

EN



Bobcat®

Landplane

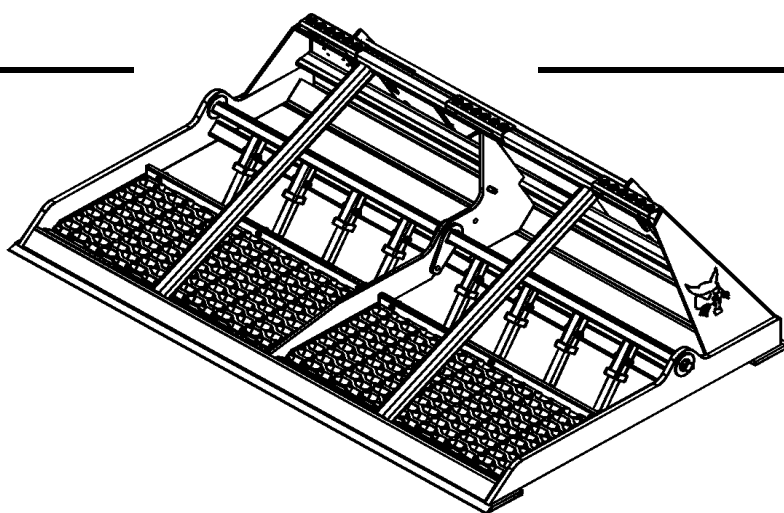
48" (122 cm)

72" (183 cm)

78" (198 cm)

Operation and Maintenance Manual

48" (122 cm.) S/N 615100101 and Above
48" (122 cm.) S/N 717300101 and Above
72" (183 cm.) S/N 615200101 and Above
72" (183 cm.) S/N 615000101 and Above
78" (198 cm.) S/N 611500101 and Above
78" (198 cm.) S/N 615300101 and Above





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REFERENCE INFORMATION

Write the correct information for YOUR Landplane Attachment in the spaces below.
Always use these numbers when you refer to your Landplane.

Landplane Serial Number

NOTES:

YOUR BOBCAT® DEALER:

ADDRESS:

PHONE:



Bobcat Company Europe
J. Huysmanslaan 59
B-1651 LOT
Belgium

FOREWORD

SAFETY

**OPERATING
INSTRUCTIONS**

**PREVENTIVE
MAINTENANCE**

SPECIFICATIONS



Bobcat®

BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED



ISO 9001:2000 is a set of international standards that control the processes and procedures which we use to design, develop, manufacture, distribute, and service Bobcat products.

British Standards Institute (**BSI**) is the Certified Registrar Bobcat Company chose to assess the Company's compliance with the ISO 9001:2000 set of standards. The BSI registration certifies that the two Bobcat Company manufacturing plants and the Bobcat Company corporate offices (Gwinner, Bismarck and West Fargo) in North Dakota are in compliance with ISO 9001:2000. Only certified assessors, like BSI, can grant registrations.

ISO 9001:2000 means that as a company we say what we do and do what we say. In other words, we have established procedures and policies, and we provide evidence that the procedures and policies are followed.



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FOREWORD

This Operation and Maintenance Manual was written to give the owner/operator instructions on the safe operation and maintenance of the Landplane. READ AND UNDERSTAND THIS OPERATION and MAINTENANCE MANUAL BEFORE OPERATING YOUR Landplane. If you have any questions, see your Bobcat dealer.

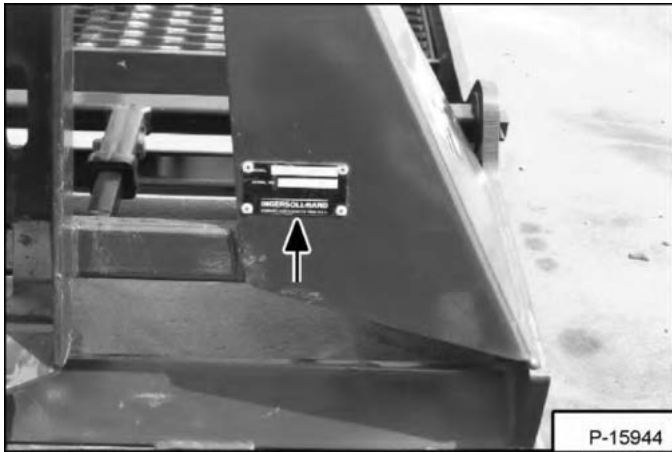
FOREWORD

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SERIAL NUMBER LOCATION	VII



SERIAL NUMBER LOCATION

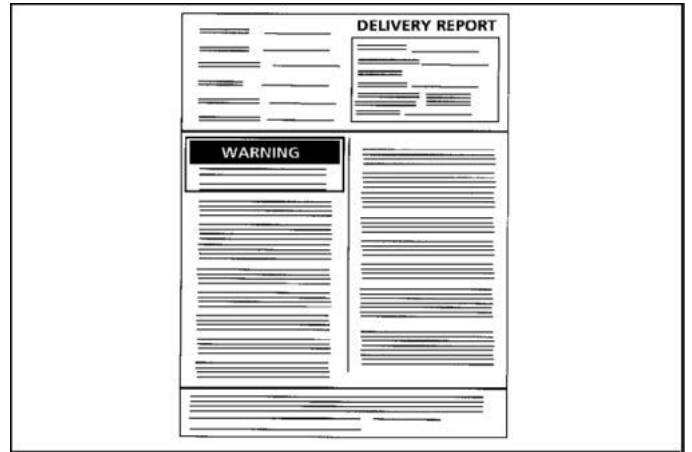
Figure 1



Always use the serial number of the Landplane 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 performing a specific service operation [Figure 1].

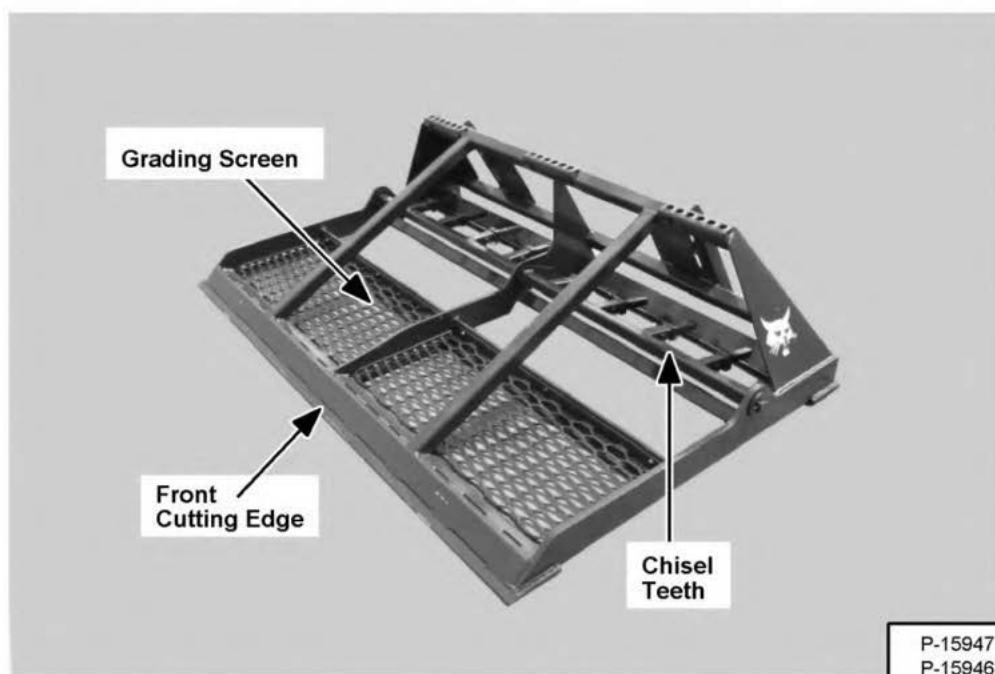
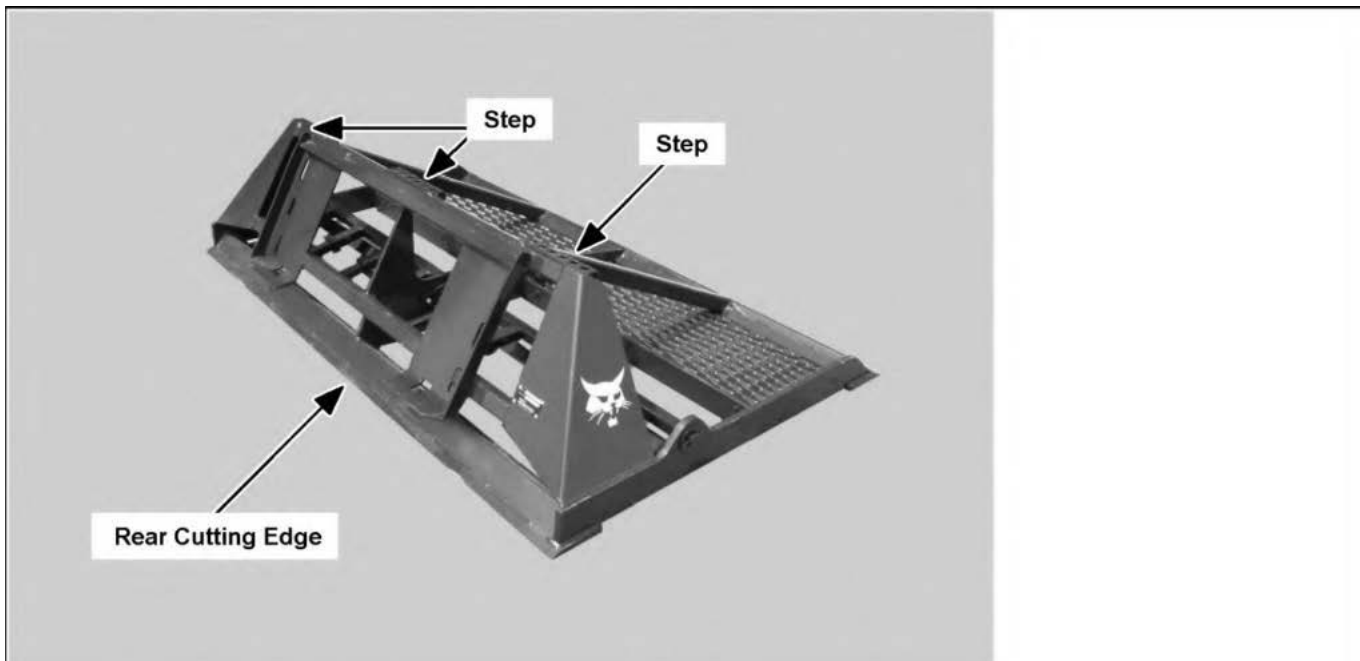
ATTACHMENT DELIVERY REPORT

Figure 2



The Attachment Delivery Report must be completed by the dealer and signed by the owner or operator when the Landplane is delivered. An explanation of the form must be given to the owner. Make sure it is completed [Figure 2].

PARTS IDENTIFICATION



P-15947
P-15946

SAFETY

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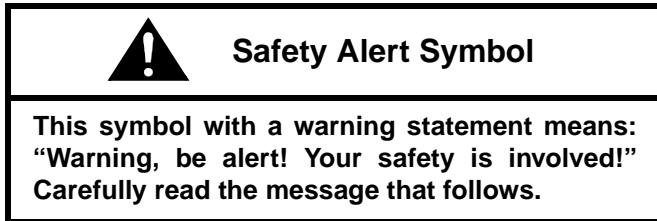




Bobcat®

SAFETY INSTRUCTIONS

Safe Operation Is The Operator's Responsibility



Operators must be trained before running the machine. Untrained operators can cause injury or death.

W-2001-1285



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

I-2019-0284



Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

W-2044-1285

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

Check all of the items on the Bobcat Service Schedule Sticker under the 8-10 hour column or as shown in the Operation and Maintenance Manual.

Safe Operation Needs A Qualified Operator

For operators to be qualified, they must not use drugs or alcoholic drinks which impair alertness or coordination while working. Operators who are taking prescription drugs must get medical advice to determine if they can safely operate a machine.

A Qualified Operator Must Do The Following:

Understand the Written Instructions, Rules and Regulations

- The written instructions from Bobcat Company include the Delivery Report, Operation and Maintenance Manual, Operator's Handbook, and machine signs (stickers).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) symbol. Regulations may identify a hazard such as a powerline.

Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your Bobcat dealer before the product is delivered.
- New operators must start in an area without onlookers and use all the controls until they can operate the machine and attachment safely under all conditions of the work area. Always fasten seat belt before operating.

Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the machine load capacities. Material that is very dense is heavier than the same volume of less dense material. Reduce the size of load if handling dense material.
- Operators must know any prohibited uses or work areas, for example, they need to know about excessive slopes.
- Know the location of any underground lines.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service. Safety glasses, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat Safety equipment.

SI ATT-1203

SAFETY INSTRUCTIONS (CONT'D)

Use Safety Rules

- Read and follow instructions in the machine and the attachment's Operation and Maintenance Manual before operating.
- Check for underground lines before operating attachment (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, transportation, maintenance and storage of equipment.
- Check that the Bob-Tach levers are in the locked position and the wedges fit securely into the holes of the attachment (if applicable).
- Check that the attachment is securely attached to the machine.
- Make sure all the machine controls are in the NEUTRAL position before starting the machine.
- Operate the attachment only from the operator's position.
- When learning to operate the attachment, do it at a slow speed in an area clear of onlookers.
- DO NOT permit personnel to be in the work area when operating the machine and attachment.
- The attachment must be used ONLY on approved machines. See your Bobcat dealer for updated list of approved attachments for each machine model.
- DO NOT modify equipment or add attachments that are not approved by the manufacturer.
- DO NOT make any adjustments or repairs on the machine or attachment while the engine is running.

Fire Prevention

The machines 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 spark arrester exhaust system (if equipped) is designed to control the emission of hot particles from the engine and exhaust system, but the silencer and the exhaust gases are still hot.

- Do not use the machine where exhaust, arcs, sparks or hot components can make contact with flammable material, explosive dust or gases.
- The operator cab, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part.
- Check fuel and hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Tighten or replace any parts that show leakage. Always clean fluid spills. Do not use petrol or diesel fuel for cleaning parts. Use commercial nonflammable solvents.
- Do not use ethyl spirits or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or onlookers.
- Always clean the machine, disconnect the battery, and disconnect the wiring from the Bobcat 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 dust mask when grinding painted parts. Toxic dust or gas can be produced.
- Stop the engine and let it cool down before adding fuel. No smoking!
- Use the procedure in the Operation and Maintenance Manual for connecting the battery and for jump starting.
- Use the procedure in the Operation and Maintenance Manual for cleaning the spark arrester silencer (if equipped).



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OPERATING INSTRUCTIONS

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**OPERATING
INSTRUCTIONS**



Bobcat®

MACHINE OPTIONS

The 48 inch (122 cm) Landplane is approved for use on the 463 Loader and MT50, MT52 Mini Loaders.

The 72 inch (183 cm) Landplane is approved for use on the 5600 Toolcat™ Service Work Machine

The 72 inch (183 cm) and 78 inch (198 cm) Landplane is approved for use on the 553, 753, 763, 773, 774, 863, 864, 873, 883, A220, A300 S130, S150, S160, S175, S185, S220, S250, S300, T180, T190, T200, and T300 Bobcat Loaders.

Warranty on this attachment is void if used on a non-approved vehicle. See your Bobcat dealer for an updated list of approved vehicles.

ENTERING AND DISMOUNTING

Loader



Before you leave the operator's seat:

- Lower the lift arms, put the attachment flat on the ground.
- Stop the engine.
- Apply the hand brake.
- Raise seat bar.
- (Foot Pedal Controls) Move pedals until both lock.
- (Advanced Control System - ACS) Move the hydraulic controls to the NEUTRAL POSITION to make sure that both lift and tilt functions are switched off.

