The Dassault Mirage III in South African Air Force service

PART 1

Introduction to the Mirage III in SAAF service
SAAF Mirage IIICZ and BZ

This E-book was compiled by Malcolm Reid
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Introduction

Research forms an essential part of the scale modeling experience. Over the years, through book and internet based research, I have found that there is a wealth of information pertaining to Mirages in South African Air Force (SAAF) service but that the focus is more toward the Mirage F1AZ/CZ. I have also found during my research that the printed and internet based reference data pertaining to the SAAF Mirage III family is superficial, variable and fragmented at best and that associated commentary is not always accurate. Several Internet forums do not always succeed in providing accurate details pertaining to the Mirage III in SAAF service with available data generally lacking in attention to detail which some scale modelers seek (e.g. colour scheme or marking variations). By far the best single repository for SAAF Mirage III based information is the Unofficial SAAF Website (saairforce.co.za).

For the modeling fans of French Mirage jet aircraft, times are good as, of 2022, we have seen new plastic model kit releases over the past 10 years of the Mirage III in 72nd, 48th (Eduard, Hobbyboss, Kinetic) and 32nd (Italeri and the Revell reboxing) scales. The 32nd scale Italeri kit, whilst not being the best, thankfully provides a much-needed replacement for the 40 year-old Revell kit. These new model kits have been designed and produced to accepted "modern" tooling standards with reasonable "out the box" detail and recessed panel lines and riveting. Thankfully, there seems to be renewed interest in the Mirage III amongst kit manufacturers and modelers alike as is reflected on the various modeling websites.

I felt that a single record recording the details pertaining to the Mirage III in SAAF service was needed for reference use by modelers and enthusiasts alike. This document is in no way intended to be the definitive record of the Mirage III in SAAF service, but it does allow as much available data and images to be recorded in a consolidated manner. This may then form the basis of future revisions as more data comes to light. This document has been divided into eight sub-parts each addressing a particular aspect of the Mirage III in SAAF service. These sub-parts are :

- **Part 1** provides a summary narrative of the Mirage III in SAAF service, details of the numbers of Mirages operated by the SAAF and their post service disposal status. It then focuses on the particular colour schemes and camouflage variations for the Mirage III BZ and CZ.

- **Part 2** continues with the subject of colour schemes for the later Mirage III variants in SAAF service (Mirage III DZ, D2Z, EZ, RZ and R2Z). Part 2 also addresses some of the detailed markings associated with SAAF Mirage IIIs, such as permutations of ejection seat warning markings.

- **Part 3** This section addresses the external stores (fuel tanks and weapons) carried by the various Mirage III variants whilst operated by the SAAF.

- **Part 4** provides details of the subtle, and not so subtle, differences between the Mirage III variants.

- **Part 5** addresses the radar and aircraft protection systems fitted to SAAF Mirage III variants. This section also provides details pertaining to the various communications and avionics systems and focuses specifically on external details such as antennae, which would be of interest to a modeler.

- **Part 6** presents photos of Mirage IIIBZ and CZ airframes, which have been preserved at the SAAF Museum at Swartkop in Pretoria and the South African National Museum of Military History in Johannesburg.

- **Part 7** presents photos of Mirage IIIRZ and R2Z airframes, which have been preserved at the SAAF Museums at Swartkop in Pretoria and Ysterplaat in Cape Town.

- **Part 8** provides a sample collection of the author's builds of the recently released 48th and 32nd Mirage III kits with commentary on the kits as well as recommendations for paint mixes.

In compiling this document, data has been obtained from various Internet sources and individual contributors. This data has been cross-referenced where needed to ensure, as much as possible, the consistency and correctness of that data. There have been many contributors to various Internet forums relating to the SAAF Mirage III, and in particular, the Unofficial SAAF Website (saairforce.co.za). Without the efforts of fellow enthusiasts, pilots and crews in providing this written and photographic documentation of the history of the Mirage III in SAAF service, this narrative would not have been possible. Many of the images sourced via Internet searches have been used without specific permission of the originators as, in many cases, these are unknown. Others have been included with the originators' details retained and unedited as sourced from the Internet. The images have been included in this document on a "fair use" basis for the purposes of historical research and the recording thereof. This document is offered as a free E-book and in no way does it provide a source of income for the author or any other party.

Digital images of SAAF Mirage IIIs sourced from the Internet tend to be of low quality (some less than 50kB in size), which makes it difficult at times to interpret specific details. Notwithstanding this lack of quality, these low-resolution images have been included to address a specific aspect of the Mirage III. These images have been used as sourced from the Internet and have not been subject to any adjustments (hue, saturation etc.) and have not been sharpened.

What is undeniable is that, although there were several accepted official colour schemes adopted through the life of the SAAF Mirage III, the actual colour schemes were quite variable in detail from one aircraft to the next. The moral of the story – refer to photographs as much as possible of the particular subject you want to model. An example is how the buff/green camouflage applied to the SAAF Mirage IIIs varied. There were in fact three buff/green colour schemes : original gloss hard edge buff/green, later matt soft edge buff/green in the original pattern as well as a modified (simplified) pattern.

I think it would be remiss not to recognize the efforts of Dean Wingrin for having established and maintaining the wonderful Unofficial SAAF Forum website (saairforce.co.za). As noted previously, this is the go-to website for SAAF aviation.

I also appreciate the input from those who were so eager to assist in providing data and commentary during the various model builds of SAAF Mirage IIIs on the modeling page of this website. We should not forget the efforts of the few dedicated personnel at both the SAAF Museums at Swartkop and Ysterplaat as well as the National Museum of Military History for allowing me access to their Mirage III collections (and thus, details not usually available to the general public) and for the continuing work they do to maintain a visual legacy of the SAAF.

This document also uses terminology from the operating period of the Mirage III in SAAF service. As an example, names such as South West Africa are used in their historical context and not as an expression of the author's political views.

The SAAF Museum's Mirage IIICZ #805 at Swartkop Air Base – the photo was taken in 2009 prior to the repaint of #805 by the SAF Museum.

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Part 1 - Introduction to the Mirage III in SAAF service and SAAF Mirage IIICZ and BZ

1 The Dassault Mirage III – a very short introduction

It is not the purpose of this document to discuss in any detail the design merits of the Mirage III or the service history of this aircraft outside of the SAAF. Many other works exist which more than satisfy this need for information. However, as an introduction, a very brief description of the Mirage III is provided below.

The Mirage III was the first of a long lineage of aesthetically pleasing Dassault designed fighter jet aircraft, which includes the later Mirage F1 and the Mirage 2000.

The Mirage III has been described variably as a 2nd or 3rd generation[1] jet fighter aircraft. The Mirage III was designed by the French company Avions Marcel Dassault, originally as a lightweight point defence interceptor aircraft carrying internal guns and air to air missiles. High speed, fast climbing ability, relative simplicity and lightweight attributes were required. The delta wing was selected by Dassault as being the best aerodynamic design for the interceptor role. It was intended to compete with similar aircraft of the same era such as the American F-104 Starfighter, the British English Electric Lightning and the Soviet Mig-21.

The first operational Mirage III variant, the IIIC, was powered by a 2nd generation turbojet, the SNECMA Atar 09B. The 09B engine can most easily be differentiated from other Mirage III engines by its horizontally split clamshell (or "eyelid") variable exhaust nozzle. The 09B engine also powered the Mirage IIIB twin seat trainer version.

Dassault then developed the Mirage IIIE which featured a slightly longer fuselage and the higher thrust Atar 09C turbojet engine distinguishable from the Atar 09B by its more conventional annular configured variable exhaust nozzle. The Mirage IIIE was designed for the multi-role mission as opposed to an interceptor. As such it had an improved avionics specification and increased fuel capacity accommodated in the elongated fuselage. The two seat trainer version was designated IIID.

The Israelis converted some of their Cs to use the higher thrust Atar 09C. Some of these were later sold to Argentina.

Dassault developed a reconnaissance version designated Mirage IIIR. A reconnaissance nose replaced the radome of the C and E and incorporated several cameras oriented in various planes and angles. It was also powered by the Atar 09C. A later development for the SAAF, the R2Z was based on the R but powered by the higher thrust Atar 09K50 turbojet engine (as was installed in the Mirage F1 series), although it's almost impossible to differentiate between the 09C and 09K50 by simply looking at the exhaust.

The SAAF procured several versions of the Mirage IIIB, C, D, E and R. The individual designations had a suffix "Z" added to indicate SAAF use e.g. Mirage IIICZ. For the modeler, it is important to be aware that the SAAF versions were not always entirely the same as the French versions, specifically with respect to avionics fit and cockpit instrument panel layouts. The SAAF RZ and R2Z reconnaissance nose had a different camera and window layout to those used by the French.

[1] The term "Generation" is used to define the relative level of improvement of performance of jet powered fighter aircraft. 2ndgeneration is defined as "Supersonic (limited purpose) 1955-70".

2 The Mirage III in SAAF service

The Mirage III in SAAF service was endowed with local nicknames such as the "Miracle" or "Strykyster" (Afrikaans for clothes iron because of its wing planform). As a collective, any Mirage, with its afterburning engine, was referred to as a "Vlamgat" (Afrikaans for flaming hole) and the Mirage pilot community were referred to as Vlamgatte. This is the aircraft which set the SAAF on the path of regular supersonic operations. The Canadair CL.13 Sabre operated up to then by the SAAF could only achieve supersonic speeds in a dive.

South Africa was one of four air forces to operate the Mirage IIIC. The others were France (IIIC), Israel (IIICJ) and Argentina (ex-Israeli IIICJs). The Swiss took delivery of only one IIIC (IIICS) as an evaluation airframe. The Mirage IIICZ was acquired by the SAAF in the early 1960's.

The Mirage III had a distinguished career in the SAAF, in particular the CZ, D2Z and RZ/R2Z seeing regular combat operations throughout the so-called Bush War in southern Angola from the late 1960s to the mid 1980s. Although the Mirage IIICZ was intended for use by the SAAF in the interceptor / air superiority role, it saw most of its SAAF combat action in the Close Air Support (CAS) / ground attack role with some notable actions. Details of these can be found in the other publications dedicated to the SAAF (as listed under the References section of this document). After the final conventional battles of the Bush War in 1987/1988 and the withdrawal of South Africa from South West Africa (SWA)/Namibia, the Mirage IIICZ was relegated to training SAAF pilots in Air Combat Maneuvers (ACM) at the SAAF ACM camps held at various air bases across South Africa. The IIICZs acted in the role of "adversary" aircraft against Mirage F1s and Cheetah Es.

The SAAF Mirage III never did receive the same accolades as were attributed to the later Mirage F1AZ and F1CZ. This may be understandable based on the later F1 being more capable, more powerful and able to carry a heavier combat load over a longer distance thereby ensuring its relevance in the complex air combat environment the SAAF found itself in in the late 1980s. F1CZ air to air combat kills against Angolan Mig-21s added to the allure of the Mirage F1.

During its ten year combat career in the Bush War spanning 1978 to 1988 only one Mirage IIICZ was damaged due to enemy fire. A single R2Z was shot down by AAA. Various numbers of CZs, D2Zs and RZ/R2Zs would be temporarily located at AFB Ondangwa and AFB Rundu in SWA from their home bases in South Africa, depending on the size and duration of the particular ground operation for which they were required to provide air support.

Oddly enough, the more capable Mirage IIIEZ saw very limited action in the Border War. The EZs were mostly relegated to the combat training role with 85 Combat Flying School at AFB Pietersberg. This coincided with the acquisition of the Mirage F1 by the SAAF.

