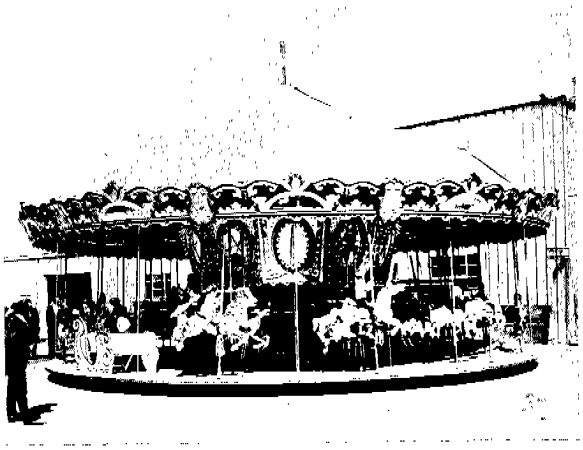
SPECIFICATIONS

MFG: CHANCE RIDES, INC.
NAME: CAROUSEL 30/40/45/50
TYPE: NON-KIDDIE

This ride conforms with all applicable ASTM amusement ride standards in effect on the date of manu

36 FT. CAROUSEL

PARK MODEL



TRAILERING

Customer-furnished van

Length ..... 42 ft.
Type ..... Tandem axle electronics van
Minimum inside height of van ..... 111 in.

OPTIONS

- Complete racking of customer-furnished van
- Special outside fence with horse design
- Brass spiral horse pole sleeves
- Brass spiral floor hanger rod sleeves
- Ceiling kit with lights
- Baptist Music Organ, Model No. 162A
- Organ console replica

SEATING

Number of seats ..... 30 horses, 2 chariots
Maximum number of passengers per seat
  Horses ..... 1 adult or 1 child
  Chariots ..... 4 adults or 8 children
Maximum passenger weight per seat
  Horses ..... 170 lbs.
  Chariots ..... 680 lbs.
Maximum total number of passengers ..... 38 adults or 42 children
Maximum total passenger weight ..... 6,460 lbs.
Minimum passenger height ..... 42 inches (unaccompanied by adult)
Loading ..... All passengers simultaneously
Maximum unbalance ..... 8 adults (1,360 lbs.)

PERFORMANCE

Direction of travel ..... Counter-clockwise
Ride speed ..... 5 rpm
Ride duration (maximum) ..... 2½ min.
Ride duration (recommended) ..... 2 min.
Maximum wind speed (operating) ..... 35 mph
Maximum wind speed (static) ..... 80 mph

MAXIMUM RIDE WEIGHT (empty) ..... 26,000 lbs. (with van)

DRIVE ..... Electro-Hydraulic

POWER REQUIREMENTS (with optional ceiling)

Total ..... 24 kW
Motor ..... 4 kW
Lights ..... 20 kW
Minimum/maximum line voltage 208/230

MOTOR

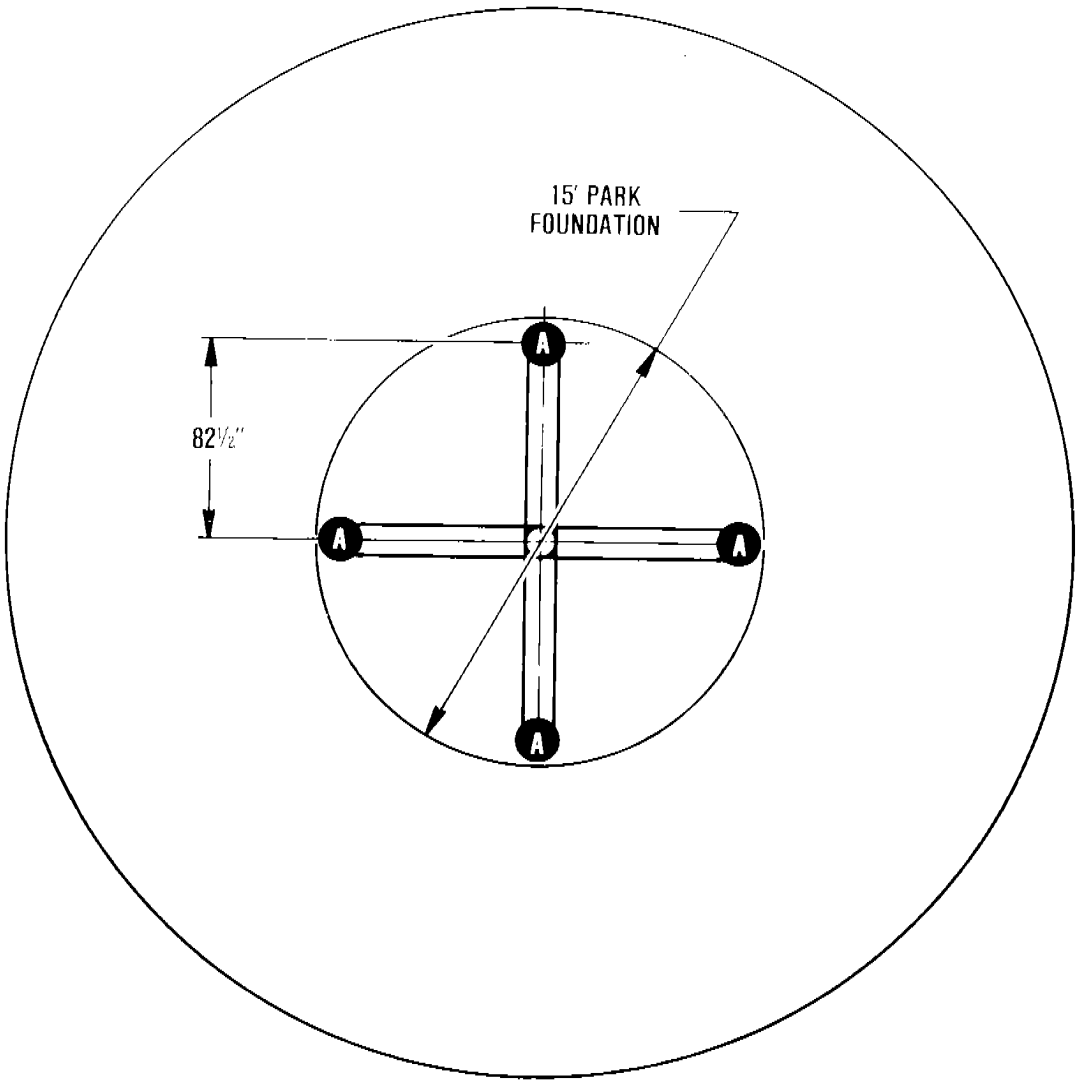
Type ..... 208 Y/460 volt, 3 phase, 60 Hz
Horsepower rating 5

LIGHTING ..... 110 volt incandescent

STANDARD LEAD-IN CABLE

Size ..... 2/4 Type G
Length ..... 50 ft.

Specifications are effective as of publication date. Because we try to improve every Chance product, these specifications are subject to change without notice.



MAXIMUM INDIVIDUAL GROUND LOADS (POUNDS)
REFER TO INSTALLATION DRAWINGS FOR SPECIFIC LOADS AND LOCATIONS

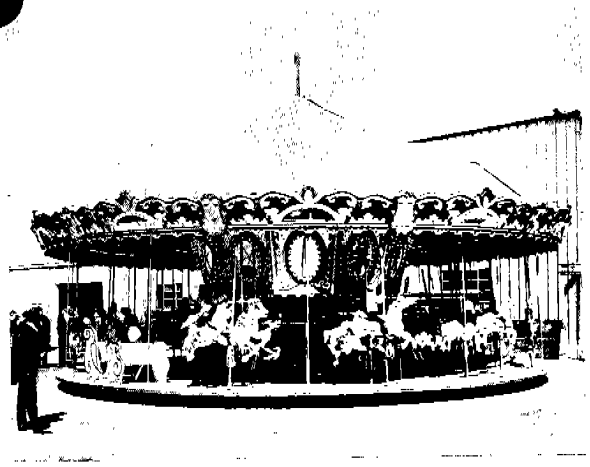
SYMBOL	DESCRIPTION	OPERATING - NO WIND 36 PASSENGERS	ADD FOR 35 MPH WIND
A	PARK TYPE BASE	6,900	± 2600

RIDE CLEARANCE DIMENSIONS

Cornice diameter ..... 38 ft.
Floor diameter ..... 33 ft.
Center pole height ..... 24 ft.
Inner floor height ..... 8½ in.
Outer floor height ..... 13 in.

SPECIFICATIONS

This ride conforms with all applicable ASTM amusement ride standards in effect on the date of manufacture.



TRAILERING

Main trailer*

Length ..... 10 ft.
Width ..... 102 in.
Height ..... 12 ft.

Customer-furnished van* for portable model

Length ..... 30 to 40 ft.
Type ..... Furniture or electronics van
Minimum inside height of van .....

* Customer must furnish converter dolly for tandem towing of trailers.

OPTIONS

- Complete racking of customer-furnished van
- Special outside fence with horse design
- Brass spiral horse pole sleeves
- Brass spiral floor hanger rod sleeves
- Ceiling kit with lights
- Baptist Music Organ, Model No. 162A
- Organ console replica

SEATING

Number of seats ..... 30 horses, 2 chariots
Maximum number of passengers per seat
  Horses ..... 1 adult or 1 child
  Chariots ..... 4 adults or 8 children
Maximum passenger weight per seat
  Horses ..... 170 lbs.
  Chariots ..... 680 lbs.
Maximum total number of passengers ..... 38 adults or 42 children
Maximum total passenger weight ..... 6,460 lbs.
Minimum passenger height ..... 42 inches (unaccompanied by adult)
Loading ..... All passengers simultaneously
Maximum unbalance ..... 8 adults (1,360 lbs.)

PERFORMANCE

Direction of travel ..... Counter-clockwise
Ride speed ..... 5 rpm
Ride duration (maximum) ..... 2½ min.
Ride duration (recommended) ..... 2 min.
Maximum wind speed (operating) ..... 35 mph
Maximum wind speed (static) ..... 80 mph

MAXIMUM RIDE WEIGHT (empty) ..... 30,000 lbs. (with main trailer and van)

DRIVE ..... Electro-Hydraulic

POWER REQUIREMENTS (with optional ceiling)

Total ..... 24 kW
Motor ..... 4 kW
Lights ..... 20 kW
Minimum/maximum line voltage 208/230

MOTOR

Type ..... 208 Y/460 volt, 3 phase, 60 Hz
Horsepower rating 5

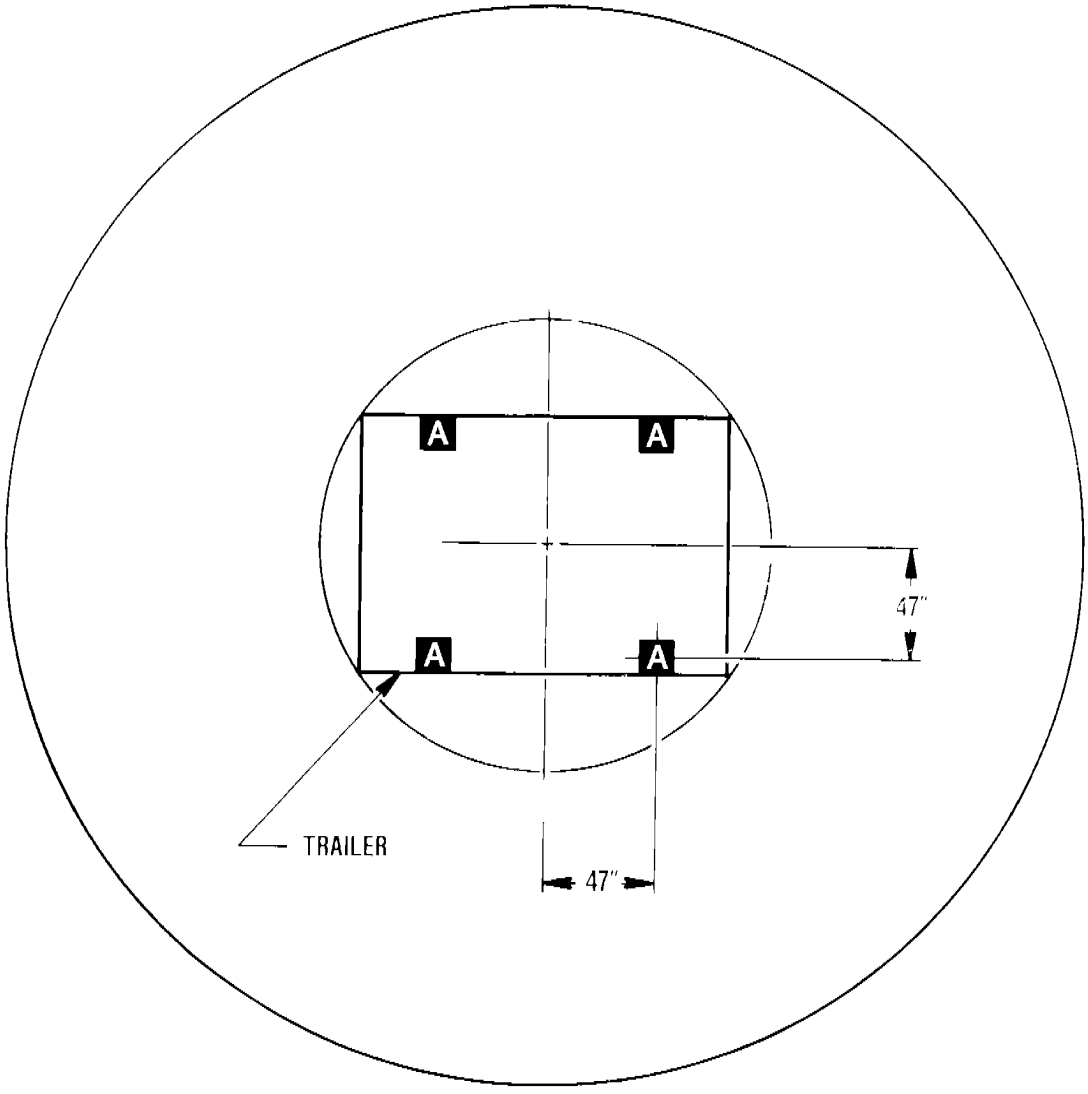
LIGHTING ..... 110 volt incandescent

STANDARD LEAD-IN CABLE

Size ..... 2/4 Type G
Length ..... 50 ft.

Specifications are effective as of publication date. Because we try to improve every Chance product, these specifications are subject to change without notice.

PORTABLE MODEL 36 FT. CAROUSEL



MAXIMUM INDIVIDUAL GROUND LOADS (POUNDS)
REFER TO INSTALLATION DRAWINGS FOR SPECIFIC LOADS AND LOCATIONS

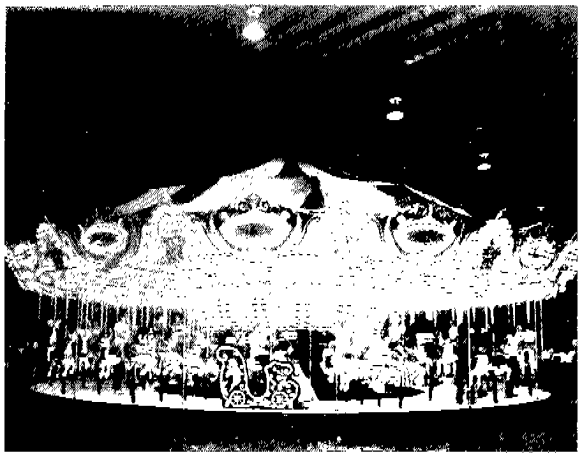
SYMBOL	DESCRIPTION	OPERATING - NO WIND 36 PASSENGERS	ADD FOR 35 MPH WIND
A	TRAILER JACKS	8,400	± 4500

RIDE CLEARANCE DIMENSIONS

Cornice diameter ..... 38 ft.
Floor diameter ..... 33 ft.
Center pole height ..... 24 ft.
Inner floor height ..... 8½ in.
Outer floor height ..... 13 in.

SPECIFICATIONS

This ride conforms with all applicable ASTM amusement ride standards in effect on the date of manufacture.



TRAILERING

Customer-furnished vans

Number of vans required 2
Length ..... 40 ft.
Type ..... Tandem axle electronics van
Minimum inside height of van ..... 111 in.

OPTIONS

- Complete racking of customer-furnished van
- Special outside fence with horse design
- Brass spiral horse pole sleeves
- Brass spiral floor hanger rod sleeves
- Baptist Music Organ, Model No. 162A
- Organ console replica

SEATING

Number of seats ..... 60 horses, 2 chariots
Maximum number of passengers per seat
Horses ..... 1 adult or 1 child
Chariots ..... 4 adults or 6 children
Maximum passenger weight per seat
Horses ..... 170 lbs.
Chariots ..... 680 lbs.
Maximum total number of passengers ..... 68 adults or 72 children
Maximum total passenger weight ..... 11,560 lbs.
Minimum passenger height ..... 42 inches (unaccompanied by adult)
Loading ..... All passengers simultaneously
Maximum unbalance ..... 12 adults (2,040 lbs.)

PERFORMANCE

Direction of travel ..... Counter-clockwise
Ride speed ..... 5 rpm
Ride duration (maximum) ..... 2½ min.
Ride duration (recommended) ..... 2 min.
Maximum wind speed (operating) ..... 35 mph
Maximum wind speed (static) ..... 80 mph

MAXIMUM RIDE WEIGHT (empty) ..... 51,000 lbs. (with two 40 ft. vans)

DRIVE ..... Electro-Hydraulic

POWER REQUIREMENTS

Total ..... 35 kW
Motor ..... 6 kW
Lights ..... 24 kW
Minimum/maximum line voltage 208/230

MOTOR

Type ..... 208 Y/460 volt, 3 phase, 60 Hz
Horsepower rating 7.5

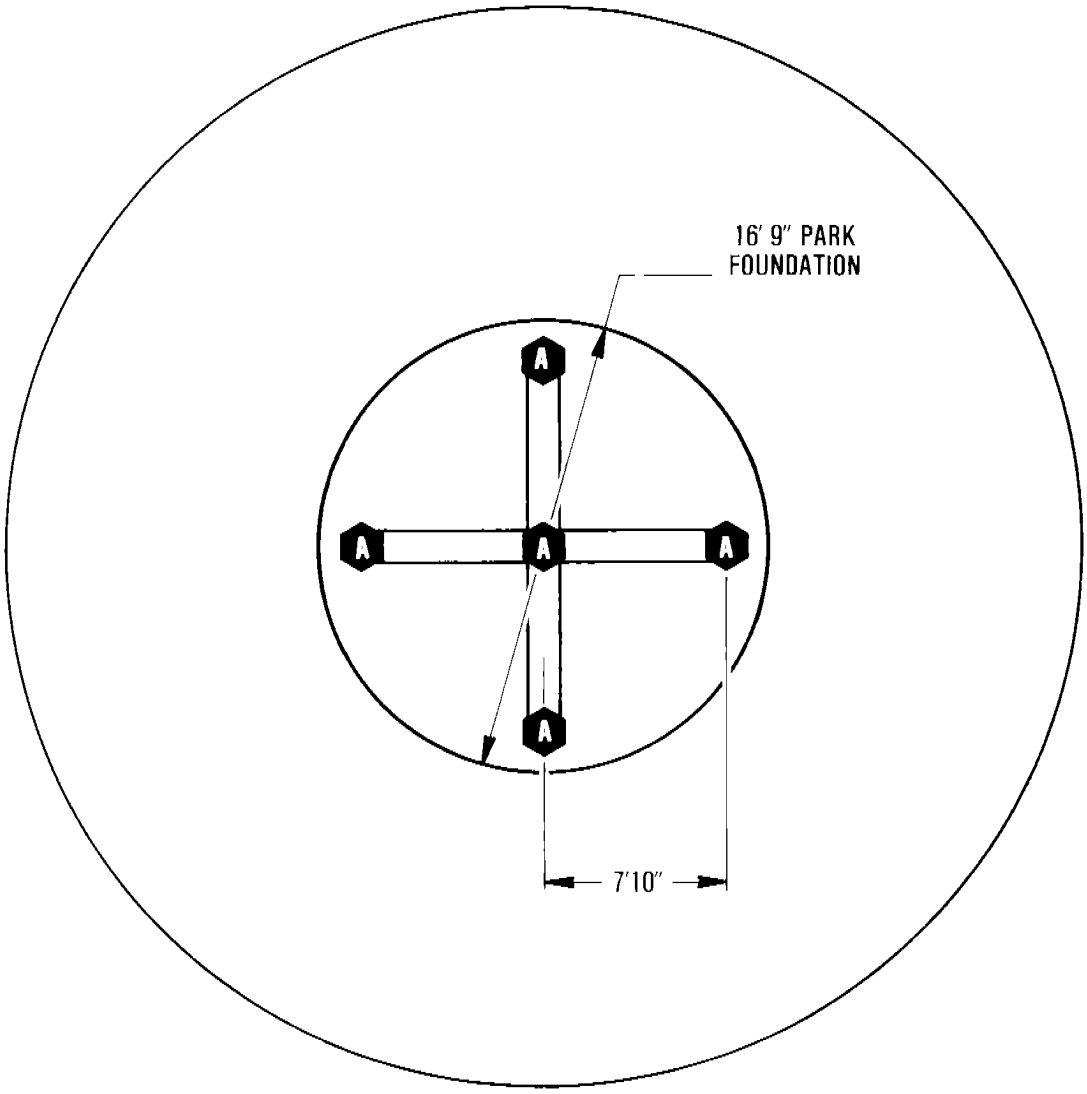
LIGHTING ..... 110 volt incandescent

STANDARD LEAD-IN CABLE

Size ..... 2/4 Type G
Length ..... 50 ft.

