ENTRAPPED VEHICLES & CABLE ENTANGLEMENT OF SYSEM

Entrapped Vehicle

On occasions a vehicle could become entrapped by the cables

Entrapped Vehicle (NON Life Threatening)

1. **Move vehicle back into the original line of installation.**
2. **Cut the interfering /tangled vehicle.**
3. **Pull cable away from vehicle.**
4. **Move down from incident and remove cables from posts, then remove several post from footings to reduce tension (Will take about 200' of unsupported cable to get cable on ground).**
5. **Release tension at turnbuckles.**
6. **Push specific terminal cable release post (CRP) over to release tension on that particular cable only.**

Entrapped Vehicle (NON Life Threatening)

5. RELEASING TENSION AT TURNBUCKLES. CLOSEST ONE IS TYPICALLY LESS THAN 500 FOOT AWAY!

TURNBUCKLES MUST HAVE A MINIMUM OF 1-1/2” OF THREAD ENGAGEMENT WHEN UNDER TENSION

Entrapped Vehicle (NON Life Threatening)

6. Push specific terminal cable release post (CRP) over to release tension on that particular cable only.

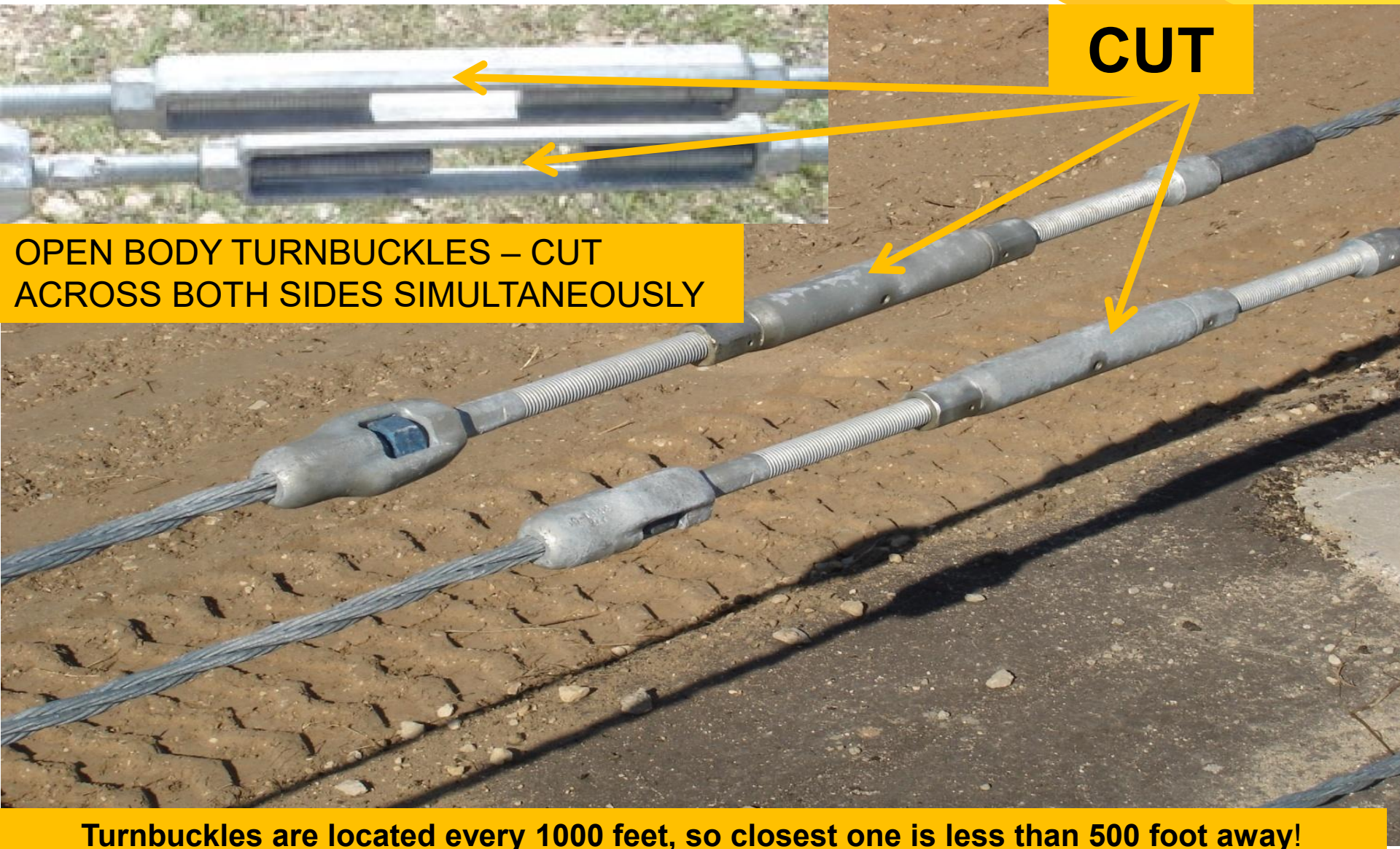
CASS™ I-10 Texas

CASS™ SH 97 Texas

IN LIFE THREATENING SITUATIONS
CUT THE TURNBUCKLE OR CABLE.

- **The cables normally will retract when cut.**
- **Cutting the turnbuckle allows a quicker repair and it is safer than fraying cable strands.**
- **Cut cable between post allowing the post to absorb the force/energy 300' from incident.**
- **Contact Valtir for repair parts.**

Cut the Turnbuckle!



Turnbuckles are located every 1000 feet, so closest one is less than 500 foot away!

Distribution of Additional Infomation

Staying safe around high tension cable guardrails

Please - Don't Cut The Cable

With each passing year, traffic numbers increase on Maine's highways. This increase brings greater likelihood of cross-over accidents. Cross-median crashes, especially on high-speed roadways, often result in serious injuries and fatalities.

Cable barriers, now being installed by MaineDOT, have proved successful in preventing many cross-median collisions. These cables can mean life saving protection for motorists, but may create dangerous situations for emergency responders when handled inappropriately.

Keeping the Cable Intact

Cutting the cable barrier after a collision may seem logical. However, cutting the cable is not only dangerous, it compromises the integrity of the entire guardrail system. Loosening the turnbuckles to safely release tension allows the guardrail system to operate safely with only minor repairs.

To safely release tension in the cable:

- Find the closest metal turnbuckles which are located every 1,000 feet.
