



400 Commonwealth Drive, Warrendale, PA 15096-0001

# SURFACE VEHICLE STANDARD

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An American National Standard

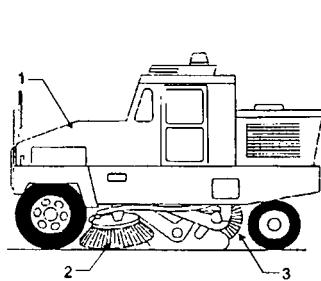
## (R) SELF-PROPELLED SWEEPERS AND CLEANING EQUIPMENT

1. **Scope**—This SAE Standard applies to all self-propelled machines that are designed to clean material from highways, parking lots, and floors in non-residential buildings. Primary methods for removing material can be by mechanical means, pneumatic, washing system, or a combination.
- 1.1 **Purpose**—To identify self-propelled cleaning equipment, which are grouped into street and industrial sweepers and scrubbers.
2. **References**—There are no referenced publications specified herein.
3. **Definitions**
  - 3.1 **Street Sweepers**—Self-propelled machines primarily designed to sweep material from highways, parking lots, construction sites, and road repaving work. These machines can move material to a hopper or other type of container attached to the machine by mechanical or pneumatic means, or by combinations of each.
  - 3.2 **Industrial Sweepers**—Self-propelled or operator-assisted machines used to clean up material inside Industrial and Commercial areas. These machines can be mechanical, pneumatic, or combinations of each with or without floor scrubbing attachments.
  - 3.3 **Industrial Scrubbers**—Self-propelled machines which use a washing system to remove material. This washing system consists of a tank of cleaning solution, a method for applying the cleaning solution to the surface and a collection system to recover the cleaning solution.
  - 3.4 **Combination Industrial Sweepers/Scrubbers**—Self-propelled machines which incorporate both a sweeping and a scrubbing system.
4. **Identification**
  - 4.1 Integral mechanical tricycle configuration sweepers with a maximum transport speed of less than 40 km/h. (See Figure 1).

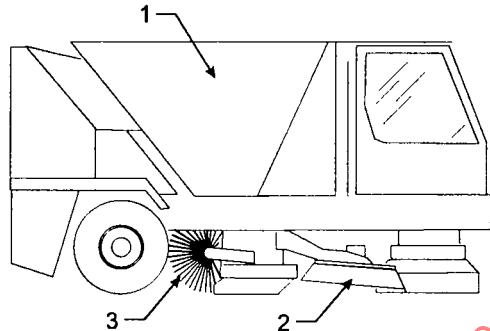
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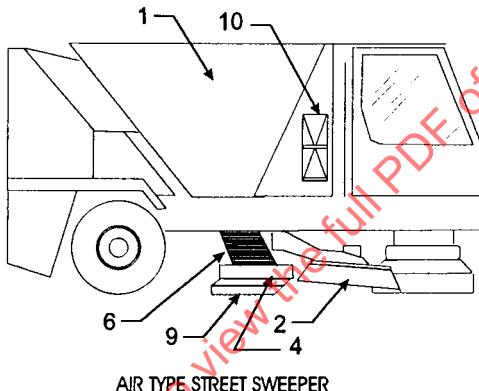
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REAR TRICYCLE STREET SWEEPER



FRONT TRICYCLE SWEEPER



AIR TYPE STREET SWEEPER

1. Hopper	6. Vacuum Hose
2. Gutter Broom	7. Transfer Broom
3. Main Broom	8. Caster Wheel
4. Pick-up Head	9. Skids
5. Pick-up Nozzle (If less than Full width)	10. Fan

FIGURE 1—SELF-PROPELLED CLEANING EQUIPMENT—  
REAR TRICYCLE STREET SWEEPER, FRONT TRICYCLE SWEEPER,  
AND AIR TYPE STREET SWEEPER

- 4.1.1 Hoppers can be high dump (being able to dump into refuse container or low dump (being able to dump into refuse container).
- 4.1.2 The machine can be front or rear wheel steer with steering controls located either center, left, right, or both left/right.
- 4.1.3 Material can be placed in the hopper via mechanical or pneumatic means or by combinations of each.
- 4.2 Integral chassis sweepers some of which have a top speed less than 40 km/h and some of which are designed to transport at highway speeds. (See Figure 2).

