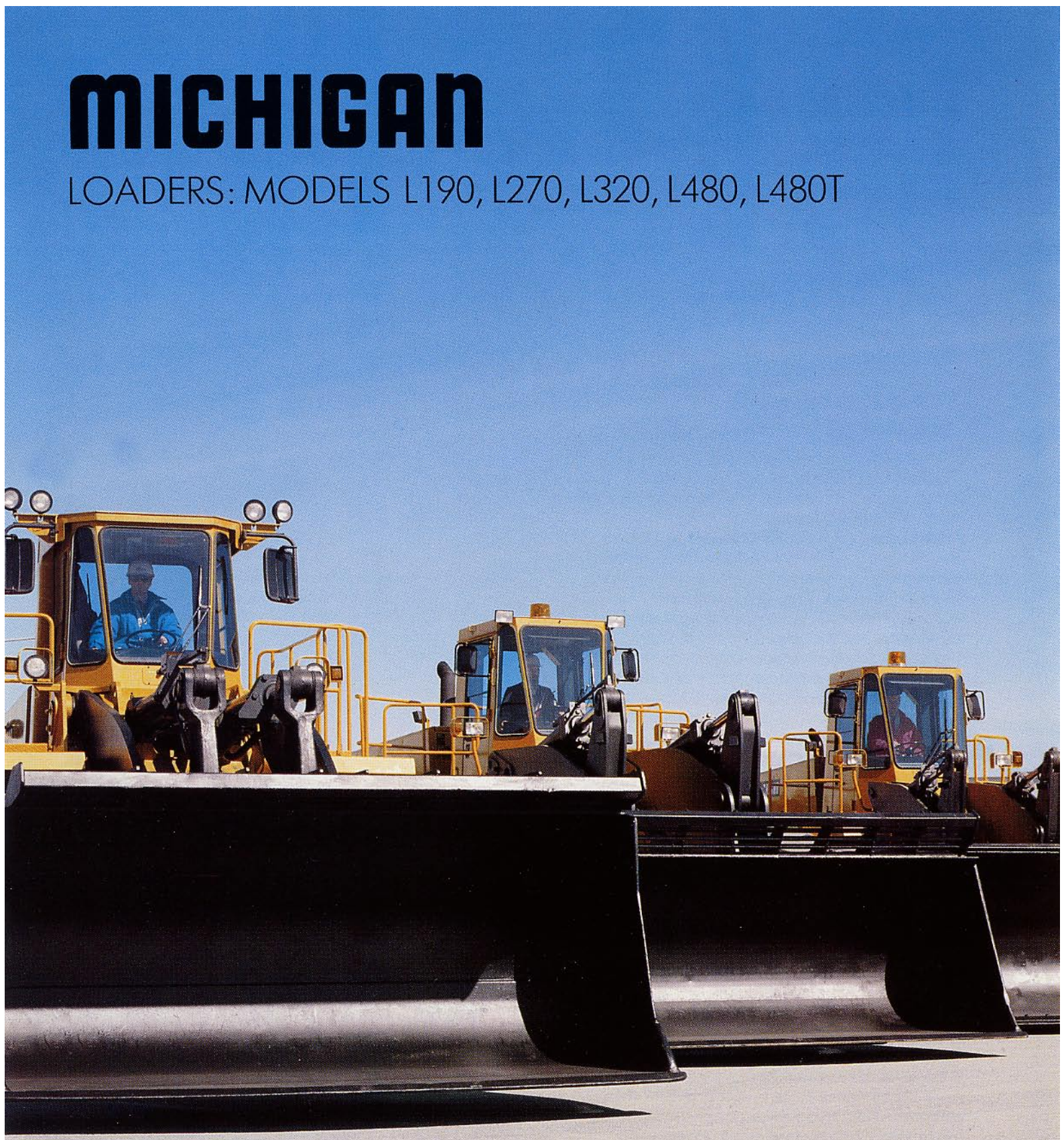
MICHIGAN

LOADERS: MODELS L190, L270, L320, L480, L480T



MICHIGAN – INCREASES YOUR PRODUCTION VOLUME – AND REDUCES YOUR COSTS

Reliable pace-setters under tough working conditions

The Michigan loaders are high-production machines built for cost-effective handling of large material volumes. Thanks to a robust construction, the productivity-boosting features of the Michigan loaders can be fully utilized, round the clock, under any conditions over the very long life of the machine. The speed- and flow-controlled hydraulic system, the limited slip differentials and the powerful Z-bar linkage provide unmatched productivity, even when the work pace is high and the demands of the job exacting. The Michigan range of loaders, with sizes between 27 and 80 tonnes, permits selection of a loader ideally suited to the rest of the production apparatus. A wide selection of rugged buckets and attachments further boost capacity and considerably broaden the range of applications: Handling of shot rock, boulders, coal and woodchips.Loading of haulers. Load-carry operations. Feeding of crushing plants. Log handling. The uses are many, but the contribution of the Michigan loaders is always the same: Productive, reliable, economical.

