

MV™ SERIES



COMPARISON GUIDE





INTRODUCTION | Built for Your Daily Grind



Introducing the new International® MV™ Series, a medium duty truck that's built with everything you need to conquer your daily grind. It's designed and engineered to set new standards for quality and productivity, with a spacious new cab crafted through driver input for optimal comfort, control and safety. The MV Series offers the industry-leading intelligence of the Diamond Logic® electrical system, and the industry's first and only all-makes diagnostics system OnCommand® Connection for unrivaled connectivity. With virtually limitless customization options, the MV Series provides the ideal truck for your demanding application.

The MV Series is built smarter to work harder for you – all day, every day.

- ▶ Driver controls and instrumentation are based on robust industry-standard SAE J1939 electrical architecture, controls and switches are configured to be easy to find, reach and operate, even when wearing gloves.
- ▶ Up to 30 customizable factory-installed switches with custom labels are optimally positioned to use with integrated equipment, user-replaceable switches are available for any application.
- ▶ Steering wheel control labels are laser-etched for maximum readability and durability.
- ▶ The innovative new shifter is mounted on the steering column, allowing the driver to easily operate shifting and engine braking while keeping their eyes on the road and hands on the wheel.
- ▶ The powerful, all-new HVAC system employs advanced automotive heating and cooling technology to deliver optimal comfort and reliability. The system endured rigorous testing in extreme temperatures to deliver best-in-class visibility and comfort.
- ▶ A new max defrost feature in the HVAC system helps clear windows faster in colder climates, providing quicker, clearer visibility for increased uptime and less waiting.
- ▶ Cab wiring includes all-new harnessing and an all-new in-cab power distribution module that's protected from the elements.
- ▶ The 3-piece hood can be raised with less than 12lbs. of effort, a class-leading advantage that allows easy access to service points while reducing back strain.





Introduction

REAL WORLD CONFIRMATION.

To confirm the many advantages of the MV™ Series, we contracted an independent, third party company to conduct a thorough evaluation to see how it stacks up to the competition. Measurements were taken from standard production vehicles and performed in precisely the same manner, by the same personnel, across all models. Plus, vehicle specifications were matched as closely as possible to help ensure competitive consistency. How did the MV Series compare? Find the results on the following pages.

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INTRODUCTION | Specifications



ENGINEERED FOR DURABILITY.
BUILT FOR THE DRIVER.

The MV™ Series has a broad range of applications to maximize productivity.

And with two proven Cummins® engines, three cab sizes, a choice of 4x2 or 6x4 axle configurations — plus our unmatched expertise in delivering the specifications to suit your application, the MV Series can be dialed in to deliver precisely what you need.



Introduction

GVW

- ▶ 21,500 - 54,600 lbs.

Models/BBC/BA

- ▶ MV607: 107" BBC, 40" BA
- ▶ MV60H: 107" BBC, 40" BA (Low Profile)

Cab Configurations

- ▶ Regular Cab
- ▶ Extended Cab
- ▶ Crew Cab

Wheelbase Options

- ▶ 128" - 311"

Axle Configurations

- ▶ 4x2, 6x4

Rear Axle

- ▶ Single Rear Axle (4x2)
 - Meritor: 13,500 - 30,000 lbs.
 - Dana Spicer: 13,500 - 30,000 lbs.
- ▶ Tandem Rear Axle (6x4)
 - Meritor: 34,000 - 40,000 lbs.
 - Dana Spicer: 40,000 lbs.

Front Axle

- ▶ Meritor: 8,000 - 14,600 lbs. (4x2, 6x4)
- ▶ Dana Spicer: 8,000 - 14,000 lbs.

Frames

- ▶ High Strength Low-alloy Steel 50,000 - 80,000 PSI
- ▶ Heat Treated Alloy Steel 120,000 PSI
- ▶ Clean CA available for body mounting

Front Suspension

- ▶ Spring, Parabolic Taper Leaf: 8,000 - 14,600 lbs.

Rear Suspension

- ▶ Spring, Single Vari-Rate: 13,500 - 31,000 lbs.
- ▶ Tandem, 4-Spring Multileaf: 34,000 - 40,000 lbs.
- ▶ IROS Air Suspension available for Single and Tandem Axle

Electrical System

- ▶ Diamond Logic® Electrical System
- ▶ Alternators
 - 12 Volt 160 - 325 Amp.
- ▶ Battery Systems
 - 12 Volt, 2 to 3 Batteries
- ▶ Headlights
 - Long Life Halogen

Exhaust System

- ▶ Single, Horizontal, After-treatment Device Frame Mounted Right, Under Cab or Back of Cab, Horizontal or Vertical Tailpipe

Brakes

- ▶ Hydraulic Disc with Four Channel ABS, Optional Traction Control
- ▶ Air Brakes with ABS, Optional Traction Control - and Electronic Stability Program with Traction Control

Steering

- ▶ TRW/Ross Power
- ▶ Sheppard Power

Engines

- ▶ Cummins B6.7: 200 - 325 hp and 520 - 750 lb.-ft. of torque*
- ▶ Cummins L9: 260 - 350 hp and 720 - 1000 lb.-ft. of torque

Transmissions

- ▶ Eaton® Fuller: 6, 10 Speed Manual
- ▶ Eaton: Prociption™ 7 Speed Dual Clutch Automatic
- ▶ Allison: 1000, 2000, 3000 Series (HS, EVS, RDS, MH) Automatic
- ▶ Allison: 3000 TRV Series Automatic
- ▶ Eaton® Fuller: Advantage 10 Speed Fully Automated Manual

Fuel Tank

- ▶ 40 - 140 Gallon Non-Polished and Polished Aluminum, Mounted Right Side, Left Side or Dual Under Cab, Right Side Back of Cab

DEF Tank

- ▶ 5-15 Gallon

Tires

- ▶ Continental, Michelin, Goodyear, Bridgestone, Hankook, Yokohama

*340 hp and 700 lb.-ft. of torque / 360 hp and 800 lb.-ft. torque ratings available for emergency vehicles and RV applications only

Key Advantages

- The MV Series offers components for virtually any application, including tandem rear axles. This is a clear advantage over the Hino and the Ford, which both have limited available equipment.



INTRODUCTION | A Competitive Set



The MV™ Series was independently tested side-by-side against the Ford F-750, Hino 268A and Freightliner M2 106. Although all four models have unique design elements and component availability, every measure was taken to perform an accurate head-to-head comparison of key specifications, components, and features.

Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Model	MV607	F-750	268A	M2 106
BBC	107"	114"	108"	106"
BA	40"	40.4"	40.6"	41"
Engine	Cummins B6.7™ 260 HP	Ford Power Stroke® 6.7 300 HP	Hino JO8E-VB 260 HP	Detroit™ DD5™ 230 HP
Transmission	Allison 2200 RDS	Ford TorqueShift® HD	Allison 2500 RDS	Allison 2500 HS
Frame	80,000 PSI	80,000 PSI	80,000 PSI	120,000 PSI
Front Axle	MFS-08-153B 8,000 lbs	E-1002I 10,000 lbs	MFS10 10,000 lbs	DA-F-10.0-3 10,000 lbs
Rear Axle	19060S 19,000 lbs	21060S 21,000 lbs	RS-19-145 19,000 lbs	DA-RS-19.0-4 19,000 lbs
Rear Suspension	IROS Air 20,000 lbs	Multi-leaf 21,000 lbs	Semi-elliptical 21,000 lbs	AirLiner 21,000 lbs
Tire Manufacturer	Continental	Goodyear	Bridgestone	BF Goodrich
Front Tires	255/70R22.5	11R22.5	11R22.5	11R22.5
Front tire Tread	HSR2	RSA	R268	ST230
Rear Tires	255/70R22.5	11R22.5	11R22.5	11R22.5
Rear Tire Tread	HDR	G182 RSD	M726EL	DR444
Base Warranty	2 Years	2 Years	2 Years	2 Years

