

OEM-APPROVED GSE & TOOLING FOR

A global leader in the original design, development, and manufacture of recommended engine handling solutions:

Shipping Stands

Fan Stator Shipping Stands

Optional Shipping Stand Accessories

Protective Covers

Slings

Shipping Containers

Site Transport

Pedestal Sets

Fan Tooling

Approved by



Split Shipping System





Uplift Shipping Stand Engine OEM P/N: 11C4300 AGSE P/N: AGSE-E175 Fan Stator Shipping Stand Engine OEM P/N: 11C3004 AGSE P/N: AGSE-C069

Fan Transfer Dolly Engine OEM P/N: 11C4348 AGSE P/N: AGSE-E177 Split Engine Components Container Engine OEM P/N: 11C4306 AGSE P/N: AGSE-C083





OEM-APPROVED FOR THE GENX-2B ENGINE SHIPPING STAND FEATURES

CUSTOM DESIGNED | HIGHLY DURABLE | SAFE & ERGONOMIC LOW PROFILE & VERSATILE | MANUFACTURED IN-HOUSE LOWEST TOTAL COST OF OWNERSHIP | SHORTEST LEAD TIMES

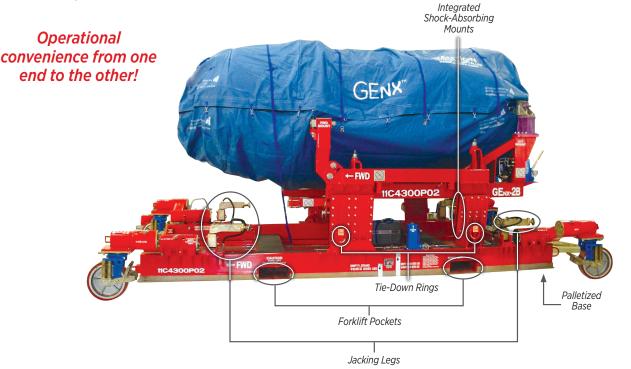
Our reliable & rugged Shipping Stands have been trusted for decades by airlines, aircraft hangars, and engine shops!

All Stands Provide:

- Air/Truck Transport or Storage for propulsors or full engines in QEC configuration*
 - Tie-Down Rings offer secure retainment during air/truck transport
 - Forklift Pockets for convenient site transport

Select Models Feature:

- Bootstrap Capability to simplify on-wing engine removal & installation
- Integrated Shock-Absorbing Mounts to reduce vibrations for engine protection during transport
- External Shock-Absorbing Mounts for truck transport
- Roll-Over designs to achieve minimum "low profile" dimensions for passing through aircraft side cargo door
- Uplift or vertical adjustment to accommodate height-restricted transport
- · Jacking Legs to:
- Properly align the engine for fan removal & installation
- Raise the stand off the ground without the need for a forklift or overhead lifting device
- Palletized Bases compatible with aircraft cargo loading systems
- Ground Handling Bracket Sets (11C4628) to firmly support the engine from both sides of the fan hub frame
- Stacking Spacers to minimize multi-stand shipping or storage volume when empty



Uplift Shipping Stand with Cover Protecting Propulsor

Engine OEM P/N: 11C4300 AGSE P/N: AGSE-E175

"AGSE Shipping Stands are designed and built in compliance with the specifications and requirements of the engine's equipment manufacturer (OEM). The customer is solely responsible for selecting the appropriate packaging based on all information at their disposal, including the specific application, regulatory compliances, product compatibility, shipping requirements, and documentation issued by the Engine OEM. Any AGSE-referenced shipping information presented in this product literature or other AGSE documentation is for general guidance only. It should not be considered a complete set of shipping requirements that can alter, satisfy, or influence regulatory and engine OEM shipping requirements. The content found in AGSE marketing materials and other documentation is subject to change; AGSE accepts no liability for loss or damage resulting from changes, errors, omissions, or misinterpretations of these AGSE publications.



