KS-16153 L1, L2, AND L3 DEHYDRATORS
REPLACEMENT PARTS AND PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of the KS-16153 L1, L2, and L3 dehydrators. It also covers the approved procedures for replacing these parts.

1.02 This section is reissued to change the sensing element color bands and add catalog numbers to Fig. 1 and 6. This reissue does not affect the Equipment Test List.

1.03 Part 2 of this section covers the part numbers and the corresponding names of parts which it is practicable to replace in the field in the maintenance of the dehydrator. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called Replacement Parts.

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts covered in Part 2. This information is called Replacement Procedures.

2. REPLACEMENT PARTS

2.01 Fig. 1 through 6, included in this part, show the replaceable parts in their proper relation to the other parts of the apparatus. The part numbers are given with the names listed by the Western Electric Company Merchandise Department. When these names differ from those in general use in the field, the latter names, in some instances, are shown in parentheses.

2.02 When ordering parts for replacement purposes, give the part number and the name of the part, and state that the part is for the KS-16153—list number and serial number—dehydrator. For example: KS-16467 L1 blower for the KS-16153 L2—serial number—dehydrator. The part numbers and names specified in this section, except the pressure switch, are names of parts assigned by the Lectrodryer Division, McGraw-Edison Company, Pittsburgh, Pennsylvania. Do not refer to the Bell System Practice number or to any information shown in parentheses.

2.03 Information enclosed by parentheses ( ) is not ordering information. This information may be references to notes, parts referred to in other portions of the section and not considered replaceable, or part names in general use in the field if these names differ from those assigned by the manufacturer.

