

# TRAM / 6 PASS.



## WARNING

This manual is for the exclusive use of dealers accredited by Motrec International Inc. and should not be considered an official document constituting any kind of guarantee for the end user. All information and data are subject to change without notice. All photos contained in this document are for illustrative purposes only and may include non-applicable options.

### PARTS:

It is recommended that part numbers be confirmed with Motrec International Inc. before ordering by providing the serial number of the vehicle requiring the part. In some cases, the part installed on the vehicle may differ from the manual depending on the options chosen.

Publication date:

**July 1, 2015**

Edition for vehicles with  
a serial number higher than:

**1116741**

For additional information,  
please contact our customer service:

### MOTREC INTERNATIONAL INC.

200 Des PME Street  
Sherbrooke, Quebec J1C 0R2  
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## AVERTISSEMENT

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### PIÈCES:

Il est recommandé de valider les numéros de pièces avec Motrec International Inc. avant de commander, en fournissant le numéro de série du véhicule pour lequel la pièce est requise. Dans certains cas, il est possible que la pièce installée sur le véhicule diffère du manuel en fonction des options choisies.

Date de publication:

**1<sup>er</sup> juillet 2015**

Édition destinée aux véhicules ayant  
un numéro de série supérieur à:

**1116741**

Pour toutes informations additionnelles,  
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# MOTREC

## TRAM 6 PASSENGERS



**OPERATOR AND MAINTENANCE MANUAL  
SPARE PARTS LISTS INCLUDED**

SERIAL NUMBER : 1116741 & UP

Printed in Canada

## **One Year Limited Warranty**

Effective April 25, 2005, Motrec International Inc. (MOTREC) hereby warrants to the Original Retail Purchaser (Owner) that any of its vehicles shall be free from any defect in materials for a period of 90 DAYS while in the possession of such Original Retail Purchaser. This warranty IS NOT TRANSFERABLE to any subsequent Buyer.

The warranty period is extended to one year or one thousand (1,000) hours, which ever first occurs, on the electric motor, differential (parts that bathe in oil) and the electronic speed controller. MOTREC makes no warranty or representation with respect to the internal combustion engine, tires and batteries, since their respective manufacturers cover such parts. Accessories (light, gage, horn, etc), electrical contacts (switch, solenoid, contactor, relay), diodes & fuses, belts & pulleys, filters & spark plugs, lubricants, brake linings & shoes, brake drums & discs, seals, seats, trim and other items subject to wear are not included in this warranty; nor is any item that in MOTREC sole opinion, shows evidence of neglect, misuse, abuse, collision or alteration.

This warranty shall not apply to normal maintenance requirements as described in the User Manual, and to damages during shipment. The latter is the carrier's responsibility. No compensation will be allowed for delays.

To initiate warranty coverage on any MOTREC vehicle, the Dealer must complete and return the "Sales/Installation Report" to MOTREC within 30 days after delivery to the Original Retail Purchaser; or within 90 days after the delivery date to the Dealer, which ever occurs first. Failure to follow these procedures will result in considering the warranty coverage effective as of the shipment date from the factory.

The defective vehicle must be returned, at the Owner's expense, to an authorised MOTREC Dealer within 30 days after failure. The Owner will not be charged for parts and labour required for warranty repairs, which must be performed by an authorised MOTREC Dealer only. The vehicle will be returned at the owner's expense. The Warranty Claim Forms must be completed and returned with the defective part(s) to MOTREC within 30 days after repair was done. No compensation will be allowed for damages caused by vehicle downtime.

It is the responsibility of the owner of the vehicle to make sure that the driver is properly trained and instructed in the safety features and operation of the vehicle, including vehicle stability, as required by OSHA and ANSI-B56. Operators shall read, understand and follow the safety and operating instructions in MOTREC Manual before driving the vehicle. Operators shall not be permitted to drive the vehicle unless a complete and adequate training has been provided. Driving a vehicle constitutes a hazard. The driver is responsible for the control of the vehicle while driving and must always evaluate and care for all peculiar situations that he or she may meet while driving. The driver assumes the inherent hazards related to this activity. The vehicle is designed for off-road use only. MOTREC disclaims any liability for incidental or consequential damages, to include, but not be limited to, personal injury or property damage arising from vehicle misuse, lack of maintenance or any defect in the vehicle.

