

FIGURE 1 – OPERATING CONTROL ZONE

(12) *Power source* means an engine or motor.

(13) *Reel-type mower* means a lawn mower which cuts grass by rotating one or more helically formed blades about a horizontal axis to provide a shearing action with a stationary cutter bar or bed knife.

(14) *Rotary mower* means a power lawn mower in which one or more cutting blades rotate in essentially a horizontal plane about at least one vertical axis.

(15) *Separate* means to cause to have any apparent relative displacement induced by external forces.

(16) *Shield* means a part or an assembly which restricts access to a hazardous area. For the purposes of this part 1205, the blade housing is considered a shield.

(17) *Stress* means a force acting across a unit area in a solid material in resisting separation, compacting, or sliding that tends to be induced by external forces.

(18) *Top of the mower's handles* means the uppermost portion(s) of the handle that would be gripped by an operator in the normal operating position.

(19) *Walk-behind power lawn mower* means a grass cutting machine either pushed or self-propelled, with a minimum cutting width of 12 in (305 mm) that employs an engine or a motor as a power source and is normally controlled by an operator walking behind the mower.

(b) Where applicable, the definitions in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052) apply to this part 1205.

[44 FR 10024, Feb. 15, 1979, as amended at 46 FR 54934, Nov. 5, 1981]

§ 1205.4 Walk-behind rotary power mower protective shields.

(a) *General requirements.* Walk-behind rotary power mowers shall meet the following requirements:

(1) When the foot probe of Fig. 2 is inserted under any point within the areas

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to be probed during the foot probe test of paragraph (b)(1) of this section, the shields shall prevent the foot probe

from entering the path of the blade or causing any part of the mower to enter the path of the blade.

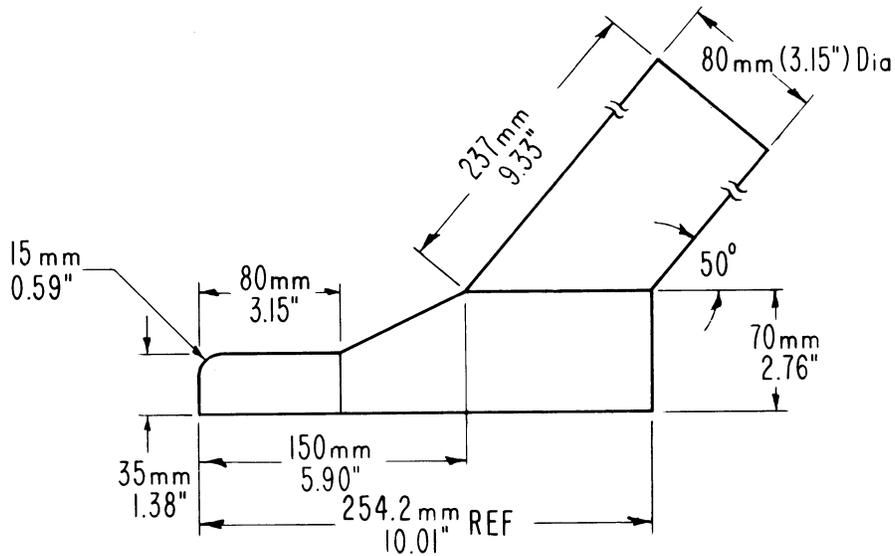
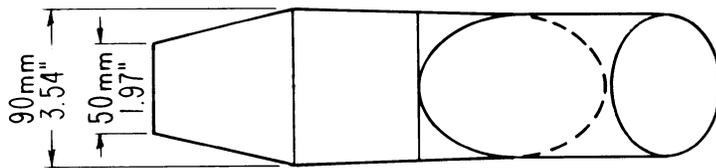


FIG 2—FOOT PROBE

(2) Any shield located totally or partly within the areas to be probed, as defined in paragraph (b)(1)(ii) of this section, shall not permanently separate,

crack, or deform when the shield is subjected to a 50 lb (222 N) static tensile force, uniformly distributed over not less than half the length of the

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shield. The force shall be applied for at least 10 seconds in the direction which produces the maximum stress on the shield. While being tested, a shield shall be attached to the mower in the manner in which it is intended to be used. (This requirement does not apply to the housing.)

(3) During the obstruction test of paragraph (b)(2) of this section, shields shall not:

- (i) Stop the mower as a result of contact with the raised obstacle,
- (ii) Enter the path of the blade, or
- (iii) Cause more than one wheel at a time to be lifted from the fixture surface.

(b) *Shield tests—general—(1) Foot probe test.* (i) The following test conditions shall be observed:

(A) The test shall be performed on a smooth level surface.

