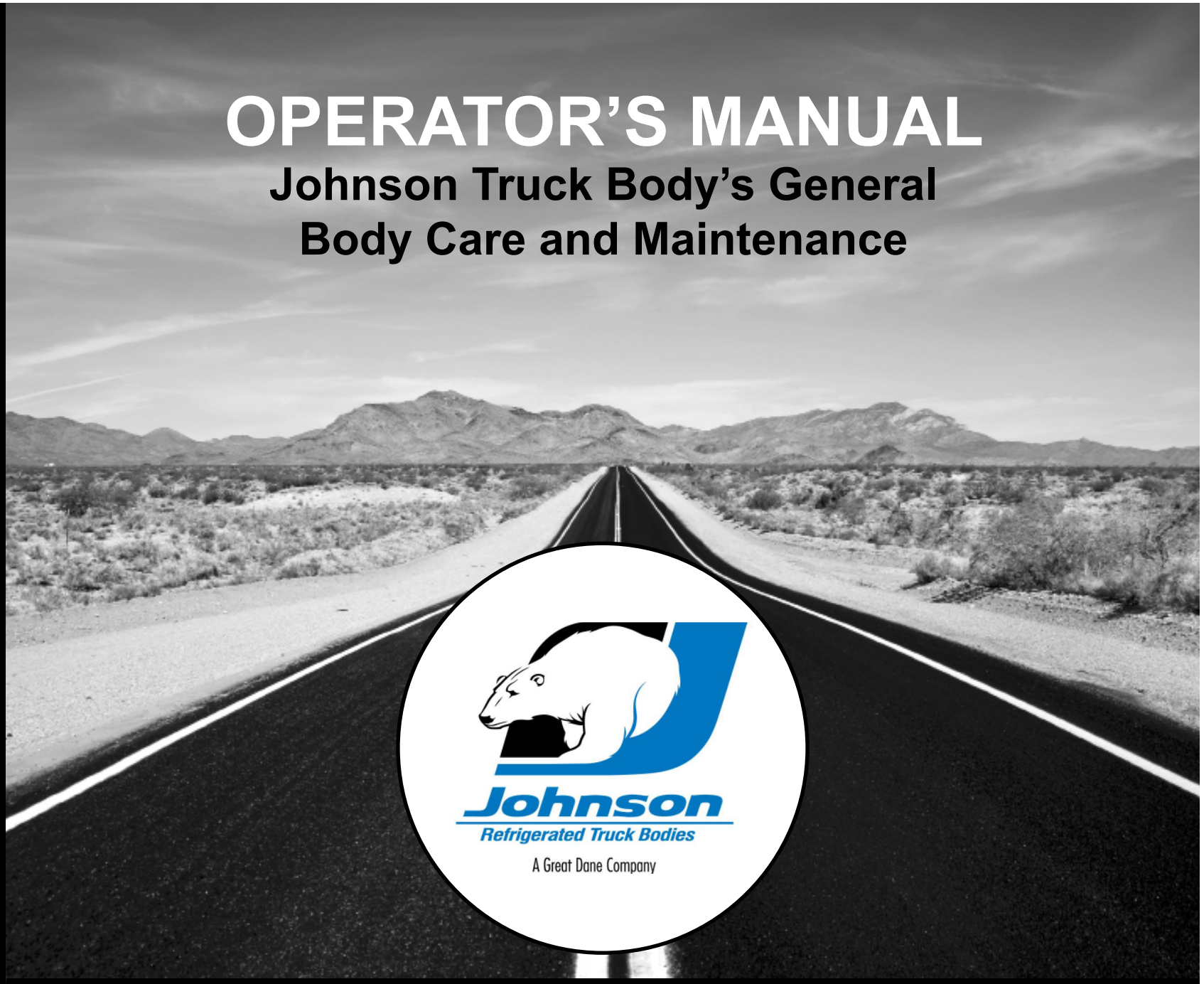
OPERATOR'S MANUAL

WARNING: This manual contains important safety information. Read manual carefully. Keep manual with truck body at all times.

OPERATOR'S MANUAL

Johnson Truck Body's General Body Care and Maintenance



Johnson
Refrigerated Truck Bodies
A Great Dane Company

DRIVE AWAY WITH MORE

OM-GENERAL BODY
Rev. 013122

INTRODUCTION

THANK YOU...

Thank you for your order of a Johnson Truck Body. We are grateful you chose our thermal efficient fiberglass body.

This manual contains important information about your Johnson Truck Body and should remain with the truck body at all times. This manual has been prepared to assist you in retaining the safety, dependability, and performance that are built into Johnson Truck Bodies. It is essential that this body receives periodic inspections, maintenance, and service parts replacement.

This manual includes safety checks that the operator must perform periodically. Reading your operator's manual will help you and others avoid personal injury or damage to the system. The information in this manual will provide the operator with the safest and most effective use of the truck body. Knowing how to operate the truck body safely and correctly will allow you to train others on the proper operation.

It is important that every truck body owner and/or operator have an organized preventative maintenance program. The United States Department of Transportation requires that the maintenance records be kept on every commercial highway vehicle. It is to your advantage to be able to show that regularly scheduled inspection checks have been made on every piece of equipment operated. A regular preventative maintenance program will assure that you get the most from your Johnson Truck Body. It is recommended that you use similar preventative maintenance practices with regard to this refrigeration system as well.

It is important to have your body serial number intact and on record when you are making a call to Johnson Truck Bodies. This identifies the build specifications for that unit. It can be found on the IVD tag located on the front wall. Some bodies may have a duplicate tag inide the body above the rear door.

Finally, please note that you can find information on our website by going to www.greatdane.com. Under 'Products', you will find Johnson Series for our current product offerings, 'Parts & Services' you will find 'Johnson Truck Body Parts' library, 'Inside Great Dane' you will find our common Operational and Maintenance manuals. At any time you need assistance, please call our Customer Service Department at 800-922-8360.

IMPORTANT

READ THIS MANUAL CAREFULLY AND BECOME FAMILIAR WITH YOUR JOHNSON TRUCK BODY. KNOW ITS APPLICATIONS, ITS LIMITATIONS AND ANY HAZARDS INVOLVED. SHOULD YOU HAVE ANY FURTHER QUESTIONS, CONTACT JOHNSON TRUCK BODIES AT 800-922-8360 AND ASK FOR CUSTOMER SERVICE. PLEASE HAVE YOUR BODY SERIAL NUMBER READY WHEN YOU CALL. THIS MANUAL SHOULD BE KEPT WITH THE BODY AT ALL TIMES.

CONTENTS

REGISTRATION

Record your model number & equipment model numbers below.

BODY

Serial Number _____

Date put into service _____

Contact Johnson Truck Bodies Customer Service at 800-922-8360 for Parts & Service questions.

ALL ELECTRIC (AE) SYSTEM

Make _____

Model _____

Serial number _____

Contact your local refrigeration service center for technical service or call Johnson Truck Bodies Customer Service at 800-922-8360 for assistance

LIFT GATE

Make _____

Model _____

Serial number _____

Contact your local dealer for support.

THERMO KING / CARRIER

Condensing Unit _____

Model _____

Serial number _____

Contact your local dealer for technical support.