Specifications are effective as of publication date. Because we try to improve every Chance product, these specifications are subject to change without notice.

PARK MODEL 50 FT. CAROUSEL



MAXIMUM INDIVIDUAL GROUND LOADS (POUNDS)
REFER TO INSTALLATION DRAWINGS FOR SPECIFIC LOADS AND LOCATIONS

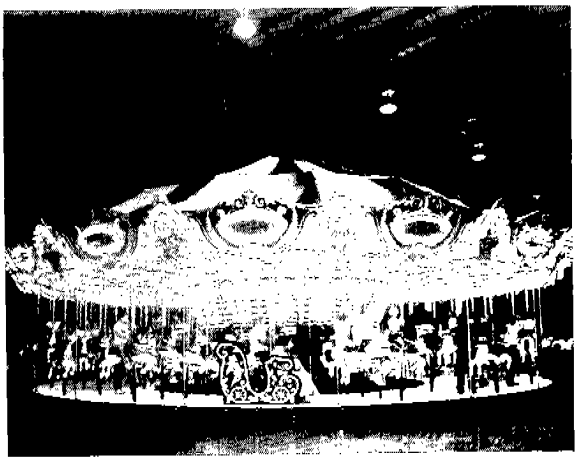
SYMBOL	DESCRIPTION	OPERATING - NO WIND 36 PASSENGERS	ADD FOR 35 MPH WIND
A	PARK TYPE BASE	10.800	± 3200

RIDE CLEARANCE DIMENSIONS

Cornice diameter ..... 50 ft.
Floor diameter ..... 45 ft.
Center pole height ..... 27 ft.
Inner floor height ..... 9 in.
Outer floor height ..... 14 in.

SPECIFICATIONS

This ride conforms with all applicable ASTM amusement ride standards in effect on the date of manufacture.



TRAILERING

Main trailer*

Length ..... 20 ft.
Width ..... 8 ft.
Height ..... 13 ft. 6 in.
Tire size ..... 10:00 x 20 (12-ply)

Customer-furnished vans*

Number of vans required 3
Length ..... 28 ft.
Type ..... Furniture or electronics van
Minimum inside height of van ..... 102 in.

* Customer must furnish 2 converter dollies for tandem towing of trailers.

OPTIONS

- Complete racking of customer-furnished van
- Special outside fence with horse design
- Brass spiral horse pole sleeves
- Brass spiral floor hanger rod sleeves
- Baptist Music Organ, Model No. 162A
- Organ console replica

SEATING

Number of seats ..... 60 horses, 2 chariots
Maximum number of passengers per seat
  Horses ..... 1 adult or 1 child
  Chariots ..... 4 adults or 6 children
Maximum passenger weight per seat
  Horses ..... 170 lbs.
  Chariots ..... 680 lbs.
Maximum total number of passengers ..... 68 adults or 72 children
Maximum total passenger weight ..... 11,560 lbs.
Minimum passenger height ..... 42 inches (unaccompanied by adult)
Loading ..... All passengers simultaneously
Maximum unbalance ..... 12 adults (2,040 lbs.)

PERFORMANCE

Direction of travel ..... Counter-clockwise
Ride speed ..... 5 rpm
Ride duration (maximum) ..... 2½ min.
Ride duration (recommended) ..... 2 min.
Maximum wind speed (operating) ..... 35 mph
Maximum wind speed (static) ..... 80 mph

MAXIMUM RIDE WEIGHT (empty) ..... 55,000 lbs. (with main trailer and three 28 ft. vans)

DRIVE ..... Electro-Hydraulic

POWER REQUIREMENTS

Total ..... 35 kW
Motor ..... 6 kW
Lights ..... 24 kW
Minimum/maximum line voltage 208/230

MOTOR

Type ..... 208 Y/460 volt, 3 phase, 60 Hz
Horsepower rating 7.5

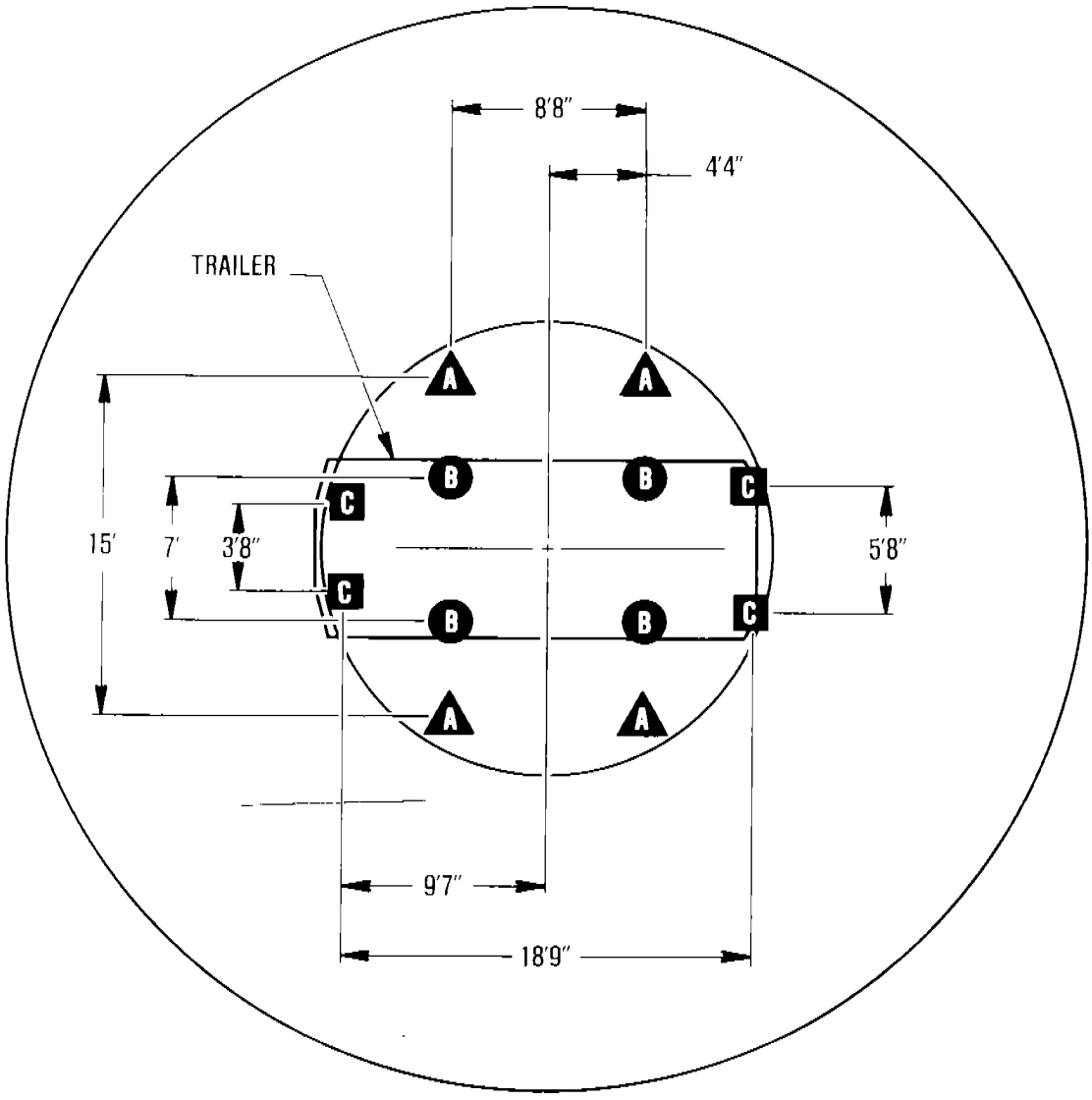
LIGHTING ..... 110 volt incandescent

STANDARD LEAD-IN CABLE

Size ..... 2/4 Type G
Length ..... 50 ft.

Specifications are effective as of publication date. Because we try to improve every Chance product, these specifications are subject to change without notice.

PORTABLE MODEL **50 FT. CAROUSEL**



MAXIMUM INDIVIDUAL GROUND LOADS (POUNDS)
REFER TO INSTALLATION DRAWINGS FOR SPECIFIC LOADS AND LOCATIONS

SYMBOL	DESCRIPTION	OPERATING - NO WIND 36 PASSENGERS	ADD FOR 35 MPH WIND
A	TRAILER OUTRIGGERS	5,400	± 1,600
B	TRAILER LEVELING JACKS	3,800	———
C	TRAILER STABILIZING JACKS	4,300	± 1300

RIDE CLEARANCE DIMENSIONS

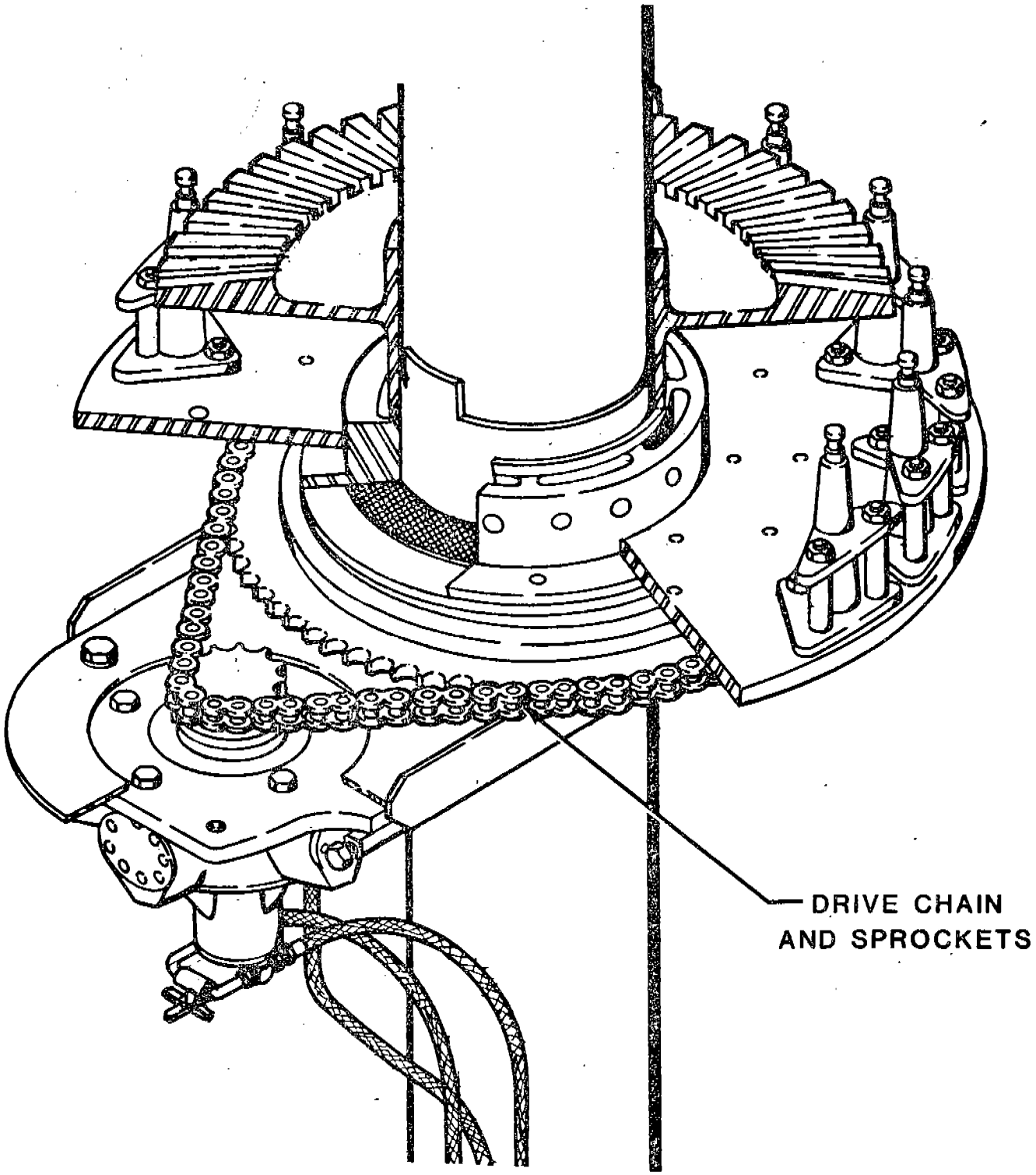
Cornice diameter ..... 50 ft.
Floor diameter ..... 45 ft.
Center pole height ..... 27 ft.
Inner floor height ..... 9 in.
Outer floor height ..... 14 in.

CARROUSEL (Merry-Go-Round)

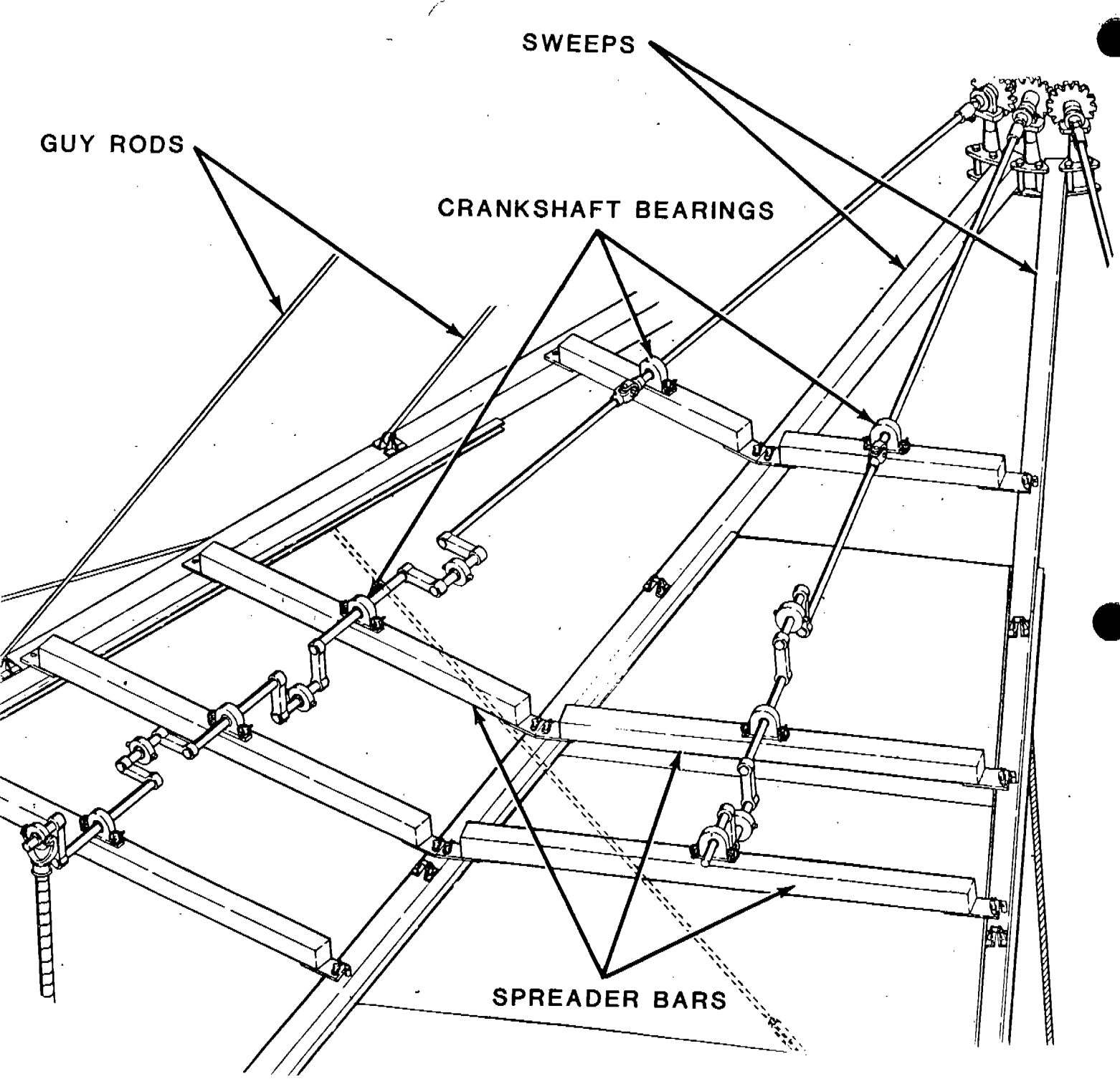
Ride Serial Number _____ Owner _____ Date _____

FIELD INSPECTION POINTS

1. ( ) Inspect blocking and/or leveling, including foundation bolts, if applicable.
2. ( ) Inspect lock nuts on leveling jacks (trailer mounted models only).
3. ( ) Inspect hydraulic valves for leveling jacks (trailer mounted models only).
4. ( ) Inspect cable leads, electrical connections and grounding per local code.
5. ( ) Inspect fences for proper installation.
6. ( ) Inspect drive chain and sprocket for alignment and tension.
7. ( ) Inspect drive belts for proper tension of deflection. Deflection = belt span in inches / 64 (models without hydraulic drive only).
8. ( ) Inspect all brushes for tension and wear.
9. ( ) Check all electrical connection to commutator.
10. ( ) Inspect sweep attach points for signs of wear. Check spreader bars and guy rods.
11. ( ) Inspect crankshaft bearings for wear.
12. ( ) Inspect horse hanger hooks and bearings (Bulletin B389R1068-0).
13. ( ) Inspect horses, stirrups and reins if equipped) for broken, loose or missing parts.
14. ( ) Inspect horse pole telescopes and sockets (Bulletin B389R1068-0).
15. ( ) Check operation of brake.
16. ( ) Inspect for hydraulic leaks (rides with hydraulic drive only).
17. ( ) Check the speed of ride per data on ride identification plate.
18. ( ) Check ride for excessive vibration.
19. ( ) Inspect the structure for cracks, bad welds, etc.
20. ( ) Inspect electrical wiring for short circuits, bad wires, etc.
21. ( ) Inspect overall appearance of ride for cleanliness and general overall upkeep.

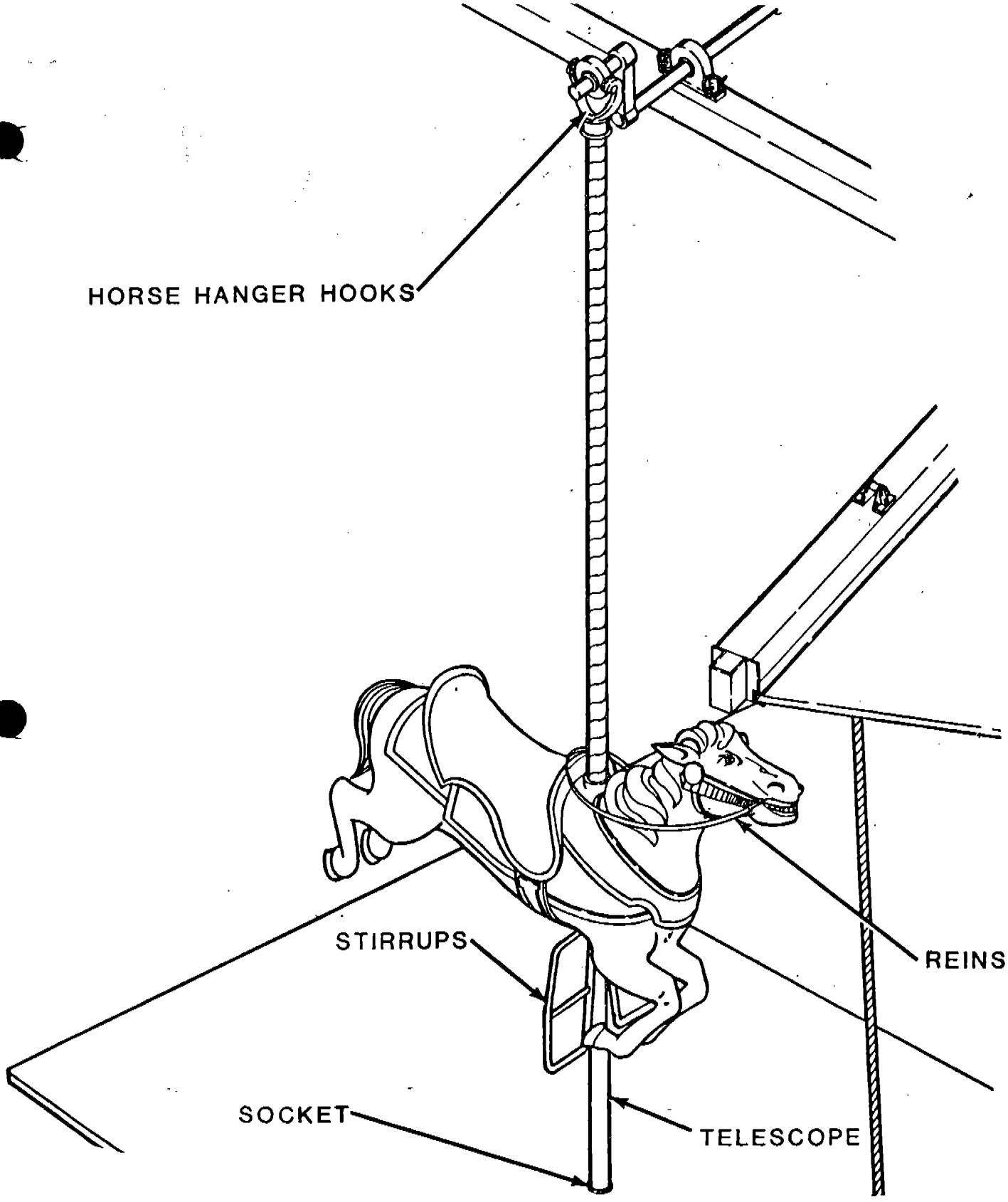


6. ( ) Inspect drive chain and sprocket for alignment and tension.



