ACCIDENT

Aircraft Type and Registration:	Piper PA-28-236, G-CSBD	
No & Type of Engines:	1 Lycoming O-540-J3A5D piston engine	
Year of Manufacture:	1981 (Serial no: 28-8211019)	
Date & Time (UTC):	27 February 2022 at 1300 hrs	
Location:	Old Buckenham Airfield, Norfolk	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Rudder damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	64 years	
Commander's Flying Experience:	4,330 hours (of which 1,000 were on type) Last 90 days - 32 hours Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries made by the AAIB	

Synopsis

On roll out, after landing, the pilot made a rudder input to counter a crosswind gust. As he did so there was an immediate onset of a violent nosewheel shimmy which dissipated as the aircraft slowed to 20 kt. The shimmy appeared to have been caused by a foreign object becoming trapped between the nosewheel tyre and the wheel spat.

History of the flight

The aircraft had landed at Old Buckenham Airfield with a 15 kt crosswind. During the rollout the pilot described encountering a crosswind gust which he corrected with a rudder input. This immediately initiated a violent nosewheel shimmy which the pilot felt made the aircraft "virtually uncontrollable". As the aircraft slowed to 20 kt, the shimmy subsided, and it continued to taxi normally.

Subsequent investigation

Examination of the aircraft found that the rudder had been damaged and that the nosewheel tyre sidewall had also been severely damaged. This sidewall damage appeared to have been caused by a foreign object, probably a stone, getting trapped between the wheel spat and tyre. In the absence of any other faults with the nosewheel steering and rudder system, it is suspected that this caused the shimmy which then led to the rudder damage.

AAIB Observation

In this case it is not known when, how or where the foreign object was picked up. However, the AAIB have reported on several occurrences where aircraft wheel spats have been causal or contributory factors to accidents. In one case, wheel spat mud contamination was a contributory factor in a fatal accident.

As a result of these previous accidents, the CAA drew attention to *'Safety Sense Leaflet 12 - Strip Flying'* and reminded owners of aircraft fitted with wheel spats to take account of ground conditions and to take care to ensure wheel spats are clear of contamination.