

### **ConneXion Program**

### Disclaimer

This document provides instructions for the correct RFID tag (sticker) placement in trucks and passenger cars.

Please note that the tags are fragile and CANNOT BE REMOVED WITHOUT DAMAGING THEM once they have been installed. Please use care to install them properly. You will be charged a full replacement fee for any damaged tag.

For assistance, please contact FBCL at <u>connexion@federalbridge.ca</u>.

### A. Common mistakes

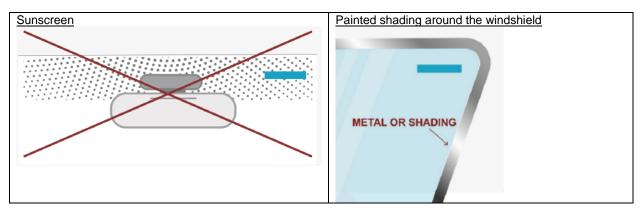
#### Metal Oxide Windshields

Some vehicle models are manufactured with a metal oxide windshield. These metalized windshields will prevent the tag from successfully communicating with the roadside system. Some manufacturers of vehicles with metallized windshields will leave a small metal-free area specifically for the installation of RFID tags. These metal-free zones are not visible to the naked eye; however, they are typically located close to or behind the rear-view mirror. Please confirm this location with your vehicle's manual and/or your vehicle's manufacturer. For reference, the Bay Area Toll Authority maintains a list of vehicles with metal oxide windshields:

https://www.bayareafastrak.org/en/common/docs/MetalOxideWindshieldList.pdf.

#### **Avoid Painted Surfaces**

Paint usually contains metallic particles which will block part of all the RF signal and the tag will not be read by the system.



Ensure appropriate distance from the edges or metallic parts

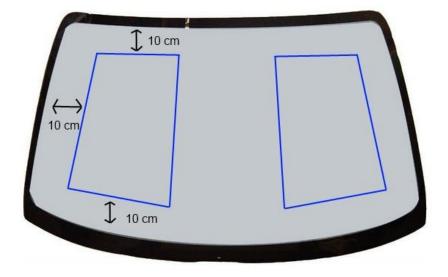




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The tag should be installed at least 10 cm or even more if possible away from any metallic surface such as the windshield edges or the beam holding the rearview mirror. Some trucks may also have a metal rod separating the left and the right part of the windshield. These metallic parts may distort or attenuate the RF signal and lower the chances that a tag will be read.





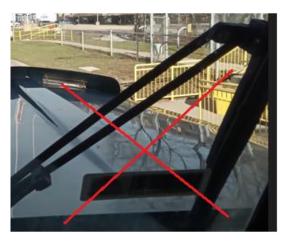




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#### **Beware of Windshield Wipers**

The tag should be installed far away from the windshield wipers. Some trucks may also have their wipers positioned vertically when not used instead of horizontal. Please remember to keep at least 7.5 cm away from metallic surfaces, wipers are usually metallic.



#### Avoid proximity with other tags

The RFID tag should not be installed close to other tags. Allow at least **7.5 cm/2-3 inches** distance between the tags or install the tag on a different location if possible.



#### **Installation Orientation**

Tags must be installed horizontally. Tags that are installed vertically will not work.



# READ <u>BEFORE</u> INSTALLATION



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The following picture shows 3 installation errors on the same truck:

- 1. Close to the vertical metallic support rod
- 2. Behind the wipers
- 3. Right next to another tag







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### **B. Recommended Tag Placement**

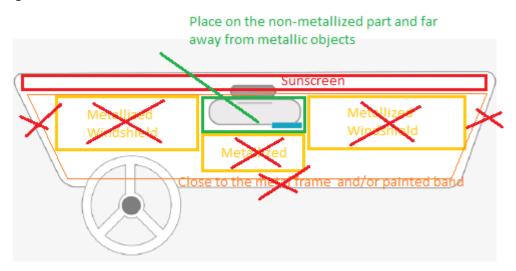
#### **Passenger Cars & SUVs**

Please follow these guidelines when installing the ConneXion tag in a vehicle that is less than 2.45 metres (8 feet) in height.

The location should be cleaned of dust and grime prior to installation. As shown in the illustration, the tag should be installed in the shaded area illustrated below on the <u>inside</u> of your vehicle's windshield. The tag should be installed away from the metal window frame, behind the rear-view mirror, to not impede the line of sight and 7.5cm away from the rearview mirror. Note that many vehicles have electronic devices such as GPS units, radios and navigational compasses installed in the rear-view mirror. These electronics can interfere with the operation of the transponder. Transponders must be installed a minimum of 15 cm from electronic devices.

