



## NORTH CAROLINA SHERIFFS' ASSOCIATION

<b>Name of Dealership</b>	<b>Type of Vehicle</b>	<b>Zone</b>	<b>Base Unit Price</b>
<a href="#"><u>MACK - MRU633 – (6X4 – NATURAL GAS – FRONT LOADER, REAR LOADER, SIDE LOADER, ROLL-OFF, KNUCKLEBOOM, HOOK LIFT) (Specification #39)</u></a>			
Transource, Inc.	2017 Mack MRU633	★Appalachia	\$127,902.09
Transource, Inc.	2017 Mack MRU633	★Dogwood	\$127,902.09
Transource, Inc.	2017 Mack MRU633	★Cardinal	\$127,902.09
Transource, Inc.	2017 Mack MRU633	★Longleaf Pine	\$127,902.09



## **NORTH CAROLINA SHERIFFS' ASSOCIATION**

### **MACK - MRU633 – (6X4 – NATURAL GAS – FRONT LOADER, REAR LOADER, SIDE LOADER, ROLL-OFF, KNUCKLEBOOM, HOOK LIFT) SPECIFICATION #39**

2017 Mack MRU633

**ALL ITEMS FACTORY INSTALLED UNLESS OTHERWISE INDICATED**

**INSTRUCTIONS:** Listed above, you will find the model numbers of the vehicles that will be included in this year's contract.

#### **1. CUSTOMER/VEHICLE INFO**

- a. Price Book Level - 2008-10-07
- b. Chassis (Base Model) - MRU633 R (9L CNG) - 6x4 DayCab
- c. Customer Fleet Size - Dealer Fleet with less than 25 vehicles in own fleet of any vehicle brand
- d. Type Of Service - Municipal
- e. Initial Registration Location - Any state EXC. Calif or Hawaii (US14)
- f. Language-Pubs/Decal/Signs - English
- g. Vehicle Application Class - Class B Highway-Inner City
- h. Vehicle use & Body/Trailer Type - Refuse front loader
- i. Terrain Grade - Normal Highway, Starting Grades
- j. Loading Surface - Concrete loading and /or unloading surface
- k. Vehicle Vocation - Refuse / landfill operation

#### **2. ENGINE/TRANSMISSIONS**

- a. Engine Package - ISL-G 220 Cummings 220 @ 2200 RPM
- b. Transmission - 4500 RDS 6 SP-Allison rugged duty series GEN 5 w/prognostics
- c. Transmission Electronics - Refuse w/dual input auto-neutral and pban

#### **3. EXHAUST/EMISSIONS**

- a. DPF Diesel Particulate Filter - Without DPF, with vertical RH side BOC-3way catalytic converter (CNG/LNG)
- b. Exhaust - No muffler, single (R/S) vert straight EXH stack plain end, side outlet diffuser, outboard
- c. Exhaust System Material Finish - Standard exhaust system material finishing.
- d. Exhaust Aftertreatment System - 3 way catalytic converter
- e. Regenerat Control Switch, DPF - Without DPF regeneration control switch
- f. Emission On Board DIAG Control - Without emission on board diagnostic

#### **4. ENGINE EQUIPMENT**

- a. Air Cleaner - 15"Single element factory OPT
- b. Air Compressor - Cummins twin 30.4 CFM
- c. Alternator - 12V160A Delco 24SI brush type
- d. Batteries - 3-12V Mack M/F 31 650 CCA threaded Stud type
- e. Cooling Performance - Extra narrow radiator with length1 (60 DM2), 41 DEG C ATB cooling capacity W/O AUX RAD
- f. Coolant Protection - Texaco extended life coolant #7998 W/Nitrites (50/50 MIX) to -34 DEG
- g. Radiator Blind - Winterfront
- h. Coolant Filter / Conditioner - Without filter/conditioner
- i. Engine Block Heater Receptacle (CA) - Engine block heater receptacle, MTD LH side rear or CAB (NYC)
- j. Fan Drive - Horton fan, "ON-OFF" - replaces 1181010

