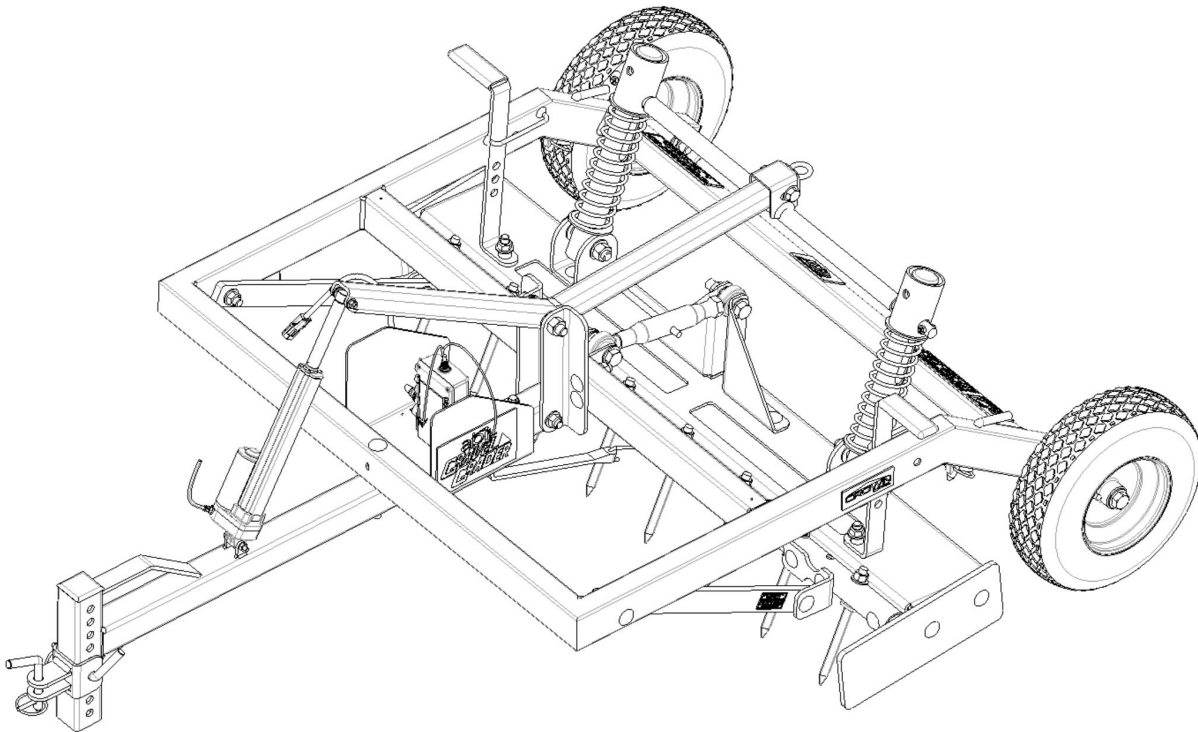


Owner's Manual

ABI GRAVEL GRADER



NOTE: This Owner's Manual covers several models. Features may vary by model. Not all features in this manual are applicable to all models and the model depicted may differ from yours.

For Your Records

Located on the right side of the frame, on the inside surface of the front frame tube, is an ID plate showing the serial number. Record your machine’s information and serial number in the space provided below. ABI will use this information to give you prompt, efficient service when you order parts or need product support.

Model and Serial Number

Model Number:

Serial Number:

Invoice Number:

Purchaser’s Name:

Contact Information

ABI Attachments, Inc
520 S. Byrkit Ave.
Mishawaka, IN 46544

Customer Support

Email: abicutomerservice@abiattachments.com
Phone: 877-788-7253
Website: www.abisupport.com

Table of Contents

General Info & Warranty.....	3
Safety.....	4
SafetyLabels.....	7
Uncrating Instructionsand Setup.....	8
OperartionGuide.....	10
Maintenance.....	12
Replacement Parts.....	13
PartsDescription.....	14
Footnotes.....	22

General Information



LIMITED WARRANTY

Gravel Grader & Infield Grader Models

36 Month Consumer, 12 Month Commercial, & 3 Month Rental

TERMS & CONDITIONS

“ABI” means ABI Attachments, Inc. 520 S Byrkit Ave, Mishawaka, Indiana 46544, 877.788.7253. The above referenced models are warrantied for 36 months, from the original invoice date, against defects in materials and/or workmanship when put to normal and designed residential, farm, & ranch consumer use; 12 months for commercial use and 3 months for rental use. Options are warranted for 12 months (3 months rental). This limited warranty is only valid on new equipment to the original purchaser with proof of purchase. Non-transferable.

For the purpose of the warranties, “normal & designed use” refers to such uses shown in ABI marketing materials, websites, & videos specific to this product and does not include misuse, abuse, accidents, or damage due to inadequate maintenance, storage, or exposure to corrosive materials including airborne salt. However, a final judgment of “normal & designed use” is the sole opinion of ABI.

The warranty holder is responsible for performing reasonable and proper maintenance. The warranty holder is further responsible for purchasing and performing replacement of normally wearing parts at own expense.

ABI’s obligation and or liability, under this warranty, of any product defect or claim for injury or damages is limited to repair or replacement of the product, or payment of the reasonable cost of repair or replacement of the product, at ABI’s sole discretion and direction. During the warranty period, warranty replacement parts or replacement product will ship by a standard method at no charge to the warranty holder, in the United States & Canada only. Expedited shipping costs or international shipping costs (Outside of US or Canada) of warranty parts or replacement product is the responsibility of the warranty holder.

To secure warranty service, the warranty holder must, (1) report the defect immediately to ABI customer service, in writing, for warranty consideration within the applicable warranty term and discontinue use of the product; (2) present photographic evidence of the warranty claim and valid proof of purchase; (3) return the product or part to ABI or independent service technician within 30 days of defect discovery or failure, for return, inspection, or repair; if required. If ABI is unable to repair the product to conform to the warranty in a reasonable number of attempts, ABI will provide, at its option, one of the following: (a) a replacement for the product or, (b) a full refund of the purchase price. Repair, replacement, or refunds are the warranty holder’s EXCLUSIVE remedies against ABI under this limited warranty.

ABI IS NOT RESPONSIBLE FOR THE FOLLOWING: (1) Equipment purchased used; (2) Any equipment that has been altered or modified in ways not approved by ABI, including, but not limited to, unauthorized repair, and acts of God; (3) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions/recommendations; misuse, lack of proper protection during storage or use, vandalism, the elements, collision or accident; (4) Normal maintenance/wear parts and/or service, including but not limited to, tips, shanks, teeth, scarifiers, top-links, finish rakes, pins, bolts, leveling blades, profile blades, tires, rims, and bearings. Periodic replacement of normally wearing parts is the responsibility of the warranty holder.

To the extent permitted by law, the limited warranty stated above is the exclusive warranty given by ABI to the original purchaser, and ABI disclaims any other warranties. There are no other warranties, either express or implied, including any warranty of merchantability, fitness for a particular purpose, or arising from course of dealing or trade usage. ABI shall not be liable in any event for incidental or consequential or other special damages under any theory of strict liability or negligence, or expenses of any kind, including, but not limited to, personal injury, damage to property, cost of equipment rentals, loss of profit, loss of time, loss of wages, or cost of hiring services to perform tasks normally performed by this product. ABI reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to owners of units previously sold.

