

Hard rock equipment return on investment through improved safety, productivity, and durability. This is the quality and innovation promise that MacLean Engineering brings to its full suite of utility vehicles, and what we mean when we say we build for life underground.



An operator standing in front of a MacLean Boom Truck, still in active service after two decades underground.

Utility Vehicles Mine-Mate™ Series

ANFO/Emulsion Chargers | Boom Trucks | Cassette Trucks | Deck Trucks | Fan Handlers | Fuel Lube Trucks | Personnel Carriers | Scissor Lifts and Attachments | Water Sprayers

OUR COMMITMENT TO MINING SAFETY AND PRODUCTIVITY RUNS DEEP.

CANADA | MEXICO | PERU | SOUTH AFRICA | AUSTRALIA

macleanengineering.com

 **MacLean**
Performance. Reliability. Innovation.



Features:

- 4-wheel drive articulated steering
- Driver and passenger seating positions
- High temperature exhaust insulation
- Mercedes 904 engine
- Exhaust purifier with insulation blankets
- Dana 32000 3-speed electronic shift transmission
- Dana outboard planetary drive axles
- Enclosed SAHR secondary brakes (emergency/park brakes)
- Mechanical suspension seats
- High-output LED lights
- Numbered and labelled hydraulic hoses
- 150 L diesel fuel tank
- Centralized lube points
- Hot side - cold side engine layout

OPTIONAL FEATURES:

- ROPS/FOPS canopy and enclosed cab
- Engine-end suspension system
- Mercedes 906, Deutz 2012, and Cummins QSB4.5 Tier 4 Interim engines available.
- Air-ride seats
- High-altitude kits
- Various solid and filled-tire options
- Various fire suppression systems
- Automatic lubrication system

MACLEAN
360
PROMISE



The 3-Series Carrier

The foundation for underground safety and productivity.

With a 2.4 metre (8-foot) width purpose-built for typical heading sizes of 4.5 metres (15 feet) or greater, the MacLean 3-series carrier spans our ground support and utility vehicles product lines. Parts commonality across the fleet and MacLean-quality design combine to deliver a substructure that drives up productivity and availability, and drives down total cost of ownership. The 3-Series carrier is available on the MacLean ANFO/Emulsion Charger, Cable Bolter, Shotcrete Sprayer, and Transmixer, as well as the MacLean Boom Truck, Scissor Lift, Deck Truck, Personnel Carrier, Cassette Truck, Fuel Lube Truck, Water Sprayer and Water Cannon.

Benefits:

- Parts commonality across 3-Series fleet
- Quality seal of MAC-10 Warranty (1 year on defects, 2 years on powertrain, 7 years on frame)
- MacLean-quality rugged design and ease of repair, built for the underground environment
- Available with MacLean exclusive Mine-Mate™ suspension system, which delivers a 30% reduction in whole body vibrations



Features:

- 4-wheel drive articulated steering
- Driver and passenger seating positions
- Mechanical suspension seats
- High temperature exhaust insulation
- Mercedes 904 engine
- Dana 32000 3-speed electronic shift transmission
- Dana outboard planetary drive axles
- Enclosed SAHR secondary brakes (emergency/park brakes)
- High-output LED lights
- Numbered and labelled hydraulic hoses
- 130 L diesel fuel tank
- Centralized lube points
- Hot side - cold side engine layout

OPTIONAL FEATURES:

- Deutz TCD 2012 Engines - 4&6 cylinders
- ROPS/FOPS canopy and enclosed cab
- Air-ride seats
- High-altitude kits
- Various solid and filled-tire options
- Various fire suppression systems
- Automatic lubrication system

The 2-Series Carrier

Small frame workhorse for narrow headings.

With a 1.8 metre (6-foot) width designed for typical heading sizes of 3.5 metres (11 feet) or greater, the MacLean 2-series carrier is available across our ground support, ore flow and utility vehicles product lines. As with the 3-Series carrier, parts commonality across the fleet and MacLean-quality design combine to deliver a substructure that drives up productivity and availability, and drives down total cost of ownership. The 2-Series carrier is available on the MacLean Small Section Bolter, ANFO/Emulsion Charger, Shotcrete Sprayer and Transmixer, as well as the MacLean Boom Truck, Scissor Lift, and Personnel Carrier.

