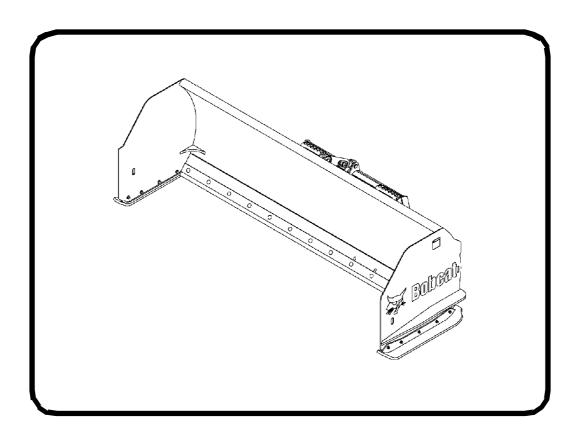




Operation & Maintenance Manual Snow Pusher

(Snow Pusher 94) S/N A01500101 & Above (Snow Pusher 94R) S/N AV5V00101 & Above (Snow Pusher 120) S/N A01T00101 & Above (Snow Pusher 120R) S/N AV5U00101 & Above





CONTENTS

Bobcat Company P.O. Box 128 Gwinner, ND 58040-0128 UNITED STATES OF AMERICA Doosan Bobcat EMEA s.r.o. U Kodetky 1810 263 12 Dobris CZECH REPUBLIC



FOREWORD

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

DECLARATION OF CONFORMITY EU	. 5
DECLARATION OF CONFORMITY UK	. 7
BOBCAT COMPANY IS ISO 9001 CERTIFIED	. 9
SERIAL NUMBER LOCATIONS	11 11
DELIVERY REPORT	11
ATTACHMENT IDENTIFICATION	12
FEATURES AND ACCESSORIES	13 13



Declaration of Conformity for Interchangeable Equipment

Directive 2006/42/EC of the European Parliament and of The Council "Machinery Directive Article 1(1)(b)"

Manufacturer



Bobcat Company
World Headquarters
250 East Beaton Drive
West Fargo, ND 58078-6000
UNITED STATES OF AMERICA

Technical Documentation

Doosan Bobcat EMEA s.r.o. Homologation Manager U Kodetky 1810 26312 Dobříš CZECH REPUBLIC Equipment Also Compliant to Other EC Directive(s) or Standard(s) Listed Below:

Description of Equipment

Type of Interchangeable Equipment:	Snow Pusher			
Model Name: Model Code:	Snowpusher 94	Snowpusher 94R	Snowpusher 120	Snowpusher 120R
	A01500101	AV5V00101	A01T00101	AV5U00101
Lot Series:	& above	& above	& above	& above

Declaration of Conformance

This equipment conforms to the requirements of an interchangeable equipment as specified in Machinery Directive 2006/42/EC Article1(1)(b) and any other directives listed. This declaration applies exclusively to the interchangeable equipment and does not include any hydraulic, electrical or mechanical adaptation done by the installer. Installation shall be done in accordance with instructions and specifications included in this manual.

Authorized Signatory and Place of Declaration

Troy Kraft

Vice President Engineering

90 gr

Date: February 17, 2012

Place: Bismarck, North Dakota, USA



UK Declaration of Conformity for Interchangeable Equipment

Supply of Machinery (Safety) Regulations 2008 Paragraph 3(b)

Manufacturer



Bobcat Company World Headquarters 250 East Beaton Drive West Fargo, ND 58078-6000 UNITED STATES OF AMERICA

Technical Documentation

Homologation Manager Doosan Bobcat EMEA s.r.o. U Kodetky 1810 26312 Dobříš CZECH REPUBLIC Equipment Also Compliant to Other UK Regulations(s) or Standard(s) Listed Below:

Description of Equipment

Type of Interchangeable Equipment:	Snow Pusher			
Model Name: Model Code:	Snowpusher 94	Snowpusher 94R	Snowpusher 120	Snowpusher 120R
Lot Series:	A01500101 & above	AV5V00101 & above	A01T00101 & above	AV5U00101 & above

Declaration of Conformance

This equipment conforms to the requirements of an interchangeable equipment as specified in Supply of Machinery (Safety) Regulations 2008, paragraph 3(b), and any other regulations listed. This declaration applies exclusively to the interchangeable equipment and does not include any hydraulic, electrical or mechanical adaptation done by the installer. Installation shall be done in accordance with instructions and specifications included in this manual.

Authorized Signatory and Place of Declaration

Troy Kraft

Vice President Engineering

Oray degree

Date: February 17, 2012

Place: Bismarck, North Dakota, USA



BOBCAT COMPANY IS ISO 9001 CERTIFIED







ISO 9001 is an international standard that specifies requirements for a quality management system that controls the processes and procedures which we use to design, develop, manufacture, and distribute Bobcat products.

British Standards Institute (**BSI**) is the Certified Registrar Bobcat Company chose to assess the company's compliance with the ISO 9001 at Bobcat's manufacturing facilities in Gwinner, North Dakota (U.S.A.), Pontchâteau (France), and the Bobcat corporate offices (Gwinner, Bismarck, and West Fargo) in North Dakota. **TÜV Rheinland** is the Certified Registrar Bobcat Company chose to assess the company's compliance with the ISO 9001 at Bobcat's manufacturing facility in Dobris (Czech Republic). Only certified assessors, like BSI and TÜV Rheinland, can grant registrations.

ISO 9001 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.



SERIAL NUMBER LOCATIONS

Attachment Serial Number

Figure 1

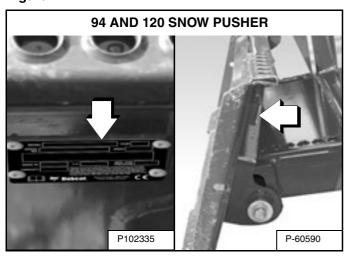


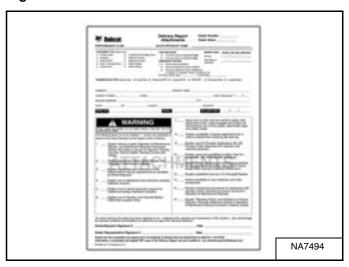
Figure 2



Always use the serial number of the snow pusher when requesting service information or when ordering parts. Earlier 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] or [Figure 2].

DELIVERY REPORT

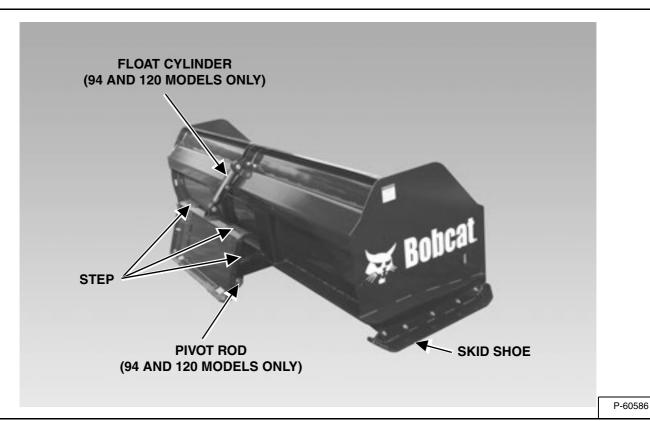
Figure 3

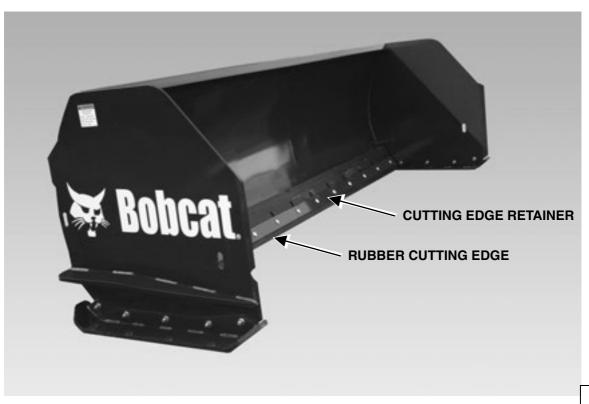


The delivery report [Figure 3] contains a list of items that must be explained or shown to the owner or operator by the dealer when the Bobcat snow pusher is delivered.

The delivery report must be reviewed and signed by the owner or operator and the dealer.

ATTACHMENT IDENTIFICATION





12

P-60587

FEATURES AND ACCESSORIES

Standard Items

The snow pusher is equipped with the following Standard Items:

- Floating Blade (only 94 and 120 snow pushers)
- Oscillating Blade (only 94 and 120 snow pushers)
- Rubber Cutting Edge.

Options And Accessories

Below is a list of Options and Accessories available for the snow pusher. See your Bobcat dealer for other available options and accessories.

Polyurethane Cutting Edge



SAFETY AND TRAINING RESOURCES

SAFETY INSTRUCTIONS	17
Safe Operation Is The Operator's Responsibility	17
Safe Operation Needs A Qualified Operator	
Use Safety Rules	
Avoid Silica Dust	
FIRE PREVENTION	19
Maintenance	
Operation	
Electrical	
Hydraulic System	
Fueling	
Starting	
Spark Arrester Exhaust System	
Welding And Grinding	
Fire Extinguishers	
PUBLICATIONS AND TRAINING RESOURCES	21
ATTACHMENT SIGNS (DECALS)	22
Pictorial Only Safety Signs	



SAFETY INSTRUCTIONS

Safe Operation Is The Operator's Responsibility



Safety Alert Symbol

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

WARNING

Operator must have instructions before operating the machine. Untrained operators can cause injury or death.

W-2001-0502

IMPORTANT

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

I-2019-0284

A DANGER

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

D-1002-1107

WARNING

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

W-2044-1107

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

Check all of the items on the Bobcat Service Schedule Decal under the 8-10 hour column 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 and the attachment.

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 & Maintenance Manual, Operator's Handbook, Safety Manual and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. For driving on public roads, the machine must be equipped as stipulated by the local regulations authorising operation on public roads in your specific country. Regulations may identify a hazard such as a utility line.

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.
- The new operator must start in an area without bystanders and use all the controls until he or she 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 which is very dense will be heavier than the same volume of less dense material. Reduce the size of load if handling dense material.
- The operator must know any prohibited uses or work areas, for example, he or she needs 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, respiratory equipment, hearing protection, Special Applications Kits or a Front Window Guard are required for some work. See your Bobcat dealer about Bobcat Safety equipment for your machine.

