



**EV3/2020 ("Karoli"), issued 15.10.2020**

Language regime

Neither of the parties or their representatives are from Finland and both parties present their cases in English. The adjustment is issued on the basis of the Act 10/1953 on Marine Insurance Adjustments by the Average Adjuster and is therefore appealable. It is therefore recalled at the outset that cases may be tried before the appellate instances, the Maritime Court of Helsinki and, as the case may be, the Supreme Court of Finland, only in the two national languages of Finland, Finnish or Swedish. In order to facilitate a potential appeal, the adjustment is issued both in the Finnish and English languages, English being the language of the application and that used by the parties in their submissions. In the case of discrepancy between the two language versions, the text of the adjustment in the Finnish language is stated to prevail. This summary is composed in the English language.

The events

The parties are unanimous about the underlying events. There were two occurrences of turbocharger damages, one on 11.10.2018 and the other on 8.5.2019. The word 'occurrence' is used in this Adjustment in a neutral meaning without indicating whether the two occurrences constitute one or two casualties under the H&M (Hull and Machinery) Policy. Thereby this Adjustment follows the language of the applicable insurance conditions, the Nordic Marine Insurance Plan 2013, Version 2016 (hereinafter NMIP). The basic circumstances, not contested by the Owners, have been described by the Underwriters as follows:

Occurrence I

On 10.11.2018 main engine (ME) turbocharger (TC) of the Vessel got damaged during pilotage to port Kristiansand. ME was stopped and the vessel was towed to the berth.

H&M surveyors attended on board as and carried out the survey at anchor in the inner road of Kristiansand. It was identified that the TC was complete overhauled during latest dry docking of the Vessel in July 2018 by company A. The overhaul included complete rotor exchange for the new one. Running hours from last overhaul of TC was approximately 1100 hours. Service engineers from A also attended on board.

H&M surveyors compiled a survey report. The surveyor referred to the service report from A. The Underwriters also applied for additional comments from company F, whose expert inspected the damaged turbocharger on board and compiled the F report.

Company B also carried out investigations and issued a report but were not present on board. B issued its investigation report based on collected documents. Following the incident, the complete turbocharger was replaced. A completely new turbocharger with all components was assembled by company T.

The Underwriters adjusted Occurrence I with Adjustment I and the net claimed amount was EUR 18.737,83 after deducting EUR 50.000 as explained below under Occurrence II.

#### Occurrence II

The Vessel was on a laden voyage from Kokkola, Finland to Tarragona, Spain via Kiel Canal on 8.5.2019. The voyage passed without event until the Vessel was passing through the English Channel on 8.5.2019, when the turbocharger failed at 20:00 hours. The Vessel was at approximately 32 nautical miles south of the entrance to the port Poole, UK. The vessel drifted while the crew dismantled the turbocharger and fitted the blanks to allow limited operation of the main engine. The Vessel arrived at Poole roads and dropped anchor on 9.5.2019. As reported by the Owners, T engineers arrived on board whilst the vessel was at anchor and collected turbocharger before surveyor attendance.

On 9.5.2019 at 13:20, the Vessel proceeded to Poole port, being all fast alongside South Quay at 15:05 the same day.

H&M Surveyor D on behalf of S initially attended on 10.05.2019 and reviewed damaged parts which had been landed at that time alongside at Poole.

After a discussion between the parties about a possible impact of vibration on the turbocharger damage, the underwriters asked the Owners whether indeed the vibration at the main engine had been abnormally increased and that it could have impacted the operation of the turbocharger, the Owners provided a measurement report.

The Underwriters adjusted Occurrence II with Adjustment II.

#### Insurance cover and the dispute

The applicable insurance conditions are the NMIP Chapters 1-13 on “full conditions” as per Clause 10-4. The “full conditions” cover provides for indemnification unless any of the exceptions of the NMIP apply. The Underwriters considered both occurrences fortuitous and held the Owners covered for costs of the turbocharger repairs or replacements.

