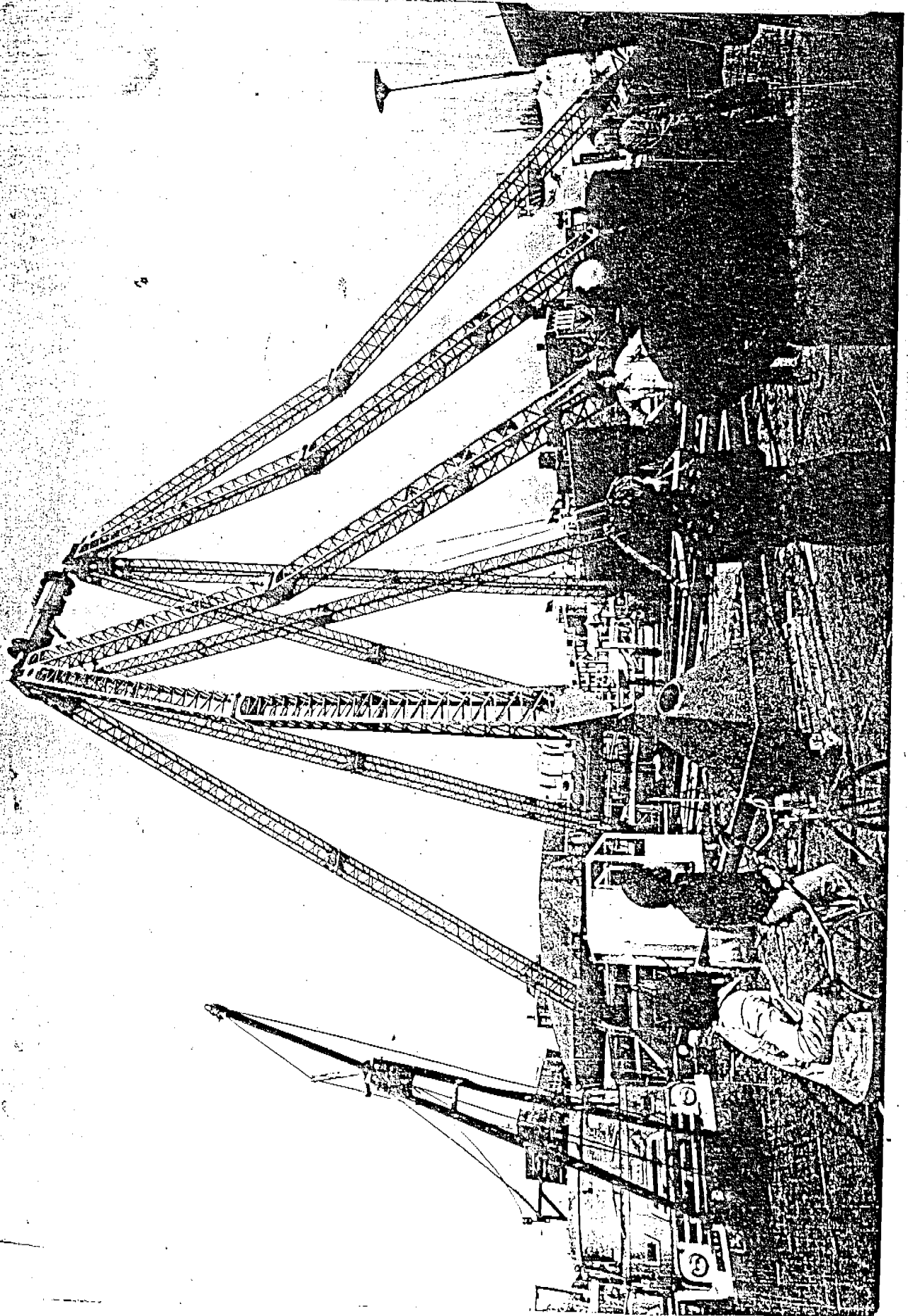


M2
MFG: BAKER
NAME: GIANT WHEEL
TYPE: NON-KIDDIE



GIANT WHEEL 53 m.

M1.

MECHANICAL MAINTENANCE MANUAL.

For the hydraulic, pneumatic and electric maintenance see the separate persistent instructions.

All parts of the Giant Wheel should be kept clean and corrosionfree.

All parts, especially the moving parts, should be inspected regularly and faults, cracks and undue wear should be reported and repaired.

For LUBRICATION see pages M2-M5.

For the maintenance of the correct prestress see pages M6-M10.

The distances of the gondolas to the platforms on either side of the wheel should be reasonably equal and the driving tyres should not run off their tracks. If necessary correct the height of one or more foundation blocks.


