



# WJ-6 (L-14) Underground Mining Loader

WJ-6 (L-14) is a high capacity underground mining loader for use in 4.6 x 4.6 meter mining tunnels. This intelligent loader features many improvements in operator and maintenance ergonomics. The already high level of safety has been further increased to make the operation and maintenance more fluent.

Higher productivity and profitability is achieved by better balanced machine and larger bucket size. Rebalancing makes the bucket filling easier and reduces tire wear. The maximum discharging height is 2490mm which can be used with 50 ton underground truck.

The WJ-6 loader is equipped with an independent cab for easy disassembly and maintenance. Increase the interior space of the cab, improve the driver's comfort.



## MAIN SPECIFICATIONS

Tramming capacity	14 000 kg
Max. Break out force	220KN
Max. Tractive force	276KN
Standard bucket	6.0m <sup>3</sup>
Size	10732×2945×2576 (mm)

## SPEEDS FORWARD & REVERSE(VOLVO TAD1350 VE)

1st gear	4.9km/h
2nd gear	8.3km/h
3rd gear	13.9km/h
4th gear	22.7km/h

## BUCKET MOTION TIMES

Raising time	7.9 sec
Lowering time	4.5 sec
Dumping time	2.2 sec

## OPERATING WEIGHTS \*

Total operating weight	38 400 kg
Front axle	17 200 kg
Rear axle	21 200 kg

## LOADED WEIGHTS \*

Total loaded weight	52 400 kg
Front axle	36 600 kg
Rear axle	15 800kg

\* Unit weight is dependent on the selected options



### OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	-15 °C ~ +45 °C
Standard operating altitude	With engine Volvo TAD1350VE 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 TAD1350VE
Output	256 kW @ 1900rpm
Torque	1743 Nm @ 1200rpm
Number of cylinders	In-line 6
Displacement	12.78 L
Cooling system	Liquid cooled
Combustion principle	4-stroke, direct injection, turbo with intercooler
Air filtration	Pre-filtration+two stage filtration, dry type
Control System	Fuel electronically controlled injection system
Electric system	24 V
Emissions	Euro Stage III Certificate Number E5 96R.03003
Exhaust system	DOC+POC+ Silencer
Average fuel consumption at 50% load	25.6L/h
Fuel tank capacity	600L

### CONVERTER

Dana C8602 Convertor
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### TRANSMISSION

Dana 6421 Transmission	Electric control shifting Integrate shift and steering operation four gears forward and reverse
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### AXLES

Front axle spring applied hydraulic operated brakes Fixed	Kessler D106 Limited slip differential
Rear axle spring applied hydraulic operated brakes Self-oscillation frame, Oscillating ± 8°	Kessler D106 Limited slip differential

### TIRES

Tire size	26.5-25 L-5S 36ply
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### HYDRAULICS

Door interlock for brakes,	Standard
Oil cooler for hydraulic and transmission oil	Capability up to 50 °C ambient temperature
Fittings	JIC Standard
Hoses	GB3683
Working Hydraulic oil tank capacity	460L

### STEERING HYDRAULICS

Full hydraulic, centre-point articulation, power steering with two double acting cylinders.	Electronic control joystick
Steering main valve	Open circuit type
Steering hydraulic cylinders	2 pcs
Steering pump	Plunger variable pump

### BUCKET HYDRAULICS

The oil flow from Steering hydraulic pump is directed to Bucket hydraulics when steering is not used.	Electronic control handle
Boom system	Z-LINK
Lift cylinders	2 pcs
Dump cylinder	1 pc
Main valve	Open circuit type
Pump for bucket hydraulics	Plunger variable pump

### BRAKES HYDRAULICS

SAHR multidisc wet brakes on all wheels. Integrate service brake, park brake and emergency brake in a whole system. 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 oil tank capacity	100L

## OPERATOR'S COMPARTMENT

The WJ-6 (L-14) cabin offers superior operator ergonomics through increased leg space and improved pedal position to reduce operator fatigue. The front of the pedal protrudes outward, and the cabin upper front portion and the left and right sides protrude outward provide operator with spacious room.

The cabin is ROPS/FOPS certified to protect the operator in case of roll over or falling objects. The interior side of the cab adopts 25mm flame-proof and noise-reducing materials and the external covering has flame-proof ABS material, which is not only beautiful and comfortable, but also effective in dustproof and noise-reducing functions. The cab has laminated safety glass windows, emergency exits which adopts sealing strip to remove the glass inside and outside for emergency escape. In addition, the cabin is mounted with rubber shock absorbers to reduce whole body vibration



### CABIN

ROPS certification according to ISO 3471
FOPS certification according to ISO 3449
Enclosed Cabin with Air Conditioner
Flame resistance and Sound absorbent material to reduce noise
Laminated glass windows
Air conditioner and cab installed separately
Powered pre-filter for A/C device
Adjustable joysticks and arm rest
Emergency exit
Floor washable with water to reduce dust
Three-point contact access system to cabin
12V/24V output
Master circuit breaker switch

### DASHBOARD AND DISPLAYS

A new 7" colour display with advanced screen functionality has all the needed information and alarms on one large display giving the operator more time to keep eyes on the road.

