FRESH AERO EasyLift V Adaptor System For Grumman AA-1 & AA-5 Series Aircraft



Shown with recommended ATV/Motorcycle lift - not included

User Manual



Where Imagination Meets Innovation

Thank you for purchasing the Fresh Aero EasyLift V System for AA-1 & AA-5 series Grumman aircraft. We're confident you will be pleased with this new innovation in Grumman maintenance tools.

When it comes to lifting Grumman AA-1 & AA-5 aircraft, special requirements are needed to assure safe and damage free lifting.

For nose gear, wheel and tire servicing, current Grumman AA-1 & AA-5 series aircraft lifting procedures include placing sand bags or other weight on the top surface of the horizontal stabilizer to lower the tail section and consequently raise the nose. Recent evidence suggests that excessive loading of the horizontal stabilizer has contributed to stabilizer spar support fatigue and cracking. As a result, an Airworthiness Directive was issued by the FAA to address this issue.

The Fresh Aero EasyLift V System was developed to completely eliminate loading the tail section and correctly places the lifting load precisely where Grumman maintenance manuals specify – at station 51, just aft of the firewall on AA-1 & AA-5 series aircraft.

The EasyLift V System can also be used to lift each main gear & wheel assembly at station 125 without loading the strut. The load is spread out almost 4 feet along hard lifting points specified in Grumman maintenance manuals. This is very useful if the strut needs servicing.

To make our EasyLift even more versatile - and to reduce your cost, we've redesigned our new EasyLift V to bolt onto a "Harbor Freight" #61632/60536 ATV/Motorcycle lift. The Fresh Aero EasyLift V bolts on to the ATV lift in just minutes and provides a stable and secure lifting platform for lifting Grumman AA-1 and AA-5 aircraft.

An added benefit -- you can use your ATV/motorcycle lift for other lifting chores with the EasyLift V removed. Very versatile indeed!

The Harbor Freight #61632/60536 ATV/motorcycle lift available at all Harbor Freight stores for under 80 dollars (even less expensive with a coupon). If you don't have a Harbor Freight store nearby, you can order one.

Innovative features include:

- ✓ Just bolts onto the stable and robust Harbor Freight ATV/Motorcycle lift in minutes.
- ✓ An articulating support beam that mates perfectly with the bottom of the aircraft and pivots to compensate for the increasing angle of incidence as the aircraft is raised. It lifts the aircraft at the locations specified in the Grumman manuals for excellent access when performing strut, wheel or tire maintenance.

The Fresh Aero EasyLift System continued

✓ The support beam features a structural aluminum "C" channel core fastened to a treated wood sub plate and cushioned with a heavy duty wrap around carpet. The beam extends past the width of the aircraft with a large load lifting area – considerably more than required by Grumman service manuals.

The Fresh Aero EasyLift V System provides a stable and safe lifting environment for servicing Grumman AA-1 & AA-5 series aircraft gear & wheel assemblies. A combination of innovation, quality and intrinsic safety make the EasyLift one of the finest lift systems in the aviation market today and a superior solution for lifting Grumman AA-1 & AA-5 series aircraft. It doesn't get any easier than this!

The Fresh Aero EasyLift 5 year Limited Warranty

Fresh Aero Aviation makes every effort to provide high quality and durable products to the aviation community and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 3 years from the date of purchase. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents; repairs or alterations outside our facilities; or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation defect or problem must be included with the product. If inspection verifies the defect, we will either repair or replace the product at our discretion or may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return the repaired or replaced product at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then the purchaser must bear the cost of returning the product.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

Fresh Aero Aviation, 1142 Roseland Drive, Columbia, TN 38401-7700 Phones: (931) 381-6092 www.freshaero.com Email: info@freshaero.com

Study and Save this Manual



Read this entire manual and all jack and lift labeling before using this lift system. Make sure you understand the instructions and safety precautions in this manual and also on the labels on your EasyLift. Failure to follow all the instructions in this manual can cause personal injury and aircraft and jack damage. Keep this manual and your invoice in a safe place for future reference. Do not use this lift system if you do not understand all the instructions and safety precautions in this manual. If this product is used without observing the information given under this symbol, injury or death may result.

