

Owner's Manual

Workman XL

ATV Trailer



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 front left corner of the rectangular frame 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: abicustomerservice@abiattachments.com
Phone: 877-788-7253
Website: www.abisupport.com

Table of Contents

Warranty.....	3
Safety.....	4
Safety Labels.....	7
Unpacking Instructions & Parts List.....	8
Setup.....	9
Tow Vehicle Wire Installation.....	18
Wiring Schematic.....	19
Brake Controller Adjustments.....	20
Brake Shoe Manual Adjustments.....	20
Replacement Parts.....	21
Maintenance.....	22
Trouble Shooting & FAQs.....	23
Options.....	24
Footnotes.....	27

Product Manual Information

NOTE: This operators manual covers several models, Features may vary by model. Not all features in this manual are applicable to all models depicted may differ from yours.



LIMITED WARRANTY

Workman XL & Rebel Trailer Models

24 Month Consumer, 3 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 warranted for 24 months, from the original invoice date, against defects in materials and/or workmanship when put to normal and designed residential, farm, & ranch consumer use; 3 months for commercial use and 3 months for rental use. Options are warranted for 12 months (3 months commercial & 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.

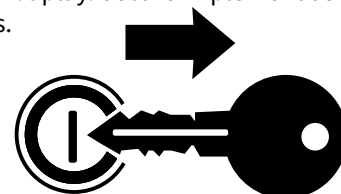
SAFETY PRECAUTIONS FOR CHILDREN

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.

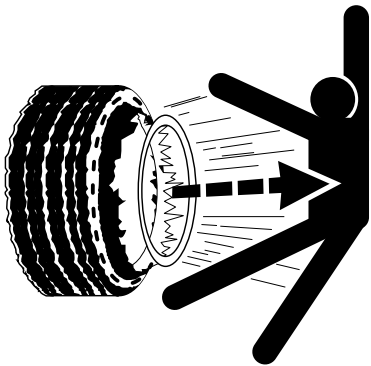
SHUTDOWN & STORAGE

- 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.

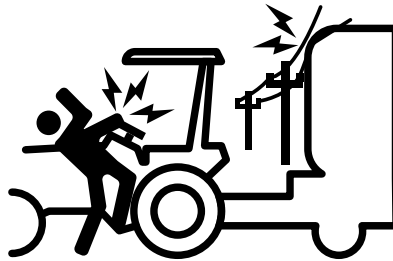


OPERATION SAFETY

- 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.



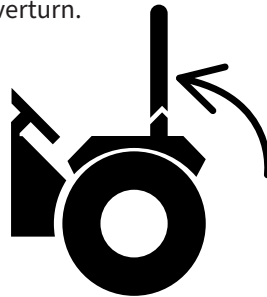
WEAR PERSONAL PROTECTION EQUIPMENT (PPE)

- 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.



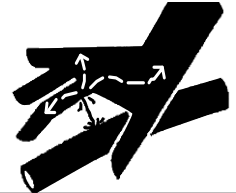
USE SEAT BELT AND ROPS

- 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.



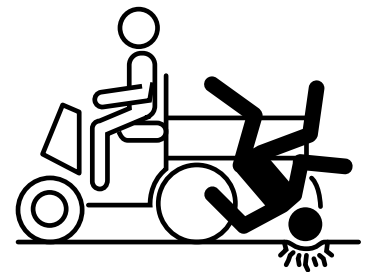
AVOID HIGH PRESSURE FLUIDS HAZARD

- 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.	<ul style="list-style-type: none">● Lower implement, stop low 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.	<ul style="list-style-type: none">● 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.

Unpacking Instruction & Parts

Initial Setup Instructions

Tools Needed:

- Gloves
- Safety Glasses
- Safety Shoes
- (2) 10 mm Socket or wrench
- (2) 13 mm (1/2 in) Socket or wrench
- (2) 16 mm (5/8 in) Socket or wrench
- (2) 18 mm Socket or wrench
- 21 mm deep well socket for tires
- Adjustable wrench (optional)
- Standard set of pliers
- Black electrical tape
- Lithium grease
- Razor Blade or knife
- Air Pump
- Wire Crimping Tool

Removing From Shipping Crate

1. Remove lid of box and set out packaged components to confirm all parts are accounted for (**Fig 1**),

Packing List

- Workman Bed
- Tires (Quantity 4 Deflated)
- Set of Struts
- Main Frame
- Bed Rest
- Cross Bar Support
- Brake Axle
- Idler Axle
- Tongue
- Optional Tongue Support Bracket
- Electric Actuator
- Pig skin cover and 2 zip ties
- Wiring Harness (2 packs)
 - Packet One: Wiring Harness, Rocker Switch, Two Extensions (One for Rocker Switch and One for Main Harness)
 - Packet Two: Workman to Rascal Adapter
- A - Subframe Strut Hardware Packet
- B - Bed Rest Hardware Packet
- C - Black Box Hardware Packet
- D - Pivot Mount Hardware Packet
- E - Cross Bar Hardware Packet
- F - Lower Mount Hardware Packet
- G - Upper Mount Hardware Packet
- H -Tongue Hardware Packet
- H - Axle Hardware Packet
- H - Axle Hardware Packet

Hardware Packing List

PACKET	PART #	DESCRIPTION	QTY
A	Subframe Strut Hardware	M8x25 Hex Bolts	16
		Washer	32
		M8 Nylon Lock Nuts	16
B	Bed Rest Hardware	M8x70 Hex Bolts	2
		Washer	4
		M8 Nylon Lock Nuts	2
C	Black Box Hardware	M6x30 Hex Bolts	4
		Washer	8
		M6 Nylon Lock Nuts	4
D	Pivot Mount Hardware	M12x95 Hex Bolts	2
		Washer	4
		M12 Nylon Lock Nuts	2
E	Cross Bar Hardware	M10x25 Hex Bolts	4
		Washer	8
		M10 Nylon Lock Nuts	4
F	Lower Mount Hardware	M12x75 Hex Bolts	1
		Washer	2
		M12 Nylon Lock Nuts	1
		Spacer	2
G	Upper Mount Hardware	M12x110 Hex Bolts	1
		Washer	2
		M12 Nylon Lock Nuts	1
		Spacer	2
H	Tongue Hardware	M12x80 Hex Bolts	4
		M12x30 Hex Bolts	2
		Washer	12
		M12 Nylon Lock Nuts	6
H	Axle Hardware	M12x75 Hex Bolts	4
		Washer	8
		M12 Nylon Lock Nuts	4
H	Axle Hardware	M12x75 Hex Bolts	4
		Washer	8
		M12 Nylon Lock Nuts	4

Setup

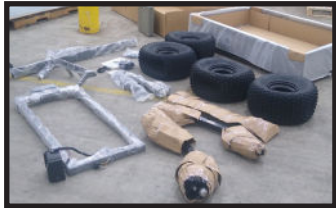


Fig 1.