SI ATT EMEA-0817

SAFETY INSTRUCTIONS (CONT'D)

Use Safety Rules

- Read and follow instructions in the machine and the attachment's Operation & 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, transport, maintenance and storage of equipment.
- Check that the Bob-Tach® levers are in the locked position and the wedges are fully engaged into the holes of the attachment (if applicable).
- Check that the attachment is securely fastened 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.
- Operate the attachment according to the Operation & Maintenance Manual.
- When learning to operate the attachment, 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 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.
- Keep shields and guards in place. Replace if damaged.

Avoid Silica Dust



Cutting or drilling concrete containing sand or rock containing quartz may result in exposure to silica dust. 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 petrol or diesel fuel for cleaning parts. Use commercial non-flammable solvents.

Fueling



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. 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).

SI ATT EMEA-0817

FIRE PREVENTION (CONT'D)

Welding And Grinding

Always clean the machine and attachment, 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.

Dust generated from repairing non-metallic 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



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 Bobcat attachment. You can order from your Bobcat dealer.

For the latest information on Bobcat products and the Bobcat Company, visit our website at **Bobcat.eu**.



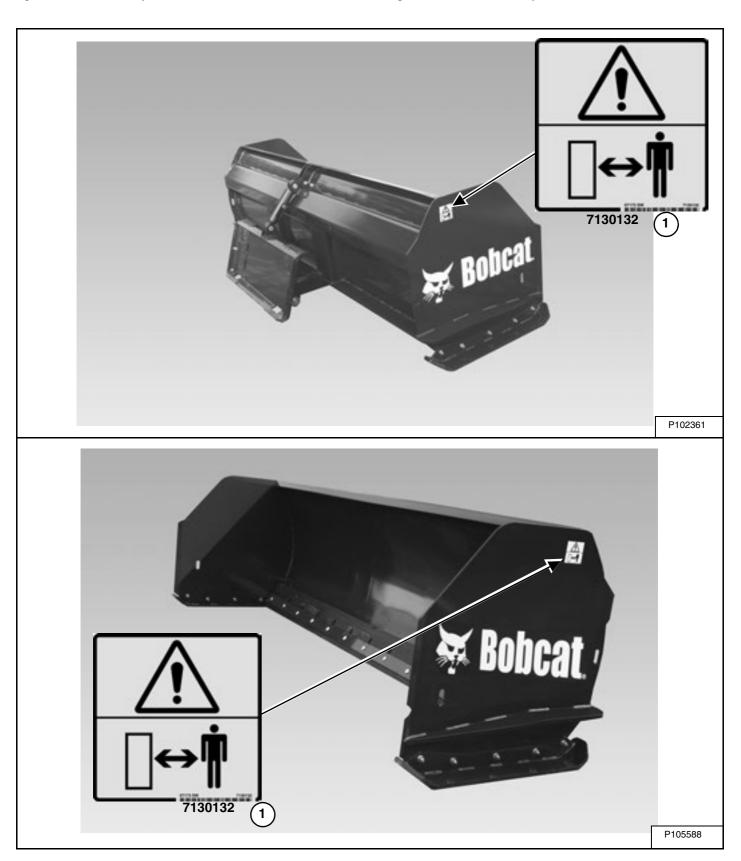
OPERATION & MAINTENANCE MANUAL

6904233

Complete instructions on the correct operation and the routine maintenance of the Bobcat Attachment.

ATTACHMENT SIGNS (DECALS)

Follow the instructions on all the Attachment Signs (Decals) that are on the attachment. Replace any damaged attachment signs and be sure they are in the correct locations. Attachment signs are available from your Bobcat attachment dealer.

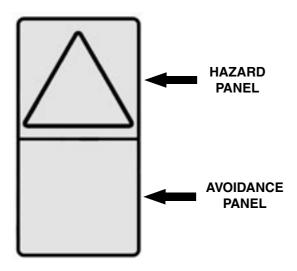


ATTACHMENT SIGNS (DECALS) (CONT'D)

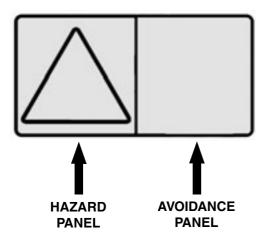
Pictorial Only Safety Signs

Safety signs are used to alert the equipment operator or maintenance person to hazards that may be encountered in the use and maintenance of the equipment. The location and description of the safety signs are detailed in this section. Please become familiarized with all safety signs installed on the machine / attachment.

Vertical Configuration



Horizontal Configuration



The format consists of the hazard panel(s) and the avoidance panel(s):

Hazard panels depict a potential hazard enclosed in a safety alert triangle.

Avoidance panels depict actions required to avoid the hazards.

A safety sign may contain more than one hazard panel and more than one avoidance panel.

NOTE: See the numbered ATTACHMENT SIGNS (DECALS) on Page 22 for the location of each correspondingly numbered pictorial only decal.

1. General Hazard (7130132)

This safety sign is located on the Snow Pusher.





AVOID INJURY OR DEATH

- Bystanders must keep at least 3 m (10 ft) away from the machine and attachment when operating.
- Never leave the operating position when the engine is running.

W-2320-0910



OPERATING INSTRUCTIONS

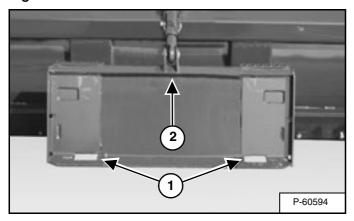
DAILY INSPECTION	27 27
Rubber Cutting Edge Inspection	27
OPERATING PROCEDURE WITH LOADERS Approved Loader Models And Requirements Sentering And Exiting The Loader Installation Operation With The Loader Removal 3	30 31 33 39
OPERATING PROCEDURE WITH TELESCOPIC HANDLERS	2 3 4 7
OPERATING PROCEDURE WITH COMPACT WHEEL LOADERS 5 Approved Compact Wheel Loader Models And Requirements 5 Entering And Exiting The Compact Wheel Loader 5 Installation 5 Operation With The Compact Wheel Loader 5 Removal 6	50 51 53
LIFTING THE ATTACHMENT	
TRANSPORTING THE ATTACHMENT ON A TRAILER	
TRANSPORTING THE ATTACHMENT AND MACHINE ON A TRAILER	



DAILY INSPECTION

Attachment Mounting Frame

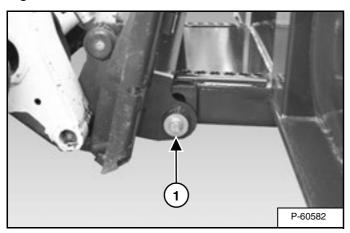
Figure 4



Inspect the Bob-Tach wedge mounts (Item 1), mounting flange (Item 2) [Figure 4] and all welds on the snow pusher for wear and damage each time the snow pusher is removed from the loader.

Pivot Rod Inspection (94 And 120 Snow Pushers)

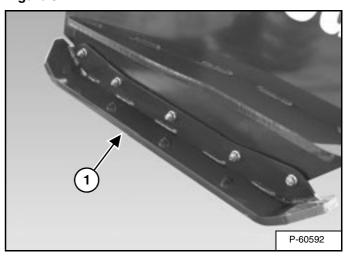
Figure 5



Inspect the pivot rod (Item 1) [Figure 5] and bolts on the snow pusher for wear and damage each time the snow pusher is removed from the machine.

Skid Shoe Inspection

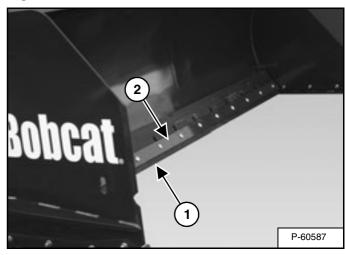
Figure 6



Inspect the skid shoes (Item 1) [Figure 6], bolts and all welds on the snow pusher skid shoes for wear and damage each time the snow pusher is removed from the machine.

Rubber Cutting Edge Inspection

Figure 7



Inspect the rubber cutting edge (Item 1), retainer plate (Item 2) [Figure 7] and all bolts on the snow pusher for wear and damage each time the snow pusher is removed from the machine.

DAILY INSPECTION (CONT'D)

Bob-Tach

Hand Lever Bob-Tach

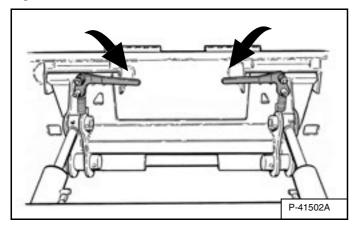


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

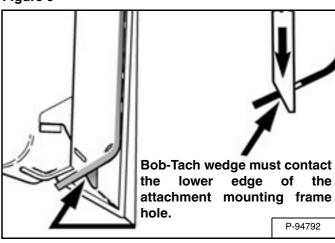
Figure 8



Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 8] (wedges fully extended through the attachment mounting frame holes).

The levers and wedges must move freely [Figure 8].

Figure 9



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 9].

NOTE: If the wedge does not contact the lower edge of the hole, the attachment will be loose and can come off the Bob-Tach.

Inspect the mounting frame on the attachment. (See the machine's Operation & Maintenance Manual for inspecting the Bob-Tach). Replace any parts that are damaged, bent or missing. Keep all fasteners tight. Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges. (See the machine's Operation & Maintenance Manual for the correct procedure.)

DAILY INSPECTION (CONT'D)

Bob-Tach (Cont'd)

Power Bob-Tach



AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 10

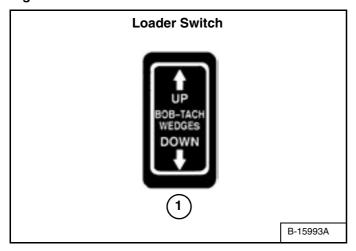


Figure 11

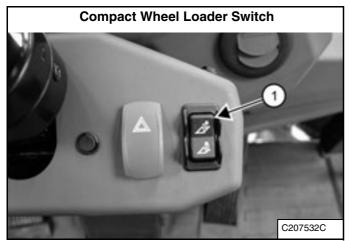
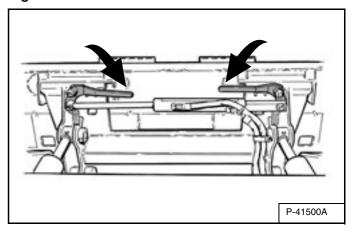
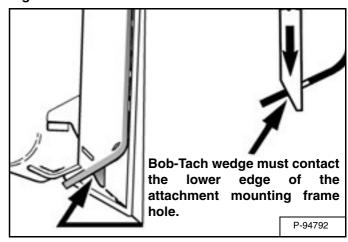


Figure 12



Push and <u>hold</u> the BOB-TACH "WEDGES DOWN" switch (Item 1) [Figure 10] or [Figure 11] until the levers are fully engaged in the locked position [Figure 12] (wedges fully extended through the attachment mounting frame holes).

