

schat-harding

INSTRUCTION MANUAL

S-H REF NO J6705

DATE OF ISSUE: 17.12.1996

GENERAL

EQUIPMENT: HANDLING SYSTEM FOR RIGID INFLATABLE BOAT

CUSTOMER: SCHAT-HARDING INC, USA obo CANADA

ORDER NO: S-H INC PO 20717

SHIP: CCGS PIERRE RADISSON

DESIGNER: SCHAT-HARDING LTD (UK)

MANUFACTURER: SCHAT-HARDING LTD (UK)

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HANDLING EQUIPMENT FOR RIGID INFLATABLE BOAT

MRT/3900

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SECTION I

SPECIFICATION

MIRANDA BOAT DAVIT

TYPE MRT 3900

**SPECIFICATION OF DAVIT AND WINCH FOR SCHAT TRIPLE FALL 'MIRANDA' TYPE MRT
SUITABLE FOR RESCUE BOAT APPLICATION**

Schat 'MIRANDA' davit type MRT, set complete with :

- Davit structure c/w bronze bushed sheaves.
- Boat cradle with rollers.
- Steel wire rope falls for two part lowering and single point pick-up.
- Galvanised suspension gear between falls, cradle and rescue boat.
- Grease nipples.
- Schat track mounted hydraulic winch fitted with hydraulic motor.
- Deckwatertight power pack c/w hydraulic pump, electric motor and all necessary valves.
- Deckwatertight electric starter with heater, totally enclosed starting equipment for mounting on deck c/w overload and circuit break protection, isolating switch, indicator lamp, and STOP/START pushbuttons.
- Hydraulic hand control valve.

The Schat winch is totally enclosed with all gearing running in an oil bath. The brake mechanisms are also enclosed in a watertight case. The winch is power hoist/lower type operated by a two way directional control valve mounted near the deck edge. In case of hydraulic power failure the winch can be operated in lowering direction by use of the brake lever, speed of descent being controlled by preset centrifugal brakes. The winch is fitted with a handcrank unit for use in the hoist direction and also a hand pay-off unit for use in the lowering direction. Note empty boat cradle only. Hand pay-off unit can only be operated when 'deadman' brake lever is raised.

MIRANDA DAVIT TYPE MRT 3900

(SWL 3900 KGS)

PERFORMANCE

- Running out - gravity - boat + 2 crew.
Lowering - gravity - boat + 15 persons (3800 kgs max).
Operating parameters up to 20° heel + 10° trim.
Lowering speed approximately 40 M/Min.

- Hoisting by hydraulic motor.
Design load (3900 kgs).
Hoist speed approx 0-55 M/Min.

- Manual handcrank back-up.

- Gravity pay-out of cradle - as in lowering at reduced speed.

SECTION II

GENERAL DESCRIPTION

SCHAT GRAVITY DAVITS

GRAVITY DAVIT PRINCIPLE

The distinguishing characteristics of all gravity davits is that the boat is brought by its own weight from the stowed position inboard to the full outboard position and subsequently lowered, without the exertion of manual or mechanical force. The lowering of the boat is controlled by a winch with a brake lever, of the 'deadman' type and also centrifugal brakes which regulate the lowering speed to within the required limits.

There are a number of distinct types of Schat Gravity Davits each designed to give the maximum efficiency and to occupy the minimum of deck space under particular boat stowage conditions.

WINCHES

Schat winches are totally enclosed with all gearing running in an oil bath. The brake mechanisms are also enclosed in a watertight casing. Thus, all the moving parts are protected from icing up, corrosion etc thereby ensuring that the winch is kept in a free running state under the most adverse conditions. Where the boat weight and other factors permit the winch is mounted on the davit track to give the added advantage of maximum clear deck space.

HOISTING

By hydraulic motor fitted to winch.

OPERATION

The operation of the Schat Gravity Davit is extremely simple, but as in the handling of all heavy weights, there are precautions to be observed and crews should be trained in the procedures detailed in this booklet.

"The davits and winches are constructed in compliance with IMO 92 Chapter III.

Regulation 48 Parts 1 to 1.11 and 2 to 2.10 inclusive.

Also Regulations 22 and 28."

MIRANDA DAVIT TYPE MRT 3900

GENERAL DESCRIPTION

The davit is based on 'gravity davit skate principle' with a level ship track angle of 35 degrees giving 15° running out angle (slope) when ship heeled 20° high side list.

With gripe webbing straps cleared away, lower boat and cradle by selecting lower mode on hydraulic hand control valve lever. In the event of hydraulic failure raise brake lever on winch. Boat will then lower under control of centrifugal brakes.

The boat suspension strop angle will ensure boat and cradle remain against track and ship's side during lowering and recovery, thus obviating tricing and bowsing gear.

Boat should be boarded at deck level through centre track opening and cradle opening, engine started and boat lowered to waterline. As boat nears waterline cock (pull release line on), off-load release hook on boat lifting frame. As boat clears cradle and ship's side allow cradle to lower under waterline and lower brake lever.

RECOVERY

Approximately 10 seconds before boat comes alongside, start power pack. Boat crew will hook in spare strop (stowed in boat) and have ready hook on end as boat comes alongside. Crew to hook on suspension strop to cradle centre rope. Note outer cradle ropes for taking lift load only.

Hoisting by hydraulic motor at variable speeds; slow hoist to engage hook on cradle point can be speeded up once cradle and boat are together.

Care should be taken at deck level to ensure cradle engages inside arms.

Fore and aft rope painter attached to cradle and/or boat during streaming (underway recovery/launching) will give added control over cradle and boat position.

Strop used for launching must be removed and stowed back in boat for next recovery.

SECTION III

POWER PACK OPERATING PROCEDURE

POWER PACK UNIT
OPERATING PROCEDURE

Power pack unit comprises :

- twin 40kw electric motor/hydraulic pump units
- delivery 70 IGPM (35 IGPM per pump)
- max working pressure 2500 psi

- 1) Check oil level in tank and replenish if necessary.
- 2) Switch 'ON' electrical supply to power pack unit starter control panels from ship's electrical control panel.
- 3) Switch 'ON' master switches on starter control panels (sited adjacent to power pack unit) 2 off - one per electric motor/hydraulic pump unit.
- 4) The davit is ready for use.

When davit duties are completed reverse above procedure to shut down power pack unit.

