

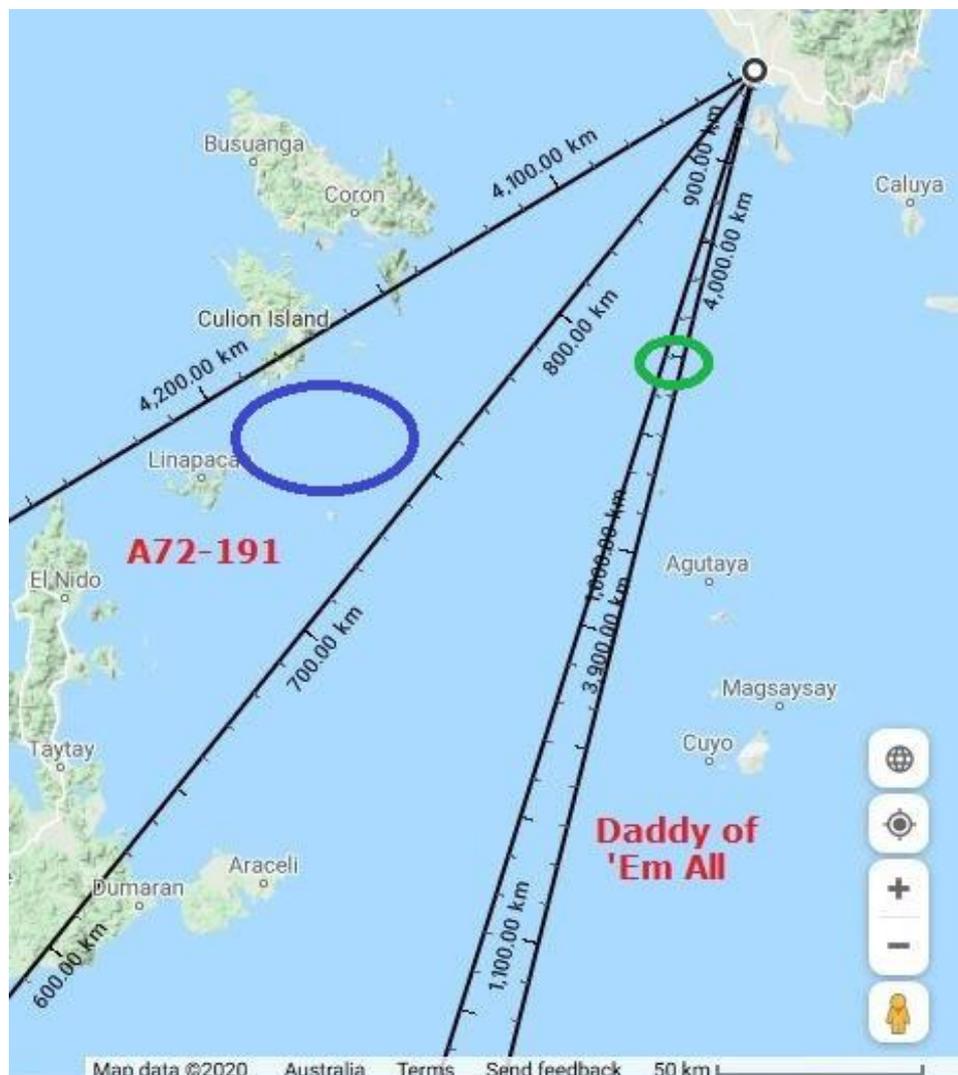
## Sitrep

As it stands, a positive identification of the wreck in the waters off northern Palwan has not yet been possible. I think everybody agrees that the only two likely candidates are the USAAF 380th Bomb Group's B-24L-FO-15 44-49860 (*Daddy of 'Em All*) built at the Ford factory in Willow Run (FO) and the RAAF 200 Flight's B-24M-CO-10 44-41984 (A72-191) produced at the Consolidated factory in San Diego (CO).

The map below shows the likely arcs of the return flights to San Jose on Mindoro of the two aircraft in relation to the general location of the wreck inside the blue circle.

For A72-191, the left boundary indicates the likely flightpath if they had navigated visually to the northern tip of Palawan before turning towards their destination at San Jose, while the right boundary is the direct flightpath from where they were last seen heading roughly north by a US Navy PB4Y off Brunei. The further north they flew before turning towards San Jose, the closer the right hand boundary would close to the left.

For *Daddy of 'Em All*, the left hand boundary of the arc reflects a direct flight from the target area in Balikpapan over land in Borneo, while the right boundary reflects a flight back from the northern tip of Borneo which may have been their last waypoint if navigating visually. Any attempt to avoid flying over possible Japanese occupied territory would have pushed the right boundary further to the right. Given that *Daddy of 'Em All* was extremely low on fuel, the reason the aircraft was ultimately abandoned, it seems highly unlikely that the left boundary could be assumed to have been any further left as the pilot strove to reach Mindoro as soon as possible before running out of fuel.



The sole eyewitness account we have of *Daddy of 'Em All* going down is from the crew's radar bombardier. He notes that they were held in a holding pattern over Balikpapan for "probably between 1 and 2 hours" which meant that as they approached San Jose on the return trip, by his calculation about 15 minutes out, their "engines began to run out of fuel one after another". After baling out between 1,300 and 2,000 feet, he "joined the 5-10 mile string of airmen settling into or towards the tepid waters of the Sulu Sea". After the last member of the crew had baled out, "*Daddy of 'Em All* finally dipped a wing and crashed into the sea from what I (he) estimated was about 1,000 feet".

The 380th BG history records that "as the engines one after another sputtered and died, the rescue facilities at base were alerted and the crew was ordered to bail out". "Very shortly a Catalina landed on the water and picked up eight of the men who had dropped close together. By this time the ocean was getting somewhat rough, and the Cat had considerable difficulty in taking off to look for the rest of the crew. After nearly two hours of searching, some sea dye was spotted and another Cat was instructed to land to pick up three more men. The remaining crew member" was rescued by PT boat.

On the other hand, Snake has described the location of the wreck as being about 70 miles from San Jose on Mindoro and "just off the southeast coast of Culion Island" inside some small islands that lay to the east and "not actually in the Sulu Sea".

Based on the above and taking into account the distance that would be covered by a B-24 at cruising speed, one which was running out of fuel and seemingly unlikely to divert some 60 kilometres off course, I think it more likely *Daddy of 'Em All* went down in the vicinity of the green circle on the map.

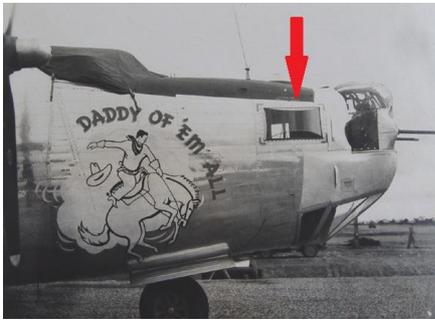
It's also worth remembering that Snake suggests that if the wreck was *Daddy of 'Em All* which the eyewitness said crashed into the ocean from about 1,000 feet, "most of the aircraft would be around the site but our wreck appears to have broken up at a height greater than a thousand feet and come down scattering parts over a wide area".

The crew of *Daddy of 'Em All* who baled out before the aircraft crashed were rescued by US rescue aircraft and a PT boat. I have searched through all the US Navy air and PT boat squadron war diaries over the period and, unusually, have found no reference to the rescue and therefore have not been able to pinpoint the location.

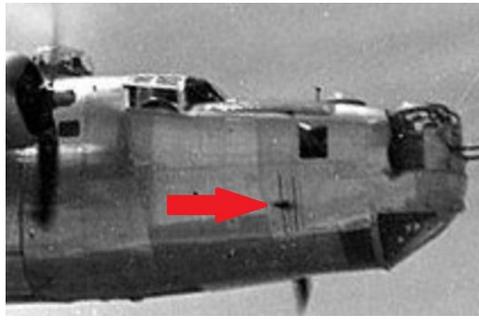
One thing that does have me puzzled is that while our eyewitness and the 380th BG history both refer to most of the crew being picked up by Catalina, the eyewitness continually refers to it being a Navy Catalina. By that stage of the war, however, the Seventh Fleet naval air squadrons had replaced their Catalinas with Mariners. It may have in fact been an Army rescue Catalina which would be the reason records concerning the rescue are not readily available.