Built for continuous production

The productive reliability of the Michigan loaders is the result of a combination of more than thirty years of experience in the business and modern computer-aided technology, design and production. Michigan loaders are always at the cutting edge of technology and always in line with the demands of the market.
Rugged and proven components in combination with reliable systems lay the foundation for their high availability.
Transmission, torque converter and brake system with few moving parts increase reliability and reduce component wear.
High material grades and rigorous production control provide further guarantees for strength and durability.

Robust frame of very high steel grade. Machine attachment surfaces and iso-mounting of engine, transmission and radiator.

Powerful boom of high quality steel. Well sealed bearings.

Reliable electrical system with fire-resistant wiring and sealed twistlock connectors.

Comfort and safety boost productivity

A Michigan operator is well protected from the job site's often stressful and sometimes dangerous environment.
The ROPS/FOPS cab with its carefully planned, ergonomic interior gives the operator the comfort and safety he needs for optimum performance even towards the end of a long and hard shift.
The high location of the cab and large rearview mirrors and glazed areas as well as the design of the boom offer good visibility over both the attachment and the site.
The pilot-operated hydraulic system and automatic bucket positioner greatly facilitate the work of the operator.
Cab heating and air conditioning are standard, of course.

ROPS/FOPS cab with high safety.

Cummins engine with high maximum output to provide the necessary power reserve. A reliable power source even under heavy loads. Effective air cleaning in three stages and high-capacity cooling system.

Pressurized, sealed, pilot-operated hydraulic system with efficient filters.

Reliable dual-circuit brake system with high availability.

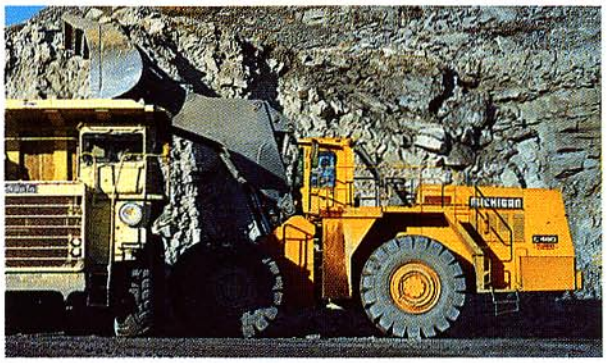
Frame joint designed for high stresses. Maximum flexibility and long life.

Large planetary-type hub reductions greatly reduce the stresses on the drivetrain components. Low-friction roller bearings reduce heat buildup.

Dependable countershaft transmission. Only one third as many moving parts as in planetary-type transmissions. Low-friction roller bearings minimize the risk of overheating.

Rugged cast-steel axle housings.

Z-bar linkage for aggressive bankdigging and demanding loading



The geometry of the rugged boom, in combination with the capacity of the hydraulic system, gives very high breakout and lift forces

- Long reach and high dump height
- Automatic boom kickout and bucket positioner for fast, reliable, precision work
- Fast rollback and good carry angle ensure good bucket filling
- Wide selection of buckets for different densities

Hydraulic system with plenty of muscle

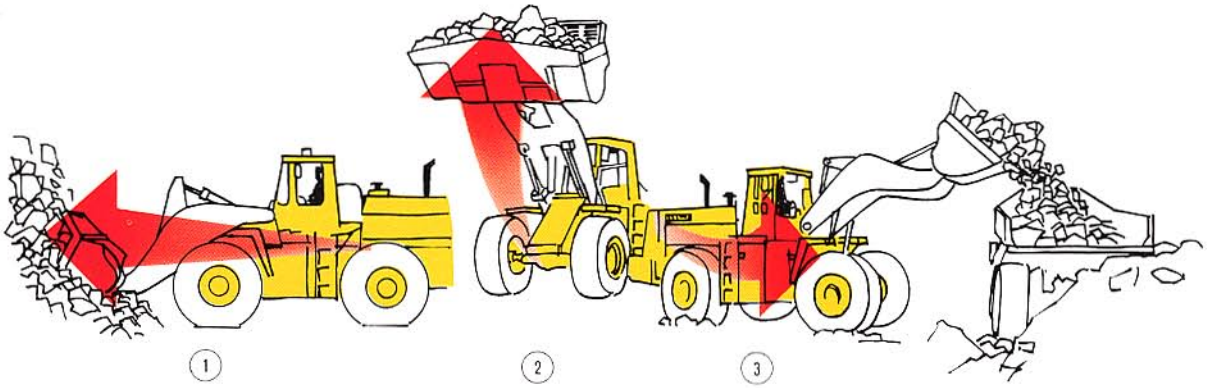
A speed- and pressure-sensing hydraulic system instantly balances the shifting demands from the steering system and the working hydraulics with the need for rimpull. Each load cycle is executed without an ounce of unnecessary power being wasted. All power is concentrated and directed to where it is needed.

