

Purpose/Application:

To safely and efficiently extract a stuck vehicle.

PPE

- CSA Safety glasses
- Task specific gloves (Cut/abrasion resistant)
- High visibility clothing
- Clothing that protects arms and legs
- CSA Safety boots
- CSA Hard hat

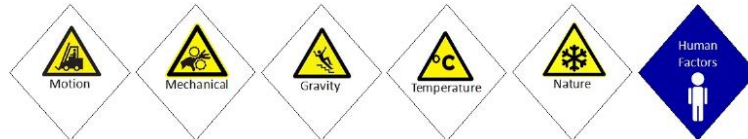
TRAINING

- Training appropriate to position

TOOLS/EQUIPMENT

- Emergency roadside kit (reflective triangles)
- Proper rated Tow Strap (2-3 times stuck vehicle weight)
- Proper rated Clevis (drop forged with screw pin)
- Proper rated connection points (must exceed sling load rating)
- Optional (radios, recovery hitch, heavy coat or blanket)

HAZARD SOURCES



#	Job Steps	Hazards	Control Measures
1	<p>Contact your supervisor for approval to tow. Discuss the specific situation with them (whose vehicle, how it is stuck and how bad, location, ground conditions, weather conditions, personnel, towing equipment available, if flaggers are available, etc.).</p> <p>Note: towing on public highways or roads using company vehicles is prohibited.</p>	<p>Human Factor Workers in our industry and the public at large have been killed performing towing of vehicles. Recognize that this is a high-risk task and several controls are required to do it safely.</p>	<p>Elimination / Substitution Consider alternate method such as a tow-truck or heavy equipment.</p> <p>Administrative Ensure supervisor is aware of plan and approves the tow.</p>

<p>2</p>	<p>Complete pre-task HIAC and safety meeting with all involved so everyone is involved and clear on their role.</p>	<p>Human Factor Strike has had a serious towing incident in the past where someone who was not part of the planning meeting placed themselves into the towing operation and was struck and run over by a vehicle.</p>	<p>Administrative If hazards cannot be controlled, then do not proceed with the tow.</p>
<p>3</p>	<p>Secure area from other vehicles, equipment and persons (Establish a danger zone which no one enters). If towing on a lease road, ensure that there are people to act as flaggers and warning devices (triangles/traffic cones) on both sides of the tow and an appropriate distance from the tow so that oncoming vehicles can be stopped. If these are not available, do not proceed with tow.</p>	<p>Motion Other traffic and equipment. Nature, Temperature Wet, muddy, icy ground conditions, low visibility. Gravity Uneven ground and footing.</p>	<p>Administrative Place Reflective triangles to warn traffic or send additional personnel to flag down traffic on corners or hills. Personal Protective Equipment Use good traction footwear fully laced, wear HI-VIS vest or clothing.</p>

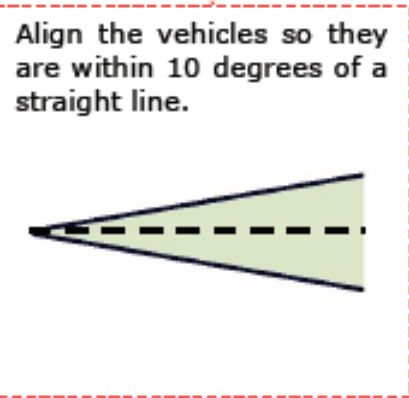
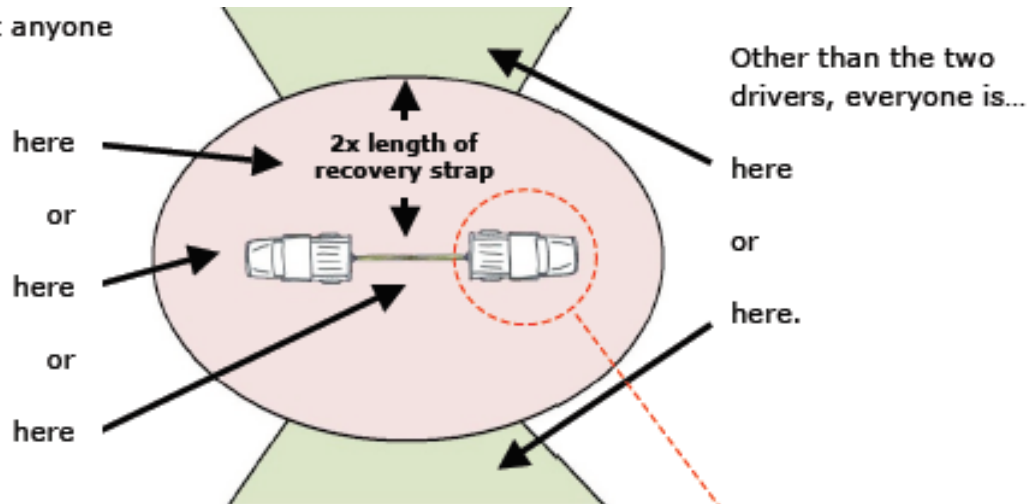
4	Check towing equipment (Tow slings, Clevises, hitches, etc.).	Gravity, Motion Pinches, cuts, scrapes.	Administrative Never use damaged components. Discard all cut, frayed, abraded, separated, or generally damaged straps. Personal Protective Equipment Gloves (Appropriate for task).
5	Check vehicle and equipment weights and weight ratings.		
6	As much as possible clear out, mud, sand and snow from tire area in direction of tow.	Gravity, Human Factors Awkward positions, heavy shovel load, poor ground conditions, strike against object.	Engineering Use appropriate shovel. Personal Protective Equipment Wear gloves, proper position.
7	Position tow vehicle in line with stuck vehicle, always use rear of pulling vehicle.	Motion Struck by moving vehicle, traffic and overstress on vehicle components.	Administrative Stay in line of sight and out of area, align vehicle within 10 degrees of a straight line, use larger vehicle as tow vehicle.
8	Layout recovery strap between both vehicles.		
9	Attach recovery strap to both vehicles with proper rated clevis, or by wrapping around structural component.	Mechanical Pinch points/Sharp edges, attachment failure.	Engineering Ensure attachments are onto heavy-duty receivers, proper rated tow hooks, or around heavy frame components. Administrative Never attach a strap to vehicle steering, drive train, suspension or body components.
10	(Optional) Place heavy blanket over middle of strap.		
11	Plan and discuss procedure and communications (Signals) between both drivers and spotter if used.	Human Factor Missed communication.	Administrative Clear two-way communication with acknowledgment.

