

Hawker Hurricane emergency shipments for Singapore, Burma, Ceylon and the Netherlands East Indies, December 1941-April 1942

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With an Appendix titled 'Hurricanes Mark I, IIA and IIB delivered to squadrons in Singapore, Burma, Ceylon and the Netherlands East Indies (aircraft deliveries, allocations and fates as far as is known until approximately 15 April 1942)' by Peter C. Boer and Geoffrey Sinclair.

Introduction

During 1941 the RAF was heavily tasked and the demand for fighters from the active war theatres, including a commitment of 200 a month from October onwards as defence aid to Russia, was huge. Singapore and Burma could do with Brewster 339E Buffaloes as the performance of the fighters of the Japanese Army and Navy air forces was thought to be in the same category at best. The Buffalo squadrons were to work up locally with largely newly trained personnel from New Zealand and Australia. When the Pacific War erupted on 8 December 1941 the Buffaloes almost immediately proved to be inferior compared to the Japanese fighters met in air combat although it was later realised that the perceived inferiority must have been at least in part due to the level of experience of the Buffalo pilots. More modern Hawker Hurricanes were quickly redirected from other planned destinations to strengthen the Buffalo force and replace the losses, even though, besides the defence aid for Russia, Hurricanes were very much in need in northern Africa. Combat-experienced squadrons could also not be missed. Nevertheless, the defence of Singapore received priority, Burma coming in second place. The British Admiralty further insisted that the fighter defences of Ceylon urgently needed strengthening with modern fighters by the RAF, while in January 1942 the new allied ABDA Command in Java had established a necessity to strengthen the allied air defences of the Netherlands East Indies (NEI, present day Indonesia). Two RAF Hurricane squadrons were eventually planned to be based in western Java. Both ultimately went to Ceylon.

The initial Hurricane emergency allocations for the defence of Singapore, Burma and Ceylon from December 1941 were the following:

Singapore,

-51 aircraft already en route (but to Basrah, Iraq) with convoy WS.12Z,

-48 aircraft (enlarged with two reserves to 50) from the Middle East to be flown off the aircraft carrier HMS Indomitable (258 Squadron and 605 Squadron) to go to Singapore via the NEI,

Singapore or Burma depending on developments,

-50 aircraft to be shipped from the UK with various convoys as attrition replacements (the first eight earmarked for Burma in January 1942).

-40 aircraft to be shipped from Takoradi (Gold Coast Colony, present day Ghana, western Africa, also the starting point of the ferry route across Africa to Port Sudan in present day Sudan) with the aircraft transport vessel HMS Athene. [1]

Burma,

-48 aircraft to be ferried from Port Sudan, present day Sudan, to Rangoon, Burma,

-17 aircraft to be shipped from Takoradi (later reduced to nine). [2]

Ceylon,

-8 aircraft to be shipped from Takoradi (earmarked aircraft originally to go to Burma). [3]

A second “run” by HMS Indomitable and HMS Athene was planned in late January-early February 1942 after a request from ABDA Command, the 90 Hurricanes involved to arrive in Batavia, Java before the end of February. [4] Only a second ferry trip by Indomitable materialised with 60 Hurricanes and the personnel of two fighter squadrons reallocated from Middle East Command. The Athene left Batavia on 10 February to load American Curtiss P-40E aircraft for the ABDA Area in Australia instead. [5] With the fall of Singapore the RAF tried to reallocate the two additional fighter squadrons to Burma but (political) pressure from ABDA Command and the NEI Government kept the destination at the NEI. [6]

Where did the aircraft and units come from and did they arrive as planned? And, if not, where did they go? The paper further looks into the usage and fate of the aircraft. Operations flown are not a focal point of this study, nor are the exploits of the personnel of the units involved.

A part of 267 (Fighter) Wing redirected to Singapore

First to be redirected to Singapore was a part of convoy WS.12Z which officially sailed on 12 November 1941 from Liverpool/Clyde but formed up next day off Oversay. [7] The aircraft transport vessel HMS Sussex in the convoy carried 41 partly disassembled Hurricanes (outer wings off and in crates only) and the Dutch freighter MS Abbekerk (an ammunition ship) ten crated Hurricanes, all originally to go to Basrah, Iraq but with probably Russia as a final destination. Ships in convoy WS.12Z also carried the ground personnel of 232 Squadron and the equipment of two unknown Hurricane squadrons. Also carried were advanced echelons of the ground parties of three other squadrons, all part of 267 (Fighter) Wing consisting of 17, 135, 136 and 232 Squadrons and destined for Basrah. [8]

On approximately 16 December 1941 all aircraft, the ground personnel for 232 Squadron and the ground equipment for two squadrons were diverted to Singapore,

the remainder of 267 Wing (becoming a three squadron wing) receiving Rangoon, Burma, as its new destination (see below). The convoy left Durban on 24 December with a part of it including HMS Sussex and MS Abbekerk, redesignated WS.12ZM, slightly later renumbered DM.1, receiving as its destination Singapore. [9]

The ships of DM.1 passed through the Sunda Straits and Banka Straits in the Netherlands East Indies and arrived on 13 January 1942, unloading of the fighters starting immediately. After assembly by 151 Maintenance Unit (151 MU) from Seletar, Singapore the first Hurricane flew on 15 January. The crated Hurricanes all went to Seletar and were concealed and dispersed in the large rubber plantation bordering on the airfield and initially kept in reserve. The first 18 disassembled Hurricanes were wheeled six each to Kallang, Sembawang and Seletar and re-assembled there by 151 MU teams with assistance from maintenance personnel of the squadrons based at these airfields. All others went to concealed positions near Seletar and were successively re-assembled by 151 MU there. The convoy included a large supply of spares but Hurricane tool kits were scarce. [10]

The 24 pilots for the Hurricanes came from 17, 135, 136 and 232 Squadrons (six from each) who were on board of the troopship Duchess of Bedford in WS.12Z. The pilots together with the main part of the ground echelon of 232 Squadron which had been on board of the troopship Monarch of Bermuda changed ship at Durban and were reconstituted as 232 (Provisional) Squadron. All arrived in Singapore on the Dutch ship MS Oranje with DM.1. [11]

No 232 (P) Squadron was split up in three Flights based at Seletar (A and B Flights) and Kallang (C Flight). The unit number was a bit of a mistake as there was also a 232 Squadron proper, now a flying echelon only which was en route to Singapore on the aircraft carrier HMS Indomitable (see below). The provisional 232 Squadron became operational as of 20 January having enjoyed only a few days of acclimatising during which time the aircraft had to be air tested. On approximately 24 January C Flight was transferred to Seletar with three remaining serviceable aircraft, leaving two aircraft in repair at Kallang. [12]

Buffalo unit 488 Squadron based at Kallang was to re-equip partly with Hurricanes (one Flight of eight 1st line aircraft) and was initially allocated nine aircraft. It took over its first Hurricanes on 24 January and the others in the next two days. A second Kallang based Buffalo squadron, No 243, was also to partly re-equip with Hurricanes but this did not happen due to a lack of Hurricanes after 27 January. [13] When 232 (P) Sq became operational the two other Buffalo squadrons (21 Sq and 453 Sq) based in Singapore had already suffered severe losses when deployed in Malaya. They were, as a result, merged into one unit on 25 December. No 243 Sq lost most of its aircraft in a Japanese air raid on 27 January and was deactivated on 30 January. On the same day all remaining Buffaloes were concentrated into one squadron No 453, while the remnants of 21 Sq were transferred to Australia. [14]

Into combat

The Hurricanes Mark IIB from Sussex and Abbekerk were put into service quickly but losses were high. It took time before the provisional unit, which had many inexperienced pilots in its ranks, had become a reasonably cohesive unit the enemy had to worry about. Apart from the CO and the Flight commanders all pilots were freshmen, only a few having flown for a few months with a squadron. Most pilots came straight or almost straight from an OTU with only some 20-30 flying hours on Hurricanes and a few without even that as they came from a Spitfire OTU. CO Sqn Ldr L.N. Landels was killed in action already on the very first day of operations, a severe blow to the morale. [15]

Normally squadrons sent overseas were given some time to acclimatise after a long sea voyage and especially when inexperienced the flying echelon went through a unit and tactical training program first. In Singapore the AHQ and the Fighter Group Hq thought that the operational situation necessitated an immediate deployment. The necessary training was discarded and the unit was deployed without waiting for the Hurricane conversion of the Flights of 243 Sq and 488 Sq which would have given a number of operational Hurricanes to better match that of the opposing fighters and cooperation with combat-experienced pilots. [16]

The squadron was scrambled three to five times a day and formations of Japanese bombers escorted by Mitsubishi A6M Navy Os or Nakajima Ki 43 Army 1s and Nakajima Ki 27 Army 97s had to be intercepted almost daily. Apart from the first day of operations when unescorted Japanese bombers were successfully attacked the Hurricanes were almost always outnumbered by what were thought to be Navy Os. [17] Very little was known about the performance of the Japanese fighters, in reality most of the time Nakajima Ki 43 Army 1s instead of Navy Os, but that soon changed at the cost of pretty severe losses. Although reasonably accurate intelligence data on the Navy O performance was available with the RAF this had either not been shared with AHQFE in Singapore or had not been believed to be accurate. At Seletar there were also no resident Buffalo squadrons whose pilots could share experiences and tactics. [18]

The turning rate of the "Navy O" could not be matched by the Hurricane IIB even with the outer two machineguns in each wing deleted, making dog fights lethal. Only above 6,000 metres the Hurricane proved to be faster and it climbed faster while it could usually out dive its opponent given enough altitude to build up speed. The warning time (even with the radar warning that was available in Singapore) seldom was sufficient to climb out to heights above 6,000 metres, however. This necessitated "in-and-out" tactics, the Hurricane pilots immediately diving away after an attack from preferably higher altitude. Worse, when flown against a Buffalo even this considered somewhat outdated fighter (which contrary to the Hurricane could be and was flown with partly filled wing fuel tanks during air defence sorties) could turn faster than the Hurricane and match the turning rate of the "Navy O" at the normal operating level of 5,000-6,000 metres. The only real advantage of the Hurricane above the Buffalo was its heavier armament. Like the Buffalo the Hurricane was a sturdy fighter that could

absorb a lot of battle damage and stay aloft, damage which would have taken apart the more nimble built opponents. [19]

Nevertheless 232 (P) Sq was a very welcome addition to the by now much depleted Buffalo strength. The Hurricane strength developed as follows.

19 January: 232 (P) Sq is declared operational at the end of the day with 18 Hurricanes (all serviceable).

24 January: strength of 232 (P) Sq 11 Hurricanes (8 serviceable).

25 January: strength of 232 (P) Sq 16 Hurricanes (unknown number serviceable).

27 January: of 51 Hurricanes delivered, 17 written off, two reparable with 232 (P) Sq, seven reparable at 151 MU (of which four within 24 hours), 12 with 232 (P) Sq and 9 with 488 Sq. Four Hurricanes status "undetermined" (three damaged aircraft not yet struck off charge and the final one not yet fully assembled).

30 January: strength of 232 (P) Sq 17 Hurricanes (unknown number serviceable), 488 Sq 7 Hurricanes (3 serviceable, 4 in major repair). [20]

No 151 MU delivered the seven Hurricanes in its care mentioned above with remarkable speed to 232 (P) Sq in the period of 27 up to and including 29 January. In the same period the Japanese pattern bombed the Singapore airbases destroying two Hurricanes of 232 (P) Sq in repair at Kallang. As there were also two operational losses the total strength of the unit, nevertheless, became just 17 aircraft. [21] No 488 Squadron at Kallang had lost two of its nine aircraft in an air raid on 27 January and had three lightly splinter damaged Hurricanes serviceable again on 30 January. Despite being well dispersed and far apart all nine Hurricanes had been hit. The squadron turned over its seven remaining aircraft (including four with major damage which were being repaired by seconded 488 Sq personnel) to 232 (P) Sq on the next day (31 January), leaving the latter as the sole Hurricane unit. [22]

Eight more 232 (P) squadron Hurricanes were lost in the period of 30 January up to and including 1 February 1942, mostly on the ground but a few after a crash landing with battle damage. The squadron was involved in air battles daily in this period and was surprised on the ground at least once. Due to late warning and despite the fact that the Hurricanes were very well dispersed repeated attacks by formations of Japanese bombers took a rather large toll. No 151 MU could no longer assist with repairs after its facilities had been bombed out on 29 January. Its evacuation to Java began on 2 February although a Repair and Salvage Unit (RSU) party was formed that remained active for a number of days. The RSU tasks for the Hurricane squadrons were mainly carried out by 81 RSU at Sembawang, however. Part of its tasks became the salvaging of Hurricanes and the harvesting of spares from them as many parts had become scarce by now. [23]

A plan to keep just eight Hurricanes and the remaining Buffaloes in Singapore had been approved by the AHQ on 30 January with the orders for 232 (P) Squadron being issued on the next day. By then there were only six serviceable aircraft left and the CO was ordered to evacuate his unit including the flyable but unserviceable aircraft. Sqn Ldr R.E.P. Brooker, the successor of Sqn Ldr Landels, and five other pilots were to stay behind. [24]

Initially 488 Sq was to be transferred to Palembang but the orders were rescinded on 31 January while the next day the complete ground crew of 232 (P) Sq as well as nine pilots for who there were no planes were ordered to Palembang by ship. The personnel left on 2 February on a coaster and safely arrived at Palembang on the third. The ground crew of 488 Sq was kept in Singapore to service Hurricanes. [25]

No 232 (P) Sq squadron moved to Sembawang on 2 February with six serviceable aircraft. Four flyable but unserviceable Hurricanes were flown from Seletar to Palembang I (PI, South Sumatra, NEI) on this day by four 488 Sq pilots seconded to the unit. Left in repair at Seletar were two Hurricanes while three former 488 Sq aircraft were still in repair at Kallang and one former 488 Sq aircraft was in repair at Sembawang. [26]

On 5 February the remaining Hurricanes were transferred to Kallang where 232 (P) Sq was to be relieved by 232 Sq proper. By now also "Opponent" Hurricanes operated in Singapore (see below). The flying echelon of 232 (P) Sq was evacuated to Palembang I on the same day, six aircraft in all, including one Hurricane initially left at Sembawang. This aircraft was flown to Tengah and later from Tengah to Kallang by 453 Sq and 258 Sq pilots as 232 (P) Sq did not have a pilot available when the aircraft had to be flown away due to artillery shelling. The unserviceable but flyable Hurricane in repair at Sembawang was flown to Tengah by the CO of 453 Sq and went to Kallang later in the day for further repairs. On taxiing out Sqn Ldr Brooker's Hurricane hit the still soft earth of a recently filled bomb crater and had to stay behind for repairs, following the others two days later. [27]

The unit had lost 32 Hurricanes, evacuated 10 aircraft to Palembang I and had turned over six Hurricanes under repair to 232 Sq which would also be evacuated although one of these was lost on the ferry flight to PI. In a period of slightly over two weeks the unit had been operational in Singapore nine of its pilots were killed in action. A further two of the original 51 Hurricanes had been lost by 488 Sq and the remaining aircraft was still in final assembly at Seletar. [28]

No 232 Sq proper arrived at Kallang in the morning of 5 February with 10 Hurricanes including a few former 232 (P) Sq Hurricanes evacuated on 2 February of which one would be lost in Singapore (see below).

Operation Opponent

On 27 December 1941 it was decided to direct the aircraft carrier HMS Indomitable from Cape Town (South Africa) to Port Sudan (in present day Sudan) and have her fly off part of her own aircraft and load 48 Hurricanes, later increased to 50 by including two reserves, which were reassigned from "Middle East" to "Far East" (Singapore). All aircraft were Mark IIBs. In Port Sudan also 52 pilots were taken on board, which largely came from 232 Sq and 258 Sq. [29] The flying echelon of 232 Sq had been on a troopship in the Singapore-Bombay convoy WS.14 (which sailed on 8 December 1941) and arrived at Takoradi on 29 December with orders to disembark there. [30]

The pilots of 258 Sq had travelled to Gibraltar with the aircraft transport vessel HMS Athene. They were to fly Hurricanes off the aircraft carriers HMS Ark Royal and HMS Argus in the Mediterranean, fly to Malta to refuel and then to Egypt (together with the flying echelons of 242 Sq and 605 Sq). However, the Ark Royal was sunk by a German U-boat on 12 November and the pilots of 258 Sq plus three of 605 Sq and one of 242 Sq remained at Gibraltar for the time being, essentially as a reserve. Re-allocated to Singapore the pilots re-embarked on Athene, left Gibraltar on 24 December and arrived at Takoradi on 1 January 1942. [31]

Together with those of 232 Sq most of the pilots travelled across Africa in an assortment of civilian and RAF aircraft, some being tasked with the ferry of a Hurricane from Takoradi to Khartoum and/or from Khartoum to Port Sudan, a few with twin-engine experience ferrying Bristol Blenheim bombers to Port Sudan. There the two flying echelons were brought up to strength (also included were the four pilots from 242 Sq and 605 Sq) and a number of spare pilots were added. The carrier left Cape Town early January and after loading sailed from Port Sudan on 15 January. The fighters were originally to be flown off near the coast of Sumatra but this was changed into a position to the south of Christmas Island with the airplanes to land at Kemajoran, the civilian airfield of Batavia (present day Djakarta) in Java. [32]

Sixteen Hurricanes were flown off in the afternoon of 27 January, sixteen in the morning and another seventeen in the afternoon of the next day. Also one of the spares was flown off in the afternoon of the 28th as one of the Hurricanes flown to Kemajoran in the morning of that day crashed on landing. Blenheim bombers of the RAF provided navigational assistance and protection during the flight, a Catalina flying boat of the RAF was in the area to supply air-sea rescue services in case of ditchings and fighters of the ML/KNIL (Army Air Corps of the Royal NEI Army) were on stand-by in western Java if fighter support would be in order. From Kemajoran the aircraft were to be flown to Palembang II (PII) a large new airfield in the jungle to the southwest of the city of Palembang in southern Sumatra (NEI) with Seletar in Singapore as the next stop. The operation was code named "Opponent". [33]

Apart from an unserviceable one the 16 Hurricanes of 232 Sq and 258 Sq which arrived at Kemajoran first were ferried to PII on 29 January. Two of the aircraft were damaged during landing of which one ended up on its nose ruining its propeller but

the other one was a write-off as it had turned over. The 13 others (five from 232 Sq and eight from 258 Sq) flew to Seletar in the early evening of the same day while at the same time 11 more Hurricanes of both squadrons arrived at PII from Java, followed the next day by 19 Hurricanes. Four aircraft damaged in landing accidents or otherwise having become unserviceable remained behind at Kemajoran for the time being. Again Blenheims accompanied the fighters as escorts and for navigational guidance. [34] In the morning of 30 January three more aircraft of 232 Sq flew to Seletar and the following morning another four aircraft of 232 Sq plus four of 258 Sq went to Singapore but to Tengah this time. [35] The Hurricanes which remained behind in Sumatra were flown to PI (the former civilian airfield of Palembang to the north of the city) on 31 January apart from one in repair at PII. [36]

Having been made operationally serviceable at Seletar (the first 16) or PII (all others) a total of 24 Hurricanes were flown over to Tengah where the final aircraft of the initial 16 arrived in the early morning of 31 January. As had become the standard practise with 232 (P) Sq all newly arrived aircraft had the two outer machineguns in each wing removed (which also was the standard practise in Burma and Ceylon) to improve the turning rate. Servicing was done by Buffalo maintenance personnel as the ground echelons of the squadrons were still at sea with convoy WS.14. [37]

The composite squadron scrambled with 15 Hurricanes in the morning of 31 January to intercept a formation of bombers escorted by fighters, 232 Sq attacking the fighters and 258 Sq the bombers. Although the pilots of 232 Sq and 258 Sq on average were somewhat more experienced than those of 232 (P) Sq, the majority of those in 258 Sq had flown at least six months on operations in Europe, only very few had any experience in air-to-air combat with enemy fighters. That 232 (P) Sq had lost pilots trying to dogfight with the Japanese opponents and by now had adopted successful "in-and-out" tactics was not known. Once again there had been no time for acclimatization or training in the view of the AHQ and the Fighter Group Hq.

