2003 General Motors Light Service Support Vehicle (LSSV) Military Truck Owner's Manual Supplement

The information in this manual pertains to the operation of the vehicle. It also contains the vehicle's scheduled maintenance services. This manual along with the owner's manual will assist you in the proper use and maintenance of the vehicle. The sections in this supplement correspond to the sections in the 2003 Vehicle Owner's Manual and the 2003 Duramax Diesel Engine Owner's Manual Supplement.

Please keep this supplement with the owner's manual and diesel supplement in the vehicle, so it will be there if you ever need it while you're on the road.

This manual includes the latest information at the time it was printed. We reserve the right to make changes in the product after that time without notice.

How to Use This Manual

Many people read the owner's manual from beginning to end when they first receive the vehicle. If you do this, it will help you learn about the features and controls for the vehicle. In this manual, you'll find that pictures and words work together to explain things.

Litho in USA
Part No. LSSVOM03 First Edition

Index

A good place to look for what you need is the Index in back of the manual. It's an alphabetical list of what's in the manual, and the page number where you'll find it.

Driving the Vehicle

As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or an accident. Refer to "The Driving, the Road and the Vehicle" and "Off-Road Driving with The Four-Wheel-Drive Vehicle" in the 2003 Vehicle Owner's Manual.

Safety Warnings and Symbols

You will find a number of safety cautions in this book. We use a box and the word CAUTION to tell you about things that could cause personal injury if you were to ignore the warning.

⚠ CAUTION:

These mean there is something that could hurt you or other people.

In the caution area, we tell you what the hazard is. Then we tell you what to do to help avoid or reduce the hazard. Please read these cautions. If you don't, you or others could be hurt.

Vehicle Damage Warnings

Also, in this supplement manual you will find these notices:

Notice: **These mean there is something that could damage the vehicle.**

In the notice area, we tell you about something that can damage the vehicle. Many times, this damage would not be covered by the warranty, and it could be costly. But the notice will tell you what to do to help avoid the damage.

When you read other manuals, you might see CAUTION and NOTICE warnings in different colors or in different words.

You'll also see warning labels on the vehicle. They use the same words, CAUTION or NOTICE.

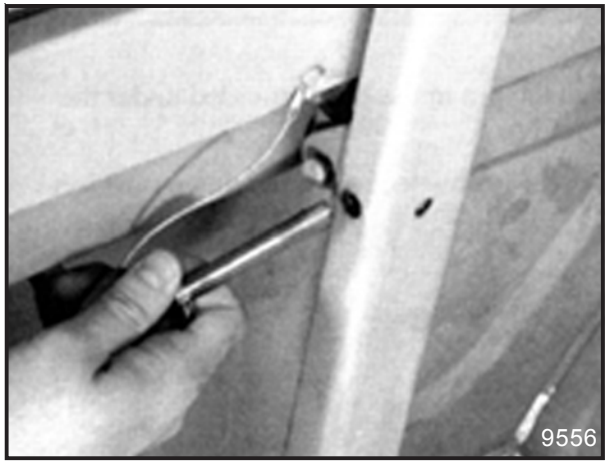
NOTES

Section 1 Seats and Restraints

Troop Seats

If the vehicle is equipped with troop seats, this feature provides space for up to eight passengers in the cargo area of the pickup model. The seats can be lowered individually for use or raised for storage. The seats lock in both the up and down positions.

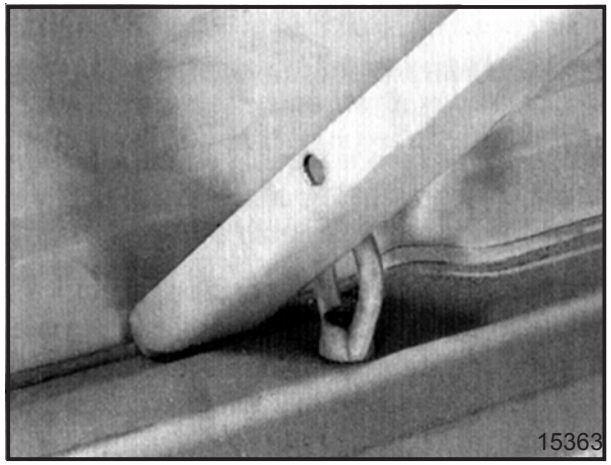
Troop Seat Operation



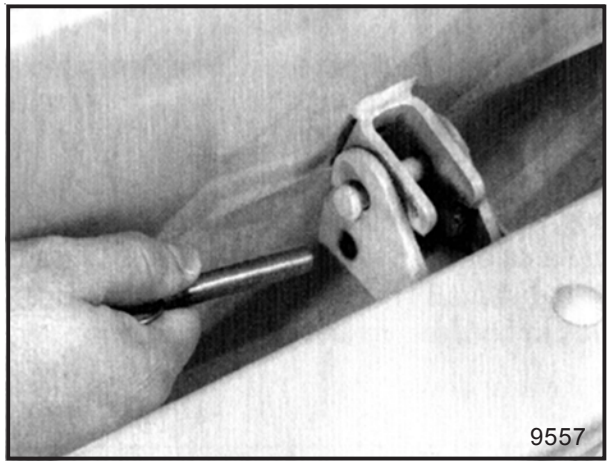
A quick-release pin is located on the left or right side of the troop seat leg immediately under the hinge pin.

When the seat is in the up position, the quick release pin will go through the left-hand leg for passenger's side seats or a right-hand leg for driver's side seats. It will then go through the seat channel and will be placed in front of the hinge pin.

Folding the Seat Down



1. Remove the pin and place the legs into the joint of the cargo area side and the floor.



2. Place the pin in the hole provided under the hinge pin. The seat is now locked in the down position.

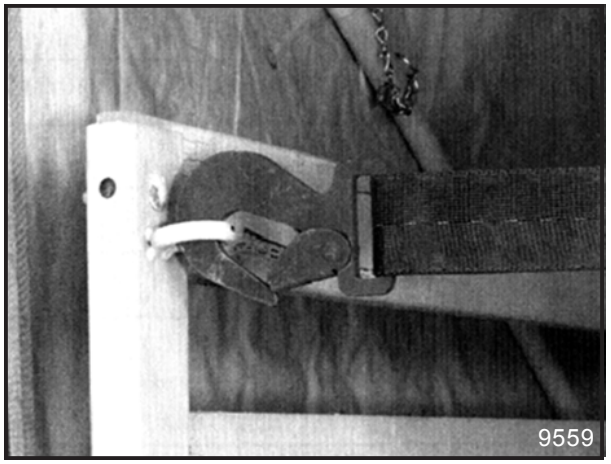
Folding the Seat Up

Reverse Steps 1 and 2.

To remove the troop seats, refer to Seats in the 2003 LSSV Military Trucks service manual supplement.

Restraints

Rear Safety Strap



Whenever the troop seats are occupied, the safety strap should be attached across the top of the rear seat backs using the eye-bolts provided.

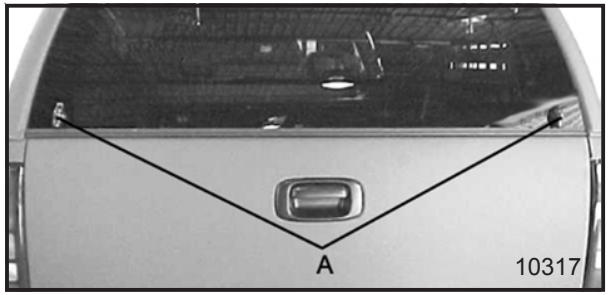
NOTES

Section 2 Features and Controls

Windows

If the vehicle is equipped with a topper, it features tempered opening windows that have locking handles.

