

EXAMINATION NOTES

-Total Tach Time: 587.73 (last annual 565.30 on November 04, 2014 at a total airframe time of 3,131.3)-

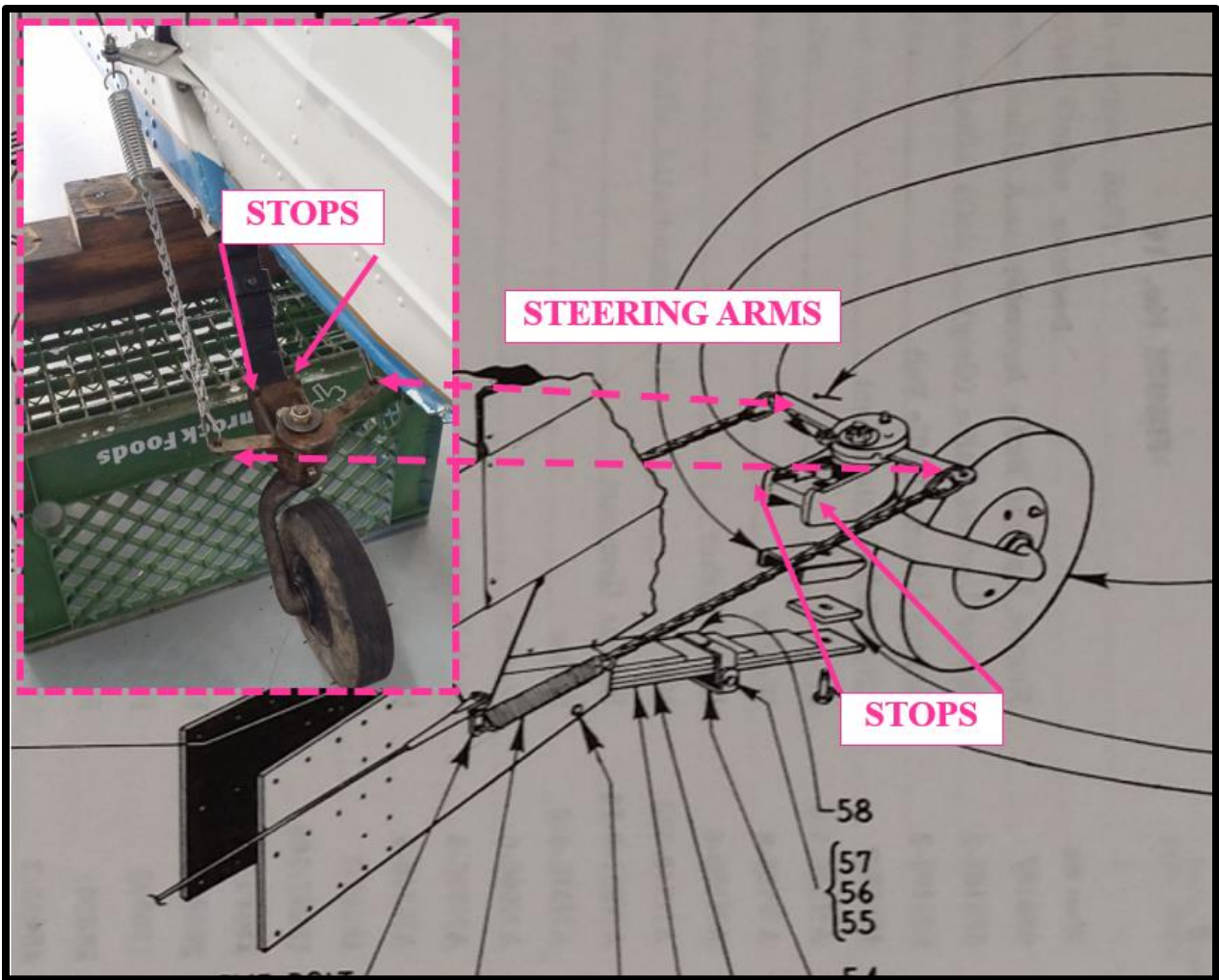
The Luscombe 8a was equipped with a Scott 3-24B tailwheel (now Scott 2000), with a steerable six-inch rubber tire that has full-swivel capability. The airplane came to rest on the edge of the runway with the right landing gear collapsed and folded under the fuselage. The tailwheel steering chains remained affixed to their respective rudder horns as well as their respective steering arms mounted on the tailwheel body. The tailwheel had rotated over 180-degrees and was canted to the left leaving the chains crossed over one another.

