



May 24, 2019

City of Laurel

Public Works Department

Laurel, MS 39440

Meridian, MS

Memphis, TN

Jackson, TN

Little Rock, AR

Jonesboro, AR

Tupelo, MS

Jackson, MS

**New 2020 Mack Model Granite GR64B Refuse Truck With**  
**Pac-Mac 25 yd Rear Loader Body**

Price F.O.B. Laurel, MS \$212,841.90

\*Guaranteed Buy Back 36 months \$112,500.00

**Must meet Trade Terms (see attached form)**

\*Delivery – approximately 120 Days From your Order

(pending build slot availability)

Service Location – Tri-State Truck Center – Meridian, MS (61 miles from Laurel, MS)

"We appreciate your business!"

A handwritten signature in cursive script that reads "B. Page".

Brent Page

New Truck Sales

Tri-State Truck Center

Meridian, MS

800-737-5237

**City of Laurel, Mississippi  
Public Works Department  
Bid Specifications for  
25 Cu. Yd. Garbage Truck**

**INTENT:**

This specification describes a hydraulically actuated packer body and chassis of the rear loading type with the following minimum specifications necessary to perform the work assigned. The body shall be capable of compacting and transporting refuse to a landfill or transfer station and dispensing the load by means of hydraulically ejecting the load from the body.

**GENERAL TERMS:**

This equipment shall be manufactured in the United States of America. All equipment furnished under this contract shall be new, unused and the same as the manufacturer's current production model. Accessories not specifically mentioned herein, but necessary to furnish complete unit ready for use, shall also be included. Unit shall conform to the best practice known to the body trade in design, quality of material and workmanship. Assemblies, sub-assemblies and component parts shall be standard and interchangeable throughout the entire quantity of units, as specified in this invitation to bid. Bidders are to quote only their top-of-the-line commercial grade equipment. Bids on lesser industry models will be rejected. Bids with equipment not meeting these minimum capacities and requirements will be subject to rejection. The complete unit shall be delivered to the City of Laurel, MS Public Works Department no later than August 30.

It shall be the bidder's responsibility to carefully examine each item of the specification. Failure to offer a completed bid or failure to respond to each section of the technical specification (COMPLY: YES or NO) will cause the proposal to be rejected without review as "non-responsive". All variances, exceptions and/or deviations shall be fully described in the appropriate section.

**GUARANTEE:**

The body shall be covered by a twenty-four (24) month warranty.

The transmission warranty shall be for three years or better. (Include a Copy of Warranty Statement)

**PARTS MANUAL:**

Bidder shall furnish a complete parts, maintenance, and operator's manual with each truck and garbage body sold.

**SERVICE AVAILABILITY:**

Successful bidder must have factory authorized full service capabilities within 50 miles of Laurel, MS.

**EVALUATION:**

Evaluation of the bids to determine the best and lowest shall include: the proximity of the bidder for warranty work; the delivery time; the value of the equipment above the minimum required; the lowest bid and all other factors relevant to this request.

**NOTICE:**

The City of Laurel reserves the right to reject any and all bids.

**City of Laurel**  
**Minimum Specifications for a New 25 Cubic Yard**  
**High Compaction Rear Loading Garbage Truck**

All bidders must fill in all blanks: YES, if meeting or exceeding specification; NO, if exceptions are taken to a certain specification. Any exceptions taken must be explained in detailed writing on bidders own letterhead and attached to the bid submitted. Bidder must attach a copy of warranty on chassis, drive train, and components.

**CAPACITY**

The packer body shall have a capacity, excluding the receiving hopper of not less than 25 cubic yards.

YES

The hopper shall have a capacity of three and ninety-four hundredths (3.94) cubic yards.

3.61

The structural integrity of the body shall allow high density loading of up to 1,000 pounds per cubic yard of normal refuse.

YES

**BODY DIMENSIONS**

Maximum width, outside 96".

YES

Maximum overall length of the body and tailgate combined shall not exceed the following: 270".

284"

Body width, inside 89".

85"

Body height, inside 79".

83.5"

Body height, outside (above chassis) 96".

98"

**BODY CONSTRUCTION**

The body interior shall have a smooth floor without a trough. The sides and roof shall also be smooth. (No Exception).

YES

The body shall have a street side access door to allow entrance to body for service.

YES

In order to prevent damage from corrosion and fire, no hydraulic cylinders, valve or other hydraulic components shall come in contact with refuse packed into the body.

YES

4.5" X 8.38" Body sides & roof shall be of curved stress skin construction interfacing with the 12" X 12" FORMED CHANNEL  
 FORMED PLATE corner mainframe bolsters. Rear bolsters shall be 5" x 20" formed channel @ the  
 INBOARD OF major upper & lower connecting points of the mainframe. Front bolster shall be a  
 SKIN. 5" x 8" formed channel @ the major upper & lower connecting points. All sidewall  
 and roof members shall be continuous welded. YES CONTINUOUS WELDED MEETS THE INTENT

Body roof shall be minimum 8 gauge, 80,000 PSI minimum yield hi-tensile steel  
 sheet, fully welded to a full length 11 gauge 50,000 PSI yield roof crown rail to  
 contain and dissipate forces equally through the body structure. ALL 10 GA 80,000 PSI

Body sides shall be minimum 8 gauge, 80,000 PSI minimum yield high tensile 10 GA 80,000 PSI  
 steel sheet, fully welded to roof crown rail and to a 4.7" x 18" floor skirt rail. 6" X 11" SKIRT RAIL

Rear mainframe body side bolsters shall be a minimum 3" x 20" and contoured 4.5" X 8"  
 shaped to sidewall with minimum 7 gauge 80,000 PSI minimum yield. 1/4" 50,000 PSI  
 Reinforcement bolsters shall be full welded to the curved body side sheets.

Body floor shall be flat full width and must not have inboard guide rails or a trough.  
 Floor shall be a minimum 7 gauge, 80,000 PSI minimum yield steel sheet. 3/16" 50,000 PSI

Floor longitudinals (long members) shall be a formed trapezoidal shape 9.6"x11"  
 with a 3.3" base sill of 7 gauge, 80,000 PSI minimum yield formed steel channels 8" STRUCTURAL  
 and shall be continuous welded to the floor sheet. C CHANNEL

Floor cross members shall be 3"x6"x7 gauge, 80,000 PSI minimum yield steel 7" X 9" 3/16 50,000 PSI  
 channels. Cross members shall be interfaced through the long members on FULLY INTERFACED W/LONG  
 approximately 18" centers to fully support the floor. Cross members shall be full MEMBERS  
 width, single piece. (No Exceptions).

#### TAILGATE DIMENSIONS

Maximum overall width at the hopper opening shall be 84 1/2". 88"

Inside tailgate loading width shall be a minimum of 80". YES

Hopper opening height shall be a minimum of 55". YES

Loading sill height below chassis rail shall be 3.8" exclusive of any container  
 handling mechanisms. EQUAL TO CHASSIS

Minimum overall height above the chassis frame with the tailgate raised: 207 1/4". 166"

#### TAILGATE CONSTRUCTION

Tailgate sides shall be single piece 3/16" 150,000 PSI minimum yield 321 BHN YES HOPPER AREA  
 abrasion resistant plate steel.

Tailgate side reinforcement shall consist of 6"x 1 7/8" 11 gauge, 50,000 PSI formed steel channels fully welded to the perimeter edge of the tailgate side sheets. An interlaced network of 6"x 1 7/8" gauge, 50,000 PSI and 6 5/8"x 1 7/8" 7 gauge, 80,000 PSI minimum yield formed steel channels shall also be fully welded to the tailgate side for superior support.

MEETS THE INTENT  
10 GA 80,000 PSI  
AND 1/4" 50,000  
PSI FOR SUPERIOR  
SUPPORT.

Hopper floor shall be minimum 1/4" 150,000 PSI minimum yield 321 BHN abrasion resistant steel plate.

YES

Hopper floor lateral reinforcement shall consist of a 3/16" 80,000 PSI minimum yield formed "Z" channel cross member. Forward hopper reinforcements shall be provided by a lateral network of 3/16" 80,000 PSI and 3/8" 50,000 PSI minimum yield formed steel channel cross members.

MEETS THE INTENT  
3/8" CHANNEL, PLUS  
5/16" 50,000 PSI  
FORMED "DOUBLE L"  
CROSS MEMBERS.

Hopper front compaction face shall be minimum 5/16" 150,000 PSI minimum yield 321 BHN abrasion resistant steel plate.

YES

Tailgate shall be equipped with heavy duty 1" diameter turnbuckles, one on each side of body, to secure the tailgate in the closed position against the body to prevent leakage.

AUTO LATCHES

Two (2) grab handles (3/4" hot rolled steel bar) shall be located on each side of the tailgate for operator safety and comfort. One handle is to be mounted horizontally no less than 49" above the riding step. The other shall be mounted in the vertical plane, with the bottom edge no less than 44" above the steps. The latter shall also be attached to the rearward face of the perimeter of the tailgate reinforcement. (If unit is equipped with a container handling attachment, the latter will be omitted.)

YES

The rear step shall be bolt-on design fabricated from 12 gauge, 3 diamond Grip Strut, slip resistant, self-cleaning material. Located on each side of the tailgate, they shall provide for a minimum of 396 square inches of footing area for a single rider. The steps must conform to ANSI standards.

YES

The tailgate shall be raised with two (2) single acting 4" bore x 26" stroke hydraulic cylinders. The cylinders shall incorporate an integral orifice, which will limit the descent speed of the tailgate in the event of hydraulic failure.

YES, INTEGRAL ORIFICE  
3" BORE, 38" STROKE.

The tailgate shall be equipped with one piece, removable rubber gasket. The gasket, which shall have a durometer rating of 35-45 and tensile strength of 1500-1800 PSI shall extend across the entire bottom width of the tailgate and provide for watertight seal vertically up the side for no less than 21".

YES

The hopper shall be formed from 3/16", 80,000 PSI high tensile steel.

HOPPER SILL IS 2" X 4" X 3/8"  
WALL TUBE

The rear hopper area shall be equipped with a tailgate-to-driver buzzer system installed on both the curbside and street side of the hopper.

YES

## PACKING MECHANISM

Packing cycle control shall be mechanical, lever operated on the right hand side of the tailgate. A two lever design, the operator shall have the capability to start, stop, and Reverse the direction of any function at any time throughout the packing cycle. YES

Packing mechanism control valve shall be centrally located within the upper confines Of the hopper, under upper light cross members. MOUNTED RIGHT SIDE OF UPPER CONFINE

The packing cycle time shall be no greater than 17-19 seconds. YES

Packing mechanism shall consist of two primary structures, the upper packing Panel and the packing blade. YES

## UPPER PACKING PANEL

The upper packing panel shall be mounted to the tailgate weldment with two (2) sets of upper and lower link arms. Each upper link arm shall be secured to the panel and tailgate with two (2) 2" diameter induction hardened C-1045 cold drawn steel pins. The lower link arms shall be connected to the tailgate with 2" diameter induction hardened C-1045 pins and to the panel with 2 5/16" heat treated, induction hardened 4340 cold rolled steel hinge pins. NO LINKS, UPPER PANEL SLIDES

The upper packing panel shall be constructed from 3/16" 150,000 PSI minimum yield, 321 BHN abrasion resistant steel plate in all areas of refuse contact. The packing blade hinge lugs shall be constructed from 3" thick 50,000 PSI minimum yield steel plate. YES, 3/16" 150,000 PSI. MEETS INTENT WITH DIFFERENT DESIGN.

