

Type description

The Northrop N-156F Freedom Fighter was a private venture development from the N-156T (T-38 Talon) trainer as a low cost, modern fighter and fighter-bomber for export to friendly countries with limited defence budgets. The first prototype was rolled out on 31st of May 1959 and first flown from Edwards AFB on 30th of July. In 1962 the N-165F was given the military designation F-5A and a two-seat combat-capable trainer was ordered with the designation F-5B. The RF-5A was the reconnaissance version of the F-5A. It was ordered in October 1967 and made its first flight in May 1968.

The F-5 Freedom Fighter in Norwegian service

When the RNoAF was looking for a replacement for the F-86F and K in the early sixties, price and cost-effectiveness were important considerations. The key missions were anti-invasion defence and supporting the ground forces, with air defence as a secondary role. The aircraft should also be simple, rugged and require little maintenance. In January 1964 the F-5 was announced the winner over the F-104G (already in use in the interceptor and fighter bomber roles), F-104H, G-91, A-4E and F-84F. The RNoAF requested some minor changes from the baseline model to make it safer to operate in the harsh winter climate and reduce the risk of fatigue cracks, the most prominent changes being de-icing equipment for the cockpit windshield and a tail-hook. The Norwegian models were designated by adding a (G) to the version suffix. On the 22nd of March 1966, the first F-5s were formally handed over to 336 Squadron, soon followed by 338, 332 and 334 Squadrons. The jet training squadron, No. 718 was set up with the F-5A(G) and F-5B(G) in July 1968. Finally, the RNoAF's sole dedicated recon unit, 717 Sqn. took delivery of their RF-5A(G)s and a couple of F-5B(G)s in April 1969.

Modelling notes

The best 1/72 scale kits of the Freedom Fighter were released by ESCI in the 1980s. Different issues represented the F-5A, F-5B and RF-5A, with optional parts for Canadian and Dutch manufactured versions. The kits have since been re-released by Italeri, Revell and Wolfpack. The only necessary modifications for a correct Norwegian model are adding the de-icing kit in front of the windshield and filling the engraved grid pattern on the fuselage side - these represent auxiliary air intakes found on the Canadian and Dutch versions only.

Colour notes

The F-5s were delivered in Northrop's standard aluminium paint all over. This is specified as Semi Gloss Aluminium and is slightly darker than Xtracolor X500 Duraluminium. The anti-glare panels on the nose and wingtip tanks, and jet engine air intake lips were black and the fin tip is light grey (close to FS26440). In the late 1960s the RNoAF planned to camouflage all frontline aircraft. A T.O. published in 1974 specified that the F-5s should be painted dark green on the upper surfaces. These plans were dropped after two aircraft had been painted green on the upper surfaces. The colour had the Norwegian paint number OGF-70, and was close to FS24098. A number of external fuel tanks for the F-5s had also been painted green or dark grey FS36118 with light grey FS36440 undersides.

This decal sheet is for aluminium painted (and green) F-5s after the change of marking system in September 1972. From about 1986 onwards the remaining aircraft were painted overall neutral grey FS26270. Although this decal sheet is not intended for the grey aircraft, many of the decals can still be used. Note that by this time, they grey aircraft had RWRs fitted to the tailfin and nose as well as chaff/flare dispensers on the rear fuselage.

Marking notes

The aircraft in the 64- and 65- serial range were delivered with Norwegian roundels. Aircraft in the 66- serial range were delivered without any national insignia while later aircraft were delivered with USAF markings. RNoAF specifications called for roundels in six positions, but the F-5s carried them in only four, and a few aircraft did not carry the roundel on the lower wing surface at all. The fuselage roundels were 600mm, the upper wing roundels were 900mm while the lower wing roundels could be either 900mm, 600mm or missing completely. With the change of markings in 1972, the roundels were specified to be 400mm on the fuselage and 600mm on the wings. These were changed consecutively, but not necessarily at the same time for fuselage and wings.

Stencils have been printed in two alternative styles. One set as stickers on "silver" background, and one set as painted on. There are also variations in style for the Rescue markings. Note that aircraft # 902 had misspelling RESQUE, but this came after it had been painted grey all over.

