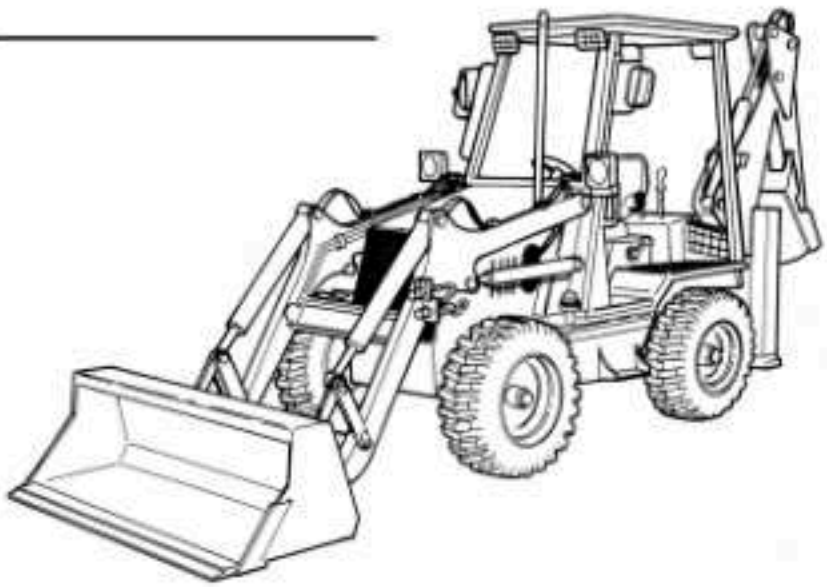
BL-275

Ingersoll-Rand

Operation & Maintenance Manual

S/N 573011001 & Above
B Series



6903859
22586127 (1-05) Revised (5-05) (2)

Printed in U.S.A.

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CONTENTS

FOREWORD III

SAFETY XI

OPERATING INSTRUCTIONS OI-1

PREVENTIVE MAINTENANCE PM-1

MACHINE SIGN TRANSLATIONS MST-1

SPECIFICATIONS SPEC-1

REFERENCE INFORMATION

Write the correct information for YOUR Ingersoll-Rand Backhoe Loader in the spaces below. Always use these numbers when referring to your Ingersoll-Rand Backhoe Loader.

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.

Backhoe Loader Serial Number _____

Engine Serial Number _____

NOTES:

_____

_____

_____

YOUR Ingersoll-Rand® DEALER:

_____

ADDRESS:

_____

PHONE:

_____

Ingersoll-Rand Company
Utility Equipment
501 Sanford Avenue
Mocksville, NC 27028

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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 Ingersoll-Rand Backhoe Loader. READ AND UNDERSTAND THIS OPERATION & MAINTENANCE MANUAL BEFORE OPERATING YOUR BACKHOE LOADER. If you have any questions, see your Ingersoll-Rand dealer.

This manual may illustrate backhoe loaders with additional options and accessories not installed on your backhoe loader.

BACKHOE LOADER IDENTIFICATION VIII

BACKHOE LOADER SERIAL NUMBER. VII

DELIVERY REPORT. VII

ENGINE SERIAL NUMBER VII

FEATURES, ACCESSORIES AND ATTACHMENTS IX
- Attachments IX
- Machine Features IX
- Options And Accessories. IX

OIL. V

REGULAR MAINTENANCE ITEMS V

SERIAL NUMBER LOCATION VII

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BACKHOE HYDRAULIC CONTROLS

Backhoe Control Levers

Learn the function of the control levers before you start the engine to begin operation **[Figure OI-32]**.

LEVER NO. 1 **[Figure OI-32]** - Boom and Swing.

To lower the boom, push the lever forward (Item 2) **[Figure OI-32]**.