- Loosen the turnbuckles with a wrench to release tension.
- This will create slack in the cable, which can then be moved.
- If more slack is necessary, cut the turnbuckle, not the cable.
- Move, tow, or drive vehicle as close as possible to the centerline of the cable system to relieve the excess tension.
- Remember - the entire system is under high tension.

Please remember - when cut, the tension contained in the cable is released and can cause serious injury.

Loosen the turnbuckles to safely release tension.

Distribution of Additional Infomation

All Tangled Up:

Iowa Department of Transportation

How to Extricate a Vehicle from a High-Tension Cable Median Barrier

Brifen USA Inc.

High-tension cable median barrier systems are saving lives

High-tension cable barrier systems are a fairly new safety feature being added to select stretches of Iowa highways where there is a higher occurance of median crossover crashes. The barriers are designed to reduce median crossover crashes by keeping errant vehicles on their own side of the road.

When vehicles have become entangled in the cables, emergency service providers have asked: ***What do we do if there are life-threatening injuries and we can't get to the victims because of the cables. Can the cables be safely cut to save lives?***

The answer is "yes," but cutting the cables should be a last resort. There are other options for extrication that allow the cables to remain intact and continue to save other lives. When high-tension cable barriers are cut, thousands of feet of barrier could be placed out of service until repairs can be made.

Barrier system elements

High-tension cable barrier systems used in Iowa have either three or four cables. Each cable is held in constant tension in the range of 3,000 to 8,000 pounds, depending on ambient temperature and seasonal changes.

Although several different high-tension cable barrier types exist, they all use the same cable that consists of ¾-inch-diameter galvanized steel cable with 3x7 (21 wires) construction.

Depending on the type of system, the cables may be attached to the weak steel posts using special locking hook bolts or threaded through the posts. The barrier is installed using concrete footings in which metal tubes are cast to form sockets for the posts. After impact, any damaged posts can be removed from the sockets and replaced with new posts.

Turnbuckles are used to achieve the appropriate tension in the system. Turnbuckles are generally installed every 1,000 feet or at lesser distances (as little as 200 feet), if required.

