

# **JDT-415**

**4 Wheel Drive 15 Ton End Dump Truck**

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# JDT-415

## 4 Wheel Drive 15 Ton End Dump Truck

The **JDT-415** four wheel drive, 15 ton capacity dump truck is recognized as the most **rugged, productive, and efficient** truck of its size available, anywhere in the world for mining and tunnelling.

The JDT-415 is designed to stay on the job: no other 15 - 16 ton underground truck has proven itself as extensively as this efficient work horse with **excellent mechanical availability**. The JDT-415 is a proven performer, producing on major projects from the Canadian Arctic to hot Asian deserts and up to 4800 meters altitude in the South American Andes.

The JDT-415 is available in the same compact dimensions as the JDT-413 except with raised dump box sides, or if box height is a concern, it can be supplied with a wide box and an extended rear axle.

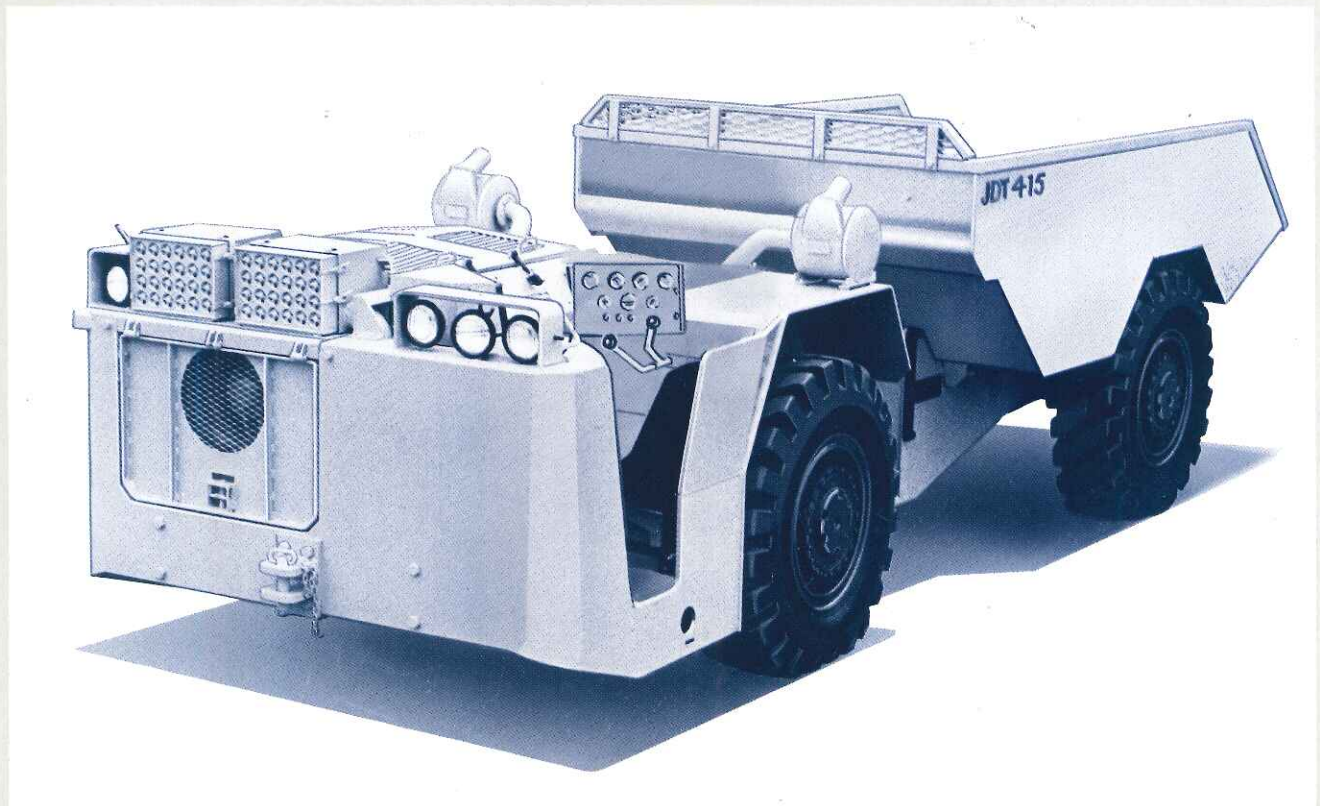
**Excellent manoeuvrability** is achieved with compact dimensions, short turning radius, articulated frame and single lever "stick" steering control. The side seated operator's position with easy access controls and gauges provides maximum comfort and visibility, making it possible to **maximize production** in close quarters.

