

BayStar outboard steering

With mechanical steering you sacrifice a degree of comfort, and traditional hydraulic systems may be more than is needed on lower horsepower outboard engines. The solution is finally here—BayStar!

Built in the tradition of SeaStar — the industry leading hydraulic steering — BayStar brings the same safety and comfort now common on larger outboards to boats with outboards up to 150 HP.

Features:

- Designed just for smaller outboards.
- Low friction hydraulic steering system.
- 4.5 turns from lock-to-lock.
- Balanced cylinder, featuring a compact design that fits most splashwells.
- Cylinder provides full engine movement.
- Optional five position tilt helm available.
- Compact helm has only a 5" footprint; needs only 3" dash hole (standard or Tilt).
- Packaged complete with helm, cylinder, fittings, tubing, oil, fill kit and detailed instructions.
- Standard 3/4" tapered steering shaft.
- Fast, easy installation.
- Meets A.B.Y.C. standards.
- Meets N.M.M.A. certification requirements.

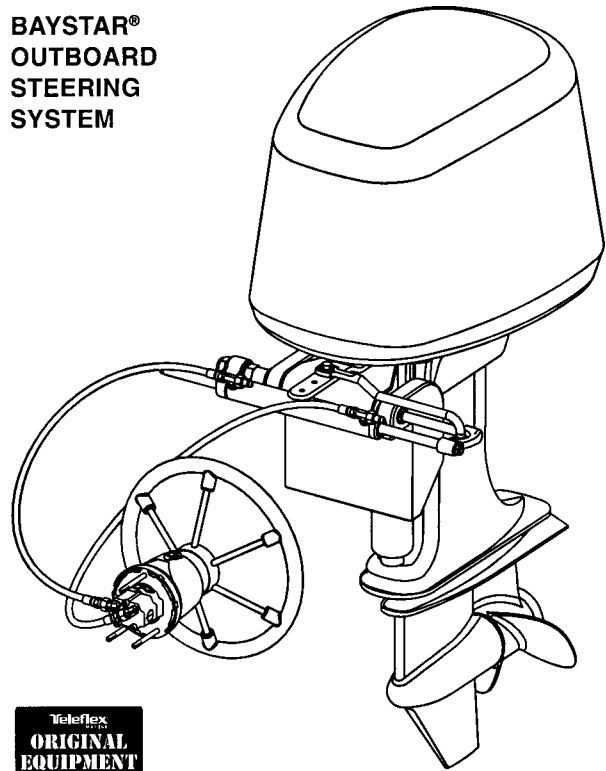
Note: BayStar is NOT suitable for smaller HP outboard engines that use wing nut type transom mount clamping screws.

Applications:

BayStar is for single-outboard powered boats rated up to 150 HP, including runabouts and inflatables — and outboard engines with ABYC standard engine tilt tubes up to 150 HP (total). For single station, single engine use only.

BayStar™

BAYSTAR®
OUTBOARD
STEERING
SYSTEM



(4.5 turns lock-to-lock)

Tilt
STEERING
available!

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e-mail: sales@sealandpower.com

BayStar outboard steering

Complete Systems:

BayStar kits come complete with everything needed for an install: helm, cylinder, tubing, fittings and fluid. For your convenience two lengths of either 20' or 30' cut-to-fit tubing are supplied.

BayStar Steering Kit (20' tubing set) HK4200
BayStar Steering Kit (30' tubing set) HK4230



Components:

BayStar Front Mount Helm HH4016

BayStar Outboard Cylinder HC4600*

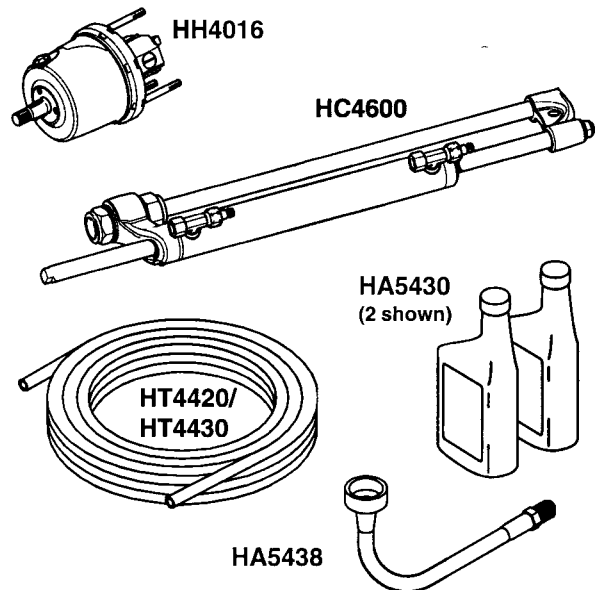
* The cylinder utilizes the outboard engine maker's factory supplied drag link for simplified installation. Please note cylinder dimension requirements. Is the splashwell wide enough? The standard cylinder requires 32" (813mm) splashwell width. Find the dimensions (A, B & C) of your splashwell (see chart and diagram on following pages). Check them against the minimum splashwell dimensions to ensure full movement of engine and cylinder.

HK4200 Tubing (2 x 20' lengths) HT4420

HK4230 Tubing (2 x 30' lengths) HT4430

SeaStar Oil (1 Quart) HA5430 (x2)

BayStar Filler Kit HA5438



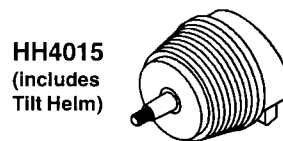
Options:

BayStar Sport Tilt Helm/Mech. HH4015

BayStar Compact Cylinder (optional) .. HC4645

BayStar Compact Cylinder (optional) .. HC4647

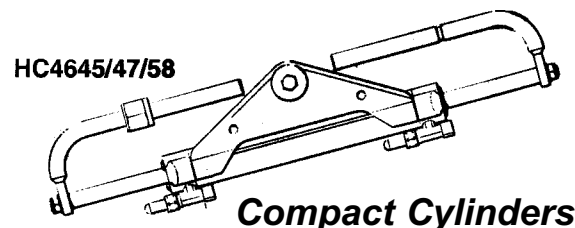
BayStar Compact Cylinder (optional) .. HC4658



Service Items:

SeaStar Oil (1 Gallon) HA5440

Steering Wheel Locknut 747521



NOTE: HC4600 BayStar standard Cylinder is a universal cylinder, however, ensure it will fit you splashwell. If the splashwell measurements limit the engine to BayStar Compact Steering Cylinders HC4645, HC4647, HC4658, please view the application guide to determine which cylinder is to be used for your engine. BayStar Compact Cylinders are NOT available in kit form, all parts MUST be ordered separately.

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BayStar outboard steering

Compact Cylinders Application Guide:

ENGINE MAKER/ BRAND	YEAR	MODEL	CYLINDER PART NUMBER	NOTES
FORCE	1985 TO DATE	90-150 HP	HC4645	
HONDA	1992 TO DATE	30-90 HP	HC4645	
	1998 TO DATE	115-130 HP	HC4647	
JOHNSON/EVINRUDE <i>Note: Johnson 115 HP 2-stroke engines, required the pivot plate to be flipped. See note #4 below.</i>	1977 TO 1989	65-150 HP	Consult Factory	
	1991 TO DATE	40-150 HP	HC4645	
	1997 TO DATE	115 HP Ficht	HC4658	See note 4.
	1997 TO DATE	75-150 HP Ficht	HC4645	
MERCURY/MARINER	1984 TO DATE	75-150 HP	HC4645	See notes 1,4.
NISSAN	1990 TO DATE	120-140 HP	HC4645	
SUZUKI	1986 TO DATE	150 HP	HC4645	
	1996 ONLY	115-140 HP	N/A	
	1987 TO 2002	115-140 HP	HC4645	See note 1.
	1990 TO 2000	90-100 HP	HC4645	
	1998 TO DATE	40-70 HP 4-stroke	HC4645	See note 1.
TOHATSU	2001 TO DATE	115-140 HP 4-stroke	HC4658	See notes 1,4.
	1990 TO DATE	140-140 HP	HC4645	
YAMAHA	1998 TO DATE	40-50 HP	HC4645	See note 2.
	1998 TO DATE	60 HP	HC4645	See note 3.
	1986 TO DATE	70-90 HP	HC4645	See note 1.
	1997 TO DATE	80-150 HP 4-stroke	HC4645	
	2000 TO DATE	40 & 60 HP 4-stroke	Consult Factory	
YANMAR	1990 TO DATE	27-36 HP	HC4645	See note 1.

