GRECH
MOTORS

Sprinter Owner's Manual

This label contains vital information used to identify your specific vehicle and the safety features that must be understood and followed in order to operate this vehicle safely.

Your Grech Vehicle ID Number is:

GRECH MOTORS

Congratulations,

and thank you for purchasing a Grech Motors Vehicle.

You have taken ownership of a true luxury vehicle which is in a class all its own. We are providing this manual to familiarize you with your new Grech Motors vehicle. This manual shall serve as a reference document for the operations and maintenance procedures that shall be required throughout the life of your vehicle. This edition covers all Chassis models, and is designed to be used in conjunction with the original chassis manufacturer's owner's literature, as well as all other component manufacturers literature.

IMPORTANT: PLEASE READ CAREFULLY

For your safety and the safety of others, we ask that you completely familiarize yourself with this manual, and all other operators manuals before you operate this vehicle for the first time.

PLEASE NOTE: Updates to all manuals are online at GRECHMOTORS.COM

Grech Motors 6915 Arlington Avenue Riverside, California 92504
(855)-99-GRECH (4-7324) GRECHMOTORS.COM

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Any item not passing inspection, must be reported immediately, before operating vehicle

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Item	Inspection Procedure	Pass	Fail
1	Check preventative maintenance schedule: for services due at present mileage		
2	Calculate Load Carrying/Payload Capacity (See page 47 of this manual)		
3	Check Side Passenger Entry Door - Emergency Exit Operation		
4	Check operation of: drivers seat and seat belt		
5	Check operation of: steering wheel and shift levers		
6	Check operation of: turn indicators		
7	Check operation of: foot pedals and parking brake		
8	Check operation of: all gauges, for normal readings with engine running		
9	Check operation of: dash indicator lights with key on, engine not started, then again with engine started		
10	Check operation of ventilation system: heating, defrosters, fans and air conditioning		
11	Check: horn, wipers, washers, and mirrors for cleanliness, adjustment, operation and damage		
12	Check condition of: fire extinguisher, warning reflectors and first aid kit		
13	Check: all doors, glass and windows: for operation, cleanliness, and damage.		
14	Check: all emergency exits for operation, warning devices, markings, to be free and clear		
15	Check interior lighting: for operation and damage		

Pre-Trip Inspection (suggested minimum)

Any item not passing inspection, must be reported immediately, before operating vehicle

FAILURE OF HIGHLIGHTED ITEM(S) TO PASS INSPECTION WILL CAUSE VEHICLE TO BE GROUNDED

Item	Inspection Procedure	Pass	Fail
16	Check Side Passenger Entry Door: for damage and proper closing operation		
17	Check exterior lighting: for operation and damage		
18	Check exterior: for cleanliness, markings and damage		
19	Check fuel cap: in place and secure		
20	Check all tires and wheels: for tread depth, cracks & bulges, missing lug nuts, and air pressure 80 psi		
21	Check: oil level		
22	Check: transmission fluid level		
23	Check: engine coolant level		
24	Check: power steering fluid level		
25	Check: brake fluid level		
26	Check: belts for tension and wear		
27	Check operation of: cameras, if applicable		
28	Check operation of: PA system, if applicable		
29	Check operation of: audio and video system, if applicable		
30			

GENERAL VEHICLE SAFETY WARNINGS

NO STANDEES ARE ALLOWED, AT ANY TIME, WHILE THE VEHICLE IS IN MOTION.

DISCONTINUE OPERATION OF THE VEHICLE, IF ANY CRITICAL ITEM ON THE PRE-TRIP INSPECTION LIST FAILS TO PASS, OR UNTIL ALL PROBLEMS HAVE BEEN RESOLVED.

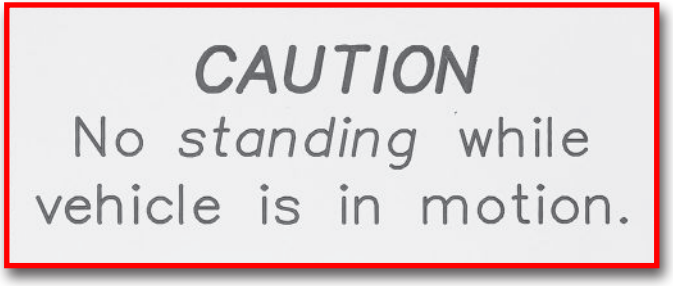
DISCONTINUE OPERATION OF THE VEHICLE, IF THE DOOR WARNING, DOOR AJAR LIGHT IS ILLUMINATED WHILE VEHICLE IS IN MOTION.

IF A DOOR AJAR WARNING LIGHT IS LIT, CHECK ALL DOORS FOR PROPER CLOSURE. NEVER OPERATE THIS VEHICLE UNTIL THE PROBLEM HAS BEEN RESOLVED.

THIS VEHICLE IS NOT DESIGNED TO TOW ANOTHER VEHICLE OR TRAILER. DO NOT ATTEMPT TO TOW OR PULL ANOTHER VEHICLE WITH THIS VEHICLE.

DISCONTINUE OPERATION OF THE VEHICLE, IF ANY PERSON STANDS WHILE THE VEHICLE IS IN MOTION.

DISCONTINUE OPERATION OF THE VEHICLE, IF A DOOR OR EMERGENCY EXIT SHOULD OPEN WHILE THE VEHICLE IS IN MOTION.



Side Door Emergency Egress Operation

Emergency Egress - (must be checked on a daily basis)

This vehicle is equipped with an Emergency Door that, when actuated, will allow passengers to open the door. The Emergency Egress function is actuated by first pulling the **RED KNOB** upward and then pushing the **RED BUTTON** down as indicated on the sticker. See Photos below. When the Emergency Knob & Button have been actuated, the door can easily be opened with hand-pressure applied to slide the door open.

Side Entry Door Egress Assembly

Side Entry Door Egress Knob & Button & Instructions

Side Entry Door Button

Side Entry Door Knob

Emergency Egress Window Operation

Handle in Closed Position - Photo 1

Handle in Open Position - Photo 2

CAUTION!

Check Exit Operation, Daily.

Turn handle, push out to open in case of emergency!

Emergency Egress Window Sticker

Windows with Emergency Exit stickers are designated Emergency exits. Follow the directions on the sticker.

Turn Handle and push window out.

This vehicle is equipped with an Emergency Egress Window. This window serves as supplemental exit point in the event of an emergency. The Emergency Egress Window is located on the driver's side of the vehicle.

The Emergency Egress Window is a vital component in the vehicle's emergency exit system. As such the vehicle

driver should test the Emergency Egress Window Operation every day before putting the vehicle into service.
To test the System, the vehicle driver should check the following items:

1. Each Emergency Egress Window is marked by an Emergency Exit sticker on the bottom edge of the window, next to each Emergency Handle. Confirm that the Emergency Egress Window is equipped with the sticker designating that window as an emergency exit. If the Emergency Egress Window is missing the Emergency Exit designation sticker, **call the Grech Motors Service Department at 1-855-99-GRECH (47324) and do not operate the vehicle.**
2. The Emergency Egress Window is secured by two latches at the bottom edge of the window. Actuate the Emergency Egress Window by rotating the handle as shown in **Photo No. 1 on page 10.**
   The latch is in the released position when the handle moves from the horzontal to the vertical position, and releases the window to be pushed open.
3. When Emergency Egress Window Latch is released, as shown in **Photo No. 2 on page 10** the user can open the window by pushing on the bottom of the window frame. The Emergency Egress Window should swing out and away from the vehicle.
4. If the Emergency Egress Window does not swing open when the latches are released and the window frame is pushed, **call the Grech Motors Service Department at 1-855-99-GRECH (47324) and do not operate the vehicle.**
5. When properly closing the Emergency Egress Window back to a secured position, the handles will return to the horizontal locked position. Each latch should be in the locking position when the user moves the latch to the horizontal position. Check to ensure the Emergency Egress Window is secured against the vehicle by pushing against the inside window frame while the latch is in the locked horizontal position. If the window is not secure, **call the Grech Motors Service Department at 1-855-99-GRECH (47324) and do not operate the vehicle.**

Emergency Roof Hatch Exit

SEE MANUFACTURERS LITERATURE
FOR ADDITIONAL INFORMATION

SUGGESTED MAINTENANCE
Periodically inspect attaching fasteners for evidence of loosening due to tampering, and regularly clean surface with a mild soap and water.

CAUTION: When removing graffiti, it is the customers responsibility to ensure cleaning solutions are compatible with the materials used on Safety Vents. Solutions containing, acetone, ether, lacquer thinner, or other solvents can destroy the high strength properties of many engineering plastics - AVOID these cleaners

Photo 1

TURN LATCH AS SHOWN ABOVE, THEN PUSH KNOB TO OPEN

CAUTION!
Check Exit Operation, Daily.

