

## **Alabama County Joint Bidding Program**

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Heavy Duty Dump Truck Chassis-  
Option A

Nextran Truck Centers

**BID SUBMITTAL FORM**  
**Alabama County Joint Bidding Program**  
**BID ITEM – HEAVY DUTY DUMP TRUCK CHASSIS OPTION A**

Company Name: Nextran Truck Centers

Address: 1801 Fulton Road  
Fultondale, AL 35068

Bid Submitted by: Bruce Graham  
(Name of company representative)

Title: Sales Manager e-mail address: bgraham@nextranusa.com

Phone: 205-841-4450 Fax: 205-841-4430

By submitting this bid, we agree:

Initials

That the equipment model number identified below meets the bid specs for this bid item

BG

That the bid price will be honored for all counties for the period from **Jan. 1, 2024** to **Dec. 31, 2024**.

BG

That the equipment will be delivered at the bid price to all counties participating in the joint bid program

BG

That the company representative listed above will be the contact person for purchasing this bid item under the joint bid program

BG

That the bid is accompanied by a current catalog or model specification document for the model number identified below

BG

That the bid is accompanied by a copy of the manufacturer's standard warranty as required in the bid specifications

BG

That the bid includes the e-verify documentation required by Alabama law

BG

That, if awarded the bid, a performance bond will be provided upon request

BG


That an option sheet with individual pricing is attached

BG

Total Bid Price including options: \$ 186,437.00

Equipment Model #: GR64F

Description: Mack Trucks Granite Forward Axle

Signature of company representative submitting bid:  Bruce Graham

Title: Sales Manager

Only (100) units are available on this bid to ACCA Members and will be sold either on a first-come, first-serve basis, or however the ACCA and its members deem appropriate. Neither Mack Trucks and/or Nextran Truck Centers will be obligated to deliver more than (100) units if we are awarded this contract. By awarding this contract to Nextran Truck Centers, the ACCA and all its members acknowledge and accept this limitation to our bid. This quantity limitation shall supersede any other obligation under this contract relative to quantities.



## OPTION COST SHEET FOR HEAVY DUTY DUMP TRUCK CHASSIS OPT A

### Option

### Option Price


Furnish, as an alternate transmission from the base bid, an Allison 4500-RDS-6 six speed automatic over drive Rugged Duty Series Gen 4 with transmission cooler, external oil cooler, internal filter, oil level sensor, temperature gauge and aluminum bell housing. Allison transmission to be factory filled with *TRANSYND* synthetic lubricant. Allison transmission low gear ratio = 4.70 and transmission high gear ratio = .67 over drive.

\$ 9,500.00

**NOTE:** Award will be made on the basis of the total cost of the machine with all options included. However, a county may, at its discretion, deduct one or more of the above-referenced options from the machine, and in such event, the cost of the option as stated on the bid shall be deducted from the total cost of the machine. There shall be no other deductions and no additions made to the machine by the purchasing county or by the vendor.

Equipment Model #: GR64F

Description: Mack Trucks Granite Axle Forward

Signature of company representative submitting bid: 

Title: Sales Manager

# **BID SPECIFICATIONS FOR HEAVY DUTY DUMP TRUCK CHASSIS - OPTION A**

## **GENERAL**

These specifications shall be construed as the minimum acceptable standards for a heavy-duty dump truck chassis. Should the manufacturer's current published data or specifications exceed these standards, the manufacturer's standards shall be considered minimum and shall be furnished. All integral parts not specifically mentioned in the scope of these specifications that are necessary to provide a complete working unit shall be furnished. Additionally, the machine offered for bid shall include all standard manufacturers' equipment.

The use of specific names or numbers in the specifications is not intended to restrict the bidder or any seller or manufacturer, but is intended solely for the purpose of indicating the type, size, and quality of equipment considered best adapted to the uses of counties participating in this joint bid.

Note all units offered for bid must be of manufacturer's current production model and must be fully compliant with current EPA Requirements . Chassis should be equipped with the appropriate diesel particulate filter and SCR after treatment system.

## **BID SUBMITTAL FORM**

Each bidder must submit his or her bid on the Bid Submittal Form included in the invitation to bid package. All written warranties to be submitted shall be attached to the Bid Submittal Form.

## **BID PRICE**

The price bid shall include all destination charges, delivery charges, title fees, rebates and all other applicable costs and refunds.

## **REPLACEMENT PARTS AVAILABILITY**

Parts must be available for 5 years or 500,000 miles of use for the piece of equipment bid.

## **WARRANTY**

Bidders shall submit a copy of the manufacturer's standard warranty along with a complete explanation of the warranty with their bid. Warranty must be transferable. Warranty must include the following minimum coverage:

Basic Vehicle: 1 Year or 100,000 miles      **Standard Warranty Certificate and Page 9**

Diesel Engine: 2 year or 250,000 miles. However, counties will have the option to purchase additional coverage (an extended warranty) if negotiated between the purchasing county and successful bidder within the first 9 months of truck purchase.      **Standard Engine Certificate and Page 9**

Transmission: 3 Year or 300,000 miles      **Page 10 and Warranty Certificate**

Rear Carriers: 3 Year or 300,000 miles      **60 months/500,000 miles. Warranty Certificate and Page 9**



Yes ☒ No ☐

Page # 9

or

Attachment Warranty  
Certificates

### **ASSEMBLY AND DELIVERY**

The truck chassis will be purchased for use with a 16' dump body and optional body equipment that is to be bid separate and apart from the truck chassis. The dump body company will be responsible for assembly and installation of the dump body and related optional equipment, including the cost of the same. The selling truck chassis dealer will be responsible for delivery of the chassis to the dump Body Company for installation and for delivery of the complete dump truck unit to the county following installation and assembly of the dump body and related options onto the truck chassis. Freight to the Dump Body Company will be included in the truck bidder's proposal. Dump body installation and assembly costs will be included in the dump body bidder's proposal. Dump Body Bidder is responsible for Freight back to the Truck Bidder after Dump Body installation.

### **DOT INSPECTION AND SAFETY EQUIPMENT** Page 9

Prior to delivery each unit shall be DOT inspected and include the appropriate documentation and decal. In addition each unit shall be equipped with the required fire extinguisher and reflective triangle kit.

Page 5

Page 6

### **ENGINE AND RELATED COMPONENTS**

Shall be an in line 6 design 13 liter, overhead cam, turbo charged diesel engine capable of developing 455HP with a torque rating of 1650FT# (Standard Transmission) or 1750 FT# with optional Automatic Transmission.

Yes ☒ No ☐

Page # 2 and Engine Spec  
Sheet

Engine shall have full wet replaceable cylinder liners, fuel injection system to be electronic common rail injection.

Yes ☒ No ☐

Page # Engine Spec Sheet

Restriction in Co Pilot Screen

Air intake system shall have a single dry element with a restriction indicator.

Yes ☒ No ☐

Page # 3 and Co Pilot Screen

Turbo air shall flow through a chassis mounted charge air cooler, engine cooling system to have a minimum 1,000 square inches of frontal area, aluminum core radiator with silicone hoses throughout and coolant protection to -34 degrees F.

Page 3

Page 3

Yes ☒ No ☐

Page # 3 and Base Vehicle  
Sheet (BSV)

Fan drive to be electronically modulated multi-speed viscous type with a poly V Belt with automatic tension control. Auto Tension in BSV

Yes ☒ No ☐

Page # 3 and BSV

Single vertical Exhaust, Cab Mounted for clear back of cab with bright finish heat shield and stack.

Yes ☒ No ☐

Page # 2

DPF element/SCR catalyst combined in a single unit mounted on passenger side frame rail under passenger door.

Yes ☒ No ☐  
Page # 2 and Clear Tech Sheet

Factory installed integral Engine Brake.

Yes ☒ No ☐  
Page # 3

Engine electronics to have:

Full diagnostic capability

Yes ☒ No ☐  
Page # Engine Spec Sheet

Road Speed limiting and Cruise control feature  
Factor Limits Default to 65mph and can be adjusted to customer preferences

Yes ☒ No ☐  
Page # 7

Shutdown capabilities for critical engine functions

Yes ☒ No ☐  
Page # 7

### **STARTING AND ELECTRICAL SYSTEM**

12-Volt system fuse/circuit breaker protected

Yes ☒ No ☐  
Page # BSV

12V gear reduction starter, 12V 160 Amp alternator (28si)

Yes ☒ No ☐  
Page # 3

(3) 12V maintenance free group 31 batteries with 650 cold cranking amps each, batteries to be mounted in a single steel box with polished aluminum cover.

Yes ☒ No ☐  
Page # 3

### **TRANSMISSION AND DRIVELINE**

A manual ten (10) speed Fuller RT-16989LL or equivalent over drive design with a minimum first gear ratio of 14.6 to1

Yes ☒ No ☐  
Page # 2

Transmission should have oil cooler with dash mounted temperature gauge, left and RH side PTO access gears with appropriate clearance

Yes ☒ No ☐  
Page # 3 and Manual Transmission Sheet



Eaton advantage easy pedal manually adjusting 15.5" two plate ceramic clutch 9 spring, 6 paddle design with AIR assist feature and remote lube fittings for clutch release bearing and both crosses mounted on LH side under cab or hood

Yes ☒ No ☐  
Page # 3

Main drivelines Spicer 1810HD or equivalent with coated splines/ inter axle 1810 with coated splines.

Yes ☒ No ☐  
Page # 3

### **CAB EXTERIOR**

Cab to be Class 8 design welded Galvanized steel cab shell for construction and vocational applications.

Yes ☒ No ☐  
Page # BSV

PG 6 Cab doors should also be of Galvanized steel and have high visibility windows with a Peep window in the passenger side. In additions both doors should have power window Controls and door locks. BSV

Yes ☒ No ☐  
Page # 6 and BSV

Cab mounting should be air suspended at rear on dual air bags mounted outside the frame rails.

Yes ☒ No ☐  
Page # BSV

Cab should feature:

Dual air horns in addition to the standard electric signal horn

Yes ☒ No ☐  
Page # 6

Chrome bullet style marker lights

Yes ☒ No ☐  
Page # 5

Bright finish heated West Coast mirrors with 8" convex mirrors mounted below the West Coast mirrors. Mirrors to be mounted on break away brackets to protect door skin.

Yes ☒ No ☐  
Page # 6

Stainless Steel Exterior sun visor

Yes ☒ No ☐  
Page # 6

Cab glass to be safety tinted

Yes ☒ No ☐  
Page # 6

Cab to have grab handles of both sides of cab

Yes ☒ No ☐  
Page # 6

Cab exterior and chassis to have all required DOT and ICC lighting (turn signal indicators, emergency flashers, rear stop, tail, turn and backup lighting.)

**Standard Required Equipment**

Yes ☒ No ☐  
Page # BSV

Hood is to be a full tilting fiberglass design with safety latch to include bright finished grill, bright finish air intakes, and bright finish full hood surround.

Yes ☒ No ☐  
Page # 6 and BSV

Cab and hood paint color to be selected from manufacturer's standard non-metallic paint chart.

Yes ☒ No ☐  
Page # 8

### **CAB INTERIOR**

Cab interior to include the following:

Storage tray on back wall of cab and in overhead console

Yes ☒ No ☐  
Page # 6 and Interior Brochure

Cab interior is to be PREMIUM level fully groomed with headliner, back wall and windshield pillar post and door panels covered

**This is now called "Preferred"**

Yes ☒ No ☐  
Page # 6 and Interior Brochure

Cab should have interior sun visors on both sides of cab.

Yes ☒ No ☐  
Page # BSV

Cab floor should be covered with black polyurethane mat.

Yes ☒ No ☐  
Page # 5

Dash features to include:

Brushed Nickel appearance

Yes ☒ No ☐  
Page # Interior Brochure

Center mount console with cup holders

Yes ☒ No ☐  
Page # Interior Brochure

Full adjusting tilt and telescopic steering column

Yes ☒ No ☐  
Page # Interior Brochure

Full instrumentation with all standard gauges and a secondary gauge package with: (Engine Oil Temp, Trans Oil Temp, Exhaust Pyrometer, Boost Pressure)

Yes ☒ No ☐  
Page # 5

Cab seats should be:



PREMIUM High Back air ride design with arm rest

Yes x No       
Page # 6

Passenger seat to be fixed design with arm rest

Yes x No       
Page # 6

Both seats to have fabric covering with required lap and shoulder belts.

Yes x No       
Page # 6

Factory installed integral air conditioning with R134A refrigerant and rotary type air conditioner compressor.

Yes x No       
Page # 5 and BSV

AM/FM/CD radio with clock, weather band and Blue Tooth capability, two- way radio power leads with mounting plate installed in overhead console with mirror mounted antenna LH side

Yes x No       
Page # 5

Two additional dash mounted power outlets to be furnished.

Yes x No       
Page # BSV

Windshield wipers to be two (2) speed electric with washer and intermittent feature.

Yes x No       
Page # 6

### **AIR BRAKES**

Brake system to be full dual antilock air design with heated air dryer.

Yes x No       
Page # 3

Air compressor should have 37.4 CFM capacity and increased air reservoir capacity for the local installation of a pusher style third axle.

Yes x No       
Page # 3

System to include an in cab control valve for rear service brakes.

Yes x No       
Page # 5

### **FRAME/BUMPER/FUEL TANKS**

Steel 120,000 PSI steel frame rails 11.81" x 4.13" x 0.44" with a section modulus of 26.3 and a RBM per rail of 3,160,000.

Yes x No       
Page # 4

222"-226" wheelbase with a 135"-139" cab to axle and a 197"-201" load platform.

Yes x No       
Page # 4

Heavy-duty back to back channel cross members with huck bolt fasteners throughout.

Yes ☒ No ☐  
Page # 4 and BSV

Front bumper Bright Finish steel swept back channel design with Bright Finish plate type radiator guard and right and left hand bumper recessed tow hooks.

Yes ☒ No ☐  
Page # 4

Fuel tank(s) to be aluminum with a minimum of 100-gallon capacity.

Yes ☒ No ☐  
Page # 4

### **FRONT AXLE**

20,000 Reverse Elliot design steel I beam axle with 20,000# multi leaf suspension and shock absorbers

Yes ☒ No ☐  
Page # 3 and Front Axle Sheet

20,000# integral power steering (Master/Slave assist design)

Yes ☒ No ☐  
Page # 3

Maximum of 34.5" spring centers

Yes ☒ No ☐  
Page # Front Axle Sheet

**SET FORWARD** front axle position only.

Model GR65FR  
"F" Designates Front Axle Forward  
Position

Yes ☒ No ☐  
Page # BSV

Unitized sealed (maintenance free) front wheel hubs.

Yes ☒ No ☐  
Page # Front Axle Sheet

Sealed tapered kingpins and bearings.

Yes ☒ No ☐  
Page # Front Axle Sheet

Meritor "S" cam design 16.5" x 6" Q+ brakes with:  
Outboard mounted drums and Dust Shields

Yes ☒ No ☐  
Page # 3

Automatic slack adjusters

Yes ☒ No ☐  
Page # 3

Front wheels to be Aluminum ten (10) hole bud style, hub piloted 22.5" x 12.25".

Yes ☒ No ☐  
Page # 7



Front tires to be 425/65R22.5 radials Bridgestone, Goodyear, Michelin, Firestone, Continental, General, or Yokohama.

Yes ☒ No ☐  
Page # 7

### **REAR AXLE**

46,000# capacity (4.19-4.30) ratio double reduction design tandem rear axle with top loaded carriers and 46,000# multi leaf rear suspension with Heavy Duty Anti Sway spring package. Rear spring insulators to be Urethane Heavy Duty shock insulators. transverse torque rod and bronze center bushings. Leaf over walking beam design with bronze center bushings will be accepted as a substitute, however no REYCO, AIR RIDE or T RIDE suspensions will be accepted.

Driver controlled inner wheel power divider and differential lock in both rear axles with manual air valve and warning light.

Yes ☒ No ☐  
Page # 4 and Rear Axle and Rear Axle Carrier Sheets

Meritor "S" cam design 16.5" x 7" Q+ brakes with:  
Outboard drums and dust shields

Yes ☒ No ☐  
Page # 4

Automatic slack adjusters

Yes ☒ No ☐  
Page # 4

Brake chambers shall be (4) 30/30 style chambers with raised chambers on rear axle.

Yes ☒ No ☐  
Page # 4

Rear wheels to be Alum Disc (10) hole bud style, hub piloted 24.5x 8.25 inside and out.

Yes ☒ No ☐  
Page # 4

Rear tires to be 14 ply minimum traction tread 11R24.5 Bridgestone, Michelin, Goodyear Continental, General, Firestone, or Yokohama

Yes ☒ No ☐  
Page # 7

Yes ☒ No ☐  
Page # 6

### **Options**

In addition to the above options related to the tri-axle or heavy duty dump truck chassis, the bid must also include the cost for each of the following options, itemized separately on the bid:

Allison 4500-RDS-6 six speed automatic over drive Rugged Duty Series Gen 4 with transmission cooler, external oil cooler, internal filter, oil level sensor, temperature gauge and aluminum bell housing. Allison transmission to be factory filled with TRANSYND synthetic lubricant. Allison transmission low gear ratio = 4.70 and transmission high gear ratio = .67 over drive.

Yes ☒ No ☐  
Page# See Allison Addendum at end of Specification

# CUSTOMER PROPOSAL

**MACK®**



**PREPARED FOR**

**DATE**

10/18/2023

**PREPARED BY**

NEXTRAN CORPORATION

1801 FULTON ROAD

FULTONDALE

AL 35068-1605

**QUOTE INFORMATION**

NEXT2023000356C614

GRANITE 64FR MACK SPEC

Qty: 1





# TECHNICAL SPECIFICATION

## GRANITE 64FR MACK SPEC



APPLICATION PACKAGES	DESCRIPTION
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, LH BATTERY BOX, 6.6 GALLON (25L) SLEEVED DEF, 22" SLEEVED LH FUEL TANK

CUSTOMER/VEHICLE INFO	DESCRIPTION
S CHASSIS (BASE MODEL)	GRANITE 64FR MACKSPEC
S ASSEMBLY PLANT	Made in Macungie, PA USA
CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
TYPE OF SERVICE	MUNICIPAL
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION
EMISSION WARRANTY CERTIFICATION	EPA (only) for Mack MP7 / MP8 Diesel
INTENDED REGISTRATION LOCATION	ALABAMA
S INITIAL REGISTRATION LOCATION	USA REGISTRATION
BRAND ORNAMENT	BULLDOG BRAND ORNAMENT, CHROME
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
VEHICLE USE & BODY/TRAILER TYPE	DUMP TRUCK
TRAILER TYPE	WITHOUT TRAILER TYPE
S GROSS COMBINATION WEIGHT (CA in PC29 only)	TRUCK ONLY - NO TRAILER TOWING PROVISIONS PROVIDED
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
TOPOGRAPHY	GRADES <6% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 16%
AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S OPERATING TERRAIN GRADE CONDITIONS	ON-OFF HIGHWAY, STARTING GRADES<18%
S LOADING SURFACE FACTOR	CONCRETE LOADING AND / OR UNLOADING SURFACE
VEHICLE VOCATION	CONSTRUCTION SERVICE

ENGINE/TRANSMISSIONS	DESCRIPTION
ENGINE PACKAGE, COMBUSTION	MP8-455C (LT) MACK 455HP @ 1500-1700 RPM (PEAK) 2100 RPM (GOV) 1650 LB-FT, US'21
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS VOCATIONAL APPLICATION
TRANSMISSION	FULLER RTO-16908LL (14.56/0.74)
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT

EXHAUST/EMISSIONS	DESCRIPTION
NOX LIMITS	CARB LEGACY / EPA (200MG/HP/HR), 50 State Idle Compliance
S IDLE EMISSION LABEL LOCATION (CA in PC29 only)	IDLE EMISSION LABEL LOCATION, LOWER LH CORNER OF DRIVER DOOR
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21
S CHASSIS MOUNTED EMISSIONS FINISH	W/O DEF COVER & PAINTED DPF COVER
S DIESEL EXHAUST FLUID TANK	6.6 GALLON (25 L) 22" LEFT SIDE FUEL TANK MTD
EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
EXHAUST STACK HEIGHT	9' 6" FROM GROUND
EXHAUST SYSTEM MATERIAL FINISH	SINGLE, BRIGHT FINISH HEAT SHIELD, STACK
EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2024



# TECHNICAL SPECIFICATION (cont.)



ENGINE EQUIPMENT		DESCRIPTION
S	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
S	AIR COMPRESSOR/DRYER	WABCO HEATED SS-HP AIR DRYER W/ WABCO 636 (37.4 CFM) AIR COMPRESSOR
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE
S	BATTERIES	(3) MACK 12V 760/2280 CCA THREADED STUD TYPE
S	BATTERY BOX - MOUNTING (x)	LH RAIL UNDER CAB FORWARD OF FUEL TANK (3 BATTERY MAX)
	BATTERY BOX COVER	POLISHED ALUMINUM
	STARTER MOTOR	12 VOLT MELCO STARTER (MITSUBISHI ELECTRIC)
	ENGINE BRAKE	MACK MP8 POWERLEASH
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)
S	OIL SUMP	OIL PAN
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
	GEAR SHIFTER	EATON/FULLER SHIFTER
	CLUTCH	EATON ADVANTAGE SOLO 9-SPRING,2PLATE 15.5" CERAMIC 6 PADDLES, SELF ADJUST
	CLUTCH ACTUATION SYSTEM & PEDAL PAD	AIR ASSIST CLUTCH CABLE SYSTEM WITH RUBBER PEDAL
	CLUTCH LUBE LINE	REMOTE LUBE FTGS:CLUTCH REL. BRG & BOTH CROSS-SHAFTS;MTD UNDER LH DOOR
	DRIVELINE - MAIN	SPICER 1810 HD W/COATED SPLINES (PROPS-L)
	DRIVELINE - INTERAXLE	SPICER 1810 W/COATED SPLINES
	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
	LUBRICANTS, TRANSMISSION	SYNTHETIC OIL IN TRANSMISSION
	TRANSMISSION OIL COOLER	TRANS OIL COOLER (INTEGRAL OIL PUMP)

FRONT AXLE EQUIPMENT		DESCRIPTION
	FRONT AXLE	20000# (9100 KG) MACK FXL20 STRAIGHT SPINDLE/UNITIZED BEARINGS
	SPRINGS - FRONT	MACK MULTILEAF 20000# (9100 KG) GROUND LOAD RATING, EQUAL BIAS
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 6" Q+
S	BRAKE, FRONT	CAST IRON
	FRONT AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR FRONT AXLE
	FRONT BRAKE ADJ. MANUFACTURE	MERITOR - AUTOMATIC
S	FRONT BRAKE CHAMBER MFG.	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX
S	HUB MATERIAL, FRONT	FERROUS
	FRONT AXLE LUBRICANT	FRONT AXLE LUBE, FAG NLGI2 GREASE
S	SHOCK ABSORBER, FRONT	DOUBLE ACTING TYPE
	STEERING	SHEPPARD SD110 + HD94

**PRICELIST DATE**  
20230717

**QUOTATION**  
NEXT2023000356C614

**DATE**  
10/18/2023

**PAGE**  
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# TECHNICAL SPECIFICATION *(cont.)*



REAR AXLE EQUIPMENT		DESCRIPTION
	REAR AXLE	46000# (20900kg) MACK S462R CAST DUCTILE IRON HOUSING
	DRIVE AXLE LUBRICANT	DRIVE AXLE LUBE, SHELL 80W90 MINERAL OIL
S	CARRIER - REAR AXLE	150/151 SERIES (Tandem Mack Rear Axles up to 150,000lb GCW)
	TRACTION DIFFERENTIAL	INTERWHEEL DIFFERENTIAL LOCK, ALL REAR AXLES
S	POWER DIVIDER LOCKOUT	INTERAXLE POWER DIVIDER LOCKOUT, W/BUZZER & LIGHT
	REAR AXLE RATIO	4.19 RATIO
	REAR SUSPENSION	SS46 MACK CAMELBACK MULTILEAF 46,000 lb, HEAVY DUTY
S	BOGIE SPREAD, REAR	50" AXLE SPACING (BOGIE WHEELBASE)
S	TRANSVERSE TORQUE RODS, R SUSP	TRANSVERSE TORQUE ROD (REAR AXLE ONLY)
S	AUX.SPRING BRAKE QTY	AUX SPRING BRAKE QTY, 4 CHAMBERS
S	BRAKES - REAR	MERITOR "S" CAM 16.5"x7" Q+ (Total for QTY = 2)
S	BRAKE, DRIVE, REAR	CAST IRON
	REAR BRAKE ADJ MANUFACTURE	MERITOR - AUTOMATIC (Total for QTY = 2)
	DRIVE AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR REAR AXLE
	REAR BRAKE CHAMBER SIZE	REAR SPRING BRAKE CHAMBERS 30/30 TYPE
	BRAKE ORI REAR-MOST DRIVE AXLE	DRUM BRAKE CHAMBER ORIENTATION: High Mount - Rear of Axle - Chamber Down
	PARKING BRAKE CHAMBER	HALDEX "LIFE SEAL PLUS" (3" STROKE) BRAKE CHAMBERS (Total for QTY = 2)
S	HUB MATERIAL, DRIVE	IRON PRESET REAR HUB W/INTEGRATED SPINDLE NUT
S	ANTILOCK BRAKE SYSTEM	BENDIX WITH TRACTION CONTROL 4S4M
S	BRAKE VALVE VERSION	BENDIX SWITCHES AND VALVES WHERE POSSIBLE

FRAME EQUIPMENT/FUEL TANKS		DESCRIPTION
	WHEELBASE	226"
	AF (OVERHANG)	63"
	FRAME RAILS & LINERS	11.1 x 105 x 300mm - (0.437" x 4.13" x 11.81"); RBM 3,160,000 LB-IN
S	FRONT FRAME EXT. (BOLTED ON)	6" BOLT ON FRAME EXTENSION
S	FRONT FRAME LENGTH	FRONT FRAME LENGTH 725MM
S	CROSSMEMBERS	BOC AND INTERMEDIATE(S) STEEL HD BACK-TO-BACK CHANNEL
S	REAR CROSSMEMBER OPTIONS	STEEL CLOSING REAR CROSSMEMBER
S	REAR FRAME TREATMENT	WITHOUT TAPERED FRAME RAIL ENDS
	FRONT BUMPER	EXTENDED-SWEPT BACK-STEEL BRIGHT FINISH
	CAB GUARD, FRONT	PLATE TYPE BRIGHT FINISH
S	CROSSMEMBER, BOGIE TYPE	BASIC SOLUTION TRUNNION BRACKET, STD HEIGHT
S	TOWING DEVICE, FRONT	HOOKS
S	FUEL LEVEL SENDER UNIT, LIQUID	BASIC FUEL LEVEL SENDER MOUNTED ON L.H TANK
	FUEL TANK - LH	111 GALLON (420 L) 22" ALUMINUM, SLEEVED D-SHAPED
S	FUEL TANK - RH	W/O RH FUEL TANK
S	FUEL HOSES, LIQUID	BRAIDED HOSE
S	FUEL FILLER NECK OPTIONS	WITHOUT FILLER NECK SCREEN, WITH NON-LOCKABLE FUEL TANK CAP
	FUEL LINE OPTIONS, LIQUID	W/O FUEL LINE OPTION
S	CAB INSTEP VERSION	STANDARD 2 STEP CAB ACCESS
	STEPS (BRIGHT) - FUEL TANK	BRIGHT FINISH ALUMINUM STEPS & STAINLESS STEEL BRIGHT FINISHED STRAPS

AIR/BRAKE		DESCRIPTION
S	AIRTANK DRAIN VALVE	MANUAL (PETCOCK) DRAIN VALVES ON ALL TANKS



# TECHNICAL SPECIFICATION *(cont.)*



AIR/BRAKE		DESCRIPTION
S	AIRTANK MATERIAL	STEEL AIR TANK PAINTED CHASSIS COLOR
S	RELOCATE AIR RESERVOIRS	W/O RELOCATED AIR TANKS
	AUXILLIARY AIRTANK	AUXILIARY AIR TANK CAPACITY FOR (1) EXTRA LIFT AXLE
S	PARKING BRAKE VALVE	SINGLE VALVE SYSTEM

ELECTRICAL		DESCRIPTION
S	ROOF & SIDE MARKER LIGHTS	(5) TRUCKLITE CHROME BULLET ROOF MARKER & STANDARD MARKER / DIRECTIONAL SIGNAL
S	HEADLAMP BULB TYPE	HEADLAMP BULB TYPE, LED, HEATED
S	DAYTIME RUNNING LIGHTS	W/OVERRIDE SWITCH, PARK BRAKE & ENGINE RUNNING ACTIVATED
S	DRL OVERRIDE SPEED THRESHOLD	DRL OVERRIDE SPEED THRESHOLD 8 KMPH (5 MPH)
S	TAIL LAMPS	INCANDESCENT TAIL LAMPS

TRAILER CONNECTIONS		DESCRIPTION
	TRAILER BRAKE VALVE	HAND CONTROL VALVE FOR TRAILER BRAKES W/ AIR CONNECTIONS OR SERVICE BRAKES W/O AIR CONNECTIONS

PTO		DESCRIPTION
	POWER TAKE OFF CONTROL	TRANSMISSION PTO SWITCH AND LIGHT WITH WIRING AND PIPING FOR LOCAL INSTALLATION
	BODY BUILDER INTERFACE	BODY LINK III W/O CAB PASS-THRU

SPECIALTY EQUIPMENT		DESCRIPTION
S	LANE SUPPORT SYSTEM (LSS)	WITHOUT LANE SUPPORT SYSTEM
S	DATA CAPTURE	WITHOUT DATA CAPTURE
S	CAMERA, SURVEILLANCE	WITHOUT CAMERA

CAB INTERIOR (A THRU G)		DESCRIPTION
S	SPEEDOMETER -&- GAUGES - UNIT(s) OF MEASURE	U.S. UNITS (PREDOMINANT)
	GUAGE - PACKAGE, SECONDARY	2ND GA PKG W/ENG OIL TEMP, TRANS OIL TEMP, PYRO, BOOST PRESS
	GAUGE OIL TEMP-REAR AXLE	REAR AXLE OIL TEMP GAUGE IN DID (DRIVER INFORMATION DISPLAY)
S	AIR CONDITIONING/HEATER	BLEND AIR HVAC W/"ATC" TEMP REGULATION
S	CUPHOLDER	CUPHOLDER
S	DOME LAMP, INTERIOR	(4) DOME LAMPS - DOOR AND SWITCH ACTIVATED
S	DASH INDICATOR - LAMP BODY OUT OF POS	DASH MTD, INDICATOR BODY/HOIST UP "BODYBUILDER LAMP"
	FIRE EXTINGUISHER	5LB (ABC RATED) MOUNTED BETWEEN DRIVER SEAT BASE AND DOOR VALVE AIMED REARWARD
	FLOOR COVERING	POLYURETHANE FLOOR MAT W/ REMOVABLE INSERTS

CAB INTERIOR (H THRU R)		DESCRIPTION
S	INSTMNT CLUSTER LANGUAGE	DEFAULT: ENGLISH, SPANISH, FRENCH
S	KEY TYPES FOR DOORS	ALL CHASSIS KEYED AT RANDOM
S	DOOR OPENING OPTIONS	W/O ELECTRONIC KEYLESS ENTRY
	FORWARD OVERHEAD STORAGE	(2) STORAGE COMPARTMENTS AND NET RETAINERS W/CENTER MOUNTING FOR CB PROVISIONS
S	AUDIO ACCOMMODATION	PREMIUM STEREO, AM/FM, MP3, WEATHER BAND, BLUETOOTH
S	ANTENNA - RADIO	RADIO ANTENNA, CAB MOUNTED BEHIND LH DOOR



# TECHNICAL SPECIFICATION *(cont.)*



CAB INTERIOR (H THRU R)		DESCRIPTION
	ANTENNA - CB RADIO	48" ANTENNA LEFT SIDE MIRROR MOUNTED
S	POWER LEADS	POWER LEADS (5-WAY BINDING POSTS FOR CB RADIO) IN HEADER CONSOLE
S	AUDIO SPEAKER LOCATION	SPEAKER LOCATION, IN DOORS, MIDDLE HIGH SIDE PANEL
S	COM.RADIO PREP KIT (CB)	CB RADIO MOUNTING REINFORCEMENT IN HEADER CONSOLE
S	REAR WALL STORAGE COMPARTMENT	STORAGE POUCH REAR
	REFLECTOR KIT	W/O SLEEPER BOX FURNISH KIT PARALLEL TO INSIDE SURFACE OF RIDER'S SEAT BASE

CAB INTERIOR (S THRU Z)		DESCRIPTION
	INTERIOR TRIM LEVELS	PREFERRED TRIM PACKAGE, STEEL GRAY (Package 12A)
	SEAT - DRIVER'S	MACK-AIR, HIGH BACK, 4 CHAMBER AIR LUMBAR, BOLSTER, EXTENSION
	SEAT COVERING - DRIVER'S	DRIVER'S SEAT - STEEL GREY VINYL / CLOTH MIX
S	SEAT - PASSENGER'S	MACK-FIXED, HIGH BACK
	SEAT COVERING - PASSENGER'S	PASSENGER'S SEAT - STEEL GREY VINYL / CLOTH MIX
	SEAT SUPPORT, DUST COVER	SEAT, DUST COVER FOR DRIVER'S SEAT
	SEAT ARMREST	INBOARD MOUNTED ARM REST, DRIVER'S & RIDER'S SEAT
	SEAT BELT(S)	LAP & SHOULDER HEIGHT ADJUSTMENT D-RING SEATBELT RH/LH ORANGE IN COLOR
S	SEAT BELT REMINDER	SEAT BELT REMINDER IN INSTRUMENT, WITH AUDIO
S	IGNITION TYPE	KEY TYPE
	STEERING WHEEL	2 SPOKE LEATHER GRIP, SATIN ALUMINUM SPOKES, WITH SWITCHES
	WINDSHIELD TYPE	ONE PIECE WINDSHIELD
	CAB GLASS	TINTED WINDSHIELD & SIDE WINDOWS & REAR WINDOW (IF EQUIPPED)
S	WASHER RESERVOIR POSITION	W/O WINDSHIELD WASHER OPTION
S	WINDSHIELD WIPERS	2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE

CAB EXTERIOR		DESCRIPTION
S	HOOD LATCH TYPE & FINISH	STRAP TYPE HOOD LATCH WITH BLACK FINISH
S	EXTERIOR TRIM FINISH AND PACKAGES	GRANITE BRIGHT AIR INTAKE
	GRILLE	BRIGHT FINISH BARS W/BRIGHT FINISH SURROUND GRILL MOUNTED
S	PASSENGER SIDE VISIBILITY OPTIONS	AUXILIARY WINDOW IN RH DOOR
	GRAB HANDLES	BF EXTERIOR CAB GRAB HANDLES, BLACK GRAB HANDLE RH INTERIOR WINDSHIELD POST
	HORN - AIR	(2) MACK RECTANGULAR SINGLE TRUMPET (ONE EACH SIDE OF CAB ROOF)
S	HORN - ELECTRICAL	DUAL TONE
	MIRRORS - EXTERIOR	FLAT MIRROR - POLISHED ALUMINUM FINSH, HEATED, W/O LAMPS
	MIRRORS - CONVEX TYPE CAB DOORS	BRIGHT FINISH, LH & RH, 8" DIAMETER HEATED CONVEX
	SUN VISOR - EXTERIOR	SUN VISOR, EXTERIOR, STAINLESS STEEL (UNPAINTED)

AERODYNAMIC DEVICES		DESCRIPTION
S	FRONT CHASSIS AERODYNAMIC PACKAGE	WITHOUT FRONT AERODYNAMIC FAIRINGS

WHEELS & TIRES		DESCRIPTION
	TIRES BRAND/TYPE - FRONT	425/65R22.5 L CONTINENTAL HAC 3 (22800 lbs) (Total for QTY = 2)
	WHEELS - FRONT	22.5x12.25 ACCURIDE 29374x POLISHED ALUMINUM, 5.88" OFFSET, 10 HAND HOLE (Total for QTY = 2)
	TIRES BRAND/TYPE - REAR	11R24.5 G BRIDGESTONE M760 ECOPIA (24020 lbs) (DRIVE ONLY) (Total for QTY = 8)

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# TECHNICAL SPECIFICATION *(cont.)*



WHEELS & TIRES		DESCRIPTION
	WHEELS - REAR	24.5x8.25 ACCURIDE ACCU-LITE 42362x POLISHED ALUMINUM, 6.59" OFFSET, 10 HAND HOLE (Total for QTY = 8)
S	TIRE INFLATION VALVE	STANDARD VALVE STEMS AND CAPS
S	FRONT HUB/WHEEL TRIM	WITHOUT FRONT HUB/WHEEL TRIM
S	REAR HUB/WHEEL TRIM	WITHOUT REAR HUB/WHEEL TRIM (Total for QTY = 2)

COMMUNICATION SYSTEMS		DESCRIPTION
	CO-PILOT - DISPLAY FEATURES ACCESS LEVEL	CO-PILOT DISPLAY, FULL DRIVER ACCESS
	FLEET TRIP MANAGEMENT	FLEET TRIP MANAGEMENT DRIVER CONTROL
S	TELEMATIC GATEWAY	TELEMATICS GATEWAY, 4G/LTE AND WLAN SYSTEM WITH DIAGNOSTIC SERVICES

ENGINE ELECTRONICS		DESCRIPTION
S	OIL PRESSURE, ENGINE SHUTDOWN	OIL PRESSURE, ENGINE SHUTDOWN
S	COOLANT TEMP, ENGINE SHUTDOWN	COOLANT TEMP, ENGINE SHUTDOWN
S	ENGINE PROTECTION SYSTEM	ENGINE PROTECTION (SHUTDOWN)
	ENGINE IDLE CONTROL	IDLE CONTROL, 650 RPM
S	SMART IDLE ELEVATED IDLE RPM TIME	INCREASE 10 MINUTE MAXIMUM TIME
S	IDLE S/D ABS TAMPER CHECK	IDLE SHUTDOWN ABS TAMPER CHECK, ENABLED
S	IDLE S/D WARNING TIME	30 SEC IDLE S/D WARNING TIME
S	IDLE S/D IF WARM-UP TEMP	38C DEG (100F), WARM UP TEMP DELAY
S	IDLE S/D WARM-UP TIMER	5 MIN. WARM UP TIME DELAY
	IDLE S/D IF PTO ACTIVE	ENGINE IDLE SHUTDOWN TIME OVERRIDDEN IF PTO ACTIVE
S	IDLE SHUTDOWN IF POWER > LIMIT	ENG IDLE SHUTDOWN TIME OVERRIDDEN IF TORQUE > THAN LIMIT
S	IDLE S/D OVERRIDE %ENGINE LOAD	IDLE SHUTDOWN OVERRIDE UPTO 20% ENGINE LOAD THRESHOLD
S	AMBIENT TEMP MIN TRESHOLD	AMBIENT TEMP MIN TRESHOLD, 16 DEG C, (60 DEG F)
S	AMBIENT TEMP MAX TRESHOLD	AMBIENT TEMP MAX TRESHOLD, 27 DEG C, (80 DEG F)
S	EL HD THROTTLE,MAX ROAD SPEED	ELECTRONIC HAND THROTTLE, MAX ROAD SPEED, 16 KMH (10 MPH)
	EL HAND THROTTLE,MAX ENG SPEED	ELECTRONIC HAND THROTTLE, MAX ENGINE SPEED, 2100 RPM
S	EL HAND THROTTLE,MIN ENG SPEED	ELECTRONIC HAND THROTTLE, MIN ENGINE SPEED, 700 RPM
S	EL HD THROTTLE,SPEED RAMP RATE	ELECTRONIC HAND THROTTLE, SPEED RAMP RATE, 100 RPM/SEC

TRANSMISSION ELECTRONICS		DESCRIPTION
S	TRANSMISSION ELECTRONICS PACKAGE	W/O ELEC TRANS PACKAGE OPTION (all non-Allison transmissions)
S	TRANSMISSION ELECTRONIC SHIFTING PROPERTIES	W/O ALLISON FUELSense 2.0 PROGRAMMING

VEHICLE ELECTRONICS		DESCRIPTION
S	ROAD SPEED LIMITER SETTING	105 KM/H ROAD SPEED LIMITER (65MPH)
	PEDAL RSL SETTING	105 KM/H PEDAL ROAD SPEED LIMITER (65MPH)
S	CRUISE CONTROL	CRUISE CONTROL
S	CRUISE CONTROL, MAX SPEED	MAX CRUISE, 105 KPH (65 MPH)
S	CRUISE CONTROL MIN SPEED	MIN CRUISE, 32 KPH (20 MPH)
S	CRUISE RESUME WITH CLUTCH	CRUISE RESUME WITH CLUTCH
	ENG BRK ENGAGE IN CRUISE	ENG BRK ENGAGE IN CRUISE, 3 MPH, ABOVE SET SPEED
	PDLO ENGAGED VLS	POWER DIVIDER LOCK OUT (PDLO) ROAD SPEED LIMIT 24KMH (15MPH)
	DIFF LOCK SPEED LIMIT	DIFFERENTIAL LOCK ROAD SPEED LIMIT 24KMH (15MPH)

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# TECHNICAL SPECIFICATION *(cont.)*



VEHICLE ELECTRONICS		DESCRIPTION
S	DETECTION SPEED SENSR TMRNG	DETECTION OF SPEED SENSOR TAMPERING, ENABLE
S	ENG TORQUE LIMIT,SPEED SENSOR	ENG TORQUE LIMITED TO 50%, IF SPEED SENSOR TAMPER DETECTED
S	DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED
S	DR PERFORMANCE PARAMETERS	WITHOUT DRIVER PERFORMANCE PARAMETERS
S	ENGINE OVERSPEED,ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM
S	ENGINE OVERSPEED,FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM
S	VEHICLE OVERSPEED,ALL COND,LOG	VEHICLE OVERSPEED,ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)
S	VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)
S	ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN
S	PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH

PTO ELECTRONICS		DESCRIPTION
S	PTO1 SINGLE SPEED CONTROL RPM.	PTO 1ST, SINGLE SPEED SETTING, 1000 RPM
S	PTO 1ST, MAX ROAD SPEED	1ST PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 1ST, SPEED RAMP RATE	PTO 1ST, SPEED RAMP RATE 100 RPM/SEC
S	PTO 1ST, MAX ENGINE SPEED	PTO 1ST, MAX ENGINE SPEED, 2100 RPM
S	PTO 1ST, ROAD SPEED LIMIT	PTO 1ST, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 1ST, MINIMUM ENGINE SPEED	PTO 1ST, MINIMUM ENGINE SPEED, 600 RPM
S	PTO 2ND, SINGLE SPEED SETTING	PTO 2ND, SINGLE SPEED SETTING, 1000 RPM
S	PTO 2ND, MAX ROAD SPEED	2ND PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	PTO 2ND, SPEED RAMP RATE	PTO 2ND, SPEED RAMP RATE 100 RPM/SEC
S	PTO 2ND, MAX ENGINE SPEED	PTO 2ND, MAX ENGINE SPEED, 2100 RPM
S	PTO 2ND, ROAD SPEED LIMIT	PTO 2ND, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	PTO 2ND, MINIMUM ENGINE SPEED	PTO 2ND, MINIMUM ENGINE SPEED, 600 RPM

PAINT		DESCRIPTION
S	PAINT DESIGN	SINGLE COLOR
S	PAINT TYPE	SOLID PAINT
S	PAINT COLOR - FIRST COLOR	MACK WHITE; P9188
S	PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR
S	PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR
S	PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT
S	CAB COLOR	SAME AS FIRST COLOR - CAB
S	HOOD COLOR	SAME AS FIRST COLOR - HOOD
S	ROOF FAIRING COLOR	WITHOUT ROOF FAIRING
S	CHASSIS RUNNING GEAR	MACK BLACK (URETHANE); P3036
S	BUMPER	W/O OPTIONAL BUMPER PAINT
S	FUEL TANK - ***NO INVENTED VARIANTS ALLOWED in the FUEL TANK PAINT FAMILY***	W/O OPTIONAL FUEL TANK PAINT
S	HUBS & DRUMS-FRONT	SAME AS CHASSIS RUNNING GEAR
S	HUBS & DRUMS-REAR	SAME AS CHASSIS RUNNING GEAR

CALCULATED CODES - KAX		DESCRIPTION
S	PROPCALC SELECTION	YES, THE ORDER MUST BE CALCULATED
	AUTO ROUTING & CLIPPING, CENTER	AUTOMATIC ROUTING & CLIPPING PLACEMENT, CENTER SECTION



# TECHNICAL SPECIFICATION (cont.)



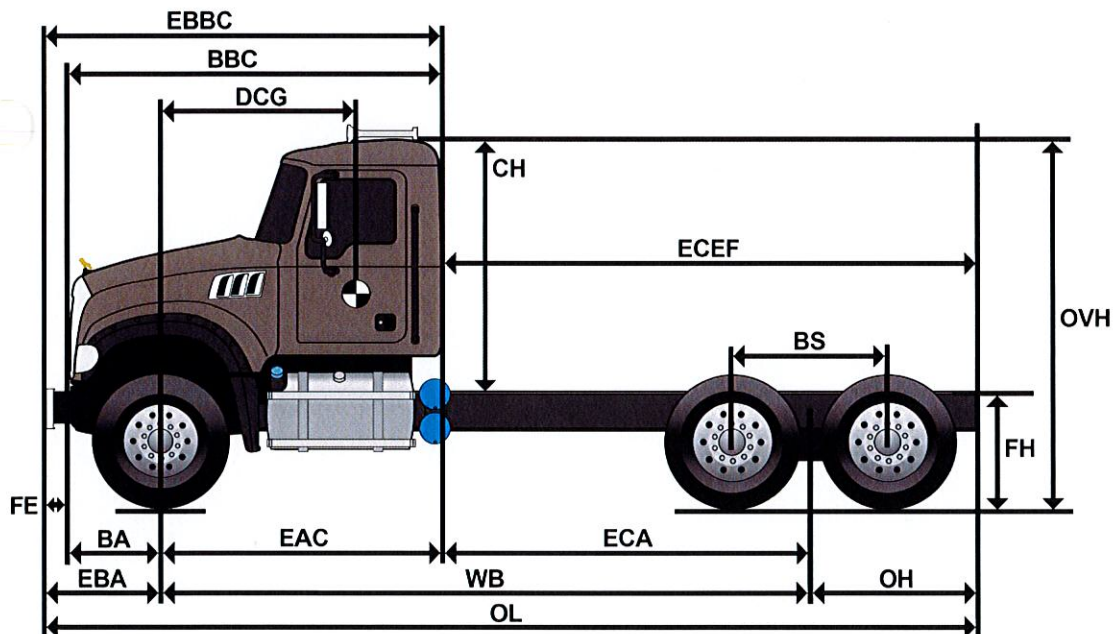
BASE WARRANTY & PURCHASED COVERAGES		DESCRIPTION
S	VEHICLE WARRANTY TYPE	HEAVY DUTY WARRANTY CLASSIFICATION
S	BASIC CHASSIS COVERAGE	HEAVY DUTY STANDARD BASE COVERAGE 12 MONTHS/100,000 MILES (161,000 KM)
	EMISSION - SURCHARGE	EPA (only) for Mack MP7 / MP8 Diesel
S	ENGINE WARRANTY	MACK MP7/MP8 BASE ENGINE COVERAGE 24 MONTHS / 250,000 MILES (402,000KM)
S	EMISSION COMPONENT COVERAGE	US and CANADA EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/100,000 MILES (161,000 KM)
	TRANSMISSION WARRANTY	36/350K MI: EATON TRANSMISSION STANDARD NORMAL AND HEAVY DUTY COVERAGE
S	CARRIER & AXLE HOUSING WARRANTY	STANDARD MACK HEAVY DUTY COVERAGE 60 MONTHS / 500,000 (804,672 KM)
S	AIR CONDITIONING WARRANTY	AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE
S	CHASSIS TOWING WARRANTY	STANDARD NORMAL / HEAVY DUTY CHASSIS TOWING 90 DAYS OR 5,000 MILES
S	ENGINE TOWING WARRANTY	STANDARD MACK ENGINE TOWING COVERAGE 24 MONTHS/250,000 MILES (402,000 KM)
S	GUARDDOG CONNECT BUNDLE	NO GUARDDOG CONNECT (ASIST & MACK ONECALL)

SERVICES		DESCRIPTION
S	MACK INTEGRATED UPTIME	MACK INTEGRATED UPTIME - 24 MONTHS
S	FLEET INTEGRATION	WITHOUT FLEET INTEGRATION
S	PARTNERED SERVICES	NO PARTNERED SERVICES PROVIDED

Prior to delivery each vehicle will be DOT inspected locally and include the appropriate documentation and decal.

