# Powertrain solutions for defense

## Propulsion for any terrain

# Power solutions for defense

Cummins leverages power systems that have proven themselves in both military and commercial applications. Whether you're repowering existing military vehicles for land or sea, integrating a power plant into a new design, or determining the best mobile power generation solution, Cummins is here to help you complete your mission.

Our products can be tailored to meet a wide range of vehicle and application demands. Our expertise in developing and designing advanced diesel engines and powertrain-related components – including filtration, aftertreatment, fuel systems, control systems, air handling systems, axles, drivelines, brakes, suspension systems, and electric power generation systems – enables us to deliver effective power solutions for defense applications.

## Enlist Cummins' expertise

From supply lines to frontlines, on land and at sea, Cummins has demonstrated unwavering commitment to readiness. Every aspect of our design, manufacturing, and support is internally managed, ensuring complete command and control, resulting in unmatched reliability, efficiency, durability, and quality.

We deliver exceptional power solutions for a wide range of defense applications, including wheeled and tracked combat vehicles, logistics vehicles, naval vessels, heavy artillery, and mobile command centers. As the world's largest independent diesel engine manufacturer and a key supplier to defense agencies globally, Cummins powers thousands of vehicles and power generation units currently in active service, helping our customers maintain strong defenses.

## Off-the-shelf power. Out-of-the-box versatility.

Equip your forces with the tactical advantage of extended range and the efficiency of Cummins engines. With engines ranging from 74 to 800 hp, Cummins provides outstanding power density for peak performance across the power curve, ensuring both superior capability and peace of mind.

### ECONOMIES OF SCALE

By starting with commercial off-the-shelf (COTS) technology and then tailoring to meet your specifications, you gain advantages in pricing, reliability, data and global delivery times.

### RIGOROUS TESTING

Our state-of-the-art test cells as well as rigorous on- and off-road testing ensure the highest quality and performance when our products see action.

### POWERTRAIN INTEGRATION

Cummins electronic technology now goes beyond the engine to fully integrate with other electronically controlled systems on the powertrain, and by combining Meritor's expertise and capabilities in axle and brake technology, we are positioning ourselves as a leading provider of integrated powertrain solutions for both internal combustion and electric power applications.

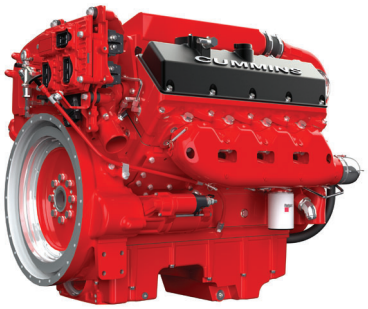
### INNOVATION FOR SUPERIOR PERFORMANCE

We are continuously advancing performance through innovation, for example making unparalleled investments in research and development, focusing on in-house component technologies. This dedicated approach ensures that Cummins delivers the optimal power solution, precisely engineered and integrated for each unique application.

### LEGACY OF MILITARY EXCELLENCE

Since the 1970s, Cummins has been a leader in developing engine technologies for the U.S. Army, building on a heritage that began with WWII products. With over 100 years of expertise in R&D, engineering, system integration, and technical guidance, we tailor solutions for diverse applications, locations, and conditions, providing comprehensive service and support. Our continuous innovation ensures we deliver the best solutions to meet our customers' needs.


