Air Accident Investigation Unit Ireland

SYNOPTIC REPORT

SERIOUS INCIDENT
Socata MS880B, EI-BNU
Navan Airfield, Co. Meath, Ireland

11 July 2022

An Roinn Iompair
Department of Transport

Foreword

This safety investigation is exclusively of a technical nature and the Final Report reflects the determination of the AAIU regarding the circumstances of this occurrence and its probable causes.

In accordance with the provisions of Annex 13[1] to the Convention on International Civil Aviation, Regulation (EU) No 996/2010[2] and Statutory Instrument No. 460 of 2009[3], safety investigations are in no case concerned with apportioning blame or liability. They are independent of, separate from and without prejudice to any judicial or administrative proceedings to apportion blame or liability. The sole objective of this safety investigation and Final Report is the prevention of accidents and incidents.

Accordingly, it is inappropriate that AAIU Reports should be used to assign fault or blame or determine liability, since neither the safety investigation nor the reporting process has been undertaken for that purpose.

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[1] **Annex 13**: International Civil Aviation Organization (ICAO), Annex 13, Aircraft Accident and Incident Investigation.
[2] **Regulation (EU) No 996/2010** of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation.
[3] **Statutory Instrument (SI) No. 460 of 2009**: Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulations 2009.

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In accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No 996/2010 and the provisions of SI No. 460 of 2009, the Chief Inspector of Air Accidents, on 11 July 2022, appointed John Owens as the Investigator-in-Charge to carry out an Investigation into this Serious Incident and prepare a Report.

Aircraft Type and Registration:	Socata MS880B (Rallye), EI-BNU
No. and Type of Engines:	1 x Continental O-200-A
Aircraft Serial Number:	1204
Year of Manufacture:	1968
Date and Time (UTC)[4]:	11 July 2022 @ 13:00 hrs
Location:	Navan Airfield (EIHH), Co Meath, Ireland
Type of Operation:	Private
Persons on Board:	Crew – 1 Passengers – 1
Injuries:	Nil
Nature of Damage:	Substantial to left main landing gear
Commander's Licence:	Private Pilot Licence (PPL) Aeroplane (A) issued by the Irish Aviation Authority (IAA)
Commander's Age:	25 years
Commander's Flying Experience:	164 hours, of which 30 were on type
Notification Source:	Airfield Owner
Information Source:	AAIU Report Form submitted by the Pilot AAIU Field Investigation

[4] **UTC**: Co-ordinated Universal Time. All times in this report are quoted in UTC unless otherwise stated; local time was UTC + 1 hour on the date of the occurrence.

SYNOPSIS

During a crosswind landing on Runway 27 at Navan Airfield (EIHH), the trailing arm of the aircraft's left main landing gear fractured. The aircraft veered to the left and its left main wheel entered longer grass to the side of the grass runway. As the aircraft decelerated, the left wing dropped, and its lower surface contacted the longer grass. The aircraft turned further to the left and came to rest adjacent to the left side of the runway. The Pilot and the one passenger on board exited the aircraft normally. There was no fire. No injuries were reported to the Investigation.

NOTIFICATION AND RESPONSE

The airfield owner notified the AAIU shortly after the event occurred. Two Inspectors of Air Accidents deployed to the airfield and commenced an Investigation.

1. FACTUAL INFORMATION

1.1 History of the Flight

A witness at the airfield recorded a video of the aircraft on final approach to Runway (RWY) 27 at EIHH. The history of the flight is based on the video and on the Pilot's account of the occurrence.

The aircraft departed EIHH at 12:30 hrs for a local flight and was returning to EIHH approximately 30 minutes later. The approach to RWY 27 was conducted with a crosswind from the left (southerly) as indicated by the windsock located near the runway threshold. In the final moments of the approach, the aircraft's sink rate increased, and the aircraft appeared to touch down hard on the grass runway. During the subsequent roll out, the aircraft veered to the left and its left main landing gear entered longer grass adjacent to the left side of the runway. As the aircraft decelerated, the left wing dropped, and its lower surface contacted the longer grass. The aircraft turned further to the left as it came to rest adjacent to the left side of the runway (**Photo No. 1**). The Pilot and the one passenger on board exited the aircraft normally. There was no fire.

Photo No. 1: Final resting position of the aircraft

1.2 Injuries to Persons

No injuries were reported to the Investigation.

1.3 Interview with the Pilot

The Pilot said that everything was normal on the approach to the runway. He said that he had the flaps set to 20 degrees and that the aircraft landed just after the runway threshold at a speed of 60 knots (kt). He stated that there was a crosswind of '*8 or 9 knots*' coming from the south. He noted that the landing was a '*little*' hard. The Pilot recalled that after about 20 metres (m) of ground roll there was a '*wobble*' and he felt the aircraft '*dragging and pulling to the left*' and therefore decided not to use the brakes in case it caused '*extra stress on the gear*'. He said that '*the wheel failed completely and collapsed*' a few metres before the aircraft stopped. The Pilot stated that the aircraft's propeller did not contact the ground.

