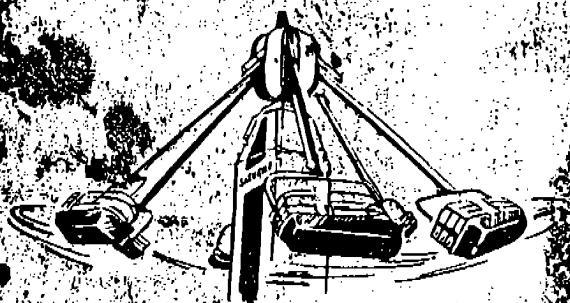


MFG: MULLIGAN ENTERPRISES
NAME: SATURN SIX

Portable rides inc.

**OPERATION
and
SERVICE MANUAL**

for
"SATURN SIX"



FORWARD

This manual is provided to give the operator essential information regarding the proper operation and maintenance of the Saturn Six.

The manual contains the information and instructions on proper operation. To keep the unit operating at its maximum efficiency, the manual should be read by the operator and by those persons responsible for the maintenance of the unit.

An important item in prolonging the life of the unit is to keep dirt and other foreign particles away from its vital parts. We have taken precautions to keep dirt and other foreign particles from reaching the vital parts under normal operating conditions. The operator must also take precautions to make sure that the fuel, and the oil are always kept clean.

The serial number and the trailer identification number are stamped on the ride and on the trailer, name plates, to assure proper shipment of parts for your equipment, these numbers should be used when forwarding your order to the factory.

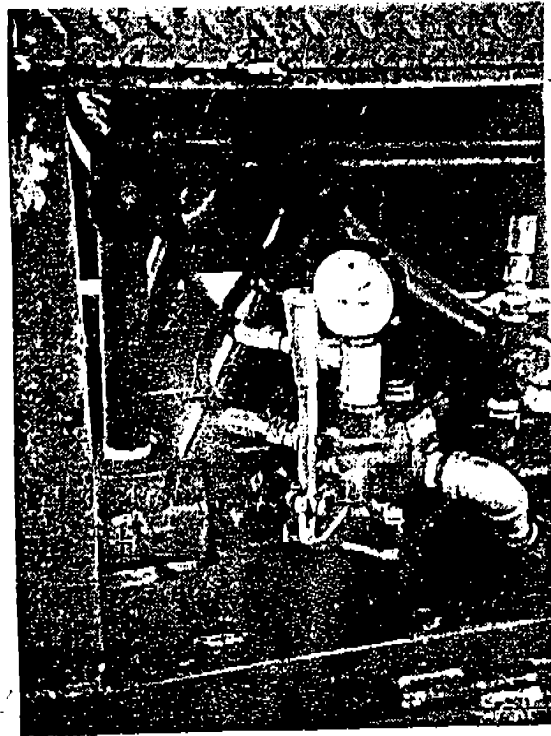
Before beginning the effective operation of your machine, before each use the ride should be checked for loose connections, bolts, nuts, and carter keys.

Be sure to check electrical wiring for loose connections. The ride is to be operated on a 220 current.

It has been proven that over 90% of the troubles that occur in the ride operation are avoided when those persons responsible for maintenance adhere to an adequate program of lubrication, inspection, and maintenance on a regularly scheduled basis. The time and expense involved in such programs is only a fraction of the loss that could occur when poor maintenance practice results in a major malfunction, or breakdown.

When ride is pulled onto location, place front tandems over the center stake marker. Be sure to level trailer.

1. Unload steps and landing track from the opossum belly.
2. Place out-riggers for the platforms into position.
3. Let left side platforms down and place in position.
4. Let right back platform down, and remove from the ride, lay on the ground, then place the right back platform into position. Place platform (on ground) on the ride after cars have been put on.
5. Place mud sills into position.
6. Unload cars, taking right top car off first, then left top car.
7. Remove back car rack.
8. Remove bottom back cars.
9. Remove two top front cars and set on tail gate, keep cars to the left leaving boom socket open.



PICTURE 2

Lever For Raising and Lowering

11. Place car boom in the socket at the rear of the trailer.
12. Put winch, which is directly in front of the tower in high gear.
13. Start motor.
14. With one man working the winch, the second man push lever (pic. #2) forward slowly, raising the tower to approximately six feet:
15. At this point place sweep boom in position before continuing to raise the tower.
16. One man releases winch with small amount of slack in the cable, continue to raise tower up to second stage of the cylinder.
17. Stop all operations and place winch into low gear.
18. Continue to raise tower with approximately six inches of slack in the cable, until the tower breaks over center, the winch will then set the tower on the base under its own power.
19. Bolt the tower down with the two pins provided.
20. Take pin out of cylinder.



PICT. #3

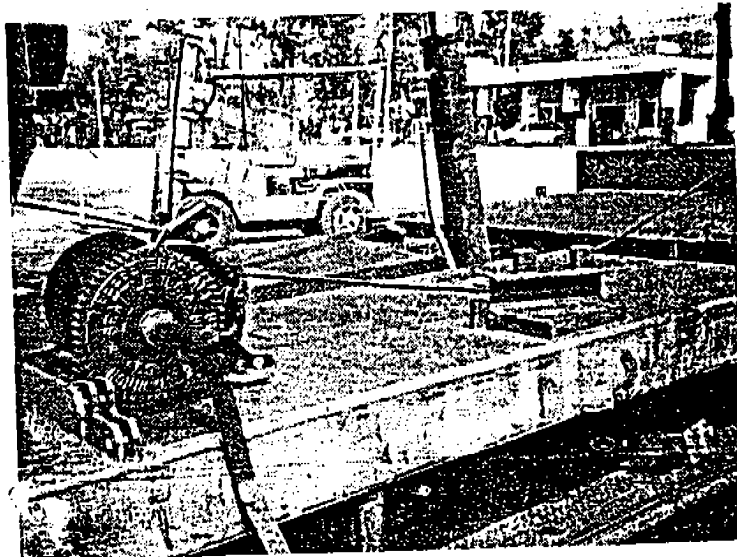
Valve on the Cylinder

21. Place brace for cylinder in position.
22. Open valve in picture # 1 fully.
23. With one man standing in the position with his foot on the cylinder head, pressing downward, the cylinder will come down slowly.
24. When cylinder reaches the bottom, close valve (picture # 2) tightly.
25. Place sweeps in position, with corresponding numbers together.
26. Un-pin sweep boom and fold against tower.
27. Place landing track in position.
28. Place cars on the sweeps with corresponding numbers together, while turning the ride in reverse.
29. Remove pin on the top socket of the head to release the sweeps.
30. Place fence and steps in position.
31. Place belts on the motor.
32. Put operating controls in position.
33. Close # 1 valve (will be in the open position when ride is set up (picture # 2)).
34. Open # 2 valve.