10. ( ) Inspect sweep attach points for signs of wear. Check spreader bars and guy rods.

11. ( ) Inspect crankshaft bearings for wear.



12. ( ) Inspect horse hanger hooks and bearings (Bulletin B389R1068-0).

13. ( ) Inspect horses, stirrups and reins (if equipped) for broken, loose or missing parts.

14. ( ) Inspect horse pole telescopes and sockets (Bulletin B389R1068-0).

NUMBER: B389R1085-0

DATE: NOV. 30, 1990

SUPERSEDES:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: 38901086 through 38902190 Chance Rides, Inc.

81-4806 through 85-4809
Chance Manufacturing Co., Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with rides produced by Chance Manufacturing Company, Inc.

Ride: 50' CARROUSEL Subject: Hydraulic Motor Cavitation

Chance Rides, Inc. has become aware of at least one 50' CARROUSEL amusement ride which has experienced cavitation to the hydraulic motor. A rework kit has been developed which when properly installed will help keep the motor supplied with oil. Chance Rides, Inc. requires all owners of the above noted rides to order and install kit number K389R1085-0 which contains all parts necessary to rework one ride.

PARTS LIST

Part Number	Description	Quantity
62743000	3/4" 90° Elbow	1
10000300	Hose	1
62777000	3/4" Close Nipple	2
62701800	3/4 to 1/2 Bushing Reducer	1
60036800	90 Degree Adapter	1
28440300	Check Valve	1
62702800	1" to 3/4" Bushing	1
K389R1085-0	Drawing	

The above noted kit must be installed per the instructions which will accompany the kit and the attached Certification Of Compliance returned within 15 days after receipt of the kit.

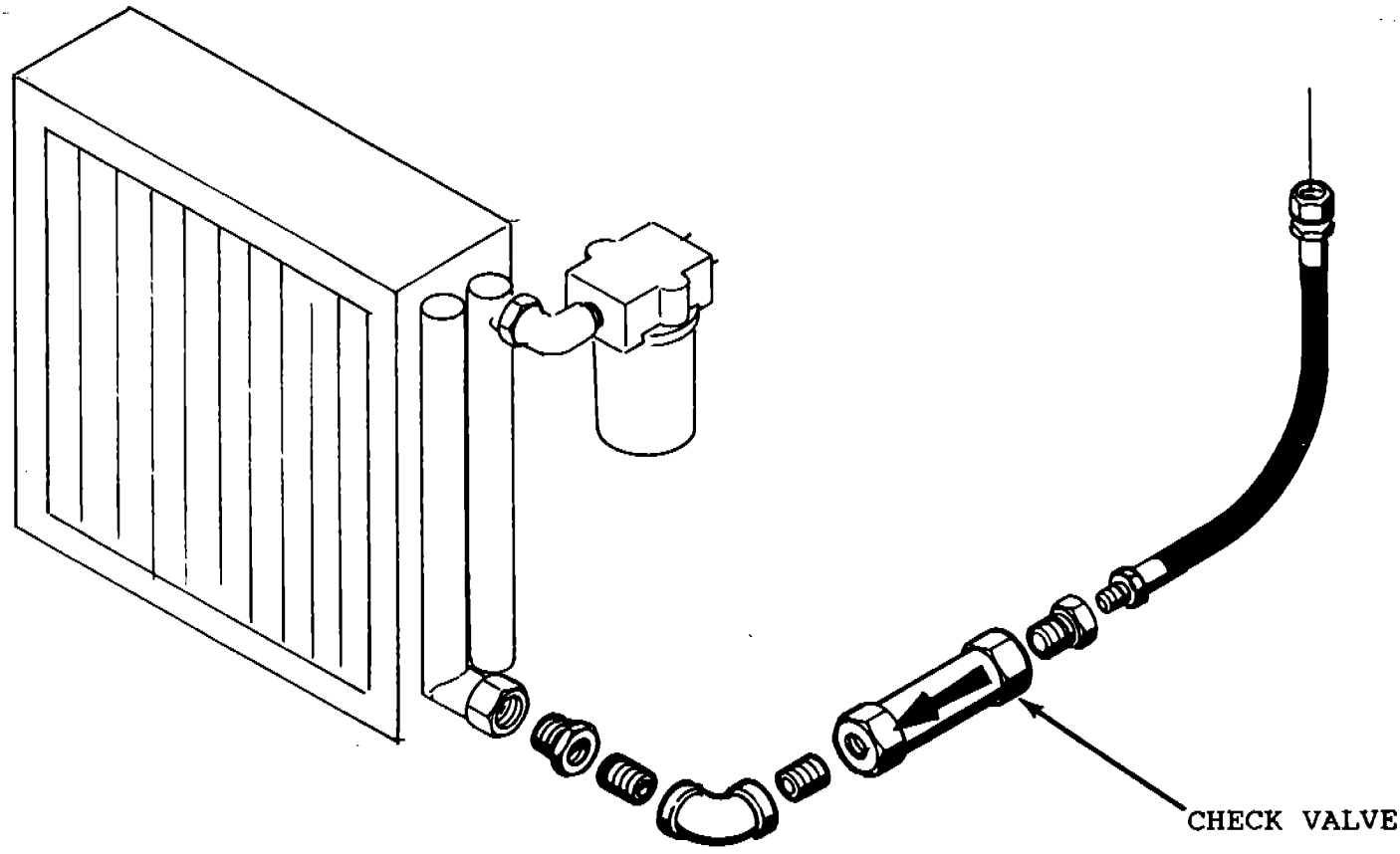
All work must be performed by qualified personnel, capable of understanding the function of the parts and their proper installation.

Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416

NOTICE

Use only those components authorized, specified or provided by Chance Rides, Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with any unauthorized alterations and/or modifications or additions and installations of unauthorized components.



KIT 389R1085-0

NUMBER: B389R1068-A

DATE: SEPT. 6, 1991

SUPERSEDES: B389R1068-0
B30-0259-0A
B-0241-00

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: All Units - Chance Rides, Inc.
All Units - Chance Manufacturing Co., Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with rides produced by Chance Manufacturing Company, Inc.

Ride: CARROUSEL

Subject: Inspection of Horse Hanger Hooks, Bearings, Horse Pipe, Telescope Assemblies, and Crankshaft Throws

Chance Rides, Inc. requires that all CARROUSEL owners inspect the horse hanger hooks, the horse hanger hook bearing, the horse pole, the telescope assemblies and crankshafts to ensure that all parts fit properly within the wear tolerances for a safe ride.

Perform the following inspection at each set-up, or monthly, whichever occurs first.

MG-70 Horse Hanger Hook
Part No. 33424000
(36' CARROUSEL)

370-101 Horse Hanger Hook
Part No. 33426300
(50' CARROUSEL)

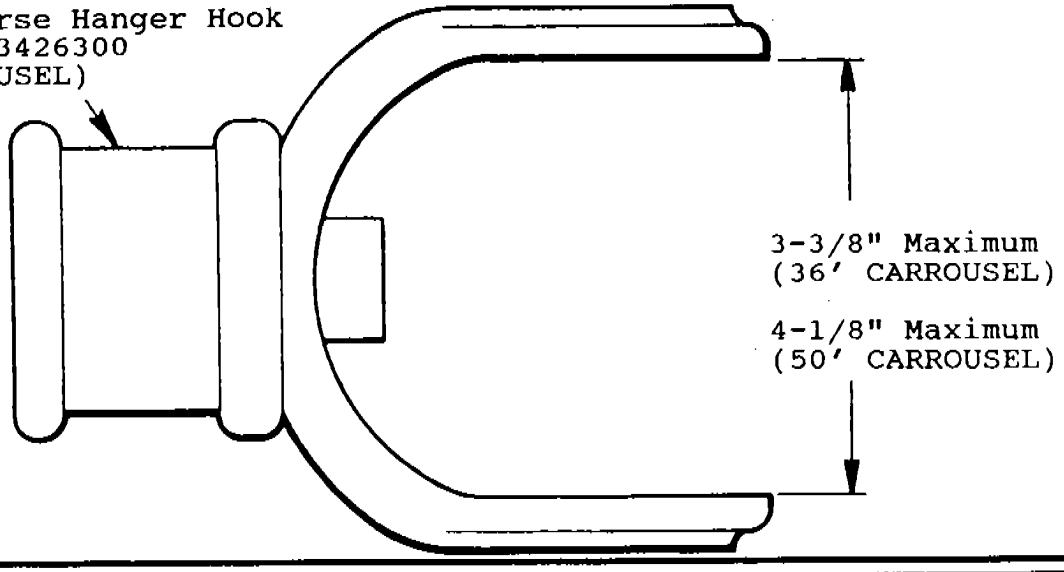


ILLUSTRATION A

Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416

1. Measure the distance between the hooks as shown in Illustration A. The dimension must be within the specified limits. Report any variations to the Chance Rides Customer Service Department. These hooks may face either inward or outward when attached to the crankshaft.

⚠ WARNING: DO NOT HEAT THE HORSE HANGER HOOK TO STRAIGHTEN IT.

2. Inspect for excessive wear on top of the horse hanger bearing ears and the underside of the horse hanger hook Item 1 of Illustration C. Wear at this point increases the gap between safety stops (Item 2 and 3 of Illustration C). This gap should not exceed 3/16". Any gap larger than 3/16" will allow the hook to come off the bearing during operation.

   Using a piece of bar 3/16" thick, check the gap between each of the safety stops, if the bar passes easily through the gap, the hanger bearings should be replaced. Inspect horse hanger hook and replace if excessive wear is evident.

3. Inspect for excessive wear between horse hook, horse pole, and connecting rivet (Item 4, illustration C). Maximum allowable upward and downward movement of horse hook on horse pole is 1/8 inch.

4. All horse pipes furnished by Chance Rides, Inc. have a 1/8 x 45 degree chamfer on the bottom (Item 5, Illustration C). The telescope pipes have a 3/16" x 30 degree chamfer on the top (Item 6, Illustration B). These are to prevent the two pipes cutting into one another and jamming. Any replacement pipes must also be chamfered.

5. The lower casting on the telescope (Item 7, Illustration B) and the upper casting on the floor lock should be inspected for wear or damage. Excessive wear could result in release of the telescope from the floor lock. Parts which allow easy locking or unlocking are worn and should be replaced.

6. Visually inspect crankshaft throw castings for indications of cracks (Illustration E). If indications are found, contact Chance Rides, Inc. DO NOT ATTEMPT TO WELD OR REPAIR THROWS. DO NOT OPERATE RIDE UNTIL APPROVED REPAIR IS COMPLETE.

All work must be performed by qualified personnel, capable of understanding the function of the parts and their proper installation.

NOTICE

Use only those components authorized, specified or provided by Chance Rides, Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with any unauthorized alterations and/or modifications or additions and installations of unauthorized components.

NOTE: BOTTOM CASTING EARS AND MATING EARS ON TELESCOPE LOCK SHOULD BE CHECKED FOR EXCESSIVE WEAR WHICH COULD CAUSE THE TELESCOPE TO DISENGAGE FROM THE LOCK.

NOTE: TOP OF TELESCOPE PIPE MUST BE TAPERED AS SHOWN TO PREVENT A SHARP EDGE FROM CUTTING INTO HORSEPIPE RESULTING IN A JAM BETWEEN THE TWO PIPES.

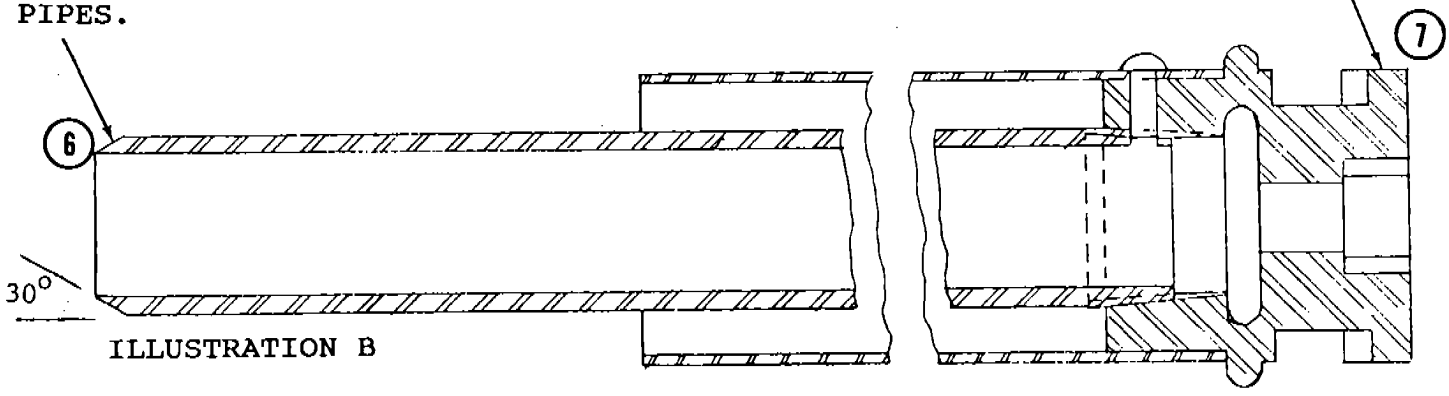


ILLUSTRATION B

NOTE: ALL HORSE HANGER HOOKS AND BEARINGS SHOULD BE INSPECTED FOR EXCESSIVE WEAR AT POINT 1. EXCESSIVE WEAR WILL RESULT IN INCREASED CLEARANCE BETWEEN STOPS 2 AND 3 WHICH SHOULD NOT EXCEED 3/16"

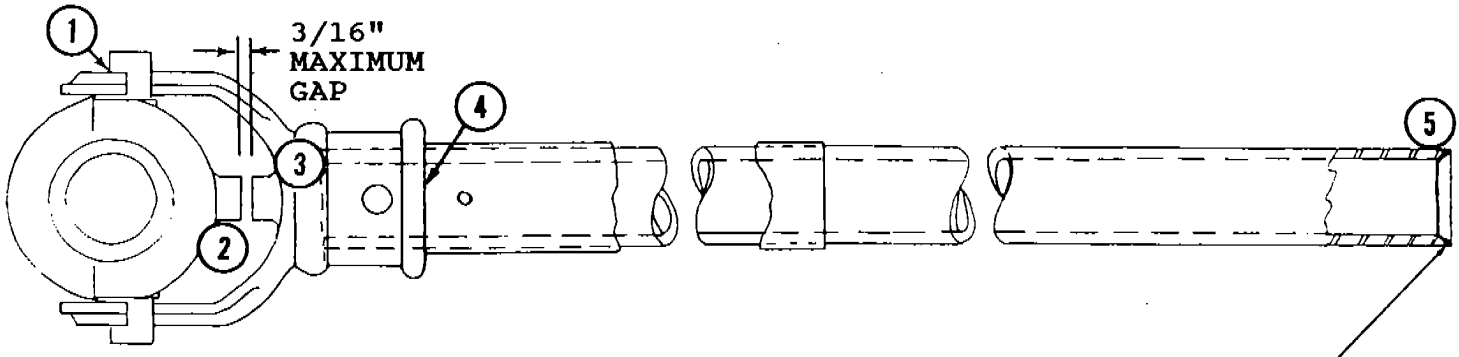


ILLUSTRATION C

1/8" X 45 DEGREES CHAMFER ON BOTTOM OF HORSE PIPE TO PREVENT A SHARP EDGE FROM CUTTING INTO TELESCOPE RESULTING IN A JAM BETWEEN THE TWO PIPES.

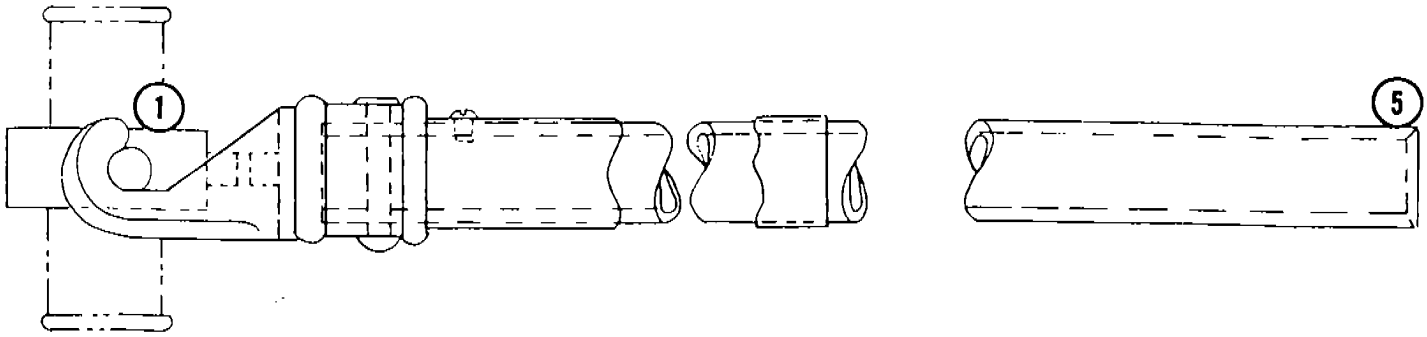
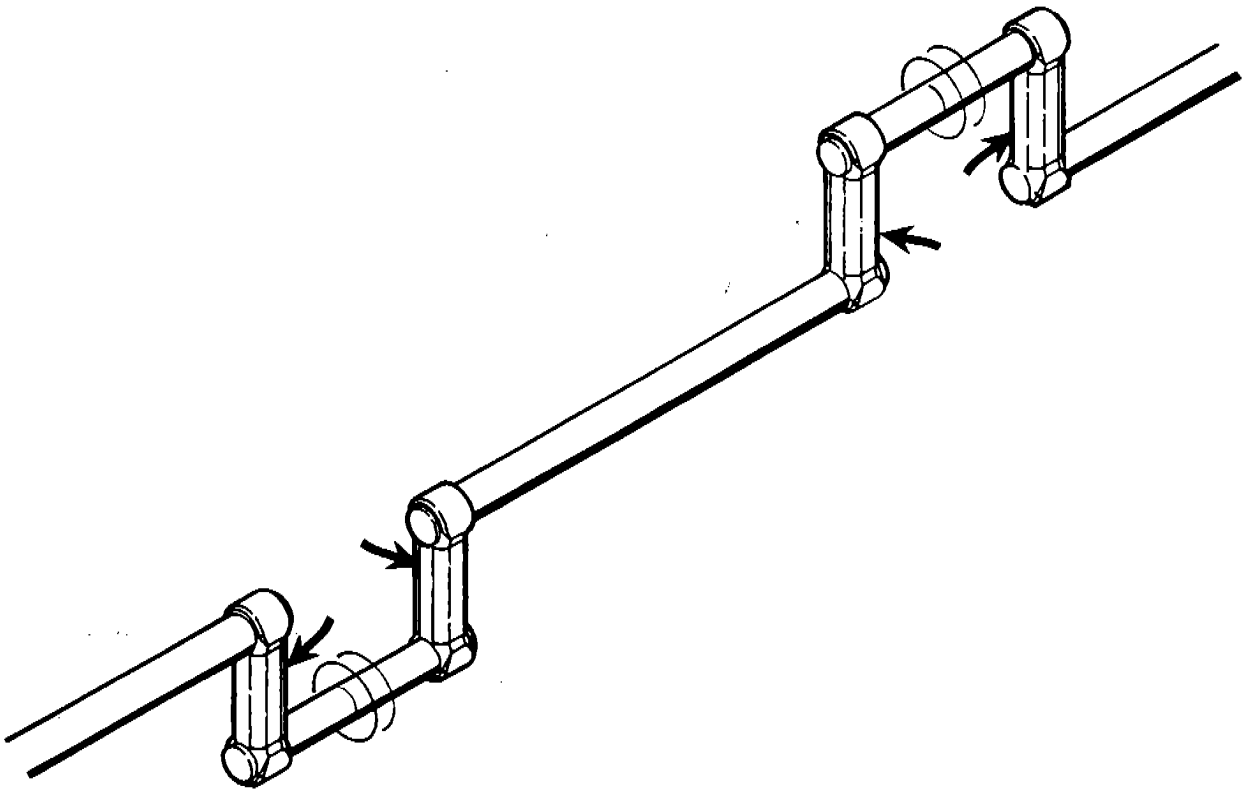


ILLUSTRATION D

ILLUSTRATION E



NUMBER: B404R1115-0

DATE: DEC. 4, 1992

SUPERSEDES:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: 403-00191 thru 403-01292
404-00192 thru 404-00492
405-00192 thru 405-00292

Ride: 28' CARROUSEL w/Pedestal
36' CARROUSEL w/Pedestal
50' CARROUSEL w/Pedestal

Subject: Horse Step Shield Installation

Chance Rides, Inc. has become aware that a possible pinch point exists between the horse step and the horse pedestal on the CARROUSEL amusement rides listed above. Chance Rides, Inc. has developed a kit that when properly installed will shield the horse pedestal.