1.4 Damage to Aircraft

The aluminium trailing arm on the left main landing gear sustained a fracture. The left main landing gear fairing sustained impact damage (**Figure No. 1**).

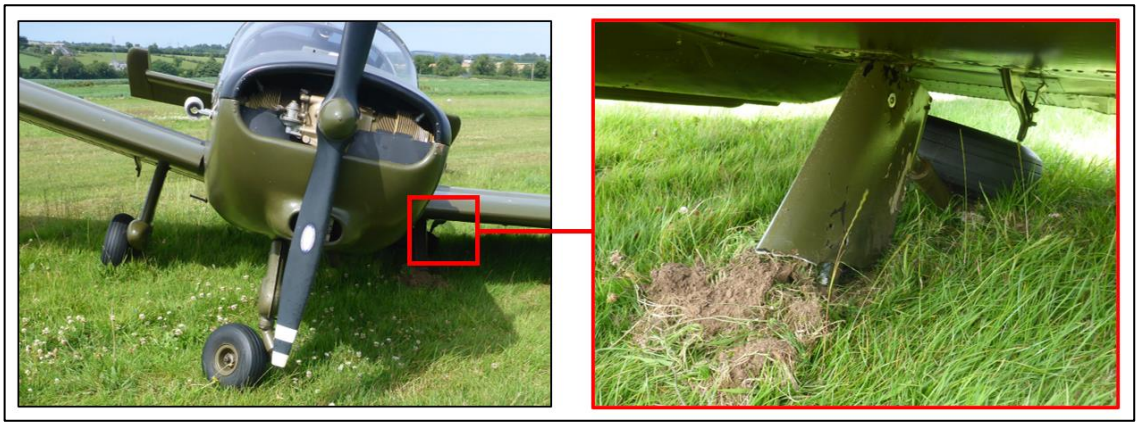

Figure No. 1: Fractured left main landing gear

1.5 Personnel Information

The Pilot held a European Union Part-FCL[5] PPL(A), which was issued by the IAA on 8 April 2022. The licence contained an SEP[6] (land) class rating which was valid until 31 March 2024. The Pilot's Class 2 Medical Certificate (required for a PPL) was valid until 24 July 2024.

[5] **Part-FCL:** (Flight Crew Licensing): Commission Regulation (EU) No. 1178/2011 laying down technical requirements and administrative procedures related to civil aviation aircrew.
[6] **SEP:** Single Engine Piston.

The Pilot's Flying Experience is outlined in **Table No. 1**.

Total all types:	164 Hours
Total on type:	46 hours
Total on type P1:	16 hours
Last 90 days:	40 Hours (all on type)
Last 28 days:	12 Hours (all on type)
Last 24 hours:	2 Hours (all on type)

Table No. 1: Pilot's Flying Experience

1.6 Aircraft Information

1.6.1 General

The Socata MS880B (Rallye) low-wing, 6.97 m long, all-metal four-seater aircraft was manufactured in 1968. The 880B variant is powered by a Continental O-200-A four-cylinder, horizontally opposed, reciprocating engine, fitted with a two-bladed, fixed-pitch propeller. It was type-certified in 1961. A fixed (non-retractable) tricycle landing gear with a free-castoring nose gear is installed. The subject aircraft's Maximum Take-Off Mass (MTOM) was 771 kg. The two front seats and the rear bench seat were fitted with lap straps; shoulder straps were not fitted. The Flight Manual for the aircraft states that the '*demonstrated cross-wind*'[7] is '*20 kt*'. The Normal Landing checklist contained in the Flight Manual states that the [air]speed at touchdown should be '*46/49 kt*'.

The wings on the aircraft type incorporate electrically powered trailing-edge flaps and leading-edge slats. The slats deploy automatically during landing due to changes in airflow over the wing. Following the occurrence, the leading-edge slats were found in the extended position.

1.6.2 Airworthiness Certification

The Certificate of Airworthiness for the aircraft was issued by the IAA on 18 February 2011. The associated Airworthiness Review Certificate (ARC) was issued on 10 June 2022 and was valid until 9 June 2023. The total aircraft operating hours at the time of ARC renewal was 4,786:25.

1.6.3 Other Occurrences

The Investigation asked the type-certificate[8] holder for the aircraft type if it was aware of any other failures of the main landing gear trailing arm. The type-certificate holder advised that it had not received any other reports of '*crack occurrences of the trailing arm on this aircraft type*'.

