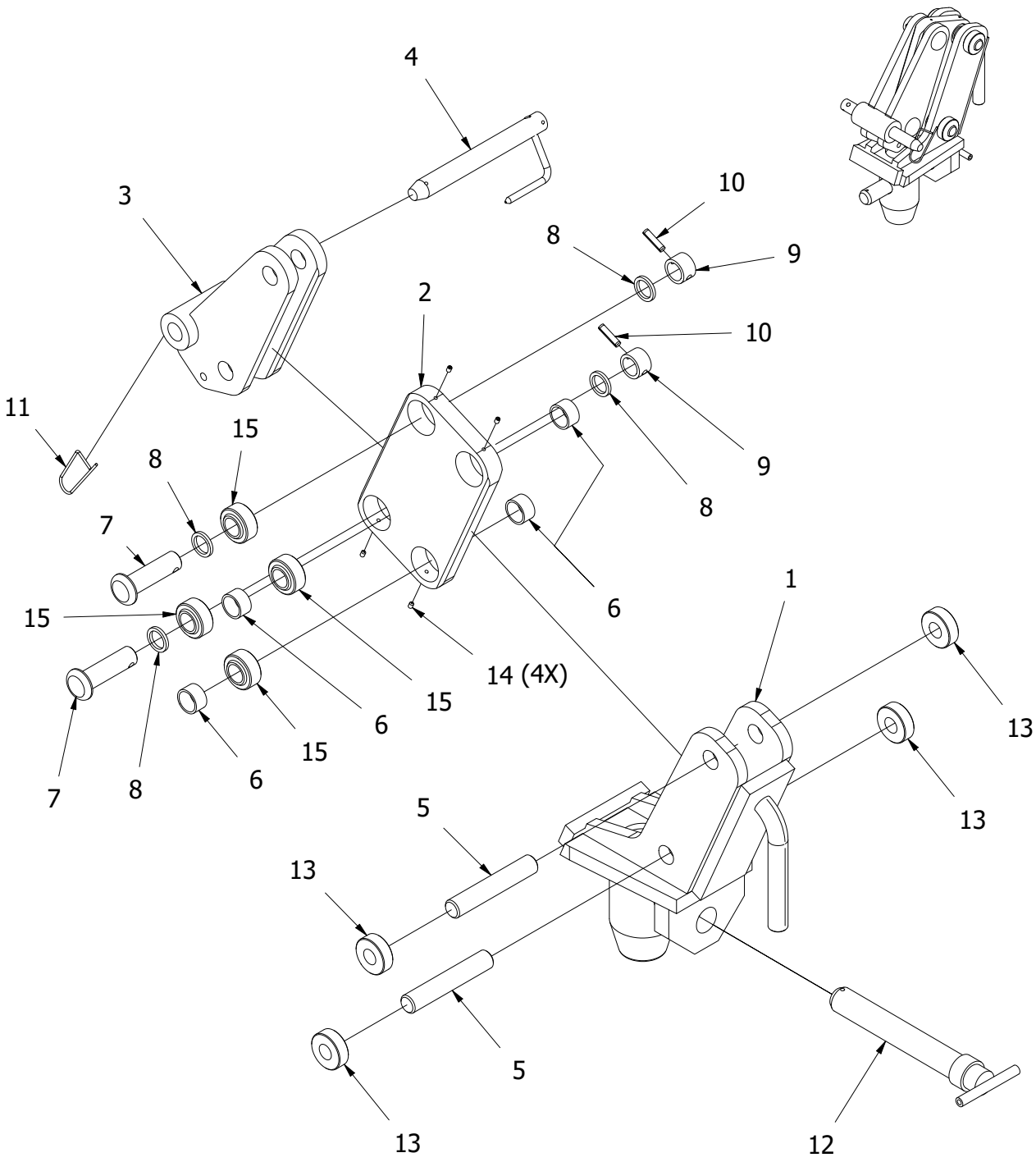


Figure 7.17-1 AM-1928-B34 Forward Mount Assembly, RH

IPB Figure 18 - AM-1928-A10
Aft Mount Assembly, LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A10	-	Aft Mount Assembly, LH (Illustrated in Figure 7.18-1)		
1	AM-1928-C10	1	Aft Mount Base	-	-
2	AM-1928-D10	1	Aft Mount Hold Down	-	-
3	AM-1928-E10	1	Aft Mount Spindle Assembly, LH	-	-
4	AM-1928-G10	1	Hold Down Pin	-	-
5	AM-90500-41T	1	Safety Pin	-	-
6	Commercial	2	Flat Washer - 1/2” Dia. x 7/8” OD 1/16” Thk - NAS1149 - SS	-	-
7	Commercial	2	Cotter Pin - 3/32” Dia. x 3/4” Lg. Zinc Plt	-	-

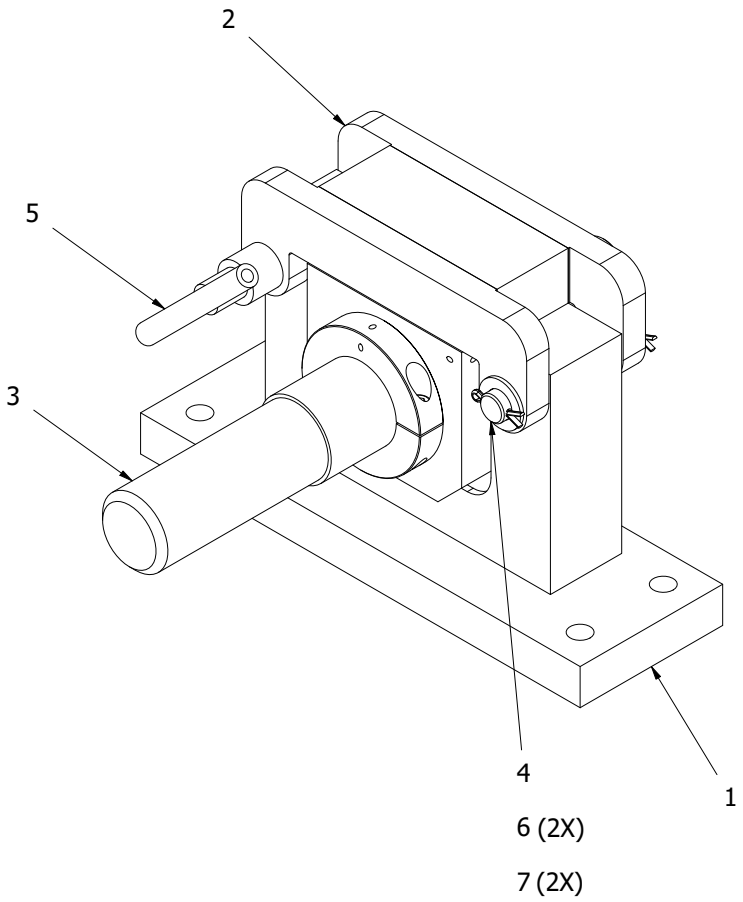


Figure 7.18-1 AM-1928-A10 AftMount Assembly, LH

IPB Figure 19 - AM-1928-B10
Aft Mount Assembly, RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B10	-	Aft Mount Assembly, RH (Illustrated in Figure 7.19-1)		
1	AM-1928-C10	1	Aft Mount Base	-	-
2	AM-1928-D10	1	Aft Mount Hold Down	-	-
3	AM-1928-F10	1	Aft Mount Spindle Assembly, LH	-	-
4	AM-1928-G10	1	Hold Down Pin	-	-
5	AM-90500-41T	1	Safety Pin	-	-
6	Commercial	2	Flat Washer - 1/2” Dia. x 7/8” OD 1/16” Thk - NAS1149 - SS	-	-
7	Commercial	2	Cotter Pin - 3/32” Dia. x 3/4” Lg. Zinc Plt	-	-