STORMS: In regard to the safety of the structure it is not necessary to stop the working of the wheel during a storm. When the safety of the passengers indicates to stop the wheel must be left to the responsibility of the local managment.

When heavy storms are expected with windforces of 10 or more on the Beaufort-scale it is suggested to remove one or more parts of the wooden main-floor on the leeward side of the wheel. In doing so the windsuctions above and under the floor are better balanced.

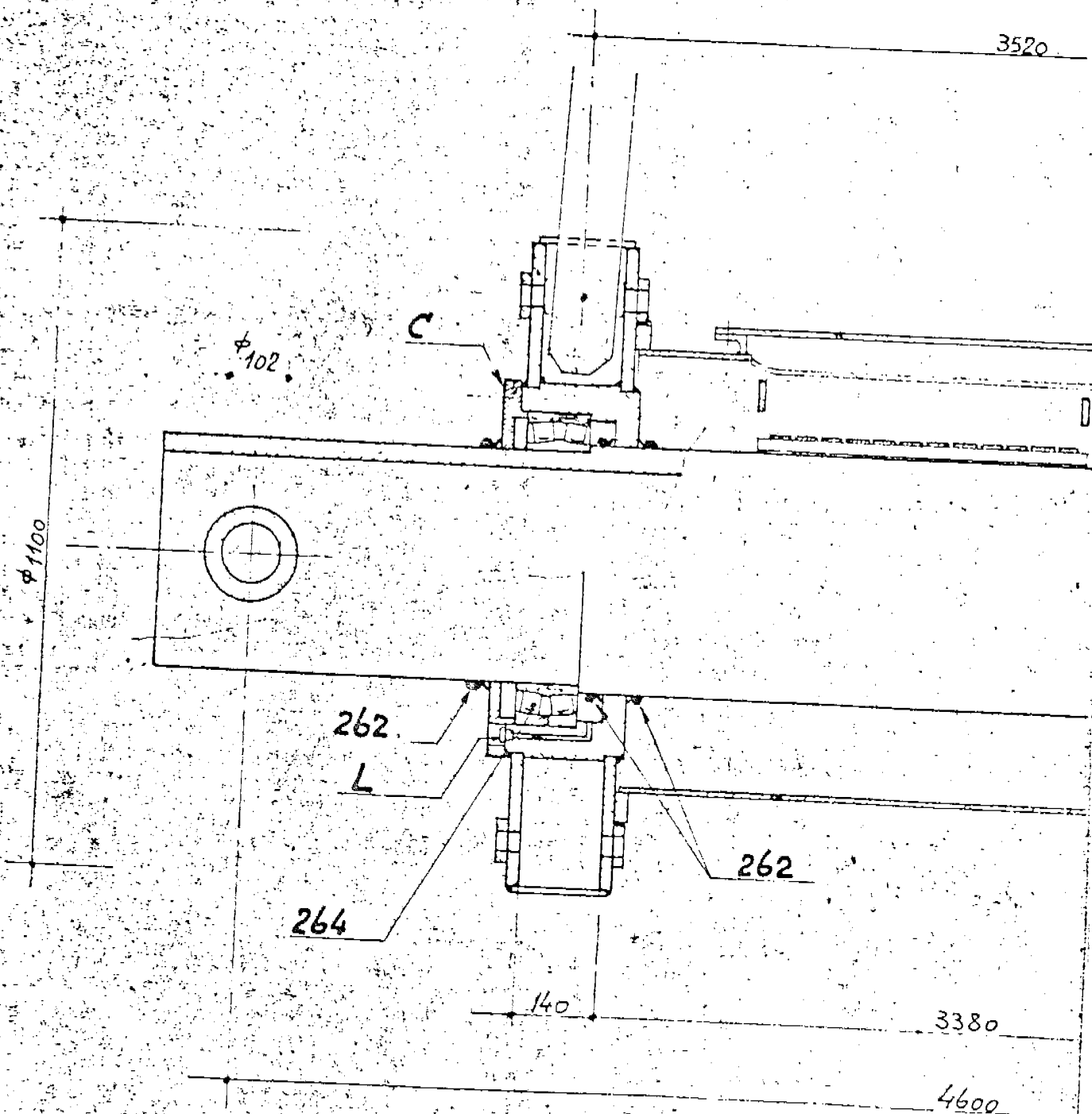
When the necessaty indicates it (e.g. when the airpressure drops too much during a prolonged electricity-cut-off, and the grip of the tyres diminishes intolerably) the wheel should be tied to the masts as indicated in page M11.

HIBERNATION. When the season is over it is suggested to take off the gondolas and the umbrellas and store them during the winter in a place not exposed to the weather. The wheel should be tied to the masts as indicated in page M11.