# Higher-horsepower engines




## V903

### GENERAL SPECIFICATIONS*

**Displacement:**
903 cubic in (14.8 L)

**Overall length:**
56.5 in (1435 mm)

**Overall width:**
35.1 in (891 mm)

**Overall height:**
35.6 in (904 mm)

**Weight (dry):**
2580 lbs (1171 kg)

### POWER RATINGS

| HP | kW |
|---|---|
| 525-760 | 392-567 |

### TORQUE

| lb-ft | N-m |
|---|---|
| 1144-1570 | 1551-2129 |


## X15

### GENERAL SPECIFICATIONS*

**Displacement:**
912 cubic in (14.9 L)

**Overall length:**
57 in (1447 mm)

**Overall width:**
41.1 in (1044 mm)

**Overall height:**
50 in (1263 mm)

**Weight (dry):**
2926 lbs (1327 kg)

### POWER RATINGS

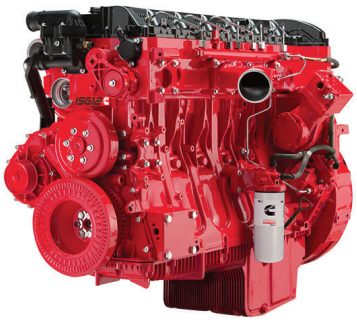
| HP | kW |
|---|---|
| 400-675 | 298-503 |

### TORQUE

| lb-ft | N-m |
|---|---|
| 1450-2050 | 1966-2779 |

*Subject to change

# Light-and medium-duty engines



## ISG12

### GENERAL SPECIFICATIONS*

**Displacement:**
720 cubic in (11.8 L)

**Overall length:**
51 in (1295 mm)

**Overall width:**
37.7 in (958 mm)

**Overall height:**
41.4 in (1051 mm)

**Weight (dry):**
1746 lbs (792 kg)

### POWER RATINGS

| HP | kW |
|---|---|
| 375-500 | 279-373 |

### TORQUE

| lb-ft | N-m |
|---|---|
| 1475-1696 | 2000-2300 |

## L9

### GENERAL SPECIFICATIONS*

**Displacement:**
543 cubic in (8.9 L)

**Overall length:**
44.5 in (1130 mm)

**Overall width:**
30.6 in (778 mm)

**Overall height:**
39.9 (1013 mm)

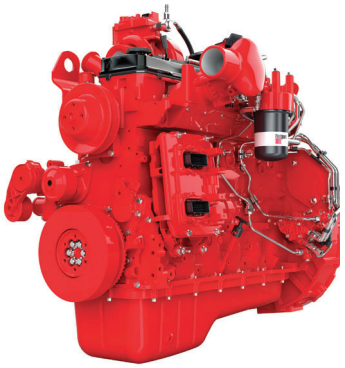
**Weight (dry):**
1706 lbs (774 kg)

### POWER RATINGS

| HP | kW |
|---|---|
| 306-540 | 228-403 |

### TORQUE

| lb-ft | N-m |
|---|---|
| 885-1401 | 1200-1900 |



## B6.7

### GENERAL SPECIFICATIONS*

**Displacement:**
409 cubic in (6.7 L)

**Overall length:**
41.3 in (1050 mm)

**Overall width:**
27.8 in (707 mm)

**Overall height:**
33 in (838 mm)

**Weight (dry):**
1069 lbs (485 kg)

### POWER RATINGS

| HP | kW |
|---|---|
| 183-360 | 136-269 |

### TORQUE

| lb-ft | N-m |
|---|---|
| 516-811 | 700-1100 |

*Subject to change

# Meeting standards with technology and fuel diversity

Cummins offers a full portfolio of technologies to help you maintain engine availability while meeting the latest emissions regulations.

Our engines are also capable of operating with a wide variety of fuels, including NATO F-34 and F-54, JET A-1, JP-8, AVTUR, F24, and Hydrotreated Vegetable Oil (HVO).

**If your forces are going to be using high-sulfur fuels, we can provide engines either with or without the aftertreatment system.**

# Technology ahead of the wave

Shipbuilders and naval operations around the globe rely on Cummins for continuous improvement and innovation. With a broad range of power from 4.5 to 95 liters — including propulsion engines, auxiliary engines and marine generators — we have the engines and generators that will meet your needs and exceed military and security requirements. We've been providing reliable, durable diesel engines to the marine market since 1919 and continue to innovate.

## FUEL VERSATILITY

All Cummins marine engines are capable of running on JP-5, JP-8, kerosene and biodiesel. All of Cummins' high horsepower engines are also fully certified to run on unblended paraffinic fuels (EN15940), including HVO.

## WORLDWIDE APPROVAL

Major marine classification societies located around the world — including the American Bureau of Shipping — approve many of Cummins marine engines, specifically engine features such as independent safety and alarm systems, dual-walled fuel lines and duplex filtration.