Figure 13



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 13].

NOTE: If the wedge does not contact the lower edge of the hole, the attachment will be loose and can come off the Bob-Tach.

Inspect the mounting frame on the attachment. (See the machine's Operation & Maintenance Manual for inspecting the Bob-Tach). Replace any parts that are damaged, bent or missing. Keep all fasteners tight. Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges. (See the machine's Operation & Maintenance Manual for the correct procedure.)

OPERATING PROCEDURE WITH LOADERS

Approved Loader Models And Requirements

Figure 14

LOADER MODELS	SNOW PUSHER 94	SNOW PUSHER 94R	SNOW PUSHER 120 AND 120R
A300	X	X	X
A770	X	X	X
S130	X	X	
S150	X	X	
S160	X	X	
S175	X	X	
S185	X	X	
S205	X	X	X
S220	X	X	X
S250	X	X	Χ
S300	X	X	X
S330	X	X	X
S450	X		
S510	X	X	
S530	X	X	
S550	X	X	
S570	X	X	
S590	X	X	X
S630	X	X	Χ
S650	X	X	Χ
S740	X	X	X
S770	X	X	X
S850	X	X	X
S66	X		X
S76	X		X
S86	X		X
T140	X	X	
T180	X	X	X
T190	Х	Χ	X
T250	Х	Χ	X
T300	Х	X	X
T320	Х	Х	X
T450	Х		
T550	Х	Х	X
T590	Х	Х	X
T650	Х	X	X
T770	Х	X	X
T870	Х	X	X
T66	Х		X
T76	Х		X
T86	Х		X

X = Approved

The chart [Figure 14] shows the approved snow pusher models for each loader model.

The warranty is void if this attachment is used on a non-approved carrier. See your Bobcat dealer for an updated list of approved carriers.

WARNING

Never use attachments, implements, or buckets which are not approved by the Bobcat Company. Attachments, implements, and buckets for safe loads of specified densities are approved for each model. Unapproved attachments or buckets can cause injury or death.

W-2662-0623

Entering And Exiting The Loader



AVOID INJURY OR DEATH

When operating the machine:

- · Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the pedal controls or footrests and hands on the controls.

W-2261-0909

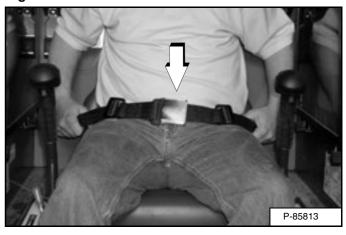
Entering

Figure 15



Use the snow pusher steps, grab handles (on cab) and the safety treads (on top of the loader lift arms and frame) to enter and exit the loader [Figure 15].

Figure 16



Enter the loader. Fasten the seat belt and adjust it so the buckle is centred between your hips [Figure 16].

Figure 17



Lower the seat bar and engage the parking brake [Figure 17].

Put the foot pedals or hand controls in NEUTRAL position.

NOTE: Keep your hands on the steering levers and your feet on the foot pedals (or footrests) while operating the loader.

See the loader's Operation & Maintenance Manual and Operator's Handbook for detailed information on operating the loader.

Entering And Exiting The Loader (Cont'd)

Exiting

Lower the lift arms and put the attachment flat on the ground.

Stop the engine and engage the parking brake.

Lift the seat bar and make sure the lift and tilt functions are deactivated.

Remove the key.

Exit the loader.



AVOID INJURY OR DEATH

Before you leave the operator's position:

- Lower the lift arms, put the attachment flat on the ground.
- Stop the engine and engage the parking brake.
- Move all pedals, handles, joysticks, and other controls until they are LOCKED or in the NEUTRAL position.

SEE THE MACHINE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION.

W-2722-0623

Installation

Hand Lever Bob-Tach

NOTE: The illustrations and instructions provided explain how to install a bucket attachment on to a loader. Follow these same instructions if you are installing different attachments such as a grapple, tiller, combo bucket, etc.

The attachment mounting frame for the attachment has a top flange that is designed to receive the top edge of the Bob-Tach and the lower part of the frame is designed to receive the Bob-Tach wedges.

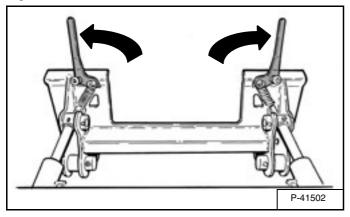


Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause serious injury or death.

W-2744-0608

Always inspect the loader's Bob-Tach and the attachment mounting frame before installation. See the loader's Operation & Maintenance Manual. (See DAILY INSPECTION on Page 27.)

Figure 18

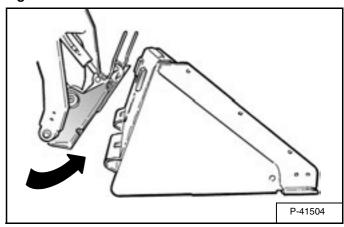


Pull the Bob-Tach levers up until they are fully raised (wedges fully raised) [Figure 18].

Enter the loader. (See Entering And Exiting The Loader on Page 31.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Figure 19



Lower the lift arms and tilt the Bob-Tach forward.

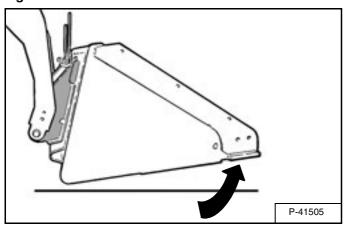
Drive the loader slowly forward until the top edge of the Bob-Tach is completely under the top flange of the attachment mounting frame [Figure 19].

NOTE: Be sure the Bob-Tach levers do not hit the attachment.

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

Figure 20



Tilt the Bob-Tach backward until the attachment is slightly off the ground [Figure 20]. This will cause the attachment mounting frame to fit up against the front of the Bob-Tach.

NOTE: When leaving the operator's seat to install an attachment, tilt the attachment until it is slightly off the ground.

Stop the engine and exit the loader. (See Entering And Exiting The Loader on Page 31.)



AVOID INJURY OR DEATH

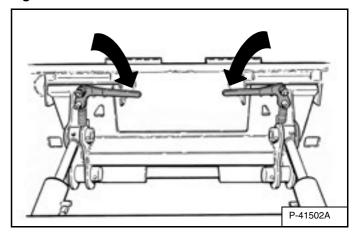
Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- · Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. See your Bobcat dealer for service if controls do not deactivate.

W-2463-0623

Figure 21

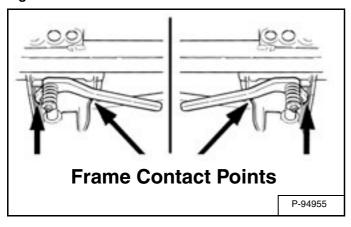


Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 21] (wedges fully extended through the attachment mounting frame holes).

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

Figure 22



Both levers must contact the frame as shown when locked [Figure 22].

If both levers do not engage in the locked position, see your Bobcat dealer for maintenance.

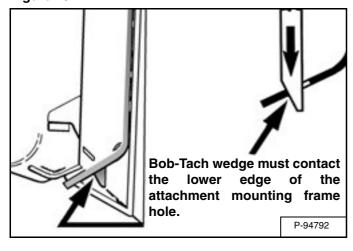


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 23



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 23].

Installation (Cont'd)

Power Bob-Tach



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

W-2744-0608

This loader may be equipped with a Power Bob-Tach.

Enter the loader. (See Entering And Exiting The Loader on Page 31.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Figure 24

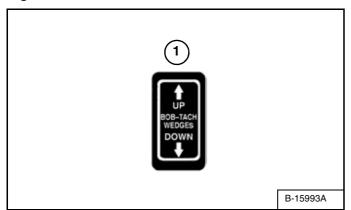
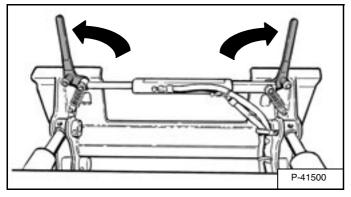
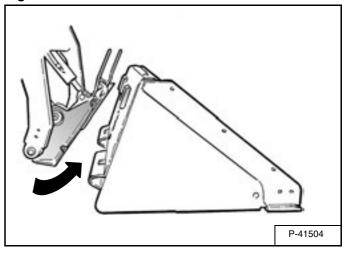


Figure 25



Push and <u>hold</u> the BOB-TACH "WEDGES UP" switch (Item 1) **[Figure 24]** until the levers are fully raised (wedges fully raised) **[Figure 25]**.

Figure 26



Lower the lift arms and tilt the Bob-Tach slightly forward.

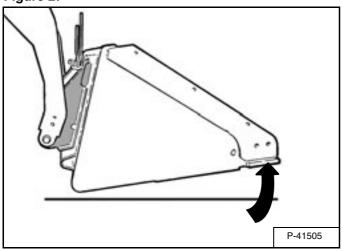
Drive the loader slowly forward until the top edge of the Bob-Tach is completely under the top flange of the attachment mounting frame [Figure 26].

NOTE: Be sure the Bob-Tach levers do not hit the attachment.

Installation (Cont'd)

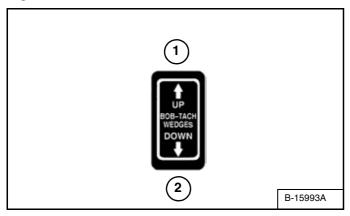
Power Bob-Tach (Cont'd)

Figure 27



Tilt the Bob-Tach backward until the attachment is slightly off the ground [Figure 27]. This will cause the attachment mounting frame to fit up against the front of the Bob-Tach.

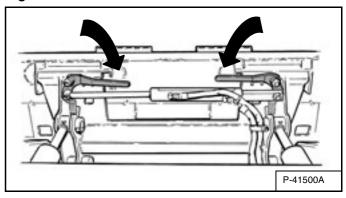
Figure 28



NOTE: The Power Bob-Tach system has continuous pressurised hydraulic fluid to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (BOB-TACH "WEDGES UP") to be sure both wedges are fully raised before installing the attachment.

Push and <u>hold</u> the BOB-TACH "WEDGES UP" switch (Item 1) **[Figure 28]** until the levers are fully raised (wedges fully raised).

