



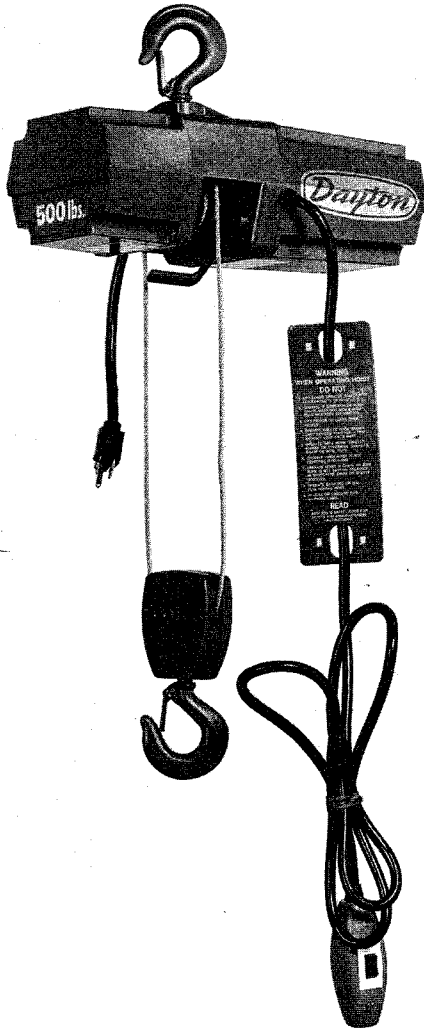
# OPERATING MANUAL & PARTS LIST

# ELECTRIC HOIST

## MODEL 2Z668

Form  
5S1206

DAYTON ELECTRIC MANUFACTURING CO. CHICAGO 60648



Model Number	Capacity	Lift Speed	Power Supply
2Z668	500 lbs.	10 FPM	115V.-60 Hz-1 Ph.

**WARNING:** The hoisting equipment shown in this bulletin should not be used to lift, support, or otherwise transport human cargo.

### HOW TO ORDER REPAIR PARTS

Please provide following information:

- Model Number
- Serial Number
- Part Description and Number as shown in Parts List.

Address order to:  
Dayton Electric Mfg. Co.  
CUSTOMER SERVICE DEPT.  
5959 W. Howard St.  
Chicago, Illinois 60648

ITEM NO.	PART NAME	QTY. REQ.	PART NUMBER	ITEM NO.	PART NAME	QTY. REQ.	PART NUMBER
1	Suspension Frame	1	33K4	32	Switch (L.S.)	1	815K5
2	Control Cover	1	36K9	33	Paddle (L.S.)	1	24K5B
3	Transmission Cover	1	35K3	34	Cable Guide	1	210K1
4	Drum	1	16K4	35	Spacer	1	127K1
5	Bottom Block Frame	2	30K4	36	Spacer	1	127K2
6	Sheave	1	28K4	37	Wear Guide Insert	1	127K3
7	High Speed Pinion	1	400K7	38	Retaining Ring	2	H-5543
8	High Speed Cluster Gear	1	406K1	39	Bearing	4	521K3
9	Intermediate Cluster Gear	1	406K2	40	Bearing	4	521K8
10	Load Brake Gear	1	403K8	41	Load Bearing	2	521K4
11	Brake Assembly	1	586KG1	42	Woodruff Key (Drum)	1	H-4355
12	Output Gear	1	405K5	43	Woodruff Key (Output Gear)	1	H-4356
13	Thrust Washer	6	255K1	44	Screw	4	H-1841-P
14	Thrust Washer	4	255K2	45	Lockwasher	4	H-4061-P
15	Drum Shaft	1	132K4	46	Screw (Bottom Block)	2	H-2743-P
16	Drive Coupling	1	107K5	47	Dowel Pin	1	H-5387
17	Cable Assembly	1	19K301	48	Pin (Hook)	2	H-5159
18	Hook With Latch	2	3K35	49	Plug	1	H-6259
19	Hook Collar	2	124K2	50	Latch Kit	2	H-7549
20	Nameplate (U.L.)	1	674K1	51	Dowel Pin	2	H-5383
21	Pushbutton Station Assy. (Consists of item nos. 22 thru 27.)	1	534KG30	52	Set Screw	1	S-7-121
22	Pushbutton Enclosure	1	PB-48-R	53	Screw	1	H-2742-P
23	Pushbutton Enclosure	1	PB-48-L	54	Washer	1	H-4004-P
24	Rocker Switch	1	4K1	55	Screw	2	H-2744-P
25	Pushbutton Cord Assembly	1	936KG9	56	Spring	2	X-3500
26	Screw (P.B.)	2	H-2967	57	Splice Connector	2	H-5757
27	Flexloc Nut (P.B.)	2	H-3972	58	Warning Label	1	687K3
28	Power Cord Assembly	1	951KG2	59	Overwrap Warning Label	1	687K5
29	Motor	1	861K350	60	Lubricant (/lb.)		H-7673
30	Capacitor	1	810K1	61	Nameplate (Cap.)	2	675K57
31	Insulator	1	759K1	62	Jumper Wire	1	JF-940-32
				63	Cotter Pin	1	H-5021-P