Some jurisdictions do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from jurisdiction to jurisdiction.

Publish Date: 3/1/2021

Safety



WARNING! The **SAFETY ALERT SYMBOL** indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.



CALIFORNIA PROPOSITION 65

WARNING! Cancer and reproductive harm- www.P65Warnings.ca.gov

SAFETY AT ALL TIMES

Careful operation is your best assurance against an accident. All operators, no matter how much experience they may have, should carefully read this manual and other related manuals, or have the manuals read to them, before operating the tow vehicle and this implement.

- Thoroughly read and understand the “Safety Label” section. Read all instructions noted on them.
- Do not operate the equipment while under the influence of drugs or alcohol as they impair the ability to safely and properly operate the equipment.
- The operator should be familiar with all functions of the tow vehicle and attached implement and be able to handle emergencies quickly.
- Make sure all guards and shields appropriate for the operation are in place and secured before operating implement.
- Keep all bystanders away from equipment and work area.
- Start tow vehicle from the driver’s seat with hydraulic controls in neutral.
- Operate tow vehicle and controls from the driver’s seat only.
- Never dismount from a moving tow vehicle or leave tow vehicle unattended with engine running.
- Do not allow anyone to stand between tow vehicle and implement while backing up to implement.
- Keep hands, feet, and clothing away from power-driven parts.
- While transporting and operating equipment, watch out for objects overhead and along side such as fences, trees, buildings, wires, etc.
- Do not turn tow vehicle so tight as to cause hitched implement to ride up on the tow vehicle’s rear wheel.
- Store implement in an area where children normally do not play. When needed, secure attachment against falling with support blocks.

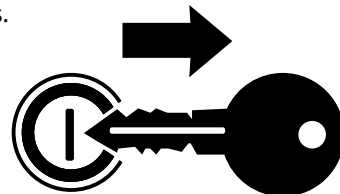
SAFETY PRECAUTIONS FOR CHILDREN

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to implements and their work.

- Never assume children will remain where you last saw them.
- Keep children out of the work area and under the watchful eye of a responsible adult.
- Be alert and shut the implement and tractor down if children enter the work area.
- Never carry children on the tractor or implement. There is not a safe place for them to ride. They may fall off and be run over or interfere with the control of the tow vehicle.
- Never allow children to operate the tow vehicle or implement, even under adult supervision.
- Never allow children to play on the tow vehicle or implement.
- Use extra caution when backing up. Before the tractor starts to move, look down and behind to make sure the area is clear.

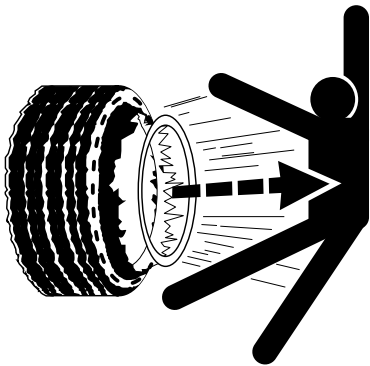
SHUTDOWN & STORAGE

- If engaged, disengage power take-off.
- Park on solid, level ground and lower implement to ground or onto support blocks.
- Put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
- Relieve all hydraulic pressure to auxiliary hydraulic lines
- Wait for all components to stop before leaving operator’s seat.
- Use steps, grab-handles and anti-slip surfaces when stepping on and off the tractor.
- Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.



TIRE SAFETY

- Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- Always maintain correct tire pressure. Do not inflate tires above recommended pressures shown in the Operator's Manual.
- When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- Securely support the implement when changing a wheel.
- When removing and installing wheels, use wheel handling equipment adequate for the weight involved.
- Make sure wheel bolts have been tightened to the specified torque.
- Some attachments may have foam or sealant inside them and must be disposed of properly.

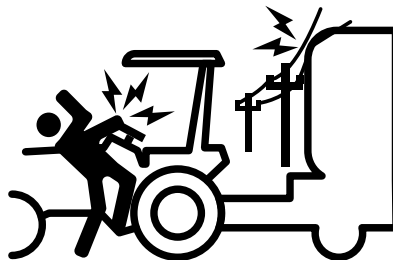


OPERATION SAFETY

- Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
- Stop implement immediately upon striking an obstruction. Turn engine off, remove key, inspect and repair any damage before resuming operation.
- Never operate tractor and implement under trees with low hanging limbs. Operators can be knocked off the tractor and then run over by implement.

TRANSPORT SAFELY

- Comply with federal, state, and local laws.
- Use towing vehicle and trailer of adequate size and capacity. Secure equipment towed on a trailer with tie downs and chains.
- Sudden braking can cause a towed trailer to swerve and upset. Reduce speed if towed trailer is not equipped with brakes.
- Avoid contact with any overhead utility lines or electrically charged conductors.
- Always drive with load on end of loader arms low to the ground.
- Always drive straight up and down steep inclines with heavy end of a tow vehicle with loader attachment on the "uphill" side.
- Engage park brake when stopped on an incline.
- Maximum transport speed for an attached equipment is 20 mph. **DO NOT EXCEED.** Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- As a guideline, use the following maximum speed weight ratios for attached equipment:
 - **20 mph** when weight of attached equipment is less than or equal to the weight of machine towing the equipment.
 - **10 mph** when weight of attached equipment exceeds weight of machine towing equipment but not more than double the weight.
- **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle towing the load.



PRACTICE SAFE MAINTENANCE

- Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- Work on a level surface in a clean dry area that is well-lit.
- Lower implement to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- Do not work under any hydraulic supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- Use properly grounded electrical outlets and tools.
- Use correct tools and equipment for the job that are in good condition.
- Allow equipment to cool before working on it.
- Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- Inspect all parts. Make certain parts are in good condition & installed properly.
- Replace parts on this implement with genuine ABI Attachments parts only.
- Do not alter this implement in a way which will adversely affect its performance.
- Do not grease or oil implement while it is in operation.
- Remove buildup of grease, oil, or debris.
- Always make sure any material and waste products from the repair and maintenance of the implement are properly collected and disposed.
- Remove all tools and unused parts before operation.



PREPARE FOR EMERGENCIES

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.



USE SAFETY LIGHTS AND DEVICES

- Slow moving tractors, skid steers, self-propelled machines, and towed equipment can create a hazard when driven on public roads. They are difficult to see, especially at night. Use the Slow Moving Vehicle sign (SMV) when on public roads.
- Flashing warning lights and turn signals are recommended whenever driving on public roads.



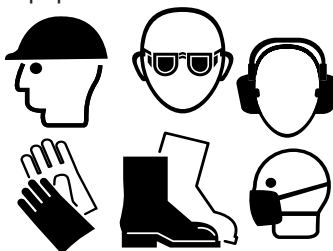
AVOID UNDERGROUND UTILITIES

- **Dig Safe, Call 811 (USA)** Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.
- Be sure to ask how close you can work to the marks they positioned.



