**Operating Manuel** 

M/V Lacie G. Eymard

Official #: 1256246

Dynamics Marine, Inc. for Marine Industrial Fabrication, Inc. Dec 30, 2014

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#### A. General Information

The subject vessel is a three legged, self-propelled, self-elevating, general purpose service vessel. The hull including the installation of machinery were fabricated at Halimar Shipyards (Hull No. H-183) in Morgan City, LA. The accommodation building, legs and footings, and final outfitting were done at Marine Industrial Fabrication, Inc. in the Port of Iberia, New Iberia, LA. Final delivery to the owner Offshore Liftboats, LLC was in the month of January, 2015.

The vessel's load line assignment was obtained from Lloyds Register, and the tonnage admeasurement was obtained from DNV. The vessel is admeasured at 180 Gross Tons domestic, 122 Net Tons domestic, and 743 Gross Tons international, 222 Net tons international.

This vessel is limited to "restricted service" due to its configuration, which is unsuitable for full ocean operations. The vessel exhibits insufficient stability and seakeeping characteristics to survive in the open ocean in weather conditions that occur on a normal basis. The following operational restrictions must be followed to provide adequate safety for normal operations.

## **Operational Restrictions**

- 1. The vessel is limited to operation in the Gulf of Mexico within the 175 Ft chart datum in positions not to exceed 72 nautical miles from a position of safe refuge. A position of safe refuge is any point where the vessel can be jacked clear of the water in a chart datum not to exceed seventy five feet.
- 2. While in transit afloat at drafts in excess of seven feet, no persons are permitted on the main deck except in emergencies only.
- 3. Evacuation procedures shall be in accordance with the included Heavy Weather Evacuation Plan.
- 4. Pending the approach of a severe storm, the unit shall be evacuated before the winds reach fifty knots.
- 5. The Captain shall seek safe harbor or jack-up the unit when the 12 hour advanced weather forecast calls for winds in excess of sixty knots. The vessel is to jack-up at any time that increasing sea conditions begin to exceed four-feet significant wave height or five-foot swell height.
- 6. All accesses to the deck house shall remain closed when afloat.
- 7. While engaged in jacking operations, all personnel are to be at stations assigned by the Captain.

Specific detailed instructions regarding floating stability and loading restrictions may be found in other sections of this booklet.

Crew and/or persons in addition to the crew (PACS) are to remain off deck when the vessel is underway.

It is the responsibility of the Captain to ascertain the cause of any unexpected vessel list and/or heel prior to attempting to take corrective action.

The floating operation of the vessel is to be limited to conditions producing vertical centers of gravity below the allowable limits contained in this booklet, specifically the "Allowable KG Curve".

The maximum allowable elevated variable loadings on the unit are to be limited to those values indicated on the "Elevated Variable Load Limits" diagram included in this booklet.

The normal crew on the vessel is one Captain (200-ton license), one mate, one able-bodied seaman, and one ordinary seaman. If the vessel is to be moving for more than twelve hours per day, another Captain is required.

The vessel is not suitable for full ocean service in its current configuration. If ocean transit conditions and/or operations outside the 175' chart datum limit are intended, the vessel is required to meet 100 knot intact stability criteria. This is not feasible in transit modes without removal of some substantial portion of the leg. Recommendations should be obtained from a reputable naval architect and specific approval of the proposed operation is to be obtained from USCG at the following address:

Commanding Officer
USCG Marine Safety Center
Stop 7102
2100 Second Street SW
Washington, D.C. 20593
(202) 475-3400

The person in charge of this vessel at all times is the Captain. When two Captains are on board the one most senior in rank with the operating entity is in charge of the vessel. In no case do any personnel of the lessors of this vessel have any authority exceeding that of the Captain of this vessel. As affects proposed operations, the opinion and direction of the Captain shall be followed specifically at all times.

## B. Principal Dimensions and Data

137'-0"
80'-0'
134'-0''
78'-0"
10'-0"
32'-0"
16'-0"
2'-6"
72"
215'-0"
213 0
5.284 FT
1045.64 LT
7.50 FT
1625.44 LT
579.80 LT
1,298,752 LB
1236246
180
122
743
222
17,841 Gallons
90 Gal/HR
7.0 Knots
1387 N-Miles
1598 S-Miles
20,896 Gallons
4414 Square Feet
670 Square Feet
-
1000 Pounds/Sq Ft
1250 Pounds/Sq Ft
100 Pounds/Sq Ft
32-105 Degrees F

## C. Tank Capacities

Included as Appendix A, tank capacity tables are provided for each ballast, fuel oil, potable water, and hydraulic oil tank in the vessel. The tables list capacity in cubic feet and long tons, centers of gravity for longitudinal, transverse, and vertical centers, and free surface corrections. The hydraulic oil in the jacking system reservoir and in the crane power packs is included in the lightship weight of the vessel, there is no need to add this weight to the stability sheets.

Preceding the tables is a key plan showing tank locations in the hull and maximum capacity in appropriate units for reference usage. The maximum capacity for each tank in long tons is also listed on the load condition sheet used for calculating stability.

Section G includes a thorough discussion of using the tank capacity tables to calculate vessel draft, trim, heel, and stability characteristics from the data included herein. The following units and volume conversions are applicable to calculating tank weight and volume. Please note that hydrostatic properties and tank capacities are given in long tons.

#### **Conversion Units**

One Knot (Kt)	1.15 Miles per Hour
One Long Ton (LT)	1.12 Short Ton (ST) 2240 Pounds (Lbs)
One Short Ton (ST)	2000 Pounds (Lbs)
Salt Water (SW)	261.8 Gallons per LT 8.56 Lbs per Gallon
Fresh Water (FW)	268.5 Gallons per LT 8.34 Lbs per Gallon
Fuel Oil (FO)	316.4 Gallons per LT 7.26 Lbs per Gallon

## D. <u>Deck Crane and Storage Capacities</u>

This section of the Operating Booklet is directed toward the Captain as well as the Crane Operator for the vessel.

The vessel is fitted with a Gulf Crane GC 175T ton main crane on the port forward corner, and a Gulf Crane GC50T telescopic auxiliary crane on the starboard forward corner. The load charts for the cranes are included herein for convenience. In accordance with API regulations, the load chart is also affixed to the crane in a position clearly visible to the crane operator. The crane operator is prohibited from exceeding the lift values given in the API load/radius diagram furnished by the crane manufacturer.

The main crane is of sufficient capacity to produce relatively large increases of loading on the footings of the vessel when a large hook load is extended far from the center of rotation of the crane. As such, the crane should never be used until preload operations have been completed.

The main deck of the vessel is designed to support 500 pounds per square foot. Concentrated weight items that exceed this bearing load value should be supported by suitable cribbing to prevent possible structural damage to the deck structure. The weather decks of the accommodation building are designed for 94 pounds per square foot. Storage of cargo on the accommodation decks is not advisable, and in no case should exceed 94 pounds per square foot.

The maximum variable load allowed aboard the unit is a function of total displacement or draft in the floating mode, and is a function of the leg extension in the elevated position. The Captain is charged with maintaining a continuous record of the total variable load aboard the unit at any given time. In support of this record, the crane operator must maintain a lift by lift record of the weight items or lifts being added to and/or removed from the vessel. This record shall be furnished to the Captain by the crane operator on a regular and timely basis.

Anyone operating the crane should be a "certified crane operator" pursuant to the qualification procedures indicated in API RP-2D.

## E. Operations Afloat, Jacking and Holding

## **E.1 Normal Floating Operations**

The vessel should normally be operated with about a one tenth to one quarter degree down by the stern trim while afloat. This enables the flat topside decks to shed water more quickly during transit. The trim should never be allowed to exceed one half degree. One half degree of trim produces a difference in draft between bow and stern of about fourteen inches (14"). Trim control can be accomplished by the placement of deck cargo and the use of trim ballast tanks.

When fuel oil and potable water tanks are not completely full on both sides, the starboard side tanks should be kept completely full and the port side tanks used for consumption. This will help to balance the weight of the main crane located on the port side of the vessel.

The number of "slack" tanks, that being tanks that are not completely full or empty should be kept to an absolute minimum. If proper selection of trim ballast tanks is used, there is never a reason to have more than one ballast tank slack at any given time.

After preloading operations, it is important to completely strip the ballast tanks used for preloading. The bottom of the vessel has approximately ten inches of dead rise between centerline and side shell. This aids in allowing the residual water in the tanks to flow to the suction lines. After the vessel is jacked up, the hull can be tilted toward the suction lines slightly to enable the removal of any remaining water in the tanks. The location of the suction lines in the tanks is indicated on the ballast piping drawings furnished with this booklet.

The maximum draft of the vessel is limited to 7.50 feet by load line considerations. The load and stability calculations shown in Section G of this booklet should always be completed prior to moving the vessel. If the draft and trim of the vessel do not meet the calculated values a resolution is needed. Recheck the calculations and re-verify the values of weights aboard. If correction is still not possible further investigation is necessary.

If the vessel is at a deeper draft than the values calculated would indicate, carefully check the tanks in the hull for any water that may have found entry into the vessel. If the tanks are all filled to the anticipated levels, the water may be in one of the legs and/or footings. Water in one or more legs can lead to a very dangerous situation.

If it is expected that there may be water in one of the legs, do not raise the legs into a full up position. This will raise the weight of the water as the leg is jacked-up and may produce a vertical center of gravity that would be large enough to capsize the vessel. The proper manner in which to check for water in one of the legs is to preload the vessel per the instructions included hereafter, then jack the vessel up to a high enough vertical position that the main crane will allow access to the top of the leg using a personnel basket. If the main crane boom is not rigged to adequate length to reach the aft leg, it will be necessary to jack the vessel to the top of the aft leg to access the top of the leg from the leg guide platform. Open the manhole and check the leg for any water. If water is found in the leg, call the port Captain and seek advise on what procedure will be used to solve the problem.

## E.2 Jacking and Preloading

The displacement of the vessel at maximum draft is taken from Section G and is 1625.44 LT. The weight of the three legs and footings is 367.30 LT, leaving a total hull plus variable load of 1258.14 LT. The rated jacking capacity of the installed rack and pinion system is 1761.16 LT, so the jacking capacity is never exceeded if the proper operational procedure is followed.

The legs on the vessel have a maximum jacking speed of about fourteen feet per minute at an engine speed of 1800 RPM. Speeds at lesser RPM's are proportional. Carefully checking the time that the legs have been operating is a good indication of how far the footings are from the bottom at any given time. When approaching the desired position at which the vessel is to be jacked-up, the legs are run down until they are about ten feet above the bottom. If the vessel is to be jacked-up at a position that is close to a platform or other structure, it is a good idea to try an approach run to the desired position well away from the structure. This will indicate how much if any wind, wave, and current drift can be expected to move the vessel before the footings tag bottom. A bottom survey indicating any obstructions should be obtained before jacking operations at any platform. The presence of flow lines or other bottom obstructions or faults can make for a dangerous condition.

When the vessel has reached its desired position, jack the legs down until the footings tag bottom. Then continue to jack the legs down until the bottom of the hull has **just cleared the waterline**. Level the vessel as necessary by jacking any one leg that needs further extension to level the hull. At this time, preload operations can be commenced.

The vessel is equipped with a preload system to enable the operator to test the bearing capacity of the soil below the footings before a large air gap is reached. The vessel must always be preloaded prior to jacking to air gaps exceeding five feet. Preloading not only tests the bearing capacity of the soil below the footings, but also insures leg, hull, and jacking system integrity prior to jacking the vessel to a large air gap. The amount of preload required varies with the leg extension and the variable load that is to be carried during any proposed operation.

The required amount of preload is a function of the weight of the vessel during the initial jacking sequence, the amount of weight that will be added to the vessel on the particular location after initial jacking operations, and the leg extension below the bottom of the hull. As a minimum, both the main port and starboard preload tanks should be completely filled during a minimum preload operation.

A sample form is included in Appendix C to aid in determining the amount of preload required under any given circumstances. Blank forms are included in the back cover of this booklet. To use the form, you must know the weights on the vessel during the current jacking operation, the maximum amount of weight that will be carried on the boat at this location, and the leg extension below the hull. Leg extension is defined as water depth, plus penetration, plus air gap to the bottom of the hull.

To use the preload calculation form, enter the weight and center values for the anticipated extreme loading that will occur on this location for lightship, fuel & potable, deck load, and stores totals in the space provided at the upper section of the sheet. Note that no ballast should be carried in the elevated position except during the preload operation itself. These numbers can be calculated using

the stability calculation sheets described in detail in Section G of this booklet. Multiply each weight item by its longitudinal and transverse levers and enter the moments in the appropriate column. Sum all of the weights and moments and enter the results in the "Total Leg Load" line in the form. Divide moments by weight and enter the total center of gravity on the same line. Note that the vertical centers of gravity for the items do not affect the required preload values.

Calculate the aft, port, and stbd leg loads using the formula indicated on the form and enter the value on the form. Enter the leg extension on the form. Move to the next section of the form and calculate the required load for each leg using the formula indicated on the form and enter the required leg loads for each leg in the appropriate position. Note that the required leg load for each leg is simply the anticipated maximum leg load that will be experienced due to adding additional load to the boat at a later date, plus an allocation for wind, wave, and current loadings that are presented as a constant multiplied by the leg extension. The constant utilized in this calculation was developed using seventy knot winds, plus ten foot wave height combined with one knot current. It should be sufficient for all Gulf of Mexico operations with the exception of severe storm conditions. Preparation for passage of a severe storm is discussed in detail in a later section of this booklet

The bottom section of the form is used to calculate the amount of preload ballast that must be pumped aboard to produce leg loads during the preload procedure that are equal to the previously calculated required leg loads. Enter weight and center values for each item, multiply weights by centers and enter moments for each item. Sum the weights and moments and enter the totals on the bottom line of the lower section. Divide the total moments by the total weight to obtain the centers. Calculate the leg load for each leg using the formulas indicated on the form at the extreme bottom section, and enter the values in the positions indicated at the bottom of the form. The calculated leg loads during the proposed preload operation (those at the bottom of the form) must be larger than the required leg load values entered in the upper section of the form. If the leg loads are not large enough, add additional ballast to tanks and recalculate the leg loads. If the preloaded leg load values can not be brought to a value larger than the required leg load values, the proposed operating condition is not acceptable and should not be undertaken.

After the required amount of preload has been pumped aboard the vessel, hold the load value for a minimum of fifteen minutes. Level the hull by jacking at any time during the preload operation that the footings begin to penetrate. If the footings are experiencing large penetrations, hold the preload ballast for a minimum of thirty minutes after the footings have stabilized. Following this period of time, the preload ballast is pumped overboard, and the vessel is jacked to the desired air gap. Care should be taken to completely strip each tank used for trim ballast while moving and each tank used for preload operations.

## E.3 Holding Conditions

During holding operations, the hull should be checked several times a day to make certain that it is remaining in a level condition. If the footings are penetrating, the appropriate leg(s) should be jacked to level the hull. If the footings are experiencing large and/or repeated penetration after preloading operations have been completed, it may be an indication of an unsafe condition. Under this circumstance, the vessel should be lowered to minimum air gap to clear the wave crests, and preloading operations should be repeated.

If the total variable load values at any time during operations on a particular location do not exceed the values that were planned and adequate preload has been applied during the initial jacking operation, and the footings are remaining stable, no additional action is required during holding operations.

The preload calculation sheet should be updated when there is a large change in the amount of variable load placed onboard the vessel. Recalculate the required footing loads and ascertain that the preloaded value was in excess of the required leg loads. If the required leg load values happen to exceed the preloaded leg load values, jack the vessel to minimum air gap and repeat the preload procedure.

When operations are complete at a given location, the weight and stability summary sheets included in Section G of this booklet should be completed prior to jacking down the vessel. Any trim ballast that will be required to level the boat should be pumped aboard before the vessel is jacked down. This will insure that the vessel will break footings in a level condition of trim and heel. Upon breaking footings and jacking the legs fully up to transit position, the draft, trim, and heel of the vessel should be measured and compared to the calculated values on the stability forms. If correlation is not obtained, investigate the vessel using the instructions indicated in this section of this booklet.

## F. Environmental Limitations on Operations

The operational limit on the vessel floating is normally wave conditions that cause excessive green water on the deck of the boat. The wind velocity exceeding that acceptable under the calculated conditions discussed in Section G of this booklet is also a limiting factor, but would only be encountered in sheltered waters or in quick storms with a lot of wind and little wave action. In open water, the wave conditions limit the operation of the vessel in wind speeds exceeding about 30 knots. The intact stability of the vessel is not critical until the winds reach about 70 knots.

If the vessel is underway and excessive water is being taken on deck, the vessel should be jacked clear of the wave crests by about five feet. It is a directive from USCG that the vessel be jacked up at any time the wave conditions exceed four feet significant wave height. Jacking operations should be limited to four foot significant wave heights. The vessel should only be jacked in seas exceeding four foot significant if loss of the vessel is pending from down flooding or if topside wave damage is becoming unacceptable for the security of the vessel and/or crew.

Lowering the legs somewhat has a beneficial effect on vessel motion, stability, and freeboard. The additional freeboard gained by lowering the legs should never be used to allow the addition of variable load above the stated limit of 579.80 LT contained in Sections B and G of this booklet. The Captain is warned to carefully check the water depth by fathometer and chart verification before partially jacking down the legs to improve seakeeping performance of the vessel. Accidental and therefore unexpected contact of the legs of the vessel with the bottom and/or some submerged obstruction may seriously damage the leg and/or jacking system as well as present what might be a stability problem. Do not lower the legs more than twenty feet to improve vessel performance. Check the calculations in Section G of this booklet before proceeding.

Operations while jacked-up should not exceed the leg extension, wave height, and wind speed combinations indicated below, nor the various limits indicated on the "Elevated Variable Load Limits" graph included in Appendix C. Table 1 is supplied for information purposes while reviewing this section only. The "Elevated Variable Load Limits" graph included in Appendix C consists of a plot of curves through the calculated data points listed in Table 1, plus other applicable limitations. The allowable "up weight" for any water depth can be read directly from the graph for seventy knot wind conditions. The wave heights for all cases except the 100 Knot case have been taken as ten feet with simultaneous current profile of one knot at the surface to zero knots at the bottom. The curve is composed of seventy knot wind speed leg strength limit, and the allowable variable load afloat limit at shorter leg extension values. The 100 knot wind case has a wave height of twenty-five feet and the same current profile as the other cases. Wave period for ten foot wave height has been assumed to be 6.25 seconds and wave period for the twenty-five foot wave height has been assumed to be 9.88 seconds. These values are consistent with the twenty to one wave slope ratio, measured at maximum values of power density spectra functions characteristic of wind generated gravity waves. The water depth for each case in Table 1 were assumed to be fifteen feet less than the leg extension value for all cases. The water depth for the one hundred knot wind case is twenty four feet less than the leg extension. The current and wave loadings on the leg are a function of water depth: however; the current and wave loadings are a very small and secondary consideration to the overall loading value on the structure. The principal load on the vessel structure causing leg strength limitations is the wind load in most cases followed by the up-weight of the vessel. The wind and "up-weight" account for over ninety percent of the effective stress in the legs of the vessel in any condition. As such, the "up weight" indicated to as

"Limiting Load" in Table is to be applied to all cases as a function of leg extension, without regard for the value of water depth. For example, if the vessel is elevated to a 145' leg extension in a water depth of 125', the limiting load value is 1258.14 LT for 70 knot wind conditions. If the vessel is elevated to 145' leg extension in a water depth of 50', the limiting load value is still taken to be 1258.14 LT.

It is the responsibility of the Captain to maintain continuous weather forecast information, which will allow the evaluation of the possible necessity to abandon location or take corrective action to reduce variable loading and/or air gap to the limits indicated in the graph, well in advance of the passage of relatively severe storm conditions. The load limit graph indicates that the allowable total "up weight" for seventy knot wind conditions falls to 1044.00 LT at the leg extension of 190 feet. Since the lightship component of "up weight" is 648.58 LT, only 147.66 LT (330,758 lbs) of allowable deck load is available at this leg extension under seventy knot wind conditions. At this point, the top of the leg is beginning to enter the leg guide structure. This corresponds to a chart datum of 175 feet assuming a fifteen foot air gap and a two foot penetration. The unit is limited to passage in water depths not to exceed 175' chart datum by DMI restrictions placed in this operating booklet.

The allowable total up weight for seventy knot wind conditions and 145 foot leg extension is 1892 LT and the calculated limit for the same criteria and a 95 foot leg extension is 5688 LT, which value exceeds the floating variable load capacity of the vessel substantially. The floating variable load capacity plus lightship "up weight" of the vessel is 1258.14 LT, and the intersection of the seventy knot wind curve allowable load and the 1258.14 LT limit on maximum "up weight" displacement occurs at a leg extension of 164.80 feet. All values of total up weight are limited below this leg extension by the 1258.14 LT "up weight" limit.

The leg extension values discussed herein are the distance from the bottom of the hull to the bottom of the footing. This value includes the water depth, footing penetration, and the air gap above the still water line to the bottom of the hull. Footing penetrations is soft bottom areas can be large, and must be accounted for in calculating leg extension. Since the wind values used herein have been taken as seventy knots, there is little chance that this operational limit will be exceeded except in the case of a severe storm.

Table 1
Environmental Limitations Elevated Conditions

Leg Position	Wind Speed	Leg Strength	Limiting Load
190' Extension	70 Kt	1044 LT	1044 LT
140' Extension	70 Kt	1892 LT	1258.14 LT*
90' Extension	70 Kt	5688 LT	1258.14 LT*
75' Chart Datum	100 KT	Position of Safe Refuge Only	1258.14 LT*

<sup>\*</sup>Note - Total weight limited by variable load plus lightship "up weight" limit of 1258.14 LT.

#### G. Calculating Stability

The lightship weight and centers of gravity for the subject vessel were determined by a dead weight and inclining experiment performed on Dec 18, 2014 at Marine Industrial Fabrication in the Port of Iberia. The lightship displacement was determined to be 1045.64 LT. This value is included on the following load condition forms in the appropriate position. The maximum displacement floating is limited by stability criteria to 1,625.44 LT. The difference in these two values is 579.80 LT and this value will be referred to as "variable load" (maximum variable load afloat) throughout this discussion. The value known as variable load contains all weights on the vessel not included in the "lightship weight". The lightship weight of the vessel contains all items permanently attached to the vessel at time of delivery to owner, all fluids in systems, and oil in crane and jacking hydraulic oil tanks. The lightship weight notably does not include fuel oil, potable water, deck load, trim ballast, stores, crew and effects, persons in addition to the crew and their personal effects, loose galley equipment, tools, crane rigging, etc., and any item permanently attached to the vessel after delivery to the owner. A location is contained on page three of the stability calculation forms for the correction to lightship for any condition. As items are permanently added to the vessel, their weight and centers should be added to the "Lightship Addition Summary" section on page three of the blank forms included in the back cover. Thereafter, when using a new "blank" form, the weight additions to lightship will be included in the stability calculation. The Captain is to add all appropriate items for any loading condition to that position on the form as well as in the position labeled "Lightship Add Sum Total" on page one of the calculation forms. If items are permanently added to the vessel after delivery to the owner, the weight and centers of these added items must be recorded on the forms and used in all future calculations.

The weights of various liquids both consumable and ballast can be calculated from soundings of the tanks and conversion to weight and center values by comparison with the values given in the tank tables included in Appendix A of this booklet. A line is included on the forms for each tank compartment in the hull and is used to enter weight, centers, and free surface if the tank is not empty or completely full. Free surface corrections are applied to partially full tanks and are entered as zero for tanks that are empty or completely full. The sign convention for tank tables is the same as that described for deck load items in the following paragraph. If the longitudinal center of weight for a tank in the LCG column of the tank tables is noted as "a" then the value is positive on the load forms. If the LCG value is "f" the value is negative. A similar situation exists for TCG with tanks indicated as "s" having positive TCG values and tanks indicated as "p" having negative TCG values.

The weights of various items placed on the boat as "deck load" and "stores" must be accurately recorded along with their appropriate position. The reference coordinate system for the weight calculations is defined below. The vertical center of gravity is taken in feet above the baseline or bottom of the hull. The main deck is at ten feet above baseline. The longitudinal position is measured from "midships", in this case a point on the middle of the main hull structure forty-nine (49) feet aft of the headlog. Positive is taken as aft of midship and negative is taken forward of midship. The transverse position is measured from centerline, with positive being to starboard and negative being to port. Each weight item is multiplied by the appropriate center value to obtain the moments for each item.

The values for all weights and moments including free surface are totaled and the result yields the corrected "KG" of the vessel, KG indicating the distance from the  $\underline{K}$ eel to center of  $\underline{G}$ ravity. The KG value must be lower than the "Allowable KG" from the allowable KG curve included in Appendix D.

Six sample loading conditions covering a full range of typical operating drafts are included for reference. If the calculation indicates that the resulting KG value will exceed the Allowable KG value, then the condition is not acceptable and the proposed operation should not be undertaken. It is important to note that the signs of the values entered on the stability summary sheets are critical to obtaining a correct answer. The sums, products, and quotients must be handled in an algebraic fashion. A detailed description of how to use the stability forms follows.

The first page of the form is the summary sheet. The operational lightship is permanently indicated on that form. The other values on the summary page are entered as a result of completing page two and three of the forms and entering the data on the summary page.

To start the calculation process, sound each fuel, potable, and ballast tank and note the soundings in the comment section of the appropriate tank line on page two. Using the tank tables, enter the weight, VCG, LCG, TCG, and free surface for each tank containing any liquids. If the tank sounding is between two values in the tank table, use linear interpolation to obtain the proper values. Multiply each tank's weight by its lever and enter the results in the moment columns. After all tanks are entered, sum the weight and moment columns into the total lines. Divide the total moments by total weight for the total line to obtain the total centers for the tanks. Enter the total potable water and fuel oil line on page one of the summary sheet in the provided position. Enter the total ballast values from page two on the line provided on page one.

The next step is to enter each deck load, and lightship correction item weight and centers on page three of the summary sheet. Following a process similar to that for the tanks, multiply the weights by levers to obtain moments, sum the total weights and moments, divide total moment by total weight to obtain total center, and enter the total lines for deck load and stores on page one of the summary sheet.

Now, return to page one and sum the lightship, liquids, deck load, and lightship correction weights and moments and enter the values on the load condition total line on page one. Divide each moment by the total weight to obtain the center values for the total vessel. The draft for the vessel is now taken from the hydrostatics using the total weight calculated to find the draft. Use linear interpolation if the weight value is between two lines of values listed in the hydrostatics.

Continue using linear interpolation and obtain the values for KMT, KML, and LCB from the hydrostatics. The equation for producing the following values is clearly indicated on the load condition forms to the left of each blank to be filled. Calculate the trim arm (T-ARM) by subtracting the LCG from the total LCG, and enter it on the line indicated Calculate the corrected KG by dividing the total free surface by the total weight and adding the total VCG value and enter it on the line indicated. Calculate the available transverse metacentric height by subtracting the corrected KG from KMT and enter it on the line indicated. In similar fashion, calculate GML and enter it on the line indicated. Enter the allowable KG curve provided at the calculated draft and read the allowable KG. Enter the allowable KG curve on the indicated line. Remember, the calculated corrected KG must be smaller than the allowable KG. Calculate the heel by multiplying the total TCG value by 57.3 and dividing by GMT. Enter the heel on the indicated line. Heel

should not be more than plus or minus 0.25 degrees, positive heel is down by the starboard side, and negative heel is down by the port side. Calculate the trim in similar fashion and enter the trim value on the indicated line. Trim should be between zero and 0.6 degrees, with positive trim being down by the stern and negative trim down by the bow. This completes the calculation of stability.

