BASIC OPERATION OF PURE CAR CARRIER

I. INTRODUCTION

Vehicles are transported all over the world on board Pure Car Carriers. This vessel type is unique in many ways;

1) **Difficulty in maneuvering**: This is due to the ver
2) y high freeboard of PCCs. Ship handlers will experience difficulty in maneuvering this vessel because it is very susceptible to the effects of the wind.

3) **Vehicles are expensive cargoes and prone to damage**: Vehicles are very expensive commodities and are considered to be damage prone where minor dents or paint scratches may cost thousands of dollars.

4) **Specialized equipments**: PCCs are uniquely equipped to transport vehicles. It has unique doors, ramps, car decks (fixed or movable), deck lifters, lashing materials, ventilations and ballasting system, among many others.

5) **Limited time in ports**: PCCs have very limited staying time in ports and even a few minutes delay in its arrival and departure will incur cost.

I.2 Trade Service

Trade Services for PCCs are;

Japan – U.S. West Coast
Japan – U.S. East Coast - Caribbean
Japan – Middle East – Europe
Japan – Australia – Papua New Guinea
Europe – Middle East - Far East

This may vary depending on its charterer or cargo requirement.

I.3 Pure Car Carrier Outline

Pure Car Carriers are unique in many ways. These are ro/ro vessels with doors and ramps for loading of wheeled and/or tracked vehicles. Ramp construction varies. This is composed of side ramps located

along the midship area, a stern or quarter ramp which maybe forward extended or aft ward extended. The midship ramp may also be adjustable to another deck whereas the stern ramps are fixed and with a higher axle load capacity.

The car decks are usually fitted with lashing points and internal ramps that can be adjustable to other decks and are closed at sea. Lower and upper car decks are normally used for loading cars and intermediate car decks can be adjusted to accommodate pick-ups trucks or high-ceilinged vehicles.

PCCs have very high side profile which makes it susceptible to the effects of wind whether in berth or maneuvering. This characteristic also makes it difficult to anchor the vessel. Hence, it may cause the vessel to drag its anchor.

The vessel also has very limited time in port. Loading or discharging operations are normally completed within a day after which the vessel should immediately sail for the next port. Maintaining schedules are very important as labors are normally arranged prior to arrival in port in view that any form of delay could be costly.

The cargoes are considered dangerous because of those vehicles carrying full-tank gasoline and are considered hazardous. The exhaust emitted by vehicles is hazardous and failure or inadequacy of the ventilation system may cause stoppages of cargo operations.

Likewise, vehicles can be damaged easily. Minor dents, paint scratches or pilferage of radios or other car accessories will incur cost. Crews on board must always be conscious of damage prevention particularly in handling the vehicles during loading and discharging.

II. CAR CARRIER OPERATION

II.1 Sailing Instruction

A typical sailing instruction, as the basis for passage planning, involves all the required information throughout the vessel's voyage addressed to all concerned personnel especially the Master.

An example of which is as follows;

(### signifies to fill in the blank)

TO : MASTER OF "###"
CC : HIROKURA HOFU
HIROKURA HIROSHIMA
CARHIJ
SANKYU MIZUSHIMA
UKB MARINE
UKB EXPDOC
UKB IMP DOC
SOGO PORT TOYOHASHI
ASAHI UNYU YOKAICHI
ASAHIUNYU YOKAICHI
NGO CAR
NGO EXPDOC @NGO IMPDOC
CHIBA MARINE CHIBA
SUZUYO OMAESAKI
YAL YOKOHAMA
YOK MARINE
YOK EXPDOC @ YOK IMPDOC
VANCOUVER MARINE
LAVSHIP SEATTLE
LAVSHIP PORTLAND
LAVSHIP SANFRANCISCO
LAVSHIP LONGBEACH (INCL. LA/HUENEME)
PSHINC SANDIEGO
NYK BULKCAR NEWYORK
NYKBULK LOSANGELES
TYO EXPDOC
BL CORRECTION
NA DOC (SYSTEM CONTROLLER)
DOCCENTER CONV
DOCDENTER NACCS
SYSDOC MF
FUEL CHARTGCAR MARTECH
CARFLEET MARPCC
CARAMERIC (FILE)
@SHIP,AMANGETECH
@NYKSM SINGAPORE
@MARITECH TOKYO
@TADASANGYO TOKYO
@BARBERSHIP KUALALUMPUR
@WALLEMSHIP HONGKONG
@HACHIUMAKISEN TOKYO

@SHOEI J
@FAR-EAST TRANSPORT
@KANBARA KISEN

FM: CARAMERIC

/// SAILING INSTRUCTIONS FOR M/V "###" V.### ///

DEAR CAPT ###

PLS BE ADVISED YR SAILING INSTRUCTIONS AS FOLLOWS.

AAA) SCHEDULE

KAWASAKI	MAY 18-18 LDG(SUBARU) / BUNKER
TOYOHASHI(TAHARA)	19-19 LDG(TOYOTA)
OMAESAKI	20-20 LDG(SUZUKI)
HONOLULU	MAY 29-30 DISCH(TOYOTA,SUBARU,SUZUKI) ON 30TH
LOS ANGELES	JUN 6-6 DISCH(SUZUKI)
VANCOUVER,WA	9-10 DISCH SUBARU
TACOMA	11-12 DISCH(SUZUKI) ON 12TH
JAPAN	JUN 26TH ARD

++ VOY NUMBER SHUD BE CHANGED TO VOY"###" UPON YR ARRIVAL ###
++ ABOVE SCHEDULE IS CALCULATED BASED ON ###KTS. HEVER YR VSL MAY
++ PERFORM THIS VOYAGE EARLIER THAN ABOVE SCHEDULE, WITH BETTER SPEED, PROVIDED THAT YR BUNKER CONSUMPTION IS STILL WITHIN THE C/P AGREEMENT, IN THIS CONTEXT, PLS PROCEED WITH YR UTMOST SPEED MAINTAINING BUNKER CONSUMPTION WITHIN THE C/P AGREEMENT

++SHOULD YOU HAVE ANY INCIDENT / TROUBLE / MAINTENANCE / REPAIR WHICH COULD AFFECT ABOVE SCHEDULE, YOU SHOULD REPORT TO THE LINE OPERATOR ASAP AND CAR AMERIC
BBB) BUNKERING
AT ### : 1) FULL TANK CAPACITY

2) MINIMUM REACHABLE JAPAN
PLS INFORM US OF BUNKER REQ @ 7 DAYS PRIOR TO YR ARRIVAL AT###

CCC) IF THE BUNKER QUANTITY AT RECEIPT DOES NOT MATCH THE BUNKER QUANTITY SOUNDED BY THE VESSEL, YOU ARE REQUESTED TO REPORT THE SHORTAGE TO FUEL TEAM IMMEDIATELY IN ADDITION TO MAKE A REMARK ON THE BUNKER DELIVERY RECEIPT.

DDD) WEATHER ROUTING SERVICES (WRS)
@WE WILL ARRANGE ABOVE SERVICE BY "###" THROUGHOUT THIS VOYAGE.

@IN THIS TIME OF SEASON, WE SUSPEND ABV SERVICE. HOWEVER, WE ARE ALWAYS READY TO ARRANGE IT IF YOU REQUEST US, THEREFORE PLS INFORM US IF YOU NEED OUR SERVICES.

@WE WILL ARRANGE "WEATHER ROUTING SERVICE" BY "WNI OCEANROUTES(WNI)" JAPAN WEATHER ASSOCIATION (JWA)" FM ### TO ### FOR THE PURPOSE OF CHOOSING FAVOURABLE TO FOLLOW THEIR RECOMMENDED ROUTES, WHILE THE FINAL SELECTION OF ROUTES SHALL ALWAYS BE LEFT TO YOU, WE BELIEVE THEY WILL ASSIST YOU IN SELECTING AN OPTIMUM TRACK. YOU ARE THEREFORE REQUESTED TO CONTACT "WNI" DIRECTLY IF YOU NEED ANY MORE INFORMATION WITH REGARDS TO THE EXPECTED WEATHER CONDITIONS AND/OR IF YOU ARE DOUBTFUL OF THE RECOMMENDED ROUTE AND ANY RECOMMENDED DIVERSIONS SENT BY THEM. THEY WILL CAREFULLY REVIEW THE CAPTAINS INTENTION AND CONCUR OR OFFER AN ALTERNATIVE RECOMMENDATION THESE TYPE OF SPECIFIC REQUEST OR INQUIRIES FM CAPTAIN ARE ARE FREE AS ARE INCLUDED IN THE WRS FEES.

EEE) ETA NOTICE
UPON SAILING LAST LDG PORT IN JPN, PLS ADV YR UPDATED ETA TO LOCAL AGENT IN USWC WITH COPY TO NYK BULK LA, N CARAMERIC, CARFLEET EVERY DAY WITH FLWG ITEMS.

1. NOON POSITION
2. ETA PILOT STATION (AT YR CALCULATED SPEED)
3. AVERAGE SPD IN YR LAST 24 HRS.
4. REMAINING DISTANCE
5. SEA/WEATHER CONDITION

*AFTER THE COMPLETED DISCH OPERATION IN USEC, PLS SEND US ETA REPORT TO CARFLEET AND CARAMERIC EVERYDAY UNLESS OTHERWISE INSTRUCTED BY US.

FFF) CARGO DAMAGES BECAUSE OF FALLING DOWN OF GAS TIGHT DOOR… RECENTLY, WE HAD A CARGO DAMAGES DUE TO SUDDEN FALLING DOWN OF GAS TIGHT DOOR DURING CARGO OPS. FORTUNATELY, THE DOOR HAS FALLEN BETWEEN 2 CARS THAT MADE DAMAGES TO BOTH CARGO AND DRIVER NOT SERIOUS, H'EVER, WE WOULD LIKE TO REMIND YOU TO CHECK ALL HOOK AND/OR STOPPER WHEN OPENING GAS TIGHT DOORS.

GGG) IN TAKING ACCOUNT OF RECENT NOSE HIT DAMAGE HAPPENED AT LOADING/DISCHARGING OPS. YOU ARE KINDLY REQUESTED TO TAKE FLWG COUNTERMEASURES

1) MAKE SURE OUTER RAMP'S EDGES IS COVERED BY RUBBER MATS.
2) ANGLE OF OUTER RAMPS MUST BE KEPT AS LOW AS POSSIBLE BY BALLASTING.
3) BE FAMILIAR WHERE "LOW PROFILE CAR" STOWED. THEN DUTY OFFICER/DECK HANDS SHOULD OBSERVE AND CONFIRM SUCH "LOW PROFILE CAR" CAN BE DRIVEN WITHOUT HITTING SHIPS DECK AT THE END OF EVERY INNER SLOPES AND OUTER RAMPWAYS.
4) NEEDLESS TO SAY, BEST WAY TO AVOID SUCH NOSE HIT DAMAGE IS TO KEEP LOW SPEED DRIVING, T'FORE, YOU ARE REQUESTED TO HAVE STEVEDORE TO DO SO.

FYG: FLWG ARE "LOW PROFILE CAR" CURRENTLY BEING SHIPPED.