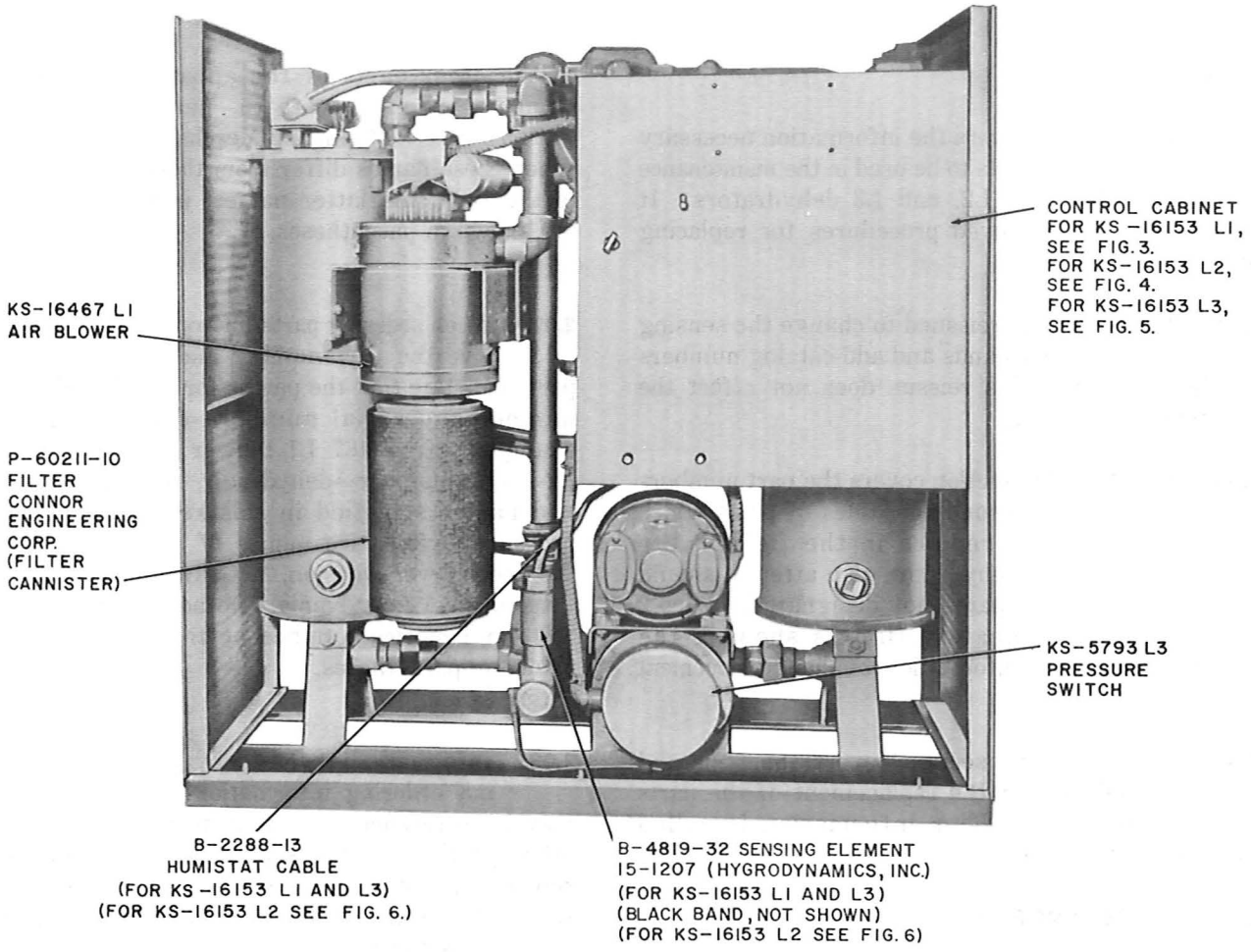

Fig. 1—KS-16153 L1, L2, and L3 Dehydrator (Front View)

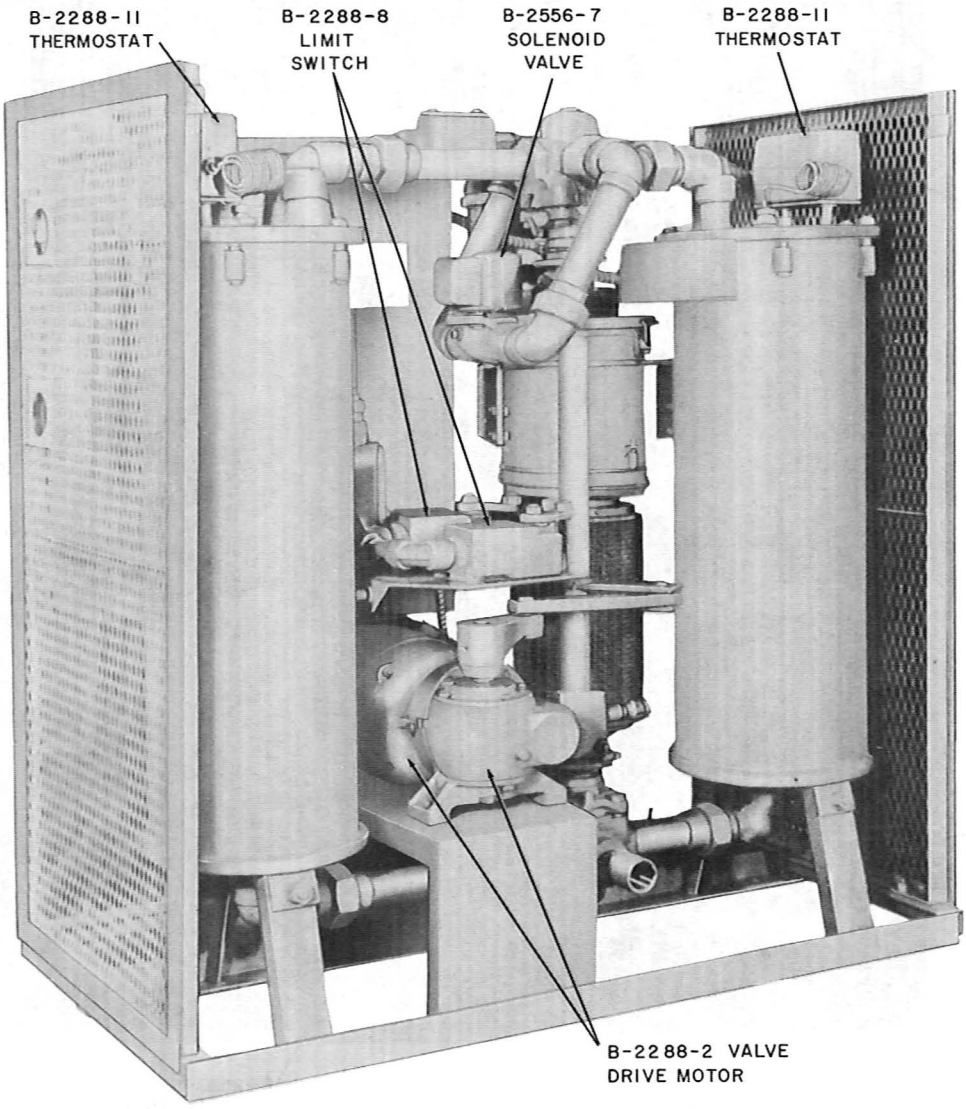

Fig. 2—KS-16153 L1, L2, and L3 Dehydrator (Rear View)