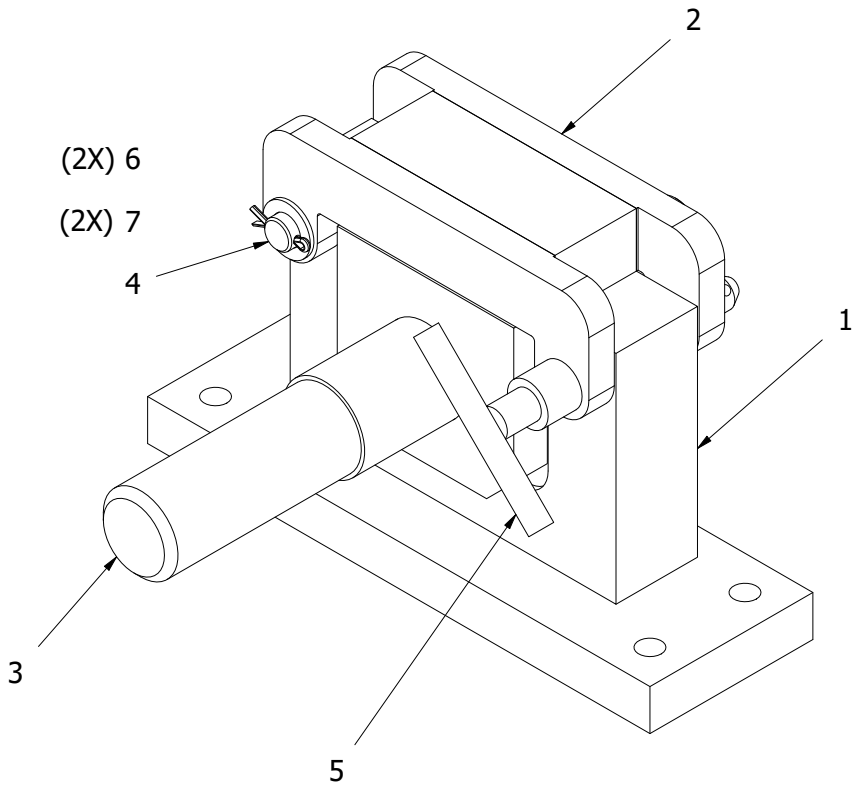


Figure 7.19-1 AM-1928-B10 AftMount Assembly, RH

IPB Figure 20 - AM-1928-A41
Forward Mount Assembly, LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A41	-	Forward Mount Assembly, LH (Illustrated in Figure 7.20-1)		
1	AM-1928-A39	1	Forward Mount Support Weldment	-	-
2	AM-1928-B37	1	Forward Mount Adapter Weldment	-	-
4	AM-1928-C37	1	Safety Pin LH	-	-
5	AM-91000-96T	1	Safety Pin	-	-
6	AM-1928-E37	2	Threaded Shaft	-	-
7	AM-1928-G37	4	Spacer	-	-
8	LHSS12	4	Spherical Bearing	-	-
9	6438K55	4	Collar	-	-
10	AM-1928-D37	1	Bearing Plate	-	-
11	AM-1928-H37	4	Spacer	-	-
12	AM-1928-J37	2	Tube	-	-
13	92785A190	4	Cup Point Set Screw	-	-
14	Commercial	2	Roll Pin - 1/4” Dia. x 1” Lg. Cres	-	-
15	AM-9000B	1	Retaining Clip	-	-
16	AM-1928-F37	2	Shaft	-	-

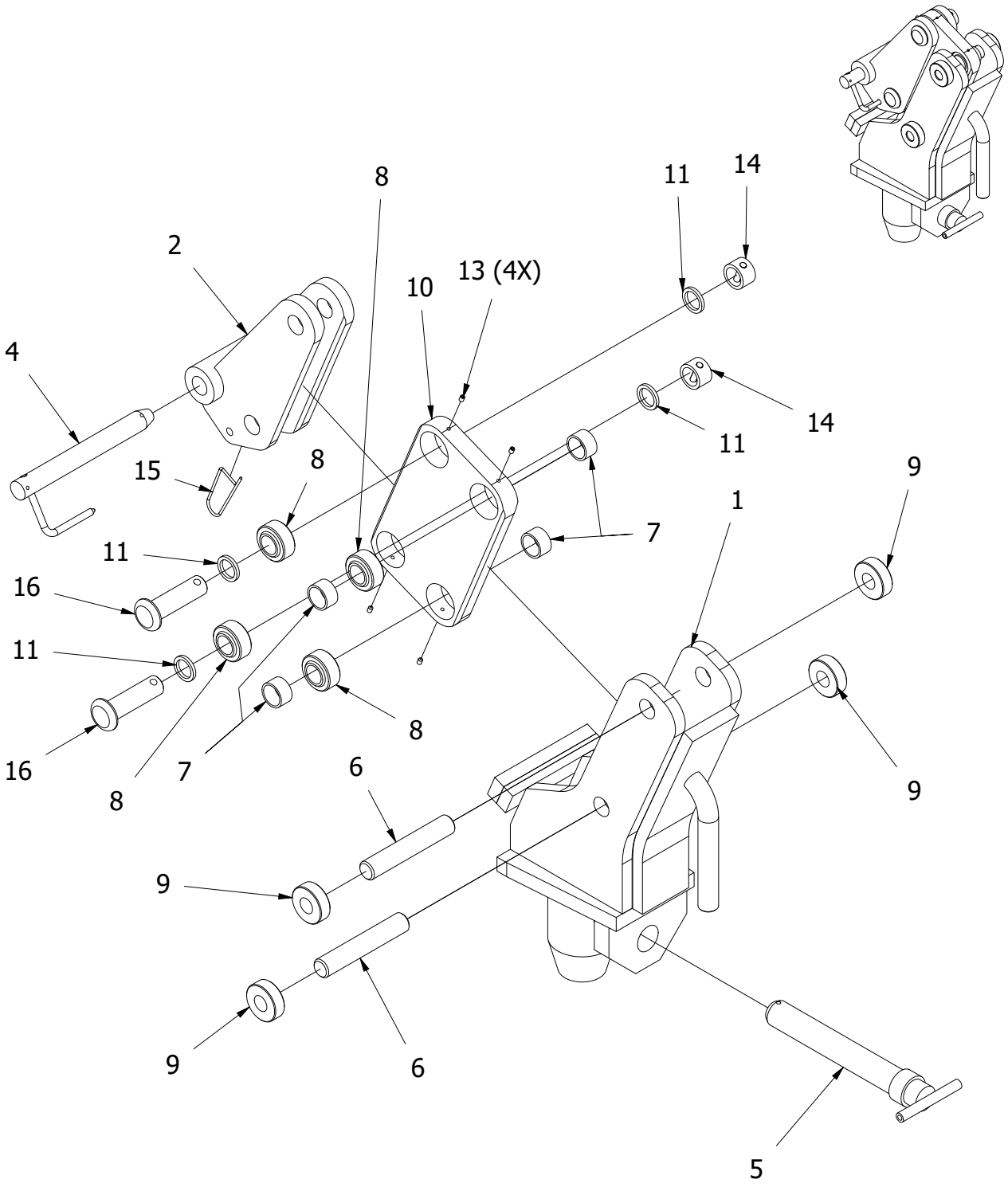


Figure 7.20-1 AM-1928-A41 Forward Mount Assembly, LH

IPB Figure 21 - AM-1928-B41
Forward Mount Assembly, RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B41	-	Forward Mount Assembly, LH (Illustrated in Figure 7.21-1)		
1	AM-1928-A39	1	Forward Mount Support Weldment	-	-
2	AM-1928-B37	1	Forward Mount Adapter Weldment	-	-
3	AM-1928-K37	1	Safety Pin RH	-	-
5	AM-91000-96T	1	Safety Pin	-	-
6	AM-1928-E37	2	Threaded Shaft	-	-
7	AM-1928-G37	4	Spacer	-	-
8	LHSS12	4	Spherical Bearing	-	-
9	6438K55	4	Collar	-	-
10	AM-1928-D37	1	Bearing Plate	-	-
11	AM-1928-H37	4	Spacer	-	-
12	AM-1928-J37	2	Tube	-	-
13	92785A190	4	Cup Point Set Screw	-	-
14	Commercial	2	Roll Pin - 1/4” Dia. x 1” Lg. Cres	-	-
15	AM-9000B	1	Retaining Clip	-	-
16	AM-1928-F37	2	Shaft	-	-