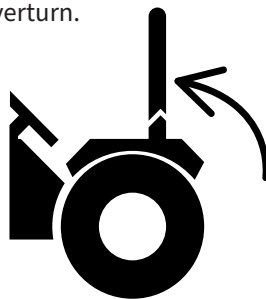
WEAR PERSONAL PROTECTION EQUIPMENT (PPE)

- Wear protective clothing and equipment appropriate for the job such as safety shoes, safety glasses, hard hat, and ear plugs.
- Clothing should fit snug without fringes and pull strings to avoid entanglement with moving parts.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment safely requires the operator's full attention. Avoid wearing headphones while operating equipment.



USE SEAT BELT AND ROPS

- ABI Attachments recommends the use of a CAB or roll-over protective structures (ROPS) and seat belt in almost all tow vehicles. Combination of a CAB or ROPS and seat belt will reduce the risk of serious injury or death if the tow vehicle should be upset.
- If ROPS is in the locked-up position, fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.



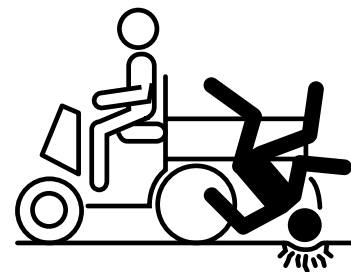
AVOID HIGH PRESSURE FLUIDS HAZARD

- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Before disconnecting hydraulic lines or performing work on the hydraulic system, be sure to release all residual pressure.
- Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- **DO NOT DELAY.** If an accident occurs, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.



KEEP RIDERS OFF MACHINERY

- Never carry riders on tractor or implement.
- Riders obstruct operator's view and interfere with the control of the tow vehicle.
- Riders can be struck by objects or thrown from the equipment. Never use tractor or implement to lift or transport riders.



Safety Labels

	⚠ WARNING 10-10978	
	TO PREVENT SERIOUS INJURY OR DEATH: <ul style="list-style-type: none">● Avoid unsafe operation and maintenance. Do not operate or work on this machine without reading and understanding the operator's manual.● If manual is lost, call 877-788-7253● Do not allow riders and keep others away during operation.● Lower implement, stop tow vehicle engine, set park brake and remove ignition key before servicing, adjusting, repairing or unplugging.● Safely support and secure implement before adjustments or repairs are made.● Park or block implement so it will not roll when disconnecting from tow vehicle.● Never place any part of the body underneath implement or between movable parts even when the engine has been turned off.● DO NOT operate or transport at high speeds.● DO NOT operate or transport on steep slopes.	

Uncrating Instruction & Setup

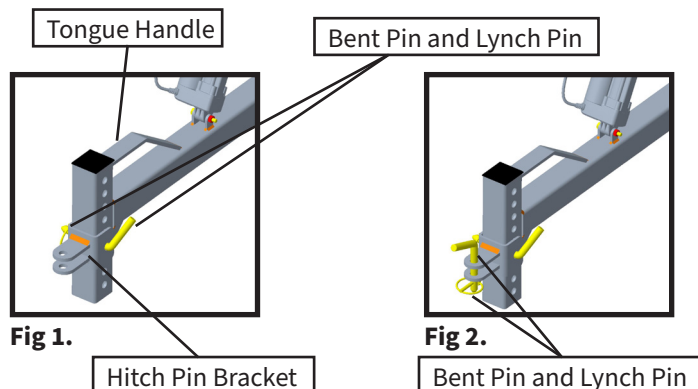
Removing From Shipping Crate

Tools Needed:

- Gloves
- Safety Glasses
- Safety Shoes
- Tin Snips/ wire cutters



1. Cut metal straps (Use caution when cutting metal straps that they do not spring toward you and cause injury).
2. Cut zip ties holding manual and boxed accessories to frame.
3. Unit can now be picked up by the Tongue Handle and pulled off the skid or, if using a tow vehicle is preferred, remove Hitch Pin Bracket Weldment, (2) Bent Pins and (2) Lynch Pins from boxed accessories (**Fig 1**).
4. Align holes in Hitch Pin Bracket to one of the holes in the Tongue Coupler Tube. Mount Hitch Pin Bracket to Tongue Coupler Tube using (1) Bent Pin and (1) Lynch Pin (**Fig 1**) - any hole in tube will work until unit is pulled off the skid (*this can be re-attached after the unit is sitting on the ground to make the tongue level with the ground when attached to the tow vehicle*).
5. Attach Hitch Pin Bracket to tow vehicle using second Bent Pin and second Lynch Pin (**Fig 2**).
6. Carefully pull unit off skid with the tow vehicle.



Initial Setup Instructions

Tools Needed:

- Gloves
- Safety Glasses
- Safety Shoes
- Wire Cutters

1. If unit was pulled off the skid manually, remove Hitch Pin Bracket Weldment, (2) bent pins and (2) Lynch pins from boxed accessories (**Fig 1**).
 2. Align holes in Hitch Pin Bracket to one of the holes in the Tongue Coupler Tube. Mount Hitch Pin Bracket to Tongue Coupler Tube using (1) Bent Pin and (1) Lynch Pin (**Fig 1**) so that the Tongue of the unit is level with the ground when hitched to the tow vehicle.
 3. Attach Hitch Pin Bracket to tow vehicle using second Bent Pin and second Lynch Pin (**Fig 2**) and confirm Tongue of unit is level with ground.
 4. If using the tow-vehicle battery to power the ABI Gravel Grader, plug in the 8' wire harness into the pigtail coming from the control box (**Fig 3**). The other end of the wire harness will connect to the 12" battery harness (that has the alligator clips) provided (**Fig 4**).
- NOTE: TO AVOID ELECTRICAL DAMAGE TO THE UNIT BY SPLICING GRAVEL GRADER WIRE HARNESS INTO THE TOW VEHICLE WIRING SYSTEM AND POSSIBLY REVERSING THE WIRES, OR THE TOW VEHICLE HAVING A POSITIVE GROUND RELAY SYSTEM, CONNECT THE WIRING HARNESS DIRECTLY TO THE TOW VEHICLE BATTERY (BLACK TO GROUND AND RED TO POSITIVE).**
5. Use the alligator clips to connect the red wire to the positive battery terminal and the black wire to the negative battery terminal on the tow vehicle (**Fig 5A & 5B**).

Plastic zip ties are included in the boxed accessories to secure the wire harness to strategic points of the tow vehicle. Please route the wiring in a safe manner to avoid pinch points and high heat areas.

6. If a separate battery has been purchased to run the ABI Gravel Grader actuator, the 8' wire harness can be set aside. The removable battery can be mounted directly in front of the control box (**Fig 6**). The battery needs to be a 12-volt, non spillable, sealed, lead-acid battery. The recommended battery number is 12180 (**Fig 7**).
7. After setting the battery in position, connect the 12" wire harness into the pigtail from the control box (**Fig 8**). Attach the red alligator clip to the positive battery terminal and the black alligator clip to the negative battery terminal (**Fig 9A & 9B**).