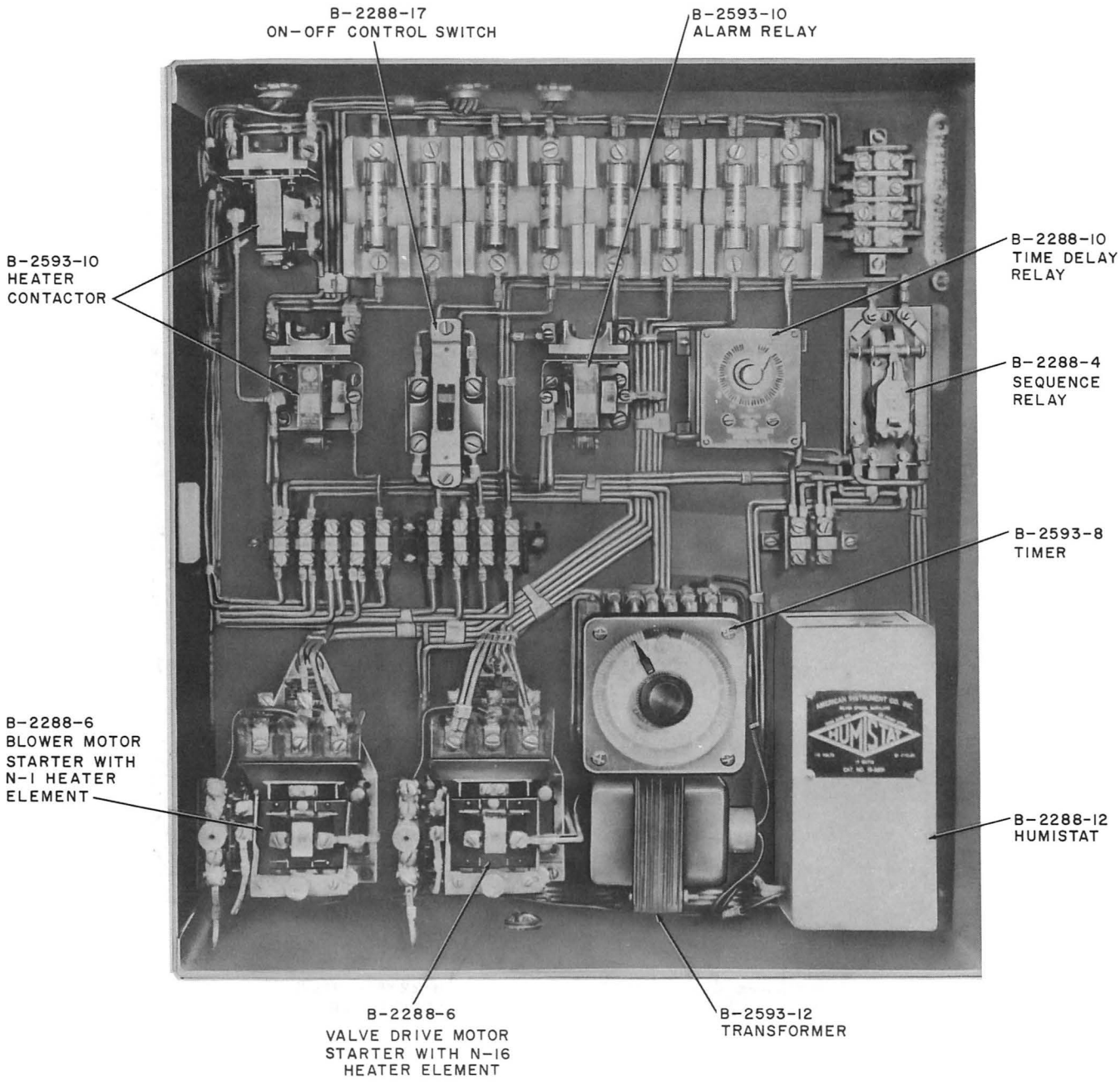

Fig. 3—KS-16153 L1 Dehydrator—Control Cabinet—Humidity Cycle Operation

