

**BID SUBMITTAL FORM**  
**Alabama County Joint Bid Program**  
**BID ITEM – LOWBOY TRACTOR - OPTION A**

Company Name: Nexttran Truck Centers

Address: 1801 Fulton Road  
Fultondale, AL 35068

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

Title: Mack Sales Manager E-mail address: bgraham@nexttranusa.com

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

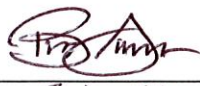
By submitting this bid, we agree:	Initials
That the equipment model number identified below meets the bid specs for this bid item	<u>BG</u>
That the bid price will be honored for all counties for the period from January 1, 2023 to December 31, 2023.	<u>BG</u>
That the equipment will be delivered at the bid price to all counties participating in the joint bid program	<u>BG</u>
That the company representative listed above will be the contact person for purchasing this bid item under the joint bid program	<u>BG</u>
That the bid is accompanied by a current catalog or model specification document for the model number identified below	<u>BG</u>
That the bid is accompanied by a copy of the manufacturer's standard warranty as required in the bid specifications	<u>BG</u>
That the bid includes the e-verify documentation required by Alabama law	<u>BG</u>
That, if awarded the bid, a performance bond will be provided upon request	<u>BG</u>
That an option sheet with individual pricing is attached	<u>BG</u>

Total Bid Price including options: \$ 178,078.00

Equipment Model #: Pinnacle 64T

Description: 2025 Mack Pinnacle 64T

Only Twenty (20) units are available on this bid to ACCA Members and will be sold on a first-come, first-serve basis, or however the ACCA and its members deem appropriate. Neither Mack Trucks and/or Nexttran Truck Centers will be obligated to deliver more than twenty (20) units if we are awarded this contract. By awarding this bid to Nexttran 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

Signature of company representative submitting bid:   
Title: Sales Manager


**OPTION COST SHEET FOR  
HEAVY DUTY LOW BOY TRACTOR  
OPTION A**

<u>Options</u>	<u>Option Price</u>
MDRIVEHD 14 speed automated manual transmission	\$ <u>5,500.00</u>
Dual purpose wet line kit	\$ <u>5,500.00</u>
Aluminum cab guard	\$ <u>1,500.00</u>
60" Long Light bar	\$ <u>1,500.00</u>

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

Equipment Model #: Pinnacle 64T

Description: 2025 Mack Pinnacle 64T

Signature of company representative submitting bid: 

Title: Sales Manager

# INVITATION TO BID HEAVY EQUIPMENT

## NOTICE OF BID OPENING

**NOTICE IS HEREBY GIVEN** that the Association of County Commissions of Alabama, which administers the Alabama County Joint Bid Program on behalf of Alabama's county governing bodies, shall receive and open bids for the purchase of zero (0) or more items of heavy road equipment at its office located at 2 North Jackson Street, Montgomery, Alabama, at **10:00 a.m. on Friday, October 7, 2022**. Bid specifications are available at <http://www.alabamacounties.org/heavy-equipment/> for each of the following items:

Backhoes  
Tractors  
Track Mount Excavators  
Compact Track Mount Excavators  
Mini Track Excavator  
Wheeled Excavators  
Highway Speed Truck Excavators  
Motor Graders  
Heavy Duty Hydrostatic Bulldozers  
Mulching Dozer  
Wheel Loaders  
Heavy Duty Dump Chassis  
Lowboy Tractors  
Skid Steer Loader w/no Attachments

Skid Steer Attachments  
Ride-on Industrial Boom Mowers  
Asphalt Distributor Truck  
Chip Spreader  
Rubber Tire Roller  
7.5 Ton Single Drum Vibratory Roller  
One-man Pothole Patchers  
Trailer Mounted Patchers  
Trailer Mount Mastic Patcher/Crack Sealer  
Half Round End Dump Trailer  
Lowboy Trailers  
Road Wideners and Attachments  
16' Steel Dump Bodies (Automatic and Manual)

**Time is of the essence in submitting bids and only bids received in the Association office by 10:00 a.m. Central Time on Friday, October 7, 2022 will be opened and considered.** Bidders and any other interested individuals are invited to attend the bid opening.

## NOTICE OF BID OPENING PROCEDURES

All bids for **Heavy Equipment** will be opened and the name(s) of the bidders read aloud on the morning of the bid opening on Friday, **October 7, 2022 at 10:00 a.m.** at 2 North Jackson Street, Montgomery, AL. The specifics of each bid submitted will be compiled by the Association staff thereafter and will be available, **upon written or emailed request**, one week after the bid opening. Requests should be emailed to [jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org).

## THE INVITATION PACKAGE

The invitation package for each item to be bid includes: this invitation to bid, the written bid specifications for the particular item of heavy road equipment, and a Bid Submittal Form to be used in submitting a bid for that particular item. Bidders should verify that they have received all pages of the invitation package. If there are any omissions, the bidder should contact Kenya Howard in the Association office by mail, fax, or e-mail ([jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org)) to request missing pages. It is the responsibility of the bidder to make this request in sufficient time to prepare and submit the bid in time for the bid opening. Bidders should carefully read and comply with all parts of the invitation package, including all attachments and/or any addendum.

## **PREPARING AND SUBMITTING BIDS**

All bids must be typed or hand written in ink on the attached Bid Submittal Form. **The completed Bid Submittal Form shall be placed in front of and separated from all other documents included in the bid packet, such that it will be the first document viewed upon opening the bid packet.**

Bids submitted in pencil and bids not submitted on the Bid Submittal Form will **not** be considered. All bids shall include a current catalog or model specification document for the equipment model number being offered for consideration. Bids submitted without such documentation will **not** be considered. Only information contained on the attached Bid Submittal Form and in the model specification document will be considered in evaluating bids.

Each separate requirement in the bid specification includes a block for indicating whether or not the item bid meets the specification. The bidder shall indicate compliance with each requirement by checking "Yes" or "No" in the block to the right of each bid specification. In addition, the bidder shall indicate the page number in the supplied manufacturer's equipment literature on which compliance with the specification can be verified. Failure to complete this portion of the bid form may result in the subject bid not being considered. Additionally, all bidders are required to submit a factory build/order sheet showing all of the standard and option items for each piece of equipment bid in order to assist the bid review committee in assuring that each bid is in conformance with the required bid specifications.

Each bid for one of the heavy equipment items included in the bid package must be submitted on the Bid Submittal Form for that item and forwarded in a separate envelope with the bid item and item number clearly identified on the outside of the envelope. Envelopes containing a "no bid" shall also include the words "NO BID" on the outside of the envelope. Facsimiles and e-mails will not be accepted. Bids submitted by "Express/Overnight" services must be in a separate inner envelope or package sealed and identified as stated above. All bids must be received in the Association office prior to the bid opening. Bids received after the deadline will be returned unopened.

The County Joint Bid Program reserves the right to require a performance bond from successful bidders as permitted under Alabama law. However, **no bid bond is required for this bid offering.**

All bids should be mailed or hand-delivered to:

**ATTN: Joint Bid Program**  
**Association of County Commissions of Alabama**  
**2 North Jackson Street, FL 7, Montgomery, Alabama 36104 (Physical Address)**  
**P.O. Box 5040, Montgomery, Alabama 36103 (Mailing Address)**

## **BID SPECIFICATIONS**

Please note that each piece of heavy equipment available for bid may include several different sizes and categories of machines. You should read each set of specifications very carefully as the differences vary depending upon the piece and size of equipment.

Where applicable, each bid submission shall include the separate cost of each item listed in the "Options" section of the bid specifications. However, all bids will be awarded on the basis of the **total cost of the machine with all options included**. Therefore, the "Bid Price" stated on the Bid Submittal Form must be the total cost, including the cost of all options.

Once the bids have been awarded, any county participant purchasing under this program may, at its discretion, deduct one or more of the options set out in the bid specifications, 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.

Any use of specific names and/or model numbers in the attached specifications is not intended to restrict the bidder or any seller or manufacturer, but is included solely for the purpose of indicating the type, size, and quality of materials, product services, or equipment considered best adapted to the use of the counties participating in the joint bid program.

## **BIDDER QUALIFICATIONS**

All bidders and all program participants must be in compliance with any applicable federal, state, county and municipal laws, regulations, resolutions and ordinances, including but not limited to, licensing, permitting, and taxation requirements. All bidders should be prepared to submit evidence or documentation as proof that they are properly licensed and permitted under any applicable laws upon request. Such evidence or documentation may be submitted with the bid. Additionally, all bidders shall provide proof that they are in compliance with the e-verify requirements of Alabama's Immigration Law (Ala. Code § 31-13-1 et seq., as amended by Act No. 2012-491).

## **BID AWARD**

The Houston County Commission will serve as the awarding authority for all bids and will award all contracts at a regular meeting of the Houston County Commission. Any and all bids submitted in compliance with this invitation to bid shall be considered, and award will be made to the lowest responsible bidder meeting bid specifications as determined by the awarding authority in compliance with Alabama law. All bids will be reviewed and evaluated by a committee created for that purpose, which committee will make comments and recommendations to the awarding authority regarding the award. All factors contained in each invitation package will be evaluated in determining the successful bidder, and any omissions of the stated requirements may be cause for rejection of the bid submitted. The awarding authority reserves the right to reject any and all bids, to waive any informality in bids, and to accept in whole or in part such bid or bids solely at its discretion.

The contract period will be one year with an option to renew for a second and third year under identical price, terms, and conditions upon the mutual consent of the vendor and the awarding authority. Any renewal contract shall be approved in writing by the vendor and the awarding authority no later than 90 days prior to the expiration of the existing contract.

## **CONTACT REGARDING BIDS AND INVITATION**

Contact initiated by a potential bidder with any county official, county employee, or member of the Association staff shall only be as specifically set out in this Invitation to Bid. Any questions related to the bid or the County Joint Bid Program shall be directed to Association staff in writing under the procedures set out in this Invitation to Bid. Additionally, a bidder may contact the Association in writing to request an appointment to review bid specifications following the bid opening. **However, there shall be no communication with any county official or county employee regarding this bid between the date of this invitation and the date of bid award.** Any contact other than as set out here shall be deemed as an attempt to unduly influence the bid award, and shall be grounds for rejection of the bid submitted by the bidder initiating such other contact.

Any questions or problems related to downloading or obtaining copies of this Invitation to Bid should be directed to **Kenya Howard** at [jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org) or **334-263-7594**.

Any other questions or requests for additional information regarding this invitation or the bid specifications shall be submitted **in writing** no later than five (5) days prior to bid opening to:

**ATTN: Patrick McDougald**  
**Association of County Commissions of Alabama**  
**P.O. Box 5040**  
**Montgomery, Alabama 36104**

**OR**

**Patrick McDougald**  
**E-mail: [barbeng@bellsouth.net](mailto:barbeng@bellsouth.net)**

# **BID SPECIFICATIONS FOR HEAVY DUTY LOW BOY TRACTOR - OPTION A**

## **GENERAL**

These specifications shall be construed as the minimum acceptable standards for a heavy duty Low Boy tractor. 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 EPA standard US21 . 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.

## **MANUALS**

Each unit shall be provided with one (1) copy of the operator's manual

## **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 shall be transferable. Warranty must include the following minimum coverage:

Basic Vehicle: 1 year or 100,000 miles **Standard Chassis Certificate and Page 10**

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 10**

Transmission: 3 Year or 300,000 miles **Transmission Certificate and Page 11**

Rear Carriers: 3 Year or 300,000 miles **Carrier Certificate and Page 11**

Yes  No   
Page# 10/ 11  
or  
Attachment Certificates

**ASSEMBLY AND DELIVERY**

The selling truck chassis dealer shall be responsible for delivery of the completed unit to the purchasing county with all requested options.

**DOT INSPECTION AND SAFETY EQUIPMENT** **Page 12**

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 safety triangles.

**Page 6** **Page 7**

Yes  No   
Page # 6/7/12

**ENGINE AND RELATED COMPONENTS**

Shall be an in line 6 design 13 liter, overhead cam, turbo charged diesel engine capable of developing 505 HP with a peak torque rating of 1,900 FT#.

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

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

**Restriction Indicated in Maintenance Section of Co-Pilot Display**

Yes  No   
Page # 3 and Co-Pilot Display Sheet

Turbo air shall flow through a chassis mounted charge air cooler, engine cooling BSV 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 # Fan Drive Brochure

Exhaust to be DUAL vertical with bright finish heat shields, elbows and stacks.

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 Cleartech Brochure

Factory installed integral Engine Brake.

Yes  No   
Page # 3



Engine electronics to have:

Yes  No   
Page # \_\_\_\_\_

Full diagnostic capabilities **Page 8 also in Engine Spec Sheet and Co-Pilot Display Spec Sheet**

Yes  No   
Page # Engine Brochure

Road speed limiting and Cruise Control Feature  
**Factory is 75mph; can be set to customer desired speed**

Yes  No   
Page # Engine Brochure

Shutdown capabilities for critical engine functions

Yes  No   
Page # Engine Brochure

**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

Unit should be equipped with a backup alarm

Yes  No   
Page # 5

Bumper mounted Fog Lights

Yes  No   
Page # 5

**TRANSMISSION AND DRIVELINE**

Manual eighteen (18) speed Fuller RTLO-18918B or equivalent overdrive design, with a minimum first gear reduction of 14.4 to 1.

Yes  No   
Page # See Transmission Addendum

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

Yes  No   
Page # See Transmission Addendum

Eaton Advantage easy pedal manually adjusting 15.5" two plate ceramic clutch 9 springs, 6 paddle design with AIR assist feature and remote lube fittings for clutch release bearing and both crosses mounted on LH frame rail under hood.

Yes  No   
Page # See Transmission Addendum

Main driveline Spicer 1810HD with coated splines/ inter axle driveline 1710HD with coated spline or equivalent.

Yes  No   
Page # 3

**CAB EXTERIOR**

Cab to be Class 8 designed for construction and vocational applications. Cab construction should be welded Galvanized steel shell.

Yes  No   
Page # BSV

Cab doors should also be of Galvanized steel and have high visibility roll up style windows with power window and door lock control on both doors, BSV passenger door to include a peep window in the lower half of door.

Page 8

Yes  No   
Page # 8 and BSV

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

Yes  No   
Page # BSV

Cab should feature:

Dual air horns in addition to the standard electric signal horn

Yes  No   
Page # 8

Chrome Bullet style marker lights

Yes  No   
Page # 5

Bright finish heated and motorized 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 # 8

Stainless Steel Exterior sun visor

Yes  No   
Page # 8

Cab glass to be safety tinted

Yes  No   
Page # 7

Cab to have grab handles of both sides of cab

Yes  No   
Page # 8

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

Yes  No   
Page #           

Hood is to be a full tilting fiberglass design with safety latch, bright finish headlight bezels and bright finish grille.

Yes  No   
Page # 7 and BSV

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

Yes  No   
Page # 10

### **CAB INTERIOR**

Cab interior to include the following:

Storage tray on back wall of cab and in overhead console

Yes  No   
Page # BSV

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

Yes  No   
Page # 7 and Interior Brochure

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

Yes  No   
Page # Interior Brochure

Cab floor should be covered with black polyurethane mat.

Yes  No   
Page # 6

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

Axle oil temperature gauges  
*Accessed by Co-Pilot Display*

Yes  No   
Page # 6

Exhaust pyrometer

Yes  No   
Page # 6

Manifold pressure gauge

Yes  No   
Page # 6

Cab seats should be: Driver and rider High Back air ride design with arm rest, both seats to have fabric covering with required lap and shoulder belts.

Yes  No   
Page # 7

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

Yes  No   
Page # 6 and BSV

AM/FM/CD radio with clock weather band and Blue Tooth capability, two-way radio power leads and mounting plate installed in overhead console (not on dash) with dual mirror mounted antennas.

Yes  No   
Page # 7

Two additional dash mounted power outlets to be furnished.

Yes  No   
Page # BSV

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

Yes  No   
Page # 7

**AIR BRAKES**

Full Dual Air Brake system with Bendix Road Stability System to include ABS/ATC/ESP with YAW control with heated air dryer.

Yes  No   
Page # 4/3

Semi - trailer connection package with 16' coiler air and electrical connections with an in cab hand control valve for trailer service brakes.

Yes  No   
Page # 6

Air compressor should have 37.4CFM capacity

Yes  No   
Page # 3

**FRAME/BUMPER/FUEL TANKS**

Steel 120,000 PSI frame rails 11.81" x 3.54" x 0.37" with a section modulus of 20.6 and a RBM per rail of 2,470,000.

Yes  No   
Page # 5 and Frame Spec Sheet

235" wheelbase with adequate frame rail clearance to accommodate a third axle, if desired.

Yes  No   
Page # 5

148" cab to axle.

Yes  No   
Page # 5

Heavy duty cross - members with huck bolt fasteners throughout.

Yes  No   
Page # 5

Bright Finish stainless steel clad aluminum with a swing out towing clevis each side.

Yes  No   
Page # 5

Fuel tank(s) to be polished aluminum with a minimum of 150 Gallon capacity

Yes  No   
Page # 5

Driver's side frame or fuel tank mounted step(s) and tread plate platform to access Trailer connections.

Yes  No   
Page # 5

Chassis to be equipped with frame mounted bright finish quarter fenders mounted ahead of front pull axle and rear mud flaps mounted at end of frame on heavy duty spring loaded brackets

Yes  No   
Page # 5

**FIFTH WHEEL**

Tractor to be equipped with a Fontaine, Holland, or Jost air slide fifth wheel. Fifth wheel should have pinning feature for use with a dump trailer. Pins should be removable type for Multi - purpose use.

Yes  No   
Page # 6

**FRONT AXLE**

14,600 Reverse Elliot design steel I beam axle with 14,600# taper leaf suspension, 14,600# integral power steering, shock absorbers and a maximum of 34.5" spring centers. **SET FORWARD** front axle position only. Unitized sealed (maintenance free) front wheel hubs. Sealed tapered kingpins and bearings. Meritor "S" cam design 16.5" x 6" Q+ brakes with outboard mounted drums, dust shields and automatic slack adjusters. Front wheels to be Machine Cleaned Buffed Aluminum ten (10) hole bud style, hub piloted 24.5" x 8.25". Front tires to be 16 ply 11R24.5 radials Bridgestone, Goodyear, Michelin, Firestone, Continental, General Or Yokohama.

Yes  No   
Page # 4/8/Front Axle  
Sheet

**REAR AXLE**

Meritor RT 46-164EH 46,000# capacity (3.58-4.10 based on transmission) ratio tandem axle with in cab power divider lock out valve with warning light and buzzer, lube pump and filter. In addition both rear axles should be equipped with driver controlled inter wheel differential locks with manual valve and warning light. 60 inch axle spacing. 46,000# air ride rear suspension with shock absorbers and transverse torque rods on both rear axles. Meritor "S" cam design 16.5" x 8 5/8" Q+ brakes with outboard drums, dust shields and automatic slack adjusters. Brake chambers shall be (4) 30/30 style chambers with raised chambers on rear axle. Machine Cleaned Buffed Aluminum ten (10) hole bud style, hub piloted 24.5 x 8.25 rear wheels. Rear tires to be 16 ply 11R24.5 radials Bridgestone, Goodyear, Michelin, Firestone, General, Continental, Yokohama.

Yes  No   
Page # 4/8/Rear Axle  
Sheet

**OPTIONS**

In addition the bid must also include the cost for each of the following options, itemized separately on the bid:

14 speed Automated Manual Transmission (MDRIVEHD .78 Over Drive Series only) 14-speed forward and 4 speed reverse with Ultra Low Creeper 32.04 Lo gear forward and 37.49 Lo reverse with factory installed 1300 series PTO flange with dash mounted control.

Yes  No   
Page # 2/6

Dual-purpose wet line system for use with a dump trailer or a detachable neck low boy trailer.

Yes  No   
Page # 12

Aluminum Cab Guard with rear window

Yes  No   
Page # 12

60-Inch Long light bar with warning lights (stobes or rotators) work lights, stop lights, tail lights and turn signals

-light bar shall be mounted on the Aluminum Cab Guard with Controls  
Mounted on the Dash inside the Cab

Yes  No   
Page # 12

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

# CUSTOMER PROPOSAL



PREPARED FOR

DATE

10/3/2022

PREPARED BY

NEXTRAN CORPORATION

1801 FULTON ROAD

FULTONDALE

AL 350681605

QUOTE INFORMATION

NEXT2022000186C614

PINNACLE 64T DAYCAB

Qty: 1



# TECHNICAL SPECIFICATION

## PINNACLE 64T DAYCAB



APPLICATION PACKAGES	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, RIGHT FRONT BATTERY BOX, 18.4 GALLON (70L) DEF, DUAL 26" FUEL TANKS	0	0

CUSTOMER/VEHICLE INFO	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
S CHASSIS (BASE MODEL)	PINNACLE 64T DAYCAB	5,038	2,090
S ASSEMBLY PLANT	Made in Macungie, PA USA	0	0
	CUSTOMER FLEET SIZE REGIONAL FLEET 25 OR MORE VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND	0	0
S ORDER TYPE REQUIREMENTS	RETAIL OR STOCK - CUSTOM SPECIFICATIONS	0	0
	TYPE OF SERVICE MUNICIPAL	0	0
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION	0	0
	EMISSION WARRANTY CERTIFICATION EPA (only) for Mack MP7 / MP8 Diesel	0	0
S INITIAL REGISTRATION LOCATION	USA REGISTRATION	0	0
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH	0	0
	VEHICLE USE & BODY/TRAILER TYPE VAN TRAILER	0	0
S TRANSPORT CYCLE	LOCAL DISTRIBUTION	0	0
S GROSS COMBINATION WEIGHT (CA in PC29 only)	80,000 LB (36 TONNES) GROSS COMBINATION WEIGHT	0	0
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 76M (250FT)	0	0
	TOPOGRAPHY GRADES <3% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 8%	0	0
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR	0	0
S TERRAIN GRADE	ON HIGHWAY, STARTING GRADES<16%	0	0
S LOADING SURFACE	CONCRETE LOADING AND / OR UNLOADING SURFACE	0	0
	VEHICLE VOCATION PICKUP & DELIVERY / SHORT HAUL SERVICE	0	0

ENGINE/TRANSMISSIONS	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
	ENGINE PACKAGE, COMBUSTION MP8-505C+ (VC) MACK 505HP @ 1400-1700 RPM (PEAK) 2100 RPM (GOV) 1900 LB-FT, US'21	2,108	530
S GEAR SELECTION TUNING	BASIC, GEAR-SELECTION TUNING	0	0
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS HIGHWAY APPLICATION	0	0
	TRANSMISSION MACK TMD14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW CREEPER/MULTI-SPEED REVERSE(OVERDRIVE)	578	192
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT	0	0

EXHAUST/EMISSIONS	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
	CARB 2008 IDLE REGULATION IDLE EMISSION CERTIFICATION, BASIC	0	0
S	DPF DIESEL PARTICULATE FILTER CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21	0	0
	CHASSIS MOUNTED EMISSIONS FINISH BRIGHT FINISH DEF COVER & PAINTED DPF COVER	0	0
S	DIESEL EXHAUST FLUID TANK 18.4 GALLON (70 L) 26" LEFT SIDE FRAME MOUNTED	190	67
	AD-BLUE TANK VENTILATION FILTER DEF TANK VENTILATION FILTER	0	3
	EXHAUST DUAL VERTICAL OUTBOARD MOUNTED STRAIGHT EXHAUST STACK TURNED OUT END	89	51

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# TECHNICAL SPECIFICATION (cont.)



EXHAUST/EMISSIONS		DESCRIPTION	WEIGHT (LB)	
			FRONT	REAR
S	EXHAUST STACK HEIGHT	11' 6" FROM GROUND	0	0
	EXHAUST SYSTEM MATERIAL FINISH	DUAL, BRIGHT FINISH HEAT SHIELDS, STACKS, ELBOWS AND SCR COVER (IF EQUIPPED)	0	0

ENGINE EQUIPMENT		DESCRIPTION	WEIGHT (LB)	
			FRONT	REAR
	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD	0	0
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER	0	0
S	AIR COMPRESSOR/DRYER	WABCO AIR DR SS-HP AIR DRYER W/ WABCO 636 (37.4 CFM) AIR COMPRESSOR	0	0
S	AIR DRYER POSITION (CA)	AIR DRYER POSITION STANDARD	0	0
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE	16	0
S	BATTERIES	(3) MACK 12V 650/1950 CCA THREADED STUD TYPE	0	0
S	BATTERY BOX - MOUNTING (x)	RH RAIL UNDER CAB (3 BATTERY MAX)	0	0
	BATTERY BOX COVER	POLISHED ALUMINUM	5	0
S	STARTER MOTOR	12 VOLT DELCO 39MT-MXT	31	0
	ENGINE BRAKE	MACK MP8 POWERLEASH	0	0
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)	0	0
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE	0	0
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER	0	0
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES	0	0
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)	0	0
S	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION	0	0
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)	0	0
	ENGINE BLOCK HEATER	120V 1500W ENGINE BLOCK HEATER	5	0
S	OIL SUMP	OIL PAN	0	0
S	TETHER DEV PKG, CAPS & COVERS	FURNISH CAP RETAINER FOR OIL FILL & RADIATOR OVERFLOW TANK	0	0
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY	0	0

CLUTCH/TRANS EQUIPMENT		DESCRIPTION	WEIGHT (LB)	
			FRONT	REAR
S	GEAR SHIFTER	MACK mDRIVE-PREMIUM SHIFTER	0	0
S	CLUTCH	ZF/SACHS SINGLE PLATE 17" (430MM) ORGANIC MATERIAL	0	0
S	CLUTCH ACTUATION SYSTEM & PEDAL PAD	WITHOUT CLUTCH CABLE SYSTEM	0	0
	DRIVELINE - MAIN	SPICER SPL350XL LITE - XLARGE (PROPS-XL)	42	42
	DRIVELINE - INTERAXLE	SPICER SPL250XL "LITE SERIES"	0	0
S	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE	0	0
S	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT	0	0
S	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC	0	0
S	BELL HOUSING	ALUMINUM	0	0
	LUBRICANTS, TRANSMISSION	75W - 90 (SYNTHETIC LUBRICANT)	0	0
S	TRANSMISSION OIL COOLER	MACK mDRIVE TRANSMISSION OIL COOLER MOUNTED LH SIDE OIL TO WATER COOLER	0	0

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# TECHNICAL SPECIFICATION (cont.)