(1) High rimpull and high pressure in the working hydraulics provide effective bank penetration and reliable filling of the bucket.

(2) Amplified flow in the working hydraulics increases the lifting speed when the machine is approaching the load vehicle and simultaneously raising its bucket.

(3) Increased flow in the steering system provides reliable and flexible steering when the machine is approaching the vehicle for unloading.

Maneuverability is reinforced by directional clutch modulation, providing fast but smooth directional shifting.



Limited slip differential for maximum traction

Limited slip differentials keep the machines productive even when the underlying surface is soft, wet or slippery.
The more rimpull is taken out, the harder the multidisc clutches between the differential case and the axle shafts lock. When one wheel spins, up to 60 % of the rimpull can be transmitted to the wheel with better traction.
Result: Always rimpull on the wheel with the best grip. Tire wear is also greatly reduced. Limited slip differentials are a decisive advantage which very few of our competitors offer.

L 190

Engine output:
SAE J1349 Net *222 kW (298 hp)*
Operating weight: *27 t (59 520 lb)*
Buckets: *4,0–6,8 m³ (5,2–9,0 yd³)*

A choice between two booms permits optimal adaptation to the existing machine fleet.

L 270

Engine output:
SAE J1349 Net *268 kW (360 hp)*
Operating weight: *41,3 t (91 070 lb)*
Buckets: *5,35 m³ (7,0 yd³)*

A new member of the Michigan family with the same outstanding features as the other machines in the family. High lift- and break out force, stability, well-matched speed range, fast and smooth directional shifting, well-balanced hydraulics and good operator comfort ensure good fuel economy and short cycle times.

L 320

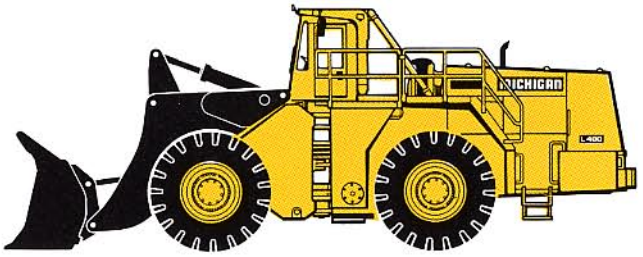
Engine output:
SAE J1349 Net *311 kW (417 hp)*
Operating weight: *44 t (97 020 lb)*
Buckets: *6,1–11,4 m³ (8,0–15,0 yd³)*

Choice between two booms.
Outboard, wet, oil-cooled brakes with long life. Efficient loading of off-highway haulers of up to 50 tonnes.

L 480

Engine output:
SAE J1349 Net *488 kW (655 hp)*
Operating weight: *80,4 t (177 300 lb)*
Buckets: *9,6 m³ (12,5 yd³)*

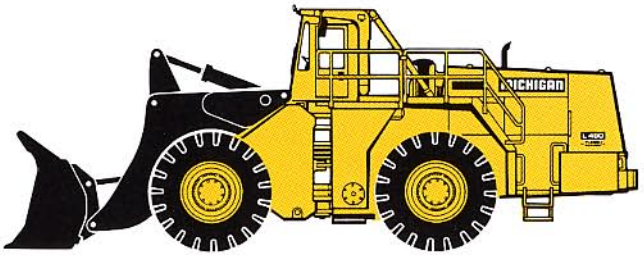
Efficient loading of off-highway haulers of up to 90–100 tonnes. The L 480 achieves extremely short cycle times, even in very tough handling.



L 480 T

Engine output:
SAE J1349 Net *506 kW (679 hp)*
Operating weight: *80,7 t (177 800 lb)*
Buckets: *9,6 m³ (12,5 yd³)*

The unique turbo transmission with three interacting torque converters guarantees constant high rimpull and acceleration. In combination with the machine's powerful hydraulics and fast, smooth directional shifting, this results in remarkable maneuverability for a machine in this size class.



