

THE WONDERFUL WORLD OF
INTERNATIONAL
AMUSEMENT

DEVICES, INC.

MFG: INTERNATIONAL
AMUSEMENT DEVICES
NAME: KIDDIE FERRIS WHEEL
TYPE: KIDDIE

CARNY TOWN.COM

OPERATIONS
AND
MAINTENANCE MANUAL
KIDDIE FERRIS WHEEL



"THE INTERNATIONAL GROUP"

P. O. Box 1320 • 155-157 Columbus Avenue • Sandusky, Ohio 44870 • (419) 627-8663 • TEL/FX 985370

KIDDIE FERRIS WHEEL

Special Loading Procedure Figure 1.

Lubrication check sheet drawing Figure 2.

Hydraulic schematic drawing & parts list Figure 3 & 4.

Electrical schematic & equipment list Figure 5, 6 & 7.

Recommended Lubricants:

Marpack grease - Texaco

Shell Tellus Hydraulic Oil - Shell

Recommended Hydraulic Oil equivalent:

Shell - Shell Tellus 68 - warm weather

Shell Tellus 46 - cool weather

Texaco - Rando HD 68

Mobil - DTE 26

Design speed no more than 4 RPM.

OPERATING INSTRUCTIONS

It is recommended that the daily setup and testing be accomplished prior to opening the ride for guest operation. To verify all functions are safely performed, proceed in the following manner:

VERIFY THE FOLLOWING:

- A. Daily maintenance and inspection has been performed and checklist signed off.
- B. Gondola doors are closed and locked in position.
- C. No loose objects are located on the main arm, ride head, gondola sweeps or in the gondolas.
- D. No personnel are located in a position where ride will hazard their safety.
- E. No cables, tree limbs, power cords, trucks, etc. are positioned such as to impact the ride during its operation cycle.

DAILY STARTUP:

PARK MAINTENANCE PERSONNEL ONLY.

After verifying the above proceed as follows:

1. Proceed to main breaker and turn on.
2. Turn on the accessory lights, if ride is lighted.

NOTE: If there are any bulbs out, refer to shutdown procedures and shutdown ride before leaving control panel to change bulbs.

3. Proceed to control console and turn on key switch to "ON". This will turn on hydraulic pump and lights and can be heard as a hum.

NOTE: If power will not come on, stop all operation until maintenance personnel have corrected the problem.

4. Verify the hydraulic motor is "ON".

NOTE: If there are any bulbs out, refer to shutdown procedures and shutdown ride before leaving control panel to change bulbs.

5. Slowly activate hand valve to start ride. Ride will cycle as long as desired. To stop ride, close the hand valve.
6. Recycle the ride per step five (5) as directed by normal operating procedures.
7. An emergency stop button has been provided in case all other control is lost. Use if necessary.

SHUTDOWN:

1. Turn off key switch and remove key. Verify the hydraulic motor is "OFF".
2. Proceed to the main disconnect and switch to the "OFF" position.

GUEST OPERATION

Recommended method only - Refer to park operational manual for daily operation instructions.

Repeat steps 1 - 4 of daily startup and testing procedure and proceed as follows:

1. Allow correct number of guests to enter the fenced-in ride area and close entrance gate. Refer special loading procedure for Kiddie Wheel (see Figure 1).
2. After guests are seated verify that door is closed and locked.
NOTE: The door requires a positive downward force on the latch mechanism to lock. Always verify the latch is in lock position.
3. Verify that no one is in the fenced-in areas who is not seated in the ride.
4. Index the ride to next position per attached loading diagram (Figure 1).
5. Repeat steps 1 - 4 until ride is loaded.
6. Watch all ride functions and be prepared to stop ride if necessary.
7. When ride is fully loaded it is normally run for a few revolutions and then unloaded.
8. When ride has stopped, open door, load, unload and reload in same order. Verify that all guests have left the fenced-in area.
CLOSE EXIT GATE.
9. Open entrance gate and repeat steps 1 - 5.