The seat bar system must lock the lift and tilt controls in neutral when the seat bar is up. Service the system if hand controls do not lock correctly.

- (Selectable Joystick Control - SJC) Move the joysticks to the NEUTRAL POSITION to make sure that travel hydraulic functions are switched off.

The seat bar system must switch off the lift and tilt control functions when the seat bar is up. Service the system if hand controls do not switch off.

W-2463-0603

Figure OI-1



Use the Landplane steps, handrails (on cab) and the safety treads (on top of the loader lift arms and frame) to enter and dismount from the loader [Figure OI-1].

Figure OI-2



Get in the operator seat and fasten the seat belt. Position the seat belt buckle between the hips, tighten the seat belt until it is secure [Figure OI-2].

Figure OI-3



Lower the seat bar [Figure OI-3].

ENTERING AND DISMOUNTING (CONT'D)

Service Work Machine

Enter and dismount from the operator seat of the work machine from the left side.

NOTE: The left side of the work machine as viewed from the operator seat.

Figure OI-4



Fasten the seat belt (Item 1) [Figure OI-4] securely and lower the operator arm rest (Item 2) [Figure OI-4].

WARNING

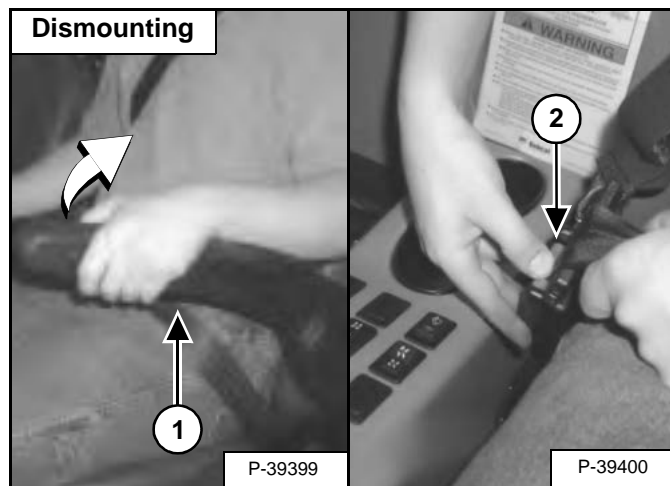
AVOID INJURY OR DEATH

Before leaving the operator's seat:

- Lower the lift arm, put the attachment flat on the ground.
- Raise operator arm rest.
- Stop the engine.
- Put gear lever in PARK.

W-2443-1102

Figure OI-5



Raise the operator arm rest (Item 1) [Figure OI-5] to switch off lift, tilt, auxiliary and drive functions.

Press the red release button (Item 2) [Figure OI-5] to disconnect the seat belt.

Remove the key and dismount from the cab.

INSTALLATION

Loader / Service Work Machine

! WARNING

Bob-Tach levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

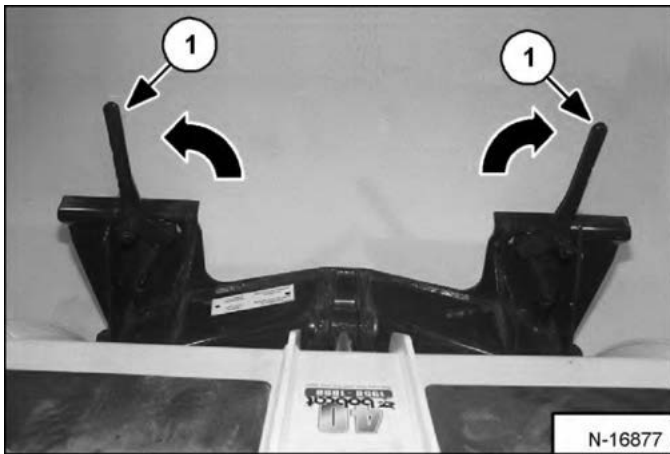
W-2054-1285

Installing The Landplane

Always inspect the Bob-Tach and Landplane mount before installation. For Inspection (See Page 27.)

For Machines Equipped With The Hand Lever Bob Tach:

Figure OI-6



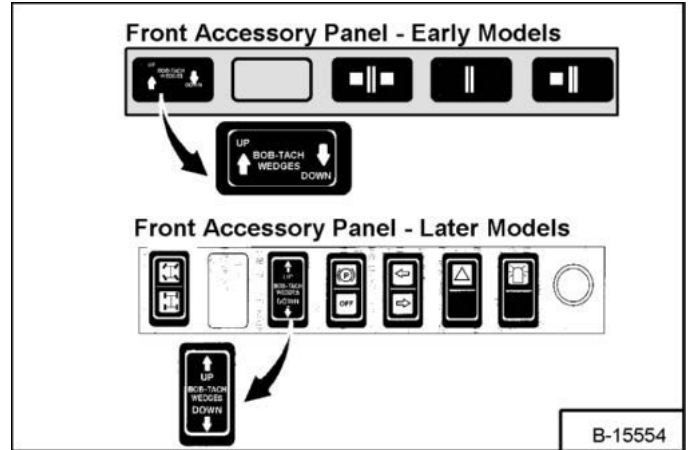
Pull the Bob-Tach levers (Item 1) [Figure OI-6] fully up.

Loaders: Enter the loader. Fasten the seat belt, lower the seat bar and start the engine. Release the hand brake.

Service Work Machine: Enter the cab and fasten the seat belt, lower the operator arm rest, and start the engine. Release the hand brake.

For Loaders Equipped With The Power Bob- Tach:

Figure OI-7



Push and hold the BOB-TACH WEDGES UP switch [Figure OI-7] (Front Accessory Panel) until the wedges are fully raised [Figure OI-6].

Press the PRESS TO OPERATE LOADER button (if equipped).

Loaders: Enter the loader. Fasten the seat belt, lower the seat bar and start the engine. Release the hand brake.

Press the PRESS TO OPERATE LOADER button (if equipped).

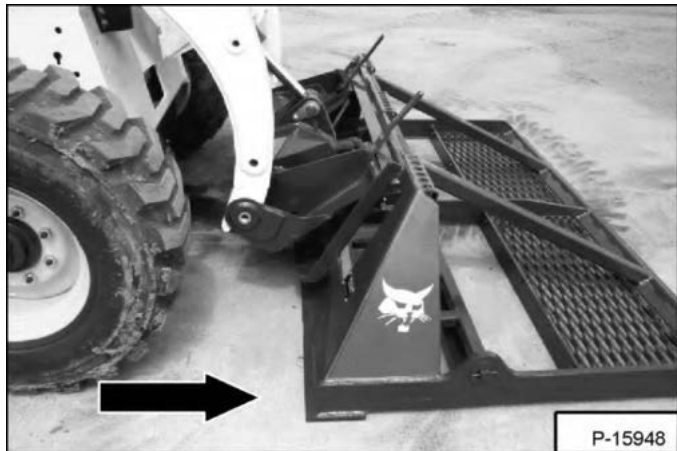
INSTALLATION (CONT'D)

Loader / Service Work Machine (Cont'd)

For All Machines

Raise the lift arm(s) slightly and tilt the Bob-Tach forwards.

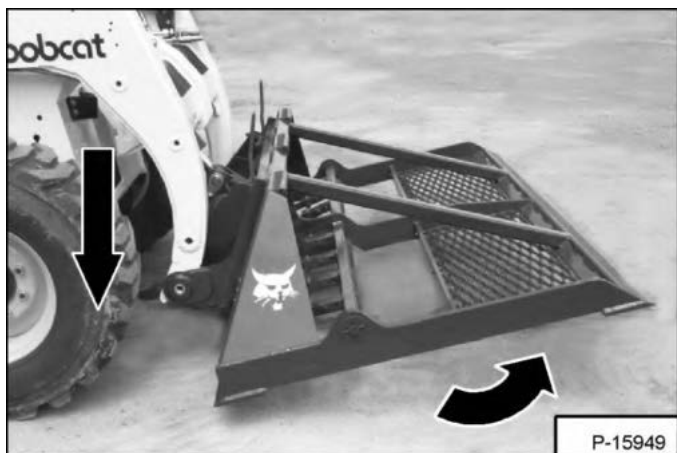
Figure OI-8



Drive the machine forwards until the top edge of the bob-Tach is completely under the top flange of the Landplane [Figure OI-8].

Be sure the Bob-Tach levers do not touch the Landplane.

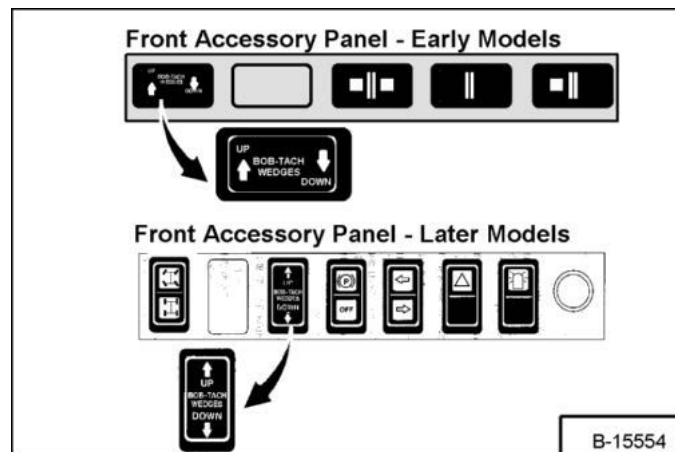
Figure OI-9



Lower the lift arm(s) and tilt the Bob-Tach backwards until the Landplane is slightly off the ground [Figure OI-9].

For Loaders Equipped With The Power Bob-Tach

Figure OI-10



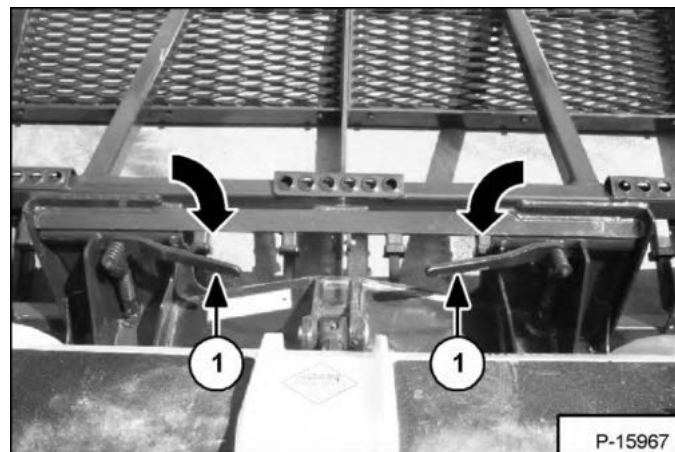
Push and hold the BOB-TACH WEDGES DOWN switch [Figure OI-10] (Front Accessory Panel) until the wedges are fully extended through the mounting frame.

Stop the engine and dismount from the loader.

For Machines Equipped With The Hand Lever Bob-Tach:

Stop the engine and dismount from the loader.

Figure OI-11



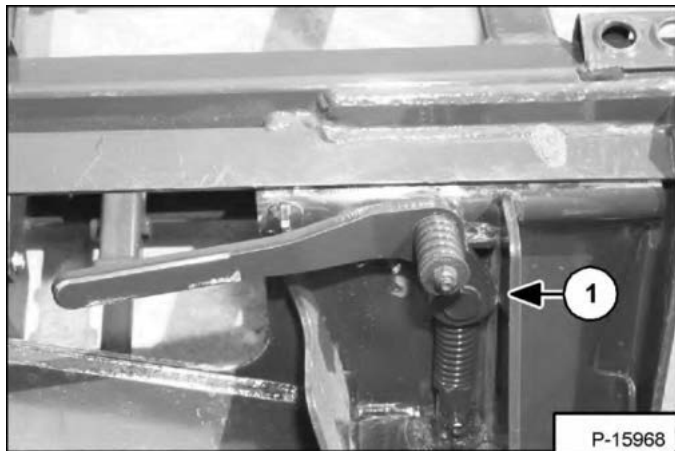
Push down on the Bob-Tach levers (Item 1) [Figure OI-11] until they are fully locked into position and the wedges are fully extended through the mounting frame holes.

INSTALLATION (CONT'D)

Loader / Service Work Machine (Cont'd)

For All Machines

Figure OI-12



The levers will make contact with the frame (Item 1) [Figure OI-12] as shown when locked.

If the levers do not lock into position, see your Bobcat loader dealer for maintenance.

Figure OI-13

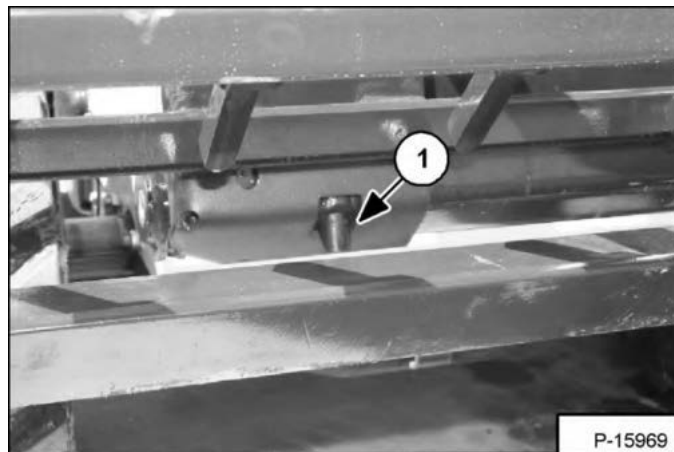
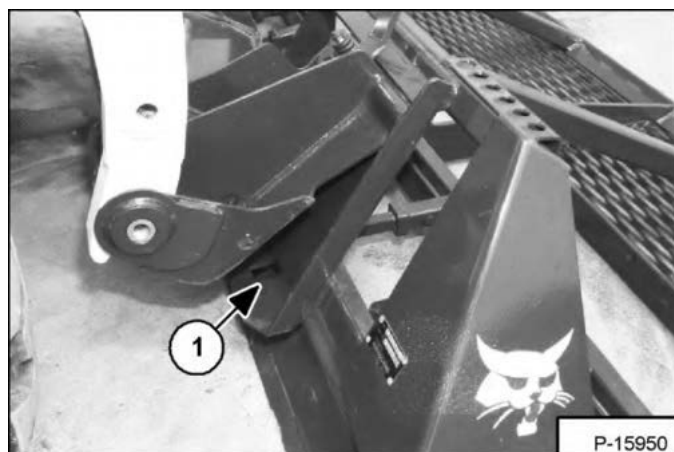


Figure OI-14



The wedges (Item 1) [Figure OI-13] must extend through the holes (Item 1) [Figure OI-14] in the mounting frame of the Landplane, securely attaching the Landplane to the Bob-Tach. The wedge is shown extending through the hole in the Landplane [Figure OI-13].

WARNING

Bob-Tach wedges must extend through the holes in attachment. Lever(s) must be fully down and locked. If the wedges are not secured, the attachment can become separated, resulting in Injury or death.