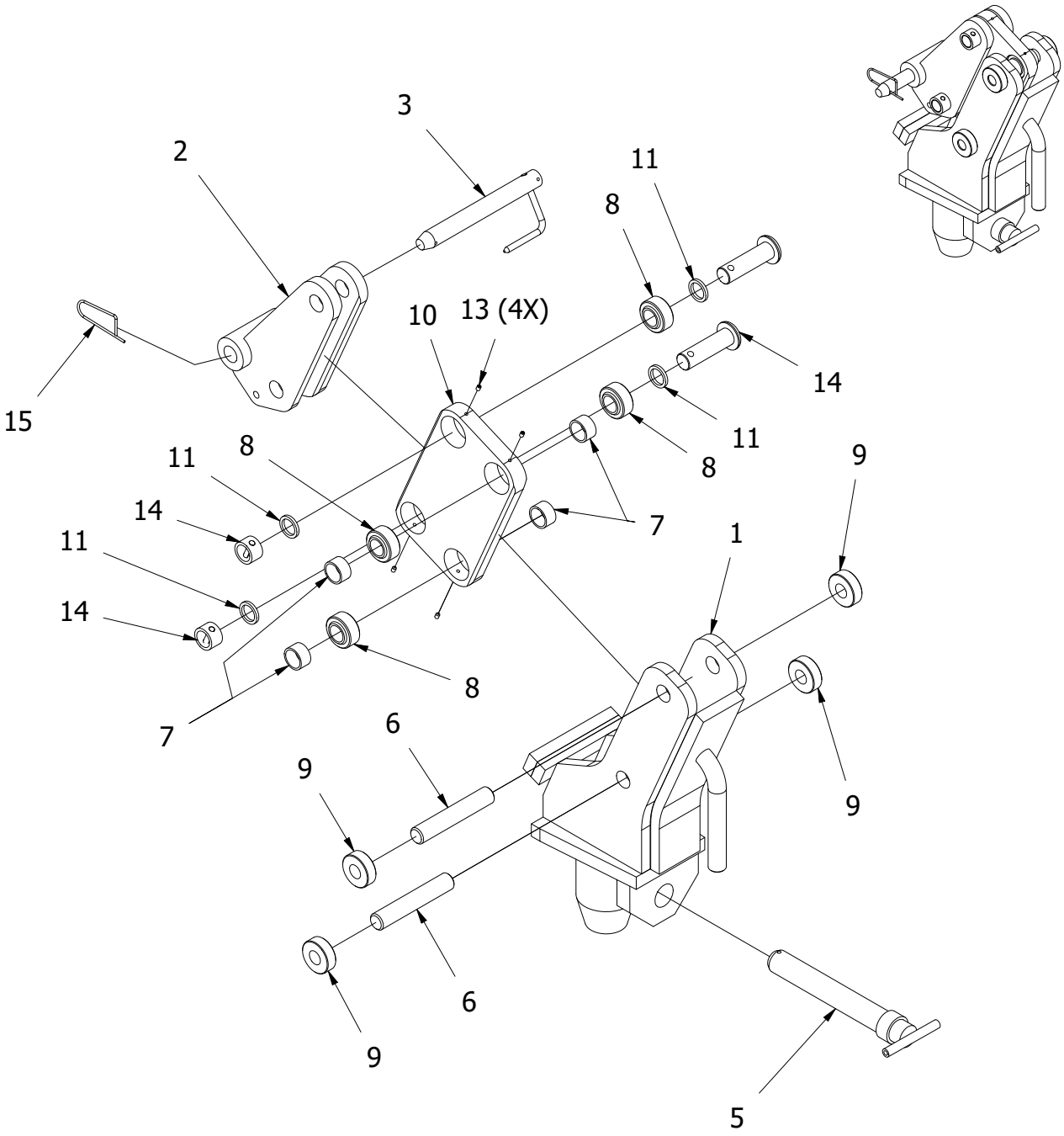


Figure 7.21-1 AM-1928-B41 Forward Mount Assembly, RH

IPB Figure 22 - AM-2620-B1
Aft Mount Assembly, LH, No Spindle

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-2620-B1	-	Forward Mount Assembly, LH No Spindle (Illustrated in Figure 7.22-1)		
5	AM-2620-A3	1	Aft Mount Support	-	-
6	AM-2620-B4	1	Clamp	-	-
7	AM-2620-G4	1	Pivot Pin	-	-
8	Commercial	2	Cotter Pin - 3/32” Dia. x 3/4” Lg. Zinc Plt	-	-
9	AM9500-41	1	Safety Pin	-	-
10	Commercial	2	Flat Washer - 1/2” ID x 7/8” OD x 1/16” Thk.- NAS1149 - SS	-	-
18	Commercial	4	Hex Bolt - 1/2”-13 UNC x 2-1/4” Lg. Gr. 5 - Zinc Plt	-	-
19	Commercial	4	Hex Nut - 1/2-13 UNC - Zinc Plt	-	-
20	Commercial	4	Flat Washer - 1/2” Dia. - Zinc Plt	-	-

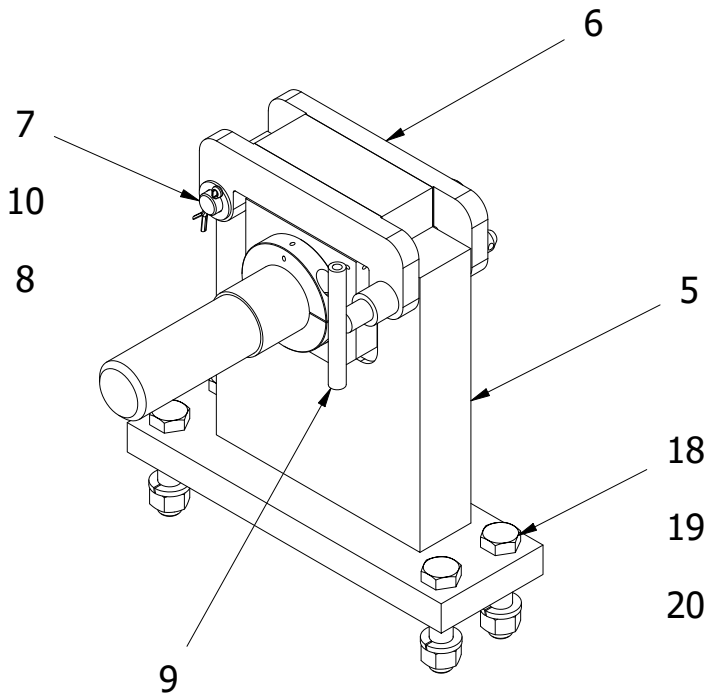


Figure 7.22-1 AM-2620-B1 Aft Mount Assembly, LH, No Spindle

IPB Figure 23 - AM-2620-C1
Aft Mount Assembly, RH, No Spindle

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-2620-C1	-	Forward Mount Assembly, RH No Spindle (Illustrated in Figure 7.23-1)		
5	AM-2620-A3	1	Aft Mount Support	-	-
6	AM-2620-B4	1	Clamp	-	-
7	AM-2620-G4	1	Pivot Pin	-	-
8	Commercial	2	Cotter Pin - 3/32” Dia. x 3/4” Lg. Zinc Plt	-	-
9	AM9500-41	1	Safety Pin	-	-
10	Commercial	2	Flat Washer - 1/2” ID x 7/8” OD x 1/16” Thk. - NAS1149 - SS	-	-
18	Commercial	4	Hex Bolt - 1/2”-13 UNC x 2-1/4” Lg. Gr. 5 - Zinc Plt	-	-
19	Commercial	4	Hex Nut - 1/2”-13 UNC - Zinc Plt	-	-
20	Commercial	4	Flat Washer - 1/2” Dia. - Zinc Plt	-	-

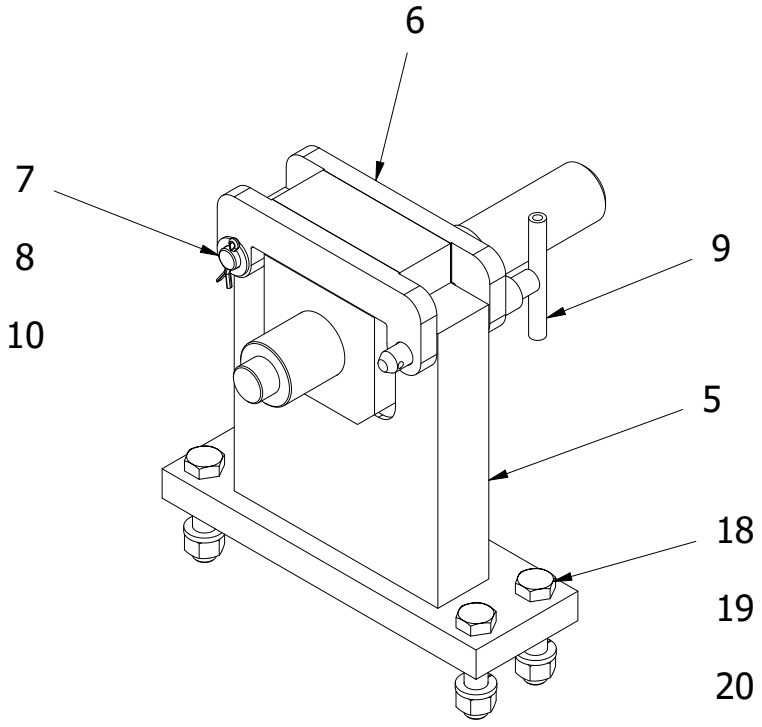


Figure 7.23-1 AM-2620-C1 Aft Mount Assembly, RH, No Spindle

IPB Figure 24 - AM-1928-E10
Aft Mount Spindle Assembly - LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-E10	-	Aft Mount Spindle Assembly, LH (Illustrated in Figure 7.24-1)		
1	AM-1928-H10	1	Adjustable Spindle, LH	-	-
2	AM-1928-K10	1	Mount Block - LH	-	-
3	AM-1928-M10	2	Modified Lock Collar	-	-

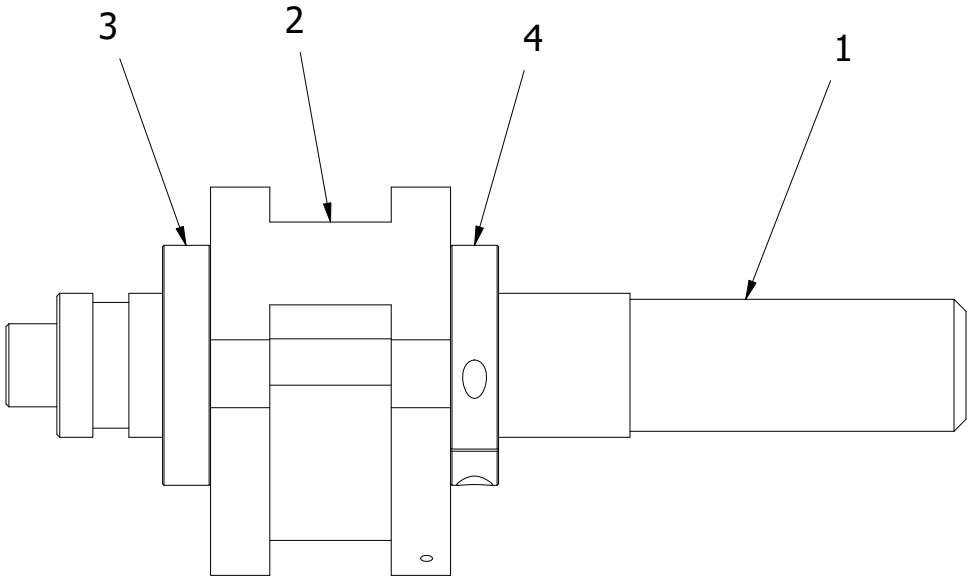


Figure 7.24-1 AM-1928-E10 Aft Mount Spindle Assembly, LH

IPB Figure 25 - AM-1928-F10
Aft Mount Spindle Assembly - RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-F10	-	Aft Mount Spindle Assembly, RH (Illustrated in Figure 7.25-1)		
1	AM-1928-J10	1	Fixed Spindle, RH	-	-
2	AM-1928-L10	1	Mount Block, RH	-	-
3	92373A560	1	Spring Pin	-	-