[7] **Demonstrated crosswind**: The largest crosswind (corrected to 90°), in which a test pilot has demonstrated that a safe landing can be accomplished. It is generally not an absolute limitation, but a guide as to what limiting values should be applied.

[8] **Type Certificate:** Before a newly developed aircraft type enters into operation, it must obtain a type certificate from the relevant aviation regulatory authority, e.g., EASA.

1.6.4 Aircraft Maintenance

1.6.4.1 Manufacturer's Requirements

Chapter III of the Maintenance Manual for the aircraft type contains the '*PERIODICAL INSPECTIONS*'. The actual inspections are outlined in '*Section 3.3*'. There is no specific inspection requirement to check for cracks on the main landing gear trailing arms contained in this section.

Chapter II of the Maintenance Manual for the aircraft type contains the maintenance procedures for the aircraft. '*Section 2.7 – Landing Gear*' states:

> *'The landing gear is of the fixed type and therefore requires no adjustment in operation. The only checks to be made periodically are the inspection of wheel rocker beam* [trailing arm] *hings* [hinges/pivots] *plays* [free play]*, the correct locking of nuts and the possible presence of craks* [cracks]*'.*

In November 1965, the Aircraft Manufacturer published Service Bulletin (SB) No 42, which contains additional inspection requirements for the aircraft's landing gear. Regarding the main landing gear, the SB states:

> '*We recommend to all operators to check regularly the condition of the main landing gear strut bodies.*
>
> *This check should be performed on the main landing gear legs, on the area located around the shock strut upper attachment and particularly, above this attachmen*t. […]
>
> *This inspection should be renewed every 50 operating hours approximately and performed after every hard landing*'.

The SB does not contain any inspection requirements for the trailing arms in addition to those contained in Section 2.7 of the Maintenance Manual for the aircraft.

1.6.4.2 Legislative Requirements

Aircraft must be maintained in accordance with an Aircraft Maintenance Programme (AMP). The AMP for some aircraft, including '*aeroplanes*' with a MTOM of 2,730 kg or less, may be based on a '*Minimum Inspection Programme (MIP)*', as provided for in Part ML.A.302 (d) of Commission Regulation (EU) No 1321/2014[9] (Part ML was introduced by Commission Implementing Regulation (EU) 2019/1383). The Acceptable Means of Compliance (AMC) for Part ML.A.302 (d) contains an '*acceptable*' MIP for '*aeroplanes*' with a MTOM of 2,730 kg or less.

Part ML.A.302 (d)(2)(a) states that an MIP shall contain the '*servicing tasks as required by the DAH's* [Design Approval Holder's] *requirements*'. Part ML.A.302 (c)(3) permits additional maintenance tasks to be included or alternative maintenance actions to those contained in the DAH's instructions for continuing airworthiness; however, alternative maintenance actions shall not be less restrictive than those set out in the MIP.

[9] Regulation (EU) No 1321/2014 on the '*continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks*'.

In accordance with Part ML.A.302(b), the aircraft owner may declare the AMP, or it may be approved by a Continuing Airworthiness Maintenance Organisation (CAMO) or Combined Airworthiness Organisation (CAO). In this case, the aircraft owner declared an AMP for the aircraft which was based on the MIP.

1.6.4.3 Maintenance History

Records indicate that an Annual Inspection, which included 50-hour and 100-hour tasks, was certified on 10 June 2022. The maintenance tasks required to be performed during the Annual Inspection were detailed in the aircraft's MIP-derived maintenance programme. The following tasks were included in the '*Landing Gear*' section and were recorded as being carried out:

> […]
>
> '*All units: Inspect for poor condition and insecurity of attachment, including the related structure.* [As per the MIP].
>
> *Linkages, trusses and members: Inspect for undue or excessive wear fatigue and distortion.* [As per the MIP].
>
> […]
>
> *'Main landing gear: Inspect main landing gear for corrosion and cracks ref sb 42*. [Additional to MIP].
>
> […]'.

As outlined in **Section 1.6.4.1**, the main landing gear items of SB 42 relate to the area located around the shock strut upper attachment; the SB does not contain any inspection requirements for the trailing arms.

The landing gear inspections detailed in Section 2.7 of the Maintenance Manual for the aircraft did not form part of the AMP. The Investigation advised the owner to consider including these inspections in the aircraft's AMP. The owner stated that he will update the AMP in this regard.

1.7 Trailing Arm Examination

1.7.1 Introduction

To facilitate further examination, the Investigation removed the fractured trailing arm from the aircraft at the accident site with the assistance of the aircraft owner.