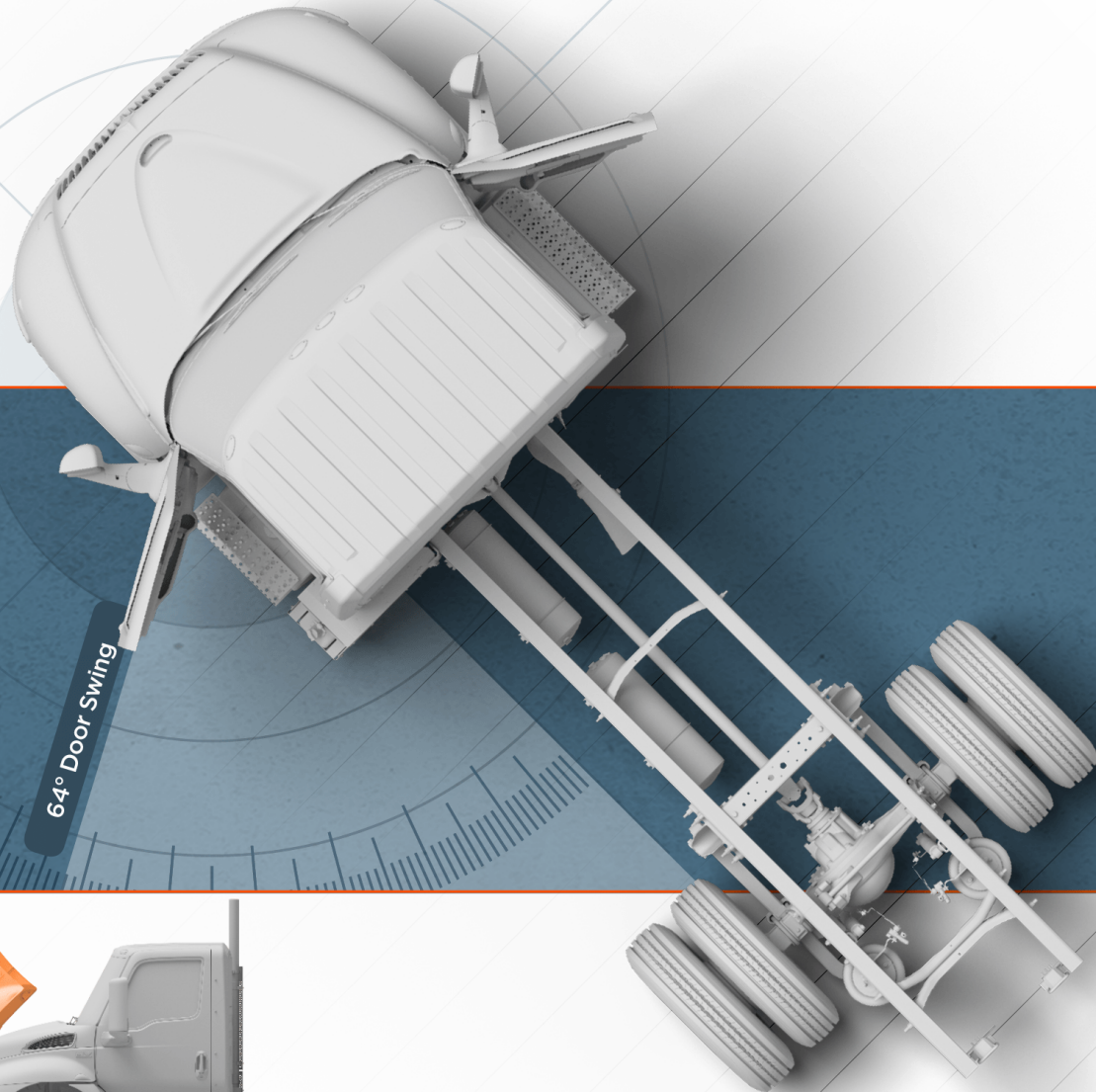
Introduction



CAB DESIGN | Innovative Cab



Cab Design



Everything in the new International® MV™ Series is designed to help the driver be more comfortable, productive and safe. It's the result of listening to extensive feedback from drivers and body companies to design and build a truck that prioritizes all their needs - a philosophy we call DriverFirst™.

THE MV SERIES STARTS WITH A DURABLE CAB, BUILT FOR THE JOB SITE

- ▶ A high-strength, low-alloy (HSLA) reinforced, cold-rolled steel cab delivers superior corrosion resistance as well as world-class fit and finish
- ▶ One piece of steel surrounds the entire door opening providing superior structural integrity

SMART FEATURES DESIGNED INTO THE NEW MV SERIES CAB:

- ▶ An all new interior offers an improved ergonomic design, including better elbow room, hip room and leg room
- ▶ Visibility has been enhanced, including door-mounted mirrors positioned to see more while turning your head less to reduce fatigue
- ▶ Improved ingress and egress through wider opening doors, redesigned cab steps and grab handles that are precisely positioned for proper 3-point access
- ▶ The MV Series cab steps are designed with consistent spacing and a large stair-step offset for predictable footing and improved step visibility from above
- ▶ Available extended length cab steps are longer and more evenly spaced. The new full-grip interior handle makes doors easier to open and close when wearing work gloves

NEW PEDESTAL CAB MIRROR

- ▶ Reduced wind noise
- ▶ Optimized positioning to reduce driver neck strain
- ▶ Mirrors have been moved forward to improve driver's field of view
- ▶ Improved mirror serviceability with fewer mounting bolts, wiring connector located at the base and improved glass replacement





