



Technical Circular

No.: 014/2021

Date: 23rd March 2021

Subject: RMI – Loss of propulsion in high density traffic areas in China.

1. Marshall Islands Administration (RMI) has issued Marine Safety Advisory (MSA No. 16-20 & MSA No. 04-21) providing information on recent cases, as listed below, where ships have lost their propulsion while in areas of high-density traffic or narrow waterways in China.
 - a. *While under pilotage to the berth at Jiangyin, due to insufficient starting air pressure there were difficulties starting the main engine. A leaking flange in the starting air pipeline caused the problem and rectifying it resulted in two hours from stoppage to berthing.*
 - b. *Departing Zhangjiagang under pilotage in Chang Jiang Kou (CJK), the main engine shut down for 15 minutes, due to fuel oil (F.O.) high temperature and low pressure. In planning for leaving the Domestic Emission Control Area (DECA), heating the F.O. for the fuel changeover began too early. This resulted in the F.O. vaporizing and shutting down the engine.*
 - c. *Under pilotage from Nantong Anchorage, after 15 minutes, the main engine experienced various alarms. Eventually the engine could not increase its speed above half ahead and the pilots anchored the vessel for safety. Troubleshooting the main engine found the crank angle sensor adapter plate required modification according to the maker's instructions.*
 - d. *Approaching the CJK pilot station, the main engine failed twice resulting in the vessel being not under command. The No.3 cylinder suction valve stuck and a main engine Fuel Injection Valve Actuation (FIVA) system failed causing the problem. A subsequent port State control (PSC) inspection found a previously unreported main engine remote control failure and a violation of the DECA requirements related to F.O. changeover timing.*
 - e. *Departing from the shipyard, while in the CJK channel, the main engine's No.1 cylinder air starting valve sealing ring had heavy leakage resulting in loss of propulsion. The vessel required tug assistance to Baoshan anchorage. The PSC investigated and concluded improper maintenance caused the problem as these aged sealing rings had not been renewed after overhaul at the shipyard.*
 - f. *Under pilotage from a Shanghai berth, the main engine protection device accidentally shut down the main engine. The failure of one revolutions per minute (RPM) sensor*



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- . While we have taken utmost care to be as factual as possible, readers/ users are advised to verify the exact text and content of the Regulation from the original source/ issuing Authority.

generated a false main engine over speed signal. Subsequent inspection by the PSC found in addition, the main engine protection system could not display the actual RPM.

- g. A vessel departed Chengxi Shipyard and as the speed was brought up, the Main Engine Unit No.3 FIVA Valve O-ring developed an increasing oil leak. This caused the pilot to emergency anchor the vessel at Nantong. A subsequent port State control (PSC) inspection led to a detention with deficiencies unrelated to this incident.*
 - h. While maneuvering in the Yangtze River after fuel oil was changed over to LSMGO, a loss in fuel oil pressure in the diesel generator engines resulted in an electrical blackout and loss of propulsion. The vessel was detained by the PSC over failure to implement the ISM Code related to the critical operation of fuel oil changeover.*
 - i. A vessel was departing the berth at Jingjiang when the Main Engine remote control failed, resulting in the engine side control being used. The pilot dropped anchor at Jingjiang. The subsequent PSC inspection led to a detention unrelated to this incident.*
 - j. During unbreathing operations at Changzhou, the main engine would not start and the vessel was shifted to a nearby temporary anchorage for repairs. The vessel was not detained by the PSC in this case.*
 - k. After repairs at Huarun Dadong Shipyard a sea trial was completed. However, on departure, the main engine's automatic slow down got activated and the vessel returned to the shipyard. Since this critical situation was not reported to the local authority immediately, PSC detained the vessel.*
2. From above, it is noted that in most cases, incidents have occurred -
- a. When maintenance has been deferred, since the ship will be proceeding to a shipyard;
 - b. After routine maintenance without renewing spares when required;
 - c. On departure from a shipyard or after a long repair period, without purging the F.O. pipelines adequately or testing the main engine properly; and
 - d. Inadequate investigation into the root cause resulting in repeated failures, or an incomplete solution of the problem.
3. In several cases, these incidents have led to PSC investigation and subsequent detentions. These may also be considered a serious implementation failure of the International Safety Management Code and a major non-conformity will be raised during the additional audit.