Research suggests that there are a number of items which might help differentiate between the two aircraft:

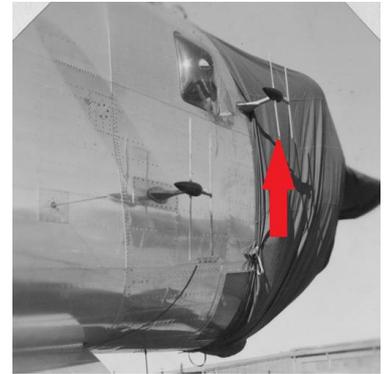
1. **Nose scanning windows and direction finding antennas** - B-24Ls had large rectangular scanning windows on either side just behind the nose turret while most B-24Ms from the Consolidated factory in San Diego had smaller square windows. Notably, Australian B-24Ms had an AN-148 direction finding antenna located below and behind the scanning window on both sides of the aircraft while 200 Flight B-24Ms also had a second AN-148 in front of the scanning windows. As shown in the photo below, *Daddy of 'Em All* was not fitted with AN-148 antennas.



*Daddy of 'Em All* with elongated scanning windows and without APN-148 antennas.



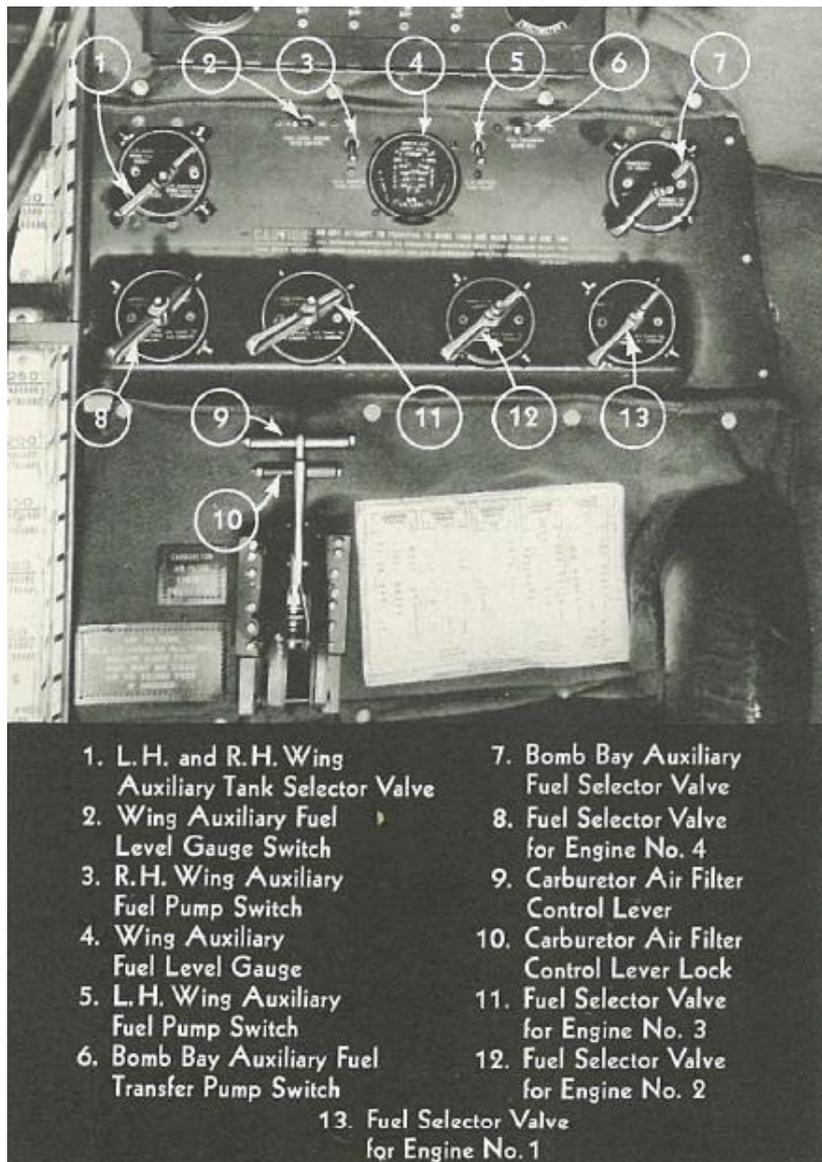
RAAF 25 Squadron B-24M A72-190 with one APN-148 on either side.



A 200 Flight B-24M with a second pair of APN-148s.

Unfortunately though, the nose of the wreck has been destroyed and the size of the windows are not ascertainable. No APN-148s have as yet been recovered.

2. **Flight and Command Deck equipment** – A centralised fuel control system was installed on B-24Ms commencing with Block 10 at San Diego, including A72-191, and towards the end of Block 10 at the Ford factory, the third block of Ford B-24Ms. It seems unlikely that *Daddy of 'Em All*, from the second last block of Ford's B-24Ls, had the system installed. Of note, the system included a “central fuel control panel (32G1600) ... installed in the flight compartment at station 4.1”.<sup>1</sup>



The centralised fuel control panel.

The pair of APN-148 antennas fitted below and behind the nose scanning windows were for the SCR-729 identification friend or foe (IFF) transceiver system as shown below.<sup>2</sup>

Components of the SCR-729-A IFF system.<sup>3</sup>

The second pair of APN-148 antennas fitted forward of the nose scanning windows and immediately behind the nose turret were for Rebecca, an airborne beacon locating transceiver system which worked in conjunction with a ground-based transponder called Eureka. The system was used by British and American forces in support of special and airborne operations, although not exclusively, and was identical to the SCR-729 IFF system as shown at right, with the Rebecca indicator unit, trans-recur unit and control unit in their respective positions as when installed in 200 Flight B-24s.<sup>4</sup>

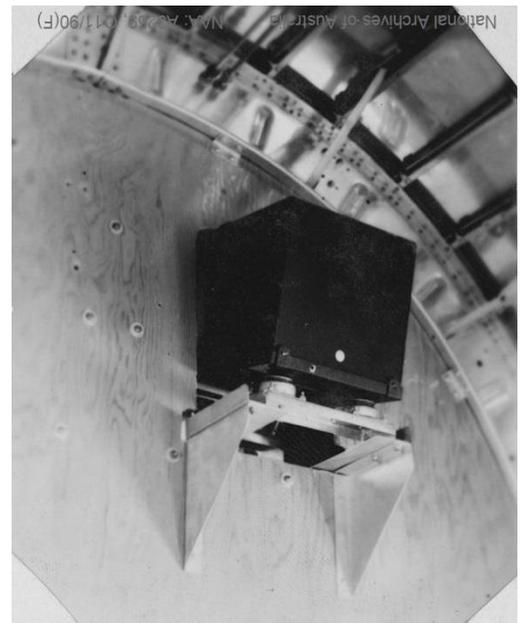


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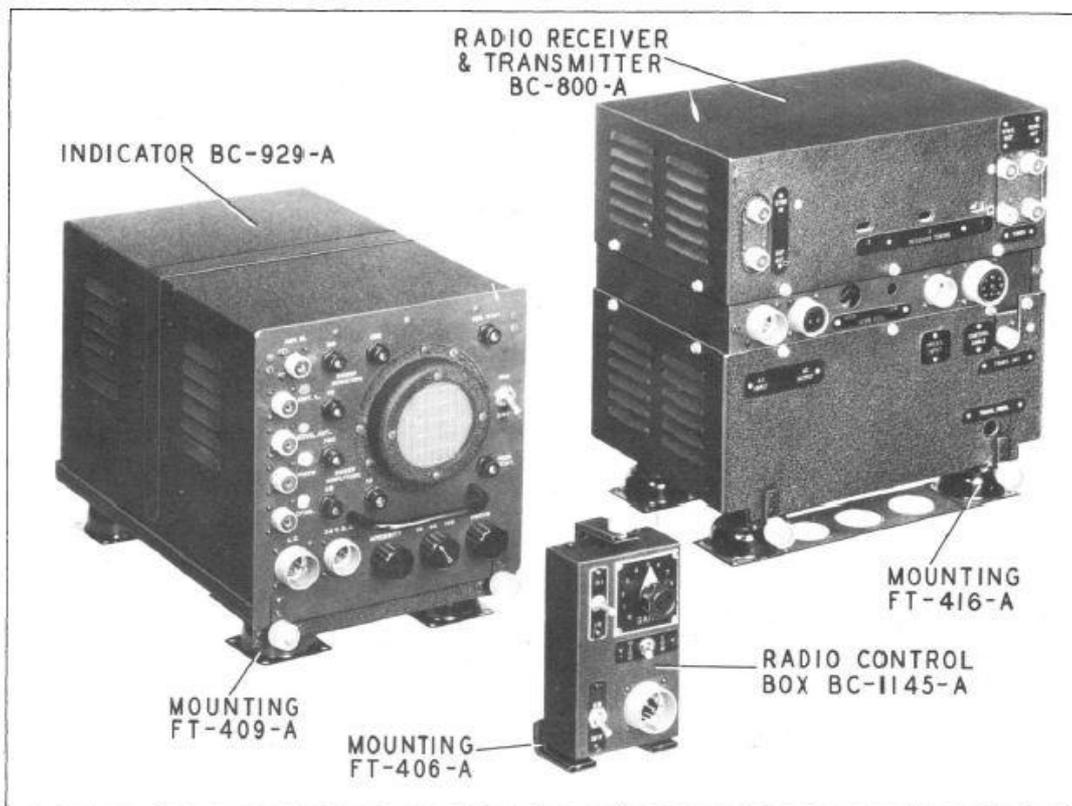


