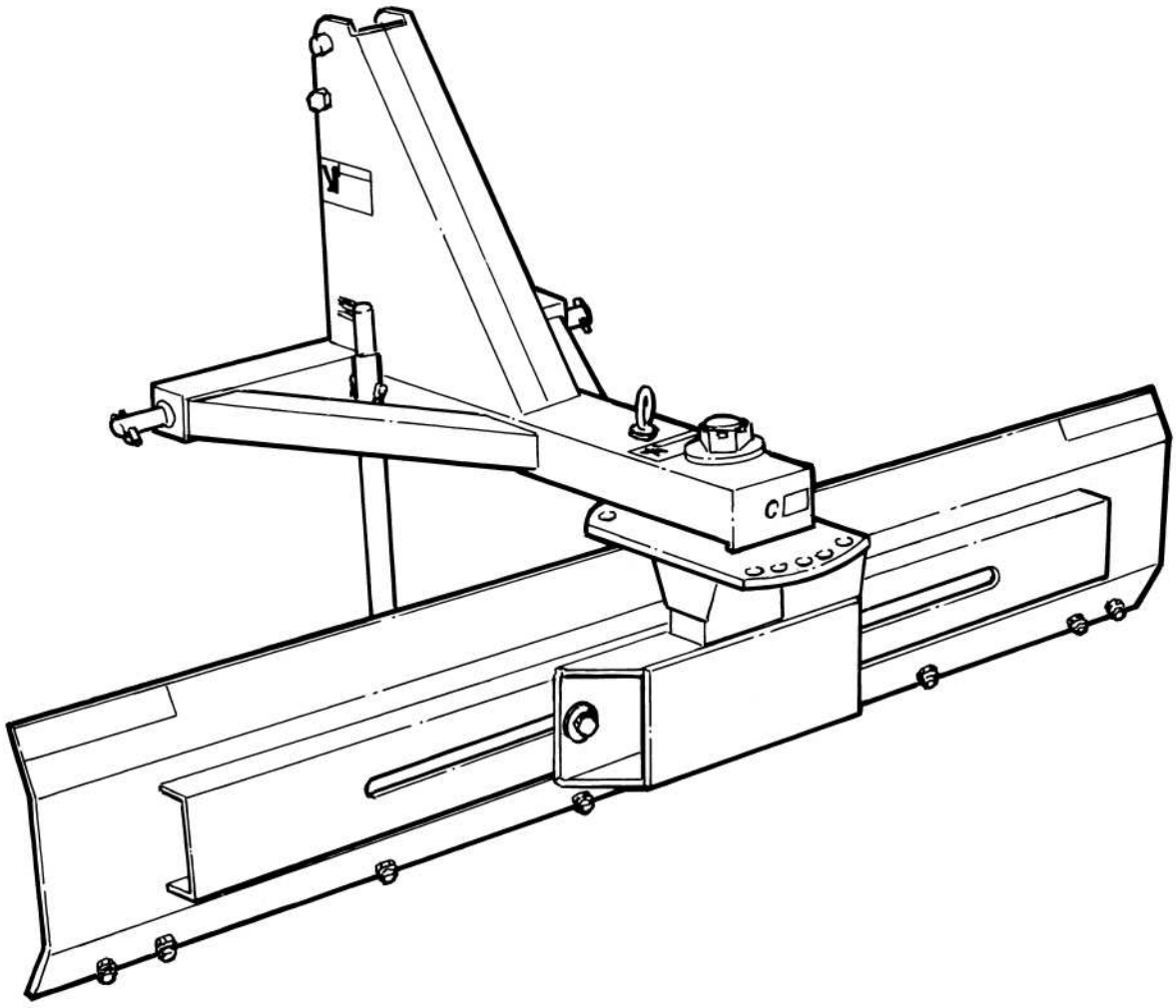
EN

Operation & Maintenance Manual

Three-Point Angle Blade



3PT Angle Blade 60 S/N: B63U00101 & Above
3PT Angle Blade 72 S/N: B63V00101 & Above
3PT Angle Blade 84 S/N: B63W00101 & Above

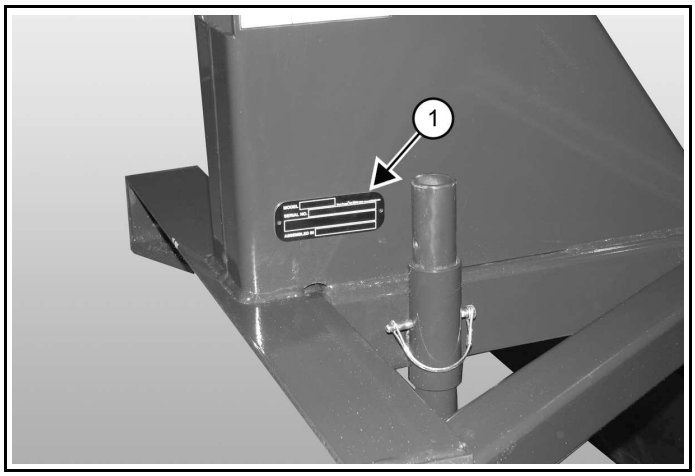
7495916enUS (A)
October 2022

Printed in USA
Original Instructions


IGNITE™
ATTACHMENTS

IMPLEMENT SERIAL NUMBER

Figure 1



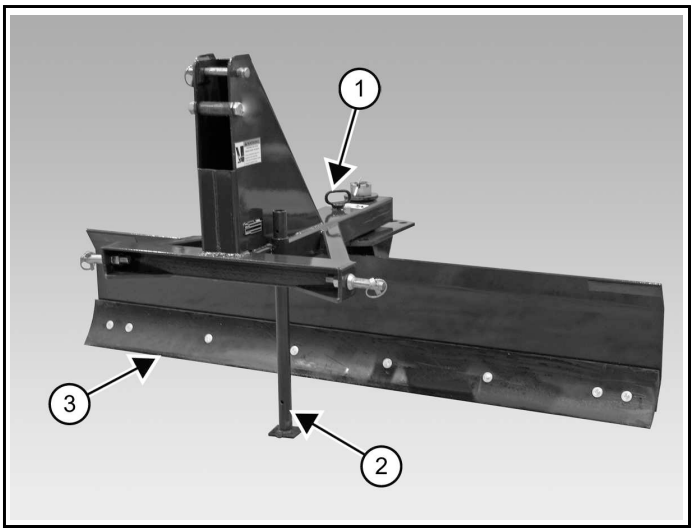
p-96182a

Always use the serial number of the three-point angle blade when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation [Figure 1].

IMPLEMENT IDENTIFICATION

Front

Figure 2

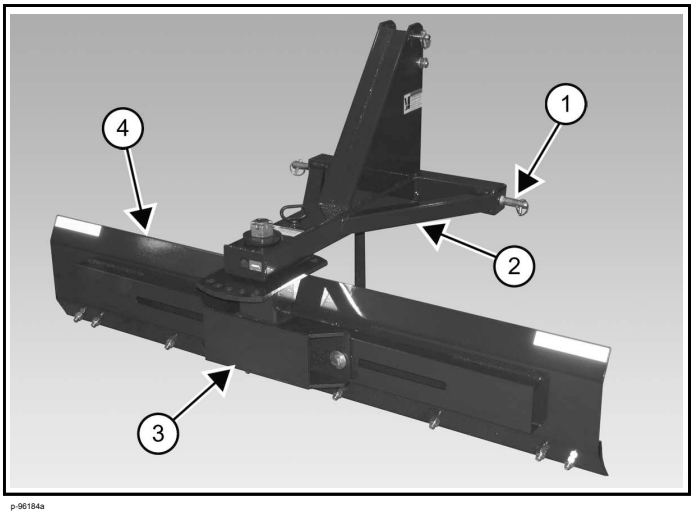


p-96183a

REF.	DESCRIPTION
1	Locking Pin
2	Storage Stand
3	Cutting Edge

Rear

Figure 3



p-96184a

REF.	DESCRIPTION
1	Three-Point Hitch (Category 1)
2	Mainframe
3	Pivot Assembly
4	Moldboard

FEATURES AND ACCESSORIES

Standard Items

The three-point angle blades are equipped with the following standard items:

- Replaceable / Reversible Cutting Edge
- Five Forward Grading Angles
- Five Backward Backfilling Angles
- Rear Three-Point Quick Hitch Compatible
- 304,8 Mm (12 In) Side Shift From Center
- Variable Position Oscillation (15° Max)
- Equipped With Storage Stand.

SAFETY INSTRUCTIONS

Safe Operation Is The Operator's Responsibility (Implement)

Safety Alert Symbol

This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.

DANGER

The signal word DANGER on machine signs and in the manuals indicates a hazardous situation which, if not avoided, will result in serious injury or death.
D-1002

WARNING

The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
W-2044

IMPORTANT

This notice identifies procedures which must be followed to avoid damage to the machine.
I-2019

The machine and implement must be in good operating condition before use.

Check all of the items on the Service Schedule decal (if equipped) in the Every 10 Hours section or as shown in the Operation & Maintenance Manual.

Safe Operation Needs A Qualified Operator

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine.

Use Safety Rules

- Read and follow instructions in the machine and the implement's Operation & Maintenance Manual before operating.
- Check for underground lines before operating implement (if applicable).
- In addition to the 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.
- Check that the implement is securely fastened to the machine.
- Make sure all the machine controls are in the neutral position before starting the machine.
- Operate the implement only from the operator's position.
- Operate the implement according to the Operation & Maintenance Manual.
- When learning to operate the implement, do it at a slow rate in an area clear of bystanders.
- DO NOT permit personnel to be in the work area when operating the machine and implement.
- The implement must be used ONLY on approved machines. Visit igniteattachments.com for an updated list of approved implements for each machine model.
- DO NOT modify equipment or add implements that are not approved by the manufacturer.
- DO NOT make any adjustments or repairs on the machine or implement while the engine is running.
- Keep shields and guards in place. Replace if damaged.

Call Before You Dig

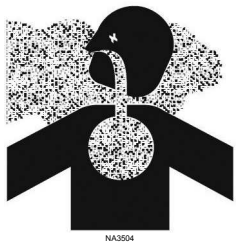

P200081

Dial 811 (USA Only)

Dial 1-888-258-0808 (USA & Canada)

When you call, you will be directed to a location in your state / province / city for information about buried lines (telephone, cable TV, water, sewer, gas, etc.).

Silica Dust Exposure



Silica dust can cause lung disease and is known to the state of California to cause cancer.

Cutting or drilling concrete containing sand or rock containing quartz may result in exposure to silica dust.

Do not exceed Permissible Exposure Limits (PEL) to silica dust as determined by OSHA or other job site Rules and Regulations. Use a respirator, water spray, or other means to control dust.

FIRE PREVENTION

Maintenance

The machine and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

The operator’s area, engine compartment, and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.

All fuels, most lubricants, and some coolants mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

Do not use the machine where exhaust, arcs, sparks, or hot components can contact flammable material, explosive dust, or gases.

Electrical

Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

Hydraulic System

Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for

leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.

Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

Fueling

P200084

Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

Ultra Low Sulfur Diesel (ULSD) poses a greater static ignition hazard than earlier diesel formulations with higher sulfur content. Avoid death or serious injury from fire or explosion. Consult with your fuel or fuel system supplier to ensure the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

Starting

Do not use ether or starting fluids on any engine that has glow plugs or an air intake heater. These starting aids can cause explosion and injure you or bystanders.

Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.

