DELTA DAGGER DRONES

by Ron Downey

The contractor flight line at Holloman AFB in New Mexico is becoming crowded these days with a small air force of long "obsolete" Convair F-102 Delta Daggers. But "obsolete" is not really the word, for Sperry and RCA have found a way to take these retired fighters and have them fly new, important missions as PQM-102s or QF-102s.

The U.S. Air Force, realizing that they needed a cheap, reliable supersonic missile target to provide up-to-date "threat simulations" contracted to have F-102s converted to both man-rated and non-man-rated drones. As aircraft designators go, the PQM-102 (the main production version) is the new kid on the block. This is because these Delta Daggers are the first converted-fighter target drones not to have provisions for manned operations. Converted aircraft drones use aircraft designators if they are still able to be flown by a pilot. If they cannot be flown by a pilot, they are considered rockets or guided missiles. Thus, QF-102s (Q = drone, F = fighter) can be flown by a man in the aircraft or by remote control, while PQM-102s (P = soft-pad launched, Q = drone, M = guided missile) can only be flown by a remote controller.

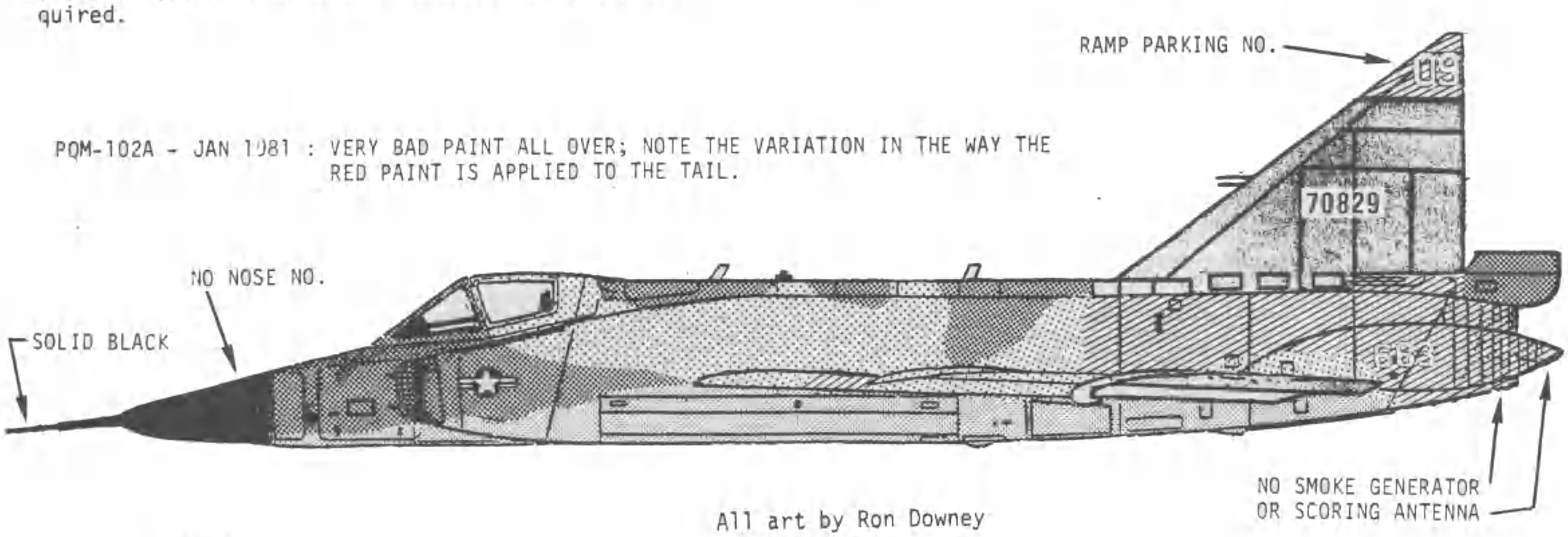
By eliminating the pilot the PQM-102s can pull 8 g's (a structural limit) while QF-102s are limited to 6.85 g's (a human limit). The PQM-102s have a top speed of Mach 1.2 and an operating height of up to 55,000 feet. Like the Army's QF-86E conversion (see CP #9), the PQM-102 is a very cost-effective program. The only expense involved is the conversion to drone electronics, with no new airframe or structure required.