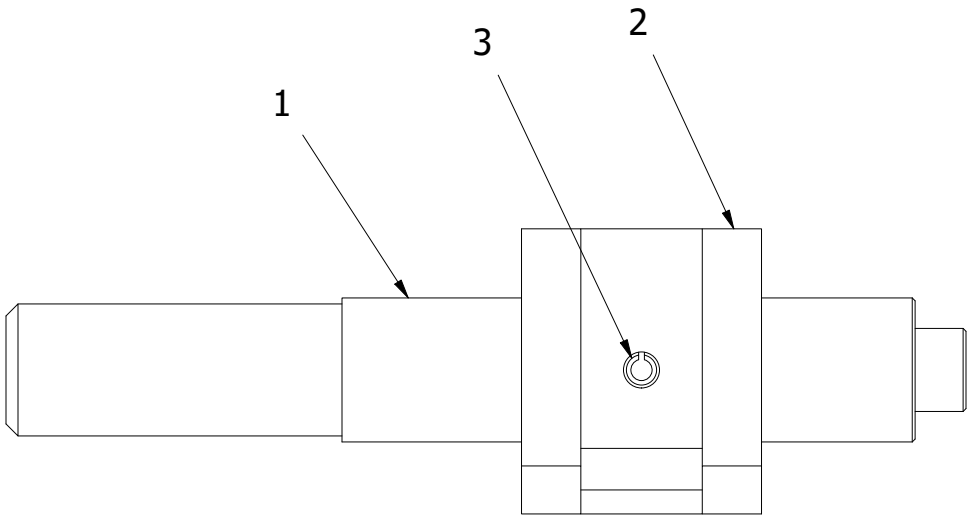
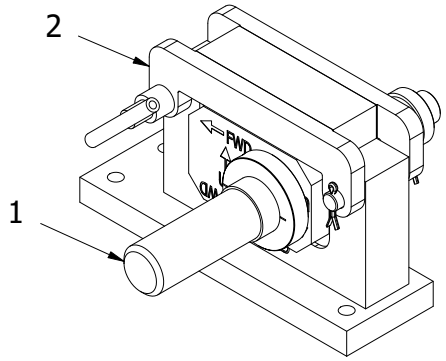


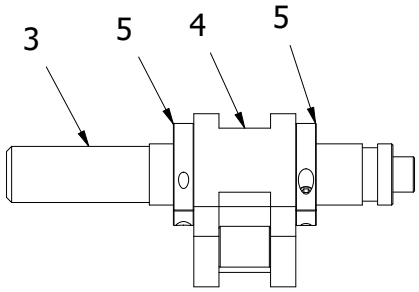
Figure 7.25-1 AM-1928-F10 Aft Mount Spindle Assembly, RH

IPB Figure 26 - AM-1928-A9
Aft Mount Assembly - LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A9	-	Aft Mount Assembly, LH (Illustrated in Figure 7.26-1)		
1	AM-1928-C9	1	Aft Spindle Assembly, LH	-	-
2	AM-1928-G9	1	Base Assembly, LH	-	-
3	AM-1928-M9	1	Adjustable Spindle, LH (Used on AM-1928-C9)	-	-
4	AM-1928-N9	1	Mount Block, LH (Used on AM-1928-C9)	-	-
5	3S108	2	Shaft Collar (Used on AM-1928-C9)	-	-
6	AM-1928-E9	1	Aft Base Weldment (Used on AM-1928-G9)	-	-
7	AM-1928-J9	1	Aft Mount Cap (Used on AM-1928-G9)	-	-
8	AM-1928-K9	1	Hold Down Pin (Used on AM-1928-G9)	-	-
9	Commercial	2	Cotter Pin - 1/8” Dia. x 1” Lg. Zinc Plt (Used on AM-1928-G9)	-	-
10	AM-90500-41T	1	Safety Pin (Used on AM-1928-G9)	-	-



AM-1928-A9



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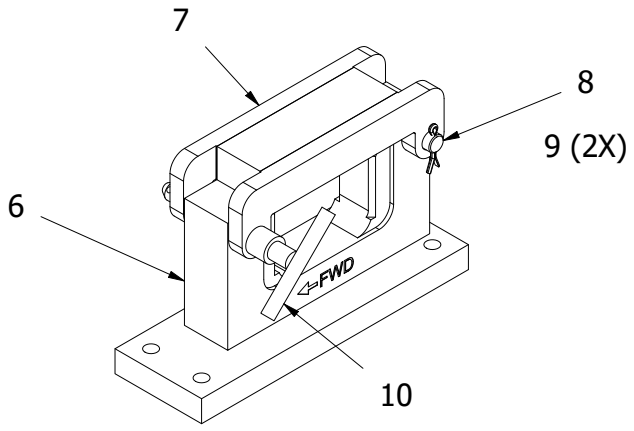
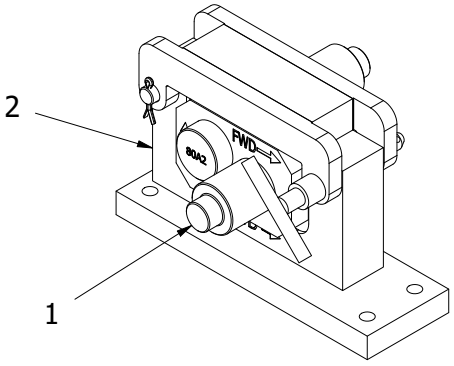


AM-1928-G9

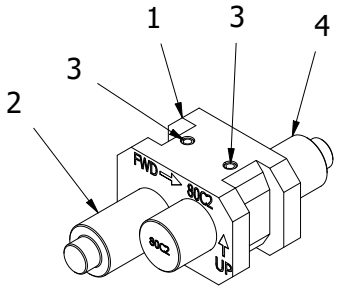
Figure 7.26-1 AM-1928-A9 Aft Mount Assembly, LH

IPB Figure 27 - AM-1928-B9
Aft Mount Assembly - RH

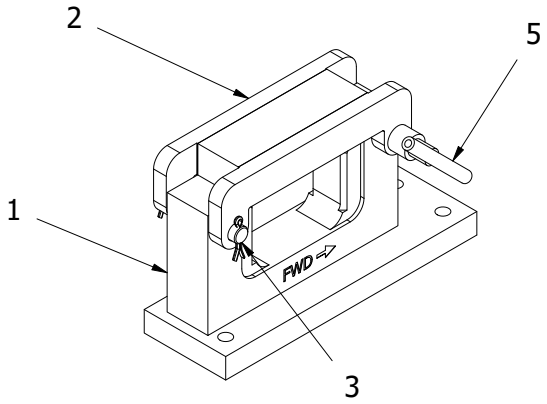
ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B9	-	Aft Mount Assembly, RH (Illustrated in Figure 7.27-1)		
1	AM-1928-D9	1	Aft Fixed Assembly, RH	-	-
2	AM-1928-H9	1	Base Assembly, RH	-	-
3	AM-1928-S9	1	Mount Block, RH (Used on AM-1928-D9)	-	-
4	AM-1928-P9	1	Fixed Spindle, RH (Used on AM-1928-D9)	-	-
5	92373A563	2	Spring Pin (Used on AM-1928-D9)	-	-
6	AM-1928-R9	1	Fixed Spindle - RH	-	-
7	AM-1928-F9	1	Aft Base Weldment (Used on AM-1928-H9)	-	-
8	AM-1928-J9	1	Aft Mount Cap (Used on AM-1928-H9)	-	-
8	AM-1928-K9	1	Hold Down Pin (Used on AM-1928-H9)	-	-
9	Commercial	2	Cotter Pin - 1/8” Dia. x 1” Lg. Zinc Plt (Used on AM-1928-H9)	-	-
10	AM-90500-41T	1	Safety Pin (Used on AM-1928-H9)	-	-