The indicator unit installed in the fuselage.<sup>5</sup>



Rear view of installed indicator unit.<sup>6</sup>

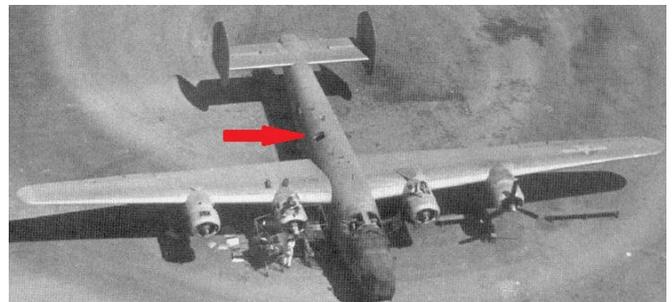
The discovery of any of these parts would confirm the wreck as that of A72-191.



3. **Command deck ditching escape hatch** – These mid-fuselage hatches were fitted on the production lines commencing with Block 15 B-24Ms at the Consolidated factory (the block immediately after A72-191's block, Block 10) and Block 15 B-24Ls at the Ford factory (the block including *Daddy of 'Em All*). Blocks numbers generally increased by fives and usually consisted of approximately 50, 100, 200 or 250 airframes.<sup>7</sup>



The flight deck escape hatch was immediately behind the pilot.



The command deck escape hatch on B-24M-COs was mid-fuselage on the right hand side above the trailing edge of the wing, as indicated.

A command deck escape hatch was discovered on the wreck as shown below.



Indicated by black line lower left.



While the discovery of the hatch would appear to rule out the wreck from being A72-191, there is some cause to believe it does not.

Aircraft constructed on the San Diego and Willow Run production lines were the basic models. Following completion on the production line, the planes were flow to modification centres. The following excerpt from Consolidated's *Plane Talk* magazine of January 1944 probably best describes the role of the modification centres:

Two engines were dead, and half of the tail section looked shot away. But the big bomber somehow settled to the runway and rolled to a stop. The crew piled out, and hurried off to the report room.

Thirty-six hours later details in their report were in the hands of officers of the Special Projects Branch, Material Center, Wright Field, Ohio. And Wright Field experts were in a huddle, studying changes in the B-24 which officers returned from that mission had suggested.

Less than a week afterward some of the changes requested by those fliers in North Africa were already being incorporated in new Liberators on the modification line at Tucson.

The modification center is an American answer to the swift-changing problems of today's war. Shifts in enemy tactics can be met by immediate changes in our equipment, without disrupting the flow on assembly lines at parent plants.

Some people think a modification center is just a place where planes are camouflaged for service in the special area they will fly in-made white for sea-going, greenish for the jungles, pinkish for the desert.

But actually modification means far more - it is a method of avoiding the "freezing" of designs which volume production usually requires.

Mass-production techniques applied to aircraft marked the first step in building America's airpower. But along with the aircraft assembly line came new problems. The battle fronts were producing almost daily evidence that "time makes ancient good uncouth." On automotive assembly lines, one year's inadequacies in a machine could be corrected in the following year's model. The earlier model of an automobile could still provide service. Not so with a bomber. In combat conditions, an earlier model bomber is often a death trap for its crew.

So to mass-production we had to add flexibility. Changes and additions had to be made, not on a drawing of next year's model but on today's machine.

On an assembly line the tools, jigs, and fixtures determine in advance the exact nature of their product. A change-over in those tools, jigs and fixtures is a job of weeks or months.

The modification center which Consolidated Vultee built at Tucson, at the onset of the war, laps this time-gap.

Ships are flown to Tucson direct from the parent plant's assembly line at San Diego, to undergo two types of operations.

First come the alterations required to fit the ships specially for the climatic and other conditions in which they will operate. This work comprises about 25 percent of the plant's job.

The other 75 percent of the work at Tucson consists of modifications ordered by the army. These modifications may be executed at Tucson for a few days or for a few months - depending on the time required by the parent plant for adjusting its assembly line procedure to permit the new change in design to be incorporated in planes when first assembled.<sup>8</sup>

As shown below, the Master Change Record to begin installing ditching escape hatches on B-24M-15-COs (commonly written as B-24M-CO-15) on the San Diego production line (MCR-632) was actually promulgated prior to 15 December 1944.<sup>9</sup>

**Field Service Bulletin**      **SAN DIEGO DIVISION**      December 15, 1944

M. C. R.

MASTER CHANGE RECORD

Block No. B-24M-10-CO

MCR 51B	Pressurized Magnetos — Conversion to ventilated type magnetos to comply with Technical Order No. 01-5EE-39.	MCR 246C	recognition light and electrical leads removed. Bombardier's Correction Card — Correction data transcribed to correction cards to provide calibration data.
MCR 130C	Recognition Light — Top white		

Block No. B-24M-15-CO

MCR 128B-2	Heat Anti-Icing—Size of heating ducts increased to improve performance of anti-icing and cabin heating systems.	MCR 632	Ditching Provisions over Aft Bomb Bay—Relocated radio and oxygen equipment; installed vertical sling at station 4.0; provided escape hatch between stations 5.35 and 6.0, right side; provided reinforcements for installation of ditching ribs against the catwalk and against the longerons at the top of bomb bay opening in order to prevent collapse of bomb bay doors.
MCR 128L	Heat Anti-Icing—Insulation installed on nacelle heating ducts to increase efficiency of heat anti-icing system.		
MCR 147B	Bomb Door Up Lock — Rede-		

