

Op-Air  
0155-61

NAVY DEPARTMENT  
OFFICE OF NAVAL OPERATIONS  
WASHINGTON,

I-32-GB

Feb 21

October 21, 1918.

From: Director of Naval Aviation,  
To: All Naval Air Stations, Aviation Detachments,  
Bureaus and Naval Districts.

Subject: Weekly Report - October 21, 1918.

1. Hours of patrol obtained during the past week at Naval Air Stations, together with the number of flights and seaplanes used for patrol, for week ending October 21, 1918:

PATROLS

<u>Stations</u>	<u>Flights</u>	<u>Hours</u>	<u>Min.</u>	<u>Aircraft in commission</u>	<u>Complement at station</u>
Cape May	35	101	- 56	10 seaplanes	10 seaplanes
" "	3	9	- 57	1 dirigible	
Chatham	48	94	- 29	16 seaplanes	12 seaplanes
Coco Solo	14	30		2 "	12 "
Halifax	8	21	- 35	2 "	4 "
Hampton Roads	83	279	÷ 6	20 "	24 "
Key West	100	149	÷ 5	6 "	18 "
Miami	7	95	÷ 10	4 "	12 "
Montauk	45	90	- 27	10 "	12 "
"	3	13	- 5	1 dirigible	
North Sydney	11	20	-	4 seaplanes	4 seaplanes
Rockaway	107	309	- 50	13 seaplanes	24 "
"	7	18	- 46	1 dirigible	
"	38	376	÷ 1	4 kite balloons	
	502	1,609	- 27		

Lighter-than-air  
craft total - 51 417 49  
Seaplanes total - 451 1191 38

Coco Solo reports for week ending October 14, 1918.  
16 flights 53 hours 2 seaplanes.

NOTE - The sign ÷ indicates that the record for the week is greater, the sign - indicates that the record for the week is less than for the preceding week. Underscoring denotes best record for station.

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2. Hours of flying other than patrol obtained during the past week at Naval Air Stations, together with the number of flights and seaplanes in commission and at each station, for the week ending October 21, 1918:

Stations	Flights other than patrol	Hrs. Min.		Aircraft in com- mission	Complement at Station.
Akron	10	20	57	2 Dirigibles	
Akron	34	19	45	1 Kite Balloon	
Akron	18	33	53	21 Free Balloons	
Bay Shore	732	681	40	25 Seaplanes	48 Seaplanes
Cape May	16	5	33	10 Seaplanes	
Chatham	24	8	26	11 Seaplanes	
Coco Solo	3	2		3 Seaplanes	
Halifax	11	22	45	5 Seaplanes	
Hampton Roads	49	38	29	23 Seaplanes	
Hampton Roads	22	14	4	4 Kite Balloons	
Great Lakes	7	4		2 Seaplanes	
Key West	898	663	8	25 Seaplanes	36 Seaplanes
Key West	18	27	50	1 Dirigible	# 1 Dirigible
Miami	1254	896	35	29 Seaplanes	114 Seaplanes
Miami Marines	359	355	49	Airplanes	
Montauk	9	10	45	10 Seaplanes	
Montauk	5	19		1 Kite Balloon	
North Sydney	24	27		6 Seaplanes	
Pensacola	1048	723	30	76 Seaplanes	108 Seaplanes
Pensacola	73	44	35	1 Dirigible	
Rockaway	19	10		13 Seaplanes	
Rockaway	2	2	53	1 Dirigible	
San Diego	503	411	5	16 Seaplanes	36 Seaplanes
	<u>5138</u>	<u>4043</u>	<u>42</u>		

	Flights	Hours	Min.
Seaplanes .....	4597	3504	56
Dirigibles .....	103	96	15
Lighter-than-air craft	182	182	57
Airplanes .....	359	355	49

GRAND TOTAL FOR FLYING TIME

Patrol .....	502	1609	27
Other than patrol.....	<u>5138</u>	<u>4043</u>	<u>42</u>
	5640	5653	9

# Number at station.

Coco Solo reports for week ending Oct. 14th

6 flights 3 hours 20 minutes, with 4 seaplanes

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3. The following officers have been ordered abroad:

Jennelle, Ralph C.	Ensign,	U.S.N.R.F.
Kelsey, Robert P.	"	"
Mansford, Berkely	"	"
Pulsifer, George H.	"	"
Starr, Frederic H.	"	"
Twitchnell, Pierrepont E.	"	"
Woolsey, Talfourd J.	"	"

4. Ensign commissions have been requested for the following men:

Allen, Dolph Chadwick;	Jones, Nathaniel Erskine,
Bellman, Russell Sylvester,	Lawson, Edwin Macy,
Beauchamp, Richard Allyn,	McCullock, John Wellington
Blount, John Gray,	McKelvy, Lockhart Charles
Briggs, Mead Greacen,	MacDonald, Gordon Graeme,
Burgess, Sullivan,	Mirkil, Hazelton, Jr.
Callinan, Roy M.	Morehouse, Russell
Carr, John Edwin,	Newbern, Phiny Alan
Cobb, James Orr,	Niehaus, Robert Lewis
Coles, William Marian,	Peters, Reed Clancey,
Corcoran, Lawrence Mark	Peterson, Edwin Earnest
Cullity, Edwin Francis,	Reinhardt, C.G.
Dogovan, James Augustine	Scott, Everett, B.
Dorgan, Albert William	Shaw, Lauren Launer
Eberhardt, Earnest Carl,	Sloman, Frank Henry
Fletcher, Walter D.	Smith, Clarendon Waite,
Flynn, Charles Edward,	Smith, Everett, Jr.
Forgan, James Berwick,	Stephenson, Frank L.
Fowle, Wilson Farnsworth	Strong, William Lord, Fr.
Hassan, Enuir,	Ternhune, Howard Haven
Heffron, John M.	Tolnas, Tryge Johann,
Henderson, Ray Millard,	Van De Water, Donald Gifford
Henry, Chas. W.	Walker, Herbert William
Herron, John Cuthbert,	Wallingford, Joseph Kævil
Hovey, Leon B.	Waterman, Francis Bently,
Hundt, Lester Thomas	Weiss, Harold Turreff,
	Whiteman, Zopher Howell, Jr.

5. The French Government has announced its intention to give names of distinguished American Aviators to French ships in return for the compliment paid it by the American Government in naming American vessels after famous French Aviators. The name of Quentin Roosevelt has already been given to one French torpedo boat destroyer.

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CHATHAM - October 14, 1918.

New Plane:

Ensign Schiff, took delivery of a new HS-2 from East Greenwich, R.I., on October 11th. She took the air remarkably quickly. Her dashboard fittings are more complete than in the older planes, an extra compass for the observer being a welcome addition.

Rescue at Sea:

Thanks are due to Ensign Cook and the crew of S.C. 166 from Nantucket Section Headquarters for rescuing plane No. 1693, Ensign Shields, pilot, 50 miles east of Chatham, after 27 hours on the water. A broken camshaft housing caused a forced landing, this being the fourth case of breakage of this part within a month. The plane was nearly in a sinking condition when sighted and was a total loss.

Vent Pipe at Top of Gravity Tank:

It was thought that with a straight vent pipe on the gravity tank the rush of air caused a certain amount of gasoline to be sucked out and wasted. A gooseneck pipe was attached and the gas consumption of the plane was greatly lowered. The gooseneck is to be attached to all planes in operation.

Reduction of Weight of Equipment:

A careful examination of the equipment carried by HS-1 and HS-2 planes has been made by Ensign Hudson, and the following proposals made for a much needed reduction in weight, in order to increase their patrolling radius. At the present time three and one half hours is the maximum average safe patrolling time, flying at over 1500 r.p.m. The principal saving recommended is to reduce the crew from three to two, saving 180 lbs. Further saving in weight is advocated by taking a 15 lb. emergency tool kit instead of a complete set, omitting three motor and hull covers totalling 15 lbs., substituting for a 10 lb. tow line and 3-1/2 lb. safety belt, a sea anchor and line totalling the same. Total equipment now carried 639.5 lbs. Equipment suggested 446 lbs. saving of 193.5 lbs. resulting. A possible further reduction is suggested by fitting the bilge pump with a special "intake" hose, small and flexible enough to be capable of sucking water from the odd corners, reducing the weight from 10 to 20 lbs.