W-2102-0497

INSTALLATION (CONT'D)

Mini Loaders

! WARNING

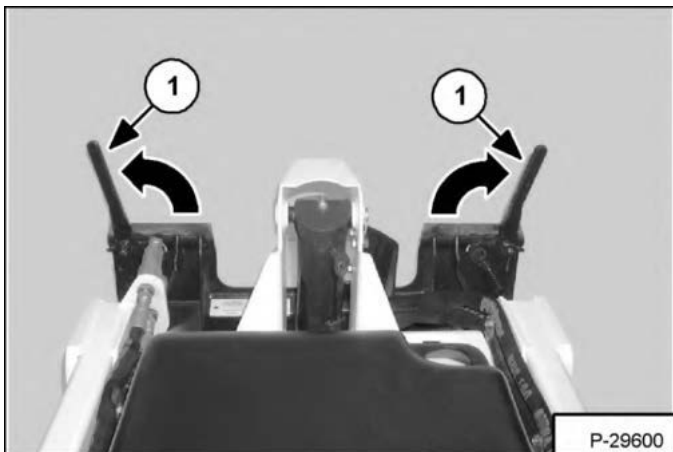
Load, unload and turn on flat level ground. Do not exceed rated operating capacity shown on sign (sticker) in cab. Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

W-2056-1187

Installing The Landplane

Always inspect the Bob-Tach and Landplane mount before installation. (For *BOB-TACH Inspection* and *Landplane Mount Inspection*) (See Page 27.)

Figure OI-15



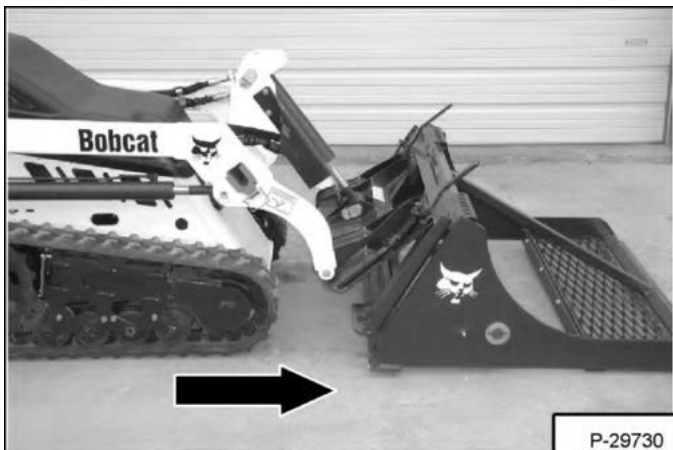
Pull the Bob-Tach levers (Item 1) [Figure OI-15] fully up.

From the Operator's position, start the engine.

Release the hand brake.

Raise the lift arms slightly and tilt the Bob-Tach forwards.

Figure OI-16



Drive the mini loader forwards until the top edge of the Bob-Tach is completely under the top flange of the Landplane [Figure OI-16].

Be sure the Bob-Tach levers do not touch the Landplane.

Figure OI-17



Lower the lift arms and tilt the Bob-Tach backwards until the Landplane is slightly off the ground [Figure OI-17].

Stop the engine.

! WARNING

Before you leave the operator's position at the rear of the loader:

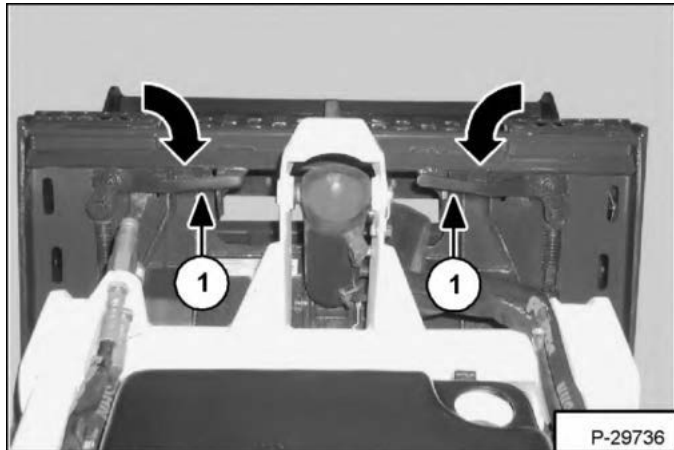
- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Apply the hand brake.

W-2416-1201

INSTALLATION (CONT'D)

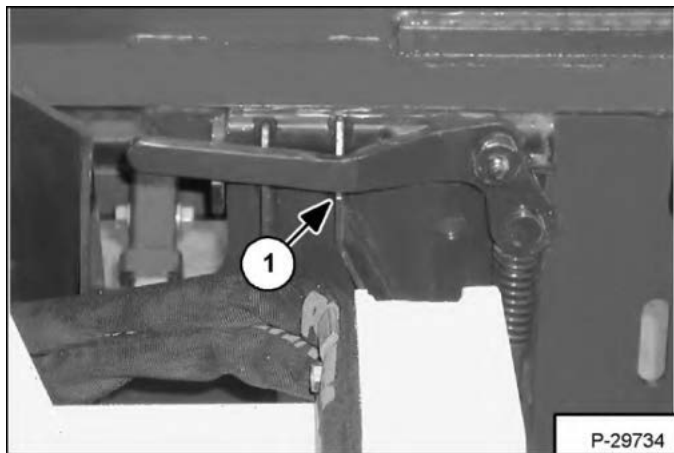
Mini Loaders (Cont'd)

Figure OI-18



Push down on the Bob-Tach levers (Item 1) [Figure OI-18] until the levers are fully locked into position.

Figure OI-19



The levers will make contact with the frame (Item 1) [Figure OI-19] as shown when locked.

If the levers do not lock into position, see your Bobcat loader dealer for maintenance.

Figure OI-20

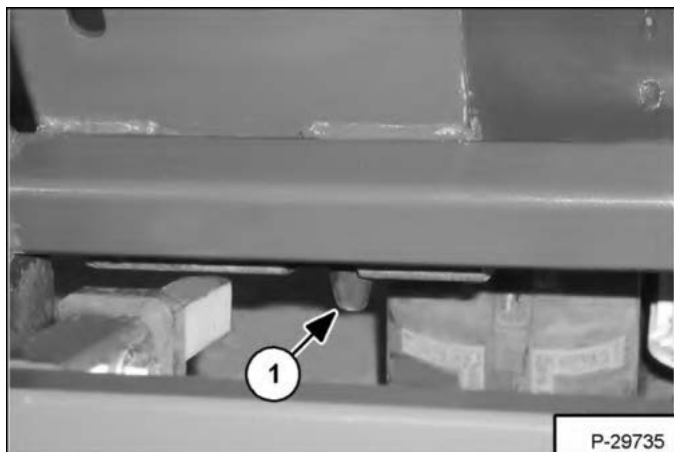
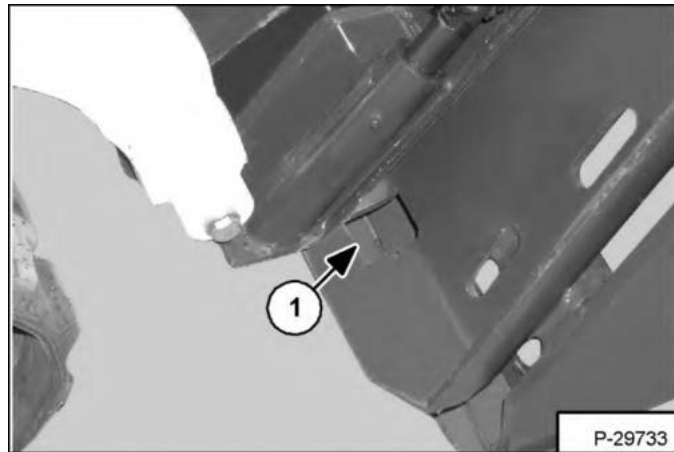


Figure OI-21



The wedges (Item 1) [Figure OI-20] must extend through the holes (Item 1) [Figure OI-21] in the mounting frame of the Landplane, securely attaching the Landplane to the Bob-Tach. The wedge is shown extending through the hole in the Landplane [Figure OI-20].

WARNING

Bob-Tach wedges must extend through the holes in attachment. Levers must be fully down and locked. If the wedges are not secured, the attachment can become separated, resulting in injury or death.

W-2102-0588

REMOVAL

Loader / Service Work Machine

For Loaders Equipped With The Power Bob-Tach

Loaders: Enter the loader. Fasten the seat belt, lower the seat bar and start the engine. Release the hand brake.

Press the PRESS TO OPERATE LOADER button (if equipped).

Figure OI-22

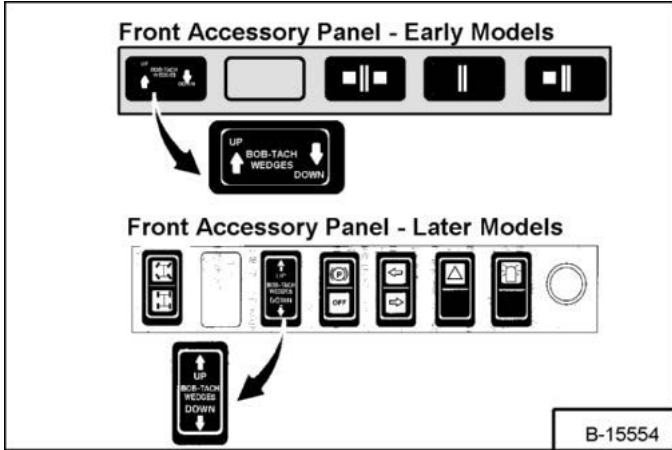
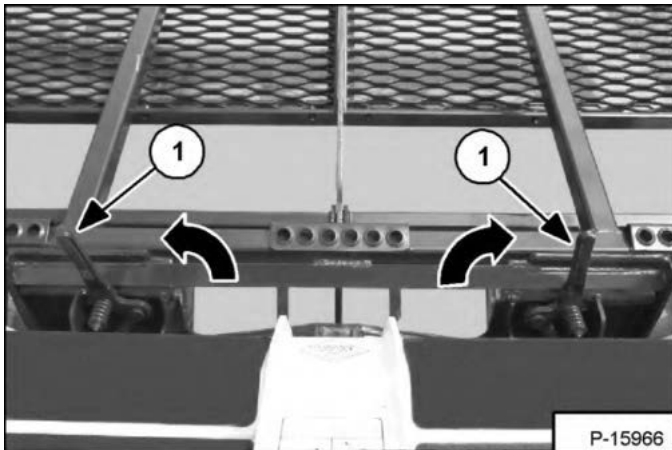


Figure OI-23



Push and hold the BOB-TACH WEDGES UP switch [Figure OI-22] (Front Accessory Panel) until the levers (Item 1) [Figure OI-23] are fully raised.

For Machines Equipped With The Hand Lever Bob-Tach:

Pull the Bob-Tach levers (Item 1) [Figure OI-23] fully up.

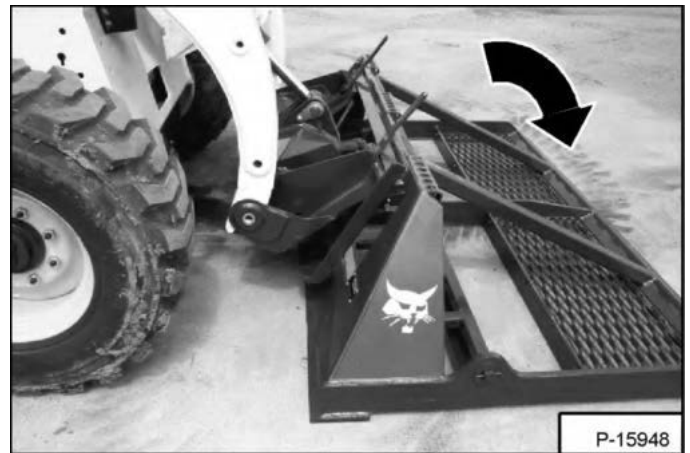
Loaders: Enter the loader. Fasten the seat belt, lower the seat bar and start the engine. Release the hand brake.

Service Work Machine: Enter the cab and fasten the seat belt, lower the operator arm rest, and start the engine. Release the hand brake.

Press the PRESS TO OPERATE LOADER button (if equipped).

For All Machines

Figure OI-24



Tilt the Bob-Tach forwards while backing the machine away from the Landplane [Figure OI-24].

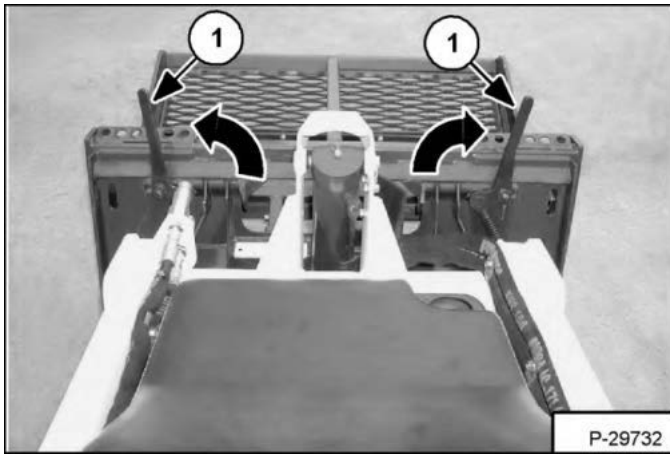
NOTE: In muddy conditions or to prevent the Landplane from freezing to the ground, put the Landplane on planks or blocks before removing from the loader.

REMOVAL (CONT'D)

Mini Loaders

Place the attachment flat on the ground, apply the hand brake and shut the engine off.

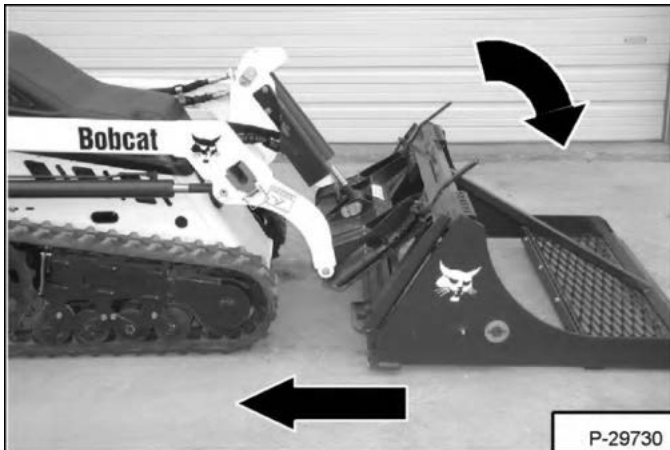
Figure OI-25



Pull the Bob-Tach levers (Item 1) [Figure OI-25] fully up.

From the operator's position at the rear of the mini loader, start the engine and release the hand brake.

Figure OI-26



Tilt the Bob-Tach forwards while backing the mini loader away from the Landplane [Figure OI-26].

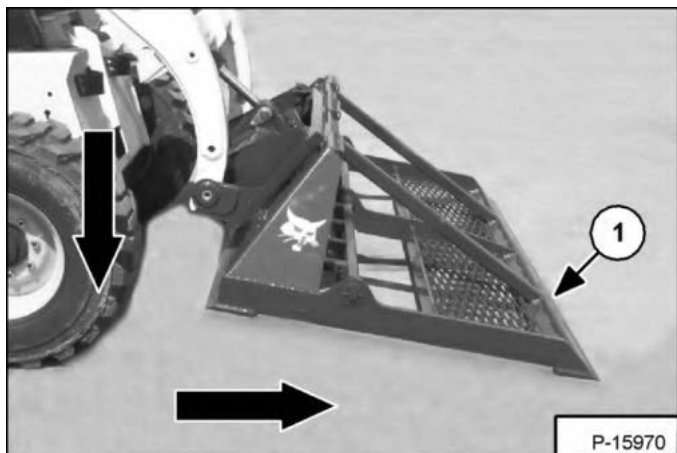
NOTE: In muddy conditions or to prevent the Landplane from freezing to the ground, put the Landplane on planks or blocks before removing from the mini loader.