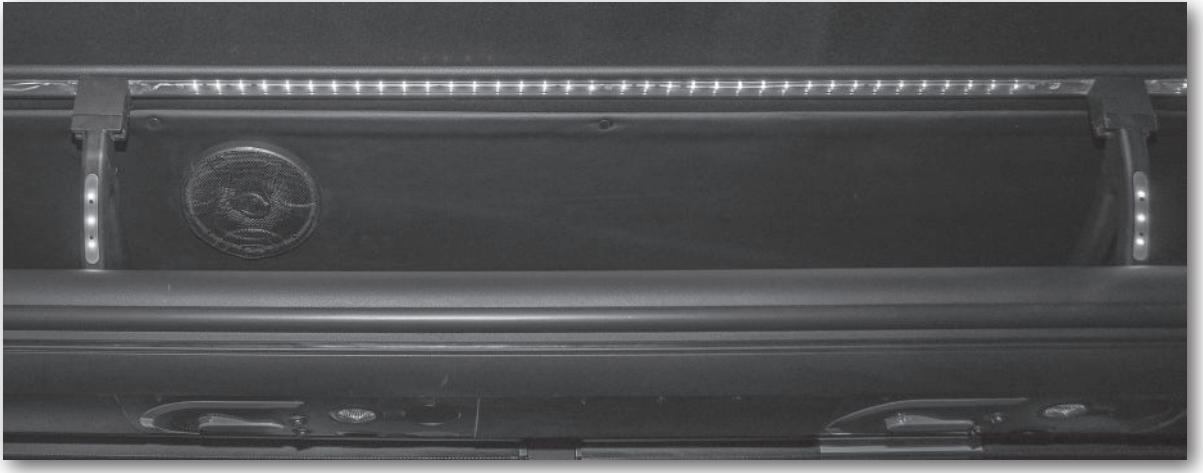
Emergency Roof Hatch Exit

This vehicle is equipped with one Emergency Roof Hatch. This hatch serve as a supplemental exit point in the event of an emergency. The Emergency Roof Hatch is located in the vehicle's roof, above the passenger walkway.

The Emergency Roof Hatch is a vital component in the vehicle's emergency exit system. As such the vehicle driver should test the Emergency Roof Hatch every day before putting the vehicle into service. To test the System, the vehicle driver should check:

1. To ensure that each Emergency Roof Hatch is marked by an Emergency Exit sticker. Confirm that the Emergency Roof Hatch is equipped with the sticker designating the hatch as an emergency exit. If the Emergency Roof Hatch Exit is missing the Emergency Exit designation sticker, **call the Grech Motors Service Department at 1-855-99-GRECH (47324) and do not operate the vehicle**.
2. Each Emergency Roof Hatch is secured by one latch. Actuate the Emergency Roof Hatch by turning its latch from the "LATCHED" position to the "TO EXIT" position. See Photo No. 1 on page 12.
3. When Emergency Roof Hatch latch is released, the user can open the hatch by pushing it away from the vehicle. The Emergency Roof Hatch should swing out and away from the vehicle.
4. If the Emergency Roof Hatch does not swing open when the latch is released and the hatch is pushed, **call the Grech Motors Service Department at 1-855-99-GRECH (47324) and do not operate the vehicle**.
5. Close Emergency Roof Hatch and secure it by returning the latch to the "LATCHED" position. Check to ensure the Emergency Roof Hatch is secured against the coach by pushing against the hatch while the latch is in the "LATCHED" position.

Overhead Parcel Rack



Overhead Parcel Rack

CAUTION!

Do not overload Parcel Racks. Do not fasten parcels to retainer bars.

Note: Maximum loading specification for both model parcel racks is either 20 Lbs. per foot or 5 Lbs per passenger.

Limo Sprinter Drivers Overhead Control Panel

1 5 9 13

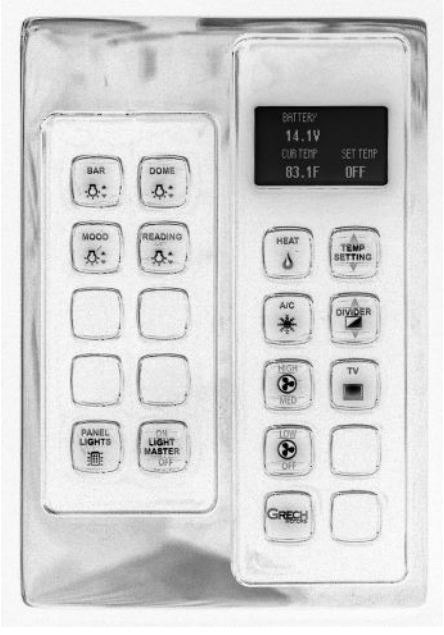
2 6 10 14

3 7 11 15

4 8 12 16

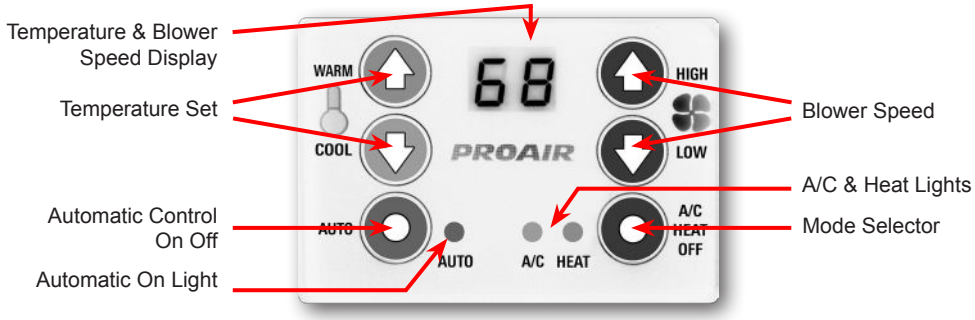
1. Locks & Unlocks Controls
2. Divider (Up - Down)
3. Television
4. Radio
5. Heat
6. Air Conditioning
7. Fan Speed (High - Medium)
8. Fan Speed (Low - Off)
9. Bar Lighting (Dimable)
10. Mood Lighting (Dimable)
11. Panel Lights
12. Blank
13. Dome Lights (Dimable) (Dimable)
14. Reading Lights
15. Master Lighting (On - Off)
16. GRECH Logo (No Function)

Limo Sprinter Passenger Control Panel



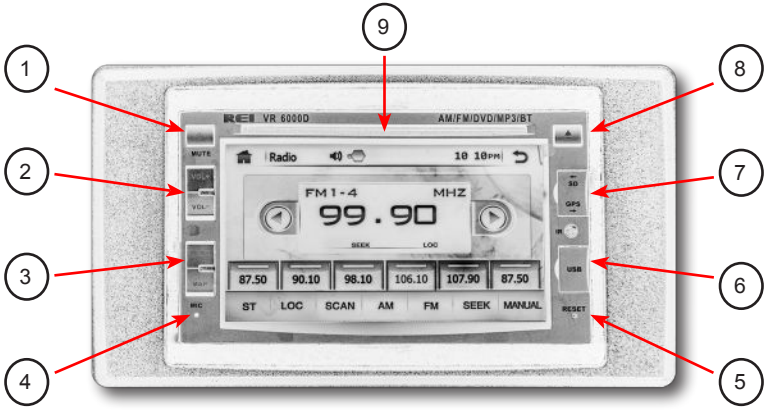
1. Bar Lighting (Dimable)
2. Dome Lights (Dimable)
3. Mood Lighting (Dimable)
4. Reading Lights (Dimable)
5. Panel Light (On - Off)
6. Master Light (On - Off)
7. Heat
8. Temperature Setting
9. Air Conditioning
10. Divider (Up - Down)
11. Fan Control (High - Medium)
12. Television
13. Fan Control (Low - Off)
14. GRECH Logo (No Function)

PROAIR Control Panel



Mode Selector	Push once for A/C, push again for heat and push once more to turn off.
A/C Mode	Display on, reads and displays probe temperature, blower motor operates. Constant signal from A/C relay above set temperature point and signal off below set temperature point. A/C light will be on.
Heat Mode	Display on, reads and displays probe temperature, blower motor operates. Constant signal from heat relay below set temperature point and signal off above set temperature point. Heat light will be on.
Blower Speed	Select desired blower speed by pressing the up or down arrows, display will indicate set speed, F1 to F3 for the three speeds of operation.
Temperature	Temperature can be set by using the up/down buttons to select the desired level between 50°F and 99°F or 10°C and 37°C. Display will show set temperature for two or three seconds then display will show actual temperature. To switch between Fahrenheit and Celsius press both temperature up and down buttons at the same time for three seconds.
Auto Mode	With A/C or heat on press auto to turn on auto 1 or auto 2 temperature control, press once more to shut off. In auto 1 mode temperature is maintained + or - 2° and blower speed is manually set. In auto 2 mode temperature is maintained + or - 2° and blower speed is automatic and cannot be changed. To switch between auto 1 and auto 2 press and hold temperature up button then press and hold auto button for three seconds. Display will show current auto mode (A1 or A2) then switch to the other mode (A2 or A1) .
Preset Operations	Upon cycling of 12vdc supply, the unit will default to previous settings mode and blower speed. All output signals are negative voltage.

