



Double Dutch

Anniversary Heavy

Rotary

by Carlo KUIT & Paul KIEVIT/ Bronco Aviation



From September 2018 Niels van den BERG is the Commander of 298 squadron. He started with the Squadron during 2011 when he transferred from sister squadron 300, operating the AS532 'Cougar'. One of the most important tasks the Commander has is the introduction of the new CH-47F MYII CAAS.

April the 16th of 2020 marked the 75th Anniversary of The Royal Netherlands Air Force (RNLAf) 298 Squadron which is currently operating a force of ten CH-47D 'Chinooks' and is awaiting delivery of twenty CH-47F MYII CAAS Chinooks (US Army Multi Year II program, Common Avionics Architecture System) as replacement. Due to the COVID-19 crisis the planned 75th Anniversary was postponed to a later moment. Especially COVID-19 and the introduction of the new Chinook fleet is on top of the mind of Lt Col. Niels van den BERG, the current Commander of 298 squadron. Niels transitioned from 300 Squadron during 2011 and has been 298 Squadron's Commander since September 2018. "My primary focus is

to have stability in the squadron. We have worked incredibly hard over the last seven years implementing new procedures, quality assurance and improved operations which has shown to be successful. There is no need to change". Niels continues "The big challenge for the squadron is implementing the new CH-47F fleet and remaining open for business to support international missions. The moment that we have both the new CH-47F and legacy CH-47Ds in use with the squadron this will be a turning point in potentially briefly impacting availability for operations. We expect under the current COVID-19 situation to have the conversion completed by 2022". The first new CH-47Fs are expected to arrive in The Netherlands during December 2020.

As Boeing Philadelphia has been identified as Critical Infrastructure, the impact by COVID-19 has been minimal. The total number of new CH-47F MYII CAAS Chinooks within the Royal Netherlands Air Force will be twenty. Fifteen will be assigned to 298 Squadron at Gilze-Rijen Air Base while five will remain with 302 Squadron at Fort Hood in the United States."

COVID-19 Crisis Impact

"After the announcement by Dutch Prime Minister Mark RUTTE on the 16th of March, in which the intelligent lockdown was announced in the Netherlands, we took a week and a half to rethink how we as a squadron would move forward" according to Niels. "We decided to focus on crew checks, flight currencies

and certification flights to safeguard our basic skillset and readiness status as we are not able to set up complex exercises with our sister squadrons (300 and 301 Squadron) and the 11 Air Mobile Brigade. We have about half of the squadron working from home and rotate personnel every couple of days to avoid risks of virus infection. Luckily, 2019 has been a very good year for us in terms of training and flight hours. Therefore, we can absorb a bit before we are negatively impacted" Niels adds. The Helicopter Weapons Instructor Course (HWIC) which had been taking place at that moment in Germany was cancelled mid-March. "Currently we only allow four persons for planning and the execution of flights. Therefore, we work in solitude as a squadron".



Defense Helicopter Command (DHC)

The Heavy Rotary Squadron is one of four flying squadrons which is part of the Defense Helicopter Command (DHC). Since the establishment of the DHC in July 2008, 298 Squadron transferred to Gilze-Rijen Air Base from SoesterBERG Air Base. The purpose of the DHC is to integrate all the Helicopter Units of the Royal Netherlands Air Force (AH-64Ds, AS532U2s, CH-47D/Fs and NH90s) under one Central Command structure across two airbases and save costs. Only the NH-90 fleet of 860 Squadron is based at Naval Air Station De Kooy in the Northern part of The Netherlands. The other three units reside at Gilze-Rijen Air Base.

History of the 298 Squadron

The squadron has its heritage dating back to April the 16th, 1945 when the squadron was operating at Gilze-Rijen Air Base as 'No. 6 Dutch Auster Squadron' with six Auster's. Soon after the end of World War 2 the Squadron was transferred to the Dutch West Indies. On March 1st, 1950, 298 AOP (Air Observation Post) was established. Over the years, '298' has flown various types of aircraft and helicopters. The Auster's were replaced by L-18C 'Piper Cubs' and L-21B 'Super Cubs' to support the role of artillery spotters. The first Helicopter arrived in 1955 (H-23B 'Raven'). The Alouette II followed in 1959 for 'Search and Rescue' (SAR) missions. These were replaced by Alouette IIIs from 1964 onwards. Twelve Bo-105C 'Bolköw' helicopters were also part of the 298 Squadron from 1975 to 1979.