SECTION IV

SYSTEM OPERATING PROCEDURE

MIRANDA DAVIT TYPE MRT 3900

OPERATING INSTRUCTIONS

LAUNCHING (BOAT STOWED)

- 1) Clear away gripe strappings (ensure trackway path clear).
- 2) Move control valve lever to 'lower' and run boat + cradle to deck level. Move control valve lever to neutral to stop lowering.
- 3) Board personnel - crew.
- 4) Start boat engine.
- 5) Move control valve lever to 'lower' and run boat + cradle to water.
- 6) Boat crew to pull off-load boat release lanyard as boat nears water, continue lowering cradle to below surface after boat departs.
- 7) Stop lowering with cradle submerged, approx 10 ft. Should boat be away for more than short period or ship be underway, hoist cradle clear of water as in 'Boat Hoist' and leave outboard.

NOTE: In event of hydraulic power failure system may be operated at winch by raising gravity brake lever.

RECOVERY

- 1) Lower cradle to below waterline (as in Boat Launching).
- 2) Start power pack.
- 3) Boat crew to attach spare boat suspension strop link (stowed in boat) to boat suspension hook as boat nears ship.
- 4) Attach suspension strop hook to CENTRE ROPE FALL as boat comes alongside.
- 5) Ease cradle up past boat by moving control valve lever to HOIST until boat pulled into cradle and continue hoisting at desired speed.

A dual power pack with dual control valves is a feature of this system. The system can operate on one power pack alone but if a boost is required to lift quickly then the second pack can be brought into operation, then both levers are moved simultaneously to double the speed of lift.

- 6) Return lever to neutral at deck level and disembark personnel and crew.
- 7) With personnel disembarked, ease cradle and boat up track and stop approx 18 inches from fully stowed position.

NOTE: Rotary limit switch on winch is set to cut-out hoist at approx 12 inches from stowed position for back-up purpose.

- 8) Switch off power and stow remaining distance by handcrank.
- 9) Connect gripe straps.

NOTE: In the event of a total breakdown of the power the cradle can still be hoisted via the handcrank unit.

SECTION V

FALLS ASSEMBLY DETAILS

MIRANDA DAVIT TYPE MRT 3900

FALLS, GRIPES ETC

FALLS ROPE DETAILS - Refer to Drawing M903554, SK767 & SK768.

18mm dia galvanised boat fall rope 6 x 36 + FC construction, 180 kgf/mm² material with a minimum breaking load of 19300 kgs.

One end to be left plain wire bound, other end fitted with Crosby 3/4" size open spelter (fork end).

1 off 29 metres - SK768 Mid Wire
1 off 29 metres - SK767 For'd Wire
1 off 27 metres - SK767 Aft Wire

SUSPENSION CHAIN

For details refer to drawing M901550.

GRYPE (STROP) DETAILS

For details refer to drawing SK691.

SECTION VI

HOIST WINCH UNIT

HOIST WINCH UNIT

GENERAL ARRANGEMENT M902624
SECTIONAL ARRANGEMENT S711550

The hoist winch unit is powered by a single hydraulic fixed displacement motor.

The hydraulic motor drives the rope barrel via a spur gear train. The gearing is fully enclosed in a fabricated oil tight case and all shafts are laid up on either spherical bearings or deep groove ball bearings. Lubrication is of the oil bath type ie gears running in oil. The inspection cover is fitted with an oil tight gasket.

Fitted to the hydraulic motor shaft are a hydraulic brake and sprag unit. The hydraulic brake is of the multiplate 'fail safe' type ie can only be released when hydraulic pressure applied. The brake is maintenance free, plate wear being automatically compensated for by springs

POWER HOIST - sprag unit inner race freewheels in the hoist direction thus enabling the load to be hoisted without releasing the hydraulic brake.

POWER LOWER - sprag unit inner race engages (locks) with outer race thus holding the load until hoist motor and brake are hydraulically actuated.

Also incorporated in the winch are a brake unit and a centrifugal brake unit. The 'deadman' type brake unit contains a disc brake that is held on - engaged - by a brake lever and weight.

GRAVITY LOWERING - with brake lever lifted the disc brake is pulled off - disengaged - (hydraulic brake and motor disengaged from disc brake) and load lowers under the influence of the centrifugal brake unit preset at required gravity lowering speed.

HANDCRANK - the brake unit is also fitted with a handcrank point ie square cut on outer end of disc brake shaft, that enables load to be hoisted by hand via a portable handcrank reduction unit. During this operation the sprag unit inner race freewheels in the hoist direction. Should motion be stopped the load is held by hydraulic brake and motor.

HAND PAY-OFF - light falls can be payed-off barrel by lifting 'deadman' brake lever and rotating handwheel fitted to centrifugal brake unit.

NOTE

Power hoist/lower and handcrank motions can only be achieved when the disc brake is in the engaged position.

SECTION VII

HYDRAULIC CIRCUIT DESCRIPTION

HYDRAULIC CIRCUIT

DESCRIPTION

TYPE MRT/3900

SCHEMATIC CIRCUIT S711742A
GENERAL ARRANGEMENT HOIST WINCH M902624

NOTE : See Schematic Circuit for all item number referred to below.

Twin power pack unit comprises 2 dual pumps driven by electric motors (40 kw @ 1775 rpm) which deliver a total of 70 IGPM (35 IGPM each).

All motions are controlled by a manually (hand lever) operated directional control valve (item 2) which is mounted in a control panel sited adjacent to davit structure.

Hand lever movement causes the spool in the directional control valve to shift and direct flow to the appropriate port.

Directional control valve spools (hand levers) are self-centering to neutral position.

All motions are infinitely variable from creep to maximum speed.

A relief valve is incorporated in the directional control valve to protect the hydraulic system against overloads ie surge pressure - shock loads, should system pressure exceed relief valve setting flow is dumped to tank.

In the event of a failure/breakdown of one of the motor/pump units the handling system can still be operated but at reduced performance ie half speed.

In the event of a total power pack unit failure/breakdown the davit can still be operated manually - refer to Operating Instructions.

WITH POWER PACK RUNNING

DIRECTIONAL CONTROL VALVE 'NEUTRAL' POSITION

Flow from pumps is through directional control valve (item 2) and back to tank.

NOTE

All work ports A and B open to tank.

HOIST

Flow from ports 'A1/A2' is directed to manifold block (item 13), through free flow sections of load control valve (item 6) to hydraulic motor (item 1), with pressure on motor load is hoisted. Discharge from motor returns to tank via directional control valve.

NOTE

Winch is fitted with a 'fail safe' hydraulic brake (item 11) and sprag unit both mounted on the motor shaft, which enables the load to be hoisted even though the brake is engaged (sprag unit inner race freewheels in hoist direction). When load is stopped any reverse rotation engages (locks) sprag unit inner race with outer race and load is held by brake and motor.