NOTES:

- Requires Spacer kit part # HO5090.
- Engine clamp brackets must be cut or ground, and the engine through bolted onto the transom, or interference will occur, restricting engine trim and tilt.
- Steering hook Yamaha Part # 63D-48511-00-4D must be installed.
- Cylinder HC4645 may be used in these applications. The pivot plate will need to be flipped before installation. Instructions provided with Owner's Manual.

Splashwell Size Requirements:

CYL MODEL NO.	NO. OF ENG.	SPLASHWELL DIAG. DIM.			MINIMUM ENGINE CENTER DISTANCE
		A	B	C	
HC4600	1	32" (813 mm)	5" (127 mm)	4" (102 mm)	N/A (N/A)
HC4645/47/58	1	21" (534 mm)	6" (153 mm)	5" (127 mm)	N/A (N/A)

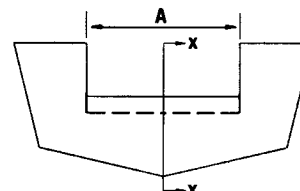
(Twin engine applications not available at this time.)

NOTES:

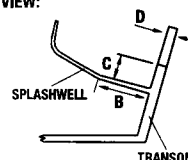
- Ensure there is no interference between the BayStar cylinder rod (starboard side) and the splashwell boot or engine controls & cables.
- Dimensional restrictions also apply to external motor mount brackets.
- Ensure dimension 'A' maintains 32" (813mm) through full trim/tilt range.
- Maximum transom thickness 3" (76mm).
- Engines less than 70 HP may require up to 1" (25mm) of additional splashwell clearance.

REQUIRED SPLASHWELL DIMENSIONS/ MINIMUM ENGINE CENTER DISTANCES:
(refer to chart at left)

REAR VIEW:



SIDE VIEW:



"D" not to exceed 3"

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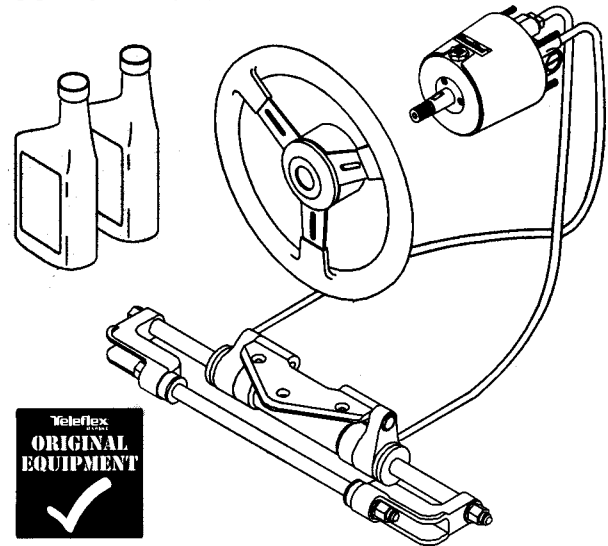
Unmatched comfort and control. Only with SeaStar steering. The world's most popular outboard hydraulic system offers smooth, super-efficient steering for today's high performance hulls with single or multiple outboards up to 600 HP combined. It's the OEM Choice for center consoles, cruisers and more.