SAFETY WARNINGS AND PRECAUTIONS

SAVE THESE INSTRUCTIONS

These safety warnings and precautions draw attention to potential safety concerns, system damage, operation and service information. Please read all the information carefully to avoid injury and equipment damage.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The safety alert symbol ( ) is used with a signal word (DANGER, WARNING, or CAUTION), a pictorial and/or a safety message to alert you to hazards.

SAFETY PRECAUTIONS

Johnson Truck Bodies recommends that all services be performed by a qualified service technician. However, there are several general safety practices which you should be aware of.

WARNING: Always wear safety glasses or goggles when working with or around the truck body and its refrigeration system. Refrigerant can cause permanent damage if it comes in contact with your eyes and/or skin.

WARNING: Keep hands and loose clothing clear of fans, belts and gears at all times when the unit is operating.

WARNING: Use extreme caution when servicing refrigeration unit, and when climbing onto, or off of chassis and equipment.

CAUTION: Exposed coil fins can cause painful lacerations. Use caution when performing service work on the evaporator or condenser coils, service work is best left to a qualified service technician.

CAUTION: Disconnect electrical source and use extreme caution if drilling holes in the unit. Drilling into electrical wiring or refrigerant lines could cause a fire. Never drill into structural components.

WARNING: Unit may start at any time when the unit is connected to grid power.

WARNING: Be sure to disconnect power supply when inspecting any part of the unit.

ELECTRICAL HAZARD

WARNING: Be sure to disconnect unit from grid power before working on the unit. This is an all electric unit and could present a potential electrical hazard.

DANGER

AN IMMEDIATE HAZARDOUS SITUATION. IF THE HAZARDOUS SITUATION IS NOT AVOIDED, DEATH OR SERIOUS INJURY WILL OCCUR.

WARNING

A POTENTIALLY HAZARDOUS SITUATION. IF THE HAZARDOUS SITUATION IS NOT AVOIDED, DEATH OR SERIOUS INJURY COULD OCCUR.

CAUTION

A POTENTIALLY HAZARDOUS SITUATION. IF THE HAZARDOUS SITUATION IS NOT AVOIDED, MINOR OR MODERATE INJURY COULD OCCUR.

IMPORTANT

INDICATES HELPFUL INFORMATION FOR PROPER OPERATION OR MAINTENANCE OF YOUR TRUCK BODY.

WARNING

CALIFORNIA PROPOSITION 65 WARNING: ENGINE EXHAUST FROM THIS VEHICLE CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

REFRIGERANT

Although fluorocarbon refrigerants are classified as safe, observe caution when working with refrigerants or around areas where they are being used in the servicing of your unit.

FIRST AID

EYES: For contact with liquid, immediately flush eyes with large amounts of water. Get prompt medical attention.

SKIN: Flush areas with large amounts of warm water. Do not apply heat. Wrap burns with dry, sterile bulky dressing to protect from infection or injury. Get prompt medical attention.

INHALATION: Move victim to fresh air and restore breathing if necessary. Stay with victim until arrival of emergency personnel.

DANGER

FLUOROCARBON REFRIGERANTS MAY PRODUCE TOXIC GASES. IN THE PRESENCE OF AN OPEN FLAME OR ELECTRICAL SHORT, THESE GASES ARE SEVERE RESPIRATORY IRRITANTS CAPABLE OF CAUSING DEATH.

DANGER

FLUOROCARBON REFRIGERANTS TEND TO DISPLACE AIR AND CAN CAUSE OXYGEN DEPLETION WHICH COULD RESULT IN DEATH BY SUFFOCATION. PROVIDE ADEQUATE VENTILATION IN ENCLOSED OR CONFINED AREAS.

WARNING

FLUOROCARBON REFRIGERANTS EVAPORATE RAPIDLY, FREEZING ANYTHING THEY CONTACT IF ACCIDENTALLY RELEASED INTO THE ATMOSPHERE FROM THE LIQUID STATE.

REFRIGERANT OIL

Observe the following precautions when working with or around refrigerant oil.

FIRST AID

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while holding the eyelids open. Get prompt medical attention.

SKIN: Remove contaminated clothing. Wash thoroughly with soap and water. Get medical attention if irritation persists.

INHALATION: Move victim to fresh air and restore breathing if necessary. Stay with victim until arrival of emergency personnel.

INGESTION: Do not induce vomiting. Immediately contact poison control center or physician.

WARNING

ALWAYS WEAR SAFETY GLASSES OR GOGGLES TO PROTECT EYES FROM CONTACT WITH REFRIGERANT OIL.

WARNING

PROTECT SKIN AND CLOTHING FROM PROLONGED OR REPEATED CONTACT WITH REFRIGERANT OIL. RUBBER GLOVES ARE RECOMMENDED.

WARNING

WASH THOROUGHLY AND IMMEDIATELY AFTER HANDLING REFRIGERANT OIL TO PREVENT IRRITATION.

SAFETY LABELS AND LOCATIONS

UNDERSTANDING THE SYSTEM SAFETY AND OPERATIONAL LABELS

These safety warnings and labels shown below are placed on this system to draw attention to potential safety concerns, system damage, operation and service information. Please read all the information carefully to avoid injury and system damage.

For replacement parts contact Johnson Truck Bodies at 800-922-8360.

REFRIGERATION SYSTEM SAFETY LABELS

Electrical Hazard

Locations vary depending on model. Can be found near all power receptacles, high voltage tray covers and interface boards. Indicates a dangerous hazard which, if not avoided, will result in death or serious injury by electrical shock. Depending on Maintenance task, may require a NFPA 70E PPE category 1-4.

TRUCK BODY SAFETY LABELS

WARNING: Door Holdback Decal - Part # 087-1032

Door must be fully engaged into holdback device to retain door in the full open position. Failure to secure door into holdback device may result in the door swinging shut on the operator. Door holdback device needs to be replaced immediately if damaged.

Located at eye-level on the inside of every door of the body approximately 60”-66” from the ground.

CAUTION: Interior Cam Hardware Door Release Maintenance Required Decal - Part # 029-1048

Interior Door Releases need to be lubricated annually to ensure emergency use of door release to be used.

NOTICE: Interior Cam Hardware Door Release Decal - Part #

Interior Door Release allows you to not remain locked inside if you have an interior door release handle or lever. Notice instructs user to unscrew T-Handle on interior door pan completely from the exterior hasp, the hasp will drop away and you can push the door open to exit body. Reassemble components to close door.

CAUTION: Automotive Interior Door Release & Gasket Lubrication Decal - Part # 087-1066

Interior Door Release latch must be cleaned and lubricated regularly with a Food Grade Silicone Lube to ensure continued performance.

Food Grade Silicone Lube should also be applied to door gaskets to clean and reduce condensation and freezing.

Located on interior access panel near door latch.

CAUTION: Automotive Door Latch Internal Release Decal Part # 087-1067

Pull release lever located on top or bottom of door latch to open door from inside compartment.

Located on interior access panel near door latch.

DAILY OPERATING INSTRUCTIONS FOR YOUR MECHANICAL OR ALL-ELECTRIC SYSTEM

OPERATING INSTRUCTIONS

See your Supplemental Refrigeration Operation Manual for proper steps to operate your refrigeration system.

