ALLAN HERSCHELL

CHANCE MANUFACTURING CO., INC.

Number: 29
Date: 12-7-72

Superceeds: -
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Date: February 1966

Service Information

Ride: STAR JET RIDE

Subject: ERECTION AND CARE

REFERENCES:

Blueprints SJ-101 Assembly Drawing
SJ-100P Parts Numbers Drawing
HC-153 Hydraulic Circuit Drawing
KT-101 Foundation Drawing
SJ-1 Wiring Diagram
HC-215 Oil Cylinder
Waterman Valve Print
Link Belt Parts List
Cutler Hammer Brake Information
Electric Circuit Diagram and
Electrical Spec. Sheet
Packing List

Service Bulletins: Winter Storage
Lift Cylinders

Pamphlet: "Keeping Hydraulic Systems Clean"
Installation of Wesche Collector Ring

ERECTION AND CARE OF STAR JET RIDE - MODEL "C"

1. Refer to print SJ-101 for general arrangement of parts and to print SJ-100P for part number identification and lubrication instructions.

2. Select a spot that is reasonably level, especially for the center of the ride and the platform assembly. Regrade if necessary.

3. Place the center drive assembly into position so that the motor extension cords will run in the direction of the switch box to suit operator's convenience.

4. Level the center drive assembly by placing the level in tool box on top of the beams and using the four adjusting screws and ground plates. Tighten lock nuts.

5. Attach four platform tie rods to center base with bolts and lock nuts, with numbers on tie rods matching numbers on center base.

6. Assemble eight sweeps to center with shafts and safety pins. The numbers on the sweeps must match the numbers on the center drive unit.

7. Attach eight pull rods to hydraulic cylinders with tapered pins and safety pins. Hook the spring end of the pull rods into the ears on the sweeps, with the grease fittings up.

8. Assemble loading platform using taper pins and safety pins to lock in place. Add screw jacks at platform splices. Platforms are numbered.

9. Assemble Star Jet cars to sweeps with vehicle pins and safety pins. Adjust nut on pull rods to obtain a 10" clearance between bottom of car and platform. On Basic Ride hold 12" to ground.

10. Attach cables from cars to levers on hydraulic cylinders after transferring the valves from their shipping mounts to mounting brackets on top of sweeps.

11. Attach 4 light poles by driving tapered pins into pipe locks. Assemble switch box to lightpole, matching numbers on light poles to numbers on platforms.

12. Connect twist lock jumper cords from motor, light poles and magnetic valve.

13. Erect chain fence with numbers on fence posts matching numbers on platform. Outlet and inlet to ride can be located in any of four places.

14. Check to see that all safety pins are in place and that all set-screws are tight.

15. Lubricate the entire machine, with the exception of the reducer. Use Socony PD-1020A or Shell Retinax "A" (in tool box) on gear drive. When located near salt water, use Fiske Bros. Lubriplate #630AA.

(A) Grease lower bearing (6 fittings) daily. Also see sheet #5.

(B) Lubricate with grease gun once a year the top ball bearing. This requires removal of top aluminum rain cover for easy access.

(C) Oil and grease sweep pins and tension rod sleeve weekly. Check dwg. JS-100P for further and more detailed lubrication instructions.

(D) Use Mobil MP Grease or King Graphite Prod. KPG-24. It is more important that commutator rings (under rain cover) be kept clean. Brushes should be kept clean and free to slide in brush holder under spring pressure. Replace when worn or will not operate.

16. FLUID DRIVE UNIT

At the Allan Herschell factory, the fluid drive sheave is given the proper amount of a premium grade of SAE 10@ oil. A change of oil is

necessary every five years unless excessive slippage indicates that an earlier change is necessary. Check oil level yearly. A slippage of 85 RPM between RPM of motor and the RPM of hydrosheave is considered standard. The hydrosheave bearings are lubricated for life.