The trailing arm is constructed as follows: The wheel axle is attached to one end, and a steel pivot bush is fitted into a bore at the other end (**Photo No. 2**). A shock absorber attachment point is located mid-way along the upper part of the trailing arm. A pivot pin (not shown), installed through the bore of the steel pivot bush, forms the point of attachment with the main strut of the landing gear. A retention pin prevents rotation of the pivot bush. A grease nipple installed at the pivot end of the trailing arm aligns with a hole in the pivot bush, to allow lubrication of the pivot pin.

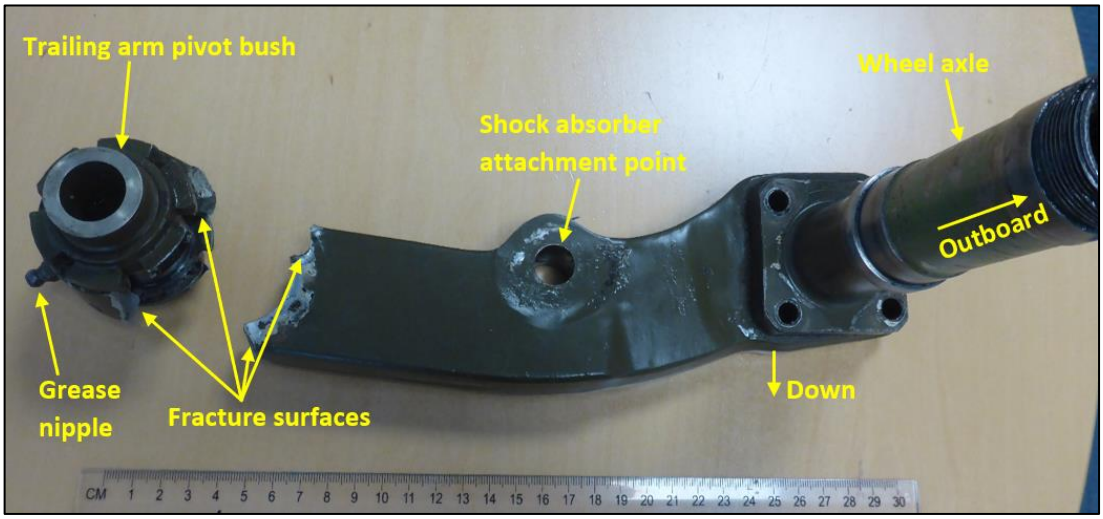

Photo No. 2: Fractured left main landing gear trailing arm

1.7.2 Metallurgical Analysis

The Investigation sent the trailing arm to a metallurgist for detailed examination. The information contained in this section is based on the metallurgical analysis report received. The report noted that the trailing arm had fractured on both the upper and lower parts of its pivot bore, causing the bush to separate from it (**Photo No. 3**).

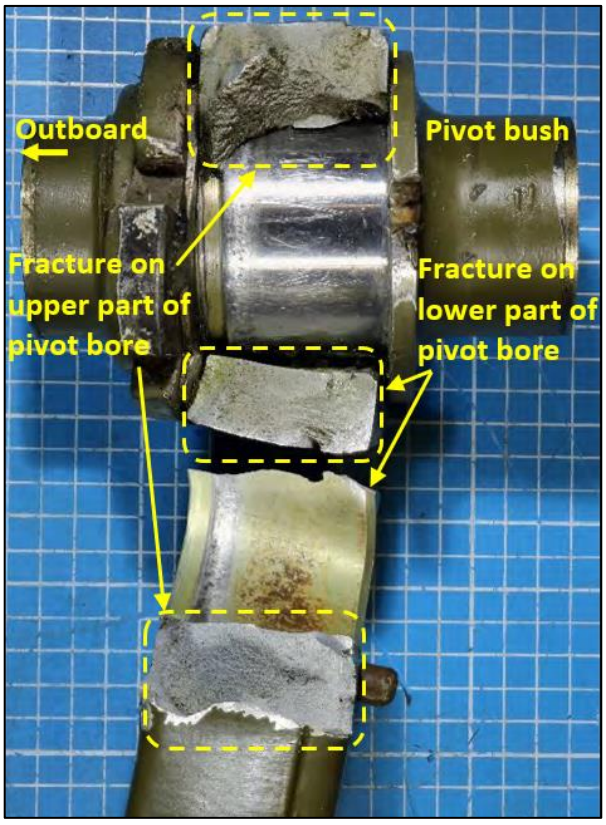

Photo No. 3: Location of fractures

Two fatigue[10] cracks were identified on the fracture located on the upper part of the pivot bore of the trailing arm; the fatigue cracks had initiated from the two corners/edges of the upper surface, close to the pivot bush (**Figure No. 2**). Each fatigue crack had penetrated to a depth of approximately 1.5 mm prior to an instantaneous overload failure. Radial markings indicated that the fracture had initiated primarily from the upper inboard corner, with a secondary initiation point at the upper outboard corner. This fracture had occurred without significant evidence of bending. Secondary fatigue cracks were also evident at both upper corners, which, according to the metallurgist, suggests that fatigue crack initiation was primarily a function of the cyclic stress exerted on the arm, rather than any material defect in the arm itself.

