

CONFIDENTIAL ROUTE SHEET
Navy Yard, Mare Island, California

C-53718

Serial C-53718

Date 26 July 1945

7/24/45

From: Sub Ad
LtrNo: FF12-10/(ADMIN)/S74/S78/770 Serial 0710

Subj: Gun and Ammunition Pressure-Proof Stowages - Location of

Form C-51b (Rev. 9-15-43)

9256-M.I.N.Y. 9-7-44-20M

Code	Initials		Remarks
	By	Date	
300	S	7/27	
301A	J	7/31	
313	GW	7/28	We are doing.
306	LI	8/1	RMG 31 JUL 45 14/15 7/31
090	Re: delay from Intel		
220			

CONFIDENTIAL

File No. S78/12 216-A

Keyed—Code — Prepare reply

at later than

DO NOT DETACH FROM
CORRESPONDENCE

Copies to: (All copies must be authorized and recorded by legal office confidential files).

ws

FF12-10/(ADMIN)/
S74/S78/770

COMMANDER SUBMARINE FORCE
PACIFIC FLEET. ADMINISTRATION
MARE ISLAND, CALIFORNIA

Serial: 0710

C O N F I D E N T I A L

JUL 24 1945.

From: Commander Submarine Force Pacific Fleet Administration,
Mare Island, California.

To : Commander Submarine Force Pacific Fleet Administration.

Subject: Gun and Ammunition Pressure-Proof Stowages - Location of.

Reference: (a) ComSubPacAd Conf. Ltr. S71/S73/S74/S78 Serial 01486 of
17 June 1945.
(b) ComSubPacAd Conf. Ltr. S73/Serial 01525 of 20 June 1945
Encl.(A) Subase Pearl Harbor Dwg. #XAA-190.

1. Paragraph 4 (d) of reference (a) authorizes two 40 MM
barrel stowages.

2. Enclosure (A) of reference (b) shows only one 40 MM
barrel stowage.

3. In the absence of contrary instructions, it is proposed
to furnish overhaul submarines with two 40 MM barrel stowages in accord-
ance with provisions of reference (a).

4. By copy of this letter the Commandant Navy Yard Mare Island,
the Commanding Officer U.S. Naval Drydocks Hunters Point and the Officer-in-
Charge Submarines and Submarine Planning Bethlehem Steel are requested to pro-
ceed in accordance with the foregoing in connection with installation of amm-
unition stowages in overhaul submarines.

Copy to:

W. D. WILKIN.

BuShips (Code 5815)
Comdt NYd Mare Island
CO USNDD Hunters Point
CINC S/M & S/M Plann Beth Steel
AIM San Francisco
SubAdRep Hunters Point
ComSubRon 10
CO Subase Pearl Harbor
MOHP

50000 1252

C-53575

Serial C-53575-----

Ans (A) - (C) New

FF12-10/(ADMIN)/
573/757

COMMANDER SUBMARINE FORCE
PACIFIC FLEET. ADMINISTRATION
MARE ISLAND, CALIFORNIA

pan

Serial: 0702

JUL 23 1945

CONFIDENTIAL

From: Commander Submarine Force Pacific Fleet Administration,
Mare Island California.

To : Commander Submarine Force Pacific Fleet Administration,
Representative at Hunter's Point and Bethlehem Steel.

Subject: Submarines SS212-525 - Gun Foundations, Topside Gun Stowage
Lockers, Ammunition Stowages, Ammunition Passing Scuttles -
Provision of.

References: (a) ComSubPacAd ltr 571/573/574/578 serial 01486 of
17 June 1945.
(b) BuShips ltr C-SS/574-1(5815) over C-SS/578-3 of
23 June 1945.
(c) ComSubPacAd ltr 573 serial 01563 of 23 June 1945.
(d) ComSubPacAd 092202/July.
(e) BuOrd ltr SS/574(Prld) of 21 June 1945.

Enclosures: (A) Copy of reference (a).
(B) Copy of reference (b).
(C) Copy of reference (e), less enclosures thereto.

1. References (a) and (b), copies forwarded herewith, Enclosures
(A), and (B), cover the subject matter in detail.

2. Regarding gun installations and associated equipment in overhaul
submarines, the following policy, based on the provisions of references (a) and
(b), will govern:

(a). 5"/25 CALIBER GUNS.

The present stock of these guns at Navy Yard Mare Island is extremely
limited, and delivery of additional quantities of these guns is
uncertain.

No definite information regarding shipping schedules is available.

Paragraph 5 of reference (c) states that all two-gun installations
will be made at Pearl Harbor with the exception that Commander Submarine
Force Pacific Fleet Administration Mare Island has been requested to
install a second gun for transportation on each submarine returning
from overhaul when stability conditions permit and guns are available.

FF12-10/(ADMIN)/
573/757

COMMANDER SUBMARINE FORCE
PACIFIC FLEET. ADMINISTRATION
MARE ISLAND, CALIFORNIA

1b

Serial:

JUL 23 1945

CONFIDENTIAL

Subject: Submarines SS212-525 - Gun, Gun Foundations, Topside Gun Stowage Lockers, Ammunition Stowages, Ammunition Passing Scuttles - Provision of.

Therefore, although 2 foundations for 5"/25 caliber guns will be installed in each overhaul submarine, only one 5"/25 caliber gun shall be regularly installed in each overhaul submarine on the forward or after foundation as specified by the commanding officer in each case.

Whenever the stock of 5"/25 caliber assemblies at Navy Yard Mare Island permits the assignment of an additional 5" gun for transportation as directed by reference (b), the second gun will be specifically assigned by this command to an overhaul submarine designated by name in each case.

In this connection, a second gun will not be assigned to any ship in the following classes, which are excepted because of stability considerations: SS212-227, 240-252 and 265-274.

Unless specifically directed by the Commander Submarine Force Pacific Fleet Administration in certain cases, compensation in the form of weight removal to provide for the installation of a second 5"/25 deck gun shall not be accomplished, nor shall the forward ammunition passing scuttle referred to in paragraph 2 (i) of reference (b) be installed in any submarine in the excepted classes (referred to in the preceding sentence) by overhaul activities in the San Francisco Bay Area.

(b) 40 MM GUNS.

No specific information regarding delivery schedules is available.

However, on the basis of past deliveries, it is assumed that stock of these guns, depleted by installations in overhaul submarines, will be replenished by future deliveries in quantities sufficient to permit the installation of 40 MM guns in overhaul submarines in accordance with the following.

In each overhaul submarine, two foundations for 40 MM guns are to be installed, one on the cigarette deck forward and one on the cigarette deck aft.

FF12-10/(ADMIN)/
S73/757

COMMANDER SUBMARINE FORCE
PACIFIC FLEET. ADMINISTRATION
MARE ISLAND, CALIFORNIA

pan

Serial:

JUL 23 1945

CONFIDENTIAL

Subject: Submarines SS212-525 - Gun Foundations, Topside Gun Stowage Lockers, Ammunition Stowages, Ammunition Passing Scuttles - Provision of.

During overhaul availabilities, all of the subject submarines are to receive one 40 MM gun which shall be installed on the forward or after foundations as specified by the commanding officer in each case.

Overhaul submarines shall be provided with a second 40 MM gun, installed on the second cigarette deck foundation, only when installation of the second 40MM gun is specifically requested by the commanding officer in individual cases and provided further that a sufficient supply of 40 MM guns is available. This is in accordance with reference (d).

(c) 20 MM TWIN ASSEMBLIES.

No specific information regarding future deliveries of 20 MM twin assemblies is available, but there is an ample supply of these assemblies on hand at Navy Yard Mare Island at the present time.

The present stock is sufficient to cover the requirements of overhaul submarines for some time to come.

In cases where only one 5"/25 caliber gun is installed, a twin 20 MM mount shall be installed on the second main deck foundation.

