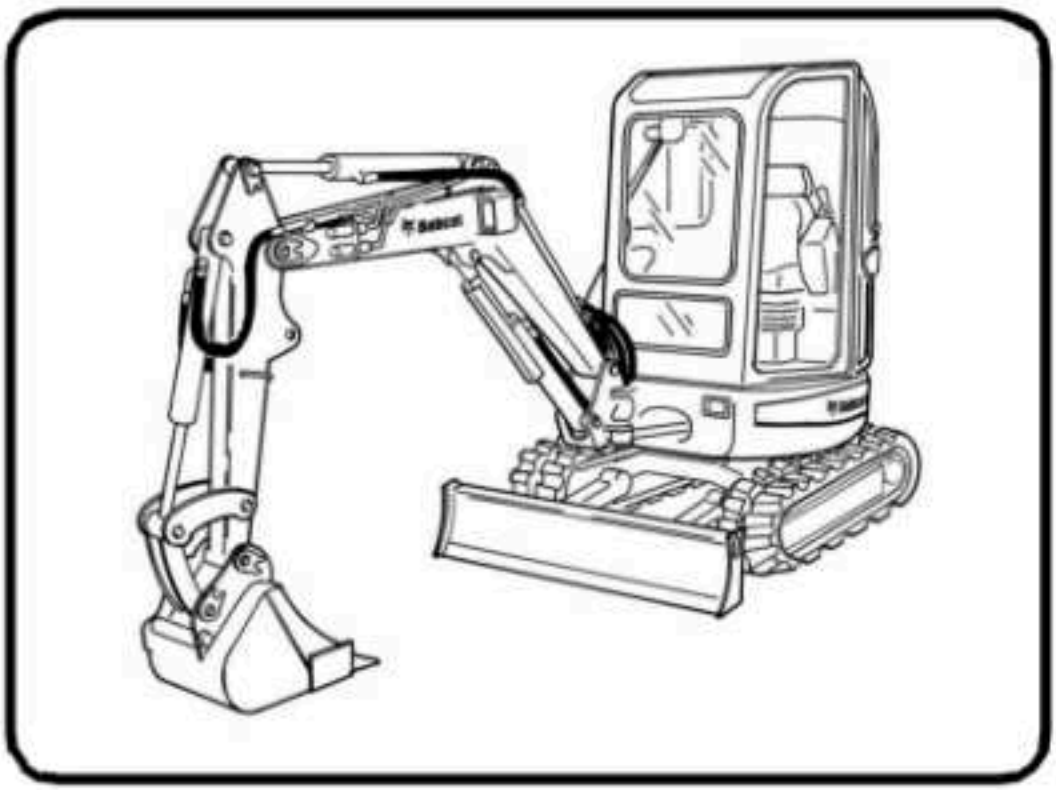
Bobcat®

Operation & Maintenance Manual
425 Compact Excavator

S/N A1HW11001 & Above



6904865 (3-07) Revised (10-07) (2)

Printed in U.S.A.

© Bobcat Company 2007

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD III

SAFETY & TRAINING RESOURCES XI

OPERATING INSTRUCTIONS OI-1

PREVENTIVE MAINTENANCE PM-1

SYSTEM SETUP AND ANALYSIS SA-1

MACHINE SIGN TRANSLATIONS MST-1

SPECIFICATIONS SPEC-1

WARRANTY WARRANTY-1

ALPHABETICAL INDEX INDEX-1

REFERENCE INFORMATION

Write the correct information for YOUR excavator in the spaces below. Always use these numbers when referring to your Bobcat Excavator.

Bobcat Excavator Serial Number _____

Engine Serial Number _____

_____

NOTES _____

_____

_____

_____

YOUR BOBCAT EXCAVATOR DEALER:

_____

ADDRESS:

_____

PHONE:

_____

Bobcat Company
P.O. Box 128
Gwinner, ND 58040-0128

Bobcat Company Europe
Drève Richelle 167
B-1410 WATERLOO
Belgium

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

FOREWORD

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

BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED V

DELIVERY REPORT. VII

EXCAVATOR IDENTIFICATION VIII

FALLING OBJECT GUARDS (FOGS) X

FEATURES, ACCESSORIES AND ATTACHMENTS IX
- Attachments IX
- Buckets Available. IX
- Falling Object Guards (FOGS). X
- Options and Accessories IX
- Special Applications Kit X
- Special Applications Kit Inspection And Maintenance X
- Standard Items. IX

REGULAR MAINTENANCE ITEMS V

SERIAL NUMBER LOCATIONS VII
- Engine Serial Number VII
- Excavator Serial Number VII