PICT. #4 Shows #1 Valve (seen).
and #2 Valve (not seen as it is behind #1 Valve)

1. Put fence and fence posts in the rack at the front of the trailer.
2. Remove the piece of track at the tub boom location.
3. Remove all cars with the cars rotating forward.
4. Place sweeps in the racks with the corresponding #'s together.
5. Pull cylinder up and stand in the rack.
6. Close # 2 valve (shown in set-up procedures, picture # 2 - preceeding page).
7. Open # 1 valve (also shown in the same picture.)
8. Push lever forward (shown in picture # 2).
9. When cylinder reaches the right height, place pin in the top end, fastening cylinder into position.
10. Remove belts from the motor.
11. Detach brake cables from the controls.
12. Un-bolt tower at the base.
13. Hook cable from the lower winch in the eye at the top of the tower.
14. Place the six inch snatch block at the front of the trailer.
15. Place the four inch snatch block in front of the tower winch.
16. Put base for the tower support into position.



PICT. #5

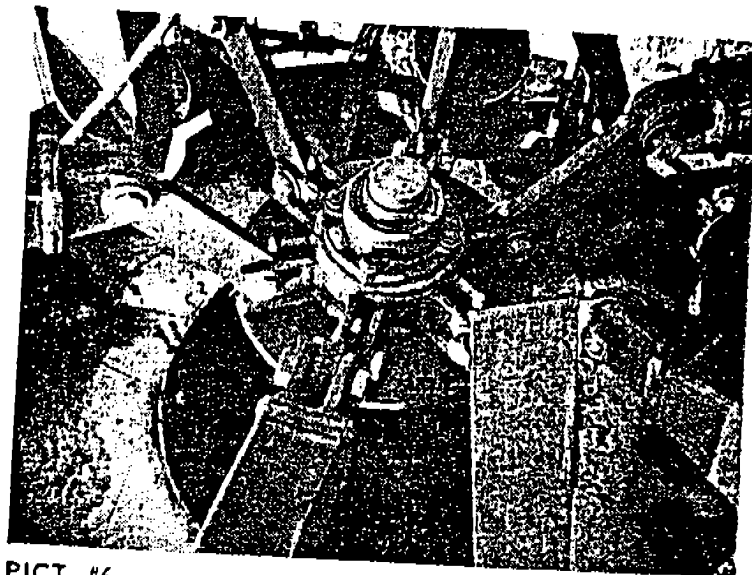
Shows Amount of Slack Désirable

in set up procedure.

18. With the winch in low gear, start winching.
19. As pressure raises on the gauge, pull lever out to release pressure keeping pressure at approximately 100 lbs., until tower breaks over center, watching tower and keeping slack from cable (picture # 5) let it slowly down onto the stand.
20. After tower has been lowered into position and fastened down, then the cars may be loaded, and the misc. parts placed in the opossum belly.

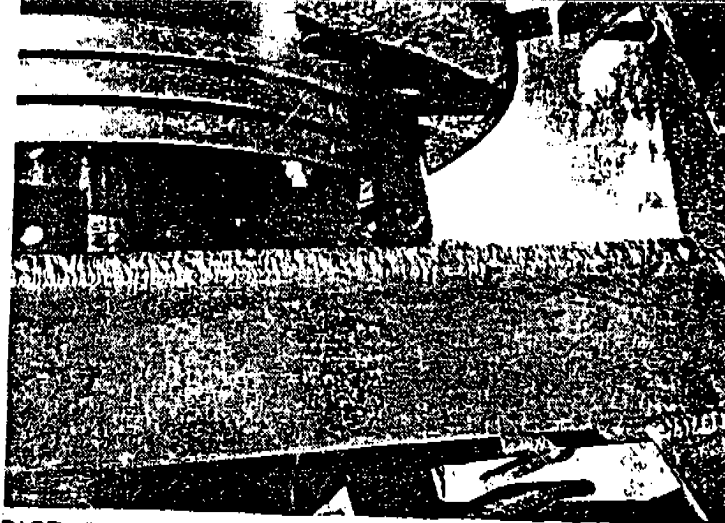
GREASING SPECIFICATIONS

Grease amounts called for should be enough for each set-up, or if ride is in a park once a month. Greasing should be done before ride is erected each time.



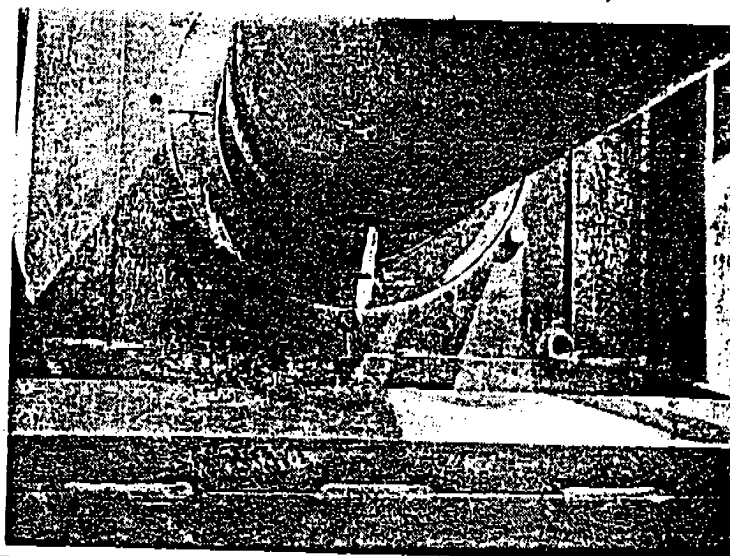
PICT. #6

There Are 13 Fittings on Head
Each Fitting Gets One Shot

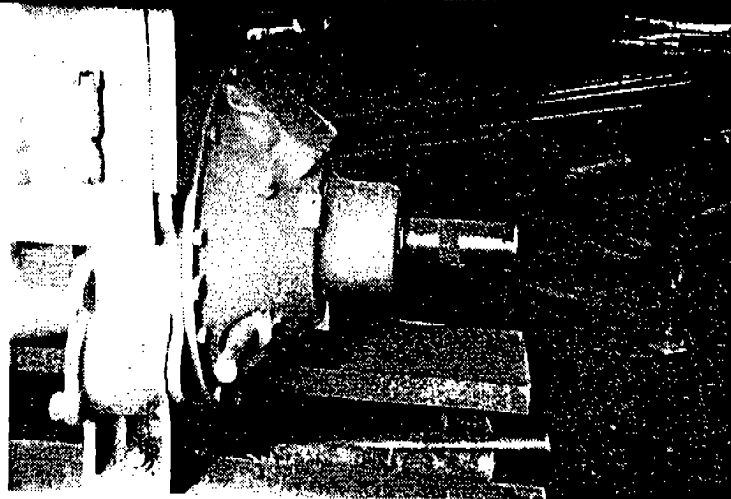


PICT. #7 Two Fittings Behind Brass Connector Rings
Under the Head - 1 Shot

PICTURES NOT SHOWN: 2 fittings on drive line
1 fitting bottom gear box
1 fitting bottom bearing under
sprocket & chair
(one shot each)



PICT. #8 One Fitting Inside Tower On Top End
of Center Pole — 5 Shots



PICT. #9 One Fitting on the Clutch Housing, on End of Motor
One Shot Each Day

CAUTION: The grease fitting in picture # 9 is for the throw out bearing (inside housing). This must be greased frequently to prevent wear on the collar.

MOTOR CARE

All owners are furnished with a parts, and operating manual for the engine which is on their ride, to answer questions regarding its care and operation.

