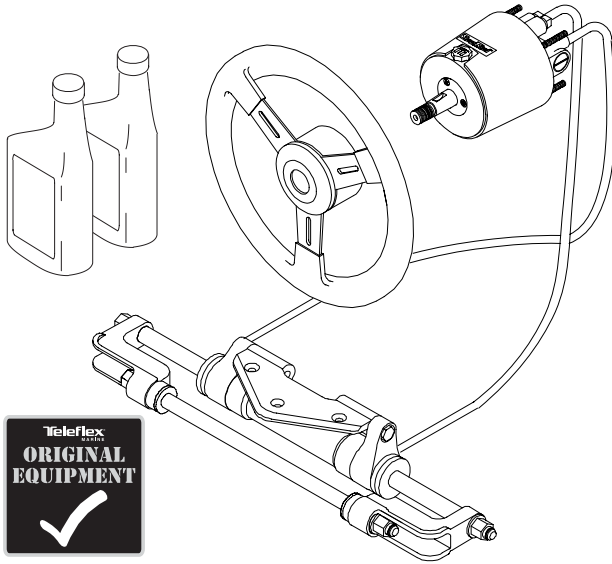


SeaStar outboard steering

SeaStar®

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® PIVOT MOUNT CYLINDER OUTBOARD SYSTEM



(5 turns lock-to-lock)

PLEASE NOTE WHEN ORDERING: SeaStar steering kits come with cylinder # HC5345. If your application requires the use of a cylinder other than HC5345, you will need to purchase all components separately (helm, hoses, cylinder, etc.)

DIMENSIONS: pages 160-162
HOW TO MEASURE: page 84
SERVICE PARTS: pages 148-157
SUPPORT: www.teleflexmarine.com
or call 604-270-6899

NOTE: When properly installed, this steering system will connect to outboard engines with ABYC standard tilt tubes, using the engine's tiller arm (and possibly an adapter, depending on engine). 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.** For SeaStar PRO, see the "Pro Series Outboard Steering" section of this catalog.

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.

SeaStar P/A
available!

Tilt
STEERING
available!

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.

hydraulic outboard steering, pivot front mount cylinder

Complete Systems:

SeaStar 1.7 Steering Kit (with Hoses) .. HK63XX

(XX = length of included hose kit in feet.)

SeaStar 1.7 Steering Kit (no Hoses) HK6400

Components:

SeaStar 1.7 Helm HH5271

Pivot Mount Outboard Cylinder (Black) .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.)

Pivot Mount Cylinder (Silver)HC53__SIL

(Same part number as black cylinders except for "SIL" suffix. For cylinder applications, see those for HC53__ series in Application Guide on next page.)

Pivot Mount Cylinder — PRO (Black).... HC63__

(Second two digits are the same as standard black pivot mount cylinders; for example, PRO equivalent of HC5345 is HC6345. For PRO cylinder applications, see those for HC53__ series in Application Guide on next page.)

Pivot Mt. Cylinder — PRO (Red) ... HC63__RED

(Same P/N as black PRO cylinders except for "RED" suffix. For red PRO cylinder applications, see those for HC53__ series in Application Guide on next page.)

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 KitHO5__

(See Application Guides on next two pages.)

Add-A-Station/Autopilot Fitting Kit HF5501

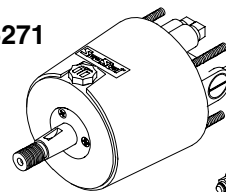
Service Items:

SeaStar Oil (1 Gallon) HA5440

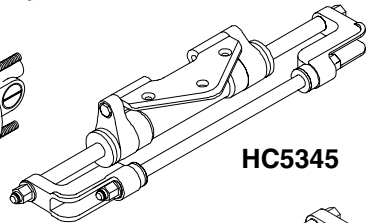
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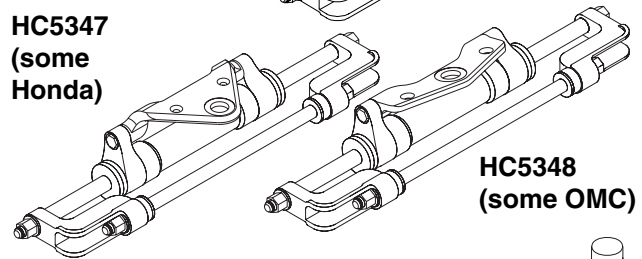
HH5271