TOYOTA: CELICA,MR2 AND LEXUS SC ETC
HONDA: CIVIC HYBRID ETC
MAZDA: ATIENZA
SUZUKI: AERIO SPORTS TYPE ETC

HHH) RECENTLY HEAT DAMAGE ON TIRES (STOWED ON FO TANK TOP), REPORTED FM A VESSEL UNDER ANOTHER COMPANY'S OPERATIONS, T'FORE WE WOULD LIKE YOU TO REMIND THAT MAINTAIN TEMP. LESS THAN 50 DEGREES CENTIGRADE. PLS REFER NAV9000 CODE.90-10-3172

III) SPECIAL ATTENTION FOR SOOT BLOWING WHILE BERTHING
RECENTLY, SOOT DAMAGE HAS BEEN REPORTED AT TOYOTA PRIVATE BERTH. A VESSEL WAS OBSERVED "BLOWING STACKS" ON SEVERAL

OCCASIONS DURING DISCH OPS. SUBSEQUENTLY, RESIDUE WAS STUCK TO MANY TOYOTA VEHICLES LOCATED IN THE YARD, AS A RESULT, WHICH WAS RINSED OFF TO MITIGATE ANY POTENTIAL DAMAGE.

PLS REMIND ALL CREWS THAT SOOT HAS A POSSIBILITY TO HARM THE PAINT SURFACE OF VEHICLES ON THE YARD, TFORE SOOT BLOWING HAS BEEN STRICTLY PROHOBITED AT BERTHING N SHOULD BE PRACTICED ELABORATELY BEFORE ENTERING EVERY PORT, HOPE ANY FURTHER DAMAGE WONT BE SEEN IN THE FUTURE.

JJJ) PLS BE ADVISED THAT U.S. CUSTOMS HAS PUT INTO EFFECT A REQUIREMENT FOR ALL VESSELS CARGO MANIFESTS TO BE SUBMITTED 24 HRS PRIOR TO FIRST LOADING DATE STARTING DEC 3RD 2002, NYK LINE HAS OBTAINED TEMPORARY EXEMPTION FOR THIS RULE UNTIL FURTHER NOTICE. U.S. CUSTOMS HAS DESIGNATED THE BELOW "CUSTOMS EXEMPTION APPLICATION" NUMBER FOR NYK VESSELS.

CEA NUMBER: P-01-1202-0013

PLS BE PREPARED TO INFORM CUSTOMS OF THE ABOVE CEA NUMBER UPON DEMAND. PLS KEEP THIS NUMBER ON SHIP'S FILE FOR PRESENT OR FUTURE USE.

KKK) DRUG SMUGGLING IN THE U.S.A.
AS YOU KNOW THE U.S. CONGRESS ENACTED AND AMENDED LAWS IN 1986 TO STRENGHTEN THE ABILITY OF THE U.S. CUSTOMS SERVICE TO DEAL WITH DRUG SMUGGLING AND THE PENALTIES AGAINST OWNERS AND/OR OPERATORSOF VESSELS IN WHICH DRUG ARE TRANSPORTED INTO THE U.S. HAD BEEN GREATLY INCREASED. IN CONSIDERATION OF SUCH SITUATION, NYK SIGNED THE "SEA CARRIER INITIATIVE AGREEMENT " THROUGH THE BALTIC AND INTERNATIONAL MARITIME COUNCIL (BIMCO)" GUARANTEEING COOPERATION TOWARD THE U.S. CUSTOMS IN ORDER TO MAKE GOOD IMPRESSION ON THE AUTHORITIES IF NYK VESSELS UNFORTUNATELY INVOLVED WITH ANY TROUBLE. THEREFORE PLS BE GUIDED/INSTRUCTED TO TAKE NECESSARY MEASURES MENTIONED INTO BIMCO'S "SEA CARRIER SECURITY MANUAL" TO KEEP YOUR GOOD VESSEL AWAY FROM DRUG SMUGGLING. NYK HAS DIDTRIBUTED A/M MANUAL AND INFORMATION LEAFLETS TO YOU SINCE LAST DECEMBER HEVER IF THEY COULD NOT BE FOUND ON YOUR VESSEL PLS IMMEDIATELY REQUEST US TO SUPPLY THEM AGAIN.

LLL) SEA CARRIER INITIATIVE AGREEMENT (SCIA1991)

IN ADDITION TO GGG) , AS YOU HAVE BEEN ALREADY INFORMED FM OWNER BY "SCIA1991", "DRUG SMUGGLING RISK LEVELS OF GEOGRAPHIC AREAS", "BIMCO'S CONFIRMATION LETTER", "CET-LIST" AND "SEA CARRIER INITIATIVE AGRREMENT (SCIA1991)", WHICH WERE DISTRIBUTED BY NYK RECENTLY, NYK SIGNED "SEA CARRIER INITIATIVE AGREEMENT (SCIA 1991)", WHICH IS A REVISION OF "SCIA 1989", THROUGH THE "BALTIC AND INTERNATIONAL MARITIME COUNCIL (BIMCO)" IN ORDER TO PAY MORE ATTENTION FOR AVOIDING DRUG SMUGGLING IN THE U.S.A. IN THIS REGARD, PLS KINDLY TAKE NECESSARY MEASURES MENTIONED IN ABV MANUALS AND PAY MUCH ATTENTION FOR DRUG SMUGGLING. ALSO IF NYK VESSELS ARE UNFORTUNATELY WITH ANY TROUBLE OF DRUG SMUGGLING, PLD KINDLY INFORM "CARAMERIC" AND "NYKBULK NEWYORK" AS SOON AS POSSIBLE SO THAT WE CAN TAKE PROMPT NECESSARY ACTION FOR MINIMIZING TROUBLE.

KKK) AS FOR OTHER NOTICES YOU ARE KINDLY REQUESTED TO CAREFULLY READ "GENERAL SAILING INSTRUCTIONS FOR THE MASTER"

LLL) VSLS PARTICULARS
G/T: (INTERNATIONAL)### / (JAPANESE) ###
N/T: ###
D/W: ###
DRAFT(SUMMER): ###
LOA: ### BREADTH:### BUILT: ###
OWNER: ###
FLAG: ###
CALL SIGN: ###
BOW THRUSTER: ###
STERN CAR LADDER:#TH DECK, MX SET AT ###, SIDE MIDSHIP LADDER: #DECK MX SET AT BOTH SIDES
INMARSAT NO. ### TEL NO(JAPANESE AREA ONLY) ###
LLOYD REGISTER NO. ### OFFICIAL NO.: ###
CLASS: ###
CEA NUMBER: P-01-1202-0013

MMM) PERSON IN CHARGE
1. OPERATION MATTER
2. SALES AND MARKETTING MATTER

3. STOWAGE/MARINE TECHNICAL MATTER
4. OPERATION/MARINE TECHNICAL MATTER IN USWC

CAPT.###

WISHING YOU HAVE A SAFE AND PROSPEROUS VOYAGE

BEST REGARDS
CARAMERIC

II.2 General Instructions to Master

Ship Owners provide the vessel of the General Instructions to Masters. This contains the company policy for ship management. Being the person with the highest authority onboard, the Master is guided by this instruction on his day to day work onboard. If he will be deviating from the company's operational procedures, he may do so but he is required to report it to the company to explain his reason.

Being the representative of the company, the Master has the duty to preserve and properly protect the interest of the Owners and its direct Customers. Quick dispatch and turn-around of the vessel should be performed in accordance with the Sailing Instructions by always considering smooth and safe operation of the vessel.

In the shipboard management, the following items should be given careful attention:

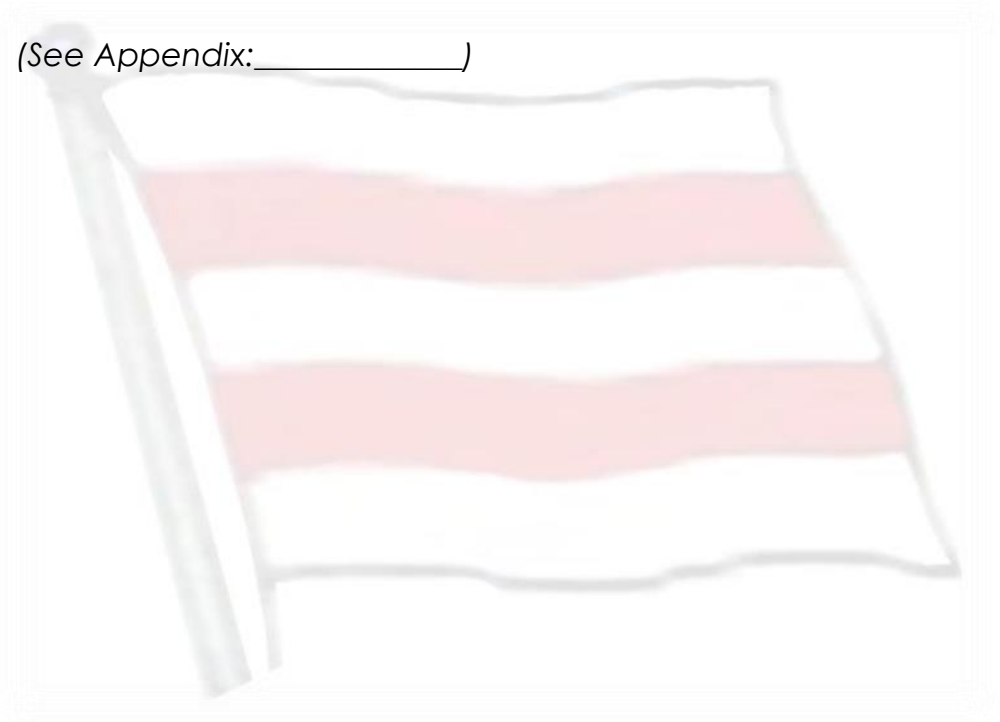
Safety Operation
Quality Control
Cost Control

The instruction also contains the accounting matters and on how to handle the ship's money such as:

Management of Ship's Money
Requesting for Ship's Money
Notes When Paying by Ship's Money
Account of Ship's Money
Entertainment Expenses
Slop Chest Management
Provisions Management

Entertainment Fee/Watching & Maintenance of Reefer Container
Crew Extra Overtime

(See Appendix:_____)



III. CARGO OPERATION

III.1 Hold Cleaning

It cannot be over emphasized that the condition of the cargo hold should always be checked prior to any cargo operation. Hold cleaning must be done as poor conditions may cause unnecessary delay and damage to cars or vehicles.

If an opportunity should arise, wherein the vessel is completely empty, car decks can be washed down completely with fresh water and detergents.

However if time is limited, it is important to sweep down the car decks prior to cargo operations and the following are checked:

1. Loose lashings on deck – these are to be collected and stowed appropriately, confirm that there are sufficient amount of lashings in each compartments of the cargo hold.
2. Mud / stones – swept clear as these can cause damage to the vehicles
3. Loose nuts / bolts – are liable to fall down or be thrown off from speeding cars causing damage to other vehicles
4. Hydraulic oil from ramps etc. – will cause paint damage to cars or slippery decks that might hinder the safe transit of cars.
5. Grease from wires.
6. Leaking pipes – especially sea water pipes as this will cause rusting.
7. Rust on deck overheads – loose rust will fall to cars and cause paint damage
8. Empty cans or bottles from beams – stevedores may leave empty cans or bottles from overhead beams which might fall into the cars.
9. Rust from ventilators – rust from exhaust or intake ventilators can be blown into the vehicles.
10. Bilge wells – to be cleaned and checked for blockages or overflow.

Hold cleaning should always be done, prior to loading or discharging even on intermediate ports.