When the 20 MM twin mount is installed on the main deck foundation as above, commanding officers shall be informed that the 20 MM guns for the main deck mount normally shall be carried below and mounted only when the situation requires.

When only one 40 MM gun is installed on the cigarette deck of any overhaul submarine, a twin 20 MM mount shall be installed on the second cigarette deck 40 MM foundation. This is to be in addition to the twin 20 MM referred to in the second sentence preceding.

The 20 MM guns of the twin 20 MM mounts installed on the cigarette deck foundations may be carried in the mounted position at all times.

FF12-10/(ADMIN)/
S73/757

COMMANDER SUBMARINE FORCE
PACIFIC FLEET, ADMINISTRATION
MARE ISLAND, CALIFORNIA

pan

Serial: 0702

CONFIDENTIAL

JUL 23 1945

Subject: Submarines SS212-525 - Gun Foundations, Topside Gun Stowage Lockers, Ammunition Stowages, Ammunition Passing Scuttles - Provision of.

(d) .50 CALIBER MACHINE GUNS.

References (a) and (b) state that the allowance of .50 caliber machine guns for the subject submarines is four .50 caliber machine guns per ship.

Reference (e) states that these four .50 caliber machine guns shall be Cal .50 Browning M2 Aircraft Basic with Retracting Slide Group Assemblies, complete with Flash Eliminators Mark 1 Mod 0 and Gun Mount Adapters Type E-11.

The above ordnance material may be obtained by overhaul submarines from the Naval Supply Depot, Oakland.

Being Mfr'd by BuShips for ships at yard
Navy Yard Mare Island is manufacturing yoke assemblies referred to in paragraph 2 of reference (e) and it is understood that other overhaul activities can obtain the yoke assemblies from Navy Yard Mare Island upon request. Each of the subject ships should be provided, during overhaul availability, with four of the yoke assemblies referred to.

3. By copy of this letter the Commandant Navy Yard Mare Island, the Commanding Officer, U.S. Naval Drydocks Hunters Point, and the Officer-in-Charge Submarines and Submarine Planning Bethlehem Steel are requested to consider the foregoing in connection with gun armament installations in overhaul submarines.

W. D. WILKIN.

Copy to:
ComSubPacAd
BuShips (Code 5815)
BuOrd
Comdt NYd Mare Island
CO USNDD Hunters Point
OINC S/M & S/M Plann Beth Steel
AIM SanFran
ComSubRon 10
CO Subase Pearl Harbor
MOHP

PHOTOSTATED—
COPY RETAINED—

PHOTOSTATED—
COPY RETAINED—

C-SS/S74-1(5815)
C-SS/S78-3

NAVY DEPARTMENT
BUREAU OF SHIPS
WASHINGTON 25, D.C.

CONFIDENTIAL

23 June 1945

To: Commandant, Navy Yard, Portsmouth, N. H.
Commandant, Navy Yard, Mare Island, Calif.
Commandant, Navy Yard, Boston, Mass.
Supervisor of Shipbuilding, USN, Groton, Conn.
Supervisor of Shipbuilding, USN, Manitowoc, Wis.
Supervisor of Shipbuilding, USN, Philadelphia, Pa.
Commander Submarine Force, Pacific Fleet.
Commander Submarines, Atlantic Fleet.
Commander Submarine Force, Pacific Fleet,
Administration, Mare Island, Calif.

Subj: Submarines, SS212-525 - Gun Foundations, Topside Gun
Stowage Lockers, Ammunition Stowage, Ammunition Passing
Scuttles - Provision of.

Ref: (a) CNO conf. ltr. Op-23C-2-VRJ, 6/12/45, Serial 0262523
over (SC)S29-1/SS of 15 June 1945 (Not to all
addressees).
(b) BUORD restr. ltr. SS/S74 over (Prld) of 21 June 1945.

1. Reference (a) authorized the following gun armament for the subject vessels and, in addition, specified the ammunition and topside pressure proof lockers which should be carried to serve these guns:

(a) Two 5"/25 caliber guns on the main deck, one forward and one aft of the conning tower. The second gun will not be installed on new construction submarines at the present time. The second 5"/25 caliber gun is not authorized for SS212-227, 240-252 and 265-274 unless compensation in the form of weight removal is made to maintain a metacentric height of not less than 1.25 feet.

(b) Two, 40 mm guns on bridge deck level, one forward and one aft of the conning tower.

(c) Four, .50 caliber machine guns. In accordance with reference (b) the Bureau is authorizing in separate correspondence the installation of socket stanchions suitable for .50 caliber Browning M2 aircraft basic machine guns in place of the .50 caliber gun socket stanchions now being provided.

C-SS/S74-1(%'L%)

C-SS/S78-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island, Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

2. In compliance with reference (a) it is requested that the gun foundations, ready service lockers and ammunition passing scuttles listed below be provided on the subject submarines. These items, part of which are already being provided, constitute the total topside armament equipment to be installed.

(a) Provide two foundations suitable for 5"/25 caliber guns, one forward and one aft of the conning tower.

(b) Provide two foundations at bridge deck level suitable for 40 mm guns, one forward and one aft of the conning tower.

(c) Provide 16 stanchions suitable for .50 caliber machine gun supports, four on each side of the bridge deck and four on each side of the main deck.

(d) Provide two lockers for 5"/25 caliber ammunition each containing 10 rounds, one forward and one aft of the conning tower.

(e) Provide two pressure proof lockers for 40 mm ammunition each containing at least 100 rounds, one forward and one aft of the conning tower. These lockers do not have to be accessible from the bridge deck level.

(f) Provide two pressure proof lockers for .50 caliber ammunition each containing 300 rounds. These lockers must be accessible from bridge deck level.

(g) Provide pressure proof stowage for two 40 mm gun barrels. This stowage does not have to be accessible from bridge deck level.

(h) Provide pressure proof stowage for two .50 caliber machine guns. This stowage must be accessible from bridge deck level.

(i) In the case of SS212-284 and 362-364 provide two passing scuttles suitable for 5"/25 caliber ammunition, one forward and one aft of the conning tower. The forward ammunition passing scuttle should not be installed on SS 12-227, 240-252 and 265-274 until the necessary weight has been removed to permit the installation of a second 5"/25 caliber gun as required by paragraph 1(a) above. Plans are presently being developed for a forward passing scuttle and will be forwarded when available.

C-SS/S74-1(5815)

C-SS/S73-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island and Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

(j) In the case of SS285-525 less SS362-364 provide one 5"/25 caliber ammunition passing scuttle aft of the conning tower. A forward scuttle is not required for these vessels since a gun access trunk is already installed.

3. In case a design study indicates the necessity for a modification of the topside ready service ammunition stowage as outlined in paragraph 2, a reduction in the capacity specified will be acceptable.

4. The total ammunition allowance, magazine and ready service established by reference (a) for the guns listed in paragraph 1 above is as follows:

- (a) 5"/25 caliber - 100 rounds (50 rounds per gun)
- (b) 40 mm - 800 rounds (400 rounds per gun)
- (c) .50 caliber - 4000 rounds (1000 rounds per gun)

5. The gun foundations, ready service lockers and magazine ammunition stowage for .30 caliber guns and 20 mm guns should be eliminated when the equipment and ammunition allowance in accordance with paragraphs 2 and 4 above is provided. The present provisions for small arms and small arms ammunition (rifle, pistol and shotgun) are not affected by this change in armament.

