



Ariens Company
655 W. Ryan St.
Brillion, WI 54110
www.ariens.com

Service Bulletin

Product Family: 920 Series Sno-Tek™ Snow Throwers

Subject: LCT Engine Oil Drain Tube Seepage

Dealer Action: Inspect and Correct as Necessary

Ariens Company has been notified by LCT Engines (Liquid Combustion Technology) that there is a potential for oil seepage from the oil drain tube on some engines used on Ariens Sno-Tek™ snow throwers.

LCT has released the following Technical Service Bulletin which identifies the issue and explains steps to take if a machine displays this defect. Please read the attached bulletin and inspect and repair all Sno-Tek models in your inventory per the instructions in the bulletin.

If you need to contact LCT USA customer service please have the Ariens model and serial numbers and LCT engine model and serial numbers available. Dealers can contact LCT USA customer service at 800-552-8094 for information on any warranty claims.



*Liquid Combustion
Technology*

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Oil Drain Tube Oil Seepage 9/28/2011

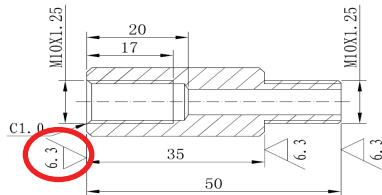
PROBLEM DEFINITION:

Oil Seepage from 35mm Drain Tube Reported by customer. After internal inventory audit, seepage was confirmed. Further Investigative Analysis determined:

35mm Oil Tube Face (crush washer engagement area) does not meet surface finish drawing specification of 6.3um

Short Term Corrective Action:

LCT recommends increasing drain bolt torque to 23lb-ft to allow crush washer to fill excessive ridges/valleys caused by the out of specification surface finish:



- Capability study was conducted on 30pc of Oil Drain Tubes removed from inventory product
 - Engines were filled with oil and monitored over a 24hr period
 - 5pcs of the 30 were observed to have an oil witness mark below oil drain bolt (35mm drain tube side)
 - Oil Drain Tubes were removed from engines and service Oil Drain Tubes (with correct surface finish) installed and torqued and engines were placed back into inventory
 - Removed Oil Drain Plugs were then torqued to 23lb-ft and pressurized in a submerged state to look for joint seal failure. No failures were observed after torque was increased to 23lb-ft



30pc Oil Drain Tube Samples
- Samples were torqued to 23lb-ft
- Samples were pressurized and submerged
- No leaks were detected

Long Term Corrective Action:

- Currently working with supplier to determine root cause of oil drain tube missing the facing operation
- Will update with full 8D report once final root cause has been determined

Containment Activities:

- Inventory audits were conducted with product in South Carolina warehouse
- Product with May 25th date code (>15000 engine serial number) was discovered to have the “non faced” machining condition
- Product from August 6th (<8000 engine serial number in August) was discovered to have correct machined face surface area
- Total engine exposure based on the 5/30 statistical sample—5689