## DIESEL ELECTRIC PIONEER

Using our own AvK® and Stamford® alternators, Cummins pioneered diesel electric propulsion in 2004. Currently, there are over one thousand Cummins diesel electric generators powering Platform Supply Vessels and Offshore Service Vessels around the globe.

## 24/7 SERVICE AND SUPPORT

Receive support at major ports on every continent through our distributor network — anytime day or night. With Cummins-powered vessels operating in every time zone, get unmatched access to technical experts around the clock and attain parts worldwide through our three major distribution centers in Memphis, Singapore and Belgium.

# On the frontline of power solutions

From powering command centers, mobile hospitals and infrastructure at forward operating bases to missile defense and directed weapon systems, Cummins Power Generation provides the expertise and innovation to keep your mission on track — anywhere in the world.

## RUGGED MOBILE POWER

Deep defense experience and technical capabilities fuel our Rugged Mobile Power (RMP) products. We've engineered them to meet demanding performance, logistics and mobile power requirements for the most challenging logistical and terrain operations. Rated 5 to 60kW, 50/60hz, Cummins RMP generators reduce logistical footprint, increase reliability, and improve unit mobility and transportability. They are also under an NSE, certified to use diesel, JP8/F34, F24, JP5, and are flexible enough to create microgrid solutions without the need for external control devices. Additionally, service personnel can assemble up to 16 of them in parallel to create a network configuration.

## CUMMINS 800 KW POWER UNIT

The DQBPU mobile power unit is proven to deliver in the toughest conditions anywhere in the world. Designed and tested for defense applications, this generator uses military remote monitoring and offers significant operational advantages for any military service. Rated 50/60 Hz, 2400/4160/2220/3800 volts, this three-phase, four-wire, 800-kW, trailer-mounted diesel generator complies with all reliability, safety and regulatory standards. It offers multiple fuel option capabilities and is weather-resistant with an aluminum enclosure that features ergonomic service access for maintenance efficiency.

## MILITARY BASE OPERATIONS

From upgrading backup power solutions to providing megawatts of baseload power, Cummins Power Generation plays a critical role in powering military operations around the world. With flexible solutions to deliver integrated energy management and sustainable power solutions, Cummins power system products include diesel and natural gas generator sets ranging from 15 to 3750 kVA. They feature battery storage systems, system-level controls and switching technologies, and remote monitoring capabilities to provide a complete integrated approach for maximum reliability.

## MOBILE POWER SOLUTIONS

With easy-to-use controls and ultimate reliability, Cummins mobile power solutions range from 40 to 1250 kVA and are integrated using the same controller on every platform to offer ease of logistics and mobility. They can be fitted with a heavy-duty package to withstand the harshest conditions.

## RMP 50/60 Hz

| MODEL NAME | PRIME RATINGS: 50 HZ | PRIME RATINGS: 60 HZ | ENGINE MODEL | STANDARD ALTERNATOR | STANDARD CONTROLLER | SOUND LEVEL FULL LOAD @7M DB(A) |
|---|---|---|---|---|---|---|
| **5RMP-1030A** | 5.2 kVA | 5 kWe | D902 | YD-6060-5 | ADCS | 68 |
| **10RMP-1040A** | 10.4 kVA | 10 kWe | 3TNV84T-BMCU | YD-6060-10 | ADCS | 68 |
| **15RMP-1050A** | 15.6 kVA | 15 kWe | 4TNV84T-BPCU | YD-6060-10 | ADCS | 70 |
| **30RMP-1060A** | 31 kVA | 30 kWe | QSB3.3 | UC224 | ADCS | 70 |
| **60RMP-1070A** | 62.5 kVA | 60 kWe | QSB4.5 | UC227 | ADCS | 72 |

