

# Nose-Dragger DRAGGER® MODEL: NDE-1

## ASSEMBLY AND OPERATING INSTRUCTIONS



**Dragger-DRAGGER® / Airtug, LLC is not responsible for aircraft damage sustained when proper clearance is not maintained by the operator between the tug and the aircraft and the surroundings.**

### GENERAL

Thank you for purchasing the Electric Nose-Dragger Dragger! We hope that this unique powered Dragger aircraft tug will enable you to fly more by allowing easy ground handling. Like all other airplane moving devices, this unit has some limitations. It will not take your airplane over large curbs or craters, but it will perform well on gentle slopes and hard smooth surfaces. The Nose-Dragger Dragger will handle wet surfaces and can be fitted with chains for operation in light snow. It is simple to operate. It takes some practice and planning to use, but once accustomed to the handling, it is like having a strong buddy along every time you must move your airplane. **PRACTICE IS HIGHLY RECOMMENDED.** Operating your Nose-Dragger Dragger before hooking up to the plane is essential. Practice moving the tug forward and reverse. Get familiar with handling, speed, maneuvering, etc. Then practice turning your airplane. Next, try moving your airplane in an open area, away from the hangar and other obstacles. When you move the airplane into the hangar for the first time, have a friend watch the wings and tail to help avoid hitting any obstructions. It also pays to have wheel chocks in place to prevent pushing back too far in the hangar. Safety lines painted on the hangar floor and ramp area will also guide you to safe parking. Always check for clearance.

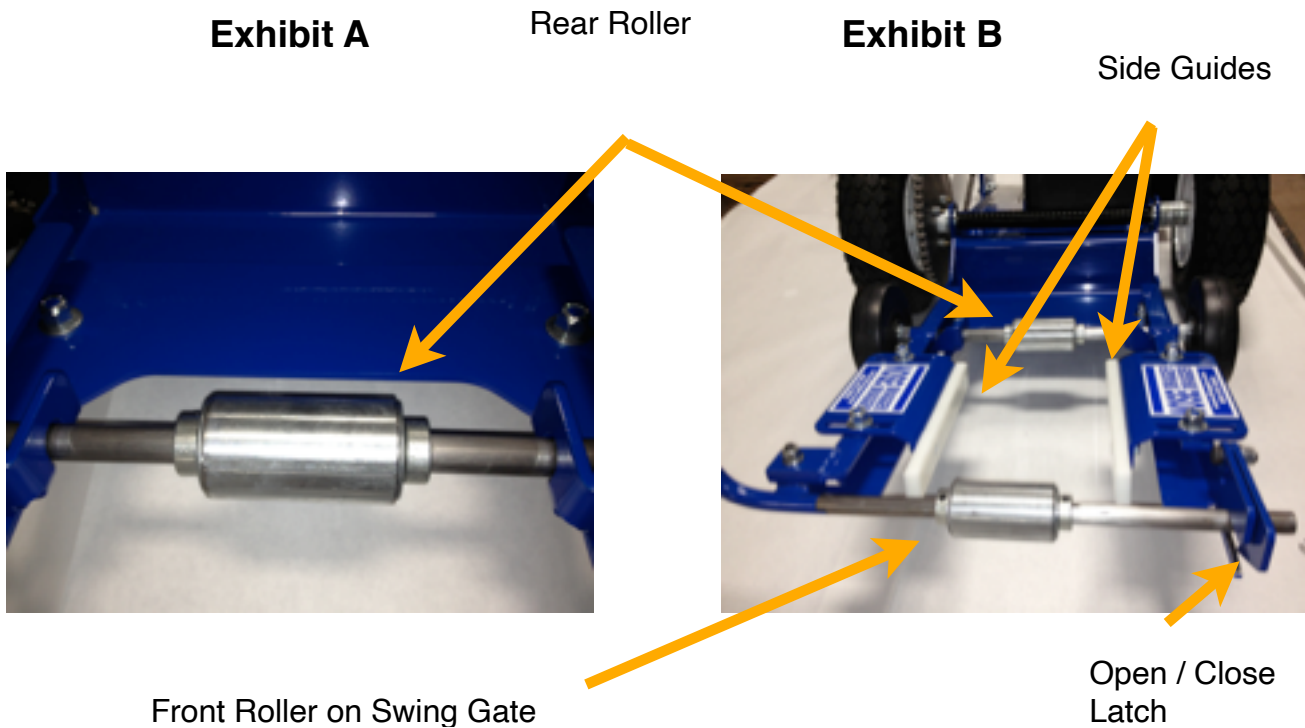
Your new Nose-Dragger Dragger comes partially pre-assembled from the factory. The procedures listed below are all you need to get your new aircraft tug fully operational. If you experience any problems or have any questions, please do not hesitate to contact us at 1-800-972-5563.

## SAFETY

Read these instructions carefully. Be thoroughly familiar with the controls and the proper use of the Nose-Dragger-Dragger. Know how to stop it and disengage the controls quickly. Never allow children to operate it and keep them away while it is operating. Never allow adults to operate the Dragger without proper instructions. Keep the area of operation clear of all persons, particularly small children and pets. Exercise caution to avoid slipping or falling, especially when operating in reverse. Thoroughly inspect the area where the Nose-Dragger Dragger will be used and remove all foreign objects from your path. Wear proper footwear that will improve footing on slippery surfaces. Never attempt to make any adjustments while the engine (motor) is running. Always wear safety glasses or shields during operation.

