

General Guidelines for Annual Inspection of Service Truck Cranes as of April 2019

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I. Definitions

Anti-two-blocking device: “[A] device which automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component).” [29 CFR 1926.1416(d)(3)(i)]

Control valves: Used to control the flow/pressure by fully or partially opening or closing in response to control device.

Extension boom/s: Additional booms that telescope out from main boom to increase reach.

Load hook assembly: A hook with a safety latch bridging the throat opening used for hoisting the load.

Hoist: “[A] mechanical device for lifting and lowering loads by winding a line onto or off a drum.” [29 CFR 1926.1401]

Hoist/Winch motor/Pump: Motor to drive hoist drum by electrics or hydraulics.

Main boom: The primary boom affixed to the mast that supports the extension booms.

Mast: The upper frame structure rotating about the base supporting the main boom.

Remote control: A radio or corded pendant device that transmits signals to control the crane from a distance.

Rotation mechanism: Provides rotation of the mast.

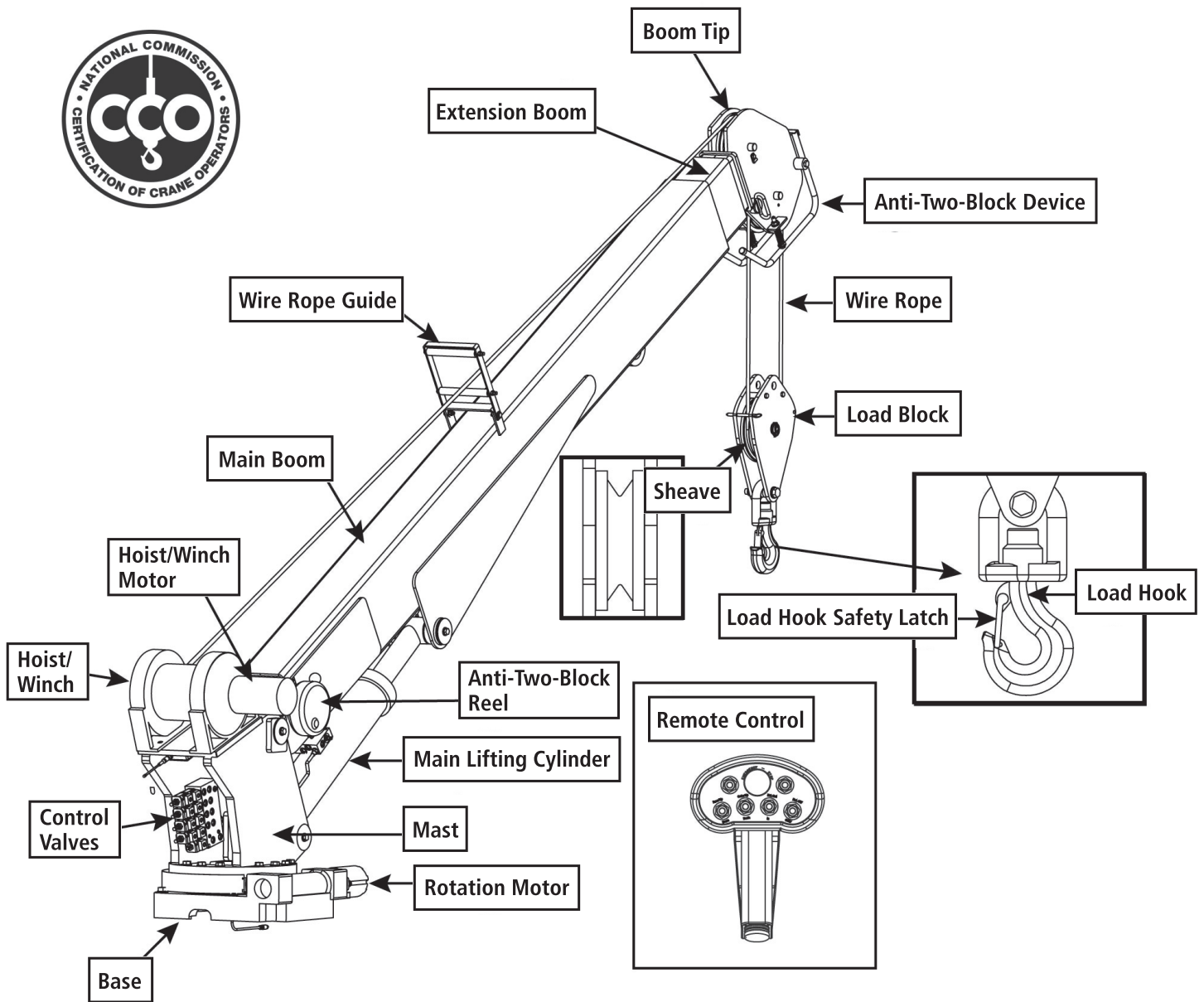
Sheave: A grooved wheel or roller for wire rope.

