

**Utility Vehicle
2200**

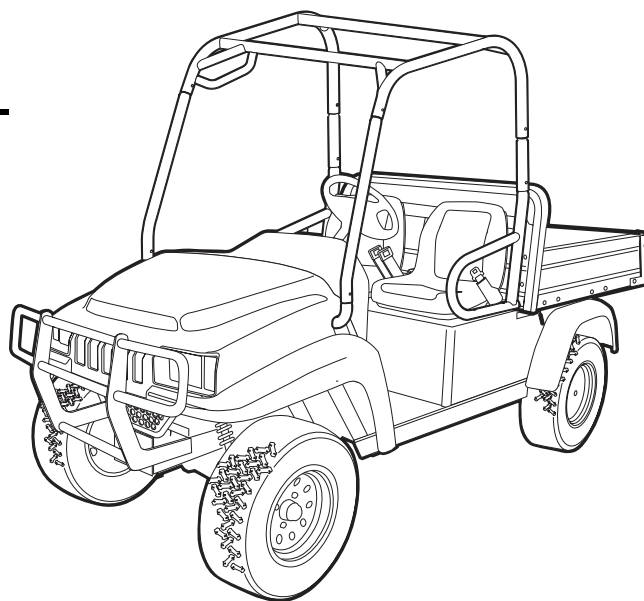


Bobcat®

**Service
Manual**



**S/N 235311001-D to 235312999-D
S/N 235211001-G to 235212999-G**



FOREWORD

Bobcat vehicles are designed and built to provide the ultimate in performance efficiency; however, proper maintenance and repair are essential for achieving maximum service life and continued safe and reliable operation.

This manual provides detailed information for the maintenance and repair of Bobcat 2200 Utility vehicle, and should be thoroughly reviewed prior to servicing the vehicles. The procedures provided must be properly implemented, and the DANGER, WARNING, and CAUTION statements must be heeded.

This manual was written for the trained technician who already possesses knowledge and skills in electrical and mechanical repair. If the technician does not have such knowledge and skills, attempted service or repairs to the vehicle may render the vehicle unsafe. For this reason, Bobcat advises that all repairs and/or service be performed by an authorized Bobcat distributor/dealer representative or by a Bobcat factory-trained technician.

It is the policy of Bobcat, Inc. to assist its distributors and dealers in continually updating their service knowledge and facilities so they can provide prompt and efficient service for vehicle owners. Regional technical representatives, vehicle service seminars, periodic service bulletins, maintenance and service manuals, and other service publications also represent Bobcat's continuing commitment to customer support.

This manual covers all aspects of typical vehicle service; however, unique situations sometimes occur when servicing a vehicle. If it appears that a service question is not answered in this manual, you may write to us at: Bobcat, Inc.; P.O. Box 204658; Augusta, GA 30917; Attention: Technical Services, or contact a Bobcat Technical Service Representative at (706) 863-3000, ext. 3580.

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This manual effective September 20, 2004.

WARNING

- **Read Section 1 – Safety before attempting any service on this vehicle.**
- **Before servicing vehicle, read complete section(s) and any referenced information that may be relevant to the service or repair to be performed.**

NOTE: *This manual represents the most current information at the time of publication. Bobcat, Inc., is continually working to further improve our vehicles and other products. These improvements may affect servicing procedures. Any modification and/or significant change in specifications or procedures will be forwarded to all Bobcat dealers and will, when applicable, appear in future editions of this manual.*

Damage to a vehicle or component thereof not resulting from a defect or that occurs due to unreasonable or unintended use, overloading, abuse, or neglect (including failure to provide reasonable or necessary maintenance as instructed in the vehicle owner's manual), accident or alteration, including increasing vehicle speed beyond factory specifications or modifications that affect the stability of the vehicle or the operation thereof, will void the warranty.

Bobcat, Inc., reserves the right to change specifications and designs at any time without notice and without incurring any obligation or liability whatsoever.

