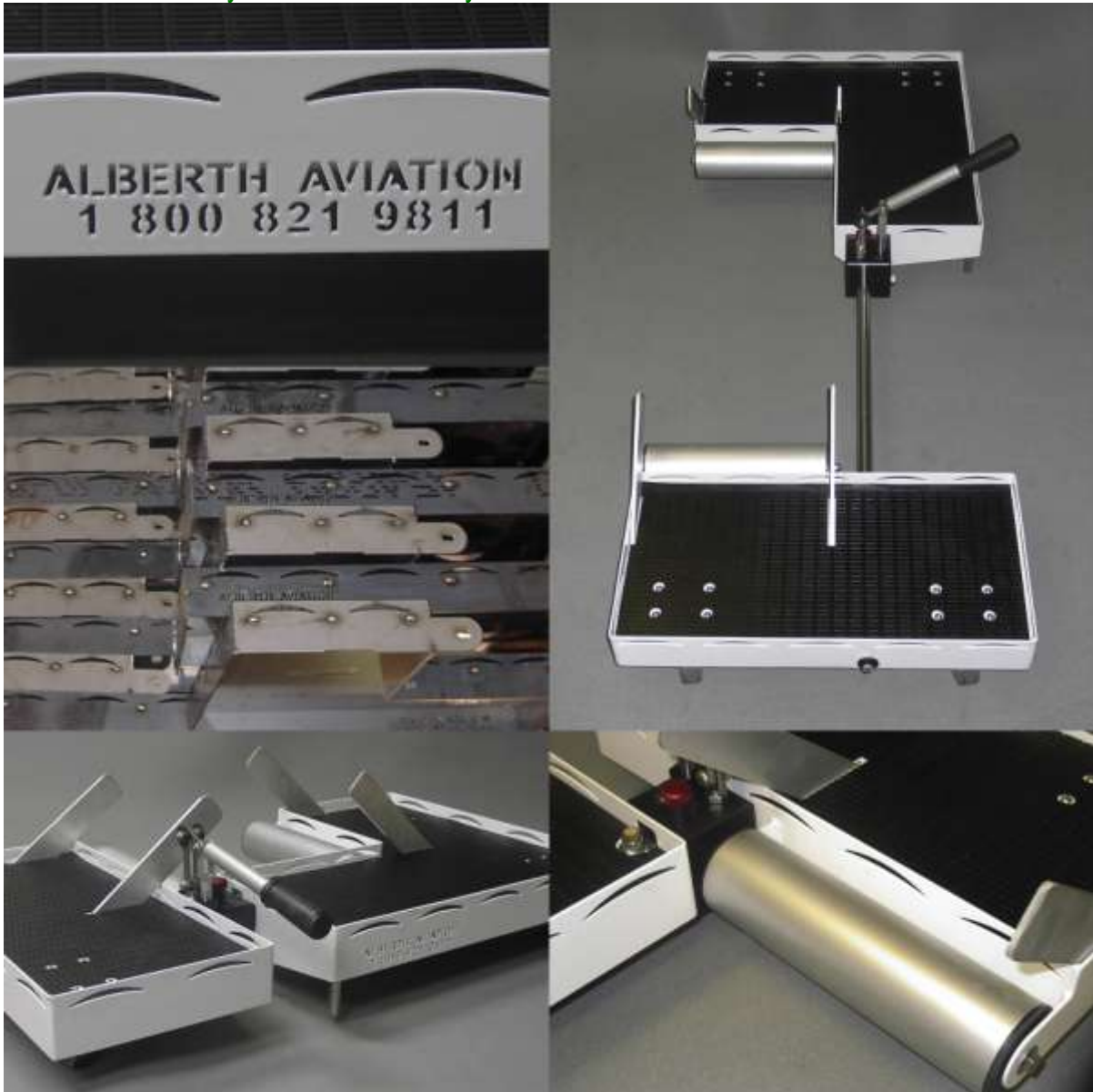




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## Alberth Aviation Hydraulic Wheel Dolly HWD40



## Hydraulic Wheel Dolly Owners Manual Contents

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*A full demonstration video is online at [www.alberthaviation.com](http://www.alberthaviation.com).*

## Alberth Aviation Hydraulic Wheel Dolly

### Introduction

#### General Description

The HWD-40 Hydraulic Wheel Dolly provides the ability to handle heavier aircraft wheels with ease and precision. The Hydraulic Wheel Dolly is designed to accommodate wheel diameters from 25 to 40 inches, tire widths from 4 to 13 inches and wheel weights up to 350 pounds. The combination of hydraulic lift, rollers and casters allows complete articulation of a wheel on all three axes. A difficult job for two persons is now an easy job for one person.