It is the responsibility of the Owner of the vehicle to make sure that the service technicians are properly trained as required by OSHA and ANSI-B56. Service technicians shall read, understand and follow instructions in the MOTREC manual before servicing the vehicle. Only qualified and authorized personnel shall be permitted to maintain, repair, adjust and inspect the vehicle.

MOTREC prohibits, and disclaims responsibility for, any vehicle modification altering the weight distribution and stability, increasing the speed or affecting the safety of the vehicle. Such modifications can cause serious personal injury or property damage for which MOTREC disclaims any responsibility.

For Owners that are located outside North America, the warranty period starts the date of shipment from the factory, and the defective parts must be returned at the Owner's expense to MOTREC prior to warranty repair.

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**INSTRUCTIONS**

## **SAFETY WARNINGS FOR OPERATORS**

- FAILURE TO OBEY THE FOLLOWING SAFETY RULES MAY RESULT IN SEVERE INJURY.
- It is the responsibility of the owner of this vehicle to train operators to ensure that they understand the operating characteristics of this vehicle, including training in vehicle stability, and obey the following safety rules and guidelines. Owner shall comply with OSHA and ANSI/ITSDF B56.8 & B56.9 Standards for vehicle use, safety rules, operator training and certification. Do not drive this vehicle unless you are a qualified operator.
- Do not drive this vehicle under the influence of drugs or alcohol.
- Do not drive this vehicle on public roads and highways. This vehicle is designed to be driven in buildings.
- The electrical system of this vehicle will make sparks which can ignite inflammable materials. Never use the vehicle in hazardous areas where there are inflammable materials, explosive dust or fumes in the air.
- Have your vehicle inspected regularly by trained personnel, and cease operation if a malfunction occurs.
- Do not open battery compartment to prevent battery explosion, acid splashing, severe damage to eyes or skin.
- Do not open motor compartment. Keep clear from moving, rotating(wheels, sheaves, etc) or lifting parts.
- Never carry more passengers than number allowed for this vehicle. Wait until all occupants are seated and holding on before moving. Always keep all body parts inside vehicle. Keep both hands on steering wheel.
- Do not exceed the vehicle cargo load capacity and gross trailing weight capacity, rated for flat hard even surface. Different operating conditions such as loose terrain or ramps reduce vehicle capacity.
- Avoid loose, unbalanced or top-heavy loads to keep a good stability and prevent overturn. Do not load cargo that can fall off the vehicle. Do not carry cargo that is longer, wider or higher than this vehicle.
- Always depress slowly the accelerator for smooth acceleration. Avoid stunt driving or horseplay.
- Avoid sharp turns, always slow down before turning, to prevent vehicle overturn or trailer jack knife. Vehicle is more sensitive to overturn and jack knife when traveling on inclines or when carrying a heavy load.
- Always drive straight up and down the face of an incline, never across the face, to prevent overturn and trailer jack knife. Drive slower and start applying brakes sooner on inclines to adjust for longer stopping distance.
- Use extra care and drive slowly in reverse, in congested areas or on wet or slippery ground.
- Keep to the right under normal conditions. Maintain a safe distance from all objects.
- Slow down and sound the horn when approaching a corner or other blind intersections.
- Before leaving the vehicle, park on a level ground flat surface, turn off all switches, set the forward/reverse switch to neutral, set the parking brake, remove the key. Do not park the vehicle on an incline.
- Before battery charging, park the vehicle in a well ventilated area set for. Do not operate it when charging. To interrupt a charging cycle, disconnect the AC plug; disconnecting the DC plug or a battery terminal, or operating the vehicle, could damage the charger and produce a spark, battery explosion and acid splashing.
- Use another driver to steer this vehicle while it is towed. Be sure the driver uses brakes when you slow or stop the towing vehicle. Do not exceed 5 MPH or carry any passenger while towing this vehicle.

**MAINTENANCE**

## **SAFETY WARNINGS FOR SERVICE TECHNICIANS**

FAILURE TO OBEY THE FOLLOWING SAFETY RULES MAIN RESULT IN SEVERE INJURY.

