

OWNER'S MANUAL

for your new



**HIGH PERFORMANCE CENTRAL CLEANING SYSTEM
FOR RV APPLICATIONS**

READ MANUAL BEFORE OPERATING SYSTEM

TO THE OWNER:

Read the owner's manual thoroughly to ensure the most efficient use of your DIRT DEVIL® system.

THIS APPLIANCE IS FOR RV USE.

Please be sure this manual/installation information is left with the power unit or customer when installation is completed.

IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING THIS VACUUM SYSTEM

When using an electrical appliance, basic precautions should always be followed, including the following:

WARNING

To reduce the risk of fire, electric shock or injury:

- Unplug and disconnect power before servicing.
- Do not use on wet surfaces.
- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
- Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Do not handle system or appliance with wet hands.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- Do not put any object into openings. Do not use with any opening blocked. Keep openings free of dust, lint, hair, and anything that may reduce air flow.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes.
- Connect to a properly grounded outlet. See grounding instructions.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Do not place or store anything on top of power unit - over-heating of motor could occur.
- Any service work required under the motor cover should be performed by an authorized service representative.
- Do not use without dust bag and/or filters in place.
- Always turn off this appliance before connecting or disconnecting motorized nozzle.

SAVE THESE INSTRUCTIONS

FOR RV USE

IMPORTANTES MESURES DE SECURITÉ

LISEZ COMPLÈTEMENT LE MODE D'EMPLOI AVANT D'UTILISER CE SYSTÈME D'ASPIRATEUR.

En employant un appareil électrique, des précautions fondamentales devraient toujours être prises, y compris:

AVERTISSEMENT

Pour réduire les dangers de feu, d'électrocution, ou de blessure:

- Débrancher et couper le courant avant de le réparer.
- Ne pas utiliser sur des surfaces mouillées.
- Ne pas utiliser comme jouet et surtout faire attention quand on l'emploie près des enfants.
- Employer seulement tel que décrit dans ce manuel d'emploi et qu'avec les accessoires du fabricant.
- Ne pas utiliser si la corde ou la prise électrique est endommagée. Si l'appareil ne fonctionne pas, est endommagé, est tombé par terre, a été laissé à l'extérieur, ou a été immergé, dans l'eau, veuillez rapporter l'appareil à un centre de service.
- Ne pas tirer sur le cordon électrique. Ne pas utiliser le cordon électrique comme poignée, ni le coincer dans une porte ou l'appuyer sur des coins et boudures tranchants. Ne pas passer l'aspirateur sur le cordon électrique. Eloigner le cordon électrique de la chaleur.
- Ne pas débrancher en tirant sur le cordon électrique. Pour le débrancher, saisir la prise de courant, et non le cordon électrique.
- Ne pas utiliser avec les mains mouillées.
- Ne rien mettre dans les fentes et les orifices bouchés. Ne pas employer avec des orifices bouchés. Éliminer poussière, cheveux et les autres choses qui peuvent rendre difficile la circulation d'air.
- Gardez cheveux, vêtements amples, doigts, et toutes autres parties du corps loin des orifices et des pièces mobiles.
- Ne pas aspirer quelque chose qui brûle ou fume, comme des cigarettes, des allumettes, ou des cendres chaudes.
- Brancher à une prise de courant munie d'une mise à la terre. Voir les renseignements de mise à la terre.
- Éteindre tous les contrôles avant de débrancher.
- Faire bien attention en nettoyant les escaliers.
- Ne pas utiliser pour aspirer des liquides inflammables comme l'essence et ne pas employer dans des endroits où ces choses peuvent se trouver.
- Pour réduire les risques de choc électrique, ne pas aspirer de matières humides.
- Pour éviter d'être blessé par les pièces en mouvement, débrancher avant l'entretien.

CONSERVEZ CES INSTRUCTIONS

POUR VEHICULES DE RECREATION.

Connect to a properly grounded outlet only.
Ne brancher l'appareil qu'à une prise avec mise à la terre.

GROUNDING INSTRUCTIONS

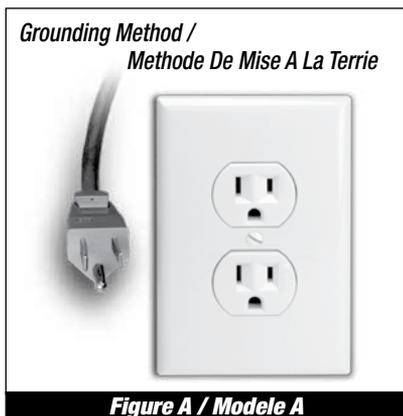
This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

The Model CV1500 appliance is for use on a nominal 120 volt circuit and has a grounding plug that looks like the plug illustrated in Fig. A.

Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adapter should be used with this appliance.



INSTRUCTIONS DE MISE À LA TERRE

Cet appareil doit avoir une mise à la terre. Si une défectuosité ou autre survenait, la mise à la terre offre une voie de moindre résistance au courant électrique, d'où un risque moins élevé d'électrocution. Cet appareil est équipé d'un cordon électrique ayant un conducteur et une fiche de mise à la terre. Cette fiche doit être branchée dans une prise appropriée qui a été installée et mise à la terre convenablement en accord avec le code électrique de votre région

AVERTISSEMENT

Un branchement incorrect de l'équipement de mise à la terre peut causer un risque d'électrocution. Si vous avez un doute concernant la mise à la terre de votre prise, veuillez faire vérifier votre installation par un électricien qualifié ou une personne du service après-vente. Ne pas modifier la fiche fournie avec l'appareil - si la fiche ne se branche pas à la prise, faites installer une prise adéquate par un électricien qualifié.

L'appareil, modèle CV1500 doit être employé avec un circuit de 120 volts et avoir une prise qui ressemble à la prise illustrée sur l'image A.

Vérifiez que votre appareil est branché sur une prise ayant la même configuration que la fiche électrique. Aucun adaptateur ne devrait être utilisé avec cet appareil.

WARNING:
ELECTRIC SHOCK
COULD OCCUR
IF USED ON WET
SURFACES.

ATTENTION:
NE PAS UTILISER
SUR TAPIS OU
PLANCHER
MOUILLE.

CAUTION:
DO NOT USE ON
WET RUG OR
FLOOR.



CV1500 OPERATING INSTRUCTIONS

Inserting hose into valve (Fig.B). Lift lid on valve. Power unit will automatically come on. Insert hose into valve. Connect desired attachment and you are ready to vacuum.