3 SAAF Mirage III - airframe numbers, disposal and current status

3.1 Mirage IIICZ

Aircraft No. (#)		Construction number	Comments
800	Red "A"	c/n 149	At one time the last flying IIIC in the world (now grounded), last registered as ZU-DME "Black Widow"
801	Red "B"	c/n 150	-
802	Red "L"	c/n 151	Crashed (wake turbulence) at sea 14 Feb 1990, Langebaan (Capt. Mark Edwards ejected successfully)[2]
803	Red "S"	c/n 153	Sold for scrap in 1996
804	Red "D"	c/n 157	Static display (gate guard) AFB Makhado
805	Red "E"	c/n 158	Static display SAAF Museum AFB Swartkop
806	Red "F"	c/n 161	Sold for scrap in 1996
807	Red "G"	c/n 163	Static display at Sir Pierre van Ryneveld High School, Kempton Park
808	Red "H"	c/n 164	Static display at Lowveld Aero Club, Nelspruit
809	Red "J"	c/n 168	Stored at AFB Swartkop
810	Red "K"	c/n 171	Crashed (engine flame-out) 12-Apr-1983, Hoedspruit. The pilot ejected safely.[3]
811	Red "M"	c/n 172	Engine exhaust damaged by SAM-7 but aircraft landed safely at AFB Ondangwa during operations over Ongiva, 27 August 1981 (Capt. Rynier Keet). [4]Sold for scrap in 1996.
812	Red "N"	c/n 175	-
813	Red "P"	c/n 178	On static display at the SA National Military History Museum, Johannesburg.
814	Red "O"	c/n 181	Sold for scrap in 1996
815	Red "C"	c/n 189	Sold for scrap in 1996

The reference to red single letter code as was applied to the Mirage IIICZ in their original natural metal delivery scheme. These codes were dispensed with upon receipt of camouflage. Note that the code "I" was not used. From notes courtesy of P. van Schalkwyk :

"*I and O were often not allocated to aircraft, due to the close relation with an I (one) and 0 (zero). "I" was not used on the Mirages."*

The SAAF took delivery of CZ 800 & 801 in France for purposes of the initial pilots' conversion course. They were respectively identified as "A" and "B". CZ serial number 802 and 803 were the first CZs delivered from Dassault direct to South Africa. For the following two aircraft, an informal decision was made to allocate the abovementioned two aircraft to two specific pilots who were then invited to select their own unique letters based on whatever took their fancy, hence the out of sequence letter coding in the list above. SAAF bureaucracy quickly put a halt to this and some semblance of order was reinstated."[5]

[2] Ref. Vernon Vice (SAAF Forum, saairforce.co.za)
[3] Ref. Vernon Vice (SAAF Forum, saairforce.co.za)
[4] Ref. Brent Best (SAAF Forum, saairforce.co.za)
[5] Ref. John Boardman via Brent Best (SAAF Forum, saairforce.co.za)

3.2 Mirage IIIBZ

816	White "R"	c/n 228	Delivered to the SAAF museum Swartkop in 1990. On static display.
817	White "T"	c/n 229	Given civil registration of ZU-DMD – theoretically airworthy although grounded.
818	White "U"	c/n 230	Delivered to the SAAF museum Swartkop 1990. On static display.

The reference to white single letter code as was applied to the Mirage IIIBZ in their original natural metal delivery scheme, the white letter code being applied to a large red panel on the vertical stabilizer [6]:

- The codes were applied to 816 (R) and 817 (T). Before the code "U" could be applied to 818, the tail fin was damaged. The fin was then replaced with that of 816, with the code (R) applied to it. The rudder with the correct 818 marking was however retained. 816 later received a new fin, with only the red paint applied to it and no code letter applied to it. The code "U" was thus allocated, but did not seem to have been applied to 818. Photographs do exist of both 816 and 818 with the exchanged fins fitted to both aircraft.

3.3 Mirage IIIEZ

Some of the EZ's carried the CZ type of red code letter on the vertical stabilizer and also a black letter & number combination of the fuselage e.g. "EZ2"

The surviving EZs were all converted to Cheetah Es. It appears that the wings may have been sold to other Mirage III operators as they were no longer required by the SAAF. The Cheetah E was fitted with Kfir wings. Thus, unfortunately, no Mirage IIIEZ examples were retained as museum exhibits in South Africa.

819	Red "V" / Black "EZ1"	c/n 435	Ex French AF 13-PH; converted to Cheetah E.
820	Black "EZ2"	c/n 437	Ex French AF 13-PJ, converted to Cheetah E.
821	Red "X" / Black "EZ3"	c/n 441	Crashed 15th March 1969. A replacement for this airframe was ordered from Dassault (842).
822	-	c/n 442	Converted to Cheetah E.
823	Red "Z"	c/n 444	Ex French AF 13-QI, converted to Cheetah E.
824	Black "EZ6"	c/n 446	Converted to Cheetah E and written off 17th June 1991 near Louis Trichardt.
825	-	c/n 448	Converted to Cheetah E.
826	Black "EZ8"	c/n 450	Ex French AF 13-??, converted to Cheetah E. Delivered to SciBono College, Newtown 2004 as Cheetah E.
827	-	c/n 409	Converted to Cheetah E.
828	-	c/n 411	Converted to Cheetah E.
829	-	c/n 459	Converted to Cheetah E.
830	-	c/n 413	Converted to Cheetah E. Written off 20th October 1990 on takeoff from Louis Trichardt due to engine failure.
831	-	c/n 465	Converted to Cheetah E.
832	-	c/n 416	Ex French AF 2-ET, converted to Cheetah E.
833	-	c/n 464	Converted to Cheetah E.
834	-	c/n 420	Converted to Cheetah E.
842	-	-	Replacement aircraft for #821. Converted to Cheetah E, delivered to SAAF museum April 2000 as static

[6] Ref. Piet van Schalkwyk (SAAF Forum, saairforce.co.za)

			exhibit

3.4 Mirage IIIDZ

839	-	-	Converted to Cheetah D
840	-	-	Converted to Cheetah D
841	-	-	Converted to Cheetah D

3.5 Mirage IIID2Z

843	-	-	Converted to Cheetah D
844	-	-	Converted to Cheetah D
845	-	-	Converted to Cheetah D
846	-	-	Converted to Cheetah D
847	-	-	Converted to Cheetah D
848	-	-	Written off 22 May 1985
849	-	-	Converted to Cheetah D
850	-	-	Written off 6 November 1981, near Pietersburg.
851	-	-	Written off 5 April 1979, near Pietersburg
852	-	-	Converted to Cheetah D
853	-	-	Converted to Cheetah D

3.6 Mirage IIIRZ

835		c/n 1F1A	Delivered June 1967, retired as static exhibit at SAAF museum Swartkop.
836		c/n 2F2A	Delivered June 1967, used to repair Mirage IIID2Z 844.
837		c/n 3F3A	Delivered June 1967, retired as static exhibit at the Military Museum in Bloemfontein.
838		c/n 4F4A	Delivered June 1967, retired as static exhibit at the SAAF museum Swartkop.

3.7 Mirage IIIR2Z

854	-	-	Written off 27 October 1977, Kimberley.
855	-	-	Converted to Cheetah R and used to evaluate the Advance Combat Wing (ACW).
856	-	-	Written off 6 June 1979 in Angola. Combat loss (AAA). Capt. Otto Schur survived ejection.
857	-	-	Currently with SAAF Museum, Ysterplaat as static exhibit.

4 SAAF Mirage III in combat

From 1967 to 1988, the South African Defence Force (SADF) was involved in a protracted conflict in northern South West Africa and southern Angola against the South West Africa Peoples' Organization (SWAPO) and its armed wing, Peoples' Liberation Army of Namibia (PLAN). This counter insurgency later escalated into a more conventional conflict against Angolan armed forces supported by Cuban combatants who were providing protection to PLAN cadres in the southern regions of Angola. This conflict has variably been referred to as the Bush War or the Border War. The conflict gradually escalated from a low intensity guerilla insurgency in the 1960s waged in northern South West Africa to full-scale conventional armor battles in southern Angola in the late 1980s between South African / UNITA forces and the opposing Angolan / Cuban forces. It is not the intent of this narrative to cover the history of this conflict but it is important to have some basic knowledge of events to place the Mirage III operations into context. For several excellent historical accounts of the Bush War, please refer to the reference section at the end of this document.

The SADF established a number of military bases and airfields in the north of SWA and the Caprivi Strip. These were created to support cross-border SADF and SAAF operations against PLAN guerillas in Southern Angola and Zambia. The major SAAF airfields located in the far north of SWA were at Ondangwa and Rundu, both located close to the Angolan border, and Grootfontein 200 kilometers further south. Mirage operations were conducted from all three of these airfields throughout the Border War. However, Ondangwa would be the prime air base from which the Mirage IIIs would operate when mobilized for operations.

Two Mirage IIICZs at Ondangwa Air Base. Note the black radome on the aircraft in the foreground and the camouflaged nose of the aircraft under the shelter, likely indicating that the latter CZ has a "ballast" nose fitted. The aircraft in the foreground is fitted with air to air IR missiles (likely AIM-9B Sidewinders) on the outboard wing pylons and what look to be 110G wing tanks which were equipped with shackles for two bombs which could be carried in tandem beneath the tank.

Once the intensity and regularity of operations into Angola escalated, the SADF also established numerous forward operating airfields in SADF controlled areas of Southern Angola to act as logistics bases to further support ongoing ground operations against PLAN (one example is the airstrip at Ongiva) but these were not used by fast jets due to the nature of the runways (most often dirt strips).

Before the arrival of the Mirage F1AZ and CZ in the combat theatre, the Mirage IIICZ and D2Z bore the brunt of fast jet ground attack operations along with the Buccaneer and Canberra. The first such operation took place in the attack on a large PLAN base located near the town of Cassinga in Southern Angola. This attack took place in 1978 and was 2 Squadron's first combat operation since the Korean War. During this operation, the Mirage IIICZ and Buccaneers were instrumental in attacking and halting an advancing convoy of Angolan tanks and armoured vehicles using canon fire and unguided aerial rockets.

The IIICZ's Achilles heel was its short range as it was designed by the French as a relatively lightweight point defense interceptor designed to carry a simple load of three air-to-air missiles. After Operation Savannah (1975) when the SADF made an advance on Luanda and later subsequently withdrew under international pressure, the early days of the bush war saw most operations launched from the SADF military bases into the "shallow area" of Southern Angola against SWAPO/PLAN targets. Therefore, due to its range limitations, the Mirage IIICZ had to be forward based as close to the border as possible – Ondangwa was the answer. The initial purpose of the SAAF basing Mirage IIICZs at Ondangwa was to provide Combat Air Patrol (CAP) sorties for the protection of the SADF military bases from the Angolan Air Force as well as to provide top cover for ground attack operations and SAAF support missions being flown by other SAAF assets such as the Impala Mk. II and Alouette III and Puma helicopters.

The Mirage IIIs conducted a respectable number of successful combat sorties in the Close Air Support (CAS) / ground attack role. The SAAF also used the Mirage IIID2Z and the RZ/R2Z for combat operations (ground attack and reconnaissance respectively). When, later in the war, SADF operations were being conducted further north into Angola, the use of Mirage F1s become more prolific due to their longer range for both ground attack and air superiority sorties as well as their ability to carry a heavier combat load. It was at this stage that the Mirage IIIs became less of a factor in the border war although they were involved right to the end in providing support for the final conventional battles (Operations Modular, Packer and Hooper – 1987/8).

The Mirage IIIs were not permanently located in the border area. Typically several aircraft would be flown up from their home bases in South Africa (Waterkloof and Hoedspruit) to provide support as required by ongoing ground operations.

For the Combat Air Patrol (CAP) / air superiority role, the Mirage IIICZ would usually be equipped with a centerline supersonic fuel tank and two wing mounted AIM-9B Sidewinders or Kentron V3B infrared guided missiles. The IIICZ did not use the larger radar guided Matra R530 on combat operations. Although the IIICZ was scrambled on several occasions against Angolan MiG-21s they never succeeded in successfully engaging in air-to-air combat.

For the CAS / ground attack role, Mirage IIICZs were typically fitted with conventional 250lb or 500lb general purpose (GP) bombs mounted below the wing external fuel tanks. Combined JL-100 rocket pod / fuel tanks were also used but to a lesser degree as was the case when Mirage IIICZs engaged an armored column during the Cassinga attack. The two internally mounted twin 30mm canon also proved useful.

For a reconnaissance mission, the RZ / R2Z would typically be fitted with a combination of fuselage and wing fuel tanks and, in some cases, two AIM-9B or V3B IR missiles for self-defense.

For ground attack missions the D2Z would typically be equipped with JL-100 combined rocket pod / fuel tanks.

In summary the Mirage IIICZs were deployed to the Border as follows :

- Cassinga 1978
- Operation Rekstok – March 1979
- Operation Protea – August 1981
- 1986, 1987 and 1988.