Eight Hurricanes of 232 (P) Sq from Seletar were also up, the unit coming out of the fighting with two aircraft damaged but reparable. [38] No 232 Sq and 258 Sq, however, lost six aircraft (five damaged beyond repair in crash landings plus one shot down) and one pilot (of 258 Sq) while six other Hurricanes (all of 258 Sq) made emergency landings at Sembawang or Tengah but were reparable. Two of the three at Sembawang were severely damaged, though. The remaining twelve serviceable Hurricanes of the two squadrons were withdrawn to Palembang I on 1 and 2 February for the protection of a new large Singapore bound convoy that was to pass the Sunda Straits on 2 February and the Banka Straits on the next day. No 258 Sq left behind a detachment at Tengah to ensure the repair of its damaged aircraft as far as would be possible. The two severely damaged Hurricanes at Sembawang were further damaged as a result of Japanese artillery fire on 5 February, both becoming write-offs. A damaged aircraft of 232 Sq crashed on landing at PI on 2 February but could be repaired. [39]

No 258 Squadron returned to Tengah with nine Hurricanes on 3 February, being tasked with a bomber escort mission the following day. Due to miscommunications the Hurricanes were not prepared the following morning, however and the mission was cancelled. Seven of the nine aircraft were flown back to Palembang I together with the three aircraft left behind earlier at Tengah that were by now repaired. Two of the newly arrived nine had to be left behind at Tengah as their engines would not start. The detachment of 258 Sq left at Tengah (five pilots, two serviceable aircraft, one unserviceable aircraft which on 5 February was flown from Sembawang to Tengah, respectively from Tengah to Kallang by 488 Sq and 453 pilots) operated together with 232 Sq and officially became a part of this unit on 7 February. [40]

No 232 Squadron arrived back in Singapore on 5 February with ten Hurricanes. An eleventh aircraft had returned to PI with a malfunction. The squadron operated for some hours from Tengah but then moved to Kallang due to Japanese artillery shelling of Tengah. Approximately two of the Hurricanes had been part of the aircraft of 232 (P) Sq flown to Palembang on 2 February mentioned above. In the period of 5 to 9 February the unit operated daily against Japanese formations of bombers and fighters losing two aircraft on the 5th (of which one crashed on arrival at Kallang), three aircraft and its CO Sqn Ldr A.J.A. Llewellyn on the 7th, one aircraft on the 8th and three Hurricanes plus a pilot on the 9th. By the evening of the 9th six Hurricanes (including one newly assembled Hurricane picked up at Seletar that day and two former 258 Sq aircraft) were left of which one was unserviceable as the landing gear was under repair. [41]

With Malacca already lost and Singapore reached by Japanese troops on 9 February the RAF had no other option then to evacuate its Hurricanes on the island to southern Sumatra. On the 10th 232 Sq proper was ordered to evacuate to Palembang I and it flew out eight Hurricanes on that day, including the brand new BE578 (the final one of the crated Hurricanes of MS Abbekerk that still had to be made operational), the unserviceable 232 (P) Sq aircraft evacuated from Sembawang and three former 488 Sq aircraft just out of major repairs. One of the eight, the original 232 Sq aircraft "A", crashed in South Sumatra en route to PI after the pilot had to bale out due to engine problems. One Hurricane was still in repairs at Kallang and two more of 232 (P) Sq at Seletar and these were flown out on the next day, although one of the 232 (P) Sq aircraft had to be crash landed on an NEI island en route to Palembang and was a write-off. At PI 232 (P) Sq and 232 Sq proper were merged as 232 Sq with Sqn Ldr Brooker of the former as its CO. [42]

Some 200 RAF, RNZAF and RAAF personnel, detachments of ground personnel that had worked on the damaged aircraft and had helped the last Hurricanes and Buffaloes away from Seletar, Tengah and Sembawang, were evacuated by Dutch Lockheed Lodestar transport aircraft operating from PI in the night of 9 and 10 February and the two following nights. [43] The final three Hurricanes left Singapore for Palembang as mentioned on 11 February while 21 more or less complete but salvaged Hurricanes were abandoned in Singapore including two belly landed 232

Sq aircraft at Kallang. None proved to be in a reparable state after investigation by the Japanese Army air force. A few Rolls Royce Merlin engines were captured intact and were brought to Japan for testing and a comparison with two other liquid cooled engines, the Allison engine from a captured Curtiss P-40 and a Daimler-Benz engine procured from Germany. [44]

Apart from the losses sustained by 232 (P) Sq mentioned above, 232 Sq and 258 Sq lost and abandoned a total of 17 "Opponent" Hurricanes when deployed from airfields in Singapore, including the 232 Sq aircraft lost on the ferry flight to PI on 10 February. Also lost in combat by 232 Sq was the above mentioned former 232 (P) Sq aircraft (evacuated to PI on 2 February and reallocated to 232 Sq), while another former 232 (P) Sq aircraft crashed on the evacuation flight to PI on 11 February. [45]

Hurricanes at Palembang.

The parts of the squadrons left behind at Palembang I became fully operational again on 3 February being tasked with the defence of southern Sumatra (especially the two Palembang airbases and two oil refineries and their large tank farms near the city) and the final part of the convoy route through the Banka Straits. Ground echelons for the two squadrons (including that of 258 Sq) were on their way with convoy WS.14 (see below) but 232 Sq had been reunited with its own ground echelon at PI after its service with 232 (P) Sq and only 258 Sq still had a make-shift ground echelon of Brewster Buffalo personnel. [46]

Before 232 (P) Sq was relieved at Kallang by 232 Sq proper on 5 February one Hurricane of the latter unit had been lost on arrival from Java at PII as mentioned above. Also about four Hurricanes of 232 Sq and 258 Sq had been lost at PI and PII (the latter used as a dispersal and emergency landing ground) or on sorties flown from PI due to crash landings on the wet runways after tropical down pours or after the pilot had become lost above the featureless jungle due to bad weather. There was no homing equipment and the Hurricanes were equipped with the TR9D radio which had a relatively short range and often was useless in the wet monsoon climate.

At Palembang the serviceability was low as there was a shortage of spares and Hurricane tool kits while there were few battery starters and no battery-charging facilities. [47] Much help was received from the ML/KNIL which regularly flew with Lockheed Lodestar transport aircraft between PI and the airfields of Batavia and Bandoeng in western Java for the supply of the RAF units. Several Lodestars attended Palembang I weekly. [48] However, No 41 Air Stores Park and No 62 RSU bringing in a large supply of spares, spare engines etc., as well as salvaging equipment, arrived at Batavia on 3 February with convoy DM.2 (originally part of WS.14, see later). Some of the personnel of these units arrived at PI on approximately 12 February while the first stores were unloaded in Oosthaven in the southern part of South Sumatra. [49]

The Japanese started their operation for the conquest of Banka and South Sumatra on 1 February and on 6, 7 and 8 February intensive air raids with fighters and bombers were flown against PI. This airfield was not protected by radar sites as the Singapore air bases had been but there were rings of observer posts although these often were of little help given the prevailing monsoon weather. Losses of the Hurricane squadrons were consequently heavy as take-offs were often late or took place when the first bombs were already falling. On 6 February at the beginning of the day there were 32 Hurricanes at PI in total. [50]

Two Hurricanes were missing (shot down) on 6 February and two made crash landings and were write-offs. The next day a staggering 12 Hurricanes were lost. The RAF was surprised on the ground resulting in six Hurricanes damaged beyond repair (of which three burnt). A further three were lost in crash landings and another three Hurricanes were missing (shot down). Eleven Hurricanes were damaged on the ground but reparable, although some were later abandoned at PI. On 8 February another two Hurricanes were shot down. The number of serviceable aircraft dropped to only seven on 10 February but grew to 20 after the final aircraft from Singapore arrived on 10 February (seven) and 11 February 1942 (two). The total Hurricane strength at the beginning of the day on 12 February was 24 but one more crashed that day due to bad weather. [51]

A final Japanese air operation against PI on 13 February to crush the last resistance before the invasion of Palembang caused the loss of two Hurricanes but of eight new "Operation Churn" aircraft (see later) just arriving from Java and low on fuel two were shot down, the pilots both using their parachute. During missions later in the day Hurricanes ran into violent tropical storms causing the loss of another three aircraft. [52] The Japanese invasion of Palembang followed on the next day starting with an air raid followed by parachutist landings while the Japanese main force approached Palembang in small ships and barges along the Moesi River. One Hurricane was shot down, its pilot making a crash landing on PI. Again a number of "Churn" aircraft flying in from Java and low on fuel ran into the Japanese Army air force. Of the nine new Hurricanes four crashed and one was shot down. [53]

The RAF units at PI were evacuated to PII where on 15 February a total of 22 Hurricanes were gathered of which 16 were serviceable. The aircraft operated in particular against the Japanese invasion fleet on the Moesi River and were very effective. The allied ABDAIR Headquarters in Java ordered the evacuation to Batavia in the afternoon, however and all 15 flyable aircraft were flown out in the afternoon and early evening. Five unserviceable or damaged Hurricanes were abandoned at PI and seven at PII. [54] Two of those at PI were later repaired by the 64th Sentai of the Japanese Army air force and operated by the unit from PI although one crashed killing its pilot. A third selected Hurricane could not be made flyable. [55]

The 49 "Opponent" Hurricanes were all deployed to South Sumatra and in part also operated from airfields in Singapore as described above. Up to and including 15

February a total of 40 aircraft were lost or abandoned, nearly all as a result of operations flown. From this total 23 were lost or abandoned in South Sumatra, excluding the one aircraft lost when ferried from Singapore to PI already mentioned. Nine "Opponent" Hurricanes were evacuated to Java. Of the 17 WS.12Z Hurricanes evacuated to South Sumatra from Singapore one was lost after reallocation to 232 Sq in Singapore and one was lost on the ferry flight from Singapore to Palembang as mentioned above. Of the remaining 15 a total of 12 were lost or abandoned in South Sumatra and three were evacuated to Java, while of the 17 "Churn" aircraft that reached South Sumatra 14 were lost or abandoned at PI or PII and also three were evacuated to Java. [56]

HMS Athene

Another element of the reinforcement plan for Singapore concerned the aircraft transport vessel HMS Athene which started loading of a planned 40 Hurricanes at Takoradi early January 1942 and would deliver these to either Singapore or Rangoon depending on circumstances. The operation was codenamed "Churn". The airplanes were redirected "Middle East" aircraft, all recently arrived with different freighters at Takoradi from the UK. Athene left Takoradi on 8 January and reached Cape Town on the 17th of that month. In Cape Town its master received the order to go to Singapore with the actually loaded 39 Hurricanes Mark IIB, all partly disassembled with outer wings off and in crates, a few smaller items such as batteries packed separately in boxes and drained of all fluids. [57] It was subsequently decided to unload the aircraft at Batavia, Java and assemble them there due to the by now unfavourable circumstances in Singapore. The Athene arrived at Tandjoeng Priok, the harbour of Batavia, on 4 February 1942. [58]

Unloading went quickly but assembling the aircraft by the available RAF personnel, some 151 MU personnel just transferred to Java from Seletar and personnel of recently arrived fighter squadron ground echelons not accustomed to this work, was painfully slow. The RAF asked the ML/KNIL for assistance which was quickly arranged, the assembly work being formally taken over in the evening of 9 February. Until that moment the RAF personnel had been busy assembling the first four Hurricanes in a hangar at Kemajoran airport, having finished two apart from the final checks. [59]

A team consisting of about 90 men, ML/KNIL and KNILM (Royal NEI Airline) technicians, some experienced mechanics of the Dutch naval air service and locally hired technical personnel, started on 10 February and completed the job in five and a half days working a day and a night shift in the suburbs of Batavia on roads near Kemajoran and at Kemajoran airfield. When the aircraft were in working order with running engines, functional hydraulics etc. they were wheeled to Kemajoran where KNILM technicians put on the outer wings, reconnected the ailerons and did the final flight checks. RAF personnel then made them combat ready by taking care of the armament. The first Hurricane was air tested on 12 February and on 15th the final

aircraft were readied for test flying. When serviceable the aircraft were ferried by RAF and ML/KNIL pilots to Tjililitan airbase, the military airfield of Batavia. [60]

Only 27 of the 39 aircraft were allocated to the RAF the others going to the ML/KNIL. The latter on orders from the allied ABDAIR Headquarters, to be able to re-equip a ML squadron (2-VI.G.IV) which had a very experienced flying echelon but almost no aircraft left after air combat above eastern Java. The majority of the RAF allocated planes (17 aircraft) were ferried to Palembang I to strengthen 232 Sq and 258 Sq as mentioned already. Of the 10 Hurricanes which were still in Java three were unserviceable and seven were operated by 488 Sq after the allied evacuation of Palembang which was completed on 16 February. [61] The flying echelon of 488 Sq had been evacuated from Singapore to Java by ship in the night of 6 February to safely arrive on the 10th. The ground crew of the unit left Singapore by ship on 12 February together with some of the pilots of 232 Sq and 258 Sq. [62] The Hurricanes were turned over to the reformed 605 Squadron on 21 February when 488 Squadron was assigned for evacuation (see below).

Replacement pilots and Hurricane maintenance personnel were sent to Java with the above mentioned convoy WS.14 of which a part later called DM.2 was detached on 19 January 1942. The latter included the troopships Warwick Castle and Empress of Australia which carried Headquarters 266 (Fighter) Wing and the ground echelons of 242, 258 and 605 Squadrons plus 15 pilots. Also about 25 largely inexperienced unassigned replacement pilots travelled with the convoy. DM.2 merged at sea with a Bombay-Singapore convoy on 28 January and arrived at Batavia on 3 February. As mentioned already No 41 Air Stores Park and 62 RSU with a large amount of spares, spare components such as engines and other equipment arrived with this convoy at Batavia as well. [63]

Groups of personnel were gradually sent on to Palembang I, moving by ship and train and the final part on trucks. Apart from some 266 Fighter Wing staff, the groups consisted of maintenance personnel of 242 Sq, 258 Sq and 605 Sq, the defence sections of all three squadrons, a number of the pilots and some personnel of advance echelons of 41 Air Stores Park and 62 RSU. All arrived at PI in the period of 9-13 February. A few of the pilots were the first to arrive by means of a ML/KNIL Lodestar on 6 February, others following by ship, train and truck to arrive on 9 February. [64] The Air Stores Park and the RSU were just unloading stores and equipment at Oosthaven in the southern part of South Sumatra when on 14 February the Japanese attacked. Both units were ordered to re-embark and returned to Java but without the unloaded stores and equipment. Much of this could be retrieved later, though as the harbour stayed in allied hands for some time. [65]

Remnants in Java

Although a large number of damaged non-flyable aircraft fell into enemy hands in Singapore and at Palembang I and II a total of 25 Hurricanes ended up in RAF hands in Java after the evacuation of Palembang. This total consisted of the 15 aircraft

evacuated from PII (12 WS.12Z and Indomitable aircraft and three Athene aircraft) and the final ten Athene aircraft that could not be ferried anymore. Apart from three unserviceable Athene aircraft (from the final ten) and three of the evacuated Hurricanes grounded because of their poor condition the 25 aircraft found their way to 488 Sq and 232 Sq. These units reformed at Tjililitan becoming operational on 18 February (488 Sq) and 19 February (232 Sq). No 488 Sq stood down on 21 February as it had been assigned for evacuation from Java (apart from a number of its pilots) and turned over its Hurricanes to the newly formed 605 Sq at the end of the day.

The original ground echelon of 232 Sq was also assigned for evacuation and replaced by the recently arrived ground echelon of 242 Sq. The unit which was renumbered 242 Sq as of 22 February kept its flying echelon from PI. No 605 Sq was a ground echelon only and received a newly formed flying echelon mainly composed of pilots from 258 Sq and 488 Sq. Both 242 Sq and 605 Sq were brought up to strength with some recent arrivals while the remaining personnel of 258 Sq including the recently arrived ground echelon were earmarked for evacuation. No 242 Sq and 605 Sq remained at Tjililitan and were later merged into 242 Sq.

Japanese forces soon landed in Java and carried out simultaneous landing operations in the eastern part as well as in the western part of the island in the night of 28 February and 1 March and the early morning of the latter day. Apart from air defence missions the Hurricanes also flew Army support missions to the Japanese landing areas on the coast and Japanese troops on roads in the western part of West Java in early March. On 3 and 4 March 242 Sq flew very successful strafing missions to the occupied airbase Kalidjati. After 3 March the squadron operated from the ML/KNIL airbases Andir and Tasikmalaja in western Java.

The final operational mission was flown with two Hurricanes from Tasikmalaja on 8 March, the day of the capitulation of the allied forces in Java (effective the next day). [66]

The strength of the squadrons developed as follows.

17 February, 232 Sq and 488 Sq: 19 (both units non-operational).

20 February, 232 Sq and 488 Sq: 18 (14 serviceable).

22 February, 242 Sq and 605 Sq: 18 (16 serviceable).

1 March, 242 Sq and 605 Sq: 15 (12 serviceable).

3 March, 242 Sq: 11 (10 serviceable).

4 March, 242 Sq: 10 (8 serviceable).

7 March, 242 Sq: 5 (3 serviceable). [67]

After the capitulation just four reparable RAF Hurricanes remained (two at Andir and two at Tasikmalaja) to fall in Japanese hands together with one of the ML/KNIL aircraft (at Andir). Two of the five could be made flyable by the Japanese Army air force test unit formed at Andir, the one of the ML/KNIL and aircraft Z5611 of the RAF. The latter was brought to Japan for evaluation while the ML/KNIL Hurricane went to the 59th Sentai of the Army air force at Andir. The three other Hurricanes proved to be reparable only in principle as the components and parts needed for their repair could not be located anywhere. [68]

The reformed No 267 (Fighter) Wing to Burma

The main parties of the ground personnel of 17, 135 and 136 Squadrons and most of the pilots of 17, 135, 136 and 232 Squadrons plus the ground equipment of two of the squadrons were on ships of the already mentioned convoy WS.14 which left from Liverpool/Clyde on 8 December 1941 to arrive at Durban on 8 January 1942. On arrival at Freetown in Sierra Leone (23 December) the squadron commanders were informed of the new destinations. As mentioned above 232 Sq was to go to Singapore, while the other three squadrons were destined for Burma as 267 (Fighter) Wing. WS.14B was the convoy part with destination Bombay and reached the harbour of this city on 28 January 1942. [69]

The pilots of 17, 135 and 136 Squadrons disembarked in Freetown or Takoradi in western Africa, travelled to Port Sudan in present day Sudan with a stop-over in Khartoum in a variety of airliners and in various RAF aircraft, and then had to await the delivery of Hurricanes Mark IIB in Cairo in Egypt. While the delivery of reallocated "Middle East" Hurricanes destined for Singapore received priority this took time. Some of the pilots subsequently ferried a "Middle East" Hurricane from Port Sudan to Rangoon in Burma, while others very gradually reached Rangoon on airliners, flying boats, transport aircraft, bombers and aircraft of Ferry Command. [70] Six pilots of 136 Sq were sent back from Rangoon to India and were flown to Karachi to ferry a Hurricane from Karachi, via Bombay and Bangalore to Ceylon. They arrived at Ratmalana on 23 February, and temporarily flew with K Squadron which was officially established on 1 March (see below).