- k. Engine Brake - W/O ENG BRK
- l. Fuel-Water Separator - Cummins CNG coalescing fuel filter stanchion MTD on frame
- m. Fuel Equipment Water Heater (CA) - Fuel equipment, heater for the CNG supply regulator
- n. Battery Box-Mounting - Single box 3 batt perp, to frame 11" from NTOF
- o. Battery Box Cover - Basic battery box cover
- p. Battery Disconnect Switch - Without battery disconnect switch
- q. Emergency Start Studs - Without emergency start studs
- r. Hoses- Radiator/Heater - Silicone
- s. Tether DEV PKG, CAPS & Covers - Tether PK2 Batt box cover
- t. Engine Block Heater - 120 volt / 1.0 kw, cummins engine block heater
- u. Battery Shock Pads - Without battery shock pads
- v. Smart Idle Elevated Idle RPM Time - Increase 10 minutes maximum time

#### 5. CLUTCH/TRANS EQUIPMENT

- a. Driveline-Main - Meritor 18 MXL "xtended lube"
- b. Driveline-Interaxle - Meritor 17 MXL "xtended lube"
- c. Lubricants, Transmission - Transynd synthetic auto trans fluid
- d. Transmission Oil Cooler - Remote MTD oil cooler furnish for Allison transmission
- e. Prop Shaft Bearing Guard - Without prop shaft bearing guard
- f. Propeller Shaft Main, Unvsl JNT - Propeller shaft main, universal joint half-round type
- g. Prop Shaft Interaxl Univ Joint - Prop shaft interaxle, univ joint half-round type
- h. Transmission Torque Converter - Furnish-TC521 for use w/Allison (HD,RDS) transmission
- i. Transmission Protection - Without transmission protection
- j. Engine Smart Torque Feature - Engine smart torque feature, disabled

#### 6. FRONT AXLE EQUIPMENT/TIRES

- a. Front Axle - FXL 18 18000 LB-Mack 8200KG
- b. Spring-Front - 18,000 LB taperleaf 8200 KG
- c. Brake, Front - Cast iron brakedrum, front axle
- d. Front Axle Brakes - Bendix ES-165-06D 16.5 x 6 cast spider
- e. Front Axle Brake Dust Shield - Front brakes without dust shields
- f. Front Brake ADJ. Manufacture - Front brake adjustment, automatic haldex
- g. Front Brake Chamber MFG. - Front brake chamber manufacturer, MGM
- h. Brake lining Material Front - Brake lining material front, Eaton ES-600
- i. Hub Material, Front - Basic material hub (steel/cast iron), front
- j. Shock Absorber, Front - Without shock absorber, front
- k. Steering - XD120 Sheppard-Power
- l. Bump Stop, Front Suspension - Without bump stop, front suspension
- m. Front Brake Chamber Size - Front brake chamber 24SQ inches (service)

#### 7. REAR AXLE EQUIPMENT/TIRES

- a. Rear Axle-Tandem - S38"R" 38000LB-Mack 17200KG FAB HSNG
- b. Rear Axle Casing Width (CA) - Rear axle casing width, standard
- c. Lube Pump, Rear, Axle - Without lube pump, rear axle
- d. Carrier - Rear Axle - CRDP150/151
- e. Rear Axle Ratio - Ratio 3.79, rear axle
- f. Rear Suspension-Tandem - SS38- Mack multileaf
- g. Springs- Anti-Sway - W/O anti-sway
- h. Rear Susp. Beam Busings - Urethane bushings
- i. Bogie Spread, Rear - Bogie Spread, 1270MM (50.0")
- j. Suspension Leveling Devise (CA) Without susp. leveling device
- k. Rear Shock Absorber - Without shock absorber, rear
- l. Transverse Torque Rods, R Susp - Without rear suspension transverse torque rod
- m. Brakes-Rear - Bendix ES 165-07D 16.5x7 cast spider
- n. Brake Drums/Rotors-Rear - Cast iron brake drums
- o. Rear Brake ADJ Manufacture - Rear brake adjustment, automatic haldex
- p. Rear Brake Chamber Size - Rear brake chamber 30 / 30 SQ inches (service/emergency)
- q. Drive Axle Brake Dust Shield - Rear drive brakes without dustshields
- r. Brake Lining Material Drive - Brake lining material drive, Eaton EES-600
- s. HUB Material, Drive - Iron preset HUB, W/ integrated spindle nut