Initial Setup Instructions

1. Assembly requires 2 Individuals.
2. After removing the components from the box, turn trailer bed upside down for assembly. Use cardboard from packaging to protect bed rails - be careful not to damage tailgate pins or D-rings (**Fig 2**).
3. Remove the 4 wooden blocks from the corners of the trailer bed used for shipping and discard/recycle (**Fig 3**).
4. Set Struts on top of the trailer bed inside the angle steel welded to the trailer bed with angled section of strut (portion of strut with axle bushings) facing toward the rear of the trailer bed (**Fig 4**). Struts are left side and right side. Be sure the angled walls of angle steel on strut and trailer bed are flush (**Fig 5**).
5. Use screwdriver to align holes in angled steel welded to trailer bed and holes in strut if need be. From packet "A", bolt each end of the struts to the steel angle on the trailer bed (place washer next to the head of the bolt and next to the nut) - hand tighten only at this time (**Fig 6**). Finish mounting each strut by adding bolts, washers and nuts down the full length of the struts (place washer next to the head of the bolt and next to the nut) - hand tighten at this time. (**Fig 7**).
6. Lay rectangular frame on ground with pivot point brackets facing upwards (**Fig 8**). Open packet "B" and take out 2 washers and 2 bolts. Slide washer onto each bolt. Lift front end of rectangular frame by wiring and slide bolt (with washer) into holes (as shown in **Fig 9**).
7. Set Bed Rest Bracket on rectangular frame having both bolts go thru holes in bracket. Make sure the black plastic box bracket mounts are facing toward wiring (**Fig 10**). Slide washer onto each bolt. Thread Nylon Locknut onto each bolt and tighten using (2) 13mm wrenches or socket set (**Fig 11**).



Fig 2.



Fig 3.

Angled portion of struts angled toward rear of bed.



Fig 4.

Rear of trailer bed.

Walls of angle steel on strut and bed to be flush.

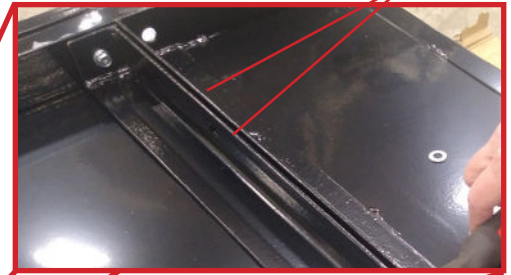


Fig 5.



Fig 6.

Hand tighten screws along the full length of the struts and on both ends of each strut.

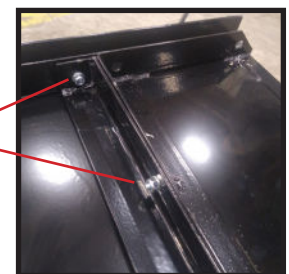
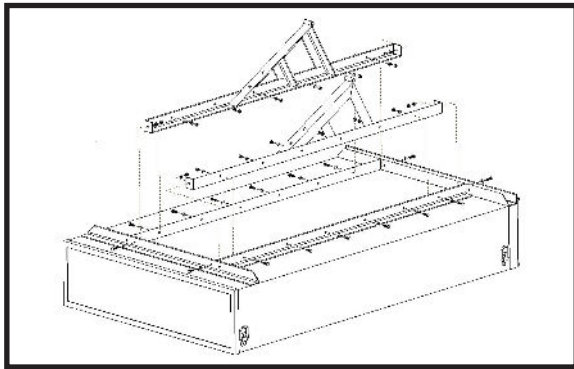


Fig 7.

Setup (cont'd)



Hardware from Packet "A".

Pivot brackets on rectangular frame facing upwards.



Fig 8.



Fig 9.

Slide bolts (with washers) thru holes in rectangular frame.

Black plastic box mounting brackets.

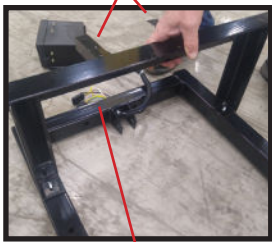


Fig 10.

Wiring for black plastic box.

Place washer and locknut onto bolt and tighten.

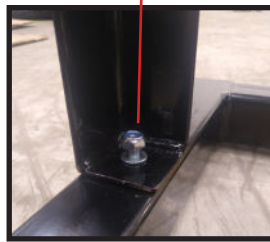
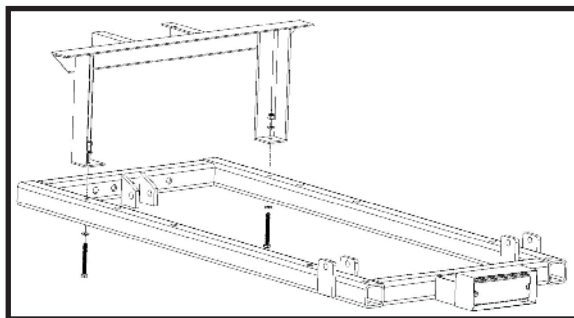


Fig 11.



Hardware from Packet "B".

8. Mount black plastic box on under side of brackets on bed rest frame with hardware from packet "C". Slide washer onto each bolt, then slide (4) bolts thru holes from underside of brackets. Slide washer onto each bolt. Thread nut onto each bolt and tighten using (2) 10mm wrenches or socket set. (**Fig 12**).

9. Set rectangular frame/bed rest assembly onto trailer bed with welded pivot brackets facing toward bed (tail light will be facing toward tailgate) in line with axle bearings on struts (**Fig 13**).

10. Use hardware from packet "D" to attach rectangular frame/bed rest assembly to struts. Slide washer onto bolt then slide bolt thru outside pivot bracket. Continue to slide bolt thru pivot bushing on strut then thru inner pivot bracket. Slide washer onto bolt. Thread Locknut onto bolt hand tight only. Repeat inserting second bolt on other strut. Tighten both locknuts using (2) 18mm wrenches or socket set so the locknuts are snug against the inner pivot brackets but still allow the rectangular frame/bed rest assembly to easily pivot when lifted (**Fig 14**).

11. Mount Crossbar to both struts using hardware from packet "E". Actuator brackets on crossbar must be facing toward front of bed. Slide 1 washer on each bolt then slide the 4 bolts thru the holes in the crossbar mounting brackets and struts (2 bolts on each side). Slide a washer onto each bolt. Thread nut onto each bolt hand tight only (**Fig 15**).

12. Tighten the bolts on both ends of each strut first using (2) 13mm wrenches or socket set (**Fig 16A & B**). Next, tighten the bolts along the length of each strut using (2) 13mm wrenches or socket set (**Fig 17**). Then tighten bolts securing crossbar to struts using (2) 16mm wrenches or socket set (**Fig 18**).

13. Mount the motor end of the Electrical Actuator to the brackets welded to the rectangular frame toward the front of the trailer using hardware from packet "F". Actuator motor must be toward the underside of the bed. Slide washer onto bolt then slide bolt into 1st bracket welded to rectangular frame. Slide spacer onto bolt on inside of first bracket then slide bolt thru actuator bracket. Slide second spacer onto bolt then slide bolt thru second bracket. Slide washer onto bolt. Thread locknut onto bolt and tighten nut using (2) 18mm wrenches or socket set so that it is snug against second bracket but allows the actuator to pivot smoothly when lifted (**Fig 19A & B**).