Unidentified CZ with radar nose and a clear demarcation of camouflage between the upper buff and lower blue/grey on the nose cone.

5 SAAF Mirage III colours and markings – an overview

There needs to be a disclaimer before we continue – the colour schemes discussed in this document are to be considered to be a general rule. However, there were many variations to the basic colour schemes as well as spurious schemes, non-standard locations of national insignia, variable colour replacement parts (such as exhaust shrouds / radomes) and squadron badges etc. It is best to check reference pictures.

The following is a general guideline to Mirage III colours and markings in SAAF service. Each variant is dealt with in more detail later in the various sections of this document.

The SAAF Springbok insignia ("Castles") were applied as follows :

- Wings, upper and lower, 30 inch[7] diameter – the Springbok faces towards the fuselage with legs towards the wing trailing edge.
- Fuselage, 24 inch diameter – the springbok faces forward.
- There is always an exception to the rule - there is a photo of a Mirage IIICZ (813 in natural metal) with the right hand intake Springbok facing rearwards which is an error (or a practical joke…).
- Aircraft serial numbers, titling, squadron badges, SAAF castles etc. were applied symmetrically on both sides of the airframe. The standard three-digit aircraft "tail number" applied to the rear fuselage was 8" high.
- The Springbok was a gold colour (and not orange as some model / decal manufacturers would have one believe !)
- The three colour orange/white/blue rudder flash was applied with orange at the leading edge, irrespective of which side of the rudder.

Throughout the Mirage III's service with the SAAF, the locations of the SAAF Castles, squadron insignia as well as data stenciling could vary from one aircraft to another. For the modeler or researcher, it is therefore important to obtain photographic records of the particular aircraft in question.

No SAAF Mirage III variants received the revised Castle and Winged Eagle national insignia which appeared on the Mirage F1AZs from 1993, with two notable exceptions :

- CZ #800 received the Winged Eagle inside the Castle which coincided with the last incarnation of the black / gold "Black Widow" colour scheme as shown elsewhere in this document.
- BZ #817 in a non-standard buff/green camouflage scheme, which had the Winged Eagle inside the Castle on the intakes.

The Mirage IIIBZ, CZ and EZs were delivered to South Africa in natural metal and were later camouflaged in South Africa. This later buff/green camouflage has variably been referred to as deep buff/olive drab or mid-buff/olive green in various reference works and internet discussion forums. The undersides were painted in "Light Admiralty Grey" which, in reality, was more a pale blue-grey. The official designations were :

- Deep buff – BSC360[8]

[7] This dimension is the diameter of a circle drawn around the five outer points of the Castle
[8] BSC – British Standard Colour

- Olive drab – BSC298
- Light Admiralty Grey – BSC697

This would apply to all SAAF Mirage III variants thus camouflaged in buff/green with the exception of the R2Z and D2Zs, which were painted in the buff/green camouflage in France before delivery. The paints used by the French varied inasmuch as the buff appeared to be more orange and the underside colour with a more pale blue hue than a "light admiralty grey".

The RZs were delivered in the standard NATO grey/green upper surface camouflage with painted silver lower surfaces as applied by Dassault in France prior to delivery.

As a general rule, the external fuel tanks (500, 800 and 1,300 liter) used on the SAAF Mirage IIIs were not painted and were retained in their natural metal state. Some had an external protective coating or sealant applied which resulted in a faded patchy yellow-orange appearance as it wore off. However, as always, there are some variations as shown elsewhere in this document. For example, an RZ painted in the low visibility blue camouflage with one of its 1,300 liter tanks painted in a similar low visibility blue/grey.

Other general colour details :

- The detachable drag chute cover was retained throughout Mirage III service in natural metal with a metallic blue leading edge.
- Main undercarriage bays were a mix of what appears to be a yellow-chrome primer (main wheel area) and primer green (gear leg area) (BZ/CZ/DZ/EZ/RZ) or overall silver (D2Z/R2Z).
- Nose gear bay was either yellow-chrome primer (BZ/CZ/DZ/EZ/RZ) or overall silver (D2Z/R2Z).
- Nose and main gear door interiors were generally painted silver, although photos of some early CZs show the main gear door interiors to be yellow-chrome primer.
- For the Atar 09B as installed in the BZ and CZ, the exhaust nozzle interior was medium green (assumed by the author to be some form of heat resistant coating). Exterior surfaces were various hues of heat affected bare metal.
- Cockpit interiors were black for all variants. This included the ejection seat.
- Dielectric and conformal antennae panels – Light grey or white with black/dark grey leading edge trim (on the vertical stabilizers).
- Inside of intakes of buff/green aircraft – Silver. However the external camouflage colours were wrapped around into the inside leading edges of the intakes, the leading edges of splitter plates and the front end of the shock cones. The same applied for the grey / green RZs.
- The upper surface camouflage wrapped around the leading edge of the wing to the first panel line on the underside of the wings.
- There were several versions of the buff/green camouflage scheme – these are dealt with in detail further on in this document.

Once again, it is important to note that there may have been subtle variations to the above, so referencing photographs will be important for the modeler.

6 Yellow primer ventral panels

Some Mirage IIIBZs and CZs had the ventral gun tray and the rear ventral panel painted in a yellow primer. The purpose for this is unknown but it could be that these were primed (unpainted) replacement parts. Photographic evidence is scarce so these yellow primed panels may have been fitted to the Mirage IIICZs in any of the three standard colour schemes.

7 Nose cones – radar versus ballast

In the various parts of this document, images of CZs and EZs will be presented showing varying painting styles of the noses of the aircraft. The CZs and EZs were not fitted with the radar at all times. For maintenance of the radar, the entire nose section could be removed as a complete unit including the nose cone and the radome. A replacement nose sans the radar would then be installed. This included ballast to make up for the lack of the radar and to maintain the center of gravity within acceptable parameters.

7.1 Radar nose

The radar nose forward section consisted of a black radome. This could in reality vary from a faded black to almost dark grey. There was a characteristic gloss black backing ring at the rear of the radome which can clearly be seen in the images which follow. Furthermore :

- In the case of the CZ, with the radar installed, "*Cyrano CSF*" was variably applied in black script on the nose cone.
- In the case of the EZ, with the radar installed, "*Cyrano II CSF*" was variably applied in black script on the nose cone

As always, based on the variable application of this text, it's best to verify through photo references.

With the radar nose installed, the nose cone behind the radome could seen variably as follows :

- Unpainted natural metal.
- Painted entirely in buff. The buff could be a different hue to that on the balance of the airframe as shown in images in this document.
- Painted in buff upper surface with light grey (pale blue) lower surface, with a hard edge separating the two colours and as a continuation of the rest of the aircraft.

The natural metal nose cone section aft of the black radome can be explained in that not all nose cones may have been camouflaged during the transition from natural metal to buff/green camouflage or were replacement parts. Hence the presence of natural metal nose cones on camouflaged aircraft.

Unpainted natural metal CZ with radar installed as indicated by the black radome with unpainted natural metal nose cone. Note "*Cyrano CSF*" on the nose cone.
Of interest is the early location of the ejection seat warning triangle on the intake. This was later moved to just beneath the cockpit ahead of the intake.

This CZ in hard edge buff/green camouflage has an unpainted natural metal nose cone installed. The text "*Cyrano CSF*" on the nose cone indicates that the radar nose is fitted. Note the revised location of the ejection seat warning triangle when compared to the previous image.

CZ in hard edge buff/green camouflage fitted with radar. In this case, the nose cone has been painted entirely in buff, which is a darker hue than the rest of the airframe. The text "*Cyrano CSF*" does not appear on the nose cone. Note the extension of the black onto the forward part of the pitot probe. The aircraft in the background is an R2Z

Two CZs in the later soft edge buff/green camouflage waiting to take off. Both aircraft are fitted with radar noses. The front CZ has the entire nose cone painted in buff whilst the second CZ has the camouflage running through the nose cone (buff upper, light grey lower)

7.2 Ballast nose

In the case of the ballast nose being fitted, the following could be seen :

- Natural metal colour scheme – the entire nose including the radome and nose cone would be unpainted natural metal.
- Buff/green camouflage scheme – the entire nose would be painted in buff upper surface with light grey (pale blue) lower surfaces, with hard edge separating the two colours as a continuation from the forward fuselage. This appeared to be more common on aircraft painted in the later soft edge matt buff/green camouflage. But as always, there are exceptions – check your references.

CZ #802 in natural metal colour scheme with unpainted nose cone, indicating that a "ballast" nose has been installed to replace the radar nose.

An anonymous looking CZ with a painted ballast nose cone. Note that the upper / lower camouflage demarcation is followed through to the tip of the nose. The rear portion of the pitot probe is also painted in buff.

8 Mirage IIICZ - colours and camouflage

16 Mirage IIICZs were delivered to the SAAF. These received tail numbers 800 to 815. These aircraft were operated by 2 Squadron, known as the "Flying Cheetahs".

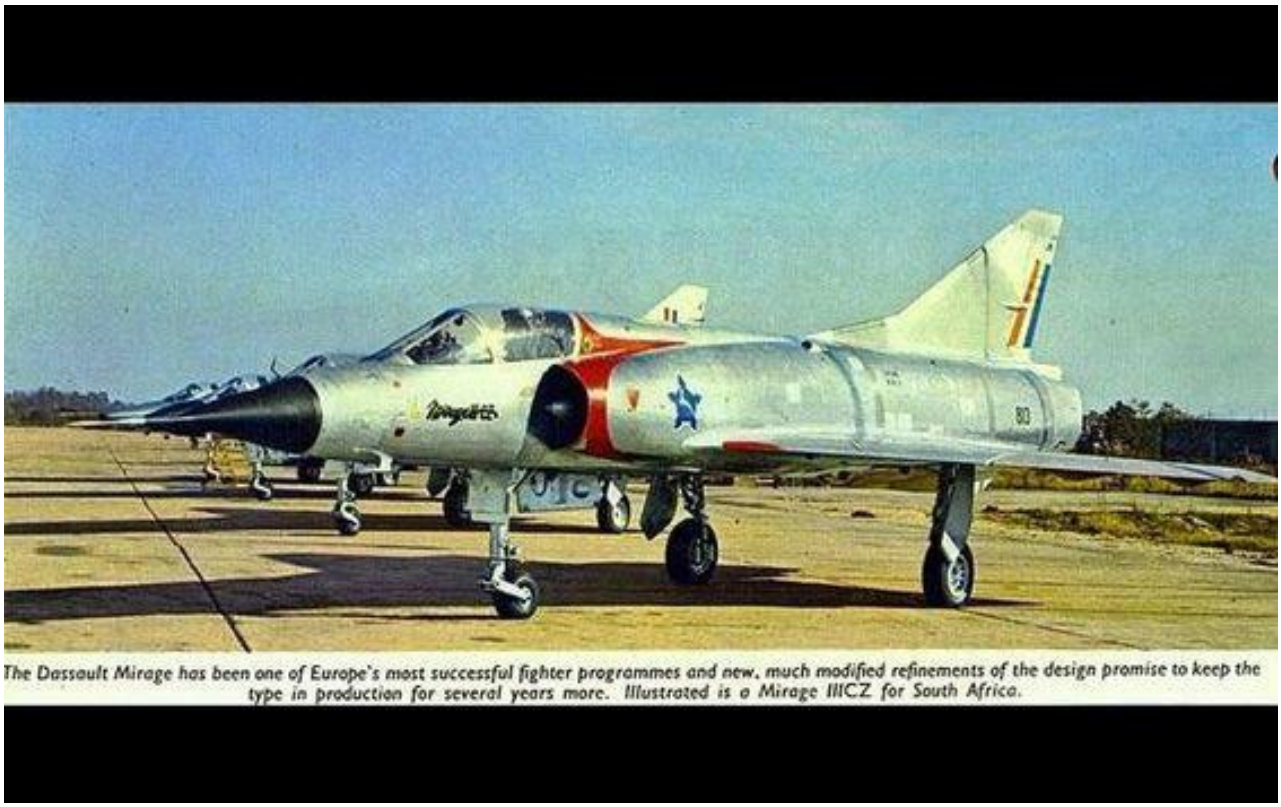
8.1 Early unpainted natural metal

Mirage IIICZs were initially delivered in an unpainted natural metal state. This presented itself in a rather patchy finish showing wear and scuff marks. Various panels exhibited different metallic hues. The two main fuselage wing attachment frames were a much darker colour representing a different grade of metal.