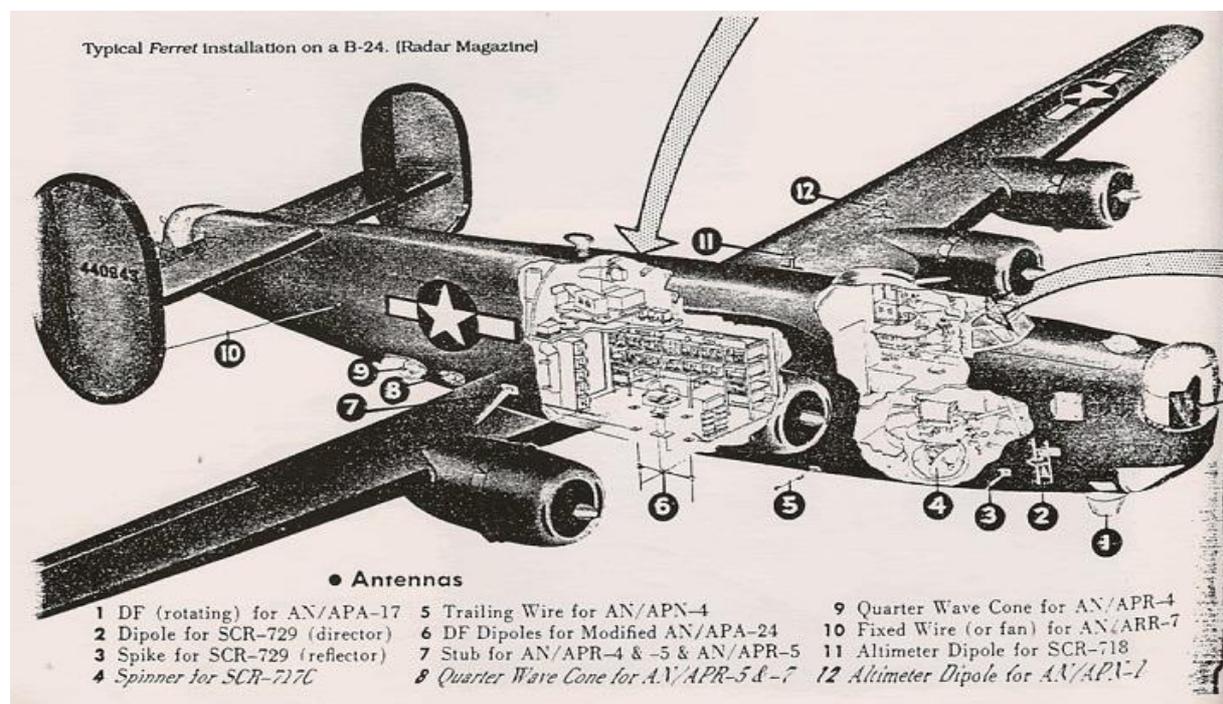
Given Consolidated's own description of the Tucson modification above, it seems likely then that command deck ditching escape hatches were being installed on aircraft at Tucson from or even before 15 December 1944. On that date, the RAAF B-24Ms still at Tucson were probably A72-158 to A72-159 and A72-173 to A72-198.<sup>10</sup> It should be noted that a RAAF report in June 1945 also confirmed that "MCR changes" did take place at "intermediate points within a block".<sup>11</sup>

Analysis of RAAF reports from Washington regarding the delivery of B-24s to Australia indicate that A72-191 was delivered to Tucson from San Diego before 20 November 1944 and was released from there sometime between 2 and 8 January 1945, which means the aircraft was in the right place at the right time to have the hatch installed at Tucson.<sup>12</sup> The RAAF had actually sought to have the hatches incorporated into RAAF B-24 modifications during initial discussions in May 1944.<sup>13</sup>

Notably, A72-191 was modified amongst a batch of thirty-five B-24Ms which I call the "B-24M-CO-10 specials" with production serial numbers from 44-41962 (A72-172) to 44-41996 (three airframes after A72-198, 44-41993, the last RAAF B-24M). Seven of these airframes were diverted for US use in special operations.

It seems that some time between 18 and 26 December 1944, the airframe being modified between A72-178 and A72-179 was diverted to be converted to a US F-7B. F-7s were B-24s modified for the photo reconnaissance role. The F-7B carried additional fuel-tanks in the forward bomb-bay and six cameras in the aft bomb-bay, the cameras attended to by airborne located in the vicinity of the command deck above the bomb bay where the new escape hatches were to be installed.<sup>14</sup>

A further five aircraft were diverted for conversion to US Ferret radar countermeasures (RCM) aircraft. These were Ferret XIV (production serial number 44-41981 diverted from between A72-188 and A72-189), Ferret XV (44-41985 diverted from between A72-191 and A72-192), and Ferrets XVI to XVIII (44-41994 to 44-41996 diverted immediately after the last RAAF B-24M, A72-198). The five Ferrets were urgently required to form a flight to support the Twentieth Air Force's B-29s in the bombing campaign against the Japanese homeland by identifying and jamming Japanese radars.<sup>15</sup> As shown in this cutaway drawing from *Radar Magazine* in 1945, the Ferrets incorporated electronic equipment in the bomb bay with attendant specialists on the command deck:



The seventh airframe diverted for US use was allocated as a testbed for the NACA Lewis Research Center, the forerunner of NASA's John Glenn Research Center.<sup>16</sup>

Of the 28 airframes of the batch allocated to the RAAF (A72-158, A72-159, A72-172 to A72-175 and A72-177 to A72-198), 19 were also allocated for special duties.

Obviously the presence of A72-158 and A72-159 in the series and the absence of A72-176 (the Liberator being restored at Werrabee which was not fitted with the hatch) are anomalies. The production serial numbers for the former actually sit between those for A72-180 and A72-181 and the Australian serial numbers appear to have been reissued, anecdotally due to two aircraft crashing while on delivery flights which makes sense. On the other hand, the production serial number for A72-176 places it between A72-166 and A72-167 off the production line at San Diego, suggesting the aircraft may have been delayed at the Tucson modification centre for an unknown reason. At any rate, at the very latest, A72-176 was released from Tucson sometime between 18 and 26 December 1944, just a few days after MCR-632 had been promulgated.<sup>17</sup>

A72-186 and A72-197 (44-41978 and 44-41992), allocated to 201 Flight, were converted at 1 Aircraft Performance Unit (APU) to become the first Australian RCM Ferrets with a fitout similar to the US Ferrets in the bomb bay and on the command deck.<sup>18</sup> A third aircraft, A72-198 (44-41993 - the last of the RAAF B-24Ms) was also sent to 1 APU for radar trials.<sup>19</sup>

Three of the aircraft in the batch (A72-172, A72-189 and A72-193 – 44-41962, 44-41982 and 44-41988 respectively) were selected to be converted into VIP transport with passengers accommodated behind the command deck and bomb bay. You can see the extra passenger windows fitted to A72-172 forward of the waist gunner position in the photo below.<sup>20</sup>



At least two aircraft, A72-179 and A72-196 (44-41969 and 44-41991), were utilised as Support Air Observer (SAO) aircraft in the Oboe operations on Borneo carrying Army Air Liaison Officers (ALO) and acting in the role of airborne forward air control (FAC).<sup>21</sup> The Army ALOs and associated RAAF staff were accommodated on the command deck. Interestingly, you can see in the photo below taken inside A72-179 while on SAO operations over Brunei and Labuan in June 1945 that what appears to be a marine ply wall has been fitted at the rear of the command deck and just in front of the ball turret.



The remaining 11 RAAF "specials" allocated to special duties, including A72-191, served at one time or another with 200 Flight supporting Special Operations Australia operations carrying troops and equipment, most likely on the command deck, for dropping behind Japanese lines.<sup>22</sup>

The common factor amongst all of these "specials", both US and Australian, is the increased number of people accommodated on or in the vicinity of the command deck for long distances over water, at times five or more.

Also of note is that of the remaining 52 airframes in Block 10, three were also converted into F-7Bs while another 38 were converted into PB4Y-1 long range maritime patrol aircraft for the US Navy.<sup>23</sup>

After the last of the RAAF B-24Ms delivered (A72-198), the remaining RAAF allocation of B-24s was made up with upgraded B-24Js (beginning with A72-300). As shown below, these were fitted with the escape hatch.<sup>24</sup>

	<u>A72-67</u>	<u>A72-305</u>
Radar Operators escape hatch	Not fitted	Fitted
Separate Radar Operators Compt. on upper deck containing table, chair, and fabric partition	Not fitted	Fitted
Radar message conveyer.	Not fitted	Fitted

Of course, all of the above is just a long-winded way of saying, in the absence of definitive evidence to the contrary, that it is possible that A72-191 did have a command deck ditching escape hatch fitted and that the discovery of the hatch at the wreck site does not eliminate the possibility that the wreck is A72-191.

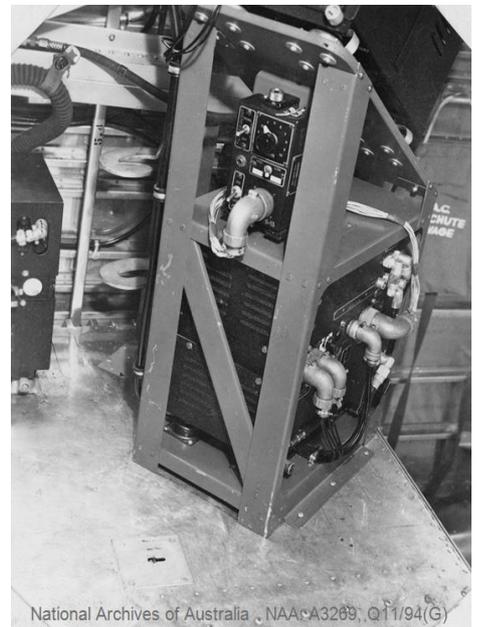
I should add that the B-24M which appears to have initially replaced A72-191 at 200 Flight in April 1945 was flown "to Amberley for replacement" on 17 April and "allotted" to 3 Aircraft Depot.<sup>25</sup> Although there could have been a number of issues with the aircraft leading to it apparently being returned, the lack of any signal traffic discussing faults or possible remedies may suggest that the aircraft was simply deemed unsuitable.