14. Before installing the “Piston End” (small end) of the electric actuator lift to the crossbar, manually turn the piston shaft counter clockwise until the piston is completely seated in the actuator then turn the piston shaft two complete revolutions clockwise (to prevent piston from bottoming out during use) to set the limit switch. Install the “Piston End” of the actuator to the crossbar brackets. Using hardware from Packet "G", slide one washer onto bolt. Slide bolt thru first bracket then slide one spacer onto bolt then slide bolt thru end of piston. Slide second spacer onto bolt then slide bolt thru second bracket. Slide second washer onto bolt. Thread locknut onto bolt and tighten nut using (2) 18mm wrenches or socket set so that it is snug against second bracket but allows the actuator to pivot smoothly when lifted (**Fig 20A & B**).

15. Connect the two wires from the actuator lift motor to the wires from the black plastic box - they only fit one way (**Fig 21**).

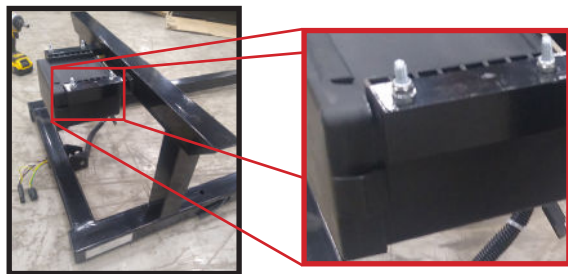
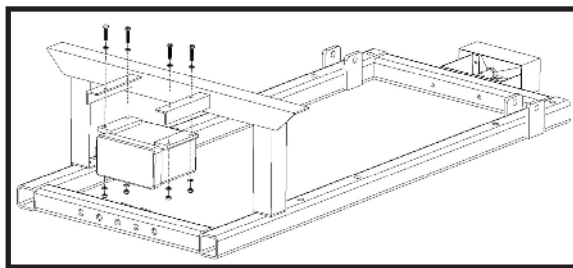


Fig 12.



Hardware from Packet "C".



Fig 13.

Line up pivot brackets on rectangular frame with axle bearings on struts.

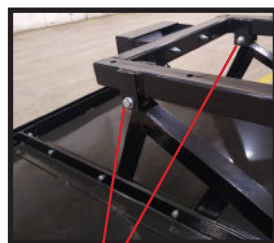
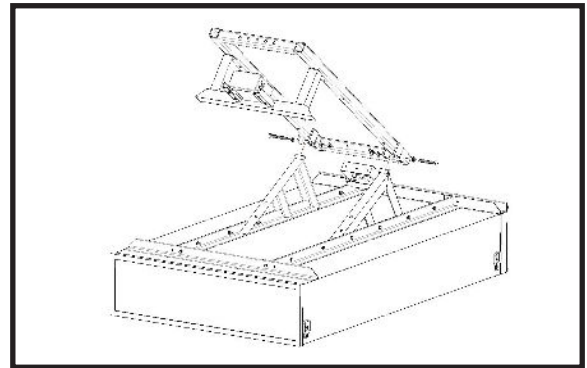


Fig 14.

use hardware from packet "D" to attach rectangular frame/bed rest assembly to struts.



Hardware from Packet "D".

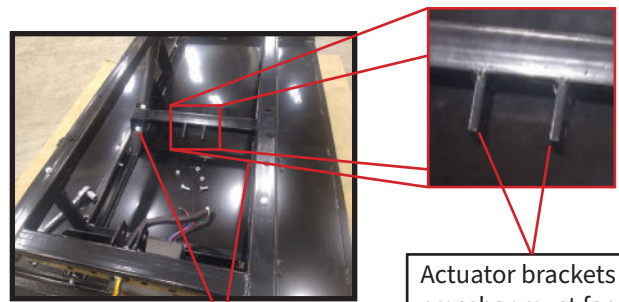
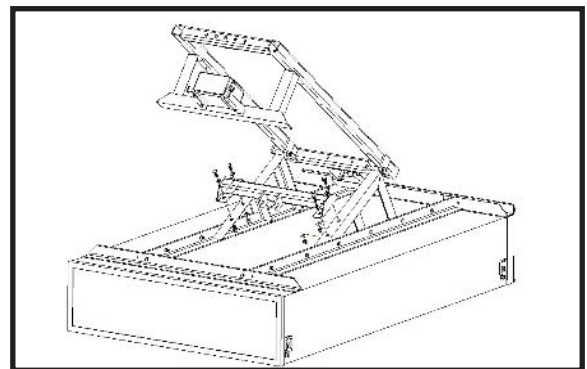


Fig 15.

Use hardware from packet "E" to mount crossbar to struts.

Actuator brackets on crossbar must face toward front of bed (toward black plastic electrical box).



Hardware from Packet "E".



Fig 16A.

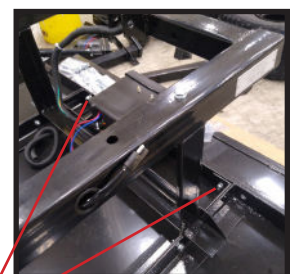


Fig 16B.

Tighten bolts on both ends of each strut.

Setup (cont'd)



Fig 17.

Tighten bolts along length of each strut.



Fig 18.

Tighten bolts on crossbar.

Paper can be used to protect crossbar from being scratched while mounting actuator if desired.

Spacers on inside of brackets on either side of actuator lift.

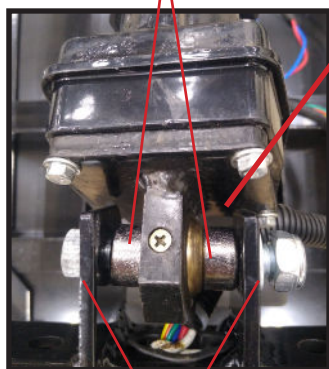


Fig 19A.

Washers next to bolt head and locknut.

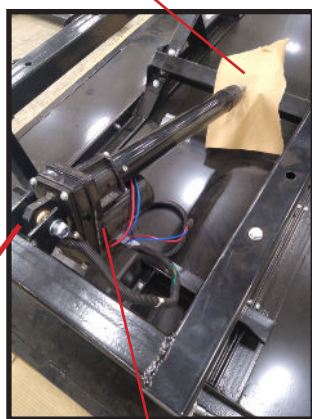


Fig 19B.

Actuator Lift mounted to brackets on rectangular frame with actuator motor toward underside of bed.

16. Bolt the “Brake Axle” in the front mounting holes with the swing arms on the axle pointing to the rear or taillight of the trailer using hardware from packet “H”.

Note: There are 3 packages of bolts labeled “H” which are used in steps 16, 17, & 20.

Slide washer onto each bolt (4) then insert bolts into slots on both axle brackets. Continue to insert bolts thru holes in rectangular frame. Slide washer onto each bolt. Thread locknut onto bolts and hand tight only (**Fig 22**). Align axle mounting brackets so they are parallel with rectangular frame then tighten bolts using (2) 18mm wrenches or socket set (**Fig 23**). Connect the brake wires to the wires coming out the side of the frame on both sides. If desired, secure connections with black electrical tape. Push excess wire into frame (**Fig 24**).