The JDT-415 design and manufacture has been continuously upgraded over the years to meet the strictest quality criteria. All parts and assemblies are selected incorporating conservative engineering standards aimed at **simple maintenance, reduced downtime, low operating costs, and maximum productivity**.

The JDT-415 is easy to load from the side or rear because of the low height and is a productive and efficient teammate of LHD's like Jarvis Clark scoops or conventional loaders.

Jarvis Clark Company, the world's leading trackless equipment supplier, offers **Full Trackless Service**, an invaluable after-purchase benefit:

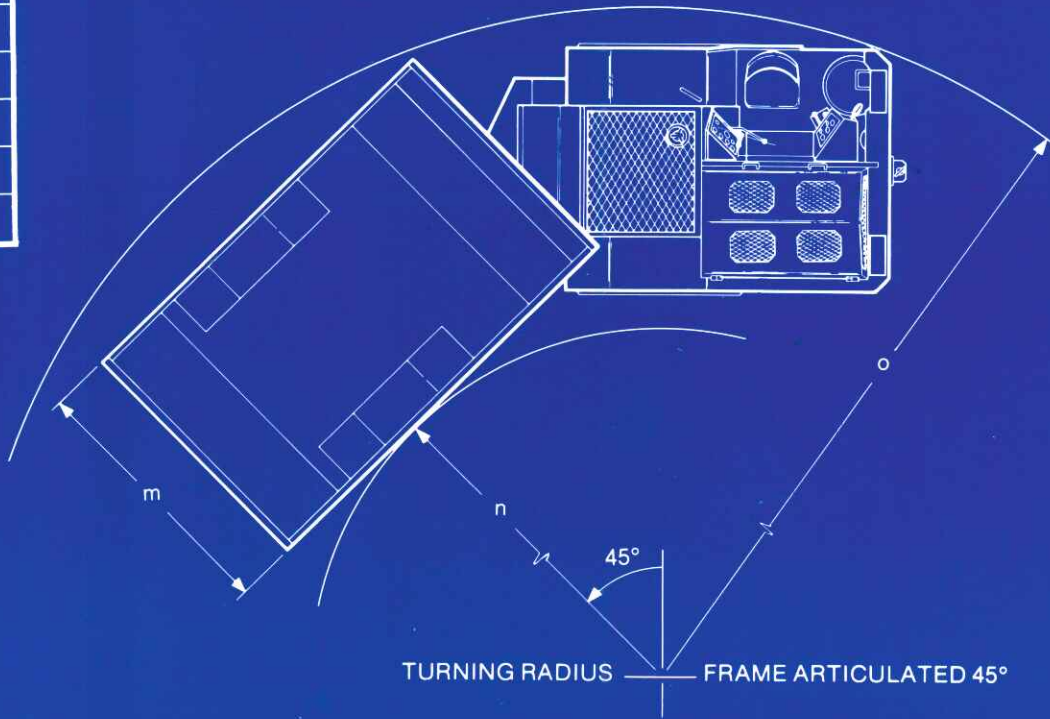
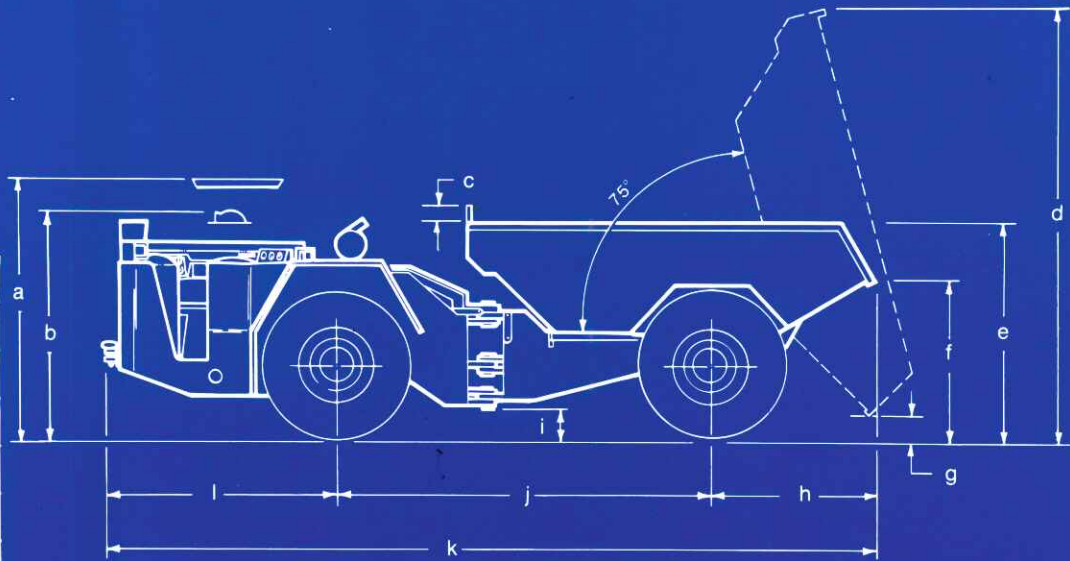
- Quality parts and service support.
- Preventative maintenance programs.
- Component exchange service.
- Custom engineering.
- Training for operators and mechanics.
- Trackless systems planning.
- Financing support.
- Rebuilt and used equipment.



