Engine room fires *as of 31.12.2025*

The Nordic Association of Marine Insurers

Cefor

Spotlight on: Engine room[1] fires

Engine room fires especially affect older vessels and certain vessel types. The report highlights trends and risks associated with these fires, emphasizing the importance of maintenance and prevention measures.

Stabilization in fire frequency on a high level: Engine room fires rose substantially from 2019 to 2021, then stabilized at a higher level than before 2019.

Older vessels face higher risks: Both the frequency and cost of engine room fires are highest for the oldest vessels, indicating increased risk and expense as the fleet ages.

Passenger and container/car/RoRo vessels most affected: Passenger and container/car/RoRo vessels have a 2-3 times higher frequency of engine room fires than bulk carriers and tankers.

Claim cost per vessel varies by type: Passenger vessels experience the highest and most volatile claim cost per vessel, with container/car/RoRo vessels showing a steep cost increase over the past fifteen years.

Context: Cefor has reported on a sharp increase in the cost of machinery claims partly explained by the ageing of the world fleet[2]. The ageing of the world fleet also makes it even more important to focus on engine room fire prevention.

Data and methodology details: The report is based on hull and machinery insurance claims data from Cefor members up to December 2025, including claims above USD 10,000, with adjustments for incurred but not reported claims.

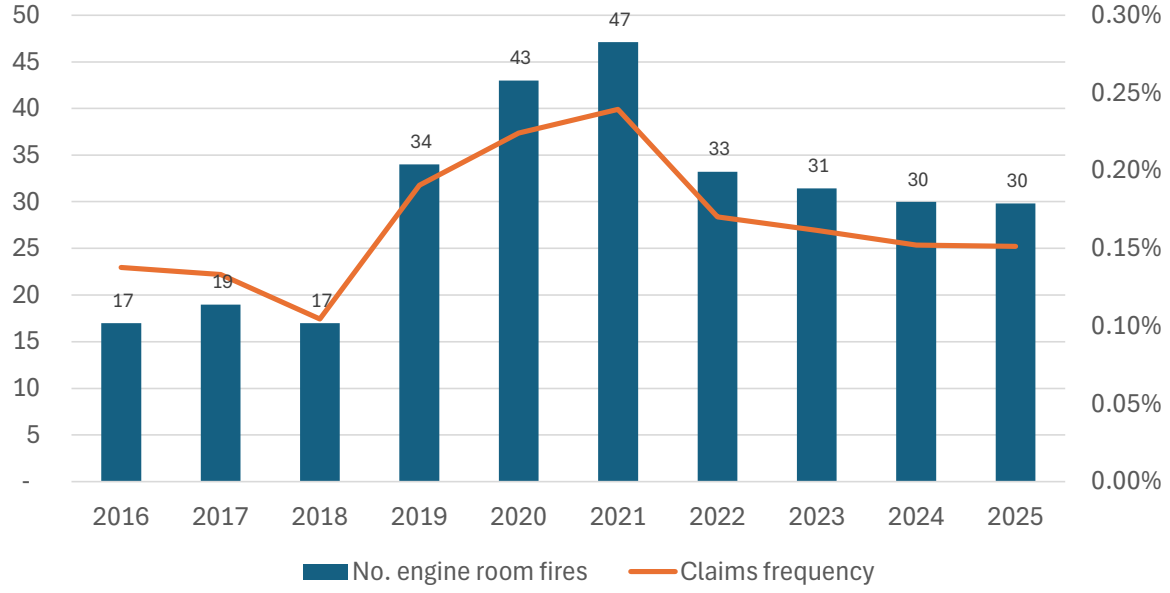
[1] In this analysis, 'engine room' is used as synonym for machinery-related fires. The statistics include fires > USD 10,000 in the main or auxiliary engine, boiler, generator, other machinery as well as any fire in the engine room.

[2] See 'The 2025 Cefor Ocean Hull Report'

1. Engine room fire frequency

The years 2019-2021 saw a substantial rise in the occurrence of engine-room fires. Despite a reduction and subsequent stabilisation from 2022 onwards, incident levels remained at a substantially higher level than in the years prior to 2019.