Sperry Flight Systems Division was first tasked in the early '70s to convert these aircraft, with the first flight occuring on 13 August 1974 and the first operational flight occuring on 25 June 1975. Airframe modifications were done by the Aircraft Service Division of Fairchild Industries. RCA took over the Sperry contract in October of 1979 and will administer it until all aircraft are gone. Originally, 145 aircraft were converted in the program and the inventory is now down to about 80. With normal attrition they will all be gone by the end of 1983. An interesting note is that the US Army has or will have up to 24 aircraft for their use.

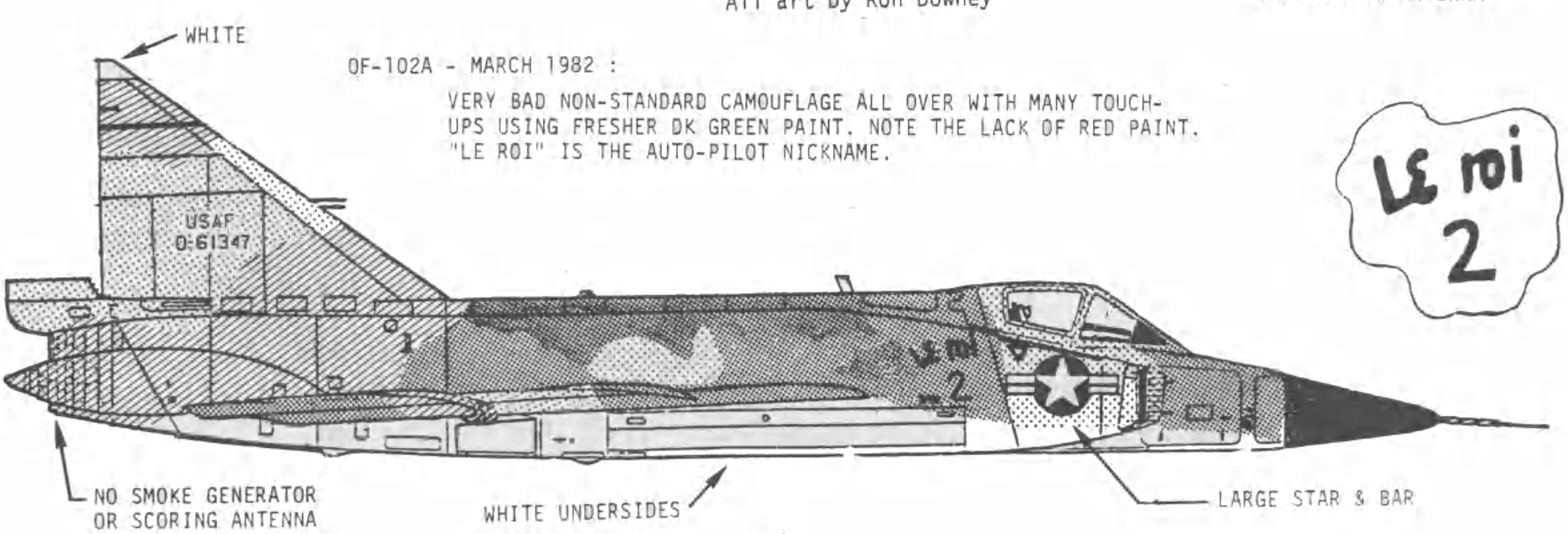
The PQM aircraft are one of two types, PQM-102A or PQM-102B. The QF-102s are "A" models only. The PQM-102As have line modification numbers in the 600 series (these are the consecutive drone conversion numbers given them by Fairchild), while the PQM-102Bs have 700 and 800 numbers. The QF-102s do not have numbers if they are still man-rated. Other visual differences include an external smoke generator nozzle on the "A"s (the "B"s have an internal oil pipe run to the engine) and the "A"s have an electronics pallet in place of the seat. The "B"s have a dummy seat installed and the electronics are placed elsewhere.