Primary compaction by the upper panel shall be accomplished with two (2) double 2-5" X 26" LOCATED acting 5" bore x 36" stroke hydraulic cylinders. Located outside of the hopper INBOARD ABOVE HOPPER AREA confines, the cylinders shall produce a minimum force of 73,600 pounds. MIN. FORCE = 94,000 LB.

Forward hinged side doors on each side of the tailgate shall provide access to the outside cylinders. The doors shall be easily opened without hand tools. The side doors shall prevent operator contact with the packing mechanism components as well as protect the components from the outside elements. DESIGNED TO NOT REQUIRE DOORS TO COVER CYLINDERS

## PACKING BLADE

The packing blade shall be mounted to and pivot on the upper panel hinge lugs with heat treated, induction hardened ASTM 4340 cold rolled 3" steel pins. YES

The packing blade shall be constructed with 3/16" 150,000 PSI minimum yield, 321 BHN, abrasion resistant steel plate and capable of resisting shearing and breaking forces of large objects during the compacting cycle. 1/4" 150,000" PSI YES

Pre-compaction by the packing blade shall be accomplished with two (2) double acting, 5 1/2" bore x 24" stroke cushioned hydraulic cylinders. Located inside the hopper confines, the packing blade cylinders shall produce a minimum force of 111,670 pounds (33.25 PSI).

2-4 1/2" X 24"  
43 PSI

All packing mechanism links shall have replaceable hardened steel bushings for extended service life. Wear shoes or roller shall not be acceptable in high compaction packing systems.

UHMW SHOES

All cylinder and link pivot pins shall be kept in place with minimum Grade 5 retaining bolts, lock nuts, and lock collars.

YES

Each hopper full of material shall be compressed between the packing blade, upper panel and ejector panel. The ejector panel shall be automatically advanced by an ejector unload valve. No operator attention shall be required to advance the ejector panel as the body fills.

YES

The packing mechanism shall be equipped with an "automatic crowd" pressure sensing device, which will enable the packing mechanism to find a path through the load which will neither stall the mechanism nor damage the structure thereby prolonging the hopper floor and mechanism life.

YES

#### **DISCHARGE OF LOAD**

The load shall be discharged by means of a positive ejection system. A double acting, telescopic hydraulic cylinder shall extend and retract the ejector panel the full length of the body. The ejector cylinder shall attach to the body and the ejector panel via cold-drawn, C1045, pins having a minimum diameter of 1 1/2" and positioned diagonally to minimize possible damage from objectionable liquids.

YES

The ejector cylinder shall have the following dimensional characteristics:

#### STAGES

4

3

#### BORE

6"

6.5"

#### STROKE

134.1"

124"

The ejector panel face sheet shall be constructed from 11 gauge hi-tensile steel. Four (4) hi-tensile formed steel channels shall span horizontally, with one (1) trapezoidal cross member at floor level. The vertical panel corner posts shall be 0.375 hi-tensile steel. A 7 gauge hi-tensile steel protective covering shall be provided to keep refuse from coming in contact with the ejector cylinder.

MEETS THE INTENT  
W/10GA 80,000 PSI  
AND 4" SQ. TUBE  
7 GA COVER



The ejector panel shall extend and retract without the assistance of clamp bars or associated hardware.

YES

Smooth movement of the ejector panel in the body shall be achieved with two (2) cast alloy shoes on each side of the ejector panel. Shoe castings shall conform to specification 28C358-A0201 possessing a minimum contact surface of 18 square inches each shoe side and having a minimum hardness of 260 BHN. Each shoe shall pivot on a minimum 2" diameter, C1045, removable cold drawn stub pin held within the fully boxed 4"x12" base frame of the ejector panel. Four (4) shoes shall be provided for each ejector panel and shoes must be replaceable without removing the ejector panel as refuse is packed against it.

MEETS THE INTENT  
UHMW SHOES IN A FIXED  
CHANNEL.

Ejector guide bottom edge shall be located .375" above longitudinal floor corners. The guide channel shall have interior dimensions of 3.5"x 4.2". The top flange of the guide channel shall be reinforced with a 45 degree plate, which shall also serve as a self-cleaning device. The track shall also minimize pivotal movement of the ejector panel as refuse is packed against it. Plastic (non-metallic) ejector shoe material is not acceptable.

FORMED RAIL 5" X 5"  
6" ABOVE FLOOR

The rod end of the ejector cylinder shall be pin mounted at the front of the body to the main lateral bolster of the body longitudinal members thus affording maximum resisting bending movement.

MEETS THE INTENT  
WITH A VERTICAL  
MEMBER FOR THE SAME  
PURPOSE.

## **CONTROLS**

The ejector panel and tailgate raise controls shall be mounted outside the body on the front left hand side of the body. Direct connection of the control handles to the valve spool shall exist to minimize moving parts and allow for ease of service.

YES

An electrical device shall be supplied to automatically raise the engine speed to the proper RPM during the packing cycle.

YES

An additional throttle advance switch shall be located at the front left hand side of the body within hands reach of the ejector and tailgate raise controls.

YES

Power take off controls shall be conveniently mounted in the cab, preferably to right side of the driver.

YES

## **HYDRAULIC SYSTEM**

Front bumper mounted, crankshaft driven gear pump, producing 42 GPM @ 1200 RPM, and rated at 3000 PSI.

YES OR HOT SHIFT

Air actuated dry valve, controlled by in-cab switch, with electronic over speed protection shall be provided. Chassis must be equipped with Allison World Tech RDS transmission.

YES

The pump must run quietly. Gearing shall be selected for minimum engine RPM compatible with recommended pump RPM for correct operating pressure and rates of flow for the refuse body.

YES

The hydraulic pump shall be designated to operate continuously with peak loading at frequent, short intervals.

YES

The hydraulic system shall incorporate adjustable relief valves to protect all components from excessive pressure and overloads.

YES

All hydraulic tubes will be securely clamped to prevent vibration, abrasion, and excessive noise.

YES

All hydraulic tubes running the length of the body shall be routed over the roof on the street side bias of the body.

YES

All hydraulic hoses shall conform to S.A.E. standard for designed pressure. Bends shall not be less than recommended by S.A.E. standards. Flat spots in hoses will not be acceptable.

YES

All high-pressure hoses shall be sheathed with fabric protective covering.

YES

The hydraulic oil reservoir shall be frame mounted underneath the body and shall have a gross capacity of 50 gallons filled with hydraulic fluid.

YES, MOUNTED TO FT.  
OF BODY

The tank shall be complete with a screened fill pipe and cap, filter breather, clean out cover, level & temperature sight gauge, and shut off valve.

YES

The hydraulic system shall be protected by a five (5) micron return line filter along with a 100 mesh (140 micron) reusable oil strainer in the suction line.

YES

The return line filter shall also include an in-cab filter by-pass monitor, which shall alert the operator or service personnel when the filter is in need of replacement.

YES- GAUGES VISIBLE  
THROUGH BACK WINDOW

All multi-spool control valves shall be of a section design such that servicing would not require replacement of the entire valve assembly.

YES

## **HYDRAULIC CYLINDERS**

All cylinders must have a working pressure rating of no less than 2500 PSI

YES

Inside packing cylinders must be of the internal cushion design so that hydraulic shock and audible noise is minimized. This shall be accomplished by a design, which will decrease the speed of the cylinder for the last one-half (1/2") inch of cylinder stroke on both directions of travel.

YES

of cylinder stroke on both directions of travel. YES

Rods of inside and outside packing cylinders must be induction hardened to a surface hardness of 55-65 Rockwell C scale. YES

Rods of all cylinders shall be chrome plated. YES

All packing cylinder end lugs shall be forged steel material. YES

#### **ELECTRICAL**

All electrical wiring connectors to be automotive double-seal, with wiring in split convoluted loom. YES

All wiring connections to be soldered with rubber-molded covering or crimp type connectors with shrink-wrap. Unprotected wiring in any application is not acceptable. YES

All electrical limit switches shall be epoxy impregnated to minimize effects of excess moisture. YES

#### **LIGHTING**

Clearance, back up, and directional lights shall be Lexan lens, shock mounted in a protective housing. The whole unit shall be pop out and replaceable. YES

All lights shall be provided in accordance with FMVSS#108, ANSI Z245. 1-1999 plus mid body turn signals on each side of the body and a center brake light on the rear. YES

#### **PAINT**

The entire body shall be properly cleaned of all dirt, grease, and weld slag before painting. Cleaning shall be in keeping with accepted industry practices. YES

A primer coat and acrylic urethane enamel topcoat is to be applied. YES

The body is to be equipped with ICC regulation high visibility tape. The reflective tape is to be installed on lower body side perimeter and across rear hopper lip. YES

The body color shall be white as to match the cab. YES

#### **ADDITIONAL FEATURES**

Tailgate shall be equipped with an amber strobe light.	Dual front and rear with Smart lights.	<u>YES</u>
A cable system with hook to load city dumpsters		<u>YES</u>

15,000 lb. Reeving cylinder with lip and latch kit.

The unit shall come equipped with a 15,000 pound reeving cylinder equipped with a lip and latch kit.

✓

## CHASSIS SPECIFICATIONS MODEL

New and unused conventional chassis

✓

156.9" CA

✓

Wheelbase: to accommodate body builder

✓

## ENGINE

370 HP diesel engine and 1250 LB/FT torque

425 h.p @ 1560 lb-ft.

Exceed

Radiator: Minimum 1500 square inch

✓

Engine brakes

✓

Air cleaner: single element

✓

Fan Clutch: Air On/Off type

✓

Alternator: Minimum 12V 135 AMP

165 amp

Exceed

Batteries: (3) 12 volt

✓

13 Gallon diesel exhaust fluid tank

8.7 Gallon

ND

Single horizontal RH muffler with cab mounted vertical tailpipe, under frame routing, outside rail.

Vertical Muffler and Tail pipe

ND

Muffler/tailpipe guard

✓

## TRANSMISSION AND EQUIPMENT

Allison 4000 RDS 6-speed automatic transmission with PTO provisions

4500 RDS Allison

Exceed

Push button, electronic shift control

✓

Under mounted pump off of PTO. No front mount pump will be acceptable.