Benefits:

- Parts commonality across 2-Series fleet
- Quality seal of MAC-10 Warranty (1 year on defects, 2 years on powertrain, 7 years on frame)
- MacLean-quality rugged design and ease of repair, built for the underground environment



Features:

- Onboard suspension system
- Up to 32 km/h (20 mph) tram speeds
- Driver and passenger seating positions
- Deluxe suspension seats
- 4-wheel drive, articulated steering
- Automotive-style controls
- Driver's instrument panel with electronic multi-gauge screen and rocker switches
- Mercedes 904 engine
- Dana 24000 Series transmission - 4-speed electronic shift
- Dana 113 outboard planetary drive axles
- Enclosed SAHR secondary brakes (emergency/park brakes)
- High-output LED lights
- Numbered and labelled hydraulic hoses
- 130L diesel fuel tank
- Centralized lube points
- Hot side - cold side engine layout
- Exhaust purifier with insulation blankets

OPTIONAL FEATURES:

- Enclosed cab
- Air-ride seats
- High-altitude kits
- Various solid and filled-tire options
- Various fire suppression systems
- Automatic lubrication system

Low-Profile Series Carrier

Get the lowdown on productivity.

The newest MacLean utility vehicle carrier features a low-profile, high-speed design ideal for smaller heading (1.8m/6-foot tram height and width) operations. Equipped with a standard suspension system to reduce Whole Body Vibrations, this carrier was purpose-built for potash, salt, and even hard-rock mines, and can be equipped with any application end.

Benefits:

- Delivers speed, safety and comfort in low-heading mines
- Provides versatility and cost savings with ease of interchangeable application ends
- Quality seal of MAC-10 Warranty (1 year on defects, 2 years on powertrain, 7 years on frame)
- MacLean-quality rugged design and ease of repair, built for the underground environment
- Standard suspension delivers 30% reduction in Whole Body Vibrations



Scissor Lift



Features:

- Safety lock bar for raised maintenance work
- Four 0.41m (16") stroke stabilizing jacks
- Incorporated ladder
- Anti-slip dimple plate on all step surfaces and three-point contact on all climbing areas
- Remote engine start/stop from deck
- Control system on deck and driver's compartment
- Fixed safety handrail system with lanyards and interlocks
- Automatic back-up alarm
- CSA Certified Lift

OPTIONAL FEATURES:

- Side-shift deck
- Forward-shift deck
- Remote drive system (RDS)
- Wood decking
- Air/hydraulic power pack

Underground multi-tasker.

Designed to provide a safe work platform for installation of services in tunnel headings up to six meters (20 feet) high, the Mine-Mate™ SL2 & SL3 Scissor Lifts are fully equipped as standard for the multi-tasking required in today's underground trackless mining environment. The SL3 is available with an industry-first 8000lb deck capacity and attachment system.

Models Available:



Benefits:

- Complete drift cover coverage from a single setup
- Long-life power train using industry proven components
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Superior traction due to four-wheel drive and powershift transmission



Features:

- Quick connect hydraulic and electrical connections for rapid and safe installation and removal
- Interlock capability to ensure that safe areas are not compromised
- Multi-axis movement for ease of installation
- Radio Remote Control allows operator to maintain good visibility and work at a safe distance when operating attachments
- Platform area suitable for two workers
- Adequate room to transport fans on the deck while tramming

Attachments



Extending innovations.

Convenient and versatile, the MacLean Mine-Mate™ Series Attachments (Fan Handlers, Pipe Handler, Cable Reel Attachment, and Cable Pusher Attachments) are ready when you are. All Mine-Mate™ Series Attachments are powered by the SL3 hydraulic system with quick disconnects for easy on/off application to the platform. Each attachment is specifically designed to improve safety and productivity.

Models Available:



Benefits:

- Multiple tools fit the standard SL3 Scissor Lift
- Increases the utilization of the SL3 Scissor Lift
- No requirement for LHDs or jumbos for service installation or maintenance
- Capable of lifting fans or pipes from ground into position in one simple step
- Safe handling of heavy objects
- Reduces strain on operators
- Multi-axis movements allow fast and easy installation and positioning
- Can easily and safely be removed with a forklift



ANFO/Emulsion Charger



Features:

- Two 0.41m (16”) stroke stabilizing jacks
- Anti-slip dimple plate on all step surfaces, three-point contact on all climbing areas and lanyard mounting points on basket
- Auto parallel basket, boom enable trigger and slope sensing mechanisms
- Basket swing keeps operator from overextending
- ANFO tank certified to CSA pressure vessel standards
- Boom and basket certified to CSA aerial lifting standards
- Emergency power down from basket
- Remote engine start/stop from basket
- Automatic back-up alarm and boom movement alarm

OPTIONAL FEATURES:

- Electric power pack
- Onboard air compressor
- Telescopic and retractable canopy
- Hose pusher for uphole ANFO

Explosives performance.