Spark Arrester Exhaust System

The spark arrester exhaust system is designed to control the emission of hot particles from the engine and exhaust system, but the muffler and the exhaust gases are still hot.

Check the spark arrester exhaust system regularly to make sure it is maintained and working properly. Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrester muffler (if equipped).

Welding And Grinding

Always clean the machine and implement, disconnect the battery, and disconnect the wiring from the Ignite Attachments controllers before welding. Cover rubber hoses, battery, and all other flammable parts. Keep a fire extinguisher near the machine when welding.

Have good ventilation when grinding or welding painted parts. Wear a dust mask when grinding painted parts. Toxic dust or gas can be produced.

Dust generated from repairing nonmetallic parts such as hoods, fenders, or covers can be flammable or explosive. Repair such components in a well-ventilated area away from open flames or sparks.

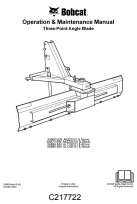
Fire Extinguishers

P200083

Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

PUBLICATIONS AND TRAINING RESOURCES

The following publications are also available for your Ignite Attachments machine. Access them online at www.igniteattachments.com.



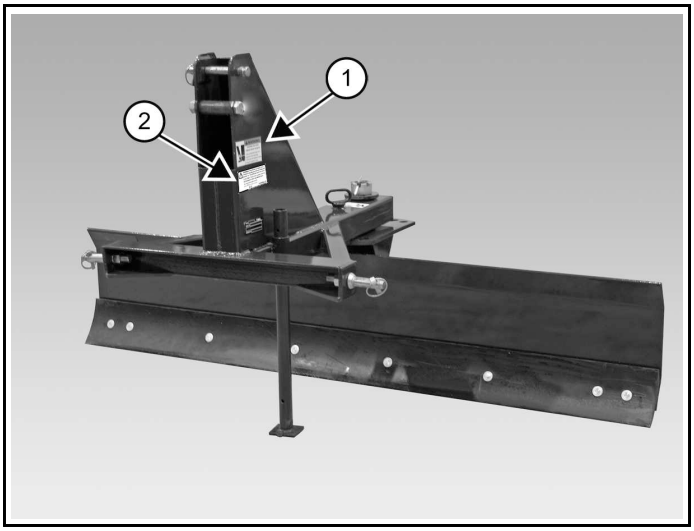
Operation & Maintenance Manual

Complete instructions on the correct operation and the routine maintenance of your implement. 7495916.

For the latest information on Ignite Attachments products and the Ignite Attachments Company, visit our website at www.igniteattachments.com.

IMPLEMENT SIGNS (DECALS)

Figure 4



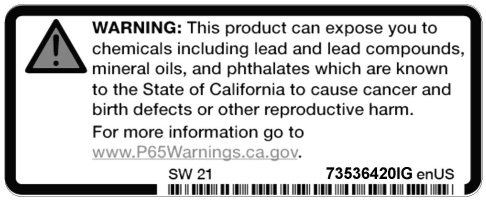
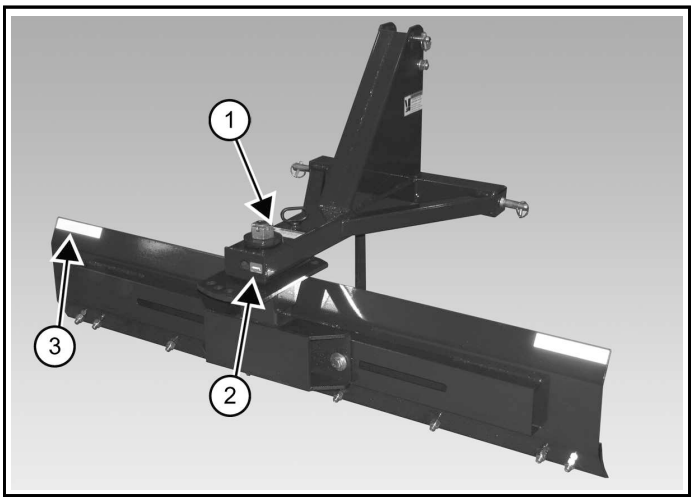
REF.	Decal
1	Crush Warning Located near 3 point hitch, both sides 71892000IG 
2	Prop65 Located near 3 point hitch 73536420IG 

Figure 5



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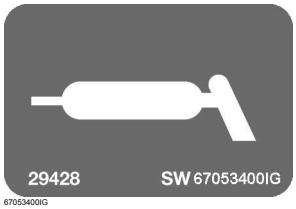
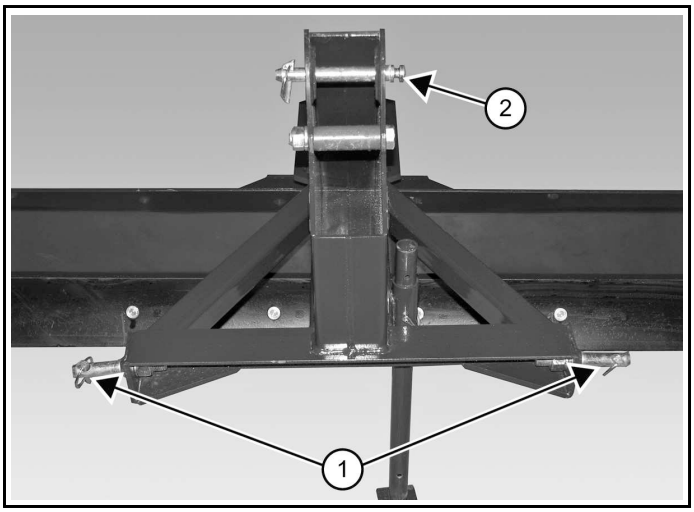
REF.	DECAL
1	Pinch Warning Located On Pivot Assembly 71838450IG  71838450IG
2	Lubrication Location Located On Front Of Pivot Assembly 67053400IG  67053400IG
3	Reflector Located on moldboard, both sides 71409200IG 

DAILY INSPECTION

Implement Mounting Frame

Figure 6



p-96187a

- Inspect the lower implement mounts (Item 1) and upper mount (Item 2) [Figure 6] and all welds on the implement for wear and damage each time the implement is removed from the machine.
- Check the following items at the start of a work day:
  - ▹ Check for damaged or missing decals. Replace if necessary.
  - ▹ Replace any worn or damaged parts immediately.
- Frequently inspect the implement to ensure that all components are secure and that all bolts and nuts are thoroughly tightened.

Three-Point Hitch

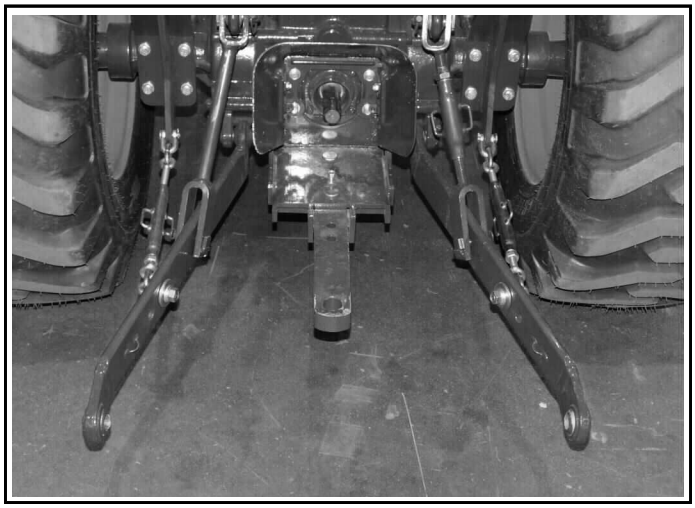
See your machine Operation & Maintenance Manual for detailed information on inspecting three-point hitch.

⚠ WARNING

UNINTENDED MOVEMENT HAZARD
Failure to follow instructions can cause serious injury or death.
The parking brake must be engaged before leaving the operator's seat. Rollaway can occur because the transmission may not prevent machine movement. Lock the brake pedals together (if equipped) before activating the parking brake.◂

W-2656

Figure 7



P138256

- Inspect the three-point hitch linkage, PTO shaft splines, guards, and shields. Replace if damaged or missing [Figure 7]. Repair broken or loose parts.

OPERATING PROCEDURE WITH COMPACT TRACTORS

Approved Compact Tractor Models & Requirements

	Angle Blade 60	Angle Blade 72	Angle Blade 84
Tractor HP	18–60 HP	18–60 HP	26–60 HP

The chart shows the approved angle blade models for compact tractors based on horsepower.

Warranty on this implement is void if used on a non approved carrier. Contact your Ignite Attachments representative for a current list of compatible carriers.

⚠ WARNING

MODIFICATION AND INSUFFICIENT INSTRUCTIONS HAZARD
Use of unapproved attachments, implements or improperly sized attachments can cause serious injury or death.
Attachments, implements and buckets for safe loads of specified densities are approved for each model. Never use attachments, implements or buckets which are not approved by Ignite Attachments.
W-2709

Compact Tractor / Implement Setup

Setting Up The Ballast

Install the correct ballast on the compact tractor before installing the implement. See the compact tractor Operation & Maintenance Manual for ballast information.

Entering And Exiting The Compact Tractor

⚠ WARNING

INSTABILITY HAZARD
Failure to obey warnings can cause the machine to rollover.
- **Use Roll-Over Protective Structure (ROPS) and fasten the seat belt.**
- **Install the correct rear ballast.**
- **Do NOT exceed the Loader lift capacity.**
- **Check tire condition and proper air pressure.**
- **Use tires with the correct load rating.**

W-3043

See your compact tractor Operation & Maintenance Manual for detailed instructions on entering and exiting the machine.

Installing The Three-Point Implement

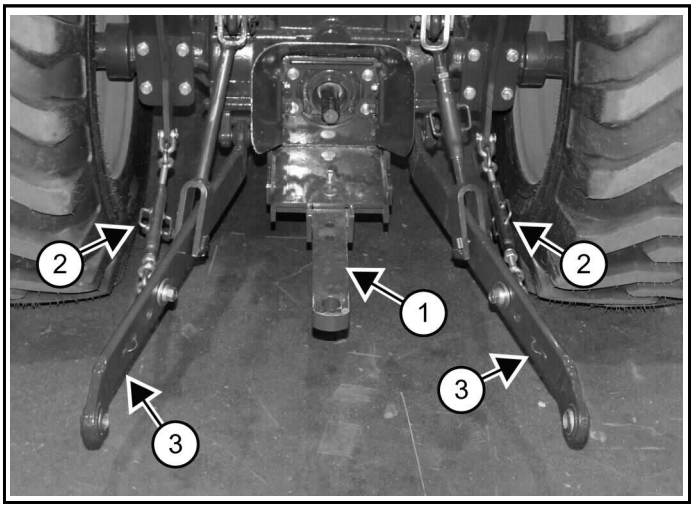
NOTE: Your machine and attachment and / or implement models may vary, but the procedure is the same. Always inspect the compact tractor three-point hitch and implement three-point mounting before installation. (See Daily Inspection on Page 10) .

⚠ WARNING

GENERAL HAZARD
Failure to obey warnings can cause serious injury or death.
Obey all warnings on the machine and in the manuals.
W-2744

NOTE: The following images may not show your exact three-point implement but the procedure is the same.

Figure 8



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1. Move the drawbar (Item 1) [Figure 8] to the storage position or remove (if necessary). See the compact tractor Operation & Maintenance Manual for detailed information.

   The three-point hitch lower links must be set wide enough to clear the implement mounting pins.

2. Adjust the sway bars (Item 2) (both sides) to move the lower links (Item 3) [Figure 8] as needed.

   See the compact tractor Operation & Maintenance Manual for detailed information on adjusting sway bars.