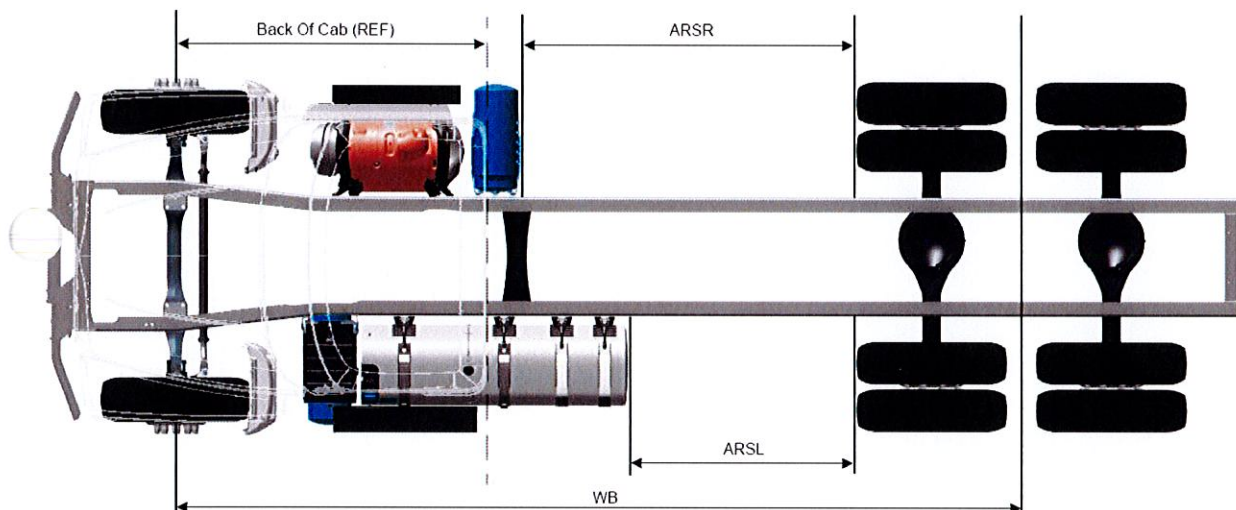
**VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY**

Description	Sales Code	Dwg Ref	Length	UOM
Front Frame Extension	N/A	FE	6.1	INCHES
Bumper to Front Axle	N/A	BA	29.0	INCHES
Eff. Bumper to Front Axle	N/A	N/A	35.1	INCHES
Wheelbase	N/A	WB	226.2	INCHES
Rear Overhang	N/A	OH	63.4	INCHES
Overall Length	N/A	OL	324.7	INCHES
Bumper to Back of Cab	N/A	BBC	116.5	INCHES
Eff. Bumper to Back of Cab	N/A	EBBC	122.6	INCHES
Eff. Cab to Rear Axle	N/A	ECA	138.7	INCHES
Eff. Front Axle to Back of Cab	N/A	EAC	87.5	INCHES
Eff. Cab to End of Frame	N/A	ECEF	202.0	INCHES
Unladen Frame Height	N/A	FH	45.6	INCHES
Cab Height	N/A	CH	70.9	INCHES
Overall Height	N/A	OVH	119.6	INCHES
Driver CG	N/A	DCG	70.9	INCHES
50" AXLE SPACING (BOGIE WHEELBASE)	GWXABX	BS	50.0	INCHES



**VEHICLE SPECIFICATION/CALCULATED PERFORMANCE SUMMARY**

Description	Sales Code	Dwg Ref	Left Value(in)	Right Value(in)
Wheelbase	N/A	WB	226.2	226.2
Available Rail Space Right	N/A	ARSR	N/A	95.7
Available Rail Space Left	N/A	ARSL	47.8	N/A
Eff. Front Axle to Back of Cab	N/A	REF	87.5	87.5
Front Axle To Fender	CDX23X	N/A	35.4	35.4
Cleartech One Unit	DPF04F	N/A	0.0	48.0
Battery Box	393AA2	N/A	15.0	0.0
111 GALLON (420 L) 22" ALUMINUM, SLEEVED D-SHAPED / W/O RH FUEL TANK	288AF7 / 290AA1	N/A	73.4	0.0
Ad-Blue Tank	DF1001	N/A	7.5	0.0
Drive Tire Radius	901091	N/A	22.1	22.1



Top View image is intended for illustration purposes only and is not presented to scale. Wheelbase, Axle Spacing and After frame are not shown as specified, but are a representation. Customer Adaptation (CA) options and relocated components are not represented in these images. Most CA options impact the variation of the image, thus an image may not populate. Calculations are approximate to a tolerance of  $\pm 4$  inches due to component mounting variation. Certain chassis component options are NOT represented in the Top View image, such as, but not exclusive to, Front Frame Extensions, Fuel Water Separators, Air Dryers, PTOs, Fifth Wheels, Chassis Fairings, Toolboxes, Trailer Connections. For further information on these items and their respective locations on your specification, please refer to the data sheets associated with those items in the configurator.



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# TECHNICAL SPECIFICATION

## GRANITE 64FR MACK SPEC

## Allison Addendum



APPLICATION PACKAGES	DESCRIPTION
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, LH BATTERY BOX, 6.6 GALLON (25L) SLEEVED DEF, 22" SLEEVED LH FUEL TANK

CUSTOMER/VEHICLE INFO	DESCRIPTION
S CHASSIS (BASE MODEL)	GRANITE 64FR MACKSPEC
S ASSEMBLY PLANT	Made in Macungie, PA USA
CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
TYPE OF SERVICE	MUNICIPAL
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION
EMISSION WARRANTY CERTIFICATION	EPA (only) for Mack MP7 / MP8 Diesel
INTENDED REGISTRATION LOCATION	ALABAMA
S INITIAL REGISTRATION LOCATION	USA REGISTRATION
BRAND ORNAMENT	BULLDOG BRAND ORNAMENT, CHROME
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
VEHICLE USE & BODY/TRAILER TYPE	DUMP TRUCK
TRAILER TYPE	WITHOUT TRAILER TYPE
S GROSS COMBINATION WEIGHT (CA in PC29 only)	TRUCK ONLY - NO TRAILER TOWING PROVISIONS PROVIDED
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
TOPOGRAPHY	GRADES <6% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 16%
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S OPERATING TERRAIN GRADE CONDITIONS	ON-OFF HIGHWAY, STARTING GRADES<18%
S LOADING SURFACE FACTOR	CONCRETE LOADING AND / OR UNLOADING SURFACE
VEHICLE VOCATION	CONSTRUCTION SERVICE

ENGINE/TRANSMISSIONS	DESCRIPTION
ENGINE PACKAGE, COMBUSTION	MP8-455C MACK 455HP @ 1400-1700 RPM (PEAK) 2100 RPM (GOV) 1750 LB-FT, US'21
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS VOCATIONAL APPLICATION
TRANSMISSION	4500 RDS 6 SPEED ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT

EXHAUST/EMISSIONS	DESCRIPTION
NOX LIMITS	CARB LEGACY / EPA (200MG/HP/HR), 50 State Idle Compliance
S IDLE EMISSION LABEL LOCATION (CA in PC29 only)	IDLE EMISSION LABEL LOCATION, LOWER LH CORNER OF DRIVER DOOR
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21
S CHASSIS MOUNTED EMISSIONS FINISH	W/O DEF COVER & PAINTED DPF COVER
S DIESEL EXHAUST FLUID TANK	6.6 GALLON (25 L) 22" LEFT SIDE FUEL TANK MTD
EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
EXHAUST STACK HEIGHT	9' 6" FROM GROUND
EXHAUST SYSTEM MATERIAL FINISH	SINGLE, BRIGHT FINISH HEAT SHIELD, STACK
EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2024





ENGINE EQUIPMENT		DESCRIPTION
S	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
S	AIR COMPRESSOR/DRYER	WABCO HEATED SS-HP AIR DRYER W/ WABCO 636 (37.4 CFM) AIR COMPRESSOR
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE
S	BATTERIES	(3) MACK 12V 760/2280 CCA THREADED STUD TYPE
S	BATTERY BOX - MOUNTING (x)	LH RAIL UNDER CAB FORWARD OF FUEL TANK (3 BATTERY MAX)
	BATTERY BOX COVER	POLISHED ALUMINUM
S	STARTER MOTOR	12 VOLT DELCO 39MT-MXT
	ENGINE BRAKE	MACK MP8 POWERLEASH
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)
S	OIL SUMP	OIL PAN
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
	GEAR SHIFTER	ALLISON DASH MOUNTED SHIFTER W/NEUTRAL TO RANGE INHIBIT (HD SERIES)
S	CLUTCH ACTUATION SYSTEM & PEDAL PAD	WITHOUT CLUTCH CABLE SYSTEM
	DRIVELINE - MAIN	SPICER 1810 HD W/COATED SPLINES (PROPS-L)
	DRIVELINE - INTERAXLE	SPICER 1810 W/COATED SPLINES
	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
	LUBRICANTS, TRANSMISSION	TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS
	TRANSMISSION OIL COOLER	ALLISON 4xxx SERIES TRANSMISSION W/DIRECT MOUNT COOLER & SS COOLANT TUBES

FRONT AXLE EQUIPMENT		DESCRIPTION
	FRONT AXLE	20000# (9100 KG) MACK FXL20 STRAIGHT SPINDLE/UNITIZED BEARINGS
	SPRINGS - FRONT	MACK MULTILEAF 20000# (9100 KG) GROUND LOAD RATING, EQUAL BIAS
S	FRONT AXLE BRAKES	MERITOR "S" CAM TYPE 16.5" x 6" Q+
S	BRAKE, FRONT	CAST IRON
	FRONT AXLE BRAKE DUST SHIELD	DUST SHIELDS FOR FRONT AXLE
	FRONT BRAKE ADJ. MANUFACTURE	MERITOR - AUTOMATIC
S	FRONT BRAKE CHAMBER MFG.	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX
S	HUB MATERIAL, FRONT	FERROUS
S	FRONT AXLE LUBRICANT	FRONT AXLE LUBE, FAG NLGI2 GREASE
S	SHOCK ABSORBER, FRONT	DOUBLE ACTING TYPE
	STEERING	SHEPPARD SD110 + HD94



# **BROCHURES**



**MACKSPEC**



**GR64F**



**BUILT  
FOR THE JOB**



# GR64F



## STANDARD POWERTRAIN SPECIFICATIONS

### ENGINE: MACK MP7-345C

Peak Horsepower - 345 HP at 1400-1700 RPM  
Horsepower - 295 HP at 2000 Gov. RPM  
Max. Torque - 1360 lb. ft. at 1000-1300 RPM  
V-MAC IV - Total Vehicle Electronics  
Air Compressor - Meritor/Wabco 318 (18.7 CFM)  
Air Cleaner - 11" Single Element  
Alternator - Delco 12V 130A (24SI)  
Batteries - (3) Mack 12V 650/1950 CCA Threaded Stud Type  
Coolant Protection: -34 degrees F (-37 C)  
Mack Coolant Conditioner  
ClearTech One DPF/SCR Emission System  
Mack PowerLeash Engine Brake  
Silicone Engine Hoses and Tubing  
Poly-V Fan Belt with Automatic Tensioner  
Fan Drive: Electronically Modulated Multi-Speed Viscous  
Flywheel Housing - Aluminum (Lightweight)  
Mack Fuel/Water Separator with Manual Drain Valve  
Radiator - Aluminum Core  
Starter - Delco 12V 39MT-MTX  
Electronic Starter Interlock

### TRANSMISSION: MACK mDRIVE TMD13AFD-HD

13-Speed, Ratios: 17.54 Low - 0.78 High  
Overdrive  
Clutch - Single Plate 17" Organic Material  
Transmission Bell Housing - Aluminum  
Transmission Oil Cooler - mDRIVE Gear Box Mounted,  
Water to Oil Cooler  
Grade Gripper  
Mackcellerator  
Main Driveline - Meritor RPL25 Series with Permalube U-Joints

### REAR AXLE: MACK S38R

38,000 Pound Capacity  
Suspension - Multileaf (Mack Camelback)  
38,000 Pound Capacity  
Tires - 11R22.5  
Carrier - Malleable Housing  
Wheels - Aluminum Disc, 22.5" x 8.25",  
10-Hole, Hub Piloted  
Hub Material - Iron Preset w/ Integrated  
Spindle Nut  
Brakes - Bendix 16.5" x 7"  
Brake Drums - Cast Outboard Mounted  
Premium Rear Wheel Seals  
Slack Adjusters - Automatic  
Spring Brake Chambers - 30/30 Double  
Diaphragm Type, Mechanical  
Spring Release  
Shock Absorbers - (4) Mounted on Forward  
and Rear Axles Each Side

### FRONT AXLE: MACK FXL12

12,000 Pound Capacity  
Suspension - Mack Taperleaf Springs,  
12,000 Pound Rating, (2 Springs)  
Tires - 295/75R22.5 (Low Profile)  
Wheels - Aluminum Disc, 22.5" x 8.25",  
10-Hole, Hub Piloted  
Hub Material - Iron  
Integrated Front Wheel Seals  
Brakes - Bendix 16.5" x 5"  
Brake Drums - Cast Outboard Mounted  
Shock Absorbers - Double Acting Type  
Slack Adjusters - Automatic  
Steering - Sheppard SD110 Power Steering

# GR64F



## STANDARD CAB INTERIOR/EXTERIOR SPECIFICATIONS

### CAB: CONVENTIONAL

Air Conditioning with Integral Heater  
Cab Mounting - 4 Point, Air Bags  
and Shocks at Rear  
12 Volt and USB Outlets  
Coat Hook  
Co-Pilot Driver Display with  
GuardDog Maintenance, Stalk Controls  
Cup Holders  
Dome Lamps - 2RH / 2LH  
Galvanized Steel Visibility Doors  
Door Trim - Padded Armrests and Map Pockets  
Floor Mats - Polyurethane  
Gauges - Air Pressure (Primary and Secondary)  
Engine Coolant Temperature, Engine Oil  
Pressure, Speedometer, Tachometer,  
Fuel Level, DEF Level  
Optional Gauges - Exhaust Pyrometer, Boost  
Pressure, Transmission Oil Temperature,  
Engine Oil Temperature, Air Application  
Grab Handles, Exterior - RH & LH Behind Door  
Hood - DCPD Material, Insulated  
Horn - Electric, Single Tone  
Identification and Clearance Lights (5)  
Instrument Panel - Gunmetal Trim  
Interior Trim: Standard - Steel Gray

Keys - (2) Keyed at Random  
Key Type Starter Switch  
Low Pressure Indicator Light and Buzzer  
Exterior Mirrors - RH & LH Aerodynamic  
Overhead Console with Storage Compartments  
Parking Brake "On" Indicator Light  
AM/FM Premium Stereo, CD Player, MP3  
Weather Band, Bluetooth  
CB Connections - 5 way Binding Posts  
Driver Seat - High Back, 1 Chamber Lumbar,  
Air Suspension  
Rider Seat - High Back, Non-Suspension  
Seat Belts - Lap and Shoulder  
Steering Column - Tilt and Telescopic  
Steering Wheel - Urethane Foam Grip,  
Gunmetal Spokes  
Rear Storage Pouch  
Right Hand Door Peep Window  
Sunvisors - Interior, RH & LH  
Window Controls - Power  
Windshield - Tinted, 2 Piece  
Cab Glass - Tinted  
Windshield Wipers - 2 Speed Electric Motor  
with Intermittent Feature  
Paint Color - Mack White (Cab, Hood, and  
Fenders), Mack Black (Chassis and  
Running Gear)

## ADDITIONAL STANDARD SPECIFICATIONS

### AIR/BRAKE

Dual Air Brake System  
Air Dryer - 1200UP w/ Coalescing Filter  
Air Reservoirs - Steel  
Manual Drain Valves

### ELECTRICAL

12 Volt Electrical System  
Battery Box - Steel with Molded Plastic Cover  
Courtesy Light Switch - Headlamp and Clearance  
GuardDog connect Services  
Daytime Running Lights  
Electric Circuit Protection Package  
Waterproof Electrical Connections  
Headlights - Flush Mounted Halogen Lights  
Rear Lighting - (2) Combination Stop, Tail,  
Directional, and Back-Up Lights  
Solid State Turn Signal Flasher

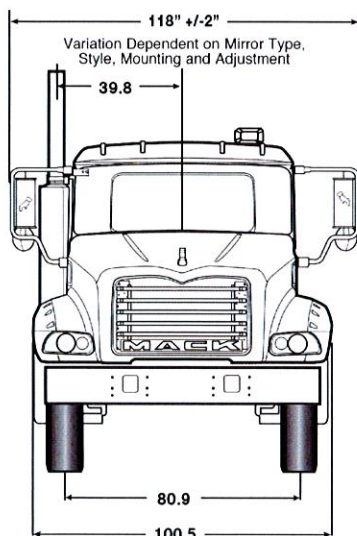
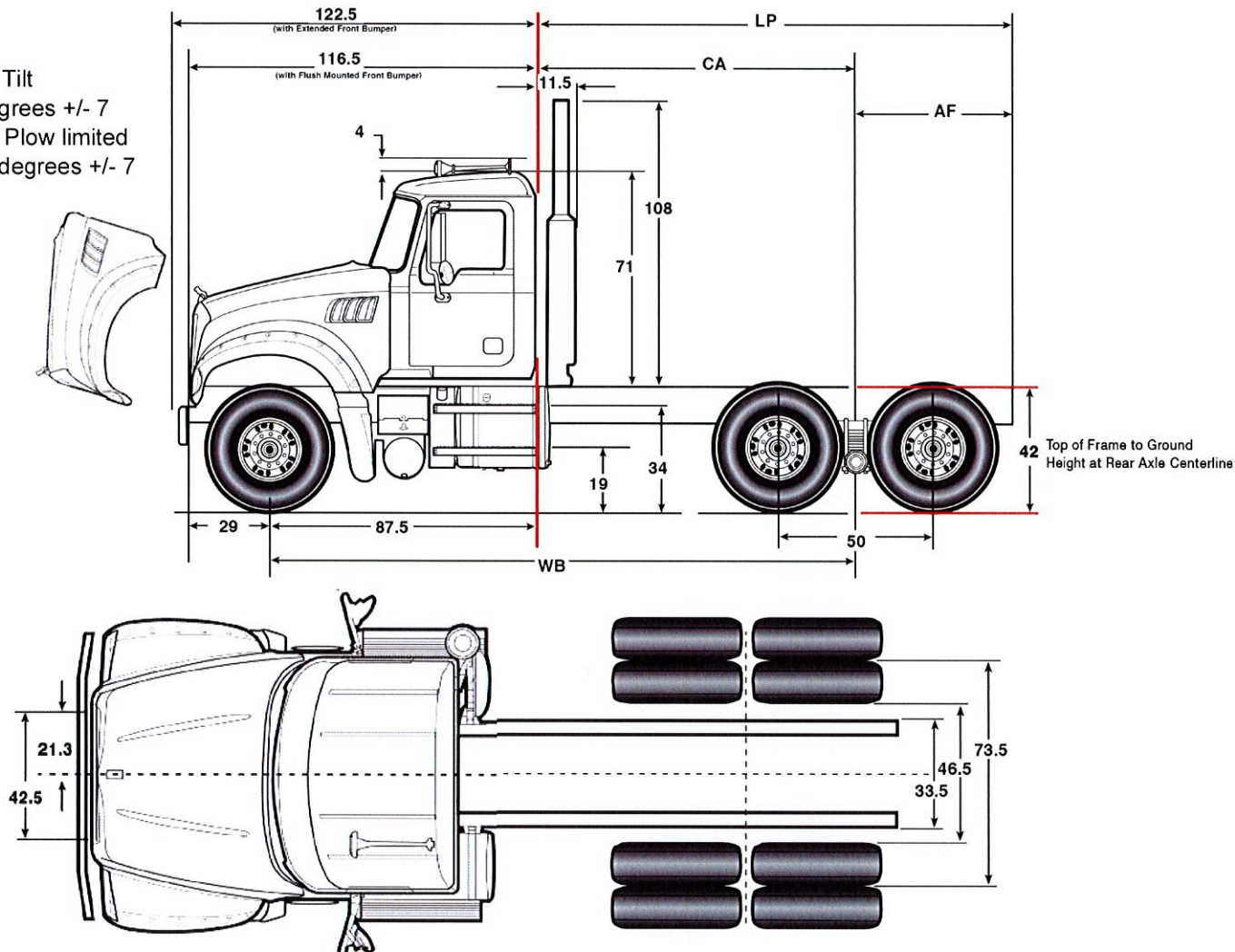


# GR64F



## STANDARD CHASSIS DIMENSIONS

Hood Tilt  
73 degrees +/- 7  
Snow Plow limited  
to 35 degrees +/- 7



### FRAME EQUIPMENT/FUEL TANKS

- Frame Rail w/out Liner – 11.81" x 3.54" x .32" Steel
- Section Modulus – 17.7 in<sup>3</sup>
- RBM (per rail) – 2,120,000 lb. in.
- Front Bumper – Extended Swept Back Steel Channel
- Bumper to Back of Cab (BBC) – 122.5"
- Crossmembers – BOC & Intermediate(s) Steel HD Back-to-Back Channel
- Front Frame Extension
- Front Tow Hooks
- Fuel Tanks – 50 Gallon LH Steel 22" dia.
- Diesel Exhaust Fluid (DEF) Tank - 11.8 Gallon, 22" Diameter, Frame Mounted on Left Side with Painted Cover

### STANDARD WHEELBASE/LOAD PLATFORM

- For standard wheelbase and load platform information refer to your current version of MSS



# GR64F



## AVAILABLE DRIVELINE COMPONENTS

MP7 ENGINES	
MODEL	HORSEPOWER / TORQUE
MP7-355A	355 HP [265kW] @ 1500-1800 RPM 1360 lb. ft. [1843 nM] @ 1000-1300 RPM
MP7-345C	345 HP [257kW] @ 1400-1700 RPM 1360 lb. ft. [1843 nM] @ 1000-1300 RPM
MP7-365C	365 HP [272kW] @ 1400-1700 RPM 1460 lb. ft. [1980nM] @ 1000-1300 RPM
MP7-395C	395 HP [295Kw] @ 1450-1700 RPM 1560 lb. ft. [2115 Nm] @ 1050-1300
MP7-325M	325 HP [242kW] @ 1400-1900 RPM 1230 lb. ft. [1662 nM] @ 1000-1350 RPM
MP7-376M	376 HP [280kW] @ 1450-1900 RPM 1360 lb. ft. [1843 nM] @ 1000-1400 RPM
MP7-425M	425 HP [317kW] @ 1500-1800 RPM 1560 lb. ft. [2115nM] @ 1050-1200 RPM

MP8 ENGINES	
MODEL	HORSEPOWER / TORQUE
MP8-415C	415 HP [309kW] @ 1400-1700 RPM 1660 lb. ft. [2251 Nm] @ 1050-1300 RPM
MP8-445C	445 HP [332kW] @ 1300-1800 RPM 1815 lb. ft. [2460 nM] @ 1150-1300 RPM
MP8-505C	505 HP [377 kW] @ 1500-1700 RPM 1860 lb. ft. [2508nM] @ 1100-1400 RPM
MP8-425M	425 HP [317kW] @1500-1800 RPM 1560 lb. ft. [2115 nM] @ 1050-1400 RPM
MP8-455M	455 HP [339kW] @ 1400-1700 RPM 1760 lb. ft. [2359 nM] @ 1050-1300 RPM
MP8-505M	505 HP [377kW] @ 1500-1700 RPM 1860 lb. ft. [2508nM] @ 1150-1400 RPM

MACK TRANSMISSIONS			
MODEL	SPEEDS	RATIOS	LOW/HIGH
T309	9	11.40 / 0.71	
T310	10	13.81 / 0.73	
T310M	10	17.35 / 0.73	
T310MLR	10	27.31 / 0.71	
T313	13	13.44 / 0.74	
T313LR	13	16.42 / 0.71	
T318	18	13.44 / 0.71	
T318LR	18	16.42 / 0.71	
T318LR21	18	16.42 / 0.71	

MACK <i>m</i> DRIVE TRANSMISSIONS			
MODEL	SPEEDS	F. RATIOS	R. RATIOS
TmD12AFD-HD	12	14.94 / 1.00	17.49 / 13.73
TmD12AFO-HD	12	11.73 / 0.785	13.73 / 10.78
TmD13AFD-HD	13	19.34 / 1.00	37.49 / 8.62
TmD13AFO-HD	13	17.54 / 0.785	20.53 / 10.78
TmD14AFO-HD	14	32.04 / 0.785	37.49 / 8.62

ALLISON TRANSMISSIONS			
MODEL	SPEEDS	RATIOS	LOW/HIGH
3000-RDS	5	3.49 / 0.75	
3000-RDS[R]	5	3.49 / 0.75	
3000-RDS	6	3.49 / 0.65	
3000-RDS [R]	6	3.49 / 0.65	
4000-RDS	6	3.51 / 0.64	
4000-RDS [R]	6	3.51 / 0.64	
4500 RDS	5	4.70 / .076	
4500 RDS [R]	5	4.70 / .076	
4500 RDS	6	4.70 / .067	
4500 RDS [R]	6	4.70 / .067	

FRONT AXLES		
MODEL	MAKE	CAPACITY
FXL12	MACK	12,000 lb. [5443 kg.]
FXL 14.6	MACK	14,600 lb. [6600 kg.]
FXL 16.5	MACK	16,500 lb. [7484 kg.]
FXL18	MACK	18,000 lb. [8165 kg.]
FXL20	MACK	20,000 lb. [9072 kg.]
FXL23	MACK	23,000 lb. [14,433 kg.]

REAR AXLES - TANDEM		
MODEL	MAKE	CAPACITY
S38R	MACK	38,000 lb. [17,237 kg.]
S40	MACK	40,000 lb. [18,100 kg.]
S402R	MACK	
MT-40-14X4D	MERITOR	
S440	MACK	44,000 lb. [19,958 kg.]
S460	MACK	46,000 lb. [20,886 kg.]
S462	MACK	
S462R	MACK	
RT46-160	MERITOR	
RT46-164EH	MERITOR	
S522	MACK	52,000 lb. [23,600 kg.]
S522R	MACK	
S582	MACK	58,000 lb. [26,309 kg.]
S652	MACK	65,000 lb. [29,484 kg.]



# Product Information

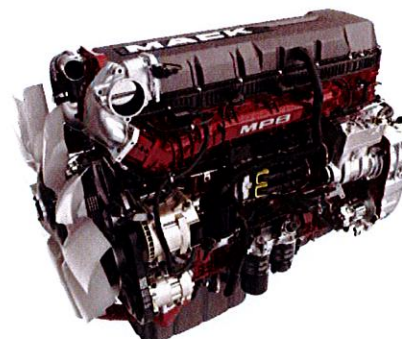


1001840 MP8-455C, MAXICRUISE DIESEL ENGINE – US '21

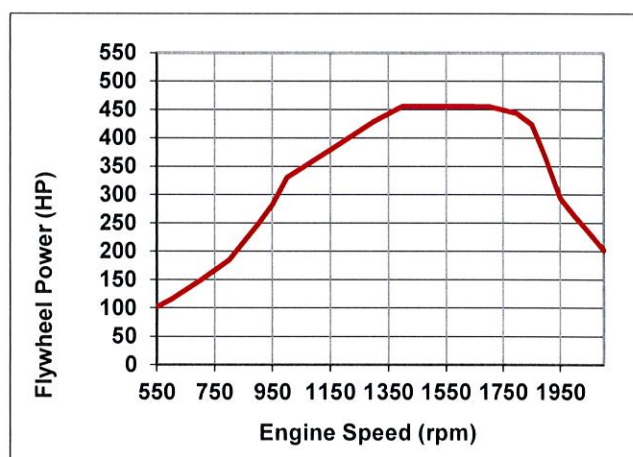
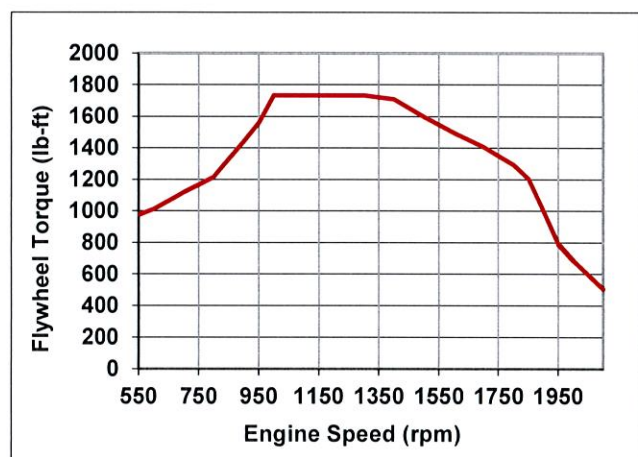
Updated: August 5, 2021

## Performance summary

Peak HP [kW]	455 [339] @ 1400-1700 RPM
HP [kW] at governed RPM	206 [154] @ 2100 RPM
Peak torque lb. ft. [Nm],	1750 [2373] @ 1000-1300 RPM
Clutch engagement lb. ft. [Nm]	860 [1165] @ 800 RPM
Operating range	550 – 2100 RPM



## Torque and Power Curves:



## Gearing Recommendations / Recommended Cruise RPM

Proper gearing is essential to achieve optimum vehicle performance and economy. Vehicle specifications including engine, transmission, axle ratio, and tires should be selected to meet minimum startability and gradeability recommendations while balancing performance and economy with customer requirements. Dealers should refer to the **PAWS Performance Predictor** to gauge compliance to vehicle-specific minimum recommendations.

**Recommended Cruise RPM: 1100 – 1300**

# Product Information



**1001840 MP8-455C, MAXICRUISE DIESEL ENGINE – US '21**

**Updated:** August 5, 2021

## Features and benefits

### **18:1 CR wave piston, 220 bar peak cylinder pressure**

Our patented Wave piston delivers improved combustion and lower friction, resulting in cleaner emissions and better fuel economy. Six steel waves forged into the piston crown optimize fuel injection for increased combustion efficiency.

### **Electronic common rail fuel injection**

The simplicity of Mack's electronic common fuel rail system eliminates external high-pressure lines as can be common with "one pump" common rail systems. This direct injection system delivers ultra-precise control over fuel injection pressure, timing and volume. The result is more power and efficiency, with less engine noise.

### **Intake throttle**

MP Series engines are equipped with intake throttles that improve heat management, helping to increase the exhaust gas temperature at idle and low load, increasing the efficiency of the exhaust aftertreatment.

### **Dual-butterfly EGR valve**

The MP8 Dual-butterfly EGR Valve reduces fuel consumption through higher EGR flow rates compared to other systems that incorporate single-poppet style EGR valves.

### **CLEARTECH™ ONE aftertreatment**

Mack's re-engineered exhaust aftertreatment system is designed for MP series engines and features a sophisticated new design that delivers near-zero emissions and low maintenance in a lighter, more compact unit



# Product Information



**1001840 MP8-455C, MAXICRUISE DIESEL ENGINE – US '21**

**Updated:** August 5, 2021

**Base engine specifications:** All engine specifications are listed for the base engine model and do not include specifications found in optional engine equipment.

<b>Number of cylinders &amp; firing order</b>	6, In-Line: 1 – 5 – 3 – 6 – 2 – 4
<b>Bore and stroke, inches [mm]</b>	5.16 X 6.22 [131 X 158]
<b>Displacement, cubic inches [L]</b>	780 [13]
<b>Compression ratio</b>	18:1
<b>Torque rise</b>	34.0%
<b>Idle speeds:</b>	
Low	Adjustable, 650 RPM
High	2100 RPM
<b>Engine brake retarding power</b>	475 HP [355 kW] @ 2250 RPM
<b>Weight, dry [approximate] lbs. [kg]</b>	2711 [1230]
<b>Fuel filter</b>	Spin-on, disposable
<b>Fuel system</b>	High pressure F2 common rail
<b>Fuel supply pump</b>	Eccentric-style pump (no lifters or tappets)
<b>Lubrication system:</b>	
Type	Full pressure, wet sump
Oil filters	2 Spin-on full flow, disposable
Oil cooler	Stainless steel plate
Total oil capacity, includes filters	37 quarts [35 liters]
Drain plug	Magnetic
<b>Turbocharger</b>	Variable geometry turbocharger with journal bearings

# Product Information



**1321236 DELCO ALTERNATOR, 28SI 12v 160-AMP, BRUSH TYPE**

**Updated:** June 4, 2021

The Delco Remy 28SI alternator is designed to address vehicle applications that require higher electrical output, with lower weight, improved temperature capability, and fuel savings. The 28SI brush style alternator is designed with dual internal fans which provide maximum cooling technology, improving the operating efficiency and durability of the unit.

Mack offers this as an improved, cost-effective replacement for the previously offered 24SI models rated 100A, 130A, 145A, and 160A. As such, a remote sense signal wire is not provided with this offering.

## Features and Benefits:

- Dual Internal Fans create cool environment for bearings and electronics
- Multi-function regulator features auto-start and remote sense capability
- The rear cover protects electronics while managing airflow
- Easy installation with one-wire connection
- Advanced design "Avalanche" press fit diodes provide long life, protection from electrical system spikes

## Specifications:

**Performance Output:** 160 Amps – 14.2 Volts (12V nominal) 125 Amps at Idle

**Construction:** Brush

**Stator Diameter:** 5.67" (144mm)

**Typical Weight:** 18.7lbs (8.5 kg)

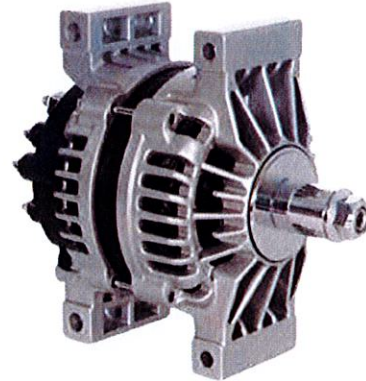
**Speed Capability:** Continuous - 10,000 rpm  
Intermittent 12,000 rpm

**Inlet Temperature Limits:** Low: -40°C / -40°F  
High: 125°C / 257°F

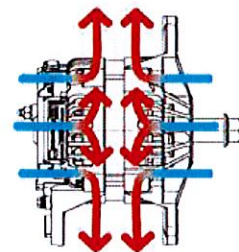
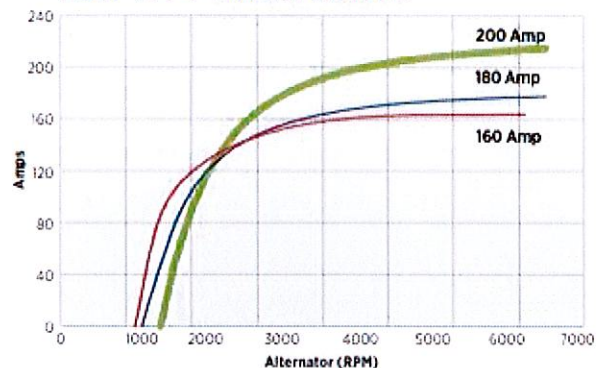
**Polarity:** Negative Ground

**Rotation:** Clockwise

**Alternator RPM:** 3.5 x Engine RPM



**28SI 12V POWER CURVE**



**28SI Air Flow** Draws air from drive end and terminal end over electronics and internal components and out frame air vents for cooler internal alternator temperature





## Product Information

### 113- Air Compressors and Air Dryers, Mack Conventional Models with MP7 and MP8 Engines

Updated: April 18, 2023

Sales Code	Air Compressor Specs		Air Dryer Specs					Turbo Cutoff	Governor Location
	Air Compressor	Air Inlet	Compressor Cylinder	Air Dryer	Air Dryer Name	Heated	Desiccant Element		
1133402	WABCO 636 (37.4 CFM)	Filtered Non-Boosted	Twin		Bendix AD-IP Extended Purge	12V/90W	Center Bolted Canister	N	Bulkhead Mounted
1133422	WABCO 318 (18.7 CFM)	Filtered Non-Boosted	Single		Bendix AD-IP Extended Purge	12V/90W	Center Bolted Canister	N	Bulkhead Mounted
1133410	WABCO 636 (37.4 CFM)	Filtered Non-Boosted	Twin		Bendix AD-IP	12V/90W	Center Bolted Canister	N	Bulkhead Mounted
1133424	WABCO 318 (18.7 CFM)	Filtered Non-Boosted	Single		Bendix AD-IP	12V/90W	Center Bolted Canister	Y	Bulkhead Mounted
1133414	WABCO 636 (37.4 CFM)	Filtered Non-Boosted	Twin		Bendix AD9	12V/75W	Perimeter Bolted Canister (8 bolts)	N	Bulkhead Mounted
1133423	WABCO 318 (18.7 CFM)	Filtered Non-Boosted	Single		Bendix AD9	12V/75W	Perimeter Bolted Canister (8 bolts)	N	Bulkhead Mounted
1133411	WABCO 636 (37.4 CFM)	Filtered Non-Boosted	Twin		WABCO System Saver 1200 Twin	12V/95W	Twin Spin On Canisters (no bolts)	N	Bulkhead Mounted
1133416	WABCO 318 (18.7 CFM)	Filtered Non-Boosted	Single		WABCO System Saver 1200 Twin	12V/95W	Twin Spin On Canisters (no bolts)	Y	Bulkhead Mounted
1133413	WABCO 636 (37.4 CFM)	Filtered Non-Boosted	Twin		WABCO System Saver 1200 Plus	12V/95W	Spin On Canister (no bolts)	N	Integrated to Air dryer
1133418	WABCO 318 (18.7 CFM)	Filtered Non-Boosted	Single		WABCO System Saver 1200 Plus	12V/95W	Spin On Canister (no bolts)	N	Integrated to Air dryer

# Product Information



## 316- Mack Batteries, 12 Volt

Updated: August 9, 2022

Options for battery type and battery quantity may vary by truck model and other options related to the electrical system. This document does not specify all battery package restrictions yet provides definitions of attributes found in battery packages to aid the dealer in selecting a package based on customer requirements.