PROPER LOADING INSTRUCTIONS

Proper loading practices will help insure the appropriate environment for temperature-controlled product, and will optimize the refrigeration performance to insure delivery of the highest quality products. All products must be loaded in a manner that allows for an envelope of air to circulate around the sides, top, front, back and underside of the product. Proper air circulation is critical to maintaining the desired product temperature.

NOTE:

1. Truck body must be pulled down to required air temperatures prior to any product being introduced (i.e. Pre-chill or pre-freeze body).
2. Be sure product is at or below required product temperatures prior to loading.

RETURNING FROM ROUTE

See your Supplemental Refrigeration Operation Manual for proper steps to operate refrigeration system returning from route.

⚠ CAUTION

DO NOT START TRUCK ENGINE UNTIL UNIT HAS BEEN PROPERLY DISCONNECTED FROM GRID POWER. FAILURE TO DO SO COULD CAUSE SYSTEM FAILURE AS WELL AS ELECTRICAL HAZARDS.

COLD CHAIN BEST PRACTICES GUIDE

Cold chain is an uninterrupted supply system that manages a constant cold temperature, helping ensure product safety and stability. The following practices are recommended for product protection during the loading, transport and delivery process. Proper practices help ensure the appropriate environment for your temperature-controlled product, and will optimize refrigeration system performance.

LOADING, TRANSPORT AND DELIVERY

Product MUST be stored and loaded the required temperature for the product
Pre-cool, store, and verify product is at the proper temperature before loading. Refrigeration units are designed to maintain product temperature, not to pull down product temperature.

Use dependable packaging
Materials must be durable, crush-resistant.

Verify setpoint temperature
Confirm setpoint temperature. Mechanical units primarily use an in-cab control feature (factory set). All-Electric units primarily use thermostats located inside the body.

Pre-cool truck body by activating refrigeration
Pre-cool body to setpoint temperature. Refer to your thermometer to verify unit has reached the appropriate temperature before loading product.

Loading product
Load quickly to minimize inside and outside air exchange. Allow for an envelope of air to circulate around the sides, top, front, back and underside of the product when loading. Proper airflow is critical to maintaining required product temperature. Load cargo securely to prevent the risk of shifting and damage to product during handling and transit.

NOTE: The body's interior air temperature will be higher after loading product.

Vented containers for fresh products

Non-vented containers for low temperature

Block pallets for sufficient air circulation

In-cab Control Feature

Thermostat

Cornershell Thermometer

Minimize door openings
Limit the number and duration of door openings to minimize inside and outside air exchange.

Always use door strip curtains
Install and/or maintain door strip curtains properly to help reduce internal and external air exchange while loading product.

Allow for body temperature recovery
Body temperature recovery time will increase with the entry of ambient air. Allow time for refrigeration system to recover from door openings. The greater the temperature gap between the setpoint temperature and actual body temperature, the more time it will take to recover to setpoint.

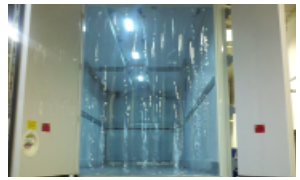
Loading/delivering product at docking station
Position body tightly against and maintain an effective seal between body and dock. Move product quickly to limit exposure to non-refrigerated areas.

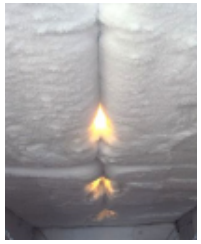
Defrost system regularly
Monitor system automatic defrost cycle, or initiate a system defrost when frost/ice accumulates on evaporator coil or eutectic cold plates to ensure optimal refrigeration performance.

Door switches to shut down fans
The use of door switches to shut down fans when door is opened is considered best practice to conserve the air temperature within the body and not force it out through the door opening. It may also reduce your heat load recovery time. If you do not have door switches, you can accommodate this same effect by shutting your refer system off at each stop when the door is opened. You can turn it back on when the doors are closed. Contact your refrigeration dealer for an aftermarket service to potentially add door switches to your existing body.

Outside Air Exchange

Door Strip Curtains





Frost/Ice Accumulations

PROPER AIRFLOW

Proper airflow is ***critical*** to maintaining required product temperature. Even with optimal system performance, obstructions create poor air circulation and uneven temperature distribution, risking damage to your product.

Load product evenly to provide passable airways between top of the cargo and body ceiling when loading. Do not block system's warm air intake and cold air discharge. Do not load product tightly against walls or doors. This restricts airflow and will negatively affect system cooling efficiency.

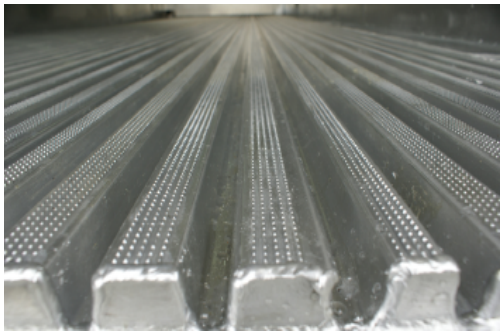
Truck body interior must be kept clean to prevent contamination and obstruction of airflow. Clear body floor and drains of all debris to prevent circulation blockage, and check evaporator unit regularly to make sure it is free of debris.

Keep floor beneath product open so warm air can return back through cooling system. Block pallets help provide an airflow channel by forming additional space between body floor and cargo. If you do not use pallets, you can utilize Johnson's polyslat floor racking systems. They are constructed of polyslat (recycled plastic) material to resist moisture and rot.

Johnson's Airflow flooring option is designed to ensure sufficient airflow on the underside of the product. The channels provide a means for air to pass beneath the product, while the foam insulation below the flooring acts as a barrier to keep body floor cool.

Secure pallet loads with plastic netting instead of stretch film, which severely restricts proper ventilation. Avoid using slip sheets or hand stacking as these are not favorable methods for adequate airflow.

General Air Flow Diagram



Johnson's Airflow Flooring

Tapered Polyslat Floor Rack

PREVENTATIVE MAINTENANCE

It is important that every refrigerated truck body owner and/or operator have an organized preventative maintenance program. A closely followed preventative maintenance program will help to keep your Johnson Truck Body in top operating condition. The following general schedule is provided to assist in monitoring that maintenance.

CARGO AREA INSPECTION

Johnson Truck Bodies are designed to maintain the required temperature for product being carried during time of transit. To assist the unit in performing this function, operator should:

- Inspect outside of body for loose or improperly sealed doors.
- Inspect that the refrigeration system is operating, has pulled down and has stabilized to desired air operating temperature prior to loading product.
- Inspect inside of body for damaged walls. **Any damage to the wall or insulation must be repaired.** See Body Care and Maintenance section of this manual.
- Be sure loads are at the proper carrying temperature when loaded into truck body.
- Supervise loading to make sure there is sufficient air space around the load for proper air circulation.
- See Thermo King Operator's Manual and/or Carrier, lift gate, etc. for maintenance and troubleshooting guidelines.