There is no evidence available, but my thoughts are that it may relate to a lack of the command deck ditching escape hatch. That aircraft was A72-169, three before the start of what I call the "B-24M-CO-10 specials" commencing at A72-172, which appears to have been released from the Tucson modification centre before 11 December 1944 and prior to Consolidated publishing MCR 632 in the San Diego Division's Field Service Bulletin.<sup>26</sup> It is hard to tell without access to the relevant signal traffic and the individual aircraft cards, but it appears that A72-169 was replaced by A72-183.

It should also be noted that the only B-24 issued to 200 Flight which was not a B-24M-CO-10 "special" was A72-373, a B-24J-5-NT from the same block as A72-305 which, as indicated above, fitted with a command deck escape hatch. Although the aircraft was issued to 200 Flight after the war had ended and was only used on transport flights, it appears that it was fitted out with Rebecca. The photos below show the operator's position directly under the escape hatch on a B-24J.<sup>27</sup>

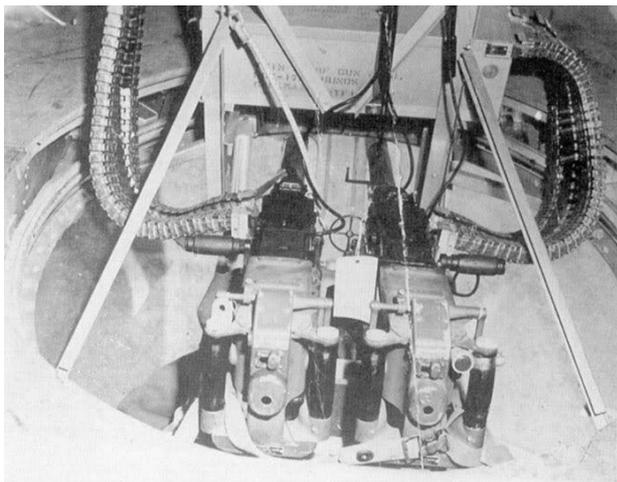


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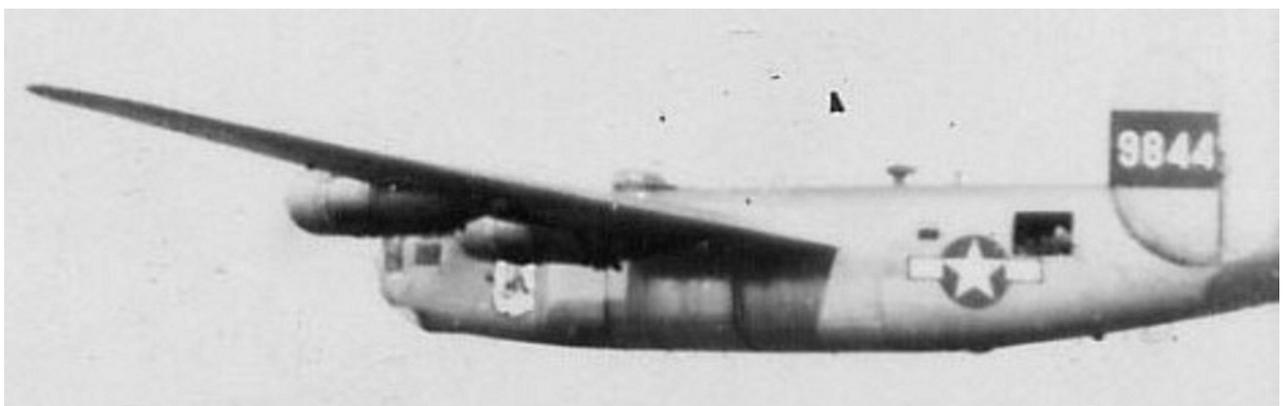
4. **Belly guns** – The 380th Bomb Group Association record in a history compiled of the group that “to save weight, all 5th Air Force B-24s had their ball turrets removed and replaced by a Scarff-ring mounted set of twin-50 machine guns”. The upside down Scarff ring was covered by a shallow plexiglass dish. RAAF B-24Ms, meanwhile, were all fitted with retractable ball turrets.<sup>28</sup>



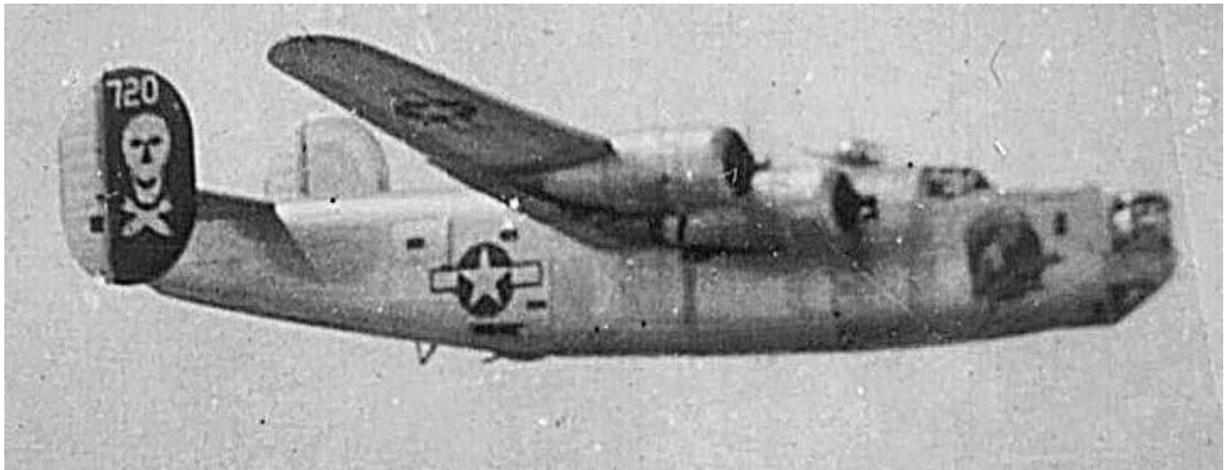
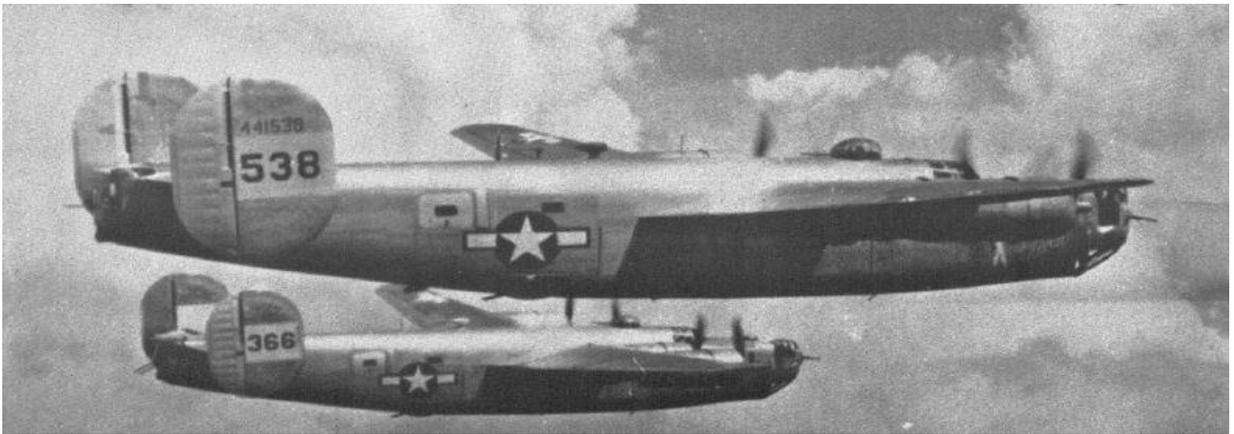
The twin .50 cal machine guns mounted on a Scarff ring covered by a shallow plexiglass dish as reportedly fitted to all 380th Bomb Group B-24s, including *Daddy of 'Em All*.



