



After the Royal Thai Air Force commenced bringing helicopters into service in 1950 with the introduction of the H1 (WS-51) and H2 (Hiller 360), 1953 saw additional helicopters being sought. United States military assistance offered another two types of helicopter with the H2A (UH-12B Raven) and the H1A (YH-5A). However these were small helicopters with a primary purpose of Search and Rescue. If these aircraft were used for other tasks they would find the tasks difficult because of their small size. This led to consideration of a new larger helicopter. This committee consisted of Air Vice Marshall Thawi Culasap, Chief of Staff of the Royal Thai Air Force (rank and appointment at that time) as Chairman. A decision was made to purchase six S-55 aircraft from the Sikorsky Company of the USA. This purchase was made through a Sikorsky intermediary – the Thai Technical Company Limited. The price was US\$152,150 per aircraft. All six aircraft were delivered on 10 July 1954. After all delivery checks were completed, the aircraft was designated Helicopter Type 3 or H3. The aircraft were assigned to Number 1 Platoon, 63 Squadron of Wing 6 at Don Muang. Aircraft numbers were RTAF H3-1/97 to H3-6/97.

The S-55 or H3 aircraft of the RTAF were manufactured by Sikorsky from the commercial model, however they were capable of being used on military missions. They were capable of transporting 8-10 infantrymen or in a general support role they could carry nine passengers and two pilots. They could operate at a maximum weight of 7200 pounds (empty weight of 4795 pounds). In rescue missions they had an electrically-operated hoist with a 400 pound capacity. This was mounted over the passenger compartment door and was used to lift survivors.

The Helicopter Type 3 (H3) was regarded as the most modern helicopter in the RTAF fleet at that time, owing to its innovative use of hydraulic and electrical flight control system technology. This required the Sikorsky Company to send technicians to 63 Squadron to act as advisers in the use and maintenance of the aircraft. One problem with the H3 was that the tips of the main rotor blades could contact the top of the tail boom during engine start, owing to the swash plate which was responsible for the directional control of the aircraft. This had completely different characteristics to the systems in fixed wing aircraft. Sometimes pilots would pull back on the cyclic control before the aircraft was stable. Because of an illusion caused by the radial engine, pilots would think the aircraft was out of balance and attempt to correct using the controls. The rotor head would tilt causing the rear section of the rotor disk

to drop and strike the top of the tail boom. If this strike was not too severe, it could easily be fixed. However a more severe strike could sever the boom and require the complete replacement of the tail boom. It could also cause the complete destruction of the aircraft with the aircraft rolling over. This type of incident can become progressively worse. The Sikorsky Company subsequently made modifications which resolved this issue in the S-55C model. The tail boom in that model was angled slightly downwards. The synchronized stabilizer which had been V-shaped was enlarged and straightened. In addition, the control system allowed the aircraft to be brought to a rapid halt. The violence that this produced was one cause of the usual damage that the undercarriage sustained, especially the two smaller wheels of the forward landing gear.

The H3 helicopters of 63 Squadron were used in various missions, regardless of it being administrative flying, general flying; whether it was on a mission for the RTAF itself ie air transport, transporting senior commanders to operations in various far-flung provinces or flying in support of other operations for which the call had gone out. This could include the transport of officials or Committees of the World Court who came to examine evidence in the case between Cambodia and Thailand over the Prasart Khao PhraWihan. The Prime Ministers of Thailand at that time, Field Marshal P. Phibulsonkhram, and Field Marshal Sarit Thanarat used the RTAF H3 helicopters several times to conduct inspections of public service officials. However, the primary role of the H3 aircraft was rescue of those in peril, or the survivors of an aircraft accident. If you look at it, you would see the H3 carried the English word 'RESCUE' on both sides of the fuselage. This is surely clear confirmation of its primary role. With the H3 used in this role, it surpassed the smaller H1A and H2A aircraft because of its larger size and better capabilities in a number of areas. As well, when the aircraft were purchased, some float kits were also acquired. As you can see from the photos of Number 6 or 6316. This allowed the aircraft to conduct operations for crashed aircraft or personnel in areas of water; such as rivers and the sea. These floats were described as 'hot dog' floats because of their shape. However these floats were only used on very few occasions. The first time was a test of their use. This was because it was easy to flip the helicopter when using floats on water. H3 Number 6 was fitted with floats and had several test flights for water take-offs and landings from a large pond near Bangkrabi district of Patumthani Province. This allowed pilots to build their knowledge and experience. As far as we have seen photos of the H3, the furthest that the floats were used was in the search for a Type 15 fighter aircraft (F8F-1/1B Bearcat) which had experienced an accident outside an airfield of Wing 2 Koke Kratiam in 1955. However, after that occasion the floats were taken off and never refitted.