		WEIGHT (LB)	
FRONT AXLE EQUIPMENT	DESCRIPTION	FRONT	REAR
	<b>FRONT AXLE</b>		
	14600# (6600 KG) MACK FXL14.6 STRAIGHT SPINDLE/UNITIZED BEARINGS	69	0
	<b>SPRINGS - FRONT</b>		
	MACK TAPERLEAF 14600# (6600 KG) GROUND LOAD RATING, EQUAL BIAS	16	0
	<b>FRONT AXLE BRAKES</b>		
	MERITOR "S" CAM TYPE 16.5" x 6" Q+	29	0
S	BRAKE, FRONT	0	0
	<b>FRONT AXLE BRAKE DUST SHIELD</b>		
	DUST SHIELDS FOR FRONT AXLE	5	0
	<b>FRONT BRAKE ADJ. MANUFACTURE</b>		
	MERITOR - AUTOMATIC	3	0
S	FRONT BRAKE CHAMBER MFG.	0	0
	FRONT BRAKE CHAMBER MANUFACTURER, HALDEX		
	HUB MATERIAL, FRONT	106	0
S	<b>STEERING</b>		
	TRW THP60 POWER	64	0
S	FRONT AXLE LUBRICANT	0	0
	FRONT AXLE LUBE, FAG NLGI2 GREASE		

		WEIGHT (LB)	
REAR AXLE EQUIPMENT	DESCRIPTION	FRONT	REAR
	<b>REAR AXLE</b>		
	46000# (20900kg) MERITOR RT46-164EH	0	1,786
S	REAR AXLE CASING WIDTH	0	0
	W/O WIDE TRACK AXLE		
	LUBE PUMP, REAR AXLE	0	16
S	CARRIER - REAR AXLE	0	0
	VENDOR CARRIER		
	<b>REAR AXLE RATIO</b>		
	3.58 RATIO	0	0
	<b>REAR SUSPENSION</b>		
	MACK AL-461 AIR 46,000 lb (NOT FOR USE WITH AIR DISC BRAKES)	0	1,145
	<b>BOGIE SPREAD, REAR</b>		
	60" AXLE SPACING (BOGIE WHEELBASE)	0	56
S	SUSPENSION LEVELLING DEVICE (CA in PC29 only)	0	3
	ELECTRICAL REGULATION LEVELING DEVICE		
S	AIR SUSPENSION DUMP WARNING	0	0
	AIR SUSPENSION DUMP, SPEED LIMITED, WARNING INDICATOR & BUZZER		
S	REAR SHOCK ABSORBER	0	27
	REAR SHOCK ABSORBER		
S	TRANSVERSE TORQUE RODS, R SUSP	0	0
	TRANSVERSE TORQUE ROD - ALL AXLES		
S	AUX.SPRING BRAKE QTY	0	20
	AUX SPRING BRAKE QTY, 4 CHAMBERS		
	<b>BRAKES - REAR</b>		
	MERITOR - CAM 16.5"x8 5/8" Q+ (Total for QTY = 2)	0	49
S	BRAKE, DRIVE, REAR	0	0
	CAST IRON		
	REAR BRAKE ADJ MANUFACTURE	0	0
	MERITOR - AUTOMATIC (Total for QTY = 2)		
	<b>DRIVE AXLE BRAKE DUST SHIELD</b>		
	DUST SHIELDS FOR REAR AXLE	0	12
	<b>REAR BRAKE CHAMBER SIZE</b>		
	REAR SPRING BRAKE CHAMBERS 30/30 TYPE	0	0
	BRAKE ORI REAR-MOST DRIVE AXLE	0	0
	DRUM BRAKE CHAMBER ORIENTATION: Middle Mount - Forward of Axle - Chamber Up		
S	<b>PARKING BRAKE CHAMBER</b>		
	HALDEX "GOLD SEAL PLUS" (3" STROKE) BRAKE CHAMBERS (Total for QTY = 2)	0	0
	HUB MATERIAL, DRIVE	0	318
	IRON PRESET REAR HUB W/INTEGRATED SPINDLE NUT		
S	<b>POWER DIVIDER LOCKOUT</b>		
	POWER DIVIDER LOCKOUT, W/BUZZER & LIGHT	0	40
S	DRIVE AXLE LUBRICANT	0	0
	DRIVE AXLE LUBE, SHELL 75W90 SYNTHETIC OIL		
	<b>TRACTION DIFFERENTIAL</b>		
	DRIVER CONTROLLED INTER WHEEL DIFFERENTIAL LOCK ALL RR AXLES, MANUAL AIR VALVE W/WARNING LIGHT.	0	18
S	<b>ANTILOCK BRAKE SYSTEM</b>		
	MACK ROAD STABILITY ADVANTAGE BENDIX ABS/ATC/ESP W/YAW CONTROL 4S4M	7	0
S	BRAKE VALVE VERSION	0	0
	BENDIX SWITCHES AND VALVES WHERE POSSIBLE		
S	SPRING BRAKE INVERSION VALVE	5	0
	TRACTOR SPRING BRAKE INVERSION VALVE		

# TECHNICAL SPECIFICATION *(cont.)*



			WEIGHT (LB)	
FRAME EQUIPMENT/FUEL TANKS	DESCRIPTION		FRONT	REAR
	<b>WHEELBASE</b>	<b>235"</b>	102	102
	AF (OVERHANG)	62"	-8	190
	<b>FRAME RAILS &amp; LINERS</b>	<b>9.5 x 90 x 300mm - (0.37" x 3.54" x 11.81"); RBM 2,470,000 LB-IN</b>	0	0
<b>S</b>	FRONT FRAME LENGTH	Standard Bumper Position	47	-2
	<b>CROSSMEMBERS</b>	<b>HIGHWAY SEVERE DUTY BOC AND BCL CROSSMEMBERS</b>	7	12
	REAR CROSSMEMBER OPTIONS	BOXED AND TAPERED CROSSMEMBER	-17	91
	REAR FRAME TREATMENT	TAPERED AND FLANGED RAIL ENDS (28 deg.)	0	0
	<b>MUDFLAP HANGERS, REAR AXLE</b>	<b>FLEET ENGINEERS FB-27 SHORTIE BRACKET #33-04647;30.25"L;W/CONSPICUITY FEATURE</b>	0	25
	MUDFLAP TYPE, REAR AXLE	BLACK POLYETHYLENE WITH WHITE "MACK" LETTERS	0	14
<b>S</b>	MUDFLAP, FRONT AXLE	BLACK POLYARMOUR (NO NAME TO APPEAR ON FLAP) (NOT ANTI-SPRAY TYPE)	0	0
<b>S</b>	<b>FRONT BUMPER</b>	<b>FLUSH-STAINLESS CLAD ALUMINUM</b>	98	-4
<b>S</b>	FUEL LEVEL SENDER UNIT, LIQUID	BASIC FUEL LEVEL SENDER MOUNTED ON L.H TANK	0	0
	<b>FUEL TANK - LH</b>	<b>117 GALLON (445 L) 26" ALUMINUM ROUND</b>	223	93
	<b>FUEL TANK - RH</b>	<b>50 GALLON (190 L) 26" ALUMINUM ROUND</b>	115	80
	<b>FUEL TANK POLISH OPTION</b>	<b>POLISHED ALUMINUM</b>	0	0
<b>S</b>	FUEL HOSES, LIQUID	BRAIDED HOSE	5	3
<b>S</b>	FUEL FILLER NECK OPTIONS	WITHOUT FILLER NECK SCREEN, WITH NON-LOCKABLE FUEL TANK CAP	0	0
	FUEL LINE OPTIONS, LIQUID	DUAL DRAW AND RETURN FUEL SYSTEM	0	0
<b>S</b>	CAB INSTEP VERSION	STANDARD 2 STEP CAB ACCESS	0	0
	<b>STEPS (BRIGHT) - FUEL TANK</b>	<b>STANDARD FINISH STEPS AND BRIGHT FINISH STRAPS</b>	0	0
	<b>QUARTER FENDERS</b>	<b>STAINLESS STEEL QUARTER FENDERS</b>	0	20

			WEIGHT (LB)	
AIR/BRAKE	DESCRIPTION		FRONT	REAR
<b>S</b>	AIRTANK DRAIN VALVE	MANUAL DRAIN VALVES, WITH LANYARD ON SUPPLY TANK ONLY	0	0
	<b>AIRTANK MATERIAL</b>	<b>ALUMINUM AIR TANK, POLISHED ALUMINUM FINISH</b>	-13	-4
<b>S</b>	RELOCATE AIR RESERVOIRS	W/O RELOCATED AIR TANKS	0	0
<b>S</b>	PARKING BRAKE VALVE	TWO (2) VALVE DUAL BRAKE SYSTEM - TRAILER SUPPLY AND TRACTOR-TRAILER PARK	0	0

			WEIGHT (LB)	
ELECTRICAL	DESCRIPTION		FRONT	REAR
	<b>BACK-UP ALARM</b>	<b>ECCO BACK-UP ALARM 575 CONSTANT SOUND LEVEL 107 dB</b>	0	3
	<b>AUX. FOG LAMP</b>	<b>FOG LAMPS (ROUND)</b>	9	0
<b>S</b>	<b>ROOF &amp; SIDE MARKER LIGHTS</b>	<b>(5) TRUCKLITE CHROME BULLET ROOF MARKER &amp; STANDARD MARKER / DIRECTIONAL SIGNAL</b>	0	0
<b>S</b>	HEADLAMP BULB TYPE	HEADLAMP BULB TYPE, LED	0	0
<b>S</b>	DAYTIME RUNNING LIGHTS	W/OVERRIDE SWITCH, PARK BRAKE & ENGINE RUNNING ACTIVATED	0	0
<b>S</b>	DRL OVERRIDE SPEED THRESHOLD	DRL OVERRIDE SPEED THRESHOLD 8 KMPH (5 MPH)	0	0
	<b>TAIL LAMPS</b>	<b>INCANDESCENT TAIL LAMPS</b>	0	7

# TECHNICAL SPECIFICATION (cont.)



		WEIGHT (LB)	
TRAILER CONNECTIONS	DESCRIPTION	FRONT	REAR
	<b>FIFTH WHEEL</b>		
	AIR - HOLLAND FW35 SERIES LH RELEASE, NO TILT (AVAIL: 8.82")	0	481
	5TH WHEEL MOUNTING BRACKETS	0	75
S	FIFTH WHEEL ANGLE MATERIAL	0	0
S	FIFTH WHEEL ANGLE THICKNESS	0	0
	5TH WHEEL OFFSET	0	0
	50" BOGIESPREAD = -5" OFFSET, 52" BS = -4", 54" BS = -3", 55" BS = -2.5"	0	0
	GROUND TO 5TH WHEEL TOP HGT. (CA in PC29 only)	0	0
	1308MM (51.5") GROUND TO 5TH WHEEL TOP HEIGHT	0	0
	FIFTH WHEEL LEG-HEIGHT (KAX Result)	0	0
	224MM (8.81"), FIFTH WHEEL LEG-HEIGHT (SELECTED BY KAX)	0	0
S	TRAILER GLAD HAND COUPLINGS	0	0
	GLAD HAND COUPLINGS - NORTH AMERICAN STD	0	0
S	<b>TRAILER BRAKE VALVE</b>	0	0
	HAND CONTROL VALVE FOR TRAILER BRAKES W/ AIR CONNECTIONS OR SERVICE BRAKES W/O AIR CONNECTIONS	0	0
S	TRAILER CONNECTION POSITION (CA in PC29 only)	0	0
	TRAILER AIR BRAKE CONNECTIONS, BACK OF CAB	0	0
S	<b>TRAILER ACCESS PACKAGE</b>	18	45
	LOW PROFILE DECK PLATE		
S	TRAILER BRAKE HOSEHANGER	0	0
	HOSE TENDER, POGO STICK (CHASSIS MOUNTED)	0	0
S	TRAILER ELECTRICAL RECEPT	0	0
	SINGLE, 7 PINS STD SAE TYPE, BACK OF CAB	0	0
	<b>TRAILER BRAKE HOSES &amp; CABLES</b>	0	0
	TRAILER AIR HOSES (16' COILED TYPE)	0	0
	<b>TRAILER ELECTRICAL CABLE CONFIG</b>	3	0
	TRAILER ELECTRICAL CORD CONFIG, COILED, LONG(4570MM OR 15')		
S	TRAILER CONNECTORS HOLDER	0	0
	ELECTRICAL PLUG HOLDER (INCLUDES GLAD HAND STORAGE)		

		WEIGHT (LB)	
PTO	DESCRIPTION	FRONT	REAR
	<b>PTO - REAR MOUNTED</b>		
	PTR-FL, Single RH: (INNER)	36	9

		WEIGHT (LB)	
SPECIALTY EQUIPMENT	DESCRIPTION	FRONT	REAR
S	AUXILIARY POWER UNIT	0	0
	WITHOUT AUXILIARY POWER UNIT		
S	LANE SUPPORT SYSTEM (LSS)	0	0
	WITHOUT LANE SUPPORT SYSTEM		
S	DATA CAPTURE	0	0
	WITHOUT DATA CAPTURE		
S	CAMERA, SURVEILLANCE	0	0
	WITHOUT CAMERA		

		WEIGHT (LB)	
CAB INTERIOR (A THRU G)	DESCRIPTION	FRONT	REAR
S	SPEEDOMETER -& GAUGES - UNIT(s) OF MEASURE	0	0
	U.S. UNITS (PREDOMINANT)		
	<b>GAUGE - PACKAGE, SECONDARY</b>	0	0
	2ND GA PKG W/BOOST PRESS,TRANS OIL TEMP,PYRO,APP AIR PRESS		
	<b>GAUGE OIL TEMP-REAR AXLE</b>	0	0
	REAR AXLE OIL TEMP GAUGE IN DID (DRIVER INFORMATION DISPLAY)		
S	<b>AIR CONDITIONING/HEATER</b>	0	0
	BLEND AIR HVAC W/"ATC" TEMP REGULATION		
S	CUPHOLDER	0	0
	CUPHOLDER		
S	DOME LAMP, INTERIOR	0	0
	(4) DOME LAMPS - DOOR AND SWITCH ACTIVATED		
	<b>FIRE EXTINGUISHER</b>	9	0
	5LB (ABC RATED) MOUNTED BETWEEN DRIVER SEAT BASE AND DOOR VALVE AIMED REARWARD		
S	CARBON MONOXIDE DETECTION SYS	0	0
	WITHOUT CARBON MONOXIDE DETECTION SYSTEM		
	<b>FLOOR COVERING</b>	16	0
	POLYURETHANE FLOOR MAT W/ REMOVABLE INSERTS		

# TECHNICAL SPECIFICATION (cont.)



			WEIGHT (LB)	
CAB INTERIOR (H THRU R)	DESCRIPTION		FRONT	REAR
S	INSTMNT CLUSTER LANGUAGE	DEFAULT: ENGLISH, SPANISH, FRENCH	0	0
S	KEY TYPES FOR DOORS	ALL CHASSIS KEYED AT RANDOM	0	0
S	DOOR OPENING OPTIONS	W/O ELECTRONIC KEYLESS ENTRY	0	0
	FORWARD OVERHEAD STORAGE	(2) STORAGE COMPARTMENTS AND NET RETAINERS W/CENTER MOUNTING FOR CB PROVISIONS	0	0
S	AUDIO ACCOMMODATION	PREMIUM STEREO, AM/FM, MP3, WEATHER BAND, BLUETOOTH	0	0
S	ANTENNA - RADIO	48" ANTENNA RIGHT SIDE MIRROR MOUNTED	0	0
	ANTENNA - CB RADIO	48" ANTENNA LEFT SIDE MIRROR MOUNTED	0	0
S	POWER LEADS	POWER LEADS (5-WAY BINDING POSTS FOR CB RADIO) IN HEADER CONSOLE	0	0
S	AUDIO SPEAKER LOCATION	SPEAKER LOCATION, IN DOORS, MIDDLE HIGH SIDE PANEL	0	0
S	COM.RADIO PREP KIT (CB)	MOUNTING PLATE AND VELCRO STRAP IN HEADER CONSOLE	0	0
S	AUXILIARY REAR WINDOW	REAR WINDOW (FIXED TYPE)	0	0
S	REAR WALL STORAGE COMPARTMENT	STORAGE POUCH REAR	5	0
	REFLECTOR KIT	W/O SLEEPER BOX FURNISH KIT PARALLEL TO OUTSIDE SURFACE OF RIDER'S SEAT BASE	12	3

			WEIGHT (LB)	
CAB INTERIOR (S THRU Z)	DESCRIPTION		FRONT	REAR
	INTERIOR TRIM LEVELS	PREMIUM PACKAGE, STEEL GRAY (Package 12A)	0	0
	SEAT - DRIVER'S	MACK-AIR, HIGH BACK, 4 CHAMBER AIR LUMBAR, BOLSTER, EXTENSION	67	16
	SEAT COVERING - DRIVER'S	DRIVER'S SEAT - STEEL GREY VINYL / CLOTH MIX	0	0
	SEAT - PASSENGER'S	MACK-AIR, HIGH BACK, 4 CHAMBER AIR LUMBAR, BOLSTER, EXTENSION	69	14
	SEAT COVERING - PASSENGER'S	PASSENGER'S SEAT - STEEL GREY VINYL / CLOTH MIX	0	0
	SEAT ARMREST	INBOARD MOUNTED ARM REST, DRIVER'S & RIDER'S SEAT	5	3
S	SEAT BELT(S)	LAP & SHOULDER (BOTH SEATS) CAB MOUNTED SHOULDER BELT ADJUSTMENT (NOT AVAIL W/EXTENDED RIDER SEAT)	0	0
S	SEAT BELT REMINDER	SEAT BELT REMINDER IN INSTRUMENT, WITH AUDIO	0	0
S	IGNITION TYPE	KEY TYPE	0	0
	STEERING WHEEL	2 SPOKE LEATHER GRIP, SATIN ALUMINUM SPOKES, WITH SWITCHES	0	0
S	WINDSHIELD TYPE	TWO PIECE WINDSHIELD	0	0
S	CAB GLASS	TINTED WINDSHIELD & SIDE WINDOWS & REAR WINDOW (IF EQUIPPED)	0	0
S	WINDSHIELD WIPERS	2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE	0	0

			WEIGHT (LB)	
CAB - SLEEPER BOX	DESCRIPTION		FRONT	REAR
S	REFRIGERATOR	W/O SLEEPER BOX REFRIGERATOR	0	0

			WEIGHT (LB)	
CAB EXTERIOR	DESCRIPTION		FRONT	REAR
S	EMBLEMS OPTION	W/O MISC ORNAMENT CHANGE OPTION	0	0
S	HOOD LATCH TYPE & FINISH	STRAP TYPE HOOD LATCH WITH BLACK FINISH	0	0
	EXTERIOR TRIM FINISH AND PACKAGES	PINNACLE BLACK AIR INTAKE	0	0
S	GRILLE	HERITAGE DESIGN CHROME GRILLE W/ BLACK BACKGROUND	0	0

# TECHNICAL SPECIFICATION (cont.)



		WEIGHT (LB)	
CAB EXTERIOR	DESCRIPTION	FRONT	REAR
S	PASSENGER SIDE VISIBILITY OPTIONS AUXILIARY WINDOW IN RH DOOR	3	0
S	GRAB HANDLES PREMIUM BLACK EXTERIOR CAB GRAB HANDLE, BLACK GRAB HANDLE RH INTERIOR WINDSHIELD POST	0	0
	HORN - AIR (2) MACK RECTANGULAR SINGLE TRUMPET (ONE EACH SIDE OF CAB ROOF)	7	0
S	HORN - ELECTRICAL DUAL TONE	5	0
	MIRRORS - EXTERIOR BULLDOG STYLIZED MIRRORS - LH & RH HEATED & MOTORIZED AND ILLUMINATED W/INTEGRAL CONVEX MIRROR	7	0
	SUN VISOR - EXTERIOR SUN VISOR, EXTERIOR, STAINLESS STEEL (UNPAINTED)	9	0

		WEIGHT (LB)	
AERODYNAMIC DEVICES	DESCRIPTION	FRONT	REAR
S	CAB AERODYNAMIC PACKAGES WITHOUT CAB AERODYNAMIC DEVICES	0	0
S	FRONT CHASSIS AERODYNAMIC PACKAGE WITHOUT FRONT AERODYNAMIC FAIRINGS	0	0
S	REAR CHASSIS AERODYNAMIC PACKAGE WITHOUT REAR AERODYNAMIC FAIRING	0	0

		WEIGHT (LB)	
WHEELS & TIRES	DESCRIPTION	FRONT	REAR
	TIRES BRAND/TYPE - FRONT 11R24.5 H BRIDGESTONE R250ED (14320 lbs) (Total for QTY = 2)	252	0
	WHEELS - FRONT 24.5x8.25 ACCURIDE ACCU-LITE POLISHED ALUMINUM, 6.59" OFFSET, 10 HAND HOLE (Total for QTY = 2)	111	0
	TIRES BRAND/TYPE - REAR 11R24.5 G BRIDGESTONE M726 ELA (24020 lbs) (DRIVE ONLY) (Total for QTY = 8)	0	1,129
	WHEELS - REAR 24.5x8.25 ACCURIDE ACCU-LITE POLISHED ALUMINUM, 6.59" OFFSET, 10 HAND HOLE (Total for QTY = 8)	0	441
S	DRIVE WHEEL STUDS DRIVE WHEEL STUDS LONGER LENGTH	0	0
S	TIRE INFLATION VALVE STANDARD VALVE STEMS AND CAPS	0	0
S	FRONT HUB/WHEEL TRIM WITHOUT FRONT HUB/WHEEL TRIM	0	0
S	REAR HUB/WHEEL TRIM WITHOUT REAR HUB/WHEEL TRIM (Total for QTY = 2)	0	0
S	WHEEL NUT & FINISH, FRONT WHEEL NUT BASIC FINISH, FRONT	0	0
S	WHEEL NUT FINISH, REAR (CA) WHEEL NUT BASIC FINISH, REAR	0	0

		WEIGHT (LB)	
COMMUNICATION SYSTEMS	DESCRIPTION	FRONT	REAR
S	CO-PILOT - DISPLAY FEATURES ACCESS LEVEL CO-PILOT DISPLAY, DRIVER ACCESS LEVEL 1	0	0
S	TELEMATIC GATEWAY TELEMATICS GATEWAY, 4G/LTE AND WLAN SYSTEM WITH DIAGNOSTIC SERVICES	0	0

		WEIGHT (LB)	
ENGINE ELECTRONICS	DESCRIPTION	FRONT	REAR
	ENGINE FUEL ECONOMY SETTINGS -- SOFTWARE PACKAGES ENGINE SOFTWARE SETTINGS - BEST PERFORMANCE	0	0
S	OIL PRESSURE, ENGINE SHUTDOWN OIL PRESSURE, ENGINE SHUTDOWN	0	0
	COOLANT LEVEL, ENGINE SHUTDOWN COOLANT LEVEL ENGINE SHUTDOWN	0	0
	COOLANT TEMP, ENGINE SHUTDOWN COOLANT TEMP, ENGINE SHUTDOWN	0	0
S	ENGINE PROTECTION SYSTEM ENGINE PROTECTION (SHUTDOWN)	0	0
S	ENGINE IDLE CONTROL IDLE CONTROL, 600 RPM	0	0

# TECHNICAL SPECIFICATION *(cont.)*



		WEIGHT (LB)		
ENGINE ELECTRONICS	DESCRIPTION	FRONT	REAR	
S	SMART IDLE ELEVATED IDLE RPM TIME	INCREASE 10 MINUTE MAXIMUM TIME	0	0
S	IDLE S/D ABS TAMPER CHECK	IDLE SHUTDOWN ABS TAMPER CHECK, ENABLED	0	0
S	IDLE S/D IF WARM-UP TEMP	38C DEG (100F), WARM UP TEMP DELAY	0	0
S	IDLE S/D WARM-UP TIMER	5 MIN. WARM UP TIME DELAY	0	0
S	IDLE SHUTDOWN IF POWER > LIMIT	ENG IDLE SHUTDOWN TIME OVERRIDDEN IF TORQUE > THAN LIMIT	0	0
S	IDLE S/D OVERRIDE %ENGINE LOAD	IDLE SHUTDOWN OVERRIDE UPTO 20% ENGINE LOAD THRESHOLD	0	0
S	AMBIENT TEMP MIN TRESHOLD	AMBIENT TEMP MIN TRESHOLD, 16 DEG C, (60 DEG F)	0	0
S	AMBIENT TEMP MAX TRESHOLD	AMBIENT TEMP MAX TRESHOLD, 27 DEG C, (80 DEG F)	0	0
S	EL HD THROTTLE,MAX ROAD SPEED	ELECTRONIC HAND THROTTLE, MAX ROAD SPEED, 16 KMH (10 MPH)	0	0
	EL HAND THROTTLE,MAX ENG SPEED	ELECTRONIC HAND THROTTLE, MAX ENGINE SPEED, 2100 RPM	0	0
S	EL HAND THROTTLE,MIN ENG SPEED	ELECTRONIC HAND THROTTLE, MIN ENGINE SPEED, 700 RPM	0	0

		WEIGHT (LB)		
TRANSMISSION ELECTRONICS	DESCRIPTION	FRONT	REAR	
	TRANSMISSION DRIVE MODE PACKAGES, mDRIVE	mDRIVE- ENHANCED CONSTRUCTION - ECON, PERF, & PERF+ DRIVE MODES, MANUAL RETURN (premium)	0	0
	ECONO ROLL	ECONO ROLL DISABLE mDRIVE (REQUIRED FOR ALL OTHER TRANSMISSIONS)	0	0
S	TRANSMISSION KICK-DOWN MODE	MACKCELLERATOR ENABLE	0	0
S	TRANSMISSION ELECTRONICS PACKAGE	W/O ELEC TRANS PACKAGE OPTION (all non-Allison transmissions)	0	0
	TRANSM AUTO NEUTRAL ON P-BRAKE	mDRIVE TRANSMISSION PARK BRAKE AUTO NEUTRAL	0	0
S	TRANSMISSION ELECTRONIC SHIFTING PROPERTIES	W/O ALLISON FUELSENSE 2.0 PROGRAMMING	0	0