8. Be sure to use the rubber strap provided to secure the battery and control box in position (**Fig 10**).

9. Take the remaining two Bent Pins and Lynch Pins from the boxed accessories and slide the Bent Pins into the holes in the frame near the tires. Clip the Lynch Pins onto the Bent Pins (**Fig 11**). The pins are stored here and will be used later to hold the grader box in various positions during use.



Fig 3. Control box pigtail
8' wire harness

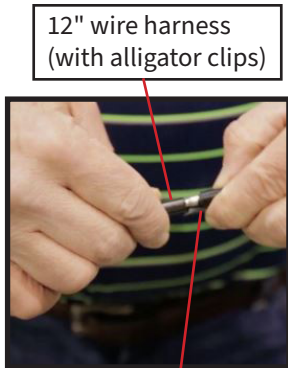


Fig 4. 12" wire harness (with alligator clips)
8' wire harness



Fig 5A. Red alligator clip
Tow vehicle positive battery terminal

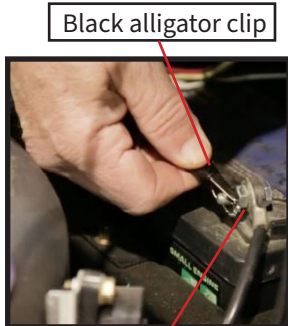


Fig 5B. Black alligator clip
Tow vehicle negative battery terminal

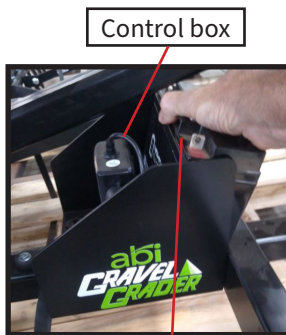


Fig 6. Control box
12 volt battery



Fig 7.

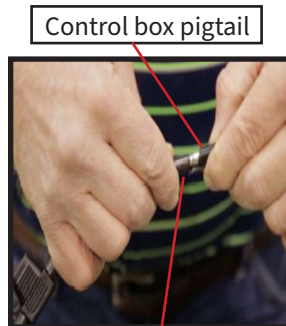


Fig 8. Control box pigtail
12" wire harness (with alligator clips)

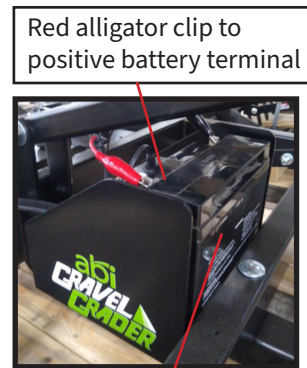


Fig 9. Red alligator clip to positive battery terminal
Black alligator clip to negative battery terminal



Fig 10. Rubber strap to secure battery and control box



Fig 11. Bent Pins w/ Lynch Pins storage positions

To extend the battery life, ABI recommends disconnecting the alligator clips and attach the battery to a trickle charger when the Gravel Grader is not being used.

Operation Guide

Actuator Adjustments

1. Re-confirm the adjustable hitch is properly mounted on the hitch coupler tube so when hitched to the tow vehicle, the tongue and frame of the Gravel Grader are level with the ground.
2. The electric actuator and the adjustable grader box are the components used most on the Gravel Grader. During operation, keep the wireless remote easily accessible in order make depth changes while grading.
3. 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 (**Fig 12**).

Grader Box pitch Adjustments

4. On the back of the tool is an adjustable toplinek (**Fig 13**). The toplinek is used to control the pitch of the grader box.
5. Rotating the toplinek counter-clockwise (less threads on the toplinek showing) pitches the grader box forward (**Fig 14**). As the grader box pitches forward, the ripping teeth become more engaged into the material, 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 (**Fig 15**).
6. Rotating the toplinek clockwise (more threads on the toplinek showing) pitches the grader box backward. As the toplinek 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 material (**Fig 16**).

Material capture wing Adjustments

7. As the height and pitch of the grader box is adjusted, adjust the gravel capture wing accordingly (**Fig 17**). During deep decompaction, keep the capture wing angled up and out of the way. When using the box to move material or reclaim material from the shoulder of the workspace, angle the capture wing down to pull material in.



Fig 12.



Fig 13.



Fig 14.



Fig 15.



Fig 16.



Fig 17.

Crown control handle Adjustments

8. Use the handles bolted to the top of the grader box to engage the ABI Gravel Grader's crown control feature (**Fig 18**). Choose which side of the grader box to have engaging the surface and pin the opposite side's handle securely to the frame using the Bent pins and Lynch pins mentioned in step 9 on page 9 (**Fig 19**).

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.

9. Lower the grader box with the electric actuator and the Gravel Grader will engage the work surface on an angle so that material will flow across the box's blade toward the center of the driveway (**Fig 20**).

Transport Position

10. When transporting to and from workspace or when towing long distances, lock the grader box into "transport position" by placing the Bent pins in the lowest hole on the crown control handles and secure the pins with the Lynch pins to pin the grader box up out of play. Doing so extends the life of the grader's primary components. (**Fig 21**).

ABI understands that every situation is different so ABI encourages you to experiment with the various settings available on your ABI Gravel Grader.

Crown Control Handles

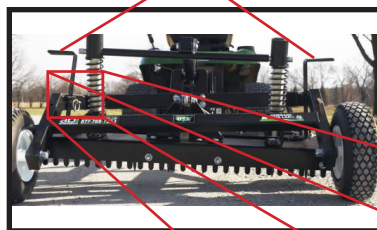


Fig 18.



Fig 19.

Slide Bent Pin thru frame and desired hole in Crown control Handle for preferred pitch of crown on driveway. Secure Bent Pin with Lynch pin.

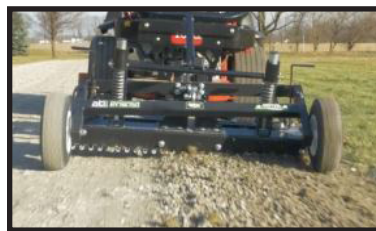


Fig 20.



Fig 21.

Maintenance

Tire Pressure:

Tire pressure should be 24 MAX psi. Check pressure once a month or if tire visually looks low. Fill with air if low.

Lubricating Wheel Hubs

The grease zerk to lube the bearing hub is located on the back side of the wheel hub. The bearing in each of the hubs should be greased every 6 months. They should also be greased before any long period of storage. **(Fig 22).**



