OPERATOR CHAIRS
TESTS AND INSPECTION

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1. GENERAL

1.01 This section describes miscellaneous inspections which should be made on the KS-15784, KS-20751 (A&M Only), and KS-22063 metal-type operator chairs.

1.02 This section is reissued to revise the format, add the KS-22063 operator chair, and rate the KS-20751 operator chair A&M Only. Since this is a general revision, revision arrows have been omitted. The Equipment Test List is affected.

1.03 The inspections covered in this section are for general appearance and condition of operator chairs.

1.04 Certain faults appearing during the inspection may be corrected locally. For instructions covering the scope of such work and the method of its performance, see Section 065-100-802 covering metal-type chairs. Work required as a result of the inspection, but not covered in Section 065-100-802, should not be performed by the local plant force. In such cases, the chairs may be disposed of or used for the basis of an engineering complaint. Work, such as tightening or replacing loose or missing nuts, bolts, and screws and providing lubrication when required, may in many cases be done most economically at the time of inspection.

2. APPARATUS

2.01 ***List of Tools and Materials:*** The following tools and materials are used in this section if corrective action is required during inspection.

TOOLS	DESCRIPTION
R-8550	6-inch steel scale
—	Plumb line (A piece of light string weighted with any convenient object may be used.)
—	Yard stick
MATERIALS	
KS-14666	Cleaning cloth
KS-14670	Commutator cloth

3. METHOD

3.01 Inspect chairs as covered in the following procedures, and remove from service chairs failing to meet any of the requirements unless the defect can be corrected in conjunction with the inspection.

A. General Appearance

3.02 ***Finish:*** Inspect the chair generally to see that it presents a satisfactory appearance for service. Clean parts as required, using the KS-14666 cleaning cloth.

(a) All parts of the chair shall be clean.

(b) Finish shall not be badly worn, scratched, or discolored.

(c) Chairs shall be free from stains which could come off on clothing.

B. General Condition

3.03 ***Welds:*** Inspect the upper units of all operator chairs for visible cracks or breaks in the welds and loose spindles. Upper units having defective welds or loose spindles shall be removed from service.

3.04 Chairs shall be complete with all parts peculiar to their design.

3.05 All parts shall be free from slivers, burrs, sharp edges, rough surfaces, and corners or projections that may cause damage to clothing or cause personal injury.

3.06 Screws and nuts shall be securely tightened.

3.07 ***Seat Tilt (Wobble) (All Types):*** Place the operator chair on a flat, even surface, and adjust the height of the chair until the chair seat is raised to midheight (approximately 19 inches for KS-20751 and KS-22063 operator chairs). Using a yard stick, measure wobble from the floor to all sides of the seat. If wobble is more than 1/2 inch, the chair shall not be used until it is repaired. Excessive wobble may be due to either defective welds, worn spindle, or worn hub threads.

3.08 ***Seat Slant:*** Place the offset spindle operator chair on a flat, even surface, and with the seat in the lowest position, check that the front edge of the seat is not lower than the rear edge.

3.09 ***Stability:*** There should be little or no tendency for the chair to rock when the chair is placed on a flat, even surface. All four legs or chair rests should touch the supporting surface or come within 1/16-inch of it. Measure this space with the R-8550 tool.

3.10 ***Upholstered Backrests:*** Inspect the covering of the upholstered backrests to see that it is not torn, frayed, or worn thin.

3.11 ***Backrests of Metal-Type Operator Chairs:*** Check the distance between the backrest and seat of the metal-type operator chairs having swivel backrests and cane seats using the plumb line, proceed as follows:

(1) With the backrest held in a vertical position and the chair is level, except in the case of offset spindle chairs, the seat should slope to the rear.

(2) Check all chairs having swivel backrests to insure that the hexagon head cap screws securely mount the backrests and permit them to swivel and assume comfortable supports for persons seated on the chairs.

(3) Check that all adjustment knobs are tight and not prone to slip. Adjustment knobs which cannot be tightened with average hand pressure should be replaced.

3.12 ***Rubber- and Plastic-Covered Foot Rings:*** Inspect the rubber- and plastic-covered foot rings for the following:

(1) Rubber and plastic-covered foot rings on operator chairs are not bent more than 3/4 inch between supports.

(2) Covering is not worn through to the metal over a length of 1 inch or more.

(3) Plastic-covered foot rings are free from cracks in the covering 1/16 inch or more wide, or a separation between the ends of the corrugated section is no greater than 1/16 inch.

(4) Foot ring clamps, on operator chairs having rubber-covered foot rings, are not missing.

3.13 ***Cane and Fiber-Webbing Seats:*** Inspect the cane work and fiber webbing of the operator chair seats for the following:

(1) The cane work or webbing does not have a permanent sag more than 1/2-inch deep and that there are no broken strands.

Note: Seats having a permanent sag greater than 1/2-inch deep may be reinforced with foam rubber seat supports.

(2) The cane work has no protruding pieces or other roughness which may cause damage to clothing.

(3) The cane work is free from anything, such as oil or grease, which may soil operator's clothing.

Danger: Broken wires on wire seat supports are an accident hazard.

3.14 ***Wire Seat Supports:*** Inspect the wire seat supports to see that they are free from broken wires.