6. It is understood that the Bureau of Ordnance expects to ship two, 40 mm guns to the building yards for the following new construction submarines:

Navy Yard, Portsmouth	-	SS484-494
Navy Yard, Boston	-	SS296 and SS522-525
SUPSHIP, Groton	-	SS344-352 and SS435-437
SUPSHIP, Philadelphia	-	SS303 and SS425-428
SUPSHIP, Manitowoc	-	SS378

In case it is impossible to install two, 40 mm ready service lockers, 100 rounds each, on any of the above vessels it will be satisfactory as an interim installation to utilize the forward 5"/25 caliber ammunition ready service locker, the forward 20 mm ammunition ready service locker and one of the after 20 mm ammunition ready service

C-SS/S74-1(5815)
C-SS/S73-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island and Boston:
SUPSHIP, Groton, Manitowoc and Philadelphia
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

lockers for 40 mm ammunition stowage. The second after 20 mm ammunition ready service locker authorized for installation in connection with the twin 20 mm mount may be used as a .50 caliber ammunition stowage as an interim installation.

7. In the case of new construction submarines it is requested the the alterations and installations outlined above be accomplished where possible without delaying the delivery of any vessel in the building program. A change under the contracts to cover the increased cost due to the above work will be issued in separate correspondence. In the case of those submarines in which the work is not accomplished prior to delivery, this item should be included as Government responsibility in the list of already authorized work submitted to the Board of Inspection and Survey at the time of acceptance trials. It is requested that the Navy Yard, Portsmouth submit weight and moment changes which result from the accomplishment of this revision to the armament and stowage arrangement. The Bureau should be advised as to the vessels which will receive the alterations requested herein prior to delivery.

8. In the case of submarines in service these alterations and installations should be accomplished when availability of material permits and where no interference with scheduled operations will result. A shipalt will be issued to cover this work.

9. Plans required for the accomplishment of the alterations requested herein should be prepared by Navy Yard, Portsmouth and the Supervisor of Shipbuilding, Groton for new construction submarines. In the case of vessels in service, the necessary plans should be prepared locally by the activity accomplishing the alterations. It is requested, however, that Navy Yard, Portsmouth furnish copies of all plans prepared in connection with these alterations to the Force Commanders and to the information addressees of this letter for information and guidance. All plans developed or altered in accomplishing the subject alterations should reference this letter as the authorizing correspondence.

10. Weight compensation required in the accomplishment of the alterations and installations outlined above should be accomplished by the removal of permanently installed lead ballast except in the case of the vessels noted in paragraph 1(a). The Bureau should be advised as to the amount and location of any lead ballast removed from each submarine in service.

C-SS/S74-1(5815)
C-SS/S73-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island and Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

11. Rearrangement of radio antennas will be made the subject
of separate correspondence

CC:
CNO (Op-23C)
COMSUBSPACADCOM
COMDT NYPEARL
CO USN DD Hunters Point, San Fran.
ASTINDMAN, Ferry Bldg., San Fran
COMSUBBASE, New London
COMSUBBASE, Pearl
BUORD
INSURV (2)
INSURVPAC (2)

/s/ H. C. SEXTON,
By direction of
Chief of Bureau.

SUBMARINE FORCE PACIFIC FLEET
ADMINISTRATION

FF12-10(A)/S71/S73/S74/S78

JK

Serial: 01486

Care of Fleet Post Office,
San Francisco, California,
17 June 1945

CONFIDENTIAL

From: The Commander Submarine Force, Pacific Fleet,
Administration.

To : Submarine Force, Pacific Fleet.

Subject: Submarine Gun Armament.

Reference: (a) Cominch Confidential Despatch 271120 May
1945 to Cincpac Pearl.
(b) ComSubPacAd Conf Ltr FF12-10(A)/S71/S73/S74
S78 Serial 0675 of 31 March 1945.

1. Reference (a) requested that the following armament plan
be authorized for fleet submarines subsequent to SS212:

- 2 - 5"/25 caliber guns on main deck, one forward one aft.
- 2 - 40MM guns on cigarette deck, one forward one aft.
- 4 - .50 caliber machine guns.

Reference (a) also requested that a 20MM twin mount be supplied to the
Submarine Force for use as a substitute for the 40MM where the submarine's
mission dictates such a change. The flexibility, rapid fire, and reliability
of the 20MM make it superior to the 40MM for close-in defense.

2. Reference (b) approved the submarine gun armament requested
by reference (a) with the exception that not more than 270 guns would be
procured. In the following classes of submarines, stability becomes a
critical consideration and two 5"/25 caliber guns must not be mounted on
them unless compensation is made to maintain a metacentric height of 1.25
feet: SS212-227, SS240-252, and SS265-274.

3. Ammunition allowances are as follows:

- (a) 5"/25 caliber - - - - - 100 rounds per gun, subject to
stowage space.
- (b) 40MM - - - - - 400 rounds per gun.
- (c) 20MM - - - - - 1,080 rounds per gun.
- (d) .50 caliber - - - - - 1,000 rounds per gun.

4. The following pressure proof stowages topside are authorized:

- (a) Two for 5" ammunition each containing 10 rounds, one forward
one aft.
- (b) Two for 40MM ammunition each containing at least 100 rounds,
one forward one aft.

COMMANDER SUBMARINE FORCE
PACIFIC FLEET ADMINISTRATION

JK

FF12-10/(A)/S71/S73/S74/S78

Serial: 01486

Care of Fleet Post Office
San Francisco, California
17 June 1945

CONFIDENTIAL

Subject: Submarine Gun Armament.

- (c) Two for .50 caliber ammunition each containing 300 rounds, accessible from bridge.
- (d) Stowage for two 40MM barrels.
- (e) Stowage for two .50 caliber machine guns, accessible from bridge.

5. Sixteen sockets for .50 caliber machine guns are authorized, four on each side of the bridge and four on each side of the main deck.

6. The installation of a 20MM twin mount on the main deck is authorized for submarines mounting only one 5"/25 caliber gun. 20MM guns for this main deck mount will normally be carried below decks and will be mounted only when the situation requires. No additional pressure proof stowages are authorized for submarines carrying 20MM guns. Some of the stowages authorized by paragraph 4 can be converted to carry 20mm ammunition.

MERRILL COMSTOCK.

DISTRIBUTION:

(51-45)

List I-E Case 3.

Special:

Comsubs7thFlt

Comsubslant

W. S. LANGLEY,
Asst. Flage Secretary.

ENCLOSURE "A"

S3/S74
(Prld)

NAVY DEPARTMENT
BUREAU OF ORDNANCE
WASHINGTON 25, D.C.

R E S T R I C T E D

21 JUN 1945

A I R M A I L

From: The Chief of the Bureau of Ordnance.
To : The Chief of the Bureau of Ships.
Commanding Officer
Naval Submarine Base, New London, Conn.

Subject: Cal. 50 Machine Gun Assemblies for Submarines.

Reference: (a) ComSubPac restr. ltr FF12-10(A)/S74 Serial 1515
to BuOrd dated 19 May 1945.

Enclosure: (A) Copy of reference (a)
(B) One copy SubBase Pearl Drawing No. XAA-84-
.50 Caliber Gun Yoke.
(C) One copy SubBase Pearl Drawing No. XAA-86-
.50 Caliber Gun Mount and Socket.

1. Reference (a) states that the two Cal. 50 Browning M2 heavy barrel, flexible machine guns complete with two mounts Mk. 26 Mod. 1 now being provided for new construction submarines are unsatisfactory and are being replaced at Pearl Harbor with two Cal. 50 M2 Aircraft basic machine guns complete with adapter Gun Mounts E-11 and yokes designed by the Submarine Base Pearl Harbor for use with the Cal. 50 gun mount socket stanchions installed on all Pacific Fleet submarines. Enclosure (B) and (C) are copies of the drawings forwarded by reference (a) of the Pearl Harbor design yoke and the socket stanchion respectively. Reference (a) requests that all new construction submarines be provided with Cal. 50 Aircraft basic machine guns complete with adapter gun mounts E-11 and a yoke similar to that shown by Enclosure (B).