OPERATING PROCEDURE FOR LOADER/SERVICE WORK MACHINE

Cutting The Ground

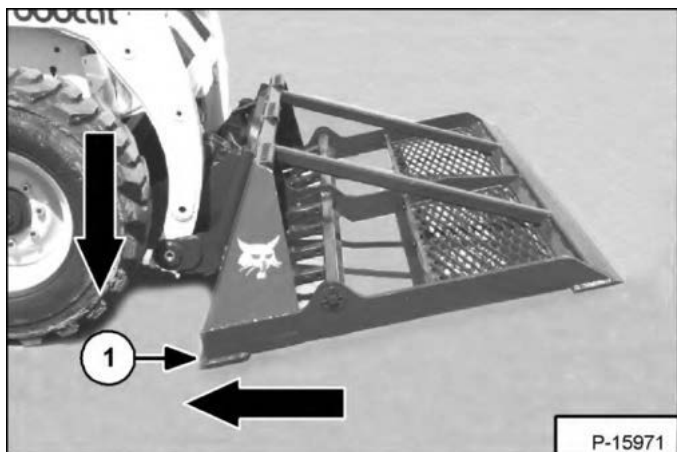
Raise the lift arms and put the Landplane at the desired angle.

Figure OI-27



If driving forwards, lower the lift arm(s) until the front cutting edge (Item 1) [Figure OI-27] of the Landplane breaks through the surface.

Figure OI-28

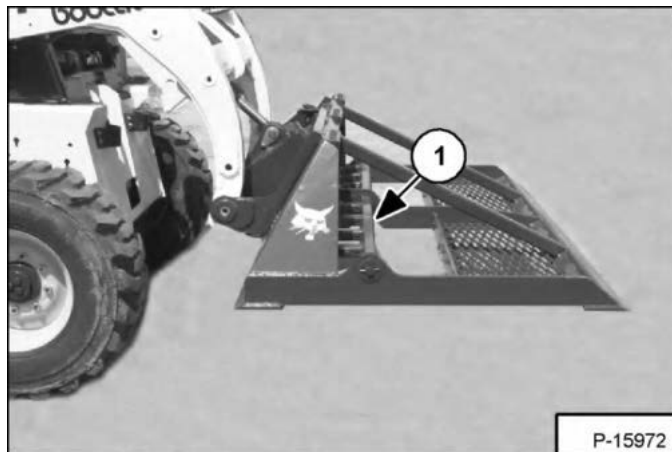


If operating in reverse, lower the lift arm(s) until the rear cutting edge (Item 1) [Figure OI-28] of the Landplane breaks through the surface.

Use the lift and tilt functions of the loader/service work machine to increase traction and cutting depth. Keep an even digging depth and obtain the desired grade angle.

Grading With The Chisel Teeth In The Engaged Position

Figure OI-29



When the chisel teeth (Item 1) [Figure OI-29] are engaged, they break up hard or compacted soil while the cutting edges level the soil.

OPERATING PROCEDURE FOR LOADER/SERVICE WORK MACHINE (CONT'D)

Grading With The Chisel Teeth In The Engaged Position (Cont'd)

Figure OI-30

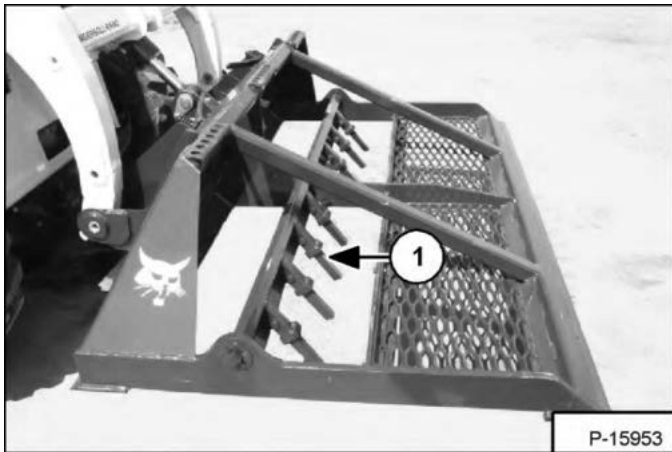
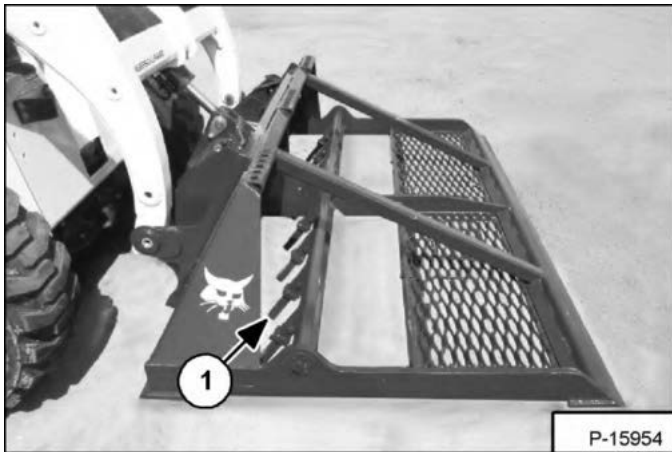


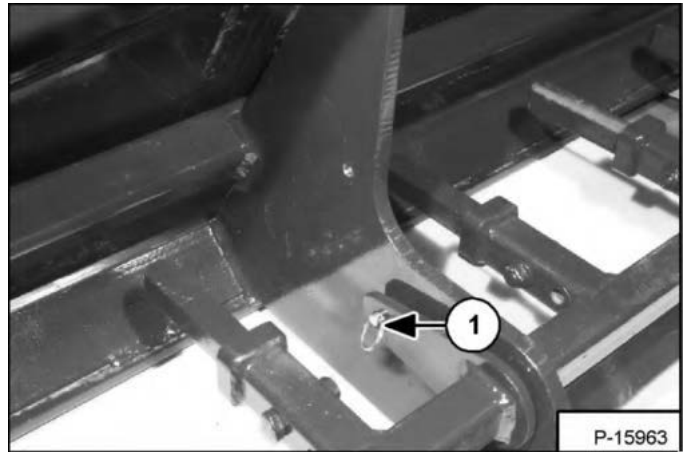
Figure OI-31



The chisel teeth (Item 1) [Figure OI-30] and [Figure OI-31] can be used in the forward operating position [Figure OI-30], and reverse operating position [Figure OI-31].

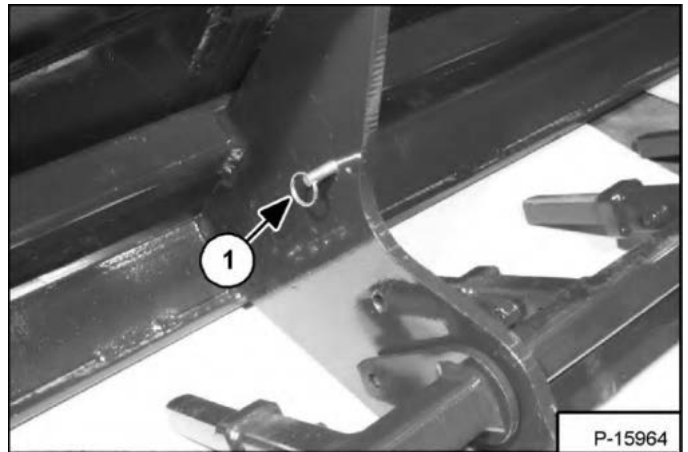
(72 inch (183 cm) and 78 inch (198 cm) landplane)

Figure OI-32



Remove the locking pin (Item 1) [Figure OI-32].

Figure OI-33



Place the locking pin (Item 1) [Figure OI-33] in the storage position.

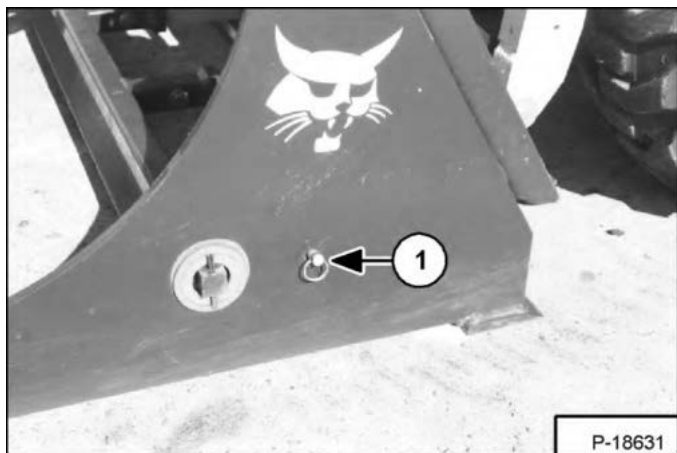
Move the chisel teeth to the forward or reverse operating position.

OPERATING PROCEDURE FOR LOADER/SERVICE WORK MACHINE (CONT'D)

Grading With The Chisel Teeth In The Engaged Position (Cont'd)

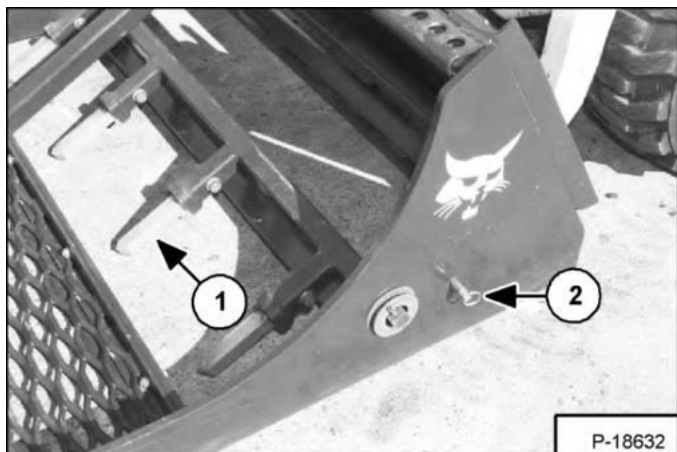
(48 inch (122 cm) landplane)

Figure OI-34



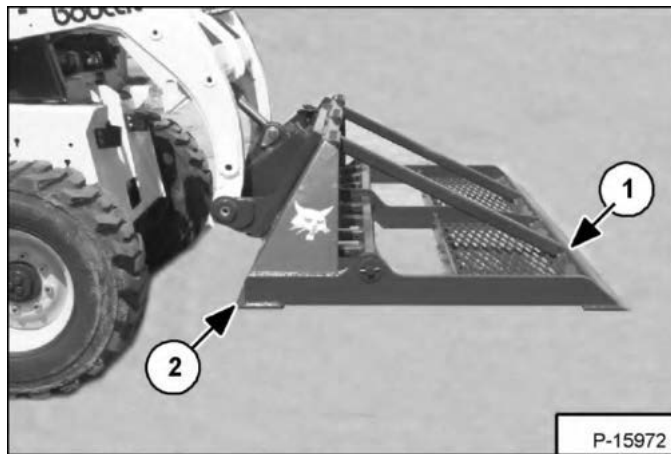
Remove the locking pin (Item 1) [Figure OI-34].

Figure OI-35



Move the chisel teeth (Item 1) [Figure OI-35] to the forwards or reverse operating position, and install the locking pin (Item 2) [Figure OI-35].

Figure OI-36



When operating the machine in reverse, leave the front cutting edge (Item 1) [Figure OI-36] on the ground and control the digging depth by raising or lowering the rear cutting edge (Item 2) [Figure OI-36].

When operating the machine in forward, leave the rear cutting edge (Item 2) [Figure OI-36] on the ground and control the digging depth by raising or lowering the front cutting edge (Item 1) [Figure OI-36].

OPERATING PROCEDURE FOR LOADER/SERVICE WORK MACHINE (CONT'D)

Levelling The Ground (Using Lift Arms In Float Position)

Loaders

(Foot Controls) To put the lift arms in a *float* position, push the top (toe) of the lift pedal fully forwards until the pedal is in the *float* position.

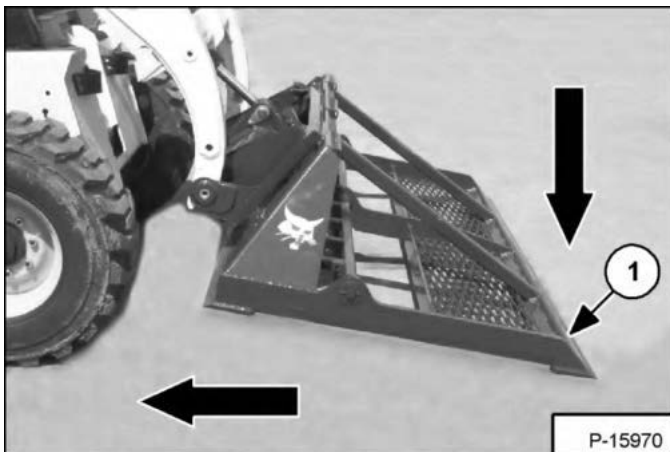
(Hand Controls) To put the lift arms in the *float* position, move the left lever fully towards the operator until it is in the *float* position.

(Hand Controls With Push Button Float) Press and hold the *Float Button* before moving the lever.

(Foot Controls) Push the tilt pedal to change the position of the front cutting edge.

(Hand Controls) Move the right lever to change the position of the front cutting edge.

Figure OI-37



With the Landplane tilted further forwards, there is more force on the front cutting edge (Item 1) **[Figure OI-37]** and more loose material can be moved.

Drive backwards to level loose material. Never drive forwards when the hydraulic control for the lift arms is in the *float* position.

(Foot Controls) To release from the *float* position, push the bottom (heel) of the lift pedal.

(Hand Controls) To release from the *float* position, move the left lever upward (away from the operator).

(Hand Controls With Push Button Float) To release from the *float* position, press the *Float Button*.

IMPORTANT

Never drive forwards when the hydraulic control for lift arms is in float position.

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Service Work Machine

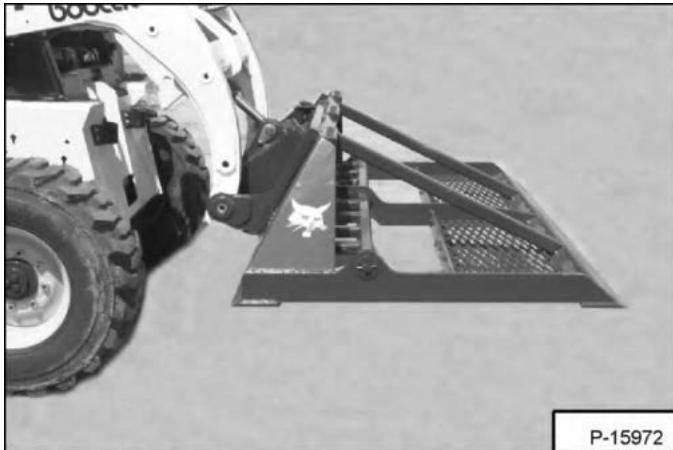
To put the lift arm in the *float* position, push the joystick fully forwards until it locks into the float position.

Pull the joystick backwards to raise the lift arm and release from the float position.