A ball turret as fitted to all RAAF B-24Ms including A72-191, with the slots for the machine guns when the turret was retracted clearly visible.



380th Bomb Group B-24L-FO-15 44-49844, 16 airframes before and from the same block as 44-49860 – *Daddy of 'Em All*. The shallow plexiglass dish is visible below the US insignia on the fuselage, although it appears the guns are not fitted.



The shallow plexiglass dish with guns fitted are also visible below the US insignia on the fuselage of these other Fifth Air Force Liberators.

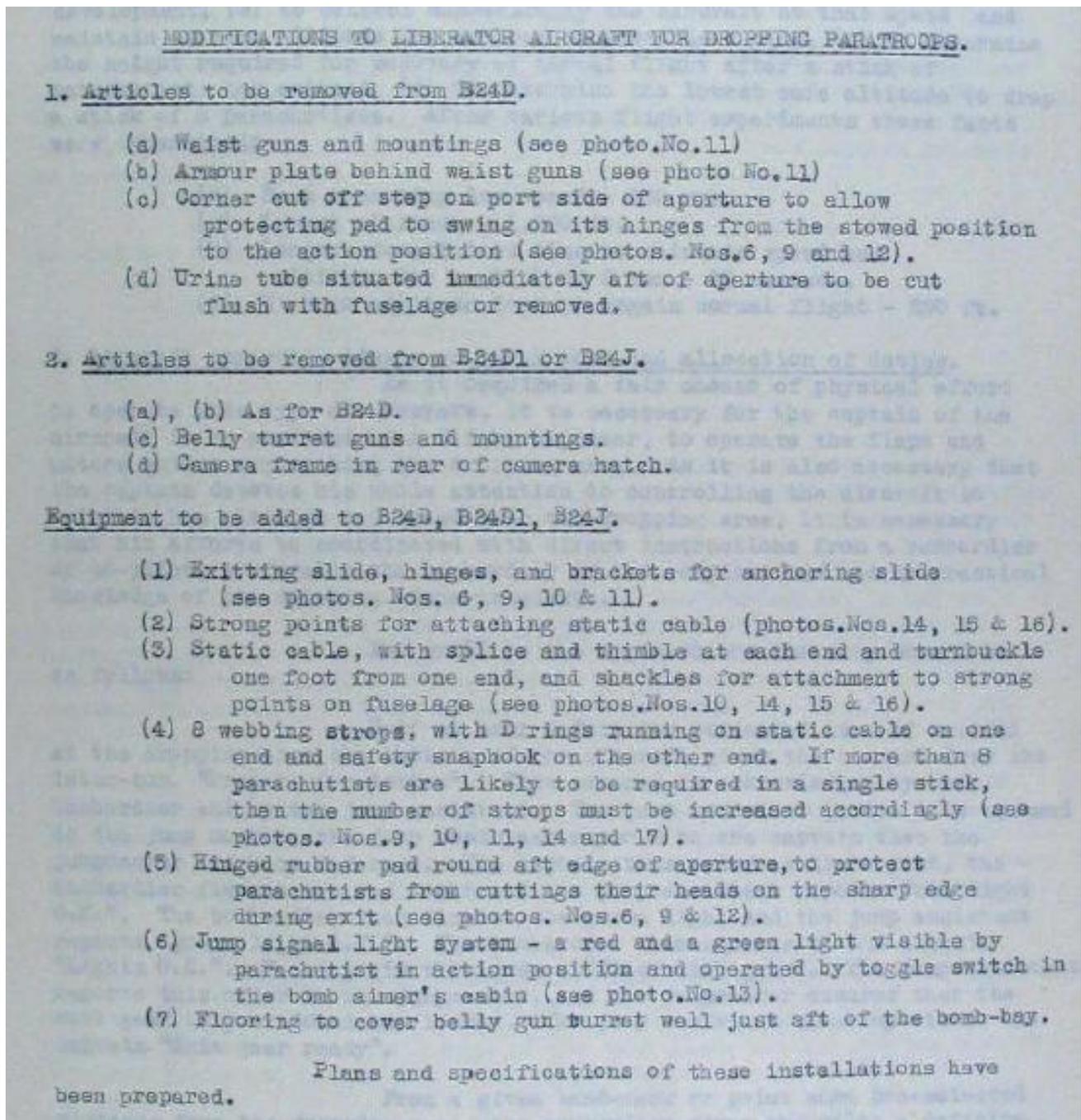


In contrast, in this photo taken at Puerto Princesa in the Philippines in June 1945, RAAF B-24L-CO-1 A72-72 (MJ-R) in the foreground has the ball turret retracted while SAO aircraft B-24M-CO-10 A72-179 (GR, later GR-R) has its turret extended.

Notably though, some authors have written that 200 Flight B-24Ms had their ball turrets removed. Unfortunately, I have been unable to find a source proving that and I'm not convinced that it is true, at least not in the case of A72-191.

It is true that when Director Special Operations Australia (SOA) recommended the formation of 200 Flight to the Air Officer Commanding RAAF Command in January 1945 he did suggest the unit be equipped with Liberators, but that "such auxiliaries as gun turrets, armour and other parts" could "in part be dispensed with, together with some members of an operational crew, thus lightening the aircraft and lowering the speed at which dropping" could be conducted.<sup>29</sup>

However, in the post activity report of initial Liberator paratroop dropping trials conducted with the 380th Bomb Group in the RAAF's North West Area (NWA) in the Northern Territory in December 1943, SOA reported that the modifications detailed below were made in order to conduct the activity, including removing the "belly turret guns and mountings" and adding "flooring to cover belly gun turret well just aft of the bomb-bay".<sup>30</sup> I'm not convinced though that meant removing the ball turret entirely.



Subsequently, in late February 1945, immediately after having been issued their first aircraft and while hurriedly preparing for their first mission in just over two weeks time, 200 Flight sought to have their new Liberators modified for the task. As indicated in the message below sent on 1 March, 200 Flight declared that the modifications had previously been carried out in the RAAF North West Area and primarily consisted of "removing portion of armament and fitting of chute for dropping supplies and personnel". 200 Flight stressed that the "structure of aircraft not affected weight and balance not affected". I would have thought removing the ball turret would have affected the weight and balance at least.<sup>31</sup>

200 Flight

- 39A

T. 58                    1                    MAR                    T. 310                    27

FEB                    (.)                    SECRET                    MODIFICATION                    OF

200                    FLIGHT                    AIRCRAFT                    (.)                    WORK

IS                    AN                    AUTHORIZED                    INSTALLATION                    PREVIOUSLY

CARRIED                    OUT                    IF                    N.W.A.                    (.)

MAINLY                    CONSISTS                    OF                    REMOVING                    PORTION

OF                    ARMAMENT                    AND                    FITTING                    OF

CHUTE                    FOR                    DROPPING                    SUPPLIES                    AND

PERSONNEL                    (.)                    STRUCTURE                    OF                    AIRCRAFT

NOT                    AFFECTED                    WEIGHT                    AND                    BALANCE

NOT                    AFFECTED                    (.)                    TECHNICAL                    ORDER

NOT                    ISSUED                    AS                    THIS                    IS

SPECIAL                    INSTALLATION                    FOR                    OPERATIONAL                    REQUIREMENT

ON                    SIX                    AIRCRAFT                    (.)                    REBECCA

HAS                    TO                    BE                    FITTED                    AT

SAME                    TIME                    (.)                    THIS                    FLIGHT

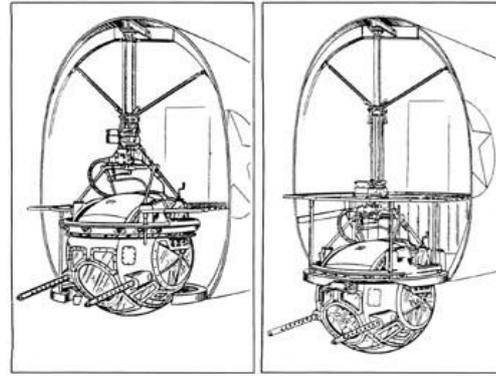
ON                    DUTIES                    WHICH                    CAN                    ONLY

