

AeroShell



BRIEFING NOTE – 27th March 2022

AeroShell Grease 5, 6, 7, 22

Dear Customer,

Further to our letter dated 25th January 2022, we would like to provide you with an update regarding the on-going supply disruption for the following grades:

- AeroShell Grease 5
- AeroShell Grease 6
- AeroShell Grease 7
- AeroShell Grease 22

At this time, we are encountering ongoing supply disruption for these grades owing to the loss of manufacturing capabilities at our supplier's facility.

As a top priority, AeroShell have formed a dedicated team to evaluate our supply continuity plan. We are taking reasonable steps to mitigate the effects of this event and have, amongst others, worked to assess alternative grease solutions that can be considered for use if approved by the equipment manufacturer. We remain ready to work with equipment manufacturers to confirm the suitability of the alternative greases listed on page 3, and our dedicated technical team are at your disposal to support you.

Suitable manufacturing capacity at both Shell-owned and third party operated facilities have been identified. We can confirm that initial production has commenced for certain grades (ASG 7 and ASG 22), with production planned for ASG5 and ASG6 from end Q2 of 2022. Large pack sizes (drums and pails) will be prioritised initially, and small packs (tins and cartridges) are estimated to commence production in late May.

We estimate that initial inventory will reach our global warehouse network from early May. To expedite supply, we additionally intend to selectively air freight inventory across our global supply network. Given the on-going global logistics constraints, we anticipate that fully restoring inventory to normal operating levels for all SKUs may take six months. However, please note that the time frames stated are an estimation not confirmed timelines.

As previously communicated, ahead of sustained supply being restored, we will continue to proactively manage our existing inventories. Orders will be allocated on a case-by-case basis until further notice. We appreciate that this may mean we are unable to fulfill certain orders for the impacted grades, and please

accept our sincere apologies for any inconvenience that this may cause to you. The situation remains dynamic and we are committed to keeping you fully updated.

Your AeroShell Account Manager remains available to discuss any specific concerns you may have. In the meantime, we thank you for your patience and cooperation as we work hard to resolve the issue.

Yours faithfully,

Saskia Boeve

Global General Manager
Shell Aviation Lubricants
Shell Centre
London SE1 7NA

Appendix

Proposed Alternatives

Customers should choose the appropriate products for their needs and refer to the OEM's manuals. Options for consideration are:

- **AeroShell Grease 5:** ASG 5 is approved by OEMs and to Mil-G-3545C (obsolete). Subject to the approval of the OEM, AeroShell Grease 58 may be an acceptable alternative, in particular for wheel bearing applications where ASG 58 is already approved for Parker and other OEM wheels. ASG 58⁽¹⁾ has also been used as a General Aviation aircraft grease following specific OEM approval.
- **AeroShell Grease 6:** ASG 6 is the only grease approved to MIL-PRF-24139A (NATO Code G-450). There are no currently identified alternatives.
- **AeroShell Grease 7:** ASG 7 is the only grease approved to MIL-PRF-23827 Type II. Subject to the approval of the OEM, AeroShell Grease 33⁽²⁾ may be an acceptable alternative. ASG 33 is approved to MIL-PRF-23827 Type I and a favoured general aircraft grease by leading OEMs.
- **AeroShell Grease 22:** ASG 22 is approved to MIL-PRF-81322, DOD-G-24508 (NATO code G395). Subject to the approval of the equipment OEM, AeroShell Grease 58 may be an acceptable alternative, in particular for wheel bearing applications where ASG 58 is approved for many applications.

The mixing of Microgel[®] or clay thickened grease with other thickener types should generally be minimized or avoided.

Lithium complex grease generally has superior additive tolerance allowing for more sophisticated performance characteristics such as corrosion protection, load carrying ability, and mechanical stability.

(1) ASG 58 is a synthetic hydrocarbon, lithium-complex-thickened grease designed as the next generation wheel bearing grease. ASG 58 is approved to SAE AMS 3058. It shares the same technology proven AeroShell Lithium Complex thickener systems used in ASG 33 and ASG 64.

(2) ASG 33 is lithium-complex-thickened grease with synthetic hydrocarbon and ester base oil and is an industry accepted alternative to ASG 7. It is approved to MIL-PRF-23827 Type I, Boeing BMS 3-33 and SAE AMS 3052. There is an aviation industry trend to move away from clay-based grease such as Microgel to lithium complex grease.