Rear Topper Window



Opening the Rear Window Door

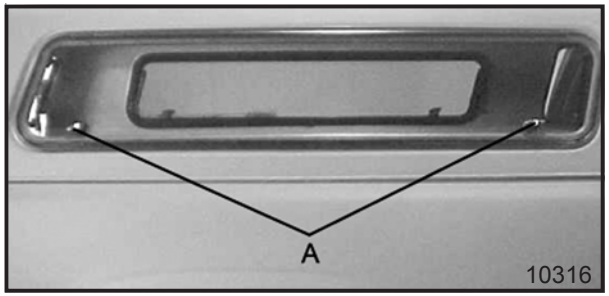
1. Turn both handles (A) clockwise 90°.
2. Pull open the rear window door. A cylinder on both sides of the window will assist with opening and hold the window in the open position.

Closing Rear Window Door

1. Pull the window door down.
2. Turn both handles (A) counter clockwise 90°.

Notice: The window must be fully closed before operation of the vehicle.

Side Topper Window



Open the Side Window Doors

1. Turn both handles (A) clockwise 90°.
2. Pull open the window door. A cylinder on both sides of the window will assist with opening and hold the window in the open position.

Closing the Side Window Doors

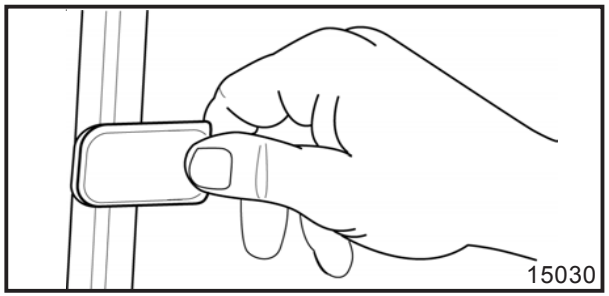
1. Pull the window door down.
2. Turn both handles (A) counter clockwise 90°.

Notice: The window must be fully closed before operation of the vehicle.

Sliding Rear Window

If the vehicle is equipped with a sliding rear window, it features tempered glass surrounded by a durable black finish aluminum frame and three panel design. Locking latch adds cab security.

To open the window hold the latch in the open position and slide the window open. To close the window slide the window until the latch is fully engaged against the frame.



Starting and Operating the Vehicle

Starting the Engine

The diesel engine starts differently than a gasoline engine.

⚠ CAUTION:

Do not use gasoline or starting "aids," such as ether, in the air intake. They could damage the engine. There could also be a fire, which could cause serious personal injury.

Refer to the 2004 Duramax Diesel Engine Owner's Manual Supplement, located in the glove compartment.

Fuel Fired Coolant Heater

⚠ CAUTION:

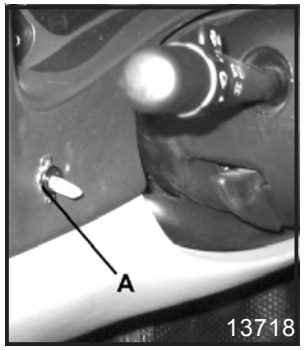
<u>To Prevent Asphyxiation:</u> DO NOT operate while in confined spaces such as closed, unventilated enclosures! Open an outside enclosure door before operating the heater.

<u>To Prevent Fire:</u> DO NOT operate heater where flammable or explosive materials, gases or dusts may be present. DO NOT operate heater over dry grass or other dry ground cover. Switch heater off while refueling vehicle! Switch heater off BEFORE entering fueling stations!

<u>To Prevent Burning:</u> NEVER touch hot components of the heating system!

The heater is a diesel powered supplementary heating system that will heat the engine coolant of the vehicle. This will prevent cold start up of the engine. It can be used in conjunction with the factory coolant heater.

Fuel Fired Coolant Heater Operation



The fuel fired coolant heater is controlled by a toggle switch located on the instrument panel (I/P) bezel to the left of the steering column. The heater is activated by moving the switch (A) to the ON position.

An indicator lamp will illuminate the switch. To deactivate the heater move the switch to the OFF position.

If the switch is in the ON position and flashing, there is a problem with the system. Refer to the 2003 LSSV Service Manual Military Supplement.

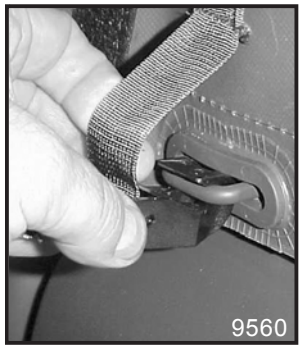
Turn the fuel fired coolant heater OFF when not in use.

Storage Areas

Cargo Cover-Soft Top

If the vehicle is equipped with a soft top cargo cover, it must be fully installed and properly anchored before traveling on the highway. The side panels and rear panel of the cargo cover can be rolled up. The cargo cover allows ventilation within the closed portion through opening vents located on the front of the top.

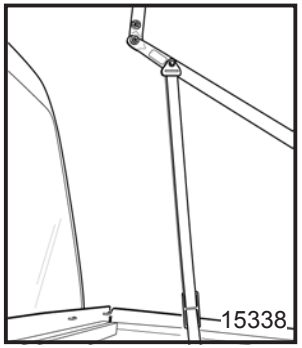
Rolling Up the Side Panels:



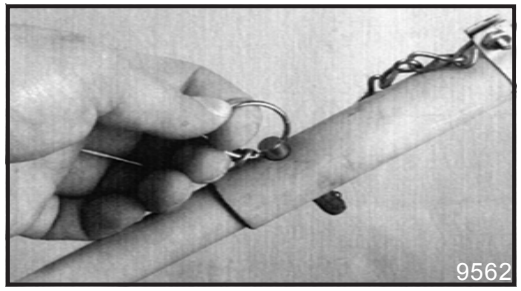
1. Release tension on the hooks by pushing the release on the front of the hook.
2. Remove the plastic hook from the bed fastener.
3. Pull apart the velcro flaps on both side panels near the vehicle cab.
4. Pull apart the velcro flaps on both side panels near the back of the vehicle.
5. Roll the sides upward.
6. When the sides reach the top, they can be held in place by inserting the cargo cover straps in the clips at the top of the cargo cover.

Storing the Cargo Cover:

1. Release tension on the hooks by pushing the release on the front of the hook.
2. Remove the plastic hook from the bed fastener.
3. Pull apart the velcro flaps on both side panels near the vehicle cab.
4. Pull apart the velcro flaps on both panels near the back of the vehicle.
5. Release the six cover straps, located inside the cargo box that attaches the cover to the cargo cover bows.
6. Remove the cover from the cargo cover bows.
7. Fold the cover neatly and store it behind the seat in the truck cab.



8. Release the four corner support straps.

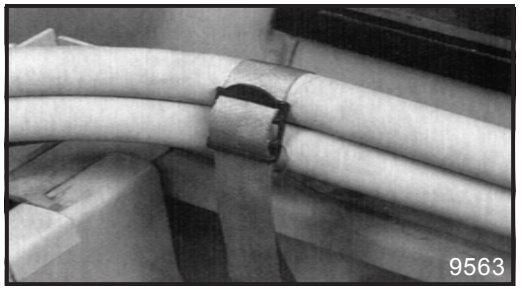


9. Remove the six quick release pins from the sides of the cargo cover bows.

10. Stack the bows on top of each other without striking the cab or the troop seats (if equipped), push down equally on both sides of the upper part of the front and rear bows.

11. Pull upward equally on both sides of the upper part of the center bow.

12. Standing at the rear of the vehicle, push the bows forward.



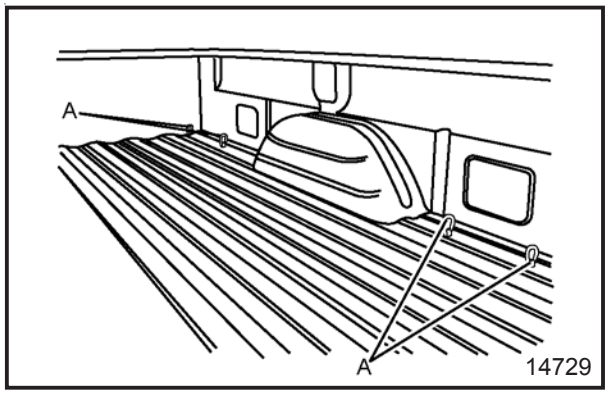
13. Secure the bows in place with the front support straps.