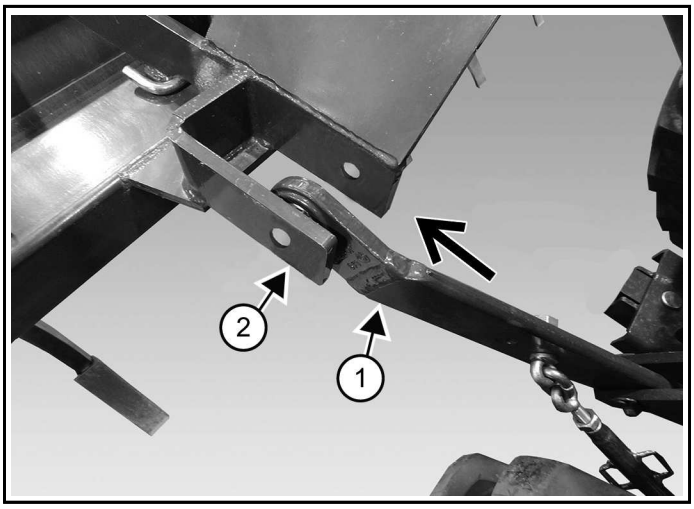
⚠ WARNING

CRUSHING HAZARD
Contact with the machine can cause serious injury or death.
Before backing the machine, look in all directions and make sure no bystanders are in the work area. Do not allow anyone between the machine and the implement when backing up to the implement for installation.
W-2734

3. Enter the compact tractor (See Entering And Exiting The Compact Tractor on Page 11) .

4. Start the engine and release the parking brake.

Figure 9



P142006a

5. Drive the compact tractor to the implement and align the lower links (Item 1) with the implement lower mounts (Item 2) [Figure 9] (both sides).

6. Lower or raise the compact tractor three-point hitch lower links (Item 1) until they are even with the lower mounts (Item 2) [Figure 9] (both sides) of the three-point implement.

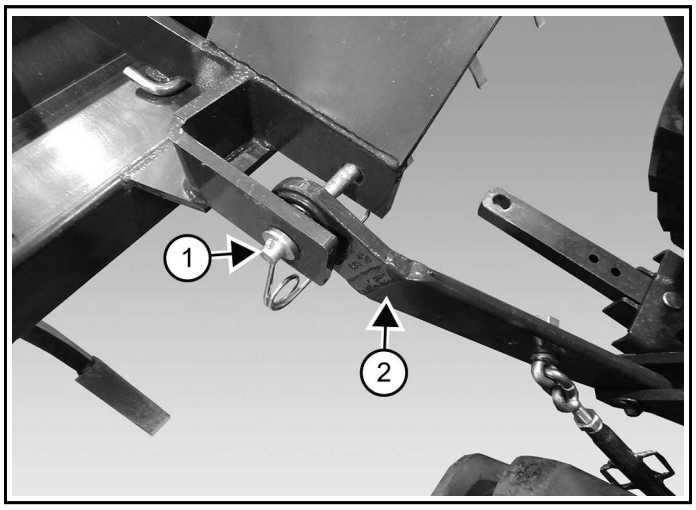
   See the compact tractor Operation & Maintenance Manual for detailed information on operating the compact tractor.

7. Stop the engine and exit the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

⚠ WARNING

PINCHING HAZARD
Failure to follow instructions can cause serious injury.
Keep fingers and hands out of pinch points when installing and removing implement or attachments.
W-2571

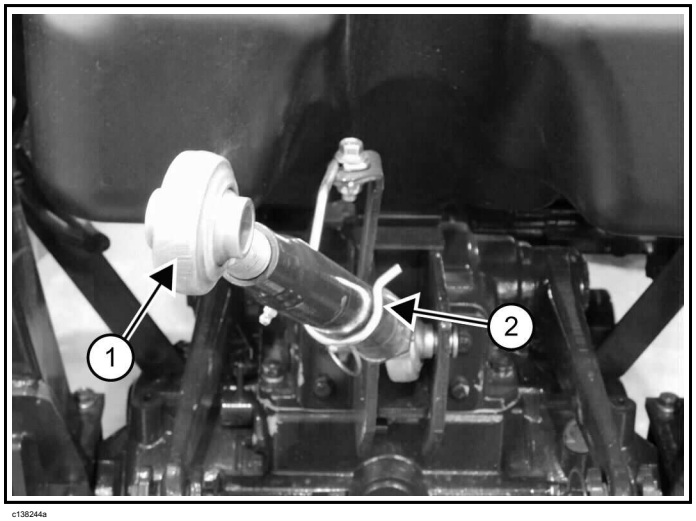
Figure 10



P142005a

8. Install the lower implement pin (Item 1) through the lower mounts and lower link (Item 2) [Figure 10] (both sides) and secure with retaining clip.

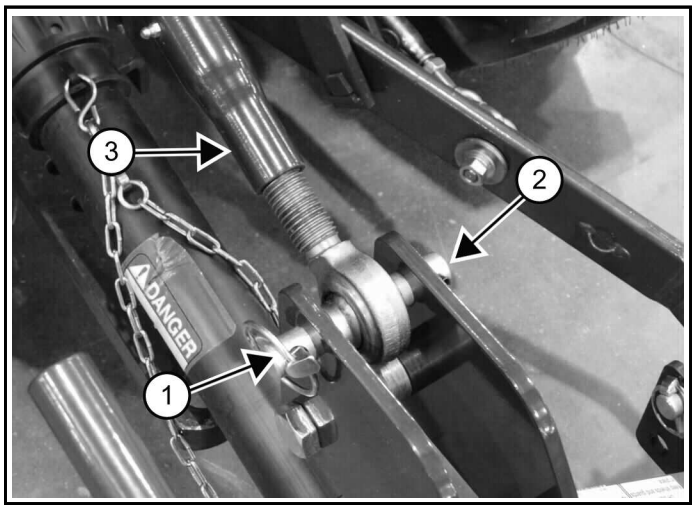
Figure 11



c138244a

9. Remove the top link (Item 1) from the storage position bracket (Item 2) [Figure 11].

Figure 12



c138245a

10. Lower the top link (Item 3) [Figure 12] until it aligns with the implement upper mounting hole.

11. Install the pin (Item 2) and retainer pin (Item 1) [Figure 12].

    NOTE: It may be necessary to lengthen or shorten the top link to align it with the implement mounting hold [Figure 12].

12. The implement can be leveled front to back by adjusting the top link.

13. The implement side to side sway will need to be adjusted. (See Adjusting The Sway Bar on Page 14)

Raising The Storage Stand

NOTE: Your machine and attachment and / or implement models may vary, but the procedure is the same.

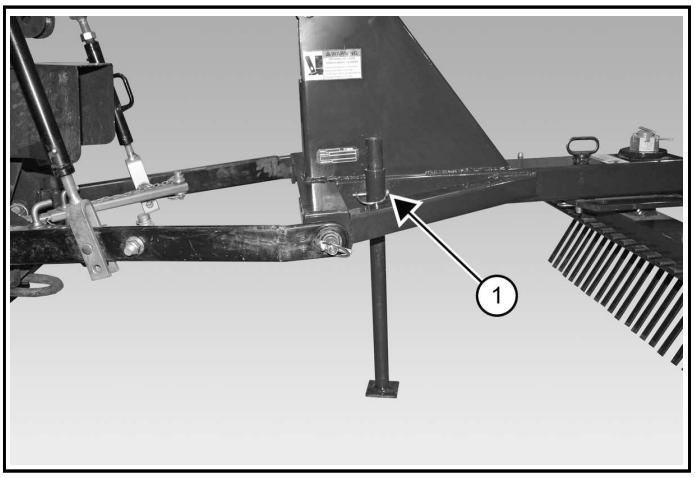
1. Enter the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

2. Start the engine and release the parking brake.

3. Always park on flat level ground. Raise the three-point implement slightly above the ground. See the tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch.

4. Stop the engine and exit the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

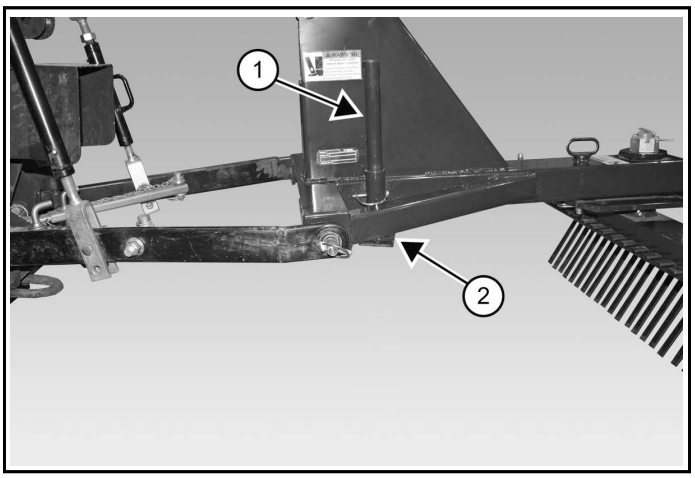
Figure 13



P-96309a

5. Remove the retaining pin (Item 1) [Figure 13]

Figure 14



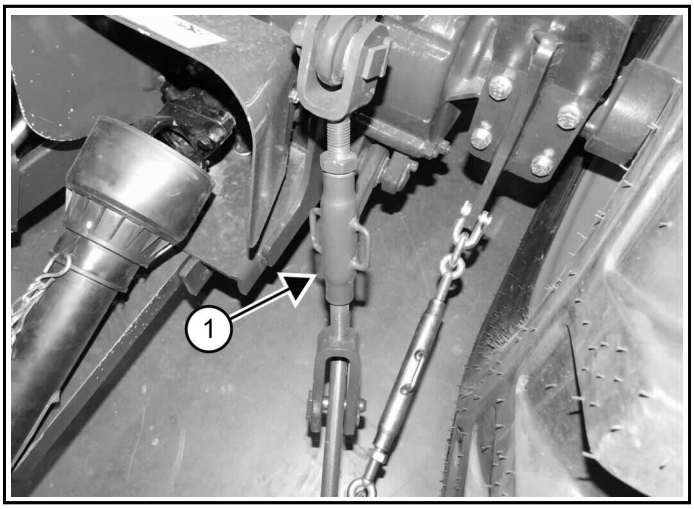
P-96331a

6. Raise the storage stand (Item 1) [Figure 14].

7. Align the holes and install the retaining pin (Item 2) [Figure 14].

Adjusting The Lift Link

Figure 15



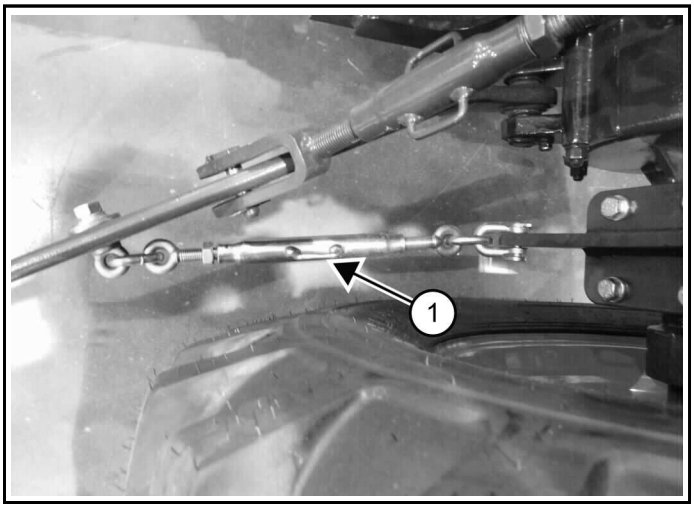
p138247b

The lift link (Item 1) [Figure 15] is used to adjust the side to side level of the implement.