ORDER BY PART NUMBER AND GIVE SERIAL NUMBER OF HOIST WHEN ORDERING PARTS.

## I. SAFETY PRECAUTIONS

This hoist is designed for safe operation within the limits of its rated capacity. There are safety features built into the hoist to protect the operator and others from injury due to failure of the hoist itself. However, listed below are safety pointers which must be followed in order to protect personnel and property.

1. Align hoist for a straight line pull. Avoid side pull or end pull.
2. The limit switch is an emergency device. Do not use limit switch to stop the hoist in normal operation.
3. Do not operate hoist with twisted, kinked or damaged wire rope.
4. Do not operate a damaged or malfunctioning hoist until necessary adjustments or repairs have been made.
5. The supporting structure should have a load rating at least equal to the hoist.
6. Do not lift more than the rated capacity of the hoist.
7. Do not leave a load suspended in the air unattended.
8. Avoid jogging controls or quick reversals of load.
9. Always remove load and disconnect hoist from power supply before making repairs.
10. The operator should not engage in any practice which will divert his attention while engaged in operating the hoist.
11. Before starting the hoist, the operator should be certain that all personnel are clear.

## II. INSTALLATION INSTRUCTIONS

### 1. GENERAL INSTRUCTIONS

- a. The power supply should be within plus or minus 10% of 115 volts.
- b. Pushbutton station, brake and limit switch should be tested by the operator before beginning a shift. If these controls not operate properly, they should be repaired or replaced before operations are started.