The following markings were applied :

- Red trim on the intake leading edge and to the rear of the canopy.
- A thin red demarcation line was painted on the upper wing just ahead of the control surface (elevon) hinge line and ran from the wingtip to the fuselage. This then ran forward along the wing / fuselage junction and formed a small triangular section at the wing root leading edge, the latter overlapping slightly onto the lower surface.
- The upper and lower wing airbrakes were painted red with yellow edging.
- The standard Castle and Springbok national insignia were located in six places (upper and lower wings, 30", and fuselage, 24"). The fuselage insignia were located on the intakes in line with the junction of the wing leading edge to the fuselage.
- Orange, white and blue stripes (front to back) covered the entire rudder. A photo of #800 shows a different arrangement of a smaller vertical three colour flash applied to the upper portion of the vertical stabilizer ahead of the rudder. #800 also had a 2 Squadron "Flying Cheetahs" badge applied to the vertical stabilizer ahead of the rudder actuator (see image below).
- "*Mirage IIICZ*" was proudly scripted in black on the forward fuselage either side of the cockpit beneath the windscreen.
- "AVIONS M'DASSAULT" was applied in black text over the rudder flash on the top half of the rudder.
- The complete 3-digit individual aircraft serial number was added in 8" black numerals on the rear fuselage aft of the wing trailing edge.
- "SNECMA ATAR 9" was applied in black text on fuselage just aft of the forward main fuselage structure frame.
- The various avionics antennae on the vertical stabilizer leading edge and fin tip were painted in a very pale gray or white with black or dark grey leading edges.
- A distinct white panel is visible below the rudder.
- Ejection seat warning triangles were located on the intakes.

It is likely that only the first few Mirage IIICZs were delivered in this initial natural metal scheme.



The Dassault Mirage has been one of Europe's most successful fighter programmes and new, much modified refinements of the design promise to keep the type in production for several years more. Illustrated is a Mirage IIICZ for South Africa.

CZ #803 in typical early natural metal colour scheme as described on the previous page.
Note "SNECMA ATAR 9" barely visible on the upper rear fuselage in both photos above and below.
There is no 2 Squadron badge on the vertical stabilizer. Note the different locations of the orange/white/blue flash on the two aircraft.
There is no 2 Squadron "Flying Cheetahs" badge on the vertical stabilizer.

CZ #800 in early basic delivery natural metal delivery scheme. Note that the fin flash is located on the vertical stabilizer and not the rudder.
The 2 Squadron badge ("Flying Cheetahs") has been applied to the vertical stabilizer.

The primer yellow colour of the interior of the main gear doors and the silver interior of the nose gear door are clearly visible. Typically both main and nose undercarriage doors would close after the undercarriage had been locked in place. However, these could be manually opened by the ground crew as appears to be the case for #800 in the image above.

8.2 Later unpainted natural metal

Most of the CZs were delivered in a more elaborate scheme as follows (those CZs delivered in the initial scheme were later updated to this scheme) :

- Red stylized lightning bolt added along each side of the fuselage.
- The "SNECMA ATAR 9" text was either not applied or removed from the rear fuselage.
- A large single unique identification letter was added in red to the lower forward area of the vertical stabilizer.
- The orange/white/blue fin flash was applied to the entire rudder.
- In some instances, "MIRAGE IIICZ / Nº. 8xx" was added in black text over the rudder flash below the text "AVIONS M'DASSAULT", the "8xx" being a placeholder for the actual aircraft serial number allocated e.g. "802". Best to verify via photo references.
- The 3-digit aircraft serial number remained in 8" black numerals on the rear fuselage.
- The last two digits of the 3-digit serial number were now repeated with small black numerals on the upper section of the nose landing gear front cover.
- The 2 Squadron "Flying Cheetahs" badge was located on the upper part of the vertical stabilizer.
- Ejection seat warning triangles were located either on the intakes or relocated to just beneath the canopy ahead of the intakes..
- All other details were as per the initial delivery scheme noted above.

CZ #805 in updated natural metal colour scheme – the red fuselage flash, 2 Squadron badge and large red aircraft code have now been added. Note the colours of the air brake (red with yellow edging).

Thirteen SAAF Mirage IIIs in the early natural metal unpainted scheme. There appears to be a mix of CZ and EZs (CZs have the prominent fillet added to the leading edge of the vertical stabilizer – the closest aircraft is a CZ). The CZs also display the round 2 Squadron badge on the vertical stabilizer, thus indicating that at least six of the aircraft are CZs.
The first four CZs can be identified by their red Alpha-codes on the vertical stabilizers as follows (from right to left) : #'s 814 (O), 805 (E), 802 (L) and 807 (G).

Five CZs showing consistency in application of the final definitive natural metal markings for the Mirage IIICZ fleet.
These are #'s 807 (G), 803 (S), 800 (A), 802 (L) and 810 (K) based on other images available from the same photo-shoot.
#800 and #803 appear in images earlier in this document showing the original delivery scheme without the red fuselage flash.

Unpainted natural metal CZ #809 with full markings and unpainted ballast nose cone.
Note the characteristically dark hue to the two fuselage / wing structural frames.

CZ #813 showing the location of the aircraft tail number, red lightning bolt and wing Castle. The airbrake is in standard red with yellow border. Note also the lighter colours of the various access panels on the upper wing surface.

CZ #806 with a radar nose with nose cone painted in the later gloss buff upper/grey lower colours.
Note how faded the black leading edges to the various antennae panels on the vertical stabilizer are.

CZ #815 with a yellow circle with black 61 just aft of the fuselage national insignia.
This was a temporary marking applied for an air race. The fuel tanks are the 1,300 liter RP62 subsonic type.

CZ #813 with the starboard fuselage springbok facing backwards !! Note the reduced text (two lines only) on the rudder compared to #806 and #815 in the images above.

CZ #801 demonstrating the final definitive markings as applied to the unpainted natural metal CZ fleet. In this case, the ejection seat warning triangles have been relocated to beneath the cockpit ahead of the intakes.

Three CZs : #'s 810 (K), 811 (M), and 812 (N) demonstrating the final natural metal markings.
Note the clamshell engine exhaust arrangement, which was characteristic of the Atar 09B engine fitted to the BZ and CZ.
Another distinctive feature of the BZ and CZ is the extended fillet to the lower leading edge of the vertical stabilizer. This fillet was not present on the D, D2Z, E, RZ and R2Z.

Not much to say about this one…..CZ #814 with red ballast nose.

A magnificent image of a flight of CZs showing the complete set of markings over unpainted natural metal. The ejection seat warning triangles are still present on the engine intakes.

A large portion of the SAAF's CZ fleet in one photo ! From right to left :
#812 (N), 811 (M), 806 (F), 805 (E), 803 (S), 802 (L), unidentified, 810 (K) and 813 (P).

CZ #800 (A). Different metallic hues on various panels are apparent. Note the protective cone over the air data sensor on the forward fuselage.

8.3 Early buff / green camouflage

In 1971, the SAAF commenced trials to identify a new camouflage scheme to replace the natural metal finish on the Mirage IIICZs. Three aircraft (803, 809 & 813) are recorded as having had trial camouflage schemes applied.[9] The final scheme selected consisted of a hard edge upper surface (wings, fuselage and vertical stabilizer) disruptive camouflage scheme of deep buff BSC360 and olive drab BSC298. The undersides were in light admiralty grey BSC697 (which was actually closer to a very pale blue-grey). For the purposes of this document, these colours will be referred to as buff, green and blue respectively.

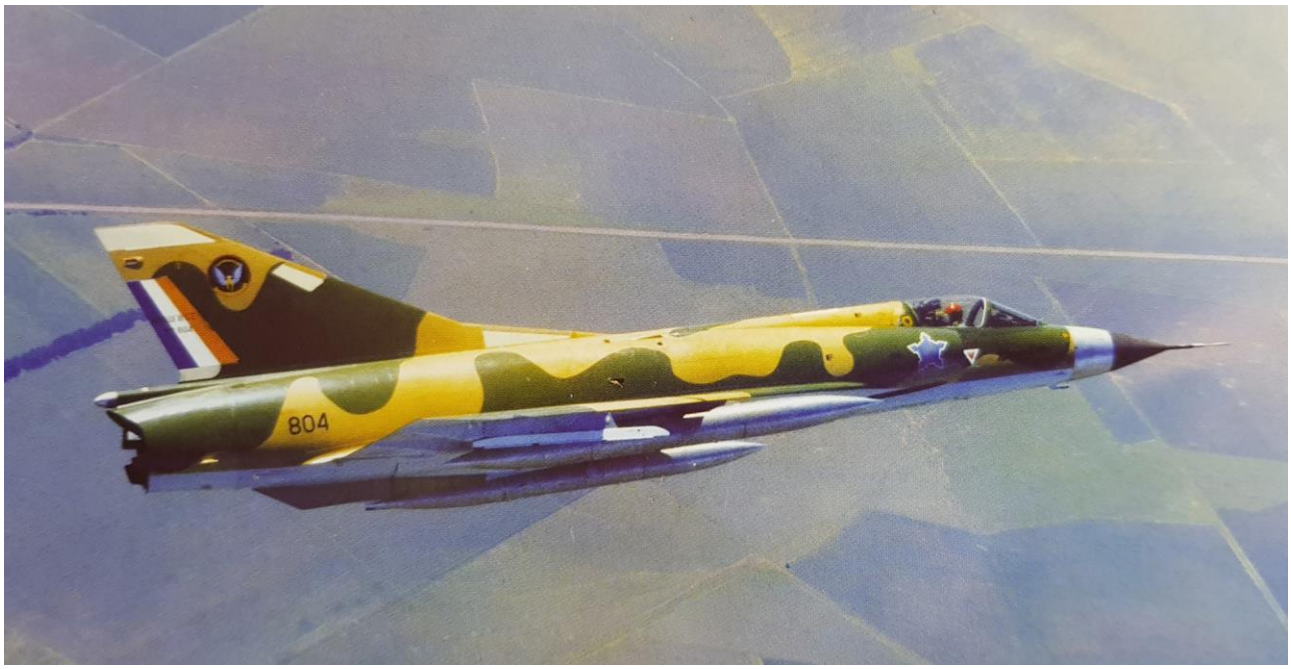
The separation between upper and lower surface colours was a straight hard edge from nose to tail running through the wing leading and trailing edges. The upper surface camouflage wrapped around the wing leading edge up to the first panel line on the lower wing surface. Camouflage colours were wrapped around into the intakes.

The finish was gloss and generally showed very little weathering. By 1974, the entire fleet of CZs had been painted in this scheme.

Markings and colour details are as follows :

- SAAF Castles located in 6 positions - upper and lower wings (30"). The fuselage castles (24") were moved forward to just aft of the engine intake leading edge. However, as always, there were variations to this – there are photographs of some CZs in this camouflage with the fuselage Castles located further back in line with the wing leading edge / fuselage join.
- The 2 Squadron badge remained on the top half of the vertical stabilizer.
- The South African national colours of orange, white and blue remained prominently displayed on the rudder with the text "MIRAGE IIICZ / N°. 8xx" superimposed in black. The text "AVIONS M' DASSAULT" was no longer applied above this text.
- The 3-digit aircraft serial number remained in 8" black numerals on the rear fuselage. The last two digits of the 3-digit serial number were repeated in small black numerals on the lower part of the nose landing gear front cover.
- Black "*Mirage IIICZ*" script was retained on the forward fuselage either side of the cockpit.
- The radome (when radar nose installed) remained in semi-gloss black (or very dark grey) with the thin gloss black ring at the rear end.
- The upper and lower wing airbrakes retained their red colour with yellow edging. All other red wing and fuselage trim and demarcation lines were removed.
- The various avionics antennae on the vertical stabilizer leading edge and fin tip remained in the original pale gray or white with black / dark grey leading edges. The dorsal dielectric panel just aft of the canopy was painted in white / light grey.

