

# MAINTENANCE MANUAL



DEMAND DEMERS.



# MAINTENANCE AND CLEANING

## MAINTENANCE

### WHY MAINTAIN YOUR VEHICLE?

This guide describes the scheduled maintenance required for your vehicle. Carefully following this schedule helps protect against major repair expenses resulting from neglect or inadequate maintenance and may also help to increase the value of your vehicle when you sell or trade it.

It is your responsibility to see that all scheduled maintenance is performed and that the materials used meet DEMERS AMBULANCES engineering specifications. Failure to perform scheduled maintenance specified in this guide will invalidate warranty coverage on parts affected by the lack of maintenance. Be sure receipts or records for completed maintenance are kept with the vehicle and confirmation of the work performed is always recorded in this guide.

Your DEMERS AMBULANCES dealership has trained technicians who can perform the required maintenance using genuine DEMERS AMBULANCES parts. They are committed to meeting your service needs and to assuring your continuing satisfaction.

### PROTECTING YOUR INVESTMENT

Maintenance is an investment that will pay dividends in the form of improved reliability, durability and performance. To assure the proper performance of your vehicle and its emission control systems, it is imperative that scheduled maintenance be completed at the designated intervals.

DEMERS AMBULANCES strongly recommend the use of genuine DEMERS AMBULANCES replacement parts. Parts other than DEMERS AMBULANCES, or DEMERS AMBULANCES authorized remanufactured parts that are used for maintenance replacement or for the service must be equivalent to genuine DEMERS AMBULANCES parts in performance and durability. It is the owner's responsibility to determine the equivalency of such parts. Please consult your Warranty Guide for complete warranty information.

### DEMERS AMBULANCES SERVICE

When you need maintenance for your DEMERS AMBULANCES vehicle, there's only one thing to remember: Service and care, available at your DEMERS AMBULANCES dealership. From scheduled maintenance to more complicated repair work, nobody knows your vehicle better. Protect your investment by choosing DEMERS AMBULANCES service.

### THE RIGHT PEOPLE

The difference is training and equipment, which means nobody, is more qualified to work on your DEMERS AMBULANCES than our service technicians. They will fix it right the first time.

### THE RIGHT PARTS

From emergency lights to scene lights and everything in between, nothing fits like an original. With DEMERS AMBULANCES service, you'll get the parts made especially for your vehicle – genuine DEMERS AMBULANCES parts.

# MAINTENANCE AND CLEANING

## APPEARANCE AND CARE

### EXTERIOR CLEANING

To preserve and to maintain the appearance of your vehicle, it is important to take proper care of it. To avoid any deterioration of the vehicle, it is important to repair the paint as soon as a scratch or loss of clear coat is noticed.

In the following cases, it is important to wash your vehicle as soon as possible to protect the paint surface:

- After a rainfall to prevent possible damage from acid rain.
- After driving on coastal roads.
- When contaminants such as soot, bird droppings, tree sap, metal particles or bugs get on the paint surface.
- When dust, sand or mud builds up on the surface.

Whenever possible, store or park your vehicle inside a garage, a covered area or a shady area. UV rays can deteriorate paint protection. It is recommended to:

- Avoid automatic car wash (with/ without contact).
- Do not approach nozzle more than 30 inches from the vehicle, if using a high-pressure water jet machine,
- Do not use an ice scraper on the decals on the window.

Do not wash the vehicle in direct sunlight. Use a car washing soap. Do not use cleaning agents that are petroleum based or that contain acid or abrasives, as they can damage the paint, chrome or plastic on the vehicle. Approved cleaning products can be obtained from DEMERS AMBULANCES. Follow all manufacturers' directions regarding correct products usage, necessary safety precautions and appropriate disposal of any vehicle care product.

Rinse well before washing the vehicle and after washing to remove all cleaning agents completely. If they dry on the surface, they could stain. Dry with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.

Inside flanges, seams and folds on the doors, hatches and hood are particularly vulnerable to effects of road salt. Therefore, these areas must be clean regularly. Take care that the drain holes in the lower edge of the doors are not block. Spray water under the body and in the wheel wells to remove dirt and wash away road salt.