III.2 Loading Operations

III.2.1 Preparations for loading

The smooth flow of the loading operation depends on planning. To avoid any unnecessary delays or damage to vehicles the following must be checked;

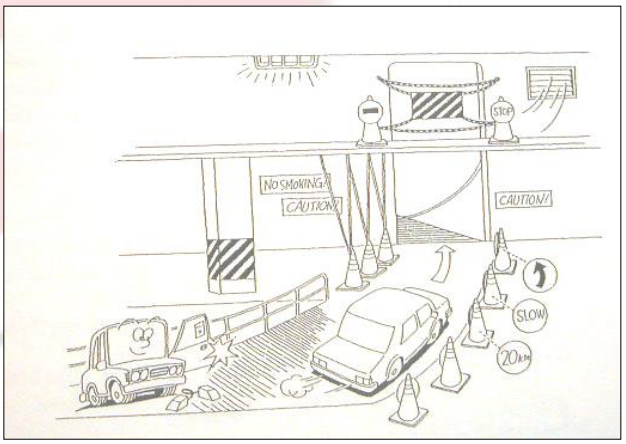
1. Keep car ladders and turn tables (if any) in good working order.
2. Maintain the car decks, cargo hold, inner slope ways in good condition; clean, dry and free from rust and paint chips.
3. Check and remove foreign objects such as empty bottles which are often placed on the beams in the ceilings on deck.
4. Provide and maintain caution marks such as "NO SMOKING" and "MAX SPEED 20 km/h" and other indications in the hold ; number of deck, direction of driving, exit signs and etc.
5. Check the condition of lashing points on each car deck.
6. Check that lashing materials are sufficient in each compartment of the cargo hold.
7. Confirm that ventilation system is working well and that all the dampers are placed in the correct position. Sweep out rust, dust and dirt from the bottom of the air ducts.
8. Check and ensure proper lighting is available in all cargo holds. Replace all busted lighting fixtures accordingly.
9. Ensure that plywood and/or rubber matting are ready for protection of wharf surface to be used under the car ladder.
10. Check materials for damage prevention; traffic cones, rubber matting and separation tapes are supplied sufficiently and distributed properly in the cargo hold.
11. Check that a bag of sawdust is prepared in the vicinity of the car ladder for the treatment of oil spills on deck.
12. Ensure that Car Deck Arrangement is in accordance with shippers or Charterer's instructions.
13. Check that all equipment to be used during cargo operations such as deck lifters are in good working order.
14. Keep battery trolley, gasoline safety cans, fix-a-flat aerosol ready for possible use.
15. Tidal schedule are computed and times for possible re-setting of ramps taken into consideration.

III.2.2 Pre-loading Meeting

In every loading port, a pre loading meeting should be held at the ship's office for a smooth and safe operation.

The stevedore foreman, Port Captain, NYK Agent, Master and Chief Officer of the vessel should attend this meeting. Matters to be discussed are;

a. Loading schedule and stowage plan;
b. Schedule of car ladder operations: setting, resetting and shifting;
c. Void spaces in cargo hold for sounding work and passageways;
d. Maximum driving speed during the loading operation;



e. Slow speed driving (caution) areas; car ladder, inner slope ways etc.
f. Any other points relevant for safe loading operations.

III.2.3 Loading Operations

The loading operation on Pure Car Carriers is often fast and will require utmost attention of all available personnel. It is the duty of the Chief Officer to brief his officers and crew on the stowage and all other special requirements for the said ports including situations that may arise that can hinder the smooth flow of loading operation.

The crew must be suitably attired with no buttons or zippers on their clothing that may damage the paint condition of the cars. They should be positioned appropriately that all areas of cargo operation are in sight at all times so that any situation can be attended to immediately and damages to cars loaded can be reported immediately to the Chief Officer for counter signing of damage report forms by the stevedore foreman.

The following must be taken into consideration at all times;

a. Car Ladder: always keep the car ladder at a proper angle during cargo operation to avoid damage to vehicles bottom. Internal

ramps should be kept clear of obstructions and decks that is not be used should be closed.

b. Speed : The Master or Chief Officer should instruct the stevedore foreman that the driving speed should not exceed 20 kph and speed should be further reduced on restricted or dangerous areas such as ramps, inner slope ways, small head clearance, multiple obstructions and narrow spaces which need a sharp turn for maneuvering.
c. Void spaces: sufficient void space should be kept around sounding holes and entrances/exits/pilot access to stairways in accordance with NYK requirements which is 50cmx50cm.
d. Driving route: A safe driving route must be provided for after discussion with the stevedore foreman. Car decks that are not to be used must be closed. Use traffic cones, surveyor tapes, etc.
e. Dead Car: refuse to load non-start vehicles, if you must, on insistence of shippers, make sure that such vehicles are included in the exception list.
f. No Smoking: notify the stevedore foreman that smoking is strictly prohibited in the cargo hold.
g. Stowage Information: any important stowage information
h. Separation: cargo operation should be double checked by the stevedore foreman and a ship's officer with stowage plan in each compartment to avoid any over stows or shortages.
i. Conditions: loaded vehicles must be checked for the following faults and should be corrected during loading operation and during voyage:

(i) Door does not completely closed.
(ii) Lighted vehicle that have their lights on..
(iii) Unclosed windows.
(iv) Protruding radio antennas.
(v) Locked doors.
(vi) Hand brake not engaged properly
(vii) ignition key remaining on key hole
(viii) Leaking engine oil, transmission oil, brake oil, fuel oil, grease etc.
(ix) Transmission gear not shifted to proper position. If you can not correct the hand brake and transmission lever on the vehicle because of stowage situation, take additional lashings and fit wooden wedges to the vehicles.

j. Additional lashing: additional lashing should be considered to allow the vehicles to be stowed in vulnerable place with the minimum

amount of inertia when pitching and rolling at rough or heavy weather.

k. Un-used lashing: materials should be stowed properly so as not to drop on the next deck and hitting vehicles stowed there.

III.3 Hold Inspection during laden voyage

Hold inspection must be done after sailing every loading port, discharging port, during heavy weather and regularly during long voyages. This is to ensure that the lashing condition and the vehicles are taken cared of during transit.

III.3.1 Lashing checks

1. The following should be checked:

a) non lashing;
b) loose lashing;
c) twisted lashing;
d) wrong angle lashing;
e) touching the ship's structures in hold, such as frame and bracket, and
f) wooden wedges not fitted on vehicles on slope ways.

2. Report to the Company any improper lashing with location (where units are stowed) and loading port.

3. Lashing condition must be checked whenever necessary such as:

a) when rough weather is anticipated;
b) during rough weather;
c) after experiencing rough weather, and
d) after completion of discharge at every discharging ports.

III.3.2 Condition of Vehicles

You should check the condition of loaded vehicles in the hold at the time of lashing checks, and verify properly as follows:

a. All lights should be turned off on the vehicles.
b. All doors and windows closed.
c. Radio antenna retracted.
d. Vehicles unlocked.

e. Hand brake fully engaged.
f. Key out of the ignition.
g. Fluid leaks, gasoline, engine oils etc. to be corrected.

When electrical problem occurs, the battery power will generally run down with in 12 hours. Vehicles stowed underneath deck of oil leaking units must be covered with plastic sheets without delay to prevent staining damage.

III.3.3 Condition of Cargo hold

The condition of the cargo hold must be check during the laden voyage at regular intervals to confirm the following points.

1. Gas tight door, watertight door, passage door and other access hatch covers must be closed.
2. Inflammable gas must be exhausted from the hold by ventilating at regular intervals.
3. Moisture and bilge should be cleared from the hold.
4. Leakage of oil or grease from ship's pipes, structures or wire ropes.
5. Leakage of ballast water from pipes and valves.
6. Smell and strange noises.

Soundings of ballast tanks and hold bilges should be done twice a day to prevent or find out the accident of leaking seawater into the cargo hold, within its earliest period.

If any residues such as rust scales, grain or other previous cargoes are sighted on car roofs or sides, no attempt must be made to remove them, or to touch the surfaces affected by the residues.

III.4 Preparations for Discharging

III.4.1 Pre-Discharging Meeting

In every discharging port, a pre-discharging meeting should be held at the ship's office to minimize possible cargo damages during the discharging operation.

The stevedore superintendent and/or foreman, Agent and/or surveyor, Captain and/or Chief Officer should attend this meeting.

Matters to be discussed are as follows:

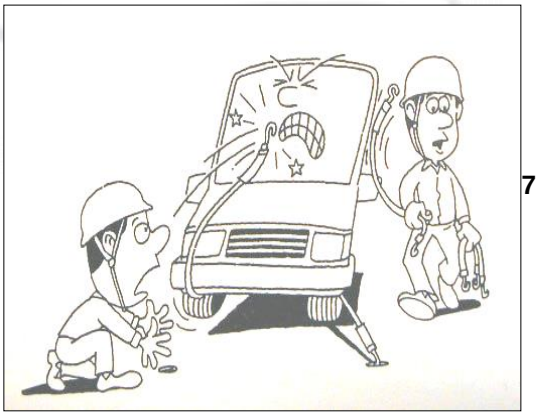
1. Discharging plan of stevedores and sequences of deck/hold to be discharged.
2. Areas tightly stowed beyond standard at the loading port.
3. Areas where the vessel's structure requires special care for handling of vehicles.
4. Purpose of caution mark, signs on the block stowage plan and markings in the hold which are employed to assist drivers/breakmen.
5. Equipment for discharging non-starting vehicles.

a) towing tractors;
b) cables for charging flat batteries;
c) gasoline or diesel for refueling, and
d) portable refueling tanks (approved CFR 49 Ch. 176.78)

6. Any other points relevant to the safety of discharging.
7. Unlashing schedule.
8. Schedule of car ladder operation; setting, resetting and shifting up/down (including inner movable ramps).
9. Correct method of starting the vehicles engine.
10. Purpose of materials such as traffic cones, surveyors tape to be used in the cargo hold for damage prevention program.
11. Maximum driving speed in the hold and the terminal yard.
12. Slow speed driving areas; car ladder, inner slope ways etc.

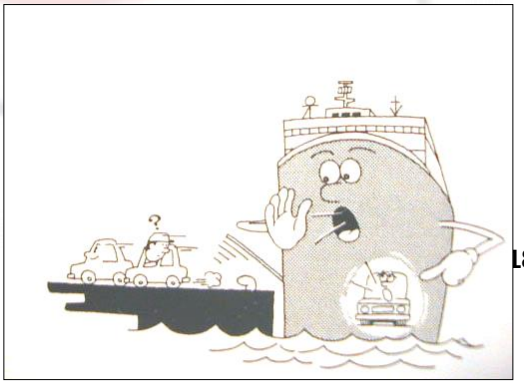
III.4.2 Guidance for discharging

1. Discharging operation should be carried out under the supervision of a stevedore superintendent and/or ship's personnel.
2. Smoking is prohibited in the cargo hold. Officers and crew should set the examples to be followed by stevedore laborers and other persons.
3. Fire fighting equipment. You should be familiar with the location of fire extinguishers, fire hydrants and fire hoses in every compartment.
4. Port separation. Confirm and indicate the port separation to the stevedore before starting the un-lashing work to avoid any short or over-landed problems.
5. Car ladder: Always keep the car ladder at the proper angle during cargo operation to avoid hitting the vehicle.
6. Un-lashing work: it has been pointed out that more than 50% of scratch damages occur during lashing and unlashing



work. Therefore the crew should attend the unlashing work as much as possible to reduce scratch damage. Check that all lashing materials are released from the vehicles and removed from the drive way in the hold.