Changing Bag (Fig. B). To keep your CV1500 at top efficiency, change the filter bag at regular intervals. Since cleaning schedules differ, check frequently in the beginning to determine proper interval. To maintain cleanability, replace filter bag when it is 2/3 to 3/4 full.

To Change the Filter Bag (Fig.B). Locate canister, lift lid and pull bag collar off connector. **Open new bag**, (expand pleats by gently pulling on the bag). Slide collar securely onto the inlet connector. (See Fig.B) Replace with Bag #9597. To reorder, check bag for instructions or go to www.rvbags.com

To remove secondary #4929 Filter & #4928/4934 Filter Supports for Cleaning (Fig.B) Take out bag #9597, pull support 4934 off connector and out of canister. Take out 4929 & 4928. For reassembly, follow instructions in reverse order.

NOTE: 4929 filter wraps to front of 4928 filter support (Fig.B).

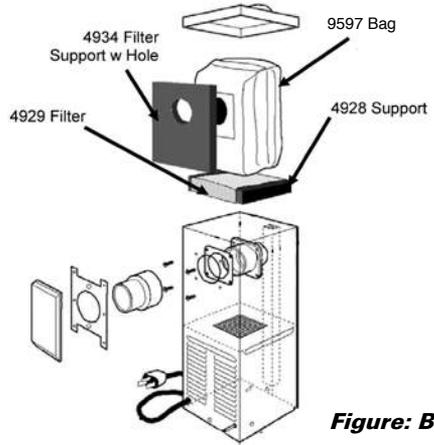


Figure: B

NOTE: This appliance has a THERMAL PROTECTOR built into the motor to prevent overheating. If motor will not operate, pull power cord plug out of receptacle then reinsert to reset.

If motor brushes or bearings are worn out, the thermal protector will trip off again after a short period of time. If this happens, service for this and any other servicing should be performed by an authorized service representative.

CV1500 INSTALLATION INSTRUCTIONS

WARNING: This unit must be installed in an accessible area with interior vent (Fig D).

AVERTISSEMENT: Cet unité devrait être installé dans un endroit bien aéré et accessible afin d'éviter la surchauffe de L'appareil.

The Dirt Devil® CV1500 can be installed in any one of four configurations. Figures C, D & E illustrate three configurations, with C being the most common. The one not shown is a variation of D.

1. Locate unit centrally so that area to be cleaned can be conveniently reached with standard 20' or 30' hose. Also locate near grounded electrical receptacle for easy plug-in connection of motor cord. Route supply cord so that it doesn't rest against sharp edges or pinch points. See grounding instructions on page 3.

2. **All dimensions that follow are approximate. To determine best configuration for your installation, temporarily install unit for best valve location. Be sure there is clearance to remove top cover and filter bag.**

continued onto next page

INSTALLATION INSTRUCTIONS continued...

3. Determine valve location and cut 2 1/4" (58mm) wide x 3 3/4" (95mm) high opening, 9 7/8" (251mm) above the floor (Fig C) for upright canister position or 1 3/4" (45mm) above floor for horizontal canister position (see fig D).
4. Do not vent into a wall, ceiling or concealed space of a building or structure. Unit must be vented with interior vent or equivalent (see fig D).
5. Place the CV1500 canister in its approximate location before installing inlet valve (4940), mounting plate (4865), and inlet reducer (5531) (see fig. E).
6. Inlet valve switch should be wired at this point for convenience (See Figure E). Insert pre-stripped ends of 18-2 (1.00 mm-2) low voltage wire into holes on back of inlet valve (4940), press in firmly and wires will lock automatically. Pull lightly to test for locking. Connect other ends of wire from inlet valve to wire leads from relay (7090) with wire nuts provided.
7. Install inlet reducer (5531) to inlet connector (7464), glue if needed. Assemble inlet valve to wall with mounting plate (4865) using the four screws provided (see Figure E). Also, tabs on mounting plate should face away from inlet valve.
8. Secure unit to floor and or wall with mounting screws provided.

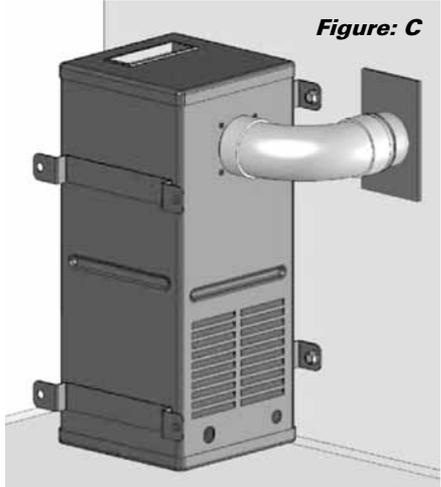


Figure: C

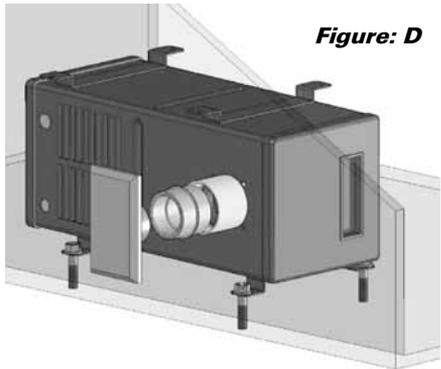


Figure: D

9. Plug in power cord from motor unit to nearby electrical receptacle. Route power supply cord so that it doesn't rest against sharp edges or pinch points. The CV1500 unit operates when the inlet valve lid is lifted.

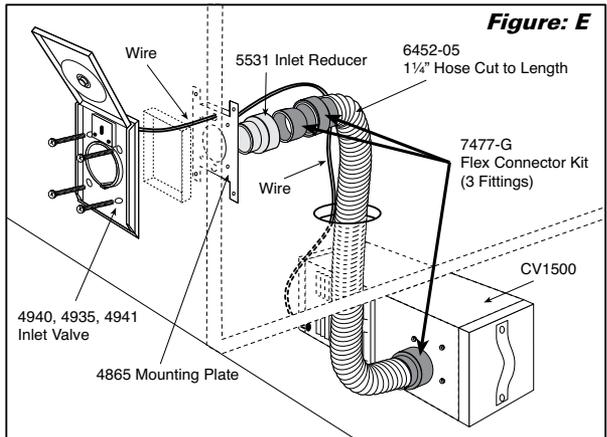


Figure: E

VACPAN™

OPERATING INSTRUCTIONS

Simply switch on the VacPan automatic dustpan by pushing the raised tab with your foot. Switching on the VacPan activates your central vacuum. Brush dirt and debris toward the VacPan. When cleaning is complete, switch off the VacPan and the central vacuum system by pushing the raised tab with your foot.