14. To reinstall the cargo cover, reverse Steps 1 - 13.

Note: The cargo cover is marked with the word FRONT on the inside top to aid in proper positioning of the cover onto the vehicle.

Cargo Tie Downs

If the vehicle is equipped with cargo tie downs, four are provided on each side of the rear cargo area.



The cargo tie downs (A) are used to strap cargo in and keep it from moving inside the cargo area.

Each of these tie down rings are rated for a maximum pull of 660 lbs. (300 kg) upward or 450 lbs. (200 kg) of horizontal force.

⚠ CAUTION:

Do not load the vehicle any heavier that the Gross Vehicle Weight Rating (GVWR), or either the maximum front or rear Gross Axle Weight Rating (GAWR). If you do, parts on the vehicle can break, and it can change the way the vehicle handles. These could cause you to lose control and crash. Also, overloading can shorten the life of the vehicle.

Weapons Mount

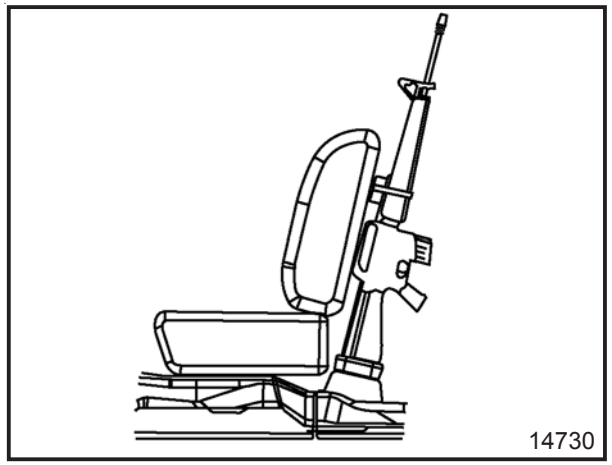
Weapon Mount (Floor Mount)

⚠ CAUTION:

If the weapon is improperly stored, it can move around in a collision or sudden stop. People in the vehicle could be injured. Be sure to secure any such item properly. The weapon should be made safe when stored in this mount.

The floor mount weapon mount is located behind the front seats and will secure two weapons.

Mounting the Weapon



1. Place the stock of the weapon into the lower mount.
2. Place the barrel into the upper mount until fully seated in the clamp.
3. Secure with strap and pull to tighten. Pull the strap outward and slide it over the barrel of the weapon and secure the buckle by pulling tight.

Weapon Mount (Cab Mount)

⚠ CAUTION:

If the weapon is improperly stored, it can move around in a collision or sudden stop. People in the vehicle could be injured. Be sure to secure any such item properly. The weapon should be made safe when stored in this mount.

Lower Weapon Mount

To secure weapons in the vehicle's mount:

1. Place the stock into the lower weapon mount.

Upper Weapon Mount

2. Place the barrel into the upper weapon mount until fully seated.

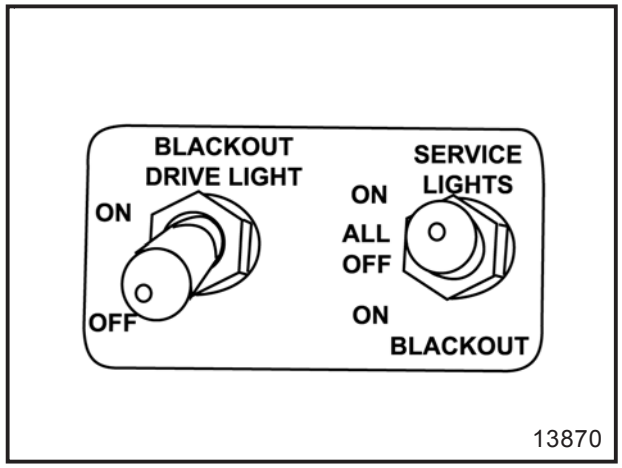
3. Pull the strap outward and slide it over the barrel of the weapon and secure the buckle by pulling tight.

NOTES

Section 3 Instrument Panel

Exterior Lamps

Service and Blackout Lighting



Notice: If the vehicle is not going to be driven for 24 hours or more, the service lights switch must be placed in the "ALL OFF" position. This will help prevent drain on the batteries.

Notice: Before normal driving operations, turn on service lights to ensure headlights, brake lights and turn signals are operational.

Service Lights/Blackout Control

The switch located on the accessory panel next to the 24-volt gage is the service lights/blackout control.

With the Ignition Switch in the ON Position:

- Pull the switch outward then push upward to the service ON position. All normal service lamps will be operational with normal controls.
- Move the service lights/blackout switch to the center ALL OFF position. All lamps and accessory power to the vehicle will turn off.
- Move the switch to the blackout position, the following will occur:
  - The blackout lighting system will be operative.
  - The front and rear blackout marker lamps will illuminate.
  - The blackout stop lamps will illuminate when the brakes are applied.
  - The instrument panel warning lights will

remain functional.

- The hazard lights will remain functional.
- The horn will not be functional.

The vehicle's military 12-pin trailer wiring connector and trailer lamps are also controlled by this switch.

Blackout Drive Light Control

The switch located on the accessory panel next to the service light switch is the blackout drive light control.

The service lights/blackout control switch must be in blackout position or in the down position for the blackout drive lights to function.

With the ignition switch in the ON position:

- Pull the switch outward then up to the ON position, the front blackout drive lamp will activate.
- Pull the switch outward then down to the OFF position, the blackout drive lamp will deactivate.
- The switch will return to the center position automatically after you release it from either the ON or OFF position.

Operating Service and Blackout Lighting

Exterior Lamp or Device	Service Lights/Blackout Switch	Blackout Drive Light Switch
Headlamps and Taillamps	SERVICE ON	OFF
Parking Lamps	SERVICE ON	OFF
Front/Rear Side Marker Lamps	SERVICE ON	OFF
Marker Lamps; Roof, Fender and End Gate	SERVICE ON	OFF
Stop Lamps	SERVICE ON	OFF
Back-Up Lamps	SERVICE ON	OFF
License Plate Lamps	SERVICE ON	OFF
Front/Rear Turn Signals	SERVICE ON	OFF
Hazard Warning Lamps	SERVICE ON	ON/OFF
Cargo Lamp (If Equipped)	SERVICE ON	OFF
Horn	SERVICE ON	OFF
Front/Rear Blackout Marker Lamps	BLACKOUT	ON/OFF
Blackout Stop Lamps	BLACKOUT	ON/OFF
Blackout Drive Lamp (Headlamp)	BLACKOUT	ON

Exterior Lamp or Device	Service Lights/Blackout Switch	Blackout Drive Light Switch
Instrument Panel/Switch Illumination	SERVICE ON	OFF
Radio/Clock Illumination	SERVICE ON	OFF
Headlamp High-Beam Indicator	SERVICE ON	OFF
Turn Signal/Hazard Warning Indicators	SERVICE ON	OFF
Four-Wheel-Drive Indicator	SERVICE ON	ON
Dome/Courtesy Lamps	SERVICE ON	OFF
Glove Compartment Lamp	SERVICE ON	OFF
Warning Chime: Headlamps On, Instrument Cluster Warning Lights	SERVICE ON	ON/OFF

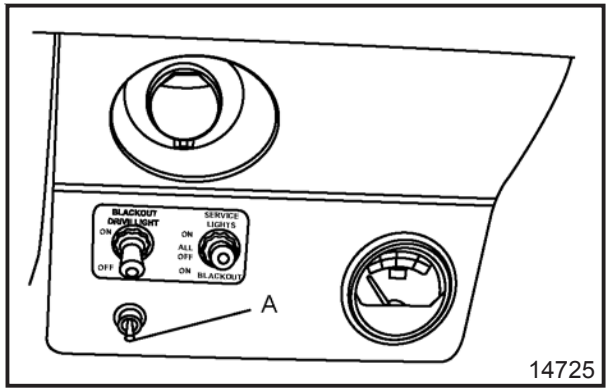
Mechanical Device	Service Lights/Blackout Switch	Blackout Drive Light Switch
Automatic Transmission Shift lock Control	SERVICE ON	ON/OFF
Torque Converter Lockup Clutch	SERVICE ON	ON/OFF