Study the sample cases carefully, they indicate how to trim the vessel using placement of the deck loading as a primary criteria. Never use any more trim ballast that absolutely necessary, and never allow more than one slack trim ballast tank. If fuel and potable tanks are not full, consolidate the remaining liquids into the starboard side tanks to balance the weight of the main crane.

#### H. Preparation for Passage of Severe Storm

These following general recommendations apply to the safety of the vessel in several operating modes and the best condition the vessel can be put into to achieve the optimum chance of surviving the passage of a severe storm.

- A. In general this is a fair weather vessel when afloat, intended to survive bad weather conditions in the jacked-up condition. The route of the vessel is restricted by USCG stipulation to areas where the chart datum does not exceed 175 feet. As such, the vessel can always seek refuge from deteriorating weather conditions by jacking, excepting the occurrence of a serious navigational error, which is very unlikely given the general availability of Loran and GPS navigation devices and long range VHF radio.
- B. Long term operations in the jacked-up condition should be planned to limit the vessel to the operating limits stated in Section F of this booklet, and the leg extension/up weight loading values indicated in the load limit graph.
- C. The vessel will loose practical maneuverability when the wind reaches something on the order of 30 knots. This is not to say that the vessel will not move, it is just that many close positioning activities become impossible due to loss of control of the vessel and little or no headway can be made up wind.
- D. If the vessel is underway and is caught in increasing wind and wave conditions and the water depth permits jacking the vessel to a safe air gap, then the vessel should be immediately jacked-up and not further moved until conditions improve.
- E. If the vessel is caught in increasing wind and wave conditions in water too deep in which to jack (a navigational error has occurred or the operator has not complied with the route restrictions), then the legs should be lowered twenty feet and the vessel should proceed directly to a position of safe refuge. If headway cannot be safely made, then the vessel should be positioned head into the wind and seas and held in position until the conditions improve. A position of safe refuge is any area where the chart datum is less than or equal to seventy five feet.
- F. If the vessel is in water depths shallow enough in which to jack but the seas seem to high for safe jacking operation (the operator has ignored the advise contained in item D above), then the vessel should be held head into the seas until conditions improve. If the vessel is capable of taking the seas floating without any danger of severe damage, then it is best to hold this position and not risk damaging the legs and jacking system due to jacking operations in the high seas. This is especially true in hard bottom situations.
- G. If predicted severe weather such as a hurricane is approaching and sea conditions are still low enough to permit jacking operations, then the vessel should be moved inshore.
- H. If a severe storm is approaching and the weather has deteriorated to such a sea condition that jacking would risk the safety of the vessel, then the vessel should be fully preloaded if possible, the preload pumped overboard and the vessel jacked well clear of any expected maximum wave crest elevations. This might be taken as about a forty-foot maximum air gap where no other

limitation is applicable. For very severe storms a higher limit might be necessary in shallow water. If the available leg length is limited, the vessel should be jacked until the top of the leg is even with the top of the leg guide. Any variable load that can be removed from the vessel should be removed. Potable water can be pumped over the side in an emergency.

I. If anticipated weather conditions will exceed the operational limits shown in Section F of this booklet, then the unit should be abandoned in place at maximum air gap. Care should be taken to secure all watertight closures on the vessel prior to the departure of the last crew member. The evacuation of the unit should follow the guidelines given in the following Heavy Weather Evacuation Plan.

#### **Heavy Weather Evacuation Plan**

- A. The requirement for evacuation of the vessel pending the approach of heavy weather or severe storm will most likely occur when the vessel is in the elevated position. It is the responsibility of the Captain to maintain adequate weather forecast information to allow the evacuation of the crew and well in advance of the occurrence of severe storm conditions.
- B. On the occurrence of a tropical weather disturbance either developing within or moving into the Gulf of Mexico, the Captain shall make immediate plans to evacuate the vessel. The evacuation should be planned to be completed twenty-four hours in advance of forecasted wind conditions that will exceed fifty knots at the vessel's operational location. Similar planning shall be implemented on the occurrence of non-tropical storm systems that are forecasted to exceed the stated operational limits. Time frames may be much shorter as regards the advanced forecast of the approach of non-tropical storm systems.
- C. The primary means of transportation for evacuating crew and PACS should be the field operator's normal mode of transportation, that being by boat and/or helicopter. The secondary means of transportation should be the field stand-by boat. The third option is to contact the owner's onshore operations manager and arrange independently chartered boat and/or helicopter transportation. Failing all of the above means of obtaining evacuation transportation, the Captain shall notify USCG on VHF channel 16 of the details of the emergency evacuation situation.
- D. The crew and PACS shall wear life jackets while engaging in any vessel evacuation actions. Primary helicopter or boat transportation should be boarded on the heliport or jacket boat landing. As an alternative, all but one of the crew and all PACS may be placed onboard the available boat transportation using the personnel basket on the crane. The remaining crane operator may board after everyone has departed and the crane has been secured using the jacket boat landing. If sea conditions are too high to permit direct boarding, the operator should transfer to the evacuation vessel from the jacket boat landing using a safety line and ring buoy in addition to wearing a life jacket.
- E. On the less likely occasion that the vessel is underway and is jacked to escape increasing seas, or has been operating on a location that is not adjacent to a jacket with a boat landing, a different evacuation procedure is applicable. The vessel should be preloaded and secured immediately after jacking operations to escape increasing sea conditions. Upon the decision to evacuate the vessel, immediate boat evacuation transportation should be obtained. conditions permitting, the PACS and all but one crew member capable of operating the jacking system, may directly board the evacuation boat on the leeward side of the jack-up while the jack-up is at a relatively low position. The remaining crew member should jack the vessel to the required air gap to weather the storm. The remaining crew member may then abandon ship using the furnished jacob's ladder placed on the leeward side of the vessel. This action should always be taken wearing a life jacket, plus using a life line and ring buoy passed to the evacuation vessel. If seas are too high to permit direct boarding of the evacuation vessel, then the jack-up should be elevated to survival air gap with the full crew and PACS aboard. Evacuation of all but one crew member and all PACS may be accomplished by using the crane and the personnel basket. The remaining crane operator should abandon the jack-up using the above described jacob's ladder method, after securing the crane in its cradle.

F. On the rare occasion that the vessel would need to be evacuated while in the floating mode, the crew and PACS should wear life jackets and board the furnished life rafts, rescue boat, and/or an available evacuation vessel directly on the leeward side of the jack-up. Life lines and ring buoys should be used in addition to life jackets in the case of boarding an evacuation vessel in heavy seas.

## I. Check Lists for Operations

These items should be checked before commencing the listed operation, and any appropriate corrective action should be taken immediately.

## **Operations Afloat**

- 1. Variable load including corrections to lightship do not exceed 579.80 LT (1,298,752 lbs).
- 2. Load forms completed and calculated KG of vessel does not exceed the allowable KG value on the "Allowable KG Curve" is Appendix D.
- 3. Deck load is carefully stowed and secured against movement, deck cranes secured in transit cradles.
- 4. All water tight closures secured.
- 5. Unused trim, wing, and preload ballast tanks stripped to minimum residual water levels.
- 6. Bilges pumped dry in engine rooms, auxiliary machinery space, and rudder compartments.
- 7. Fuel and potable water consolidated to produce only one slack tank each and placed to control trim and heel, also not more than one slack ballast tank.
- 8. Heel is less than one half degree, and trim is between even keel and one half degree down by the stern.
- 9. Tail shaft and rudder tube stuffing boxes water tight.
- 10. Route is within 72 nautical miles of the 75 foot chart datum, and water depth on route does not exceed 175 feet.
- 11. Twelve hour advanced weather forecast available and indicates conditions within operating limits.
- 12. Wave height does not exceed four-feet significant or five-foot swell.
- 13. Crew and PACS at stations assigned by the Captain.
- 14. Propulsion, steering, jacking, and electrical equipment fully functional.
- 15. Adequate consumables aboard for duration of voyage.
- 16. Engine room checked every four hours.

17. Sea chest, overboard discharge, and all ballast manifold valves closed after trim ballasting operations.

## **Jacking Operations**

- 1. Both main engines, power take-offs, and hydraulic pump groups fully functional.
- 2. Bottom soil conditions investigated and suitable for jacking, areas where punch through of the footings might occur may not be suitable for safe operations and should be avoided.
- 3. Pipelines and/or other bottom obstructions located and clear of jacking location.
- 4. Wind and current investigated and suitable to allow positive vessel positioning while legs are being lowered.
- 5. All water tight closures secured.
- 6. Water depth within operational limits.
- 7. Wave height less than four feet.
- 8. Crew and PACS at stations assigned by Captain.
- 9. Preload equipment fully functional.
- 10. Footings are stable for fifteen minutes after preloading in good soil conditions, thirty minutes if large penetrations are experienced, and six hours minimum in punch through conditions.
- 11. Preload ballast removed prior to jacking to air gap.
- 12. All ballast tanks stripped to minimum residual levels after preload operation.
- 13. Check for overhead obstructions before jacking to air gap.
- 14. Captain at jacking controls, mate in engine room at hydraulic pumps, seamen on deck maintaining lookout for obstructions.

## **Elevated Operations on Location**

- 1. Minimum crew aboard as needed for safe operation.
- 2. All water tight closures secured when not in use.
- Variable load is continuously monitored to determine suitability of service condition.
   Maximum variable load not exceeding allowable from Elevated Variable Load Limits diagram in Appendix C.
- 4. Twelve hour advanced weather forecast always on hand and predicted weather within service limits of vessel.
- 5. Engine room checked every four hours.
- 6. Fire pumps submerged and piping manifolds set for ready fire fighting service.
- 7. Fire fighting and life saving equipment in order.
- 8. Temporary access walkways to fixed platform completely surrounded by suitable safety railings.
- 9. Crew and PACS informed of any safety precautions necessary adjacent to production operations on platform.
- 10. Crew and PACS informed of emergency evacuation procedures contained in HWEP.
- 11. Twice a day status report to shore based operations manager, includes variable load and weather status.
- 12. No one allowed on/off boat in crane handled personnel basket without life jacket.
- 13. Crew, supply, and tug boats requested to remain well clear of this vessel's legs, especially in adverse wind, wave, and/or current conditions.

#### J. Vessel System Operation and Component Location

This section has been added to this booklet to satisfy the requirements of 46 CFR 134.170. Other items required by the quoted paragraph from 46 CFR are contained in other sections of this booklet.

#### Bilge, Ballast, and Fire Main Systems

The bilge, ballast and fire main system on this vessel are combined into one system indicated on Dwg. No. P-01 Bilge, Ballast, and Fire Main Piping (2 Shts) included in Appendix F of this booklet. Essentially, the bilge and ballast piping is arranged into a parallel manifold system with each ballast compartment connected to both suction and discharge manifolds by gate valves. The bilge suctions are connected to the suction manifold through a gate valve and check valve. A basket type suction strainer is also located between the bilge suction lines and the combination bilge/ballast pumps.

To add ballast water to any tank while afloat, open the sea chest valve(s) and the discharge manifold to the tank to be filled, and start the ballast pump(s). To move water from one ballast tank to another, close the sea chest valve, open the suction manifold valve to the tank from which water is to be removed, open the discharge valve to the tank that to receive the water, and start the ballast pump(s). To remove water from a tank and put it overboard, open the suction manifold valve to the tank, open the overboard discharge valve, and start the ballast pump(s).

To add ballast water to any tank while in the elevated position, open the discharge manifold valve to the tank and start the fire/preload submersible pump(s). To remove water from any tank while elevated, open the suction manifold valve to the tank, open the overboard discharge valve, and start the ballast pump(s).

To pump water from the bilges overboard, open the suction manifold valve to the bilge to be pumped, open the overboard discharge valve, and start the bilge/ballast pump(s). To pump water from the bilges to another tank, open the suction valve to the bilge to be pumped, open the discharge valve to the tank which is to receive the bilge water, and start the bilge/ballast pump(s).

An alternative method to remove water from the bilges (or any other location on the vessel) is to use the furnished portable electric pump and hose located in the tool cage in the accommodation building in the forward port engine room access compartment.

To pressurize the fire main while afloat or elevated, close all sea chest, suction manifold, discharge manifold, and overboard discharge valves (this should be the normal condition at any time), lower the submersible fire/preload pump(s) into the water, and start the pump. All fire stations are then pressurized.

## General Arrangement, Fire and Safety Plans, and Compartment Access

A full set of drawings are contained in Appendix F, Volume II of this booklet. Inspection of these drawings will clearly indicate the location of all water tight and weather tight compartments, openings in the hull, vents and closures, shut downs for mechanical and electrical emergencies, alarms for flooding and excessive vessel tilt, smoke detectors, access to all compartments and decks, shut down locations for emergencies, and emergency power diagram.

A brief summary of important functions follows:

Bilge alarms sound in the engine room and pilot house, they may be acknowledged but will resound after a set time period if the problem is not addressed.

The tilt alarm sounds in the pilot house and the Captains quarters. It may also be acknowledged but will resound after a set period of time if the problem is not addressed.

The engine room ventilation may be shut down from the pilot house and the engine room access compartment (washer/dryer passageway) in the forward port corner of the main deck accommodation cabin. To restart ventilation, return the shut down switch to run position.

The fuel oil pumps may be shut down from the start/stop station located in the starboard stack house. The engine room ventilation shut downs will also shut down the fuel oil pump. To restart the pump, return the switches to run position.

Remote mechanical fuel oil manifold valve reach rods are located on the port and starboard sides of the accommodation cabin at the main deck level. These may be used to close the suction lines from the fuel oil tanks without entering the engine room. To reopen the valve, use the reach rod or the valve handle located in the engine room.

Fire pumps may be started in the pilot house or at start/stop stations, with one switch located in each stack house. To stop the pump, return the switch to the off position.

All tank vents on the vessel are fitted with self-actuating ball type check valves with flame screens. Manual closure of the tank vents is never required.

All openings in the hull structure and all compartment access are clearly indicated on the drawings.

There are no hazardous locations on the vessel. None of the equipment on the vessel is explosion proof, so operations in hazardous areas adjacent to production facilities is prohibited. Routing of down hole source liquids and/or gas to or over the deck of the vessel is prohibited.

The emergency power for the system consists of two 12 VDC batteries, one located immediately below the switchboard in the port engine room, and the other located at the port side generator. If 120 VAC power is lost, emergency power defaults to the battery below the switchboard. If 12 VDC power is required for extended periods of time, the battery power may be switched to the generator battery using the switch located at the switchboard. All emergency lighting on the vessel is powered by independent batteries located in the lighting fixtures.

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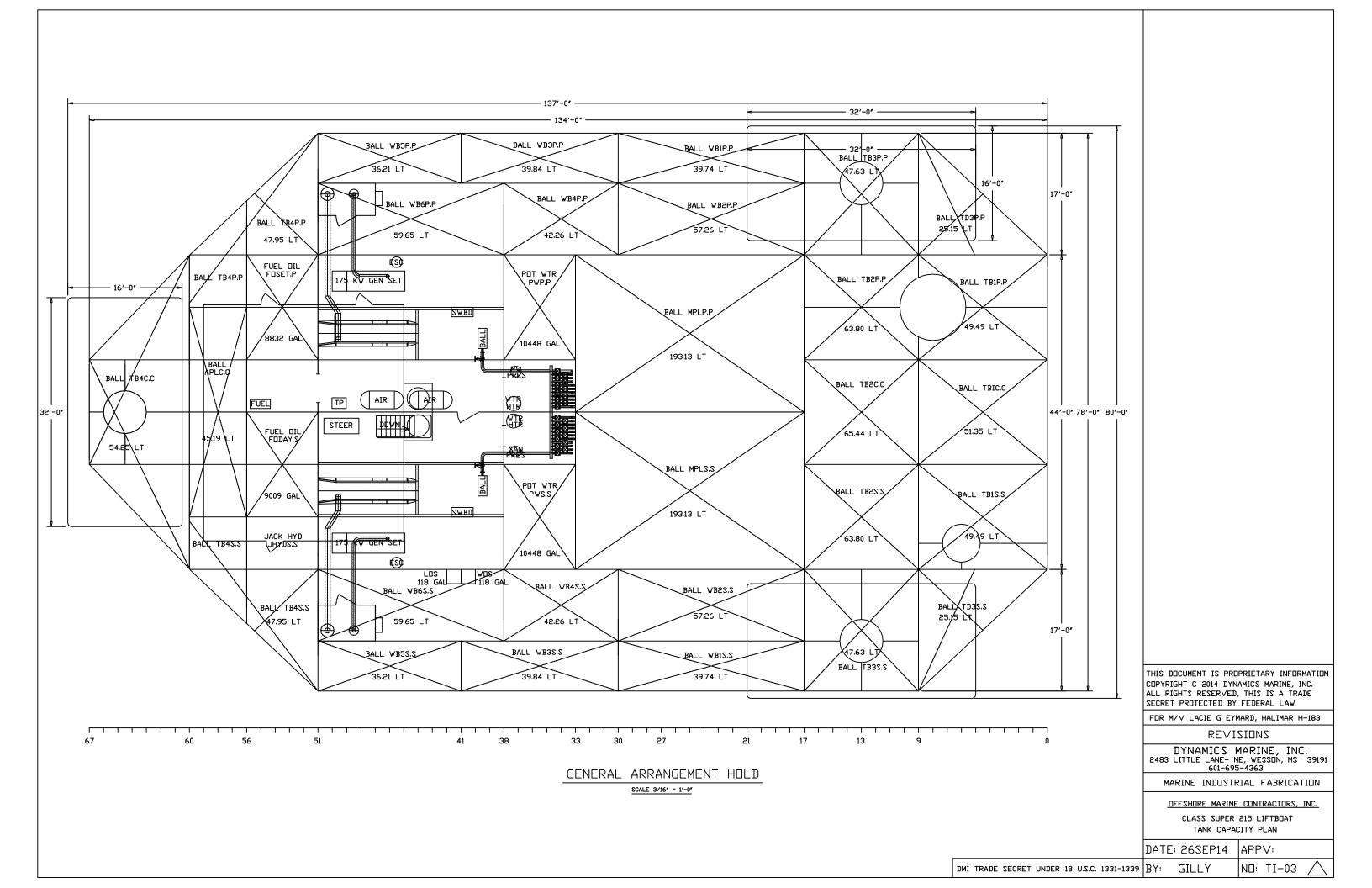
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## APPENDIX A

TANK CAPACITY PLAN TANK CAPACITY TABLES



Tank: TB1C.C, Contents: SALT WATER at 1.025 Specific Gravity

		Volume	Weight	Cent	er of G	ravity		FSM
Sno	ding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'	3	2	0.01	42.17f	0.00	0.20	0.3	1.1
0'	6	22	0.08	42.41f	0.00	0.38	1.0	7.2
0'	9	64	0.25	42.68f	0.00	0.55	1.2	12.9
1'	0	129	0.49	42.95f	0.00	0.72	1.9	22.2
1'	3	213	0.81	43.20f	0.00	0.88	1.8	24.0
1'	6	318	1.21	43.45f	0.00	1.05	2.6	33.3
1'	9	442	1.69	43.69f	0.00	1.21	2.5	35.1
2 '	0	588	2.25	43.94f	0.00	1.38	3.3	44.4
2 '	3	753	2.88	44.19f	0.00	1.54	3.3	46.2
2 '	6	939	3.59	44.44f	0.00	1.71	4.0	55.3
2 '	9	1145	4.37	44.69f	0.00	1.87	4.0	57.3
3 '	0	1371	5.24	44.94f	0.00	2.04	4.8	66.6
3 '	3	1618	6.18	45.18f	0.00	2.20	4.7	68.4
3 '	6	1885	7.20	45.43f	0.00	2.37	5.5	77.7
3 '	9	2171	8.29	45.68f	0.00	2.54	5.5	79.5
4 '	0	2479	9.47	45.93f	0.00	2.70	6.3	88.8
4 '	3	2806	10.72	46.18f	0.00	2.87	6.2	90.6
4 '	6	3155	12.05	46.43f	0.00	3.04	7.0	99.9
4 '	9	3522	13.45	46.68f	0.00	3.20	7.0	101.7
5'	0	3911	14.94	46.93f	0.00	3.37	7.8	111.0
5 '	3	4319	16.49	47.18f	0.00	3.53	7.7	112.8
5'	6	4749	18.13	47.43f	0.00	3.70	8.5	122.1
5'	9	5198	19.85	47.68f	0.00	3.87	8.5	123.9
6'	0	5667	21.64	47.93f	0.00	4.03	9.3	133.2
6'	3	6151	23.49	48.17f	0.00	4.20	8.5	133.2
6'	6	6638	25.35	48.37f	0.00	4.36	7.9	133.2
6'	9	7124	27.20	48.55f	0.00	4.51	7.4	133.2
7 '	0	7610	29.06	48.71f	0.00	4.66	6.9	133.2
7 '	3	8097	30.92	48.85f	0.00	4.81	6.5	133.2
7 '	6	8583	32.78	48.97f	0.00	4.96	6.1	133.2
7 '	9	9069	34.63	49.08f	0.00	5.10	5.8	133.2
8 '	0	9556	36.49	49.18f	0.00	5.24	5.5	133.2
8 '	3	10042	38.35	49.26f	0.00	5.38	5.2	133.2
8 '	6	10528	40.20	49.34f	0.00	5.52	5.0	133.2
8 '	9	11015	42.06	49.42f	0.00	5.66	4.8	133.2
9 '	0	11501	43.92	49.48f	0.00	5.79	4.6	133.2
9 '	3	11987	45.78	49.55f	0.00	5.93	4.4	133.2
9 '	6	12473	47.63	49.60f	0.00	6.06	4.2	133.2
91	9	12960	49.49	49.65f	0.00	6.20	4.1	133.2
10'	0	13446	51.35	49.70f	0.00	6.33	0.0	14.8

Soundings in feet & inches.---Other distances in FEET.------TB1C.C Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00 (Zero Sounding is at the Reference Point.)

Tank: TB1P.P, Contents: SALT WATER at 1.025 Specific Gravity

Sno	ding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'	3	1	0.00	42.17f	9.50p	0.37	0.2	0.1
0'	6	14	0.05	42.38f	11.75p	0.56	0.7	4.7
0'	9	49	0.19	42.62f	13.05p	0.74	1.1	11.7
1'	0	106	0.41	42.88f	13.58p	0.91	1.4	18.4
1'	3	184	0.70	43.13f	13.86p	1.07	1.7	23.3
1'	6	282	1.08	43.38f	14.02p	1.24	2.1	29.7
1'	9	400	1.53	43.62f	14.13p	1.40	2.4	34.5
2 '	0	539	2.06	43.87f	14.21p	1.57	2.8	40.8
2 '	3	697	2.66	44.11f	14.27p	1.73	3.2	45.6
2 '	6	877	3.35	44.36f	14.31p	1.90	3.6	51.9
2 '	9	1076	4.11	44.61f	14.35p	2.07	3.9	56.8
3 '	0	1295	4.95	44.86f	14.37p	2.23	4.3	63.0
3 '	3	1535	5.86	45.11f	14.40p	2.40	4.6	67.9
3 '	6	1795	6.86	45.35f	14.42p	2.56	5.0	74.1
3 '	9	2075	7.93	45.60f	14.44p	2.73	5.4	79.0
4 '	0	2376	9.07	45.85f	14.45p	2.90	5.8	85.3
4 '	3	2697	10.30	46.10f	14.47p	3.06	6.1	90.1
4 '	6	3038	11.60	46.35f	14.48p	3.23	6.5	96.3
4 '	9	3399	12.98	46.60f	14.49p	3.40	6.9	101.2
5'	0	3781	14.44	46.85f	14.50p	3.56	7.3	107.5
5'	3	4183	15.97	47.10f	14.51p	3.73	7.6	112.3
5'	6	4605	17.59	47.35f	14.51p	3.89	8.0	118.5
5'	9	5047	19.27	47.60f	14.52p	4.06	8.4	123.4
6'	0	5510	21.04	47.85f	14.53p	4.23	8.8	129.6
6'	3	5990	22.87	48.09f	14.53p	4.39	8.7	132.1
6'	6	6476	24.73	48.31f	14.54p	4.55	8.1	133.2
6'	9	6962	26.59	48.50f	14.55p	4.71	7.5	133.2
7 '	0	7449	28.44	48.66f	14.56p	4.86	7.1	133.2
7 '	3	7935	30.30	48.80f	14.57p	5.01	6.6	133.2
7 '	6	8421	32.16	48.93f	14.57p	5.16	6.2	133.2
7 '	9	8908	34.02	49.04f	14.58p	5.30	5.9	133.2
8'	0	9394	35.87	49.14f	14.58p	5.44	5.6	133.2
8 '	3	9880	37.73	49.24f	14.59p	5.58	5.3	133.2
8 '	6	10367	39.59	49.32f	14.59p	5.72	5.1	133.2
8'	9	10853	41.44	49.39f	14.59p	5.86	4.8	133.2
9 '	0	11339	43.30	49.46f	14.60p	6.00	4.6	133.2
9 '	3	11825	45.16	49.53f	14.60p	6.13	4.4	133.2
9 '	6	12312	47.01	49.58f	14.60p	6.27	4.3	133.2
9 '	9	12798	48.87	49.64f	14.60p	6.40	4.1	133.2
10'	0	12960	49.49	49.65f	14.61p	6.44		

Soundings in feet & inches.---Other distances in FEET.------TB1P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17 (Zero Sounding is at the Reference Point.)

Tank: TB1S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr	avity VCG	GML	FSM Ft-LT
0'3	1	0.00	42.17f	9.50s	0.37	0.2	0.1
0'6	14	0.05	42.38f	11.75s	0.56	0.7	4.7
0'9	49	0.19	42.62f	13.05s	0.74	1.1	11.7
1' 0	106	0.41	42.88f	13.58s	0.91	1.4	18.4
1' 3	184	0.70	43.13f	13.86s	1.07	1.7	23.3
1' 6	282	1.08	43.38f	14.02s	1.24	2.1	29.7
1' 9	400	1.53	43.62f	14.13s	1.40	2.4	34.5
2' 0	539	2.06	43.87f	14.21s	1.57	2.8	40.8
2'3	697	2.66	44.11f	14.27s	1.73	3.2	45.6
2' 6	877	3.35	44.36f	14.31s	1.90	3.6	51.9
2 ' 9	1076	4.11	44.61f	14.35s	2.07	3.9	56.8
3' 0	1295	4.95	44.86f	14.37s	2.23	4.3	63.0
3'3	1535	5.86	45.11f	14.40s	2.40	4.6	67.9
3' 6	1795	6.86	45.35f	14.42s	2.56	5.0	74.1
3' 9	2075	7.93	45.60f	14.44s	2.73	5.4	79.0
4' 0	2376	9.07	45.85f	14.45s	2.90	5.8	85.3
4'3	2697	10.30	46.10f	14.47s	3.06	6.1	90.1
4' 6	3038	11.60	46.35f	14.48s	3.23	6.5	96.3
4' 9	3399	12.98	46.60f	14.49s	3.40	6.9	101.2
5' 0	3781	14.44	46.85f	14.50s	3.56	7.3	107.5
5 ' 3	4183	15.97	47.10f	14.51s	3.73	7.6	112.3
5' 6	4605	17.59	47.35f	14.51s	3.89	8.0	118.5
5' 9	5047	19.27	47.60f	14.52s	4.06	8.4	123.4
6' 0	5510	21.04	47.85f	14.53s	4.23	8.8	129.6
6' 3	5990	22.87	48.09f	14.53s	4.39	8.7	132.1
6' 6	6476	24.73	48.31f	14.54s	4.55	8.1	133.2
6' 9	6962	26.59	48.50f	14.55s	4.71	7.5	133.2
7' 0	7449	28.44	48.66f	14.56s	4.86	7.1	133.2
7' 3	7935	30.30	48.80f	14.57s	5.01	6.6	133.2
7' 6	8421	32.16	48.93f	14.57s	5.16	6.2	133.2
7' 9	8908	34.02	49.04f	14.58s	5.30	5.9	133.2
8' 0	9394	35.87	49.14f	14.58s	5.44	5.6	133.2
8' 3	9880	37.73	49.24f	14.59s	5.58	5.3	133.2
8' 6	10367	39.59	49.32f	14.59s	5.72	5.1	133.2
8' 9 9' 0	10853	41.44	49.39f	14.59s	5.86	4.8	133.2
9' 0	11339	43.30	49.46f	14.60s	6.00	4.6	133.2
9'3	11825	45.16	49.53f	14.60s	6.13	4.4	133.2
9'6	12312	47.01	49.58f	14.60s	6.27	4.3	133.2
	12798	48.87	49.64f	14.60s	6.40	4.1	133.2
10' 0	12960	49.49	49.65f	14.61s	6.44		

Soundings in feet & inches.---Other distances in FEET.------TB1S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

(Zero Sounding is at the Reference Point.)

