

<b>REFERENCE:</b>	Nova Bus Manuals
<b>SECTION:</b>	99: General practices

**APPLICATION DEADLINE:**N/A

<b>SUBJECT:</b>	Vehicles disinfection
<b>JUSTIFICATION:</b>	Recommendations on the disinfection of vehicles as well as products and precautions to be taken.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	–	Client	Client	–
2	–	–	–	–

#### MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
<b>LEVEL 1</b>				
–	–	–	–	–
<b>LEVEL 2</b>				
–	–	–	–	–

#### DISPOSAL OF PARTS

<b>REMOVED PARTS ARE:</b>	<b>DISCARDED</b>	<b>RETAINED</b>	
	–	–	

#### REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2020JA20	Initial release	André Pelletier

**APPROVED BY:**

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**WARNING**

Follow your internal safety procedures.

**WARNING**

Follow all CDC (Center for Disease Control and Prevention) policies regarding COVID-19 prevention while working on the vehicle. Such as, but not limited to:

- Practice social distancing while cleaning – 6 feet (2 meters) min.
- Also wear appropriate PPE (personal Protection Equipment) including but not limited to: Disposable gloves, gowns and face masks as well as eyes protections (shield or goggles).

Refer to CDC documentation: What Bus Transit Operators Need to Know About COVID-19. Check regularly for updated information.

<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/transit-maintenance-worker.html>

<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html#Cleaning>

[https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Fhealthcare-supply-ppe-index.html](https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Fhealthcare-supply-ppe-index.html)

**RECOMMENDED PRODUCTS AND USE**

PRODUCT TYPE	USE
Soap/Detergent	Recommended for all soft (porous) surfaces like carpeted areas, seats and safety belts.
Isopropyl alcohol (70% Concentration)	For small, hard (non-porous) surfaces like handrails, handles, belt buckles steering wheel and most of the driver's controls & electronics. Can also be used on leather or vinyl seats.
Disinfectant*	Use on large hard (non-porous) surfaces such as floors, compartment doors and interior trim.

*\*A DISINFECTANT SOLUTION CAN BE PREPARED BY MIXING 5 TABLESPOONS (1/3rd CUP) OF HOUSEHOLD BLEACH (SODIUM HYPOCHLORITE) WITH A GALLON OF WARM WATER. THIS SOLUTION WILL LOSE ITS EFFECTIVENESS IN ABOUT 24 HOURS. MAKE A NEW BATCH EVERY DAY.*

**CAUTION**

**DO NOT USE HYDROGEN PEROXIDE-BASED CLEANING SOLUTION.**

**NOTE**

A product must be applied to a cloth and not directly to the surface to be treated. Never spray a product directly on vehicle equipment. Direct spray may cause a short circuit or malfunction for some equipment.

**CAUTION**

- Always pour bleach into the water, not the other way around.
- Do not add more than the recommended concentration of bleach (1/3 cup). Using a higher concentration could damage the interior surfaces of the vehicle.
- To be effective, the disinfectant mixture must be in contact (wet) with the surface for a period of at least 60 seconds (at the recommended concentration).
- Make sure the surfaces have dried thoroughly before boarding passengers (to minimize the risk of clothing discoloration and exposure to vapors).
- If commercial products are used, follow the manufacturer's instructions regarding the application, the contact time required, the personal protective equipment (PPE) to be used as well as the necessary ventilation.
- Do not mix products containing bleach (sodium hypochlorite) with those containing ammonia.
- If dilution is necessary, use the hottest water possible.

## ALCOHOL-BASED SOLUTIONS

Alcohol solution used to disinfect non-porous surfaces must contain 70% isopropyl alcohol (as opposed to 60% for hand cleaning).

## UNDERSTANDING THE DIFFERENCE BETWEEN CLEANING AND DISINFECTING

### CLEANING

Refers to the removal of germs, dirt and impurities from surfaces. It does not kill germs, but by removing them it lowers their numbers and the risk of spreading infection.

Cleaning is an important process already performed by coach operators during their regular activities (end of day or end of shift). Operators must continue and increase as much as possible the frequency of their cleaning routine during pandemic times.