NOTE: In case of electrical failure, open hydraulic control lever on control panel to relieve hydraulic pressure and pull gondolas around by hand to unload.

SERVICE INSTRUCTIONS AND CHECK LISTS

The following service instruction check lists are provided to outline maintenance procedures and provide retainable daily/weekly/yearly maintenance records.

It is highly recommended that copies of these sheets be provided to maintenance personnel for signoff and return to buyers maintenance record keeping function.

The daily sheets will provide an overall view of possible problems indicated by bolts loose or keys missing in one location repeatedly. If such an indication appears, the Chief of Maintenance should be notified for corrective action.

NOTE: International Amusement Devices, Inc. considers it mandatory that electrical/electronic, consoles/controls be serviced ONLY by authorized permanent maintenance personnel, as directed by the Chief of Maintenance ONLY.

Performed by _____

Date _____

DAILY MAINTENANCE RECORD

DATE _____

Refer to Figure 2 - 7

EQUIPMENT REQUIRED:

- A. Rags
- B. Set of open and box-end wrenches
- C. Grease gun with grease
- D. Approved hydraulic oil (as specified)

PERFORM THE FOLLOWING STEPS:

1. Completely clean ride being sure to remove all dirt, oil and excessive grease. Inspect for possible damage such as broken or in-operative retaining systems, broken or cracked fiberglass. Repair all problems prior to opening the ride for guest operations.

REPORT PROBLEMS:

2. Verify all nuts and bolts are tight. If a bolt is found to be loose, re-tighten per torque standard procedures. (See torque spec. sheet in back of manual).

REPORT LOCATION ON LOOSE BOLTS:

3. Verify that all cotter keys are present and correctly installed. If missing keys are noted, replace with correct size.

REPORT ALL FINDINGS:

Daily Maintenance Record - page 2

3. Verify that all cotter keys are present and correctly installed. If missing keys are noted, replace with correct size.

REPORT ALL FINDINGS:

4. Inspect all bearing surfaces for wear. If problems are discovered, take appropriate action.

REPORT FINDINGS:

5. Lubricate (grease) all zerk fittings (grease nipples) on the ride. Verify that all fittings are accepting grease as specified. Wipe excess grease from nipples. Replace any broken nipples and any nipples not accepting grease or not retaining grease. Figure 2.

REPORT FINDINGS:

6. Inspect oil systems site gauges: refill if necessary. Check all hydraulic connections and verify no excessive leakage is present. NOTE: If not able to maintain oil level in pump site gauge, REPORT IMMEDIATELY. Report leakage problems and amount of oil required to refill the tank, and/or head.

REPORT FINDINGS:

7. If your ride is equipped with lights, check all electrical connections, car to arm lights, arm light to main arm and verify correct. Report broken or cracked wires or connectors.

REPORT FINDINGS:

8. Check all facade for correct position and maintain tightness.

REPORT FINDINGS:

9. Check secondary safety system cable etc. for satisfactory connections.

REPORT FINDINGS:

ACCEPTED BY _____

DATE _____

WEEKLY SERVICE INSTRUCTIONS

DATE _____

1. Repeat daily service instructions check list.
ALL ITEMS. Attach to the sheet.

2. Verify that no more than 2 months have passed
since last filter change.

If time above had elapsed, change filter.

NOTE: It is recommended that the filter be
changed after the initial 2 weeks of operations
and then at a maximum interval of 2 months.

NOTE: Filter change performed

DATE: _____

REPORT FINDINGS:

ACCEPTED BY _____

DATE _____

PERFORMED BY _____

DATE _____

International Amusement requires copies of all weekly
service reports with attachments to be sent to P.O.
Box 1320 Sandusky, Ohio 44870.
Please send promptly.