At each corner of the main floor a part of the planking should be removed to equalize the windsuction above and under the floor in case of storms. The wooden floor can be removed in toto, but in this case it is imperative to remove the gondolas too, in order to preserve the stability of the structure.

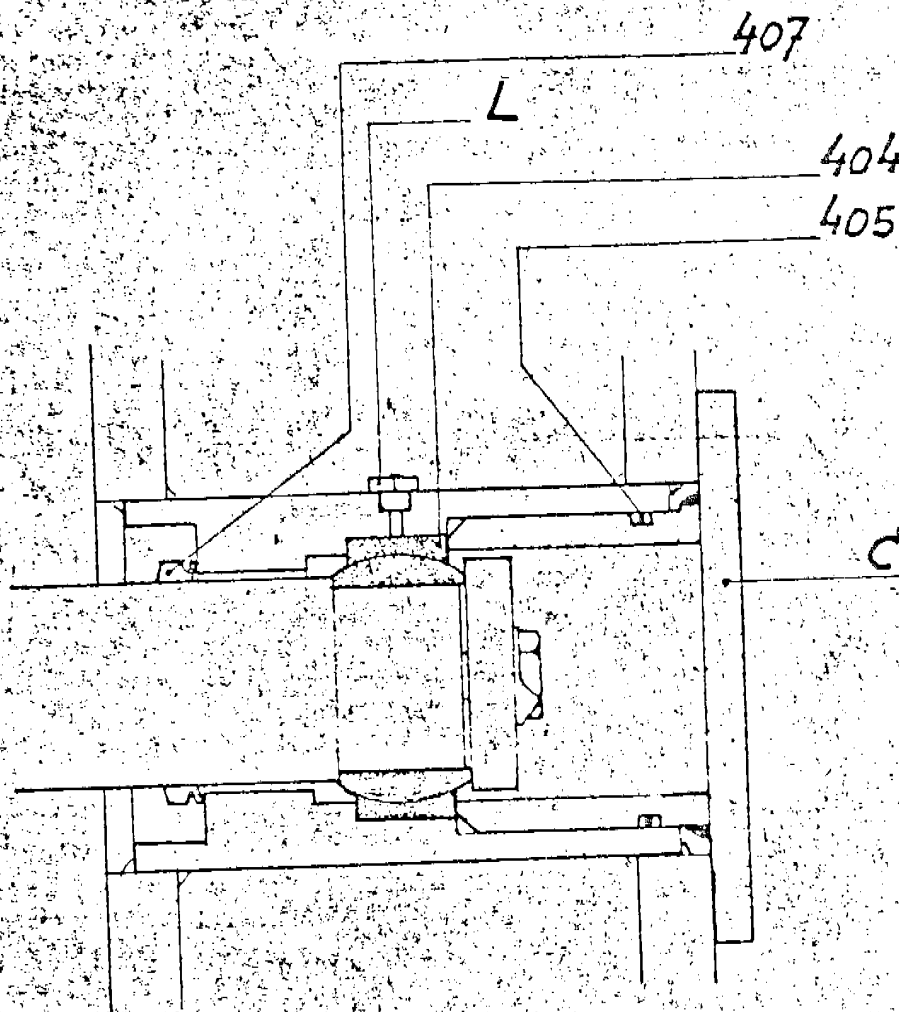

Prinsenweide 70
Apeldoorn-Holland
Tel. 055-212350

3520



ONCE IN 4 YEARS TAKE OFF COVERS "C" RINSE BEARINGS
WITH GASOLINE AND RENEW GREASE. FILL THE SPACE
HALF FULL.

LUBRICATION OF GONDOLA BEARINGS IN SPOKES



LUBRICATE THE SPHERICAL BEARINGS OF THE GONDOLA-CARRYING AXLES EACH 150 WORKING HOURS (AT LEAST EVERY 4 WEEKS) WITH A SMALL AMOUNT (ABOUT $\frac{1}{6}$ OUNCE) OF GREASE THRU "L"