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CHATHAM (Cont.)

By using unsweetened chocolate and "pemmican" instead of canned goods, a greater concentration of nourishment might be obtained for the same weight. The gasoline supply cock leading to the lower tanks (except the cock shutting off the supply from the fan pump) are never used at this station, and their elimination would make an appreciable reduction in weight.

BAY SHORE - October 14, 1918.

NAVIGATION DEPARTMENT

The Navigation Department recently established at this station has instituted two features in connection with the training which they believe will be of immeasurable value to all HS-2 pilots trained in Navigation.

In the past it has been the custom from a standpoint of safety to send two or more planes out together with instructions to keep each other in sight. The results obtained were very unsatisfactory. The planes were obliged to follow the leader and the value of the flight for all but the first was lost. To make it necessary for pilots to fly own courses and still maintain the same margin of safety, the planes at Bay Shore are now sent out at fifteen minute intervals with instructions to keep a close watch for planes on the water. All fly the same track and should one be forced to land, a plane following would sight it. The planes with wireless equipment are sent out last and required to send a message every fifteen minutes.

Heretofore the student has been given the wind direction velocity. He calculated the compass courses and time before starting out and submitted same to Navigation office for correction. The student is now required to determine the wind by flying a range consisting of three conspicuous points in line, a known distance apart. He then works out his first course by the time the starting point is reached and figures the other courses after checking the wind by taking bearings of objects along the coast or in patrol Number Three, by taking a bearing on light ship ten miles off the coast.

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CAPE MAY - October 16, 1918.

To overcome the many difficulties experienced in operating and maintaining the Mark IV bomb gears, the following modifications have given most satisfactory results:

An L shaped lever is bolted to a bracket on the side of the gun mount cowl. One arm of the lever extends forward horizontally, and is used as a handle to be pulled upward to release the bomb. To prevent accidental releasing, it is secured by a cotter-pin which passes through it and a projecting arm on the bracket. The other arm of the lever extends down about six inches below the cowl, and to it is attached a 3/16" woven wire. This wire is let into a 5/16" copper tube attached on the outside of the boat, and running from below the cowl to a point just under and close up against the wing section. At this point the wire is lead through a sheave and then into another section of tubing, which runs to a point six inches forward of the launching gear release hooks, and to within four inches of the gears. The wire is here attached to an L shaped lever. This lever operates on a bolt attached to the side of the gears, and allows the lever to move freely above the gears. The arm to which the wire is attached is parallel to the gears, the other arm extends to a point midway between the gears, and to it are fastened two wires of equal length. These wires are led directly to the launching gear release hooks, the position of these hooks having been reversed so that they operate by a forward pull.

This mechanism was devised by a gunner's mate attached to this Station. Photographs showing the gear are being taken, and will be sent to other Air Stations upon request.

MONTAUK - October 10, 1918

On October 2nd this Station was visited by Captain Yates Sterling, U.S.N., Chief of Staff, Third Naval District, and Lieutenant (j.g.) C. W. Bell, U.S.N.R.F., Aviation Aide, Third Naval District.

Recently a forced landing in an R-9 within easy view of the Coast Guard Station, resulted in the sinking of the plane and timely rescue by a passing boat of the crew. The surf was considered an entirely possible one for the Coast Guard to navigate, and the matter of cooperation with the Coast Guard Stations will be made a matter for close consideration.

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MONTAUK - October 10, 1918.

Last week an HS-2L boat, piloted by Ensign J. M. Corbett, U.S.N.R.F., and Ensign Richard E. LaVie, U.S.N.R.F., assistant pilot, and V. C. Smith, MM-2c (A), U.S.N., mechanic, was lost at sea and landed approximately 100 miles from this station. The boat and crew were picked up by a cargo vessel about 48 hours later. The boat rode the moderate sea well and sustained only minor injuries until, while being again hoisted overboard, it was dropped a short distance and placed in condition which made its return to the L.W.F. Company for repairs necessary. The matter of compasses is being given special attention at this station.

Recently a message from Dirigible A-247, equipped with a Cutting & Washington radio set, was picked up at Hampton Roads, a distance of nearly 275 miles. This is believed to be a distance record in the Navy for a transmitter of this type.