✓

## FRONT AXLE AND SUSPENSION

I-beam type front axle; 16,000 pound capacity or greater	20,000 lb	<u>EXCEED</u>
Air cam 16.5" x 6"; 24 square inch long stroke brake chamber		<u>✓</u>
Power steering, dual steering gears	Single TRW TAS-66	<u>NO</u>
18,000 pound leaf front suspension	20,000 lb	<u>EXCEED</u>
Front shock absorbers		<u>✓</u>

## REAR AXLE AND SUSPENSION

Minimum 40,000 pounds	46,000 lb	<u>EXCEED</u>
Axle ratio: to be determined by body builder & truck manufacturer	4.88	<u>✓</u>
Drive Lines: 1800 main drive line, 1700 interaxle drive line	SPICER SPL 250XL / SPICER SPL 170XL	<u>EXCEED</u>
Rear Suspension: 46,000 LB suspension (No Air)		<u>✓</u>

## BRAKE SYSTEM

Rear Brakes: 16.5 X 7	16.5 X 8"	<u>EXCEED</u>
Long stroke 2 drive axles spring parking chambers		<u>✓</u>
Air dryer with heater		<u>✓</u>
Automatic slack adjusters		<u>✓</u>

## FRAME

Frame rails: minimum 11/32 X 3 1/2 X 10 15/16 inch 120 KSI	<u>EXCEED</u>
Single RAIL with Inside channel	

## CHASSIS

Frame Reinforcement

Full front bumper

✓

Two (2) front tow hooks – frame mounted

✓

### FUEL TANKS AND EQUIPMENT

Minimum 80 gallon fuel tank mounted left side under cab

93 Gallon

EXCEED

### FRONT TIRES, HUBS, AND WHEELS

11R22.5 Steer

315/80 R 22.5

EXCEED

Front disc wheel; 22.5"X9.00" 10- hub pilot 5.25 insert shand steel

✓ EXCEED

Hubs: Steel

Polished  
Aluminum

✓

### REAR DRIVE TIRES, HUBS, WHEELS

11R22.5, 14-ply

315/80 R 22.5

EXCEED

Rear dual disc wheels; 22.5X8.25" 10-hub pilot 2 hand HD steel

EXCEED

22.5X9.0" Rims

Polished Aluminum

### CAB EXTERIOR

Air bag type rear cab suspension

✓

Dual air horns

✓

Dual heated mirrors

✓

LH and RH 8" convex mirrors mounted below primary mirrors

NO

Integral Convex built into  
west coast mirrors

### CAB INTERIOR

Adjustable tilt and telescoping steering column

✓

Heater, defroster, and air conditioner

✓

Driver seat: air suspension, high back with head rest

✓

2-man fixed back with integral head rest

✓

Interior Color: Beige or Gray

✓

### SAFETY FEATURES

Five (5) pound fire extinguisher mounted out board of driver seat

✓

Triangular reflectors without flares

✓

Rear Camera and backup alarm

✓

### PAINT

Cab Color: White

✓

Base/Clear

✓

### WARRANTY/SERVICE

Towing- Included in Price. 3 year unlimited with no cap

NO

*Engine only, See DETAILS with this QUOTE*

3 year Full Engine Warranty Included in Price

\$0 Deductible- Includes Emissions/aftertreatment

EW4 or equivalent

✓

Winning bidder must pickup and deliver the truck back when an issue arises,  
Not charging a pickup and delivery fee. This includes towing for a warrantable  
Repair. *NO CHARGE FOR PICKUP AND DELIVERY*

NO

*Free Towing will only Apply To ENGINE for 36 months*  
3 year guaranteed buyback price required. Turned in with unpriced specs  
prior to bid

*(See TRADE Term Agreement) 112,500<sup>00</sup>*

TC4 or equivalent chassis coverage

*12 months / 100K*

NO

State delivery time

*120 DAYS FROM YOUR ORDER  
AS LONG AS BUILD SLOTS ARE  
AVAILABLE.*

### OPTIONS

Show extended warranty options

✓

### ADDITIONAL INFORMATION REQUIRED

Fuel mileage per gallon

N/A

Fuel emission amounts

N/A

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5/24/2019

TRIST2019000148C639

GRANITE 64BR

Qty: 1

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TRI-STATE TRUCK  
CENTER, INC.

412 HIGHWAY 49 S

RICHLAND

MS 392188403

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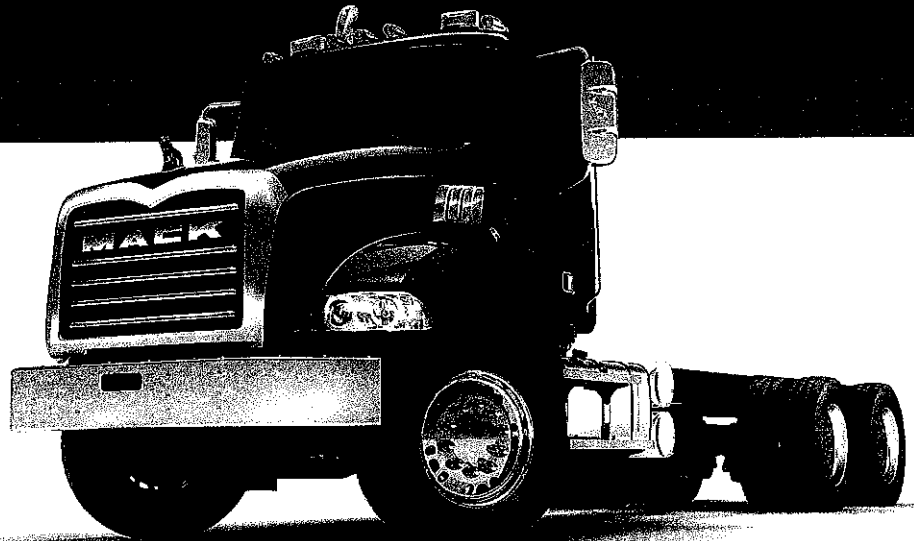
LAUREL CITY OF

Po Box 647

LAUREL

MS 394410647

# QUOTE





**MACK®**



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**DATE**

5/24/2019

**QUOTE INFORMATION**

TRIST2019000148C639

GRANITE 64BR

Qty: 1

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**PREPARED BY**

TRI-STATE TRUCK  
CENTER, INC.

412 HIGHWAY 49 S

RICHLAND

MS 392188403

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**PREPARED FOR**

LAUREL CITY OF

Po Box 647

LAUREL

MS 394410647

Thank you for giving us this opportunity to provide a quote.

This proposal contains the complete specification and performance details of the Mack model configured for your application. Every proposed spec from Mack is prepared with lowest total cost of ownership and highest return on investment as the key objectives for our customers.

This reflects Mack's focus on application excellence to deliver uptime and fuel economy, reduced maintenance, driver satisfaction, productivity and high resale value. The enclosed spec and recommendations have been carefully designed to meet all these objectives.

Beyond the technical specifications contained in this proposal, it's important to remember that each Mack truck is backed by Mack Connect, the industry's leading uptime and productivity solution, plus a coast-to-coast network of dealer service locations. I think that after reviewing this proposal you will realize why Mack is "The American Truck You Can Count On."

I look forward to meeting with you and to discuss any questions you might have regarding this proposal.

Yours sincerely

**WAYNE SMITH**

TRI-STATE TRUCK CENTER, INC.

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**PRICELIST  
DATE**

20180803

**QUOTATION**

TRIST2019000148C639

**DATE**

5/24/2019

**PAGE**

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**CUSTOMER NAME**

LAUREL CITY OF

**DEALER NAME**

TRI-STATE TRUCK CENTER, INC.

**MACK®**

## TECHNICAL SPECIFICATION

### GRANITE 64BR

APPLICATION PACKAGES			DESCRIPTION
PK80J8	GRANITE AB CONFIG PKG.		PK8 1750: CTO, LH BB, 33L DEF, 93 GALLON SLEEVED FUEL, INBOARD AIR

CUSTOMER/VEHICLE INFO			DESCRIPTION
S	002EO2	CHASSIS (BASE MODEL)	GRANITE 64BR
S	99X93X	ASSEMBLY PLANT	Made in Macungie, PA USA
S	PB10A1	PRICE BOOK LEVEL	2020A Pricebook
S	MP2001	CUSTOMER FLEET SIZE	DEALER FLEET WITH LESS THAN 25 VEHICLES IN OWN FLEET OF ANY VEHICLE BRAND
S	013001	TYPE OF SERVICE	COMMERCIAL
S	M98018	WARRANTY REGISTRATION LOCATION	US - WARRANTY REGISTRATION LOCATION
S	505015	INITIAL REGISTRATION LOCATION	ALL 50 STATES, CARB ENGINE EMISSION (US17)
S	534014	LANGUAGE-PUBS/DECAL/SIGNS	ENGLISH
S	DHX10X	ROAD CONDITION	WELL MAINTAINED SURFACED ROADS >95% DRIVING DISTANCE
	0051J5	VEHICLE USE & BODY/TRAILER TYPE	ROLL-OFF TRUCK
	DKXG2X	GROSS COMBINATION WEIGHT	80,000 LB (36 TONNES) GROSS COMBINATION WEIGHT
S	70BB1X	BRAKE REGULATION	BRAKE REGULATION, STOPPING DISTANCE 94M (310FT)
	QCXC1X	TOPOGRAPHY	GRADES <9% GREATER THAN 98% OF DRIVING DISTANCE MAX GRADE 20%
S	E1BD1X	AMBIENT TEMP UPPER LIMIT (GTA)	AMBIENT TEMPERATURE HOT. WARMER THAN 104 F (40 C) ALLOWED UP TO 25 HOURS PER YEAR
S	032A89	TERRAIN GRADE	ON-OFF HIGHWAY, STARTING GRADES<18%
	033A30	LOADING SURFACE	GRAVEL LOADING AND / OR UNLOADING SURFACE
	0342A4	VEHICLE VOCATION	REFUSE / LANDFILL OPERATION
	026086	SALES PROMOTION	RAPID QUOTE MANAGEMENT PROGRAM - US

ENGINE/TRANSMISSIONS			DESCRIPTION
	1000W0	ENGINE PACKAGE, COMBUSTION	MP7-425M MACK 425HP @ 1500-1800 RPM (PEAK) 2100 RPM (GOV) 1560 LB-FT, US'17
S	Q1CA1X	GEAR SELECTION TUNING	BASIC, GEAR-SELECTION TUNING
	136AS6	TRANSMISSION	4500 RDS 6 SP-ALLISON RUGGED DUTY SERIES GEN 5 W/PROGNOSTICS
S	U6AA1X	ENGINE GOVERNOR TYPE	ENGINE GOVERNOR TYPE MIN-MAX