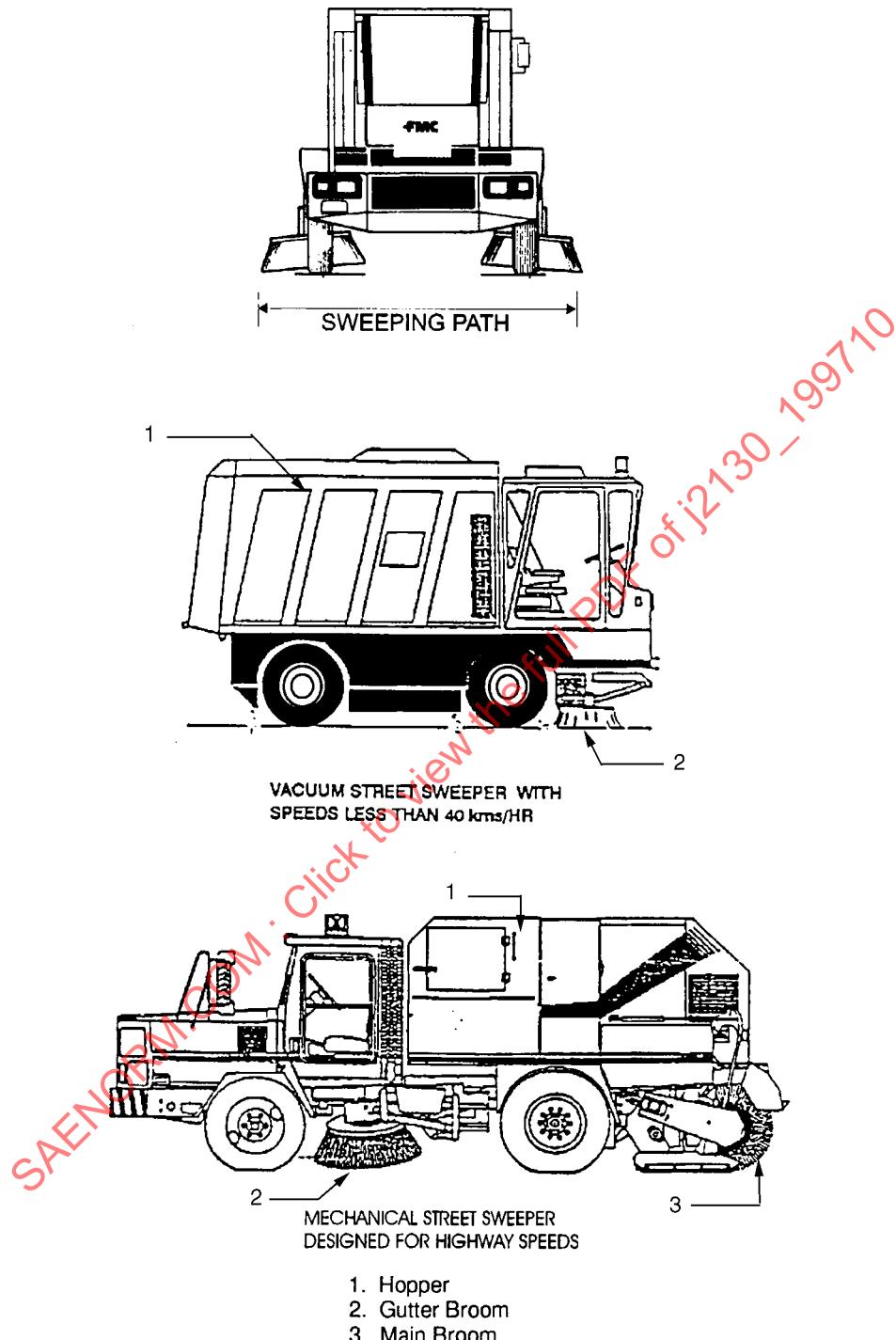


FIGURE 2—SELF-PROPELLED CLEANING EQUIPMENT—  
VACUUM STREET SWEEPER WITH SPEEDS LESS THAN 40 KM/H  
AND MECHANICAL STREET SWEEPER DESIGNED FOR  
HIGHWAY SPEEDS

- 4.2.1 Hoppers can be high dump (being able to dump into refuse container) or low dump (being able to dump on the ground only).
- 4.2.2 Steering controls can be located in the center, on the left or right side or both.
- 4.2.3 Material can be placed in the hopper by mechanical or pneumatic means or by combinations of each.