## RMP 400 Hz

| MODEL NAME | PRIME RATINGS: 400 HZ | ENGINE MODEL | STANDARD ALTERNATOR | STANDARD CONTROLLER | SOUND LEVEL FULL LOAD @7M DB(A) |
|---|---|---|---|---|---|
| **10RMP-1041A** | 10 kWe | 3TNV84T-BMCU | YD-400-10 | ADCS | 68 |
| **15RMP-1051A** | 15 kWe | 4TNV84T-BPCU | YD-400-10 | ADCS | 70 |
| **30RMP-1061A** | 30 kWe | QSB3.3 | Marathon 30 kW 400 Hz | ADCS | 70 |
| **60RMP-1071A** | 60 kWe | QSB4.5 | Marathon 60 kW 400 Hz | ADCS | 72 |

## RMP 50/60 Hz

| MODEL NAME | PRIME RATINGS: 50 HZ | PRIME RATINGS: 60 HZ | ENGINE MODEL | STANDARD ALTERNATOR | STANDARD CONTROLLER | SOUND LEVEL FULL LOAD @7M DB(A) |
|---|---|---|---|---|---|---|
| **DQBPU** | 889 | 800 | QSK38 | Marathon 741FDM4368 | DCS | 84 |

# ProTec™: Proven military grade solutions

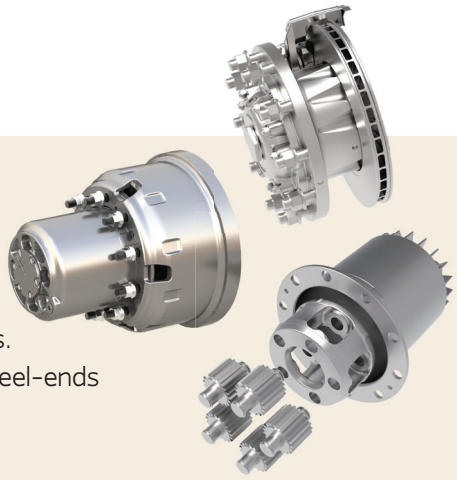
As a leading global supplier of drivetrain, mobility, braking and aftermarket solutions, we provide innovative products that offer superior performance, efficiency and reliability for tactical-wheeled vehicles.

## Designed and engineered for high performance

We first began supplying drivetrain components to military fleets more than 100 years ago. Today, we're one of the world's largest drivetrain producers for defense vehicles. We provide systems for a complete range of lightweight to heavyweight vehicles, armored personnel and advanced-wheeled combat vehicles for the most challenging terrains.

With decades of experience engineering tactical drivetrain components, the ProTec solutions for tactical vehicles offer high performance, efficiency and reliability. ProTec Independent Suspension Axle Systems (ISAS®) matched with durable ProTec All-Wheel Drive Beam Axles provide the dependability demanded where it counts most: on the battlefield.

Our teams carefully study end user requirements to ensure specific platform requirements come first in our engineering processes. Our ongoing initiative to reinvent our global defense portfolio around the specifications and demands of our customers confirms our unwavering commitment.



## Precision customization for premium performance

The ProTec series is customizable to meet your vehicle performance objectives. Options such as coil suspensions, hydrostrut compatibility and a variety of wheel-ends provide you with the versatility needed to succeed in tough environments.

### COIL SUSPENSIONS

- Combat-tested for reliability and durability
- Offers drum brakes for armored security vehicles or air disc brakes for mine resistant ambush protected (MRAP) vehicles
- Enables pre-programmed settings for exceptional performance in highway, cross-country, mud, sand, snow and transport (kneel) environments
- Symmetrical design allows identical parts to be used on both sides of the suspension