SeaStar[®]

Features:

- Patented steering lock valves.
- Low friction hydraulic steering system.
- 5 turns from lock-to-lock (single cylinder).
- Compact helm has only a 4-7/16" footprint; needs only 3" dash hole (Tilt requires larger dash cut out).
- Packaged complete with helm, cylinder, fittings, oil, bleeder kit and detailed instructions.
- Standard 3/4" tapered steering shaft.
- Fast, easy installation.
- Meets A.B.Y.C. standards.
- Meets N.M.M.A. certification requirements.

SEASTAR[®]
FRONT MOUNT CYLINDER
OUTBOARD SYSTEM



Applications:

Single and dual non-power-assisted outboard engines up to 300 HP (600 combined HP for counter-rotating duals) that have ABYC standard engine tilt tube.

Ideal for cruisers, runabouts, center console boats, offshore fishing boats and many more.

Suitable for speeds up to 60 MPH and dual station use (with purchase of extra helm, hose & fittings).

Allows independent engine tilt in dual engine installations. Dual engines require purchase of a tie bar kit and extra hardware.

(5 turns lock-to-lock)

Tilt[™]
STEERING
available!

Note: Use only SeaStar outboard steering hoses (HO51/HO57 type) with SeaStar outboard steering systems. The use of nylon tubing is not recommended for SeaStar outboard steering.

SeaStar outboard steering

Complete Systems:

SeaStar 1.7 Steering Kit (with Hoses) HK63XX
SeaStar 1.7 Steering Kit (no Hoses) HK6400

Components:

SeaStar 1.7 Helm HH5271

Front Mount Outboard Cylinder HC5345*

(See application guide for some engines which may require HC5347, HC5348 or HC5358.)

SeaStar Hose Kit (2 hoses) HO51__

SeaStar Oil (1 Quart) HA5430 (x2)

Options:

SeaStar 2.4 Helm *(see ordering guide)* .. HH5272

SeaStar 1.7 Sport Tilt Helm/Mech. HH5291

SeaStar 1.7 Traditional Tilt Helm/Mech. . HH5741

SeaStar 2.4 Sport Tilt Helm/Mech. HH5292

SeaStar 2.4 Traditional Tilt Helm/Mech. . HH5742

SeaStar 1.7 Rear Mount Helm HH5261

SeaStar 1.7 Commercial Duty Helm HH5217

SeaStar 2.4 Commercial Duty Helm HH5224

(Designed for small Lobster and Crabbing vessels, these helms have a stainless steel shaft with heavy duty seal and wiper, which help protect the helm from the abrasive effects of sediment brought on board with traps or pots.)

SeaStar Round Bezel Kit HA5417

(Reduces helm protrusion by 3.75")

SeaStar Backplate Kit HA5418

(Reduces helm protrusion by thickness of dash and allows clean retrofit of SeaStar helm where following helms were previously installed: pre-1991 SeaStar, SyTen, and mechanical rotary steering)

SeaStar 20° Dash Wedge Kit HA5419

SeaStar Bulkhead Hose Kit (2 hoses) HO81__

(Allows installation through a bulkhead without additional fittings. See Page 14 for more information.)

SeaStar Twin Engine Tie Bar Kit HO5__

(See Application Guides on next two pages.)