AM-1928-B9



AM-1928-D9



AM-1928-H9

Figure 7.27-1 AM-1928-B9 Aft Mount Assembly, RH

IPB Figure 28 - AM-1928-A22
FWD Bootstrap Adapter, LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A22	-	FWD Bootstrap Adapter, LH (Illustrated in Figure 7.28-1)		
5	Commercial	1	Hex Head Cap Screw 1”-8 UNC x 6.5” Lg. Gr. 5 - Zinc Plt	-	-
6	G-213-3/4	1	Round Pin Anchor Shackle	-	-
7	AM-1928-H22	1	FWD Bootstrap Adapter Weldment	-	-
9	Commercial	4	Lock Nut - 1”-8 UNC Top Insert Gr. 5 - Zinc Plt	-	-

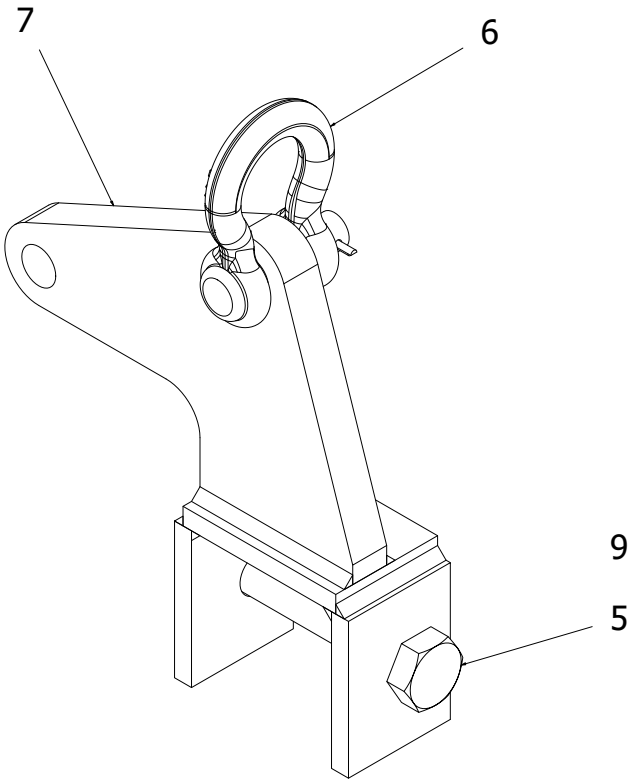


Figure 7.28-1 AM-1928-A22 FWD Bootstrap Adapter, LH

IPB Figure 29 - AM-1928-B22
FWD Bootstrap Adapter, RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B22	-	FWD Bootstrap Adapter, RH (Illustrated in Figure 8.29-1)		
5	Commercial	1	Hex Head Cap Screw 1”-8 UNC x 6.5” Lg. Gr. 5 - Zinc Plt	-	-
6	G-213-3/4	1	Round Pin Anchor Shackle	-	-
8	AM-1928-J22	1	FWD Bootstrap Adapter Weldment	-	-
9	Commercial	4	Lock Nut - 1”-8 UNC Top Insert Gr. 5 - Zinc Plt	-	-

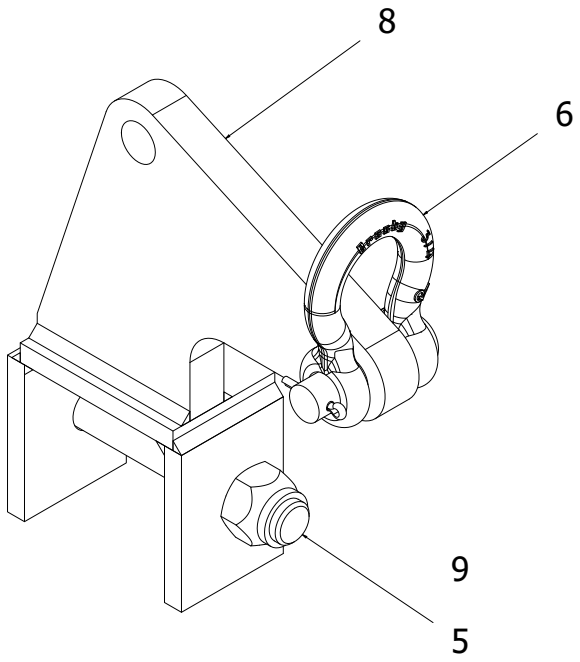


Figure 7.29-1 AM-1928-B22 FWD Bootstrap Adapter, RH

IPB Figure 30 - AM-1928-C22
AFT Bootstrap Adapter

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-C22	-	AFT Bootstrap Adapter (Illustrated in Figure 7.30-1)		
4	AM-1928-F22	2	Safety Pin	-	-
10	AM-1928-D22	2	AFT Bootstrap Adapter Support	-	-
11	AM-1928-E22	1	AFT Bootstrap Adapter	-	-
12	AM-1928-G22	2	Safety Pin	-	-
13	AM-9000A	2	Retainer Pin (Large)	-	-
14	AM-9000B	2	Safety Pin Retainer (Small)	-	-

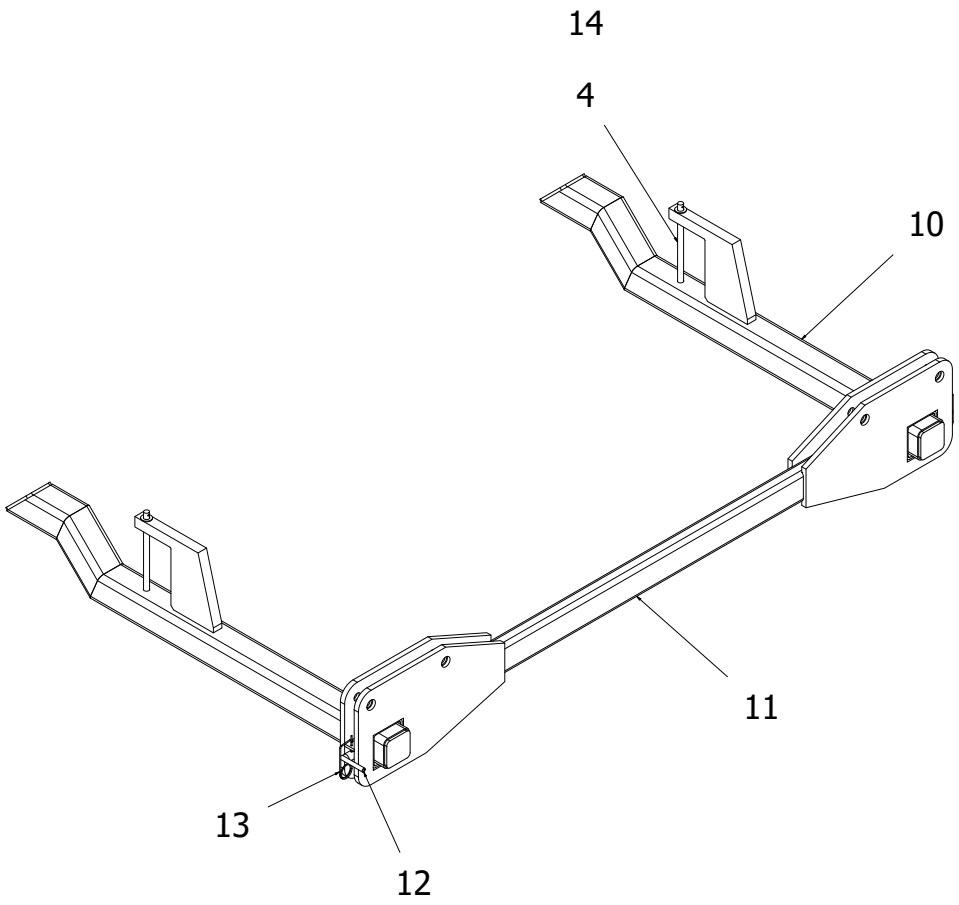


Figure 7.30-1 AM-1928-C22 AFT Bootstrap Adapter

IPB Figure 31 - AM-1928-A21
FWD Bootstrap Adapter, RH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-A21	-	FWD Bootstrap Adapter, RH (Illustrated in Figure 7.31-1)		
1	Commercial	1	Hex Head Cap Screw 1”-8 UNC x 7.5” Lg. Gr. 5 - Zinc Plt	-	-
2	G-213-3/4	1	Round Pin Anchor Shackle	-	-
3	Commercial	1	Lock Nut - 1”-8 UNC Top Insert Gr. 5 - Zinc Plt	-	-
4	AM-1928-F21	1	FWD Bootstrap Adapter Weldment	-	-