### WHEEL-ENDS

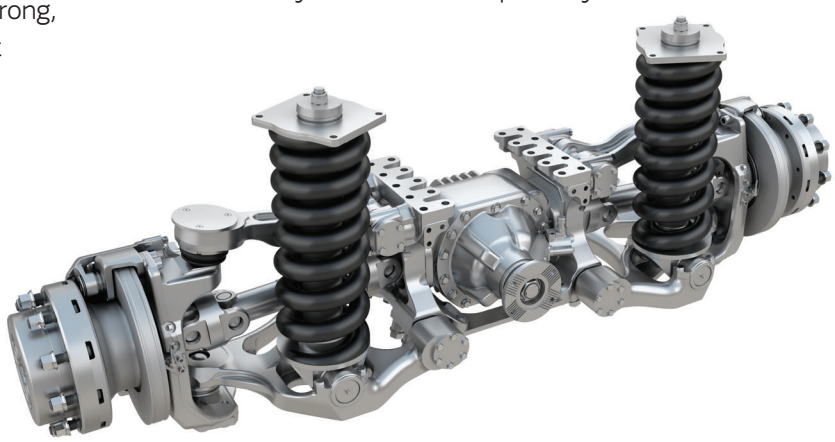
- Distinct gear reduction wheel-ends, including bevel and planetary, provide the flexibility to meet a variety of demands
- Bevel gear wheel-ends meet or exceed OEM specifications for heavy-duty vehicles and are engineered to reduce weight without sacrificing strength and durability
- Planetary wheel-ends available in family 2 or family 3 planetary gears

# ProTec Independent Suspension Axle Systems (ISAS®)

ProTec Independent Suspension Axle Systems (ISAS) provide scalable solutions for light-, medium- and heavy-duty tactical-wheeled vehicles. The weight-efficient, payload-enhancing design increases the capacity of the vehicle to carry incremental armor for added protection in combat environments. The strong, yet lightweight differential carrier balances weight savings without compromising durability.

## FEATURES AND BENEFITS

- Versatile amboid and spiral bevel gearings engineered to fit any application requirements
- Available in your choice of dual air spring or single coil configurations for flexibility
- Customization for specific applications and OEM packaging flexibility
- Features optional anti-lock braking system (ABS), driver-controlled differential lock (DCDL) and central tire inflation system (CTIS) compatibility



# ProTec ISAS® specifications overview

| | 2000 SERIES | 3000 SERIES | 3400 SERIES | 4000 SERIES | 4500 SERIES | 5000 SERIES |
|---|---|---|---|---|---|---|
| **Gross axle weight rating (GAWR)** | Up to 6,600 (3T) – Steer<br>Up 7,500 lbs (3.5T) – Drive | Up to 11,000 (5T) – Steer<br>Up 12,100 lbs (5.5T) – Drive | Up to 14,300 (6.5T) – Steer<br>Up 15,400 lbs (7T) – Drive | Up to 18,700 (8.5T) – Steer<br>Up 20,900 lbs (9.5T) – Drive | Up to 19,800 (9T) – Steer<br>Up 23,100 lbs 10.5T) – Drive | Up to 26,400 (12T) – Steer<br>Up 28,600 lbs (13T) – Drive |
| **Steering angle** | Up to 35° | Up to 38° | Up to 38° | Up to 35° | Up to 35° | Up to 35° |
| **Total wheel travel** | Up to 11 in (280 mm) | Up to 11.8 in (300 mm) | Up to 11.8 in (300 mm) | Up to 13.8 in (350 mm) | Up to 13.8 in (350 mm) | Up to 15.7 in (400 mm) – Inboard brakes<br>Up to 13.8 in (350 mm) – Outboard brakes |
| **Brake type** | Hydraulic disc | Hydraulic disc | Air disc or Hydraulic disc | Air disc | Air disc | Air disc or cam |
| **Wheel-end type** | Planetary | Planetary, portal or bevel geared | Planetary | Planetary | Planetary | Planetary |

# ProTec all-wheel drive beam axles

ProTec all-wheel drive beam axles are engineered to the most demanding military specifications, including tough performance and dependability requirements. They utilize proven technologies and are available in multiple configurations.

Engineered and built for the extreme demands of the military-duty cycle, our axles have been the axle of choice for the United States Army's fleet of 2.5- and 5-ton vehicles for more than a century. Our ProTec all-wheel drive beam axles provide the range and performance demanded by military and service personnel applications.