Owner shall comply with OSHA and ANSI/ITSDF B56.8 & B56.9 Standards for vehicle maintenance.

Only qualified and authorized personnel shall be permitted to maintain, repair, adjust and inspect carriers, vehicles, tractors, and batteries.

Before any maintenance work, park the vehicle on flat level surface, turn off all switches, remove key, lift wheels off the ground and secure with jack stands of adequate capacity. Don't connect charger.

Keep clear from moving parts such as tires, sheaves and motor.

Follow the maintenance instructions applicable to the type of repair, maintenance, or service.

Always wear a face shield and gloves when working around batteries.

Before opening the battery compartment, disconnect the charger, turn off all switches and remove the key. Batteries emit highly explosive gases which greatly increase when charging; do not disturb connections or produce sparks around batteries to avoid a battery explosion and acid splashing. Battery acid causes severe damage to eyes or skin. Flush contaminated area immediately with water.

Use insulated tools to avoid sparks that can cause battery explosion and acid splashing.

Use two counteracting tools, double-wrench technique, when disconnecting or tightening terminals on the battery and the speed controller to avoid cracking the terminal or battery post welds.

Before cleaning or replacing a battery, charger, speed controller, contactor, relay, diode, or any other component in the power circuit, always disconnect the charger, turn off all switches, remove the key, wear a face shield and gloves, identify battery polarity and disconnect battery leads, discharge the capacitor in the controller with a 10 ohms, 25 W resistor for a few seconds across B+ and B-.

After cleaning, the power must not be reapplied until terminal areas are thoroughly dry.

On EE-Rated vehicles make sure that the control box is sealed, the static strap makes good contact with the ground, the motor is sealed by bands, the cable protectors are properly installed.

Keep cables and wires clear from mechanical and rubbing action. Make sure that cable insulation is free from cutting or visible damage. Make sure that EE-Rated cable protectors are properly installed.

Before replacing a fuse or circuit breaker, identify the cause of failure and repair.

Programmable controllers must be programmed using the parameter settings in this service manual, before connecting the motor, to avoid sudden vehicle movement and accident.



Do not try to increase motor speed by changing parameter settings in the speed controller; it can cause accident and severe damage to the motor.

SEPEX speed controls are protected by a diode in the power circuit to filter inductive loads in the event of a sudden power interrupt. Some speed controllers require a diode to filter inductive loads on the KSI input. Removing the diodes will cause the speed control failure.

Before resuming maintenance operations, inspect safety warnings stickers and replace any if damage is found and part of the text can't be read.

Check decals and labels, see "DECAL AND LABELS" page.

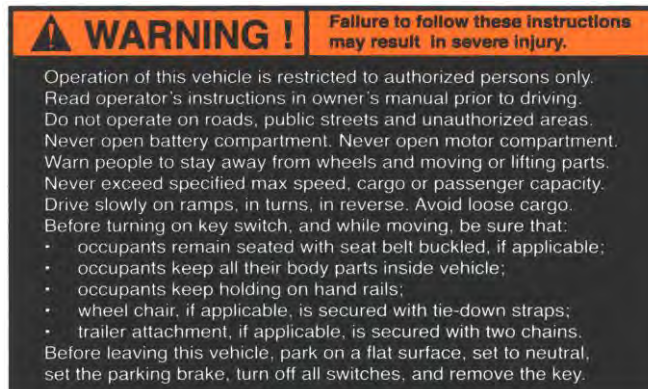
## **DECALS AND LABELS**

### **! CAUTION !**

The images included in this section depict the decals/markings installed on the vehicle. It is of the utmost importance that these decals/markings remain unaltered and readable. Else, the sticker or the part bearing the marking has to be replaced.

Dashboard general security warning label:

# 5100000001



## **PERIODIC MAINTENANCE CHECKLIST**

### **! WARNING !**

Maintenance operations must be made by properly trained service technicians.

- Keep clear from moving parts such as tires.
- Keep cables and wires clear from mechanical and rubbing action
- Before any maintenance work, park the vehicle on a flat level surface and block the wheels.