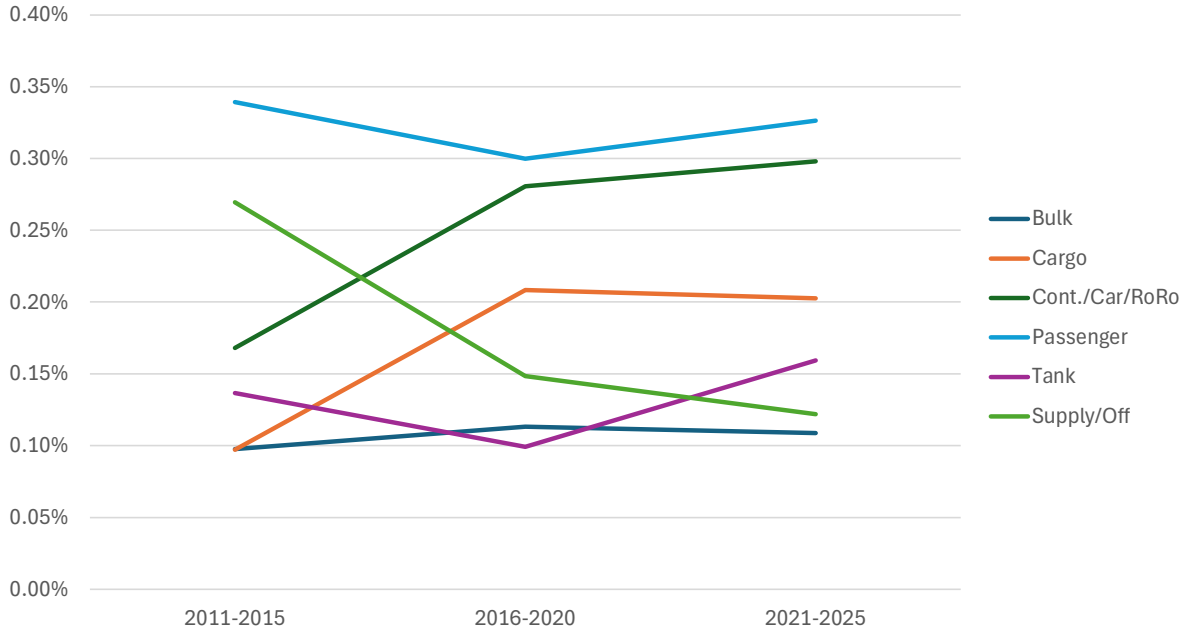
1.1: Number and frequency of engine room fires



Graph 1.2 shows that the frequency of engine room fires increased for most vessel segments from the years prior to 2016. The highest increase was on container/car/RoRo vessels, followed by cargo vessels. For bulk and tank vessels, the frequency increased moderately in 2021-2025, following a decline in the years 2016-2020. Only supply/offshore vessels show a substantial decrease since 2011.

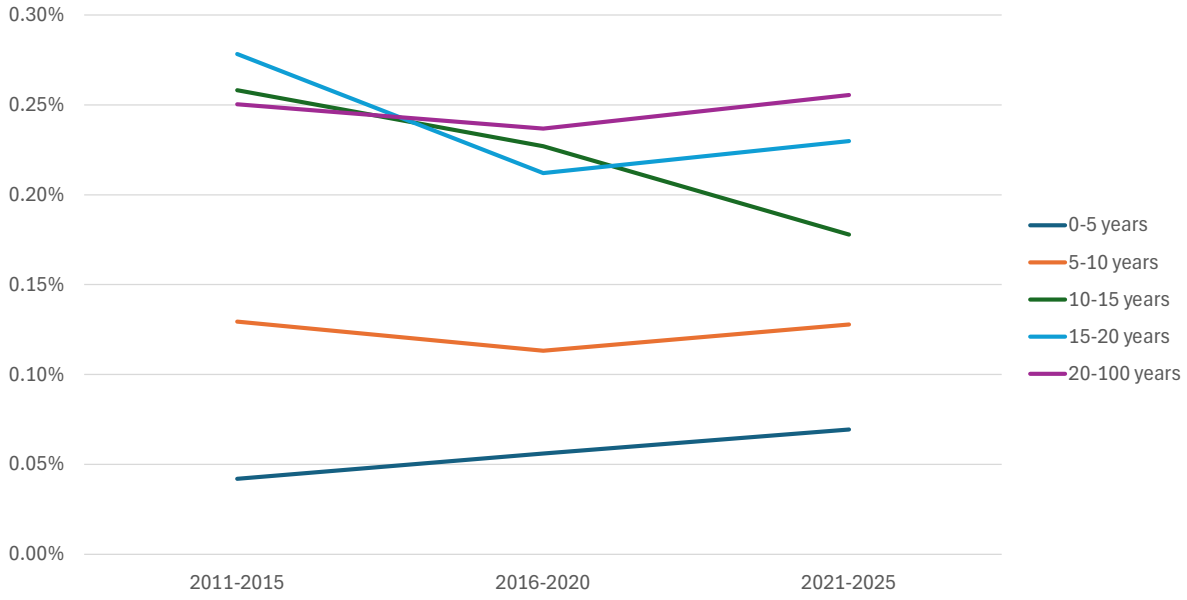
Passenger and container/car/RoRo vessels have 2-3 times higher engine room fire frequency than tankers and bulk carriers.