EXTERIOR BODY INSPECTION

- Inspect refrigeration equipment and cowling is intact and that all fasteners are present.
- Inspect aluminum roof band, cornershell/roof band joints and exterior roof sealant is intact and reseal as needed.
- Inspect all fiberglass areas: roof, doors, front wall, rear wall, sidewalls and cornershells for cracks, separation, or damage.
- Inspect rain gutters are all intact and all fasteners are present.
- Inspect all lighting, interior and exterior, camera and proximity sensors are working or aligned.
- Inspect all electrical power connections for wear and service.
- Check fenders, rubrail, bumper, storage boxes, mud flaps and splash guards for damage.
- Inspect lift gate to be working properly, maintain per lift gate manufacturer's instructions.
- Be sure decals and reflective markers are all intact.

⚠ WARNING

TO REDUCE THE RISK OF SERIOUS PHYSICAL INJURY, NEVER REACH INTO THE CONDENSING UNIT WHILE THE SYSTEM IS PLUGGED INTO GRID POWER. ALWAYS DISCONNECT POWER SUPPLY WHEN SERVICING CONDENSING UNIT. SERVICING OF THE CONDENSING UNIT IS ONLY TO BE CONDUCTED BY A CERTIFIED REFRIGERATION TECHNICIAN.

BODY DOOR INSPECTION

- Inspect exterior sheet, interior pan and door lips for damage.
- Inspect if rubber gaskets are missing or torn.
- Inspect interior and exterior door hardware for damage or wear. Door latches should be free of dirt and grime. ***NOTE: Silicone spray for door latches and gaskets***
- ***Lubricate Interior Door Handles***
- Adjust door hardware for proper seal (dollar bill test). (This prevents warm air from entering body as well as cold air from escaping)
- Inspect grab handles.
- Check door holdback stops or t-holders and (if applicable) cornershell bracket.
- Check interior wiring harness to door pan, if applicable.
- Check interior door pull straps, if applicable.
- Inspect door curtains.

BODY SUBFRAME INSPECTION

- Inspect underbody subfloor for cracks or damage.
- Inspect subfloor ovals over wheels for damage.
- Inspect long stringers for cracks or damage.
- **Inspect tie-down angle welds are intact and tie down bolts are tight.**
- Inspect subframe attachments - utility, cart, and cord boxes, check welds and fasteners.
- Inspect mud flaps and splash guards are securely attached.
- Inspect drain holes/kazoo, clean if necessary.
- Inspect rear bumper and assembly for damage.
- Inspect steps and their grab handles.

BODY INTERIOR INSPECTION

- Inspect ceiling and wall surfaces for cracks or damage, repair as needed.
- Inspect seams for cracks or openings, seal as needed.
- Inspect floors for damage or cracked welds, clean or repair as needed.
- Inspect wire conduit covers are in place, no wires exposed.
- Inspect vacuum relief is tube open and label is present, primarily on Lo-Temp Bodies
- Inspect all interior shelving, slats, refrigeration equipment, etc., to be functioning and no damage.

LIGHTS / ELECTRICAL INSPECTION

- Inspect the following lights are present and working:
  - Exterior clearance lights
  - Stop, turn and tail lights
  - Back-up lights
  - Exterior work or flood lights
  - License plate light
  - Interior dome light
  - Exterior courtesy lights, if present
- Inspect that refrigeration's on/off switch, indicator light and/or plug-in outlet is not damaged or worn.
- Inspect circulation fan is operational.
- Inspect master electrical box is not damaged or worn.
- Inspect and check 12-volt master disconnect switch on electrical box is operable.
- Inspect back-up camera, proximity sensors and in-cab monitor are working properly, align as necessary.
- Inspect dash switches are operable.
- Cycle Automotive door locking system and key fob is functional, if applicable.

BODY CARE AND MAINTENANCE

FIBERGLASS MAINTENANCE AND REPAIR

To keep the exterior of your new fiberglass truck body in good condition, periodic preventative care and maintenance should be followed.

FINISH PROTECTION

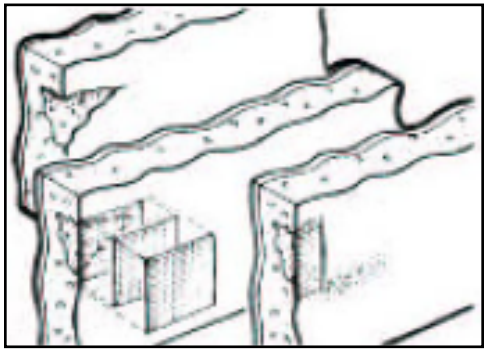
The Johnson fiberglass body has a beautiful, natural glass finish that will stay this way if washed periodically with common strength soap and water. High caustic soaps and solutions will cause premature color fade and panel surface deterioration. It is acceptable to use a hot water pressure washer system for cleaning; however to prevent premature deterioration of exterior finish, the water pressure against the surface of the panel should not be extreme. Mild to moderate amounts of pressure are efficient to apply soap and remove surface dirt.

NOTE: heavy doses of acetone or lacquer should not be used.

For good finish protection, we recommend applying a coat of wax one or two times a year. Waxing helps protect against every day elements and ultra violet rays which cause surface deterioration and fading. Many automotive or fiberglass boat waxes can be used. Check the product label for recommended surfaces and application.

A mild, abrasive rubbing compound is recommended to be used with wax. Johnson Truck Bodies uses a product manufactured by “Meguiar’s”. Any fiberglass boat or automobile parts supplier should be able to provide this or an equivalent product for you.

Use Whink’s Rust Remover to remove any surface rust streaks that may have occurred on your fiberglass surfaces.



FIBERGLASS REPAIR

Exterior walls, interior walls and floor

Johnson Truck Bodies are extremely durable, but occasional accidents do occur. If so, repairs are simple, amazingly inexpensive and easily done in your own shop. Fiberglass repair kits from local boat or hardware stores are readily available. Observe all manufacturers’ instructions, which include safety precautions.

Exterior fiberglass surface repairs

If Fiberglass Reinforced Plastic (FRP) surface has superficial cracks or a porous surface:

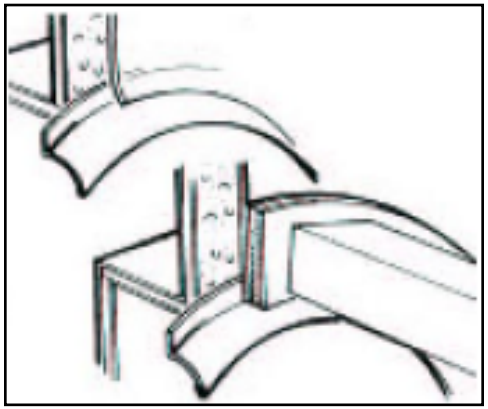
1. Remove any decals from area of repair
2. Sand the area with 180-grit sandpaper

3. Wipe area clean and tack with a tack cloth
4. For light to moderate repairs, apply DuPont 4724 Lightweight Polyester Filler to area
5. For moderate or heavy repairs, apply DuPont Z-Chrome Rust Defender to area
6. Allow to dry and sand area with 220-grit sandpaper
7. Wipe area clean and tack with a tack cloth. May need to repeat steps 4 or 5, 6 and 7
8. Prime the area, using a DuPont Tufcoat Primer
9. Using a topcoat sealer, seal area according to customer's specifications (i.e. gel coat with Cooks Armorcoat Gel Coats or paint with DuPont's Imron or PPG's Ditzler Paints)

Exterior fiberglass panel repairs that include foam repair

If a fiberglass fracture or damage ever appears, it should be repaired as soon as possible.