Interior Lamps

Topper Dome Lamp

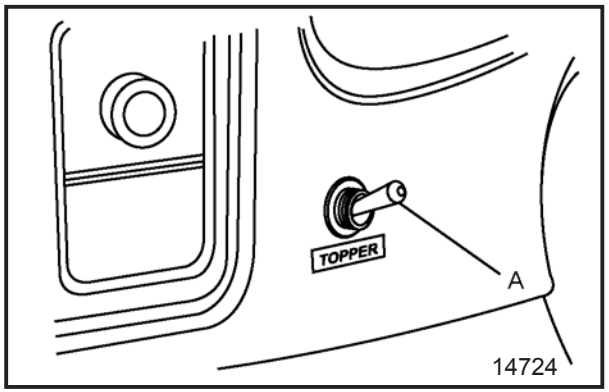
The fiberglass topper dome lamp is controlled by a master switch on the side of the dome lamp and a pair of 3-way switches.

With Blackout Lighting

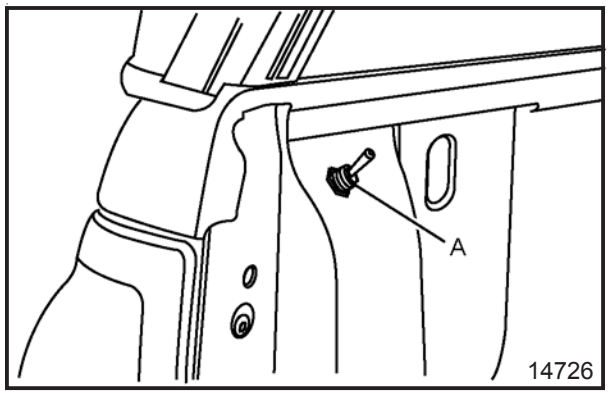


The interior 3-way switch (A) is located on the accessory panel.

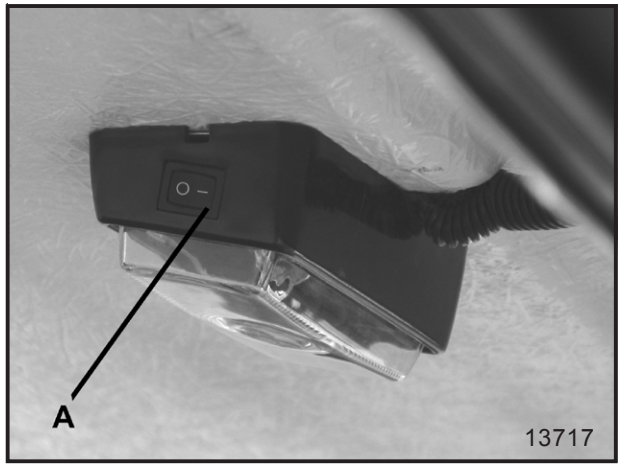
Without Blackout Lighting



The interior 3-way switch (A) is located on the instrument panel (I/P) bezel to the left of the steering column.



The bed mounted 3-way switch (A) is located in the left rear of the cargo bed.



The topper mounted master switch (A) is located on the rear center of the topper roof. If the master switch is turned OFF the following will occur:

- The interior mounted 3-way switch will not function.
- The bed mounted 3-way switch will not function.

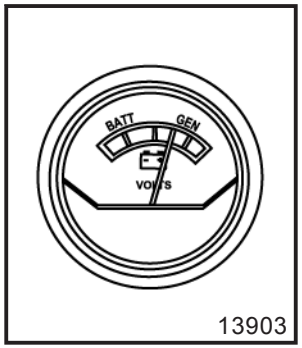
The dome lamp will not function in the blackout mode.

Warning Lights, Gages and Indicators

24-Volt Gage

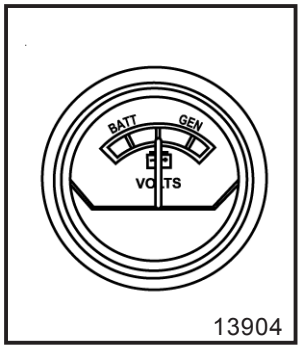
The 24-volt gage is located in the accessory panel next to the service and blackout lighting switch.

Engine Running Reading



The gage needle should be in the green band when engine speed is above an idle. If the needle is not in the green band, the fuse may have blown. If the fuse is not blown and the system still does not work properly, refer to your local GM dealer.

Engine Off Reading



In a no load situation, with the engine off, the gage needle should be mid-way between the red band and green band, in the yellow band. If the gage needle is in the lower end of the yellow band, this is unacceptable, and the battery may be dead.

NOTES

NOTES

Section 4 Driving the Vehicle

Your Driving, the Road and the Vehicle

Using JP8 as a Fuel

Use of JP8 fuel is acceptable in Duramax 6.6L diesel vehicles and will not impact warranty coverage.

For additional information on other compatible fuels, refer to the 2004 Duramax Diesel Engine Owner's Manual Supplement.

Loading the Vehicle

⚠ CAUTION:

Do not load the vehicle any heavier than the GVWR, or either the maximum front or rear GAWR. If you do, parts on the vehicle can break, or it can change the way the vehicle handles. These could cause you to lose control. Also, overloading can shorten the life of the vehicle.

Notice: **The warranty does not cover parts or components that fail because of overloading.**

Make sure that all cargo is properly secured to prevent the load from shifting. All loads must be distributed evenly over the axle and secured to the tie-down rings provided. Refer to "Loading Your Vehicle" in the Index of the 2003 Vehicle Owner's Manual for more information on vehicle loading.

If the vehicle is equipped with troop seats, you can carry up to eight passengers. Passengers must stay seated at all times and the rear safety strap in place.

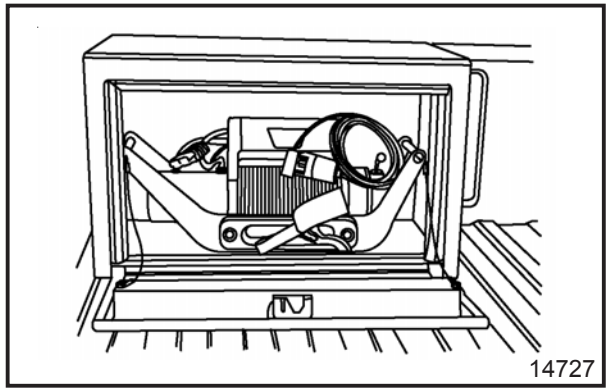
Winch

Multi-Mount

The multi-mount winch has 9,000 lbs (4,082 kg) of single line pull. The multi-mount slides into the hitch receiver and allows you to move and operate the winch from the front or the back of vehicle.

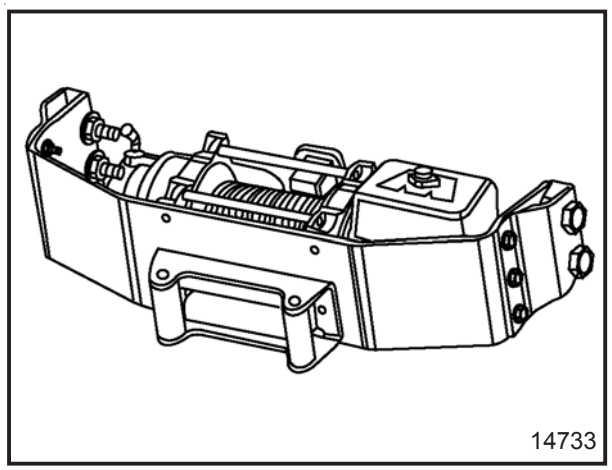
Refer to WARN industries operator's manual in the vehicle glove compartment for additional instructions and warnings.

