

Technical Report — Abnormal Tracker Operation Following the Side-Rivet Bearing Retrofit, Arctech SkyLine II

Plants: Angol · Falcon · Dinamo · Los Sauces I (PowerTree / Hergo / Infrastrutture portfolio)
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Ref. IEN-ARC-BRG-001 · Rev. 05 · 21 August 2026 · Scope: tracker bearing system and tracker operation only

1. Summary

In January–February 2026 Arctech installed side rivets on **444 bearing housings** at Angol, Falcon, Dinamo and Los Sauces I, as its corrective solution for a defect in which the two-piece plastic bearings of the SkyLine II tracker were separating and, in Arctech's own words, "trackers may be stuck" (Engineering Confirmation Letter, Rev. 00, 22 October 2025).

Since then, an abnormal operating condition has developed on the retrofitted trackers: they no longer turn smoothly, but move in jerks accompanied by a loud, repetitive knocking. On close inspection (11 and 17 August 2026) we found the **black plastic bearing displaced along the torque tube and pushed hard against the face of the bearing housing**, with rubbing marks and loss of material at the contact. At installation and at commissioning — carried out and signed off by Arctech — the bearings moved freely. At the positions inspected, they no longer do. We also recorded the noise while the trackers were moving (17 August 2026): a regular impact roughly every half second, stopping the instant the tracker stops.

This report presents our field findings and our working diagnosis. It does not pre-judge the root cause — that determination belongs to Arctech's engineering, and we formally request that investigation here. Our observations suggest the riveted bearings are no longer able to accommodate the movement they were designed to allow; why that is happening, and what the correct permanent solution is, are the questions we ask Arctech to answer, jointly with us, on site.

2. Background

Date	Event
9 Oct 2025	iEnergia formally reports failed bearing housings (2 Falcon, 1 Angol) with photographs. Arctech confirms on site the same day and escalates to its head office.
21 Nov 2025	Inventory of failed bearings reported to Arctech: Angol 7, Falcon 2 (+2 already repaired), Los Sauces I 1.
24 Nov 2025	Angol stopped for about a week; the production loss is reported to Arctech.
Dec 2025 – Feb 2026	Arctech contracts and executes the side-rivet retrofit on 444 bearing housings at Angol, Falcon, Dinamo and Los Sauces I. Work received 9 February 2026, with written observations: two further housings found broken and a count discrepancy at Falcon.
10 Feb 2026	Arctech confirms in writing that the 10-year structural warranty is not affected by the works.
May – Aug 2026	Jerky, audible tracker movement and row misalignment are observed on the retrofitted plants and worsen over the winter.

11 / 17 Aug
2026

iEnergia photographs the displaced bearings at close range and records the trackers in motion at two bearing positions.

3. What we found in the field

The photographs below were taken on 11 and 17 August 2026. The black plastic bearing has moved along the torque tube and is now **bearing hard against the face of the bearing housing**. Rubbing marks and powdery residue can be seen at the contact, and material has been lost there — the parts are being forced to move against each other at a surface that, in the original design, they did not load in this way.



Figure 1 — 11 August 2026. The black plastic bearing, displaced along the torque tube, pushed against the face of the Arctech bearing housing. The finger indicates the contact.



Figure 2 — the same contact, closer. Rubbing marks and residue where the plastic bearing meets the housing, and the small void where material has been lost.



Figure 3 — the assembly, general view. The hinged Arctech bearing housing clamped over the black plastic bearing on the galvanised torque tube.



Figure 4 — 17 August 2026. A second position, inspected six days later: same condition.

4. The noise, recorded and measured

On 17 August 2026 we filmed the trackers in motion at two different bearing positions, 75 minutes apart. Analysis of the two soundtracks shows:

- a loud, sharp impact roughly **every half second** while the tracker moves — 48 impacts in the first recording (27 s), 19 in the second (10 s), at an almost constant rhythm in both;
- each impact followed by a brief metallic ringing of the structure; and
- in the second recording, the noise **stops completely the moment the tracker stops moving**.

Wind or background noise does not keep a steady rhythm, and does not switch off with the tracker. The recordings and the full analysis are annexed.