7. Sawdust. A bag of sawdust and waste cloth must be prepared in the vicinity of the car ladder, Oil spills should be marked properly first to prevent accidents and then wiped with sawdust and waste cloths.
8. Safety ropes. Safety ropes, stop signs and any others safety items should be placed at the car ladder and/or positions in the hold before starting cargo operations.
9. Rubber matting. Rubber matting should be laid on the edge of the car ladder in order to prevent "nose hitting" damages of the discharging vehicles.
10. The first car. The Chief Officer should observe and confirm that the first discharging passenger car can drive out without hitting the end of the car ladder.
11. Driving speed. The Master or the Chief Officer should instruct the Stevedore Superintendent that the driving speed should be limited to a maximum 20 km/hr (12.4 mph) in the cargo hold. Care must be taken when going around corners and when approaching both the end of the inner slope way and the steep angle of the car ladder.
12. Safe driving route. You should provide a safe driving route in the cargo hold using the traffic cones and surveyor tapes upon discussion with the Stevedore Superintendent.
13. Lead driver. You may assist the lead driver when he is trying to turn, switch-back, pull and break out.
14. Stevedore damage. All cargo damages should be reported to the company without delay, including Stevedore Injury Report. Damage to vehicles to be filled on the damage report form and countersigned immediately by the Stevedore Foreman.
15. Pilferage. Check any unauthorized visitor entering the cargo hold in order to prevent cargo pilferage, especially car radio sets. Gas tight doors, water tight doors, passage doors and other access hatches leading to compartments with cargoes designated to other ports should be closed as much as possible.
16. Short land (Over Carriage). The Chief Officer must check each compartment by the checklist to ensure that all cargo for the designated port was discharged,

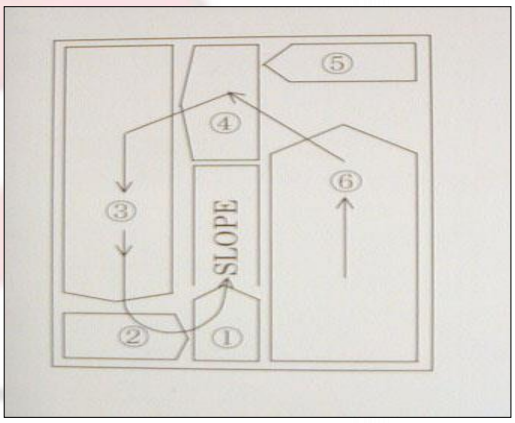


before starting to re-set and stow the car ladder.

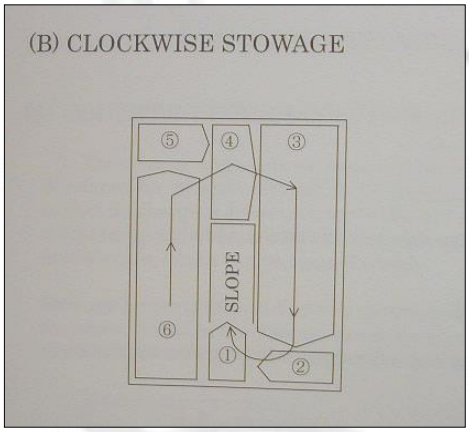
17. Unsatisfactory work. If any unsatisfactory work and/or rough cargo handling has been observed throughout the discharging operation, the Chief Officer should note the remarks of the above matter on the Stevedore Cargo Working Report. In such case copies should be sent to the company with the Master's Voyage Memorandum.

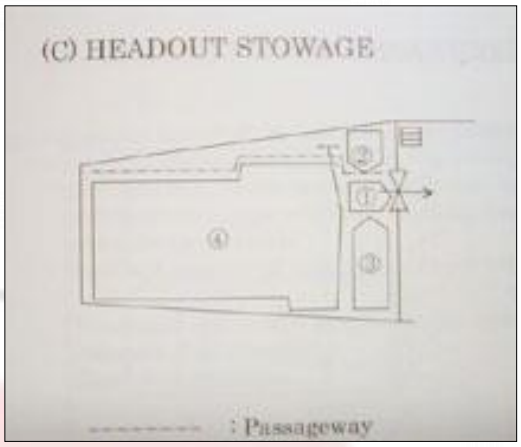
III.5 Stowage Plans

There are three (3) different types in stowage of vehicles;



a. Counter-clockwise Stowage: the counter-clockwise stowage system was developed for vehicles with steering on the left hand side. Discharging drivers can enter the key car from the driver's side which may open widely. After the key car is moved, the other cars can be driven out smoothly with counter clockwise route in the compartments. From this system it is possible to obtain not only an improvement in the damage prevention program but also an improvement of the discharging production rate.





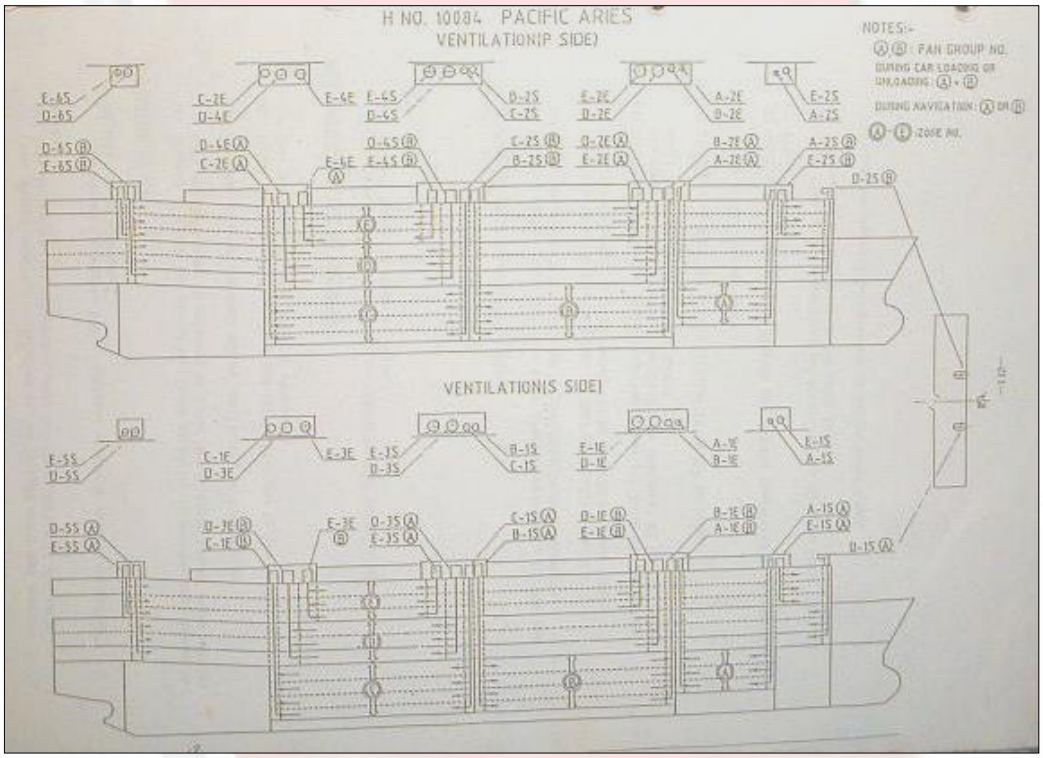
b. Clockwise Stowage: vehicles with the steering on the right hand side are in the clockwise pattern. Both stowage plans work on the same principle, but in opposite direction.

c. Head-out Stowage: should be applied in compartments where the counter-clockwise/clockwise stowage is considered unsuitable due to a narrow space or presence of sharp turns.

III.5.1 Distance between vehicles

As many vehicles as possible should be stowed horizontally, except in the ramp way with the following distances maintained.

1. The distance between the sides of two vehicles should be kept 10cm (4 inches) or from the nearest ship's structure. A minimum of 10 cm. for Australian service.
2. The distance between bumpers and from the nearest ship's structure should be kept at minimum 30 cm. as walkway for lashing/unlashing gang.



3. The width of the passage should be kept at a minimum of 30 cm (40 cm for Australian service). The passage usually will be provided in the middle of each deck from bulkhead to bulkhead as walkway for lashing/unlashing and for the crew to inspect the conditions of vehicles and lashings during the voyage.
4. The space in front of hold stairs should be kept about 50cm X 50cm
5. Workable spaces must be kept around portable fire extinguishers and fire hoses.
6. Key cars must be provided enough space for smooth discharging.
7. Heavy weight vehicles must be given enough space for lashing/unlashing works.

III.6 Ventilation System

It is of utmost importance that the ventilation system on board is kept in good order and satisfactory condition, as this not only affect the safety of the vessel and its cargo but the working environment of the ship's crew and the stevedores as well.

Deficiency in the ventilation system may cause undue delay to the vessel, as most longshoremen will refuse to work if the atmospheric conditions inside the cargo holds will pose a danger or risk to their health.

Under these circumstances, special attention must be kept on the following points:

1. Before entering port, make sure that all hold ventilation system is in good order, repair or replaced defective parts, and keep the system always in good condition.
2. Before starting cargo operations, confirm whether the ventilation system is working well, with all dampers in correct position.
3. During the cargo operations, watch the ventilation system strictly and keep it running always in good condition.
4. Report to the stevedore foreman or the responsible person of the longshore workers immediately if any defect or trouble is detected during the operation.

III.6.1 Ventilation at Sea

1. Dampers of cargo fans should be closed perfectly to prevent rust damage to cars due to incoming moisture or rough sea spray or rainy weather.
2. Open the dampers and keep natural ventilating in fine weather.
3. Check the leakage of gasoline and inflammable gas in the hold every day, and operate cargo fans if necessary.

III.6.2 Hold Ventilation Starting Procedure

In order to make sure that the ventilation system is kept in good working order, a starting procedure checklist must be prepared and utilized according to your own vessels procedure.

Ventilation system in car carriers is of great importance in loading and unloading operation and knowledge of the procedure is very necessary. Most important in starting hold ventilation;

1. The first thing to have in mind, is that you must confirm all ventilation dampers are open (done through checklist).
2. Confirm from the engine department that all three (3) generators are simultaneously running. we could also determine by looking at the panel board if the lights are opened.
3. Confirm that the switch (light) is in OFF position.
4. Switch on the source supply.
5. Confirm the fans started are running completely by determining if the lights are on.

- ❖ The fans in two zones shall not be started at the same time. Wait 10 seconds after switching on the other fan.
- ❖ Check occasionally the Galvanometer at switchboard rooms.

III.7 Fire Prevention

Pure Car Carriers (PCC's), due to its nature, carries hazardous cargoes. As the vehicle it loads have gasoline in their tanks. Therefore, vehicles transported by PCC's are considered as dangerous cargoes according to various government regulations.

Fire, once it breaks out on board a vessel is very difficult to bring under control. For the safety of everyone on board fire prevention must not only be practiced diligently but must be a way of life.

The following important precautions should be taken into account;

1. Fire/Smoke detectors. This may be a unique equipment on board your vessel, as there are various makers. Familiarize yourself with the operation, proper maintenance and location of the various units. This should be regularly tested and kept in good working order. Often times this gives off false alarms that induce a crewmember to set the sensitivity to a very low level. No adjustments should be made without the approval of your superintendent and/or the makers. As this is not a perfect

mechanism, all crew must always be alert to fire using sight and sense of smell.

