ArmorGuard® Gate System

Operating Instructions

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16m system shown

The ArmorGuard® Gate System (AGGS) is designed to function as a crashworthy longitudinal barrier in accordance with the guidelines set forth in the National Cooperative Highway Research Program Report Number 350 and the AASHTO Roadside Design Guide and is simple and easy to operate. These brief instructions will demonstrate a method to open and close the system in a safe and efficient manner

General

The AGGS system is normally in the closed position as shown in the above photograph. In this condition the system functions as a roadside barrier up to the levels required for the National Highway System (NHS). The system is designed to be able to be opened for incident management to allow emergency vehicle access or rerouting traffic to the other side of the highway. If the system is to be opened, proper traffic control practices (in accordance with local standards) should always be followed. General safety precautions relating to the operation of heavy equipment and the use hand tools and compressed air (when used) should also be followed.

Opening the System

Once proper traffic control has been established on site, two people can easily open the system in less than 5 minutes. The first step in the process is to decide whether the system is going to be completely removed from the opening or only swung open from one end (like a “gate”). In either case, the hinge covers must be removed from both ends of the system. These hinge covers are held in place by four pins (two on each cover) at each hinge cover location, as shown in Figure 1.

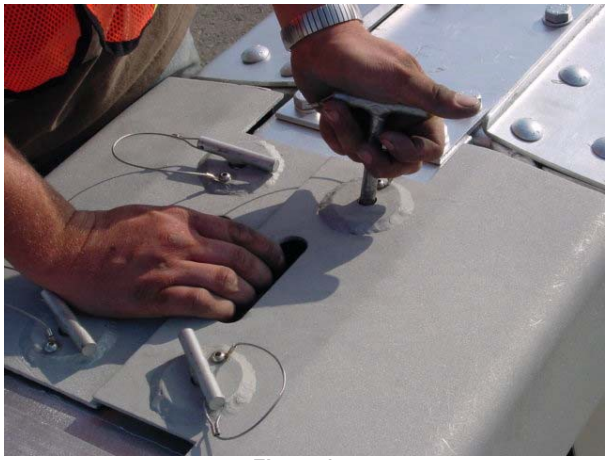


Figure 1
Hinge Cover Pins

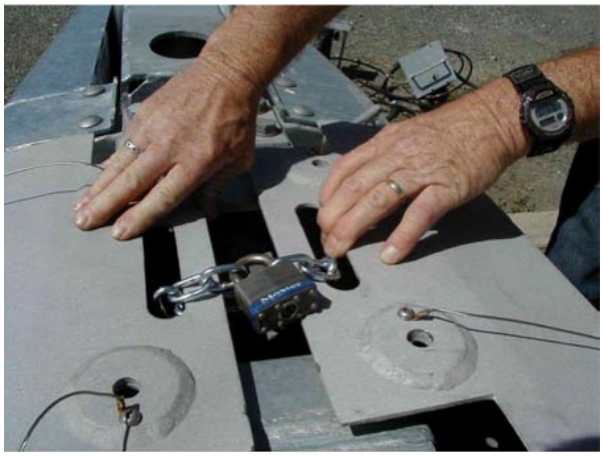


Figure 2
Hinge Cover Locking

If additional security is needed at the site of a AGGS system, an agency lock can be applied to the cover opening handles so the covers cannot be removed, as per Figure 2.

Once the hinge cover pins have been removed, the covers can be rotated outward as shown in Figure 3. This allows the cover to then be lifted out of the structure (Figure 4) so it can be placed in a convenient area for reinstallation, but out of the way during the following steps. Some find it convenient to place the covers inside of the gate structure through the opening in the top of the system. The covers weigh less than 18 kilograms.

Figure 3
Rotate Cover Outward

Figure 4
Lift Cover from Hinge Area

Once all of the covers are removed (4 per system, two at each end), the main hinge pin is visible and can be removed as indicated in Figure 5. Remove one pin to open as a "gate" and both pins to completely remove the AGGS unit from the opening.

Figure 5
Removing the Main Hinge Pin

When the Main Hinge Pin is removed, the system needs to be raised onto the wheels so the AGGS can be moved out of position. The system can be raised with the manual jacks (standard) or with the pneumatic raise system (if that option is purchased).