#### Pump Head

The pump head's unique design acts to pull the rollers of the wheel dolly together and lift wheels to provide more precise adjustment than a mechanical powered design.

#### Tool Pans

The tool pans are designed with a fence to contain all the tools needed for a wheel/brake change; the high quality rubber mats provide traction to prevent slippage.

#### Casters

The high quality casters provide smooth rolling action, will not damage hangar floors and are resistant to all aviation hydraulic fluids.

#### Wheel Guides

The wheel guides provide wheel stability on the Hydraulic Wheel Dolly. The wheel guides come in 0, 1, 3, and 4 inch offsets that are used in combination to fit various wheel widths. Additional offsets are available for other combinations.

#### Rollers

The rollers are made from aluminum tubing that is clear anodized for a long lasting finish. The rollers have UHMW plastic end caps with sealed bearings for smooth operation.

#### Personal Safety

- Always use the Hydraulic Wheel Dolly for lifting heavier wheels.
- DO NOT leave wheels unattended on the Hydraulic Wheel Dolly, sloped floors may allow the Hydraulic Wheel Dolly to travel.
- Keep area around the Hydraulic Wheel Dolly clear of debris or other tools.
- Always use the correct wheel guides to stabilize the wheel and prevent wheels from tipping off the Hydraulic Wheel Dolly, which may cause wheel damage or personal injury.

#### Maintenance

The HWD40 should require very little maintenance. Check for loose bolts or hydraulic leaks on a regular basis. A spare set of o-rings is included should the hydraulic pump need rebuilding.

#### Troubleshooting:

Trapped air bubbles or low fluid levels may require bleeding of the pump assembly. Remove the pivot hinge bolt and spacers from the pump piston, remove the 5/8" chrome piston, top off with hydraulic fluid and carefully replace piston as to not disturb the piston seal.



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#### Reservoir Filling:



Hinge bolt removal



Reservoir



Top off Reservoir

Contact Alberth Aviation if you have any questions regarding the operation or maintenance of this Hydraulic Wheel Dolly at 800-821-9811. The online demonstration video may also be helpful.

## Alberth Aviation Hydraulic Wheel Dolly

### **Safety Precautions:**

Read and understand operating manual before using the Alberth Aviation Hydraulic Wheel Dolly.

DO NOT make any modifications to this Hydraulic Wheel Dolly.

DO NOT damage the chrome hydraulic bar with other tools. Leaks may occur or seals in the pump head may be damaged if the chrome bar is damaged.

Before each use, examine the wheel dolly for hydraulic leaks, loose rollers or loose casters and maintain as needed.

Only use the wheel dolly in a cleared work area on a flat surface.

DO NOT leave wheels unattended on the wheel dolly at any time. Unattended wheels on the wheel dolly on a sloped surface may travel and damage the aircraft or other equipment or personnel.

FOR USE ONLY on aircraft wheels that have been properly jacked no more than 4 inches off the ground.

The proper sized wheel guides should ALWAYS be used. Failure to use the correct wheel guides could cause wheels with a high crown to tip off of the Hydraulic Wheel Dolly causing WHEEL DAMAGE OR PERSONAL INJURY.

DO NOT exceed 350 pounds maximum lift capacity of the Hydraulic Wheel Dolly.

DO NOT ATTEMPT TO LIFT AIRCRAFT WITH THE HYDRAULIC WHEEL DOLLY.

DO NOT store the Hydraulic Wheel Dolly on un-level surfaces or on its side. Hydraulic fluid will leak from the bleeder valve and create a safety hazard. This may also require refill and bleeding of the hydraulic wheel dolly reservoir.



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## Unpacking instructions:

The Hydraulic Wheel Dolly is shipped with a brass-shipping plug to prevent fluid leakage during shipping.

The brass-shipping plug must be replaced with the included stainless breather plug using a proper wrench.



Replacing ship plug

## Operating instructions:

### Determine the correct wheel guides:

DO NOT use the wheel dolly without the provided wheel guides. WHEEL DAMAGE, TIRE DAMAGE OR PERSONAL INJURY may occur if the wheel is not properly stabilized with the wheel guides.

The provided wheel guide pairs are straight, 1 inch offset, 3-inch offset and 4 inch offset. Additional pairs of wheel guides are available. Combining the wheel guides allow width adjustments of 8, 9, 11, and 13 inches. The base width of the wheel guide slots is 12 inches.

Measure the width of the tire you are changing. Choose the combination of wheel guides that will allow 1/2 inch of space to rotate the wheel without pinching the tire with the wheel guides.

The straight wheel guides should be used in the inboard slots of the wheel dolly. The offset wheel guides should be used in the outboard slots of the wheel dolly. Inboard/Outboard is in reference to the wheel halves.