**Note:** All Mack battery options are maintenance free and include 3/8" x 16 stainless stud posts.

### ➤ Battery Type

- **Cranking Battery:** Also referred to as "starter batteries", these batteries are designed to deliver a large burst of power for a short time, such as when starting the engine. Not recommended for use in long periods of cycling such as running sleeper accessories.
- **Dual Purpose Battery:** Serves as a cranking battery but also provides higher reserve capacity necessary for running sleeper accessories for longer periods of time. A better option when adding certain electrical system options such as electric lift gate prep kits.

Good

Better

Best

- **Regular Flooded:** Mack's basic, old-school battery, primarily intended as a cranking battery. The least expensive and the least durable of all battery options – not the best option for severe duty applications.
- **Enhanced Flooded:** Dual purpose batteries for starting and longer cycling. Cost more than regular flooded options but cost less than AGM options. Up to double the cycle life compared to regular flooded battery with design features that add durability characteristics similar to those found in AGM batteries.
- **AGM (Absorbed Glass Mat):** The most durable Mack batteries available with a design inherent to be most tolerant to vibration and shock. More expensive than regular flooded and enhanced-flooded options. Provides up to 3-times the life of enhanced flooded batteries in laboratory conditions. Non-spillable as defined by the DOT.

❖ *Author's note: If ever in doubt about selecting a particular battery package, go with an AGM option every time. These options are worth every penny given the battery's design for durability, longevity, and reliability.*

- **Battery Type and Quantity:** Options for battery type and quantity will vary with other electrical system options such as alternator selection, shore power with inverter, or APU.
- **Battery voltage and Cold Cranking Amperage (CCA):** All batteries are 12V. CCA varies per individual battery and number of batteries in a package. All individual batteries and packages are defined in the following table.



# Product Information



## 316- Mack Batteries, 12 Volt

Updated: August 9, 2022

- **Cold Cranking Amperage (CCA):** CCA is a rating used to define a battery's ability to start the engine in cold temperatures (generally, it is easier to start an engine in a warm environment than in a cold environment). The CCA rating refers to the number of amps a 12-volt battery can deliver at 0° F (-18° C) for 30 seconds while maintaining a voltage of at least 7.2 volts. The higher the CCA rating, the greater the starting power of the battery. If you live in a cold climate, the CCA rating is a more important consideration than in warm weather climates.

### Interpreting CCA ratings per battery package

$$\begin{array}{c} \text{(3) MACK 12V 760/2280 CCA} \\ \swarrow \quad \uparrow \quad \nwarrow \\ \text{Battery} \quad \times \quad \text{Individual} \quad = \quad \text{Combined} \\ \text{quantity} \quad \quad \text{battery CCA} \quad \text{package CCA} \\ \quad \quad \quad \text{rating} \end{array}$$

- **Combined Reserve Capacity:** Reserve capacity is simply the time in minutes a battery can sustain a 25-amp load without dropping below 10.5 volts, at which time the battery should be recharged. The table below lists the combined reserve capacity for all Mack battery package options, which is useful for determining the best option for meeting the customer's cycle requirements.

Sales Code	Battery Qty.	Individual Battery CCA	Combined CCA	Combined Reserve Capacity	Battery Type
3165105	3	650	1950	450	Regular Flooded Cranking Battery
3166104	4		2600	600	
3165104	3	760	2280	510	
3166106	4		3040	680	
3164104	2	1000	2000	370	
3165106	3		3000	555	
3166105	4		4000	740	
3165107	3	730	2190	570	Enhanced Flooded Dual Purpose Battery
3166107	4		2920	760	
3165108	3	800	2400	600	AGM Dual Purpose Battery
3166108	4		3200	800	
3169029	4	925	3700	760	

Good  
↓  
Better  
↓  
Best

# Product Information



## 1180027 BEHR FAN AND ELECTRONICMODULATING VISCOUS FAN DRIVE (118AB8)

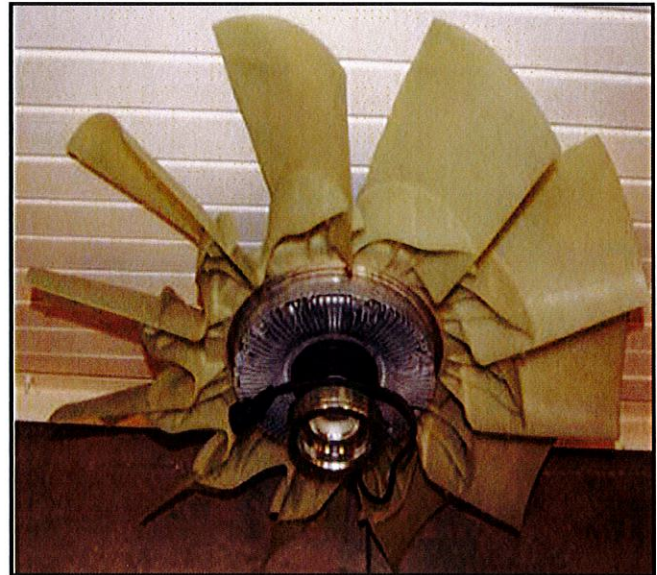
**Related:**

**Updated:** October 31, 2019

The Behr Cold Start Improved (CSI) electronically-controlled viscous (E-Visco®) fan and clutch implements an aerodynamically improved blade design, driving more air flow with less fan power consumption. This is a maintenance-free system that reduces noise (due to low engagement rates) and lowers fuel consumption. This system uses a solenoid, rather than the bi-metal strip used on a conventional Visco® clutch.

The CSI E-Visco® fan clutch provides improved controls to minimize fan on-time, better management of engine cooling and fuel efficiency. This fan clutch provides a cold start feature to trigger quicker and extended disengagement for easier starting in cold climates. Lower disengagement speeds have also been developed to better manage engine cooling needs.

The electrically drive E-Visco® clutch directly controls the coolant requirements by means of electrical sensors. A regulator processes the values (for coolant, oil and charge-air temperatures, engine speed, retarder, HVAC system, etc.) and a clocked control current forwards them to the integrated electromagnet. The discrete-operated magnetic field has an armature via which it operates the valve controlling the internal oil flow and the control circuit is closed by an additional sensor for the fan speed. This increases the dynamic response of the engagement and disengagement of the fan. Adjustment of the cooling as required improves the coolant temperature level while minimizing noise and fuel consumption.



### **System Features:**

- Low Noise Operation
- Low idle speed
- Quick engagement
- Fan speed adjusts to cooling requirements
- Low oscillations of coolant temperature
- Increased performance life (slip-heat protection\*)
- Increased torque capacity (comparable to On/Off clutches)
- Soft engagements (no torque-peaks at engagement)

### **\*Slip-heat Protection**

This prevents intermediate fan speeds at high input speed. Without this protection, the clutch may overheat at high input speed.

### **Limits of Slip-heat Protection**

- No limitations below drive input speed of 2400 rpm (approx. 1800rpm engine speed)
- Function similar to On/Off fan at drive input speed of 2400-3060 rpm (approx. 2300 rpm engine speed)



# Product Information



## EBR-VEB Mack MP8 PowerLeash™ (110-AA6)

**Affects:** Anthem, Pinnacle, Granite

**Related:** Interior Trim (004)

**Updated:** Jan 30, 2019


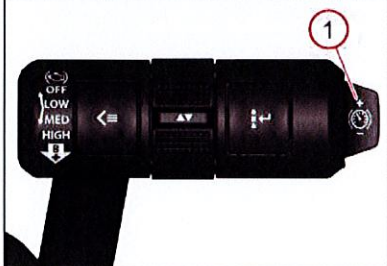

### MACK PowerLeash™ Engine Brake

The Mack PowerLeash engine brake available on the MP8 engine, controls vehicle speed by using engine compression in conjunction with internal engine exhaust braking functions. Engine braking reduces wear on the foundation brakes and helps a driver maintain control of the vehicle. The Mack engine braking can also be ordered to work in unison with the vehicle's cruise control system, to maintain the vehicle set speed in downhill terrain.

The Anthem, Pinnacle and GU system integrates the PowerLeash switch in a stalk switch mounted on the right hand side of the steering column. The stalk is used to activate, deactivate or change setting of the PowerLeash system. This system can be used in conjunction with the cruise control to adjust for over speed on downhill grades to maintain a target speed.

The system uses a five position control switch along with a set switch to adjust settings. The first four positions of the control switch stop at detents, with the fifth position being a momentary type switch. See outline below for more information on the switches.

With the control switch in any on position, the set switch can be used to adjust maximum target speed to maintain the set target speed on downhill grades. When the brake engages to maintain a target speed, the engine braking can vary from 0%-100% to maintain the set speed.

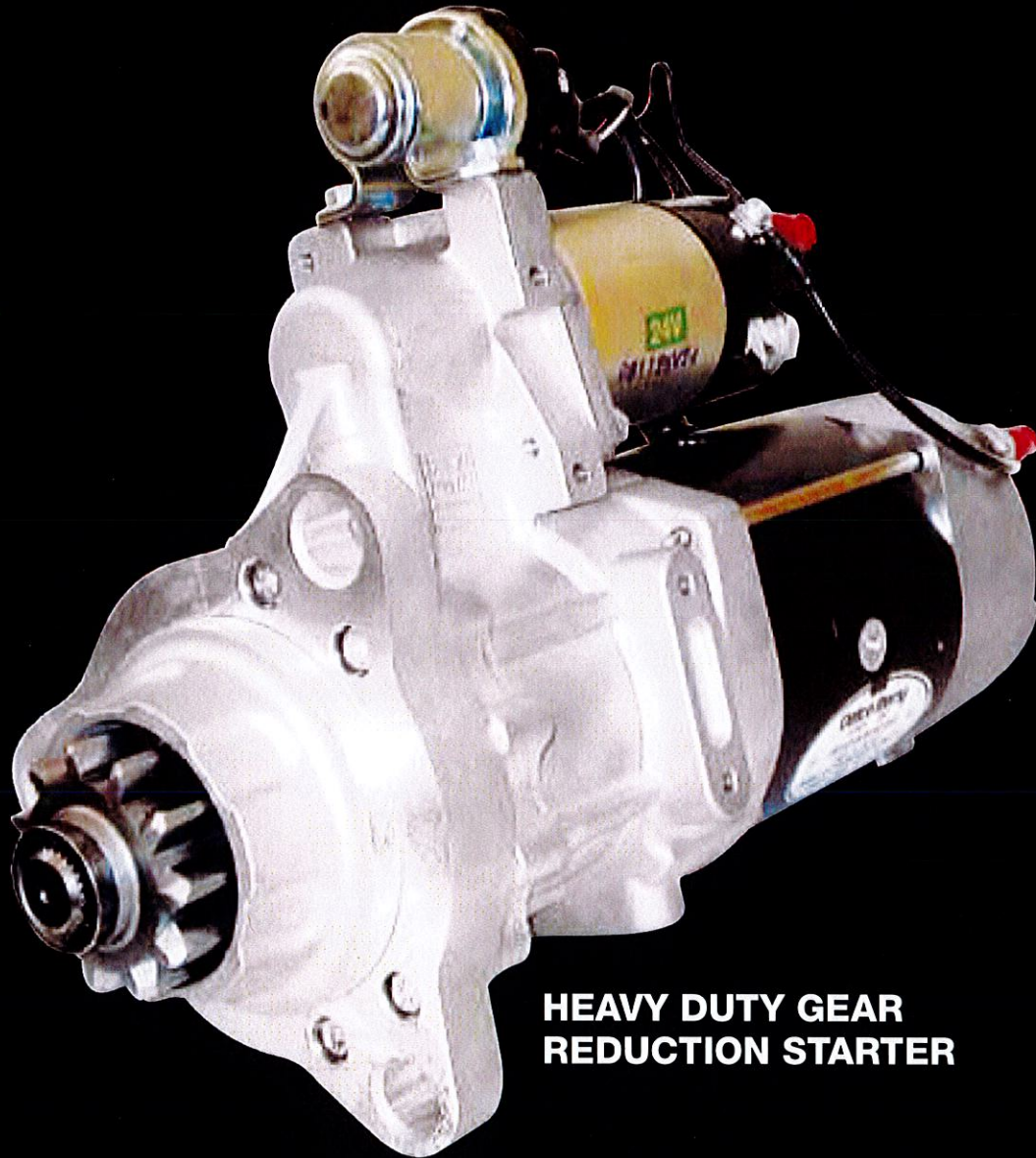
Control Switch	Set Switch	Set Speed in Instrument Panel Display
		
To activate the engine brake, move the stalk switch, to the LOW, MED or HIGH position (1). The last stalk switch position B+, is for maximum engine braking and is controlled by a momentary switch.	The cruise control braking set target speed can be adjusted up to 9 mph higher than the current cruise control set speed (1)..	When the cruise control and engine brake are activated the following icons display in the Driver Information Display (DID). 1 – Cruise Control Icon 2 – Current Speed 3 – Current Cruise Control Braking Set Speed 4 – Cruise Control Braking Icon

**Note:** If equipped with a Mack Active Cruise Control, the engine brake may engage even if the engine brake is switched off. This is performed in order to help maintain a safe following distance between vehicles.

**Note:** For mDRIVE users, when the Mack engine brake is activated and the transmission is shifting gears, there will be a momentary interruption of the braking torque.



## **DELCO REMY 39MT**



**HEAVY DUTY GEAR  
REDUCTION STARTER**

**HEAVY IN FEATURES  
LIGHT IN WEIGHT**



# DELCO REMY 39MT



The Delco Remy 39MT Heavy Duty Starter Motor offers engineering enhancements and features that put it in a class of its own, with 15% more power and greater durability.

## LONG LIFE BRUSHES

The 39MT features new long life brushes, engineered for maximum service life. Start after start, day after day, year after year, these unique brushes allow us to back the 39MT starters with a 3-year unlimited mileage warranty.

## IMPROVED DRIVER SYSTEM

Durability is also a benefit of the new and improved drive system that provides up to 40% increase in strength. It's more resistant to high-impact loads that can sometimes occur as a result of rapid re-engagement, engine rock-back or engine hydro-lock.

## FEATURES

### STANDARD INTEGRAL MAGNETIC SWITCH

Reduces voltage drop and ensures that the solenoid receives the maximum available voltage in any starting condition

### MAXIMUM TORQUE TECHNOLOGY

For exceptional torque and starting power

### LIGHT WEIGHT

Cast-aluminum body helps to keep the weight down without sacrificing strength or durability

### SEALED NOSELESS CONFIGURATION

Eliminates accumulation of debris and reduces contamination for the life of the starter

### ELECTRICAL SOFT START

Design rotates the pinion to allow for proper pinion-to-ring gear alignment and full engagement before cranking at full power

### SOLID LINK SOLENOID

Prolongs service life by eliminating contact welding in low-voltage situations

### HEAVY DUTY BEARING AND BUSHING SYSTEM

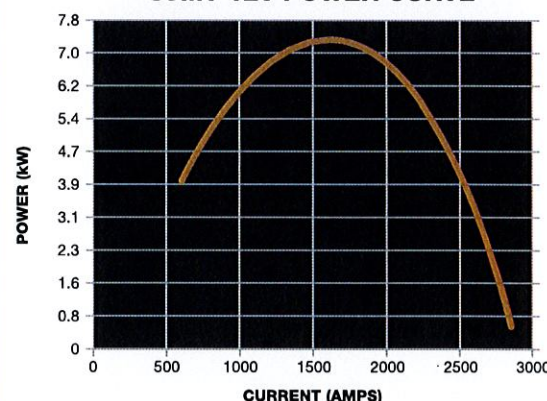
Increases reliability and service life

## SPECIFICATIONS

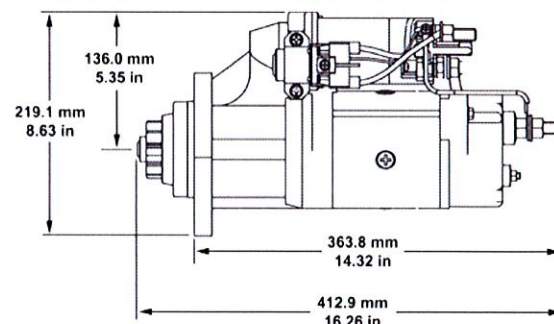
ENGINE SIZE	12V up to 16 Liters 24V up to 16 Liters
ROTATION	Clockwise
MOUNTING	12V: SAE #1, SAE #3 24V: SAE #3
PINION DATA	11 Tooth, 6-8 Pitch 12 Tooth, 8-10 Pitch 12 Tooth, Mod 3-metric
OUTPUT	12V Peak at 7.3 kW 24V Peak at 9.0 kW
WEIGHT	14 kg/30.8 lbs.
DIAMETER	114 mm/4.5 inches
HEAVY DUTY DRIVE	Electrical Soft-Start Engagement System Overrunning Clutch

## PERFORMANCE

39MT 12V POWER CURVE



## DIMENSIONS



# Product Information



## Co-Pilot

Affects: Anthem, Pinnacle, Granite  
Related: Interior Trim (004)  
Updated: May 30, 2017

## DRIVER INFORMATION DISPLAY

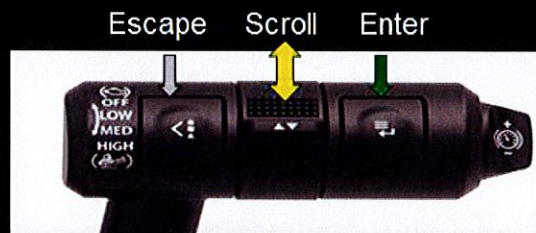
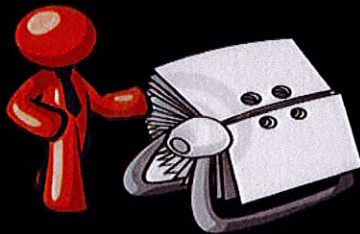
### Copilot Display Control - Driver Information Display (DID)

Simple and intuitive

Meets FMCSA driver distraction guidelines

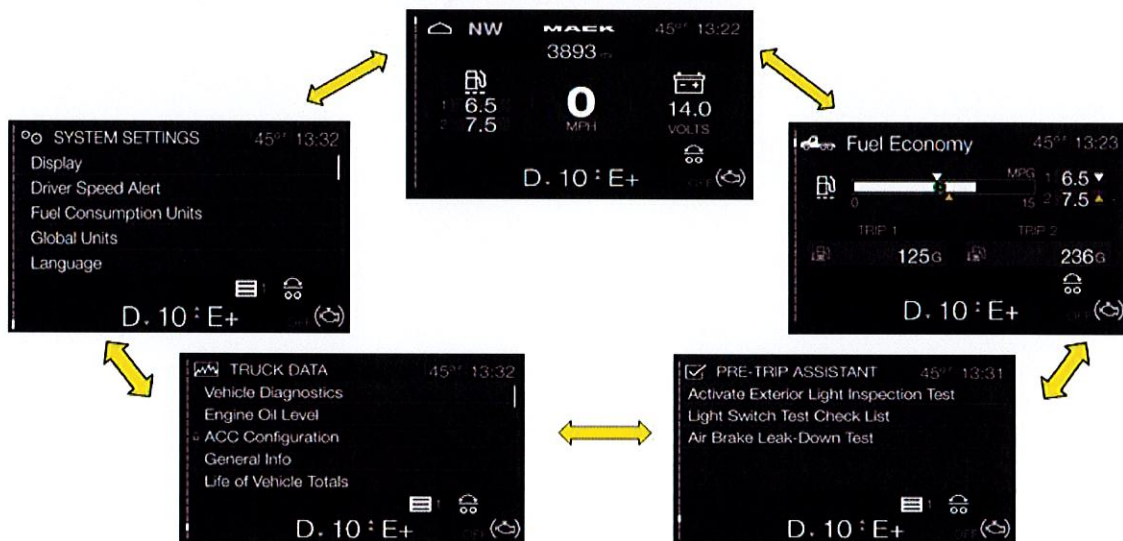
One keystroke access

360 deg. scroll switch works like a Rolodex



## DID SCREEN NAVIGATION

Menu screen navigation is in a circular format





# Product Information



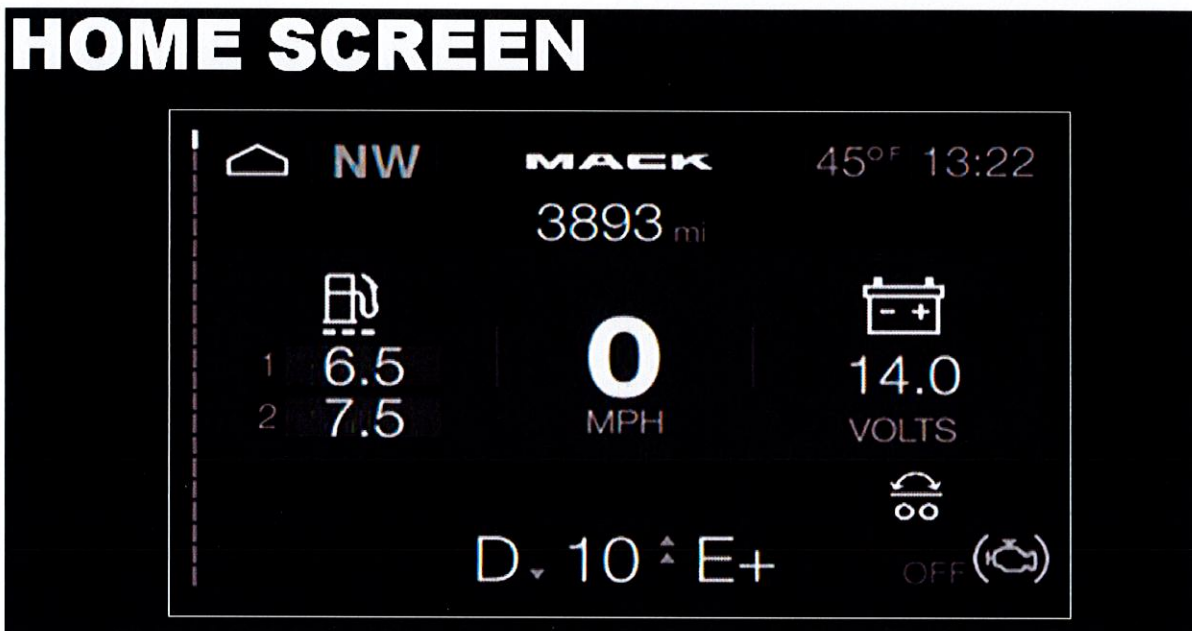
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite

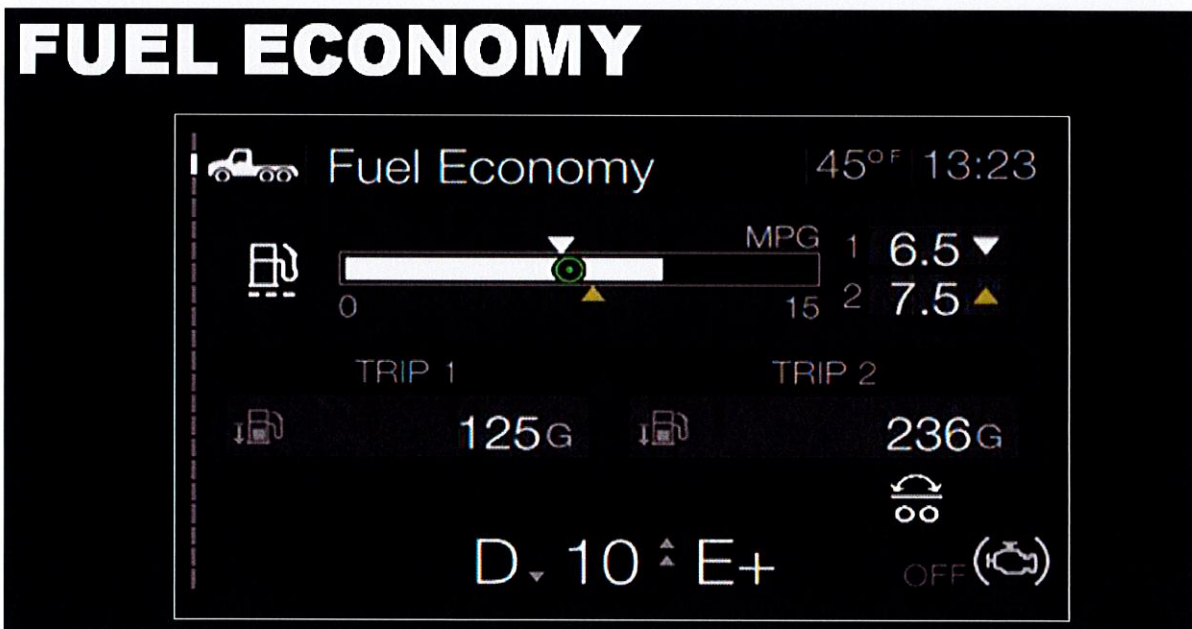
**Related:** Interior Trim (004)

**Updated:** May 30, 2017

## HOME SCREEN



## FUEL ECONOMY



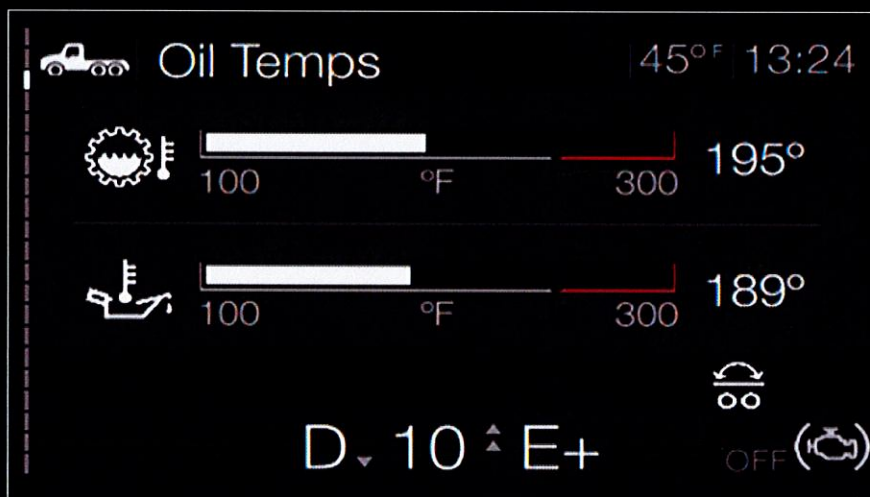
# Product Information



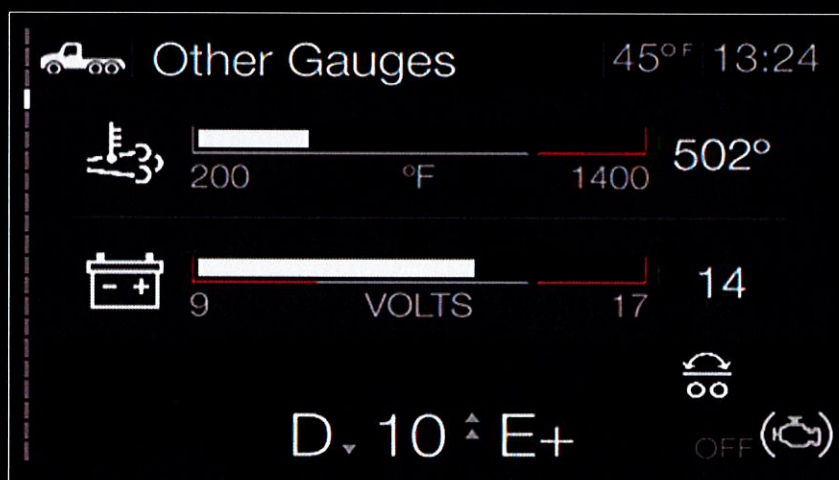
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

## OIL TEMPERATURES



## EXHAUST PYROMETER, VOLTMETER





# Product Information



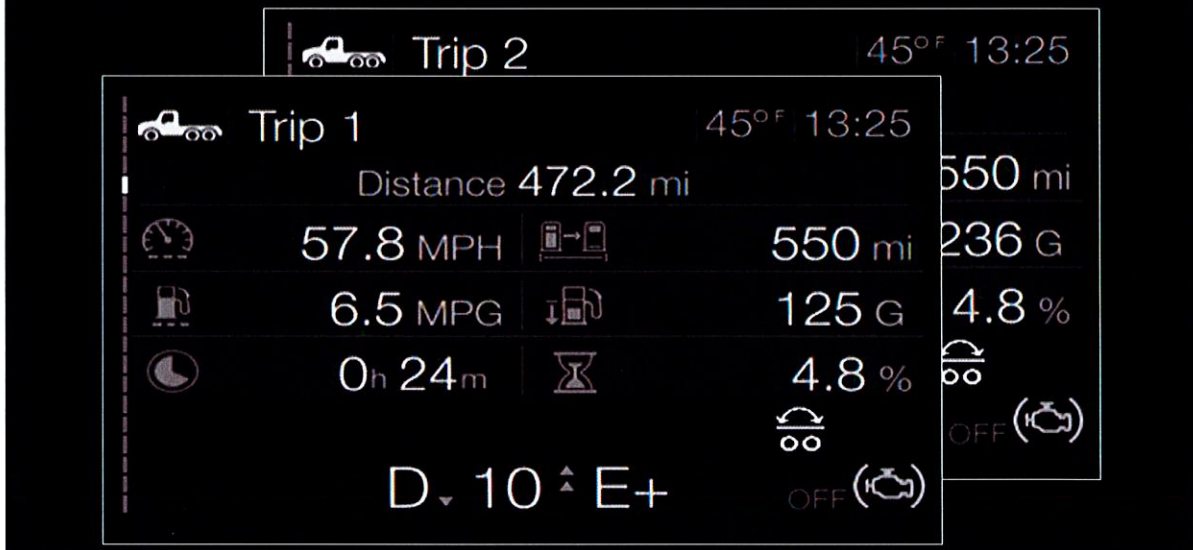
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite

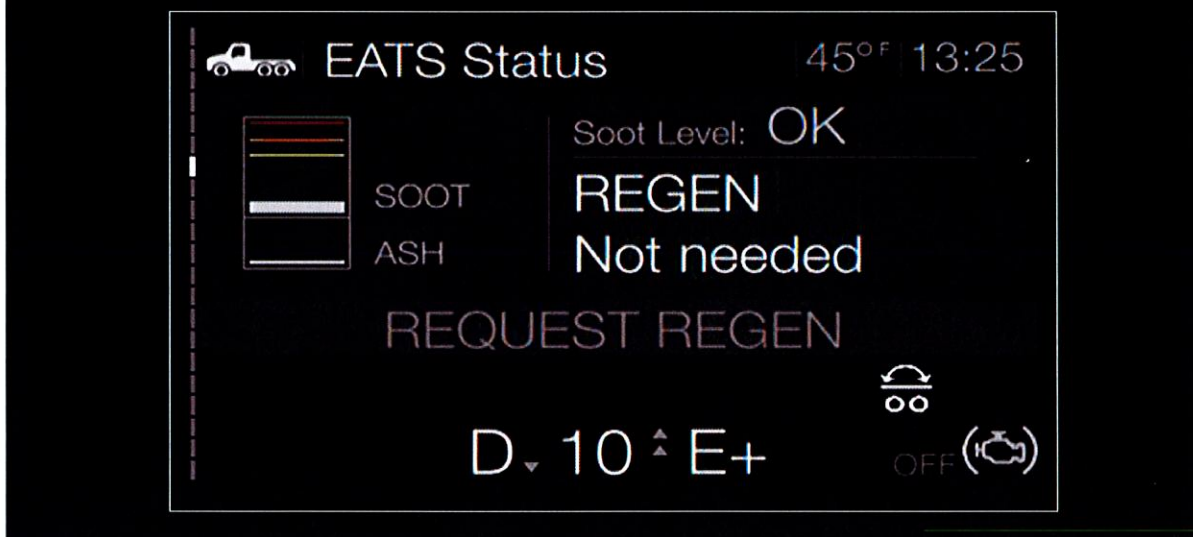
**Related:** Interior Trim (004)

**Updated:** May 30, 2017

## TRIP ODOMETER 1 & 2



## EATS STATUS (ENGINE AFTERTREATMENT SYSTEM)



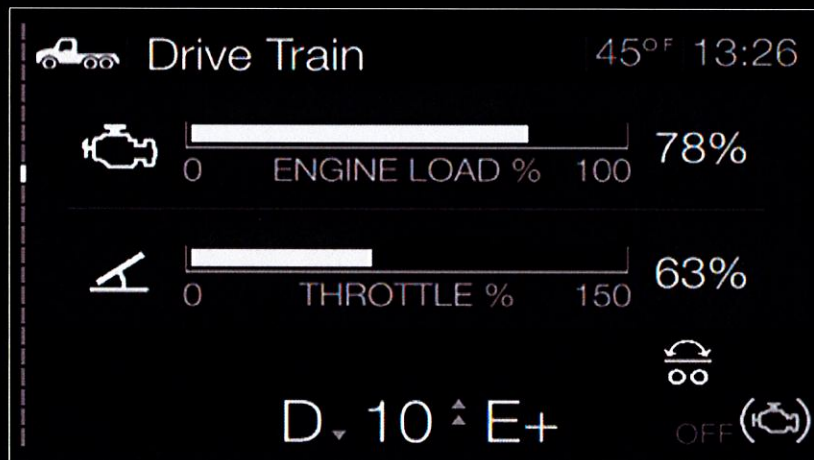
# Product Information



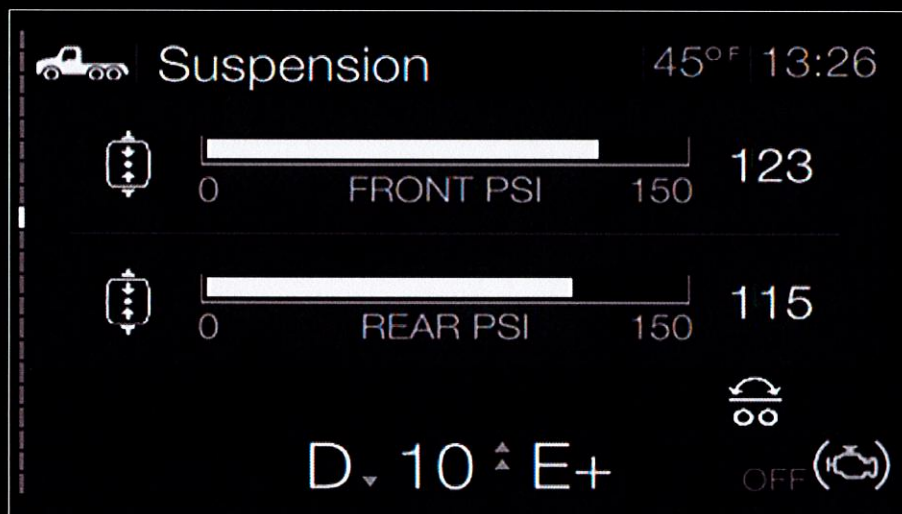
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

## DRIVE TRAIN LOAD, THROTTLE %



## AIR SUSPENSION





# Product Information



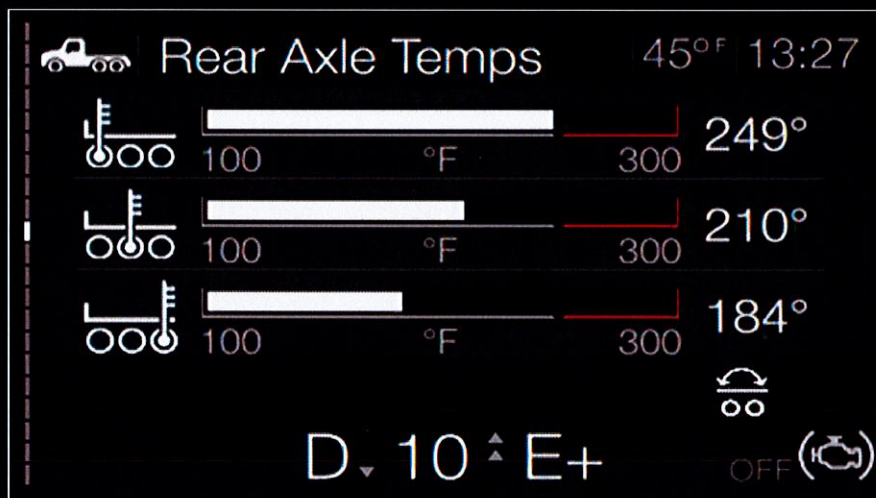
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite

**Related:** Interior Trim (004)

**Updated:** May 30, 2017

## AXLE TEMPERATURES



## FUEL INCENTIVE



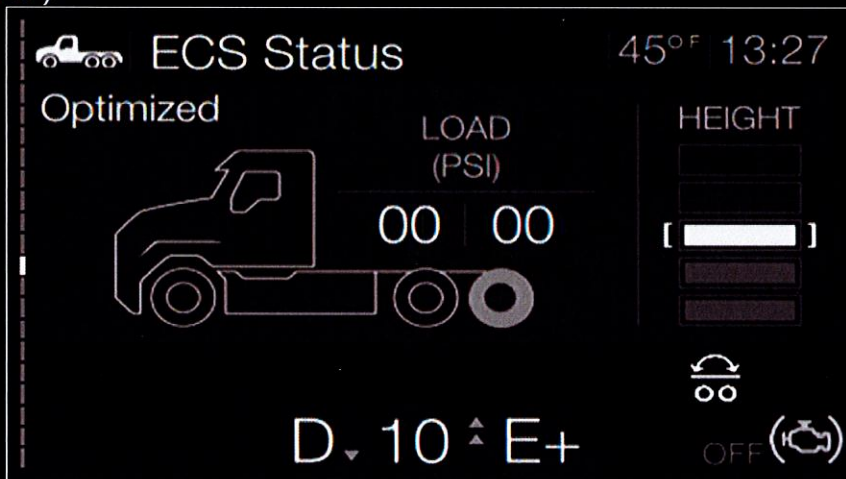
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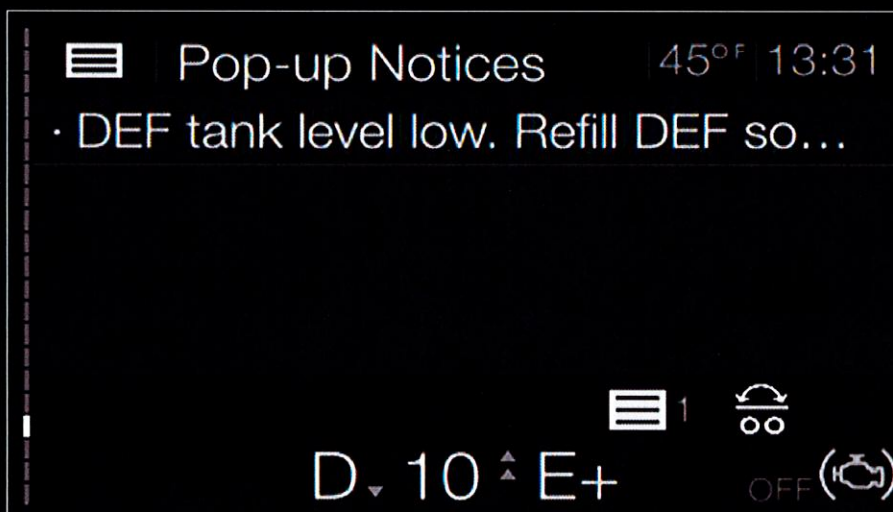
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

## ELECTRONIC CONTROLLED SUSPENSION (6X2 ONLY)



## POP-UP NOTICES





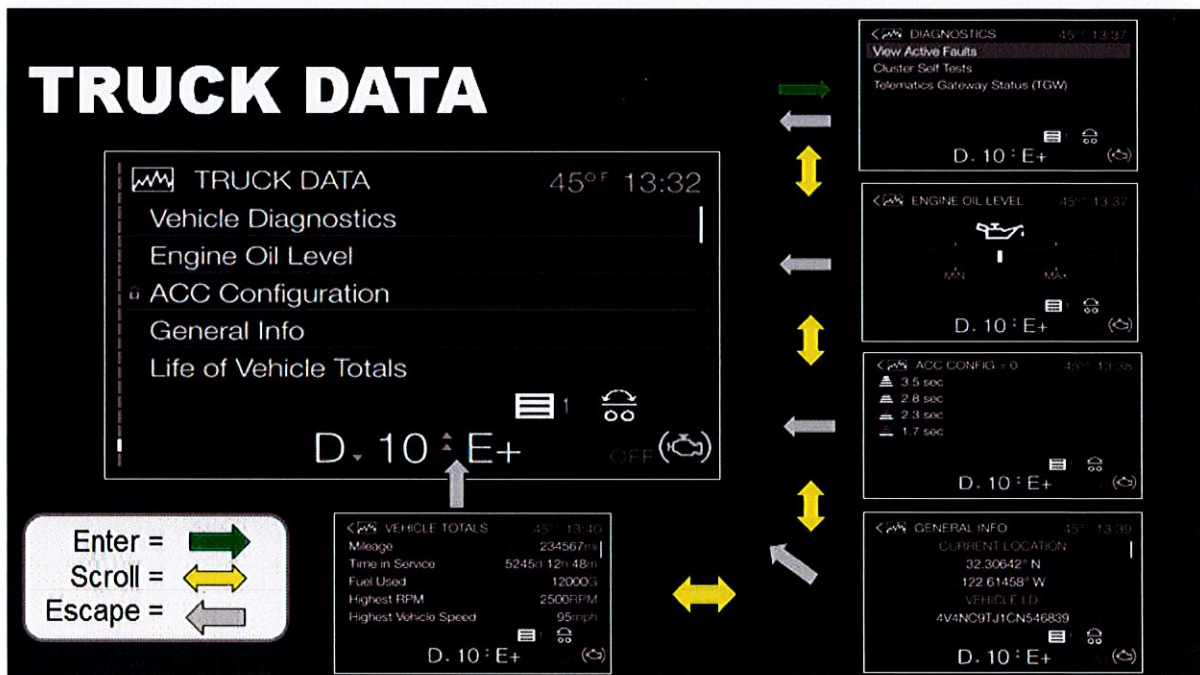
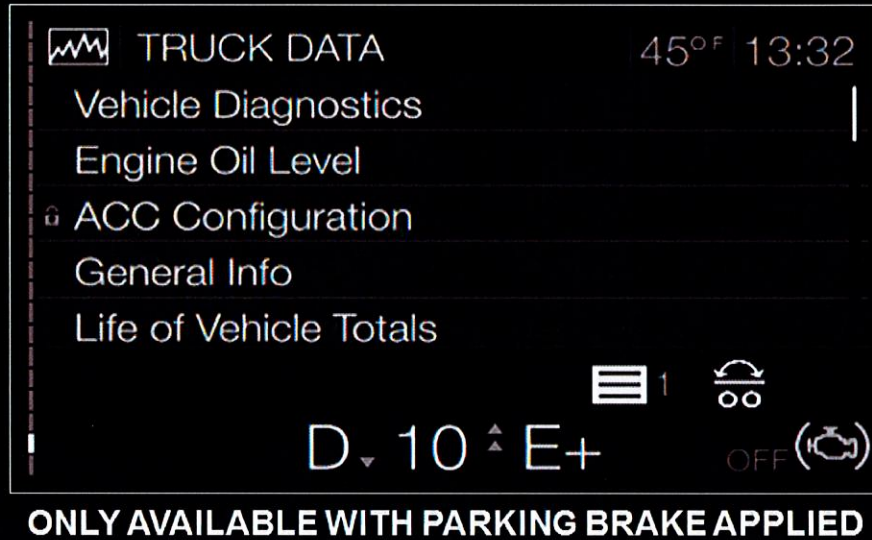
# Product Information



## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

## TRUCK DATA



# Product Information






## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite




**Related:** Interior Trim (004)



**Updated:** May 30, 2017

# PRE-TRIP ASSISTANT

Enter =   
Scroll =   
Escape = 


☒ PRE-TRIP ASSISTANT 45°F 13:31  
Activate Exterior Light Inspection Test  
Light Switch Test Check List  
Air Brake Leak-Down Test

  
D. 10 ↑ E+ OFF 

☒ LIGHT INSPECTION 45°F 13:34  
Exterior lights activated.  
Exit cab and verify that all  
lights are functioning.  
Exit screen to end test.  
D. 10 ↑ E+ 




☒ SWITCH TEST 45°F 13:35  

<input checked="" type="checkbox"/> Left Turn Signal	<input checked="" type="checkbox"/> Fog Light
<input type="checkbox"/> Right Turn Signal	<input type="checkbox"/> Head Lights - AUTO
<input type="checkbox"/> Service Brake	<input type="checkbox"/> High Beams
<input type="checkbox"/> Hazard Lights	<input type="checkbox"/> Flash-to-Pass
<input type="checkbox"/> Parking Lights	<input type="checkbox"/> Reverse/Backup Lights
<input type="checkbox"/> Head Lights	<input checked="" type="checkbox"/> DRL (Daytime Switch)

  
Activate each switch listed above  
D. 10 ↑ E+ 



☒ LEAK-DOWN TEST 45°F 13:36  
To begin test  
Turn Engine Off  

Start	--	--
End	--	--
Drop	--	--

  
START TEST   
D. 10 ↑ E+ 

# PRE-TRIP ASSISTANT

☒ PRE-TRIP ASSISTANT 45°F 13:31  
Activate Exterior Light Inspection Test  
Light Switch Test Check List  
Air Brake Leak-Down Test

  
D. 10 ↑ E+ OFF 

**ONLY AVAILABLE WITH PARKING BRAKE APPLIED**



# Product Information



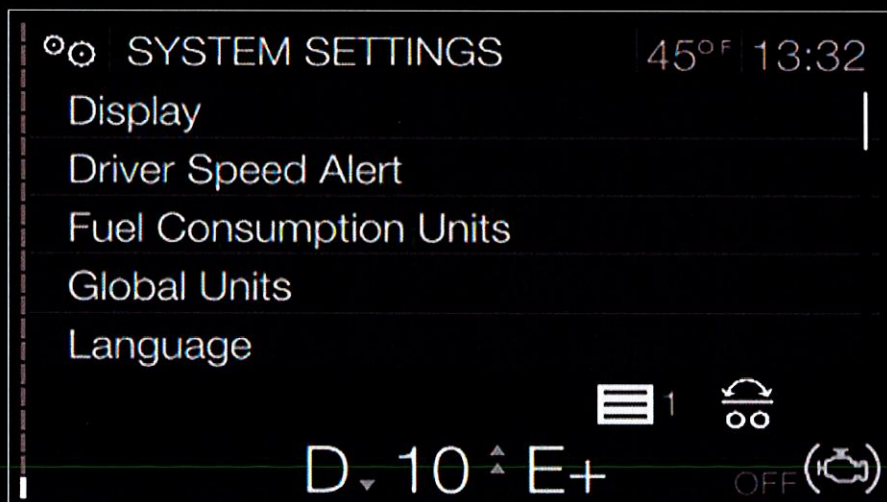
## Co-Pilot

**Affects:** Anthem, Pinnacle, Granite

**Related:** Interior Trim (004)

**Updated:** May 30, 2017

## SYSTEM SETTINGS



**ONLY AVAILABLE WITH PARKING BRAKE APPLIED**

**DFA-FULL:** This feature will allow the driver to access fault codes through the Co-Pilot display.

**DFA-LIM:** This feature will not allow the driver to access fault codes through the Co-Pilot display.

# Product Information



## DPF- ClearTech™ One US17 Emission Systems

**Affects:** All Models  
**Related:** Chassis Configuration  
**Updated:** November 13, 2017

US'17 emission standards still require the use of a DPF and an SCR. ClearTech One™ is the name for Mack's new frame mounted single unit – Sales Code DPF0111. Other emission configurations have also been upgraded to US'17 standards and are depicted below.