Fresh Aero EasyLift System Safety Warnings and Precautions

Warning: always adhere to the following safety precautions when using this lift system

- Always keep the work area clean and well lit. Cluttered areas invite accidents and possible injuries.
- Stay alert and concentrate on safety. Be attentive to what you are doing. Do not use this lift when you are tired. A moment of inattention while operating tools and equipment may result in serious personal injury.
- Always wear ANSI approved safety goggles when using this lift and other tools and equipment.
- Never handle this lift if under the influence of alcohol, drugs or medications. Read warning labels on prescriptions you are taking to determine if your judgment or reflexes will be impaired while taking these drugs. Do not handle lift if any doubt exists.
- This lift system (with the attached Harbor Freight lift) is heavy and requires bending when lifting and positioning under aircraft. Always use caution when handling this lift. Handle lift system by bending your knees, not your back. Improper lifting or use of this lift can cause personal injury and equipment damage.
- Always inspect entire lift system for damage, broken or loose parts and proper level of hydraulic fluid before each use (refer to the Harbor Freight #61632/60536 manual for fluid level check procedure). Check for alignment and binding of moving parts or any other condition that may affect proper operation. Do not use this lift system if any of these conditions exist and tag the EasyLift with a "Do Not Use" label until repaired. Repairs and replacements must always be performed by a qualified technician or the manufacturer. Service or maintenance performed by unqualified persons could result in injury.



Safety Warnings and Precautions - continued

- The EasyLift V System was designed to be used with the Harbor Freight #61632/60536 ATV/Motorcycle Lift. Always use the EasyLift V System with the #61632/60536 lift. Follow the assembly instructions below completely to mount the EasyLift adaptor onto the #61632/60536 lift.
- Always use this lift system for its intended application: lifting Grumman AA-1 & AA-5 series aircraft nose & main gear/wheel assemblies for servicing. This is a single purpose lifting system and must not be used for any purpose other than its intended application.
- Make certain that the support beam (crossbeam) socket is properly seated on the end of the vertical support cone before sliding Easy Lift System under aircraft prior to lifting.
- Always locate aircraft and lift system on a hard, level, flat, dry concrete or asphalt surface before lifting aircraft. If, surface compresses when lifting aircraft, stop using this lift immediately and move aircraft to a surface that will support the weight of the aircraft.
- Locate jack at station 51 or 125 on aircraft as specified in Grumman maintenance manuals. Station 51 is located about 6 inches back from the firewall and extends about 12 inches aft. Station 125 is centered on edge of fuselage adjacent to the main gear being lifted. Refer to photos 4 and 5 for correct lifting position.
- For nose gear lifting, position support beam of EasyLift System parallel with the firewall and with ends of beam extended past fuselage an equal distance on both sides of aircraft (photo 4). Keep beam clear of any antennas or other attachments on the aircraft.
- For main gear lifting, position crossbeam parallel with edge of aircraft fuselage. Crossbeam should protrude past the edge of fuselage about 1 inch for the entire length of crossbeam and the center of the beam should be centered with the landing gear being lifted (photo 5). Keep beam clear of any antennas or other protrusions at bottom of aircraft.
- Always keep hands away from pinch points along beam and base when lifting aircraft.
- Always remain clear of bottom of raised aircraft. Always verify that you and other people are not below any portion of raised aircraft.



Safety Warnings and Precautions - continued

- Always use the locking levers on the Harbor Freight lift (photo 2) to backup the hydraulic jack for added safety. When aircraft is lifted to desired height, confirm that the two locking levers on both sides of the lift are locked into the lever retainers Be sure to release the locking levers with the release bar before lowering aircraft.
- Always chock both non-lifted tires of aircraft (on both sides) before lifting aircraft to desired height to prevent movement.
- If aircraft will remain lifted unattended for an extended period of time, be sure to block the aircraft's axle with wood or other load bearing material to serve as a secondary support system.