[9] Ref. Brent Best (SAAF Forum, saairforce.co.za)

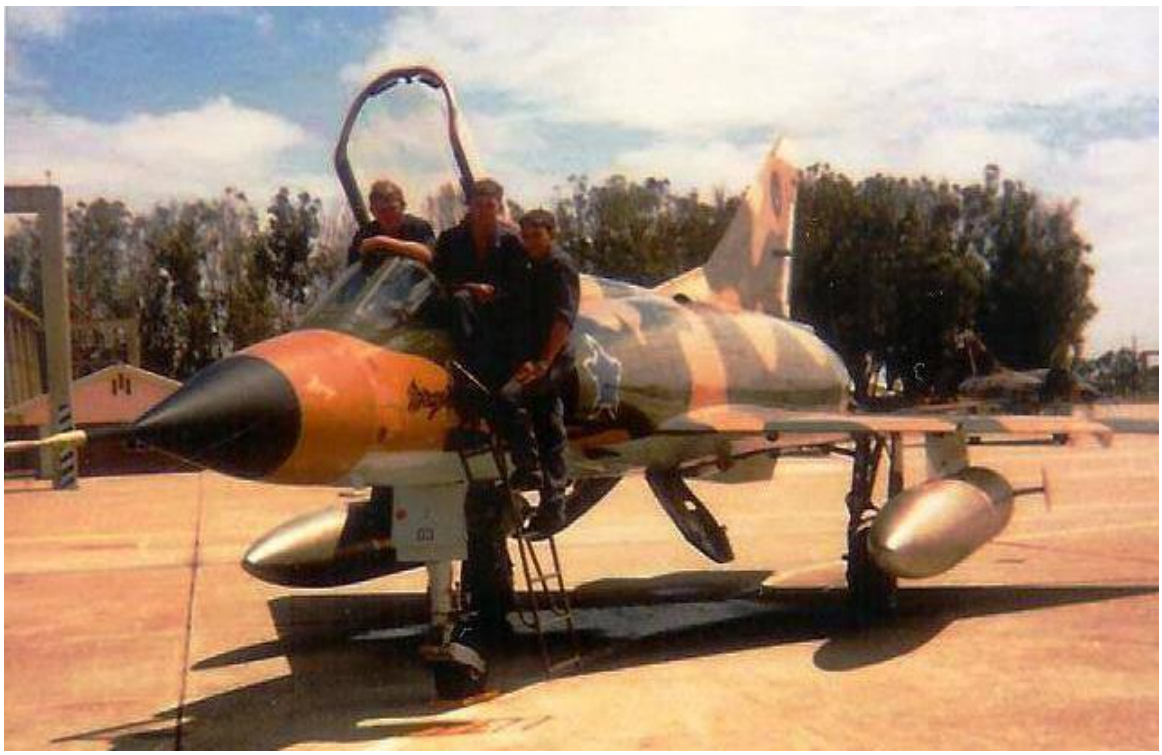


CZ #804 in gloss hard edge buff/green camouflage with full markings. The radar is installed with an unpainted natural metal nose cone. #804 has RP18R fuel tanks on the inboard wing hard points and missile launch rails on the outboard wing pylons.

In this image Dassault Mirage IIICZ number 809 of 2 Squadron SAAF can be seen landing after the four-aircraft display on 5 October.

CZ #809 in gloss hard edge buff/green camouflage with full markings. The radar is installed, but this time with a solid buff painted nose cone.

CZ #800 seen in 1975 in hard edge camouflage with unpainted natural metal nose cone. Note that the Castle is located slightly further back on the intake when compared to the images above and blow this one.



CZ #803 in hard edge buff/green camouflage and full buff nose cone which is clearly a different hue to the buff on the rest of the aircraft. #803 is fitted with1,300 liter RP62 wing tanks. When the outboard missile pylons are not fitted, an aerodynamic faring is installed to cover the elevon actuator.

Unidentified CZ #803 in hard edge buff/green camouflage. Note that the green camouflage flows onto the nose cone and that the light blue grey underside colours follows through onto the nose cone. Note the black ring between the dark grey radome and the buff nose cone. Other interesting details are the large ejection warning triangle beneath the canopy (with the stylized canopy in red above this), the fuselage Castle on the forward part of the intakes, the red and yellow air brake, the white conformal antennae and the stenciling aft of the canopy for the canopy emergency release mechanism.

CZ #811 in hard edge buff/green camouflage in hard edge buff/green camouflage with radar nose and full buff nose cone which is darker than the buff on the rest of the aircraft. Text on the upper air brake appears to by "BLY AF". The store on the centerline hard point is unidentified but may be a target-towing pod. Note the little yellow/black-striped door beneath the wing indicating that ground crew have manually opened the main gear doors.

A hanger full of Mirages. The CZ in the right foreground has the camouflaged radar nose cone in buff / blue with a hard edge between the two colours. The aircraft behind this is a BZ (filleted vertical stabilizer), with another CZ behind that. The aircraft at the front left is a DZ or D2Z as depicted by the chisel shaped tip to the nose. Behind this is either a CZ or an EZ with unpainted nose cone. Behind this either an RZ or R2Z as identified by the camera window on the nose.

CZ #806 in hard edge buff/green camouflage and with an unpainted natural metal nose cone. Some aircraft in this configuration retained the text "*Cyrano CSF*" in black script on the natural metal nose cone as can be seen in this image. Note how the black radome colour carries forward onto the pitot probe. The colour of the dielectric panels looks to be cream in this image but were more than likely off-white or very light grey.

A neat formation of CZs (from front to back #'s 804, 802, unidentified and 801). All four are in finished in the hard edge buff/green camouflage scheme with full markings. #801 has a buff/grey ballast nose. The other three all have radar noses with unpainted natural metal nose cones. Three of the CZs (including #804) are carrying the 500 liter supersonic RP18R fuel tanks. #802 appears to be carrying the shorter subsonic fuel tank (more in Part 3) which is different to the more common 1,300 liter RP62 fuel tanks used by the SAAF. #804 has a missile launch rail installed on the wing outboard pylon.

Possibly the same formation as in the image above, this time with a bit of a reshuffle.

Another view of the same formation as on the previous page

CZ #802 in early hard edge buff/green camouflage with full markings and painted nose cone. Note the position of the Castles on the wing and the red/yellow air brake. The drag chute cover is natural metal with a metallic blue front edge as can be seen in this image.

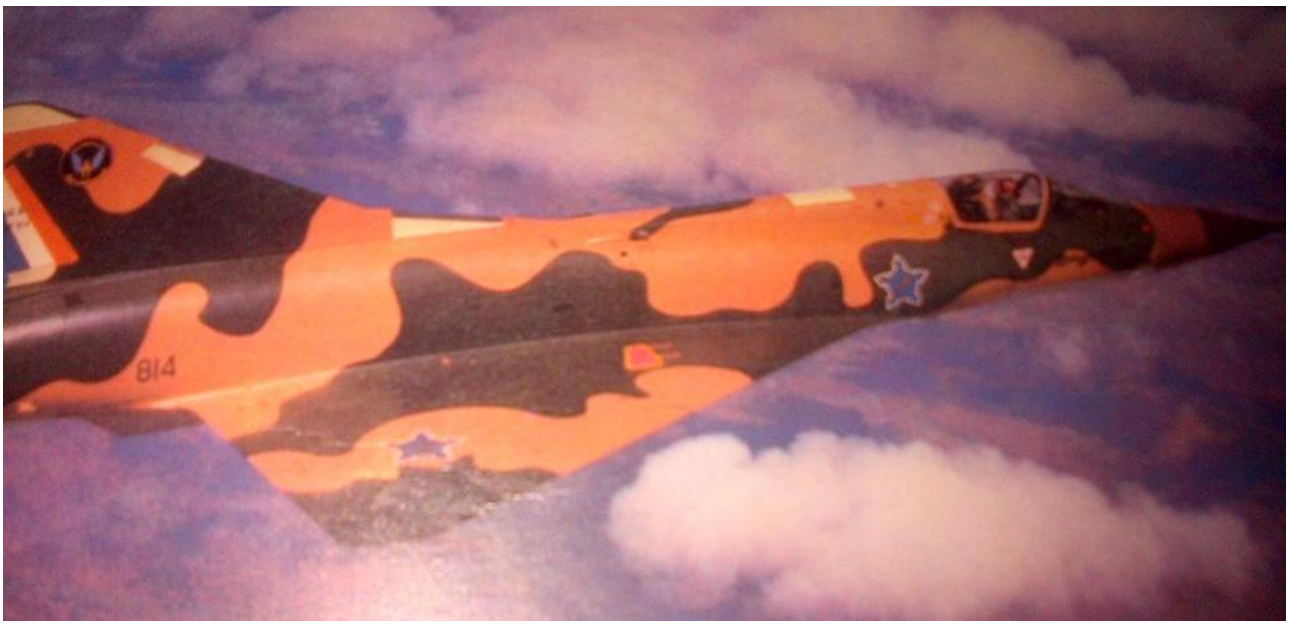
Neat line up of three CZs, possibly at Ysterplaat Air Base based on the presence of the Shackleton MR.3 in the background. Note how shiny the natural metal nose cones are – they appear to have been polished. All three CZs are in the hard-edged buff/green camouflage with what appear to be full markings. All three are carrying the 1,300 liter RP62 wing tanks.

Interesting image of CZ #800 with a 24" Castle repeated on the vertical stabilizer. The Castle on the intake is slightly further aft than seen on other images above and below this one. Note the red/yellow airbrake. "*Cyrano CSF*" appears to be missing from the natural metal nose cone. 500 liter supersonic RP18R fuel tanks are installed on the wing inboard hard points.

CZ #811 is finished in the hard edge buff/green camouflage equipped and has a ballast nose cone fitted. The off-yellow colour is likely a faded buff. Note that the underside blue runs all the way through to the tip of the nose. Note also the difference in green on the rear fuselage section around the exhaust as well as the forward part of the intake.

A very neat and clean looking CZ #810 in hard edge gloss camouflage with the nose cone painted in overall buff.

CZ #814 with "Saartjie" on the vertical stabilizer – personalized art on SAAF Mirage IIIs appears to have been a rare occurrence. #814 is in the hard-edge buff/green camouflage. However, looking closely at the rear fuselage, the section around the engine exhaust appears to be a replacement part painted in the later soft edge camouflage. Note the step in the line between upper buff and lower blue. The fuselage Castle is also located further back on the intake. The drag chute cone is natural metal with a metallic blue front section. It has clearly been used before as witnessed by the dented rear end. Note that the off-white conformal dielectric panels have all been painted over.



Another image of CZ #814 painted in hard edge buff/green camouflage. The fuselage Castle is located far back on the intakes. Of further interest is that, in this image, the canopy frame is painted entirely in buff and does not match the surrounding camouflage possibly denoting a replacement part.

Unidentified CZ finished in hard edge buff/green camouflage. The underside is a light blue/grey. Details to note are the position of the Castle on the wing underside. This is located between the inboard and outboard elevon actuator aerodynamic fairings. The wing tanks are the 500 liter RP18R type which can be used in supersonic flight but cannot be ejected in flight. The prominent air data probe is visible on the underside of the nose. Note how the upper surface camouflage wraps around the leading edge of the wings. The airbrakes are standard red edged in yellow. The large gun troughs are also visible on the underside of the intakes.

Nice line-up of six CZs and two R2Zs (the second and last aircraft are R2Zs). They all appear to be finished in the hard edge buff/green camouflage with full markings including Castles and orange/white/blue rudders. The second last aircraft (a CZ) is the only one that appears not to have the 2 Squadron badge applied to the vertical stabilizer. Note the difference in green between the first and third aircraft from the left (both CZs). The camouflage scheme is the same but the latter CZ has a much lighter tone to the green.

8.4 Revised (late) buff / green camouflage

As the Bush War gained momentum, several of the IIICZs were repainted with a soft edge upper surface (wings and fuselage) disruptive camouflage consisting of olive drab BSC298 and deep buff BSC360. The undersides remained Light Admiralty Grey BSC697 (pale blue) with a hard edge between the upper and lower colours. The camouflage was applied as a matt finish, which tended to weather a lot more than the original gloss finish.

There were two distinct permutations for the revised matt soft edge upper buff/green camouflage patterns :

a) Original camouflage pattern similar to the gloss hard edge pattern.
b) Revised camouflage pattern applied to the fuselage and the starboard wing. The port wing pattern remained as per the early gloss hard edge pattern.