VACPAN™

INSTALLATION INSTRUCTIONS

1. VACPAN requires a minimum 2-1/4" toe kick height.
2. Once the VACPAN location is determined, cut a 6-3/4" long x 1-3/4" high slot in the cabinet toe kick to accept the VACPAN.
3. Run vacuum tube piping and low voltage wire from the main piping line to the VACPAN location.
4. Access for final piping connections must be made. From below, cut an access hole underneath the cabinet, positioned so that final piping connections can be made through the access hole. Allow for 1/2" vertical play in vacuum tube piping at VacPan location so that final piping connections can be made.
5. Attach low voltage wires to the VACPAN terminal connections marked "low voltage only".
6. Prior to final installation, check for an airtight seal between the VACPAN and elbow. Teflon tape may be used if required.
7. Slide VACPAN into mounting slot and secure to toe kick using the two #6 screws provided.
8. Reach through the access hole and make final piping connections.

VACPAN™ II OPERATING INSTRUCTIONS

VacPanII can be used as both an automatic dustpan and a standard hose inlet.

For automatic dustpan operation, slide top cover up, creating a sweep opening and automatically switching on central vacuum system. Sweep material into opening. When complete, slide top cover down, automatically shutting off central vacuum system.

For Standard Hose Inlet operation, ensure top cover is in fully lowered position. Grasp side finger grips in top cover and flip top cover up. The top cover will lock out of the way. Lift sprung flapper door open and insert central vacuum hose. Use your central vacuum hose as you would with any other standard inlet valve.

VACPAN™ II INSTALLATION INSTRUCTIONS

1. VacPanII Wall Mount can be installed inside any wall with a minimum stud width of 2-3/4".
2. VacPanII should be located against wall stud.
3. Once the VacPanII location is determined and prior to applying the wallboard, attach Standard Mounting Bracket to the wall stud so that the center of the mounting plate is 4" above the subfloor.
4. Attach VacPanII base stopper bracket, thereby allowing appropriated space for final installation.
5. Run vacuum tube piping and low voltage wire from the main line to VacPanII location and attach to mounting bracket.
6. Snap off two protruding tabs of VacPanII base stopper bracket and discard.
7. Align VacPanII with mounting bracket. Height adjustment may be required depending on finished floor.
8. For VacPanII height adjustment: The body can be shortened by scoring along Quick-Trim Grooves on back of body. The two-piece front cover can be adjusted for height by twisting apart and engaging the mating teeth of the two parts. The VacPanII entrance ramp can be slid on mating body grooves.
9. Attach low voltage wires to VacPanII terminal connections.
10. Slide VacPanII into mounting bracket and secure to wall using two #10 x 1-1/2" screws provided. CAUTION: Do not over-tighten mounting screws as VacPanII operation can be affected.

DIRT DEVIL® CV1500 LIMITED WARRANTY

Your DIRT DEVIL® CV1500, which has been manufactured and inspected in accordance with carefully specified engineering requirements, is warranted to be free from defects in material and workmanship for five (5) years.

This warranty is, however, subject to the following qualifications, conditions and limitations which are set forth to provide you and all users of DIRT DEVIL® products with information concerning the duration extent, availability and applicability of this DIRT DEVIL® Limited Warranty, the procedure to be taken to obtain its performance and other information concerning the DIRT DEVIL® warranty policy.

DURATION OF WARRANTY AND TO WHOM EXTENDED

H-P Products warrants to the customer, the DIRT DEVIL® equipment and accessories manufactured or supplied by H-P Products to be free from defects in material and workmanship under normal intermittent use and when properly installed and operated, for a period of five (5) years from the date of purchase by the first consumer purchaser.

EXCEPTIONS AND LIMITATIONS ON WARRANTY

Defects, malfunctions, failure or damage caused by improper, unreasonable or negligent use or repair while the warranted parts are in the possession of the consumer are excluded from the warranty. The warranty does not cover unauthorized repair of the motor assembly.

IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF FIVE (5) YEARS FROM THE DATE OF PURCHASE BY THE ORIGINAL CONSUMER.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may be void where prohibited.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS WARRANTIES AND DOES NOT COVER THE INSTALLATION OF EQUIPMENT. IN NO EVENT SHALL H-P PRODUCTS BE LIABLE FOR ANY OTHER OBLIGATIONS OR LIABILITIES, ESPECIALLY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES TO ANYONE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may be void where prohibited.

WE NEITHER ASSUME NOR AUTHORIZE ANY PERSON TO ASSUME FOR US ANY LIABILITY IN CONNECTION WITH THE SALE OR SERVICE OF THIS DIRT DEVIL® EQUIPMENT OTHER THAN HEREIN ABOVE PROVIDED.

PROCEDURE TO BE TAKEN TO OBTAIN PERFORMANCE OF WARRANTY

To secure repair of any warranted parts under this warranty, the following procedure should be taken.

