



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543-1026

September 22, 2008

MEMORANDUM FOR: AIS Observers

FROM: Amy Van Atten
Acting Branch Chief, FSB

SUBJECT: Rhule Trawl

This memo is intended to clarify and specify how to complete the Trawl Gear Characteristics Log for the Rhule Trawl, previously called the Eliminator Trawl or Haddock Rope Trawl. As of August 13, 2008 this net will be an alternative to the Haddock Separator Trawl, in the Regular B DAS Program and Eastern U.S./Canada Haddock Special Access Programs.

Background

Framework 40-A was developed in Amendment 13 to provide additional opportunities for NE multispecies vessels to target healthy fish stocks in an attempt to achieve optimum yield from the fishery. The Haddock Separator Trawl was developed and approved in 2006, to allow fishing in otherwise closed areas, as it was shown to target haddock and exclude cod.

The Rhule Trawl won the 2007 smart gear competition and recently gained NMFS approval to be used in the US/Canada management area. This net uses large meshes (> 7.9 ft) in the forward part to allow fish escapement. Obtaining accurate data on this net are important since observer data will be analyzed to determine efficiency and selectivity of this net.

The Trawl Gear Characteristics Log

Several sections of the Trawl Gear Characteristics Log will need special attention when recording data for this net. Any comments you or the captain can provide will be very helpful for future gear log modifications. The Net Type will be recorded as **“Rhule Trawl 4-Seam”** (not currently on your net type cheat sheet). Kites will be used therefore the number of panels and size of panels should be recorded.

The fishing circle fields may cause some confusion because of the extremely large meshes located on the bottom of the fishing circle and the smaller meshes on the top. The protocol states to record the total number of meshes and the size of the largest mesh in the fishing circle. Any additional information the Captain can provide regarding the fishing circle mesh number and size of mesh should be recorded in the comments section (see figure 4). For the escape outlet section, **Yes**, should be checked as the large meshes in the fore part of the net will be considered an escape outlet. The *Escape Outlet Type field* should be recorded as 1, (Panel). The *Escape Outlet Mesh Size* (recorded in inches), is the size of the largest mesh directly behind the sweep (these meshes will be larger than 95 inches). The *Escape Outlet Length Field* should be recorded as the total number of large meshes behind the sweep in the fore/aft direction of the net. *Escape Outlet Width* is preferred to be recorded as the number of meshes along the sweep, which runs from one side of the net to the other. The captain may not know this mesh count, in which case the length of the sweep, in whole inches, can be recorded. *Shape Type Code* should be recorded 01, the code for rectangular. *Location Type Code* should be recorded as 2, (Net Bottom).

Fields Summarized:

Net Name = Bottom Trawl

Net Type = Rhule Trawl (4-Seam)

Kite Panel = Yes (see figures) Definition = A flat structure, usually semi-flexible used to modify the shape of trawl and mesh openings by providing lift when a trawl is moving through the water

Number = Record the total number of panels in the kite (generally will be 3)
(Note: A Kite can consist of multiple panels)

Width = Record in whole inches the width of each individual panel, from captain

Length = Record in whole inches the length of each individual panel, from captain
(Note: entire size of the kite (all panels together) should be a minimum of 29.1 sq. ft)

Fishing Circle – Circumference of net at the narrow, aft end of the square of the net

Meshes = Record the number of meshes around net (obtained from captain).

Mesh Size = Record the size, in whole inches, of the largest mesh in the fishing circle

(Note: Any information the captain can provide about the size and number of meshes in this fishing circle should be commented on. There are going to be large meshes on the bottom of the fishing circle and smaller meshes on the top of the fishing circle).

Escape Outlet – An opening in the net to facilitate escapement of fish, sea turtles, marine mammals *etc.*) (see figures)

Escape Outlet Used = Yes

Escape Outlet Type = Panel (1)

Mesh Size = Record (in whole inches) the size of largest mesh behind the sweep. This may be obtained from the captain.

Length = Record, the number of the largest meshes behind the sweep in fore/aft direction of the net.

Width = Record the number of meshes along the sweep, if not known by captain record the length of the sweep in inches (The sweep runs from one side of the net to the other).

Shape = Record, 01 for rectangular.

Location = Record code for Net Bottom (2).

Comment on any additional information the captain can provide about this escape outlet, such as number of large meshes in wings, or the mesh sizes as they taper toward the codend.