DPF-0111 Shown on a Granite Axle Forward:



ClearTech One – DPF-0111 replaces the previous two component systems: DPF-0103, DPF-0104, and DPF-0105. On Granite Models with Mack engines, DPF-0111 will be in the forwardmost position behind the right front fender. If a Twin Steer package is ordered with the new frame mounted ClearTech One system, please refer to the Packaging Data Sheets for relocated position on the right hand frame rail.

Shown on a Pinnacle with Dual Battery Boxes:





# Product Information

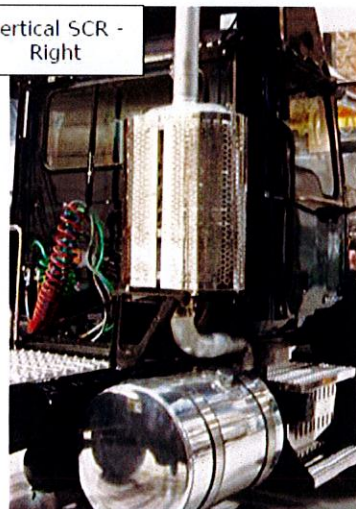


## DPF- ClearTech™ One US17 Emission Systems

**Affects:** All Models  
**Related:** Chassis Configuration  
**Updated:** November 13, 2017

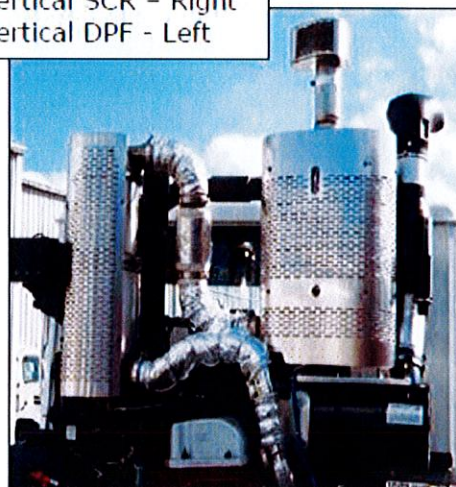
Other systems that are available on the models listed in the description:

Vertical SCR -  
Right



**CLEARTECH HV - DPF0101**  
Available on Anthem and GRB  
Twin Steer Mixers with 92" FA  
Spacing

Vertical SCR - Right  
Vertical DPF - Left



**CLEARTECH VV - DPF0102**  
Standard on LR and TE Cab Over  
Models

Vertical SCR - Left  
Vertical DPF - Right



**CLEARTECH VV - DPF0106**  
Twin Steer Conventional Mixers

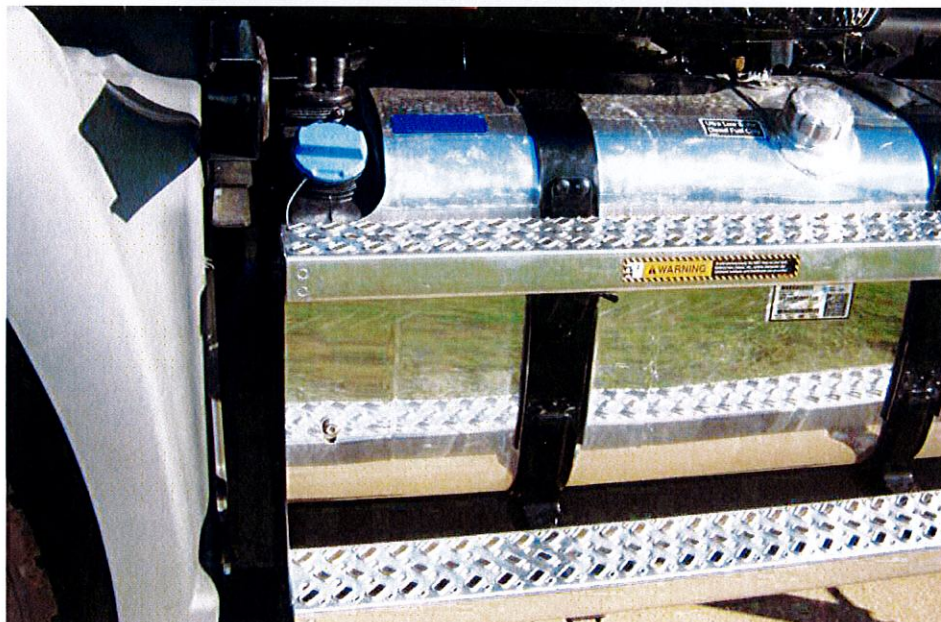
# Product Information



**DF12025      6.6 GALLON (25 L) 22" INTEGRAL TO LH FUEL TANK  
(DF10P1)**

Updated: September 1, 2017

25L DEF tank, 22" diameter, used in conjunction with sleeved 22" fuel tanks.





# Product Information



## 130-5101 Single Cab Mounted Exhaust, Turned End (130AD7)

**Affects:** Conventional Models

**Related:** DPF/SCR (DPF), Exhaust Finish (EXMF-)

**Updated:** May 1, 2018

Cab mounted exhaust, saves 50 pounds over single back of cab stanchion mounted exhaust.

**NOTE:** Ground to top of exhaust height is 9' 6" on a Granite Day Cab. Ground to top of exhaust height is 11' 6" with a 36" HOS Sleeper. Order EXSTH355 if you would like a day cab with the extra 11' 6" height.



# Product Information



## 130-5101 Single Cab Mounted Exhaust, Turned End (130AD7)

**Affects:** Conventional Models

**Related:** DPF/SCR (DPF), Exhaust Finish (EXMF-)

**Updated:** May 1, 2018



Cab Mounted Pivot at  
Top of Exhaust System:





# Product Information



## 130-5101 Single Cab Mounted Exhaust, Turned End (130AD7)

**Affects:** Conventional Models

**Related:** DPF/SCR (DPF), Exhaust Finish (EXMF-)

**Updated:** May 1, 2018

Cab Mounted Exhaust shown on Day Cab with 11" 6" Height:



# Product Information



## 1362135 Transmission, Eaton RTO-16908LL

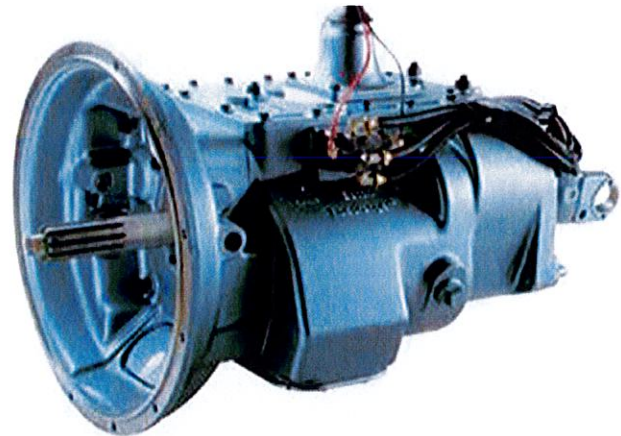
**Related:** Transmission (136), Driveline (195), Rear Axle (268)

**Updated:** July 2, 2020

8 plus 2 versatility for on/ off-highway applications and demanding on-highway duty.

The 8LL transmissions provide drivers with the versatility they need for a mix of on- and off-highway applications.

These transmissions offer eight road-speed gears and two additional deep-reduction ratios in low and reverse.



- Eight road speed gears and two additional deep reduction ratios in low and reverse for on/off-highway versatility.
- Improved tolerance to driver abuse due to new mainshaft washer design.
- High capacity tapered roller bearings on both auxiliary countershafts for increased bearing life.
- Improved output seal system increases seal life and eliminates potential for seal damage during yoke service.
- Easy range shifting and long life due to proven heavy-duty synchronizer technology.
- Binocular-type range and deep reduction shift cylinder assembly for greater serviceability and fewer parts.
- Increased lubrication protection with optional integral oil pump.
- Standard SAE 6-bolt and 8-bolt PTO openings and optional thru-shaft PTO provision at rear.

### Applications at a Glance

Linehaul	Heavy Haul	Severe Duty						Constr.	P&D
		Logging	Mining	Oil Field	Refuse	Agriculture	Off-Hwy		
No	No	No	No	✓	✓	✓	✓	✓	✓



# Product Information



## 1362135 Transmission, Eaton RTO-16908LL

**Related:** Transmission (136), Driveline (195), Rear Axle (268)

**Updated:** July 2, 2020

### Clutch Housing Type, Material and Weight

SAE No. 1			SAE No. 2		
Material	Aluminum [kg]	Iron [kg]	Material	Aluminum [kg]	Iron [kg]
Standard	23 lbs. [10]	76 lbs. [34]	Standard	21 lbs. [10]	68 lbs. [31]
Nodal	36 lbs. [16]	92 lbs. [42]	Nodal	N/A	88 lbs. [40]

### Quick Specs

Lbs.-Ft. Max TQ [Nm]	Integral Oil Pump	Thru- Shaft PTO	Integral Oil Cooler	External Oil-to- Water Cooler	External Oil Filter	Oil Capacity Pints [liters]	Length Inches [mm]	Weight (*) Lbs. [kg]	PTO Speed (% of engine)	Combined PTO Torque (Lbs.-ft.)
1650 [2237]	Yes	Optional	No	Optional	Optional	28 [13]	33.1 [841]	690 [313]	94%	500

(\*) Less clutch housing, lubricant and end yoke

### PTO Openings:

- Two SAE standard openings.
- **Right side:** Regular duty, 6-bolt, short length.
- **Bottom:** Heavy duty, 8-bolt.

### PTO Drive Gears:

- **Right side:** A 45-tooth, 6/8 pitch gear.
- **Left side:** A 47-tooth, 6/8 pitch gear.
- Both gears turn at 0.94 engine speed.

### Gear Ratios

Overall Ratio	Reverse Gear Ratios		
19.58	1	2	3
	15.22	9.95	2.89

LL	L	1	2	3	4	5	6	7	8
14.56	9.42	6.24	4.63	3.40	2.53	1.83	1.36	1.00	0.74
55%	51%	35%	36%	34%	38%	35%	36%	34%	Final

# Product Information



**1362135**

**Transmission, Eaton RTO-16908LL**

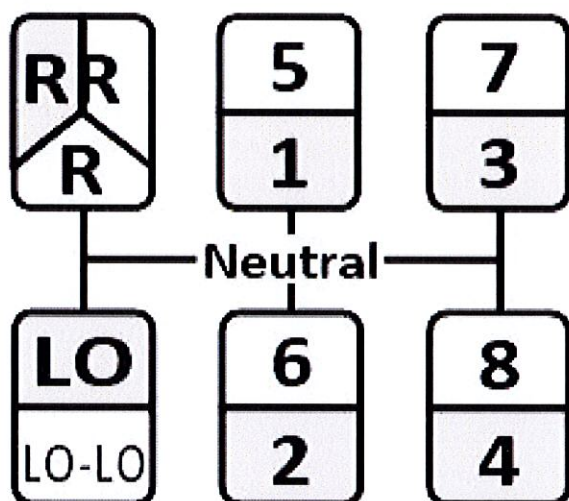
**Related:**

Transmission (136), Driveline (195), Rear Axle (268)

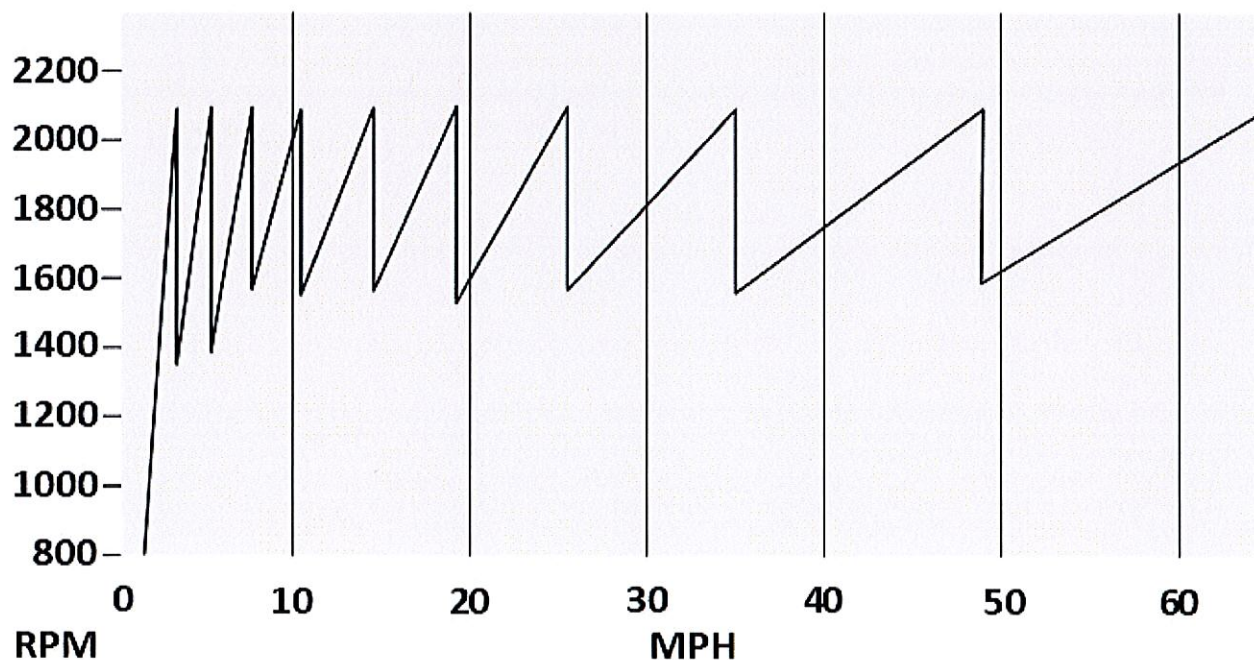
**Updated:**

July 2, 2020

## Shift Pattern



**Performance Chart (based on engine operating at 2100 RPM and top speed of 65 MPH)**







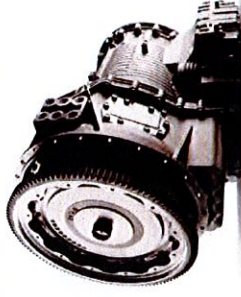
## Product Information

### 136- ALLISON TRANSMISSION RUGGED DUTY SERIES w/ GEN 6 ELECTRONICS

Updated: February 21, 2022

This product information bulletin applies to the following models:

Sales Code	Description
1364577	3000 RDS 6 SPD ALLISON GEN6 W/PROGNOSTICS, WITH PTO PROVISION
1364578	3000 RDS R 6 SPD ALLISON GEN 6 W/PROG, W/OUTPUT RETARDER W/PTO
1364584	4000 RDS 6 SPD ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
1364585	4000 RDS R 6 SPD ALLISON GEN 6, W/PROG, W/OUTPUT RETARDER W/PTO
1364579	4500 RDS 5 SPD ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
1364581	4500 RDS 6 SPD ALLISON GEN 6 W/PROGNOSTICS, WITH PTO PROVISION
1364580	4500 RDS R 5 SPD ALLISON GEN 6 W/PROG, W/OUTPUT RETARDER W/PTO
1364582	4500 RDS R 6 SPD ALLISON GEN 6, W/PROG, W/OUTPUT RETARDER W/PTO
1364587	4700 RDS 7 SPEED ALLISON GEN 6 W/ PROGNOSTICS (Customer Adaptation)



#### PTO Specifications

Series	Mounting Pad Positions Viewed from Rear	Drive Gear Rating with one PTO lb-ft (N·m)	Drive Gear Rating with two PTOs lb-ft (N·m)
3000 (4)	4 and 8 o'clock	485 (660)	685 (930)
4000 (4)	1 and 8 o'clock	685 (930)	1175 (1595)

(4) Minimum 600 rpm idle speed required when dual PTOs are used simultaneously

#### Physical Characteristics

	Length (1) inch (mm)	Depth (2) inch (mm)	Dry Weight lbs (kg) (3)
<b>3000</b>			
Basic model	28.30 (718.7)	12.90 (327.7)	535 (243)
With PTO only	32.50 (825.4)		575 (261)
With retarder only	28.29 (718.5)		615 (279)
With PTO + retarder	32.49 (825.4)		655 (298)
<b>4000 / 4500</b>			
Basic model	30.54 (775.8)	14.75 (374.7)	831 (377)
With PTO only	33.41 (848.8)		893 (405)
With retarder only	30.54 (775.8)		906 (411)
With PTO + retarder	33.41 (848.8)		968 (439)
<b>4700</b>			
Basic model	40.61 (1031.5)	14.89 (378.2)	1087 (493)
With PTO only	43.49 (1104.5)		1149 (521)
With retarder only	40.61 (1031.5)		1162 (527)
With PTO + retarder	43.49 (1104.5)		1224 (555)

(1) Length measured from flywheel housing to end of output shaft. (2) Depth measured below transmission centerline.  
(3) Weight does not include transmission cooler, piping, fluid, coolant and other installation components.

#### Ratios

Model	1st	2nd	3rd	4th	5th	6th	7th	Reverse	2nd Reverse
3000	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	—	-5.03:1	—
4000	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	—	-4.80:1	—
4500	4.70:1	2.21:1	1.53:1	1.00:1	0.76:1	0.67:1	—	-5.55:1	—
4700	7.63:1	3.51:1	1.91:1	1.43:1	1.00:1	0.74:1	0.64:1	-4.80:1	-17.12:1

#### Retarder Performance

Model	Torque Capacity lb-ft (N·m)	Power Capacity hp (kW)
3000 series	1300 (1763)	500 (373)
4000 series	1600 (2170)	600 (447)

**Application Note:** Allison RDS Transmissions not approved for Oil Field Service on Pumps, Winches or Augers

D

D



## Product Information

### 136- ALLISON TRANSMISSION RUGGED DUTY SERIES w/ GEN 6 ELECTRONICS

Updated: February 22, 2022

The 6th Gen Push Button Shift Selectors have been updated with hardware improvements to increase durability and in support of technologies such as cybersecurity and functional safety.



Allison Shift Lever

Allison shift controllers provide the driver with the following capabilities:



- In-cab Fluid Level Check:** Shift controller advises the driver of transmission fluid level without having to check a fluid level dipstick.
- **CORRECT FLUID LEVEL** – The fluid is within the correct fluid level zone when OK is shown
  - **LOW FLUID LEVEL** – The display shows the number of quarts the transmission fluid is low.
  - **HIGH FLUID LEVEL** – The display shows the number of quarts the transmission fluid is overfilled .

TRANS OIL  
LEVEL OK

TRANS OIL  
2QT LO

TRANS OIL  
3QT HI

**Access to System Prognostics:** Shift controller advises the driver on the health and status of the following functions:

- **Fluid Life Monitor** – The status of the fluid life is displayed as a percentage until fluid is due for a change .

OIL LIFE  
100%

FILTERS  
OK

- **Filter Life Monitor** – The status of filter life is displayed as OIL FILTERS OK and alerts when filters are due for a change with REPLACE FILTERS .

TRANSHEALTH  
LO

- **Transmission Health Monitor** – The status of transmission health is displayed as OK or LO .

P0730  
ACTIVE

**Access to System Diagnostics:** Shift controller allows driver access to display system diagnostic codes.





**PRODUCT INFORMATION**  
**400-GRANITE GRILL FINISHES**  
**Updated: April 11, 2023**

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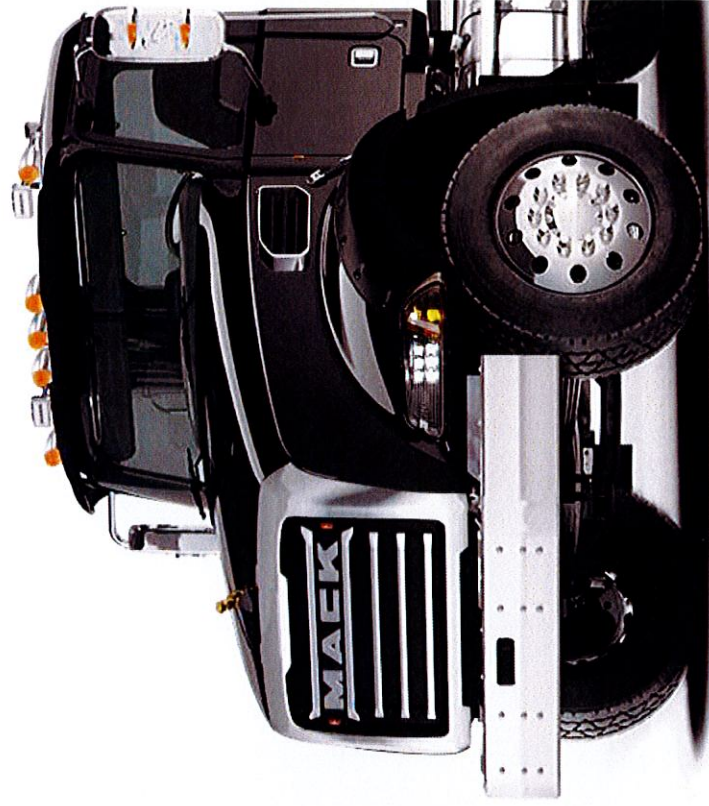
**40000025**

**BLACK FINISH BARS W/BRIGHT FINISH  
SURROUND GRILL MOUNTED**



**40000026**

**BRIGHT FINISH BARS W/BRIGHT FINISH  
SURROUND GRILL MOUNTED**



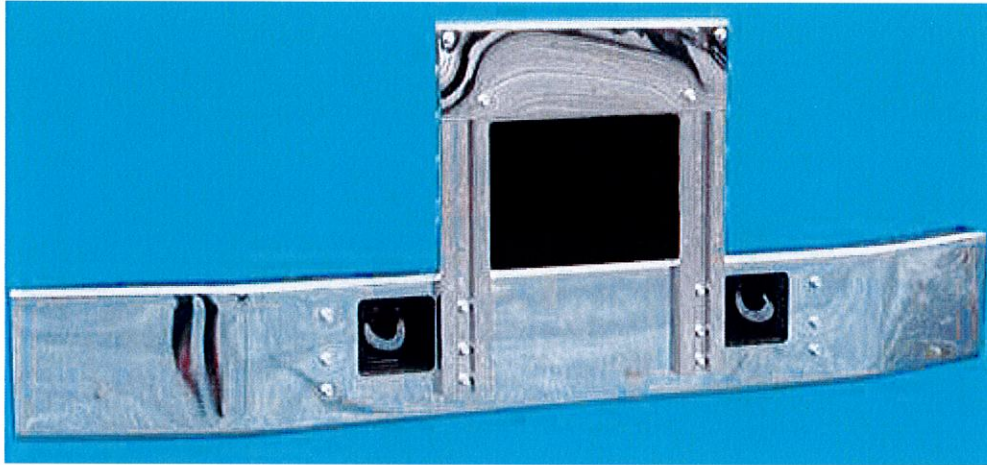


# Product Information



**BUMP-SCE EXTENDED-SWEPT BACK-STEEL BRIGHT FINISH (4DXN6X)**

Updated: September 1, 2017





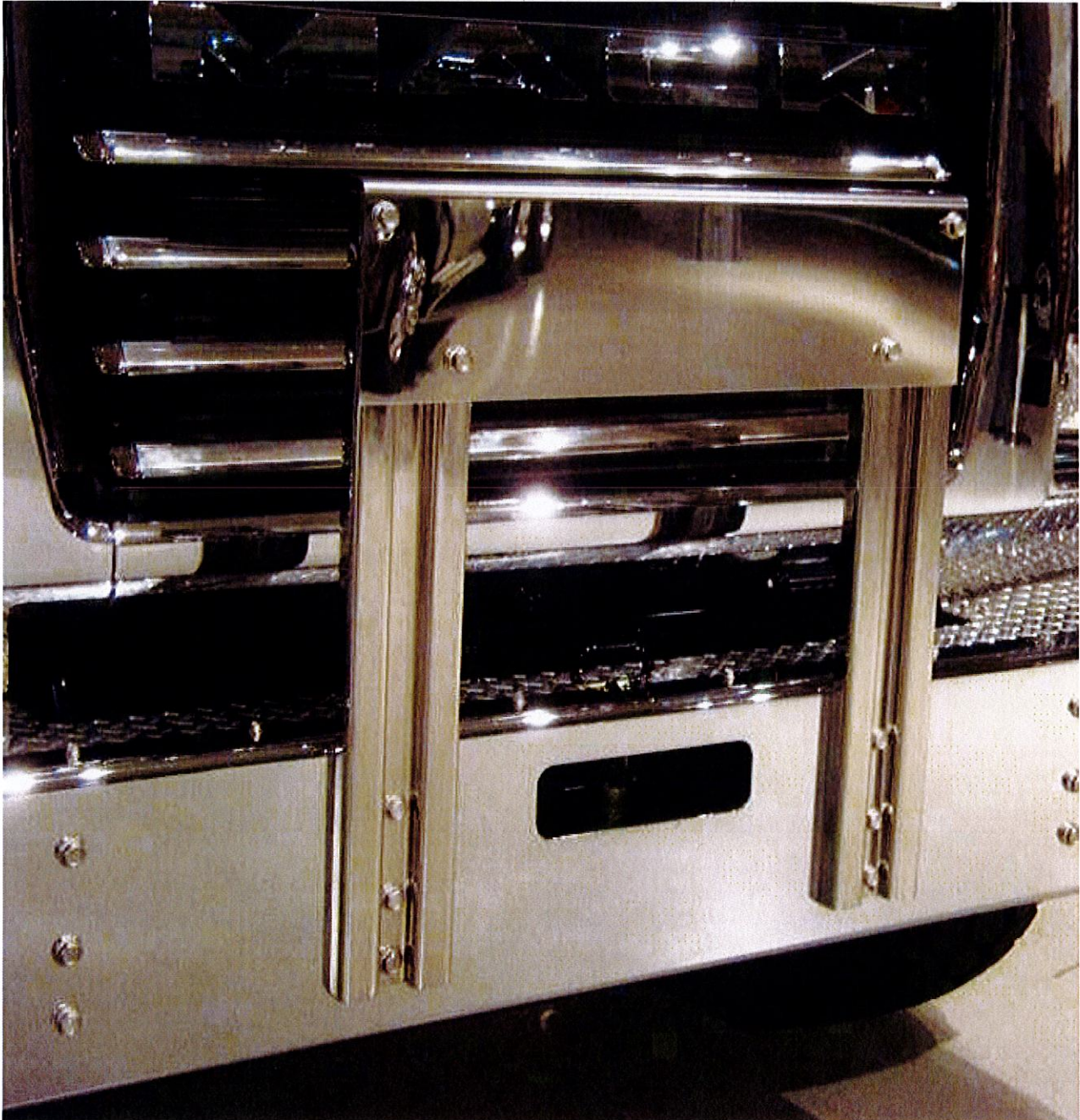
# Product Information



## GUARD-GB Radiator Guard – Bright Finish (5FXA2X)

Updated:

September 1, 2017





# Product Information



## 157-9001 Exterior Sunvisor, Stainless Steel (157037)

**Affects:** Conventional Models

**Related:** Sleeper Box (016), Roof Fairing (159)

**Updated:** April 24, 2018

Stainless Steel Exterior Sun Visor shown on Anthem Day Cab





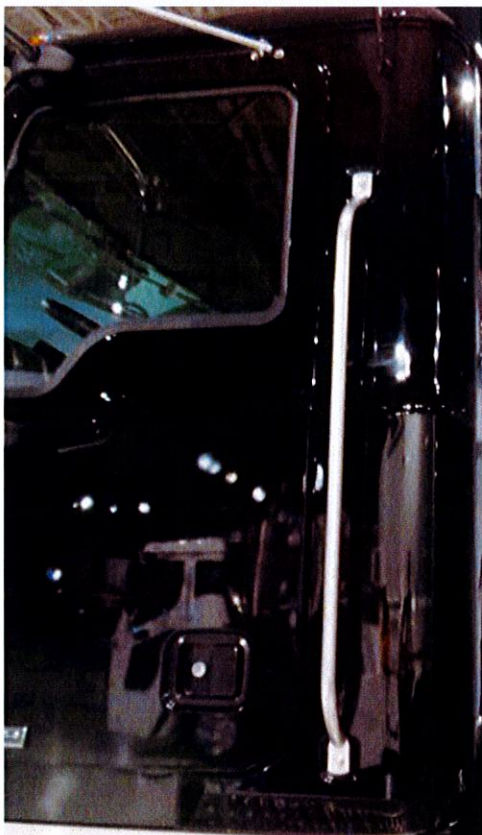
# Product Information



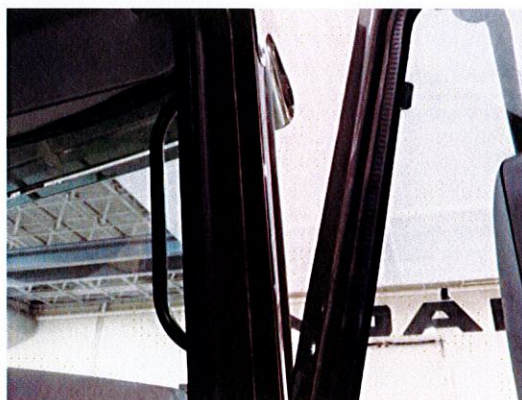
## 587-0102 Bright Finish Exterior Grab Handles, Black Interior Grab Handles (5870B7)

**Affects:** Conventional Models  
**Related:** Exhaust (130)  
**Updated:** June 22, 2018

Bright Finish Exterior Handles:



Right Hand Windshield Post:



# Product Information

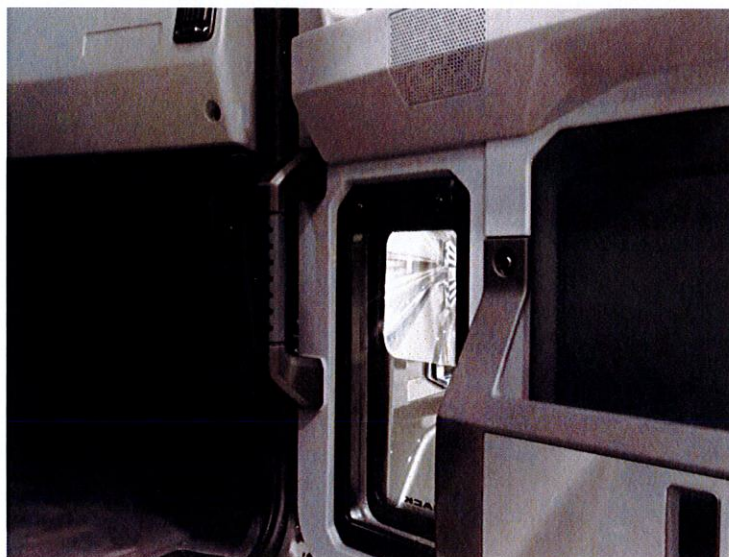


## **587-0102    Bright Finish Exterior Grab Handles, Black Interior Grab Handles (5870B7)**

**Affects:** Conventional Models  
**Related:** Exhaust (130)  
**Updated:** June 22, 2018

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Right Hand Door:



Left Hand Door:





# Product Information



## **152-2401 Flat Mirror, Polished Aluminum, Heated, No Illumination (1520C2)**

**Affects:** Vocational Models

**Related:** Cab (144)

**Updated:** November 2, 2017

Shown on Granite:

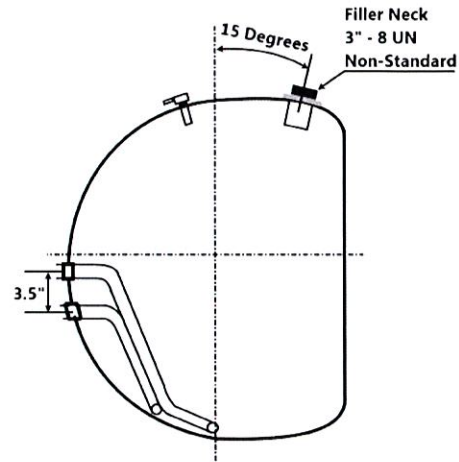
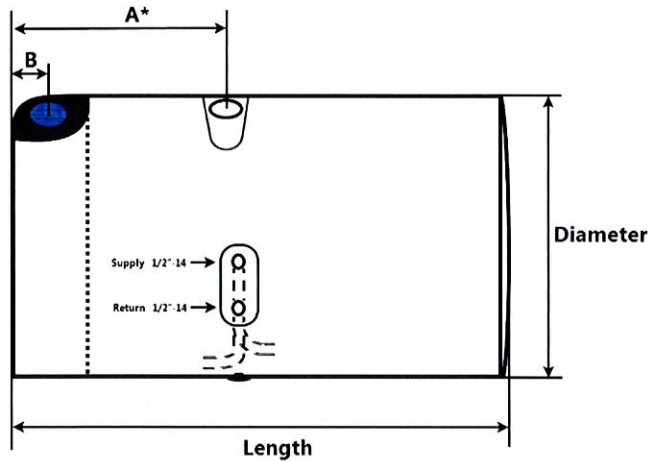


# Product Information



## Sleeved Diesel Fuel Tank Dimensions

**Affects:** Conventional Models  
**Related:** DEF Tank (DF1), Fuel Tank Paint (959) or Polish (FTNK), DEF Tank (DF1)  
**Updated:** March 1, 2018



DIAMETER	SYMBOL PREFIX 288/290	MATERIAL	SHAPE	USABLE GALLONS	LENGTH	A*	B
22"	S066	ST	S	66	47"	29.5"	4.0"
	A066	AL	S	66	47"	29.5"	4.0"
	S088	ST	S	88	62"	29.5"	4.0"
	A088	AL	S	88	62"	29.5"	4.0"
	S116	ST	S	116	74"	29.5"	4.0"
	A116	AL	S	116	74"	29.5"	4.0"
26"	B066	AL	S	66	47"	29.5	4.0"
	A072	AL	S	72	37"	18"	4.0"
	B072	AL	S	72	37"	18"	4.0"
	A093	AL	S	93	46"	37"	4.0"
	B093	AL	S	93	46"	37"	4.0"
	A117	AL	S	117	60"	18"	4.0"

Key:  
 AL = Aluminum  
 ST = Steel  
 S = Sleeved

\*Dimension "A" is shown as a standard reference point, the pick-up and return lines are usually at the same dimension as dimension "A", the fill. Certain chassis combinations will change position of these components.



## FRONT AXLE

# MAC K<sup>®</sup>

## FXL20

20,000 LBS. [9 072 kg]



- Unitized wheel hubs—requires no maintenance—permanently sealed with grease.
- Sealed tapered kingpins and bearings keep out road splash, extend axle life and lower maintenance.
- Forged I-Beam construction, strong and lightweight.

### DETAIL SPECIFICATIONS

#### MAKE: MACK

Type ..... Reverse Elliot, Drop-Forged  
& Heat Treated I-Beam  
Size (Beam Center Height) ..... 4.75" [121 mm]  
Flange Width ..... 3.50" [89 mm] Top & Bottom  
Web Thickness ..... 0.75" [19 mm]  
Section Modulus ..... 9.90" in<sup>3</sup> [172 cm<sup>3</sup>]

#### STEERING KNUCKLE:

Material ..... Chromium Molybdenum  
Alloy Steel, Heat Treated

#### Spindle Diameter

Inner Bearing ..... 2.68" [68 mm]  
Outer Bearing ..... 2.68" [68 mm]

#### Steering Knuckle Pin:

Material ..... Modified Carbon Steel, Heat  
Treated & Induction Hardened

Type ..... Tapered  
Diameter

Top ..... 1.57" [40 mm]  
Bottom ..... 2.36" [60 mm]

#### STEERING KNUCKLE: (Continued)

Inclination ..... 6°  
Knuckle Pin Support  
Upper ..... Tapered Roller Bearing  
Lower ..... Grooved bushing

#### Thrust Bearing

Type ..... Tapered Roller Bearing  
Location ..... Top of Knuckle Pin  
Hub ..... Ductile Iron  
Bearings ..... Tapered Roller (Unitized)  
Lubrication ..... Permanently lubed  
with Synthetic Grease

#### Pivot Centers:

FXL20 ..... 69.92" [1 776 mm]  
Spring Centers ..... 33.5" [851 mm] MRU, LEU  
32.5" [826 mm] GU

**NOTE: FXL used with wide base type tires will exceed 96" [2 438 mm] overall width.**



Mack Trucks, Inc., Allentown, Pennsylvania

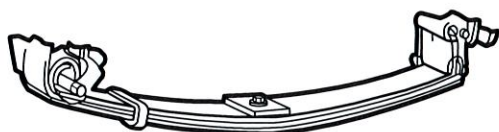
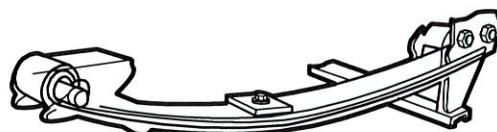
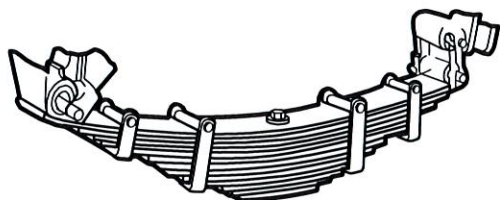
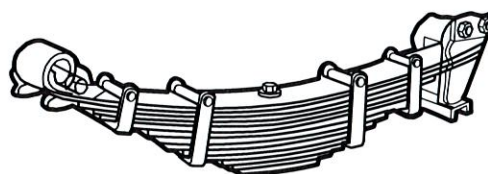


**BRAKES**

TYPE		CAM
SIZE	DIAMETER WIDTH	16.5" [419 mm] 6" [152 mm]
MAKE		Arvin Meritor
ACTUATION		Air
LINING THICKNESS		0.85" [22 mm] Tapered
LINING AREA, TOTAL		378 in <sup>2</sup> [2 439 cm <sup>2</sup> ]
CHAMBER SIZE— Sq. In. Per Wheel		1 @ 24 [155 cm <sup>2</sup> ]
SLACK ADJUSTER LENGTH		5.5" [140 mm]
BRAKE ADJUSTMENT		Self-Adjusting
DUST SHIELDS		Optional

**SUSPENSION**

SPRING CAPACITY (GRD. LOAD RATING)	SPRING SIZE	SPRING SIZE		CHASSIS MODEL APPLICATION
		LENGTH	WIDTH	
<b>20,000 LB.</b> [9 072 KG] <b>STD.</b>	Taperleaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	GU
	Taperleaf - Slipper	50.25" [1 276 mm]	3.5" [89 mm]	MRU/LEU
	Multileaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	GU (OPT.)
	Multileaf - Slipper	50.25" [1 276 mm]	3.5" [89 mm]	MRU
<b>18,000 lb.</b> [8 165 kg]	Multileaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	GU
	Multileaf - Slipper	50.25" [1 276 mm]	3.5" [89 mm]	MRU
<b>20,000 lb.</b> [9 072 kg] <b>HD</b>	Multileaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	GU
	Multileaf - Slipper	50.25" [1 276 mm]	3.5" [89 mm]	MRU/LEU


**TAPERLEAF SHACKLE**

**TAPERLEAF EYE & SLIPPER**

**MULTILEAF SHACKLE**

**MULTILEAF EYE & SLIPPER**

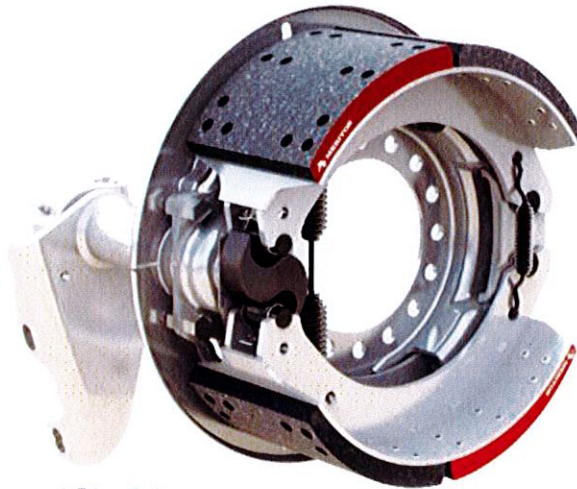


# Product Information



## **241- Meritor Q+ Front Drum Brakes (241)**

**Affects:** All Models  
**Related:** Front Axle (240)  
**Updated:** February 12, 2018



Q+™ Drum Brakes

### **Premium Stopping Performance**

Engineered to assist vehicle manufacturers in meeting FMVSS-121 stopping distance requirements, the Meritor Q+™ drum brake system remains the industry standard. Q+ brakes offer exceptional durability comparable to disc brakes.