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EXHAUST/EMISSIONS			DESCRIPTION
S	CIRAA4	CARB 2008 IDLE REGULATION	IDLE EMISSION CERTIFICATION, CARB (WITH DECAL LOCATED ON LOWER LH CORNER / DRIVER DOOR
S	DPF04F	DPF DIESEL PARTICULATE FILTER	CLEARTECH ONE BOX E.A.T.S. RH SIDE UNDER CAB US17
	8NAB1X	DPF COVER	DPF COVER STAINLESS STEEL, POLISHED
	DF10P1	DEF TANK	8.7 GALLON (33 L) 26" INTEGRAL TO LH FUEL TANK
S	6MDAAX	AD-BLUE TANK VENTILATION FILTER	WITHOUT DEF TANK VENTILATION FILTER
	130AD7	EXHAUST	SINGLE VERTICAL RIGHT SIDE CAB MOUNTED, LOWER VENTURI DIFFUSER, TURNED END
	KRXAPX	EXHAUST STACK HEIGHT	9' 6" FROM GROUND
S	Q0AA1X	EXHAUST SYSTEM MATERIAL FINISH	W/O BRIGHT FINISH EXHAUST
S	78AC7X	EMISSION ON BOARD DIAG CONTROL	EMISSION OBD, DISPLAY ONLY, USA2018

ENGINE EQUIPMENT			DESCRIPTION
S	125AA4	AIR CLEANER	11" x 30" (279 mm x 762 mm) UNDER HOOD SINGLE ELEMENT DRY TYPE W/AIR INTAKE FROM BOTH SIDES OF HOOD
S	1VAAAX	AIR INTAKE SOURCE	W/O INSIDE/OUTSIDE AIR INTAKE
S	121AA5	BUG SCREEN	BLACK ALUMINUM MOUNTED BEHIND GRILLE, WITHOUT WINTER FRONT COVER
S	113AA6	AIR COMPRESSOR	MERITOR/WABCO 318 (18.7 CFM)
	132AB8	ALTERNATOR	DELCO 12V 165A (36SI) BRUSHLESS W/ REMOTE VOLTAGE SENSING
S	316AA8	BATTERIES	(3) MACK 12V 650/1950 CCA THREADED STUD TYPE
	393AA4	BATTERY BOX - MOUNTING	LH RAIL - STACKED (3 BATTERY MAX)
	L5XF1X	BATTERY BOX COVER	POLISHED ALUMINUM
	318AA3	BATTERY DISCONNECT SWITCH	FLAMING RIVER BIG SWITCH WIRED TO POSITIVE SIDE
S	NCXA5X	STARTER MOTOR	12 VOLT DELCO 39MT-MXT
S	110AA5	COMBUSTION ENGINE BRAKE	MACK MP7 POWERLEASH
S	JMXB1X	ENGINE BRAKE LIGHTING (CA)	VEHICLE AND TRAILER (IF APPLICABLE) STOP LAMPS ACTIVATE UPON SERVICE BRAKE APPLICATION ONLY(3899000)
S	118AB8	FAN DRIVE	BEHR FAN AND ELECTRONIC MODULATING VISCOUS FAN DRIVE
	119AI9	COOLANT PROTECTION	ETHYLENE GLYCOL FULLY FORMULATED COOLANT (50/50 MIX DYED PINK) TO - 34DEG, W/ FILTER
S	124AA3	HOSES - RADIATOR/HEATER	MACK BRAND EPDM RADIATOR & HEATER HOSES
S	293AA2	FUEL-WATER SEPARATOR	MACK W/MANUAL DRAIN VALVE (INTEGRAL W/PRIMARY FUEL FILTER)
S	MBXA1X	PRIMARY FUEL FILTER POSITION (CA)	STANDARD FUEL FILTER POSITION
S	QHXC1X	OIL PAN	OIL PAN
	5NXA1X	ENGINE BLOCK HEATER	120V 1500W ENGINE BLOCK HEATER
	36AD1X	TETHER DEV PKG, CAPS & COVERS	FURNISH CAP RETAINER FOR OIL FILL & RADIATOR OVERFLOW TANK, BATTERY BOX, AND TOOL BOX (IF FURNISHED)

CLUTCH/TRANS EQUIPMENT			DESCRIPTION
	492007	GEAR SHIFTER	ALLISON DASH MOUNTED SHIFTER W/NEUTRAL TO RANGE INHIBIT (HD SERIES)
	195AB6	DRIVELINE - MAIN	SPICER SPL250XL "EXTENDED LUBE SERIES"
	204AA9	DRIVELINE - INTERAXLE	SPICER SPL170XL "LIFE SERIES"
	83AA1X	PROP SHAFT BEARING GUARD	DRIVESHAFT GUARD FOR CENTER BEARING
	76AA1X	PROPELLR SHAFT MAIN, UNVSL JNT	UNIVERSAL JOINT HALF-ROUND TYPE
S	8WAAAX	PROP SHAFT INTERAXL UNIV JOINT	HALF-ROUND UNIVERSAL JOINT
S	4LDA1X	TRANSMISSION OUTPUT TORQUE	TRANSMISSION OUTPUT TORQUE BASIC
S	RCXB1X	BELL HOUSING	ALUMINUM
	7RXAEX	LUBRICANTS, TRANSMISSION	TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS
	139AA7	TRANSMISSION OIL COOLER	FURNISH FOR ALLISON TRANSMISSION W/DIRECT MOUNT COOLER

CLUTCH/TRANS EQUIPMENT		DESCRIPTION
442022	TRANSMISSION TORQUE CONVERTER	FURNISH TC541 FOR USE W/ALLISON (HD) SERIES WORLD TRANSMISSION

FRONT AXLE EQUIPMENT		DESCRIPTION
	240AA3	FRONT AXLE
	244AB4	SPRINGS - FRONT
S	241081	FRONT AXLE BRAKES
	LQXABX	BRAKE LINING MATERIAL FRONT
S	U3XA1X	BRAKE, FRONT
S	U0AA1X	FRONT BRAKE ADJ. MANUFACTURE
S	V7AD1X	FRONT BRAKE CHAMBER MFG.
S	O5BD1X	FRONT BRAKE CHAMBER SIZE
S	0KXA1X	HUB MATERIAL, FRONT
S	K4AAAX	SPINDLE NUTS, FRONT
S	1KAA1X	SHOCK ABSORBER, FRONT
	245AA3	STEERING
S	7VXC1X	LUBRICANTS, FRONT AXLE

REAR AXLE EQUIPMENT		DESCRIPTION
	268AA9	REAR AXLES - TANDEM
S	6MAA1X	REAR AXLE CASING WIDTH
S	018AA6	CARRIER - REAR AXLE
	TAXAEX	REAR AXLE RATIO
	1860K6	REAR SUSPENSION - TANDEM
S	XZXA1X	REAR SUSP. BEAM BUSHINGS
S	GWXABX	BOGIE SPREAD, REAR
	2AAABX	REAR SPRING INSULATOR MAT'L
	XYXB1X	TRANSVERSE TORQUE RODS, R SUSP
	253005	BRAKES - REAR
	MAXCAX	BRAKE LINING MATERIAL DRIVE
S	U4XA1X	BRAKE, DRIVE, REAR
S	U1AA1X	REAR BRAKE ADJ MANUFACTURE
S	V1AB1X	REAR BRAKE CHAMBER SIZE
S	300AD0	REAR BRAKE CHAMBER
S	0LXI5X	HUB MATERIAL, DRIVE
S	1CXI2X	HUB OIL SEAL, DRIVE
S	N2AE1X	SPINDLE NUTS, MAIN AXLE
S	3LAC1X	POWER DIVIDER LOCKOUT
S	7WXA1X	LUBRICANTS, REAR AXLE(s)
	254AB5	TRACTION DIFFERENTIAL
S	9GAAAX	ABS SENSOR & MODULATOR
S	698AA5	ANTILOCK BRAKE SYSTEM
S	URXD1X	BRAKE VALVE VERSION

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TRAILER CONNECTIONS		DESCRIPTION
321031	TRAILER ELECTRICAL RECEPT	SINGLE 7 PINS STD SAE TYPE, END OF FRAME

PTO		DESCRIPTION
	TYXE1X	POWER TAKE OFF CONTROL
S	2WAZ1X	PTO TRANS NEUTRAL CONTRL CHECK
S	B83083	BODY BUILDER INTERFACE

CAB INTERIOR (A THRU G)		DESCRIPTION
S	198048	GAUGES - UNIT OF MEASURE
	E0AAAX	GAUGE - TRANSMISSION OIL TEMP
	D9AAAX	GAUGE - EXHAUST PYROMETER
S	173AA5	AIR CONDITIONING/HEATER
	3CAA1X	DRIVER AUXILIARY FAN
S	10XAHX	DOME LAMP, INTERIOR
	3XAA1X	DASH INDICATOR - LAMP BODY OUT OF POS
	786066	FIRE EXTINGUISHER
	184AA3	FLOOR COVERING

CAB INTERIOR (H THRU R)		DESCRIPTION
S	C52082	INSTMNT CLUSTER LANGUAGE
	160AF0	KEYED ALIKE CHASSIS
S	13AA1X	DOOR OPENING OPTIONS
S	E3XD1X	FORWARD OVERHEAD STORAGE
S	17400N	AUDIO ACCOMMODATION
S	73AC1X	ANTENNA - RADIO
	5BXB5X	ANTENNA - CB RADIO
	0LAA1X	AUDIO SHUTOFF
S	1WAB1X	POWER LEADS
S	5CXB2X	AUDIO SPEAKER LOCATION
S	5JXAIX	COM.RADIO PREP KIT (CB)
S	21XA1X	AUXILIARY REAR WINDOW
S	IFXB1X	REAR WALL STORAGE COMPARTMENT
	784034	REFLECTOR KIT

CAB INTERIOR (S THRU Z)		DESCRIPTION
	004044	INTERIOR TRIM LEVELS
	196ABQ	SEAT - DRIVER'S
	MAPC1X	SEAT COVERING - DRIVER'S
	197AA3	SEAT - PASSENGER'S
	MAQA1X	SEAT COVERING - PASSENGER'S
	0HAA1X	SEAT SUPPORT, DUST COVER

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VEHICLE ELECTRONICS			DESCRIPTION
S	X3CB1X	DRIVER ID FUNCTION	DRIVER ID FUNCTION, DISABLED
S	G5AAHX	ENGINE OVERSPEED,ALL COND, LOG	ENGINE OVERSPEED, ALL CONDITIONS, TIME LOG IF ABOVE 2200 RPM
S	G2AAGX	ENGINE OVERSPEED,FUELED, LOG	ENGINE OVERSPEED, FUELED, TIME LOG IF ABOVE 2100 RPM
S	G4AAUX	VEHICLE OVERSPEED,ALL COND,LOG	VEHICLE OVERSPEED,ALL COND, TIME LOG IF ABOVE 75MPH (121KMH)
S	G3AAPX	VEHICLE OVERSPEED, FUELED, LOG	VEHICLE OVERSPEED, FUELED, TIME LOG IF ABOVE 70MPH (113KMH)
S	G1AABX	ENGINE IDLE DELAY TO LOG	ENGINE IDLE DELAY TO START LOG, 2 MIN
S	W9A01X	PERIODIC TRIP LOG DAY OF MONTH	PERIODIC TRIP LOG, DAY 1 OF THE MONTH
S	R4BA1X	PRE-TRIP DIAGNOSTIC INSPECTION	PRE-TRIP DIAGNOSTICS INSPECTION, BASIC