Chance Rides, Inc. requires all owners of the above listed CARROUSELS to order the specific horse step shield kit, as defined below. Follow the installation instructions in this bulletin and return the Certification Of Compliance within 15 days from receipt of kit. Each kit contains all necessary parts to rework the ride for which the particular kit is intended. Kits are available at no charge if ordered within 90 days of the date on this bulletin.

Kit number K403R1115-0 (28' CARROUSEL)

Item No.	Part Number	Description	Quantity Required
1	36675000	Shield	18
2	66408000	1/2 Self-tap #10 Screw	108
3	68529800	3/16 SAE Washer	108

Kit number K404R1115-0 (36' CARROUSEL)

Item No.	Part Number	Description	Quantity Required
1	36675000	Shield	30
2	66408000	1/2 Self-tap #10 Screw	180
3	68529800	3/16 SAE Washer	180

Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416

Kit number K405R1115-0 (50' CARROUSEL)

Item No.	Part Number	Description	Quantity Required
1	36675000	Shield	60
2	66408000	1/2 Self-tap #10 Screw	360
3	68529800	3/16 SAE Washer	360

All work must be performed by qualified personnel, capable of understanding the function of the parts and their proper installation.

NOTICE

Use only those components authorized, specified or provided by Chance Rides Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with any unauthorized alterations and/or modifications or additions and installations of unauthorized components.

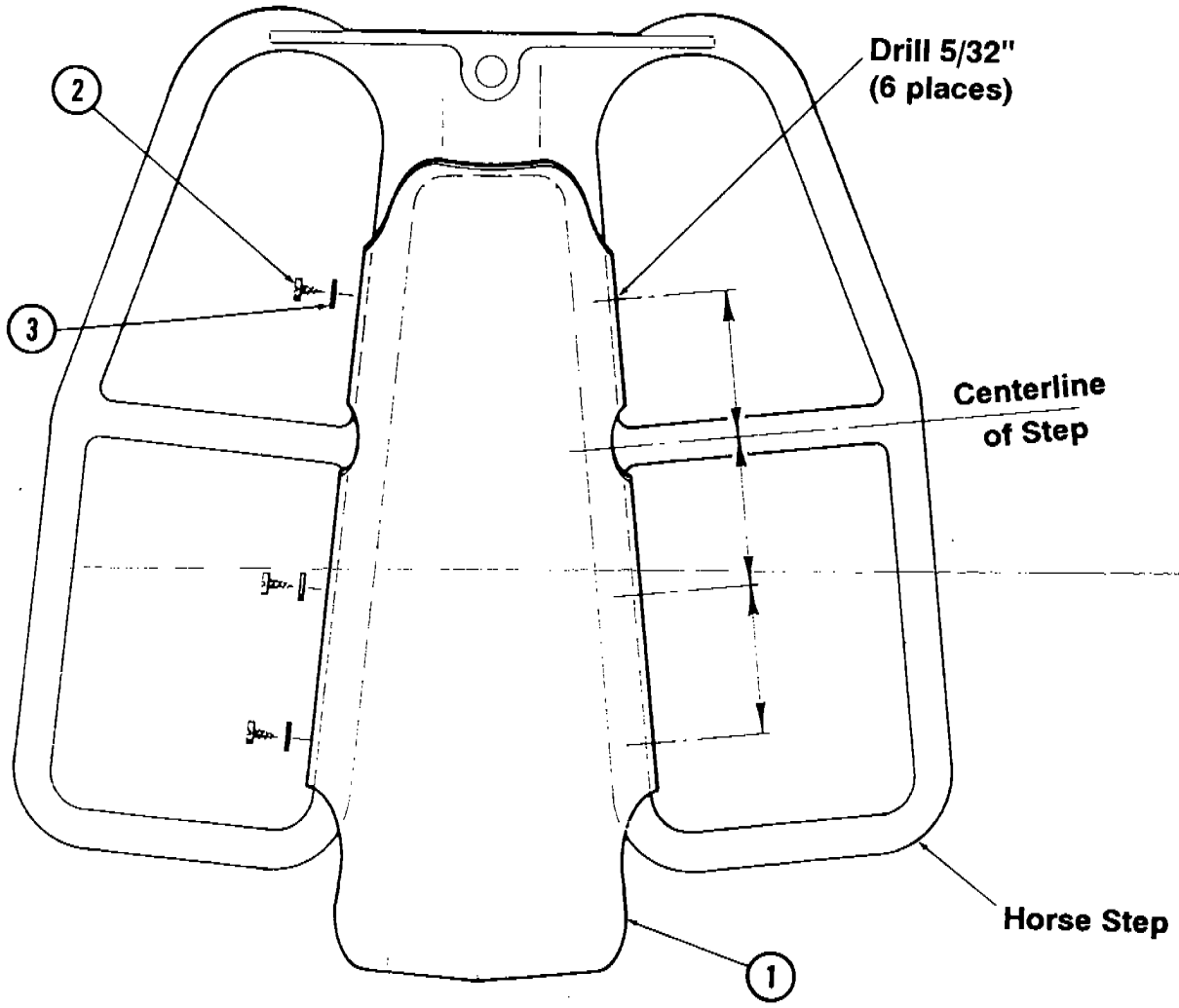


ILLUSTRATION A

INSTALLATION INSTRUCTIONS

1. Align the shield on the back side of the horse steps as shown in Illustration B.

2. Using a 5/32 inch drill bit, drill 6 holes into the horse step to a depth of 1/2 inch as shown in Illustration A, use shield as template.

3. Attach the shield (Item 1) to the horse step with 6 SAE washers (Item 3) and 6 #10 self-tapping screws (Item 2).

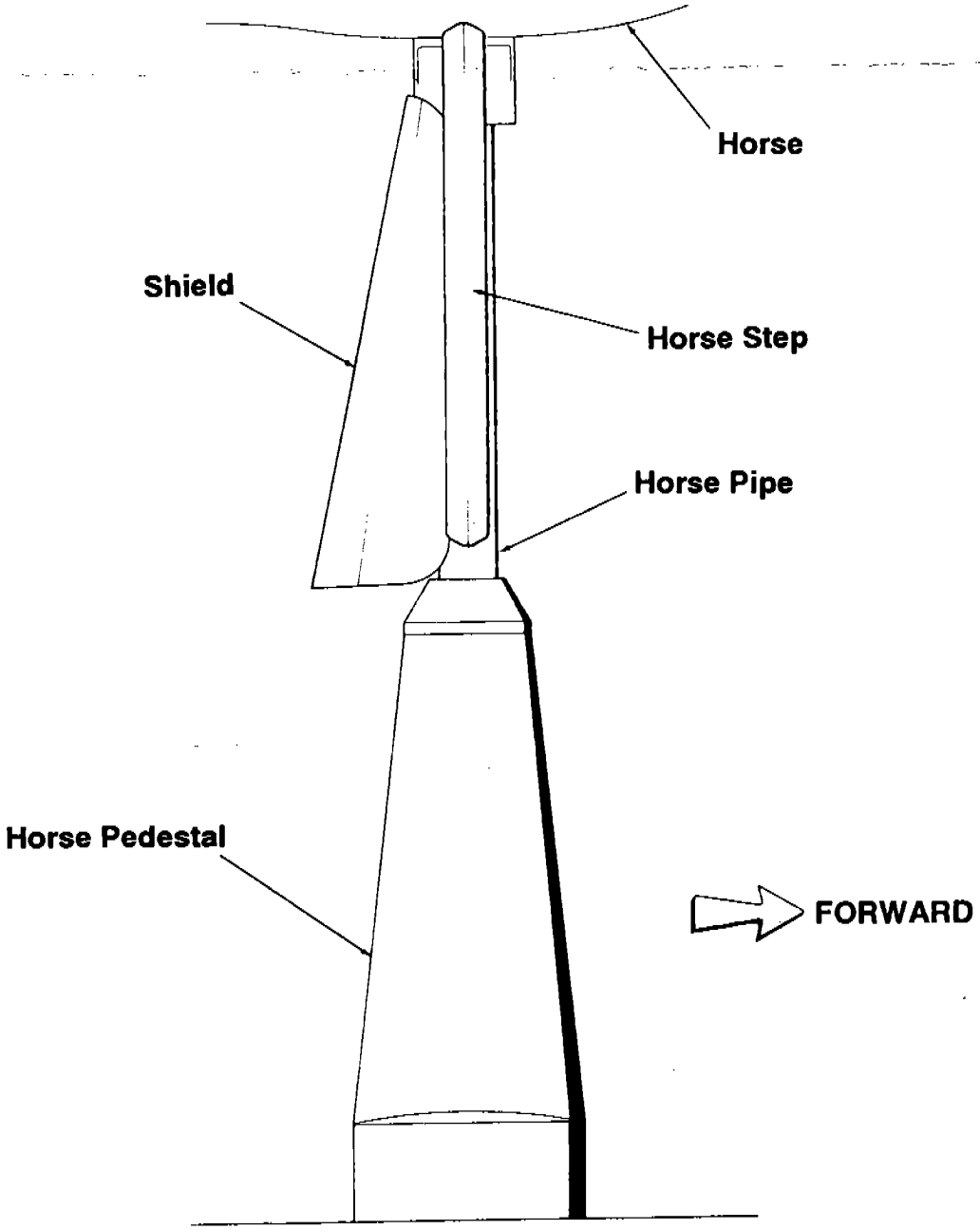


ILLUSTRATION B

B404R1115-0

We hereby certify the procedure outlined in the above-mentioned service bulletin has been performed on the CARROUSEL, Serial Number _____, in accordance with the instructions and specifications supplied by Chance Rides, Inc.

Date Bulletin Received _____

Date Procedure Performed _____

Name and Address of Person Performing Procedure:

_____

_____

Attested:

Owner _____ Maintenance Supervisor _____

Address _____ Address _____

City _____ State _____ City _____ State _____

By _____

Date _____ Date _____

Results _____

_____

_____

This certification must be completed and returned to **CHANCE RIDES, INC., P.O. BOX 12328, WICHITA, KS 67277-2328**, within fifteen (15) days of receipt of parts.

NUMBER: B389R1117-0

DATE: JAN. 11, 1993

SUPERSEDES:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: MGR-07186 through 0MG-12092
Chance Rides, Inc.

389-01086 through 389-02992
Chance Rides, Inc.

All units - Chance Manufacturing Co., Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with rides produced by Chance Manufacturing Company, Inc.

Ride: 36' and 50' CARROUSELS (Equipped with Ceilings) Subject: PINCH POINT

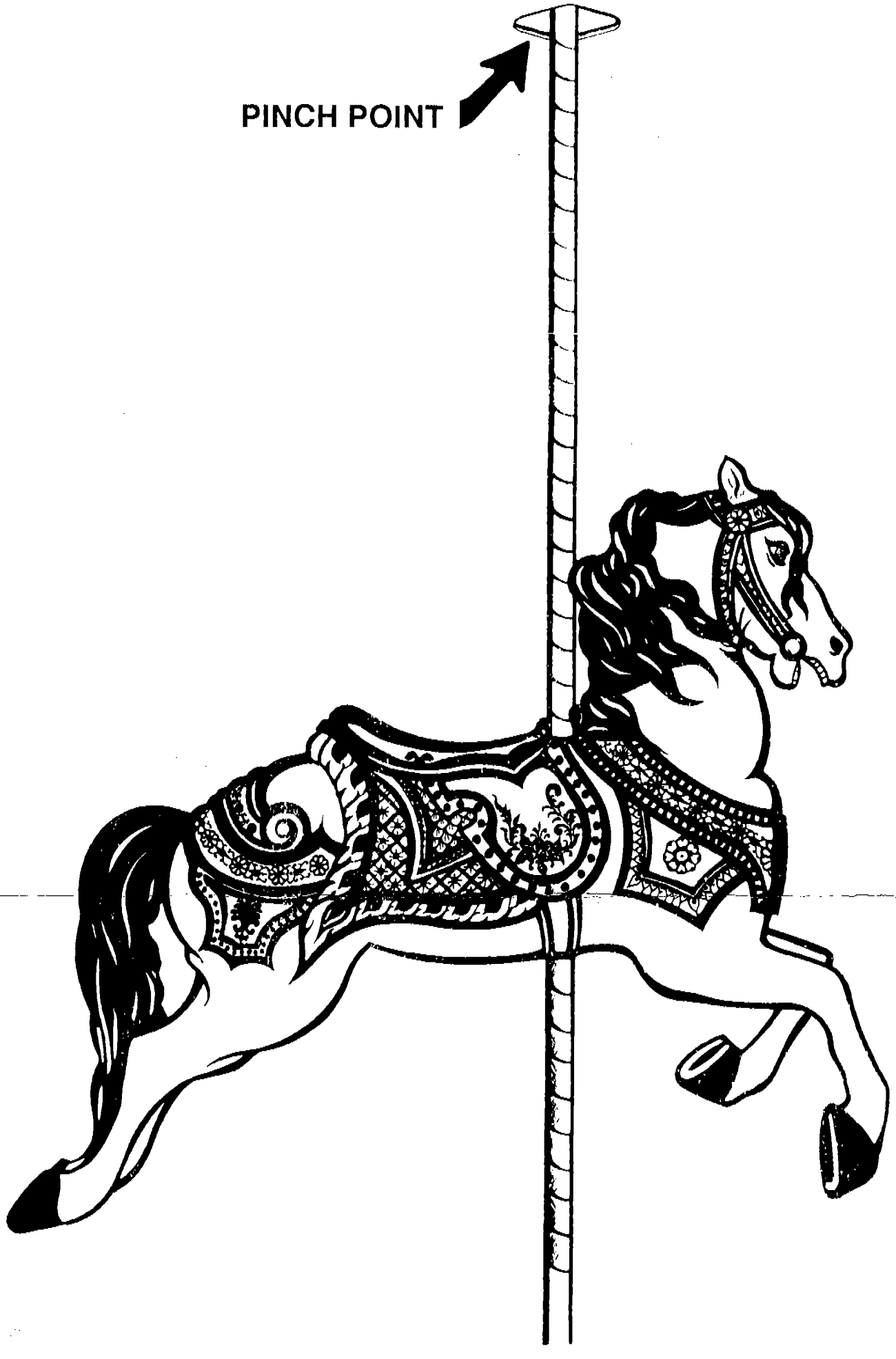
Chance Rides, Inc. has become aware that a possible pinch point exists between the horse pole and the edge of the ceiling panel on the CARROUSEL amusement rides listed above. This may occur if a passenger on a CARROUSEL animal reaches over his or her head and/or stands up in the horse steps while the ride is in motion. When this occurs, it may result in injury to the passenger.

Operators of all rides are required to give safety announcements to all passengers before the start of each ride cycle. Safety announcements given by ride operators of CARROUSELS with ceiling panels must include but not be limited to the following:

1. Once seated, remain seated while the ride is in motion.
2. Hold onto the horse pole.
3. Do not extend hands above your head height on horse pole.

The operator must remain in full control of the operating controls at all times during the operation of the ride. The ride and its passengers must be given the full attention of the operator at all times. The operator must immediately stop the ride if anyone is observed in an unsafe position or doing anything that could lead to an unsafe condition.

Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416


PINCH POINT

NUMBER: B403R1135-0

DATE: AUG. 20, 1993

SUPERSEDES:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: 40300191 through 40301392 and
40301592 through 40302093

Ride: 28' CARROUSEL

Subject: RIDE INFORMATION PLATE

Chance Rides, Inc. has become aware that some of the weights shown on the ride information plate for the above noted 28' CARROUSEL amusement rides are incorrect.

Chance Rides, Inc. requires all owner/operators of the above noted rides to order and install the ride information plate per the installation instructions found on this bulletin. When ordering the new ride information plate, identify serial number from present ride information plate. New ride information plates are now available at no charge, if ordered and the old ride information plate returned to Chance Rides, Inc. within 90 days of the date on this bulletin.

ORDER THE FOLLOWING PARTS:

Quantity 1 Ride Information Plate, Part Number 25343000

Quantity 4 Rivets, Part Number 66143000

All work must be performed by qualified personnel, capable of understanding the function of the parts and their proper installation.

NOTICE

Use only those components authorized, specified or provided by Chance Rides, Inc.

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with any unauthorized alterations and/or modifications or additions and installations of unauthorized components.

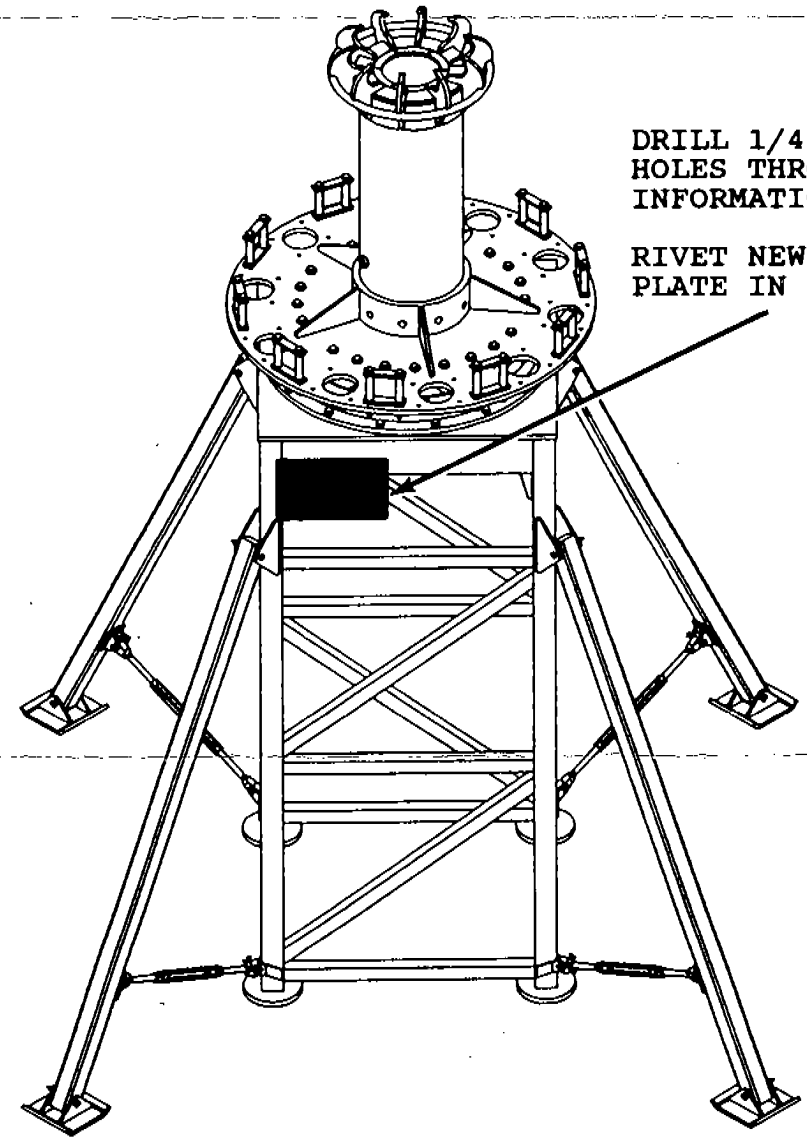
Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416

INSTALLATION INSTRUCTIONS

1. Remove old ride information plate by drilling out rivets holding ride information plate in place, using a drill motor with a 1/4 inch drill bit.

2. Using the old ride information plate as a template, drill 1/4 inch diameter holes in the new plate to match the existing holes in the old plate.

3. Pop rivet the new plate in place using the rivets supplied with the plate.



NUMBER: B404R1136-0

DATE: AUG. 20, 1993

SUPERSEDES:

America's Largest Manufacturer of Amusement Rides

SERVICE BULLETIN

Effective Serial Number: All Units - Chance Rides, Inc.
(Except 389-01086 through 38903092)

All Units - Chance Manufacturing Co., Inc.
(except 73-2815; 76-2843; 78-2853; 78-2855; 79-2860 and 81-4806 through 85-4809)

Chance Rides, Inc. SPECIFICALLY DISCLAIMS ANY LIABILITY for losses associated with rides produced by Chance Manufacturing Company, Inc.

Ride: 28' CARROUSEL
36' CARROUSEL
50' CARROUSEL

Subject: HORSE HOOK

Chance Rides, Inc. has designed a new style horse hook which is being used on all current production model CARROUSEL amusement rides. This hook will also be used as a replacement part for all CARROUSELS listed above. To determine when a horse hook must be replaced, refer to Chance Rides, Inc. Service Bulletin number B389R1068-A or the CARROUSEL owner/operator's manual.