This station has been informed that the complement will be changed to 12 HS-2L's. This is very encouraging from an operating point of view. The actual operating will be provided on a temporary basis from Great Pond. Considerable work is being done in organization. A chart is being drawn up to show proper segregation of duties, and, in considering the purpose of the station, that of efficient patrol, all trucks and operating facilities are being placed under the immediate supervision of the Flight Officer of the Day, who will practically run the station during flying hours.

October 16, 1918:

Trouble is still being experienced with broken connecting rods in Liberty Engines. The latest break was on a new engine which had flown less than thirty minutes. In each instance the breaks have occurred in the after half of the engine. No plausible explanation of the cause of this trouble has been advanced.

On October 9th an HS-2L made a forced landing due to a broken connecting rod. Upon investigation it was found that all of the connecting rod bearings were burned. The oil had been drained and the crank case had been washed out with coal oil just previous

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to this flight and it is thought that the burning of the bearings was due to lack of oil. In the future care will be taken to insure proper lubrication of the bearings by priming the oil pump and the main oil lead with oil after treating the engine with coal oil.

Recently a flight in an HS-2L was made carrying three passengers besides pilot. The pilot reported that the machine controlled well.

A Cleveland tractor which was designed for beach use in hauling up seaplanes has been used with success for hauling down kite balloons. This type of tractor is recommended for similar use at stations where winches are not available.

The Coast Guard Stations in this area have their numbers painted in large letters and placed near the look-out tower? This practice has proved very beneficial to the pilots in locating their positions.

As a sample of endurance the following information on A-188, an R-6 is given: This plane has been in use for approximately eighteen months. Pilots report that they have flown this machine for periods of thirty minutes without touching the controls.

KEY WEST - October 8, 1918.

Twice during the past week seaplanes from this station have been employed in a search for survivors of sea disasters. On October 1st, while the seas were running high, a launch having on board a liberty party returning to one of the naval vessels in the harbor, was swamped. On October 4th a report was received that a large freighter had been rammed and sunk the previous night by a tanker. Seaplanes aided by dirigibles A-236 searched the area of these accidents unsuccessfully for survivors - the sinkings occurred at night, too much time elapsed before there was sufficient daylight to enable a search to be instituted.

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KEY WEST - October 31, 1918.

During the week experiments were conducted on Mark IV bombs to determine the explosive effect of TNT in various states of decomposition. In one test the booster charge which had broken down to a liquid state, was removed and replaced by new granulated TNT. Upon being dropped this bomb failed to explode. From similar tests it would appear that in cases of deterioration to a liquid state of the TNT on the secondary booster charge in the body of the bomb, the deterioration also spreads to the main charge. It is also concluded that TNT in a liquid state will not explode under these conditions. Another test was conducted with a second bomb, the booster charge of which was but partly decomposed to a state resembling brown sugar. After the booster charge had been packed tightly with fresh granulated TNT, the bomb was dropped and exploded successfully. From like tests it appears that when the TNT of the booster charge is in a partial state of decomposition, the main body of the TNT will not be affected, provided the air space above the booster charge has been eliminated by the addition of fresh TNT. In all these tests tetryl bomb heads were used. The dash pot was released so that the arming was not delayed. The heads with the primer cylinder omitted, were set off, to see if the heads armed properly. It is difficult to determine whether the breaking down of the TNT can be attributed to moisture or excessive heat, for bombs which have never been out of the arsenal have been found in the same liquified state, resembling shellac, as those which had been carried on planes. Three new bombs were tried out all of which functioned successfully.

During the week nine OXX-N9 machines have been flown to Miami - a distance of 155 miles - without trouble of any kind. Refueling was done from an S.P. boat and an HS-2L type seaplane.

October 15, 1918.

A squadron of three Hispano-Suiza N-9 seaplanes flew to Havana on Thursday, October 10th, on the occasion of Cuba's Independence Day.