- t. HUB Oil Seal, Drive - Premium HUB seal, drive
- u. Power Divider Lockout - Without power divider
- v. Lubricants, Rear Axle - Petroleum oil in rear axle
- w. Rear Spring Insulator Mat'L - Rear spring insulator, rubber
- x. Spring Brake Chambers-Vendor - MGM Model TR-T; tamper-resistant brake chambers
- y. Traction Differential - W/O intr-whl/diffrentl optns
- a`. Spindle Nuts, Main Axle - Spindle nuts, main axle, ingergrated
- aa. ABS Sensor & Modulator - ABS 4 sensors & 4 modulators (front & rear axles)
- ab. Brake Chmbr Diaphragm Material - Brake chamber diaphragm, basic
- ac. Anti-Lock Brake System - Bendix KB (Eaton/Bosch)ABS
- ad. Axle alignment (CA) - Axle alignment, chassis report, send to customer

#### 8. PUSHER/TAG EQUIPMENT/TIRES

- a. Option Center Support - W/O option center support

#### 9. FRAME EQUIPMENT/FUEL TANKS

- a. Wheel Base - 210"
- b. AF (Overhang) 96"
- c. Frame Rails - Steel-5/16" X 13 1/4" X 3 1/4"
- d. Frame Inner Liner - Without liner
- e. Front Frame Ext. (Bolted On) - Without front frame extension, bolted on
- f. Crossmembers - STL-1/2"Pl bolted BOC & intrmdt 1/8" BELO rail, GR5 BB, 1st xmbr boc rr 38. 17" from a line
- g. Frame Rail Free Space - Without frame rail clearance
- h. Rear Crossmember Options - Rear crossmember, straight frame end (Basic)
- i. Mudflap, Front Axle - Mudflap, front axle, basic (no anti-spray) short
- j. Front Bumper - Bumper, steel painted extended, including central tow-pin
- k. Guard, Under Engine BAYT - Without guard
- l. AUX Crossm. In Rear Overhang - Without Auxiliary Crossmember in Rear Overhang
- m. Crossmember, Bogie Type - Without crossmember, bogie
- n. Towing Device, Front - One pin towing device, front
- o. Towing Device, Rear - Without towing devices, rear
- p. Fuel Hoses, Liquid - Fuel hoses, high pressure
- q. Fuel Tank Position Liquid - Fuel tank position basic

#### 10. AIR/BRAKE

- a. Air Dryer Manufacturer - Wabco air dryer, 1800P with coalescing oil filter
- b. Airtank Drain Valve - Petcock drain valve, on brake sys tanks
- c. Airtank Material - Steel airtank
- d. Body Builder, Air Prep Kit - Without body builder air prepkit
- e. Air Dryer Position (CA) - Air dryer position standard
- f. Parking Brake Valve - Parking brake valve, 1 yellow knob, all parking
- g. Chassis Packaging (CA) - Without customer specified chassis packaging
- h. Auxiliary Airtank - Without aux, airtank

#### 11. ELECTRICAL

- a. Parking Brake Lighting - Without parking brake lighting
- b. Back-up Alarm - Without back-up alarm
- c. Aux, Power Outlet, Interior - Aux power outlet, 12V doghouse
- d. Headlight Lamp Type - Headlamp bulb type, halogen
- e. Tail Lamps - Tail lamp, multipurpose
- f. Warning Lights Body - Without warning light body
- g. Front & Side Indicator LMP TYP - Side indicator lamp type basic
- h. Daytime Running Lights - DRL when parking brake off

#### 12. TRAILER RCONNECTIONS

- a. Without exterior indicator lamp, main switch
- b. Trailer Connection Position (CA) - Without trailer connection position
- c. Trailer Brake Valve - Without trailer brake valve

#### 13. PTO/SPECIALTY EQUIPMENT

- a. Additional Electrical Schematic - Without additional electrical schematic
- b. Hydraulic Pump - W/O hydraulic pump
- c. Prop Shaft, Main To AUX Transm (CA) - Without prop shaft from main to aux transmission
- d. Certified Weight - Customer guaranteed weight, must be certified weight
- e. Rust Protection, Additional, (CA) - Without transp, rustprotection
- f. Transport Adaptation - Uniform load no adaptation
- g. PTO Engine Mounted, Rear - Without PTO engine rear
- h. Power Take Off Control - Without power rake off control
- i. Crankshaft Adapter - W/O front end PTO drive
- j. Body Builder PREP Pass Through - Without body builder prep.
- k. Body Builder Module - EL Prop kit, refuse (no pass thru, 9 & 29 Pin BOC), CTRL LINK2
- l. Unique Decals machine Directiv (CA) - Without decals
- m. PTO Transm. Mounted - Without PTO transm. Mounted