The new style horse hook is an investment casting which can be identified by the two vertical slits on the hook base which allows it to clamp around the horse pole. This new horse hook is held to the horse pole by a hex head capscrew and locknut as opposed to a rivet, as used with the old style horse hook.

NOTE: Since horse hooks wear independently of each other, they may be replaced individually. Chance Rides, Inc. requires only those hooks not meeting the manufacturer's specifications be replaced at any one time. Therefore, it is acceptable for both the new style and the old style horse hook being utilized on the same unit at the same time.

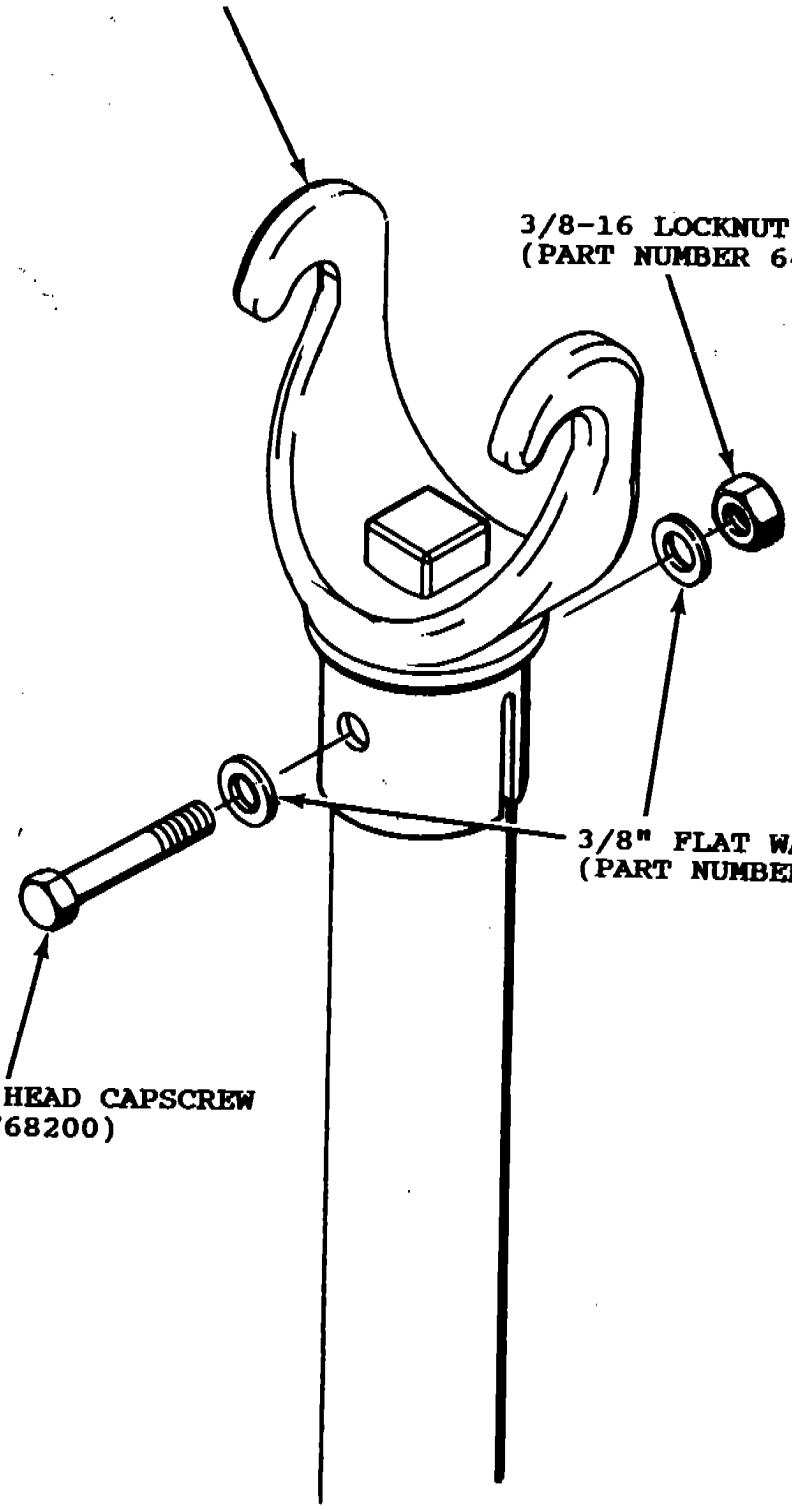
Factory and Sales Office: 4219 Irving · P.O. Box 12328 · Wichita, Kansas 67277-2328 · (316) 942-7411 · FAX: (316) 942-7416

REPLACEMENT HOOK FOR 28' CARROUSEL WITH SERIAL NUMBER 403-00191 AND ON (PART NUMBER 21445500)

REPLACEMENT HOOK FOR 36' CARROUSEL WITH SERIAL NUMBER 404-00192 AND ON (PART NUMBER 21445500)

REPLACEMENT HOOK FOR 50' CARROUSEL WITH SERIAL NUMBER 405-00191 AND ON (PART NUMBER 21445500)

REPLACEMENT HOOK FOR ALL OTHER CARROUSELS LISTED ON THE FRONT OF THIS BULLETIN (PART NUMBER 33424000)



36 FOOT AND 50 FOOT CARROUSELS

Field inspection and test guide

Contents

CHANCE RIDES, INC.
4219 Irving
P.O. Box 12328
Wichita, KS 67277-2328

phone (316) 942-7411
toll free 1-800-242-6231
fax (316) 942-7416

Introduction

Proper maintenance is essential to the safe operation of this ride. The tests and inspection points outlined in this field guide are not intended to replace the recommended maintenance schedule. This guide does not contain maintenance and repair procedures and should only be used as a ride inspection and test guide.

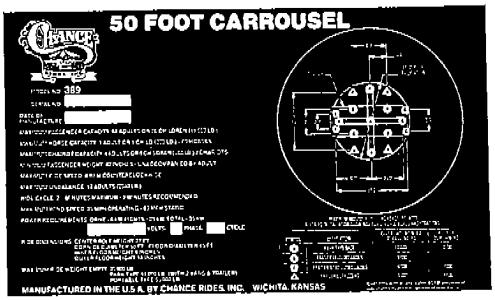
When repairs are necessary, use only those components authorized, specified or provided by the manufacturer. If any alterations, modifications and/or additions, installations of unauthorized components are made to the original design without the manufacturer's explicit written consent or without direct supervision by a manufacturer's representative, CHANCE RIDES, INC. makes no claims as to the integrity of the altered or modified ride (product).

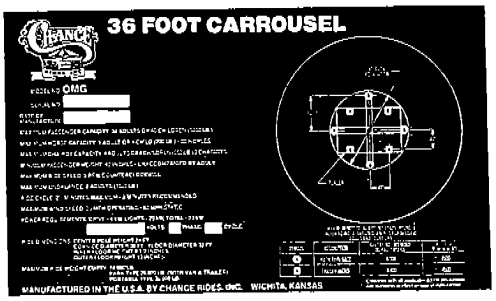
Information in this field inspection and testing guide applies only to products manufactured by CHANCE RIDES INC. built after January 1, 1986 (36 Foot Carrousel serial number MGR-07186 and on / 50 Foot Carrousel serial number 389-01086 and on).

CHANCE RIDES INC., reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to such changes.

Ride description

The **36 Foot** and **50 Foot Carrousels** are mounted on either a trailer or a stationary base. The stationary base should be anchored to the ground for permanent installation. One or more auxiliary trailers provide additional racking provisions for poratability. The ride rotates in a counter-clockwise direction by either an electro-hydraulic drive with integral hydraulic braking, or an electric drive with an electro-mechanical brake.





The ride information plaque is mounted near the centerpole on the trailer deck (portable model) or on the mud sill (park model). The ride information plaque shown is for example only. Always refer to the information plaque mounted to the ride being inspected.

The ride information plaque is mounted to near the centerpole on the trailer deck (trailer-mounted model) on the mud sill (ground model). It lists specifications, operating dimensions, ground loads, as well as model and serial number and date of manufacture.

Detailed operation and maintenance information is available in the *36-Foot Carrousel Operation And Maintenance Manual* (manual number 24328200) or the *50-Foot Carrousel Operation And Maintenance Manual* (manual number 24327200). For more information, or to order manuals, contact CHANCE RIDES, INC.

Operation

Operating controls

NOTE: Some rides are equipped with a fixed control panel on the hydraulic pallet. Control functions are similar.

1. Pump switch - This switch controls the hydraulic pump. Turn the switch off before leaving the control console. Do not stop the ride by turning off the pump.

2. Start switch - Push this button to start the timed ride cycle. At the end of the cycle the ride will brake to a stop.

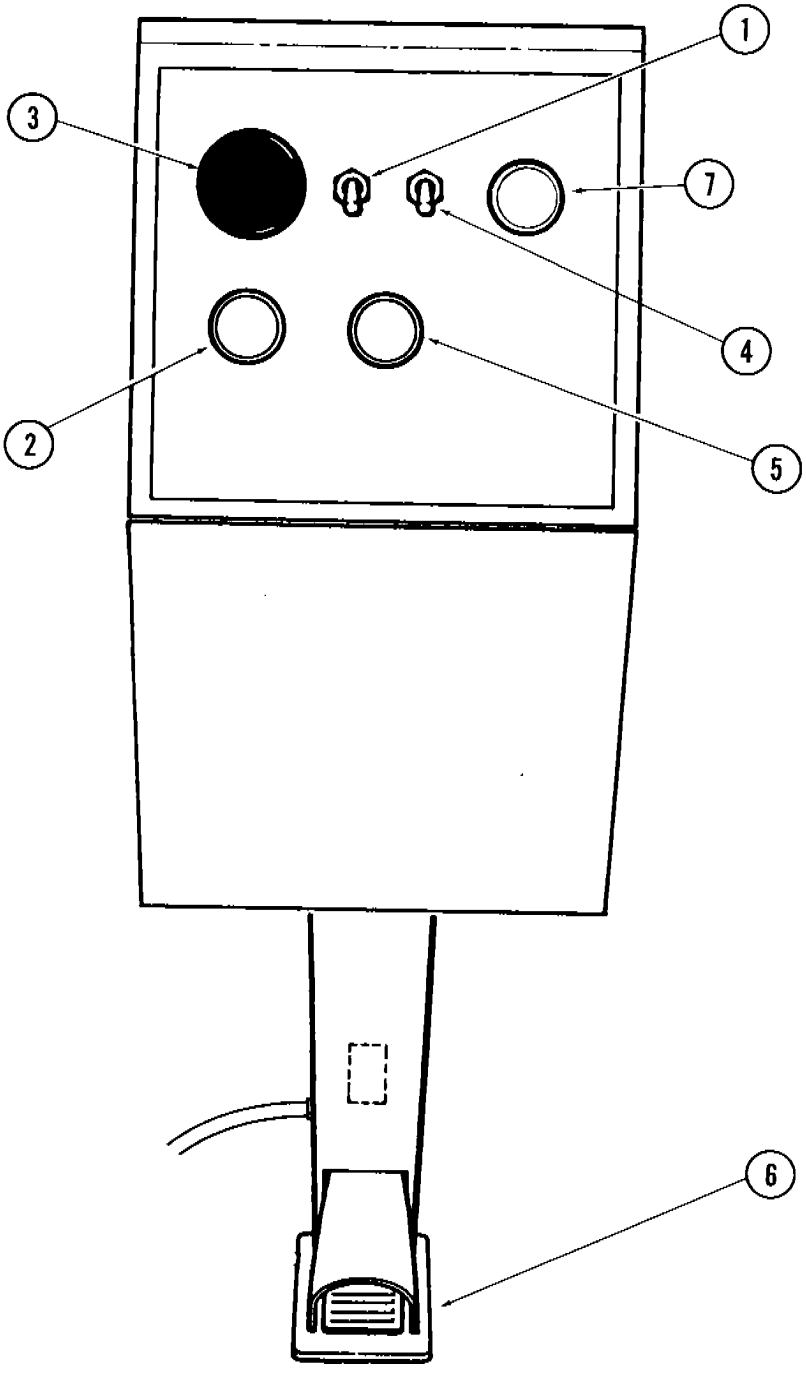
3. Emergency stop switch - This switch interrupts the timed ride cycle. The ride will brake to a stop.

4. Lights switch - This switch controls the decorative lighting on the ride.

5. Jog button (if equipped) - Push this switch to rotate the ride to any position.

6. Operator presence switch (if equipped) - This foot switch must be depressed to operate the start or jog switches. If the switch is released, the ride cycle is interrupted and the ride will brake to a stop.

7. Main power switch (if equipped) - This switch turns off the main power circuit breaker.



Operating controls

1. Pump switch
2. Start switch
3. Emergency stop switch
4. Lights switch
5. Jog button (if equipped)
6. Operator presence switch (if equipped)
7. Main power switch (if equipped)

Operating the ride (test cycle)

The operating procedure is provided in the *Carrousel Operation Manual and Parts Catalog*. Make sure that a copy of the manual is readily available.

Test the operation of all controls. Throughout the ride cycle, check for correct speed and proper brake operation. Check the overall performance of the ride based on previous operating performances of the individual ride.

General inspection and testing

Testing

Field performance testing of amusement rides[1]

The following specifications conform with ASTM F846 standard guide for *Testing Performance Of Amusement Rides And Devices*, in effect on date of ride manufacture.

Erection or installation testing

Each erection or installation of a ride shall be given an inspection prior to carrying passengers that shall include but not be limited to the following:

a. Determine that ride has been erected according to the set-up procedures in the operations manual.

b. Inspect field inspection points listed in the *Field Inspection Guide*.

c. Visual check of all passenger carrying devices including restraint devices and latches, and the pins and capscrews securing them.

d. Visual inspection of entrances, exits, stairways and ramps and devices securing them.

e. Test of all communications equipment necessary for operation of the ride or device.

f. Operate the ride to determine that direction of travel conforms to the information plate, ride manual field inspection guide of specification sheet.

g. Operate the ride for a minimum of three ride cycles to determine that the ride speed does not exceed the speed specified in the information plate, ride manual field inspection guide of specification sheet.

Daily pre-opening inspection

This inspection shall include a daily inspection of all items as specified in the previous item (erection or installation testing).

1. B090R1002-0 May 14, 1986

Documented field performance and operational testing
Documentation and certification shall be performed by a person who by demonstrated education and field experience is knowledgeable with construction, erection, operation, maintenance and repair of amusement rides.

Operational load testing
Any operational test including load testing performed on a ride shall be completely non-destructive in nature. Overload testing exceeding the rated limits listed on the information plate, operation manual, field inspection guide or specification sheet shall be deemed inappropriate. Where maximum total passenger weight is not readily available, passenger capacity multiplied by 170 pounds per adult and/or 90 pounds per child may be used.

Non destructive testing with inert loads can be accomplished only with special care as to placement of the load so that it is centered both vertically and horizontally as would be the load of the passenger it replaces. Extra seat reinforcement must be used to offset any load concentration created. Such tests shall be documented and certified as non-destructive by the person making the test and the agency requiring it. Results of all load tests shall be communicated to the factory upon completion by the certifying agency.

Conducting a non-destructive operational load test assures the testing agency only that it will carry a given load in a given way at a given moment and in no way assures future safety of the ride.

Conducting a destructive load or overload test also assures the testing agency that it will carry a given load in a given way at a given moment and in no way assures future safety of the ride. However, it also introduces the probability of inflicting serious irreparable damage to the ride that may or may not be apparent at the time of the test.

CHANCE RIDES, INC. considers inert load testing of any nature appropriate only for situations requiring experimental development of stress-strain testing during prototype development. A certificate of load test on the prototype and certification that each production ride met the design criteria when it was manufactured is available from the factory upon request.

Non-destructive testing[2]

REFERENCE STANDARD *1. ASTM-F24 Standard On Amusement Rides And Devices*
a. F846-86 Testing Performance Of Amusement Rides
b. F853-86 Maintenance Procedures For Amusement Rides And Devices
c. F893-87 Inspection Of Amusement Rides And Devices

CHANCE RIDES, INC., at the time of design and manufacture, determines by calculations and testing of a prototype amusement ride the appropriateness for use, of not only the parts, but the entire system of a newly designed ride. These calculations and tests are utilized to, as feasibly as possible, determine the requirements for expected design life of major components. Based on this design criteria, CHANCE RIDES, INC. does not identify critical components on amusement rides to be singled out for non-destructive testing.

If through field experience, there is an indication that a structural or mechanical problem may develop on rides currently operating, CHANCE RIDES, INC. will notify owners by bulletin of the recommended procedures to inspect and correct the possible problem. Any possible defect which could affect the continued safe or proper operation of the ride should be reported immediately to the manufacturer by the owner/operator. This information is necessary so that a determination can be made for either the repair or replacement of the possible defective parts.

Field repairs should not be undertaken without the approval and proper instructions from the manufacturer and should be performed by qualified personnel. These persons should have a complete understanding of both the component's function and the manufacturer's instructions.

It is the responsibility of the individual inspector to thoroughly inspect the ride as he deems necessary based on his knowledge and field experience and manufacturer's recommendations. If the inspector finds an area or component that could be a problem, structural or otherwise, the factory should then be notified. It is then the responsibility of the inspector to ensure that the manufacturer's recommendations for repair,

replacement or otherwise have been completed and are in compliance with the required specifications.

Load testing is a destructive form of testing and is not recommended by the manufacturer, as per previous topic "Field performance testing of amusement rides."

Fasteners

Capscrews

Capscrews used by CHANCE RIDES, INC. are classified as functional load-carrying capscrews if:

- They are used as tension members in the erection or operation of the ride

and/or

- The are required to resist shear through friction-type connections in the erection or operation of a ride.

Capscrews are selected with consideration to grade, size and quantity, using joint capacities based on tightness torques of 60% rated yield and group joint efficiencies of 62.5%

Torque requirements[6]

Capscrews must be tightened to the torque values listed in the torque chart. These values were selected to produce a tightening torque range of 60% to 70% of proof load, when tightened with a hardened washer under the nut or capscrew head (whichever is accessible for tightening). When the capscrew is tightened from the head end, apply anti-seize lubricant to the shank end of the capscrew. When the threads are lubricated, use 10% less torque to tighten the capscrew.

DO NOT TIGHTEN CAPSCREWS OVER THE RECOMMENDED TORQUE. This can damage the capscrew, due to variances in coefficients of friction and torque wrench accuracy.

Always use a torque wrench. It is impossible to accurately measure the tightness of a capscrew by other methods. Torque wrenches must be checked for accuracy twice each operating season.

Size Diameter - Threads/inch	Foot pound torque range (see notes 1 and 2) with locknut and hardened washer	
	SAE J429 Grade 5 ASTM A325	SAE J429 Grade 8 ASTM A490
1/4 - 20	5-6	7-8
1/4 - 28	6-7	8-10
5/16 - 18	11-13	15-18
5/16 - 24	12-15	17-21
3/8 - 16	19-24	27-33
3/8 - 24	22-27	31-38
7/16 - 14	30-35	45-55
7/16 - 20	35-40	50-60
1/2 - 13	50-60	65-80
1/2 - 20	55-65	75-90
5/8 - 11	95-115	130-160
5/8 - 18	105-130	150-180
3/4 - 10	165-200	235-285
3/4 - 16	185-225	260-320
7/8 - 9	270-325	380-460
7/8 - 14	295-360	415-505
1 - 8	400-490	565-690
1 - 12	440-535	620-755
1 1/8 - 7	495-600	800-975
1 1/8 - 12	555-675	900-1095
1 1/4 - 7	700-850	1135-1380
1 1/4 - 12	775-940	1255-1525
1 1/2 - 6	1215-1480	1975-2395
1 1/2 - 12	1370-1660	2220-2700

Torque chart

Torques for functional load carrying cold finished hex head capscrews with dry rolled threads, used with locknuts (see note 3), and tightened with an ASTM A325 hardened washer under the capscrew or locknut head (whichever is accessible for tightening).

This torque range will develop 60% to 70% of proof load.

*Refer to **Replacement of capscrews and locknuts** for conditions requiring replacement*

NOTES

1. Use anti-seize lubricant on capscrew shank when tightened from head end.

2. Use 10% less torque when anti-seize or other lubricant is used on threads.

3. Use same torque range for holes tapped in steel.

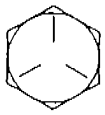
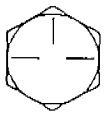
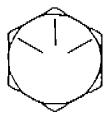
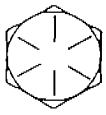
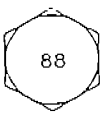
Capscrew grades

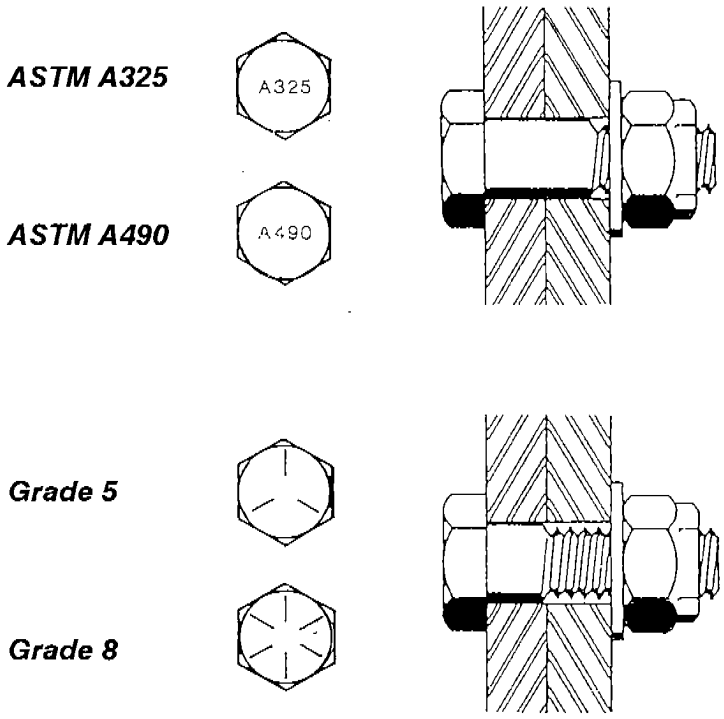
CHANCE RIDES, INC. uses only grade 5 or better capscrews and grade 8 locknuts, with A325 hardened washers for functional loads. The *Grade markings chart* shows the capscrew markings to be found on CHANCE rides. The manufacturer's identification symbols must be present on all functional load carrying capscrews.