There are no warranties expressed or implied in this manual. See the limited warranty found in the vehicle owner's manual or write to Bobcat, Inc., P.O. Box 204658, Augusta, GA 30917-4658 USA, Attention: Warranty Department.

CONTENTS

SECTION 1 – SAFETY

General Warning	1-1
-----------------------	-----

SECTION 2 – VEHICLE SPECIFICATIONS

SECTION 3 – GENERAL INFORMATION

General Information	3-1
Model Identification	3-1
Storage	3-2
Preparing the Vehicle for Extended Storage	3-2
Returning the Stored Vehicle to Service	3-3

SECTION 4 – BODY AND TRIM

Cleaning the Vehicle	4-1
Seat Cleaning	4-1
Front Body Repair	4-2
Abrasions and Haze	4-2
Light Scratches	4-2
Large Scratches and Abrasions	4-2
Front Body Components	4-2
Instrument Panel Removal	4-2
Instrument Panel Installation	4-4
Dashboard Removal	4-4
Dashboard Installation	4-4
Front Body Removal	4-5
Front Body Installation	4-5
Front Fender Removal	4-5
Front Fender Installation	4-5
Roll-Over Protective Structure (ROPS)	4-5
ROPS Removal	4-6
ROPS Installation	4-6

Seat	4-7
Seat Removal	4-7
Seat Adjustment	4-7
Seat Installation	4-7
Seat Frame Removal	4-7
Seat Frame Installation	4-7
Safety Belts	4-8
Safety Belt Removal	4-8
Safety Belt Installation	4-8
Cargo Bed With Electric Lift	4-9
Testing the Bed Lift Motor	4-9
Bed Lift Motor Removal	4-9
Bed Lift Motor Installation	4-9
Cargo Bed Removal	4-10
Cargo Bed Installation	4-10
Rear Fender	4-10
Rear Fender Removal	4-10
Rear Fender Installation	4-10
Floor Mat	4-11
Floor Mat Removal	4-11
Floor Mat Installation	4-11

SECTION 5 – ACCELERATOR AND BRAKE PEDAL ASSEMBLIES

Accelerator Pedal	5-1
Accelerator Pedal Removal	5-1
Accelerator Pedal Installation	5-2
Accelerator Pedal and RPM Adjustment	5-2
Brake Pedal	5-3
Brake Pedal Removal	5-3
Brake Pedal Installation	5-3
Brake Pedal Adjustment	5-4
Park Brake Pedal	5-4
Park Brake Pedal Removal	5-4
Park Brake Pedal Installation	5-4
Park Brake Cable Installation	5-5
Park Brake Cable Adjustment	5-5

SECTION 6 – HYDRAULIC AND PARK BRAKE SYSTEMS

Brake System Inspection	6-1
Brake System Troubleshooting	6-3

Brake Pads and Caliper	6-5
Front Brake Pad and Caliper Removal	6-5
Front Brake Pad and Caliper Installation	6-7
Rear Brake Pad and Caliper Removal	6-8
Rear Brake Pad and Caliper Installation	6-9
Brake Disc and Hub	6-10
Front Wheel Disc and Hub Removal	6-10
Front Wheel Disc and Hub Installation	6-14
Rear Wheel Disc Removal	6-15
Rear Wheel Disc Installation	6-16
Front Brake Line Removal	6-17
Front Brake Line Installation	6-17
Rear Brake Line Removal	6-18
Rear Brake Line Installation	6-19
Filling the Hydraulic System	6-20
Reservoir Removal	6-20
Reservoir Installation	6-20
Master Cylinder Removal	6-21
Master Cylinder Installation	6-22
Bleeding the Hydraulic Brake System	6-22
Purging the Hydraulic System	6-23
Park Brake System	6-23
Park Brake Adjustment	6-23
Park Brake Cable Adjustment	6-24
Park Brake Wheel Cables	6-24
Front Park Brake Cable Removal	6-26
Front Park Brake Cable Installation	6-27