Relief valve (item 5) is fitted to protect the motor against overload ie surge pressure - shock loads.

LOWER

Flow from ports 'B1/B2' is directed through manifold block (item 14) to hydraulic motor, pressure on motor, simultaneously disengages hydraulic brake (item 11) and pilot opens load control valve (item 6) and motor lowers load. Discharge from motor returns to tank via directional control valve.

NOTE

Load control valve operation - The valve is set above maximum load induced pressure. Load pressure will not open valve until pilot pressure is applied. If the load tries to run ahead of supply flow pilot pressure will fall and valve will throttle or close to prevent runaway. When flow is reversed it passes through free flow section of valve.

If system pressure collapses ie hand lever 'neutral' position selected, load control valve will close and brake will automatically engage.

Should brake failure occur, the load control valve will sustain the load by hydraulic lock.

SECTION VIII

FAULT FINDING (HYDRAULICS)

TROUBLE SHOOTING CHART 1

TROUBLE	POSSIBLE CAUSE	REMEDY
POWER PACK WILL NOT START	SHIP'S SUPPLY NOT 'ON'	SWITCH 'ON'
	STARTER OVERLOADS TRIPPED	RESET
	ELECTRICAL HOIST HANDCRANK PROTECTION SWITCH TRIPPED OR STICKING	REMOVE HANDCRANK UNIT
		REMOVE SWITCH DISASSEMBLE AND CLEAN
NOISY PUMP		
	PUMP SUCKING AIR	TEST BY POURING OIL ON PUMP INTAKE JOINTS WHILE LISTENING FOR CHANGE IN SOUND OF OPERATION. TIGHTEN AS REQUIRED.
	TANK OIL LEVEL BELOW MINIMUM	REPLENISH TANK USING CORRECT GRADE OF HYDRAULIC OIL.
	RESTRICTED SUCTION LINE	REPLACE SUCTION FILTERS IN TANK. CHECK INTAKE PIPING FOR OBSTRUCTIONS.
	WORN PUMP	REMOVE, DISASSEMBLE AND CHECK FOR WEAR. REPLACE WORN PARTS.
	EXCESSIVE PRESSURE	CHECK RELIEF VALVE SETTINGS. CHECK LINES FOR OBSTRUCTIONS.

TROUBLE SHOOTING CHART 2

TROUBLE	POSSIBLE CAUSE	REMEDY
PUMP NOT DELIVERING OIL	PUMP/MOTOR SHAFTS DISENGAGED	REMOVE ELECTRICAL MOTOR. CHECK FLEXIBLE COUPLING.
	PUMP SHAFT SHEARED DUE TO ROTOR SEIZURE	DISASSEMBLE AND REPAIR.
PUMP NOT DELIVERING PRESSURE	RELIEF VALVE SETTING NOT HIGH ENOUGH	SCREW DOWN RELIEF VALVE ADJUSTING SCREW
	WORN PUMP	CHECK AS ABOVE - NOISY PUMP
RELIEF VALVES CHATTERING	AIR BEING DRAWN INTO SYSTEM AT PUMP INTAKE	CHECK AS ABOVE - NOISY PUMP
DAVIT WILL NOT HOIST OR LOWER		
	PUMP NOT DELIVERING OIL	CHECK AS ABOVE
	PUMP NOT DELIVERING PRESSURE	CHECK AS ABOVE
	DISC BRAKE (BRAKE UNIT ON WINCH) DISENGAGED	ENSURE 'DEADMAN' BRAKE LEVER ON WINCH IS IN FULLY 'ON' POSITION
DAVIT WILL LOWER BUT NOT HOIST	DISC BRAKE (BRAKE UNIT ON WINCH) NOT FULLY ENGAGED	ENSURE 'DEADMAN' BRAKE LEVER ON WINCH IS IN FULLY 'ON' POSITION
	UNLOADING RELIEF VALVE (6) VENTING	REMOVE, DISASSEMBLE AND CLEAN

TROUBLE SHOOTING CHART 3		
TROUBLE	POSSIBLE CAUSE	REMEDY
DAVIT WILL HOIST BUT NOT LOWER	WINCH HYD BRAKE (11) ENGAGED	ENSURE PRESSURE TO BRAKE
		REMOVE BRAKE, DISASSEMBLE AND CLEAN
	LOAD CONTROL VALVE (5) STICKING	REMOVE, DISASSEMBLE AND CLEAN
LOAD LOWERS WITH DEADMAN BRAKE 'ON'	SPRAG UNIT FAILURE IN WINCH	REMOVE AND REPLACE

MIRANDA DAVIT TYPE MRT 3900

FAULT FINDING (MECHANICAL)

DAVIT DOES NOT RUN OUT WHEN BRAKE LEVER IS LIFTED

1. Check that gripe wires have been released.
2. If davit is still reluctant to run out, reconnect gripe straps and check free running of winch in lowering direction. Normally a pull of approximately 250 lbs is sufficient when applied to the falls with brake lever lifted.
3. Check free running of sheaves.
4. If davits have sustained any damage by weather, cargo handling etc misalignment of various points may be the cause. In this case davit manufacturer should be contacted.

BRAKE OR CLUTCH FAILS TO HOLD BOAT

To check clutch : (see drawing S711550)

1. Rotate hand pay-off wheel (Item AC) in lowering direction. With brake lever lifted this is possible but with lever in down position the sprag clutch should resist movement in lowering direction. Check clutch (items 4, 5 and 6). If inner or outer race is badly indented renew clutch.
2. Check Ferodo plate brake (Item L D407029B) for grease or oil. Clean or renew. Check for wear, renew if necessary.

WINCH NOT FREE RUNNING

1. Check that oil in gearcase is of correct viscosity and level.
2. Check gear teeth for breakages and gearcase for foreign matter.
3. Check bearings for collapse and bearings and shafts for rust and corrosion. (This should not occur with correct periodic maintenance).
4. Check that sprag clutch cage has not broken and jammed clutch mechanism. (This is a very unlikely occurrence).

WINCH WILL NOT HOIST

1. Check that 'deadman' brake lever is fully on. Lift brake lever and release it. Should return by its own weight to the full ON position. If not, readjust as described in General Maintenance.
2. Handcrank winch to hoist cradle to ensure 'deadman' brake is functioning correctly.
3. Should the winch hoist via the handcrank unit but when power is selected will not hoist, check rotary limit valve (fitted to barrel shaft) for dirt or partially open limit valve. This can be readily checked by plugging the line between the relief valve on motor and the limit valve. Take care to plug all ports to avoid tank line pressure dump to tank.