Tank: TB2C.C, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	279	1.07	33.77f	0.00	0.16	132.1	118.3
0'6	712	2.72	33.91f	0.00	0.29	51.8	118.3
0'9	1144	4.37	33.94f	0.00	0.42	32.2	118.3
1' 0	1576	6.02	33.96f	0.00	0.54	23.4	118.3
1' 3	2008	7.67	33.97f	0.00	0.67	18.4	118.3
1' 6	2441	9.32	33.97f	0.00	0.79	15.1	118.3
1' 9	2873	10.97	33.98f	0.00	0.92	12.8	118.3
2' 0	3305	12.62	33.98f	0.00	1.04	11.2	118.3
2'3	3737	14.27	33.98f	0.00	1.17	9.9	118.3
2' 6	4170	15.92	33.98f	0.00	1.29	8.8	118.3
2' 9	4602	17.57	33.99f	0.00	1.42	8.0	118.3
3' 0	5034	19.22	33.99f	0.00	1.54	7.3	118.3
3 ' 3	5466	20.87	33.99f	0.00	1.67	6.7	118.3
3' 6	5899	22.52	33.99f	0.00	1.79	6.3	118.3
3 ' 9	6331	24.18	33.99f	0.00	1.92	5.8	118.3
4' 0	6763	25.83	33.99f	0.00	2.04	5.5	118.3
4' 3	7195	27.48	33.99f	0.00	2.17	5.1	118.3
4' 6	7628	29.13	33.99f	0.00	2.29	4.8	118.3
4' 9	8060	30.78	33.99f	0.00	2.42	4.6	118.3
5' 0	8492	32.43	33.99f	0.00	2.54	4.3	118.3
5' 3	8924	34.08	33.99f	0.00	2.67	4.1	118.3
5' 6	9357	35.73	33.99f	0.00	2.79	3.9	118.3
5' 9	9789	37.38	33.99f	0.00	2.92	3.8	118.3
6' 0	10221	39.03	33.99f	0.00	3.04	3.6	118.3
6' 3	10653	40.68	33.99f	0.00	3.17	3.5	118.3
6' 6	11086	42.33	33.99f	0.00	3.29	3.3	118.3
6' 9	11518	43.98	33.99f	0.00	3.42	3.2	118.3
7' 0	11950	45.63	33.99f	0.00	3.54	3.1	118.3
7' 3	12382	47.28	33.99f	0.00	3.67	3.0	118.3
7' 6	12815	48.94	34.00f	0.00	3.79	2.9	118.3
7' 9	13247	50.59	34.00f	0.00	3.92	2.8	118.3
8' 0	13679	52.24	34.00f	0.00	4.04	2.7	118.3
8'3	14111	53.89	34.00f	0.00	4.17	2.6	118.3
8' 6	14544	55.54	34.00f	0.00	4.29	2.5	118.3
8' 9	14976	57.19	34.00f	0.00	4.42	2.5	118.3
9' 0	15408	58.84	34.00f	0.00	4.54	2.4	118.3
9'3	15840	60.49	34.00f	0.00	4.67	2.3	118.3
9' 6	16273	62.14	34.00f	0.00	4.79	2.3	118.3
9 9	16705	63.79	34.00f	0.00	4.92	2.2	118.3
10' 0	17137	65.44	34.00f	0.00	5.04	2.2	118.3

Soundings in feet & inches.---Other distances in FEET.-----TB2C.C Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

(Zero Sounding is at the Reference Point.)

Tank: TB2P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	157	0.60	33.73f	10.96p	0.33	167.9	48.1
0'6	568	2.17	33.89f	13.43p	0.49	64.9	118.4
0'9	1000	3.82	33.94f	13.96p	0.62	36.9	118.4
1' 0	1433	5.47	33.96f	14.18p	0.75	25.7	118.4
1' 3	1865	7.12	33.97f	14.29p	0.87	19.8	118.4
1' 6	2297	8.77	33.97f	14.36p	1.00	16.1	118.4
1' 9	2730	10.42	33.98f	14.41p	1.12	13.5	118.4
2' 0	3162	12.07	33.98f	14.44p	1.25	11.7	118.4
2' 3	3594	13.72	33.98f	14.47p	1.38	10.3	118.4
2' 6	4026	15.38	33.98f	14.49p	1.50	9.2	118.4
2' 9	4459	17.03	33.99f	14.51p	1.63	8.3	118.4
3' 0	4891	18.68	33.99f	14.52p	1.75	7.5	118.4
3 ' 3	5323	20.33	33.99f	14.53p	1.88	6.9	118.4
3 ' 6	5755	21.98	33.99f	14.54p	2.00	6.4	118.4
3 ' 9	6188	23.63	33.99f	14.55p	2.13	6.0	118.4
4' 0	6620	25.28	33.99f	14.56p	2.25	5.6	118.4
4' 3	7052	26.93	33.99f	14.57p	2.38	5.2	118.4
4' 6	7485	28.58	33.99f	14.57p	2.50	4.9	118.4
4' 9	7917	30.23	33.99f	14.58p	2.63	4.7	118.4
5' 0	8349	31.88	33.99f	14.58p	2.75	4.4	118.4
5' 3	8781	33.53	33.99f	14.59p	2.88	4.2	118.4
5' 6	9214	35.18	33.99f	14.59p	3.00	4.0	118.4
5' 9	9646	36.84	33.99f	14.59p	3.13	3.8	118.4
6' 0	10078	38.49	33.99f	14.60p	3.25	3.7	118.4
6' 3	10511	40.14	33.99f	14.60p	3.38	3.5	118.4
6' 6	10943	41.79	33.99f	14.60p	3.50	3.4	118.4
6' 9	11375	43.44	33.99f	14.60p	3.63	3.2	118.4
7' 0	11807	45.09	33.99f	14.61p	3.75	3.1	118.4
7' 3	12240	46.74	33.99f	14.61p	3.88	3.0	118.4
7' 6	12672	48.39	34.00f	14.61p	4.00	2.9	118.4
7' 9	13104	50.04	34.00f	14.61p	4.13	2.8	118.4
8' 0	13537	51.69	34.00f	14.61p	4.25	2.7	118.4
8'3	13969	53.34	34.00f	14.62p	4.38	2.6	118.4
8' 6	14401	54.99	34.00f	14.62p	4.50	2.6	118.4
8 ' 9	14833	56.64	34.00f	14.62p	4.63	2.5	118.4
9'0	15266	58.30	34.00f	14.62p	4.75	2.4	118.4
9 ' 3	15698	59.95	34.00f	14.62p	4.88	2.3	118.4
9'6	16130	61.60	34.00f	14.62p	5.00	2.3	118.4
9'9	16563	63.25	34.00f	14.62p	5.13	2.2	118.4
9'10.1	16708	63.80	34.00f	14.62p	5.17		

Soundings in feet & inches.---Other distances in FEET.------TB2P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

(Zero Sounding is at the Reference Point.)

Tank: TB2S.S, Contents: SALT WATER at 1.025 Specific Gravity

G 14	Volume	Weight		er of Gr		CMT	FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	157	0.60	33.73f	10.96s	0.33	167.9	48.1
0'6	568	2.17	33.89f	13.43s	0.49	64.9	118.4
0'9	1000	3.82	33.94f	13.96s	0.62	36.9	118.4
1' 0	1433	5.47	33.96f	14.18s	0.75	25.7	118.4
1' 3	1865	7.12	33.97f	14.29s	0.87	19.8	118.4
1' 6	2297	8.77	33.97f	14.36s	1.00	16.1	118.4
1' 9	2730	10.42	33.98f	14.41s	1.12	13.5	118.4
2' 0	3162	12.07	33.98f	14.44s	1.25	11.7	118.4
2' 3	3594	13.72	33.98f	14.47s	1.38	10.3	118.4
2' 6	4026	15.38	33.98f	14.49s	1.50	9.2	118.4
2' 9	4459	17.03	33.99f	14.51s	1.63	8.3	118.4
3' 0	4891	18.68	33.99f	14.52s	1.75	7.5	118.4
3 ' 3	5323	20.33	33.99f	14.53s	1.88	6.9	118.4
3' 6	5755	21.98	33.99f	14.54s	2.00	6.4	118.4
3 ' 9	6188	23.63	33.99f	14.55s	2.13	6.0	118.4
4' 0	6620	25.28	33.99f	14.56s	2.25	5.6	118.4
4' 3	7052	26.93	33.99f	14.57s	2.38	5.2	118.4
4' 6	7485	28.58	33.99f	14.57s	2.50	4.9	118.4
4' 9	7917	30.23	33.99f	14.58s	2.63	4.7	118.4
5' 0	8349	31.88	33.99f	14.58s	2.75	4.4	118.4
5'3	8781	33.53	33.99f	14.59s	2.88	4.2	118.4
5' 6	9214	35.18	33.99f	14.59s	3.00	4.0	118.4
5' 9	9646	36.84	33.99f	14.59s	3.13	3.8	118.4
6' 0	10078	38.49	33.99f	14.60s	3.25	3.7	118.4
6' 3	10511	40.14	33.99f	14.60s	3.38	3.5	118.4
6' 6	10943	41.79	33.99f	14.60s	3.50	3.4	118.4
6' 9	11375	43.44	33.99f	14.60s	3.63	3.2	118.4
7' 0	11807	45.09	33.99f	14.61s	3.75	3.1	118.4
7' 3	12240	46.74	33.99f	14.61s	3.88	3.0	118.4
7' 6	12672	48.39	34.00f	14.61s	4.00	2.9	118.4
7' 9	13104	50.04	34.00f	14.61s	4.13	2.8	118.4
8' 0	13537	51.69	34.00f	14.61s	4.25	2.7	118.4
8' 3	13969	53.34	34.00f	14.62s	4.38	2.6	118.4
8' 6	14401	54.99	34.00f	14.62s	4.50	2.6	118.4
8' 9	14833	56.64	34.00f	14.62s	4.63	2.5	118.4
9'0	15266	58.30	34.00f	14.62s	4.75	2.4	118.4
9'3	15698	59.95	34.00f	14.62s	4.88	2.3	118.4
9'6	16130	61.60	34.00f	14.62s	5.00	2.3	118.4
9'9	16563	63.25	34.00f	14.62s	5.13	2.2	118.4
9'10.1	16708	63.80	34.00f	14.62s	5.17		

Soundings in feet & inches.---Other distances in FEET.------TB2S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

Tank: TD3S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr	avity VCG	GML	FSM Ft-LT
0'3	 20	0.08	42.45f	30.23s	3.16	1.0	12.8
0'6	77	0.29	42.431 42.84f	30.23s	3.33	2.6	25.5
0'9	169	0.65	43.24f	29.91s	3.49	2.9	32.2
1' 0	292	1.12	43.63f	29.73s	3.66	4.4	40.3
1' 3	444	1.70	44.00f	29.55s	3.82	4.7	44.7
1' 6	622	2.37	44.36f	29.38s	3.98	6.0	50.0
1' 9	822	3.14	44.70f	29.22s	4.14	6.2	79.9
2' 0	1044	3.99	45.03f	29.07s	4.29	7.3	57.0
2'3	1282	4.89	45.33f	28.93s	4.45	8.3	60.6
2' 6	1539	5.88	45.65f	28.77s	4.60	9.3	64.1
2' 9	1805	6.89	45.91f	28.65s	4.75	8.4	64.5
3' 0	2080	7.94	46.15f	28.54s	4.90	8.8	67.4
3 ' 3	2358	9.01	46.36f	28.44s	5.05	8.3	68.6
3 ' 6	2640	10.08	46.53f	28.36s	5.19	7.7	69.1
3 ' 9	2921	11.16	46.67f	28.29s	5.33	6.9	69.1
4' 0	3203	12.23	46.79f	28.24s	5.46	6.3	69.1
4'3	3485	13.31	46.89f	28.19s	5.60	5.8	69.1
4' 6	3767	14.38	46.97f	28.15s	5.73	5.4	69.1
4' 9	4049	15.46	47.04f	28.12s	5.86	5.0	69.1
5' 0	4331	16.54	47.10f	28.09s	5.99	4.7	69.1
5'3	4612	17.61	47.16f	28.06s	6.12	4.4	69.1
5' 6	4894	18.69	47.21f	28.04s	6.25	4.1	69.1
5' 9	5176	19.77	47.25f	28.02s	6.38	3.9	69.1
6' 0	5458	20.84	47.29f	28.00s	6.51	3.7	69.1
6'3	5740	21.92	47.32f	27.98s	6.64	3.5	69.1
6' 6	6022	22.99	47.36f	27.97s	6.77	3.4	69.1
6' 9	6303	24.07	47.38f	27.96s	6.90	3.2	69.1
7' 0	6585	25.15	47.41f	27.94s	7.02	0.0	19.5

Soundings in feet & inches.---Other distances in FEET.------TD3S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.00

Tank: TB3S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr	avity VCG	GML	FSM Ft-LT
0'3	447	1.71	34.00f	30.31s	3.12	94.4	180.1
0'6	893	3.41	34.00f	30.31s	3.25	47.3	180.1
0'9	1338	5.11	34.00f	30.31s	3.37	31.6	180.1
1' 0	1783	6.81	34.00f	30.31s	3.50	23.7	180.1
1' 3	2229	8.51	34.00f	30.31s	3.62	18.9	180.1
1'6	2674	10.21	34.00f	30.31s	3.75	15.8	180.1
1' 9	3119	11.91	34.00f	30.31s	3.87	13.5	180.1
2' 0	3565	13.61	34.00f	30.31s	4.00	11.8	180.1
2'3	4010	15.31	34.00f	30.31s	4.12	10.5	180.1
2' 6	4456	17.01	34.00f	30.31s	4.25	9.5	180.1
2' 9	4901	18.72	34.00f	30.31s	4.37	8.6	180.1
3' 0	5346	20.42	34.00f	30.31s	4.50	7.9	180.1
3 ' 3	5792	22.12	34.00f	30.31s	4.62	7.3	180.1
3' 6	6237	23.82	34.00f	30.31s	4.75	6.8	180.1
3' 9	6682	25.52	34.00f	30.31s	4.87	6.3	180.1
4' 0	7128	27.22	34.00f	30.31s	5.00	5.9	180.1
4'3	7573	28.92	34.00f	30.31s	5.12	5.6	180.1
4' 6	8019	30.62	34.00f	30.31s	5.25	5.3	180.1
4' 9	8464	32.32	34.00f	30.31s	5.37	5.0	180.1
5' 0	8909	34.02	34.00f	30.31s	5.50	4.7	180.1
5' 3	9355	35.72	34.00f	30.31s	5.62	4.5	180.1
5' 6	9800	37.42	34.00f	30.31s	5.75	4.3	180.1
5' 9	10245	39.12	34.00f	30.31s	5.87	4.1	180.1
6' 0	10691	40.82	34.00f	30.31s	6.00	3.9	180.1
6' 3	11136	42.53	34.00f	30.31s	6.12	3.8	180.1
6' 6	11582	44.23	34.00f	30.31s	6.25	3.6	180.1
6' 9	12027	45.93	34.00f	30.31s	6.37	3.5	180.1
7' 0	12473	47.63	34.00f	30.31s	6.50	3.4	184.3

Soundings in feet & inches.---Other distances in FEET.------TB3S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.00

Tank: TD3P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr	avity VCG	GML	FSM Ft-LT
0'3	20	0.08	42.45f	30.23p	3.16	1.0	12.8
0'6	77	0.29	42.84f	30.23p	3.33	2.6	25.5
0'9	169	0.65	43.24f	29.91p	3.49	2.9	32.2
1' 0	292	1.12	43.63f	29.73p	3.66	4.4	40.3
1' 3	444	1.70	44.00f	29.55p	3.82	4.7	44.7
1' 6	622	2.37	44.36f	29.38p	3.98	6.0	50.0
1' 9	822	3.14	44.70f	29.22p	4.14	6.2	79.9
2' 0	1044	3.99	45.03f	29.07p	4.29	7.3	57.0
2'3	1282	4.89	45.33f	28.93p	4.45	8.3	60.6
2'6	1539	5.88	45.65f	28.77p	4.60	9.3	64.1
2'9	1805	6.89	45.91f	28.65p	4.75	8.4	64.5
3' 0	2080	7.94	46.15f	28.54p	4.90	8.8	67.4
3 ' 3	2358	9.01	46.36f	28.44p	5.05	8.3	68.6
3' 6	2640	10.08	46.53f	28.36p	5.19	7.7	69.1
3 ' 9	2921	11.16	46.67f	28.29p	5.33	6.9	69.1
4' 0	3203	12.23	46.79f	28.24p	5.46	6.3	69.1
4'3	3485	13.31	46.89f	28.19p	5.60	5.8	69.1
4' 6	3767	14.38	46.97f	28.15p	5.73	5.4	69.1
4' 9	4049	15.46	47.04f	28.12p	5.86	5.0	69.1
5' 0	4331	16.54	47.10f	28.09p	5.99	4.7	69.1
5'3	4612	17.61	47.16f	28.06p	6.12	4.4	69.1
5' 6	4894	18.69	47.21f	28.04p	6.25	4.1	69.1
5' 9	5176	19.77	47.25f	28.02p	6.38	3.9	69.1
6' 0	5458	20.84	47.29f	28.00p	6.51	3.7	69.1
6' 3	5740	21.92	47.32f	27.98p	6.64	3.5	69.1
6' 6	6022	22.99	47.36f	27.97p	6.77	3.4	69.1
6' 9	6303	24.07	47.38f	27.96p	6.90	3.2	69.1
7' 0	6585	25.15	47.41f	27.94p	7.02	0.0	19.5

Soundings in feet & inches.---Other distances in FEET.-------TD3P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.00

Tank: TB3P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	447	1.71	34.00f	30.31p	3.12	94.4	180.1
0'6	893	3.41	34.00f	30.31p	3.25	47.3	180.1
0'9	1338	5.11	34.00f	30.31p	3.37	31.6	180.1
1' 0	1783	6.81	34.00f	30.31p	3.50	23.7	180.1
1' 3	2229	8.51	34.00f	30.31p	3.62	18.9	180.1
1' 6	2674	10.21	34.00f	30.31p	3.75	15.8	180.1
1' 9	3119	11.91	34.00f	30.31p	3.87	13.5	180.1
2' 0	3565	13.61	34.00f	30.31p	4.00	11.8	180.1
2' 3	4010	15.31	34.00f	30.31p	4.12	10.5	180.1
2' 6	4456	17.01	34.00f	30.31p	4.25	9.5	180.1
2' 9	4901	18.72	34.00f	30.31p	4.37	8.6	180.1
3' 0	5346	20.42	34.00f	30.31p	4.50	7.9	180.1
3 ' 3	5792	22.12	34.00f	30.31p	4.62	7.3	180.1
3' 6	6237	23.82	34.00f	30.31p	4.75	6.8	180.1
3 ' 9	6682	25.52	34.00f	30.31p	4.87	6.3	180.1
4' 0	7128	27.22	34.00f	30.31p	5.00	5.9	180.1
4'3	7573	28.92	34.00f	30.31p	5.12	5.6	180.1
4' 6	8019	30.62	34.00f	30.31p	5.25	5.3	180.1
4' 9	8464	32.32	34.00f	30.31p	5.37	5.0	180.1
5' 0	8909	34.02	34.00f	30.31p	5.50	4.7	180.1
5' 3	9355	35.72	34.00f	30.31p	5.62	4.5	180.1
5' 6	9800	37.42	34.00f	30.31p	5.75	4.3	180.1
5' 9	10245	39.12	34.00f	30.31p	5.87	4.1	180.1
6' 0	10691	40.82	34.00f	30.31p	6.00	3.9	180.1
6' 3	11136	42.53	34.00f	30.31p	6.12	3.8	180.1
6' 6	11582	44.23	34.00f	30.31p	6.25	3.6	180.1
6' 9	12027	45.93	34.00f	30.31p	6.37	3.5	180.1
7' 0	12473	47.63	34.00f	30.31p	6.50	3.4	184.3

Soundings in feet & inches.---Other distances in FEET.------TB3P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.00

Tank: WB1P.P, Contents: SALT WATER at 1.025 Specific Gravity

	Volume	Weight		er of Gra	-		FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	7	0.02	0.53f	34.47p	0.91	2.3	1.0
0'6	37	0.14	1.17f	35.09p	1.08	4.8	2.7
0'9	95	0.36	1.84f	35.26p	1.25	7.5	4.4
1' 0	179	0.68	2.52f	35.34p	1.42	10.3	6.0
1' 3	289	1.10	3.20f	35.38p	1.58	13.0	7.6
1'6	426	1.63	3.88f	35.41p	1.75	15.9	9.3
1' 9	589	2.25	4.56f	35.43p	1.92	18.9	11.0
2' 0	779	2.97	5.25f	35.45p	2.09	21.5	12.6
2' 3	995	3.80	5.93f	35.46p	2.25	24.4	14.3
2' 6	1320	5.04	7.60f	35.47p	2.46	57.2	20.9
2' 9	1655	6.32	8.70f	35.47p	2.64	45.6	20.9
3' 0	1990	7.60	9.42f	35.48p	2.80	38.0	20.9
3 ' 3	2326	8.88	9.94f	35.48p	2.95	32.5	20.9
3 ' 6	2661	10.16	10.32f	35.48p	3.10	28.4	20.9
3 ' 9	2996	11.44	10.62f	35.49p	3.24	25.2	20.9
4' 0	3332	12.72	10.86f	35.49p	3.38	22.7	20.9
4' 3	3667	14.00	11.06f	35.49p	3.51	20.6	20.9
4'6	4002	15.28	11.22f	35.49p	3.64	18.9	20.9
4' 9	4337	16.56	11.36f	35.49p	3.78	17.4	20.9
5' 0	4673	17.84	11.48f	35.49p	3.91	16.2	20.9
5'3	5008	19.12	11.58f	35.49p	4.04	15.1	20.9
5'6	5343	20.40	11.67f	35.49p	4.17	14.1	20.9
5' 9	5678	21.68	11.75f	35.49p	4.29	13.3	20.9
6' 0	6014	22.96	11.82f	35.49p	4.42	12.6	20.9
6' 3	6349	24.24	11.88f	35.49p	4.55	11.9	20.9
6' 6	6684	25.52	11.93f	35.49p	4.68	11.3	20.9
6'9	7019	26.80	11.99f	35.49p	4.81	10.8	20.9
7' 0	7355	28.08	12.03f	35.49p	4.93	10.3	20.9
7'3	7690	29.37	12.07f	35.49p	5.06	9.8	20.9
7' 6	8025	30.65	12.11f	35.49p	5.19	9.4	20.9
7'9	8360	31.93	12.15f	35.49p	5.32	9.0	20.9
8' 0	8696	33.21	12.18f	35.50p	5.44	8.7	20.9
8' 3	9031	34.49	12.21f	35.50p	5.57	8.4	20.9
8' 6	9366	35.77	12.24f	35.50p	5.69	8.1	20.9
8' 9	9701	37.05	12.27f	35.50p	5.82	7.8	20.9
9' 0	10037	38.33	12.29f	35.50p	5.95	7.5	20.9
9' 3	10372	39.61	12.31f	35.50p	6.07	7.3	20.9
9' 6	10407	39.74	12.32f	35.50p	6.09		

Soundings in feet & inches.---Other distances in FEET.------WB1P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WB1S.S, Contents: SALT WATER at 1.025 Specific Gravity

	Volume	Weight		er of Gra			FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	7	0.02	0.53f	34.47s	0.91	2.3	1.0
0'6	37	0.14	1.17f	35.09s	1.08	4.8	2.7
0'9	95	0.36	1.84f	35.26s	1.25	7.5	4.4
1' 0	179	0.68	2.52f	35.34s	1.42	10.3	6.0
1' 3	289	1.10	3.20f	35.38s	1.58	13.0	7.6
1'6	426	1.63	3.88f	35.41s	1.75	15.9	9.3
1' 9	589	2.25	4.56f	35.43s	1.92	18.9	11.0
2' 0	779	2.97	5.25f	35.45s	2.09	21.5	12.6
2' 3	995	3.80	5.93f	35.46s	2.25	24.4	14.3
2' 6	1320	5.04	7.60f	35.47s	2.46	57.2	20.9
2' 9	1655	6.32	8.70f	35.47s	2.64	45.6	20.9
3' 0	1990	7.60	9.42f	35.48s	2.80	38.0	20.9
3 ' 3	2326	8.88	9.94f	35.48s	2.95	32.5	20.9
3' 6	2661	10.16	10.32f	35.48s	3.10	28.4	20.9
3 ' 9	2996	11.44	10.62f	35.49s	3.24	25.2	20.9
4' 0	3332	12.72	10.86f	35.49s	3.38	22.7	20.9
4' 3	3667	14.00	11.06f	35.49s	3.51	20.6	20.9
4' 6	4002	15.28	11.22f	35.49s	3.64	18.9	20.9
4' 9	4337	16.56	11.36f	35.49s	3.78	17.4	20.9
5' 0	4673	17.84	11.48f	35.49s	3.91	16.2	20.9
5' 3	5008	19.12	11.58f	35.49s	4.04	15.1	20.9
5'6	5343	20.40	11.67f	35.49s	4.17	14.1	20.9
5' 9	5678	21.68	11.75f	35.49s	4.29	13.3	20.9
6' 0	6014	22.96	11.82f	35.49s	4.42	12.6	20.9
6' 3	6349	24.24	11.88f	35.49s	4.55	11.9	20.9
6' 6	6684	25.52	11.93f	35.49s	4.68	11.3	20.9
6' 9	7019	26.80	11.99f	35.49s	4.81	10.8	20.9
7' 0	7355	28.08	12.03f	35.49s	4.93	10.3	20.9
7' 3	7690	29.37	12.07f	35.49s	5.06	9.8	20.9
7' 6	8025	30.65	12.11f	35.49s	5.19	9.4	20.9
7'9	8360	31.93	12.15f	35.49s	5.32	9.0	20.9
8' 0	8696	33.21	12.18f	35.50s	5.44	8.7	20.9
8' 3	9031	34.49	12.21f	35.50s	5.57	8.4	20.9
8' 6	9366	35.77	12.24f	35.50s	5.69	8.1	20.9
8' 9	9701	37.05	12.27f	35.50s	5.82	7.8	20.9
9'0	10037	38.33	12.29f	35.50s	5.95	7.5	20.9
9' 3	10372	39.61	12.31f	35.50s	6.07	7.3	20.9
9' 6	10407	39.74	12.32f	35.50s	6.09		

Soundings in feet & inches.---Other distances in FEET.------WB1S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

