

(A) STATIC TEST REQUIREMENTS FOR EASING OUT LINE FITTINGS

1. PROVIDE LABEL PLATES AS SHOWN BELOW.
2. STATIC PULL TEST STAPLE AND PAD EACH TO 600 POUNDS BY JACK DYNAMOMETER.

**PADEYE FOR EASING-OUT LINE
STATIC TEST - 600 LBS**

**FAIRLEAD STAPLE FOR EASING-OUT LINE
STATIC TEST - 600 LBS**

METAL PHOTO
BLACK LETTERING 5/16" HIGH

(A) STATIC TEST REQUIREMENTS FOR PROBE SWIVEL ARM

1. WITH THE PROBE SWIVEL ARM RIGGED AS IN SERVICE, ATTACH A LINE TO THE PELICAN HOOK, APPLY A PULL OF 36,000 POUNDS IN THE FOLLOWING POSITIONS:
ABEAM HORIZONTAL
30 FORWARD, 5 ABOVE HORIZONTAL
30 AFT, 15 BELOW HORIZONTAL
2. HOLD THIS STRAIN FOR A PERIOD OF TEN (10) MINUTES IN EACH POSITION DURING WHICH TIME NO FAILURE OR DEFORMATION SHALL RESULT.
3. APPLY A ABEAM HORIZONTAL PULL OF 9000 POUNDS ON THE INHAUL PAD AND HOLD FOR A PERIOD OF TEN (10) MINUTES.
4. PROVIDE LABEL PLATE AS SHOWN BELOW:

**FUELING AT SEA
PROBE RECEIVING STATION
STATIC TEST - 36,000 LBS**

3. INHAUL PADEYE FOR PROBE, ITEM 5, SHALL BE INSTALLED ON THE OPPOSITE SIDE, FORWARD OR AFT, OF THE STATION FROM THE HAULING PART OF THE INHAUL FINAL EXACT LOCATION SHALL BE SUCH THAT WHEN INHAUL IS RIGGED, THE INHAUL SHALL LIE DIRECTLY ABOVE AND IN LINE WITH THE SPANWIRE WHEN THE PROBE RECEIVER IS POINTING DIRECTLY ABEAM.
4. EASING OUT LINE PADEYE & STAPLE, ITEM 13, SHALL BE INSTALLED ON THE HORIZONTAL AND ABOVE THE SWIVEL ARM.
5. STOWAGE COVER FOR PROBE, ITEM 6, PROVIDES SUPPORT AND PROTECTION FOR THE PROBE RECEIVER, PREFERABLY, IT SHOULD BE INSTALLED SO THAT THE PROBE RECEIVER, ITEM 1, IS POINTING AWAY FROM THE FUEL OIL RISER WHEN STOWED. IT MAY BE MOUNTED TO THE HOUSE SIDE OR OTHER SUITABLE SUPPORT STRUCTURE.
6. FUEL OIL RISER SHALL PREFERABLY BE LOCATED FORWARD OF THE STATION. IT SHALL BE FITTED WITH THE 8" IPS TERMINAL FLANGE AND A GATE VALVE AND FITTINGS AS SPECIFIED IN SECTION 9550-1 OF THE "GENERAL SPECIFICATIONS FOR SHIPBUILDING." THE TERMINAL FLANGE SHALL BE LOCATED IN THE PROPER HORIZONTAL RELATIONSHIP TO THE SWIVEL ARM ASSEMBLY AS SPECIFIED ON REFERENCE 5. THE VERTICAL RELATIONSHIP OF THE TERMINAL FLANGE TO THE SWIVEL JOINT SHALL BE AS SHOWN ON REFERENCE 5. IF VERTICAL RELATIONSHIP CANNOT BE MAINTAINED, A BUTTERFLY VALVE, WITH POSITIVE TYPE CONTROL, MAY BE SUBSTITUTED FOR THE GATE VALVE.
7. RIDING LINE AND JIGGER TACKLE FITTINGS, ITEMS 16-19 & 21-23 SHALL BE LOCATED AS SHOWN ON SHEET 4 OF THIS PLAN.
8. PORTABLE LIFELINES SHALL BE PROVIDED IN SEPARATE SECTIONS, TO CLEAR THE FAS GEAR OF EACH TYPE FUELING SYSTEM, AS SHOWN ON SHEET 4 OF THIS PLAN.
9. TO ACHIEVE COMPLETE WORKING RANGE AND TO PROVIDE ADEQUATE WORKING AREA FOR THE DIFFERENT TYPES OF FUELING SYSTEMS, THE DECK EDGE DISTANCE SHALL BE AS FOLLOWS:
A- WHEN PROBE SWIVEL ARM ASSEMBLY IS MOUNTED 6'-0" ABOVE WORKING LEVEL, DECK EDGE DISTANCE = 5'-0" TO 7'-0"
B- WHEN PROBE SWIVEL ARM ASSEMBLY IS MOUNTED 6'-6" ABOVE WORKING LEVEL, DECK EDGE DISTANCE = 5'-0" TO 8'-6"