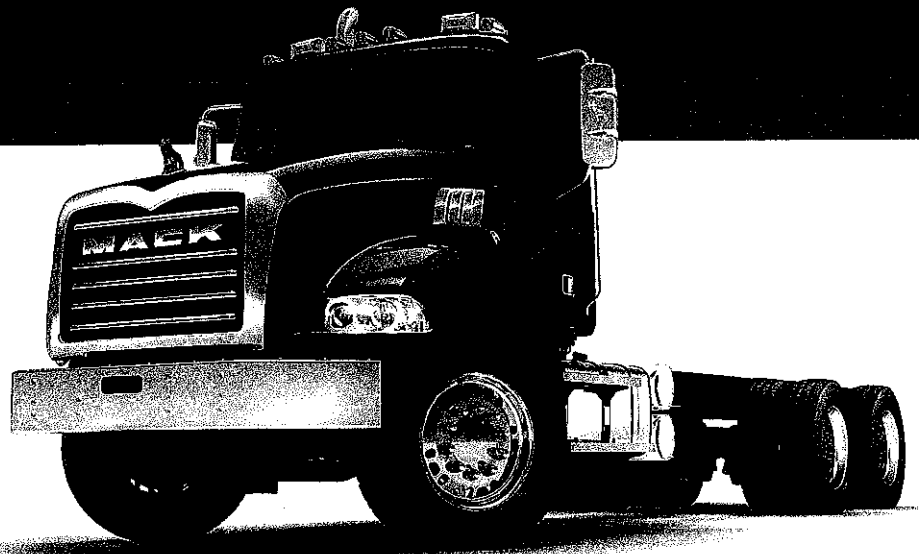
PTO ELECTRONICS			DESCRIPTION
S	F3AAEX	PTO1 SINGLE SPEED CONTROL RPM.	PTO 1ST, SINGLE SPEED SETTING, 1000 RPM
S	F5AABX	PTO 1ST, MAX ROAD SPEED	1ST PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	F6AABX	PTO 1ST, SPEED RAMP RATE	PTO 1ST, SPEED RAMP RATE 100 RPM/SEC
S	F7AAPX	PTO 1ST, MAX ENGINE SPEED	PTO 1ST, MAX ENGINE SPEED, 2100 RPM
S	F8AAGX	PTO 1ST, ROAD SPEED LIMIT	PTO 1ST, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	F9AABX	PTO 1ST, MINIMUM ENGINE SPEED	PTO 1ST, MINIMUM ENGINE SPEED, 600 RPM
S	H6AAEX	PTO 2ND, SINGLE SPEED SETTING	PTO2 SINGLE SPEED SETTING, 1000 RPM
S	H0AABX	PTO 2ND, MAX ROAD SPEED	2ND PTO, MAX ROAD SPEED, 10 MPH (16 KPH)
S	G9AABX	PTO 2ND, SPEED RAMP RATE	PTO 2ND, SPEED RAMP RATE 100 RPM/SEC
S	H7AANX	PTO 2ND, MAX ENGINE SPEED	PTO 2ND, MAX ENGINE SPEED, 2100 RPM
S	H5AAGX	PTO 2ND, ROAD SPEED LIMIT	PTO 2ND, ROAD SPEED LIMIT, 97 KMH (60 MPH)
S	G8AABX	PTO 2ND, MINIMUM ENGINE SPEED	PTO 2ND, MINIMUM ENGINE SPEED, 600 RPM

PAINT			DESCRIPTION
S	950AD0	PAINT DESIGN	SINGLE COLOR
S	924014	PAINT TYPE	SOLID PAINT
S	944AA7	PAINT COLOR - FIRST COLOR	MAC K WHITE; P9188
S	945998	PAINT COLOR - SECOND COLOR	NO SECOND TRUCK COLOR PROVIDED; NO COLOR
S	946998	PAINT COLOR - THIRD COLOR	NO THIRD TRUCK COLOR PROVIDED; NO COLOR
S	996AA3	PAINT - CAB PAINT SYSTEM	PAINT - CAB, URETHANE CLEAR COAT
S	MPB944	CAB COLOR	SAME AS FIRST COLOR - CAB
S	MPD944	HOOD COLOR	SAME AS FIRST COLOR - HOOD
S	MPC998	SLEEPER ROOF COLOR	WITHOUT SLEEPER ROOF COLOR
S	MPA998	ROOF FAIRING COLOR	WITHOUT ROOF FAIRING
S	951AA6	CHASSIS RUNNING GEAR	MAC K BLACK (URETHANE)
	958028	BUMPER	W/O OPTIONAL BUMPER PAINT
S	959019	FUEL TANK - ***NO INVENTED VARIANTS ALLOWED in the FUEL TANK PAINT FAMILY***	W/O OPTIONAL FUEL TANK PAINT
	07XZ1X	FRONT WHEEL PAINT	WITHOUT SPECIAL PRE-FINISHED OPTION
	08XZ1X	DRIVE WHEEL PAINT	WITHOUT SPECIAL PRE-FINISHED OPTION
S	954AA1	PAINTED DISC WHEELS, FRONT	WITHOUT PAINT
S	955AA1	PAINTED DISC WHEELS, REAR	WITHOUT PAINT
S	956016	DEMOUNT.RIMS-FRONT	WITHOUT PAINT
S	957027	DEMOUNT.RIMS-REAR	WITHOUT PAINT
S	952AA1	SPOKE WHEELS-FRONT	WITHOUT OPTIONAL SPOKE WHEEL PAINT

PAINT			DESCRIPTION
S	953AA1	SPOKE WHEELS-REAR	WITHOUT OPTIONAL SPOKE WHEEL PAINT
S	962032	HUBS & DRUMS-FRONT	SAME AS CHASSIS RUNNING GEAR
S	963033	HUBS & DRUMS-REAR	SAME AS CHASSIS RUNNING GEAR

CALCULATED CODES - KAX			DESCRIPTION
S	9JXA1X	PROPCALC SELECTION (CA)	YES, THE ORDER MUST BE CALCULATED

BASE WARRANTY & PURCHASED COVERAGES			DESCRIPTION
S	898003	VEHICLE WARRANTY TYPE	HEAVY DUTY WARRANTY CLASSIFICATION
S	M50030	BASIC CHASSIS COVERAGE	HEAVY DUTY STANDARD BASE COVERAGE 12 MONTHS/100,000 MILES (161,000 KM)
S	M51021	ENGINE WARRANTY	MAC K MP7/MP8 BASE ENGINE COVERAGE 24 MONTHS / 250,000 MILES (402,000KM)
S	M52022	EMISSION COMPONENT COVERAGE	US and CANADA EQUIPPED VEHICLE EMISSION COMPONENTS COVERAGE 60 MONTHS/100,000 MILES (161,000 KM)
	M540B4	TRANSMISSION WARRANTY	ALLISON TRANSMISSIONS (Contact Allison Transmission for standard warranty and extended coverage data)
S	M55035	CARRIER & AXLE HOUSING WARRANTY	STANDARD MAC K HEAVY DUTY COVERAGE 36 MONTHS / 350,000 (563,000 KM)
S	M56026	AIR CONDITIONING WARRANTY	AIR CONDITIONING STANDARD COVERAGE (Sealed System Only) 12 MONTHS UNLIMITED MILEAGE
S	M57027	CHASSIS TOWING WARRANTY	STANDARD NORMAL / HEAVY DUTY CHASSIS TOWING 90 DAYS OR 5,000 MILES
S	M58028	ENGINE TOWING WARRANTY	STANDARD MAC K ENGINE TOWING COVERAGE 24 MONTHS/250,000 MILES (402,000 KM)
S	M690F9	GUARDDOG CONNECT BUNDLE	24 MONTH - GUARDDOG CONNECT WITH MAC K OTA (with ASIST and Mac K OneCall))
S	M67017	PREMIUM MAINTENANCE - CHASSIS LUBE AND INSPECTION	W/O PREMIUM MAINTENANCE - CHASSIS LUBE AND INSPECTION COVERAGE





**PAC-MAC MODEL RLX-25  
SPECIFICATION**

**Truck-mounted, 25 cubic yard rear loader body.**

The unit will be used in collection and loading of residential or commercial refuse. This specification describes a hydraulically actuated packer body of the rear loading type with the following minimum specifications necessary to perform the work assigned.

**UNIT WILL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.**

The body shall conform to the latest ANSI Z245 specification as well as the Federal Motor Vehicle Safety Standard FMVSS-108 at the time of manufacture. All proposals include delivery, training of operators and service personnel.

1. The minimum capacity of the body shall be 25 cubic yards exclusive of the hopper.
2. The minimum capacity of the hopper shall be 3.61 cubic yards without the use of a hopper loading sill extension.
3. The body shall be designed to allow high density compaction of up to 1000 lbs. per cubic yard of household refuse.
4. The unit shall be manufactured in an ISO 9001:2000 certified facility.

#### BODY DIMENSIONS

1. The maximum overall width shall be 96 inches.
2. The maximum overall length shall be 284 inches.
3. The maximum height above the chassis frame shall be 98" inches.
4. The inside width of the body shall be 85 inches at the widest point.
5. The inside height of the body shall be 84 inches at the highest point.
6. The minimum weight of the body and the tailgate (less special options) shall be 13,300 lbs.

#### BODY CONSTRUCTION

1. The body shall have a smooth floor without a trough. No cylinders, valves or other hydraulic components shall be exposed to refuse packed to the body. Floors with trough or depression are not acceptable.
2. The body floor, sides and roof shall be designed and constructed to withstand maximum imposed force residential refuse without structural

4. The length of the tailgate shall be 75"

#### TAILGATE CONSTRUCTION

1. The lower tailgate sides shall be fabricated from ASTM A-514 steel w/ minimum hardness of 321 BHN.
2. The hopper floor and chute shall be fabricated from 1/4" ASTM A-514 steel w/ minimum hardness of 321 BHN.
3. The tailgate sides shall be reinforced with hi-tensile steel channels interlaced and fully welded to the side sheets.
4. The hopper and chute floor shall be reinforced with hi-tensile steel channels.
5. The tailgate shall be secured to the body with tailgate lock bars made of ASTM A-514 steel. The tailgate locks shall operate automatically when the tailgate is raised or lowered.
6. The tailgate seal shall extend a minimum 24 inches up the body side.
7. Two grab handles shall be located on each side of the tailgate.
8. The rear steps shall be fabricated from open grip material with a minimum standing surface of 380 square inches per step. The steps shall comply with A.N.S.I. standards. Steps shall be of a bolt-on design.