HYDRAULICS

Hydraulics are pre-set at the factory, no adjustments should be made any time without the prior consultation of a factory representative.

SATURN 6

Manufacturer:

Portable Rides Inc.
P. O. Box 1612
Gibson, FL 33534
(813) 677-5429

Passengers:

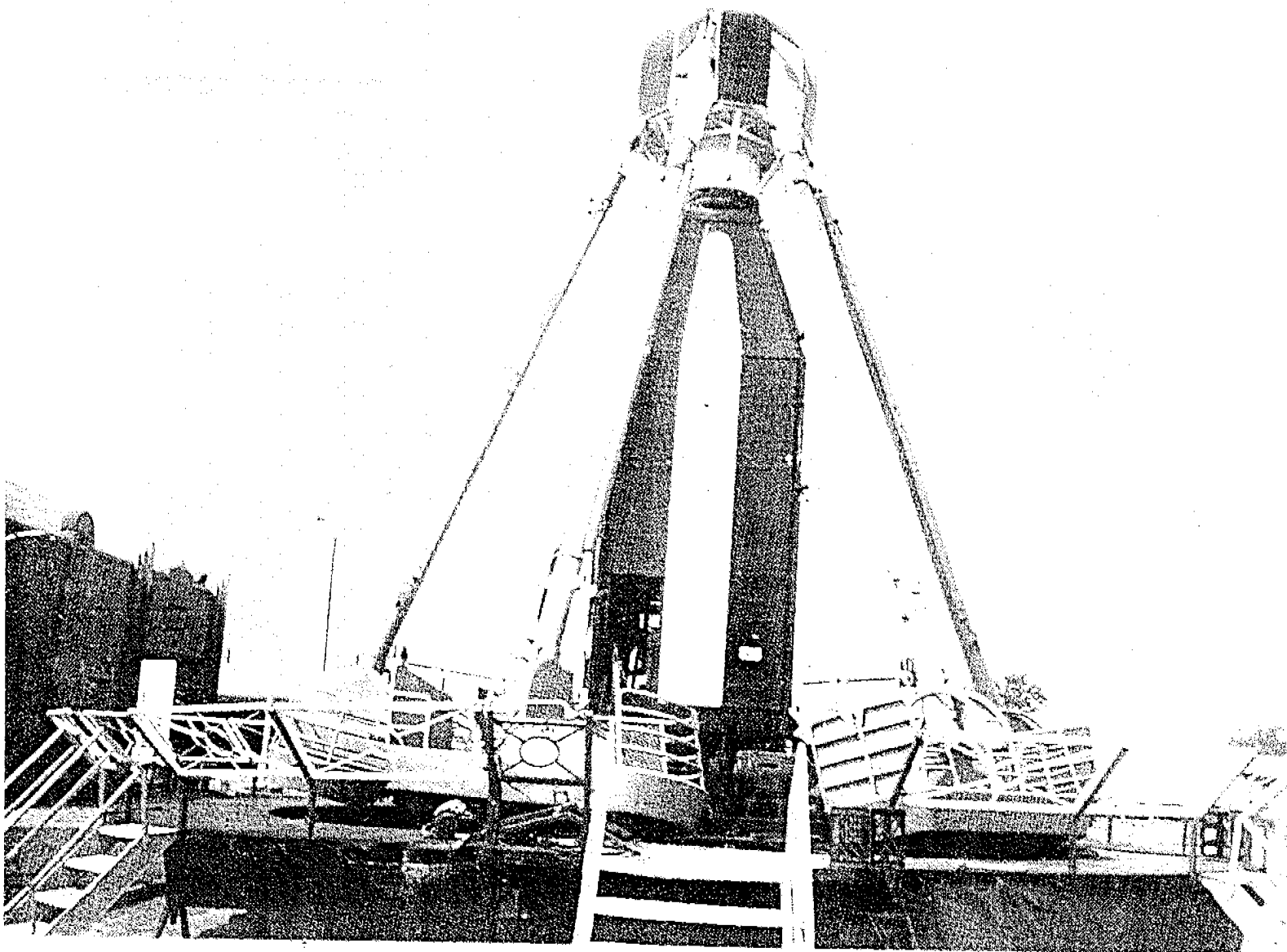
Height Restriction - Approximately 42"
(Feet must touch floor)

(Capacity):

Child 36 Adult 24

Maximum RPM:

12



SATURN 6

1. *Inspect electrical - Proper grounding, fuses, conduit, etc.*
2. *Inspect blocking.*
3. *Inspect mud sill; jacks (See Fig.1).*
4. *Inspect stairs and fence.*
5. *Inspect walkway platform for stability and R Keys.*
6. *Inspect guide track - R keys (See Fig.2).*
7. *Inspect guide car wheels.*
8. *Inspect cars; cracking - jagged expanded metal, etc. (See Fig.3).*
9. *Inspect door latch (plunger). Check for secondary back-up latch or restraint. One of the following methods is recommended to be used as the secondary backup.*
 - a) *lap restraint*
 - b) *R key in end of plunger*
 - c) *dog latch*
10. *Inspect bottom sweep area/lower rocker arm for cracks (See Fig.4). Cotter keys should be used on these pins to prevent passenger from pulling key.*

NOTE: Bottom sweep area should be inspected closely at least once a month (See Fig.5).
11. *Inspect condition of sweep pins.*
12. *Inspect for sweep safety cables.*
13. *Inspect tower hinges for cracks and Grade 5 bolts (See Fig.6).*
14. *Inspect brake system (See Fig.7 & 13).*

NOTE: Brake must be functional; however, ride may be allowed to coast to a stop during normal operation.
15. *Inspect for excessive hydraulic leaks.*
16. *Inspect condition of drive belts and relevant parts.*

17. *Inspect lower rocker arm for cracking and defects (See Fig.8 & 9).*

NOTE: CRUCIAL AREA!!!! Cracking around pin holes must be welded in the following procedure. Cracked area must be properly ground out and rewelded with 7018 rod. Welding must be performed by qualified personnel.

IF CRACKING KEEPS RECURRING IN SAME AREA (more than 2 times) THEY CANNOT BE REWELDED. Rocker arm must be replaced. **RIDE CANNOT OPERATE!!!!**

18. *Inspect rocker arm reinforcement gussets for uniformity (See Fig.8).*

19. *Inspect top tower structure for cracks.*

20. *Inspect upper rocker arm bearing area for cracking and wear (See Fig.10).*

NOTE: CRUCIAL AREA!!!! Welding must be performed by qualified personnel. 7018 rod must be used. **AGAIN, IF CRACKING KEEPS RECURRING IN THE SAME AREA, THEY CANNOT BE REWELDED.** **RIDE CANNOT OPERATE!!!!**

21. *Top bearing must have grease-zerks. Lubricate as needed.*

22. *Inspect top safety cable (See Fig.10).*

23. *Inspect scissor arms for cracks. Grade 8 bolts, castellated cotter key or self-locking nuts must be used (See Fig.11).*

24. *Inspect lifter shaft and shaft plate. Shaft should be kept lubricated (See Fig.12).*

25. *Inspect operator controls (See Fig.13).*

26. *Check RPM - max 12.*

LOUD BANGING NOISE WHEN RIDE IS OPERATING INDICATED PROBLEM IN ACCUMULATOR OR TOP BEARING. DO NOT ALLOW RIDE TO OPERATE. OWNER SHOULD CONTACT MANUFACTURER.