Add-A-Station/Autopilot Fitting Kit HF5501

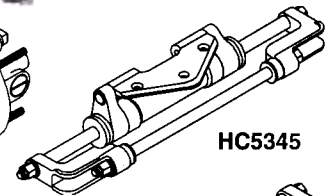
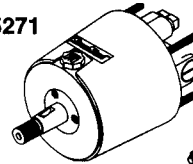
Service Items:

SeaStar Oil (1 Gallon) HA5440

Steering Wheel Locknut 747521

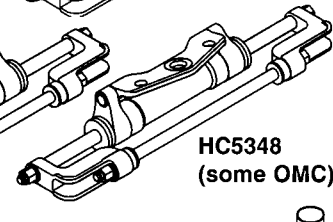
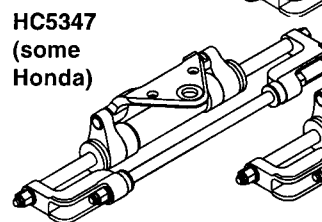


HH5271

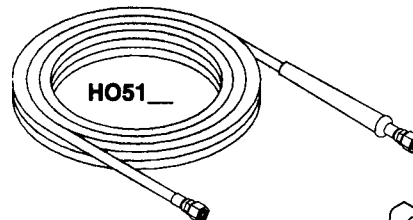


HC5345

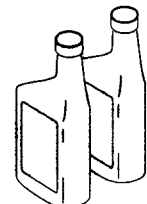
HC5347
(some
Honda)



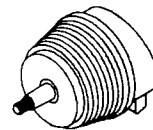
HC5348
(some OMC)



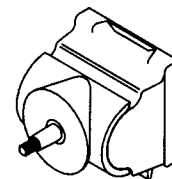
HO51__



HA5430
(2 shown)

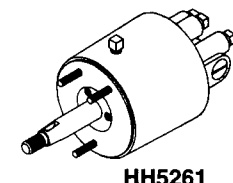
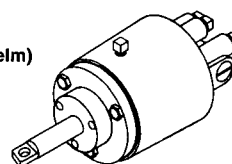


HH5291/HH5292
(includes Tilt Helm)



HH5741/HH5742
(includes Tilt Helm)

(Tilt Helm)



HH5261



HF5501

747521



SeaStar outboard steering

Single & Dual Engine Application Guide:

ENGINE MAKER/ BRAND	YEAR	MODEL	CYLINDER PART NUMBER	TWIN ENGINE 1 CYLINDER TIE BAR KIT (COMPLETE)	TWIN ENGINE 2 CYLINDERS TIE BAR KIT (COMPLETE)	NOTES
FORCE	1985 TO DATE	90-150 HP	HC5345	HO5008A	HO5008A	
HONDA	1996 TO DATE	75-90 HP	HC5345	HO6001	HO6002	See note 3.
	1998 TO DATE	115-130 HP	HC5347	HO5063	HO5064	See note 5.
	1998 TO DATE	30-50 HP	HC5345	HO6001	HO6002	See note 2.
	2001-DATE	150HP 4-stroke	HC5345	HO6003	HO6002	
	2001-DATE	200-225 HP 4-stroke	HC5345	HO6001	HO6002	
JOHNSON/EVINRUDE	1977-1990	65-300 HP	HC5348	HO6001	HO6002	
	1988-1997	250-300 HP V8	HC5342	HO5001A	HO5030	See note 5.
	1991-DATE	40-250 HP	HC5345	HO6003	HO6002	
	1996-DATE	75-250 HP Ficht	HC5345	HO6003	HO6002	
	1998-DATE	40-140 HP 4-stroke	HC5358	HO6003	HO6002	See note 2.
	2000-DATE	115HP Ficht	HC5358	HO6003	HO6002	See note 2.
MERCURY/MARINER	1984 TO 1994	2.4/2.5 EFI	HC5345	HO6001	HO6002	See note 4.
	1989 TO DATE	75-300 HP	HC5345	HO6001	HO6002	See note 3.
	1996-DATE	75-200 HP 2/4-stroke	HC5345	HO6001	HO6002	
	1998 TO DATE	30-60 HP	HC5345	HO6001	HO6002	See note 2.
	2002 TO DATE	225 HP 4-stroke	HC5358	HO6001	HO6002	See note 1.
2003 TO DATE	250 HP XS	HC6345	N/A	(See SKA next page)	See note 6.	
NISSAN/TOHATSU	1990 TO DATE	90-140 HP	HC5345	HO6001	HO6002	
SUZUKI	1986 TO DATE	100 HP	HC5345	HO6003	HO6002	
	1986-2002	115-140 HP	HC5345	HO6001	HO6002	NOT 1996
	1986-DATE	150-250HP 2/4-stroke	HC5345	HO6003	HO6002	
	1996 ONLY	115-140 HP	HC5348	HO6001	HO6002	
	1998 TO DATE	40-140 HP 4-stroke	HC5358	HO6003	HO6002	See note 2.
	2003 TO DATE	90 HP 4-stroke	HC5358	HO6003	HO6002	See note 2.
US MARINE (FORCE)	1996-DATE	90-120 HP	HC5345	HO6001	HO6002	
YAMAHA	1990 TO DATE	40-90 HP	HC5345	HO6003	HO6002	
	1986-DATE	100-250 HP 2-stroke	HC5345	HO6001	HO6002	
	1997-DATE	80-225 HP 4-stroke	HC5358	HO6001	HO6002	See note 1.
	2000-DATE	150-250 HP DI	HC5358	HO6001	HO6002	See note 1.
	2002-DATE	300 HP DI	HC5358	HO6001	HO6002	
	2003-DATE	40-60 HP 4-stroke	HC5348	HO6003	HO6002	See note 2.
YANMAR (DIESEL)	1994 TO DATE	27 & 36 HP	HC5345	HO6001	HO6002	