The pilots of 63 Squadron were made up of about 30 commissioned and non-commissioned officers. They flew the aircraft allocated to the squadron which included not only rotary wing aircraft like the Types 1-3 but also fixed wing aircraft like the Communications Type 7 (Cessna 170) and Trainer Type 8 (T-6) of which there was one of each. So when you consider that there were two pilots for each aircraft, with such a range and quantity of aircraft, the squadron was deficient a few pilots. This is especially so when you consider that military pilots sometimes get sent to undertake various RTAF courses and training, and are sent off to other appointments with other agencies. This can cause shortages of pilots especially at certain times. One solution was the use of a single pilot, which in some of the aircraft in service at that time was not really a problem. However, with the H3 the risk of an accident occurring was increased by the use of a single pilot. This was because the centre of gravity of the H3 on the horizontal axis of the rotor was critical, coupled with the long tail boom. In addition, because the pilot-in-charge sat in the right hand seat, his visibility of the left side of the aircraft was not good at all.

Sometimes an experienced aircrewman would also sit in the cockpit to assist the pilot in flying the aircraft. This occurred so often that some aircrewmen experienced in H3 operations over a long time became experienced co-pilots. Additionally, some senior RTAF who had previously flown the H3 (such as Air Chief Marshal Bunchu Chansubeksa, who had started

flying the H3 in 1956 when he was Assistant Chief-of-Staff RTAF (Plans and Research) continued flying right up to 1962 (when the weather was suitable) and the aircraft was being retired from service.

Apart from that, another important mission of the H3, which was also regarded as an honour, was its use as a Royal Transport or Royal Vehicle. This was the first time that a RTAF helicopter had been so designated. The aircraft designated Royal Transport was Number 4 or 6314 and it was used to transport His Majesty the King and Her Majesty the Queen on their tour on 6 November 1955. On that occasion, Captain Niwet Pachayakrit (later Wing Commander), an engineering officer of 63 Squadron was assigned as Flight Engineer of the Royal Transport. He wrote an article "The Royal travels to Kradung Mountain" which was printed in the RTAF Newspaper of November-December 1955. In the article he described the atmosphere of the Royal journey by H3 Royal Transport in detail. (However, I am unable to reproduce the entire article here as it runs to several pages, so I will provide some highlights from the article.) "In accord with these Royal Travel stipulations, His Majesty the King and Her Majesty the Queen will travel by means of H3 on 6 November 1955." On 4 November at 1020h, H3 aircraft Number 4 (6314) which was to be used as the Royal Transport moved from Wing 6 at Don Muang along with Number 3 (6313) and Number 6 (6316) which would transport court officials and the Royal entourage. They landed for refueling at the Flying School at Nakhon Rachasima before continuing. They reached Khon Kaen at 1550h and all three aircraft were parked together on the sports field of Suan Sanuk school, behind the the Provincial Office of Khon Kaen. His Majesty the King and Her Majesty the Queen were expected to arrive at the Provincial Office at 1500h on 5 November 1955. On the morning of 6 November, the Royal party arrived at the aircraft. Air Commodore Prasert Huangsuwan and Wing Commander Chuay Srisomphong were the pilots. The Royal Transport took off at 0925h and arrived at the summit of Kradung Mountain at 1030h. The two other aircraft had flown at 0600h in order to transport the Palace officials and entourage from sub-district Baan Srithan sub-district, Kradung Mountain district of Loei Province to the summit of Kradung Mountain. Problems arose with aircraft Number 3 (6313) and Number 6 (6316) which needed to conduct several sorties between Baan Srithan and the mountain summit in order to transport many people. The number of public servants and Palace officials had grown from 30 to 172. Therefore the two aircraft had to fly a total of 48 sorties between 0600h and 1800h. The fuel which had been pre-positioned was insufficient. Additional fuel had to be taken from a C-47 aircraft which had been parked at Loei Provincial Airport. After Their Majesties has taken in the view from the summit of Kradung Mountain and spoken with their subjects who had patiently waited many long hours, His Majesty the King and Her Majesty the Queen travelled by H3 Royal Transport from the summit at 1440h, arriving at Baan Srithan sub-district at 1450h. After speaking with more of their subjects, His Majesty the King and Her Majesty the Queen travelled to their night accommodation in Loei Province by Royal Vehicle.