The CH-47 fleet is equipped and available to support Dutch Special Forces like the Commando Force (KCT/ Korps Commando Troepen) and MARNS (Dutch Marines) where needed. To train and hone procedures regular exercises take place. These mostly take place on undisclosed locations across The Netherlands. In April 2018 Commando's and MARNS trained in embarkation of a ship supported by a CH-47D and an AS532 'Cougar'. Till 2014 the 298 Squadron had a dedicated flight to support Special Operations, no. 5 flight.



To mark the 75th Anniversary of 298 Squadron CH-47D 'D-666' has received a special paint with on one side a dragonfly, which is part of the squadron insignia. The right side of the helicopter is adorned by a Grizzly; it refers to the callsign which was chosen 15 years ago. Air traffic control, among others, makes use of this callsign. And for the people of 298 squadron, the Grizzly is a kind of mascot.

Purchase of New CH-47D's

In early 1993 the Dutch Government signed an agreement with the Canadian Government to acquire seven Boeing CH-147 C-models that were in use by the Canadian Armed Forces between 1974 and 1991. In December 1993, a

contract was signed with Boeing for the purchase of thirteen modern CH-47D Chinooks with a digital Honeywell Avionics Control and Management System (ACMS) cockpit and improved T55-L-714 engines. Seven being remanufactured ex-Canadian C-models and six were brand new with a "one-piece machined" airframe structure as a novelty. Boeing delivered the remanufactured

CH-47D Chinooks to the Royal Netherlands Air Force (RNLAf) in 1995-1996 marking the 25th Anniversary of operations with the 'Chinook' fleet during that year. The six new CH-47Ds were delivered during 1998-1999.

Currently ten CH-47D's are still on strength, with two 'Chinooks' lost in accidents in 2005 during operations in Afghanistan and the oldest CH-47D (D-661) being

withdrawn from service during late 2019. Captain Roël BOEZEN "Booze", 298 squadron Liaison Officer, adds "The accidents in Afghanistan made us realize we had to further improve and hone the training and capabilities of our crews. Both lost helicopters suffered from a hazardous mountainous and brownout landing during reduced visibility operations where wind and loss of engine power due to the thin air



conditions had an impact on the performance of the Chinook. Circumstances we do not encounter when operating in The Netherlands. As a result, a new Training Program has been implemented consisting of 'High Blaze' exercises for dedicated mountain flying, and 'Hot Blaze' to allow crews to practice operations in a hot, high and dusty environment. Captain

BOEZEN continues 'one of the most challenging conditions to fly in are in snow in which you can easily lose your reference orientation. Therefore, we have cold weather operations in snowy conditions in the Nordics trained during 'Cold Blaze'. Last, but not least, the fourth training is 'TAC Blaze' with a focus on tactical maneuvers and electronic warfare.



Captain BOEZEN is posing in front of the right side of CH-47D '666' showing the Grizzly bear. This CH-47D has as nickname 'The Beast'. All individual CH-47s have been given a nickname.



During the 8th of October 2012 the first new CH-47F was delivered to 298 squadron at Gilze-Rijen Air Base. A total of three CH-47Fs would be operated with 298 Squadron in the Netherlands with the other three being delivered directly to 302 Squadron at Fort Rucker Air Base. During late 2015 D-891 transferred to 302 Squadron