CHANCE RIDES, INC. requires the use of cold-formed hex head capscrews with rolled threads. Hex bolts and hot formed hex head capscrews are not recommended because they may have machined threads and can have die seams along the shank.

NEVER REPLACE CAPSCREWS OR NUTS WITH PARTS OF A LESSER GRADE, OR DIFFERENT LENGTHS THAN THOSE SHOWN IN THE CHANCE PARTS CATALOG.

Grade markings for functional load carrying capscrews
Manufacturer's identification symbols must be present on all capscrews

Correct markings	Examples of unacceptable markings
SAE J429 Grade 5 Medium carbon 81,000 yield 	 **Grade 5.1** Low carbon  **Grade 5.2** Low carbon martensitic
ASTM A325 Type 1 Medium carbon Longer shank and shorter thread length than Grade 5 81,000 yield  **ASTM A325 Type 3** Corrosion resisting Longer shank and shorter thread length than Grade 5 81,00 yield 	 **ASTM A325 Type 2** Low carbon martensitic
SAE J429 Grade 8 Medium carbon 130,00 yield 	 **ISO R898** Class 8.8 Medium carbon 92,000 yield 
ASTM A490 Alloy steel Longer shank and shorter thread length than Grade 8 130,00 yield 	 **ISO R898** Class 10.9 Alloy steel 130,000 yield 



Capscrew comparison
ASTM A325 and A490 capscrews have longer shanks and shorter threads then Grade 5 and Grade 8 capscrews of the same size.

Replacement of capscrews and locknuts
When permanently installed capscrews and locknuts are disassembled for repair or adjustment, they must be replaced if they have been in service over five (5) years, or corrosion, or other damage requires over-torquing for removal. If a torque wrench is not used to measure excessive removal torques, the capscrews and locknuts must be replaced.

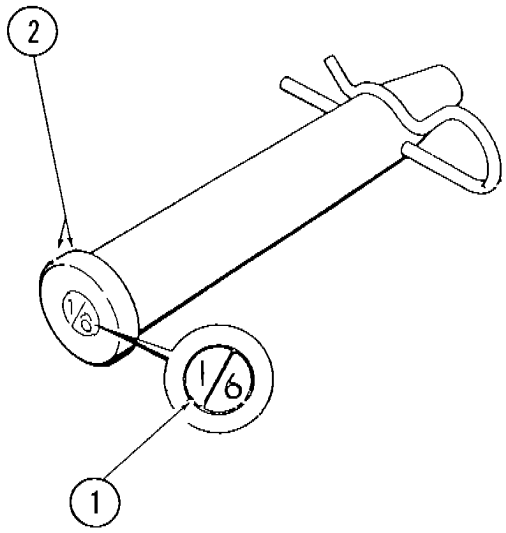
Capscrews and locknuts which are frequently disassembled for portability must be replaced each operating season. If the capscrews and locknuts become damaged, corroded or require excessive torque for removal, they must be replaced. If a torque wrench is not used to measure excessive removal torques, the capscrews and locknuts must be replaced.

Pins[3]

Tapered pins used on amusement rides are subject to deterioration due to improper use and wear. CHANCE RIDES, INC. specifies certain pins for certain applications on amusement rides. These pins have been developed over a period of years, taking into account size, design, material and hardness characteristics.

Use only the pins specified by CHANCE RIDES, INC. These pins are identified as shown in the following illustration. Always use the correct hairpin.

Pin identification
1. Date of manufacture
2. Rounded edges

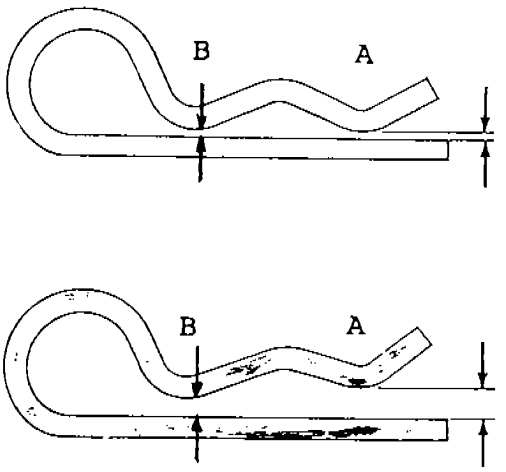


Use care when installing and removing tapered pins. Since these pins are hardened (as are hammers and punches) care must be taken to strike the pin straight on. Striking a pin at an angle can cause the pin to chip, resulting in personal injury. For this reason APPROVED SAFETY GLASSES OR GOGGLES MUST BE WORN AT ALL TIMES when tapered pins are being installed or removed. If a tapered pin is chipped, bent, or "mushroomed" on either end, discard it and replace it with a new pin.

Pin keepers

All keepers (R-keys, hair pins, lynch pins, etc.) must be inspected for wear. If a keeper is bent out of shape or "sprung", it must be replaced.

Hairpins are expendable parts. After repeated use, they become worn and "sprung" as shown.

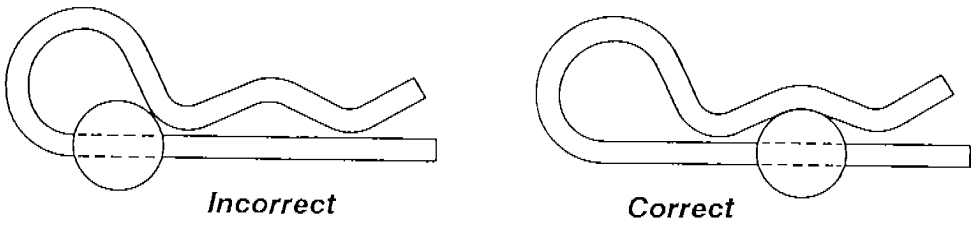


Acceptable hair pins
Dimension "A" equals dimension "B" in a relaxed position

Unacceptable hair pins
Dimension "A" is greater than dimension "B" in a relaxed position

NEVER ATTEMPT TO BEND A HAIR PIN BACK INTO SHAPE. REPLACE IT WITH A NEW PART.

The correct installation of a hairpin is shown. Incorrectly installed hairpins are more likely to fail, and will distort after only a few uses.



Incorrect *Correct*

CHANCE RIDES, INC. recognizes and recommends the safety procedures specified in *ASTM Standards F770 Operation Procedures for Amusement Rides and Devices and F853 Maintenance Procedures for Amusement Rides and Devices.*

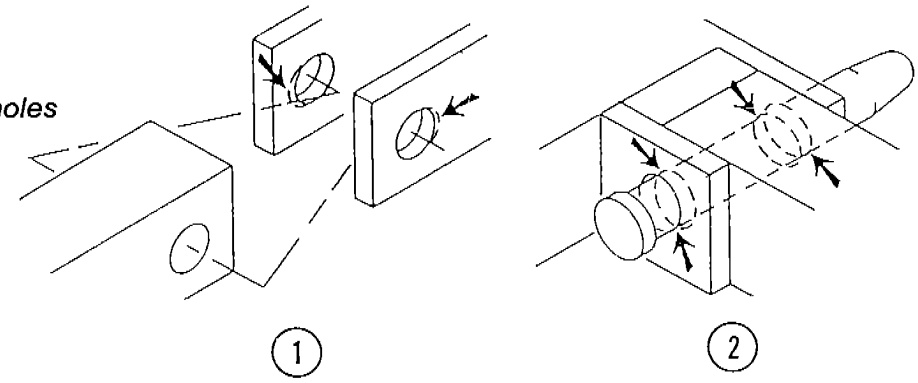
Inspection

Joint inspection

Some joints will appear to wear rapidly on new rides. This is usually a result of the holes not aligning in the mating parts. When this condition occurs it results in "point contact". A joint with this condition will generally wear rapidly until the load is distributed evenly over the fastener and the parts. If in doubt about the condition of a bolt, pin or hole on a new ride consult CHANCE RIDES, INC., and replace as required.

1. Inspect stationary joints for "egg-shaped" wear and loose pins.

1. Stationary joint wear
2. Stationary joint-misaligned holes resulting in point contact



2. Inspect moving joints for wear and lubrication.

3. Inspect welded structural joints for cracking or fatiguing.

4. Inspect bolted structural joints for cracking, fatiguing and proper bolt tightness.

5. Inspect pins and keepers on all pin joints for wear and proper installation.

6. Inspect all pins for proper CHANCE identification marks.

Cable inspection[5]

Replace cables if any of the following conditions exist. If more than one cable is used, cables must be replaced as a set.

1. Severe corrosion
   a. Rust appearing to stem from interior of cable.
   b. Cable appears clean but previous corrosion is evident from pitted condition in wires.

5 B090R1071-0 May 25, 1990

2. Severe stretching occurring in a short section of cable, indicated by a marked reduction in the diameter of the cable.

3. Severe physical damage such as kinking, crushing or "bird caging".

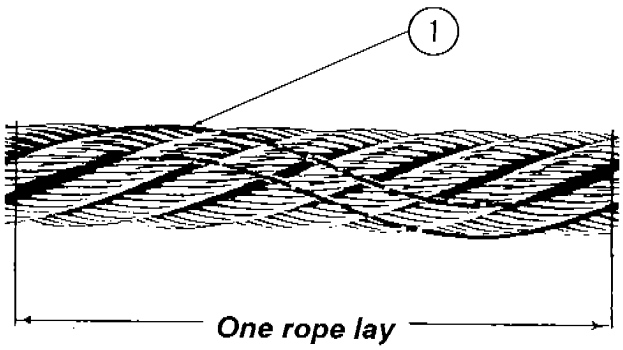
Kinking

Crushing

Bird caging

4. One strand being 75% broken through.

5. A number of wires, equal to the number in a strand, broken in the length of one rope lay.



"Lay" as a unit of measure

1. One strand

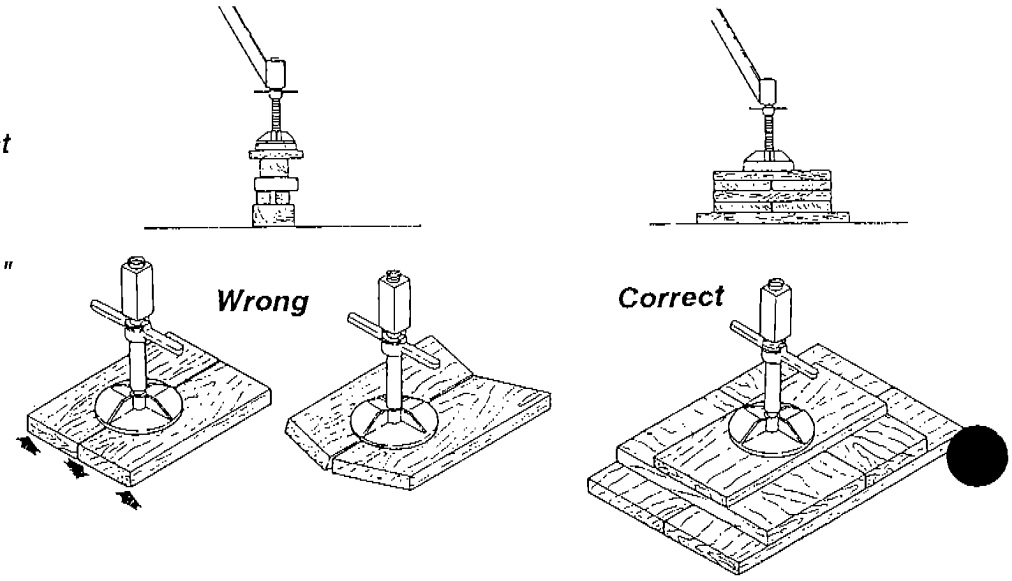
Leveling and blocking (portable models)

1. Inspect leveling and blocking at each set up and at the start of each day (rides erected in soft locations require more frequent inspection).

2. Inspect for proper cross blocking or crib blocking. Cross blocking distributes weight evenly.

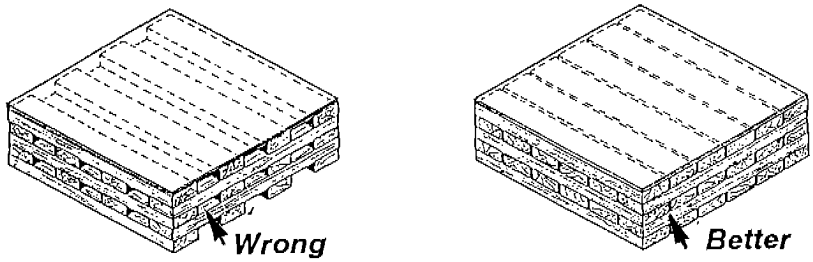
Always cross block
Cross blocking distributes weight evenly.

Recommended blocking:
3 X 12 X 36" and 3 X 12 X 24" unless otherwise noted.



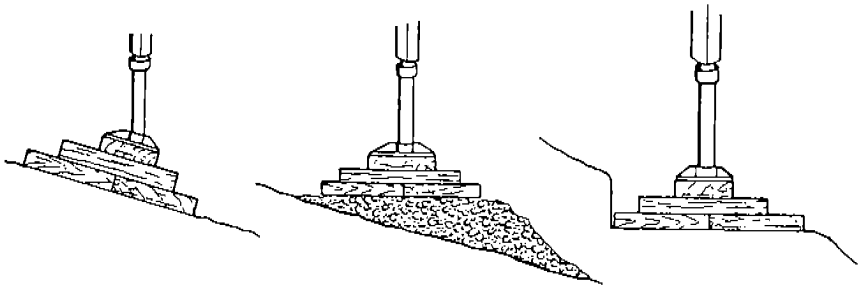
To avoid crushing under load "crib" blocking should be spaced no more than 1/4" for drainage.

"Crib" blocking
Large voids can let blocking crush under load. 1/4" spaces allow adiquate drainage.



3. Inspect blocking for proper contact with ground.

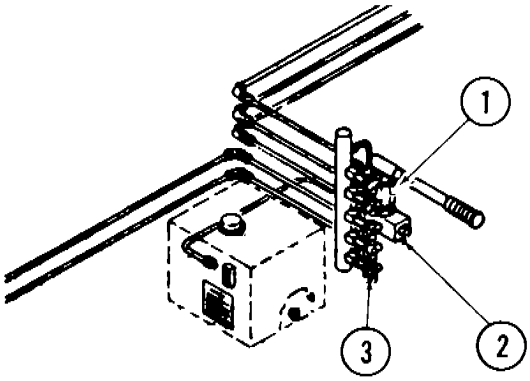
4. Level ground under blocking.by digging where possible, instead of filling. Fill dirt will be soft and allow settling.



No ! Poor Better

Blocking on a slope
Level the ground beneath blocking by digging where possible. Don't fill, the fill dirt will be soft allowing the ride to tilt.

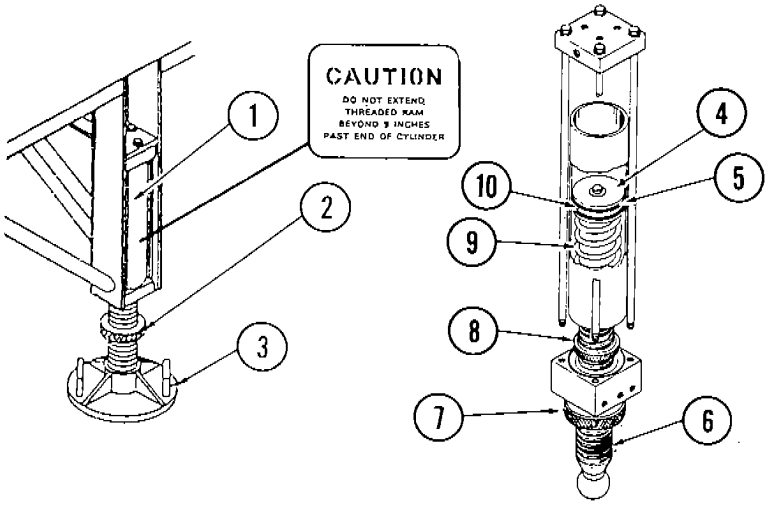
5. Inspect hydraulic leveling jacks for leaks at every set-up. The hydraulic jacks are for leveling purposes only.After the ride is leveled and all locking rings have been tightened, open the needle valves and the hand pump valve to relieve hydraulic pressure on the leveling jacks.



Open shut off valve to release pressure.

1. Hand pump
2. Hand pump valve
3. Needle valve

6. Check the lock rings on all screw jacks for tightness.



1. Leveling cylinder
2. Locking ring
3. Base
4. Piston
5. Block vee packing
6. Ram
7. Lock nut
8. Nut
9. Ram spring
10. Back up washer

General safety guidelines

The following is a list of general safety rules to which everyone should adhere.

1. All work must be performed by competent, qualified mechanics, capable of understanding the function of the parts and their proper installation.

2. Inspect the ride before each day of operation to determine that no portion of the ride is damaged, missing or worn in such a manner that unsafe conditions can develop.

3. Perform the manufacturer's recommended maintenance procedures at the intervals and in the manner specified in the operation and maintenance manual.

4. Study each job carefully to determine all hazards so that necessary safety precautions can be taken.

5. Examine safety devices (tools, ladders, etc.) before they are used to make sure they are in good condition. Use only OSHA approved safety items. Ladders must be clean and unpainted.

6. Use the proper tool or equipment for each job. All hand electric power tools must be properly grounded.

7. Wear close fitting, comfortable clothing when working on or near moving parts or live electrical circuits. Avoid finger rings, jewelry or other articles which can be caught in moving parts or come in contact with electrical circuits.

8. Protect your eyes by wearing approved safety glasses or goggles.

9. Wear a hard hat at all times. When working in elevated areas, use a safety belt.

10. Where work performed is hazardous, never work alone.

11. If guards are removed from equipment, make sure they are replaced before leaving the job.

12. Clean up after each job, disposing of surplus materials.

13. Keep a record of parts replaced and the date of replacement. Inform the manufacturer of any replacement requirements which are frequent or cause unsafe conditions.

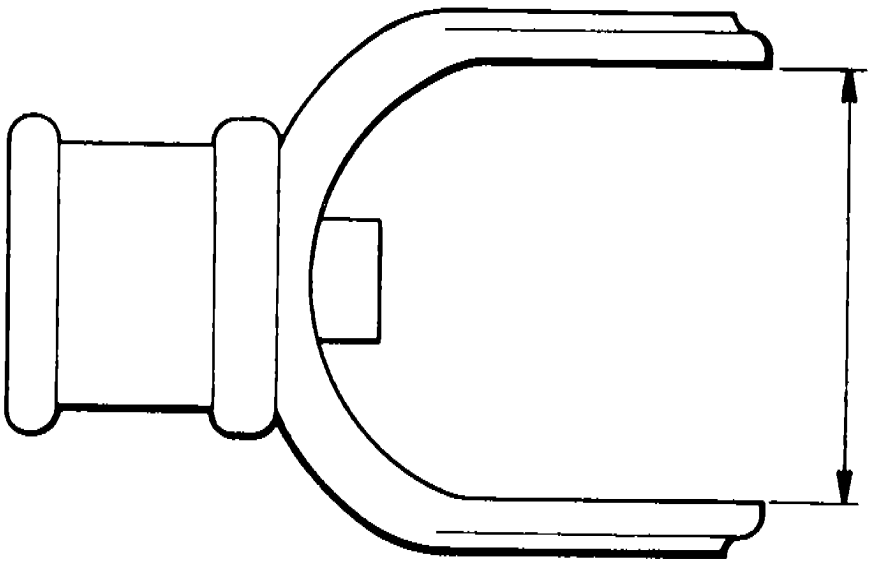
14. Make modifications and additions only as outlined in manufacturer's service and safety bulletins.

Horse and pole inspection

1. Inspect the horse hanger hooks monthly or at each set-up. Measure the distance between the hooks as shown. The dimension must be within the specified limits[4].

Horse hanger hook inside demensions

3 3/8" maximum (36' carrousel)
4 1/8" maximum (50' carrousel)



2. With the hook installed, inspect for excessive wear on the top of the horse hanger bearing ears. Check the clearance between the safety stops. This gap must not exceed 3/16"[4]. Horse hanger hooks can face inward or outward. Perform this inspection monthly or at each set-up, whichever occurs first.

