

## VACUUM CLEANERS

### KS-14377 TYPE

### REQUIREMENTS AND ADJUSTING PROCEDURES

#### 1. GENERAL

1.01 This section covers the portable KS-14377 type vacuum cleaner (Fig. 1).

1.02 This section is reissued to add the KS-14377 L5 and L6 vacuum cleaners, to revise list of gauges and materials, and to add 2.04 and 3.04.

1.03 The KS-14377 L5 vacuum cleaner replaces the L1 and L3. The KS-14377 L6 vacuum cleaner replaces the L2 and L4. The replaced vacuum cleaners are rated manufacture discontinued. It is possible to update the older cleaners to the equivalent of the newer as follows:

(a) *Updating the KS-14377 L1 to L3 and the KS-14377 L2 to L4.* This conversion makes it possible to use a disposable paper filter in addition to the felt-cambric filter. Use of the paper filter requires a rubber baffle inside the dust container at the hose connection. The baffle is part of the KS-14377 L25 conversion kit. Pamphlet No. 6013, supplied with the kit, gives the necessary information for converting the KS-14377 L1 to L3 and the KS-14377 L2 to L4.

(b) *Updating the KS-14377 L3 to L5 and the KS-14377 L4 to L6.* In order to provide for grounding the KS-14377 vacuum cleaners the KS-7586, 25-foot, 2-wire cord equipped with

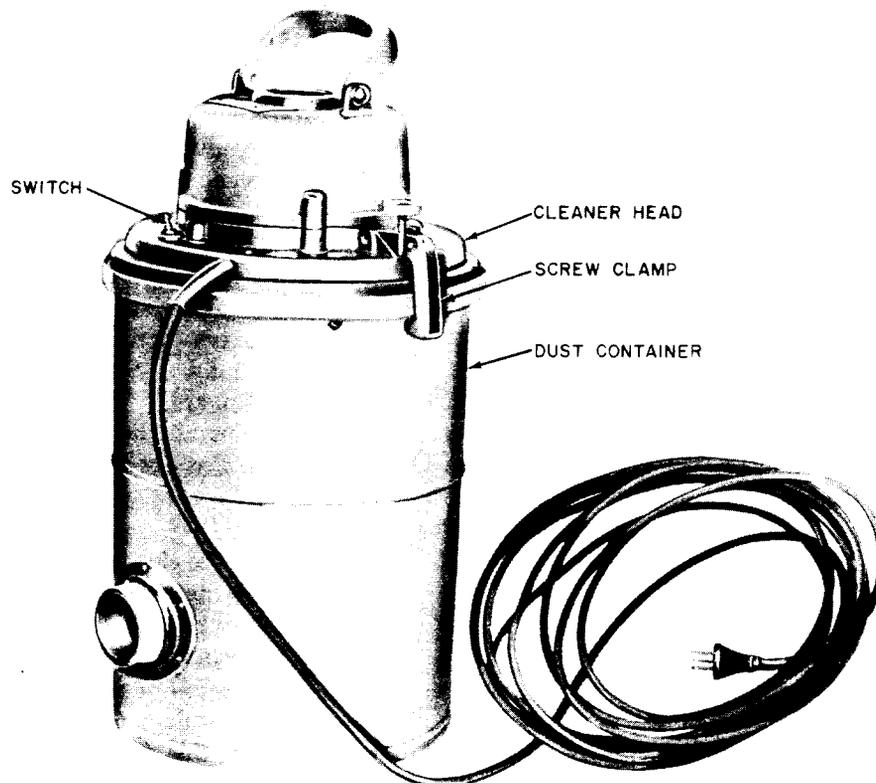


Fig. 1—KS-14377 Type Vacuum Cleaner

**SECTION 075-180-703**

a nonpolarized plug has been replaced by the KS-14377 L31, 25-foot, 3-wire cord, equipped with a parallel blade 3-conductor grounding type plug. The KS-14377 L3 and L4 vacuum cleaners may be updated to the equivalent of the L5 and L6 by replacing the 2-wire cord with the 3-wire cord. See Section 075-180-803.

The KS-14377 L2, L4, and L6 vacuum cleaners have several motor refinements which reduce operating noise. These three types are referred to as silent vacuum cleaners. The KS-14377 L1, L3, and L5 do not have these refinements and are referred to as standard vacuum cleaners.♦

**1.04** Reference shall be made to Section 020-010-711 covering general requirements and definitions for additional information necessary for the proper application of the requirements listed herein.