See the compact tractor Operation & Maintenance Manual for detailed information on adjusting the lift link.

Adjusting The Sway Bar

Figure 16



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The sway bar (Item 1) [Figure 16] (both sides) are used to center the implement between the tires and limits the implements side to side movement.

Adjust the sway bars to center the implement between the tires. See the compact tractor Operation & Maintenance Manual for detailed information on adjusting sway bars.

When adjusting the sway bars with implement installed, the implement will need to be raised slightly off the ground.

Control Functions Three-Point Hitch (Implement)

The three-point hitch will be used to raise or lower the implement. (See the compact tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch).

Operation With The Compact Tractor

Driving The Implement And Tractor To Worksite

The following images may not show your exact three-point implement but the procedure is the same.

⚠ WARNING

GENERAL HAZARD
Steering and braking can be affected by the loader attachment, implements, front wheel assist and the rear differential lock.
Always install the correct ballast. Do not exceed the Loader or Three-Point Hitch lift capacities.
Always carry loads low. Slow down when turning.
Always lock the brake pedals together (if equipped) for road travel.
Unlock the brake pedals (if equipped) only when using brake pedals to assist in slow speed turns in work applications.
Make sure that the brakes are adjusted correctly so the compact tractor does not pull to one side when braking.

W-2738

⚠ WARNING

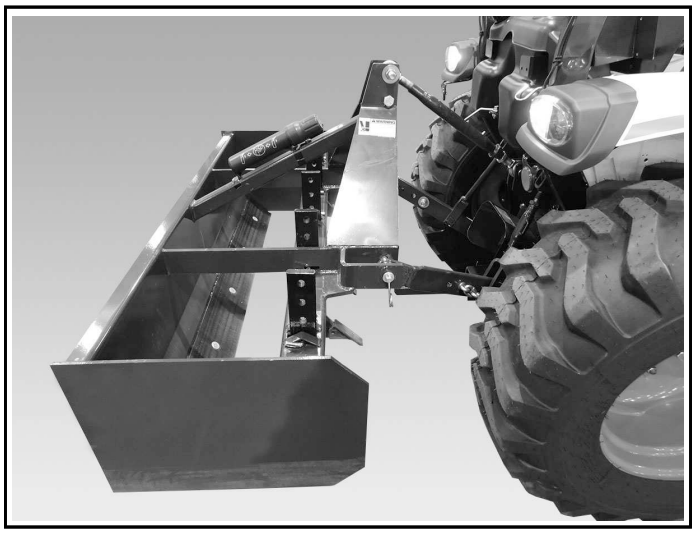
INSTABILITY HAZARD
Failure to obey warnings can cause the machine to rollover.
- **Use ROPS and fasten the seat belt.**
- **Install the correct rear ballast.**
- **Do NOT exceed the Loader lift capacity.**
- **Check tire condition and proper air pressure.**
- **Use tires with the correct load rating.**

W-3043

1. Enter the compact tractor.
   (See Entering And Exiting The Compact Tractor on Page 11)

2. Start the engine.

Figure 17



P142007g

3. Raise the implement to the travel position [Figure 17]. See the compact tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch.

4. Drive the compact tractor and implement to the work area.

5. When operating on public road or highway, always follow local regulations. For example; Slow Moving Vehicle (SMV) emblem or directional signals and hazard / flasher lights may be required.

6. Park on flat level ground.

7. Lower the implement slightly above the ground. (See the compact tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch.)

8. Stop the engine and exit the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

⚠ WARNING

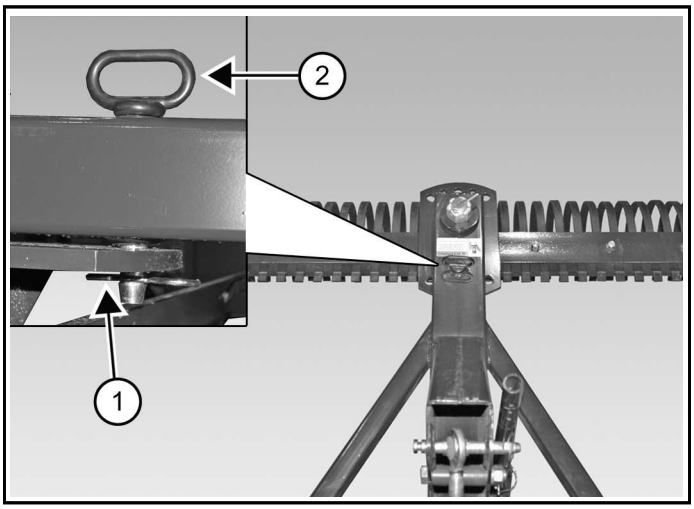
UNINTENDED MOVEMENT HAZARD
Failure to follow instructions can cause serious injury or death.
Before you leave the operator's seat:
Fully lower the loader arms, put the attachment flat on the ground (if equipped).
Fully lower the implement(s) to the ground (if equipped).
Lock brake pedals together (if equipped) and engage the parking brake.
Place all controls in neutral.
Stop the engine, unfasten the seat belt, and remove the key.

W-3178

Angled Positioning

NOTE: Your machine and attachment and / or implement models may vary, but the procedure is the same.

Figure 18



C217656a

1. Remove the lower retaining pin (Item 1) [Figure 18].

2. Remove the locking pin (Item 2) [Figure 18].

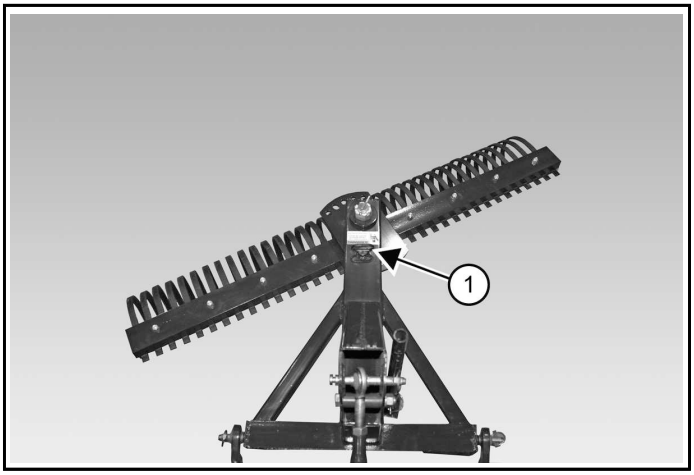
⚠ WARNING

PINCHING HAZARD
Failure to follow instructions can cause serious injury.
Keep fingers and hands out of pinch points when installing and removing implement or attachments.

W-2571

3. Rotate the implement to one of the forward angled positions.

Figure 19



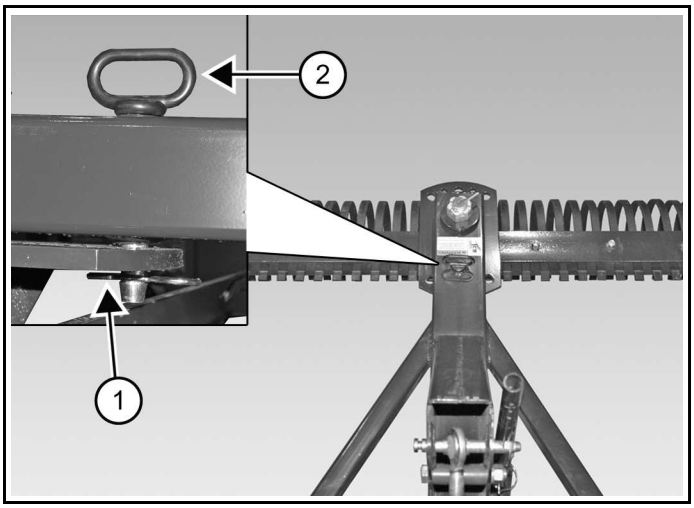
P-96315a

4. Install the locking pin (Item 1) [Figure 19] and lower retaining pin.

Backfilling Positioning

The following images may not show your exact three-point implement but the procedure is the same.

Figure 20



C217656a

1. Remove the lower retaining pin (Item 1) [Figure 20].
2. Remove the locking pin (Item 2) [Figure 20].

⚠ WARNING

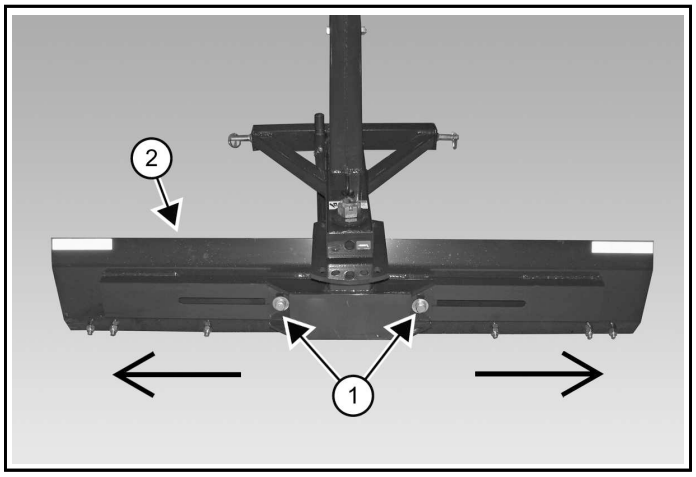
PINCHING HAZARD
Failure to follow instructions can cause serious injury.
Keep fingers and hands out of pinch points when installing and removing implement or attachments.

W-2571

3. Rotate the implement 180° or to a rearward angled position. Install the locking pin (Item 1) [Figure 20] and retaining.

Side Shifting

Figure 21



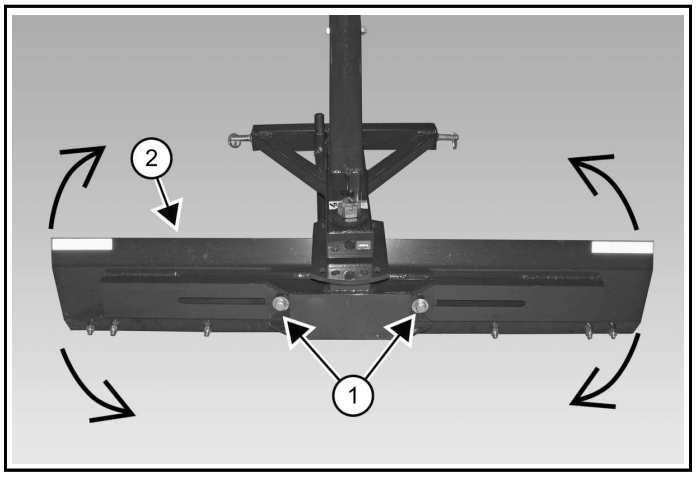
p-96186a

- Loosen the bolts (Item 1) [Figure 21].
- Slide the moldlboard (Item 2) [Figure 21] to the left or right.

  The moldboard can be side shifted either left or right up to 12 in (304,8 mm) from center.
- When the moldboard is at the desired position, tighten the bolts to 144 ft-lb (195 N·m) torque.

Oscillating

Figure 22



p-96186b

1. Loosen the bolts (Item 1) [Figure 22].
2. Raise or lower either end of moldboard (Item 2) [Figure 22] until desired angle is reached.

   The moldboard can be oscillated 7.5° from center.