2. The Bureau of Ships has indicated that it will request new construction submarine building yards to provide socket stanchions of the type indicated by Enclosure (C) for all vessels completing after 1 August 1945. Accordingly, the present Bureau of Ordnance allowance list for subject equipment is being revised to authorize the issuance by the Naval Supply Depots, Norfolk and Oaklant upon request by each new construction yard's outfit supply activity (and by the Commandant Ninth Naval District for Manitowoc submarines) of the following equipment (except for Carriages Mk. 23 Mod. 0) in the quantities authorized for submarines (the authorized Cal. 50 armament has just been increased to four assemblies per vessel by the Chief of Naval Operations):

Cal. 50 Browning Machine Gun M2, Aircraft Basic with
retracting slide group assembly.
Flash Eliminator Mk. 1 Mod. 0

Cal. 50 Mount Mk. 32 Mod. 0 consisting of:
Gun Mount adapter Type E-11
Cal. 50 Carriage Mk. 23 Mod 0*

Applicable spare parts and accessories.

ENCLOSURE "C"

26

*It should be noted that the Carriage Mark 23 Mod 0 referred to is the designation given by the Bureau of Ordnance to the yoke shown on Enclosure (B). The Bureau of Ordnance does not have any of these Carriages presently available but is investigating to determine whether a certain Army Ordnance yoke which can be obtained can be used as a substitute. The results of this investigation will be reported to as soon as it has been completed. The Bureau of Ships is requested to have new construction submarine building yards provide yokes of the type indicated by Enclosure (B) until the results of this investigation are known and during the interim period when Carriages Mark 23 Mod 0 or a substitute therefore cannot be provided.

3. By copy of this letter, the Naval Gun Factory, Publications Section, is requested to deliver the following publications to new construction submarines, for subject equipment in lieu of those now being provided:

TM 9-225 Browning Machine Gun, Cal. 50 M2 Aircraft Basic.

TM 9-225 Browning Machine Gun, Cal. 50. All Types (Ordnance Maintenance) (Including Change No. 4)

Handbook of Instructions with parts catalogue for Single Adapters for Cal. 50 Machine Guns Types E-11 and E-13. (AN11-10-25 of 20 November 1944).

SNLA-38(Ord 9) Browning Machine Gun Cal. 50 M2 Aircraft Basic.

4. The Bureau of Ordnance will deliver 25 Aircraft Basic Guns, Flash Eliminators, Gun Mount Adapters E-11 and sets of applicable spare parts and accessories immediately on Shipment Orders 204232 (for all equipment except the adapters) and 202875 (covering the adapters) to the Supply Officer, Submarine Base, New London in order to provide new construction submarines which have completed a few months prior to August 1945 with this equipment, but the Submarine Base, New London will have to provide any such vessels with the necessary yokes and socket stanchions.

CC:

G. F. HUSSEY, JR.

CNO (with copy of Encl.(A))

INSURV (with copy of Encl.(A))

INSURVPAC (with copy of Encl.(A))

L. H. Schofield

By direction

COMSUBPACADCCM

COMSUELANT

COMSUBTRAINPAC

SUBASE PEARL HARBOR

COMDT NYD PORTS

SO NYD PORTS

COMDT NYD MARE ISLAND

SO NYD MARE ISLAND

SUBADCCM MARE ISLAND

COMDT NYD BOSTON

SO USNDD SO BOSTON

COMDT NYD PHILA

SO NYD PHILA

CO NAVREPBASE NEW ORLEANS

SO NAVREPBASE NEW ORLEANS

COMDT 9TH NAV DIS(DIST. ORD. OFFICER)

SUPSHIP GROTON, CONN

SUPSHIP MANITOWOC, WIS

SUPSHIP, PHILA, PA

NAVGUN ALLOWANCE SECTION

NAVGUN PROGRESS SECTION

NAVGUN PUBLICATIONS SECTION

SOINC NSD NORFOLK

SOINC NSD OAKLAND

INDIAN 8th N.D. NEW ORLEANS

S3/S74
(Prld)

NAVY DEPARTMENT
BUREAU OF ORDNANCE
WASHINGTON 25, D.C.

R E S T R I C T E D

21 JUN 1945

A I R M A I L

From: The Chief of the Bureau of Ordnance.
To : The Chief of the Bureau of Ships.
Commanding Officer
Naval Submarine Base, New London, Conn.

Subject: Cal. 50 Machine Gun Assemblies for Submarines.

Reference: (a) ComSubPac restr. ltr FF12-10(A)/S74 Serial 1515
to BuOrd dated 19 May 1945.

Enclosure: (A) Copy of reference (a)
(B) One copy SubBase Pearl Drawing No. XAA-84-
.50 Caliber Gun Yoke.
(C) One copy SubBase Pearl Drawing No. XAA-86-
.50 Caliber Gun Mount and Socket.

1. Reference (a) states that the two Cal. 50 Browning M2 heavy barrel, flexible machine guns complete with two mounts Mk.26 Mod. 1 now being provided for new construction submarines are unsatisfactory and are being replaced at Pearl Harbor with two Cal. 50 M2 Aircraft basic machine guns complete with adapter Gun Mounts E-11 and yokes designed by the Submarine Base Pearl Harbor for use with the Cal. 50 gun mount socket stanchions installed on all Pacific Fleet submarines. Enclosure (B) and (C) are copies of the drawings forwarded by reference (a) of the Pearl Harbor design yoke and the socket stanchion respectively. Reference (a) requests that all new construction submarines be provided with Cal. 50 Aircraft basic machine guns complete with adapter gun mounts E-11 and a yoke similar to that shown by Enclosure (B).

2. The Bureau of Ships has indicated that it will request new construction submarine building yards to provide socket stanchions of the type indicated by Enclosure (C) for all vessels completing after 1 August 1945. Accordingly, the present Bureau of Ordnance allowance list for subject equipment is being revised to authorize the issuance by the Naval Supply Depots, Norfolk and Oaklant upon request by each new construction yard's outfit supply activity (and by the Commandant Ninth Naval District for Manitowoc submarines) of the following equipment (except for Carriages Mk.23 Mod. 0) in the quantities authorized for submarines (the authorized Cal.50 armament has just been increased to four assemblies per vessel by the Chief of Naval Operations):

Cal. 50 Browning Machine Gun M2, Aircraft Basic with
retracting slide group assembly.
Flash Eliminator Mk. 1 Mod. 0

Cal. 50 Mount Mk.32 Mod. 0 consisting of:
Gun Mount adapter Type E-11
Cal. 50 Carriage Mk. 23 Mod 0*

Applicable spare parts and accessories.

ENCLOSURE " " 28

*It should be noted that the Carriage Mark 23 Mod 0 referred to is the designation given by the Bureau of Ordnance to the yoke shown on Enclosure (B). The Bureau of Ordnance does not have any of these Carriages presently available but is investigating to determine whether a certain Army Ordnance yoke which can be obtained can be used as a substitute. The results of this investigation will be reported to as soon as it has been completed. The Bureau of Ships is requested to have new construction submarine building yards provide yokes of the type indicated by Enclosure (B) until the results of this investigation are known and during the interim period when Carriages Mark 23 Mod 0 or a substitute therefore cannot be provided.

3. By copy of this letter, the Naval Gun Factory, Publications Section, is requested to deliver the following publications to new construction submarines, for subject equipment in lieu of those now being provided:

TM 9-225 Browning Machine Gun, Cal. 50 M2 Aircraft Basic.

TM 9-225 Browning Machine Gun, Cal. 50. All Types (Ordnance Maintenance) (Including Change No. 4)

Handbook of Instructions with parts catalogue for Single Adapters for Cal. 50 Machine Guns Types E-11 and E-13. (ANLL-10-25 of 20 November 1944).