Figure 29

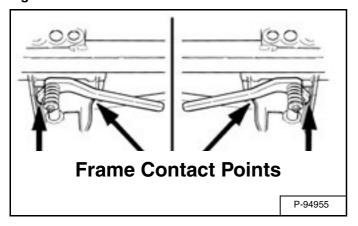


Push and <u>hold</u> the BOB-TACH "WEDGES DOWN" switch (Item 2) [Figure 28] until the levers are fully engaged in the locked position [Figure 29] (wedges fully extended through the attachment mounting frame holes).

Installation (Cont'd)

Power Bob-Tach (Cont'd)

Figure 30



Both levers must contact the frame as shown when locked [Figure 30].

If both levers do not engage in the locked position, see your Bobcat dealer for maintenance.

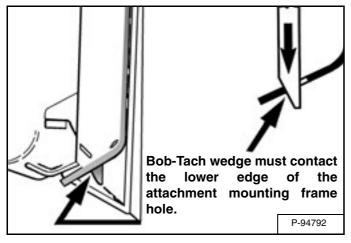


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 31



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 31].

Lower the lift arms and put the attachment flat on the ground.

Stop the engine and exit the loader. (See Entering And Exiting The Loader on Page 31.)



AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- · Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. See your Bobcat dealer for service if controls do not deactivate.

W-2463-0623

Operation With The Loader

Enter the loader. (See Entering And Exiting The Loader on Page 31.)

Start the engine, and release the parking brake.



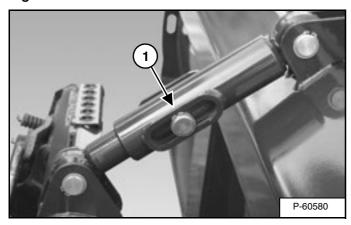
AVOID INJURY OR DEATH

- Bystanders must keep at least 3 m (10 ft) away from the machine and attachment when operating.
- Never leave the operating position when the engine is running.

W-2320-0910

94 And 120 Snow Pushers

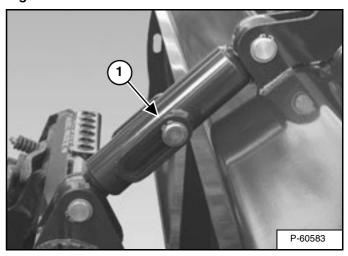
Figure 32



Fully lower the lift arms, tilt the Bob-Tach forward until the tension pin (Item 1) **[Figure 32]** is approximately centred in the slot of the float cylinder.

NOTE: This position allows the snow pusher to fully float and follow the contour of the ground.

Figure 33



If more down pressure is needed, tilt the Bob-Tach forward until the tension pin (Item 1) [Figure 33] is positioned at the end the slot of the float cylinder. Do Not over tilt the Bob-Tach.

NOTE: Over tilting of the Bob-Tach after the tension pin is all the way forward will raise the rubber cutting edge and the rear of the skid shoes, causing them to loose contact with the ground.

NOTE: This position will restrict the snow pushers ability to fully float.

All Model Snow Pushers

Drive forward pushing snow to desired location.

Adjust speed according to the depth and weight of the snow being moved.

Removal

Hand Lever Bob-Tach

Lower the lift arms and put the attachment flat on the ground. Lower or close the hydraulic equipment (if equipped).

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

Stop the engine and release auxiliary hydraulic pressure (if applicable). (See the loader's Operation & Maintenance Manual and Operator's Handbook for correct procedure.)

Exit the loader. (See Entering And Exiting The Loader on Page 31.)



AVOID INJURY OR DEATH

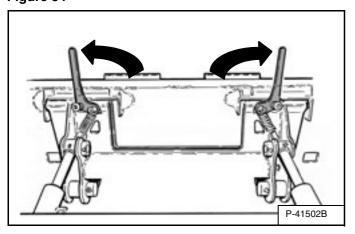
Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- · Stop the engine.
- Engage the parking brake.
- · Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. See your Bobcat dealer for service if controls do not deactivate.

W-2463-0623

Figure 34



Pull the Bob-Tach levers up [Figure 34] until they are fully raised (wedges fully raised).

WARNING

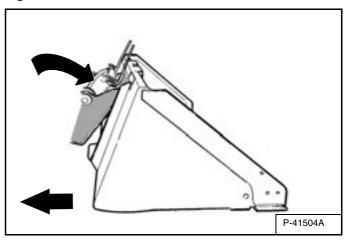
Bob-Tach levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

W-2054-1285

Enter the loader. (See Entering And Exiting The Loader on Page 31.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Figure 35



Tilt the Bob-Tach forward and drive the loader backward, away from the attachment [Figure 35].

Removal (Cont'd)

Power Bob-Tach

Lower the lift arms and put the attachment flat on the ground. Lower or close the hydraulic equipment (if equipped).

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

Figure 36

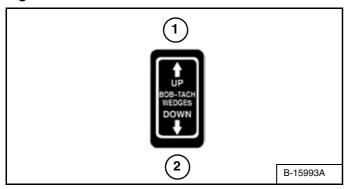
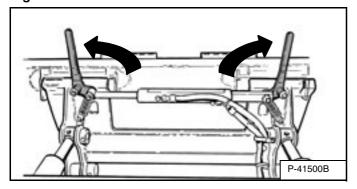
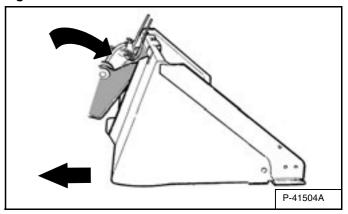


Figure 37



Push and hold the BOB-TACH "WEDGES UP" switch (Item 1) [Figure 36] (Front Panel) until the levers [Figure 37] are fully raised (wedges fully raised).

Figure 38



Tilt the Bob-Tach forward and drive the loader backward, away from the attachment [Figure 38].

NOTE: The Power Bob-Tach system has continuous pressurised hydraulic fluid to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (BOB-TACH "WEDGES UP") when removing an attachment to be sure both wedges are fully raised.

Approved Telescopic Handler Models And Requirements

Figure 39

TELESCOPIC HANDLER MODELS	SNOW PUSHER 94 AND 94R	SNOW PUSHER 120 AND 120R
T2250	X	X

X = Approved

The chart **[Figure 39]** shows the approved snow pusher models for the T2250 Telescopic Handler.

The warranty is void if this attachment is used on a non-approved carrier. See your Bobcat dealer for an updated list of approved carriers.



Never use attachments, implements, or buckets which are not approved by the Bobcat Company. Attachments, implements, and buckets for safe loads of specified densities are approved for each model. Unapproved attachments or buckets can cause injury or death.

W-2662-0623

Entering And Exiting The Telescopic Handler



AVOID INJURY OR DEATH

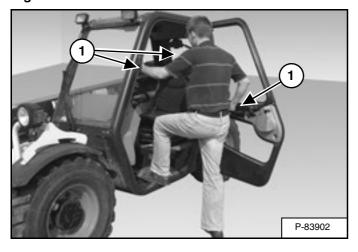
When operating the machine:

- Keep the seat belt fastened snugly.
- Lower the restraint bar (if equipped).
- · Keep your feet and arms inside the cab.

W-2810-1109

Entering

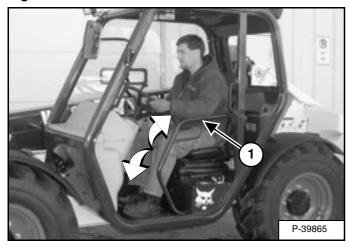
Figure 40



Use the hand grabs (Item 1) [Figure 40] to enter the operator cab.

NOTE: Maintain three-point contact at all times while entering or exiting the Telescopic Handler. Do not jump.

Figure 41



Fasten seat belt and lower the restraint bar (Item 1) [Figure 41] (if equipped), and engage the parking brake.

Put the Travel Direction Control lever and joystick in NEUTRAL.

See the Telescopic Handler's Operation & Maintenance Manual and Operator's Handbook for detailed information on operating the Telescopic Handler.

Exiting

Put the Travel Direction Control Lever and the Joystick in NEUTRAL.

Engage the parking brake.

Retract and lower the boom and attachment flat on the ground.

Stop the engine.

Raise the restraint bar (*if equipped*) and make sure the lift, tilt, boom extend, auxiliary hydraulic and traction drive functions are deactivated.

Remove the key.

Exit the Telescopic Handler.



Before you leave the operator's position:

- Put the travel Direction Control Lever and the Joystick in neutral.
- Engage the parking brake.
- Retract and lower the boom and attachment flat on the ground.
- Stop the engine. Raise the restraint bar (if equipped).

SEE THE MACHINE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION.

W-2637-0623

Installation

Hand Lever Bob-Tach

NOTE: The illustrations and instructions provided explain how to install a bucket attachment on to a Telescopic Handler. Follow these same instructions if you are installing different attachments such as a grapple, tiller, combo bucket, etc.

The attachment mounting frame for the attachment has a top flange that is designed to receive the top edge of the Bob-Tach and the lower part of the frame is designed to receive the Bob-Tach wedges.

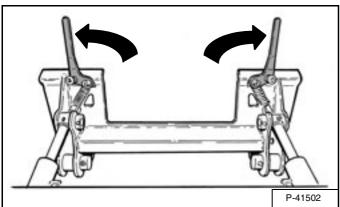


The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

W-2044-1107

Always inspect the Telescopic Handler's Bob-Tach and the attachment mounting frame before installation. See the Telescopic Handler's Operation & Maintenance Manual. (See DAILY INSPECTION on Page 27.)

Figure 42

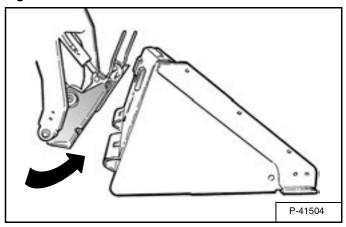


Pull the Bob-Tach levers up until they are fully raised (wedges fully raised) [Figure 42].

Enter the Telescopic Handler. (See Entering And Exiting The Telescopic Handler on Page 43.)

Start the engine and release the parking brake.

Figure 43



Lower the boom and tilt the Bob-Tach forward.

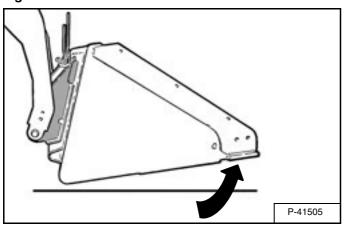
Drive the Telescopic Handler slowly forward until the top edge of the Bob-Tach is completely under the top flange of the attachment mounting frame [Figure 43].

NOTE: Be sure the Bob-Tach levers do not hit the attachment.

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

Figure 44



Tilt the Bob-Tach backward until the attachment is slightly off the ground **[Figure 44]**. This will cause the attachment mounting frame to fit up against the front of the Bob-Tach.