OPERATING PROCEDURE FOR LOADER/SERVICE WORK MACHINE (CONT'D)

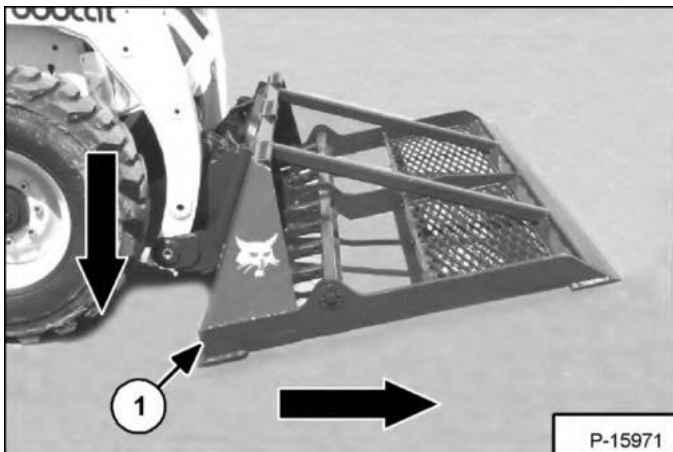
Levelling The Ground

Figure OI-38



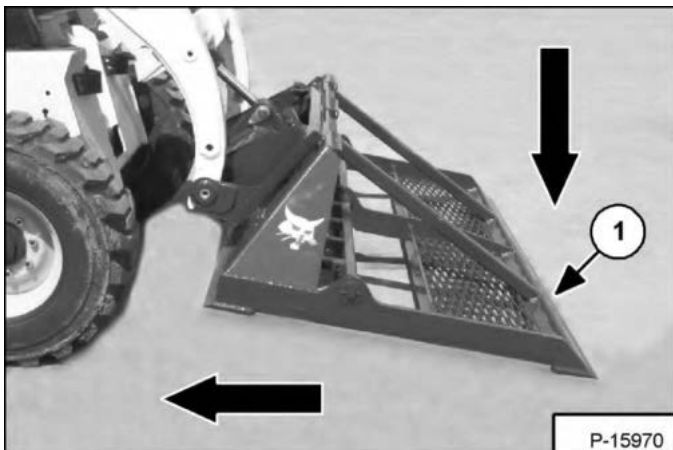
To level the ground when the lift arm(s) are not in the *float* position, raise the lift arm(s) and put the Landplane at the desired angle [Figure OI-38].

Figure OI-39



If driving forwards, tilt the Landplane so there is more pressure on the rear cutting edge (Item 1) [Figure OI-39] than on the front cutting edge.

Figure OI-40



If driving in reverse, tilt the Landplane so there is more pressure on the front cutting edge (Item 1) [Figure OI-40] than on the rear cutting edge.

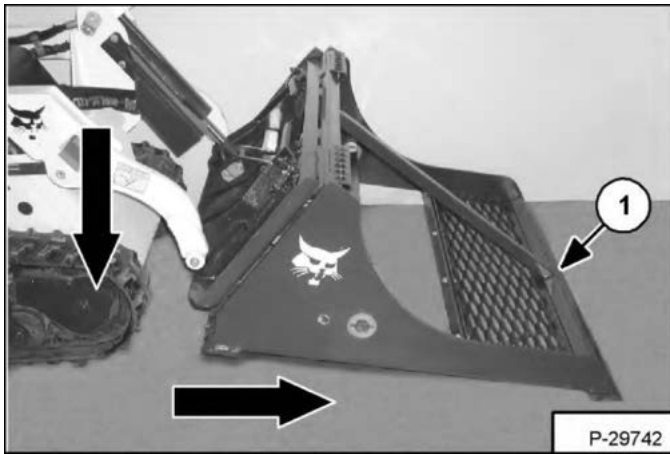
When grading in the forwards direction, the expanded metal grate will catch and hold rocks while allowing the soil to fall through the grating.

OPERATING PROCEDURE FOR MINI LOADERS

Cutting The Ground

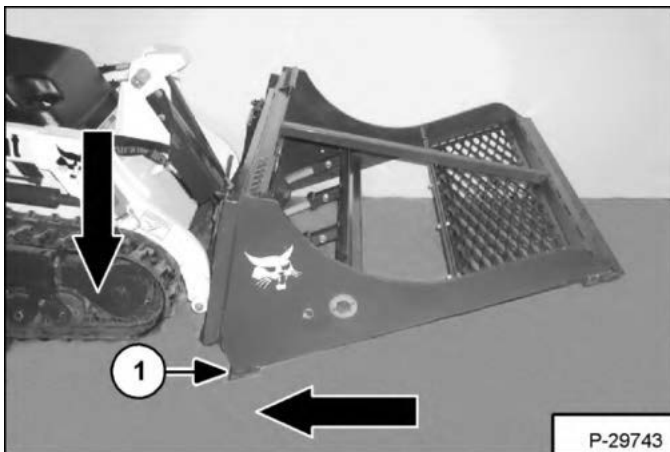
Raise the lift arms and put the Landplane at the desired angle.

Figure OI-41



If driving forwards, lower the lift arms until the front cutting edge (Item 1) [Figure OI-41] of the Landplane breaks through the surface.

Figure OI-42

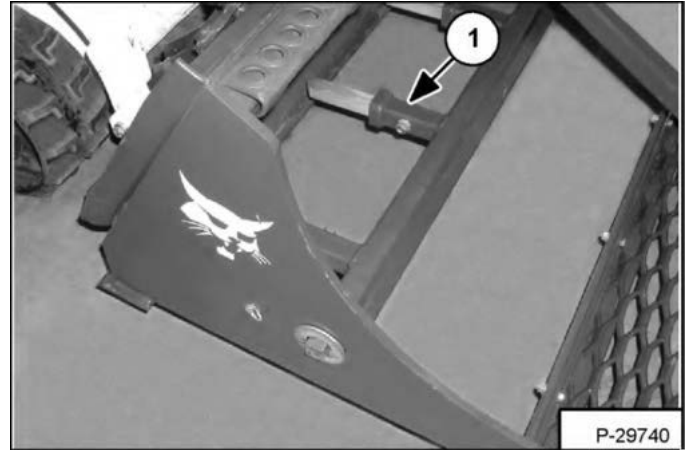


If operating in reverse, lower the lift arms until the rear cutting edge (Item 1) [Figure OI-42] of the Landplane breaks through the surface.

Use the lift and tilt functions of the mini loader to increase traction and cutting depth. Keep an even digging depth and obtain the desired grade angle.

Grading With The Chisel Teeth In The Engaged Position

Figure OI-43



When the chisel teeth (Item 1) [Figure OI-43] are engaged, they break up hard or compacted soil while the cutting edges level the soil.

Figure OI-44

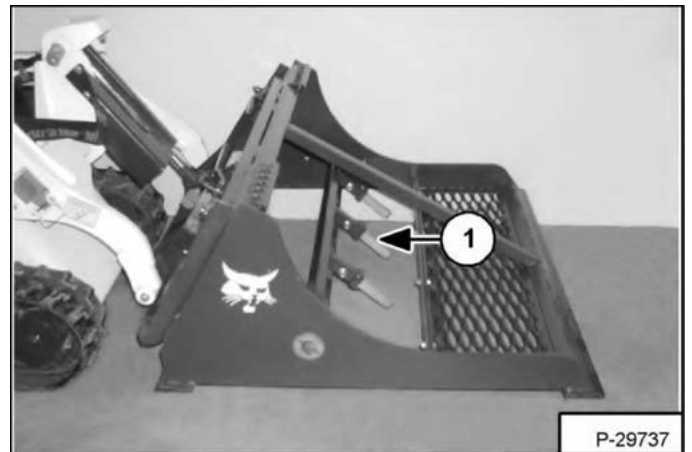
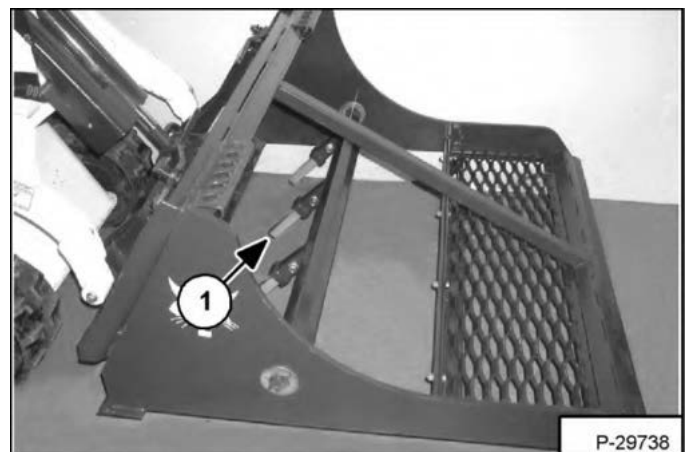


Figure OI-45

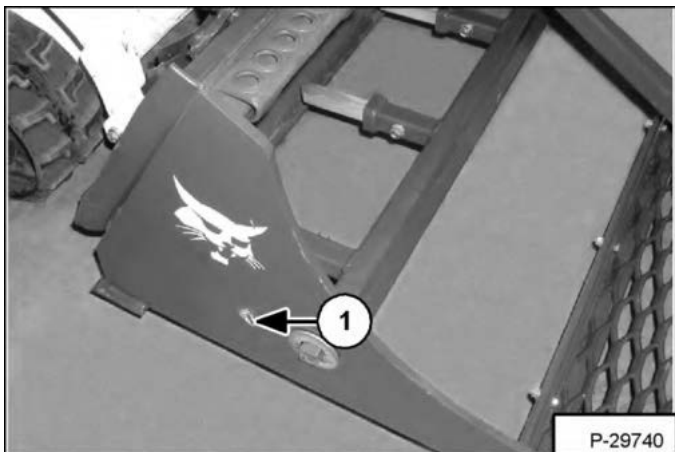


The chisel teeth (Item 1) [Figure OI-44] and [Figure OI-45] can be used in the forwards operating position [Figure OI-44], and reverse operating position [Figure OI-45].

OPERATING PROCEDURE FOR MINI LOADERS (CONT'D)

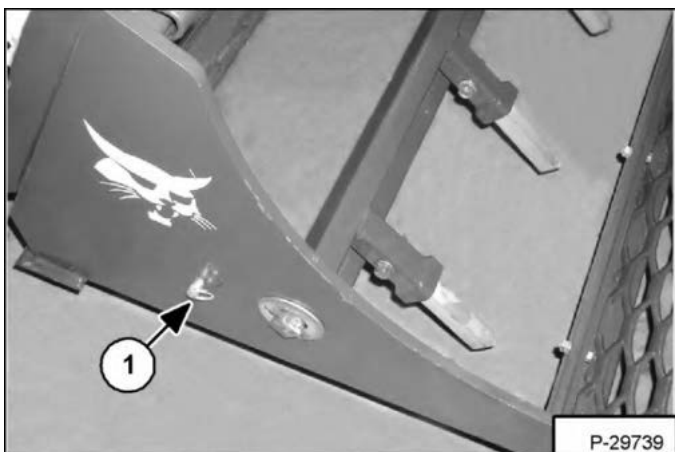
Grading With The Chisel Teeth In The Engaged Position (Cont'd)

Figure OI-46



Remove the locking pin (Item 1) [Figure OI-46].

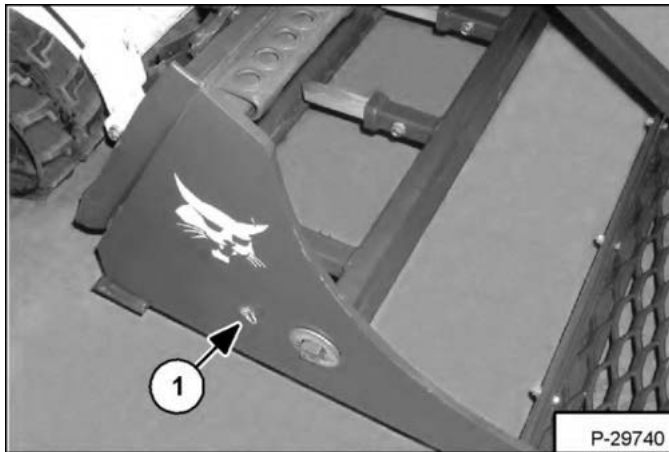
Figure OI-47



Place the locking pin (Item 1) [Figure OI-47] in the storage position.

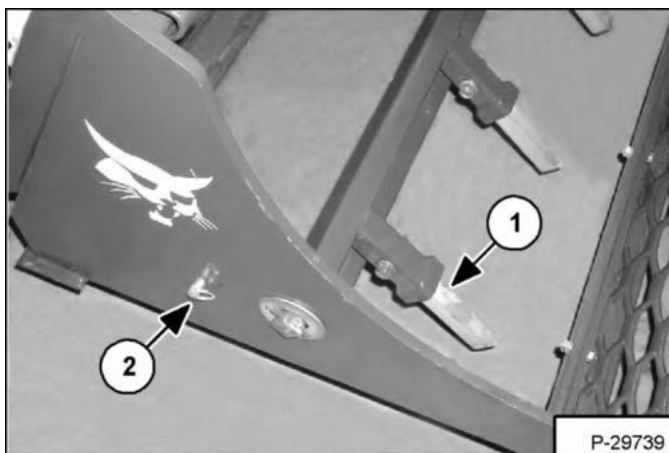
Move the chisel teeth to the forwards or reverse operating position.

Figure OI-48



Remove the locking pin (Item 1) [Figure OI-48].

Figure OI-49

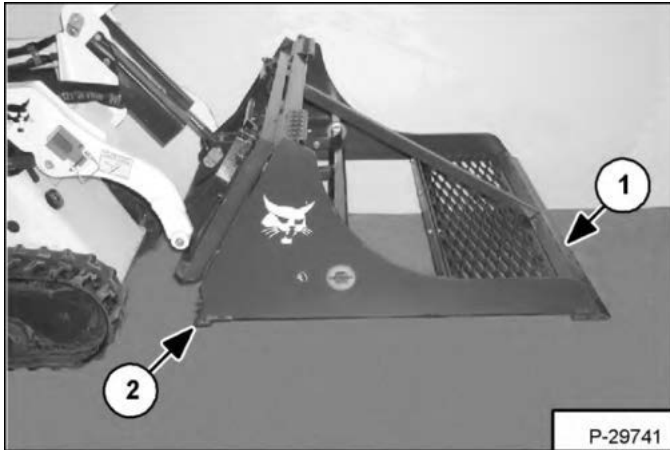


Move the chisel teeth (Item 1)[Figure OI-49] to the forwards or reverse operating position, and install the locking pin (Item 2) [Figure OI-49].

OPERATING PROCEDURE FOR MINI LOADERS (CONT'D)

Grading With The Chisel Teeth In The Engaged Position (Cont'd)

Figure OI-50



When operating the mini loader in reverse, leave the front cutting edge (Item 1) [Figure OI-50] on the ground and control the digging depth by raising or lowering the rear cutting edge (Item 2) [Figure OI-50].

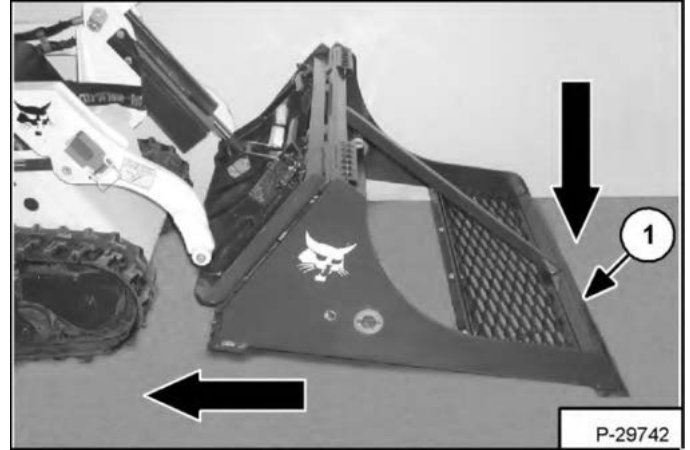
When operating the mini loader in forwards, leave the rear cutting edge (Item 2) [Figure OI-50] on the ground and control the digging depth by raising or lowering the front cutting edge (Item 1) [Figure OI-50].

Levelling The Ground (Using Lift Arms In Float Position)

To put the lift arms in a *float* position, push the lift arm lever fully forward away from the operator.

Move the tilt lever forwards to change position of the front cutting edge.

Figure OI-51



With the Landplane tilted further forward, there is more force on the front cutting edge (Item 1) [Figure OI-51] and more loose material can be moved.