Emergency stop brake button
Sound and light fault alarm
Full-featured rocker switch
Parking brake button
Key switch

### OPERATOR'S SEAT

The cabin is fitted with an adjustable mechanical suspension seat with four-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 wall

Mechanical suspension
Height adjustment
Adjustment according to the operator's weight
Adjustable arm rests
Adjustable back support
Four-point seat belt

### FRAME

#### REAR AND FRONT FRAME

The rear frame has a heavy-duty design to better stabilize the equipment while lifting and shoveling ore. The heavy-duty design of the rear frame and tail frame minimizes impact damage from the roadway walls. Using high strength alloy steel plate optimizes material thickness, reduce dead weight, and improve the overall transportation capacity, long structure life.

The working mechanism boom is a box structure that provides strong impact load resistance and is optimized to reduce stress and extend boom life. Rear frame split design, easy to disassemble.

Central hinge	Adjustable bearing
Tanks	Welded to the frame
Boom system	Z-LINK

## ELECTRICAL EQUIPMENT

### MAIN COMPONENTS

Alternator	28 V,150 A
Batteries	2×12 V, 120Ah
Starter	24V/6.5KW
Driving and working lights	LED lights 1PC under boom 2PCS on boom 4PCS in Cabin 2PCS in rear frame
Sensors	Hydraulic oil level/oil temperature sensor;Diesel oil level sensor; Working/steering/ac cumulator/axle/fuel pressure sensor;Brake oil level/oil temperature sensor
Alarm	Low oil level warning; Oil pressure warning Rotating warning light
Control system	Programmable controller Built-in diagnosis and alarm system
horn configuration	Standard
Red and green indicator lights	4PCS in front and rear frame
Image System (Reversing)	Standard

### INCLUDED SAFETY FEATURES

#### FIRE SAFETY

Portable fire extinguisher	8kg 2PCS
Portable fire extinguisher	Standard
Isolation of combustibles and ignition sources	Standard
Heat insulation on exhaust manifold	Standard
Cover on turbo	Standard
Cooling fan shield	Standard

#### OTHER FUNCTIONS

lockable Main power switch	Standard
Manual centralized lubrication system	Standard
Emergency stop button	2 pcs rear rack/1 pc cab
Engine charge tank manual pressure relief cover	Standard
Accumulator automatic pressure relief device	Standard
Front and rear rack locking devices	Standard
Boom Locking Device	Standard

## DOCUMENTATION

### STANDARD MANUALS

Operator's Manual	English
Maintenance Manual	English
Parts Manual	English
Service and Repair Manual	English
Decals	English

## OPTIONS

### SAFETY OPTIONS

In-line remote control system
Retrieval hook (hydraulic brake release by pulling the hook)\
Emergency steering
Tele remote control system
Ansul manual fire extinguishing system and automatic shutdown

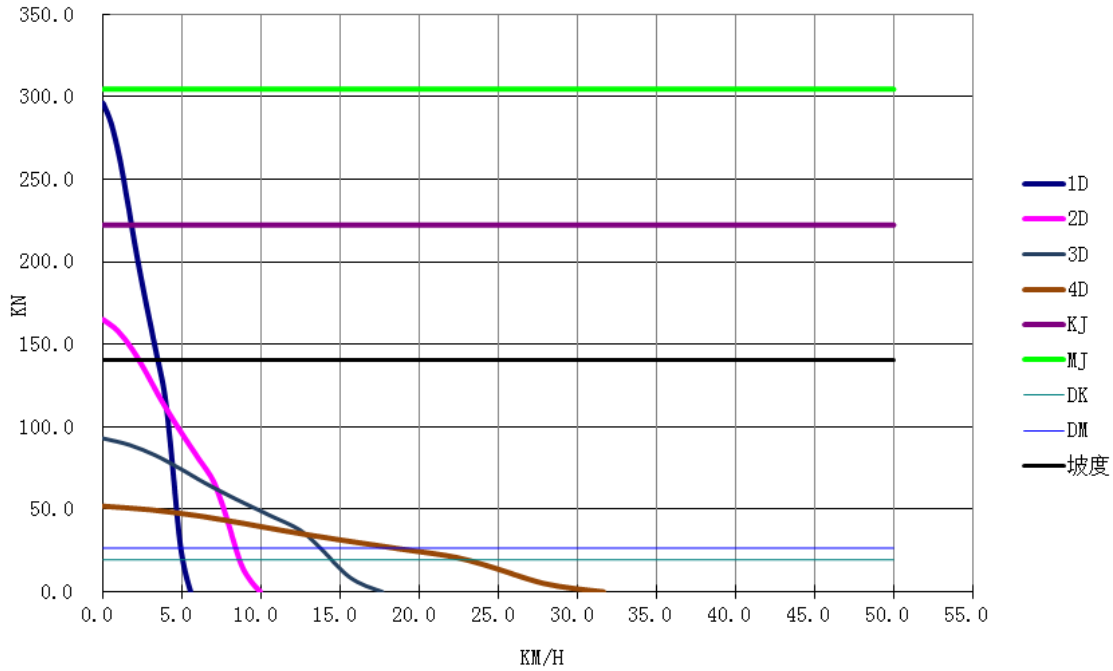
### OTHER OPTIONS

Additional cabin heater element for air conditioning
26.5R25 radial steel tires
Customized Bucket Capacity
J-bolt fastening bucket teeth
Fast fuel, hydraulic oil and transmission oil interface
Automatic centralized lubrication system

## GRADE PERFORMANCE

Volvo TAD1350VE, 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, and MJ is the static friction force at full load;

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