17. Bolt the “Idler Axle” in the rear mounting holes with the swing arms on the axle pointing to the rear or taillight of the trailer using hardware from packet “H”. Slide washer onto each bolt (4) then insert bolts into slots on both axle brackets. Continue to insert bolts thru holes in rectangular frame. Slide washer onto each bolt. Thread locknut onto bolts and hand tight only (**Fig 25**). Align axle mounting brackets so they are parallel with rectangular frame then tighten bolts using (2) 18mm wrenches or socket set (**Fig 26**).

18. Tires will be partially deflated for shipping purposes (**Fig 27**). This may cause the bead on the tire to separate from the rim (**Fig 28**). If this happens, fill tire to 15 lbs max air pressure to re-seat the bead (a popping sound may happen - this is normal). **Once the bead has re-seated, reduce the air pressure in the tire back to the normal working pressure of 3 - 5 lbs.**

Before mounting tire to hub, remove the lug nuts from the hubs (**Fig 29**). Mount each wheel/tire assembly to the hubs with the 4 tapered lug nuts. The taper of the lug nuts must face toward the wheel. Install tire with the valve stems pointing outwards away from the frame (**Fig 30**). Tighten the nuts gradually, alternating between nuts opposite each other to assure even seating of the wheel onto the axle (**Fig 31**). Once all 4 lug nuts are snug with rim, repeat pattern and tighten firmly (when trailer is in upright position and tires are on the ground, further tightening of all lug nuts may be required). Repeat tire installation procedure four all for tires (**Fig 32**).

19. Position Tongue upside down in front of trailer (since trailer is upside down) (**Fig 33**). On the tongue assembly, connect the male electrical connectors to the female electrical connectors, ensuring that the colors of the wires match. Both connectors only go on one way (**Fig 34**). If desired, use electrical tape to keep the connectors from coming apart.

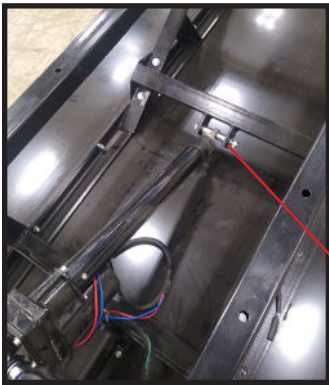


Fig 20A.

Spacers on inside of brackets on either side of actuator lift.

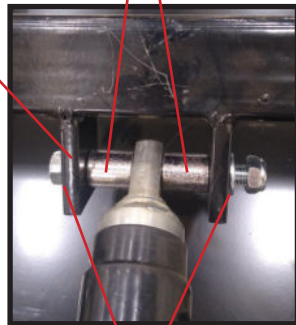
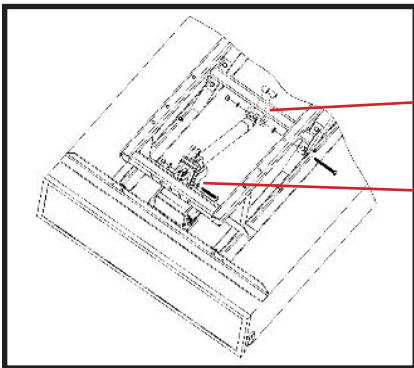


Fig 20B.

Washers next to bolt head and locknut.



Hardware from Packet "G".

Hardware from Packet "F".



Fig 21.

Secure the trailer wiring connections with black electrical tape to prevent the wires from becoming unplugged.

Swing arms on Brake axle.

Tail light.



Fig 22.

Set brake axle on frame with swing arms on axle facing toward tail light.

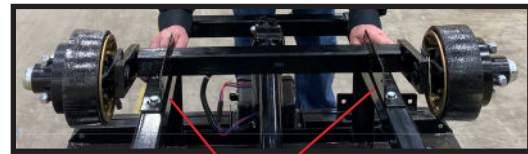


Fig 23.

Align axle brackets so they are parallel to rectangular frame before tightening bolts.

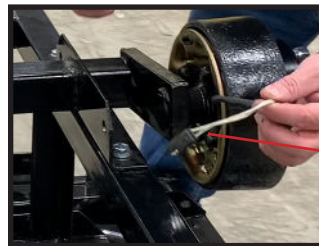


Fig 24.

On both sides, connect the brake wires to the wires coming out of the side of the frame.

Swing arms on Idler axle.

Tail light.

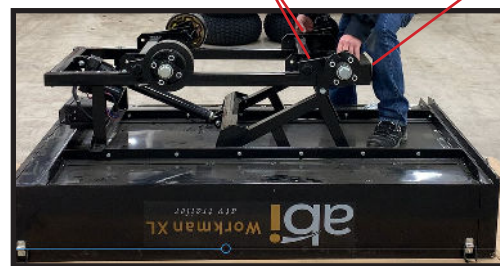


Fig 25.

Set idler axle on frame with swing arms on axle facing toward tail light.

Setup (cont'd)

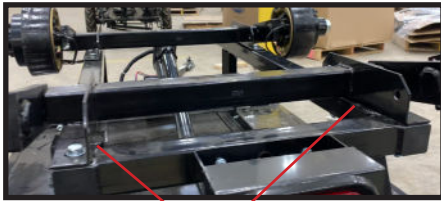
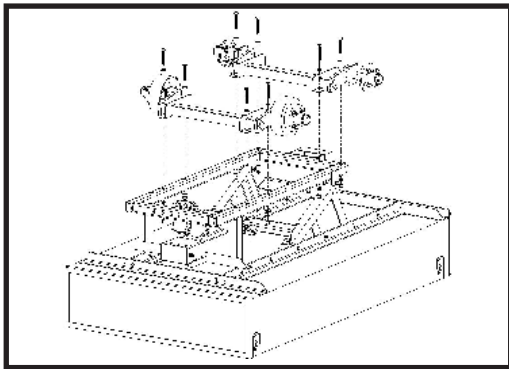


Fig 26.

Align axle brackets so they are parallel to rectangular frame before tightening bolts.



Hardware from Packets "H".

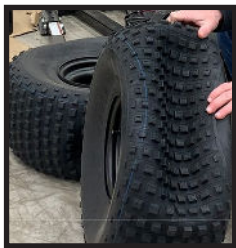


Fig 27.



Fig 28.

Bead of tire may separate from rim during shipping.

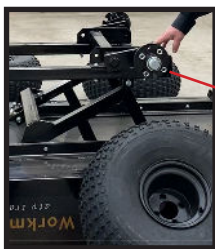


Fig 29.

Remove lug nuts from all 4 hubs.

Valve stem must be pointed outward when mounting tire.



Fig 30.

Replace lug nuts with tapered portion of lug nut facing inward toward rim.

The other option instead of pulling the grommet off the tongue is following the same procedure but pull the grommet off the frame of the trailer and push the 2 connectors thru the grommet. Work the 2 connectors into the frame of the trailer and position the grommet back onto the frame. Push the remaining wire into the tongue while positioning the tongue up next to the frame (Fig 37).