According to the Scott 3-24B Handbook, "The tail wheel assemblies provide directional control throughout full rudder travel of the aircraft while the tailwheel is in contact with the ground. The assemblies will automatically full-swivel only well after the maximum point of air rudder control is reached in either direction... The tailwheel steering and release mechanism is so designed that 65-degrees of tailwheel turn (or travel) is provided either right or left from neutral steering position before the mechanism begins to release."

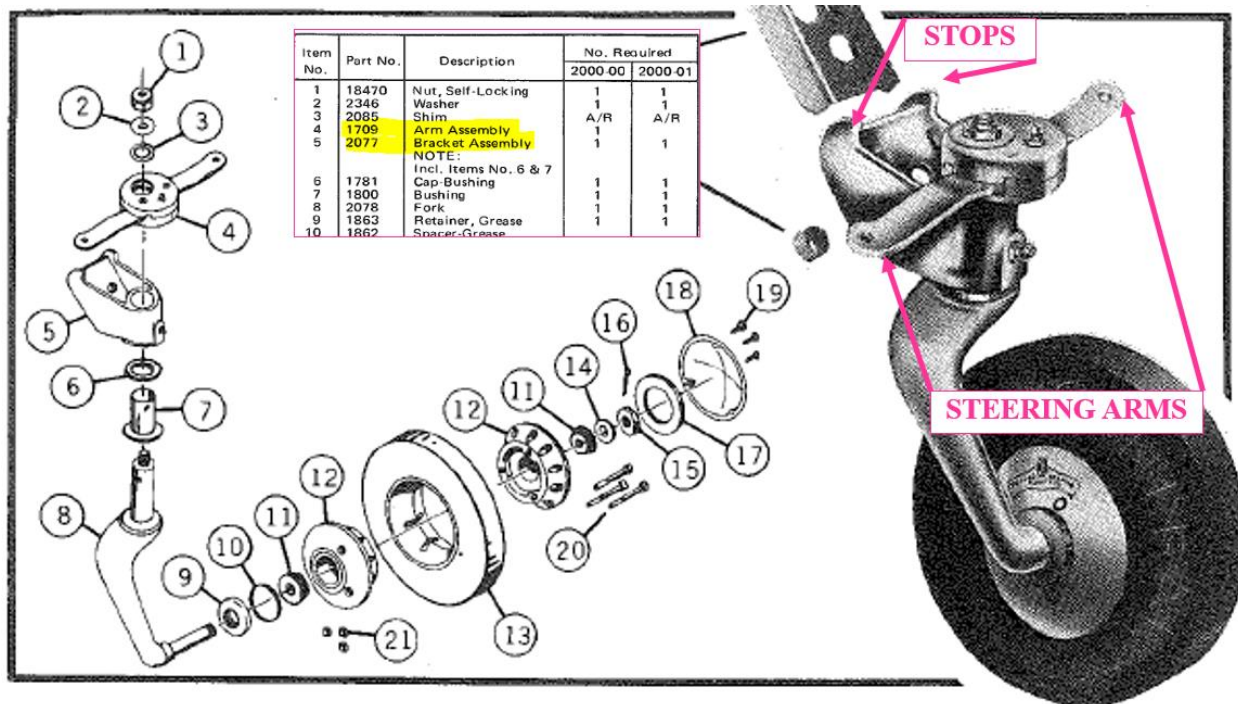
A post accident examination revealed that arms of the steering arm were bend upward; the right arm more excessively. The bend was significant enough that the arm was able to clear over the stop allowing the steering head to continue on around to the reversed position. This prohibited the wheel from releasing into the freely castering mode. Additionally if the wheel continued past the stops, the steering would become reversed with the chains crossed.



