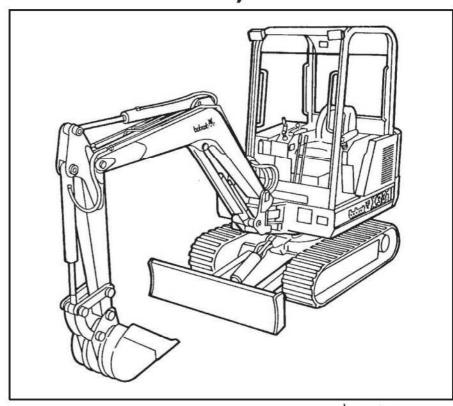
# X331

## **Excavator**

# Service Manual

(S/N 511920001 & Above)





MELROE INGERSOLL-RAND

6722918(5-94)

Printed in U.S.A.

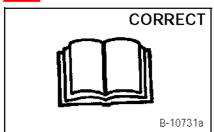


#### MAINTENANCE SAFETY



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.

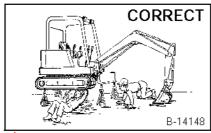
Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



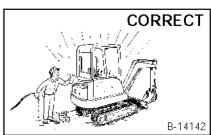
**Bobcat** 

without

service Hydraulic Excavator instructions.



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



Cleaning and required daily. maintenance



ventilation Have good when weldina or grinding painted parts. Wear dust mask when grinding

painted parts. Toxic dust and gas



engine must be run for service. without warning.



Vent exhaust to outside when Exhaust system must be tightly sealed. Exhaust Fumes can kill

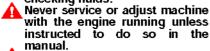


Always lower the bucket and blade to the ground before doing any maintenance.

Never modify equipment or add attachments not approved by Bobcat Company.



Stop, cool and clean engine of flammable materials before checking fluids.



Avoid contact with leaking hydraulic fluid or diesel fue leaking under pressure. It can penetrate the skin or eyes.

Never fill fuel tank with engine running, while smoking or when near open flame.



Keep body, jewelry and clothing away from moving parts. away from moving parts, electrical contact, hot parts and exhaust.

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.



Lead-acid batteries produce flammable and explosive gases. Keep arcs, sparks, flames and lighted tobacco away from batteries.

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 attention. îmmediate medical

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.

MSW20-0805



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