Stabilizer/Outrigger: Extendable, or fixed, members attached to the carrier vehicle (not the crane base) to increase vehicle stability during crane operation.

Wire rope: A rope that travels around sheaves and/or drums.

II. Diagram

Service Truck Crane Components & Terminology



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III. Citations

OSHA

ASME

Chassis		
OSHA 1926.1412(d)(1)(ix)	ASME B30.5-2.1.2(j)	Tire Air Pressure
OSHA 1926.1412(d)(1)(iii)	ASME B30.5-2.1.3(l)	Hoses/Tubes/Fittings
OSHA 1926.1412(d)(1)(iv)	ASME B30.5-2.1.2(i)	Hydraulic Fluid Level
OSHA 1926.1412(f)(2)(xx)/ OSHA 1926.1433(d)(8)	ASME B30.5-1.9.7	Guard/Covers
OSHA 1926.1412(f)(2)(vi)/ OSHA 1926.1433(d)(9)	ASME B30.5-1.9.2	Exhaust Systems
OSHA 1926.601(b)(1)	ASME B30.5-2.1.3(j)	Brakes
OSHA 1926.1412(f)(2)(ix)	ASME B30.5-2.1.3(k)	Tires/ Wheels
OSHA 1926.1412(f)(2)(i)(A)	ASME B30.5-1.10(b)	Main Frame Members

Outriggers/Stabilizers		
OSHA 1926.1412(d)(1)(iii)	ASME B30.5-2.1.2(e)	Hoses/Tubes/Fittings
OSHA 1926.1412(f)(2)(xiii)(E)	ASME B30.5-1.9.3(a)	Lock (Manually Extended)
OSHA 1926.1412(f)(2)(xiii)	ASME B30.5-2.1.3(o)	Cylinders
OSHA 1926.1412(f)(2)(xiv)	ASME B30.5-1.9.3(d)	Pads/ Floats
OSHA 1926.1412(f)(2)(xii)	ASME B30.5-1.9.3(c)	Holding Valves (Vertical O.R. cylinders)
OSHA 1926.1412(f)(2)(i)(C)	ASME B30.5-2.1.3(a)	Welds
OSHA 1926.1412(f)(2)(i)	ASME B30.5-2.1.3(a)	Beams
OSHA 1926.1412(f)(2)(xvii)		Caution/ Warning Signs

OSHA**ASME**

Operator Control Devices		
OSHA 1910.180(d)(3)(i)	ASME B30.5-1.6.1	Control Devices
OSHA 1910.180(d)(3)(vii)	ASME B30.5-1.6.1(d)	Remote Controls
	ASME B30.5-1.6.1(e)	Remote Control Emergency Stop
	ASME B30.5-1.6.1(a)	Controls Identified
OSHA 1910.180(d)(3)(ii)	ASME B30.5-2.1.2(a)&(b)	Adjustment and Excessive Wear
	ASME B30.5-1.6.3(a)	Remote Start Options
	ASME B30.5-1.6.3(b)	Throttle Control

Load Chart		
OSHA 1926.1417(c)(1)/ OSHA 1910.180 (c)(1)(i)	ASME B30.5-1.1.3(a)	Per Configuration
OSHA 1910.180 (c)(2)	ASME B30.5-1.1.3(b)	Durable
OSHA 1910.180 (c)(2)	ASME B30.5-1.1.3(b)	Legible
OSHA 1910.180 (c)(2)	ASME B30.5-1.1.3(b)	Securely Attached

Safety Device/Operational Aid		
OSHA 1926.1416(d)(1)(i)(A)	ASME B30.5-1.9.1(c)	Boom Angle Indicator
OSHA 1926.1416 (e)(4)(i)	ASME B30.5-1.9.10.2	Overload Protection
OSHA 1926.1416 (d)(1)(xi)	ASME B30.5-1.9.12(d)	Crane Level Device
OSHA 1926.1416 (d)(3)(i)	ASME B30.5-1.9.10.1(a)	Anti Two-Blocking/ Damage Prevention Device

OSHA**ASME**

Mast/Base		
OSHA 1926.1412(d)(1)(iii)	ASME B30.5-2.1.2(e)	Hoses/Tubes/Fittings
OSHA 1926.1412(f)(2)(i)(B)	ASME B30.5-2.1.3(b)	Structural Fasteners
OSHA 1926.1412(f)(2)(iii)	ASME B30.5-2.1.3(d)	Turntable/Rotate/Bearing
OSHA 1926.1412(f)(2)(xi), (A), (B),(C)	ASME B30.5-2.1.3(m)	Hydraulic Motor/Pump
OSHA 1926.1412(f)(2)(xi)(D)	ASME B30.5-2.1.3(n)(6)	Hydraulic Pressure
OSHA 1926.1416 (d)(1)(xi)	ASME B30.5-2.1.2(h)	Electrical Wiring
OSHA 1926.1412(f)(2)(i)(C)	ASME B30.5-2.1.3(a)	Welds