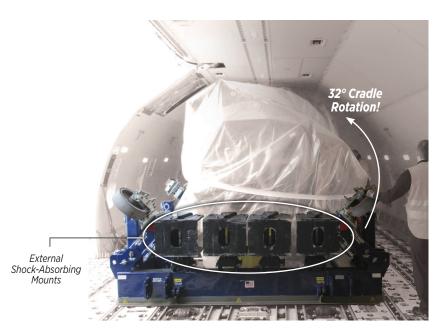


OEM-APPROVED FOR THE GENX-2B ENGINE SHIPPING STANDS

= Available Feature

| SHIPPING | STANDS BY PART NU | MRFD* | | | | | | | | | | Available i catale |
|--------------------------------|---|--------------------------------------|----------------------|-------------------------------|-----------------------------|-----------|--------|--------------|--------------------|-----------------------------------|---------------------|-------------------------------|
| PART Engine OEM NUMBER: AGSE | DDODUU COD CADADI E | FULL ENGINE TRANSPORT/ STORAGE | BOOTSTRAP CAPABLE | INTEGRATED SHOCK MOUNTS | EXTERNAL SHOCK MOUNTS | ROLL-OVER | UPLIFT | JACKING LEGS | PALLETIZED BASE | GROUND HANDLING BRACKET SET | STACKING SPACERS | OTHER ENGINES ACCOMMODATED |
| 11C4319 AGSE-E215 | Boeing 747, 767 & 777 | • | • | | • | • | | • | • | | | |
| 11C4300 AGSE-E175 | Boeing 747, 767 & 777, Douglas DC-10 & MD-11 An-124 or Similar Specialized Aircraft | ● † | • | • | | | • | • | • | • | | |
| 11C4349 AGSE-E176 | For Ground Transport Only | • | • | • | | | | | | • | | |
| 11C4678 AGSE-E257 | Boeing 747, 767 & 777, Douglas DC-10 & MD-11 | | | • | | | | | | | | GEnx-1B |
| 9446M34P01 AGSE-E196 | For Ground Transport Only | | | • | | | | | | | • | GEnx-1B |

[†]For Ground Transport only. A Shipping Stand comprises a Cradle & Base.



Roll-Over Shipping Stand in Low Profile Position loaded onto the Main Deck of a Boeing 777 Aircraft Engine OEM P/N: 11C4319 AGSE P/N: AGSE-E215

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OEM-APPROVED FOR THE GENX-2B ENGINE FAN STATOR SHIPPING STANDS

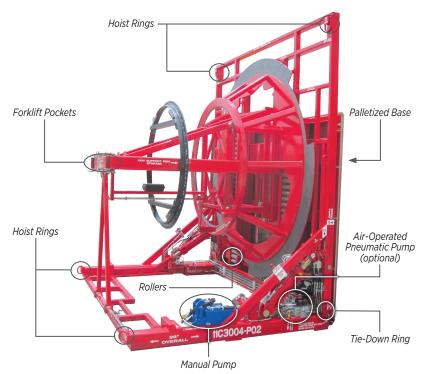
Dependable, efficient, and versatile handling solutions for fan stators!

- Air/Truck Transport or Storage for fan stator modules*
- Manual Pump to vertically adjust the stand for proper alignment during fan removal & installation
- Palletized Base compatible with aircraft cargo loading systems
- Rollers allow multiple positions for improved loading/ unloading onto/from aircraft
- Folding Side Guide Bars center the stand in Boeing 747 side cargo doors

- Tie-Down Rings offer secure retainment during truck transport
- Forklift Pockets for convenient site transport
- Hoist Rings interface with overhead lifting devices for rotation to air or truck shipping positions
- Optional Air-Operated Pneumatic Pump rotates the stand without physical exertion or the need for an overhead lifting device