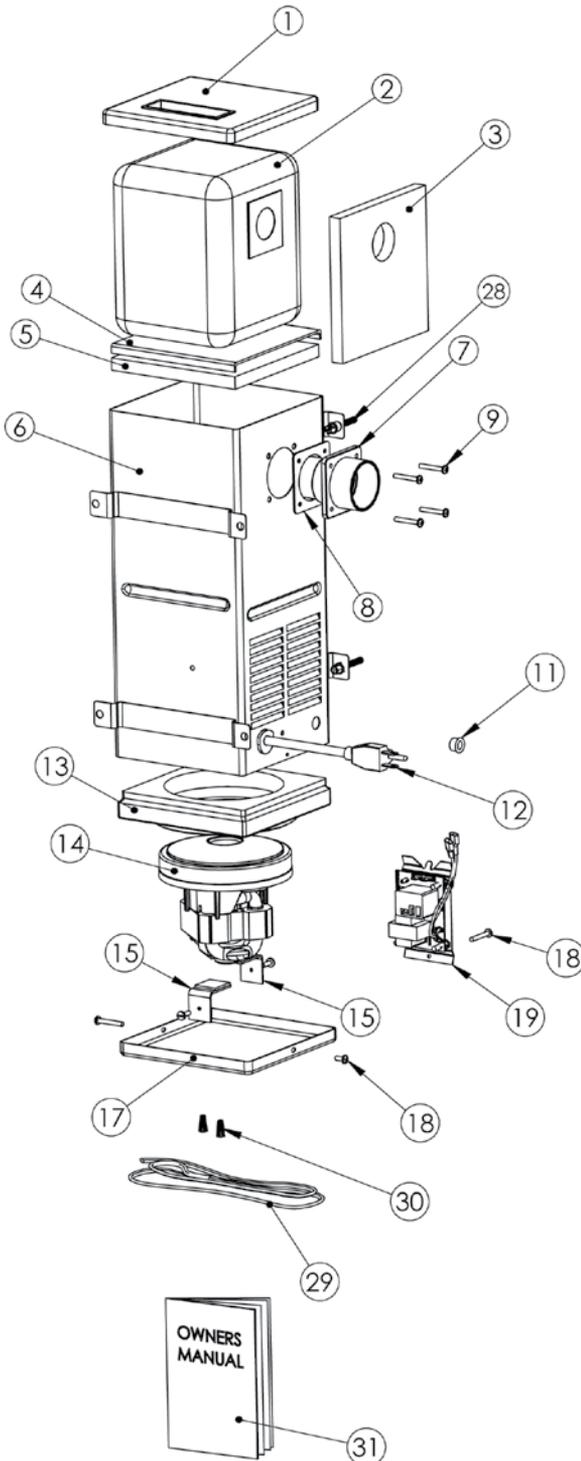
The warranted parts, together with satisfactory evidence of the purchase date, must be delivered, with shipping and delivery charges prepaid, to one of the following: (1) the Distributor/Dealer from whom purchased; or (2) H-P Products, 512 West Gorgas St., Louisville, Ohio 44641.

Upon compliance with the above procedure H-P Products will repair or replace, at its option, any warranted part which is defective. Such part or parts will be furnished without cost F.O.B. place of shipment. Return shipment will be made freight collect. All costs for service calls shall be borne by the one requesting service.

DIRT DEVIL® central vacuums are manufactured
under exclusive license from Royal® Appliance Mfg. Co. by

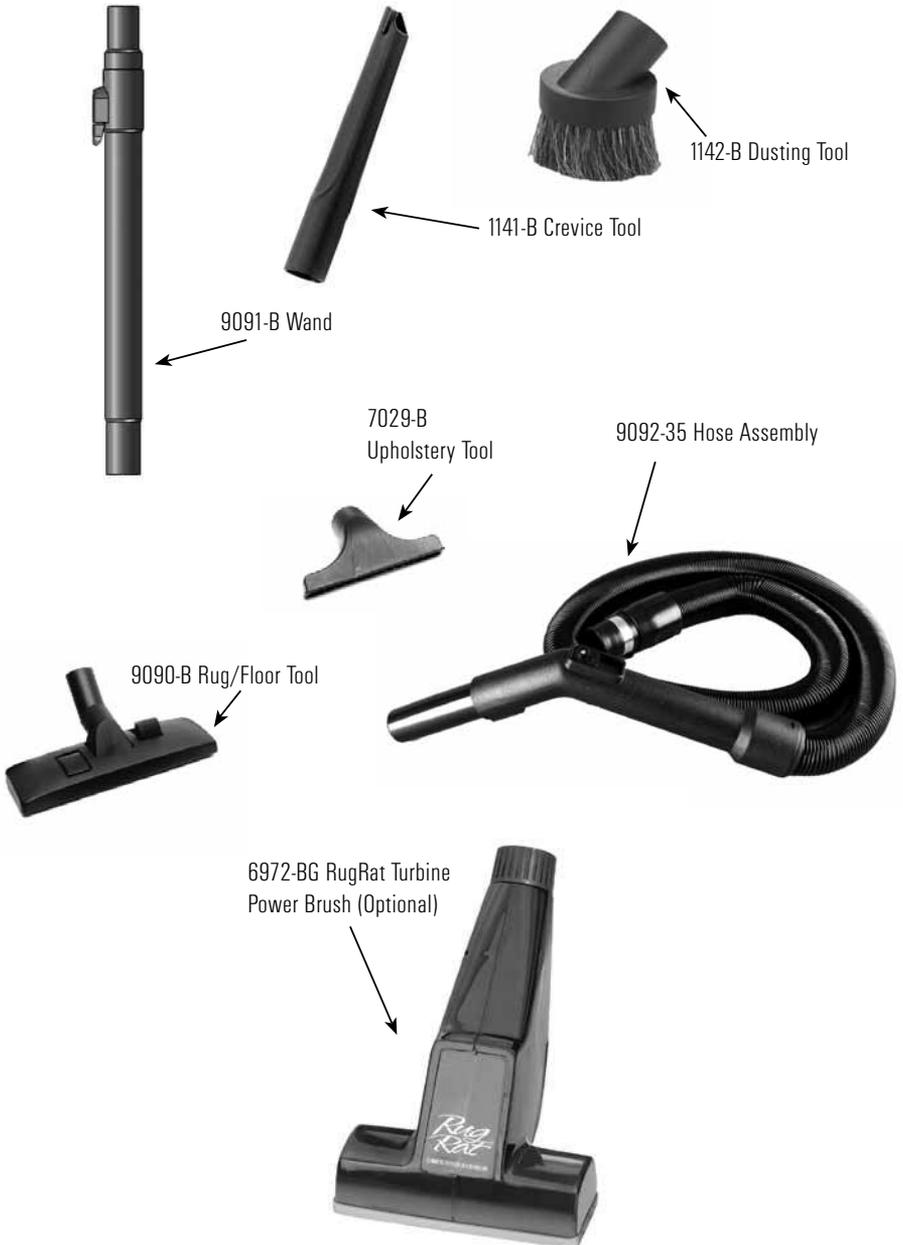
H-P Products
512 W. Gorgas St. • Louisville, OH 44641
330-875-5556

CV1500 PARTS LIST



#	Part #	Name	Qty.
1	7759	Top Cover	1
1a	7764-DD	Product Label	1
1b		Handle	1
1c		Gasket	1
2	9597	Bags (3 pack)	
3	4934	Support - Side	1
4	4929	Filter - Secondary	1
5	4928	Support - Bottom	1
6	8728	Canister	1
7	7464	Inlet Connector	1
8	7455	Gasket	1
9	7655-01	Screw	4
11	7599-01	Bushing L.Volt Wire	1
12	7110-01	Power Cord	1
13	7758	Gasket - Motor	1
14	9590	Motor	1
15	9591	Bracket - Motor	2
17	6678	Bottom Cover	1
18	7064-02	Screw	5
19	7090	Relay Assy	1
28	7775	Screw	4
29	5148-6	Low Volt Wire (6 ft)	
30	5149	Wire Nut	2
31	9601	Owners Manual	1
32	7539-02	Ground Screw	1
33	5737-03	Ground Wire	1
34	7108	Hex Nuts	3

CV1500 ACCESSORY LIST



Your motorhome is equipped with a Carbon Monoxide alarm, which has a sensor that is designed to detect carbon monoxide gas fumes resulting from incomplete combustion of fuel. It will detect carbon monoxide gas from any combustion source such as from the furnace, oven/ range, water heater, refrigerator, chassis engine and generator engine.