4. These incidents show the importance of carrying out proper main engine preparation and testing and ensuring familiarization with fuel oil changeover procedures prior to entering high-density traffic areas or narrow waters. Attention is also drawn to the Safety Notice issued by the Shanghai Maritime Safety Administration.
5. Accordingly, in order to avoid similar failures and to prevent accidents occurring, ship owners, operators and masters of vessels in the concerned waters are advised to thoroughly test its engines and ensure the main engine, steering gear and all essential manoeuvring systems are in good order before departure from the berth, as well as before arrival in the high density traffic waters.
6. Any defect found is to be corrected before the vessel departs the wharf or arrives in high density traffic waters. Special attention is to be given when entering or exiting a Domestic ECA to F.O. preparation and changeover.
7. Further, any such incident is to be immediately reported to the local authorities and to the Republic of the Marshall Islands Maritime Administrator at -inspections-hk@register-iri.com

Enclosure:

1. RMI MSA No. 16-20.
2. RMI MSA No. 04-21.
3. Safety Notice issued by MSA of China.

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MARINE SAFETY ADVISORY No. 16-20

To: Owners/Operators, Masters, Nautical Inspectors, Recognized Organizations

Subject: LOSS OF PROPULSION IN HIGH-DENSITY TRAFFIC AREAS IN CHINA

Date: 9 April 2020

This Marine Safety Advisory provides information on recent cases where ships have lost their propulsion while in areas of high-density traffic or narrow waterways in China.

CASE A: While under pilotage to the berth at Jiangyin, due to insufficient starting air pressure there were difficulties starting the main engine. A leaking flange in the starting air pipeline caused the problem and rectifying it resulted in two hours from stoppage to berthing.

CASE B: Departing Zhangjiagang under pilotage in Chang Jiang Kou (CJK), the main engine shut down for 15 minutes, due to fuel oil (F.O.) high temperature and low pressure. In planning for leaving the Domestic Emission Control Area (DECA), heating the F.O. for the fuel changeover began too early. This resulted in the F.O. vaporizing and shutting down the engine.

CASE C: Under pilotage from Nantong Anchorage, after 15 minutes, the main engine experienced various alarms. Eventually the engine could not increase its speed above half ahead and the pilots anchored the vessel for safety. Troubleshooting the main engine found the crank angle sensor adapter plate required modification according to the maker's instructions.

CASE D: Approaching the CJK pilot station, the main engine failed twice resulting in the vessel being not under command. The No.3 cylinder suction valve stuck and a main engine Fuel Injection Valve Actuation (FIVA) system failed causing the problem. A subsequent port State control (PSC) inspection found a previously unreported main engine remote control failure and a violation of the DECA requirements related to F.O. changeover timing.

CASE E: Departing from the shipyard, while in the CJK channel, the main engine's No.1 cylinder air starting valve sealing ring had heavy leakage resulting in loss of propulsion. The vessel required tug assistance to Baoshan anchorage. The PSC investigated and concluded improper maintenance caused the problem as these aged sealing rings had not been renewed after overhaul at the shipyard.

This MSA is evaluated annually by the Administrator and expires one year after its issuance or renewal unless otherwise noted, superseded, or revoked.

CASE F: Under pilotage from a Shanghai berth, the main engine protection device accidentally shut down the main engine. The failure of one revolutions per minute (RPM) sensor generated a false main engine overspeed signal. Subsequent inspection by the PSC found in addition, the main engine protection system could not display the actual RPM.

Local PSC authorities have increasingly been concerned at similar incidents where a ship presents a danger through its inability to freely maneuver in high-density traffic areas or narrow waters. When they occur, these incidents require the vessel to anchor for repairs as well as an investigation by the local PSC.

In several cases, these have led to PSC detentions in accordance with Appendix 2 of IMO Assembly Resolution [A.1138\(31\)](#), *Procedures for Port State Control, 2019*. This may also be considered a serious implementation failure of the International Safety Management Code. A major non-conformity will be raised during the additional audit.

