

SERVICE LETTER CO-03
ISSUED BY HUSS MASCHINENFABRIK
APRIL 11, 1988



**RETURN RECEIPT
REQUESTED**

RE: Condor - Arrester device maintenance

Our Operating Manual prescribes that all parts of the "arrester device" must be kept free of rust.

We have occasion to draw special attention to these maintenance measures once again and we wish to assist you in this by means of more detailed instructions in conjunction with the attached Drawing No. 3-22798.

- 1) Spray the regulating rope (Item 1) with a rope care agent such as e.g. LOT-EX at least once every six months.
- 2) Check the complete arrester rod assembly (Item 2) every 4 weeks to ensure that it runs easily and oil the bearing points.
- 3) Check the springs and holders (item 3) every 4 weeks and also keep free of rust.
- 4) Each time the arrester device is triggered, subsequently check the cross-grooved linings of the arrester grippers (Item 4) and exchange if any signs of wear are noted.
Also check the arrester bed (counterpart) (Item 5).
- 5) All parts of the arrester device including the speed regulator (Item 7) located at the foot of the tower must be kept absolutely free of rust at all times.
However, it is essential that the arrester grippers (Item 4), the arrester bed (Item 5) and the arrester rail (Item 6) should remain completely free of grease.



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7. Quality screw connections for which a specific tightening torque is prescribed must be subjected to careful inspection prior to assembly / erection of the ride. In any case, only flawless nuts and bolts may be used and these must be clean and lightly oiled.

After certain periods of operation, it is necessary to check the pretensioning. If any parts of the ride are found to have settled with time, these checks must be carried out more frequently.

8. The gondolas must not be loaded with more than 2 passengers each (calculated load 165 lb/person). The passengers must be distributed among the gondolas and the rotating units as evenly as possible.
9. It is prohibited to lean out of the gondolas, to stretch out arms and legs, to smoke and to enter the gondolas with animals or with umbrellas, sticks or other bulky or pointed objects.
10. Children under 8 years of age and of a height of less than 4,5 ft. (137 cm) may only use the ride if accompanied by a responsible adult.

Drunken persons are not to be admitted to the ride.

11. The notices announcing the prohibitions and conditions contained in 9 and 10 must be prominently displayed.
12. The operator must not switch on the drive power until:
 - a) all passengers are properly seated
 - b) all entry ports to the gondolas have been pneumatically closed
 - c) the platform has been cleared of people
 - d) the public is standing at a sufficient distance away from the trajectory of the gondolas.



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13. All parts of the ride must be checked daily prior to starting operation and if necessary also during pauses in operation to ensure that they are in perfect condition. It is especially important to check for any sinking or settling of the support blocks or of single support elements.
14. The two drive units (i.e. brakes, motors, gears, racks and pinions) possess safety functions in the lower part of the trajectory coming into the platform area.

For this reason they must be maintained in the manner specified by the manufacturing companies in order to ensure that they function properly at all times. Operation of the ride must always be discontinued if any faults are found.

If the drive brakes fail at full lifting speed, first determine the cause beyond any doubt and then wait until the brakes have cooled off before restarting operation of the ride. It may be necessary to call in a specialist company. If the deceleration/stop brakes fail, the manager of the ride must contact the manufacturers HUSS before restarting operation.

15. The ride is not designed for snow loads. If the ride is erected outside the snow-free season, any snow must be swept off all parts of the ride without delay.
16. At wind speed force 8 or higher (stormy wind, twigs broken off trees) operation of the ride must be discontinued immediately.
17. The correct functioning of the overspeed monitors and the battery voltage of the emergency lowering device must be checked once a week.
18. The instructions of operation and maintenance of the individual manufacturers and the specially indicated check-points must be observed.



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VII

Maintenance Instructions for Fiberglass Surfaces

We use only first-class materials to produce the surface finish of our fiberglass components. Although these require very little maintenance, they cannot do entirely without maintenance. To retain the brilliant surface gloss for a long time we recommend you to:

1. Clean the surfaces at least every 14 days with clear water and then polish with a leather cloth.
2. Never rub dust or dirt off the surfaces when dry.
3. Clean the surfaces with a solution of water and household washing-up liquid or similar as required but at the latest every 3 months; after drying, apply a good automobile wax and polish with a soft cloth.
4. If you use a high-pressure steam jet, never work with chemicals which are more aggressive than soapy water.
5. If you use a high-pressure steam jet with chemicals which comply with Point 4, wax and polish the surfaces again afterwards.
6. Stubborn spots and stains can be swiftly removed with moist acetone cloths; keep the contact time with acetone to a minimum.
Immediately after working with acetone or cleaning benzine, wash the surface well with clear water and then wax and polish.