REVISIONS

SYM.	DESCRIPTION	DATE	APP'D
A	PC NO. 4 DELETED; RELOCATED EASING OUT LINE PAD AND STAPLE; ADDED TEST REQUIREMENTS	1/15/77	1/23/77

GENERAL NOTES

1. THE INTENT OF THIS PLAN IS TO SET FORTH THE PROPER CONFIGURATION OF A FUELING AT SEA RECEIVING STATION SO THAT THE STATION MAY RECEIVE FUEL BY ANY OF THE SEVERAL METHODS. SHEET 2 SHOWS HOW THE STATION IS RIGGED TO RECEIVE FUEL BY THE PRIMARY METHOD, PROBE. SHEET 3 SHOWS HOW THE STATION IS RIGGED TO RECEIVE FUEL BY THE SECONDARY METHODS, ROBB OR NATO COUPLING. IN MANY CASES IT MAY NOT BE POSSIBLE TO CONFIGURE THE STATION EXACTLY AS SHOWN BUT IN ALL CASES, THE STATION MUST BE CONFIGURED AS NEAR AS POSSIBLE TO THAT SHOWN AND MUST INCLUDE ALL OF THE ITEMS LISTED AND MUST COMPLY WITH THE CRITERIA ESTABLISHED BY THE LISTED REFERENCE PLANS, SINCE THE PROBE SYSTEM IS THE PRIMARY SYSTEM, ALL EFFORT SHALL BE MADE TO CONFIGURE THE STATION SO THAT THE PROBE RECEIVER HOSE ASSEMBLY & SWIVEL JOINT ASSEMBLY MAY REMAIN RIGGED AT ALL TIMES.
2. SWIVEL JOINT ASSEMBLY, ITEM 3, SHALL BE INSTALLED SO THAT ITS CENTER, OR THE CENTERLINE OF THE SPANWIRE, IS FROM 6'-0" TO 6'-6" ABOVE THE WORKING LEVEL OF THE F.A.S. STATION AS SPECIFIED ON REFERENCE 5. ITS SUPPORT STRUCTURE MAY BE A DECK HOUSE SIDE, OUTRIGGER, KINGPOST ETC. IT MAY BE RIVETED, BOLTED, OR WELDED TO ITS SUPPORT STRUCTURE AS SHOWN ON REFERENCE 3.

LIST OF ITEMS REQUIRED AT F.A.S. STATION

ITEM	QUAN.	DESCRIPTION	SOURCE	FSN	REMARKS	REF
1	1*	PROBE RECEIVER	GOVERNMENT FURNISHED	S2040-830-5146		
2	1*	SWIVEL ARM (PROBE)		S2040-851-9467		2
3	1	SWIVEL JOINT ASSY		S2040-851-9471		3
4	1	CONVENTIONAL LINK ADAPTER			FURNISHED WITH ITEM 3	3
5	1	INHAUL PADEYE (PROBE)			FURNISHED WITH ITEM 3	3
6	1*	HINGED STOWAGE COVER		S2040-851-9474		4
7	1*	HOSE ASSEMBLY		S2040-933-1454		5
8	1	INHAUL BLOCK	INSTALLING ACTIVITY PROVIDE		12" WOOD SNATCH BLOCK, RIG NO. 25 BOSTON AND LOCKPORT FIG. 3072 "U" CONNECTION OR EQUAL	
9	1	QUICK COUPLING (ROBB) NIPPLE ASSEMBLY		STL. 1H4730-640-1309 882, 1H4730-640-1308	STL. FOR NSFO 812, FOR JP-5	6
10	1	BREAKABLE SPOOL "A" END		1H4730-237-8171		7
11	1	ADAPTER (FOR ROBB COUPLING)			STRAIGHT OR 45° AS REQUIRED BY REFERENCE PLAN	5
12	1	EASING-OUT LINE ASSEMBLY			MANUFACTURE PER REFERENCE PLAN	8
13	1	EASING-OUT PADEYE & STAPLE			MANUFACTURE PER REFERENCE PLAN	8
14	1	REMATING LINE ASSEMBLY			MANUFACTURE PER REFERENCE PLAN	8
15	2	RIDING LINE ASSEMBLY			MANUFACTURE PER REFERENCE PLAN	8
16	2	RIDING LINE FAIRLEAD BLOCK		923940-822-2250	12" METAL SNATCH BLOCK, RIG NO. 25, SINGLE WITH-OUT BECKET, SAFETY LOCKING TYPE W/SWIVEL EYE & SHACKLE	
17	2	FAIRLEAD BLOCK PADEYE			MANUFACTURE PER REFERENCE PLAN	8
18	2	BLOCK STOWAGE STAPLE			MANUFACTURE PER REFERENCE PLAN	8
19	2	RIDING LINE CLEAT			20" THREE HORN TYPE, MANUFACTURE PER REFERENCE PLAN	1
20	2	JIGGER TACKLE ASSEMBLY			MANUFACTURE PER REFERENCE PLAN	8
21	2	JIGGER PADEYE & LINK			MANUFACTURE PER REFERENCE PLAN	8
22	2	JIGGER TACKLE CLEAT			12" THREE HORN TYPE, MANUFACTURE PER REFERENCE PLAN	1
23	2	JIGGER STOWAGE STAPLE			MANUFACTURE PER REFERENCE PLAN	8
24	MINIMUM OF ONE	INHAUL FAIRLEAD BLOCK		923940-822-2250	12" METAL SNATCH BLOCK RIG NO. 25, SINGLE WITH-OUT BECKET, SAFETY LOCKING TYPE W/SWIVEL EYE & SHACKLE	
25	MINIMUM OF ONE	INHAUL FAIRLEAD PADEYE			REVERSIBLE DECK SOCKET TYPE TO SUIT ITEM NO. 24	