Warning: Never do any of the following when using the Easy Lift System:

- Do not drop or mishandle this lift system. Handle this unit carefully.
- Never alter or modify the design or structure of the EasyLift System.
- Never use the EasyLift System for any purpose other than lifting the nose and main gear of Grumman AA-1 & AA-5 aircraft at station 51 and 125 respectively. Refer to the Grumman maintenance manuals for the specific series being lifted and photos 3 & 4 in this manual). This is a single purpose lift and must not be used for any purpose other than its intended application. Note: the Harbor Freight ATV/Motorcycle lift can be used for other approved lifting when the EasyLift System is removed from the lift.
- Never use the ATV/motorcycle lift to lift aircraft without the EasyLift V System attached properly.
- Never extend the range or capacity of the EasyLift System by using blocks, risers or other attachments under the base or above the support beam.
- Never use this lift on uneven, unleveled, soft or rocky surfaces. Base must lay flat and level with no rocking.
- Never use this lift on oily, wet or other slippery surfaces.
- Never use this lift on a surface that will not support the aircraft load or a surface that will cause the base of this lift to tilt or list.



Safety Warnings and Precautions - continued

- Never allow children in the work area. Do not allow children to handle or play with the Easy Lift System.
- Do not overreach. Keep proper footing and balance at all times. Never place your body or any part of your body below the lifted aircraft or between any other pinch points. Also, make certain other people are clear of lifted aircraft.
- Never pull, push or lean on any part of lifted aircraft.
- Never climb on or into lifted aircraft. Also make certain other people stay off lifted aircraft.
- Never lift either main gear of aircraft when nose wheel or aircraft is lifted off surface.
- When lowering aircraft, lower the lift gradually and allow aircraft to slowly lower to ground level.
- To avoid damage to the EasyLift System and prevent personal injury, never place the Harbor Freight lift on a stand, chair, table or cart.
- To prevent personal injury, never sit or stand on this lift or support beam.

Warning: The warnings, precautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this lift system and must be supplied by the person or persons using this product. If you have questions regarding the performance, operation or maintenance of the EasyLift System, or just need another manual, please call or write the Fresh Aero Group at the at the contact numbers and e-mail address at the bottom of this page. Manuals are also available on our web site in PDF format.

Other Legal Notices

The Fresh Aero Aviation Group make no representations or warranties regarding any damages, injuries or benefit expected by using this unit lawfully, or any request from a third person, which are caused by the inappropriate use of this product.

Disclaimer of Warranty

The Fresh Aero Aviation Group makes no representations of warranties, either expressed or implied, by or concerning any content of these written materials and in no event shall be liable for any implied warranty for any consequential, incidental or indirect damages (including but not limited to damages for loss of business profits or business interruption) arising from the use or inability to use these written materials or equipment. No liability is assumed with respect to the use of the information contained in these written materials, or for damages resulting from the use of the information contained therein.

Copyright 2017

The Fresh Aero Aviation Group reserves all rights to this manual and the EasyLift system including the right to alter the features and contents of this publication and the EasyLift without obligation or advance notice.

Fresh Aero Aviation, 1142 Roseland Drive, Columbia, TN 38401-7700 Phones: (931) 381-6092 www.freshaero.com Email: info@freshaero.com