CAB DESIGN | Efficient by Any Measure | Key Numbers



CAB DESIGN
innovative cab



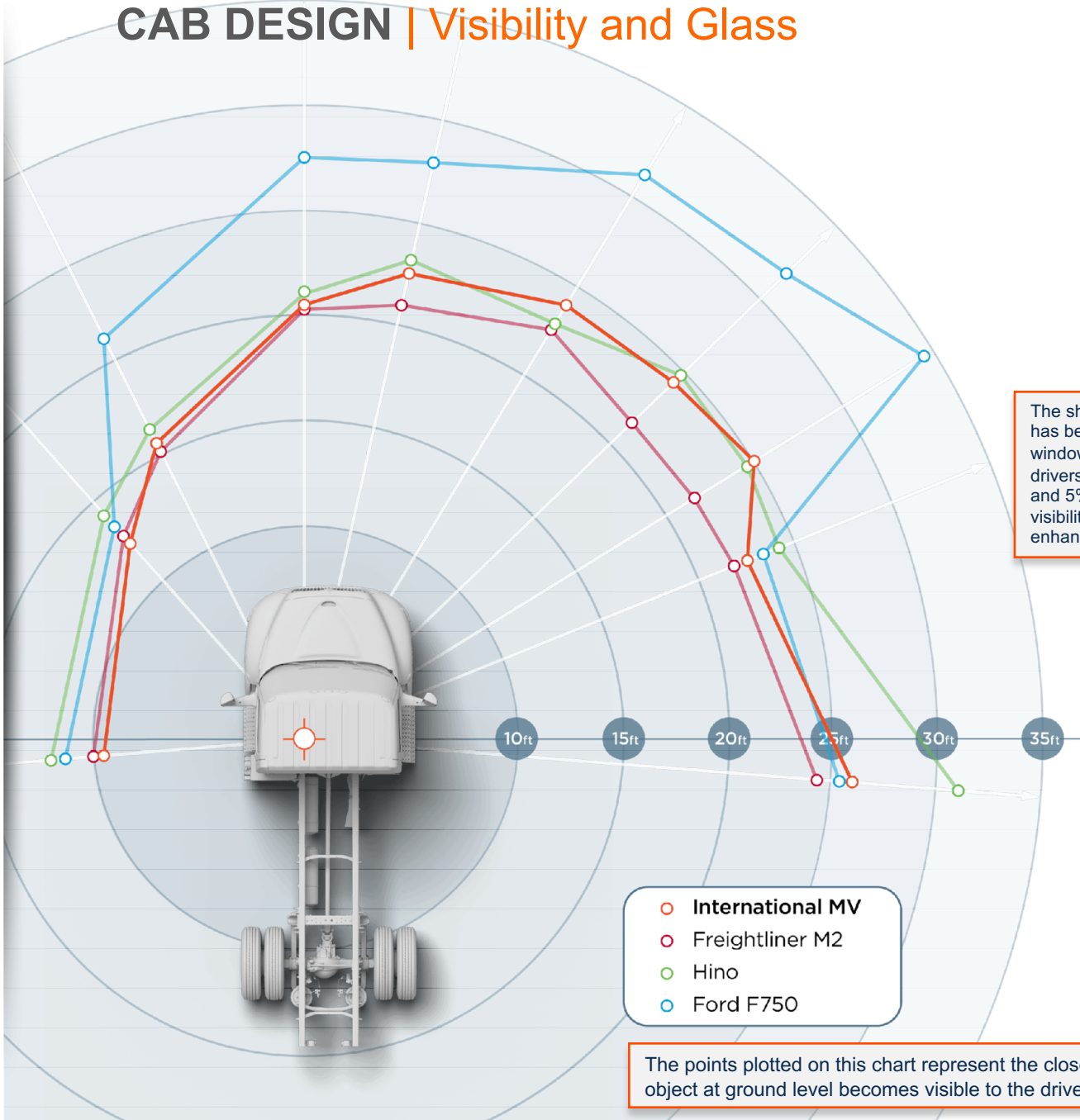
Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Available BBCs (Reg., Ext., Crew Cabs)	107", 132.9", 150.9"	114", 135.4", 149.4"	108", 138"	106", 132", 154"
Windshield Slope	63°	36°	75°	65°
Cab Construction	Welded High Strength Steel	Welded Steel	Welded Steel	Aluminum
Available Cabs	Regular 26" Extended 44" Crew	Regular 21" Super 44" Crew	Regular 30" Extended	Regular 26" Extended 48" Crew
Door Construction	Steel	Steel	Steel	Steel
Cab Suspension -Standard Optional	4 Point Rubber Mounts Air Ride	4 Point Rubber Mounts	4 Point Rubber Mounts	4 Point Rubber Mounts Leaf Spring Air Ride
Widest Door Opening Angle	64°	66°	69°	65°
Hood Design	3-Piece Composite	1-Piece Composite	1-Piece Composite	1-Piece Composite
Hood Tilt Effort	11.4 lbs.	68.3 lbs.	22.0 lbs.	32.3 lbs.
Hood Operation Dampening	Dampened Closing	Dampened Open	Dampened Closing	Dampened Open and Closing
Inside/Outside Air (snow valve)	Not Available	Not Available	Not Available	Not Available
Hood Hatch	Available	Not Available	Not Available	Not Available

Key Advantages

- The MV Series' 3-piece hood offers reduced repair costs associated with 1-piece designs.
- The MV Series also offers an optional cab air ride suspension not found on some competitors.
- Larger step offset than the Hino and the Freightliner, for improved entry and exit.
- An all new interior offers an improved ergonomic design, including better elbow room, hip room and leg room.



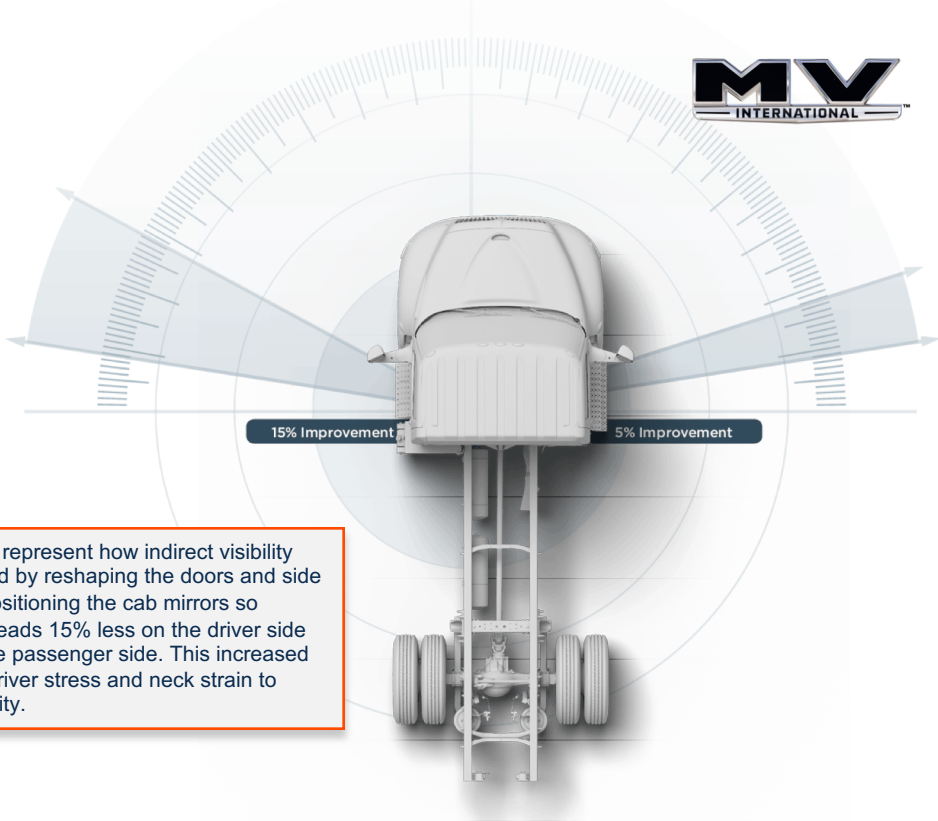
CAB DESIGN | Visibility and Glass



- International MV
- Freightliner M2
- Hino
- Ford F750

The points plotted on this chart represent the closest an object at ground level becomes visible to the driver.

The shaded areas represent how indirect visibility has been optimized by reshaping the doors and side windows, and repositioning the cab mirrors so drivers turn their heads 15% less on the driver side and 5% less on the passenger side. This increased visibility reduces driver stress and neck strain to enhance productivity.



The MV Series interior was designed based on a meticulous study of interaction points between the driver and truck – everything from what a driver sees to how he moves and reacts in virtually any situation. That’s why the MV Series has been designed with a large swept-back windshield, optimized mirror placement and redesigned 1-piece side windows.

KEY MV SERIES DESIGN ELEMENTS FOR SUPERIOR VISIBILITY

- ▶ Cab doors have been redesigned and side glass has been optimized with a lower bottom edge for improved lateral driver visibility
- ▶ Cab mirrors have been redesigned and moved forward for better visibility. The mirror location also means minimal head-turn by the driver which can reduce neck strain and help keep the driver’s eyes on the road



CAB DESIGN | Visibility and Glass | Key Numbers



Cab Design

CAB DESIGN
visibility and
cab glass



Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Driver's Side Rear	114"	136"	140"	118"
Driver's Side Forward	145"	158"	167"	156"
Forward Straight Ahead	247"	333"	254"	242"
Forward Over Center	271"	346"	277"	253"
Forward at hood Corner	282"	377"	285"	265"
Passenger Side Forward	269"	280"	288"	273"
Passenger Side Rear	310"	306"	374"	290"
Windshield Design	1-piece	1-piece	1-piece	1-piece
Windshield Rake Angle	63°	36°	75°	65°
Windshield Area (sq. in.)	1,909	1,511	1,985	2,197
Wiper Coverage (sq. in.)	1,193	1,212	1,504	1,427
Wiper Efficiency (%)	62%	80%	76%	65%
Side Glass (sq. in.)	1,144	1,238	1,368	1,144
Rear Cab Glass (sq. in.)	749	835	654	657
Total Cab Glass (sq. in.)	3,802	3,584	4,007	3,998

Key Advantages

- The MV Series with its wide, panoramic windshield and sloped hood maintains clear visibility advantages across most competitors.
- The straight ahead visibility on the MV Series is better than the Ford F-750 by 7 feet. The F-750 cab design and lower roof height means the driver sits lower in the cab with a lower sightline through the windshield relative to the hood. This lengthens the point at which an object at ground level becomes visible to the driver.
- Enhanced door-mounted mirrors positioned to see more while turning your head less to reduce fatigue.