*WHEN FUELING AT SEA STATIONS ARE BEING INSTALLED ON PORT & STARBOARD SIDE OF VESSEL, ITEMS 1, 2, 6 & 7 SHALL BE PROVIDED ONLY AT THE F.A.S. STATION WHICH NORMALLY WOULD RECEIVE FUEL ALL OTHER ITEMS ARE REQUIRED PORT AND STARBOARD.

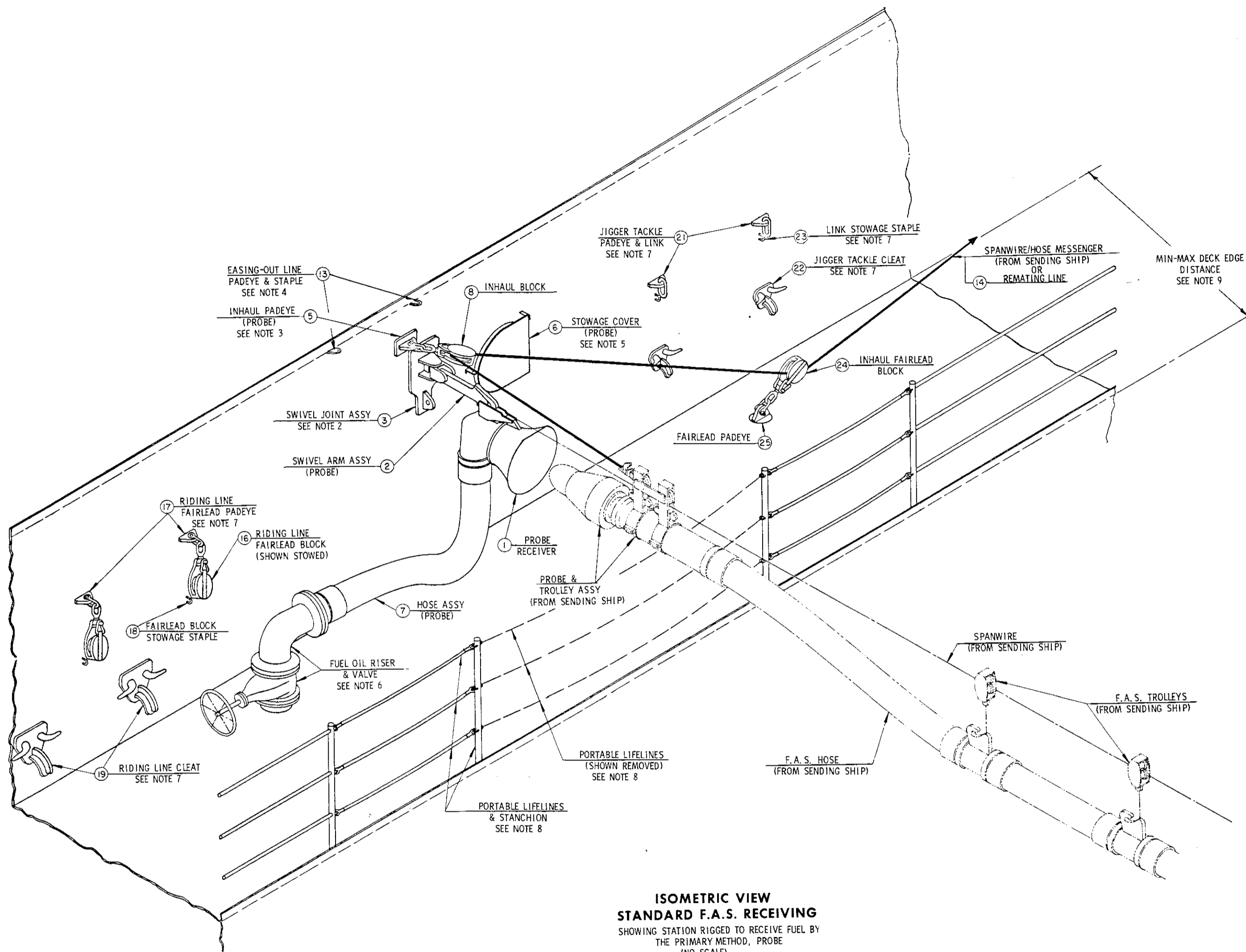
(A) STATIC TEST REQUIREMENTS FOR RIDING LINE FITTINGS

