

X 331

Excavator

Service Manual

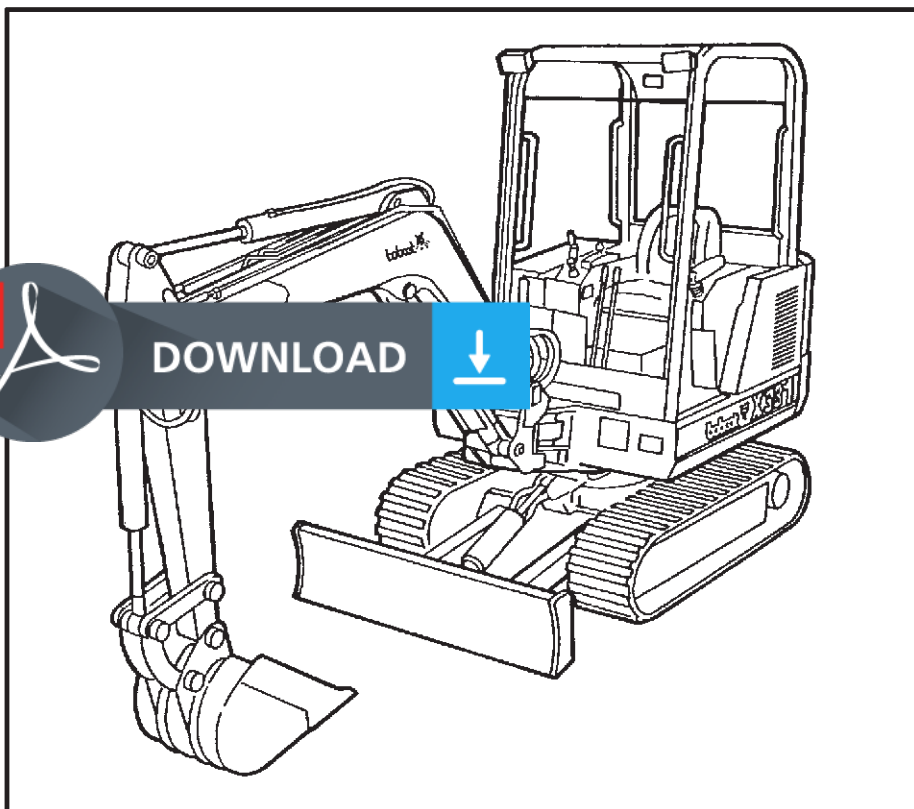
(S/N 512911001 – 512912999)



PDF



DOWNLOAD



**MELROE
INGERSOLL-RAND**

6724222(2-96)

1 of 525

Printed in U.S.A.



© Melroe Company 1996

Dealer Copy -- Not for Resale

MAINTENANCE SAFETY



WARNING

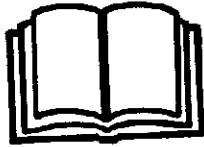
Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after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

W-2003-0903



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

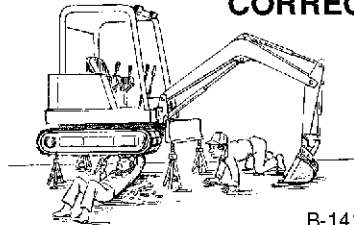
CORRECT



B-10731a

- ⚠ Never service the Hydraulic Excavator without instructions.

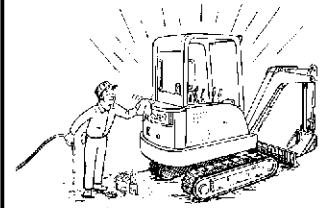
CORRECT



B-14148

- ⚠ Use the correct procedure to lift and support the excavator.
- ⚠ Always lift the blade fully before installing jackstands.

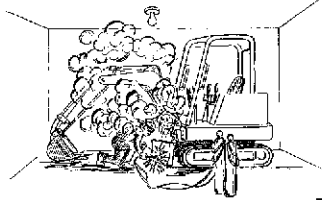
CORRECT



B-14142

- ⚠ Cleaning and maintenance are required daily.