Operation Identification Photos

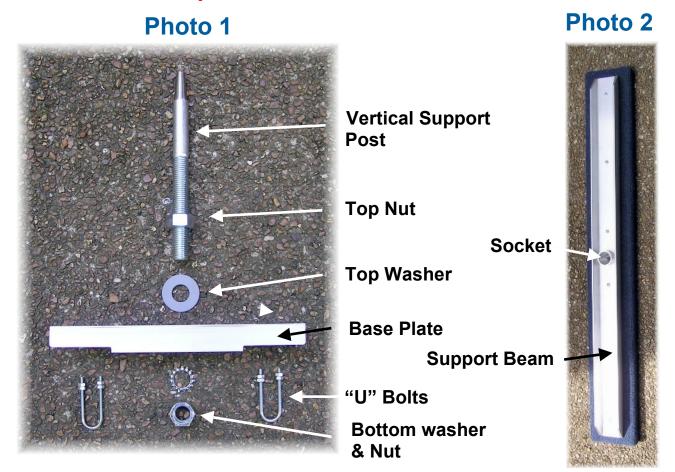
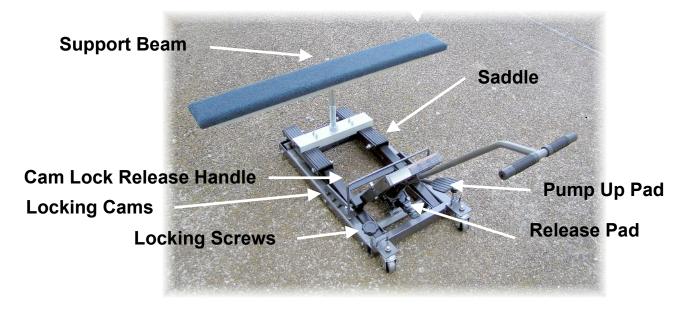


Photo 3



Operation Identification Photos - continued

Photo 4



Station 51
Front edge of crossbeam about 6 inches from firewall

Photo 5



Station 125

Ram centered with gear strut and crossbeam carpet overlapping edge of fuselage approximately 1 inch

EasyLift Assembly Procedure

Tools needed for assembly:

7/16 inch socket wrench, 7/16 inch open end wrench, a large adjustable wrench or "Channel Lock" type pliers and a large vise. Note: if you don't have these tools, perhaps you can borrow them from a friend or your local FBO.

Refer to the materials list and assembly drawing on page 9 for the following tasks:

- 1. Assemble the Harbor Freight #61632/60536 ATV/Motorcycle Lift following the Harbor Freight owners manual included with the lift. What you haven't purchased the lift yet? Well, get out there and do it. This is the first step!
- 2. Lay out the EasyLift adaptor parts and identify the vertical support post with two nuts and lock washer on one end and a tapered cone one the other end (photo 1). Remove one nut and the lock washer and slide the 1" ID flat washer onto the threaded end of the post and hold it against the nut.
- 3. Identify the base support channel with the large hole in the center (photo 1) and insert the vertical support post the end with the nut and washer, into the flat side of the base channel (the side opposite the "legs"). Slide the lock washer onto the bottom of the post and screw the remaining nut onto the vertical support post between the channel "legs".

Note: the nut should be flush with the end of the post for now.

- 4. Locate the $1 \text{ x}\frac{1}{2}$ square inch block of aluminum and wedge this block between a flat on the nut and one of the inner sides of the base legs (this is used to hold the bottom nut from turning when tightening the top nut and can be removed when the tightening procedure it complete).
- 5. Clamp the base plate in a vise with the vertical support post up and tighten the top nut until the lock washer at the bottom is complexly compressed and the assembly is totally secure with no movement. Confirm that this assembly is TIGHT.
- 6. Confirm that a least one thread is showing at the bottom of the post between the "legs". If not, loosen the assembly and adjust the post to provide this.
- 7. Locate the two "U" bolts with the threaded nuts and slide these "U" bolts onto the round horizontal bar that links the two saddle pads on the Harbor Freight lift (photo 2).
- 8. Hold the assembled channel from step 4 in one hand with the vertical post up and slide the open ends of the "U" bolts into the holes in the channel. Align and square the channel on the Harbor Freight lift pads and replace & tighten one nut on each thread securely (photo 2). **Note:** tighten nuts evenly side to side, so that an equal amount of thread protrudes from each nut.

EasyLift Assembly Procedure - continued

9. Tighten nuts until the legs of the channel depress and deform the rubber on ATV/Motorcycle lift saddles. Tighten the second nut on each previously tightened nut to act as a lock nut.

Important for future use: Always confirm that this assembly - including the vertical support is tight with no movement before attempting to lift aircraft.

That's it! You're ready to use your EasyLift!