Example Photos:



Wheel Guides 0,1,3,4"



Small Wheel 0" & 4"



Med Wheel 0" & 3"



Lg Wheel 0" & 0"

### Opening the Hydraulic Wheel Dolly:



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The wheel dolly pans must be extended to accommodate diameter of wheel.

Turn the bleeder valve knob counterclockwise  $\frac{1}{2}$  to 3 turns to open the valve. DO NOT over rotate the valve. The more the valve is opened, the faster and easier the dolly will extend.

Hold the right pan with right hand. Place one foot against left pan and gently pull to open the wheel dolly rollers to accommodate the outside wheel diameter. Alternatively, you can use a hand press movement to spread the wheel dolly pans.

Methods to open wheel dolly:



Hand-Foot Start



Hand-Foot Finish



Hand-Press

Only open the wheel dolly as wide as necessary for the wheel you are mounting.

### **Removing the wheel from the axle with the Hydraulic Wheel Dolly:**



Verify proper unpacking, correct wheel guide determination, and opening of wheel dolly.

Jack the aircraft and remove the wheel lugs and retaining parts per manufacturer's maintenance instructions. The aircraft wheel must be no more than 4 inches off of the floor after jacking to use the Hydraulic Wheel Dolly.

Position the wheel dolly around the wheel and insert the wheel guides.

Confirm there is no more than  $\frac{1}{2}$  inch open space between the wheel guides and the tire.

Close the bleeder valve by turning clockwise until it stops.



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Pump the wheel dolly handle just until the rollers contact the wheel. In the wheel removal procedure, the wheel dolly should be used to provide just enough lift to neutralize the weight of the wheel so it can be slid off of the axle.

Excess force will cause too much upward pressure on the axle and make wheel removal difficult.

Pull, rotate or undulate the wheel so that it moves with the wheel dolly and slides fully off the axle.

After the wheel is removed from the axle, move the wheel dolly with the loaded wheel away from the plane and follow instructions for unloading a wheel.

The low profile of the Hydraulic Wheel Dolly allows easy maneuvering around the landing gear doors to clear the wheel from the aircraft.

### **Unloading the wheel from the Hydraulic Wheel Dolly:**

Stabilize the wheel with one hand to prevent the wheel from falling after release from the Hydraulic Wheel Dolly.



Bleeder Valve



Wheel guides & loading

Turn the bleeder valve knob counterclockwise  $\frac{1}{2}$  to 3 turns to open the valve. DO NOT over rotate the valve. The more the valve is opened, the faster and easier the dolly will extend.

Hold the right pan with right hand. Place one foot against left pan and gently pull to open the wheel dolly rollers to accommodate the outside wheel diameter. The weight of the wheel will make opening the wheel dolly slightly easier.

Remove the rear wheel dolly wheel guides.

Move the Hydraulic Wheel Dolly away from the wheel, store the wheel guides and proceed to move the wheel to storage.

### **Replacing a wheel on the axle with Hydraulic Wheel Dolly:**



Verify proper unpacking, correct wheel guide determination, and opening of wheel dolly.

Follow the opening the wheel dolly instructions above and open to the correct width.

Stabilize the wheel with one hand to prevent the wheel from falling and position the wheel dolly in the loading position.

Insert the outboard wheel guides in the front slots nearest the pump head. Place the back straight guides on their respective right and left tool pan trays. Position the wheel dolly so that the front wheel guides touch the front of the tire. Insert the inboard wheel guides in the rear slots of the wheel dolly. Inbound/Outbound is in reference to the wheel halves.

Close the bleeder valve by turning clockwise until it stops.



Bleeder Valve



Wheel guides & loading

Pump the pump handle and lift the wheel with the Wheel Dolly rollers. The wheel should be lifted to approximate the height of the axle that has been previously jacked.

Use the Wheel Dolly to position the wheel near the aircraft axle.

Visually align the wheel hub to the aircraft axle, make fine-tuning adjustments by pumping or bleeding hydraulic pressure on the wheel dolly. Rotate the wheel as needed to align with brake keys.

Push, rotate or undulate the wheel so that it moves with the wheel dolly and slides fully onto the axle. Follow the opening the Wheel dolly instructions above and open to clear the wheel dolly from the wheel.

Return the wheel guides to the Hydraulic Wheel Dolly for storage.



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**Specifications:**

Maximum load capacity: 350 lbs.

Wheel Diameters: 25 to 40 inches.

Wheel Widths: 4 to 13 inches.

Fluid: Dextron, Type F or 5606

Weight: 100 lbs.

Finish: Powdercoat polyester.