Quick Start Guide

The setup video for this assembly and operation is available at abisupport.com under ABI Gravel Grader or by following this link:

https://www.youtube.com/watch?v=cenxZWqD5gk&feature=youtu.be
Model and Serial Number

Attached to the frame is an ID plate showing the serial number. Record your implement information and serial number in the space provided below. ABI will use this information to give you prompt, efficient service when you order parts.

Size: ________________________________
Serial number: _______________________
Invoice number: ______________________
Purchaser’s name: ____________________
ABI Gravel Grader Assembly

Tools Required: Hammer
¾” socket and wrench
7/16” socket and wrench
Phillips head screwdriver or screw gun with phillips head bit
Pocket knife

Please remember to use appropriate safety equipment such as goggles and gloves

Remove the Crate:

To begin, remove the four screws that hold the crate to the bottom pallet. Carefully remove crate and set aside. Using a pocket knife, cut all straps that secure the tool to the skid.

Remove the hardware box. Use an empty box or spare materials to support grader frame for assembly.

Next, set all the parts off to the side and verify that everything is present.
Step 1 - Bolt on center uprights

Install both angle iron brackets using the four ½” x 2 ½” carriage bolts and secure with a single washer and nut.

* Be sure not to tighten any of the nuts and bolts until after you have completed assembly.

Step 2 - Install the tongue

To install the center tongue use the ½” x 2 ½” carriage bolt with a washer and nut. Attach the tongue between the two angle brackets that you installed previously.

Next, attach the center of the tongue to the frame using the ½” x 5 ½” carriage bolt. Secure with a single washer and nut.
Step 3 - Bolt on battery mounting bracket

Next, install the control box and stand-alone battery holder. This is attached by using a ½” x 3 ½” carriage bolt. Secure with a single washer and one nut.

Step 4a

If using the tow-vehicle battery to power the ABI Gravel Grader then you will plug in the eight foot wire harness into the pigtail coming from the grey control box. The other end of the wire harness will connect to the twelve inch battery harness provided.

Use the alligator clips to connect the red wire to the positive battery terminal and the black wire to the negative battery terminal.
We have included plastic zip ties so you can secure the wire harness to strategic points of your tow vehicle. *Please route your wiring in a safe manner to avoid pinch points and high heat areas.*

**Step 4b**

If you have decided to purchase a separate battery that can be mounted to (and removed from) the Gravel Grader, you can set aside the eight foot wire harness.

The battery needs to be a 12-volt, non spillable, sealed, lead-acid battery. The recommended battery number is 12180.

After setting the battery in position, connect the 12” wire harness into the pigtail from the control box. Attach the red alligator clip to the positive battery terminal and the black alligator clip to the negative battery terminal.

Be sure to use the strap provided to secure the battery and wire harness in position.
Step 5 - Install the rocker shaft

Position the tube so that the notched side of the shaft faces the front of the Gravel Grader.

Locate the square receiver connected to the rear spring system. Insert the rear-facing end of the rocker shaft into the square receiver and secure with a \( \frac{1}{2}'' \times 2 \frac{3}{4}'' \) standard bolt with two washers and a nut.

Use the larger of the bent pins (5/8”) and \( \frac{3}{8}'' \) R-pin to attach the center of the tube to the top of the angle iron brackets we installed in step one.

*Please install the R-pin all the way to the base of the pin.*
**Step 6 - Actuator Installation**

First, bolt the bottom of the actuator to the center of the tongue using the ¼” x 1 ½” standard bolt with two washers and a nut.

Utilize the wireless remote to extend the actuator so that the top hole in the inner stroke lines up with the hole on the rocker shaft.

Complete the connection by using the ¼” x 2” standard bolt with two washers and a nut to secure the two components together.

**Step 7 - Install side plate of grader box**

The side plate and gravel capture wing are interchangeable and can be used on either side of the box.

The wing is designed to help grab the loose gravel from the edge and help pull it back into the driveway.

To install the side plate, use two ½” x 2 ½” carriage bolts with one nut and one washer per bolt.

**Step 8 - Fasten angled wing on box frame**

On the opposite side of the grader box, use two ½” x 1 ½” carriage bolts, two washers, a ½” nut and the wing handle adjustable nut to attach the wing to the box.

After tightening the capture wing handle be sure to adjust the handle so it is facing upward. To do this push on the center button of the handle, pull the handle out and turn.
Step 9 - Install crown control handles

Now, attach the crown control handles (one on each side) to the top of the grader box. For this step, use a ½” x 2 ½” standard bolt, ½” bushing, two washers, and one nut per handle.