As the cases above show, some incidents have occurred:

- When maintenance has been deferred, since the ship will be proceeding to a shipyard;
- After routine maintenance without renewing spares when required;
- On departure from a shipyard or after a long repair period, without purging the F.O. pipelines adequately or testing the main engine properly; and
- Inadequate investigation into the root cause resulting in repeated failures, or an incomplete solution of the problem.

Before entering high-density traffic areas or narrow waters, owners and operators are reminded to carry out proper main engine preparation and testing wherever applicable. Special attention must be given when entering or exiting a DECA to F.O. preparation and changeover. Any such incident should be immediately reported to the local authorities and to the Republic of the Marshall Islands Maritime Administrator (inspections-hk@register-iri.com) by the Master.

Republic of the Marshall Islands

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MARINE SAFETY ADVISORY No. 04-21

To: Owners/Operators, Masters, Nautical Inspectors, Recognized Organizations

Subject: LOSS OF PROPULSION IN HIGH-DENSITY TRAFFIC AREAS IN CHINA

Date: 17 March 2021

Further to Marine Safety Advisory No. [16-20](#), the Republic of the Marshall Islands Maritime Administrator (the "Administrator") continues to receive loss of propulsion reports from ships while in high density traffic or in narrow waters in China. The most recent incidents include:

CASE A: A vessel departed Chengxi Shipyard and as the speed was brought up, the Main Engine Unit No.3 FIVA Valve O-ring developed an increasing oil leak. This caused the pilot to emergency anchor the vessel at Nantong. A subsequent port State control (PSC) inspection led to a detention with deficiencies unrelated to this incident.

CASE B: While maneuvering in the Yangtze River after fuel oil was changed over to LSMGO, a loss in fuel oil pressure in the diesel generator engines resulted in an electrical blackout and loss of propulsion. The vessel was detained by the PSC over failure to implement the ISM Code related to the critical operation of fuel oil changeover.

CASE C: A vessel was departing the berth at Jingjiang when the Main Engine remote control failed, resulting in the engine side control being used. The pilot dropped anchor at Jingjiang. The subsequent PSC inspection led to a detention unrelated to this incident.

CASE D: During unberthing operations at Changzhou, the main engine would not start and the vessel was shifted to a nearby temporary anchorage for repairs. The vessel was not detained by the PSC in this case.

CASE E: After repairs at Huarun Dadong Shipyard a sea trial was completed. However, on departure, the main engine's automatic slow down got activated and the vessel returned to the shipyard. Since this critical situation was not reported to the local authority immediately, PSC detained the vessel.

These incidents show the importance of carrying out proper main engine preparation and testing and ensuring familiarization with fuel oil changeover procedures prior to entering high-density traffic areas or narrow waters in China. Attention is also drawn to the [Safety Notice](#) issued by the Shanghai Maritime Safety Administration.

As a reminder, loss of propulsion must be reported by the Master to the local authorities and to the Administrator (inspections-hk@register-iri.com).

This MSA is evaluated annually by the Administrator and expires one year after its issuance or renewal unless otherwise noted, superseded, or revoked.

(Translation)

SAFETY NOTICE

On December 13 2020, the container ship "Oceana" (IMO 9634684) lost control in the deep water channel of CJK area. MV "Oceana" subsequently collided with the domestic cargo ship "XINQISHENG 69" which subsequently sank and left 4 seafarers dead and 4 seafarers missing.

This matter is currently under investigation and the search for all of the remaining seafarers is continuing.

In order to avoid similar failures and prevent accidents occurring, All vessels in the concerned waters are hereby urged to thoroughly test its engines and ensure the main engine, steering gear and all essential maneuvering systems are in good order before departure from the berth, as well as before arrival in the high density traffic waters. Any defects found should be corrected before the vessel departs the wharf or arrives in the high density traffic water.

If any malfunction arising from such defects subsequently occurs and impacts upon the vessel's safe navigation in any respects, it will be thoroughly investigated. The vessel will be subject to PSC inspection also, and severe cases may lead to detention respectively.

If the departure from the last foreign port is less than the period of quarantine assigned by the local quarantine policy, the investigation and inspection will be carried out after fulfilling the quarantine requirements at the anchorage. All associated cost will be on the ship's account.

Shanghai Maritime Safety Administration of P.R.China