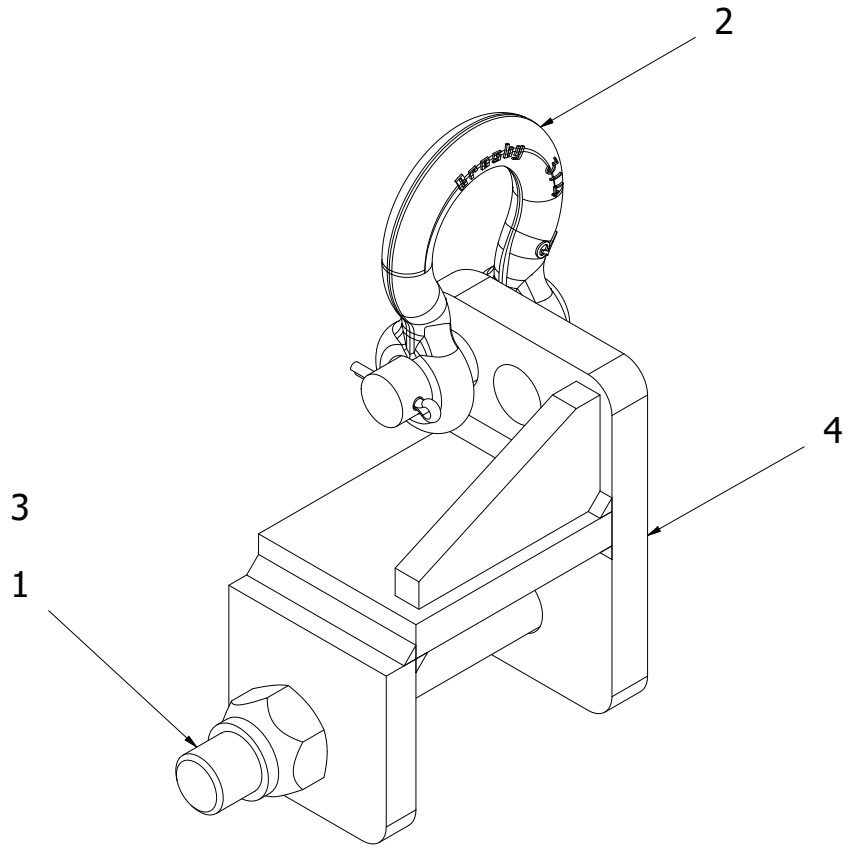


Figure 7.31-1 AM-1928-A21 FWD Bootstrap Adapter, RH

IPB Figure 32 - AM-1928-B21
FWD Bootstrap Adapter, LH

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-B21	-	FWD Bootstrap Adapter, LH (Illustrated in Figure 7.32-1)	-	-
1	Commercial	1	Hex Head Cap Screw 1”-8 UNC x 7-1/2” Lg. Gr. 5 - Zinc Plt	-	-
2	G-213-3/4	1	Round Pin Anchor Shackle	-	-
3	Commercial	1	Lock Nut - 1”-8 UNC Top Insert Gr. 5 - Zinc Plt	-	-
4	AM-1928-G21	1	FWD Bootstrap Adapter Weldment	-	-

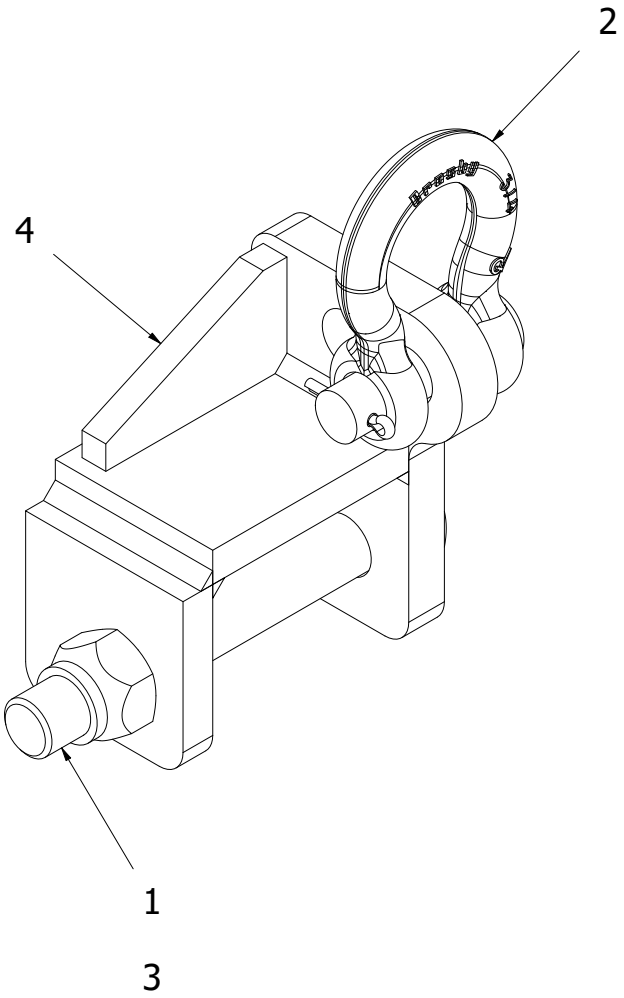


Figure 7.32-1 AM-1928-B21 FWD Bootstrap Adapter, RH

IPB Figure 33 - AM-1928-C21
AFT Bootstrap Adapter

ITEM	PART NUMBER	QTY	PART DESCRIPTION	SPARES	RECOMMENDED REPLACEMENT
	AM-1928-C21	-	AFT Bootstrap Adapter (Illustrated in Figure 7.33-1)	-	-
1	Commercial	1	Hex Head Cap Screw 3/4”-10 UNC x 5-1/2” Lg. Gr. 5 - Zinc Plt	-	-
2	G-213-3/4	1	Round Pin Anchor Shackle	-	-
3	Commercial	1	Lock Nut - 3/4”-10 UNC Top Insert Gr. 5 - Zinc Plt	-	-
4	AM-1928-H21	1	AFT Bootstrap Adapter Weldment	-	-

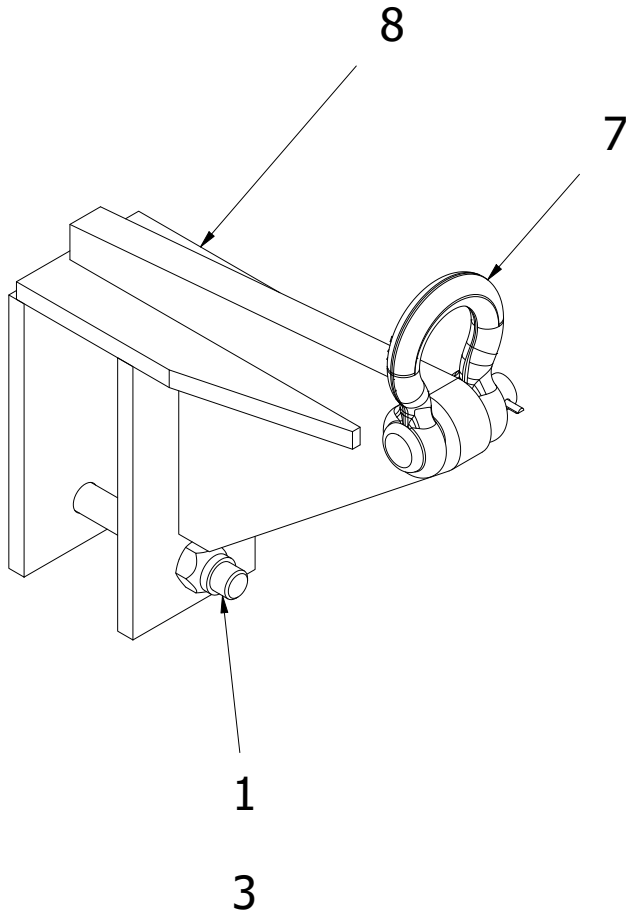


Figure 7.33-1 AM-1928-C21 AFT Bootstrap Adapter

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	QTY	DESCRIPTION
	AM-1928-A63	-	AM-1928-155 STENCIL KIT (Figure 8.2-1)
1	AM-1928-B63	1	AM-1928-155 STENCIL KIT DETAILS
2	AGSE-N198-S01	2	AGSE LOGO
3	AM-2207	1	AGSE PLACARD
4	AGSE-CE	1	CE PLACARD
5	AM-2287	2	PLACARD - TIE DOWN
6	AGSE-V122-P01	2	DECAL - MADE IN THE USA

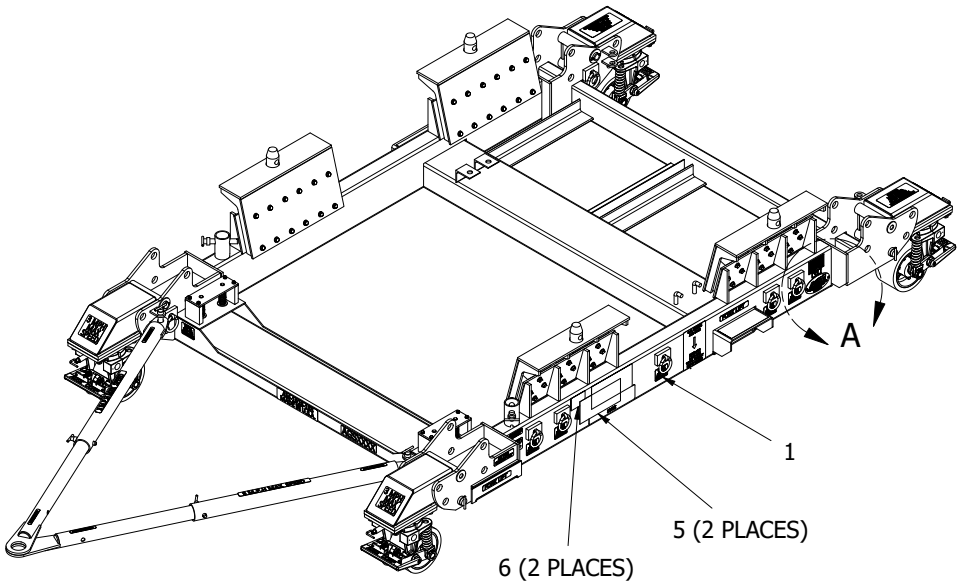
ITEM	PART NUMBER	QTY	DESCRIPTION
	AM-1928-B63	-	AM-1928-155 STENCIL KIT DETAILS (Figures 8.2-2 and 8.2-3)
-01	AM-1928-6301	4	FORK LIFT
-02	AM-1928-6302	1	FWD W/ ARROW (LS)
-03	AM-1928-6303	1	FWD W/ ARROW (RS)
-04	AM-1928-6304	2	OK FOR TRANSPORT
-05	AM-1928-6305	2	FWD MOUNT STORAGE
-06	AM-1928-6306	14	TRUCK AND AIR TIE DOWN
-07	AM-1928-6307	2	TRUCK AND AIR TIE DOWN
-08	AM-1928-6308	2	C.G, CRADLE AND BASE TOTAL WEIGHT
-09	AM-1928-6309	2	AM-1928-155 MADE IN U.S.A.
-10	AM-1928-6310	2	SERIAL NUMBER
-11	AM-1928-6311	4	3 MPH MAX SPEED