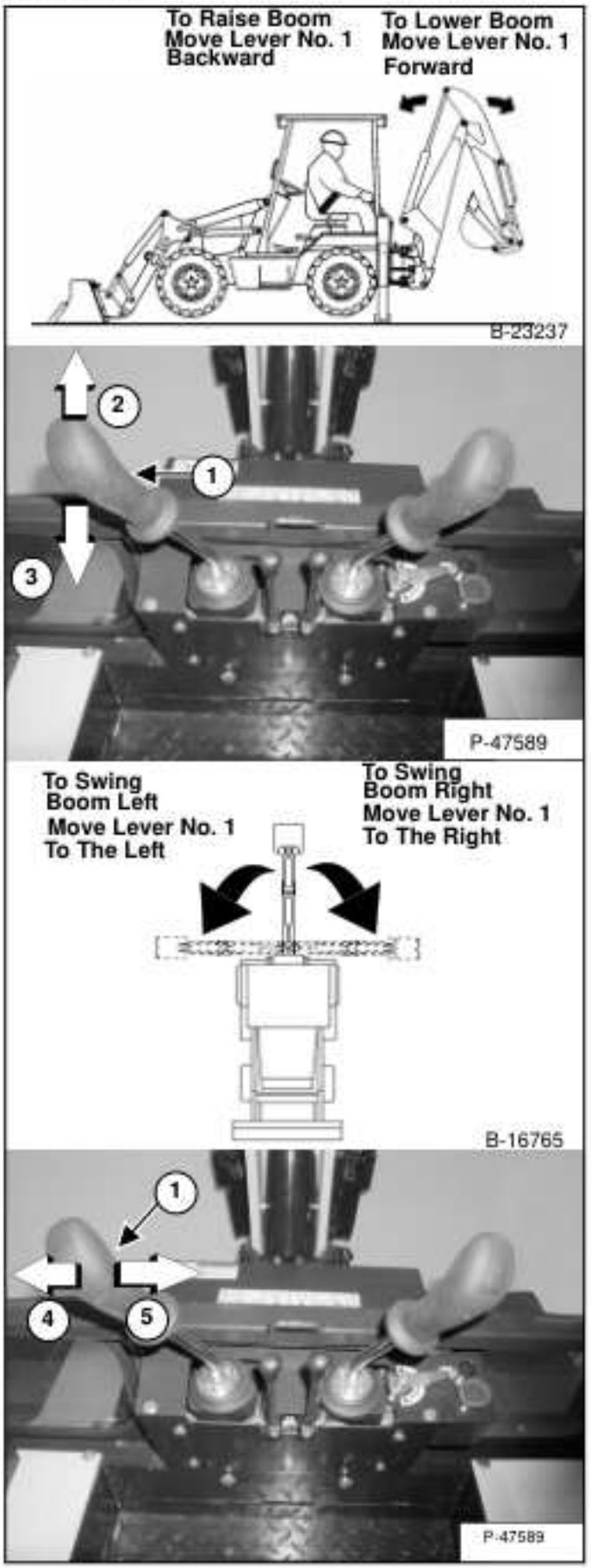
To raise the boom, pull the lever backward (Item 3) **[Figure OI-32]**.

To swing the boom to the left, move the lever to the left (Item 4) **[Figure OI-32]**.

To swing the boom to the right, move the lever to the right (Item 5) **[Figure OI-32]**.

NOTE: If you release the boom and swing control lever, the lever will return to the neutral position.

Figure OI-32



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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 Ingersoll-Rand Backhoe Loader without instructions.

CORRECT



B-16768

⚠ Always use an approved lift arm support device when servicing the backhoe loader with the lift arms raised. Replace the lift arm support device if damaged or missing.

⚠ Disconnecting or loosening any hydraulic tubeline, hose, fitting component, or part failure can cause lift arms or backhoe boom to drop.

CORRECT



B-16738

⚠ Cleaning and maintenance are required daily.

⚠ NEVER modify equipment or add attachments not approved by Ingersoll-Rand

WRONG



B-16730

⚠ 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-16746

⚠ 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-16719

⚠ Never work on backhoe loader with lift arms raised unless supported by an approved lift arm support device.

⚠ Always lower the backhoe bucket to the ground before doing any maintenance.

WRONG



B-16571

⚠ 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-16731

⚠ 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 engine cover closed except for service. Close and latch engine cover before operating the backhoe loader.

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 INGERSOLL-RAND SERVICE PERSONNEL.** **Always use genuine Ingersoll-Rand replacement parts.**

MSW17-0504

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BACKHOE LOADER SPECIFICATIONS (CONT'D)

Loader Performance

*Loader Rated Operating Capacity (Per ISO 14397)	2265 lb. (1027 kg)
Loader Tipping Load (ISO)	4715 lb. (2138 kg)
Operating Weight	6770 lb. (3071 kg)
Travel Speed	4.0 MPH (6,4 km/hr.)
Bucket Capacity (Loader)	13.1 ft^3 (0.37 m^3)
Loader Breakout	4250 lb. (1928 kg)

*Determined with equipment shown (backhoe in the center transport position).

Backhoe Performance

Std. Backhoe Bucket Width	16 in. (400 mm)
Diggingforce Bucket Dipper	 5340 lb. (2422 kg) 3153 lb. (1430 kg)

Controls

Hydraulics	Hand Operated Lever
Loader Auxiliary Hydraulics	Hand Operated Lever
Backhoe Auxiliary Hydraulics	Button Operated
Parking Brake	Hand Lever activated and button activated parking brake. Button activated system is a spring applied pressure release (SAPR) system.
Travel Control Pedal	Foot Operated Lever

Engine

Make/Model	Kubota D1105 Turbo-charged (Tier II)
Fuel/Cooling	Diesel/Liquid (Antifreeze Mixture)
Horsepower (SAE Net)	31.5 HP (23,4 kW) @3000 RPM
Number Of Cylinders	Three
Displacement	68.53 ci (1,123 L)
Lubrication	Pressure System with Filter
Air Cleaner	Dry replaceable cartridge
Equipped with spark arrestor exhaust system	

Hydraulic System

Hydraulic Pump	Gear Driven
Hydraulic Cooling	Cooler/Fan

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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

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 Ingersoll-Rand Backhoe Loader and attachment must be in good operating condition before use.

Check all of the items on the 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 Ingersoll-Rand 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 Ingersoll-Rand 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 Ingersoll-Rand dealer in English and Spanish. They provide information for safe and efficient equipment operation. Safety videos are also available.

Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity (R.O.C.) of the loader or the Rated Lift Capacity of the backhoe. 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 or hearing protection are required for some work. See your Ingersoll-Rand dealer about available Safety Equipment.

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