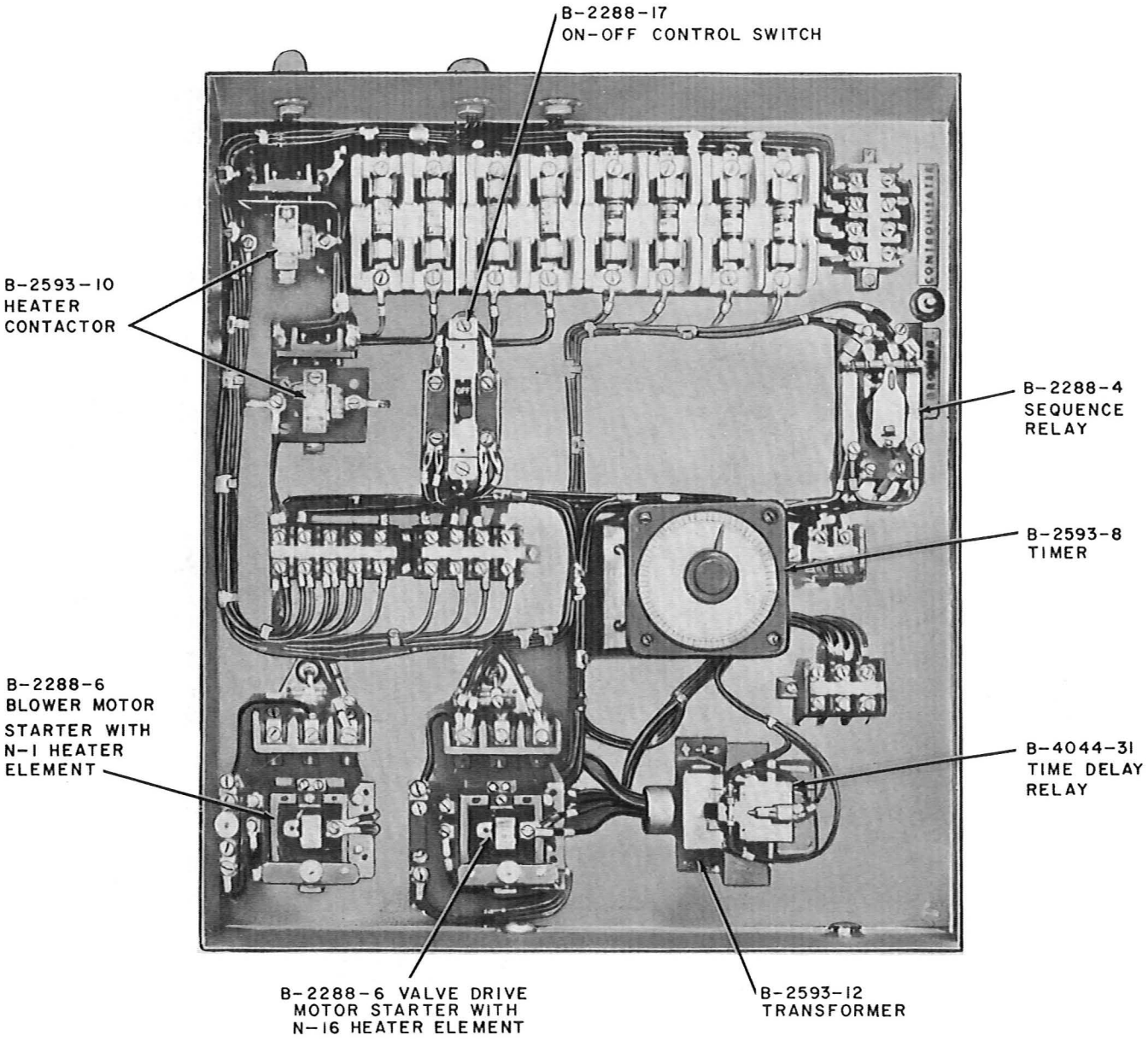

Fig. 4—KS-16153 L2 Dehydrator—Control Cabinet—Remote Control Humidity Cycle Operation