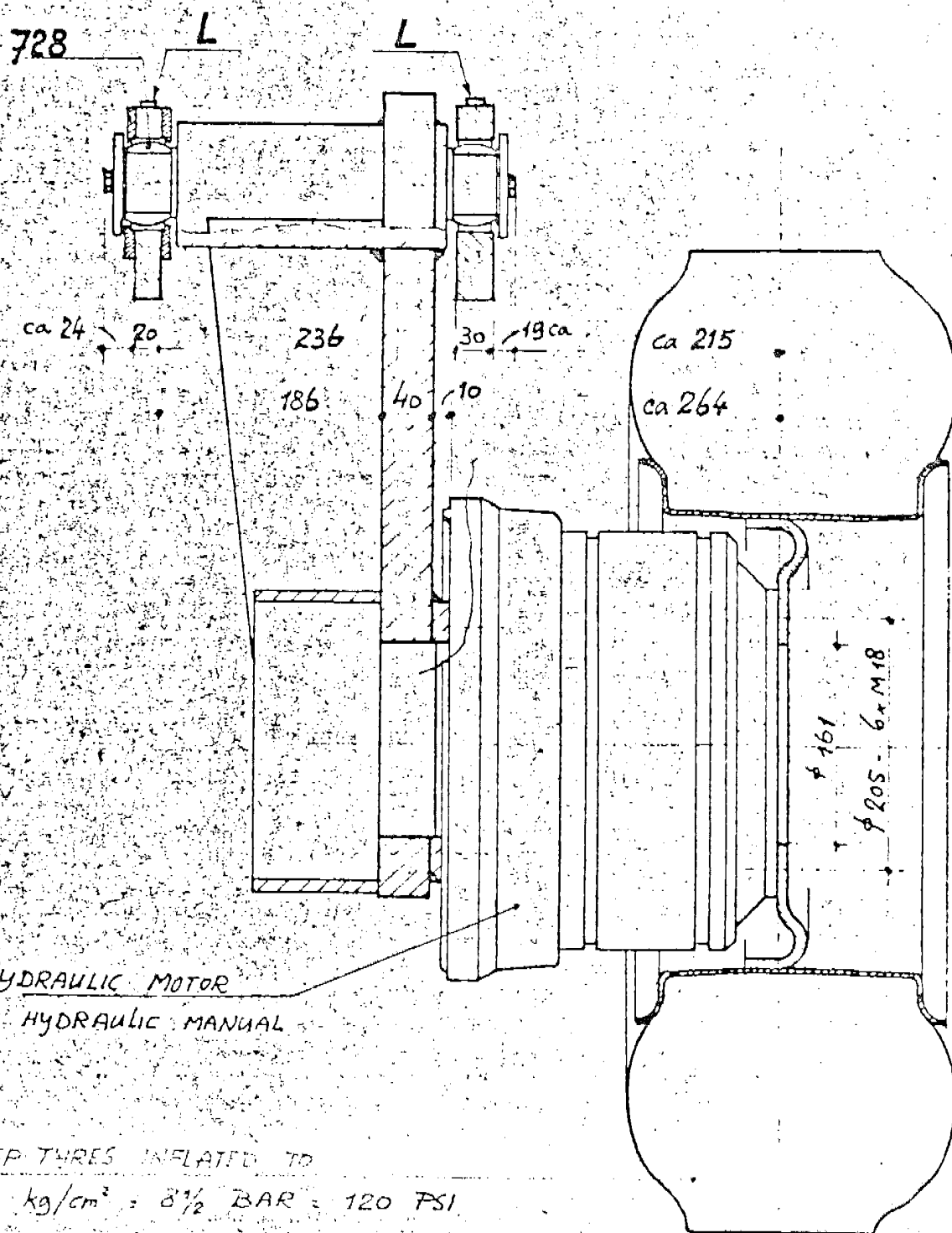
USE Li/Pb GREASE WITH EP AND PREFERABLE ALSO MoS_2 ADDITIONS. CONSISTENCY 2-3 ACCORDING TO NLGI