AM/FM/DVD PA Control & Back-up Camera



1. Power/Source Button

Press and hold the POWER button (1) to turn the unit on or off. Press once to mute the audio.

2. Volume Buttons

Press to adjust the volume level Up or Down.

3. Menu/MAP Buttons

Press MENU button to access the radio main screen.

Press the MAP button to access the GPS Navigation screen.

4. Bluetooth Microphone

Internal microphone for Bluetooth calls.

5. Reset Button

Press to reset system settings to factory default.

6. Front Panel mini-B USB Input

Connect to USB memory for playback of music/video files.

7. Front Panel microSD Inputs

Connect to microSD memory for playback of music/video files.

8. Disk Eject Button

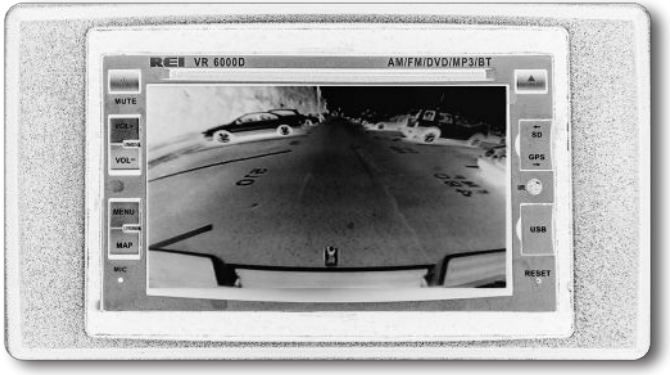
Press to eject a disk.

9. Disk Slot

Insert CD/DVD disc here.

PLEASE SEE THE MANUFACTURERS LITERATURE FOR ADDITIONAL OPERATING INFORMATION

AM/FM/DVD PA Control & Back-up Camera



LCD Monitor

Back-Up Camera
(located on rear of vehicle)

The indash LCD Monitor automatically displays the Back-up Camera image when the vehicle is shifted into reverse.

System Operation

This system consists of two major components:
1. Indash LCD Monitor 2. Back-Up Camera

SEE MANUFACTURERS LITERATURE
FOR ADDITIONAL INFORMATION

Warning Regarding Removing or Adding Vehicle Components

CAUTION!

THE VEHICLE SEATING CONFIGURATION IN THIS VEHICLE HAS BEEN INSTALLED IN ACCORDANCE WITH THE DESIGN PARAMETERS DETERMINED BY GRECH MOTORS, ENGINEERING DEPARTMENT.

THE ADDING, MOVING OR REMOVING OF THE ORIGINAL SEATING, IS STRICTLY PROHIBITED WITHOUT THE AUTHORIZATION OF GRECH MOTORS, ENGINEERING DEPARTMENT.

MODIFYING THE SEATING ARRANGEMENT OF YOUR VEHICLE WITHOUT PROPER ENGINEERING SPECIFICATIONS, CAN CHANGE THE **WEIGHT DISTRIBUTION/PAYLOAD CHARACTERISTICS**, OF THE VEHICLE AND POTENTIALLY ENDANGER THE PASSENGERS BY CREATING AN UNSAFE OPERATING CONDITION.

CAUTION!

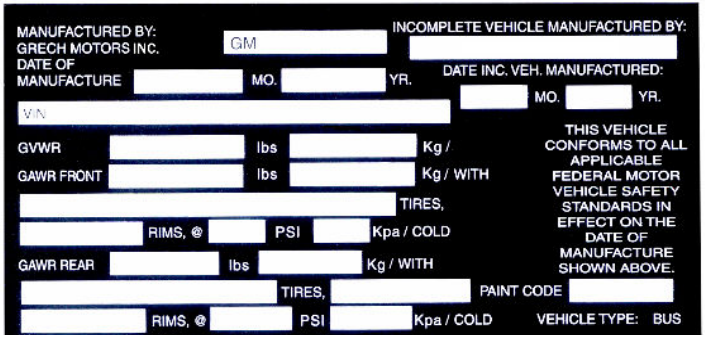
Do not Alter, Add or Change any components installed in this vehicle. Adding or changing components may adversely affect vehicle stability creating an unsafe vehicle.

General Vehicle Dimensional Specifications - Body & Chassis by Model

	1	2	3	4	5	6
Models ➔	3500 Dual	3500 Single	2500 Low Roof	2500 Hi-Roof		
Chassis ➔	Sprinter	Sprinter	Sprinter	Sprinter		
Features ➔						
GVWR(see ID Label)	11,030 #	10,140 #	8,550 #	8,550 #		
GAWR (front)	4,080 #	4,080 #	3,970 #	3,970 #		
GAWR (rear)	7,720 #	7,060 #	5,360 #	5,360 #		
Wheelbase	170 in	170 in	144 in	170 in		
Overall Length	289.8 in	289.8 in	240.2 in	289.8 in		
Turning Radius	51.5 ft	51.5 ft	47.6 ft	51.5 ft		
Ground Clearance	10 in	10 in	---	---		
Clear Door Opening - Entry Door	42 in	42 in	---	---		
Clear Door Opening - Luggage Door	61.5 in	61.5 in	61.5 in	61.5 in		
Overall Exterior Height	112.75 in	112.75 in	99 in	112.75 in		
Exterior Width (with mirrors folded in)	79.7 in	79.7 in	79.7 in	79.7 in		
Exterior Width (with mirrors extended)	95.5 in	95.5 in	99.5 in	99.5 in		
Interior Height	75.5 in	75.5 in	63.75 in	75.5 in		
Interior Width	70 in	70 in	67 in	70 in		

Vehicle Manufacturers Identification Label

Sprinter (sample label)



(Label is located on drivers door jam of each vehicle)

LABEL EXPLANATION

GM # - This is your permanent GRECH Vehicle Identification number.

VIN # - This is your DMV Vehicle Identification Number.

GVWR -This is the gross rated weight capacity of your vehicle

GAWR Front -This is the rated weight capacity of the front axle

GAWR Rear -This is the rated weight capacity of the rear axle

Date Incomplete Vehicle Manufactured - This is the date the chassis was produced by XXXX

Date Of Manufacture by GRECH - This is the date the vehicle was completed by GRECH.

Paint Code - This is the master number for the paint specification and color used on your vehicle.

Tires, Rims - This indicates the required tire and rim sizes, and air capacities for your specific vehicle, for your maximum payload.

GETTING THE SERVICES YOU NEED

Warranty repairs to your vehicle must be performed by an authorized dealer. While any authorized dealer handling your vehicle line will provide warranty service, we recommend you return to your selling authorized dealer who wants to ensure your continued satisfaction.

Please note that certain warranty repairs require special training and equipment, so not all authorized dealers are authorized to perform all warranty repairs. This means that, depending on the warranty repair needed, you may have to take your vehicle to another authorized dealer.

A reasonable time must be allowed to perform a repair after taking your vehicle to the authorized dealer. Repairs will be made using Grech Motors parts, or remanufactured or other parts that are authorized by Grech Motors.

Away From Home

If you are away from home when your vehicle needs service, contact the Grech Customer Relations or use the online resources listed below to find the nearest authorized dealer.

In the United States:

Mailing address
Grech Motors
Customer Relationship
6915 Arlington Avenue
Riverside, California 92504

Telephone
1-855-99-Grech (4-7324)

Online

Additional information and resources are available online at www.GRECHMOTORS.com

These are some of the items that can be found online:

- U.S. dealer locator by Dealer Name, City/State, or Zip Code
- Owner Manuals
- Maintenance Schedules
- Recalls

Additional Assistance

If you have questions or concerns, or are unsatisfied with the service you are receiving, follow these steps:

1. Contact your Sales Representative or Service Advisor at your selling/servicing authorized dealer.
2. If your inquiry or concern remains unresolved, contact the Sales Manager, Service Manager or Customer Relations Manager.
3. If you require assistance or clarification on Grech Motors policies, please contact the Grech Customer Relationship Center.

In order to help you serve you better, please have the following information available when contacting a Customer Relationship Center:

- Vehicle Identification Number.
- Your telephone number (home and business).
- The name of the authorized dealer and city where located.
- The vehicle's current odometer reading.

In some states, you must directly notify Grech Motors in writing before pursuing remedies under your state's warranty laws. Grech Motors is also allowed a final repair attempt in some states. In the United States, a warranty dispute must be submitted to the BBB AUTO LINE before taking action under the Magnuson-Moss Warranty Act, or to the extent allowed by state law, before pursuing replacement or repurchase remedies provided by certain state laws.
This dispute handling procedure is not required prior to enforcing state created rights or other rights which are independent of the Magnuson-Moss Warranty Act or state replacement or repurchase laws.

REPORTING SAFETY DEFECTS

(U.S. ONLY)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Grech Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or

Grech Motors

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153);
or go to http://www.safercar.gov;
or write to:
Administrator
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

REPORTING SAFETY DEFECTS

(CANADA ONLY)

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada.