Also a part of convoy WS.12Z (WS.12ZB) had had Bombay as its destination, the advanced echelons and equipment of the squadrons of 267 Wing arriving at Bombay on 5-6 January to sail to Rangoon from there. [71] On 16 January 1942 the personnel of 135 Sq reached Rangoon first, moving to the former civilian airfield Zayatkwint directly after arrival. No 17 Sq was re-established on 28 January at RAF Base Mingaladon in the northern outskirts of Rangoon to which large airbase 135 Sq was transferred in the next month. The first three Hurricanes IIB arrived at Mingaladon on 23 January but only a few pilots were present yet. No 136 Sq was re-established on 6 February but the ground echelon was soon sent back from Rangoon to India to await further deliveries of Hurricanes and ground equipment there. It was stationed at Asansol (near Calcutta) on 27 February. [72]

Apart from the six pilots sent to Ceylon, a number of the 136 Sq pilots were temporarily attached to 17 Sq and 135 Sq. Additional pilots for these two units quickly became a necessity as Hurricane sections had to be on stand-by during the hours of darkness as the Japanese also bombed the airfields of Rangoon at night. A part of the 136 Sq ground personnel was also temporarily reassigned. [73] At Asansol 136 Sq was to be brought back up to strength but with additional Hurricanes in the pipeline the AHQ in Burma wanted the squadron re-established at Mingaladon. A group of personnel was transferred to Mingaladon on approximately 5 March but further transfers were cancelled resulting in some personnel getting stranded at Akyab, an island off Burma's west coast. Flying and ground personnel were then concentrated in Calcutta to take over Hurricanes and ground equipment but re-equipment went slow. In the period of 13 up to and including approximately 17 March the squadron received nine well worn Hurricanes Mark I originally intended for OTU use and only one (repaired former 17 Sq) Mark IIB as more Mark IIBs were not available. Apart from ten of the original pilots still available initially only five replacement pilots were allocated. The pilots in Ceylon did start their long trip to Asansol in the second half of March but would miss the fighting in Burma. The main force of the squadron was transferred to its new base Akyab in the period of 18 to 20 March 1942 (see below). [74]

Operations from Rangoon and Magwe

Initially only 31 Hurricanes Mark IIB were ferried from Port Sudan (30) and Basrah, Iraq (one), via Habbaniya (Iraq), Sjarjah (Oman) and further through British India via Karachi, New Delhi and Calcutta to Mingaladon of which 30 reached Rangoon in the period from 23 January up to and including 15 February. One crashed en route on 28 January during the landing at Habbaniya, killing the pilot of 17 Sq. [75] The Japanese attack on lower Burma had started on 18 January. Mingaladon, as a consequence, was regularly attacked with an intensified assault starting on 6 February. The destination of the ferried Hurricanes therefore became Magwe (a civilian airfield some 370 km to the north of Mingaladon) after 15 February, the aircraft being flown over to Mingaladon when this was considered safe but usually the day after arrival. Apart from the fighters two Mark IIA Photo Reconnaissance (PR) Hurricanes of No 2 Photographic Reconnaissance Unit (2 PRU) on their way to Singapore followed the ferry route. They were kept with 267 Wing in Burma and initially stationed at Zayatkwinn and later with the squadrons at Mingaladon. The PR aircraft arrived on 25 January together with four fighter Hurricanes. [76]

The Hurricanes of 17 Sq and 135 Sq flew a mix of air defence and Army support missions from the start, a situation very different from that in Singapore and Palembang where the vast majority of the sorties flown were air defence with only very few Army support sorties in the final days of action in Singapore as well as at Palembang. Losses due to air combat in Burma were relatively low. Until 7 March (the evacuation of Mingaladon, Zayatkwinn and surrounding strips) the losses by cause were as follows.

Shot down in air combat: six (one when seconded to 28 Army Co-operation Sq),

Lost in non-combat accidents: three,

Lost on the ground due to enemy air raids: two,

Lost to enemy ground fire: one,

Lost to own ground fire: one (when seconded to 28 Sq).

A total of 13 Hurricanes had been lost but another three with damage sustained in air battles or air raids could not be repaired due to a lack of spares and were slowly cannibalized at Mingaladon.

The Hurricane fighter strength at Rangoon (excluding the two PR aircraft) had developed as follows:

3 February, 17 Sq and 135 Sq: 21 aircraft (11 serviceable),

12 February, 17 Sq and 135 Sq: 19 aircraft (unknown number serviceable),

16 February, 17 Sq and 135 Sq: 30 aircraft (15 serviceable),

1 March, 17 Sq and 135 Sq: 27 aircraft (20 serviceable),

5 March, 17 Sq and 135 Sq: 30 aircraft (14 serviceable). [77]

Although the two squadrons had been very successful the inevitable aircraft losses due to air combat and ground fire during strafing attacks in support of ground forces could not be covered adequately by new aircraft deliveries. The ferry of new Hurricanes from Port Sudan was a frustrating slow trickle which kept the number of operational squadrons to just two instead of the planned four (17, 135 and 136 Sq of 267 Wing plus 67 -Buffalo- Sq).

The pilots of 17 Sq and 135 Sq were on average even somewhat less experienced than their colleagues in Singapore with only the COs and some of the Flight commanders having combat experience over Great Britain and France. The flying echelons were well led, however, while the co-operation with the American Volunteer Group (AVG) squadrons using well established tactics against the opposing Nakajima Ki 27 and Nakajima Ki 43 fighters of the Japanese Army air force worked out very well in air combat. [78] Also the total number of serviceable fighters at Rangoon was a reasonable one. There were, for example, 38 Hurricanes, Buffaloes and American P-40s available on 16 February. The combined fighter force was able to deny the Japanese local air superiority during most of February 1942. The number of serviceable Hurricanes (as well as the total number of serviceable allied fighters) decreased significantly from early March, though. [79]

Seventeen reallocated crated "Middle East" aircraft left on 31 December from Takoradi on the freighter SS Cefn-y-Bryn and were unloaded at Karachi after arrival

on 3 February. This shipment was codenamed "Operation Cross". The Hurricanes were assembled by No 1 (India) MU (renumbered 301 MU on 18 March) at RAF Karachi. Eight of the Mark IIBs were ferried to Ceylon as planned. This initial allocation of just eight aircraft had to satisfy the immediate needs of the Admiralty as there were no more Hurricanes available. [80] The other nine Hurricanes Mark IIB from the Cefn-y-Bryn were ferried to Calcutta (Dum Dum airfield) and were picked up there by 267 Wing pilots in the period of approximately 24 February up to and including approximately 12 March. The aircraft were flown to Magwe but only one of the first two delivered went on to Mingaladon. Five others were assigned to 67 Sq at Magwe in the period of 27 February-2 March. On the former date also two Hurricanes ferried from Port Sudan were flown from Magwe to Mingaladon while on 2 March 67 Sq received three Hurricanes which had just been ferried from Port Sudan. About four days later the decision was made to keep all new deliveries at Magwe as the evacuation of Mingaladon, Zayatkwint and surrounding strips was imminent. [81]

No 67 Squadron at Magwe had originally been the only fighter squadron in Burma and was equipped with Brewster Buffaloes. It was to convert to Hurricanes as soon as sufficient numbers of these aircraft were available. Already on 28 February the first group of pilots started with a short type transition, the other pilots of the squadron following on 3 March. The eight aircraft allocated to 67 Sq (one Flight) were kept at Magwe especially for the execution of strafing attacks on airfields in Thailand occupied by the Japanese Army air force. A PR Hurricane had reconnoitred these airfields from Magwe early March and the pilot had reported a build-up of an enemy fighter force. [82]

Five of the pilots of 67 Sq were incorporated in a ground attack mission to the Thai airbase Lampang that was to be carried out on 5 March together with Bristol Blenheim bombers and with eight Curtiss P-40s of the AVG and four 67 Sq Buffaloes as escorts. A rather unique mission as the Hurricanes were to be used as dedicated ground attack aircraft with the original 12 guns and carrying two (non-droppable) ferry tanks to give them the necessary range. A dangerous mission for the Hurricane pilots as their aircraft would be in a configuration not suitable for air combat with ferry tanks considered a fire hazard. The 67 Sq pilots were to be led by Wg Cdr F.R. Carey of 267 Wing (who had in vain protested against the set-up of the mission with AHQ) but his aircraft had an engine malfunction shortly after take-off and he had to return to Magwe. The CO of 67 Sq took over but the mission was unsuccessful and was broken off. The Blenheims could not be seen at the briefed rendezvous and the Hurricanes on reaching its location could also not see the en route refuelling strip Namsang due to heavy haze and landed at He Ho to fly on to Namsang later.

Another try with four of the Hurricanes followed next day. One of the Hurricanes had had a mishap due to faulty brakes on landing at Namsang. Also this time the Hurricanes had to turn back due to poor visibility while the Blenheims bombed an alternative target. The still serviceable aircraft flew back to Magwe on the same day

and the final flights on the Hurricanes by 67 Sq pilots were made on 7 March, the unit reverting to Buffaloes as the Hurricanes were to be reallocated. [83]

The aircraft used by 67 Sq were kept at Magwe (apart from the one in repair at Namsang) until the evacuated 17 Sq arrived to take charge of them (see below). Magwe also remained the endpoint of the ferry from Port Sudan and the flying in of small groups of Hurricanes from Calcutta by 267 Wing pilots continued until approximately 18 March. Wg Cdr Carey flew one of the 67 Sq aircraft to Akyab and on 7 March escorted two Westland Lysanders from there to Mingaladon. His aircraft was then used for Army support sorties from the strip Zigon (see below). No 67 Sq was ordered to evacuate to Dum Dum, Calcutta on the 10th including the remaining flyable Buffaloes. [84]

There were great problems in the maintenance field due to a lack of spares, absence of spare propellers and a great shortage of tools and rotol kits, although much help was received from the staff of the railway workshops in Rangoon. On 5 March the number of serviceable aircraft available had dropped to only six apart from the Hurricanes at Magwe. No 60 Repair and Salvage Unit (60 RSU) then based at Asansol, India was allocated to 267 Wing in February and embarked in Calcutta on the 15th with destination Rangoon. It never arrived and was sent back while en route. On approximately 15 March the unit was re-established at Kanchrapara near Calcutta where it took up Blenheim and Hurricane work using tools that were locally purchased, borrowed and transferred by other units as it had arrived in India without any equipment. [85] As mentioned already on leaving the airfields and strips at Rangoon (7 March) three unserviceable aircraft at Mingaladon that could not be made flyable, all cannibalized for parts, were burnt. One more Hurricane which returned to Mingaladon from a patrol on 7 March, badly damaged after an encounter with Japanese fighters, also had to be burnt as it could not be restored to a safe flying condition in time. [86]

Withdrawn to Magwe and Akyab

In the final days before the evacuation of the city of Rangoon (8 March) 17 Sq operated from a threesome of the strips surrounding Rangoon and 135 Sq from Mingaladon. Their aircraft were mainly employed for Army support missions while only a limited number were available for air defence. On 7 March Mingaladon was definitively left. The two squadrons further operated from forward bases including Zigon (a strip halfway Rangoon and Magwe). The ground crews were largely transferred to Zigon, Magwe (main party 17 Sq) and Akyab, a civilian airfield on an island near the coast of western Burma some 480 km to the northwest of Mingaladon and almost due west of Magwe (main party of 135 Sq, on 7 March already on its way from Rangoon to Akyab by ship). No 17 Squadron was withdrawn to Zigon and Magwe on 7 March and from the 10th all remaining serviceable aircraft were allocated to it. Also from the 10th the just readied Park Lane strip at Prome (somewhat to the north of Zigon) was used as the rough surface of Zigon caused too

much damage to aircraft during take-off and landing. The Hurricane pilots formed a somewhat strange mix of 17 Sq and 135 Sq pilots but also a number of 136 Sq ones (including the 136 Sq CO) but those of 135 Sq and 136 Sq were soon withdrawn (see below). [87]

The sorties flown were mainly to cover the retreat of the British Army from Rangoon, many being strafing missions which often resulted in some degree of damage to the aircraft. Operating from the improvised strips also meant a quick deterioration in the condition of the Hurricanes. Magwe was used as a maintenance base and a makeshift maintenance unit had been formed there in February with personnel from 17 Sq and 135 Sq to perform inspections and repairs. Hurricanes were much needed for air support, however, and flyable with working guns became the new definition of serviceable for a while although especially many of the Merlin engines were much overdue for inspection. [88]

The flying echelon of 135 Sq was withdrawn to Akyab around 11 March and the complete unit was then transferred to Dum Dum, Calcutta, where the squadron was reformed during March. A number of the pilots flew damaged Hurricanes to Dum Dum, including the final three damaged aircraft flown out of Mingaladon on 7 March and brought up to a safe condition for the flight to Dum Dum by 135 Sq personnel at Akyab. A few of the squadron pilots were sent from Calcutta to Karachi by rail to pick up replacement Hurricane IIBs later in March. [89]

Major repairs and inspections had to be carried out in India with 4 (India) MU at Kanchrapara (which became 304 MU as of April) and second line repairs and engine changes with the above mentioned 60 RSU. No 135 Sq received a few of the repaired Hurricanes as well as some new ones and on approximately 31 March it started to fly operations again although on a limited scale, initially flying convoy protection missions over the Bay of Bengal. The squadron had approximately eight Hurricanes on strength again on 5 April. [90]

Of the 43 Hurricanes Mark IIB delivered in Burma before 8 March 19 Hurricanes were lost or abandoned up to and including 9 March and only 24 survived of which about 13 were serviceable with 17 Sq at Magwe on 10 March. Approximately 11 aircraft were already in India or were readied for the ferry flight to Dum Dum for inspection or repairs. The Hurricanes had to be flown to Akyab and as far as they could be brought up to a safe state for the ferry flight they were flown via Chittagong to Dum Dum, the others going by ship to Calcutta. Hurricane work at 60 RSU gained momentum quickly, though and by the end of March the unit had repaired six Hurricanes including one or two Mark Is. [91]

There was a Maintenance Unit in Burma, No 154 MU, but this unit was almost continuously non-operational since January due to difficult moves to safer locations. The unit had originally been based at Mingaladon but, being a high value but vulnerable target, was transferred to Meiktila in January and was based at Lashio from March 1942. This was not a large unit to begin with and it did not have any

Hurricane expertise and spare parts. When finally redeployed at Lashio it seems to have concentrated on Bristol Blenheim work. The unit was dissolved in June 1942 after its personnel had reached India or had been reposted in China. [92]

No 17 Sq was concentrated at Magwe on 10 and 11 March where it became a part of the newly formed BurWing, a composite wing composed of bombers, fighters and army co-operation aircraft. It replaced 67 Squadron which then evacuated with its remaining Brewster Buffaloes to Calcutta in the period of 10 March up to and including 16 March, after having turned over its Hurricanes to 17 Sq. From 12 March 17 Sq carried out a limited number of fighter sweeps combined with reconnaissance missions but there were no contacts with the enemy apart from some ground fire. On 17 and 18 March larger missions were flown combining the escort of Blenheim bombers with strafing of enemy boat activity on the Irrawaddi River and the airfields and strips near Rangoon. In this one week period several of the Hurricanes were damaged including one of four recently arrived Hurricane Mark Is the first of which were taken over at Dum Dum on 9 and 10 March. The Mark Is were issued due to the shortage of Mark IIBs. [93]

Part of 67 Sq's flying echelon returned to Akyab on the 17th with four Curtiss Mohawks borrowed from 5 Sq at Dum Dum where this unit was working up on this aircraft type. All of the Buffaloes were unfit for operations. The section was deployed without any ground personnel and was supported by Akyab's Refuelling and Rearming party as 136 Sq had not yet arrived apart from a small advance party. The main party of the latter unit with the first six Hurricane Mark Is arrived at Akyab on approximately 18 March. The section was mainly on stand-by to cover the deployment of the Hurricane unit and the pilots flew very little. The Mohawks were withdrawn again on the 20th after 136 Sq had become operational. [94]

At Akyab from 12 March AkWing was formed, also a composite wing which included 136 Sq from India. On 19 March the two Hurricane units had a strength as follows.

17 Sq at Magwe: 20 Hurricane Mark IIBs, three Mark Is.

136 Sq at Akyab: 9 Hurricane Mark Is, one Mark IIB. [95]

In the mean time in India No 3 PRU had been established for deployment in Burma. This new unit was in part transferred from Dum Dum to Magwe on approximately 18 March with initially one Hurricane Mark I equipped with ferry tanks for tactical reconnaissance and one Tiger Moth for visual reconnaissance. Also the two former 2 PRU PR Hurricanes and its pilots were now assigned to 3 PRU. No 17 Sq remained responsible for part of the maintenance of the 3 PRU Hurricanes. [96]

No 17 Sq received a few new and some repaired Hurricanes ferried in from Calcutta from about 12 March, deliveries to the unit continuing until approximately 18 March. One airplane was lost in a take-off accident on 19 March while one of the Mark Is had to be sent to Calcutta for repairs around the same date. Disaster struck the unit on 21

March. First a Hurricane was lost in a forced landing on the return flight from a ground attack mission to the airfields near Rangoon, now fully occupied by the Japanese Army air force. Then the Japanese retaliated with air strikes against Magwe. This resulted in one Hurricane damaged beyond repair after a crash landing as a result of the ensuing air combat and one Hurricane completely destroyed when it was hit by a Japanese bomb just after its pilot had made an emergency landing at Magwe also due to battle damage. Six of the Hurricanes dispersed on Magwe and its nearby dispersal field were also damaged beyond repair. About four other Hurricanes were damaged but reparable. One more Hurricane was lost the next day as the landing gear failed during a landing on one of the emergency strips. Magwe was again bombed on 22 March but although no fighter Hurricanes were lost several were damaged. [97]

No 3 PRU lost two of its three Hurricanes on 21 and 22 March. One of the former 2 PRU Hurricanes was lost in a crash landing on 21 March when it was accidentally shot down by a 17 Sq Hurricane near Magwe and the Mark I was lost in one of the air raids on the 21st. The remaining PR Hurricane was moderately damaged on the 22nd but was lost three days later. This aircraft had been repaired to a flyable state by 17 Sq personnel and was to be flown via Akyab and Chittagong to Calcutta for further repairs. It crashed on the take-off from Akyab and was damaged beyond repair. The unit had just one Tiger Moth left and had to await the completion of the modification of two Hurricanes Mark IIB into PR aircraft in India. [98]

Of the 21 Hurricanes 17 Sq had had on charge at the beginning of the day on 21 March ten were lost and eleven could be made flyable of which about three were serviceable. Nine were withdrawn to Akyab in the evening of 22 March, while work on the other two continued at Magwe, but during the ferry flight on the 22nd one more was lost due to engine failure. The remaining ten aircraft were seconded to 136 Sq on the next day. The ferry flights to Akyab had been done by pilots of B Flight of the squadron who were ordered to Calcutta and left on the following days by transport plane. [99] The ground echelon and the A Flight pilots left for Lashio and Loiwing on the Chinese border by car and truck on 23 March apart from a repair and salvage party. [100]

Withdrawn to Calcutta and Lashio-Loiwing

No 136 Squadron at Akyab consisted of a strengthened Flight only and apart from one (repaired former 17 Sq) Mark IIB it only had old Mark Is. Its second Flight was still reforming at Asansol in India and received its first Hurricane (a Mark I) on approximately 21 March. The unit was not safe at Akyab either and scrambled twice on 23 March to intercept Japanese air raids, losing one of its Mark Is while a second made an emergency landing after being hit. Next day Akyab was again attacked by the Japanese Army air force and a third attack followed on 27 March. Also a nearby satellite field used for dispersal was attacked. Losses were severe on these three days, the squadron having lost in the air battles a total of three of its own aircraft (two

Mark Is and its only Mark IIB) plus three of the seconded 17 Sq Hurricanes. On the ground four of its Mark Is plus three of the seconded Mark IIBs were lost or damaged beyond repair. [101]

On 26 March six of the Hurricanes (four of the 17 Sq Mark IIBs and two Mark Is), all flyable but not combat ready, were flown from Akyab to Chittagong across the border with India but were ordered to Calcutta the next day. The planned transfer of the squadron to Chittagong had been cancelled. Also on 26 March part of the ground personnel left by ship for Chittagong but the squadron stayed operational at Akyab with just two remaining serviceable Hurricanes of which one was lost on the next day. The second serviceable Hurricane (a Mark I) was also evacuated to Calcutta on the 27th. [102]

Apart from the aircraft losses the air raids had caused major damage to the Akyab facilities although the runway could be repaired quickly. Evacuation flights with transport aircraft to Calcutta continued but it was the end of Akyab as an operational base. No 136 Squadron was transferred on 27 March to Calcutta having (apart from a few aircraft in India) just seven Hurricanes left including the remaining four 17 Sq aircraft. The personnel were initially gathered at Dum Dum but regrouping started at Alipore on 31 March, the first operational flight from Alipore being made on the same day. The squadron kept most of the evacuated aircraft and received some more new and repaired replacement Hurricane IIBs as well as a few Mark Is (including a repaired former 17 Sq machine) in the course of April and early May 1942 to bring it on strength for the defence of Calcutta. Burma had been given up. [103]

No 17 Squadron was in part based at Lashio near the end of March, with Loiwing (further to the north) to be used as an operations base. The unit was awaiting the ferry of new Hurricanes from Calcutta where B Flight at Dum Dum airfield was busy taking over seven new and a repaired aircraft. The eight Hurricanes were ferried to Lashio and from there to Loiwing on 6 April 1942. Magwe was occupied by the Japanese Army on 16 April but the rather primitive Loiwing was initially considered relatively safe. A and B Flight operated the aircraft in turn and together with the American Volunteer Group with its Curtiss P-40s. It did not take the Japanese Army air force long before Loiwing was attacked in force, however. [104]

Three Hurricanes were lost as a result of an air battle in combination with bad weather on 9 April and two were shot down in an air battle on the next day. One more Hurricane was lost in a strafing attack on Loiwing on 10 April. The two Hurricanes left serviceable were both seconded to 3 PRU for tactical reconnaissance on 13 April. This unit had followed 17 Sq to Loiwing and was awaiting delivery of new PR Hurricanes. It flew some tactical reconnaissance sorties with borrowed 17 Sq Hurricanes from approximately 7 April. Sqn Ldr C.A.C. Stone of 17 Sq was flown to Dum Dum to plea for new Hurricanes but there weren't any to spare for Burma. He returned on the 16th with the order to prepare for evacuation to India. The next day

the phased withdrawal of 17 Sq to Calcutta began as the fall of Lashio was to be expected within days.