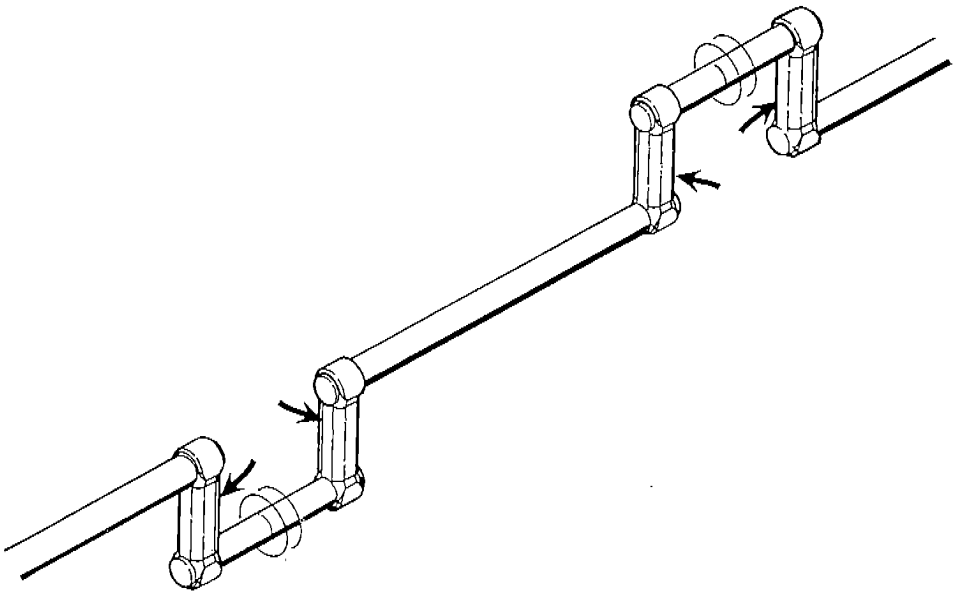
3. Inspect for excessive wear between horse hook, horse pipe and connecting rivet[4]. Maximum allowable upward and downward movement of horse hook on horse pipe is 1/8". Perform this inspection monthly or at each set-up, whichever occurs first.

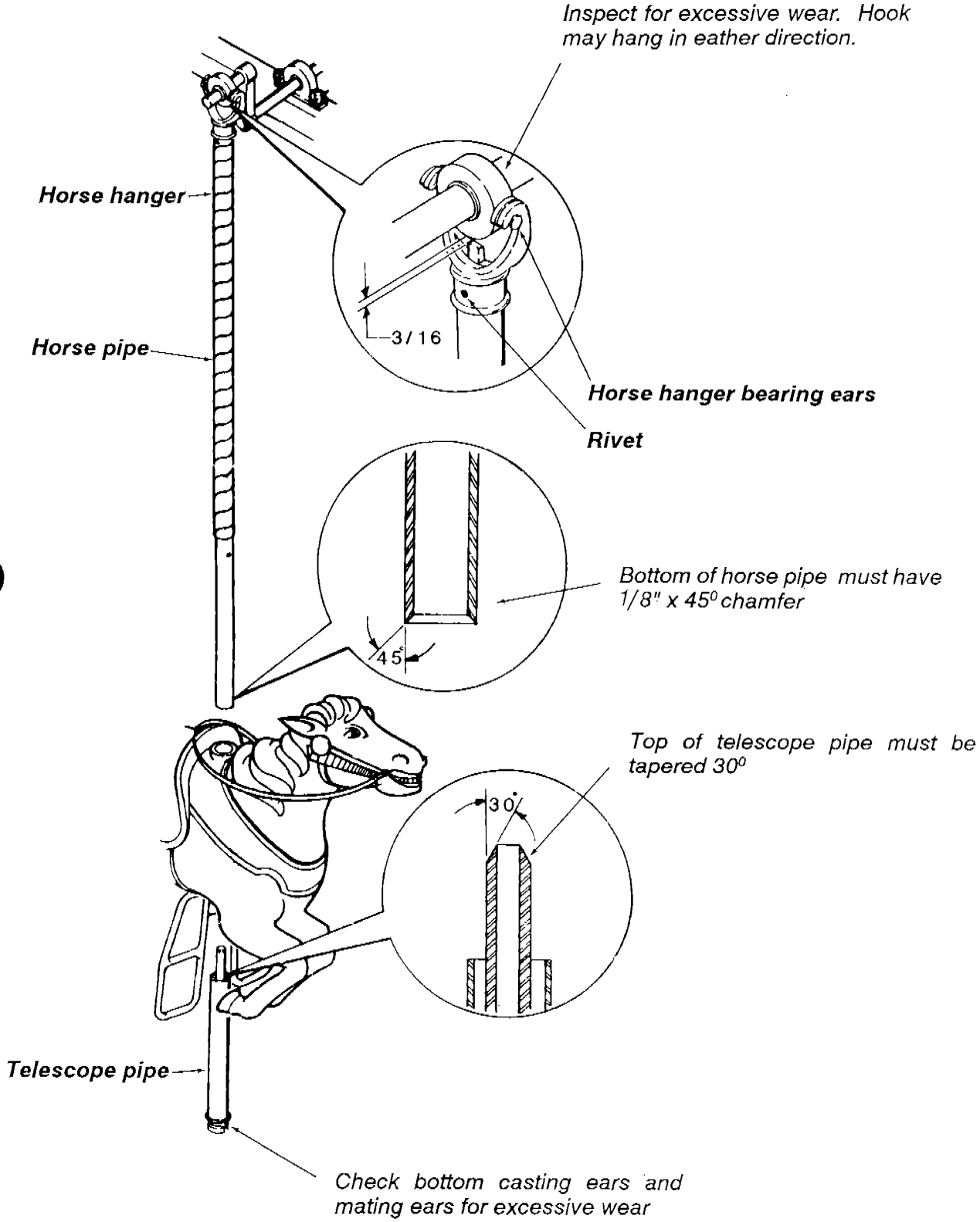
4. Inspect the chamfers on the bottom of each horse pipe and the top of each telescope pipe. All parts must have these chamfers[4]. Perform this inspection monthly or at each set-up, whichever occurs first.

5. Inspect the lower casting on each telescope and the upper casting on each floor lock. Look for wear or damage which can prevent secure locking of the telescope into the floor. Parts must require deliberate effort to lock or unlock.

6. Inspect horses, stirrups and reins (if equipped) for worn, broken or missing parts.

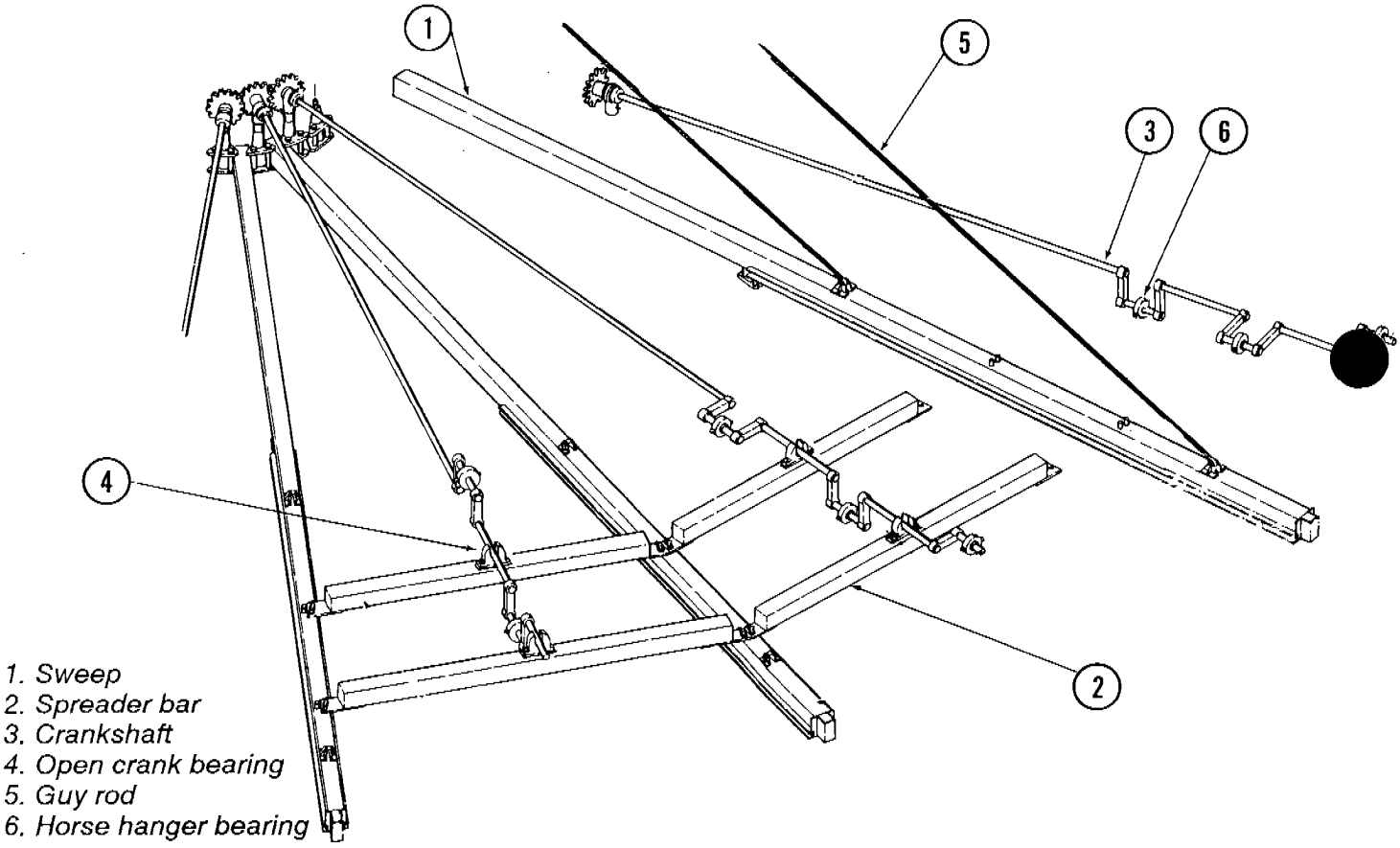
7. Inspect crankshaft throw castings for indications of cracks[4]. Perform this inspection monthly or at each set-up, whichever occurs first.




Inspect for excessive wear. Hook may hang in eather direction.
Horse hanger
Horse pipe
3/16
Horse hanger bearing ears
Rivet
Bottom of horse pipe must have 1/8" x 45° chamfer
45°
Top of telescope pipe must be tapered 30°
30°
Telescope pipe
Check bottom casting ears and mating ears for excessive wear

Sweep inspection

1. Inspect sweep attach points for signs of wear.



1. Sweep
2. Spreader bar
3. Crankshaft
4. Open crank bearing
5. Guy rod
6. Horse hanger bearing

2. Inspect the installation of the spreader bars and hairpins.

3. Inspect the installation of the guy rods.

4. Inspect open crank bearings and horse hanger bearings for wear and smooth operation.

5. Inspect sweeps, spreader bars and crankshafts for visible cracks or damage.

Electrical and lighting inspection

1. Inspect cable leads, electrical connections and grounding per local code.

2. Test the operator controls.

Trailer or park base inspection

1. Inspect center pole braces for installation of pins and hairpins.

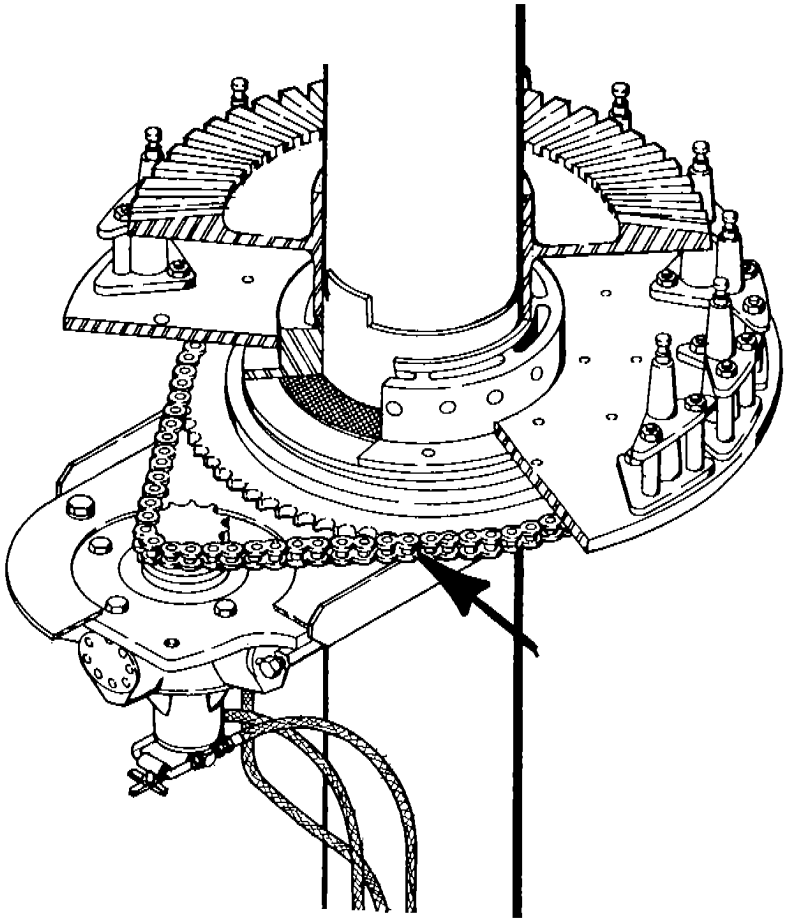
2. Inspect mud sills (park model) for proper installation and foundation bolts, where applicable.

3. Inspect trailer or park base structures for visible cracks or damage.

Drive inspection

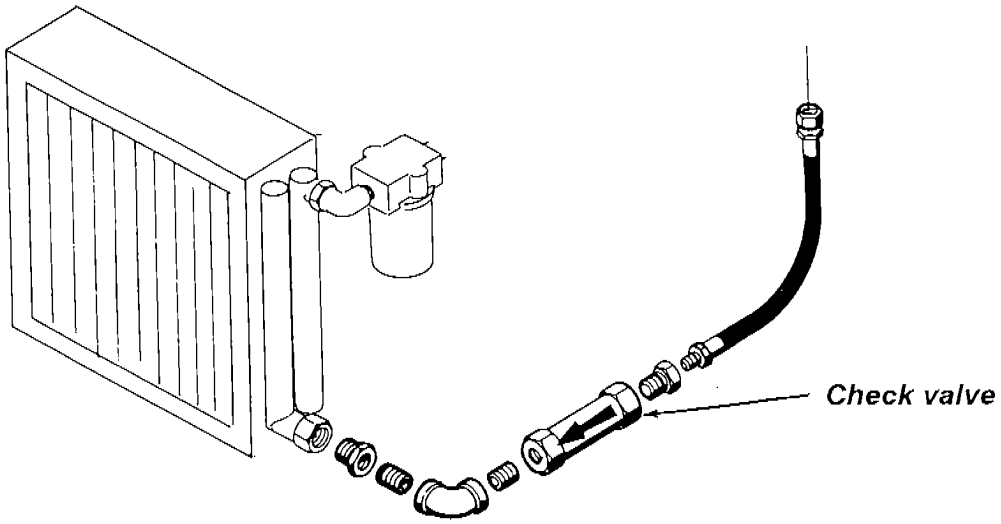
1. Inspect the drive chain and sprockets for alignment and proper tension. Check for 5/8" of chain deflection on the slack side of the chain.

Drive chain and sprockets



2. On rides with electric drive, check the drive belts and sheaves for alignment and proper tension. Check drive belt for 1/2" of deflection at 10 lbs pressure in the center of the top span.

3. On rides with electro-hydraulic drive, inspect the entire hydraulic system including hoses, tubes, fittings and other components for leaks.



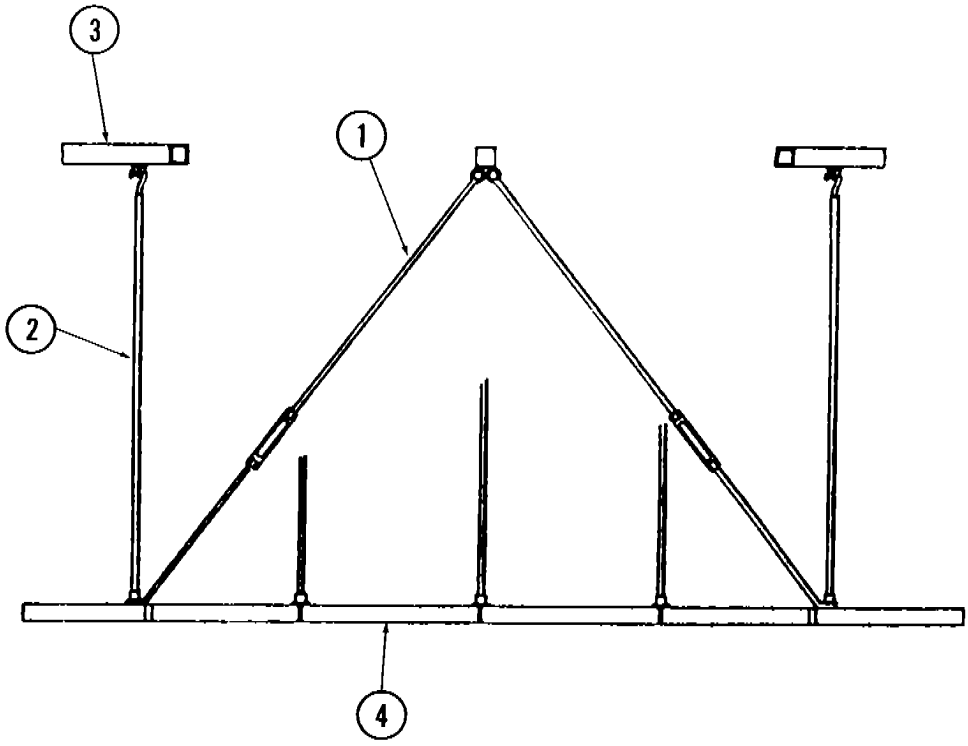
4. On 50 foot carrousels, check for installation of the check valve as shown[7]. On 36 foot carrousels. check for this valve on units 22 and on.

Platform and fence inspection

1. Check platform heights as follows:
   36 foot carrousels ..... 13" ± 1"
   50 foot carrousels ..... 14" ± 1"

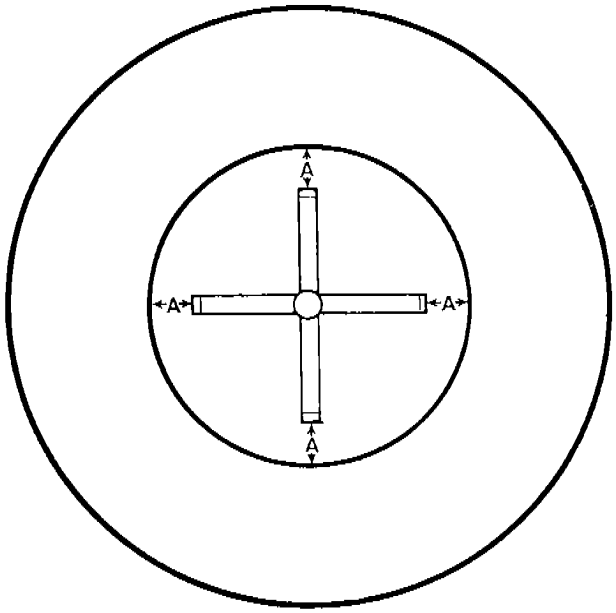
2. Check for installation of sway rods.

1. Sway rod
2. Floor hanger
3. Sweep
4. Floor



3. Check for proper adjustment of sway rods by measuring distance from ends of mud sill to the inside of the platform.

NOTE: *On trailer mounted rides, measure from the centerline of the center pole to the inside of the platform.*



All measurements taken at "A" must be within 1/2" of each other.

4. Inspect the fences for proper installation.

Bibliography

The following service bulletins and manuals are referenced in the preceding text. Service bulletins issued after publication of this guide are located at the back of each section. Any future bulletin releases affecting a ride will be provided by CHANCE RIDES, INC. Bulletins received after receipt of this guide should be considered updates to this guide.

CHANCE RIDES, INC.
4219 Irving
P.O. Box 12328
Wichita, KS 67277-2328

36-Foot Carrousel Operation And Maintenance Manual
24328200
June, 1987

50-Foot Carrousel Operation And Maintenance Manual
24327200
May, 1987

1. *Field Performance Testing Of Amusement Rides*
   B090R1002-0
   May 14, 1986

2. *Non-destructive Testing*
   B090R1022-0
   March 21, 1988

3. *General Safety - Taper Pins*
   B090R1056-0
   February 9, 1990

4. *Inspection Of Horse Hanger Hooks, Bearings, Horse Pipe, And Telescope Assemblies, and Crank Throws*
   B389R1068-A
   September 6, 1991

5. *Cable Inspection*
   B090R1071-0
   May 25, 1990

6. *Replacement And Torque Requirements For Functional Load Carrying Capscrews*
   B090R1075-0
   May 25, 1990

7. *Hydraulic Motor Cavitation*
   B389R1085-0
   November 30, 1990

36 FOOT AND 50 FOOT CARROUSELS

Field inspection and test guide

Manual number 24329301

CHANCE RIDES INC.