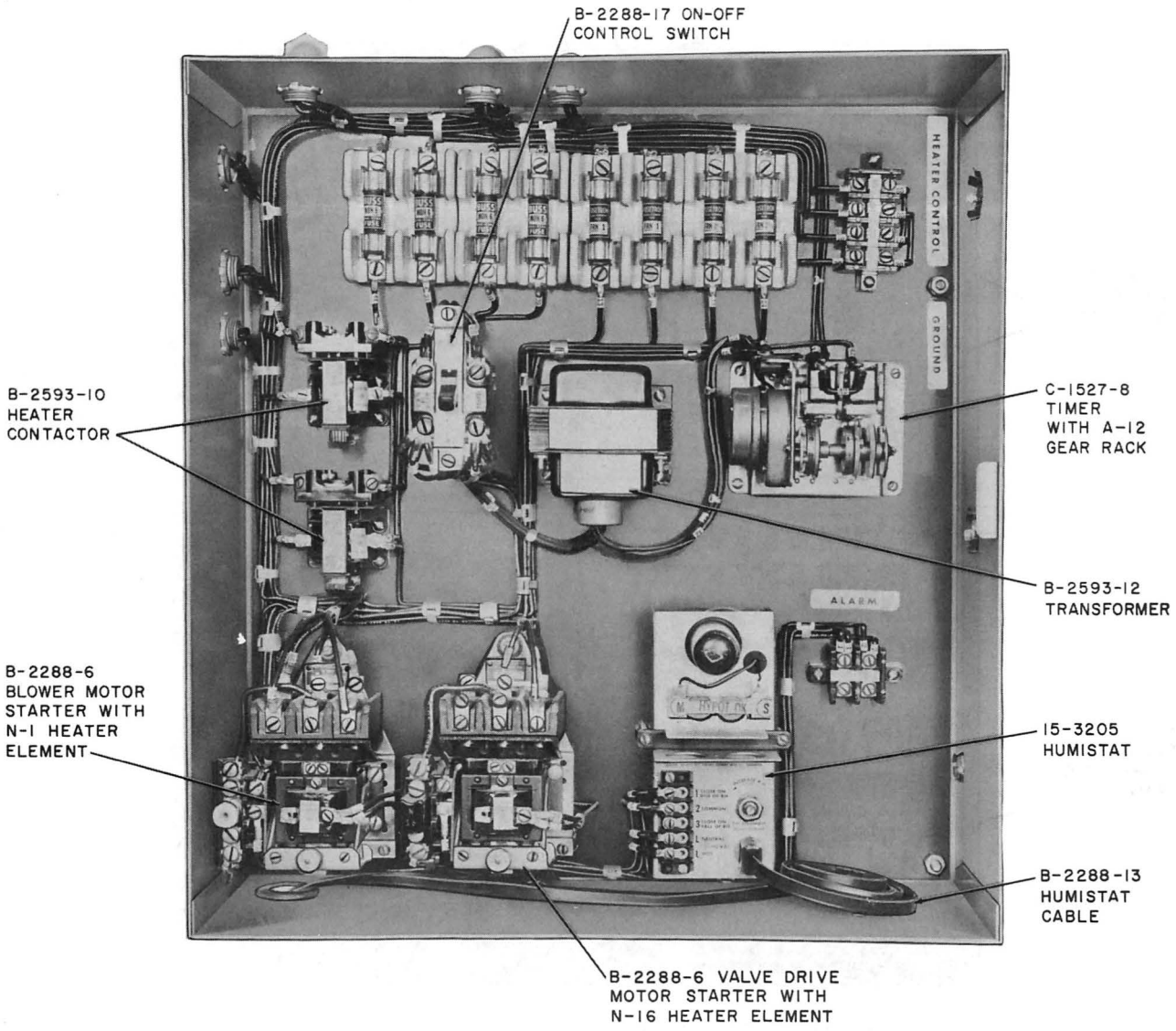

Fig. 5—KS-16153 L3 Dehydrator—Control Cabinet—Time Cycle Operation

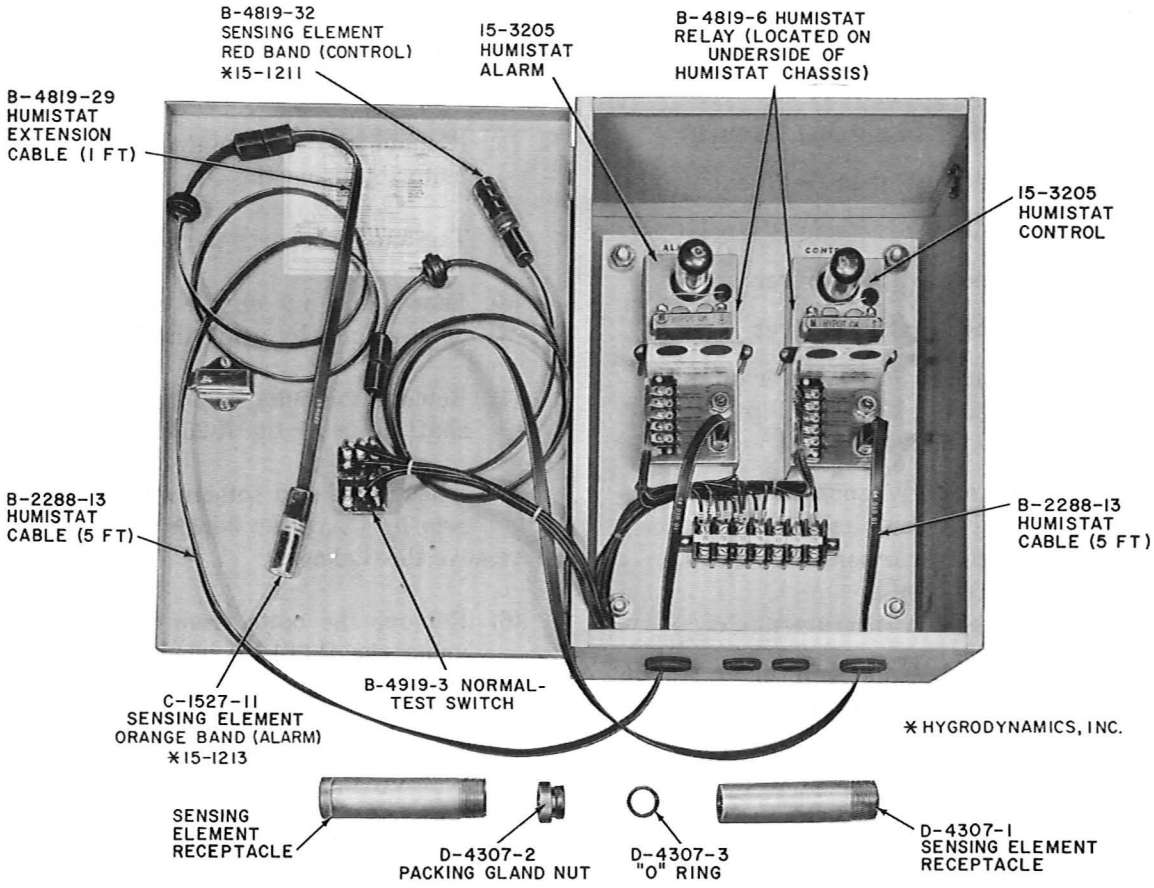

Fig. 6—KS-19553 Remote Control (Dehydrator)—Part of KS-16153 L2 Dehydrator

3. REPLACEMENT PROCEDURES

3.01 *List of Tools*

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
564A	45-Degree Offset Screwdriver
565A	90-Degree Offset Screwdriver
KS-6854	Screwdriver
R-1539	Pipe Wrench
R-1542	6-Inch Adjustable Wrench
R-2512	8-Inch Adjustable Wrench
R-2652	9-Inch Adjustable Wrench
—	3-Inch C Screwdriver
—	4-Inch E Screwdriver
—	2-Inch B Screwdriver or the Replaced No. 2 Phillips-Type Screwdriver
—	Spanner Wrench No. 4-4896A Hygrodynamics Inc or the Replaced Spanner Wrench, Cat. No. 4-4896A American Instrument Co
—	15-Inch Monkey Wrench, No. 90 Billings and Spencer Co

General

3.02 Before starting to make any replacement of parts on the dehydrator, remove the fuse designated DEHY CONT in the power supply fuse cabinet and the 15-ampere fuse in the telephone company service panel when a separate fuse is furnished for the dehydrator heaters. In general, before starting to make any replacements, it will be necessary to remove the guard screen that protects that portion of the equipment where the work is to be done.

3.03 No replacement procedures are specified for screws or other parts where the procedure consists of a simple operation.

3.04 After making any replacement of parts of the dehydrator, the replacement part or parts shall meet the readjusting requirements involved as specified in Section 161-372-701. Other parts whose adjustments may have been directly disturbed by the replacing operation shall be checked to the readjusting requirements and an over-all operational check shall be made of the dehydrator before restoring the equipment to service.