(B) Pneumatic tires, when present, shall be inflated to the cold pressures recommended by the mower manufacturer.

(C) The mower housing shall be adjusted to its highest setting relative to the ground.

(D) The blade shall be adjusted to its lowest position relative to the blade housing.

(E) The mower shall be secured so that the mower may not move horizontally but is free to move vertically.

(ii) *Areas to be probed.* (A)(1) The minimum area to be probed shall include an area both 60 degrees to the right and 60 degrees to the left of the rear of the fore-aft centerline of the cutting width. For single-blade mowers, these angles shall be measured from a point on this fore-aft centerline which is at the center of the blade tip circle (see Fig. 3). For multi-blade mowers, these angles shall be measured from a point on the fore-aft centerline of the cutting width which is one half of the cutting width

forward of the rearmost point of the composite of all the blade tip circles (See Fig. 4).

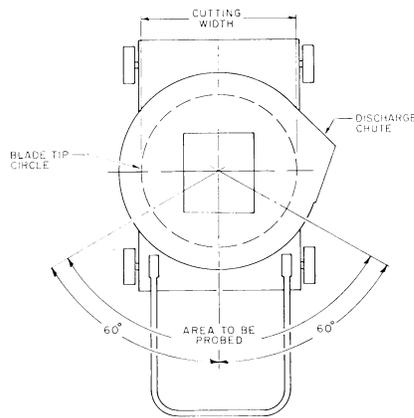
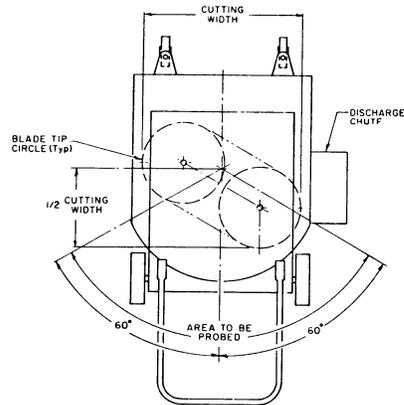


FIGURE 3 - AREA TO BE PROBED



**FIGURE 4 - AREA TO BE PROBED
MULTI-BLADE MOWERS**

(2) For a mower with a swing-over handle, the areas to be probed shall be determined as in paragraph

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(b)(1)(ii)(A)(I) of this section from both possible rear positions. (See Fig. 5.)

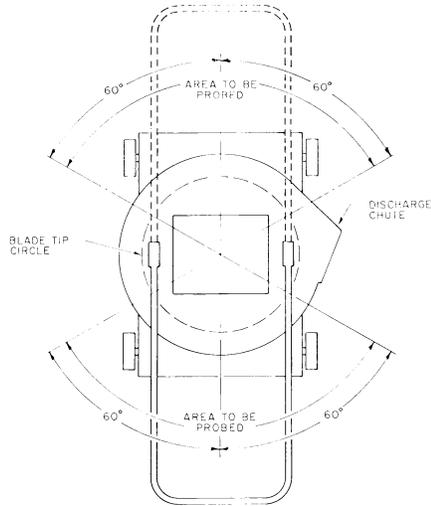


FIGURE 5 - AREA TO BE PROBED SWINGOVER HANDLE

(B) Where a 360 degree foot protective shield is required by §1205.5(a)(1)(iv)(B) or §1205.5(c), the entire periphery of the mower shall be probed (including any discharge chute comprising part of the periphery).

(iii) *Procedure.* Within the areas specified in paragraph (b)(1)(ii), the foot

probe of Fig. 2 shall be inserted under the bottom edge of the blade housing and shields. During each insertion, the "sole" of the probe shall be kept in contact with the supporting surface. Insertion shall stop when the mower housing lifts or the horizontal force used to insert the probe reaches 4 lb (17.8 N), whichever occurs first. As the foot probe is withdrawn after each insertion, the "toe" shall be pivoted upward around the "heel" as much as possible without lifing the mower.

(2) *Obstruction test.* (i) The following test conditions shall be observed:

(A) Pneumatic tires, when present, shall be inflated to the cold pressure recommended by the mower manufacturer.

(B) The mower housing shall be at its highest setting relative to the ground.

(ii) The test shall be performed on the fixture of Fig. 6, which consists of a level surface having (A) a 0.99 in (25 mm) deep depression with a 5.90 in (150 mm) radius of curvature and (B) a raised obstacle 0.60 in (15 mm) square, each extending the full width of the fixture. The depression shall be lined with a material having a surface equivalent to a 16- to 36-grit abrasive. The depression and the obstacle shall be located a sufficient distance apart so that the mower contacts only one at a time.