SNLA-38(Ord 9) Browning Machine Gun Cal. 50 M2 Aircraft Basic.

4. The Bureau of Ordnance will deliver 25 Aircraft Basic Guns, Flash Eliminators, Gun Mount Adapters E-11 and sets of applicable spare parts and accessories immediately on Shipment Orders 204232 (for all equipment except the adapters) and 202875 (covering the adapters) to the Supply Officer, Submarine Base, New London in order to provide new construction submarines which have completed a few months prior to August 1945 with this equipment, but the Submarine Base, New London will have to provide any such vessels with the necessary yokes and socket stanchions.

CC:

G. F. HUSSEY, JR.

CNO (with copy of Encl.(A))

INSURV (with copy of Encl.(A))

INSURVPAC (with copy of Encl.(A))

COMSUBPACDCOM

COMSUBELANT

COMSUBTRAINPAC

SUBBASE PEARL HARBOR

COMDT NYD PORTS

SO NYD PORTS

COMDT NYD MARE ISLAND

SO NYD MARE ISLAND

SUBADCOM MARE ISLAND

COMDT NYD BOSTON

SO USNDD SO BOSTON

COMDT NYD PHILA

SO NYD PHILA

CO NAVREPBASE NEW ORLEANS

SO NAVREPBASE NEW ORLEANS

COMDT 9TH NAV DIS(DIST. CRD. OFFICER)

SUPSHIP GROTON, CONN

SUPSHIP MANITOWOC, WIS

L. H. Schofield

By direction

SUPSHIP, PHILA, PA

NAVGUN ALLOWANCE SECTION

NAVGUN PROGRESS SECTION

NAVGUN PUBLICATIONS SECTION

SCINC NSD NORFOLK

SCINC NSD OAKLAND

INDIAN 8th N.D. NEW ORLEANS

7LY 1945

CON

Navy Yard, Mare Island, California

Serial

C-55441

From: ComPorts
 L¹No: SS/S78 (16345-2HDS)

7/13/45

Subj: Submarines - Arrgt. Showing Location of Pressure-Proof
 Ready Service Lockers

Form C-51b (Rev. 9-15-48)

9256-M.I.N.Y. 9-7-44-20M

Code	Initials		Remarks
	By	Date	
301	J	7/22	
313	J	7/21	This argt okay for chariot bridge (deep) boat.
370	J	7/22	
350	J	7/22	
13/3N	J	8/1	
052A	R/B		
220	J	8/1	2 copies forwarded to A.14, S.2

CONFIDENTIAL

Encl in 052

File No. 578/42 516-A

Copies to: (All copies must be authorized and recorded by legal office confidential files).

Keyed—Code _____ Prepare reply

later than _____

DO NOT DETACH FROM
CORRESPONDENCE

Encl A. h. u.

Receipt to be returned by Design

SS/578 (16345-2HDS)

GEB

CONFIDENTIAL

13 JUL 1945

From: Commandant. *Ports*
To: Bureau of Ships.

Subj: Submarines SS296, SS297, SS302-303, SS312, SS362, SS384A385, SS425-428 Incl. SS480, SS483-494 Incl., SS516, SS522-525 Incl. - Arrgt. Showing Location of Pressure-Proof Ready Service Lockers.

Ref: (a) BuShips ltr. C-SS/574-1(5815) over C-SS/578-3 of 28 June 1945.

Encl: (Hw)

<u>Ports. Plan</u>	<u>BuShips No.</u>	<u>Title</u>	<u>No. & Kind</u>
(A) 69160-296 Alt. 1	SS296-57803- 720168	Arrgt. Showing Location of Pressure-Proof Ready Service Lockers.	2 Bps.

1. Enclosure (A) indicating arrangement of topside gun and ammunition stowage lockers, also location of gun mounts for installation on subject new construction and repair submarines in accordance with reference (a), is forwarded for information and files.

2. Attention is invited to the installation of hinged platforms in way of the forward 750 Cal. gun mounts on bridge deck which is considered requisite to proper operation of these guns.

S. E. DUDLEY,
By direction.

CC: SS Phila (w/1 Bp. Encl. (A))
Comdt., Boston " "
→ Comdt., M. I. " "
SS Groton " "
Comsublant " "
Comsubpac " "

*Filed
main Vlt.
Desired
alt 2
on file
8/17/45
LKH*

NOTE:— One copy of Shipment Order to be inclosed with plans. One copy to be forwarded Navy Yard, Mare Island, direct.

SS/S78 (16345-2 HDS)

No. 13935

NAVY YARD, PORTSMOUTH, N. H.

CONFIDENTIAL

PLAN SHIPMENT ORDER

Following plans shipped to Navy Yard, Mare Island, this date 13 July 1945

<u>Ports. No.</u>	<u>Bu. Ships</u>	<u>Title</u>	<u>No. and kind of each</u>		
			<u>Tr.</u>	<u>Vd.</u>	<u>Bp.</u>
69160- Alt.1	SS296-S7803-720168	Arr'g't. Showing Location of Pressure-Proof Ready Service Lockers			2

NAVY YARD, MARE ISLAND

Receipt is acknowledged of plans forwarded above.

Date Received _____

Signed _____

CONFIDENTIAL ROUTE SHEET

Navy Yard, Mare Island, California

Serial

C-52681

Date July 2, 1945

6/28/45

From: BuShips
LtNo: C-SS/S74/1(5815) C-SS/S78-3Subj: Submarines, SS212-525 - Gun Foundations, Topside Gun
Stowage Lockers, Ammunition Stowage, Ammunition Passing
Scuttles - Provision of

Form C-51b (Rev. 9-15-43)

9256-M.I.N.Y. 9-7-44-20M

Code	Initials		Remarks
	By	Date	
300	S	7/3	
301A	W	7/1	
313	W	7/1	Request copy Copy retained.
370	W	7/1	Request copy
388	UC	7/3	LeChamber Hudson R. N. -
090 220	rec'd copies from BuShips		

CONFIDENTIAL

File No. 528/42 216-A

Copies to: (All copies must be authorized and recorded by legal office confidential files).

Keyed—Code _____ Prepare reply

not later than _____

DO NOT DETACH FROM
CORRESPONDENCE

one extra copy. - Burned

NAVY DEPARTMENT

BUREAU OF SHIPS

WASHINGTON 25, D. C.



REFER TO FILE NO.

C-SS/S74-1(5815)

C-SS/S78-3

CONFIDENTIAL

28 JUN 1945

To: Commandant, Navy Yard, Portsmouth, N. H.
Commandant, Navy Yard, Mare Island, Calif.
Commandant, Navy Yard, Boston, Mass.
Supervisor of Shipbuilding, USN, Groton, Conn.
Supervisor of Shipbuilding, USN, Manitowoc, Wis.
Supervisor of Shipbuilding, USN, Philadelphia, Pa.
Commander Submarine Force, Pacific Fleet.
Commander Submarines, Atlantic Fleet
Commander Submarine Force, Pacific Fleet,
Administration, Mare Island, Calif.

Subj: Submarines, SS212-525 - Gun Foundations, Topside Gun
Stowage Lockers, Ammunition Stowage, Ammunition Passing
Scuttles - Provision of.

Ref: (a) CNO conf. ltr. Op-23C-2-VRJ, 6/12/45, Serial 0262523
over (SC)S29-1/SF of 15 June 1945 (Not to all
addressees).
(b) BUORD restr. ltr. SS/S74 over (Prld) of 21 June 1945.

1. Reference (a) authorized the following gun armament for the subject vessels and, in addition, specified the ammunition and topside pressure proof lockers which should be carried to serve these guns:

(a) Two 5"/25 caliber guns on the main deck, one forward and one aft of the conning tower. The second gun will not be installed on new construction submarines at the present time. The second 5"/25 caliber gun is not authorized for SS212-227, 240-252 and 265-274 unless compensation in the form of weight removal is made to maintain a metacentric height of not less than 1.25 feet. (in cond. VI b)

(b) Two, 40 mm guns on bridge deck level, one forward and one aft of the conning tower.