		WEIGHT (LB)		
VEHICLE ELECTRONICS	DESCRIPTION	FRONT	REAR	
	ROAD SPEED LIMITER SETTING	113 KM/H ROAD SPEED LIMITER(70 MPH)	0	0
	PEDAL RSL SETTING	108 KM/H PEDAL ROAD SPEED LIMITER (67MPH)	0	0
S	CRUISE CONTROL	CRUISE CONTROL	0	0
	CRUISE CONTROL, MAX SPEED	MAX CRUISE, 113 KPH (70 MPH)	0	0
S	CRUISE CONTROL MIN SPEED	MIN CRUISE, 32 KPH (20 MPH)	0	0
S	ENG BRK ENGAGE IN CRUISE	ENG BRK ENGAGE IN CRUISE, 3 MPH, ABOVE SET SPEED	0	0
	LOW GEAR LIMITING FEATURE	LOWER GEAR VEHICLE LIMITING FEATURE	0	0
	LOW GEAR LIMITING SPEED	LGVLS 103 KM/H, 64 MPH	0	0
S	ROAD SPEED LIMIT CONTROL TYPE	RSL CONTROL TYPE NORMAL	0	0
	PDLO ENGAGED VLS	POWER DIVIDER LOCK OUT (PDLO) ROAD SPEED LIMIT 40KMH (25MPH)	0	0
	MAXIMUM ENG SPEED AT 0 MPH	1950 MAXIMUM ENGINE SPEED AT 0 MPH	0	0
S	DETECTION SPEED SENSR TMPRNG	DETECTION OF SPEED SENSOR TAMPERING, ENABLE	0	0
S	ENG TORQUE LIMIT,SPEED SENSOR	ENG TORQUE LIMITED TO 50%, IF SPEED SENSOR TAMPER DETECTED	0	0
S	DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED	0	0
S	DR PERFORMANCE PARAMETERS	WITHOUT DRIVER PERFORMANCE PARAMETERS	0	0
	ENGINE OVERSPEED,ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM	0	0
S	ENGINE OVERSPEED,FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM	0	0

# TECHNICAL SPECIFICATION (cont.)



			WEIGHT (LB)	
VEHICLE ELECTRONICS	DESCRIPTION		FRONT	REAR
S	VEHICLE OVERSPEED,ALL COND,LOG	VEHICLE OVERSPEED,ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)	0	0
S	VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)	0	0
S	ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN	0	0
S	PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH	0	0

			WEIGHT (LB)	
PTO ELECTRONICS	DESCRIPTION		FRONT	REAR
S	TRANS PTO1 SPLITTER RANGE	PTO1 FOR SPLITTER RANGE - KEYPAD REMOTE CONTROLLED	0	0
S	TRANS PTO2 SPLITTER RANGE	PTO2 FOR SPLITTER RANGE - KEYPAD REMOTE CONTROLLED	0	0

			WEIGHT (LB)	
PAINT	DESCRIPTION		FRONT	REAR
S	<b>PAINT DESIGN</b>	<b>SINGLE COLOR</b>	0	0
S	<b>PAINT TYPE</b>	<b>SOLID PAINT</b>	0	0
S	PAINT COLOR - FIRST COLOR	MACK WHITE; P9188	0	0
S	PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR	0	0
S	PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR	0	0
S	PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT	0	0
	CAB COLOR	SAME AS FIRST COLOR - CAB	0	0
S	HOOD COLOR	SAME AS FIRST COLOR - HOOD	0	0
S	ROOF FAIRING COLOR	WITHOUT ROOF FAIRING	0	0
S	CHASSIS RUNNING GEAR	MACK BLACK (URETHANE); P3036	0	0
S	BUMPER	W/O OPTIONAL BUMPER PAINT	0	0
S	FUEL TANK - ***NO INVENTED VARIANTS ALLOWED in the FUEL TANK PAINT FAMILY***	W/O OPTIONAL FUEL TANK PAINT	0	0
S	HUBS & DRUMS-FRONT	SAME AS CHASSIS RUNNING GEAR	0	0
S	HUBS & DRUMS-REAR	SAME AS CHASSIS RUNNING GEAR	0	0

			WEIGHT (LB)	
CALCULATED CODES - KAX	DESCRIPTION		FRONT	REAR
S	PROPCALC SELECTION	YES, THE ORDER MUST BE CALCULATED	0	0
	AUTO ROUTING & CLIPPING, CENTER	AUTOMATIC ROUTING & CLIPPING PLACEMENT, CENTER SECTION	0	0

			WEIGHT (LB)	
BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION		FRONT	REAR
S	VEHICLE WARRANTY TYPE	NORMAL DUTY WARRANTY CLASSIFICATION	0	0
S	<b>BASIC CHASSIS COVERAGE</b>	<b>NORMAL DUTY STANDARD BASE COVERAGE 12 MONTHS/100,000 MILES (160,934 KM)</b>	0	0
	EMISSION - SURCHARGE	EPA (only) for Mack MP7 / MP8 Diesel	0	0
	<b>ENGINE WARRANTY</b>	<b>MACK MP7/MP8 BASE ENGINE COVERAGE 24 MONTHS / 250,000 MILES (402,000KM)</b>	0	0
S	EMISSION COMPONENT COVERAGE	US and CANADA EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/100,000 MILES (161,000 KM)	0	0



# TECHNICAL SPECIFICATION *(cont.)*



BASE WARRANTY & PURCHASED COVERAGES	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
S	TRANSMISSION WARRANTY mDRIVE HD TRANSMISSION NORMAL DUTY COVERAGE: 60 MONTHS OR 750,000 MILES	0	0
S	CARRIER & AXLE HOUSING WARRANTY STANDARD VENDOR NORMAL / HEAVY DUTY COVERAGE 36 MONTHS/350,000 (563,00 KM)	0	0
S	AIR CONDITIONING WARRANTY AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE	0	0
S	CHASSIS TOWING WARRANTY STANDARD NORMAL / HEAVY DUTY CHASSIS TOWING 90 DAYS OR 5,000 MILES	0	0
S	ENGINE TOWING WARRANTY STANDARD MACK ENGINE TOWING COVERAGE 24 MONTHS/250,000 MILES (402,000 KM)	0	0
S	GUARDDOG CONNECT BUNDLE 24 MONTH - GUARDDOG CONNECT WITH MACK OTA (with ASIST and Mack OneCall))	0	0
S	PREPAID API WITHOUT PREPAID API	0	0
S	PREMIUM MAINTENANCE - CHASSIS LUBE AND INSPECTION W/O PREMIUM MAINTENANCE - CHASSIS LUBE AND INSPECTION COVERAGE	0	0
<b>FRONT / REAR AXLE WEIGHTS (LB)</b>		9584	9289
<b>TOTAL WEIGHT (LB)</b>			18872



- Locally installed cab guard
- 60" long LED light bar with work lights, stop lights, tail lights and turn signals mounted on cab guard
- Locally installed Dual-Purpose wet line system for use with dump trailer or a detachable neck low boy trailer

Truck will be DOT Inspected and include the appropriate documentation and decal3



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# TECHNICAL SPECIFICATION

## PINNACLE 64T DAYCAB

Transmission Addendum



APPLICATION PACKAGES	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
CHASSIS CONFIGURATION PACKAGE	ONEBOX EATS, RIGHT FRONT BATTERY BOX, 18.4 GALLON (70L) DEF, DUAL 26" FUEL TANKS	0	0

CUSTOMER/VEHICLE INFO	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
S CHASSIS (BASE MODEL)	PINNACLE 64T DAYCAB	5,038	2,090
S ASSEMBLY PLANT	Made in Macungie, PA USA	0	0
CUSTOMER FLEET SIZE	REGIONAL FLEET 25 OR MORE VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND	0	0
S ORDER TYPE REQUIREMENTS	RETAIL OR STOCK - CUSTOM SPECIFICATIONS	0	0
TYPE OF SERVICE	MUNICIPAL	0	0
S WARRANTY REGISTRATION LOCATION	USA - WARRANTY REGISTRATION LOCATION	0	0
EMISSION WARRANTY CERTIFICATION	EPA (only) for Mack MP7 / MP8 Diesel	0	0
S INITIAL REGISTRATION LOCATION	USA REGISTRATION	0	0
S LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH	0	0
VEHICLE USE & BODY/TRAILER TYPE	VAN TRAILER	0	0
S TRANSPORT CYCLE	LOCAL DISTRIBUTION	0	0
S GROSS COMBINATION WEIGHT (CA in PC29 only)	80,000 LB (36 TONNES) GROSS COMBINATION WEIGHT	0	0
S BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 76M (250FT)	0	0
TOPOGRAPHY	GRADES <3% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 8%	0	0
S AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR	0	0
S TERRAIN GRADE	ON HIGHWAY, STARTING GRADES<16%	0	0
S LOADING SURFACE	CONCRETE LOADING AND / OR UNLOADING SURFACE	0	0
VEHICLE VOCATION	PICKUP & DELIVERY / SHORT HAUL SERVICE	0	0

ENGINE/TRANSMISSIONS	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
ENGINE PACKAGE, COMBUSTION	MP8-505C (VC) MACK 505HP @ 1500-1700 RPM (PEAK) 2100 RPM (GOV) 1850 LB-FT, US'21	2,108	530
S GEAR SELECTION TUNING	BASIC, GEAR-SELECTION TUNING	0	0
S GHG APPLICATION, VEHICLE	GREEN HOUSE GAS HIGHWAY APPLICATION	0	0
<b>TRANSMISSION</b>	<b>FULLER RTLO-18918B (14.40/0.73)</b>	618	206
S GEARBOX 12TH GEAR LOCK-OUT	WITHOUT 12TH GEARBOX GEAR LOCK-OUT	0	0

EXHAUST/EMISSIONS	DESCRIPTION	WEIGHT (LB)	
		FRONT	REAR
CARB 2008 IDLE REGULATION	IDLE EMISSION CERTIFICATION, BASIC	0	0
S DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17 / US21	0	0
CHASSIS MOUNTED EMISSIONS FINISH	BRIGHT FINISH DEF COVER & PAINTED DPF COVER	0	0
S DIESEL EXHAUST FLUID TANK	18.4 GALLON (70 L) 26" LEFT SIDE FRAME MOUNTED	190	67
AD-BLUE TANK VENTILATION FILTER	DEF TANK VENTILATION FILTER	0	3
EXHAUST	DUAL VERTICAL OUTBOARD MOUNTED STRAIGHT EXHAUST STACK TURNED OUT END	89	51

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# TECHNICAL SPECIFICATION (cont.)

Transmission Addendum



		WEIGHT (LB)		
EXHAUST/EMISSIONS	DESCRIPTION	FRONT	REAR	
S	EXHAUST STACK HEIGHT	11' 6" FROM GROUND	0	0
	EXHAUST SYSTEM MATERIAL FINISH	DUAL, BRIGHT FINISH HEAT SHIELDS, STACKS, ELBOWS AND SCR COVER (IF EQUIPPED)	0	0

		WEIGHT (LB)		
ENGINE EQUIPMENT	DESCRIPTION	FRONT	REAR	
	AIR CLEANER	UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD	0	0
S	BUG SCREEN	BLACK ALUMINUM BUG SCREEN MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER	0	0
S	AIR COMPRESSOR/DRYER	WABCO AIR DR SS-HP AIR DRYER W/ WABCO 636 (37.4 CFM) AIR COMPRESSOR	0	0
S	AIR DRYER POSITION (CA)	AIR DRYER POSITION STANDARD	0	0
S	ALTERNATOR	DELCO 12V 160A (28SI) BRUSH-TYPE	16	0
S	BATTERIES	(3) MACK 12V 650/1950 CCA THREADED STUD TYPE	0	0
S	BATTERY BOX - MOUNTING (x)	RH RAIL UNDER CAB (3 BATTERY MAX)	0	0
	BATTERY BOX COVER	POLISHED ALUMINUM	5	0
S	STARTER MOTOR	12 VOLT DELCO 39MT-MXT	31	0
	ENGINE BRAKE	MACK MP8 POWERLEASH	0	0
S	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)	0	0
S	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE	0	0
S	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO -34DEG, W/ FILTER	0	0
	HOSES - RADIATOR/HEATER	SILICONE RADIATOR AND HEATER HOSES	0	0
S	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE V2 (INTEGRAL W/ PRIMARY FUEL FILTER)	0	0
S	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION	0	0
S	ENGINE HEATERS	120v 1500w BLOCK HEATER ONLY (120V-15A PLUG)	0	0
	ENGINE BLOCK HEATER	120V 1500W ENGINE BLOCK HEATER	5	0
S	OIL SUMP	OIL PAN	0	0
S	TETHER DEV PKG, CAPS & COVERS	FURNISH CAP RETAINER FOR OIL FILL & RADIATOR OVERFLOW TANK	0	0
S	ENGINE STOP, EMERGENCY (CA in PC29 only)	WITHOUT ENGINE STOP, EMERGENCY	0	0

		WEIGHT (LB)		
CLUTCH/TRANS EQUIPMENT	DESCRIPTION	FRONT	REAR	
	GEAR SHIFTER	EATON/FULLER SHIFTER	0	0
	CLUTCH	EATON ADVANTAGE EZ-PEDAL 9-SPRING,2PLATE 15.5" CERAMIC 6 PADDLES, MANUAL ADJUST	5	0
	CLUTCH ACTUATION SYSTEM & PEDAL PAD	AIR ASSIST CLUTCH CABLE SYSTEM WITH RUBBER PEDAL	0	0
	CLUTCH PEDAL PAD	RUBBER PAD	3	0
	CLUTCH ACTUATION SYSTEM	AIR OPERATED CLUTCH ASSIST	-2	0
	DRIVELINE - MAIN	SPICER SPL350XL LITE - XLARGE (PROPS-XL)	42	42
	DRIVELINE - INTERAXLE	SPICER SPL250XL "LITE SERIES"	0	0
S	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE	0	0
	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT	0	0
	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC	0	0
S	BELL HOUSING	ALUMINUM	0	0

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# TECHNICAL SPECIFICATION (cont.)

Transmission Addendum



		WEIGHT (LB)	
CLUTCH/TRANS EQUIPMENT	DESCRIPTION	FRONT	REAR
<b>S</b>	LUBRICANTS, TRANSMISSION	0	0
	<b>TRANSMISSION OIL COOLER</b>	45	3
	<b>TRANS OIL COOLER (INTEGRAL OIL PUMP)</b>		

		WEIGHT (LB)	
FRONT AXLE EQUIPMENT	DESCRIPTION	FRONT	REAR
	FRONT AXLE	69	0
	SPRINGS - FRONT	16	0
	FRONT AXLE BRAKES	29	0
<b>S</b>	BRAKE, FRONT	0	0
	FRONT AXLE BRAKE DUST SHIELD	5	0
	FRONT BRAKE ADJ. MANUFACTURE	3	0
<b>S</b>	FRONT BRAKE CHAMBER MFG.	0	0
	HUB MATERIAL, FRONT	106	0
<b>S</b>	STEERING	64	0
<b>S</b>	FRONT AXLE LUBRICANT	0	0

		WEIGHT (LB)	
REAR AXLE EQUIPMENT	DESCRIPTION	FRONT	REAR
	REAR AXLE	0	1,786
<b>S</b>	REAR AXLE CASING WIDTH	0	0
	LUBE PUMP, REAR AXLE	0	16
<b>S</b>	CARRIER - REAR AXLE	0	0
	REAR AXLE RATIO	0	0
	REAR SUSPENSION	0	1,145
	BOGIE SPREAD, REAR	0	56
<b>S</b>	SUSPENSION LEVELLING DEVICE (CA in PC29 only)	0	3
<b>S</b>	AIR SUSPENSION DUMP WARNING	0	0
<b>S</b>	REAR SHOCK ABSORBER	0	27
<b>S</b>	TRANSVERSE TORQUE RODS, R SUSP	0	0
<b>S</b>	AUX.SPRING BRAKE QTY	0	20
	BRAKES - REAR	0	49
<b>S</b>	BRAKE, DRIVE, REAR	0	0
	REAR BRAKE ADJ MANUFACTURE	0	0
	DRIVE AXLE BRAKE DUST SHIELD	0	12
	REAR BRAKE CHAMBER SIZE	0	0
	BRAKE ORI REAR-MOST DRIVE AXLE	0	0
<b>S</b>	PARKING BRAKE CHAMBER	0	0
	HUB MATERIAL, DRIVE	0	318
<b>S</b>	POWER DIVIDER LOCKOUT	0	40
	DRIVE AXLE LUBRICANT	0	0
	TRACTION DIFFERENTIAL	0	18



**PI64T**

**BIGGER  
THAN IRON**

# PI64T



## STANDARD POWERTRAIN SPECIFICATIONS

### ENGINE: MACK MP8-415C

Peak Horsepower - 415 HP at 1400-1700 RPM  
Horsepower - 295 HP at 2000 Gov. RPM  
Max. Torque - 1660 lb. ft. at 1050-1300 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 TMD12AFO

12-Speed, Ratios: 11.73 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: MERITOR MT-40-14X

40,000 Pound Capacity  
Suspension - Maxlite 40EZ Air Suspension  
40,000 Pound Rating  
Tires - 295/75R22.5 (Low Profile)  
Carrier - Malleable Housing  
Wheels - Aluminum Disc, 22.5" x 8.25",  
10-Hole, Hub Piloted  
Hub Material - Aluminum 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 - Aluminum  
Integrated Front Wheel Seals  
Brakes - Bendix 15" x 5"  
Brake Drums - Cast Outboard Mounted  
Shock Absorbers - Double Acting Type  
Slack Adjusters - Automatic  
Steering - TAS65 TRW Integral Power Steering

# PI64T



## 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 - 1200P w/ Coalescing Filter  
Air Reservoirs - Steel  
Electronic Stability Control  
Parking Brake Control - 2 Valve System, Trailer  
Supply and Tractor-Trailer Park  
Electric Plug Holder (Includes Glad Hand Storage)  
Hand Control Valve for Trailer Brakes  
Hose Tender - Pogo Stick, Chassis Mounted  
Manual Drain Valve - Lanyard Control on Supply  
Tank  
Trailer Connection Package - Semi  
Trailer Air Hoses & Electric Cord - 12' Straight Type  
Trailer Receptacle - (7) Wire Mounted on Back of Cab

### ELECTRICAL

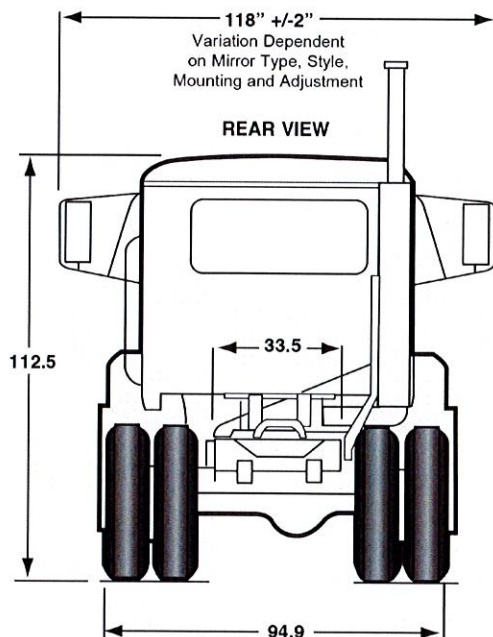
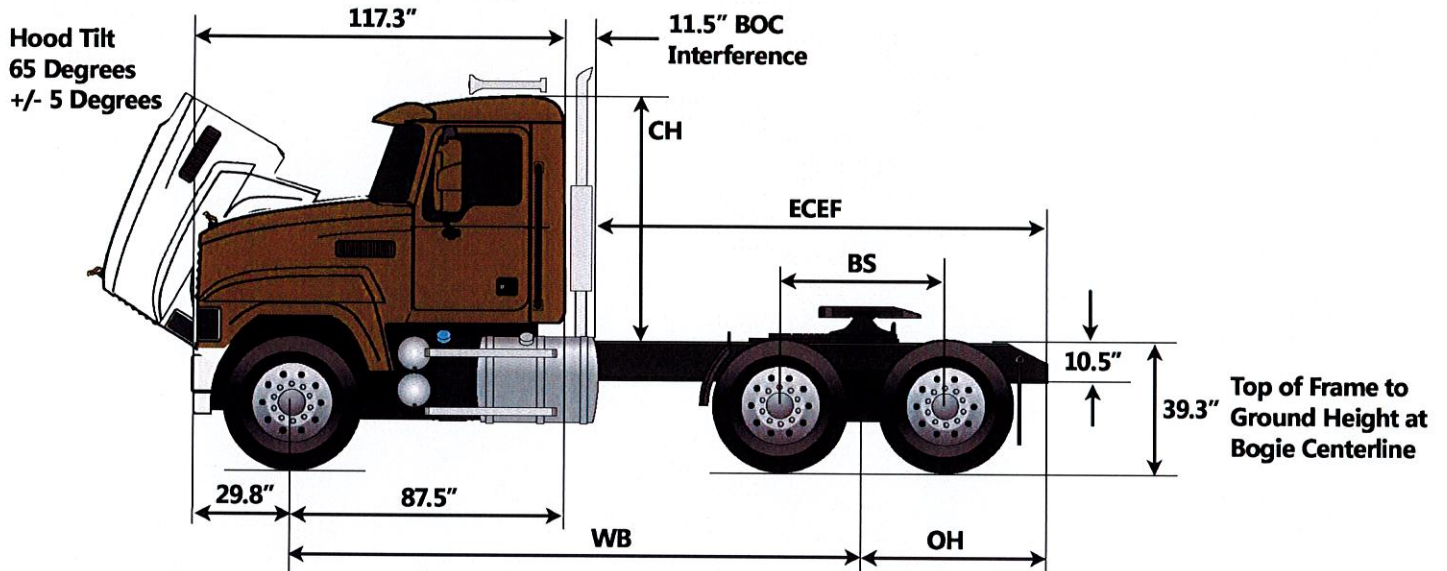
12 Volt Electrical System  
Battery Box - Steel with Molded Plastic Cover  
Courtesy Light Switch - Headlamp and Clearance  
GuardDog connect Services  
Daytime Running Lights  
Electric Circuit Protection Package  
Waterproof Electrical Connections  
Headlights - Flush Mounted LED Lights  
Rear Lighting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



# PI64T



## STANDARD CHASSIS DIMENSIONS



### FRAME EQUIPMENT/FUEL TANKS

- Frame Rail w/out Liner – 10.47" x 3.54" x .24" Steel
- Section Modulus – 11.6 in<sup>3</sup>
- RBM (per rail) – 1,390,000 lb. in.
- Front Bumper – Stainless Steel Clad Aluminum Flush Mounted
- Bumper to Back of Cab (BBC) – 117"
- Crossmembers – Steel/Rear Crossmembers – Boxed and Tapered
- Fifth Wheel – Air Slide LH Release, Bolt to Outboard Mtg. Angles
- Tapered and Flanged Rail Ends – 28°
- Front Tow Device – (2) Clevis
- Fuel Tanks – 93 Gallon LH & RH, 26" dia. Aluminum
- Fuel Lines – Dual Draw & Return, Material – Nylon Tube
- Diesel Exhaust Fluid (DEF) Tank - 18.4 Gallon, 26" 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

# PI64T



## AVAILABLE DRIVELINE COMPONENTS

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
MP8-415E	415 HP [310kW] @1400-1700 RPM 1660 lb. ft. [2251 nM] @ 1000-1300 RPM
MP8-445E	455 HP [339kW] @ 1300-1700 RPM 1815 lb. ft. [2460 nM] @ 1100-1300 RPM
MP8-505E	505 HP [377kW] @ 1400-1700 RPM 1860 lb. ft. [2508nM] @ 1100-1400 RPM
MP8-505A	505 HP [377 kW] @ 1500-1700 RPM 1860 lb. ft. [2508nM] @ 1100-1400 RPM
MP8-415SE - TC	415 HP [310 kW] @ 1300-1700 RPM 1760 lb. ft. [2386] @ 900-1300 RPM
MP8-445SE - TC	445 HP [332 Kw] @1400-1700 RPM 1860 lb. ft. [2432 kW] @ 900-1300 RPM

MACK <i>m</i> DRIVE TRANSMISSIONS			
MODEL	SPEEDS	F. RATIOS	R. RATIOS
TmD12AFD	12	14.94 / 1.00	17.49 / 13.73
TmD12AFO	12	11.73 / 0.785	13.73 / 10.78
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

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	
T313	13	13.44 / 0.74	
T31321	13	13.44 / 0.71	
T313LR	13	16.42 / 0.71	
T313LR21	13	16.42 / 0.71	
T318	18	13.44 / 0.71	
T318LR	18	16.42 / 0.71	
T31821	18	13.44 / 0.71	
T318LR21	18	16.42 / 0.71	

EATON FULLER TRANSMISSIONS			
MODEL	SPEEDS	RATIOS	LOW/HIGH
FA14810B	10	15.42 / 1.00	
FA15810B	10	15.42 / 1.00	
FAM15810B	10	15.42 / 1.00	
FAO14810C	10	12.80 / 0.73	
FAO15810C	10	12.80 / 0.73	
FAO16810C	10	12.80 / 0.73	
FAOM15810C	10	12.80 / 0.73	
FAOM16810C	10	12.80 / 0.73	
FR15210B	10	14.80 / 1.00	
FRO14210C	10	12.69 / 0.74	
FRO15210C	10	12.69 / 0.74	
FRO16210C	10	12.69 / 0.74	
FRO17210C	10	12.94 / 0.74	
FRO18210C	10	12.94 / 0.74	
FRW15210B	10	16.21 / 1.00	
RTO14908LL	10	14.56 / 0.74	
RTO16908LL	10	14.56 / 0.74	
RTLO16913A	13	12.31 / 0.73	
RTLO18913A	13	12.31 / 0.73	
RTO16915	15	13.31 / 0.79	
RTLO16918B	18	14.40 / 0.73	
RTLO18918B	18	14.40 / 0.73	

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

## AVAILABLE DRIVELINE COMPONENTS CONTINUED

FRONT AXLES		
MODEL	MAKE	CAPACITY
FXL12	MACK	12,000 lb. [5443 kg.]
E1252IR	DANA SPICER	
MFS131	MERITOR	
STEERTEK	HENDRICKSON	
FXL12.5	MACK	12,500 lb. [5681 kg.]
E1252IR	DANA SPICER	
MFS131	MERITOR	
STEERTEK	HENDRICKSON	
FXL13.2	MACK	13,200 lb. [6000 kg.]
E1322IL	DANA SPICER	
MFS131	MERITOR	
STEERTEK	HENDRICKSON	
FXL14.6	MACK	14,600 lb. [6486 kg.]
MFS141	MERITOR	
STEERTEK	HENDRICKSON	

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-40-14X4C	MERITOR	
MT-40-14X4D	MERITOR	
RT40-145A	MERITOR	
DS405	DANA SPICER	
D40-155	DANA SPICER	
D40-156	DANA SPICER	
D40-155H	DANA SPICER	
D40-156H	DANA SPICER	
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	
D46-170	DANA SPICER	

The information in this document was accurate as of the date of the publication. Illustrations may not be representative of current product. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice at any time.