Drive backwards to level loose material. Never drive forwards when the hydraulic control for the lift arms is in the *float* position.

To release the *float* position, pull the lift arm lever toward the operator, to the neutral position.

IMPORTANT

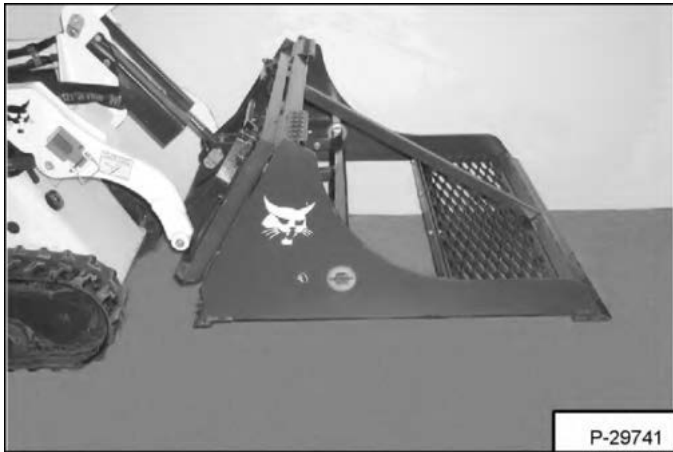
Never drive forwards when the hydraulic control for lift arms is in float position.

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OPERATING PROCEDURE FOR MINI LOADERS (CONT'D)

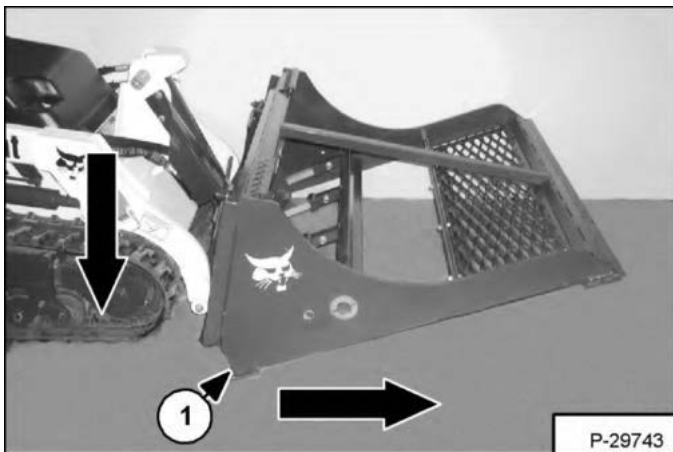
Levelling The Ground

Figure OI-52



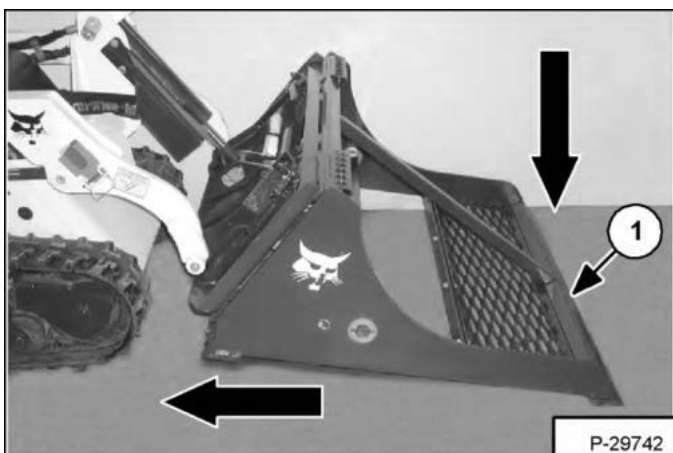
To level the ground when the lift arms are not in the *float* position, raise the lift arms and put the Landplane at the desired angle [Figure OI-52].

Figure OI-53



If driving forwards, tilt the Landplane so there is more pressure on the rear cutting edge (Item 1) [Figure OI-53] than on the front cutting edge.

Figure OI-54



If driving in reverse, tilt the Landplane so there is more pressure on the front cutting edge (Item 1) [Figure OI-54] than on the rear cutting edge.

When grading in the forwards direction, the expanded metal grate will catch and hold rocks while allowing the soil to fall through the grating.

TRANSPORTING THE LANDPLANE

Lifting The 48 Inch (122 cm) Landplane

NOTE: Use chains that are in good condition and of adequate size to lift the attachment.

Figure OI-55

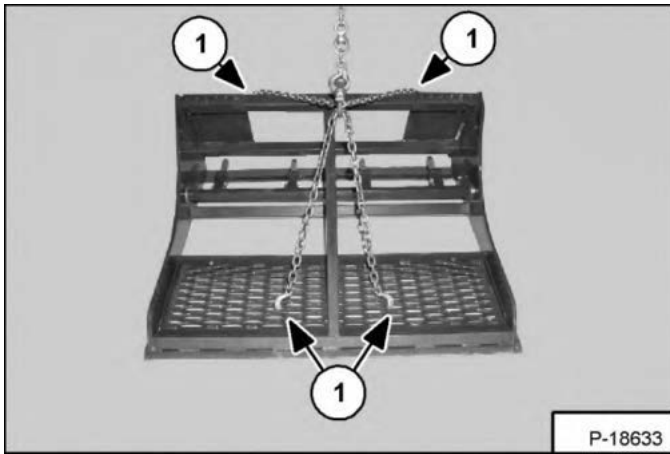


Figure OI-56

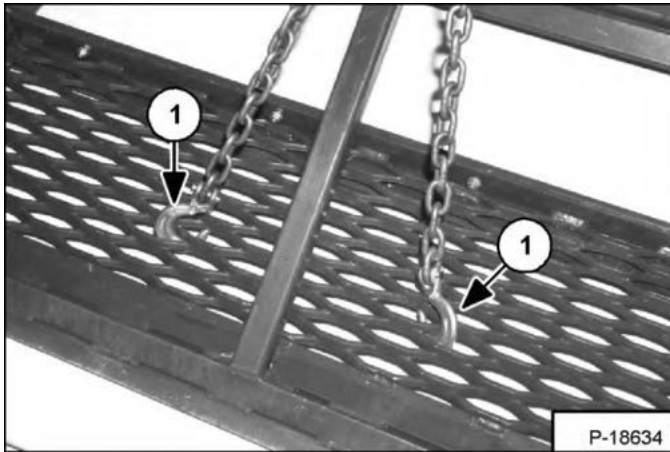
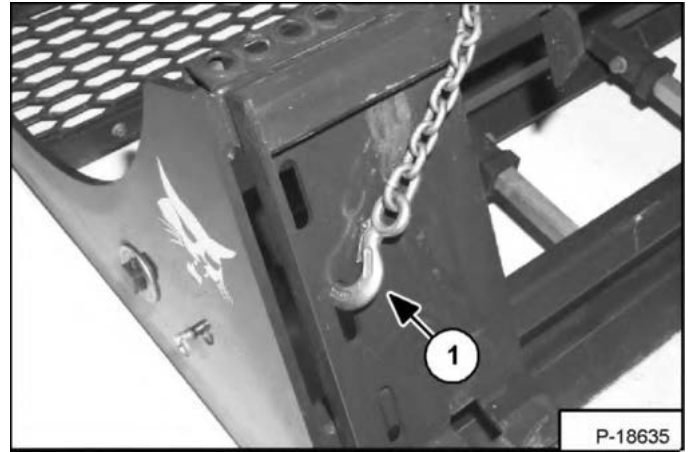


Figure OI-57



Attach the chains (Item 1) [Figure OI-55], [Figure OI-56] and [Figure OI-57] to the Landplane rear frame and the expanded metal (close to the frame).

When attaching chains to a landplane that does not have the expanded metal grating installed, the landplane will need to be lifted and blocked under the front cutting edge. The front chain will then need to be wrapped around the front cutting edge and secured.

When positioning the landplane onto a transportation vehicle, block the front cutting edge up. After the chains have been removed, raise the landplane and remove the blocks before securing the landplane to the transportation vehicle.

TRANSPORTING THE LANDPLANE (CONT'D)

Lifting The 72 Inch (183 cm) And 78 Inch (198 cm) Landplane

NOTE: Use chains that are in good condition and of adequate size to lift the attachment.

Figure OI-58

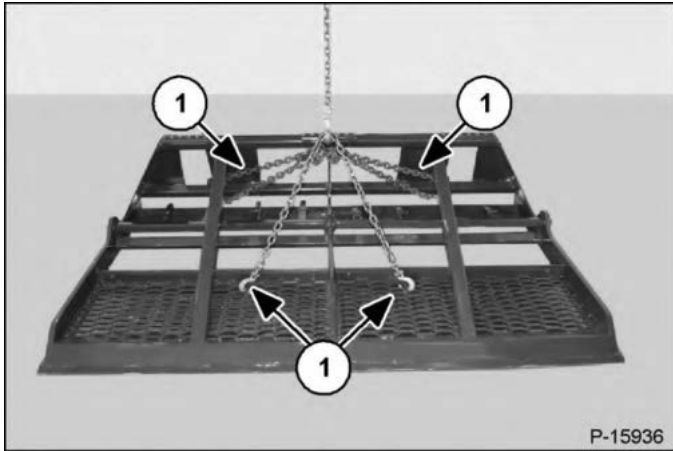


Figure OI-59

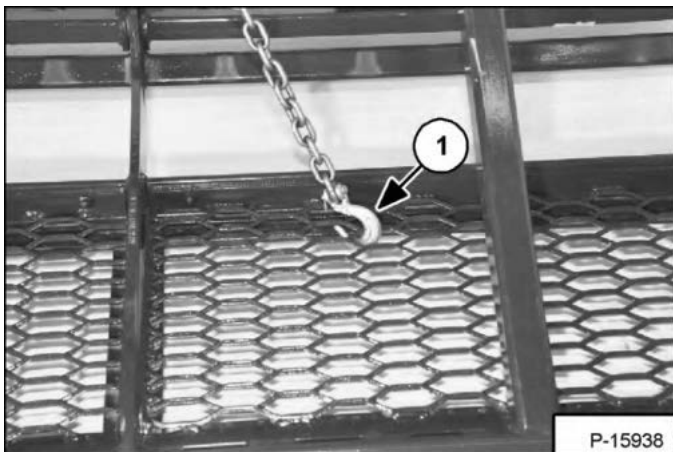
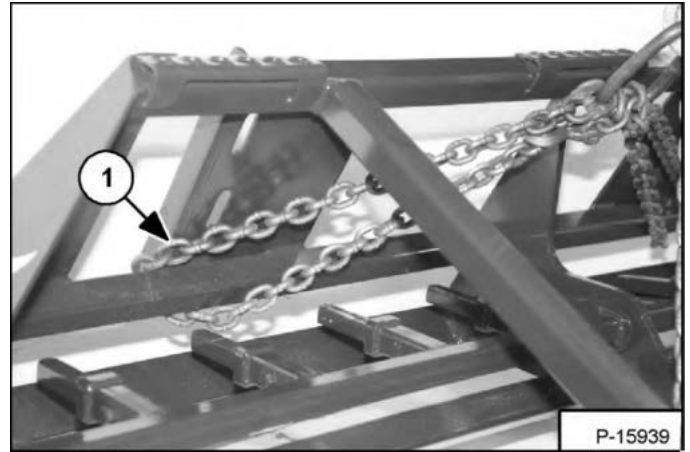


Figure OI-60



Attach the chains (Item 1) [Figure OI-58], [Figure OI-59] and [Figure OI-60] to the Landplane rear frame and the expanded metal (close to the frame).

When attaching chains to a landplane that does not have the expanded metal grating installed, the landplane will need to be lifted and blocked under the front cutting edge. The front chain will then need to be wrapped around the front cutting edge and secured.

When positioning the landplane onto a transportation vehicle, block the front cutting edge up. After the chains have been removed, raise the landplane and remove the blocks before securing the landplane to the transportation vehicle.

TRANSPORTING THE LANDPLANE (CONT'D)

Attaching The Landplane To The Transportation Vehicle

Figure OI-61

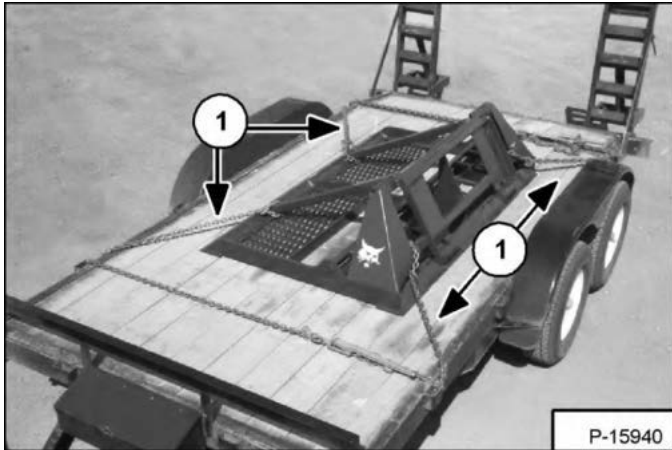


Figure OI-62

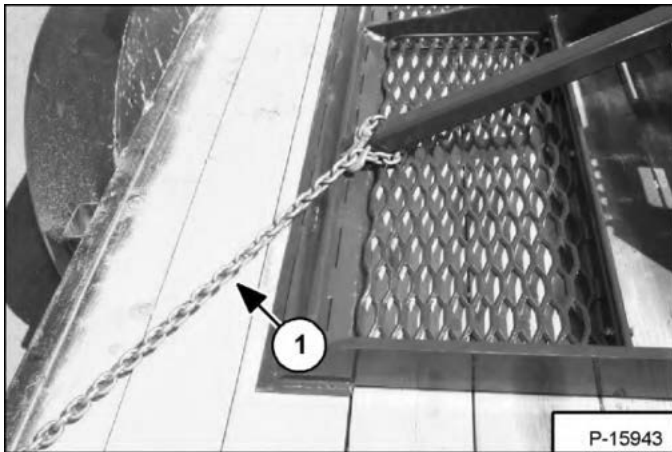
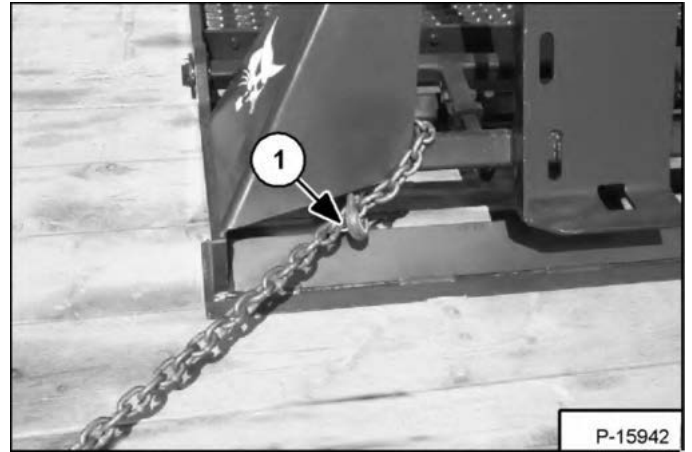


Figure OI-63



Attach the chains (Item 1) [Figure OI-61], [Figure OI-62] and [Figure OI-63] to the Landplane frame.

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

See the correct machine Operation and Maintenance Manual for TRANSPORTING THE BOBCAT MACHINE to properly chain the machine to the transportation vehicle.

TRANSPORTING THE LANDPLANE (CONT'D)

Loading The Landplane

WARNING

Adequately designed ramps of sufficient strength are needed to support the weight of the machine when loading onto a transportation vehicle. Wooden ramps can break and cause personal injury.

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Install chains at the rear tie down positions [Figure OI-65].

Attach each end of the chain to the transportation vehicle.

