

SeaStar Power Purge JR.  
Part # HA5445-2

SeaStar/BayStar Power Purge Jr. is the quickest way to bleed a SeaStar/BayStar system in the field & assure a rock-solid steering feel every time! The Power Purge Jr. reduces installation and warranty costs while enhancing the quality of the boat to the end user. A typical manual fill and purge takes the average experienced installer or service technician about 30 minutes per boat — by using the Power Purge Jr. this can be reduced to 10 minutes or less.



Figure 12-1. Power Purge JR. HA5445-2.



Figure 12-2. Dual cylinder purge kit HA5461.

### Advantages

- Steering feel is solid every time
- Complete Fill & Purge in 10 minutes or less
- Fast and efficient
- Easy to operate
- Screens contaminants from steering fluid
- Quick connect fittings
- Convenient portable size
- Convenient electrical hook-up utilizing 12 volt boat battery
- Optional Dual Cylinder Purging Kit HA5461 available
- Optional 50' Hose Extension Kit HA5462, for longer runs

### NOTICE

Larger SeaStar Power Purge Sr. also available for high volume users, part # HA5447. Contact Technical Support for details.

## Replacement Parts List

- Service kit, Kit # HP6125
- Helm adapter, Kit # HP6148 (*one per kit*)
- Quick connect fitting replacement, Kit # HP6170 (*includes all quick connect fittings, NO hose*)
- Hose/quick connect replacement, Kit # HP6171
- Power Purge motor replacement, Kit # HP6116
- Low profile cylinder bleed adapter, Kit # HP6149.

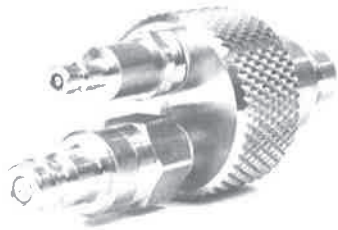


Figure 12-3. Helm adapter kit HP6148.

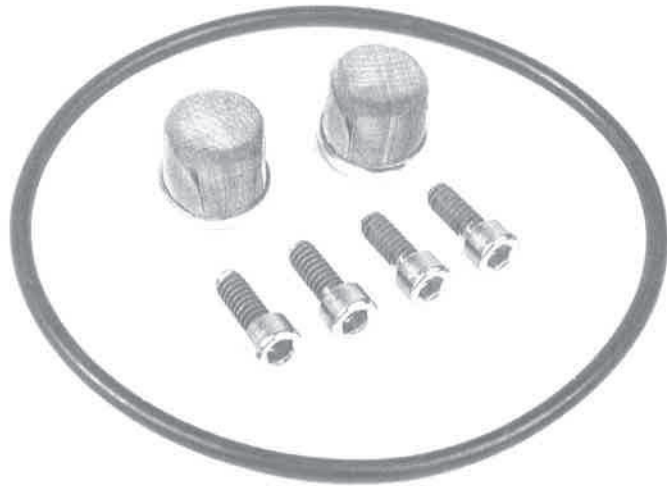


Figure 12-4. Service kit HP6125.



Figure 12-5. Quick connect kit HP6170.



Figure 12-6. Low profile bleed adapter HP6149.