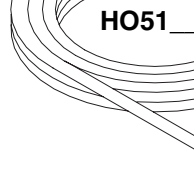
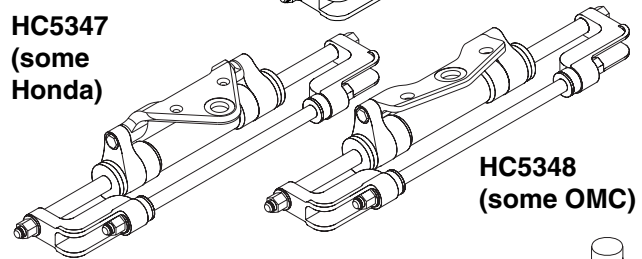
HC5345



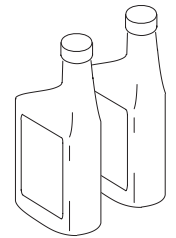
HC5347
(some
Honda)



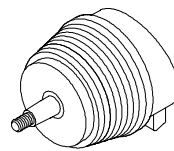
HC5348
(some OMC)



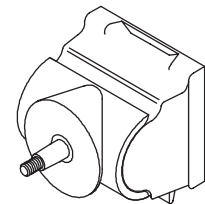
HO51__



HA5430
(2 shown)

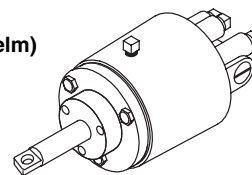


HH5291/HH5292
(includes Tilt Helm)

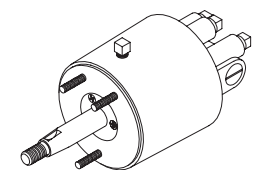


HH5741/HH5742
(includes Tilt Helm)

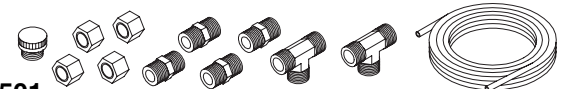
(Tilt Helm)



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-DATE	90-150 HP	HC5345	HO5008A	HO5008A	
HONDA	1996-DATE	75-90HP	HC5345	HO6001	HO6002	See Note 3.
	1998-DATE	115-130HP	HC5347	HO5063	HO5064	See Note 5.
	1998-DATE	30-50HP	HC5345	HO6001	HO6002	See Note 2.
	2001-DATE	150HP 4-Stroke	HC5345	HO6003	HO6002	
	2001-DATE	225HP 4-Stroke	HC5345	HO6001	HO6002	
	2003-DATE	BF135HP	HC5345	HO6003	HO6002	
JOHNSON/EVINRUDE	1977-1990	65-300HP	HC5348	HO6003	HO6002	
	1988-1997	250-300HP V8	HC5342	HO5001A	HO5030	See Note 5.
	1991-DATE	40-250HP	HC5345	HO6003	HO6002	Includes ETech Engines.
	1996-DATE	75-250HP Ficht	HC5345	HO6003	HO6002	
	1998-DATE	40-140HP 4-Stroke	HC5358	HO6003	HO6002	See Note 2.
	2000-DATE	115HP Ficht	HC5358	HO6003	HO6002	See Note 2.
	2002-DATE	200-225HP 4-Stroke	HC5345	HO6003	HO6002	
	2005-DATE	E250 DPX Vindicator	HC5348	HO6003	HO6002	
MERCURY/MARINER	1984-1994	2.4/2.5HP EFI	HC5345	HO6001	HO6002	See Note 4.
	1989-DATE	75-300HP	HC5345	HO6001	HO6002	See Note 3.
	1996-DATE	75-200HP 2/4-Stroke	HC5345	HO6001	HO6002	
	1998-DATE	30-60HP	HC5345	HO6001	HO6002	See Note 2.
	2002-DATE	225HP 4-Stroke	HC5358	HO6001	HO6002	See Note 1.
	2003-DATE	250HP XS	HC6345	N/A	HO6002	See Note 6.
NISSAN/TOHATSU	1990 TO DATE	90-140 HP	HC5345	HO6001	HO6002	
SUZUKI	1986-DATE	100HP	HC5345	HO6003	HO6002	
	1986-2002	115-140HP	HC5345	HO6001	HO6002	NOT 1996
	1986-DATE	150-250HP 2/4-Stroke	HC5345	HO6003	HO6002	
	1996 ONLY	115-140HP	HC5348	HO6001	HO6002	
	1998-DATE	40-140HP 4-Stroke	HC5358	HO6003	HO6002	See Note 2.
	2003-DATE	90HP 4-Stroke	HC5358	HO6003	HO6002	See Note 2.
US MARINE (FORCE)	1996-DATE	90-120HP	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	25-60 HP 4-stroke	HC5348	HO6003	HO6002	See Note 2.
YANMAR	1994-DATE	90-120HP	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 One Spacer Kit HO5090 per engine.
3. Minimum Engine Center = 27"
4. May Require Extensive Cowling Modifications.
5. HO5030 and HO5064 come without Tie Bar.
6. One cylinder per engine. Must use Mercury-supplied tiller bolt for installation.