Use chain binders to prevent the loader from moving during transportation.

Figure OI-64



With the Landplane attached to the loader/service work machine, drive the machine onto the transportation vehicle in a forwards direction (Landplane first) [Figure OI-64].

The rear of the trailer must be blocked or supported when loading or unloading the machine to prevent the front end of the trailer from rising up.

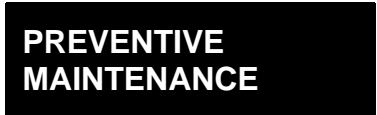
Be sure the transportation and towing vehicles are of adequate size and capacity.

Figure OI-65



PREVENTIVE MAINTENANCE

CHISEL TEETH	29
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Removal And Installation.	30
GRADING SCREEN	31
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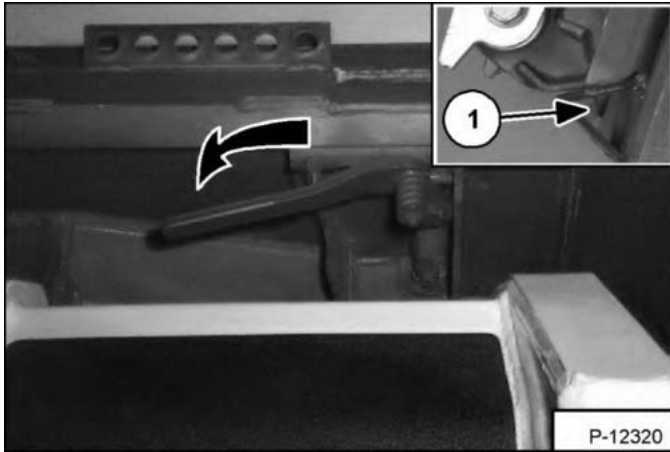


Bobcat®

INSPECTION

Hand Lever Bob-Tach Inspection

Figure PM-1



Move the Bob-Tach levers to engage the wedges [Figure PM-1]. The levers and wedges must move freely.

The wedges must extend through the holes in the attachment mounting frame (Item 1) [Figure PM-1].

WARNING

Bob-Tach wedges must extend through the holes in attachment. Lever(s) must be fully down and locked. If the wedges are not secured, the attachment can become separated, resulting in injury or death.

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Figure PM-2

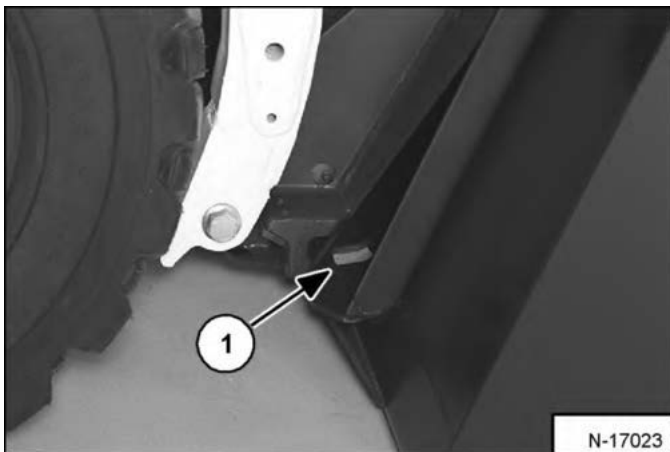
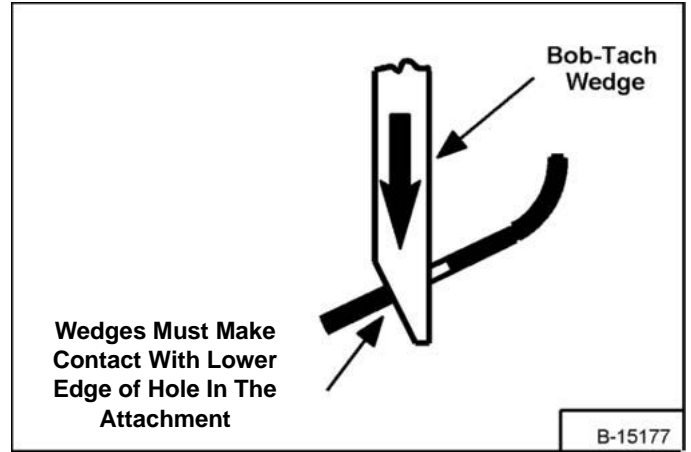


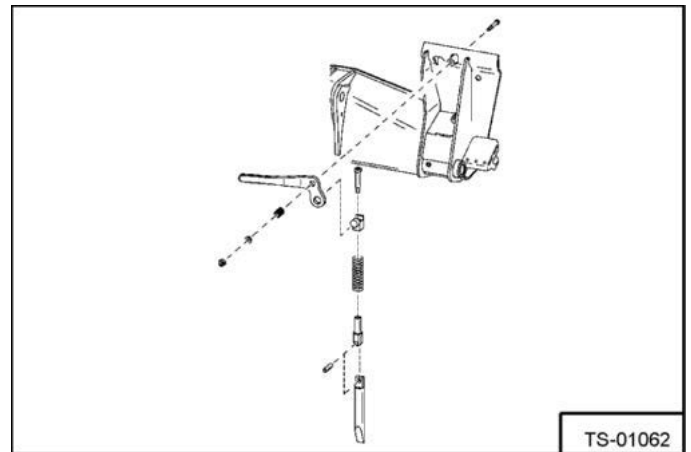
Figure PM-3



The spring loaded wedge (Item 1) [Figure PM-3] must make contact with the lower edge of the hole in the attachment (Item 1) [Figure PM-2] and [Figure PM-3].

If the wedge does not make contact with the lower edge of the hole [Figure PM-2] and [Figure PM-3], the attachment will become loose and can become detached from the Bob-Tach.

Figure PM-4



Inspect the mounting frame on the attachment and the Bob-Tach, links and wedges for excessive wear or damage [Figure PM-4]. Replace any parts that are damaged, bent, or missing. Keep all connections tight.

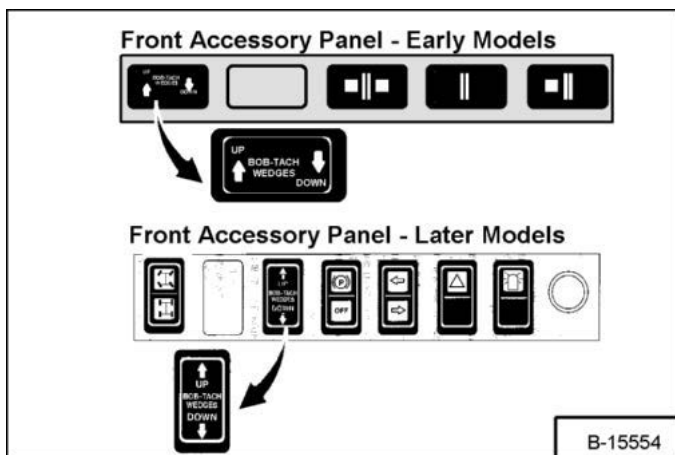
Check for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges (See the correct loader/service work machine Service Manual for *LUBRICATION OF THE BOBCAT MACHINE*).

INSPECTION (CONT'D)

Power Bob-Tach Inspection

Figure PM-5



Push and hold the Bob-Tach "Wedges Up" switch [Figure PM-5] until wedges are fully raised. Push and hold the Bob-Tach "Wedges Down" switch [Figure PM-5] until the wedges are fully down. The wedges must move freely.

Figure PM-6

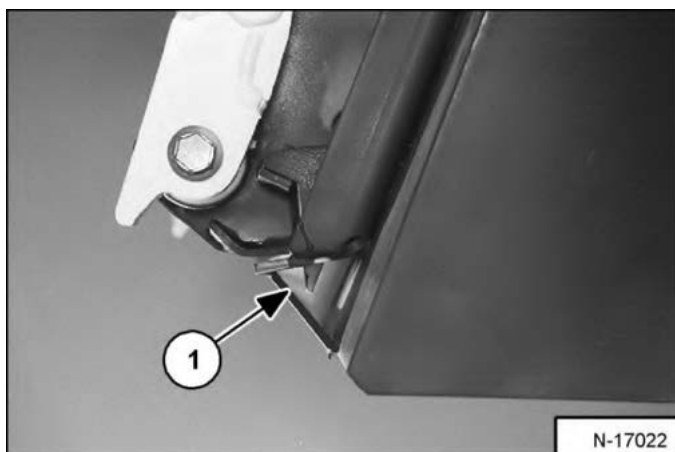
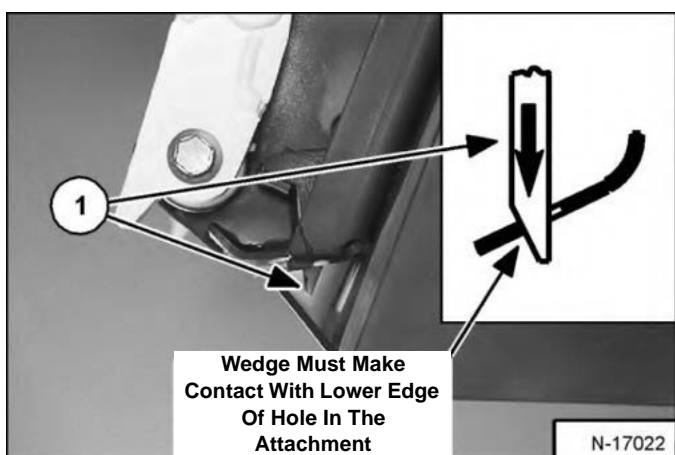


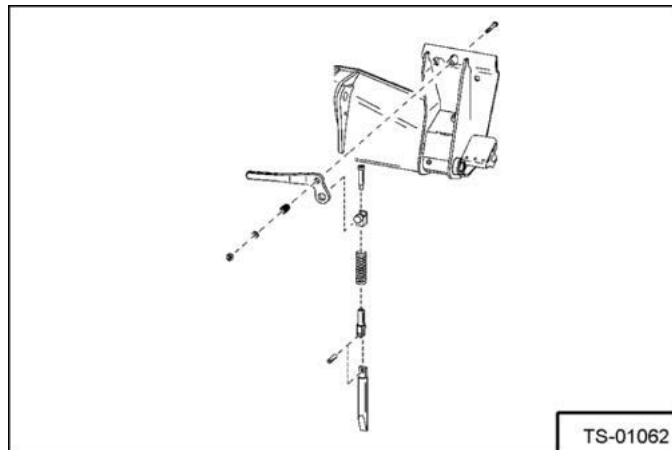
Figure PM-7



The wedges must extend through the holes in the attachment mounting frame (Item 1) [Figure PM-6] and must make contact with the lower edge of the hole in the attachment [Figure PM-6] and (Item 1) [Figure PM-7].

If the wedge does not make contact with the lower edge of the hole [Figure PM-7] the attachment will be loose and can become detached from the Bob-Tach.

Figure PM-8



Inspect the mounting frame on the attachment and the Bob-Tach, links and wedges for excessive wear or damage [Figure PM-8]. Replace any parts including stickers and lever that are damaged, bent or missing. Keep all connections tight. Inspect the hoses and fittings for leaks.

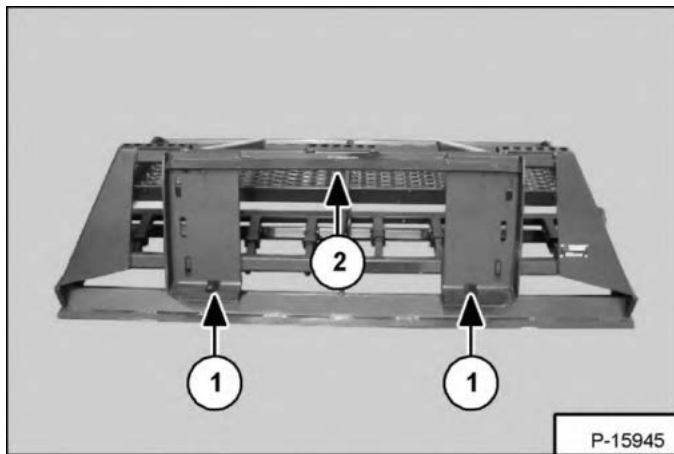
Check for cracked welds. Contact your Bobcat Dealer for repair or replacement parts.

Lubricate the wedges. (See the correct loader Service Manual for *LUBRICATION OF THE BOBCAT LOADER*.)

INSPECTION (CONT'D)

Landplane Mount Inspection

Figure PM-9

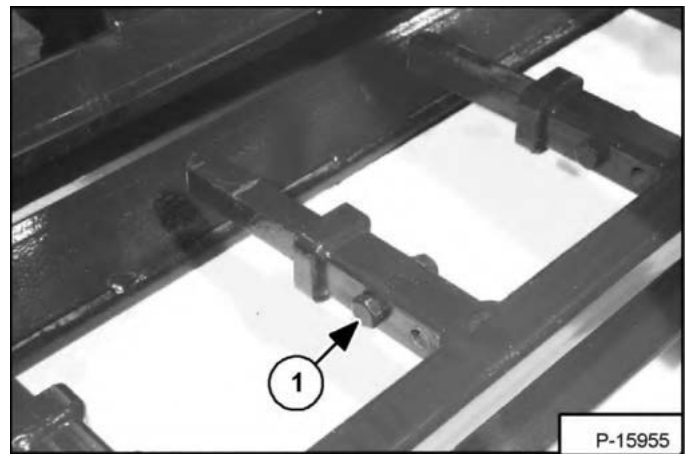


Inspect the Bob-Tach wedge mounts (Item 1) [Figure PM-9], mounting flange (Item 2) [Figure PM-9], and all welds on the Landplane mount for wear and damage each time the Landplane is removed from the loader.

CHISEL TEETH

Removal And Installation

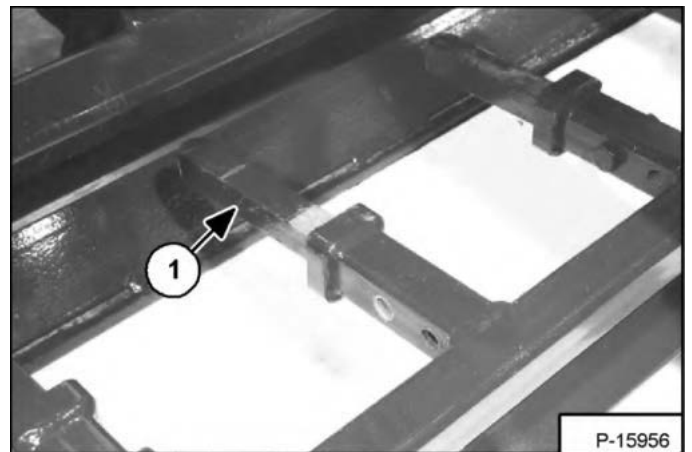
Figure PM-10



Remove the bolt (Item 1) [Figure PM-10] and nut.

Installation: Tighten the nut and bolt to 88-95 Nm torque.

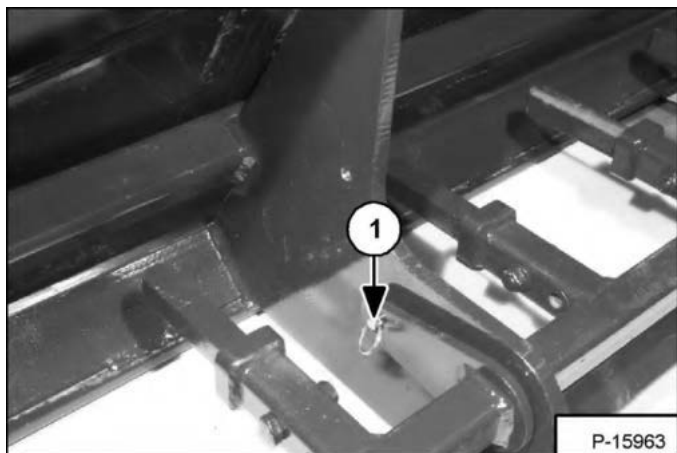
Figure PM-11



Remove the tooth (Item 1) [Figure PM-11].