#### WARNING

- Do not wash the vehicle with strong household soap, strong chemical detergents, gasoline or solvents.
- Do not wash the vehicle in direct sunlight or while the vehicle body is hot, as the surface may become water-spotted.
- Avoid using tight-napped or rough cloths, such as washing mitts. Care must be taken when removing caked-on dirt or other foreign substances so the paint surface is not scratched or damaged.

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### EXTERIOR LENSES

Use lukewarm or cold water, a soft cloth and a car washing soap to clean exterior lenses. Approved cleaning products can be obtained from DEMERS AMBULANCES. Follow all manufacturers' directions regarding correct products usage, necessary safety precautions and appropriate disposal of any vehicle care product.



#### WARNING

- Do not wash the exterior lenses with strong household soap, strong chemical detergents, gasoline or solvents.
- Do not wash the exterior lenses in direct sunlight or while the surface is hot, as the surface may become water-spotted.
- Avoid using tight-napped or rough cloths, such as washing mitts. Care must be taken when removing caked-on dirt or other foreign substances so the surface is not scratched or damaged.

### CHROME VENTS

Use lukewarm or cold water, a soft cloth and a car washing soap to clean chrome vents. When the cleaning of the vehicle with high pressure water, do not aim the high-pressure water in the opening of the chrome vents.

Approved cleaning products can be obtained from DEMERS AMBULANCES. Follow all manufacturers' directions regarding correct products usage, necessary safety precautions and appropriate disposal of any vehicle care product.

Rinse the chrome vents well, before washing and after to remove all cleaning agents completely. If they dry on the surface, they could stain. Dry the finish with a soft, clean chamois or an all-cotton towel to avoid surface scratches and water spotting.



#### WARNING

- Do not aim high-pressure water in the opening of the chrome vents.
- Do not wash chrome in direct sunlight or while the surface is hot, as the surface may become water-spotted.

### WAXING

Regular waxing or mild polishing protects the paint surface and helps maintain vehicle appearance. After waxing, polishing is recommended to remove built up residue and to avoid a “weathered” appearance.

Approved cleaning products can be obtained from DEMERS AMBULANCES. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.



#### WARNING

- Do not use machine compounding on basecoat and clearcoat paint finish. It may damage it.
- Use only non-abrasive waxes and polishes that are made for a basecoat and clearcoat paint finish on the vehicle and on the module.

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### WINDSHIELD

Clean the outside of the windshield with glass cleaner.

Clean the rubber blades using a lint free cloth or paper towel soaked with windshield washer fluid or a mild detergent. Wash the windshield thoroughly when cleaning the blades. Bugs, road grime, sap, and a buildup of vehicle wash/wax treatments may cause wiper streaking. Replace the wiper blades if they are worn or damaged.

Wipers can be damaged by:

- Extreme dusty conditions
- Sand and salt
- Heat and sun
- Snow and ice, without proper removal

### TIRES

To clean the tires, use a stiff brush with tire cleaner.



#### **WARNING**

- Using petroleum-based tire foam products on the vehicle may damage the tires.
- When applying a tire foam, always wipe off any overspray from all painted surfaces on the vehicle.

### ALUMINUM WHEELS

Keep the wheels clean using a soft clean cloth with mild soap and water. Rinse with clean water. After rinsing thoroughly, dry with a soft clean towel.

The surface of these wheels is similar to the painted surface of the vehicle. Do not use strong soaps, chemicals, abrasive polishes, abrasive cleaners, cleaners with acid or abrasive cleaning brushes on them because the surface could be damaged.



#### **WARNING**

- Using chrome polish on aluminium wheels could damage the wheels. Use chrome polish on chrome wheels only.
- Driving the vehicle through an automatic car wash that has silicone carbide tire cleaning brushes, could damage the aluminium or chrome-plated wheels.

### INTERIOR CLEANING

It is important to often wash the interior of the vehicle. Although not always visible, dust and dirt can accumulate on the upholstery. Dirt can damage carpet, fabric and plastic surfaces. Regular vacuuming is recommended to remove particles from the upholstery. Soils should be removed as quickly as possible. The vehicle's interior may experience extremes temperature that could cause stains to set rapidly.