**1.05 Asterisk (\*):** Requirements are marked with an asterisk when to check for them would necessitate the dismantling or dismounting of the apparatus, or would affect the adjustment involved or other adjustments. No check need be made for these requirements unless the part is accessible for other reasons or its performance indicates that such a check is advisable.

**1.06 Satisfactory commutation,** for the purpose of this section, may be said to have been attained if neither the brushes nor the commutator are burned or damaged to the extent that abnormal maintenance is required. The presence of some visible sparking is not necessarily evidence of unsatisfactory commutation.

**2. REQUIREMENTS**

**2.01 Cleaning:** The vacuum cleaner shall be cleaned when necessary.

**\*2.02 Motor Brush Length:** The length of the brushes shall be

Min 3/8 inch

Use the R-8550 scale.

To check this requirement remove the brushes as covered in 3.003(1). Measure the brush length from the inner end of the brush spring to the top of the arc in the brush face. If both brushes meet

the requirement, remount the brushes as covered in 3.003(2).

**2.03 Motor Commutator:** The surface of the commutator shall be free from scoring, pitting, or other deformation of the surface or structure.

Gauge by eye.

**2.04 Frame Grounding:** There shall be continuity between the grounding blade of the power cord and the frame of the vacuum cleaner.♦

**3. ADJUSTING PROCEDURES**

**3.001 List of Gauges and Materials**

CODE OR SPEC NO.	DESCRIPTION
<b>GAUGES</b>	
R-8550	6-Inch Scale
<b>MATERIALS</b>	
KS-7860	Petroleum Spirits
KS-14666	Cloth
KS-14510	Multimeter (or equivalent)

**3.002 Removing and Remounting Cleaner Head:**

To remove the cleaner head from the dust container proceed as covered in (1), and to remount the cleaner head proceed as covered in (2).

(1) Before removing the cleaner head, disconnect the vacuum cleaner from the power supply. Loosen the two screw clamps on opposite sides of the head by turning out the knurled screws with the fingers. Disengage the clamp hooks from the rim of the container and remove the head from the container using the clamps as handles.

(2) Position the cleaner head in the dust container. If it is necessary to turn the head with reference to the container, lift the head clear of the felt-cambric filter so that the filter will not be twisted. Engage the clamp hooks in the rim of the container and then tighten the knurled screws with the fingers. Make sure that the cleaner head, aluminum ring, and dust container are firmly clamped together to prevent leakage of air which would reduce the suction of the

vacuum cleaner. If the rubber gaskets on the cleaner head or the aluminum ring have lost their resiliency, replace the gaskets.

**Caution:** *The vacuum cleaner should never be used for cleaning when the felt-cambric filter is torn or missing.*

**3.003 Removing and Remounting Motor Brushes:** To remove a brush from its brush holder proceed as covered in (1), and to remount the brush proceed as covered in (2).

(1) To gain access to the motor brushes, remove the cleaner head from the dust container as covered in 3.002(1). Unscrew and remove a brush holder cap with the fingers. Loosen the brush spring plate in the brush holder by inserting a thumbnail between the plate and the holder and then remove the brush assembly by pulling on the plate. Mark the brush to ensure its being remounted in the same brush holder and position relative to the commutator surface.

(2) To remount a brush, place it in the slots of the brush holder from which it was removed and in its original position with respect to the commutator surface. Push the brush and spring into the holder, insert the brush spring plate tabs in the slots and seat the plate on the holder. If the brush spring plate does not remain seated on the brush holder, bend the tabs on the plate out slightly. Mount the cap. Remount the cleaner head as covered in 3.002(2).

**3.01 Cleaning (Req. 2.01):**

(1) Do the following cleaning at a place remote from the central office apparatus.

(2) Remove the dust from inside the dust container as follows: Remove the cleaner head from the dust container as covered in 3.002(1). Leave the hose attached to the container at this time. Hold the filter assembly in the dust container with one hand and tap around the inside of the felt-cambric filter with the other hand. Give the dust time to settle and then remove the filter assembly from the dust container. Remove the hose by turning the coupling counterclockwise and pulling it away from the container. Empty the dust in the dust

container into a suitable closed receptacle. Do not wash or dry clean the felt-cambric filter.

(3) If the dust container is provided with the rubber baffle described in 1.03 and shown in Fig. 2, the filter assembly should have a disposable paper filter mounted over the felt-cambric filter. If the paper filter is clogged with dust or is missing, mount a new paper filter as follows: Remove the old paper filter. Examine the felt-cambric filter and if it is clogged or torn replace it. Slip the new paper filter over the outside of the felt-cambric filter until the cardboard ring in the paper filter is against the rubber gasket of the filter assembly.