<b>CHECK/PERFORM</b>	<b>PERIOD HOURS</b>	<b>DAY</b>	<b>WEEK 20</b>	<b>MONTH 50</b>	<b>QUART. 200</b>	<b>YEAR 1000</b>	<b>2 YEARS 2000</b>
MECHANICAL DAMAGE		<b>X</b>					
TIRE PRESSURE, pressure rating on tire					<b>X</b>		
WARNING DECALS & MARKINGS					<b>X</b>		
STEERING FOR PLAY					<b>X</b>		
HYDR. BRAKE LINES FOR LEAK					<b>X</b>		
TONG WEAR (tow hole, rear pivot)					<b>X</b>		
STEERING LINKAGES					<b>X</b>		
LUBRICATE (GREASE EP-2) steering pivots, ball joints and kingpins.					<b>X</b>		
WHEEL BEARINGS PLAY					<b>X</b>		
TIGHTEN NUTS/BOLTS					<b>X</b>		
CLEAN AND RE-PACK HUBS						<b>X</b>	

## **FRONT AND REAR AXLE**

### **! CAUTION !**

Before maintenance, secure the vehicle from moving, block the wheel (left & right) opposite of the axle you will work on and raise the vehicle supporting it with two jack stands of adequate capacity

### **STEERING INSPECTION**

- Check tire inflation pressure, suspension components, tie rods straightness, tie rod ends play (wear), play (wear) in wheel bearings, kingpins and bushings.

### **TOE-IN ADJUSTEMENT**

- With the wheels in straight forward direction, measure the inside (left to right) distance between the front tires, at the front and rear of the tires;
- Turn the rear tie rod until the distances are equal and tighten the two lock nuts on the tie rod.

### **REMOVING & GREASING OF FRONT HUBS, required once-a-year**

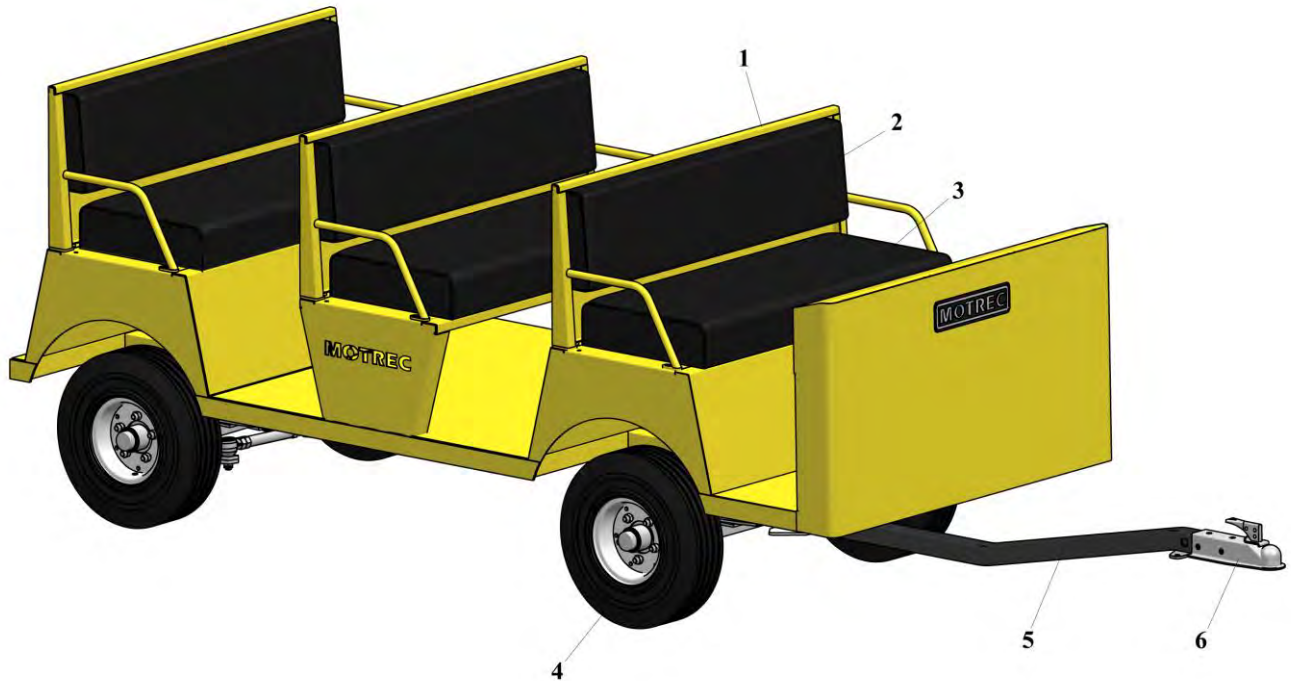
- Remove dust cap and cutter pin, unscrew nut, remove hub;
- Inspect bearings and races for wear and replace worn bearings;
- Replace the seal;
- Pack the hub with wheel bearing grease and re-assemble.