These two patterns will be demonstrated in the images which follow.

Initially, the six Castles remained (30" on wings and 24" on fuselage) as did the orange/white/blue flash and associated text "MIRAGE IIICZ / Nº. 8xx" in black on the rudder as well as the 2 Squadron badge. Later, the 2 Squadron badge and rudder flash were removed but the Castles were retained. The most common configuration would appear to be all six Castles present but with the 2 Squadron badge and rudder flash removed. Over time, all markings were removed from some aircraft imparting a rather bland appearance.

Other details :

- Castles were applied variably on the wings and fuselage. When applied, the fuselage Castles were located just aft of the engine intake leading edges.
- The 3-digit aircraft serial number remained in 8" black numerals on the rear fuselage. The last two digits of the 3-digit serial number were repeated in small black numerals on the lower part of the nose landing gear front cover.
- Generally speaking, the black "*Mirage IIICZ*" script was removed from the forward fuselage on some aircraft – but check your references.
- Aircraft were equipped with either the radar and ballast nose.
- The upper and lower wing airbrakes retained their red colour with yellow edging.
- Common to all aircraft in this colour scheme was that all of the conformal antennae on the vertical stabilizer leading edge and fin tip were oversprayed in the base camouflage colours. This seems to have coincided with the installation of several new blade antennae on the fuselage spine, details of which are addressed in another part of this e-book.

This revised colour scheme would best approximate that applied to an aircraft used operationally on the Border during the latter part of the Bush War. In summary, there appears to be a wide variety of permutations to colouring on the forward fuselage and markings applied to the CZ in this late matt buff/green scheme so verification against photographs can provide the modeler with some guidance on what particular markings should be applied.

CZ #800 finished in the soft edge matt buff/green camouflage (original pattern) with orange/white/blue rudder flash. The green demonstrates a blotchy weathered finish. Note that the 2 Squadron badge and the fuselage Castle have not been applied to this aircraft. The airbrakes are the standard red with yellow edging. There is "no step" boot print on each air brake as well as a single boot print on the center control surface on both wings. This aircraft is carrying two V3B air-to-air IR guided missiles.

Anonymous CZ in soft edge buff/green camouflage (revised pattern). The revised pattern has the dark green covering the forward part of the vertical stabilizer strake. This area is buff on the original pattern as can be seen in the first image on this page. The green on the revised pattern wraps around onto the starboard fuselage as can be seen in the first image on the following page.

CZ #806 at Ondangwa Air Base (note aircraft shelters at back left of the image). #806 is finished in the soft-edge matt camouflage (revised pattern). The Castles have been applied in 6 locations. The 2 Squadron badge and rudder flash have been removed from the vertical stabilizer. *Mirage IIICZ* has also been removed from the forward fuselage.. Other details to note : the white antenna beneath the rudder, red/yellow airbrakes, buff and blue/grey nose cone, ejection warning triangles and yellow surround to emergency canopy release window. Outboard wing pylons are installed. Centerline tank is 1,100 liter RP825. Note the blade antennae on the fuselage spine and on the nose gear door beneath the Castle. The engine is running as denoted by the open auxiliary inlet door on the intake. The coat hanger shaped marking on the aircraft in the foreground denotes a lifting point.

A great image of three CZs and one BZ. CZ #813 in the front has the soft edge camouflage in the original pattern, the second aircraft (BZ #817) appears to have the gloss hard edge camouflage (original pattern) and the last two have the soft edge matt camouflage in the revised pattern. #813 has the 2 Squadron badge on the vertical stabilizer as well as Castles on the fuselage and wings, but no orange/white/blue rudder. The other two CZs look quite anonymous and rather bland being devoid of most markings. It is not clear if these two aircraft have the wing Castles. The last two CZs have the full buff nose cone whereas #813 has the blue underside to the nose cone. All four Mirages have the red / yellow airbrakes. Interesting additional detail to note on the second CZ : the tail cone is a darker green than the rest of the aircraft and the forward part of the air intake appears to be gloss compared to the rest of the fuselage, possibly denoting replacement parts.

CZ #800 in soft edge buff/green camouflage (original pattern). Interesting items to note : Blue/white/orange rudder flash with text “MIRAGE IIICZ / Nº. 800”, SAAF Castles on wings but not intakes and solid buff nose cone. All conformal antennae have been painted over. The aircraft displays standard markings and warning data around the forward fuselage. The airbrakes are in standard red with yellow edging. A ”no step” boot print can be seen on the airbrake. A similar marking can be seen on the center control surface aft of the wing Castle. *Mirage IIICZ* no longer appears on the forward fuselage.
The silver round object on the upper fuselage in line with the airbrake is the starboard fuel filler cap. #800 has the newer blade antenna on the fuselage spine. The missile is a V3B.

CZ #802 in soft edge buff/green camouflage (revised pattern) devoid of fuselage Castles, 2 Squadron badge or rudder flash. This aircraft is carrying what appears to be an aerial target-towing pod on the centerline. Aircraft has solid buff nose cone. The wing tanks are the 110G 500 liter type which can be used for supersonic flight. The three fins, as can be seen at the rear of the tank, allowed the 110G to be ejected in flight (unlike the RP18R tanks). The 110Gs are unpainted natural metal. The outboard wing pylons have been installed.

CZ forward fuselage showing soft edge matt camouflage (original pattern). Details to note include : weathered dark grey radome with gloss black backing ring; solid buff nose cone (a distinct darker hue than the fuselage buff); Castle well forward on the air intake. Note that the intake bullet is painted green and that the camouflage wraps into the leading edge of the intake and the splitter plate. *Mirage IIICZ* no longer appears on the forward fuselage. The white text just above the ground crewmember's hand is unidentified and is not standard. The CZ in the background appears not to have the Castle on the intake. In this case, the buff on the nose cone is similar in hue to the buff on the rest of the aircraft. Both CZs have the blade antenna on the fuselage spine aft of the canopy. The grey aircraft in the background is an RZ as denoted by the camera windows and the doppler fairing beneath the nose.

CZ finished in soft edge buff/green camouflage. Note how the camouflage colours wrap around on the inside leading edge of the intake and the splitter plate. The green on the intake bullet faring extends much further into the intake. This aircraft does not have the fuselage Castle. The ejection seat warning triangle with red canopy above it are visible beneath the cockpit. The yellow marking denotes the location of the emergency canopy release handle. Note the standard NATO symobology on the cover of the equipment bay aft of the cockpit. Note also the long strengthening plate between the intake and the fuselage. This was characteristic of only the BZ and CZ.

CZ #804 finished in soft edge buff/green camouflage (original pattern). Both wing and fuselage Castles are present. Mirage IIICZ can be seen on the nose of #804 but appears to be missing from the nose of the rear CZ. The airbrakes are standard red with yellow edging. Nose cone is finished in buff upper and blue lower surface. Note the blade antennae on the fuselage spine and on the nose gear door. #804 carries a missile pylon on the outboard wing hard point.

Photo of CZ forward fuselage showing some interesting detail : soft edge matt camouflage in what appears to be the original pattern; radome faded to a dark grey; distinct gloss black radome backing ring; full buff nose cone; Castle well forward on the air intake. The standard ejections eat warning triangle and stylized red canopy markings are present. The yellow shape aft of the cockpit denotes the emergency canopy release handle. Note as well the presence of the newer blade antenna on the upper fuselage. *Mirage IIICZ* has been removed from the forward fuselage.

Mirage IIIs wore a more toned-down scheme and, in some cases, fewer markings than that worn previous
rce Base Hoedspruit on 5 October 1987. The only markings visible on the aircraft are the Springbok Castle
the serial number. The castle is also visible on top of the wing.

CZ #811 finished in soft edge camouflage (revised pattern). Note the obvious weathering of the green paint around the various access panels. #811 has the solid buff nose cone. The forward part of the ventral strake appears to be a darker colour than the underside blue. The drag chute cone is missing. #811 has the later blade antenna on the fuselage spine. *Mirage IIICZ* is not present on the forward fuselage.

CZ #804 finished in soft edge buff/green camouflage (original pattern). The vertical stabilizer is devoid of all markings. It is assumed that the SAAF Castles are in all six positions based on the fact that the intake Castles are present. Pilot's name is beneath the windshield. This is likely to have appeared on both sides. *Mirage IIICZ* appears in black on the forward fuselage. Nose cone is buff / blue.

Sad fate of some of the SAAF's CZs, probably at Hoedspruit. The aircraft second and forth from the left and are in the original pattern soft edge camouflage whilst the first, third and fifth are in the revised pattern. Each aircraft also demonstrates the variable application of markings. This confirms that there was really no standard at the late stage of the aircraft's service with the SAAF.

CZ, possibly #805 finished in the soft edge matt camouflage (revised pattern) with most visible markings removed apart from the aircraft serial number and the standard symbology on the forward fuselage. The airbrakes remain red with yellow trim. The nose cone appears to be solid buff. #805 is carrying a centerline 1,100 liter RP825 fuel tank.

This is not the best quality image but it's rather an evocative image of a CZ trailing its drag chute. It is equipped with the 1,100 liter RP825 fuel tank. The protuberances beneath the wings are the aerodynamic fairing for the elevon actuators.

Photos taken in 2005 of CZ #805 in soft edge camouflage (revised pattern) as it was delivered to the SAAF Museum at Swartkop Air Base and prior to its repaint by the Museum.

Two more images of CZ #805 at Swartkop taken in 2009. Compare these images to those on the previous page taken in 2005. The soft edge camouflage appears to have been removed to expose a hard edge camouflage. The conundrum is that this is in the revised pattern which was not applied as such for the original hard edge camouflage. #805 has the painted ballast nose.

CZ #805 was then repainted in the soft edge original pattern. The fuselage Castles are too large in comparison to those presented in photos.

Above is an interesting image of four Mirage IIIs – from right to left :
1) EZ in unpainted natural metal delivery scheme. It has the red trim behind the canopy. *Cyrano II CSF* can be seen on the nose cone. The EZ is noticeable by the doppler antennae located beneath the nose ahead of the front landing gear.
2) CZ in early hard edge gloss camouflage with 2 Squadron badge on vertical stabilizer and unpainted natural metal nose cone. The fuselage Castle is located far back on the intakes.
3) Unpainted natural metal EZ with 3 Squadron badge on vertical stabilizer. Note the red trim aft of the canopy and on the intakes.
4) Unpainted natural metal CZ with 2 Squadron "Flying Cheetahs" badge on vertical stabilizer.
The three aircraft on the left have JL-100 combined fuel tank / rocket pods on the wing pylons.

CZ fitted with centerline RP825 fuel tank and missile launchers on the wing outboard pylons.

8.5 Test and development colours

As a result of operational experience in the border area, the buff was deemed to be too light when viewed from above against typical Southern Angolan ground conditions. This was a concern which arose with the advent of Cuban flown MiG-21s and, later, MiG-23s providing top cover to Angolan / Cuban ground operations. A test scheme was devised which replaced the buff with matt dark earth. The matt dark green would remain unchanged. This test pattern appeared to remain as per the original camouflage but with a feathered edge between the upper colours and the finish was matt. Two aircraft are noted to have been painted in this test scheme – one was #809 (the identity of the other unknown). In the photos of #809 below, dark earth appears to also have been applied in a wrap around covering the undersides of the fuselage with the exception of a ventral panel just ahead of the exhaust, which looks to be in a yellow primer referred to elsewhere in this document. The author's assumption is that the wing lower surfaces remained in blue. This colour scheme was not adopted for the rest of the CZ fleet.

CZ #809 in the experimental dark brown / green camouflage in company with two natural metal EZs. #809 retains all the high visibility markings with the fuselage Castles located far back on the intakes. *Mirage IIICZ* remains on the forward fuselage.

CZ #809 in the experimental dark brown / green camouflage. Note that this appears to wrap around the forward and rear fuselage underside. The ventral fin and ventral fairing seem to be painted in the yellow chromate primer. The presence of Castles on the upper wing would indicate that these have likely also been applied to the lower wing.