During the week experiments were conducted with the non-recoil Davis Gun mounted on an HS-2L boat. Six shots were fired at an old steel wreck in the harbor which served as a target. Of these four were direct hits by inexperienced officers, showing the ease with which this gun may be operated accurately. The Davis gun operated perfectly but due to faulty ammunition it did not function properly as a tracer. No shock was felt in the boat following the firing of the gun and there was no danger of the buckshot which takes up the recoil, damaging the plane. One of the shots upon striking a metal girder exploded, damaging the target.

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KEY WEST, FLORIDA

The new flight training syllabus for students is in operation and gives promise of increasing the ability of the students turned out.

Due to winds of high velocity and heavy rains which continued through out the week, flying operations of both patrols and school have been necessarily curtailed.

MIAMI - October 14 1918.

A serious epidemic of Spanish Influenza has cut down operations of this station considerably. A large percentage of officers and enlisted men have the disease.

The teams of carrier pigeons being tained for use in the Patrol Division at this Station have made four flights from Bemini Island, approximately fifty-eight miles distant from this Station.

The best time for the flight of a single bird was one hour and twenty-one minutes. About twenty-five minutes of the time during the flight from Bemini to this Station, the bird is out of sight of land.

Three of the birds refused to leave the Island, alighting there. They were caught by one of the natives and returned to the man in charge of the team on the next trip .

In view of the fact that this entire flight is over water, with no land marks to follow, a record of four flights for entire team of twenty birds without the loss of a single bird is considered exceptional.

PENSACOLA, FLA. Oct.12 1918.

The H-12's have been put in commission again, Captain F.S.McGill of the Royal Air Force, who has been acting in the H-12 Squadron during the past week in an advisory capacity, reports these boats to be in a fair condition, and believes now that having been overhauled they will give service for many hours.

Actual practice has proven that HS-1 and HS-2 sea-planes carry an excessive amount of "right rudder" while in flight with the power on. Experience in this Squadron has lead to the definite conclusion that the trouble could be completely eliminated by moving the forward end of the vertical stabilizer 3/8" to the left. This we have done , and the change is effected by taking off a scant

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PEVERACOLA FLA.

5/16" on the left side of the diagonal strut which goes through both the stabilizer and the hull to the keel. To compensate for this a similar piece of spruce is secured to the right side of the same strut. The "U" bolt which secures the fitting at the forward edge of the stabilizer is shifted to the left a sufficient distance to keep the base of the stabilizer in a perfect straight line. The above mentioned change has been made on HS-1 seaplanes numbers 1611 and 1738, which have been in constant use for the past five weeks, the result being that the pressure on the right rudder has been almost entirely relieved. No difference in the flying of the planes is noticed in a glide, and in every position; the rudder control responds very easily. More specific data will be furnished later.

In view of the fact that Squadron V has been more or less crippled with hull trouble on HS-1 seaplanes, as they are not built to stand the treatment accorded them as training seaplanes, it has been necessary for us to reinforce the bottoms in a manner which has proved entirely satisfactory. Practically all floors from Station No.26 forward of the step to Station No.6, have been replaced with 1/2" straight grained ash, using four 5/8" holes on each side of the keel as lightening holes instead of the large ones that were in the original floors. For bottom planking we have used mahogany or baywood as the first layer of lamination, tapered oak being 3/4" thick at the step and tapered to 3/16" on the sides is being used between the laminations. Seaplane No.1619, HS-1, was repaired in this manner, and after being launched has flown as a training machine for 154:30, during which time approximately 770 landings have been made by instructors and students, and at the present time the hull is in as good condition as when it was taken out of the shop.

GUNNERY SCHOOL. New style safety belts with side elastic bands and four straps extending to the fuselage have been tried out in gunnery planes. These are reported to give much more freedom of movement and are more satisfactory than the old ones.

NIGHT FLYING. Six men were qualified during the past week. File.

DIRIGIBLE SECTION. Goodyear envelope E-150 has been received and has been installed on the Goodyear car. Trial flights were made on Saturday, Oct.12th, and everything except the ballonnet valves worked very satisfactorily. 61

PENSACOLA FLA

They seem to stick and it was necessary to use the closing device which causes the extra set of control wires to be used. The only valve used thus far successfully at this Station has been the gammeter type as used by the Goodrich Company, and it is suggested that this type of valve be used altogether until further improvements are made.