New CH-47F's

To cater for the loss of the two CH-47Ds and for the additional demand for Heavy Rotary Capacity, the Dutch Ministry of Defense signed a new contract with manufacturer Boeing in 2007 for the delivery of six CH-47Fs. The CH-47Fs were equipped with updated ACMS cockpits (Block6 with partly color displays), improved self-protection kits, CHASE (Chinook Aircraft Survivability Equipment). The main purpose of the CH-47F fleet was to serve as a platform for Special Forces Operations. The configuration included Fast Rope Capabilities, new attachment points for on-board weapons, a long-distance communication radio and a Forward-Looking Infrared System (FLIR) under the nose. With the

latter system, the pilot has good situational awareness of the surroundings under very poor visibility conditions. The 'F' had GPS navigation connected to a radar altimeter. Initially 298 squadron had three CH-47Fs (D-890/891/892). To complement 302 squadron in Ford Hood, CH-47F 'D-891' was transferred to the US during 2015. The remaining two F's have been shipped back to Boeing in March 2019 in support of the current Renew Program. Two of the CH-47Fs (D-894/895) assigned to 302 Squadron were ferried to Boeing in April 2020, with the last two (D-891/893) to follow early June 2020. In anticipation of the arrival of the new CH-47F fleet, 300 hours of Base Maintenance inspections are diminishing for the

existing CH-47D fleet but will continue until the Initial Operation Capability (IOC) of the new CH-47F fleet. It is currently uncertain what the fate will be for the remaining CH-47Ds. Two are foreseen to be used as instructional airframes and one is planned to be delivered to the National Military Museum (NMM) at SoesterBERG.

The New CH-47 MY II CAAS Chinook

In the period between 2010 - 2015, The Netherlands prepared for the replacement of the ageing 11 D-models as well as the expansion of the Chinook fleet with three helicopters. After extensive deliberations, the standard US Army MYII CAAS configuration was considered as the

most efficient choice for a successor. The Netherlands was able to utilize options in the existing MYII production contract between the US Army and Boeing. For that, the Letter of Offer and Acceptance (LOA) with the US Army for fourteen new CH-47F MYII CAAS Chinooks was signed on November the 12th, 2015. On April the 14th, 2016 the US Department of Defense awarded Boeing a contract to build 12 CH-47Fs followed by an additional order on April the 28th, 2017 for the remaining two new CH-47F's. To prevent a "mixed fleet" of CAAS and ACMS Chinooks, which would have been costly during the sustainment of the fleet, it was then decided upon to renew and modernize the six ACMS F-models. On December the 14th, 2017

The Netherlands and Boeing signed the Direct Commercial Sales contract for the Renew Program, converting the six ACMS F-models into the exact same configuration as the 14 new Chinooks.

Operating the standard MYII CAAS Chinook will allow for further optimization of operations, training and maintenance. “We have had a lot of contact with the US Army and the Australian MOD being existing operators, to understand potential challenges we might encounter when fielding the new Chinooks. When we deliver them to the RNLAf, we want to make sure that there are no obstacles and that they will be able to operate and sustain the helicopters during the first three years. This period will allow the RNLAf to become self-supporting when it comes to in-service support” according to Colonel Koen van GOGH, Senior Project Manager Defense Material Organization (DMO) who is responsible for the Replacement and Modernization program Chinook.

“At around 2,500 parts of the legacy CH-47Fs will be reused. These parts will be overhauled (zero hours status) before being installed on brand-new MYII CAAS airframes. This option turned out to be more efficient and affordable than modifying the legacy CH-47F fleet. The first idea was to just replace the ACMS cockpit of the legacy Fs by a MYII CAAS Cockpit. We concluded the risk was too big in terms of certification and costs” according to Colonel



During March 2019 the first two CH-47Fs (procured in 2008) left for Boeing Philadelphia to be rebuilt to MYII CAAS standard. Airframes involved were D-890 and D-892 which were on strength with 298 squadron. After rebuilt to MY II CAAS the airframes will remain with 302 squadron in the US.

van GOGH. “The legacy CH-47Fs are now sent to ‘Summit Aviation’ who are tasked by Boeing under the Renew contract to remove the usable parts from the helicopters and have them delivered into the overhaul process.” Summit Aviation is an Industry Leader in Aircraft Maintenance, Repair, Avionics upgrades, Mission System Integration, Modifications and Aircraft sales.

The new CH-47F MY II CAAS Chinook comes with the short nose, which differs from the current ‘F’ version in appearance. This meant there is no room for our current Weather Radar. Also, the FLIR system under the nose will not be implemented. Another striking difference is the Woodland Desert Sage Color Scheme, instead of the current grey scheme.