NOTES:

1. HC5345 is optional for Single Engine ONLY applications. DO NOT use HC5345 for twin engine applications as operational interference may occur.
2. Requires Kit HO5090.
3. Minimum Engine Center = 27"
4. May Require Extensive Cowling Modifications.
5. HO5030 and HO5064 comes without Tie Bar.
6. One cylinder per engine. Must use Mercury supplied tiller bolt for installation.

HO5090 SPACER KIT PARTS LIST

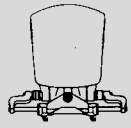
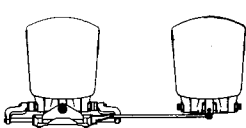
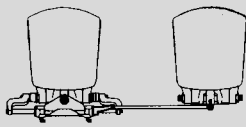
ITEM	P/N	QTY	DESCRIPTION
1	198767	1	Screw 3/8-24 x 1-5/8" Hex Head (Tiller Bolt)
2	113600	1	Fender Washer 3/8" I.D. (stainless steel)
3	773421	1	Spacer 1/2" (aluminum)
4	728994-1	1	Yamaha Spacer 3/16"
5	995876	2	Thick Spacer 3/8" (nylon)

*Interference between the cylinder and boat may occur under certain conditions. Check installation thoroughly throughout the full range of engine tilt and trim (and jackplate movement, if present).