Paint coatings were removed to facilitate further examination. A dent was found on the outboard corner of the upper part of the trailing arm, close to the fatigue crack at this corner. The dent was not apparent prior to paint removal. There was no dent/damage present on the inboard corner, and because a fatigue crack had also occurred there, the metallurgical analysis concluded that the dent on the outboard corner was not a primary cause of fatigue crack initiation.

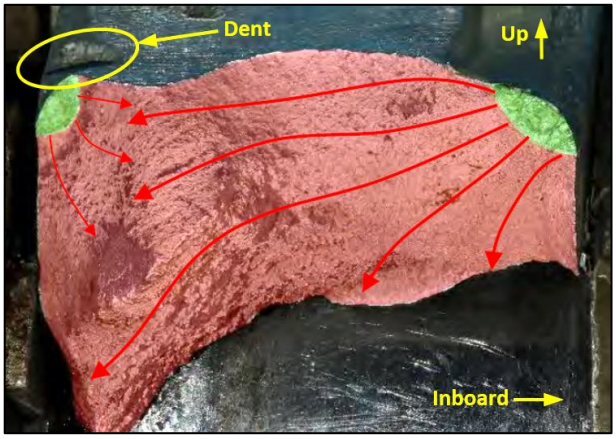

Figure No. 2: Fracture on upper part of pivot bore. Green shading indicates fatigue crack growth. Red shading indicates overload failure. Red arrows show direction of failure

The fracture on the lower part of the trailing arm (**Figure No. 3**) was an overload failure as a result of the failure on the upper part. This fracture had bent away from pivot bush.

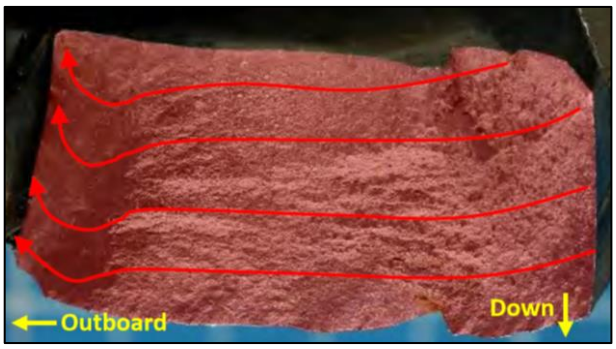

Figure No. 3: Fracture on lower part of trailing arm. Red shading indicates overload failure. Red arrows show direction of failure

[10] **Fatigue:** The progressive, localised, and permanent structural change that occurs in a material subjected to repeated or fluctuating strains at nominal stresses that have maximum values less than the static yield strength of the material. Fatigue may culminate in cracks and cause fracture after a sufficient number of fluctuations.

The metallurgical analysis considered the loads in the vertical plane that the trailing arm is normally subjected to (**Figure No. 4**). Landing and ground loads cause the shock absorber to compress and a bending load to be exerted on the trailing arm, resulting in compressive stresses on its upper surface and tensile (stretching) stresses on its lower surface.