ALLAN HERSCHELL

CHANCE
MANUFACTURING CO., INC.

Number: 14
Date: 3-7-72

Superceeds: ..
Number:
Date:

Service Information

Ride: 36', 40', & 45' MERRY-GO-ROUND **Subject:** ERECTION & MAINTENANCE

Reference:
Print MG-268 General Arrangement
Print MG-100-PA Parts Numbers and Lubrication
Print MG-320 Electric Circuit
Electric Consumtion Sheet
Packing List

ERECTION INSTRUCTIONS FOR 36', 40', and 45' MERRY-GO-ROUNDS

1. Refer to General Arrangement Drawing MG-268. Lay the foundation in place, which consists of two steel cross members and are commonly called Mud Sills. (MG-229) These Mud Sills must be placed on solid level ground, concrete piers or concrete slab. It is necessary to position the mud sills so that the Drive Unit and winch positions are convenient for erection since this relationship cannot be changed later. Use the carpenters bubble level to make certain that the mud sills are level in all directions. Use thin wood or metal shims under the ends of the mud sills as necessary to obtain a perfect level. If shims are used under ends of mud sills, it is important that the mud sill center under the center pole also be shimmed to assure a tight ground contact. Position the drive base to top of mud sills and secure with taper pins.

2. INSTALLATION AND ASSEMBLY OF CENTER POLE (Dwg. MG-268)

(a) Place wooden folding buck support across end of mud sill so the center pole base hinge casting bracket points to support buck. Using several men, position the center pole MG-136-2 on the support buck as per above drawing. If center pole hinge bracket is not bolted in place (export models only) perform this operation making certain that the rounded edges of hinge face bottom of pole. Mate the center pole hinge bracket with hinge casting on center of mud sills, insert hinge bolt and lock in place with nut. When the Merry-Go-Round is taken down, make certain that center pole hinge bolt is loose before lowering the center pole.

(b) Slide Center Pole Brace Hub (MG-225) over the top of the center pole so that the bearing surface is facing the top of the pole. Align brace hub with drilled holes in center pole by mating stamped arrows on center pole

INSTALLATION AND ASSEMBLY OF CENTER POLE (continued)

and hub, and insert pin and tighten the two set screws on either side of hub to lock in place. Pack bearing surface with a good grade of cup grease and place large fiber washer over bearing surface of hub assembly. Place drive chain sprocket in position with crankshaft bearing studs facing up.

(c) Slide bevel gear (MG-273) over the top of the center pole with the gear teeth facing the top of the pole. Work the bevel gear into mating slots of center pole brace hub and tighten set screws to lock in place. Place drive chain tight around the sprocket and hold in position with short length of wire at the base of excess loop of chain.

(d) Commutator assembly (MG-251-1) is placed on the pole so the junction box faces the top of the pole and the bottom edge of the commutator rests on the bevel gear. Junction box should be aligned with large hold in center pole and final positioning and securing will be made later.

(e) Insert Center Pole Top Hub (J-25-1) in place inside of top of center pole by mating stamped arrows on hub with those on center pole top. Caution must be used so the roller cage bearing is not dropped or damaged. Secure assembly by inserting eyebolt through center pole and hub and lock with nut on eyebolt shaft. Pack thrust bearing E-54 with Mobil MP Grease or King Graphite Product KGP-24, making certain that the thrust bearing is firmly seated in top hub after insertion. Position the Guy Rod Spider over bearing and hub shaft. Insert the metal tent pole and attach the two block and tackle units to tent pole and attach the two block and tackle units to tent pole ...s near the top. The center pole is now "dressed" and ready to raise to vertical position.

3. ERECTION OF CENTER POLE ASSEMBLY (Dwg. MG-268)

(a) Install temporary derrick pole, brace legs and winch, which must be placed relative to drive unit as illustrated on drawing. Insert two handles on the hand winch 90 degrees apart for proper leverage. Draw enough cable out of winch to secure tackle block to eye bolt at the top of the center pole and end of one hub brace pipe (MG-241) to center pole brace hub ear which is facing up while the center pole is resting on the wooden buck. This brace pipe will be used to safety lock the center pole in place when it is first raised to the vertical position.

(b) Slowly turn the winch handles to raise the center pole. When the pole is about halfway up, have one man guide the bracepipe end into its fitting on the mud sill as pole raises and lock in place with pin and safety pin to secure against accidents. When the center pole stands upright, attach the other three brace pipes, making certain that the pin and the safety pin are installed on each end of each brace. After all the brace pipes are secured, the winch and derrick pole can be removed. Use the carpenters bubble level to make certain that the center pole is absolutely vertical. If it is necessary to add shims under the ends of the mud sills to plumb the center pole, make certain that the shims are also added under the mud sill center under the center pole so no gap exists.

ERECTION OF CENTER POLE ASSEMBLY (Dwg. MG-268) (continued)

4. Nail together the staging ladders and place plank in position at right angles to center pole to make a scaffold for installation of the sweeps, the hanging rods and positioning of crankshafts. The scaffold can remain in one position and the entire moving assembly rotated by hand around to this one location. Hook one long and one short sweep guy rod (MG-26 -1 and 2) into opening #1 of the spider at the top of the center pole. Insert the #1 sweep arm MG-248 into the mating numbered slot of the sweep hub. Attach long and short guy rods to proper fittings at the top of the sweep arm. Repeat this operation in sequence for all sweep arms. NOTE: (On the 45' Merry-Go-Round, the sweep arms which carry the electric wiring must be placed opposite each other).

5. Assemble the inside and outside sweep arm cross rails (MG-226-142) between sweep arms with safety pins. Note that the cross rails without bearings are placed between sweep arms #1 and #2, #7 and #8 since the chariots are used below these locations.

6. Install crankshafts (MG-279-1) in position, alternating large and small bevel gears with small gears to center of bevel gear. The crankshaft throws must be 180 degrees apart on alternate shafts to give proper action to the jumping horses. When a fixed scaffold is used, the Merry-Go-Round is rotated by hand to bring the work into proper position over the scaffold. The crankshaft throws can each be placed in an upright position and they will properly position themselves. Note that no crankshafts are used between sweeps #1, #2, #7 and #8 because of the chariot positions. The crankshaft tee bearings are inserted over the vertical studs on the sweep hub and the set screws tightened to lock in place.

7. The outside numbered scenery panels are called cornices (MG-161), and are positioned at ends of the sweep arms in sequence to mate with sweep arm numbers. Move the wooden scaffold to outside ends of sweep arms as they are removed from the packing crate. The cornices are locked in place with large flat metal keys. The cornice light shields (MG-171) are hung at the cornice joints and secured with thumb screws at the bottom edge of the shields. Notice that each cornice is numbered and must be mated in proper sequence to sweep arms while light shields are interchangeable.

8. The two halves of the canvas tent top are spread over the top of the sweep guy rods with the smooth side of the canvas facing the top. Care must be taken so as not to tear or damage the canvas. The draw lines for block and tackle are allowed to hang alongside the center pole and metal split ring of tent top assembled around draw lines. With the block and tackle attached to the split ring at the top of the canvas, individually pull each half of the tent top into position. Lace the two halves together and snap outside edges to cornice. Add vertical metal quarter poles to underside of canvas to provide additional support and give characteristic shape to tent. The draw lines of tent top block and tackle may be secured to metal eyes on #2 and #8 sweeps.

9. Hook Platform Hanger Rods (MG-195) to eyes welded to underside of sweep arms. Place metal platform support channels in place over the bottom nut on the end of the platform support rods. The platform channels have one end beveled, and this beveled end should be facing the outside of the Merry-Go-Round.

ERECTION OF CENTER POLE ASSEMBLY (Dwg. 268) (continued)

Numbered wooden platforms are now positioned over the support channels in their proper location under the numbered sweep arms and the top nuts of the platform hanger rods drawn tight to secure. Note that the chariot platforms are to be placed under #1, #2, #7 and #8 sweeps, and that these two wooden platforms contain metal keyways to lock the chariots in place. Hook two turnbuckle sway rods to the eye welded in the #2 sweep arm above the inside edge of the platform and spread right and left to be secured at the lower ends under platform support channel nuts. Repeat this operation with two sway rods hooked to the eye on #8 sweep arm. The sway rod turnbuckles are properly adjusted during the ride testing at the factory and should not be too tight. Some "play" is required in all sway rods.

10. Hang horsepipe (MG-267) from the crankshaft bearings with grease fittings of bearings located on top. Carefully place horses on horsepipes and secure with horse foot stirrups pinned through horse pipes and top metal stirrup ears recessed in holes in the belly of the horse. Pull horse and horse pipe toward outside of Merry-Go-Round and insert the bottom of horse pipe into a well-greased telescope assembly. Return the entire unit to an upright position, and mate telescope to socket in wooden platform by pressing down and giving it a quarter turn to lock. Alternate various colored horses for the most pleasing effect. Note that the small horses and rod telescope assemblies are for the inside row only, with the medium size horses in the center row, and the large horses on the outside row for the most impressive display.

11. Install the chariots on platform between sweeps #1, #2, #7 and #8. Lock in place on platform by inserting base pins of chariots into metal keyway slots in platform and push into restricted ends of keyway.

12. The drive shaft brace (MG-261-1), is commonly called the "banjo" and is secured to the ears of the center pole sweep hub and it projects at right angles. Attach the two banjo brace legs (MG-242) to the banjo and mud sills and secure with set screws, cotter key and pins. Remove the wire holding the drive chain to the large sprocket and pull the slack in chain over the top of the banjo. Insert vertical drive shaft (MG-237) in upright position through the banjo and mate the top bearing assembly slots with the track on the banjo. The drive chain must be placed around the small sprocket at the top of the drive shaft before it is positioned in the banjo track. Lower flange studs of drive shaft are positioned in the gear reducer flange at the same time the upper bearing is mated to the banjo tracks. Obtain proper chain tension with adjusting screw until the chain has a slack of only 1/8" to 1/4" and then tighten the lock nut.

13. Install the center scenery panels so the Indian Heads and scenery alternate. Attach the lights to the center panels. Secure commutator. Thread BX cable harness from commutator through drilled hole to center pole and drop to the bottom hole where one end is drawn out to attach to switch and timer control box. Bolt the switch box assembly (SP-102) in proper position and lock in place on the mud sill. Assemble the brush assembly (MG-254) and contact fingers (MG-255-1) in the proper position and lock in place with set screw. Assemble electrical twist locks on all electrical connections. The short electrical harness is placed between the power unit and the switch is connected to the switch control box.

ERECTION OF CENTER POLE ASSEMBLY (Dwg. 268) (continued)

14. Double check all pins, safety pins, set screws and nuts to make certain that they are secure and tight.

15. The canvas sidewalls are secured to the eyelets on the sweep arms and then rolled to the top and secured to the sweep arms with the webbing straps provided.

16. Carefully double check all fittings, pins, safety pins, nuts, cotter keys and electrical connections for security. Lubricate the entire Merry-Go-Round per instructions before starting the motor.

17. Clear the Merry-Go-Round of all tools, light cords, crates, etc. before testing the unit.

LUBRICATION

If a regular program of lubrication is followed, using recommended oil and grease, you will be rewarded with many, many years of trouble-free operation and few maintenance problems. Before the first operation of the Merry-Go-Round, lubricate the entire machine, with the exception of the gear reducer, using Socony PD-1020-A or the Shell Retinax "A" which is shipped in the tool box. When the Merry-Go-Round is located near salt water, use Fiske Bros. Lubriplate #630-AA. If a gasoline engine is used for power, a good grade of SAE #20 automobile oil is used in the crankcase.

(a) Fluid Drive Unit - At the factory, the fluid drive clutch has been given the correct amount of premium grade SAE #10 for proper operation. Change the oil at start of each season and check monthly. A slippage of 85 RPM of motor and RPM of fluid clutch drive is standard. Excess slippage indicates the need for additional oil. When filling or adding oil to the clutch, the mark on the housing rim at the 2-1/2" position is placed top dead center. This will position the filler plug opening 36 degrees off center so that oil added until it starts to run out of the opening will properly fill the clutch. Use SAE #10-W oil. Gasket compound is recommended for plug threads to eliminate leakage. The fluid clutch bearings are lubricated for life and require no attention.

(b) Vertical Drive Shaft Worm Reducer Link Belt V-350 on 36' Merry-Go-Round. Link Belt WV-500 on 45' Merry-Go-Round.

1. Follow instructions on the name plate using 600-W in warm weather and a combination of 1/2 SAE #40 and 1/2 of 600-W in cold weather. Maintain the proper level.

2. Drain and refill after 150 hours of operation.

LUBRICATION (continued)

3. Use Grease gun (furnished in tool kit) on the upper bearing. Use Mobil MP Grease or King Graphite Product KGP-24.

4. Keep breather fitting clean and open.

It should be noted that when the Merry-Go-Round is first started in cold weather after it has been idle for some time, the oil in the drive shaft worm reducer is sometimes congealed and tends to create an overload on the motor. When this occurs it is advisable to assist the first few initial rotations by hand pushing and then operating the machine for fifteen minutes until the lubrication is warmed.

(c) Use the grease gun furnished in the tool box for the following marked fittings.

Use Mobil MP Grease or King Graphite Product KGP-24.

1. Motor (ball bearing type only)
2. Horse pipe top bearings - 30 places
3. Crankshaft tee bearings - 10 places
4. Top of vertical drive shaft - 1 place
5. Top of center pole cap spider - 1 place
6. Bearing on vertical drive - 2 places
7. Telescope horse pipes - 30 places
8. Sweep arm hub - 2 places (top and bottom)

(d) Drive chain is lubricated with Socony PD-1020A or Shell Retinax "A".

(e) SAE-30 motor oil is used to lubricate the bronze bushing at the top of the center pole and can be reached with an oil can from a hole drilled near the bottom of the tent pole.

MAINTENANCE SUGGESTIONS

(a) Check "V" belts on drive unit for proper tension. When new, adjustment should be made frequently until the initial stretch is taken up. Do not make belts too tight and they will need very little attention during the season.

MAINTENANCE SUGGESTIONS (continued)

CAUTION:

Belt adjustment must be made by moving the engine or the motor--never by moving the fixed position of the gear reducer.

(b) The life of the entire drive unit and chain will be increased if the chain is removed once a year and reinstalled in an upside down position. A removable chain link is installed for this purpose.

(c) Remove slack from the drive chain when it becomes more than 1/8" to 1/4" by using the set screw and locknut on the banjo. It is important that the chain is not too tight or excessive wear results.

(d) The automatic electric brake brings the ride to a gentle but positive stop with either the gasoline or electric motor. On electric drives, the brake is automatically applied when the electric timer switch stops the flow of current to the motor and brake.

On gasoline engine drives, the brake is controlled from a manual toggle switch near the timer. A new brake usually requires several adjustments until the brake shoe surfaces are properly seated. Adjustments for torque, lining wear and equalizing brake shoe clearance are to be made according to the instructions on the nameplate of the brake assembly. A set screw and lock nut mounted on top of the solenoid frame provides adjustment for equalizing clearance between the two brake shoes to prevent dragging when the brake is released.

MG-100-PA

MG-229 MUD SILL (1)

MG-250 ENGINE BUSH ASSE

ENGINE WISCONSIN V[redacted] POW

AS PER A.H. CO. SPE[redacted]

TOP VIEW OF ENGINE DRIVE ASS

MG-169-2

MG-169-1 CONTACT FINGERS (6)

MG-252 COMM. RINGS (4) PER ASSY MG-433 COMMUTATOR ASSEMBLY (1)

MG-410 BRUSH ASSEMBLY (1)

CAT. 57-5030 1 POLE 110 20A CIRCUIT BREAKER (2)

MG-249 QUARTER POLE (12)

MG-47 CRANKSHAFT COLLAR (10)

MG-175 20 WATT HEADSHIELD FLOOR FIXTURE (12)

MG-171 CORNICE LIGHT SHIELD (12)

MG-10 PLATFORM HANGER UNIT (24)

MG-1 HORSE (10)

MG-181 CORNICE (12)

MG-45, 46 PLATFORM LOCK FOR CHARIOT (8)

MG-12 HORSE (10)

CHARIOT DOUBLE SEAT (12) (MG-424)

MG-90 PLATFORM (12)

MG-388 PLATFORM SUPPORT

MG-164 FLOURESCENT RING 20 WATT LOW POWER FACTOR & FLOURESCENT LAMP (12)

MG-1 HORSE (10)

MG-123 KEY FOR CORNICE (12)

MG-228-11 OUTSIDE CROSS RAIL (12)

MG-228-12 INSIDE CROSS RAIL (12)

MG-229 MUD SILL (1)

MG-240-1 BRACE HUB YOKE PIN (10)

MG-180 30 WATT (37½") FLOOR FIXTURE FOR PICTURE PANELS (2)

MG-178 PICTURE PANEL (2)

MG-184 INDIAN FACE (6)

MG-230 YOKE (6)

SWAY ROD - L-MG-116 SMG-217

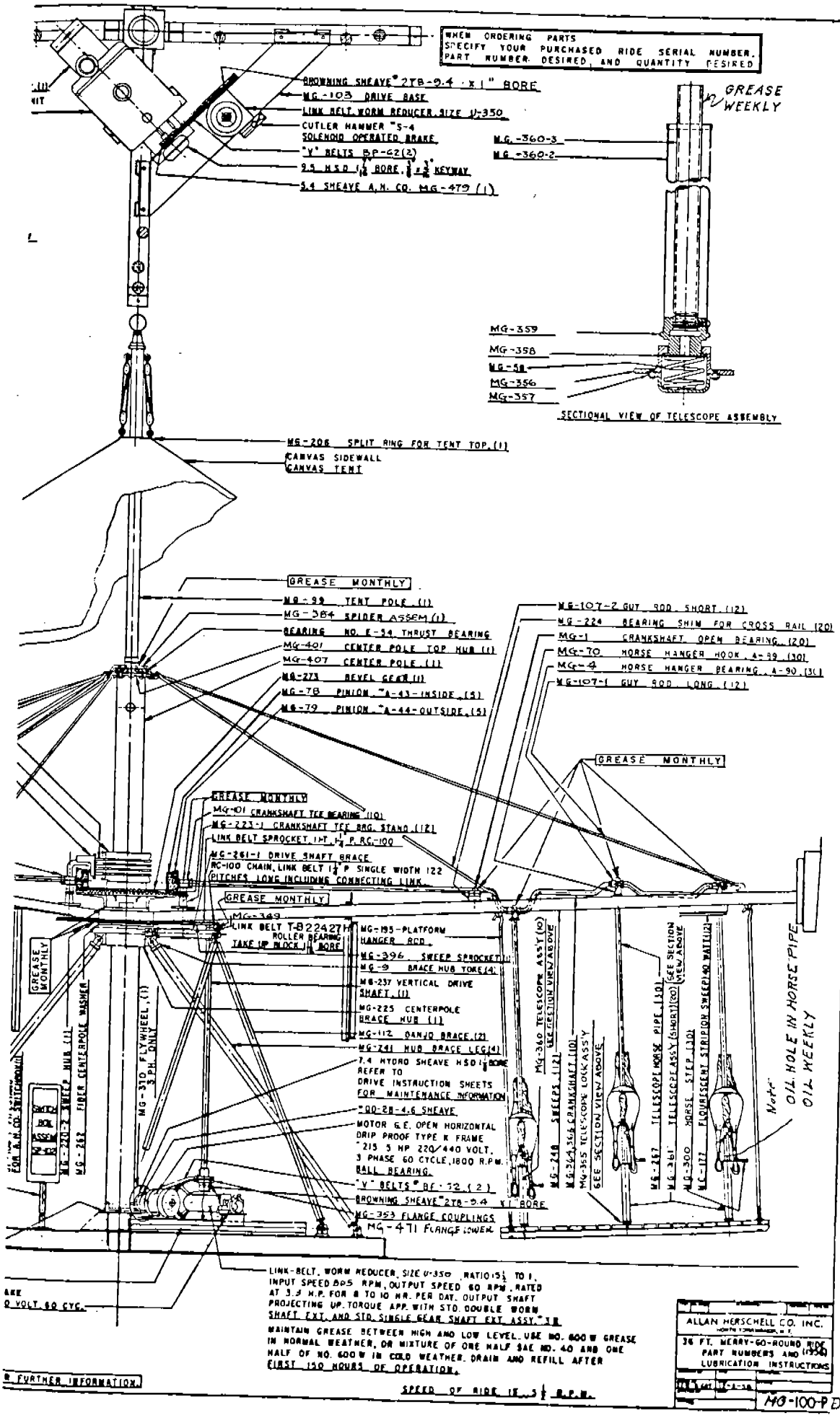
MG-233 CENTERPOLE CROSS H[redacted]

MG-103 DRIVE BASE (1)

CUTLER-HAMMER "S-4 SOLENOID OPERATED [redacted]

10" FT. TORQUE, 1" DIA. BORE [redacted]

REFER TO A.H. CO. ERECTION & CARE SHEETS [redacted]



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