November 16, 2017

SALES ENGINEERING  
MackTrucks.com

# Product Information

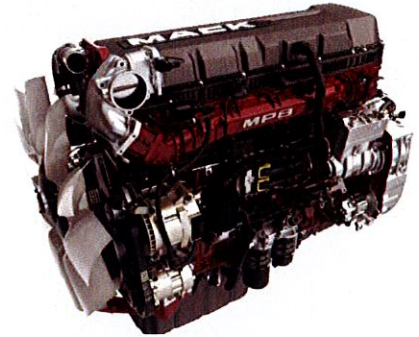


1001846 MP8-505C, MAXICRUISE DIESEL ENGINE – US '21

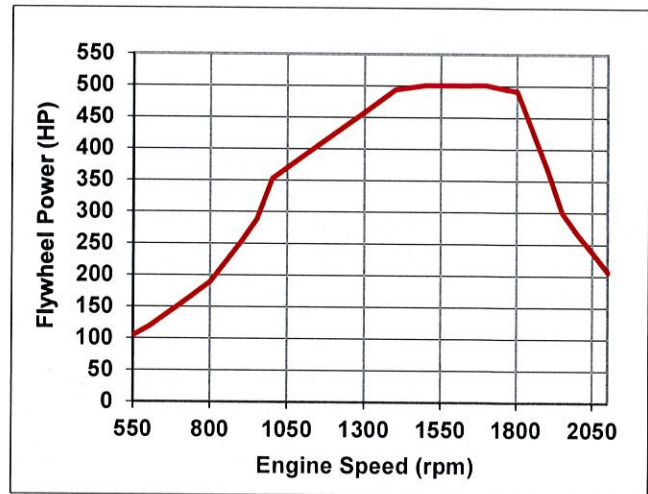
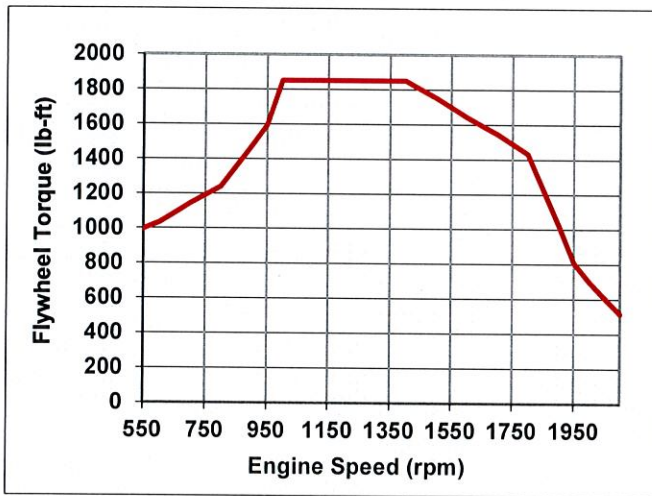
Updated: August 5, 2021

## Performance summary

Peak HP [kW]	505 [377] @ 1500-1700 RPM
HP [kW] at governed RPM	206 [154] @ 2100 RPM
Peak torque lb. ft. [Nm],	1850 [2508] @ 1000-1400 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



1001846 MP8-505C, MAXICRUISE DIESEL ENGINE – US '21

Updated: August 5, 2021

## Features and benefits

<b>18:1 CR wave piston, 220 bar peak cylinder pressure</b>	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.
<b>Electronic common rail fuel injection</b>	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.
<b>Intake throttle</b>	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.
<b>Dual-butterfly EGR valve</b>	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.
<b>CLEARTECH™ ONE aftertreatment</b>	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



1001846 MP8-505C, MAXICRUISE DIESEL ENGINE – US '21

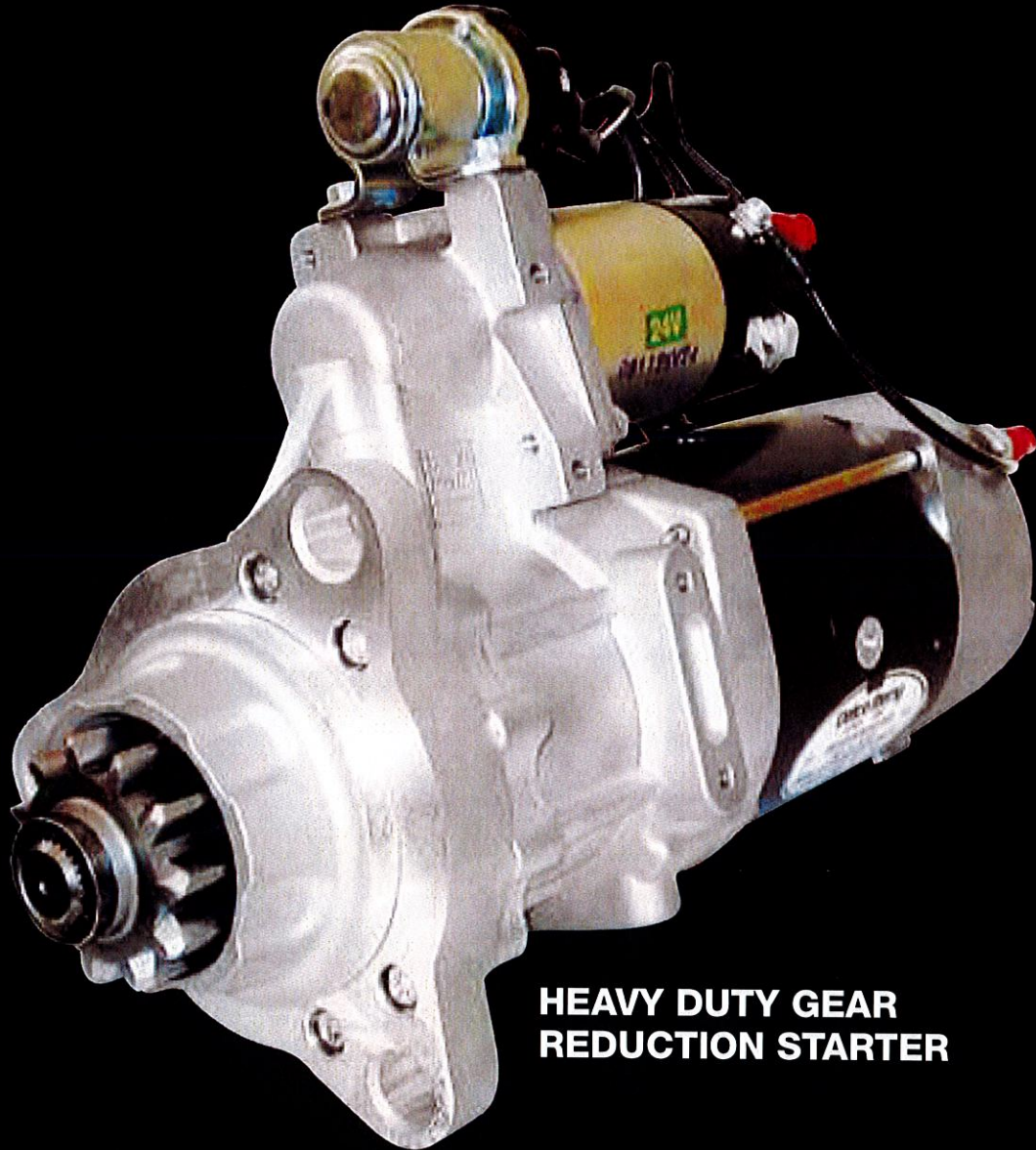
Updated: August 5, 2021

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

Number of cylinders & firing order	6, In-Line: 1 – 5 – 3 – 6 – 2 – 4
Bore and stroke, inches [mm]	5.16 X 6.22 [131 X 158]
Displacement, cubic inches [L]	780 [13]
Compression ratio	18:1
Torque rise	29.0%
Idle speeds:	
Low	Adjustable, 650 RPM
High	2100 RPM
Engine brake retarding power	475 HP [355 kW] @ 2250 RPM
Weight, dry [approximate] lbs. [kg]	2711 [1230]
Fuel filter	Spin-on, disposable
Fuel system	High pressure F2 common rail
Fuel supply pump	Eccentric-style pump (no lifters or tappets)
Lubrication system:	
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
Turbocharger	Variable geometry turbocharger with journal bearings



# 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

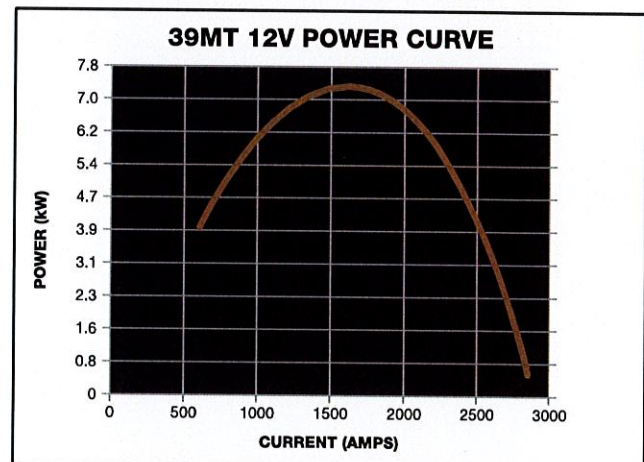
### HEAVY DUTY BEARING AND BUSHING SYSTEM

Increases reliability and service life

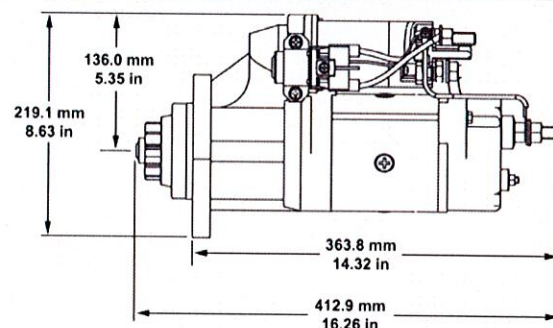
## SPECIFICATIONS

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

## PERFORMANCE



## DIMENSIONS





# Product Information



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

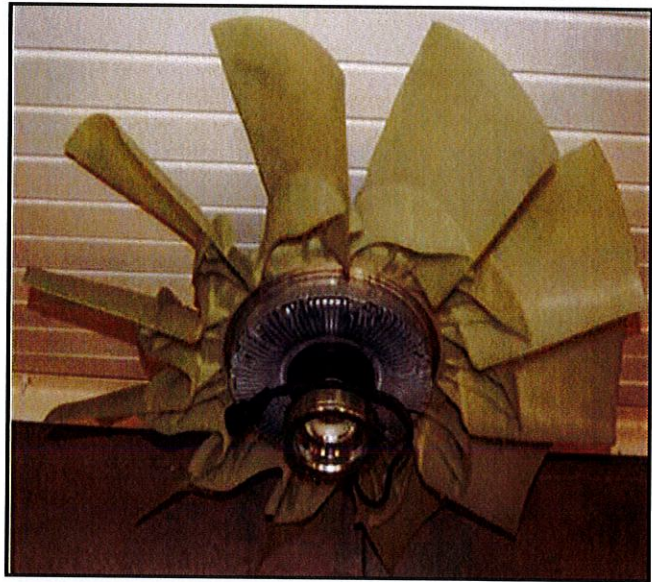
**Related:**

**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



## 1362176 Transmission, Eaton RTLO-18918B

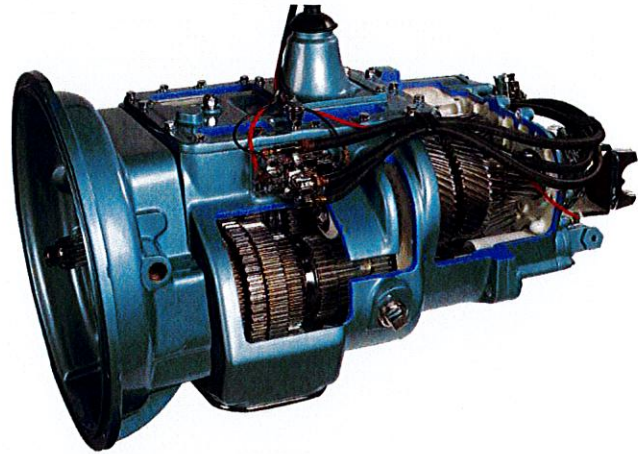
**Related:** Transmission (136), Driveline (195), Rear Axle (268)

**Updated:** July 2, 2020

With the Eaton RT-18, drivers will experience versatility and low shift effort in a premium 18-speed transmission.

The innovative, patented design features a simple mainshaft, which is not splined to the auxiliary gear. This unique design eliminates the added mass, drag and inertia of the entire auxiliary section.

During upshifts, where both the lever and splitter button are moved together, the low-inertia mainshaft is quickly brought to synchronous, resulting in fast, easy shifts.



- Unbeatable versatility with 19.7 to 1 overall reduction and 14.40 low gear.
- Economical performance with 0.73 and 0.86 overdrives for efficient cruise RPMs.
- Exclusive output seal design improves seal life and eliminates potential for seal damage during yoke removal.
- Faster, smoother range and splitter shifts and improved cold weather performance due to design improvements.
- On selected models an optimized lubrication system provides increased cooling and lubrication for more difficult, harder working applications.
- Quieter operation and increased durability due to helical gears in auxiliary section.
- Improved lubrication with standard internal oil pump and oil lines for directed lubrication.
- Smoother, faster, easier shifting due to patented low-inertia technology.

### Applications at a Glance

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

# Product Information



## 1362176 Transmission, Eaton RTLO-18918B

**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]
<b>Standard</b>	23 lbs. [10]	76 lbs. [34]	<b>Standard</b>	21 lbs. [10]	68 lbs. [31]
<b>Nodal</b>	36 lbs. [16]	92 lbs. [42]	<b>Nodal</b>	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.)
1850 [2509]	Yes	No	No	Yes	Optional	28 [13]	33.1 [841]	716 [325]	79%	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 0.79 engine speed.

Overall Ratio	Reverse Gear Ratios			
19.72	1	2	3	4
	3.43	4.03	12.85	15.06

LL	L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
14.4	12.29	8.51	7.26	6.05	5.16	4.38	3.74	3.2	2.73	2.28	1.94	1.62	1.38	1.17	1	0.86	0.73
17%	44%	17%	20%	17%	18%	17%	17%	17%	20%	17%	20%	17%	18%	17%	17%	17%	Final

# Product Information

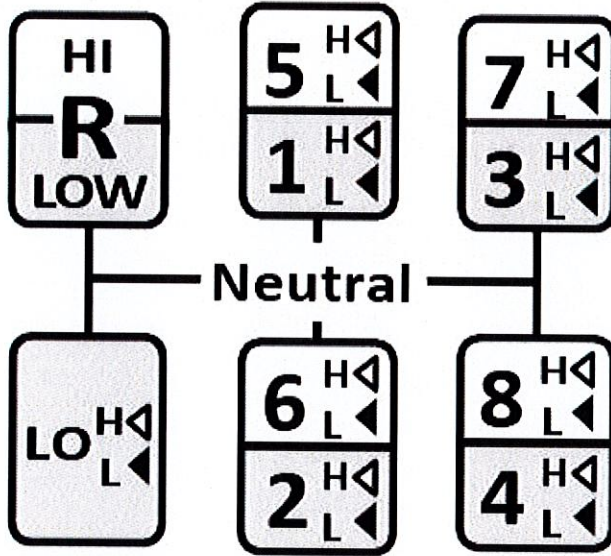


**1362176**      **Transmission, Eaton RTLO-18918B**

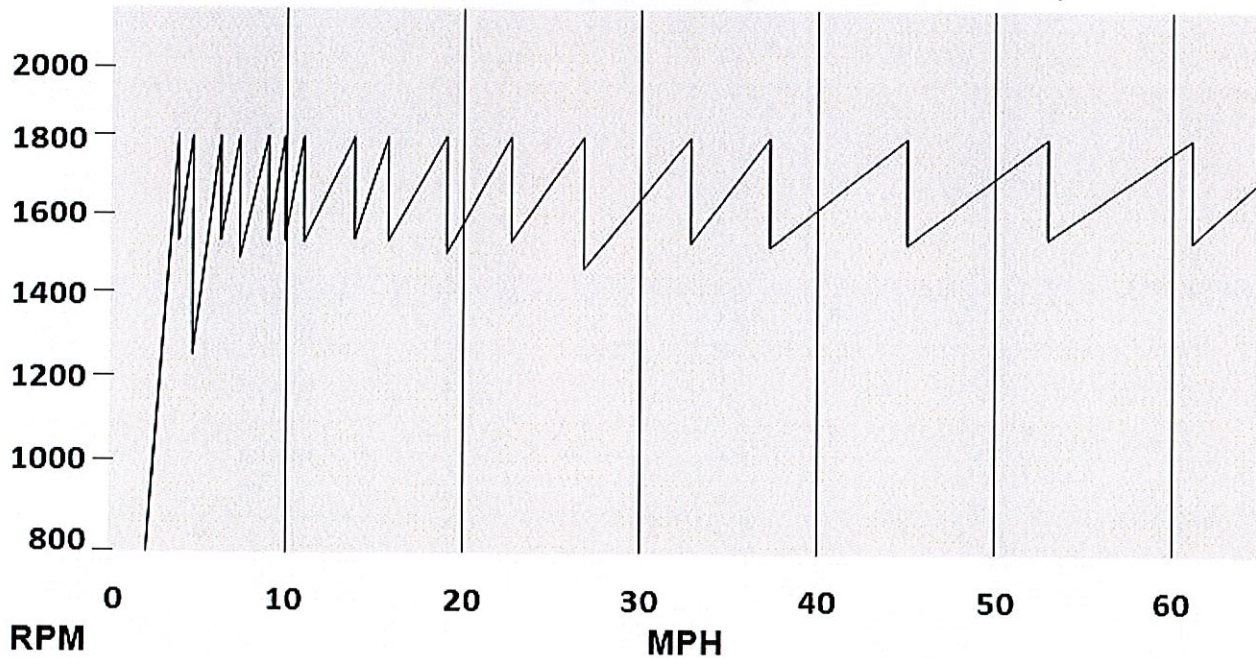
**Related:**      Transmission (136), Driveline (195), Rear Axle (268)

**Updated:**      July 2, 2020

## Shift Pattern



Performance Chart (based on 1800 RPM engine cruising at 1630 RPM / 65 MPH)



# Product Information



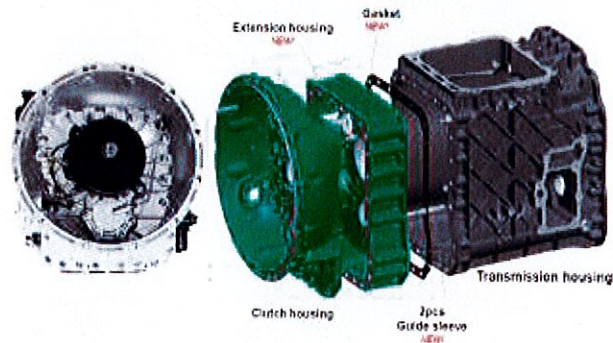
## 1361511 TMDMACK 14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW CREEPER/ MULTI-SPEED REVERSE (OVERDRIVE) (136176)

Updated: September 1, 2017

## Mack® mDRIVE™ HD F Series Transmission

The mDRIVE HD heavy-duty automated manual transmission comes standard on Mack® Granite® trucks to help tackle whatever challenges you face on the job. This 13-speed, two-pedal transmission offers up to 1,920 lb.-ft. of torque, horsepower ratings from 325 to 505 HP and is designed to integrate seamlessly with Mack MP7® and MP8® engines.

Because mDRIVE HD is in constant communication with your engine, it's continuously monitoring changes in grades, vehicle speed, acceleration, torque demand, weight and other factors, so there's no compromising on performance.



### mDRIVE HD F Series offers the following features:

#### Grade Gripper

There's no awkward and dangerous roll-back when stopping on a grade. Grade Gripper keeps your position for up to three seconds after the brake pedal is released.

#### Rock Free

Don't let troublesome terrain bog you down. When your truck gets stuck, mDRIVE HD rocks the vehicle back and forth to break you free.

*(Optional with Mack Fleet shifter package)*

#### Power Launch

When rocking won't release your truck from sand and loose soil, mDRIVE HD responds with more power than you thought possible. It allows you to raise the engine RPM and torque prior to engaging drive mode to free your vehicle.

*(Optional with Mack Fleet shifter package)*

#### PTO Options

The mDRIVE HD is available with up to six different combinations of rear transmission-mounted PTO options and a selection of factory-installed piston and gear-driven hydraulic pump options.

#### PowerLeash™ Engine Brake

Get maximum performance from your engine brake. By setting your downhill speed, the engine, engine brake and transmission work together to allow a faster controlled descent speed in a higher gear without overspeeding the engine.

#### Enhanced Construction Shift

Heavy-duty construction jobs demand more aggressive shifting. Enhanced Construction Shift maximizes gradeability and improves starting and shifting on rough terrain.

*(Optional with Mack Fleet shifter package)*

#### Heavy Haul Shift

Meet Mack's most assertive shift strategy yet. Designed for the trucks that shoulder your largest loads, Heavy Haul Shift offers even more performance-oriented shift points and less skip shifting. Recommended for loads over 180,000 GCW. *(Requires Mack Premium shifter package)*

### COMPLETE INTEGRATION

As part of Mack's legendary integrated powertrain, mDRIVE HD works seamlessly with Mack engines and axles for improved efficiency, increased uptime and lower cost. Because when all the pieces perform together, everything else falls into place.

### LIGHTER THAN THE COMPETITION

Even though mDRIVE HD is built strong, it won't weigh you down. It's hundreds of pounds less than competitors, so you can ditch the dead weight and increase your payload.

### INCREASED PRODUCTIVITY

The mDRIVE HD is automated, so it's easier to work than traditional manual transmissions. Because drivers don't have to worry about shifting gears, they're more rested and ready to finish the job with increased focus and productivity.

### ONE-STOP SERVICE

Because mDRIVE HD is a Mack transmission, it's serviced in Mack's industry-leading, coast-to-coast dealer network and supported by our comprehensive Uptime Services. Forget the additional time or hassle spent dealing with third-party repairs.

# Product Information



## 1361511 TMDMACK 14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW CREEPER/ MULTI-SPEED REVERSE (OVERDRIVE) (136176)

Updated: September 1, 2017

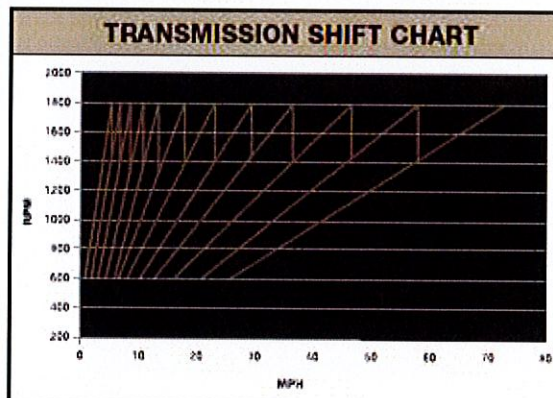
OVERDRIVE SHIFTER FEATURES		
FEATURES	FLEET	PREMIUM
AUTO NEUTRAL	STANDARD	STANDARD
GRADE GRIPPER	STANDARD	STANDARD
GEAR SELECTION ADJUSTMENT	OPTIONAL	STANDARD
POWERLEASH ENGINE BRAKE	STANDARD	STANDARD
ENHANCED CONSTRUCTION SHIFT **	OPTIONAL	STANDARD
EASY SHIFT **	OPTIONAL	OPTIONAL
HEAVY HAUL SHIFT **	OPTIONAL	STANDARD
CRUISE 'N BRAKE	OPTIONAL	STANDARD
LOW SPEED MODULATION CONTROL	STANDARD	STANDARD
MACKCELLERATOR	OPTIONAL	STANDARD
ROCK FREE	OPTIONAL	STANDARD
POWER LAUNCH	OPTIONAL	STANDARD

\*\* These options are selectable under the M05- PID condition.

OVERDRIVE SPECIFICATIONS	
TYPE	14 SPEED AUTOMATIC MANUAL TRANSMISSION
LENGTH	40" [1016 MM]
WEIGHT (DRY)	687 LB [312 KG]
OIL CAPACITY	19.5 QUARTS [18 L]
TORQUE RATING	2360 LB. FT. [3200 N*m]
NUMBER OF SPEEDS - FORWARD	14
NUMBER OF SPEEDS - REVERSE	4
CASE, BELL HOUSING MATERIAL	ONE PIECE HEAT TREATED ALUMINUM
CASE, BELL HOUSING TYPE	SAE #1
TYPE OF GEARS	HELICAL
CONTROL	D PANEL DASH MOUNTED SHIFTER
SHIFTER INDICATORS	R-REVERSE / N-NEUTRAL / D-DRIVE / M-MANUAL
LUBRICATION	SPLASH & PRESSURE

For Information Concerning Power Take-Offs Consult Power Take-Off Sheets

OVERDRIVE GEAR RATIOS		
FORWARD GEAR	RATIO	% STEP
Creep(1)	32.04	
Creep(2)	19.38	
1st	11.73	
2nd	9.21	27
3rd	7.09	30
4th	5.57	27
5th	4.35	28
6th	3.41	28
7th	2.70	26
8th	2.12	27
9th	1.63	30
10th	1.28	27
11th	1.00	28
12th	0.78	27
REVERSE GEAR	RATIO	% STEP
R0	37.49	
R1	13.73	
R2	10.78	
R3	8.62	



# Product Information



1361511 TMDMACK 14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW  
CREEPER/ MULTI-SPEED REVERSE (OVERDRIVE)  
(136176)

Updated: September 1, 2017

## Feature Description

### *No change from current options*

#### **Gear Selection Adjustment**

The driver can manually select gears using the up / down buttons located on the Premium shifter. The Driver Display will indicate how many up / down gears are available by the means of up / down arrows.