20. Once wiring is pushed back into the tongue and frame and both grommets are in their correct position, have someone hold the tongue in position (upside down since trailer is upside down) while the optional tongue support bracket is placed into position (Fig 38). **MAKE SURE NO WIRES ARE BEING PINCHED BETWEEN THE TONGUE AND FRAME WHILE MOUNTING THE TONGUE AND TONGUE SUPPORT BRACKET.**

21. Bolt the tongue assembly and tongue support bracket to the frame using hardware from packet "H - Tongue Hardware". Slide washer onto long bolt then slide long bolts (4) into tongue bracket. Continue sliding bolts thru trailer frame and tongue support bracket. Slide washer onto each bolt then thread locknut onto each bolt - hand tighten only (Fig 39). Slide washer onto short bolt then slide short bolts (2) into tongue bracket. Continue sliding bolts thru tongue support bracket. Slide washer onto each bolt then thread locknut onto each bolt - hand tighten only (Fig 40). If optional tongue support bracket is not being used, step 13 is still the same with bracket omitted. Once all 6 bolts and nuts are in place, tighten using (2) 18mm wrenches or socket set.

22. With the trailer still upside down, gently pull the slack out of the wiring harness running thru the tongue out by the ball hitch (Fig 41). Loop the excess wire around the safety clip on the side of the ball hitch to protect the wire harness if the ball hitch is detached from the tow vehicle but the harness is not (Fig 42).

23. Before flipping the trailer to the upright position, make sure there is cardboard on the ground so that the trailer side doesn't get scratched when the trailer is flipped up on it's edge. Flip the tailgate pin, as well as the "D" rings on the side of the trailer to a position they won't get pinched and bent when lifting the trailer (Fig 43). With the help of 2 people, lift the trailer from one side until the opposite side of the trailer is resting on the cardboard (Fig 44).

24. With a person on either side of the trailer, Continue pulling the trailer over onto its tires (Fig 45). The ABI Workman XL Trailer is now complete (Fig 46).

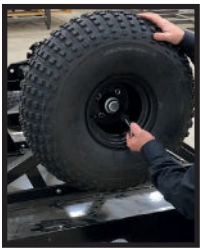


Fig 31.



Fig 32.

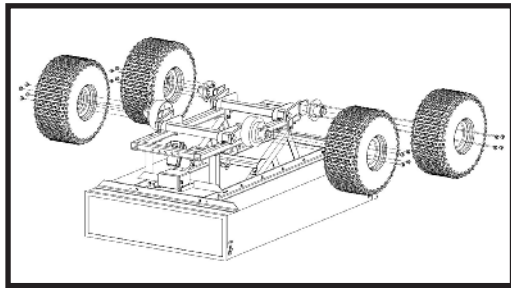


Fig 33.

Tongue is upside down position since trailer is upside down.

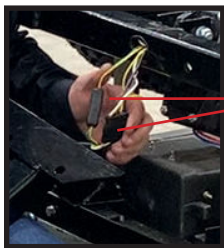


Fig 34.

Both Connectors from the tongue snap onto the connectors on the trailer frame only one way.

13. Push excess wiring back into the frame. There are 2 ways to accomplish this - pushing the wire into the tongue or into the frame of the trailer. There are grommets on both the tongue and frame to protect the wires from being damaged by the sharp metal edges (Fig 35).

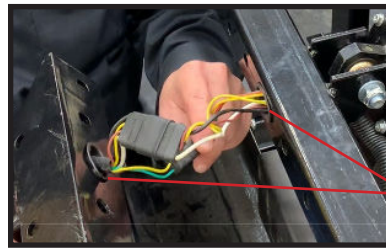


Fig 35.

Grommets on tongue and frame of trailer.

To push the big connector into the tongue, pull the tongue grommet off the tongue and push it over the big grommet then work the big and small connectors inside the tongue and replace the grommet back onto the tongue. push the remaining wires into the frame of the trailer as you pull the tongue closer to the frame (Fig 36).

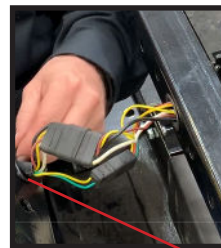


Fig 36A.

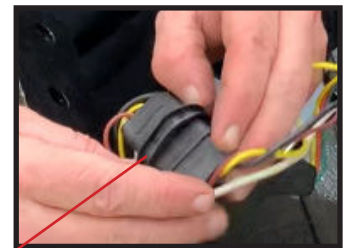


Fig 36B.

Remove grommet from tongue and slide over big connector.

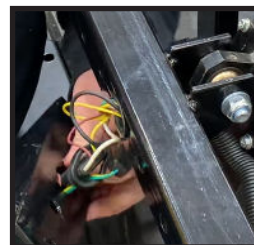


Fig 36C.



Fig 37.



Fig 38A.



Fig 38B.

Optional Tongue Support Bracket.

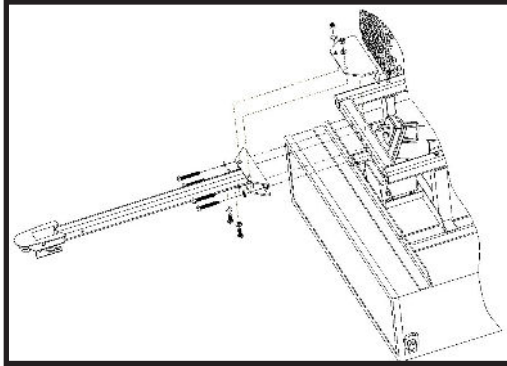
Tow Vehicle Wiring Installation



Fig 39.



Fig 40.



Hardware from Packets "H-Tongue".



Fig 41.



Fig 42.

Gently pull excess wiring harness out of tongue and loop wire around safety clip on side of ball hitch.

Position tailgate pin to a position it won't get pinched and bent when lifting the trailer up on its side.



Fig 43A.

Lay cardboard on the ground to protect the side of the trailer when flipped on its side.

NOTE:

TO AVOID ELECTRICAL DAMAGE TO THE UNIT BY SPLICING THE WORKMAN XL 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 WHITE TO POSITIVE).

The necessary wiring to hook the workman XL trailer to the tow vehicle are in the kit (Fig 47).

The 6 prong connector coming out of the hitch on the trailer will plug into the 6 prong connector and the end of the wiring harness (Fig 48).

The other end of the wiring harness has 4 bare wires, black, white, brown and yellow (Fig 49).

Along with the main wiring harness are 2 small wire leads with Ring connectors (One white and one black) (Fig 50 and Fig 51). The black lead has a 30 amp fuse.

Crimp the end of the black wire (opposite the end with the Ring connector to the black wire on the main harness shown in Fig 50.

Crimp the end of the white wire (opposite the end with the Ring connector to the white wire on the main harness shown in Fig 51.

Once the black and white leads have been crimped, slide the black heat shrink wrap over each of the crimped portion of the leads and use a heat gun to shrink the wrap and secure it around the both connectors. (Fig 52).

Refer to your tow vehicle owner's manual or call your local tow vehicle dealer to determine which leads on the tow vehicle will connect to the yellow and brown wires to control the running lights and stop lights.

Along with the main wiring harness is the Rocker Switch and hardware to mount the Rocker Switch to the tow vehicle (Fig 53) and (Fig 54).

Coming out the back side of the Rocker Switch is the 3 prong connector that plugs onto the 3 prong connector on the main wiring harness (Fig 55 and Fig 56).