Decalling notes

The decal sheet contains six different sets of tail number fonts:

- A) As specified by T.O.1-1-4(N).
- B) Slightly slimmer than A, used on many F-5s.
- C) The "ugly" Rygge-font, applied on base at Rygge airfield.
- D) Variant with tighter radius curves.
- E) Late type F-16 variant, apparently not used on F-5s.
- F) Smaller 250 mm variant

Decal application

The decals have a very thin carrier film and need to be handled with care. Individual decals should be cut out and soaked for a few seconds in lukewarm water. Slide the decal from the paper over to the model's surface without wrinkling. Avoid moving the decal excessively to avoid tearing the film and washing off the adhesive. The carrier film might at first seem rigid and difficult to lay down over complex surfaces, but using decal solutions like Micro Set and Micro Sol will make them snuggle down over detail and make them look painted on when completely dry. For best results, decals should always be applied to a gloss surface.

Thanks

Thanks to Dag Roger Stangeland for sharing his knowledge on Norwegian F-5s and to Jens Håkon Brandal for help with the instructions.

Front page:

F-5A(G), 66-9228. 338 Sqn., Ørland 1983.

F-5B(G), 67-14909. 336 Sqn., Rygge 1973. Tail number style B.

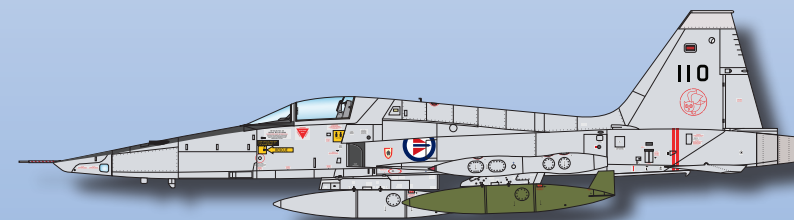
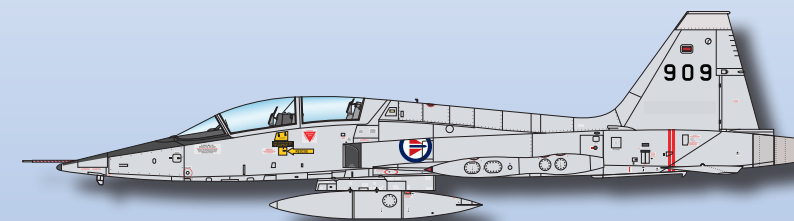
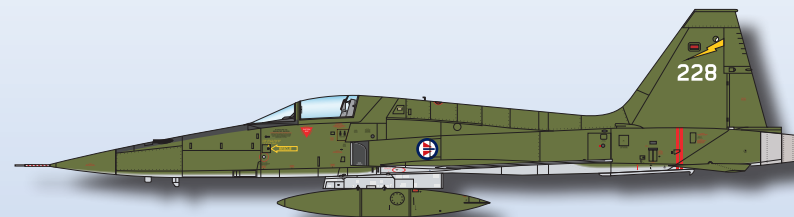
RF-5A(G), 68-9110. 717 Sqn. Rygge 1979. Tail number style A.






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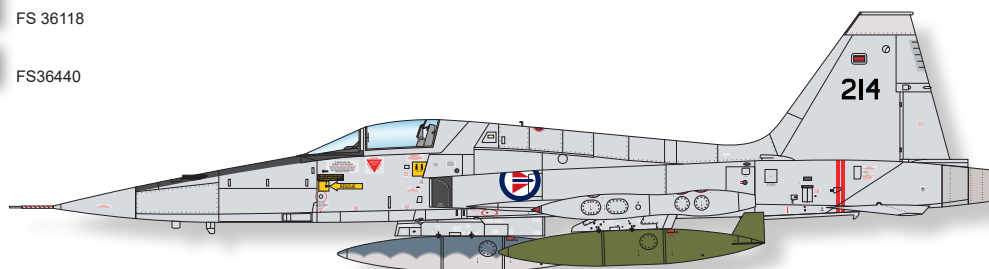
Vingtor