#### PACKING MECHANISM

1. The packing cycle shall be controlled by a two-lever control that allows the operator to start, stop and reverse the direction of any function at any point during the packing cycle.
2. The tailgate control valve shall be located within the tailgate. It shall be a sectional valve.

3. The packing mechanism shall consist of two primary components: the slide and the packer (sweep) blade.

- A. The packing mechanism shall be mounted on four wear shoe assemblies utilizing UHMW poly wear shoes. The shoes shall be replaceable without removing the slide assembly from the tailgate.

The packer and slide shall be hinged by two 3" diameter alloy steel pins. These pins shall also support the (2) lower wear shoe assemblies.

- B. The slide face shall be constructed from 3/16" ASTM A-514 steel w/ minimum hardness of 321 BHN.
- C. The packer blade shall be mounted to, and pivot on, the slide. The packer blade shall be fabricated from hi-tensile steel plate, of varying thickness from 10 ga. to 1/2"
- D. The packer shall have replaceable heat treated bushings in the pivots.

The face sheet shall be 3/16" ASTM A-514 steel w/ minimum hardness of 321 BHN.

4. The packing mechanism shall be powered by two 4 1/2" bore cushioned hydraulic cylinders .
5. The slide mechanism shall be powered by two 5" Bore cushioned hydraulic cylinders
6. The slide and packer cylinders shall have hardened, chrome plated rods. Each cylinder shall have replaceable heat treated bushings.
7. The packing blades shall operate

in a minimum 20 second cycle time with a minimum 3 second reload time.

8. The compaction cycle shall interrupt above the hopper sill.
9. Material in the hopper shall be compacted between the packing mechanism and the ejector panel. The ejector panel shall hold pressure against the compacted material and will automatically drift forward by a hydraulic load control valve without operator assistance.
10. The packer blade (sweep) assembly shall be protected by a secondary relief valve that is integral to the tailgate-mounted control valve.

#### EJECTION SYSTEM

1. The load shall be ejected by a double acting, telescopic hydraulic cylinder that shall extend and retract the ejector panel the full length of the body without the use of clamp bars or related hardware.
2. The ejector cylinder shall have replaceable heat treated bushings. The cylinder shall have the following dimensions:  
  

Body size	Bore	Stroke	Stages
25 cu. yd.	6.5"	127"	3
3. The ejector panel shall have a 10 gauge hi-tensile steel face sheet that is reinforced by structural steel tubing and formed channels of high tensile steel.
4. The ejector panel shall be mounted on 8 high-density polyethylene wear shoes that shall be replaceable without removing the ejector panel from the body. Metallic shoes are not acceptable.
5. The ejector panel shall be guided in the body by two guide tracks located

on the body sides 4" above the body floor. The tracks shall be 5 3/4" deep, fabricated from hi-tensile steel and fully welded to the body sides.

6. The ejector cylinder shall be mounted angularly to the body floor and not require a trough or depression in the floor.

## CONTROLS

1. The ejector and tailgate lift controls shall be mounted at the left front of the body.
2. Ejector and tailgate controls shall be mounted directly to the valve spool.
3. A throttle advance switch shall be located convenient to the ejector and tailgate lift controls.
4. The tailgate controls shall be located at the right rear of the tailgate. The two-lever design shall have positive control of movement of the packing mechanism at all times. The tailgate controls shall comply with the applicable A.N.S.I. regulations.
5. An automatic throttle advance device shall be incorporated with the tailgate controls.

## HYDRAULIC SYSTEM

1. The hydraulic pump shall be a fixed displacement rated at no less than 2500 psi working pressure and have sufficient capacity to equal 35-38 GPM flow at a reasonable engine RPM
2. The hydraulic pump shall be a direct mount to a transmission-driven clutch-activated hot shift PTO or driven by the engine crankshaft.

3. For extended life of all hydraulic components the maximum operating pressure shall not exceed 2500 PSI.
4. The hydraulic system shall incorporate an adjustable relief in the body valve.
5. Hydraulic hoses and tubes shall be secured by clamps as required to prevent damage from abrasion and vibration. Hydraulic hoses and tubes shall use S.A.E. O-ring boss and JIC 37 degree flare ends for zero leaks.
6. Hydraulic hoses shall comply with the applicable S.A.E. standards for the designed specifications.
7. Hydraulic hoses are to have a 4:1 burst to working pressure safety factor.
8. The hydraulic oil reservoir shall have a minimum capacity of 50 gallons. The reservoir shall be equipped with filler, breather cap, sight glass, clean out cover, 100 mesh suction filter, magnetic tank drain plug and gate valve at the suction outlet. The hydraulic reservoir shall not be a structural member of the body or the mount for the ejector cylinder.
9. A 10 micron Inline Return line filter shall be located on the hydraulic tank and be equipped with a condition indicator.
10. A suction screen filter of 100 mesh (141 micron) shall strain all the oil leaving the tank. Suction filter shall be equipped with a 5 P.S.I. bypass valve.
11. All hydraulic valves shall be sectional in order to allow replacement of defective sections

without replacement of the entire valve.

12. All cylinders and valves shall have SAE O-ring boss ports.
13. Hydraulic system shall meet an ISO cleanliness standard of 20/18/13
14. Manufacturer shall provide printed ISO hydraulic cleanliness record.

#### HYDRAULIC CYLINDERS

1. All cylinders shall have a working pressure rating of 3000 psi.
2. The packer and slide cylinders shall have hard chrome plated rods.
5. The packer and slide cylinders shall carry a minimum one year warranty.
6. Tailgate cylinders shall have hardened chrome plated cylinder rods, and be equipped with restrictors to limit the speed of raising and lowering of the tailgate.
7. Telescopic cylinders shall have chrome plated cylinder sleeves and plungers.
8. All cylinders are to operate without direct contact with the compacted load.

#### ELECTRICAL

1. All electrical wiring shall be color coded and be protected by loom.
2. Electrical harnesses shall be connected with weatherproof automotive-grade electrical connectors.
3. Electrical wires shall be stranded



copper type with a SXL covering to remain flexible and resist to deterioration.

4. Electrical wires shall be color coded and numbered for easy identification.
5. Body electrical system shall be protected with its own fuse block.
6. All fuses shall be ATO type.
7. All limit switches shall be water proof to prevent damage from the elements and pressure washing.
8. All lighting shall comply with F.M.V.S.S. #108, with an additional set of two stop, tail and turn lights mounted above the hopper on a light bar.
9. Clearance, backup, stop and directional lights shall be rubber grommet mounted with sealed light housings, lexan lenses, vibration resistant filaments, and unitized sealed quick change connections.
10. A 112 Db backup alarm conforming to current standards must be provided.  
The alarm must also sound when the tailgate is open.
11. Conspicuity tape shall be applied per ANSI Z245 requirements.

#### PAINTING

1. All burrs and rough areas are to be ground smooth and all welds cleaned to remove slag.
2. Prior to application of any coating, all surfaces shall be thoroughly cleaned and conditioned with a phosphate solution.
3. The body shall then be coated with two (2) coats of a self etching epoxy primer.

4. Two finish coats of polyurethane Enamel shall be applied to produce a high gloss finish.

Warranty

1. One year warranty on the entire unit.
2. "On-Site" warranty service.
3. Additional warranties available upon request OR QUOTED.

ADDITIONAL OPTIONAL FEATURES

1. A rear vision camera system shall be provided and include 7"LCD flat screen monitor in cab.
2. Work lights
3. Smart light system with dual front and rear strobes.
5. An Emergency PTO Stop will be located on the rear of the body.  
(now standard)
6. Operators and Parts manuals shall be provided on CD and paper copy. (standard)
7. Dual rotary actuated cart tippers shall be mounted on rear load sill with handles mounted curbside and street side.



# RLX SERIES

## TECHNICAL DATA AND SPECIFICATIONS

### MODEL

	RLX18	RLX20	RLX20 "BRUTAL"	RLX25	RLX25 "BRUTAL"
Capacity	18 yd <sup>3</sup>	20 yd <sup>3</sup>	20 yd <sup>3</sup>	25 yd <sup>3</sup>	25 yd <sup>3</sup>
Hopper capacity	3.61 yd <sup>3</sup>	3.61 yd <sup>3</sup>	3.61 yd <sup>3</sup>	3.61 yd <sup>3</sup>	3.61 yd <sup>3</sup>
Body weight (body shell only)	4,779 lb	5,118 lb	5,118 lb	5,885 lb	5,885 lb
Body weight (complete unit, less options)	12,700 lb	13,000 lb	13,000 lb	14,000 lb	14,000 lb
Hopper inside width	80"	80"	80"	80"	80"

### BODY SPECIFICATIONS

	RLX18	RLX20	RLX20 "BRUTAL"	RLX25	RLX25 "BRUTAL"
Sidewalls (curved shell)	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI
Floor (single sheet, flat)	3/16" high tensile steel	3/16" high tensile steel	3/16" high tensile steel	3/16" high tensile steel	3/16" high tensile steel
Roof (curved shell)	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI
Ejection panel face	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI	10 ga 80,000 PSI
Hopper	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)
Packer panel face	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)	1/4" 100,000 PSI (T-1)
Slide panel face	3/16" T-1 steel	3/16" T-1 steel	3/16" T-1 steel	3/16" T-1 steel	3/16" T-1 steel
Hopper sides	3/16" T-1 steel (lower tailgate); 10 ga 80 ksi steel (upper tailgate)	3/16" T-1 steel (lower tailgate); 10 ga 80 ksi steel (upper tailgate)	3/16" T-1 steel (lower tailgate); 10 ga 80 ksi steel (upper tailgate)	3/16" T-1 steel (lower tailgate); 10 ga 80 ksi steel (upper tailgate)	3/16" T-1 steel (lower tailgate); 10 ga 80 ksi steel (upper tailgate)