1. Determine repair area, oversize the repair area by 2-4" for feathering fiberglass and buffing
2. Remove any decals and damaged fiberglass and foam from area of repair
3. Sand remaining area of fiberglass to remove all foreign matter, and rough up to assure a good bond. Best practice is to feather/bevel the old fiberglass edges to meet up with the new product.
4. Fill voided foam area with a urethane based foam product
5. Allow foam to dry, and trim excess foam to within 1/4" of exterior of finished sheet
6. Clean and wipe down repair area to remove dust and oils
7. Fill area with Mar glass to within 1/8" of exterior of finished sheet
8. Allow to harden and sand
9. Cut oversized strips of fiberglass mat to cover area (approximately 2" larger than damaged area and about 3-4 strips)
10. Lay mat on clean cardboard
11. Saturate mat with resin and catalyst mixture
12. Place coated mat into repair
13. Remove all air bubbles from the layers of wet mat with brush or roller
14. Allow to dry



<u>After area has hardened:</u>

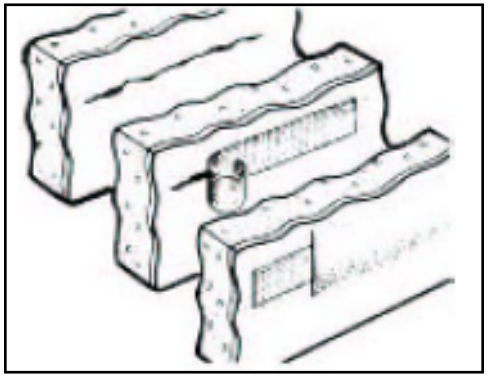
1. Sand, flush and feather edges to original liner
2. Prime and paint as needed

Exterior fiberglass fender replacement

1. You may need to remove the tires
2. Use a saw to cut off old fender where it joins the exterior sheet, do not cut exterior sheet
3. Pull exterior sheet away from body just enough to allow lip of new fender to be forced up behind sheet, grind behind sheet to even surface
4. Mask all areas of fender to avoid glue from sticking to exposed visible surfaces
5. Dry fit fenders to opening, measure and cut 5-6 wood sticks to hold fender in place or clamps
6. Using either two-part epoxy based glue or resin method, install fender so lip is behind exterior sheet:
7. Position flat pieces of wood around fender against body exterior sheet or clamp in place
8. Keep pressure on fender lip and exterior sheet while curing
9. Allow to dry, then trim to length, sand and paint as needed.

Interior fiberglass liner

If a fracture or damage ever appears, it should be repaired as soon as possible.



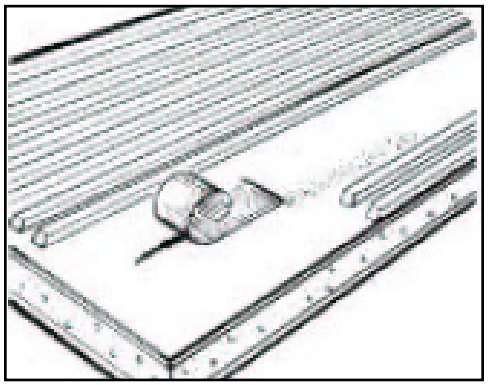
1. Sand entire area to remove all foreign matter and rough up to assure a good bond
2. Fill voided foam area with a urethane based foam product, if necessary
   a. Allow foam to dry and trim excess foam to within 1/8” of sheet
   b. Sand area again to assure a good bond
   c. Putty over foam to allow mat to adhere
3. Cut strips of fiberglass mat to cover area
4. Coat area with resin and catalyst mixture (mixed according to manufacturer’s instructions)
5. Lay pre-cut pieces of fiberglass mat over fresh resin removing any air bubbles
6. Work resin into mat with clean brush or roller removing any air bubbles
7. Saturate mat with more resin and catalyst mixture
8. Apply enough mixture to make a convex over the damaged area
9. Use small roller or brush to work into place removing any air bubbles
10. Trim any edges or excess mat before completely hardened

<u>After area has hardened:</u>

1. Sand flush to original liner
2. Re-coat with resin to give a smooth, glossy finish

Fiberglass floor

If a definite fracture or crack appears, it can be repaired in the same manner as the interior liner repair.



If an entire area of the floor wears thin, repair as follows:

1. Sand entire area to remove all foreign matter and rough up to assure a good bond
2. Cut strips of fiberglass mat to cover area
3. Coat area with resin (mixed according to manufacturer's instructions)
4. Lay pre-cut pieces of fiberglass mat over fresh resin
5. Apply additional resin to completely saturate top of mat
6. Use paint roller to smooth the surface and remove the air bubbles

If grit for a non-slip surface is desired:

1. Sprinkle grit (silica sand or aluminum oxide) repaired area while resin is still wet
2. Allow to harden
3. Re-coat area with mixed resin and catalyst to lock in grit, do not over coat or you will loose your grit surface.

OTHER BODY CARE AND MAINTENANCE

Interior drain holes

1. After defrost, make sure drains are clear of debris and check for proper drainage.
2. If drains are backed up or draining slowly, clean out with pressure washer or water hose.

Cleaning body interior

Clean and sanitize body interior after cold plate defrost.

1. Make sure your drain holes are open or your door opening is sloped down hill
2. After defrosting unit, spray down walls using an all-purpose cleaner.
3. Rinse down walls using a water hose or pressure washer (2,600 lbs or less).
4. Wipe down or let air dry completely before closing up tight

Body Doors

Make sure doors are sealing properly and correct leaks by performing a gasket compression test:

1. Place a dollar bill or similar paper type and size between the door gasket and jam while you open and close the door.
2. Try to pull the dollar bill back out. There should be some resistance as you pull the dollar out.
3. Do this around the perimeter of the door checking resistance on the bill as you go. If there is no resistance, either tighten or shim under the handle, lugs, cups, shim the hinge at that location or replace the door gasket if it appears to have lost its resilience or is missing.

Gaskets

It is recommended that gaskets be checked monthly for tears or over-compression.

1. Wipe away any build-up and make sure surfaces are kept clean.
2. Check for any visible tears.
3. Check that adhesive is holding. If coming loose, use 3M 4799 rubber cement glue to reattach.
4. If flattened out (over-compressed), gasket needs to be replaced.
5. Retest gasket compression test noted above

Door hardware

1. Check and treat door hinges and hardware monthly to prevent rust and corrosion.
2. It is recommended to apply Fluid Film, a lanolin based rust and corrosion preventative over tightly adhering rust, dry or damp metal surfaces and painted surfaces.
3. Shake can before using.
4. Hold can 6-8 inches from work surface. Do not spray with can in inverted position.
5. Lubricate internal door releases with anti-seize
6. Review door holdbacks, replace as necessary
7. Adjust hardware for proper tension on gasket to prevent air leaks

Strip curtain repair

1. Remove damaged curtain section by removing screws in aluminum strap.
2. Measure curtain length, and contact JTB Parts Department to order replacement curtain material.