DECALS

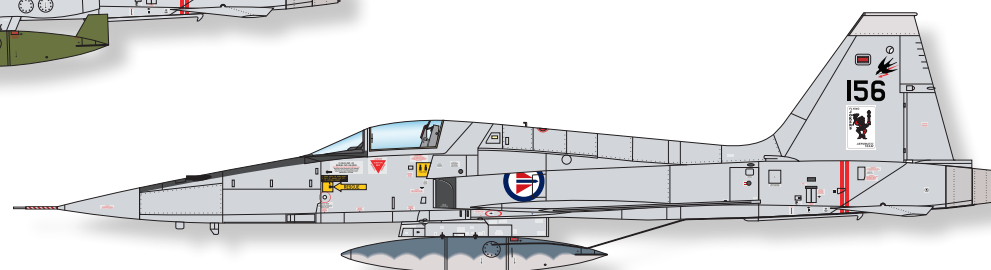
Northrop F-5A/F-5B/RF-5A Freedom Fighter RNoAF - post 1972



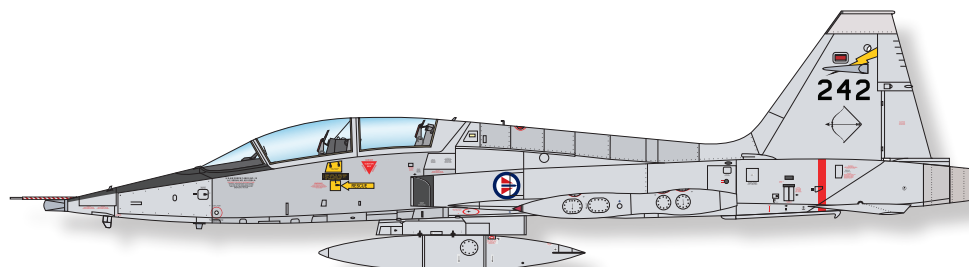
| | | | |
|---|--------------------|---|------------------|
|  | Northrop Aluminium |  | OGF-70 (FS24098) |
|  | FS26440 |  | FS 36118 |
| | |  | FS36440 |



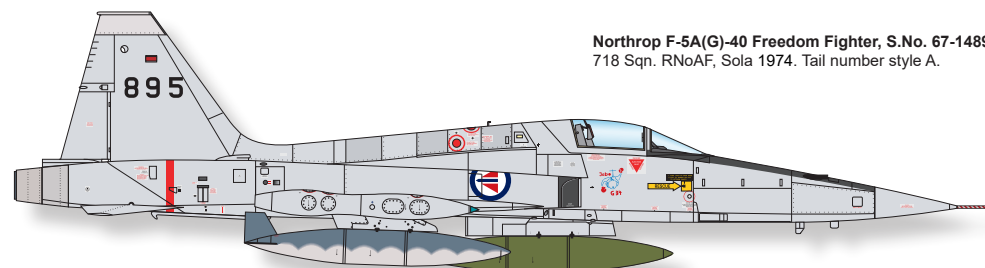
Northrop F-5A(G)-30 Freedom Fighter, S.No. 66-9214, 214.
718 Sqn. RNoAF, Sola 1980. Tail number style A.



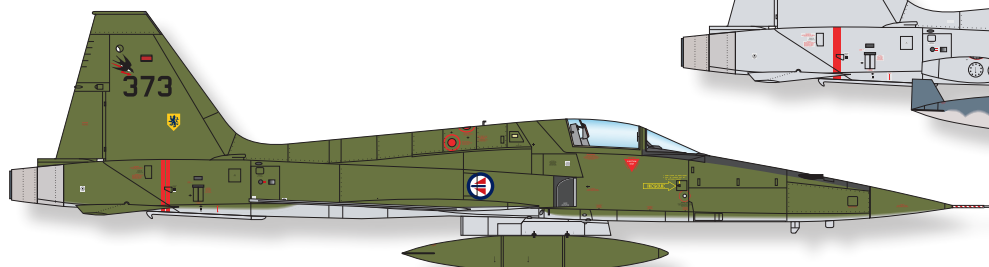
Northrop F-5A(G)-35 Freedom Fighter, S.No. 67-21156, 156.
Flying Jokers Aerobatic Team, 336 Sqn. RNoAF, Rygge 1977. Tail number style C.