YEARLY SERVICE AND INSPECTION PROCEDURES

DATE _____

1. Perform daily service/maintenance.
2. Perform weekly service instructions.
3. Remove and replace hydraulic oil in motor and tank.
Allow oil to drain from all hoses, etc. Completely clean tank and strainer prior to refilling.
CAUTION: After refill be sure that pump(s) is operating correctly and oil is being pumped, so no damage will occur to pump.
4. During the off season or twice yearly (year round park operation) all welds, bearing surfaces and secondary safety systems must be inspected for cracks or possible problems using an inspecting method conforming to local standards (i.e. ultra-sonic or x-ray in conjunction with magnaflux).

Please attach this report to the yearly inspection sheet and send copies to I.A.D.I. via CERTIFIED MAIL.

ACCEPTED BY _____

DATE _____

I.A.D.I. Notification

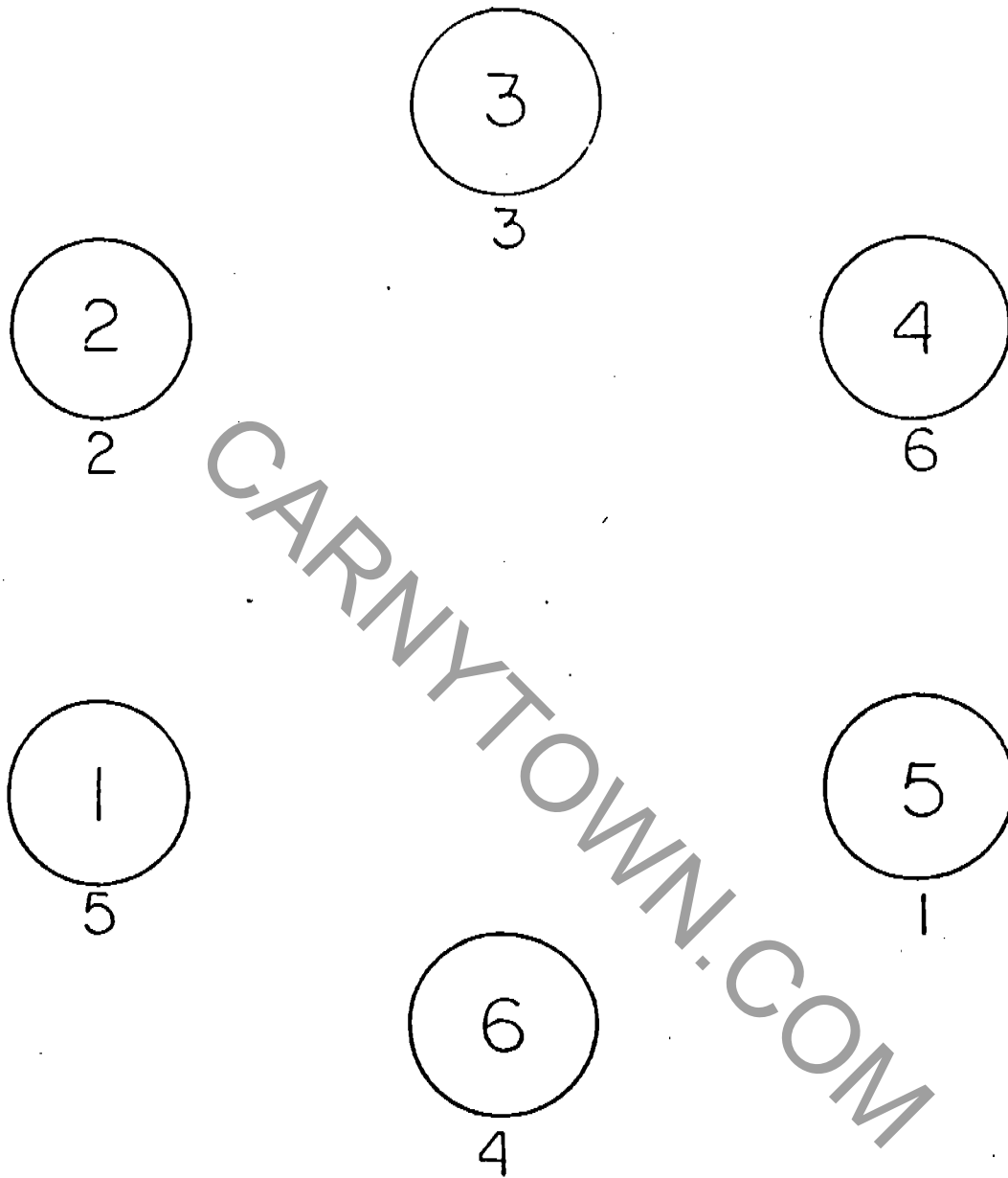
Performed Date _____

Certified No. _____

PERFORMED BY _____

DATE _____

SPECIAL LOADING PROCEDURE FOR KIDDIE WHEEL



Numbers below circles denote loading sequence.

Figure 1

Dept. of Engineering

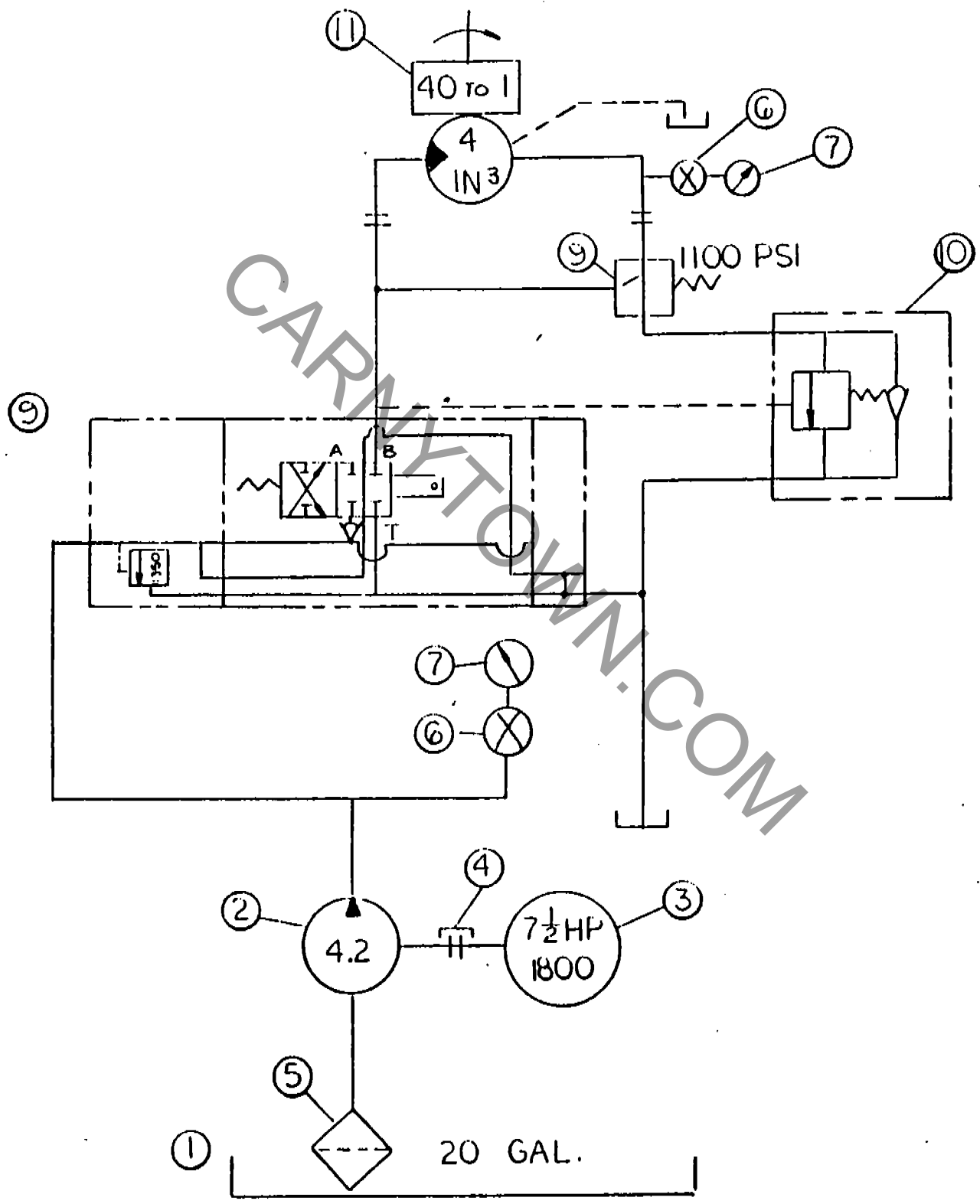
INTERNATIONAL
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KIDDIE FERRIS WHEEL HYDRAULIC SYSTEM PARTS LIST