If you have any additional questions regarding this gear you can contact Tyler Staples at (508) 495 – 2129 or KB McArdle at (508) 495 – 2377. Thank You

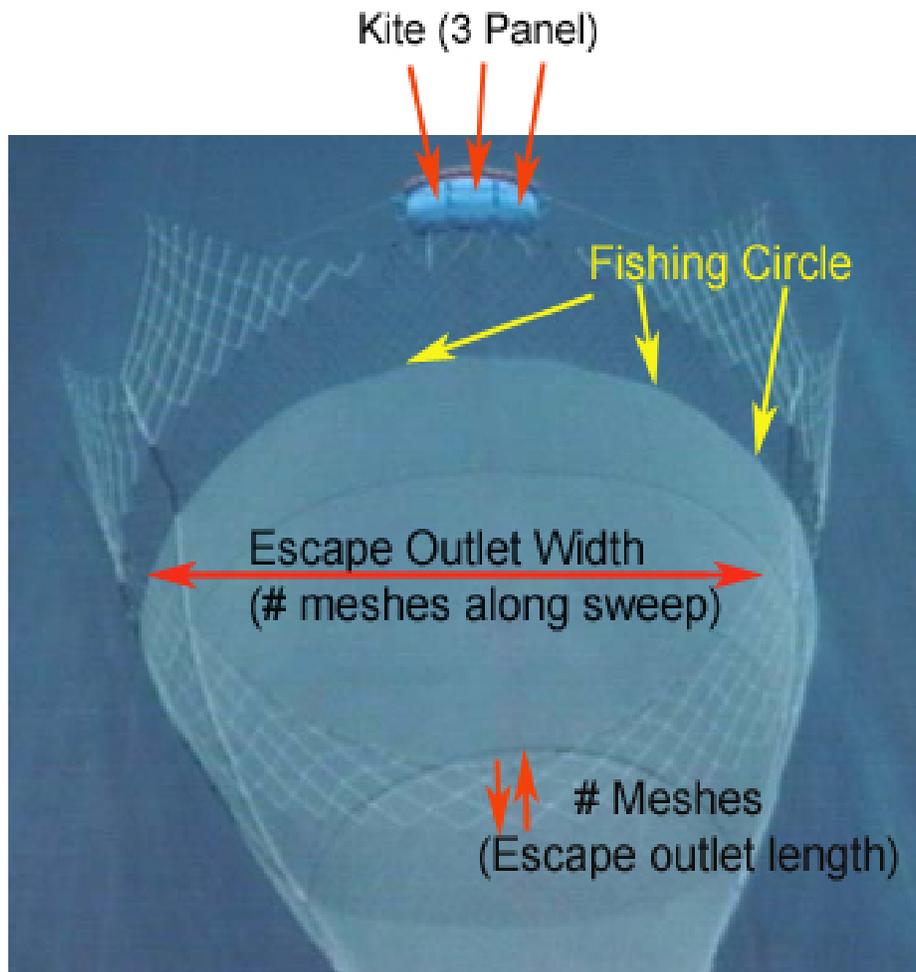


Figure1. Top view, kite and escape outlet

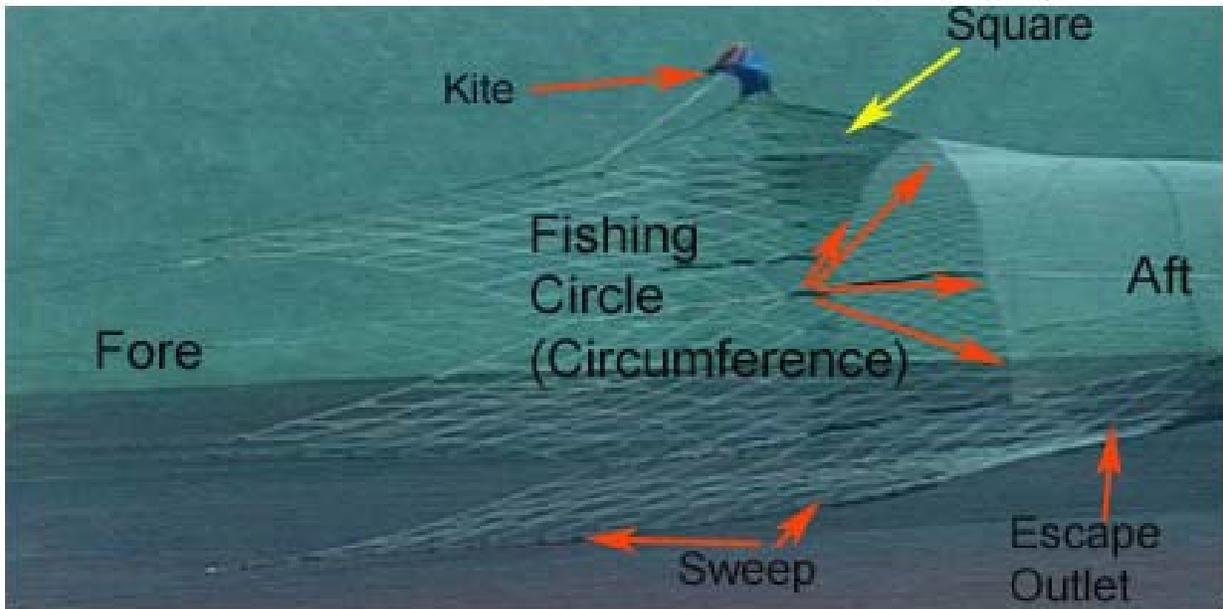


Figure 2. Side view of net

Large Diamond Meshes (>7.9 ft)



Figure 3. Large diamond mesh in escape outlet

**NMFS FISHERIES OBSERVER PROGRAM
TRAWL GEAR CHARACTERISTICS LOG**

OBS/TRIP ID	Z00000-
DATE LANDED mm/yy	00 / 00
PAGE #	1 OF 1

GEAR CODE 0 5 0		NET NAME Bottom Trawl		NET TYPE Rhule Trawl		NET BUILDER Superior Trawl		CODEND HUNG Unknown 0 Diamond 1 X Square 2 Square, Wrapped 3 Combination 8		GEAR MOUNTED ELECTRONICS USED? NO 0 X YES 1		EXCLUDER/SEPARATOR DEVICE USED? NO 0 X YES 1	
GEAR NUMBER(S) 01		CONSTRUCTION MATERIAL TYPE NET BODY CODEND Unknown 00 Nylon 01 Poly 02 Kevlar® 03 Spectra® 04 Tenex® 05 Nomex® 06 Combination 98 Other 99		LENGTH MEASUREMENTS Headrope 196 ft Footrope/Sweep 244 ft Ground Cable 20 fm Bridle 30 fm		FISHING CIRCLE # MESHES 365 MESH SIZE 96 0 in		TWINE TYPE Single 1 Double 2 X Single on Top/ 3 Double on Bottom Other 9		NUMBER OF TRANSDUCERS TYPE Unknown 0 Wired 1 Wireless 2 Both 3		T.E.D. EXTENSION Mesh Size _____ in	