3. When the moldboard is at the desired angle, tighten the bolts to 144 ft-lb (195 N·m) torque.

Operating The Three-Point Implement

The three-point angle blade can be used for leveling, landscaping, road maintenance, and snow removal.

1. Park the machine on flat, level ground.
2. Lower the three-point angle blade slightly above the ground. See the compact tractor's Operation & Maintenance Manual for detailed information on operating the three-point hitch.
3. Stop the engine and exit the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

⚠ WARNING

UNINTENDED MOVEMENT HAZARD
Failure to follow instructions can cause serious injury or death.
Before you leave the operator's seat:
Fully lower the loader arms, put the attachment flat on the ground (if equipped).
Fully lower the implement(s) to the ground (if equipped).
Lock brake pedals together (if equipped) and engage the parking brake.
Place all controls in neutral.
Stop the engine, unfasten the seat belt, and remove the key.
W-3178

4. The three-point angle blade may be adjusted in any single or combination of the positions listed:
   a. Angled (See Angled Positioning on Page 15)
   b. Backfilling (See Backfilling Positioning on Page 16)
   c. Side Shifted (See Side Shifting on Page 16)
   d. Oscillated (See Oscillating on Page 16)
5. Enter the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)
6. Start the engine and release the parking brake.

⚠ WARNING

GENERAL HAZARD
Failure to follow instructions can cause serious injury or death.
- **Fasten seat belt, start, and operate only from the operator's seat.**
- **Never wear loose clothing when working near machine.**

W-2135

7. Slowly drive the tractor with the three-point angle blade on the ground.
8. Adjust the three-point hitch for desired position. See the compact tractor's Operation & Maintenance Manual for detailed information on operating the three-point hitch.
9. Adjust the cutting edge and correct angle as needed.

   Watch for and avoid obstructions and obstacles that could cause damage to the three-point angle blade and compact tractor.

   Damage to the three-point angle blade and compact tractor may occur by hitting hidden objects.

Removing The Three-Point Implement

Lowering The Storage Stand

NOTE: Your machine and attachment and / or implement models may vary, but the procedure is the same.

In muddy conditions or to prevent the implement from freezing to the ground, put the implement on planks or blocks before removing the implement from the machine.

⚠ WARNING

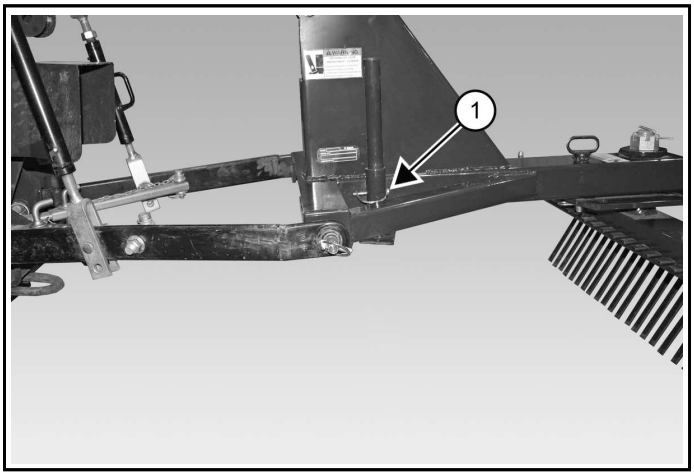
UNINTENDED MOVEMENT HAZARD
Failure to follow instructions can cause serious injury or death.
Before you leave the operator's seat:
Fully lower the loader arms, put the attachment flat on the ground (if equipped).
Fully lower the implement(s) to the ground (if equipped).
Lock brake pedals together (if equipped) and engage the parking brake.
Place all controls in neutral.
Stop the engine, unfasten the seat belt, and remove the key.
W-3178

1. Always park on flat, level ground. Fully lower the loader arms and put the attachment flat on the ground (if equipped).
2. Lower the three-point implement slightly above the ground. See the compact tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch.
3. Stop the engine and exit the compact tractor. (See Entering And Exiting The Compact Tractor on Page 11)

⚠ WARNING

CRUSHING HAZARD
Failure to follow instructions can cause serious injury or death.
Do not stand between the machine and attachment / implement.
Keep bystanders away.
Install support stands before disconnecting attachment / implement from the machine.
W-2724

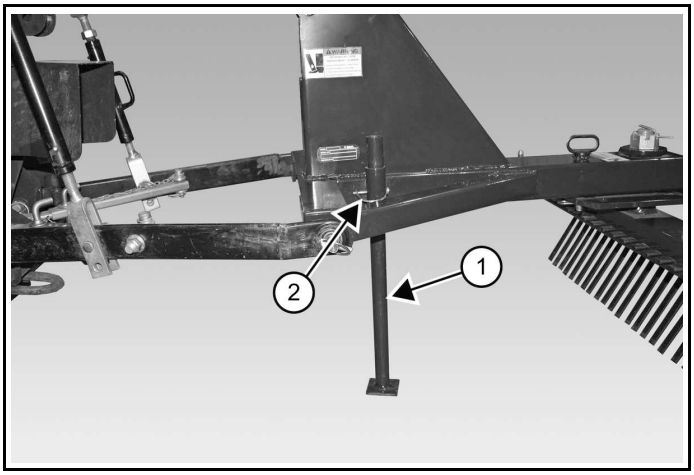
Figure 23



P-96331b

4. Remove the retaining pin (Item 1) [Figure 23].

Figure 24



P-96309b

5. Lower the storage stand (Item 1) [Figure 24]. Align the holes and install the retaining pin (Item 2) [Figure 24].

6. Enter the compact tractor.
(See Entering And Exiting The Compact Tractor on Page 11)

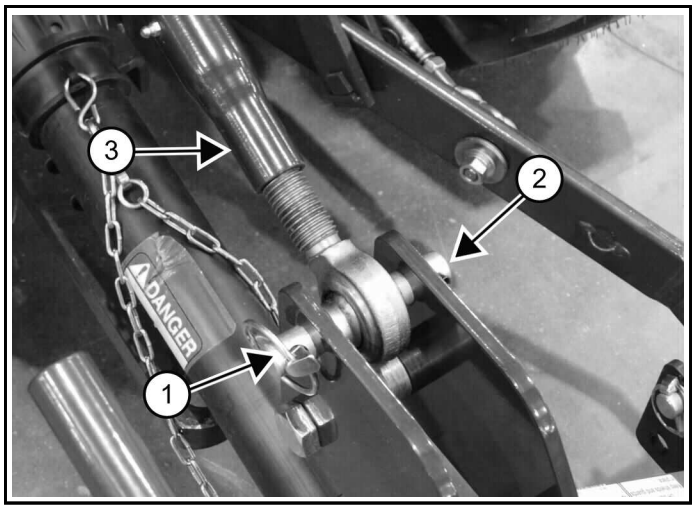
7. Start the engine and release the parking brake.

8. Lower the three-point setting the implement on the ground. See the compact tractor Operation & Maintenance Manual for detailed information on operating the three-point hitch.

9. Stop the engine and exit the compact tractor.
(See Entering And Exiting The Compact Tractor on Page 11)

Removing The Three-Point Implement

Figure 25



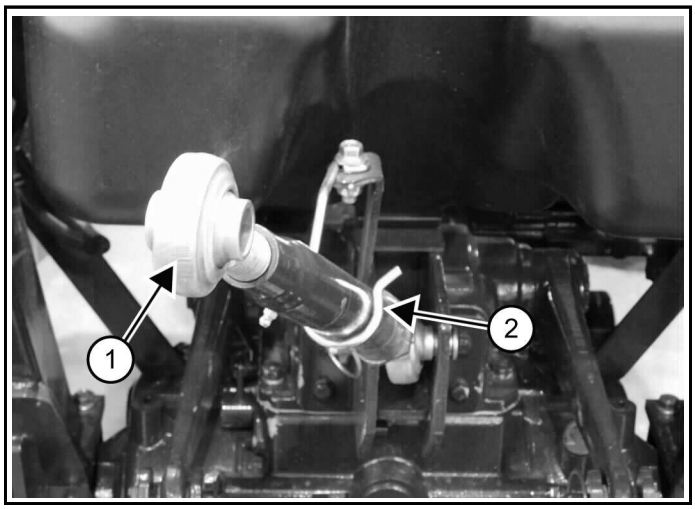
C138245a

1. Remove the retainer pin (Item 1) and pin (Item 2) [Figure 25].

   It may be necessary to lengthen or shorten the top link when remove the implement from the compact tractor.

2. Remove the top link (Item 3) [Figure 25] from the implement.

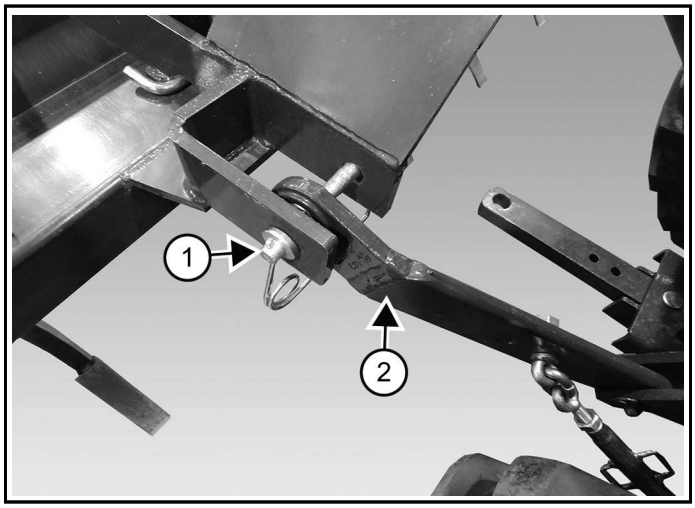
Figure 26



138244a

3. Place the top link (Item 1) into the storage position bracket (Item 2) [Figure 26].

Figure 27



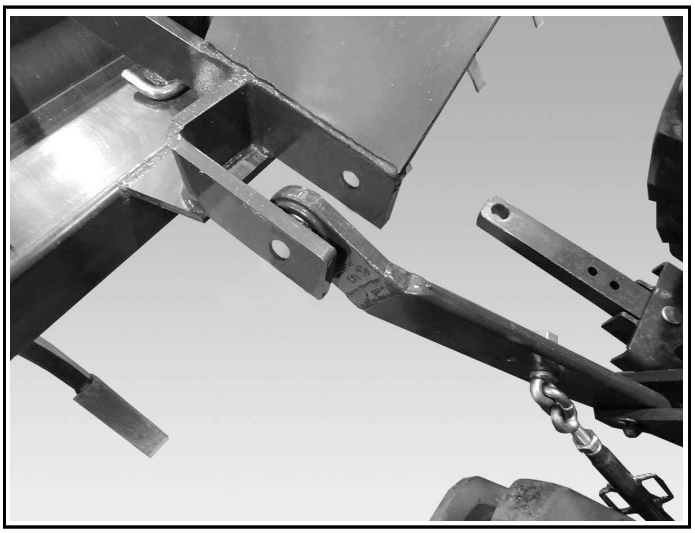
P142005a

4. Remove the lower implement pin (Item 1) from the lower mounts and lower link (Item 2) [Figure 27].

5. Enter the compact tractor.
(See Entering And Exiting The Compact Tractor on Page 11)

6. Start the engine and release the parking brake.

Figure 28



P142006c

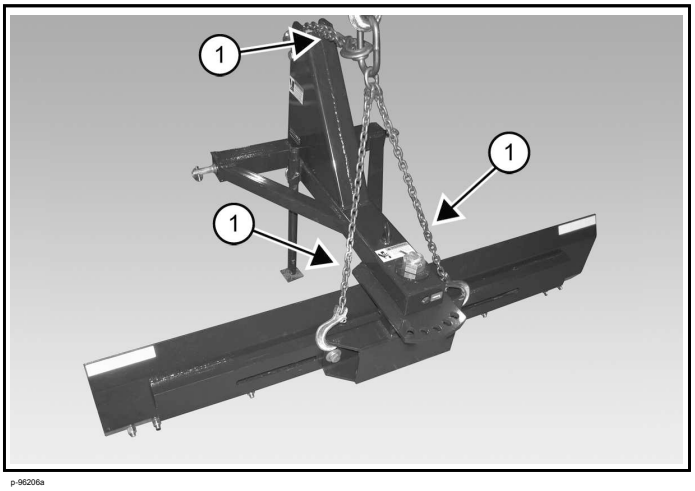
7. Slowly drive the compact tractor away from the implement [Figure 28].