# 07/24/14 10:01:37 Dynamic Marine, Inc. GHS 10.50A DMI SUPER 215 TANK CAPACITY DATA

#### TANK CHARACTERISTICS No Trim, No Heel

Tank: WB2P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	37	0.14	0.96f	26.04p	0.85	3.7	6.1
0'6	105	0.40	1.56f	26.46p	1.02	5.9	10.6
0'9	207	0.79	2.18f	26.64p	1.19	8.2	15.7
1' 0	344	1.31	2.80f	26.74p	1.35	10.5	19.5
1' 3	515	1.97	3.43f	26.80p	1.52	12.8	23.9
1' 6	721	2.76	4.05f	26.84p	1.69	15.2	28.3
1' 9	963	3.68	4.68f	26.88p	1.85	17.6	32.6
2' 0	1239	4.73	5.31f	26.90p	2.02	19.5	37.0
2'3	1549	5.92	5.94f	26.92p	2.19	22.4	41.8
2' 6	2014	7.69	7.50f	26.94p	2.40	53.6	60.9
2' 9	2493	9.52	8.56f	26.95p	2.58	43.3	60.9
3' 0	2972	11.35	9.27f	26.96p	2.75	36.3	60.9
3 ' 3	3450	13.18	9.79f	26.96p	2.90	31.3	60.9
3' 6	3929	15.00	10.18f	26.97p	3.05	27.5	60.9
3 ' 9	4408	16.83	10.49f	26.97p	3.19	24.5	60.9
4' 0	4887	18.66	10.73f	26.97p	3.33	22.1	60.9
4'3	5366	20.49	10.94f	26.98p	3.46	20.1	60.9
4'6	5845	22.32	11.11f	26.98p	3.60	18.5	60.9
4' 9	6324	24.15	11.25f	26.98p	3.73	17.1	60.9
5' 0	6803	25.98	11.37f	26.98p	3.86	15.9	60.9
5'3	7282	27.81	11.48f	26.98p	3.99	14.8	60.9
5' 6	7760	29.63	11.57f	26.98p	4.12	13.9	60.9
5' 9	8239	31.46	11.66f	26.99p	4.25	13.1	60.9
6' 0	8718	33.29	11.73f	26.99p	4.38	12.4	60.9
6' 3	9197	35.12	11.80f	26.99p	4.51	11.7	60.9
6' 6	9676	36.95	11.86f	26.99p	4.64	11.2	60.9
6' 9	10155	38.78	11.91f	26.99p	4.76	10.6	60.9
7' 0	10634	40.61	11.96f	26.99p	4.89	10.1	60.9
7' 3	11113	42.44	12.00f	26.99p	5.02	9.7	60.9
7' 6	11592	44.26	12.05f	26.99p	5.15	9.3	60.9
7' 9	12070	46.09	12.08f	26.99p	5.27	8.9	60.9
8' 0	12549	47.92	12.12f	26.99p	5.40	8.6	60.9
8 ' 3	13028	49.75	12.15f	26.99p	5.53	8.3	60.9
8' 6	13507	51.58	12.18f	26.99p	5.65	8.0	60.9
8' 9	13986	53.41	12.21f	26.99p	5.78	7.7	60.9
9' 0	14465	55.24	12.23f	26.99p	5.91	7.5	60.9
9'3	14944	57.07	12.26f	26.99p	6.03	7.2	60.9
9'6	14994	57.26	12.26f	26.99p	6.05	, • <u>-</u>	30.3
		inchesOf					

WB2P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WB2S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	6	0.02	0.47f	24.76s	0.69	2.1	1.7
0'6	42	0.16	1.02f	26.10s	0.86	3.9	6.5
0'9	113	0.43	1.62f	26.48s	1.03	6.1	11.0
1' 0	219	0.84	2.24f	26.65s	1.20	8.4	15.5
1' 3	359	1.37	2.87f	26.74s	1.37	10.7	20.0
1' 6	534	2.04	3.49f	26.81s	1.54	13.1	24.4
1' 9	744	2.84	4.12f	26.85s	1.70	15.4	28.9
2' 0	989	3.78	4.74f	26.88s	1.87	17.9	33.4
2 ' 3	1268	4.84	5.37f	26.90s	2.04	20.4	37.8
2' 6	1583	6.04	6.01f	26.92s	2.20	68.2	60.9
2 ' 9	2062	7.87	7.63f	26.94s	2.42	52.3	60.9
3' 0	2541	9.70	8.64f	26.95s	2.60	42.5	60.9
3 ' 3	3019	11.53	9.33f	26.96s	2.76	35.7	60.9
3 ' 6	3498	13.36	9.84f	26.96s	2.91	30.8	60.9
3 ' 9	3977	15.19	10.22f	26.97s	3.06	27.1	60.9
4' 0	4456	17.02	10.52f	26.97s	3.20	24.2	60.9
4'3	4935	18.85	10.76f	26.98s	3.34	21.9	60.9
4' 6	5414	20.67	10.96f	26.98s	3.48	19.9	60.9
4' 9	5893	22.50	11.12f	26.98s	3.61	18.3	60.9
5' 0	6372	24.33	11.26f	26.98s	3.74	16.9	60.9
5'3	6851	26.16	11.38f	26.98s	3.87	15.8	60.9
5' 6	7329	27.99	11.49f	26.98s	4.00	14.7	60.9
5' 9	7808	29.82	11.58f	26.98s	4.13	13.8	60.9
6' 0	8287	31.65	11.66f	26.99s	4.26	13.0	60.9
6' 3	8766	33.48	11.74f	26.99s	4.39	12.3	60.9
6' 6	9245	35.30	11.80f	26.99s	4.52	11.7	60.9
6' 9	9724	37.13	11.86f	26.99s	4.65	11.1	60.9
7' 0	10203	38.96	11.92f	26.99s	4.78	10.6	60.9
7' 3	10682	40.79	11.96f	26.99s	4.91	10.1	60.9
7' 6	11161	42.62	12.01f	26.99s	5.03	9.7	60.9
7' 9	11639	44.45	12.05f	26.99s	5.16	9.3	60.9
8' 0	12118	46.28	12.09f	26.99s	5.29	8.9	60.9
8' 3	12597	48.10	12.12f	26.99s	5.41	8.6	60.9
8' 6	13076	49.93	12.15f	26.99s	5.54	8.3	60.9
8' 9	13555	51.76	12.18f	26.99s	5.67	8.0	60.9
9'0	14034	53.59	12.21f	26.99s	5.79	7.7	60.9
9 ' 3	14513	55.42	12.24f	26.99s	5.92	7.4	60.9
9'6	14992	57.25	12.26f	26.99s	6.05	7.2	60.9

Soundings in feet & inches.---Other distances in FEET.------WB2S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

Tank: MPLP.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	324	1.24	10.00f	3.67p	0.17	682.7	99.9
0'6	1297	4.95	10.00f	7.33p	0.33	341.3	798.9
0'9	2594	9.90	10.00f	9.17p	0.48	170.7	798.9
1' 0	3890	14.86	10.00f	9.78p	0.61	113.8	798.9
1' 3	5187	19.81	10.00f	10.08p	0.74	85.3	798.9
1' 6	6484	24.76	10.00f	10.27p	0.87	68.3	798.9
1' 9	7781	29.71	10.00f	10.39p	0.99	56.9	798.9
2' 0	9078	34.67	10.00f	10.48p	1.12	48.8	798.9
2'3	10375	39.62	10.00f	10.54p	1.24	42.7	798.9
2' 6	11671	44.57	10.00f	10.59p	1.37	37.9	798.9
2' 9	12968	49.52	10.00f	10.63p	1.50	34.1	798.9
3' 0	14265	54.47	10.00f	10.67p	1.62	31.0	798.9
3'3	15562	59.43	10.00f	10.69p	1.75	28.4	798.9
3' 6	16859	64.38	10.00f	10.72p	1.87	26.3	798.9
3 ' 9	18156	69.33	10.00f	10.74p	2.00	24.4	798.9
4' 0	19452	74.28	10.00f	10.76p	2.12	22.8	798.9
4'3	20749	79.23	10.00f	10.77p	2.25	21.3	798.9
4'6	22046	84.19	10.00f	10.78p	2.37	20.1	798.9
4' 9	23343	89.14	10.00f	10.80p	2.50	19.0	798.9
5' 0	24640	94.09	10.00f	10.81p	2.62	18.0	798.9
5 ' 3	25936	99.04	10.00f	10.82p	2.75	17.1	798.9
5' 6	27233	104.00	10.00f	10.83p	2.87	16.3	798.9
5 ' 9	28530	108.95	10.00f	10.83p	3.00	15.5	798.9
6' 0	29827	113.90	10.00f	10.84p	3.12	14.8	798.9
6' 3	31124	118.85	10.00f	10.85p	3.25	14.2	798.9
6' 6	32421	123.80	10.00f	10.85p	3.37	13.7	798.9
6' 9	33717	128.76	10.00f	10.86p	3.50	13.1	798.9
7' 0	35014	133.71	10.00f	10.86p	3.62	12.6	798.9
7' 3	36311	138.66	10.00f	10.87p	3.75	12.2	798.9
7' 6	37608	143.61	10.00f	10.87p	3.87	11.8	798.9
7' 9 8' 0	38905	148.56	10.00f	10.88p	4.00	11.4	798.9
8' 0	40202	153.52	10.00f	10.88p	4.12	11.0	798.9
	41498	158.47	10.00f	10.89p	4.25	10.7	798.9
	42795	163.42	10.00f	10.89p	4.37	10.3	798.9
8' 9 9' 0	44092 45389	168.37 173.33	10.00f 10.00f	10.89p 10.90p	4.50	10.0 9.8	798.9
9'3	45389	178.28	10.001 10.00f	10.90p 10.90p	4.62 4.75	9.8 9.5	798.9 798.9
9' 6	47982	183.23	10.001 10.00f	10.90p 10.90p	4.75	9.3	798.9
9' 9	49279	188.18	10.001 10.00f	10.90p 10.90p	5.00	9.2	798.9
10' 0	50576	193.13	10.001 10.00f	10.90p 10.91p	5.12	8.8	798.9
TO 0	20276	193.13	TO.001	TO.2TD	J. 14	0.0	1000

Soundings in feet & inches.---Other distances in FEET.-----MPLP.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

# 07/24/14 10:01:37 Dynamic Marine, Inc. GHS 10.50A DMI SUPER 215 TANK CAPACITY DATA

#### TANK CHARACTERISTICS No Trim, No Heel

Tank: MPLS.S, Contents: SALT WATER at 1.025 Specific Gravity

		Volume	Weight	Cent	er of Gr	avity		FSM
Snd	ling	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'	3	324	1.24	10.00f	3.67s	0.17	682.7	99.9
0'	6	1297	4.95	10.00f	7.33s	0.33	341.3	798.9
0'	9	2594	9.90	10.00f	9.17s	0.48	170.7	798.9
1'	0	3890	14.86	10.00f	9.78s	0.61	113.8	798.9
1'	3	5187	19.81	10.00f	10.08s	0.74	85.3	798.9
1'	6	6484	24.76	10.00f	10.27s	0.87	68.3	798.9
1'	9	7781	29.71	10.00f	10.39s	0.99	56.9	798.9
2 '	0	9078	34.67	10.00f	10.48s	1.12	48.8	798.9
2 '	3	10375	39.62	10.00f	10.54s	1.24	42.7	798.9
2 '	6	11671	44.57	10.00f	10.59s	1.37	37.9	798.9
2 '	9	12968	49.52	10.00f	10.63s	1.50	34.1	798.9
3 '	0	14265	54.47	10.00f	10.67s	1.62	31.0	798.9
3 '	3	15562	59.43	10.00f	10.69s	1.75	28.4	798.9
3 '	6	16859	64.38	10.00f	10.72s	1.87	26.3	798.9
3 '	9	18156	69.33	10.00f	10.74s	2.00	24.4	798.9
4 '	0	19452	74.28	10.00f	10.76s	2.12	22.8	798.9
4 '	3	20749	79.23	10.00f	10.77s	2.25	21.3	798.9
4 '	6	22046	84.19	10.00f	10.78s	2.37	20.1	798.9
4 '	9	23343	89.14	10.00f	10.80s	2.50	19.0	798.9
5 '	0	24640	94.09	10.00f	10.81s	2.62	18.0	798.9
5'	3	25936	99.04	10.00f	10.82s	2.75	17.1	798.9
5'	6	27233	104.00	10.00f	10.83s	2.87	16.3	798.9
5'	9	28530	108.95	10.00f	10.83s	3.00	15.5	798.9
6'	0	29827	113.90	10.00f	10.84s	3.12	14.8	798.9
6 '	3	31124	118.85	10.00f	10.85s	3.25	14.2	798.9
6'	6	32421	123.80	10.00f	10.85s	3.37	13.7	798.9
6'	9	33717	128.76	10.00f	10.86s	3.50	13.1	798.9
7'	0	35014	133.71	10.00f	10.86s	3.62	12.6	798.9
7'	3	36311	138.66	10.00f	10.87s	3.75	12.2	798.9
7'	6	37608	143.61	10.00f	10.87s	3.87	11.8	798.9
7'	9	38905	148.56	10.00f	10.88s	4.00	11.4	798.9
8 '	0	40202	153.52	10.00f	10.88s	4.12	11.0	798.9
8'	3	41498	158.47	10.00f	10.89s	4.25	10.7	798.9
8'	6	42795	163.42	10.00f	10.89s	4.37	10.3	798.9
8 '	9	44092	168.37	10.00f	10.89s	4.50	10.0	798.9
9 '	0	45389	173.33	10.00f	10.90s	4.62	9.8	798.9
9 '	3	46686	178.28	10.00f	10.90s	4.75	9.5	798.9
9 '	6	47982	183.23	10.00f	10.90s	4.87	9.2	798.9
9 '	9	49279	188.18	10.00f	10.90s	5.00	9.0	798.9
10'	0	50576	193.13	10.00f	10.91s	5.12	8.8	798.9

Soundings in feet & inches.---Other distances in FEET.------MPLS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

Tank: PWS.S, Contents: FRESH WATER at 1.000 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	101	0.38	11.00a	11.00s	0.33	66.7	30.5
0'6	360	1.34	11.00a	13.45s	0.49	25.0	72.2
0'9	631	2.35	11.00a	13.97s	0.62	14.3	72.2
1' 0	901	3.36	11.00a	14.18s	0.74	10.0	72.2
1' 3	1171	4.36	11.00a	14.29s	0.87	7.7	72.2
1' 6	1441	5.37	11.00a	14.36s	1.00	6.2	72.2
1' 9	1711	6.38	11.00a	14.41s	1.12	5.3	72.2
2' 0	1981	7.38	11.00a	14.44s	1.25	4.5	72.2
2' 3	2252	8.39	11.00a	14.47s	1.37	4.0	72.2
2' 6	2522	9.40	11.00a	14.49s	1.50	3.6	72.2
2' 9	2792	10.40	11.00a	14.51s	1.62	3.2	72.2
3' 0	3062	11.41	11.00a	14.52s	1.75	2.9	72.2
3 ' 3	3332	12.41	11.00a	14.53s	1.87	2.7	72.2
3' 6	3603	13.42	11.00a	14.54s	2.00	2.5	72.2
3 ' 9	3873	14.43	11.00a	14.55s	2.12	2.3	72.2
4' 0	4143	15.43	11.00a	14.56s	2.25	2.2	72.2
4' 3	4413	16.44	11.00a	14.57s	2.37	2.0	72.2
4' 6	4683	17.45	11.00a	14.57s	2.50	1.9	72.2
4' 9	4953	18.45	11.00a	14.58s	2.62	1.8	72.2
5' 0	5224	19.46	11.00a	14.58s	2.75	1.7	72.2
5' 3	5494	20.47	11.00a	14.59s	2.87	1.6	72.2
5' 6	5764	21.47	11.00a	14.59s	3.00	1.6	72.2
5' 9	6034	22.48	11.00a	14.59s	3.12	1.5	72.2
6' 0	6304	23.49	11.00a	14.60s	3.25	1.4	72.2
6'3	6575	24.49	11.00a	14.60s	3.37	1.4	72.2
6' 6	6845	25.50	11.00a	14.60s	3.50	1.3	72.2
6' 9	7115	26.51	11.00a	14.60s	3.62	1.3	72.2
7' 0	7385	27.51	11.00a	14.61s	3.75	1.2	72.2
7'3	7655	28.52	11.00a	14.61s	3.87	1.2	72.2
7' 6	7925	29.53	11.00a	14.61s	4.00	1.1	72.2
7' 9	8196	30.53	11.00a	14.61s	4.12	1.1	72.2
8' 0	8466	31.54	11.00a	14.61s	4.25	1.1	72.2
8' 3	8736	32.55	11.00a	14.62s	4.37	1.0	72.2
8' 6	9006	33.55	11.00a	14.62s	4.50	1.0	72.2
8' 9	9276	34.56	11.00a	14.62s	4.62	1.0	72.2
9' 0	9546	35.57	11.00a	14.62s	4.75	0.9	72.2
9' 3	9817	36.57	11.00a	14.62s	4.87	0.9	72.2
9'6	10087	37.58	11.00a	14.62s	5.00	0.9	72.2
9	10357	38.59	11.00a	14.62s	5.12	0.9	72.2
9'10.1	10448	38.92	11.00a	14.62s	5.17		

Soundings in feet & inches.---Other distances in FEET.------PWS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

Tank: PWP.P, Contents: FRESH WATER at 1.000 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	101	0.38	11.00a	11.00p	0.33	66.7	30.5
0'6	360	1.34	11.00a	13.45p	0.49	25.0	72.2
0'9	631	2.35	11.00a	13.97p	0.62	14.3	72.2
1' 0	901	3.36	11.00a	14.18p	0.74	10.0	72.2
1' 3	1171	4.36	11.00a	14.29p	0.87	7.7	72.2
1' 6	1441	5.37	11.00a	14.36p	1.00	6.2	72.2
1'9	1711	6.38	11.00a	14.41p	1.12	5.3	72.2
2' 0	1981	7.38	11.00a	14.44p	1.25	4.5	72.2
2 ' 3	2252	8.39	11.00a	14.47p	1.37	4.0	72.2
2'6	2522	9.40	11.00a	14.49p	1.50	3.6	72.2
2 ' 9	2792	10.40	11.00a	14.51p	1.62	3.2	72.2
3' 0	3062	11.41	11.00a	14.52p	1.75	2.9	72.2
3 ' 3	3332	12.41	11.00a	14.53p	1.87	2.7	72.2
3 ' 6	3603	13.42	11.00a	14.54p	2.00	2.5	72.2
3 ' 9	3873	14.43	11.00a	14.55p	2.12	2.3	72.2
4' 0	4143	15.43	11.00a	14.56p	2.25	2.2	72.2
4 ' 3	4413	16.44	11.00a	14.57p	2.37	2.0	72.2
4'6	4683	17.45	11.00a	14.57p	2.50	1.9	72.2
4' 9	4953	18.45	11.00a	14.58p	2.62	1.8	72.2
5' 0	5224	19.46	11.00a	14.58p	2.75	1.7	72.2
5 ' 3	5494	20.47	11.00a	14.59p	2.87	1.6	72.2
5' 6	5764	21.47	11.00a	14.59p	3.00	1.6	72.2
5' 9	6034	22.48	11.00a	14.59p	3.12	1.5	72.2
6' 0	6304	23.49	11.00a	14.60p	3.25	1.4	72.2
6'3	6575	24.49	11.00a	14.60p	3.37	1.4	72.2
6' 6	6845	25.50	11.00a	14.60p	3.50	1.3	72.2
6' 9	7115	26.51	11.00a	14.60p	3.62	1.3	72.2
7' 0	7385	27.51	11.00a	14.61p	3.75	1.2	72.2
7' 3	7655	28.52	11.00a	14.61p	3.87	1.2	72.2
7' 6	7925	29.53	11.00a	14.61p	4.00	1.1	72.2
7' 9	8196	30.53	11.00a	14.61p	4.12	1.1	72.2
8' 0	8466	31.54	11.00a	14.61p	4.25	1.1	72.2
8 ' 3	8736	32.55	11.00a	14.62p	4.37	1.0	72.2
8' 6	9006	33.55	11.00a	14.62p	4.50	1.0	72.2
8' 9	9276	34.56	11.00a	14.62p	4.62	1.0	72.2
9' 0	9546	35.57	11.00a	14.62p	4.75	0.9	72.2
9' 3	9817	36.57	11.00a	14.62p	4.87	0.9	72.2
9'6	10087	37.58	11.00a	14.62p	5.00	0.9	72.2
9' 9	10357	38.59	11.00a	14.62p	5.12	0.9	72.2
9'10.1	10448	38.92	11.00a	14.62p	5.17		

Soundings in feet & inches.---Other distances in FEET.------PWP.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

Tank: WB3P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Grand	avity VCG	GML	FSM Ft-LT
0'3	192	0.73	11.00a	34.95p	0.88	238.7	17.7
0'6	475	1.82	11.00a	35.28p	1.01	96.3	17.7
0'9	759	2.90	11.00a	35.36p	1.14	60.3	17.7
1' 0	1043	3.98	11.00a	35.40p	1.26	43.9	17.7
1' 3	1326	5.07	11.00a	35.42p	1.39	34.5	17.7
1' 6	1610	6.15	11.00a	35.43p	1.51	28.4	17.7
1' 9	1894	7.23	11.00a	35.44p	1.64	24.2	17.7
2' 0	2178	8.32	11.00a	35.45p	1.76	21.0	17.7
2' 3	2461	9.40	11.00a	35.46p	1.89	18.6	17.7
2' 6	2745	10.48	11.00a	35.46p	2.02	16.7	17.7
2 ' 9	3029	11.57	11.00a	35.47p	2.14	15.1	17.7
3' 0	3312	12.65	11.00a	35.47p	2.27	13.8	17.7
3 ' 3	3596	13.73	11.00a	35.47p	2.39	12.7	17.7
3 ' 6	3880	14.81	11.00a	35.47p	2.52	11.8	17.7
3 ' 9	4163	15.90	11.00a	35.47p	2.64	11.0	17.7
4' 0	4447	16.98	11.00a	35.48p	2.77	10.3	17.7
4'3	4731	18.06	11.00a	35.48p	2.89	9.7	17.7
4' 6	5014	19.15	11.00a	35.48p	3.02	9.1	17.7
4' 9	5298	20.23	11.00a	35.48p	3.14	8.6	17.7
5' 0	5582	21.31	11.00a	35.48p	3.27	8.2	17.7
5 ' 3	5865	22.40	11.00a	35.48p	3.39	7.8	17.7
5' 6	6149	23.48	11.00a	35.48p	3.52	7.4	17.7
5' 9	6433	24.56	11.00a	35.48p	3.64	7.1	17.7
6' 0	6716	25.65	11.00a	35.48p	3.77	6.8	17.7
6' 3	7000	26.73	11.00a	35.48p	3.89	6.5	17.7
6' 6	7284	27.81	11.00a	35.49p	4.02	6.3	17.7
6' 9	7567	28.90	11.00a	35.49p	4.14	6.0	17.7
7' 0	7851	29.98	11.00a	35.49p	4.27	5.8	17.7
7' 3	8135	31.06	11.00a	35.49p	4.39	5.6	17.7
7' 6	8418	32.15	11.00a	35.49p	4.52	5.4	17.7
7' 9	8702	33.23	11.00a	35.49p	4.64	5.3	17.7
8' 0	8986	34.31	11.00a	35.49p	4.77	5.1	17.7
8' 3	9270	35.40	11.00a	35.49p	4.89	4.9	17.7
8' 6	9553	36.48	11.00a	35.49p	5.02	4.8	17.7
8' 9	9837	37.56	11.00a	35.49p	5.14	4.7	17.7
9'0	10121	38.65	11.00a	35.49p	5.27	4.5	17.7
9'3	10404	39.73	11.00a	35.49p	5.39	4.4	17.7
9' 3.4	10434	39.84	11.00a	35.49p	5.40		

Soundings in feet & inches.---Other distances in FEET.------WB3P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WB3S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	192	0.73	11.00a	34.95s	0.88	238.7	17.7
0'6	475	1.82	11.00a	35.28s	1.01	96.3	17.7
0'9	759	2.90	11.00a	35.36s	1.14	60.3	17.7
1' 0	1043	3.98	11.00a	35.40s	1.26	43.9	17.7
1' 3	1326	5.07	11.00a	35.42s	1.39	34.5	17.7
1' 6	1610	6.15	11.00a	35.43s	1.51	28.4	17.7
1' 9	1894	7.23	11.00a	35.44s	1.64	24.2	17.7
2' 0	2178	8.32	11.00a	35.45s	1.76	21.0	17.7
2' 3	2461	9.40	11.00a	35.46s	1.89	18.6	17.7
2' 6	2745	10.48	11.00a	35.46s	2.02	16.7	17.7
2' 9	3029	11.57	11.00a	35.47s	2.14	15.1	17.7
3' 0	3312	12.65	11.00a	35.47s	2.27	13.8	17.7
3 ' 3	3596	13.73	11.00a	35.47s	2.39	12.7	17.7
3 ' 6	3880	14.81	11.00a	35.47s	2.52	11.8	17.7
3 ' 9	4163	15.90	11.00a	35.47s	2.64	11.0	17.7
4' 0	4447	16.98	11.00a	35.48s	2.77	10.3	17.7
4'3	4731	18.06	11.00a	35.48s	2.89	9.7	17.7
4' 6	5014	19.15	11.00a	35.48s	3.02	9.1	17.7
4' 9	5298	20.23	11.00a	35.48s	3.14	8.6	17.7
5' 0	5582	21.31	11.00a	35.48s	3.27	8.2	17.7
5' 3	5865	22.40	11.00a	35.48s	3.39	7.8	17.7
5' 6	6149	23.48	11.00a	35.48s	3.52	7.4	17.7
5' 9	6433	24.56	11.00a	35.48s	3.64	7.1	17.7
6' 0	6716	25.65	11.00a	35.48s	3.77	6.8	17.7
6' 3	7000	26.73	11.00a	35.48s	3.89	6.5	17.7
6' 6	7284	27.81	11.00a	35.49s	4.02	6.3	17.7
6' 9	7567	28.90	11.00a	35.49s	4.14	6.0	17.7
7' 0	7851	29.98	11.00a	35.49s	4.27	5.8	17.7
7' 3	8135	31.06	11.00a	35.49s	4.39	5.6	17.7
7' 6	8418	32.15	11.00a	35.49s	4.52	5.4	17.7
7' 9	8702	33.23	11.00a	35.49s	4.64	5.3	17.7
8' 0	8986	34.31	11.00a	35.49s	4.77	5.1	17.7
8' 3	9270	35.40	11.00a	35.49s	4.89	4.9	17.7
8' 6	9553	36.48	11.00a	35.49s	5.02	4.8	17.7
8' 9	9837	37.56	11.00a	35.49s	5.14	4.7	17.7
9'0	10121	38.65	11.00a	35.49s	5.27	4.5	17.7
9'3	10404	39.73	11.00a	35.49s	5.39	4.4	17.7
9' 3.4	10434	39.84	11.00a	35.49s	5.40		