“Although the main goal was to stay common with the US Army, Dutch operating intent and

national legislation led to the addition of some unique modifications. Fortunately, there is no need to integrate these into CAAS, so commonality will not be affected.” The additional Dutch requirements include elements such as: Crashworthy Crew Seats with ballistic protection, leading to modified MFCUs (Multifunctional Control Units), a LH Removable escape Hatch, a Hook Load Measuring System, an Ice Detection System, a Pitot Heater Failure Indicator, FRIES (Fast Rope Ingress and Egress System), including external hardpoints, and a minor change to the electrical system, all of which can be implemented during production. A Fall Protection System to protect maintainers, and an Emergency Locator Transmitter are implemented by ‘SES-I’ (Science and Engineering Services) in Huntsville, Alabama as ‘Post-

Production Modifications’. “We selected ‘SES-I’ because they did similar work for the US Army and we wanted to make sure we do not interfere with the work performed on the Boeing production line” explains Colonel van GOGH.

On March the 20th 2020, the first RNLAf CH-47Fs made their maiden flight during acceptance at Boeing Philadelphia (registration D-472 and D-473). These two helicopters left Boeing Ridley Park to be ferried to Huntsville, Alabama on the 5th of May 2020 for validation and verification by the US Army and the Postproduction Modifications by ‘SES-I’. “These two helicopters are planned to be the first CH-47s to be sent to The Netherlands by December 2020. After arrival in the Port of Antwerp, Belgium, the helicopters will be transported to Woensdrecht Air Base in The Netherlands where



Lt. Colonel Wil Van RIJEN (System Integrator, wearing Camo) and Colonel Koen van GOGH (Blue) doing a walkaround of an CH-47D

they will be prepared to be transferred to 298 Squadron with an expected arrival at Gilze-Rijen around mid-January 2021” according to Colonel van GOGH. These two CH-47Fs will have all our additional requirements implemented and will have the Digital Automated Flight Control System (DAFCS) 3.5 software and CAAS 9.4 installed. The Colonel continues “In order to support a tight conversion schedule of our flight crew to the MYII CAAS Chinook, we decided that the next six CH-47Fs coming from the production line will not undergo the Post Modification until a later date. These six Chinooks will go to Fort Hood, TX (USA) directly to be used for conversion training. The next batch of CH-47Fs will be delivered after the Post Modification. The earlier unmodified CH-47s will then rotate through ‘SES-I’ to complete the process of modification as well. During January-February 2021 we planned the arrival of another two CH-47s to the Netherlands, these will be airframes built with retrofitted parts of the

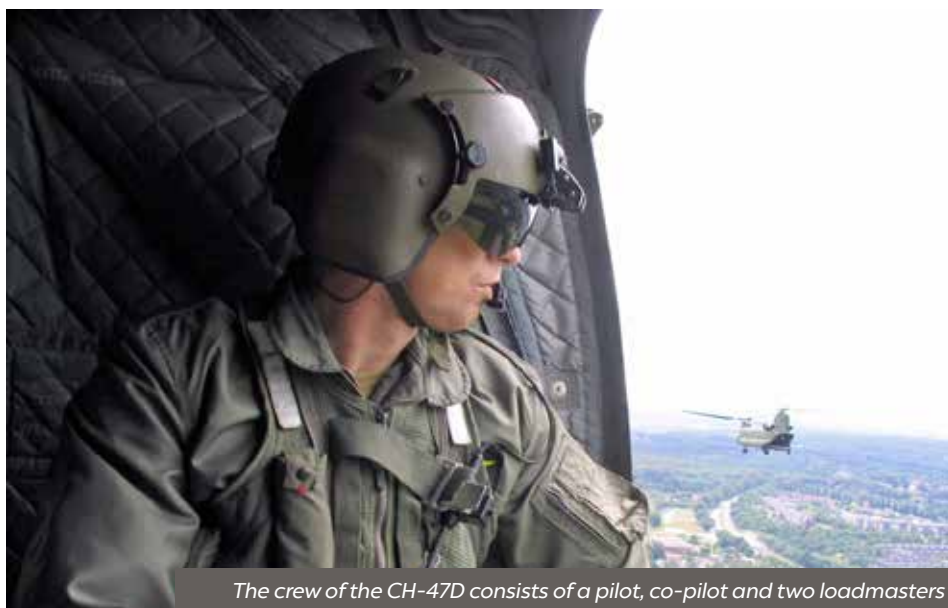
legacy CH-47Fs” concludes the Colonel.

