

**WAC 296-62-07745 Appendix F—Work practices and engineering controls for automotive brake and clutch inspection, disassembly, repair and assembly—Mandatory.** This mandatory appendix specifies engineering controls and work practices that must be implemented by the employer during automotive brake and clutch inspection, disassembly, repair, and assembly operations. Proper use of these engineering controls and work practices will reduce employees' asbestos exposure below the permissible exposure level during clutch and brake inspection, disassembly, repair, and assembly operations. The employer must institute engineering controls and work practices using either the method set forth in (1) or (2) of this appendix, or any other method which the employer can demonstrate to be equivalent in terms of reducing employee exposure to asbestos as defined and which meets the requirements described in (3) of this appendix, for those facilities in which no more than five pairs of brakes or five clutches are inspected, disassembled, reassembled and/or repaired per week, the method set forth in (4) of this appendix may be used:

(1) Negative pressure enclosure/HEPA vacuum system method.

(a) The brake and clutch inspection, disassembly, repair, and assembly operations must be enclosed to cover and contain the clutch or brake assembly and to prevent the release of asbestos fibers into the worker's breathing zone.

(b) The enclosure must be sealed tightly and thoroughly inspected for leaks before work begins on brake and clutch inspection, disassembly, repair and assembly.

(c) The enclosure must be such that the worker can clearly see the operation and must provide impermeable sleeves through which the worker can handle the brake and clutch inspection, disassembly, repair and assembly. The integrity of the sleeves and ports must be examined before work begins.

(d) A HEPA-filtered vacuum must be employed to maintain the enclosure under negative pressure throughout the operation. Compressed-air may be used to remove asbestos fibers or particles from the enclosure.

(e) The HEPA vacuum must be used first to loosen the asbestos containing residue from the brake and clutch parts and then to evacuate the loosened asbestos containing material from the enclosure and capture the material in the vacuum filter.

(f) The vacuum's filter, when full, must be first wetted with a fine mist of water, then removed and placed immediately in an impermeable container, labeled according to WAC 296-62-07721(6) and disposed of according to WAC 296-62-07723.

(g) Any spills or releases of asbestos containing waste material from inside of the enclosure or vacuum hose or vacuum filter must be immediately cleaned up and disposed of according to WAC 296-62-07723.

(2) Low pressure/wet cleaning method.

(a) A catch basin must be placed under the brake assembly, positioned to avoid splashes and spills.

(b) The reservoir must contain water containing an organic solvent or wetting agent. The flow of liquid must be controlled such that the brake assembly is gently flooded to prevent the asbestos-containing brake dust from becoming airborne.

(c) The aqueous solution must be allowed to flow between the brake drum and brake support before the drum is removed.

(d) After removing the brake drum, the wheel hub and back of the brake assembly must be thoroughly wetted to suppress dust.

(e) The brake support plate, brake shoes and brake components used to attach the brake shoes must be thoroughly washed before removing the old shoes.

(f) In systems using filters, the filters, when full, must be first wetted with a fine mist of water, then removed and placed immediately in an impermeable container, labeled according to WAC 296-62-07721(6) and disposed of according to WAC 296-62-07723.

(g) Any spills of asbestos-containing aqueous solution or any asbestos-containing waste material must be cleaned up immediately and disposed of according to WAC 296-62-07723.

(h) The use of dry brushing during low pressure/wet cleaning operations is prohibited.

(3) Equivalent methods. An equivalent method is one which has sufficient written detail so that it can be reproduced and has been demonstrated that the exposures resulting from the equivalent method are equal to or less than the exposure which would result from the use of the method described in subsection (1) of this appendix. For purposes of making this comparison, the employer must assume that exposures resulting from the use of the method described in subsection (1) of this appendix must not exceed 0.016 f/cc, as measured by the WISHA reference method and as averaged over at least eighteen personal samples.

(4) Wet method.

(a) A spray bottle, hose nozzle, or other implement capable of delivering a fine mist of water or amended water or other delivery system capable of delivering water at low pressure, must be used to first thoroughly wet the brake and clutch parts. Brake and clutch components must then be wiped clean with a cloth.

(b) The cloth must be placed in an impermeable container, labeled according to WAC 296-62-07721(6) and then disposed of according to WAC 296-62-07723, or the cloth must be laundered in a way to prevent the release of asbestos fibers in excess of 0.1 fiber per cubic centimeter of air.

(c) Any spills of solvent or any asbestos containing waste material must be cleaned up immediately according to WAC 296-62-07723.

(d) The use of dry brushing during the wet method operations is prohibited.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 19-01-094, § 296-62-07745, filed 12/18/18, effective 1/18/19. Statutory Authority: RCW 49.17.010, [49.17].040, [49.17].050, and 49.26.130. WSR 00-06-075, § 296-62-07745, filed 3/1/00, effective 4/10/00. Statutory Authority: RCW 49.17.040, [49.17.]050 and [49.17.]060. WSR 97-01-079, § 296-62-07745, filed 12/17/96, effective 3/1/97. Statutory Authority: Chapter 49.17 RCW. WSR 89-11-035 (Order 89-03), § 296-62-07745, filed 5/15/89, effective 6/30/89; WSR 87-24-051 (Order 87-24), § 296-62-07745, filed 11/30/87. Statutory Authority: RCW 49.17.050(2) and 49.17.040. WSR 87-10-008 (Order 87-06), § 296-62-07745, filed 4/27/87.]