Replacement of Parts
KS-16153 L1, L2, and L3 Dehydrators

3.05 ***Valve Drive Motor:*** To replace the valve drive motor, proceed as follows.

(1) Remove the coverplate on the end of the motor by using the 4-inch E screwdriver.

(2) Tag and disconnect the wires.

(3) Loosen the nut on the conduit on the side of the motor by using the R-2512 wrench.

(4) Remove the bolts holding the linkage to the shaft by using the R-2512 wrench.

(5) Loosen the two setscrews on the operating arm by using the 3-inch C screwdriver, and remove this linkage.

(6) Remove the bolts from the motor base by using the R-2512 wrench; then remove the motor.

(7) Mount the replacing motor on its base and securely tighten the bolts.

(8) Remount the other parts in reverse order of removal.

3.06 ***Filter Canister:*** To replace the filter canister, proceed as follows.

(1) Remove the wing nut from the bottom of the canister.

(2) Remove the canister from the blower housing.

(3) Install a new or reconditioned canister.

(4) Mount the wing nut and tighten. The replaced canister should be returned to the Western Electric Company for reconditioning.

3.07 ***Blower:*** To replace the blower (including motor), proceed as follows.

(1) Remove the cover from the terminal box by using the 2-inch B screwdriver.

(2) Tag and remove the incoming wires.

(3) Loosen the conduit screw by using the 4-inch E screwdriver and remove the conduit.

(4) Remove the mounting bolts by using the R-2512 wrench and remove the blower.

(5) Remount the new or reconditioned blower to the dehydrator.

(6) Reassemble the parts in the reverse order of removal. The blower motor removed should be returned to the Western Electric Company for reconditioning.

3.08 ***Solenoid Valve:*** To replace the solenoid valve, remove the plate from the side of the valve with the 3-inch C screwdriver. Tag and disconnect the wires. Loosen the coupling nuts on each side of the valve by using the 15-inch monkey wrench. Remove the pipe connections to the valve by using the R-1539 pipe wrench. Assemble a new valve to the pipe connections. Mount the valve assembly in place and securely tighten the coupling nuts. Reconnect the wires to the terminals and remount the cover.

3.09 ***Thermostat:*** To replace the thermostat, remove the coverplate screws on the front of the thermostat by using the 3-inch C screwdriver, and remove the wires. Remove the conduit connectors by using the R-2512 adjustable wrench. Remove the thermostat from the mounting bracket. Mount a new thermostat on the mounting bracket taking care that the element extends to the bottom of the well of the tower. Reconnect the conduit connector and the wires to the terminals. Remount the cover.

3.10 ***ON-OFF Control Switch:*** To replace the ON-OFF control switch, remove the cover mounting screws with the 3-inch C screwdriver. Tag and remove the wires to the switch terminals. Using the 4-inch E screwdriver, remove the switch from its mounting. Mount a new switch on its mounting and remount the other parts in reverse order of removal.

3.11 ***Motor Starter (Valve Drive Motor or Blower Motor:*** To replace either motor starter, tag and disconnect all external leads to the starter. Remove the three screws securing the starter to the bracket by using the 4-inch E screwdriver. Mount a new starter on the bracket and tighten the screws. Connect the wires to their proper terminals.

3.12 ***Limit Switch:*** To replace either limit switch, remove the cover and disconnect the wires. Loosen the conduit nut by using the R-2512 wrench, and remove the switch. Note the position of the arm on the switch to be replaced. Mount a new switch. The trip arm of the new switch should be adjusted by loosening the setscrews that hold it in place and moving the arm to the same position as the replaced switch. Connect the conduit nut to the switch and connect the wires to their proper terminals. Remount the cover.

3.13 ***Sensing Element:*** To replace the sensing element, unscrew the packing gland nut (knurled, hex, or ring nut) from the sensing element receptacle by using the spanner wrench, R-2512 wrench, or hand pressure. Remove the sensing element. Using the 3-inch C screwdriver, remove the mounting screw from the center of the sensing element. Remove the sensing element from the cable plug. Mount the new sensing element on the cable plug. Replace the mounting screw in the center of the sensing element and thread the screw into the cable plug by using the 3-inch C screwdriver. Insert the sensing element into the sensing element receptacle, making sure the "O" ring is in place, and securely tighten the packing gland nut.

Note: When replacing the sensing elements, make sure to replace the elements with the correct color band as shown in Fig. 1 and 6.

