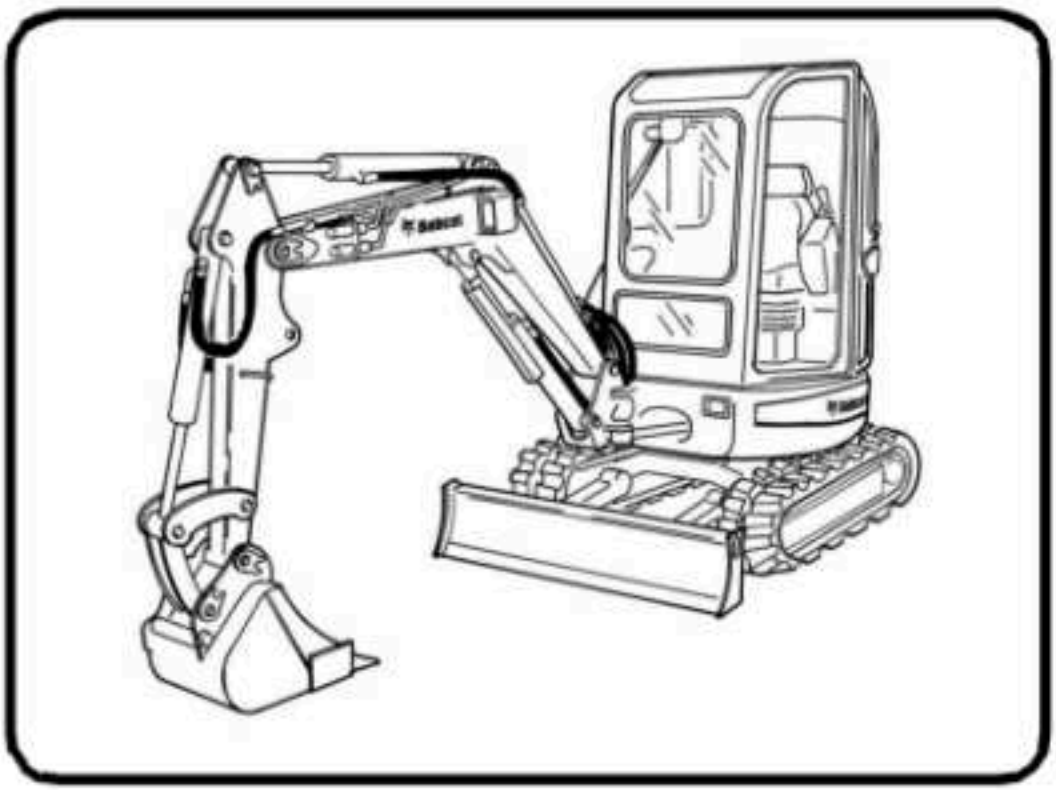
Bobcat®

Operation & Maintenance Manual
425, 428 Compact Excavator

425 S/N AACJ11001 & Above
425 S/N A9K311001 & Above
428 S/N A9K411001 & Above



6986951 (2-08) Revised (10-09) (1)

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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

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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.

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BOBCAT COMPANY IS IS0 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 and Bismarck, North Dakota (U.S.A.), Pontchateau (France), Dobris (Czech Republic) and the Bobcat corporate offices (Gwinner, Bismarck & West Fargo) in North Dakota. 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

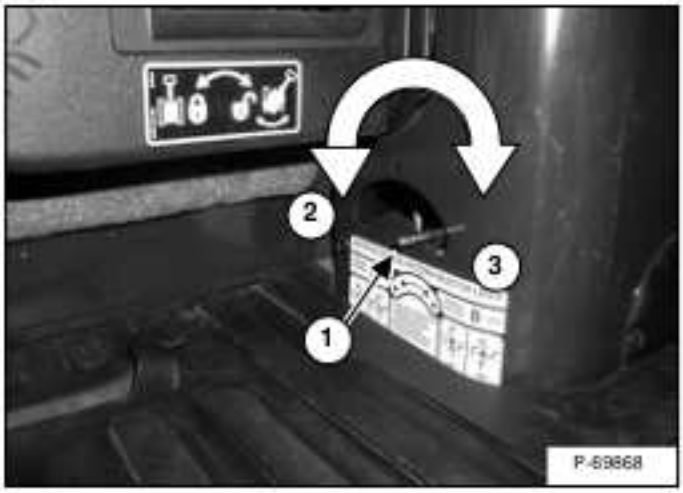
	ENGINE OIL FILTER 6657635		BATTERY 6670251
	FUEL FILTER 6667362 FUEL FILTER, inline 6633977		FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 Gal.) 6903118 - (5 Gal.) 6903119 - (55 Gal.)
	AIR FILTER, Outer 6672467		RADIATOR CAP 6682274
	AIR FILTER, Inner 6672468		PROPYLENE GLYCOL ANTI-FREEZE, Premixed [-34° 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.