FIGURE 1

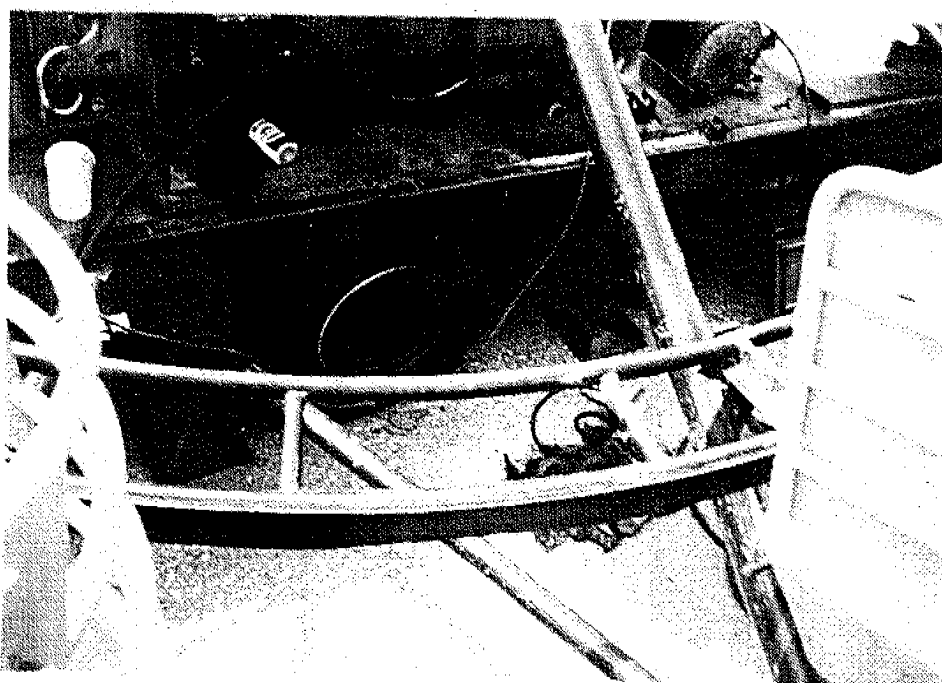


FIGURE 2

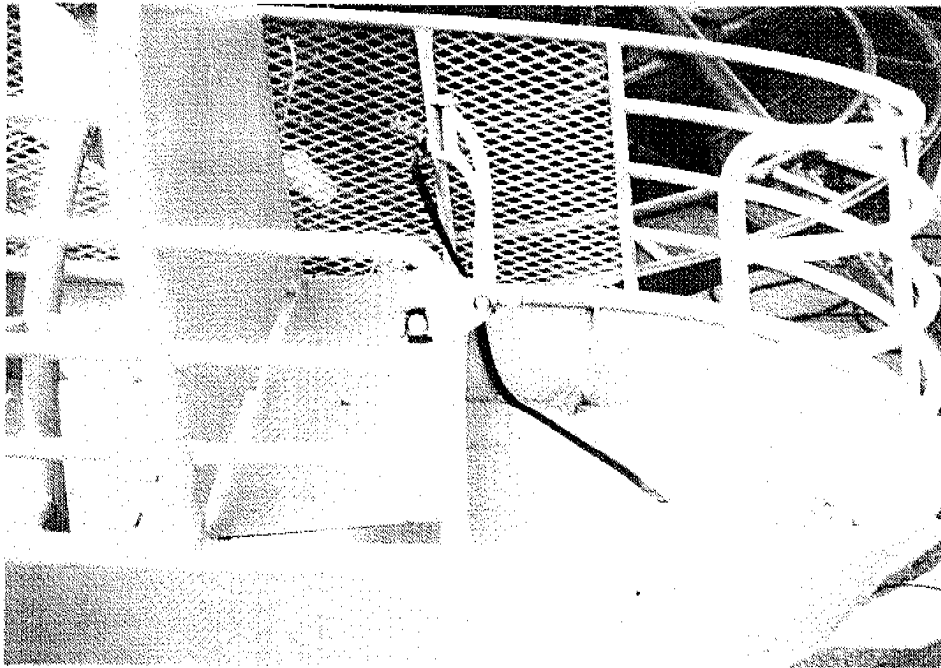


FIGURE 3

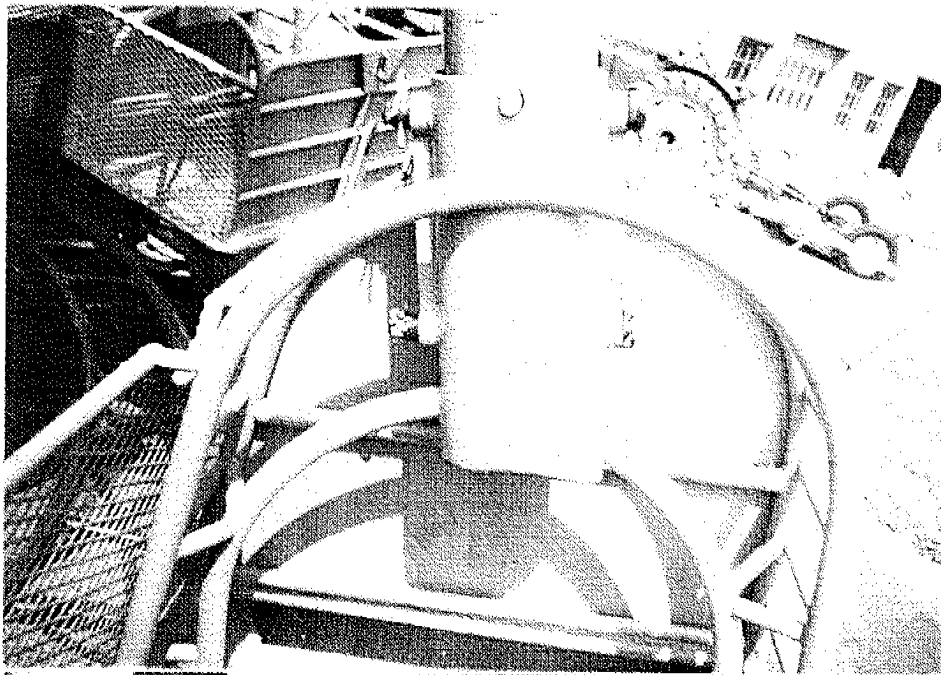


FIGURE 4

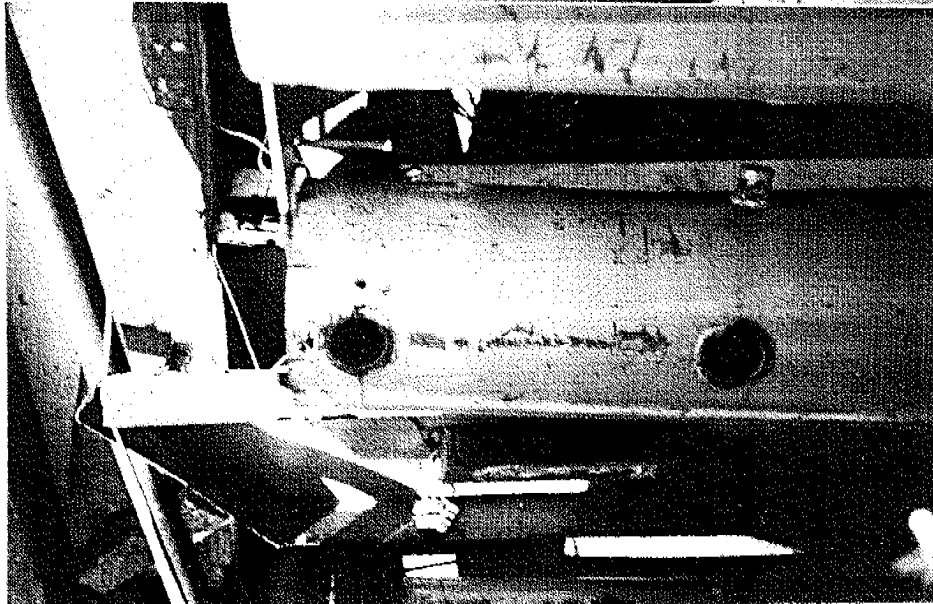


FIGURE 5

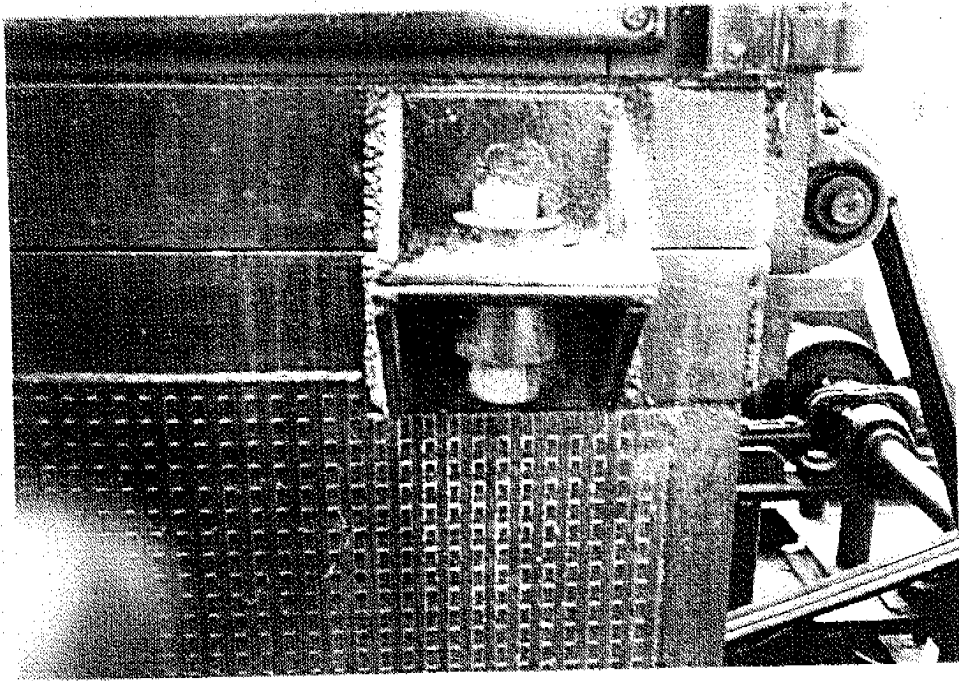


FIGURE 6

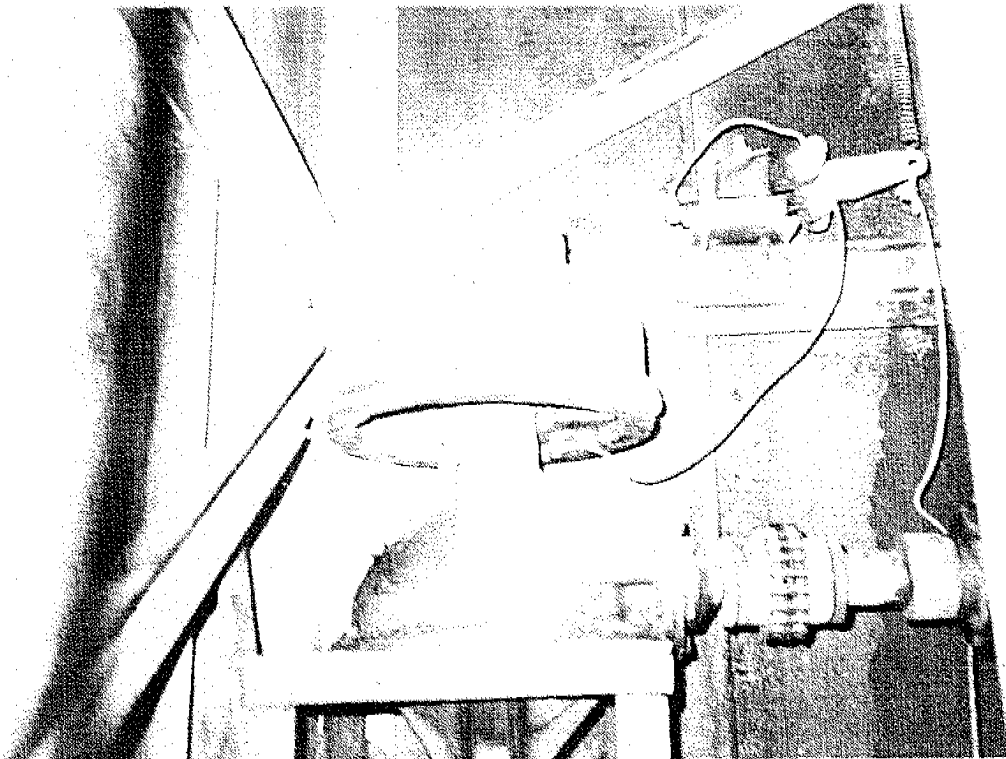


FIGURE 7

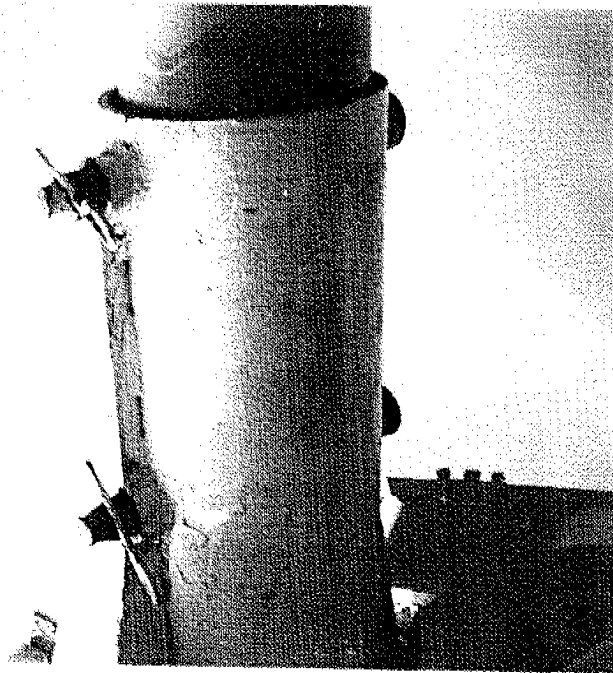


FIGURE 8

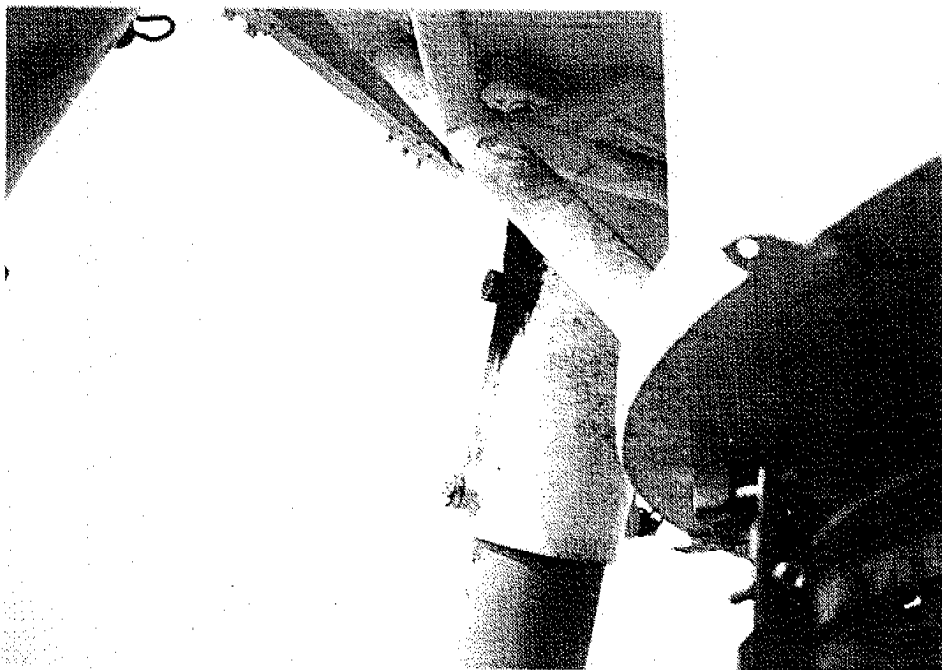


FIGURE 9

FIGURE 10

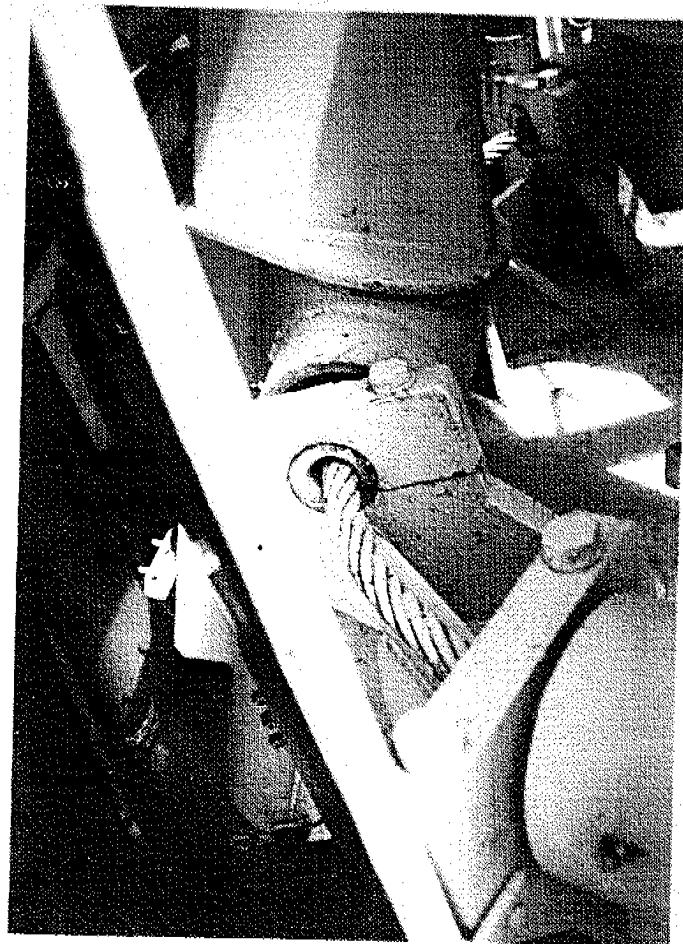


FIGURE 11

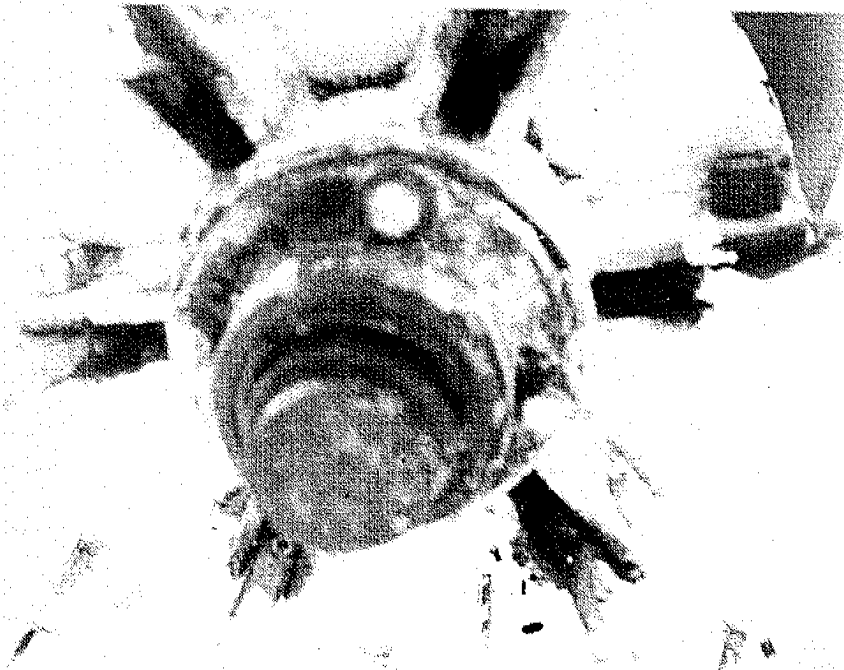


FIGURE 12

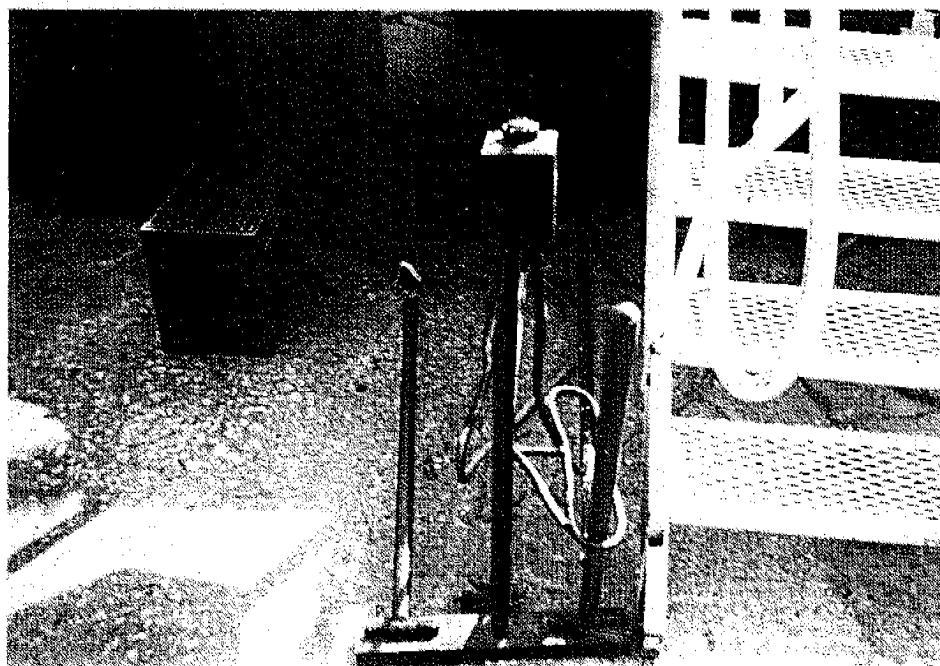


FIGURE 13

AMUSEMENT DEVICES OF TAMPA, INC.

POST OFFICE BOX 1612 • GIBSONTON, FLORIDA 33534
813 - 677 - 5429

August 9, 1989

Dept. of Labor
Attn.: Mr. James W. Greenawalt, Jr.

(Lower and Upper Rocker Arms.)

Weld all material with E7018 low Hydrogen welding rod
1/8 5/32.

If area has previously broke I would not recommend
rewelding. You can have the top pin bushing replaced
if wore out. All material taken off should be replaced
the same as came from the factory.

All other material you sent seems to cover all
other areas of the ride. We do recommend that all work
be done by qualified personnel.