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SeaStar outboard steering

Single & Dual Engine Ordering Guide: Front Mount Systems

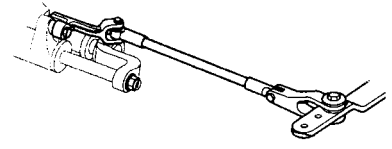
ENGINE/CYLINDER CONFIGURATION	COMPONENT DESCRIPTION	QTY. REQ'D	MODEL	PART NO.	
SINGLE ENGINE (SINGLE CYLINDER) Applications up to 300 HP maximum <u>NUMBER OF TURNS: 5</u> 	CYLINDER (See Application Guide)	1	PIVOT FRONT MOUNT	HC53__	
	HELM	1	SEASTAR 1.7	HH5271	
	HOSE KIT	1	OUTBOARD HOSE	H051__	
	OIL	3	SEASTAR OIL (QT.)	HA5430	
	FOR EXTRA STEERING STATION ADD:				
	HELM	1	SEASTAR 1.7	HH5271	
	FITTING KIT	1	ADD A STATION	HF5501	
	HOSE KIT	1	OUTBOARD HOSE	H051__	
	OIL	1	SEASTAR OIL (QT.)	HA5430	
	DUAL ENGINE (SINGLE CYLINDER) Non-Counter-Rotating Applications to 450 HP max; Counter-Rotating Applications to 600 HP maximum. <u>NUMBER OF TURNS: 5</u> 	CYLINDER (See Application Guide)	1	PIVOT FRONT MOUNT	HC53__
TIE BAR KIT		1	SEE APPLICATION GUIDE	H060__	
HELM		1	SEASTAR 1.7	HH5271	
HOSE KIT		1	OUTBOARD HOSE	H051__	
OIL		3	SEASTAR OIL (QT.)	HA5430	
FOR EXTRA STEERING STATION ADD:					
HELM		1	SEASTAR 1.7	HH5271	
FITTING KIT		1	ADD A STATION	HF5501	
HOSE KIT		1	OUTBOARD HOSE	H051__	
OIL		1	SEASTAR OIL (QT.)	HA5430	
DUAL ENGINE (DUAL CYLINDERS) Non-Counter-Rotating Applications to 450 HP max; All Counter-Rotating Engine Applications <u>NUMBER OF TURNS: 7</u> 	CYLINDER (See Application Guide)	2	PIVOT FRONT MOUNT	HC53__	
	TIE BAR KIT	1	SEE APPLICATION GUIDE	H060__	
	HELM	1	SEASTAR 2.4	HH5272	
	HOSE KIT	1	OUTBOARD HOSE	H051__	
	HOSE KIT	1	OUTBOARD HOSE	H051__	
	HOSE KIT	1	OUTBOARD HOSE	H051__	
	FITTING KIT	1	TEE FITTINGS	HF5530	
	OIL	3	SEASTAR OIL (QT.)	HA5430	
	FOR EXTRA STEERING STATION ADD:				
	HELM	1	SEASTAR 2.4	HH5272	
FITTING KIT	1	ADD A STATION	HF5501		
HOSE KIT	1	OUTBOARD HOSE	H051__		
OIL	1	SEASTAR OIL (QT.)	HA5430		

For all Seastar outboard systems: Use following option A or B:

A) Outboard hose: order in standard lengths (cannot be cut to length.)

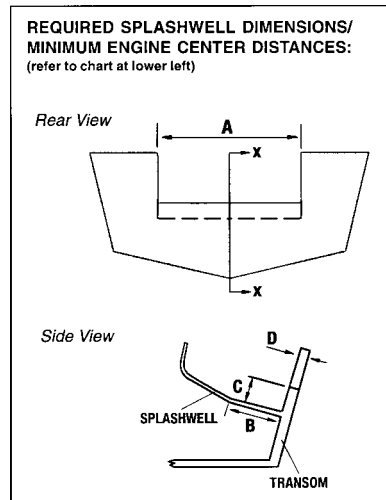
B) Copper tube: 3/8" diameter copper tube and hose kit part No. HF5508.

TYPICAL FRONT MOUNT TIE BAR KIT FOR HC5345 FRONT MOUNT CYLINDER (HO6001/HO6002/HO6003)



NUMBER OF ENGINES	SPLASHWELL DIAGRAM DIMENSION			MINIMUM ENGINE CENTER DISTANCE
	A	B	C	
1	22" (559mm)	6" (152mm)	5" (127mm)	N/A
2	44" (1118mm)	6" (152mm)	5" (127mm)	26" (660mm)
3	66" (1677mm)	6" (152mm)	5" (127mm)	29" (737mm)

NOTE: MAXIMUM ENGINE CENTER DISTANCE: 36" (914mm) USING THE STANDARD SEASTAR TIE BAR



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