- 1A. RBU-20 Racine 20 gallon reservoir
- 1B. HSC-B-20-5D reservoir cover
- 2A. 1P-3028-CP5JB Dowty gear pump
- 2B. PVQ-06-20B-B108 mounting flange
- 2C. 6405-10-0 port adapter
- 2D. 6405-12-0 port adapter
- 2E. 449624 3/4" pump riser
3. 7½ hp. - 1800 RPM. - T.E.F.C. motor 230/460 V.
- 4A. #300 Magnalox coupling
- 4B. 449768 coupling guard
5. 448322 submerged suction strainer
6. 434442 ½" shutoff valve (2)
7. 432740 0-3000 psi. - 2½ inline gauge (2)
8. Racine 3/8" fourway stackable valve with:
 1. ML15-P-2TBB inlet manifold relief
 2. ML15-W-2FBF-AS fourway valve - male spool end
 3. ML15-E-2TO outlet manifold
 4. 6405-10-0 port adapters (4)
 5. TRK-15-3 tie rod kit
9. #FE1-PBEH-T06H relief valve
10. 25725-4Y-2 holding valve
11. Washington Scientific Hydraulic Motor & Gearbox
with 2 3/8 keyed shaft #RSA-04-3R50-N
12. 6405-12-0 port adapters (2)