SECTION IX

ELECTRICAL EQUIPMENT

SCHAT-HARDING LTD
POWER PACK EQUIPMENT

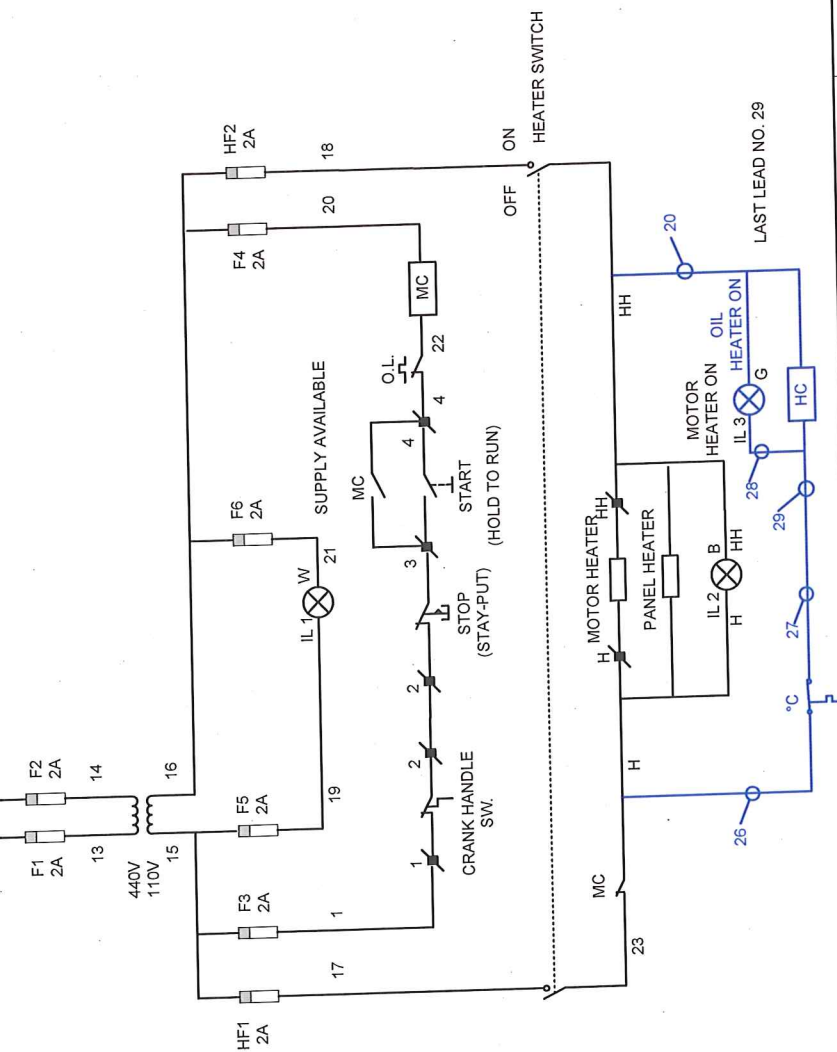
1) **FIXED ELECTRIC MOTOR**

MAKERS	:	ROTOR BV
FRAME SIZE	:	7-AD 225 SH
VOLTAGE	:	440
PHASE/CYCLE	:	3/60
KW/RPM	:	40/1775
ENCLOSURE	:	IP56
WINDING	:	HT/LC SQUIRREL CAGE

2) **STARTER**

MAKERS	:	ACME ELECTRICAL MFG CO LTD
TYPE	:	DOL DWT IP44
VOLTAGE	:	440/3/60
PUSHBUTTON	:	INTEGRAL WITH STARTER BOX

3) LIMIT SWITCHES	HOIST	C/H PROTECTION
MAKERS	:	N/A SIGMA
TYPE	:	N/A 472791
LEVER	:	N/A 540048



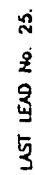
— « HC » DANS DÉMARREUR #1 SEULEMENT

PROJET		NGCC Pierre Radisson			
TITRE		PLAN DÉMARREUR BOSSOIR MIRANDA POUR FRC 733			
DES. PAR	GUY VALCOURT	DATE	27 DÉC. 2012		
REV. PAR		DATE			
REV.	TAILLE	ÉCHELLE	NIL	FEUILLE	1 de 1

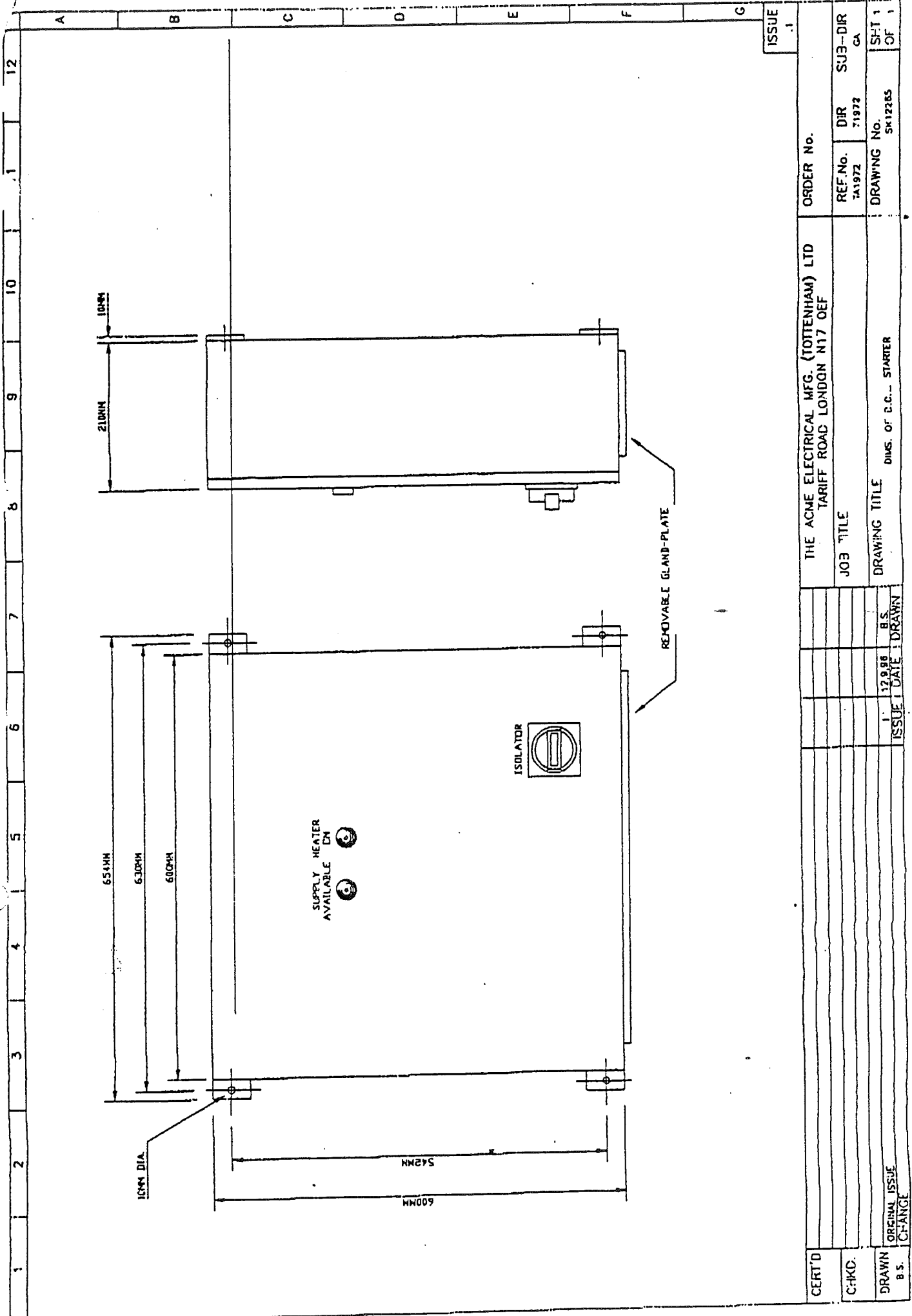
POUR CORRIGER LE PLAN SK12285
 ADDITION DE CONTACTEUR HC POUR
 ÉLÉMENT CHAUFFANT DU RÉSERVOIR
 D'HUILE HYDRAULIQUE.