| FAN STATOR | FAN STATOR SHIPPING STANDS BY PART NUMBER* | | | | | | | | | | | |
|-----------------------------|---|-----------------------------|--------------------|---------------------------|--------------|--|--|--|--|--|--|--|
| PART Engine OEM | CAPABLE OF TRANSPORT ON | AIR-OPERATED PNEUMATIC PUMP | COMPATIBLE WITH OT | OTHER ENGINES | | | | | | | | |
| NUMBER: AGSE | FREIGHTER AIRCRAFT* | (-PPK) | FAN CASE COVERS | FAN CASE TRANSFER DOLLIES | ACCOMMODATED | | | | | | | |
| 11C3004 AGSE-C069 | Boeing 747, 767 & 777, Douglas DC-10 & MD-11 | • | 11C3409 | 11C4490 | GEnx-1B | | | | | | | |
| 11C4572 AGSE-C084 | Boeing 747, 767 & 777, Douglas DC-10 & MD-11 | | 11C3409 | 11C4490 | GEnx-1B | | | | | | | |

Operational convenience from top to bottom!



Stand in Truck Shipping Position





Stand with Air Pump in Mid-Rotation



Stand in Air Shipping Position





OEM-APPROVED FOR THE GENX-2B ENGINE OPTIONAL SHIPPING STAND ACCESSORIES & PROTECTIVE COVERS

| OPTIONAL SHIPPING STAND ACCESSORIES Improve safety & productivity! | | | | | | | | | | | |
|--|--|--|---|--|----------------------------|--|--|--|--|--|--|
| PART Engine OEM NUMBER: AGSE | DESCRIPTION COMPATIBLE WITH OTHER AGSE EQUIPMENT | | INCLUDES: | SPECIFIC FUNCTION | OTHER ENGINES ACCOMMODATED | | | | | | |
| 11C4510 AGSE-E18412 | Stand Lift System | 11C4319 (Roll-Over Shipping Stand) 11C4300 (Uplift Shipping Stand) 11C4467 (Shipping Container) for split shipment/storage | Four (4) Jacking Leg Assemblies | Raises or lowers the Shipping Stand 47.5" (121 cm) for loading on or removal from a truck trailer or loading system without the need for a forklift or overhead lifting device | GEnx-1B | | | | | | |
| AGSE-V133 | Accessory Drive System | 11C4319 (Roll-Over Shipping Stand) | Cart with Motor-Controlled Drive Shaft | Rotates Cradle to achieve minimum dimensions to pass through aircraft side cargo door | GEnx-1B, Trent | | | | | | |
| 11C4347 | Forward Fan Case Support Ring | 11C4300 (Uplift Shipping Stand) 11C4348 (Fan Case Transfer Dolly) | • One (1) Ring • Seven (7) Mounting Pads | Supports the Fan Stator during lift & turn operations, engine buildup, and transport | | | | | | | |

| PROTECTIVE COVERS Lasting protection against dirt, water, and contamination! | | | | | | | | | | | |
|--|--------------------------|---|---------------|------------------|----------------|--|--|--|--|--|--|
| PART NUMBER: | PROVIDES PROTECTION FOR: | COMPATIBLE WITH | | FOR USE DURING: | | | | | | | |
| Engine OEM 11C4499 | Full Engine | OTHER AGSE EQUIPMENT 11C4319 (Roll-Over Shipping Stand) | AIR TRANSPORT | GROUND TRANSPORT | SITE TRANSPORT | | | | | | |
| 11C4388 | Full Engine | 11C4300 (Uplift Shipping Stand) 11C4349 (Truck Shipping Stand) | • | • | | | | | | | |
| 11C4389 | Propulsor | 11C4300 (Uplift Shipping Stand) 11C4349 (Truck Shipping Stand) | • | • | | | | | | | |
| 11C4310 | Fan Case | | • | • | | | | | | | |
| 11C4382 | Stage 1 Fan Disk | | | | • | | | | | | |



Stable and versatile overhead support for horizontal build-up or Shipping Stand transfer!