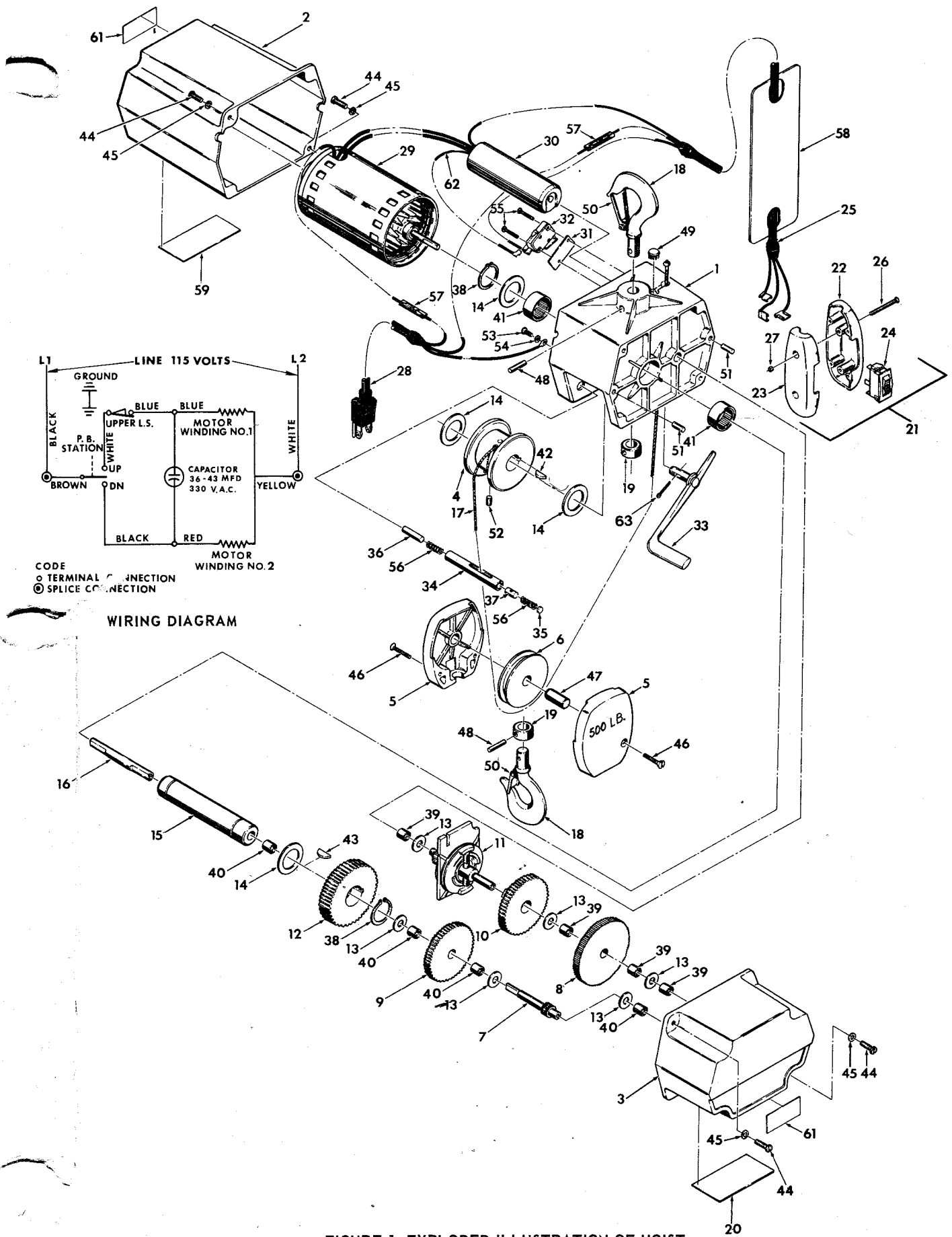


FIGURE 1. EXPLODED ILLUSTRATION OF HOIST

## II. INSTALLATION INSTRUCTIONS (Cont.)

### 2. LIMIT SWITCH OPERATION

Before placing the hoist in operation, check for proper upper limit switch operation. Push the "UP" button and, while the hook is moving upward, raise the limit switch paddle (item 33, figure 1). The hook should stop immediately. **DO NOT OPERATE THE HOIST IF THE LIMIT SWITCH IS NOT OPERATING PROPERLY.**

### 3. BRAKE OPERATION

**NOTE:** Run in hoist with a light load a few times before lifting the rated load (500 pounds). After lifting a light load a few times, test the hoist by lifting 500 pounds.

Check for load hook drift with 500 pounds on the hook. If hook does not stop within one to two inches when pushbutton is released it may be necessary to replace the brake assembly.

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## III. OPERATION

### 1. OPERATING RECOMMENDATIONS

The hoist is designed for intermittent duty only. Total on-time should not exceed six minutes per hour (10% duty cycle). Extended duty cycles or excessive jogging of the hoist will result in premature motor failure.

### 2. HANDLING THE LOAD

**CAUTION:** Do not exceed the rated load of 500 pounds.

#### a. Attaching the Load

- (1) The hoist rope should not be wrapped around the load.
- (2) The load should be attached to the hook by means of slings or other appropriate devices which should be seated properly in the saddle of the hook before operation.