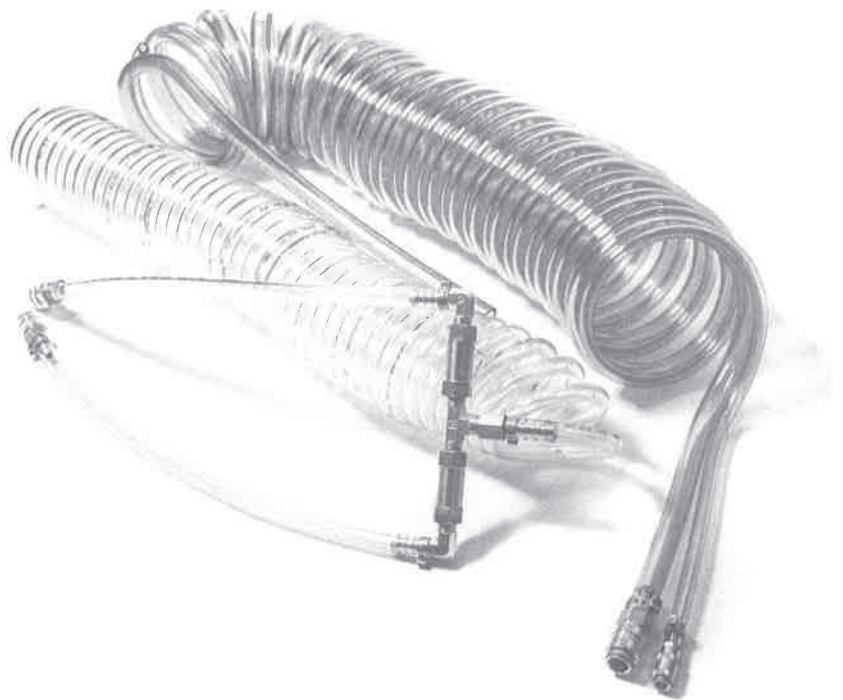


Figure 12-7. Hose/quick connect kit HP6171.



Figure 12-8. Power Purge motor kit HP6116.

## SeaStar Bleed Hose

Part # HA5438

- This kit is needed to properly bleed the SeaStar Outboard steering kit
- Screws onto the SeaStar and equivalent fluid to bleed the SeaStar system
- Makes for a clean bleed when used properly

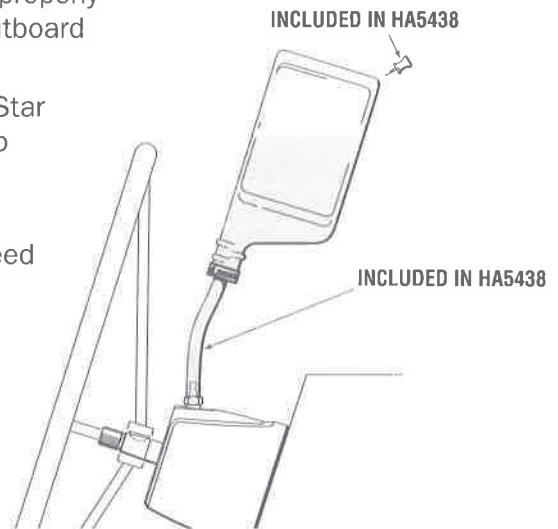


Figure 12-9.

## SeaStar Remote Fill

Part # HA6450

- Can be used with ALL SeaStar Helm pumps
- Relocate your fill plug to a more convenient or hidden place

### NOTICE

Requires 7/8" hole to be drilled onto dash above helm pump.

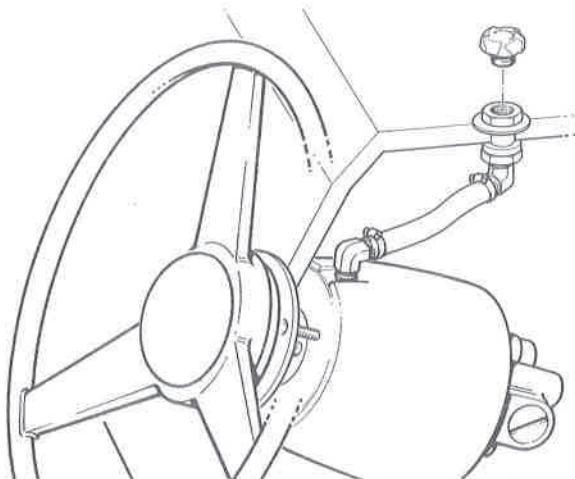
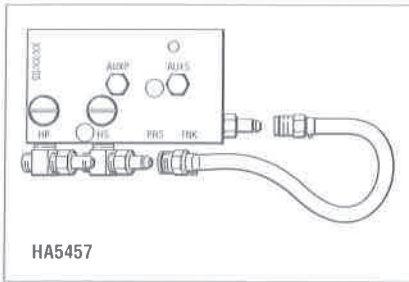


Figure 12-10.

### SeaStar Power Steering Purge Kit Part # HA5457

- Makes bleeding even easier than before.
- Central bleeding location—no need to run hoses to reservoir.
- Can only be used with Power Steering Cylinders made after October 2005.



### SeaStar Power Steering Purge Kit Part # HA5456

- Comes with 25' of hose to go from the steering cylinder to the reservoir.
- Makes bleeding easier and cleaner than before.