| PART Engine OEM NUMBER: AGSE | COMPATIBLE WITH AGSE SHIPPING STAND(S): | MAXIMUM LOAD CAPACITY | CENTER OF GRAVITY ADJUSTMENT FEATURE | TWO (2) SPREADER BEAMS | FORKLIFT POCKETS | TELESCOPING ADJUSTMENT TOOL | INCLUDES STORAGE CONTAINER | OPTIONAL STORAGE CONTAINER | OTHER ENGINES ACCOMMODATE |
|---------------------------------|--|-----------------------------|--------------------------------------|------------------------------|---------------------|--------------------------------|----------------------------------|-------------------------------|---------------------------|
| 11C4542 AGSE-L033 | 11C4300 (Uplift Shipping Stand) | 44,000 lbs 19,958 kg | | • | | | • | | GEnx-1B |
| 11C4484 AGSE-L038 | 11C4319 (Roll-Over Shipping Stand) 11C4300 (Uplift Shipping Stand) 11C4349 (Truck Shipping Stand) | 32,000 lbs 14,515 kg | Lifting Ring, Aft Cables | | • | • | | • | GEnx-1B, Trent |
| AGSE-L018 | 11C4300 (Uplift Shipping Stand) 11C4349 (Truck Shipping Stand) | 30,000 lbs 13,608 kg | Lifting Ring, Aft Cables | | • | • | • | | GEnx-1B, Trent |
| 11C4648 AGSE-L043-G03 | | 25,000 lbs 11,340 kg | Lifting Ring, Forward Turnbuckles | | • | • | | • | GEnx-1B |
| 11C4640 AGSE-L043-G01 | | 25,000 lbs 11,340 kg | Lifting Ring, Forward Turnbuckles | | • | • | | • | |
| 11C4323 | 11C4628 (Ground Handling Bracket Set) | 16,000 lbs 7,257 kg | Lifting Ring | | | • | | • | GEnx-1B |



Sling Supporting a Roll-Over Shipping Stand Engine OEM P/N: 11C4484 AGSE P/N: AGSE-L038





OEM-APPROVED FOR THE GENX-2B ENGINE SHIPPING CONTAINERS & SITE TRANSPORT

| DA DT NUMBER | ACCOMMOD | ATES: | COMPATIBLE WIT: | REMOVABLE | FORKLIET | SEPARABLE | SHOCK- | SLIDE OUT | VIEW | DOCUMENT | OTHER ENGIN |
|----------------------------|---|---|---|-----------|----------|--------------------|---------------------|----------------------------|------|-----------|-------------|
| PART NUMBER: Engine OEM | SPLIT ENGINE COMPONENTS | SHIPPING STAND COMPONENTS | COMPATIBLE WITH OTHER AGSE EQUIPMENT | COVER | POCKETS | SHIPPING CRATES | ABSORBING MOUNTS | PLATFORM/ CONTAINER LID | PORT | CONTAINED | OTHER ENGIN |
| C4683 GSE-C119 | Core Module | | | • | | | • | | • | • | GEnx-1B |
| C4306 GSE-C083 | Acoustic Panels Aft Support Ring Deflector Panels Fan Blades Forward Flight Mount Lower Bifurcation Assembly Spinner Splitter | | | • | • | | | • | • | • | |
| C4467 GSE-C082 | | Casters External Shock Mounts Stand Lift System Steering Bars Tow Bar | 11C4319 (Roll-Over Shipping Stand) for split shipment/storage | • | • | • | | | • | • | |

| SITE TRANS Exceptional tran | | facility or between local | sites! | | | | | | | |
|------------------------------------|---------------|---|--------------------------------------|--------------------|---------|---------|--------------|----------------------------|----------------------|-------------------------------|
| PART Engine OEM NUMBER: AGSE | ACCOMMODATES: | COMPATIBLE WITH OTHER AGSE EQUIPMENT | DISASSEMBLES/ FOLDS WHEN EMPTY | PNEUMATIC TIRES | CASTERS | TOW BAR | JACKING LEGS | MANUAL MOVEMENT ONLY | STORAGE CONTAINER | OTHER ENGINES ACCOMMODATED |
| 9446M34P02 AGSE-E197-G02 | Propulsor | 11C4678 (Shipping Stand) 9446M34P01 (Truck Shipping Stand) | • | • | | • | | | | GEnx-1B |
| 9446M34P03 AGSE-E197-G01 | Propulsor | 11C4678 (Shipping Stand) 9446M34P01 (Truck Shipping Stand) | • | | • | • | | | | GEnx-1B |
| 11C4348 AGSE-E177 | Fan Case | 11C4300 (Uplift Shipping Stand) 11C4349 (Truck Shipping Stand) 11C3004, 11C4572 (Fan Stator Shipping Stands) 11C4347 (Fan Case Support Ring) | • | | • | | • | • | • | |