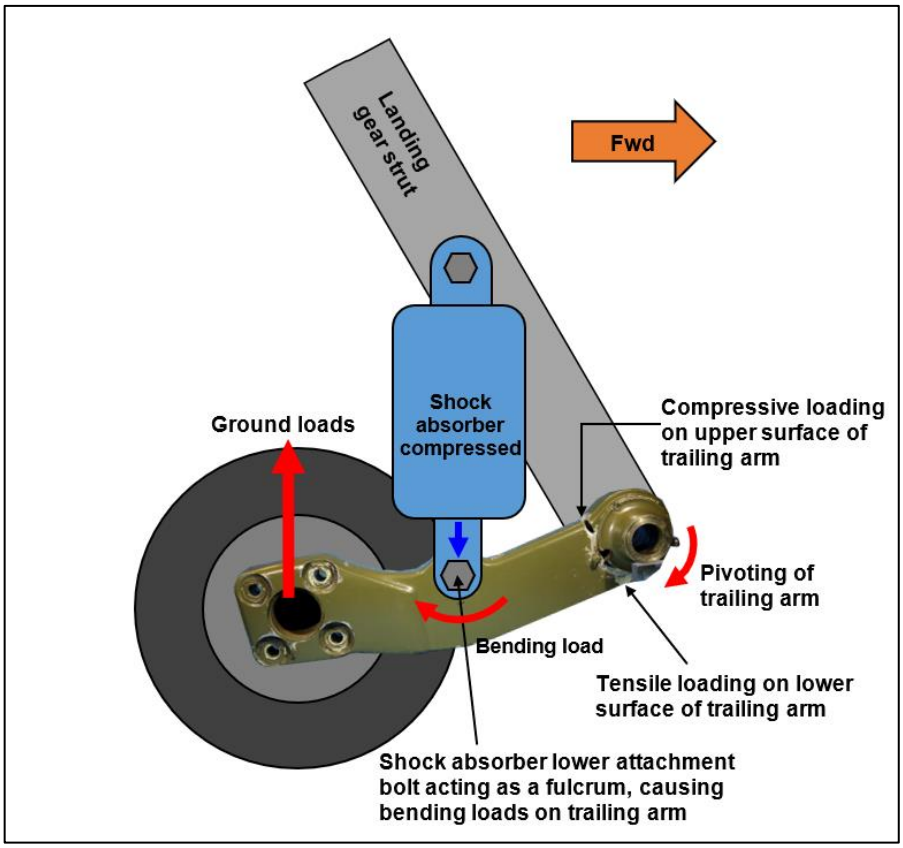

Figure No. 4: Loads on trailing arm in the vertical plane

In addition, the mounting position of the wheel results in a torsional (twisting) component being generated by the landing and ground loads, which could result in a change in direction of the bending of the trailing arm, and lead to tensile loading along the inboard side of the arm (**Figure No. 5**).

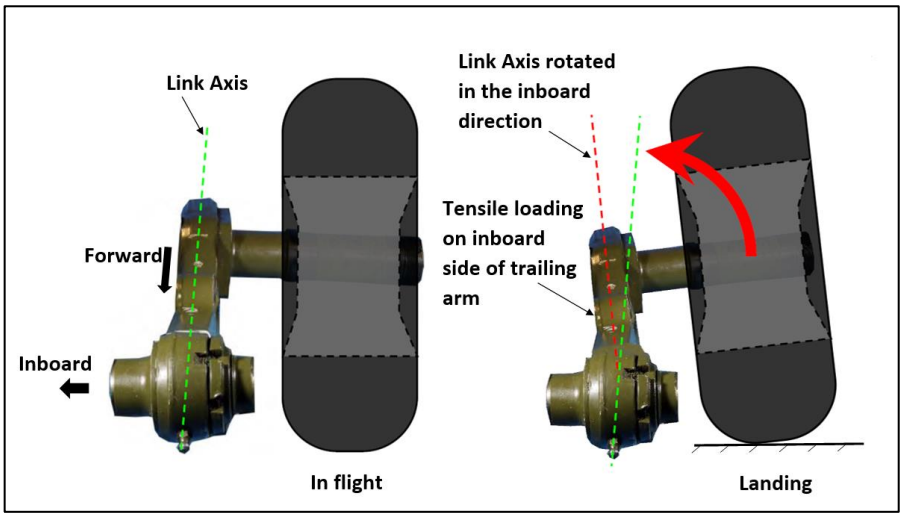

Figure No. 5: Torsional loading on trailing arm on landing (for illustration purposes only)

The metallurgical analysis considered that the magnitude of any tensile stresses arising from the combined bending and torsional loading would be expected to be much greater towards the lower surface of the trailing arm than it would be towards its upper surface. The analysis therefore considered that it would be reasonable to expect that any failure caused purely by overloading would initiate at the lower inboard corner of the trailing arm. However, the fracture surfaces indicated that the failure had initiated primarily from the upper inboard corner, with a secondary initiation point at the upper outboard corner. The analysis considered that this could be explained by the presence of the pre-existing fatigue cracks at these locations, which would have provided sites of stress concentration and likely caused the trailing arm to fail at a lower level of loading than would have been the case if the fatigue cracks had not been present.

The metallurgical analysis also considered that the maximum stresses caused by landing and ground loads would have occurred on the lower surface of the trailing arm, yet the fatigue cracks had initiated at its upper two corners. The metallurgical analysis therefore deemed it likely that the initiation of the fatigue cracks was not due to landing and ground loads alone. However, it was not possible for the metallurgical analysis to identify additional sources of loading, which could explain the initiation of the fatigue cracks at these locations.

The metallurgical analysis noted that a step (indentation) had been worn into the inner diameter of the pivot bore in the trailing arm (**Photo No. 4**) and that this appeared to have been caused by the outboard shoulder of the chromium plated bush during repeated torsional/bending loads prior to the failure event. There was no evidence to indicate that the step itself had participated in crack initiation.