(c) Four, .50 caliber machine guns. In accordance with reference (b) the Bureau is authorizing in separate correspondence the installation of socket stanchions suitable for .50 caliber Browning M2 aircraft basic machine guns in place of the .50 caliber gun socket stanchions now being provided.

Section 5815

C-SS/S74-1(5815)

C-SS/S78-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island, Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

2. In compliance with reference (a) it is requested that the gun foundations, ready service lockers and ammunition passing scuttles listed below be provided on the subject submarines. These items, part of which are already being provided, constitute the total topside armament equipment to be installed.

✓ (a) Provide two foundations suitable for 5"/25 caliber guns, one forward and one aft of the conning tower.

✓ (b) Provide two foundations at bridge deck level suitable for 40 mm guns, one forward and one aft of the conning tower.

9 (c) Provide 16 stanchions suitable for .50 caliber machine gun supports, four on each side of the bridge deck and four on each side of the main deck.

✓ (d) Provide two lockers for 5"/25 caliber ammunition each containing 10 rounds, one forward and one aft of the conning tower.

(L.P.H. SPECIAL BRACKET) g.w.o.

✓ (e) Provide two pressure proof lockers for 40 mm ammunition each containing at least 100 rounds, one forward and one aft of the conning tower. These lockers do not have to be accessible from the bridge deck level.

9 (f) Provide two pressure proof lockers for .50 caliber ammunition each containing 300 rounds. These lockers must be accessible from bridge deck level.

✓ (g) Provide pressure proof stowage for two 40 mm gun barrels. This stowage does not have to be accessible from bridge deck level.

✓ (h) Provide pressure proof stowage for two .50 caliber machine guns. This stowage must be accessible from bridge deck level.

9 (i) In the case of SS212-284 and 362-364 provide two passing scuttles suitable for 5"/25 caliber ammunition, one forward and one aft of the conning tower. The forward ammunition passing scuttle should not be installed on SS212-227, 240-252 and 265-274 until the necessary weight has been removed to permit the installation of a second 5"/25 caliber gun as required by paragraph 1(a) above. Plans are presently being developed for a forward passing scuttle and will be forwarded when available.

Section 5815

C-SS/S74-1(5815)

C-SS/S78-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island and Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

(j) In the case of SS285-525 less SS362-364 provide one 5"/25 caliber ammunition passing scuttle aft of the conning tower. A forward scuttle is not required for those vessels since a gun access trunk is already installed.

3. In case a design study indicates the necessity for a modification of the topside ready service ammunition stowage as outlined in paragraph 2, a reduction in the capacity specified will be acceptable.

4. The total ammunition allowance, magazine and ready service, established by reference (a) for the guns listed in paragraph 1 above is as follows:

- ✓ (a) 5"/25 caliber - 100 rounds (50 rounds per gun)
- ? (b) 40 mm - 800 rounds (400 rounds per gun) 708
- ? (c) .50 caliber - 4000 rounds (1000 rounds per gun)

5. The gun foundations, ready service lockers and magazine ammunition stowage for .30 caliber guns and 20 mm guns should be eliminated when the equipment and ammunition allowance in accordance with paragraphs 2 and 4 above is provided. The present provisions for small arms and small arms ammunition (rifle, pistol and shotgun) are not affected by this change in armament.

6. It is understood that the Bureau of Ordnance expects to ship two, 40 mm guns to the building yards for the following new construction submarines:

Navy Yard, Portsmouth	- SS484-494
Navy Yard, Boston	- SS296 and SS522-525
SUPSHIP, Groton	- SS344-352 and SS435-437
SUPSHIP, Philadelphia	- SS303 and SS425-428
SUPSHIP, Manitowoc	- SS378

In case it is impossible to install two, 40 mm ready service lockers, 100 rounds each, on any of the above vessels it will be satisfactory as an interim installation to utilize the forward 5"/25 caliber ammunition ready service locker, the forward 20 mm ammunition ready service locker and one of the after 20 mm ammunition ready service

Section 5815

C-SS/S74-1(5815)

C-SS/S78-3

CONFIDENTIAL

To: COMDT NY Portsmouth, Mare Island and Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia
CONSUBSPAC, CONSUBSLANT, CONSUBAD, Mare Island.

lockers for 40 mm ammunition storage. The second after 20 mm ammunition ready service locker authorized for installation in connection with the twin 20 mm mount may be used as a .50 caliber ammunition storage as an interim installation.

7. In the case of new construction submarines it is requested that the alterations and installations outlined above be accomplished where possible without delaying the delivery of any vessel in the building program. A change under the contracts to cover the increased cost due to the above work will be issued in separate correspondence. In the case of those submarines in which the work is not accomplished prior to delivery, this item should be included as Government responsibility in the list of already authorized work submitted to the Board of Inspection and Survey at the time of acceptance trials. It is requested that the Navy Yard, Portsmouth submit weight and moment changes which result from the accomplishment of this revision to the armament and stowage arrangement. The Bureau should be advised as to the vessels which will receive the alterations requested herein prior to delivery.
8. In the case of submarines in service these alterations and installations should be accomplished when availability of material permits and where no interference with scheduled operations will result. A shipalt will be issued to cover this work.
9. Plans required for the accomplishment of the alterations requested herein should be prepared by Navy Yard, Portsmouth and the Supervisor of Shipbuilding, Groton for new construction submarines. In the case of vessels in service, the necessary plans should be prepared locally by the activity accomplishing the alterations. It is requested, however, that Navy Yard, Portsmouth furnish copies of all plans prepared in connection with these alterations to the Force Commanders and to the information addressees of this letter for information and guidance. All plans developed or altered in accomplishing the subject alterations should reference this letter as the authorizing correspondence.
10. Weight compensation required in the accomplishment of the alterations and installations outlined above should be accomplished by the removal of permanently installed lead ballast except in the case of the vessels noted in paragraph 1(a). The Bureau should be advised as to the amount and location of any lead ballast removed from each submarine in service.

Section 5815

C-SS/S74-1(5815)

C-SS/S78-3

CONFIDENTIAL

VIA AIRMAIL

To: COMDT NY Portsmouth, Mare Island and Boston;
SUPSHIP, Groton, Manitowoc and Philadelphia;
COMSUBSPAC, COMSUBSLANT, COMSUBAD, Mare Island.

11. Rearrangement of radio antennas will be made the subject of separate correspondence.

H.C. Smith

CC:

CNO (Op-23C)

COMSUBSPACADCOND

COMDT NYPEARL

CO USN DD Hunters Point, San Fran.

ASTINDIAN, Ferry Bldg., San Fran.

COMSUBBASE, New London

COMSUBBASE, Pearl

BUORD

INSURV (2)

INSURVPAC (2)

H. C. Smith
By direction of
of Bureau

Navy Yard, Mare Island, California

Date April 24, 1945

Serial C - 49563

4/18/45

Subj: Submarines - 5"/25 Caliber Pressure Proof Ready Service
locker - Modification for Right or Left Hand Installation.

Form C-51b (Rev. 9-15-43)

9256—M.I.N.Y. 9-7-44—20M

Code	Initials		Remarks
	By	Date	
350	<i>[Signature]</i>	MAY 2 1945	
374A	<i>[Signature]</i>	MAY 29	alterations were made for P.B. sub's only.
513	<i>[Signature]</i>	5/3	change noted in Par 3 was tried at
301	<i>[Signature]</i>	5/5	this yard and found to be unsatisfactory.