A number of the pilots were the first to be flown out as a passenger in Blenheim bombers evacuating Lashio. Both the remaining personnel at Lashio and that at Loiwing left on 27 April by car and truck. The convoy reached the airfield of Myitkyina and the squadron personnel was flown to Calcutta in transport aircraft from there. [105] During May 1942 the squadron was re-equipped with new and repaired Hurricanes IIB and also a few Mark Is (including at least one former 136 Sq airplane) and brought up to strength again at Dum Dum for the defence of Calcutta. [106] Apart from local air defence for the protection of the Burma Road, the important connection with China, it had been of little use when at Loiwing and Lashio. The range of the Hurricanes was insufficient to allow the flying of missions to occupied airfields further south and forward bases for refuelling were no longer available.

Not counting the temporarily assigned Mark Is and the Mark IIA PR Hurricanes a total of 67 Hurricanes were sent to Burma of which one ferried from Port Sudan crashed en route and nine shipped from the United Kingdom (instead of the original earmarked eight) were lost at sea. Of the 57 aircraft that reached their destination 44 were lost or abandoned (of which two while seconded to 28 Squadron for tactical reconnaissance), seven were sent to India for necessary maintenance and repairs not to return to Burma, four were evacuated to India by 136 Sq on 27 March and two were evacuated to India by 3 PRU on 27 April 1942. The latter unit had stayed behind at Loiwing but kept its two new PR Hurricanes received in April at Dum Dum. [107]

Attrition reserves and Operation Semolina

Most of the 50 Hurricane attrition reserves for Singapore or Burma (depending on developments) mentioned earlier were indeed shipped from the UK. Allocation of aircraft started in December 1941 but none reached Singapore or Java. Eight, later nine, were earmarked Burma in January 1942 and of the remaining 41 airplanes probably only 36 did actually sail. The cargo ships carrying the Hurricanes all sailed from the UK with so-called OS convoys to Freetown going on independently to the Table Bay in South Africa with Bombay as their initial destination. The cargoes of the ships planned to sail from Bombay to Singapore were reallocated after the fall of Singapore. Of the freighters in the convoys following WS.12Z (DM.1) that reached Singapore or were diverted to Batavia, Java while on the way to Singapore none carried Hurricanes.

All of the shipped attrition reserves were redirected to Ceylon and India to re-equip or replace losses in the existing squadrons. Nine were lost at sea off Cape Town when their ship hit a German mine. [108] Apart from some aircraft allocated to the evacuated 67 Sq, 135 Sq and 136 Sq in India tasked (from 31 March) with convoy patrols over the Bay of Bengal and the defence of Calcutta, the first batches of

replacement aircraft reached the squadrons from approximately the middle of April 1942. [109]

The aircraft carrier HMS Indomitable, however, sailed back from Trincomalee to Port Sudan after Operation Opponent to take up a new load of Hurricanes. The carrier arrived on 25 February and left port two days later with 60 Hurricanes (50 Mark IIs plus 10 Mark Is), as well as the flying echelons of 30 Sq and 261 Sq (strengthened with additional pilots) which were withdrawn from Middle East Command for this operation, codenamed "Semolina". Also a large servicing party of 196 men mainly drawn from the ground crew of 30 Sq was on board of the carrier to reassemble the Hurricanes and make them flight ready again. [110] The remainder of the ground echelons embarked on the troopship Princess Kathleen which left Port Tewfik on the Red Sea on 22 February to first sail to Port Sudan and on the 26th left for Java (NEI). [111]

After the RAF had failed in an attempt to redirect the two additional squadrons (30 Sq and 261 Sq) from the Middle East to Burma an immediate strengthening of the forces in Ceylon was decided on by the British Chiefs of Staff on 21 February. This proposal also included the two squadrons but failed as well. On the next day it was reaffirmed to ABDA Command and the NEI authorities that Indomitable with the two squadrons was to go to Java. The Japanese attack on Java was soon to be expected and already after a few days at sea the carrier and the Princess Kathleen were diverted to Ceylon. [112] The Japanese invasion of Java took place in the night of 28 February and 1 March and on 3 March it was clear that flying the Hurricanes to Java would be a very risky undertaking. The Far Eastern Council (the allied inter-governmental body controlling ABDA Command) and the U.S.-British Combined Chiefs of Staff in Washington definitively decided on that day to redirect all Hurricanes on board to Ceylon. [113] AHQ India tried in vain to redirect 24 of the Hurricanes on Indomitable to Calcutta on 6 March but the British Chiefs of Staff blocked the orders immediately. [114]

Indomitable flew off its Hurricanes on 6 and 7 March with Ratmalana as the initial destination. Two of the aircraft returned to the ship with technical problems and were landed without problems although not equipped with an arrester hook. They could not be repaired in time for a second try. [115] No 261 Squadron moved to China Bay after a few days but 30 Sq stayed at Ratmalana. G Squadron, formerly K Sq and officially established at Ratmalana on 1 March, moved to the so-called Colombo Racecourse airfield, an improvised dispersal airfield unknown to the Japanese, on 23 March. [116]

The fighter defences of Ceylon had been seriously strengthened this time and in the second half of March all three squadrons became operational. During the tactical training in March five aircraft were lost or sent to India for repairs, while one (seconded 136 Sq) pilot of K Sq was seriously injured on 12 March and another of 30 Sq was killed on 3 April. K Squadron was brought up to normal squadron strength

during the first half of March. It was strengthened with spare pilots from the Indomitable, pilots from the original 258 Sq evacuated from Java, ground personnel from 258 Sq and other units evacuated from Java and a number of Hurricanes Mark I and Mark IIB transferred by 30 Sq and 261 Sq. It lost its 136 Sq pilots in the second half of March, though. The unit was renamed G squadron on 22 March but then numbered 258 Sq on 30 March 1942. [117]

No 258 Sq became a relatively combat experienced unit with the influx of personnel from Java including ten pilots, relatively being the word as the majority of the pilots were still inexperienced. Both in 30 Sq and 261 Sq, however, apart from the CO, the Flight Commanders and one or two others all pilots were fresh out of OTU training or had a few months of flying with a squadron and no combat experience. [118]

Contrary to the situation in Singapore and in Burma the three squadrons had a few weeks of unit and tactical training to spare before the Japanese attacked although the training was far from completed at the moment of the attack. Also intelligence on the Navy O performance was available and briefed in the training period. [119]

On 1 April 1942 the three squadrons had a strength as follows.

30 Sq at Ratmalana: 23 (22 Mark IIBs and one Mark I),

258 Sq at Colombo Racecourse airfield: 17 (10 Mark IIBs and seven Mark Is),

261 Sq at China Bay: 21 (19 Mark IIBs and two Mark Is). [120]

Of the 66 Hurricanes on strength on 10 March, five were lost in accidents or had been sent to India by ship for major repairs during March as mentioned already. Of the remaining 61 aircraft a further three Mark IIBs of 261 Sq were pushed to a corner in the hangar as there were no spares to replace their damaged propellers. Apart from propellers spare parts were not yet a problem, though. One more Hurricane was lost on 3 April (a Mark IIB of 30 Sq) and one Mark I was transferred from 261 Sq to 258 Sq on the same day. [121]

The squadrons had to come in action soon after as the Japanese executed a Pearl Harbor like naval attack with aircraft carriers to cripple Ceylon as a naval base and take out the war ships of the Royal Navy based there. Large numbers of carrier based aircraft of the Japanese Navy air force attacked on 5 April and 9 April 1942, the Mitsubishi Navy Os (flown by mostly very experienced pilots) to be met by the Hurricanes as well as a number of FAA Fairey Fulmars. Losses on both sides were high and the three Hurricane units suffered severe aircraft losses and also lost a number of pilots. The radar in Ceylon was, unfortunately, not yet operational on 5 April. On that day 21 Hurricanes of 30 Sq and 14 of 258 Sq scrambled but 30 Sq was unable to form up as their base was bombed during the take-off. One of their Hurricanes crashed on the take-off run. [122] The numbers of serviceable aircraft available on the next morning were just seven with 30 Sq and five (of which two Mark Is) with 258 Squadron. [123] No 261 Sq had been kept in reserve but scrambled on 9

April with 16 Hurricanes. The unit had six aircraft serviceable (including a Mark I) on the following day. [124]

The three Hurricane squadrons were in no position to fend off another attack but fortunately none materialised. Of the 60 Hurricanes present on 5 April a total of 27 aircraft were lost in or declared damaged beyond repair after the air battles of 5 and 9 April 1942. [125]

Replacement aircraft had already been gathered at 301 MU in Karachi and as soon as the circumstances were considered safe enough for ferry flights replacement Hurricanes began to arrive from approximately mid-April. The batches of aircraft consisted of both Hurricanes ferried from Port Sudan as well as Hurricanes assembled in Karachi after having arrived by cargo ship from the United Kingdom. Most were Mark IIBs but a few Mark Is were ferried too. Also replacement pilots were posted in. [126]

Conclusions

The 51 aircraft from convoy WS.12Z and the 49 flown off by HMS Indomitable arrived in time to be deployed for the defence of Singapore. Of the 17 out of the total of 39 Hurricanes shipped with HMS Athene that reached South Sumatra just before the Japanese attack on Palembang seven were shot down and only ten could be used for a few days in attacks on the Japanese invasion forces. Only three of these ten were evacuated to Java together with twelve Hurricanes from WS.12Z and Indomitable on 15 February 1942. Ten Athene aircraft could not be ferried anymore but played a role in the defence of Java with the 15 aircraft in total evacuated from Palembang II, while 12 Hurricanes were transferred to the ML/KNIL on 15 February.

A total of 57 Hurricanes of the eventually 67 aircraft planned to go to Burma did reach their destination. All of the 57 aircraft saw combat although the final seven deployed to Lashio-Loiwing on 6 April 1942 (with a repaired earlier delivery) lasted only a week. Nine were lost at sea and one was lost on the ferry flight from Port Sudan to Burma. At least 36 of the eventually planned 41 attrition replacements (the original 50 minus nine earmarked Burma but lost at sea) reached India but were too late to play a role in the defence of Singapore, the NEI or Burma. All were all redirected to India (defence of Calcutta) and Ceylon.

The eight aircraft originally planned in December 1941 to go to Ceylon as well as 58 of the 60 Hurricanes of the second run by HMS Indomitable reached Ceylon in time and all were operational by approximately 19 March. The majority could be deployed during the first Japanese attacks on 5 and 9 April 1942. The Indomitable Hurricanes were initially destined for Java to arrive before the end of February but this schedule could not be met. The Indomitable only sailed on 27 February and had to be redirected as Java was invaded in the night of 28 February and 1 March and flying the aircraft to Java became too big a risk.

The emergency allocations of December 1941 (excluding the attrition replacements) were far from adequate when measured in numbers of aircraft but it was all that could be made available at short notice. Priorities were necessary as the numbers needed exceeded those that could be made available and were Singapore first, Burma second and Ceylon last. The Hurricanes and the units to operate them were made available at the cost of Middle East Command and the aid to Russia and were sent by the quickest means and ways available. The aircraft and units, nevertheless, arrived in the Far East from the United Kingdom, Takoradi and Port Sudan over a period of some one to three and a half months.

In Singapore as well as at Palembang this led to a situation in which relatively small numbers of aircraft were wasted away in air combat with superior numbers of enemy fighters by inexperienced squadrons not given the time to adjust locally and do some additional hard needed unit and tactical training. Only in Ceylon, not yet attacked, there were a few weeks time for training but the unit and tactical training of the (also inexperienced) squadrons was far from complete when the Japanese attacks came on 5 and 9 April 1942. Losses were high but were to a large part caused by too late a warning and one of the squadrons on Readiness consequently being attacked when still taking off. Air combat losses in Burma were relatively low although the squadrons were equally inexperienced. This was the result of a good cooperation with American AVG squadrons which used well established and successful tactics and the fair number of Curtiss P-40s deployed by the AVG.

Much had been expected from the Hawker Hurricane but the performance of the Mark IIB and especially that of the Mark I in Burma and Ceylon left much to be desired when compared to the performance of the Nakajima Ki 43 Army I or the Mitsubishi A6M Navy O. The Mark IIB could not even beat the Brewster 339 Buffalo at the normal operating altitudes. Its only advantage was its relatively heavy armament and (like the Buffalo) sturdy construction. It could take punishment in air combat that would take its more nimble opponents apart in the air.

Proper maintenance was a problem in Singapore and at Palembang, and especially so in Burma. No 151 MU at Seletar had to close down late January as its facilities had been bombed out although 81 RSU remained behind until the final Hurricanes were evacuated. In South Sumatra 41 Air Stores Park and 62 RSU were just arriving when the Japanese forces invaded Palembang while in Burma No 154 MU at Mingaladon was non-operational during difficult moves to safer locations further to the north. When finally re-established at Lashio it was unable to do major repairs and overhauls for the Hurricane squadrons, while there was no RSU assistance in Burma. The aircraft of the squadrons in Burma had to be flown or shipped and those in Ceylon all had to be transported by ship to India for major maintenance and repairs. There was a lack of tools in Singapore, in South Sumatra and especially so in Burma and there was also a great lack of spares in South Sumatra as well as Burma, while spare propellers were a scarcity everywhere.

The above factors combined with losses on the ground due to enemy air raids in Singapore, South Sumatra and Burma caused very high combat loss figures and fast decreasing total numbers of Hurricanes on strength without, apart from a period in Burma in February 1942, the squadrons having any chance of capturing a local air superiority in the period described.

Endnotes

[1] Air 2/7628 (UK National Archives, Operations Semolina and Opponent, telegrams 27 December 1941 and 1 January 1942, memo's 1 January 1942 and 5 January 1942). General remark: all geographical names in this paper are spelled as they were at the time.

[2] Air Vice-Marshal Stevenson's Despatch on Air Operations Burma and Bay of Bengal, 1 January to 22 May 1942, General Headquarters India, 28-9-1942 (hereafter Stevenson's Despatch), pts. 7, 22. The original requirement allocated Burma on 12 December 1941 comprised five squadrons (four squadrons of 267 Wing plus 67 Squadron) reduced on approximately 16 December to four or 64 ac in 1st line plus 16 ac in immediate reserve (the 16 reserves were to come from the flow of shipped attrition reserves).

[3] Messages between AHQ India and 222 Group, 20-23 February 1942 (relevant text parts, via Air Historical Branch RAF).

[4] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. War Office 68573, message Churchill to Wavell, 4 February 1942); P.C. Boer, The loss of Java (Singapore, 2011, hereafter Boer, Java), p. 7; interview author with H. Creutzberg, LL.M.

[5] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. C-in-C EF Diary).

[6] Ibid.; interview author with H. Creutzberg. LL.M.

[7] www.convoyweb.org.uk.

[8] Air 2/7628 (UK National Archives, Operations Semolina and Opponent, telegram 27 December 1941), Air 8/612 (UK National Archives, Operation of Hurricanes in Far East); interview author with J.C. Benschop (description of method of shipment of partly disassembled Hurricanes); <http://abbekerk.worldpress.com/voyages-of-the-abbekerk/liverpool-20-april-1940/>.

[9] www.convoyweb.org.uk; Air 2/7628 (Operations Semolina and Opponent).

[10] Gerry Beauchamp (editor), Escape from Singapore (Stittsville, Ontario, Canada, 1985), p. 35; Brian Cull with Paul Sortehaug, Hurricanes over Singapore (London,

2004, hereafter Cull), pp. 24-25; correspondence author with P.D. Gifford; research by J. van der Wei (UK National Archives and Air Historical Branch RAF, 1976).

[11] Cull, p. 22; Christopher Shores and Brian Cull with Yasuho Izawa, *Bloody Shambles*, Vol. 1, *The drift to war to the fall of Singapore* (hereafter *Shores*, 1), pp. 159-160.

[12] Cull, pp. 25-26; description by B.J. Parker; correspondence author with P.D. Gifford.

[13] Air 8/612 (UK National Archives, *Operation of Hurricanes in Far East*); Cull, pp. 39-40.

[14] Sq ORBs (Forms 540, UK National Archives); Brian Cull with Paul Sortehaug and Mark Haselden, *Buffaloes over Singapore* (London, 2003, hereafter Cull, *Buffaloes*), pp. 96, 174, 179; *Shores*, 1, pp. 348-49. It is remarked that 21 Sq was a RAAF unit, all other squadrons mentioned were RAF units including No 453 and No 488 (although their personnel was almost exclusively RAAF, respectively RNZAF).

[15] Description by B.J. Parker; see also Cull, pp. 8-9.

[16] *Ibid.*, Sir Paul Maltby, *Report of the air operations during the campaign in Malaya and the Netherlands East Indies from 8 December 1941 to 12 March 1942*, London, 1948 (hereafter *Maltby, Report*), p. 1377, par. 315.

[17] *Maltby, Report*, p. 1379, par. 347-48.

[18] According to B.J. Parker the squadron intelligence officer returned from AHQFE empty handed as there was no information on the Navy O at all. However, the first pre-production Navy Os had been sent to China in July 1940 already where two were shot down by anti-aircraft artillery. The wrecks were thoroughly investigated and by analysing things like the fuel tank contents and the (nimble) construction the Chinese came to a accurate analysis of the aircraft performance. The report was shared with the British and also the Dutch military attaché in China received a copy of the report. Obviously neither the RAF nor the ML/KNIL-Netherlands East Indies Army Air Corps did believe the performance estimates could be right at the time. The Chinese also shared their intelligence data with Brigadier-general H.B. Claggett (U.S. Army Air Corps, Philippines). The information also reached the American Volunteer Group of which the headquarters did pass the intelligence on to the P-40 pilots of the group.