Soundings in feet & inches.---Other distances in FEET.------WB3S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WB4P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Grand	avity VCG	GML	FSM Ft-LT
0'3	161	0.62	8.00a	25.63p	0.67	155.7	37.5
0'6	456	1.74	8.00a	26.51p	0.80	55.1	37.5
0'9	751	2.87	8.00a	26.70p	0.93	33.5	37.5
1' 0	1046	3.99	8.00a	26.79p	1.05	24.1	37.5
1' 3	1340	5.12	8.00a	26.83p	1.18	18.8	37.5
1' 6	1635	6.24	8.00a	26.86p	1.30	15.4	37.5
1' 9	1930	7.37	8.00a	26.89p	1.43	13.0	37.5
2' 0	2224	8.49	8.00a	26.90p	1.56	11.3	37.5
2' 3	2519	9.62	8.00a	26.91p	1.68	10.0	37.5
2' 6	2814	10.75	8.00a	26.92p	1.81	8.9	37.5
2' 9	3109	11.87	8.00a	26.93p	1.93	8.1	37.5
3' 0	3403	13.00	8.00a	26.94p	2.06	7.4	37.5
3' 3	3698	14.12	8.00a	26.94p	2.18	6.8	37.5
3' 6	3993	15.25	8.00a	26.94p	2.31	6.3	37.5
3 ' 9	4287	16.37	8.00a	26.95p	2.43	5.9	37.5
4' 0	4582	17.50	8.00a	26.95p	2.56	5.5	37.5
4' 3	4877	18.62	8.00a	26.95p	2.68	5.2	37.5
4' 6	5171	19.75	8.00a	26.96p	2.81	4.9	37.5
4' 9	5466	20.87	8.00a	26.96p	2.93	4.6	37.5
5' 0	5761	22.00	8.00a	26.96p	3.06	4.4	37.5
5'3	6056	23.12	8.00a	26.96p	3.18	4.2	37.5
5' 6	6350	24.25	8.00a	26.97p	3.31	4.0	37.5
5' 9	6645	25.37	8.00a	26.97p	3.43	3.8	37.5
6' 0	6940	26.50	8.00a	26.97p	3.56	3.6	37.5
6' 3	7234	27.63	8.00a	26.97p	3.68	3.5	37.5
6' 6	7529	28.75	8.00a	26.97p	3.81	3.3	37.5
6' 9	7824	29.88	8.00a	26.97p	3.93	3.2	37.5
7' 0	8118	31.00	8.00a	26.97p	4.06	3.1	37.5
7'3	8413	32.13	8.00a	26.97p	4.18	3.0	37.5
7' 6	8708	33.25	8.00a	26.98p	4.31	2.9	37.5
7' 9	9003	34.38	8.00a	26.98p	4.43	2.8	37.5
8' 0	9297	35.50	8.00a	26.98p	4.56	2.7	37.5
8' 3	9592	36.63	8.00a	26.98p	4.68	2.6	37.5
8' 6	9887	37.75	8.00a	26.98p	4.81	2.5	37.5
8' 9	10181	38.88	8.00a	26.98p	4.93	2.5	37.5
9' 0	10476	40.00	8.00a	26.98p	5.06	2.4	37.5
9' 3	10771	41.13	8.00a	26.98p	5.18	2.3	37.5
9'6	11065	42.26	8.00a	26.98p	5.31	2.3	37.5

Soundings in feet & inches.---Other distances in FEET.------WB4P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

Tank: WB4S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	161	0.62	8.00a	25.63s	0.67	155.7	37.5
0'6	456	1.74	8.00a	26.51s	0.80	55.1	37.5
0'9	751	2.87	8.00a	26.70s	0.93	33.5	37.5
1' 0	1046	3.99	8.00a	26.79s	1.05	24.1	37.5
1' 3	1340	5.12	8.00a	26.83s	1.18	18.8	37.5
1' 6	1635	6.24	8.00a	26.86s	1.30	15.4	37.5
1' 9	1930	7.37	8.00a	26.89s	1.43	13.0	37.5
2' 0	2224	8.49	8.00a	26.90s	1.56	11.3	37.5
2' 3	2519	9.62	8.00a	26.91s	1.68	10.0	37.5
2' 6	2814	10.75	8.00a	26.92s	1.81	8.9	37.5
2' 9	3109	11.87	8.00a	26.93s	1.93	8.1	37.5
3' 0	3403	13.00	8.00a	26.94s	2.06	7.4	37.5
3 ' 3	3698	14.12	8.00a	26.94s	2.18	6.8	37.5
3 ' 6	3993	15.25	8.00a	26.94s	2.31	6.3	37.5
3 ' 9	4287	16.37	8.00a	26.95s	2.43	5.9	37.5
4' 0	4582	17.50	8.00a	26.95s	2.56	5.5	37.5
4' 3	4877	18.62	8.00a	26.95s	2.68	5.2	37.5
4'6	5171	19.75	8.00a	26.96s	2.81	4.9	37.5
4' 9	5466	20.87	8.00a	26.96s	2.93	4.6	37.5
5' 0	5761	22.00	8.00a	26.96s	3.06	4.4	37.5
5'3	6056	23.12	8.00a	26.96s	3.18	4.2	37.5
5' 6	6350	24.25	8.00a	26.97s	3.31	4.0	37.5
5' 9	6645	25.37	8.00a	26.97s	3.43	3.8	37.5
6' 0	6940	26.50	8.00a	26.97s	3.56	3.6	37.5
6' 3	7234	27.63	8.00a	26.97s	3.68	3.5	37.5
6' 6 6' 9	7529	28.75	8.00a	26.97s	3.81	3.3	37.5
6' 9 7' 0	7824 8118	29.88 31.00	8.00a 8.00a	26.97s 26.97s	3.93 4.06	3.2 3.1	37.5 37.5
7 3	8413	32.13	8.00a	26.97s	4.18	3.0	37.5
7' 6	8708	33.25	8.00a	26.97s 26.98s	4.10	2.9	37.5
7 0 7' 9	9003	34.38	8.00a	26.98s	4.43	2.8	37.5
8' 0	9297	35.50	8.00a	26.98s	4.56	2.7	37.5
8'3	9592	36.63	8.00a	26.98s	4.68	2.6	37.5
8' 6	9887	37.75	8.00a	26.98s	4.81	2.5	37.5
8' 9	10181	38.88	8.00a	26.98s	4.93	2.5	37.5
9' 0	10476	40.00	8.00a	26.98s	5.06	2.4	37.5
9'3	10771	41.13	8.00a	26.98s	5.18	2.3	37.5
9' 6	11065	42.26	8.00a	26.98s	5.31	2.3	37.5

Soundings in feet & inches.---Other distances in FEET.------WB4S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

Tank: WB5P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	171	0.65	31.84a	34.94p	0.89	200.7	16.1
0'6	429	1.64	31.93a	35.28p	1.01	80.1	16.1
0'9	687	2.62	31.96a	35.36p	1.14	50.0	16.1
1' 0	945	3.61	31.97a	35.40p	1.27	36.4	16.1
1' 3	1203	4.59	31.98a	35.42p	1.39	28.6	16.1
1' 6	1461	5.58	31.98a	35.43p	1.52	23.5	16.1
1' 9	1719	6.56	31.98a	35.44p	1.64	20.0	16.1
2' 0	1977	7.55	31.99a	35.45p	1.77	17.4	16.1
2' 3	2234	8.53	31.99a	35.46p	1.89	15.4	16.1
2' 6	2492	9.52	31.99a	35.46p	2.02	13.8	16.1
2' 9	2750	10.50	31.99a	35.47p	2.14	12.5	16.1
3' 0	3008	11.49	31.99a	35.47p	2.27	11.4	16.1
3 ' 3	3266	12.47	31.99a	35.47p	2.39	10.5	16.1
3 ' 6	3524	13.46	31.99a	35.47p	2.52	9.8	16.1
3 ' 9	3782	14.44	31.99a	35.47p	2.64	9.1	16.1
4' 0	4040	15.43	31.99a	35.48p	2.77	8.5	16.1
4'3	4298	16.41	31.99a	35.48p	2.89	8.0	16.1
4' 6	4555	17.40	31.99a	35.48p	3.02	7.5	16.1
4' 9	4813	18.38	31.99a	35.48p	3.14	7.1	16.1
5' 0	5071	19.37	31.99a	35.48p	3.27	6.8	16.1
5'3	5329	20.35	31.99a	35.48p	3.39	6.5	16.1
5' 6	5587	21.34	32.00a	35.48p	3.52	6.2	16.1
5' 9	5845	22.32	32.00a	35.48p	3.64	5.9	16.1
6' 0	6103	23.30	32.00a	35.48p	3.77	5.6	16.1
6' 3	6361	24.29	32.00a	35.48p	3.89	5.4	16.1
6' 6	6619	25.27	32.00a	35.49p	4.02	5.2	16.1
6' 9	6876	26.26	32.00a	35.49p	4.14	5.0	16.1
7' 0	7134	27.24	32.00a	35.49p	4.27	4.8	16.1
7' 3	7392	28.23	32.00a	35.49p	4.39	4.7	16.1
7' 6	7650	29.21	32.00a	35.49p	4.52	4.5	16.1
7' 9	7908	30.20	32.00a	35.49p	4.64	4.3	16.1
8' 0	8166	31.18	32.00a	35.49p	4.77	4.2	16.1
8' 3	8424	32.17	32.00a	35.49p	4.89	4.1	16.1
8' 6	8682	33.15	32.00a	35.49p	5.02	4.0	16.1
8' 9	8940	34.14	32.00a	35.49p	5.14	3.8	16.1
9'0	9198	35.12	32.00a	35.49p	5.27	3.7	16.1
9'3	9455	36.11	32.00a	35.49p	5.39	3.6	16.1
9' 3.4	9482	36.21	32.00a	35.49p	5.40		

Soundings in feet & inches.---Other distances in FEET.------WB5P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WB5S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	171	0.65	31.84a	34.94s	0.89	200.7	16.1
0'6	429	1.64	31.93a	35.28s	1.01	80.1	16.1
0'9	687	2.62	31.96a	35.36s	1.14	50.0	16.1
1' 0	945	3.61	31.97a	35.40s	1.27	36.4	16.1
1' 3	1203	4.59	31.98a	35.42s	1.39	28.6	16.1
1' 6	1461	5.58	31.98a	35.43s	1.52	23.5	16.1
1' 9	1719	6.56	31.98a	35.44s	1.64	20.0	16.1
2' 0	1977	7.55	31.99a	35.45s	1.77	17.4	16.1
2' 3	2234	8.53	31.99a	35.46s	1.89	15.4	16.1
2' 6	2492	9.52	31.99a	35.46s	2.02	13.8	16.1
2' 9	2750	10.50	31.99a	35.47s	2.14	12.5	16.1
3' 0	3008	11.49	31.99a	35.47s	2.27	11.4	16.1
3 ' 3	3266	12.47	31.99a	35.47s	2.39	10.5	16.1
3 ' 6	3524	13.46	31.99a	35.47s	2.52	9.8	16.1
3 ' 9	3782	14.44	31.99a	35.47s	2.64	9.1	16.1
4' 0	4040	15.43	31.99a	35.48s	2.77	8.5	16.1
4'3	4298	16.41	31.99a	35.48s	2.89	8.0	16.1
4' 6	4555	17.40	31.99a	35.48s	3.02	7.5	16.1
4' 9	4813	18.38	31.99a	35.48s	3.14	7.1	16.1
5' 0	5071	19.37	31.99a	35.48s	3.27	6.8	16.1
5'3	5329	20.35	31.99a	35.48s	3.39	6.5	16.1
5' 6	5587	21.34	32.00a	35.48s	3.52	6.2	16.1
5' 9	5845	22.32	32.00a	35.48s	3.64	5.9	16.1
6' 0	6103	23.30	32.00a	35.48s	3.77	5.6	16.1
6' 3	6361	24.29	32.00a	35.48s	3.89	5.4	16.1
6' 6	6619	25.27	32.00a	35.49s	4.02	5.2	16.1
6' 9	6876	26.26	32.00a	35.49s	4.14	5.0	16.1
7' 0	7134	27.24	32.00a	35.49s	4.27	4.8	16.1
7' 3	7392	28.23	32.00a	35.49s	4.39	4.7	16.1
7' 6	7650	29.21	32.00a	35.49s	4.52	4.5	16.1
7' 9	7908	30.20	32.00a	35.49s	4.64	4.3	16.1
8' 0	8166	31.18	32.00a	35.49s	4.77	4.2	16.1
8' 3	8424	32.17	32.00a	35.49s	4.89	4.1	16.1
8' 6	8682	33.15	32.00a	35.49s	5.02	4.0	16.1
8' 9	8940	34.14	32.00a	35.49s	5.14	3.8	16.1
9' 0	9198	35.12	32.00a	35.49s	5.27	3.7	16.1
9'3	9455	36.11	32.00a	35.49s	5.39	3.6	16.1
9' 3.4	9482	36.21	32.00a	35.49s	5.40		

Soundings in feet & inches.---Other distances in FEET.------WB5S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.73

Tank: WOS.S, Contents: LUBE OIL at 0.924 Specific Gravity

	Volume	Weight	Cent	er of Gr	avity		FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	7	0.03	21.00a	23.00s	3.62	1.3	0.0
0'6	15	0.05	21.00a	23.00s	3.75	0.7	0.0
0'9	22	0.08	21.00a	23.00s	3.87	0.4	0.0
1' 0	29	0.10	21.00a	23.00s	4.00	0.3	0.0
1' 3	37	0.13	21.00a	23.00s	4.12	0.3	0.0
1' 6	44	0.15	21.00a	23.00s	4.25	0.2	0.0
1' 9	52	0.18	21.00a	23.00s	4.37	0.2	0.0
2' 0	59	0.20	21.00a	23.00s	4.50	0.2	0.0
2' 3	66	0.23	21.00a	23.00s	4.62	0.1	0.0
2' 6	74	0.25	21.00a	23.00s	4.75	0.1	0.0
2' 9	81	0.28	21.00a	23.00s	4.87	0.1	0.0
3' 0	88	0.30	21.00a	23.00s	5.00	0.1	0.0
3 ' 3	96	0.33	21.00a	23.00s	5.12	0.1	0.0
3' 6	103	0.36	21.00a	23.00s	5.25	0.1	0.0
3 ' 9	110	0.38	21.00a	23.00s	5.37	0.1	0.0
4' 0	118	0.41	21.00a	23.00s	5.50		

Soundings in feet & inches.---Other distances in FEET.------WOS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.50

Tank: LOS.S, Contents: LUBE OIL at 0.924 Specific Gravity

	Volume	Weight	Cent	er of Gr	avity		FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	7	0.03	23.00a	23.00s	3.62	1.3	0.0
0'6	15	0.05	23.00a	23.00s	3.75	0.7	0.0
0'9	22	0.08	23.00a	23.00s	3.87	0.4	0.0
1' 0	29	0.10	23.00a	23.00s	4.00	0.3	0.0
1' 3	37	0.13	23.00a	23.00s	4.12	0.3	0.0
1' 6	44	0.15	23.00a	23.00s	4.25	0.2	0.0
1' 9	52	0.18	23.00a	23.00s	4.37	0.2	0.0
2' 0	59	0.20	23.00a	23.00s	4.50	0.2	0.0
2'3	66	0.23	23.00a	23.00s	4.62	0.1	0.0
2' 6	74	0.25	23.00a	23.00s	4.75	0.1	0.0
2' 9	81	0.28	23.00a	23.00s	4.87	0.1	0.0
3' 0	88	0.30	23.00a	23.00s	5.00	0.1	0.0
3 ' 3	96	0.33	23.00a	23.00s	5.12	0.1	0.0
3' 6	103	0.36	23.00a	23.00s	5.25	0.1	0.0
3 ' 9	110	0.38	23.00a	23.00s	5.37	0.1	0.0
4' 0	118	0.41	23.00a	23.00s	5.50		

Soundings in feet & inches.---Other distances in FEET.------LOS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.50

Tank: WB6P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	258	0.99	28.79a	25.60p	0.67	413.7	60.4
0'6	737	2.81	28.93a	26.51p	0.80	146.4	60.9
0'9	1216	4.64	28.96a	26.70p	0.93	88.8	60.9
1' 0	1695	6.47	28.97a	26.79p	1.06	63.7	60.9
1' 3	2174	8.30	28.97a	26.83p	1.18	49.6	60.9
1' 6	2652	10.13	28.98a	26.86p	1.31	40.7	60.9
1' 9	3131	11.96	28.98a	26.89p	1.43	34.5	60.9
2' 0	3610	13.79	28.98a	26.90p	1.56	29.9	60.9
2 ' 3	4089	15.62	28.99a	26.91p	1.68	26.4	60.9
2' 6	4568	17.44	28.99a	26.92p	1.81	23.6	60.9
2' 9	5047	19.27	28.99a	26.93p	1.93	21.4	60.9
3' 0	5526	21.10	28.99a	26.94p	2.06	19.5	60.9
3 ' 3	6005	22.93	28.99a	26.94p	2.18	18.0	60.9
3 ' 6	6484	24.76	28.99a	26.94p	2.31	16.6	60.9
3 ' 9	6962	26.59	28.99a	26.95p	2.43	15.5	60.9
4' 0	7441	28.42	28.99a	26.95p	2.56	14.5	60.9
4'3	7920	30.25	28.99a	26.95p	2.68	13.6	60.9
4'6	8399	32.07	28.99a	26.96p	2.81	12.8	60.9
4' 9	8878	33.90	28.99a	26.96p	2.93	12.2	60.9
5' 0	9357	35.73	28.99a	26.96p	3.06	11.5	60.9
5'3	9836	37.56	28.99a	26.96p	3.18	11.0	60.9
5' 6	10315	39.39	28.99a	26.97p	3.31	10.5	60.9
5' 9	10646	40.65	28.87a	26.97p	3.40	3.4	42.2
6' 0	10978	41.92	28.75a	26.97p	3.49	3.3	42.2
6' 3	11309	43.19	28.64a	26.97p	3.58	3.2	42.2
6' 6	11641	44.45	28.54a	26.97p	3.67	3.1	42.2
6' 9	11972	45.72	28.44a	26.97p	3.77	3.0	42.2
7' 0	12304	46.99	28.35a	26.97p	3.86	2.9	42.2
7' 3	12636	48.25	28.26a	26.97p	3.96	2.8	42.2
7' 6	12967	49.52	28.18a	26.97p	4.06	2.8	42.2
7' 9	13299	50.78	28.10a	26.97p	4.16	2.7	42.2
8' 0	13630	52.05	28.02a	26.97p	4.27	2.6	42.2
8' 3	13962	53.32	27.95a	26.97p	4.37	2.6	42.2
8' 6	14293	54.58	27.88a	26.98p	4.47	2.5	42.2
8' 9	14625	55.85	27.82a	26.98p	4.58	2.4	42.2
9'0	14956	57.11	27.75a	26.98p	4.69	2.4	42.2
9 ' 3	15288	58.38	27.70a	26.98p	4.79	2.3	42.2
9' 6	15620	59.65	27.64a	26.98p	4.90	6.9	60.9

Soundings in feet & inches.---Other distances in FEET.------WB6P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

## 07/24/14 10:01:37 Dynamic Marine, Inc. GHS 10.50A DMI SUPER 215 TANK CAPACITY DATA

#### TANK CHARACTERISTICS No Trim, No Heel

Tank: WB6S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr	avity VCG	GML	FSM Ft-LT
0'3	258	0.99	28.79a	25.60s	0.67	413.7	60.4
0'6	737	2.81	28.93a	26.51s	0.80	146.4	60.9
0'9	1216	4.64	28.96a	26.70s	0.93	88.8	60.9
1' 0	1695	6.47	28.97a	26.79s	1.06	63.7	60.9
1' 3	2174	8.30	28.97a	26.83s	1.18	49.6	60.9
1' 6	2652	10.13	28.98a	26.86s	1.31	40.7	60.9
1' 9	3131	11.96	28.98a	26.89s	1.43	34.5	60.9
2' 0	3610	13.79	28.98a	26.90s	1.56	29.9	60.9
2' 3	4089	15.62	28.99a	26.91s	1.68	26.4	60.9
2' 6	4568	17.44	28.99a	26.92s	1.81	23.6	60.9
2 ' 9	5047	19.27	28.99a	26.93s	1.93	21.4	60.9
3' 0	5526	21.10	28.99a	26.94s	2.06	19.0	57.2
3 ' 3	5990	22.87	29.01a	26.95s	2.18	17.5	57.2
3 ' 6	6454	24.65	29.02a	26.96s	2.30	16.2	57.2
3 ' 9	6918	26.42	29.04a	26.97s	2.42	15.2	57.2
4' 0	7382	28.19	29.05a	26.98s	2.55	14.2	57.2
4'3	7847	29.96	29.06a	26.99s	2.67	13.4	57.2
4' 6	8311	31.74	29.07a	27.00s	2.79	12.6	57.2
4' 9	8775	33.51	29.08a	27.01s	2.92	11.9	57.2
5' 0	9239	35.28	29.08a	27.01s	3.04	11.3	57.2
5'3	9703	37.05	29.09a	27.02s	3.16	10.8	57.2
5' 6	10167	38.83	29.10a	27.02s	3.29	10.3	57.2
5' 9	10484	40.04	28.98a	27.03s	3.37	3.4	38.4
6' 0	10801	41.25	28.86a	27.03s	3.46	3.3	38.4
6' 3	11118	42.46	28.76a	27.04s	3.55	3.2	38.4
6' 6	11435	43.67	28.66a	27.04s	3.64	3.1	38.4
6' 9	11751	44.88	28.56a	27.05s	3.74	3.0	38.4
7' 0	12068	46.08	28.47a	27.05s	3.83	3.0	42.2
7' 3	12400	47.35	28.38a	27.05s	3.93	2.9	42.2
7' 6	12731	48.62	28.29a	27.05s	4.04	2.8	42.2
7' 9	13063	49.88	28.21a	27.05s	4.14	2.7	42.2
8' 0	13394	51.15	28.13a	27.04s	4.24	2.7	42.2
8' 3	13726	52.42	28.05a	27.04s	4.35	2.6	42.2
8' 6	14058	53.68	27.98a	27.04s	4.46	2.5	42.2
8' 9	14389	54.95	27.91a	27.04s	4.56	2.5	42.2
9'0	14721	56.21	27.85a	27.04s	4.67	2.4	42.2
9'3	15052	57.48	27.78a	27.04s	4.78	2.4	42.2
9' 6	15384	58.75	27.72a	27.04s	4.89	7.0	60.9

Soundings in feet & inches.---Other distances in FEET.------WB6S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

Tank: FOP.P, Contents: DIESEL OIL at 0.870 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gra	avity VCG	GML	FSM Ft-LT
0'3	1	0.00	42.18a	9.39p	0.37	0.4	0.3
0'6	17	0.05	42.42a	11.99p	0.56	0.9	5.4
0'9	57	0.18	42.69a	13.16p	0.73	1.3	11.7
1' 0	121	0.39	42.97a	13.65p	0.90	1.7	17.3
1' 3	207	0.67	43.25a	13.90p	1.07	2.2	22.5
1' 6	317	1.03	43.52a	14.05p	1.23	2.6	27.8
1' 9	448	1.45	43.80a	14.15p	1.40	3.0	33.2
2' 0	603	1.95	44.07a	14.22p	1.56	3.5	38.3
2' 3	780	2.53	44.35a	14.28p	1.73	3.9	43.6
2' 6	980	3.17	44.63a	14.32p	1.90	4.4	49.0
2' 9	1203	3.90	44.91a	14.35p	2.06	5.0	54.6
3' 0	1451	4.70	45.20a	14.38p	2.23	5.6	60.1
3'3	1718	5.57	45.47a	14.41p	2.40	5.2	62.8
3' 6	1988	6.44	45.68a	14.45p	2.55	4.5	62.8
3 ' 9	2258	7.32	45.83a	14.48p	2.70	4.0	62.8
4' 0	2528	8.19	45.96a	14.50p	2.84	3.6	62.8
4'3	2798	9.07	46.06a	14.51p	2.98	3.2	62.8
4' 6	3069	9.95	46.14a	14.53p	3.12	2.9	62.8
4'9	3339	10.82	46.21a	14.54p	3.26	2.7	62.8
5' 0	3609	11.70	46.27a	14.55p	3.39	2.5	62.8
5'3	3879	12.57	46.32a	14.56p	3.52	2.3	62.8
5' 6	4149	13.45	46.37a	14.56p	3.65	2.2	62.8
5 ' 9	4419	14.32	46.40a	14.57p	3.78	2.0	62.8
6' 0	4690	15.20	46.44a	14.57p	3.91	1.9	62.8
6' 3	4960	16.08	46.47a	14.58p	4.04	1.8	62.8
6' 6	5230	16.95	46.50a	14.58p	4.17	1.7	62.8
6' 9	5500	17.83	46.52a	14.59p	4.30	1.6	62.8
7' 0	5770	18.70	46.54a	14.59p	4.43	1.6	62.8
7' 3	6041	19.58	46.56a	14.60p	4.56	1.5	62.8
7' 6	6311	20.45	46.58a	14.60p	4.69	1.4	62.8
7' 9	6581	21.33	46.60a	14.60p	4.81	1.4	62.8
8' 0	6851	22.21	46.62a	14.60p	4.94	1.3	62.8
8' 3	7121	23.08	46.63a	14.61p	5.07	1.3	62.8
8' 6 8' 9	7391	23.96	46.64a	14.61p	5.19	1.2	62.8
	7662	24.83	46.66a	14.61p	5.32	1.2	62.8
9' 0 9' 3	7932	25.71	46.67a	14.61p	5.45	1.1	62.8
9' 3	8202	26.58	46.68a	14.61p	5.57	1.1	62.8
9 9	8472	27.46 28.34	46.69a 46.70a	14.62p	5.70	1.1	62.8
9'9 9'10.1	8742			14.62p	5.83	1.0	62.8
9,10.1	8832	28.63	46.70a	14.62p	5.87		

Soundings in feet & inches.---Other distances in FEET.------FOP.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.17

# 07/24/14 10:01:37 Dynamic Marine, Inc. GHS 10.50A DMI SUPER 215 TANK CAPACITY DATA

#### TANK CHARACTERISTICS No Trim, No Heel

Tank: FOS.S, Contents: DIESEL OIL at 0.870 Specific Gravity

		Volume	Weight	Cent	er of Gra	avity		FSM
Sno	ding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'	 3	 1	0.00	42.18a	2.05s	0.20	0.4	0.2
0'	6	17	0.05	42.16a 42.41a	4.65s	0.39	0.9	5.4
0'	9	56	0.18	42.41a 42.69a	5.82s	0.57	1.3	11.6
1'	0	120	0.39	42.09a 42.97a	6.31s	0.73	1.7	17.2
1'	3	207	0.67	43.24a	6.56s	0.73	2.2	22.5
1'	6	316	1.02	43.52a	6.71s	1.07	2.6	27.7
1'	9	447	1.45	43.79a	6.82s	1.23	3.0	33.1
2'	0	601	1.95	44.07a	6.89s	1.40	3.5	38.3
2'	3	778	2.52	44.34a	6.94s	1.56	3.9	43.5
2'	6	977	3.17	44.62a	6.99s	1.73	4.4	48.9
2'	9	1200	3.89	44.90a	7.02s	1.90	5.0	54.5
3 '	0	1448	4.69	45.19a	7.025 7.04s	2.06	5.6	60.1
3 '	3	1714	5.56	45.46a	7.045 7.08s	2.23	5.2	62.7
3 '	6	1984	6.43	45.67a	7.12s	2.38	4.5	62.8
3 '	9	2255	7.31	45.83a	7.12s	2.53	4.0	62.8
4 '	0	2525	8.18	45.96a	7.11s	2.68	3.6	62.8
4'	3	2795	9.06	46.06a	7.18s	2.82	3.2	62.8
4 '	6	3065	9.93	46.14a	7.19s	2.95	2.9	62.8
4 '	9	3335	10.81	46.21a	7.20s	3.09	2.7	62.8
- 5'	0	3605	11.69	46.27a	7.21s	3.22	2.5	62.8
5'	3	3876	12.56	46.32a	7.22s	3.36	2.3	62.8
5 '	6	4146	13.44	46.36a	7.23s	3.49	2.2	62.8
5 '	9	4416	14.31	46.40a	7.24s	3.62	2.0	62.8
6 '	0	4686	15.19	46.44a	7.24s	3.75	1.9	62.8
6 '	3	4956	16.06	46.47a	7.25s	3.88	1.8	62.8
6 '	6	5226	16.94	46.50a	7.25s	4.01	1.7	62.8
6'	9	5497	17.82	46.52a	7.25s	4.14	1.6	62.8
7 '	0	5767	18.69	46.54a	7.26s	4.26	1.6	62.8
7 '	3	6037	19.57	46.56a	7.26s	4.39	1.5	62.8
7 '	6	6307	20.44	46.58a	7.26s	4.52	1.4	62.8
7 '	9	6577	21.32	46.60a	7.27s	4.65	1.4	62.8
8 '	0	6847	22.19	46.61a	7.27s	4.77	1.3	62.8
8 '	3	7118	23.07	46.63a	7.27s	4.90	1.3	62.8
8 '	6	7388	23.95	46.64a	7.27s	5.03	1.2	62.8
8 '	9	7658	24.82	46.66a	7.28s	5.16	1.2	62.8
9 '	0	7928	25.70	46.67a	7.28s	5.28	1.1	62.8
9 '	3	8198	26.57	46.68a	7.28s	5.41	1.1	62.8
9 '	6	8468	27.45	46.69a	7.28s	5.54	1.1	62.8
9 '	9	8739	28.32	46.70a	7.28s	5.66	1.0	62.8
10'	0	9009	29.20	46.71a	7.29s	5.79	0.0	12.6