# JDT-415

## 4 Wheel Drive 15 Ton End Dump Truck

	cm	in.
a	229	90
b	208	82
c	15	6
d	396	156
e	208	82
f	142	56
g	25	10
h	147	58
i	30	12
j	348	137
k	693	273
l	198	78
m	254	100
n	290	114
o	569	224



# Specifications



## Engine

Make and Model	Deutz Diesel F8L-413 FW
Mine Service Rated Power at 2300 rpm	185 hp (138 kW)
Maximum Torque at 1550 rpm	520 ft. lbs. (705 N.m.)
Bore and Stroke	4.9" (125 mm) x 5.1" (130 mm)
Displacement	779 cu. in. (12.76 L)
Number of Cylinders	V8
Cooling	Air
Electrical System	12 volt



## Electrical System

Voltage	12 Volt
Alternator	55 Amp
Battery	455 crank amps @ 0°F (-18°C)

System protected by circuit breakers.



## Transmission

Clark MHR 28421 Series

Full Power Shift, 4 Speeds, Forward & Reverse				
Gears	1st	2nd	3rd	4th
Ratios	4.83:1	2.29:1	1.32:1	0.73:1



## Torque Converter

Clark C-270 series, heavy duty industrial type single stage integral to transmission ..... Stall Ratio: 2.728:1



## Axles

Clark	
Front (D19640)	Spiral bevel No Spin® differential,
Rear (D33640)	full floating, planetary wheel end drive.

Ratio	Differential	6.333:1
	Planetary	4.125:1
	Total Reduction	26.125:1



## Wheels & Tires

Tube type, nylon, hard rock, wide lug, deep tread, with underground mine service compound. United SMC XT-3.  
Tire size front and rear 14:00x24, 20 ply.



## Brakes

**Service:** Air over hydraulic disc on all four wheels. Independent front and rear service brakes, with maxi spring actuators on each master cylinder for emergency and parking.

**Parking:** Spring applied drive line disc brake, automatically actuated by low air or low clutch pressure or may be manually applied.



## Steering

Single lever "stick" controls full hydraulic steering. Articulated frame, 90° articulation, 45° right or left.  
Turning radius ..... inside—9'6" (290 cm)  
..... outside—18'8" (569 cm)



## Seating

Foam padded; infinitely adjustable, back and forward tilt, up and down travel.

Operator side seated for maximum visibility and bi-directional tramping.



## Oscillation

**Front Axle Oscillation:** ±10° for a total of 20°, with heavy duty 12" (305 mm) diameter bronze bushings and thrust washers.