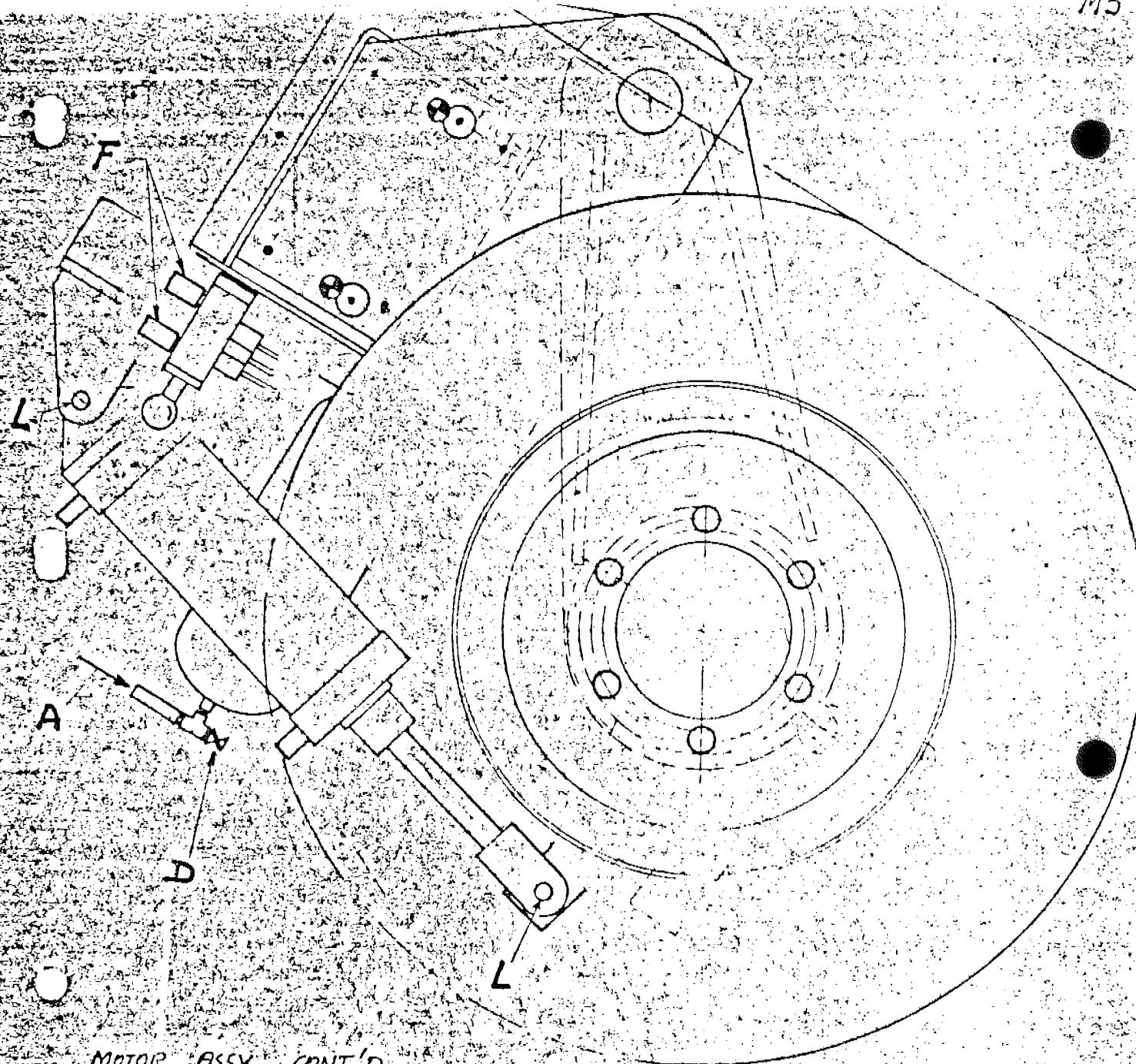
EXAMPLES: MOBILGREASE LARITAL 2
SHELL ALVANIA EP2
CHEVRON DURA-LITH EP2

TAKE OFF COVER "C" AND RENEW GREASE ONCE A YEAR
FILL HOUSING HALF FULL.

MOTOR ASSEMBLY

LUBRICATE THE SPHERICAL BEARINGS 728 AT .L. WITH GREASE EVERY 150 WORKING HOURS (AT LEAST EVERY 4 WEEKS)
USE THE SAME AMOUNT AND THE SAME QUALITY AS INDICATED FOR THE GONDOLA-AXIS BEARINGS (PAGE M3)





MOTOR ASSY CONT'D

LUBRICATE THE PIVOTS OF THE AIR CILINDERS WITH A FEW DROPS OF OIL EVERY 150 WORKING HOURS (OR 4 WEEKS)

AIR PRESSURE AT 'A' MAX 10 kg/cm^2 = 10 BAR : 140 PSI

DRAIN CONDENSATED WATER AT 'D' REGULARLY

FOR MAINTENANCE OF THE PNEUMATIC COMPONENTS SEE THE PERTINANT MANUAL. CHEQUE THE OUILT FILTERS 'F' OF THE CONTROLEVALVES REGULARLY; THEY SHOULD NOT BE CLOGGED.

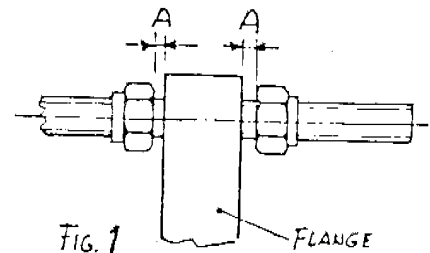
PRESTRESS.

M6

The wheel is prestressed during erection. Due to setting of the material and wear of the pins this tension will get less during use. It is essential that the correct stress is remained.

The wheel is prestressed by means of the hydraulic members B2, C3 and D4 (see fig. 2 & 3, page M7) and by the mechanically adjustable beams F2 on both sides of the wheel. The hydraulic members are sketched on pages M8, M9 and M10. The correction-procedure goes as follows.

