

MASCARELLO CARROCERIAS E ÔNIBUS LTDA



MANUAL AND WARRANTY AND MAINTENANCE TERMS

BUS BODIES ROAD, URBAN, MICRO AND MINI MICRO MODELS

This manual was elaborated to give the needed information for the maintenance of your bus. It is important that these information reach the new drivers and the maintenance team.

1. SCOPE OF WARRANTY

MASCARELLO CARROCERIAS E ÔNIBUS LTDA, as a manufacturer, guarantees that this product was produced according to the most rigid quality standards with ISSO 9001 certification.

- a. Mascarello assures that the warranty will be effective to each unit, since the defects are not resulting of the natural wear of the pieces and compounds and that the vehicle is not under abnormal and inappropriate use conditions, accidents of any kind, vandalism acts or third people technical intervention.
- b. The warranty refers to the bus body and its some parts as optional items rendered by Mascarello, chassis parts are not concerned, so warranty comes straight from the chassis manufacturer, according to the chassis manual.
- c. All the warranty requests must be made by the phones: +55 (045) 3219-6141, +55 (045) 3219-6073 and +55 (45) 3219-6124. The information registers will be made by e-mail together with the responsible technician.

OBS.: Any event not provided in this term will be analyzed and decided by MASCARELLO.

2. WARRANTY EXPIRATION DATES

Warranty period	Description
12 months	The painting is guaranteed against possible defects of adherence, shine and resistance, since the cleaning is made with recommended products by the paints SUPPLIER.
36 months	Body structural – 03 years of warranty. (structural breaking)
12 months	Compounds used in the body as in resistance, operation, collage and fixation.
3 months	Electric and pneumatic (pneumatic cylinder repairs). Pneumatic valves repairs, gas cylinder, pneumatic valves in general, electric motors, exhaust fan, heating, defroster, water motor of the windshield. Door screws, door guides, door brushes, pivots and terminals, rubber bearings.

Table 01.

- a. To concede the warranty mentioned in this term, the vehicle must be used in normal conditions, with rigorous observation of MASCARELLO'S project as in maintenance, conservation, stocking and weight.

3. GUARANTEE EXTINCTION

The warranty will end when:

- a. The expiration date showed in table 01 is over.

The structural guarantee will end when:

- a. The structure of the product is repaired or changed outside a Mascarello's authorized.

4. GENERAL CONDITIONS

a. The obligation prevised in this guarantee are limited to the replacement or free repairs by the factory, since the examination is made by the Mascarello's authorized. When performed by the Mascarello's authorized, a technician will identify the damaged piece and will make sure that there is no misuse to, after that, order the replacement of the piece. It is the responsible of the dealership, then, report all the process to Mascarello's factory. The piece to be changed will be labeled and will hold the request or not to send to the factory.

The damage and replaced pieces are property of Mascarello, not implying as a right of extension in the warranty period, nor of the pieces, nor the bus body, not changing the original warranty period.

b. The terms of this warranty are not applicable if Mascarello state inappropriate use, negligence, malpractice or accident, as well as the default or leak of proper maintenance of the bus body.

c. MASCARELLO'S guarantee does not apply to expenses related to immobility of the product, hosting, help and winch, and personal or material damages of the buyer or third, nor loss of profits.

d. To MASCARELLO is reserved the right to realize alterations and improvements in its products, in any time, without incur in the obligation of make the same alterations in the sold products.

5. CARE WITH MAINTENANCE AND CLEANING

It is the owner responsibility to observe the follow recommendations, which serves to prevent damages resultant of the influence of environment in which the vehicle is subject.

External Cleaning

a. Wash the vehicle with the engine off, using water and shampoo or mild soap, proper for cleaning.

b. Wash and dry the vehicle in the shadow.

c. To remove painting stains resultants of signaling paint, asphalt or oil, use kerosene or benzene. After cleaning, we recommended to wash and wax the affected area.

d. To remove the impurities of the inferior part of the vehicle, use hot water and mild soap.

e. It is recommended the application of wax with silicon or similar every 3 months. If during the washing it is observed that the water does accumulate in water drops, the vehicle can be waxed after drying.

Internal Cleaning

- a.** To remove stains of the floor and the internal coating with a moist cloth and detergent or mild soap.
- b.** To clean the upholstered and bag holder with plastic or fabric coating, use water and mild soap. Never use products derived of oil in this cleaning.
- c.** Only in cases where there is the need of remove bubble gum in the upholstered or carpet, scratch and after that, clean with benzene or kerosene, and after that, clean with water and mild soap.
- d.** Clean the rest of the interior of the vehicle with a moist cloth and vacuum cleaner.
- e.** You must not use water jet to wash inside the bus.