#### **Idle Governor Driving Mode**

This feature is included in every software feature package and is useful in the lower gear range (1-6), for example when driving slowly in congested areas. The Idle Driving mode is engaged by the driver removing their foot from the accelerator and allowing the vehicle to idle along. The transmission automatically selects the gear which best suits the speed. When the Basic shifter is utilized, slightly pressing the accelerator or brake pedal will change engine speed to facilitate an upshift or downshift. Although the engine load may vary, the Idle Governor will adjust the torque to maintain idle speed and therefore achieve constant vehicle speed. The feature also works in Reverse and is quite helpful when backing up a trailer.

#### **Gear Selection of Start Gear**

The driver can in the "Manual mode" select start gear in the range from 1-3.

For Tractor models, in the "Drive mode" the transmission will select the start gear based on the load, the grade and engine size. Typically the start gear is 1 or 2 with a trailer connected and 4 when bob-tailing. However, the driver can adjust the selected gear by up to two gears above the calculated as long as it does not exceed "Highest available start gear". The highest available start gear is a customer programmable parameter in the range from 1-6 with a default value of 6. For Truck configurations the starting gear will be 1.

#### **Performance Mode**

A button on the Premium gear lever lets the driver select Performance operating mode.

- Economy, the transmission will select shift points and command engine parameters maximizing fuel economy.
- Performance mode selects shift points and engine parameters maximizing to be driven in high grades and other rough conditions. Improved ability to rock free.

There are three customer programmable settings for the Performance mode:

1. Performance mode available. When you press the button, the transmission goes to PERF mode, and stays there until you turn-off the truck, or press the button again. Recommended setting for off-road vehicles.
2. Performance mode available. Once enabled the mDrive monitors the engine utilization and automatically returns to Economy if the power demand for a specified time window drops to a level that can be handled by the Economy mode. In other words it minimizes the time in Performance mode, which improves Fuel Economy.
3. Performance mode disabled. Best for fuel economy.

#### **Auto Neutral when Parking Brake applied**

In situations where the mDrive is still in gear after the parking brake has been applied, the mDrive will go into Neutral after four minutes in order to protect the release bearing from excessive temperature and wear. If the driver presses the accelerator pedal, the transmission engages the gear was selected before.

#### **Auto Neutral at Key-off if Gear engaged**

In order avoid "torque lock-up" of the driveline when shutting off the engine with a gear engaged; mDrive will automatically go into Neutral during key-off.

#### **Basic PTO functions**

Possibility to engage PTO in vehicle speeds up to 6Mph (speed limit depends on the rear axle ratio)

Pre-defined splitter positions: SW parameter defines splitter to engage when use of transmission PTO.

© 2017

believe | **Low Speed Modulation Control**

Provides smooth low speed control without the need to continually brake and accelerate.

on you  
rmation,

# Product Information



## 1361511 TMDMACK 14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW CREEPER/ MULTI-SPEED REVERSE (OVERDRIVE) (136176)

Updated: September 1, 2017

### “P” Additional Features “Rock Free”

In situations where wheel spin occurs and a vehicle becomes stuck, the mDrive transmission has the ability to rock the vehicle back and forth to maneuver out of the stuck condition. A combination of carefully pressing and releasing the accelerator, to ease the vehicle forward or backwards, will produce the rocking motion to elongate the wheel tracks which have caused the vehicle to become stuck.

Engage as follows:

- Engage differential locks
- Turn off traction control
- Select Performance mode of the mDrive
- Press the M button for Manual selection, and select 1st gear, or the 1st reverse gear
- Carefully press accelerator pedal up and down with a smooth pumping action



### “P” Additional Features “Power Launch”

If the vehicle becomes “really stuck” in sand or very soft soil and are unable to get it moving again by trying to rock it free. That’s where the Power Launch feature comes in. With the Performance software package, the mDrive has the ability to use full engine torque to get the vehicle moving once again.

Engage as follows:

- Engage differential locks
- Select Performance mode of the mDrive
- Press the M or D button for Manual/Drive, use 1st gear, or the 1st reverse gear
- Push and hold the minus (-) button on the gear selector
- Completely depress the accelerator – the engine will rise to 1300 rpm
- Release the minus (-) button and the clutch is engaged, launching the vehicle free



**Grade Gripper** is a safe, convenient way to hold a vehicle on-grade (road inclines and declines) without risk of roll-back or clutch burn-out.

Grade Gripper ‘grips’ both the tractor and the trailer brakes.

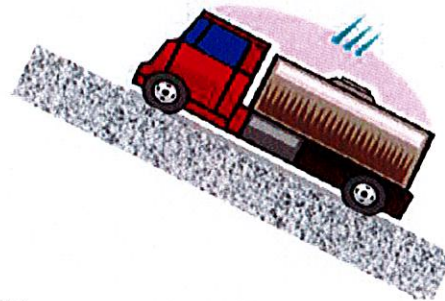
When the brake pedal is released, Grade Gripper maintains braking until the throttle pedal is applied, or until a 3 second timer expires.

Grade Gripper only applies on grades at 0 mph, with the service brakes applied.

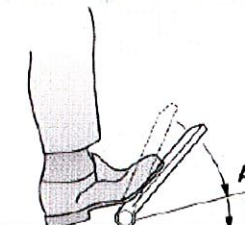
A dash switch can be used to disable Grade Gripper, whenever needed. If disabled, the switch lamp flashes and a Co-Pilot message informs the driver.



Grade Gripper Disabled



The **MackCellerator** is a 2-position throttle pedal. The first position (A) provides 100% throttle. If the driver presses further, the pedal passes a detent to full travel (B). The mDRIVE will then automatically downshift (assuming there is sufficient engine RPM range).



A A = 100% throttle  
B B = Downshift



# Product Information



1361511 TMDMACK 14AFO-HD mDRIVE HD 14 SP, ULTRA-LOW CREEPER/ MULTI-SPEED REVERSE (OVERDRIVE) (136176)

Updated: September 1, 2017

**PowerLeash+** engine brake controls include the following features:

'Cruise'n Brake' automatically engages PowerLeash+ at 3 mph above the cruise control target set speed, then auto disengages it prior to resuming cruise (0.5 mph above). Note: 'Cruise'n Brake' only functions in Auto mode.

'Latch' mode automatically engages the engine brake whenever the throttle pedal is released and the PowerLeash+ control switch is in the 'ON' position.

'Auto' mode keeps the engine brake off unless a target downhill braking set speed is specified, using the 'SET-' button. PowerLeash+ will automatically and progressively (0-100%) attempt to maintain the set speed. The control switch must be in the ON position. Applying the service brakes will not automatically activate PowerLeash+.



# 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

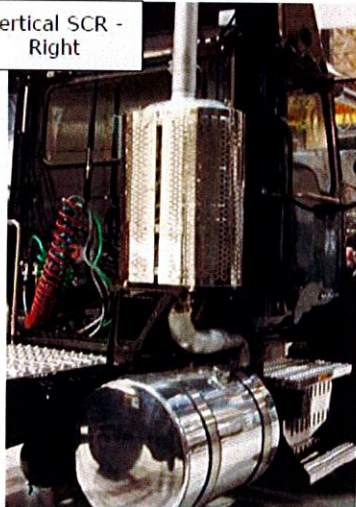


## DPF- ClearTech™ One US17 Emission Systems

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

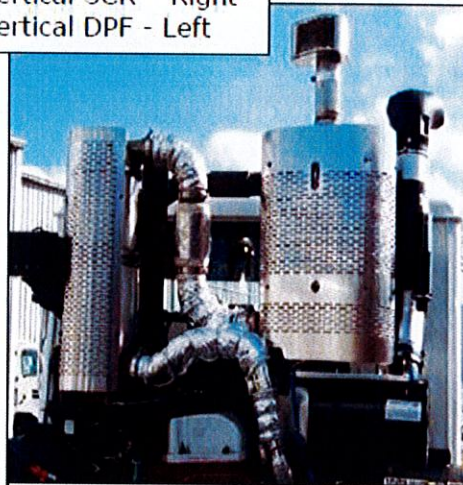
Other systems that are available on the models listed in the description:

Vertical SCR - Right



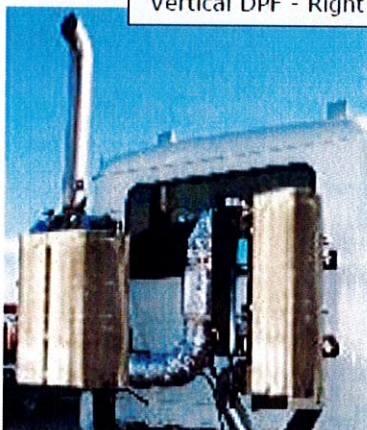
**CLEARTECH HV – DPF0101**  
Available on Anthem and GRB  
Twin Steer Mixers with 92" FA  
Spacing

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

# FRONT AXLE

# MACK®

## FXL14.6

14,600 LBS. [6 623 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) . . . . . 3.74" [95 mm]  
 Flange Width, Top . . . . . 3.35" [85 mm]  
 Flange Width, Bottom . . . . . 3.35" [85 mm]  
 Web Thickness . . . . . 0.394" [10 mm]  
 Section Modulus . . . . . 5.82" in<sup>3</sup> [95 cm<sup>3</sup>]

#### STEERING KNUCKLE:

Material . . . . . Chromium Molybdenum Alloy Steel, Heat Treated  
 Spindle Diameter  
 Inner Bearing . . . . . 2.28" [58 mm]  
 Outer Bearing . . . . . 2.28" [58 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  
 Hub . . . . . Ductile Iron  
 Bearings . . . . . Tapered Roller (Unitized)  
 Lubrication . . . . . Permanently lubed with Synthetic Grease  
 Pivot Centers:  
 FXL14.6 . . . . . 69.92" [1 776 mm]  
 Spring Centers . . . . . 33.5" [851 mm] MRU  
 32.5" [826 mm] CHU, CXU, GU

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

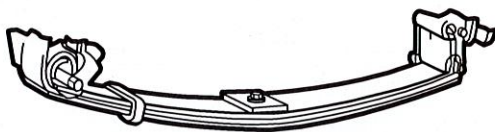


## BRAKES

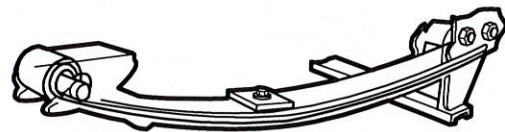
TYPE		CAM
SIZE	DIAMETER WIDTH	16.5" [419 mm] 5" [127 mm]
MAKE		Arvin Meritor
ACTUATION		Air
LINING THICKNESS		0.85" [22 mm] Tapered
LINING AREA, TOTAL		157 in <sup>2</sup> [2 026 cm <sup>2</sup> ]
CHAMBER SIZE— Sq. In. Per Wheel		1 @ 24 [155 cm <sup>2</sup> ]
SLACK ADJUSTER LENGTH		5.5" [140 mm]
BRAKE ADJUSTMENT		Self-Adjusting
DUST SHIELDS		Optional

## SUSPENSION

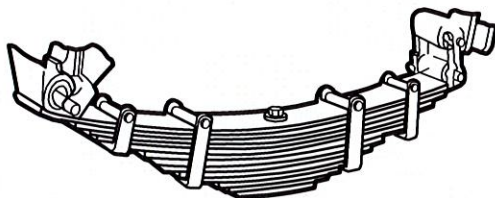
SPRING CAPACITY (GRD. LOAD RATING)	SPRING SIZE	SPRING SIZE		CHASSIS MODEL APPLICATION
		LENGTH	WIDTH	
<b>14,600 lb.</b> [6 623 kg] <b>STD.</b>	Taperleaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	CHU, GU
	Taperleaf - Shackle	58.85" [1 495 mm]	4" [102 mm]	CXU
	Multileaf - Shackle	52.52" [1 334 mm]	4" [102 mm]	GU
	Multileaf - Slipper	50.25" [1 276 mm]	3.5" [89 mm]	MRU



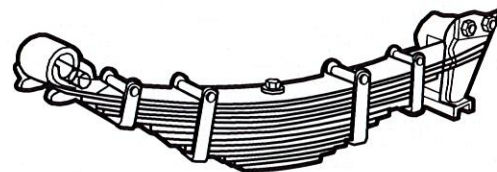
**TAPERLEAF SHACKLE**



**TAPERLEAF EYE & SLIPPER**



**MULTILEAF SHACKLE**



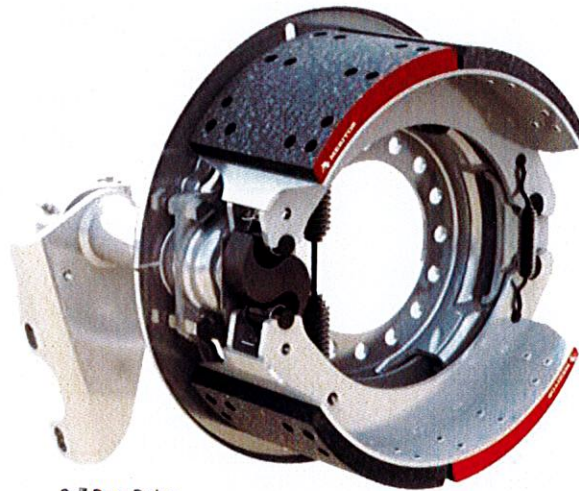
**MULTILEAF EYE & SLIPPER**

# 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

### **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



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## **BUM-SSBF Front Bumper, Flush, Stainless Steel Clad Aluminum (4DXP1X)**

**Affects:** Conventional Models

**Related:** Front Frame Extension (FFE), Front Towing Device (TDF)

**Updated:** December 12, 2017

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Shown on Granite Axle Forward:



# Product Information



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## **BUM-SSBF Front Bumper, Flush, Stainless Steel Clad Aluminum (4DXP1X)**

**Affects:** Conventional Models

**Related:** Front Frame Extension (FFE), Front Towing Device (TDF)

**Updated:** December 12, 2017

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Shown on Pinnacle:



Shown on Anthem (18.5" Ground Clearance, No Spoiler, 275/80R22.5 Tires):



# Product Information



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## **BUM-SSBF** Front Bumper, Flush, Stainless Steel Clad Aluminum (4DXP1X)

**Affects:** Conventional Models

**Related:** Front Frame Extension (FFE), Front Towing Device (TDF)

**Updated:** December 12, 2017

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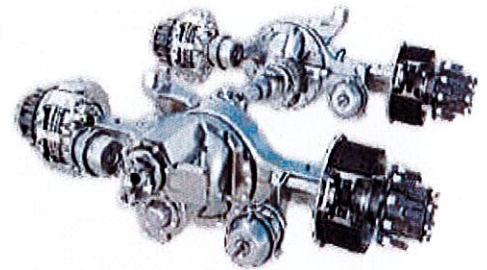
# SED

PRODUCT INFORMATION

**PID Code/Condition:** 268-2021  
**Description:** Meritor RT46-164EH  
**Models:** ALL  
**Date:** August 10, 2015

## MERITOR TANDEM AXLES

For many applications, nothing less than a tandem axle will survive. And Meritor tandems not only survive, but thrive on the toughest, meanest, most demanding jobs. Year after year, Meritor tandems keep delivering the performance. And the goods. With legendary durability. Plus reduced maintenance and operating costs.



### Sales Engineering

Mack Trucks, Inc.  
 Allentown, PA 18103  
 United States

Phone: 800 868 6225  
 Fax: 610 351 8791

MackTrucks.com

14X EXCLUSIVE

#### Features/Options

#### Performance Benefits

More robust Inter-Axle Differential (IAD)	20% larger than the competition's and with fewer parts; torque capacity up to 2050 lb. ft. in certain applications; improved pinion, differential and needle bearing design provides longer life and increased reliability
2.64-7.17 vocational ratio range	Widest ratio range to match your application and specific engine manufacturer's recommendations
DualTrac™ housing option	Effectively repositions the loading on wheel bearings similar to dual tire configurations when used with 0.0°-0.56° outset wheels
High-torque gear design	Provides smoother and quieter operation, greater torque capacity and longer component life
Rugged, single-piece carrier design	Supports precise gear alignment
Meritor spindle design	Central Tire Inflation (CTI) system-ready
Optional aluminum rear carrier and is available for RT-40-145A family only	Reduces weight to deliver additional payload capacity and greater fuel economy
Broad range of gear ratios available	Enables end users to choose axles tailored to their needs, whether it be improved fuel economy, greater torque or maximum traction
Lowest-maintenance tandem design available	Extends range up to 500,000 miles between lube changes
Anti-lock braking system (ABS) and Automatic Traction Control (ATC) options	Provides greater braking control, shorter stopping distances and improved traction for both starting and higher-speed driveability
Optional Driver-Controlled Differential Lock (DCDL)	Provides maximum traction and spinout protection under slippery conditions

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

## Hypoid Single-Reduction Axle Specifications

RATINGS pounds (kg)	AXLE MODEL	GCW HIGHWAY pounds (kg)		STANDARD RATIOS	RING GEAR SIZE (PITCH DIAMETER) Inches (mm)	AXLE SHAFT SPLINE SIZE Inches (mm)	AXLE SHAFT DIAMETER Inches (mm)	HOUSING BOX SIZE Inches (mm)	WALL THICKNESS AT SPRING SEAT Inches (mm)	WHEEL-END SERIES	APPLICATIONS
		Max. 3% Grade (Unpaved)	Max. 8% Grade (Paved)								
45,000 (20,884)	RT-45-160P	185,000 (83,990)	160,000 (72,640)	3.42, 3.58, 3.73, 3.91, 4.10, 4.30, 4.56, 4.89, 5.38, 5.63, 6.14, 6.43, 6.83, 7.17	18.0 (457.2)	2.35 (59.7) 46 Teeth	2.25 (57.2)		0.50 (12.7), 0.63 (16.0) Wide Track Only Available as RT-45-164 Series		GS, HS, RS
	RT-46-154P								0.63 (16.0)		

Applications Key: GS – General Service • HS – Heavy Service • RS – Restricted Service

See Applications section for specific vehicle references. Refer to publication TP7824 for complete axle specification details.

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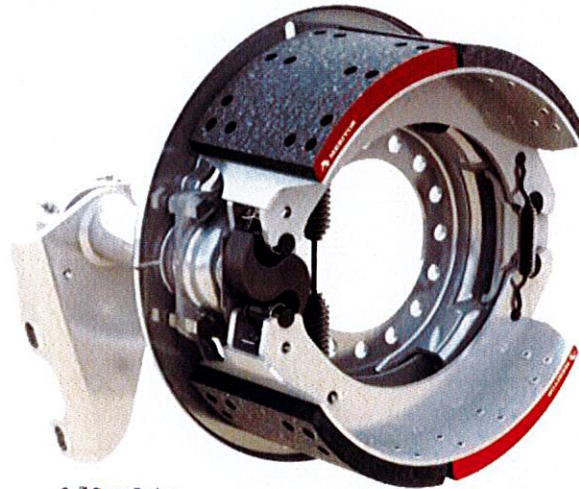
# Product Information



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<b>253-</b>	<b>Meritor Q+ Rear Drum Brakes (253)</b>
<b>Affects:</b>	All Models
<b>Related:</b>	Rear Axle (268), Rear Suspension (186)
<b>Updated:</b>	February 12, 2018

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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

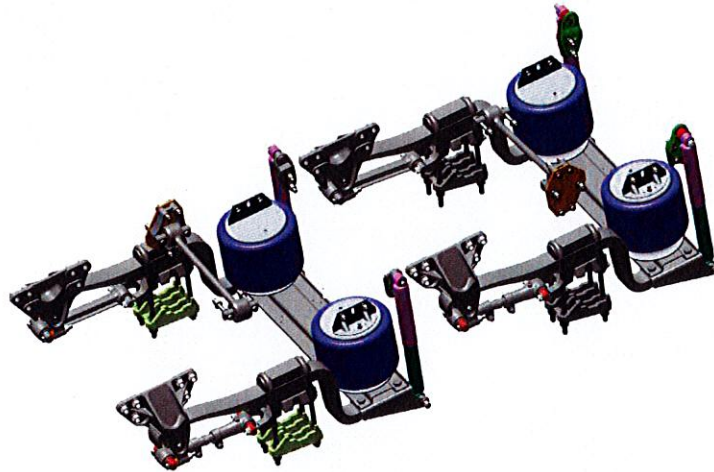
# Product Information



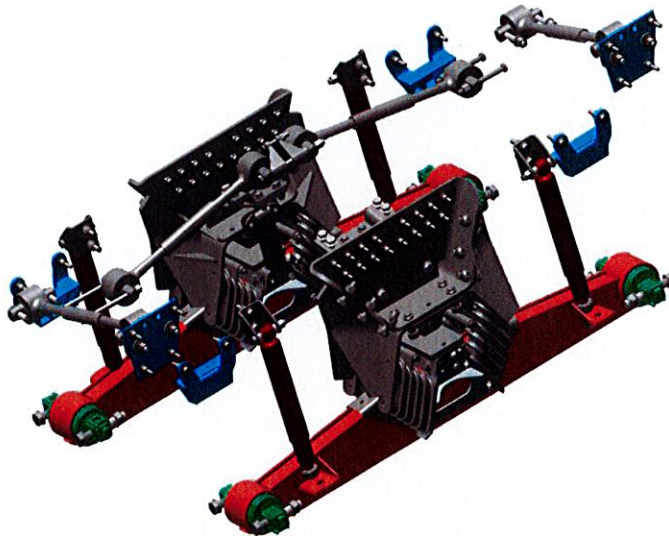
## **RSHABS Rear Shock Absorbers, All Outboard Mounted (YVXA1X)**

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

Outboard Mounted shocks shown on a rear air suspension:



Outboard Mounted shocks shown on a Hendrickson HMX mechanical rear suspension:





# Product Information



## 464-3000 Quarter Fenders, Stainless Steel (464AA5)

Affects: Tractors

Updated: January 30, 2018

Shown on Right Side:



Shown on Left Side:



# Product Information



## 698-2002 Mack Road Stability Advantage, Bendix ABS/ATC/ESP w/ Yaw Control & 4S / 4M

Related: ABS Sensor Option (ABS-)

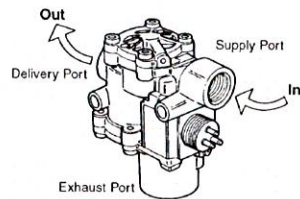
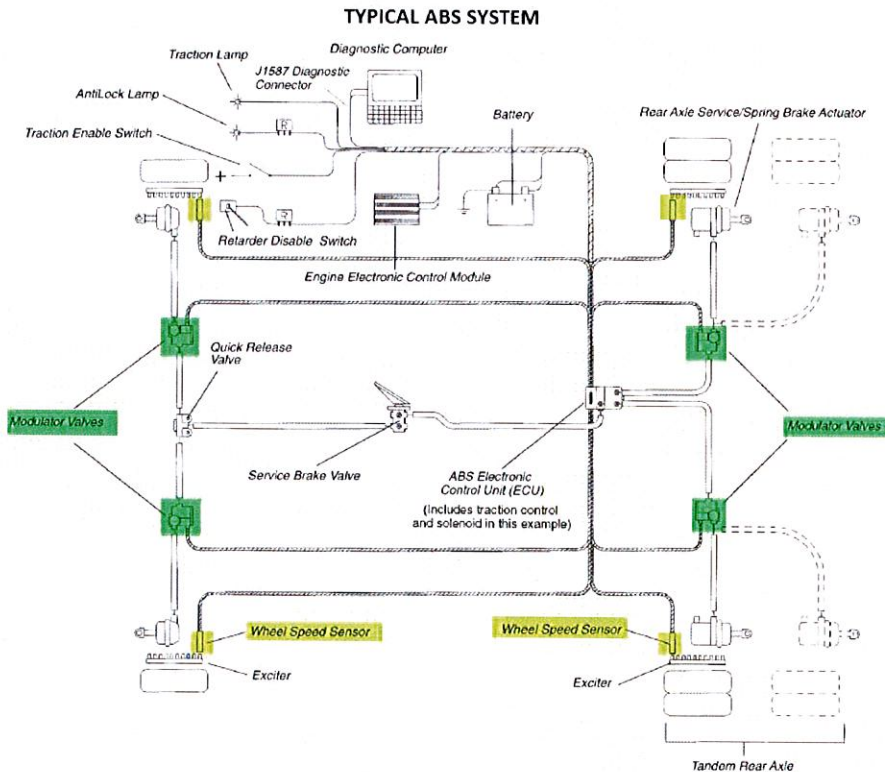
Updated: March 17, 2020

### Antilock Braking System (ABS)

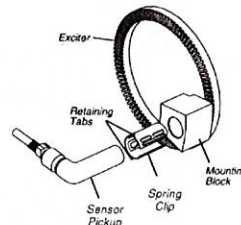
ABS uses wheel speed sensors to monitor wheel-slip or wheel lock-up during braking. The system intervenes when needed – using Pressure Modulator Valves (PMVs) to adjust and/or pulse the brake pressure – in order to optimize the contact between the tires and the road surface.

4S / 4M shown.

6S/ 6M would provide a Wheel End Speed Sensor and Exciter and Rear – Rear axle



ABS Modulator Valve



Typical Sensor Assembly

# Product Information



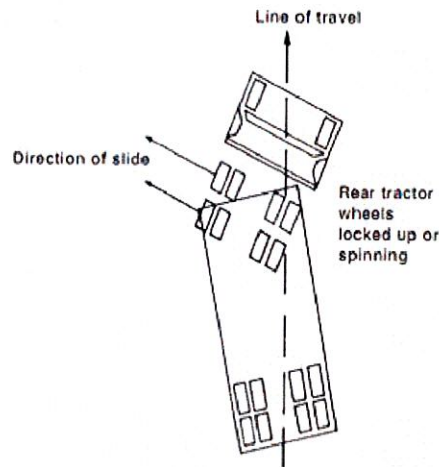
## 698-2002 Mack Road Stability Advantage, Bendix ABS/ATC/ESP w/ Yaw Control & 4S / 4M

Related: ABS Sensor Option (ABS-)

Updated: March 17, 2020

### Automatic Traction Control (ATC)

Traction Control provides standard ABS; improves vehicle traction during acceleration; and aid lateral stability while driving through curves. The ECU communicates with the engine's Controller to provide Engine Torque Limiting (ETL), and/or use Differential Braking (DB) to make brake applications at individual wheels.



### Traction Control Full Disable

Disable Traction Control is for mud and snow conditions to maximize tire grip to the operating surface.