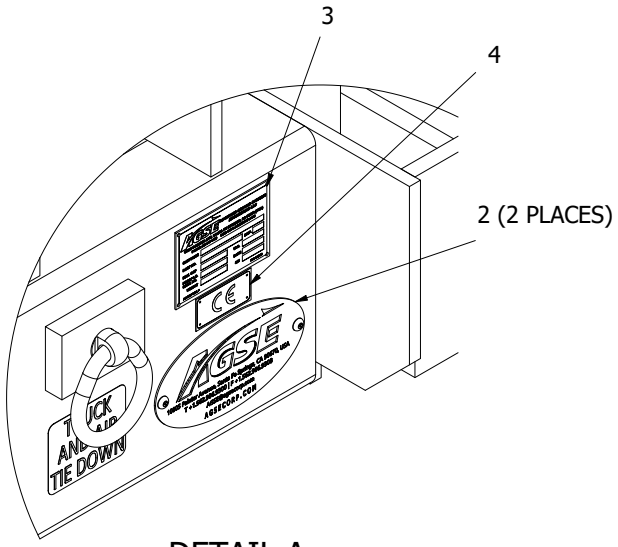
ITEM	PART NUMBER	QTY	DESCRIPTION
-12	AM-1928-6312	2	CAUTION LOCK CASTER WITH SPRING IN AFT POSITION BEFORE RETRACTING
-13	AM-1928-6313	2	3 M.P.H MAX SPEED
-14	AM-1928-6314	2	AM-1928-D20
-15	AM-1928-6315	2	AM-1928-C20

ITEM	PART NUMBER	QTY	DESCRIPTION
	AM-1928-C63	-	AM-1928-156 STENCIL KIT (Figure 8.2-4)
1	AM-1928-D63	1	AM-1928-156 STENCIL KIT DETAILS
2	AGSE-N198-S01	2	AGSE LOGO PLACARD, SMALL
3	AM-2207	1	AGSE PLACARD
4	AGSE-CE	1	CE PLACARD
5	AM-2260	4	NO TIE DOWN PLACARD
6	AM-2260	2	NO TIE DOWN PLACARD, ON 4” ID

ITEM	PART NUMBER	QTY	DESCRIPTION
	AM-1928-D63	-	AM-1928-156 STENCIL KIT DETAILS (Figure 8.2-5)
-02	AM-1928-6302	1	FWD W/ARROW (LS)
-03	AM-1928-6303	1	FWD W/ARROW (RS)
-07	AM-1928-6307	2	TRUCK AND AIR TIE DOWN
-16	AM-1928-6316	2	ENGINE LOGO
-17	AM-1928-6317	2	CRADLE ONLY 1,080 LBS (490 KG)
-18	AM-1928-6318	2	C.G, W/ARROW
-19	AM-1928-6319	2	MD-11 WING FOR A310-300/A300-600/A330 & B747/B767
-20	AM-1928-6320	2	MD-11 TAIL W/2 ARROW
-21	AM-1928-6321	1	MD-11 TAIL W/ARROW (RH)
-22	AM-1928-6322	1	MD-11 TAIL W/ARROW (LH)
-23	AM-1928-6323	1	MD-11 WING W/ARROW (RH)

-23	AM-1928-6323	1	MD-11 WING W/ARROW (RH)
-24	AM-1928-6324	1	MD-11 WING W/ARROW (LH)
-25	AM-1928-6325	2	AFT MOUNT
-26	AM-1928-6326	2	SERIAL NUMBER
-27	AM-1928-6327	2	ENGINE MODEL
-28	AM-1928-6328	1	AM-1928-156 MADE IN U.S.A





DETAIL A

Figure 8.2-1 AM-1928-A63 Stencil Kit for AM-1928-155

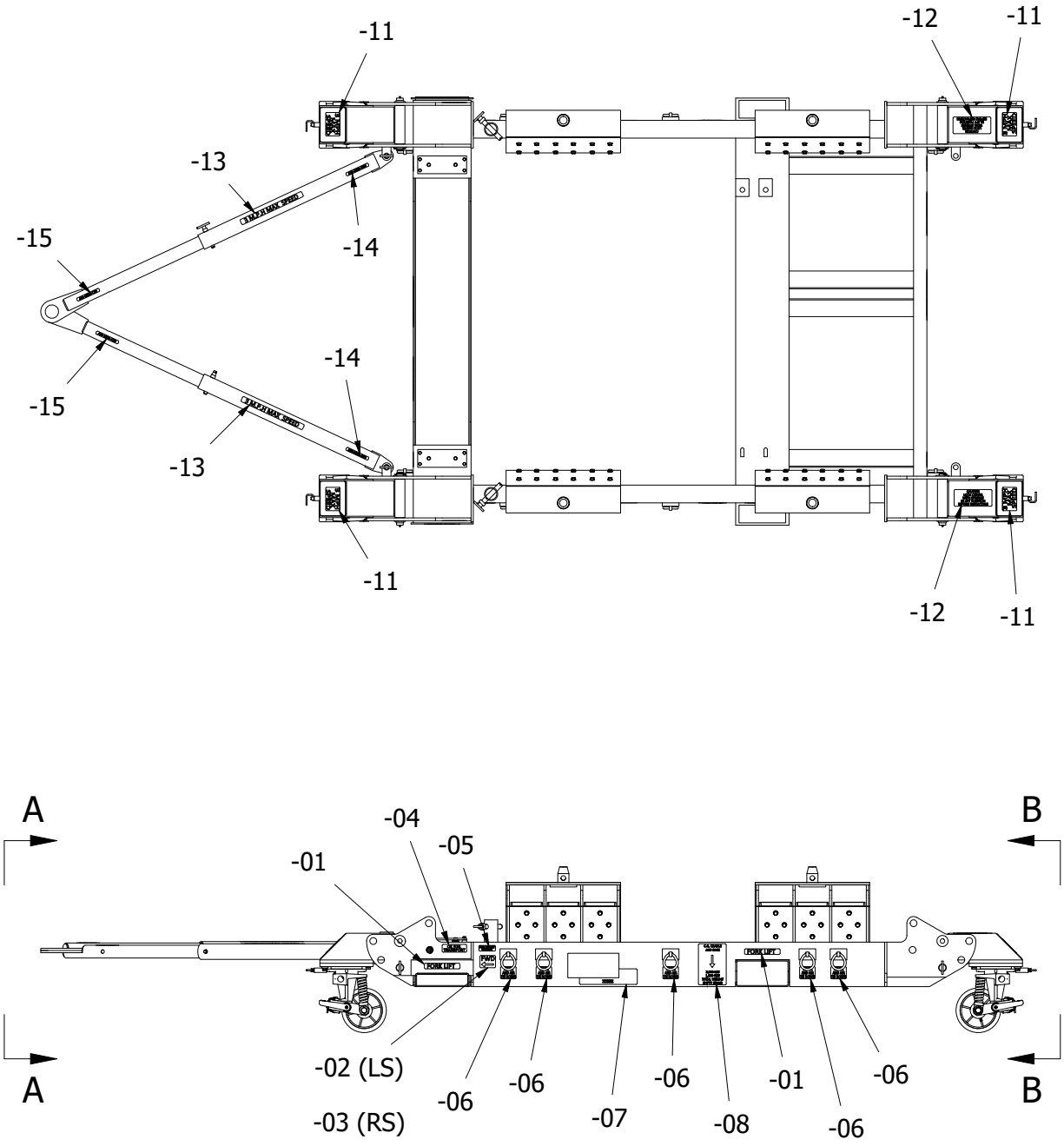
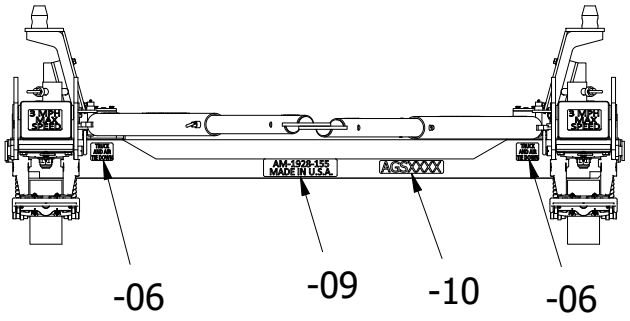
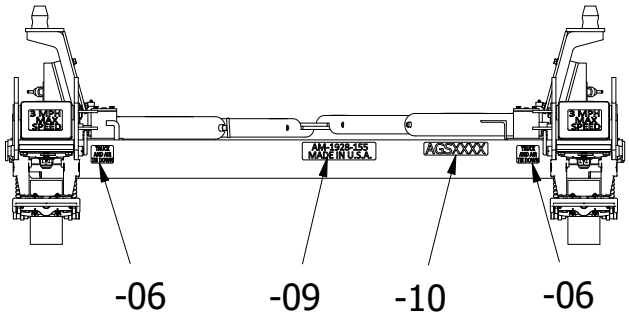