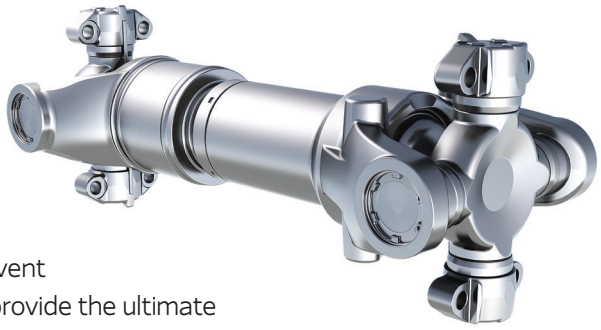
## FEATURES AND BENEFITS

- Single, tandem or tridem configurations available
- Accommodates multiple suspension configurations for application flexibility
- Non-vented drum brake protects the braking system while operating in adverse conditions
- Backed by military-duty cycle testing for proven performance
- Features optional anti-lock braking system (ABS), driver-controlled differential lock (DCDL) and central tire inflation system (CTIS) compatibility

# ProTec all-wheel drive beam axles specifications overview

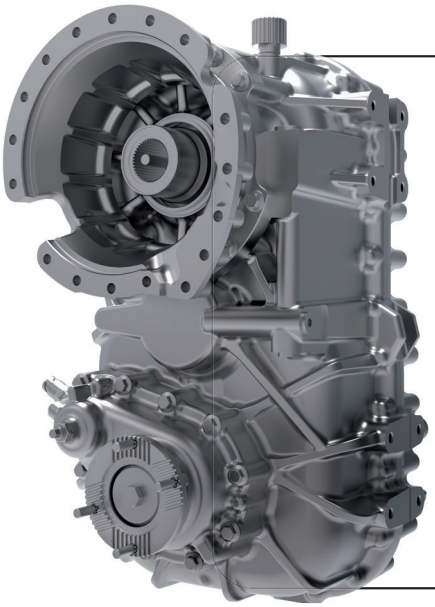
| | 3000 SERIES | 4000 SERIES | 4500 SERIES | 5000 SERIES | 5000 SERIES TANDEM/TRIDEM |
|---|---|---|---|---|---|
| **Gross axle weight rating (GAWR)** | Up to 11,000 lbs (5T) – Steer<br>Up to 12,100 lbs (5.5T) – Rigid | Up to 18,700 lbs (8.5T) – Steer<br>Up to 25,000 lbs (11.3T) – Rigid | Up to 26,400 lbs (12T) – Steer<br>Up to 28,700 lbs (13T) – Rigid | Up to 28,700 lbs (13T) – Steer<br>Up to 30,800 lbs (14T) – Rigid | Up to 30,000 lbs (13.6T) per axle |
| **Steering angle** | Up to 42° | Up to 42° | Up to 35° | Up to 42° | N/A |
| **Brake type** | Hydraulic disc, air disc and air drum | Hydraulic disc, air disc, air drum, s-cam or wedge | Air disc or wedge | Air disc, s-cam or wedge | Air drum |
| **Wheel-end type** | Planetary or bevel geared | Planetary or bevel geared | Planetary | Planetary | Planetary |
| **Wheel-end ratio** | 3.55 | 3.55, 4 - Planetary<br>2 – Bevel | 3.55, 4, 4.63 | 3.46, 3.55, 4, 4.63, 5.6 | 3.46 |

## Drivelines



Permalube™ RPL Series drivelines are the first in North America to be permanently lubricated and sealed for life to reduce the costs associated with downtime for greasing and maintenance. RPL Series drivelines deliver the highest torque capacity for demanding defense applications and the nylon thrust washers eliminate metal-to-metal contact to prevent wear. The triple lip seals along with the protective steel guard provide the ultimate protection against contaminants for extended u-joint life. For more information or to review model details and specifications, please see our RPL Series drivelines spec sheet (SP-0662) on Literature On Demand.

**cummins.com/drivetrain-systems/lod**



## Transfer cases

Specifying the right transfer case to match the exact needs of each military or service personnel vehicle is essential to vehicle performance and durability. That's why our expanded line of transfer cases offers a wide range of options to fit the most demanding tactical-wheeled vehicle applications. For more information or to review model details and specifications, please see our transfer case brochure (SP-18125) on Literature On Demand.