CAB INTERIOR |



Cab Interior



UNLEASHING DRIVER PRODUCTIVITY

From the beginning, the top priority for the MV™ Series was to design a truck that made drivers more comfortable, alert and productive. To achieve this goal, we turned to the people who know driving best – drivers.

This driver-centric approach starts with one of the roomiest cabs in its class, and then sweats all the details – including a powerful new HVAC system. Controls and switches are configured to be easy to find, reach and operate, even when wearing gloves. Visibility has been enhanced, including door-mounted mirrors positioned to see more while turning your head less to reduce fatigue. Even the air horn lanyard is placed exactly where drivers told us they prefer it to be.





CAB INTERIOR | Cab Size and Dimensions | Key Numbers



Cab Interior

CAB INTERIOR
cab size and dimensions



Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
WIDTH				
A-pillar to A-pillar at Dash	69.25"	61"	70"	73.5"
B-pillar to B-pillar at Dash	72"	63"	73"	72"
Cab Width at Shoulder Level	78"	70"	79"	76.75"
Cab Width at Hip Level	72.5"	61"	74"	71.75"
Centerline of Seat to Door at Hips	14.25"	16.25"	15.25"	14.5"
DEPTH				
A-pillar to Back of Cab at Dash	44.5"	49.75"	45.5"	45.25"
A-pillar to Back of Cab at Roof	36.5"	33.5"	42"	39.5"
Fuel Pedal Centerline to Back of Cab	46.5"	54.5"	45"	45.5"
HEIGHT				
Floor to Roof at Dash Edge	51.25"	47"	54"	51.5"
Floor to Roof at Seat Edge	56.5"	47"	60"	56"
Floor to Roof at B-pillar	56.75"	45.5"	60"	49.5"
Total Volume (cu. ft.)*	93	71	105	91

*Volume is calculated from the above as well as additional data not included in this table

Key Advantages

- The MV Series cab volume surpasses the Ford F-750 by 22 cu. ft. and the Freightliner M2 106 by 2 cu. ft. for a more comfortable interior.
- The MV Series has more hip and shoulder room than most of the competitors, allowing for a more spacious environment for drivers wearing bulky work clothes.
- The MV Series cab depth (fuel pedal centerline to back of cab) exceeds the Hino 268A by 1.5" and the Freightliner M2 106 by 1" for a more spacious interior.



CAB INTERIOR | Driver Environment



DRIVER ENVIRONMENT

The new MV™ Series is one of the most driver-centric trucks on the road today. With more intuitive controls, a quieter cab, critical information at your fingertips and dozens of other smart features that help keep a driver comfortable and in control both on the road and at the job site.

- Controls and switches are configured to be easy to find, reach and operate, even when wearing gloves
- An all new interior offers an improved ergonomic design, including better elbow room, hip room and leg room
- The MV Series dash has been completely redesigned with intuitive control positioning based on frequency of use, optimized gauge fonts and colors, and improved ergonomics
- A new, large flat surface area on the passenger dash-top allows items to rest while parked or serve as a convenient flat writing surface
- An available flat instrument panel includes a new center-mounted vent to keep the middle passenger cool while providing space for extra legroom or a large floor-mounted body control module

INDUSTRY-LEADING HVAC SYSTEM

Completely redesigned HVAC system employs advanced automotive heating and cooling technology for outstanding performance and vastly improved reliability:

- Tests have shown new brushless motor lasts 3-times longer than system used in DuraStar
- Incorporates best-in-class MAX Defrost performance for unsurpassed windshield clearing time - clears 100% of the windshield in less than 30 minutes

ONE OF THE QUIETEST CABS ON THE ROAD

Wind noise simulation was used extensively during development to guide design and achieve noise reduction objectives

Optimized design attributes include:

- Improved door sealing and floor insulation
- Pedestal mirrors, hood shape and hood-to-door geometry reduces wind noise
- Door redesign removed vent window seam



CAB INTERIOR | Driver Environment | Key Numbers



Cab Interior

CAB INTERIOR
driver
environment



Series	MV Series		Ford F-750		Hino 268A		Freightliner M2 106	
Seat Travel	7"		6"		6"		7"	
Horizontal	5.50"		3"		6"		4.25"	
Vertical								
Belly Room	18"		18.75"		18.5"		20.25"	
Leg Room	30.25"		29.5"		27.25"		27.25"	
Steering Column Tilt Range	23°		4°		5°		24°	
Head Room	34.75"		28.75"		40"		29.25"	
Minimum	40.25"		31.75"		46"		33.5"	
Maximum								
Sound Levels (db)*	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior
Idle	60.2**	81.5**	46.1	70.2	57.2**	78.3**	60.8**	83.7**
750 RPM	60.2**	81.5*	46.8	72.1	57.2**	78.3**	60.8**	83.7**
1500 RPM	64.9	87	53.5	80.3	65.1	85.4	70.8	88.4
Governed	67.2	87.9	64.3	91.5	75.4	96.7	75.6	96.9

* Average of high and low readings recorded over a 10-second duration.

** Engine idle at or higher than 750 RPM

Key Advantages

- Steering column adjustability is critical in ensuring a driver a relaxed, comfortable seating position. The MV Series tilt steering column range of 23° beats the Ford F-750 which is only 4° and the Hino 268A at 5°.
- The MV Series leg room surpasses all the competitors, offering more leg comfort for drivers. Maximum Headroom on the MV series is better than the Ford F-750 by 8.5" and the Freightliner M2 106 by almost 7".
- Interior sound levels are lower than the M2 106 at all levels measured.



CAB INTERIOR | DriverFirst™ in Every Detail

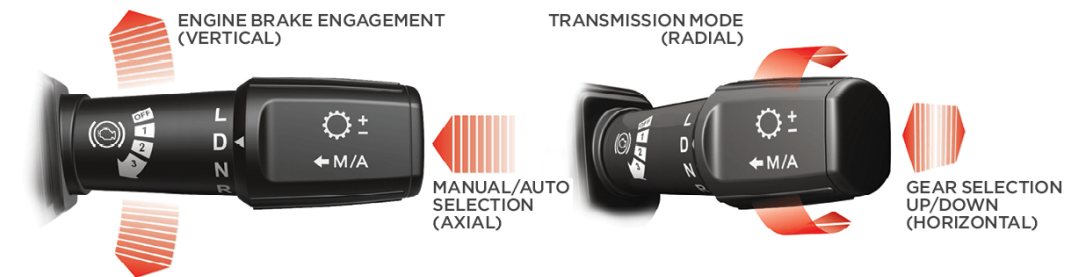


DRIVERFIRST - DEFINED

Every detail inside the MV™ Series cab has been carefully designed, measured and clinic-tested to optimally benefit the driver. All-new gauges are optimized so key information and alerts are precisely where they need to be for clear viewing without distraction. The available new premium gauge cluster features a customizable digital display that allows drivers to intuitively select the information they prefer in a variety of situations. The color, illumination, legibility and even the type font and size of gauges is designed to deliver optimal viewing in varying light conditions, maximizing alertness and minimizing eye fatigue.

The available premium gauge cluster provides a wealth of information for the driver, including:

- ▶ Real-time fuel economy
- ▶ Axle load*
- ▶ Custom gauge settings*
- ▶ Safety indicators*



The innovative new shifter is mounted on the steering column, allowing you to easily reach and smoothly operate shifting and engine braking while keeping your eyes on the road and your hands on the wheel.