### **Performance advantages:**

- Versatility to perform in a variety of applications, including linehaul, regional haul and vocational
- Thicker lining blocks increase service life and mileage between relines
- Specially designed S-cam and heavy-duty shoe return spring delivers additional brake shoe travel for full wear
- Improved camshaft bushing contributes to longer service life

# Product Information



## **241- Meritor Q+ Front Drum Brakes (241)**

**Affects:** All Models  
**Related:** Front Axle (240)  
**Updated:** February 12, 2018

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### **Meritor Q+ Cam Brakes**

Performance, serviceability, dependability, simple operation and proven design have made the Meritor Q+ the top choice for drum brake systems.

### **Features and Benefits**

- Optimized lining geometry for uniform wear and consistent performance, enhanced camshaft bushing material, double anchor pin design, and extended lube option minimize maintenance and downtime
- Advanced friction material helps meet revised stopping distance regulation without the use of air disc brakes
- Best-in-class e-coat corrosion protection standard on all Q+ brake shoes
- PlatinumShield™ coating technology is an available option for highly corrosive environments and duty cycles, delivering premium protection against rust-jacking
- Stamped Steel Spider Q+ drum brake option offers weight savings of 6.5 lbs. per brake without sacrificing durability or performance, which improves fuel efficiency and maximizes payload
- Patented quick-change shoe also minimizes downtime
- Most widely used drum brake in the industry means superior support in the aftermarket for parts availability, core return values and service accessibility
- Wider brake shoe packages for improved stopping performance and improves lining life



# Product Information



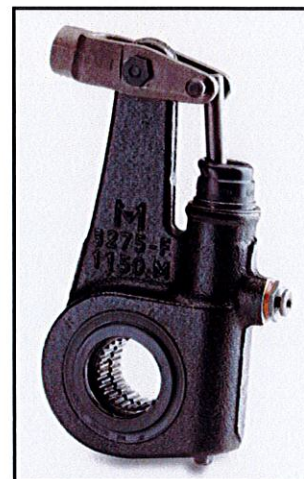
## FBADJ-AM Slack Adjuster, Automatic, Meritor, Front

**Affects:** Anthem, Granite, Pinnacle  
**Related:** Front Axle (240), Front Brakes (U3X)  
**Updated:** May 18, 2020

Meritor's unique design keeps brakes in constant adjustment while eliminating the need for frequent under-the-truck brake adjustments. This reduces brake maintenance costs and vehicle safety inspection citations while also optimizing brake performance.

### Performance advantages:

- Maximum reliability and robustness
- Lowest cost and lightest weight ASA on the market
- Only ASA that adjusts on chamber stroke
- 25,000 in-lbs. torque capacity
- Pawl design simplifies service



### Features and Benefits

- Pull pawl design requires fewer moving parts, enhancing durability and reliability
- Fully sealed to resist internal contamination for longer life
- Industry's lightest weight ASA, which increases payload and camshaft bracket life
- Self-contained design doesn't require special grounding straps, simplifies installations
- Keeps brakes properly adjusted for shorter stopping distances and longer lining life
- Grease purge to camshaft resists binding
- Ratchet type adjuster minimizes internal wear which results in robust design and maximizes reliability
- Simple to manually adjust with no anti-reverse springs to overcome
- Stroke sensing design

Automatic Slack Adjuster Specifications	
Slack Length (inches)	5.0, 5.5
Arm Configuration	Straight 0.625" offset clevis
Camshaft Spline Size and No.	1.25" - 24
	1.25" - 10
	1.50" - 10
	1.50" - 28
Clevis Thread	0.50" - 20 for chamber type 9,12,16
	0.625" - 18 for 20, and larger chambers

# Product Information



## 531- ACCURIDE MACHINE-FINISHED ALUMINUM WHEEL 22.5 X 12.25, 5.88" OFFSET, 10 HAND HOLES

Updated: July 9, 2021



Sales Code	Wheel Size	Bolt Holes	Bolt Circle (mm)	Center Bore (mm)	Offset	Weight (lbs)	Max Load (lbs)	Max Inflation (psi)	Wheel Finish
5311614	22.5 X 12.25	10	285.75	220	5.88"	66	11000	131	Standard Finish
5311620	22.5 X 12.25	10	285.75	220	5.88"	66	11000	131	Extra Polish Finish
5311621	22.5 X 12.25	10	285.75	220	5.88"	66	11000	131	Extra Polish w/ ACCU-SHIELD Coating *

\* **Accu-Shield® coating (sales code 5311621)** is designed and engineered to have - and keep - their bright, shiny appearance even under the rigorous conditions. Wheel with Accu-Shield® coating clean quickly and easily with only mild soap and water or standard non-abrasive household cleaners, saving time and money on polishing and maintenance.





# SED

PRODUCT INFORMATION

**Sales Code:** 268-1026/ 268AA9  
**Description:** Mack S462R Tandem Rear Axle  
**Date:** August 31, 2016

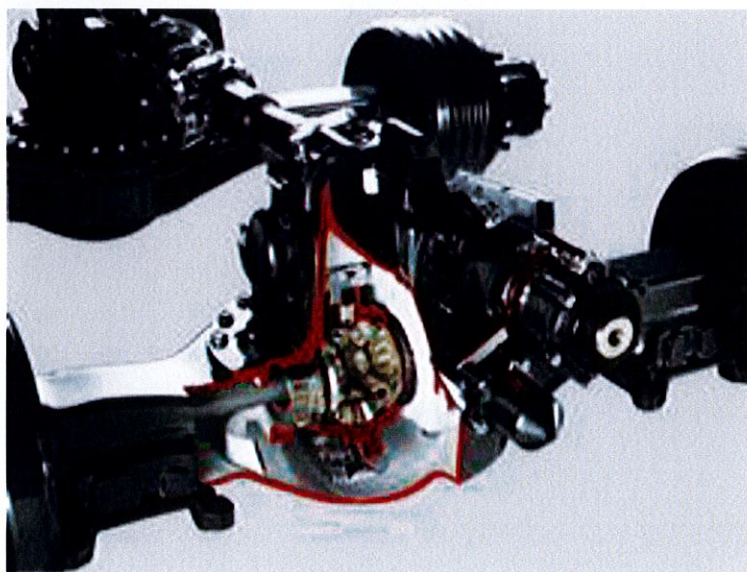
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## Sales Engineering

Mack Trucks Inc.  
2402 Lehigh Parkway South  
Allentown, PA 18103

Phone: 800-868-6225  
Fax: 610-351-8791  
Email: [sales.engineering@macktrucks.com](mailto:sales.engineering@macktrucks.com)

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**Mack Axle Model:** ..... S462R  
**Capacity** ..... 46,000 lbs. [20,900 kg]  
**Axle Creep Rating\*** ..... 70,000 lbs. [31,800 kg]

\* Axle creep rating does not take into account the suspension creep rating which may be different. Check with the suspension supplier to be sure the suspension creep rating meets your application needs.



# SED

PRODUCT INFORMATION

## Gross Combination Weight Rating:

CRDP125/126 up to: . . . . . 125,000 lbs. [56,818 kg]

CRDP150/151 up to: . . . . . 150,000 lbs. [68,182 kg]

CRDP180/181 up to: . . . . . 180,000 lbs. [81,818 kg]

Refer to the Mack Carrier Application Guideline. Failure to follow these Guidelines may void the Mack Carrier Warranty.

## Carriers:

**Standard:** Dual Reduction Top Mounted with Inter-Axle Power Divider, Air Assisted Inter-Axle Power Divider Lockout and 4 Pinion Closed Differential.

**Optional:** Mechanical Interwheel Power Divider only available on CRDP1501/1511 & CRDP1801/1811.

**Optional:** Driver Controlled, Air Assisted Interwheel Differential Lock, available on Front Rear, Rear Rear, or Both Rear Axles. Available on CRDP125/126, CRDP150/151, and CRDP180/181.

## Ratios Available:

**CRDP125/126:** 2.54; 2.66; 2.83

**CRDP150/151:** 3.11; 3.25; 3.40; 3.56; 3.79; 3.98; 4.19; 4.50; 4.80; 5.04; 5.31; 5.66; 5.81; 6.12; 6.53

**CRDP180/181:** 3.79; 3.98; 4.19; 4.45; 4.68; 5.00; 5.31; 5.66; 6.12; 6.53; 7.08





# SED

PRODUCT INFORMATION

## Oil Capacity:

Carrier Bowl (each carrier) . . . . . 26 pints [12.3L]

### Bevel Gear Compartment (each carrier):

CRDP125/126, CRDP150/151, CRDP1501/1511  
8 pints [3.8L]

CRDP180/181, CRDP1801/1811 . . 8.5 pints [4.0L]

### Inter-Axle Power Divider:

CRDP125/126, CRDP150/151 . . . 1.0 pints [0.5L]

CRDP180/181 . . . . . 1.5 pints [0.7L]

**Drain Plugs** . . . . . Magnetic

**Axle Housing** . . . Cast Ductile Iron with Forged "R" Series  
Spindle Ends Welded to Housing Shell  
Inner Journal

**Spindle** . . . . . Induction Hardened Inner Journal

### Dimensions:

Inner Bearing	3.75" [95mm]
Outer Bearing	3.25" [83mm]
Spindle Bore	2.67" [68mm]



# SED

PRODUCT INFORMATION

## Axle Shafts:

Type: ..... Integral Flange

Material: Induction Hardened Chromium Molybdenum Steel

Body Diameter: ..... 1.890" [48mm]

Diameter Over Splines: ..... 2.200" [56mm]

Splines, No. & Type: ..... 43 – Involute

## Brakes:

Type: ..... "S" Cam or Disc

Actuation: ..... Air

Brake Adjustment: ..... Self Adjusting

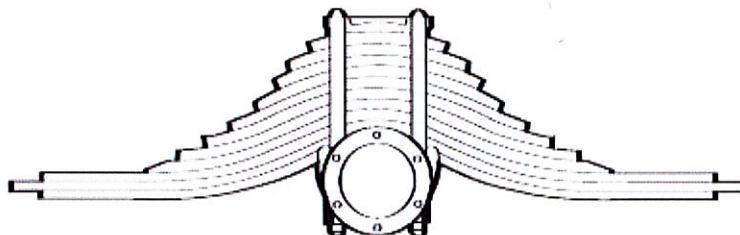
Parking Emergency Brake: .... Spring Loaded Chamber

## Auxiliary Spring Brake:

Type: .. Spring Loaded Chambers [Double Diaphragm Type]

Spring Release: ..... Mechanical



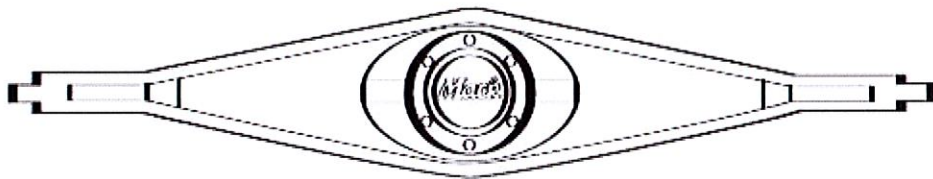


**Transverse Torque Rods: . . . . . Standard**



# SED

PRODUCT INFORMATION



## Mack Walking Beam Suspension

Mack Suspension Model	SW462
Capacity	46,000 lbs. [20,900kg]
Creep Rating	62,000 lbs. [28,125kg]
Load Centers	50" [1270mm] Standard 55" [1397mm] Optional
Beam Centers (Chassis Width)	39" [991mm]
Beam Type	I-Section
Material	Fabricated Steel
Width at Ends	4" [102mm]
Axle Retention:	Upper and Lower Rubber Shock Insulators, Optional Urethane Insulators, Cast Steel Spring Brackets, Cast Iron Caps
Trunnion Bracket & Crossmember:	One Piece Fabricated Steel with Integral Spindle and Collar Assembly
Spindle:	Solid
Bushing:	Bronze
Transverse Torque Rods:	Optional



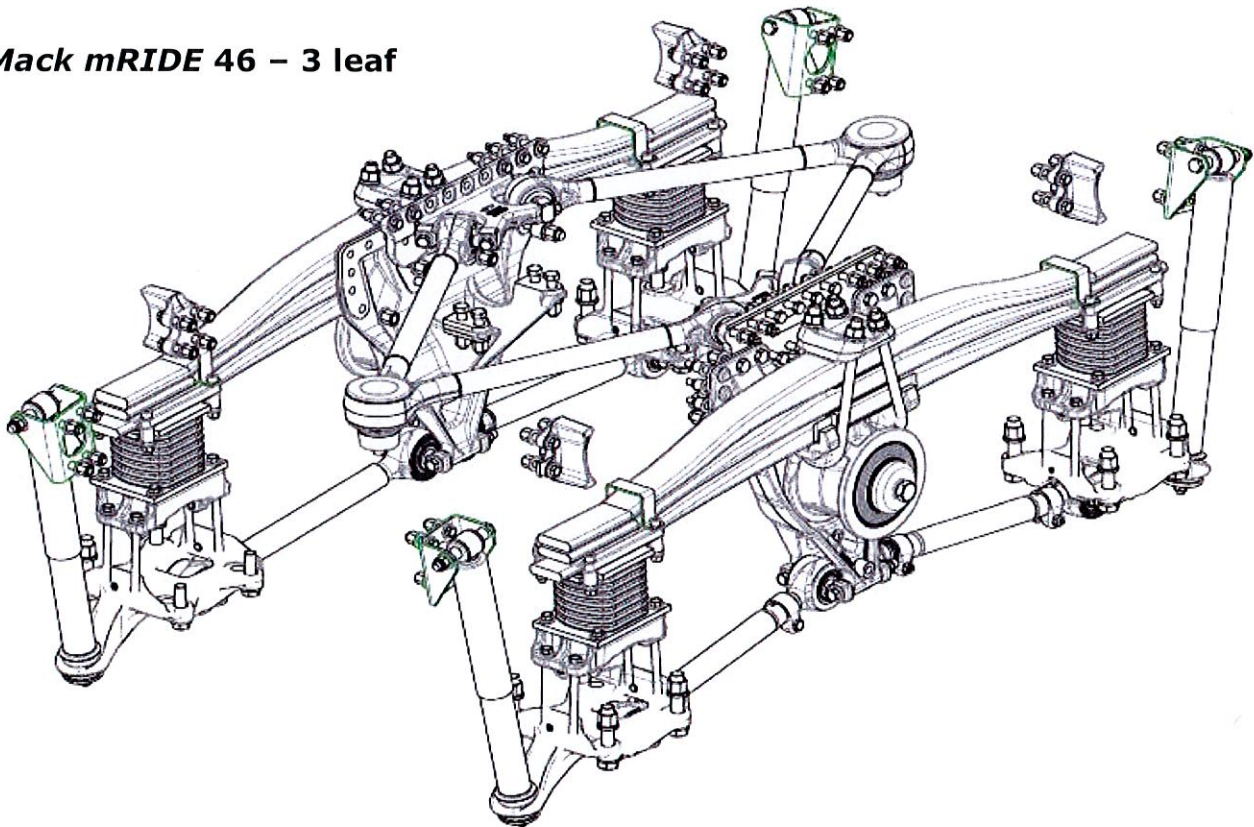
## Mack mRIDE 46

Product Specifications	
Weight Rating	46,000 Pounds
Load Distribution	50 / 50
Spring type	Parabolic
Width of Spring	2.95 in. (75mm)
Number of Leaves	3 Normal Ride
Leaf Thickness	2 @1.61 in. (41mm) 1 @ 2.17 in. (55mm)
PID Code	1861610
Deflection Rate (lbs./in)	21,700
Weight – Conventional Cab and Cabover <sup>1</sup>	1441 <sup>1</sup>
Creep Rating	60,000 Pounds
Spring height	5.63 in. (143mm)
Rear Shock Absorber	4 standard
Available Mack Axles	S462R (PID code 2681026)
V-Rod Tube (OD x Wall thickness)	1.89 in. (48mm) x 0.20 in. (5mm)
Lower Torque Rod Tube (OD x Wall thickness)	1.89 in. (48mm) x 0.20 in. (5mm) –Left - Adjustable
	1.89 in. (48mm) x 0.20 in. (5mm) –Right - Fixed
Axle Spacing	54 in.
Suspension Jounce (metal to metal)	3.94 in. 100mm)
Available Truck Models	CHU, GU7 & GU8, TD, MRU, LEU
1. Includes torque rods, brackets but no crossmembers	

## Mack mRIDE 46

Suspension Ride Heights		
	CHU, GU7, GU8 & TD *	MRU & LEU **
# Of Leaves	3 Tractor/Truck Normal Ride	3 Truck Normal Ride
Weight Ratings (Lbs.)	46,000	46,000
Ride Height Chassis Only***	11.1"	11.5"
Ride Height Full Load***	9.9"	10.3"
* CHU, GU7, GU8 & TD Ride Heights Based on 11.8in (300mm) frame height ** MRU & LEU Ride Heights Based on 13.37in (340mm) frame height *** Centerline of Rear Axle to Bottom of Frame		

**Mack mRIDE 46 – 3 leaf**



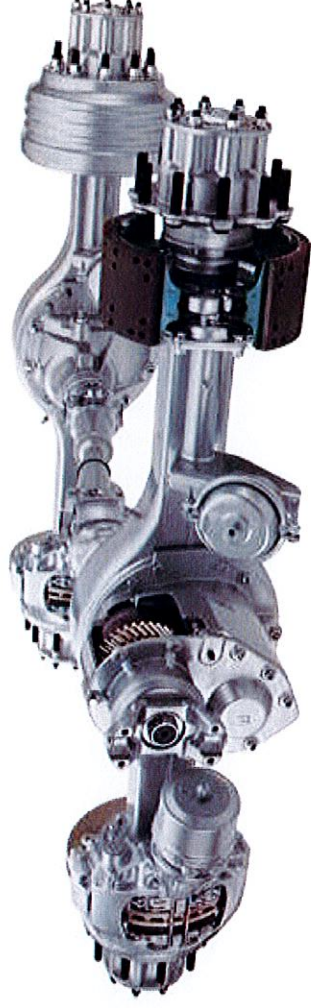


# Mack Proprietary Axle

Driveline Engineering – Hagerstown, MD



# Top Mounted Carrier = More Ground Clearance

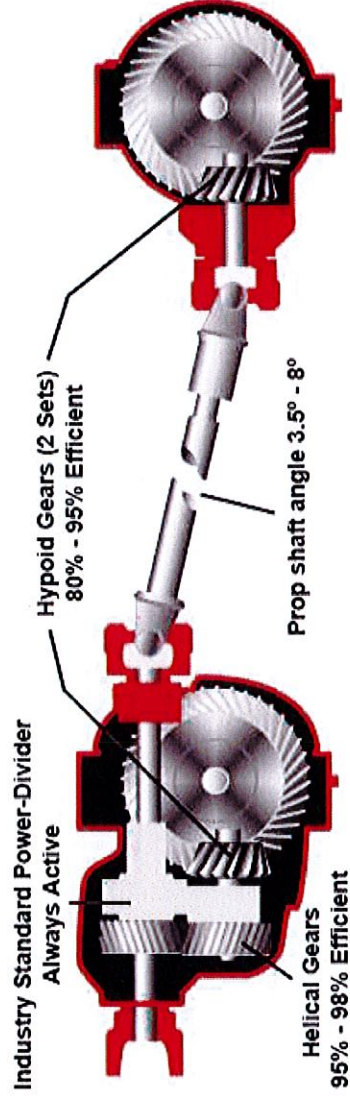
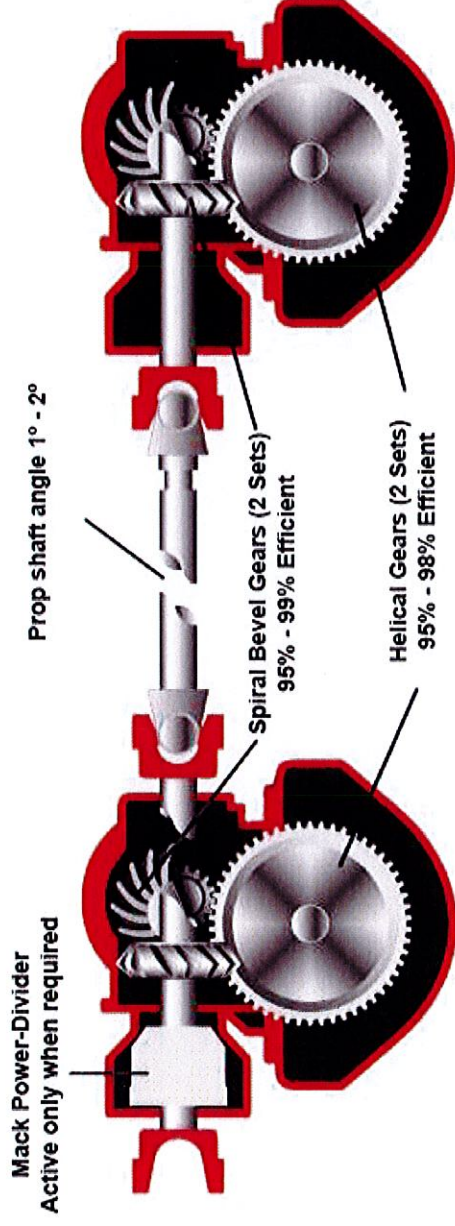


Top Mounted Drivehead provides more ground clearance compared to a competitor face-mounted Drivehead.



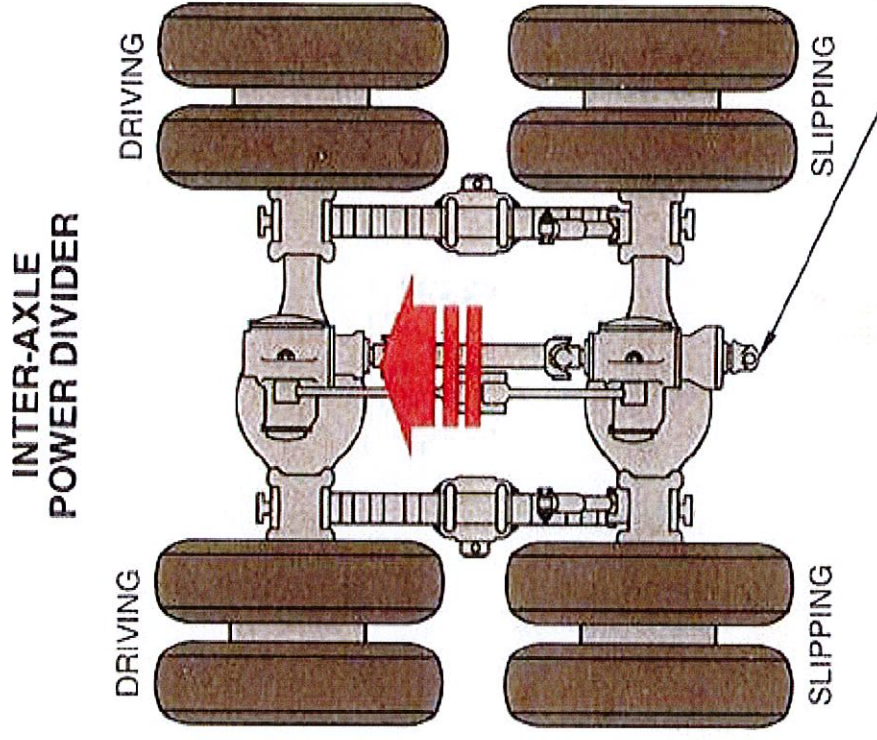


# Mack Axle (Bevel/Helical Gear) Efficiency > Industry Std. (Hypoid/Amboid Gear) Efficiency



# Mack Proprietary Standard Power Divider = Better Vehicle Traction

Mack  
power dividers  
mean traction



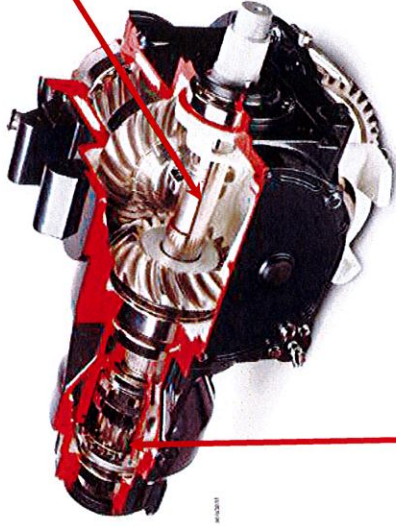
Under minimum traction conditions, the resisting force on the slipping axle is multiplied three fold and applied to the axle that has retained traction, without locking.



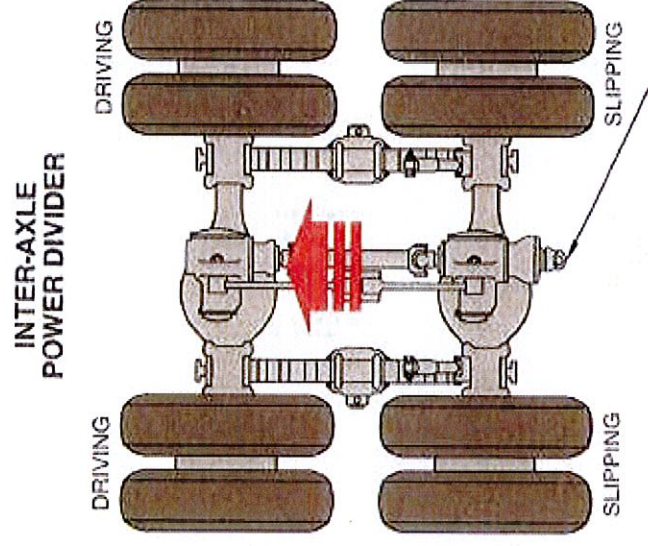


## What is Power-Divider and Why do you need it?

### Thru-shaft



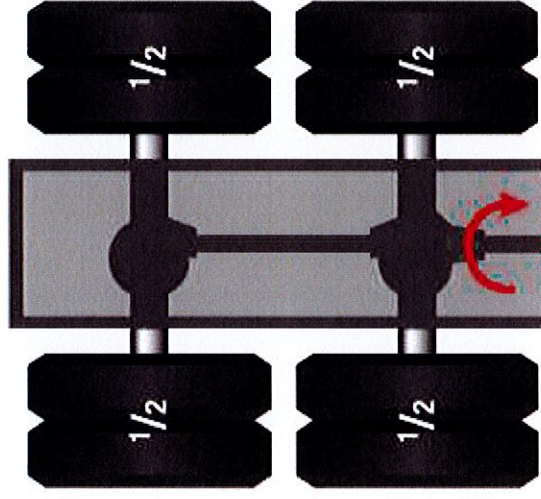
Power-Divider Cage distributes torque between outer-cam & inner-cam using 2-rows of wedges. Outer-cam drives front-axle while inner-cam drives through-shaft which drives power to rear axle



# Mack Axle & Carrier Features – *Interaxle Power Divider*

## Mack Interaxle Power Divider

### Conventional Differential



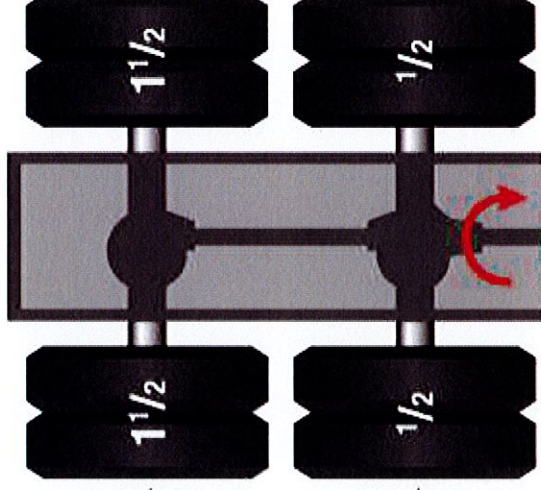
$$\begin{array}{r} \frac{1}{2} + \frac{1}{2} = 1 \\ \frac{1}{2} + \frac{1}{2} = 1 \\ \hline 2 \end{array}$$

1:1 or 50%-50%

Rear Tandem Axle - On better traction surface

Front Tandem Axle - On poor traction surface (represented by 1 unit)

### Mack Interaxle Power Divider



### Tractive Effort

Front Axle

Rear Axle

Total

Bias Ratio

$$\begin{array}{r} \frac{1}{2} + \frac{1}{2} = 1 \\ 1\frac{1}{2} + 1\frac{1}{2} = 3 \\ \hline 4 \end{array}$$

3:1 or 75%-25%

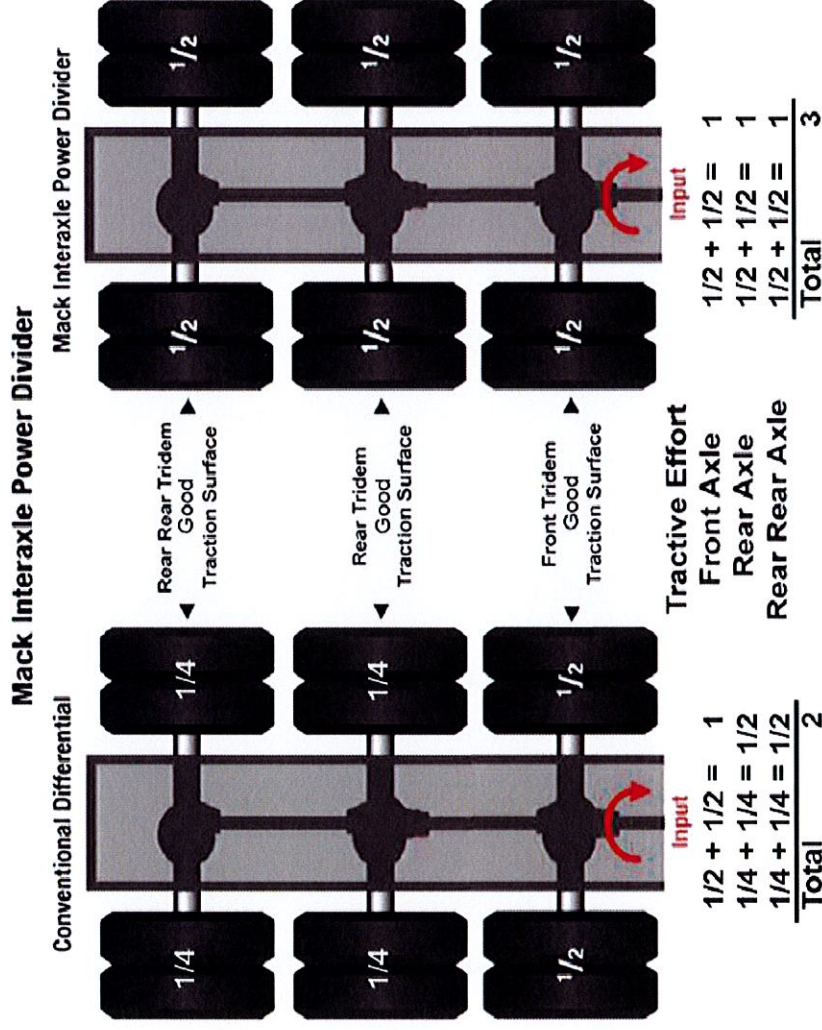
## The Mack Advantage

- Mack power-divider uses a CAM mechanism which automatically distributes the torque between slipping and non-slipping axle.
- Competitor axle power-divider uses gear-differential which always splits torque in 50:50 ratio between front and rear axle.





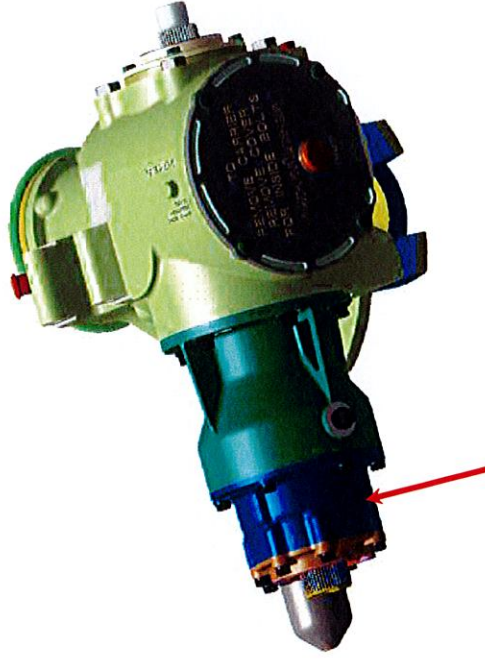
# Mack Axle & Carrier Features – *Interaxle Power Divider*



- The Mack Power Divider provides the only tridem capable of a true 1/3rd, 1/3rd, 1/3rd torque split between driven axles (This reduces the tire and road wear on the first drive axle).
- Competitor axle power divider splits torque in 50:25:25 ratio between three drive axles (first axle transfers more torque to the first set of drive wheels causing excessive tire wear and tearing up the road surface).

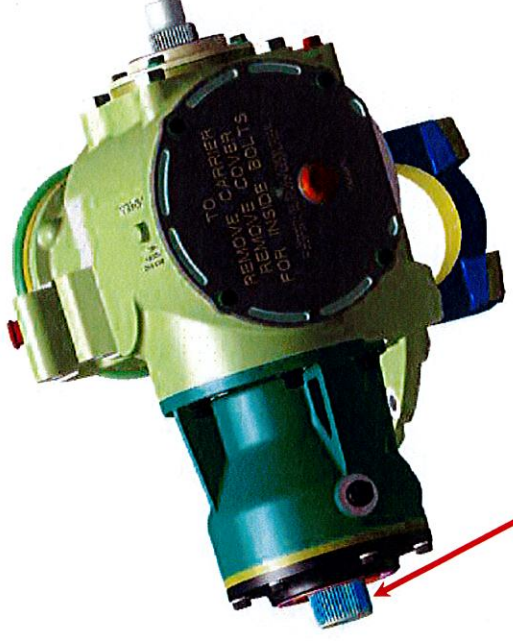


# Mack Inter-Axle Power Divider Lock-out (PDLO)



PDLO is an option (85% of customers order this) on Mack axles but std. feature on competitor axles

Front Carrier with PDLO (Power Divider Lock-Out) – Available on all Mack front carriers (i.e CRD125, 150, 200 & 95 carriers)



No PDLO is STD (15% of customers order this) on Mack

Front Carrier with OUT PDLO (Power Divider Lock-Out) – Standard on all Mack front carriers

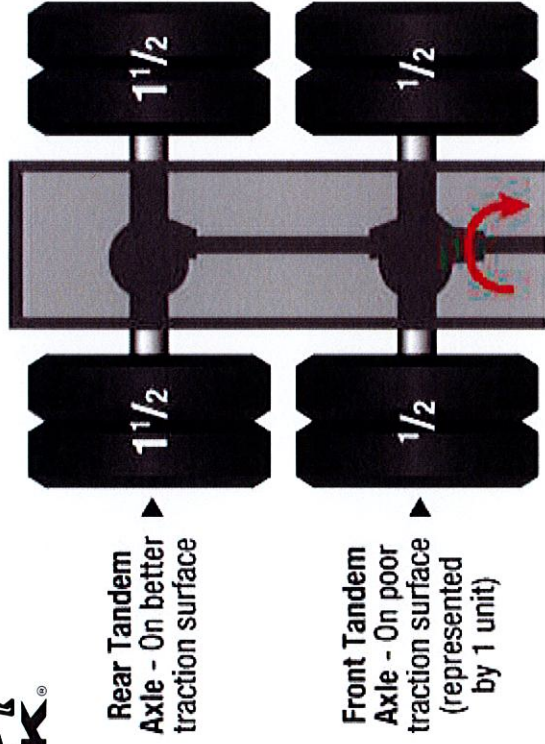




# What is Power-Divider Lock-out (PDLO) and Why do you need it?



Mack Interaxle Power Divider



Rear Tandem  
Axle - On better  
traction surface

Front Tandem  
Axle - On poor  
traction surface  
(represented  
by 1 unit)

## Tractive Effort

Front Axle  $\frac{1}{2} + \frac{1}{2} = 1$   
Rear Axle  $1\frac{1}{2} + 1\frac{1}{2} = \frac{3}{2}$   
Total  $\frac{4}{2}$

Bias Ratio 3:1 or 75%-25%

## Mack Advantage

If front-tandem has zero traction, the CAM mechanism (and/or conventional IAD gear divider) distributes 3 x Zero torque (1 x zero torque) to rear axle.

In the process the Power-Divider will burn-out due to excessive differential action.

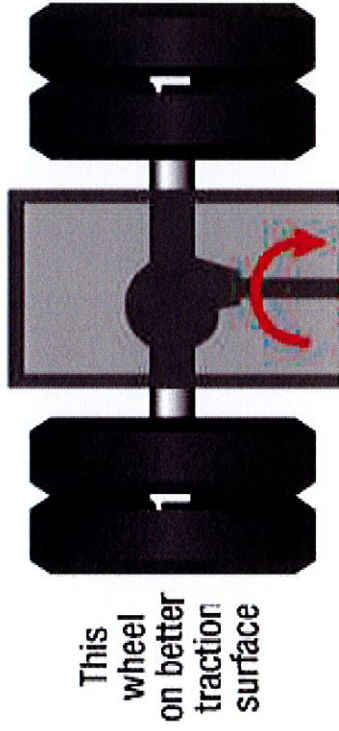
PDLO locks the inner & outer-cam preventing differential action and will propel the truck with the help of axle that is on better traction surface.



# Mack Axle & Carrier Features – *Inter-Wheel Power Divider (optional feature)*

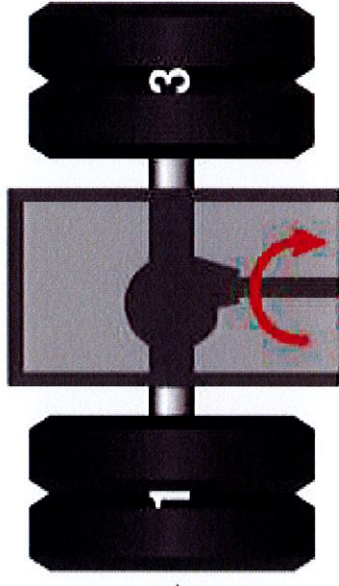
## Mack Interwheel Power Divider

### Conventional Differential



This wheel on poor traction surface (represented by 1 unit)

### Mack Interwheel Power Divider

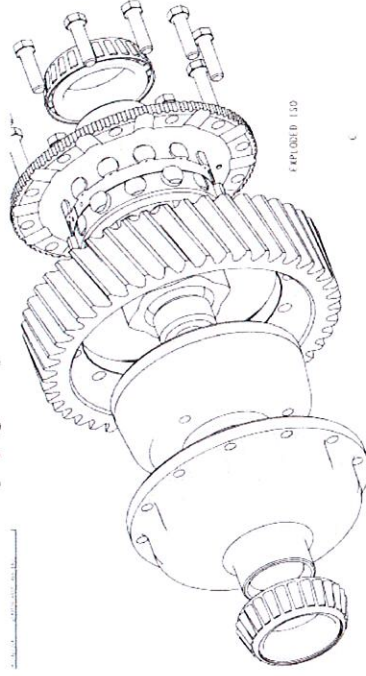


$1 + 1 = 2$   
1:1 or 50%-50%

Tractive Effort  
Bias Ratio

$1 + 3 = 4$

## The Mack Advantage



- Mack Unique/Proprietary Inter-Wheel power-divider uses a CAM mechanism which automatically (no in-cab switch will need to be engaged as in case with diff. lock option) distributes the torque between slipping and non-slipping wheel.

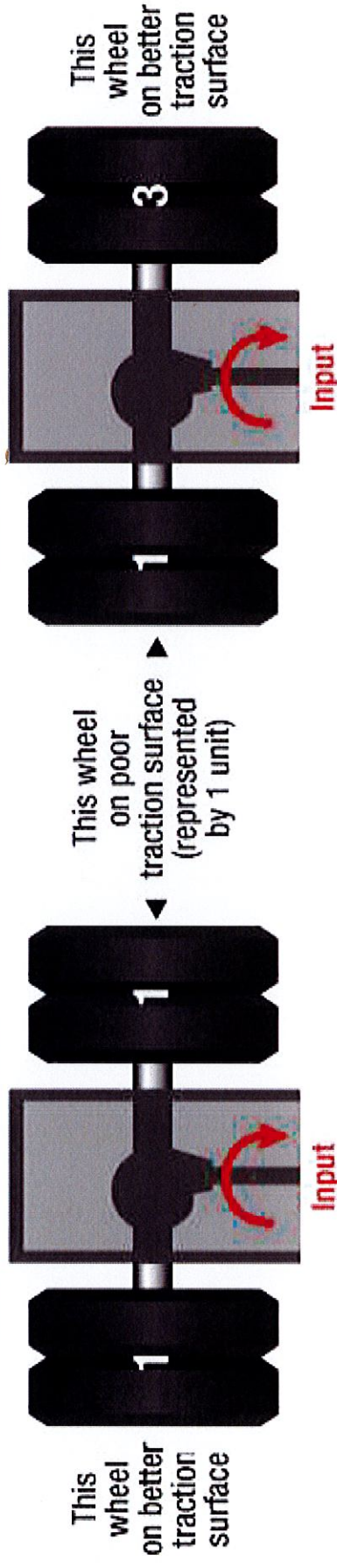




# What is Inter-Wheel Power Divider and who uses it

## Mack Interwheel Power Divider

Conventional Differential



$$1 + 1 = 2$$

1:1 or 50%-50%

Tractive Effort

Bias Ratio

$$1 + 3 = 4$$

3:1 or 75%-25%

## The Mack Advantage

- IWPD automatically distributes torque between slipping and non-slipping wheel.
- Diff. Lock needs to be disengaged once vehicle is on good surface. IWPD eliminates the hassle (some customers like this option).
- IWPD can still work over 25MPH unlike Inter-Wheel Differential Lock (VECU disengages Inter-axle and Inter-wheel diff. lock for safety reasons).
- IWPD Dis-advantage: If one wheel has zero traction then other wheel will see 3 x Zero torque.