#### 14. CAB (A THRU G)

- a. Air Restriction Indicator - Mechanical, graduated, on filter
- b. Antenna, Radio - Antenna, radio, roof center front MTD, short rubber
- c. Antenna, Radio Control (CA) - Without antenna, radio control
- d. Audio Shutoff - Without automatic audio shutoff
- e. Blind Spot Vision SYS. Rear - Without prop kit for camera
- f. CAB - CA531
- g. CAB Auxiliary Fan (CA) - Without CAB auxiliary fan
- h. CAB Door Options - MR LH & RH sliding windows
- i. CAB Grab Handle - CAB grab handles, outer and inner, basic
- j. CAB A/C Unit - Manual controlled climate control air condition
- k. CAB Heater Unit - Without heater unit
- l. CAB Instep Version - CAB step version basic
- m. CAB Tilt Pump - Manual tilt pump
- n. CAB Step Panel Protection - Without CAB step panel protection
- o. Center Controle Console - Center console, basic
- p. Emblems Option - Emblems option, complete
- q. Fire Extinguisher (CA) W/O fire extinguisher option
- r. Forward Overhead Storage - Forward overhead STG, 2 radio shelf, driver side
- s. Front Grille - Painted grille (painted frame) silver
- t. Fuel Level Sender Unit, Liquid - Without liquid fuel level sender unit
- u. Gauge-Transmission Oil Temp - Transmission oil temp, gauge with high temp.
- v. Gauges-Unit Of Measure - U.S. Units (Predominant)
- w. Gearshift Inhibitor - Without gear shift inhibitor
- x. Number Of Auxiliary Gauges - Without auxiliary gauges
- y. Odometer - No hubodometer provided
- a`. Radio/Radio Accommodation - Premium stereo, AM/FM, cd-player, mp3, weather band

#### 15. CAB (H THRU R)

- a. Horn-Air - Black twin trumpet, under cab mounted
- b. Horn, Electrical - 1 single electric horn single tone
- c. Ignition Type - Ignition type, key
- d. Key Alike Chassis - All chassis keyed at random-2 keys
- e. Mirrors-Convex Type CAB Doors - W/O convex mirror
- f. Mirrors-Exterior - Bulldog-BR Fin
- g. Mirrors-proximity - Without proximity mirror
- h. Personalized Name Plate - Without personalized name plate
- i. Power Leads - Power lead, plug type, headliner MTD
- j. Roof Market Light - Standard type

#### 16. CAB (S THRU Z)

- a. Seat-Driver's - Air-Bostrom Talladega 905 series (mid back)
- b. Seat- Passenger's - Fixed-Mack (mid-back)
- c. Seat Belt(s) - Lap & shoulder (both seats) (not available with extended rider seat)
- d. Seat Covering - All cloth, black, driver & rider sears
- e. Steering Wheel - Diameter 450mm steering wheel, rubber grip V1

- f. Time Counter (CA) - Without time counter
- g. Windshield Protector - Without windsheild protector
- h. Windscreen WND Deflector - Without windscreen wind deflector

#### 17. WHEELS & TIRES

- a. Tires Brand/Type-Front - 11R22.5 H Bridgestone R283A Ecopoia (total for QTY=2)
- b. Tire Speed Limit - Tire speed limit basic
- c. Wheels-Front - 22.5 X 8.25 steel disc 11.25BC Hayes Lemmerz #90260;HP10 2 hand hole, hvy dty (6.12"INST) (total for qty = 2)
- d. Wheel Finishing, Front - Without wheel finishing front
- e. Front Axle Tire & Wheel Quantity - Two front tires & wheels
- f. Tires Brand/Type-Rear - 11R22.5 G Bridgestone R268 Ecopia (total for qty = 8)
- g. Wheels-Rear - 22.5 X 8.25 STL disc unimnt 10 Hayes Lemmerz #90541 2 hand hole WGT reduced (total for qty = 8)
- h. Rear Wheel Rim Clamp - Without rear wheel rim clamp
- i. Rear Disk Wheel:Polish - W/O RR disc whl-bright finish
- j. Rear Axle tire & Wheel Quantity - Eight rear axle tires & wheels
- k. Hub/Wheel Isolator Drive - Without hub/wheel isolator drive
- l. Wheel Nut & Finisher, Front - Wheel nut & finish basic, front
- m. Wheel Nut Finish, rear, (CA) - Wheel nut basic finish, rear
- n. Tire Inflation Valve - Tire inflation valve, standard
- o. Spare Wheel - Without spare wheel