DOORS USED? NO 0 YES 1 X		WEIGHT OF ONE DOOR 550 kg		KITE PANEL KITE USED? NO 0 YES 1 X		KITE USED? Number 3 Width 40 in Length 40 in		MESH SIZE 161 mm 163 mm 162 mm 160 mm 160 mm 162 mm 164 mm 159 mm 160 mm 161 mm		BRAND Unknown 0 Furuno® 1 Simrad® 2 Northstar Tech 3 Notus 4 Marport 5 Scanmar 6 Combination 8 Other 9		ESCAPE OUTLET USED? NO 0 YES 1 X TYPE Unknown 0 Panel 1 X Opening 2 Single Flap 3 Double Flap 4 Other 9	
COMMENTS Floats attached to kite panel Sweep tapered down from 16 inch in center down to 12 inch at wing ends Captain did not know number of meshes on sweep so I recorded length of sweep in inches Fishing Circle Captain said there were 22 meshes at 8 ft in the belly of the net and 221 8 inch meshes on the top and each of the sides of the net had 61 meshes at 8 inches Large diamond meshes in escape outlet made of tenex, rest of net poly		GROUND GEAR TYPE GROUND CABLE BRIDLE/LEG SWEEP Unknown 00 Chain 01 Cable / Wire 02 X Wrapped Cable 03 Rock Hopper 04 Roller 05 Rubber Cookie 06 Bobbin 07 Plate Gear 08 None 98 Other 99		SWEEP GEAR Number 4 Diameter 16 in		FLOATS Number 20 Diameter 8 in		LINER USED? NO 0 X YES 1 MESH SIZE ____ mm ____ mm ____ mm ____ mm		LOCATION Unknown 0 Headrope 1 Wings 2 Footrope 3 Headrope & Footrope 4 Door 5 Codend 6 Other Combo 8 Other 9		MESH SIZE 96 in LENGTH # MESHES 2 OR ____ in WIDTH # MESHES ____ OR 2928 in SHAPE Type Code 01 LOCATION Type Code 2	
						STRENGTHENER USED? NO 0 X YES 1				# OF RECEIVERS			
						CHAFING GEAR USED? NO 0 YES 1 X							

Figure 4. Example of gear log for Rhule trawl