2. Fixed CO_2 System. This is your ultimate fire fighting equipment. CO_2 is an inert gas that is 1.5 times heavier than air. A capacity of 30% to 45% the volume of the largest compartment must always be kept. The operation and maintenance to keep this equipment in good working order is necessary. This should only be used on the order of the Master and to be operated only by an authorized personnel, after completing the checklist for its usage.

3. Ventilation System. Should be kept in good working order and must be operated not only during loading/discharging work but also in port or at sea at proper intervals to prevent inflammable gas from remaining in the car holds. The dampers for ventilation must also be kept in good order so that they can be opened/closed easily as the need arises.

4. Gas tight, Water tight and other access doors should always be kept closed at sea. This would prevent the rapid spreading of fire and immediate flooding of CO_2 to the compartment.

5. Portable fire extinguishers, fire hoses and hydrants must be regularly checked and maintained in good working order, They should always be in place according to the fire control and safety plan.

6. No Smoking and No Naked lights sign is to be exhibited due to accumulation of inflammable gas in the car holds. The no smoking/no naked lights rule should always be enforced.

7. Gasoline safety tanks of the approved type should always be used in re-filling gasoline or diesel on cars. Storage of gasoline/diesel in the cargo hold and near a battery charging room must be avoided. Proper storage of gasoline/diesel is of utmost importance. In port, do not re-fill vehicles and charge dead batteries in the same compartment.

8. Cleanliness of cargo holds, living areas and engine room. The condition and cleanliness of such areas is a big deterrent. Often oil stained rags, sawdust and other fire hazards are the major cause of fire.

9. Fire patrols. Regular conduction of fire rounds at least every four (4) hours at sea. Checking by sight and smell that any potential risk including all gas tight, watertight and access doors are closed.

10. Regular fire drills are a must, so that in the event of such emergency, all crew are familiarized with their duties, responsibilities and the appropriate equipments to be brought.

11. Bilges and scuppers are to be checked and cleaned frequently, so that in the event of fire, the use of fire hoses and hydrants can be used without compromising the safety of the vessel.

III.8 Ballasting and De-ballasting Operation

Ballasting and de-ballasting operations are essential parts of a vessel's safe operation. Adjustments for stability, trim and heel can be made accordingly.

In a Pure Car Carrier, the proper utilization of ballasting/de-ballasting can often save any undue delay in port and damage to vehicles by adjusting trim or heel in order to maximize the use of car ladder with correct angle or height adjustment.

The following should be taken into consideration;

1. Familiarize yourself with your equipment, including valves, rates (tons/hour) and capacity of your tanks.
2. Prepare a checklist for such operations including the notification to the engineer on watch so that there is sufficient electrical power for said purpose.
3. Be aware of pertinent ballasting and de-ballasting regulations in each port. Some ports prohibit the discharge of ballast water. It is always a good idea to change to clean ballast at sea in order to avoid pollution.
4. Adjust your ballasting and de-ballasting so that you can maximize the use of your car ladder. In tidal ports it is often advisable to adjust the heel or trim of the vessel than stop cargo operations or adjust car ladder to another deck. This may also be necessary for loading some cargoes that have low chassis clearance to avoid damages to such cargoes.

5. Make sure that when deballasting in port the overboard discharge to the quay is monitored or closed to avoid any damage to the vehicles in port or in the yard.
6. Inadequate adjustments on trim or heel may cause damage to quays and considerable expenses in cost and delay to the vessel.

III.9 Damage Prevention

It is most important on board a Pure Car Carrier that everyone pays utmost attention in order to achieve safe and smooth transportation of vehicles without any damage. The mutual cooperation and assistance of crew on board plays an important role to always keep the vehicle status damage free.

III.10 NYK Line Standard Stowage

III.10.1 Distance between vehicles

In order to safely stow vehicles as many as possible onboard the ship's longitudinal direction except on inner slope way, the following spacing should always be maintained:

a) The distance between the sides of two vehicles or the nearest distance between the side of vehicle and the nearest ship's structure should be kept 10cm. (4 inches).
b) The distance between bumper and bumper, or the distance between bumper and the nearest ship's structure should be kept at a minimum 30 cm. (12 inches) as walkway space for lashing/unlashing/lashing check work.
c) The space in front of hold stairs should be kept about 50 cm. X 50 cm.
d) Workable space must be kept around portable fire extinguishers and fire hoses.

III.10.2 Standardized Stowage System

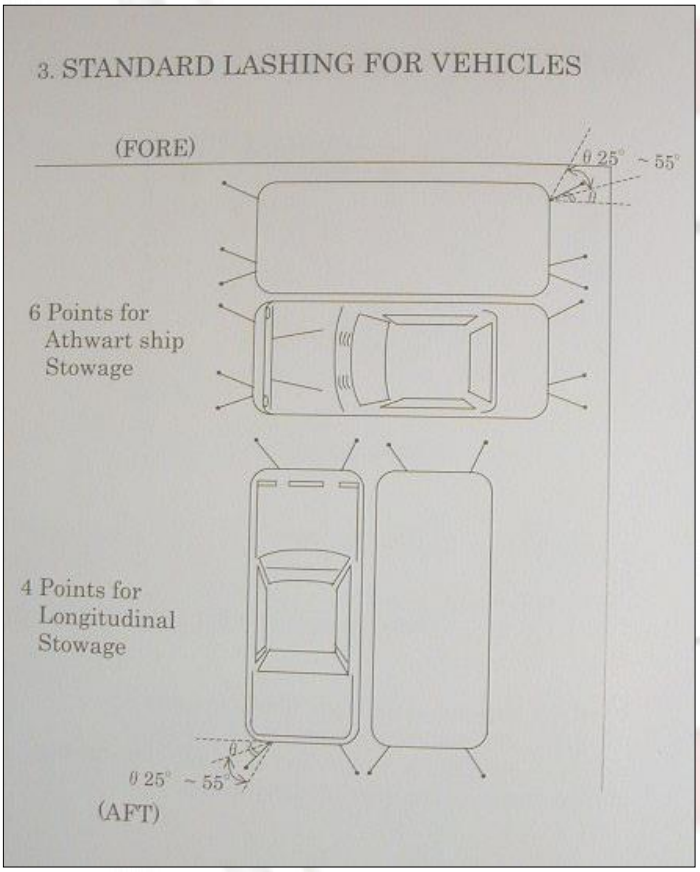
a. Counter-clockwise stowage: The counter-clockwise stowage system was developed for vehicles with left hand steering wheel so that discharging driver can enter the key car (first discharging car) of each stowage block from the driver's side, which can be opened widely. Stowage properly followed by this system could make an

improvement in the damage prevention program and also facilitate good discharging production rate.

b. Clockwise stowage : Vehicles with the right hand drive steering wheel should be stowed in a clockwise pattern. Both stowage work on the same principle but in opposite direction.

c. Head-out stowage : should be applied in compartments where the counter-clockwise or the clockwise stowage is considered as unsuitable due to a narrow space or presence of sharp turns.

III.11 Standard Lashing for Vehicles



Lashing line shall be taken to an angle within the range of 25-55 degrees based on the wheels athwart direction line. If the lashing line can not be taken within the range, additional lashing lines shall be taken for that vehicle.

<u>Standard number of lashing points per vehicle:</u>

Passenger car stowed longitudinally : 4 points
Athwart ship stowage : 6 points
Slope way stowage

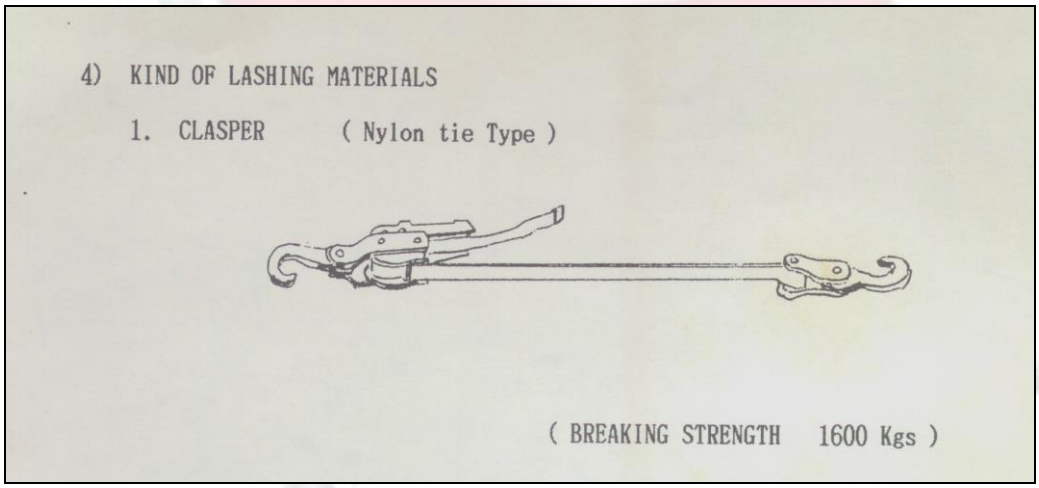
<u>Lashing Materials:</u>

a) For Passenger car
Breaking load : 2000 kg
Safety working load : 500 kg
Recommended materials :
Clasper C-500D, Tightner A2015

b) For Truck
Breaking load 4500 kg
Safety working load 1125 kg

Recommended materials:
NAV-45

Breaking load 6000 kg
Safety working load: 1500 kg
Recommended materials:
RCB, C-1500, A-6001



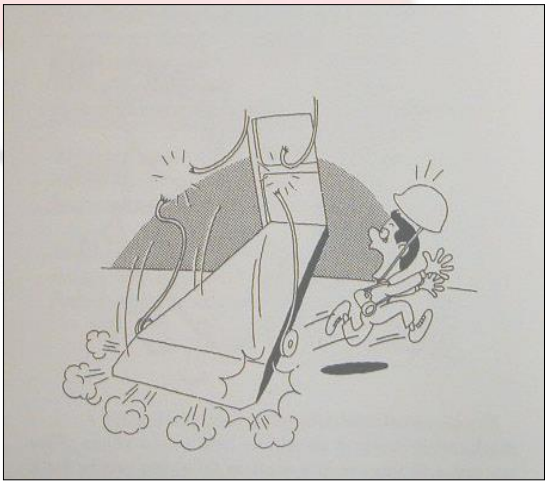
c) For Heavy duty truck & construction machine
Breaking load : 10000 kg
Safety working load : 2500 kg
Recommended materials : C-2500, A-10001

Breaking load : 15000 kg
Safety working load : 3750 kg
Recommended materials : Chain

Breaking load : 16000 kg
Safety working load : 4000 kg
Recommended materials : HCC-16

III.12 Pre-Loading Discharging Meeting

At every loading/discharging port, pre-loading/discharging meeting should be held at the ship's office in order to discuss and confirm following points for a smooth and safe operation:



a. Loading/discharging schedule.
b. Schedule of car ladder operation.
c. Maximum driving speed during the cargo operation.
d. Driving areas which require special attention and extra low speed.
e. Any other points relevant for the prevention of damage.