### HYDRAULIC SYSTEM

	RLX18	RLX20	RLX20 "BRUTAL"	RLX25	RLX25 "BRUTAL"
Cylinders	-	-	-	-	-
Ejector	(1) 2-stage 5.5" bore	(1) 2-stage 5.5" bore	(1) 2-stage 5.5" bore	(1) 3-stage 8.5" bore	(1) 3-stage 6.5" bore
Tailgate	(2) 3" bore; 1.75" rod; 38" stroke	(2) 3" bore; 1.75" rod; 38" stroke	(2) 3" bore; 1.75" rod; 38" stroke	(2) 3" bore; 1.75" rod; 38" stroke	(2) 3" bore; 1.75" rod; 38" stroke
Slide	(2) 5" bore; 4" rod; 25" stroke	(2) 5" bore; 4" rod; 25" stroke	(2) 5.5" bore; 4.5" rod; 28" stroke	(2) 5" bore; 4" rod; 25" stroke	(2) 5.5" bore; 4.5" rod; 28" stroke
Packer	(2) 4.5" bore; 3.5" rod; 24.38" stroke	(2) 4.5" bore; 3.5" rod; 24.38" stroke	(2) 4.5" bore; 3.5" rod; 24.38" stroke	(2) 4.5" bore;	(2) 5" bore; 3.5" rod; 24.38" stroke
Valves	-	-	-	-	-
Shutoff	Ball	Ball	Ball	Ball	Ball
Packing controls	Sectional spool	Sectional spool	Sectional spool	Sectional spool	Sectional spool
Ejector/tailgate raise	Sectional spool	Sectional spool	Sectional spool	Sectional spool	Sectional spool
Operating pressure in PSI	2,500	2,500	2,500	2,500	2,500
Maximum operating pressure	2,750	2,750	2,750	2,750	2,750
Gallons per minute (GPM)	35-38 GPM	35-38 GPM	35-38 GPM	35-38 GPM	35-38 GPM
Reservoir	50 gal.	50 gal.	50 gal.	50 gal.	50 gal.
Packing cycle time	-	-	-	-	-
Complete	17-19 sec	17-19 sec	24 sec	17-19 sec	24 sec
Reload	3 sec	3 sec	4 sec	3 sec	4 sec
Compaction rate in lb/yd	900+	900+	1000+	900+	1000+

### CHASSIS REQUIREMENTS

	RLX18	RLX20	RLX20 "BRUTAL"	RLX25	RLX25 "BRUTAL"
Minimum GVWR	41,000 lb	43,000 lb	43,000 lb	54,000 lb	54,000 lb
Minimum GAWR	-	-	-	-	-
Front axle	12,000	12,000	12,000	14,000	14,000
Rear axle	28,000	31,000	31,000	40,000	40,000
Usable CA (+/- 2 in)	138"	148-152"	148-152"	N/A	N/A
Minimum after frame	40"	40"	40"	57"	57"

### STANDARD FEATURES

- ▶ One piece flat floor
- ▶ Curved shell body
- ▶ Fast cycle time
- ▶ Meets or exceeds ANSI standards
- ▶ Wide open accessibility for cleaning and maintenance
- ▶ Automatic latches and integrated tailgate props
- ▶ The industry's highest standard for hydraulic cleanliness
- ▶ LED lighting, weatherproof connections and braided loom
- ▶ Dual Amber oval rear strobes
- ▶ Heat-treated pins and replaceable bushings throughout
- ▶ Large access door with safety interlock
- ▶ Emergency stop on curb side
- ▶ Driver alert buttons on both sides
- ▶ Sectional valves

### OPTIONAL EQUIPMENT

- ▶ Single or dual cart tipplers
- ▶ Reeving system: 12K cylinder / 15K cylinder
- ▶ Kick bar and container latches (38" minimum chassis height only)
- ▶ Front-mounted pump
- ▶ Amber or clear beacon rear strobes (single or dual)
- ▶ Amber oval flush mount strobes (front and/or rear)
- ▶ Smart light strobe system (may be combined with amber ovals)
- ▶ Rear vision camera
- ▶ Work lights over hopper and tailgate sides
- ▶ Frame mounted water cooler
- ▶ Frame mounted tool box
- ▶ Emergency stop on street side
- ▶ Pressure gauge

All design, specifications, and components are subject to change at the manufacturer's sole discretion at any time without notice. Data published herein is for information purposes only and shall not be construed to warrant suitability of the unit for any particular purpose, as performance may vary with the conditions encountered. The only warranty is our standard written warranty for this product at the time of shipment.



**HOL-MAC CORPORATION**  
P.O. BOX 349, BAY SPRINGS, MS 39422  
601-764-4121

# MACK ENGINE PROTECTION PLAN 2



## ENGINE PROTECTION PLAN 2 CERTIFICATE

(Valid for trucks ordered on or after April 2, 2018 or plans purchased February 19, 2018 or later)

Mack Trucks, Inc. ("Mack Trucks"), warrants certain individual components of each 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. This extended coverage plan ("Protection Plan") provides additional coverage from failures of specified components or parts ("Covered Parts") that may occur after the Mack Standard Truck Warranty has expired and until the expiration of this Protection Plan. All warranty periods are calculated from date in service. This Protection Plan applies only to Mack trucks operated exclusively in the United States and Canada.

Mack Trucks' obligation under this Protection Plan is limited to, at its sole option, repair or replacement at a Mack Trucks authorized dealer of Covered Parts that are returned within the coverage period and acknowledged by Mack Trucks to be defective. Covered repairs must be performed by a Mack Trucks authorized dealer. All coverage is 100% for parts and labor except as noted. All parts replaced shall become the property of Mack Trucks.

This Protection Plan provides coverage for the following Covered Parts until the earliest to occur of the time/mileage/hours purchased, subject to the following Qualifications and Limitations.

### Engine Plan 2 Covered Parts List

Covered Parts	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	
Coolant Pump Assembly	
Crankcase Ventilation Assembly	
Crankshaft	
Crankshaft Hub	
Cylinder Block	Includes: Casting, main caps, bolts
Cylinder Block Heater	
Cylinder Head	Includes: assembly, casting, bolts, plugs, sleeves
EGR (Exhaust Gas Recirculation) Components	All components including clamps, control valve, cooler, fittings, gaskets, mixer, pipes, and EGR wiring harness. Excludes: EGR cooler vibration damper which is a maintenance item.
Continued on Page 2...	

**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED, INCLUDING 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 AND INCIDENTAL DAMAGES. MACK TRUCKS NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.**

This Warranty is subject to Mack Trucks' Standard Warranty Limitations and Exclusions, which are printed on page 3 of this Warranty Certificate and are available through a Mack Trucks

# MACK ENGINE PROTECTION PLAN 2



Covered Parts	Qualifications and Limitations
Electrical EA Harness Supplied with Engine	(From EECU to sensors and injectors and actuators)
Engine Brake Mechanism - PowerLeash™	Includes: PowerLeash™ control valve and PowerLeash™ rocker arms (factory installed only)
Engine Electronic Control Unit (EECU)	
Engine Heat Shield	
Engine Mounted Sensors	Includes: Coolant temperature, crankcase pressure, crankshaft (engine timing), EGR temperature and pressure, engine oil level and temperature, engine oil pressure, engine position (camshaft), fuel pressure and temperature, intake boost pressure and temperature, inlet manifold air (temperature and pressure)
Exhaust Manifold	Includes: Casting, joint seals, rings or wraps
Fan Belt Tensioner Assembly and Bracket	Excludes: Fan belts
Flywheel	Includes: Housing and ring gear
Fuel Filter Housing	Excludes: Filters
Fuel Injection System	Includes: Injectors, sleeves, common rail assembly (electronic fuel pressure regulator and pressure sensor)
Fuel Transfer Pump	
Gaskets, Seals, O Rings, 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
Oil Pan	
Oil Pump	
Piston Assembly	Includes: Cooler nozzles, liners, pistons, rings
Power Steering Pump	
Pre-Heater	Includes: Preheat relay, terminals, power cables. Factory installed only.
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 <b>NOT</b> covered. Normal maintenance adjustments are <b>NOT</b> covered.
Thermostat (Coolant)	Includes: Thermostat side cover
Timing Gear Cover and Mounting Plate	
Turbocharger Assembly	Includes: VGT actuator module, HE+ Package, if included
Valve Assembly	Includes: Guides, keepers, rotators, seats, springs, valves; failures resulting from the valve adjustments not being maintained properly are <b>NOT</b> covered. Normal maintenance adjustments are <b>NOT</b> covered.
Valve Cover	
Valve Yokes (Bridge) and Pins	Failures resulting from the valve adjustments not being maintained properly are <b>NOT</b> covered. Normal maintenance adjustments are <b>NOT</b> covered.
Vibration Dampers and Bolts	
Covered Telematics Components	Qualifications and Limitations
Mack Proprietary Hardware (Factory Installed)	Includes: Wiring Harness, Telematics Gateway (TGW) control unit.
Software (GuardDog® Connect)	Includes: Remote software updates, if equipped. Remote configuration updates, if equipped. Two configuration updates allowed each year for the first two years. After two years, remote configuration updates may be added as a subscription or additional fee.

This Warranty is subject to Mack Trucks' Standard Warranty Limitations and Exclusions, which are printed on page 3 of this Warranty Certificate and are available through a Mack Trucks

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

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

### **EXCLUSIONS:**

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

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

**MACK®**

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



# MACK EXHAUST AFTERTREATMENT SYSTEM PROTECTION PLAN

## EXHAUST AFTERTREATMENT SYSTEM

EPA 2014 and newer

Mack Trucks, Inc. ("Mack Trucks"), warrants certain individual components of each 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. This extended coverage plan ("Protection Plan") provides additional coverage from failures of specified components or parts ("Covered Parts") that may occur after the Mack Standard Truck Warranty has expired and until the expiration of this Protection Plan. All warranty periods are calculated from date in service. This Protection Plan applies only to Mack trucks operated exclusively in the United States and Canada.

Mack Trucks' obligation under this Protection Plan is limited to, at its sole option, repair or replacement at a Mack Trucks authorized dealer of Covered Parts that are returned within the coverage period and acknowledged by Mack Trucks to be defective. Covered repairs must be performed by a Mack Trucks authorized dealer. All coverage is 100% for parts and labor except as noted. All parts replaced shall become the property of Mack Trucks.

This Protection Plan provides coverage for the following Covered Parts until the earliest to occur of the time/mileage/hours purchased, subject to the following Qualifications and Limitations.

### Exhaust Aftertreatment System Covered Parts List

Covered Parts	Qualifications and Limitations
Aftertreatment Control Module (ACM)	
AHI Module, Nozzle and Valve	
DEF Pump Assembly	
DEF Tank Assembly	Includes: Tank, Tank Heater/Sender, Heated hoses
DPF Assembly	Includes: AHI / 7th Injector
Exhaust Aftertreatment Sensors	Includes: Sensor harnesses that is part of DPF and SCR assemblies. Does not include chassis harness.
SCR Assembly	

**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED, INCLUDING 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 AND INCIDENTAL DAMAGES. MACK TRUCKS NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.**

This Warranty is subject to Mack Trucks' Standard Warranty Limitations and Exclusions, which are printed on page 2 of this Warranty Certificate and are available through a Mack Trucks authorized dealer.



**MACK TRUCKS INC ("MACK TRUCKS") STANDARD WARRANTY LIMITATIONS & EXCLUSIONS**

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

**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES OR CONDITIONS, STATUTORY OR OTHERWISE, EXPRESSED OR IMPLIED, INCLUDING 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 AND INCIDENTAL DAMAGES. MACK TRUCKS NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF VEHICLES, COMPONENTS OR PARTS.**



**Tri-State Truck Center, Inc.**

**Terms, Conditions, & Limitations**

**Presented By:**

A handwritten signature in black ink, appearing to read "Wayne Smith", is written over a horizontal line.