KIDDIE WHEEL HYDRAULIC



Dept. of Engineering

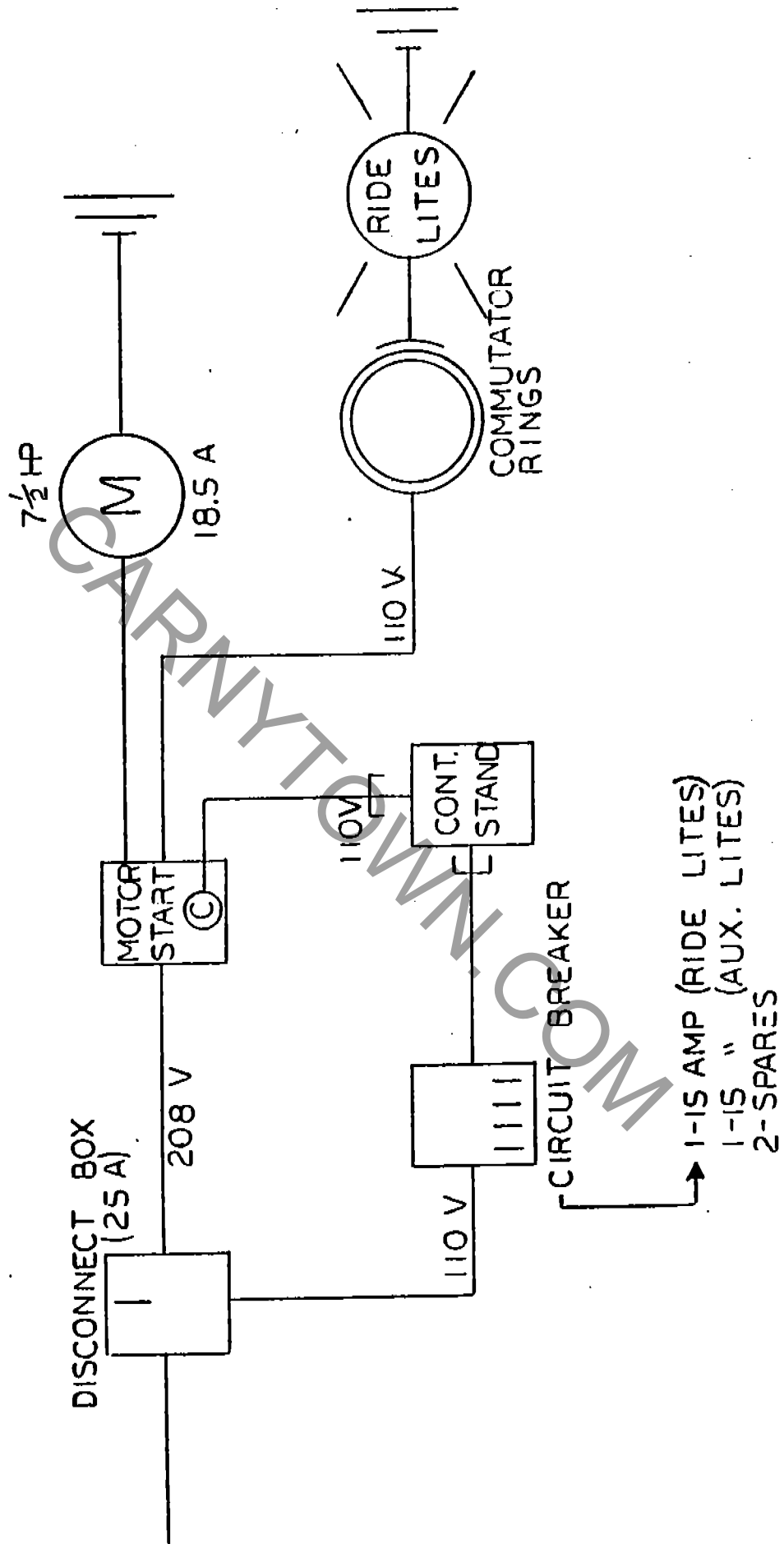
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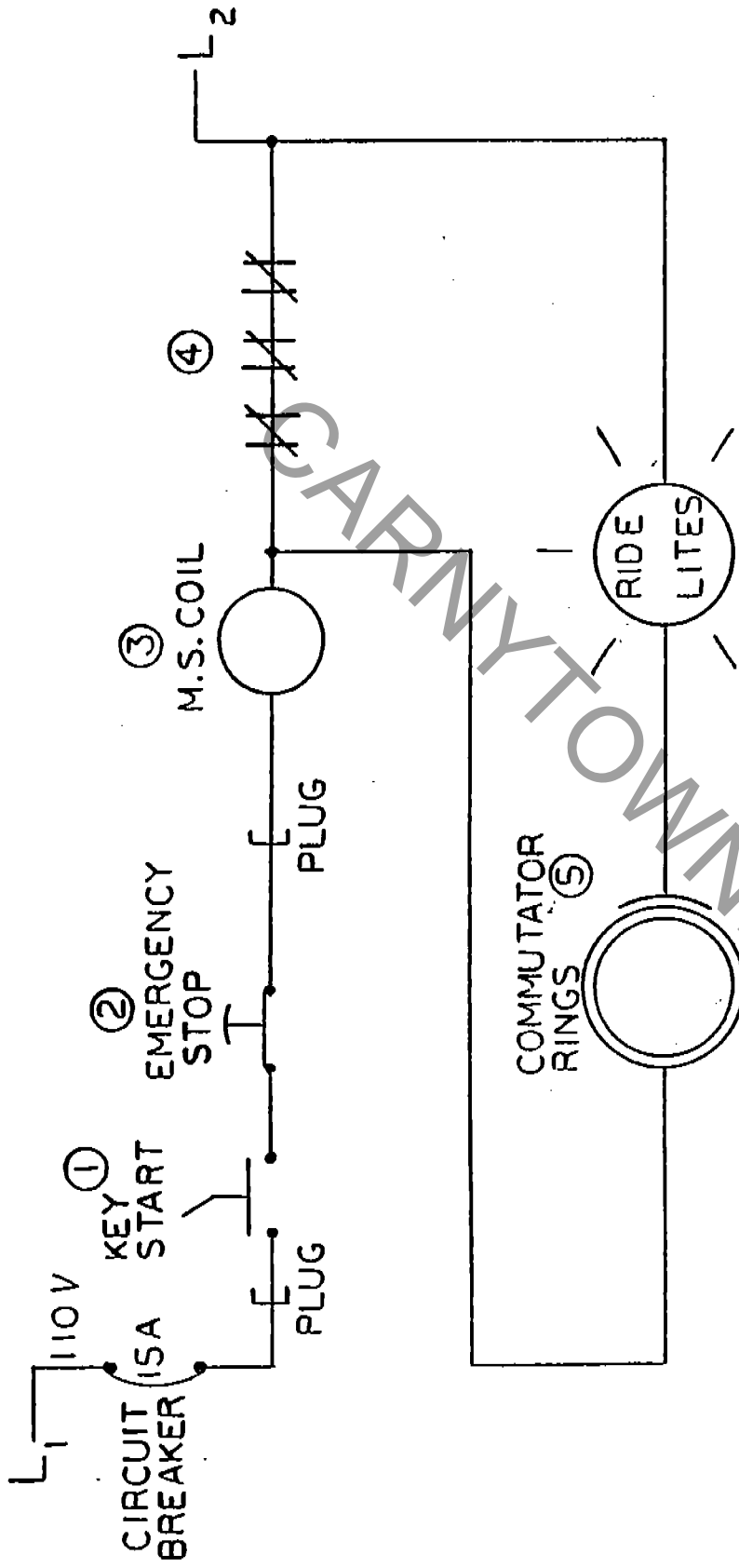
ELECTRICAL

1. KEY SWITCH 2 POSITION 800T-H33A
2. EMERGENCY STOP 800T-D6A
3. 7½ HP 230 V MOTOR STARTED WITH 110 COIL NEMA 4
709-BCD
4. HEATERS N-39
5. COMMUTATOR RINGS INSUI-8
#23642-RINGS (30")
#11961-SCRUBBERS
#11289-FEED
#11287-CLAMPS

NOTE: ALL COMPONENTS ARE ALLEN-BRADLEY BRAND



ELECTRICAL LAYOUT



ELECTRICAL SCHEMATIC

TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
1. Ride does not move	1. Electric motor not running	1a. Main power off 1b. Blown fuses 1c. Key switch turned off
	2. Hydraulic system malfunction	2a. Low oil level 2b. Manual control valve not shifting 2c. Hydraulic pump - electric motor coupling not engaged 2d. Suction strainer clogged 2e. Hydraulic pump running in reverse
	3. Main shaft coupling	3a. Remove coupling cover and check flex-grid
2. Hydraulic oil hot	1. Pressure adjustments	1a. Check setting and adjust
	2. Poor ventilation to reservoir	2a. Insure hydraulic reservoir is clean and free of debris
3. Speed incorrect	1. Incorrect adjustments (contact manufacturer)	1a. Check relief valve adjustment
		1b. Check manual valve adjustment
4. Gondola door won't stay shut	1. Door latch not shut	1a. Insure latch is snapped into full locked position
5. Lights	1. Electric problems	1a. Commutator rings dirty or bent
		1b. Circuit breaker tripped
		1c. Light bulb burned out
6. Noises	1. Lack of lubrication	1a. Grease all bearings
	2. Hydraulic system sucking air	2a. Check for pump cavitation or loose hose connections
	3. Low oil level	3a. Check oil level
	4. Drive coupling makes clicking sounds	4a. Lubricate coupling