3.15 ***Air Cell Seats:*** Inspect the covering of air cell seats of operator chairs for the following:

(1) Covering is free of upturned broken threads which may cause damage to operator's clothing. (Any such threads shall be clipped off or underturned or if more than six threads in any square-inch area are broken or worn through, the seat shall be replaced.)

(2) Covering fits the seat smoothly without any wrinkles which may cause discomfort.

(3) The covers are not torn out of more than ten of the binding prongs, or out of more than six adjacent prongs. Prongs may be inspected by lifting the seat out of the rubber gasket and turning the seat over.

(4) The seats do not have a definite and permanent concavity 1/2-inch or more deep.

3.16 ***Upholstered Seats:*** Inspect the covering of the upholstered seats to see that they are not torn, frayed, or worn thin.

3.17 ***Chair Rests:*** Inspect the chair rests on the operator chairs for the following:

(1) Sliding surfaces of chair rest are clean and free of floor wax or other gummed material.

(2) Chair rests are held securely in the chair legs and the base is not rusted, damaged, or missing.

(3) The base of the plastic chair rests is not worn to such an extent that the screwhead or edge of the screw sleeve on the rubber grip-type chair rests or the edge of the cone-shaped washer on the prong-type chair rests protrudes below the sliding surface of the chair rest when the base is in an extreme swiveled position.

(4) The sliding surface of the chair rests, having a metal slide base, is not worn through the thickness of the metal.

3.18 ***Operation of Center Spindle-Type Operator Chairs:*** Turn the upper assembly to increase the height of the chair about 3 inches, and at the same time check to see that the threads of the spindle and hub are properly lubricated. Vibration, squeaking, undue resistance to turning, as well as dry-appearing surfaces of the threads, are evidences of insufficient lubrication. The absence of lubrication between threads of nut and spindle could result in stressing of welds.

3.19 ***Operation of Offset Spindle-Type Operator Chairs:*** Inspect the chairs with the prong-and-slot arrangement in accordance with (a) and the chairs with the steel-pin arrangement in accordance with (b).

(a) If the inner spindle engages the outer spindle at the lower end by means of a prong-and-slot arrangement, inspect for proper functioning of the spindle as follows:

(1) When the chair is occupied, inspect the inner spindle to see that it disengages from the outer spindle and turns freely within the outer spindle as well as on the ball bearing, while the outer spindle remains stationary in the hub.

(2) When the chair is not occupied, inspect the prongs on the end of the inner spindle to see that they engage the slots in the lower end of the outer spindle and cause the outer spindle to turn when the chair seat is turned.

(3) Inspect the prongs and slots to see that they are not so worn as to permit the parts to disengage when raising and lowering the spindle in the hub by turning the chair seat.

Note: When making this test, inspect the outer spindle to see that it is free to turn in the hub; it shall not be jammed at its lowest position nor its movement obstructed by a gummed accumulation of oil and dirt.

(4) Inspect the spring in the inner spindle to see that it is not too weak to operate the prong-and-slot arrangement properly.

(b) If the spindle is one in which the inner spindle engages the outer spindle on the upper end by means of a steel-pin arrangement, inspect the inner spindle to see that it turns freely within the outer spindle for a little less than one complete turn until the steel pins on the inner and outer spindles make contact.

3.20 ***Outer Spindle and Hub Assembly:*** Inspect the outer spindle and hub assembly of

the operator chairs to see that they are clean and free from lubrication, except that which remains on the threads after wiping them with a clean KS-14670 commutator cloth.

3.21 ***Functioning of Spindle:*** Inspect the functioning of the spindle of the operator chairs to see that it is free from any gummed accumulation of oil, dirt, or rust on the inner spindle; or broken or cracked nylon bearings or ball bearings, as evidenced by stickiness or binding in operation. If the inner spindle turns freely within the outer spindle, apply a lubricant sparingly per Section 065-100-802 to the inner spindle at a point just above the ball bearing. Do not apply oil to ball bearings.

3.22 ***Finished Parts:*** Check that all finished parts of the operator chairs are free from traces of polishing oil or material used to lubricate the threads of the spindle.

3.23 ***Chair Glides:*** Check to see that all glides are tight and properly placed. Loose or otherwise defective glides must be replaced. Glides should not catch on floor or carpet when normal chair movement is attempted with the chair either occupied or unoccupied.

3.24 ***Chair Casters:*** Check to see that all chair casters move freely in all directions, and are properly attached to the lower unit of the KS-22063 or KS-20751 chair. Casters which are defective must be replaced.

3.25 ***Accessories:*** Inspect the purse and ticket holders, spindle covers, seat supports, backrest pads, and U-hooks for the following:

(1) ***Purse Holders and Ticket Holders:*** Purse holders (not available for KS-20751 or KS-22063) and ticket holders are not bent out of shape to an extent that it would interfere with their functioning. The finish will not be marred or worn to the extent of exposing the base metal on the exposed surfaces.

(2) ***Spindle Covers:*** The spindle covers are not torn or otherwise damaged.

(3) ***Seat Supports:*** The seat supports are in good condition and shall prevent the chair seat from sagging uncomfortably under the weight of an average person.

(4) ***Backrest Pads:*** The backrest pads have no threads of the facing fabric broken, or a total of more than 6 inches of the binding stitching unraveled, or the binding torn or missing.

(5) ***U-Hooks:*** The U-hooks are in place, and not more than one of the loops for the U-hooks so ripped or torn as to fail to serve its purpose.