The hardware can be assembled to the Rocker Switch and mounted to the tow vehicle handlebar or some other area on the tow vehicle (Fig 57). An additional piece of linkage can be added to change the angle of how the Rocker Switch is mounted or extend it away from the area mounted (Fig 58).

If more cable length is needed, see OPTIONS section of this manual for additional cables that are available.



Fig 43B.

Position "D" rings to a position they won't get pinched and bent when lifting the trailer up on its side.



Fig 44A.



Fig 44B.



Fig 45.



Fig 46.



Fig 47.



Fig 48.

Yellow - Running Light

Brown - Stop Light

Black - Positive

White - Negative

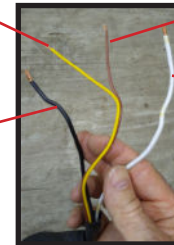


Fig 49.



Fig 50.

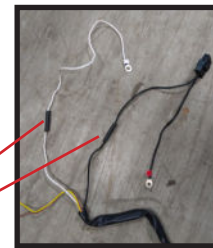


Fig 52.

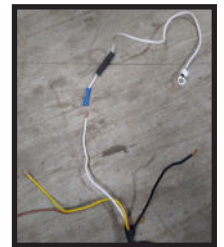


Fig 51.

Slide heat shrink wrap over crimped wires and use heat gun to shrink wrap around both connectors.



Fig 53.



Fig 54.

Tow Vehicle Wiring Installation (cont'd)



Fig 55.



Fig 56.



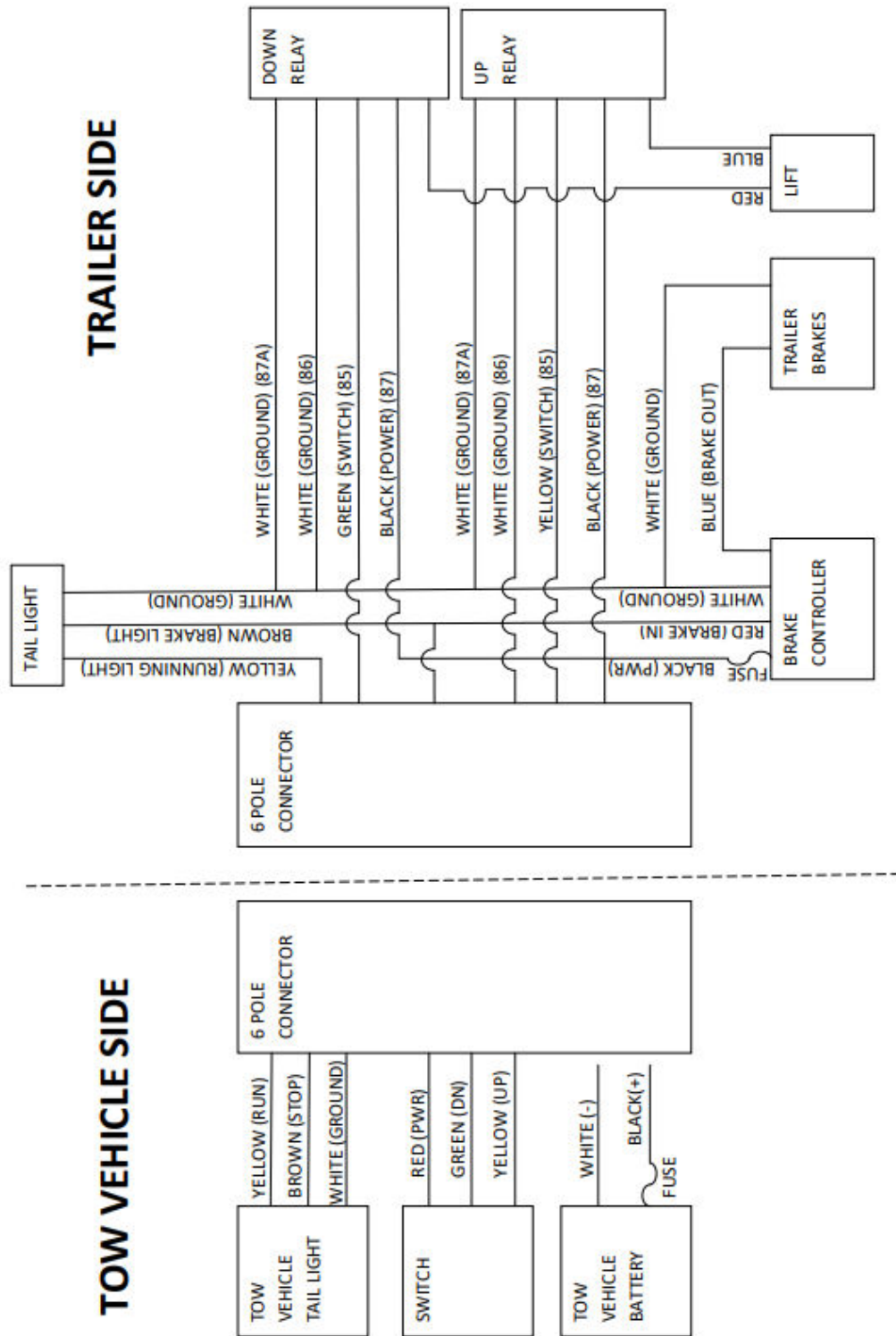
Fig 57.



Fig 58.

Wiring Schematic

WORKMAN XL WIRING



Brake Controller Adjustments

A NOTE: The electronic braking system is not compatible with ALL tow vehicles. Please contact ABI for more information: 877-788-7253 or log on to ABIsupport.com.

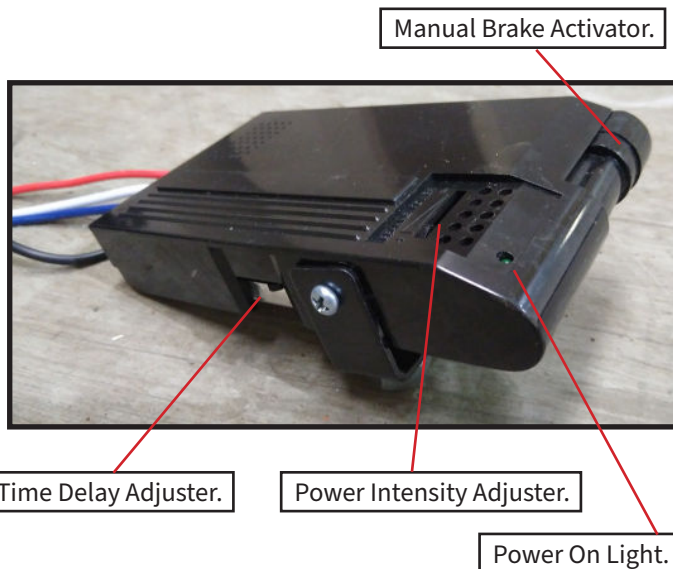
ABI offers power brakes as a standard feature on the dual axle Workman XL only. Mounted within the black box on the Workman XL Trailer is a Brake Controller, which allows adjustment to the time delay and power intensity of the trailer brakes.