The dispute in this matter is whether the Occurrence I and Occurrence II can be treated as one casualty, or two separate casualties. The Underwriters consider that there are two separate casualties whereas the Owners have the view that the two Occurrences constituted only one casualty. The significance of the dispute is whether one or two deductibles should be applied. Theoretically, the same problem could emerge in a situation, where the sum insured for one casualty would be reached. There is a Deductible of EUR 25.000 for each and every casualty as per Clause 12-18 and Machinery damage deductions of EUR 25.000 for each and every casualty as per Clause 12-16 of the NMIP. The Underwriters have applied these two deductions in

Adjustment II after which the net claimed amount was EUR 3.377,66. Should the two occurrences be considered as one casualty, the net claimed amount would be EUR 53.377,66.

### Positions of the parties

The Underwriters consider Occurrences I and II different casualties and the Owners as one casualty.

The Underwriters have referred to their submissions in the e-mail dated 18.5.2020. In that message the Underwriters state, as the Average Adjuster reads it, that only one and same cause for two occurrences can make them one damage with single set of deductibles. Furthermore, the Underwriters refer to the complete replacement of the turbocharger between the two occurrences.

The Underwriters further refer to the commentaries of Clause 12-18 NMIP, which provide as follows:

“In practice, the question has been raised regarding the extent to which a new deductible shall apply where there has been a further development of damage which the assured could have averted, e.g. damage to the stern tube due to postponed repairs of damage to the propeller, or where an error in design has been discovered which will lead to more and more cracks in the main engine unless it is repaired.<sup>1</sup> The deciding factor for the number of deductibles in such cases must be when the assured’s negligence acquires the nature of an independent damage cause which “breaks” the causal chain from the first damage. Such a new cause occurs if the assured’s conduct can be characterized as negligent in relation to the development of the damage after the first damage was discovered. New damage must then give rise to a new deductible. This must apply even if the insurer

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<sup>1</sup> Emphasis by the Underwriters.

has failed to object to a postponement of the repairs, but not, however, if the insurer has confirmed directly to the assured that it is safe to proceed without making repairs.”

According to the Underwriters, the idea in the above paragraph is that the casualty occurred and then developed in one part, making it a consequential damage that develops as a result of the same cause.

The Underwriters put forward the question, what caused the first turbocharger overhauled by A in July 2018 and the second turbocharger delivered by T to fail. The Underwriters referred to the statement of the Owners that vibration, which was measured for a report, was in range.

The Underwriters made further the following quote from the commentaries of Clause 12-18 NMIP:

“A situation that has given rise to considerable problems in relation to the number of deductibles is where there is an error in design or the like in the cylinder linings from the factory which causes them to crack after a certain period of use. There may not necessarily be any pattern to when the cracks occur. In some cases, it is discovered at the same time that several linings have cracked, whereas in other cases weeks or months may pass between each time a lining cracks. The deciding factor for the question regarding the number of deductibles in such cases must be the extent to which the cracks can be traced back to the same cause.<sup>2</sup> If the cracks are attributable to the same cause, they must be regarded as one casualty, which only gives rise to one deductible. Elements in this evaluation include whether there is a close connection in terms of time or place between the incidents of damage, or whether the new incidents are of a totally independent nature, and whether the common underlying factor

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<sup>2</sup> Emphasis by the Underwriters.

increases the risk of new damage, cf. above under Cl. 4-18.<sup>3</sup> Cracks that may be traced back to the same error on the part of the manufacturer should be regarded as one casualty and only give rise to one deductible. The incidents described here take place within the same area in the ship and, in the event of an error in manufacture, it is foreseeable that the error will affect several of the manufactured units until the error is discovered. If, however, there are several separate errors, or it is clear that the manufacturer should have discovered the error and done something about it, the incidents will constitute several casualties in relation to the deductible.”