1.2: Frequency of engine room fires by vessel type

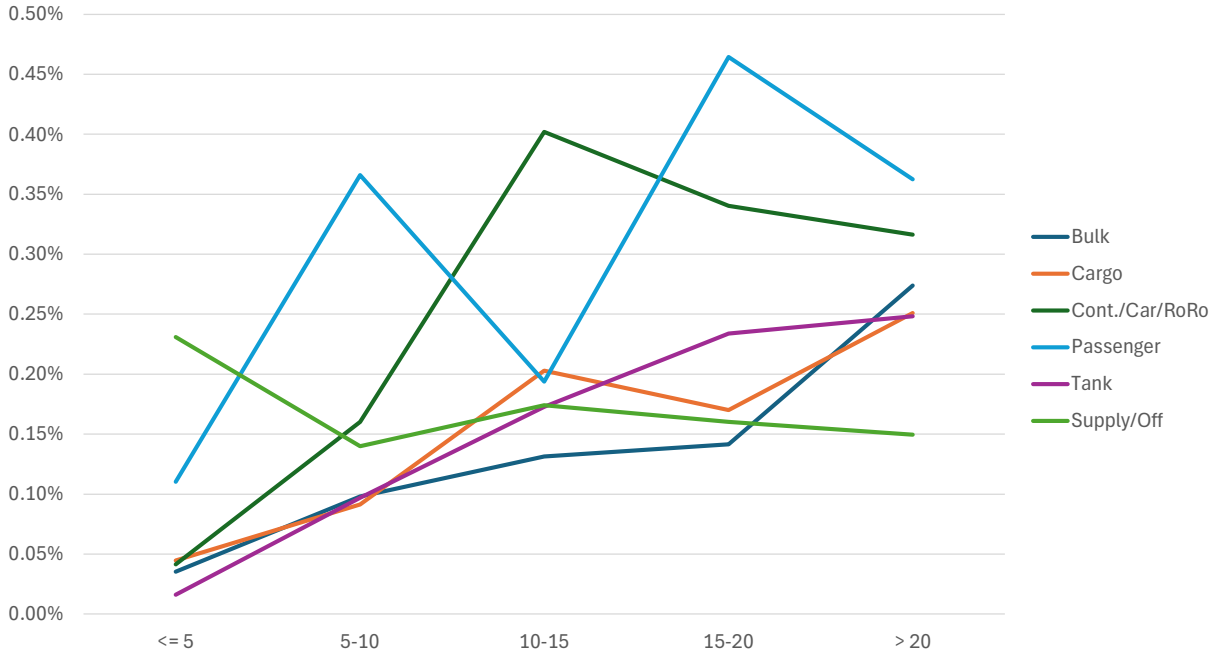


As shown in graph 1.3, the frequency of engine room fires increases with vessel age. In addition, vessels in all age groups, except those aged 10-15 years, show some increase in frequency during the period 2021-2025.