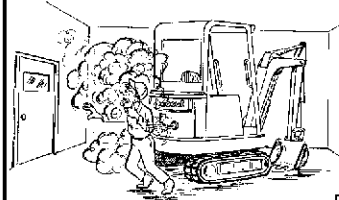
WRONG



B-14147

- ⚠ Have good ventilation when welding or grinding painted parts.
- ⚠ Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.

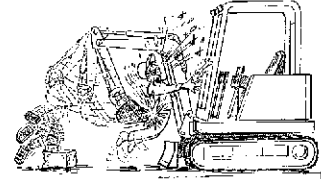
WRONG



B-14141

- ⚠ Vent exhaust to outside when engine must be run for service.
- ⚠ Exhaust system must be tightly sealed. Exhaust Fumes can kill without warning.

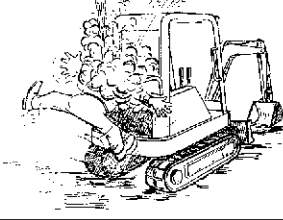
WRONG



B-14145

- ⚠ Always lower the bucket and blade to the ground before doing any maintenance.
- ⚠ Never modify equipment or add attachments not approved by Bobcat Company.

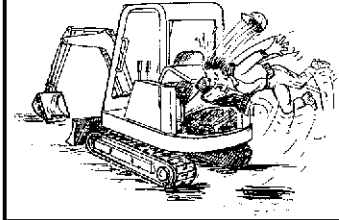
WRONG



B-14146

- ⚠ Stop, cool and clean engine of flammable materials before checking fluids.
- ⚠ Never service or adjust machine with the engine running unless instructed to do so in the manual.
- ⚠ Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.
- ⚠ Never fill fuel tank with engine running, while smoking or when near open flame.

WRONG



B-14143

- ⚠ Keep body, jewelry and clothing away from moving parts, electrical contact, hot parts and exhaust.
- ⚠ Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engines are running or tools are used. Use eye protection approved for type of welding.
- ⚠ Keep rear door closed except for service. Close and latch door before operating the excavator.

WRONG



B-6589

- ⚠ Lead-acid batteries produce flammable and explosive gases.
- ⚠ Keep arcs, sparks, flames and lighted tobacco away from batteries.
- ⚠ Batteries contain acid which burns eyes or skin on contact. Wear protective clothing. If acid contacts body, flush well with water. For eye contact flush well and get immediate medical attention.

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. The Service Safety Training Course is available from your Bobcat dealer.