Transport Canada Contact Information

Website http://www.tc.gc.ca/eng/roadsafety/menu.htm
Phone 1–800–333–0510

WHEELS AND TIRES

TIRE CARE

Information About Uniform
Tire Quality Grading

Tire Quality Grades apply to new pneumatic passenger car tires.
The Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. **For example: Treadwear 200 Traction AA Temperature A.**

These Tire Quality Grades are determined by standards that the United States Department of Transportation has set.

Tire Quality Grades apply to new pneumatic passenger car tires. They do not apply to deep tread, winter-type snow tires, space-saver or temporary use spare tires, light truck or LT type tires, tires with nominal rim diameters of 10 to 12 inches or limited production tires as defined in Title 49 Code of Federal Regulations Part 575.104 (c)(2).

U.S. Department of Transportation Tire quality grades: The U.S. Department of Transportation requires Grech Motors to give you the following information about tire grades exactly as the government has written it.

Treadwear

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half (1 ½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the

actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

Traction AA A B C

WARNING

The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning or peak traction characteristics

The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

Temperature A B C

WARNING

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under-inflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 139. Grades B and A represent

higher levels of performance on the laboratory test wheel than the minimum required by law.

Glossary of Tire Terminology

***Tire label:**
A label showing the original equipment tire sizes, recommended inflation pressure and the maximum weight the vehicle can carry.

***Tire Identification Number (TIN):**
A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size and date of manufacture. Also referred to as DOT code.

***Inflation pressure:**
A measure of the amount of air in a tire.

***Standard load:**
A class of P-metric or Metric tires designed to carry a maximum load at 35 psi [37 psi (2.5 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.

***Extra load:**
A class of P-metric or Metric tires designed to carry a heavier maximum load at 41 psi [43 psi (2.9 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.

***kPa:**
Kilopascal, a metric unit of air pressure.

***PSI:**
Pounds per square inch, a standard unit of air pressure.

***Cold tire pressure:**
The tire pressure when the vehicle has been stationary and out of direct sunlight for an hour or more and prior to the vehicle being driven for 1 mile (1.6 kilometers).

***Recommended inflation pressure:**

The cold inflation pressure found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door.

***B-pillar:**
The structural member at the side of the vehicle behind the front door.

***Bead area of the tire:**
Area of the tire next to the rim.

*** Sidewall of the tire:**
Area between the bead area and the tread.

***Tread area of the tire:**
Area of the perimeter of the tire that contacts the road when mounted on the vehicle.

***Tread area of the tire:**
Area of the perimeter of the tire that contacts the road when mounted on the vehicle.

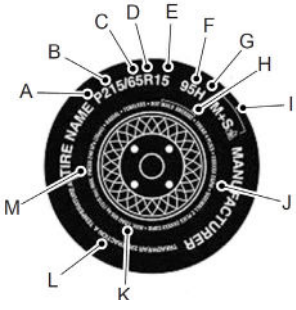
***Rim:**
The metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.

Information Contained on the Tire Sidewall

Both United States and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

Information on P Type Tires

P215/65R15 95H is an example of a tire size, load index and speed rating. The definitions of these items are listed below. (Note that the tire size, load index and speed rating for your vehicle may be different from this example.)



A. **P:** Indicates a tire, designated by the Tire and Rim Association, that may be used for service on cars, sport utility vehicles, minivans and light trucks.
Note: If your tire size does not begin with a letter this may mean it is designated by either the European Tire and Rim Technical Organization or the Japan Tire Manufacturing Association.

B. **215:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

C. **65:** Indicates the aspect ratio which gives the tire's ratio of height to width.

D. **R:** Indicates a radial type tire.

E. **15:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

F. **95:** Indicates the tire's load index. It is an index that relates to how much weight a tire can carry. You may find this information in your owner's manual. If not, contact a local tire dealer.

Note: You may not find this information on all tires because it is not required by federal law.

G. **H:** Indicates the tire's speed rating. The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time under a standard condition of load and inflation pressure. The tires on your vehicle may operate at different conditions for load and inflation pressure. These

speed ratings may need to be adjusted for the difference in conditions. The ratings range from 81 mph (130 km/h) to 186 mph (299 km/h). These ratings are listed in the following chart.

Note: You may not find this information on all tires because it is not required by federal law.

Note: For tires with a maximum speed capability over 149 mph (240 km/h), tire manufacturers sometimes use the letters ZR. For those with a maximum speed capability over 186 mph (299 km/h), tire manufacturers always use the letters ZR.

H. **U.S. DOT Tire Identification Number:** This begins with the letters DOT and indicates that the tire meets all federal standards.
The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

Letter Rating	mph (km /h)	Letter Rating	mph (km /h)
M	81 mph (130 km/h)	U	124 mph (200 km/h)
N	87 mph (140 km/h)	H	130 mph (210 km/h)
Q	99 mph (159 km/h)	V	149 mph (240 km/h)
R	106 mph (171 km/h)	W	168 mph (270 km/h)
S	112 mph (180 km/h)	Y	186 mph (299 km/h)
T	118 mph (190 km/h)		

I. **M+S or M/S:** Mud and Snow, or
AT: All Terrain, or
AS: All Season.

J. **Tire Ply Composition and Material Used:** Indicates the number of plies or the number of layers of rubber-coated fabric in the tire tread and sidewall. Tire manufacturers also must indicate the ply materials in the tire and the sidewall, which include steel, nylon, polyester, and others.

K. **Maximum Load:** Indicates the maximum load in kilograms and pounds that can be carried by the tire. (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door.

L. **Treadwear, Traction and Temperature Grades:**

***Treadwear** The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear 1½ times as well on the government course as a tire graded 100.

***Traction:** The traction grades, from highest to lowest are AA, A, B, and C. The grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

***Temperature:** The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

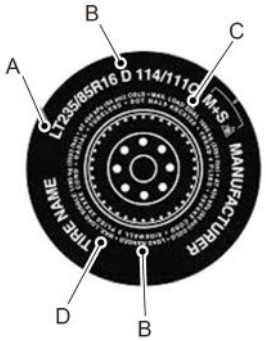
M. **Maximum Inflation Pressure:** Indicates the tire manufacturers' maximum permissible pressure or the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the vehicle manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure
on the vehicle label. The tire suppliers may have additional markings, notes or warnings such as standard load or radial tubeless.

Additional Information Contained on the Tire Sidewall for LT Type Tires

Note: Tire Quality Grades do not apply to this type of tire.
LT type tires have some additional information beyond those of P type tires. These differences are described below.

A. **LT:** Indicates a tire, designated by the Tire and Rim Association, that is intended for service on light trucks.

B.



Load Range and Load Inflation Limits: Indicates the tire's load-carrying capabilities and its inflation limits.

C. **Maximum Load Dual lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a dual;
defined as four tires on the rear axle (a total of six or more tires on the vehicle).

D. **Maximum Load Single lb (kg) at psi (kPa) cold:** Indicates the maximum load and tire pressure when the tire is used as a single; defined as two tires (total) on the rear axle.

Information on T Type Tires
T145/80D16 is an example of a tire size.

Note: The temporary tire size for your vehicle may be different from this example. Tire Quality Grades do not apply to this type of tire.
T type tires have some additional information beyond those of P type tires. These differences are described

below:

A. **T:** Indicates a type of tire, designated by the Tire and Rim Association, that is intended for temporary service on cars, sport utility vehicles, minivans and light trucks.

B. **145:** Indicates the nominal width of the tire in millimeters from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

C. **80:** Indicates the aspect ratio which gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall.

D. **D:** Indicates a diagonal type tire.

R: Indicates a radial type tire.

E. **16:** Indicates the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel diameter.

Location of the Tire Label
You will find a Tire Label containing tire inflation pressure by tire size and other important information located on the B-Pillar or the edge of the driver's door.

Inflating Your Tires
Safe operation of your vehicle requires that your tires are properly inflated. Remember that a tire can lose up to half of its air pressure without appearing flat.

Every day before you drive, check your tires. If one looks lower than the others, use a tire gauge to check pressure of all tires and adjust if required.

At least once a month and before long trips, inspect each tire and check the tire pressure with a tire gauge (including spare, if equipped). Inflate all tires to the inflation pressure recommended by Grech Motors.

You are strongly urged to buy a reliable tire pressure gauge, as automatic service station gauges may be inaccurate. Grech Motors recommends the use of a digital or dial-type tire pressure gauge rather than a stick-type tire pressure gauge.

Use the recommended cold inflation pressure for optimum tire performance and wear. Under-inflation or over-inflation may cause uneven tread wear patterns.