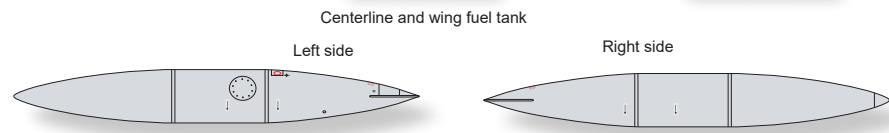
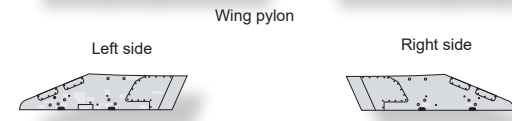
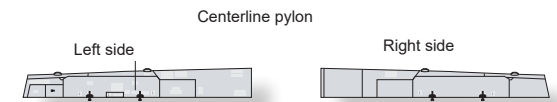
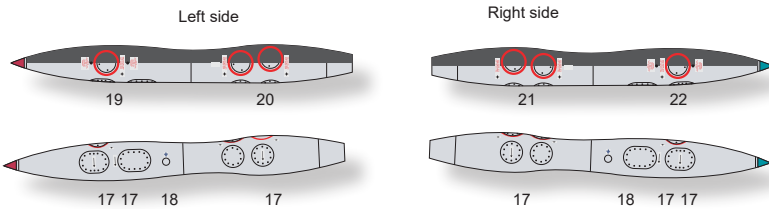
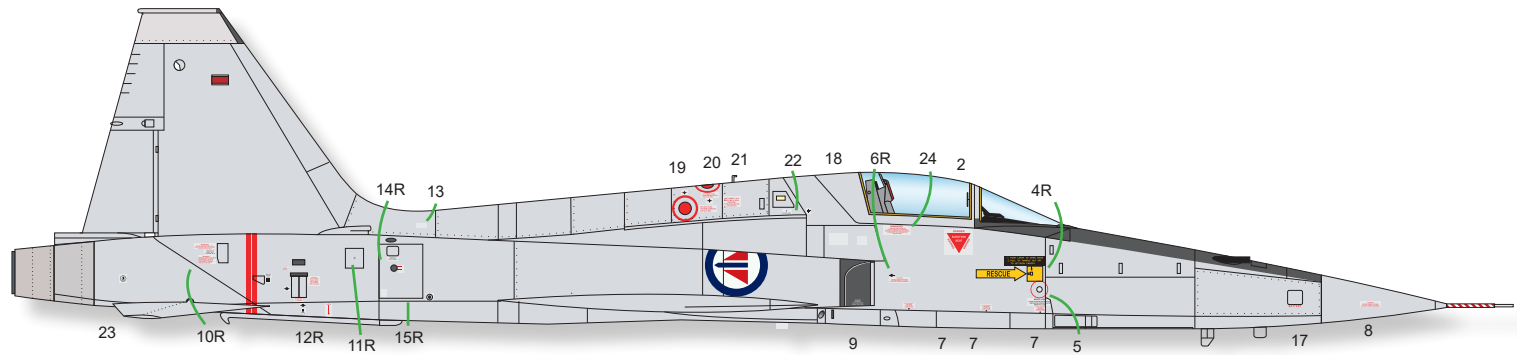
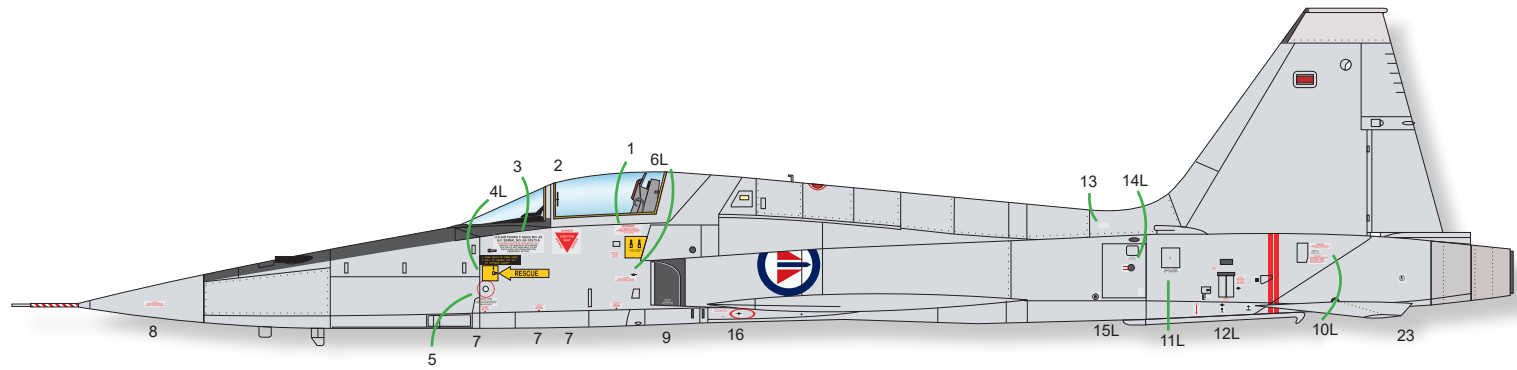
Northrop F-5B(G)-20 Freedom Fighter, S.No. 66-9242, 242.
338 Sqn. RNoAF, Ørland 1985. Tail number style A.