The Underwriters further contended that the fact that the assembly was not made correctly by both A and T did not mean that the two occurrences should be regarded as one casualty. The same casualty would subsist in the case there was something done wrong by A that continued exist even when T assembled a new turbocharger. That would constitute one and same cause. But if a similar error were made by both T and A there would be just two similar causes, but not the same. The damage to the second turbocharger did not accrue from the cause of the damage to the first turbocharger.

The Underwriters further referred to the survey report of F having surveyed the damage of the first turbocharger stating the following:

“After inspection of all the parts, the most probable root cause and therefore our conclusion is that the bolts holding the nozzle on the bearing cover (compressor side) were loose and slowly unturned due to vibration, and by time they came all out and the nozzle loosened. Causing the oil pressure to the compressor bearing to drop heavily and the compressor bearing breaks down. Due to this the rotor gets a

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<sup>3</sup> Clause 4–18 NMIP to which the Underwriters refer in the quote, addresses the insurer’s liability upto the sum insured for loss caused by any one casualty. The Commentary of the Clause deals with the question, when there is one casualty and when more than one casualty.

heavy unbalance, causing the piston ring on the turbine end to brake and with dropping oil pressure the turbine bearing brakes down as well.

Giving the probable main root cause of the TC failure: Faulty installed bolts securing the cover for the compressor bearing housing.”

The Underwriters refer to the fact that according to F the bolts of nozzle were already loose before they unturned to the understanding of the Underwriters due to normal vibration. Thus, the conclusion of the F report was that the bolts were faultily installed at the inception and so they were loose.

As regards the second turbocharger provided by T, the cause is not clear as the Owners had disagreed to surveyor D’s findings. Nonetheless, D advised that the damage occurred due to some form of harmonic vibrations.

The Underwriters could not consider that the damages to the first and second turbocharger were due to one and the same cause and consequently could not consider these two occurrences as one casualty.

The Owners contend that there are two absolutely identical accidents with turbocharger of mv Karoli and both inspectors agree with this. The Owners refer to two photos of turbocharger disassembly after damage, one in November 2018, another in May 2019. In their view, in both cases lubricating nozzle was turned off, oil stopped lubricating the bearing and it collapsed. In the two cases there were different insurance inspectors, they had different opinions concerning reason of unturned bolts holding lubricating nozzles. The Owners consider that these were only assumptions, not certain reasons, which the surveyors admitted themselves. The Owners also refer to the commentary of NMIP Clause 12–18 with the following quotes:

„However, the result may cause the assured economic problems if several casualties occur at short intervals. This is something the assured may have to

take into consideration during the negotiations concerning the size of the deductible.

The deciding factor for the number of deductibles in such cases must be when the assured's negligence acquires the nature of an independent damage cause which "breaks" the causal chain from the first damage. Such a new cause occurs if the assured's conduct can be characterized as negligent in relation to the development of the damage after the first damage was discovered."

The Owners point out that after the first occurrence they replaced the damaged turbocharger, and after that they asked twice T to inspect the turbocharger by warranty, which in the Owners' view shows that the Owners are very responsible in technical maintenance and the reason for the second turbocharger damage was not negligence.

With reference to Clause 12–18 NMIP, the Owners contend that the damage occurred to the same part of vessel, the turbocharger of the main engine. Turbocharger was replaced, but it is the same model as before and part of the same vessel and the same engine as before. The Owners compare it to the piston of engine. If a part of engine is broken and is replaced and then broken again this should not be a new case according to the Owners.

The Owners invoked the Underwriters' confirmation of 20 February 2020 that the two occurrences would constitute one casualty, the message reading as follows:

"On the balance of probabilities, we accept the two damage occurrences, i.e. in Norway in November 2018 and in UK in May 2019 as a one matter."

The Owners further contend that T inspected the second turbocharger twice after its installation in November 2018 before the damage in May 2019, and the latter inspection was only two weeks before the damage.