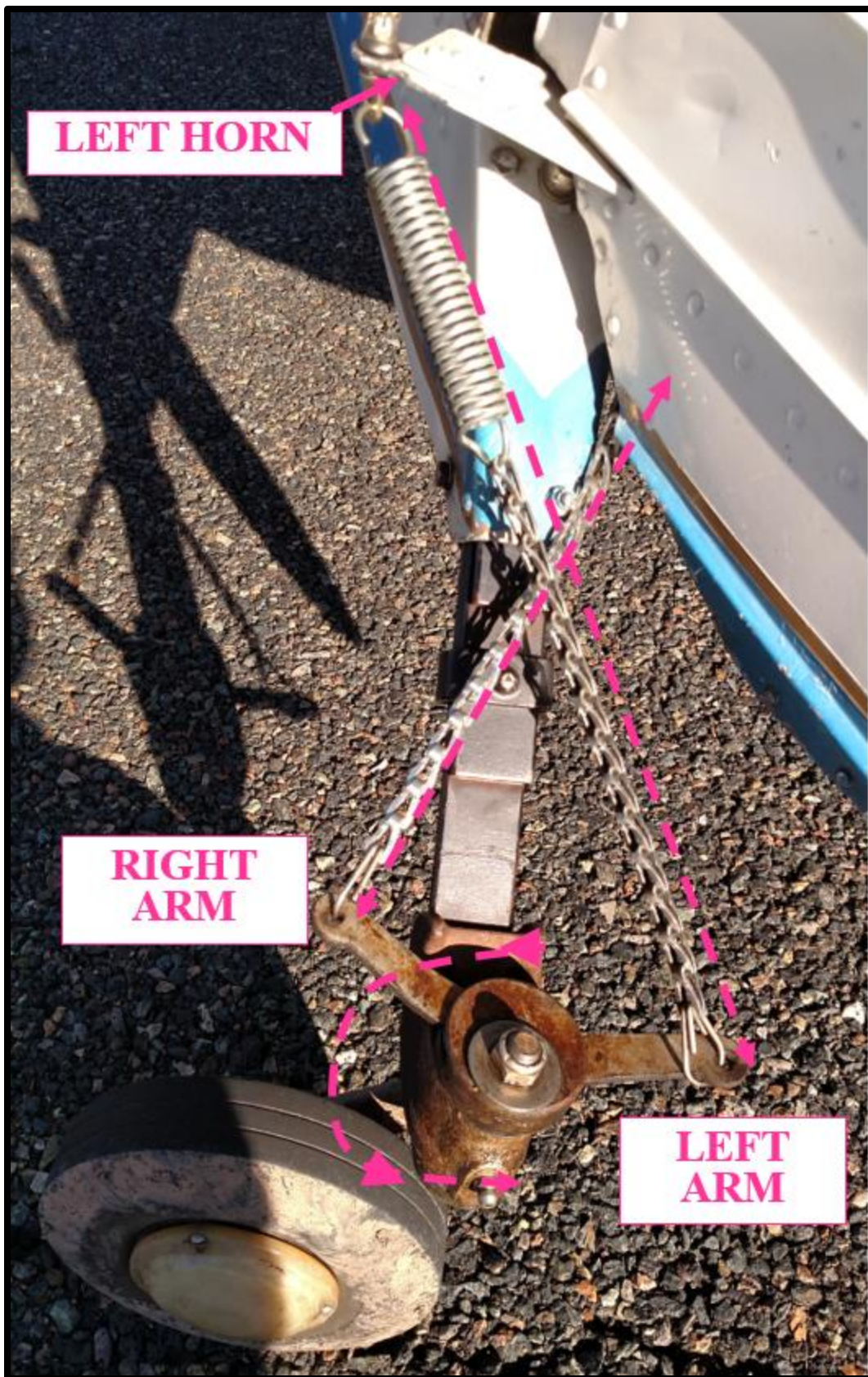
Picture 1: Accident Site



Picture 2: Illustrated Parts Catalog and Airplane After Recovery



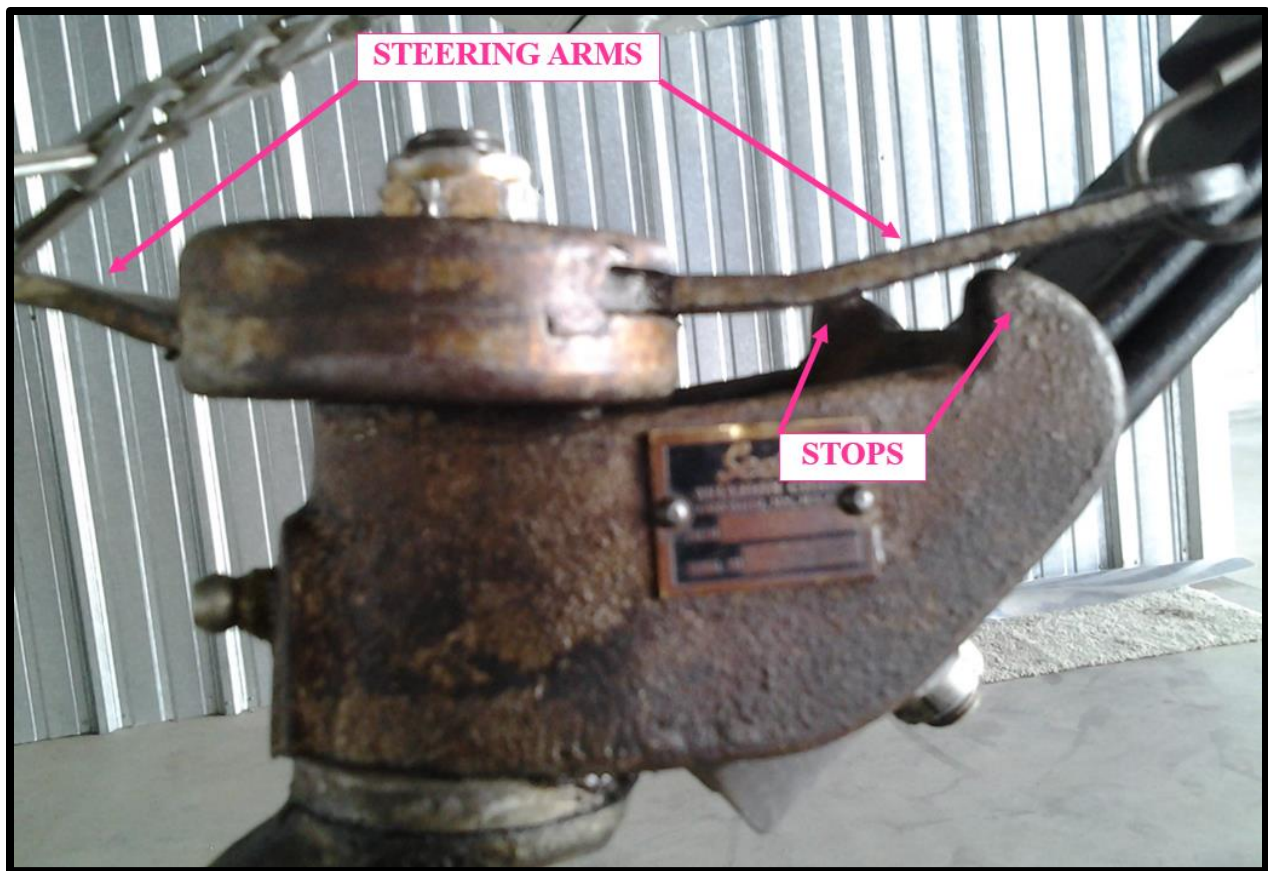
