



WJ-3(L-7) Underground Mining Loader

WJ-3(L-7) underground mining loader is suitable for 3.8×3.8m mine tunnel. Compared with other underground mining loader, this model has a great improvement in wheelbase and turning radius. Smaller wheelbase and larger turning angles can adapt to the requirements of different tunnels.

Better machine stability and a more reasonable cutting edge design can effectively improve production efficiency and the wear resistance and service life of the bucket. The engine cover with gas spring support is easy to repair and maintain.

WJ-3 is equipped with an independent cab which is easy to be removed and replaced; it increases the space inside the cab and improves the driver's comfort.



MAIN SPECIFICATIONS

Tramming capacity	7 000 kg
Max.Break out force	115KN
Max. Tractive force	155KN
Standard bucket	3.0m ³
Size	9200x2355x2255 (mm)

SPEEDS FORWARD & REVERSE(VOLVO TAD850 VE)

1st gear	4.4km/h
2nd gear	8.9km/h
3rd gear	16.6km/h
4th gear	23.6km/h

BUCKET MOTION TIMES

Raising time	6.7 sec
Lowering time	3.3 sec
Dumping time	0.9sec

OPERATING WEIGHTS *

Total operating weight	19200 kg
Front axle	9400 kg
Rear axle	9800 kg

LOADED WEIGHTS *

Total loaded weight	26200 kg
Front axle	20700 kg
Rear axle	5500kg

* Unit weight is dependent on the selected options

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<http://www.liononemining.com>

OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	-15 °C~+45 °C
Standard operating altitude	With engine Volvo TAD850VE from -1500 m to +3000 m at 25 °C without rated power derate

REQUIREMENTS AND COMPLIANCE

JB/T5500 Underground Mining Loader
JB/T5501 Underground Mining Loader Test Method
JB 8518 Underground Mining Loader Safety Requirement
GB25518 Underground Mining Loader Safety Requirement
XY13.1-2013 Underground Mining Loader Company Standard

POWER TRAIN

ENGINE

Diesel engine	Volvo TAD850VE
Output	160kW @2200rpm
Torque	1060Nm @ 1350rpm
Number of cylinders	In-line 6
Displacement	7.7 L
Cooling system	Water cooled 650mmElectronic silicone oil clutch fan
Fuel System	Integrated hand pump, remote fuel filter
Intake system	Low position turbocharger Dry air filtration, pre-filtration + two-stage filtration
Control System	Fuel electronically controlled injection system
Start system	24V/5.5KW starter motor, intake preheating
Emission Standards	Euro Stage III Certificate Number96R-032939H
Exhaust system	DOC+POC+ Silencer
Average fuel consumption at 50% load	16L/h
Fuel tank capacity	200L

CONVERTER

Dana C273 Convertor

TRANSMISSION

Dana 32000Transmission	Electronically controlled shift Integrated control of shift operation and steering handle Forward and backward each with four gears
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AXLES

Front axle spring applied hydraulic operated brakes Fixed	Kessler D91 Standard differential
Rear axle spring applied hydraulic operated brakes Self-oscillation frame, Oscillating ± 8°	Kessler D91 No-spin Differential

TIRES

Tire size	17.5-25 L-5S 20ply
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HYDRAULICS

Door interlock for brakes,	Standard
Hydraulic oil radiator	Capability up to 50 °C ambient temperature
Transmission oil radiator	
Fittings	JIC Standard
Hoses	GB3683
Working Hydraulic oil tank capacity	320L

STEERING HYDRAULICS

Full hydraulic, centre-point articulation, power steering with two double acting cylinders.	Handle operation
Steering main valve	Open circuit type
Steering hydraulic cylinders	2 pcs
Steering pump	Gear type Quantitative pump

BUCKET HYDRAULICS

When not steering, the steering hydraulic pump and the working hydraulic pump merge to improve work efficiency	Hydraulic pilot handle operation
Boom system	Z-link
Lift cylinders	2 pcs
Dump cylinder	1 pc
Main valve	Open circuit type
Pump for bucket hydraulics	Gear type Quantitative pump

BRAKES

Service brakes are spring applied; hydraulically operated multidisc wet brakes on all wheels. Integrate service brake, park brake and emergency brake in a whole system. Two independent circuits: one for the front and one for the rear axle. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589

Automatic brake activation system, ABA	Standard
Manually driven emergency brake release pump	Standard

Brake hydraulic tank is shared with servicing hydraulic tank, volume 320L



OPERATOR'S COMPARTMENT

L-7 cab provides superior ergonomic operating space to reduce operator fatigue by increasing legroom and improving pedal position. The front part of the pedal protrudes outward, and the upper front part and the left and right sides protrude outward to make the cab space larger.

L-7 cab has passed ROPS/FOPS certification to protect operator safety. The cab interior is affixed with 25mm flame-retardant and noise-reducing interior fabric, which is not only beautiful and comfortable inside, but also effective in dust prevention and noise reduction. It is equipped with a laminated glass window and is installed with a four-port sealing strip to remove the glass inside and outside for emergency escape in the event of a dangerous situation.

CABIN

ROPS certification according to ISO 3471

FOPS certification according to ISO 3449

Enclosed Cabin with Air Conditioner (Optional)

Sound-absorbing and noise-reducing flame-retardant interior material (closed)

Laminated glass windows (closed)

Air conditioner and cab installed separately

Adjustable joysticks and arm rest

Emergency exit

Floor washable with water to reduce dust

Three-point contact access system to cabin

DASHBOARD AND DISPLAYS

Equipped with 7-inch IFM color display screen, the vehicle's status information and fault alarm information are displayed on a large display screen, and corresponding sound and light alarms are configured on the panel, allowing the operator more time to watch the road.