IMPORTANT: Especially in the case of urban cars, water jet should not be used inside the bus, avoiding damaging the coating and the appearance of alive cracks, being in discordance with 15570 standard.

When washing the vehicle internally, do not throw water in the electrical equipment, mainly in the electrical center, because the damages caused are irreparable and not passive of guarantee.

Glasses and rubber

It is the owner's responsibility to observe the recommendations below:

- a.** The glasses must be cleaned with alcohol-based products. Missing those, soap-based soapy water can be used, rubbing the glasses with a flannel until they are cleaned.
- b.** Clean the windows channels with a brush, and later, apply a small amount of graffiti powder.
- c.** Clean the rubber trims using a cloth with liquid silicon or a liquid compound of equal parts of alcohol and glycerin.

For better conservation of the bus

It is the owner's responsibility to observe the recommendations below:

- a.** Wash the vehicle from time to time and keep it in a covered place.
- b.** In case the vehicle roads in the coast or in regions where it can suffer with salt or sand action, it is important to wash it completely, with water and mild soap, after its usage.
- c.** Spray the inferior part of the vehicle with vegetal oils, however, the break hoses and other rubber parts must be protected earlier.

TABEL 02 LUBRICANTS

Description	Frequency (days)	Lubricant (type)
Conection battery ties	90	Grease
Latches in general internal/external	90	Grease
Windshield seat	90	Oil
Driver's and passenger seats mechanism	180	Grease
Steppe mechanism	60	Grease
Pantograph door and/or hinge's mechanism	90	Grease
Pantograph wicket mechanism	90	Oil
Air intakes mechanism	180	Oil
Core external lock	30	Oil

Retightening of the body

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It is the owner's responsibility to observe the period defined in table 03, to retighten the fixation bolts and nuts of the several holders and components in the bus body.

About the bolts, nuts, clamps and connectors that are not related in the tighten table, it must be confirmed its stability and, if need, retighten them.

Table 03 - Retighten

ITEM	FREQUENCY (Months)
Seats and bag holders	06
Hinges of the front grille and rear hatch	06
Door mechanism	02
Wicket mechanism	03
couplings of latches	03
Bumper	06
Roof air entrance mechanism	03
Door actuators regulation – Urban cars.	01
Door actuators regulation – road cars.	03

Description of items to be adjusted

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Table 4- Adjusted	
ITEM	FREQUENCY (Months)
Passenger's door	03
Partition wall door	03
Luggage compartment door	03
Fuel tank, battery and engine doors	03
Rear door	03
Front grille	03
Windscreen wiper mechanism	03

ATTENTION: the wheels bolts must be retighten after (KM) road, according to the chassis manufacturer manual.

Número Fabricação	
Data Fabricação	
Modelo	

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Safety Rules

While driving a vehicle, the person in charge is assuming a serious commitment, because a single imprudence or a lack of maintenance can cause damages that can vary from a single damage to even more serious accidents, putting the driver, passengers and pedestrian's life at risk.

For this reason, we strongly recommend that you follow the car traffic laws, as well the orientations as follow below:

1. Use the seat belt;
2. Keep all safety and warning equipments inside the vehicle;
3. Replace the tires when they do not offer safety conditions;
4. Keep the headlights and tail lights in perfect condition and correctly adjusted;
5. Obey maximum passenger and luggage balance limits to keep the vehicle goes safely respecting axle load limits and chassis manufacturer limits;
6. When parking the vehicle, let it engaged in a reduced gear and with the parking break activated;
7. Do not keep the vehicle working for long periods, in closed places, because of the gas that releases and launches monoxide, which is highly toxic;
8. On down road (declivity), keep reduced gear engaged to avoid the constant use of the break and assure the vehicle control at any situation;
9. Use compatible gears transmitted to the engine performance and according to the ground conditions where the vehicle goes, due

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that the break and accelerator exchanging raise the fuel consumption considerably;

- 10.** Never drive your coach having loads over weight limit. Its maximum load meets the regular legislation, observing the axle load limits and the vehicle overall load capacity based on the chassis type. Such capacity is calculated based on 70 KG passenger weight, adding 10, 20 or 35 kg per passenger, according to the bus type and it is written down on the invoice, well balanced in the vehicle body. Obey maximum passenger and luggage balance limits to keep the vehicle goes safely respecting axle load limits and chassis manufacturer limits.