**4.3** Truck chassis mounted sweepers that are able to transport at highway speeds. (See Figure 3).

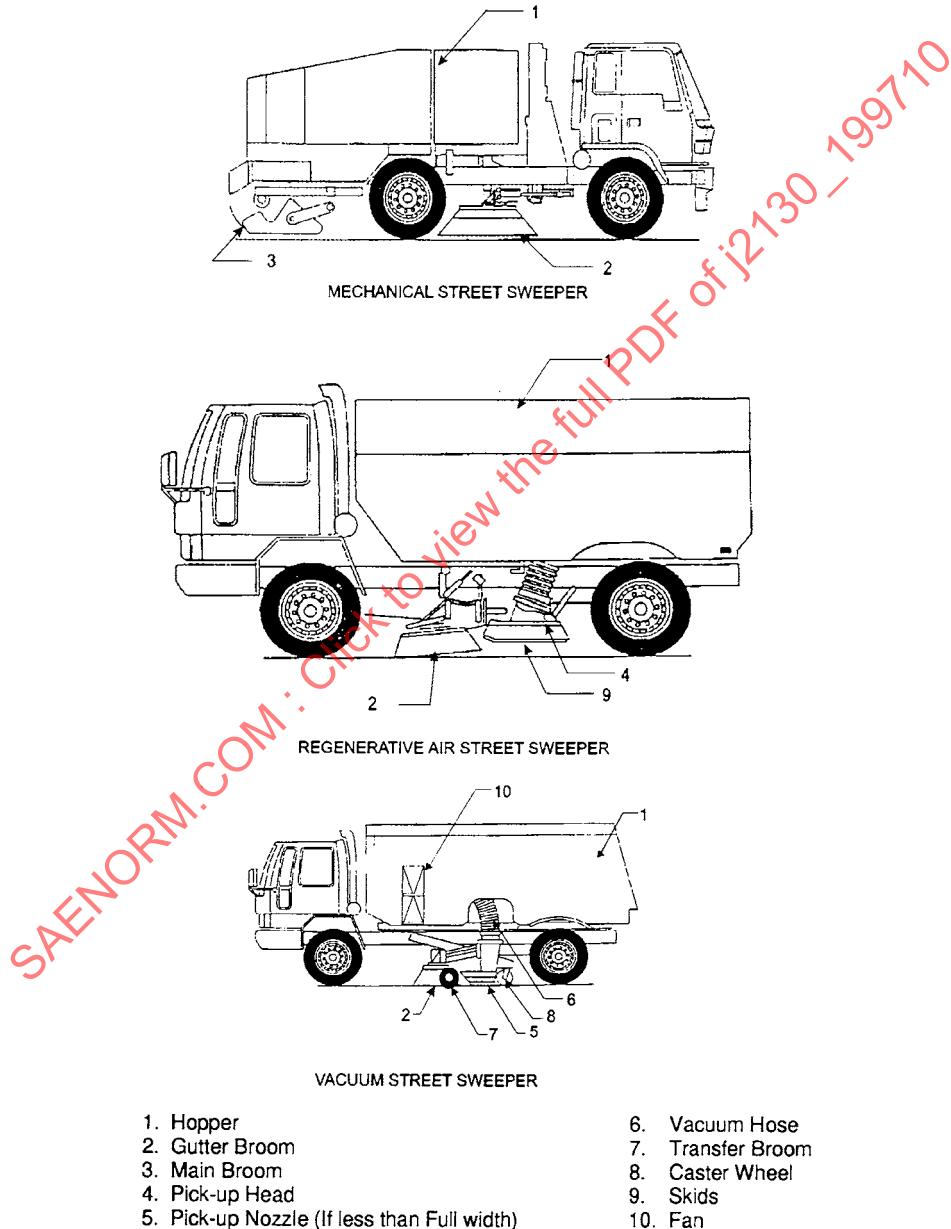
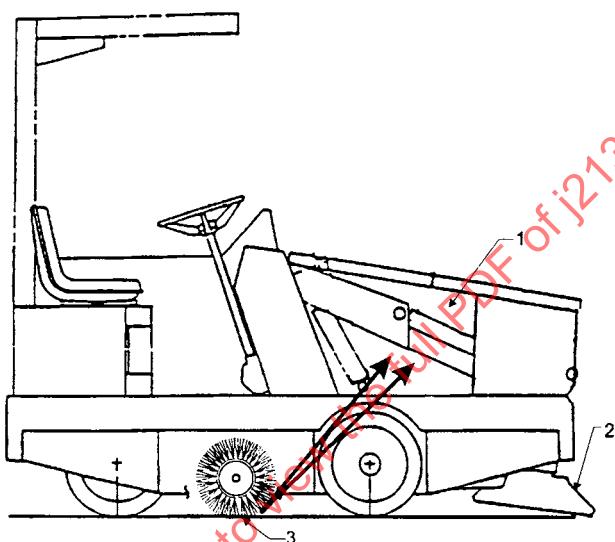
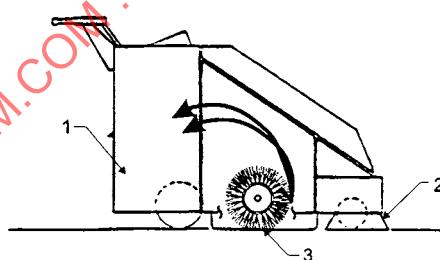