#### Tag should be placed horizontally.

Please contact your car manufacturer or check your car manual to identify the non-metallized area and place the tag there.

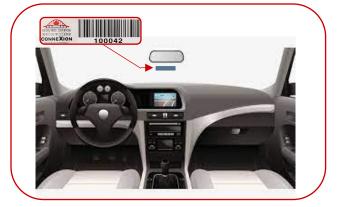




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#### Trucks – Windshield Tags

Please follow these guidelines when installing the ConneXion tag in a vehicle that is 2.45 metres (8 feet) in height or above.

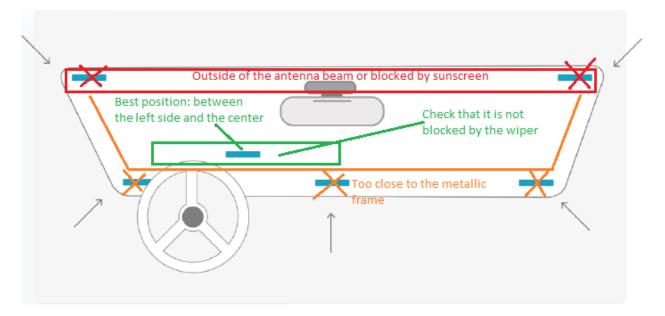
The location should be cleaned of dust and grime prior to installation. As shown in the illustration, the tag should be installed in the area illustrated below on the <u>inside</u> of your vehicle's windshield. The tag should be installed a few centimeters away from any metal frame and so as to not impede the line of sight.

If a vitally important sticker, tag or other device is already in that spot, please mount the ConneXion tag slightly below or next to it.

(**NOTE**: If the vehicle is a Car Carrier, you may need a different type of tag. Please contact FBCL at <u>connexion@federalbridge.ca</u>).

Tag should **be placed horizontally**.

Please contact your car manufacturer or check your car manual to identify the non-metallized area and place the tag there.



Tags must be installed a minimum of 15 cm from electronic devices. Such as GPS units, radios, etc.



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When applying the tag to a surface, it is recommended that the surface temperate should be within the range of 21°C to 38°C (70°F to 100°F). Application is not recommended if the surface temperature is below 10°C (50°F).

Do not wash the interior of the windshield or disturb the transponder for 72 hours after installation.





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#### Motorcycles

For installation on a motorcycle, you will need a Headlamp Tag.

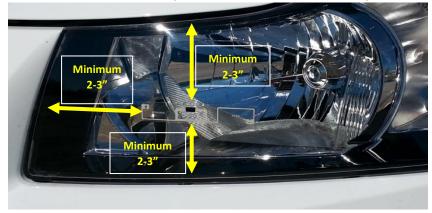
The Headlamp Tag must be attached to the motorcycle's headlight. Please see next section for headlamp tag placement. (A motorcycle windscreen may also work but headlight is preferred.)

#### **Headlamp tags**

- 1. Check with the manufacturer or the vehicle/bike manual if the headlamp glass contains metallic particles. Even though the tag is placed on the outside surface there may be interference.
- 2. Clean the surface with a commercially available cleaning solution



3. Avoid placing the tag too close to the headlamp frame. Additional frames may also interfere. Place the sticker horizontally at least **7.5 cm/2-3 inches** away from the frame.





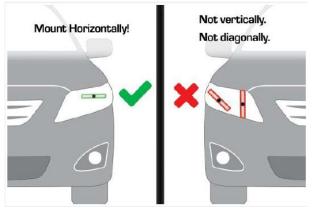
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4. Place the sticker facing the antenna and not on a curved surface.



- 5. When applying the tag to a surface, it is recommended that the surface temperate should be within the range of 21°C to 38°C (70°F to 100°F). Application is not recommended if the surface temperature is below 10°C (50°F).
- 6. Handle the tags with care during installation. Do not excessively bend or distort the tag when removing it from the liner. It is best to apply the tag by the edges:



Smooth out the tag to ensure complete adhesion and remove any air pockets.



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If installation on the headlamp is not possible (for example the 2-3.5" distances can not be kept) or the headlamp glass have metallic elements, the tags may be placed on any plastic surface for example the bumper. Again, the tag must be mounted a minimum 2" from any metal structures. This includes any metal structures behind the bumper, such as bumper mounts or the vehicle's frame.



7. Once the tag has been installed on the vehicle, there will be a period of time necessary to allow the tag's adhesive to cure. Due to temperature and humidity variations the total cure time may vary. Most applications will experience an 80% cure of the adhesive within 1 hour and full adhesive cure within 72 hours of application.

Do not wash the vehicle or disturb the tag for 72 hours after installation.