At the time a vehicle is turned in, it must be capable of passing any applicable state and federal safety and emissions' inspection. It must also meet or exceed the following Terms and Conditions. These requirements have been carefully defined to establish the operating condition of a Mack used truck, as agreed to by both the seller and the buyer.

Delivery Initial Here: Customer \_\_\_\_\_ Tri-State Truck Center, Inc. \_\_\_\_\_

Turn-In Initial Here: Customer \_\_\_\_\_ Tri-State Truck Center, Inc. \_\_\_\_\_

#### Engine

1. Engine must be the original engine produced in the truck. If the engine has been replaced, owner must identify it as such and valuation may be altered based on engine age, mileage and other factors.
2. Engine must operate at a minimum of 80% of the original manufacturer's rated horsepower after allowing for driveline losses and as verified by a chassis dynamometer test.
3. Engine must be mechanically sound and within the manufacturer's specifications relating to oil pressure, coolant temperature and pressure and fuel pressure. Engine must have no leaks and be free from contamination. Crankcase blow-by must be within specification. Engine password must be cleared.
4. Engine air compressor must meet the manufacturer's performance specifications and must not exceed the manufacturer's maximum tolerances for oil blow-by (oil blown into the air system).
5. Batteries, starter, alternator and other ignition system components must be in sound condition. Batteries must be original CCA rating, capable of holding a charge and start the truck unassisted.
6. Air conditioning compressor must be operational and system must be free from defects and operate as intended.

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#### Drivetrain

1. Clutch, transmission, front and rear axles must be roadworthy and free from defects with no visible bends, cracks or leaks.
2. The clutch must be in adjustment or must be replaced if it cannot be adjusted to within acceptable tolerances.
3. Allison automatic transmission must shift smoothly and operate as originally intended.

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#### Brakes

1. Brake linings are to be no less than 5/8" on rear axles and 1/2" on front axle. Brake drums must be free from breaks or cracks and cannot be worn in excess of 1/16" per side.

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## Tires

1. Steer: Matched original equipment tread type tires. Minimum 10/32" tread depth measured at the lowest point.
2. Drive: Matched original equipment tread type tires. Minimum 12/32" tread depth measured at the lowest point. Recaps are not acceptable.
3. All tires must be free from cuts, bulges, gouges and have no irregular tread wear pattern, such as dishing, cupping, edging, feathering, etc, etc.

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## Cab / Sleeper / Body

1. Paint and/or body damage must not exceed \$500.00 total per unit, including, but not limited to, the sheet metal, bumper, grill, fuel tanks, fairings, dents, rust damage, etc, etc.
2. All decals, permits, unit numbers and any other customer installed identification must be removed and done so in a manner as to not damage the original paint. Any damage resulting from de-identifying the truck must be repaired.
3. Upholstery must be free from tears or open seams. Tears, open seams, holes and punctures must be repaired.
4. All glass shall be free from cracks, chips, and scratches.
5. Dash panel and interior trim pieces must not be missing and must be free from holes, cracks and/or breaks.
6. All instruments, gauges, warning lights, radio, switches and knobs must be free from defect and operate as originally intended.

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## Non-Mack Bodies and Equipment

1. Bodies such as dump, refuse, flatbed, concrete mixer, etc, etc must be free from defects and perform as originally designed for by the manufacturer.
2. Physical damage to body and components must not exceed \$500.00
3. There shall be no leaks of the hydraulic system.
4. Any repairs performed on body, including its hydraulic system, must be made with original equipment parts.

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## General

1. All standard and optional equipment, on or in truck chassis, must be in good working order and must be on the truck as delivered.
2. Truck must pass DOT inspection and be able to go in service without any repairs.
3. Any unit that has been wrecked and sustained damages greater the 15% of the original contract price must be disclosed. **Tri-State Truck Center, Inc. reserves the right to reject any and all units that have not been repaired in accordance with acceptable standards or workmanship.**
4. Units (including non-Mack bodies) must be maintained in accordance to the original manufacturer's published maintenance requirements. At the sole discretion of Tri-State Truck Center, Inc., proof of maintenance may be required before unit turn-in.
5. Vehicles must have a minimum of (30) gallons of fuel at turn-in time.
6. Trucks must be available for pick-up on the 15<sup>th</sup> of the month following the agreed upon anniversary date of the original delivery. Failure to do so will result in a \$5,000.00 per month penalty for the first (3) months. After (3) months, this agreement becomes null and void and Tri-State Truck Center, Inc., shall be released from this agreement.
7. Excess mileage will result in a penalty of \$.48 per mile for the first 20,000 miles and \$.63 per mile thereafter.

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## Purchase Option

1. The customer reserves the right to purchase this unit at the end of the term for a 10% premium over the guaranteed residual. The premium shall be paid to Tri-State Truck Center, Inc., 494 E.H. Crump Blvd., Memphis, TN 38126.

Delivery Initial Here: Customer \_\_\_\_\_ Tri-State Truck Center, Inc. \_\_\_\_\_

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## Documents

1. Payment for the truck will not be made until Tri-State Truck Center, Inc receives clear titles/ownerships, free and clear of all liens and encumbrances.
2. A current Federal Annual and State (if applicable) inspection sticker must be on vehicle at time of delivery.

Delivery Initial Here: Customer \_\_\_\_\_ Tri-State Truck Center, Inc. \_\_\_\_\_

Turn-In Initial Here: Customer \_\_\_\_\_ Tri-State Truck Center, Inc. \_\_\_\_\_

**To Be Completed At Time Of Order Receipt.**

Buyer: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State & Zip: \_\_\_\_\_  
Bid /RFQ / Reference #: \_\_\_\_\_  
Sale Price: \$ \_\_\_\_\_  
Guaranteed Residual: \$ \_\_\_\_\_  
Purchase Option: \$ \_\_\_\_\_

\_\_\_\_\_  
Tri-State Truck Center, Inc. Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Customer Date

\_\_\_\_\_  
Title

**To Be Completed At Time Of Delivery.**

Truck Serial Number: \_\_\_\_\_  
Body Serial Number: \_\_\_\_\_  
Length of Agreement (Term): \_\_\_\_\_  
Total Miles Allowed: \_\_\_\_\_  
Turn-In Date: \_\_\_\_\_

\_\_\_\_\_  
Tri-State Truck Center, Inc. Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Customer Date

\_\_\_\_\_  
Title

**To Be Completed At Time Of Turn-In.**

Date of Turn-In: \_\_\_\_\_

Buy Back Amount \$ \_\_\_\_\_

Less Time Penalty \$( \_\_\_\_\_ )

Less Mileage Penalty \$( \_\_\_\_\_ )

Settlement Amount \$ \_\_\_\_\_

\_\_\_\_\_  
Tri-State Truck Center, Inc. Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Customer Date

\_\_\_\_\_  
Title

Terms and Conditions for

# Allison Transmission Coverage

## Transmission Coverage **Definitions And Requirements**

### Standard Limited Warranty

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

### Partnership Coverage

Some Allison-equipped vehicles purchased through Allison Partnerships carry Partnership Coverage. Partnership Coverage begins at the end of the Standard Limited Warranty period. Duration of Partnership Coverage varies depending upon the Vocational Model Series purchased.

**REQUIREMENTS:** Use of Allison Approved TES 295® transmission fluid and Genuine Allison Filters is required. Failure to use Allison Approved TES 295® transmission fluid and Genuine Allison Filters will result in no coverage for repairs beyond Standard Limited Warranty.

**NOTE:** Except as noted, all transmissions with Partnership Coverage beyond Standard Limited Warranty have 100% parts and labor coverage with no mileage limitations.

### Coverage Pricing

Extended Transmission Coverage must be purchased within one year of the delivery of the vehicle. Pricing shown in this brochure is applicable to Extended Transmission Coverage purchased in 2019.

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

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

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

### Extended Transmission Coverage

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

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

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

\* See Warranty Parchment for exact coverage details.

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

## HOL-MAC CORPORATION WARRANTY POLICY

Hol-Mac Corp. (Pac-Mac ®) warrants each Hol-Mac product it manufactures and each new part and component sold by Hol-Mac to be free of defects in material and workmanship, provided the parts and components are operated and maintained in accordance with Hol-Mac published operating and maintenance instructions applicable thereto. This warranty is subject to the terms and conditions stated below.

**Warrantor:** This warranty is granted by Hol-Mac Corporation, P.O. Box 349, Bay Springs, Mississippi 39422. All warranty work must be accomplished by Hol-Mac at its factory in Bay Springs, Mississippi, or by such other facility specifically authorized by Hol-Mac. All warranty work performed by a facility other than Hol-Mac must be approved by Hol-Mac in writing prior to commencement of said work.

**Duration of Warranty:** The time periods applicable to the warranty of the specified component parts of the Hol-Mac products are as follows:

Major Structural Component Parts – 1 year  
Non-Hydraulic Replacement Parts – 1 year

**Exclusion and Disclaimers:** This warranty does not extend to normal maintenance services such as cleaning, greasing, mechanical adjustments and maintenance inspections or to any defect due to the negligence of others, failure to operate or maintain the product in accordance with the published operating and maintenance instructions furnished by Hol-Mac, unreasonable use, accidents, alterations or wear and tear. Hol-Mac also reserves the right to make changes in the design or material of its products without incurring obligation to incorporate such changes in any product previously manufactured.

**Procedure for Obtaining Performance Under this Warranty:** In order to qualify under this warranty, the owner must notify Hol-Mac within (45) days of discovery of the defect and promptly deliver the entire product or defective part to Hol-Mac at its factory in Bay Springs, MS, or if requested by Hol-Mac to such other authorized facility designated by Hol-Mac. Upon receipt of such product, part or component, if it is found not to be defective in material or workmanship, Hol-Mac shall notify the owner of such fact and request instructions for the return of such product, part or component to the owner. All costs of transporting Hol-Mac products to and from the Hol-Mac factory, or such other authorized facility designated by Hol-Mac, shall be paid by the owner.

[NO OTHER WARRANTY, WHETHER OF FITNESS OR OTHERWISE, EXPRESSED OR IMPLIED, IN FACT OR BY LAW, IS GIVEN BY HOL-MAC WITH RESPECT TO ANY NEW PRODUCT, PART OR COMPONENT, OR WITH RESPECT TO ANY WORK AND NO OTHER OR FURTHER OBLIGATION OR LIABILITY SHALL BE INCURRED BY HOL-MAC BY REASON OF THE MANUFACTURE, SALE, OR LEASE OF ANY PRODUCT, PART, OR COMPONENT OR OF ITS USE, WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE OF MANUFACTURE OR OTHERWISE.]