SECTION 7 – STEERING AND FRONT SUSPENSION

Steering Wheel	7-1
Steering Wheel Removal	7-1
Steering Wheel Installation	7-2
Steering Column	7-2
Steering Column Removal	7-2
Steering Column Installation	7-3
Rack and Pinion	7-3
Rack and Pinion Removal	7-3
Rack and Pinion Installation	7-4
Rack and Pinion Disassembly	7-5
Rack and Pinion Assembly	7-9
Wheel Alignment	7-11

Front Suspension Components	7-13
Steering Upright Removal	7-13
Upper A-Arm Removal	7-15
Upper A-Arm Installation	7-16
Lower A-Arm Removal	7-16
Lower A-Arm Installation	7-18
Front Coil-Over Shock Absorber Removal	7-18
Front Coil-Over Shock Absorber Installation	7-19
Steering Upright Installation	7-20

SECTION 8 – WHEELS AND TIRES

General Information	8-1
Wheels	8-2
Wheel Removal	8-2
Wheel Installation	8-2
Tires	8-2
Tire Removal	8-2
Tire Installation	8-2

SECTION 9 – REAR SUSPENSION

Rear Coil-Over Shock Absorber	9-1
Swing Arms	9-2
Swing Arm Removal	9-2
Swing Arm Installation	9-3

SECTION 10 – PERIODIC MAINTENANCE

Periodic Service Schedule	10-1
Brake Fluid Reservoir	10-6
Brake Fluid	10-6
Engine Oil	10-6
Oil Pressure – Gasoline Engine	10-6
Engine Oil Level Check	10-7
Engine Oil and Filter Change	10-7
Oil Viscosity	10-11
Gearcase Lubrication	10-11
Lubrication Level Check for Front Differential, Transmission, and Rear Differential	10-11
Lubrication Change for Front Differential, Transmission, and Rear Differential	10-11
Engine Coolant – Diesel Vehicles	10-13
Engine Coolant Level Check	10-13

Fueling Instructions	10-13
Draining Water from Fuel Filter	10-15
Battery	10-15

SECTION 11A – TROUBLESHOOTING AND ELECTRICAL SYSTEM: GASOLINE VEHICLES

Troubleshooting Guide	11a-1
Wiring Diagram	11a-6
Test Procedures	11a-8
Index of Test Procedures	11a-8

SECTION 11B – TROUBLESHOOTING AND ELECTRICAL SYSTEM: DIESEL VEHICLES

Troubleshooting Guide	11b-1
Wiring Diagram	11b-6
Test Procedures	11b-8
Index of Test Procedures	11b-8

SECTION 12A – ELECTRICAL COMPONENTS: GASOLINE VEHICLES

Starter and Starter Solenoid	12a-1
Relays	12a-1
Neutral Switch	12a-2
Carburetor Solenoid	12a-2
Voltage Regulator	12a-3
Instrument Panel	12a-4
Key Switch	12a-5
Fuse	12a-6
Reverse Warning Buzzer	12a-7
Reverse Warning Buzzer Limit Switch	12a-7
Low Oil Warning Light	12a-9
Fuel Gauge/Hour Meter	12a-10
Fuel Level Sending Unit	12a-11
Ignition Coil and Charge Coil	12a-11
Charge Coil	12a-11
Oil Pressure Sensor	12a-11
Light Switch	12a-13
Wire Harness Diodes	12a-13
Bed Lift Switch	12a-14
Bed Lift Circuit Breaker	12a-15
General Information	12a-16