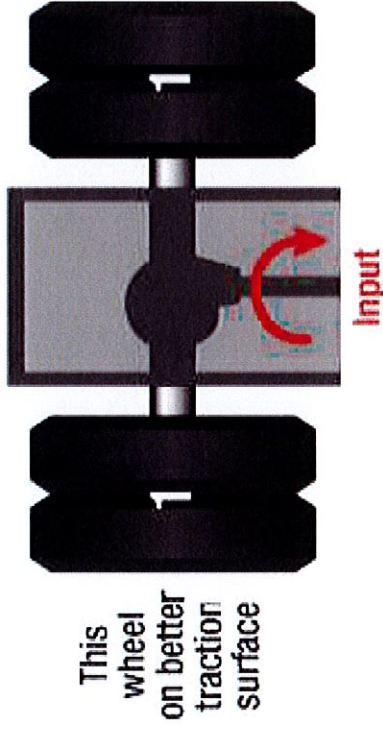




## What is Diff. Lock and Why do you need it?



Conventional Differential

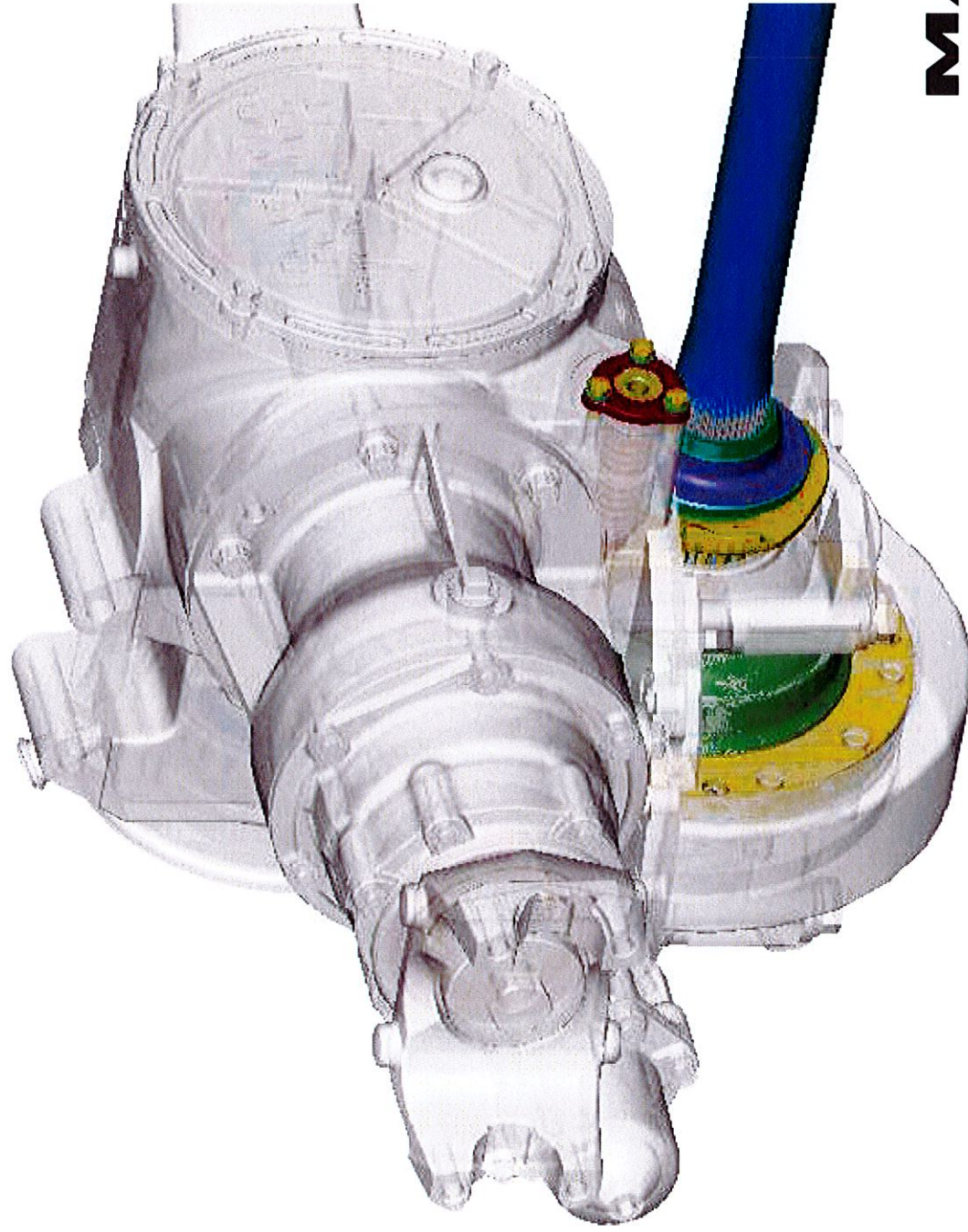


If one of the wheel starts slipping the differential gears will start spinning and excessive differential action will cause burn-out

- Diff. Lock is optional feature on Mack and Competitor axles.
- Diff. Lock is engaged by actuating a switch inside the cab.
- Diff. Lock locks left & right diff. halves preventing differential action and will propel the truck with the help of the wheel that is on better traction surface.
- Diff. Lock should be dis-engaged while on concrete surface or driving over 25MPH. The axle shafts can lock-up if vehicle turns a corner with Diff. Lock engaged.



# CRD150-151 INTER-WHEEL DIFFERENTIAL LOCK

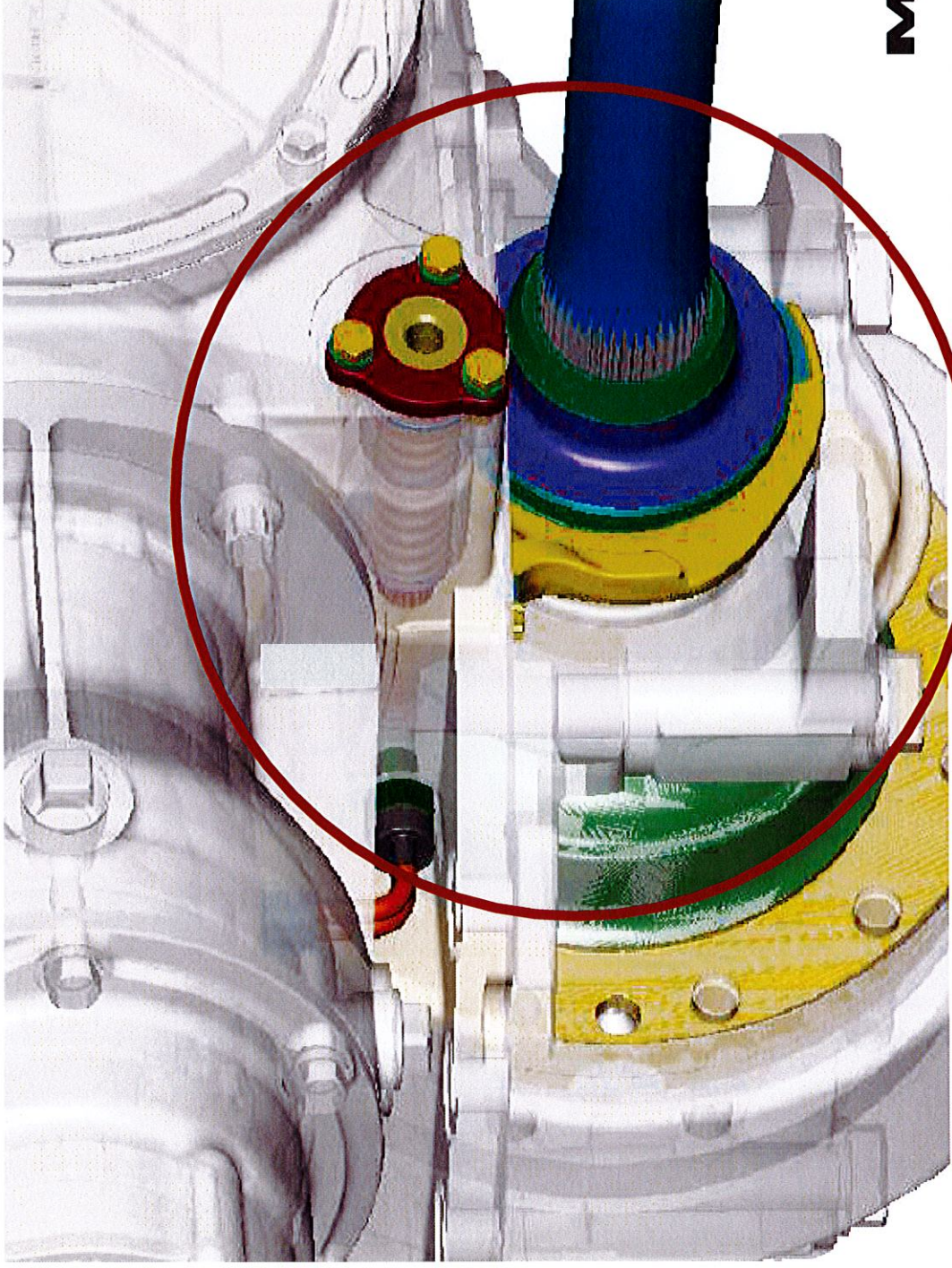


  
**MACK®**





THE CRD150-151 INTER-WHEEL DIFFERENTIAL LOCK (DIFF LOCK) FEATURE HAS BEEN INTEGRATED INTO THE MAIN CARRIER HOUSING. THUS, MAINTAINING THE SAME EXTERNAL ENVELOPE AS THE STANDARD CRD150-151 AXLES AND MINIMIZING ANY ADDITIONAL WEIGHT.





# Product Information

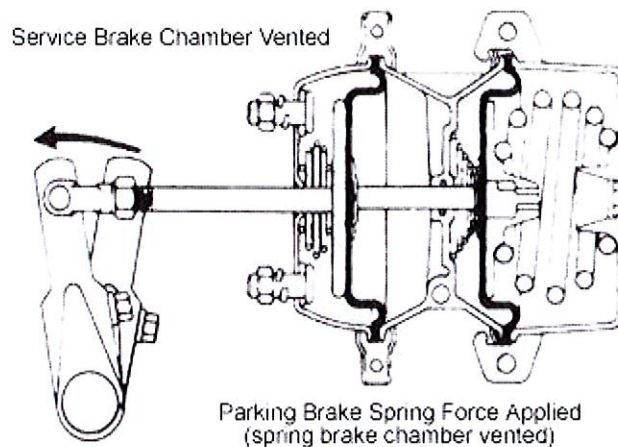


## RBCS- Rear Brake Chamber Size (V1A)

**Affects:** All Models  
**Related:** Rear Brakes (253)  
**Updated:** February 9, 2018

Different size brake chambers are identified by numbers which specify the effective area of the diaphragm. A type 30/30 brake chamber has 30 square inches effective area in each chamber.

The rear brake air chamber is more complicated because it serves two purposes. One part of this dual chamber is called the spring brake chamber and the other part is called the service brake chamber. The service brake chamber is what activates when you step on the tractor brake pedal. The spring brake chamber is what is charged to release the spring brakes.



Spring brakes were designed so there would always be a fail-safe method of stopping an air brake vehicle, if for some reason, all air supply pressure were suddenly lost while the vehicle is in motion. In the diagram above, the heavy duty spring in the right hand compartment (spring brake chamber) forces the push rod to the left which engages the slack adjuster when there is no air pressure in the spring brake chamber.

This forms the emergency brake action to stop a vehicle in motion should the air supply fail. Release of air pressure in the spring brake chamber is what takes place when you set your air parking brakes. The parking brake valve on the cab dash, releases the air pressure in the spring brake chambers, and the powerful spring applies hundreds of pounds of brake force on the push rod, thereby rotating the slack adjuster and setting the brakes.



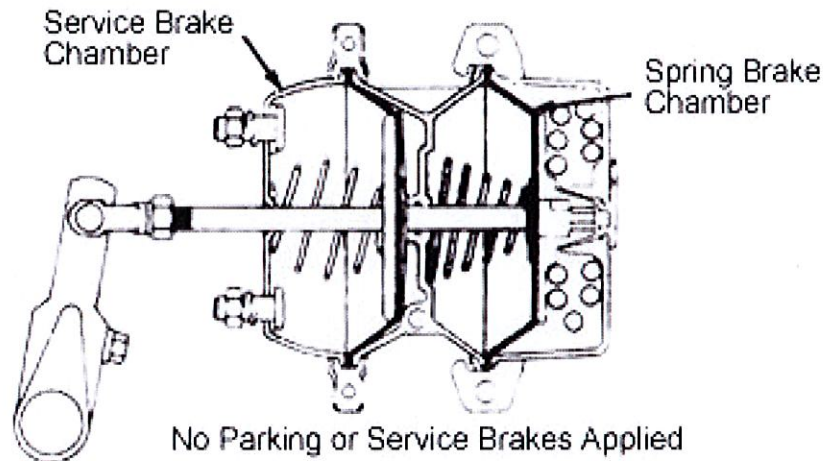
# Product Information



## RBCS- Rear Brake Chamber Size (V1A)

**Affects:** All Models  
**Related:** Rear Brakes (253)  
**Updated:** February 9, 2018

In the diagram below, the spring brake chamber has been pressurized, and the spring brake diaphragm has compressed the heavy duty spring, which allows the push rod to release the pressure on the slack adjuster arm, which releases the parking brake.



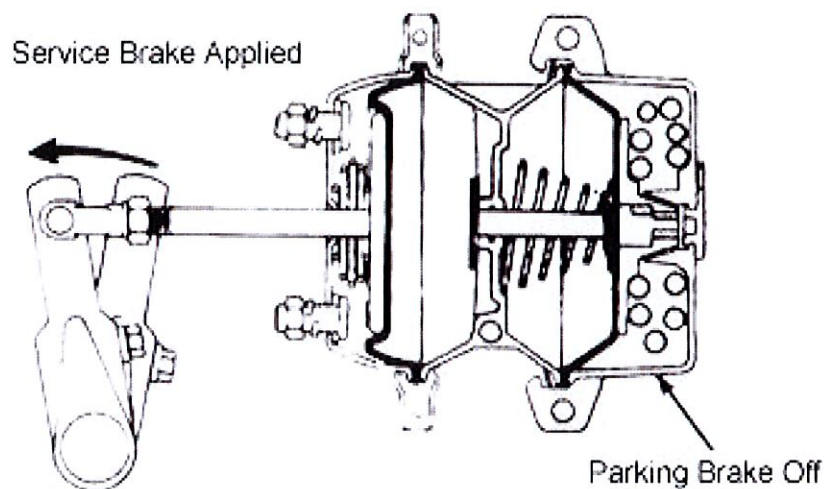
When you release the parking brake, you actually pressurize the spring brake chamber. Now the service brake chamber can move the push rod to the left when the brake pedal is pressed. Trailers also have spring brakes which function just like the tractor rear wheel spring brakes. The trailer service brake chambers can be charged when the truck foot brake is applied, or when the trailer hand brake is applied.

# Product Information



## RBCS- Rear Brake Chamber Size (V1A)

**Affects:** All Models  
**Related:** Rear Brakes (253)  
**Updated:** February 9, 2018



The diagram above shows the service brake chamber when full service braking action is applied. Notice how the left hand chamber air on its right side has pushed the chamber diaphragm to the left which forces the push rod to the left also.

What is not shown in this diagram is that when the service brake chamber moved the push rod to the left, the push rod moved away from the spring brake chamber diaphragm because it is not fastened to the spring brake diaphragm. The spring brake diaphragm only pushes on the push rod (much like you would push the end of a broom handle with the palm of your hand), so the push rod is free to move to the left with the service brake chamber when service brake action is required.

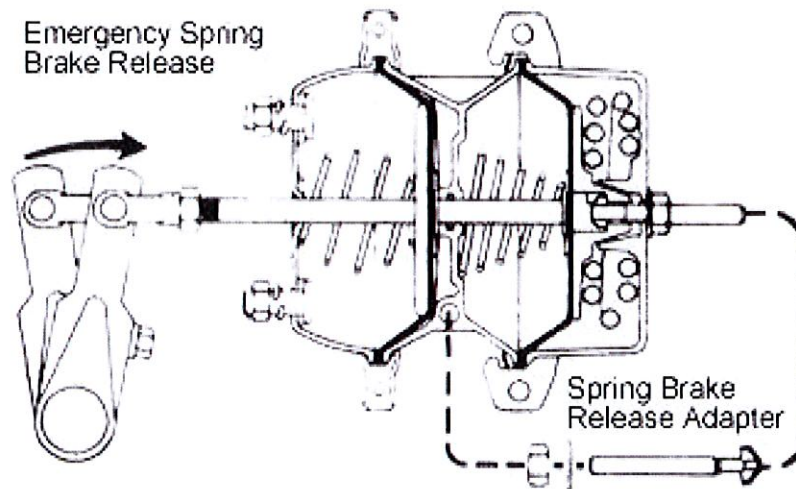


# Product Information



## RBCS- Rear Brake Chamber Size (V1A)

**Affects:** All Models  
**Related:** Rear Brakes (253)  
**Updated:** February 9, 2018



There can be emergency situations where one or more service brake chambers cannot be pressurized for what ever reason. When this situation arises, most spring brake chambers have a release bolt mounted on the outside of the spring chamber housing.

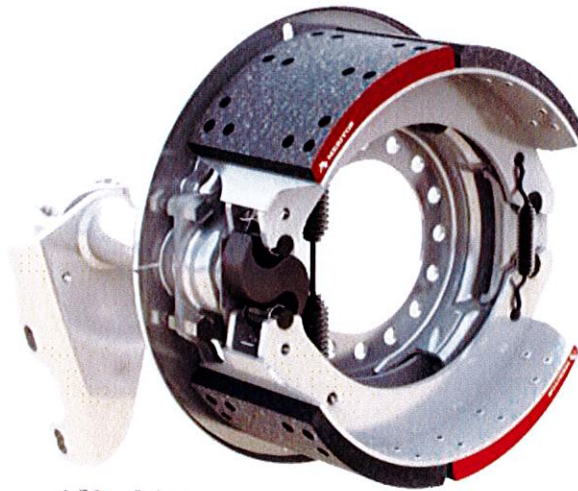
You can override the spring brake feature by installing this service bolt, and using a wrench to draw the spring brake diaphragm to the right, which compresses the heavy duty spring and releases the spring brake force on the push rod. Usually, you insert the bolt and twist it 1/4 turn to lock it into place, then you tighten the nut. In this configuration, that spring brake is disabled, but the service brake can still work. This is only to be used for emergency situations, because it disables the protective spring brake feature.

# Product Information



## **253- Meritor Q+ Rear Drum Brakes (253)**

**Affects:** All Models  
**Related:** Rear Axle (268), Rear Suspension (186)  
**Updated:** February 12, 2018



Q+™ Drum Brakes

### **Premium Stopping Performance**

Engineered to assist vehicle manufacturers in meeting FMVSS-121 stopping distance requirements, the Meritor Q+™ drum brake system remains the industry standard. Q+ brakes offer exceptional durability comparable to disc brakes.

### **Performance advantages:**

- Versatility to perform in a variety of applications, including linehaul, regional haul and vocational
- Thicker lining blocks increase service life and mileage between relines
- Specially designed S-cam and heavy-duty shoe return spring delivers additional brake shoe travel for full wear
- Improved camshaft bushing contributes to longer service life



# Product Information



## **253- Meritor Q+ Rear Drum Brakes (253)**

**Affects:** All Models  
**Related:** Rear Axle (268), Rear Suspension (186)  
**Updated:** February 12, 2018

---

### **Meritor Q+ Cam Brakes**

Performance, serviceability, dependability, simple operation and proven design have made the Meritor Q+ the top choice for drum brake systems.

### **Features and Benefits**

- Optimized lining geometry for uniform wear and consistent performance, enhanced camshaft bushing material, double anchor pin design, and extended lube option minimize maintenance and downtime
- Advanced friction material helps meet revised stopping distance regulation without the use of air disc brakes
- Best-in-class e-coat corrosion protection standard on all Q+ brake shoes
- PlatinumShield™ coating technology is an available option for highly corrosive environments and duty cycles, delivering premium protection against rust-jacking
- Stamped Steel Spider Q+ drum brake option offers weight savings of 6.5 lbs. per brake without sacrificing durability or performance, which improves fuel efficiency and maximizes payload
- Patented quick-change shoe also minimizes downtime
- Most widely used drum brake in the industry means superior support in the aftermarket for parts availability, core return values and service accessibility
- Wider brake shoe packages for improved stopping performance and improves lining life

# Product Information



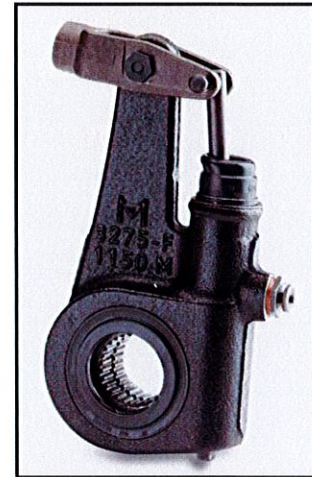
## RBADJ-AM Slack Adjuster, Automatic, Meritor, Rear

**Affects:** Anthem, Granite, Pinnacle  
**Related:** Rear Axle (268), Rear Brakes (253)  
**Updated:** May 18, 2020

Meritor's unique design keeps brakes in constant adjustment while eliminating the need for frequent under-the-truck brake adjustments. This reduces brake maintenance costs and vehicle safety inspection citations while also optimizing brake performance.

### Performance advantages:

- Maximum reliability and robustness
- Lowest cost and lightest weight ASA on the market
- Only ASA that adjusts on chamber stroke
- 25,000 in-lbs. torque capacity
- Pawl design simplifies service



### Features and Benefits

- Pull pawl design requires fewer moving parts, enhancing durability and reliability
- Fully sealed to resist internal contamination for longer life
- Industry's lightest weight ASA, which increases payload and camshaft bracket life
- Self-contained design doesn't require special grounding straps, simplifies installations
- Keeps brakes properly adjusted for shorter stopping distances and longer lining life
- Grease purge to camshaft resists binding
- Ratchet type adjuster minimizes internal wear which results in robust design and maximizes reliability
- Simple to manually adjust with no anti-reverse springs to overcome
- Stroke sensing design

Automatic Slack Adjuster Specifications	
Slack Length (inches)	5.0, 5.5, 6.0, 6.5, 7.0
Arm Configuration	Straight
Camshaft Spline Size and No.	1.50" - 10 1.50" - 28 1.625" - 37
Clevis Thread	0.625"-18 for type 20,24,30,36 chambers





# SED

PRODUCT INFORMATION

## Sales Engineering

Mack Trucks, Inc.  
Allentown, PA 18103  
United States

Phone: 800 868 6225  
Fax: 610 351 8791

MackTrucks.com

**Sales Code:** 531 / 346 / MA4 1611

**Description:** Front Wheel, Accuride 24.5" x 8.25" Accu-Lite

**Date:** March 12, 2020

## Accu-Lite® Aluminum Wheels

*The Lightest and Brightest in the Industry*



Surface Treatment!

With the introduction of Accu-Lite® Aluminum Wheels – with their lighter weight and superior finish – Accuride once again set a new standard for lightweight aluminum wheels! We not only shaved weight off our previously lightweight wheels, but we also streamlined our available part numbers to make specifying even easier.

All Accu-Lite Aluminum Wheels are available with Standard Polish (SP), Extra Polish (XP) and Extra Polish with Accu-Shield (XPC).

NEW! Four popular Accu-Lite Aluminum Wheels are now available with the premium Accu-Armor Aluminum Wheel

Wheel Size	Part Number	Bolt Holes	Bolt Circle (mm)	Center Bore (mm)	Offset	Weight (lbs)	Max Load (lbs)	Max Inflation (psi)
24.5 x 8.25	41362	10	285.75	220	6.59"	54	7,400	131

The information in this document was accurate as of the date of release and pertains to the current version of Mack's Sales Tool. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice.



**PRODUCT INFORMATION**  
**004- INTERIOR TRIM LEVELS**

Updated: July 5, 2023

**Interior Trim Overview**

**COMFORT**  
**Interior Trim**

(allows various seat and seat covering options)

- Steel Gray (0041110)  
Available with All Models
- Sierra Tan (0041111)  
Available with Day Cab Only



Steel Gray Interior Trim



Sierra Tan Interior Trim



Gunmetal Dash & Door Accents



Gunmetal Dash & Door Accents



Charcoal Map Pocket with Charcoal Insert



Charcoal Map Pocket with Charcoal Insert

**PREFERRED**  
**Interior Trim**

(allows various seat and seat covering options)

- Steel Gray (0042110)  
Available On All Models
- Sierra Tan (0042111)  
Available with Day Cab Only



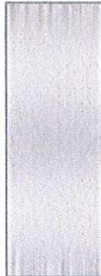
Steel Gray Interior Trim



Sierra Gray Interior Trim



Satin Aluminum Dash & Door Accents



Satin Aluminum Dash & Door Accents



Charcoal Map Pocket with Charcoal Insert



Charcoal Map Pocket with Charcoal Insert

**ELITE**

**Interior Trim**

(allows various seat and seat covering options)

- Steel Gray (0043110)  
Available On 70" Sleeper Only



Steel Gray Interior Trim



Woodgrain Dash & Door Accents



Charcoal Map Pocket with Dark Saddle Insert





## 004- INTERIOR TRIM LEVELS

Updated: July 5, 2023

**COMFORT INTERIOR TRIM**  
Steel Gray with Gunmetal Accents  
(available with all models)



**PREFERRED INTERIOR TRIM**  
Steel Gray with Satin Aluminum Accents  
(available with all models)



**ELITE INTERIOR TRIM**  
Steel Gray with Woodgrain Accents  
(available with 70" sleeper only)



**COMFORT INTERIOR TRIM**  
Sierra Tan with Gunmetal Accents  
(available with day cab only)



**PREFERRED INTERIOR TRIM**  
Sierra Tan with Satin Aluminum Accents  
(available with day cab only)



**COMFORT INTERIOR TRIM**  
Steel Gray with Gunmetal Accents



**COMFORT INTERIOR TRIM**  
Sierra Tan with Gunmetal Accents



**ELITE INTERIOR TRIM**  
Steel Gray with Woodgrain Accents



**PREFERRED INTERIOR TRIM**  
Sierra Tan with Satin Aluminum Accents







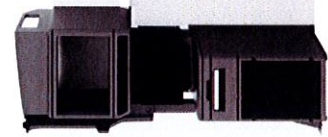
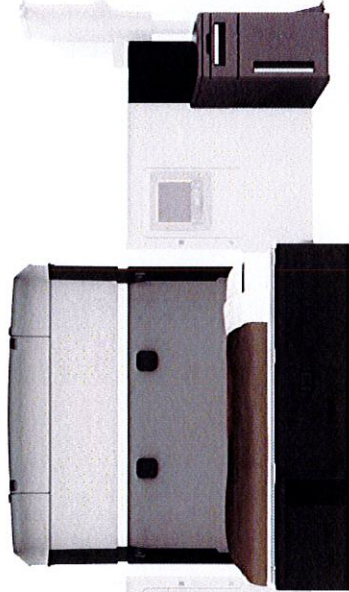
## 004- INTERIOR TRIM LEVELS

Updated: July 5, 2023

### Sleeper Environment Overview

(bunk and storage options shown below may vary between 48-inch and 70-inch sleepers)

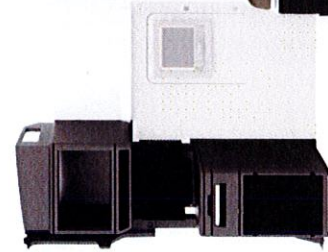
**COMFORT & PREFERRED STEEL GRAY  
INTERIOR TRIM** (all sleeper models)  
Shown with single bunk and lower storage



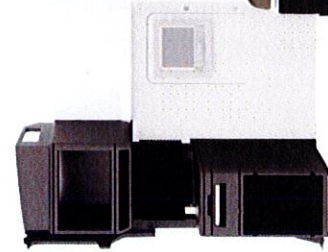
**COMFORT & PREFERRED STEEL GRAY  
INTERIOR TRIM** (all sleeper models)  
Shown with double bunk and full storage



**COMFORT & PREFERRED STEEL GRAY  
INTERIOR TRIM** (all sleeper models)  
Shown with single bunk and full storage



**ELITE STEEL GRAY INTERIOR TRIM WITH DARK  
SADDLE WALL COVERING** (70-inch sleeper only)  
Shown with single bunk and full storage



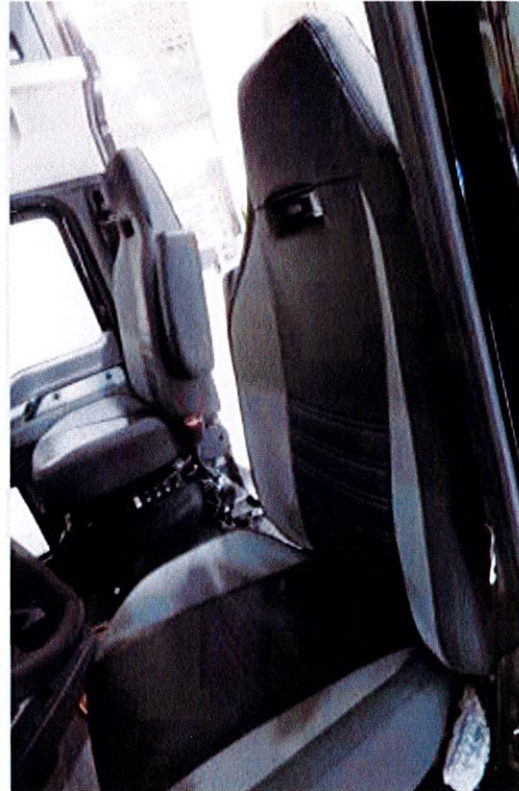
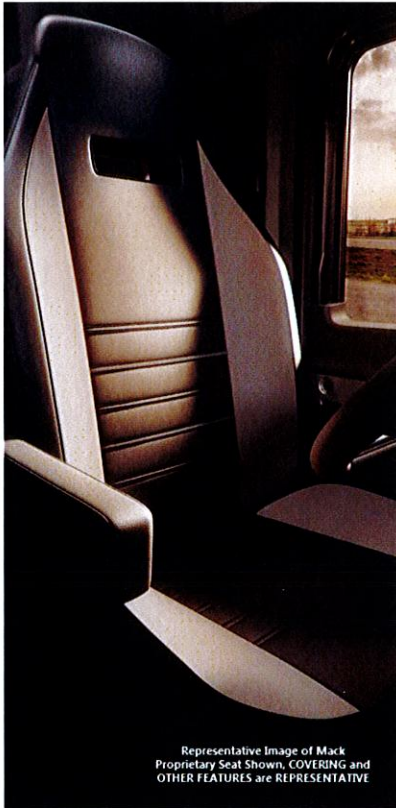


# Product Information



## 196-3140 Driver Seat (196ABQ)

**Affects:** Conventional Models  
**Related:** Interior Trim (004)  
**Updated:** December 6, 2017



196-3140 FEATURES	MODEL	MODEL
FEATURE	DAY CAB	SLEEPER
SEAT TYPE	HIGH BACK	HIGH BACK
UPHOLSTERY	VINYL/CLOTH	VINYL/CLOTH
SEAT BACK	CARPET	CARPET
BASE	AIR	AIR
SHOCK ABSORBER	STD. NON-ADJUSTABLE	STD. NON-ADJUSTABLE
SWIVEL	N/A	N/A
BOLSTER (THIGH)	STANDARD	STANDARD
LUMBAR (# OF CHAMBERS)	4	4
HEAT	N/A	N/A
DUST COVER	OPTIONAL	OPTIONAL
ARM REST	REQUIRED	REQUIRED
HEAT	N/A	N/A

# Product Information



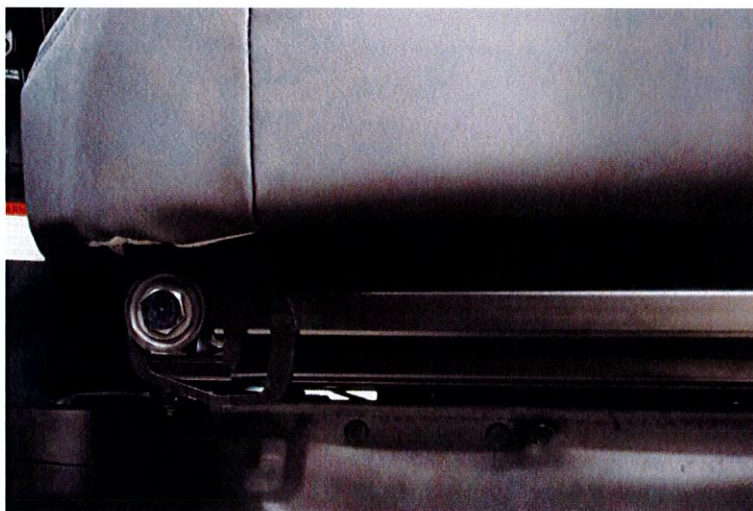
## 196-3140 Driver Seat (196ABQ)

**Affects:** Conventional Models

**Related:** Interior Trim (004)

**Updated:** December 6, 2017

### Bolster Adjustment:



### Lumbar Switches:





# Product Information

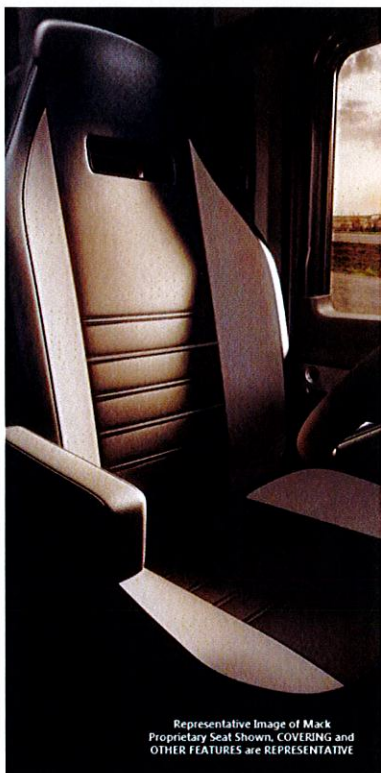


## 197-3000 Passenger Seat, Fixed, Standard Trim Level (197AA1)

Affects: Conventional Models

Related: Interior Trim (004)

Updated: September 13, 2017



197-3000 FEATURES	MODEL	MODEL
FEATURE	DAY CAB	SLEEPER
SEAT TYPE	HIGH BACK	HIGH BACK
UPHOLSTERY	VINYL/VINYL&CLOTH	VINYL/MORDURA
	MORDURA/ULTRALEATHER	MORDURA/ULTRALEATHER
SEAT BACK	CARPET	CARPET
BASE	FIXED	FIXED
SHOCK ABSORBER	N/A	N/A
SWIVEL	N/A	N/A
BOLSTER (THIGH)	N/A	N/A
LUMBAR (# OF CHAMBERS)	N/A	N/A
HEAT	N/A	N/A
DUST COVER	N/A	N/A
ARM REST	OPTIONAL	OPTIONAL
HEAT	N/A	N/A

# Product Information



## **197-3000 Passenger Seat, Fixed, Standard Trim Level (197AA1)**

**Affects:** Conventional Models  
**Related:** Interior Trim (004)  
**Updated:** September 13, 2017

Passenger Seat Base, Fixed:





# Product Information



## 1746111 Heavy Duty AM/FM/WB Stereo Receiver with Front-panel USB Port and Integrated Bluetooth®

**Affects:** Anthem, Granite, Pinnacle  
**Related:** Audio Accommodation (174)  
**Updated:** May 20, 2020



- **Heavy-duty design:** Made for a commercial vehicle driver by having larger buttons and a heavy-duty construction for tougher environments.
- **Weather band (WB):** Offers National Weather Radio Broadcasts from over 1,025 locations throughout the United States on seven VHF/FM frequencies to provide continuous weather information 24-hours a day.
- **Built-in Bluetooth®:** Selectable between audio streaming and / or hands-free phone operation - up to 10 devices can be easily stored in the radio memory for fast pairing.
- **Front-panel USB port:** Gives a direct-connect location for memory devices with USB interface to play stored music and / or charge the device and have iPod® control through the radio.
- **Range:** 162 .400 MHz - 162 .550 MHz
- **Front auxiliary input:** Easy access to plug in a smart device and enjoy your digital music library through the vehicle's speakers
- **Rear Auxiliary input:** Provides an auxiliary terminal for permanent hard wire to the rear of the radio.
- **Quartz alarm clock:** Built-in quartz alarm clock with one-hour timer.
- **Output power:** 18 W x 4 Channels.
- **Sound quality (EQ):** Select the sound type (Pop, Rock, Country, News, Jazz, Classical or Manual) to improve the dynamic range.
- **Mechless:** No compact disc (CD) player.
- **VF dot matrix display:** Three-line display that maximizes the viewing area on the front of the radios allowing for more information on the screen and minimizes the need to scroll.
- Separate bass, mid, treble, balance and fader controls.
- 6 AM and 12 FM radio preset buttons.
- Auto-store memory.
- Back-lit display lighting (blue)
- PA function





# SED

PRODUCT INFORMATION

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## Sales Engineering

Mack Trucks, Inc.  
Allentown, PA 18103  
United States

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Phone: 800 868 6225  
Fax: 610 351 8791

MackTrucks.com

**PID Code/Condition:** D0C-0001  
**Description:** Rear Wall Storage Pouch  
**Models:** Conventionals  
**Date:** January 22, 2016



*The information in this document was accurate as of the date of release and pertains to the current version of Mack's Sales Tool. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice.*





# SED

PRODUCT INFORMATION



*The information in this document was accurate as of the date of release and pertains to the current version of Mack's Sales Tool. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice.*

# Product Information



## CCX - Secondary Gauge Packages

**Affects:** Anthem, Granite, Pinnacle

**Updated:** September 8, 2020

Effective with the 22A price book, the CCX family of secondary gauge packages will be restructured to:

- **Change 1:** Add a standard feature to provide the customer with the maximum available component sensors. The following component sensors will become standard on all Anthem, Granite and Pinnacle models and all will be visible through Co-Pilot if an optional secondary gauge package is not selected.
  - Engine oil temperature
  - Transmission oil temperature
  - Axle oil temperature
  - Pyrometer
  - Air suspension pressure (if equipped with air suspension)
- **Change 2:** Include the optional 2GP- sales codes in the CCX family selections for up to four dash-mounted analog gauges. Optional gauge packages can include:
  - Engine oil temperature
  - Transmission oil temperature
  - Boost pressure
  - Pyrometer
  - Brake application pressure
  - Air cleaner restriction

### 2GP- Analog Secondary Gauge Packages (Cab Interior A-G)

Sales Code	Component	
2GP-BTPA	<ul style="list-style-type: none"><li>• Transmission Oil Temperature</li><li>• Brake Application Pressure</li></ul>	<ul style="list-style-type: none"><li>• Boost Pressure</li><li>• Pyrometer</li></ul>
2GP-ETPA	<ul style="list-style-type: none"><li>• Engine Oil Temperature</li><li>• Transmission Oil Temperature</li></ul>	<ul style="list-style-type: none"><li>• Pyrometer</li><li>• Brake Application Pressure</li></ul>
2GP-ETPB	<ul style="list-style-type: none"><li>• Engine Oil Temperature</li><li>• Transmission Oil Temperature</li></ul>	<ul style="list-style-type: none"><li>• Pyrometer</li><li>• Boost Pressure</li></ul>
2GP-ETPR	<ul style="list-style-type: none"><li>• Engine Oil Temperature</li><li>• Transmission Oil Temperature</li></ul>	<ul style="list-style-type: none"><li>• Pyrometer</li><li>• Air Cleaner Restriction</li></ul>



# Product Information



## CCX - Secondary Gauge Packages

Affects: Anthem, Granite, Pinnacle

Updated: September 8, 2020

### 2GP- Analog Gauges Location on Dash

Position	Sales Code			
	2GP-ETPB	2GP-ETPR	2GP-ETPA	2GP-BTPA
1	Engine Oil	Air Restriction	Engine Oil	Boost Pressure
2	Transmission Oil	Engine Oil	Transmission Oil	Transmission Oil
3	Pyrometer	Transmission Oil	Pyrometer	Pyrometer
4	Boost Pressure	Pyrometer	Brake Application	Brake Application



# Product Information

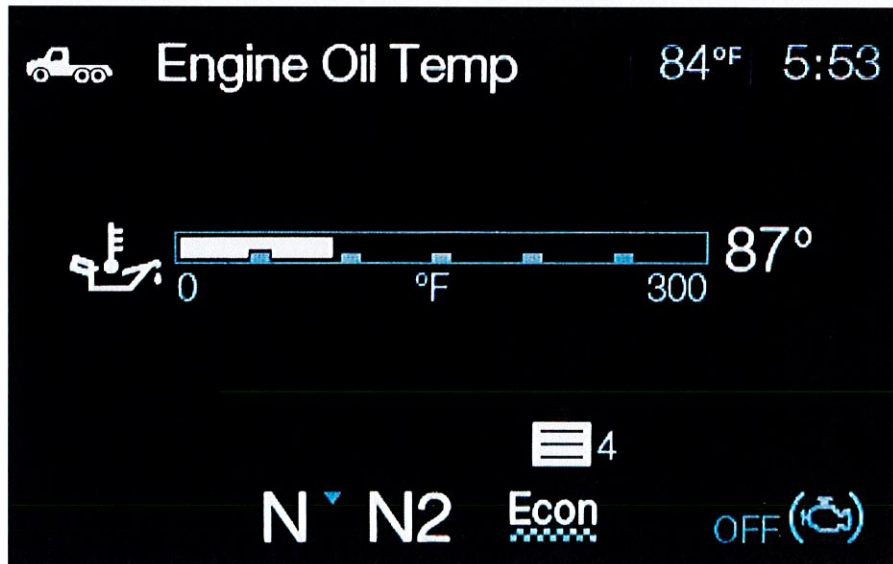


## CCX - Secondary Gauge Packages

Affects: Anthem, Granite, Pinnacle

Updated: September 8, 2020

All digital gauges displayed in Co-Pilot are designed as this example showing engine oil temperature



Selecting "Without Secondary Gauge Package" adds a small storage area above dash switches.