CONFIDENTIAL

File No. 578/L2 216-A
Keyed—Code Prepare reply
not later than

Copies to: (All copies must be authorized and recorded by legal office confidential files).

**DO NOT DETACH FROM
CORRESPONDENCE**

 $\vee SS'$

SS/S78
(10875-2CDS)

U. S. NAVY YARD,
Portsmouth, N. H.

MGL

CONFIDENTIAL

18 APR 1945

From: Commandant.
To: Commandant, Mare Island.

Subj: Submarines - 5"/25 Caliber Pressure Proof Ready Service
Locker - Modification for Right or Left Hand Installation.

Refs: (a) Comdt., M.I. ltr. SS/S78-3 (374-718386) of 13 Mar. 1945.
(b) Ports. Plan 348-417, Bu. No. SS417-S1112-70935, Alt. 1 -
Foundation for 104 rd. - 40 MM or 5"/25 Cal. Pressure-
Proof Ready Service Locker - Aft.
(c) Ports. Plan 291-295, Bu. No. SS295-S7803-69600, Alt. 4-M2 -
5"/25 Cal. Pressure-Proof Ready Service Locker.
(d) Ports. Plan 291-295, Bu. No. SS295-S7803-69600, Alt. 4 -
5"/25 Cal. Pressure-Proof Ready Service Locker.

1. In connection with changes suggested in reference (a), the comments on the revision of carriers, Piece Q3, have been investigated and the necessity for making this alteration is not quite clear due to the fact that this Yard is installing the subject locker aft as shown on reference (b) without any changes being found necessary.
2. Attention is invited to the swing of the locker door as indicated on reference (b) in panels 2 and 3, which maintains carrier, Piece Q3, in same position as when installed forward. The inboard arrows as shown in panels 2 and 4 of references (c) and (d) were disregarded by this Yard when installing locker aft by reference (b) and are being deleted from reference (d) so as not to be misleading.
3. In fabrication of this locker at this Yard, it was found that the revolving retainer plate, Piece N4, rotated too freely and necessitated increasing the pressure on the ratchet pawl, Piece K5, by increasing the free length of spring, Piece D4, to 2-7/8".

216-A
Homer Ambrose
HOMER AMBROSE

~~S. E. DUDLEY,~~
By direction.

CONFIDENTIAL

Navy Yard, Mare Island, California

Serial C-54522

8/10/45

Subj: Submarines SS212-525 - gun Foundations, Topside Gun Stowage Lockers, Ammunition Stowage, Ammunition Passing Scuttles - Weights and Moments - Changes In.

6115—M.I.N.Y. 8-2-45—20M

Code	Initials		Remarks
	By	Date	
301	<i>[Signature]</i>	8/25	
313	<i>[Signature]</i>	8/24	
350	<i>[Signature]</i>	13 1945	<i>[Signature]</i>

CONFIDENTIAL

Encls A - D h. u.

552

SS/S80
SS/S78
(16345-2CDX)

U. S. NAVY YARD,
Portsmouth, N. H.

MGL

10 AUG 1945

CONFIDENTIAL

From: Commandant.
To: Bureau of Ships. (Code 5815).

Subj: Submarines SS212-525 - Gun Foundations, Topside Gun
Stowage Lockers, Ammunition Stowage, Ammunition Passing
Scuttles - Weights and Moments - Changes in.

Refs: (a) BuShips ltr. C-SS/S74-1(5815) over C-SS/S78-3 of
28 June 1945.
(b) Ports. Plan 69160 - Bu. No. SS296-S7803-720168, Alt. 2,
Arrangement showing location of Pressure-Proof
Ready Service Lockers.

Encls: (Hw)

- (A) NBS Form 204, Gross Change in Weight and Moment
due to Rearrangement of Topside Armament - 2 copies
- (B) NBS Form 204, Net Change in Weight and Moment due
to Change in Topside Armament for Submarine
SS312 - "
- (C) NBS Form 204, Net Change in Weight and Moment due
to Change in Topside Armament for Submarines
SS382 and SS385 - "
- (D) NBS Form 204, Net Change in Weight and Moment due
to Change in Topside Armament for Submarines
SS483 to 494, inclusive - "

1. Referring to paragraph 7 of reference (a), the above enclosures, indicating change in weight and moment due to rearrangement of topside armament and ammunition stowage as shown thereon and on reference (b), are forwarded for the Bureau's information.

2. Enclosure (A) indicates the gross weight and moment for the entire installation as covered on plan, reference (b).

3. The vessels now under overhaul at this Yard that will receive this new armament change before completion are the U.S.S. BURRFISH (SS312), U.S.S. PICUDA (SS382) and U.S.S. BANG (SS385). The new construction submarines are SS483-494. The net change in weight and moment for these vessels is indicated on Enclosures (B), (C) and (D).

4. Necessary changes in lead ballast will be made dependent on

CONFIDENTIAL

CONFIDENTIAL

MGL

SS/S80 (16345-2CDX)

SS/S78

Subj: Submarines SS212-525 - Gun Foundations, Topside Gun
Stowage Lockers, Ammunition Stowage, Ammunition Passing
Scuttles - Weights and Moments - Changes in.

the results of trim dives after completion of vessels and
reported in separate correspondence.

5. There will be about 2 tons added displacement to these
vessels due to the additional ready service pressure-proof
lockers located on topside and included in this arrangement.

CC: Comdt., Boston (w/1 copy of each Encl.)
Comdt., Mare Island ditto
SS, Phila. ditto

CONFIDENTIAL

Proposed change in weights and moments No. due to Gun Foundations, TopsidesGun Stowage Lockers, Arm. Stowage and Arm. Passing Scuttles, as per Ports Plan69160 (296) BuShips No. SB296-87803-720168, Alt.2as described in BuShips letter No. C-88/874-1(5815) of 28 June 1945

Bureau's No. Approved by letter No. of

CHANGES

ITEM	GROUP No.	WEIGHT IN TONS TO NEAREST .01		MOMENT IN TON-FEET TO NEAREST .01			
				Above the base line which is <u>1</u> inches above bottom of keel amidships		Forward of Frame <u>69</u> which is <u>1</u> feet <u>69</u> of M. P. or mid length on normal W. L.	
		Increase	Decrease	Increase	Decrease	Increase	Decrease
5" Gun Found. Ford.		1.29		30.96		80.95	
5" Gun 25 Cal. "		6.18		163.77		387.80	
5" Gun Found. Aft		1.29		28.38			8.09
5" Gun 25 Cal. Aft		6.18		163.27			38.75
40 MM Ford.		1.18		35.99		57.82	
40 MM Aft		1.18		36.58		25.37	
40 MM Found. Ford. inc.		.12		3.36		5.88	
40 MM Found. Aft Inc.		.40		11.40		8.60	
50 Cal. Mach. Guns (4)		.14		3.99		5.11	
50 Cal. " " Mounts (16)		.21		5.67		9.86	
50 Cal. " " Stowage Lks. PP		.35		9.98		10.15	
40 M.M. Gun Bar'l. Stow. Lks. PP.		.66		15.58		32.01	
Final result,		19.18		508.93		576.71	

Entered on Card Record of changes and returned to file, 19.....

Initial.