Soundings in feet & inches.---Other distances in FEET.------FOS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

Tank: JHOS.S, Contents: HYDR OIL at 0.924 Specific Gravity

	Volume	Weight	Cent	er of Gr	avity		FSM
Snding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'3	1	0.00	42.19a	16.71s	0.54	0.4	0.2
0' 6	13	0.04	42.19a 42.46a	10.71s 17.76s	0.34	0.4	1.1
0'9	37	0.13	42.46a 42.76a	17.70s 18.00s	0.88	1.4	1.1
1' 0	73	0.25	43.05a	18.10s	1.04	1.8	2.5
1' 3	120	0.41	43.33a	18.15s	1.21	2.2	3.2
1' 6	179	0.61	43.60a	18.19s	1.37	2.7	4.1
1' 9	248	0.85	43.88a	18.21s	1.54	3.1	4.6
2' 0	329	1.13	44.16a	18.23s	1.70	3.6	5.3
2'3	422	1.45	44.43a	18.24s	1.87	4.1	6.0
2' 6	525	1.81	44.71a	18.25s	2.04	4.6	6.7
2' 9	641	2.21	45.00a	18.26s	2.20	5.2	7.5
3' 0	769	2.65	45.29a	18.26s	2.37	5.7	8.2
3 ' 3	904	3.11	45.55a	18.27s	2.53	5.0	8.3
3'6	1040	3.58	45.73a	18.28s	2.69	4.3	8.3
3 ' 9	1175	4.04	45.88a	18.29s	2.83	3.8	8.3
4' 0	1310	4.51	46.00a	18.29s	2.97	3.4	8.3
4'3	1445	4.97	46.09a	18.30s	3.11	3.1	8.3
4'6	1580	5.44	46.17a	18.30s	3.25	2.9	8.3
4' 9	1715	5.90	46.23a	18.30s	3.38	2.6	8.3
5' 0	1850	6.37	46.29a	18.30s	3.52	2.4	8.3
5' 3	1985	6.83	46.34a	18.31s	3.65	2.3	8.3
5' 6	2120	7.30	46.38a	18.31s	3.78	2.1	8.3
5' 9	2255	7.76	46.42a	18.31s	3.91	2.0	8.3
6' 0	2390	8.23	46.45a	18.31s	4.04	1.9	8.3
6' 3	2526	8.69	46.48a	18.31s	4.17	1.8	8.3
6' 6	2661	9.16	46.51a	18.31s	4.30	1.7	8.3
6' 9	2796	9.62	46.53a	18.31s	4.43	1.6	8.3
7' 0	2931	10.09	46.55a	18.31s	4.56	1.5	8.3
7'3	3066	10.55	46.57a	18.32s	4.68	1.5	8.3
7' 6	3201	11.02	46.59a	18.32s	4.81	1.4	8.3
7' 9	3336	11.48	46.61a	18.32s	4.94	1.3	8.3
8' 0	3471	11.95	46.62a	18.32s	5.07	1.3	8.3
8 ' 3	3606	12.41	46.64a	18.32s	5.19	1.2	8.3
8' 6	3741	12.88	46.65a	18.32s	5.32	1.2	8.3
8' 9	3876	13.34	46.66a	18.32s	5.45	1.2	8.3
9' 0	4011	13.81	46.67a	18.32s	5.57	1.1	8.3
9' 3	4147	14.27	46.68a	18.32s	5.70	1.1	8.3
9' 6	4282	14.74	46.69a	18.32s	5.83	1.1	8.3
9'9	4372	15.05	46.70a	18.32s	5.91		

Soundings in feet & inches.---Other distances in FEET.------JHOS.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.33

Tank: APLC.C, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	ravity VCG	GML	FSM Ft-LT
0'3	177	0.67	55.75a	0.00	3.16	42.4	235.2
0'6	595	2.27	55.91a	0.00	3.31	15.5	473.5
0'9	1027	3.92	55.95a	0.00	3.45	9.0	473.5
1' 0	1460	5.57	55.96a	0.00	3.57	6.3	473.5
1' 3	1892	7.22	55.97a	0.00	3.70	4.9	473.5
1' 6	2324	8.87	55.98a	0.00	3.82	4.0	473.5
1' 9	2756	10.53	55.98a	0.00	3.95	3.3	473.5
2' 0	3189	12.18	55.98a	0.00	4.08	2.9	473.5
2' 3	3621	13.83	55.98a	0.00	4.20	2.5	473.5
2' 6	4053	15.48	55.99a	0.00	4.33	2.3	473.5
2' 9	4485	17.13	55.99a	0.00	4.45	2.1	473.5
3' 0	4918	18.78	55.99a	0.00	4.58	1.9	473.5
3 ' 3	5350	20.43	55.99a	0.00	4.70	1.7	473.5
3' 6	5782	22.08	55.99a	0.00	4.83	1.6	473.5
3 ' 9	6215	23.73	55.99a	0.00	4.95	1.5	473.5
4' 0	6647	25.38	55.99a	0.00	5.08	1.4	473.5
4'3	7079	27.03	55.99a	0.00	5.20	1.3	473.5
4' 6	7511	28.68	55.99a	0.00	5.33	1.2	473.5
4' 9	7944	30.33	55.99a	0.00	5.45	1.2	473.5
5' 0	8376	31.99	55.99a	0.00	5.58	1.1	473.5
5' 3	8808	33.64	55.99a	0.00	5.70	1.0	473.5
5' 6	9241	35.29	55.99a	0.00	5.83	1.0	473.5
5' 9	9673	36.94	55.99a	0.00	5.95	1.0	473.5
6' 0	10105	38.59	55.99a	0.00	6.08	0.9	473.5
6' 3	10537	40.24	55.99a	0.00	6.20	0.9	473.5
6' 6	10970	41.89	56.00a	0.00	6.33	0.8	473.5
6' 9	11402	43.54	56.00a	0.00	6.45	0.8	473.5
7' 0	11834	45.19	56.00a	0.00	6.58	0.0	59.2

Soundings in feet & inches.---Other distances in FEET.------APLC.C Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 3.00

Tank: TB4P.P, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	 1	0.01	42.19a	24.10p	0.70	0.4	0.3
0'6	17	0.07	42.42a	26.83p	0.89	1.0	8.4
0'9	61	0.23	42.68a	28.34p	1.07	1.4	19.0
1' 0	130	0.50	42.95a	28.91p	1.24	1.7	26.5
1' 3	223	0.85	43.22a	29.14p	1.40	2.2	32.8
1' 6	338	1.29	43.48a	29.23p	1.56	2.6	38.5
1' 9	474	1.81	43.74a	29.26p	1.73	3.0	43.2
2' 0	631	2.41	43.99a	29.25p	1.89	3.4	47.4
2' 3	806	3.08	44.24a	29.21p	2.05	3.8	51.0
2' 6	998	3.81	44.48a	29.17p	2.21	4.2	54.3
2' 9	1209	4.62	44.72a	29.11p	2.37	4.7	57.5
3' 0	1479	5.65	45.28a	28.70p	2.55	25.4	188.1
3'3	1887	7.21	46.37a	27.96p	2.79	24.8	192.7
3' 6	2310	8.82	47.13a	27.48p	2.99	20.2	192.7
3 ' 9	2733	10.44	47.65a	27.15p	3.16	17.1	192.7
4' 0	3156	12.05	48.04a	26.91p	3.32	14.8	192.7
4'3	3579	13.67	48.33a	26.72p	3.48	13.1	192.7
4' 6	4002	15.28	48.56a	26.57p	3.63	11.7	192.7
4' 9	4425	16.90	48.75a	26.46p	3.77	10.6	192.7
5' 0	4848	18.51	48.90a	26.36p	3.91	9.6	192.7
5'3	5272	20.13	49.03a	26.28p	4.05	8.9	192.7
5' 6	5695	21.75	49.14a	26.21p	4.18	8.2	192.7
5'9	6118	23.36	49.24a	26.15p	4.32	7.6	192.7
6' 0	6541	24.98	49.32a	26.09p	4.45	7.1	192.7
6' 3	6964	26.59	49.39a	26.05p	4.58	6.7	192.7
6' 6	7387	28.21	49.46a	26.01p	4.71	6.3	192.7
6' 9	7810	29.82	49.51a	25.97p	4.84	6.0	192.7
7' 0	8233	31.44	49.56a	25.94p	4.97	5.7	192.7
7' 3	8656	33.05	49.61a	25.91p	5.10	5.4	192.7
7' 6	9079	34.67	49.65a	25.88p	5.23	5.1	192.7
7' 9	9502	36.29	49.69a	25.86p	5.36	4.9	192.7
8' 0	9925	37.90	49.73a	25.83p	5.49	4.7	192.7
8'3	10348	39.52	49.76a	25.81p	5.62	4.5	192.7
8' 6	10771	41.13	49.79a	25.80p	5.75	4.3	192.7
8' 9	11194	42.75	49.82a	25.78p	5.87	4.2	192.7
9'0	11617	44.36	49.84a	25.76p	6.00	4.0	192.7
9'3	12041	45.98	49.86a	25.75p	6.13	3.9	192.7
9'6	12464	47.59	49.89a	25.73p	6.26	0.7	45.9

Soundings in feet & inches.---Other distances in FEET.------TB4P.P Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

### 07/24/14 10:01:37 Dynamic Marine, Inc. GHS 10.50A DMI SUPER 215 TANK CAPACITY DATA Dynamic Marine, Inc.

#### TANK CHARACTERISTICS No Trim, No Heel

Tank: TB4S.S, Contents: SALT WATER at 1.025 Specific Gravity

Snding	Volume GALLONS	Weight LONG TONS	Cent LCG	er of Gr TCG	avity VCG	GML	FSM Ft-LT
0'3	1	0.01	42.19a	24.10s	0.70	0.4	0.3
0'6	17	0.07	42.42a	26.83s	0.89	1.0	8.4
0'9	61	0.23	42.68a	28.34s	1.07	1.4	19.0
1' 0	130	0.50	42.95a	28.91s	1.24	1.7	26.5
1' 3	223	0.85	43.22a	29.14s	1.40	2.2	32.8
1' 6	338	1.29	43.48a	29.23s	1.56	2.6	38.5
1' 9	474	1.81	43.74a	29.26s	1.73	3.0	43.2
2' 0	631	2.41	43.99a	29.25s	1.89	3.4	47.4
2' 3	806	3.08	44.24a	29.21s	2.05	3.8	51.0
2' 6	998	3.81	44.48a	29.17s	2.21	4.2	54.3
2' 9	1209	4.62	44.72a	29.11s	2.37	4.7	57.5
3' 0	1479	5.65	45.28a	28.70s	2.55	25.4	188.1
3 ' 3	1887	7.21	46.37a	27.96s	2.79	24.8	192.7
3 ' 6	2310	8.82	47.13a	27.48s	2.99	20.2	192.7
3 ' 9	2733	10.44	47.65a	27.15s	3.16	17.1	192.7
4' 0	3156	12.05	48.04a	26.91s	3.32	14.8	192.7
4'3	3579	13.67	48.33a	26.72s	3.48	13.1	192.7
4' 6	4002	15.28	48.56a	26.57s	3.63	11.7	192.7
4' 9	4425	16.90	48.75a	26.46s	3.77	10.6	192.7
5' 0	4848	18.51	48.90a	26.36s	3.91	9.6	192.7
5' 3	5272	20.13	49.03a	26.28s	4.05	8.9	192.7
5' 6	5695	21.75	49.14a	26.21s	4.18	8.2	192.7
5' 9	6118	23.36	49.24a	26.15s	4.32	7.6	192.7
6' 0	6541	24.98	49.32a	26.09s	4.45	7.1	192.7
6' 3	6964	26.59	49.39a	26.05s	4.58	6.7	192.7
6' 6	7387	28.21	49.46a	26.01s	4.71	6.3	192.7
6' 9	7810	29.82	49.51a	25.97s	4.84	6.0	192.7
7' 0	8233	31.44	49.56a	25.94s	4.97	5.7	192.7
7' 3	8656	33.05	49.61a	25.91s	5.10	5.4	192.7
7' 6	9079	34.67	49.65a	25.88s	5.23	5.1	192.7
7' 9	9502	36.29	49.69a	25.86s	5.36	4.9	192.7
8' 0	9925	37.90	49.73a	25.83s	5.49	4.7	192.7
8 ' 3	10348	39.52	49.76a	25.81s	5.62	4.5	192.7
8' 6	10771	41.13	49.79a	25.80s	5.75	4.3	192.7
8' 9	11194	42.75	49.82a	25.78s	5.87	4.2	192.7
9' 0	11617	44.36	49.84a	25.76s	6.00	4.0	192.7
9'3	12041	45.98	49.86a	25.75s	6.13	3.9	192.7
9' 6	12464	47.59	49.89a	25.73s	6.26	0.7	45.9

Soundings in feet & inches.---Other distances in FEET.------TB4S.S Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.50

Tank: TB4C.C, Contents: SALT WATER at 1.025 Specific Gravity

		Volume	Weight	Cent	er of G	ravity		FSM
Sno	ding	GALLONS	LONG TONS	LCG	TCG	VCG	GML	Ft-LT
0'	3	855	3.27	64.60a	0.00	4.98	49.8	1048.6
0'	6	1558	5.95	65.04a	0.00	5.16	27.3	1048.6
0'	9	2260	8.63	65.20a	0.00	5.31	18.8	1048.6
1'	0	2963	11.32	65.29a	0.00	5.44	14.4	1048.6
1'	3	3666	14.00	65.34a	0.00	5.57	11.6	1048.6
1'	6	4368	16.68	65.38a	0.00	5.70	9.7	1048.6
1'	9	5071	19.36	65.41a	0.00	5.83	8.4	1048.6
2 '	0	5774	22.05	65.42a	0.00	5.96	7.4	1048.6
2 '	3	6476	24.73	65.44a	0.00	6.09	6.6	1048.6
2 '	6	7179	27.41	65.45a	0.00	6.21	5.9	1048.6
2 '	9	7882	30.10	65.46a	0.00	6.34	5.4	1048.6
3 '	0	8584	32.78	65.47a	0.00	6.46	5.0	1048.6
3 '	3	9287	35.46	65.48a	0.00	6.59	4.6	1048.6
3 '	6	9990	38.15	65.49a	0.00	6.72	4.3	1048.6
3 '	9	10692	40.83	65.49a	0.00	6.84	4.0	1048.6
4 '	0	11395	43.51	65.50a	0.00	6.97	3.7	1048.6
4 '	3	12098	46.20	65.50a	0.00	7.09	3.5	1048.6
4 '	6	12800	48.88	65.50a	0.00	7.22	3.3	1048.6
4 '	9	13503	51.56	65.51a	0.00	7.34	3.2	1048.6
5'	0	14206	54.25	65.51a	0.00	7.47		

Soundings in feet & inches.---Other distances in FEET.------TB4C.C Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 5.00

### APPENDIX B

CRANE LOAD CHARTS

### APPENDIX C

# SAMPLE PRELOAD CALCULATION FORM ELEVATED VARIABLE LOAD LIMIT DIAGRAM

#### LACIE G EYMARD SAMPLE PRELOAD CALCULATION

#### MAXIMUM WEIGHT ITEMS TO BE CARRIED ON BOAT DURING OPERATION

ITEM	WT	LCG	LMOMT	TCG	TMOMT
	(LT)	(+AFT)		(+STBD)	
LIGHTSHIP UP WEIGHT	678.34	2.409	1634.12	-1.079	-731.93
PW & FO TOTALS	135.67	26.22	3557.27	-1.52	-206.22
DECK LOAD SUM TOT	100.00	4.00	400.00	9.00	900.00
LIGHTSHIP ADD SUM TOT					
TOTAL LEG LOAD	914.01	6.12	5591.39	-0.04	-38.15

 AFT LEG LOAD = TOT LEG LOAD x (34 + LCG) / 103
 356.00
 LT

 PORT LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (29 - TCG) / 58
 279.41
 LT

 STBD LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (29 + TCG) / 58
 278.60
 LT

 LEG EXTENSION BELOW HULL
 150 FT
 FT

 REQ'D AFT LOAD = AFT LOAD ABV + (0.611 x LEG EXT)
 447.65 LT

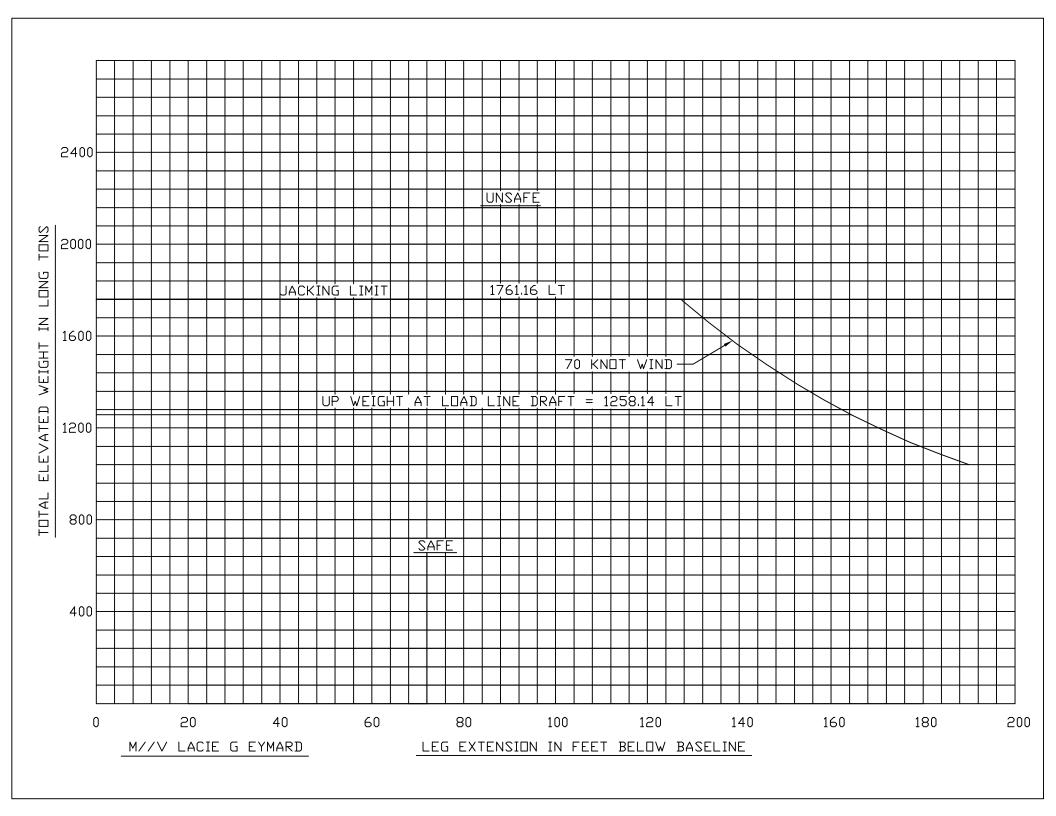
 REQ'D PORT LOAD = PORT LOAD ABV + (1.085 x LEG EXT)
 442.16 LT

 REQ'D STBD LOAD = STBD LOAD ABV + (1.085 x LEG EXT)
 441.35 LT

#### WEIGHT ITEMS ON BOARD AT TIME OF PRELOAD OPERATION

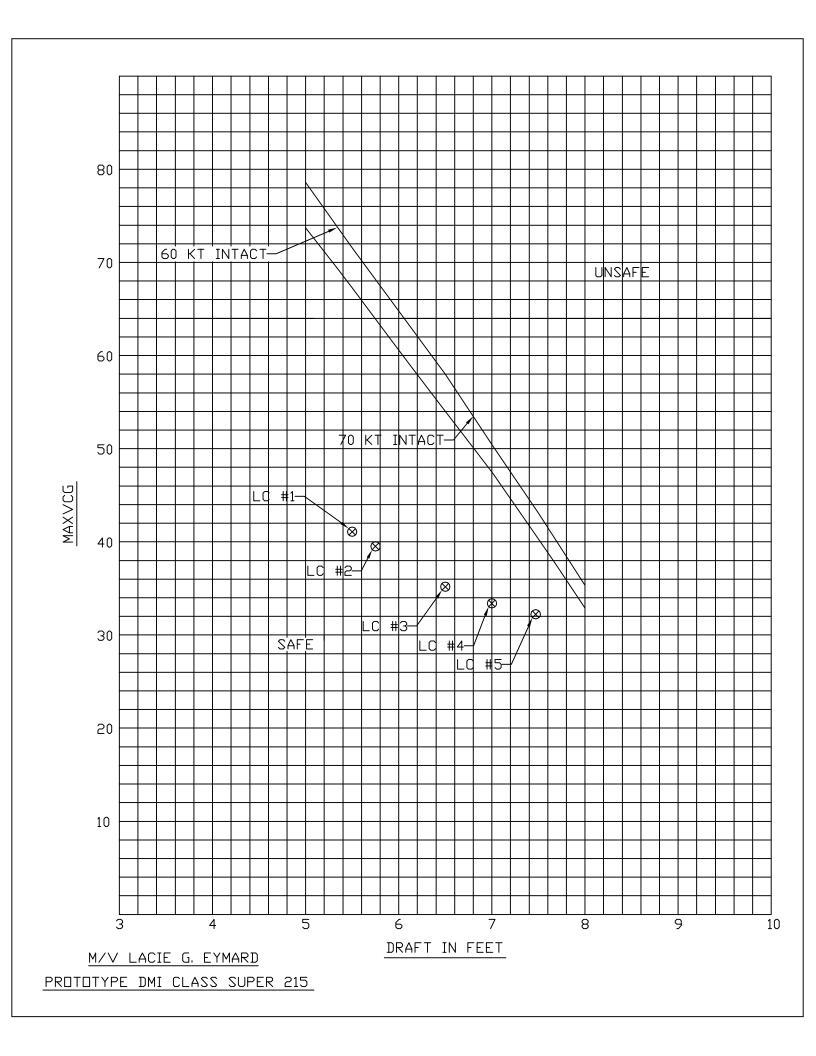
ITEM	WT		LCG	LMOMT	TCG	TMOMT
	(LT)		(+AFT)		(+STBD)	
LIGHTSHIP UP WEIGHT	678.34		2.409	1634.12	-1.079	-731.93
PW & FO TOTALS	123.28		26.24	3234.87	-1.37	-168.89
DECK LOAD SUM TOTAL						
LIGHTSHIP ADD SUM TOT						
TRIM BALL #1 PORT						
TRIM BALL #1 STBD						
TRIM BALL #1 CENT						
TRIM BALL #2 PORT	63.80		-34.00	-2169.20	-14.62	-932.76
TRIM BALL #2 STBD	65.44		-34.00	-2224.96	14.62	956.73
TRIM BALL #2 CENT	63.80		-34.00	-2169.20	0.00	0.00
TRIM BALL #3 PORT						
TRIM BALL #3 STBD						
TRIM BALL #3 CENT						
WING BALL #2 PORT						
WING BALL #2 STBD						
WING BALL #4 PORT	42.26		8.00	-26.98	-22.96	-970.29
WING BALL #4 STBD	42.26		8.00	26.98	22.96	970.29
TRIM BALL #4 PORT				0.00		0.00
TRIM BALL #4 CENT	54.25		65.51	3553.92	0.00	0.00
TRIM BALL #4 STBD						
PRELOAD BALL PORT	193.13		10.00	1931.30	-10.91	-2107.05
PRELOAD BALL STBD	193.13		10.00	1931.30	10.91	2107.05
PRELOAD BALL AFT					 	
TOTAL	4540.00		0.7050075	E700.45	0.57000	070.05
TOTAL	1519.69		3.7653375	5722.15	-0.57699	-876.85

AFT LEG LOAD = TOT LEG LOAD  $\times$  (34 + LCG) / 103 557.20 LT PORT LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD)  $\times$  (29 - TCG) / 56 490.82 LT STBD LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD)  $\times$  (29 + TCG) / 56 471.67 LT



### APPENDIX D

# ALLOWABLE KG CURVE HYDROSTATIC TABLES



#### 215S General HydroStatics

# HYDROSTATIC PROPERTIES No Trim, No Heel, VCG = 0.00

LCF	Displacement	Buoyand	cy-Ctr.	Weight/		Moment/		
Draft-	Weight(LT)	LCB	VCB	Inch	LCF-	-Deg trim-	KML-	KMT
5.284	1,045.75	3.78a	3.04	21.55	4.09a	5395.41	295.6	114.48
5.300	1,049.88	3.78a	3.05	21.56	4.08a	5399.84	294.7	114.06
5.400	1,075.71	3.79a	3.11	21.54	4.16a	5378.60	286.5	111.58
5.500	1,101.57	3.80a	3.16	21.57	4.06a	5406.78	281.2	109.12
5.600	1,127.48	3.80a	3.22	21.61	3.94a	5445.26	276.7	106.79
5.700	1,153.44	3.80a	3.27	21.67	3.76a	5496.35	273.0	104.62
5.800	1,179.49	3.80a	3.33	21.78	3.47a	5581.86	271.1	102.83
5.900	1,205.63	3.79a	3.38	21.83	3.33a	5623.04	267.2	100.84
6.000	1,231.80	3.78a	3.44	21.85	3.25a	5647.82	262.7	98.86
6.100	1,257.94	3.78a	3.49	21.79	3.44a	5596.42	254.9	96.78
6.200	1,284.11	3.77a	3.55	21.82	3.33a	5630.70	251.2	95.04
6.300	1,310.31	3.76a	3.60	21.85	3.27a	5650.77	247.1	93.31
6.400	1,336.54	3.75a	3.65	21.87	3.21a	5670.86	243.1	91.67
6.500	1,362.79	3.74a	3.71	21.89	3.15a	5690.97	239.2	90.11
6.600	1,389.06	3.73a	3.76	21.89	3.15a	5693.97	234.8	88.53
6.700	1,415.32	3.72a	3.81	21.89	3.15a	5697.02	230.6	87.01
6.800	1,441.59	3.71a	3.87	21.89	3.15a	5700.12	226.5	85.55
6.900	1,467.85	3.70a	3.92	21.89	3.15a	5703.26	222.6	84.14
7.000	1,494.12	3.69a	3.98	21.89	3.15a	5706.45	218.8	82.78
7.100	1,520.38	3.68a	4.03	21.89	3.15a	5709.68	215.1	81.47
7.200	1,546.65	3.67a	4.08	21.89	3.15a	5712.96	211.6	80.21
7.300	1,572.91	3.66a	4.13	21.89	3.15a	5716.28	208.2	78.99
7.400	1,599.18	3.65a	4.19	21.89	3.15a	5719.65	204.9	77.82
7.500	1,625.44	3.64a	4.24	21.89	3.15a	5723.07	201.7	76.68

Distances in FEET.-----Specific Gravity = 1.025.-----Moment in Ft-LT. Draft is from Baseline.