These recommendations apply to factory stock outboards only. Modified installations may require a higher capacity steering system. (Cylinder volume / helm displacement = number of turns.) If in doubt, contact Teleflex Canada technical service for assistance. For single, dual and triple engine installations, refer to SeaStar Manual #1.1 for detailed instructions, application

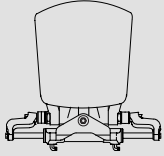
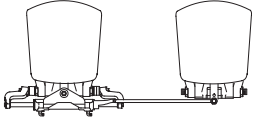
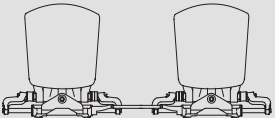
information and parts diagrams. Some applications vary from what is depicted in this catalog. Always consult SeaStar manual for diagrams specific to your application. Use only SeaStar/SeaStar PRO Hose or 3/8" Copper Tubing + Hoses to plumb the system. **NOTE:** Interference between the cylinder and boat can occur under certain conditions. Check installation thoroughly throughout the full range of movement for engine tilt and trim (and jack plate, if present).

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)

hydraulic outboard steering, pivot front mount cylinder

Single & Dual Engine Ordering Guide: Pivot Mount Systems

ENGINE/CYLINDER CONFIGURATION	COMPONENT DESCRIPTION	QTY. REQ'D	MODEL	PART NO.
SINGLE ENGINE (SINGLE CYLINDER) Applications up to 300 HP maximum NUMBER OF TURNS: 5 	CYLINDER (See Application Guide)	1	PIVOT MOUNT	HC_3__
	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. NUMBER OF TURNS: 5 	CYLINDER (See Application Guide)	1	PIVOT MOUNT
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 NUMBER OF TURNS: 7 	CYLINDER (See Application Guide)	2	PIVOT MOUNT	HC_3__
	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	
OPTIONAL EQUIPMENT	BACK PLATE KIT		(FOR STANDARD HELMS)	HA5418
	20 DEGREE WEDGE		(FOR STANDARD HELMS)	HA5419
	AUTOPILOT FITTING KIT		(FOR ALL HELMS)	HF5501
	* TILT HELM- SEASTAR I			HH5741
	REAR MOUNT HELM- SEASTAR I			HH5261
	** TILT HELM- SEASTAR II			HH5742
	REAR MOUNT HELM- SEASTAR II			HH5262
	SILVER CYLINDERS			HC53__SIL
PRO CYLINDERS (available in red, silver or traditional black)			HC63__	
POWER ASSIST STEERING			PA1200	