* When added with optional feature code for required sensors.



CHASSIS AND FRAME EQUIPMENT

The MV™ Series offers a wide range of 50,000, 80,000 and 120,000 PSI single rail frames. Single frame rails are generally lighter than reinforced double rails and offer a higher strength-to-weight ratio. Single rail frames are also not susceptible to intra-rail corrosion. When a reinforced frame is required, a full length outer c-channel reinforcement is available for heavier applications - an option not available on some competitors.

STANDARD HUCK® BOLT FRAME FASTENERS

- ▶ Highly resistant to vibration
- ▶ Huck® Bolt fasteners provide superior clamping force over time and do not require re-torquing

CHASSIS OF CHOICE

- ▶ Air tanks, fuel tanks, battery boxes and exhaust systems can all be mounted in various positions to better align with your application
- ▶ The frame rails on the MV Series offer upfitters the flexibility to attach almost any body that's required by the application
- ▶ Major frame components can be attached easily by ordering custom pre-punched frame rails to meet any application



Chassis

CHASSIS | Chassis and Frame Equipment | Key Numbers



CHASSIS
chassis and
frame equipment



Series	MV Series	F-750	Hino 268A	Freightliner M2 106
Frame Ratings Yield (PSI) SM (in ³) RBM (in.-lbs.)	50,000, 80,000, 120,000 10.74 - 29.84* 859,200 - 3,580,800	50,000, 80,000, 120,000 10.75 - 29.2* 632,000 - 3,504,000	80,000, 120,000 13.02 - 16.11 2,063,800 - 3,866,400	50,000, 80,000, 120,000 10.2 - 21.6* 508,000 - 3,715,000*
Available Reinforcements Full Partial	.25" Outer C-Channel Not Available	.25" Inner C-Channel Not Available	Not Available Not Available	.25" Inner C-Channel .25" Partial Inner L-Sert
Low Pro Chassis Configuration	Available	Available	Available	Available
Front of Frame Extensions	20" Bolt-On 4" Bumper Extension	Integral 20" 3" Bumper Extension	4" Extended Bumper	8" Bolt-On
Fuel Tanks Type Total Capacity Depth of Cross Section	D-Style / Cylindrical Aluminum: 40 - 140 Gallons D-Style: 16", 19" Cylindrical: 24"	Rectangular / Aluminum: 50 - 115 Gallons 13", 14", 15" 16"	Rectangular Aluminum: 50 - 100 Gallons 21"	Rectangular / Cylindrical Aluminum: 28 - 200 Gallons Rectangular: 12", 14", 18" Cylindrical: 23"
Exhaust ATD Configurations Location	Horizontal / Vertical RH Under Cab / RH Back of Cab	Horizontal RH Under Cab / RH Back of Cab	Horizontal RH Under Cab	Horizontal / Vertical RH Under Cab / LH / RH Back of Cab
Exhaust Stack Configurations	Vertical: Single Horizontal: Single	Vertical: Single Horizontal: Single	Vertical: Single Horizontal: Single	Vertical: Single Horizontal: Single
DEF Tank Sizes	5, 7, 15 Gallons	8 Gallons	4.7 Gallons	6, 13, 23 Gallons
*Includes reinforcements				

Key Advantages

- The MV Series offers frame reinforcements not available on the Hino 268A.
- The frame rails on the MV Series offer upfitters the flexibility to attach almost any body that's required by the application.



CHASSIS | Axles and Maneuverability



A BENCHMARK IN SAFETY AND PRODUCTIVITY

You need optimal maneuverability to navigate through tight city streets or busy job sites. The MV™ Series is engineered to provide an inside wheel cut of up to 50°.

- ▶ The MV Series offers a wide range of axles and suspensions to fulfill the needs of applications ranging from delivery vans to medium duty dump applications
- ▶ Optimized steering geometry allows both wheels to produce nearly identical wheel turn angles for superior performance regardless of the turning direction

SUPERIOR RIDE AND HANDLING

- ▶ The MV Series has been designed and engineered to provide the industry's best ride and handling with less wander and an automotive-like on-center feel

BENDIX® WINGMAN®

- ▶ Bendix Wingman Advanced and Bendix Wingman Fusion collision mitigation systems are both available on the MV Series. Bendix Wingman Advanced uses radar to help detect and mitigate forward collisions. Bendix Wingman Fusion adds a camera to integrate Adaptive Cruise Control, Lane Departure Warning, Over-Speed Alert and Stationary Vehicle Braking.



Chassis

CHASSIS | Axles and Maneuverability | Key Numbers



CHASSIS
axles and maneuverability



Series	MV Series		Ford F-750		Hino 268A		Freightliner M2 106	
Axle Configurations Set-Forward Set-Back	Not Available 40"		Not Available 40.4"		Not Available 40.6"		Not Available 41"	
Front Axles Capacities Front Drive Axles - Capacities	Dana Spicer, Meritor 8,000 - 14,600 lbs. Not Available		Dana Spicer 8,500 - 14,000 lbs. Not Available		Meritor 8,000 - 14,000 lbs. Not Available		Detroit, Meritor 6,000 - 20,000 lbs. 10,000 - 18,000 lbs.	
Front Suspension Spring Type Capacities	Taper-leaf 8,000 - 14,600 lbs.		Taper-leaf 8,500 - 14,000 lbs.		Taper-leaf 8,000 - 14,000 lbs.		Taper-leaf / Flat-leaf 6,000 - 20,000 lbs.	
Standard Steering Gear	TRW TAS-40		TRW THP-60		TRW THP-60		TRW TAS-64	
Inside Wheel Cut	LH 50°	RH 51°	LH 49°	RH 49°	LH 50°	RH 49°	LH 50°	RH 50°
211" WB, Measured Axle Track, LH	27.8'		28.4'		27.9'		27.9'	
Rear Axles Single Tandem	Dana Spicer, Meritor 13,500 - 30,000 lbs. 34,000 - 40,000 lbs.		Dana Spicer 13,500 - 26,000 lbs. Not Available		Meritor 17,500 - 23,000 lbs. Not Available		Detroit, Dana Spicer, Meritor 17,500 - 31,000 lbs. 40,000 - 46,000 lbs.	
Rear Suspensions Spring Air Capacities	International® Vari-rate/Multi-leaf International Ride Optimized Suspension (IROS), Hendrickson HAS 13,500 - 40,000 lbs.		Multi-leaf Hendrickson HAS 15,500 - 31,000 lbs.		Semi-elliptical leaf, Hendrickson Comfort Air 19,000 - 23,000 lbs.		Multi-leaf, Flat-leaf, TufTrac, Hendrickson RT, HAULMAAX AirLiner, Hendrickson PRIMAAX 12,500 - 46,000 lbs.	

Key Advantages

- The MV Series with a 211" wheelbase provides turn angles of at least 50 degrees for both wheels resulting in a turning radius of just over 27.8' – better than all three competitors.
- Unlike the Ford and Hino, the MV Series offers tandem rear axles with capacities up to 40,000 lbs. for heavier applications.



INDUSTRY STANDARD ELECTRICAL SYSTEM

The MV™ Series electrical system features all-new harnessing and a new power distribution module that's located inside the cab and away from the elements for outstanding reliability. Industry standard J1939 system architecture also ensures routine maintenance will remain predictable and diagnostics will be efficient.

FACTORY INSTALLED UPFITTER SWITCHES

- ▶ Up to 30 fully customizable, user-replaceable switches are available for any application
- ▶ Warning lights can be any of seven colors
- ▶ Common switch pack for wiring simplicity
- ▶ Any switch can be relocated by the customer without wiring changes

NEW, REDESIGNED ELECTRICAL PANEL

- ▶ The MV Series electrical panel is located inside the cab, under the passenger side dash and is easily accessed without tools.
- ▶ The electrical panel housing features a specially-designed recessed perimeter to protect from spills.