1. TEST AND PROVIDE LABEL PLATES FOR RIDING LINE FITTINGS IN ACCORDANCE WITH REFERENCE 9.

REFERENCE DRAWING

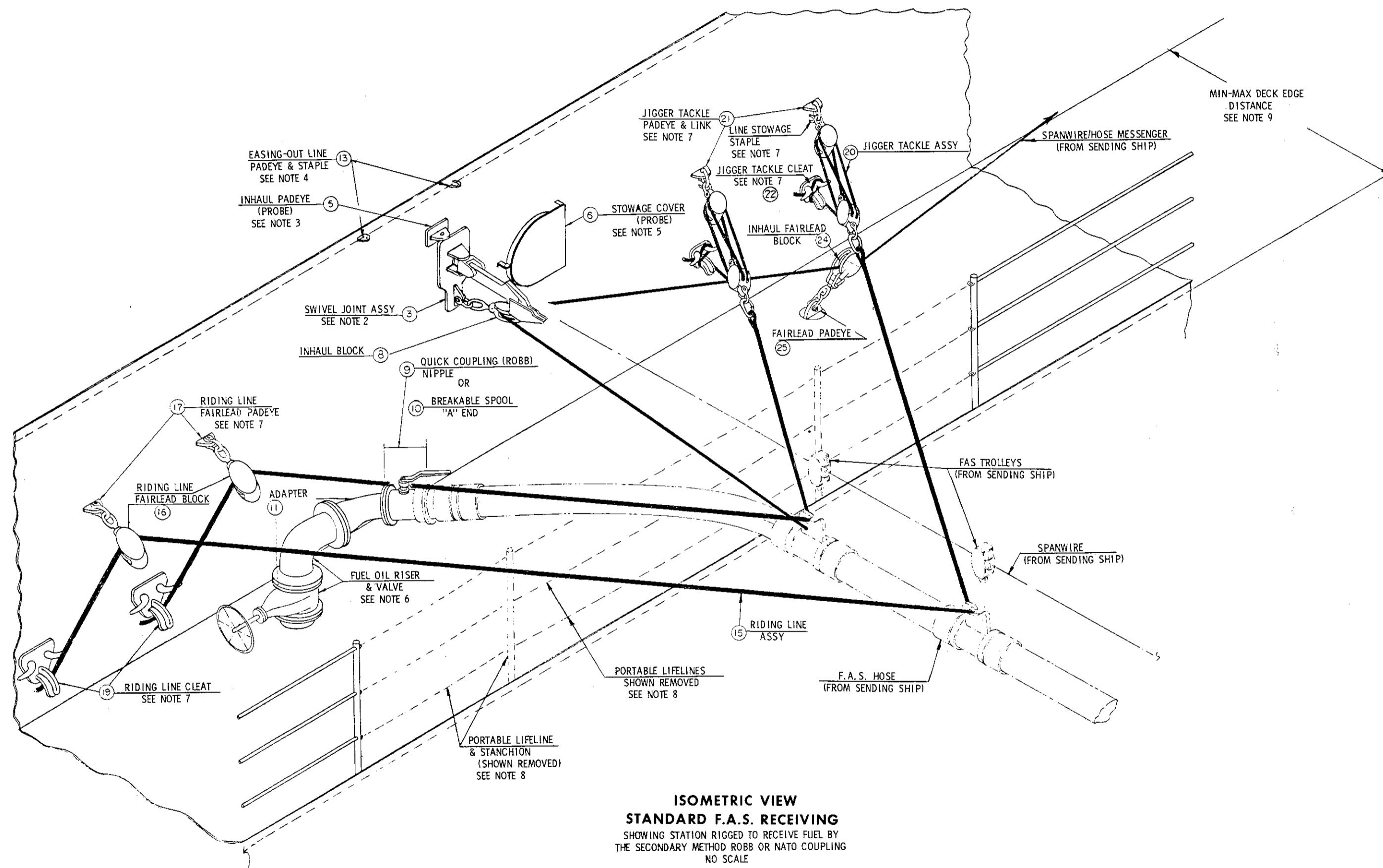
1	FAS 3 HORN CLEAT 12&20 INCH TYPE	805 2554187
2	SWIVEL ARM DETAILS	805-2213160
3	SWIVEL JOINT DETAILS	805-2213155
4	HINGED STOWAGE COVER	805-2217230
5	PROBE FUELING ARMGT & DETAILS - RECEIVING SHIP	805-2213794
6	QUICK COUPLING & VALVE COMBINATION	5000-84824-841597
7	QUICK RELEASE SPOOL - BREAKABLE TYPE	S5501-169238
8	F.A.S. RIDING LINE, JIGGER TACKLE, & REMATING LINE, ASSY & DETS	805-2227936
9	TEST ARMGT - RIDING LINE FITTING	805-2556869
10		