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VIII:

*** Points to Check in the Safety Equipment of the CONDOR ***
once a year with the assistance of an approved expert

Item	Component	Point to check	Desired value	Remarks
1	Magnetic brake on the lifting motor (56)	Air gap between the armature disk and the coil	0,07 in (1,8 mm)	See nameplate for max. air gap
2	Toothed racks (52) Pinions (53)	Tooth profile Fastening screws	236 ft lb (320 Nm)	
3	Running rollers on the lifting assembly (48)	Air gap between running roller and track	0,008 - 0,16 in. (0,2 - 0,4 mm)	If the gap is bigger than 0.5mm it must be re-adjusted
4	Limit switch on the tower (57) (58)	Position of the switching rail and the sensing distance	0,08 in (2,0 mm)	Check top and bottom positions
5	DC motors (49) (50) (51)	Carbon brushes Commutator		Clean interior of motors of carbon dust
6	Arrester device Drawing No. 3-22798	Rails, wedges Rope Rope pulleys		The rail should be free of grease Check visually Grease bearings
7	Slip-rings Conductor rails (59) (60)	Slip-ring tracks Carbon brushes Brush holders		Grind down welds Check spring tension and connections
8	Trailing cable (61) Winding drum	Cable sheath Coiling device Gearbox		Check for external damage Check oil level
9	Gondolas (38) (62) (42)	Bearings Shock absorbers Door locks		
10	Flange connections (63)	Tightening torque of the screws	12325 psi (850 bar)	With SKF pre-loading device Important for park models



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*** Points to Check in the Safety Equipment of the CONDOR ***

once a year with the assistance of an approved expert

Item	Component	Point to check	Desired value	Remarks
11	Counter-weight ropes (64)	Rope fastenings Ropes		Visual inspection
12	Steel construction Welds	Check for cracks		
13	Lifting gearbox (50)	Gogs Bearings		Gearboxes should be dismantled after 5 years and checked at the maker's works
14	Hydraulic system	Leaks Oil level Filters		
15	Pneumatic system Gondola locking system Drawing No. 2-15.34D	Leaks Pressure test		
16	Electrical system	Screw connections Plug-and-socket connections Earth-leakage circuit breaker Motor protection switch.		
17	Electrical system	Overspeed test Insulation resistance		
18		Trial operation after Acceptance Certificate		



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Ihre Zeichnung

Unser Zeichen

Telefon-Durchwahl / Kommission / Tag
November 1990

RE: CONDOR - Arrestor Gripping Device

Please replace paragraph F5 on page 13 of your manual as follows:

"After each use, check arrestor pad (pos. 5) and the arrestor pads (pos. 4).

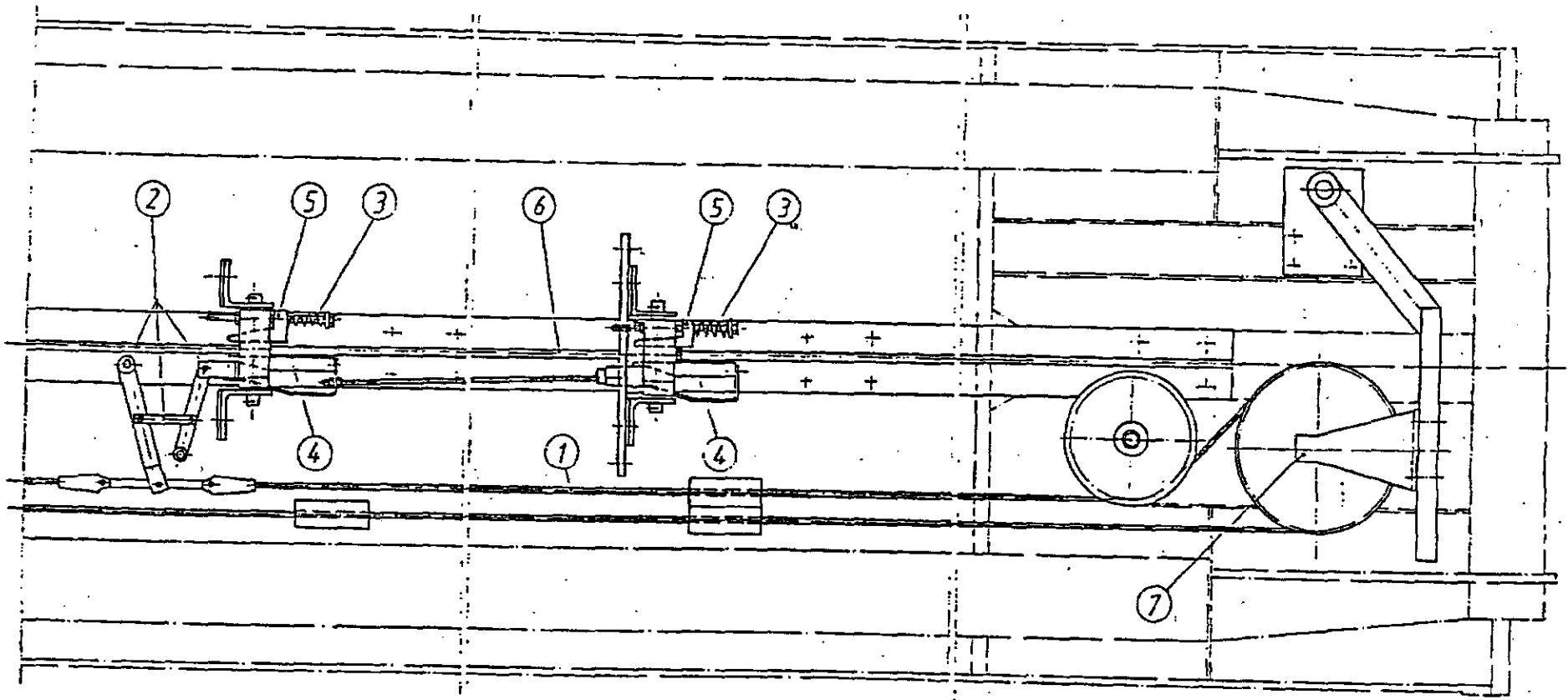
If the bronze pads are flush with the steel surface, the gripping roll shows less than 50% knurl and there is no longitudinal grooved profile on the opposite iron wedge, the gripping device has to be replaced.