### APPENDIX E

### SAMPLE LOADING CONDITIONS

						CLAS	S SUPER 2	215 STABIL	ITY CALC	JLATION S	UMMARY S	HEET							
						S	AMPLE LO	AD CONDIT	ION #1 BUF	RN OUT NO	DECK LO	AD							
	ITEM		WT		VCG	VMOM		LCG	LMOM		TCG	TMOM		FS		COMME	NTS		
			LT		FT	LT-FT		FT	LT-FT		FT	LT-FT		LT-FT					₩
ODEDATION	 NAL LIGHTSHIP		4045.04		40.70	44732.48		4.00	1756.68		0.70	704.05				* 055 NO	L TE BELOW	⊢—	+
OPERATIO	NAL LIGHTSHIP		1045.64		42.78	44/32.48		1.68	1756.68		-0.70	-731.95			<u> </u>	" SEE NO	I BELOW	├──	┼
POT WTR 8	L S FUEL OIL TOTA	AL .	12.57		1.56	19.58		11.25	141.45		12.60	158.36		72.20		FROM S	HT 2		
																			Щ
BALLAST T	ANK TOTAL		38.80		4.36	169.21		0.00	2005.66		16.80	651.73		192.70		FROM S	HT 2		<del>                                      </del>
DE014 1 0 1	D 0111111111111111111111111111111111111		0.00		0.00	0.00		0.00	0.00		2.00	0.00				550110		<b>└</b>	<del>                                      </del>
DECK LOAI	D SUMMARY TO	IAL	0.00		0.00	0.00		0.00	0.00		0.00	0.00				FROM S	HI3	<del></del>	$+\!-\!\!\!-$
LIGHTSHIP	ADD SUM TOTA	AL	4.56		14.55	66.30		18.11	82.55		0.88	4.00				FROM S	L HT 3		+-
LOAD CON	DITION TOTAL		1101.57		40.84	44987.57		3.62	3986.33		0.07	82.14		264.90					
DDAFT (UV	(DDOO)	5.50	I	LANT (LIVE	200)	400.40	ı	LIZALI (LIVEDE	00)	004.00	ı	L OD (LIVED	100)	1 0.00	.1	IT ADM - L	20 1 00	0.46	+
DRAFT (HY	DROS)	5.50		KMT (HYDE	(05)	109.12		KML (HYDR	08)	281.20		LCB (HYDR	105)	3.80		T-ARM = LO	JG-LUB	-0.18	4—
NOTE: DO	NOT EXCEED N	AX DRAFT	OF 7.50 FEE	Т															+
CORRECTE	D KG = VCG TC	T + (FS TO)	/ WT TOT)			41.08		GMT = KMT	- CORR KG		68.04			GML = KM	L - CORR KO	3	240.12		
																			igspace
ALLOWABL	LE KG FROM CU	RVE	from 60 kt ir		71.55			HEEL = TCC	5 TOT x 57.3	B/GMT		0.06	deg	TRIM = T-A	RM x 57.3 /	GML		-0.04	deg
			from 70 kt ir	itact curve	67.42														╅—
												The KG is	okay lue	t to be sur	nloseo ch	neck all ent	rice and roo	do	
LIMITING V	/ALLIES:	COPPECTE	ED KG MIIST	r RE I ESS 1	HAN THE V	ALLIE EDOM	THE ALLOW	NABLE KG C	IIDVE			calculation	•	t to be suit	s, piease ci	icox all cit	iles alla lec	10	
LIIVII I II V	ALULU.				R THAN 1.0		IIIL ALLOV	I ABLE NO C	OIVVL			calculation	13						
			I	I											I		ı		+-
COORDINAT	E ORIGIN:	THE ORIGII	N OF THE C	OORDINATE	SYSTEM IS	AT FRAME	30 (60' AFT	HEADLOG),	CENTERLIN	IE. AND BAS	ELINE								+
							`			_,									
		POSITIVE	COURDINA	ATE (LUG AF	ID LCB) IS A	FIOFINE	ORIGIN												
		POSITIVE Y	COORDINA	TE (TCG AN	ND TCB) IS S	TBD OF THE	ORIGIN												
		POSITIVE Z	COORDINA	TE (VCG AN	ND VCB) IS A	BOVE THE	ORIGIN												
																		<u> </u>	┷
SIGN CONV	/ENTION:							Y PORT SIDI							0.0040.5	L	l	<b>└</b>	
					N, NEGATIV				IOT DE MA	NITAINED 5	D DDODES	DEGULTS				mics Marin	e, Inc.	├──	+-
		THE ALGE	BRAIC SIGN	S OF ALL V	ALUES, SUM	S, PRODUC	IS, AND QU	OTIENTS MU	19 I RF WAI	NIAINED FO	JK PROPER	KESULIS		All rights re	eserved.			$\vdash$	+-
* NOTE: OPE	 Erational Light	SHID AVI I LE	NCLUDES IT	EMS DEDMAN	JENTI V ATTA	CHED TO VE	CEL AT THE	TIME OF DELL	VEDV TO TH	E OWNED AT	I ELLIDS IN 1	VSTEM AND		NE AND IACE	(ING HVD OII	TANKS		<del></del>	+-
NOTE: OPE	RATIONAL LIGHT	ORIP VALUE	INCLUDES III	EIVIO PERIVIAI	NENILI ALIA	CHED IO VE	OSEL AT THE	THIVE OF DELI	VERT IUTH	E OVINER, AL	T LEGIDO IN	STOTEW, AND	OIL IN CRA	NE AND JACK	VING HID OIL	CANAL		$\vdash$	+-
		I	l				l	1				l	<u> </u>	I .	l .		l		

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET SAMPLE LOAD CONDITION #1 BURN OUT NO DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM	TCG	TMOM		FS	COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	L	.T-FT	
PORT POTABLE WTR		35.38		0.00		0.00		0.00		72.20	
STBD POTABLE WTR	9.40	35.38	1.50	14.10	0.00	0.00	14.49	136.21			
FUEL OIL SETTLING (PORT)		26.16		0.00		0.00		0.00			
FUEL OIL DAY (STBD)	3.17	26.69	1.73	5.48	44.62	141.45	6.99	22.16			
TOTAL POT WTR & FUEL OIL	12.57	123.61	1.56	19.58	11.25	141.45	12.60	158.36		72.20	
TRIM BALL #1 PORT		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 STBD		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 STBD	24.98	41.09	4.45	111.16	49.32	1232.01	26.09	651.73		192.70	
TRIM BALL #4 CENT		48.94		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 PORT		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 STBD		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 PORT		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 STBD		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 PORT		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 STBD		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 PORT		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 STBD		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 PORT		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 STBD		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 PORT		53.69		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 STBD		52.79		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00	0.00	0.00		0.00	
AFT PRELOAD BALLAST	13.82	41.06	4.20	58.04	55.98	773.64	0.00	0.00		0.00	
TOTAL BALLAST	38.80	1371.37	4.36	169.21	0.00	2005.66	16.80	651.73		192.70	
,											
											<u> </u>

						JLATION SUMMARY S RN OUT NO DECK LO		
			OAN	DECK LOAD SUM		NA GOT NO DEGICEO	<u> </u>	
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	COMMENTS
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
				DDITION SUMMARY				
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear	0.56	31.00	17.30	44.00	24.55	0.00	0.00	
Galley Stores	1.00	13.00	13.00	38.00	38.00	4.00	4.00	
Crane Rigging	2.00	15.00	30.00	0.00	0.00	0.00	0.00	
Engine Stores	1.00	6.00	6.00	20.00	20.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	4.56	14.55	66.30	18.11	82.55	0.88	4.00	

						CLAS	S SUPER 215	STABIL	ITY CALCU	JLATION SI	JMMARY S	HEET							
						SAMPL	E LOAD CON	DITION #	2 BURN OL	JT AND 64.8	88 LT DECI	K LOAD							
	ITEM		WT		VCG	VMOM		.CG	LMOM		TCG	TMOM		FS		COMME	ENTS		
			LT		FT	LT-FT		FT	LT-FT		FT	LT-FT		LT-FT					
OPERATIO	NAL LIGHTSHIP		1045.64		42.78	44732.48		1.68	1756.68		-0.70	-731.95				* SEE NO	TE BELOW		
DOT WITD			10.57		4.50	10.50		10.10	0.44.05		10.00	450.00		70.00		550110			├
POIWIR	& FUEL OIL TOTA	AL .	12.57		1.56	19.58		19.48	244.85		12.60	158.36		72.20		FROM S	HIZ		-
DALLACT	TANK TOTAL		38.80		4.36	169.21		0.00	2005.66		16.80	651.73		100.70		FROM S	LITO		<u> </u>
BALLASI	IANK TOTAL		36.60		4.30	169.21		0.00	2005.00		16.80	051.73		192.70		FROM S	H		-
DECKION	D SUMMARY TO	TAI	64.88		13.00	843.44		10.00	648.80		0.00	0.00				FROM S	LT 2		-
DECK LOA	D SOMMAN TO	IAL	04.00		13.00	043.44		10.00	040.00		0.00	0.00				TROMS	I		
LIGHTSHIE	ADD SUM TOTA	71	4.56		14.55	66.30		18.11	82.55		0.88	4.00				FROM S	HT 3		
	1					00.00			02.00		0.00						I		
LOAD CON	IDITION TOTAL		1166.45		39.29	45831.01		4.06	4738.53		0.07	82.14		264.90					
20/12/00/1	DITION TOTAL		1100.10		00.20	10001.01		1.00	1700.00		0.07	02.11		201.00		L	l .		
DRAFT (HY	(DROS)	5.75		KMT (HYDE	ROS)	103.72	KN	IL (HYDR	OS)	272.10		LCB (HYDR	OS)	3.80		T-ARM = LO	CG-LCB	0.26	
NOTE: DO	NOT EXCEED M	AX DRAFT	OF 7.47FEE	T															
2000505	50 1/0 1/00 50	T - (50 TOT				00.50		- 1/11	00001/0		04.00				0000.1/4		000.50		
CORRECT	ED KG = VCG TO	1 + (FS 101	/ W1 101)			39.52	GN	II = KMI	- CORR KG		64.20			GML = KML	- CORR KO	•	232.58		-
ALL OW/AD	LE KG FROM CU	D)/E	frame CO let in		67.82			FL = TCC	TOT x 57.3	CMT		0.06	4	TRIM = T-A	DM -: 57.2 /	CMI		0.06	400
ALLOWAB	LE KG FROW CO	RVE	from 60 kt in from 70 kt in		63.57		ПЕ	EL = ICG	101 X 57.3	/ GIVI I		0.06	aeg	I KIIVI = I-A	KIVI X 57.37	I		0.06	aeg
			IIOIII 70 Kt III	I	03.37											L		l .	-
												The KG is	okay lust	to be sure	nlesse ch	ack all ent	ries and red	do	
LIMITING \	/ALLIES:	COPPECTE	D KG MUST	r RE I ESS T	THAN THE V	ALUE EDOM	THE ALLOWA	RIEKGC	IIDVE			calculation	•	to be suit	, picase oi	icok ali citt	iles and rec	40	
LIMITING					R THAN 1.0		THE ALLOWAL	JEE NO C	OKVL			Calculation	13						
		OWIT AND C	J. 111001 1	I	I IIIAN II														
COORDINAT	TE ODICIN:	THE OBIGIN	OF THE CO		SVSTEM IS	AT EDAME	 30 (60' AFT HE	ADLOG) (	PENTEDI IN	E AND BAS	ELINE					1			+
COOKDINA							`	ADEOG), V	JEN I EINEIN	L, AND DAS	LLINL								<u> </u>
		POSITIVE X	COORDINA	ATE (LCG AN	ND LCB) IS A	FT OF THE	ORIGIN												
		POSITIVE Y	COORDINA	TE (TCG AN	ND TCB) IS S	TBD OF THE	ORIGIN												
				•	ND VCB) IS A														
					102,.07													1	
	VENTION:	POSITIVE H	IEEL IS DOV	NN BY STBE	SIDE. NEG	ATIVE HEEL	IS DOWN BY P	ORT SIDE											
SIGN CON'							OWN BY BOW							Copyright @	2012 Dvna	mics Marin	e, Inc.		
SIGN CON								ENTS MI	IST DE MAI	NTAINED EC	D DDODED	RESULTS		All rights re		1	ĺ		
SIGN CON		THE ALGE	BRAIC SIGNS	S OF ALL V	ALUES, SUM	S, PRODUC	IS, AND QUUII		O I DE WAN	MIAINED I C	IN FROFER								
SIGN CON		THE ALGEE	BRAIC SIGN	S OF ALL VA	ALUES, SUM	S, PRODUC		EN 13 MIC	31 BE WAI		K FROFER	KEGGETG		rai riginto re	Joci Vou.				
						,								·		TANKS			

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET SAMPLE LOAD CONDITION #2 BURN OUT AND 64.88 LT DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	FS		COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	LT-F	т	
PORT POTABLE WTR		35.38		0.00		0.00		0.00		72.20	
STBD POTABLE WTR	9.40	35.38	1.50	14.10	11.00	103.40	14.49	136.21			
FUEL OIL SETTLING (PORT)		26.16		0.00		0.00		0.00			
FUEL OIL DAY (STBD)	3.17	26.69	1.73	5.48	44.62	141.45	6.99	22.16			
TOTAL POT WTR & FUEL OIL	12.57	123.61	1.56	19.58	19.48	244.85	12.60	158.36		72.20	
TRIM BALL #1 PORT		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 STBD		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 STBD	24.98	41.09	4.45	111.16	49.32	1232.01	26.09	651.73	19	92.70	
TRIM BALL #4 CENT		48.94		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 PORT		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 STBD		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 PORT		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 STBD		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 PORT		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 STBD		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 PORT		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 STBD		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 PORT		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 STBD		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 PORT		53.69		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 STBD		52.79		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00	0.00	0.00		0.00	
AFT PRELOAD BALLAST	13.82	41.06	4.20	58.04	55.98	773.64	0.00	0.00		0.00	
TOTAL BALLAST	38.80	1371.37	4.36	169.21	0.00	2005.66	16.80	651.73	19	92.70	
,											
· · · · · · · · · · · · · · · · · · ·										-	

						JLATION SUMMARY S JT AND 64.88 LT DEC		
			JAMIT LL L	DECK LOAD SUM		51 AND 04.00 ET DEC	K LOAD	
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	ТМОМ	COMMENTS
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
DECK LOAD ITEM # 1	64.88	13.00	843.44	10.00	648.80	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	64.88	13.00	843.44	10.00	648.80	0.00	0.00	
				DITION SUMMARY				
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear	0.56	31.00	17.30	44.00	24.55	0.00	0.00	
Galley Stores	1.00	13.00	13.00	38.00	38.00	4.00	4.00	
Crane Rigging	2.00	15.00	30.00	0.00	0.00	0.00	0.00	
Engine Stores	1.00	6.00	6.00	20.00	20.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00	4	0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	4.56	14.55	66.30	18.11	82.55	0.88	4.00	

						CLAS	SS SUPER 2	215 STABIL	ITY CALCU	JLATION S	UMMARY S	HEET							
					Ţ	SAMPLE LO	DAD CONDI	TION #3 100	% CONSU	MABLES A	ND 176.92 I	DECK LOA	D						
	ITEM		WT		VCG	VMOM		LCG	LMOM		TCG	TMOM		FS		COMME	NTS		
			LT		FT	LT-FT		FT	LT-FT		FT	LT-FT		LT-FT					
OPERATION	NAL LIGHTSHIP		1045.64		42.78	44732.48		1.68	1756.68		-0.70	-731.95				* SEE NOT	E BELOW		
			105.05					22.22						2.22					
OT WTR &	FUEL OIL TOTA	AL	135.67		5.45	739.56		26.22	3557.19		-1.52	-205.70		0.00		FROM SI	HT 2		
BALLAST T	ANK TOTAL		0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00		FROM SI	H12		
2501/104	0		170.00		10.57	2000 00		5.00	000.04		5.05	1000.00				500110	IT 0		
JECK LOAD	D SUMMARY TO	TAL	176.92		13.57	2399.96		5.22	923.04		5.65	1000.00				FROM SI	H13		
IOUTOUID	ADD SUM TOTA	<u>.                                    </u>	4.50		14.55	66.30		18.11	82.55		0.88	4.00				FROM SI	IT 0		
IGHTSHIP	ADD SUM TOTA	AL	4.56		14.55	66.30		18.11	82.55		0.88	4.00				FROM SI	H13		
			1000 =0		25.12	1=000000			221212					2.22					
LOAD CONI	DITION TOTAL		1362.79		35.18	47938.30		4.64	6319.46		0.05	66.35		0.00					
DRAFT (HYI	DBOS)	6.50	Г	KMT (HYDR	OS)	90.11	T	KML (HYDR	06)	239.20		LCB (HYDR	OS)	3.74		T-ARM = LC	CICE	0.90	
JKAFT (HTL	l	0.30		KWII (HIDK	(03)	90.11		KWL (HIDK	03)	239.20		LCB (HTDK	03)	3.74		I-AKWI - LC	-G-LCB	0.90	
NOTE: DO	NOT EXCEED N	AX DRAFT	OF 7.50 FEE	Т															
CORRECTE	D KG = VCG TC	T + (FS TOT	/ WT TOT)			35.18		GMT = KMT	- CORR KG		54.93			GML = KML	- CORR KG	;	204.02		
		`	, i													1			
ALLOWABL	E KG FROM CU	RVE	from 60 kt int	tact curve	57.99			HEEL = TCC	TOT x 57.3	/ GMT		0.05	deg	TRIM = T-AF	RM x 57.3 /	GML		0.25	dec
			from 70 kt int	tact curve	54.00								,						
			1								1								
	!		<u>.</u>									The KG is	okay. Just	t to be sure,	, please ch	eck all entr	ies and red	<b>o</b>	
LIMITING V	ALUES:	CORRECTE	D KG MUST	BE LESS T	HAN THE V	ALUE FROM	THE ALLOV	WABLE KG C	URVE			calculation	ıs						
		GMT AND G	ML MUST B	BE GREATE	R THAN 1.0	FT													
COORDINATE	E ODIONI	THE OBICIN	LOF THE CO	ODDINATE	SASTEM IS	AT EDAME	30 (60' AFT	HEADLOG)	OFNITEDI IN	E AND BAS	EL INE								
	E ORIGIN:	I I LE OKIGII	NOF THE CO	JUNDINAIE	3 1 3 1 E W 13				CENTERLIN	E, AND DAS	CLINE I								
JOINDINA	E ORIGIN:						•		CENTERLIN	E, AND DAS	ELINE								
JANUAR	E ORIGIN:		COORDINA				•	TILADLOGJ,	CENTERLIN	E, AND BAS	ELINE								
	E ORIGIN:	POSITIVE X		TE (LCG AN	ID LCB) IS A	FT OF THE	ORIGIN	TILADLOG),	CENTERLIN	E, AND BAS	ELINE								
CONDINA	E ORIGIN:	POSITIVE X	COORDINA	TE (LCG AN	ID LCB) IS A	FT OF THE	ORIGIN E ORIGIN	TILADEOG),	CENTERLIN	E, AND BAS	ELINE								
CONDINA	E ORIGIN:	POSITIVE X	COORDINA	TE (LCG AN	ID LCB) IS A	FT OF THE	ORIGIN E ORIGIN	TILADEOG),	CENTERLIN	E, AND BAS	ELINE								
		POSITIVE X POSITIVE Y POSITIVE Z	COORDINA COORDINA COORDINA	TE (LCG AN TE (TCG AN TE (VCG AN	ID LCB) IS A ID TCB) IS S ID VCB) IS A	FT OF THE ( TBD OF THE ( BOVE THE (	ORIGIN E ORIGIN ORIGIN	BY PORT SIDE		E, AND BAS	ELINE								
SIGN CONV		POSITIVE X POSITIVE Y POSITIVE Z POSITIVE H	COORDINA COORDINA COORDINA	TE (LCG AN TE (TCG AN TE (VCG AN VN BY STBD	ID LCB) IS A ID TCB) IS S ID VCB) IS A	FT OF THE ( BOVE THE ( ATIVE HEEL	ORIGIN  ORIGIN  ORIGIN  . IS DOWN B	Y PORT SIDI		E, AND BAS	ELINE			Copyright ©	2012 Dyna	mics Marine	e, Inc.		
		POSITIVE X POSITIVE Y POSITIVE Z POSITIVE H POSITIVE T	COORDINA COORDINA COORDINA EEL IS DOW RIM IS DOW	TE (LCG AN TE (TCG AN TE (VCG AN VN BY STBD IN BY STER	ID LCB) IS A ID TCB) IS S ID VCB) IS A O SIDE, NEGATIV	TBD OF THE BOVE THE ATIVE HEEL	ORIGIN  ORIGIN  ORIGIN  IS DOWN BY BOOWN BY BOOWN BY BOOWN	Y PORT SIDI	<u> </u>			RESULTS		Copyright ©		mics Marine	e, Inc.		
		POSITIVE X POSITIVE Y POSITIVE Z POSITIVE H POSITIVE T	COORDINA COORDINA COORDINA EEL IS DOW RIM IS DOW	TE (LCG AN TE (TCG AN TE (VCG AN VN BY STBD IN BY STER	ID LCB) IS A ID TCB) IS S ID VCB) IS A O SIDE, NEGATIV	TBD OF THE BOVE THE ATIVE HEEL	ORIGIN  ORIGIN  ORIGIN  IS DOWN BY BOOWN BY BOOWN BY BOOWN	EY PORT SIDE	<u> </u>			RESULTS				mics Marine	e, Inc.		
SIGN CONV		POSITIVE X POSITIVE Y POSITIVE Z POSITIVE H POSITIVE T THE ALGEE	COORDINA COORDINA COORDINA EEL IS DOW RIM IS DOW BRAIC SIGNS	TE (LCG AN TE (TCG AN TE (VCG AN VN BY STBD IN BY STER S OF ALL VA	ID LCB) IS A ID TCB) IS S ID VCB) IS A O SIDE, NEG. N, NEGATIV ALUES, SUM	FT OF THE ( TBD OF THE ( BOVE THE ( ATIVE HEEL (E TRIM IS D IS, PRODUC	ORIGIN  E ORIGIN  ORIGIN  LIS DOWN B  OWN BY BO  TS, AND QU	PY PORT SIDI DW OTIENTS MU	E JST BE MAI	NTAINED FO	DR PROPER			All rights res	served.		s, Inc.		

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET SAMPLE LOAD CONDITION #3 100% CONSUMABLES AND 176.92 DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM	TCG	TMOM		FS	COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT		LT-FT	
PORT POTABLE WTR	38.92	35.38	5.17	201.22	11.00	428.12	-14.62	-569.01			
STBD POTABLE WTR	38.92	35.38	5.17	201.22	11.00	428.12	14.62	569.01		0.00	
FUEL OIL SETTLING (PORT)	28.63	26.16	5.87	168.06	46.70	1337.02	-14.62	-418.57		0.00	
FUEL OIL DAY (STBD)	29.20	26.69	5.79	169.07	46.71	1363.93	7.29	212.87		0.00	
TOTAL POT WTR & FUEL OIL	135.67	123.61	5.45	739.56	26.22	3557.19	-1.52	-205.70		0.00	
TRIM BALL #1 PORT		45.18		0.00		0.00		0.00		0.00	
FRIM BALL #1 STBD		45.18		0.00		0.00		0.00		0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00		0.00		0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00		0.00		0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00		0.00		0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00		0.00		0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00		0.00		0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00		0.00		0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00		0.00		0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00		0.00		0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00		0.00		0.00	
TRIM BALL #4 STBD		41.09		0.00		0.00		0.00			
TRIM BALL #4 CENT		48.94		0.00		0.00		0.00		0.00	
WING BALL #1 PORT		26.02		0.00		0.00		0.00		0.00	
WING BALL #1 STBD		26.02		0.00		0.00		0.00		0.00	
WING BALL #2 PORT		47.23		0.00		0.00		0.00		0.00	
WING BALL #2 STBD		47.23		0.00		0.00		0.00		0.00	
WING BALL #3 PORT		28.51		0.00		0.00		0.00		0.00	
WING BALL #3 STBD		28.51		0.00		0.00		0.00		0.00	
WING BALL #4 PORT		38.04		0.00		0.00		0.00		0.00	
WING BALL #4 STBD		38.04		0.00		0.00		0.00		0.00	
WING BALL #5 PORT		23.66		0.00		0.00		0.00		0.00	
WING BALL #5 STBD		23.66		0.00		0.00		0.00		0.00	
WING BALL #6 PORT		53.69		0.00		0.00		0.00		0.00	
WING BALL #6 STBD		52.79		0.00		0.00		0.00		0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00		0.00		0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00		0.00		0.00	
AFT PRELOAD BALLAST		41.06		0.00		0.00		0.00		0.00	
				2.30		2.00		2.00			
TOTAL BALLAST	0.00	1371.37	0.00	0.00	0.00	0.00	0.00	0.00		0.00	
			2.00	2.30	0.00	2.00	2.00	2.00			
•											
									_		

		9				JLATION SUMMARY S MABLES AND 176.92		n
		3/		ECK LOAD SUM		WIABLES AND 170.92	DECK LOA	U .
			_					
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	COMMENTS
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
DECK LOAD ITEM # 1	76.92	13.00	999.96	12.00	923.04	0.00	0.00	
DECK LOAD ITEM # 2	50.00	14.00	700.00	-2.00	-100.00	-10.00	-500.00	
DECK LOAD ITEM # 3	50.00	14.00	700.00	2.00	100.00	30.00	1500.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	176.92	13.57	2399.96	5.22	923.04	5.65	1000.00	
			LIGHTSHIP ADDI					
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear	0.56	31.00	17.30	44.00	24.55	0.00	0.00	
Galley Stores	1.00	13.00	13.00	38.00	38.00	4.00	4.00	
Crane Rigging	2.00	15.00	30.00	0.00	0.00	0.00	0.00	
Engine Stores	1.00	6.00	6.00	20.00	20.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	4.56	14.55	66.30	18.11	82.55	0.88	4.00	·