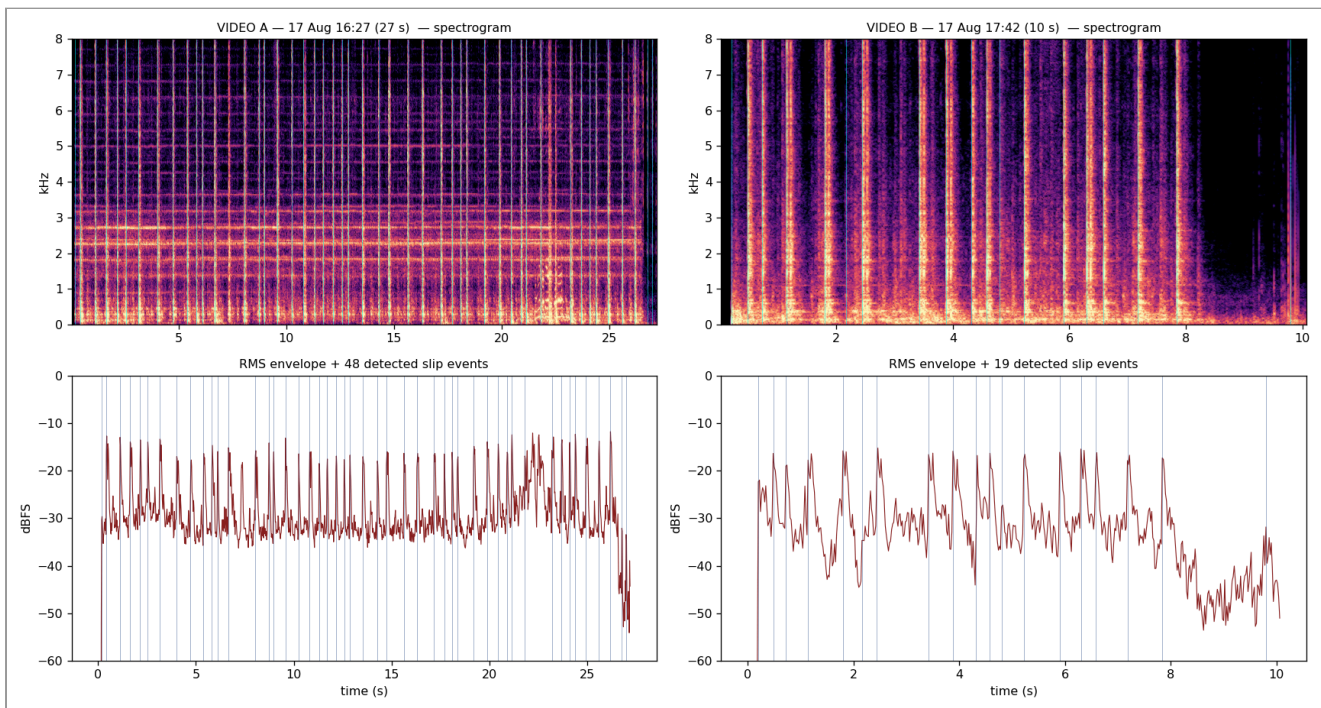


Figure 5 — sound analysis of the two recordings. Each vertical line is one impact. Left: 27-second recording, 48 impacts. Right: 10-second recording, 19 impacts; all activity ceases at ~8 s when the tracker stops.

5. Our working diagnosis — for Arctech's investigation

We put forward the following as our reading of the evidence. **It is a diagnosis, not a conclusion**, and we ask Arctech's engineering to investigate and either confirm or correct it.

The original design treats the bearing as a floating component. Arctech's own installation manual for these plants (2024022009, Los Sauces 1) is explicit about this: *"The Bearing House should be not be tightened when it is installed, since it will adapt itself when the Torque Tube is totally aligned."* The assembly also includes dedicated Plastic Bearing Stoppers to manage the bearing's position, and the manual's tolerance tables give the bearing generous freedom where the design expects movement — **±12 degrees of angular self-alignment** in the north–south direction and **±3 degrees in clocking** — while the corresponding allowance along the tube axis is only **±1.5 mm**. The same tables permit the posts themselves **±2 degrees of plumbness north–south** and **±1 degree east–west**, with the post seat square

to the tube within **±0.5 degrees**. In other words: by Arctech's own documentation, the system was designed to tolerate angular variation generously, and the bearing was meant to remain free.

