

# CAT® UNDERGROUND MINING TRUCK **BODIES**

DUMP, EJECTOR  
AND LIGHT MATERIAL



## CAT TRUCK BODIES

# THE RIGHT BODY FOR THE JOB

Picking the right truck body for the application is critical to getting maximum value from your Cat® underground truck. Integral to the truck, Cat underground truck bodies are designed to stand up to the harsh conditions of an underground mine and work as part of your truck system. They are sized to meet payload requirements without compromising vehicle balance, braking or control. With a wide variety of sizes and material densities available, we can offer the right truck body for your truck and your application. When combined with the correct wear liners and plates, and together with the Truck Payload Management System (TPMS), Cat truck bodies can help you achieve the optimal payload.





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# WHY CAT TRUCK BODIES?

Caterpillar designs application-specific underground truck body solutions to suit underground mining conditions. Cat underground truck bodies are designed to meet target payload in demanding conditions. They are designed to be durable and analyzed as an integral part of the entire vehicle system, helping you achieve maximum machine life. From the design to the materials, manufacturing to shipping, the entire process meets Cat standards of safety, quality and control.

Cat truck bodies are optimized for each individual model, using accurate specifications, including machine force, to understand exactly how to size the bodies and deliver the ideal payload.

Truck body wear liners and plates help extend the life of your body. And Cat truck bodies are easy to rebuild, with all wear components available as service parts that you can get directly from your Cat dealer.



### **VERTICAL INTEGRATION**

We follow a dynamic approach to engineering — treating the body as part of a system rather than a static structure. A static structure designed in isolation has the propensity to cause problems to other parts of the system. Cat bodies are designed along with the chassis. A sophisticated proprietary analysis software is used to simulate a virtual haul cycle, followed by validation in the field.

### **VIRTUAL AND FIELD VALIDATION**

A virtual product environment ensures every aspect of the system works together efficiently. Caterpillar engineers use proprietary dynamic analysis tools to understand the true system interactions. This complete system knowledge results in optimal machine component life and value.

### **CONTINUOUS INNOVATION**

We are always investing in research to improve our existing bodies and develop new ones that meet the needs of our customers.

### **HIGH-QUALITY MANUFACTURING**

All Cat bodies are made with high quality materials, with every piece designed, manufactured and tested to meet our high standards. Our investment in tooling, equipment, facilities and expertise results in some of the most comprehensive body manufacturing facilities in the world.

### **EXPERIENCED TEAM**

We've been producing truck bodies for decades, and you can rely on Caterpillar for expertise and support unlike any other manufacturer.

### **CUSTOMIZABLE SOLUTIONS**

Caterpillar offers flexible liners and plates for unique and extreme conditions, allowing our truck bodies to handle the harshest applications.

### **SAFETY FOCUS**

We know that safety is important to our customers, so we look for ways we can support their initiatives with our body designs.

We also follow a corporate safety initiative to maintain safe working conditions in our manufacturing facilities, which are clean, modern and updated to protect our employees.

### **UNPARALLELED SUPPORT**

Caterpillar offers unparalleled product support and performance validation through our global underground mining team, Cat Mining organization and global Cat dealer network. Cat dealers are in every mining region in the world, providing boots-on-the-ground support no matter how remote the location. Together with our dealers, we are committed to delivering the Cat brand promise.

# CRITICAL BODY DESIGN FACTORS

## FRAGMENTATION

Accurate drilling and blasting result in consistent and targeted fragmentation size. This size varies by material type and the intended downstream processing. So the truck body must be durable, but lightweight enough for efficient hauling.

## ABRASION

Abrasion rates can be determined by the typical wear liner life or by bucket tip life. Severe abrasion can also influence liner decisions in the middle zone, although wear rates will be highest at the rear of the body. Wear plates and impact plate options are available.

## COHESION

Material cohesion is a concern when material is sticky and doesn't release from the truck body. The material left inside the body is referred to as carryback. In addition to being extremely inefficient, carryback makes it difficult to manage equipment and results in inadvertent misuse of the machine. Accuracy of the VIMS™ (Vehicle Information Management System) and PLE (Product Link™ Elite) can be erroneous due to the additional weight. Depending on where you are in the calibration process, the truck is either recording the carryback on every load — resulting in inflated production numbers — or, worse yet, ignoring the information and causing the truck to be overloaded. Carryback can also increase fuel burn and drive downtime for cleaning.





## CAT BODIES ARE THE IDEAL MATCH FOR CAT TRUCKS

We design our truck bodies to work as part of the complete loading and hauling system, maximizing efficiency and delivering the reliable performance you expect from any Cat product.

There are a number of reasons why using an OEM-designed body is the right choice—and there are just as many risks to choosing a third-party body instead.

- + Lower payload
- + What is the actual competitive body weight?
- + Is it ready to go to work without liners?
- + Improper distribution of axle splits and structural load path
- + Negative impact on steering and suspension, frame, lower powertrain, light fabrications, pinned joints and tire life
- + Unbalanced machine weight splits, which can lead to tire and component life decreases, as well as dumping problems
- + Increased machine downtime for repairs
- + Inaccurate VIMS / TPM / PLE readings
- + Machine overload
- + Excessive debris collected on front frame (spillage)
- + Competitive bodies with different connection points and stiffness characteristics can increase the risk of lower chassis life
- + Interference with front frame
- + Damage to platforms and handrails due to inadequate overhead protection
- + Liners or attachments failing and damaging crusher
- + Body retention pins may not be ISO13333 certified

# DUMP BODY

Caterpillar offers Dump bodies for all Cat Underground Truck models. Dump body materials, design and fabrication are specially made for the demanding underground environment and abrasive materials to be moved. They best suit Cat machine balance and support better machine performance.



## FEATURES

- + Caterpillar offers multiple Dump body options for each truck model. All body designs also take body weight into consideration, targeting a stronger body and balanced weight for overall machine performance improvements.
- + Dump bodies are built in the same factory as our machines and go through the same strict quality controls. They are as tough as the trucks themselves.

## DUMP BODY OPTIONS

MODEL NOMINAL PAYLOAD CAPACITY	PART NUMBER	BUCKET CAPACITY
<b>AD30</b> 30 000 kg / 66,139 lb	613-7031	11.3 m <sup>3</sup> (14.8 yds <sup>3</sup> )
	613-7034	14.4 m <sup>3</sup> (18.8 yds <sup>3</sup> ) STD
	613-7036	17.5 m <sup>3</sup> (22.9 yds <sup>3</sup> )
	613-7037	16.8 m <sup>3</sup> (21.9 yds <sup>3</sup> )
<b>AD45</b> 45 000kg / 99,208 lb	568-7264	18 m <sup>3</sup> (23.6 yds <sup>3</sup> )
	568-7256	21.3 m <sup>3</sup> (27.9 yds <sup>3</sup> ) STD
	568-7260	25.1 m <sup>3</sup> (32.8 yds <sup>3</sup> )
<b>AD63</b> 63 000kg/ 138,891 lb	592-0787	26.9 m <sup>3</sup> (35.2 yds <sup>3</sup> ) STD
	592-0789	32.6 m <sup>3</sup> (42.6 yds <sup>3</sup> )
	592-0790	33.8 m <sup>3</sup> (44.2 yds <sup>3</sup> )
	592-0791	36.6 m <sup>3</sup> (47.9 yds <sup>3</sup> )



# EJECTOR BODY

Caterpillar offers Ejector bodies for the AD30 and AD45 trucks. The Ejector body has a movable ejector plate that pushes the material out without the need to raise the body. The Cat ejector system has a reputation for strength and durability.

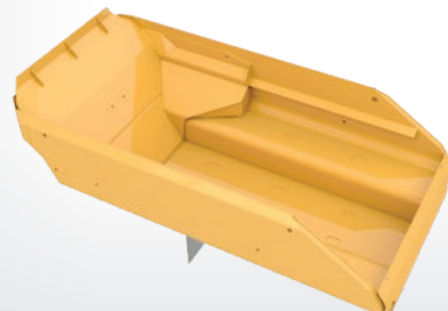


## FEATURES

- + The Ejector body is specially designed solution for those sites with low roof / backs heights where conventional dumping cannot be undertaken.
- + Powerful and durable Cat ejector system allows the body to work stably and achieve maximum productivity.
- + Note that all ejector systems are heavier than conventional dump systems and therefore payloads are reduced.
- + Ejector systems also require increased maintenance compared to conventional dump systems.

## EJECTOR BODY OPTIONS

MODEL NOMINAL PAYLOAD CAPACITY	PART NUMBER	BUCKET CAPACITY
<b>AD30</b> 27 000kg / 59,525 lb	613-7027 (Intl) /	15.2 m <sup>3</sup> (19.9 yds <sup>3</sup> )
	613-7028 (US)	16.8 m <sup>3</sup> (21.9 yds <sup>3</sup> )
	613-7029 (Intl) /	
	613-7030 (US)	
<b>AD45</b> 40 000kg / 88,185 lb	568-7265 (Intl) /	22.9 m <sup>3</sup> (30.0 yds <sup>3</sup> )
	568-7266 (US)	



# LIGHT MATERIAL BODY

Caterpillar offers a Light Material body for the AD63 truck. The larger truck body enables maximum efficiency and greater capacity for light, loosely-packed material. It is designed for optimal hauling capability and structural reliability to help lower your cost per ton.



## FEATURES

- + The Light Material body is designed for handling material with light density, such as salt, potash or lower-grade materials.
- + This body is carefully designed to have larger capacity, but still fit machine balance and underground drift size requirements.
- + Body protections like wear liners and plates are also available for the Light Material body. Body configurations need to be closely configured to ensure the machine is not overloaded.

## LIGHT MATERIAL BODY OPTION

MODEL NOMINAL PAYLOAD CAPACITY	PART NUMBER	BUCKET CAPACITY
<b>AD63</b> 63 000kg/ 138,891 lb	588-8056	38.3 m <sup>3</sup> (50.1 yds <sup>3</sup> )



# PASS MATCH

The trucks and loaders that make up your loading and hauling system must match each other's capabilities and be suited for the specific characteristics of your mine and the demands of the operation. Our comprehensive line of trucks and loaders are ideally matched to help you achieve optimal hauling system performance.



5 PASS



3 PASS



4-5 PASS



3 PASS



3 PASS



3-4 PASS

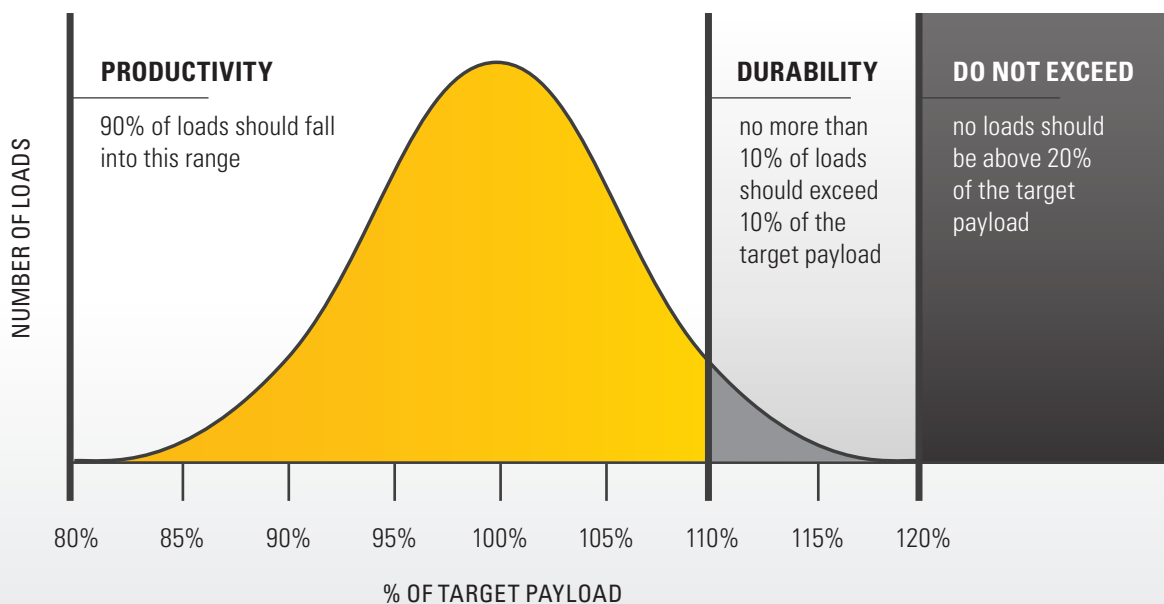


3 PASS

# CHOOSING THE RIGHT BODY

## 10/10/20 POLICY

The Caterpillar exclusive 10/10/20 payload guidelines help achieve a balance of excellent payload and safe operation. For optimum body life, Caterpillar recommends that 110% payloads occur no more than 10% of the time and that the average of all loads equal the nominal payload. Payloads in excess of 120% of nominal exceed the truck's design parameters. The ideal hauling strategy that maximizes machine and machine component life is to keep the mean of all payloads at or below the machine's rated target payload. When equipping your truck body with sideboards, please consider the Cat 10/10/20 policy.



**TARGET PAYLOAD: Lower Body Weight → Higher Payload**

CALCULATION:  $GMW - \text{Chassis Weight} - \text{Body Weight} = \text{Target Payload}$

**CAPABLE PAYLOAD: Correct Body Sizing → Ideal Payload Distribution (10/10/20)**

CALCULATION:  $\text{Density} \times \text{Volume} \times \text{Fill Factor} = \text{Capable Payload}$