The manual jack system is shown in Figure 6. The handle is stored inside of the hinge area so it can be made secure if the system is locked (Figure 2). This method allows the system to be raised by turning the jack handle in the indicated position. The system should only be raised enough to clear any obstacles or debris around the system. Care should always be taken to ensure that you maintain positive control of the gate structure. If significant gradients are present, a tether should be attached to the moveable structure and to the anchored structure so the system can be slowly moved to the proper position.

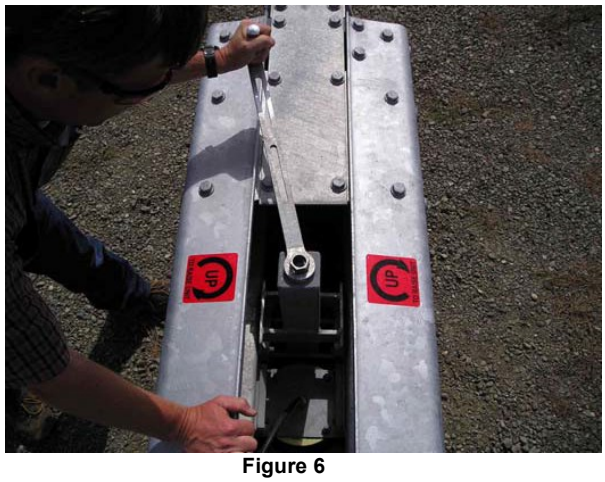


Figure 6
Manual Jack System

If the AGGS system is supplied with a pneumatic raise/lower system, an air supply can be used to assist with lifting of the gate structure. The air supply can be from an air compressor or from a static air supply bottle as shown in Figure 7.

Figure 7
Air Supply Bottle for Pneumatic Raise/Lower Option

The operation of the pneumatic system is shown in Figure 8. A full set of instructions will be supplied with the system at delivery. It is important to follow the operating instructions for the pneumatic control system. This option is frequently used for conditions where the AGGS system is to be opened and closed many times in a short period of time.

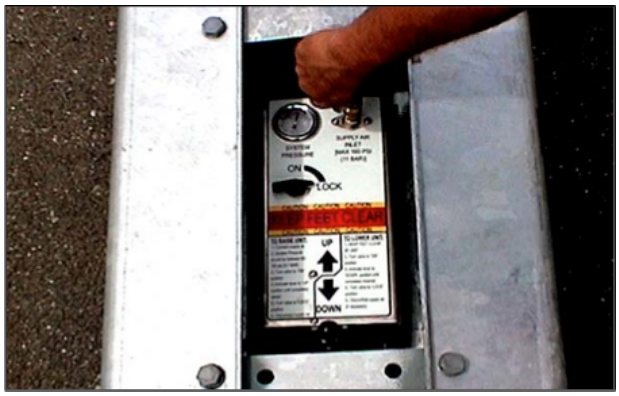
Figure 8

The Air Lift Control Panel

The Control panel is divided into two sections:

- The air management section (Top)
- The lift direction section (Bottom).

1. Air Supply Fitting
2. Air System Pressure gauge
3. Supply Air Inlet regulator
4. Air system position Lock
5. Raise Instructions
6. Lower Instructions
7. Raise or Lower Actuator



Connect the air supply hose to the Supply Air Inlet fitting located on the top (or on some models the end) of the Control Panel. Adjust the Supply Air Inlet regulator until you see approximately 120 psi on the System Pressure gauge.

CAUTION: Air pressure applied to the system at over 160 psi (11 bar) could result in damage to the system components. Never operate the system over the recommended pressure.

Move the selector handle from the LOCK position to the ON position

Activate the jack by moving the direction handle located on the end of the panel in the UP or DOWN position.

Care should always be taken to not place hands, feet or other body members under the AGGS system when it is in the raised position. Lowering the system in this manner could cause serious bodily harm.

With the system in the raised and unpinned condition, two people can either swing the system open like a “gate” (Figure 9) or completely remove it from the opening as shown in Figure 10.

Figure 9
Opening the AGGS System from one end

Figure 10
Removing the AGGS System Completely From Opening

Reinstallation

Follow the reverse of the procedures to reinstall the AGGS system in the barrier wall opening. Again, proper care should be taken regarding safety precautions and using proper traffic control.

If there are any questions regarding these instructions, contact CSP Pacific Ph: 0800 655 200 or go to www.csppacific.co.nz