Proposed change in weights and moments No. due to Gun Foundations, Topside
Gun Stowage Lockers, Amm. Stowage and Amm. Passing Scuttles, as per Ports. Plan
69160 (296) BuShips No. SS296-37803-720168, Alt. 2

as described in BuShips letter No. C-SS/374-1(5815) of 28 June 1945
C-SS/378-3

Bureau's No. Approved by letter No. of

CHANGES

ITEM	GROUP No.	WEIGHT IN TONS TO NEAREST .01		MOMENT IN TON-FEET TO NEAREST .01			
				Above the base line which is 1 inches above bottom of keel amidships		Forward of Frame ⁶⁹ which is 1 feet ^{ford} of M. P. or mid length on normal W. L.	
		Increase	Decrease	Increase	Decrease	Increase	Decrease
Total Sh. 1		19.18		508.93		576.71	
5" Ready Service Locker Ford.		1.00		26.00		49.00	
5" " " " Aft		1.00		25.00		26.00	
40 M.M. " " Ford.		.81		24.71		39.69	
40 " " " Aft		.81		20.25		21.06	
50 Cal. " " (2)		.35		9.98		10.15	
New Amm. Allowance		7.39		70.00		166.00	
5" Amm. Pass. Scuttle		.41		21.00		3.00	
This total is the gross weight and moment of topside armament and stowage as referred to in BuShips letter. For net weight on all vessels affected this total will have to be modified to cover present arrangement on board.							
Final result,		30.95		705.87		891.61	

Entered on Card Record of changes and returned to file, 19.....

Initial.

Proposed change in weights and moments No. _____ due to Deductions from gross
weight and moment for topside armament and amm. allowance installed at time inclining
experiment (SS382) was made for these vessels

as described in _____ letter No. _____ of _____

Bureau's No. _____ Approved by _____ letter No. _____ of _____

CHANGES

ITEM	GROUP No.	WEIGHT IN TONS TO NEAREST .01		MOMENT IN TON-FEET TO NEAREST .01			
				Above the base line which is 1 inches above bottom of keel amidships		Forward of Frame ⁶⁹ which is 1 feet ^{ford} of M. P. or mid length on normal W. L.	
		Increase	Decrease	Increase	Decrease	Increase	Decrease
Gross weight Sh. 2		30.95		705.87		891.61	
4" gun and mount ford.		5.19		152.00		332.00	
Gun found. ford.		1.29		30.96		82.57	
2 - 20 W.M. guns		.64		22.00		23.00	
Amm. allowance		6.77		62.00		154.00	
Total deductions		13.89		266.96		591.57	
Final result,		17.06		438.91		300.04	

Entered on Card Record of changes and returned to file _____, 19_____

Initial. C

Proposed change in weights and moments No. _____ due to Deductions from gross weight
and moment for topside armament and amm. allowance installed at time the inclining
experiment (SS417 and SS477) was made for these vessels

as described in _____ letter No. _____ of _____
Bureau's No. _____ Approved by _____ letter No. _____ of _____

CHANGES

ITEM	GROUP No.	WEIGHT IN TONS TO NEAREST .01		MOMENT IN TON-FEET TO NEAREST .01			
				Above the base line which is 1 inches above bottom of keel amidships		Forward of Frame ⁶⁹ which is 1 feet ^{ford} of M. P. or mid length on normal W. L.	
		Increase	Decrease	Increase	Decrease	Increase	Decrease
Gross weight Sht. 2		30.95		705.87		891.61	
Deduct. 1-5" gun aft		6.18		160.00		39.00	
" 1-40 MM Ford.		1.04		32.00			51.00
" 1-20 MM Aft		.28		9.00			6.00
" Orig. Amm. Allowance		10.02		88.00		433.00	
Total ded.		17.52		289.00		451.00	
Final result,		13.43		416.87		440.61	

Entered on Card Record of changes and returned to file _____, 19____

Initial. D

IN REPLY
REFER TO

U. S. NAVAL SUBMARINE BASE
NAVY NUMBER 128 (ONE TWO EIGHT)
FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

NB14/S29-1/55(Fr)

Serial (0465)

14 SEP 1945

C-O-N-F-I-D-E-N-T-I-A-L

From: The Commanding Officer.
To : The Commandant, Navy Yard, Mare Island, California.
Via : The Commander Submarine Squadron TEN.
Subject: U.S.S. CERO (SS225) - Reballasting of.
Enclosure: (A) U. S. Submarine Base, Navy No. 128, Calculation of
Weights and Moments.

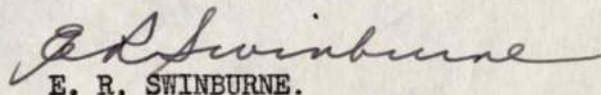
1. During the refit of subject vessel at this activity during August 1945, armament was increased and ballast changes were made to compensate for the increased weight as noted in enclosure (A).

2. The final arrangement of ship's armament is as follows:

- 1 - Twin 20MM gun forward.
- 1 - 40MM gun forward cigarette deck.
- 1 - 40MM gun after cigarette deck.
- 1 - 5"/25 caliber gun aft.

3. Ship's copy of lead ballast stowage plan was corrected for this change.

4. This information is furnished in order that the CERO's home yard ballast record may be corrected to date.


E. R. SWINBURNE.

Copies to:

- USS CERO (1-with enclosure)
- CSS 18 (1-with enclosure)
- Comdt., NYd., Navy #128 (1-with enclosure)
- BuShips (1-with enclosure)

U. S. SUBMARINE BASE, NAVY NO. 128

CALCULATION OF WEIGHTS AND MOMENTS

U.S.S. CERO (SS225)Date 8 August, 19 45

DESCRIPTION	WEIGHT, TONS	CENTER OF GRAVITY					
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. <u>69</u>			
WEIGHT REMOVED				FOR'D	MOMENTS	AFT	MOMENTS
1 - 20MM Gun Forward	.30	32.2	9.66	50.5			15.2
1 - 20MM Gun Aft.	.30	32.2	9.66	22.5			6.8
1 - 20MM Stowage (Ammo.) Fr. 57	.27	25	6.75	27			7.3
TOTAL	.87		26.07				29.3
WEIGHT ADDED							
1 - 40MM Gun Forward	1.05	32.2	33.80	50.5	53.00		
1 - 40MM Gun Aft.	1.05	32	33.6	24	25.2		
1 - Twin 20MM Gun Forward Fr. 43	.34	26.5	9.0	61.5	20.9		
1 - 40MM Ammo. Stowage Fr. 48	1.38	25.3	35.0	49	67.5		
1 - 40MM Ammo. Stowage Fr. 58	1.38	25.3	35.0	24	33.1		
2 - 50 Caliber Gun Lockers Fr. 55	.31	30.5	9.0	31.5	10.0		
2 - 50 Caliber Ammo. Lockers Fr. 55	.30	31.5	10.0	31.5	10.0		
TOTAL	5.81		165.4		219.7		
BUOYANCY REMOVED							
1 - 20MM Gun Forward	.04	32.2	1.3	50.5	2.02		
1 - 20MM Gun Aft.	.04	32.2	1.3	22.5	.90		
1 - 20MM Stowage Fr. 57	.21	25.0	5.25	27	5.67		
TOTAL	.29		7.9		8.59		
BUOYANCY ADDED							
1 - 40MM Gun Forward	.14	32.2	4.50	50.5			7.1
1 - 40MM Gun Aft.	.14	32.0	4.48	24.0			3.36
1 - Twin 20MM Gun Forward Fr. 43	.05	26.5	1.32	61.5			3.07
1 - 40MM Ammo. Stowage Fr. 48	.64	25.3	16.2	49			31.4
1 - 40MM Ammo. Stowage Fr. 58	.64	25.3	16.2	24			15.4
2 - 50 Caliber Gun Lockers Fr. 55	.18	30.5	5.5	31.5			6.0
2 - 50 Caliber Ammo. Lockers Fr. 55	.23	31.5	7.3	31.5			7.0

CALCULATED BY W.E. MacCoun TOTAL
MACCOUN, W.E., LT.(jg), USNR.

2.02

55.5

SHEET 1 OF 2 73.33

CALCULATION OF WEIGHTS AND MOMENTS

U.S.S. CERO (SS225)

Date 8 August 19 45

[illegible]

CALCULATED BY W. E. KACCOUN, Lt(jg) USNR

SHEET 2 OF 2