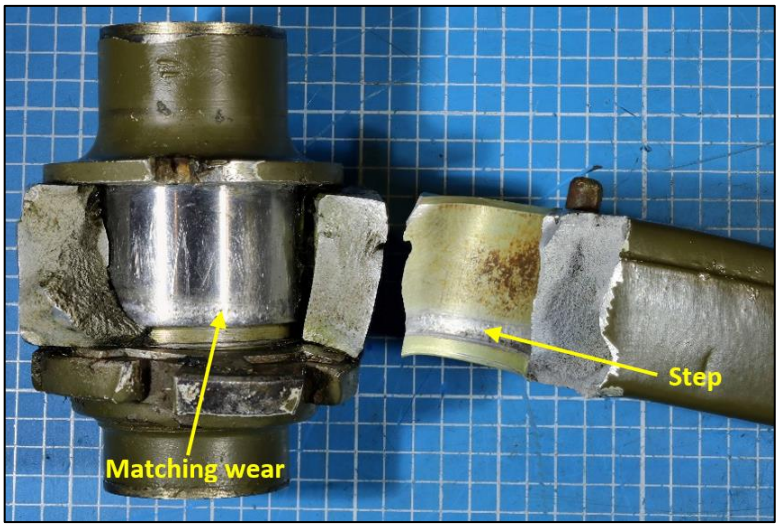

Photo No. 4: Step worn into the inner diameter of the pivot bore in the trailing arm

It was noted that the grease nipple was found to be unobstructed, and the lubrication holes remained aligned. The metallurgical analysis concluded that the fatigue cracks would have initiated some considerable time (‘*months or years*’) before the occurrence date and that although their presence would have reduced the static strength of the trailing arm, it was considered unlikely that such small cracks would result in a failure under the loads arising from a ‘*normal*’ landing. It was therefore considered likely that the failure was the result of the pre-existing fatigue cracks, in combination with higher-than-normal landing loads.

The metallurgical analysis also noted that if the trailing arm had not failed during the occurrence landing, it was likely that the fatigue cracks would have continued to propagate with each successive landing. The metallurgist therefore considered it likely that a point would have been reached, at some time in the future, when the fatigue cracks would have grown to a length sufficient to cause a failure of the trailing arm, even under normal loading conditions.

1.8 Airfield Information

Navan Airfield (EIHH) has two grass runways: RWY 07/25 and RWY 09/27. The airfield's website states that RWY 07/25 is 530 m long and RWY09/27 is 700 m long.

1.9 Meteorological Information

Met Éireann, the Irish meteorological service, was asked to provide an aftercast of the weather conditions prevailing in the EIHH area at the time of the occurrence. The report contained the following estimated conditions (**Table No. 2**).

Meteorological Situation:	Ireland lies in a light to moderate southerly airflow between high pressure in the North Sea and low pressure south of Iceland.
Surface Wind: **Wind at 2,000 feet (ft):** **Between surface and 300 ft:**	Southerly, 8-12 kt. Southerly, 15-20 kt. Similar to surface.
Visibility:	40 kilometres (km).
Weather:	Hazy sunshine.
Cloud:	Broken (5-7/8 oktas[11]) layered cloud with bases between 6,000-7,000 ft.
Surface Temperature/Dew Point:	24/14 degrees Celsius (C).
Mean Sea Level (MSL) Pressure:	1020 Hectopascals (hPa).
Freezing Level:	13,000 ft.

Table No. 2: Estimated weather conditions in the EIHH area at the time of the occurrence

1.10 Aircraft Repairs Following Occurrence

The left main landing gear trailing arm was replaced following the occurrence. Records for inspection of the aircraft following the occurrence were provided to the Investigation, and no further damage was noted.

[11] **Okta:** A unit of cloud amount, expressed as a number of eights of the sky dome covered by clouds.

2. ANALYSIS

2.1 The Landing

The video of the landing shows the aircraft's sink rate increasing before the aircraft appeared to touch down hard on the grass runway. Metallurgical analysis of the fractured trailing arm found that, although the presence of two 1.5 mm deep fatigue cracks would have reduced the static strength of the trailing arm, it was unlikely that such small cracks alone would result in a failure under the loads arising from a '*normal*' landing. Based on the metallurgical analysis, the Investigation therefore considers it likely that the failure was the result of the pre-existing fatigue cracks, in combination with higher-than-normal landing loads.

According to the Pilot, there was a crosswind of '*8 or 9 knots*' when the aircraft landed. This is consistent with the southerly, 8-12 kt surface wind contained in the meteorological aftercast. The windsock visible in a video of the landing also indicates a southerly crosswind. The aircraft's demonstrated crosswind is 20 kt. The reported crosswind when the aircraft landed was less than this; however, its presence may have been a factor in the increase in sink rate prior to touchdown.