						CLAS	S SUPER 2	15 STABIL	ITY CALC	JLATION S	UMMARY S	HEET							
						SAMPLE LO	DAD CONDI	TION #4 100	% CONSU	MABLES A	ND 308.25	DECK LOA	D						
	ITEM		WT		VCG	VMOM		LCG	LMOM		TCG	TMOM		FS		COMME	NTS		
			LT		FT	LT-FT		FT	LT-FT		FT	LT-FT		LT-FT					
OPERATIO	NAL LIGHTSHIP		1045.64		42.78	44732.48		1.68	1756.68		-0.70	-731.95				* SEE NO	TE BELOW		
																		<u> </u>	—
POT WTR	& FUEL OIL TOTA	AL	135.67		5.45	739.56		26.22	3557.19		-1.52	-205.70		0.00	1	FROM S	HT 2	<b></b>	₩
DALLAGE	FANIK TOTAL		0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00		FROMO	LIT O		₩
BALLASI	TANK TOTAL		0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	1	FROM S	HI2	<del>                                     </del>	₩
DECKTON	D SUMMARY TO	TAL	308.25		14.13	4357.00		7.03	2167.50		3.24	1000.00				FROM S	LIT 2	₩	$\vdash$
DECK LOA	D SUMMART TO	IAL	306.23		14.13	4337.00		7.03	2107.30		3.24	1000.00	1			FROM 3	ПІЗ	<del></del>	+
LIGHTSHIE	ADD SUM TOTA	<u> </u>	4.56		14.55	66.30		18.11	82.55		0.88	4.00				FROM S	HT 3	<del>                                     </del>	+-
LIGITIOIII	ADD COM TOTA	<u>.                                    </u>	4.00		14.00	00.00		10.11	02.00		0.00	7.00				TROWG	I	+	$\vdash$
I OAD CON	DITION TOTAL		1494.12		33.39	49895.34		5.06	7563.92		0.04	66.35		0.00	1			<del>                                     </del>	+-
LOAD CON	DITION TOTAL		1434.12		33.33	49090.04		3.00	1000.02		0.04	00.55	1	0.00	'			$\vdash$	$\vdash$
DRAFT (HY	'DROS)	7.00		KMT (HYDE	ROS)	82.78		KML (HYDR	OS)	foonesss		LCB (HYDR	ROS)	3.69		T-ARM = LO	CG-LCB	1.37	t
,				ì				,	<i>'</i>			`							
NOTE: DO	NOT EXCEED M	AX DRAFT	OF 7.50 FEE	Т															
																		<u> </u>	
CORRECT	ED KG = VCG TO	T + (FS TOT	/ WT TOT)			33.39		GMT = KMT	- CORR KG	i	49.39			GML = KM	L - CORR KO	j	#VALUE!	<b>_</b>	₩
411011145	- 1/0 FD014 011			<u> </u>	50.40							0.05	ļ.		57.0	0111		10.441.1151	<del>↓.</del>
ALLOWAB	LE KG FROM CU	RVE	from 60 kt in from 70 kt in		50.46 47.50			HEEL = TCG	101 x 57.3	3 / GM I		0.05	aeg	IRIM = I-A	RM x 57.3 /	GML		#VALUE!	deg
			Irom 70 Kt in	Tact curve	47.50														₩
												The KG is	okay. Jus	t to be sur	n nloseo ch	nock all onto	rice and ro	do	
LIMITING \	/ALLIES.	COBBECTE	D VC MUST	F DE LEGG T	THAN THE V	ALUE EDOM	THE ALLOW	VADI E KC C	IIDVE			calculation	•	t to be suit	e, piease ci	ieck all ellti	ics allu ic	40	
LIMITING					R THAN 1.0		THE ALLOV	VABLE NG C	UKVE			Calculation	115						-
		GWIT AND C	DIVIL WIGGI L	I GREATE	K IIIAN I.U								1	1	1	1			┼
COORDINAT	E OBICINI	THE OBIGIN	OF THE CO		EVETEM IS	ATEDAME	30 (60' AFT	HEADI OCI	CENTEDI IN	IE AND DAG	EL INE		<u> </u>	<u> </u>					+
COOKDINA							`	IILADLOG),	CLIVILIN	IL, AND DAG	J I								<b>—</b>
		POSITIVE X	COORDINA	TE (LCG AN	ID LCB) IS A	FT OF THE	ORIGIN												
		POSITIVE Y	COORDINA	TE (TCG AN	ND TCB) IS S	TBD OF THE	ORIGIN												
				•	ND VCB) IS A														
			2 2 2		102,.07													T	+-
SIGN CON	VENTION:	POSITIVE H	IEEL IS DOV	VN BY STBE	SIDE. NEG	ATIVE HEEL	IS DOWN B	Y PORT SIDI	<u> </u>										+
							OWN BY BO							Copyright	© 2012 Dyna	mics Marine	e, Inc.		$\vdash$
									JST BE MAI	NTAINED FO	OR PROPER	RESULTS		All rights re			ĺ		$\vdash$
	1			1	,	,				1	· -··		<del>                                     </del>	<b>—</b>	1	1	l		$\vdash$
													1					1	
* NOTE: OPI	RATIONAL LIGHTS	SHIP VALUE I	NCLUDES IT	 EMS PERMAN	NENTLY ATTA	CHED TO VES	SSEL AT THE	TIME OF DELI	VERY TO TH	 E OWNER, AL	LL FLUIDS IN :	SYSTEM, ANI	 D OIL IN CRAI	 NE AND JAC	 KING HYD OIL	. TANKS			$\vdash$

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET SAMPLE LOAD CONDITION #4 100% CONSUMABLES AND 308.25 DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM		TCG	TMOM	FS	COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT		FT	LT-FT	LT-FT	
PORT POTABLE WTR	38.92	35.38	5.17	201.22	11.	00 428.12		-14.62	-569.01		
STBD POTABLE WTR	38.92	35.38	5.17	201.22	11.	00 428.12	!	14.62	569.01	0.00	
FUEL OIL SETTLING (PORT)	28.63	26.16	5.87	168.06	46.	70 1337.02	:	-14.62	-418.57	0.00	
FUEL OIL DAY (STBD)	29.20	26.69	5.79	169.07	46.	1363.93		7.29	212.87	0.00	
TOTAL POT WTR & FUEL OIL	135.67	123.61	5.45	739.56	26.	22 3557.19		-1.52	-205.70	0.00	
TRIM BALL #1 PORT		45.18		0.00		0.00			0.00	0.00	
TRIM BALL #1 STBD		45.18		0.00		0.00			0.00	0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00			0.00	0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00			0.00	0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00	+		0.00	0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00			0.00	0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00			0.00	0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00			0.00	0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00			0.00	0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00			0.00	0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00			0.00	0.00	
TRIM BALL #4 STBD		41.09		0.00		0.00			0.00		
TRIM BALL #4 CENT		48.94		0.00		0.00			0.00	0.00	
WING BALL #1 PORT		26.02		0.00		0.00			0.00	0.00	
WING BALL #1 STBD		26.02		0.00		0.00			0.00	0.00	
WING BALL #2 PORT		47.23		0.00		0.00			0.00	0.00	
WING BALL #2 STBD		47.23		0.00		0.00	+		0.00	0.00	
WING BALL #3 PORT		28.51		0.00		0.00			0.00	0.00	
WING BALL #3 STBD		28.51		0.00		0.00			0.00	0.00	
WING BALL #4 PORT		38.04		0.00		0.00			0.00	0.00	
WING BALL #4 STBD		38.04		0.00		0.00			0.00	0.00	
WING BALL #5 PORT		23.66		0.00		0.00			0.00	0.00	
WING BALL #5 STBD		23.66		0.00		0.00			0.00	0.00	
WING BALL #6 PORT		53.69		0.00		0.00			0.00	0.00	
WING BALL #6 STBD		52.79		0.00		0.00			0.00	0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00			0.00	0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00			0.00	0.00	
AFT PRELOAD BALLAST		41.06		0.00		0.00	\		0.00	0.00	
TOTAL BALLAST	0.00	1371.37	0.00	0.00	0.	0.00		0.00	0.00	0.00	
`						_					

		9				JLATION SUMMARY S MABLES AND 308.25		n.
		3/	AWIPLE LOAD	DECK LOAD SUM		MABLES AND 306.23	DECK LOA	U
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	COMMENTS
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
DECK LOAD ITEM # 1	75.00	13.00	975.00	20.00	1500.00	0.00	0.00	
DECK LOAD ITEM # 2	50.00	14.00	700.00	10.00	500.00	-10.00	-500.00	
DECK LOAD ITEM # 3	50.00	14.00	700.00	10.00	500.00	30.00	1500.00	
DECK LOAD ITEM #4	50.00	14.00	700.00	0.00	0.00	-20.00	-1000.00	
DECK LOAD ITEM #5	50.00	15.00	750.00	0.00	0.00	20.00	1000.00	
DECK LOAD ITEM #6	33.25	16.00	532.00	-10.00	-332.50	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	308.25	14.13	4357.00	7.03	2167.50	3.24	1000.00	
			LIGHTSHIP AD	DITION SUMMARY				
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear	0.56	31.00	17.30	44.00	24.55	0.00	0.00	
Galley Stores	1.00	13.00	13.00	38.00	38.00	4.00	4.00	
Crane Rigging	2.00	15.00	30.00	0.00	0.00	0.00	0.00	
Engine Stores	1.00	6.00	6.00	20.00	20.00	0.00	0.00	
g		1 2.22	0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
		+	0.00		0.00		0.00	
			0.00		0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	4.56	14.55	66.30	18.11	82.55	0.88	4.00	
LIGHTSHIP ADD SUM TOTAL	4.30	14.55	00.30	18.11	0∠.35	0.88	4.00	

						CLAS	S SUPER 215	STABIL	ITY CALCU	JLATION S	UMMARY S	HEET							
						LOAD CO	ONDITION #5 10	00% COI	NSUMABLE	ES AND 439	9.57 LT DE	CK LOAD							
	ITEM		WT		VCG	VMOM	LC	CG	LMOM		TCG	TMOM		FS		COMME	ENTS		
			LT		FT	LT-FT	F	FT	LT-FT		FT	LT-FT		LT-FT					
OPERATIO	NAL LIGHTSHIP		1045.64		42.78	44732.48		1.68	1756.68		-0.70	-731.95				* SEE NO	TE BELOW		
			105.05		11.00												<u> </u>		<u> </u>
POT WIR	FUEL OIL TOTA	AL	135.67		14.23	1930.74		26.22	3557.19		-1.52	-205.70		72.20		FROM S	H12		
			20.00		4.00	100.01		0.00	0005.00		40.00	054.70		400.70		550110	1		<u> </u>
BALLASII	ANK TOTAL		38.80		4.36	169.21		0.00	2005.66		16.80	651.73		192.70		FROM S	HI2		<u> </u>
DECK LOA	D SUMMARY TO	TAL	400.77		15.03	6022.36		5.41	2167.50		2.50	1000.00		-	-	FROM S	LIT 2		
DECK LUAI	J SUNIMART TO	IAL	400.77		15.03	6022.36		3.41	2107.50		2.50	1000.00				FROM 3	П		
LIGHTSHIP	ADD SUM TOTA	\ <u>\</u>	4.56		14.55	66.30		18.11	82.55		0.88	4.00			<b>†</b>	FROM S	HT 3		
LIGHTOIM	ADD COM TOTA	<u> </u>	4.00		14.00	00.00		10.11	02.00		0.00	7.00				TROWIG	1113		
LOAD CON	DITION TOTAL		1625.44		32.56	52921.08		5.89	9569.58		0.44	718.08		264.90					
LOAD CON	DITION TOTAL		1023.44		32.30	32321.00		3.03	3303.30		0.44	7 10.00		204.90	<u> </u>	<u> </u>			
DRAFT (HY	DROS)	7.50		KMT (HYDR	ROS)	76.68	KML	_ (HYDR	OS)	201.70		LCB (HYDR	(OS)	3.15		T-ARM = LO	CG-LCB	2.74	
Ì				Ì				`	,			,	L ´						
NOTE: DO	NOT EXCEED M	AX DRAFT	OF 7.50 FEE	Т															
																<u> </u>			
CORRECTE	D KG = VCG TO	T + (FS TOT	/WT TOT)			32.72	GMT	T = KMT	- CORR KG		43.96			GML = KMI	L - CORR KO	3	168.98		
				<u> </u>	10.00								ł.		L	<u> </u>			<u> </u>
ALLOWABL	LE KG FROM CU	RVE	from 60 kt in		43.80 40.30		HEE	L = TCG	TOT x 57.3	/ GMT		0.58	deg	TRIM = T-A	RM x 57.3 /	GML		0.93	deg
			from 70 kt in	itact curve	40.30									l	l	l			
												The VC is	akay lua	4 40 ho oura	nlagge ok	ande all ante	ries and rec	la.	
I IMITING V	/ALUEC.	CODDECTE	D KC MUST	. DE LESS T		ALUE EDOM	THE ALLOWARD	F KC C	UDVE			calculation	•	t to be sure	e, piease ci	ieck all eill	nes and rec	10	
LIMITING V					R THAN 1.0		THE ALLOWABL	LE NG C	UKVE			Calculation	115						
		GWI AND	INIL NIUSI E	SE GREATE	K I HAN I.U	ГІ							Г	1	1				
COORDINAT	E ODIOIN.	THE OBIGIN	LOF THE CO	OODDINATE	CVCTEM IC	AT EDAME	 30 (60' AFT HEAI	DI OC) (	CENTEDLIN	E AND DAG	L INE				<u> </u>	<u> </u>			
COORDINAL	E ORIGIN:	THE ORIGIN	OF THE CO	OURDINATE	STSTEWNS	AI FRANCE	30 (60 AFT HEAT	DLUG), (	CENTERLIN	E, AND BAS	ELINE								
		POSITIVE X	COORDINA	TE (LCG AN	ID LCB) IS A	FT OF THE	ORIGIN												
		DOOLEN'E V	COOPDINA	TE (TCG AN	ID TCB) IS S	TRD OF THE	ORIGIN												
					10 100, 100														
				TE (VCG AN	ID VCB) IS A	ROVE THE													
				TE (VCG AN	ID VCB) IS A	BOVE THE	JKIGIN .												
SIGN CONV		POSITIVE Z	COORDINA	,	,			ORT SIDE	:										
SIGN CONV	/ENTION:	POSITIVE Z	COORDINA EEL IS DOV	NN BY STBD	SIDE, NEG	ATIVE HEEL	IS DOWN BY PO	ORT SIDE						Copyright (	2012 Dvna	mics Marine	e. Inc.		
SIGN CONV	/ENTION:	POSITIVE Z POSITIVE H POSITIVE T	COORDINA EEL IS DOV RIM IS DOW	VN BY STBC VN BY STER	SIDE, NEGATIV	ATIVE HEEL E TRIM IS D	IS DOWN BY PO			NTAINED FO	OR PROPER	RESULTS				mics Marin	e, Inc.		
SIGN CONV	/ENTION:	POSITIVE Z POSITIVE H POSITIVE T	COORDINA EEL IS DOV RIM IS DOW	VN BY STBC VN BY STER	SIDE, NEGATIV	ATIVE HEEL E TRIM IS D	IS DOWN BY PO			NTAINED FO	OR PROPER	RESULTS		Copyright ©		umics Marino	e, Inc.		
	/ENTION:	POSITIVE Z POSITIVE H POSITIVE T THE ALGEE	COORDINA EEL IS DOV RIM IS DOW BRAIC SIGNS	VN BY STBE VN BY STER S OF ALL VA	SIDE, NEGA N, NEGATIV ALUES, SUM	ATIVE HEEL E TRIM IS D S, PRODUC	IS DOWN BY PO	NTS MU	IST BE MAI				D OIL IN CRAI	All rights re	eserved.		e, Inc.		

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET LOAD CONDITION #5 100% CONSUMABLES AND 439.57 LT DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM	 TCG	TMOM		FS	COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	L	LT-FT	
PORT POTABLE WTR	38.92	35.38	5.17	201.22	11.00	428.12	-14.62	-569.01		72.20	
STBD POTABLE WTR	38.92	35.38	5.17	201.22	11.00	428.12	14.62	569.01			
FUEL OIL SETTLING (PORT)	28.63	26.16	26.16	748.96	46.70	1337.02	-14.62	-418.57			
FUEL OIL DAY (STBD)	29.20	26.69	26.69	779.35	46.71	1363.93	7.29	212.87			
TOTAL POT WTR & FUEL OIL	135.67	123.61	14.23	1930.74	26.22	3557.19	-1.52	-205.70		72.20	
TRIM BALL #1 PORT		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 STBD		45.18		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00	0.00	0.00		0.00	
TRIM BALL #4 STBD	24.98	41.09	4.45	111.16	49.32	1232.01	26.09	651.73		192.70	
TRIM BALL #4 CENT		48.94		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 PORT		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #1 STBD		26.02		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 PORT		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #2 STBD		47.23		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 PORT		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #3 STBD		28.51		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 PORT		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #4 STBD		38.04		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 PORT		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #5 STBD		23.66		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 PORT		53.69		0.00		0.00	0.00	0.00		0.00	
WING BALL #6 STBD		52.79		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00	0.00	0.00		0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00	0.00	0.00		0.00	
AFT PRELOAD BALLAST	13.82	41.06	4.20	58.04	55.98	773.64	0.00	0.00		0.00	
TOTAL BALLAST	38.80	1371.37	4.36	169.21	0.00	2005.66	16.80	651.73		192.70	
,											

						JLATION SUMMARY S ES AND 439.57 LT DE		
				ECK LOAD SUM		10 AND 400.07 ET DE	OK LOAD	
ITEM	l wr	VCG	VMOM	LCG	LMOM	TCG	тмом	COMMENTS
I I E IVI	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	COMINIENTS
DECK LOAD ITEM #1	75.00	13.00	975.00	20.00	1500.00	0.00	0.00	
DECK LOAD ITEM #2	50.00	14.00	700.00	10.00	500.00	-10.00	-500.00	
DECK LOAD ITEM #3	50.00	14.00	700.00	10.00	500.00	30.00	1500.00	
DECK LOAD ITEM #4	50.00	14.00	700.00	0.00	0.00	-20.00	-1000.00	
DECK LOAD ITEM #5	50.00	15.00	750.00	0.00	0.00	20.00	1000.00	
DECK LOAD ITEM #6	33.25	16.00	532.00	-10.00	-332.50	20.00	0.00	
DECK LOAD ITEM #7	92.52	18.00	1665.36	0.00	0.00		0.00	
BEOK EOND ITEM #1	02.02	10.00	0.00	0.00	0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	400.77	15.03	6022.36	5.41	2167.50	2.50	1000.00	
TOTAL BLOK LOAD	400.11	10.00	0022.00	0.41	2107.00	2.00	1000.00	
			I IGHTSHIP ADDI	TION SUMMARY				
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear	0.56	31.00	17.30	44.00	24.55	0.00	0.00	
Galley Stores	1.00	13.00	13.00	38.00	38.00	4.00	4.00	
Crane Rigging	2.00	15.00	30.00	0.00	0.00	0.00	0.00	
Engine Stores	1.00	6.00	6.00	20.00	20.00	0.00	0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	4.56	14.55	66.30	18.11	82.55	0.88	4.00	

### APPENDIX F

### BLANK FORMS DRAWINGS IN VOLUME II

#### M/V JAMIE G. EYMARD PRELOAD CALCULATION

#### MAXIMUM WEIGHT ITEMS TO BE CARRIED ON BOAT DURING OPERATION

ITEM	WT	LCG	LMOMT	TCG	TMOMT
	(LT)	(+AFT)		(+STBD)	
LIGHTSHIP UP WEIGHT	678.34	2.409	1634.12	-1.079	-731.93
PW & FO TOTALS					
DECK LOAD SUM TOT					
LIGHTSHIP ADD SUM TOT					
TOTAL LEG LOAD					

AFT LEG LOAD = TOT LEG LOAD x (34 + LCG) / 103	LT
PORT LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (29 - TCG) / 58	LT
STBD LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (29 + TCG) / 58	LT
LEG EXTENSION BELOW HULL FT	
REQ'D AFT LOAD = AFT LOAD ABV + (0.586 x LEG EXT)	LT
REQ'D PORT LOAD = PORT LOAD ABV + (0.879 x LEG EXT)	LT
REQ'D STBD LOAD = STBD LOAD ABV + (0.879 x LEG EXT)	LT

#### WEIGHT ITEMS ON BOARD AT TIME OF PRELOAD OPERATION

ITEM	WT	LCG	LMOMT	TCG	TMOMT
	(LT)	(+AFT)		(+STBD)	
LIGHTSHIP UP WEIGHT	678.34	2.409	1634.12	-1.079	-731.93
PW & FO TOTALS					
DECK LOAD SUM TOTAL					
LIGHTSHIP ADD SUM TOT					
TRIM BALL #1 PORT					
TRIM BALL #1 STBD					
TRIM BALL #1 CENT					
TRIM BALL #2 PORT					
TRIM BALL #2 STBD					
TRIM BALL #2 CENT					
TRIM BALL #3 PORT					
TRIM BALL #3 STBD					
TRIM BALL #3 CENT					
WING BALL #2 PORT					
WING BALL #2 STBD					
WING BALL #4 PORT					
WING BALL #4 STBD					
TRIM BALL #4 PORT					
TRIM BALL #4 CENT					
TRIM BALL #4 STBD					
PRELOAD BALL PORT					
PRELOAD BALL STBD					
PRELOAD BALL AFT					
TOTAL					

AFT LEG LOAD = TOT LEG LOAD + (29 + LCG) / 86	LT
PORT LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (28 - TCG) / 56	LT
STBD LEG LOAD = (TOT LEG LOAD - AFT LEG LOAD) x (28 + TCG) / 56	LT

									LITY CALC									
						S.	AMPLE LO	AD CONDIT	TION #1 BUF	RN OUT NO	DECK LOA	AD						$\perp$
																		$\bot$
	ITEM		WT	-	VCG FT	VMOM LT-FT		LCG FT	LMOM LT-FT		TCG FT	TMOM LT-FT		FS		СОММЕ	NTS	+
			LT		FI	LI-FI		FI	LI-FI		FI	LI-FI		LT-FT				+
PERATION	NAL LIGHTSHIP		1045.64		42.78	44732.48		1.68	1756.68		-0.70	-731.95				* SEE NO	TE BELOW	$\pm$
OT WTR 8	FUEL OIL TOT	AL I														FROM S	HT 2	+
BALLAST T	ANK TOTAL															FROM S	HT 2	土
TOK LOAD	SUMMARY TO	<u> </u>														FROM S	LITO	+
JECK LOAL	SUMMARY IC	I AL														FROMS	HI3	+
IGHTSHIP	ADD SUM TOTA	AL														FROM S	HT 3	士
																		$\perp$
OAD CONI	DITION TOTAL																	$\perp$
RAFT (HY	DROS)			KMT (HYDF	ROS)			KML (HYDE	ROS)			LCB (HYDR	ROS)			T-ARM = LO	CG-LCB	+
IOTE: DO	NOT EXCEED N	ANY DRAFT	OE 7 50 EEE	Т														$\blacksquare$
IOTE. DO	NOT EXCEED IN	DNAFT	OF 7.30 FEE	- I														+
ORRECTE	D KG = VCG TC	T + (FS TO	r / wt tot)					GMT = KM	T - CORR KG					GML = KML	- CORR KG	;		$\top$
		<u> </u>																Į.
LLOWABL	E KG FROM CU	IRVE	from 60 kt ir					HEEL = TC	G TOT x 57.3	B/GMT			deg	TRIM = T-A	RM x 57.3/	GML 		de
			110111 70 11111	laot ourvo														╈
					!													
IMITING V	ALUES:					ALUE FROM	THE ALLO	WABLE KG	CURVE									_
		GM I AND	GML MUSI	BE GREATE	R IHAN 1.0	F1							1			1		4
OORDINATI	E ORIGIN:	THE ORIGI	N OF THE C	I OORDINATE	SYSTEM IS	AT FRAME	30 (60' AFT	HEADLOG).	CENTERLIN	  E, AND BAS	SELINE		l					┿
						FT OF THE	`	,	1									
				•		TBD OF THE												$\vdash$
				•		BOVE THE												$\vdash$
		. 5011172				LOVE THE												┽
IGN CONV	ENTION:	POSITIVE I	EEL IS DOV	NN BY STBD	SIDE, NEG	ATIVE HEEL	IS DOWN E	Y PORT SIC	È									+
						E TRIM IS D								Copyright @		mics Marin	e, Inc.	$\perp$
		THE ALGE	BRAIC SIGN	S OF ALL VA	ALUES, SUN	IS, PRODUC	TS, AND QU	OTIENTS M	UST BE MAI	NTAINED F	OR PROPER	RESULTS		All rights re	served.			$\bot$
		1	1	I	1	i		1	1	I			1			I	1	1
NOTE: OPT	RATIONAL LIGHT	CHID VALUE	INCLUDES IT	EMC DEDMAA	ILLII V ATTA	CHED TO VE	COEL AT THE	TIME OF PC	IVEDV TO TU	E OWNED A	I ELLIDE IN 6	EVETEM AND	D OIL IN CRA	NE AND IACK	INC HAD OIL	TANKS		$\top$

# CLASS SUPER 215 STABILITY CALCULATION SUMMARY SHEET SAMPLE LOAD CONDITION #1 BURN OUT NO DECK LOAD

ITEM	WT	MAX WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	FS	COMMENT
	LT	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	LT-FT	
PORT POTABLE WTR		35.38		0.00		0.00		0.00		
STBD POTABLE WTR		35.38		0.00		0.00		0.00		
FUEL OIL SETTLING (PORT)		26.16		0.00		0.00		0.00		
FUEL OIL DAY (STBD)		26.69		0.00		0.00		0.00		
TOTAL POT WTR & FUEL OIL	0.00	123.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRIM BALL #1 PORT		45.18		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #1 STBD		45.18		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #1 CENT		46.73		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #2 PORT		57.99		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #2 STBD		57.99		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #2 CENT		59.50		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #3 PORT		32.71		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #3 STBD		32.71		0.00		0.00	0.00	0.00	0.00	
TRIM DIAG BALL #3 PORT		18.32		0.00		0.00	0.00	0.00	0.00	
TRIM DIAG BALL #3 STBD		18.32		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #4 PORT		41.09		0.00		0.00	0.00	0.00	0.00	
TRIM BALL #4 STBD		41.09		0.00		0.00	26.09	0.00		
TRIM BALL #4 CENT		48.94		0.00		0.00	0.00	0.00	0.00	
WING BALL #1 PORT		26.02		0.00		0.00	0.00	0.00	0.00	
WING BALL #1 STBD		26.02		0.00		0.00	0.00	0.00	0.00	
WING BALL #2 PORT		47.23		0.00		0.00	0.00	0.00	0.00	
WING BALL #2 STBD		47.23		0.00		0.00	0.00	0.00	0.00	
WING BALL #3 PORT		28.51		0.00		0.00	0.00	0.00	0.00	
WING BALL #3 STBD		28.51		0.00		0.00	0.00	0.00	0.00	
WING BALL #4 PORT		38.04		0.00		0.00	0.00	0.00	0.00	
WING BALL #4 STBD		38.04		0.00		0.00	0.00	0.00	0.00	
WING BALL #5 PORT		23.66		0.00		0.00	0.00	0.00	 0.00	
WING BALL #5 STBD		23.66		0.00		0.00	0.00	0.00	0.00	
WING BALL #6 PORT		53.69		0.00		0.00	0.00	0.00	0.00	
WING BALL #6 STBD		52.79		0.00		0.00	0.00	0.00	0.00	
MAIN PRELOAD BALL PORT		175.58		0.00		0.00	0.00	0.00	0.00	
MAIN PRELOAD BALL STBD		175.58		0.00		0.00	0.00	0.00	0.00	
AFT PRELOAD BALLAST		41.06		0.00		0.00	0.00	0.00	 0.00	
TOTAL BALLAST	0.00	1371.37	0.00	0.00	0.00	0.00	0.00	0.00	 0.00	
`										

						JLATION SUMMARY S RN OUT NO DECK LO		
				ECK LOAD SUM		001 110 52011 20		
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	COMMENTS
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
TOTAL DECK LOAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			LIGHTSHIP ADDI					
ITEM	WT	VCG	VMOM	LCG	LMOM	TCG	TMOM	
	LT	FT	LT-FT	FT	LT-FT	FT	LT-FT	
Crew and Personal Gear			0.00		0.00		0.00	
Galley Stores			0.00		0.00		0.00	
Crane Rigging			0.00		0.00		0.00	
Engine Stores			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
			0.00		0.00		0.00	
LIGHTSHIP ADD SUM TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	