Figure 2-5: Carbon Monoxide alarm

CO/LP GAS DETECTOR

Since LP gas is denser than air, the LP gas will naturally settle to the lowest point in an enclosed space. In the motorhome, this would be the floor.

To activate the CO/LP-gas sensor on this detector for the first time, remove the sensor activation strip, if such was not performed during the pre-delivery inspection.

If the alarm persists in re-arming and giving further alarms, ventilate the motorhome by opening doors and windows and then check for possible LP gas leaks. If the leak cannot be readily found,

SAFETY

then close the main valve to the LP tank and turn “off” all gas appliances and then take the motorhome to a qualified service technician after the ventilation process is concluded and the doors and windows again shut.

This single compact system provides a powerful combined alarm that detects both Carbon Monoxide (CO) and explosive gases Propane (LPG) and Methane (Natural Gas). This detector uses the latest microprocessor technology combined with two electronic self-cleaning sensors that operate independently of each other. The combined unit can detect both CO and explosive gases simultaneously.

Carbon monoxide (CO) is a colorless, odorless, tasteless gas which, when breathed, bonds to the hemoglobin in the red blood cells and, thus, drastically reduces or blocks the transfer of oxygen from the lungs to the rest of the body.

In sufficient concentrations, CO kills by asphyxiation. In lesser amounts, CO makes the victim groggy, lethargic, and unable to think clearly or quickly.

CO is one of the products of combustion for many materials including petroleum-based products (e.g., gasoline, diesel fuel, propane, butane; among others). Since many of the appliances and the engines associated with the motorhome produce CO in their normal operations, it is necessary to assure that CO levels do not rise to dangerous levels within the motor home. In sufficiently high concentrations, CO can kill in minutes.

The most susceptible people to CO poisoning are unborn babies, small children, pregnant women, senior citizens, and people with cardiovascular or respiratory problems

Consequently, it is prudent to check the CO monitor regularly for normal operation and to remain aware of the symptoms of CO poisoning which include dizziness, nausea, vomiting,

Muscular twitching, throbbing in the temples, incoherent thinking and speech, weakness, sleepiness, and intense headaches.

Should any of these symptoms be experienced in the motorhome, you should **IMMEDIATELY** evacuate the motorhome and seek medical help. Shut down the motorhome and do not attempt to operate it again until the source(s) of the CO are located and fixed.

DANGER



Never sleep in a motorhome when the engine is running—engine exhaust fumes could enter the motorhome and cause disability or death. Regularly check the exhaust system to note any leakage sites and, if found, discontinue use of the motor home until they are repaired by a competent, qualified service technician. Do not attempt repairs on the exhaust system yourself and do not modify (temporarily or permanently) the exhaust system at all.



DANGER

Carbon monoxide gas—derived from products of combustion of diesel fuel, LP gas, and other petroleum-based products—is a deadly gas which can kill motorhome occupants, if allowed to accumulate in sufficient concentration. Assure that all engine operations are not restricted—tailpipes and exhaust ports should not be blocked or restricted in any way. Additionally, any accumulation of exhaust gases outside or underneath the vehicle should be avoided as such may enter the motor home through windows or vents—be careful how and where the motor home is parked to avoid such conditions. Regularly monitor outside conditions to assure that all exhaust gases can readily be dissipated and not enter the motor home inadvertently.

Installation Guide

**FCTP-MB1101
KN1/KN2**

Sprinter Tow Package
For Sprinters equipped with the 'Radio Delete' option





What's in the box



*For programming and electrical connection information refer to RP4.2-MB21 guide included in kit.

Illustrations are typical and may not match exact vehicle detail

FCTP-MB1101-KN1/KN2

Sprinter Tow Package



Parts Description

FCTP-MB1101-KN1/KN2			
For Sprinters equipped with the “Radio Delete” option			
Image	Part Number	Description	Qty
1	BSCM-MB1101	Side Mirror Cap Camera Mounts (L&R)	1
2	CAM-EXT50-HAR	50 Inch Camera Connection Harness	1
3	CAM-EXT70-HAR	70 Inch Camera Connection Harness	1
4	MB11-VS41-HAR	Camera Switcher Harness	1
5	P-CAM-MB2	OEM Reverse Camera Adapter	1
6	P-RP4.2-MB11	Radio Replacement Interface	1
7	P-VS41-B	Camera Switcher	1
8	RP4.2-MB21-KEN-HAR	Radio Interface Harness	1
9	SVC-01	Side Cameras	2

Optional Accessory



Optional Accessory			
10	CAM-EXT-4PRCA-HAR	Front Camera Adapter Harness	1

Illustrations are typical and may not match exact vehicle detail



Important

Please read and follow the instructions carefully. To emphasize special information, the symbol  and the words **Warning**, **Caution** and **Note** have special meanings. Pay special attention to messages highlighted by these signal words.

Note: Indicates special information to make installation easier or instructions clearer.

These instructions are designed as a guide to help make the installation of this product successful. Always use caution and ask for assistance if you are not sure how to proceed.

AAMP Global & EchoMaster is not responsible for any damage that may occur during installation or any changes to the vehicle interior.