Other observations include that all aircraft had many or most of the cockpit instruments removed during the conversion process. Many, if not all, had

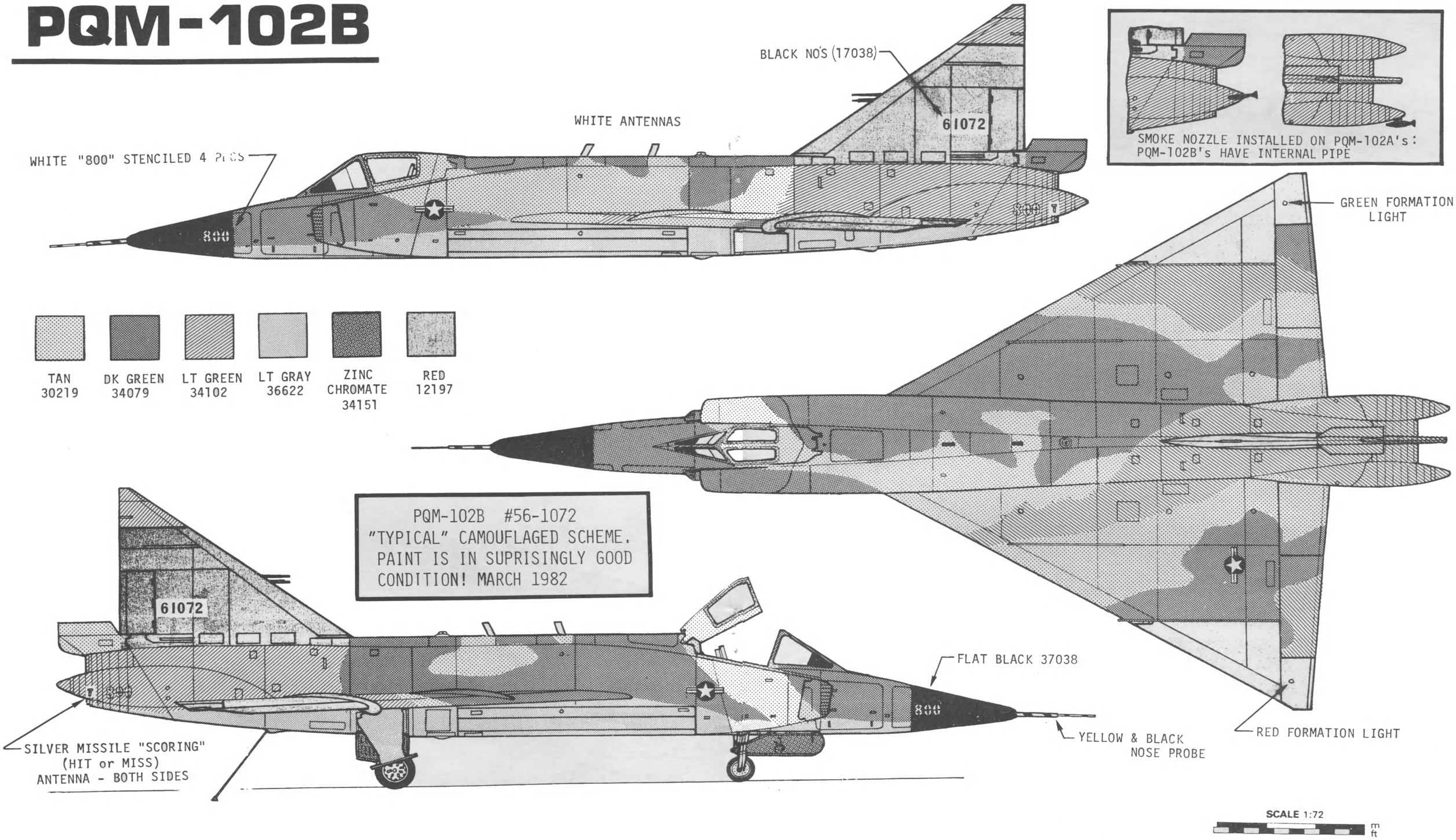
(Continued on page 15)