BE                    ACCOMPLISHED                    BY                    INCLUSION                    OF

THESE                    INSTALLATIONS

On 3 March, 5 Maintenance Group directed 3 Aircraft Depot to "proceed with modification of six aircraft from 200 flight. These required by 10 March. Understood work straight forward and parts and equipment being supplied by 200 Flight". 3 Aircraft Depot subsequently confirmed on the following day, 4 March, that the work required was "straight forward".<sup>32</sup>

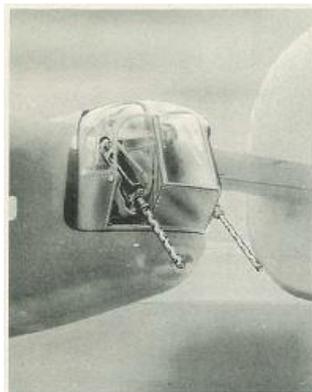
Without a direct reference to removing the ball turret and only references to removing it's armament, and taking in to account 200 Flight's statement that the aircraft's structure, weight and balance were not affected as well as the timeframe given for the modifications, I'm not convinced the turrets were actually removed. The reference to adding "flooring to cover belly gun turret well just aft of the bomb-bay" could just as well mean doing so when the turret was extended. While having the turret out of the way would be of major benefit during paratroop dropping, I think this could just as well be achieved by extending the empty turret in flight, especially on a B-24M.



Compare the photo on the left of a retracted ball turret to the diagram on the left above of same, and then the diagram above on the right with the turret extended. With the turret extended in flight, flooring could then be laid over the turret well giving more space to conduct the paratroop drops.

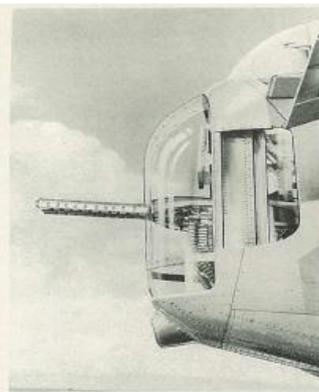
The argument is probably moot, though, as finding a ball turret well on the wreck's fuselage would serve the same purpose as finding the turret itself. If either is found at the site, it would be pretty conclusive evidence that the wreck is A72-191. If a Scarff ring is found, that would confirm it as *Daddy of 'Em All*.

5. **Tail guns** – The tails guns of the main B-24 variants are described below.<sup>33</sup>



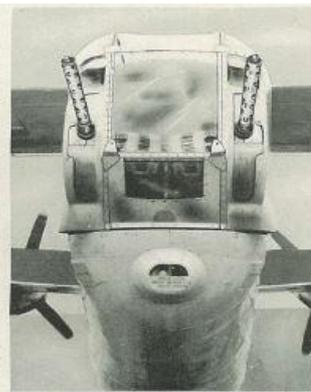
**B-24J**

The B-24J airplane is equipped with a heavy-weight armor-plated tail turret (MPC 5800-5) that is operated hydraulically. B-24J airplanes include Serial Nos. 42-72964 through 42-73514; 42-99936 through 42-110188; 44-40049 through 44-41389



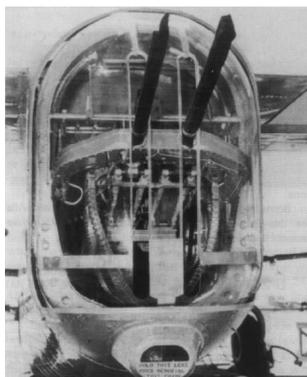
**B-24L**

A Plexiglas shield is installed in the tail of the B-24L airplane. Hand held guns are installed, thus eliminating hydraulic units in the tail section. B-24L airplanes include Serial Nos. 44-41390 through 44-41806.



**B-24M**

A light-weight Plexiglas turret, with armor plate removed (SCA 3500-7), is installed in the tail of the B-24M airplane. The turret is hydraulically operated from the main hydraulic system. The turret is equipped also for manual operation of the turret and the turret guns. B-24M airplanes include Serial Nos. 44-41807 through 44-42776.



The manually M-6A machine gun mount installed on B-24Ls such as *Daddy of 'Em All*. The plexiglass was removed on some aircraft.



A lightweight A-6 hydraulic turret installed on B-24Ms such as A72-191.

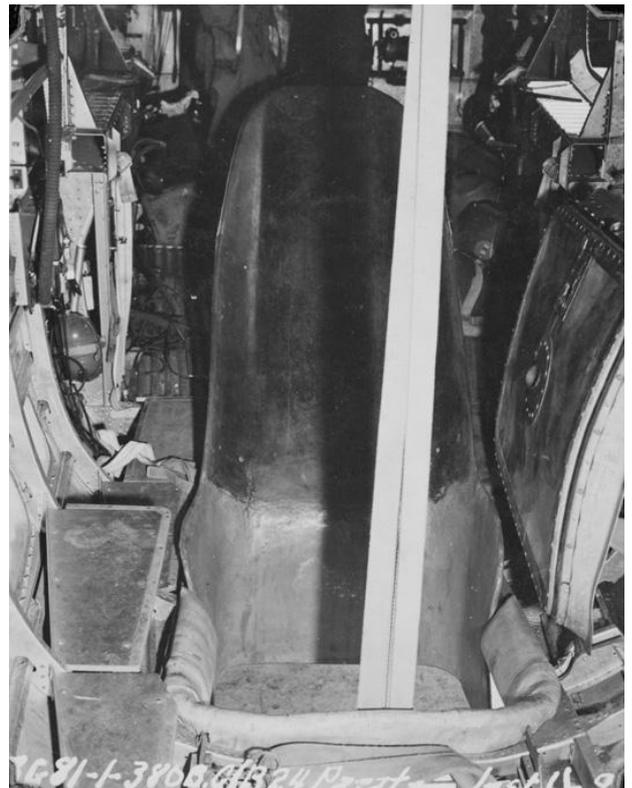
Discovery of an M-6A tail gun mount at the site would confirm that the wreck is *Daddy of 'Em All*, while an A-6 turret would confirm it as A72-191.

6. **Paratroop dropping equipment** – Included on the list above of equipment added to enable the B-24s to drop SOA troops are three unique pieces of equipment which may be recognisable among the wreckage.

The hatch through which the troops were dropped is known as the camera hatch which is located towards the rear of the fuselage, as indicated on the photo below.



As such, the main piece of equipment use was a slide made from “black iron” as shown in the photos below lowered and fitted into the camera hatch. Fitted to the near side of the hatch aperture in the photo on the right below is the second piece of equipment that was found necessary, a “hinged rubber pad” to stop the paratrooper being drop from cutting his head on the aperture edge during exit.





National Archives of Australia NAA: A5369, Q1 117(E)  
 The slide (left ) and the rubber pad (above) are shown swung back on their hinges on either side of the camera hatch in their flight stowage positions in these photos taken during December 1943 trials.

The third piece of equipment is the jump signal light positioned where the paratrooper preparing to exit could see it from the slide and operated by a toggle switch in the bomb aimer's position. The light used in the initial December 1943 trials is shown at right.

If any of the paratroop dropping equipment is found, it would conclusively prove that the wreck is that of A72-191.<sup>34</sup>



So where does that leave us.... the guys have pretty much found the nose to the waist of the aircraft. If the tail can be found, the tail gun mount may provide the answer we are looking for. Failing that, if the ball turret recess or any of the specialist equipment can be found between the two, they would do just as well. So, in short, hopefully they can find the tail when they are able to return to the site.

For me, there is nothing about this which eliminates the wreck from being A72-191, and a lot that suggest it may well be, so I'm cautiously optimistic. But once again, it comes back to finding the tail of the wreck to confirm the identity.

Snake and Mick have said they will revisit the site when they can. If the wreck does turn out to be *Daddy of 'Em All*, I'll refocus back on a visit to Palawan at some stage to search for information that may relate to A72-191 or a missing RAAF P-51 Mustang that may have crashed on the island as well.

