



## Last night-flying mission for JASDF RF-4

Arnold ten Pas

BY EARLY February, the number of active RF-4Es in Japan Air Self-Defense Force (JASDF) service was down to seven. With the end of operations for 501 Hikotai planned before the end of March,

flying activities were being progressively reduced. On February 3, the squadron's last evening and night sorties were performed by a pair of RF-4Es at Hyakuri Air Base. Seen here is shark-mouthed

RF-4EJ 07-6433 landing in the last rays of sun. This is one of the unit's RF-4E and RF-4EJ jets to have received special markings displaying the unit's years of operations - 1961 to 2020 - applied over a strip of film.

## High-altitude biofuel tests for IAF An-32

INDIAN AIR Force (IAF) An-32RE KA2692 photographed at Leh Airport on January 31 while evaluating the use of jet biofuel for high-altitude operations. The flight to undertake operations from Leh - which at 10,682ft (3,256m) is one of the highest-altitude commercial airfields in

the world - was used to validate use of indigenously developed biofuel on the IAF An-32 at the extremities of the aircraft's operating envelope. Tests were conducted by a team of pilots and engineers from the IAF's Aircraft and Systems Testing Establishment (ASTE). **Dave Allport**



## SMART A330 MRTT planned for Singapore



The RSAF's sixth and final A330-243 MRTT is serial 765 (MRTT038, c/n 1886), which arrived in the country on February 16. Meanwhile, serial 764 will remain with Airbus in Getafe, Spain, to support SMART MRTT testing. **Hans Jacobs**

AIRBUS AND SINGAPORE are collaborating on further development of the A330 Multi-Role Tanker Transport (MRTT). Under an agreement announced at February's Singapore Airshow, the partners will work on the SMART MRTT programme to develop, certify and implement an automatic air-to-air refuelling (A3R) capability, as well as enhanced maintenance solutions for

the A330 MRTT. As launch customer for SMART, the Republic of Singapore Air Force (RSAF) will provide an A330 MRTT to take part in development, the flight-test campaign and final certification programme. Flight trials have already begun and SMART is planned for certification next year.

The A3R system requires no additional equipment on the receiver and is

intended to reduce air refuelling operator (ARO) workload, improve safety and optimise the rate of fuel transfer. Once the A3R system is activated by the ARO, the boom flight control system becomes fully automated and then transfers fuel upon contact with the receiver, while the ARO monitors the operation. In the event of an anomaly due to receiver stability deviations or

tanker malfunctions, the A3R system is able to disconnect and/or clear the boom away from the receiver safely.

In the receiver aircraft, the pilot(s) closing in on the tanker takes visual cues from the automated pilot director lights. According to Airbus, this allows for more efficient operations, with smoother transitions, and minimises time during the coupled state.

## 'Viper' progress for Indonesia, Singapore

AN INITIAL upgraded Indonesian Air Force Fighting Falcon, single-seat F-16A serial TS-1610, conducted its first post-upgrade flight from Lanud Iswahyudi in Madiun, East Java, on February 18. The jet is the first to undergo domestic Falcon STAR (Structural Augmentation Roadmap) and enhanced mid-life upgrade programmes.

Meanwhile, Lockheed Martin has received a US\$67.6m (£52m) contract modification to upgrade F-16s for Singapore. The deal modifies a previous contract awarded in 2015 and, if fully exercised, would bring total value of the contract to US\$980.4m (£759m). Upgrades for 60 of Singapore's F-16C/D Block 52 jets have been approved by the US.

## TNI-AU begins re-equipping 14 SkU

INDONESIA HAS finally begun re-equipping Skadron Udara 14 (SkU 14) of the Tentara Nasional Indonesia Angkatan Udara (TNI-AU, Indonesian Air Force) at Lanud Iswahjudi, Madiun, Java, which has been without aircraft since its F-5E/Fs were retired around five years ago. The first three aircraft for the unit arrived at the base on February 7, comprising Su-27SK TS-2701, plus Su-30MK2s TS-3001 and TS-3002, using the callsign 'Thunder Flight'.