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

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

CALIFORNIA
PROPOSITION 65 WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

REGULAR MAINTENANCE ITEMS

	ENGINE OIL FILTER 6657635		BATTERY 6670251
	FUEL FILTER 6667362 FUEL FILTER, inline 6633977		FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 Gal.) 6903118 - (5 Gal.) 6903119 - (55 Gal.)
	AIR FILTER, Outer 6672467		RADIATOR CAP 6682274
	AIR FILTER, Inner 6672468		PROPYLENE GLYCOL ANTI-FREEZE, Premixed [-34° F (-37°C)] 6724094
	PRIMARY HYDRAULIC FILTER 6661248 CASE DRAIN HYDRAULIC FILTER 6661022		PROPYLENE GLYCOL ANTI-FREEZE, Concentrate 6724354
MOTOR OIL 6903105 . . . . SAE 15W/40 CE/SG (12 qt.) 6903106 . . . . SAE 15W/40 CE/SG (1 Gal.) 6903113 . . . . . SAE 15W/40 CE/SG (2.5 Gal.) 6903107 . . . . SAE 10W/30 CE/SG (12 qt.) 6903108 . . . . SAE 10W/30 CE/SG (1 Gal.) 6903112 . . . . . SAE 10W/30 CE/SG (2.5 Gal.)		6903109 . . . . . SAE 30W CE/SG (12 qt.) 6903110 . . . . . SAE 30W CE/SG (1 Gal.) 6903111 . . . . . SAE 30W CE/SG (2.5 Gal.)	

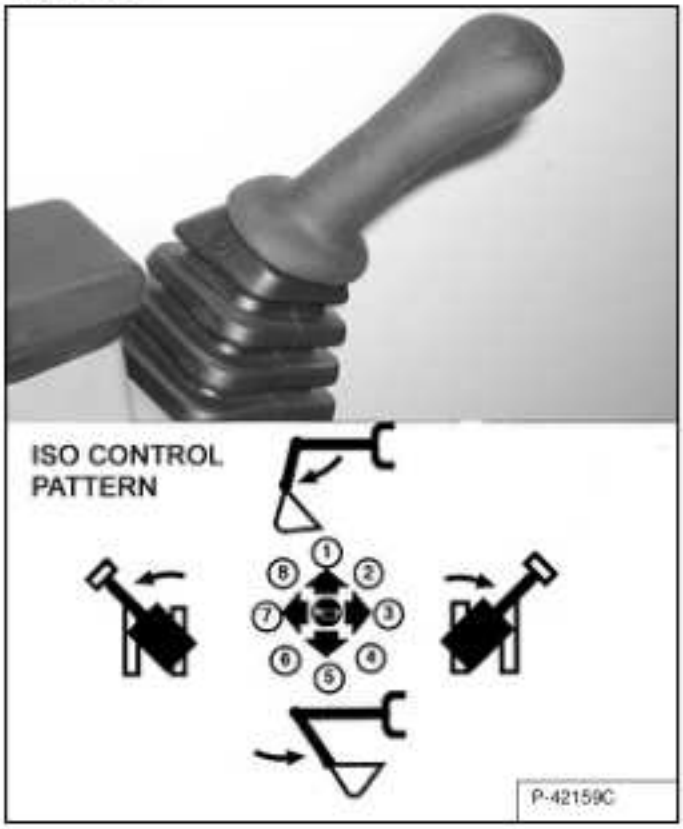
NOTE: Always verify Part Numbers with your Bobcat dealer.

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

ISO Control Pattern

Left Control Lever (Joystick)

Figure OI-36



The left lever (joystick) is used to operate the arm and slew the upperstructure **[Figure OI-36]**.

1. Arm out.
2. Arm out and slew right.
3. Slew right.
4. Arm in and slew right.
5. Arm in.
6. Arm in and slew left.
7. Slew left.
8. Arm out and slew left.