(4) If the dust container does not have a rubber baffle as shown in Fig. 2, examine the felt-cambric filter and if it is clogged or torn replace it.

(5) Place the filter assembly in the dust container and remount the cleaner head in the dust container as covered in 3.002(2).

(6) Clean the commutator as follows. Remove the motor brushes as covered in 3.003(1). Turn the commutator with the fingers and wipe the surface with a clean, dry KS-14666 cloth. If the commutator surface is smutted and cannot be so cleaned, clean it with a KS-14666 cloth moistened with KS-7860 petroleum spirits. Then wipe the commutator dry with a clean dry KS-14666 cloth. Remount the motor brushes as covered in 3.003(2).

**Note:** A bronze-colored, highly polished surface is very desirable and it should not be mistaken for a burned commutator. If the surface presents this condition and is smooth, the commutator is satisfactory.

(7) If the commutator needs reconditioning, refer the matter to the supervisor.

(8) After cleaning the parts, reassemble the vacuum cleaner as covered in 3.002(2).

(9) Clean the external surfaces of the vacuum cleaner with a KS-14666 cloth.

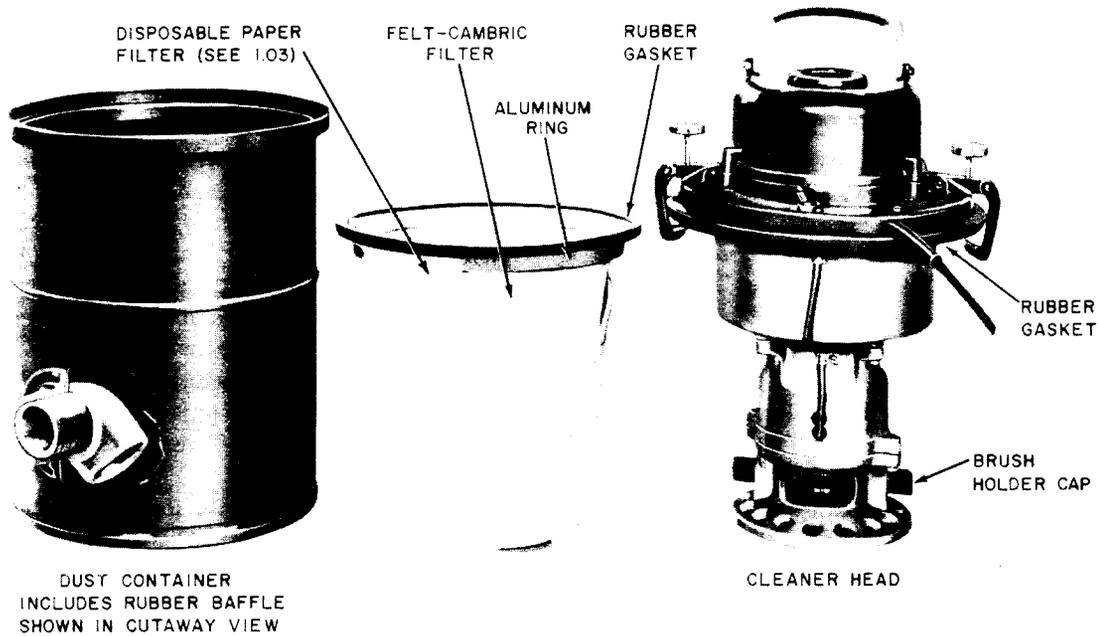


Fig. 2—KS-14377 L5 (Standard) and L6 (Silent) Vacuum Cleaner

**3.02 Motor Brush Length (Reqt 2.02):**

- (1) If the length of either brush does not meet the requirement, replace both brushes as covered in Section 075-180-803.

**3.03 Motor Commutator (Reqt 2.03):**

- (1) If necessary, clean the commutator surface as covered in 3.01(6).
- (2) If the commutator surface is scored or otherwise deformed or if the surface of an

undercut commutator is worn to the level of the insulation and is causing sparking, refer the matter to the supervisor.

- (3) If the condition of the commutator is satisfactory remount the cleaner head in the dust container as covered in 3.002(2).

**3.04 Frame Grounding (Reqt 2.04):**

Using a KS-14510 multimeter, or equivalent, check for continuity between the grounding blade of the plug and the frame of the vacuum cleaner.♦