NOTE: When leaving the operator's seat to install an attachment, tilt the attachment until it is slightly off the ground.

Stop the engine and exit the Telescopic Handler. (See Entering And Exiting The Telescopic Handler on Page 43.)



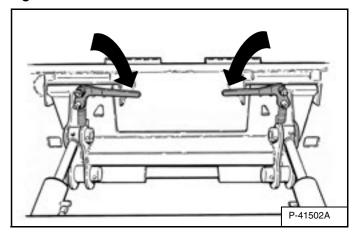
Before you leave the operator's position:

- Put the travel Direction Control Lever and the Joystick in neutral.
- Engage the parking brake.
- Retract and lower the boom and attachment flat on the ground.
- Stop the engine. Raise the restraint bar (if equipped).

SEE THE MACHINE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION.

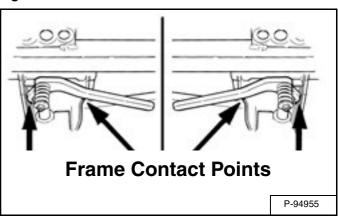
W-2637-0623

Figure 45



Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 45] (wedges fully extended through the attachment mounting frame holes).

Figure 46



Both levers must contact the frame as shown when locked [Figure 46].

If both levers do not engage in the locked position, see your Bobcat dealer for maintenance.

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

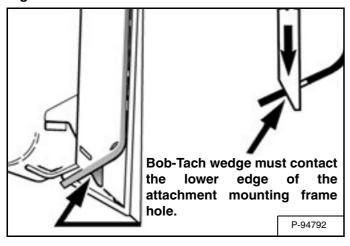


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 47



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 47].

Operation With The Telescopic Handler

Approved use with Telescopic Handler

The attachment is intended to operate on, or just above the ground.

- Retract the boom as close as possible to the front of the machine.
- Adjust the boom angle of the Telescopic Handler, so that the attachment will be able to accomplish the intended purpose efficiently.
- When transporting the attachment on the jobsite, or public road, the attachment should be positioned so that the lowest point of the attachment is approximatively 300mm (12 inches) above the ground.

WARNING

Load, unload and turn on flat level ground. Do not exceed rated capacity shown on the load capacity chart in cab. Failure to obey warnings can cause the machine to tip or rollover and cause injury or death.

W-2669-1112

NOTE: The illustrations and instructions provided explain how to operate the Telescopic Handler with the snow pusher attachment.

Operation With The Telescopic Handler (Cont'd)

IMPORTANT

When using ground engaging attachments, boom extension must not exceed 250 mm (9.8 in). Exceeding this limit can cause boom and / or hydraulic cylinder damage.

I-2266-0910

Move to the operator position, fasten seat belt and lower the restraint bar (*if equipped*), start the engine and disengage the parking brake.



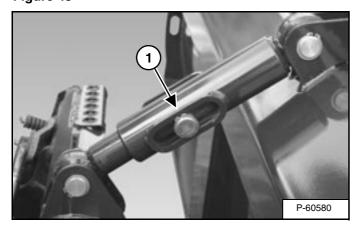
AVOID INJURY OR DEATH

- Bystanders must keep at least 3 m (10 ft) away from the machine and attachment when operating.
- Never leave the operating position when the engine is running.

W-2320-0910

94 And 120 Snow Pushers

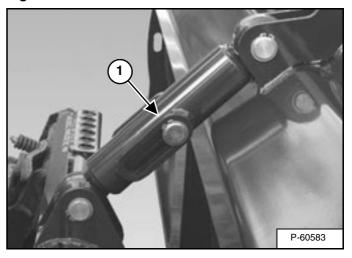
Figure 48



Fully lower the boom, tilt the Bob-Tach forward until the tension pin (Item 1) **[Figure 48]** is approximately centred in the slot of the float cylinder.

NOTE: This position allows the snow pusher to fully float and follow the contour of the ground.

Figure 49



If more down pressure is needed, tilt the Bob-Tach forward until the tension pin (Item 1) [Figure 49] is positioned at the end of the slot of the float cylinder. Do not overtilt the Bob-Tach.

NOTE: Overtilting of the Bob-Tach after the tension pin is all the way forward will raise the rubber cutting edge and the rear of the skid shoes, causing them to loose contact with the ground.

NOTE: This position will restrict the snow pushers ability to fully float.

All Model Snow Pushers

Drive forward pushing snow to desired location.

Adjust speed according to the depth and weight of the snow being moved.

Removal

Hand Lever Bob-Tach

Lower the boom and put the attachment flat on the ground and lower or close the hydraulic equipment.

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

Stop the engine and release auxiliary hydraulic pressure (if applicable). (See the Telescopic Handler's Operation & Maintenance Manual and Operator's Handbook for correct procedure.)

Exit the Telescopic Handler. (See Entering And Exiting The Telescopic Handler on Page 43.)



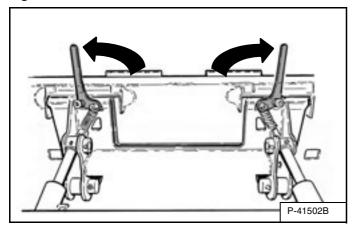
Before you leave the operator's position:

- Put the travel Direction Control Lever and the Joystick in neutral.
- Engage the parking brake.
- Retract and lower the boom and attachment flat on the ground.
- Stop the engine. Raise the restraint bar (if equipped).

SEE THE MACHINE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION.

W-2637-0623

Figure 50



Pull the Bob-Tach levers up until they are fully raised (wedges fully raised) [Figure 50].

WARNING

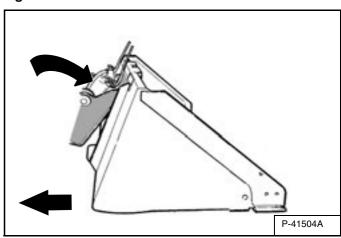
Bob-Tach levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

W-2054-1285

Enter the Telescopic Handler. (See Entering And Exiting The Telescopic Handler on Page 43.)

Start the engine and release the parking brake.

Figure 51



Tilt the Bob-Tach forward and drive the Telescopic Handler backward, away from the attachment [Figure 51].

Approved Compact Wheel Loader Models And Requirements

Figure 52

COMPACT WHEEL LOADER MODELS	SNOW PUSHER 94	SNOW PUSHER 94R	SNOW PUSHER 120	SNOW PUSHER 120R
L75	X		X	
L85	X		X	
L95	X		X	

(X = Approved)

The chart [Figure 52] shows the approved snow pusher models for the Compact Wheel Loader Model.

The warranty is void if this attachment is used on a non-approved carrier. See your Bobcat dealer for an updated list of approved carriers.



Never use attachments, implements, or buckets which are not approved by the Bobcat Company. Attachments, implements, and buckets for safe loads of specified densities are approved for each model. Unapproved attachments or buckets can cause injury or death.

W-2662-0623

Entering And Exiting The Compact Wheel Loader

Entering



GENERAL HAZARD

Failure to follow instructions can cause serious injury of death.

When operating the machine:

- Do not leave the operator's seat.
- · Always keep the seat belt fastened.

W-3079

Enter and exit the operator seat of the compact wheel loader from the left side.

NOTE: The left side of the compact wheel loader as viewed from the operator seat.

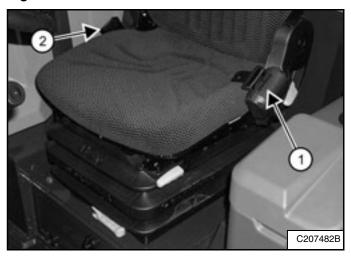
Figure 53



Enter the cab [Figure 53].

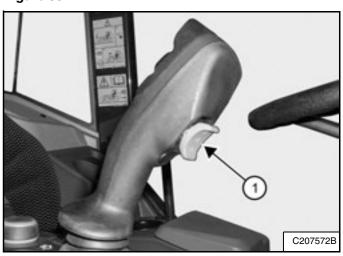
NOTE: Maintain three-point contact at all times while entering or exiting the compact wheel loader. Do not jump.

Figure 54



Fasten the seat belt (Item 1) [Figure 54].

Figure 55



Ensure that the travel direction switch (Item 1) **[Figure 55]** on the back of the joystick is set to NEUTRAL (centre) position.

See the compact wheel loader's Operation & Maintenance Manual and Operator's Handbook for detailed information on operating the compact wheel loader.

Entering And Exiting The Compact Wheel Loader (Cont'd)

Exiting

Put the travel direction switch (Item 1) [Figure 55] in NEUTRAL and activate the park brake.

Lower the lift arms and put the attachment flat on the ground.

Stop the engine.

Unfasten seat belt by pressing the red button (Item 2) [Figure 54] and remove the key. Exit the compact wheel loader.



GENERAL HAZARD

Failure to follow instructions can cause serious injury of death.

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Engage the parking brake.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt, and drive functions are deactivated.
- · Stop the engine.

12259-7BFB6B51

Installation

Hand Lever Bob-Tach

NOTE: The illustrations and instructions provided explain how to install a bucket attachment on to a machine. Follow these same instructions if you are installing different attachments such as a grapple, tiller, combo bucket, etc.

The attachment mounting frame for the attachment has a top flange that is designed to receive the top edge of the Bob-Tach and the lower part of the frame is designed to receive the Bob-Tach wedges.

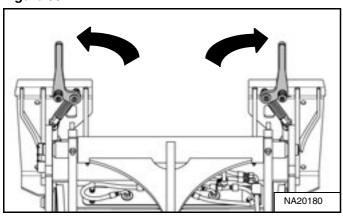


Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause serious injury or death.

W-2744-0608

Always inspect the compact wheel loader's Bob-Tach and the attachment mounting frame before installation. See the compact wheel loader's Operation & Maintenance Manual. (See DAILY INSPECTION on Page 27.)

Figure 56

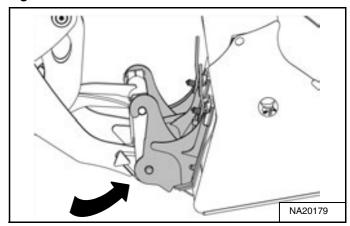


Pull the Bob-Tach levers up until they are fully raised (wedges fully raised) [Figure 56].

Enter the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

Start the engine, press the operate button and release the parking brake.

Figure 57



Lower the lift arms and tilt the Bob-Tach forward.