1. Notes for Car Ramp Operation

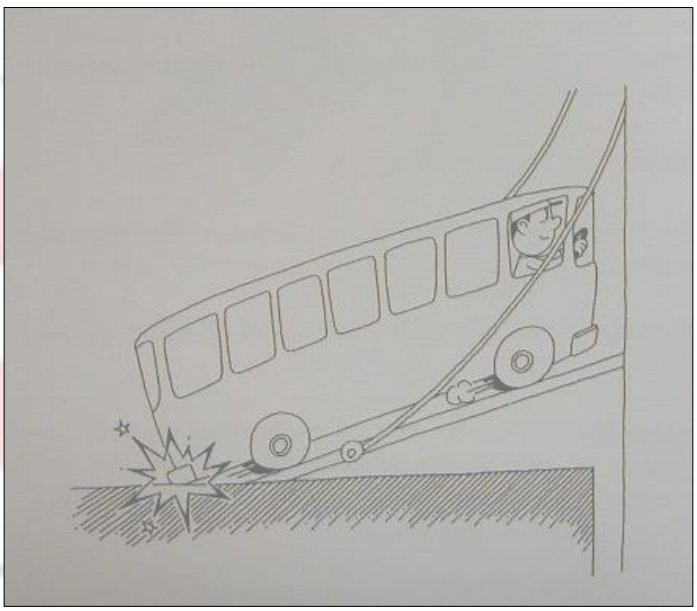
Never stand underneath the car ramp and continuously watch over every movement of the car ramp. Observe from a distance during opening and closing operation. Special attention should be paid to prevent following accident and/or damages:

1) Dropping and dislocation accident for car ramp and side port.
2) Damage to the car ramp.
3) Damage to quays (bull rails, fender, quay end and quay surface).
4) Damage to movable ramp and gas tight cover.

Regular and careful inspection on all parts of the car ramp should be carried out with keeping in mind that the car ramp is the life of PCC.

2. Keep proper approach and departure angle to prevent damage to vehicle's bottom (head/tail)

Always keep proper setting angle of the stern and side (center) car ladders in order to prevent vehicle's bottom (head / tail / between wheels) from hitting onto any parts of car ladder surface.



Special precaution should be paid at tidal ports with estimating relation between ship's draft, tidal range, pier height and workable range of respective car ladder.

Adequate ballasting plan should be considered in order to keep proper setting angle. When any changes of setting deck for side/center ramp are estimated, such time schedule should be advised to an agent and stevedore well in advance.

3. Collision accident in Cargo Hold

a) Display the safe driving route using traffic cones, surveyors tape etc.
b) Display speed limits "Max speed 20 kph (12 mph in the USA) in cargo holds
c) Ensure proper lighting so as not to dazzle the drivers while providing luminous intensity sufficient for car driving.

d) Thoroughly wiper off all spilled oils on deck to prevent slippage.

4. Pilferage of Car radios and cassette.

Carry out the following counter measure to prevent pilferage.

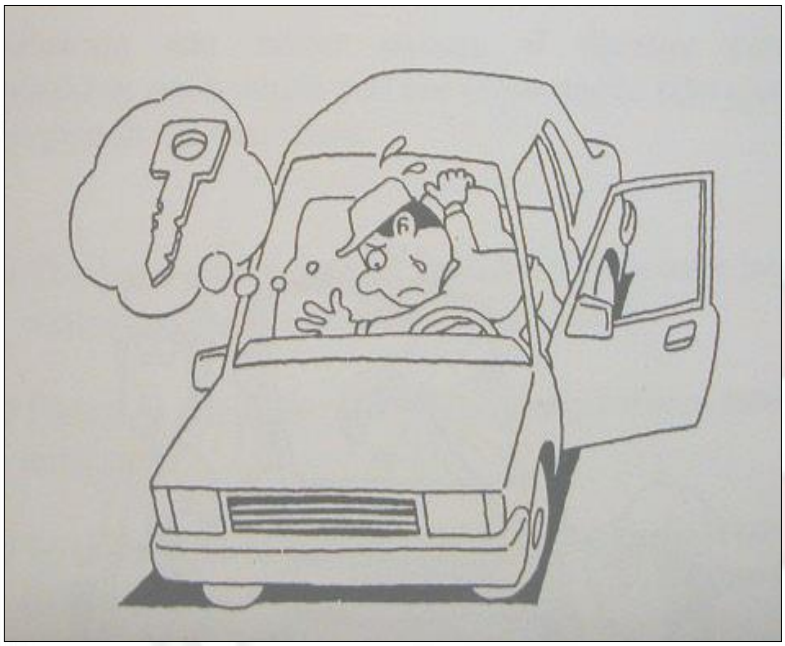
a. Close and lock all access doors to cargo holds while transiting Canal.
b. Make sure if effective block stowage for luxury cars has been applied.
c. Close all access doors to deck where no cargo operation is carried out.

d. Any unauthorized access to cargo holds must be strictly prohibited unless you can not keep watch or control them.
e. Lock up all cars in cargo holds whenever necessary depending upon security condition

5. Non-start cars because of Fuel shortage or dead battery

1) If there's shortage in gasoline, follow the rules and regulations that apply at the discharging port.
2) Direct fuel supply to carburetor must be prohibited.
3) In case a car stopped on the slope way due to shortage of gasoline, move the car to the flat area and then try starting engine again.
4) Take precaution so as not to cause damage to other cars in the vicinity.
5) Try to charge the batteries in a safe area.

6. Cars with key missing and accidentally locked up

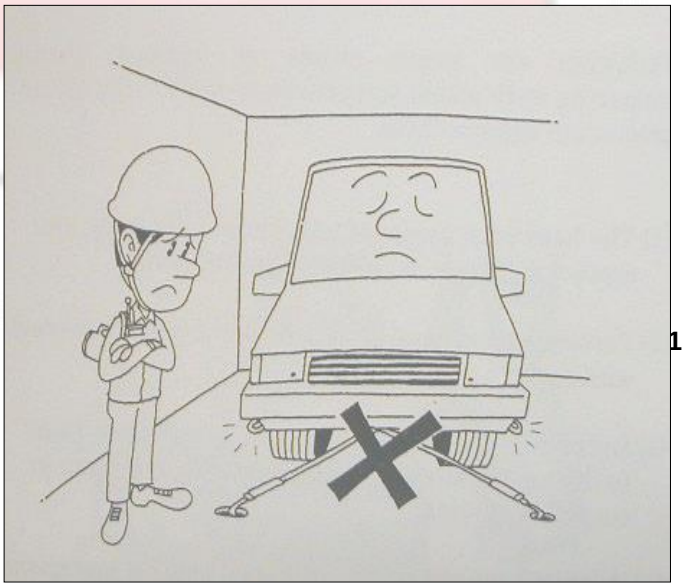


a) Immediately request the agent or stevedore foreman to call specialist service provided by the manufacturer or local car dealer.
b) When such problem is encountered at sea, cable the agent at the discharging port for due arrangement.

7. Damage prevention during unlashing work.

Following are major causes of damage during unlashing work which you should take special precaution:

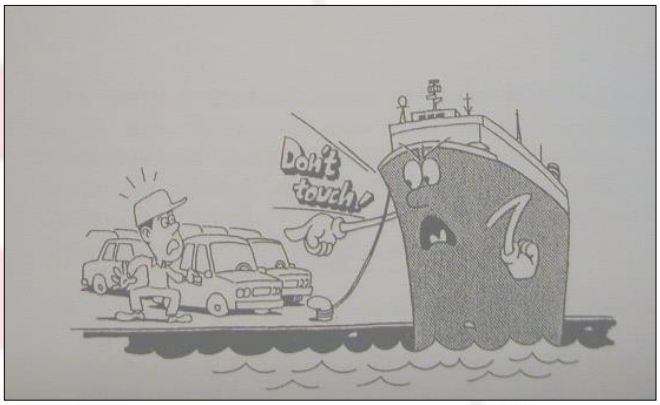
a) The hard protrusions of unlasher's suit come into contact with cars causing damage thereto.
b) Personal effect carried by unlashers that come into contact with cars.
c) In the course of setting the lashing materials back to the area of storage, swung metal fitting come into contact with cars.
d) A started cars runs onto not stored lashing materials on deck and breaks them into some pieces. Such broken pieces eventually hit other cars stowed nearby.
e) A car that ran over lashing materials was damaged by them when they bounced up thereto.



f) Damage due to vandalism.

8. Damage to cars because of wrong lashing points

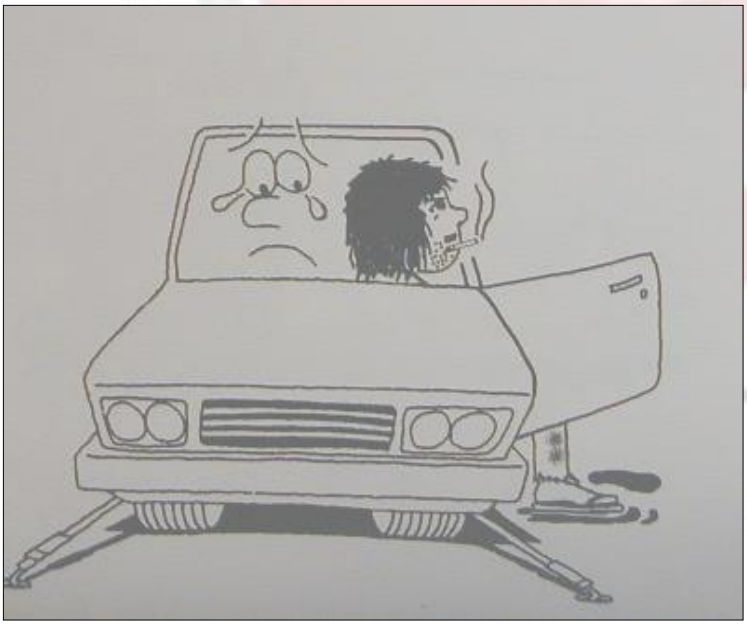
Paint peel off and/or bent damages of the towing eye easily happen if the lashings are taken from the towing eye. Generally the towing eye is not strong enough against downward stretch except the one specially designed. Therefore the towing eye should not be used for lashing points. When you find cars with defective lashing point or any other doubtful lashing manner, immediately report so that it can be fed backed to the manufacturer.



9. Don't touch or drive the vehicles on the wharf/yard

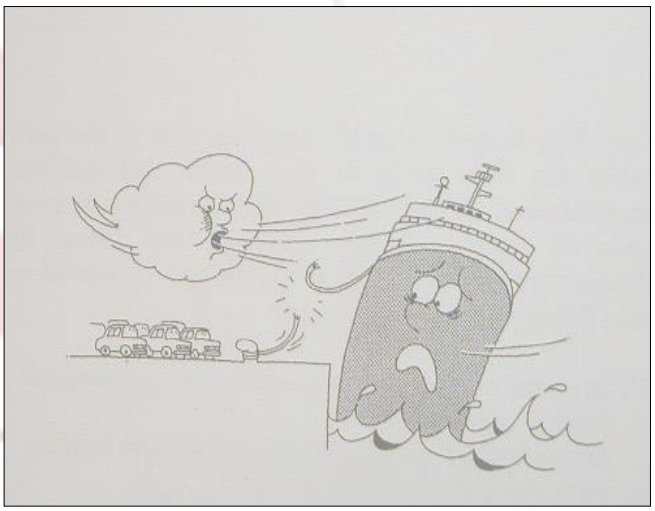
It is strictly prohibited to touch or drive the vehicles on the shipping yard. In case you have to walk through the yard, follow the instruction provided by the yard administrator and designated traffic route.

10. Unauthorized access into car cabin



Any dirty footprints and/or cigarette butt in the car's cabin are clear evidence that those cars suffered unauthorized access. As they are suspected to have occurred while transiting through the Canal or during discharging, take the following counter measure.