The MacLean Mine-Mate™ Series AC3 & AC2 models are safe, reliable and cost-effective solutions for quality explosives charging of ANFO in underground trackless mines. EC3 models provide a pre-prepared carrier to be used with emulsion modules for development and production emulsion loading.

Models Available:



Benefits:

- Complete drift coverage from single setup
- One or two-person operation
- Rapid tramming between work locations
- Cost benefits in materials handling and bulk explosives use
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- Superior traction due to four-wheel drive and powershift transmission
- Common carrier with all Mine-Mate™ Series of utility vehicles
- Purpose-designed for hazards associated with explosives handling



Features:

- Heavy-duty deck construction
- High deck (no wheel wells) or low decks available
- Hiab 095 crane on BT models
- Load tie-downs
- Two stabilizer jacks on either side of crane
- Anti-slip dimple plate on all step surfaces and three-point contact on all climbing areas
- Automatic back-up alarm

OPTIONAL FEATURES:

- Magnum 100 crane
- Increased payload
- Various deck configurations
- Tailgates and side panels
- Engine-end suspension

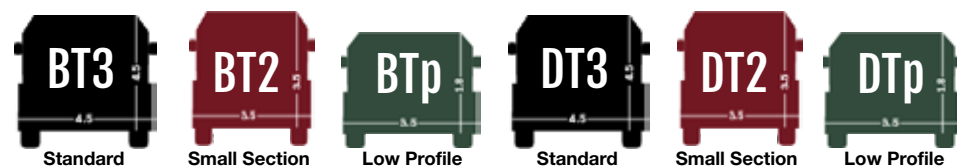


Boom Truck / Deck Truck

Heavy haulers.

Today's fast-track mining methods require the timely supply of materials and equipment to far-flung underground work places. The Mine-Mate™ Series BT2 & BT3 Boom Trucks provide a reliable, high-capacity, high-speed system to meet this challenge.

Models Available:



Benefits:

- Low-cost, dependable mine supply vehicle
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- All-in-one loading, transport & unloading
- Long-life power train using industry-proven components
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Superior traction due to four-wheel drive and powershift transmission



Features:

- Heavy-duty baffled water tank construction
- Up to 7500L capacity
- Independently controlled spray bars
1 x lower, 2 x walls
- Hydraulic-driven, two-speed pump

OPTIONAL FEATURES:

- Engine-end suspension
- Increased capacities
- Various fill and discharge options

Water Sprayer

The Dust Doctor.

Many mines seek to operate in a dust-free environment. The MacLean Mine-Mate™ Series WS3 Water Sprayer is equipped with three spray bars for high-performance dust control, helping to maintain respiratory health and proper engine function underground.

Models Available:



Benefits:

- Significant water capacity and nozzle placement to ensure maximum dust suppression effectiveness
- Long-life power train using industry proven components
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- Superior traction due to four-wheel drive and powershift transmission



Features:

- Heavy-duty baffled tank construction
- Hydraulic-driven pump systems
- Spring retract reels
- OPW and Wiggins™ dispensing
- On-board grease dispensing
- Desiccant tank breathers

OPTIONAL FEATURES:

- Various tank configurations
- Onboard compressed air
- Tool boxes
- Check-fire™ automatic fire suspension
- Engine-end suspension system

Fuel-Lube

Fill'er up.

Mining methods today require the timely supply of diesel fuel, oils and lubricants. A rugged and dependable means of transporting and dispensing bulk fluids, the MacLean Mine-Mate™ Series FL2 & FL3 Fuel-Lube Trucks are integral members of the bulk materials transfer systems.