### **ADJUSTING FRONT HUBS**

- Tighten spindle nut to 30 ft-lb to seat the bearing and back off the nut to the next slot;
- Install a new cutter pin and the dust cap.

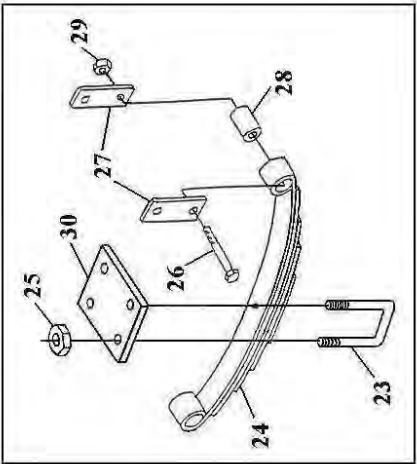
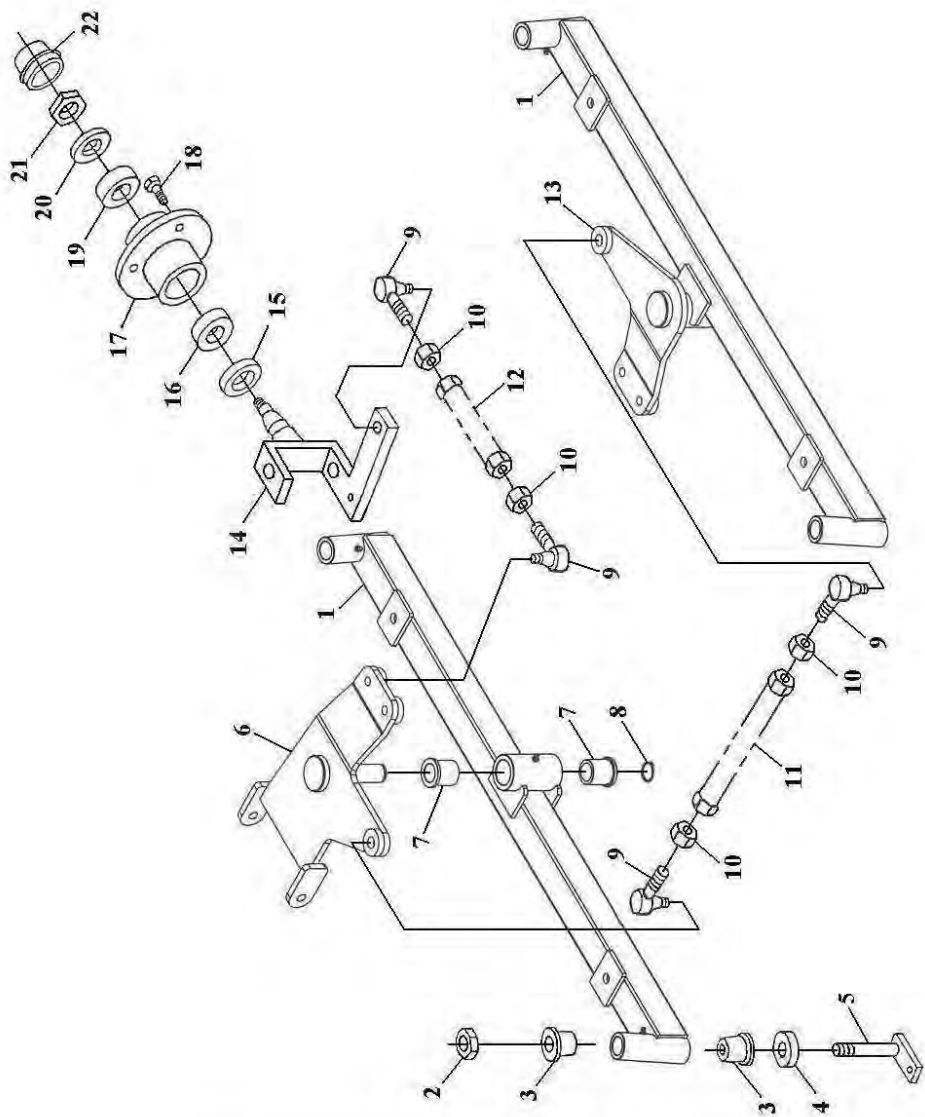
**SPARE PARTS**