Grease zerk on
backside of hub

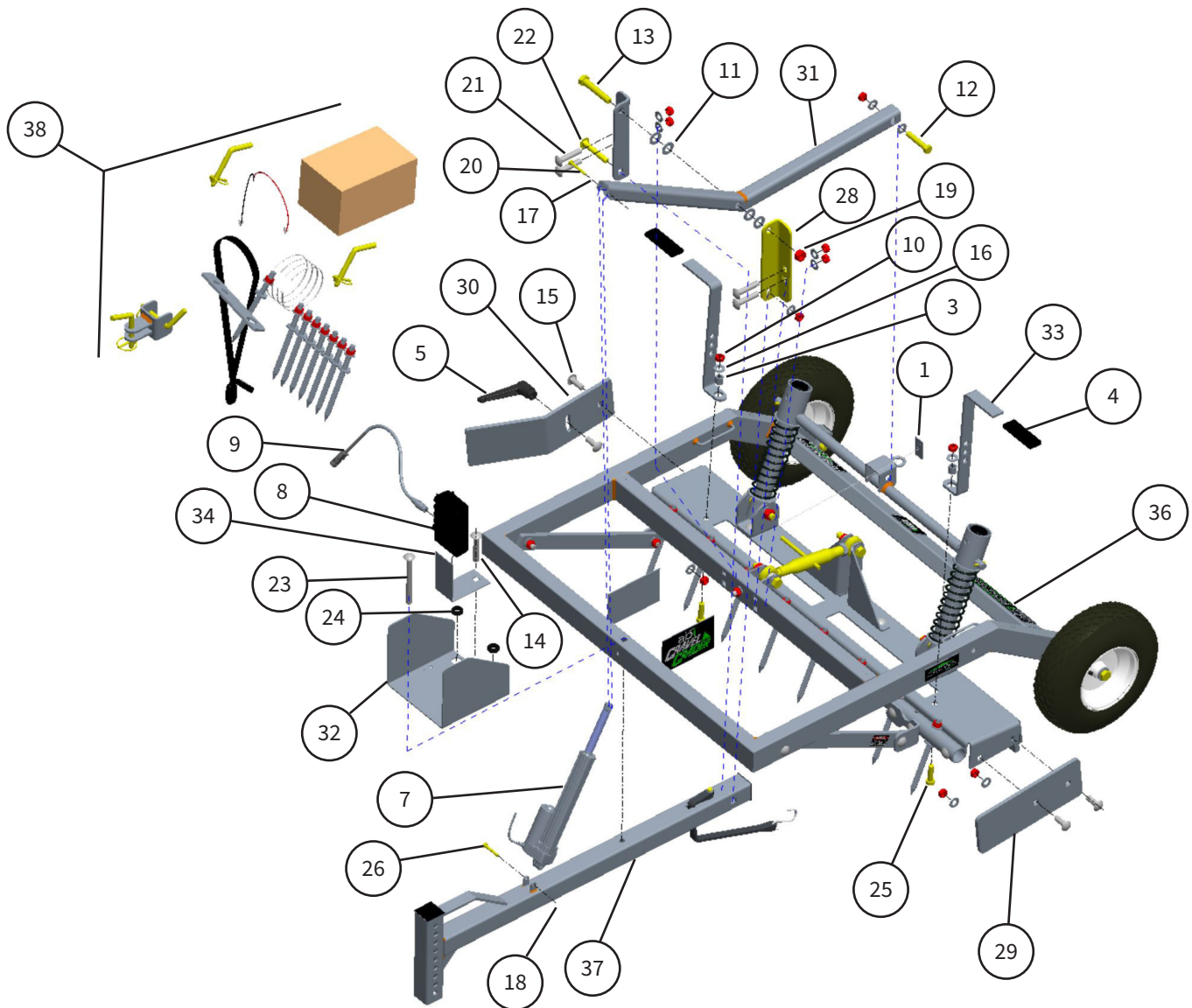
Fig 22.

Replacement Parts

All of the ground engaging components are considered wear parts and will need to be replaced as they wear out from use. To reorder, please contact the ABI Support department at 877-788-7253.

Parts Description

10-99079 ASM: GRAVEL GRADER

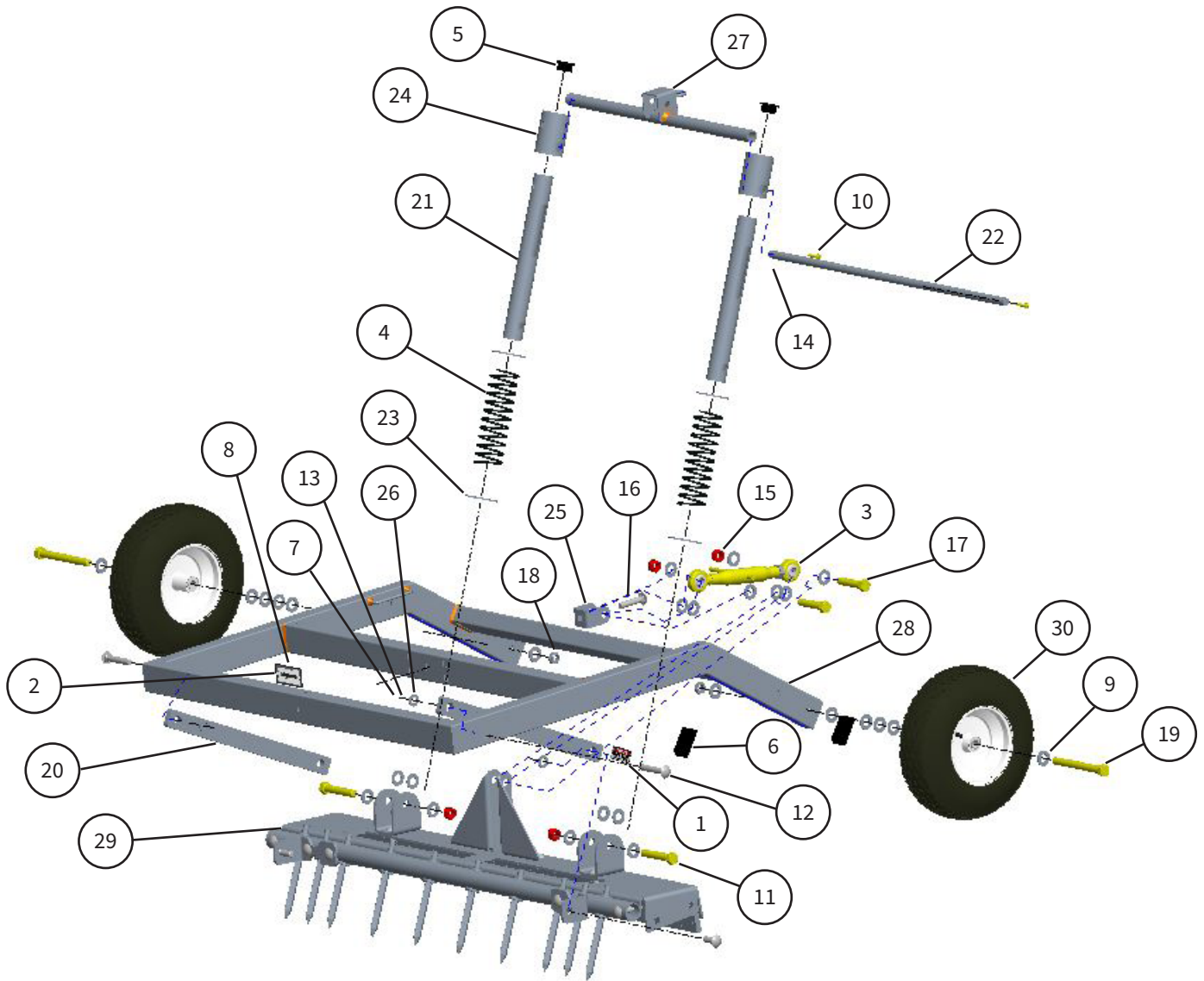


Parts Description (cont'd)