Models Available:



Benefits:

- Low-cost, dependable fuel, oil and lubricant supply vehicle
- Long-life power train using industry proven components
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- Superior traction due to four-wheel drive and powershift transmission



Personnel Carrier



Features:

- Individual padded seats with seat belts
- Fully suspended carrier
- Up to 22 person capacity
- Anti-slip dimple plate on all step surfaces and three-point contact on all climbing areas

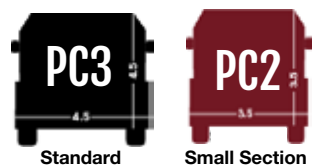
OPTIONAL FEATURES:

- FOPS certified passenger canopy or enclosed cabin
- Stop request signal
- Rear material storage area

All aboard the people mover.

Where time is at a premium and travel distances long, the rugged MacLean Mine-Mate™ Personnel Carrier provides a comfortable, safe and rapid transportation system for passengers and material in underground trackless mines.

Models Available:



Benefits:

- Fast, efficient and safe personnel transportation system
- Secure, comfortable ride from standard chassis suspension
- Dual-purpose vehicle for passengers and/or materials
- Long-life power train using proven components
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Superior traction due to four-wheel drive and powershift transmission



Features:

- Four 0.76m (30") stroke stabilizing jacks on all cassettes
- Interchangeable cassette system with multiple cassettes
- Jacks automatically secure cassette to carrier
- Multi-port connector prevents hoses from being attached while dismounting cassettes

CASSETTES:

- Flat deck
- Crane
- Man basket
- Personnel carrier
- Fuel tanker
- Fuel-lube
- Transmixer
- Mechanics truck
- Petrotac sprayer



Cassette System

Versatility innovations.

The versatility of interchangeable cassettes provides the ability to complete several tasks with a single vehicle. The MacLean Mine-Mate™ CS3 Cassette Truck is designed for full utilization through its ability to continuously adjust configurations allowing for reduced fleet size and lower capital investments. The MacLean Mine-Mate™ Cassette System features numerous configurations: Boom Trucks, Fuel Lubes, Deck Trucks, Personnel Carriers, ANFO and Emulsion Chargers, Transmixers, Mechanics Trucks, Water Tankers and Fuel Tankers.

Models Available:



Standard



Low Profile

Benefits:

- Flexibility to combine any prime mover with multiple application cassettes
- Reduced damage to cassettes compared to roll-on systems
- Jacks automatically secure cassette to frame when retracted
- Mechanical locking pins allow jacks to raise carrier deck end for maintenance if required
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Ease of maintenance with electronic engine diagnostics, accessible fuel filling and grease points
- Superior traction due to four-wheel drive and powershift transmission



LR3 – Boom Lift

A friend in high places.

The LR3 Boom Lift is the latest addition to the MacLean Mine-Mate™ Utility Vehicle Series, engineered and purpose-designed to provide ultra-versatile, full-spectrum reach and heavy load capabilities in larger-heading mines. With an 8m working height, 8,000 lbs. of lifting capacity, and interchangeable baskets and attachments, the LR3 is ideally suited to a wide range of mine services installation as well as construction and maintenance applications.



Features:

- Self-propelled, 4-wheel drive articulated carrier
- Compliant EWP (Elevated Work Platform)
- 6m (19.5ft) deck height; 8m (26.5ft) working height
- Lifting capacity 4 tons (5 tons on approval)
- Interchangeable baskets / decks
- Deck extends down to ground level for work in 1-3m height range
- +/-15 degree boom swing
- Four stabilizing jacks
- Wireless remote control for boom and basket functions
- Emergency lowering system

OPTIONAL FEATURES:

- CSA rated ROPS & FOPS canopy or enclosed cabin for driver's position
- Remote drive system from basket
- Available +/-30 degree basket swing
- Heavy-duty fan basket
- Ansul fire suppression, Checkfire fire detection, and hand held fire extinguisher

Benefits:

- 8m working height for high-reach applications, with wide range of motion that allows deck to descend to ground level for low-reach needs
- 8000 lb. lifting capacity
- Compatibility with MacLean Mine-Mate™ Series Attachments: Fan Handler, Pipe Handler, Cable Reel, and Cable Pusher attachments
- Long-life power train using industry proven components
- Clean-burning, fuel-efficient engine minimizes harmful emissions
- Superior traction due to four-wheel drive and powershift transmission



To learn about the **MacLean 360 Promise** Customer Support Program, visit macleanengineering.com

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