SECTION 12B – ELECTRICAL COMPONENTS: DIESEL VEHICLES

Starter and Starter Solenoid	12b-1
Relays	12b-1
Neutral Switch	12b-2
Fuel Solenoid	12b-2
50-Amp Circuit Breaker	12b-3
Instrument Panel	12b-4
Key Switch	12b-5
Fuse	12b-6
Reverse Warning Buzzer	12b-7
Low Oil Warning Light	12b-9
Fuel Gauge/Hour Meter	12b-10
Electric Fuel Pump	12b-11
Fuel Level Sending Unit	12b-11
Alternator	12b-12
Headlights	12b-14
Light Switch	12b-15
Thermostat Switch	12b-16
Fan Motor	12b-17
Wire Harness Diodes	12b-18
Bed Lift Switch	12b-18
Bed Lift Circuit Breaker	12b-19
Battery	12b-20
General Information	12b-20

SECTION 13A – GASOLINE ENGINE, MUFFLER, FUEL SYSTEM, AND CLUTCHES

Gasoline Engine	13a-1
Engine Removal	13a-1
Engine Installation	13a-3
Exhaust System	13a-5
Muffler Removal	13a-5
Intermediate Pipe Removal	13a-5
Intermediate Pipe Installation	13a-6
Muffler Installation	13a-6

Fuel System	13a-7
Carburetor	13a-7
Main Jet Elevation/Size Chart	13a-8
Fuel Filter	13a-8
Fuel Pump	13a-8
Fuel Level Sending Unit	13a-10
Fuel Tank	13a-13
Fuel Lines	13a-15
Fuel Shut-Off Valve	13a-16
Oil Filter Hoses	13a-17
Engine Control Linkages	13a-18
Accelerator Cable	13a-18
Governor Guard	13a-21
Governor Cable	13a-21
Accelerator Cable Retention Clip Adjustment	13a-22
Ground Speed (Transmission) Governor Arm Adjustment	13a-23
Engine Governor Arm	13a-25
Engine RPM Adjustment	13a-25
Choke and Air Intake System	13a-26
Air Filter Replacement	13a-26
Choke Cable Removal	13a-27
Choke Cable Installation	13a-28
Air Canister Removal	13a-28
Air Canister Installation	13a-29
Air Filter Intake Hose Removal	13a-29
Air Filter Intake Hose Installation	13a-30
Air Filter Outlet Hose Removal	13a-30
Air Filter Outlet Hose Installation	13a-31
Clutches	13a-31
Clutch Troubleshooting	13a-32
Drive Belt	13a-32
Drive Clutch	13a-33
Driven Clutch	13a-37
Clutch Cover	13a-40

SECTION 13B – DIESEL ENGINE, MUFFLER, FUEL SYSTEM, AND CLUTCHES

Diesel Engine	13b-1
Engine Removal	13b-1
Engine Installation	13b-4

Exhaust System	13b-6
Muffler Removal	13b-6
Intermediate Pipe Removal	13b-6
Manifold Pipe Removal	13b-7
Manifold Pipe Installation	13b-7
Intermediate Pipe Installation	13b-7
Muffler Installation	13b-8
Fuel System	13b-9
Fuel Line Hose Replacement	13b-9
Fuel Filter Replacement	13b-9
Draining Water from the Secondary Fuel Filter	13b-9
Electric Fuel Pump	13b-12
Fuel Level Sending Unit	13b-14
Fuel Tank	13b-17
Fuel Lines	13b-20
Engine Control Linkages	13b-21
Accelerator Cable	13b-21
Engine RPM Adjustment	13b-22
Air Intake System	13b-25
Air Filter Replacement	13b-25
Air Canister Removal	13b-26
Air Canister Installation	13b-26
Air Filter Intake Hose Removal	13b-26
Air Filter Intake Hose Installation	13b-27
Air Filter Outlet Hose Removal	13b-28
Air Filter Outlet Hose Installation	13b-28
Clutches	13b-28
Clutch Troubleshooting	13b-29
Drive Belt	13b-30
Drive Clutch	13b-31
Driven Clutch	13b-35
Clutch Cover	13b-37