One wheel can drop or rise a total of 12" (305 mm) with all wheels remaining on the ground for maximum traction.



## Hydraulic System

Cylinders	Double acting with chromed stems
Steering Cylinder (1)	Bore 5" (127 mm) Stroke 32" (812 mm)
Hoist Cylinder (2)	2 stage telescopic Bore
	.. 7¼" (184 mm), 6¼" (159 mm), Stroke 50½" (1283 mm)
Pump	Heavy duty gear type
Hoist and Steer	36 gpm (136 L/min) @ 2300 rpm



## Filtration Systems

Engine	
Lube Oil	Full flow 6 micron
Fuel	Full flow 3 micron
Air Cleaner	Dry type

# Specifications

## Filtration System cont'd...

### Transmission/Torque Converter

Oil ..... Full flow 20 micron

### Hydraulic

Return line ..... Full flow 25 micron

Suction line ..... 100 mesh strainer with magnetic rods



## Service Capacities

(approx.)

Location	U.S. Gal.	Litres
Fuel Tank	39	147
Crankcase*	4.5	17
Transmission*	6.5	24.6
Front Differential	3.2	12.3
Rear Differential	4.2	16.1
Planetary	1.6	6.2
Hydraulic	33	125

\*Final oil quantity to be determined by dipstick.



## Component Breakdown

Front Frame ..... 48" x 48" (1219 mm) x (1219 mm)  
 R.H. Fender ..... 41" x 46" (1041 mm) x (1168 mm)  
 L.H. Fender ..... 43" x 46" (1092 mm) x (1168 mm)  
 Rear Frame ..... 30" x 41" (762 mm) x (1041 mm)  
 Box (Split) ..... 50" x 44" (1270 mm) x (1117 mm)

Entire unit is made to break down to go through a 5' (1.52 m) x 5' (1.52 m) opening with cutting and re-welding necessary only on the box.



## Volume Capacity

Capacity\*: Maximum 15 tons (13.6 t)

### Volume Rating (SAE Ratings)\*

Nominal Heap ..... 10.5 cu. yds. (8.0 m<sup>3</sup>)

Semi-Nominal Heap ..... 10.0 cu. yds. (7.6 m<sup>3</sup>)

Struck ..... 8.0 cu. yds. (6.9 m<sup>3</sup>)

### Discharge:

Maximum Dumping Height @ 75° ..... 13'0" (3.96 m)

Dumping Time ..... 8 seconds

\*This truck has a rating of 15 short (13.6 metric) tons under normal operating conditions. Volume capacity is related to tonnage capacity by the SAE seminominally heaped rating based on material weighing 3,000 lbs./cubic yard (1,780 kg/cubic metre).



## Weights

(approx.)