ITEM	PART #	DESCRIPTION
1	10-10096	LBL: PINCH POINT A 1" X 2"
2	10-10171	24" CABLE TIE
3	10-31290	BUSHING: LONG: LASER
4	10-10442	COVER: HANDLE DRAG BAR
5	10-10521	HANDLE: ADJUSTABLE: DIECAST BLACK
6	10-10526	LBL: SHEET OF ALL: GRAVEL GRADER
7	10-10570	ACTUATOR: METAL: GDG
8	10-10597	CONTROLLER BOX: GDG UPDATED
9	10-10598	ADAPTER: 6 PIN TO 2 PIN: GDG
10	10-20050	1/2-13 TOP LKGRC
11	10-20145	5/8 SAE F/W ZNC
12	10-20169	HX HD BOLT:1/2-13 2.75":ZINC GR5
13	10-20176	HX HD BOLT:5/8-11 3.5":ZINC GR5
14	10-20184	CARR BOLT:1/2-13 3":ZINC GR5
15	10-20188	CARR BOLT:1/2-13 1.5":ZINC GR5
16	10-20194	FLT WSHR:1/2 SAE: CL ZINC
17	10-20196	FLT WSHR:1/4 SAE:CL ZINC
18	10-20208	NYLOCK NUT:1/4-20:ZINC GR 5
19	10-20209	NYLOCK NUT:5/8-11:ZINC CL

ITEM	PART #	DESCRIPTION
20	10-20265	HX HD BOLT:1/4-20 2":ZINC GR5
21	10-20273	CARR BOLT:1/2-13 2.5":ZINC GR5
22	10-20304	CARR BOLT:1/2-13 3.25 ZINC GR5
23	10-20308	CARR BOLT:1/2-13 5.5":ZINC GR5
24	10-20314	GROMMET: .875" OD:0.25" PANEL
25	10-20359	HX HD BOLT:1/2-13 1.75":ZINC GR5
26	10-20362	HX HD BOLT:1/4-20 1.75":ZINC GR5
27	10-31106	BRKT: CTR PIVOT & TONGUE LH: GDG
28	10-31108	BRKT: CTR PIVOT & TONGUE RH: GDG
29	10-31111	PLATE: BOX CONTAINMENT: GDG
30	10-31113	PLATE: BENT BOX CONTAINMENT: GDG
31	10-31132	TUBE: ACTUATION: GDG
32	10-31146	BRKT: LABEL & BATTERY: GDG
33	10-31147	HANDLE: CROWN CONTROL: GRG
34	10-31242	BRKT: CONTROLLER: GDG
35	10-80085	OWNER'S MANUAL: ABI GRAVEL GRADER
36	10-90247	KIT: MAIN FRAM PROD ASM: GDG
37	10-90248	ASM: TONGUE PROD ASM: GDG
38	10-90406	ASM: BOXED COMPONENTS: IG/GG

10-90247 KIT: MAIN FRAME PROD. ASM: GDG

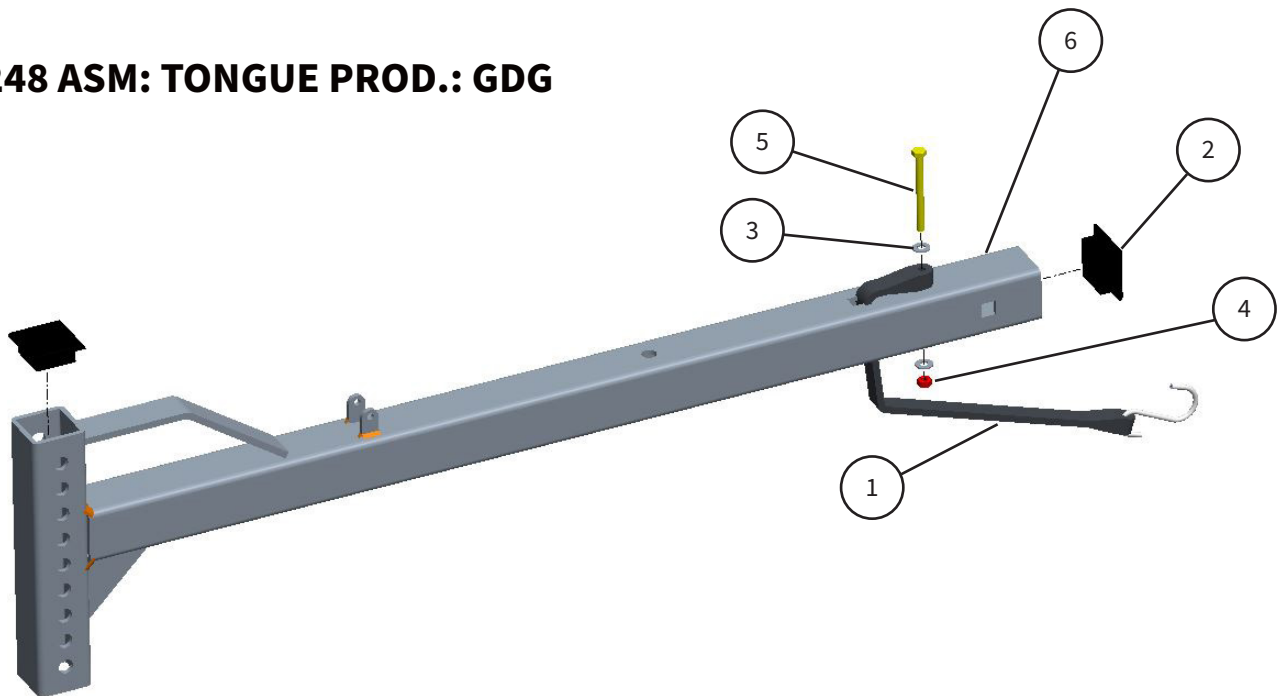


Parts Description (cont'd)

ITEM	PART #	DESCRIPTION
1	10-10096	LBL: PINCH POINT A 1" X 2"
2	10-10161	ABI SERIES SERIAL NUMBER PLATE
3	10-10316	TOPLINK: CAT0: 11-15"
4	10-10494	SPRING:GDG
5	10-10507	CAP: 1.625 ROUND: BLACK PLASTIC
6	10-10509	CAP: 2X3 BLACK
7	10-20050	1/2-13 TOP LKGRC
8	10-20104	RIVET: .5-.625 GRIP: SHOP SUPPLY
9	10-20145	5/8 SAE F/W ZNC
10	10-20175	HX HD BOLT:1/4-20 1":ZINC GR5
11	10-20176	HX HD BOLT:5/8-11 3.5":ZINC GR5
12	10-20184	CARR BOLT:1/2-13 3":ZINC GR5
13	10-20194	FLT WSHR:1/2 SAE: CL ZINC
14	10-20208	NYLOCK NUT:1/4-20:ZINC GR 5
15	10-20209	NYLOCK NUT:5/8-11:ZINC CL