WARNING

Indicates a potential hazard that could result in a death or serious injury



CAUTION

Indicates a potential hazard that could result in vehicle damage

NOTE

Indicates a potential hazard that could result in vehicle or equipment damage

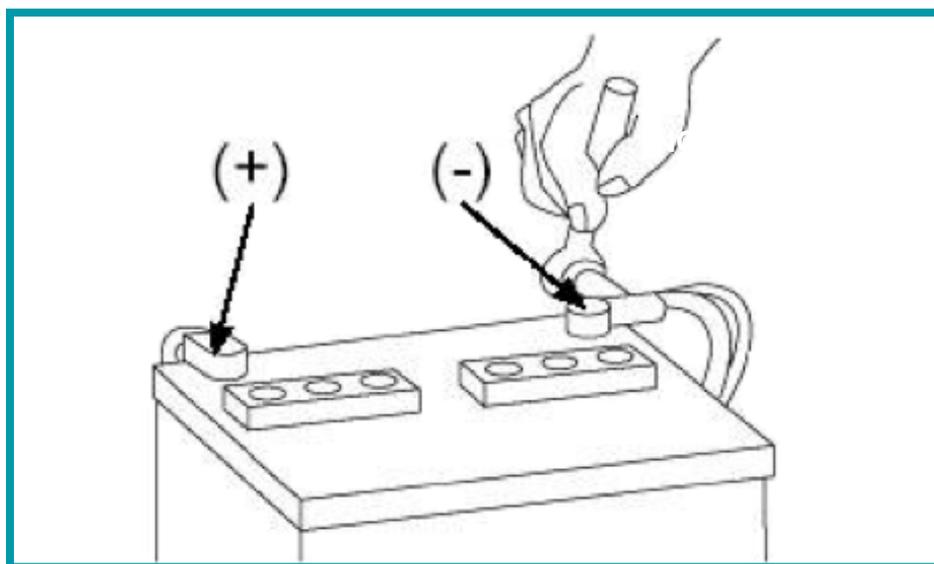
NOTE

Consult Vehicle owners guide before disconnecting negative battery cable



WARNING

DO NOT TOUCH the positive terminal with any tool when removing the negative battery cable



Illustrations are typical and may not match exact vehicle detail

FCTP-MB1101-KN1/KN2

Sprinter Tow Package



Tools required



Prior to Installation

Cover all surfaces with tape or plastic protection film to protect against scratching and damage. AAMP is in no way responsible for any damage that may occur during installation.

This product has been validated in the vehicles listed on the application guide only.

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure proper installation. Read entire instructions thoroughly before starting.

This document covers such items as:

- ▶ Vehicle Protection (use of covers and blankets, cleaning chemicals, etc)
- ▶ Vehicle Disassembly / Reassembly (panel removal, part storage, etc)
- ▶ Electrical Component Disassembly / Reassembly (battery disconnection, connector removal, etc)

NOTE

Removed Parts - Inspect the vehicle and parts for any damage
Place all removed parts on a protected surface in an area they will not get damaged
Connectors: When disconnecting connectors, do not pull on the wires, pull by holding the connectors

Illustrations are typical and may not match exact vehicle detail

Vehicle Preparation & Protection

CAUTION

Consult your vehicle owner's manual to disconnect the battery. Do not disconnect ANY airbag connectors or indicators. Doing so may result in activating a diagnostic code. These codes will require the dealer to perform the reset procedure which may incur a reset fee. If you are unsure of any vehicle trim removal process consult the OEM service manual.

Removing vehicle trim panels in extreme hot and/or cold climate could result in damage. Use care when removing all vehicle trims. Using painters blue tape on the vehicle trim panels can help limit any scratches and / or marring. Use a nylon trim panel removal tool whenever possible.

Dash Disassembly

Step 1

Carefully tape the dash trim piece around the radio display.



Step 2

Carefully remove the dash trim pieces from around the radio display. Using a nylon pry tool start from the top corners. Pry out towards the back of the vehicle. Recommended tool (Nylon pry tool).



NOTE

Once dash piece is removed, place in safe area to avoid damage.

Illustrations are typical and may not match exact vehicle detail

FCTP-MB1101-KN1/KN2

Sprinter Tow Package



Dash Disassembly (continued)

Step 3

Once the lock tabs have been released disconnect the dash trim panel and place in a safe area.

Recommended tool (Nylon pry tool).



Step 4

Remove the four Torx T20 screws securing the radio display in place.

Recommend covering the climate controls with painters tape before removing the radio display.

Recommended tool (Torx T20).



Step 5

Remove the radio display, disconnect the radio display and set it in a safe area to avoid damage.

Refer to the installation guide for the RP4.2-MB11 / 21 or BCI-MB11 for programing information and electrical connections depending on which kit you are installing.



NOTE

Once the radio display is removed, place in safe area to avoid damage.

Illustrations are typical and may not match exact vehicle detail



Door Disassembly

Step 1

Open the lower pocket on the door by unlocking the two cam locks.

Once it is open, remove the pocket by lifting it off the hinges.



Step 2

Remove the four Torx T20 screws from around the door.

Remove the cover from the door pull using a nylon pry tool. Pry from the bottom of the door pull to reveal the two Torx T30 screws.

Remove the two Torx T30 screws. Pry the door panel off the door. There are several snaps behind the panel. Disconnect the door latch and any connectors behind the door panel.



NOTE

Once the door panel is removed, place in a safe area to avoid damage

Illustrations are typical and may not match exact vehicle detail

FCTP-MB1101-KN1/KN2

Sprinter Tow Package



Mirror Disassembly

Step 1

Push the bottom of the top mirror glass in to gain access to the lower mirror glass.

Using even pressure, pull the bottom mirror glass off towards you. The mirror will pop off.



Step 2

Disconnect the defroster connector.

Not all models will have the defroster.



NOTE

Once the mirror glass is removed, place in safe place to avoid damage

Illustrations are typical and may not match exact vehicle detail

Mirror Disassembly (continued)

Step 3

Tilt the top mirror glass so you can place both hands up under the glass to get to the center of the back of the glass.

Applying even pressure, pop the glass off.



Step 4

Disconnect the defroster connector.

Not all models will have the defroster.

NOTE

Once the mirror glass is removed, place in safe area to avoid damage



Step 5

Remove the four Torx T20 screws around the mirror housing.



Illustrations are typical and may not match exact vehicle detail

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Mirror Disassembly (continued)

Step 6

Remove the outer trim ring.

Support the back cover while removing the outer trim ring.

Place in a safe area to avoid damage.



Step 7

Remove the back cover of the mirror housing.



Step 8

The turn signal indicator snaps off the back cover.

Place the back cover in a safe area to avoid damage.



Illustrations are typical and may not match exact vehicle detail

Mirror Disassembly (continued)

Step 9

Disconnect the turn signal indicator.

Place the turn signal indicator in a safe area to avoid damage.



Cable Routing

Step 1

For the tow mirror, fold the arm in towards the door to gain access to the inner hinge area. Feed a long wire tie or similar fish tool through the lower outside portion of the tow mirror arm. Tape the camera cable to the end of the wire tie you are using to feed the wire through.