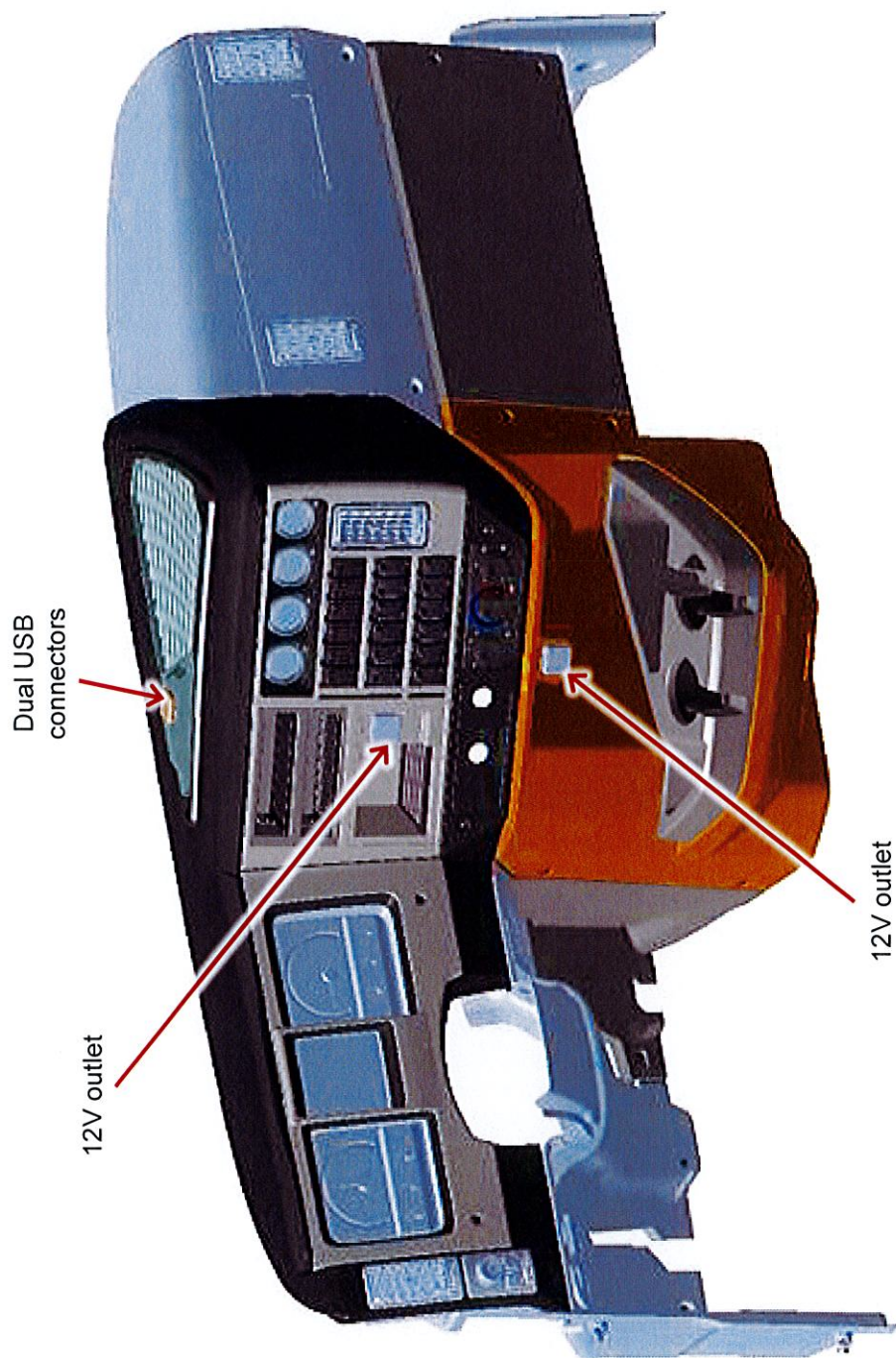


## Product Information

### M9A - DRIVER ENVIRONMENT 12V AND USB CONNECTIONS

Updated: August 31, 2021

The diagram below illustrates the location of 12V and USB connections for all conventional model dashes.





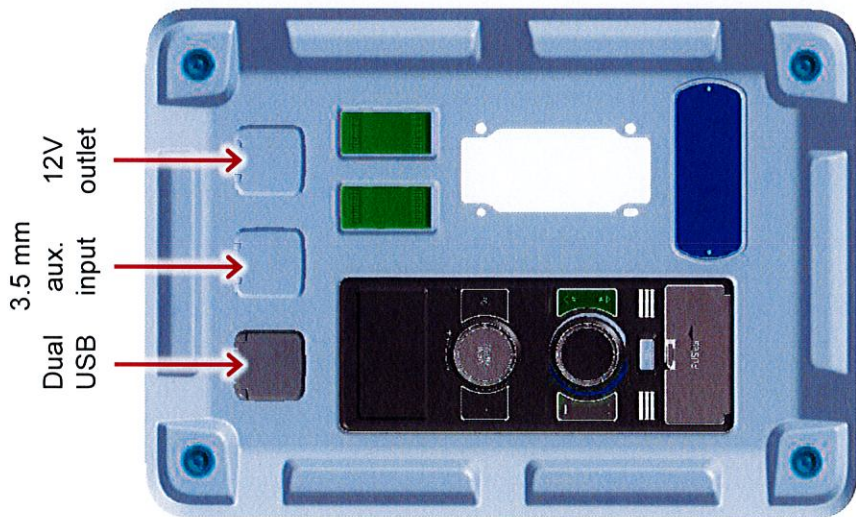
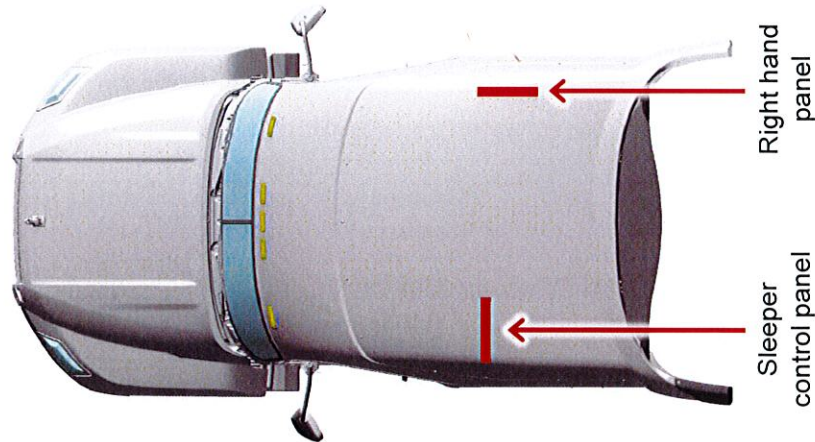
## Product Information

M9A - DRIVER ENVIRONMENT 12V AND USB CONNECTIONS

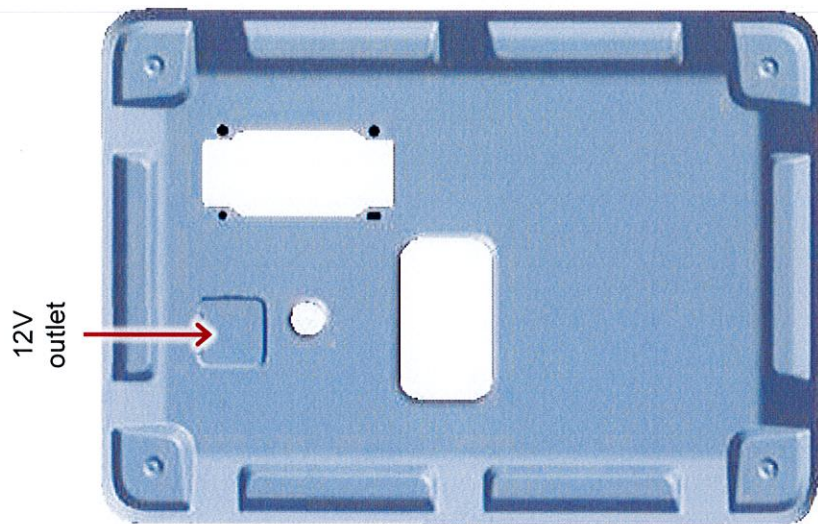
Updated: August 31, 2021

### 70-inch Sleepers

The diagrams below illustrate the location of 12V and USB connections located in the sleeper compartment.



Sleeper control panel



Right hand panel





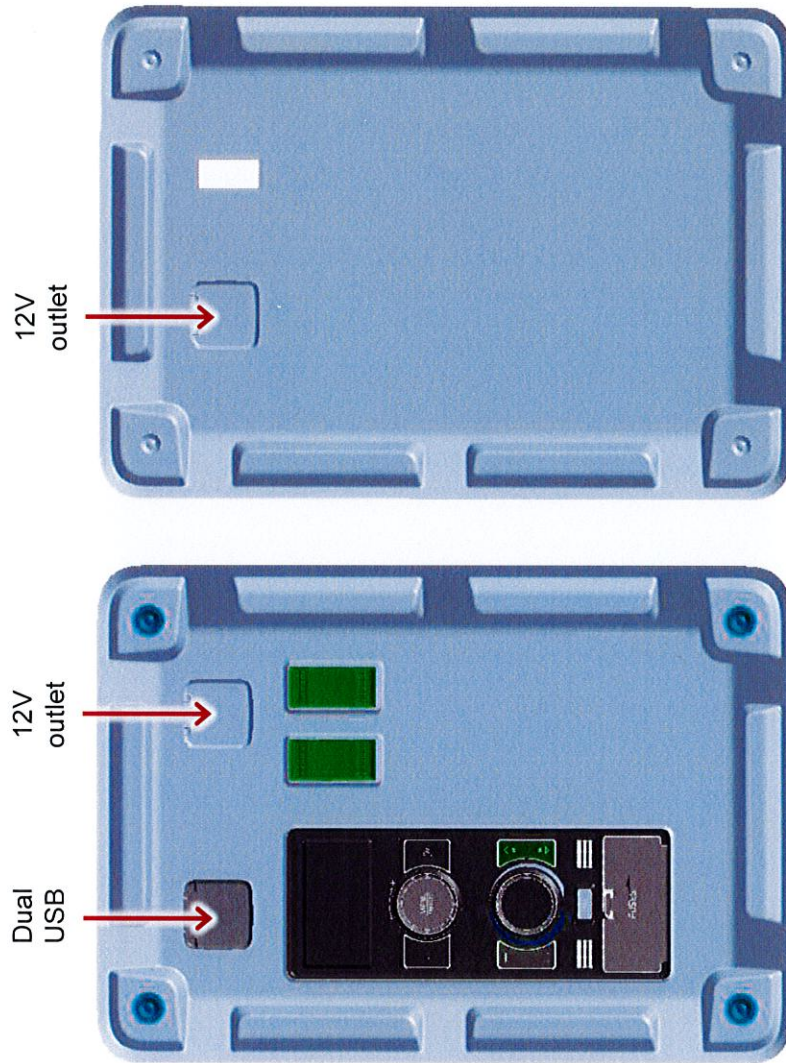
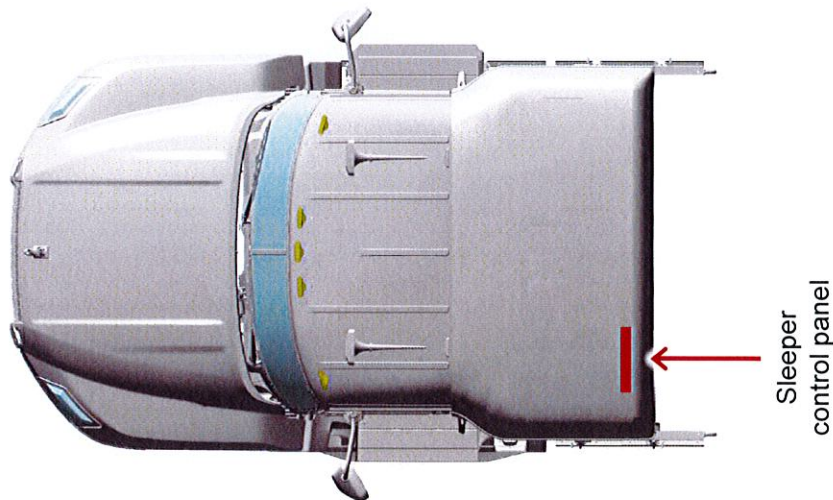
## Product Information

M9A - DRIVER ENVIRONMENT 12V AND USB CONNECTIONS

Updated: August 31, 2021

### 48-inch Sleepers

The diagrams below illustrate the location of 12V and USB connections located in the sleeper compartment.





# STANDARD CHASSIS WARRANTY CERTIFICATE



Mack Trucks warrants certain individual components of the new Mack truck to be free from defects in material and workmanship under normal use and service up to the periods as specified, provided all Mack Trucks' maintenance and inspection requirements are followed. See your local authorized Mack dealer for recommended maintenance and inspection procedures. All warranty periods are calculated from date in service of the vehicle. All coverage is 100% for parts and labor subject to the qualifications, limitations, and exclusions as noted.

**LIMITATIONS AND EXCLUSIONS TO THIS WARRANTY APPEAR ON THE REVERSE SIDE OF THIS CERTIFICATE.  
THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.**

This warranty applies to **Model Year 2024 trucks**, AN, GR, LR, PL, TE models, manufactured by Mack Trucks, operated in the United States and Canada with EPA 17 and newer engines. Specific coverage is based on the application and weight class as described in the following chart:

	<b>Standard NORMAL DUTY</b>	<b>Standard HEAVY DUTY</b>	<b>Standard SEVERE DUTY</b>
<b>Typical Vocations</b>	Line / Long Haul, Short Haul, or Pickup & Delivery	Heavy Line Haul, Construction, Refuse, Fire or Rescue Service	Heavy Construction, Heavy Refuse, Off-Road, Heavy Haul, Mining, Logging, or Oil Field
<b>Weight Class Qualifications</b>	Vehicle must have GVWR ≤ 63,000 lbs. (≤ 28 metric tons) or GCWR ≤ 110,000 lbs. (≤ 50 mt.)	Vehicle must have GVWR ≤ 80,000 lbs. (≤ 36 mt.) or GCWR ≤ 143,000 lbs. (≤ 65 mt.)	Vehicle must have GAWR > 52,000 lbs. (> 23.5 mt.) or GVWR > 80,000 lbs. (> 36 mt.) or GCWR > 143,000 lbs. (> 65 mt.)
<b>Basic Coverage *</b>	12 months or 100,000 miles (160,934 km)	12 months or 100,000 miles (160,934 km)	12 months or 100,000 miles (160,934 km)
<b>Chassis Towing</b>	Towing/Road Service coverage is limited to 90 days or 5,000 miles (8047 km), whichever occurs first, limited to the truck (less trailer) and to a single tow per incident to the nearest authorized Mack Trucks service center. Charges in excess of \$1,000 are not covered unless Mack OneCall™ service is contacted and approves additional amounts prior to tow.		Not Applicable
<b>Air Conditioning</b>	Air conditioning (sealed system only) is covered for 12 months with no mileage limitation.		
<b>Engine / Emission</b>	Not covered under this warranty certificate. See respective engine manufacturer's warranty certificate. See paragraph 19 on reverse side.		
<b>Transmission, Driveline, Rear Axle, Front Non-Drive Steer Axle</b>	36 months or 350,000 miles (563,270 km) Covered Components are as follows: • Manual Transmission – Transmission assembly • Rear Axle – Differential carrier assembly & axle housing • Front Non-Drive Steer Axle – Axle beam, steering knuckle, & tie rod • Driveline – Bearings, hangers & shafts		12 months or 100,000 miles (160,934 km)
	Allison Automatic Transmissions are not covered under this warranty certificate. See paragraph 19 on reverse side.		
<b>Mack Carrier &amp; Axle Housing</b>	60 months or 750,000 miles (1,207,008 km)	60 months or 500,000 miles (804,672 km)	24 months or 100,000 miles (160,934 km)
<b>mDRIVE™ Transmission</b>	60 months or 750,000 miles (1,207,008 km) mDRIVE™ and mDRIVE™ HD	mDRIVE™: 36 months or 250,000 miles (402,336 km); mDRIVE™ HD: 36 months with no mileage limitation	12 months or 100,000 miles (160,934 km); mDRIVE™ HD: 24 months with no mileage limitation
<b>mDRIVE™ Clutch</b>	36 months or 350,000 miles (563,270 km) mDRIVE™ and mDRIVE™ HD	36 months or 250,000 miles (402,336 km) mDRIVE™ and mDRIVE™ HD	mDRIVE™: 12 months or 100,000 miles (160,934 km); mDRIVE™ HD: 24 months or 250,000 miles (402,336 km)
<b>mDRIVE™ Transmission Towing</b>	Towing/Road Service on warrantable transmission failures is covered to 24 months or 250,000 miles (402,336 km) whichever occurs first, limited to the truck (less trailer), and to a single tow per incident to the nearest authorized Mack Trucks service center. Charges in excess of \$1,000 are not covered unless Mack OneCall™ service is contacted and approves additional amounts prior to tow.		Not Applicable
<b>Trunnion Bracket</b>	36 months or 300,000 miles (482,803 km) Limited to Trunnion Bracket & Spindle, Suspension Trunnion (Except Bushings)		12 months or 100,000 miles (160,934 km) (same restrictions as Normal & Heavy)
<b>Cab Structure</b>	60 months or 500,000 miles (804,672 km)	24 months or 200,000 miles (321,869 km)	12 months or 100,000 miles (160,934 km)
<b>Internal Cab Corrosion</b>	60 months or 500,000 miles (804,672 km)	60 months or 500,000 miles (804,672 km)	60 months or 500,000 miles (804,672 km)
	Covered only where metal is perforated from the inside to the outside. See paragraph 18 on the reverse side.		
<b>Frame Rail / Crossmembers</b>	60 months or 500,000 miles (804,672 km) Anthem/Pinnacle Models Only: 72 months or 750,000 miles (1,207,008 km)	36 months or 300,000 miles (482,803 km) Granite Model only: 60 months or 500,000 miles (804,672 km)	12 months or 100,000 miles (160,934 km)
<b>Noise Emission</b>	LIFE OF VEHICLE: Mack Trucks warrants to the first purchaser of this vehicle for purposes other than resale, and to each subsequent purchaser, that this vehicle was designed, built and equipped to conform, at the time of sale to such first purchaser, with all applicable U.S. EPA noise control regulations. This warranty is not limited to any vehicle particular part, component, or system of the vehicle. Defects in the design, assembly, or any part, component or system of the vehicle, which at the time of sale to such first purchaser, caused noise emission levels to exceed Federal standards, are covered by this warranty for the life of the vehicle. EXCLUSIONS: Failures which arise as a result of tampering rather than from defects in the design, assembly, or any part, components, or system of the vehicle are not covered by this warranty.		

\*Covered for 30 Days: Fluorescent Lights or Ballast, Light Bulbs, Fuses, Wiper Blades, and All Filters (oil, fuel, air, etc.).

Covered for 90 Days: Loose Fasteners, Leaking Fittings, or Loose Hose Clamps.



## THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.

**LIMITATIONS** – Mack Trucks' obligation is limited to, at its sole option, repair or replacement of parts which are acknowledged by it to be defective. The defective parts or assemblies replaced shall become the property of Mack Trucks. Warranty repairs performed by an authorized Mack dealer in accordance with the terms of the warranty set forth herein are free of charge. Warranty consideration can only be given if the deficiency is brought to the attention of an authorized Mack dealer upon discovery and the vehicle must be made available, in a timely fashion during the coverage period, for repair.

### EXCLUSIONS:

1. **REPAIR:** In the case of acknowledged defective Covered Parts, exchange with factory remanufactured parts may occur. Warranty repairs do not constitute an extension of any warranty period for any vehicle, component or part.
2. **DAMAGES:** Damages due to misapplication, misuse, accidents, negligence, improper operations, alterations, storage or transport, operation at excessive speeds, loading beyond the factory rated load capacity, failure to follow Mack Trucks' recommended inspection, maintenance, and service procedures, and improper or insufficient maintenance services are not covered.
3. **PROGRESSIVE DAMAGE:** Damages due to failure of operator to take reasonable precautions to mitigate damage are not covered. Damages to a Covered Part due to failure of non-covered part are not covered. Coverage is limited to failure of a Covered Part directly causing failure of a non-covered part, where reasonable precautions were taken to mitigate damages.
4. **APPLICATION:** The selling dealer is responsible for designating the correct application and/or specification for a vehicle sold to a customer. Damages due to misapplication, including but not limited to, failures of component parts of vehicles being operated in excess of factory rated load capacities, or the use of a vehicle, component or part for a purpose for which it was not intended are not covered.
5. **ALTERATIONS:** Any vehicle, component or part repaired, altered, or inspected in any way, so as to adversely affect, in Mack Trucks' sole judgment, its stability, durability, or reliability, is not covered.
6. **NON-ORIGINAL EQUIPMENT:** Any part of the vehicle that fails, malfunctions, or does not perform as a result of improper conversion or installation of bodies or equipment by other manufacturers or suppliers is not covered.
7. **MAINTENANCE AND PARTS CONSUMED:** Maintenance and inspection requirements found in the Operator's Manuals and service manuals/instructions, including, but not limited to, engine tune-up, fuel system cleaning, replacement of lubricants and filter elements, adjustments of the engine injection pump/transmission/brakes/linkages, as well as diagnosis, test time and all other adjustments must be followed and are not covered. Parts which are normally consumed or worn out during the vehicle's normal service life and customarily replaced during usual maintenance service, including, but not limited to, mud flaps and brackets, brake linings, clutch brake, and clutch linings, are not covered.
8. **PERFORMANCE COMPLAINTS:** Performance complaints are not covered (including, but not limited to, low power and/or poor fuel economy). Coverage is limited to defects in material and workmanship of a Covered Part directly causing the performance issue.
9. **WEAROUT:** Mack Trucks does not cover normal wear of Covered Parts. Failures attributable to wear are excluded. For example and without limitation, the wear rate of parts in any engine or transmission, and especially those parts within the combustion area and clutch housing area, will vary depending upon operating conditions and environment. Conditions, such as load, trailer configuration, road speed and road conditions, as well as the quality of fuel, lubrication oil, and all filters bear a direct relationship to the wear rate and resulting life of parts. Depending upon the severity of these various conditions, parts wear and resulting failure could occur within the time limit of the coverage.
10. **NON-GENUINE PARTS:** Any failure of any vehicle, component or part caused by the use of parts and accessories, or major assemblies and exchange units, which do not meet factory standards is not covered.
11. **ODOMETER READING:** Any vehicle on which the actual mileage or hours cannot readily be determined, or on which the odometer, hour meter, or Electronic Control Unit has been disconnected, disabled, or altered, may not be covered by this warranty.
12. **ACCESS TO INFORMATION:** Owner must allow Mack Trucks full access to all data stored in all Electronic Control Modules; failure to do so may result in the loss of warranty coverage.
- LABOR:** Labor to remove and install a Covered Part is included only if a Mack Trucks authorized dealer originally installed the Covered Part. Labor for overtime and/or shift differential is not covered. Excessive labor for a warrantable repair due to the prior installation of equipment or body is not covered.
14. **MISC. EXPENSE:** Meals, lodging, communications charges, travel time and expense, loss of cargo, downtime, loss of profit/revenue, rental vehicles, driver's wages and other miscellaneous expenses are not covered. Shop supplies, lube oil, lubricants, sealers, anti-freeze, filter elements and labor performed by a non-approved location are not covered.
15. **ADDITIONAL COMPONENTS:** Components or parts that are not installed by Mack Trucks, including winches, power take-offs, dumper, mixer and refuse assemblies, hoists and bodies or other special equipment are not covered. During a warrantable repair, additional time to remove any customer installed components will not be covered under warranty. Mack Trucks' factory manufacturing records will be determinative as to factory installed components.
16. **TOWING:** Unless expressly provided in this Warranty Certificate, expenses for towing or road service are not covered. Failures caused by improper towing technique are not covered.
17. **SUSPENSION PARTS:** Suspension parts, including but not limited to rubber bushings, torque rod bushings, spring pins and bushings, and greased lubrication points that fail due to improper maintenance, abnormally severe service or abuse are not covered.
18. **CAB STRUCTURE AND CORROSION:** Cab structural defects or cab corrosion that occurs in areas of the cab that previously were damaged, repaired, altered or modified are not covered. Cab corrosion where metal is perforated from the outside to the inside is not covered.
19. **VENDOR ENGINES, ALLISON AUTOMATIC TRANSMISSIONS and ALTERNATE FUEL STORAGE AND DELIVERY SYSTEMS:** Vendor engines, Allison automatic transmissions and alternate fuel (CNG/LNG/DME) fuel storage/delivery components used in Mack trucks are warranted by their respective manufacturers and not by Mack Trucks, Inc. Refer to the manufacturers' warranty statements.
20. **OIL CONSUMPTION:** Before a claim based upon excessive oil consumption will be considered, the owner must provide proof that all recommended maintenance has been performed and submit adequate documentation to show that oil consumption exceeds Mack Trucks' published standards. Under no circumstances will warranty pay for repairs related to excessive oil consumption after the earlier of 24 months, 250,000 miles, or 402,000 kilometers.
21. **ENVIRONMENTAL DAMAGE:** Parts made out of cloth, leather, wood, rubber, synthetics, paint or chrome which have been affected by exposure to the elements or chemical influence including, but not limited to, road salt/chemicals, industrial fall-out or the use of improper cleaners, polishes and/or waxes are not covered.
22. **ALIGNMENT:** Alignment of axle(s), balance of tires, changing of axle camber, caster, toe and thrust angle are not covered.
23. **GLASS:** Glass breakage and scratches are not covered unless physical proof of manufacturing responsibility is established.
24. **TIRES:** Except as expressly provided in warranty certificates covering Green House Gas (GHG) components, tires are covered only under warranties provided by the tire manufacturer.
25. **CHANGES:** Mack Trucks reserves the right to make any changes in design, or make additions to or upon its products, without incurring any obligations to install the same changes on vehicles previously built.

**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION OR LIABILITY ON THE PART OF THE MANUFACTURER INCLUDING, WITHOUT LIMITATION OF THE FOREGOING, CONSEQUENTIAL, INDIRECT, AND INCIDENTAL DAMAGES. MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.**

# MACK®

Mack Trucks, Inc.  
Post Office Box 26259  
7825 National Service Road  
Greensboro, North Carolina 27409



# STANDARD ENGINE WARRANTY CERTIFICATE

(EPA 17 and Newer, Model Year 2024)



Mack Trucks warrants certain individual components of each new Mack MP®7 and MP8 EPA 17 and newer emission engine in a new Mack truck to be free from defects in material and workmanship under normal use and service up to the periods specified, provided all Mack Trucks' maintenance and inspection requirements are followed. See your local authorized Mack dealer for recommended maintenance and inspection procedures. All warranty periods are calculated from the date in service of the vehicle. All coverage is 100% for parts and labor subject to the qualifications, limitations and exclusions as noted.

LIMITATIONS AND EXCLUSIONS TO THIS WARRANTY APPEAR ON THE FOLLOWING PAGES OF THIS CERTIFICATE.  
THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.

This warranty applies to only new Mack MP®7 and MP8 engines meeting EPA 17 and newer emission requirements in new Mack trucks operated in the United States and Canada installed in Model Year 2024 trucks.

**Standard Mack Engine Components Coverage:** 24 months or 250,000 miles (402,336 km), whichever occurs first, unless otherwise noted.

**Major Components Coverage:** 60 months or 500,000 miles (804,672 km), whichever occurs first.

USE OF IMPROPER OR UNAPPROVED FUEL OR ENGINE OIL WILL VOID THE ENGINE AND AFTERTREATMENT SYSTEM (DIESEL PARTICULATE FILTER) WARRANTIES. EPA 17 AND NEWER EMISSION MACK ENGINES REQUIRE THE USE OF MACK SPECIFICATION EOS 4.5 HIGH PERFORMANCE DIESEL ENGINE OIL AND ULTRA LOW SULFUR DIESEL (ULSD) FUEL.

USE OF FLUIDS OTHER THAN API CERTIFIED DIESEL EXHAUST FLUID (DEF) WILL COMPROMISE AFTERTREATMENT SYSTEM PERFORMANCE, INCREASE EMISSIONS, AND MAY IMPACT THIS TRUCK'S PRODUCT WARRANTIES.

## SEE FOLLOWING TABLE FOR SPECIFIC COVERAGES:

Covered Standard Components List: 24 Months or 250,000 miles (402,336 km)	Qualifications and Limitations
Air Compressor	Includes: Sprocket and Mounting Bolts
Bearings	All internally lubricated bearings and bushings only.
Camshaft, Caps, and Bolts	Failures resulting from the valve and injector adjustments not being maintained properly are <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> covered.
Connecting Rods, Caps, and Bolts	
Coolant Duct Cover	
Crankcase Ventilation Assembly	
Crankshaft	
Crankshaft Hub	
Cylinder Block	Includes: Casting, Main Caps, and Bolts
Cylinder Block Heater	
Cylinder Head	Includes: Assembly, Casting, Bolts, Plugs, and Sleeves
Diesel Particulate Filter Assembly (DPF) / Diesel Oxidation Catalyst (DOC) / Selective Catalytic Reduction (SCR)	Includes: Aftertreatment Hydrocarbon Injector (AHI), Aftertreatment Wiring Harness, Aftertreatment Control Module, Diffuser Pipe (AHI Mounting), Fuel Lines to AHI Injector, AHI Shutoff Valve, AHI Fuel Pressure Sensor, Pre-Catalyst Temperature Sensor, Post-Catalyst Temperature Sensor, Downstream DPF Temperature Sensor, DPF Differential Pressure Sensor, Particulate Matter (PM) Sensor, SCR Assembly, DEF Pump Assembly (Pump Reverting Valve, Pump Pressure Sensor), DEF Injector, DEF Tank Heating Control Valve, NOx (SCR Inlet and Outlet) Sensor, Downstream SCR Temperature Sensor (T4)
EGR (Exhaust Gas Recirculation) Components	All components including Clamps, Control Valve, Controller Area Network (CAN) EGR Valve, Cooler, Fittings, Gaskets, Mixer, Pipes, Charge Air Cooler Temperature Out (CAC Out) Sensor, EGR Venturi Differential Pressure Sensor, EGR Wiring Harness.
Electrical EA Harness Supplied with Engine	From EECU to sensors and injectors and actuators
Engine Electronic Control Unit (EECU)	
Engine Brake Mechanism - PowerLeash™	Factory installed only. Includes: PowerLeash™ Control Valve and PowerLeash™ Rocker Arms. Turbo Compound (TC) engine: Closed Loop Butterfly (CLB)

Continued on Page 2...



<b>Covered Standard Engine Components List: 24 Months or 250,000 miles (402,336 km)</b>	<b>Qualifications and Limitations</b>
Exhaust Manifold	Includes: Casting, Joint Seals, Rings, and Wraps
Fan Belt Tensioner Assemblies and Bracket	Excludes: Fan Belts
Flywheel	Includes: Housing and Ring Gear
Fuel Filter Housing	Excludes: Filters
Fuel Injection System	Includes: Injectors and Common Rail Assembly (Electronic Fuel Pressure Regulator and Pressure Sensor)
Fuel Transfer Pump	
Gaskets, Seals, O Rings, and Silicon Sealant	
Gears	All internally lubricated gears only (Timing and Idler gears)
Hoses and Lines Supplied with Engine	Fluid carrying: Engine to engine mounted
Idler Pulleys	
Intake Manifold and Throttle Assembly	
Ladder Frame	
Oil Cooler	Engine Oil Cooler only
Oil Fill Tube and Cap	
Oil Filter Housing	Excludes: Oil Filters. Includes: All control valves and sensors contained in the Oil Filter Housing.
Oil Pan	
Oil Pump	
Piston Assembly	Includes: Cooler Nozzles, Liners, Pistons, and Rings
Pneumatic Control System	TC Engine: Air Valve Unit, Buffer Valve Unit, and Check Valve
Power Steering Pump	
Pre-Heater	Factory installed only. Includes: Preheat Relay, Terminals, and Power Cables
PTO Drive / REPTO (Rear Engine Mounted PTO Drive)	Factory installed only. Excludes: All Pumps or Driven Gears
Rocker Arm Assembly and Shafts	Includes: PowerLeash™ Rockers and Non-PowerLeash™ Rockers. Failures resulting from the valve and injector adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Sensors (On Engine)	Includes: Temperature-Coolant, Crankcase Pressure, EGR Temperature, Engine Oil Level/Temperature, Engine Oil Pressure, Engine Timing/Speed (Flywheel), Temperature & Pressure – Inlet Manifold Air Sensor; Piston Cooling Jet Pressure
Starter Motor	
Telematics Gateway	TGW Unit and Associated Hardware (Antenna, Cab Overlay Harness, Antenna Cables)
Thermostat (Coolant)	Includes: Thermostat Side Cover
Timing Gear Cover and Plate	
Towing	Towing/Road Service on warrantable engine failures is covered to 24 months or 250,000 miles (402 336 km) whichever occurs first, limited to the truck (less trailer) and to a single tow per incident to the nearest authorized Mack service center. Charges in excess of \$1,000.00 are not covered unless Mack OneCall™ service is contacted and approves additional amounts prior to tow.
Turbocharger Assembly	Includes: VGT Actuator Module and Turbo Compound (TC) Assembly, if included
Valve Assembly	Includes: Guides, Keepers, Rotators, Seats, Springs, and Valves. Failures resulting from the valve adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Valve Cover	
Valve Yokes (Bridge) and Pins	Failures resulting from the valve adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Vibration Dampers and Bolts	
Water Pump Assembly	
<b>Covered Major Engine Components List: 60 Months or 500,000 miles (804,672 km)</b>	<b>Qualifications and Limitations</b>
Camshaft, Caps, and Bolts	Failures resulting from the valve & injector adjustments not being maintained properly are NOT covered. Normal maintenance adjustments are NOT covered.
Connecting Rods, Caps, and Bolts	
Crankshaft Forging	
Cylinder Block Casting, Main Caps, and Bolts	
Cylinder Head Casting and Bolts	
Exhaust Manifold Casting	
Flywheel Housing	
Gears	All internally lubricated gears only (Timing and Idler Gears)
Intake Manifold Housing	
Ladder Frame	
Thermostat Housing	
Timing Gear Mounting Plate	Excludes: Timing Gear Cover

Continued on Page 3...



**THESE LIMITATIONS AND EXCLUSIONS ARE IMPORTANT AND MUST BE READ AND UNDERSTOOD.**

**LIMITATIONS** – Mack Trucks' obligation is limited to, at its sole option, repair or replacement of parts which are acknowledged by it to be defective. The defective parts or assemblies replaced shall become the property of Mack Trucks. Warranty repairs performed by an authorized Mack dealer in accordance with the terms of the warranty set forth herein are free of charge. Warranty consideration can only be given if the deficiency is brought to the attention of an authorized Mack dealer upon discovery and the vehicle must be made available, in a timely fashion during the coverage period, for repair.

**EXCLUSIONS:**

1. **REPAIR:** In the case of acknowledged defective Covered Parts, exchange with factory remanufactured parts may occur. Warranty repairs do not constitute an extension of any warranty period for any vehicle, component or part.
2. **DAMAGES:** Damages due to misapplication, misuse, accidents, negligence, improper operations, alterations, storage or transport, operation at excessive speeds, loading beyond the factory rated load capacity, failure to follow Mack Trucks' recommended inspection, maintenance, and service procedures, and improper or insufficient maintenance services are not covered.
3. **PROGRESSIVE DAMAGE:** Damages due to failure of operator to take reasonable precautions to mitigate damage are not covered. Damages to a Covered Part due to failure of non-covered part are not covered. Coverage is limited to failure of a Covered Part directly causing failure of a non-covered part, where reasonable precautions were taken to mitigate damages.
4. **APPLICATION:** The selling dealer is responsible for designating the correct application and/or specification for a vehicle sold to a customer. Damages due to misapplication, including but not limited to, failures of component parts of vehicles being operated in excess of factory rated load capacities, or the use of a vehicle, component or part for a purpose for which it was not intended are not covered.
5. **ALTERATIONS:** Any vehicle, component or part repaired, altered, or inspected in any way, so as to adversely affect, in Mack Trucks' sole judgment, its stability, durability, or reliability, is not covered.
6. **NON-ORIGINAL EQUIPMENT:** Any part of the vehicle that fails, malfunctions, or does not perform as a result of improper conversion or installation of bodies or equipment by other manufacturers or suppliers is not covered.
7. **MAINTENANCE AND PARTS CONSUMED:** Maintenance and inspection requirements found in the Operator's Manuals and service manuals/instructions, including, but not limited to, engine tune-up, fuel system cleaning, replacement of lubricants and filter elements, adjustments of the engine injection pump/transmission/brakes/linkages, as well as diagnosis, test time and all other adjustments must be followed and are not covered. Parts which are normally consumed or worn out during the vehicle's normal service life and customarily replaced during usual maintenance service, including, but not limited to, mud flaps and brackets, brake linings, clutch brake, and clutch linings, are not covered.
8. **PERFORMANCE COMPLAINTS:** Performance complaints are not covered (including, but not limited to, low power and/or poor fuel economy). Coverage is limited to defects in material and workmanship of a Covered Part directly causing the performance issue.
9. **WEAROUT:** Mack Trucks does not cover normal wear of Covered Parts. Failures attributable to wear are excluded. For example and without limitation, the wear rate of parts in any engine or transmission, and especially those parts within the combustion area and clutch housing area, will vary depending upon operating conditions and environment. Conditions, such as load, trailer configuration, road speed and road conditions, as well as the quality of fuel, lubrication oil, and all filters bear a direct relationship to the wear rate and resulting life of parts. Depending upon the severity of these various conditions, parts wear and resulting failure could occur within the time limit of the coverage.
10. **NON-GENUINE PARTS:** Any failure of any vehicle, component or part caused by the use of parts and accessories, or major assemblies and exchange units, which do not meet factory standards is not covered.
11. **ODOMETER READING:** Any vehicle on which the actual mileage or hours cannot readily be determined, or on which the odometer, hour meter, or Electronic Control Unit has been disconnected, disabled, or altered, may not be covered by this warranty.
12. **ACCESS TO INFORMATION:** Owner must allow Mack Trucks full access to all data stored in all Electronic Control Modules; failure to do so may result in the loss of warranty coverage.
13. **LABOR:** Labor to remove and install a Covered Part is included only if a Mack Trucks authorized dealer originally installed the Covered Part. Labor for overtime and/or shift differential is not covered. Excessive labor for a warrantable repair due to the prior installation of equipment or body is not covered.
14. **MISC. EXPENSE:** Meals, lodging, communications charges, travel time and expense, loss of cargo, downtime, loss of profit/revenue, rental vehicles, driver's wages and other miscellaneous expenses are not covered. Shop supplies, lube oil, lubricants, sealers, anti-freeze, filter elements and labor performed by a non-approved location are not covered.
15. **ADDITIONAL COMPONENTS:** Components or parts that are not installed by Mack Trucks, including winches, power take-offs, dumper, mixer and refuse assemblies, hoists and bodies or other special equipment are not covered. During a warrantable repair, additional time to remove any customer installed components will not be covered under warranty. Mack Trucks' factory manufacturing records will be determinative as to factory installed components.
16. **TOWING:** Unless expressly provided in this Warranty Certificate, expenses for towing or road service are not covered. Failures caused by improper towing technique are not covered.
17. **SUSPENSION PARTS:** Suspension parts, including but not limited to rubber bushings, torque rod bushings, spring pins and bushings, and greased lubrication points that fail due to improper maintenance, abnormally severe service or abuse are not covered.
18. **CAB STRUCTURE AND CORROSION:** Cab structural defects or cab corrosion that occurs in areas of the cab that previously were damaged, repaired, altered or modified are not covered. Cab corrosion where metal is perforated from the outside to the inside is not covered.
19. **VENDOR ENGINES, ALLISON AUTOMATIC TRANSMISSIONS and ALTERNATE FUEL STORAGE AND DELIVERY SYSTEMS:** Vendor engines, Allison automatic transmissions and alternate fuel (CNG/LNG/DME) fuel storage/delivery components used in Mack trucks are warranted by their respective manufacturers and not by Mack Trucks, Inc. Refer to the manufacturers' warranty statements.
20. **OIL CONSUMPTION:** Before a claim based upon excessive oil consumption will be considered, the owner must provide proof that all recommended maintenance has been performed and submit adequate documentation to show that oil consumption exceeds Mack Trucks' published standards. Under no circumstances will warranty pay for repairs related to excessive oil consumption after the earlier of 24 months, 250,000 miles, or 402,000 kilometers.
21. **ENVIRONMENTAL DAMAGE:** Parts made out of cloth, leather, wood, rubber, synthetics, paint or chrome, which have been affected by exposure to the elements or chemical influence including, but not limited to, road salt/chemicals, industrial fall-out or the use of improper cleaners, polishes and/or waxes are not covered.
22. **ALIGNMENT:** Alignment of axle(s), balance of tires, changing of axle camber, caster, toe and thrust angle are not covered.
23. **GLASS:** Glass breakage and scratches are not covered unless physical proof of manufacturing responsibility is established.
24. **TIRES:** Except as expressly provided in warranty certificates covering Green House Gas (GHG) components, tires are covered only under warranties provided by the tire manufacturer.
25. **CHANGES:** Mack Trucks reserves the right to make any changes in design, or make additions to or upon its products, without incurring any obligations to install the same changes on vehicles previously built.