WARNINGS

Under-inflation is the most common cause of tire failures and may result in severe tire cracking, tread separation or blowout, with unexpected loss of vehicle control and increased risk of injury. Under-inflation increases sidewall flexing and rolling resistance, resulting in heat buildup and internal damage to the tire. It also may result in unnecessary tire stress, irregular wear, loss of vehicle control and accidents. A tire can lose up to half of its air pressure and not appear to be flat!
Always inflate your tires to the Grech Motors recommended inflation pressure even if it is less than the maximum inflation pressure information found on the tire. The Grech Motors recommended tire

inflation pressure is found on the Safety Compliance Certification Label or Tire Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. Failure to follow the tire pressure recommendations can cause uneven tread wear patterns and adversely affect the way your vehicle handles

WARNINGS

Do not reduce tire pressure to change the ride characteristics of the vehicle. If you do not maintain the inflation pressure at the levels specified by Grech Motors, your vehicle may experience a condition known as shimmy. Shimmy is a severe vibration and oscillation in the steering wheel after the vehicle travels over a bump or dip in the road that does not dampen out by itself. Shimmy may result from significant under-inflation of the tires, improper tires (load range, size, or type), or vehicle modifications such as lift-kits. In the event that your vehicle experiences shimmy, you should slowly reduce speed by either lifting off the accelerator pedal or lightly applying the brakes. The shimmy will cease as the vehicle speed decreases.

Maximum Inflation Pressure is the tire manufacturer's maximum permissible pressure and the pressure at which the maximum load can be carried by the tire. This pressure is normally higher than the manufacturer's recommended cold inflation pressure which can be found on the Safety Compliance Certification Label (affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position), or Tire Label located on the B-pillar or the edge of the driver's door. The cold inflation pressure should never be set lower than the recommended pressure on the Safety Compliance Certification Label or Tire Label.

Note: When weather temperature changes occur, tire inflation pressures also change. A 10°F (6°C) temperature drop can cause a corresponding drop of 1 psi (7 kPa) in inflation pressure. Check your tire pressures frequently and adjust them to the proper pressure which can be found on the Safety Compliance Certification Label or Tire Label.

To check the pressure in your tire(s):
1. Make sure the tires are cool, meaning they are not hot from driving even a mile.

Note: If you are checking tire pressure when the tire is hot, (for example, driven more than 1 mile [1.6 kilometers]), never bleed or reduce air pressure. The tires are hot from driving and it is normal for pressures to increase above recommended cold pressures. A hot tire at or below recommended cold inflation pressure could be significantly under-inflated.

Note: If you have to drive a distance to get air for your tire(s), check and record the tire pressure first and add the appropriate air pressure when you get to the pump. It is normal for tires to heat up and the air pressure inside to go up as you drive.

2. Remove the cap from the valve on one tire, then firmly press the tire gauge onto the valve and measure the pressure.

3. Add enough air to reach the recommended air pressure.

Note: If you overfill the tire, release air by pressing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.

4. Replace the valve cap.

5. Repeat this procedure for each tire, including the spare.

Note: Some spare tires operate at a higher inflation pressure than the other tires. For T type mini-spare

tires, (see the Dissimilar spare wheel and tire assembly information for a description. Store and maintain at 60 psi (4.15 bar). For full-size and dissimilar spare tires, see the Dissimilar spare wheel and tire assembly information for a description. Store and maintain at the higher of the front and rear inflation pressure as shown on the Safety Compliance Certification Label or Tire Label.

6. Visually inspect the tires to make sure there are no nails or other objects embedded that could poke a hole in the tire and cause an air leak.

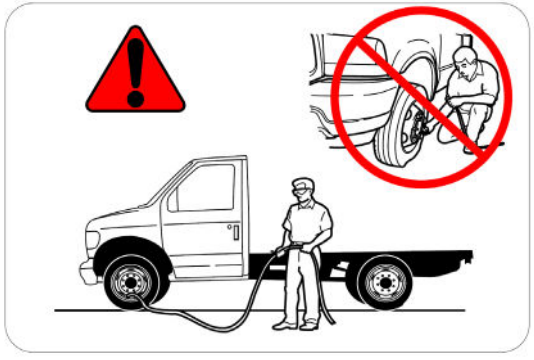
7. Check the sidewalls to make sure there are no gouges, cuts or bulges.

Tire Inflation Information

WARNINGS

An inflated tire and rim can be very dangerous if improperly used, serviced or maintained. To reduce the risk of serious injury, never attempt to re-inflate a tire which has been run flat or seriously under-inflated without first removing the tire from the wheel assembly for inspection. Do not attempt to add air to tires or replace tires or wheels without first taking precautions to protect persons and property.

All tires with Steel Carcass Plies (if equipped): This type of tire utilizes steel cords in the sidewalls. As such, they cannot be treated like normal light truck tires. Tire service, including adjusting tire pressure, must be performed by personnel trained, supervised and equipped according to Federal



Proper Tire Inflation Technique

Occupational Safety and Health Administration regulations. For example, during any procedure involving tire inflation, the technician or individual must utilize a remote inflation device, and ensure that all persons are clear of the trajectory area.

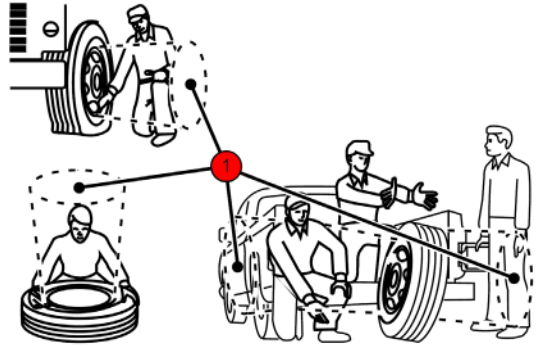
See Proper Tire Inflation Technique in the diagram on the next page.

WARNINGS

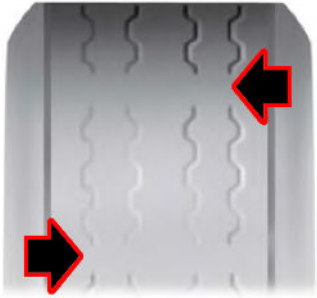
Stay out of the trajectory **(1)** as indicated in the illustration to the right.

Inspecting Your Tires and Wheel Valve Stems

Periodically inspect the tire treads for uneven or



excessive wear and remove objects such as stones, nails or glass that may be wedged in the tread grooves. Check the tire and valve stems for holes, cracks, or cuts that may permit air leakage and repair or replace the tire and replace the valve stem. Inspect the tire sidewalls for cracking, cuts, bruises



and other signs of damage or excessive wear. If internal damage to the tire is suspected, have the tire demounted and inspected in case it needs to be repaired or replaced. For your safety, tires that are damaged or show signs of excessive wear should not be used because they are more likely to blow out or fail.

Improper or inadequate vehicle maintenance can cause tires to wear abnormally. Inspect all your tires, including the spare, frequently, and replace them if one or more of the following conditions exist:

Tire Wear

WARNINGS

When the tread is worn down to one sixteenth of an inch (2 millimeters), tires must be replaced to help prevent your vehicle from skidding and hydroplaning. Built-in tread wear indicators, or wear bars, which look like narrow strips of smooth rubber across the tread will appear on the tire when the tread is worn down to one sixteenth of an inch (2 millimeters). When the tire tread wears down to the same height as these wear bars, the tire is worn out and must be replaced.

Damage

Periodically inspect the tire treads and sidewalls for

damage (such as bulges in the tread or sidewalls, cracks in the tread groove and separation in the tread or sidewall). If damage is observed or suspected have the tire inspected by a tire professional. Tires can be damaged during off-road use, so inspection after off-road use is also recommended.

Age

WARNINGS

Tires degrade over time depending on many factors such as weather, storage conditions, and conditions of use (load, speed, inflation pressure) the tires experience throughout their lives.

In general, tires should be replaced after six years regardless of tread wear. However, heat caused by hot climates or frequent high loading conditions can accelerate the aging process and may require tires to be replaced more frequently.

You should replace your spare tire when you replace the road tires or after six years due to aging even if it has not been used.

U.S. DOT Tire Identification Number

Both United States and Canada Federal regulations require tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides a U.S. DOT Tire Identification Number for safety standard certification and in case of a recall.

This begins with the letters DOT and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code designating where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, the numbers 317 mean the 31st week of 1997. After 2000 the numbers go to four digits. For example, 2501 means the 25th week of 2001. The numbers in between are identification codes used for traceability. This information is used to contact customers if a tire defect requires a recall.

Tire Replacement Requirements

Your vehicle is equipped with tires designed to provide a safe ride and handling capability.

WARNINGS

Only use replacement tires and wheels that are the same size, load index, speed rating and type as those originally provided by Grech Motors. The recommended tire and wheel size may be found on either the Safety Compliance Certification Label or the Tire Label. If this information is not found on these labels then you should contact your authorized dealer as soon as possible. Use of any tire or wheel not recommended by Ford can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally the use of non-recommended tires and wheels could cause steering, suspension, axle, transfer case or power transfer unit failure. If you have questions regarding tire replacement, contact your authorized dealer as soon as possible.

To reduce the risk of serious injury, when mounting replacement tires and wheels, you should not exceed the maximum pressure indicated on the sidewall of the tire to set the beads without additional precautions listed below. If the beads do not seat at the maximum pressure indicated, re-lubricate and try again.