## TRAILER BODY, 6 PASSENGERS



<i>REF.</i>	<i>PART NO</i>	<i>DESCRIPTION</i>
1	2384320095	STEEL BACKREST
2	23823200	BACKREST CUSHION ( COLOR BLACK)
3	2383320002	SEAT CUSHION (COLOR BLACK)
4	300022	5.7 X 8 L.R.D WHEEL ASS
	300026W	SOLID GRAY NONE-MARKING 18"OD, LUG
	300026RIB	SOLID GRAY NONE-MARKING 18"OD, RID
	2450001	STATIC STRAP
5	2219060001	TONG
6	2329000005	2" TRAILER COUPLER

**TRAILER, FRONT & REAR AXLE**



<i><b>REF</b></i>	<i><b>PART NO</b></i>	<i><b>DESCRIPTION</b></i>
<b>1</b>	2201060001	AXLE BEAM
<b>2</b>	2910300001	NUT 3/4-NF
<b>3</b>	2914364001	BUSHING
<b>4</b>	2103250001	THRUST BEARING
<b>5</b>	2205250001	KING PIN
<b>6</b>	2205110001	FRONT PIVOT
<b>7</b>	2100000002	BUSHING
<b>8</b>	2930000001	SNAP RING
<b>9</b>	2207000001	ROD END, LEFT HAND
	2207000002	ROD END, RIGHT HAND
<b>10</b>	2910000005	NUT, LEFT HAND
	2910000006	NUT, RIGHT HAND
<b>11</b>	2207120001	CENTRAL TIE ROD
<b>12</b>	2207060001	REAR TIE ROD
<b>13</b>	2205110006	REAR PIVOT
<b>14</b>	2201320009	FRONT RIGHT AXLE & REAR LEFT AXLE
	2201110006	FRONT LEFT AXLE & REAR RIGHT AXLE
<b>15</b>	2229300002	OIL SEAL
<b>16</b>	2103300001	TAPER BEARING
<b>17</b>	2224300002	HUB
<b>18</b>	2910000019	WHEEL NUT
<b>19</b>	2103300002	TAPER BEARING
<b>20</b>	2229300003	SPINDLE WASHER
<b>21</b>	2910300002	CASTELLATED NUT
<b>22</b>	2229300001	DUST CAP
<b>23</b>	2916000001	U-BOLT
<b>24</b>	2192280001	LEAF SPRING
<b>25</b>	2910000041	HEAVY NUT 1/2-NF
	2910000042	FLAT WASHER 12mm
<b>26</b>		BOLT 5/8-NC
<b>27</b>	2182320001	SHACKLE LINK
<b>28</b>	2183240002	BUSHING
<b>29</b>		NUT 5/8-NF
<b>30</b>	2185320001	PLATE



## ELECTRICAL DIAGRAM – LIGHTS, WHEELCHAIR LIFT AND HEATER

Trailer plug, 7 wires



VEHICLE 3119480010



	FUNCTION	COLOR
1	GROUND	GRN
2	BRAKE	RED/WHT
3	PARKING	BLU/BLK
4	12V	YEL
5	LEFT TURN	RED/BLK
6	RIGHT TURN	BLK/RED
7	OTHER	VIO



TRAILER 3119480009



2013-09-16

RESP : **MARTIN BEAUMONT**

MODEL(E) :

**7 WIRES TRAILER PLUG**

NO : **ELECTRICAL DIAGRAM FOR TRAILER**

SER : -

TO/À : ...