8. Remove the front ballast from the compact tractor (if equipped).

Lifting The Implement

Use chains that are in good condition and of adequate size to lift the implement.

Figure 29



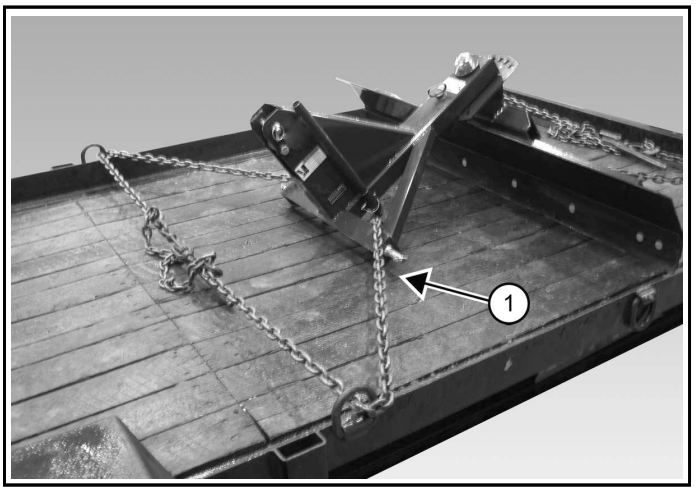
p-96206a

1. Fasten the chains to the three-point implement (Item 1) [Figure 29].

Fastening The Implement On A Trailer

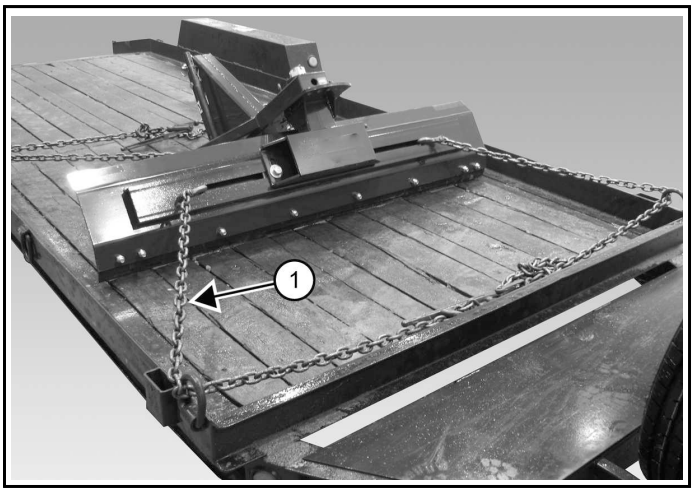
Use chain binders to prevent the implement from moving during transport.

Figure 30



p-96221a

Figure 31



p-96220a

1. Fasten the chains to the implement (Item 1) [Figure 30] and [Figure 31].
2. Fasten each end of the chain to the transport vehicle.

Transporting The Implement And Machine On A Trailer

⚠ WARNING

INSTABILITY HAZARD
Wood ramps can break and cause personal injury. Use adequately designed ramps of sufficient strength to support the weight of the machine loading onto a transport vehicle.

W-2058

Be sure the transport and towing vehicles are of adequate size and capacity for weight of machine and attachment / implement combination. (See machine and attachment Operation & Maintenance Manuals for specifications)

Loading

- The rear of the trailer must be blocked or supported when loading and unloading to prevent the front of the trailer from raising.
  - Load the heaviest end of the machine and attachment / implement combination first.
  - Lower the attachment / implement to the floor.
  - Turn the machine off.
  - Engage the parking brake (if equipped).
  - Exit the machine. (See the machine's Operation & Maintenance Manual for the correct procedure.)

Fastening

- Install the chains at the front and rear tie-down positions on the machine. (See the machine's Operation & Maintenance Manual to properly chain the machine to the transport vehicle.)
  - Install chains on the attachment / implement (if required).
  - Fasten each end of the chain to the transport vehicle.

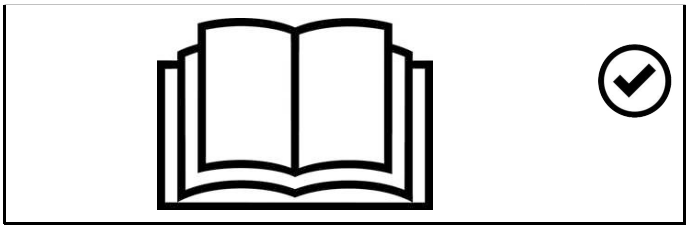
  NOTE: Use chain binders to prevent the attachment / implement and machine from moving during transport.


IGNITE™
ATTACHMENTS

MAINTENANCE SAFETY WARNINGS

- **Never service the Ignite Attachments attachment / implement without instructions. Read and understand the Operation & Maintenance Manual and safety signs (decals) on machine.**
- **Follow warnings and instructions in manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.**

This Safety Alert Symbol means: “Attention! Be Alert! Your Safety is Involved!” Carefully read the message that follows.



• Never service attachments / implements without instructions. See Operation & Maintenance Manual and Attachment / Implement Service Manual.
• Cleaning and maintenance are required daily.
• Never service or adjust attachment / implement with the engine running unless instructed to do so in manual.
• Always lower the attachment / implement to the ground before lubricating or servicing.
• Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate skin or eyes.
• Stop, cool, and clean engine of flammable materials before checking fluids.
• Keep body, loose objects, and clothing away from moving parts, electrical contacts, hot parts, and exhaust.
• Safety glasses are needed for eye protection from electrical arcs, battery acid, compressed springs, fluids under pressure, and flying debris or when tools are used. Use eye protection approved for type of welding.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are not in the Operation & Maintenance Manual must be performed ONLY BY QUALIFIED SERVICE PERSONNEL. Always use genuine Ignite Attachments replacement parts.

TROUBLESHOOTING

Troubleshooting Chart

⚠ WARNING

INSUFFICIENT INSTRUCTIONS HAZARD
Untrained operators or failure to follow instructions can cause serious injury or death.
- **Read and understand the Operation & Maintenance Manual, Operator's Handbook and decals on machine.**
- **Follow warnings and instructions in the manuals when making repairs, adjustments or servicing.**
- **Check for correct function after adjustments, repairs or service.**

W-2003

PROBLEM	CAUSE	CORRECTION
Bent moldboard.	Damaged by hitting hidden objects.	Slow speed down if soil conditions are unknown.
Cutting blade does not penetrate soil	Cutting edge is dull.	Rotate or replace cutting edge.
	Blade angle is too straight.	Adjust top link.
A-Frame bent.	Impacting objects while backfilling.	Slow speed down if soil conditions are unknown.
Moldboard digging in too much.	Blade angle too steep.	Adjust top link.
Unable to level ground adequately.	Tractor lift link set incorrectly.	Refer to machine's Operation & Maintenance Manual for the correct procedure.
Shearing locking pin.	Impacting hidden objects.	Slow speed down if soil conditions are unknown.
	Locking pin worn.	Replace locking pin.

SERVICE SCHEDULE

Maintenance Intervals

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures.

Explanation of the service intervals:

- **10:** Every 10 hours or daily (before starting the machine).

Service Schedule			
O	Check condition / proper operation. Adjust or replace as needed.	G	Grease.

Item	Service Required	Service Interval (hours)
		10
Mainframe	Check frame and welds.	O
Hardware	Check all bolts and nuts are tight.	O
Lubrication	Lubricate grease fitting. (See Lubrication Locations on Page 25)	G

REGULAR MAINTENANCE ITEMS

Adjusting The Cutting Edge

⚠ WARNING

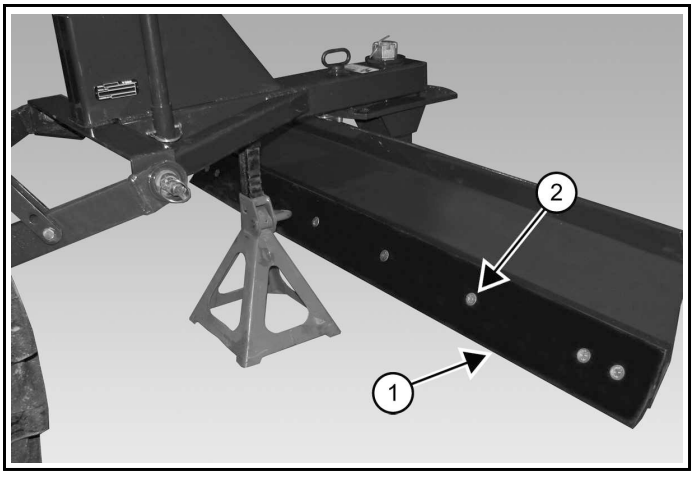
CRUSHING HAZARD
Falling implement can cause serious injury or death.
Securely block up the implement before working underneath.
W-2565

⚠ WARNING

IMPACT AND INJECTION HAZARDS
Flying debris or pressurized fluids can cause serious injury or death.
Wear safety glasses to prevent eye injury when any of the following conditions exist:
- **When fluids are under pressure.**
- **Flying debris or loose material.**
- **Engine is running.**
- **Tools are being used.**

W-2019

Figure 32



p-96197a

The cutting edge (Item 1) [Figure 32] is reversible.

1. Check the condition of the cutting edge and mounting hardware. Contact Ignite Attachments if replacement parts are needed.
2. Use a jackstand or blocks to support the angle blade.
3. When the cutting edge becomes worn or damaged, lower the angle blade until it is 1 – 2 in (25,0 – 51,0 mm) off the ground.
4. Remove the nuts and bolts (Item 2) [Figure 32] from the cutting edge, rotate the cutting edge 180° and reinstall.

   When installing tighten bolts to specified torque. (See Torque Specification For Bolts on Page 30)

LUBRICATION LOCATIONS

Always use a good quality lithium based multi-purpose grease when lubricating the implement. Apply lubricant until extra grease shows.