NORVA SHIPYARD		DEPARTMENT OF THE NAVY, WASHINGTON, D.C. NAVAL SHIP ENGINEERING CENTER TYPE DRAWING		
CH. DES. ENG.	<i>[Signature]</i>	FUELING AT SEA STANDARD RECEIVING STATION ARRANGEMENT AND REQUIREMENTS		
BRANCH SUPV.	<i>[Signature]</i>			
SEC. SUPV.	<i>[Signature]</i>			
CHECKER	<i>[Signature]</i>			
DRAWN	<i>[Signature]</i>			
SIG. <i>[Signature]</i> FOR COMMANDER NAVSHIPS	SIZE E	CODE IDENT NUMBER 80064	NAVSHIPS DRAWING NO. 804-2227933	REV. A
DATE 12/1/77	SCALE: NONE	WT.	SHEET 1 OF 4	

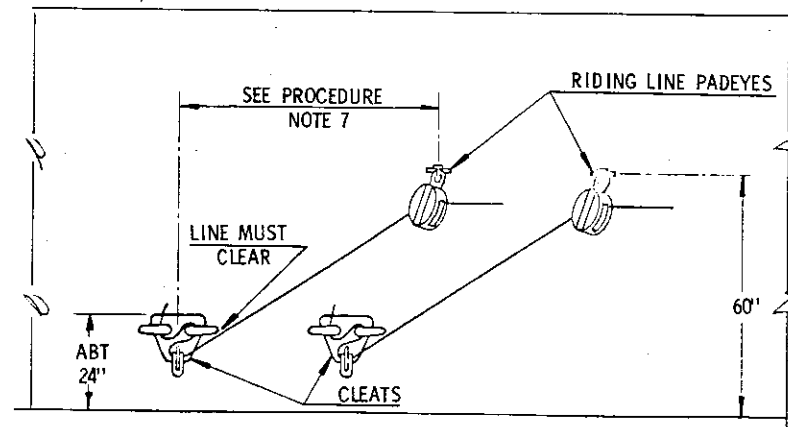


**ISOMETRIC VIEW
STANDARD F.A.S. RECEIVING**
SHOWING STATION RIGGED TO RECEIVE FUEL BY
THE PRIMARY METHOD, PROBE
(NO SCALE)

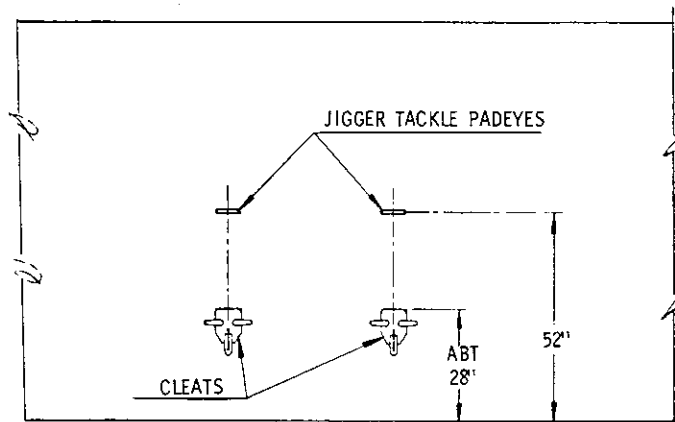
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NAVAL SHIP ENGINEERING CENTER			
TYPE DRAWING			
FUELING AT SEA STANDARD RECEIVING STATION ARRANGEMENT AND REQUIREMENTS			
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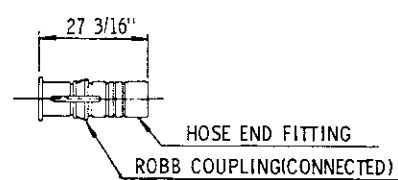
DEPARTMENT OF THE NAVY, WASHINGTON, D.C.			
NAVAL SHIP ENGINEERING CENTER			
TYPE DRAWING			
FUELING AT SEA			
STANDARD RECEIVING STATION			
ARRANGEMENT AND			
REQUIREMENTS			
SIZE	CODE IDENT NUMBER	NAVSHIPS DRAWING NO.	REV.
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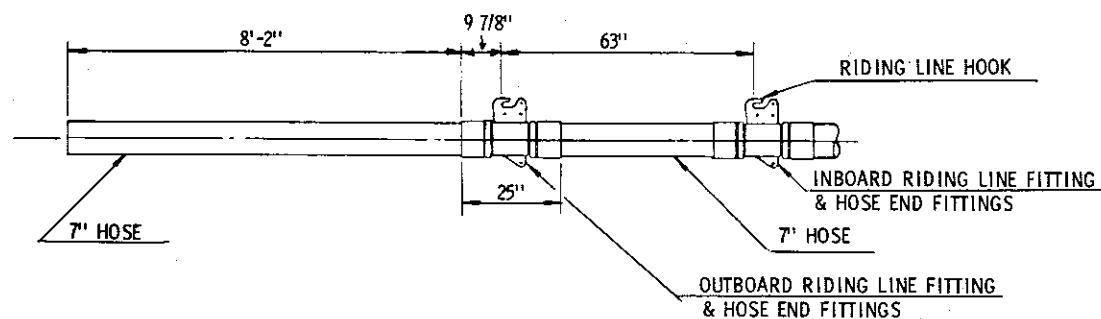
DETAIL D
LOCATION OF RIDING LINE CLEATS