When cleaning the vehicle interior, only use cleaners specifically designed for the surface being cleaned. Permanent damage may result from using cleaners on surfaces for which they were not intended. Use

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glass cleaner only on glass. Remove any accidental over-spray from other surfaces immediately. To prevent over-spray, apply cleaner directly to the cleaning cloth.

Many cleaners contain solvents that may become dangerous in close space. Before using cleaners, read to all safety instructions on the label. While cleaning the vehicle's interior, maintain proper ventilation by opening the vehicle's doors and windows.

Dust may be removed from small buttons and knobs using a small brush with soft bristles.

Products that remove odors from the vehicle upholstery and clean the vehicle glass can be obtained from DEMERS AMBULANCES.

Do not clean the vehicle using:

- A knife or any other sharp object to remove a soil from any interior surfaces.
- A stiff brush. It can cause damage to the vehicle interior surfaces.
- Heavy pressure or aggressive rubbing with a cleaning cloth. Use of heavy pressure can damage the interior.
- Laundry detergents or dishwashing soaps with the degreasers can leave residue that streaks and attracts dirt. Use only mild, neutral (pH) soaps.
- Too much cleaner that saturates the upholstery.
- Organic solvents such as naphtha or alcohol that can damage the vehicle interior.



### WARNING

- Using abrasive cleaners when cleaning glass surfaces on the vehicle, could scratch the glass and/or cause damage to the rear window defroster. When cleaning the window on the vehicle, use only a soft cloth and glass cleaner.

## SEAT BELTS

The seat belts can be cleaned by wiping them with a sponge dampened in a mild soap solution. Allow belt to dry completely before using them.



### WARNING

- Do not allow wet seat belts to roll up in the retractor.
- Never use bleach, dye or chemical solvents to clean the seat belts, since these products may severely weaken the seat belt webbing.

Periodically check to see that the seat belt and the metal components, such as buckles, tongues, retractors, flexible wires and anchors, work properly. If loose parts, deterioration, cuts or other damage on the webbing is found, the entire seat belt assembly must be replaced.

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### VINYL AND PLASTIC

A soft cloth dampened with water may be used to remove dust on the vinyl and plastic surfaces in the vehicle. If a more thorough cleaning is necessary, a clean soft cloth dampened with a mild soap solution can be used to gently remove dust and dirt. Never use spot lifters or removers on plastic surfaces. Many commercial cleaners and coatings that are sold preserve and protect soft plastic may permanently change the appearance of the interior's vinyl and plastics. Their use is not recommended.

Do not use silicone or wax-based products or those containing organic solvents to clean the vehicle interior because they can alter the appearance by increasing the gloss in a non-uniform manner.

Some commercial products may increase gloss on the instrument panel. The increase in gloss may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

### FLOOR COVERING

Regular cleaning of your floor covering is essential. A dirty floor covering mat will make it slippery.

The following procedures will help to keep your floor covering looking good and functioning correctly at a reasonable cost.

#### Maintenance method:

- Mop, sweep or vacuum thoroughly to remove all dust and debris.
- Apply recommended alkaline cleaning agent in correct dilution and leave for several minutes to emulsify the surface soil. Do not let cleaning agent dry.
- Scrub with deck scrubbing brush or a medium nylon scrubbing pad for heavy cleaning.
- Rinse using clean water or a neutralizing product.
- Vacuum or mop and allow drying.

Excessive cleaning or the use of floor finishes and sealers can adversely affect the electrical properties of the floor. Also, some cleaning agents can leave a film and should not be used with static dissipative floors – check with the cleaning agent manufacturer before use.

#### Recommended maintenance products:

Some types of cleaning agent should not be used on vinyl, such as pine oil cleaning agents and quaternary cleaners which can cause the floor to stain or become brittle and shrink. Also, some cleaning agents used for the antiseptic properties can have a lubricating effect, resulting in most flooring materials becoming more slippery when wet.