8.6 Low visibility / air superiority camouflage

The last colour scheme applied to the Mirage IIICZ was an attractive two-colour low visibility air superiority blue / grey scheme. This consisted of an overall blue / grey known as “Highveld Blue” (the lighter colour) with a darker “PR Blue” pattern applied to the upper and lower wing surfaces as well as partially covering the forward edge of the vertical stabilizer. Not all CZs had this blue/grey camouflage applied. There are photographic records of the following CZ aircraft having been painted in this scheme : 801, 802, 804, 807, 808 and 809. The purpose of this was possibly to evaluate low visibility colours for application on the Mirage F1CZ. The overall finish was matt with a soft edge between the two colours. These colours tended to fade in the harsh South African sun. Later photos show the colour having faded to an almost pink hue on aircraft in open storage. It is likely that the two colour upper surface pattern was replicated on the lower surface.

Great image of a grey/blue CZ on takeoff. Note that the nose cone is a different colour. Aircraft has the toned down ejection triangle below the canopy but it is not clear from the image if it has toned down Castles (probable). The toned down 2 Squadron badge is just visible on the vertical stabilizer. This aircraft appears to have been modified with the box-like chaff/flare dispenser at the rear end of the ventral strake.

The national insignia (located in six positions) and the 2 Squadron badge (on the vertical stabilizer) were oversprayed with the base colour to tone them down. In some cases the outline of the Castle was represented as a dashed line. The high visibility red/yellow markings on the airbrakes were deleted. All other markings / stenciling were also toned down or lightly oversprayed.

These blue/grey colours were not the same colours applied to the Mirage F1CZs – the F1CZs were painted in a three-tone low visibility colour scheme with the colours varying from a light grey to a darker blue grey. It may be that the two lighter colours used on the F1CZ matched those used on the IIICZs with a third darker colour being used for the diamond on the F1CZ. Contrary to some

commentary on various internet sites, the Mirage IIICZ blue/grey was not adopted for use on the Cheetah D/Cs. The colours applied to the Mirage IIICZs presented a distinct pink and blue hue whereas the Cheetah colours more approximate greys.

It would appear that the script "*Mirage IIICZ*" on the forward fuselage appeared variably on the blue/grey camouflaged CZs.

At the same time that this new colour scheme was applied, the CZs so painted received the Compact Radar Warning System (CRWS) represented in some of the images below by the small round black antenna on the lower nose and upper vertical stabilizer.

Unidentified CZ in low visibility blue/grey, taxiing out (possibly Hoedspruit). Note landing light in lowered position ahead of the nose undercarriage. It is not clear in this image if the wing SAAF Castles are present. The intake Castle appears to be the dashed outline style. The black rectangle on the intake is the auxiliary air blow-in door which is opened during start-up and taxiing to provide more air to the engine. Note that the "*Mirage III*CZ" script is still in place ahead of the ejection seat warning triangle on the forward fuselage. The airbrakes are no longer in the red/yellow colours.

Dassault-Breguet Mirage III RZ - SAAF-807

Per the image text, this may #807 but it's definitely not an RZ !! The Castle on the intake and the oversprayed ejection seat warning triangle are visible. The CRWS antennae are clearly visible.

CZ #802. Barely visible is the Castle on the intake. The oversprayed ejection seat warning triangle is also visible beneath the cockpit as is the 2 Squadron badge on the vertical stabilizer. Airframe number 802 has also been toned down. It would also appear that the "*Mirage IIICZ*" script is still in place on the forward fuselage ahead of the ejection seat warning triangle. The light grey patch on the fuselage appears on several images of blue/grey CZs. This may be faded paint due to fuel spills from the refueling filler ports which are located just ahead of the dorsal intakes. #820 carries a centerline RP825 fuel tank. This aircraft has not had the CRWS installed.

Unidentified CZ in its aircraft shelter. Clearly visible are the oversprayed ejection seat warning triangle and the 2 Squadron badge on the vertical stabilizer. The dark blue nose cone is apparent. The dark text beneath the windshield is the pilot's name. The engine is running as the auxiliary blow in door on the intake is open (and the ground crew person has his ear defenders on !). This aircraft has the CRWS installed.

Starboard view CZ #807. In this instance, the nose cone is similar in colour to the lighter blue camouflage colour. The toned down intake Castle and ejection warning triangle are visible. However, it appears that the 2 Squadron badge is not present on the vertical stabilizer. #807 has the Compact Radar Warning System (CRWS) installed as can be seen in this image by the round antennae on the nose and atop the vertical stabilizer.

CZ #808. Fuselage Castle and 2 Squadron badge are visible. An RP825 fuel tank is located on the centerline.

CZ #809 with freshly applied grey/blue air superiority camouflage. Nose cone is a distinct darker blue than that applied to the rest of the aircraft. Note toned down Castle on intake, ejection seat warning triangle and 2 Squadron badge on vertical stabilizer. All three external fuel tanks are unpainted natural metal. The centerline tank is an RP825 and the wing tanks are the finned 110G. The CRWS antennae are also visible just behind the nose cone and near the top of the vertical stabilizer.

CZ #809 later in life with decidedly faded paint. Here, the nose cone seems to have faded to a lighter blue-grey. The various airframe panel lines have been highlighted by the faded paint.

This image of an unidentified CZ demonstrates some nice marking details : low visibility Castle with dashed outline; subdued (oversprayed) stenciling, "*Mirage IIICZ*" and ejection seat warning triangle. The aircraft is taxiing with the auxiliary intake blow-in door open. An RP825 fuel tank is located on the centerline. Interesting to note that this fuel tank has been painted in a low visibility blue/grey. The CRWS has not been fitted to this CZ as there is no round antenna on the forward fuselage. The round object just aft of the nose cone is the hole for the emergency towing / lifting tube.

Two images of CZ #802 in low visibility blue/grey camouflage. “Mad Max” and the middle finger was applied during ACM exercises in Langebaan in 1990. The opposite side of the vertical stabilizer allegedly sported the text “It’s a girl” and a drawing of a dummy in white. Shortly after this, #802 was lost at sea with pilot Mark Edwards ejecting successfully.

CZ #801 with clearly faded paint demonstrating a distinct pink hue of the darker blue-grey. The oversprayed Castles on the intakes and the wings and the 2 Squadron badge are all evident.

CZ #801 stored (2011).

#809 in outdoor storage at the SAAF Museum at Swartkop Air Base in 2018.

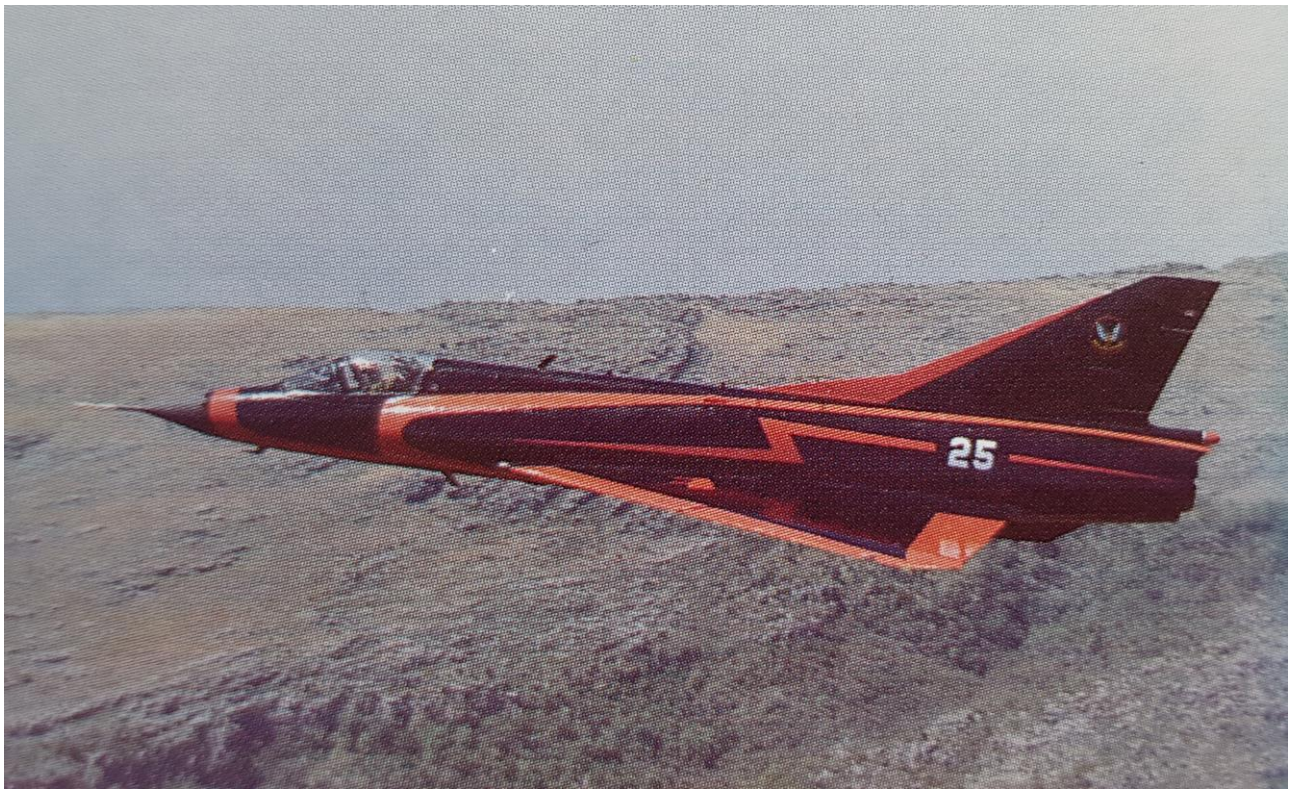
Not of much use as a reference photo, but nonetheless an evocative image of a blue/grey CZ at the start of another day's operations.

8.7 Commemorative colour schemes

There were several commemorative colour schemes applied to CZ #'s 800 and 802 as follows :

- CZ #802 was painted overall black with red trim with a large white "25" on both sides of the rear fuselage in September 1988 to celebrate 25 years of Mirage III service in the SAAF. Airbrakes were painted red. Overall finish was gloss. The wing mounted supersonic tanks were painted gloss black. #802 was later re-painted in the two-tone air superiority scheme.

  The SAAF Castles were not applied to this color scheme. The 2 Squadron badge was present on the vertical stabilizer. *Mirage IIICZ* was applied in white text on the forward fuselage.



- CZ #800 was painted overall black with gold trim with a large gold “50” on both sides of the rear fuselage in 1990 to celebrate the 50th anniversary of 2 Squadron “Flying Cheetahs”. The 2 Squadron badge was added to both sides of the vertical stabilizer. Airbrakes were painted in gold. Overall finish was gloss.

  The SAAF Castles were not applied to this color scheme.

  Mirage IIICZ was retained on the forward fuselage but in gold.

- CZ #800 has a large gold “75” replacing the previous “50” on both sides of the rear fuselage in 1995 to celebrate the 75th anniversary of the SAAF. It retained the overall black colour scheme with some adjustments to the gold trim. It appears that the airbrakes were painted black. The 2 Squadron badge was replaced with a “SAAF 75” badge on both sides of the vertical stabilizer. Overall finish was gloss. The aircraft was fitted with gloss black wing mounted supersonic tanks.

  The SAAF Castles were not applied to this color scheme. *Mirage IIICZ* was retained in gold on the forward fuselage.

- CZ #800 then had some adjustments as follows : it retained the black/gold colour scheme but with the “75” on the rear fuselage replaced with serial number “800” in gold. The “SAAF 75” badge was initially retained. #800 was nicknamed “Black Widow” with this appearing in gold text on the vertical stabilizer. *Mirage IIICZ* was retained in gold on the forward fuselage.

- The SAAF 75 badge was later replaced with the Air Force Museum badge. This seems to have coincided with listing of #800 on the civil aviation register as ZU-DME. This registration was applied in gold letters on the rear fuselage beneath and aft of the "800" as well as in large gold letters on the underside port wing.

CZ #800 as it last appeared in flying condition with SAAF Museum badge on vertical stabilizer and civilian registration ZU-DME.

This aircraft had the distinction of being the last airworthy Mirage IIIC. It has subsequently been grounded. Photos show it carrying 110G 500 liter wing tanks painted black or RP62 1,300 liter wing tanks painted black with gold trim.