- 1- Apply the correct oilpressure through the valve to the connection at letter P.
- 2- Loosen the nuts letters N and be sure that the distances A between nuts and flange do not exceed $1/8"$. See fig. 1.
- 3- After a while, untill the distances A remain constant, tighten the nuts again. In doing so, take care not to move the flange. There is no need to tighten up the nuts hard.
- 4- Shut the valve and disconnect the oilsupply. The valve should remain on the cylinder.



This procedure goes for the members B, C and D on both sides of the wheel. It is not necessary to correct the members simultaneously, but if the correction needed is great, say more than $1/8"$, repeat the procedure.

The correct oilpressures are mentioned on the respective sketches and are intended for the wheel without passengers.

The beams F2 are expanded by thread and nuts. If the threads are normally smooth, the nuts should be tightened with a moment of 6 m.kg, this is 45 ft.lbs only. The pins, which connect the beams F with the spokes should have no play.

This correction of the prestress should be performed after the first 100 working hours after erection, and after that at least twice a year at the beginning and halfway the season.

FIG. 2

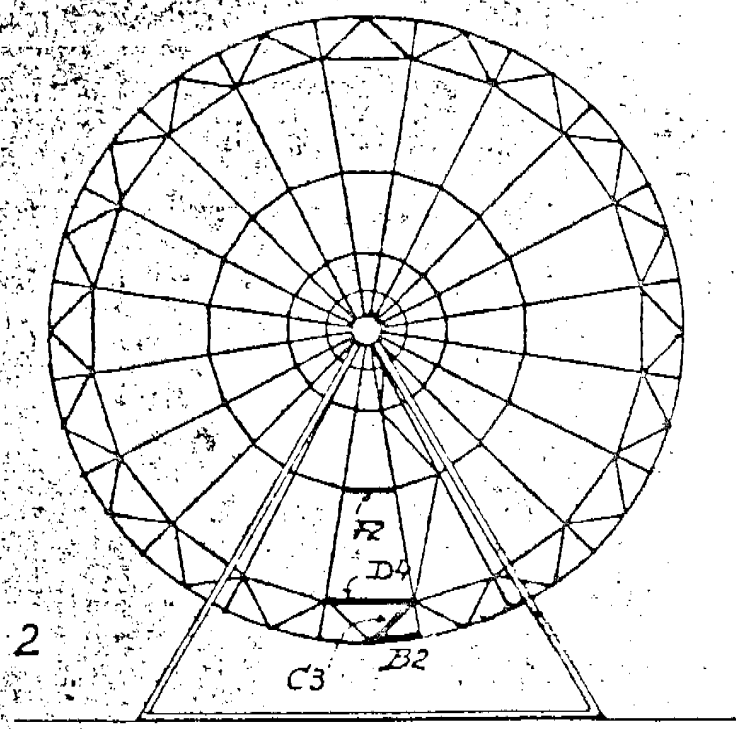
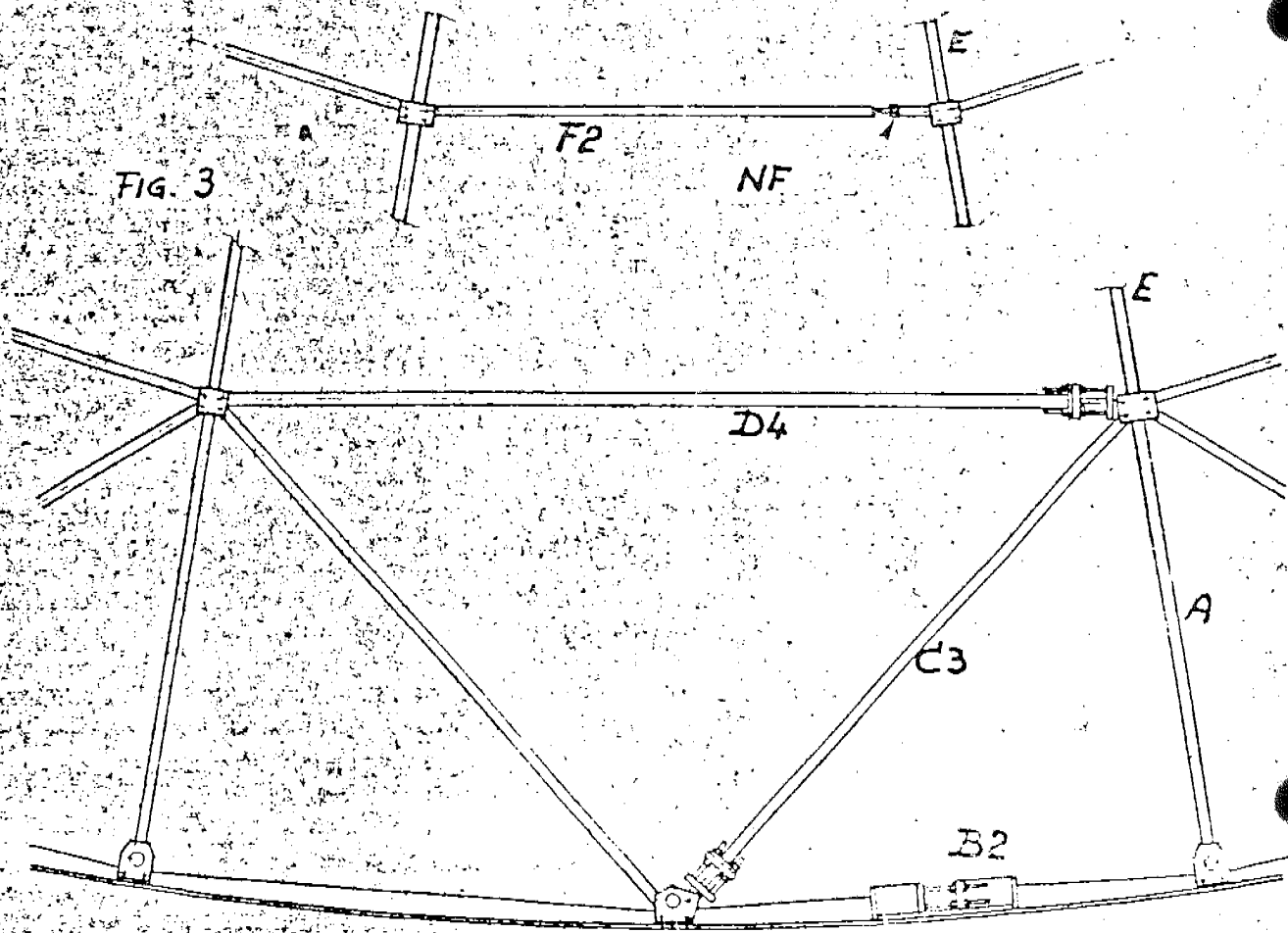