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STD / ISO Selector Valve

Figure OI-5

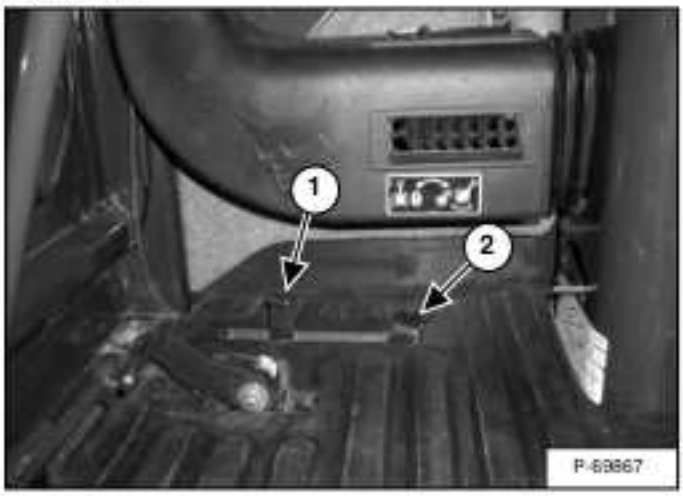


The joystick hydraulic function can be switched from Standard control pattern to ISO control pattern **[Figure OI-5]**.

Move the lever (Item 1) to the right (Item 2) to select STANDARD Control Pattern. Move to the left (Item 3) to select ISO Control Pattern **[Figure OI-5]**. (See HYDRAULIC CONTROLS on Page OI-19.)

Upperstructure Slew Lock

Figure OI-6



Push down on the front (Item 1) **[Figure OI-6]** of the foot pedal to engage the upperstructure swing lock.

Push down on the rear (Item 2) **[Figure OI-6]** to disengage the upperstructure slew lock.

NOTE: Upperstructure must be in the straight forward or straight rearward position for upperstructure to lock.

Raising And Lowering The Console

Raise the console before exiting the cab.

Figure OI-7



Pull up on the release handle **[Figure OI-7]**. The lift spring will assist in raising the console.

Lower the console before operating the excavator.

Push down on the console **[Figure OI-7]** until the latch is engaged.

NOTE: When the console is raised, the hydraulic and traction system functions are locked and will not operate.

If the engine stops, the boom/bucket (attachments) can be lowered to the ground using hydraulic pressure in the accumulator.

The control console must be in the locked down position, and the key switch in the ON position.

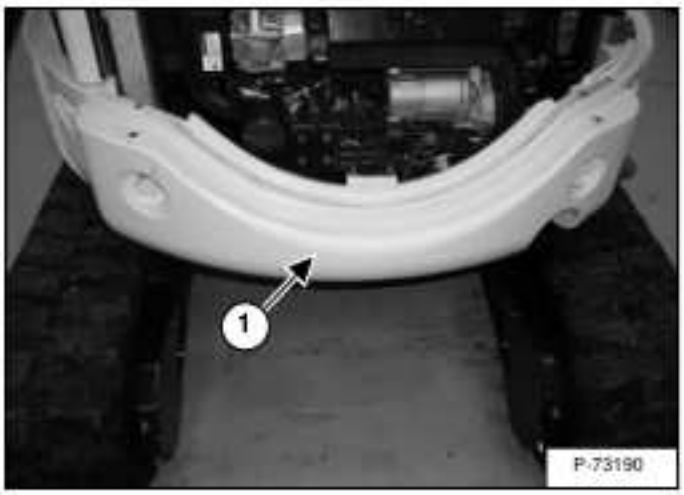
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Removing And Replacing Oil Filter

See the SERVICE SCHEDULE for the service interval for replacing the engine oil and filter. (See SERVICE SCHEDULE on Page PM-5.)

Run the engine until it is at operating temperature. Stop the engine.

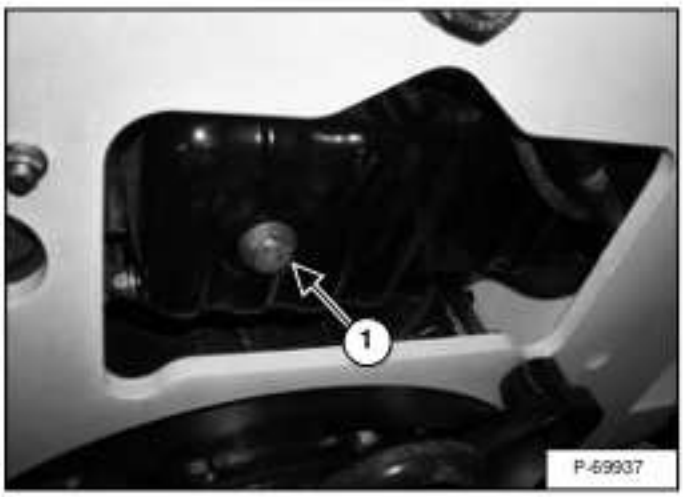
Figure PM-30



Position the upperstructure (Item 1) **[Figure PM-30]** so the tailgate is centered between the rear tracks.