- 1 *Field Service Bulletin: Volume 3 Number 2 - 15 January 1945*, Consolidated Vultee Aircraft Corporation Service Department, San Diego, p. 15.
- 2 NAA: A3269, Q11/91(C), *World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24M*; FTP-217, *US Radar: Operational Characteristics of Radar Classified by Tactical Application*, 1 August 1943, p. 100.
- 3 AN 08-40SCR729-2, *Handbook of Operating Instructions for Radio Sets SCR-729-A and SCR-729AZ*, 10 March 1944, p. iv.
- 4 NAA: A3269, Q11/91(C), *World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24M*; NAA: A3269, Q11/90(C), *World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24M - Indicator unit, trans-recur unit and control unit in the respective positions.*
- 5 NAA: A3269, Q11/90(E), *World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24M - Close up of indicator unit and brackets in position through bulkhead control unit, mounted on bulkhead on right.*
- 6 NAA: A3269, Q11/90(F), *World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24M - Rear view indicator unit showing method of mounting through bulkhead with support bracket.*
- 7 *Field Service Bulletin: Volume 2 Number 25 - 15 December 1944*, Consolidated Vultee Aircraft Corporation Service Department, San Diego, p. 8; *Field Service Bulletin: Volume 3 Number 3 - 1 February 1945*, Consolidated Vultee Aircraft Corporation Service Department, San Diego, p. 32; Martin W. Bowman (1998), *Consolidated B-24 Liberator*, The Crowood Press Ltd, Ramsbury, p. 188.
- 8 *Plane Talk - January 1944*, Consolidated Vultee Aircraft Corporation Service Department, New York, pp. 6-8.
- 9 *Field Service Bulletin: Volume 2 Number 25 - 15 December 1944*, Consolidated Vultee Aircraft Corporation Service Department, San Diego, p. 8.
- 10 NAA: A1695, 16/205/EQ, 1944. *Acquisition of Aircraft for RAAF.*
- 11 NAA: A705, 9/47/2 PART 2, *DTS [Directorate Technical Services] - Liberator Aircraft - general technical file.*
- 12 NAA: A1695, 16/205/EQ, 1944. *Acquisition of Aircraft for RAAF.*
- 13 NAA: A1695, 273/209/EQ PART 1, *Liberator - B24J Aircraft 1944 Allocation. Ident 2275A Case 500 Part 1.*
- 14 Geoffrey J. Thomas (1999), *Eyes For the Phoenix: Allied Aerial Photo-Reconnaissance Operations South-East Asia 1941-1945*, Hikoki Publications Ltd, Aldershot, p. 82; US Headquarters Army Air Forces Missing Aircraft Report - F-7B 44-40961; [https://www.456fis.org/HISTORY\\_OF\\_THE\\_B-24.htm](https://www.456fis.org/HISTORY_OF_THE_B-24.htm), <https://usmilitaryaircraft.files.wordpress.com/2016/07/airf-r.pdf> and [http://www.joebaughner.com/usaf\\_bombers/b24\\_28.html](http://www.joebaughner.com/usaf_bombers/b24_28.html) accessed 2 Sep 2020.
- 15 William Cahill (2012), *Imaging the Empire: The 3d Photographic Reconnaissance Squadron in World War II*, published in *Air Power History, Spring 2012 - Volume 59, Number 1*, Air Force Historical Foundation, Clinton, pp. 15-16; Bill Cahill (2015), *Ferret: Evolution of a design Concept*, published in *Air Power History, Winter 2015 - Volume 62, Number 4*, Air Force Historical Foundation, Clinton, pp. 22-37.
- 16 Frederick A. Johnsen (2018), *Testbeds, Motherships & Parasites: Astonishing Aircraft From the Golden Age of Flight Test*, Speciality Press, Forest Lake, pp. 9, 37, 39-40 and 182; [https://www.456fis.org/HISTORY\\_OF\\_THE\\_B-24.htm](https://www.456fis.org/HISTORY_OF_THE_B-24.htm) accessed 2 Sep 2020.
- 17 NAA: A1695, 16/205/EQ, 1944. *Acquisition of Aircraft for RAAF.*
- 18 NAA: A9186, 180, *RAAF Unit History Sheets (Form A50) 200 Flight Feb 45 - Dec 45 - 201 Flight Mar 45 - Mar 46.*
- 19 Bob Livingstone (1998), *Under the Southern Cross: The B-24 Liberator in the South Pacific*, Turner Publishing Company, Nashville, p. 150.
- 20 Bob Livingstone (1998), *Under the Southern Cross: The B-24 Liberator in the South Pacific*, Turner Publishing Company, Nashville, p. 126.

- 21 NAA: AA1966/5, 383, RAAF Command Allied Air Forces South-West Pacific Area - Report of Oboe One Operation, May 1945; NAA: AA1966/5, 385, RAAF Command Allied Air Forces South-West Pacific Area - Report of Oboe Six Operation, June 1945; NAA: A9186, 42, RAAF Unit History sheets (Form A50) Number 21 Squadron; NAA: A9186, 51, RAAF Unit History sheets (Form A50) Number 24 Squadron Jun 40 - Dec 60; NAA: A705, 166/35/596, REDMAN, John Robert Walter - (Squadron Leader); Service Number - 402395; File type - Casualty - Repatriation; Aircraft - Liberator A72-196; Date - 5 July 1945.
- 22 NAA: A9186, 180, RAAF Unit History Sheets (Form A50) 200 Flight Feb 45 - Dec 45 - 201 Flight Mar 45 - Mar 46.
- 23 <http://usafunithistory.com/PDF/20-29/20%20INTELLIGENCE%20SQ.pdf> accessed 2 Sep 2020; [https://www.456fis.org/HISTORY\\_OF\\_THE\\_B-24.htm](https://www.456fis.org/HISTORY_OF_THE_B-24.htm), <https://usmilitaryaircraft.files.wordpress.com/2016/07/airf-r.pdf> and [http://www.joebaugher.com/usaf\\_bombers/b24\\_28.html](http://www.joebaugher.com/usaf_bombers/b24_28.html) accessed 2 Sep 2020.
- 24 NAA: A705, 9/47/2 PART 2, DTS [Directorate Technical Services] - Liberator Aircraft - general technical file.
- 25 NAA: A9186, 180, RAAF Unit History Sheets (Form A50) 200 Flight Feb 45 - Dec 45 - 201 Flight Mar 45 - Mar 46.
- 26 NAA: A1695, 16/205/EQ, 1944. Acquisition of Aircraft for RAAF.
- 27 NAA: A9186, 180, RAAF Unit History Sheets (Form A50) 200 Flight Feb 45 - Dec 45 - 201 Flight Mar 45 - Mar 46; NAA: A3269, Q11/94(G), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24J - View of unit fastened in position on the floor of radar cabin in aircraft. Fastening catch for part of operators chair can be seen on floor; NAA: A3269, Q11/95(A), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Signals - Rebecca - Instillation AND 2 Rebecca; 200 Flight Liberator A/C Type B24J - View of unit mounted in position in aircraft showing relative position in respect to operators seat and other radar equipment, entrance door to the bomb bays is seen in lower left hand corner.
- 28 <http://380th.org/HISTORY/PDF/pt6.introduction.pdf> accessed 3 September 2020; Frederick A. Johnsen (1996), *Consolidated B-24 Liberator*, Speciality Press, North Branch, p. 75.
- 29 NAA: A11093, 320/5L11, RAAF Command Headquarters - Number 200 flight - Policy.
- 30 NAA: A11093, 452/A96 PART 1, RAAF Command Headquarters - Aircraft - Liberator - B24.
- 31 NAA: A11093, 320/5L12, RAAF Command Headquarters - Number 200 flight - FCOM.
- 32 NAA: A11093, 320/5L12, RAAF Command Headquarters - Number 200 flight - FCOM.
- 33 *Field Service Bulletin: Volume 3 Number 4 - 15 February 1945*, Consolidated Vultee Aircraft Corporation Service Department, San Diego, p. 46.
- 34 NAA: A11093, 452/A96 PART 1, RAAF Command Headquarters - Aircraft - Liberator - B24; NAA: A3269, Q11/17(B), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Liberator conversion experiments and Paratroop training - Slide and protecting pad in place with static straps hanging through exit hole; NAA: A3269, Q11/17(C), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Liberator conversion experiments and Paratroop training - Paratrooper about to jump; NAA: A3269, Q11/17(D), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Liberator conversion experiments and Paratroop training - Slide raised allowing camera hatch to close; NAA: A3269, Q11/17(E), World War Two - Special Operations Australia (SOA) - Services Reconnaissance Department (SRD) - Liberator conversion experiments and Paratroop training - Rubber pad raised allowing camera hatch to close.