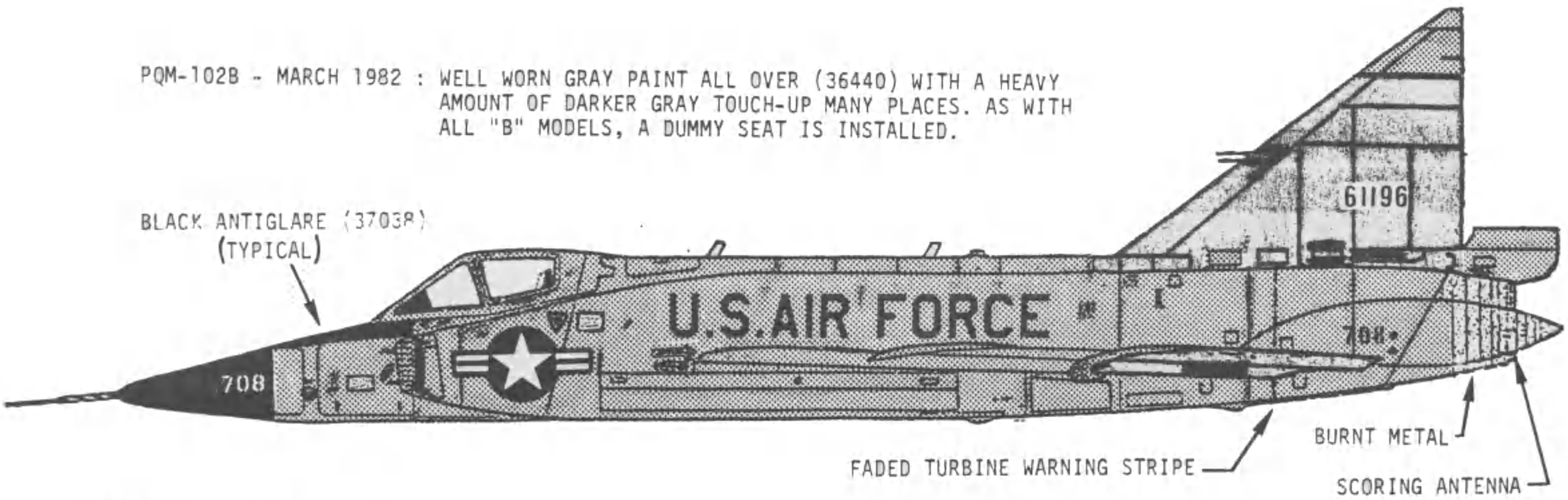
All art by Ron Downey



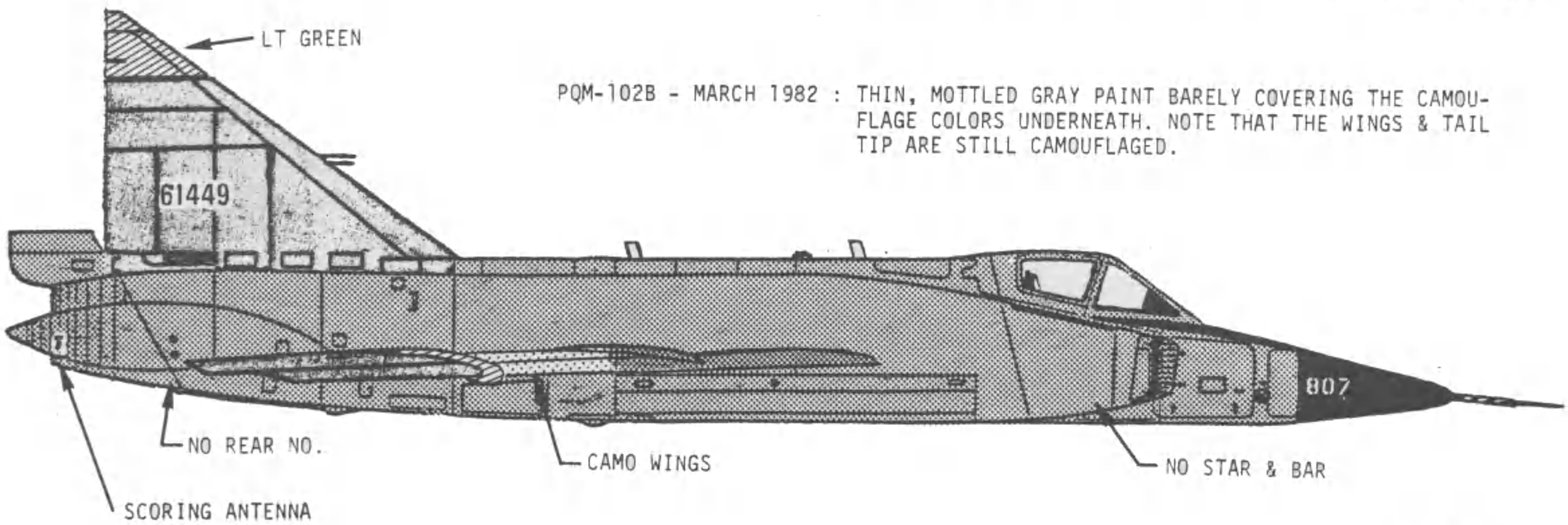
PQM-102B


BLACK NO'S (17038)
WHITE ANTENNAS
WHITE "800" STENCILED 4 PLCS
61072
800
SMOKE NOZZLE INSTALLED ON PQM-102A's:
PQM-102B's HAVE INTERNAL PIPE
GREEN FORMATION LIGHT
TAN 30219
DK GREEN 34079
LT GREEN 34102
LT GRAY 36622
ZINC CHROMATE 34151
RED 12197
PQM-102B #56-1072
"TYPICAL" CAMOUFLAGED SCHEME.