- Altro 44 Cleaner
- Johnsons Break-Up
- Center Cut
- Super Grease Buster
- Impact Detergent Degreaser
- Oasis 115XP
- Blue Thunder
- Taski Profi

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### MEDICAL CABINET WINDOWS AND FIBERGLASS

The windows and cavities of the medical cabinet can be cleaned by washing gently with a mild soap or detergent and lukewarm water, using a soft cloth or sponge. Dry with a soft cloth or moist cellulose sponge to prevent water spotting. To remove glazing compound or grease, rub lightly with a good grade of VM&P naphtha or isopropyl alcohol, then rinse.

Note: Medical cabinet windows can easily be scratched, use very low pressure when cleaning them.

#### Recommended maintenance products:

- Fantastik
- Formula 409
- Hexcel, F.O. 554
- Joy
- Lysol
- Windex
- Top Job
- PineSol
- Neleco-Placer
- Mr. Clean



#### **WARNING**

- Do not scrub or use brushes or squeegee.
- Do not use gasoline or acetone to remove glazing compound or grease.

### CORROSION PROTECTION

#### Most common factors contributing to vehicle corrosion:

- The accumulation of moisture-retaining dirt and debris in body panel sections, cavities, and other areas.
- Damage to paint and other protective coatings caused by gravel and stone chips or minor traffic accidents.

#### Environmental factors influence the rate of corrosion:

Accumulation of sand, dirt and water under the vehicle body can accelerate corrosion. Wet floor carpets should be removed for drying to avoid floor panel corrosion.

#### Corrosion will be accelerated in the following conditions:

- In areas of high relative humidity.
- In areas where the temperature stays above freezing.
- Where the level of atmospheric pollution is high.
- Where road salt is used.
- In area with salty air.

#### To protect your vehicle from corrosion:

- Wash and wax your vehicle often to keep the vehicle clean.
- Always check for minor damage to the paint and repair it as soon as possible.



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- Keep drain holes at the bottom of the doors open to avoid water accumulation.
- Since galvanic corrosion is a naturally occurring process and not a preparation or paint applications problem, it should be repaired as soon it is noticed.

Chemicals used for road surface de-icing are extremely corrosive. They accelerate corrosion and deterioration of underbody components such as the exhaust system, fuel and brake lines, brake cables, floor pan and fenders.

For additional protection against rust and corrosion, which may be required in some areas, consult your DEMERS AMBULANCES dealership.



### WARNING

- Never remove dirt, sand or other debris from the patient compartment by washing it out with a hose. Remove dirt with a vacuum cleaner or broom.
- Never allow water or other liquids to come in contact with electronic components inside the vehicle as this may damage them.

## BATTERIES MAINTENANCE

The OEM batteries needs a quarterly maintenance.

- Clean the battery compartment of all dirt.
- Check the torque of all battery connections. The torque must be 15 lbf-ft.
- Lubricate the battery drawer slides with "Fluid Film".
- Perform a Load Test on all vehicle batteries. Replace batteries that do not pass the test.



### WARNING

- It is highly recommended to connect the shoreline at all times when the vehicle is not in use to recharge the batteries. A deep discharge of the batteries can reduce the lifetime of the batteries.

## BACK-UP CAMERA MAINTENANCE

Your exterior camera system requires little care, however to maintain its optimum operating condition follow the procedures below:

- Keep your system away from excessive moisture, extreme heat or cold and magnetic fields.
- Occasionally clean the lens of the exterior camera with a soft cloth dampened with water, or a window cleaner.
- Keep liquids away from display.
- Do not place external devices or other objects on top of the LCD monitor screen.
- Occasionally clean the surface of the LCD monitor screen with a soft cloth moistened with water, or a window cleaner.

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### DOOR SWITCHES MAINTENANCE

There is a monthly maintenance on door switches.

- Clean the door switches of all dirt.
- Lubricate the door switches with "Moovit" penetrating lubricant.

### DOOR HANDLES AND LOCKS MAINTENANCE

There is a regular maintenance on the door handles and locks.