DESSIN NO Plans PRD / Plans Visio

DOSSIER N.G.C.C. Pierre Radisson



CERT'D					THE ACME ELECTRICAL MFG. (TOTTENHAM) LTD		ORDER No. 24688/6705		ISSUE 2
					TARIFF ROAD LONDON N17 0EF				
CHKG.					JOB TITLE		REF. No. TA'972	SUB-DIR SCH T1972	SHT OF 1
					DRAWING TITLE		DRAWING No. SK12266		
DRAWN E.S.					SCHEMATIC WIRING OF D.O.L. STARTER				
					DATE				
CHANGE					ISSUE				
					DATE				
REMOTE START WAS SHOWN AS "HOLD TO RUN". IT IS NOW MAINTAINED ORIGINAL ISSUE 1 13.9.96: B.S. 1 13.9.96: B.S.									



SECTION X

INSPECTION & MAINTENANCE

GENERAL INSPECTION

PROGRAMME

old down straps, gripes or lashings, tighten if necessary.

LY

lubrication points where necessary.

level in hoist winch.

hydraulic oil level in power pack unit.

condition of falls rope for damage.

operation of deadman brake on winch, lift brake lever, pullan falls
and rotate barrel.

LY

check and brake linings on winch.

rotating parts for free movement on both the davit and winch.

check contactor contacts condition for any sign of deterioration or other signs that could
lead to a possibility of them welding together. (2 starters on board)

(5-2012)

FLEET CIRCULAR - CIRCULAIRE DE LA

FC 06-2012

2012-07-13

SCHAT-HARDING DAVITS MOTOR CONTACTOR

CONTACTEUR DE MOTEUR D HARDING

Ref: section 2.5.3, Vessel Maintenance Management Manual

Réf : section 2.5.3, le Manuel l'entretien des navires

Purpose

This Circular provides instructions to CCG employees to identify and address possible electrical issues with the Schat-Harding davits motor contactors.

Objet

Cette circulaire fournit aux en GCC des conseils pour les aider à régler les problèmes électriques des contacteurs de moteur de bos Harding.

Background

An issue has recently occurred on one of our vessels with Schat-Harding davits.

Contexte

Un problème est survenu récemment impliquant l'un de nos navires bossoirs Schat-Harding.

While retrieving the lifeboat during a drill the winch motor failed to shut down when the stop command was given.

Pendant un exercice comportant la récupération d'une embarcation le treuil ne s'est pas interrompu à la commande donnée.

This caused the lifeboat to come up hard on the falls until the overload trip caused the motor to shut down. Fortunately in this situation the wires held as there were numerous occupants inside during the incident.

Cela a fait en sorte que l'embarcation occasionné un impact violent sur les de poulies jusqu'à ce que le déclenchement de surcharge entraîne l'interruption. Heureusement dans le présent cas, tout est allé bien, car il y avait de nombreuses personnes à bord durant cet incident.

Further investigation revealed that the motor contactors had welded together effectively bypassing all safety shutdowns except the overload trip.

L'enquête a révélé que les contacteurs de moteur s'étaient soudés, ce qui a empêché le fonctionnement de toutes les interruptions de sécurité à l'exception du déclenchement de surcharge.

Queries to: Director, Marine Engineering
 Telephone 613-998-1558
Infopol@DFO-MPO.GC.CA

Renseignements : Directeur, Ingénierie
 N° de téléphone : 613-998-1558
Infopol@DFO-MPO.GC.CA

Expiry Date: N/A

Date d'expiration : s.o.

EKME # 2606245

– Work Boats are 17D01B

The Fleet Circular number should be the PREFIX in the Task Description in format: <<Fleet Circular 06-2012 Davit Electrical Inspection>>.

- Detailed notes on findings shall be documented in the task notes of MAINtelligence.

Future Step

Based on findings from these investigations further guidance will be given on a solution to this issue in consultation with Schat-Harding.

Application

This circular will remain in force until confirmation is received through MAINtelligence that all affected vessels have carried out this action.

A target date for compliance is set on **August 15, 2012.**

– les bateaux de travail étant 17D01B

Le numéro de la circulaire de la Flotte devrait précéder la description de la tâche : <<Circulaire de la Flotte 06-2012 Inspection du bossoir électrique>>.

- Des notes détaillées sur les constatations devront être ajoutées aux notes de la tâche dans MAINtelligence.

Prochaine étape

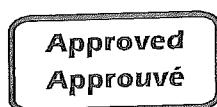
Selon les résultats des enquêtes, d'autres conseils seront transmis quant à la façon de solutionner ce problème de concert avec Schat-Harding.