1) In transiting through the Canal, close the entrance doors to cargo holds and assign watchmen and let them control and monitor all the Canal sailors.
2) Close the access doors to decks where no cargo operation is carried out.
3) Prohibit all unauthorized access to cargo holds in case you can not control them with continuous watch undertaken.

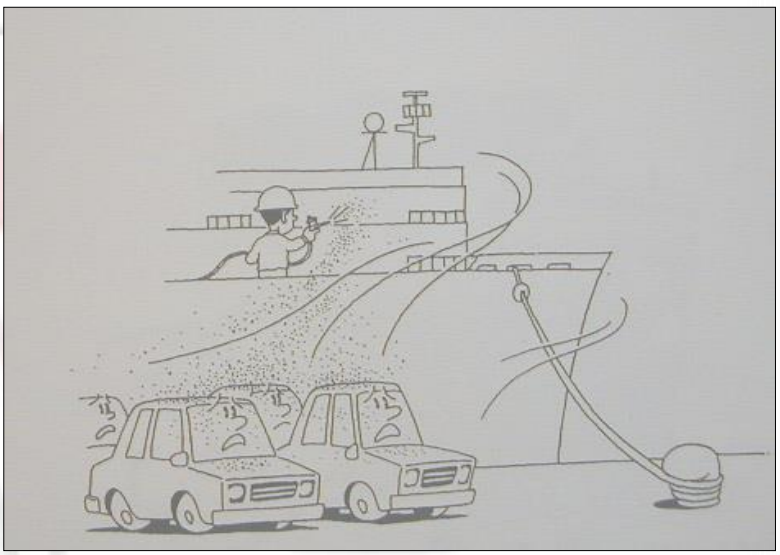


11. Strong current and wind

a. The counter measures for strong current and rough weather should be discussed with local agent staff.
b. In some special ports like Toyohashi, you have to arrange tugboats through the local agents.
c. Taking additional mooring lines is most effective measure to prevent the vessel being detached widely from her berth.
d. Car ladder should be hove up and stowed to avoid the damage to the surface of pier in above situation.

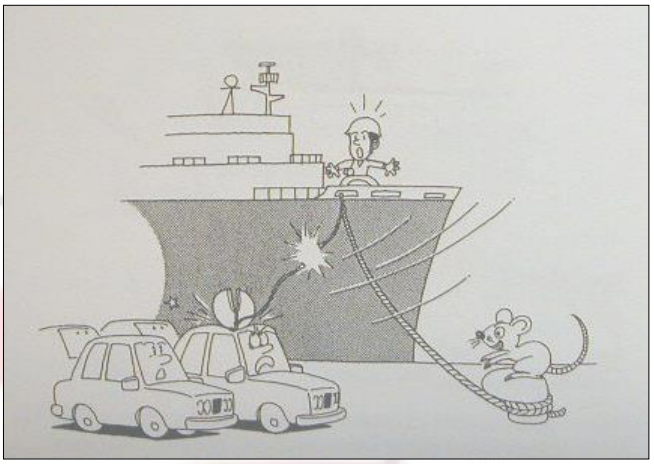
12. Paint Spray damage

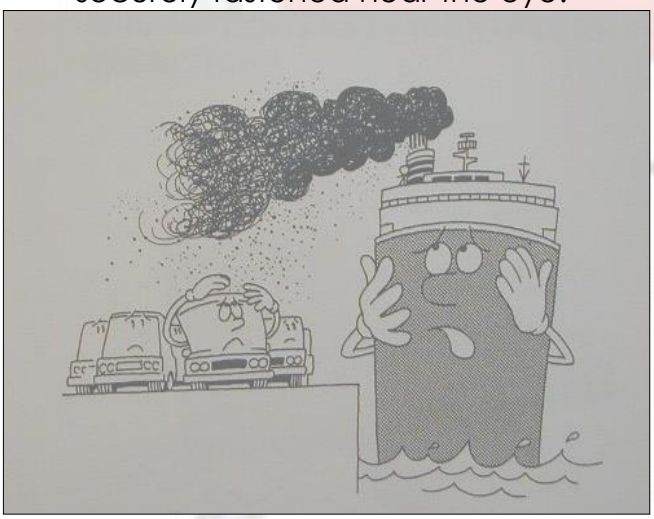
Strictly prohibit ship's painting (with spray guns or conventional methods with strong winds) work whenever there are stocked cars at yard.



13. Damage to cars on the quay due to fallen rat guard

The damage within this category frequently occurred in the past where rat guard fell down, by reason of soldered ring coming off. Check the fitted condition of the rings on the rat guard at the bow and stern from time to time and pay special attention when wind is strong. In such case, the rat guard can be securely fastened near the eye.





14. Damage to yard stocked cars by soot from the funnel

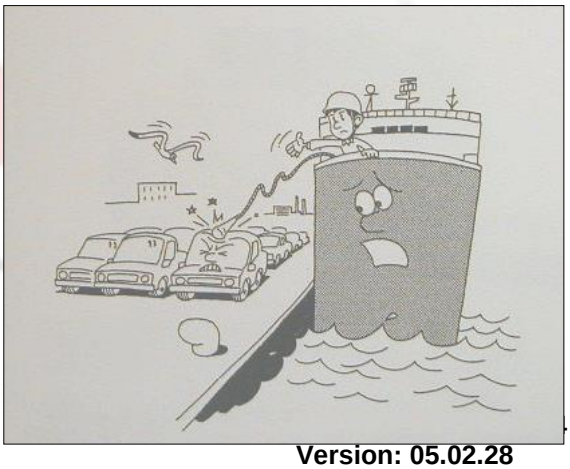
The damage occurs due to poor combustion on engine trials, automatic driving of boiler on start and poor combustion of generator engine.

a. Carry out soot blowing and wash down decks before entering port with special care.
b. Take into account the direction of the wind, and if necessary, carry out continuous operation of boiler.
c. Keep minimum load of 30% of generator

15. Damage to yard stocked cars by the heaving line thrown out in berthing

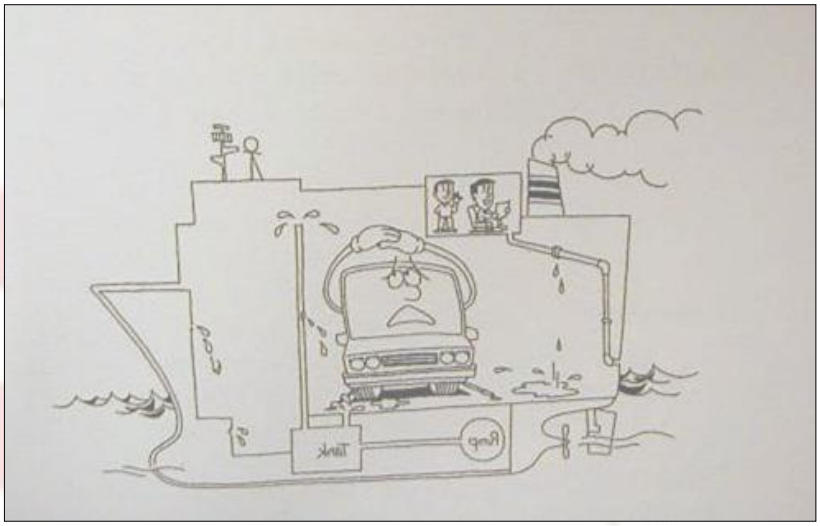
Pay attention on the following points to prevent damage from the heaving line.

a. The Master and Officers should give clear cut instructions for throwing the line.



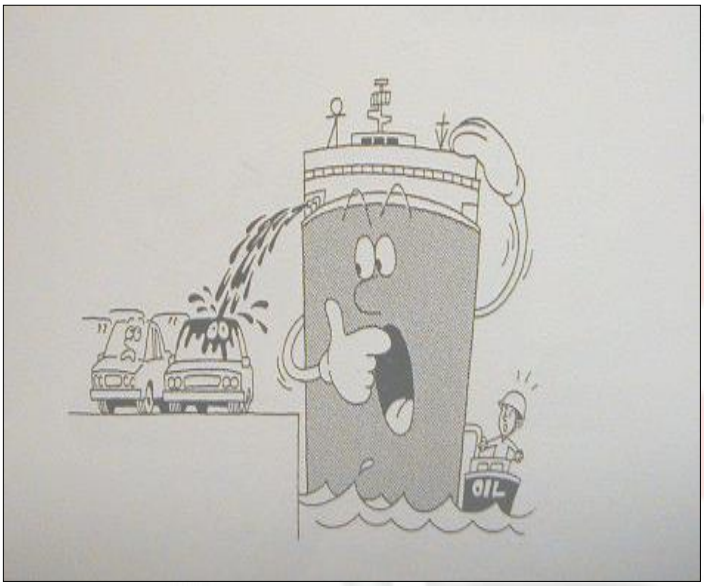
b. The heaving line is thrown vertically down onto the quay after the ship comes as close to the quay as practicable.

c. As far as circumstances permit, use a line handling boat.



16. Wet damage to cars due to overflow sea water during ballasting/deballasting operations

a. Check that all unnecessary valves are closed tightly.
b. Keep an ample allowance in ullage.
c. Pay special attention to difference in ullage caused by heel and trim of the ship.
d. Carry out periodic checks and maintenance of pumps, valves, float gauge, control units and other equipment concerned.



e. Always inspect the pipes in the holds. If anything wrong is found, repair immediately.

17. Oil stain damage to yard stocked cars due to overflow fuel oil bunkering.

In case an accident that appears as if the case represents a simple negligence in confirming the closure of the valve, care must be taken on the following points:

a. Observance of the requirements given in the bunkering manual.

b. Apply clear markings at open/shut position of all valves so that valve conditions can be viewed on sight.
c. Pay special attention to air cock phenomenon and keep enough capacity on each tank.

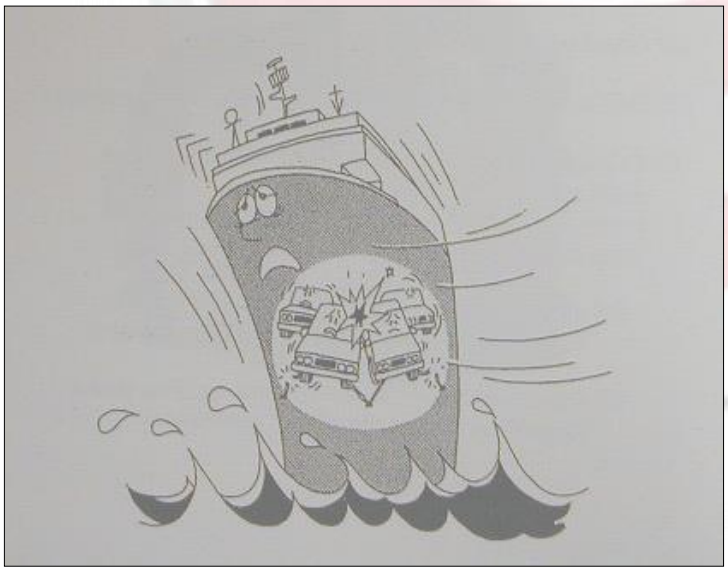
18. Over carried cars

Over carried cars will result in sizable expenses for post-incident arrangements.

1) Confirm that demarcation of stowage area of cars per each discharging port is strictly enforced.
2) Have checks on cars in cargo hold standing in the proximity of port mark.
3) Have check on cars in cargo hold for possible case of being left undischarged.