#### b. Moving the Load

- (1) Before starting to hoist, the rope should be properly seated on the drum and sheave. The rope should not be kinked or twisted.
- (2) The operator should inch the hoist into engagement with the load, and avoid unnecessary stops and starts.
- (3) The load should not be lifted more than a few inches until it is well balanced on a sling or lifting device.
- (4) The operator should test the brake each time a load approaching the rated load is handled by raising the load just enough to clear the floor or supports, and check for brake action. The lift should be continued after the operator is assured the brake is operating properly.
- (5) Never lower the hook with a load beyond the point where less than two wraps of rope remain on the drum.
- (6) Do not reverse wind cable on drum.

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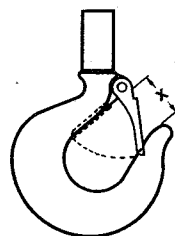
## IV. INSPECTION

Inspection procedures are divided into three general classifications based upon the intervals at which inspection should be performed. Deficiencies should be carefully examined and corrected. The intervals between inspection will vary due to operating conditions. If the hoist is used more than 40 hours per week or under adverse environmental conditions, it should be inspected more frequently.

### 1. DAILY INSPECTION

Inspect the following items daily before operating hoist.

- a. Check pushbutton station, brake and limit switch for proper operation. See paragraphs II.2. and II.3.
- b. Check hooks for deformations, chemical damage or cracks. Bent hooks or hooks damaged from chemicals, deformation, cracks or having more than 1 inch throat opening (see figure 2) should be replaced.
- c. Check wire rope for wear, twist or distortion.
- d. Check for damaged or improperly working hook latch.



NORMAL "X"	REJECT "X"
7/8"	1"

FIGURE 2. HOOK REPLACEMENT

is

## IV. INSPECTION (Cont.)

### 2. QUARTERLY INSPECTION

Inspect the following items at 90-day intervals.

- a. Check all items under daily inspection.
- b. Check for loose bolts, screws and nuts.
- c. Inspect drum and sheave for cracks and excessive wear.
- d. Inspect for worn, corroded, cracked or distorted parts.
- e. Check electrical parts, limit switch and pushbutton station.

### 3. ANNUAL INSPECTION

Inspect the following items annually.

- a. Check all items under daily and 90-day interval inspection.
- b. Check hooks for cracks by means of a magnetic particle test or other suitable crack detecting test.
- c. Inspect for worn, corroded, cracked or distorted parts including pins, bearings, shafts and gears.
- d. Inspect supporting structure and trolleys (if used) for continued ability to support the imposed loads.
- e. Check brake for worn disc and pressure plate.

## V. MAINTENANCE

### 1. BRAKE

When the brake does not function properly as described in paragraph II.3., replace the entire brake assembly (item 11, figure 1).

**CAUTION:** Keep brake surface and lining free of grease.

### 2. CABLE ASSEMBLY REPLACEMENT (See figure 1.)

- a. Loosen set screw (52). Remove worn cable assembly (17) by pulling cable from drum (4) through cable guide (34) and sheave (6) and through top of suspension frame (1) after removing plug (49).

**NOTE:** Bottom Block (5) should be disassembled by removing two screws (46) for installation of new cable.

- b. Install new cable as follows:

- (1) Insert plain end of cable assembly through opening provided in suspension frame (1) and pull cable through frame until swaged ball is seated in frame. Replace plug (49) in top of suspension frame.
- (2) Reeve cable around sheave (6), and assemble bottom block (5) with two screws (46).
- (3) Position drum (4) as shown in figure 1 and push cable through cable guide (34) and through top opening in drum and back through bottom opening in drum.
- (4) While holding cable in place, tighten set screw (52) to 25 in. lbs. torque.

### 3. LUBRICATION

- a. Gears

The gear housing is adequately packed at assembly with Sunaplex 781 permanent type lubricant. If housing is opened, regrease very lightly with Sunaplex 781 or equal. Brush on enough grease to fill gear tooth spaces.

**CAUTION:** Keep brake surface and brake lining free of grease.

- b. Drum Shaft

Apply a small amount of grease to drum shaft (15) and thrust washers (13 & 14).

- c. Load Block and Suspension

Oil sheave pin (47) in load block. Oil shank portion of both top and bottom hooks, allowing oil to run down and onto hook collars.

- d. Cable Assembly

Clean cable assembly every 30 days and apply a light coat of oil.