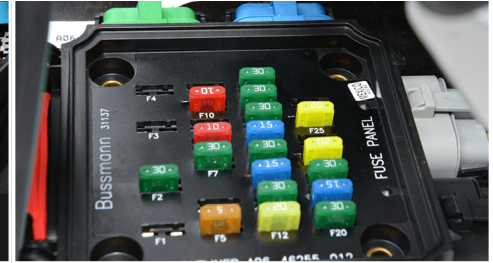
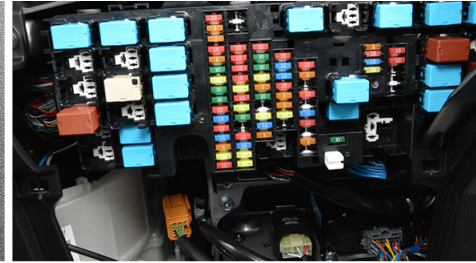


CHASSIS | Electrical | Key Numbers



Chassis

CHASSIS
electrical



Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Panel Locations Access	In cab, passenger side dash-top No tools required	In cab, behind passenger side kick panel No tools required	In cab, passenger side dash No tools required	Under hood No tools required
Batteries Amperage	2 or 3 Batteries 1,300 - 3,450 CCA	1, 2 or 3 Batteries 900 - 2,700 CCA	2 or 3 Batteries 1,200 - 1,850 CCA	2, 3 or 4 Batteries 1,850 - 4,400 CCA
Battery Box Material Cover Location	Steel, Aluminum, Plastic, Polished Aluminum, Fiberglass LH / RH Under Cab, LH Back of Cab	Steel Steel RH Side Under Cab	Steel Plastic LH Side Under cab	Steel Plastic, Aluminum, Diamond Plate LH Side Under Cab, Back of Cab
Alternators Amperage	Delco-Remy, Leece-Neville 160 - 325	Nippon Denso 175 - 357*	Delco-Remy 130 - 200	Delco-Remy, Leece-Neville 160 - 320
Jump Start Provision	Inside Battery Box, Remote outside battery box	Remote outside battery box	Provision in block heater receptacle bracket (customer install)	LH Back of Cab, Frame at starter
Circuit Protection Optional	Solid-State and Fuses Manual Reset Circuit Breakers	Solid-State and Fuses	Solid-State and Fuses	Solid-State and Fuses Spare Fuse Kit
Upfitter Auxiliary Switches	Up to 30 Switches	4 Switches	Up to 5 Switches	Up to 10 Switches
Body Builder Wiring Access	Back of cab, End of frame	Back of cab, End of frame	Back of cab, End of frame	Back of cab, End of frame

*Dual Alternator total amperage

Key Advantages

- The MV Series features an in-cab electrical panel protected from the weather and easily accessed without tools.
- The MV Series offers optional circuit breakers not available on the competitors.
- The MV Series offers up to 30 Factory-installed switches with custom labels that are optimally positioned to use with integrated equipment, making upfitting simple and quick.
- A new power distribution module that's located inside the cab and away from the elements for outstanding reliability.



Its Only Logical



Inside Advantage



The Diamond Logic® electrical system is considered the most advanced in the industry—and for good reason. Diamond Logic streamlines chassis and body equipment integration and allows customers to program automated tasks. This means more consistent performance and increased protection for both equipment and crew.

1 Body Controller

- ▶ New microprocessor is 6 times faster
- ▶ 30 more input and output pins
- ▶ Three more J1939 data links for a total of five
- ▶ Internal clock for programming timed features like auto-start

2 Switch Packs

- ▶ All switches are controlled via 6 wires
- ▶ Blinking backlights provide equipment status
- ▶ Switches can be moved without moving wiring
- ▶ Up to seven colors of lights can be used

3 PTO Power Take Off

- ▶ Engagement and disengagement based on chassis and body conditions (engine speed, road speed, outrigger deployed before boom can raise, park brake set, transmission in neutral, etc.)
- ▶ All data links can be used as an interlock
- ▶ Engine speed can be controlled (in most cases) while using the PTO with no additional wiring needed

4 Remote Power Modules

- ▶ All 12-volt outputs are automatically fused (auto resettable) with solid state technology

5 Outriggers

- ▶ Diamond Logic can control deployment
- ▶ System can sense when they are not properly stowed (not letting transmission come out of neutral) and will illuminate an indicator light in the switch packs

6 Differential Lock

- ▶ Diamond Logic can control when the axle differential locks and unlocks depending on road speed, protecting the driveline from damage due to excessive speeds in a locked position

7 Work Light

- ▶ Diamond Logic can automatically turn on or off the light based on chassis functions (for example: rear-facing light could be programmed to turn on any time the transmission is in reverse, adding additional lighting)
- ▶ Automatically shut off the light based on a timer (1-min to several hours) preventing dead batteries

8 Boom Hydraulics

- ▶ Diamond Logic can prevent the transmission from shifting into drive and can illuminate an indicator light until the boom is stowed correctly

9 Pre-Trip Light Inspections

- ▶ Driver can press a button and all the exterior lights will blink in sequence, allowing daily DOT light inspection with just one person

10 Solenoid Air Packs

- ▶ Air can be turned on with a switch in the dash or controlled based on chassis and/or body functions (for example: tailgate air lock in dump applications can be programmed to not unlock unless the truck is driving below a certain speed)



POWERTRAIN/EFFICIENCY



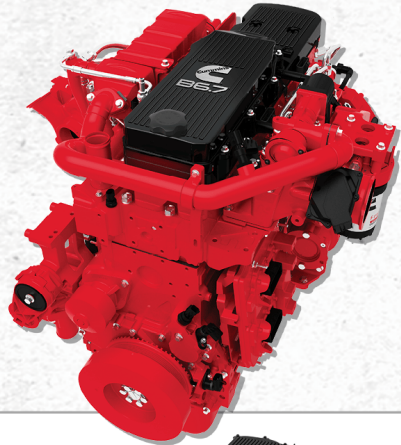
Inside Advantage

GENERATIONS OF EXPERIENCE.

With 30+ years of market leading production, an unbeatable legacy means a deep understanding of customers' duty cycles and needs. No matter the application, with the new B6.7 and L9 engines you get the lowest cost of operation and maximum uptime. The B6.7 and L9 have a long history of innovation and reliability, making them tough enough to go the extra mile no matter what the job is.

The B6.7 and the L9 both share many components which is why Cummins engines are the leaders in innovation

- Variable Geometry Turbo Charger (VGT) design improves responsiveness while an upgraded bearing system increases overall robustness. This design also increases fuel economy and produces exceptional braking horsepower
- Single Module After-treatment System combines the functions of Selective Catalytic Reduction (SCR) and a Diesel Particulate Filter (DPF) in a single flow-through design
- The UL2 Urea Dosing System eliminates the need for engine coolant lines to the doser, providing more efficient atomization to minimize the risk of urea deposits and reduce the number of regenerations



Cummins® B6.7 (200 - 325* HP)

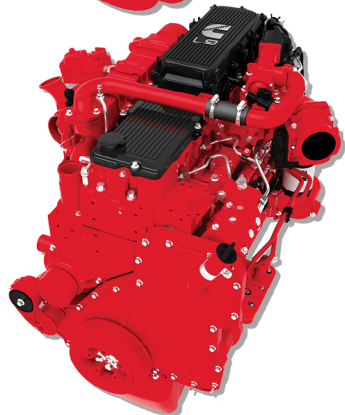
Every aspect of the B6.7 has been engineered for reliability, durability and fuel efficiency to deliver the lowest cost of ownership with maximum uptime. An industry-leading service network from International and Cummins, plus a three-year, unlimited mileage engine warranty, and it's easy to see why the B6.7 is the best-selling engine in the medium-duty truck market.