19. **Black Out due to failures of generators during cargo work**

1) Check strainers on F.O. Line
2) If F.O. supply line was blocked by sludge and mold etc. carry out following checks before entering the port (a) clean up strainers on the F.O. line of diesel generators and trial run accordingly (b) clean



out the F.O. service and settling tanks supplying fuel to diesel generators.

20. Holds inspection during laden voyage

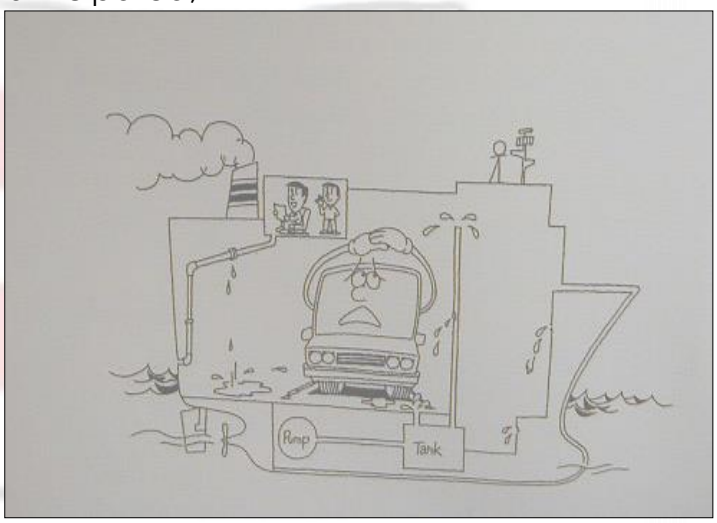
1) You should check the lashing of the loaded vehicles after sailing from loading port and amend them properly in the following cases:

a) Non-lashing;
b) Loose lashing;
c) Twisted lashing;
d) Wrong angle lashing;
e) Touching the ship's structures in hold such as frames, bracket etc.
f) Wooden wedges not fit to the type of vehicle stowed on the slope way.

In addition if you find that hand brake is not fully pulled on/or transmission gear not shifted to proper position, amend them properly, or take additional lashings to them.

2) You should report to the office improper lashing with location (where the units were stowed) and loading port.
3) You should also check the lashing conditions of the vehicles whenever necessary such as;

a) When rough weather is anticipated;
b) During rough weather;
c) After experiencing rough weather;
d) After completion of discharging at every discharging port.

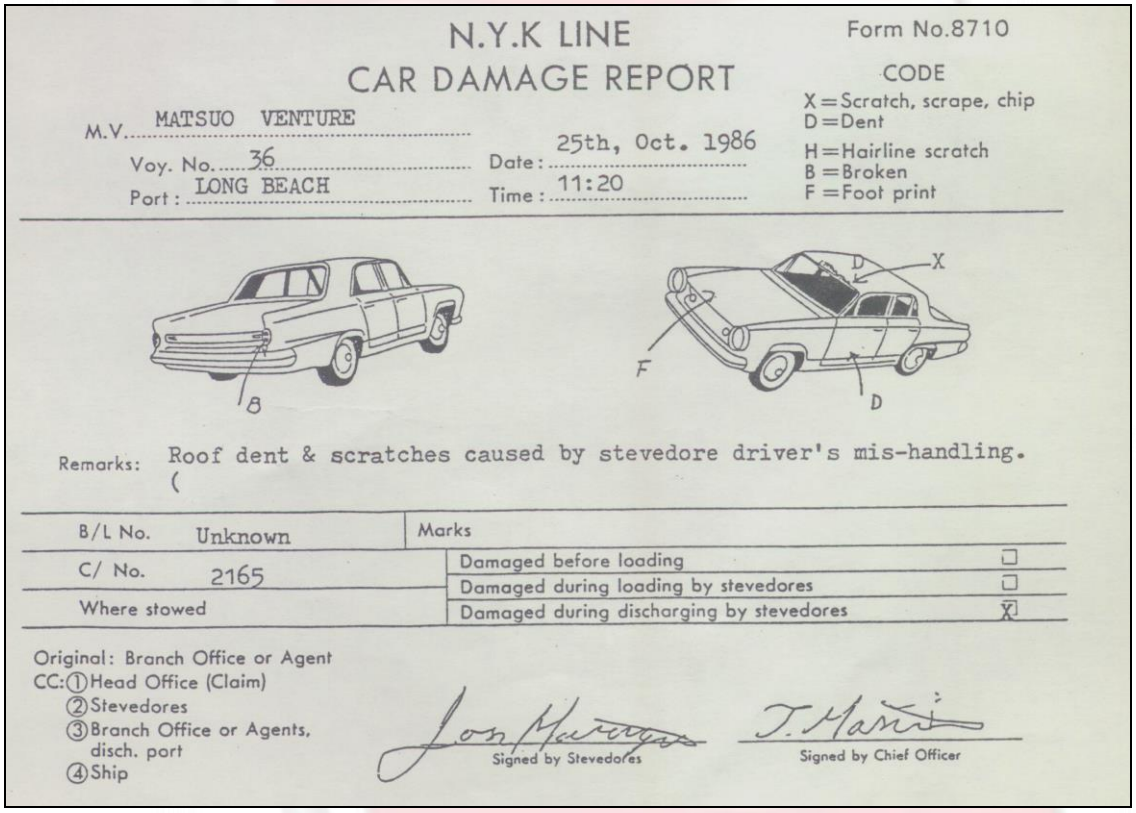


25) Wet damage to cars in cargo holds by seawater

Seawater leak into cargo holds due to corrosion of sea water pipelines. Always inspect the pipes in the hold. If anything wrong is found, repair immediately.

III.13 Damage Report

Duty Officer and watch crew should always carry the NYK Line Car Damage Report form during the cargo work. Whenever damage has occurred, above report must be issued immediately with all description of damage., The report must be signed by a Superintendent of the Stevedore Company without delay, otherwise they often refuse to sign the report at all. It is important that the same person signing the report is repeated in capital letters in the form. After completion of cargo work in each port the damage report must be sent to agent and other offices as instructed in the form. "Chief Officer's Report of cargo damage by Stevedore" is not required for same cargo damage already reported with above new report (form No. 8710)



N.Y.K LINE
CAR DAMAGE REPORT

Form No.8710

CODE
X=Scratch, scrape, chip
D=Dent
H=Hairline scratch
B=Broken
F=Foot print

M.V. MATSUO VENTURE
Voy. No. 36
Port : LONG BEACH
Date : 25th, Oct. 1986
Time : 11:20

B
F
D
X
D

Remarks: Roof dent & scratches caused by stevedore driver's mis-handling.
(

B/L No. Unknown	Marks
C/ No. 2165	Damaged before loading ☐
	Damaged during loading by stevedores ☐
Where stowed	Damaged during discharging by stevedores ☒

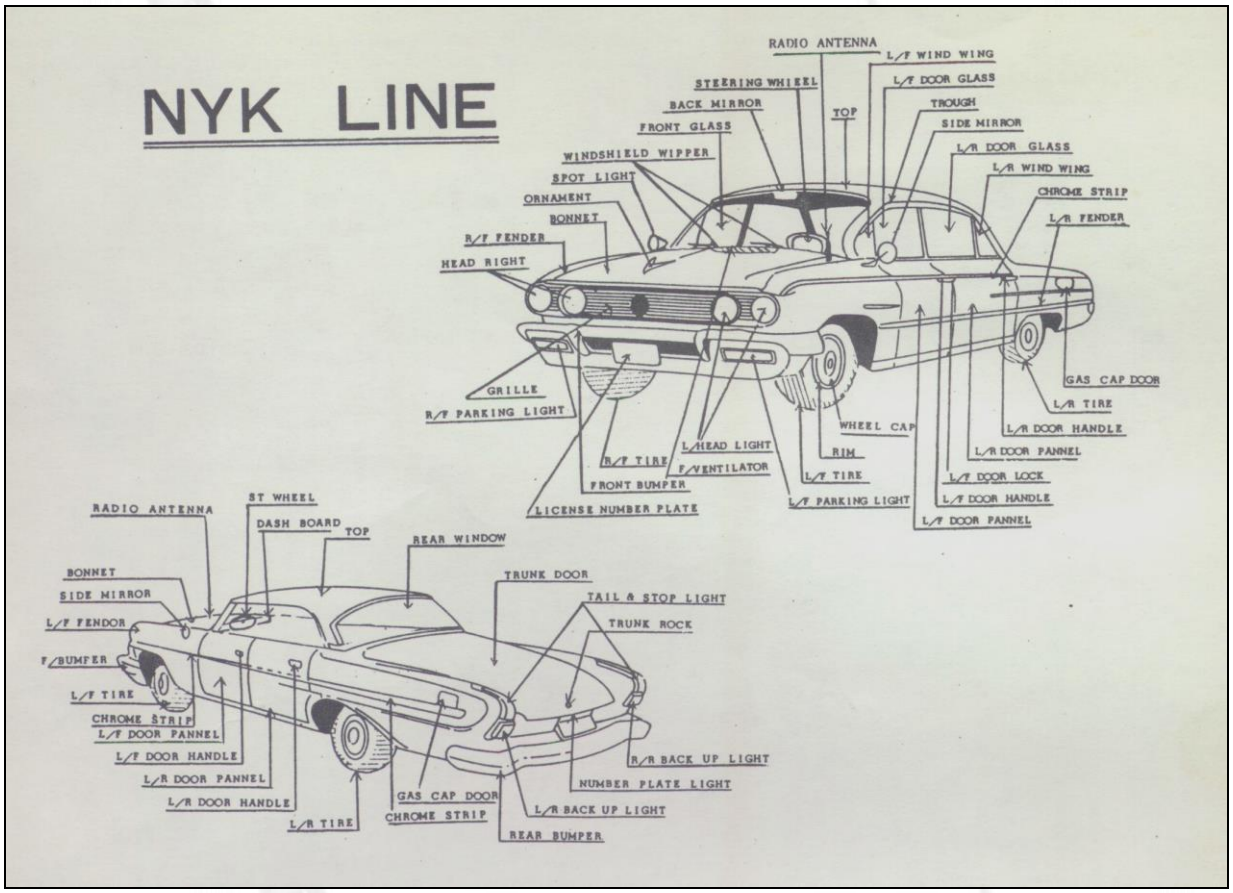
Original: Branch Office or Agent
CC: ① Head Office (Claim)
② Stevedores
③ Branch Office or Agents, disch. port
④ Ship

Signed by Stevedores
Signed by Chief Officer

Sample types of cargo damage

Broken
Dent, bend
Chip, scrape, gouge
Scratch, scuff
Rust, stain

Parts missing, pilferage
Cut, crack
OTMD……. other than marine damage
CA……commercial acceptable damage
Total loss



III. 14 Loading / Unloading system Operation and Maintenance

There are various loading and unloading systems on board a Pure Car Carrier. The operation and maintenance of which would vary for different vessels (models or types). These includes but not limited to the following:

1) External Ramps / Doors
2) Internal ramps
3) Movable card decks
4) Deck lifters
5) Ballasting system
6) Ventilation system

The operation manuals for the above should be consulted and the operations of the above equipment and/or systems be designated to a competent operator only.

The planned maintenance systems on board your vessel with regards to the above mentioned equipment should be adhered to. For the NYK fleet the "**ADMAX System"** is utilized and the responsible officer must know this system.