WARNINGS

When inflating the tire for mounting pressures up to 20 psi (1.38 bar) greater than the maximum pressure on the tire sidewall, the following precautions must be taken to protect the person mounting the tire:

1. Make sure that you have the correct tire and wheel size.
2. Lubricate the tire bead and wheel bead seat area

again.
3. Stand at a minimum of 12 feet (3.6 meters) away from the wheel and tire assembly.

4. Use both eye and ear protection.

WARNINGS

For a mounting pressure more than 20 psi (1.38 bar) greater than the maximum pressure, a Grech Motors dealer or other tire service professional should do the mounting.

Always inflate steel carcass tires with a remote air fill with the person inflating standing at a minimum of 12 feet (3.6 meters) away from the wheel and tire assembly

Important: Remember to replace the wheel valve stems when the road tires are replaced on your vehicle The two front tires or two rear tires should generally be replaced as a pair.

Safety Practices

WARNINGS

If your vehicle is stuck in snow, mud, or sand, do not rapidly spin the tires; spinning the tires can tear the tire and cause an explosion. A tire can explode in as little as three to five seconds.

Do not spin the wheels at over 35 mph (56 km/h). The tires may fail and injure a passenger or bystander.

Driving habits have a great deal to do with your tire mileage and safety.

*Observe posted speed limits
*Avoid fast starts, stops and turns

*Avoid potholes and objects on the road
*Do not run over curbs or hit the tire against a curb when parking

Highway Hazards

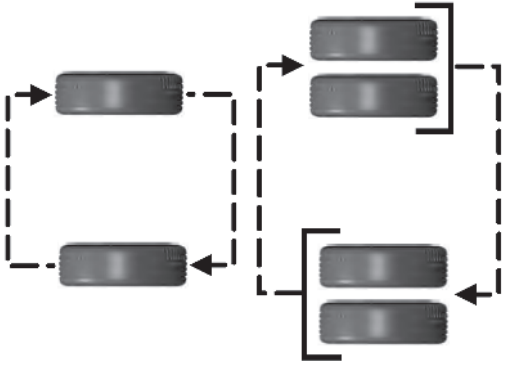
No matter how carefully you drive there's always the possibility that you may eventually have a flat tire on the highway. Drive slowly to the closest safe area out of traffic. This may further damage the flat tire, but your safety is more important.

If you feel a sudden vibration or ride disturbance while driving, or you suspect your tire or vehicle has been damaged, immediately reduce your speed. Drive with caution until you can safely pull off the road. Stop and inspect the tires for damage. If a tire is under-inflated or damaged, deflate it, remove wheel and replace it with your spare tire and wheel. If you cannot detect a cause, have the vehicle towed to the nearest repair facility or tire dealer to have the vehicle inspected.

Tire and Wheel Alignment

A bad jolt from hitting a curb or pothole can cause the front end of your vehicle to become misaligned or cause damage to your tires. If your vehicle seems to pull to one side when you're driving, the wheels may be out of alignment. Have an authorized dealer check the wheel alignment periodically.

Wheel misalignment in the front or the rear can cause uneven and rapid tread wear of your tires and should be corrected by an authorized dealer. Front-wheel drive vehicles and those with an independent rear suspension may require alignment of all four wheels.



The tires should also be balanced periodically. An unbalanced tire and wheel assembly may result in irregular tire wear.

Tire Rotation

Note: If your tires show uneven wear ask an authorized dealer to check for and correct any wheel misalignment, tire imbalance or mechanical problem involved before tire rotation.

Note: Your vehicle may be equipped with a dissimilar spare wheel and tire assembly. A dissimilar spare wheel and tire assembly is defined as a spare wheel and tire assembly that is different in brand, size or appearance from the road tires and wheels. If you have a dissimilar spare wheel and tire assembly it is intended for temporary use only and should not be used in a tire rotation.

Note: After having your tires rotated, inflation pressure must be checked and adjusted to the vehicle requirements. Rotating your tires at the recommended interval (as indicated in the Scheduled Maintenance chapter) will help your tires wear more evenly, providing better tire performance and longer tire life. Rear-wheel drive vehicles and four-wheel drive vehicles (front tires at left of diagram)

Dual rear wheel drive vehicle - six tire rotation (front tires at left side of diagram)

Dual rear wheel drive vehicles

If your vehicle is equipped with dual rear wheels it is recommended that the front and rear tires (in pairs) be rotated only side to side. We do not recommend splitting up the dual rear wheels. Rotate them side to side as a set. After tire rotation, inflation pressures must be adjusted for the tires new positions in accordance with vehicle requirements.

Sometimes irregular tire wear can be corrected by rotating the tires.

Using Snow Chains

WARNING

Snow tires must be the same size, load index, speed rating as those originally provided by Ford. Use of any tire or wheel not recommended by Grech Motors can affect the safety and performance of your vehicle, which could result in an increased risk of loss of vehicle control, vehicle rollover, personal injury and death. Additionally, the use of non-recommended tires and wheels could cause steering, suspension, axle, transfer case or power transfer unit failure.

Note: Do not use snow chains on vehicles with 20 inch wheels and tires.

The tires on your vehicle have all-weather treads to provide traction in rain and snow. However, in some climates, you may need to use snow tires and cables. If you need to use cables, it is recommended that steel wheels (of the same size and specifications) be used, as cables may chip aluminum wheels.

Note: The suspension insulation and bumpers will help prevent vehicle damage. Do not remove these components from your vehicle when using snow tires and chains.

Follow these guidelines when using snow tires and chains:

- If possible, avoid fully loading your vehicle
- Use only SAE Class S chains.
- Install chains securely, verifying that the chains do not touch any wiring, brake lines or fuel lines.
- Drive cautiously. If you hear the chains rub or bang against your vehicle, stop and retighten the chains. If this does not work, remove the chains to prevent damage to your vehicle.
- Remove the tire chains when they are no longer needed. Do not use tire chains on dry roads.

If you have any questions regarding snow chains or cables, please contact your authorized dealer.

LOAD LIMIT

Vehicle Loading - with and without a Trailer

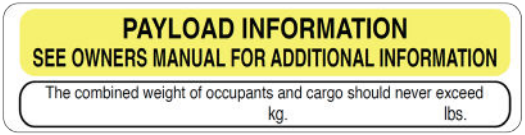
This section will guide you in the proper loading of your vehicle, trailer or both, to keep your loaded vehicle weight within its design rating capability, with or without a trailer. Properly loading your vehicle will provide maximum return of vehicle design performance. Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Payload Information Label or Safety Compliance Certification Label:

Base Curb Weight - is the weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Vehicle Curb Weight - is the weight of your new vehicle when you picked it up from your authorized dealer plus any aftermarket equipment.

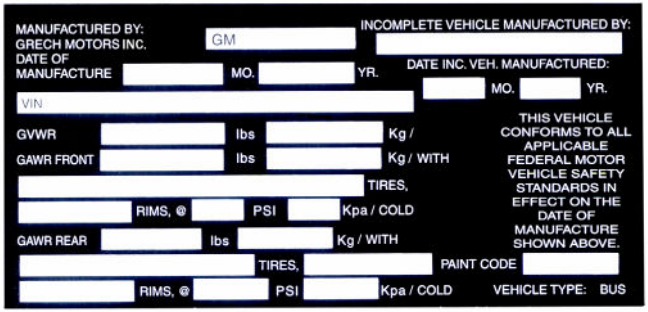
Payload - is the combined weight of cargo and passengers that the vehicle is carrying. The maximum payload for your vehicle can be found on the Payload Information Label on the B-Pillar or the edge of the driver door (vehicles exported outside the US and Canada may not have a Payload Information Label). Look for **"THE COMBINED WEIGHT OF OCCUPANTS AND CARGO SHOULD NEVER EXCEED XXX kg OR XXX lb."** for maximum payload.

Label shown for example only



The payload listed on the Payload Information Label is the maximum payload for the vehicle as built by the assembly plant.

If you install any aftermarket or authorized-dealer installed equipment on the vehicle, you must subtract the weight of the equipment from the payload listed on the Payload Information Label in order to determine the new payload.



Label shown for example only

The label above is an example of the label on your vehicle which specifies the proper **tire loading limits** which must be followed to insure the safe operation of your vehicle.

WARNING

The appropriate loading capacity of your vehicle can be limited either by volume capacity (how much space is available) or by payload capacity (how much weight the vehicle should carry). Once you have reached the maximum payload of your vehicle, do not add more cargo, even if there is space available. Overloading or improperly loading your vehicle can contribute to loss of vehicle control and vehicle rollover.

Cargo Weight - includes all weight added to the Base Curb Weight, including cargo and optional equipment. When towing, trailer tongue load or king pin weight is also part of cargo weight.

GAW (Gross Axle Weight) - is the total weight placed on each axle (front and rear) including vehicle curb weight and all payload.

GAWR (Gross Axle Weight Rating) - is the maximum allowable weight that can be carried by a single axle (front or rear). These numbers are shown on the Safety Compliance Certification Label. The label shall be affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position. **The total load on each axle must never exceed its Gross Axle Weight Rating.**

WARNING

Exceeding the Safety Compliance Certification Label vehicle weight rating limits could result in substandard vehicle handling or performance, engine, transmission and/or structural damage, serious damage to the vehicle, loss of control and personal injury.

