

## Addendum 1 to Safety Alert for A100-M radial type turbochargers

Dear Madam, Dear Sir

This addendum is in reference to **Service News 02/2016** which describes a possible safety hazard associated with ABB turbochargers of the type A100-M radial (A130-M, A135-M, A140-M, A145-M, A150-M and A155-M), and provides in detail safety measures that are immediately to be taken for the safe operation of the turbocharger.



### Action

As an immediate interim measure, operators of ABB turbochargers of the type A100-M radial are advised to limit their direct exposure to the concerned turbochargers to the necessary minimum during start-up and operation of the engine. This comprises of:

- Limiting exposure to the concerned turbochargers to maximum 15 minutes per day during start up or operation of the engine.
- In case longer stays are required, e.g. due to service work next to an operating turbocharger of this type, ABB recommends to shut down the engine to which personnel are directly exposed, as per Fig 1: Engine shut down overview.
- In cases where a shut down of the respective engine(s) is not possible, activities requiring longer stays directly exposed to turbochargers of this type shall be rescheduled to a time when a shut down is possible, or postponed until further notice.



Figure 1: Engine shut down overview

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Unless otherwise expressly set forth, no recommendation contained in this document is to be construed as provided due to a defect in the turbocharger, but merely as an improvement of the turbocharger and/or the maintenance procedures relating thereto. Any actions by the owner/operator as a result of the recommendations are not covered under any warranty provided by ABB and such actions will thus be at the owners/operators own cost and expense.

- If it is neither possible to shut down, nor postpone service activities due to extreme circumstances ABB recommends to run the engine above 70% load for at least 30 minutes in order to burn unburnt fuels that have potentially been accumulated during lower load operation in the exhaust gas system. This shall be done before any longer presence / direct exposure to a turbocharger of this type is conducted.
- During exposure times, engine load shall be kept at constant load (50-70%).

When present of an operating turbocharger of the concerned type, ABB recommends to take further precautions by being aware and further limiting exposure to the zones of increased risk.

For zones of increased risk, please refer to Figures 2-4: Zones of increased risk below.

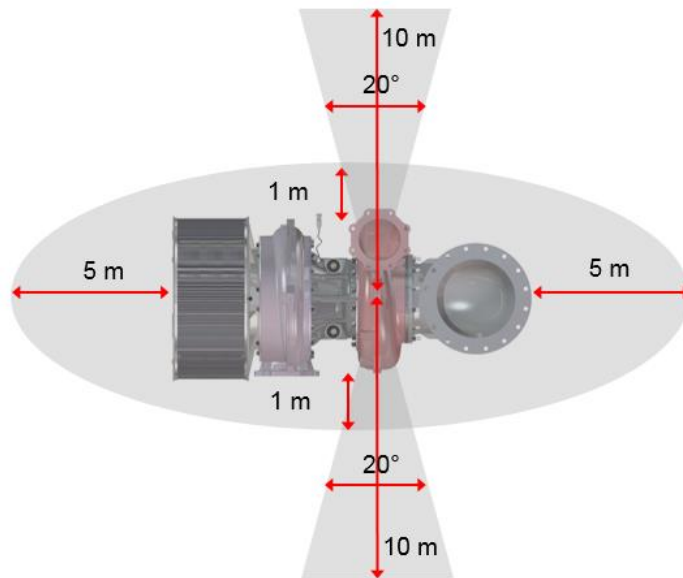


Figure 2: Zones of increased risk – turbocharger top view

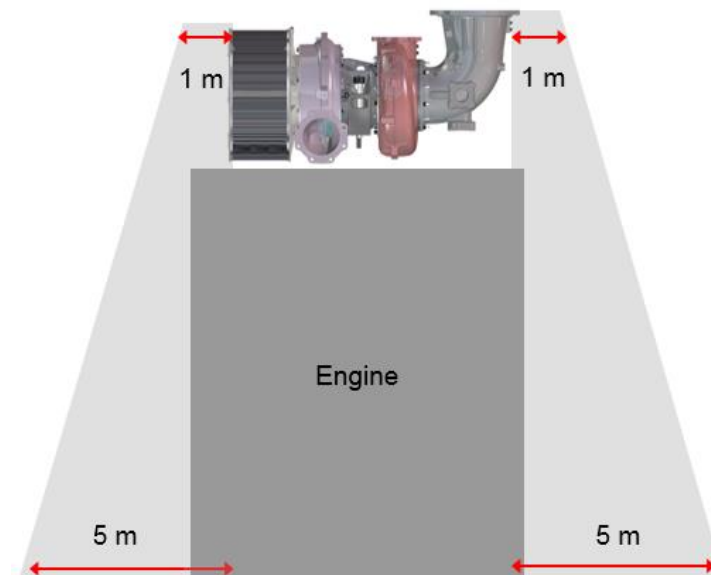


Figure 3: Zones of increased risk – engine front view

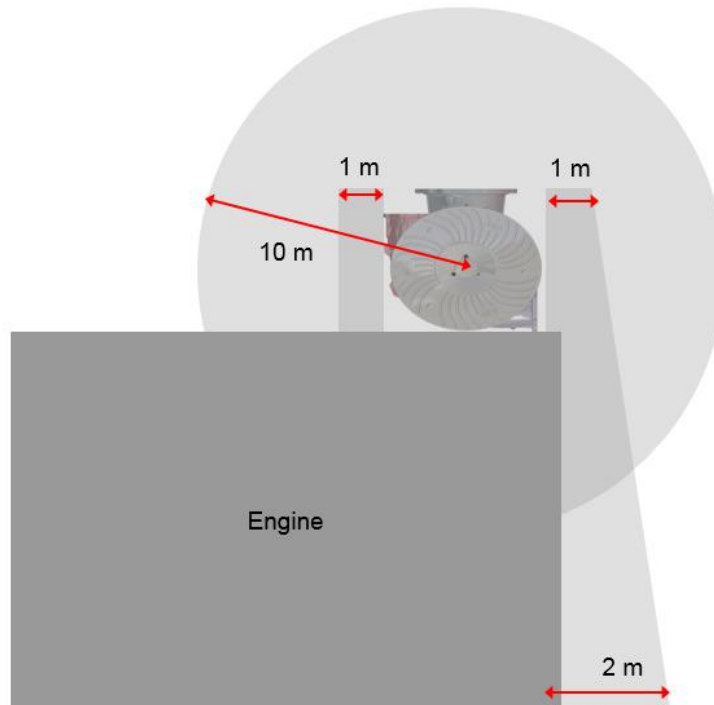


Figure 4: Zones of increased risk – engine side view

This safety measure should be observed immediately in order to minimize the risk of harm to people. Please also refer to the safety instructions in the operation manual.

Non-adherence to this recommendation can lead to serious injuries or fatal accidents.

### Further root cause analysis - next information

Next steps: ABB is currently evaluating, with top priority, which turbocharger sizes and types of the A100-M radial family are affected.

Further information will be issued latest by end of July, 2016.

If you have any questions, please do not hesitate to contact Christoph Baur, General Manager Technical Operations, ABB Turbo Systems Ltd, Switzerland ([christoph.baur@ch.abb.com](mailto:christoph.baur@ch.abb.com)) or if out of office his deputy, Rene Stoverink ([rene.stoverink@ch.abb.com](mailto:rene.stoverink@ch.abb.com)).

Safety and quality are top priorities at ABB. We apologize for the inconvenience this matter may cause and would like to thank you for your support.