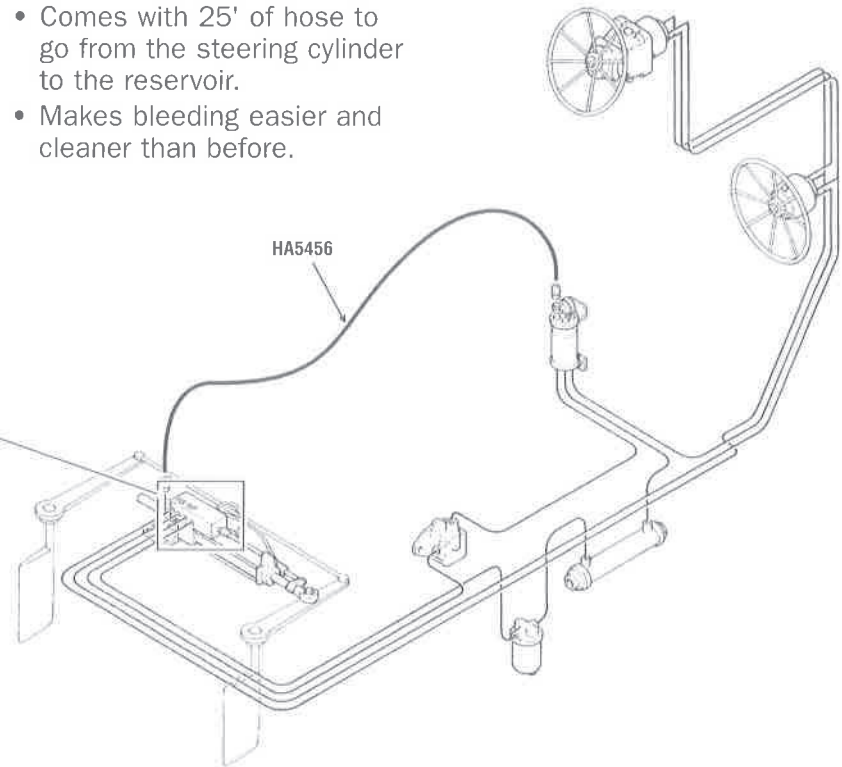


Figure 12-11.

### SeaStar Helm Pump Drill Jigs

**HA5466** Drill Jig for drilling mounting holes for standard SeaStar and SeaStar Pro helms. A 3 inch dashboard hole is required.

**HA5467** Drill Jig for drilling mounting holes for standard SeaStar and SeaStar Pro helms where dashboard has a 3-1/4 inch hole from a previously mounted mechanical helm.

**HA5468** Drill Jig for drilling mounting holes for SeaStar and SeaStar Pro Classic Tilt helms (HH6541-3, HH6542-3, HH6543-3). Also back Mount Kit (HA5418). A 4-1/2 inch dashboard hole is required.



Figure 12-12.

# Technical Info/Specifications

## NOTICE

Contact your nearest dealer or distributor to order replacement parts.

### BayStar/SeaStar Helm Pump Shaft Details

**Taper:** 3/4" Standard Taper (1" PER FOOT), **WHEEL SHAFT Threads:** 5/8"-18 UNF, **Key:** #606 Woodruff Key (3/16"), **PORT SIZES:** -5 ORB Hose (F).

## NOTICE

Theoretical torque about pivot point at 35° rudder arc with 1000 psi (70 bar) system pressure.