XINGYE Intelligent Control System Standard

Critical warnings and alarms	Displayed with sound and light
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Instrument Panel	IFM 7" Color display Full-featured rocker switch control
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OPERATOR'S SEAT

The cabin is fitted with an adjustable mechanical suspension seat with three-point seat belt. The seat can be adjusted back and forth, up and down. New softer padded arm rests and adjustable joysticks can be configured either fixed on the cabin door or on the cabin right side wall

Spring shock absorption

Height adjustment

Adjustment according to the operator's weight

Adjustable arm rests

Adjustable back support

Three-point seat belt

FRAME

REAR AND FRONT FRAME

A new heavy duty rear frame with added weight in the rear of the loader balances the machine perfectly when lifting and pushing into the muck pile. Heavy duty rear frame and mask with integrated reaction bars minimizes damage from wall impacts.

High strength structure with optimized material thicknesses and reduced own weight contribute to higher overall hauling capacity and long structural lifetime.

Welded steel box structures used in the frame and boom provide strong resistance to shock loads and are optimized to reduce stresses and extend frame lifetime

Central hinge Adjustable bearing

Tanks Welded to the frame

Boom system Z-LINK

ELECTRICAL EQUIPMENT

MAIN COMPONENTS

Alternator 28 V,110 A

Batteries 2×12 V, 100Ah

Starter 24V/5.5KW

Driving and working lights 2 PCS on boom
3 PC in cabin
2 PCS in rear frame

Sensors Diesel, hydraulic oil level sensor, working, steering, and braking system pressure sensor

Alarm Low oil level warning/
Oil pressure warning
Rotation Warning Lamp

Control system Controller control
Built-in diagnostic and alarm system

horn configuration Standard

Buzzer configuration Standard

INCLUDED SAFETY FEATURES

FIRE SAFETY

Portable fire extinguisher 2kg 1PC

Hot side - cold side design Standard

Heat source isolation cover Standard

Exhaust pipe insulation cotton protection Standard

Cover on turbo Standard

Cooling fan shield Standard

ENERGY ISOLATION

Lockable main switch Standard

Starter isolator Standard

Emergency stop push buttons 2 pcs rear frame/1 pc cabin

Pressure release in the expansion tank cap Standard

Manual discharge for pressure accumulators Standard

Frame articulation locking device Standard

Mechanical boom locking device Standard

DOCUMENTATION

STANDARD MANUALS

Operator's Manual English

Maintenance Manual English

Parts Manual English

Service and Repair Manual English

Decals English o

OPTIONS

SAFETY OPTIONS

In-line remote control system

Brake release function tow hook

Ansul manual fire extinguishing system and automatic shutdown

Emergency steering function

Tele Remote control system

ELECTRICAL OPTIONS

Imaging system

OTHER OPTIONS

Additional cabin heater element for air conditioning

17.5-25 L-5S 20ply Vacuum tire

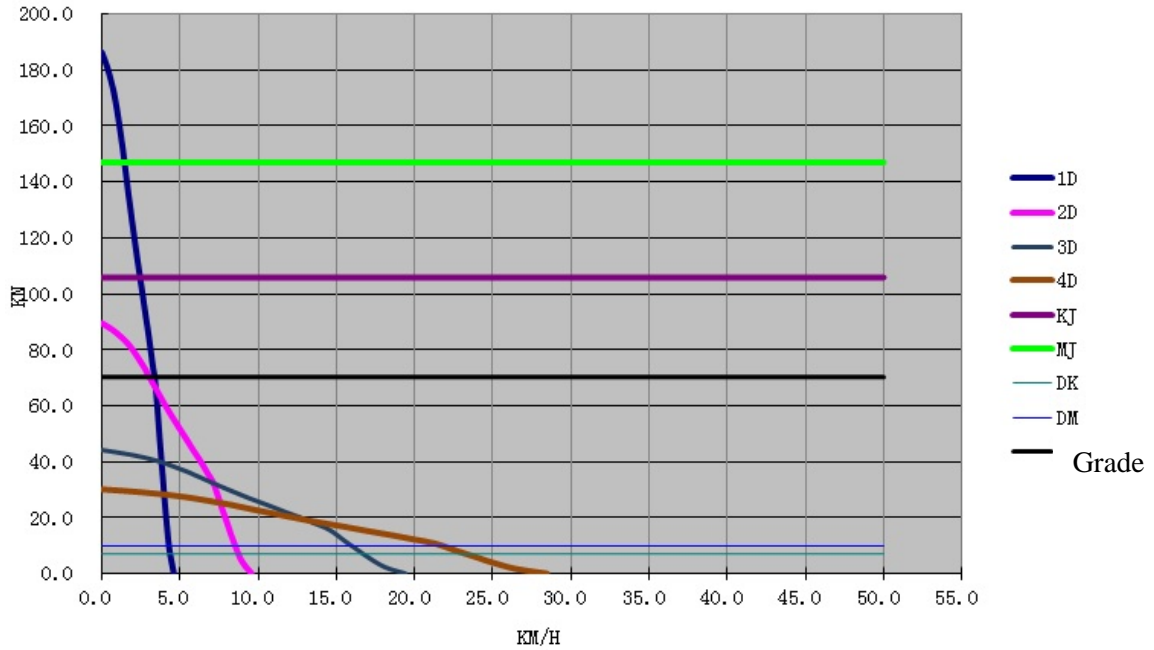
Customized Bucket Capacity

Centralized lubrication

GRADE PERFORMANCE

Volvo TAD850VE, Euro Stage III emissions (3 % rolling resistance)

EMPTY AND LOADED SPEED



1D, 2D, 3D, 4D: Gear Positions;

KJ is the static friction force at empty load, and MJ is the static friction force at full load;

DK is the dynamic friction force at empty load, and DM is the dynamic friction force at full load;