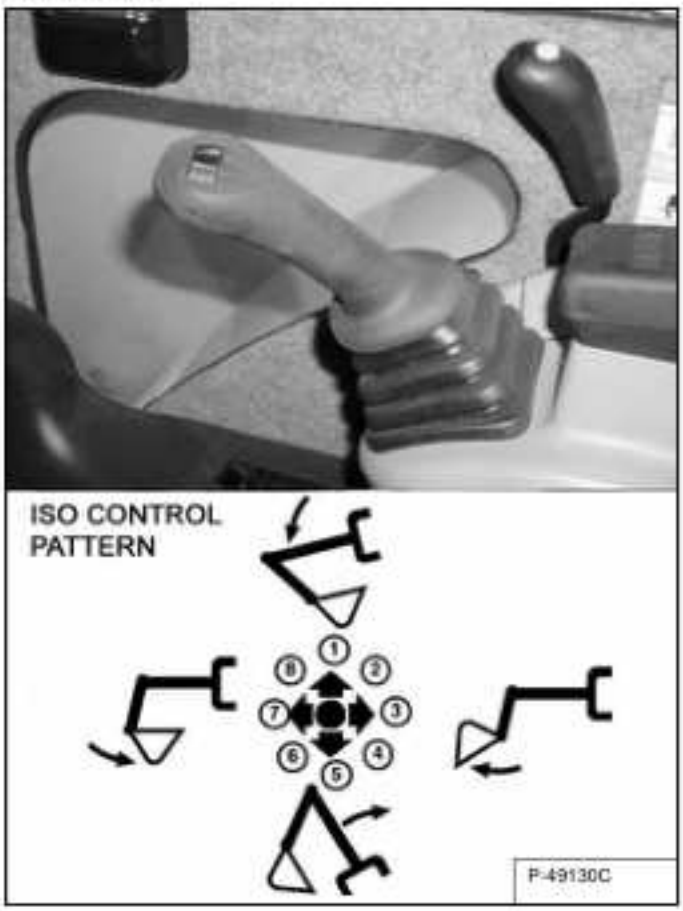
IMPORTANT

Before slewing the upperstructure, make sure the slew lock is disengaged.

I-2051-0905

Right Control Lever (Joystick)

Figure OI-37



The right lever (joystick) is used to operate the boom and bucket **[Figure OI-37]**.

1. Boom lower.
2. Boom lower and bucket dump.
3. Bucket dump.
4. Boom raise and bucket dump.
5. Boom raise.
6. Boom raise and bucket curl.
7. Bucket curl.
8. Boom lower and bucket curl.

⚠ WARNING

AVOID INJURY OR DEATH

Before leaving the machine:

- **Lower the work equipment to the ground.**
- **Lower the blade to the ground.**
- **Stop the engine & remove the key.**

W-2196-0595

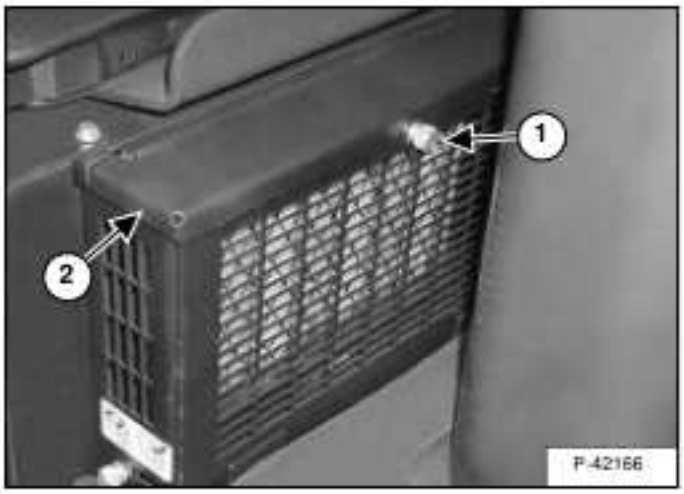
MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

CAB FILTERS

Cleaning And Maintenance (Early Models)

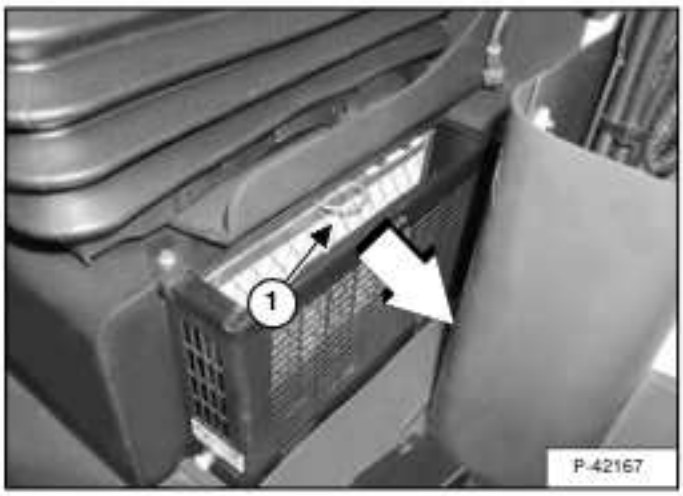
The recirculation filter must be cleaned regularly. The filter is located below the operator seat.

Figure PM-11



Remove the screw (Item 1) and cover (Item 2) **[Figure PM-11]**.