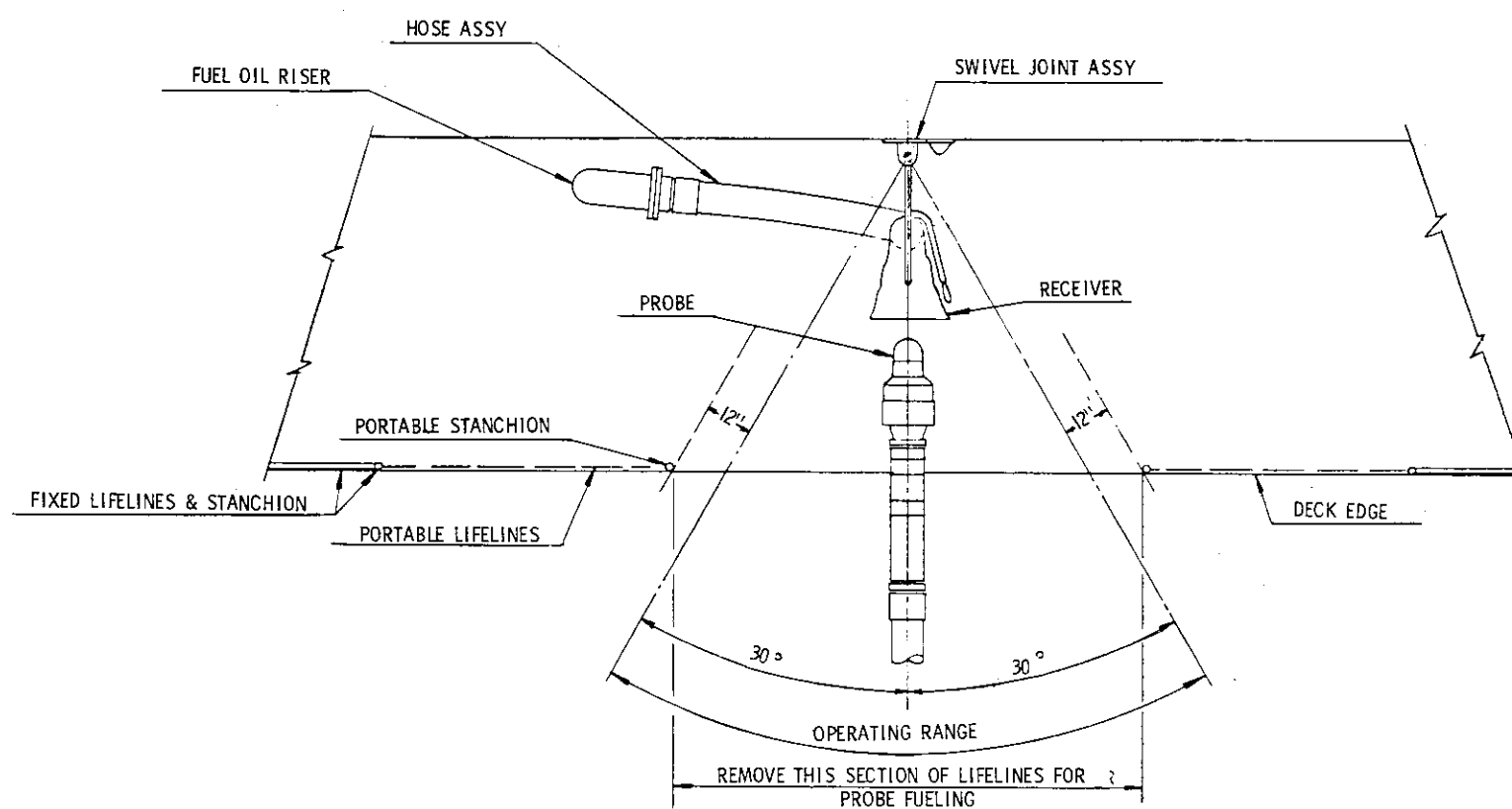
DETAIL C
LOCATION OF JIGGER TACKLE CLEATS