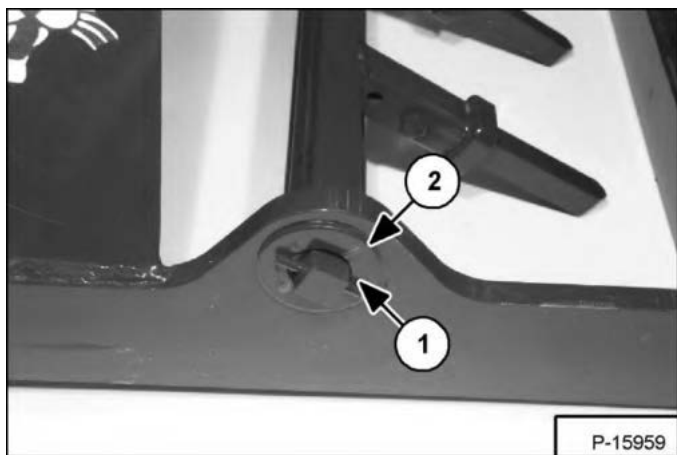
CHISEL TEETH MOUNT Removal And Installation

Figure PM-12



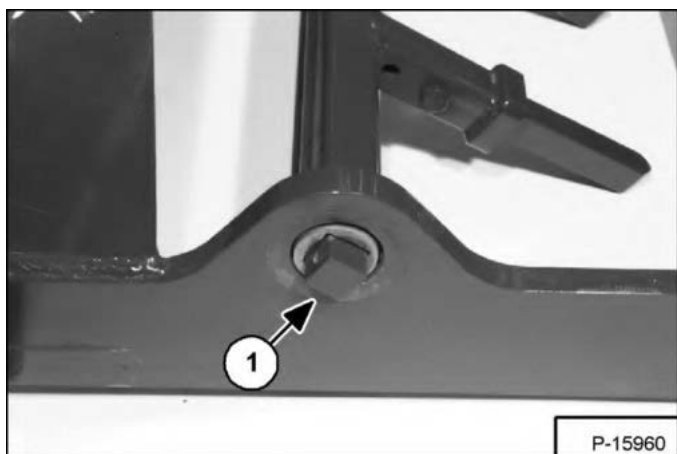
Remove the locking pin (Item 1) [Figure PM-12].

Figure PM-13



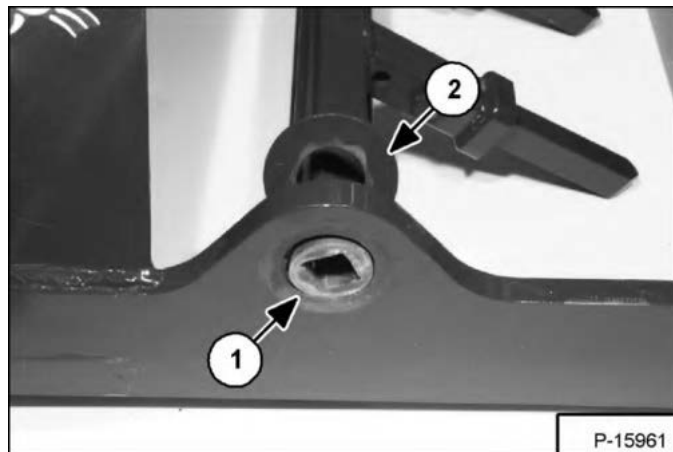
Remove the roll pin (Item 1) [Figure PM-13] and washer (Item 2) [Figure PM-13].

Figure PM-14



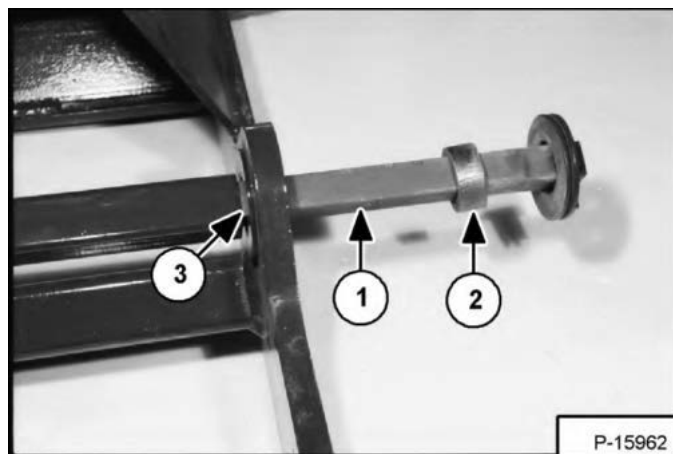
Slide the square shaft (Item 1) [Figure PM-14] into the housing.

Figure PM-15



Remove the bushing (Item 1) [Figure PM-15] and inside washer (Item 2) [Figure PM-15].

Figure PM-16



Remove the square shaft (Item 1) [Figure PM-16], bushing (Item 2) [Figure PM-16] and inside washer (Item 3) [Figure PM-16].

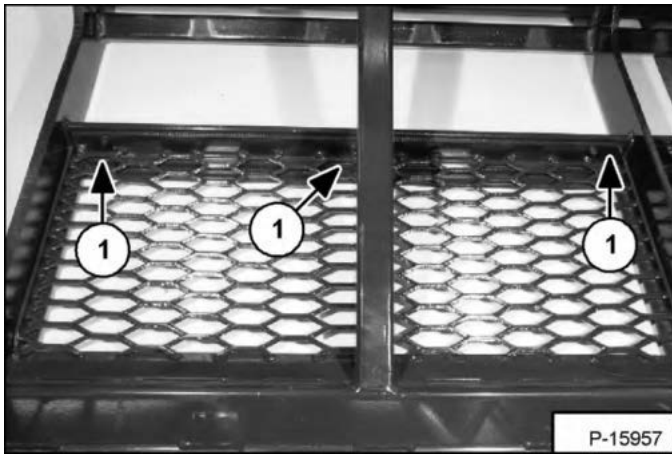
Remove the two chisel teeth mounts.

GRADING SCREEN

Removal And Installation

NOTE: The 72 inch (183 cm) and 78 inch (198 cm) Landplane are equipped with two grading screens. The 48 inch (122 cm) Landplane is equipped with one grading screen. The Grading Screen Removal And Installation is shown on the 78 inch (198 cm) Landplane. The procedure is the same for the 48 inch (122 cm) and 72 inch (183 cm) Landplanes.

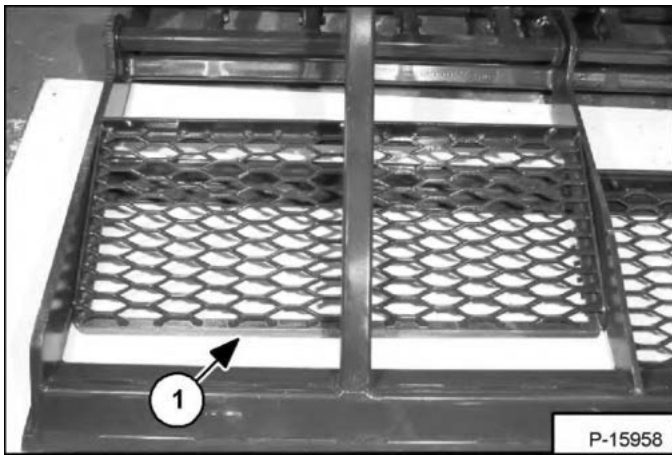
Figure PM-17



Remove the three bolts and nuts (Item 1) [Figure PM-17].

Installation: Tighten the bolts and nuts to 34-38 Nm torque.

Figure PM-18



Lift up on the screen (Item 1) [Figure PM-18] and move the screen towards the rear of the Landplane.

Remove the grading screen.



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SPECIFICATIONS

SPECIFICATIONS	35
48 Inch (122 cm) Landplane	35
72 Inch (183 cm) Landplane	36
78 Inch (198 cm) Landplane	36

SPECIFICATIONS

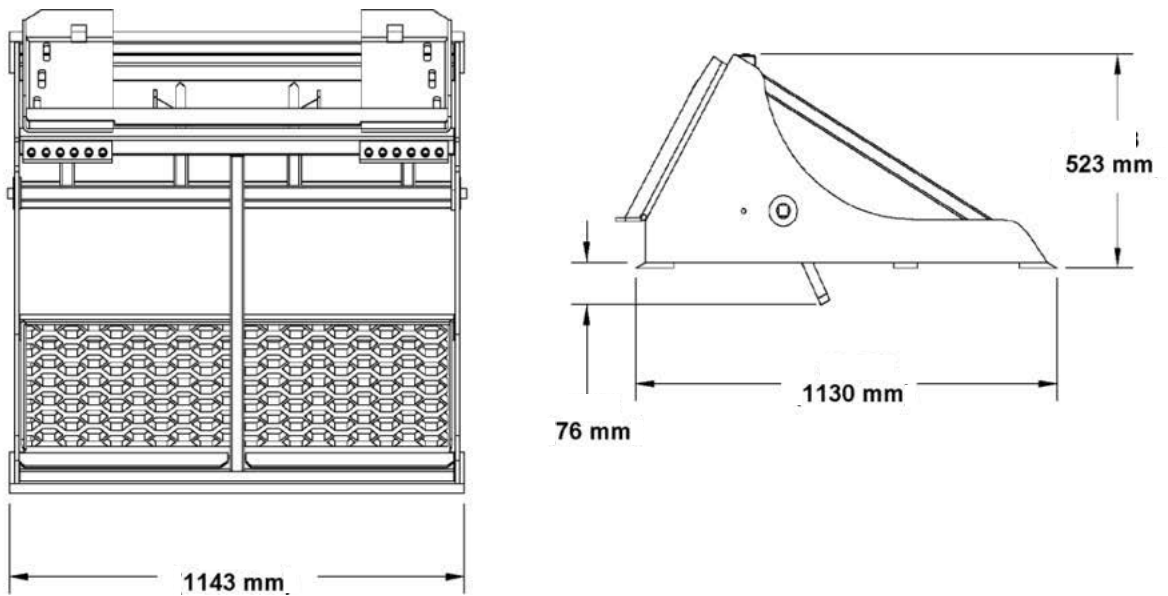


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SPECIFICATIONS

48 Inch (122 cm) Landplane

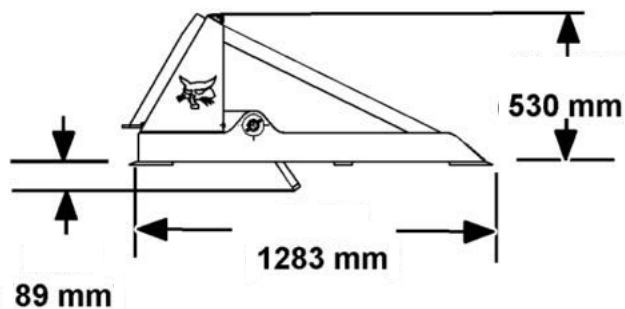
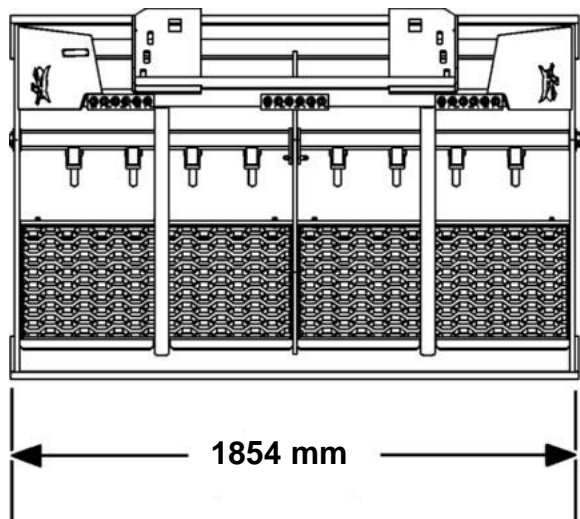
- All dimensions are shown in millimetres.
- Where applicable, specifications conform to **ISO** standards and are subject to change without notice.



Overall Attachment Width	1143 mm
Length	1130 mm
Height	523 mm
Weight	177 kg
Chisel Teeth Working Depth	76 mm

72 Inch (183 cm) Landplane

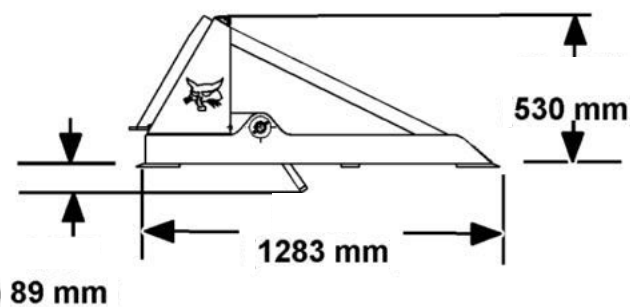
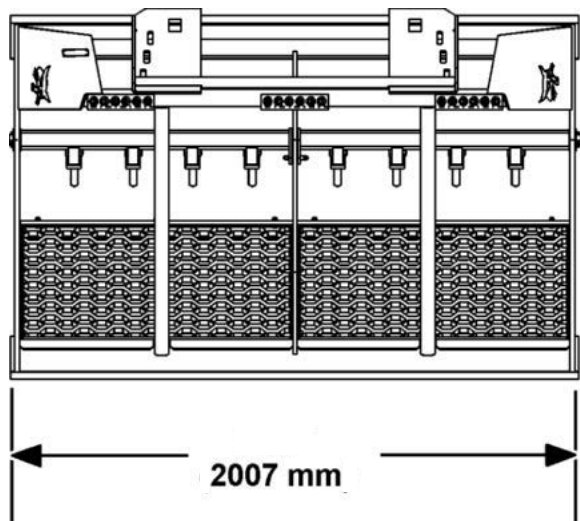
- All dimensions are shown in millimetres.
- Where applicable, specifications conform to **ISO** standards and are subject to change without notice.



Overall Attachment Width	1854 mm
Length	1283 mm
Height	530 mm
Weight	286 kg
Chisel Teeth Working Depth	89 mm

78 Inch (198 cm) Landplane

- All dimensions are shown in millimetres.
- Where applicable, specifications conform to **ISO** standards and are subject to change without notice.



Overall Attachment Width	2007 mm
Length	1283 mm
Height	530 mm
Weight	318 kg
Chisel Teeth Working Depth	89 mm

WARRANTY

Bobcat Attachments

Bobcat Europe warrants to its authorized dealer and authorized dealers of Bobcat, Ltd., who in turn warrants to the original buyer (owner) that each Bobcat attachment will be free from proven defects in material and workmanship for twelve months after delivery to the original buyer (owner).

During the warranty period, the authorized selling Bobcat dealer shall repair or replace, at his option, without charge for parts, labor and travel time of mechanics any part of the Bobcat product which fails because of defects in material and workmanship. The owner shall provide the authorized dealer with prompt written notice of the defect and allow reasonable time for replacement or repair. Bobcat Europe may, at its option, request that failed parts to be returned to the factory. Transportation of the Bobcat product to the authorized Bobcat attachment dealer for warranty work is the responsibility of the owner.

Warranty does not cover replacement of scheduled service items and/or high wear items. The warranty does not cover damages resulting from abuse, accidents, alterations, use of the Bobcat product as an attachment on any equipment not approved by Bobcat Europe, air flow obstructions, or failure to maintain or use the Bobcat product according to the instructions applicable to it.

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