Picture 3: Diagram of the Scott tailwheel



Picture 4: At Accident Site (rotated over 180-degrees)

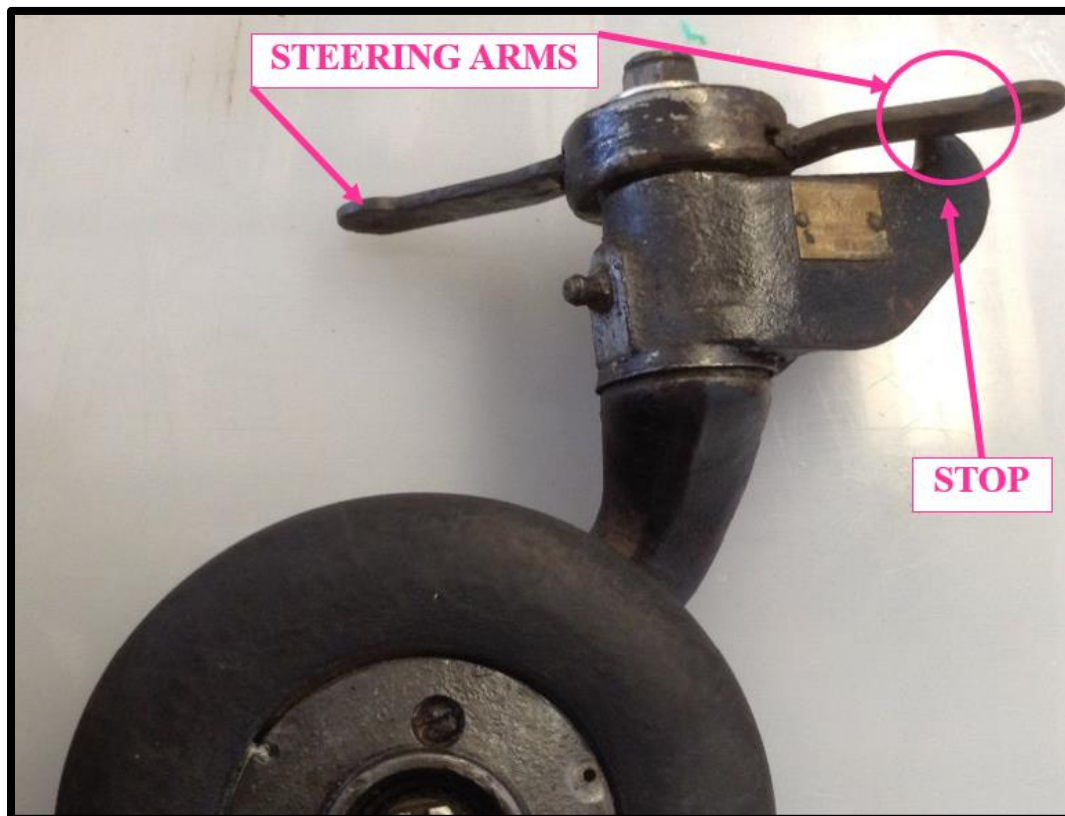


Picture 5: At Accident Site (steering arm bent upward)