The Underwriters state that they indeed were of the opinion that one set of deductibles should be applied as vibration was mentioned in surveyor reports, to which the Owners had referred to, but at a later stage the Owners had provided the Underwriters a vibration readjustment report and stated that there had been no abnormal vibration at the time of the casualty. After that there did not exist any one and the same cause for the two casualties.

The Owners state that the Underwriters had confirmed the view that the two occurrences were one casualty knowing that vibration measurements had yet to be carried out and such confirmation could not be revoked.

The Owners also point out that according to the S surveyor report, vibration of Vulkan coupling changes during period of time, and the fact that vibration was within the limits in time of measurement does not mean it was in the limits in time of accidents.

The Average Adjuster then made express questions to the parties on 24 August 2020. Firstly, the Average Adjuster asked what the parties consider to be cause of the turbocharger damages. In particular, did the parties consider that there is a common cause or defect for both occurrences.

Furthermore, the Average Adjuster referred to the submissions and reports which mention vibration in various ways in connection with both turbocharger damages. The parties were therefore invited to comment on the origin and role of vibration as a potential cause of the damages.

The Underwriters responded that with respect to Occurrence I, their conclusion was based on the final conclusion of the Frydenbø report, which is already quoted above.

As to Occurrence II, the Underwriters found it more difficult to determine what the cause of disconnection of the air end oil pump nozzle in the end cover was. Since S indicated that the damaged could have been caused due to vibration caused by the

Vulcan coupling, the Owners provided the Underwriters with the measurements of vibration on the Engine, which was carried out after Occurrence II on 22.02.2020, and which indicated that there had been no increased vibration at the main engine. Owners also advised that no parts were renewed before making these measurements.

The Underwriters stated they had not come to a 100% conclusion on the cause of damage, although on the balance of probabilities the Underwriters assumed that the turbocharger was at some point incorrectly assembled by T (either initially in Norway when Occurrence I took place, or at a later stage when the turbocharger was overhauled by the same company). Again, the damaged bolts were not retained, so, neither T nor Owners had seen damaged bolts after the occurrence took place and we could not test those in the laboratory.

The Owners replied that when Occurrence II took place, the Owners pointed out that the reason, as in Occurrence I, could be incorrectly installed lubricating nozzle fixing bolts, and due to this the S surveyor checked and noticed that there were witness marks from contact with lock washers on the lubrication nozzle, and based on this fact the surveyor stated that the lubricating nozzle fixing bolts were installed correctly, and possible cause of loosened bolts was vibration.

According to the Owners, the lubricating nozzle fixing bolts were installed and were unscrewed and then tightened again once before Occurrence II. The witness marks from contact with lock washers would still be there, even if the bolts were not correctly tightened. The Average Adjuster understands the Owners to say that it is possible that this was the case.

The Owners refer to the survey reports, which remain uncertain about the cause of the damages:

The F report (Occurrence I):

“Giving the probable main root cause of the TC failure: Faulty installed bolts securing the cover for the compressor bearing housing.”

The S report (Occurrence II):

“Our own investigation leads us to conclude that the failure could be due to incorrect oil grade resulting in darkening and frothing, or alternatively due to the presence of some form of harmonic vibrations due to the condition of the Vulkan coupling.”

The Owners stated that the exact reason was not determined by any of these surveyors. There are two identical damages and both surveyors agree with this. The bolts holding the lubricating nozzle were unscrewed due to vibration, the oil stopped lubricating the bearing and it collapsed causing the destruction of the turbocharger. Further, both surveyors made assumptions concerning reasons why these bolts were loosened and unscrewed.

Concerning the reason of unscrewed bolts because of increased vibration, the Owners confirm that between Occurrences I and II, no serious repair work was carried out on the main engine, and if the reason of Occurrence II is increased vibration, it is the same reason for both accidents. However, if there is and was no increased vibration, then investigation in the second accident came to the wrong conclusion and required further investigation.