Dash Switch:



# Product Information



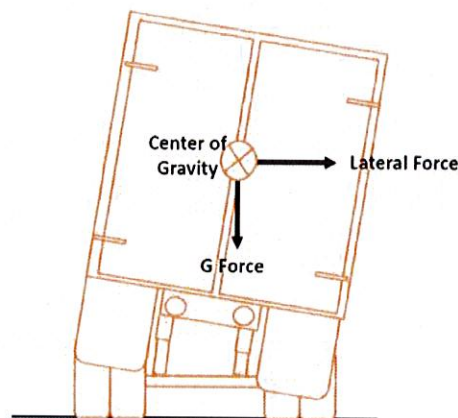
## 698-2002 Mack Road Stability Advantage, Bendix ABS/ATC/ESP w/ Yaw Control & 4S / 4M

Related: ABS Sensor Option (ABS-)

Updated: March 17, 2020

### Roll Stability Control (RSC)

Roll Stability Control (RSC) is an active vehicle safety system that automatically intervenes if a high rollover risk is detected while driving. If a rollover threat is occurring, the system intervenes and assists the driver in minimizing the rollover risk by automatically reducing vehicle speed. Roll Stability Control is designed specifically for your truck or tractor to help maintain vehicle stability and aid in reducing vehicle rollovers. RSC continuously checks and updates the lateral acceleration of the tractor and compares it to a critical threshold where rollover may occur. When the critical threshold is exceeded, RSC intervenes by reducing engine torque, and engaging the engine retarder, while automatically applying drive axle and trailer brakes. Frequently, activation takes place before the driver is aware of the need. RSC is additional to the anti-lock braking system (ABS) and automatic traction control (ATC).



# Product Information



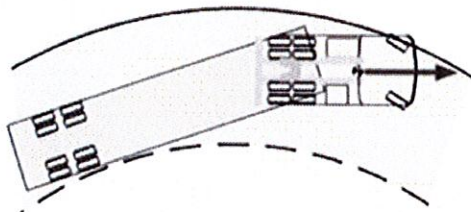
## 698-2002 Mack Road Stability Advantage, Bendix ABS/ATC/ESP w/ Yaw Control & 4S / 4M

Related: ABS Sensor Option (ABS-)

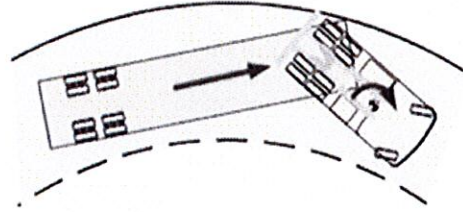
Updated: March 17, 2020

### Electronic Stability Control (ESC)

Electronic Stability Control (ESC) is an active vehicle safety system that automatically intervenes when there is a high risk of directional instability that could lead to loss of vehicle control or rollover. The ECU constantly compares the vehicles actual movement to performance models using various vehicle sensors. If the vehicle shows a tendency to leave the driver's intended path (oversteer or understeer) or exceed a critical lateral acceleration threshold, the system intervenes by selectively applying appropriate brakes to better align the vehicle to the driver's path of travel, or speed thereby assisting the driver in maintaining control of the vehicle.



Understeering ("Plowing Out")



Oversteering ("Spinning Out")

Please reference SED Letter 1399-17 from January 27, 2017 which explains the latest FMVSS-136 Regulations regarding Electronic Stability Control for highway tractors. MSS will automatically add Electronic Stability Control if the tractor ordered meets the FMVSS-136 requirements.

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

### Frame Key:

PID Code	Thickness (mm)	Frame Section (mm)	SM (in <sup>3</sup> )	RBM 10 <sup>3</sup> (lbs-in)	Wt (lbs/in)	Thk (in.)
274-1022	6	6 x 90 x 266				
274-1023	7	7 x 90 x 266	15.7	1880	1.37	0.28
274-1024	8	8 x 90 x 266	17.7	2,120	1.56	0.32
274-1027	9.5	9.5 x 90 x 300	20.6	2,470	1.84	0.37
n/a = combination not available						
ER = Engineering Required (Option Request)						

The following charts are the minimum frame requirements determined by wheel base, after frame, front axle rating, and rear axle rating. A chassis can always be ordered with a frame rail system that is heavier than the published minimum. A chassis cannot be ordered with a frame system that is lighter than the published minimum, unless an approved Option Request exists.

**NOTE:** *All slide travel requirements greater than 24" require an Option request for frame rail analysis.*

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
154	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
155	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
156	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
157	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
158	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
159	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
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163	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
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166	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
167	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
168	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
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173	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
174	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
175	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
176	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
177	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
178	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
179	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
180	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
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182	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
183	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
184	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	24	24	24
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192	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	24	24	24
193	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	24	24	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
193	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	24	24	24
194	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	24	24	24
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211	18	22	24	24	18	20	24	24	n/a	18	24	24	n/a	18	24	24
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232	16	18	22	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
233	16	18	22	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24



# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
234	16	18	22	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
235	16	18	22	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
236	14	18	22	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
237	14	18	22	24	14	16	20	24	n/a	14	18	24	n/a	14	18	24
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243	14	18	20	24	14	16	20	24	n/a	14	16	24	n/a	14	16	24
244	14	16	20	24	12	16	20	24	n/a	14	16	24	n/a	14	16	24
245	14	18	20	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
246	14	18	20	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
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256	12	16	20	24	12	16	18	24	n/a	14	16	24	n/a	12	16	24
257	12	16	18	24	12	16	18	24	n/a	14	16	24	n/a	12	16	24
258	12	16	18	24	12	16	18	24	n/a	14	16	24	n/a	12	16	24
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260	12	16	18	24	12	14	18	24	n/a	14	16	24	n/a	12	14	24
261	12	16	18	24	12	14	18	24	n/a	14	16	24	n/a	12	14	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12.5K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
154	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
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157	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
158	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
159	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
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161	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
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172	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
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174	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
175	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
176	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
177	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
178	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
179	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
180	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
181	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
182	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
183	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
184	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
185	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
186	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
187	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
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189	24	24	24	24	24	24	24	24	n/a	24	24	24	n/a	22	24	24
190	24	24	24	24	22	24	24	24	n/a	24	24	24	n/a	22	24	24
191	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24
192	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24
193	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12.5K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
194	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24
195	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24
196	20	24	24	24	20	24	24	24	n/a	24	24	24	n/a	22	24	24
197	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
198	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
199	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
200	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
201	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
202	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
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205	20	24	24	24	18	24	24	24	n/a	24	24	24	n/a	22	24	24
206	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
207	10	24	22	24	10	22	24	24	n/a	22	24	24	n/a	20	24	24
208	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	18	24	24
209	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	18	24	24
210	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	18	24	24
211	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	18	24	24
212	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	16	24	24
213	18	22	22	24	18	20	24	24	n/a	18	24	24	n/a	16	24	24
214	16	22	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
215	16	22	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
216	16	22	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
217	16	22	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
218	16	20	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
219	16	20	20	24	16	20	24	24	n/a	18	22	24	n/a	16	24	24
220	16	20	18	24	16	18	22	24	n/a	16	20	24	n/a	16	22	24
221	16	20	18	24	16	18	22	24	n/a	16	20	24	n/a	16	22	24
222	16	20	18	24	16	18	22	24	n/a	16	20	24	n/a	16	22	24
223	16	20	18	24	16	18	22	24	n/a	16	20	24	n/a	16	22	24
224	10	20	10	24	10	18	22	24	n/a	16	20	24	n/a	16	22	24
225	16	20	18	24	16	18	22	24	n/a	16	20	24	n/a	16	22	24
226	14	20	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
227	14	20	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
228	14	20	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
229	14	20	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
230	14	18	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
231	14	18	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
232	14	18	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
233	14	18	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
234	14	18	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

12.5K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
235	14	16	18	24	14	18	22	24	n/a	16	20	24	n/a	14	20	24
236	14	16	16	24	14	16	20	24	n/a	14	16	24	n/a	14	16	24
237	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
238	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
239	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
240	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
241	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
242	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
243	14	18	16	24	14	16	20	24	n/a	14	18	24	n/a	14	16	24
244	14	18	16	24	12	16	20	24	n/a	14	18	24	n/a	14	16	24
245	12	18	16	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
246	12	18	16	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
247	12	18	16	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
248	12	18	16	24	12	16	16	24	n/a	14	16	24	n/a	14	16	24
249	12	18	16	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
250	12	18	16	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
251	12	16	14	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
252	12	16	14	24	12	16	18	24	n/a	14	16	24	n/a	14	16	24
253	12	16	14	24	12	16	16	24	n/a	14	16	24	n/a	14	16	24
254	12	16	14	24	12	14	18	24	n/a	14	16	24	n/a	12	16	24
255	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	16	24
256	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	16	24
257	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	14	24
258	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	14	24
259	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	14	24
260	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	14	24
261	12	16	14	24	12	14	16	24	n/a	14	16	24	n/a	12	14	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

13.2K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
154	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
155	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
156	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
157	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
158	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
159	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
160	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
161	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
162	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
163	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
164	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
165	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
166	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
167	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
168	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
169	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
170	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
171	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
172	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
173	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
174	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
175	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
176	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
177	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
178	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
179	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
180	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
181	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
182	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
183	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
184	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
185	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
186	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
187	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
188	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
189	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
190	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	22	24	24
191	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

13.2K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
192	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24
193	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24
194	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24
195	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24
196	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	22	24	24
197	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	22	24	24
198	16	24	24	24	16	24	24	24	n/a	22	24	24	n/a	22	24	24
199	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	22	24	24
200	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	22	24	24
201	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
202	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
203	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
204	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
205	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
206	18	22	24	24	16	22	24	24	n/a	22	24	24	n/a	20	24	24
207	16	22	24	24	16	22	24	24	n/a	20	24	24	n/a	20	22	24
208	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
209	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
210	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
211	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
212	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
213	16	20	24	24	16	20	24	24	n/a	18	24	24	n/a	18	22	24
214	16	20	24	24	14	18	22	24	n/a	18	22	24	n/a	16	22	24
215	16	20	24	24	14	16	22	24	n/a	16	22	24	n/a	16	22	24
216	16	20	24	24	14	18	22	24	n/a	18	22	24	n/a	16	22	24
217	16	20	24	24	14	18	22	24	n/a	18	22	24	n/a	16	22	24
218	16	18	24	24	14	18	22	24	n/a	18	22	24	n/a	16	22	24
219	16	18	22	24	14	18	22	24	n/a	18	22	24	n/a	16	22	24
220	14	16	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
221	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
222	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
223	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
224	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
225	14	16	22	24	14	16	22	24	n/a	16	20	24	n/a	16	20	24
226	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	14	20	24
227	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	14	20	24
228	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	14	20	24
229	14	18	22	24	14	16	22	24	n/a	16	20	24	n/a	14	20	24
230	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24

# Product Information



**274025D Reference Material PI64T, Frames (2740P4)**

Updated: September 1, 2017

13.2K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
231	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24
232	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24
233	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24
234	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24
235	14	16	20	24	12	16	20	24	n/a	16	20	24	n/a	14	20	24
236	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
237	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
238	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
239	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
240	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
241	12	16	20	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
242	12	16	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
243	12	16	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
244	12	16	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
245	12	16	18	24	10	14	16	24	n/a	14	18	24	n/a	14	16	24
246	12	16	18	24	10	14	16	24	n/a	14	18	24	n/a	14	16	24
247	12	16	18	24	10	14	16	24	n/a	14	18	24	n/a	14	16	24
248	12	16	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
249	12	16	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
250	12	14	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
251	12	14	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
252	12	14	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
253	12	14	18	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
254	10	14	18	24	10	14	16	24	n/a	14	16	24	n/a	12	16	24
255	10	14	16	24	10	14	16	24	n/a	12	16	24	n/a	12	16	24
256	10	14	16	24	10	14	16	24	n/a	12	16	24	n/a	12	16	24
257	10	14	16	24	10	12	16	24	n/a	12	16	24	n/a	12	14	24
258	10	14	16	24	10	12	16	24	n/a	12	16	24	n/a	12	14	24
259	10	14	16	24	10	12	16	24	n/a	12	16	24	n/a	12	14	24
260	10	14	16	24	10	12	16	24	n/a	12	16	24	n/a	12	14	24
261	10	14	16	24	10	12	16	24	n/a	12	16	24	n/a	12	14	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

14.6K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
154	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
155	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
156	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
157	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
158	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
159	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
160	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
161	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
162	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
163	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
164	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
165	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
166	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
167	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
168	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
169	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
170	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
171	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
172	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
173	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
174	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
175	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
176	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
177	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
178	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
179	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
180	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
181	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
182	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
183	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
184	24	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
185	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
186	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
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189	22	24	24	24	22	24	24	24	n/a	22	24	24	n/a	20	24	24
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191	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24
192	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24
193	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24



# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

14.6K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
194	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24
195	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24
196	20	24	24	24	20	24	24	24	n/a	22	24	24	n/a	20	24	24
197	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
198	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
199	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
200	16	24	24	24	16	24	24	24	n/a	22	24	24	n/a	20	24	24
201	18	24	24	24	18	24	24	24	n/a	22	24	24	n/a	20	24	24
202	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
203	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
204	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
205	18	22	24	24	18	22	24	24	n/a	22	24	24	n/a	20	24	24
206	16	22	24	24	16	22	24	24	n/a	22	24	24	n/a	20	24	24
207	16	20	24	24	16	20	24	24	n/a	20	24	24	n/a	20	22	24
208	16	20	24	24	16	20	24	24	n/a	20	24	24	n/a	20	22	24
209	16	20	24	24	16	20	24	24	n/a	20	24	24	n/a	20	22	24
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212	16	20	24	24	16	20	24	24	n/a	20	24	24	n/a	20	22	24
213	16	20	24	24	16	20	24	24	n/a	20	24	24	n/a	20	22	24
214	14	18	24	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
215	14	18	24	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
216	14	18	24	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
217	14	18	24	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
218	14	18	24	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
219	14	18	22	24	14	18	22	24	n/a	18	22	24	n/a	18	22	24
220	14	16	22	24	14	16	20	24	n/a	18	20	24	n/a	18	20	24
221	14	16	22	24	14	16	20	24	n/a	18	20	24	n/a	18	20	24
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223	14	16	22	24	14	16	20	24	n/a	18	20	24	n/a	18	20	24
224	14	16	20	24	14	16	20	24	n/a	18	20	24	n/a	18	20	24
225	14	16	20	24	14	16	20	24	n/a	18	20	24	n/a	18	20	24
226	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
227	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
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231	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
232	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
233	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
234	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

14.6K Front Axle Tractor																
WB (inches)	38K Rear Axle				40K Rear Axle				44K Rear Axle				46K Rear Axle			
	Frame Thickness				Frame Thickness				Frame Thickness				Frame Thickness			
	Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)				Max. 5th Wheel Offset (in.)			
	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5	6	7	8	9.5
235	12	16	20	24	12	16	20	24	n/a	16	20	24	n/a	16	20	24
236	12	14	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
237	12	14	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
238	12	14	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
239	12	14	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
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241	12	14	18	24	12	14	18	24	n/a	14	18	24	n/a	14	18	24
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247	10	14	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
248	10	14	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
249	10	14	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
250	10	14	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
251	10	12	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
252	10	12	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
253	10	12	16	24	10	14	16	24	n/a	14	16	24	n/a	14	16	24
254	10	12	16	24	10	12	16	24	n/a	14	16	24	n/a	14	16	24
255	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
256	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
257	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
258	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
259	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
260	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24
261	10	12	14	24	10	12	14	24	n/a	12	16	24	n/a	14	16	24

# Product Information



## 274025D Reference Material PI64T, Frames (2740P4)

Updated: September 1, 2017

		Truck															
		12K Front Axle				12.5K Front Axle				13.2K Front Axle				14.6K Front Axle			
WB (inches)	AF (inches)	38K	40K	44K	46K	38K	40K	44K	46K	38K	40K	44K	46K	38K	40K	44K	46K
156 - 178	56 - 62	6	6	7	7	6	6	7	7	6	6	7	7	6	6	7	7
179 - 184	56 - 62	6	6	7	7	6	6	7	7	6	6	7	7	6	6	7	6
185 - 188	56 - 62	6	6	7	7	6	6	7	7	6	6	7	8	6	6	7	8
189	56 - 62	6	6	7	7	6	6	7	8	6	6	7	8	6	6	7	8
190	56 - 62	6	6	7	8	6	6	7	8	6	6	7	8	6	6	8	8
191 - 196	56 - 68	6	6	7	8	6	6	7	7	6	6	7	8	6	6	8	8
197 - 200	56 - 68	6	6	7	8	6	6	7	8	6	6	8	8	6	6	8	8
201 - 202	56 - 85	6	6	7	8	6	6	8	8	6	6	8	8	6	7	8	8
203 - 205	56 - 86	6	6	8	8	6	6	8	8	6	6	8	8	6	6	8	8
206	56 - 92	6	6	8	8	6	6	8	8	6	7	8	8	6	7	8	8
207	56 - 92	6	6	8	8	6	7	8	8	6	7	8	8	6	7	8	8
208 - 211	56 - 92	6	7	8	8	6	7	8	8	6	7	8	8	7	7	8	8
212	56 - 74	6	7	8	8	6	7	8	8	7	7	8	8	7	7	8	8
213	56 - 74	6	7	8	8	7	7	8	8	7	7	8	8	7	7	8	8
214 - 219	56 - 74	7	7	8	8	7	7	8	8	7	7	8	8	7	7	8	8
220 - 224	56 - 68	7	7	8	9.5	7	7	8	9.5	7	7	8	9.5	8	8	8	9.5
225	56 - 68	7	8	8	9.5	8	8	8	9.5	8	8	8	9.5	8	8	8	9.5
226 - 229	56 - 68	8	8	9.5	9.5	8	8	9.5	9.5	8	8	9.5	9.5	8	9.5	9.5	9.5
230 - 235	56 - 68	8	8	9.5	9.5	8	9.5	9.5	9.5	8	9.5	9.5	9.5	9.5	9.5	9.5	9.5
236 - 241	56 - 68	8	8	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
242 - 247	56 - 68	8	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
248 - 261	56 - 68	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5



# SED

PRODUCT INFORMATION

**PID Code/Condition:** 186-1508 / 186AB6  
**Description:** Mack AL461 Rear Air Suspension  
**Models:** ALL  
**Date:** October 14, 2016

## MACK AL461 AIR SUSPENSION

- Superior Driver Comfort
- Exceptional Handling
- On and off-road applications

The 46,000 pound capacity AL461 air suspension is built to operate under off-highway conditions up to 25 percent of the time and is approved for use with one or more lift axles.

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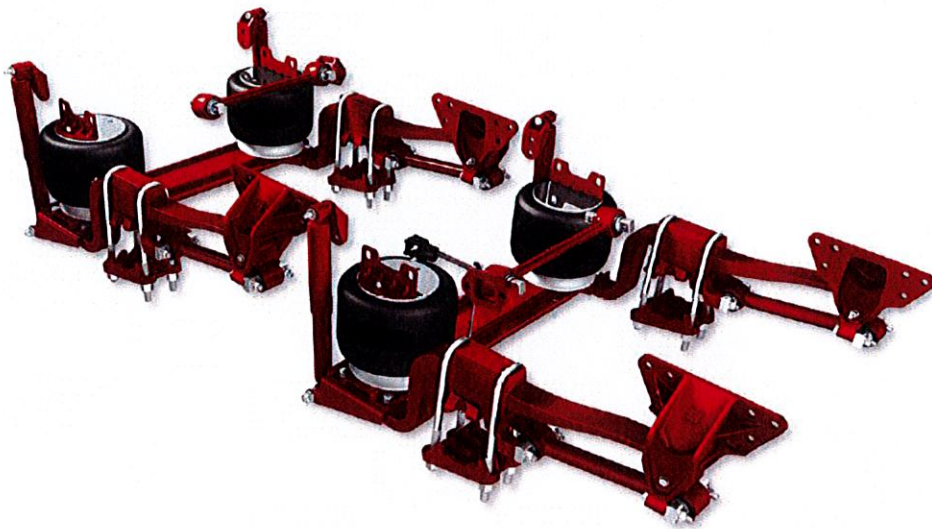
### Sales Engineering

Mack Trucks, Inc.  
Allentown, PA 18103  
United States

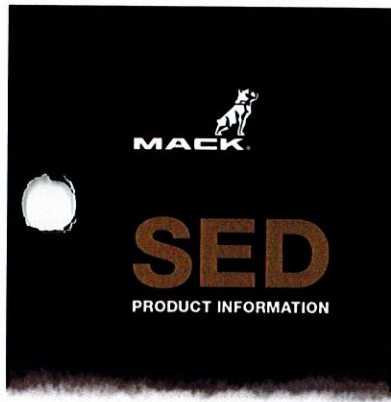
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Phone: 800 868 6225  
Fax: 610 351 8791

MackTrucks.com



*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.*



Suspension Model	Suspension Capacity (lbs.)	GCW Approval (lbs.) <sup>1</sup>	GVW Approval (lbs.) <sup>1</sup>	Service: On/Off-Highway	Tractor	Truck	Suspension Weight (lbs.) <sup>2</sup>	Site Rating (lbs.) <sup>3</sup>
AL461	46,000	150,000	76,000	On/Off	Yes <sup>4</sup>	Yes <sup>5</sup>	937	50,000

### Approved Applications

	AL461
General Freight (Van or Flatbed)	X
Refrigerated (No Swinging Meat)	X
Refrigerated (Swinging Meat)	X
Car Carrier	X
Chip Hauler	X
Concrete Pumper	X
Block Hauler	X
Wrecker	X
Dump	X
Logger	X
Oil Field	
Refuse (Transfer and Recycler)	X
Heavy Equipment Hauler	X
Mixer	X <sup>7</sup>
Beverage	X
Doubles / Triples	X
Fire / Rescue	X

1. Contact Hendrickson or original equipment manufacturer for applications that may exceed GVW / GCW approval ratings.
2. Installed weight includes complete suspension, torque rods, axle and frame brackets and all hardware.
3. Operators using vehicles equipped with liftable push or tag axles must not exceed published ratings.
4. Not approved with trailer belly lift axles.
5. No add-on lift axles.
6. One more lift axles. Maximum 50,000-lb. load on suspension for site travel.
7. Not approved for straight truck applications.

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



**281-1018** Cross Members, Steel, Severe Highway Duty, BOC to Rear Axle (281AA3)

**Affects:** Anthem & Pinnacle

**Related:** Frame (274)

**Updated:** February 8, 2018

Visual display of a steel severe duty highway style cross member that would be in the BOC to Rear Axle area:





# SED

PRODUCT INFORMATION

**Sales Code:** 330-3332 / 330AG8

**Description:** Holland FW35, Air, Blocked, Left Hand Release

**Date:** May 10, 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)

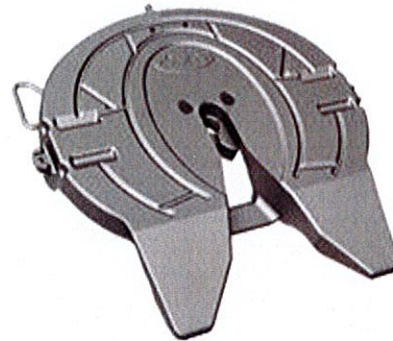
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### HOLLAND FW35

The world's most popular fifth wheel.

LOAD CAPACITY: 55,000 lbs Vertical Load

PULL CAPACITY: 150,000 lbs. Drawbar Pull



## HOLLAND FW35 SERIES

### HOLLAND FW35

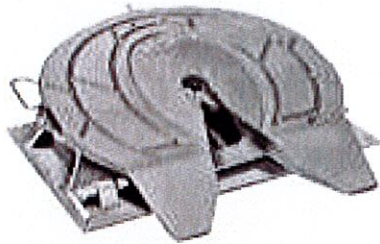
The FW35 Series is the world's most versatile and proven fifth wheel. This premium fifth wheel is designed for years of guaranteed performance, and has been the foundation for revolutionary new ideas that expand fifth wheel function and value. Available in a variety of models, including the FW31 NoLube™, the FW35 meets the needs of the transportation industry for today and beyond.



# SED

PRODUCT INFORMATION

## No Tilt

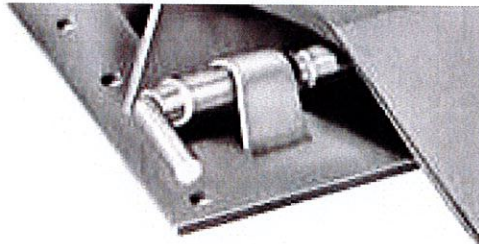


Holland No-Tilt is designed to be convertible from a standard articulating fifth wheel to a rigid "no-tilt" fifth wheel when required. In applications requiring a "no-tilt" fifth wheel, the oscillation (articulation) is provided by other means (eg. An articulating upper coupler). No-Tilt is available on both stationary and sliding mounting brackets.

Holland No-Tilt is designed to be convertible from a standard articulating fifth wheel to a rigid "no-tilt" fifth wheel when required. In applications requiring a "no-tilt" fifth wheel, the oscillation (articulation) is provided by other means (eg. An articulating upper

## Features and Benefits

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### Locking Shaft

Using an easy-to-use locking shaft the No-Tilt is converted from an articulating fifth wheel to a rigid "no-tilt" fifth wheel.