ITEM	PART #	DESCRIPTION
16	10-20273	CARR BOLT:1/2-13 2.5":ZINC GR5
17	10-20295	HX HD BOLT:5/8-11 3.0":ZINC GR5
18	10-20299	THIN NYLOCK NUT: 5/8-11:ZINC CL
19	10-20317	HX HD BOLT:5/8-11 6.0":ZINC GR5
20	10-31107	PLATE: DRAG LINK: GDG
21	10-31117	TUBE: SPRING GUIDE: GDG
22	10-31118	ROD: ACTUATION: GDG
23	10-31119	PLATE: SPRING LANDING: GDG
24	10-31120	TUBE: SIGHT GAGE: GDG
25	10-31121	BRKT: PITCH CONT SHORT: GDG
26	10-31142	BUSHING: 3/4" OD:GDG
27	10-40285	WLDMT: ACTUATION: GDG
28	10-40287	WLDMT: FRM: GDG
29	10-40288	ASM: GRADING BOX: GDG
30	10-60067	WHEEL: GDG

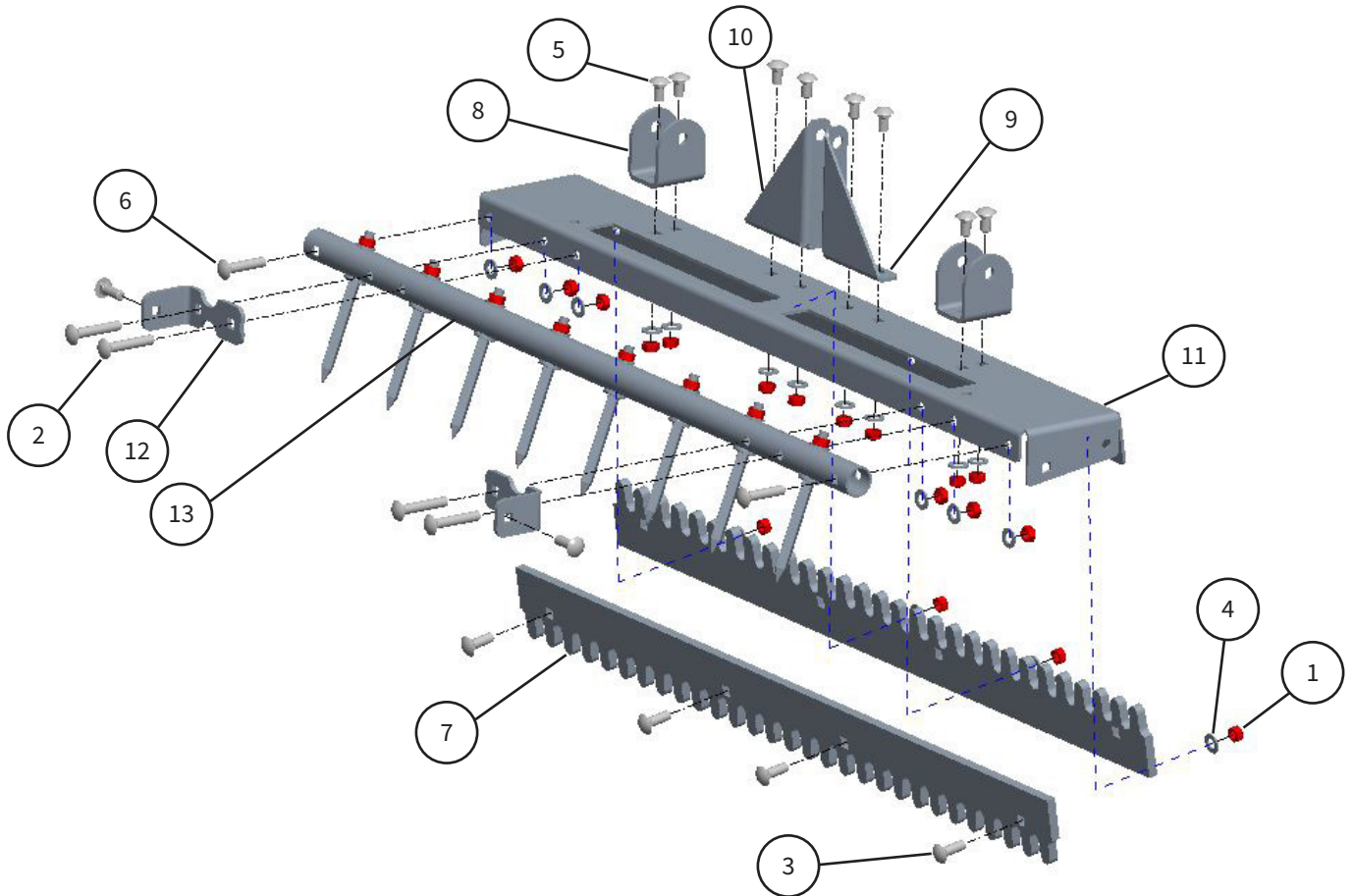
10-90248 ASM: TONGUE PROD.: GDG



ITEM	PART #	DESCRIPTION
1	10-10165	STRAP TARP: GDG
2	10-10443	CAP: 2" BLACK
3	10-20196	FLT WSHR:1/4 SAE:CL ZINC
4	10-20208	NYLOCK NUT:1/4-20:ZINC GR 5
5	10-20281	HX HD BOLT:1/4-20 X3: ZINC GR5
6	10-40284	WLDMT: TONGUE: GDG

Parts Description (cont'd)