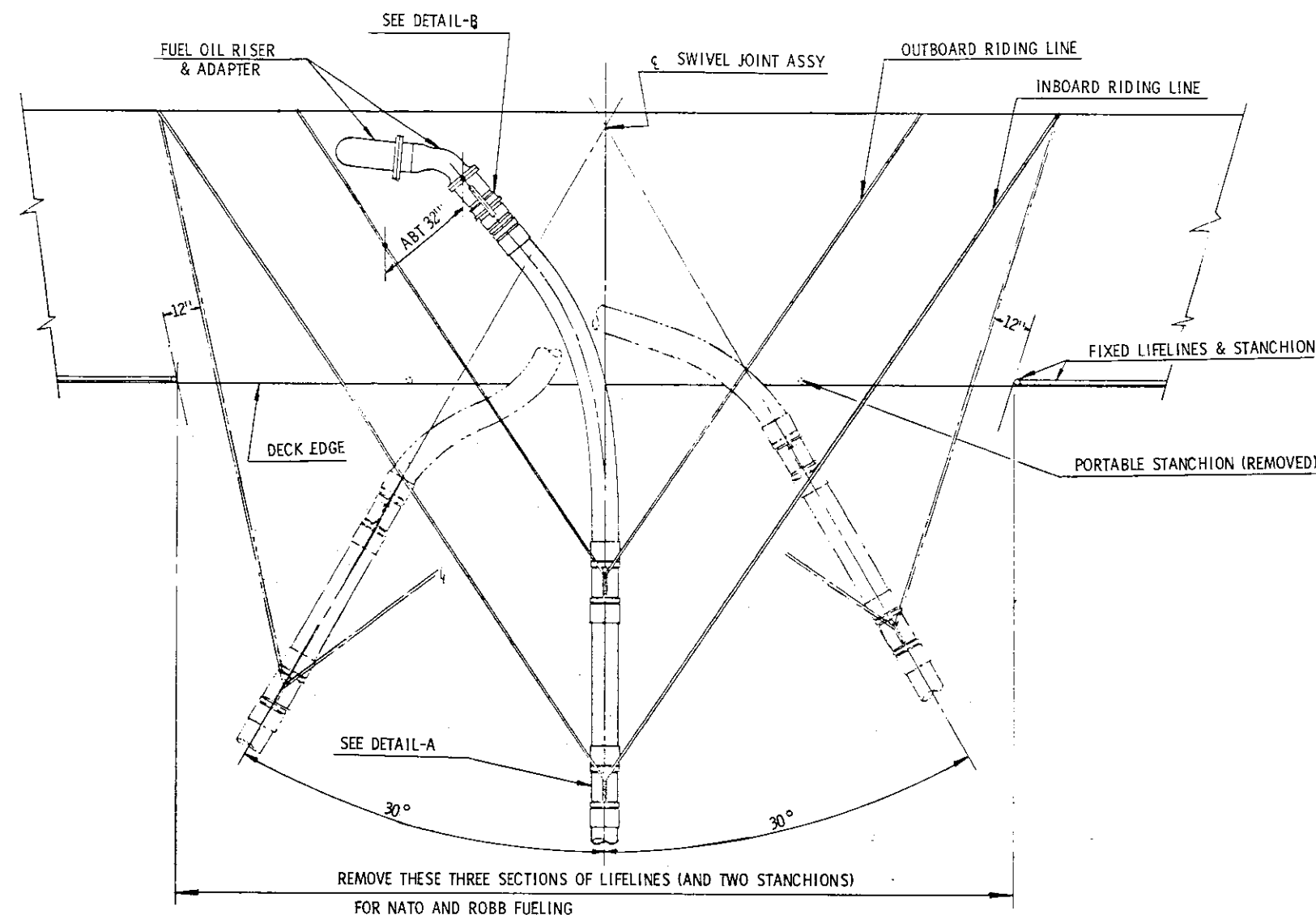
DETAIL B



DETAIL A



PLAN VIEW
(STATION RIGGED FOR PROBE FUELING)



PLAN VIEW
(STATION RIGGED FOR NATO AND ROBB FUELING)

PROCEDURES

TO LOCATE PADEYES AND CLEATS FOR RIDING LINES AND JIGGER TACKLES AND TO LOCATE PORTABLE LIFELINES:

1. MAKE SCALE TEMPLATE OF HOSE RIG SHOWN IN DETAIL-A. THOSE PARTS OF THE TEMPLATE REPRESENTING THE SOFT SECTIONS OF HOSE MUST BEND IN A SMOOTH CURVE.
2. LOCATE RISER AND PROPER ADAPTER AS DIRECTED BY HULL STANDARD PLAN 805-2213794.
3. DRAW THE ROBB COUPLING & HOSE END FITTING (SHOWN IN DETAIL-B) ATTACHED TO THE ADAPTER. PLACE THE HOSE END OF TEMPLATE AGAINST THE HOSE END FITTING. BEND TEMPLATE SMOOTHLY UNTIL CENTER LINE OF HOSE AT OUTBOARD RIDING LINE FITTING IS TANGENT TO THE ABEAM SPAN WIRE.
4. MEASURING AT THE ROBB FLANGE ON A LINE PERPENDICULAR TO THE CENTER LINE OF THE ROBB, AND MEASURING AWAY FROM THE STATION, MARK A POINT ABOUT 32-INCHES OFF THE CENTER LINE. DRAW A LINE THROUGH THAT POINT AND THE HOOK OF THE OUTBOARD RIDING LINE FITTING. DRAW ANOTHER LINE PARALLEL TO THAT LINE FROM THE HOOK OF THE INBOARD RIDING LINE FITTING. THE POINTS WHERE THOSE LINES (EXTENDED) STRIKE THE BULKHEAD LOCATE THE RIDING LINE FAIRLEAD PADEYES IN PLAN. IN ELEVATION, THE PADEYES ARE 60-INCHES ABOVE THE DECK.
5. IN PLAN THE JIGGER TACKLE PADEYES ARE SYMMETRICAL WITH THE RIDING LINE FAIRLEAD PADEYES ABOUT THE STATION CENTER LINE. IN ELEVATION THE JIGGER TACKLE PADEYES ARE 52-INCHES ABOVE THE DECK.
6. DRAW SPAN WIRE (WITH RIDING LINES) AT 30 DEGREES FORWARD AND AFT OF STATION AS SHOWN. LOCATE TWO FIXED LIFELINE STANCHIONS 12-INCHES FROM THE RIDING LINES AS SHOWN IN PLAN OF STATION RIGGED FOR ROBB. LOCATE TWO PORTABLE STANCHIONS AS SHOWN IN PLAN OF STATION RIGGED FOR PROBE.
7. LOCATE RIDING LINE CLEATS RELATIVE TO RIDING LINE FAIRLEAD PADEYES SO THAT THE RIDING LINE CLEARS THE CLEAT AS SHOWN IN DETAIL-D.
8. LOCATE JIGGER TACKLE CLEATS AS SHOWN IN DETAIL-C.

GENERAL NOTES

1. PADEYES AND CLEATS FOR RIDING LINES AND JIGGER TACKLES, AND PORTABLE LIFELINES SHALL BE LOCATED AS SHOWN IN "PROCEDURES."
2. IN SOME CASES IT MAY BE NECESSARY TO INSTALL THE PADEYES FOR THE RIDING LINE AND JIGGER TACKLE ON THE DECK IN LIEU OF A BULKHEAD. IF THIS CONDITION OCCURS THE PADEYES SHOULD BE LOCATED TO ACHIEVE THE ALIGNMENT SHOWN.
3. DURING OPERATION THE RIDING LINES ARE CONNECTED TO THE HOSE RIDING LINE FITTINGS AS FOLLOWS:
 - (A) AS ROBB COMES ABOARD IT IS RELEASED FROM ITS TROLLEY.
 - (B) THE HOSE MESSENGER IS THEN INHAULED UNTIL THE OUTBOARD RIDING LINE FITTING IS TWO BLOCKED TO INHAUL BLOCK. AS THE HOSE MESSENGER IS INHAULED THE ROBB COUPLING IS HAND CARRIED ALONG THE DECK.
 - (C) THE RIDING LINES ARE THEN DROPPED INTO THE HOOK OF THE HOSE RIDING LINE FITTINGS. IT MAY BE NECESSARY TO LASSO THE HOOK OF THE INBOARD HOSE RIDING LINE FITTING IF THE DECK EDGE DISTANCE IS THE MINIMUM, 5 FEET.
 - (D) THE RIDING LINES ARE THEN EASED OUT UNTIL THE ROBB COUPLING CAN BE CONNECTED.
 - (E) THE RIDING LINES ARE THEN CLEATED AND THE HOSE MESSENGER IS REMOVED AND RETURNED TO SENDING SHIP.

DEPARTMENT OF THE NAVY, WASHINGTON, D.C.			
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TYPE DRAWING			
FUELING AT SEA			
STANDARD RECEIVING STATION			
ARRANGEMENTS AND			
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SIZE	CODE IDENT	NAVSHIPS DRAWING NO.	REV.
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SCALE: 1/2"=1'-0"	WT.	SHEET 4 OF 4	