Multi-Mount Winch Storage



The multi-mount winch is stored in a locking storage box located in the upper middle of the cargo area. The winch is secured in the box by four floor mounted eye bolts.

Permanent Mount



The winch is electrically powered from the vehicle batteries. The permanent mount winch has 12,000 lbs (5 440 kg) of single line pull.

Refer to WARN industries operator's manual in the vehicle glove compartment for additional instructions and warnings.

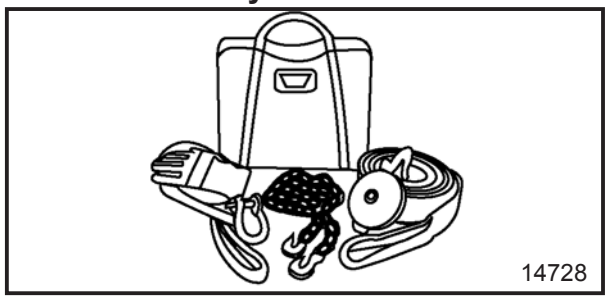
Control of the Winch

The winch is controlled by the hand held remote control to allow the operator to stand clear while controlling the winching process. The remote control provides control of the forward or reverse rotation of the spooling drum. The winch will only work with the remote.

How the Winch Reacts to Load

The winch is rated at maximum pulling capacity. This occurs on the first layer of wire rope on the drum. As the layers increase, the pulling power decreases. Exceeding the winch capacity could cause the winch to fail or the wire rope to break.

Winch Accessory Kit



The Winch Accessory Kit Contains the Following Items:

- **Tow Hooks:** Secured properly to the vehicle's frame, tow hooks provide an attachment point for wire rope, straps, and chains.

- **Clevis/D-Shackles:** The D-Shackle is a safe means for connecting the looped ends of cables, straps and snatch blocks.

- **Snatch Block:** Used properly, the multi-purpose 24,000 lbs (10 886 kgs) snatch block allows you to do the following:
  - Increase the winch's pulling power.
  - Change the pulling direction without damaging the wire rope.

- **Choker Chain:** Can be used to hook-up to another vehicle or sharp objects for an anchor point.

- **Gloves:** Wire rope, through use, will develop "barbs" which can slice skin.

- **Recovery Straps:** Used to "snatch" or pull out a stuck vehicle.

- **Tree Truck Protector:** Use this with a clevis/ D-shackle to secure the wire rope to an anchor point.

If You Are Stuck: In Sand, Mud, Ice or Snow

Using the Clevis/Towing Provisions

The vehicle is equipped with two clevises on the front and rear ends of the vehicle.

⚠ CAUTION:

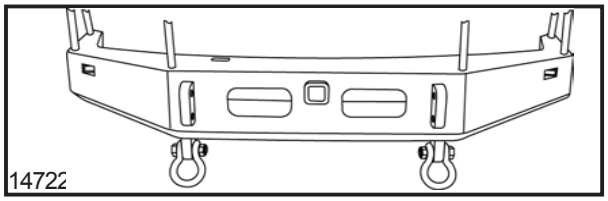
The clevises when used, are under a lot of force. Always pull the vehicle straight out. Never pull on the clevises at a sideways angle. The clevises could break off and people could be injured from the chain or cable snapping back.

When recovering the vehicle, you should determine the direction of the recovery by the distance required to free the vehicle and the surrounding terrain.

Secure the towing cable to both front or rear clevises with a V-device to gain an even pull on both anchor points and avoid damage to the vehicle.

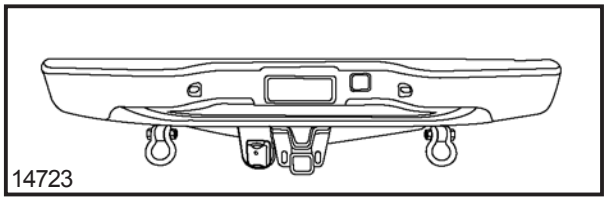
Note: Clevises meet MIL-209J for tie down specifications. **Vehicles do not meet MIL-209J for vehicle lifting.**

Front Clevis/Towing Provisions

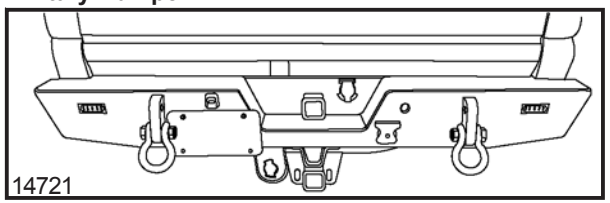


Rear Clevis/Towing Provisions

Factory Bumper



Military Bumper



Maximum Allowable Loads on Each Clevis/Towing Shackle

Regular Cab Models

Load Direction	Weight
Fore/Aft-Front	15,000 lbs (6 803 kg)
Fore/Aft-Rear	15,000 lbs (6 803 kg)
Vertical-Front	10,000 lbs (4 535 kg)
Vertical-Rear	7,000 lbs (3 175 kg)
Lateral-Front	10,000 lbs (4 535 kg)
Lateral-Rear	5,500 lbs (2 494 kg)

Crewcab Models

Load Direction	Weight
Fore/Aft-Front	15,000 lbs (6 803 kg)
Fore/Aft-Rear	15,000 lbs (6 803 kg)
Vertical-Front	10,000 lbs (4 535 kg)
Vertical-Rear	7,000 lbs (3 175 kg)
Lateral-Front	10,000 lbs (4 535 kg)
Lateral-Rear	5,500 lbs (2 494 kg)

Towing

Towing The Vehicle

When towing the vehicle, you should always use a properly equipped wrecker/recovery vehicle. Refer to “Towing Your Vehicle” and “Recreational Vehicle Towing” in the Index of the 2003 Vehicle Owner's Manual for further information on towing the vehicle.

Notice: **The steering wheel must be secured properly with the appropriate wheel-locking device to keep the wheel in the straight position. The vehicle transfer case must be in NEUTRAL (N).**

Towing a Trailer

The vehicle is equipped for towing a trailer.

Notice: **Do not exceed the maximum allowable weight the vehicle is designed to carry. Exceeding the maximum allowable weight may cause damage to the vehicle.**

Refer to “Towing a Trailer” in the Index of the 2003 Vehicle Owner’s Manual for more information on trailer towing.

The vehicle is equipped with a pintle hitch for towing a trailer. You must not exceed the maximum trailer weight towing capacity for that vehicle. Refer to the chart on the following page to find the maximum trailer weight for the vehicle.

Loading The Vehicle

⚠ CAUTION:

Do not load the vehicle any heavier than the GVWR, or either the maximum front or rear GAWR. If you do, parts on the vehicle can break, or it can change the way the vehicle handles. These could cause you to lose control. Also, overloading can shorten the life of the vehicle.

Notice: **Overloading the vehicle may cause damage. The warranty does not cover parts or components that fail because of overloading. Do not overload the vehicle.**

Make sure that all cargo is properly secured to prevent the load from shifting. All loads must be distributed evenly over the axle and secured. Refer to “Loading The Vehicle” in the Index of the 2003 Vehicle Owner’s Manual for more information on vehicle loading.

Weight of the Trailer

Vehicle	Maximum Trailer Weight	GCWR*
Regular Cab Model	12,000 lbs (5 443 kg)	22,000 lbs (9 980 kg)
Crew Cab Model	12,000 lbs (5 443 kg)	22,000 lbs (9 980 kg)

*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment and conversion. The GCWR for the vehicle should not be exceeded.

Towing capacity is limited by the military hitch, not vehicle performance.