- High Pressure Common Rail (HPCR) Fuel System delivers superior performance even in lower engine RPM ranges, enabling multiple injection events per cycle, for improved fuel efficiency with quieter, smoother operation

EFFICIENCY RATINGS	
Horsepower	200 - 260 hp
Torque	520 - 660 lb.-ft.

PERFORMANCE RATINGS	
Horsepower	280 - 325 hp
Torque	660 - 750 lb.-ft.

FIRE / EMERGENCY RATINGS	
Horsepower	340 - 360 hp
Torque	700 - 800 lb.-ft.



Cummins® L9 (260 - 350 HP)

The Cummins L9 has established a solid reputation as a dependable engine for medium duty applications. Its XPI Fuel System features multiple injection events per cycle for smoother, quieter operation. This, combined with its proprietary Variable Geometry Turbocharger (VGT), means the L9 has the highest power density of any engine in its class.

- The XPI Common Rail Fuel System delivers superior performance even in lower engine rpm ranges and enables multiple injection events per cycle, for improved fuel efficiency with quieter, smoother operation.

EFFICIENCY RATINGS	
Horsepower	260 - 350 hp
Torque	720 - 1,000 lb.-ft.

*Higher ratings available for Fire and Emergency applications

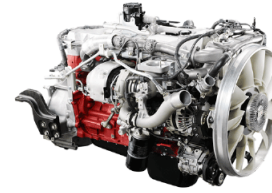
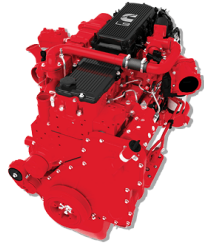


POWERTRAIN | Engine Specifications | Key Numbers



Powertrain

POWERTRAIN
engine specifications



Manufacturer	Cummins		Ford		Hino	Detroit	
Engine	B6.7L	L9	Power Stroke®6.7	6.8L Triton® gas V10	JO8E	DD5	DD8
Displacement	6.7L	8.9L	6.7L	6.8L	8L	5.1L	7.7L
Engine Block	Gray Iron		Compact Graphite	Cast Iron	Parent Bore	Rib Cast Iron	
Fuel System	High Pressure Common Rail (HPCR)	XPI Common Rail	High Pressure Common Rail	Multi-Port Injection	High Pressure Common Rail	Advanced Common Rail	
Camshaft	SOHC		DOHC	SOHC	SOHC	SOHC	
Turbocharger	Variable Geometry (VGT)		Asymmetric	N/A	Variable Geometry (VGT)	Variable Geometry (VGT)	Fixed Geometry Dual-Stage
Horsepower	200 - 325**	260 - 350	270 - 330	320	220 - 260	210 - 230	260 - 350
Torque	520 - 750	720 - 1000	675 - 725	460	520 - 660	575 - 660	660 - 1060
Dry Weight	1,150 lbs.	1,695 lbs.	2,487 lbs.	N/A	1,458 lbs.	1,188 lbs.	1,437 lbs.
Life (B50/B10)	350,000 (B50)	Not Published	500,000 (B50)	Not Published	500,000 (B50)	400,000 (B10)	
Warranty	3 Years / Unlimited* Miles	2 Years / Unlimited Miles	2 Years / Unlimited Miles	5 years / 100,000 Miles	2 Years / Unlimited Miles	3 Years / 250,000 Miles	

*On Highway applications only, 2 years / unlimited for all other applications ** Higher ratings available for Fire and Emergency applications

Maintenance Intervals ²	Cummins		Ford		Hino	Detroit	
Engine	B6.7	L9	Power Stroke® 6.7	6.8L Triton® gas V10	JO8-EV	DD5	DD8
Oil and Filter (miles)	15,000	15,000	15,000	10,000	15,000	35,000 - 50,000 ¹	35,000 - 50,000 ¹
Fuel Filter (miles)	15,000	15,000	22,000	Not Available	20,000	35,000 - 50,000 ¹	35,000 - 50,000 ¹
Coolant Filter (miles)	Not Published	15,000	Not Published	Not Published	Not Published	Not Published	Not Published
Valve Lash (miles)	150,000	150,000	Not Published	Not Published	50,000	70,000 - 100,000 ¹	90,000 - 120,000 ¹
DPF Cleaning (miles)	200,000	200,000	120,000	Not Published	No Interval required	Dash light will illuminate	150,000
DEF Pump Filter (miles)	200,000	200,000	Not Published	Not Published	150,000	300,000	500,000

¹ Depending on duty cycle
² Consult your owner's manual

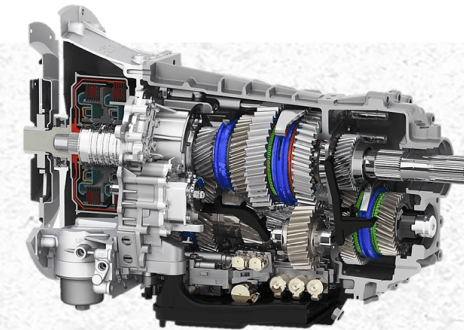
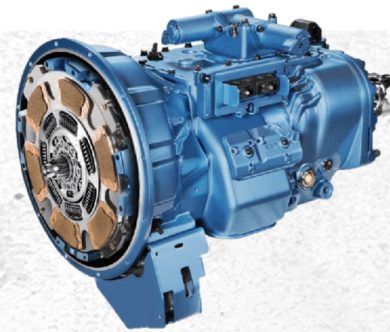
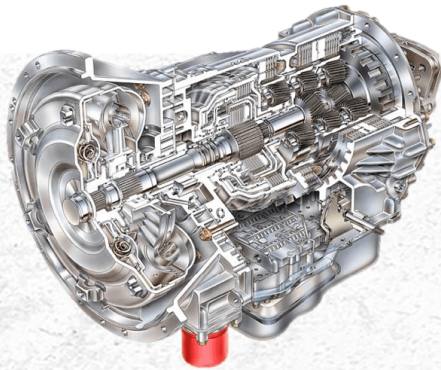


POWERTRAIN | Automatic Advantages



The MV™ Series offers the two biggest names in transmissions; Eaton® and Allison. With decades of experience between them, you can be sure that you are getting the best transmissions the industry offers. MV Series offers manual, automated and automatic transmissions for virtually unlimited applications in the medium duty market. The most popular choices for medium duty are the fully automated transmissions and MV Series offer the best. These transmissions pair perfectly with your application needs.

- ▶ Transmission choices are available to accommodate a range of driver experience levels
- ▶ Automatic options can reduce avoidable repairs, helping to keep costs down



Allison Automatic with FuelSense® 2.0.

- ▶ The Allison FuelSense 2.0 with DynActive™ Shifting features a patented torque converter that provides infinitely variable shift points based on the vehicle configuration and operating conditions. FuelSense 2.0 can improve fuel economy up to 6% compared to previous generation FuelSense packages.

Eaton® Fuller Transmission

- ▶ The Eaton Fuller Advantage® automated transmission is available with the Cummins® L9 engine. It's rated up to 350 HP and 110,000 lbs. GCW, and features a precision lubrication system with cooler-less design for reduced weight and cost-efficient performance.

Eaton® Procision™ Automatic Transmission

- ▶ This 7-speed transmission is engineered for medium duty applications up to 300 HP and 35,000 lbs. GCW. Its dual-clutch design combines the gear efficiency of a manual with the smooth shifting of an automatic transmission, delivering steady torque to the wheels under all shift conditions.