Keep the cables intact and release tension

If a vehicle becomes entangled in the cable, the first instinct of emergency responders is to cut the cable to gain better access to the victims. However, there are better options and cutting the cables should be a last resort using extreme caution and proper procedures. ***The alternatives to cutting the cable are listed here in order of preference.***

Option 1: If satisfactory extrication time exists, Iowa DOT maintenance personnel are trained to safely add slack to cable by taking out posts and loosening turnbuckles. To seek Iowa DOT assistance during an emergency, contact the Iowa DOT's Operations Support Center at 515-233-7900 any time of the day.

Option 2: Move the cables back to their original positions by releasing the tension of the cables. This can be accomplished by driving, pushing or pulling the vehicle back in the opposite manner that it entered the cable system.

Option 3: Lift the cables out of and/or off the posts for approximately 100 feet upstream and downstream of the vehicle. A span of approximately 100 feet without any posts will allow the cables to lie on the ground.

Option 4: Remove the posts from their sockets for approximately 100 feet upstream and downstream of the vehicle. If the cables are under extreme tension, use extra caution and secure the post with a chain or restraining device during removal.

Brifen USA Inc.

Are you a first responder?

Please Don't Cut the Cables!

A new safety feature is being added to many stretches of select Michigan highways. A new barrier type called high-tension cable barrier (also known as cable guardrail) is being used by MDOT primarily in freeway medians to reduce the frequency and severity of median crossover crashes.

TZD Toward Zero Deaths

MDOT Michigan Department of Transportation

Keeping the Cable Intact

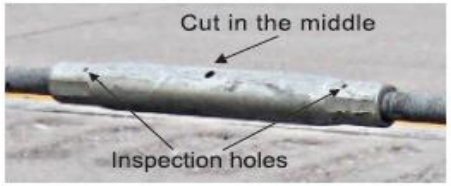
If vehicles get tangled in the cable, it may seem easy to just cut the cable to gain better access. However, there are better options. The first is to loosen the cables by removing adjacent support posts.

If a vehicle gets tangled in the cables, try to move the cables back to their original position to release tension in the cables. Consider removing the vehicle by extricating it in the opposite manner that it entered the cable system.

The cables also can be loosened at the turnbuckles. However, when loosening turnbuckles, the threaded terminals always should remain visible in the inspection holes located on the turnbuckle. NOTE: If the cables are under tension, loosening the turnbuckles any further should never be attempted since this can damage the threaded terminals and turnbuckle.

A preferred alternative to cutting the cable is cutting the turnbuckle. It is much easier and less costly to replace a turnbuckle than installing a cable splice or replacing a cable section. When cutting a turnbuckle, it is advisable to remove the adjacent posts in the vicinity of the turnbuckle. Before cutting the turnbuckle, loosen the turnbuckle until the end of each threaded terminal reaches the inspection hole. Always cut in the middle of the turnbuckle.

BEFORE CUTTING AT TURNBUCKLE, REMOVE POSTS FIRST FOR SAFETY REASONS



CUT THE CABLES ONLY AS A LAST RESORT. Cutting cables should only be considered under life or death situations where time is absolutely critical, and other alternatives for loosening cables are not feasible. Cutting cables will require a cable splice or a complete cable section replacement, which is time consuming and costly.

If the cables must be cut, make sure all personnel are clear of the cable. Also, cut the cable between two undamaged posts, away from the impact area.

Need assistance or more explanation? Contact MDOT ASAP

MDOT Maintenance personnel can provide guidance and on-site help at a crash scene 24 hours a day, seven days a week, through your local State Police or Law Enforcement Dispatch Center.

High-tension cables are under thousands of pounds of tension. Therefore, cutting a cable has the potential to cause injury. MDOT Maintenance personnel are trained to safely add slack to cables by taking out posts and loosening turnbuckles. MDOT Maintenance may have other techniques or suggestions for releasing cable tension. Contact your local MDOT Transportation Service Center with any questions on this or safety concerns regarding high-tension cable barrier.

For more information, visit:
www.michigan.gov/cableguardrail

Prepared by: MDOT Graphics\OfficeOfCommunications\Brochures\CableMedianBarrier\North Region\Cable Median Barrier First Responder Flyer (8/16 CJ)

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