First, make sure power is being supplied to the brake controller by hooking up the 4-pole wire connection to the ATV and turning on the ATV ignition. **NOTE:** Be sure to have a strong, well charged battery for full braking power. Squeeze the Manual Brake Activator and note that red lights appear by the Power Intensity Adjuster. The more lights that activate, the more stopping power applied to the Workman XL trailer brakes.

More Stopping Power: Move the Power Intensity Adjuster to the Left, towards the (+) positive symbol.

Less Stopping Power: Move the adjuster to the Right towards the (-) negative symbol.

The Time Delay Adjuster allows to place a 1-3 second delay when applying the trailer brakes. Check that the switch is pushed to the back, in the opposite direction of the power on Light, for instant stopping power. The factory default is set to instant stopping or no delay.



Brake Shoe Manual Adjustments

After using your trailer for some time, you may need to manually adjust the brake shoes located within the brake drum. At the bottom, inside portion of each brake hub you will note an elongated plastic cap. Remove this cap as indicated (**Fig 61**).

Inside the hole of the hub, you will note a silver adjuster. Insert a brake spoon or a screwdriver into the hole, and spin the teeth down to expand or add more stopping power to each hub (**Fig 62**). Spin the teeth up to contract or decrease the brake pads from contacting the brake drum. The direction 'down' would be to spin the circular adjuster in a direction towards you. Imagine the adjuster to be like a coin rolling on a table towards you, that is the direction of 'down'.

The brake hub in these views has been removed from the axle for illustrative purposes only.

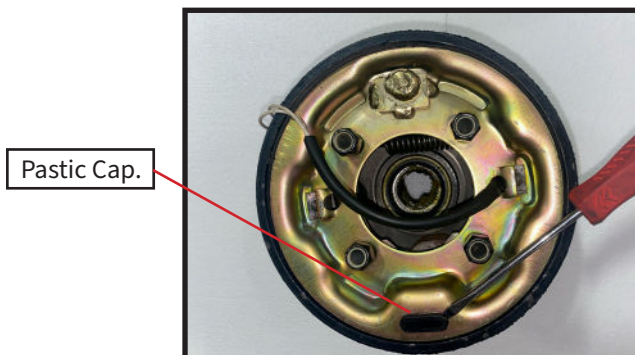


Fig 61.

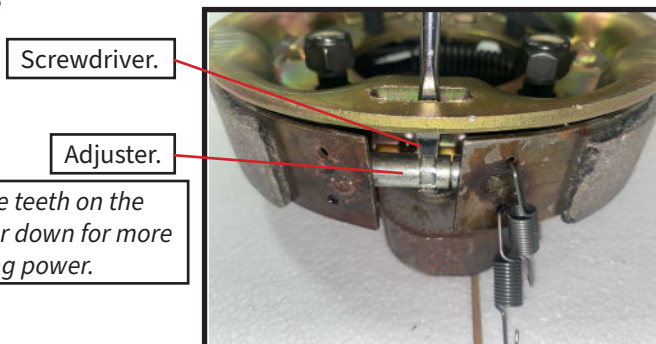


Fig 62.

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.

Maintenance

Wheels and Hubs - The bearings in both hubs (on the Idler axle only) should be greased every 12 months using a multipurpose grease. They should also be greased before any long period of storage. The grease zerk is located on the back side of each hub (**Fig 59**).

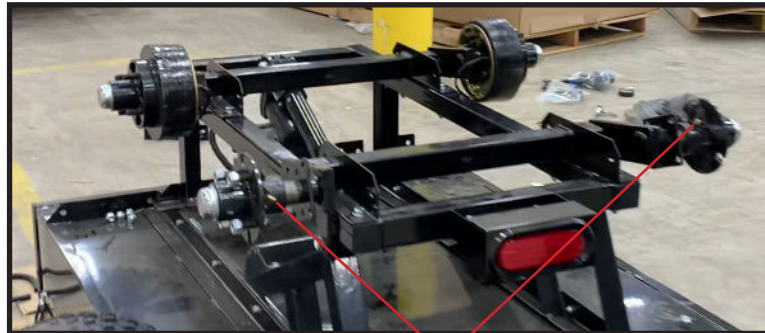


Fig 59.

Grease zerk location on Idler (rear) Axle hubs.

Bed Rest Pivot Bushings - The bushings in each strut to pivot the Bed Rest Frame should be greased once a month. Recommend using a multipurpose grease They should also be greased before any long period of storage (**Fig 60**).

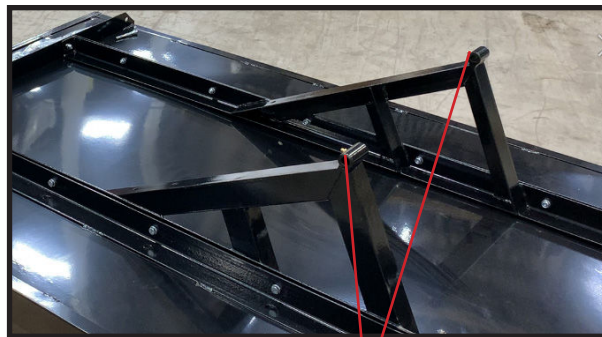


Fig 60.

Grease zerk location on both Struts.

Ball Hitch - Use spray lithium grease as needed.

Tires - Check tire pressure weekly or if tire(s) look low. If low, fill to 3 - 5 psi before using trailer. If tire(s) are cracked or chunks of rubber are missing, replace tire before using trailer.

Lug Nuts - Check lug nuts for tightness on a new trailer or when wheel(s) have been remounted after the first 10, 25 and 50 miles of use. Tighten lug nuts before each use.

Tail/Brake Lights - Check tail/brake lights for proper functioning before each use. Replace burned out light bulbs before using trailer.

Electric Brakes - Check electric brakes (if applicable) for proper functioning by operating the brake controller on the tow vehicle before each use. Repair brakes if not functioning properly before using trailer.

Trailer cleaning - Use mild dish soap and water for routine cleaning. If using to haul manure, clean after every use. Do NOT store manure in trailer bed.