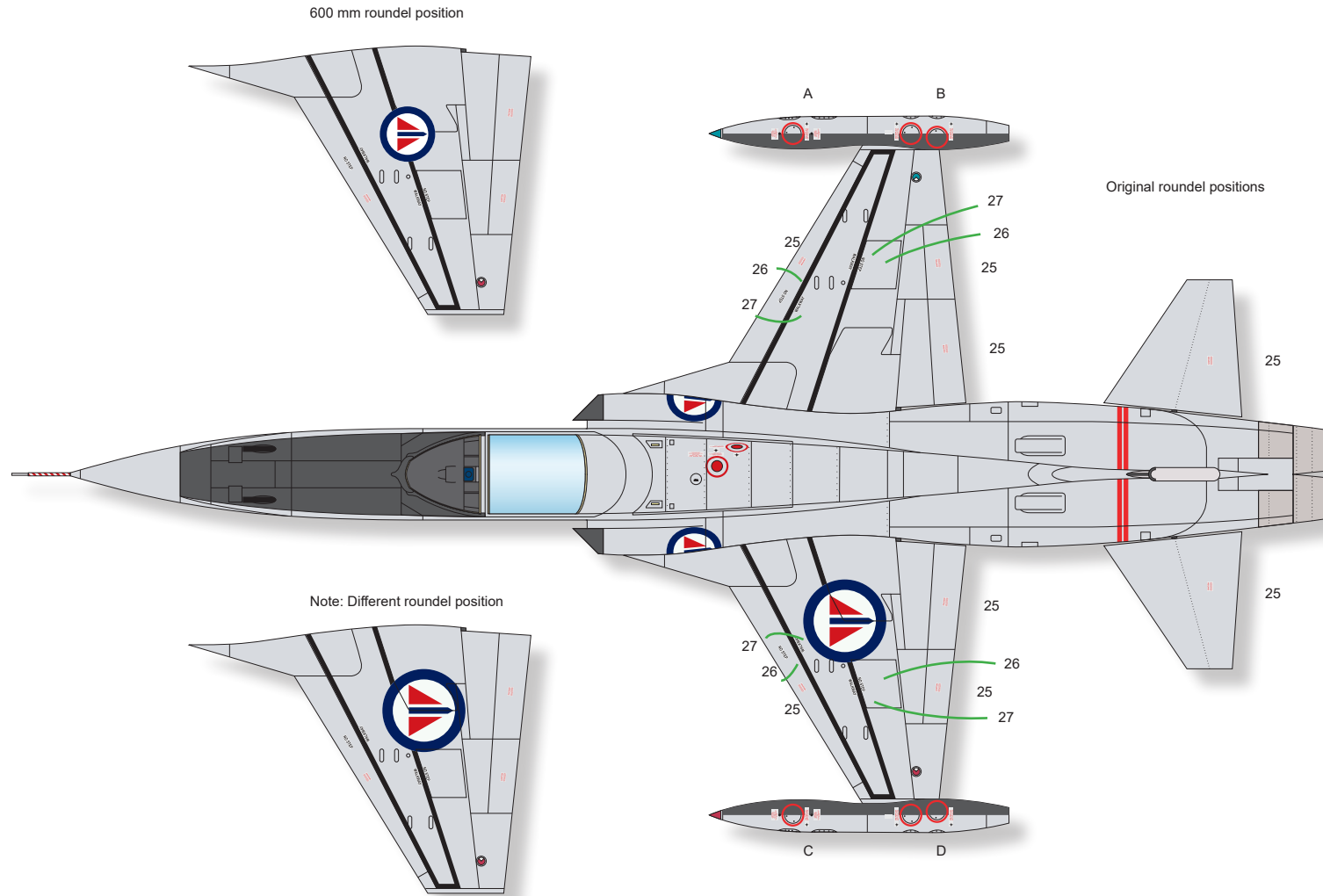
Northrop F-5A(G)-40 Freedom Fighter, S.No. 67-14895, 895.
718 Sqn. RNoAF, Sola 1974. Tail number style A.