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# Product Information



## 004-2110 Premium Trim Steel Grey (004034)

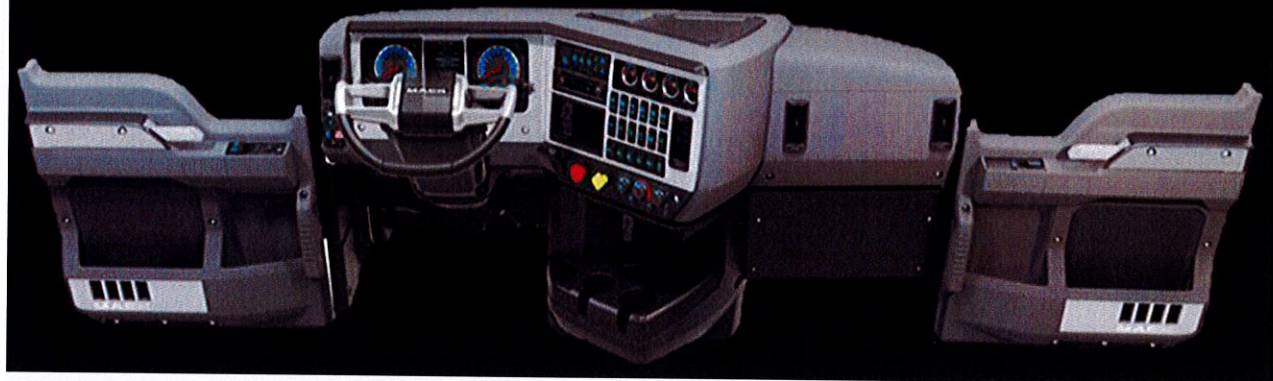
**Affects:** Anthem, Pinnacle, Granite

**Related:** Seats (196/197), Seat Covering (MAP/MAQ)

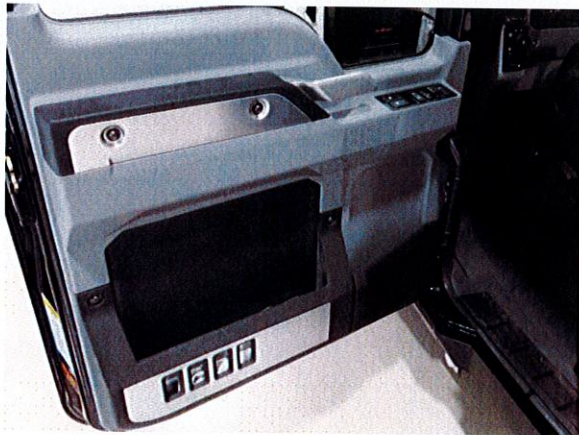
**Updated:** November 16, 2017

## PREMIUM TRIM - GREY

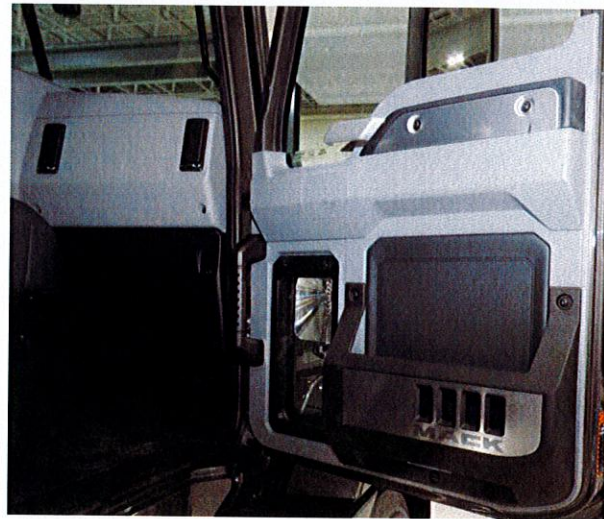
Grey interior; available on all models - day cabs and sleeper cabs



Left Door:



Right Door:



Both door panels have a black grab handle as a standard feature.

# Product Information



## 004-2110 Premium Trim Steel Grey (004034)

**Affects:** Anthem, Pinnacle, Granite  
**Related:** Seats (196/197), Seat Covering (MAP/MAQ)  
**Updated:** November 16, 2017



INTERIOR TRIM LEVELS						
TRIM LEVEL	DASH & DOOR TRIM	SEAT COVERING	STEERING WHEEL	DOOR INSERT	SLEEPER	HEADLINER
STANDARD	GUN METAL	VINYL, VINYL & CLOTH	STANDARD WHEEL W/O CONTROLS	NONE	STEEL GRAY	VINYL
STANDARD PLUS	GUN METAL	VINYL, VINYL & CLOTH	STANDARD WHEEL W/ CONTROLS	NONE	STEEL GRAY	VINYL
PREMIUM	BRUSHED ALUMINUM	VINYL & CLOTH, ULTRA LEATHER	LEATHER WRAPPED WHEEL WITH CONTROLS	STITCHED FABRIC	STEEL GRAY	VINYL
ULTRA	WOOD GRAIN	ULTRA LEATHER	LEATHER WRAPPED WHEEL WITH CONTROLS	EMBOSSSED LEATHER	STEEL GRAY WITH LEATHER	DIAMOND EMBOSSSED

INTERIOR COLORS	DAY CAB	48" SLEEPER	70" SLEEPER	STANDARD TRIM	STD. PLUS TRIM	PREMIUM TRIM	ULTRA TRIM
STEEL GRAY / BLACK	X	X	X	X	X	X	
SIERRA TAN	X			X	X	X	
GRAY/BLACK/UMBER			X				X

# 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



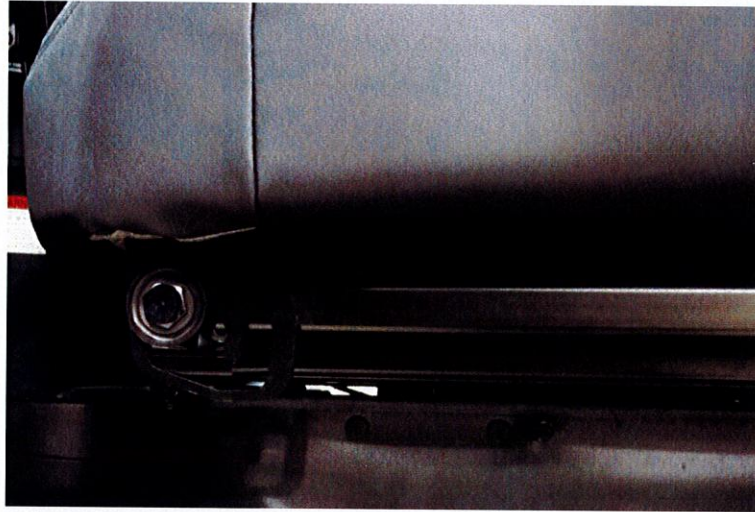
## 196-3140 Driver Seat (196ABQ)

**Affects:** Conventional Models

**Related:** Interior Trim (004)

**Updated:** December 6, 2017

### Bolster Adjustment:



### Lumbar Switches:



# Product Information



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**184-0008**      **Polyurethane Floor Mat with Polyurethane Inserts (184AA3)**  
**Affects:**      Conventional Models  
**Related:**      Interior Trim Package  
**Updated:**     September 13, 2017

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Driver Side:



Passenger Side:



# 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

# Product Information



## PWL5WH CB Binding Posts in Header Console (1WAB1X)

**Affects:** Conventional Models  
**Related:** Interior Trim (004)  
**Updated:** September 11, 2017



# Product Information



## Co-Pilot

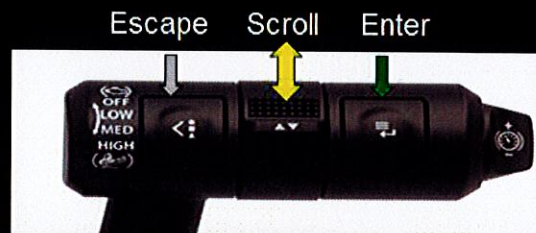
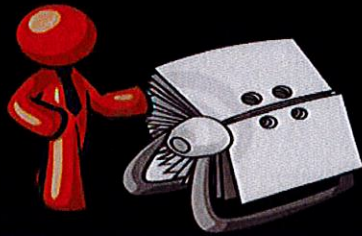
**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

# DRIVER INFORMATION DISPLAY

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

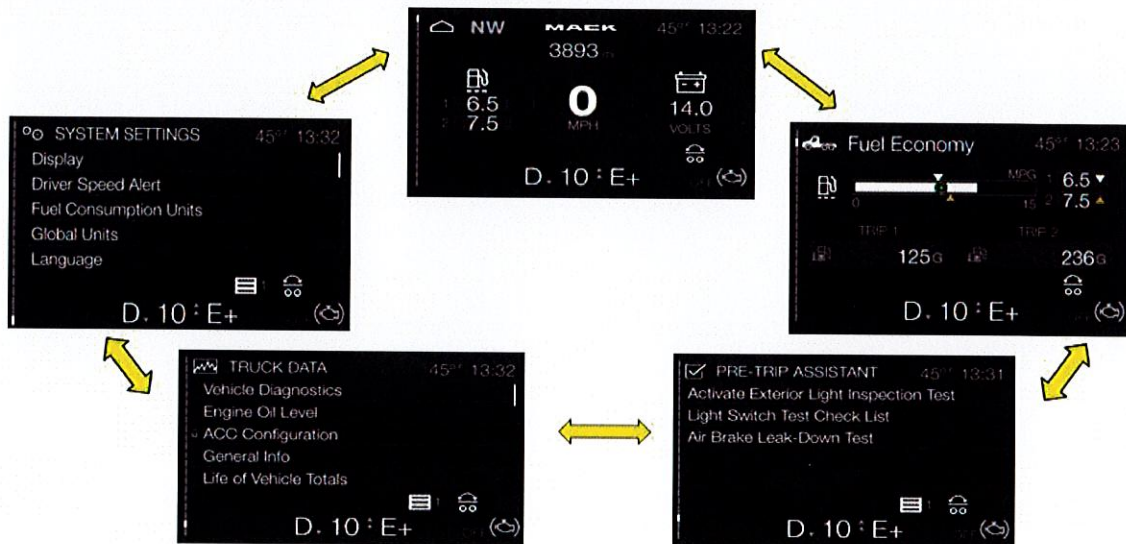
Simple and intuitive  
Meets FMCSA driver distraction guidelines  
One keystroke access