If need be, worn parts can be shipped to our factory
for replacment.

If I can help you in any other way please feel
free to call.

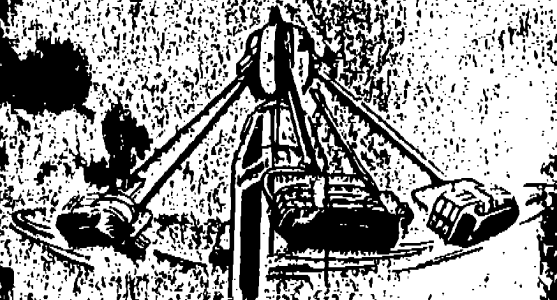
Kenny Miller

RECEIVED
AUG 14 1989
Dept of Labor

Portable Rides inc.

**OPERATION
and
SERVICE MANUAL**

for
"SATURN SIX"



RECEIVED

FEB 07 1990

Dept. of Social

FORWARD

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Before beginning the effective operation of your machine, before each use the ride should be checked for loose connections, bolts, nuts, and carter keys.

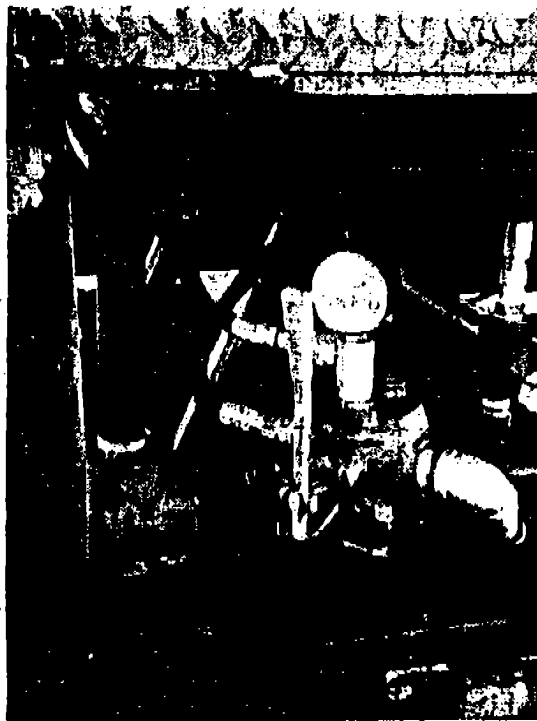
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It has been proven that over 90% of the troubles that occur in the ride operation are avoided when those persons responsible for maintenance adhere to an adequate program of lubrication, inspection, and maintenance on a regularly scheduled basis. The time and expense involved in such programs is only a fraction of the loss that could occur when poor maintenance practice results in a major malfunction, or breakdown.

SET UP PROCEDURES

When ride is pulled onto location, place front tandems over the center stake marker. Be sure to level trailer.