Tow Mirror



Step 2

Feed a long wire tie or similar fish tool through the mirror where the factory wires come through. Tape the camera cable to the end of the wire tie you are using to feed the wire through.

Non-Tow Mirror



NOTE

Removing the mirror assembly is not absolutely necessary but makes the installation easier.

Illustrations are typical and may not match exact vehicle detail

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Cable Routing (continued)

Step 3

Remove the three Torx T30 screws holding the mirror to the door of the truck.

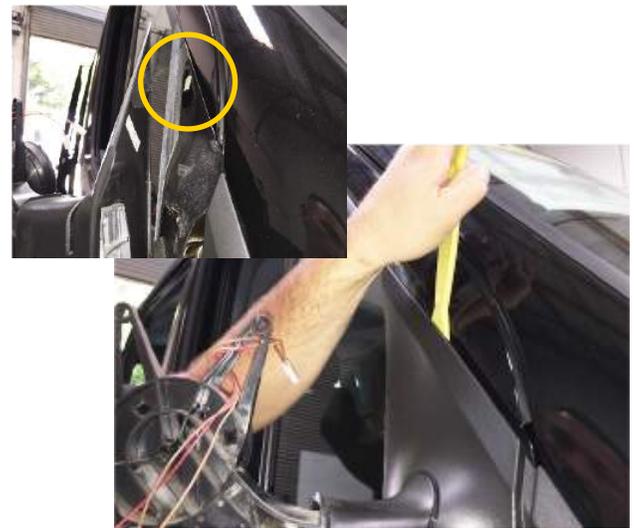
One of the Torx T30 screws has a small cap covering it. Use something slim to pry the cover off to access the screw.

The mirror arm will still be held on with a clip on the outside.



Step 4

Using a nylon pry tool, insert it (approximately as shown - above the hook) then pull it out and push the mirror assembly up to disengage.



NOTE

Removing the door speaker makes it easier to route the wires in the door.

Step 5

Feed a long wire tie or similar fish tool through the door to where the factory wires come through the boot.



Illustrations are typical and may not match exact vehicle detail

Cable Routing (continued)

Step 6

Unsnap the door boot, and feed the wire tie with the camera cable taped to the end. Do not remove the boot from the black snap ring. Only the door side of the boot needs to be removed.

NOTE

Once the cable is routed into the door jamb reinstall the three Torx T30 screws that hold the mirror frame on to the vehicle to avoid damage.



Step 7

Feed a long wire tie or similar fish tool through the boot then into the vehicle as shown.

The boot does not need to be removed from the vehicle side.



Step 8

Once inside the vehicle route the cables avoiding any moving parts.

Drivers side shown.



Illustrations are typical and may not match exact vehicle detail

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Cable Routing (continued)

Step 9

Once inside the vehicle route the cables avoiding any moving parts.

Passenger side shown.

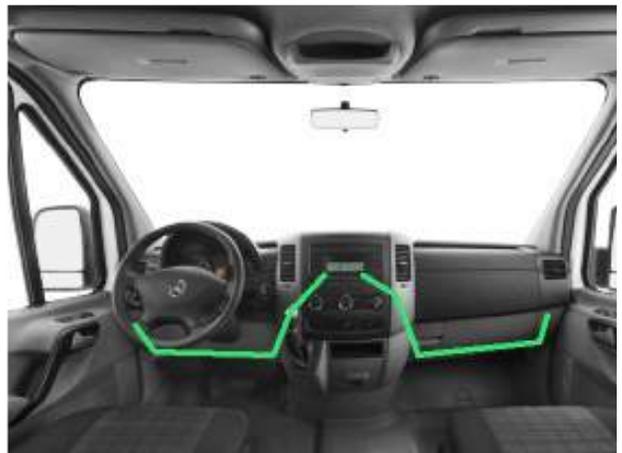


Step 10

Avoiding any moving parts, secure the cables using cable ties.

For the driver's side you will need to use the **CAM-EXT70-HAR.**

For the passenger side you will use the **CAM-EXT50-HAR.**



Mirror Assembly

Step 1

With the cables routed, you can assemble the mirror caps with the cameras.



Illustrations are typical and may not match exact vehicle detail



Mirror Assembly (continued)

Step 2

There are two sets of camera inserts per side.

- RH** Right hand side
- RH-T** Right hand side trailer
- LH** Left hand side
- LH-T** Left hand side trailer

The trailer inserts are for the mirrors that extend out farther from the vehicle.



Step 3

Select the inserts you are going to be installing.

There is a small notch on the camera; this notch needs to be on the same side as the lettering on the insert.



Step 4

Once the camera is snapped into place, slide the locking mount over the camera. There is a locking rib which needs to be lined up with the notch on the camera. You can adjust the camera using the locking mount by twisting the camera so the screw holes line up. Once the holes line up, using a No. 1 Phillips screwdriver install the supplied screws.



NOTE

DO NOT OVER TIGHTEN

Illustrations are typical and may not match exact vehicle detail

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Mirror Assembly (continued)

Step 5

When installing the camera insert on to the mirror caps, the locating tab will line up with a small hole on the front of the camera insert.



Step 6

Once the camera insert is installed in place, use a number 1 Phillips screwdriver to mount the camera insert.



NOTE
DO NOT OVER TIGHTEN

Step 7

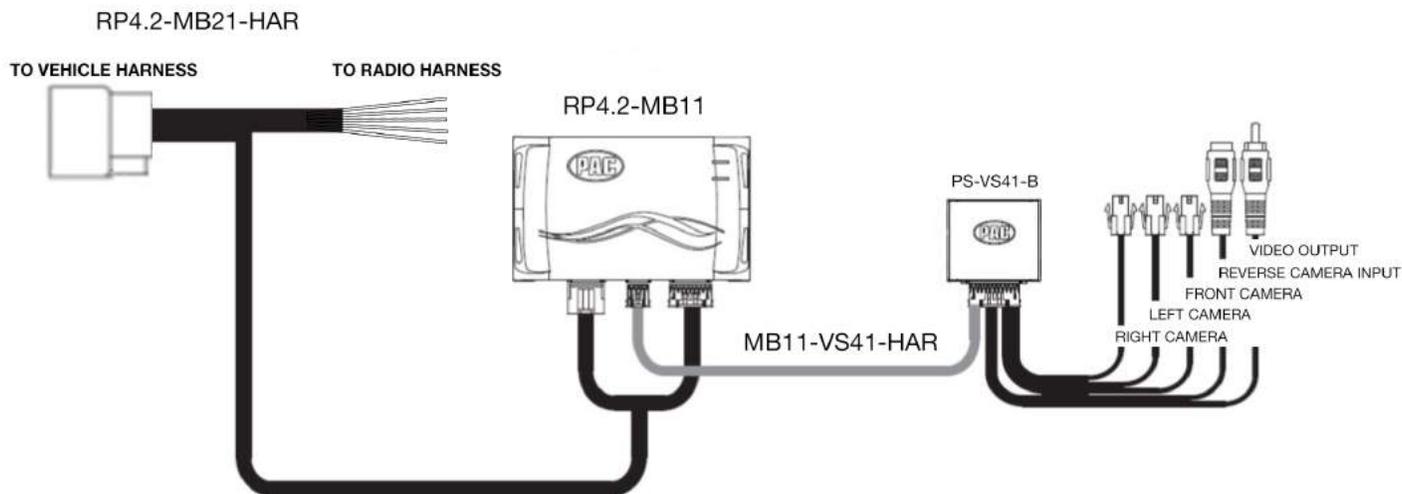
Once the camera insert is installed, snap the turn signal in place. Reinstall the mirror caps, in the reverse order they were removed.