The side rivets changed that: the bearing is now fixed to the torque tube. What we observe in the field is that the fixed bearings have been driven along the tube until they bear against the housing, and that the trackers then bind and release in steps. One mechanism we have considered, and which appears consistent with the pattern — its emergence over months, and its worsening through the colder season — is the natural change in length of the steel tube with temperature, which the bearing can no longer let pass now that it is fixed to the tube. But we present this only as a working hypothesis. Whether the driver is thermal movement, tolerance take-up, wear, a combination of these, or something else, **is precisely what Arctech's root-cause investigation needs to establish** — with the actual row geometry, drive positions and bearing condition examined jointly on site.

Whatever the cause, operating in this condition is not acceptable to leave unattended: the stepped release visibly shakes the structure at every event, the drives work against a restraint they were not designed for, the bearing is wearing at a surface not intended to carry load in this way, and tracking smoothness and row alignment are degraded. Two housings had already re-failed by the time the retrofit was received. The condition is progressive.

6. The earlier validation

The rivet solution was supported by a test at Arctech's Kunshan facility (report CN25K8OP001, witnessed by TÜV Rheinland). We have read it in full. Within its scope it was a fair durability test of the riveted joint — but it used a single 10-metre span, applied no measurement of turning force, and recorded, without comment, a loss of 6.9 g of bearing material (about 2 %) during the test. Conditions of the kind we now observe in the field — full row lengths, bearings displaced to the end of their travel, binding under drive load — were outside what that test could reproduce or detect. We therefore ask that it not be treated as closing the matter.

7. What we request

Under the SkyLine II 10-year structural warranty — which Arctech confirmed in writing (10 February 2026) is unaffected by the retrofit — we request:

#	Request
1	Acknowledgement of this claim and the opening of a formal warranty investigation into the condition reported here.
2	Arctech's recommendation for interim operation of the affected trackers while the investigation is under way.
3	A root-cause investigation by Arctech engineering into the displacement of the plastic bearing against the housing and the binding/knocking during movement, taking into account the as-built row geometry and the bearing freedoms defined in Arctech's own installation manual, and including the condition of the rivet connections to the tube.
4	Information on any revised bearing design or solution developed by Arctech subsequent to the side-rivet solution, and its applicability to these plants.
5	A joint site inspection with Arctech engineering present, at a plant of Arctech's choosing, to open and examine a sample of bearings and record their condition on an agreed basis. We will make personnel, access and equipment available.

6	The as-built register of the 444 retrofitted positions, by plant and tracker.
7	Once the root cause is established, a permanent corrective solution supplied and installed at Arctech's cost across all affected positions, with a method statement and a warranty on the corrective works.

Given the operating condition described, we would appreciate Arctech's early response, beginning with items 1 and 2.

We reserve, to be quantified separately as applicable: lost generation; wear and consequential damage to drive components and structure arising from operation in this condition; our inspection and engineering costs; and any consequential damage to other plant equipment attributable to the abnormal tracker operation. Nothing in this report waives any right or constitutes any admission by Visibility S.A. / iEnergia.

8. Closing

iEnergia reported the original bearing failures within days, in October 2025; supported Arctech's corrective campaign and received it under written observations; and, when the trackers began operating abnormally after that campaign, documented the condition with photographs and recordings. We offer this report in the same constructive spirit: as the starting point for a joint investigation that establishes the true cause and leads to a durable fix. We remain available for a technical call and can host Arctech's engineers at any of the affected plants.

Annexes: A — Bearing inspection photographs, 11 and 17 August 2026. B — Field videos with audio, 17 August 2026 (27 s and 10 s), with the sound analysis. C — Arctech Engineering Confirmation Letter, Rev. 00, 22 Oct 2025. D — TÜV Rheinland test report CN25K8OP001. E — Bearing correspondence, Oct 2025 – Feb 2026. F — Work reception record, 9–10 Feb 2026.

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