Dealer Copy -- Not for Resale

MSW20-0805



Bobcat®

ALPHABETICAL INDEX

ACCUMULATOR (S/N 12999 & Below)	2-1	HYDRAULIC CONTROL VALVE (6-Spool)	2-1
ACCUMULATOR (S/N 13001 & Above)	2-1	HYDRAULIC CONTROL VALVE (5-Spool)	2-1
AIR CLEANER	1-1	HYDRAULIC CONTROL VALVE (5-Spool)	2-1
AIR CLEANER	7-1	HYDRAULIC CYLINDER	2-1
ALTERNATOR	6-1	HYDRAULIC EXCAVATOR SPECIFICATIONS	8-1
ARM	4-1	HYDRAULIC FILTER ASSEMBLY	2-1
ARM CYLINDER	2-1	HYDRAULIC PUMP	2-1
AUXILIARY SELECTOR VALVE	2-1	HYDRAULIC RESERVOIR AND FUEL	2-1
BATTERY	6-1	RESERVOIR	2-1
BLADE	5-1	HYDRAULIC SERVICE INFORMATION	2-1
BLADE CONTROL LEVER AND CABLE	3-1	HYDRAULIC SERVICE INFORMATION	2-1
BLADE CYLINDER	2-1	HYDRAULIC SYSTEM	1-1
BOOM	4-1	HYDRAULIC SYSTEM TROUBLESHOOTING	2-8
BOOM CYLINDER	2-1	IDLER GEAR AND CAMSHAFT	7-1
BOOM PIVOT BUSHING	4-1	INSPECTION COVER (S/N 11001-11999)	4-1
BOOM SWING BRACKET	4-1	INSTRUMENT PANEL	6-1
BOOM SWING CYLINDER	2-1	JOYSTICK (S/N 12999 & Below)	3-1
BUCKET	4-1	JOYSTICK (S/N 13001 & Above)	3-1
BUCKET CYLINDER	2-1	JOYSTICK CONTROL CHANGE	2-1
BUCKET TEETH	4-1	LEFT CONSOLE (S/N 12999 & Below)	3-1
CAB	4-1	LEFT CONSOLE (S/N 13001 & Above)	3-1
CAB/CANOPY REAR COVER	4-1	LEFT CONSOLE RELEASE HANDLE	3-1
CAB ELECTRICAL	6-1	(S/N 13001 & Above)	3-1
CENTER SWIVEL JOINT	4-1	LEFT HAND CORNER POST	4-1
COOLING SYSTEM	1-1	LEFT HAND SIDE COVER	4-1
COUNTERBALANCE VALVE (S/N 11057-12999)	4-1	LIFTING AND BLOCKING THE EXCAVATOR	1-1
COUNTERWEIGHTS	4-1	LUBRICATION OF THE EXCAVATOR	1-1
CRANKSHAFT AND BEARINGS	7-1	MAIN RELIEF VALVES (S/N 11001-12999)	2-1
CRANKSHAFT GEAR	7-1	MAIN RELIEF VALVES (Adjustable)	2-1
CROSS PORT RELIEF VALVE	4-1	(S/N 13001 & Above)	2-1
(S/N 11001-11056 & S/N 13001 & Above)	4-1	MUFFLER	7-1
CYLINDER BORE	7-1	OIL COOLER	2-1
CYLINDER HEAD	7-1	OIL PUMP	7-1
DECIMAL & MILLIMETER EQUIVALENTS	8-1	PISTON AND CONNECTING ROD	7-1
ELECTRICAL SYSTEM	6-1	PORT BLOCK	2-1
ENGINE	7-1	PORT RELIEF VALVES AND MAIN RELIEF VALVES	2-1
ENGINE COMPRESSION	7-1	(S/N 13001 & Above)	2-1
ENGINE COVER	1-1	RADIATOR	7-1
ENGINE COVER	4-1	REAR FLOOR PLATE	4-1
ENGINE FLYWHEEL	7-1	RIGHT CONSOLE COVER	3-1
ENGINE LUBRICATION SYSTEM	1-1	RIGHT CONSOLE	3-1
ENGINE OIL PRESSURE	7-1	RIGHT HAND CORNER POST	4-1
ENGINE OIL SPECIFICATIONS	8-1	RIGHT HAND SIDE COVER	4-1
ENGINE SPECIFICATIONS	8-1	ROCKER ARM AND SHAFT	7-1
FAN GUARD	7-1	ROPS CANOPY	4-1
FINAL DRIVE CASE	1-1	SEAT AND SEAT MOUNT	4-1
FLOORMAT AND FLOOR PLATE	4-1	SERVICE SCHEDULE	1-1
FRONT ENGINE COVER	4-1	SPARK ARRESTOR MUFFLER	1-1
FUEL CAMSHAFT	7-1	SPEED CONTROL LEVER	3-1
FUEL, COOLANT AND LUBRICANTS	8-1	STARTER	6-1
FUEL INJECTOR NOZZLES	7-1	STEERING LEVER AND PEDALS	3-1
FUEL INJECTION PUMP	7-1	SWING BRACKET BUSHING	4-1
FUEL LEVEL SENDER	6-1	SWING GEAR BOX	4-1
FUEL SHUT-OFF SOLENOID	7-1	SWING MOTOR	4-1
FUEL SYSTEM	1-1		
GAUGES	6-1		
GAUGE LIGHTS	6-1		
GLOW PLUGS	7-1		
HEATER AIR FILTER SERVICE	1-1		
HYDRAULIC CONTROL VALVE (3-Spool)	2-1		
(S/N 12999 & Below)	2-1		

Dealer Copy -- Not for Resale



Thank you very much
for your reading.
Please click here
to get more information.