Plasma® Vehicle Tow / Recovery Cables

Light. Strong. Safe. Fast

When heavy equipment becomes stuck, mine productivity goes down. Recovering the vehicle can be a difficult and hazardous process. Traditional tow lines made from steel wire rope are heavy, inflexible, difficult to rig and recoil in dangerous patterns when they break. Plasma® Vehicle Tow / Recovery Cables from Cortland replace wire rope. Plasma Cables are designed using high modulus synthetic fibers in a torque-free braided construction offering the same strength and elongation characteristics as wire with only 1/7th the weight. Quickly attached to both towing equipment and mired vehicles, Plasma Vehicle Tow / Recovery Cables can easily meet the toughest tests.

Cortland's Plasma HMPE (High Modulus PolyEythelene) synthetic fiber has been successfully out-performing and replacing steel wire rope in lifting and towing applications for more than twenty years. Unlike wire, Plasma Cables will not rust or corrode and have much better bend and tension-tension fatigue resistance.

Successfully used in mining projects around the globe, Plasma Vehicle Tow / Recovery Cables are rapidly growing in popularity due to ease of use, performance, safety and service life.

Features & Benefits

- Towing strength of steel wire rope without the weight
- Lightweight flexibility for safe and faster installation rigging
- Low lash-back or recoil if parted
- Durable cut-resistant eye terminations
- High visibility orange chafe guard on body

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Plasma® Vehicle Tow / Recovery Cables

Plasma® Vehicle Tow / Recovery Cables have been designed to provide the maximum combination of strength, flexibility, low elongation and durability. To protect the Plasma fiber interior the entire cable body is encased in heavy duty high visibility protective jacketing. This extra-durable jacket provides protection during use from external abrasion, cutting and ingress of dirt into the Plasma fiber core. Each end termination is protected with the most durable lightweight chafe sleeve, SX Chafe Guard, and every cable delivered includes a tag providing the Minimum Break Load (MBL) and a unique serial number for traceability.

Choosing the correct size / strength cable

To determine the appropriate size cable for the application, consider two factors:

- The pulling power of the recovery vehicle
  - – either drawbar-pull for dozers, or rim-pull for trucks
  - – this is more important that the dead-weight of the disabled machine
- SWL (Safe Work Load) factor
  - – Cortland recommends a minimum SWL of 2.3 or higher for vehicle tow or recovery

Correctly sized attachment hardware on both the disabled tow and recovery vehicle is also important.

Common sizes of Cortland Plasma Vehicle Tow / Recovery Cables are shown in the chart below. However, custom sizes and lengths of Plasma Cables can be manufactured, if required.

Pulling-Power of Cat® Mine Vehicles

Dozers		Mine Haul Trucks	
D-8	139,000 lbs	785D	187,393 lbs
D-9	161,000 lbs	793F	230,000 lbs
D-10	225,000 lbs	795F	295,693 lbs
D-11	330,693 lbs	797F	340,000 lbs

Part No.	New Cable MBL (break strength) lbs	MT (tonnes)	Description	SX Covered Eye Sizes each end	Standard Length ft	m	Approx. Total Weight lbs	kgs	Target Vehicles
T310G-25SST	84,000	38	5/8" dia. Plasma	18"	25	7.6	5	2.3	Light Vehicles
T312G-25SST	113,025	51	3/4" dia. Plasma	18"	25	7.6	7	3.2	Light Vehicles
T314G-25SST	152,790	69	7/8" dia. Plasma	18"	25	7.6	10	4.5	Light Vehicles
T316G-25SST	181,500	82	1" dia. Plasma	18"	25	7.6	16	7.3	Light Vehicles
T324G-30SST	364,650	165	1-1/2" dia. Plasma	24"	30	9.1	36	16.3	Medium Vehicles & D6-8 dozers
T3332G-30SST	585,750	266	2" dia. Plasma	36"	30	9.1	85	38.6	770-780 series CAT trucks & D-9 dozers
T3340G-30SST	874,800	397	2-1/2" dia. Plasma	36"	30	9.1	103	46.7	790 series CAT Trucks & D-10/11 dozers

Notes:

- Cortland's most popular Plasma® Cable fabrication is an endless loop (grommet) with formed eye terminations each end, for maximum service life and durability. All products in above chart are for grommets. Other size/strength and eye-and-eye cable fabrications are available upon request.
- Cortland recommends attachment points to vehicles have a minimum D:d of 2:1.
- Recommended attachment point to front-frame of disabled mine haul truck is by shackle through lower frame connection point. Do NOT use "letter-opener" attachment on lower front truck frame.
- Recommended attachment to recovery dozer is on ripper blade, positioned as high as possible to prevent cutting.
- To enhance eye termination life even longer, Cortland offers a UHMPE woven tubular chafe gear option (shown right) as an additional add-on item.*
- Refer to Cortland's Plasma Vehicle Tow / Recovery Cables Usage Guidelines for more information.

* UHMPE tubular chafe gear add-on option