3.14 ***Humistat Cable:*** Remove the sensing element as covered in 3.13. Using the 3-inch C screwdriver, remove the mounting screw in the center of the sensing element. Disconnect the female cable plug from the sensing element. Disconnect the male cable plug from the Humistat socket. Remove the cable from the control cabinet and remove the packing gland nut (knurled, hex, or ring nut). Install the packing gland nut over the male plug of the new sensing element cable so that the packing gland nut will mate with the sensing element receptacle. Insert the male cable plug through the hole in the control cabinet. Insert the groove pin provided in the hole located in the

center of the sensing element socket in the Humistat. Plug the sensing element cable plug into the socket; the groove pin will hold the cable firmly in place. Plug the sensing element into the female plug of the cable. Using the 3-inch C screwdriver, place the screw through the base of the sensing element and thread it into the female cable plug. Install the sensing element as covered in 3.13. Fold any excess sensing element cable in the control cabinet.

3.15 ***Humistat:*** To replace the Humistat, proceed as follows. Remove the cover, if provided, and tag and disconnect the wires from the terminal block. Remove the sensing element cable plug from the socket in the Humistat and remove the sensing element cable. Loosen the mounting screws by using the 4-inch E srewdriver and remove the Humistat. Mount the new Humistat and securely tighten the mounting screws. Insert the cable plug through the hole in the control box. Insert the groove pin provided into the hole located in the center of the sensing element socket in the Humistat. Plug the sensing cable plug into the socket; the groove pin will hold the cable firmly in place. Reconnect the wires to their proper terminals. Remount the cover where provided.

3.16 ***Heater Contactors:*** To replace the heater contactors, tag and remove the connections from the terminals. Remove the screws holding the contactor to the back of the control box by using the 4-inch E screwdriver. Install a new contactor and reconnect the wires to their proper terminals.

3.17 ***Pressure Switch:*** To replace the pressure switch, loosen the two screws on the side of the switch by using the 3-inch C screwdriver and remove the cover. Tag and disconnect the wires from the terminals. Loosen the conduit nut by using the R-2512 wrench. Remove the three mounting screws by using the 4-inch E screwdriver and remove the switch. Mount a new switch and securely tighten the screws. Reconnect the conduit nuts and connect the leads to the terminals. Mount the cover and securely tighten the screws.

KS-16153 L1 Dehydrator—Humidity Cycle Operation

3.18 ***Alarm Relay:*** To replace the alarm relay, tag and disconnect the wires from the relay terminals. Remove the mounting screws by using the 4-inch E screwdriver and remove the relay. Mount the new relay and securely tighten the mounting screws. Connect the wires to their proper terminals.

3.19 ***Time Delay Relay:*** To replace the relay, tag and disconnect the wires. Remove the mounting screws by using the 4-inch E screwdriver and remove the relay. Mount the new relay, securely tighten the mounting screws, and connect the wires to their proper terminals.

3.20 ***Sequence Relay:*** To replace the relay, tag and disconnect the wires from the relay terminals. Remove the mounting screws by using the 4-inch E screwdriver and remove the relay. Mount the new relay and securely tighten the mounting screws. Connect the wires to their proper terminals.

3.21 ***Timer:*** To replace the timer, remove the mounting screws by using the 4-inch E screwdriver and remove the timer. Tag and disconnect the wires. Connect the wires to the proper terminals on the new timer. Mount the new timer and securely tighten the mounting screws. Adjust the timer by rotating the knob until the pointer is in the same position as on the replaced timer.

KS-16153 L2 Dehydrator—Remote Control Humidity Cycle Operation

3.22 ***Time Delay Relay:*** To replace the relay, proceed as covered in 3.19.

3.23 ***Sequence Relay:*** To replace the relay, proceed as covered in 3.20.

3.24 ***Timer:*** To replace the timer, proceed as covered in 3.21.

KS-16153 L3 Dehydrator—Time Cycle Operation

3.25 ***Timer with Gear Rack:*** To replace the timer and associated gear rack, tag and disconnect the wires from the terminals. Remove the screws holding the timer to the back of the control box by using the 4-inch E screwdriver. Note the position of the cams on the timer to be replaced. Install a new timer with gear rack and securely tighten the screws. Adjust the new timer by manually rotating the knurled wheel in a downward direction until the cams are in the same position as the replaced timer. Connect the wires to the proper terminals on the timer.