Easy Lift Operating Procedures

Read and understand all the proceeding safety precautions and warnings before using the Fresh Aero EasyLift

1. Preparing for lifting

- 1.1 Refer to the photos on the previous pages for the following procedures.
- 1.2 Locate the aircraft on a flat, level, dry and debris free surface.
- 1.3 Position socket at bottom of the support beam over the cone on the end of the vertical support post (photo).
- 1.4 Before each use, always inspect entire lift system including support beam for damage, broken or loose parts. Make certain that the EasyLift System is securely tightened to the Harbor Freight lift and that nuts are tight. Do not use this lift system if any of these conditions exist and tag the EasyLift with a "Do Not Use" label until repaired. Repairs and replacements must always be performed by qualified persons or the manufacturer. Service or maintenance performed by unqualified persons could result in injury.

2. Verify that jack ram is at lowest position

Note: Refer to the Harbor Freight #61632/60536 manual for the following lift procedures:

- 2.1 Lower the lift to a height that will allow the lift to roll under the aircraft at the position you are lifting.
- 2.2 Confirm that ATV/Motorcycle lift vertical locking screws (photo 3) are up and not touching ground or pavement.

EasyLift Operating Procedures - continued

3. Positioning the EasyLift at Station 51 for nose gear lifting

3.1 Remove any debris from under aircraft at station 51 (photo 4) and roll entire lift system including crossbeam under aircraft at station 51 with crossbeam parallel with firewall. Take care not to impact antennas or other protrusions at bottom of aircraft.

Note: Roll lift under aircraft with handle and lift lever out and away from aircraft. You will need to access this pad to pump the lift up. Make sure rear of wheel pant (if applicable) will not contact and abrade against lift assembly as aircraft is raised. Also, the handle on the lift can be removed by pulling the attach pin, if it hampers the positioning of the lift.

WARNING: Never attempt to lift aircraft if antennas or other protrusions are between crossbeam and aircraft.

3.2 Position crossbeam parallel with firewall with forward edge about 6 inches from firewall. Make sure crossbeam extends an equal distance beyond both sides of aircraft and does not interfere with the nose strut attach bolts extending back from firewall.

4. Lifting the nose gear

- 4.1 Chock rear of both main tires. Note: Aircraft will move forward slightly when lifted this is normal. Do not chock front of main tires at this time.
- 4.2 Pump the lift lever up and down to raise the crossbeam and aircraft till the wheel/tire assembly is off the the surface and the locking levers on the ATV/Motorcycle lift are engaged in one of the locking cams on both side of the lift (refer to the lift manual).
- 4.3 Screw down lock screws on both sides of ATV/motorcycle lift (photo 3) to prevent lift from moving.

WARNING: Stay clear of bottom of aircraft as aircraft is lifted and when aircraft is in the lifted position. Lift aircraft only high enough to perform intended maintenance.

EasyLift Operating Procedures - continued

4.4 Chock both front and rear of main tires and perform maintenance.

WARNING: Never risk pulling aircraft off lift by using excessive force when performing maintenance.

5. Lowering Aircraft

- 5.1 Confirm that all maintenance is properly completed and that all removed parts are properly installed on aircraft.
- 5.2 Turn the two vertical locking screws on ATV/motorcycle lift (photo 3) counterclockwise to "unlock" lift from pavement.
- 5.3 Remove chocks from rear of tires if lowering the nose gear. Raise lift slightly and pull back on the release bar on the lift to "unlock" the locking levers on each side (refer to the lift manual). Press release pad **very** slowly until aircraft begins to lower and allow aircraft to slowly return to surface.

Caution: very little pressure is required to lower aircraft to the ground. Just tap release gently.

- 5.4 Confirm that entire weight of aircraft is on tires and not on lift or support beam. Lower lift beam to its minimum height and slide the lift and crossbeam from under aircraft taking care not to impact antennas or other protrusions at bottom of aircraft. If moving aircraft, remove chocks from all tires.
- 5.5 Store jack and all components in a safe, secure and dry location. Remove support beam and store separately. Keep lift and support beam out of reach of children.