1.3 Frequency of engine room fires by age group



1.4: Frequency of engine room fires by vessel type and age group (accident years 2011-2025)



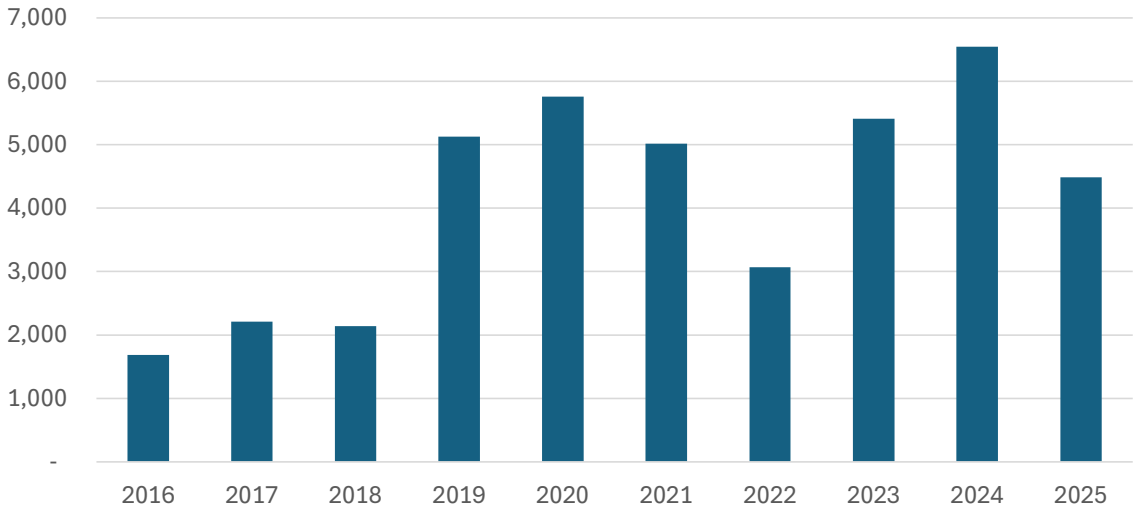
Graph 1.4 shows the relation between vessel age and engine room fires by vessel segment. It illustrates that for most vessel types, the oldest vessels are more prone to engine room fires, while such fires only rarely occur on the youngest vessels.

The issue of fires caused by leakage from low pressure fuel pipes, identified as one of the causes of engine room fires, has been addressed in a memo from the Cefor Technical Forum and is followed up in discussions with IACS and the IMO.

2. Cost of engine room fires

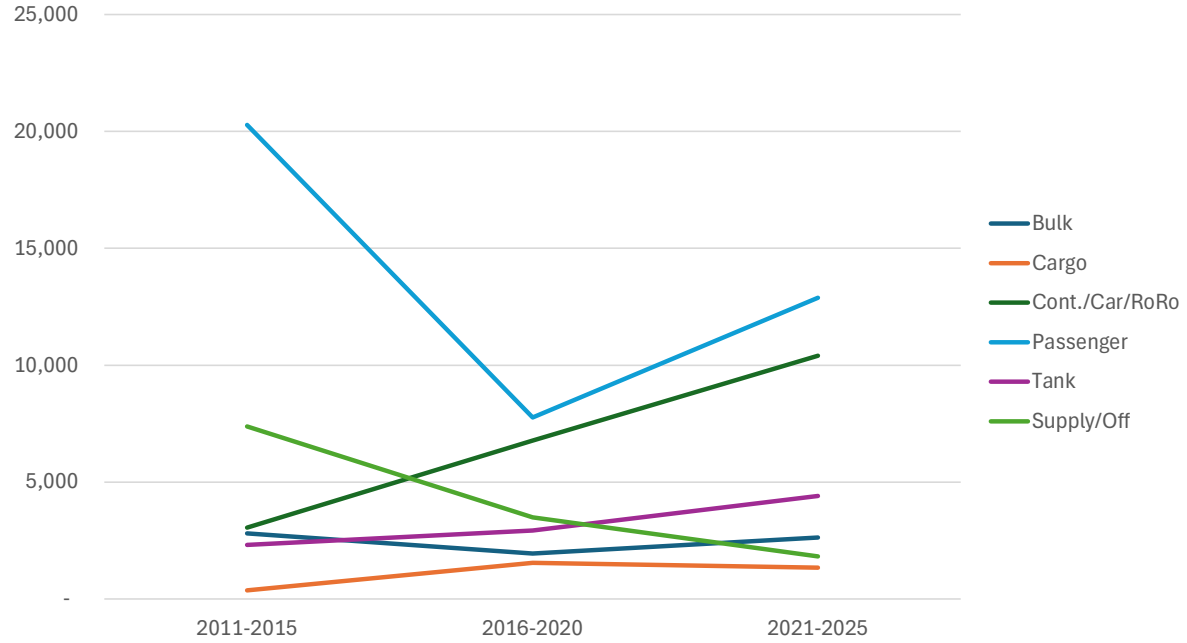
The cost of engine room fires is more volatile than the frequency. However, since 2019 the claim cost per vessel has been substantially higher in all years except one compared with the years prior to 2019.