TIME IS MONEY

– save time, save money

Round-the-clock, year-round operation requires the use of high-production machines with a minimum of downtime. The built-in reliability of the Michigan loaders is guaranteed by fast, reliable service, simple maintenance and an efficient spare parts and service organization.
The Michigan loaders are backed up by an organization of well trained, competent and knowledgeable people, able to draw on the experience accumulated by Michigan during 30 years in the business. We build machines that live up to what we promise.

Fast, reliable service

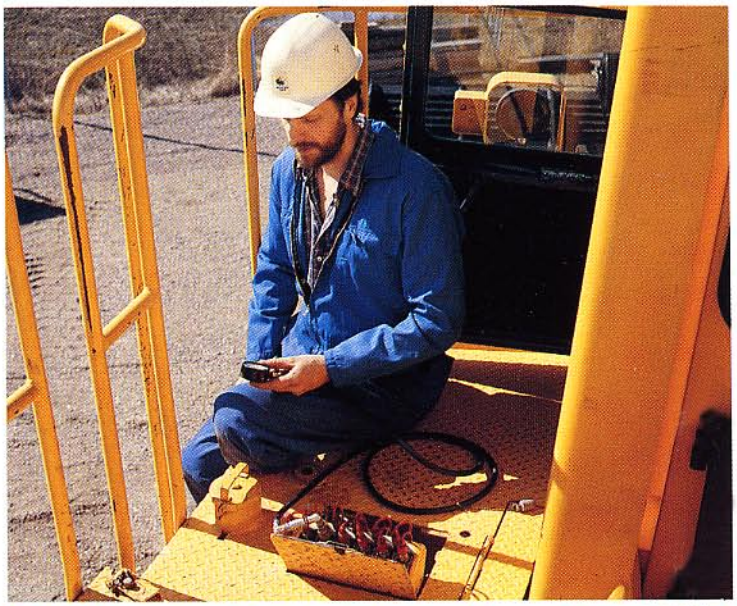
The time required for daily service is reduced to a minimum. Carefully conceived, proven solutions guarantee satisfactory service of the machine's vital points. Easily accessible central lube fitting for lubrication from ground level, conveniently located sight gauges and large openable access panels are some of the factors that permit fast daily checks.

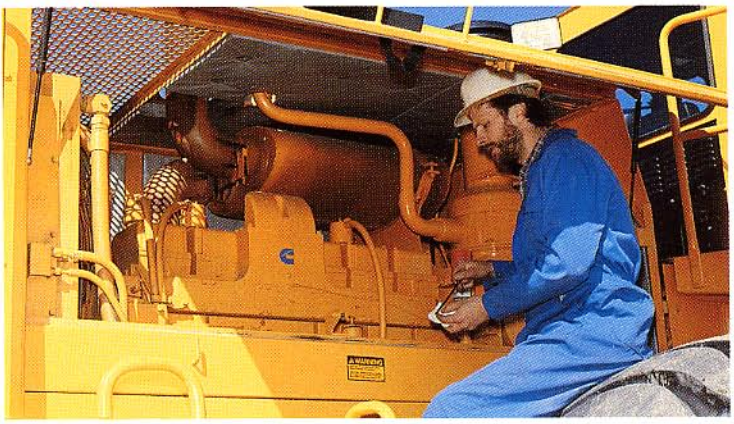
Simple maintenance

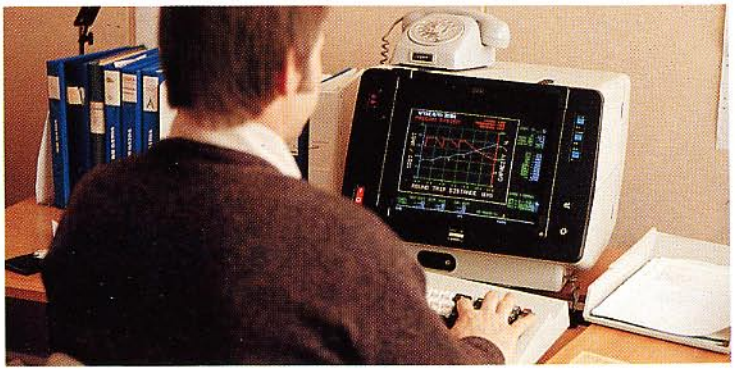
All vital components are easily accessible. External mounting of the clutch packs so that they can be replaced without the transmission having to be removed is one example of how the machines have been designed for replacements and repairs with a minimum of time lost.

Spare parts organization with resources

A worldwide, completely computerized network links the entire Volvo BM organization together. Quickly and effectively, the combined resources of central and satellite spare parts depots, dealers and even our own and our suppliers' production units can be directed towards a single goal: To deliver the spare part that is needed in the shortest possible time.







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