

Author:	Mark Scott, Jay Lewis, Mark Brookes	Revision #:	1
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SAFE OPERATING PROCEDURES

Load Securement

SOP # 12A-50

Hazard Review (enter the hazards associated with the activities)		
Struck By	Noise	Traffic
Lacerations	Debris and Dust	Falls
Walking Around or Near Equipment		
Required Personal Protective Equipment (PPE) (Based on job specific hazard review; recommended equipment should also be listed with "recommend" beside the item)		
Safety Toe Shoes	Hard Hat / Helmet	Hearing Protection
High Visibility Vest	Safety Glasses	Gloves

1. The following requirements SHALL be completed by the driver that is transporting equipment.
 - a. The driver shall ensure that when/where/if required:
 - i. Oversize load permit is active.
 - ii. The towing and towed trailer have required signage/banners that are legibly and in a serviceable condition on the front of the towing vehicle and rear of the trailer, properly secured, correct colors and markings. Install/use temporary warning lighting, if required.
 - iii. Use serviceable warning flags of correct colors and markings installed and properly secured, at extreme points of the load (I.e., the widest points on both sides or the rear-most point if the load extends beyond the vehicle).
 - iv. When pilot cars are utilized, the drivers are required to have current certification (19A NC Administrative Code (NCAC) 02D. 0643 and 0644). This certificate shall be effective for four years from the issue date and is the same for a renewal. Vehicles must be appropriately marked with required signage/banners, height stick, and warning lights. All drivers shall have a meeting to discuss routing and movement plan (recommend documenting).
 - v. When traveling to another state review requirements, they may vary by state.
2. Maintain 3 Points of Contact while traversing on and over equipment to secure it.
3. Inspect the transport vehicle/trailer for working anchor points and trailer brakes.
4. Inspect connections between Tow Vehicle/Trailer for damage, wear, functioning latches, and correct hitch locking devices locking devices, lubrication (I.e. Fifth Wheel/King Pin, Goose Neck and ball, and Pintal Hook and Ring, Balls and Couplers, etc....).
5. Check tires for wear, pressure, and items between dual wheels. Check that lights are functioning properly.
6. If equipped, inspect Bolt Mark Indicator/s (tamper-proof torque seal) a visual method to identify vibratory loosening or tampering in nuts, bolts, fasteners, and assemblies. Several bolts and nuts utilized in the connections may have critical torque values.

7. Inspect Tow Vehicle/Trailer connections prior to loading Equipment Locking devices and secondary locking pins in place are properly functioning.
8. Check equipment weight and dimensions to determine tie-down needs.
9. Ensure all accessories (buckets, booms, blades) shall be lowered and secured with chains and binders.
10. Equipment under 10,000 lbs.: At least 2 - tie-downs
11. Over 10,000 lbs.: 4 - tie-downs minimum, one at each corner.
12. The aggregate WLL ($\frac{1}{2}$ the weight of each tie down and added all together) of any load securement system must be at least 50% of the weight of the cargo. (49 CFR PART 393.106 (d))
13. Ensure only securement tie-downs and associated devices with a sufficient Working Load Limit (WLL) to match the cargo weight are used. (49 CFR PART 393.108)
14. Prior to use perform inspection of chains, binders, webbing, ratchets, and associated devices (I.e. Cleves, etc..) for wear or breakage. Ensure that markings on webbing, chains, and binders are legible.
15. Damaged load securement tie-downs and associated devices must be removed from service, disposed of, and replaced.
16. Use chocks, cribbing, blocking and bracing, and edge protection, when necessary.
17. Operator or spotter checks tension of tie-downs after first 50 miles.
18. Recheck and retighten every 150 miles or 3 hours, whichever comes first.
19. Inspect equipment for shifting, damage, or loosening.
20. Log inspection and securement success/failures in vehicle or equipment log.
21. Anchor points must be free of rust, cracks, and/or deformation.
22. All attachments shall be tied down. Ratchet is the recommended method.
23. Tie down for every 10 feet of load length with a minimum of 2 tie downs.
24. Perform post trip inspection for any device and equipment for damage, noting issues and making appropriate corrections.
25. Ensure that markings on webbing, chains, and binders are legible post-trip.

Related SOP's and SPP's			
Truck, Tractor and Trailer	SOP # 12A-36	Vehicle Operation	SOP #10 -19
Trailers and Towed Equipment	SOP # 12B-30	Fleet Safety	SPP # A6