[19] *Maltby, Report*, p. 1379, par. 348-351; correspondence author with P.D. Gifford; T. Kelly, *Hurricane over the jungle* (London, 1977, hereafter *Kelly*), pp. 56-57 and further information received from T. Kelly. It is remarked that the Buffalo had a much larger range than the Hurricane.

[20] Air 8/612 (UK National Archives, *Operation of Hurricanes in Far East*), Air 24/504 (UK National Archives, AHQFE Form 540), Air 23/3578 (UK National Archives,

Fighter Hq Ops Room Diary), Air 23/5042 (UK National Archives, Air Diary ABDACOM); see also Maltby, Report, p. 1379, par. 353. It is remarked that the details given in the text are Singapore time, these may differ one day with the UK time used in many contemporary documents.

[21] See Appendix for ac details; Cull, pp. 47, 50.

[22] Cull, pp. 48-50; correspondence author with P.D. Gifford.

[23] See Appendix for details.

[24] Maltby, Report, p. 1381, par. 372 and p. 1382, par. 383.

[25] Cull, p. 68.

[26] Cull, Buffaloes, p. 186 (correspondence of Jack Burton); correspondence author with P.D. Gifford.

[27] Cull, pp. 71, 74; logbook Flt Lt R.D. Vanderfield (453 Sq, via Gordon Birkett); Report on No. 21 and No. 453 RAAF Squadrons (Secret) by Sqn Ldr W.J. Harper, 14 January 1946, pt. 39.

[28] Maltby, Report, p. 1383, par. 391 says 45 Hurricanes were lost (all causes). However, a detailed study at individual ac level (see Appendix) proves Maltby incorrect.

[29] Air 2/7628 (UK National Archives, Operations Semolina and Opponent, telegram 27 December 1941, memo 1 January 1942, telegrams 15 January 1942).

[30] Cull, p.18; www.convoyweb.org.uk.

[31] Kelly, pp. 23-25, 29-31; Cull, pp. 18-20.

[32] Air 2/7628 (UK National Archives, memo 1 January 1942, telegrams 1 January 1942, 2 January 1942, 15 January 1942, and 17 January 1942); Kelly, pp. 30-34, 42; Cull, pp. 19-20, 52.

[33] Air 2/7628 (UK National Archives, report Indomitable 19 February 1942); Cull, pp. 55, 60; Kelly, pp. 46-51; P.C. Boer, Aircraft of the Netherlands East Indies Army Air Corps in crisis and war times, February 1937-June 1942 (Berlin-Amsterdam, 2016, hereafter Boer, Aircraft), pp. 327-28.

[34] Cull, p. 60; Kelly, pp. 53, 57; discussion author with T. Kelly about the nature of the crashes at PII; reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH, c. 1986).

[35] Cull, pp. 61-63.

[36] Reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH, c. 1986).

[37] Kelly, p. 57; Cull, p.62.

[38] Cull, pp. 65-67; Kelly, pp. 70, 74; telephone interview author with B.J. Parker; discussion author with T. Kelly; Maltby, Report, p. 1388, par. 437.

[39] Air 23/3577 (UK National Archives, Fighter HQ Ops Room diary); discussion author with T. Kelly; interview author with D.J.T. Sharp (c. 1977); correspondence author with P.D. Gifford; Cull, pp. 67-69.

[40] Cull, pp. 70-71, 77; Kelly, p. 82; Maltby, Report, p. 1388, par. 440 (confirms the number of nine ac); interview author with D.J.T. Sharp (c. 1977).

[41] Cull, pp. 72-88 (says 12 ac of which one returned); reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH, c. 1986, says 11 ac left of which one returned).

[42] Cull, pp. 89-90; Kelly, p. 84 (but dates the crash of PO Sharp wrongly on 10 February); see Appendix for details evacuated ac.

[43] Boer, Aircraft, p. 250.

[44] Information received from the Military History Department, NIDS, Tokyo (extracts from Japanese wartime newspaper and magazine publications); 64th Sentai association (via P.G. Tideman).

[45] Cull, pp. 84-85, 91-92.

[46] Cull, p. 103; reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH c. 1986).

[47] Maltby, Report, p. 1388, par. 434, 438; Kelly, pp. 85-88, 91-92.

[48] Boer, Aircraft, pp. 248-250.

[49] Maltby, Report, p. 1388, par. 438; reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH c. 1986). No 81 RSU from Sembawang was only evacuated by ship on 13 February and had to leave behind all of its equipment and stores. It did not become operational again after reaching Java and most of its personnel became PoW.

[50] Air 23/4716 (UK National Archives, Order of battle, WES-GRP, Palembang I); reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH c. 1986) .

[51] Air 23/5042 (UK National Archives, Air Diary); Air 23/4716 (UK National Archives, Order of battle); reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH c. 1986); Cull, pp. 105-112. See also Appendix for details on ac losses. Much controversy exists about the precise losses on 7 February, presumably because the RAF gave too low a loss figure in its initial report (for example only the ac burnt on the ground and not those DBR). However, the findings of an inquiry by ABD AIR led

by AVM Sir Richard Peirse gave exact loss figures by cause, which are much higher than those presented by Maltby in his Report, p. 1388, par. 443.

[52] Maltby, Report, p. 1388, par. 446; Cull, pp. 114-15; Kelly, pp. 106-108, 112.

[53] Cull, pp. 121-24; Kelly, pp. 123-33.

[54] Maltby, Report, p. 1390, par. 463; Boer, Aircraft, p. 520 (endnote 1); Kelly, pp. 158-161; Cull, pp. 138-141. See Appendix for details on evacuated ac (several Hurricanes at PI were completely salvaged and taken apart for spares but not formally written off).

[55] Cf. [44].

[56] Boer, Java, pp. 8-9 (p. 8, 3rd par. wrongly states eight new Hurricanes and one under repair, this should be ten resp. three; 17 evacuated from Palembang should be 15); Boer, Aircraft, pp. 457, 520 (endnote 1). See Appendix for details on evacuated ac (of one of the evacuated Churn ac the RAF serial is not known).

[57] Air 2/7628 (UK National Archives, signal 19 January 1942).

[58] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. C-in-C EF Diary, War Office 68117, 2 February 1942); De Koninklijke Marine in de Tweede Wereldoorlog, Deel IV De strijd in Nederlands-Oost Indië, Ingedeelde chronologie over het tijdvak 10 december 1941-8 maart 1942 (Bureau Maritieme Historie, Marinestaf, juni 1963).

[59] Boer, Aircraft, pp. 457, 520-21 (endnotes 1 and 2); interview author with J.C. Benschop.

[60] Ibid.

[61] Boer, Aircraft, pp. 457-58.

[62] Correspondence author with P.D. Gifford; Shores, 1, p. 380.

[63] Cull, pp. 103-104; www.convoyweb.org.uk.

[64] History of 226 Fighter Group (via Air Historical Branch RAF); Maltby, Report, p. 1388, par. 438; reports Dutch liaison officer Palembang (Cleuver, 2-7, via AMH, c. 1986).

[65] Boer, Java, pp. 8-11; Kelly, p. 166 (wrongly states that the ground echelon arrived on 14 February); Shores, 2, p. 70; Maltby, Report, p. 1388, par. 438, p. 1391, par. 476.

[66] Boer, Java, pp. 8, 10, 488.

[67] Ibid., pp. 29, 41, 230, 319, 372, 465.

[68] Boer, Aircraft, pp. 462, 527-28.

[69] Air 2/7628 (UK National Archives); Shores, 1, pp. 159, 258, www.convoyweb.org.uk.

[70] Shores, 1, pp. 159, 258; correspondence author with F.K. Mason.

[71] Ibid.; www.convoyweb.org.uk.

[72] Sq ORB (Form 540), Francis K. Mason, The Hawker Hurricane, an illustrated history (Manchester, UK, 2001, hereafter Mason), pp. 165-66; Shores, 1, pp. 258-260; correspondence author with F.K. Mason (it is remarked that Mason mistakenly thought at the time that the squadrons initially flew Mark Is and IIAs).

[73] Sq ORB (Form 540), Shores, 1, p. 268; Vivian K. Jacobs, The Woodpecker story (Durham, UK, 1994).

[74] Ibid.; AHQ India messages (UK National Archives, research by author, 1974-77).

[75] AHQ India and Ferry Command messages (UK National Archives, research by author 1974-77), see Appendix for details; Shores, 1, p. 272 dates the crash on 29 January and as a result of a take-off accident.

[76] Stevenson's Despatch, pt. 38; Shores, 1, p. 266.

[77] Air 23/4716 (UK National Archives, Order of battle NOR-GRP, Rangoon); AHQ India messages on unit strengths (UK National Archives, research by author 1974-77); D. Gillison, Royal Australian Air Force 1939-1942, Australia in the war of 1939-1945, Series 3, Air, Volume 1 (Canberra, 1962), p. 411; Stevenson's Despatch, pt. 163.

[78] Stevenson's Despatch, pts. 6, 30; correspondence author with F.K. Mason. See Appendix for details on the deliveries.

[79] Air 23/4716 (UK National Archives, Order of battle NOR-GRP, Rangoon).

[80] See Appendix.

[81] Ibid.

[82] Shores, 2, p. 288; e-mail Mark Haselden to author (logbook information 67 Squadron pilots), 22 January 2017; logbook Vic Bargh (via Neil Frances), photographs Vic Bargh via Malcolm Laird. See Appendix for details.

[83] Shores, 2, p. 288; e-mail Mark Haselden to author (logbook information 67 Squadron pilots), 22 January 2017; logbook notes Vic Bargh (via Neil Frances); Neil Frances, Ketchil, a New Zealand pilot's war in Asia and the Pacific (Masterton, New Zealand, 2005), pp. 81-84.

- [84] AHQ India and Ferry Command messages (UK National Archives, research by author, 1974-77), Shores, 2, p. 290.
- [85] Stevenson's Despatch, pts. 30, 42; R.S. Sansome, *The Bamboo Workshop, the history of the RAF Repair & Salvage Units India/Burma 1941-1946* (Braunton, Devon, England, 1995), pp. 35-36.
- [86] Stevenson's Despatch, pt. 30; Shores, 2, pp. 287, 290. See Appendix for details on ac losses.
- [87] Shores, 2, pp. 287, 290-91.
- [88] Stevenson's Despatch, pt. 163; Shores, 2, p. 291.
- [89] Correspondence author with F.K. Mason.
- [90] Cf. [89], Air 29/1073 (UK National Archives, 304 MU ORB).
- [91] Cf. [89], R.S. Sansome, *The Bamboo Workshop, the history of the RAF Repair & Salvage Units India/Burma 1941-1946* (Braunton, Devon, England, 1995), p. 36; see Appendix, section 2, for details on deliveries and losses.
- [92] Historic data 154 MU (via Air Historical Branch, c. 1984).
- [93] Neil Frances, *Ketchil, a New Zealand pilot's war in Asia and the Pacific* (Masterton, New Zealand, 2005), pp. 85-86; Shores, 2, p. 349, see Appendix, p. 15 for details on the Mark Is of 17 Sq.
- [94] Neil Frances, *Ketchil, a New Zealand pilot's war in Asia and the Pacific* (Masterton, New Zealand, 2005), pp. 89-91.
- [95] Stevenson's Despatch, pts. 177, 180, 185; Shores, 2, pp. 345, 348-49; logbook Vic Bargh (with thanks to Neil Frances); www.rnzaf.proboards.com, message of Andy Wright, 17 December 2011.
- [96] Mason, pp. 171-72; Shores, 2, p. 349; interview author with R.W.C.G.A. Wittert van Hoogland Esq, LL.M. (then a B-25C instructor with 5 later 3 PRU who instructed former 2 PRU/3 PRU Hurricane pilots on the B-25C). It is remarked that 3 PRU and 5 PRU merged on 28 May 1942 adopting the name 3 PRU.
- [97] Military History Office of the Defence Agency's Defence College, *Senshi Soshō*, Vol. 34 [Army air drive to the southern Pacific area] (Tokyo, 1970, hereafter *Senshi Soshō*, 34), p. 700; correspondence author with F.K. Mason; Stevenson's Despatch, pts. 185, 188; Shores, 2, pp. 350-55.
- [98] Shores, 2, p. 355; *Senshi Soshō*, 34, p. 701; interview author with R.W.C.G.A. Wittert van Hoogland Esq, LL.M.

[99] Stevenson's Despatch, pts. 185, 188, 194, 197; Shores, 2, pp. 355-356; see Appendix for ac details.

[100] Mason, p. 167; Stevenson's Despatch, pt. 198; Shores, 2, p. 356; see Appendix for ac details.

[101] Sq ORB (Form 540), Stevenson's Despatch, pt. 203; Shores, 2, pp. 355-360; correspondence author with F.K. Mason; Senshi Sosho, 34, pp. 702-703.

[102] Sq ORB (Form 540), Shores, 2, pp. 355-360; correspondence author with F.K. Mason.

[103] Sq ORB (Form 540), Vivian K. Jacobs, The Woodpecker story (Durham, UK, 1994); correspondence author with F.K. Mason; AHQ India messages (UK National Archives, research by author 1974-77); see also Appendix.

[104] Stevenson's Despatch, pt. 206; Shores, 2, pp. 361-365.

[105] Shores, 2, pp. 364-65, 367, 370-71; Senshi Sosho, 34, p. 714. No 3 PRU did receive two new Hurricanes IIB PR ac in April 1942 (stationed at Dum Dum) but these were not transferred to Loiwing as evacuation of the base was thought to be imminent.

[106] AHQ India messages (UK National Archives, research by author 1974-77); see also Appendix.

[107] Mason, pp. 171-72; correspondence author with F.K. Mason; Shores, 2, p. 367 (is not entirely correct as 3 PRU existed until 28 May, see endnote 96). See Appendix for ac details. The first two ships carrying attrition reserve Hurricanes sailed from the UK on 23 December 1941, MS Estrella, respectively on 10 January 1942, SS Alcyone. Both did not make it to their destination as planned. Estrella with eight Hurricanes developed engine problems after it had left Freetown and reached the Table Bay only on 10 March 1942. After extensive repairs in South Africa it reached Bombay on 25 August 1942. The eight Hurricanes earmarked Burma in January 1942 to replace eight reallocated to Ceylon were carried by Estrella. When this ship was seriously delayed the nine Hurricanes on board of the Alcyone were earmarked instead. Alcyone hit a German mine off Cape Town and sank on 16 March 1942, however.

[108] The first attrition replacement aircraft that did arrive were on Bengkalis (seven, all to 67 Sq and 135 Sq in India) and Clan MacNair (two, both to 261 Sq in Ceylon) which both left the UK on 17 January 1942 to arrive at Bombay on 13 March 1942, see www.convoyweb.org.uk for details on the OS convoys. Four Fairey Fulmars and four Fairey Abcores of the FAA reached Singapore on the ammunition vessels Phrontis and Derrymore, respectively. These two freighters had sailed from the UK to Australia via the Atlantic and the Panama Canal becoming part of the Melbourne-Singapore convoy MS.1.

[109] www.convoyweb.org.uk (OS convoys). Apart from Estrella and Alcyone (see endnote 107) the following ships carried attrition replacement Hurricanes: Bengkalis (seven), Clan MacNair (two), Clan MacWirth (11) and Can MacBrayne (eight). Remaining five attrition replacement aircraft unknown, possibly not shipped or replaced by ac ferried from Port Sudan.

[110] <http://www.30squadronassociation.com/history/ceylon.html>; AHQ India message, 5 March 1942 (UK National Archives, research by author 1974-77).

[111] www.rafcommands/india/cpl-george-kennedy-991267-raf/ (the photo album of Cpl George Kennedy 991267 RAF).
<http://www.30squadronassociation.com/history/ceylon.html>.

[112] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. Abdacom 01996, 22 February 1942 and 02047, 22 February 1942).

[113] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. C-in-C Eastern Forces Diary, 3 March 1942); message Dutch liaison officers Combined Chiefs of Staff (via AMH, c. 1986).

[114] www.rafcommands.com, Rob Stuart, 24 December 2011 (ref. Chiefs of Staff, India 29, ADM 223/867).

[115] Shores, 2, pp. 386-387; see Appendix for the correct serials of the ac concerned (both pilots flew off another Hurricane during their second take-off).

[116] Shores, 2, pp. 386-87, 390.

[117] Sq ORB (Form 540); 222 Group message (via Air Historical Branch RAF); see also Shores, 2, p. 390.

[118] Interview author with D.J.T. Sharp, c 1977; Shores, 2, pp. 386-87, 390-91.

[119] Interview author with D.J.T. Sharp, c. 1977.

[120] Sq ORBs (Forms 540); AHQ India message (1 April 1942, state of aircraft, UK National Archives, research by author 1974-77).

[121] Sq ORBs (Forms 540); Shores, 2, p. 411.

[122] Sq ORBs (Forms 540); Shores, 2, pp. 399-403,

[123] Sq ORB (Form 540); Shores, 2, p. 408.

[124] Air 20/4698 (UK National Archives); Shores, 2, pp. 420-29.

[125] Shores, 2, p. 429; see Appendix for details.

[126] 301 MU and AHQ India messages (UK National Archives, research by author 1974-77); www.convoyweb.co.uk.

Abbreviations used

Ac – aircraft

AHQ – Air Headquarters

AkWing – Akyab Wing

AMH – Afdeling Maritime Historie (History Department of the Royal Netherlands Navy, nowadays part of the Netherlands Institute for Military History)

AVG – American Volunteer Group

BurWing – Burma Wing

C-in-C – Commander-in-Chief

CO – Commanding Officer

Cpl – Corporal

EF – Eastern Force(s)

FAA – Fleet Air Arm

FE – Far East

ML/KNIL – Militaire Luchtvaart Koninklijk Nederlands Indisch Leger (Army Air Corps of the Royal NEI Army)

MU – Maintenance Unit

NEI – Netherlands East Indies

NIDS – National Institute of Defence Studies (Tokyo, Japan)

ORB – Operations Record Book

OTU – Operational Training Unit

P - Provisional

PR – Photographic Reconnaissance

PRU – Photographic Reconnaissance Unit

PI – Palembang I Airbase

PII – Palembang II Airbase

PO – Pilot Officer

RSU – Repair and Salvage Unit

Sq – Squadron

Sqn Ldr – Squadron Leader

Wg Cdr – Wing Commander

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Appendix: Hurricanes Mark I, IIA and IIB delivered to squadrons in Singapore, Burma, Ceylon and the Netherlands East Indies (aircraft deliveries, allocations and fates as far as is known until approximately 15 April 1942)

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The listings below are based on data collected by Peter Boer from the RAF (Air Ministry) Forms 78, aircraft movement cards, squadron Operations Record Books, AHQ India and Ferry Command messages and data collected by Geoffrey Sinclair from the Air Ministry Contract Cards, AM Forms 266 (delivery logs) and export lists. Also Japanese newspaper and magazine photographs made of captured Hurricanes in Singapore, South Sumatra and Java were used. Secondary sources used were Air Britain Royal Air Force Aircraft (Air Britain, compiler James J. Halley), Vol. BA100 to BZ999 (2006) and Vol. W1000-Z9999 (1998); Francis K. Mason, The Hawker Hurricane, an illustrated history (Manchester, 1990), Appendix IV Production, Allocation and History of Hurricanes; Christopher Shores and Brian Cull with Yasuho Izawa, Bloody Shambles, Vol. 1 (1992) and 2 (1993); Brian Cull with Paul Sortehaug, Hurricanes over Singapore (2004) and Neil Frances, Ketchil, a New Zealand pilot's war in Asia and the Pacific (2005).

See page 20 for the abbreviations used.

Export dates are given when known but the information in the delivery logs and export lists is incomplete. Ac for the ME were brought to Takoradi in West Africa by cargo ship from the UK and subsequently ferried across Africa to Port Sudan with a stop-over at Khartoum.