Demande

Cette circulaire sera en vigueur jusqu'à la réception de la confirmation dans MAINtelligence que tous les navires touchés ont été inspectés.

La date butoir de conformité est établie au **15 août 2012.**

Director General, Fleet



Mario Pelletier
Directeur general, Flotte

MANUFACTURER EQUIPMENT	SHELL		ESSO	B.P.	TOTAL	CHEVRON	MOBIL	TEXACO	GULF	CASTROL	LORCO	ROCOL	ELF- ANTAR
	OMALA 100	MELINA 30	SPARTAN EP 100 OR EP150	ENERGOL GR-XP 150	CARTER EP 110	GEAR COMP'D 150	GEAR 629 SHC 629	MEROPA 150	E.P. HD 150	ALPHA 150	HT 100		EPONA Z 100 OR 68
WINCHES GEARBOXES	ALVANIA GREASE R2/R3 OR EP2		BEACON EP2	ENER- GREASE MM=EP2	MULTIS SPECIAL 3	DURALITH GREASE EP2	MOBILUX 2 OR EP2	MULTI FAK EP2	CROWN GREASE N'2	SPHEEROL EPL2	GREASE LG 23	ROCOL BG 151	MULTI- SURVICE
GREASE POINTS DAVITS-WINCH ELECTRIC MOTORS DAVIT TRACKS	CARDIUM COMP'D OR FLUID D		SURETT FLUID N 5K	ENERGOL WRP	OSYRIS TP4A	PINION GREASE MS 250 TCB	MOBIL -TAC A	TEXCLAD Z	LUBECOTE N'1	RUSTILO 553	OPEN GEAR COMP'D	ROCOL- R0105 OR WIRE ROPE SPRAY	ENGREN- AGE 1401
WIRE ROPES	DIALA OIL B		NUTO H15 OR UNVIS N15	ENERGOL JS-A	ISOVOL- TINE	E.P. HYDRAULICS OIL 5	D.T.E. 11	TRANS- FORMER OIL	MECHANISM LP 15	INSULATING OIL	TRANS- FORMER OIL		TRANSFO- RMAREUR 40
ELECTRICAL OVERLOAD RELAY DASHPOT	TALPA OIL 40		NUTO H68 OR UNVIS N68	ENERGOL HLP68 BARTAN HV 68	CORTIS 100	MARINE OIL R&O 65	D.T.E. OR D.T.E 18	DORO AR 30	VERITAS 30	CDX 30/ MPX 30	HT 100		MISOLA H100
THICKENING OF DASH POT OIL IF NECESSARY	TELLUS 37		NUTO H32 OR UNVIS N32	ENERGOL HLP32 BARTAN HV 32	AZOLLA VG 32	E.P. HYD 32	D.T.E.13 OR D.T.E 24 SHC 524	RANDO HD 32	MECH- ANISM LP 32	HYSPIN AWH 32	HT 32		MSG A 32
HYDRAULIC SYSTEMS	ALVANIA GREASE R2/R3		BEACON EP2	ENER- GREASE MM=EP2	MULTIS SPECIAL 3	DURALITH GREASE EP2	MOBILUX 2 OR MOBILPLEX 47	MULTI FAK EP2	CROWN GREASE N'2	SPHEEROL EPL2	GREASE LG 23	ROCOL MG	MULTI- SURVICE
SPRAG-CLUTCHES	TELLUS 10 OR C10		UNVIS N15	ENERGOL HLP-10 ENERGOL SHF-LT15	AZOLLA 10	E.P. HYDRAULICS 10	VELOCITE N'6 D.T.E. 21	RANDO HD Z-15		HYSPIN AWS 10 HYSPIN AWH 15			
STIEBER ROLLER CLUTCHES													

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umoe

RECOMMENDED LUBRICANTS

EQUIVALENT GRADES BY OTHER REPUTABLE
MAKERS ARE EQUALLY SUITABLE,
CAD No.23014

DAVIT
MAINTENANCE

GREASE POINTS - 19 OFF

In order to maintain the efficiency of the davit it is essential that it is lubricated and inspected regularly.

Lubrication of the davit should be carried out at approximately 6 week intervals.

A schedule of recommended lubricants is included in this booklet.

For ease of location of grease points it is advisable to encircle each point with paint of a contrasting colour.

Wire ropes must be inspected at least once every 6 weeks for signs of excessive wear, corrosion or other defects and must be replaced when deemed necessary by a competent inspector.

Rope lubricant should be applied regularly to ropes in quantities sufficient to produce a thin, even adherent coating which will remain flexible and fully protective over the full range of temperatures likely to be encountered in service.

Ropes should be cleaned of foreign matter and corrosion and must be absolutely dry before lubricant is applied.

NOTE

PAINTING

Careless painting is the most frequent source of trouble with davits.

When painting it is essential to ensure that no paint is applied to lubrication points or bearing or any moving parts in such a way as to impede their free movement.

HOIST WINCH

MAINTENANCE

GENERAL ARRANGEMENT M902624
SECTIONAL ARRANGEMENT S711550

OIL CAPACITY 11 LITRES
GREASE POINTS 2 OFF

Check oil level and grease winch once every 6 weeks. A schedule of recommended lubricants is included in this Manual.

The disc brake and centrifugal brakes linings should be inspected annually, if linings are worn down to within 1mm of screw/rivet heads they should be replaced.

HOLDING DISC BRAKE

For replacement linings only Ferodo brake lining should be used.

CENTRIFUGAL BRAKE

Replacement shoes c/w linings should be obtained from manufacturer.

Both disc brake and centrifugal brake linings must be kept free from grease and in good condition. Grease on the linings will cause slippage and a serious accident may result.

The brake unit should never be greased other than by the grease nipples provided and only then should receive a single pump of grease. Excessive greasing here is not necessary.