Mode	lbs.	kg.
Shipping	31,200	14,152
Operating	31,600	14,334

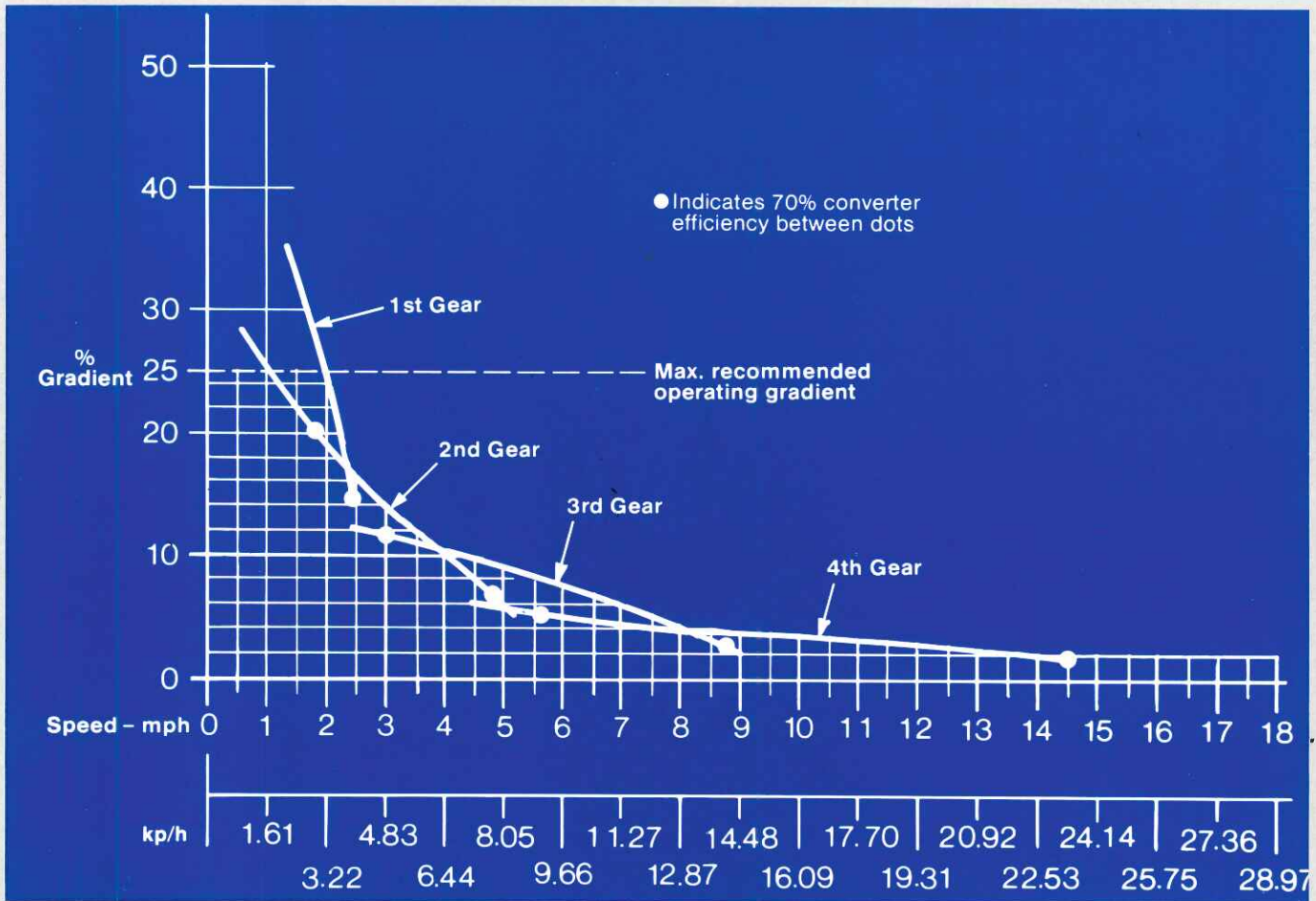
## Standard Equipment

- Independent front and rear service brakes
- Emergency disc brake
- Hydraulic steering
- Transmission oil filter
- Air starting
- Neutral start only
- Catalytic converter
- Silencer
- Dual dry type air cleaners
- Battery with isolation switch
- 12 volt electrical system
- Alternator
- Lights: 4 front, 2 rear
- Converter oil coolers (2)
- Foam padded operator's seat with adjustable suspension
- Low oil pressure/high engine temperature audio visual alarm system
- Gauges: air system, voltmeter, hourmeter, converter temperature, transmission clutch pressure, engine oil pressure, engine temperature, air cleaner service indicator
- Centre hinge lock arm
- Dump box service support tubes
- Front tow hitch

## Optional Equipment

- Caterpillar 3304 T engine rated at 165 hp (123 kW) at 2200 rpm
- GM6V-71N engine rated at 180 hp (134 kW) at 2100 rpm
- Fume diluter exhaust system
- Cowl silencer
- Fire suppression system
- Hydraulic fire resistant fluid
- 24 volt electric start
- SAE approved "ROPS" canopy
- Emergency steering
- Altitude compensation
- Tropical kit
- Optional dump boxes and special liners

# Gradeability



## Performance Data

**185 hp**

MS RATING  
138 kW

MSHA Ventilation Recommendation  
..... 16,000 cfm  
..... 453 m<sup>3</sup> / min.

### Vehicle Speeds Loaded — Level Performance

Gear	1	2	3	4
mph	2.6	5.4	9.0	15.4
kp/h	4.2	8.6	14.4	24.6

Based on 70% Converter Efficiency



## Jarvis Clark Company

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