The Owners refer to an e-mail from S to the Underwriters dated 2.10.2019, which states:

“The time frame for the previous and last failures is off interest, as well as the fact the probable component failure in the turbocharger is the same, i.e. the compressor end oil pump. The last two

turbochargers lasted a similar time and the oil pump may have failed on both occasions due to harmonic vibration.

As per the advice from Vulkan, the dynamic behaviour of the Vulkan coupling is changing along with the damping capacity, so its vibration characteristics also appear to be changing. If the Vulkan coupling was the source of the outside influence, hopefully the critical vibration frequencies have now changed with the continued aging of the rubber and the current exciting frequencies have changed such that they no longer might excite the turbocharger and risk a third failure.”

According to the Owners, this email shows that the S surveyor believes that vibration was probably the cause of the two damages, but exceptional vibration no longer exists so that at the time of vibration measurement there was no increased vibration, although at the time of both damages there was. The Owners contend that it should be confirmed that the surveyor was right that there was increased vibration at the time of both damages, but that vibration has since decreased. Alternatively, the conclusion is that the assumption about the cause of the damage to the second turbocharger is incorrect and a new full investigation should be conducted, both should be completely re-investigated by one surveyor as both cases are very similar.

Finally, the Owners refer to the S report ruling out incorrect assembly of the unit as the cause of Occurrence II.

#### Reasons for the decision of the Average Adjuster

##### A. The need to define the cause

From the submissions of the Underwriters it appears that the Underwriters consider the damages to be fortuitous and thereby covered by the policy. There is therefore no dispute as to whether the Occurrences constitute insured events being either one or two of them. The insurance cover follows NMIP Chapters 1–13 on “full conditions” as

per Clause 10–4. The “full conditions” cover provides for indemnification unless any of the exceptions of the NMIP apply. In neither of the occurrences do the Underwriters consider any of the exceptions to apply. This makes it unnecessary to define the actual cause or causes of the turbocharger damage for the existence of the cover.

The number of deductibles applied is dependent on an assessment whether one or more casualties, i.e. insured events, have occurred. Reference is made to Clauses 4–18 and 12–18 of the NMIP. Unlike defining whether a insured event or events has occurred in the first place, it is necessary to assess the root cause(s) for the breakage of both turbochargers. Only if the breakages can be considered to have the same cause, can the two Occurrences be considered to constitute one casualty.

#### B. Burden of proof

The main rules for the burden of proof are found in Clause 2–12 NMIP. These main rules do not expressly cover the situation in this case. However, the Average Adjuster considers that the spirit of the rules can be applied to this case. According to the first sentence of the Clause, “(t)he assured has the burden of proving that he has suffered a loss of the kind covered by the insurance and of proving the extent of the loss”. The Average Adjuster considers that the party alleging that there is only one casualty, the Owners, has the burden of proving that both damages had the same cause, which is required to be the dominant cause.

For this purpose, the Average Adjuster has heard the parties and studied the reports submitted to verify the potential causes of the damage. As it turned out that vibration was one potential cause referred to in the S report and contemplated by the parties during their correspondence, the Average Adjuster put forward specific questions to the parties as to the role of vibration in causing the damages.

#### C. The significance of submissions during the examination

The fact that the parties have expressed themselves during the examination of the damages does not have the effect of binding them in the adjustment procedure. Consequently, the Underwriters have not bound themselves by admitting that there exists only one casualty. Likewise, the Owners are not bound by submitting a vibration readjustment report.

#### D. The role of negligence

The Average Adjuster considers that negligence is not relevant in evaluating the cause of the damages in this case. The Underwriters quoted the Commentary of the NMIP where negligence in repairing the original damages leading to the escalation of damages is construed as a reason to consider two damages as separate casualties. In this case, no such negligence on the part of the Owners has been shown or alleged to have any role in the damage.