OEM-APPROVED FOR THE GENX-2B ENGINE PEDESTAL SETS & FAN TOOLING

| | PEDESTAL SETS Another ideal horizontal build-up solution to achieve ergonomically efficient engine centerline heights! | | | | | | | | | | | | | | | |
|----------------------------|---|---------------------|------------------------------|--|----|-----|-------|--------|-------------|---------------|------------|---|----------|-----|--|--|
| | | | | | | SUP | PORTS | SELECT | MODULES WHE | N USED IN CON | JUNCTION \ | WITH OTHER PE | DESTALS: | | | |
| PART NUMBER: Engine OEM | : MODULE SUPPORTED | NUMBER OF PEDESTALS | F LOAD CAPACITY | FULL ENGINE (configuration options below) | | | | ow) | | | | CORE MODULE WITHOUT LPT (configuration options below) | | FAN | COMPATIBLE WITH OTHER AGSE EQUIPMENT | |
| | | | | #1 | #2 | #3 | #4 | #5 | #1 | #2 | WITH LPT | #1 | #2 | | | |
| | Turbine Rear Frame | 2 | 8,000 lbs 3,629 <i>kg</i> | • | • | | • | • | | | • | | | | | |
| | Fan Hub Frame | 2 | 10,000 lbs 4,536 kg | • | • | | | | • | | • | • | • | | 11C4628 (Ground Handling Bracket Set) | |
| | Turbine Center Frame | 2 | 8,000 lbs 3,629 kg | | | • | | | • | | | • | | | | |
| 11C4251 | Forward Fan Case | 2 | 10,000 lbs 4,536 kg | • | | • | • | | • | • | | | | • | | |
| | Aft Fan Case | 2 | 10,000 lbs 4,536 kg | | | • | • | • | | • | | | | • | | |
| | Does Not Support a Specific Module | 1 | 6,600 lbs 2,994 kg | | | | | | | • | | | • | | | |

| FAN TO | OLING afety & productivity during fan mainten | nance! | | |
|----------------------------|---|---|---|--------------------------------------|
| PART NUMBER: Engine OEM | DESCRIPTION | SPECIFIC FUNCTION | COMPATIBLE WITH OTHER AGSE EQUIPMENT | ACCOMMODATES OTHER SELECT ENGINES |
| 11C3272 | Fan Hub Guide Pin Set | Aligns Fan Stator Outlet Guide Vane (OGV) Blades with Fan Hub | | GEnx-1B |
| 11C34O3 | Fan Case Taper Gage Set | Measures Fan Blade Tip clearance at 6 o'clock location | | GEnx-1B |
| 11C4307 | Fan Case Runout Measurement Fixture | Measures Fan Case full indicator reading at 144.123, 148.567, and 153.011 locations | | |
| 11C3323 | Stage 1 Fan Blade Spacer Removal Hydraulic Tool | Removes Fan Blade Spacers from Stage 1 Fan Blades | | GEnx-1B |
| 11C3398 | Stage 1 Fan Blade Spacer Removal Tool | Removes Fan Blade Spacers from Stage 1 Fan Blades | | GEnx-1B |
| 11C4616 | Fan Inlet Personnel Stand | Provides ergonomic access to upper bolts and acoustic panels during Fan Stator separation & mating procedures | 11C4514 (Fan Stator Protector Set) | GEnx-1B |
| 11C4514 | Fan Stator Protector Set | Protects Fan Case during separation & mating procedures | 11C4616 (Fan Inlet Personnel Stand) | GEnx-1B |
| 11C4397 | Fan Forward Acoustic Protector | Protects Inner Forward Fan Case during maintenance | | |