ENGINES. During the two weeks period from the 1st to the 15th nineteen Liberty engines were removed at this Station for overhaul. Of these sixteen have completed the prescribed 75 hours. Of the remaining three, two were removed from crashes. This reflects great credit on the part of the Squadrons as to the general care and operation of Liberty engines.

Considerable trouble is being experienced with Liberty generators due to the breakage of armature wires at the point where they bend to enter the computator. Redesigning the wiring seems to be the only remedy for this difficulty.

It has been found at this station that great care must be exercised in replacing Liberty oil pumps which have been removed for cleaning. Unless the drive shaft is inserted properly in the pump gear, the bosses on the upper end are liable to be broken off when the pump is fixed on. This allows the drive shaft to rise and become disengaged from the lower pump gears.

The Spanish Influenza situation is still quite serious, although the spreading of the disease in the Yard seems to be in hand. Remarkably few student officers have been taken ill - the officers and enlisted personnel being affected the most. About twenty-five officers are sick at present, and Dr. Decker is recommending leave of absence for these men, as quickly as they recover before resuming their duties. Unfortunately our school commanders, and several Squadron Commanders are included in the number. The fact that the Medical staff has kept the mortality down to a very low figure in the comparison with other localities seems worthy of commendation.

NORTH SYDNEY N.S. Oct .12 1918.

Four machines flying a total of nineteen hours and ten minutes escorted a large convoy that left here this week. The last two machines out escorted the convoy to a point seventy-five miles outside the harbor.

Successful radio tests have been carried out, messages have been sent to the shore station from two planes eighty-three nautical miles distant by chart.

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COCO SOLO - September 28, 1918.

To date, Motor No. 4017, installed in R-9 seaplane No. A-974, on July 27, 1918, has a total time of 118 hours without overhaul, and apparently is in good working order. This motor has run for 200 hours with only a top overhaul. (Bearings have not been scraped).

FOREIGN NEWS NOTES - Aircraft Tech. Note No. 82 - Bureau of Construction and Repair (From a British Source).

Damage to Fuselage Fabric.

A case has recently occurred in which the fuselage fabric on a comparatively new machine proved defective after a very short period of use.

Upon investigation it was found that the fabric contained a large amount of sulphuric acid and it is considered probable that this has been spilt over the machine when the lighting system was being installed.

Great care should be taken to ensure that no acid is spilt over machines when the accumulators are being moved in or out of the fuselage for charging or examination purposes, and it is also very important to see that suitable rubber stoppers are fitted to prevent acid jolting out of the accumulators when the machine is in service.

Should sulphuric acid be spilt over the fabric the matter should be immediately reported in order that the damage can be remedied at once, but the effects of acid spilt onto woodwork or control wires could probably be neutralized by an immediate application of a solution of common washing soda if it can be procured and afterwards cleaned off, then an application of oil given to the affected parts. This, however, is no guarantee that permanent damage will not have been caused, and it cannot be too strongly emphasized that the greatest care should always be taken to avoid acid being spilt on any part of the machine.

Note No. 76. Flying Boat Hulls. (From British Source).

Air Stations should note that a certain amount of leakage is to be expected in all cases when flying boat hulls are first used, until the planking has had time to soak and expand.

Whenever a new machine is received at a Station and it is necessary, for any reason, for it to be moored out a watch should be set on board until such time as it has been established that the hull has taken up sufficiently to reduce the leakage within safe limits. Should it be found that the leakage is excessive and likely to result

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in the machine sinking, it should, if possible, be beached in shallow water and left there for two or three days to allow the planking to swell. The spot selected for this purpose must be carefully chosen on account of its sheltered nature and sandy beach, otherwise the machine may very easily be damaged. At the end of the period, the hull should be pumped out dry, and the machine refloated, when, provided there is no defective workmanship, the hull should be reasonably watertight.

Should it be found on refloating that there is still excessive leakage, the machine should be hauled up on the trolley, leaving some water in the bilge, and a careful examination be made of the hull to ascertain the exact points at which leakage is still taking place. Should the defects then discovered be of such a nature as to be beyond the resources of the Station, a full report is immediately to be made to the Controller General of Equipment.

/s/ J. H. TOWERS

By direction.

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