1. Unload steps and landing track from the opossum belly.
2. Place out-riggers for the platforms into position.
3. Let left side platforms down and place in position.
4. Let right back platform down, and remove from the ride, lay on the ground, then place the right back platform into position. Place platform (on ground) on the ride after cars have been put on.
5. Place mud sills into position.
6. Unload cars, taking right top car off first, then left top car.
7. Remove back car rack.
8. Remove bottom back cars.
9. Remove two top front cars and set on tail gate, keep cars to the left leaving boom socket open.



PICT 12

Lever For Raising and Lowering

10. Remove remaining car racks from the ride.
11. Place car boom in the socket at the rear of the trailer.
12. Put winch, which is directly in front of the tower in high gear.
13. Start motor.
14. With one man working the winch, the second man push lever (pic. #2) forward slowly, raising the tower to approximately six feet.
15. At this point place sweep boom in position before continuing to raise the tower.
16. One man releases winch with small amount of slack in the cable, continue to raise tower up to second stage of the cylinder.
17. Stop all operations and place winch into low gear.
18. Continue to raise tower with approximately six inches of slack in the cable, until the tower breaks over center, the winch will then set the tower on the base under its own power.
19. Bolt the tower down with the two pins provided.
20. Take pin out of cylinder.



PICT. #3

Valve on the Cylinder

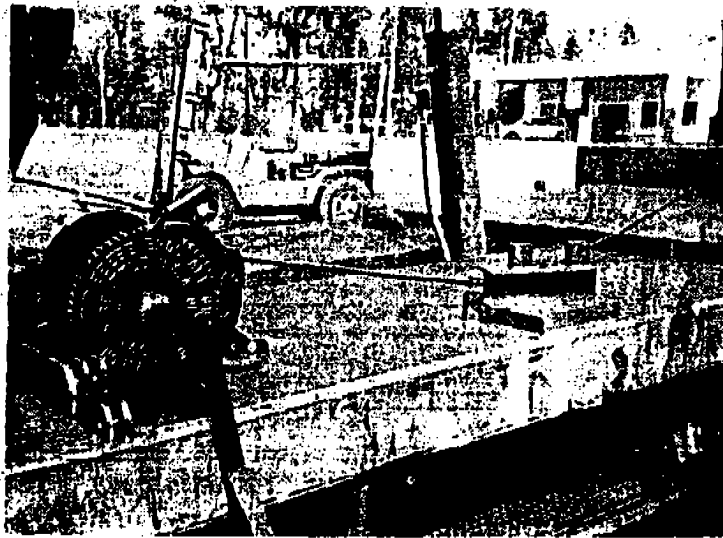
21. Place brace for cylinder in position.
22. Open valve in picture # 1 fully.
23. With one man standing in the position with his foot on the cylinder head, pressing downward, the cylinder will come down slowly.
24. When cylinder reaches the bottom, close valve (picture # 2) tightly.
25. Place sweeps in position, with corresponding numbers together.
26. Un-pin sweep boom and fold against tower.
27. Place landing track in position.
28. Place cars on the sweeps with corresponding numbers together, while turning the ride in reverse.
29. Remove pin on the top socket of the head to release the sweeps.
30. Place fence and steps in position.
31. Place belts on the motor.
32. Put operating controls in position.
33. Close # 1 valve (will be in the open position when ride is set up (picture # 2)).
34. Open # 2 valve.