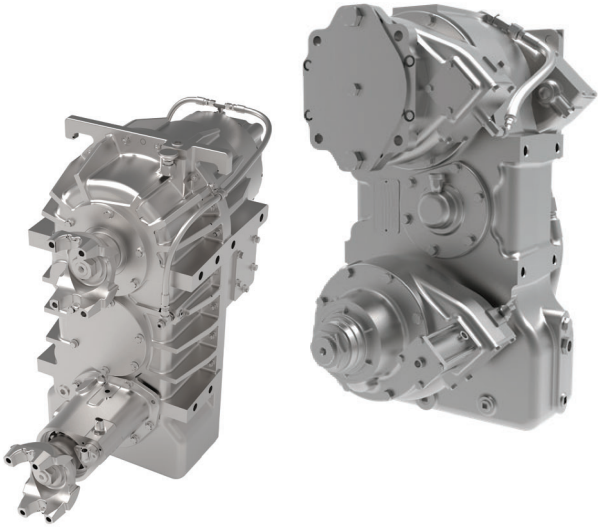
**cummins.com/drivetrain-systems/lod**

## Power take-offs (PTOs) and specialized gearboxes

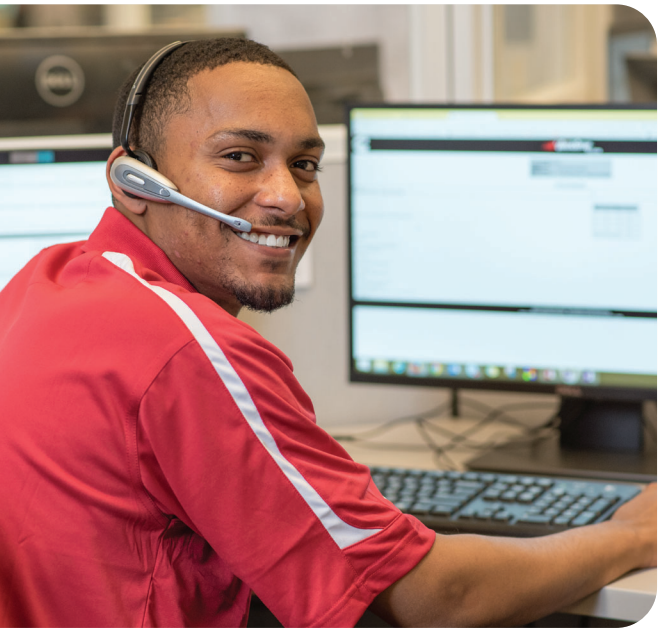
Our split-shaft power take-off units (PTOs) and creeper drive gearboxes are specifically designed for severe-duty, high-mobility, high-torque and all-wheel drive configurations across a broad range of applications and configurations.

For more information or to review model details and specifications, please see our power take-offs and gearboxes insert (SP-18131) on Literature On Demand.

**cummins.com/drivetrain-systems/lod**



# Your allies for customer and technical support



Cummins Care is a solutions center that helps to prevent issues while providing answers quickly and accurately. Our mission is to provide a whole new level of customer service that is on-call 24/7/365 to support and deliver faster personal attention with rapid results.

From the moment you engage with Cummins Care, you will have access to a Cummins expert with specialized skill sets, experience and in-depth knowledge to take care of military equipment needs. You can also connect with our helpful experts and resources in your region/language by visiting **care.cummins.com**.

We're here to ensure your military equipment is mission-ready, while delivering a seamless support experience.

To find our sales and service locations, **visit cummins.com/locations.**

# Distinguished service at every milestone

Cummins has been — and continues to be — a major supplier of diesel engines and gensets for defense purposes throughout the world. In every mission, from the European Theater of Operations in WWII to peacekeeping operations today, Cummins-powered equipment has served with distinction, earning the highest commendations for durability, dependability and performance. That's why Cummins power systems are specified in military applications by countries around the world.

**1942** Hundreds of YMS-class wooden-hull minesweepers utilized twin Cummins Model K engines as pulse chargers.

Onan produced 70,000 generators annually between 1942 and 1945.