SECTION 14 – DRIVETRAIN COMPONENTS

Half Shafts	14-1
Half Shaft Removal	14-1
Half Shaft Installation	14-3
Front Differential	14-4
Front Differential Removal	14-4
Front Differential Installation	14-6

Front Driveshaft	14-6
Front Driveshaft Removal	14-6
Front Driveshaft Installation	14-7
Rear Receiver Hitch	14-7
Rear Receiver Hitch Removal	14-7
Rear Receiver Hitch Installation	14-7
Rear Axle	14-8
Rear Axle Removal	14-8
Rear Axle Installation	14-10
Rear Driveshaft	14-11
Rear Driveshaft Removal	14-11
Rear Driveshaft Installation	14-12
Transmission	14-12
Troubleshooting	14-12
Transmission Removal	14-15
Transmission Installation	14-17
Forward/Reverse Shifter Cable	14-18
Forward/Reverse Shifter Handle	14-21
Rear Differential and Axles	14-22
Rear Differential Removal	14-22
Rear Axle Shafts and Wheel Bearings	14-23
Rear Differential Installation	14-23

SECTION 15 – RADIATOR AND COOLANT SYSTEM (DIESEL)

General Information	15-1
Engine Coolant Check	15-1
Engine Coolant Change	15-1
Coolant Reservoir Removal	15-3
Coolant Reservoir Installation	15-4
Radiator	15-4
Radiator Removal	15-4
Radiator Installation	15-8
Coolant Pipe Weldment (Steel)	15-8
Coolant Pipe Weldment Removal	15-8
Coolant Pipe Weldment Installation	15-9

SECTION 16 – TRANSMISSION MODELS 420317 AND 420682

General Information	16-1
Model Identification	16-1
Service Fixture	16-1

Transmission Removal	16-2
Transmission Disassembly	16-2
Input Shaft Disassembly	16-8
Input Shaft Assembly	16-8
Intermediate Shaft Disassembly	16-8
Output Shaft Disassembly	16-12
Shifter Shaft Removal	16-13
Shifter Shaft Installation	16-14
Case Inspection	16-14
Shaft Seal Removal	16-15
Shaft Seal Installation	16-15
Output Shaft Assembly	16-15
Intermediate Shaft Assembly	16-18
Intermediate and Output Shaft Assembly	16-22
Transmission Assembly	16-23
Transmission Installation	16-27

SECTION 17 – FRONT DIFFERENTIAL MODELS 6203-01-139-S AND 6203-01-189-S

General Information	17-1
Axle Half Shaft Removal	17-1
Front Differential Removal	17-2
Tools Required For This Section	17-3
Front Differential Coil And Output Cover	17-3
Coil and Output Cover Removal	17-3
Coil and Output Cover Installation	17-6
Front Differential	17-8
Front Differential Disassembly	17-8
Front Differential Assembly	17-14
Front Differential Installation	17-18
Axle Half Shaft Installation	17-18

SECTION 18 – REAR DIFFERENTIAL MODELS 420366 AND 420851

General Information	18-1
Rear Differential Disassembly	18-2
Pinion Gear Removal	18-4
Ring Gear Removal	18-6
Clutch Carrier Assembly	18-7
Ring Gear Installation	18-8
Pinion Gear Installation	18-9
Rear Differential Assembly	18-9

Axle Shafts and Differential Installation 18-11

SECTION 19 – KUBOTA D722 DIESEL ENGINE MANUAL

SECTION 20 – HONDA GX 620 GASOLINE ENGINE MANUAL

SECTION i – INDEX

SECTION 1 – SAFETY

To ensure the safety of those servicing these vehicles, and to protect the vehicles from damage resulting from improper service or maintenance, the procedures in this manual must be followed. It is important to note that throughout this manual there are statements contained within headings labeled DANGER, WARNING, CAUTION, or NOTE. These special statements relate to specific safety issues, and must be read, understood, and heeded before proceeding.