## MOTREC ILLUSTRATED ACCESSORIES

 <p>Strobe light, pole mount Amber 12-80V: 311600002 Red 12-80V: 2469001 Blue 12-80V: 3690008</p>	 <p>Red Tail/Brake light ** Model EE ** Assembly: 3111000030 Housing: 3111000027 Plug: 3111000029 12V : 3111000028</p>	 <p>Headlight Left: 3111480003 Right: 3111480004 Bulb H/L: 3111480006 Bulb Turn: 3111480008 Bulb Mark: 3111480007</p>	 <p>Red Tail/Brake light 12V: 386002</p>  <p>Red Tail/Turn/Rev light 12V: 3111000002</p>
 <p>Strobe light, cab mount Amber 12-48V: 3116250001 Red 12-48V: 3069026 Blue 12-48V: 3069014 Amber 72-80V: 3116720001 Red 72-80V: 3116720002 Blue 72-80V: 3116720003</p>	 <p>Red Tail/Brake light Housing: 3069012R Bulb 12V: 3117240001</p>	 <p>Headlight Left: 3111480003 Right: 3111480004 Bulb H/L: 3117480001 Bulb Turn: 3117480003 Bulb Mark: 3117480002</p>	 <p>Horn button VIP 2208224002</p>
 <p>Amber turn lamp 12V: 3111000022 Bulb 12V: 3069021 Multi-LED amber turn lamp Round Light: 3111000010 Grommet: 3111000008 Plug: 3111000009</p>	 <p>Back-up lamp Grommet: 3269001 12V: 3669012 24V: 3669012A</p>	 <p>Turn signal switch 246050</p>	 <p>Horn button, column mount 3109000011</p>
 <p>Red Tail/Brake light Grommet: 3269001 Plug: 246012A 12V : 2469021 24V : 2469022</p>	 <p>Clear lamp 12V: 3069012 Bulb 12V: 1269008</p>	 <p>Multi-LED Red Tail/Brake Light: 3111000006 Grommet: 3111000008 Plug: 3119000009</p>	 <p>Horn button, dash mount 266210</p>  <p>Horn button 3109250001</p>
	 <p>Pedestal head lamp 12V: 3111240001 Bulb 12V: 2569001B Bulb 24V: 2169001B</p>	 <p>Multi-LED Back-up Light: 3111000007 Strobe light: 3111000013 Grommet: 3111000008 Plug: 3119000009</p>	 <p>Horn 12V: 246003 24V: 246013</p>

## ADDENDUM / ADDENDA

 <p>Analog Voltmeter 12V : 3069007 24V : 2469002 36-48V : 3669002</p>	 <p>Wiper motor 12V: 3113000001 24V: 486211</p>	 <p>Cab heater 12V: 3103300001 36V: 3669008 48V: 4869020</p>	 <p>Headlamp 12V:3111250007</p>
 <p>HOBBS Gauge 24V: 2469026 36V: 3069038 48V: 4869037</p>	 <p>Wiper arm 2800000001</p>	 <p>12V Dome light 3669006</p>	 <p>Headlamp 12V: 3111300001 Bulb 12V: 3111300002</p>
 <p>DC-DC converter, 10A 12-48V: 3069019</p>	 <p>Wiper blade 14" Blade: 2800000002 18" Blade: 2800000003</p>	 <p>12V Fan 3669013</p>	 <p>Red Pilot light 12V: 246212 Bulb 12V: 246212B</p>
 <p>DC-DC Converter, 25A 12-48V: 3124000002 72-80V: 3124880001</p>	 <p>Pantograph wiper arm 246233A</p>	 <p>Limit switch 3109000029</p>	 <p>Back-up alarm or Motion beeper 12-48V : 3100000001 72-80V : 3105720001</p>
 <p>DC-DC Converter, 300W 24V: 3124224001 36-48V: 3124280001 72-80V: 3124880001</p>	 <p>Pantograph wiper blade 246233</p>		 <p>12-24V Adjustable ECCO: 3100000002</p>  <p>12-48V Adjustable PRECO: 3100000004</p>
 <p>CONNECTOR:3124280002</p>			