To support the transition and difference training, a Transportable Flight Proficiency Simulator (TFPS) was procured from the NAVAIR (Naval Air Systems) Manned Flight Simulator Enterprise Team which is stationed at NAS Patuxent River (US). “The procurement of a TFPS, stationed at Gilze-Rijen, will be more efficient for the Squadron as there will no longer be a need to train in the simulator at the Royal Air Force at RAF

Benson Air Base” continues Koen van GOGH. “The TFPS has already arrived at Gilze-Rijen Air Base and we are awaiting a team from NAVAIR to do the final acceptance testing of the Simulator. The TFPS will need to be ready before the first group Instructor Pilots is scheduled to receive their Conversion Training at Fort Hood, since the TFPS will be used for the crew’s Ground School/ Academics training at Gilze-Rijen Air Base before they head to Ft. Hood for the flight training. Each Aviator will undergo a three-week training on the

Simulator before attending a three-week course with 302 Squadron in the US and participating in an American Falcon exercise, held four times a year. Upon return to the Netherlands the Aviators will be Fully Qualified Pilots on the MYII CAAS Chinook.

Lt Colonel van den BERG adds “We had planned to send a so-called Class 0 to Fort Hood in the US during the June-July 2020 period for the Instructor Course on the MY II CAAS variant. As we have five flights with five crews, we have fifty pilots and fifty loadmasters to train, resulting in five training classes at Fort Hood. This Transition Training is planned to be executed over an eighteen-month period. We will have a team from the US Army to support the Conversion, a so-called NETT Team (New Equipment Training Team)”, both locally at Gilze-Rijen as in Ft. Hood. The expectation is to achieve Full Operational Capability (FOC) status by mid-2022 with the Initial Operational Capability (IOC) by October 2021”.



The crew of the CH-47D consists of a pilot, co-pilot and two loadmasters



2LT 'Frank' is one of the student pilots who was planned to be training with 302 squadron in the US till the breakout of covid-19. Currently 'Frank' is trained by instructor pilots within 298 squadron in order to continue the education.

Missions of the Past

'Nihil Nobis Nimium' or 'Nothing is too much' is the motto of the 298 Squadron. The Squadron has been involved in many missions and oversea deployments since it has been operating with the CH-47D/F. Kosovo (KFOR, 1999), Allied Harbor in Albania and a year later for UNMEE (United Nations Mission in Ethiopia and Eritrea). From January 2001 till May 2004, the Royal Netherlands Air Force detachments contributed to NATO's Stabilization Force (SFOR) in Bosnia. From July 2003 to November 2005 they served in Iraq. The detachment provided transport for the Stabilization Force in Iraq (SFIR) for the Dutch military personnel from the

Security Forces. From May 2005 to June 2006, three Chinooks were deployed for the Dutch Special Forces deployment for Operation Enduring Freedom (OEF).

Two Chinooks were lost due to accidents in 2005 during these operations. As of 2007 to October 2010, 298 Squadron was regularly active from Kandahar Airfield in Afghanistan in support of NATO Operation ISAF (International Security Assistance Force). And lastly from April 2014 to April 2017, three Chinooks participated in the 'Minusma' Mission. This UN Mission was designed to restore Peace and Stability in Mali.

Training in the US

"The initial training for new crews is conducted at Fort Rucker Air Base (US) as part of the Chinook Aircraft Qualification Course. After completing the course new crews continue their training with the Squadron at Gilze-Rijen Air Base. 2ndLT 'Frank' explains. "We planned to travel to Fort Hood to have a ten-week training period with 302 Squadron as part of the Mission Qualification Training (MQT)". This squadron provides Joint Air Assault Training for Helicopter