The H3 aircraft Number 4 (6314) which had been designated as Royal Transport had a new interior for its passenger compartment, with new seats and facilities for His Majesty the King and Her Majesty Princess Sirikit the Queen and the Royal officials. However the exterior remained the same as the standard H3 fleet. Later this aircraft suffered an accident in Hot District of Chiang Mai Province on 15 June 1959. There was extensive damage and it was taken out of service. Therefore another H3 aircraft was designated as Royal Transport to replace the damaged aircraft. 63 Squadron designated H3 Number 3 (6313) which had previously been the reserve Royal Transport in the Kradung Mountain operation. Apart from the interior design of the passenger compartment, the exterior colours and markings were changed from the standard H3 fleet. It is believed that H3 Number 3 (6313) was the first RTAF aircraft to carry special colours and markings as a dedicated Royal Transport aircraft.

In 1957 the RTAF received two H-19A aircraft from the US Military Assistance Program via the Military Assistance Advisory Group (MAAG). This agency coordinated negotiations

between the Governments of Thailand and the United States. The H-19A Chickasaw was the military designation of the civil S-55. Both aircraft had been in service with the US Army before being received into Thai service. These two aircraft were brought on strength of 63 Squadron in August 1957. They were allocated Number 7 or 6317 (and the RTAF serial H3-7/2500) and Number 8 or 6318 (and the RTAF serial H3-8/2500). The major external difference between the H3 aircraft received in 1957 and those received in 1953 were different horizontal stabilizers and various antennas. Apart from that, they were very similar and that includes their flying capabilities.

The H3 remained in RTAF service till mid-1962 when they were taken out of service after the United States provided military aid with the provision of (the first group of) new H-34C Chocktaw aircraft to the RTAF to replace the H3. By that time there were probably only three H3 aircraft still flying. There is evidence that by the end of 1958 the RTAF had only four H3 aircraft in service. The three aircraft remained extant until 1965. Of these three aircraft, only aircraft Number 3 (6313) or H3-3/97 survives to this day. The aircraft remains on display at the RTAF Museum at Don Muang.

If in the future this aircraft is restored both internally and externally, it would be appropriate that it reflects its time as a Royal Transport with both correct colours and markings. This would clearly demonstrate to the general public that it was the first Royal Transport helicopter in the Royal Thai Air Force.

<b>Tabulated Data of RTAF Helicopter Type 3 (S-55/H-19A) aircraft</b>						
<b>Serial</b>	<b>Type</b>	<b>Serial</b>	<b>RTAF Serial</b>	<b>Date Received</b>	<b>63 Squadron Serial</b>	<b>Comments</b>
1	S-55	55744	H.3-1/97	25 Dec 54	6311	
2	S-55	55745	H.3-2/97	25 Dec 54	6312	
3	S-55	55757	H.3-3/97	25 Dec 54	6313	RTAF Museum
4	S-55	55758	H.3-4/97	17 Feb 55	6314	
5	S-55	55771	H.3-5/97	3 Mar 55	6315	
6	S-55	55772	H.3-6/97	May 55	6316	
7	H-19A	51-3866	H.3-7/2500	Aug 57	6317	
8	H-19A	51-3871	H.3-8/2500	Aug 57	6318	



H3 Number 1 (6311) was probably one of the three aircraft still in service till 1962.



Capability display of H3 aircraft during Air Force Day, 27 March 1958.



Aircraft Number 6 being tested with floats, after landing on water.



This photo shows some features of the interior of the passenger compartment of aircraft Number 3 (6313) when it was a Royal Transport.