The fluid sheave has the correct quantity of oil when it is positioned with its 2½" marking at the top center position which places the plug opening off center. Fill with proper fluid until oil tends to run out plug opening. Then replace pipe plug. Use gasket compound on plug threads.

17. VERTICAL SHAFT WORM REDUCER U-300 (CEILING MOUNTED)

(A) Follow instructions on nameplate, using 600W in warm weather and 1/2 of SAE #40 and 1/2 of 600W in cold weather. Maintain proper level.

(B) Drain and refill after first 150 hours of operation.

(C) Keep breather fitting clean and open.

In locations where 600W is not available, have your local supplier recommend a substitute.

During cold weather testing of these rides, the 600W is too heavy which throws an overload on the motor for starting after the machine has set idle for some time. In case this happens, start the ride, giving it a little help to get it up to speed and run it for 15 minutes. After this, it will be free to run normally.

18. Check the "V" belts on the drive for proper tension. When new, adjustment should be made frequently until the initial stretch has been taken up. These are not to be too tight and need very little attention during the season. CAUTION: Any adjustment of the belt drive should be done with motor. Do not change the position of the gear reducer, except to remove excessive backlash between pinion and ring gear. Slide the pump base only to remove looseness in "V" belts between pump and motor.

19. CURRENT SUPPLY AND WIRING

RIDES ARE WIRED AS FOLLOWS: SEE WIRING DIAGRAM SJ-1

1. When customer orders for 1 phase, 3 wire, 115/230 volt supply, wiring is completed by us within the switchbox, for a single current supply by customer.

2. When customer orders for 3 phase, 4 wire, 208/120 supply, wiring is completed within switch box for a single current supply by customer

3. When customer orders for 3 phase, 3 wire, 220 volt motor supply, a separate lighting supply must be provided of 115/230 volt, 3 wire, single phase. Wiring is completed

within box for these two separate supplies by customer.

ADEQUATE VOLTAGE MUST BE MAINTAINED WITHIN 10% AT ALL TIMES.

20. OPERATING INSTRUCTIONS

(A) Move safety switch to "ON" position. This is normally left "ON" during the day's operation. (For quick stopping of ride in an emergency, move to "OFF" position).

(B) Move main dump valve switch to "ON" position. (This is a black handled switch located about 3" below timer switch and permits ride operator to lower cars during rotation of ride).

(C) Move timer to "ON" position, causing ride to rotate only.

(D) After 10 seconds, PRESS the push button of the dump valve switch to "ON". (This push button switch is located to the right of the jog switch). This will make all pressure available to cylinders. The riders may then pull the lap bars to go up or push the lap bars to go down.

(E) If a ride doesn't start, check the fuses.

(F) Always use the timer delay type of fuses.

Cable adjustments may become necessary if the riders cannot rise after pulling on the lap bar. Eyebolts with long threaded shanks and jam nuts are provided for adjustment when necessary. Turning the eye bolts farther into the levers and tightening the jam nuts should overcome the difficulty.

STAR JET RIDE

MAINTENANCE OF HYDRAULIC SYSTEM

In the tool box is an extra coil for the solenoid of the dump valve. If the ride won't come down at operator's demand, the cause is most likely to be a burned out coil, due to low voltage, or a sticky valve and dirty oil. We suggest immediate replacement of coil. Also, check the power supply line for low voltage and the condition of the oil.

The pressure gauge and pressure relief valve are furnished so that excessively high working pressures will not be imposed upon the motor and other parts of the hydraulic system. If the oil pressure in the system is too low, the vehicles will not rise. A gauge setting of 680# is recommended as sufficient for even the heaviest loads. To check system pressure, open petcock at gauge. If necessary, the system pressure can be changed by operating the relief valve handle. Always turn off petcock after reading to prevent damage to gauge.

The intake oil filter and the air filter should be inspected and cleaned frequently, depending upon local conditions.