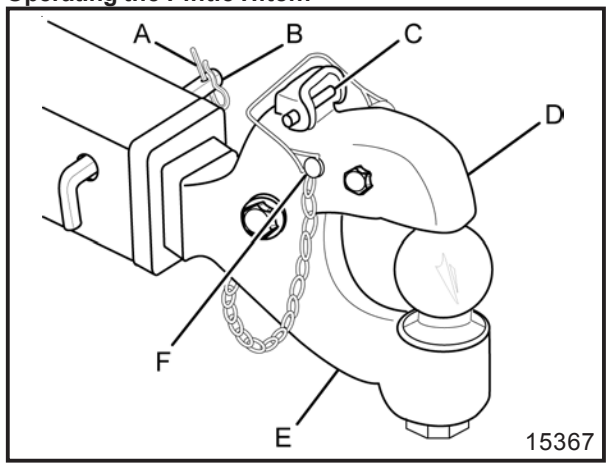
Refer to “Towing a Trailer” in the Vehicle Owner’s Manual for additional information.

Pintle Hitch

A pintle hitch is located at the rear of the vehicle, and is removable from the receiver.

Notice: **Before operating, inspect for proper operation, worn, damaged or missing parts and secure mountings. Correct as required before use.**

Operating the Pintle Hitch:



To Open:

1. Open the latch by removing latch pin (F).
2. Pull up on the lock latch (C) while lifting the latch (D).

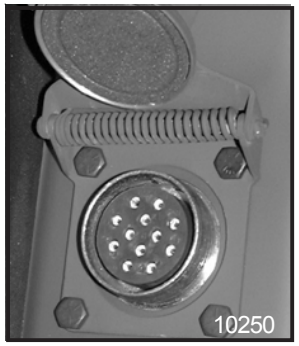
To Close:

1. Push the latch (D) until the lock latch (C) locks in place.
2. Install the latch pin (F).

Installing the Pintle Hitch:

1. Remove any debris from the inside of the receiver.
2. Push the pintle hitch (E) into the receiver.
3. Install the retaining pin (B) into the receiver and the pintle hitch (E).
4. Install the spring clip (A) into the retaining pin (B).

Trailer Wiring Connector

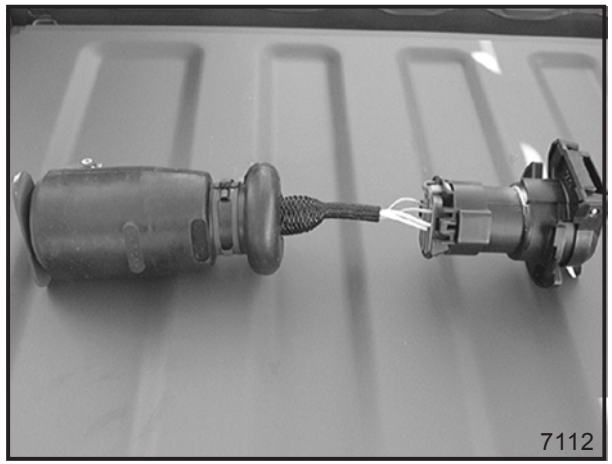


On the military bumper the NATO standard 12-pin trailer lamp and brake connector is located on the rear bumper between the right clevis/tie-down and the pintle hitch.

On the factory bumper the NATO standard 12-pin trailer lamp and brake connector is located on the rear trailer hitch to the left of the pintle hitch.

When connecting a trailer wiring harness to the connector, make sure the dog ears of the connector are properly aligned when inserting it into the connector.

Trailer Connector Adapter

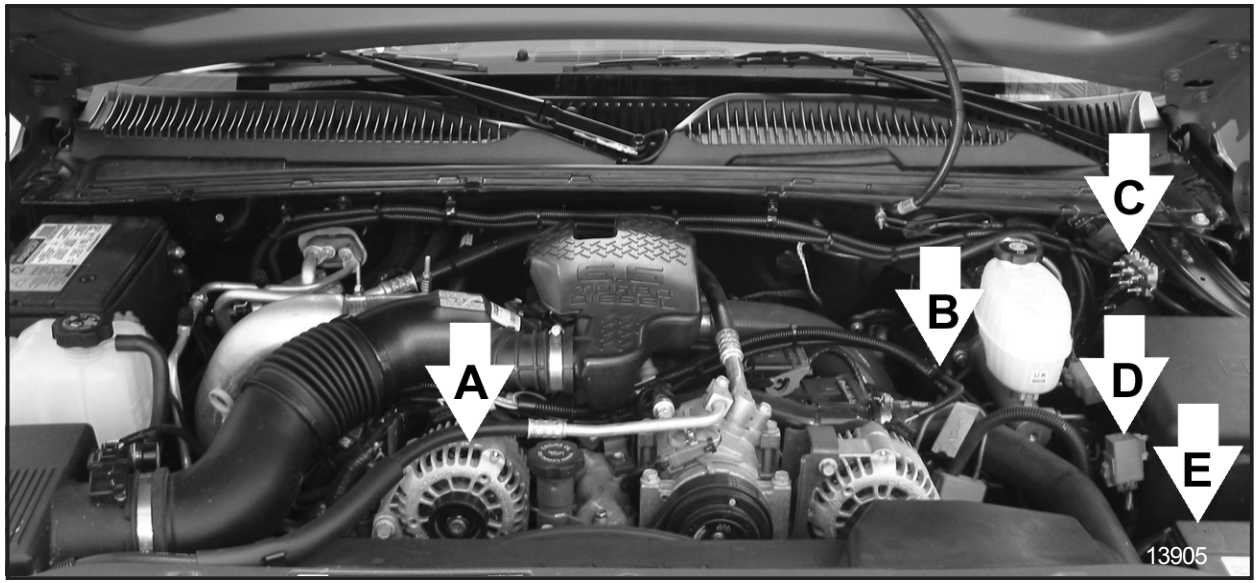


When connecting to a commercial trailer with an 8-pin connector, the adapter must be used. This adapter allows you to connect an 8-pin trailer wiring harness into the vehicle's 12-pin connector.

NOTES

Section 5 Service and Appearance Care

Underhood Component Locator



The following items are military options that may be found on the vehicle:

A. 24-Volt Generator
B. 24-Volt Generator Fuses
C. Circuit Breakers
D. 24-Volt Relay
E. 24-Volt Battery

Jump Starting

If the battery (or batteries) on the vehicle have run down and the vehicle will not start, you may want to use another vehicle to provide power to start the vehicle.

NATO slave cables are the only recommended method for 24-volt jump starting of the vehicle. You should only use NATO slave cables to jump start similar vehicles.

Heavy duty jumper cables can be used to jump start the 12-volt system. See Jump Starting from a 12-volt System.

Jump Starting from a 12-Volt System

⚠ CAUTION:

Batteries can hurt you. They can be dangerous because:

- **They contain acid that can burn you.**
- **They contain gas that can explode or ignite.**
- **They contain enough electricity to burn you.**

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: **Ignoring these steps could result in costly damage to the vehicle that would not be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.**

This procedure applies only to the 12-volt battery located on the passenger's side of the vehicle.

1. Get the vehicles close enough so that jumper cables can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground causing the vehicle not to start. The bad grounding could damage the electrical systems.

   To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the automatic transmission in PARK (P). Be sure the transfer case is in a drive gear and is NOT in NEUTRAL (N).

2. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or accessory power outlets. Turn off all lamps that are not required as well as radios. This will avoid sparks and help save both batteries. In addition, it could save the radio!

Notice: **If you leave the communications/navigation equipment on, there is a risk that they could be badly damaged. The repairs would not be covered by the warranty.**

3. Ensure the jumper cables do not have loose or missing insulation. If they do, you could get shocked and the vehicle could be damaged.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+). Negative (-) will go to a heavy, unpainted metal engine part or a remote negative (-) terminal if the vehicle has one.