Open the tailgate.

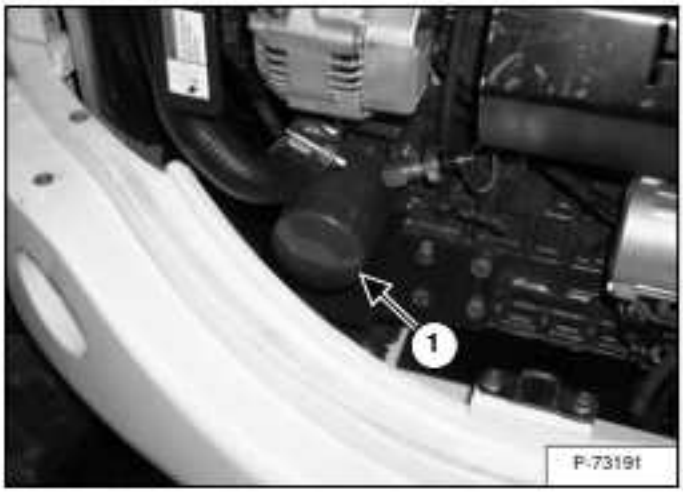
Figure PM-31



Remove the plug (Item 1) **[Figure PM-31]** from the bottom of the engine oil pan. Drain the oil into a container.

Recycle or dispose of used oil in an environmentally safe manner.

Figure PM-32



Remove the oil filter (Item 1) **[Figure PM-32]** and clean the filter housing surface.

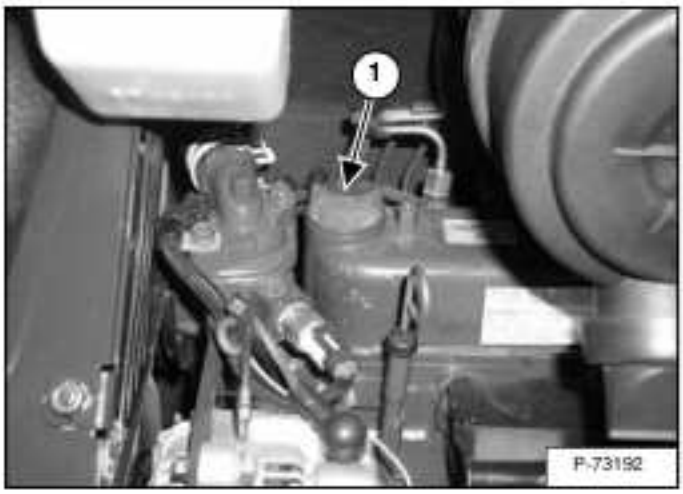
Recycle or dispose of used oil in an environmentally safe manner.

Use a genuine Bobcat replacement filter.

Put clean oil on the filter gasket. Install the filter and hand tighten.

Install and tighten the oil plug.

Figure PM-33



Remove the fill cap (Item 1) **[Figure PM-33]**.

Put oil in the engine. (See REGULAR MAINTENANCE ITEMS on Page V.) (See Capacities on Page SPEC-8.)

Install the fill cap.

Start the engine and let it run for several minutes.

Stop the engine. Check for leaks at the oil filter. Check the oil level.

Add oil as needed if it is not at the top mark on the dipstick.

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EXCAVATOR SPECIFICATIONS (CONT'D)

Drive System

Final Drive	Each track is independently driven by an Axial Piston Motor
Type of Reduction	Two-stage planetary gear reduction

Slew System

Slew Motor	Orbit Motor
Slew Circle	Single row shear type ball bearing with internal gear
Slew Speed	9.9 RPM

Undercarriage

Crawler Track Design	Sealed track rollers with boxed section track, Roller frame, Grease type track adjuster
Width of crawler	59.8 in. (1520 mm)

Capacities

Fuel Tank	17.8 Gal. (67,4 L)
Hydraulic Reservoir Only (Center of Sight Glass)	2.4 Gal. (9,1 L)
Hydraulic System (with Reservoir)	5.5 Gal. (20,7 L)
Cooling System	8.6 qt. (8,1 L)
Engine Oil and Filter	5.8 qt. (5,5 L)
Final Drive (each)	0.79 qt. (0,75 L)

Tracks

Type	Rubber	Steel
Width	12.6 in. (320 mm)	12.6 in. (320 mm)
Number Of Shoes	Single Assembly	41
Number of Track Rollers (per side)	4	4

Ground Pressure

MACHINE	425	425	425 With Long Arm Option	428
SERIAL NUMBER	AACJ11001 & Above	A9K311001 & Above	AACJ11001 & Above	A9K411001 & Above
Rubber Track Steel Track	3.61 PSI (0,249 bar) 3.70 PSI (0,255 bar)	3.54 PSI (0,244 bar) 3.70 PSI (0,255 bar)	3.81 PSI (0,263 bar) 3.90 PSI (0,269 bar)	3.97 PSI (0,274 bar) 4.08 PSI (0,281 bar)

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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

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 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-0208

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