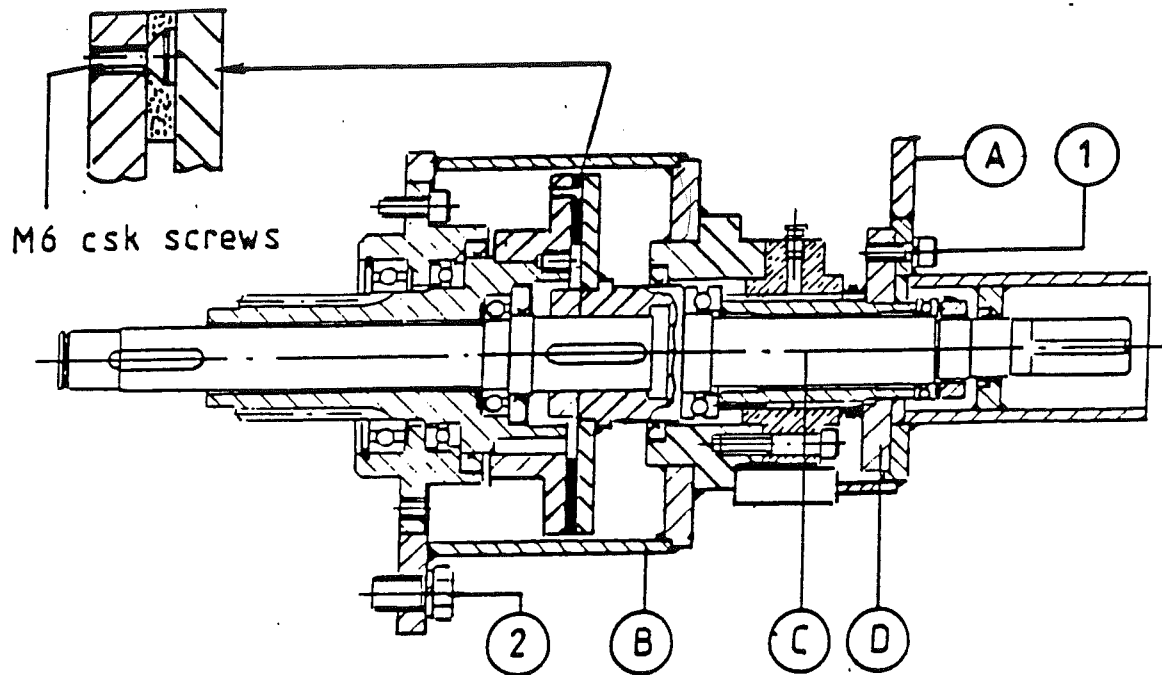
When gravity lowering, the centrifugal brake housing will heat up owing to the action of the brake shoes. As long as this is not accompanied by an increase in lowering speed this may be ignored. During tests or drills the brake housing should be allowed to cool before lowering again.

The threaded sleeve and dust seals on the 'deadman' brake lever assembly must be kept free of paint. The 'deadman' brake lever must return by its own weight to the full on - engaged - position when released.

All winch gearing should be inspected regularly for any evidence of excessive wear or defect.

When inspection covers are removed a watertight seal must be ensured on reassembly.

FOR BEARING & OIL SEAL FITMENT
REFER TO D 407029 A



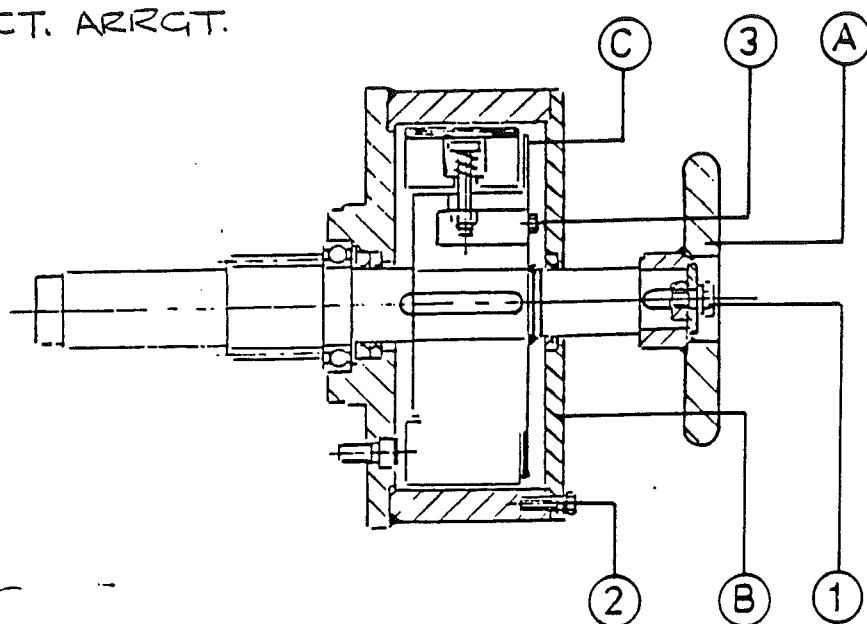
NOTE: Before commencing to work on brake unit ensure falls rope is not under load, raise 'deadman' brake lever to release tension on falls.

- 1.1 Undo cap screws (1), remove brake lever assembly (A).
- 1.2 Undo bolts (2), remove housing (B) c/w shaft (C) and threaded sleeve (D).
- 1.3 Examine lining material of disc clutch. Replace if worn down to within 1mm of screw heads.

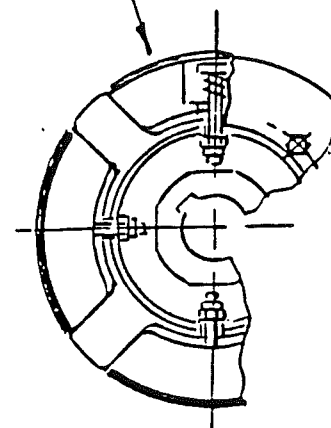
Reassembly is the reverse of the above procedure.

DISC BRAKE UNIT DISMANTLING INSTRUCTION

FOR BEARING AND OILSEAL
FITMENT REFER TO
SECT. ARRGT.



BRAKE SHOE
SEGMENT



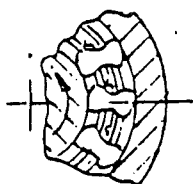
- 1 Undo bolt (1) , remove handwheel (A).
- 1.1 Undo bolt (2) , remove cover (B).
- 1.2 Undo bolt (3) , remove cover (C).
- 1.3 Extract shoes (4 segments - slide out) and examine lining material. Replace if worn down to 1mm of brake shoe material.