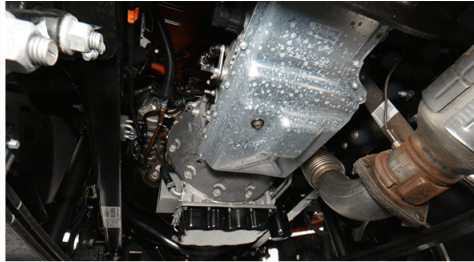


POWERTRAIN | Transmissions And Equipment | Key Numbers



Powertrain

POWERTRAIN
transmissions
and equipment



Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Manual Transmissions	Eaton Fuller: 6, 10-speed	Not Available	Eaton Fuller: 6-speed	Eaton Fuller: 6, 7, 9, 10, 11-speed Mercedes: 6 -speed
Automated Transmissions	Eaton Fuller: Advantage: 10-speed	Not Available	Not Available	Mercedes: MB Series: 6-speed
Automatic Transmissions Speeds	Allison: 1000, 2000, 3000 (HS, EVS, RDS, MH) 5, 6-speed Eaton: Procision™ 7-speed	Ford: TorqueShift® 6-Speed	Allison: 2000, 3000 (HS, RDS) 6-speed	Allison: 1000, 2000, 3000 (HS, RDS, TRV, EVS, MH) 4, 5, 6-speed
Shifter Options	Column Mounted Stalk Shifter* T-Handle Dash Mounted Shifter	Column Mounted Shifter	T-Handle-Console Mounted Shifter	SmartShift Column Shifter Push Button Dash Mounted Shifter T-Handle- Dash / Console Mounted Shifter
PTO Locations Model / Size / Location	Eaton Fuller: FR / FRO Manual: 6-Bolt, LH / RH Side / Rear Mount Advantage Series: 6, 8-Bolt, LH bottom / RH Side / Rear Mount Procision™: 6-Bolt, LH / RH Side / Rear Mount Allison: 1000, 2000, 3000: 6-Bolt, LH / RH Side Mount / Provision for Top(3000 Series) Mount	Ford: TorqueShift®: 6-Bolt, LH Side Mount	Eaton Fuller: FR / FRO Manual: 6-Bolt, LH / RH Side / Rear Mount Allison: 1000, 2000, 3000: 6-Bolt, LH / RH Side Mount	Eaton Fuller: FR / FRO / RT / RTO Manual: 6, 8-Bolt, LH / RH Side / Rear / LH Bottom Mount Allison: 1000, 2000, 3000: 6-Bolt, LH / RH Side Mount Mercedes: MBT: 6-Bolt, RH Bottom Mount
Clutches	Eaton Fuller: Solo Advantage®- Kwik- Adjust, Maintenance Free, Adjustment Free	Not Available	Eaton Fuller: Solo Advantage®	Eaton Fuller: Solo Advantage®- Maintenance Free, Adjustment Free ZF-Sachs: Extended, Organic

*not available with cable shift transmissions

Key Advantages

- The innovative stalk shifter is mounted on the steering column, allowing you to easily reach and smoothly operate shifting and engine braking while keeping your eyes on the road and your hands on the wheel.
- The Procision's™ dual-clutch technology combines the gear efficiency of a manual with the smooth shifting of an automatic resulting in smooth and continuous delivery of torque to the wheels under all shift conditions.
- Eaton Fuller Advantage® Series Precision Lubrication Technology reduces oil churning losses and eliminates the need for a transmission cooler.

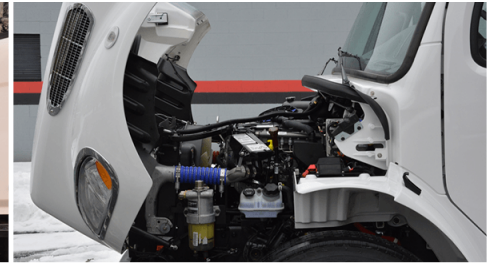
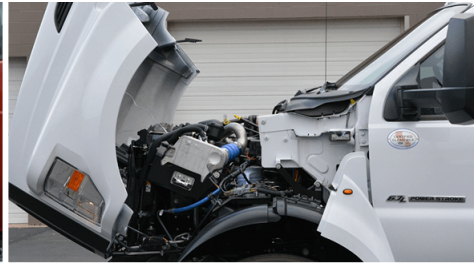


POWERTRAIN | Routine Maintenance | Key Numbers



Powertrain

POWERTRAIN
routine
maintenance



Series	MV Series	Ford F-750	Hino 268A	Freightliner M2 106
Driver Side Maintenance Points	Oil check, Oil Power Steering, fluid Transmission fluid, Coolant reservoir, Washer fluid, Power Steering reservoir	Oil fill, Power Steering reservoir	Oil check, Power Steering fluid	Oil check, Power Steering fluid, Transmission fluid
Passenger Side Maintenance Points	Air Cleaner, Filterminder	Oil Check, Transmission fluid, Coolant reservoir, Washer fluid, Air cleaner, Filterminder	Transmission fluid, Air cleaner, Filterminder	Coolant reservoir, Washer fluid, Air Cleaner, Filterminder
Translucent Containers (levels-at-a-glance)	Coolant reservoir, Washer fluid, Power Steering reservoir	Coolant reservoir, Washer fluid, Power Steering reservoir	Coolant reservoir, Washer fluid, Power Steering reservoir	Power Steering reservoir Washer fluid
ISO Identification	Oil check , Oil fill, Coolant reservoir, Washer fluid	Coolant reservoir, Washer fluid	Washer fluid	Oil fill, Washer fluid
Tethered Caps	Washer fluid	Washer fluid	Washer fluid	Coolant reservoir, Washer fluid
Fluid Filter Mounts	All bottom load	Oil Bottom load, Fuel top load	All bottom load	All bottom load
Hood Opening Effort	11.4 lbs.	68.3 lbs.	22 lbs.	32.3 lbs.
Hood Latch Design	Fender-back rubber straps	Fender-back rubber straps	Fender-back rubber straps	Fender-back rubber straps
Hood Tilt Range	53°	60°	76°	60°

Key Advantages

- The MV Series features a new under-hood Power Distribution Module which simplifies electrical routing for a clean, well-organized system and streamlined troubleshooting.
- The MV Series hood features a torsion bar assist and requires less than 12 pounds of effort to open, over 10 pounds less than the closest competitor.
- The MV Series offers an optional hood hatch not available on the competitors to access key maintenance points without opening the hood.
- The MV Series has more crucial maintenance points on the driver side for easy access.



SUMMARY | Designed to Endure, Engineered To Perform



CAB

- ▶ An all new interior offers an improved ergonomic design, including better elbow room, hip room and leg room.
- ▶ New cab door design eliminates vent window seam and lowers the glass improving driver's visibility
- ▶ Improved door sealing and floor insulation for a quieter cab
- ▶ New pedestal cab mirrors reduce wind noise, reduce drag and improve driver's visibility
- ▶ Improved cab mirror serviceability with fewer mounting bolts, wiring connector located at the base and improved glass replacement

CAB INTERIOR

- ▶ All-new dash improves ergonomics and storage while providing an automotive-level fit and finish
- ▶ Standard premium gauge cluster offers a class-leading driver interface with virtual gauges, improved connectivity and state-of-the-art graphics
- ▶ All-new HVAC has been completely redesigned for improved reliability and provides max defrost feature for best-in-class defrost performance
- ▶ New, stronger doors open wider and include redesigned side glass for improved line of sight
- ▶ Up to 30 fully customizable, user-replaceable switches are available for any application

CHASSIS

- ▶ Improved harnessing and industry standard electrical system architecture for improved reliability and maximum uptime
- ▶ In-cab power distribution module is protected from the elements
- ▶ Single canister After-Treatment Device is lighter and 70% smaller than the system it replaces

POWERTRAIN

- ▶ Industry leading Cummins® engines provide exceptional power and reliability
- ▶ New steering column-mounted stalk shifter integrates transmission functionality and available engine braking
- ▶ Wide range of manual, automated and automatic transmissions to address all your needs across town and at the job site

UPFITTING

- ▶ latest International® Truck Diamond Logic® electrical system, widely considered the most advanced in the industry
- ▶ Ability to write custom logic for your application through Diamond Logic Builder

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