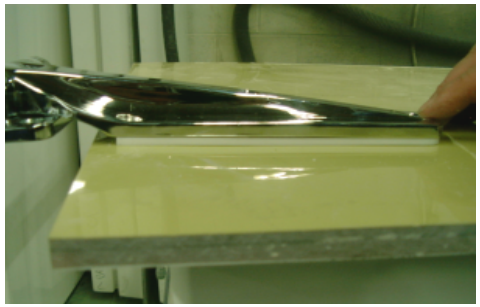
CAM LOCKING DOOR HARDWARE GUIDE

CAM LOCK ADJUSTMENT

The cam lock hardware system on a Johnson Truck Body comes in powdercoat or stainless steel finishes. They are multi-point cam latches to pull the door closed and tight. They typically range in two to five point assemblies based on your door height.

Adjusting Cam Lock Hardware:

1. After performing the gasket check process and the notation of loose tension and/or forceful tension areas of the door seal, use either of the following methods to adjust the hardware. Once complete with adjustment, retest those areas. Repeat as necessary to get a proper door seals.
2. If the gasket is not sealing along the lock side of the door, adjust set screws in the handle to adjust the paddle on the cam to increase or decrease tension.
3. If the set screws are maxed out, insert a shim behind the lug holder in that area. Repeat Gasket Check Process.
4. If the gasket is not sealing along the hinge side of the door, insert a shim behind the leaf portion of the hinge in that area. Repeat Gasket Check Process.



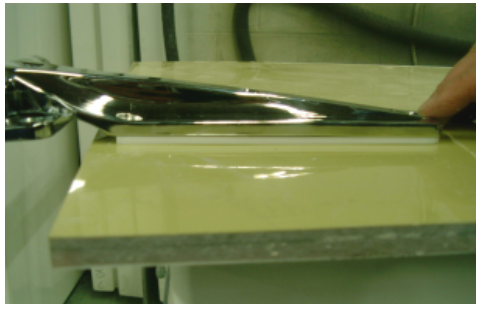
SLAM LOCKING DOOR HARDWARE GUIDE

SLAM LOCK ADJUSTMENT

The slam lock hardware system on a Johnson Truck Body is a chrome finish. They are multi-point slam latch to pull the door closed and tight. They typically range in one to two point assemblies based on your door height. The hinges also range between two and five hinges based on your door height.

Adjusting Slam Lock Hardware:

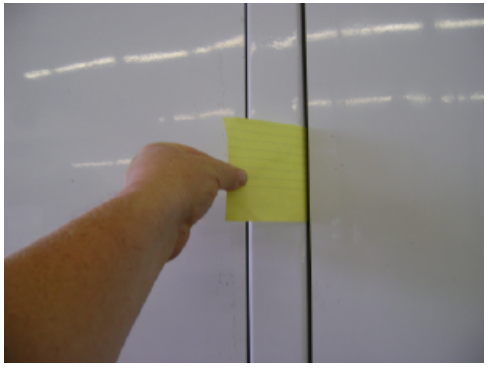
1. After performing the gasket check process and the notation of loose tension and/or forceful tension areas of the door seal, use either of the following methods to adjust the hardware. Once complete with adjustment, retest those areas. Repeat as necessary to get a proper door seals.
2. If the gasket is not sealing along the lock side of the door, adjust set screws in the handle or striker to adjust the tension on the tongue of the slam lock to increase or decrease tension against the striker.
3. If the set screws are maxed out, insert a shim behind the either the handle or the striker in that area. Repeat Gasket Check Process.
4. If the gasket is not sealing along the hinge side of the door, insert a shim behind the leaf portion of the hinge in that area. Repeat Gasket Check Process.



AUTOMOTIVE DOOR LOCK SYSTEM GUIDE

AUTOMOTIVE DOOR INSPECTION

This latch is a 2-detent latch similar to the latch on the chassis cab. The secondary position is a safety feature that keeps the door from opening in the event that it is not fully closed. However, this position will not provide a positive door seal. The primary position is fully closed and will ensure a good door seal. There is no adjustment on the latches. Adjustments are made on the strike post.



Automotive Door Inspection**:**

1. With the latch rotor in the open position, close door gently on the strike post just until it clicks into the secondary detent. The door should be slightly ajar, but not able to open without pulling the handle.
2. Push the door fully closed until it clicks into the primary detent. The door should not be ajar and should be fully sealed.
3. Check for proper seal by placing a piece of paper in the door opening and close the door on the paper. There should be some drag on the paper when pulled out.
4. If there is no drag on the paper, loosen the (2) torx drive screws on the strike post and move the strike post in to pull the door tighter. Retighten screws and re-check the door seal. Move the door strike in small amounts (i.e. 1/16” increments) until proper door seal is acquired.
5. If the drag on the paper is too much and the door handle is difficult to open, the strike post is set too far inside. Loosen the (2) torx drive screws on the strike post and move strike post out. Re-tighten screws and re-check door seal and handle function.

STRIKE HOOP ADJUSTMENT PROCEDURE

If the seal is flattened or the primary catch will not engage, the strike hoop needs to be moved out. If the door operates smoothly and the primary catch is engaged but the door is not sealing, the strike needs to be moved in.

1. First draw an outline with a pencil around the strike plate for location reference purposes.
2. Drill out the aluminum rivet (if present) using a 3/16” drill bit.
3. Loosen screws holding strike but **DO NOT** remove. The screws should be loosened just enough to adjust the strike. Adjust strike to the proper location and tighten screws. It won’t need much of an adjustment. Moving the strike in or out 1/16” to 1/4” will most likely be enough.
4. After screws have been tightened, check door for proper seal.
5. Once a good seal is achieved, drill a 3/16” hole through the door strike plate opposite the original rivet location and into the door frame mullion. Then install a new 3/16” aluminum rivet.

Step 1

Step 2

Step 3

Step 4

Step 5

IMPORTANT

IF AFTER MOVING THE STRIKE HOOP EITHER IN OR OUT FOR “FULL STROKE” ADJUSTMENT AND THE DOOR SEAL IS STILL NOT ADEQUATE, THE STRIKE HOOP MAY NEED TO BE RELOCATED ON THE DOOR FRAME. SEE STRIKE HOOP RELOCATION FOR ADDITIONAL ADJUSTMENT INSTRUCTIONS.

STRIKE HOOP RELOCATION FOR ADDITIONAL ADJUSTMENT

If after moving the strike hoop either in or out and the door seal is still not adequate, the strike hoop may need to be relocated on the door frame.

1. Using a 13/64” drill bit, drill a new hole adjacent to the existing top and bottom fasteners in both strike hoop slots prior to loosening the fasteners.
2. Draw a second outline with a pencil around the strike hoop plate for location reference purposes.
3. Remove the two fasteners and strike hoop assembly from the door frame and fill all four holes with urethane sealant.
4. Reinstall the two fasteners through the strike hoop assembly and into the two newly established holes in the door frame.
5. Adjust the strike to the proper location and tighten screws. Once a good seal is achieved, drill a 3/16” hole into the door frame mullion and trough the door strike plate opposite the original rivet location and install a new 3/16” aluminum rivet.
6. Once latch is installed and functioning properly, reinstall foam plug. Apply a small bead of silicone sealant around perimeter of access panel or around the opening in door pan. Re-install access panel using a Phillips screw driver. If using a drill or driver, set clutch to very low (3-4) and do not over tighten.