Any slivers have to be removed from the grooves, as well as the side rails."

See enclosed drawing 3-22798

Rechtsform: Kommanditgesellschaft, Sitz Bremen, Registergericht Bremen HRA 19318
Führungsinhaber/Gesellschafter: Huss Maschinenfabrik GmbH,
541 Bremen, Registergericht Bremen HRA 10337
Geschäftsführer: Dieter Weischnack, Hans Karl von Winterfeld

Bremer Bank 1 (BLZ 290 000 10) Kto.-Nr. 211 311 000
Bankhaus Norddeutscher AG 1 (BLZ 2 290 200 001) Kto.-Nr. 4500
Postkontoamt 1 Hannover (BLZ 250 100 30) Kto.-Nr. 1584 84 300



Technische Zeichnung 1. Entwurf nach DIN 2100 Blatt 1 und 2 2. Änderung nach DIN 2100 Blatt 1 und 2 3. Spindelmechanismus nach DIN 2100 Blatt 1 und 2	Überwachungszeichen nach DIN 2100	Maßstab 1:7,5	Gewicht
		Werkstoff	Type
Datum	Blatt	Rundfahrtgeschäft "Condor" Fangzange Typ 6071/III	
Blatt	Blatt		
Blatt	Blatt	Zeichnung Nr. 3-22798	
Blatt	Blatt		



SERVICE LETTER CO-07
ISSUED BY HUSS MASCHINENFABRIK
JANUARY 20, 1992

RE: CONDOR TOWING CABLE

It has been noted that the carrier for the worm gear arm of the coiling device may wear with time, or sooner, without proper maintenance of this device. It is recommended to inspect and clean/regrease this unit at least once during the operating season. It would also be beneficial to inspect and clean this unit more frequently during the operating season. Otherwise it may happen that the cable will not windup correctly and it could tear off. (See attached drawing to see unit to be inspected and cleaned.)



Huss Maschinenfabrik GMBH
& CO. KG
P.O. Box 110206
Bremen Germany

Bulletin No: Condor Service
Letter 1

Release Date: 12/7/02
Effective Date: 12/7/2002
Supercedes: None
Completion Date: December
12, 2002
Page 1 of 2

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Service Bulletin

Ride Manufacturer: Huss Maschinenfabrik
Ride Name: Condor
Model Number: All

Affected Production Dates: All
Affected Serial #: All

Abstract of Issue:

An electrical upgrade kit is available from Huss for all Condor owners to ensure that passengers can be quickly evacuated during a trailing cable failure situation.

Reason for Release:

Electrical cables are routed through the attractions tower using a trailing cable assembly. The flexing of these electrical cables over a period of years can result in their deterioration and fracture. If these electrical cables break or short circuit during the ride cycle it may result in guests being stranded at height for an extended period of time. To avoid this an upgrade kit has been designed and is available for purchase from Huss.

Action to be Taken:

The parts for this upgrade kit are available for \$11,151.13 USD plus installation. It is also recommended that a Huss technician supervise the installation of the upgrade kit. The cost for the technician is \$1260 USD per day for 4-6 days plus, airfare, hotel, meals and rental car.

According to our records you are the owner/operator of a HUSS amusement ride. If this is no longer the case, please return this letter to us together with the name, address and contact information of the current owner.



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Letter 1

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Supersedes: None
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12, 2002
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Should you have any questions regarding the above or if you would like to order the kit and technician please contact the Huss Service department in Bremen Germany by telephone at 011 49 421 499 0000 or by e-mail at service@hussrides.com.

In North America you can also order spare parts through North American Parts Inc. by telephone at 716-839-4791 or e-mail at sales@nap-inc.com.

In Asia, you can also order spare parts and service through Melcher's GMBH & Co by telephone at +65 (3559) 272 or e-mail at PhilM@melchers.com.sg.

Additional service bulletins and service information can also be found at our service web site www.husservice.com.

Best regards

HUSS Maschinenfabrik GmbH & Co. KG
- Department for technical services -

According to our records you are the owner/operator of a HUSS amusement ride. If this is no longer the case, please return this letter to us together with the name, address and contact information of the current owner.