**Table A: BayStar/SeaStar Helm Pumps**

HELM DESCRIPTION	PART NUMBER	DISPLACEMENT CU. IN./REV (cc)	RELIEF VALVE SETTING PSI (BAR)	MAXIMUM WHEEL DIA. INCHES (mm)	SEAL KIT	NOTES
BayStar Front Mount	HH4311-3	1.1 (18.02)	1000 (70)	28 (711)	HP6032	
BayStar Front Mount	HH4314-3	1.4 (23.0)	1000 (70)	28 (711)	HP6032	
BayStar Sport Tilt	HH4315-3	1.4 (23.0)	1000 (70)	20 (508)	HP6032	
BayStar Sport Plus Tilt	HH4316-3	1.4 (23.0)	1000 (70)	26 (660)	HP6032	
BayStar Front Mount	HH4016	1.6 (26.2)	800 (55)	26 (660)	HS5147	Discontinued
BayStar Sport Tilt	HH4015	1.6 (26.2)	800 (55)	26 (660)	HS5147	Discontinued
BayStar Plus Front Mount	HH4514-3	1.4 (23.0)	1000 (70)	28 (711)	HP6032	
BayStar Plus Sport Tilt	HH4513-3	1.4 (23.0)	1000 (70)	28 (711)	HP6032	
SeaStar Front Mount	HH5269-3	1.4 (23.0)	1000 (70)	28 (711)	HP6032	
SeaStar Front Mount	HH5271-3	1.7 (27.8)	1000 (70)	28 (711)	HP6032	
SeaStar Front Mount	HH5273-3	2.0 (33.0)	1000 (70)	28 (711)	HP6032	
SeaStar Front Mount	HH5272-3	2.4 (39.3)	1000 (70)	28 (711)	HP6032	
SeaStar Front Mount	HH5217-3	1.7 (27.8)	1000 (70)	28 (711)	HP6037	Commercial Helm (Stainless Shaft)
SeaStar Front Mount	HH5224-3	2.4 (39.3)	1000 (70)	28 (711)	HP6037	Commercial Helm (Stainless Shaft)
SeaStar Front Mount	HH5285-3	3.0(46.16)	1000 (70)	28 (711)	HP6032	
SeaStar Pro Front Mount	HH5779-3	1.7 (27.8)	1500 (103)	28 (711)	HP6032	
SeaStar Pro Front Mount	HH5770-3	2.0 (33.0)	1500 (103)	28 (711)	HP6032	
SeaStar Pro Front Mount	HH5772-3	2.4 (39.3)	1500 (103)	28 (711)	HP6032	
SeaStar Pro Front Mount	HH5218-3	1.7 (27.8)	1500 (103)	28 (711)	HP6032	Commercial Helm (Stainless Shaft)
SeaStar Rear Mount	HH5260-3	1.4 (23.0)	1000 (70)	28 (711)	HP6032	
SeaStar Rear Mount	HH5261-3	1.7 (27.8)	1000 (70)	28 (711)	HP6032	
SeaStar Rear Mount	HH5263-3	2.0 (33.0)	1000 (70)	28 (711)	HP6032	
SeaStar Rear Mount	HH5262-3	2.4 (39.3)	1000 (70)	28 (711)	HP6032	
SeaStar Rear Mount	HH5265-3	3.0 (49.1)	1000 (70)	28 (711)	HP6032	
SeaStar Pro Rear Mount	HH5778-3	1.7 (27.8)	1500 (103)	28 (711)	HP6032	
SeaStar Pro Rear Mount	HH5771-3	2.0 (33.0)	1500 (103)	28 (711)	HP6032	
SeaStar Sport Tilt	HH6193-3	1.4 (23.0)	1000 (70)	20 (508)	HP6032	New Product
SeaStar Sport Tilt	HH6191-3	1.7 (27.8)	1000 (70)	20 (508)	HP6032	Replaces HH5291
SeaStar Sport Tilt	HH6145-3	2.0 (33.0)	1000 (70)	20 (508)	HP6032	Replaces HH5745
SeaStar Sport Tilt	HH6192-3	2.4 (39.3)	1000 (70)	20 (508)	HP6032	Replaces HH5292
SeaStar Pro Sport Tilt	HH6189-3	1.7 (27.8)	1500 (103)	20 (508)	HP6032	Replaces HH5289
SeaStar Pro Sport Tilt	HH6190-3	2.0 (33.0)	1500 (103)	20 (508)	HP6032	Replaces HH5190
SeaStar Sport Plus Tilt	HH6491-3	1.7 (27.8)	1000 (70)	20 (508)	HP6032	New Product
SeaStar Sport Plus Tilt	HH6445-3	2.0 (33.0)	1000 (70)	20 (508)	HP6032	New Product
SeaStar Sport Plus Tilt	HH6492-3	2.4 (39.3)	1000 (70)	20 (508)	HP6032	New Product
SeaStar Sport Plus Tilt	HH6345-3	2.0 (33.0)	1000 (70)	20 (508)	HP6032	Splined Shaft
SeaStar Pro Sport Plus Tilt	HH6489-3	1.7 (27.8)	1500 (103)	20 (508)	HP6032	
SeaStar Pro Sport Plus Tilt	HH6490-3	2.0 (33.0)	1500 (103)	20 (508)	HP6032	
SeaStar Classic Tilt	HH6544-3	1.4 (23.0)	1000 (70)	20 (508)	HP6032	Replaces HH5775
SeaStar Classic Tilt	HH6541-3	1.7 (27.8)	1000 (70)	20 (508)	HP6032	Replaces HH5741
SeaStar Classic Tilt	HH6543-3	2.0 (33.0)	1000 (70)	20 (508)	HP6032	Replaces HH5743
SeaStar Classic Tilt	HH6542-3	2.4 (39.3)	1000 (70)	20 (508)	HP6032	Replaces HH5742
SeaStar Pro Classic Tilt	HH6573-3	1.7 (27.8)	1500 (103)	20 (508)	HP6032	Replaces HH5773
SeaStar Pro Classic Tilt	HH6574-3	2.0 (33.0)	1500 (103)	20 (508)	HP6032	Replaces HH5774