- Always use a wet cleaning method.
- Never spray a product directly on vehicle equipment. Always apply the product beforehand on a cloth. Direct spray may cause a short circuit or malfunction for some equipment.
- Avoid sweeping. It should be assumed that a virus can survive up to 72 hours on a solid (non-porous) surface and that it can spread through the air by clinging to dust.

### DISINFECTING

Refers to the use of chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

Disinfecting is an additional process (applied to specific high traffic - high contact areas of the coach) that should be performed by coach operators after the regular cleaning process to further reduce the risk of virus propagation during pandemic times.



- Never spray a product directly on vehicle equipment. Always apply the product beforehand on a cloth. Direct spray may cause a short circuit or malfunction for some equipment.

## PROCEDURE

- 1.1. Park the vehicle on an even surface with the transmission on neutral. Apply the parking brake.
- 1.2. If possible, the vehicle central HVAC should be run at fresh air setting and at the highest setting possible. Do not forget to do regular filter maintenance.
- 1.3. If HVAC cannot be activated (vehicle not running), open side windows as much as possible to increase ventilation.
- 1.4. Clean the vehicle.
- 1.5. Follow cleaning with disinfecting process. You can use the checklist provided at the end of this document as a guide to ensure that all areas of concern are disinfected. Checklist can be printed and dispatched to the maintenance crew.



## VEHICLE QUARANTINE PROCEDURE

### APTA RECOMMENDATION (AMERICAN PUBLIC TRANSPORTATION ASSOCIATION)

#### IF A VEHICLE WAS SUBJECTED TO A KNOWN VIRUS EXPOSURE, PROCEED AS FOLLOWS:

- Develop protocol for cleaning and disinfecting a vehicle after a person with COVID-19 was known to be in the space:
- Designate special “quarantine” parking zones for any vehicles that have suspected or known exposure to the virus.
- If the operator is still in the vehicle immediately after a known exposure, ask the operator to perform the following steps, which allow for sufficient air changes to remove potentially infectious particles:
  - o Park the vehicle in designated area.
  - o Leave the engine running and turn on HVAC to maximum fan speed.
  - o Open windows (if possible) and vehicle door.
  - o Use lockdown procedures to ensure nobody can enter/exit vehicle while quarantined; this could include additional steps such as license plate removal and placing caution/warning signs on the vehicle.

Based on guidance provided for cleaning/disinfecting the vehicles, as long as air changes are occurring in the vehicle via continuous running of HVAC and/or opened windows while the vehicle is in use, personnel can enter the vehicle for cleaning/disinfection after approximately 30 minutes.

Refer to page 6 of the APTA American Public Transportation Association - [The COVID-19 Pandemic Public Transportation Responds: Safeguarding Riders and Employees](#) for additional information.

Also consult this CDC information : <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/disinfecting-transport-vehicles.html>

**ANNEX**

**VEHICLE DISINFECTION CHECKLIST EXAMPLE**

To be carried out after cleaning. The operator must adjust the disinfection procedure according to the configuration of the vehicle.



**CAUTION**



- Never spray a product directly on vehicle equipment. Always apply the product beforehand on a cloth. Never spray a product directly on vehicle equipment. Direct spray may cause a short circuit or malfunction for some equipment.
- Never use products based on hydrogen peroxide.

**DRIVER'S AREA:**

	Steering wheel (including horn & control buttons)
	Steering column levers
	Windows frames and handles
	Seat and seat controls
	Dashboard buttons and controls (including audio/video, radio and AC controls)
	Left console buttons and transmission controls

	Destination sign controls
	Handheld communication device and screens
	Back panel (plexi)
	Fare box
	Utility compartments (console drawers, door & button)
	Driver door (if applicable)

**INTERIOR:**

	Entrance door handrails
	Floor
	Seats, back rest (2 sides)
	Window frame and handles, emergency exit handles

	Grab handles
	Modesty panels (both sides)
	Stanchions

**EXTERIOR:**

	Rear door and engine compartment access side doors handles/latches
	Fuel & DEF traps and fill caps
	Door handle and hatch for windshield washer
	Battery compartment handle
	Bike racks levers