Figure 8.2-2 AM-1928-B63 Stencil Kit Details for AM-1928-155

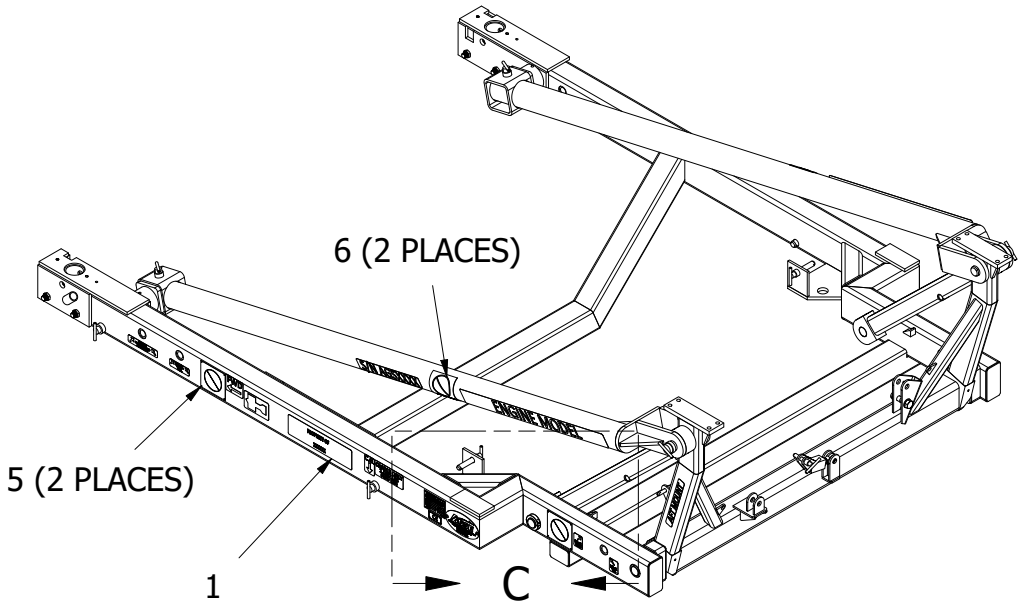


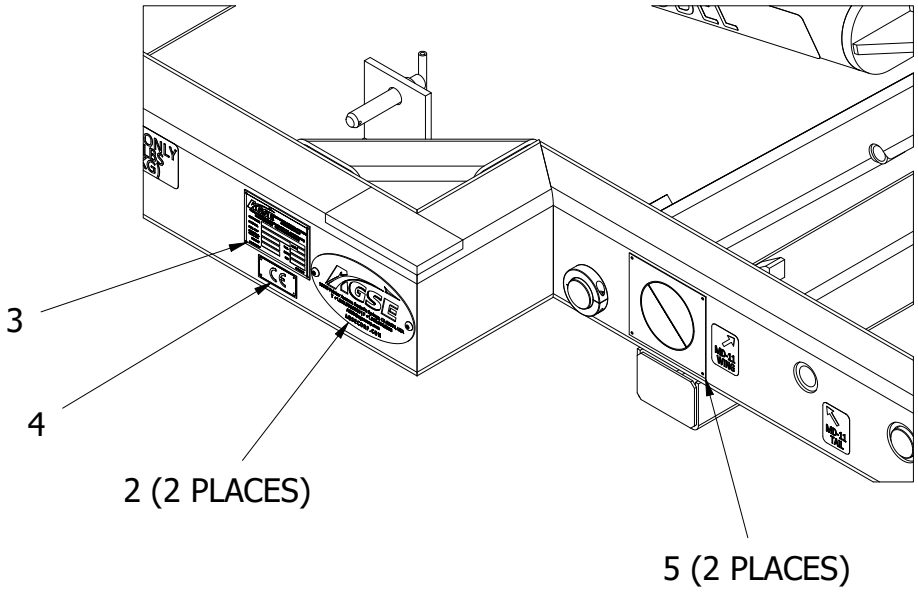
VIEW A-A



VIEW B-B

Figure 8.2-3 AM-1928-B63 Stencil Kit Details for AM-1928-155





DETAIL C

Figure 8.2-4 AM-1928-C63 Stencil Kit for AM-1928-156

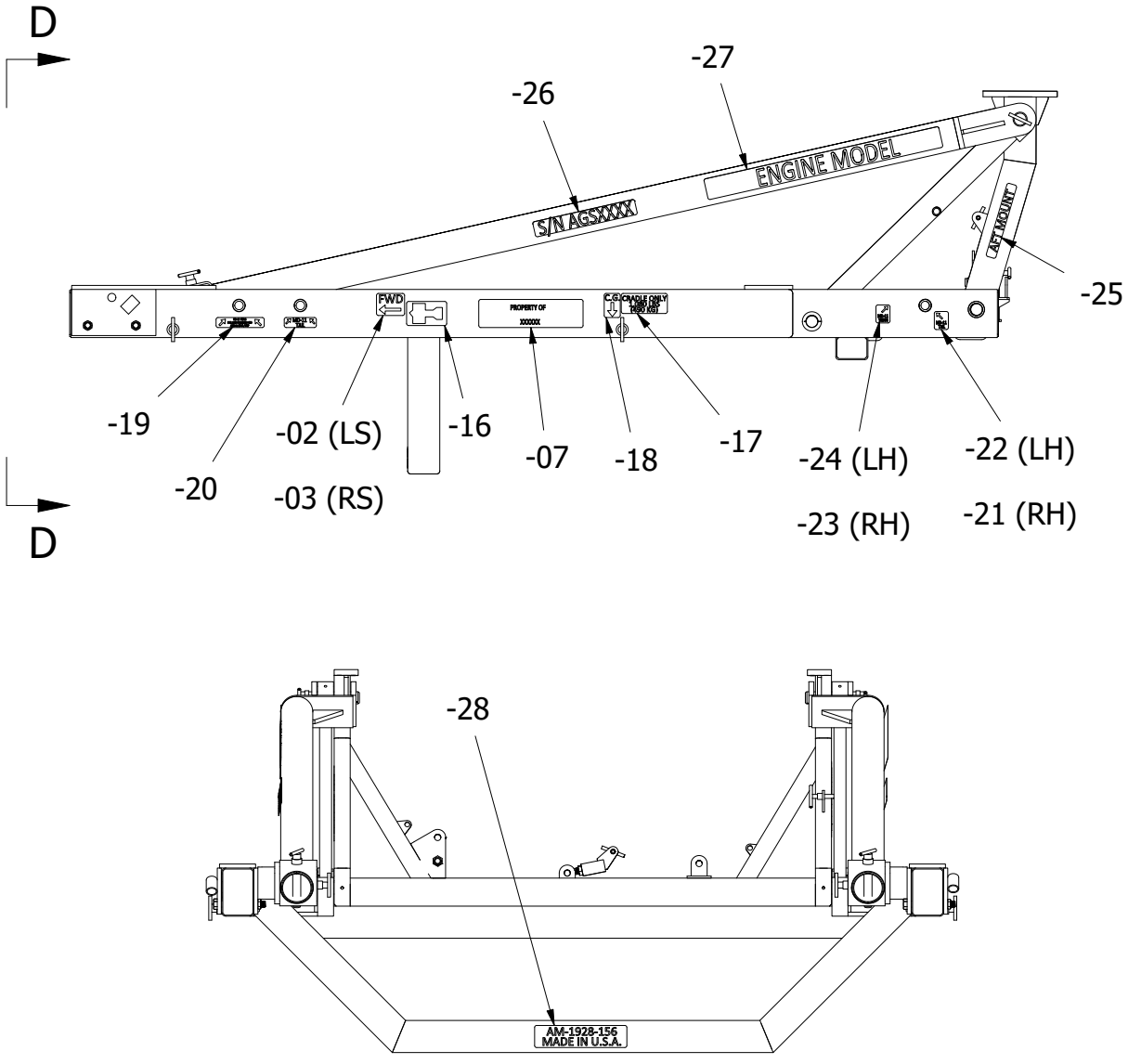


Figure 8.2-5 AM-1928-D63 Stencil Kit Details for AM-1928-156