FIG. 3



2590

$\phi 30.5$

P

110

50

4434

39 24

185 +60
-160

N

N

50

50

50

$\phi 60$

$\phi 45$

578

577

580

581

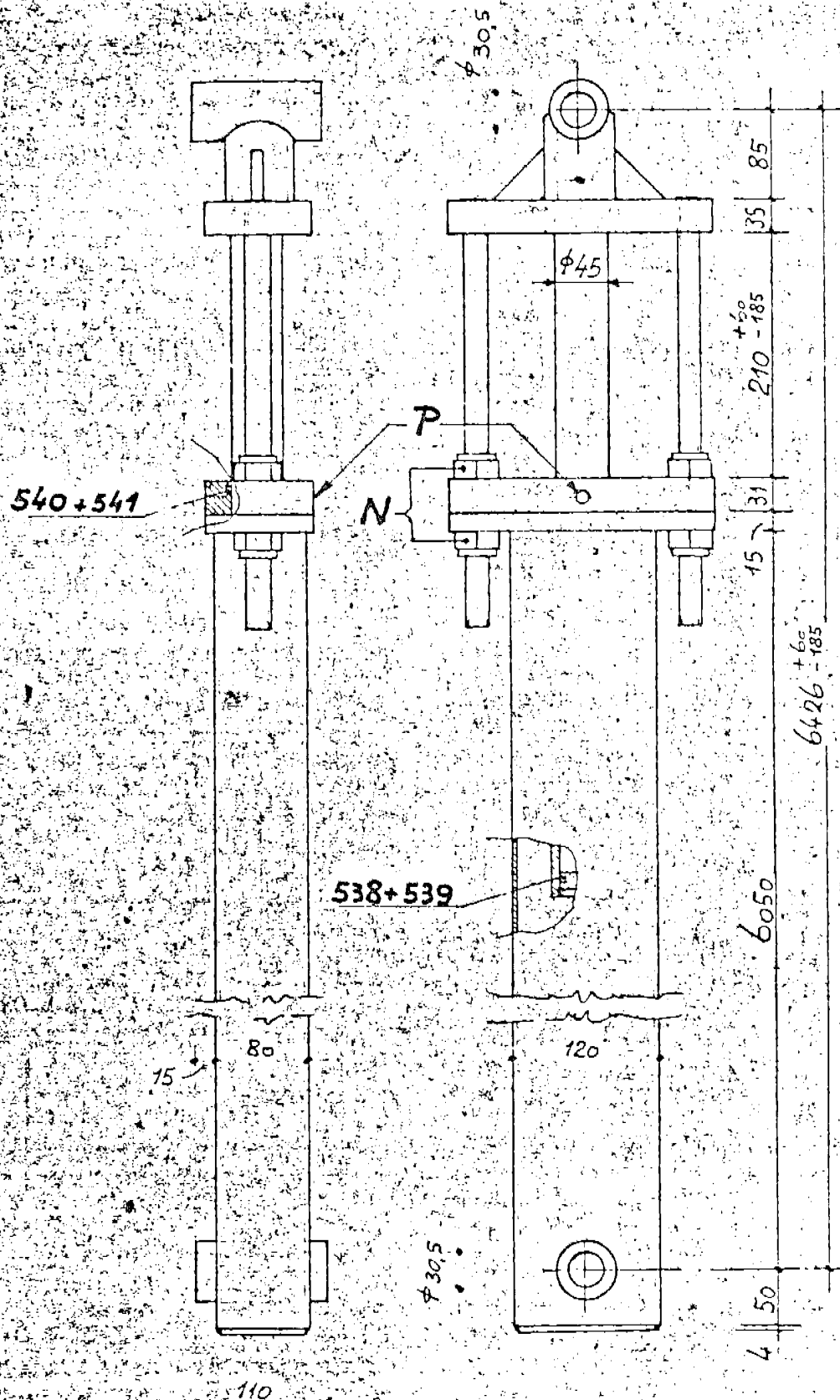
579

Hydraulische kleine Spitze C3

160 kg/cm² Vorspannungsdruck

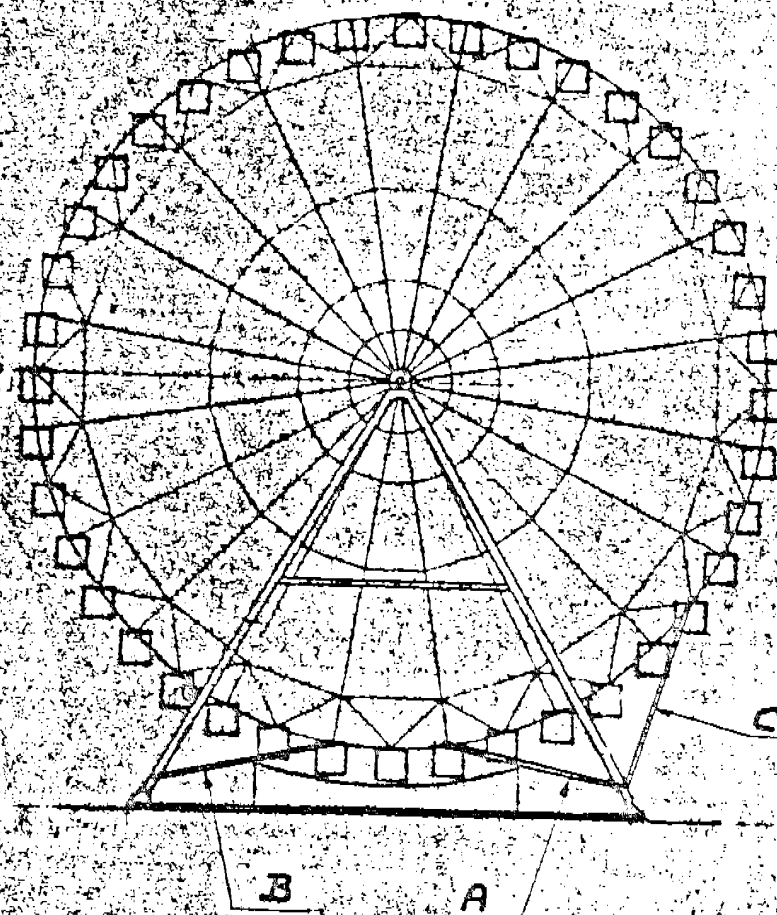
2553

147



Hydraulischer innere Kranzstab D4
Hydraulic inner Rimbeam D4

TO TIE THE WHEEL.



To prevent the wheel from turning, independent of the motor-brakes, the wheel has to be tied to the masts.

Use ties A and B or A and C or B and D or C and D on both sides of the wheel.

In the heaviest storms in a direction perpendicular to the axis of the wheel, the forces in the tie-ropes can total 6000 kg = 13000 lbs.

We suggest the use of Manila or Nylon ropes, and with four ropes to take up the forces, each rope has to take up 1500 kg = 3250 lbs. A Manila-rope of 24 mm diameter = 3" circumference or a Nylon-rope of 16 mm diameter = 2" circumference will do in this case.

The ropes could be taken around the ends of the spokes - use adequate paddings. The ropes can also be taken around the gondola-axis, but as this puts a strain on the spherical bearings, this is not recommended for long periods (hibernation).