SeaStar outboard steering

Triple Engine Application Guide:

ENGINE MAKER/ BRAND	YEAR	MODEL	CYLINDER PART NUMBER	PORT ENGINE TO DRIVE CYLINDER TIE BAR KIT (COMPLETE)	STBD. ENGINE TO DRIVE CYLINDER TIE BAR KIT (COMPLETE)	NOTES
FORCE	1995 TO DATE	90-120HP	HC5345	H06001	H06002	
HONDA	1996 TO DATE	75-90HP	HC5345	H06001	H06002	See Note 2.
JOHNSON/EVINRUDE	1991 TO DATE	90-275 HP	HC5345	— H05080	—	
	1991 TO DATE	250-300HP	HC5345	H06001	H06002	
	1991 TO DATE	200-225 HP	HC5345	H06003	H06002	
	1996 TO DATE	90-225 HP Ficht	HC5345	— H05080	—	See Note 2.
	1998 TO DATE	65-70 HP 4-stroke	HC5345	H06003	H06002	See Note 1.
	2005 TO DATE	E250 DPX Vindicator	HC5348	H06003	H06002	
MERCURY	1989 TO DATE	75-275 HP	HC5345	— H05081	—	
	2003 TO DATE	250HP XS	HC5345	H06002	H06002	See Note 3.
SUZUKI	1986 TO DATE	150-250HP 2/4-Stroke	HC5345	H06003	H06002	
	1986 TO DATE	115-140 HP	HC5345	H06003	H06002	
	1998 TO DATE	65-70 HP 4-stroke	HC5345	H06001	H06002	See Note 1.
YAMAHA	1990 TO DATE	100-200 HP	HC5345	H06001	H06002	
	1990 TO DATE	225-250 HP 4-stroke	HC5358	— H05080	—	
	1998 TO DATE	80-100 HP 4-stroke	HC5358	H06001	H06002	

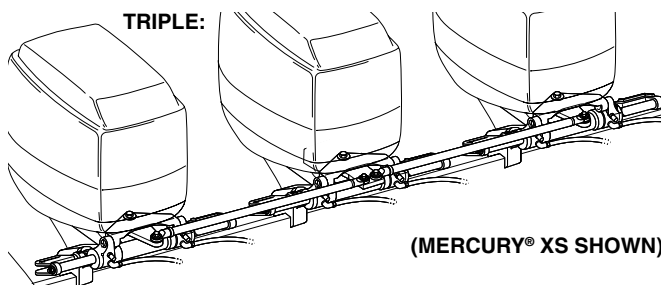
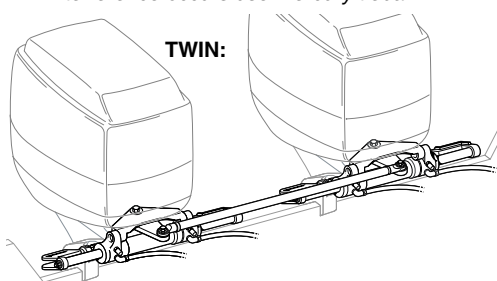
NOTES: 1. One Spacer Kit HO5090 required per engine. 2. Minimum Engine Center = 29". 3. For Mercury 250 XS models. One cylinder required per engine. Mercury supplied tiller bolt must be used on all cylinders.

Dual & Triple Engine Application Guide: SKA Performance Type Fishing Boats

ENGINE MAKER/ BRAND	YEAR	MODEL	CYLINDER PART NUMBER	TWIN ENGINE EXTENSION PLATE	TRIPLE ENGINE EXTENSION PLATE	TIE BAR	NOTES
HONDA	2001-DATE	225-ABOVE, 4-stroke	HC6345	N/A	N/A	N/A	2,4,5,6,7
JOHNSON	1991-DATE	250 HP Ficht	HC6358	H05072A	H05085	H05009	1,2,4,5,6,7
EVINRUDE	1993-DATE	250-300 HP 2-stroke	HC6358	H05073A	H05086	H05009	2,4,5,6,7
SUZUKI	1998-DATE	225-ABOVE, 4-stroke	HC6358	H05072A	H05085	H05009	1,2,4,5,6,7
MERCURY	2002-DATE	225-ABOVE, 4-stroke	HC6358	H05038A	H05079	H05009	2,4,5,6,7
	1998-DATE	225-300 HP 2-stroke	HC6345	H05038A	H05079	H05009	2,4,5,6,7
	2002-DATE	ALL XS engines	HC6345	H05076	H05077	H05009	2,3,5,6,7
YAMAHA	2000-DATE	225-ABOVE, 4-stroke	HC6358	H05047A	H05084	H05009	2,4,5,6,7