If the oil in the 50 gallon tank has become dirty, we suggest replacing it with 45 gallons of Socony DTE light oil, maintaining oil level between high and low marks on dipstick. If oil has become excessively dirty, drain the system, remove suction and discharge pipes from top of tank. Flush inside surfaces of tank with kerosene to remove sludge before refilling tank.

If it should ever become necessary to replace or repair any part of the hydraulic plumbing system, disconnect to the large suction and return hoses at the top of the oil tank. This will eliminate a syphon effect and prevent all the oil in the tank from draining out on the ground.

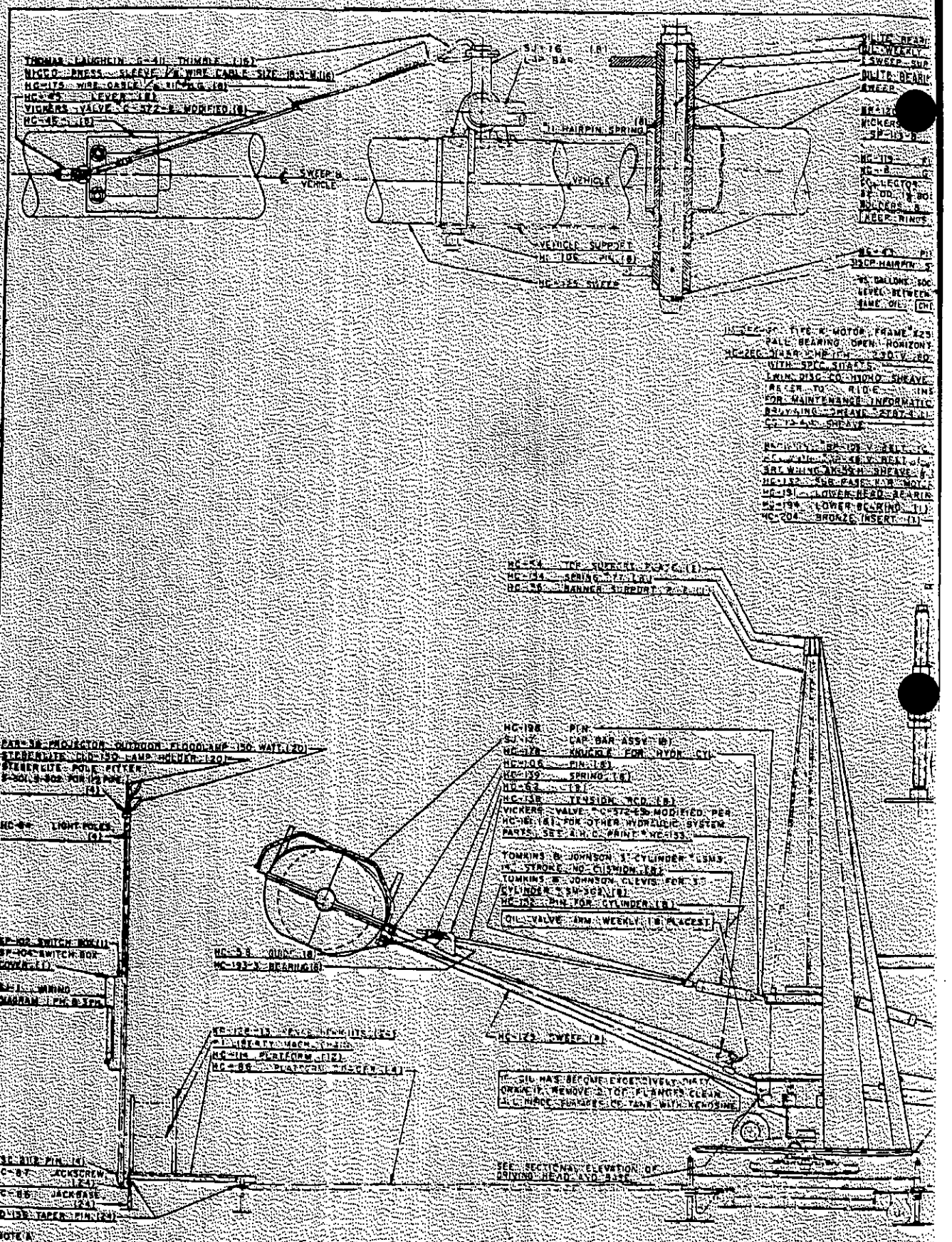
Keep valve closed except when reading gauge pressure. This will prolong the life of the pressure gauge.

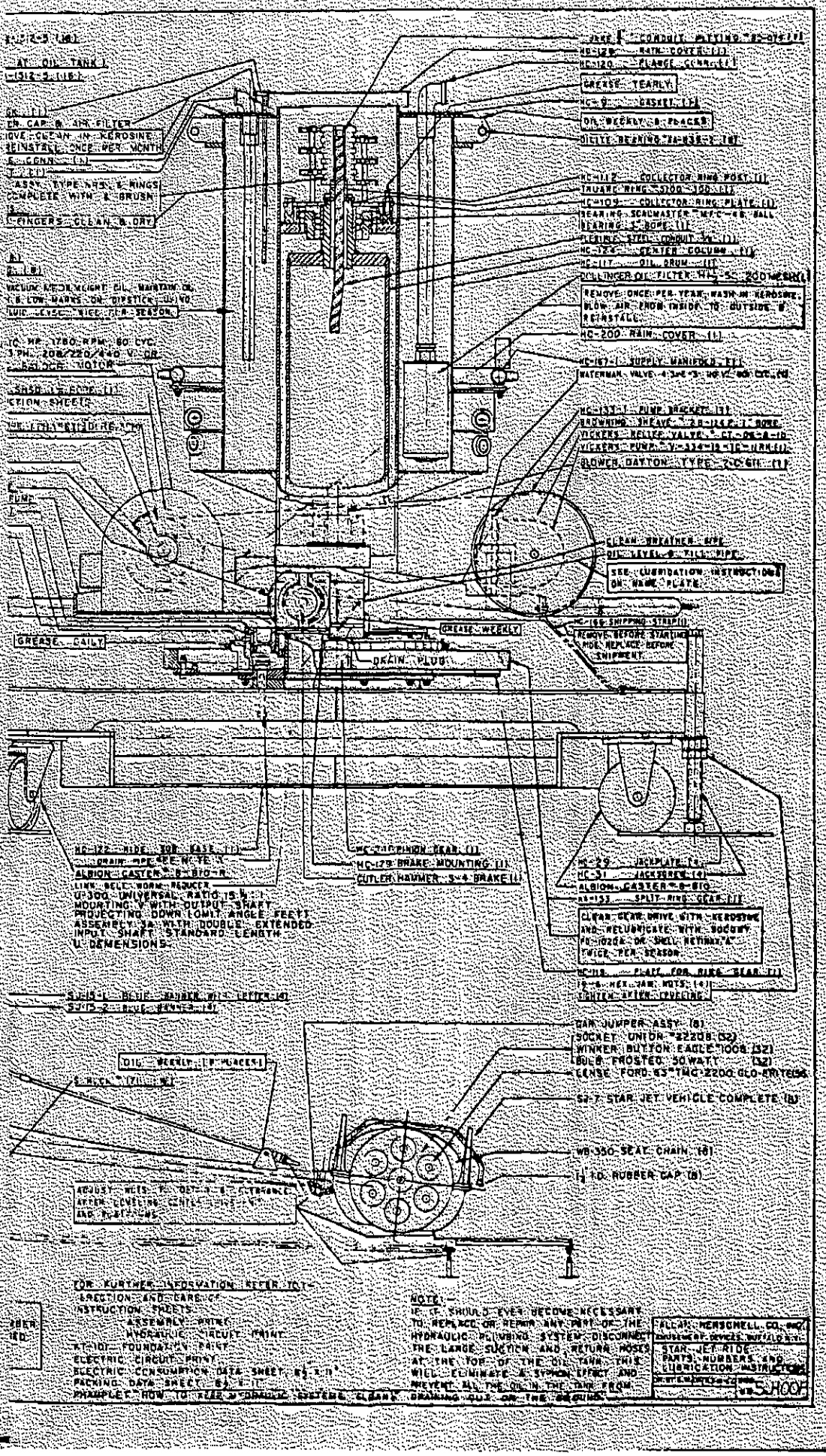
In the event that gauge becomes inoperable, proper pressure setting may be made by loading one car with two heavy adults. Then, back off the Vickers Pressure Relief Valve until pressure will not lift loaded car. Next, increase the setting of valve to lift the loaded car.