6. Positioning the EasyLift at Station 125 for main wheel lifting

WARNING: Never lift more than one landing gear at a time with the EasyLift System. This product is not designed for multiple simultaneous gear lifting. Lifting more than one gear at a time with this lift can cause personal injury and aircraft and jack damage.

EasyLift Operating Procedures – continued

- 6.1 Remove any debris from under aircraft at station 125 (photo 5) and verify that the lift is at its lowest position (see page 12). Slide EasyLift including support beam under aircraft at station 125 with support beam parallel with edge of aircraft fuselage closest to gear being lifted (photo 5). Take care not to impact antennas or other protrusions at bottom of aircraft.
- 6.2 Position the EasyLift with the lift handle facing out towards you. (at the wing root, about halfway between fuselage and leading edge of wing . You will need to access this end of the lift to operate the lift..
- 6.3 Use the same procedure outlined on page 13 to adjust the crossbeam lift the aircraft.

Note: At station 125, the support beam should protrude past the edge of fuselage about 1 inch for the entire length of crossbeam and the center of the beam should be centered with the landing gear being lifted (photo 5).

7. Lifting the main gear

- 7.1 Chock both front and rear of nose tire and main tire not being lifted and confirm that vertical locking screws on lift are not lowered into ground (refer to 4.3 on page 13).
- 7.2 Lift aircraft to desired height using the procedures in section 4. Be sure locking levers on the lift are engaged in the locking cams. Screw down vertical locking screws to engage with ground to prevent movement.

WARNING: Stay clear of bottom of aircraft as aircraft is lifted and when aircraft is in the lifted position. Lift aircraft only high enough to perform intended maintenance.

EasyLift Operating Procedures – continued

7.3 Very Important if the lift did not move – Lower the lift away from the aircraft very gently and reposition the lift under the crossbeam and maintain the support beam 1 inch overlap on the fuselage as detailed in step 6.3. Repeat step 7.2.

WARNING: Never risk pulling aircraft off lift by using excessive force when performing maintenance.

8. Lowering Aircraft

8.1 Use lowering procedure outlined in section 5 on page 14.

General Care and Maintenance of your Easy Lift System

The Fresh Aero EasyLift System requires very little maintenance to keep it in excellent operating condition. However, like all mechanical devices, some preventive maintenance is necessary to maintain the integrity and inherent safety of this lift system. Please adhere to the following maintenance procedures to keep your EasyLift in excellent condition.

Lubricate all pump linkages with a high quality general purpose lubricant as needed. Apply a rust preventive to the machined cone of the vertical support post as needed.

Avoid exposing jack and entire lifting system to moisture. If system is exposed to moisture, wipe dry with a clean cloth and re-lubricate above components.

1. Checking for Proper Hydraulic Fluid Level and Purging Air from the Hydraulic System

1.1 Refer to your ATV/motorcycle lift manual for these procedures.

Fresh Aero EasyLift V System for Grumman Specifications	
Lifting Capacity	1500 Pounds
Support Beam Weight	12 Pounds
Support Beam Length	44 Inches
Support Beam Width	5.5 Inches
Base Foot Print	33 X 16 Inches
Minimum Height with Beam	19 inches
Maximum Height with Beam	30 inches
Maximum Beam Articulation	25 degrees

Important Warning

Do not use the Harbor Freight ATV/Motorcycle Lift on a Grumman without the pivoting EasyLift V System because as the aircraft is lifted and the angle of incidence increases, all the aircraft load will be concentrated on just one small point on the lift and aircraft. Instability, damage and possible injury will probably occur. The pivoting EasyLift beam prevents this by spreading the load equally across the lift and a 42 x 6 inch carpeted beam.

Fresh Aero is not responsible for the misuse of the Harbor Freight ATV/Motorcycle Lift or the EasyLift V System.

Fresh Aero Aviation, 1142 Roseland Drive, Columbia, TN 38401-7700 Phones: (931) 381-6092 www.freshaero.com Email: info@freshaero.com