2.1 Engine room fire cost per vessel



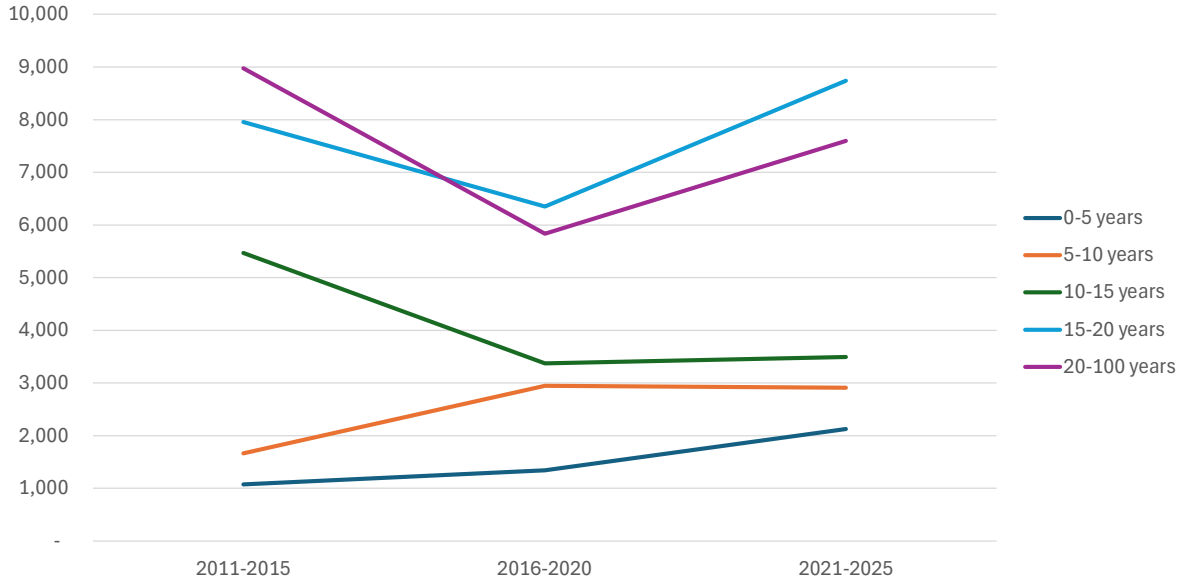
Looking at vessel segments, the claim cost per vessel is highest for passenger vessels, which also exhibit the greatest volatility. The segment with the second highest claim cost per vessel are container/car/RoRo vessels. This segment shows in addition a steep increase in the cost of engine room fires over the past fifteen years.