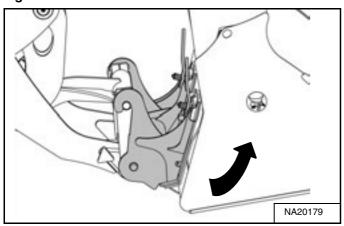
Drive the compact wheel loader slowly forward until the top edge of the Bob-Tach is completely under the top flange of the attachment mounting frame [Figure 57].

NOTE: Be sure the Bob-Tach levers do not hit the attachment.

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

Figure 58



Tilt the Bob-Tach backward until the attachment is slightly off the ground **[Figure 58]**. This will cause the attachment mounting frame to fit up against the front of the Bob-Tach.

NOTE: When leaving the operator's seat to install an attachment, tilt the attachment until it is slightly off the ground.

Stop the engine and exit the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)



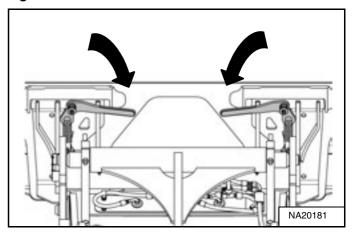
Before you leave the operator's seat:

- Close the bucket.
- Lower the lift arms.
- Put bucket flat on the ground.
- · Stop the engine.
- · Engage the parking brake.

Failure to obey warnings can cause injury or death.

W-2254-0996

Figure 59

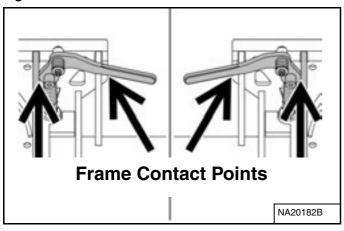


Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 59] (wedges fully extended through the attachment mounting frame holes).

Installation (Cont'd)

Hand Lever Bob-Tach (Cont'd)

Figure 60



Both levers must contact the frame as shown when locked [Figure 60].

If both levers do not engage in the locked position, see your Bobcat dealer for maintenance.

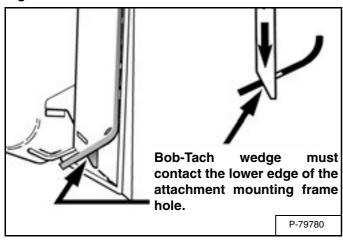


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 61



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 61].

Installation (Cont'd)

Power Bob-Tach



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

W-2744-0608

This machine may be equipped with a Power Bob-Tach.

Enter the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

Start the engine, press the operate button and release the parking brake.

Figure 62

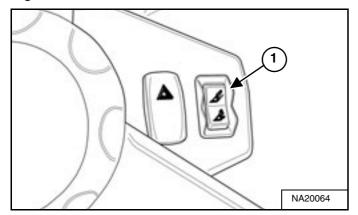
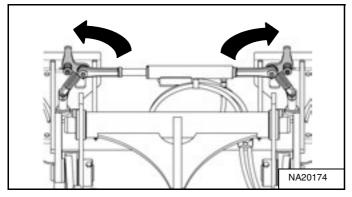
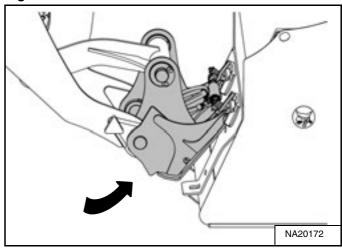


Figure 63



Push and hold the Bob-Tach "wedges up" switch (Item 1) [Figure 62] until the levers are fully raised (wedges fully raised) [Figure 63].

Figure 64



Lower the lift arms and tilt the Bob-Tach slightly forward.

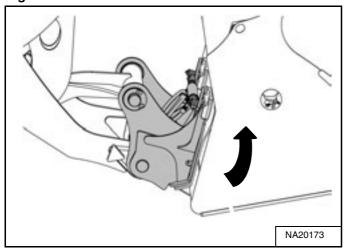
Drive the compact wheel loader slowly forward until the top edge of the Bob-Tach is completely under the top flange of the attachment mounting frame [Figure 64].

NOTE: Be sure the Bob-Tach levers do not hit the attachment.

Installation (Cont'd)

Power Bob-Tach (Cont'd)

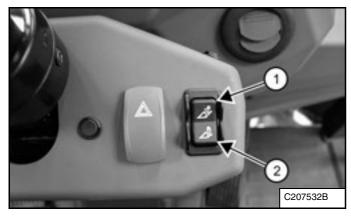
Figure 65



Lower the lift arms and tilt the Bob-Tach forward slightly.

Tilt the Bob-Tach backward until the attachment is slightly off the ground **[Figure 65]**. This will cause the attachment mounting frame to fit up against the front of the Bob-Tach.

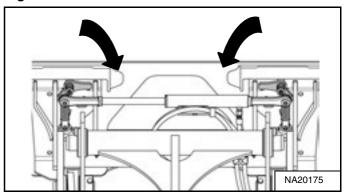
Figure 66



NOTE: The Power Bob-Tach system has continuous pressurised hydraulic oil to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (BOB-TACH "WEDGES UP") to be sure both wedges are fully raised before installing the attachment.

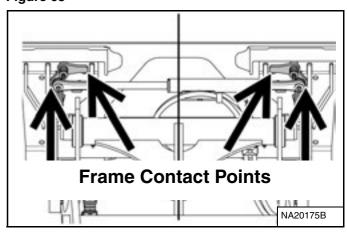
Push and hold the Bob-Tach "wedges up" switch (Item 1) [Figure 66] until the levers are fully raised (wedges fully raised).

Figure 67



Push and <u>hold</u> the BOB-TACH "WEDGES DOWN" switch (Item 2) [Figure 66] until the levers are fully engaged in the locked position [Figure 67] (wedges fully extended through the attachment mounting frame holes).

Figure 68



Both levers must contact the frame as shown when locked [Figure 68].

If both levers do not engage in the locked position, see your Bobcat dealer for maintenance.

Installation (Cont'd)

Power Bob-Tach (Cont'd)

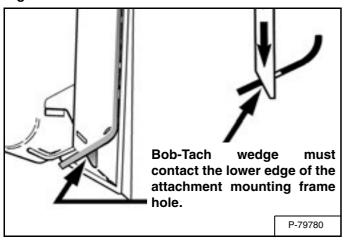


AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 69



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 69].

Lower the lift arms and put the attachment flat on the ground.

Stop the engine and exit the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

See your Bobcat dealer for service if controls do not deactivate.

W-3097-xxxx

Operation With The Compact Wheel Loader

Enter the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

Start the engine, and release the parking brake.



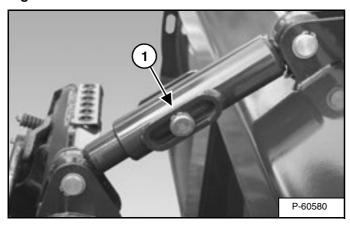
AVOID INJURY OR DEATH

- Bystanders must keep at least 3 m (10 ft) away from the machine and attachment when operating.
- Never leave the operating position when the engine is running.

W-2320-0910

94 And 120 Snow Pushers

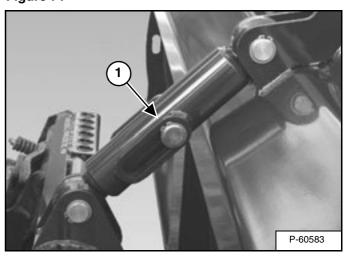
Figure 70



Fully lower the lift arms, tilt the Bob-Tach forward until the tension pin (Item 1) **[Figure 70]** is approximately centred in the slot of the float cylinder.

NOTE: This position allows the snow pusher to fully float and follow the contour of the ground.

Figure 71



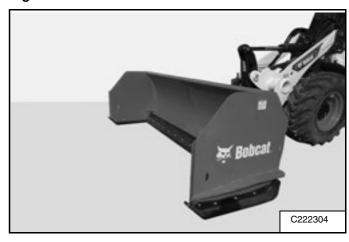
If more down pressure is needed, tilt the Bob-Tach forward until the tension pin (Item 1) [Figure 71] is positioned at the end the slot of the float cylinder. Do Not overtilt the Bob-Tach.

NOTE: Overtilting of the Bob-Tach after the tension pin is all the way forward will raise the rubber cutting edge and the rear of the skid shoes, causing them to loose contact with the ground.

NOTE: This position will restrict the snow pushers ability to fully float.

All Model Snow Pushers

Figure 72



Drive forward pushing snow to desired location [Figure 72].

Adjust speed according to the depth and weight of the snow being moved.

Removal

Hand Lever Bob-Tach

Lower the lift arm and put the attachment flat on the ground. Lower or close the hydraulic equipment (if equipped).

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

Stop the engine and release auxiliary hydraulic pressure (if applicable). (See the compact wheel loader's Operation & Maintenance Manual and Operator's Handbook for correct procedure.)

Exit the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)



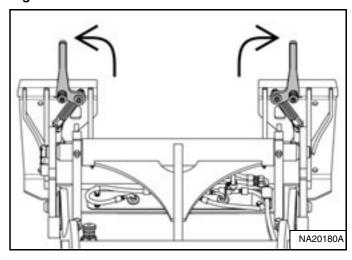
AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arm, put the attachment flat on the ground.
- Put Travel Direction Control Lever in PARK.
- · Stop the engine.
- Raise operator arm rest.

W-2443-0623

Figure 73



Pull the Bob-Tach levers up until they are fully raised (wedges fully raised) [Figure 73].



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

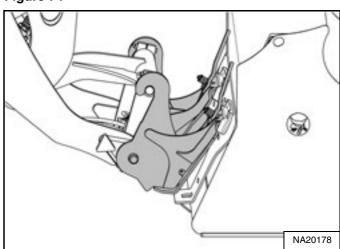
W-2054-1285

Enter the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

Start the engine.

Lower the attachment to the ground.

Figure 74



Tilt the Bob-Tach forward while backing the machine away from the attachment [Figure 74].

Removal (Cont'd)

Power Bob-Tach

Lower the lift arms and put the attachment flat on the ground. Lower or close the hydraulic equipment (if equipped).

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

Stop the engine and release auxiliary hydraulic pressure (if applicable). (See the compact wheel loader's Operation & Maintenance Manual and Operator's Handbook for correct procedure.)

Exit the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)



AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- · Stop the engine.
- Engage the parking brake.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

See your Bobcat dealer for service if controls do not deactivate.

W-3097-xxxx

Enter the compact wheel loader. (See Entering And Exiting The Compact Wheel Loader on Page 51.)

Start the engine, press the operate button and release the parking brake.