Section 1 for Singapore/Netherlands East Indies (NEI)

Hurricanes shipped from the United Kingdom on HMS Sussex and MS Abbekerk
Ac sailed from Liverpool/Clyde on 12 November 1941, arrived Singapore on 13 January 1942. All ac Mark IIBs, 41 on Sussex with outer wings off and in crates,

batteries and some smaller items in boxes and all fluids drained, 10 fully crated on Abbekerk, all reassembled by 151 MU, Seletar, Singapore.

- BE345 ME 11.11.41, 30.01.42 on strength 232 (P) Sq, lost or major damage and abandoned in the period 30.01.42-01.02.42.
- BE577 FE 06.11.41, 232 (P) Sq 01.42, lost 21.01.42 (missing over Singapore).
- BE578 originally allocated Russia 06.11.41 (crated), final aircraft assembled at Seletar, picked up 09.02.42 and flown to Kallang, 10.02.42 evacuated to Palembang I by 232 Sq, lost or abandoned before 16.02.42.
- BE579 FE 08.11.41, 232 (P) Sq 01.42, Cat E 22.01.42 (missing).
- BE584 originally allocated Russia 08.11.41 (crated), 232 (P) Sq 25.01.42-02.42, 02.02.42 to Sembawang, 05.02.42 to Kallang and evacuated same day to Palembang I, 15.02.42 evacuated from Palembang II to Kemajoran, Java; lost or abandoned before 09.03.42.
- BE585 ME 08.11.41, 24.01.42 to 488 Sq, 27.01.42 hit in air raid on Kallang. [1]
- BE587 ME 10.11.41, 232 (P) Sq 01.42-02.42, 02.02.42 evacuated from Seletar to Palembang I (flyable but unserviceable), lost or abandoned before 16.02.42.
- BE588 ME 08.11.41, 232 (P) Sq 01.42, 23.01.42 crash landed at Kallang with battle damage, 27.01.42 DBR in air raid on Kallang (while in repair).
- BE589 FE 09.11.41, 232 (P) Sq 01.42 (C Flight Kallang), 25.01.42 Cat E (missing in bad weather).
- BE590 FE 09.11.41, 232 (P) Sq 01.42, 27.01.42 Cat E (dived into the ground near Kranji).
- BE632 ME 08.11.41, 24.01.42 to 488 Sq, 27.01.42 hit in air raid on Kallang. [1]
- BE633 FE 10.11.41, 232 (P) Sq 01.42, 21.01.42 emergency landing but crashed on approach Kallang, DBR.
- BE637 ME 10.11.41, 232 (P) Sq 01.42-02.42, 11.02.42 collected at Seletar after repairs and evacuated from Kallang to Palembang I same date by 232 Sq, 232 Sq 02.42, 13.02.42 shot down near Palembang.
- BE638 ME 09.11.41 (crated), 232 (P) Sq 01.42, 26.01.42 missing (shot down).
- BE639 ME 10.11.41, 232 (P) Sq 01.42, 23.01.42 forced landed at Blakan Mati Island (written off).
- BE640 ME 08.11.41, 25.01.42 to 488 Sq, 27.01.42 hit in air raid on Kallang. [1]
- BE641 ME 10.11.41, 232 (P) Sq 01.42, 25.01.42 Cat E (missing in bad weather).
- BG693 prob. 30.01.42 on strength 232 (P) Sq, 05.02.42 81 RSU Sembawang, 05.02.42 flown to Tengah by a 453 Sq pilot due to artillery shelling of Sembawang and from Tengah to Kallang by a 488 Sq pilot, 05.02.42 or

- 07.02.42 evacuated to Palembang I (232 (P) Sq), 13.02.42 shot down near Palembang (232 Sq).
- BG720 232 (P) Sq 01.42, lost 22.01.42 (bale-out).
 - BG722 originally allocated Russia 07.11.41 (crated), c. 25.01.42 to 488 Sq, ops 30.01.42, 31.01.42 transferred to 232 (P) Sq, 02.02.42 to Sembawang, 05.02.42 to Kallang, 05.02.42 evacuated to Palembang I, 232 Sq 02.42, lost or abandoned before 16.02.42.
 - BG723 originally allocated Russia 08.11.41 (crated), 24.01.42 to 488 Sq, ops 30.01.42, 30.01.42 damaged on landing at Tengah, 31.01.42 transferred to 232 (P) Sq, 02.02.42 evacuated from Seletar to Palembang I (flyable but unserviceable), lost or abandoned before 16.02.42.
 - BG768 ME 11.41, 232 (P) Sq 01.42-02.42, 02.02.42 to Sembawang, 05.02.42 to Kallang, 05.02.42 or 07.02.42 evacuated to Palembang I, 232 Sq 02.42, crashed 12.02.42 in bad weather.
 - BG796 232 (P) Sq 01.42, shot down 22.01.42.
 - BG797 232 (P) Sq 01.42-02.42, 02.02.42 evacuated from Seletar to Palembang I (flyable but unserviceable), c. 04.02.42 to 232 Sq, 05.02.42 to Kallang, 09.02.42 missing over Johore (232 Sq).
 - BG798 originally allocated Russia 05.11.41 (crated), 232 (P) Squadron 01.42-02.42, 02.02.42 flown from Kallang to Seletar and same day to Sembawang, 05.02.42 to Kallang, 05.02.42 or 07.02.42 evacuated to Palembang I, 232 Sq 02.42, lost before 16.02.42.
 - BG799 ME 11.41, 30.01.42 on strength 232 (P) Sq, lost or major damage and abandoned in the period 30.01.42-01.02.42.
 - BG800 24.01.42 to 488 Sq, 27.01.42 hit in air raid on Kallang. [1]
 - BG804 232 (P) Sq 01.42, shot down 22.01.42.
 - BG807 232 (P) Sq 01.42, lost 24.01.42 (ditched off Senggarang).
 - BG808 232 (P) Sq 01.42, 29.01.42 damaged after the undercarriage collapsed on landing at Seletar, probably declared DBR and salvaged for spares.
 - BG810 232 (P) Sq 01.42, shot down (bale-out) 22.01.42.
 - BG817 ME 08.11.41 (crated), c. 26.01.42 to 488 Sq Kallang, 27.01.42 hit in air raid on Kallang. [1] [2]
 - BG818 232 (P) Sq 01.42, 20.01.42 shot down (bale-out).
 - BG820 232 (P) Sq 01.42, 22.01.42 belly landed at Seletar, c. 28.01.42 declared DBR and salvaged for spares.
 - BG828 (crated), 232 (P) Sq 01.42, 19.01.42 crash landed at Seletar to avoid collision with a truck, c. 28.01.42 declared DBR and salvaged for spares.
 - BG830 FE 08.11.41, 232 (P) Sq 01.42, to 151 MU 01.42, 30.01.42 on strength 232 (P) Sq again, damaged at Seletar in the period 30.01.42-01.02.42, 11.02.42 collected at Seletar after repairs and evacuated from Kallang same date by 232 Sq (flyable but unserviceable), emergency landing on NEI island en route to Palembang I, DBR.
 - BG831 ME 08.11.41, 30.01.42 on strength 232 (P) Sq, lost or major damage and abandoned in the period 30.01.42-01.02.42.

- BG845 24.01.42 to 488 Sq, 27.01.42 hit in air raid on Kallang. [1]
- BG846 232 (P) Sq 01.42, shot down 23.01.42 (bale-out).
- BG848 232 (P) Sq 01.42, missing 20.01.42 (shot down).
- BG849 ME 10.11.41, 30.01.42 on strength 232 (P) Sq, lost or major damage and abandoned in the period 30.01.42-01.02.42.
- BG851 ME 11.41, 30.01.42 on strength 232 (P) Sq, lost or major damage and abandoned in the period 30.01.42-01.02.42.
- BG860 232 (P) Sq 01.42, 22.01.42 damaged in air battle but safely landed at Seletar, lost or major damage and abandoned in the period 30.01.42-01.02.42.
- BG864 232 (P) Sq 01.42, 21.01.42 damaged on landing at Seletar as the landing gear failed to lock, to 151 MU for repairs but SOC c. 28.01.42 and salvaged for spares.
- BM898 232 (P) Sq 01.42, 23.01.42 lost (bale-out).
- BM899 FE 10.11.41, 232 (P) Sq 01.42-02.42, 02.02.42 to Sembawang, 05.02.42 to Kallang, 05.02.42 evacuated to Palembang I, 15.02.42 evacuated Palembang II to Kemajoran, Java; c. 20.02.42 to 488 Sq Tjililitan, 21.02.42 transferred to 605 Sq, lost or abandoned before 09.03.42.
- BM900 FE 08.11.41 (crated), 25.01.42 to 488 Sq, ops 30.01.42, 31.01.42 to 232 (P) Sq, 02.02.42 in repair at Sembawang, 05.02.42 left unserviceable by 232 (P) Sq at Sembawang, flown to Tengah by a 453 Sq pilot due to artillery shelling of Sembawang, same day flown from Tengah to Kallang by a 258 Sq pilot, 10.02.42 evacuated to Palembang I by 232 Sq, 02.42 Palembang I, 15.02.42 evacuated Palembang II to Kemajoran, Java; 09.03.42 into Japanese hands at Andir (with major damage and extensively cannibalised).
- BM902 FE 11.11.41, 232 (P) Sq 01.42, 27.01.42 DBR in air raid on Kallang (while in repair).
- BM903 FE 11.11.41, 232 (P) Sq 01.42, 22.01.42 damaged by defence fire from bomber tail gunners near Seletar, 27.01.42 reported in repair, abandoned and 30.01.42 no longer in the strength of 232 (P) Sq.
- BM904 FE 11.11.41, 232 (P) Squadron 01.42, crash landed with battle damage and abandoned in the period 30.01.42-01.02.42, salvaged and put up as a decoy in a dispersal at Seletar.
- BM906 FE 11.11.41, 232 (P) Sq 01.42, missing 20.01.42 (shot down).

Remarks

Of the above mentioned ac BE345, BE577, BE578, BE579, BE584, BE585, BE587, BE589, BE590, BE632, BE633, BE637, BE638, BE639, BE640, BE641, BG720, BG722, BG723, BG768, BG796, BG798, BG800, BG804, BG807, BG808, BG810, BG817, BG818, BG830, BG831, BG846, BG848, BG849, BG851, BG860, BG864, BM898, BM899, BM900, BM902, BM903, BM904 and BM906 are given in the export lists as being on the ship R.301 [=HMS Sussex] on 14.11.41 destination Archangel.

Shipping records (research by Peter Boer and Johan van der Wei, PRO, 1975-77) list 51 ac to be shipped with "S.S. R.301" allocated ME in November 1941, destination Iraq [final destination probably Russia]. These are the 44 ac listed as originally destined for Archangel plus the ac BE588, BG693, BG797, BG799, BG820, BG828 and BG845. Several telegrams and messages prove that a number of other ac were allocated which were replaced by others (no reason given) leading eventually to the ac with the serials given shipped to the FE. Some ac retained the destination as Russia on their Form 78 (see the listing), many retained a ME allocation date with relatively few having a FE allocation date on their Form 78. (All known allocation dates fall in the period of 5 November-11 November 1941). Originally all ac were to be shipped crated on HMS Sussex but eventually Sussex carried 41 partly dismantled ac and MS Abbekerk transported 10 crated ac. This was done to shorten the time needed for reassembly. Very likely the 44 serials in the exports listing represent an earlier plan not carried out or, perhaps, an administrative decoy, to conceal the route of HMS Sussex.

Hurricanes flown off by HMS Indomitable on 27 and 28 January 1942

Operation Opponent ac, sailed on Indomitable from Port Sudan, Egypt on 15 January 1942. Ac administratively reallocated Middle East to India same date. All ac Mark IIBs stowed with outer wings off and in crates, batteries and some other small items in boxes and drained of all fluids, all reassembled and made serviceable on board.

- Z3750 exp. to Takoradi 22.08.41, FE 15.01.42, ops 06.02.42, lost or abandoned before 16.02.42.
- Z5376 exp. to Takoradi 09.09.41, reported in ME 12.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5438 exp. to Takoradi 02.10.41, reported in ME 22.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5442 exp. to Takoradi 19.10.41, reported in ME 21.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5447 reported in ME 04.11.41, FE 15.01.42, India 01.05.42, remained on board of Indomitable and to India (Ceylon), see p. 19. [15]
- Z5466 exp. to Takoradi 22.09.41, reported in ME 12.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5472 exp. to Takoradi 02.10.41, reported in ME 21.12.41, FE 15.01.42, 232 Sq Palembang I 02.42, lost or abandoned before 16.02.42.
- Z5481 reported in ME 24.12.41, FE 15.01.42, 258 Sq 02.42, 03.02.42 in repair at Tengah, 05.02.42 to Kallang, seconded 232 Sq Kallang, 10.02.42 Kallang to Palembang I, 258 Sq Palembang I 02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java (damaged), lost or abandoned before 09.03.42.
- Z5482 reported in ME 24.12.41, FE 15.01.42, 232 Sq Palembang I, 05.02.42 to Kallang, 07.02.42 crashed in sea off Kallang.

- Z5483 exp. to Takoradi 22.09.41, reported in ME 04.12.41, FE 15.01.42, 232 Sq Palembang I 02.42, lost or abandoned before 16.02.42.
- Z5553 reported in ME 13.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5580 reported in ME 20.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5582 exp. to Takoradi 19.10.41, reported in ME 22.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5590 exp. to Takoradi 23.10.41, reported in ME 21.12.41, FE 15.01.42, 14.02.42 shot down and SOC Palembang.
- Z5598 exp. to Takoradi 21.09.41, reported in ME 22.12.41, FE 13.01.42/15.01.42, lost or abandoned before 16.02.42.
- Z5611 exp. to Takoradi 19.10.41, reported in ME 22.12.41, FE 15.01.42/18.01.41, 15.02.42 evacuated Palembang II to Kemajoran, Java; abandoned at Andir 03.42 (major damage already partly repaired), into Japanese hands 09.03.42, repairs completed by PoWs and ac brought to Japan for evaluation.
- Z5615 exp. to Takoradi 19.10.41, reported in ME 22.12.41, FE 15.01.42/18.01.42, lost or abandoned before 16.02.42.
- Z5657 reported in ME 23.12.41, FE 15.01.42, lost or abandoned before 16.02.42.
- Z5667 reported in ME 21.12.41, FE 15.01.42, 232 Sq Palembang I 02.42, 05.02.42 to Kallang, 10.02.42 Kallang to Palembang I, 232 Sq Palembang I, 15.02.42 evacuated from Palembang II to Kemajoran, Java; lost or abandoned before 09.03.42.
- Z5685 reported in ME 18.10.41, FE 15.01.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; lost or abandoned before 09.03.42.
- Z5693 exp. to Takoradi 05.11.41, reported in ME 24.12.41, FE 15.01.42, 232 Sq Palembang I 02.42, ops 11.02.42, lost or abandoned before 16.02.42.
- BD780 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BD781 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BD897 exp. to Takoradi 11.09.41, all. ME 03.09.41, prob. 258 Sq 01.42, prob. 31.01.42 ops Tengah and emergency landing at Sembawang, 05.02.42 81 RSU Sembawang, 05.02.42 flown to Tengah due to artillery shelling of Sembawang and from there to Kallang (by pilots of 488 Sq, respectively 453 Sq), further repairs with 232 Sq, 11.02.42 evacuated to Palembang I, lost or abandoned before 16.02.42.
- BD928 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BD933 exp. to Takoradi 02.10.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BD961 exp. to Takoradi 21.09.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE115 exp. to Takoradi 22.09.41, reported FE 15.01.42, 232 Sq Palembang 02.42, 08.02.42 shot down over Palembang I.

- BE130 exp. to Takoradi 21.09.41, reported FE 15.01.42, 232 Sq Palembang I 02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; 02.03.42 shot down by ground fire, crash landed in paddy field.
- BE158 reported FE 15.02.42, 232 Sq Palembang I 02.42, 06.02.42 missing (wreckage found 09.02.42).
- BE160 exp. to Takoradi 02.10.41, reported FE 15.01.42, 232 Sq Palembang I, 05.02.42 to Kallang, lost Singapore 09.02.42.
- BE163 reported FE 15.01.42, 258 Sq 01.42, 31.01.42 ops from Tengah, damaged in air battle, further damaged in forced landing at Tengah, abandoned and salvaged, put up as a decoy.
- BE174 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE195 exp. to Takoradi 02.10.41, reported FE 15.01.42, 232 Sq Palembang I, 05.02.42 to Kallang, 08.02.42 shot down and belly landing Kallang, DBR.
- BE196 exp. to Takoradi 02.10.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE202 exp. to Takoradi 02.10.41, reported FE 15.01.42, FE 15.02.42, 232 Sq 02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; ops 25.02.42, 01.03.42 (232 Sq), lost or abandoned before 09.03.42. .
- BE207 exp. to Takoradi 19.10.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE208 exp. to Takoradi 19.10.41, reported FE 15.01.42, 232 Sq Palembang I, 05.02.42 to Kallang, 07.02.42 crash landed at Kallang with battle damage (abandoned). [3]
- BE209 reported FE 15.02.42, 258 Sq Palembang I 02.42, missing 06.02.42 (shot down, pilot reported back at Palembang 11.02.42).
- BE212 reported FE 15.01.42, flown off 28.01.42 (258 Sq), 31.01.42 unserviceable at Tengah, 03.02.42 serviceable again and to Palembang I, 258 Sq 02.42, lost or abandoned before 16.02.42.
- BE217 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE219 exp. to Takoradi 19.10.41, reported FE 15.01.42, 232 Sq Palembang I 02.42, 08.02.42 shot down.
- BE220 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE230 exp. to Takoradi 19.10.41, reported FE 15.01.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; ops 20.02.42 (232 Sq), lost or abandoned before 09.03.42.
- BE235 exp. to Takoradi 19.10.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE238 exp. to Takoradi 02.10.41, reported FE 15.01.42, 232 Sq Palembang I 02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; ops 19.02.42 (232 Sq), lost or abandoned before 09.03.42.
- BE239 exp. to Takoradi 19.10.41, reported FE 15.01.42, 232 Sq Palembang I 02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; ops 23.02.42, 01.03.42-02.03.42 (232 Sq), lost or abandoned before 09.03.42.

- BE240 exp. to Takoradi 28.10.41, reported FE 15.01.42, lost or abandoned before 16.02.42.
- BE292 reported FE 15.01.42, lost or abandoned before 16.02.42.
- BG678 exp. to Takoradi 15.11.41, 28.01.42 flown off, 232 Sq 01.42, 31.01.42 ops from Tengah, damaged by fighters; 02.02.42 returned to Palembang I but crashed on landing, repaired; 05.02.42 crash landed on arrival at Kallang, abandoned (232 Sq).

Hurricanes shipped from Takoradi on HMS Athene

Operation Churn aircraft loaded at Takoradi, Gold Coast colony (present day Ghana, western Africa) from early 01.42 and sailed 05.01.42. All ac Mark IIBs administratively reallocated from Middle East to India on 8 January 1942, all shipped with outer wings off and in crates, batteries and some smaller items in boxes and drained of all fluids. Apart from the first four reassembled by RAF personnel at Kemajoran, Java, all reassembled by the ML/KNIL in the outskirts of Batavia and at Kemajoran airfield, Java.