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

GLOSSARY

This glossary is published for informational purposes only, and the information being furnished herein should not be considered as all-inclusive or meant to cover all contingencies.

1-Phase plug – 250-volt AC power. Three prong, twist-lock connector, located on line cord end.

3-Phase plug – 250-volt AC power. Four prong, twist-lock connector, located on line cord end.

Air temperature vs. product temperature – The United States Food and Drug Administration requires that frozen products be kept at a temperature in which they remain a frozen solid. This concept is often confused with the air temperature, which is defined as a measure of the heat content in the air. The air temperature may fluctuate due to door openings and/or other factors, but the product temperature must remain freezing.

Ambient air temperature is the temperature of the outdoor air surrounding the body.

Amp is the abbreviation for ampere, and the basic measuring unit of electrical current.

Arcing is caused by routinely plugging and unplugging unit from grid power while the compressor on/off switch is left ON and can have detrimental effects on your electronic equipment. Arcing damage on the electrical components of this system can be indicated by burnt spots on electrical connections of the line cord wires, connector contacts and prongs. Can also cause bodily harm. Recommend always shutting off power supply at the dockside's power supply disconnect box.

BTU (British thermal unit) is a common unit of measure for heat, and is equivalent to the amount of heat energy required to heat one pound of water one degree Fahrenheit. For example, raising the temperature of one pound of water from 40 degrees to 41 degrees would take one BTU. This form of measure is referred in the capacity of this refrigeration system.

BTU capacity of this refrigeration system is based on the application criteria used to calculate the heat load that the system is required to absorb and expel. BTU capacity of the system is referred to as the number of BTUs per hour of heat that can be removed from the cargo area.

Cold plate defrost – Prevent frost build-up on the surface of the plates by running the cold plate defrost system. To prevent frost build-up on the surface of the plates, a cold plate defrost is recommended to be performed every 30 to 40 days or when frost accumulation exceeds ½" build-up on plate surface.

Compressor/condensing unit is both a motor and a pump that moves refrigerant through the system. A vapor compression pump uses a scroll method to compress refrigerant gas and send it to the condenser. The condenser is a heat exchanger which removes heat from the hot compressed gas and allows it to condense into a liquid. As a whole, this unit acts like the heart of the cooling system. It is controlled by a low pressure cutout switch, and will run until the eutectic plates are frozen and the setpoint temperature inside the body is reached.

Cornershell/Front wall thermometer is the dial or digital thermometer which allows operator to monitor body's interior air temperature. Located primarily on driver side front cornershell or front wall of the body.

Door strip curtains are flexible vinyl curtains used to reduce air exchange between the refrigerated compartment and the outside during door openings.

Eutectic cold plates act like the blue ice packs in a picnic cooler and absorb heat to maintain setpoint temperature levels in the body. When the system is plugged into grid power, refrigerant passes through the plates recharging the salt brine/eutectic solution.

Fahrenheit (°F) is a unit of temperature measurement used in the United States and with this refrigeration system.

Fiberglass reinforced plastic (FRP) is a composite material made of a plastic matrix reinforced by fine fibers made of glass.

Grid power also known as dockside power, refers to the electrical power source in which a truck's refrigeration system can be plugged in and recharged overnight at customer's domicile location.

Grid power outlet is a standard outlet used to plug refrigeration system into grid power to be recharged.

Hertz (Hz) is a unit of frequency equal to one cycle per second.

Horsepower (HP) is a unit of power equivalent to 746 watts or 550 foot-pounds per second.

Line cord – 25-foot, 1-Phase or 3-Phase electrical cord provided inside the cab of the truck or cord box to connect unit to grid power when recharging refrigeration system. Amperage is dependent on refrigeration system's amperage load design requirements.

Low pressure cut-out switch (LPCO) is a pressure-operated switch that opens to stop unit operation when suction pressure reaches a predetermined maximum.

NOTE: Never adjust the low pressure control. The high and low pressure cut in/outs are preset by the manufacturer and do not need to be adjusted.

Low temperature refrigeration system is designed to maintain the temperature of your deep frozen product.

Pre-cooling 1) To cool down an empty temperature controlled area to the desired product temperature prior to loading. 2) To cool product to a desired temperature before loading into the truck body.

Recharging the system is used in reference to plugging the unit into shore power to re-energize the capacity of the refrigeration cold plates.

Reflective heating strips – during the defrost cycle, two 3000 watt strip heaters will be activated and the red indicator light on the control box will illuminate when powered. **CAUTION: Never reach inside the body during the defrost cycle. Strip heaters are located between the cold plates and ceiling and are extremely hot!**

Refrigerant is the medium of heat transfer in a refrigeration system which absorbs heat by evaporating at a low temperature and releases heat by condensing at a higher temperature.

Refrigerant oil is a special oil used to lubricate compressors in refrigerant systems.

Refrigeration is defined as the removal and the relocation of heat.

Refrigeration Power Supply Inlet is the refrigeration's system power supply connection and on/off switch. This is used to with a line cord provide power to the refrigeration system and to turn the system on or off.

Setpoint is the temperature pre-set on the thermostat or in-cab control feature. This is the desired body interior air temperature.

Volt – The basic measuring unit of electrical potential.

Watt – The basic measuring unit or electrical power.

WARRANTY

OWNER'S WARRANTY RESPONSIBILITIES

As the refrigerated truck body owner, you are responsible for the performance of the preventative maintenance outlined in this Operator Manual for Body Maintenance.

As the refrigerated truck body owner, you should be aware that Johnson Truck Bodies may deny you warranty coverage if your refrigerated truck body, refrigeration system, or a part or component has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

You are responsible for contacting Johnson Truck Bodies prior to any warranty work being done on your refrigerated truck body. Johnson Truck Bodies has to provide prior approval for warranty work before a qualified service technician performs any repairs.

If you have any questions regarding your warranty, please contact Johnson Truck Bodies and ask to speak with the Customer Service Department at 800-922-8360.

For warranty on the body's accessories (lift gate, chassis, walk-ramp, roll-up door, camera, or refrigeration system) please refer to the supplied Owner's Manual of the manufacturer's product installed. These manuals are forwarded onto the customer, located in the cab of the chassis.

⚠ WARNING

PRIOR TO CONDUCTING WARRANTY REPAIR WORK ON THIS BODY OR REFRIGERATION SYSTEM, PRE-APPROVED AUTHORIZATION MUST BE GRANTED BY MANUFACTURER OR THE MANUFACTURER'S WARRANTY WILL BE VOID. TO OBTAIN PRE-APPROVED AUTHORIZATION CONTACT JOHNSON TRUCK BODIES AT 800-922-8360.

Johnson Truck Bodies Warranty Summary

(Refer to Terms & Conditions from Original Sales Contract.)