⚠ IMPORTANT

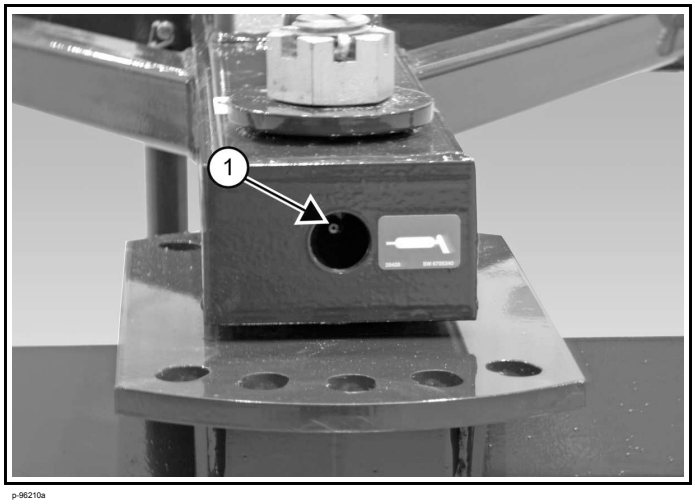
ENVIRONMENTAL HAZARD
Fluids such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local regulations for correct disposal methods.
I-2067

⚠ WARNING

IMPACT AND INJECTION HAZARDS
Flying debris or pressurized fluids can cause serious injury or death.
Wear safety glasses to prevent eye injury when any of the following conditions exist:
- **When fluids are under pressure.**
- **Flying debris or loose material.**
- **Engine is running.**
- **Tools are being used.**

W-2019

Figure 33



p-96210a

REF.	LOCATION	NO. OF FITTINGS
1	Pivot assembly	1

REMOVING AND INSTALLING THE PIVOT MOUNT

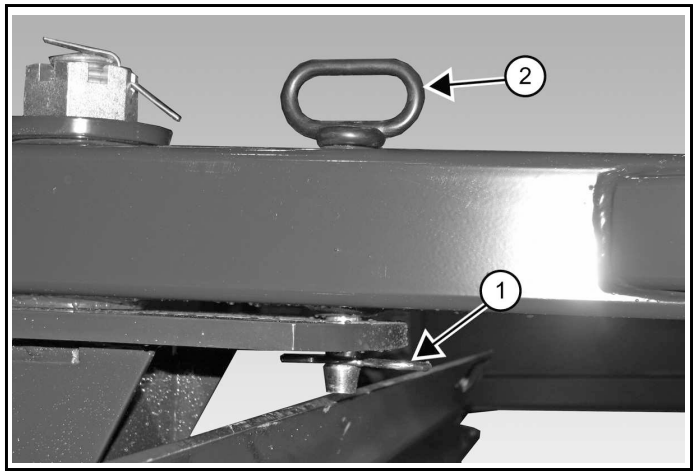
⚠ WARNING

IMPACT AND INJECTION HAZARDS
Flying debris or pressurized fluids can cause serious injury or death.
Wear safety glasses to prevent eye injury when any of the following conditions exist:
- **When fluids are under pressure.**
- **Flying debris or loose material.**
- **Engine is running.**
- **Tools are being used.**

W-2019

1. Remove the moldboard.

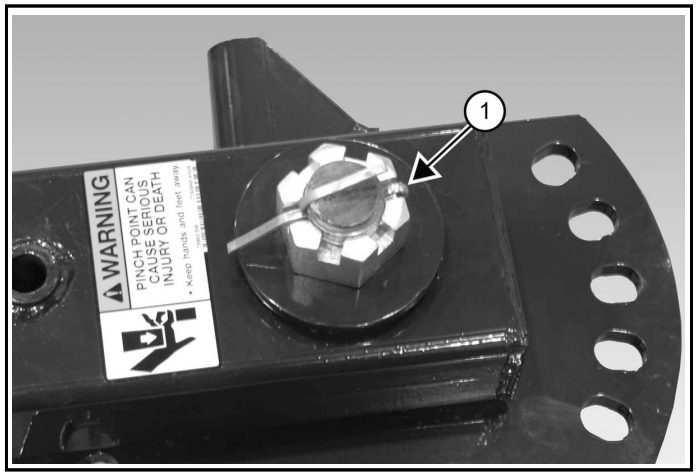
Figure 34



p-96185a

2. Remove the retaining pin (Item 1) and locking pin (Item 2) [Figure 34].

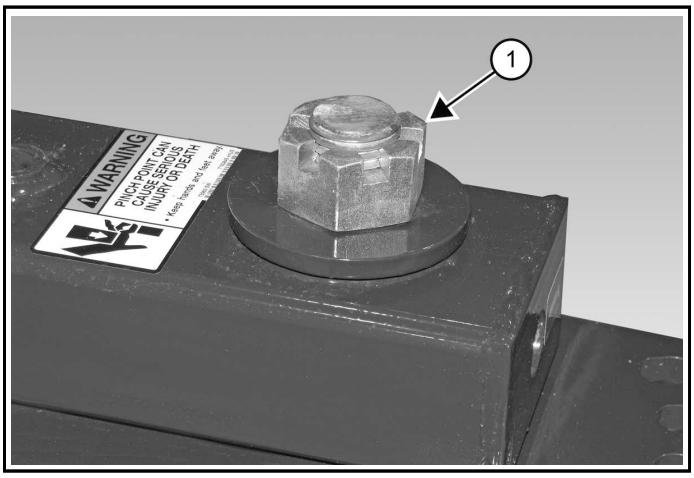
Figure 35



p-96202a

3. Remove the cotter pin (Item 1) [Figure 35].

Figure 36



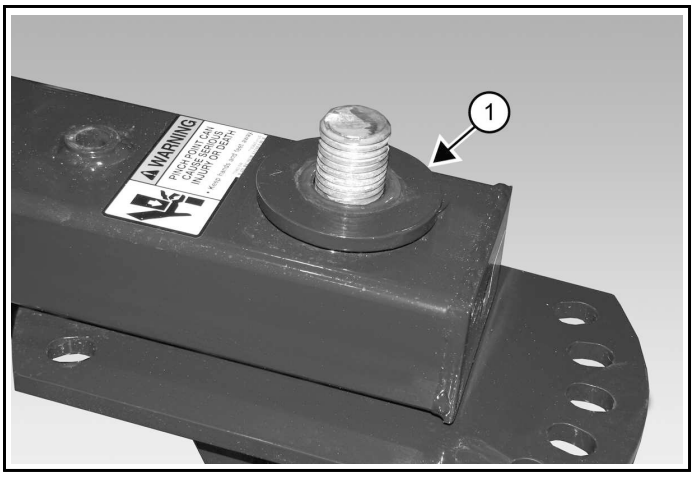
p-96203a

4. Remove the castle nut (Item 1) [Figure 36].

   When installing, install and tighten the castle nut by hand until snug against the waster. Align nearest groove in the castle nut with through hole in spindle.

   NOTE: Do not over tighten the castle nut. Pivot assembly should turn easily and smooth by hand.

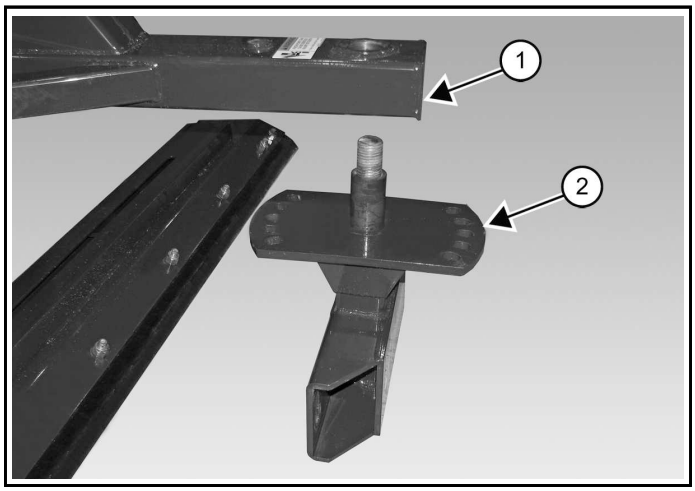
Figure 37



p-96204a

5. Remove the washer (Item 1) [Figure 37].

Figure 38



p-96205a

6. Raise the machine's three-point separating the mainframe (Item 1) from the pivot assembly (Item 2) [Figure 38].

7. Move the pivot assembly from under the mainframe.

8. Lower the machine's three-point until the mainframe is setting on the ground.

9. Inspect all parts for wear or damage. Replace any damaged parts. See Ignite Attachments for replacement parts.

   When installing, raise the machine's three-point until the mainframe is about 16 – 18 in (406 – 457 mm) above the ground.

10. Place the pivot assembly under the mainframe, aligning the pivot spindle with the mounting hole in the mainframe.

11. Slowly lower the machine's three-point until the mainframe is sitting on the pivot assembly.

STORAGE AND RETURN TO SERVICE

Implement Storage

Sometimes it may be necessary to store your Ignite Attachments implement for an extended period of time. Below is a list of items to perform before storage.

- Thoroughly clean and wash the implement.
- Lubricate the implement (if applicable).
- Inspect the three-point mounts, mounting pins and all welds on the implement for wear and damage.
- Check for loose hardware, missing guards, or damaged parts.
- Check for damaged or missing decals. Replace if necessary.
- Replace worn or damaged parts.
- Place the implement in a dry protected shelter.
- Place the implement flat on the ground.
- In muddy conditions or to prevent the implement from freezing to the ground, put the implement on planks or blocks before removing the implement from the machine.

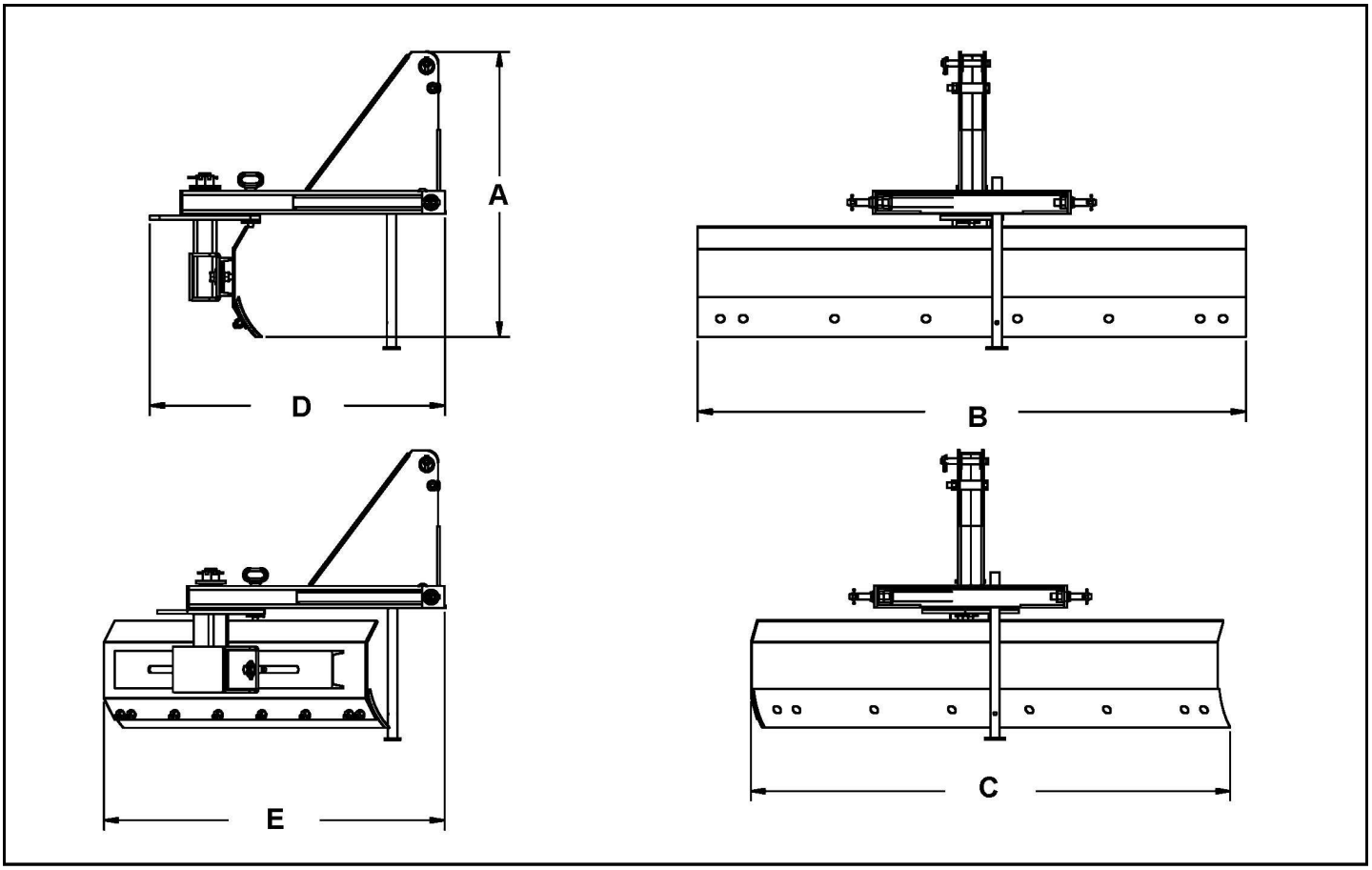
Return To Service

After the Ignite Attachments implement has been in storage, it is necessary to follow a list of items to return the implement to service.