#### E. Vibration as a cause

Vibration was pointed out to be a potential cause of Occurrence II in the S report. The loosening of the lubrication nozzle bolts could have been caused by vibration, which has reduced and finally put an end to the lubrication of the bearings which collapsed leading to the damage to the turbocharger. The Owners have referred to the possibility that vibration could have been at an increased level at the time of the occurrences in November 2018 and May 2019 but could have then decreased by the time of measurement in February 2020. The Underwriters have not expressly rejected this possibility, but have considered, partly based on the F report covering Occurrence I that the main cause on both Occurrences was faulty assembly of the turbocharger, more particularly a fault in the installation of bolts securing the cover for the compressor bearing housing.

There exists a lot of uncertainty in the reports covering both Occurrences. Furthermore, as the Average Adjuster understands, it may no longer be possible to

investigate in more detail the causes of the two Occurrences as the bolts have not been saved. Further investigations would accrue costs, which would not be proportionate to the size of the dispute.

The Average Adjuster recognizes the difficulties in presenting a fully reliable technical analysis of what happened. Therefore one is dealing with probabilities only. The Commentary of the NMIP does not give any more guidance than that the decision whether there exists one or more casualties must be done on a case by case basis. References to case law concerning Norwegian maritime law referred to in the Commentary of Clause 4–18 NMIP do not give further guidance either.

The Average Adjuster considers that the requirements imposed on the Owners' burden of proof in this case must be reasonable. The Nordic marine insurance literature has a relatively uniform view that the burden of proof of the assured should not be too high. This corresponds with other forms of insurance. According to one view, any decision should be based on a finding of circumstances which seems to be most probable. In doing this, strict burden of proof rules could be ignored. The reason is that the casualty may destroy the chances to produce evidence.<sup>4</sup>

The two Occurrences are very similar as regards the time frame and that the compressor end oil pump fell after having lasted a similar amount of time. Bolts holding the lubricating nozzle were loosened and unscrewed, which led to the breakdown of the turbochargers as lubrication was no longer in place. There is a possibility, like the Underwriters state that there was faulty installation twice. This is rejected by the S report covering Occurrence II. The Owners pointed out the possible cause that there was increased vibration during both Occurrences. Vibration was measured nine months after Occurrence II and was within the range. It is nevertheless possible that vibration had been increased during both Occurrences and caused the loosening unscrewing of the bolts. The Owners have pointed out the message from S

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<sup>4</sup> Jan Hellner, *Försäkringsrätt*, Stockholm 1965, p. 111 et seq., also Kaj Pineus, *Assurandören hos dispatchören*, Gothenburg 1978, pp. 37–39 and Olof Riska, *Riskfördelning vid sjötransport, Kaskoförsäkring och gemensamt haveri*, Helsinki 1971, pp. 87–107.

which states that according to Vulkan, the dynamic behaviour of the Vulkan coupling is changing along with the damping capacity, so its vibration characteristics also appear to be changing. Consequently, there would be a uniform reason, which is the same component, for the increased vibration for a period covering both Occurrences which makes the two damages fortuities.

#### F. Conclusions and remuneration

The Average Adjuster considers that the Owners have met their burden of proof by reasonable standards in this case and is therefore entitled to be indemnified for Occurrence II without deductibles. The Average Adjuster considers that the Owners have impliedly claimed the payment of the missing part. No claim for overdue interests was made.

Pursuant to Section 9 of Decree 121/1936 as it has been modified the last time by Decree 208/1960 the Average Adjuster is entitled to remuneration for adjustments envisaged in the Maritime Code or the Act 10/1953 on Marine Insurance Adjustments by the Average Adjuster from the party requesting the adjustment based on the extent, complicity or the work required.

#### Adjudications

The Underwriters are ordered to pay the Owners EUR 50.000 as further indemnification based on the H & M policy. The Underwriters are further ordered to pay the costs and fee of the Average Adjuster.

[Instructions for Appeal]