- Z2581 (Mark IIA modified to IIB) exp. to Takoradi 24.07.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5317 exp. to Takoradi 02.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5319 exp. to Takoradi 21.09.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5341 exp. to Takoradi 02.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5437 ME 24.09.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5546 exp. to Takoradi 23.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5555 ME 14.10.41, India 08.01.42, arr. Palembang 14.02.42, probably lost at Palembang I 14.02.42.
- Z5556 exp. to Takoradi 18.11.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5581 ME 14.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- Z5584 ME 17.09.41, exp. to Takoradi 21.09.41, 15.02.42 evacuated Palembang II to Kemajoran, Java; lost or abandoned before 09.03.42.
- Z5602 exp. to Takoradi 28.10.41, India 08.01.42, arr. Tjililitan 14.02.42, to 488 Sq, 21.02.42 to 605 Sq, ops 01.03.42, lost or abandoned before 09.03.42.
- Z5609 exp. to Takoradi 23.10.41, India 08.01.42, arr. Tjililitan 15.02.42, 15.02.42 to ML/KNIL (in exchange for BE332)
- Z5612 exp. to Takoradi 04.11.41, India 08.01.42, 15.02.42 to ML/KNIL.

- Z5616 India 08.01.42, arr. Tjililitan 16.02.42, to 488 Sq, 21.02.42 to 605 Sq, ops 25.02.42-01.03.42 damaged, lost or abandoned before 09.03.42.
- Z5619 exp. to Takoradi 28.10.41, India 08.01.42, 15.02.42 to ML/KNIL.
- Z5622 exp. to Takoradi 28.10.41, India 08.01.42, 15.02.42 to ML/KNIL.
- Z5664 exp. to Takoradi 04.11.41, India 08.01.42, arr. Tjililitan 14.02.42, to 488 Sq, 21.02.42 to 605 Sq, lost or abandoned before 09.03.42.
- Z5682 exp. to Takoradi 28.10.41, India 08.01.42, arr. Tjililitan 15.02.42, to 488 Sq, 21.02.42 to 605 Sq, lost or abandoned before 09.03.42.
- Z5683 exp. to Takoradi 18.11.41, India 08.01.42, 15.02.42 to ML/KNIL (in exchange for Z5616).
- Z5690 exp. to Takoradi 28.10.41, India 08.01.42, arr. Tjililitan 14.02.42, to 488 Sq, 21.02.42 to 605 Sq, ops 22.02.42, 24.02.42, lost or abandoned before 09.03.42.
- Z5691 exp. to Takoradi 04.11.41, India 08.01.42, arr. Tjililitan 15.02.42, to 488 Sq, 21.02.42 to 605 Sq, ops 04.03.42, lost or abandoned before 09.03.42.
- BD778 exp. to Takoradi 02.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BD890 exp. to Takoradi 09.09.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BD892 exp. to Takoradi 22.09.41, India 08.01.42, arr. Palembang 14.02.42, shot down 14.02.42 (crash landed).
- BD896 exp. to Takoradi 21.09.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BD927 exp. to Takoradi 02.10.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BE149 exp. to Takoradi 18.11.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BE194 exp. to Takoradi 28.09.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BE206 India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BE210 exp. to Takoradi 23.10.41, India 08.01.42, arr. Palembang 13.02.42, 15.02.42 evacuated Palembang II to Kemajoran, Java; ops 20.02.42-02.03.42 (232 Sq), lost or abandoned before 09.03.42.
- BE218 exp. to Takoradi 04.11.41, India 08.01.42, lost or abandoned in period 13.02.42-08.03.42.
- BE225 exp. to Takoradi 18.11.41, India 08.01.42, 15.02.42 to ML/KNIL.
- BE293 exp. to Takoradi 17.11.41, India 08.01.42, arr. Tjililitan 14.02.42, 15.02.42 to ML/KNIL.
- BE332 exp. to Takoradi 28.10.41, India 08.01.42, arr. Tjililitan 15.02.42, allocated ML/KNIL but propeller damaged and to 488 Sq, 21.02.42 to 605 Sq, ops 22.02.42-24.02.42, 25.02.42 shot down (bale-out).
- BE333 exp. to Takoradi 04.11.41, India 08.01.42, 15.02.42 to ML/KNIL.
- BE363 exp. to Takoradi 28.10.41, India 08.01.42, 15.02.42 to ML/KNIL.
- BG677 exp. to Takoradi 04.11.41, India 08.01.42, 15.02.42 to ML/KNIL.

- BG743 15.02.42 to ML/KNIL.
- DG614 (Mark IA modified to IIA, ex P3068, subsequently modified to IIB) India 08.01.42, 15.02.42 to ML/KNIL.

Section 2 for Burma

Ac sent from the Middle East, ferried from Port Sudan, Sudan (34) and Basrah, Iraq (one), arrived at Mingaladon and Magwe in the period of 23 January-24 February 1942

Ac arrived at Mingaladon three on 23 January, six on 25 January, six on 29 January, four on an unknown date in January, four on 2 February, seven on 14 February and two on 15 February and Magwe two on 24 February 1942 (both the next day on to Mingaladon). One ac was lost en route. All ac Mark IIB unless otherwise noted as Mark IIA; some came from squadrons which were re-equipping with Curtiss P-40s at the time.

India or FE dates are reported "on charge" dates (01.02.42, 01.03.42, 01.04.42, 18.04.42 and 01.05.42; the dates are "in India", no difference is made between "in India", "in Burma" or "in Ceylon", AHQ India often also reported ac lost or abandoned but not yet formally struck off charge). Other dates are when the ac was reported as lost or DBR or damaged and later abandoned as a result of operations, accidents or Japanese air raids unless otherwise noted. However, 18.04.42 was not only a general reporting date of AHQ India listing the ac reported on strength by subordinate units but also one of the dates when losses of some units and ac shipments were reported over a larger period. This includes 17 Sq, which reported on approximately 13.04.42 the Hurricanes lost to all causes for the periods it operated from Magwe (10.03.42-27.03.42) and Lashio-Loiwing (06.04.42-13.04.42). The date 18.04.42 is mentioned on a number of AM Forms but without clarification. (The notation India 15.04.42 usually is a reported "on charge" date of 301 MU in Karachi).

- Z4949 (Mark IIA PR ac) exp. Takoradi 22.08.41, FE 01.02.42, arr. 25.01.42, to Zayatkwini, 02.42 based Mingaladon, 03.42 Magwe (3 PRU), shot down by a 17 Sq Hurricane 21.03.42, forced landing, DBR.
- Z5124 exp. Takoradi 22.08.41, all. ME 01.08.41, FE 01.02.42, arr. 01.42 or 02.02.42, 03.42 via Akyab to Calcutta for repairs, 04.42 in India.
- Z5334 exp. Takoradi 29.11.41, rep. ME 10.01.42, FE 01.02.42, arr. 23.01.42, to 17 Sq, ops 24.01.42, major damage in a night bombardment at Mingaladon 26-27.01.42, DBR, SOC c. 09.02.42.
- Z5343 exp. Takoradi 02.10.41, rep. ME 12.12.41, FE 01.02.42, arr. 29.01.42, forced landing on a river bank due to adverse weather 03.02.42 and DBR, SOC 09.02.42. [4]

- Z5344 exp. Takoradi 22.09.41, all. ME 12.09.41, FE 01.02.42, arr. 23.01.42, severely damaged in an air battle that same day; this ac could not be repaired due to a lack of spares and was burnt on evacuating Mingaladon 07.03.42. [5]
- Z5473 rep. ME 15.01.42, FE 01.02.42, arr. 25.01.42, to 17 Sq, ops 26.01.42 damaged, ops 04.02.42 damaged, ops 25.02.42 (17 Sq), 02.42 detached 28 Sq, shot down 02.03.42 and crash landed, DBR.
- Z5583 rep. ME 18.01.42, FE 01.02.42, arr. 29.01.42, to 135 Sq, forced landed 01.03.42 and DBR, SOC 01.03.42. [6]
- Z5628 all. ME 13.10.42, FE 01.02.42, India 01.05.42, arr. 01.42 or 02.02.42, 03.42 via Akyab to Calcutta for repairs, 04.42 in India.
- Z5659 exp. Takoradi 29.11.41, rep. ME 10.01.42, India 01.02.42, arr. 01.42 or 02.02.42, 135 Sq 02.42; ops 06.02.42-26.02.42, 03.42 via Akyab to Calcutta for repairs, 04.42 in India (to 135 Sq).
- BD735 exp. Takoradi 28.09.41, India 01.05.42, arr. 02.42, 03.42 via Akyab to Calcutta for repairs, 04.42 in India (later with 67 Sq).
- BD882 exp. Takoradi 16.09.41, FE 01.02.42, arr. 01.42 or 02.02.42, lost before 08.03.42.
- BD895 exp. Takoradi 09.09.41, FE 01.02.42, arr. 01.42 or 02.02.42, lost before 08.03.42.
- BD921 exp. Takoradi 28.09.41, India 01.05.42, arr. 25.01.42, ops 26.01.42-29.01.42, 03.42 to Calcutta for repairs, 04.42 in India.
- BD963 exp. Takoradi 26.09.41, all. ME 15.09.41, arr. 02.42; shot down 26.02.42 and emergency landing at Mingaladon, DBR (17 Sq), 07.03.42 destroyed by own troops.
- BE170 FE 01.02.42, arr. 01.42 or 02.02.42, lost before 08.03.42.
- BE171 exp. Takoradi 02.10.41, FE 01.02.42, arr. 25.01.42, to 17 Sq, ops 29.01.42, 06.02.42; lost 26.02.42 (bale-out)
- BE198 rep. ME 11.01.42, India 01.05.42, arr. 29.01.42, to 135 Sq, 03.42 via Akyab to Calcutta for repairs, 04.42 in India (to 136 Sq).
- BE223 India 01.05.42, arr. 25.01.42, ops 26.01.42; 03.42 via Akyab to Calcutta for repairs, 04.42 in India (to 146 Sq). [7]
- BE237 exp. Takoradi 23.10.41, FE 01.02.42, arr. 01.42 or 02.02.42, lost before 08.03.42.
- BE299 exp. Takoradi 18.11.41, India 31.01.42 (rep. all. India), FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BG674 exp. Takoradi 30.11.41, India 01.05.42, arr. 29.01.42, to 17 Sq, 03.42 via Akyab to Calcutta for repairs, 04.42 in India.

- BG685, exp. Takoradi 18.11.41, arr. 02.42, 03.42 via Akyab to Calcutta for repairs, prob. 06.04.42 to 17 Sq Loiwing, 13.04.42 seconded to 3 PRU, Loiwing and 27.04.42 evacuated to Calcutta (later with 136 Sq).
- BG686, arr. 02.42, lost before 08.03.42.
- BG694 exp. Takoradi 18.11.41, FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BG742 arr. 29.01.42, lost before 08.03.42.
- BG747 arr. 02.42, 03.42 Magwe (17 Sq), crash landed after engine malfunction on take-off 19.03.42, abandoned at Magwe.
- BG811 originally allocated Russia, on ship R.313 to Basrah, Iraq 25.11.41; arr. 14.02.42, lost before 08.03.42. [8]
- BG821 exp. Takoradi 30.11.41, arr. 02.42, 26.02.42 lost (bale-out, 135 Sq) near Moulmein, Burma.
- BG853 exp. Takoradi 30.11.41, arr. 23.01.42, to 17 Sq, 24.01.42 air fight, minor damage but propeller shot up, due to a lack of spares and tools unserviceable for a while; evacuated from Mingaladon to Akyab 07.03.42 (damaged), after repairs to 136 sq Akyab c. 18.03.42, lost (bale-out) 24.03.42 after air battle. [9]
- BG876 exp. Takoradi 30.11.41, arr. 02.42, to 135 Sq, missing near Rangoon 23.02.42. [10]
- BM911 exp. Takoradi 30.11.41, FE 01.02.42, delayed arr. 01.42 or 02.02.42 (had been part of the first ferry but stranded en route with an oil leak), lost before 08.03.42.
- BM914 exp. Takoradi 30.11.41, arr. 01.42 or 02.02.42, personal ac of Wg Cdr F.R. Carey 267 Wing 02.42, ops 23.02.42-24.02.42, 26.02.42 major damage after air battle but remained flyable, 03.42 via Akyab to Calcutta for repairs, 04.42 in India.
- BM920 exp. Takoradi 29.11.41, FE/India 18.04.42 (reported on strength), 17 Sq 03.42; lost (bale-out) 09.03.42, engine caught fire and abandoned between Prome and Magwe, SOC (somewhat belated) 01.07.42.
- DG635 (Mark IIA PR ac, ex Mark I W9181) rep. ME 04.11.41, arr. 25.01.42, to Zayatkwinn, 02.42 based Mingaladon, 03.42 Magwe (3 PRU), 22.03.42 damaged on the ground in an air raid on Magwe, 25.03.42 crashed on take-off from Akyab, DBR (ac was evacuated from Magwe to Calcutta for repairs).

Crashed on the ferry flight from Port Sudan

- Z5678 exp. Takoradi 17.11.41, FE 01.02.42, stalled on approach Habbaniya 28.01.42, burnt.

Hurricanes from the "Cross" shipment

Ac reallocated from Middle East to Far East (India), shipped on the cargo ship SS Cefn-y-Bryn, left Takoradi on 31 December 1941, destination Karachi. Ac ferried from Calcutta (Dum Dum) to Magwe in the period of 24 February-c. 12 March 1942 (nine). Of the first six delivered one ferried on to Mingaladon on 25 February and five issued 67 Sq at Magwe in the period of 27 February to 2 March 1942 (incl.). Ac used by 67 Sq for Hurricane transition and two operational missions in the period of 28 February to 6 March 1942 (incl.). Final three ac delivered approximately 10-12 March 1942. All ac Mark IIB administratively allocated India 31 December 1941.

- Z5440 exp. Takoradi 17.11.41, all. ME 15.11.41, 67 Sq Magwe 03.03.42-06.03.42, 17 Sq Magwe 03.42, 21.03.42 forced landed Magwe, destroyed directly after in a Japanese air raid.
- Z5599 exp. Takoradi 18.11.41, all. ME 02.10.41, 17 Sq Magwe 03.42, 21.03.42 lost (bale-out).
- Z5601 exp. Takoradi 29.11.41, all. ME 21.10.41, FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- Z5671 exp. Takoradi 29.11.41, all. ME 23.10.41, 67 Sq Magwe 03.03.42-06.03.42, 07.03.42 escorted two Lysanders from Akyab to Mingaladon, 07.03.42 operated from Prome for Army convoy escort, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42, prob. damaged 22.03.42 when the landing gear leg collapsed on landing at an emergency strip of Magwe, abandoned.
- Z5676 exp. Takoradi 29.11.41, all. ME 24.10.41, FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BE234 exp. Takoradi 18.11.41, India 19.04.42, 67 Sq Magwe 28.02.42-06.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BE289 exp. Takoradi 18.11.41, India 18.04.42, 67 Sq Magwe 02.03.42-06.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BE290 exp. Takoradi 18.11.41, India 18.04.42, prob. arrived Magwe 24.02.42, unserviceable at Mingaladon 05.03.42, repaired to a flyable condition and flown to Akyab 07.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BE334 exp. Takoradi 29.11.41, 67 Sq 03.03.42-06.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.

Hurricanes shipped from the UK with destination Burma

Ac shipped on the (Norwegian) cargo ship MS Estrella (eight), left Liverpool/Mersey on 22/23 December 1941, destination Bombay. Developed engine problems and arrived at Table Bay, South Africa only on 10 March 1942 and in need of extensive repairs. Reached Bombay on 25 August 1942. Ac carried were: BG767, BG783, BG801, BG802, BG803, BG844, BG850 and BG854. All ac Mark IIBs administratively allocated India 22 December 1941. Probably due to the delays the Hurricanes on SS Alcyone (see hereafter) were earmarked Burma instead.

Ac shipped on the (Dutch) ammunition ship SS Alcyone (nine), left Hull 10 January 1942, destination Bombay and Karachi. All ac lost when the ship struck a German mine off Cape Town and sank after a number of explosions on 16 March 1942. [11] Ac carried were: Z5649, BG947, BG953, BG972, BH118, BH122, BN161, BN242 and BN266. All ac Mark IIBs administratively allocated India 10 January 1942. [12]

Ac ferried from Port Sudan to Calcutta, arrival at Magwe in the period of 24 February- c. 18 March (nine) or at Lashio-Loiwing on 6 April 1942 (seven)

First five ac delivered at Magwe in the period of 24 February to 2 March 1942 (incl.) of which two flown on to Mingaladon on 27 February and three issued 67 Sq Magwe on 2 March 1942. Final four of first series of nine delivered at Magwe in the period of c. 12 March to c. 18 March 1942 (incl.). Arrival dates are the dates reported arrived Karachi which may be up to 5-6 days (but more usually 0-2 days) later than the actual arrival dates.

- BG816 exp. Takoradi 29.11.41, FE 18.04.42, 67 Sq Magwe 02.03.42-06.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BG824 exp. Takoradi 16.12.41, 06.04.42 to 17 Sq Loiwing, forced landed 10.04.42, DBR.
- BG825 exp. Takoradi 16.12.41, India 18.04.42 (reported on strength), 06.04.42 to 17 Sq Loiwing, 09.04.42 crash landed due to bad weather, irretrievable and abandoned, SOC (somewhat belated) 01.07.42 as lost on operations.
- BG829 exp. Takoradi 29.11.41, FE 18.04.42, 67 Sq Magwe 02.03.42-06.03.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BG858 exp. Takoradi 16.12.41, India 18.04.42, 17 Sq Magwe 03.42, 23.03.42 to 136 Sq Akyab, 27.03.42 evacuated to Calcutta (into repair).
- BG859 exp. Takoradi 29.11.41, India 18.04.42, 67 Sq Magwe 03.03.42-06.03.42, 17 Sq Magwe 03.42, 23.03.42 to 136 Sq Akyab, 27.03.42 evacuated to Calcutta (into repair).
- BG863 exp. Takoradi 16.12.41, India 18.04.42, 17 Sq Magwe 03.42, 23.03.42 to 136 Sq Akyab, 27.03.42 evacuated to Calcutta (into repair).

- BG874 exp. Takoradi 16.12.41, India 18.04.42 (reported on strength), 06.04.42 to 17 Sq Loiwing, 10.04.42 hit and burnt in strafing attack on Loiwing, SOC (somewhat belated) 01.07.42 as lost on operations.
- BG909 exp. Takoraki 16.12.41, India 18.04.42 (reported on strength), 06.04.42 to 17 Sq Loiwing, 09.04.42 crash landed due to bad weather, irretrievable and abandoned, SOC (somewhat belated) 01.07.42 as lost on operations.
- BG944 FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BH121 exp. Takoradi prob. 06.01.42, India 03.04.42 (rep. arr.), 06.04.42 to 17 Sq Loiwing, 10.04.42 lost (bale-out) after air battle.
- BM917 exp. Takoradi 16.12.41, all. ME 05.12.41, prob. arr. Mingaladon 27.02.42, 17 Sq 03.42, damaged during strafing mission from Prome 07.03.42, 08.03.42 ferried from Prome to Magwe but hit by a truck on landing at Magwe, DBR and salvaged for parts.
- BM925 exp. Takoradi 29.11.41, FE 18.04.42, 17 Sq Magwe 03.42, lost or abandoned in period 21.03.42-27.03.42.
- BM927 exp. Takoradi 29.11.41, arr. Magwe 24.02.42, to Mingaladon 27.02.42, 17 Sq Magwe 03.42, 23.03.42 to 136 Sq Akyab, ops 24.03.42, 27.03.42 evacuated to Calcutta (into repair).
- BN104 India 02.04.42 (rep. arr.), 06.04.42 to 17 Sq Loiwing, prob. 13.04.42 seconded to 3 PRU Loiwing for tactical reconnaissance and 27.04.42 evacuated to Calcutta (later with 136 Sq).
- Z5535 exp. Takoradi 29.11.41, rep. ME 31.01.42, 06.04.42 to 17 Sq Loiwing, 09.04.42 crash landed near Loiwing due to bad weather, SOC 09.04.42.

Hurricanes Mark I issued to 136 Sq as a temporary measure in the period of 13 March-c. 17 March 1942 (nine), remaining three ac evacuated to Dum Dum airfield, Calcutta on 27 March 1942

All Middle East ac reallocated India and ferried from Port Sudan to Calcutta. Arrival dates are the dates reported arrived Karachi which may be up to 5-6 days (but more usually 0-2 days) later than the actual arrival dates. Ferry flights of Hurricanes from Karachi to Calcutta usually lasted four days.