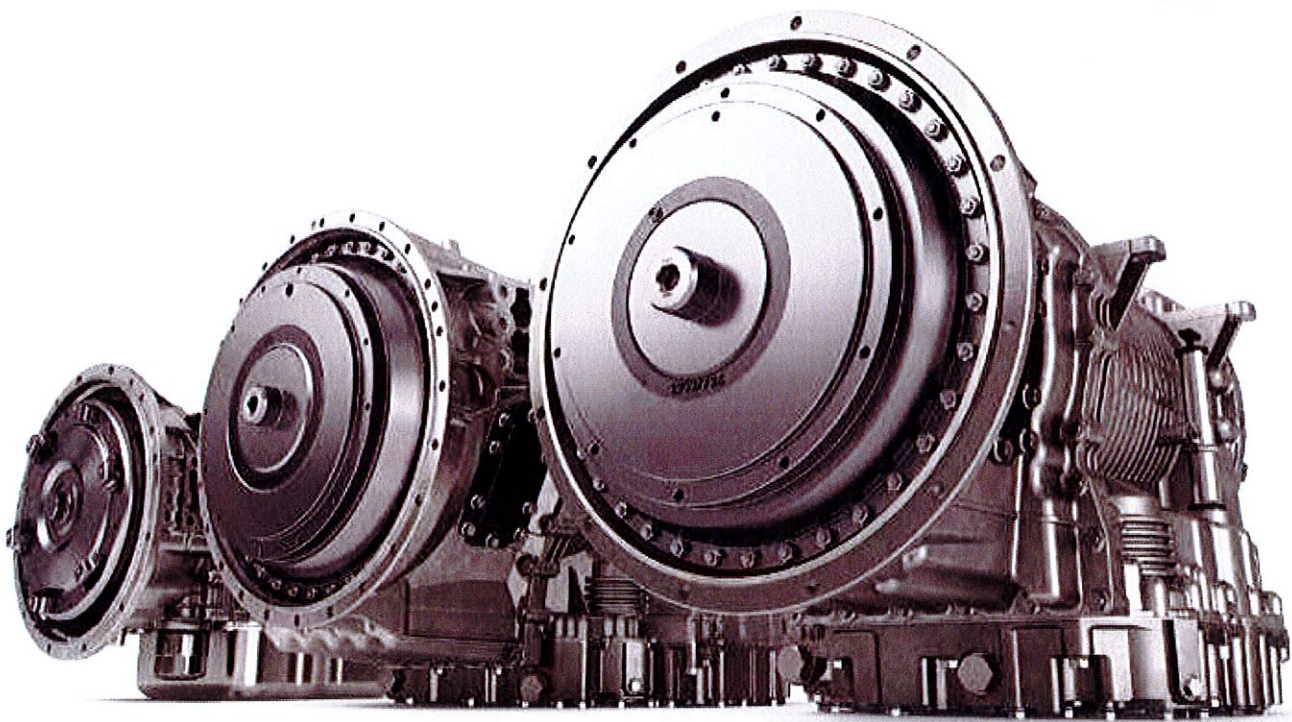
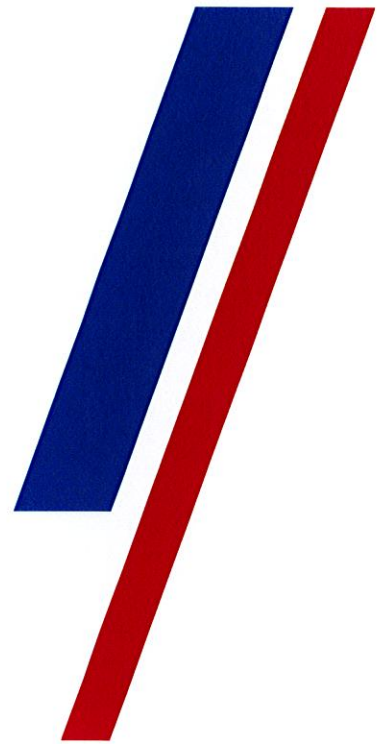
**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, REPRESENTATIONS OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION OR LIABILITY ON THE PART OF THE MANUFACTURER INCLUDING, WITHOUT LIMITATION OF THE FOREGOING, CONSEQUENTIAL, INDIRECT, AND INCIDENTAL DAMAGES. MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.**

**MACK**®

Mack Trucks, Inc.  
Post Office Box 26259  
7825 National Service Road  
Greensboro, North Carolina 27409



# 2023 Allison Transmission Coverage Pricing Guide



*Improving The Way The World Works*



Terms and Conditions for

# Allison Transmission Coverage

## Transmission Coverage Definitions and Requirements

### Standard Limited Warranty

All Allison automatic transmissions carry a Standard Limited Warranty based upon Vocational Model Series and vocations\*. Standard Limited Warranty includes 100% parts and labor for the designated coverage period. Mileage limitations for specific Vocational Model Series and/or vocations may apply.

### Coverage Pricing

Extended Transmission Coverage must be purchased within one year of the delivery of the vehicle. Pricing shown in this brochure is applicable to Extended Transmission Coverage purchased in 2023.

Suggested retail prices are established for each transmission vocational model/vocation combination.

The terms and conditions under which Allison Transmission offers Extended Transmission Coverage are set forth on the back of the Extended Transmission Coverage Agreement Registration, available from any Allison Authorized Distributor or Dealer.

Pricing and/or coverage details shown in the following charts are subject to change without notice. All pricing is in US Dollars. For current prices and coverage information, go to **[allisontransmission.com](http://allisontransmission.com)**.

### Extended Transmission Coverage

In addition to Standard Limited Warranty, Allison transmissions listed in this brochure are eligible for Extended Transmission Coverage. Extended Transmission Coverage begins at the end of the Standard Limited Warranty period and increases the coverage period. Extended Transmission Coverage is available for purchase through Allison Authorized Distributors and Dealers. Details for Extended Transmission Coverage are shown on the following charts.

**REQUIREMENTS:** Use of Allison Approved TES 668® or TES 295® transmission fluid\*\* and Genuine Allison Filters is required. Failure to use Allison Approved TES 668 or TES 295 transmission fluid and Genuine Allison Filters will result in no coverage for repair beyond Standard Limited Warranty coverage. Transmissions that are not OEM factory filled with Allison Approved TES 668 or TES 295 transmission fluid and Genuine Allison Filters must have Allison Approved TES 668 or TES 295 transmission fluid and Genuine Allison Filters installed at the time of Extended Transmission Coverage purchase. Transmissions that are not OEM factory filled with Allison Approved TES 668 or TES 295 transmission fluid, or transmissions operating with non-TES 668 or non-TES 295 fluids, must be drained and filled with Allison Approved TES 668 or TES 295 transmission fluid to achieve 100% concentration. One hundred percent concentration is not achieved until the second consecutive fluid change using Allison Approved TES 668 or TES 295 transmission fluid. The second consecutive fluid change must be achieved at the time of Extended Transmission Coverage purchase.

**NOTE:** Except as noted, all transmissions with Extended Transmission Coverage have 100% parts and labor coverage with no mileage limitations.

\* See Warranty Booklet for exact coverage details.

\*\* For a list of current Allison Approved TES 668 or TES 295 transmission fluids, go to: [allisontransmission.com](http://allisontransmission.com); click on Parts + Service, then Approved Fluids.



2023 Allison Transmission Coverage Pricing Guide

RUGGED DUTY SERIES™		Standard Limited Warranty	Extended Transmission Coverage*		RUGGED DUTY SERIES™		Standard Limited Warranty	Extended Transmission Coverage*	
Model	Vocation	Years of Coverage	2 Years	4 Years	Model	Vocation	Years of Coverage	2 Years	4 Years
1000 RDS	P&D and Beverage	3	\$368	N/A	3000 RDS	P&D and Beverage	3	\$502	\$1,060
	Utility and Other	3	\$368	N/A		Refuse Packer	3	\$966	N/A
	Dump Trucks/Mixers	3	\$287	N/A		Utility and Other	3	\$502	\$1,060
	Agriculture	3	\$287	N/A		Dump Trucks/Mixers	3	\$502	\$1,060
1000 RDS xFE	P&D and Beverage	3	\$368	N/A	3000 RDS R**	Agriculture	3	\$502	\$1,060
	Utility and Other	3	\$368	N/A		P&D and Beverage	3	\$728	\$2,086
	Dump Trucks/Mixers	3	\$287	N/A		Refuse Packer	3	\$1,176	N/A
	Agriculture	3	\$287	N/A		Utility and Other	3	\$728	\$2,086
1350 RDS	P&D and Beverage	3	\$326	N/A	3300 RDS	Dump Trucks/Mixers	3	\$728	\$2,086
	Utility and Other	3	\$497	N/A		Agriculture	3	\$728	\$2,086
	Dump Trucks/Mixers	3	\$497	N/A		P&D and Beverage	3	\$522	\$1,254
	Agriculture	3	\$497	N/A		Refuse Packer	3	\$991	N/A
1350 RDS xFE	P&D and Beverage	3	\$326	N/A	3300 RDS R**	Utility and Other	3	\$522	\$1,254
	Utility and Other	3	\$497	N/A		Dump Trucks/Mixers	3	\$522	\$1,254
	Dump Trucks/Mixers	3	\$497	N/A		Agriculture	3	\$522	\$1,254
	Agriculture	3	\$497	N/A		P&D and Beverage	3	\$669	\$2,301
1700 RDS	Utility and Other	5	\$545	N/A	3500 RDS	Refuse Packer	3	\$1,131	N/A
1750 RDS	Utility and Other	5	\$545	N/A		Utility and Other	3	\$669	\$2,301
2100 RDS	P&D and Beverage	3	\$563	\$788		Dump Trucks/Mixers	3	\$669	\$2,301
	Utility and Other	3	\$563	\$788		Agriculture	3	\$669	\$2,301
	Dump Trucks/Mixers	3	\$558	\$781		P&D and Beverage	3	\$502	\$1,209
	Agriculture	3	\$558	\$781	3500 RDS R**	Refuse Packer	3	\$971	N/A
2100 RDS xFE	P&D and Beverage	3	\$563	\$788		Utility and Other	3	\$502	\$1,209
	Utility and Other	3	\$563	\$788		Dump Trucks/Mixers	3	\$502	\$1,209
	Dump Trucks/Mixers	3	\$558	\$781		Agriculture	3	\$502	\$1,209
	Agriculture	3	\$558	\$781		P&D and Beverage	3	\$624	\$2,206
2200 RDS	P&D and Beverage	3	\$552	\$773	4000 RDS	Refuse Packer	3	\$1,086	N/A
	Utility and Other	3	\$552	\$773		Utility and Other	3	\$624	\$2,206
	Dump Trucks/Mixers	3	\$552	\$773		Dump Trucks/Mixers	3	\$624	\$2,206
	Agriculture	3	\$552	\$773		Agriculture	3	\$624	\$2,206
2200 RDS xFE	P&D and Beverage	3	\$552	\$773	4000 RDS R**	P&D and Beverage	3	\$900	\$1,641
	Utility and Other	3	\$552	\$773		Refuse Packer	3	\$1,182	N/A
	Dump Trucks/Mixers	3	\$552	\$773		Utility and Other	3	\$900	\$1,641
	Agriculture	3	\$552	\$773		Dump Trucks/Mixers	3	\$900	\$1,641
2300 RDS	P&D and Beverage	3	\$571	\$802	4500 RDS	Agriculture	3	\$900	\$1,641
	Utility and Other	3	\$571	\$802		P&D and Beverage	3	\$1,249	\$2,487
	Dump Trucks/Mixers	3	\$571	\$802		Refuse Packer	3	\$1,517	N/A
	Agriculture	3	\$571	\$802		Utility and Other	3	\$1,249	\$2,487
2350 RDS	P&D and Beverage	3	\$565	\$789	4500 RDS R**	Dump Trucks/Mixers	3	\$1,249	\$2,487
	Utility and Other	3	\$565	\$789		Agriculture	3	\$1,249	\$2,487
	Dump Trucks/Mixers	3	\$565	\$789		P&D and Beverage	3	\$863	\$1,536
	Agriculture	3	\$565	\$789		Refuse Packer	3	\$1,093	N/A
2350 RDS xFE	P&D and Beverage	3	\$560	\$784	4700 RDS	Utility and Other	3	\$863	\$1,536
	Utility and Other	3	\$560	\$784		Dump Trucks/Mixers	3	\$863	\$1,536
	Dump Trucks/Mixers	3	\$560	\$784		Agriculture	3	\$863	\$1,536
	Agriculture	3	\$560	\$784		P&D and Beverage	3	\$1,018	\$2,045
2500 RDS	P&D and Beverage	3	\$487	\$682	4700 RDS R**	Refuse Packer	3	\$1,265	N/A
	Refuse Packer	3	\$947	\$1,326		Utility and Other	3	\$1,018	\$2,045
	Utility and Other	3	\$487	\$682		Dump Trucks/Mixers	3	\$1,018	\$2,045
	Dump Trucks/Mixers	3	\$487	\$682		Agriculture	3	\$1,628	\$2,045
2500 RDS xFE	Agriculture	3	\$487	\$682	4700 RDS	P&D and Beverage	3	N/A	N/A
	P&D and Beverage	3	\$487	\$687		Refuse Packer	3	\$1,628	N/A
	Refuse Packer	3	\$947	\$1,331		Utility and Other	3	\$1,693	\$3,069
	Utility and Other	3	\$487	\$687		Dump Trucks/Mixers	3	\$1,313	\$3,069
2550 RDS	Dump Trucks/Mixers	3	\$487	\$687	4700 RDS R**	Agriculture	3	\$1,363	\$3,069
	Agriculture	3	\$487	\$687		P&D and Beverage	3	N/A	N/A
	P&D and Beverage	3	\$565	\$794		Refuse Packer	3	\$2,440	N/A
	Refuse Packer	3	\$1,092	\$1,532		Utility and Other	3	\$2,108	\$5,028
2550 RDS xFE	Utility and Other	3	\$565	\$794	4700 RDS R**	Dump Trucks/Mixers	3	\$2,108	\$5,028
	Dump Trucks/Mixers	3	\$565	\$794		Agriculture	3	\$2,108	\$5,028
	Agriculture	3	\$565	\$794					
	P&D and Beverage	3	\$565	\$794					
2700 RDS	Refuse Packer	3	\$1,092	\$1,532					
	Utility and Other	3	\$565	\$794					
	Dump Trucks/Mixers	3	\$565	\$794					
	Agriculture	3	\$565	\$794					
2750 RDS	Utility and Other	5	\$545	N/A					
	Utility and Other	5	\$545	N/A					

Rugged Duty applications with a 2200/2500/3000 RDS Series™ may have additional coverage. Contact your distributor for additional information.

\* Extended Transmission Coverage: Available for purchase through Allison Authorized Distributors and Dealers to increase coverage

\*\* Retarder Option





ACCOUNT NO:  
106770-BUS1

# STATE OF ALABAMA

## JEFFERSON COUNTY

LICENSE NO:  
00202517

LICENSE YEAR  
2022-2023

Expires. September 30, 2023

Issued Date: October 24, 2022  
Fultondale

ISSUED TO:  
NEXTRAN CORPORATION  
PO BOX 820  
FULTONDALE, AL 35068-0820

LOCATION:  
NEXTRAN TRUCK CENTER  
1801 FULTON ROAD  
FULTONDALE, AL 35068

Schedule	Class of License	Lic Amt	Fee	Penalty	Citation	Interest	Total
51	Automobile Dealers	\$97.50	\$1.25	\$0.00	\$0.00	\$0.00	\$98.75

### TRANSFER OF LICENSE

Evidence having been adduced before me that a bona fide sale of the business licensed by this certificate has been made by licensee, this license is transferred to said purchaser.

Kathleen D. Baxter  
State Comptroller

Vernon Barnett  
Commissioner of Revenue

Travis A. Hulsey  
Issuing Authority

Name of Purchaser

Issuing Authority

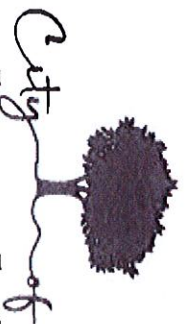
Less Exemption	\$0.00
Total	\$98.75
Mail Fee	\$0.00
Total with Mail Fee	\$98.75

EACH LICENSEE SHALL DISPLAY THE LICENSE SO ISSUED IN A  
CONSPICUOUS PLACE IN THE STORE FOR WHICH SUCH LICENSE IS ISSUED

ALABAMA CODE 1975 40-12-313

RENEW LICENSE

OCTOBER 1st THROUGH OCTOBER 31st



**Fulton**  
— A FRIENDLY CITY —

# Business License

8767

THIS CERTIFIES THAT  
**NEXTRAN CORPORATION**

of 1801 FULTON ROAD Fultondale AL 35068

## THIS LICENSE MUST BE PUBLICLY DISPLAYED

License issued subject to compliance with all pertinent city codes.

**LICENSE VALID ONLY AT LOCATION INDICATED. NON-TRANSFERABLE.**

The Firm, Corporation, Business or Person whose name appears above, has paid the required License Fees and is authorized to engage in business in this City as Indicated below.

License Type	License Number	Issue Date	Expiration Date
Merchant Retail-9654	36579	01/27/2023	12/31/2023
Rental & Leasing, Auto, Truck-9115	36579	01/27/2023	12/31/2023
Service-9753	36579	01/27/2023	12/31/2023

*Alicia Germany*

License Clerk

01/27/2023  
Date



**THE E-VERIFY  
MEMORANDUM OF UNDERSTANDING  
FOR EMPLOYERS**

**ARTICLE I  
PURPOSE AND AUTHORITY**

The parties to this agreement are the Department of Homeland Security (DHS) and the Nextran Corporation (Employer). The purpose of this agreement is to set forth terms and conditions which the Employer will follow while participating in E-Verify.

E-Verify is a program that electronically confirms an employee's eligibility to work in the United States after completion of Form I-9, Employment Eligibility Verification (Form I-9). This Memorandum of Understanding (MOU) explains certain features of the E-Verify program and describes specific responsibilities of the Employer, the Social Security Administration (SSA), and DHS.

Authority for the E-Verify program is found in Title IV, Subtitle A, of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104-208, 110 Stat. 3009, as amended (8 U.S.C. § 1324a note). The Federal Acquisition Regulation (FAR) Subpart 22.18, "Employment Eligibility Verification" and Executive Order 12989, as amended, provide authority for Federal contractors and subcontractors (Federal contractor) to use E-Verify to verify the employment eligibility of certain employees working on Federal contracts.

**ARTICLE II  
RESPONSIBILITIES**

**A. RESPONSIBILITIES OF THE EMPLOYER**

1. The Employer agrees to display the following notices supplied by DHS in a prominent place that is clearly visible to prospective employees and all employees who are to be verified through the system:

- a. Notice of E-Verify Participation
- b. Notice of Right to Work

2. The Employer agrees to provide to the SSA and DHS the names, titles, addresses, and telephone numbers of the Employer representatives to be contacted about E-Verify. The Employer also agrees to keep such information current by providing updated information to SSA and DHS whenever the representatives' contact information changes.

3. The Employer agrees to grant E-Verify access only to current employees who need E-Verify access. Employers must promptly terminate an employee's E-Verify access if the employer is separated from the company or no longer needs access to E-Verify.

Company ID Number: 204765

4. The Employer agrees to become familiar with and comply with the most recent version of the E-Verify User Manual.
  5. The Employer agrees that any Employer Representative who will create E-Verify cases will complete the E-Verify Tutorial before that individual creates any cases.
    - a. The Employer agrees that all Employer representatives will take the refresher tutorials when prompted by E-Verify in order to continue using E-Verify. Failure to complete a refresher tutorial will prevent the Employer Representative from continued use of E-Verify.
  6. The Employer agrees to comply with current Form I-9 procedures, with two exceptions:
    - a. If an employee presents a "List B" identity document, the Employer agrees to only accept "List B" documents that contain a photo. (List B documents identified in 8 C.F.R. § 274a.2(b)(1)(B)) can be presented during the Form I-9 process to establish identity.) If an employee objects to the photo requirement for religious reasons, the Employer should contact E-Verify at 888-464-4218.
    - b. If an employee presents a DHS Form I-551 (Permanent Resident Card), Form I-766 (Employment Authorization Document), or U.S. Passport or Passport Card to complete Form I-9, the Employer agrees to make a photocopy of the document and to retain the photocopy with the employee's Form I-9. The Employer will use the photocopy to verify the photo and to assist DHS with its review of photo mismatches that employees contest. DHS may in the future designate other documents that activate the photo screening tool.
- Note: Subject only to the exceptions noted previously in this paragraph, employees still retain the right to present any List A, or List B and List C, document(s) to complete the Form I-9.
7. The Employer agrees to record the case verification number on the employee's Form I-9 or to print the screen containing the case verification number and attach it to the employee's Form I-9.
  8. The Employer agrees that, although it participates in E-Verify, the Employer has a responsibility to complete, retain, and make available for inspection Forms I-9 that relate to its employees, or from other requirements of applicable regulations or laws, including the obligation to comply with the antidiscrimination requirements of section 274B of the INA with respect to Form I-9 procedures.
    - a. The following modified requirements are the only exceptions to an Employer's obligation to not employ unauthorized workers and comply with the anti-discrimination provision of the INA: (1) List B identity documents must have photos, as described in paragraph 6 above; (2) When an Employer confirms the identity and employment eligibility of newly hired employee using E-Verify procedures, the Employer establishes a rebuttable presumption that it has not violated section 274A(a)(1)(A) of the Immigration and Nationality Act (INA) with respect to the hiring of that employee; (3) If the Employer receives a final nonconfirmation for an employee, but continues to employ that person, the Employer must notify DHS and the Employer is subject to a civil money penalty between \$550 and \$1,100 for each failure to notify DHS of continued employment following a final nonconfirmation; (4) If the Employer continues to employ an employee after receiving a final nonconfirmation, then the Employer is subject to a rebuttable presumption that it has knowingly



Company ID Number: 204765

employed an unauthorized alien in violation of section 274A(a)(1)(A); and (5) no E-Verify participant is civilly or criminally liable under any law for any action taken in good faith based on information provided through the E-Verify.

b. DHS reserves the right to conduct Form I-9 compliance inspections, as well as any other enforcement or compliance activity authorized by law, including site visits, to ensure proper use of E-Verify.

9. The Employer is strictly prohibited from creating an E-Verify case before the employee has been hired, meaning that a firm offer of employment was extended and accepted and Form I-9 was completed. The Employer agrees to create an E-Verify case for new employees within three Employer business days after each employee has been hired (after both Sections 1 and 2 of Form I-9 have been completed), and to complete as many steps of the E-Verify process as are necessary according to the E-Verify User Manual. If E-Verify is temporarily unavailable, the three-day time period will be extended until it is again operational in order to accommodate the Employer's attempting, in good faith, to make inquiries during the period of unavailability.

10. The Employer agrees not to use E-Verify for pre-employment screening of job applicants, in support of any unlawful employment practice, or for any other use that this MOU or the E-Verify User Manual does not authorize.

11. The Employer must use E-Verify for all new employees. The Employer will not verify selectively and will not verify employees hired before the effective date of this MOU. Employers who are Federal contractors may qualify for exceptions to this requirement as described in Article II.B of this MOU.

12. The Employer agrees to follow appropriate procedures (see Article III below) regarding tentative nonconfirmations. The Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify case. The Employer agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer agrees to provide written referral instructions to employees and instruct affected employees to bring the English copy of the letter to the SSA. The Employer must allow employees to contest the finding, and not take adverse action against employees if they choose to contest the finding, while their case is still pending. Further, when employees contest a tentative nonconfirmation based upon a photo mismatch, the Employer must take additional steps (see Article III.B. below) to contact DHS with information necessary to resolve the challenge.

13. The Employer agrees not to take any adverse action against an employee based upon the employee's perceived employment eligibility status while SSA or DHS is processing the verification request unless the Employer obtains knowledge (as defined in 8 C.F.R. § 274a.1(l)) that the employee is not work authorized. The Employer understands that an initial inability of the SSA or DHS automated verification system to verify work authorization, a tentative nonconfirmation, a case in continuance (indicating the need for additional time for the government to resolve a case), or the finding of a photo mismatch, does not establish, and should not be interpreted as, evidence that the employee is not work authorized. In any of such cases, the employee must be provided a full and fair opportunity to contest the finding, and if he or she does so, the employee may not be terminated or suffer any adverse employment consequences based upon the employee's perceived employment eligibility status



Company ID Number: 204765

(including denying, reducing, or extending work hours, delaying or preventing training, requiring an employee to work in poorer conditions, withholding pay, refusing to assign the employee to a Federal contract or other assignment, or otherwise assuming that he or she is unauthorized to work) until and unless secondary verification by SSA or DHS has been completed and a final nonconfirmation has been issued. If the employee does not choose to contest a tentative nonconfirmation or a photo mismatch or if a secondary verification is completed and a final nonconfirmation is issued, then the Employer can find the employee is not work authorized and terminate the employee's employment. Employers or employees with questions about a final nonconfirmation may call E-Verify at 1-888-464-4218 (customer service) or 1-888-897-7781 (worker hotline).

14. The Employer agrees to comply with Title VII of the Civil Rights Act of 1964 and section 274B of the INA as applicable by not discriminating unlawfully against any individual in hiring, firing, employment eligibility verification, or recruitment or referral practices because of his or her national origin or citizenship status, or by committing discriminatory documentary practices. The Employer understands that such illegal practices can include selective verification or use of E-Verify except as provided in part D below, or discharging or refusing to hire employees because they appear or sound "foreign" or have received tentative nonconfirmations. The Employer further understands that any violation of the immigration-related unfair employment practices provisions in section 274B of the INA could subject the Employer to civil penalties, back pay awards, and other sanctions, and violations of Title VII could subject the Employer to back pay awards, compensatory and punitive damages. Violations of either section 274B of the INA or Title VII may also lead to the termination of its participation in E-Verify. If the Employer has any questions relating to the anti-discrimination provision, it should contact OSC at 1-800-255-8155 or 1-800-237-2515 (TDD).

15. The Employer agrees that it will use the information it receives from E-Verify only to confirm the employment eligibility of employees as authorized by this MOU. The Employer agrees that it will safeguard this information, and means of access to it (such as PINS and passwords), to ensure that it is not used for any other purpose and as necessary to protect its confidentiality, including ensuring that it is not disseminated to any person other than employees of the Employer who are authorized to perform the Employer's responsibilities under this MOU, except for such dissemination as may be authorized in advance by SSA or DHS for legitimate purposes.

16. The Employer agrees to notify DHS immediately in the event of a breach of personal information. Breaches are defined as loss of control or unauthorized access to E-Verify personal data. All suspected or confirmed breaches should be reported by calling 1-888-464-4218 or via email at [E-Verify@dhs.gov](mailto:E-Verify@dhs.gov). Please use "Privacy Incident – Password" in the subject line of your email when sending a breach report to E-Verify.

17. The Employer acknowledges that the information it receives from SSA is governed by the Privacy Act (5 U.S.C. § 552a(i)(1) and (3)) and the Social Security Act (42 U.S.C. 1306(a)). Any person who obtains this information under false pretenses or uses it for any purpose other than as provided for in this MOU may be subject to criminal penalties.

18. The Employer agrees to cooperate with DHS and SSA in their compliance monitoring and evaluation of E-Verify, which includes permitting DHS, SSA, their contractors and other agents, upon



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reasonable notice, to review Forms I-9 and other employment records and to interview it and its employees regarding the Employer's use of E-Verify, and to respond in a prompt and accurate manner to DHS requests for information relating to their participation in E-Verify.

19. The Employer shall not make any false or unauthorized claims or references about its participation in E-Verify on its website, in advertising materials, or other media. The Employer shall not describe its services as federally-approved, federally-certified, or federally-recognized, or use language with a similar intent on its website or other materials provided to the public. Entering into this MOU does not mean that E-Verify endorses or authorizes your E-Verify services and any claim to that effect is false.

20. The Employer shall not state in its website or other public documents that any language used therein has been provided or approved by DHS, USCIS or the Verification Division, without first obtaining the prior written consent of DHS.

21. The Employer agrees that E-Verify trademarks and logos may be used only under license by DHS/USCIS (see [M-795 \(Web\)](#)) and, other than pursuant to the specific terms of such license, may not be used in any manner that might imply that the Employer's services, products, websites, or publications are sponsored by, endorsed by, licensed by, or affiliated with DHS, USCIS, or E-Verify.

22. The Employer understands that if it uses E-Verify procedures for any purpose other than as authorized by this MOU, the Employer may be subject to appropriate legal action and termination of its participation in E-Verify according to this MOU.

## **B. RESPONSIBILITIES OF FEDERAL CONTRACTORS**

1. If the Employer is a Federal contractor with the FAR E-Verify clause subject to the employment verification terms in Subpart 22.18 of the FAR, it will become familiar with and comply with the most current version of the E-Verify User Manual for Federal Contractors as well as the E-Verify Supplemental Guide for Federal Contractors.

2. In addition to the responsibilities of every employer outlined in this MOU, the Employer understands that if it is a Federal contractor subject to the employment verification terms in Subpart 22.18 of the FAR it must verify the employment eligibility of any "employee assigned to the contract" (as defined in FAR 22.1801). Once an employee has been verified through E-Verify by the Employer, the Employer may not create a second case for the employee through E-Verify.

a. An Employer that is not enrolled in E-Verify as a Federal contractor at the time of a contract award must enroll as a Federal contractor in the E-Verify program within 30 calendar days of contract award and, within 90 days of enrollment, begin to verify employment eligibility of new hires using E-Verify. The Employer must verify those employees who are working in the United States, whether or not they are assigned to the contract. Once the Employer begins verifying new hires, such verification of new hires must be initiated within three business days after the hire date. Once enrolled in E-Verify as a Federal contractor, the Employer must begin verification of employees assigned to the contract within 90 calendar days after the date of enrollment or within 30 days of an employee's assignment to the contract, whichever date is later.



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b. Employers enrolled in E-Verify as a Federal contractor for 90 days or more at the time of a contract award must use E-Verify to begin verification of employment eligibility for new hires of the Employer who are working in the United States, whether or not assigned to the contract, within three business days after the date of hire. If the Employer is enrolled in E-Verify as a Federal contractor for 90 calendar days or less at the time of contract award, the Employer must, within 90 days of enrollment, begin to use E-Verify to initiate verification of new hires of the contractor who are working in the United States, whether or not assigned to the contract. Such verification of new hires must be initiated within three business days after the date of hire. An Employer enrolled as a Federal contractor in E-Verify must begin verification of each employee assigned to the contract within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever is later.

c. Federal contractors that are institutions of higher education (as defined at 20 U.S.C. 1001(a)), state or local governments, governments of Federally recognized Indian tribes, or sureties performing under a takeover agreement entered into with a Federal agency under a performance bond may choose to only verify new and existing employees assigned to the Federal contract. Such Federal contractors may, however, elect to verify all new hires, and/or all existing employees hired after November 6, 1986. Employers in this category must begin verification of employees assigned to the contract within 90 calendar days after the date of enrollment or within 30 days of an employee's assignment to the contract, whichever date is later.

d. Upon enrollment, Employers who are Federal contractors may elect to verify employment eligibility of all existing employees working in the United States who were hired after November 6, 1986, instead of verifying only those employees assigned to a covered Federal contract. After enrollment, Employers must elect to verify existing staff following DHS procedures and begin E-Verify verification of all existing employees within 180 days after the election.

e. The Employer may use a previously completed Form I-9 as the basis for creating an E-Verify case for an employee assigned to a contract as long as:

- i. That Form I-9 is complete (including the SSN) and complies with Article II.A.6,
- ii. The employee's work authorization has not expired, and
- iii. The Employer has reviewed the Form I-9 information either in person or in communications with the employee to ensure that the employee's Section 1, Form I-9 attestation has not changed (including, but not limited to, a lawful permanent resident alien having become a naturalized U.S. citizen).

f. The Employer shall complete a new Form I-9 consistent with Article II.A.6 or update the previous Form I-9 to provide the necessary information if:

- i. The Employer cannot determine that Form I-9 complies with Article II.A.6,
- ii. The employee's basis for work authorization as attested in Section 1 has expired or changed, or
- iii. The Form I-9 contains no SSN or is otherwise incomplete.

Note: If Section 1 of Form I-9 is otherwise valid and up-to-date and the form otherwise complies with



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Article II.C.5, but reflects documentation (such as a U.S. passport or Form I-551) that expired after completing Form I-9, the Employer shall not require the production of additional documentation, or use the photo screening tool described in Article II.A.5, subject to any additional or superseding instructions that may be provided on this subject in the E-Verify User Manual.

g. The Employer agrees not to require a second verification using E-Verify of any assigned employee who has previously been verified as a newly hired employee under this MOU or to authorize verification of any existing employee by any Employer that is not a Federal contractor based on this Article.

3. The Employer understands that if it is a Federal contractor, its compliance with this MOU is a performance requirement under the terms of the Federal contract or subcontract, and the Employer consents to the release of information relating to compliance with its verification responsibilities under this MOU to contracting officers or other officials authorized to review the Employer's compliance with Federal contracting requirements.

#### **C. RESPONSIBILITIES OF SSA**

1. SSA agrees to allow DHS to compare data provided by the Employer against SSA's database. SSA sends DHS confirmation that the data sent either matches or does not match the information in SSA's database.

2. SSA agrees to safeguard the information the Employer provides through E-Verify procedures. SSA also agrees to limit access to such information, as is appropriate by law, to individuals responsible for the verification of Social Security numbers or responsible for evaluation of E-Verify or such other persons or entities who may be authorized by SSA as governed by the Privacy Act (5 U.S.C. § 552a), the Social Security Act (42 U.S.C. 1306(a)), and SSA regulations (20 CFR Part 401).

3. SSA agrees to provide case results from its database within three Federal Government work days of the initial inquiry. E-Verify provides the information to the Employer.

4. SSA agrees to update SSA records as necessary if the employee who contests the SSA tentative nonconfirmation visits an SSA field office and provides the required evidence. If the employee visits an SSA field office within the eight Federal Government work days from the date of referral to SSA, SSA agrees to update SSA records, if appropriate, within the eight-day period unless SSA determines that more than eight days may be necessary. In such cases, SSA will provide additional instructions to the employee. If the employee does not visit SSA in the time allowed, E-Verify may provide a final nonconfirmation to the employer.

Note: If an Employer experiences technical problems, or has a policy question, the employer should contact E-Verify at 1-888-464-4218.

#### **D. RESPONSIBILITIES OF DHS**

1. DHS agrees to provide the Employer with selected data from DHS databases to enable the Employer to conduct, to the extent authorized by this MOU:

a. Automated verification checks on alien employees by electronic means, and



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- b. Photo verification checks (when available) on employees.
2. DHS agrees to assist the Employer with operational problems associated with the Employer's participation in E-Verify. DHS agrees to provide the Employer names, titles, addresses, and telephone numbers of DHS representatives to be contacted during the E-Verify process.
3. DHS agrees to provide to the Employer with access to E-Verify training materials as well as an E-Verify User Manual that contain instructions on E-Verify policies, procedures, and requirements for both SSA and DHS, including restrictions on the use of E-Verify.
4. DHS agrees to train Employers on all important changes made to E-Verify through the use of mandatory refresher tutorials and updates to the E-Verify User Manual. Even without changes to E-Verify, DHS reserves the right to require employers to take mandatory refresher tutorials.
5. DHS agrees to provide to the Employer a notice, which indicates the Employer's participation in E-Verify. DHS also agrees to provide to the Employer anti-discrimination notices issued by the Office of Special Counsel for Immigration-Related Unfair Employment Practices (OSC), Civil Rights Division, U.S. Department of Justice.
6. DHS agrees to issue each of the Employer's E-Verify users a unique user identification number and password that permits them to log in to E-Verify.
7. DHS agrees to safeguard the information the Employer provides, and to limit access to such information to individuals responsible for the verification process, for evaluation of E-Verify, or to such other persons or entities as may be authorized by applicable law. Information will be used only to verify the accuracy of Social Security numbers and employment eligibility, to enforce the INA and Federal criminal laws, and to administer Federal contracting requirements.
8. DHS agrees to provide a means of automated verification that provides (in conjunction with SSA verification procedures) confirmation or tentative nonconfirmation of employees' employment eligibility within three Federal Government work days of the initial inquiry.
9. DHS agrees to provide a means of secondary verification (including updating DHS records) for employees who contest DHS tentative nonconfirmations and photo mismatch tentative nonconfirmations. This provides final confirmation or nonconfirmation of the employees' employment eligibility within 10 Federal Government work days of the date of referral to DHS, unless DHS determines that more than 10 days may be necessary. In such cases, DHS will provide additional verification instructions.

### **ARTICLE III**

#### **REFERRAL OF INDIVIDUALS TO SSA AND DHS**

##### **A. REFERRAL TO SSA**

1. If the Employer receives a tentative nonconfirmation issued by SSA, the Employer must print the notice as directed by E-Verify. The Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify



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case. The Employer also agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer agrees to provide written referral instructions to employees and instruct affected employees to bring the English copy of the letter to the SSA. The Employer must allow employees to contest the finding, and not take adverse action against employees if they choose to contest the finding, while their case is still pending.

2. The Employer agrees to obtain the employee's response about whether he or she will contest the tentative nonconfirmation as soon as possible after the Employer receives the tentative nonconfirmation. Only the employee may determine whether he or she will contest the tentative nonconfirmation.

3. After a tentative nonconfirmation, the Employer will refer employees to SSA field offices only as directed by E-Verify. The Employer must record the case verification number, review the employee information submitted to E-Verify to identify any errors, and find out whether the employee contests the tentative nonconfirmation. The Employer will transmit the Social Security number, or any other corrected employee information that SSA requests, to SSA for verification again if this review indicates a need to do so.

4. The Employer will instruct the employee to visit an SSA office within eight Federal Government work days. SSA will electronically transmit the result of the referral to the Employer within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary.

5. While waiting for case results, the Employer agrees to check the E-Verify system regularly for case updates.

6. The Employer agrees not to ask the employee to obtain a printout from the Social Security Administration number database (the Numident) or other written verification of the SSN from the SSA.

## **B. REFERRAL TO DHS**

1. If the Employer receives a tentative nonconfirmation issued by DHS, the Employer must promptly notify employees in private of the finding and provide them with the notice and letter containing information specific to the employee's E-Verify case. The Employer also agrees to provide both the English and the translated notice and letter for employees with limited English proficiency to employees. The Employer must allow employees to contest the finding, and not take adverse action against employees if they choose to contest the finding, while their case is still pending.

2. The Employer agrees to obtain the employee's response about whether he or she will contest the tentative nonconfirmation as soon as possible after the Employer receives the tentative nonconfirmation. Only the employee may determine whether he or she will contest the tentative nonconfirmation.

3. The Employer agrees to refer individuals to DHS only when the employee chooses to contest a tentative nonconfirmation.

4. If the employee contests a tentative nonconfirmation issued by DHS, the Employer will instruct the

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employee to contact DHS through its toll-free hotline (as found on the referral letter) within eight Federal Government work days.

5. If the Employer finds a photo mismatch, the Employer must provide the photo mismatch tentative nonconfirmation notice and follow the instructions outlined in paragraph 1 of this section for tentative nonconfirmations, generally.

6. The Employer agrees that if an employee contests a tentative nonconfirmation based upon a photo mismatch, the Employer will send a copy of the employee's Form I-551, Form I-766, U.S. Passport, or passport card to DHS for review by:

- a. Scanning and uploading the document, or
- b. Sending a photocopy of the document by express mail (furnished and paid for by the employer).

7. The Employer understands that if it cannot determine whether there is a photo match/mismatch, the Employer must forward the employee's documentation to DHS as described in the preceding paragraph. The Employer agrees to resolve the case as specified by the DHS representative who will determine the photo match or mismatch.

8. DHS will electronically transmit the result of the referral to the Employer within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary.

9. While waiting for case results, the Employer agrees to check the E-Verify system regularly for case updates.

## **ARTICLE IV SERVICE PROVISIONS**

### **A. NO SERVICE FEES**

1. SSA and DHS will not charge the Employer for verification services performed under this MOU. The Employer is responsible for providing equipment needed to make inquiries. To access E-Verify, an Employer will need a personal computer with Internet access.

## **ARTICLE V MODIFICATION AND TERMINATION**

### **A. MODIFICATION**

1. This MOU is effective upon the signature of all parties and shall continue in effect for as long as the SSA and DHS operates the E-Verify program unless modified in writing by the mutual consent of all parties.

2. Any and all E-Verify system enhancements by DHS or SSA, including but not limited to E-Verify checking against additional data sources and instituting new verification policies or procedures, will be covered under this MOU and will not cause the need for a supplemental MOU that outlines these changes.



## **B. TERMINATION**

1. The Employer may terminate this MOU and its participation in E-Verify at any time upon 30 days prior written notice to the other parties.
2. Notwithstanding Article V, part A of this MOU, DHS may terminate this MOU, and thereby the Employer's participation in E-Verify, with or without notice at any time if deemed necessary because of the requirements of law or policy, or upon a determination by SSA or DHS that there has been a breach of system integrity or security by the Employer, or a failure on the part of the Employer to comply with established E-Verify procedures and/or legal requirements. The Employer understands that if it is a Federal contractor, termination of this MOU by any party for any reason may negatively affect the performance of its contractual responsibilities. Similarly, the Employer understands that if it is in a state where E-Verify is mandatory, termination of this by any party MOU may negatively affect the Employer's business.
3. An Employer that is a Federal contractor may terminate this MOU when the Federal contract that requires its participation in E-Verify is terminated or completed. In such cases, the Federal contractor must provide written notice to DHS. If an Employer that is a Federal contractor fails to provide such notice, then that Employer will remain an E-Verify participant, will remain bound by the terms of this MOU that apply to non-Federal contractor participants, and will be required to use the E-Verify procedures to verify the employment eligibility of all newly hired employees.
4. The Employer agrees that E-Verify is not liable for any losses, financial or otherwise, if the Employer is terminated from E-Verify.

## **ARTICLE VI PARTIES**

- A. Some or all SSA and DHS responsibilities under this MOU may be performed by contractor(s), and SSA and DHS may adjust verification responsibilities between each other as necessary. By separate agreement with DHS, SSA has agreed to perform its responsibilities as described in this MOU.
- B. Nothing in this MOU is intended, or should be construed, to create any right or benefit, substantive or procedural, enforceable at law by any third party against the United States, its agencies, officers, or employees, or against the Employer, its agents, officers, or employees.
- C. The Employer may not assign, directly or indirectly, whether by operation of law, change of control or merger, all or any part of its rights or obligations under this MOU without the prior written consent of DHS, which consent shall not be unreasonably withheld or delayed. Any attempt to sublicense, assign, or transfer any of the rights, duties, or obligations herein is void.
- D. Each party shall be solely responsible for defending any claim or action against it arising out of or related to E-Verify or this MOU, whether civil or criminal, and for any liability wherefrom, including (but not limited to) any dispute between the Employer and any other person or entity regarding the applicability of Section 403(d) of IIRIRA to any action taken or allegedly taken by the Employer.
- E. The Employer understands that its participation in E-Verify is not confidential information and may be disclosed as authorized or required by law and DHS or SSA policy, including but not limited to,

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Congressional oversight, E-Verify publicity and media inquiries, determinations of compliance with Federal contractual requirements, and responses to inquiries under the Freedom of Information Act (FOIA).

F. The individuals whose signatures appear below represent that they are authorized to enter into this MOU on behalf of the Employer and DHS respectively. The Employer understands that any inaccurate statement, representation, data or other information provided to DHS may subject the Employer, its subcontractors, its employees, or its representatives to: (1) prosecution for false statements pursuant to 18 U.S.C. 1001 and/or; (2) immediate termination of its MOU and/or; (3) possible debarment or suspension.

G. The foregoing constitutes the full agreement on this subject between DHS and the Employer.

**To be accepted as an E-Verify participant, you should only sign the Employer's Section of the signature page. If you have any questions, contact E-Verify at 1-888-464-4218.**



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Approved by:

<b>Employer</b> Nextran Corporation	
<b>Name (Please Type or Print)</b> Vickie M Coy	<b>Title</b>
<b>Signature</b> Electronically Signed	<b>Date</b> 04/08/2009
<b>Department of Homeland Security – Verification Division</b>	
<b>Name (Please Type or Print)</b> USCIS Verification Division	<b>Title</b>
<b>Signature</b> Electronically Signed	<b>Date</b> 04/08/2009

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### Information Required for the E-Verify Program

#### Information relating to your Company:

Company Name	Nextran Corporation
Company Facility Address	1986 West Beaver St Jacksonville, FL 32209
Company Alternate Address	1986 West Beaver St Jacksonville, FL 32209
County or Parish	DUVAL
Employer Identification Number	593139839
North American Industry Classification Systems Code	488
Parent Company	Nextran Corporation
Number of Employees	500 to 999
Number of Sites Verified for	14



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**Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:**

ALABAMA	3 site(s)
FLORIDA	8 site(s)
GEORGIA	3 site(s)

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**Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:**

Name Lorie Flaris  
Phone Number (904) 354 - 3721  
Fax Number (904) 354 - 0365  
Email Address lflaris@nextrancorp.com

Name Vickie M Coy  
Phone Number (404) 577 - 5230 ext. 2316  
Fax Number (678) 420 - 2316  
Email Address vcoy@nextrancorp.com

Name Eddie Woods  
Phone Number (205) 322 - 2534  
Fax Number (205) 322 - 1085  
Email Address ewoods@nextrancorp.com



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