2.2 Crack Detection

Records indicate that an annual inspection, which included 50-hour and 100-hour tasks, was certified on 10 June 2022. The associated maintenance tasks included an inspection of the landing gear for *'corrosion and cracks ref sb 42'.* The referenced SB (Service Bulletin) requires an inspection of the area located around the shock strut upper attachment. It does not contain a requirement to check for cracks on the trailing arms. Also, there is no inspection requirement for cracks on the trailing arms in the periodical inspections chapter of the Maintenance Manual (Chapter III), where such requirements would normally be contained. However, an inspection for the presence of cracks is contained in Section 2.7 (Landing Gear) of the maintenance procedures chapter of the Maintenance Manual (Chapter II). Although there were several landing gear-related inspection items in the owner-declared AMP for the aircraft, this particular inspection was not included. However, the small size of the fatigue cracks and their location on the upper surface of the trailing arm, close to the pivot bush, would have made them difficult to detect in any case. Notwithstanding this, the Investigation advised the owner to consider including these inspections in the aircraft's AMP. The owner stated that he will update the AMP in this regard.

Metallurgical analysis concluded that if the trailing arm had not failed when it did, it was likely that the fatigue cracks would have continued to propagate with each successive landing. The metallurgist therefore considered it likely that a point would have been reached, at some time in the future, when the fatigue cracks would have grown to a length sufficient to cause a failure of the trailing arm, even under normal loading conditions. However, it is possible that such cracks could reach a size that would permit easier detection before a trailing arm would fail under normal loading conditions.

The Investigation notes that the type-certificate holder for the aircraft stated that it had not received any other reports of crack occurrences of the main landing gear trailing arm on the aircraft type, which was type-certified in 1961. Notwithstanding this, given the advancing age of the aircraft type, the Investigation considers that awareness of the inspection requirements could be improved if the inspection for the presence of cracks, as contained in Section 2.7 of the Maintenance Manual, was included in the periodical inspections chapter (Chapter III). The Investigation therefore makes the following Safety Recommendation to the Type Certificate holder:

> **Safety Recommendation No. 1**
>
> Daher should consider amending the Periodical Inspections Chapter of the Maintenance Manual for the Socata MS880B aircraft, and similar variants, to include a specific inspection requirement for the presence of cracks in the main landing gear trailing arms (**IRLD2023002**).

3. CONCLUSIONS

3.1 Findings

1. The Airworthiness Certification for the aircraft was valid.

2. The Pilot's Licence and Medical Certificate were valid.

3. During a crosswind landing on RWY 27 at Navan Airfield (EIHH), the aircraft appeared to touch down hard, and the trailing arm of the aircraft's left main landing gear fractured.

4. The type-certificate holder advised that it had not received any other reports of crack occurrences of the trailing arm on this aircraft type.

5. Metallurgical analysis of the fractured trailing arm identified two fatigue cracks on the upper part of the pivot bore, which had initiated from the two corners/edges of the upper surface of the trailing arm, close to the pivot bush.

6. The fatigue cracks had penetrated to a depth of approximately 1.5 mm prior to an instantaneous overload failure of the trailing arm.

7. Metallurgical analysis identified that fatigue crack initiation was primarily a function of the cyclic stress exerted on the arm, rather than any material defect in the arm itself.

8. Metallurgical analysis found that the initiation of the fatigue cracks was unlikely to be due to landing and ground loads alone, although additional sources of loading, which could explain the initiation of the fatigue cracks were not identified.

9. The fatigue cracks would have provided sites of stress concentration and likely caused the trailing arm to fail at a lower level of loading than would have been the case if the fatigue cracks had not been present.

10. Metallurgical analysis considered it possible that the fatigue cracks could have grown to a length sufficient to cause a failure of the trailing arm, even under normal loading conditions.

11. There was no inspection requirement for cracks on the trailing arms in the periodical inspections chapter of the Maintenance Manual, where such requirements would normally be contained.

3.2 Probable Cause

The left-hand main landing gear trailing arm fractured during landing as a result of pre-existing fatigue cracks, in combination with higher-than-normal landing loads.

3.3 Contributory Cause(s)

Nil.

4. SAFETY RECOMMENDATIONS

No.	It is Recommended that:	Recommendation Ref.
1.	Daher should consider amending the Periodical Inspections Chapter of the Maintenance Manual for the Socata MS880B aircraft, and similar variants, to include a specific inspection requirement for the presence of cracks in the main landing gear trailing arms.	IRLD2023002
	View Safety Recommendations for Report 2023-002	

- END -

In accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No. 996/2010, and Statutory Instrument No. 460 of 2009, Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulation, 2009, the sole purpose of this investigation is to prevent aviation accidents and serious incidents. It is not the purpose of any such investigation and the associated investigation report to apportion blame or liability.

A safety recommendation shall in no case create a presumption of blame or liability for an occurrence.

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