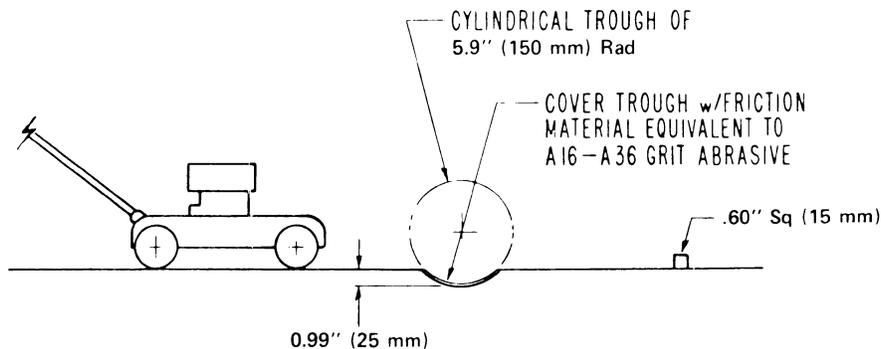


FIGURE 6 – OBSTRUCTION TEST FIXTURE

(iii) The test fixture may be relieved, only to the extent necessary, to prevent interference with any blade retaining device.

(iv) The mower shall be pushed forward and pulled rearward perpendicular to and across the depression and the raised obstacle on the fixture. The mower shall be pulled and pushed, without lifting, with a horizontal force sufficient to transit the obstruction fixture at a speed not to exceed 2.2 ft/sec (0.7 m/sec).

(c) *Movable shields*—(1) *General*. Movable shields must meet the general shield requirements of paragraph (a) of this section. In addition, movable shields which are in any of the areas to be probed defined in paragraph (b)(1)(ii) of this section and which are intended to be movable for the purpose of attaching auxiliary equipment, when deflected to their extreme open position in the manner intended by the manufacturer and released, shall either:

(i) Return automatically to a position that meets the requirements of subpart A of this part 1205 when the attached equipment is not present, or

(ii) Prevent operation of the blade(s) unless the attached equipment is present or the movable shield is returned to a position that meets the requirements of subpart A of this part 1205.

(2) *Tests*. (i) Automatic return of a movable shield shall be determined by manually deflecting the shield to its extreme open position, then releasing the shield and visually observing that it immediately returns to the closed position.

(ii) Prevention of operation of the blade(s) shall be determined, first by manually deflecting the shield to its extreme open position, then, following the appropriate manufacturer's instructions, completing the procedures necessary to operate the blade. Observe, using any safe method, that the blade(s) has been prevented from operating.

[44 FR 10024, Feb. 15, 1979, as amended at 45 FR 86417, 86418, Dec. 31, 1980; 46 FR 54934, Nov. 5, 1981; 48 FR 6328, Feb. 11, 1983]

§ 1205.5 Walk-behind rotary power mower controls.

(a) *Blade control systems*—(1) *Requirements for blade control*. A walk-behind rotary power mower shall have a blade control system that will perform the following functions:

(i) Prevent the blade from operating unless the operator actuates the control.

(ii) Require continuous contact with the control in order for the blade to continue to be driven.

(iii) Cause the blade motion in the normal direction of travel to come to a complete stop within 3.0 seconds after release of the control.

(iv) For a mower with an engine and with only manual starting controls, this blade control shall stop the blade without stopping the engine, unless:

(A) The engine starting controls for the lawn mower are located within 24 inches from the top of the mower's handles, or

(B) The mower has a protective foot shield which extends 360 degrees around the mower housing (see § 1205.4 (b)(1)(ii)(B)).¹

(2) All walk-behind rotary power mowers shall have, in addition to any blade control required by paragraph (a)(1) of this section, another means which must be manually actuated before a stopped blade can be restarted. This additional means may be either a control which is separate from the control required by paragraph (a)(1) of this section, or may be incorporated into the control required by paragraph (a)(1) of this section as a double-action device requiring two distinct actions to restart the blade.

(b) *Blade stopping test*—(1) *General*. Any test method that will determine the time between the release of the blade control and the complete stop of the blade motion in the normal direction of travel may be used.

(2) *Conditions*. (i) The mower shall be operated at maximum operating speed

¹Paragraphs (A) and (B) of § 1205.5(a)(1)(iv), permitting mowers that stop the blade by stopping the engine but that do not have power restart, were added to the standard as directed by Sec. 1212 of the Omnibus Budget Reconciliation Act of 1981, Pub. L. 97-35, 95 Stat. 357.