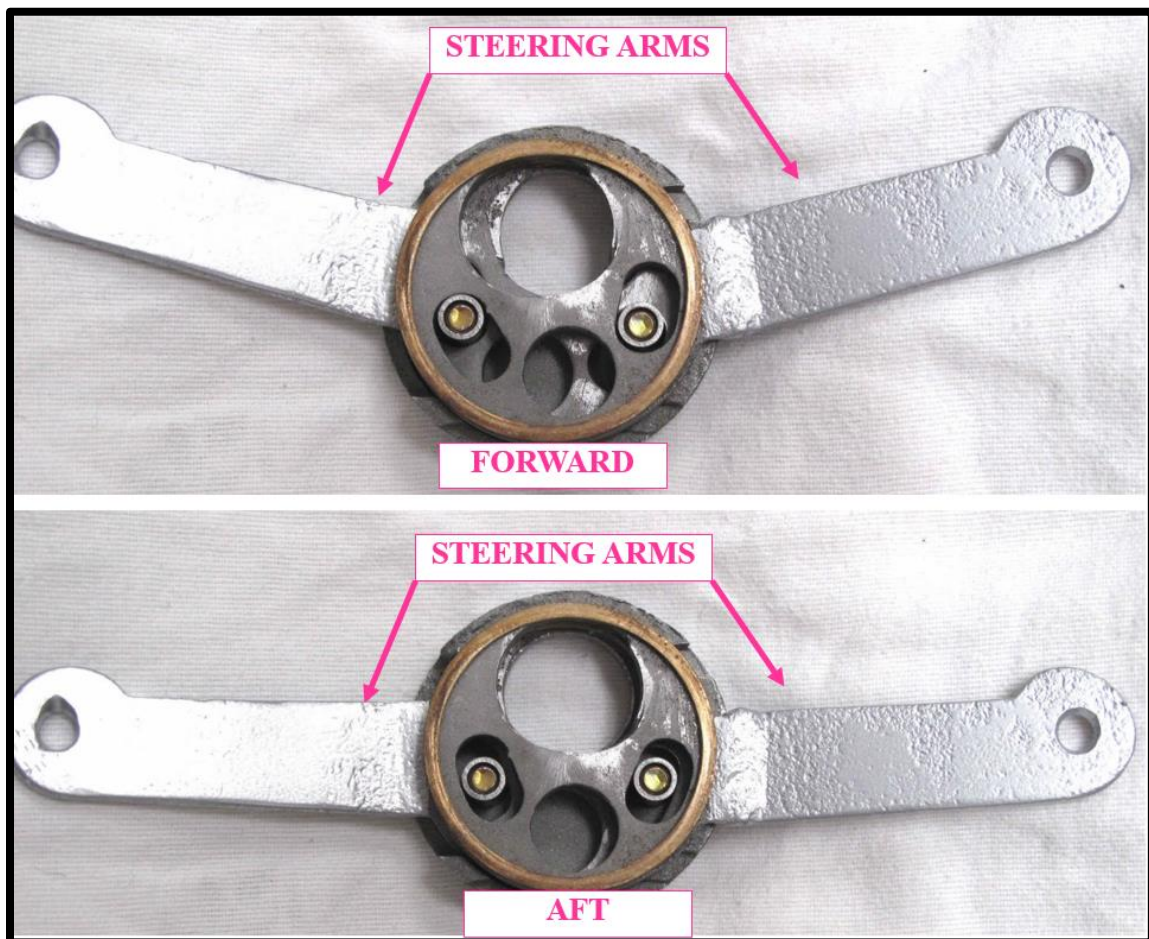


Picture 6: Steering arm bent upward (profile)

EXEMPLAR TAILWHEELS



Picture 7: Exemplar steering arm contacting stop (profile)



Picture 8: Exemplar steering arm inside (slides in grooves with tension of springs when attached)



Picture 9: Exemplar steering arms bent upward



Picture 10: Exemplar steering arms misaligned