Also refer to Broadbent Drive Sheets D1 and D2

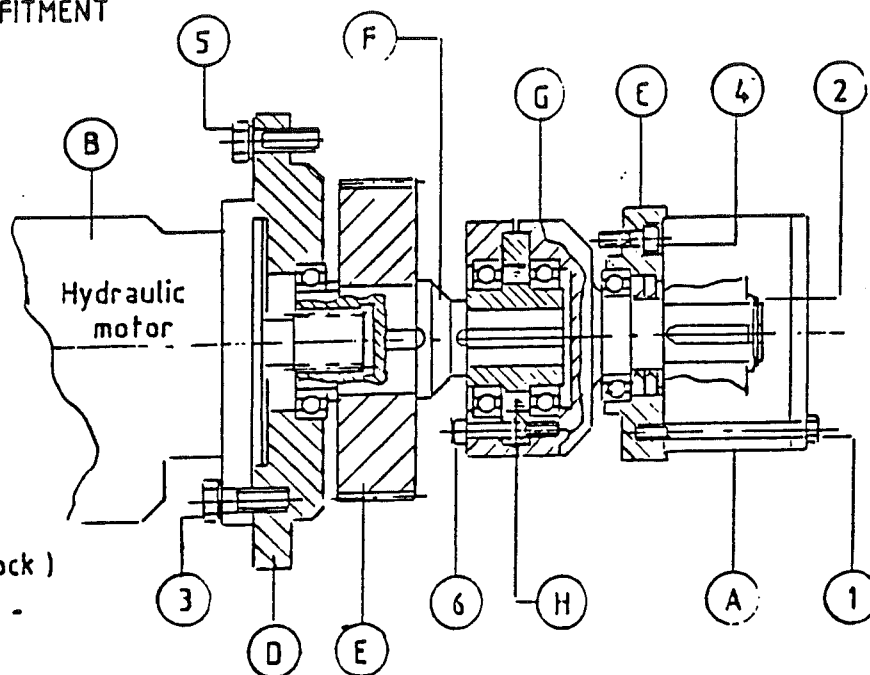
Reassembly is the reverse of the above procedure.

CENTRIFUGAL BRAKE
DISMANTLING INSTRUCTIONS

FOR BEARING & OILSEAL FITMENT
REFER TO D



View on Sprag unit
looking from Hyd. motor.
Inner race to engage (lock)
in anticlockwise direction -
winch lower direction,



NOTE Before commencing work on motor shaft assembly ensure falls rope is not under load raise deadman brake lever to release tension on falls

- 1 Undo Hydraulic brake unit bolts (1), remove outer body of brake unit (A)
- 1.1 Remove circlip (2) c/w spacer, draw off brake hub.
- 1.2 Undo bolts (3), remove Hydraulic motor (B)
- 1.3 Undo capscrews (4), remove Hydraulic brake adaptor plate (C)
- 1.4 Undo bolts (5), remove Hydraulic motor adaptor plate (D)
- 1.5 Remove spur gear (E) c/w spacer, shaft (F) and Sprag unit assembly (G) from winch
- 1.6 Remove spur gear (E) and shaft (F) from Sprag unit assembly (G)
- 1.7 Undo capscrews (6) split Sprag unit assembly (G)
- 1.8 Dismantle Sprag unit (H) and examine for excessive wear or damage.

Note The inner race of the Sprag unit may still be attached to shaft (F) but need only be removed if a new Sprag unit is to be fitted.

Reassembly is the reverse of the above procedure

Replace all oilseals and bearings if damaged

Ensure Sprag unit is reassembled correctly. Check rotation - rotate hoist motor shaft both directions it should be free to rotate in hoist direction, and lock solid in lower direction.

SPRAG UNIT
DISMANTLING INSTRUCTIONS

SECTION XI

SPARES LIST

Schat-Harding Ltd (DAVIT DIVISION) SPARES LIST

SHEET 1 OF 2 SHEETS.

BHY5300 WINCH - AVAILABLE SPARES					
DESCRIPTION	DETAIL NO	No off per Unit			
WINCH SECT ARRGT	S711550				
Sprag Unit BW13167	Item 4, 5 & 6	1			
Centrifugal Brake BC25	Item 3	1 Set			
Spherical Bearing 24026C	Item 9	1			
Cylindrical Roller Bearing NJ212	Item 10	2			
Ball Bearing 6217	Item 11	1			
Ball Bearing 6012	Item 12	1			
Ball Bearing 6008	Item 14	2			
Ball Bearing 6007	Item 15	1			
Ball Bearing 6010	Item 13	3			
Oil Seal 125 160-12	Item 17	1			
Oil Seal 58 80 8	Item 18	2			
Oil Seal 45 65 8	Item 19	1			
Oil Seal 32 52 7	Item 20	1			
Circlip ø 55 ext	Item 23	1			
Circlip ø 30 ext	Item 22	2			
		1			
Limit Switch - Crankhandle Protection					
Switch - Sigma 600 Series 472791	Item 8	1			
Lever 540048	Item 16	1			
Rotary Limit Valve D407775C	Item G	1			

Schat-Harding Ltd (DAVIT DIVISION) SPARES LIST

SHEET 2 OF 2 SHEETS.

BHY5300 WINCH - AVAILABLE SPARES							
DESCRIPTION		DETAIL NO	No off per Unit				
BRAKE UNIT		D407029B					
Ball Bearing 6016		Item 1	1				
Ball Bearing 6009		Item 2	1				
Ball Bearing 6006		Item 3	1				
Inner Ring IR 35x40x30		Item 8	1				
Needle Bearing NK40/20		Item 7	1				
Thrust Bearing 51208		Item 5	1				
Thrust Bearing 51107X		Item 6	1				
Thrust Bearing 51117		Item 4	1				
Plain Bearing MB 3520 DU		Item 9	2				
Oil Seal 115 140 12		Item 10	1				
Oil Seal 70 90 10		Item 11	1				
Oil Seal 50 80 8		Item 12	1				
Oil Seal 30 40 7		Item 13	1				
V Seal VA0065		Item 14	12				
Circlip ø 125 int		Item 15	1				
Circlip ø 30 ext		Item 17	1				
Circlip ø 50 int		Item 16	1				

Schat-Harding Ltd (DAVIT DIVISION) SPARES LIST

SHEET 1 OF 2 SHEETS.

POWER PACK - AVAILABLE SPARES								
DESCRIPTION			DETAIL NO	No off per Unit				
HYDRAULIC SPARES			S711742A					
Directional Control Valve D50			Item 2	1				
Minor repair kit comprising:								
Seal kit								
Handle gaiters								
PRV cartridge								
Hyd Motor WM76A			Item 1	1				
Major repair kit comprising:								
Thrust plates								
Seal kit								
4 Bearings								
Shaft bearing								
Load Control Valve E2B 300 Z 150 N MK 2			Item 6	1				
Seal kit SK3-0008								
Relief Valve A4B 300 STD Z N			Item 5	1				
Seal kit								
Fail Safe Brakes 0.022.512.23.002			Item 11	1				

SPARES LIST

SHEET 2 OF 2

[illegible]

Schat-Harding Ltd (DAVIT DIVISION)

SHEET 1 OF 1 SHEETS.

SHEETS.

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