Troubleshooting & FAQs

- Recommended tow vehicle engine size is 350 cc or larger with four-wheel drive in order to allow safe operation when towing the trailer.
- Using the trailer with a heavy load may inhibit the towing capacity of the tow vehicle. Do not exceed the maximum towing capacity of your vehicle. Check the vehicle's owner's manual on tow capacity limitations.
 - Do not exceed the trailer Gross Vehicle Weight Rating (1,600 lbs. GVWR)
 - Tie down all loads with proper sized fasteners, ropes, straps, etc. (Not included).
 - Never disconnect trailer from tow vehicle while on an incline.
 - Distribute the load front-to-rear and provide proper tongue weight.
 - Distribute load evenly, right to left, and avoid tire overload.
 - Keep the center of gravity low.
- Only use 2" ball hitch to attach to the trailer coupler. **CAUTION: AN IMPROPERLY COUPLED TRAILER CAN RESULT IN DEATH OR SERIOUS INJURY. TIGHTEN THE COUPLE ADJUSTMENT ON THE UNDERSIDE OF THE HITCH COUPLER REGULARLY.**
- Do not tow trailer on highways or on public thoroughfares. The trailer is designed for off road use only.
- The tailgate has 4 positions. 1) All 4 pins connected = Closed Tailgate. 2) All 4 pins removed = Open Bed. 3) Top 2 pins connected and bottom two released = Dump Position. 4) Top 2 pins released and bottom two connected = Fold Down Tailgate (Like on a pickup truck.).
- Before attempting to dump material, either remove the tailgate or release the two bottom pins to allow material to flow.
 - Tailgate may be under pressure or helping to secure the contents of trailer bed, use caution when opening and keep feet clear.
 - Stay clear of dump trailer when in use. Improper use could cause pinch points and material being dumped out of the trailer unexpectedly causing death or serious injury.
 - Never operate the dump system, up or down, without first visually and audibly ensuring people, animals and other objects are clear of the trailer and the contents it is dumping.
 - Always disconnect the electrical connection between the trailer and tow vehicle, when not in use, to prevent inadvertent operation of the dump bed.
- Keep tow vehicle motor running while operating the electric lift to prevent battery drainage.
- Use wheel chocks, when trailer is not connected to a tow vehicle, to prevent it from rolling on inclines. Brakes are not active when electrical power is disconnected.
- Do not place, optional, wireless key fob in pants pockets or other constrictive areas to avoid inadvertent operation of the electric lift.
- Driving too fast with trailer attached to tow vehicle can result in loss of control and cause death or serious injury. Decrease your speed as terrain, weather and lighting conditions deteriorate.
- Refer to video link below if having electrical problems with the actuator, brakes, running light and or stop light.
<https://www.youtube.com/watch?v=wEfwfG2u16w>

Options

- P/N 1814-13 - 6ft 3 prong wiring harness extender (for additional actuator wire harness length) (**Fig 63**).
- P/N 1826 - 4ft 6 pole to 6 pole extender (for additional wire harness length for longer tow vehicles) (**Fig 64**).
- Wireless Remote Dump System w/2 key Fobs (**Fig 65**).
- SPSPE1565 - Stake Pocket - mounted to the Workman XL side panels to allow you to build your own side boards. For use with 1x4's (**Fig 66**).
- P/N 1710 - D-Ring w/hardware - If desired, mount extra D-Rings to the Workman XL side panels (**Fig 67**).
- P/N 1560 Gas Can Mtg Bracket w/hardware (**Fig 68**).
- Trailer Side Panels (**Fig 69**).
- P/N ABI-WKM-TLBX - Workman Trailer Tool Box w/ hardware (**Fig 70**).
- P/N A1350 - Spare Tire and Rim.
- P/N STK1795 - Spare Tire Mounting Kit.



Fig 63.

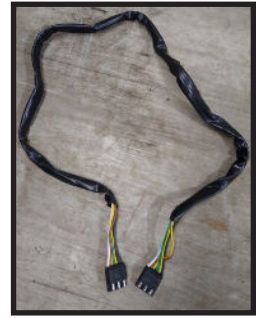


Fig 64.



Fig 65.



Fig 66.



Fig 67.



Fig 68.



Fig 69.



Fig 70.

Wireless System Installation

Open the Black Box located on the trailer just above the electric lift - refer to Fig 12 on page 9 for black box location (**Fig 71**). **NOTE: Black box does NOT need to be removed from trailer to install the wireless system - black box in views is only removed for installation demonstration.**

Locate the preinstalled 4 pole connector inside the Black Box, which has yellow, green, black, and white wires connected to it (**Fig 72**).

Connect the Wireless Receiver plug to the 4 pole connector in the Black Box. Plug will only fit one way. Push the connectors together until it clicks (**Fig 73**).

Carefully place the new Wireless Receiver on top of the brake controller in the Black Box. Close Black Box (**Fig 74**).

Press the buttons on the key fob to raise and lower the trailer bed.



Fig 71.

Preinstalled 4 pole connector inside the Black Box.

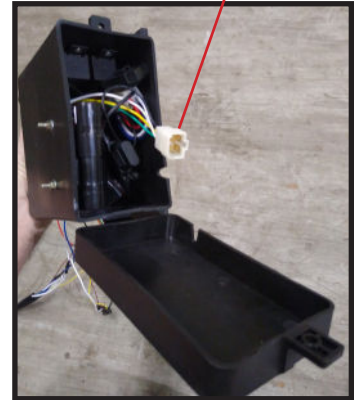


Fig 72.

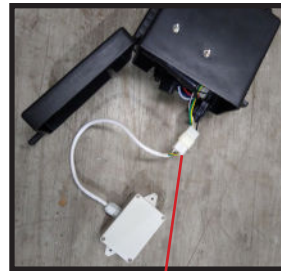


Fig 73.

Plug the connectors together until it clicks.

Gently place the new Wireless Receiver on top of the brake controller.



Fig 74.

Brake Controller.



Options (cont'd)

Trailer Side Panel Installation

Tools Needed:

Two people
Metric Socket Set
Power drill with drill bits

ABI recommends building all of step 1 on the ground then continue with step 2.

Step #1:

Note: Each long side board has one leg with a longer tab (tailgate end) and one leg with a shorter tab (front of trailer).

Assemble the pieces into a rectangle by inserting the two pins on a short side board into the two holes on a long side board (**Fig 75**).

Attach the two latches on the other side of the short side board to the two keepers on the other long side board (**Fig 76**).

Note: Longer tabs are tailgate end (tabs points away from trailer bed), shorter tabs are front (tabs wrap around corner) (**Fig 77**).

Step #2:

Have one person on each end of the panel assembly to pick up and place on trailer bed (**Fig 77**).

Tailgate, view from the rear. (Trailer in red to better show black side panels) (**NOTE:** longer tab points away from bed) (**Fig 78**).

Front, view from the front. (Trailer in red to better show black side panels) (**NOTE:** shorter tab wraps around corner) (**Fig 79**).

Step #3:

Drill 8 holes (2 per corner) at each of the mounting bolt hole locations to affix the side boards to the trailer bed.

Slide a flat washer onto each bolt head, insert bolt through a hole, attach a locking washer and nut, now tighten (hardware included in kit).

Repeat this for each of the 4 corners and your side boards are installed.



Fig 75.

Insert Pins into holes.



Fig 76.

Attach Latches.

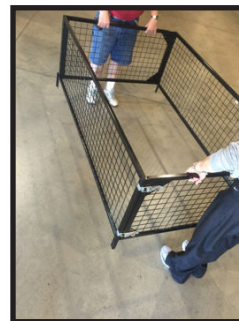


Fig 77.

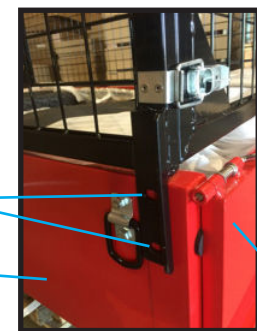


Fig 78.

Drill here.

Tailgate.

Side of Trailer.



Fig 79.

Front of trailer.

Drill here.

Side of trailer.

Contact Information

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

Customer Support

Email: support@abiattachments.com
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 Workman XL Trailer Resource or by following this link: https://www.youtube.com/watch?v=2yPGPEgX_9M&t=1s

For additional information on the use or setup of the Workman XL Trailer, 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.