#### 18. PAINT

- a. Paint/Vinyl Stripping - CAB Exterior - Single color
- b. Paint Color - Area A - Mack white 08282PP: P9188
- c. Paint Type - Solid paint
- d. Paint: Color-Area B - W/O area B paint color
- e. Paint: Color-Area C - W/O area C paint color
- f. Paint-CAB Paint System - Poly through coat w/o clear coat
- g. Paint-CAB Interior - W/O special CAB interior paint (paint exterior color)
- h. Paint-Chassis Runner Gear - Mack black: P3036
- i. Paint: Bumper - Paint bumper same color as Chassis running gear
- j. Paint: Fuel Tank - W/O optional fuel tank paint
- k. Front Wheel Paint - Front wheel powder coat, white
- l. Drive Wheel Paint - Drive wheel powder coat, white
- m. Paint: Disc Wheels-Front - Without paint
- n. Paint: Disc Wheels-Rear - Without paint
- o. Paint:Demount.Rims-Front - Without paint
- p. Paint:Demount. Rims-Rear - Without paint
- q. Paint:Spoke Wheels-Front - W/O optional spoke wheel paint
- r. Paint:Spoke Wheels-rear - W/O optional spoke wheel paint
- s. Paint-Hubs & Drums-Front - Same as Chassis running gear
- t. Paint: HUBS & Drums-Rear - Same as Chassis running gear

#### 19. APPLICATION PACKAGES

- a. Pilot Inspection - No Pilot Requested



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#### **2017 Mack MRU633**

The Mack MRU633 purchased through this contract comes with all the standard equipment as specified by the manufacturer for this model and NCSA's base vehicle specification(s) requirements which are included and made a part of this contract's vehicle base price as awarded by specification by zone.

ZONE:	★Appalachia	★Dogwood	★Cardinal	★Longleaf Pine
BASE PRICE:	\$127,902.09	\$127,902.09	\$127,902.09	\$127,902.09

While the North Carolina Sheriffs' Association has attempted to identify and include those equipment items most often requested by participating agencies for full size vehicles, we realize equipment needs and preferences are going to vary from agency to agency. In an effort to incorporate flexibility into our program, we have created specific add/delete options which allow the purchaser to tailor the vehicle to their particular wants or needs.

The following equipment delete and add options and their related cost are provided here to assist you in approximating the total cost of the type vehicle(s) you wish to order through this program. Simply deduct the cost of any of the following equipment items you wish deleted from the base unit cost and/or add the cost of any equipment items you wish added to the base unit cost to determine the approximate cost of the type vehicle(s) you wish to order.

NOTE: An official listing of all add/delete options and their prices should be obtained from the appropriate dealer in your zone when preparing your order. Additional add/delete options other than those listed here may be available through the dealers, however, those listed here must be honored by the dealers in your zone at the stated prices.

<b>VEHICLE:</b>	MRU633			
<b>DEALER:</b>	Transource, Inc.	Transource, Inc.	Transource, Inc.	Transource, Inc.
<b>ZONE:</b>	★ Appalachia	★ Dogwood	★ Cardinal	★ Longleaf Pine
<b>BASE PRICE:</b>	\$127,902.09	\$127,902.09	\$127,902.09	\$127,902.09

Order Code	Add Options	All Zones
	MP7-365HP	NA
	MP8-455HP	NA
	Mack T318-18 Speed	NA
	Allison 4500 5spd	NA
	50 gallon single tank	NA
	Dual 50 gallon tanks	NA
	Spicer-18 MXL "Xtended Lube	Incl.
	MACK FXL 14,600 LB	NA
	14,600 LB Leaf Spring	NA
	Meritor-40,000 LB	NA
	Mack- 40,000 lb multileaf	NA
	198" WB	NC
271205 <sup>1</sup>	205" WB	\$177.00 <sup>1</sup>
241OL1 <sup>1</sup>	Mack Air Disc Brakes	\$643.50 <sup>1</sup>
253AB3 <sup>1</sup>	Mack Air Disc Brakes	\$2,394.00 <sup>1</sup>