- NOTES:**
1. One Spacer Kit HO5090 required per engine.
 2. Requires one cylinder per engine.
 3. One cylinder per engine. MUST use Mercury supplied tiller bolt.
 4. Two cylinders required. Must be mounted on outside engines.
 5. Requires one HO5009 tiebar.
 6. Requires two HO5009 tiebars.
 7. If interference occurs use Mercury tiebar.

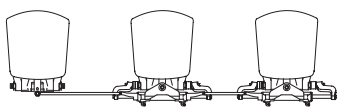
With the power and speed increasing for performance type SKA fishing boats, Teleflex offers dedicated system components for these types of craft. If your application calls for a dual or triple outboard engine configuration, is capable of speeds exceeding 55 MPH, and runs in open water, please refer to the Application Guide above for your specific engine size and type.



hydraulic outboard steering, pivot front mount cylinder

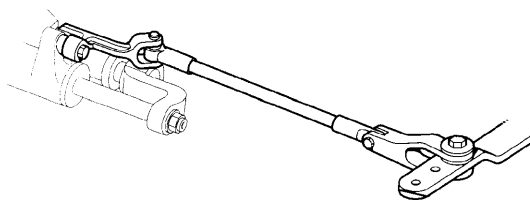
Triple Engine Ordering Guide: Pivot Mount Systems

ENGINE/CYLINDER CONFIGURATION	COMPONENT DESCRIPTION	QTY. REQ'D	MODEL	PART NO.
TRIPLE 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 MOUNT	HC_3__
	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
	OPTIONAL EQUIPMENT	BACK PLATE KIT		(FOR STANDARD HELMS)
	20 DEGREE WEDGE		(FOR STANDARD HELMS)	HA5419
	AUTOPILOT FITTING KIT		(ALL HELMS)	HF5501
	TILT HELM - SEASTAR 1.7			HH5741
	REAR MOUNT HELM - SEASTAR 1.7			HH5261
	TILT HELM - SEASTAR 2.4			HH5742
	REAR MOUNT HELM - SEASTAR 2.4			HH5262
	SILVER CYLINDERS			HC53__SIL
	PRO CYLINDERS (available in red, silver or traditional black)			HC63__
	POWER ASSIST STEERING			PA1200



NOTE: this Ordering Guide and the previous Dual/Triple Engine Application Guide are not intended for high-speed, high-load applications (e.g. Offshore Tournament Fishing Boats). For this type of application, please refer to the Tournament Series Cylinders and Tie Bars on subsequent pages.

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

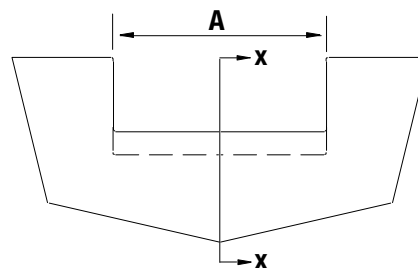


NUMBER OF ENGINES	SPLASHWELL DIAGRAM DIMENSION			MINIMUM ENGINE CENTER DISTANCE
	A	B	C	
1	22" (559mm)	6" (152mm)	5" (127mm)	N/A
2	44" (1118mm)	6" (152mm)	5" (127mm)	26" (660mm)
3	66" (1677mm)	6" (152mm)	5" (127mm)	29" (737mm)

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

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

REAR VIEW:



SIDE VIEW:

