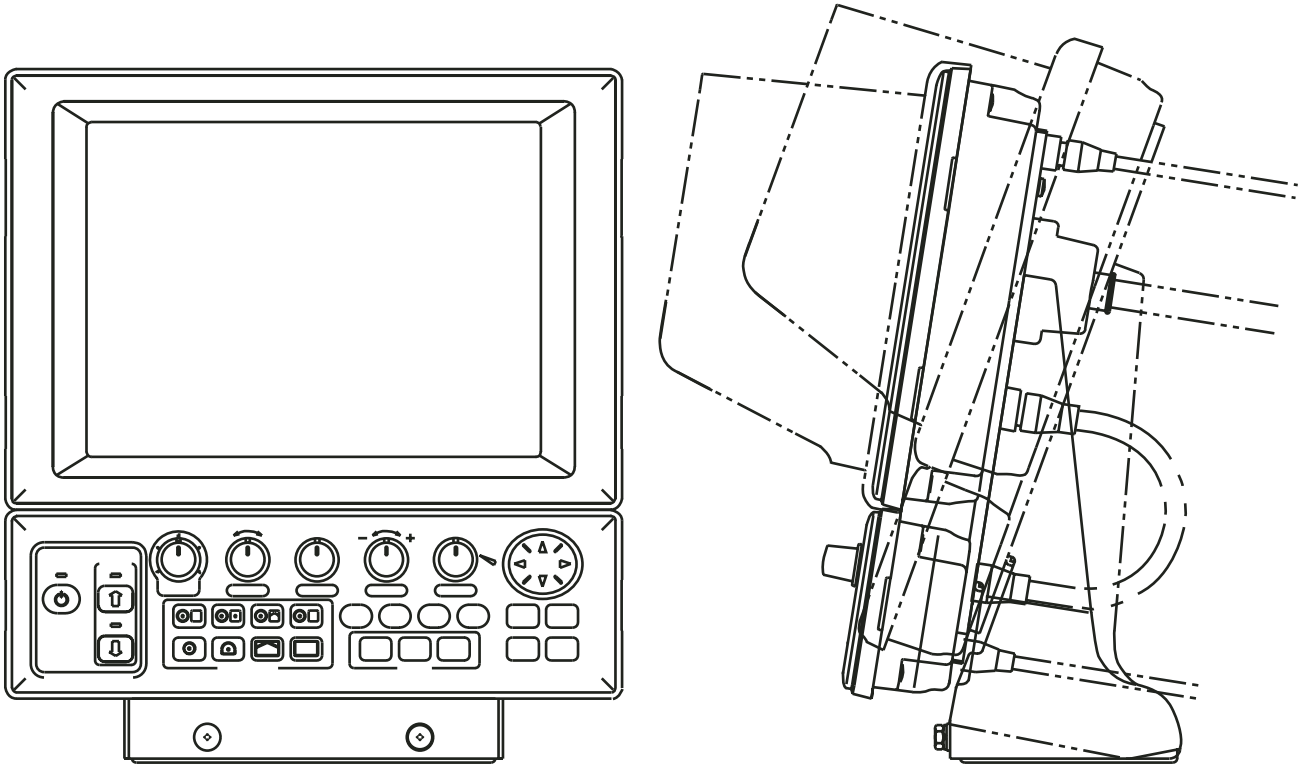
**Please read this supplement to the CH270 Manual first.**

FURUNO®

*CH270 Searchlight Sonar*



# Important Technical Installation Information

*The following checklist and information sheets are provided to help you efficiently install your CH270 sonar. If this is a high speed vessel, please pay careful attention to the tube length and fairing instructions.*

# CH270 Installation Supplement Contents

*The following checklist and information sheets are provided to help you properly and efficiently install your CH270 sonar. If this is a high speed vessel, please pay careful attention to the tube length and fairing instructions.*

**Page**



*Please feel free to contact us with any questions that you may have. Additional information such as this may be found on our web site www.Furuno.com.*

*This material is provided to augment, not replace, what is found in your CH270 manuals.*

# CH270 Installation Check Sheet

## Vessel Information

Vessel Name: _____
Type: _____ Use: _____
Length: _____ Registry: _____
Operating Speed: _____ Hull Type: _____

## CH270 System Information

CH270 Model: _____
Serial Number: _____
Shaft Travel: _____
System Input Voltage: _____

## Dealer Information

Dealer Name: _____
Address: _____ City, State, Zip: _____
Installed By: _____
Date: _____ Location: _____

## Standard System – MU100C Display Check List

| | | |
|---|---|---|
| Are all cables and connections tight & strapped? | ❑ Yes | ❑ No |
| Is NMEA data connected and activated? | ❑ Yes | ❑ No |
| What NMEA devices are connected: _____ | | |
| Has CH252 control head installation & operation been checked? | ❑ Yes | ❑ No |
| Is the unit grounded properly? | ❑ Yes | ❑ No |

*OR*

## Black Box System – VGA Display Check List

| | | |
|---|---|---|
| Are all cables and connections tight & strapped? | ❑ Yes | ❑ No |
| Does the monitor display the correct color palette? | ❑ Yes | ❑ No |
| Are the IF8000 dip switches set correctly? | ❑ Yes | ❑ No |
| Is NMEA data connected and activated? | ❑ Yes | ❑ No |
| What NMEA devices are connected: _____ | | |
| Has CH252 control head installation & operation been checked? | ❑ Yes | ❑ No |
| Is the unit grounded properly? | ❑ Yes | ❑ No |

## CH273 Transceiver Unit Check List

| | | |
|---|---|---|
| Are all cables and connections tight & strapped? | ❑ Yes | ❑ No |
| Check and note actual input voltage _____ | | |
| Is the unit grounded properly? | ❑ Yes | ❑ No |

## Motion Sensor or Incinometer Check List

| | | |
|---|---|---|
| Which sensor is being used, BS704 or MS100? | ❑ BS704 | ❑ MS100 |
| Where is the sensor located? _____ | | |
| Has the sonar been programmed to look for the sensor? | ❑ Yes | ❑ No |

## Sonar Tube Installation Check List

| | | |
|---|---|---|
| Was a Furuno supplied sonar tube used? | ❑ Yes | ❑ No |
| If not, what was the ID of the sonar tube used? _____ | | |
| What is the actual length of the sonar tube? _____ | | |
| Where is the sonar tube mounted? _____ | | |
| Is the sonar tube on or off the vessels centerline? | ❑ On | ❑ Off |
| Has a sonar tube air venting system been installed? | ❑ Yes | ❑ No |
| Has a forward sonar tube fairing been installed? | ❑ Yes | ❑ No |

# CH270 Installation Check Sheet - continued

## CH181 or CH184 Hull Unit Check List

Check and note actual input voltage: _____

| | | |
|---|---|---|
| Are all cables and connections tight and strapped? | ❑ Yes | ❑ No |
| Is the unit grounded properly? | ❑ Yes | ❑ No |
| Has the soundome been lowered and raised by hand? | ❑ Yes | ❑ No |
| Have the shaft guides been adjusted for 0.5mm tolerance? | ❑ Yes | ❑ No |
| Does the shaft have a heading mark inscribed? | ❑ Yes | ❑ No |
| Is the soundome 1/2" up, in the sonar tube when retracted? | ❑ Yes | ❑ No |
| Has epoxy been used on shaft threads? | ❑ Yes | ❑ No |
| Has soundome packing sponge been removed? | ❑ Yes | ❑ No |
| Was oil added to the soundome? | ❑ Yes | ❑ No |

*****CAUTION - Do not lay soundome on its side once oil has been added*****

| | | |
|---|---|---|
| Are all the soundome Phillips Head screws tight? | ❑ Yes | ❑ No |
| Have 3 layers of greased cotton packing been used? | ❑ Yes | ❑ No |
| Is the safety clamp installed and tightened? | ❑ Yes | ❑ No |

## Accessories Check List - if applicable

| | | |
|---|---|---|
| Checked operation of the SC-05WR external speaker? | ❑ Yes | ❑ No |
| Checked operation of the CH256 handheld remote control? | ❑ Yes | ❑ No |

## Sea Trial Check List

Date: _____ Location: _____

Operator: _____

Sea conditions: _____

Maximum detection range for the sea-bottom: _____

Maximum detection range for fish targets: _____

| | | |
|---|---|---|
| Has the sonar picture been checked for alignment? | ❑ Yes | ❑ No |
| Has the auto-retraction feature been checked? | ❑ Yes | ❑ No |
| Have the system manuals been given to the operator? | ❑ Yes | ❑ No |
| Was any hoist movement noted at maximum speed? | ❑ Yes | ❑ No |

## Operator Training

Date: _____ Location: _____

Trainer: _____

Training provided for: _____

## Necessary Follow-up

Required for: _____

When: _____

## Warranty Card Completed and Sent to Furuno USA

Date: _____

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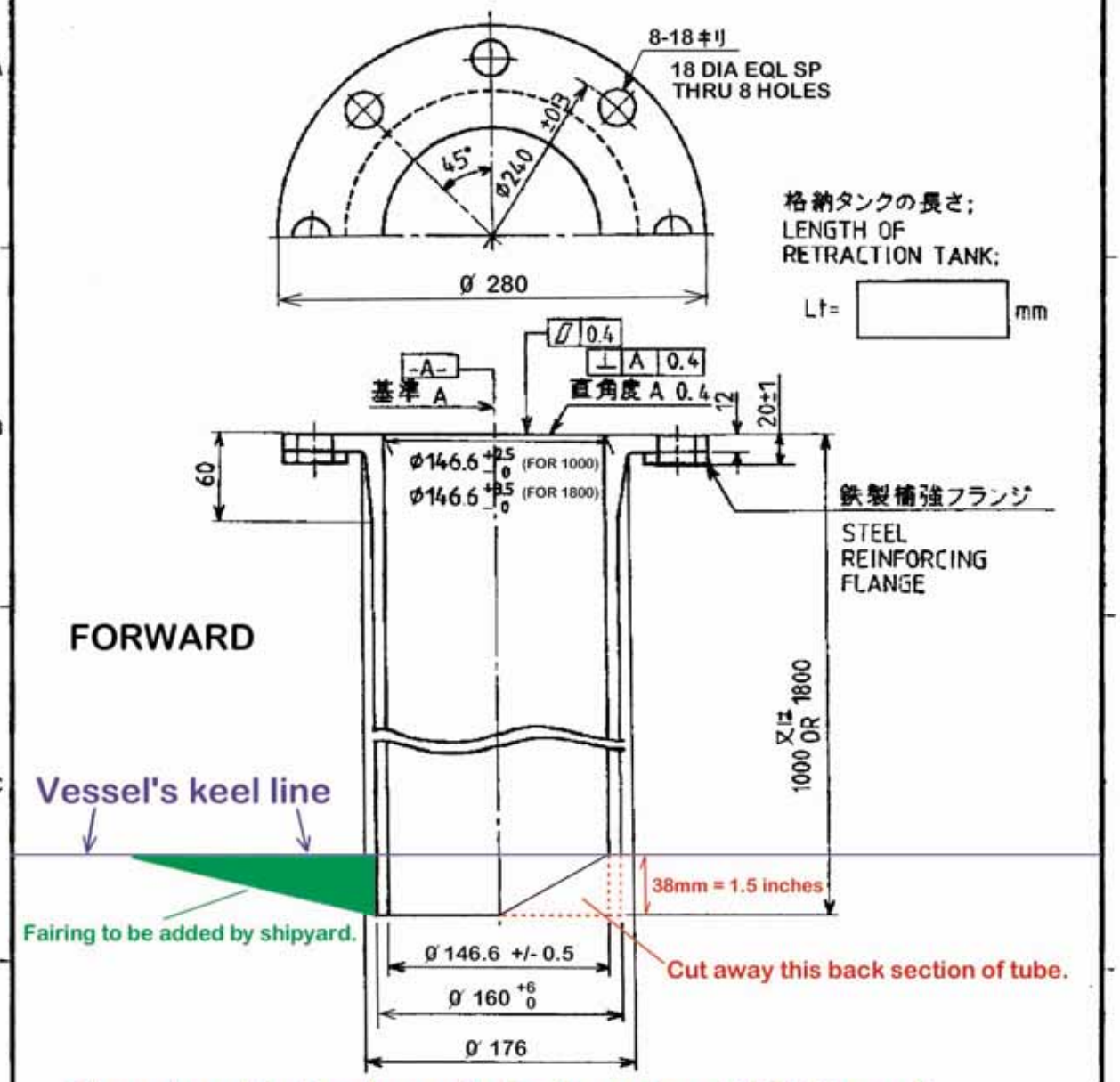



**Standard tube length is 1 meter (1000mm).**
**Minimum tube length is 22 inches or 560mm.**

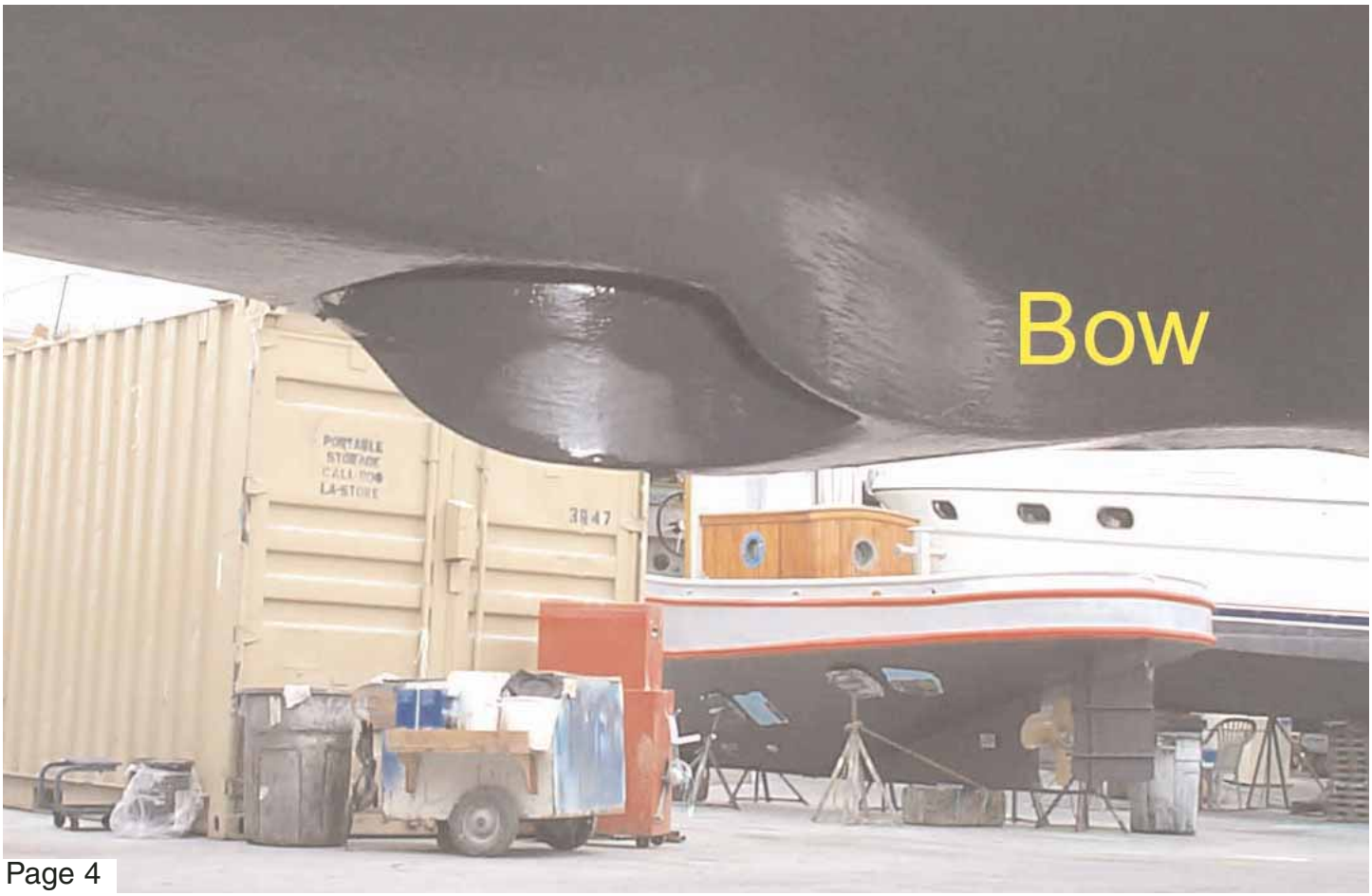
| 品番 ITEM | 品名 NAME | 材質 MATERIAL | 数量 Q'TY | 図番 DWG.NO. | 摘要 REMARKS |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 承認 APPROVED | SEP・6・'88 T.NAKAJO | 三角法 THIRD ANGLE PROJECTION | | 名称 TITLE | FRP製格納タンク外観図<br>FRP RETRACTION TANK<br>OUTLINE DRAWING |
| 検図 CHECKED | Sep.・6・'88 T.Hoso | 尺度 SCALE | 1/4 | | |
| 製図 DRAWN | AUG・30・'88 M.USUDA | 重量 WEIGHT | 1000mm: 10 kg<br>1800mm: 16 kg | 図番 DWG.NO. | C1271-004-A |

# Sonar tube fairings for high speed vessels

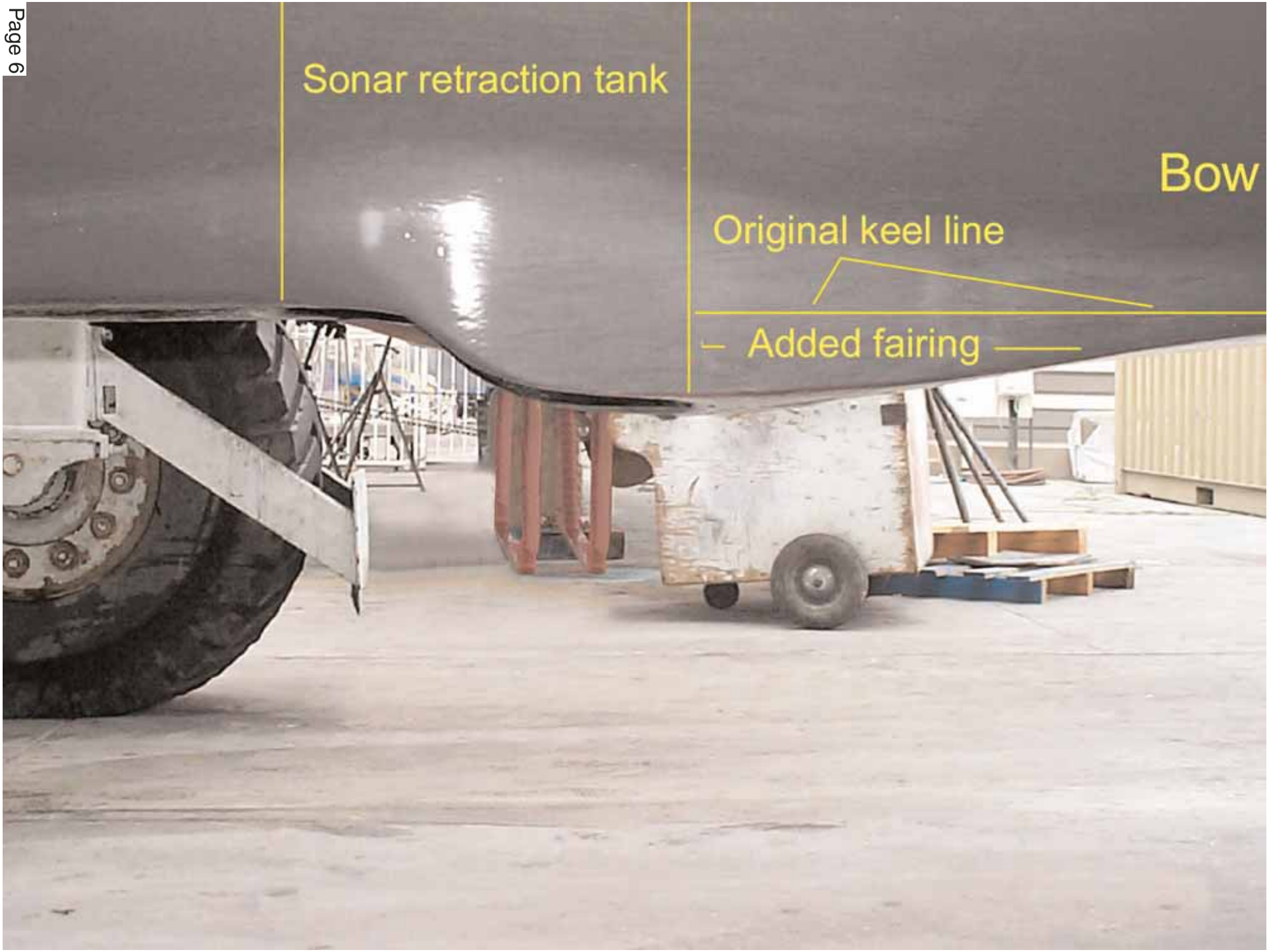
*Today, many CH270 hull tubes have to be placed in the forward part of the vessel. This location almost guarantees underway turbulence. Although a poor location, space limitations usually make it the only site available for the hull tube and hoist. As the installation manual shows, the best location is always one third to one half way back from the bow. This is okay, because a bit of prior planning and on - site fabrication will allow a very successful installation on a fast, planing hull vessel. When the vessel's bow rises or she is on a plane, you must prevent the hull tube rear wall from becoming a large water scoop. A simple but effective fairing must be constructed. The fairing routes (diverts) the water flow away from the tube opening, preventing it from striking the tube's rear wall. The same principles applicable for bow thruster installations are true for any sonar hull tube.*

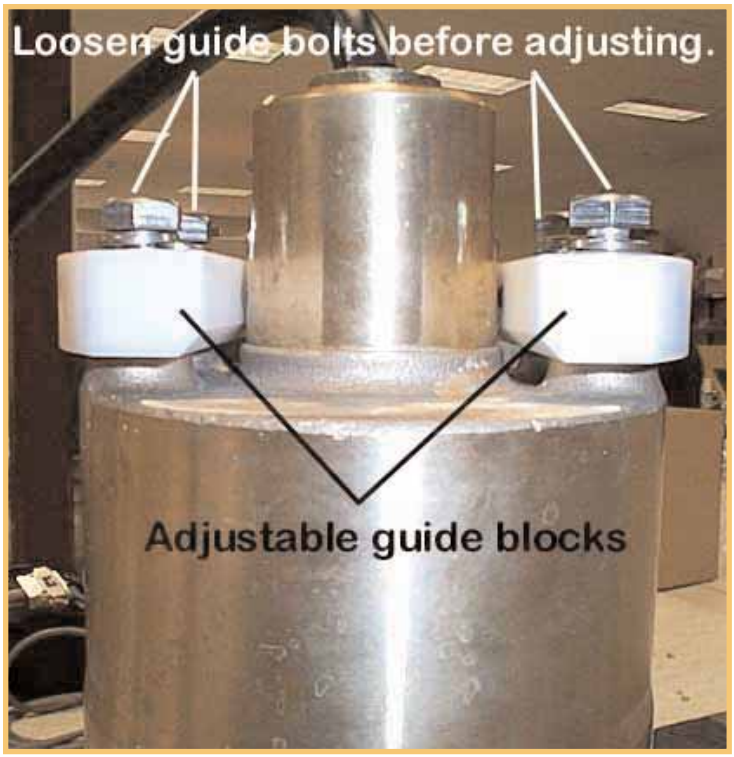
*Properly sized and shaped, the fairing will minimize turbulence and destructive soundome or shaft movement. Some vessels may require several fairing size and shape adjustments to be absolutely successful. Pictures of several typical, successful fairings are attached for your information and use. A carefully fitted installation will insure you many years of reliable, trouble free CH270 sonar operation.*



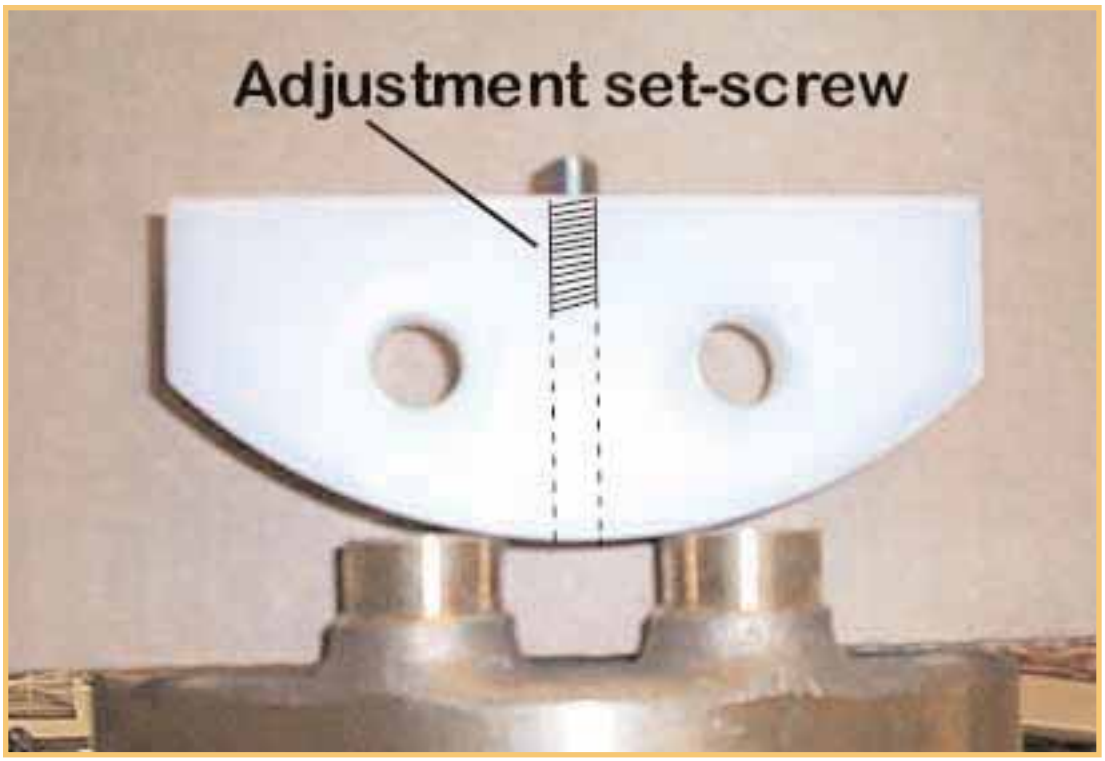

Bow


Bow


Sonar retraction tank
Bow
Original keel line
Added fairing








Please confirm that the narrowest gap between the tank guides and the retraction tube wall is **0.5mm.** Adjust if necessary.

# Motion Sensors, Inclinometers and Longer Interconnect Cables

*This valuable accessory unit must be mounted correctly to obtain any benefit from it:*

*a) Select a mounting location that is dry and vibration free*
*b) The selected location should be as close to the sonar hoist unit as possible*
*c) Mount the unit level (only compensating for normal vessel trim)*
*d) Line the unit up "fore and aft" accurately*
*e) Mount the unit "right side up" only*

*If a longer interconnect cable assembly is required, the following options are available:*

| **Part number** | **Description** |
|---|---|
| *MS1-CBL-15M* | *15 meter signal cable assembly* |
| *MS1-CBL-30M* | *30 meter signal cable assembly* |
| *MS1-CBL-50M* | *50 meter signal cable assembly* |

*Note:*
*The MS100 compensates for any vessel pitching and rolling at sea. To properly set itself the motion sensor must be powered up while the vessel is in a stable condition. This step is easier to accomplish at the dock. Please get in the habit of powering up the entire CH270 system prior to departing from the dock. This one easy step will ensure proper operation of the MS100 and enhanced CH270 performance for the duration of the voyage.*

# Soundome Cover Removal and Replacement

**To detach or replace the soundome cover assembly, remove the 8 stainless steel cross head cap screws**.

*Once the soundome has been filled with oil, keep it in a vertical position to prevent any internal seepage. If the soundome assembly has to be removed for repair or shipment, the oil must always be removed. You may wish to retain the soundome packing material for future use.*

## Checking Soundome When In Dry Dock

*When the vessel is dry-docked, check for any signs of corrosion on the Soundome assembly. Find the reason for the corrosion and as necessary attach a zinc plate to the hull unit as an anticorrosion measure. The soundome cover may be cleaned with a household plastic scouring pad, such as "Scotch Brite" pads.*

*Please feel free to call us at (360) 834-9300 or visit us on the web at www.Furuno.com if you have any additional questions.*

*Thank you for purchasing the CH270 Searchlight Sonar System!*

*Furuno U.S.A., Inc.*