Make sure all connections in the mirror are fully seated and secure when reinstalling everything.



Illustrations are typical and may not match exact vehicle detail

Wiring Diagram



Testing

Reconnect the negative battery cable.

Turn the ignition switch to ON, when the display of the unit comes on, follow the steps for set up.

Place your foot on the brake and place the vehicle in reverse. The rear camera will display on the screen.

NOTE

ONLY IF CAMERA IS INSTALLED AND ACTIVATED

Place the vehicle back in park to go to the source selection screen. Ensure all components are in working order (Navigation, steering wheel controls, HVAC, dome lights, etc.)

NOTE

Check to ensure the unit, steering wheel controls, AM/FM tuner are properly working. Double check all the functions of the vehicle are working correctly.

If the unit does not power up

- Check the vehicle's fuse first.
- Check that the connectors on the back of the unit are fully seated and locked.
- Check that no PINS have gotten bent in the connectors during installation.

Illustrations are typical and may not match exact vehicle detail

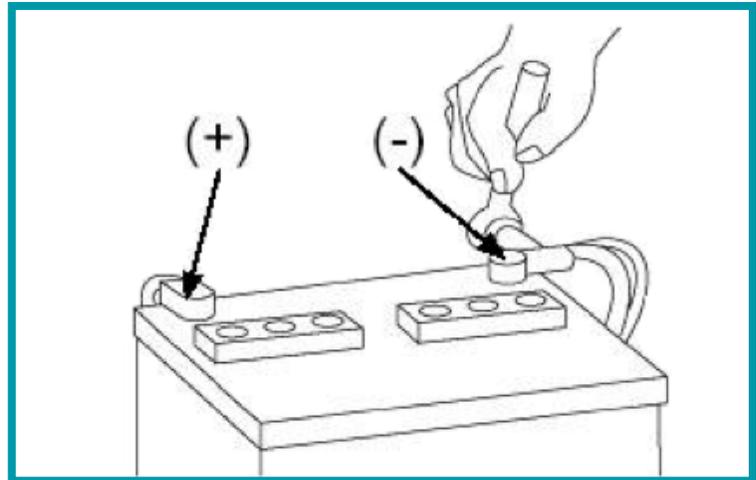
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Sprinter Tow Package



WARNING

DO NOT TOUCH the positive terminal with any tool when removing the negative battery cable



NOTICE OF INTENDED USE

Some features are not intended for viewing by the driver while the vehicle is in motion. When using the navigation feature, minimize the amount of time spent on viewing the screen and use voice prompts when possible. Avoid prolonged use of the touch screen controls while the vehicle is in motion. Such use may distract the driver or interfere with the driver's safe operation of the vehicle which can result in serious injury or death. Use of the product while the vehicle is in motion may also violate state or local laws.

This product must be properly installed and used in accordance with all laws for your safety. AAMP Global does NOT assume liability for any bodily injury or property damage that might result from any improper or unintended use.

Illustrations are typical and may not match exact vehicle detail

AGREEMENT: End user agrees to use this product in compliance with the instructions and terms of use above and with all State and Federal laws. ECHOMASTER provides instructions and safety warnings with respect to this product and disclaims all liability for any use not in conformity with those instructions or other misuse of its product. If you do not agree, please discontinue use immediately and contact EchoMaster. This product is intended for off-road use and passenger use only.



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May 9, 2017

Sharpline Converting, Inc. Paint Protection Film Installation Warranty Statement
Prepared for Tiffin Motorhomes

DuraShield Titan XT™ is backed by a 1 year labor/10 year film limited warranty.

Sharpline Converting, Inc., the manufacturer of DuraShield Titan XT™, warrants the film to perform under normal conditions according to product specifications for a period of ten (10) years from the date of install. DuraShield Titan XT™ is designed to remain optically clear, and will not experience significant discoloration, adhesive delamination or other similar failure due to a manufacturer's defect.

DuraShield Titan XT™ is guaranteed to protect a painted surface from minor paint chips. Should a paint chip occur where it is covered with DuraShield Titan XT™, Sharpline will cover the cost of repairing that area. Any stone or road hazard significant enough to dent the vehicle which causes surface damage is not covered in this warranty.

DuraShield Titan XT™ is guaranteed to be free from labor defects upon initial delivery to the dealer. Sharpline will cover the cost of repairing all verified labor and film defects. Sharpline will also cover the cost of repairing any surface issues that are a result of the removal or replacement of the DuraShield Titan XT™ film. This is based on using a Sharpline contracted installer. All approvals for removal, trimming, and/or installation shall be given by Sharpline prior to any work being performed. This warranty does not cover removal or replacement of film due to paint defects.

All claims for material and labor hours and rates are subject to approval by Sharpline. Sharpline reserves the right to provide labor to repair the unit. A photo of the film clearly demonstrating the problem area and the placement area on the unit can be submitted for review. Sharpline will provide labor for verified claims for one (1) year from the sale date of the unit. Sharpline will provide replacement film for verified claims for ten (10) years. Replacement of the film using a product other than DuraShield will invalidate this warranty.

Use of certain post-application products can invalidate this limited warranty. For best results, follow DuraShield Titan XT™ Care sheet. Sharpline will not be liable for any losses, damage or expense due to chemicals, abuse, non RV use, or other acts, occurrences, defects or faults not associated with the manufacture of DuraShield Titan XT™.