All three were flown in from Lanud Sultan Hasanuddin, Ujung Pandang, Sulawesi, where they had been operated by SkU 11. The new aircraft for SkU 14 will join two other operational units at Iswahjudi: SkU 3 with F-16A/B/C/Ds and SkU 15 with T-50I Golden Eagles. **Dave Allport**

## Surions delivered to Korean Coast Guard



KAI

ONE OF the two new Korea Aerospace Industries (KAI) KUH-1CG Surions that have joined the Republic of Korea Coast Guard is B522.

Delivery of the helicopters was announced by KAI on December 20. They are equipped with advanced mission equipment for

their roles in search and rescue and maintaining maritime security, including combatting illegal fishing. **Dave Allport**

## Thailand announces acquisition plans

THE THAI defence ministry's latest White Paper gives insight into planned purchases for the Kong Thap Akat Thai (Royal Thai Air Force, RTAF) over the next decade. Two more T-50THs will be acquired, for a total of 14,

plus six more DA42s and six DA40s. One more Gripen is included as an attrition replacement, while plans are set out for replacement of the L-39ZA/ART, C-130H and PC-9, all of which are due to be superseded by new types from 2022.

Meanwhile, the RTAF has placed an order for six H135 training helicopters. The contract will bring the service's Airbus Helicopters fleet to 18 aircraft, joining 12 H225Ms also under order. The new rotorcraft will be delivered from 2021.

## JASDF's 3 Hikotai working up at Hyakuri

AS PHANTOM operations slowly come to an end at Hyakuri Air Base, a new unit has already set up camp at its future home base. The Japan Air Self-Defense Force's (JASDF's) 3 Hikotai will complete its transfer from Misawa

to Hyakuri next year, but part of the squadron has already started operating out of its new base. On January 15, the first seven F-2As and F-2Bs landed at Hyakuri, followed by three more a few days later. Since their arrival, 3 Hikotai has

been operating on a daily basis, with around ten F-2s present at any given time. Missions include local flights, as well as sorties to and from Misawa, regularly exchanging airframes and pilots. Meanwhile, the unit still operates from

Misawa simultaneously.

For now, 301 Hikotai is still operating the F-4E from Hyakuri, but will move to Misawa later this year to become an F-35A unit, while 501 Hikotai will retire its RF-4Es within a few weeks. **Arnold ten Pas**



Single-seat F-2A 63-8537 (c/n 1037) from 3 Hikotai prepares to depart its new home at Hyakuri. **Arnold ten Pas**

## In Brief

### F-15EX for India?

Boeing has requested a US government licence to allow it to potentially offer its F-15EX to the Indian Air Force. The company is considering pitching the Advanced Eagle to meet the service's requirement for 110 new fighters.

### India signs contracts for AH-64Es and MH-60Rs

New Delhi has concluded purchase agreements with the US covering six AH-64Es for the Indian Army and 24 MH-60Rs for the Indian Navy. Sikorsky is expected to complete deliveries of the Seahawks by 2023, while army AH-64E deliveries will begin the same year.

### Indonesia receives last C-130H from Australia

Indonesia has taken delivery of the fifth and final C-130H ordered from Australia in July 2013. The Hercules, serial A-1338, was formally inducted into the Indonesian Air Force's Skadron Udara 32 at Lanud Abdulrachman Salehin Malang, East Java, on February 15.

### Initial operational clearance for India's LUH

India's Light Utility Helicopter (LUH) has been granted initial operational clearance (IOC), paving the way for Hindustan Aeronautics Limited (HAL) to begin series production. IOC was confirmed by the Centre for Military Airworthiness and Certification after three LUH prototypes completed more than 550 test flights in diverse climatic conditions.

### Indian MoD outlines Tejas Mk1A plans

The Indian Ministry of Defence has confirmed its intention to order 83 of the enhanced Tejas Mk1A fighters for the Indian Air Force. Flight testing of the Tejas Mk1A is planned to be completed by 2022.

### Afghan Black Hawk numbers to be cut

The number of UH-60A+ being supplied to Afghanistan is to be cut by two-thirds. The latest Pentagon report on the country states that the final quantity of Black Hawks has been reduced from 159 to 53 (45 of which had been delivered by October 31 last year). The remaining eight are currently being upgraded by Science and Engineering Services in Huntsville, Alabama.