Figure 75

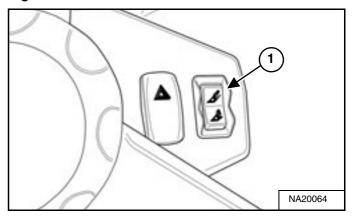
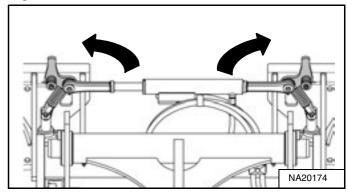


Figure 76

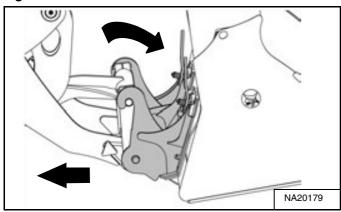


Push and hold the Bob-Tach "wedges up" switch (Item 1) [Figure 75] (Front Panel) until the levers [Figure 76] are fully raised (wedges fully raised).

Removal (Cont'd)

Power Bob-Tach (Cont'd)

Figure 77



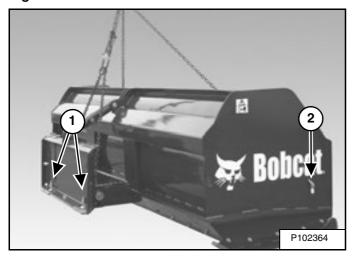
Tilt the Bob-Tach forward and drive the compact wheel loader backward, away from the attachment [Figure 77].

NOTE: The Power Bob-Tach system has continuous pressurised hydraulic oil to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (BOB-TACH "WEDGES UP") when removing an attachment to be sure both wedges are fully raised.

LIFTING THE ATTACHMENT

Procedure

Figure 78



Fasten the chains to the snow pusher mounting frame (Item 1) and end plates (Item 2) [Figure 78].

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

TRANSPORTING THE ATTACHMENT ON A TRAILER

Fastening

Figure 79

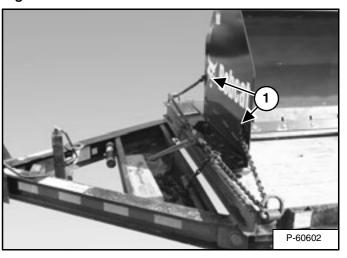
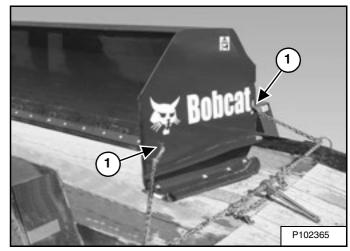


Figure 80



Fasten the chains to the snow pusher (Item 1) [Figure 79] and [Figure 80] and fasten each end of the chain to the transport vehicle.

Use chain binders to prevent the snow pusher from moving during transport.

TRANSPORTING THE ATTACHMENT AND MACHINE ON A TRAILER

Loading And Fastening



AVOID SERIOUS INJURY OR DEATH

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

W-2058-0807

Be sure the transport and towing vehicles are of adequate size and capacity for weight of machine and attachment 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 combination first.
- · Lower the attachment to the floor.
- Stop the engine.
- 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 (if needed).
- Fasten each end of the chain to the transport vehicle.

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

PREVENTIVE MAINTENANCE

MAINTENANCE SAFETY	67
TROUBLESHOOTING	
REMOVAL AND INSTALLATION Skid Shoe Procedure Rubber Cutting Edge Procedure Reversing The Rubber Cutting Edge Rubber Cutting Edge Adjustment Pivot Pin Procedure (94 And 120 Snow Pushers) Float Cylinder Removal Procedure Float Cylinder Disassembly And Assembly Procedure	70 71 71 72 73
ATTACHMENT STORAGE AND RETURN TO SERVICE	75



MAINTENANCE SAFETY

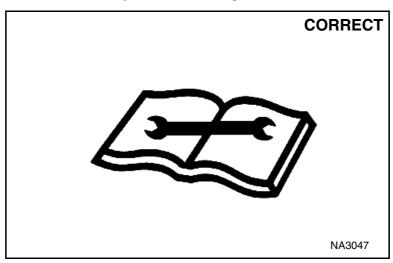


Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0807



Safety Alert Symbol: This symbol with a warning statement, means: "Warning, 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.



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 BOBCAT SERVICE PERSONNEL. Always use genuine Bobcat replacement parts.**



TROUBLESHOOTING

Chart



Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (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. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0807

Use the following troubleshooting chart to locate and correct problems which most often occur with the attachment.

PROBLEM	CAUSE	CORRECTION
Snow pusher does not seat properly on the Bob-Tach.	Bob-Tach wedges not fully retracted before installation.	Retract Bob-Tach wedges before installation.
	Mud, ice or stones are lodged between the Bob-Tach and the snow pusher.	Remove debris between Bob-Tach and snow pusher.
Snow pusher leaving snow behind.	Rubber cutting edge worn or damaged.	Adjust rubber cutting edge.
		Reverse or replace rubber cutting edge.
	Bob-Tach tilted too far forward.	Adjust Bob-Tach.

Skid Shoe Procedure



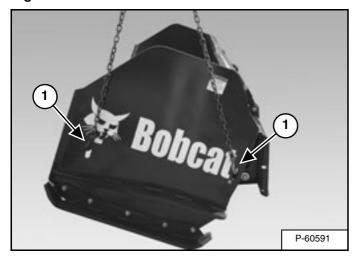
AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

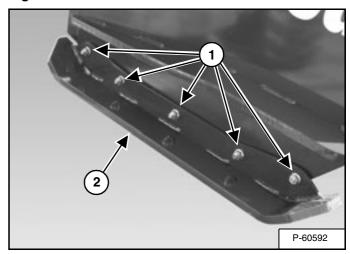
W-2019-0907

Figure 81



Attach chains (Item 1) [Figure 81] to the end plate and raise the end of the snow pusher until the skid shoe is off the ground.

Figure 82

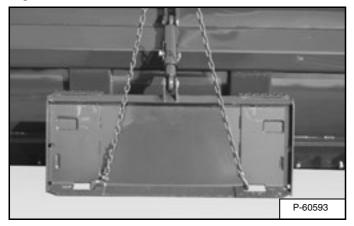


Remove the six nuts (Item 1) and bolts, then remove skid shoe (Item 2) [Figure 82].

Installation: Install new skid shoe and tighten nuts to 88 - 95 N•m (65 - 70 ft-lb) torque.

Rubber Cutting Edge Procedure

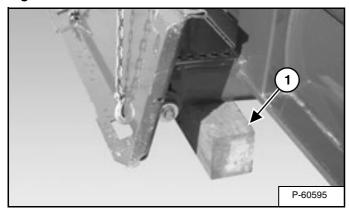
Figure 83



Attach chains to the mounting frame of the snow pusher [Figure 83].

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

Figure 84



Raise the snow pusher, then place blocking (Item 1) [Figure 84] on both sides of the snow pusher frame.

NOTE: Raising the snow pusher and placing blocks under the frame will stabilize the snow pusher and allow access to the centre cutting edge mounting bolts.



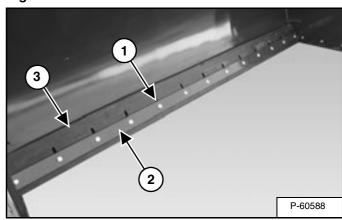
AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- · When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-0907

Figure 85



Remove the all bolts (Item 1) and locknuts. Remove the retainer plate (Item 2) and rubber cutting edge (Item 3) [Figure 85].

Installation: Tighten bolts to 87 − 108 N•m (65 − 80 ft-lb) torque.

Reversing The Rubber Cutting Edge

Remove the all bolts (Item 1) and locknuts. Remove the retainer plate (Item 2) and rubber cutting edge (Item 3) [Figure 85].

Rotate the rubber cutting edge 180° or until the worn side is facing up. Install the rubber cutting edge and retainer plate. Install locknuts and tighten to $115-135 \text{ N} \cdot \text{m}$ (85 – 100 ft-lb) torque.

Rubber Cutting Edge Adjustment

Loosen the all bolts (Item 1) and locknuts, lower the rubber cutting edge (Item 3) [Figure 85] to the bottom of the skid shoes.

71

Pivot Pin Procedure (94 And 120 Snow Pushers)



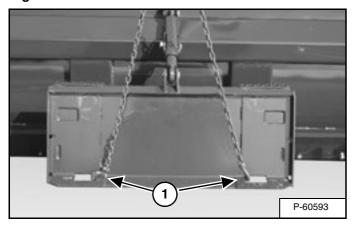
AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- · When fluids are under pressure.
- · Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-0907

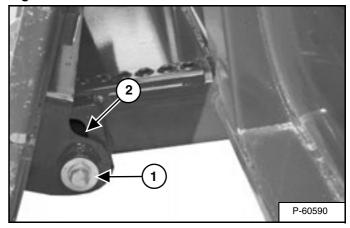
Figure 86



Install chains (Item 1) [Figure 86] on the snow pusher.

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

Figure 87



Slightly raise the mounting frame, remove bolt (Item 1) **[Figure 87]** and washer from the right or left side of the snow pusher frame.

Remove the oscillating pin (Item 2) [Figure 87] from the opposite side of the snow pusher frame that the bolt and washer were removed.

Installation: Tighten bolt to 300 − 330 N•m (220 − 245 ftlb) torque.

Float Cylinder Removal Procedure



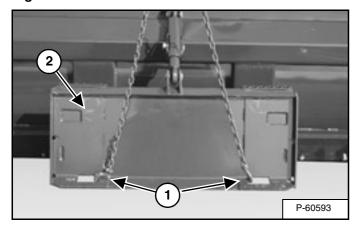
AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- · Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-0907

Figure 88

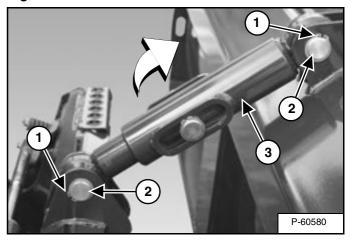


Install chains (Item 1) [Figure 88] on the snow pusher.

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

Raise lifting device until chains are tight. This will hold the mounting plate (Item 2) **[Figure 88]** from falling backwards when the float cylinder is removed.

Figure 89



Remove snap rings (Item 1) and pivot pins (Item 2), then remove the float cylinder (Item 3) [Figure 89].