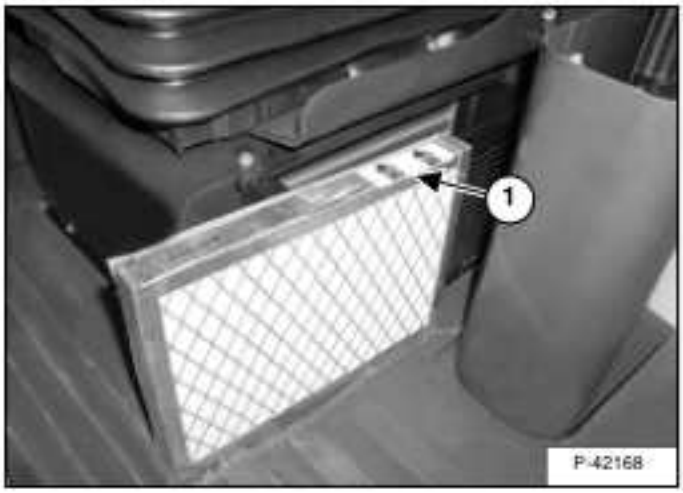
Figure PM-12



Pull the filter (Item 1) **[Figure PM-12]** away and out of the heater/AC housing.

Use low air pressure to clean the filter. Replace the filter when very dirty.

Figure PM-13



Installation: Install the filter with the arrows that indicate air flow direction (Item 1) **[Figure PM-13]** pointing towards the heater/AC housing.

The filter must be cleaned regularly.

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

EXCAVATOR SPECIFICATIONS (CONT'D)

Hydraulic System

Pump Type	Engine driven, dual outlet piston pump	
Pump Capacity Piston Pump	15.4 GPM (58,3 L/min.)	
Auxiliary Flow	13.2 GPM (50 L/min.)	
Hydraulic Filter	Full flow replaceable, 2 micron synthetic media element	
Control Valve	9 spool closed center individually compensated	
Fluid Type	Bobcat Fluid, Hydraulic/Hydrostatic 6903117 - (2.5 Gal.) 6903118 - (5 Gal.) 6903119 - (55 Gal.)	
System Relief Pressure	425	425 With Long Arm Option
Travel Circuits, Blade Boom, Arm, Bucket, Boom Swing, Auxiliary Hydraulics Joystick Control Pressure	2610 PSI (180 bar) 435 PSI (30 bar)	2900 PSI (200 bar) 435 PSI (30 bar)
Slew Relief Pressure	2030 PSI (140 bar)	2900 PSI (200 bar)
Auxiliary Relief	2610 PSI (180 bar)	2900 PSI (200 bar)
Arm Port Relief Base End and Rod End	3045 PSI (210 bar)	
Boom Port Relief Base and Rod End	3335 PSI (230 bar)	
Bucket Port Relief Base End and Rod End	3335 PSI (230 bar)	
Main Hydraulic Filter Bypass	50 PSI (3,4 bar)	

Hydraulic Cylinders

	Bore	Rod	Stroke
Boom (Cushioned - Boom Up)	3.00 in. (76,2 mm)	1.63 in. (41,3 mm)	18.68 in. (474,5 mm)
Arm (Cushion retract)	3.00 in. (76,2 mm)	1.50 in. (38,1 mm)	19.12 in. (485,6 mm)
Bucket	2.50 in. (63,5 mm)	1.38 in. (35,1 mm)	18.34 in. (465,8 mm)
Blade	2.75 in. (69,9 mm)	1.50 in. (38,1 mm)	7.68 in. (195,1 mm)
Boom Swing (Cushioned - Both Directions)	2.38 in. (60,5 mm)	1.38 in. (35,1 mm)	20.65 in. (524,5 mm)

Hydraulic Cycle Times

Boom	Raise 3.9 Seconds	Lower 3.9 Seconds
Arm	Retract 2.7 Seconds	Extend 2.3 Seconds
Bucket	Curl 2.7 Seconds	Dump 1.9 Seconds
Blade	Raise 2.1 Seconds	Raise 2.1 Seconds
Boom Swing	Left 4.6 Seconds	Right 4.2 Seconds

Electrical

Starting Aid	Glow Plugs
Alternator	12 volt, 40 Amp open frame w/ internal regulator
Battery	12 volt - 530 CCA @ 0° F (-18° C)
Starter	12 volt; gear reduction 2.7 HP (2.0 kW)
Instrumentation	Fuel gauge, audible alarm, visual warning for engine functions and hourmeter

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >

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 running the machine. Untrained operators can cause injury or death.

W-2001-1285

IMPORTANT

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

I-2019-0284

WARNING

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 excavator 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.

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. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. 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.
- Operator Training Courses are available from your Bobcat dealer in English and Spanish. They provide information for safe and efficient equipment operation. Safety videos are also available.
- Service Safety Training Courses are available from your Bobcat dealer. They provide information for safe and correct service procedures.

Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the Rated Lift Capacity of the machine. 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. Call local utilities or the TOLL FREE phone number found in the *Before Operation* Section of this manual.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service. Safety glasses, respiratory equipment, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat Safety Equipment for your model.

SI EXC-1007

MidWestTech | Bobcat 425 Compact Excavator Operation & Maintenance Manual | Publica... Order the manual at mid-west-tech.com >