DANGER

- A DANGER indicates an immediate hazard that will result in severe personal injury or death.

WARNING

- A WARNING indicates an immediate hazard that could result in severe personal injury or death.

CAUTION

- A CAUTION with the safety alert symbol indicates a hazard or unsafe practice that could result in minor personal injury.

CAUTION

- A CAUTION without the safety alert symbol indicates a potentially hazardous situation that could result in property damage.

GENERAL WARNING

The following safety statements must be heeded whenever the vehicle is being operated, repaired, or serviced. Service technicians should become familiar with these safety statements, which can be found throughout this manual. Also, other specific safety statements appear throughout this manual and on the vehicle.

DANGER

- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed area. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Battery – Poison! Contains acid! Causes severe burns. Avoid contact with skin, eyes, or clothing. Antidotes:**
 - **External: Flush with water. Call a physician immediately.**
 - **Internal: Drink large quantities of milk or water. Follow with milk of magnesia or vegetable oil. Call a physician immediately.**
 - **Eyes: Flush with water for 15 minutes. Call a physician immediately.**
- **Gasoline/Diesel – Flammable! Explosive! Do not smoke. Keep sparks and flames away from the vehicle and service area. Service only in a well-ventilated area.**
- **Do not operate engine in an enclosed area without proper ventilation. The engine produces carbon monoxide, which is an odorless, deadly poison.**

 WARNING

- Follow the procedures exactly as stated in this manual, and heed all **DANGER**, **WARNING**, and **CAUTION** statements in this manual as well as those on the vehicle.
- Only trained technicians should service or repair the vehicle. Anyone doing even simple repairs or service should have knowledge and experience in electrical and mechanical repair. The appropriate instructions must be used when performing maintenance, service, or accessory installation.
- Prior to servicing the vehicle or leaving the vehicle unattended, turn the key switch **OFF**, remove the key, and place the Forward/Reverse handle in the **NEUTRAL** position. Chock the wheels when servicing the vehicle.
- To avoid unintentionally starting the vehicle:
 - Disconnect battery cables, negative (–) cable first (Figure 1-2, Page 1-3).
 - Gasoline vehicles only: Disconnect the spark plug wires from the spark plugs.
- Frame ground – Do not allow tools or other metal objects to contact frame when disconnecting battery cables or other electrical wiring. Do not allow a positive wire to touch the vehicle frame, engine, or any other metal component.
- Wear safety glasses or approved eye protection when servicing the vehicle. Wear a full face shield and rubber gloves when working on or near batteries.
- Do not wear loose clothing or jewelry such as rings, watches, chains, etc., when servicing the vehicle.
- Moving parts! Do not attempt to service the vehicle while it is running.
- Hot! Do not attempt to service hot engine or exhaust system. Failure to heed this warning could result in severe burns.
- Use insulated tools when working near batteries or electrical connections. Use extreme caution to avoid shorting of components or wiring.
- Check the vehicle owner's manual for proper location of all vehicle safety and operation decals and make sure they are in place and are easy to read.
- Any modification or change to the vehicle that affects the stability or handling of the vehicle, or increases maximum vehicle speed beyond factory specifications, could result in severe personal injury or death.
- Lift only one end of the vehicle at a time. Use a suitable lifting device (chain hoist or hydraulic floor jack) with 1000 lb. (454 kg) minimum lifting capacity. Do not use lifting device to hold vehicle in raised position. Use approved jack stands of proper weight capacity to support the vehicle and chock the wheels that remain on the floor. When not performing a test or service procedure that requires movement of the wheels, lock the brakes.
- When servicing the vehicle with part of the vehicle on jack stands, do not operate the engine with the Forward/Reverse handle in either the **FORWARD** or **REVERSE** position. The all-wheel drive system will engage any wheel(s) with traction. See Figure 1-1, Page 1-3.

Dear

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