Float Cylinder Disassembly And Assembly Procedure



AVOID INJURY OR DEATH

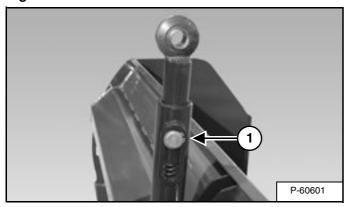
Wear safety glasses to prevent eye injury when any of the following conditions exist:

- · When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-0907

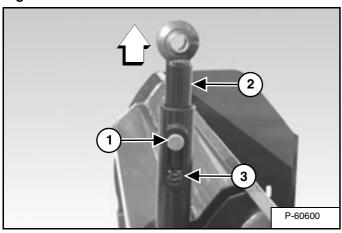
Remove the float cylinder. (See Float Cylinder Removal Procedure on Page 73.)

Figure 90



Remove snap ring (Item 1) [Figure 90].

Figure 91



Remove tension pin (Item 1), then remove rod end (Item 2) and spring (Item 3) [Figure 91].

ATTACHMENT STORAGE AND RETURN TO SERVICE

Storage

Sometimes it may be necessary to store your Bobcat attachment for an extended period of time. Below is a list of items to perform before storage:

- Thoroughly clean the attachment.
- Lubricate the attachment.
- Inspect the Bob-Tach wedge mounts, mounting flange and all welds on the attachment for wear and damage.
- Check for loose hardware, missing guards, or damaged parts.
- Replace worn or damaged parts.
- Check for damaged or missing decals. Replace if necessary.
- Place the attachment in a dry protected shelter.
- Place the attachment flat on the ground.

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

Return To Service

After the Bobcat attachment has been in storage, it is necessary to follow a list of items to return the attachment to service:

- Be sure all shields and guards are in place.
- Lubricate the attachment.
- Install and operate attachment, check for correct function.



SPECIFICATIONS

(SNOW PUSHER 94, SNOW PUSHER 94R, SNOW	,
SNOW PUSHER SPECIFICATIONS	
Dimensions	
Performance	
TORQUE SPECIFICATIONS FOR BOLTS	
Torque For General SAE Bolts	
Torque For General Metric Bolts	

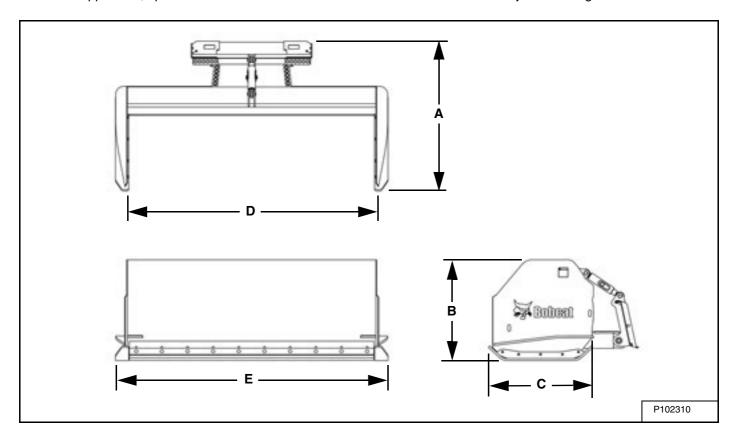
Certain specification(s) are based on engineering calculations and are not actual measurements. Specification(s) are provided for comparison purposes only and are subject to change without notice. Specification(s) for your individual Bobcat equipment will vary based on normal variations in design, manufacturing, operating conditions and other factors.



(SNOW PUSHER 94, SNOW PUSHER 94R, SNOW PUSHER 120, SNOW PUSHER 120R) SNOW PUSHER SPECIFICATIONS

Dimensions

• Where applicable, specifications conform to SAE and ISO standards and are subject to change without notice.



DESCRIPTION	SNOW PUSHER 94	SNOW PUSHER 94R	SNOW PUSHER 120	SNOW PUSHER 120R
Overall Length (A)	1428 mm (56.2 in)	1367 mm (53.8 in)	1428 mm (56.2 in)	1367 mm (53.8 in)
Overall Height (B)	961 mm (37.8 in)	961 mm (37.8 in)	961 mm (37.8 in)	961 mm (37.8 in)
End Plate Length (C)	999 mm (39.3 in)	999 mm (39.3 in)	999 mm (39.3 in)	999 mm (39.3 in)
Cutting Width (D)	2402 mm (94.6 in)	2402 mm (94.6 in)	3062 mm (120.6 in)	3062 mm (120.6 in)
Overall Width (E)	2591 mm (102 in)	2591 mm (102 in)	3251 mm (128.0 in)	3251 mm (128.0 in)

(SNOW PUSHER 94, SNOW PUSHER 120, SNOW PUSHER 120R) SNOW PUSHER SPECIFICATIONS (CONT'D)

Performance

DESC	RIPTION	SNOW PUSHER 94	SNOW PUSHER 94R	SNOW PUSHER 120	SNOW PUSHER 120R
Weigh	t	509 kg (1122 lb)	509 kg (1122 lb)	570 kg (1256 lb)	570 kg (1256 lb)
Skid S	hoes	19,1 – 127 mm (0.75 in – 5.00 in)	19,1 – 127 mm (0.75 in – 5.00 in)	19,1 – 127 mm (0.75 in – 5.00 in)	19,1 – 127 mm (0.75 in – 5.00 in)
*Rubb	er Cutting Edge	38,1 – 203,2 mm (1.50 in – 8.00 in)	38,1 – 203,2 mm (1.50 in – 8.00 in)	38,1 – 203,2 mm (1.50 in – 8.00 in)	38,1 – 203,2 mm (1.50 in – 8.00 in)
Float	Vertical	58,4 mm (2.30 in)	NA	58,4 mm (2.30 in)	NA
	Tilt	12°	NA	12°	NA
	Oscillation	±4.5°	NA	±4.5°	NA
*Polyurethane cutting edge is also available.					

TORQUE SPECIFICATIONS FOR BOLTS

Torque For General SAE Bolts

The following table shows standard torque specifications for bolts with zinc phosphate coating. Bolts purchased from Bobcat Company that have zinc phosphate coating are specified by the letter 'H' following the part number.

	Thread Size	SAE Grade 5	SAE Grade 8
N•m (in-lb)	0.250	9,0 - 10,2 (80 - 90)	12,4 - 13,6 (110 - 120)
	0.3125	20,3 - 22,6 (180 - 200)	24,2 - 27,1 (215 - 240)
N•m (ft-lb)	0.375	34 – 38 (25 – 28)	47 – 54 (35 – 40)
	0.4375	54 - 61 (40 - 45)	81 – 88 (60 – 65)
	0.500	88 – 95 (65 – 70)	122 – 136 (90 – 100)
	0.5625	122 – 136 (90 – 100)	170 – 190 (125 – 140)
	0.625	170 – 190 (125 – 140)	240 – 260 (175 – 190)
	0.750	300 - 330 (220 - 245)	410 – 450 (300 – 330)
	0.875	450 – 490 (330 – 360)	645 – 710 (475 – 525)
	1.000	645 – 710 (475 – 525)	985 – 1085 (725 – 800)
	1.125	880 – 975 (650 – 720)	1425 – 1600 (1050 – 1175)
	1.250	1200 – 1360 (900 – 1000)	2000 – 2200 (1475 – 1625)
	1.375	1630 – 1830 (1200 – 1350)	2720 – 2980 (2000 – 2200)
	1.500	2040 – 2240 (1500 – 1650)	3530 – 3870 (2600 – 2850)
	1.625	2720 – 2980 (2000 – 2800)	4680 – 5150 (3450 – 3800)
	1.750	3390 – 3730 (2500 – 2750)	5830 – 6500 (4300 – 4800)
	1.875	4270 – 4750 (3150 – 3500)	7450 – 8300 (5500 – 6100)
	2.000	5150 – 5700 (3800 – 4200)	8800 – 9800 (6500 – 7200)

TORQUE SPECIFICATIONS FOR BOLTS (Cont'd)

Torque For General Metric Bolts

THREAD SIZE	MATERIAL			
(DIA. X PITCH)	HEAD MARK 4	HEAD MARK 7	HEAD MARK 10	
M 5 x 0.8		4 − 5 N•m (3 − 4 ft-lb)		
M 6 x 1.0		8 – 9 N•m (6 – 7 ft-lb)	8 – 12 N•m (6 – 9 ft-lb)	
M 8 x 1.25	8 – 12 N•m	15 – 22 N•m	24 – 34 N•m	
	(6 – 9 ft-lb)	(11 – 16 ft-lb)	(18 – 25 ft-lb)	
M 10 x 1.25	18 – 24 N•m	30 – 41 N•m	49 – 68 N•m	
	(13 – 18 ft-lb)	(22 – 30 ft-lb)	(36 – 50 ft-lb)	
M 12 x 1.25	30 – 41 N•m	54 – 73 N•m	94 – 118 N•m	
	(22 – 30 ft-lb)	(40 – 54 ft-lb)	(69 – 87 ft-lb)	
M 14 x 1.25	49 – 68 N•m	79 – 108 N•m	157 – 186 N•m	
	(36 – 50 ft-lb)	(58 – 80 ft-lb)	(116 – 137 ft-lb)	

WARRANTY

WARRANTY



WARRANTY

A statement explaining the terms and conditions of the warranty coverage that applies to your attachment was provided in the documentation kit shipped with the machine. If this warranty statement is lost or damaged, contact your dealer or visit Bobcat.com to obtain a new copy.



ALPHABETICAL INDEX

SNOW PUSHER 94, SNOW PUSHER 94R, SNOW PUSHER 120, SNOW PUSHER 120F SNOW PUSHER SPECIFICATIONS	₹) 79
ATTACHMENT IDENTIFICATION	_
ATTACHMENT SIGNS (DECALS)	
ATTACHMENT STORAGE AND RETURN TO SERVICE	75
BOBCAT COMPANY IS ISO 9001 CERTIFIED	_
DAILY INSPECTION	_
DECLARATION OF CONFORMITY EU	5
DECLARATION OF CONFORMITY UK	7
DELIVERY REPORT	
FEATURES AND ACCESSORIES	
FIRE PREVENTION	19
LIFTING THE ATTACHMENT	63
MAINTENANCE SAFETY	67
OPERATING PROCEDURE WITH COMPACT	Т
WHEEL LOADERS	50
OPERATING PROCEDURE WITH LOADERS	
	30
OPERATING PROCEDURE WITH TELESCOPIC HANDLERS	42
PUBLICATIONS AND TRAINING	74
RESOURCES	21
REMOVAL AND INSTALLATION	
SAFETY INSTRUCTIONS	17
SERIAL NUMBER LOCATIONS	11
TORQUE SPECIFICATIONS FOR BOLTS	
	81
TRANSPORTING THE ATTACHMENT AND	C 4
	64
TRANSPORTING THE ATTACHMENT ON A TRAILER	63
	69
	85