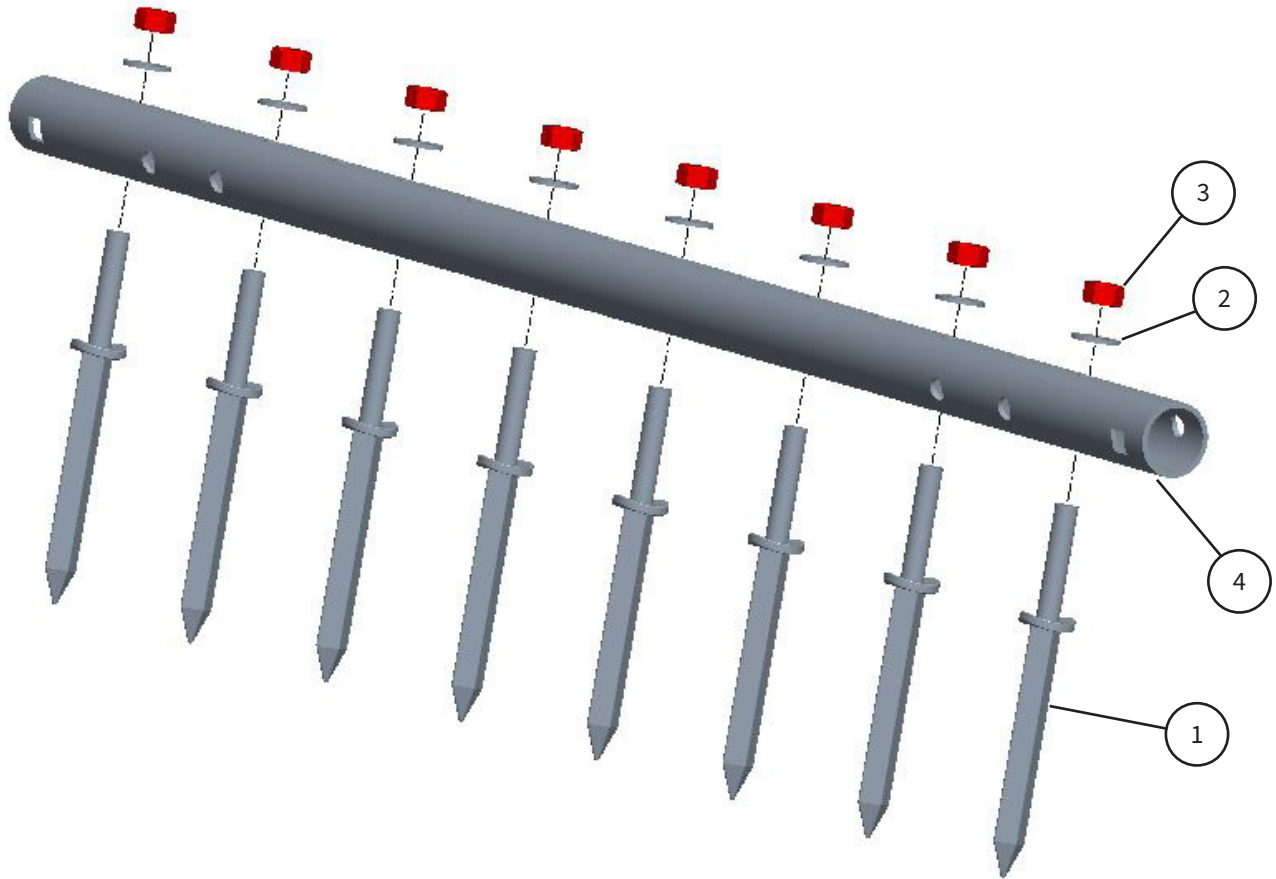
10-40288 ASM: GRADING BOX: GDG



ITEM	PART #	DESCRIPTION
1	10-20050	1/2-13 TOP LKGRC
2	10-20184	CARR BOLT:1/2-13 3":ZINC GR5
3	10-20188	CARR BOLT:1/2-13 1.5":ZINC GR5
4	10-20194	FLT WSHR:1/2 SAE: CL ZINC
5	10-20269	CARR BOLT:1/2-13 1.0":ZINC GR5
6	10-20273	CARR BOLT:1/2-13 2.5":ZINC GR5
7	10-31115	BLADE: 2 WAY: GDG

ITEM	PART #	DESCRIPTION
8	10-31116	BRKT: SPRING MNT: GDG
9	10-31122	BRKT: PITCH CONT LH: GDG
10	10-31123	BRKT: PITCH CONT RH: GDG
11	10-31138	FRM:BOX:GDG
12	10-31141	BRKT: PULL: GDG
13	10-40290	ASM: SCARIFIER: GDG

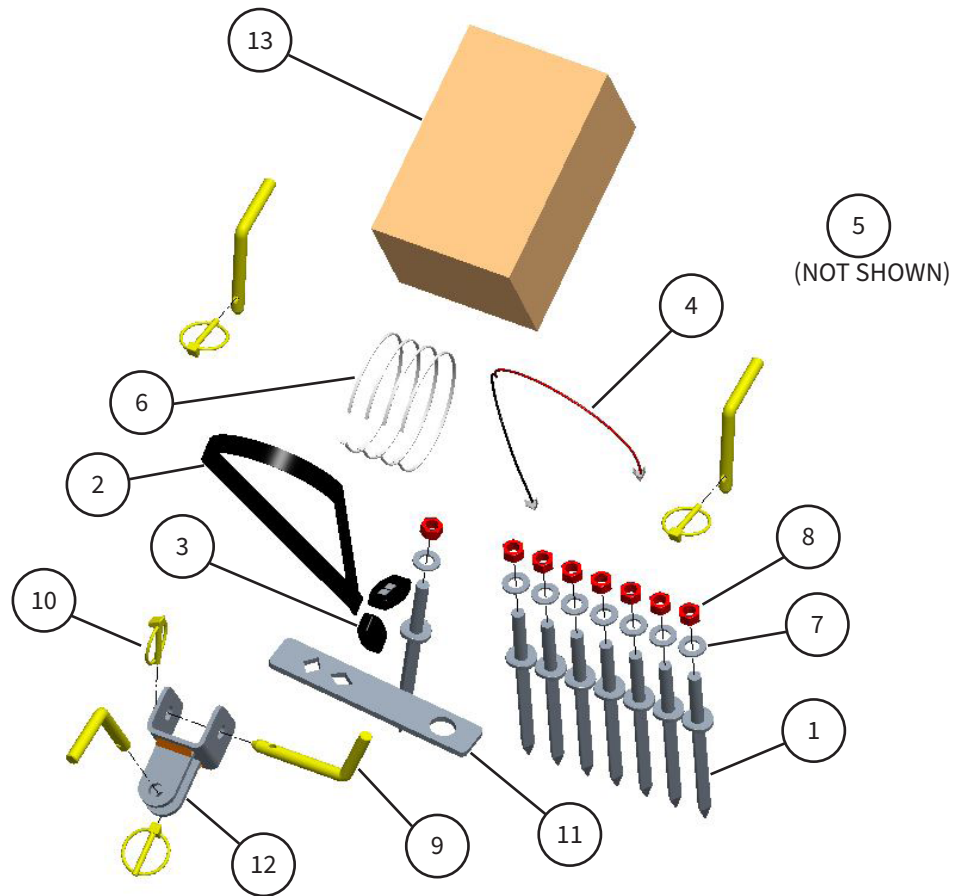
10-40290 ASM: SCARIFIER: GDG



ITEM	PART #	DESCRIPTION
1	10-10506	SCARIFIER: THREADED: HARROW TOOTH
2	10-20194	FLT WSHR:1/2 SAE: CL ZINC
3	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
4	10-31114	TUBE: SCARIFIER: GDG

Parts Description (cont'd)

10-90406 ASM: BOXED COMPONENTS: GDG



ITEM	PART #	DESCRIPTION
1	10-10506	SCARIFIER: THREADED: HARROW TOOTH
2	10-10519	LANYARD: ABI ATTACHMENTS: GDG
3	10-10522	GRAVEL GRADER WIRELESS REMOTE
4	10-10599	WIRE: BOX TO BATTERY: FUSED: GDG
5	10-10600	WIRE EXTENSION: GDG
6	10-20080	CABLE TIE 15 INCH - SHOP SUPPLY
7	10-20194	FLT WSHR:1/2 SAE: CL ZINC

ITEM	PART #	DESCRIPTION
8	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
9	10-20221	BENT PIN:1/2"X3.5":ZINC
10	10-20232	LYNCH PIN:1/4"X1.25":ZINC
11	10-31159	PLATE: SMALL SCAR WRENCH
12	10-40283	WLDMT: HITCH PIN BRKT: GDG
13	10-8000	BOX: MISC PARTS:GDG

Foot Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Contact Information

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Customer Support

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Phone: 877-788-7253
Website: www.abisupport.com

To order parts or to speak to one of ABI's Customer Service Representatives contact us Monday to Friday 9am to 5pm EST.

The setup video for operation is available at abisupport.com under 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 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.