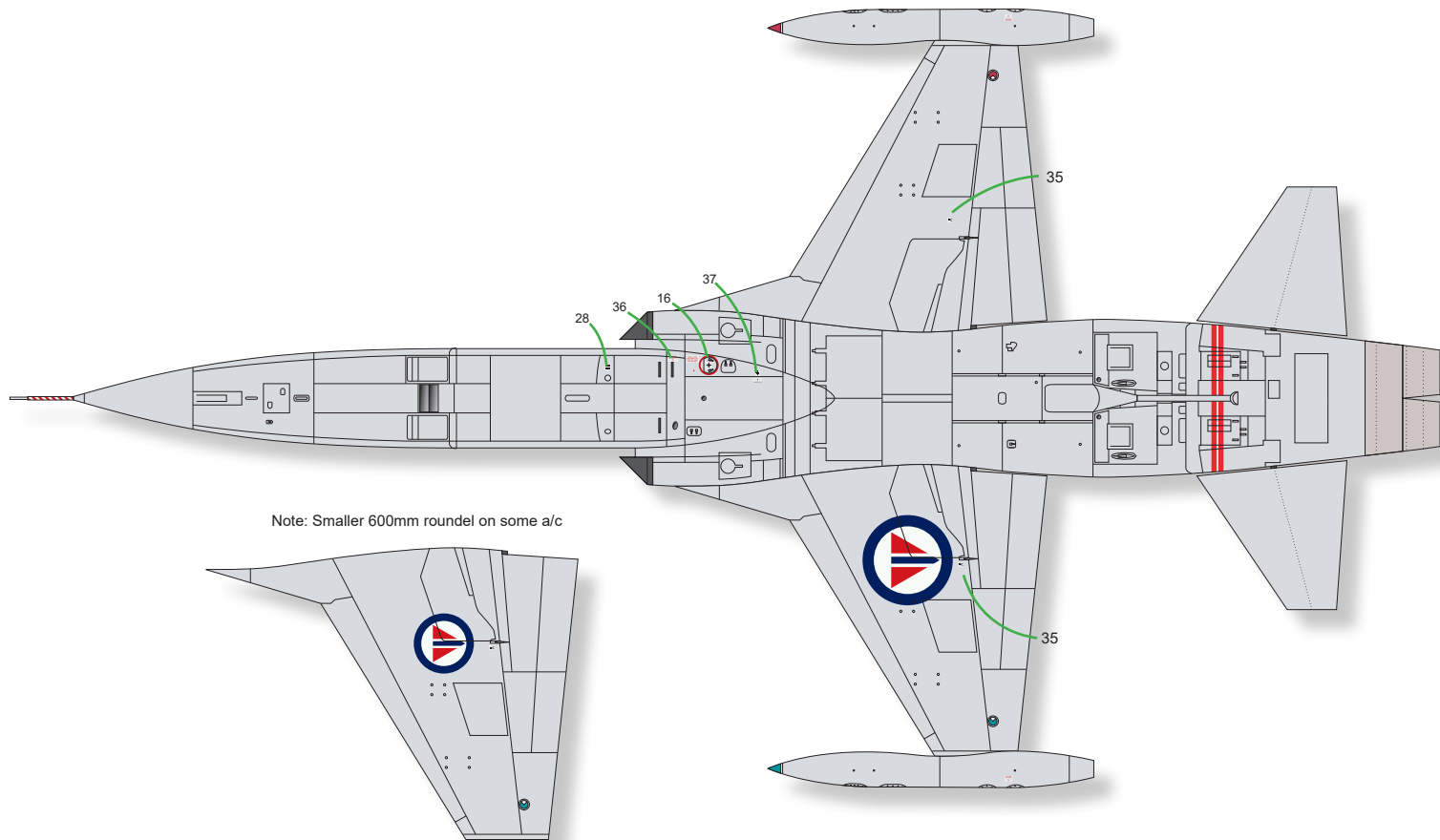


Northrop F-5A(G)-20 Freedom Fighter, S.No. 64-13373, 373.
336 Sqn. RNoAF, Rygge 1978. Tail number style A.



Note that wing fuel tanks have a vertical fin





Note: Smaller 600mm roundel on some a/c