2.2 Claim cost per vessel, by vessel type

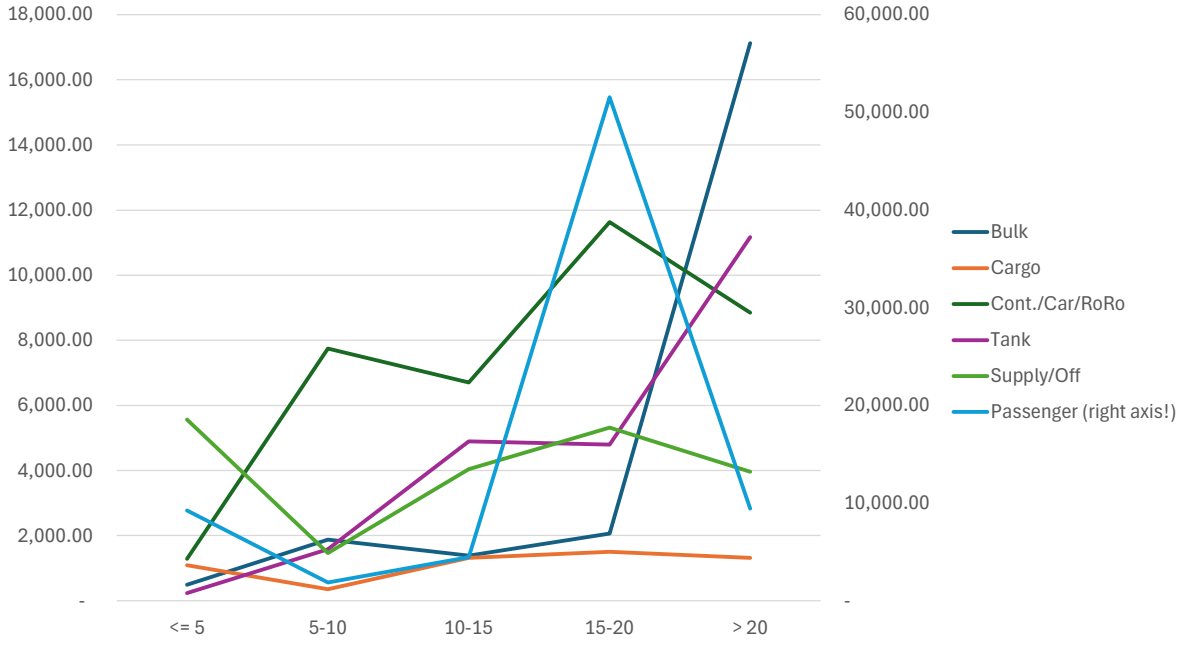


When it comes to age, not only the claims frequency but also the claim cost per vessel is highest for the oldest vessels, and especially for vessels older than 15 years.

2.3 Claim cost per vessel, by age group



2.4 Claim cost per vessel, by vessel type and age group (accident years 2011-2025)



When differentiating by vessel type and age group, the claim cost per vessel is highest for container/car/RoRo vessels older than 5 years and bulk and tank vessels over 20 years. The passenger segment has the highest cost in the 15-20 year old group but being the smallest segment in terms of vessel numbers figures are more volatile. While the claim cost is low for the youngest vessels across all vessels segments, nearly all segments show a higher cost for the oldest vessels.

3. Data explanations and more

Data: The statistics in this report reflect data reported by Cefor members into the Nordic Marine Insurance Statistics (NoMIS) database as of 31st December 2025. Ocean hull statistics as included in this report are based on the hull & machinery coverage for vessels with an IMO number.

Only claims above USD 10,000 USD are included to avoid 'noise' from minor insurance payouts.

100% perspective: Figures reflect 100% of each vessel and resulting claims originating from the vessel's hull & machinery insurance, regardless of the share underwritten by any of the Nordic insurers. This approach enables an as objective picture of vessel and casualty trends as possible.

Accident year / date of loss perspective: Unless otherwise indicated, claims are grouped by the calendar year in which the loss occurred, as opposed to grouping claims by underwriting year. This enables a more up-to-date picture of recent casualty trends and a more exact estimation of the ultimate expected claims amount for the latest year, independent of the inception date and coverage period of the respective hull insurance coverage.

IBNR: Claims (cost, numbers) reflect the status as of 31st December 2025, including an estimate of incurred but not yet reported claims, as well as expected cost adjustments for already reported claims. IBNR adjustments represent only expected reporting backlog and adjustments for claims incurred by 31 December but not additional reserves for claims that may occur after year-end but relate to previous underwriting years.

As hull insurance shows a typical development pattern over 2 to 3 years until claims are fully paid or reserved, this average typical pattern is applied to derive the ultimate expected claims figures for the youngest years. One should however be aware that individual years may deviate from the average pattern.

Exchange rates: All figures have been converted to USD. Paid claims have been converted into USD at the exchange rate in the month of payment. Outstanding claims reserves have been converted at the December 2025 exchange rate.

Further information is available on the Cefor website at www.cefor.no/statistics

Check also the main Cefor Ocean and Coastal Hull Reports 2025 at https://cefor.no/statistics/

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