PAINT IS IN SUPRISINGLY GOOD
CONDITION! MARCH 1982
FLAT BLACK 37038
YELLOW & BLACK
NOSE PROBE
RED FORMATION LIGHT
SILVER MISSILE "SCORING"
(HIT or MISS)
ANTENNA - BOTH SIDES
SCALE 1:72
m
ft

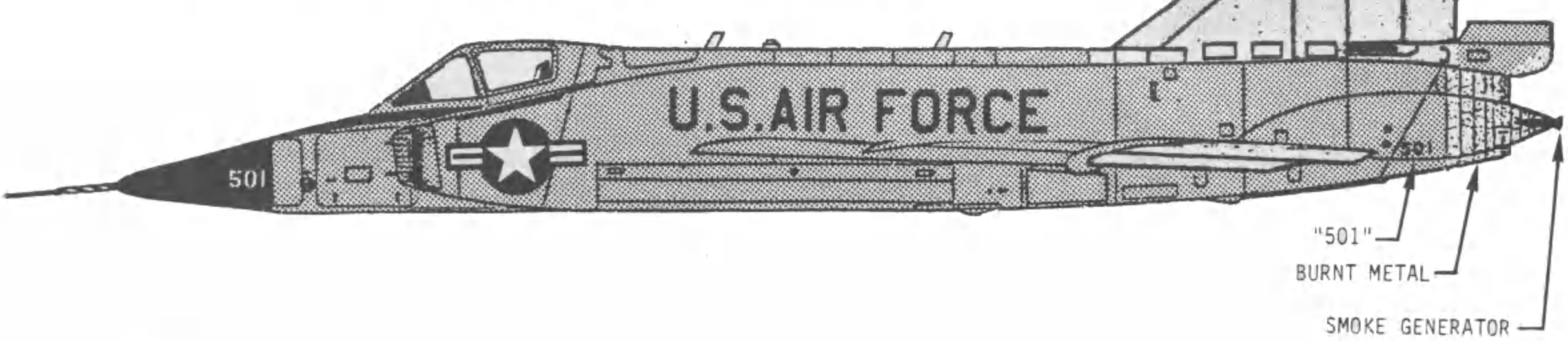
PQM-102B - MARCH 1982 : WELL WORN GRAY PAINT ALL OVER (36440) WITH A HEAVY AMOUNT OF DARKER GRAY TOUCH-UP MANY PLACES. AS WITH ALL "B" MODELS, A DUMMY SEAT IS INSTALLED.