- Be sure all shields and guards are in place.
- Lubricate the implement (if applicable).
- Install and operate implement, check for correct function.

ANGLE BLADE DIMENSIONS

Figure 39



DESCRIPTION	60” Angle Blade	72” Angle Blade	84” Angle Blade
Height (Dim A)	37.35 in. (949 mm)	37.35 in. (949 mm)	37.35 in. (949 mm)
Width (Blade Straight) (Dim B)	60.0 in. (1524 mm)	72.0 in. (1829 mm)	84.0 in. (2134 mm)
Width (Blade Fully Angled) (Dim C)	54.2 in. (1377 mm)	64.6 in. (1640 mm)	75.0 in. (1905 mm)
Length (Dim D)	38.75 in. (984 mm)	38.75 in. (984 mm)	38.75 in. (984 mm)
Length (Blade Fully Angled) (Dim E)	42.9 in. (1090 mm)	45.9 in. (1166 mm)	48.9 in. (1242 mm)

PERFORMANCE

DESCRIPTION	60” Angle Blade	72” Angle Blade	84” Angle Blade
Operating Weight (Approx.)	311 lb. (141,1 kg)	333 lb. (151,1 kg)	355 lb. (161,0 kg)
Three-Point Hitch Category	Category I	Category I	Category I
Blade Positions (Forward / Rear)	5 / 5	5 / 5	5 / 5
Blade Grading / Backfill Angles	0° / 15° / 30°	0° / 15° / 30°	0° / 15° / 30°
Blade Oscillation (From Center)	Variable (Up to 7.5°)	Variable (Up to 7.5°)	Variable (Up to 7.5°)
Blade Offset (From Center)	12 in. (304,8 mm)	12 in. (304,8 mm)	12 in. (304,8 mm)
Blade Thickness	0.25 in. (6,4 mm)	0.25 in. (6,4 mm)	0.25 in. (6,4 mm)
Cutting Edge Thickness	0.50 in. (12,7 mm)	0.50 in. (12,7 mm)	0.50 in. (12,7 mm)
Storage Stand	Yes	Yes	Yes

TORQUE FOR GENERAL SAE BOLTS

The following torque values are for use in general applications and where torque values are not otherwise specified. They apply to all steel screw threaded fasteners having the same strength levels and coated with zinc phosphate and oil or zinc dichromate.

THREAD SIZE	CAP SCREW BOLT AND NUT SAE GRADE 5	CAP SCREW BOLT AND NUT SAE GRADE 8	SOCKET HEAD CAP SCREW OR 12–POINT HEAD CAP SCREW
0.250	9 – 10 N•m (80 – 90 in-lb)	13 – 14 N•m (110 – 120 in-lb)	15 – 16 N•m (130 – 145 in-lb)
0.3125	21 – 23 N•m (180 – 200 in-lb)	24 – 27 N•m (215 – 240 in-lb)	31 – 34 N•m (270 – 300 in-lb)
0.375	34 – 38 N•m (25 – 28 ft-lb)	48 – 54 N•m (35 – 40 ft-lb)	61 – 68 N•m (45 – 50 ft-lb)
0.4375	54 – 61 N•m (40 – 45 ft-lb)	82 – 88 N•m (60 – 65 ft-lb)	95 – 102 N•m (70 – 75 ft-lb)
0.500	88 – 95 N•m (65 – 70 ft-lb)	125 – 135 N•m (90 – 100 ft-lb)	150 – 160 N•m (110 – 120 ft-lb)
0.5625	125 – 135 N•m (90 – 100 ft-lb)	170 – 190 N•m (125 – 140 ft-lb)	205 – 225 N•m (150 – 165 ft-lb)
0.625	170 – 190 N•m (125 – 140 ft-lb)	240 – 260 N•m (175 – 190 ft-lb)	285 – 310 N•m (210 – 230 ft-lb)
0.750	300 – 330 N•m (220 – 245 ft-lb)	410 – 450 N•m (300 – 330 ft-lb)	490 – 540 N•m (360 – 400 ft-lb)
0.875	450 – 490 N•m (330 – 360 ft-lb)	645 – 710 N•m (475 – 525 ft-lb)	815 – 880 N•m (600 – 650 ft-lb)
1.000	645 – 710 N•m (475 – 525 ft-lb)	985 – 1085 N•m (725 – 800 ft-lb)	1220 – 1360 N•m (900 – 1000 ft-lb)
1.125	880 – 975 N•m (650 – 720 ft-lb)	1425 – 1600 N•m (1050 – 1175 ft-lb)	1770 – 1970 N•m (1300 – 1450 ft-lb)
1.250	1220 – 1360 N•m (900 – 1000 ft-lb)	2000 – 2200 N•m (1475 – 1625 ft-lb)	2510 – 2720 N•m (1850 – 2000 ft-lb)
1.375	1630 – 1830 N•m (1200 – 1350 ft-lb)	2720 – 2980 N•m (2000 – 2200 ft-lb)	3330 – 3660 N•m (2450 – 2700 ft-lb)
1.500	2040 – 2240 N•m (1500 – 1650 ft-lb)	3520 – 3870 N•m (2600 – 2850 ft-lb)	4270 – 4680 N•m (3150 – 3450 ft-lb)
1.625	2720 – 2980 N•m (2000 – 2200 ft-lb)	4680 – 5150 N•m (3450 – 3800 ft-lb)	5630 – 6240 N•m (4150 – 4600 ft-lb)
1.750	3390 – 3730 N•m (2500 – 2750 ft-lb)	5830 – 6500 N•m (4300 – 4900 ft-lb)	6920 – 7730 N•m (5100 – 5700 ft-lb)
1.875	4270 – 4750 N•m (3150 – 3500 ft-lb)	7450 – 8300 N•m (5500 – 6100 ft-lb)	8800 – 9800 N•m (6500 – 7200 ft-lb)
2.000	5150 – 5700 N•m (3800 – 4200 ft-lb)	8800 – 9800 N•m (6500 – 7200 ft-lb)	10600 – 11700 N•m (7800 – 8600 ft-lb)

NOTE: Use the torque value for the part having the lesser grade when a fastener and nut are used together but have a different grade.

TORQUE FOR GENERAL METRIC BOLTS

Torque values shown in table below apply to combinations of a fastener and nut having the same property class, and both being coated with zinc phosphate and oil or zinc dichromate.

Use the torque value for the part having the lesser property class when a fastener and nut are used together but have a different property class.

THREAD NOM. DIA.	PROPERTY CLASS		
	8.8	10.9	12.9
M4	2,5 – 3,5 N•m (2.0 – 2.5 ft-lb)	3,8 – 4,2 N•m (2.8 – 3.1 ft-lb)	4,7 – 5,3 N•m (3.5 – 3.9 ft-lb)
M5	5,5 – 6,5 N•m (4.0 – 5.0 ft-lb)	7,6 – 8,4 N•m (5.6 – 6.2 ft-lb)	8,5 – 9,5 N•m (6.2 – 7.0 ft-lb)
M6	9,5 – 10,5 N•m (7.0 – 7.5 ft-lb)	12,3 – 13,7 N•m (9.1 – 10.1 ft-lb)	14,2 – 15,8 N•m (10.4 – 11.6 ft-lb)
M7	15 – 17 N•m (11.0 – 12.5 ft-lb)	20 – 22 N•m (14.7 – 16.2 ft-lb)	23,7 – 26,3 N•m (17.5 – 19.5 ft-lb)
M8	24 – 26 N•m (18 – 19 ft-lb)	29,4 – 32,6 N•m (21.7 – 24.0 ft-lb)	35 – 39 N•m (25.5 – 28.5 ft-lb)
M10	43 – 47 N•m (32 – 35 ft-lb)	57 – 63 N•m (42.0 – 46.5 ft-lb)	71 – 79 N•m (52.5 – 58.5 ft-lb)
M12	75 – 85 N•m (55 – 60 ft-lb)	105 – 115 N•m (78 – 85 ft-lb)	123 – 137 N•m (91 – 110 ft-lb)
M14	125 – 140 N•m (90 – 100 ft-lb)	160 – 180 N•m (118 – 133 ft-lb)	190 – 210 N•m (140 – 155 ft-lb)
M16	190 – 210 N•m (140 – 155 ft-lb)	255 – 285 N•m (188 – 210 ft-lb)	300 – 330 N•m (225 – 245 ft-lb)
M18	260 – 290 N•m (190 – 215 ft-lb)	345 – 385 N•m (255 – 285 ft-lb)	420 – 460 N•m (310 – 340 ft-lb)
M20	370 – 410 N•m (275 – 300 ft-lb)	490 – 550 N•m (360 – 405 ft-lb)	590 – 650 N•m (440 – 490 ft-lb)
M22	500 – 550 N•m (370 – 400 ft-lb)	660 – 740 N•m (490 – 545 ft-lb)	800 – 880 N•m (590 – 650 ft-lb)
M24	640 – 700 N•m (470 – 520 ft-lb)	850 – 950 N•m (625 – 700 ft-lb)	1000 – 1120 N•m (730 – 830 ft-lb)
M27	930 – 1030 N•m (680 – 760 ft-lb)	1230 – 1370 N•m (900 – 1000 ft-lb)	1470 – 1630 N•m (1100 – 1200 ft-lb)
M30	1260 – 1400 N•m (930 – 1030 ft-lb)	1700 – 1900 N•m (1250 – 1400 ft-lb)	2000 – 2200 N•m (1500 – 1600 ft-lb)
M33	1720 – 1900 N•m (1270 – 1400 ft-lb)	2300 – 2500 N•m (1700 – 1850 ft-lb)	2700 – 3100 N•m (2000 – 2300 ft-lb)
M36	2200 – 2450 N•m (1620 – 1800 ft-lb)	2900 – 3200 N•m (2200 – 2400 ft-lb)	3500 – 3900 N•m (2600 – 2900 ft-lb)

IMPLEMENT WARRANTY

A statement explaining the terms and conditions of the warranty coverage that applies to your implement is available by visiting Igniteattachments.com.


IGNITE™
ATTACHMENTS

Reference Information

Product Serial Number:

Engine Serial Number:

Dealer Information:

WARNING Cancer and Reproductive Harm. This product can expose you to chemicals including lead and lead compounds, mineral oils, and phthalates which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.