WARNINGS

Do not exceed the GVWR or the GAWR specified on the Safety Compliance Certification Label.

Do not use replacement tires with lower load carrying capacities than the original tires because they may lower the vehicle's GVWR and GAWR limitations. Replacement tires with a higher limit than the original tires do not increase the GVWR and GAWR limitations.

Exceeding any vehicle weight rating limitation could result in serious damage to the vehicle and/or personal injury.

Steps for determining the correct load limit:

1. Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lb.” on your vehicle’s placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kg or XXX lb.
4. 4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1,400 lb. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lb. (1400-750 (5 x 150) = 650 lb.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

The following gives you a few examples on how to calculate the available amount of cargo and luggage load capacity:

***Suppose your vehicle has** a 1400-pound (635-kilogram) cargo and luggage capacity. You decide to go golfing. Is there enough load capacity to carry you, four of your friends and all the golf bags? You and four friends average 220 pounds (99 kilograms) each and the golf bags weigh approximately 30 pounds (13.5 kilograms) each. The calculation would be: 1400 - (5 x 220) - (5 x 30) = 1400 - 1100 - 150 = 150 pounds. Yes, you have enough load capacity in your vehicle to transport four friends and your golf bags. In metric units, the calculation would be: 635 kilograms - (5 x 99 kilograms) - (5 x 13.5 kilograms) = 635 - 495 - 67.5 = 72.5 kilograms.

***Suppose your vehicle has** a 1400-pound (635-kilogram) cargo and luggage capacity. You and one of your friends decide to pick up cement from the local home improvement store to finish that

patio you have been planning for the past two years. Measuring the inside of the vehicle with the rear seat folded down, you have room for twelve 100-pound (45-kilogram) bags of cement. Do you have enough load capacity to transport the cement to your home? If you and your friend each weigh 220 pounds (99 kilograms), the calculation would be: 1400 - (2 x 220) - (12 x 100) = 1400 - 440 - 1200 = - 240 pounds. No, you do not have enough cargo capacity to carry that much weight. In metric units, the calculation would be: 635 kilograms - (2 x 99 kilograms) - (12 x 45 kilograms) = 635 - 198 - 540 = -103 kilograms. You will need to reduce the load weight by at least 240 pounds (104 kilograms). If you remove three 100-pound (45-kilogram) cement bags, then the load calculation would be:1400 - (2 x 220) - (9 x 100) = 1400 - 440 - 900 = 60 pounds. Now you have the load capacity to transport the cement and your friend home. In metric units, the calculation would be: 635 kilograms - (2 x 99 kilograms) - (9 x 45 kilograms) = 635 - 198 - 405 = 32 kilograms.

The above calculations also assume that the loads are positioned in your vehicle in a manner that does not overload the Front or the Rear Gross Axle Weight Rating specified for your vehicle on the Safety Compliance Certification Label. The label shall be affixed to either the door hinge pillar, door-latch post, or the door edge that meets the door-latch post, next to the driver's seating position.

PREVENTATIVE MAINTENANCE SCHEDULE

The following Maintenance Schedule is provided as a convenient reference for the specified systems and components, which require periodic service.

These schedules are not intended to be a complete list of all possible services to be performed on a regular basis, nor is it suggested that more frequent services not be considered. We suggest always referring to the Original Chassis Manufacturers Suggested Maintenance Schedule.

Because of the different types of operations coaches are subjected to, the severity of service must be considered when establishing maintenance intervals. Therefore, any such intervals given in the following schedule must be adjusted according to the particular type of operation in which your particular vehicle will be used. The intervals given are Grech Motors. recommendations and should be considered as maximum intervals. It should be noted that maintenance inspection and service operations of shorter intervals are always preferable to longer intervals.

NOTE:

Check Your Original Owner's Guide Supplement(s), regarding special operating condition and maintenance requirements, that may be applicable due to your specific vehicle operating profile.

PREVENTIVE MAINTENANCE SCHEDULE

THE FOLLOWING PAGES SPECIFY THE MINIMUM REQUIREMENTS THAT ARE NECESSARY TO PROPERLY MAINTAIN YOUR VEHICLES SYSTEMS AND COMPONENTS

CHECK EVERY DAY:

- ► all items on Pre-Trip inspection (see pages 6 & 7)
- ► side passenger door emergency release operation
- ► side passenger entry door, operation, locking, damage
- ► emergency roof hatch
- ► emergency egress window latches
- ► function of all interior and exterior lights
- ► tire pressure, 80 psi
- ► fluid leaks from, transmission, engine, power steering, engine coolant, gear oil, fuel
- ► check all seatbelts for proper function and damage

CHECK EVERY MONTH:

- ► door linkage and pivot arm lubrication and worn or damaged components
- ► and lube rear Kwikee step, (if equipped)
- ► and clean air intake filter for A/C system

AT 5,000 MILES/600 HOURS DO THE FOLLOWING:

- ► inspect tires for wear and inspect tread depth
- ► lube door seals with silicon spray, check for proper sealing
- ► Rotate Tires

SPECIAL NOTE REGARDING AIR CONDITIONING CHARGING:

Always refer to the “Charge Label” under the vehicle hood.

PREVENTIVE MAINTENANCE SCHEDULE

AT 15,000 MILES/1800 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► inspect tires for wear & tread depth & rotate tires

AT 20,000 MILES/2400 HOURS DO THE FOLLOWING:
- ► inspect tires for wear and inspect tread depth
- ► rotate tires
- ► inspect engine air filter
- ► clean battery terminals/check for proper torque

AT 25,000 MILES/3000 HOURS DO THE FOLLOWING:
- ► inspect tires for wear and inspect tread depth
- ► rotate tires
- ► inspect engine air filter
- ► clean condenser coils

AT 30,000 MILES/3600 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► inspect tires for wear & tread depth & rotate tires

AT 45,000 MILES/5400 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► inspect tires for wear & tread depth & rotate tires

SPECIAL NOTE REGARDING AIR CONDITIONING CHARGING:

Always refer to the “Charge Label” under the vehicle hood.

PREVENTIVE MAINTENANCE SCHEDULE

AT 60,000 MILES/7200 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► clean condenser coils
- ► inspect tires for wear & tread depth & rotate tires

AT 75,000 MILES/9000 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► inspect tires for wear & tread depth & rotate tires

AT 90,000 MILES/10800 HOURS DO THE FOLLOWING:
- ► lube door seals with silicon spray, check for proper sealing
- ► clean condenser coils
- ► inspect tires for wear & tread depth & rotate tires

SPECIAL NOTE REGARDING AIR CONDITIONING CHARGING:

Always refer to the “Charge Label” under the vehicle hood.

NOTE: at 100,000 MILES re-implement the initial 5000 mile maintenance routine and follow each mileage milestone as you did in the beginning. Example 100,000 miles, 115,000 miles, 120,000 miles etc...

NOTE:

Check Your Original Owner’s Guide Supplement(s), regarding special operating condition and maintenance requirements, that may be applicable due to your specific vehicle operating profile.

Basic Troubleshooting Guide

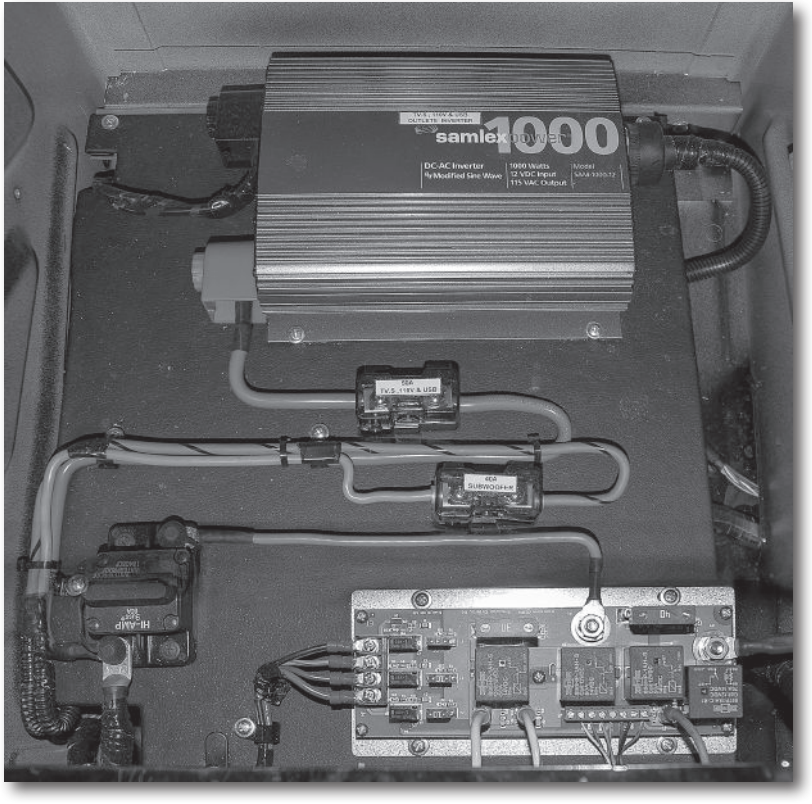
The following section details basic troubleshooting techniques that will help you to understand and determine the best course of action regarding some commonly encountered problems.