Make sure to insert the handle into it’s position on the frame before you insert the appropriate hardware.

Step 10 - Pin crown control handle pins in holes

Take two of the bent pins and linch pins provided and insert them into the “carrying positions” provided on the back of the frame.

You will use these pins in conjunction with the crown control handles when crowning your drive and when locking the grader box into transport position.
Step 11 - Adjust hitch bracket

Next, connect the adjustable hitch bracket to the tongue of the Gravel Grader. Installing the hitch requires the two ½” bent pins along with two ¼” linch pins.

One pin will be used to connect the hitch to the tower on the tongue. The other pin is used to connect the Gravel Grader to your tow vehicle.

Step 12 - Tighten all bolts

Finally, go back and tighten all bolts before you remove tool from skid. The two angled brackets from step one should be perpendicular to the ground and tight to the tongue.

Removing Gravel Grader from the skid

If a tow vehicle is unavailable, you can remove the ABI Gravel Grader from the skid by asking a friend to help. Grab the tongue and front frame and carefully lower the tool off the back of the skid. Rotate to make it easily accessible to your tow vehicle.

If a tow vehicle is available, utilize the last provided ½” bent pin and ¼” linch pin to secure the Gravel Grader to the tow vehicle. Raise the grader box to it’s highest position by using the wireless remote to fully contract the actuator. The down button will contract the actuator which will raise the box.

With the grader box all the way up, use the two bent pins stored in the rear of the frame to pin the box into travel position. Insert the pins through the side of the frame and through the crown control handles on both sides of the unit.

Once the ABI Gravel Grader is lifted from the pallet, and attached to your tow vehicle, you can pull the tool forward off the pallet.
Basic Setup and Adjustments

First, adjust the hitch to level the frame of the ABI Gravel Grader according to your tow vehicle. The frame of the tool should always be level to the ground.

Actuator

The feature you’ll use the most on the Gravel Grader is the electric actuator and the adjustable grader box. During operation, keep the wireless remote easily accessible so that you can make depth changes as you grade.

Pressing the “up” button on the remote causes the actuator to extend and lowers the grader box to the ground. Pressing the “down” button on the remote contracts the actuator and raises the grader box off the ground.

Change the pitch of the grader box

On the back of the tool you have an adjustable top link. The top link is used to control the pitch of the grader box.

Contracting the toplink pitches the grader box forward. As the toplink contracts, the ripping teeth become more engaged, and the blade at the rear of the box is lifted away from the ground so that it carries less material. This is a great position for initial de-compaction.
Extending the toplink pitches the grader box backward. As the toplink extends, the ripping teeth become less engaged and the blade in the grader box captures more material. This is a great position for moving and firming up loose gravel.

**Adjust the gravel capture wing**

As you adjust the height and pitch of the grader box, you’ll find it helpful to adjust the gravel capture wing accordingly. When attempting deep decompaction, keep the capture wing angled up and out of the way. When using the box to move material or attempting to reclaim material from the shoulder of your workspace, angle the capture wing down to pull material in.

**Crown control handles**

Use the handles bolted to the top of the grader box to engage the ABI Gravel Grader’s crown control feature. Choose which side of the grader box to have engaging the surface and pin the opposite side’s handle securely to the frame. There are three hole positions on the crown control handles to regulate the pitch of the crown. The top hole will be the most aggressive, while the lowest hole will provide the mildest pitch on your crown.

Lower the grader box and the Gravel Grader will engage your work surface on an angle so that material will flow across the box’s blade toward the center of your drive.
Transport Position

When transporting to and from workspace or when towing long distances, lock the grader box into “transport position.” Use the crown control handles and pin the grader box up out of play. Doing so extends the life of the grader’s primary components.

We understand that every situation is different so we encourage you to experiment with the various settings available on your ABI Gravel Grader.
ABI Gravel Grader Assembly Diagram #1
ABI Gravel Grader Assembly Diagram #2
The setup video for this assembly and operation is available at abisupport.com under ABI Gravel Grader or by following this link:
https://www.youtube.com/watch?v=cenxZWqD5gk&feature=youtu.be

For additional information on the use or setup of the ABI Gravel Grader, please contact the ABI customer support team at 855.211.0598.

Additional support videos are available at the ABI support page (abisupport.com) under each tool.

Warranty Information and Return Policy - Warranty and return policy information can also be found on the ABI support page under each tool. For additional questions regarding warranty or return policy, contact the ABI customer support team at 855.211.0598.