- Frequently verify if the door handles and locks are fully functional.
- Frequently clean the door handles and locks of all dirt.
- Every three (3) months, lubricate the door handles with white lithium grease.
- Every three (3) months, lubricate the door locks and lock barrels with "*Tri-Flow Superior Lubricant Aerosol*".
- In winter, every month, lubricate the door locks and lock barrels with "*Tri-Flow Superior Lubricant Aerosol*".

### DOOR SEALS MAINTENANCE

There is a regular maintenance on the door weatherstrip every three (3) months.

- Verify the door weatherstrip for tears or if they are peeling off.
- Clean the door weatherstrip of all dirt.
- Lubricate the door weatherstrip with silicone emulsion.

### DOOR HINGES MAINTENANCE

There is a regular maintenance on the door hinges every three (3) months.

- Visually check all door hinges.
- Clean door hinges of all dirtiness.
- If necessary, lubricate all door hinges.


### COT FASTENING SYSTEM MAINTENANCE

There is a regular maintenance on the cot fastening system.


- Every six (6) months, verify and apply "Anti-Seize" on the two (2) tie-down knobs of the primary antler bracket and on the tie-down knob (1) of the primary rail assembly.

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## RECOMMENDED MAINTENANCE SCHEDULE




<b>Check Every Month on your Vehicle:</b>
Check tires for wear and proper air pressure
Check and lubricate the door switches with "Moovit" penetrating lubricant
Check safety warning lamps (door ajar, speed, etc.) for proper operation
Check back-up alarm device
Check and clean back-up camera *
Check and clean interior camera *
Check and clean LCD screen of the camera system
Clean the inverter/charger unit, make sure the DC cables are secure and fasteners are tight
In winter, check and lubricate the door locks and lock barrel with "Tri-Flow Superior Lubricant Aerosol "
Check primary stretcher fastener system (single cot configuration)
Check for any loose or worn components of the suspension system
Check for leaks around fittings of the suspension system
Check and lubricate the door switches with "Moovit" penetrating lubricant
Check the standard heating system and clean if necessary




<b>Check Every Three Months on your Vehicle:</b>
Check the suction device
Check siren speakers
Clean and check all connections of the batteries (the torque must be 15 lbf·ft). Perform a load test
Lubricate the sliding tray of the conversion batteries with "Fluid Film"
Check oxygen system for leak
Check seat belts and seat latches for wear and malfunction
Check safety net webbing and anchors for wear and malfunction *
Check the stretcher FW model #107-C/ #9 and backboard fastening system *
Check and lubricate the rear flip-up step swivels with "Fluid Film"
Check and lubricate the door handles with white lithium grease
Check and lubricate the door locks and lock barrel with "Tri-Flow Superior Lubricant"
Check, clean and, if necessary, lubricate the door hinges
Check, clean and lubricate the door weatherstrip with silicone emulsion

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## RECOMMENDED MAINTENANCE SCHEDULE



<b>Check Every Six Months on your Vehicle:</b>
Check air pressure in spare tire
Check all connections in the electrical panel
Clean and check all connection in the batteries isolator
Check and, if necessary, repair the opening grille of each chrome vents
Verify and apply "Anti-Seize" on the tie-down knobs of the primary antler hook and rail assembly
Check door emergency release latches
Check cooling system fluid level and coolant strength
Check cooling system lines
Check and clean body and door drain holes



<b>Check Every Year on your Vehicle:</b>
Check and wax all interior surfaces (aluminium, ABS and fiberglass)
Check quick release oxygen cylinder bracket and tight if necessary
Check, reset and, if necessary, repair all 110 volts AC outlets

### NOTE

\* Maintenance of materials originally assembled by other than DEMERS AMBULANCES are recommend as per their respective manufacturers documentation.

\* During any regular maintenance, it is recommended that a visual inspection of all components be performed to identify and prevent any potential problems. It is the responsibility of the owner to fix and repair these issues as soon as they appear to prevent further damaging of the ambulance components. For example, during a visual inspection, any water infiltration, loose screws or damage parts should be noticed and repair to prevent additional cost and damage to other related parts. If appropriate a warranty sheet \ claim should be completed and submitted for DEMERS AMBULANCES to action.