4. Open the hood and locate the battery. Find the positive (+) and negative (-) terminals on each battery.

⚠ CAUTION:

Using a open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

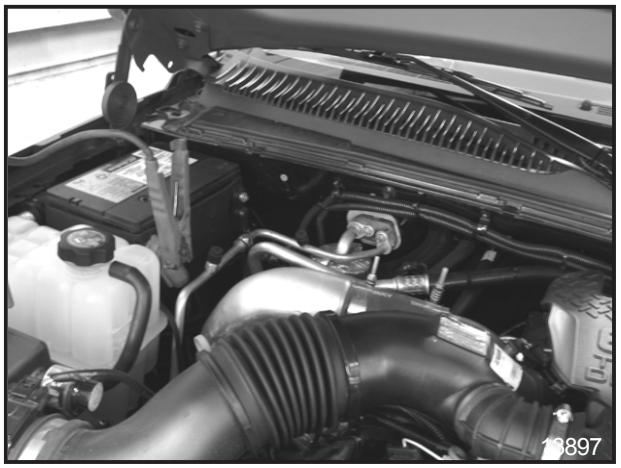
Be sure the batteries have enough water. You don't need to add water to the Delco Freedom battery (or batteries) installed in every new GM vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in the eyes or on the skin, flush the place with water and get medical help immediately.

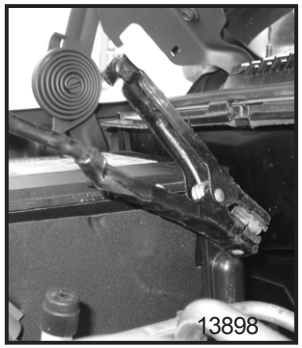
⚠ CAUTION:

Fans or other moving engine parts can injure you badly. Keep your hands away from moving part once the engine is running.

5. Connect the positive (+) cable to the positive (+) terminal of the 12-volt battery (12-volt side) of the vehicle with the dead battery.



6. Connect the positive (+) cable to the positive (+) terminal 12-volt system of the vehicle with the good battery.



7. Connect the negative (-) cable to the negative (-) terminal of the 12-volt system of the vehicle with the good battery.

Do not let the other end touch anything until the next step. The other end of the negative (-) cable does not go to the dead battery. It goes to a heavy unpainted metal part of the engine in the vehicle with the dead battery.

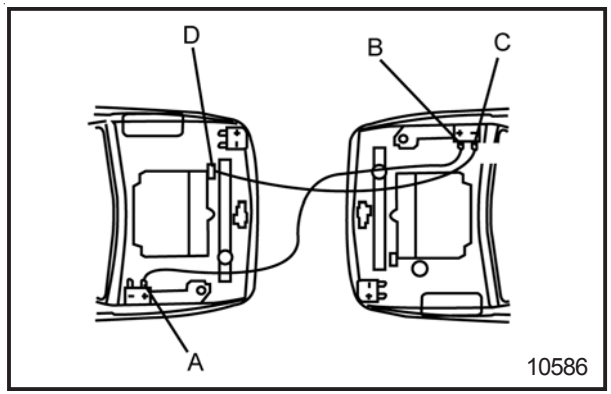
8. Attach the cable at least 18 in (45 cm) away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, but the chance of sparks getting back to the battery is much less.

9. Start the vehicle with the good battery. Allow the vehicle's battery to charge for 10 minutes before attempting to start the vehicle.

Note: It may take up to 30 minutes to charge the battery enough to start the vehicle, depending on the battery's state of charge.

10. Start the vehicle with the dead battery.

11. Remove the cables in reverse order to prevent electrical shorting. Take care that they do not touch each other or any other metal.



A. 12-Volt Positive (Dead Battery)
B. 12-Volt Positive (Good Battery)
C. 12-Volt Negative (Good Battery)
D. Engine Ground (Dead Battery)

If this procedure does not work, you will need to disconnect the 24-volt side battery and charge it alone for 10 minutes. Replace the battery and repeat the jump starting procedures as outlined.

Note: This procedure should only be performed by authorized personnel.

Slave Starting

⚠ CAUTION:

Batteries can hurt you. They can be dangerous because:

- **They contain acid that can burn you.**
- **They contain gas that can explode or ignite.**
- **They contain enough electricity to burn you.**

If you do not follow these steps exactly, some or all of these things can hurt you.

Notice: **Ignoring these steps could result in costly damage to the vehicle that wouldn't be covered by the vehicle warranty. Trying to start the vehicle by pushing or pulling it will not work, and it could damage the vehicle.**

You should only use the NATO slave receptacle and slave cable when performing this operation.

1. Get the vehicles close enough so that the slave cable can reach, but be sure the vehicles are not touching each other. If they are, it could cause a ground connection causing the vehicle not to start, and the bad grounding could damage the electrical systems.

To avoid the possibility of the vehicles rolling, set the parking brake firmly on both vehicles involved in the jump start procedure. Put the automatic transmission in PARK (P). Be sure the transfer case is in a drive gear and is NOT in NEUTRAL (N).

2. Turn off the ignition on both vehicles. Unplug unnecessary accessories plugged into the cigarette lighter or accessory power outlets. Turn off all lamps that aren't needed as well as radios. This will avoid sparks and help save both batteries. In addition, it could save the radio!

Notice: **If you leave the communications/navigation equipment on, they could be badly damaged. The repairs will not be covered by the warranty.**

3. Locate the slave receptacles on both vehicles and unscrew the cover.

⚠ CAUTION:

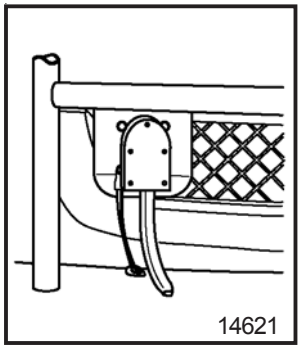
Using a open flame near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.

Be sure the batteries have enough water. You don't need to add water to the Delco Freedom® battery (or batteries) installed in every new GM vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you do not, explosive gas could be present.

Battery fluid contains acid that can burn you. Do not get it on you. If you accidentally get it in the eyes or on the skin, flush the place with water and get medical help immediately.

⚠ CAUTION:

Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engine is running.



4. Connect the slave cable to the vehicle with the dead battery.

5. Connect the slave cable to the vehicle with the good battery.

6. Start the vehicle with the good battery.

7. Allow the vehicle with the dead battery to charge for 10 minutes.

Note: It may take up to 30 minutes to charge the battery enough to start, depending on its state of charge.

8. Start the vehicle with the dead battery.

9. Remove the slave cable in the reverse order that it was installed. Take care not to let the cable ends touch each other or any other metal.

Vent Filters

Rear Axle Vent-Tube Filter

The rear axle vent-tube filter is located on the vent hose that is attached to the top of the axle housing.

Refer to the Maintenance Schedule to determine how often to inspect the filter and when to change it. See Front/ Rear Axle Inspection.

Transfer Case Vent-Tube Filter

The transfer case vent-tube filter is located on the vent hose on the driver's side of the transfer case housing.

Refer to the Maintenance Schedule to determine how often to inspect the filter and when to change it. See Transfer Case Inspection.

Front Axle Vent-Tube Filter

The front axle vent-tube filter is located on the vent hose in the engine compartment near the left inner wheel well.

Refer to the Maintenance Schedule to determine how often to inspect the filter and when to change it. See Front/ Rear Axle Inspection.

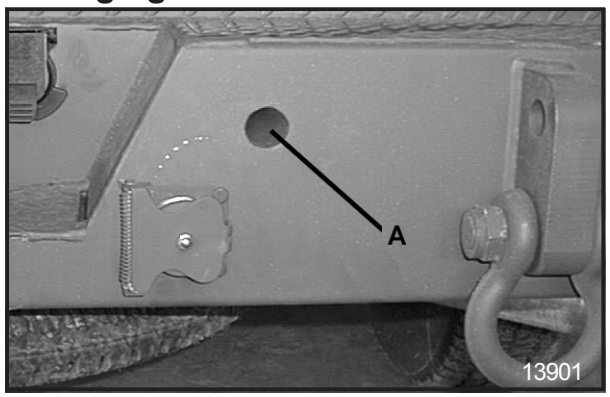
Replacement Bulbs

Lamp	Bulb Number
Blackout Headlamp	1073
Topper Dome Lamp	194
24-Volt Gage Lamp	194
License Plate Lamp	194

Note: The bulbs in the blackout tail/stop lamp and front marker lamps are light emitting diodes (LED) instead of incandescent bulbs. They are not replaceable and are serviced as an assembly. For bulb replacement refer to the 2003 LSSV Military Trucks Service Manual Supplement.