360 deg. scroll switch works like a Rolodex



# DID SCREEN NAVIGATION

Menu screen navigation is in a circular format





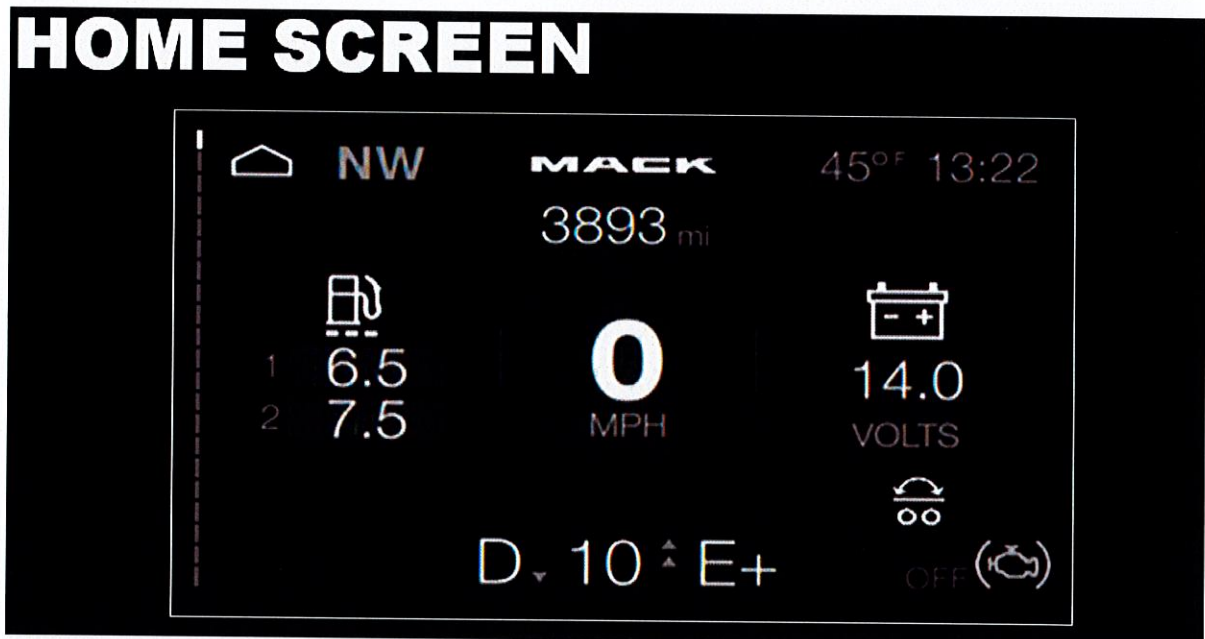
# Product Information



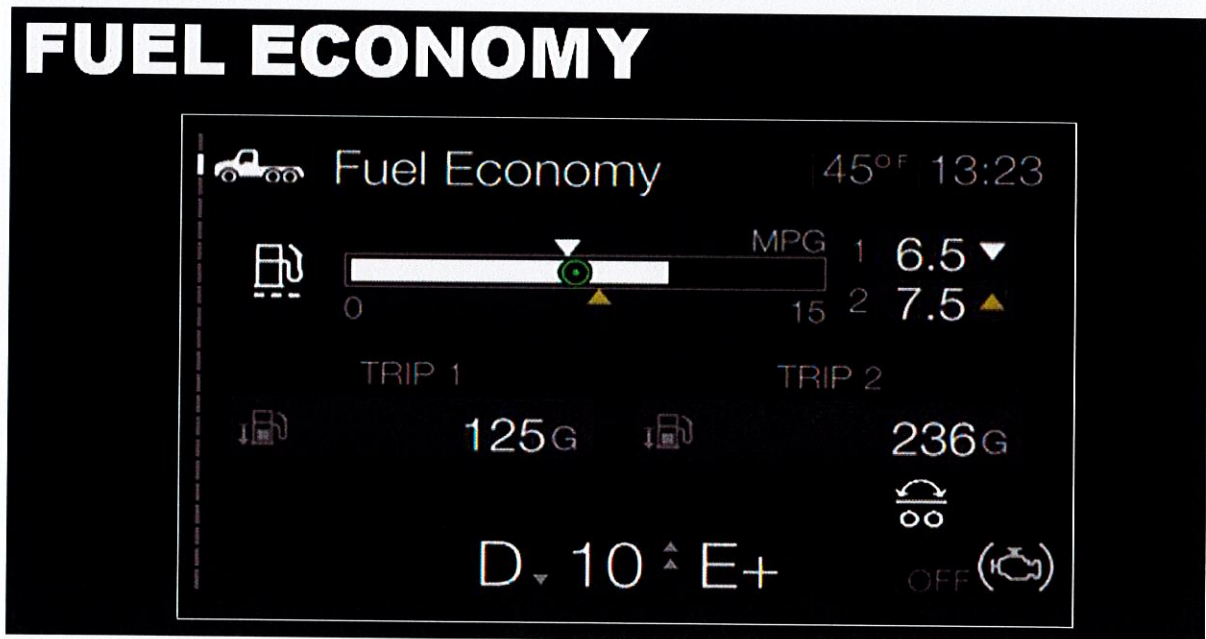
## Co-Pilot

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

## HOME SCREEN



## FUEL ECONOMY



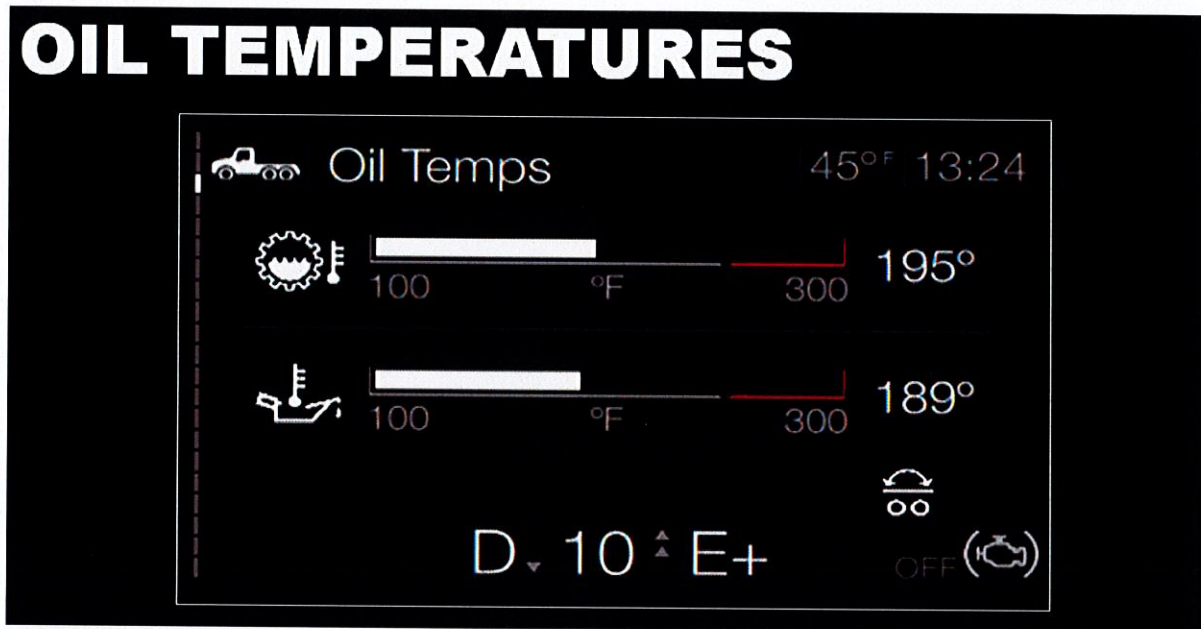
# Product Information



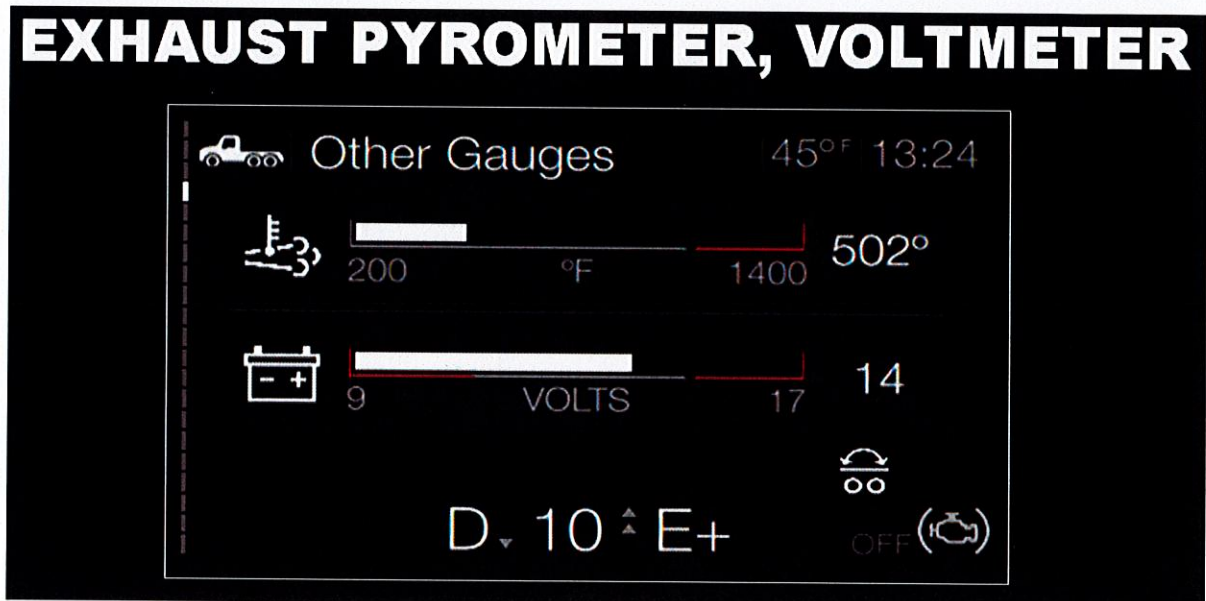
## Co-Pilot

**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)



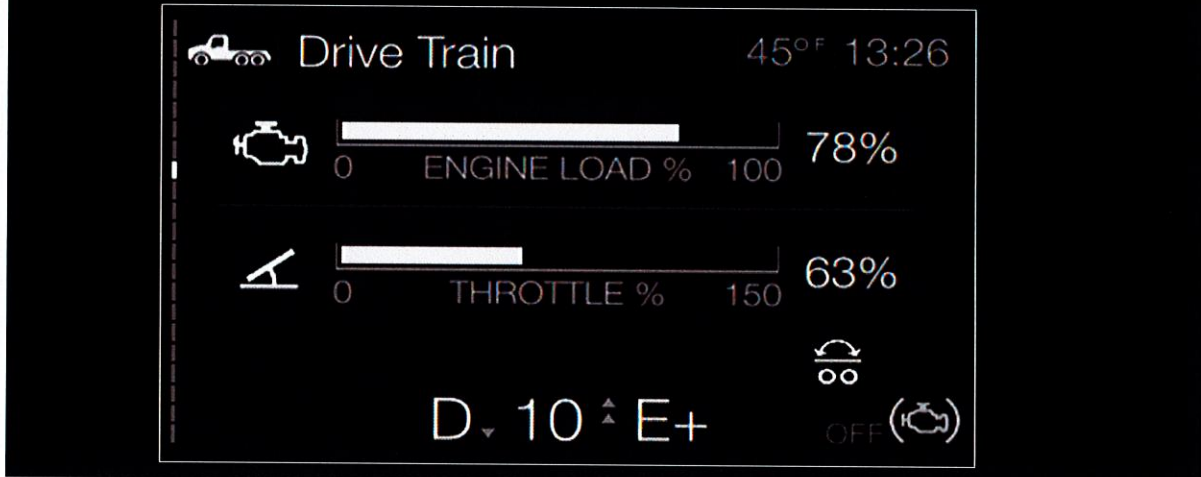
# Product Information



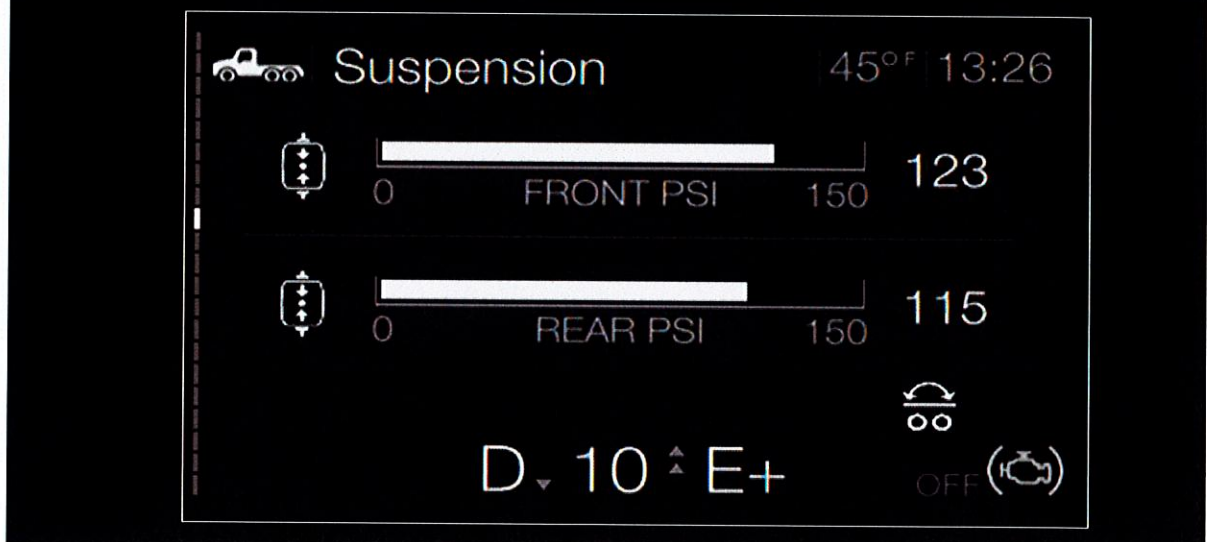
## Co-Pilot

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

## DRIVE TRAIN LOAD, THROTTLE %



## AIR SUSPENSION



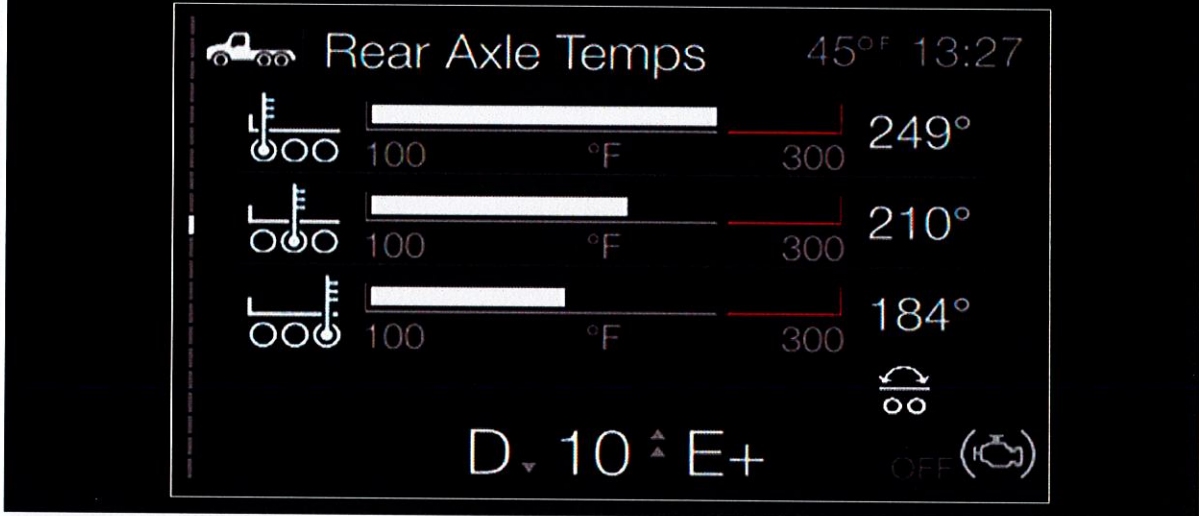
# Product Information



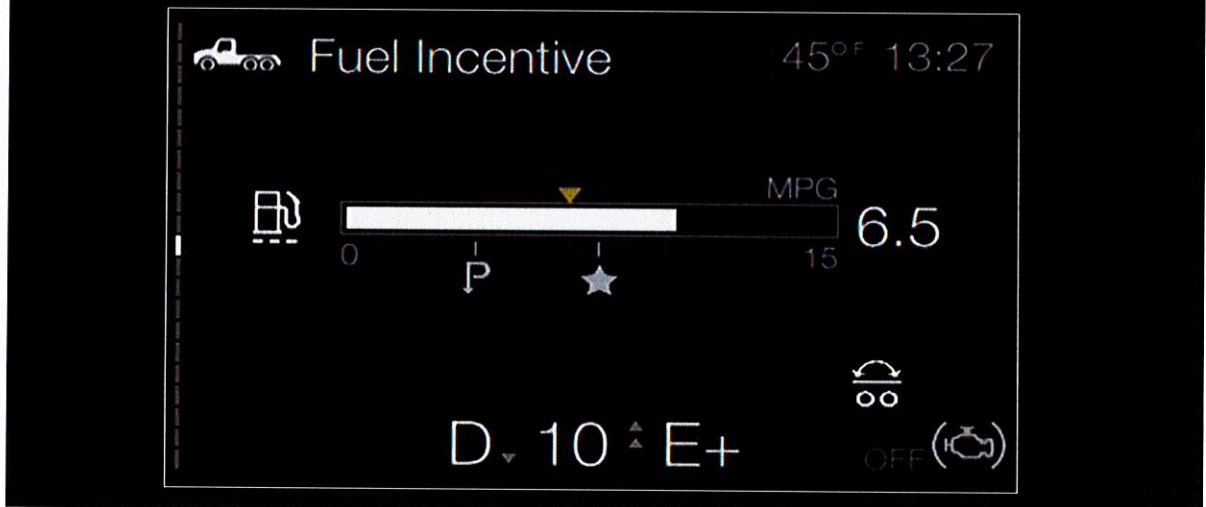
## Co-Pilot

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

## AXLE TEMPERATURES



## FUEL INCENTIVE



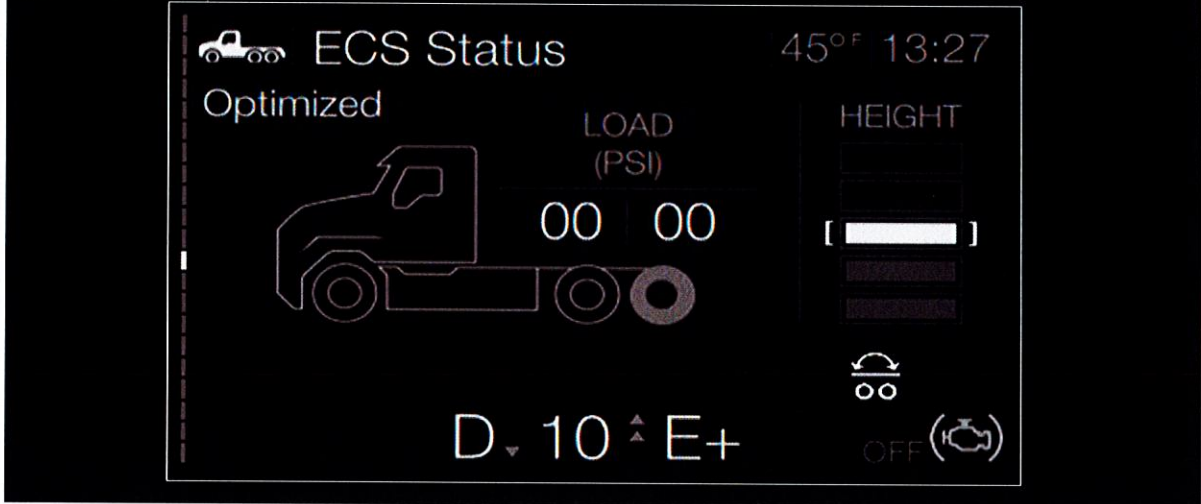
# Product Information



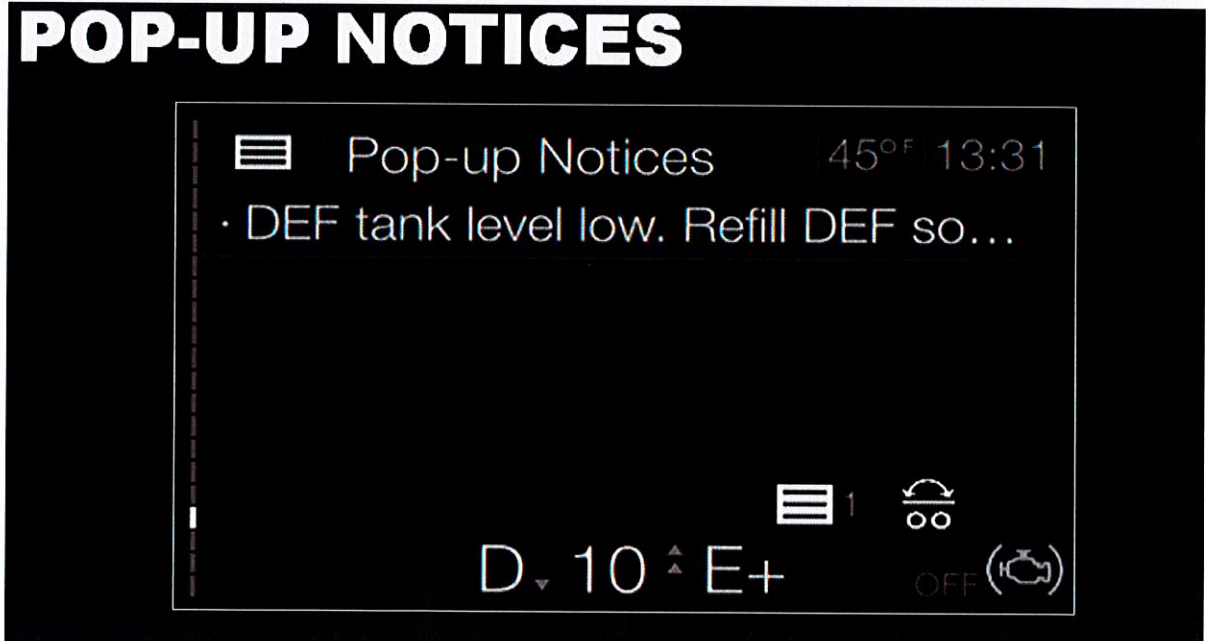
## Co-Pilot

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

## ELECTRONIC CONTROLLED SUSPENSION (6X2 ONLY)



## POP-UP NOTICES



# Product Information



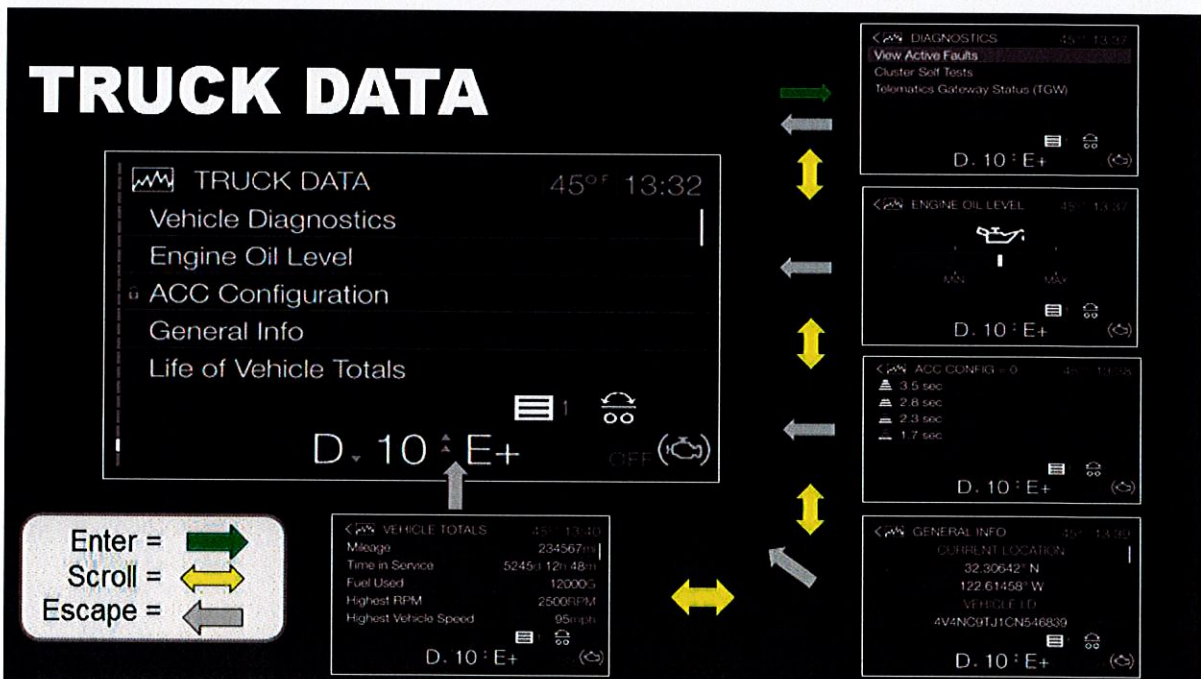
## Co-Pilot

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

# TRUCK DATA



**ONLY AVAILABLE WITH PARKING BRAKE APPLIED**



# 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+

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 checked="" 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"/> Off Overhead Switch

Activate each switch listed above

D. 10 ^ E+

LEAK-DOWN TEST 45°F 13:36

To begin test

Turn Engine Off

Start	--	--
End	--	--
Done	--	--

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+

ONLY AVAILABLE WITH PARKING BRAKE APPLIED

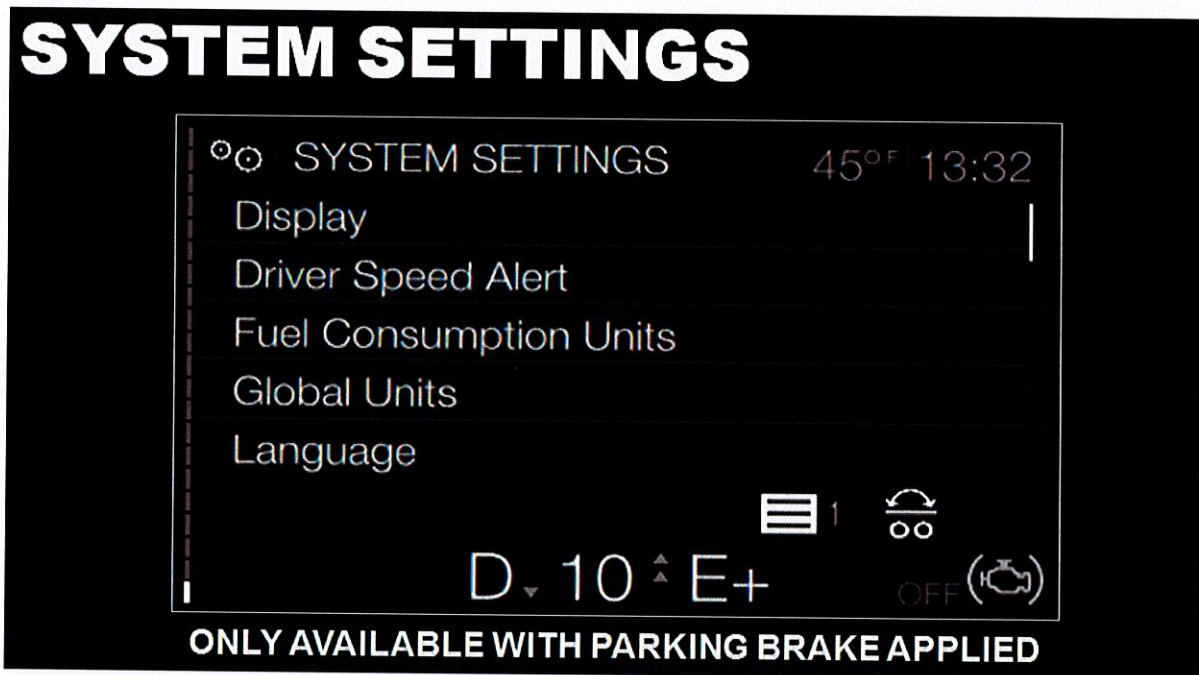


# Product Information



## Co-Pilot

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



**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



## TBH-COL2 Trailer Air Hoses 16' Coiled (5ZXA2X)

Related: Trailer Connections (TBCP)

Updated: May 26, 2017

Picture for illustration purposes only, actual installed part may vary:





# 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:** 152-9045

**Description:** Bulldog Stylized Mirrors, RH and LH Heated, Motorized, and Illuminated with Integral Convex Mirror

**Models:** All Conventionals

**Date:** August 7, 2015

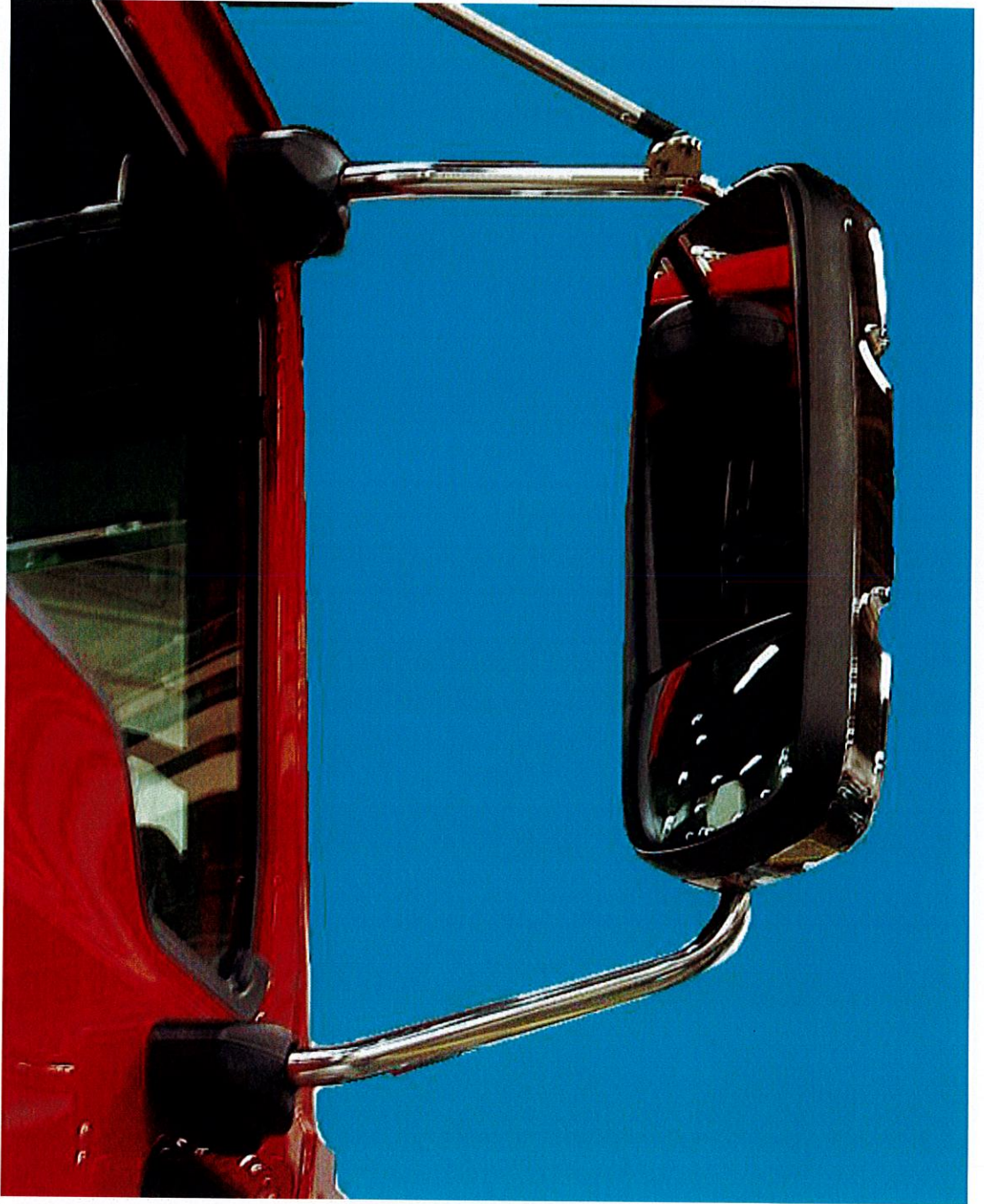


*The information in this document was accurate as of the date of release and pertains to the current version of Mack's Sales Tool. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice.*



# SED

PRODUCT INFORMATION



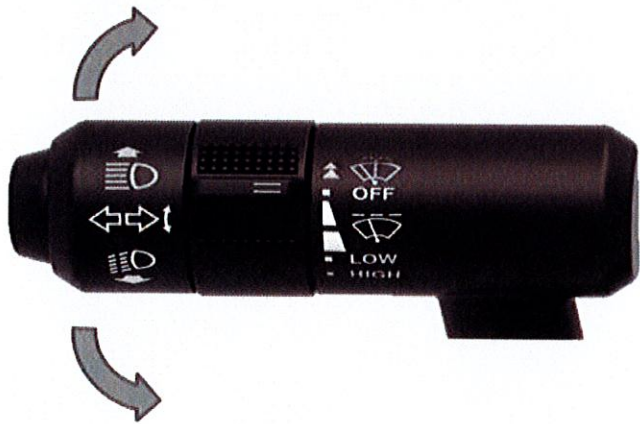
*The information in this document was accurate as of the date of release and pertains to the current version of Mack's Sales Tool. Mack Trucks, Inc. reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice.*

# Product Information



**148-0011**     **Wiper Controls (148AA3)**  
**Affects:** Anthem, Pinnacle, Granite  
**Related:** Interior Trim (004)  
**Updated:** May 30, 2017

## STALK CONTROLS



### Left Stalk Functions

- **Self-canceling turn signals:** Stalk Up/Down
- **Hi-beam control:**
  - Back (aft): Hi beam flash (momentary)
  - Forward = Hi beam lock
- **Marker Interrupt:** End button
- **Wipers:** Rotating/scroll ring
  - ↑ • Wash (momentary)
  - OFF
  - Wipers Intermittent 1 (10-12 sec)\*
  - Wipers Intermittent 2 (5-6 sec)\*
  - Wipers intermittent 3 (2-3 sec)\*
  - LO
  - HI

\* Any intermittent position starts with an immediate swipe.

# 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

## BRIDGESTONE R250 ED

**Affects:** 900- Front Tires, 901- Rear Tires, MA5- Auxiliary Tires  
**Updated:** April 20, 2021

# R250ED



- Extra-duty (ED) compound resists cuts and chips for enhanced performance in severe on-highway, moderate on/off-highway and mixed service applications.
- Five ribs with four wide, straight grooves for ideal handling and traction.
- Sidewall protector ribs fight damage from curbing, cuts and impacts.
- Cap/base compounding combines a slow-wearing cap compound with a cool-running base that shields the casing from damaging heat to enhance retreadability.

Tire Size	Load Rating	Tread Depth (32nds)	Max Road Speed (MPH)	Static Loaded Radius		RPM	Max pressure		Max Load Single Rating		Max Load Dual Rating		Tire Weight	
				inch	mm		PSI	kPa	Lb	kg	Lb	kg	Lb	kg
11R22.5	H	19	75	19.3	490.22	501	120	827	6610	2998	6005	2724	117	53
11R24.5	H	19	75	20.3	515.62	478	120	827	7160	3248	6610	2998	125	57
255/70R22.5	H	18	75	17.2	436.88	567	120	827	5510	2499	5070	2300	0	0
275/70R22.5	J	19	75	17.6	447.04	547	120	827	7000	3175	6395	2901	0	0



# Product Information

## BRIDGESTONE M726EL A

**Affects:** 901- Rear Tires, MA5- Auxiliary Tires  
**Updated:** March 29, 2021

### M726 ELA

*Engineered for Deep-Drive Applications*

Thanks to compound improvements, the M726 ELA outperforms the previous generation Bridgestone product through 5% longer wear life\* and 12% lower rolling resistance\*\*. If your fleet operates tandem drive axle tractors and you place a high value on achieving a lower cost per mile, take a closer look at the M726 ELA.

\* Wear results based on field testing of Bridgestone prototype tires in size 295/75R22.5 load range G, in normal service long haul fleet applications in the US, compared to the equivalent size and load range of Bridgestone prototype tires with different compound performance. Actual results will vary depending on several factors such as tire size, operating conditions, maintenance, road conditions, and driving style.

\*\* Rolling resistance results obtained from ISO 28580 testing of Bridgestone M726 ELA in size 295/75R22.5 load range G, compared to the equivalent size and load range of Bridgestone M726 EL.



Tire Size	Load Rating	Tread Depth (32nds)	Max Road Speed (MPH)	Static Loaded Radius		RPM	Max pressure		Max Load Single Rating	Max Load Dual Rating		Tire Weight		
				inch	mm		PSI	kPa		Lb	kg	Lb	kg	
11R22.5	G	32	75	19.6	497.84	492	105	724	6175	2801	5840	2649	135	61
11R24.5	G	32	75	20.6	523.24	470	105	724	6610	2998	6005	2724	138	63
11R24.5	H	32	75	20.6	523.24	470	120	827	7160	3248	6610	2998	143	65
285/75R24.5	G	32	75	19.8	502.92	492	110	758	6175	2801	5675	2574	138	63
295/75R22.5	G	32	75	19.1	485.14	507	110	758	6175	2801	5675	2574	126	57



# Product Information

## BRIDGESTONE M726EL A

**Affects:** 901- Rear Tires, MA5- Auxiliary Tires  
**Updated:** March 29, 2021

### Wear-Resistant Tread Compound

Improved tread compound helps resist tread squirm and heel-toe wear for 5% longer tread life, compared to previous generation product\*.

### Cap/Base Compounding

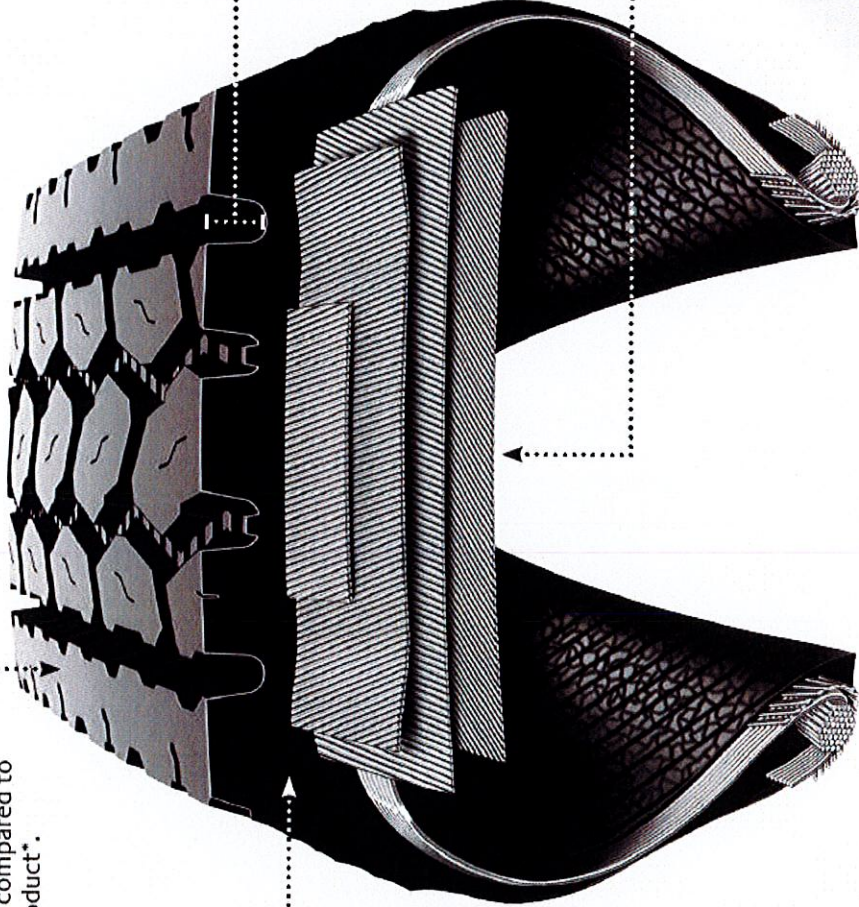
Long-wearing cap compound is engineered for excellent mileage while the base compound shields the casing from damaging heat, enhancing retreadability. Together, these compounds improve rolling resistance by 12% compared to Bridgestone M726 EL\*\*.

### Extra-Deep Tread

The 32/32nds contributes to high removal miles and long original life.

### All-Steel Casing

Four steel belts and a tough steel body ply fight tread squirm and irregular wear. Top belt adds protection against penetrating road hazards.



# 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 2023 trucks**, AN, GR, LR, PI, 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>	<i>Vehicle must have</i> GVWR ≤ 63,000 lbs. (≤ 28 metric tons) <i>or</i> GCWR ≤ 110,000 lbs. (≤ 50 mt.)	<i>Vehicle must have</i> GVWR ≤ 80,000 lbs. (≤ 36 mt.) <i>or</i> GCWR ≤ 143,000 lbs. (≤ 65 mt.)	<i>Vehicle must have</i> GAWR > 52,000 lbs. (> 23.5 mt.) <i>or</i> GVWR > 80,000 lbs. (> 36 mt.) <i>or</i> 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:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- ALIGNMENT:** Alignment of axle(s), balance of tires, changing of axle camber, caster, toe and thrust angle are not covered.
- GLASS:** Glass breakage and scratches are not covered unless physical proof of manufacturing responsibility is established.
- 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.
- 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 2023)



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 2023 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 <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> 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 <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> covered.
Valve Cover	
Valve Yokes (Bridge) and Pins	Failures resulting from the valve adjustments not being maintained properly are <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> 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 <u>NOT</u> covered. Normal maintenance adjustments are <u>NOT</u> 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 on discovery and the vehicle must be made available, in a timely fashion during the coverage period, for repair.

### EXCLUSIONS:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.  
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- ALIGNMENT:** Alignment of axle(s), balance of tires, changing of axle camber, caster, toe and thrust angle are not covered.
- GLASS:** Glass breakage and scratches are not covered unless physical proof of manufacturing responsibility is established.
- 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.
- 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.

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**MACK**<sup>®</sup>

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

**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.

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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



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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

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(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.



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

12/31/2022

NOTICE

License issued subject to  
compliance with all  
pertinent city codes.

THIS LICENSE MUST BE PUBLICLY DISPLAYED

**CITY OF FULTONDALE**

P O BOX 699

FULTONDALE, AL 350680000

**LICENSE**

No. 36579

LICENSE VALID ONLY AT  
LOCATION INDICATED.  
NON TRANSFERABLE

Mailing Name and Address

JOE KING  
NEXTRAN CORPORATION  
P. O. BOX 820

Fultondale AL 35068

Local Trade Name and Physical Location

JOE KING  
NEXTRAN CORPORATION  
1801 FULTON ROAD

Fultondale AL 35068

THE FIRM, CORPORATION, ORGANIZATION, 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.

Account Number

008767

License Number

36579

Receipt /Document

36579 / 002216

Code                      Description

532210	RENTAL & LEASING, AUTO, TRUCK
453999	MERCHANT/RETAIL
811212	SERVICE

Date Issued: 1/27/2022

FULTONDALE

AL

License Clerk:

Alicia Germany