12	Ensure all bystanders, personnel, vehicles/equipment are clear of area.	Human Factor Unannounced personnel in area.	Administrative Ensure area is secured either using flagging or designated persons to secure area. No Passengers in either truck.
13	Have pulling vehicle slowly remove slack from tow strap.		
14	Once tow strap is tight, both vehicles proceed in direction of pull. (Use 4x4 Low and avoid wheel slippage.) (The strap should stretch several feet which will help free the stuck vehicle.)	Motion Flying objects, moving vehicles, towing equipment failure	Engineering Use proper rated tow strap and connecting devices (clevis, hitch). If available use tire chains for additional traction. Ensure seatbelts are worn by both drivers. Administrative Stay out of line of fire (Clear area – Twice the length of a tow strap. A tow strap is 20'x2=40'). Ensure the strap is not twisted, tangled or knotted.
15	Once stuck vehicle is out and clear, have tow vehicle move to allow slack in strap.	Motion Moving vehicle	Engineering & Administrative Ensure vehicles are fully stopped and in park, watch for traffic.
16	Remove tow equipment and inspect all equipment & vehicles prior to putting away.	Mechanical & Motion Pinch points Damaged equipment (unsafe to drive)	Administrative If damage is suspected, have mechanic verify drivability. Personal Protective Equipment Gloves

Additional Precautions:

- Never store strap in direct sunlight, UV light can damage the strap.
- Never pull strap over sharp edges or abrasive surfaces.
- Never use a recovery strap for lifting, hoisting or winching.
- Never use a winch hook as a recovery strap anchor.
- Never expose the strap to acid or temperatures above 180 degrees F.
- Never tie knots in the strap referer to lower picture for proper process.
- If, after several attempts, the vehicle remains stuck, consider pulling from the opposite direction. If severely stuck, it will require a tow truck or larger vehicle.
- Towing of a vehicle for any distance shall be left to a properly equipped tow truck.
- It is important to note that standard manufacturer supplied tow hooks or eyelets are strength rated for the weight of that vehicle alone and are not designed for complex tows that involve situations such as mud or pulling up steep banks.
- Ensure stuck truck is unloaded and any trailer is disconnected prior to tow.

DO NOT let anyone stand...





ONLY use a recovery strap with proper loops.

Check Minimum Breaking Strength (MBS)—should be 2-3 times stuck vehicle weight.



DO NOT attach to bumpers, ball hitches, bull bars, or tie down eyes. These can tear free under towing stress.



DO NOT use tow straps, chains, or cables that can become killer metal missiles! DO NOT use a web sling.



ONLY attach recovery strap securely to a load rated component, i.e., loop onto tow hooks, engineered recovery device or on shackle with pin in hitch receiver.

Check Working Load Limit (WLL) of shackle—should exceed recovery strap strength. Frame mounted receiver also needs to be rated to the required weight.



Double length by threading straps through each other's eye. A rolled newspaper stuck between the loops provides a safe means of undoing the knot later.



Gain 50% more length by looping one strap through the eye of another.



Never use a shackle to join two straps—if a strap fails, it becomes a deadly projectile.



REFERENCES / ADDITIONAL INFORMATION

Enform – Vehicle Recover and Towing Program Development Guideline

Vehicle owner’s manual

Developed by:	1. <u>Rhys Cooper</u>	2. <u>Scott Desautels</u>	Date:	<u>February 10/16</u>
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Reviewed by:	1. <u>Glen Bauer</u>	2. _____	Date:	<u>February 29/16</u>
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Revised by:	1. <u>Todd Penney</u>	2. _____	Date:	<u>March 18, 2020</u>
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