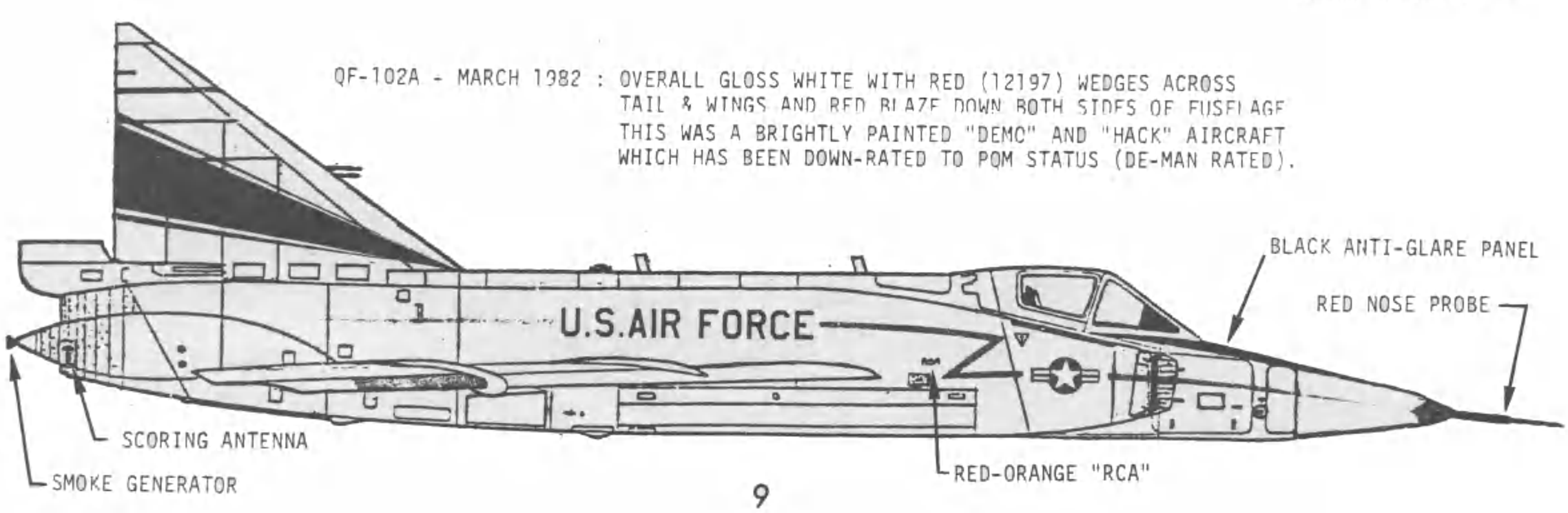
PQM-102B - MARCH 1982 : THIN, MOTTLED GRAY PAINT BARELY COVERING THE CAMOUFLAGE COLORS UNDERNEATH. NOTE THAT THE WINGS & TAIL TIP ARE STILL CAMOUFLAGED.



QF-102A - MARCH 1982 : NEW GLOSSY GRAY PAINT ALL OVER (16473)



QF-102A - MARCH 1982 : OVERALL GLOSS WHITE WITH RED (12197) WEDGES ACROSS TAIL & WINGS AND RED BLAZE DOWN BOTH SIDES OF FUSELAGE THIS WAS A BRIGHTLY PAINTED "DEMO" AND "HACK" AIRCRAFT WHICH HAS BEEN DOWN-RATED TO PQM STATUS (DE-MAN RATED).



QF-102A #56-1443 down-rated to PQM status in a badly weathered gray paint scheme at Holloman AFB in 1978.. Note the smoke nozzle on the aft nacelle. Photo: Aero Research Company.

(LEFT) PQM-102B #56-1447 at Holloman AFB in January 1981 undergoing drone conversion. Note the open avionics bay and weapons bay bay. This aircraft has since been shot down. Photo Photo by Ron Downey.

(BELOW) PQM-102A #57-0829 undergoes maintenance at Holloman AFB in January of 1981. Note the drone control electronics pack where the pilot seat would normally be. This aircraft has since been shot down. Photo by Ron Downey.