PICT. #4 Shows #1 Valve (seen).
and #2 Valve (not seen as it is behind #1 Valve)

TEAR DOWN PROCEDURE

1. Put fence and fence posts in the rack at the front of the trailer.
2. Remove the piece of track at the tub boom location.
3. Remove all cars with the cars rotating forward.
4. Place sweeps in the racks with the corresponding #'s together.
5. Pull cylinder up and stand in the rack.
6. Close # 2 valve (shown in set-up procedures, picture # 2 - preceding page).
7. Open # 1 valve (also shown in the same picture.)
8. Push lever forward (shown in picture # 2).
9. When cylinder reaches the right height, place pin in the top end, fastening cylinder into position.
10. Remove belts from the motor.
11. Detach brake cables from the controls.
12. Un-bolt tower at the base.
13. Hook cable from the lower winch in the eye at the top of the tower.
14. Place the six inch snatch block at the front of the trailer.
15. Place the four inch snatch block in front of the tower winch.
16. Put base for the tower support into position.



PICT. #5

Shows Amount of Slack Desirable

17. Push the lever forward until the gauge reads 100 lbs. (picture # 2) in set up procedure.
18. With the winch in low gear, start winching.
19. As pressure raises on the gauge, pull lever out to release pressure keeping pressure at approximately 100 lbs., until tower breaks over center, watching tower and keeping slack from cable (picture # 5) let it slowly down onto the stand.
20. After tower has been lowered into position and fastened down, then the cars may be loaded, and the misc. parts placed in the opossum belly.

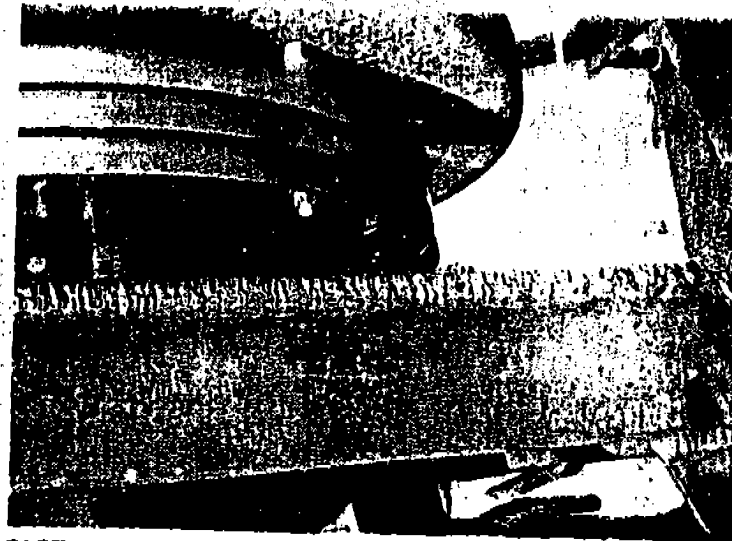
GREASING SPECIFICATIONS

Grease amounts called for should be enough for each set-up, or if ride is in a park once a month. Greasing should be done before ride is erected each time.



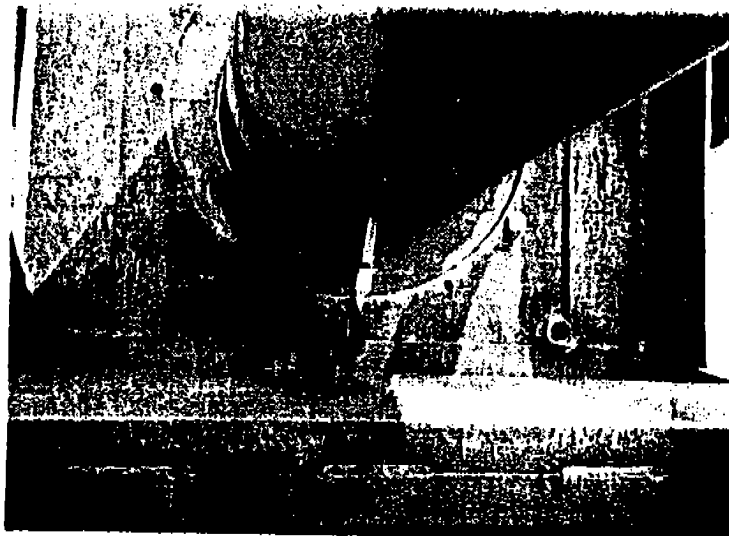
PICT. 16

There Are 13 Fittings on Head
Each Fitting Gets One Shot

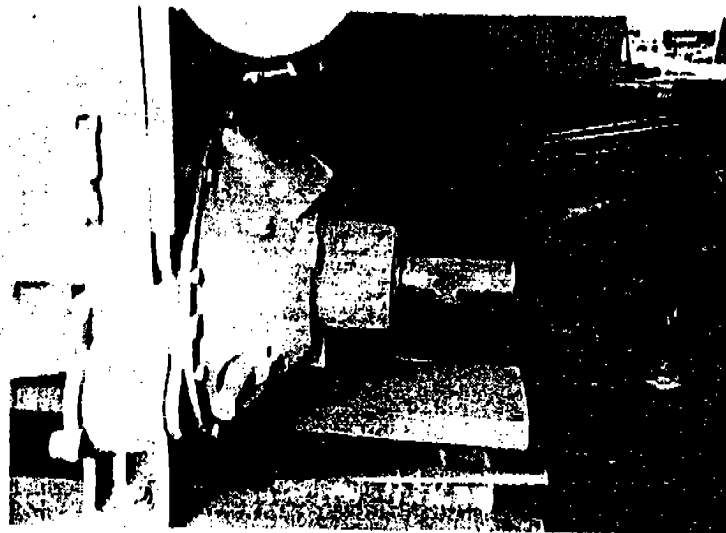


PICT. #7 **Two Fittings Behind Brass Connector Rings
Under the Head - 1 Shot**

PICTURES NOT SHOWN: 2 fittings on drive line
 1 fitting bottom gear box
 1 fitting bottom bearing under
 sprocket & chair
 (one shot each)



PICT. #8 **One Fitting Inside Tower On Top End
of Center Pole — 5 Shots**



**PICT. #9 One Fitting on the Clutch Housing, on End of Motor
One Shot Each Day**

CAUTION: The grease fitting in picture # 9 is for the throw out bearing (inside housing). This must be greased frequently to prevent wear on the collar.

MOTOR CARE

All owners are furnished with a parts, and operating manual for the engine which is on their ride, to answer questions regarding its care and operation.

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