Winch		
OSHA 1926.1412(d)(1)(iii)/ OSHA 1910.180(d)(3)(iv)	ASME B30.5-2.1.2(e)	Hoses/Tubes/Fittings
OSHA 1910.180(d)(3)(vii)	ASME B30.5-2.1.3(m)	Hydraulic/ Electric Motor
OSHA 1926.1412(d)(1)(iv)	ASME B30.5-2.3.4(a)	Winch Gear Fluid Level
	ASME B30.5-1.3.2(a)(2)(-c)	Wire Rope Below Drum Flange
OSHA 1910.180(h)(3)(x)	ASME B30.5-1.3.2(a)(2)(-a)	Wire Rope Minimum
OSHA 1910.180(d)(4)(iii)	ASME B30.5-2.1.3(c)	Drums and Sheave Devices
OSHA 1910.180(d)(3)(iii)	ASME B30.5-2.1.6(b)	Safety Devices

OSHA**ASME**

Wire Rope		
OSHA 1910.180(g)	ASME B30.5-2.4.2	Inspection Overview
OSHA 1910.180(d)(3)(vi)		Reeving
OSHA 1926.1413(a)(2)(ii)(a)(2)/ OSHA 1926.1413(a)(2)(iii)(A)	ASME B30.5-2.4.2(a)(3)(-a)	Rotation Resistant
OSHA 1926.1413(a)(2)(i)(A)/ OSHA 1910.180(g)(1)(iii,vi)	ASME B30.5-2.4.2(a)(1)(-a)	Deformities
OSHA 1926.1413(a)(2)(i)(B)/ OSHA 1910.180(g)(1)(I,iv,v)	ASME B30.5-2.4.2(a)(1)(-b);(b)(2)(-c) and (-d)	Corrosion Damage
OSHA 1926.1413(a)(2)(i)(c)	ASME B30.5-2.4.3(b)(5)	Electrical/Heat Damage
OSHA 1926.1413(a)(2)(ii)(A)/ OSHA 1926.1413(a)(2)(iii)(C)/ OSHA 1910.180(g)(1)(ii)	ASME B30.5-2.4.2(a)(1)(-c); b(2)(-c)	Wire Damage
OSHA 1926.1413(a)(2)(ii)(B)/ OSHA 1910.180(g)(1)(i)	ASME B30.5-2.4.2 (b)(2)(-b)	Diameter Reduction

Main Boom		
OSHA 1926.1412(d)(1)(iii)	ASME B30.5-2-1.2(e)	Hoses/Tubes/Fittings
OSHA 1926.1412(f)(2)(xiii)	ASME B30.5-2.1.3(o)	Lift Cylinder
OSHA 1926.1412(f)(2)(xiii)	ASME B30.5-2.1.3(o)	Extended Cylinder
OSHA 1926.1412(f)(2)(xv)	ASME B30.5-2.1.3(d)	Wear Pads
OSHA 1926.1412(f)(2)(ii)	ASME B30.5-2.1.3(c)	Sheave
OSHA 1926.1412(f)(2)(i)(c)	ASME B30.5-2.1.3(a)	Welds
OSHA 1926.1412(d)(1)(vi)	ASME B30.5-1.7.4(b)	Wire Rope Retainer
OSHA 1926.1412(f)(2)(iii)	ASME B30.5-2.1.3(d)	Tower & Lift Cylinder Pins
OSHA 1926.1412(f)(2)(i)(A)	ASME B30.5-2.1.3(a)	Structure
OSHA 1926.1412(f)(2)(xvii)	ASME B30.5-1.9.12(g)	Electrocution Warning Decal

OSHA**ASME**

Load Block & Load Hook		
OSHA 1926.1412(d)(1)(v)	ASME B30.10-1.10.5(i)	Load Hook Safety Latch
OSHA 1926.1412(f)(2)(ii)	ASME B30.5-1.7.4(a)	Sheave
OSHA 1926.1412(d)(1)(v)	ASME B30.10-1.10.5(f)	Hook Twist
OSHA 1926.1412(d)(1)(v)	ASME B30.10-1.10.5(g)	Hook Throat Opening
OSHA 1926.1412(d)(1)(v)	ASME B30.10-1.10.5(e)	Hook Wear
OSHA 1926.1412(d)(1)(v)	ASME B30.5-2.1.2(f)	Hook Swivel
OSHA 1910.180(b)(2)	ASME B30.10-1.8	Capacity Marking
OSHA 1910.180(b)(2)	ASME B30.10.1-8	Weight Marking
OSHA 1926.1412(d)(1)(vi)	ASME B30.5-1.7.4(b)	Wire Rope Retainer
OSHA 1926.1412(f)(2)(iii)	ASME B30.5-2.1.3(d)	Pin For Load Block

Load Test		
OSHA 1910.180(e)(2)	ASME B30.5-2.2.2	Main Boom and Components