- V7649 ME 24.02.42 (rep. departed), 14.03.42 to 136 Sq, 27.03.42 evacuated to Calcutta.
- V7758 rep. Takoradi 28.01.41, rep. ME 30.09.41, India 08.03.42 (rep. arr.), India 08.05.42, 13.03.42 to 136 Sq, c. 18.03.42 to Akyab, 27.03.42 evacuated to Calcutta.

- W9303 rep. ME 22.03.41, ME 27.02.42 (rep. departed), 14.03.42 to 136 Sq, c. 18.03.42 to Akyab, lost in period 23.03.42-27.03.42.
- W9321 rep. Takoradi 19.02.41, India 01.04.42, FE 12.03.42 (rep. arr.), 14.03.42 to 136 Sq, c. 18.03.42 to Akyab, lost in period 23.03.42-27.03.42.
- Z4187 rep. ME 08.41, FE 12.03.42 (rep. arr.), c. 17.03.42 to 136 Sq, c. 18.03.42 to Akyab, lost in period 23.03.42-27.03.42.
- Z4326 rep. ME 30.08.41, ME 01.03.42 (rep. departed), 17.03.42 to 136 Sq, c. 18.03.42 to Akyab, lost in period 23.03.42-27.03.42.
- Z4498 rep. ME 22.07.41, ME 05.03.42 (rep. departed), c. 14.03.42 to 136 Sq, c. 18.03.42 to Akyab, 27.03.42 evacuated to Calcutta, to 304 MU for major repairs.
- Z4567 rep. ME 15.06.41, FE 12.03.42 (rep. arr.), c. 17.03.42 to 136 Sq, c. 18.03.42 to Akyab, lost in period 23.03.42-27.03.42.
- Z4650 rep. ME 09.41, ME 05.03.42 (rep. departed), c. 14.03.42 to 136 Sq, c. 18.03.42 to Akyab, 23.03.42 shot down near Akyab (bale-out).

Hurricanes Mark I issued to 17 Sq as a temporary measure in the period of 9 March-c. 14 March 1942 (four), all Middle East ac reallocated India and ferried from Port Sudan to Calcutta

- V7673 rep. ME 06.02.41, ME 01.03.42 (rep. departed), 09.03.42 issued 17 Sq, damaged on strafing mission c. 17.03.42, to Dum Dum for repairs, crashed on arrival c. 19.03.42, DBR, to 304 MU but salvaged for parts and SOC 28.03.42.
- V7706 rep. ME 22.01.41, ME 05.03.42 (rep. departed), c. 14.03.42 issued 17 Sq, 21.03.42 lost or abandoned Magwe.
- Z4111 rep. ME 30.04.41, ME 01.03.42 (rep. departed), 10.03.42 issued 17 Sq, damaged, cause unknown, c. 19.03.42 to Dum Dum for repairs (later 136 Sq).
- Z4201 rep. ME 18.04.41, ME 01.03.42 (rep. departed), c. 10.03.42 issued 17 Sq, 21.03.42 lost or abandoned Magwe.

Hurricane Mark I issued to 3 PRU as a temporary measure c. 18 March 1942 (one) reallocated Middle East to India and ferried from Port Sudan to Calcutta

- Z4928 rep. ME 22.09.41, India 01.04.42, c. 18.03.42 issued 3 PRU, c. 19.03.42 to Magwe, 21.03.42 lost on the ground in an air raid on Magwe.

Remarks

During the final week of March and the first week of April 1942 the three squadrons evacuated first from Burma to India (67 Sq, 135 Sq and 136 Sq) received a number of new and repaired Hurricane Mark IIBs (67 Sq, 135 Sq and 136 Sq) and a few Mark Is (136 Sq) to bring them gradually back up to strength. No 67 Sq initially received

eight Mark IIBs in the period of 27 March to 5 April (incl.) but also kept a few evacuated Buffaloes. On 31 March 1942 all three squadrons became limited operational again. Ac BG878 crashed on the delivery flight east of Rewa in India on 25 March 1942. This ac was still officially on strength with 301 MU at the time but it was probably to be allocated to 135 Sq.

From approximately mid-April 1942 more Hurricane Mark IIBs and also the first Mark IICs arrived in India enabling the re-equipment of 17 Sq at Dum Dum (which also received a few Mark Is) and 146 Sq (Curtiss Mohawk and Hawker Audax, ac of the latter type replaced by repaired Brewster Buffaloes in April) at Dum Dum, both during May 1942. Also 67 Sq, 135 Sq and 136 Sq received additional Hurricanes. No 3 PRU received two Mark IIB PR ac in April and two more in May 1942 which were deployed from Dum Dum.

Listed above are only those ac delivered to the squadrons in Burma before 15 April 1942.

Section 3 for Ceylon

Hurricanes flown off by HMS Indomitable on 6 and 7 March 1942

Operation Semolina aircraft, all Mark IIB unless otherwise noted as Mark I or Mark IIA. All administratively reallocated from Middle East to Far East (India) on 23.02.42, some came from squadrons which were re-equipping with Curtiss P-40s at the time. All ac stowed with outer wings off and in crates, batteries and some other small items in boxes and drained of all fluids, all reassembled and made serviceable on board.

India or FE dates are reported "on charge" dates of AHQ India (the dates are "in India", no difference is made between "in India", "in Burma" or "in Ceylon") unless otherwise noted.

- BD771 exp. Takoradi 02.10.41, Op. Semolina 23.02.42, landed on Indomitable again 06.03.42 with engine trouble (Sqn Ldr A.G. Lewis of 261 Sq), remained on board and eventually transferred to FAA.
- BE211 exp. Takoradi 16.11.41, India 01.04.42, 30 Sq 03.42-04.42.
- BE227 exp. Takoradi 30.11.41, all. ME 23.10.41, 261 Sq, shot down 09.04.42 (crash landed), DBR.
- BE232 exp. Takoradi 02.10.41, India 01.06.42, 261 Sq 03.42-04.42, light damage 09.04.42.
- BE241 exp. Takoradi 19.10.41, all. ME 13.10.41, 261 Sq, damaged 09.04.42, landing gear collapsed on landing and DBR.
- BE242 exp. Takoradi 28.10.41, India no date given, prob. 30 Sq 03.42-04.42.

- BE291 exp. Takoradi 16.11.41, Op. Semolina 23.02.42, India 01.05.41, 30 Sq 03.42-04.42.
- BE328 exp. Takoradi 10.12.41, India 01.04.42, 261 Sq, forced landing 29.03.42, DBR, pilot got lost and landed in a paddy field near China Bay.
- BE352 ex Op. Pantaloon, India 01.05.42, 30 Sq, missing 05.04.42, SOC 04.42.
- BE365 Op. Semolina 23.02.42, India 01.05.42, 261 Sq 03.42, crash landed after a terminal velocity dive in which the landing gear came down and a wheel was torn off, severely damaged; 03.42 to India for repairs but probably written off.
- BG676 exp. Takoradi 22.12.41, 261 Sq, shot down 09.04.42.
- BG687 exp. Takoradi 16.11.41, 30 Sq 03.42-04.42.
- BG690 exp. Takoradi 10.12.41, 261 Sq, shot down 09.04.42.
- BG695 FE 15.02.42 (all. FE), Op. Semolina 23.02.42, 30 Sq, crashed 30.03.42 or 31.03.42 and DBR.
- BG721 ex Op. Pantaloon, 30 Sq, 05.04.42 crashed with battle damage, DBR.
- BG748 ex Op. Pantaloon, India 01.05.42, 30 Sq 03.42-04.42.
- BG786 exp. Takoradi 10.12.41, 261 Sq, shot down 09.04.42 (crash landed), DBR.
- BG795 exp. Takoradi 22.12.41, 30 Sq, shot down 05.04.42.
- BG815 exp. Takoradi 16.12.41, 261 Sq 03.42-04.42, light damage 09.04.42.
- BG827 30 Sq 03.42-04.42.
- BG870 exp. Takoradi 21.12.41, prob. 30 Sq 03.42-04.42.
- BG872 exp. Takoradi 22.12.41, 261 Sq, 06.04.42 damaged while landing at the strip Kokkilai (pilot overshoot).
- BG880 exp. Takoradi 10.12.41, 30 Sq, shot down 05.04.42.
- BG882 exp. Takoradi 29.12.41, 261 Sq, damaged 09.04.42, forced landed, DBR.
- BG887 exp. Takoradi 21.12.41, 30 Sq, emergency landing 05.04.42 (shots through wing tanks), repaired.
- BG911 exp. Takoradi 22.12.41, 30 Sq 03.42-04.42.
- BG916 30 Sq 03.42-04.42, crashed 20.04.42.
- BG936 exp. Takoradi 22.12.41, prob. 30 Sq 03.42-04.42.
- BG937 exp. Takoradi 22.12.41, India 23.02.42, prob. 30 Sq 03.42-04.42.

- BG967 exp. Takoradi 29.12.41, 261 Sq 03.42-04.42.
- BM909 exp. Takoradi 10.12.41, 261 Sq, shot down 09.04.42 (bale-out).
- BM910 exp. Takoradi 10.12.41, India no date given, 30 Sq, shot down 05.04.42 (bale-out).
- BM930 exp. Takoradi 21.12.41, 30 Sq, shot down 05.04.42. [13]
- BM949 exp. Takoradi 22.12.41, India 01.04.42, 30 Sq 03.42-04.42.
- BM995 India 01.05.42, Sq unknown, to 258 Sq 03.42, 258 Sq 03.42-04.42.
- BN171 exp. Takoradi 29.12.41, India 23.02.42, 30 Sq, crashed into sea 03.04.42.
- V7711 (Mark I) exp. Takoradi 10.11.40, rep. Takoradi 14.01.41, rep. ME 18.01.41, Sq unknown, to 258 Sq 03.42 or early 04.42, shot down 05.04.42, SOC 06.04.42. [14]
- V7856 (Mark I) exp. Takoradi 22.03.41, ME 21.04.41, India 01.05.42, Sq unknown, to 258 Sq 03.42 or early 04.42, 258 Sq 04.42.
- Z2573 (Mark IIA conv. to IIB) exp. Takoradi 16.08.41, rep. ME 16.10.41, 261 Sq, shot down 09.04.42.
- Z4089 (Mark I) ME 28.09.41, India 04.05.42 (rep. arr.), Sq unknown, to 258 Sq 03.42 or early 04.42, 258 Sq 04.42.
- Z4227 (Mark I) exp. Takoradi 12.05.41, ME 02.08.41, Sq unknown, to 258 Sq 03.42 or early 04.42, shot down 05.04.42 (missing).
- Z4247 (Mark I) ME 21.07.41, Sq unknown, to 258 Sq 03.42 or early 04.42, 258 Sq 04.42.
- Z4355 (Mark I) exp. Takoradi 10.07.41, all. ME 09.07.41, 30 Sq 03.42-04.42.
- Z4372 (Mark I) exp. Takoradi 10.05.41, ME 01.07.41, India 02.05.42 (rep. arr.), FE 01.05.42, Sq unknown, to 258 Sq 03.42 or early 04.42, damaged 05.04.42, repaired.
- Z4576 (Mark I) India 01.05.42, Sq unknown, to 258 Sq 03.42 or early 04.42, 258 Sq 04.42.
- Z4762 (Mark I) exp. Takoradi 14.06.41, ME 18.09.41, flown off 07.03.42, 261 Sq 03.42-04.42.
- Z4783 (Mark I) reported in Iraq, no date given, FE 01.03.42 (rep. all. FE), Sq unknown, to 258 Sq 03.42 or early 04.42, damaged 05.04.42.
- Z4961 (Mark IIA) exp. Takoradi 13.07.41, rep. ME 16.09.41, 261 Sq, flown off 06.03.42, shot down 09.04.42.
- Z5117 exp. Takoradi 16.08.41, rep. ME 13.10.41, India 23.02.42, India 01.05.41, 261 Sq 03.42, 03.42 to India for repairs, 04.42 in India.

- Z5146 exp. Takoradi 22.08.41, rep. ME 06.10.41, India 01.06.42, 261 Sq 03.42-04.42.
- Z5447 rep. ME 04.11.41, originally part of Operation Opponent see p. 5, India 01.05.42, 30 Sq, shot down 05.04.42. [15]
- Z5533 exp. Takoradi 28.10.41, all. ME 25.10.41, 261 Sq, shot down 09.04.42.
- Z5557 exp. Takoradi 16.11.41, rep. ME 31.01.42, FE 15.02.42 (all. FE), Op. Semolina 23.02.42, 261 Sq, 03.42 to 258 Sq, 12.03.42 collided with a Blenheim on take-off from Ratmalana (burnt)
- Z5587 exp. Takoradi 16.11.41, all. ME 22.10.41, India 01.04.42, Sq unknown, to 258 Sq 03.42, 258 Sq 03.42-04.42.
- Z5592 ME 25.02.42, landed on Indomitable again 06.03.42 with a Glycol leak (Sgt F. Whittaker of 30 Sq), to India for repairs, rep. in India 18.04.42.
- Z5600 exp. Takoradi 16.11.41, all. ME 21.10.41, FE/India 01.04.42, 261 Sq 03.42-04.42.
- Z5610 exp. Takoradi 16.11.41, all. ME 22.10.41, 261 Sq, lost on the ground in Japanese air raid on China Bay 09.04.42, SOC 21.05.42.
- Z5620 exp. Takoradi 04.11.41, rep. ME 24.12.41, India 15.02.42 (all. India), Op. Semolina 23.02.42, 261 Sq 03.42-04.42.
- Z5666 exp. Takoradi 19.10.41, rep. ME 28.12.41, ME 15.01.42 (rep. unserviceable with 238 Sq, Egypt), FE 15.01.42 (prob. all. FE), Op. Semolina 23.02.42, prob. 30 Sq 03.42-04.42.
- Z5670 exp. Takoradi 10.12.41, all. ME 10.41, 261 Sq shot down 09.04.42 (forced landed), DBR.

Hurricanes shipped from Takoradi on SS Cefn-y-Bryn

Operation Cross ac, reallocated from Middle East to Far East (India). Sailed on 31 December 1941, arrived Karachi on 3 February 1942 and after assembly at 1 (India) MU Karachi ferried to Ceylon (arrived on 23 February 1942). All aircraft Mark IIBs and administratively allocated India 31.12.41.

- Z5385 exp. Takoradi 26.09.41, all. ME 16.09.41, 258 Sq 03.42-04.42, shot down 05.04.42.
- Z5436 all. ME 16.09.41, 258 Sq 03.42-04.42.
- Z5461 exp. Takoradi 18.11.41, all. ME 30.10.41, 258 Sq 03.42-04.42, 05.04.42 crash landed in paddy field, DBR.
- Z5665 exp. Takoradi 18.11.41, all. ME 22.10.41, 258 Sq 03.42-04.42, shot down 05.04.42, SOC 16.04.42.

- Z5680 exp. Takoradi 17.11.41, all. ME 12.11.41, 258 Sq 03.42-04.42, shot down 05.04.42, SOC 16.04.42.
- BD701 exp. Takoradi 26.09.41, 258 Sq 03.42-04.42, shot down 05.04.42, SOC 04.42.
- BD881 exp. Takoradi 18.11.41, 258 Sq 03.42-04.42.
- BG696 exp. Takoradi 18.11.41, 258 sq 03.42-04.42, damaged 05.04.42 (Cat. E), SOC 04.42.

Remarks

After approximately 12 April 1942 more Hurricanes shipped from the UK and ferried from Port Sudan to India became available to re-equip and strengthen 30 Sq, 258 Sq and 261 Sq. The first Hurricanes shipped from the UK and allocated to Ceylon came from the cargo of the Clan MacNair (which sailed from Liverpool/Clyde on 17 January and arrived at Bombay on 13 March 1942). Mentioned above are only those ac delivered to the squadrons in Ceylon before 15 April 1942.

Abbreviations used

Ac -- aircraft

Acc – according to

All - Allocated

AM – Air Ministry (Form)

Arr – arrived

Conv - Converted

DBR – Damaged Beyond Repair

Exp – Exported

FAA – Fleet Air Arm

FE – Far East

KNIL – Koninklijk Nederlands Indisch Leger-Royal Netherlands Indies Army

ME – Middle East

ML – Militaire Luchtvaart-Army Air Corps (of the KNIL)

MU – Maintenance Unit

NFT – No Further Trace

Op - Operation

Ops – Operations (flown)

ORB – Operations Record Book

OTU – Operational Training Unit

P -- Provisional

PR – Photographic Reconnaissance

Prob -- Probably

Rep -- Reported

SOC – Struck Off Charge

Sq – Squadron

Sqn Ldr – Squadron Leader

Wg Cdr – Wing Commander

Endnotes

[1] Of the six aircraft hit in the air raid on Kallang two were destroyed and four were severely damaged. Of the latter one was evacuated from Seletar by 232 (P) Sq on 2 February 1942 (flown by a seconded 488 Sq pilot) and three were evacuated from Kallang to Palembang I by 232 Sq (proper) on 10 February 1942. The aircraft flown out on the 2nd had become a real composite plane with the outer wings, the engine and various parts taken off the Hurricanes of 232 (P) Sq and 488 Sq damaged beyond repair on 27 January 1942.

[2] Correspondence P.C. Boer with P.D. Gifford (ac mentioned once as BG718 in his logbook; Mr Gifford advised, however, that a former colleague of his had logged the ac as BG817 which the authors consider as correct).

[3] Ac is often mentioned as repaired and flown by the Japanese Army air force but there is no trace of this in Japanese publications or records.

[4] Shores, 2, p. 258 wrongly identifies this ac as BG674, see the entry for BG674 in section 2 for Burma, Ac sent from the Middle East, ferried from Port Sudan, Sudan (34) and Basrah, Iraq (one), arrived at Mingaladon and Magwe in the period of 23 January-24 February 1942.

[5] Shores, 2, p. 261 identifies this ac as Z4726 but this is not a Hurricane serial.

[6] Shores, 2, p. 286 identifies this ac as BG843 but this is not a Hurricane serial.

[7] Shores, 2, p. 266-67 identifies this ac as BE233 but this is at odds with the various RAF Forms.

[8] Ac is thought to have been delivered as a replacement for Z5678 which crashed in Iraq on 28 January 1942.

[9] Sq ORB and also Shores, 2, p. 358, identifies this ac as BG858, however see the BG858 entry in the section 2 for Burma, Ac ferried from Port Sudan to Calcutta, arrival at Magwe in the period of 24 February-c. 18 March (nine) or at Lashio-Loiwing on 6 April 1942 (seven). Former Sq personnel confirm that the only Mark IIB of 136 Sq was lost and identify this ac as the former 17 Sq ac BG853.

[10] According to Halley, 2006, p. 49 this ac was missing on 26.02.42.

[11] Movements card Estrella; www.netherlandsnavy.nl/Speybank.htm for the accident report on Alcyone.

[12] Mentioned as on Alcyone is ac BG947 which is also reported on 18 April 1942 by AHQ India and is mentioned in the logbook of the late fighter pilot (67 Sq) Vic Bargh. It is thought BG947 is a miswriting for BG747 in the AHQ India message, respectively BG847 or BM947 in the logbook.

[13] Shores, 2, p. 362 mentions this ac as lost at Akyab but this is at odds with the various RAF Forms.

[14] Ac wrongly mentioned in the Sq ORB as Z7711 which is not a Hurricane serial.

[15] Ac Z5447 was part of Operation Opponent (Hurricanes flown off by Indomitable on 27 and 28 January 1942) but remained on board of Indomitable and became a part of Operation Semolina (Hurricanes flown off Indomitable on 6 and 7 March 1942). The 1 May 1942 reporting is possibly a wartime error.

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