**Charging the Batteries:** Plug the charger into a 110V outlet and charge the batteries until the “green” indicator light on the charger comes on. Keep the charger plugged in between use. See the charger manual for additional features and instructions. You are now ready for aircraft loading adjustments necessary to fit the aircraft nose wheel to the tug once the batteries are fully charged.

**Video And Slide Show Examples Of Using The Tug:** Refer to our Video Gallery on our Dragger.com website to view a video that shows an example of how to load and unload an aircraft (<http://dragger.com/dragger-video-gallery/>). Watch the slide show as a guide to demonstrate how to position the Dragger around the nose wheel to load the aircraft (<https://dragger.com/nose-dragger-draggers/>).



**Aircraft Loading & Unloading:** The rear roller is mounted on an adjustable frame. See “Exhibit A” and notice the nut on each side. A one-time adjustment must be made when using the tug for the first time. Subsequent adjustments will only be necessary when using the tug with an aircraft that has a different size nose wheel than your primary aircraft. When adjusting the position of this rear roller for the first time, open the swing gate and from the neutral position push the tug so the front of the aircraft nose wheel is positioned tight against the rear roller. Close the swing gate. If the swing gate will not close, adjust the moveable frame holding the rear roller back a little bit at a time until the swing gate will close **firmly** against the rear of the aircraft nose wheel. Secure the two nuts on adjustable frame firmly. Adjust the side guides (see “Exhibit B” above) until the white nylon strips are just about (but not) touching the nose wheel. Tighten the bolts firmly to secure the guide in place.

With the swing gate open, drive the tug forward until the front of the nose wheel is against the rear roller of the tug.



Secure the Kick Stand



Kick Stand

Close the Swing Gate so that it is **firmly** against the rear of the aircraft nose wheel.

You are now ready to move the aircraft.



For unloading, chock the aircraft wheels. Release the Open/Close Latch to allow the swing gate to open and pull the tug away from the aircraft.

**Handle Switch & Variable Speed Control:** The directional rocker switch mounted on the tug handle has two positions: forward and reverse. Pushing the thumb throttle forward will move the tug at the desired speed in the direction selected on the directional rocker switch. For prolonged battery life, disconnect the battery cable when not in use for extended periods of time, or leave charger plugged in.

**Operating Speed:** The electric Nose-Dragger Dragger is designed to operate at a slow walking pace for safety. This slow speed may lead the operator to believe the motor lacks power or that the batteries are low. Actually, the motor has plenty of power, and the move from the hangar to the ramp will take only a minute or so.

**Use Chocks:** Always use chocks when backing into a tight parking space to protect against accidental collision with objects or walls nearby.

**Traction:** When operating the tug with the aircraft loaded, it is permissible to push down on the tug handles to aid in additional traction if necessary.

**Moving the Tug With No Power:** Lift the handlebar until the main wheels are off the surface and the smaller coaster wheels towards the front of the tug are now on the pavement.

## Assembly Instructions:

**Step 1:** Insert handle into receiver tube on bottom of frame

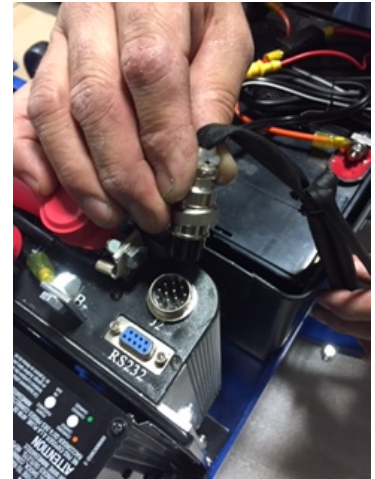


**Step 2:** Slide handle all the way in until it stops. Then tighten the two “pinch bolts” on the underside of the frame to secure the handle to the frame using a 9/16” socket or wrench.

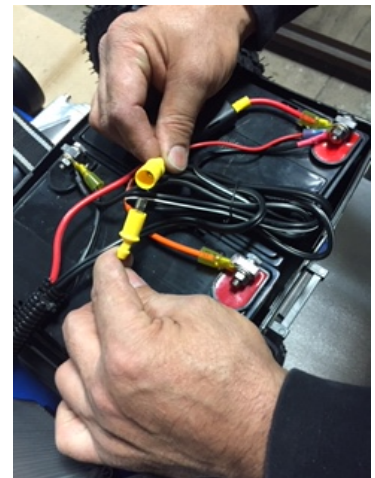




**Step 3:** Connect the cannon plug from the handle into the J2 socket of the speed controller and tighten the nut to secure. Note: the plug has a notch that lines up to the J2 connection for orientation.



**Step 4:** Connect the red wire with the inline fuse coming from the handle to the mating inline fuse holder on the top of the battery. You will feel a snap when it goes together. You should now test the unit by turning “on” the toggle switch on the handle and you should see a “green” light on the speed controller. Return the battery box lid and secure it with the strap. The unit is ready to use. Always turn the ON/OFF toggle switch to OFF when not using and never use the unit when the battery charger is plugged into 110V outlet.



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