CZ #800 (now with civilian registration ZU-DME) at the Swartkop Airshow in September 2009. It is fitted with 110G finned wing tanks.


800

Some interesting afterburner action on Mirage IIIs :

CZ #802 – Vlamgat !.
#802 is in the soft edge buff/green camouflage (revised pattern) and shows no markings apart from the black tail number.

Angry afterburner on CZ #807.

CZ #800 in early unpainted natural metal scheme.

CZ #803 in early unpainted natural metal scheme, but now with full colours on the rudder and 2 Squadron badge relocated to the top of the vertical stabilizer. “SNECMA ATAR 9” appears on the rear fuselage in both of the profiles above.

CZ #815 with red code “C” and red fuselage lightning bolt applied. “SNECMA ATAR 9“ has been removed.

CZ #805 red E.

CZ #812 red N representing the final colour scheme applied to the natural metal CZs. However, in some cases the ejection warning triangle would be moved to just beneath the cockpit as is demonstrated in images elsewhere in this document.

CZ #806 in the original gloss hard edge buff/green camouflage with full markings applied. It has the unpainted natural metal nose cone. The wing tank is the 1,300 liter RP62

CZ #800 repainted in soft edge buff/green camouflage (original pattern) with rudder orange/white/blue flash but no Castles.
Note that the Matra R550s presented in these profile images were not actually used on the CZ. The CZ used the AIM-9B and V3B missiles.

CZ #811 painted in soft edge buff/green camouflage (original pattern) with Castles in six positions and 2 Squadron badge on vertical stabilizer. It carries JL-100 combined fuel tank/rocket pod.

CZ #804 painted in soft edge buff/green camouflage (original pattern) with Castles in six positions. It carries an RP825 fuel tank on the centerline.

CZ #809 showing the experimental dark earth/green camouflage scheme.

CZ #802 is the final two-tone low visibility blue / grey camouflage.

9 Mirage IIIBZ colours and camouflage

The Mirage IIIB was introduced as a trainer for Mirage IIIC operators. The B was essentially the same as the CZ but with a revised forward fuselage to accommodate the second seat. The wings and main landing gear was the same as for the C. The B was fitted with two distinctive cable duct fairings running each side of the nose below the cockpit. All other external details, including the wings, were the same as for the C. This applies to the SAAF BZ and CZ.

Three BZs were delivered to the SAAF, these being serial numbers 816, 817 and 818. These aircraft were operated by 2 Squadron.

9.1 BZ unpainted natural metal delivery colours

The BZ was delivered in a very colorful livery consisting of a natural metal airframe with a large red panel on either side of the vertical stabilizer. The leading edge of the vertical stabilizer was left in natural metal. A red stylized lightning bolt was located on either side of the fuselage in similar fashion to those applied to the CZ. Red trim was applied to the leading edge of the intakes, but unlike on the CZ, there was no red trim behind the canopy. The South African orange/white/blue flash covered the rudder. The following text was superimposed over this in black : “AVIONS M’DASSAULT” with “MIRAGE IIIBZ / No. 8xx” below; the “8xx” being a placeholder for the aircraft serial number e.g. “817”.

The 2 Squadron badge was located on the upper forward corner of the red panel on both sides of the vertical stabilizer. The large white individual aircraft alphabetical code was located on the bottom forward corner of the red panel on both sides of the vertical stabilizer. However, an image exists of 816 devoid of this white code.

Castles were located in all six positions (30” on wings, 24” on fuselage) with the fuselage castle located just above the junction of the wing leading edge and fuselage. The aircraft 3-digit serial number was applied in 8” black numerals on the rear fuselage. The last two digits were repeated in small black numerals on the forward nose gear door.

The entire nose cone forward of the windshield fairing was painted in matt black (unlike the IIICZ which only had the radome painted black). “*Mirage IIIBZ*” was scripted in black beneath the windshield on both sides of the fuselage.

The red trim, as described for the natural metal IIICZ, was applied to the wings. The airbrakes were painted red with yellow edging.

Antennae on the vertical stabilizer were painted in light grey / white with dark grey / black leading edges. The white panel is also present just below the rudder. The rear section of the canopy had a portion of the lower frame painted in white. The longitudinal strengthening strips on the upper forward portion of the canopy were also painted in white.

BZ #816 on static display at the SAAF Museum Swartkop has been faithfully restored to this delivery scheme but without the large white letter on the vertical stabilizer.

Two images of unpainted natural metal BZ #818 (white R) in the delivery livery. The airbrakes are open and the yellow edging is clearly visible. Note the red trim on the wing leading edge at the fuselage junction. There is no red trim behind the rear cockpit.

Low quality image of BZ #816 in the delivery livery. The large white aircraft code is missing from the vertical stabilizer. As noted elsewhere in this document, this was likely to have been a replacement vertical stabilizer.

BZ #816 as currently displayed at the SAAF Museum at Swartkop Air Base. The camouflage has been stripped back to bare metal to reflect the unpainted natural metal delivery scheme with the original markings applied. “AVIONS M’DASSAULT” is missing from the rudder as it would have appeared originally on #816.

Another image of BZ #816 in delivery scheme. RP18R 500 liter fuel tanks are carried on the wings.

This is a really interesting image of a gaggle of Mirage IIIs. In the foreground is BZ#816 in unpainted natural metal delivery scheme seemingly going in the opposite direction to all the others. #816 shows the black nose cone.
The aircraft at left (above #816) is either a two seat DZ or D2Z in early gloss hard edge buff/green camouflage. It carries RP62 wing tanks. To the right of this (from left to right) are a camouflaged CZ or EZ, a blue/grey CZ, another camouflaged CZ or EZ and another blue/grey CZ. All four aircraft carry the RP825 centerline fuel tank.

9.2 BZ buff / green camouflage

All three BZs were repainted in the standard gloss hard edge buff / green / light blue camouflage (original pattern) as was the case for the CZs. The 30" and 24" castles were retained in all six positions with the castles on the fuselage being relocated forward on the engine intakes just aft of the intake leading edge. The 2 Squadron badge was retained on the upper vertical stabilizer. The rudder colours and text remained unchanged. Red airbrakes with yellow trim were retained. "AVIONS M'DASSAULT" appears to have been removed from the rudder. All other details remained unchanged.

However, there were several further permutations applied to each of the three BZs during their service lives as discussed in the following pages. The noses also appear to have been painted variably.

Unidentified BZ showing the beautiful clean lines of the original two-seat Mirage III.
This BZ has full markings applied to the hard edge gloss buff/green camouflage scheme.

9.3 Mirage IIIBZ #816

The entire nose was painted in buff upper surface and light blue lower surface with a continuation of the fuselage hard edge border between the two. A black triangular anti-glare panel was painted on the top surface of the nose cone from the nose cone panel line all the way to the pitot probe.

Two images of BZ #816 in the hard edge gloss buff/green camouflage scheme with black anti-glare panel on top of the nose. Note that "AVIONS M'DASSAULT" no longer appears on the rudder in the image above - only "MIRAGE III BZ N°. 816" remains. Note the original white/light grey conformal dielectric panels on the vertical stabilizer.

9.4 Mirage IIIBZ #817

BZ #817 flanked by two CZs. It has the orange/white/blue rudder flash and is in the original hard edge gloss buff/green camouflage pattern, with the conformal antennae panel now painted over.
The CZ in the foreground has the original camouflage pattern but with soft edging; the second CZ is in the latter soft edge simplified pattern. Note the detail differences in markings between the two CZs – the CZ in the foreground has the 2 Squadron badge and fuselage SAAF Castles whereas the other CZ has no markings apart from aircraft number and data stencils. All three retain the red/yellow air brakes.

BZ #817 - note how the upper camouflage colours follow through into the intake leading edge and the shock cone. Note also the distinctive ducting on the lower forward fuselage. This feature appears on both sides of the forward fuselage.

BZ #817 then carried at least two other colour schemes :

- Matt, soft edged buff/green/light blue camouflage. The pattern was unique being slightly different to both the original and simplified patterns. The demarcation between the upper and lower colours was a feathered wavy line. No rudder flash or squadron insignia were present. Castles were carried on the intakes and thus assumed to be present on the upper and lower wings as well. Of note is that the Castles have the later SAAF Eagle instead of the earlier Springbok. The entire nose cone was black. "*Mirage IIIBZ*" inscription was retained in black on nose. "817" appeared in black on rear fuselage. "17" appeared in non-standard large numerals on nose gear door. The airbrakes were retained as red with yellow trim.

Two images of BZ #817 repainted in the once off camouflage scheme - note that the Castles have the SAAF Eagle as opposed to the Springbok. The paint scheme is non-standard as are the colours on the 110G wing tanks. The purpose of the black rectangle on the forward fuselage in the image below is unknown.

- #817 was then painted in its final scheme, which replicates the new South African national flag colours which is best described through pictures. #817 was given the name “Skydancer” for the airshow circuit. It was added to the civil register as ZU-DMD, which appeared in white letters on the lower rear fuselage. It is theoretically airworthy but grounded.


817


817
ZU - BVD

9.5 Mirage IIIBZ #818

BZ #818 painted in standard hard edge gloss buff/green camouflage. Note that no black nose anti-glare panel has been applied ahead of the windshield. Full markings are in place including Castles, 2 Squadron badge and rudder colours. The wing tanks are 500 liter RP18R.

818 is seen at Air Force Base Hoedspruit on 5 October 1990 resplendent in the standard colour scheme of t

BZ #818 now with all-black nose cone and retains the gloss hard edge camouflage. The rudder no longer carries the orange/white/blue colours. The 2 Squadron badge has been retained. All of the conformal antennae have also been painted over. Note the distinct white forward canopy upper reinforcing frames, typical of all two seat Mirage IIIs. Fuel tanks are 1,300 liter RP62.

BZ #818 as in its current state (2018) at Swartkop Air Base. The paint has faded from the sun. This seems to be the same final colour scheme for #818 as seen in the last image of the previous page.

BZ #817 with damaged rear fuselage section.

Two underside photos of unidentified BZs. In the image above, only the starboard airbrake is painted red/yellow whilst in the image below both are painted red/yellow. The camouflage on the BZ in the image below looks like the non-standard camouflage applied to #817 as described earlier in this document (note soft edge camouflage). The location of the wing Castles between the inboard and outboard elevon actuator aerodynamic fairings and just ahead of the elevon hinge line is typical for all SAAF Mirage IIIs. When carrying air-to-air missiles, the outboard elevon actuator aerodynamic fairings would be removed and replaced with a weapon pylon. Note also the intake duct on the forward nose for avionics cooling which was typical only for the BZ. The other two seat Mirages (DZ and D2Z) had a distinct chisel nose with the duct located at the tip of the nose. The BZ was not equipped with the Cyrano radar.

The slots in the main landing gear doors are clearly visible as are the locations of the 30mm canon troughs in the image above. The long ducting along the lower forward fuselage are also visible.

The simple blade type ventral strake typical of the BZ and CZ is also clearly visible on the rear fuselage.

BZ #816 in unpainted natural metal delivery scheme. As noted elsewhere in this document, #816 was allocated the tail code white "R". However, #816's vertical stabilizer was donated to #818 and #816 received a replacement vertical stabilizer without the white "R" on it.

BZ #817 white "T"

BZ #818, with vertical stabilizer with white "R" donated from #816.

BZ #817 in hard edge buff/green camouflage and full markings. The nose cone is in the buff colour with a black anti-glare panel ahead of the windshield.

BZ #817, now on the civil register as ZU-DMD and called “Skydancer”, painted in the South African national colours.

Unidentified BZ with teeth and eyes !! The camouflage appears to be original hard edge gloss buff/green, but all of the conformal antennae have been painted over. The teeth are of a different configuration to those applied to two of the RZs.

10 References

The Unofficial SAAF Website – www.saairforce.co.za - both reference section and discussion forums including the following contributors – Dean Wingrin, Piet van Schalkwyk (SAAFColours), Greg Swart (GregAir), Alan Taylor (FlyingSpringbok), Vernon Vice (Spice), Joker, Brent Best (Kremlin), Sean Thackray (Madmax).

Other fine folks who shared their Mirage III information with me : Daan Conradie, Martin Strümpfer, Jon Durant (Battlebirds Models), John Weideman (ScaleWorx), Marc Conti, Herman Penderis.

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