Crews of the Defense Helicopter Command (DHC) and ground units of 11 Airmobile Brigade, this takes place four times a year with the 'American Falcon' exercise to conclude the training. In addition, Pilots and Load Masters follow the Initial Mission Qualification Training twice a year. The squadron is staffed with personnel from the Royal Netherlands Air Force, Army, and the US Army. Frank continues "our group consists of a mixture of a CH-47 loadmaster, Pilot, but also AH-64 pilots. Just before we would travel it became clear that we would not go to the US. Due to the Covid-19 situation the original schedule will require revision as currently 302 Squadron stood down with no training activities. We are now being trained within the Squadron here in The Netherlands. This means that we all must be flexible to cater to further Education as Training is conducted alongside daily operations". Captain Booze details further "The Defense Helicopter Command' is a more complex organization



in preparation of the firefighting season 298 squadron trained in the period February-April 2020. The third week of April saw the start of the largest nature fires in the last 40 years in The Netherlands. Four CH-47s and an AS532 have been involved a full week dropping 3.2 MIO Liters of waters in 540 drops. The AS532 can carry 2500L of water in a Bambi Bucket where the CH-47D takes 8000L of water. To support the crews a dedicated fire fighter observer joined the flights in order to guide the water drops.



The Defense Helicopter Command (DHC) and MAOT (Mobile Air Operations Team) always work closely together in the transportation of under sling loads, FBO operations. Twice a year a big exercise is held in a training area called Ederheide (GLV4/Eder Heath).

to cater to this ad-hoc additional training. Luckily, we managed to be flexible and had a fast resolution in place. The focus for training is now on Tactical Exercises, Navigational Skills and Planning of Flights. In order to provide the best possible training, we need to have Instructor Pilots and Ground Forces to act as Enemy Forces. As we cannot fully focus on the MQT training because the duration will be longer than the 10-week period at Fort Hood”.

Firefighting

The Netherlands was been confronted with the largest wildfires in 40 years in the Southern part of the Netherlands, Deurnsche Peel and Herkenbosch, during the third week of April 2020. Starting off with one supporting Chinook it resulted in a combined FBO (Fire Bucket Operations) effort of four Chinooks, a AS 532 Cougar, Mobile Air

Operations Teams (MAOT) and the Local Fire Brigades. ‘In case we are asked to support Firefighting Operations the Tasking Order is provided by the NASOC (National Air and Space Operations Center) to the Staff of DHC’ adds Niels. “The week before the fires started, we already had been asked to have one helicopter on standby”. Christiaan Velthausz, on-scene Commander and part of the Fire Department: “Under normal circumstances, the Ministry of Defense generally supplies Helicopter Capacity within 24 hours of the request. Although in practice this is a lot faster, usually about 3 to 4 hours. In the event of an increased risk of wildfires, FBO and therefore the Helicopters can be put at a 2 hours’ notice to move”. “During the Firefighting we had on average five to ten MAOT (Mobile Air Operations Team)

personnel to support the FBO operations”. The main lessons learned have been to work on a large-scale bases for a long period in a complex setting’ according to Sergeant-Major Rob van Mierlo, Commander MAOT. From the 1st of April 2020 onwards MAOT has a team on standby continuously, ready to set off within 2 hours”.

“In the event of a very large, or difficult-to-combat fires, the (Civil) Heli-Team Fire Team with Helicopters and the Mobile Air Operations Team (MAOT) of DHC form the so-called “Fire Bucket Operations (FBO) Team”. This team works together with the Local Fire Brigade on site. “About 10 years ago, the Defense Organization requested a single Point of Contact for extinguishing operations; that became the Heli-Team Fire Brigade”, according to Christiaan Velthausz, the on-scene Commander.

“We have a total of 10 Bambi Buckets which can hold in theory 10,000L of water. “During FBO operations we only drop 8,000L each time as with full capacity to prevent engine over torque as we demand all power available with full fuel load so it is safer to carry less without a risk having to return due to potential over torque” adds Captain Boezen. One of the loadmasters, who was involved in the firefighting ‘Jimmy’ explains “We had an observer of the Fire Department joining our flights who had a map showing coordinates where to drop the water. My task was to inform the Pilots on the coordinates of where to drop water. After each drop, we received direct feedback by Local Observers on the ground if our drop was successful. This worked out perfectly”. Over a 5-day period more than 3,2MIO Liters of water was dropped during 540 individual drops ■