

**WAC 296-155-34025 Scrap and material handling grapples.** (1) Grapples must be constructed in accordance with ASME B30.20-2010, Below-the-Hook Lifting Devices.

(2) **Identification.** All grapples must be marked with the following information:

- (a) Manufacturer's name and address;
- (b) Serial number or unit identification;
- (c) Grapple weight;
- (d) Rated voltage, if applicable;
- (e) Operating hydraulic pressure(s), if applicable;
- (f) Rated capacity;
- (g) If repaired or modified, name and address of repairer or modifier and (a) through (f) of this subsection if changed.

(3) **Grapple installation.**

(a) Grapples must be installed according to manufacturer's instructions.

(b) The hydraulic flows and pressures must be the same as shown in the manufacturer's instructions.

(4) **Inspections.**

(a) A qualified person must inspect all new, altered, repaired and modified grapples according to Table 28. A qualified person can limit the inspection of altered, repaired or modified grapples to the parts affected.

(b) Grapples must be visually inspected each shift they are used, by the operator or another competent person, according to Table 28.

(c) A qualified person must determine whether signs of damage indicate a hazard.

(d) Hazardous conditions must be corrected before continuing use.

**Table 28  
Grapple Frequent Inspection**

Inspect for:	How often:
Structural members for: <ul style="list-style-type: none"> <li>• Deformation.</li> <li>• Cracks.</li> <li>• Excessive wear on any part of the grapple.</li> </ul>	<ul style="list-style-type: none"> <li>• Normal service - Monthly.</li> <li>• Heavy service - Weekly to monthly.</li> <li>• Severe service - Daily to weekly.</li> <li>• Special or infrequent service - As recommended by a qualified person before and after each occurrence.</li> <li>• Before using, when a grapple has been idle for more than one month.</li> </ul>
Pins and bushings.	
Hydraulic lines.	
Hydraulic cylinders.	
Loose bolts.	
Electrical conductors that are visible without disassembly.	

**Note:**

- Normal service means service that involves operation with various weights within the rated load limit, averaging less than 65% of rated load limits.
- Heavy service means service that involves operation within the rated load limit, that exceeds the limits of normal service.
- Severe service means service that involves normal or heavy service with abnormal operating conditions.

(e) A qualified person must perform a periodic inspection of grapples according to Table 29. Include the items from Table 28 of this section.

(f) You must keep data inspection reports on critical items such as structural members, fasteners, lifting parts, hydraulic hoses, fittings and tubing, hydraulic motors and hydraulic cylinders.

(g) You must correct hazardous conditions before continuing use.

**Table 29  
Grapple Periodic Inspection**

<b>Inspect for:</b>	<b>How often:</b>
Members, fasteners, and lifting parts for: <ul style="list-style-type: none"> <li>• Deformation.</li> <li>• Wear.</li> <li>• Corrosion.</li> </ul>	<ul style="list-style-type: none"> <li>• Normal service for equipment in place - Yearly.</li> <li>• Heavy service, unless external conditions indicate that disassembly should be done to permit detailed inspection - Quarterly.</li> </ul>
Hydraulic hose, fittings, and tubing for: <ul style="list-style-type: none"> <li>• Evidence of leakage at the surface of the hose or its junction with metal couplings.</li> <li>• Blistering or abnormal deformation of the outer covering of the hose.</li> <li>• Leakage at threaded or clamped joints that cannot be eliminated by normal tightening or recommended procedures.</li> <li>• Excessive abrasion or scrubbing on the outer surface of hoses, rigid tubes, or fittings.</li> </ul>	
Hydraulic motors for: <ul style="list-style-type: none"> <li>• Loose bolts or fasteners.</li> <li>• Leaks at joints between sections.</li> <li>• Shaft seal leaks.</li> <li>• Unusual noises or vibration.</li> <li>• Loss of operating speed.</li> <li>• Excessive heating of the fluid.</li> <li>• Loss of pressure.</li> </ul>	<ul style="list-style-type: none"> <li>• Severe service - Monthly.</li> <li>• Special or infrequent service - As recommended by a qualified person before the first occurrence and as directed by the qualified person for any subsequent occurrences.</li> </ul>
Hydraulic cylinders for: <ul style="list-style-type: none"> <li>• Drifting caused by fluid leaking across the piston seals.</li> <li>• Rod seal leakage.</li> <li>• Leaks at welded joints.</li> </ul>	

Inspect for:	How often:
<ul style="list-style-type: none"> <li>• Scored, nicked, or dented cylinder rods.</li> <li>• Dented case (barrel).</li> <li>• Loose or deformed rod eyes or connecting joints.</li> </ul>	
<p>All electrical components, including meters, indicators and alarms for:</p> <ul style="list-style-type: none"> <li>• Proper operation.</li> <li>• Condition.</li> </ul>	

(5) **Operational tests.**

(a) All new, altered, repaired or modified grapples must be tested either by or under the direction of a qualified person before use. The qualified person can limit the testing of altered, repaired or modified grapples to the parts affected.

(b) All warning devices must be tested, including:

- (i) Indicator lights;
- (ii) Gauges;
- (iii) Horns;
- (iv) Bells;
- (v) Pointers;
- (vi) Other warning devices.

(c) Dated reports of all operational tests must be kept on file.

(6) **Repair.**

(a) Grapples must be repaired as follows:

(i) You must have adjustments and testing done only by or under the direction of a qualified person;

(ii) You must use replacement parts that are at least equal to the original manufacturer's specifications;

(iii) You must inspect the grapple according to subsection (4) of this section, before returning to service;

(b) You must take the following precautions before repairs on a grapple are started:

(i) You must disconnect, lock out and tag all sources of power "Out of Service";

(ii) You must tag any grapple removed from service for repair "Out of Service."

(7) Grapples must be operated only by qualified personnel.

(8) Operators must do the following:

(a) Test all controls before use during a shift;

(b) Check all meters and indicators for proper operation before making a lift;

(c) Consult a competent person before handling the load whenever there is any doubt as to safety;

(d) Respond only to instructions from competent persons, except for stop orders. An operator must obey a stop order at all times, no matter who gives it;

(e) Do not load grapples in excess of the rated load or with any load that they are not specifically designed for;

(f) Apply the grapple to the load according to the instruction manual;

(g) Bring the grapple over the load in a way that minimizes swinging;

- (h) Keep the load or grapple from contact with any obstruction;
- (i) Set down any attached load and store the grapple before leaving it;
- (j) Don't let anyone ride on loads or the grapple;
- (k) Check that all people stay clear of the load.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-34025, filed 4/19/16, effective 5/20/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and chapter 49.17 RCW, and 29 C.F.R. 1926, Subpart CC. WSR 13-02-068, § 296-155-34025, filed 12/31/12, effective 2/1/13.]