NOTE: Whenever it becomes necessary to check hydraulics at center of ride, it is advisable to disconnect the drive belt from motor to reducer. In this manner, the hydraulics can be checked with the motor running the pump without rotating the ride.

MAINTENANCE OF LOWER CENTER BEARING

Once a year, grease should be softened by adding automotive flushing oil through fan opening and draining entire bearing through the bottom plug. Then, regrease weekly at the six grease fittings with Mobil MP Grease or King Graphite Product KPG-24. If this is not done, the old grease will oxidize, stiffen and separate and corrosion will follow.


THOMAS LAUGHLIN S-41 THIMBLE (16)
NICCO PRESS SLEEVE 7/8" WIRE CABLE SIZE 18 X 7 W.I.R.C.
HC-175 WIRE CABLE 7/8" DIA. (18)
HC-145 LEVER (8)
VICKERS VALVE C-572-B MODIFIED (8)
HC-146 (8)
SWEEP-W VEHICLE
SJ-16 (8) CAP BAR
HAIRPIN SPRING (8)
VEHICLE
VEHICLE SUPPORT
HC-105 PIN (8)
HC-125 SWEEP
SWEEP
HC-113
HC-8
CYLINDER
HC-112 PIN
DROP HAIRPIN S
GALLONS SOC
LEVEL BETWEEN
NAME OIL
HP TYPE K MOTOR FRAME K25
BALL BEARING OPEN HORIZONT
HC-2EC-3 NEMA MOTOR 3 PH 230 V. 60
WITH SPEC. SHAFTS
LWIN DISC CO. HYDRO SHEAVE
REFER TO RIDE
FOR MAINTENANCE INFORMATIO
BELTING SHEAVE
C-12-4.0 SHEAVE
HP-191 V BELT
HC-48 V BELT
SAT WIRING DIAGRAM SHEAVE
HC-132 SUB-BASE MOTOR
HC-191 LOWER HEAD BEARIN
HC-194 LOWER BEARING
HC-204 BRONZE INSERT (1)
HC-54 TOP SUPPORT PLATE (8)
HC-134 SPRING
HC-58 BANNER SUPPORT
PAR-38 PROJECTOR OUTDOOR FLOOD LAMP 150 WATT (20)
STEBERWITE CAT. 199 LAMP HOLDER (20)
STEBERLITE POLE FITTER
2-30 2-802 FOR 1 1/2 PIPE
(9)
HC-64 LIGHT POLES (9)
SP-102 SWITCH BOX (1)
SP-104 SWITCH BOX COVER (1)
SJ-1 WIRING DIAGRAM 1 PH. & 3 PH.
HC-198 PIN
SJ-17 CAP BAR ASSY (8)
HC-128 KNUCKLE FOR HYDR. CYL.
HC-106 PIN (8)
HC-139 SPRING (8)
HC-63 (8)
HC-138 TENSION ROD (8)
VICKERS VALVE C-572-E5b MODIFIED PER
HC-161 (8) FOR OTHER HYDRAULIC SYSTEM
PARTS SEE A.H.C. PRINT HC-193
TOMKINS & JOHNSON 3" CYLINDER LONG
STROKE HC-CUSHION (8)
TOMKINS & JOHNSON CLEVIS FOR 3"
CYLINDER 3M-3CB (8)
HC-196 PIN FOR CYLINDER (8)
OIL VALVE ARM WEEKLY (8 PLACES)
HC-58 GUIDE (8)
HC-193-3 BEARING (8)
HC-193 SWEEP (8)
HP-102-13 PIPE RAIL (15-5)
HC-114 PLATFORM (12)
HC-86 PLATFORM BRACE (4)
OIL HAS BECOME EXCESSIVELY DIRTY
ORGANIC REMOVE 2 TOP FLANGES CLEAN
ALL INNER SURFACES OF TANK WITH KEROSENE
SEE SECTIONAL ELEVATION OF DRIVING HEAD AND BASE
ESC BUR PIN (4)
HC-87 JACKSCREW (24)
HC-85 JACKBASE (24)
LD-138 TAPER PIN (24)
NOTE A
ONCE A YEAR GREASE SHOULD BE SOFTENED
DRIVING BEARING THRU PLUG A. THEN REGREASE WEEKLY AS THE GREASE FITTINGS WITH SCCII GREASE
IF THIS IS NOT DONE THE OLD GREASE WILL SOLIDIFY STIFFEN AND SEPARATE AND CORRODE THE FIELD
WHEN ORDERING PARTS
SPECIFY YOUR PURCHASED RIDE SE
PART NUMBER DESIRED AND QUANT
BEFORE ORDERING HYDRAULIC HOSE
HYDRAULIC CIRCUIT PRINT HC-193
SPEED OF RIDE P.P.M.