- **Body Components (See "Terms and Conditions"):**
  - Structural Integrity (100% Parts Only) .....60 months (See your contract's T/C)
  - Misc. Body Components (100% Parts Only) .....12 months (See your contract's T/C)
- **Refrigeration:**
  - Condensing Unit; Misc. Refrigeration Components
    - » 100% Parts and Labor .....90 days (See your contract's T/C)
    - » 100% Parts Only .....90 days to 12 months (See your contract's T/C)
  - Cold Plates
    - » 100% Parts and Labor .....90 days (See your contract's T/C)
    - » 100% Parts Only .....90 days to 24 months (See your contract's T/C)
  - Mechanical Blower Units .....Original Manufacturers Warranty
- **Lift Gates & Roll-up door** .....Original Manufacturers Warranty (12 months typical)

NOTE:

Johnson Truck Bodies, LLC is not liable for incidental, special or consequential damages, or for any other loss,
Damage or expense of any kind, including loss of profits.
(This includes but is not limited to: *(truck rental, towing, product loss, driver down time, vehicle delivery charges).*

WARNING

Prior to conducting structural warranty repair work on this body or refrigeration system repair work,
pre-approved authorization must be granted by manufacturer or the Manufacturer's Warranty will be void.
To obtain pre-approved authorization contact Customer Service Department at **Johnson Truck Bodies at 800-922-8360**

SERVICE AND SUPPORT

From pre-sale to post-sale, we are here to help you with your support needs from the initial sales inquiry to service support for life of your Johnson equipment.

At Johnson Truck Bodies, we are positioned to provide you with the most efficient and convenient local and field support available through our in-house experts and authorized Great Dane service repair locations nationwide.

SERVICE CONTACTS

Headquarters and Manufacturing Plant

215 E Allen Street

Rice Lake, WI 54868

Toll Free: 800-922-8360

Local: 715-537-7400

Fax: 715-537-7495

Website: www.greatdane.com

Customer Service, Aftermarket Parts Orders, Warranty Claims, and Technical Service Support

Toll Free: 800.922.8360

Option #3 for Aftermarket Parts

Option # 6 for Customer Service

Email: jtbcustomerservice@greatdane.com

JTB Parts Website: www.greatdane.com/parts&service/parts/Johnson Truck Body Parts/

SUPPORT

If you are experiencing any body, refrigeration or electrical issues with your JTB equipment that you cannot troubleshoot with your service provider or maintenance team, we are here to assist you. All of our Customer Service Agents (CSA) are equipped to take your calls and your information for dispatching the appropriate service response for your issues or questions:

Contact Customer Service 800-922-8360,

Option #3 for Aftermarket Parts

Option # 6 for Customer Service

Review the information below to assure your matter is addressed properly and efficiently.

Customer Service Coverage: Monday through Friday, 7:00am - 7:00pm CST

There is a general voicemail (VM) center system that will be checked regularly for messages. Please leave a detailed message (including your Body Serial Number) and a Customer Service Agent (CSA) will return your call promptly.

Holidays and weekends will be forwarded to VM and a CSA will monitor messages and return calls based on urgency.

Technical Support Coverage: Monday through Friday, 7:30am - 5:00pm CST

After hours Refrigeration or Body Support can be arranged only if CSA is contacted prior to service request to facilitate the call.

If you need Technical Support, our Customer Service Department will be requesting information to initiate the required type of technical support or research in order to resolve the issue quickly. They will issue you a Customer Service Response number (CSR #) to refer to when the CSA or Technician returns your call.

Scheduling a time for a Technical Support service call is not necessary during 7:30am - 5:00pm CST working hours, but may be of value to your time management.

To improve our response time, notify your service or maintenance personnel of the assigned CSR # for your issue you are having on your piece of equipment when they call.

After hours support needs to be arranged with a CSA prior to service to ensure the availability of our refrigeration technician.

TECHNICAL SUPPORT PROCESS SUMMARY

1. Customer to provide Customer Service Agent (CSA) the body serial number of the unit; see Supplementary Details for more information.
2. For Body Issues, contact a CSA.
3. For Electrical Issues on Body or Refrigeration Wiring, refer to your Operations Packet for body wiring diagram to assist in initial trouble shooting. Inside the condensing unit weather-proof cover you will find a CDU wiring diagram. If issues still persist, contact a CSA to request another diagram or support.
4. For AE Refrigeration Operational Issues, refer to your Operations Packet for body wiring diagram to assist in initial trouble shooting.
   a. For our AE systems: First contact your local refrigeration service provider for service. They are able to service our equipment.
   b. If they are not able to resolve your issue, you must contact our CSA prior to receiving Refrigeration Technical Support. CSA will gather information needed to issue you a CSR # for this occurrence.
      i. Once you have your CSR #, be sure to have that available to provide to your service provider for fast service.
      ii. It is preferred you call our CSA prior to the arrival of your service provider so we notify our refrigeration tech support of your needs.
   c. Our Technicians will need to talk with your on-site service provider to get an accurate report of the operational conditions and issues you are having with the equipment. We will walk the service provider through a series of checks and inspections to resolve the issue.
   d. If Parts are needed, our Technician will relay the parts list to the CSA to facilitate the order/shipment process.

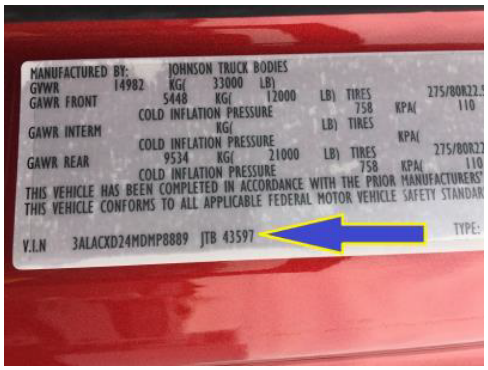
e. CSA will then follow up at a later date to ensure your equipment is functioning.

SUPPLEMENTARY DETAILS TO AID SUPPORT FOR PARTS AND SERVICE

1. The body serial number can be found on the JTB logo tag located on the front street-side corner of the body or in the driver-side door jamb of the truck. The S/N is 5-digits (i.e. “43208-20”) followed by the year of manufacture. Some units do have second serial number in the interior of the body, usually above the rear door.

    a. When rotating to a new chassis, we recommend re-installing the Serial Number badge and adding the Serial Number to the new IVD label. Contact Parts Department for any replacements needed.

2. Our Operator’s Manual initially provided in the glove box of each chassis; if no longer in that location, contact a Customer Service Agent for a new copy.
3. Our refrigeration equipment is similar to other OEM equipment where issues must be investigated and addressed by a refrigeration service provider. Our equipment is typically serviced by commercial refrigeration or transport refrigeration service providers. In many cases the same service provider that services Thermo King or Carrier Transicold reefer units or the coolers/freezers at your warehouse can service our system.
4. <u>We cannot provide support for Thermo King or Carrier reefer units</u>**,** these must be taken to your nearest Thermo King or Carrier Transicold service center.
5. It is always best to have a refrigeration technician investigate reported issues. However, more recent our units (2016 or newer) are equipped with electronic controllers and user interface displays which significantly improve troubleshooting capabilities and allow troubleshooting even without special tools and equipment right over the phone with our refrigeration service tech.
6. <u>We cannot provide support for Liftgates</u>, you must contact your liftgate manufacturer for their service center. The original manuals were also sent in the cab. There is a model and serial number badge on the liftgate for the service center. We do have a wiring diagram for how we connected the power to the truck, contact a Customer Service Agent for the Diagram.



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