Tires

Changing a Flat Tire



The military heavy duty bumper of the vehicle has an opening (A) to gain access to the spare tire hoist. For more information refer to “Changing a Flat Tire” in the Index of the 2003 Vehicle Owner’s Manual.

Inflation-Tire Pressure

Tire pressure should be within the manufacturer's recommended range as indicated on the certification/tire label which is on the driver's door edge. When hauling heavy loads the pressure should be at the maximum allowable pressure.

Refer to "Inflation-Tire Pressure" in the Index of the 2003 Vehicle Owner's Manual for additional information on tire inflation pressure.

Appearance Care

Cleaning the Outside of the Vehicle

Wash the vehicle using only mild soap and water. Do not use cleaning agents that are petroleum based, or that contain acid or abrasives. All cleaning agents should be flushed promptly and not allowed to dry on the surface. Do not towel dry or wax the paint surface.

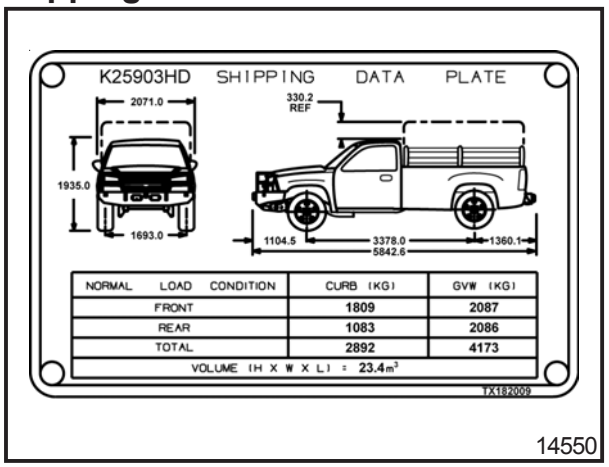
Cleaning the Soft Top (Cargo Cover)

If the cargo cover has deteriorated, replace it. Refer to cargo cover replacement in the 2003 LSSV Military Trucks Service Manual Supplement.

The cargo cover is a waterproof, welded, plastic coated polyester. Wash the cover using only mild soap and water. Do not use cleaning agents that are petroleum based, or that contain acid or abrasives. All cleaning agents should be flushed promptly and not allowed to dry on the surface. Do not towel dry or wax the surface. The windows should be washed with a water soaked cloth. Do not rub dry.

Vehicle Information

Shipping Data Plate



The data plate is used to inform the operator of the vehicle as to the make, model, Gross Vehicle Weight (GVW), and vehicle dimensions. It is located on the left corner of the left front inner door panel.

Government Vehicle Data Plate

The data plate is used to inform the operator of the vehicle as to the upfitting information and other specifications. It is located on the left front corner of the inner door panel.

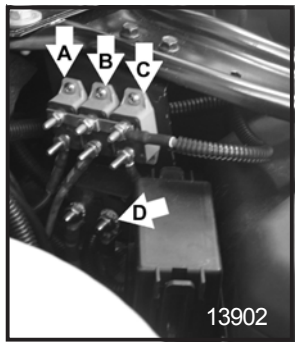
Electrical System

Fuses and Circuit Breakers

Circuit breakers protect the power accessories. When the current load is too heavy, the circuit breaker opens, protecting the circuit until the problem is fixed.

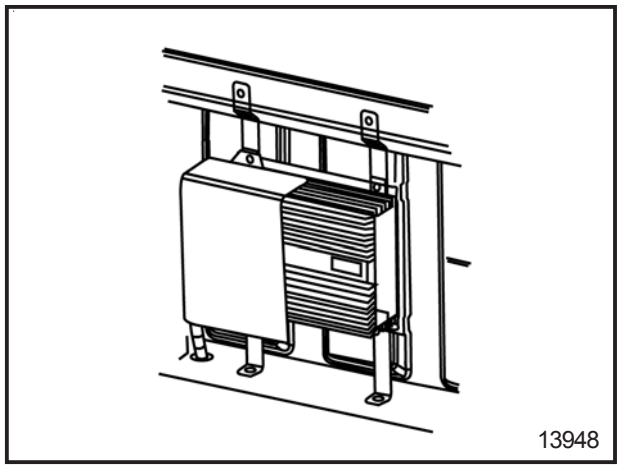
24-Volt Circuit Breakers

These circuit breakers are on the left rear fender support bracket of the engine compartment.



A. 24-Volt Stud on Equalizer
B. 24-Volt Stud on Equalizer Cover
C. Fuel Fired Heater
D. Auxiliary Items

24-Volt Power Source (Battery Equalizer)



The battery equalizer is located on the left rear wall of the cab. The primary function of the battery equalizer is to maintain battery balance or equalization charge in a predominately 24-volt system which requires regulated 12-volt power. The battery equalizer can deliver up to 100 amps of continuous 12-volt current for practically any 12-volt or 24-volt load such as two way radios, navigations or the 24-volt batteries.

NOTES

NOTES

Section 6 Maintenance Schedule

Maintenance Schedule

Front/Rear Axle Inspection

Inspect the front/rear axle fluid level and add as needed. Inspect the constant velocity joints and axle seals for leakage.

The front and rear axles are equipped with an in-line filter on the vent tubes. Inspect the filters for blockages and replace as needed. See “Front Axle Vent-Tube Filter” and “Rear Axle Vent-Tube Filter” in the Index for further information on the location of the front and rear axle filters. Refer to “Maintenance Schedule” in the Index of the 2003 Vehicle Owner’s Manual for additional maintenance information on the vehicle.

Transfer Case Inspection

Inspect the transfer case fluid level and add lubricant if necessary. On manual shift transfer case, oil the control lever pivot point and all exposed control linkage.

The transfer case is equipped with an in-line filter on the vent tube. Inspect the filter for blockages and replace as needed. Inspect vent hose at the transfer case for kinks and proper installation. See “Transfer Case Vent-Tube Filter” in the Index for further information on the location of the filter. Refer to “Maintenance Schedule” in the Index of the 2003 Vehicle Owner’s Manual for additional maintenance information on the vehicle.

Fuel Fired Coolant Heater Inspection

The heater requires no periodic maintenance other than a visual inspection by a qualified technician preferably prior to cold weather use. The technician can ensure that the heater and all components are free from damage and in proper working condition.

During the warmer months of the year when heating is not required, the heater should be switched ON and allowed to run for 5 to 10 minutes once a month at a minimum. This will keep a clean, fresh supply of fuel in the heater fuel system and keep all moving parts in top operating condition.

For troubleshooting information refer to the 2003 LSSV Military Trucks Service Manual Supplement.

Winch Inspection

Inspect the wire rope before and after each winching operation. If the wire rope has become kinked or frayed, the wire rope needs to be replaced. Be sure to also inspect the winch hook and hook pin for signs of wear or damage, and replace if necessary.

Inspect the remote control for damage, if equipped. Refer to the WARN industries operator's manual in the vehicle's glove compartment for additional inspection and maintenance information.

NOTES

Section 7 Customer Assistance Information

Customer Assistance Information

For customer assistance phone numbers, refer to Contact Information.

To assist in our review of your concerns, provide the following information:

- The Vehicle Identification Number. (This will be on the VIN plate in the cab of the vehicle)
- Current mileage on the vehicle
- Nature of the problem

Contact Information

Telephone Users

Department	Phone Number
GM Customer Assistance Center (general information, dealer location, other concerns):	1-800-222-1020
Roadside Assistance Center (towing and all Roadside Assistance program services):	1-800-243-8872

Online Users

You can find specific information on:

- Service Parts
- After Sales Assistance
- GM Military History
- News/Events

Refer to the web for updated information: www.gm-defense.com

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