AT OIL TANK
OIL WEEKLY (2 PLACES)
GREASE DAILY
GREASE WEEKLY
DRAIN PLUG
FILL PLUG
FILL PLUG
MOTOR
PUMP
GREASE YEARLY
OIL WEEKLY (2 PLACES)
REMOVE BEFORE STARTING AND REPLACE BEFORE SHIPMENT
SEE LUBRICATION INSTRUCTIONS ON NAME PLATE
REMOVE ONCE PER YEAR, WASH IN KEROSINE, BLOW AIR FROM INSIDE TO OUTSIDE & REINSTALL
CLEAN GEAR DRIVE WITH KEROSENE AND RELUBRICATE WITH SOCONY PO-102A OR SHELL RETINAX "A" TWICE PER SEASON
ADJUST NUTS "E" OUT TO ELIMINATE ENDPLAY AFTER LEVELING CENTER LINE "F" AND PLATE "G"
NOTE:-
IF IT SHOULD EVER BECOME NECESSARY TO REMOVE OR REPAIR ANY PART OF THE HYDRAULIC RAISING SYSTEM DISCONNECT THE LARGE SUCTION AND RETURN HOSES AT THE TOP OF THE OIL TANK. THIS WILL ELIMINATE A SYPHON EFFECT AND PREVENT ALL THE OIL IN THE TANK FROM DRAINING OUT ON THE GROUND.
FOR FURTHER INFORMATION REFER TO:-
ERECTION AND CARE OF
INSTRUCTION SHEETS
ASSEMBLY PRINT
HYDRAULIC CIRCUIT PRINT
KT-101 FOUNDATION PRINT
ELECTRIC CIRCUIT PRINT
ELECTRIC CONSUMPTION DATA SHEET
PACKING DATA SHEET
PAMPHLET "HOW TO KEEP HYDRAULIC SYSTEMS CLEAN"
ALLAN HERSCHELL CO., INC.
MANUFACTURERS OF DEVICES FOR AMUSEMENT PARKS
STAN JET RIDE
PARTS NUMBERS AND LUBRICATION INSTRUCTIONS
SCHOOP