FIGURE 3—SELF-PROPELLED CLEANING EQUIPMENT—  
MECHANICAL STREET SWEEPER, REGENERATIVE AIR STREET SWEEPER,  
AND VACUUM STREET SWEEPER

- 4.3.1 Hoppers can be high dump (being able to dump into refuse container) or low dump (being able to dump on the ground only).
- 4.3.2 Steering controls can be located on the left or right side or both.
- 4.3.3 Material can be placed in the hopper by mechanical or pneumatic means, or by combinations of each.
- 4.4 Industrial sweepers are designed to work in buildings, general parking areas, and other off-highway applications with speeds less than 20 km/h. (See Figure 4.) Industrial sweepers can also include walk-behind style sweepers.



DIRECT THROW RIDER INDUSTRIAL SWEEPER

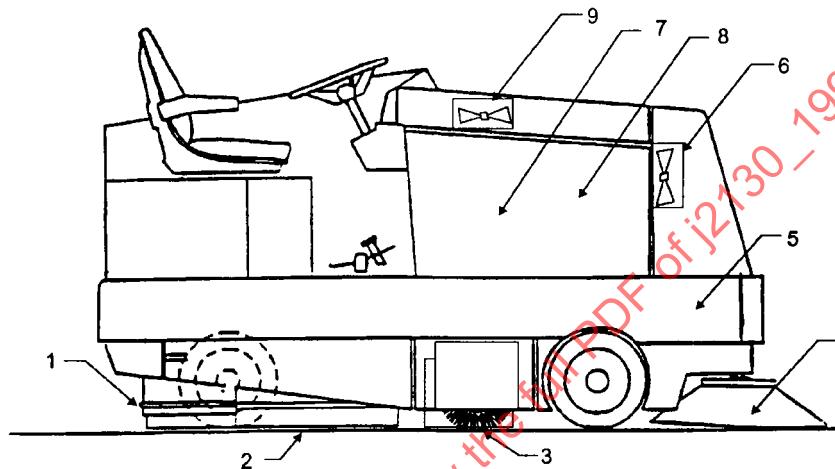


OVER THROW WALKBEHIND INDUSTRIAL SWEEPER

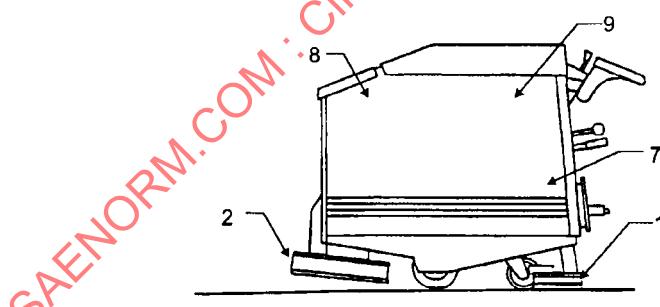
- 1. Hopper
- 2. Side Sweeping Broom
- 3. Main Sweeping Broom

FIGURE 4—SELF-PROPELLED CLEANING EQUIPMENT—  
DIRECT THROW RIDER INDUSTRIAL SWEEPER AND  
OVER THROUGH WALK-BEHIND INDUSTRIAL SWEEPER

- 4.4.1 Hoppers can be high dump (being able to dump into refuse container) or low dump (being able to dump on the ground only).
- 4.4.2 Steering controls can be located in the center, on the left or right side or both (rider machines only).
- 4.4.3 Material can be placed in the hopper by mechanical or pneumatic means, or by combinations of each.
- 4.5 Industrial scrubbers are designed to work in buildings, general parking areas, and commercial applications with speeds less than 20 km/h. (See Figure 5.) Industrial scrubbers can also include walk-behind style scrubbers.



INDUSTRIAL RIDER SWEEPER/SCRUBBER COMBINATION



INDUSTRIAL WALK BEHIND SCRUBBER

1. Squeegee	6. Dust Control Fan
2. Scrub Brush	7. Recovery Tank
3. Main Sweeping Broom	8. Solution Tank
4. Side Sweeping Broom	9. Water Pick-Up Fan
5. Hopper	

FIGURE 5—SELF-PROPELLED CLEANING EQUIPMENT—  
INDUSTRIAL RIDER SWEEPER/SCRUBBER COMBINATION AND  
INDUSTRIAL WALK-BEHIND SCRUBBER