PROBLEM	POSSIBLE SOLUTIONS
REAR A/C BLOWER INOPERATIVE	Check to make sure all fuses are good. If the rear A/C is still not working, call the Service Department at GRECH Motors.
EXTERIOR LIGHTING	One or all exterior clearance lights inoperative, please refer to the SPRINTER owner's manual for fuse locations.
REAR STEREO/CD INOPERATIVE	Check to make sure all connections are tight. Also remove the stereo and check the fuse located on the backside of the stereo. Also check the fuses in the OEM fuse panel for Radio.
PASSENGER LIGHTS INOPERATIVE	Check to make sure the switch on the overhead control panel is turned on. NOTE: There is a 5 minute light timer for the interior lights which will automatically turn them off when the door is open. The ignition switch needs to be turned on for at least 10 seconds to reset the timer.
BACK-UP ALARM INOPERATIVE	Check to make sure reverse lights are coming on, if not, check the fuse located in the SPRINTER fuse panels.

Basic Troubleshooting Guide

PROBLEM	POSSIBLE SOLUTIONS

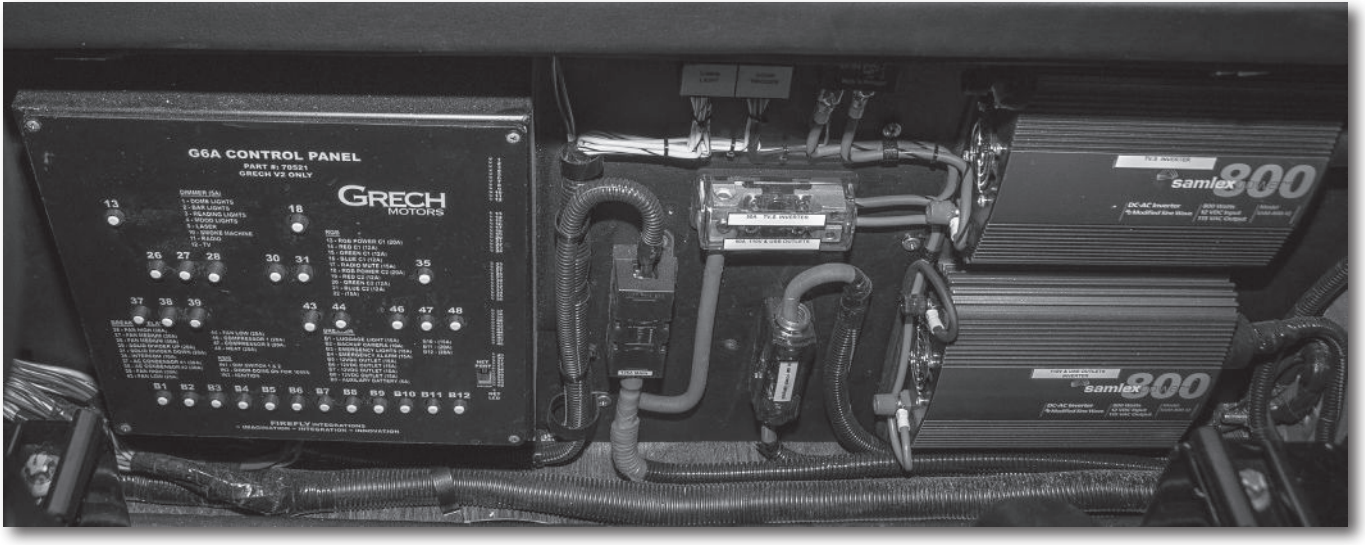
SPRINTER Standard Vehicle Control Board Assembly



This Control Board Assembly is located under the passenger's seat.

All Vehicle Wiring Diagrams can be found online
at www.Grechmotors.com/diagrams/wiring

SPRINTER LIMO Vehicle Control Board Assembly



This Control Board Assembly is
located on the divider panel

All Vehicle Wiring Diagrams can be found online
at www.Grechmotors.com/diagrams/wiring

OBTAINING PARTS

When parts are required for a warranty repair, all parts will be handled by the Grech Motors Service Department.

All other Non-Warranty parts needs can be handled by contacting the Grech Motors Parts Department, directly at 1-855-994-7324. Y In order to expedite your parts order, please have your Grech Motors serial number, which starts with G-######, and is located on the drivers door jamb of all our vehicles.

UNDERSTANDING WARRANTY POLICY *(read the following sections carefully)*

Should your bus require service related to the converted areas of the vehicle, ***read this section first, before taking any action.*** By doing so, you will clearly understand the Grech Motors Service Process, and avoid possible delays. NEVER initiate a warranty repair without prior approval of the Grech Motors Service Department. An R.A.N (Repair Authorization Number) must be obtained before each warranty repair is honored. Not following this procedure could void your warranty reimbursement for that particular repair.

If there is any doubt as to whether or not a repair is related to the Grech Motors Warranty, call the Grech Motors Service Department at 1-855-994-7324, this may save you time wasted at a chassis dealer or another shop, for a problem appropriately solved by contacting Grech Motors Service Department.

If the problem is conversion related, then it can either be repaired at our Riverside, California facility, or by a shop that we recommend in your area, or by a shop of your choice. This procedure is true of both warranty and non-warranty repairs. Depending on the nature of the problem, it may be necessary to have the warranty repair done at our Riverside, California facility.

CAUTION ABOUT TOWING!

If it becomes necessary to tow your vehicle, a flat bed rig is preferred. UNDER NO CIRCUMSTANCES, should the bus be towed by lifting the rear end, serious frame damage can occur.

WARRANTY VERSUS NON-WARRANTY

Whether a particular problem is covered under the Grech Motors Warranty depends, in some cases, on several factors. The Grech Motors Service Department, determines coverages ahead of time on a case-by-case basis, either over the phone or at our Riverside, California facility.

HAVING NON-WARRANTY REPAIRS PERFORMED

If the service manager has determined that the repair is not covered, or you are sure that it is not covered, we would be happy to recommend a shop in your area, or schedule an appointment with the Grech Motors Service Department, whichever is more convenient.

HAVING WARRANTY REPAIRS PERFORMED

There are three (3) methods:

1. Repair is done at the Grech Motors Service Department, in Riverside, California
2. Repair is done at a Grech Motors authorized service facility near you.
3. Repair is done at a shop of your choice, with prior approval of the Grech Motors Service Department.

HAVING WARRANTY REPAIRS PERFORMED (con't)

If either method 2 or 3 as described on the previous page are to be used, you must obtain pre-authorization and a Grech Motors Service Department repair authorization number (R.A.N), in advance of performing any repairs. Both requirements my be accomplished from a single phone call to the Grech Motors Service Department, at 1-855-994-7324.

If method 3 is used, simply pay for the work and mail a copy of the invoice with the repair authorization number, and your Grech Motors vehicle ID number, which is found on the vehicle ID tag on the drivers door jamb) on the invoice, so your claim(s) can be processed without any problems. You will be reimbursed within 30 days.

Send all invoices to the service manager at:

Grech Motors
Attn: Service Department Manager
6915 Arlington Avenue
Riverside, California 92504

Vendor Reference Listing

Vendor	Warranty Period
TIRES	1 Year Replacement, No Charge
SPRINTER HOTLINE	3 Years, 36,000 Miles Bumper to Bumper 3 Years, 100,000 Miles on Diesel Engine
	See SPRINTER Manual
FREEDMAN SEATING 1-713-929-6100	2 Years Limited Warranty
PHOENIX USA 1-931-561-6128	3 Years
KWIKEE ELECTRIC STEPS 1-574-258-7652	1 Year or 12,000 Miles, Whichever Comes First
PANASONIC 1-949-251-1851	1 Year, Unlimited Miles
SHURFLOW WATER PUMPS 1-800-854-3218	2 Years, Unlimited Miles
TRANSPEC WORLDWIDE 1-810-274-9400	1 Year, Unlimited Miles
VELVAC MIRRORS 1-800-783-8871	1 Year, Unlimited Miles
VOYAGER PA SYSTEM 1-800-274-1886	1 Year, Unlimited Miles
PREMIER AUTO PRODUCTS 1-856-231-1800	2 Years, Unlimited Miles
ProAir 1-800-338-8544 X 118	2 Years, Unlimited Miles
REI 1-877-726-4617	2 Years

It is the policy of Grech Motors, to incorporate product improvements to our products whenever possible or practical to do so. We reserve the right to make changes and or improvements at any time without incurring any obligation to make such changes on previously sold products. Additionally, the information and specifications contained within this manual are current at time of printing. Subsequently all information contained in this manual is subject to change at any time, without notice.

Please note that this manual applies to all Shuttle models and explains standard equipment as well as many options, and may include equipment not presently installed on your vehicle.

GRECH MOTORS

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