**1963** Twin Cummins V6 VIM engines were specified for U.S. Coast Guard 44-ft. steel-hull, "unsinkable" rescue boats.

**1978** M915 line haul truck production started with the NTC400.

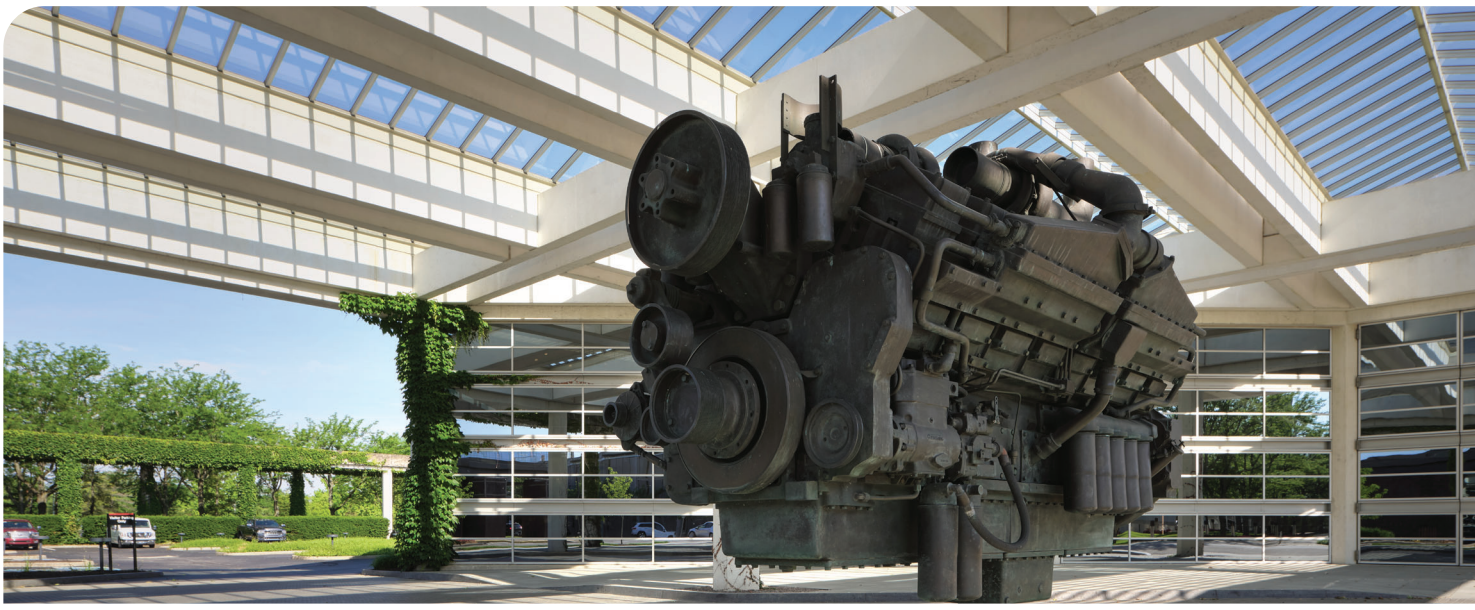
**1981** Bradley Fighting Vehicle production began with the VTA903-500.

**1993** Tank International selected the 6BT-152 for the K Variable Reach Rough Terrain Forklift.

**2005** U.S. Navy 7M RHIBS switched to the QSB5.9 230 with sterndrive.

**2014** U.S. Army Bridge Erection Boats (BEB) started production with the QSB6.7 250.

**2021** The U.S. Army contracts Cummins to supply the RMP, a quieter, more fuel-efficient version of the AMMPS generator, specifically designed for tactical environments. To date, over 49,000 units have been shipped under multiple contracts.



# Recruit Cummins for your application-specific tailoring.

As vehicles are expected to meet new requirements, have more power density, and increase fuel economy, Cummins is easily able to adapt. Whether modifying our existing engines or creating new ones based on your needs and specifications, we can assist at every phase, from providing guidance on initial bid specifications to working with original equipment manufacturers (OEMs) on installation, field testing and production.

## LEARN MORE ABOUT WHAT CUMMINS CAN DO FOR YOU.

### EBU and PSBU engines

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