## BODIES FOR EACH MODEL



**Dump**  
11.3 – 11.6 m<sup>3</sup>  
(36.6 – 47.9 yds<sup>3</sup>)



**Ejector**  
15.2 – 22.9 m<sup>3</sup>  
(19.9 – 29.9 yds<sup>3</sup>)



**Light Material**  
38.3 m<sup>3</sup>  
(50.1 yds<sup>3</sup>)

AD30



AD45



AD63



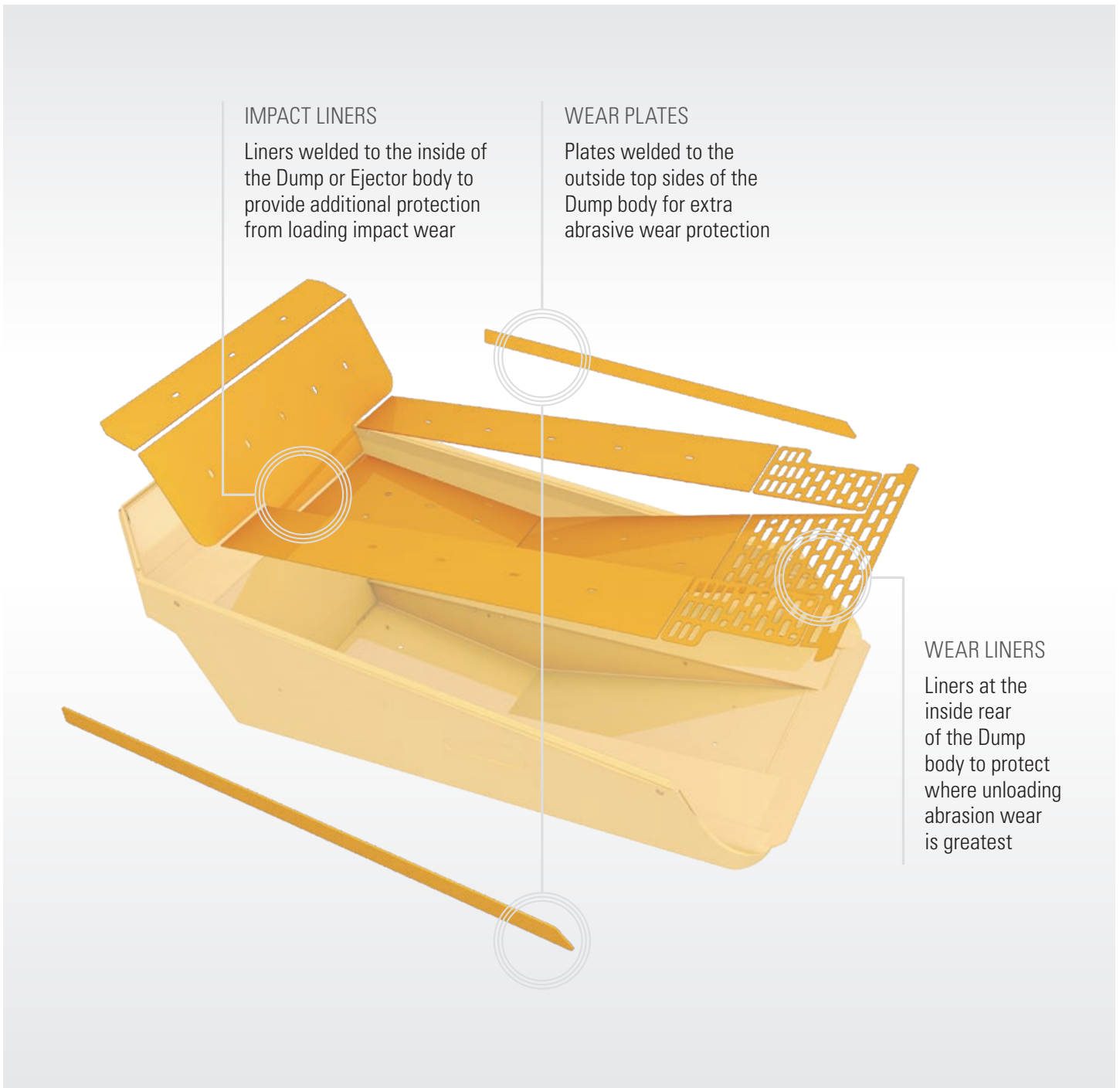
## TRUCK BODY REBUILD

Cat truck bodies are built to be rebuilt. Through rebuild, the truck bodies are given a new life. This is not just a cost-effective solution, it's also a sustainable one. These solutions allow our customers to reuse instead of discard, conserve energy, reduce waste, keep nonrenewable resources in circulation for multiple lifetimes and minimize the need for new raw materials.



# WEAR COMPONENTS

All Cat wear components for underground trucks are built to the highest standard of quality. We design each one for long life and reliable operation, helping you drive down maintenance time and reduce consumable costs while achieving the productivity you expect from a Cat component.



## IMPACT LINERS

Liners welded to the inside of the Dump or Ejector body to provide additional protection from loading impact wear

## WEAR PLATES

Plates welded to the outside top sides of the Dump body for extra abrasive wear protection

## WEAR LINERS

Liners at the inside rear of the Dump body to protect where unloading abrasion wear is greatest



## TECHNOLOGY

Cat truck bodies are the perfect match for the Cat Truck Payload Management System (TPMS).

### TRUCK PAYLOAD MANAGEMENT SYSTEM

Cat TPMS allows a mining operation to manage payloads and ensure that trucks are not under- or overloaded. A simple display in the cab gives operators accurate payload information, allowing them to help make sure their trucks are getting the correct amount of material every time.

Payload scoreboards offer an external display that gives loader operators a clear understanding of the bucket's contents for more efficient passes. Displays on both sides give loader operators clear visibility, with auto-dimming capacity and improved display accuracy.

Cat truck bodies are critical to the TPMS readings. Using a third-party truck body on Cat trucks is likely to cause inaccurate readings, which may cause truck overloading.





# UNDERGROUND TRUCK BODIES

For more complete information on Cat products, dealer services and industry solutions, visit us at [www.cat.com](http://www.cat.com)

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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