Analysis

The student pilot was conducting a cross-country personal flight. The student pilot reported that, while in cruise flight, the single-engine airplane lost power. He then performed a forced landing to a field, during which the wings and firewall were damaged.

Examination of the engine revealed damage consistent with lubrication distress. Further, a cylinder piston pin was found broken, and metal was found in the oil pickup screen and in the oil filter, which had recently been changed. It is likely that the degraded piston pin was the source of the metal in the oil, which clogged the oil inlet screen and reduced the amount of oil available to the engine and resulted in the loss of engine power. A nonmechanic had performed preventative maintenance and changed the oil and oil filter shortly before the accident. He reported that he noticed the metal in the filter but did not consider it to be an indication of a problem.

Flight Events

Enroute - Loss of engine power (total)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The failure of a cylinder piston pin, which resulted in an obstructed oil inlet screen, reduced the amount of oil available to the engine, and led to the subsequent loss of engine power. Contributing to the accident was the failure of the nonmechanic, who had recently changed the oil and oil filter, to recognize that metal in the filter was indicative of a problem.

Findings

Aircraft-Aircraft power plant-Engine (reciprocating)-Recip engine power section-Failure - C
Aircraft-Fluids/misc hardware-Fluids-Oil-Fluid level - C
Personnel issues-Task performance-Maintenance-Scheduled/routine maintenance-Other/unknown - F
Pilot Information

<table>
<thead>
<tr>
<th>Certificate:</th>
<th>Student</th>
<th>Age:</th>
<th>34</th>
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<tbody>
<tr>
<td>Airplane Rating(s):</td>
<td>None</td>
<td>Instrument Rating(s):</td>
<td>None</td>
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<tr>
<td>Other Aircraft Rating(s):</td>
<td>None</td>
<td>Instructor Rating(s):</td>
<td>None</td>
</tr>
<tr>
<td>Flight Time:</td>
<td></td>
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</tbody>
</table>

Aircraft and Owner/Operator Information

| Aircraft Make: | PIPER | Registration: | N5196L |
| Model/Series: | PA 28-180 180 | Engines: | 1 Reciprocating |
| Operator: | Coyote Flight | Engine Manufacturer: | LYCOMING |
| Operating Certificate(s) Held: | None | Engine Model/Series: | O-360 SER |
| Flight Conducted Under: | Part 91: General Aviation - Personal |

Meteorological Information and Flight Plan

| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | KAMA, 3604 ft msl | Weather Information Source: | Weather Observation Facility |
| Lowest Ceiling: | None | Wind Speed/Gusts, Direction: | 18 knots / 26 knots, 160° |
| Temperature: | 30°C | Visibility | 10 Miles |
| Precipitation and Obscuration: | No Obscuration; No Precipitation |
| Departure Point: | AMARILLO, TX (AMA) | Destination: | CHILDRESS, TX (CDS) |

Wreckage and Impact Information

| Crew Injuries: | 1 Minor | Aircraft Damage: | Substantial |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Latitude, Longitude: | 34.949444, -100.878056 (est) |

Administrative Information

| Investigator In Charge (IIC): | Jason T Aguiera | Adopted Date: | 10/17/2017 |
| Note: | The NTSB did not travel to the scene of this accident. |
| Investigation Docket: | http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=94149 |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.
The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.