Table 12-1.

**Table B: Hynautic Helm Pumps**

HELM DESCRIPTION	PART NUMBER	DISPLACEMENT CU. IN./REV (cc)	SHAFT STYLE	KEY WAY	SEAL KIT
Hynautic	h-21	2.75 (45.1)	1" Straight	1/4" Square	HS-02
Hynautic	H-22	2.00 (32.8)	1" Straight	1/4" Square	HS-02
Hynautic	H-29	2.75 (45.1)	1" Straight	1/4" Square	HS-02
Hynautic	H-25	2.75 (45.1)	3/4" Tapered	#9 Woodruff	HS-02
Hynautic	H-26	2.00 (32.8)	3/4" Tapered	#9 Woodruff	HS-02
Hynautic	H-41	5.50 (90.1)	1" Straight	1/4" Square	HS-04
Hynautic	H-42	4.00 (65.5)	1" Straight	1/4" Square	HS-04
Hynautic	H-42-2	4.00 (65.5)	3/4" Tapered	#9 Woodruff	HS-04

*Table 12-2.*
**Table C: Capilano Helm Pumps**

HELM DESCRIPTION	PART NUMBER	DISPLACEMENT CU. IN. (cc)	SHAFT STYLE	KEY WAY	SEAL KIT
Capilano	1250V	1.7-3.4 (27.8-55.7)	3/4" Tapered	3/16"	HS5161
Capilano	1275V	2.7-5.4 (44.2-88.4)	3/4" Tapered	3/16"	HS5161
Capilano	1350	8.00 (131.0)	1-1/4" Straight	3/16"	HS5171

*Table 12-3.*
**Table D: BayStar/SeaStar/Hynautic Outboard Cylinders**

MAKER	PART NUMBER	CYLINDER TYPE	SHAFT DIA IN (mm)	STROKE IN (mm)	SEAL KIT	VOLUME CU. IN (cc)	NOTES
BayStar	HC4600	Outboard	.63 (16.0)	8 (203)	HP5608/HP5607	7.24 (118.6)	<i>Discontinued</i>
BayStar	HC4645H	Outboard	.63 (16.0)	8 (203)	HP4600	7.24 (118.6)	
BayStar	HC4647H	Outboard	.63 (16.0)	8 (203)	HP4600	7.24 (118.6)	
BayStar	HC4648H	Outboard	.63 (16.0)	8 (203)	HP4600	7.24 (118.6)	
BayStar	HC4658H	Outboard	.63 (16.0)	8 (203)	HP4600	7.24 (118.6)	
SeaStar	HC5345-3	Outboard	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar	HC5347-3	Outboard	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar	HC5348-3	Outboard	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar	HC5358-3	Outboard	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar Pro	HC6345-3	Outboard Pro	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar Pro	HC6358-3	Outboard Pro	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar	HC6750	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC6751	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC6752	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC6753	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC6754	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC6755	Outboard Tournament	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	<i>Discontinued (See page 3-11)</i>
SeaStar	HC5370-3	Outboard Side Mount	.50 (12.7)	8 (203)	HP6088	8.3 (135.2)	<i>Replaces HC5370-71</i>
SeaStar	HC5380-3	Outboard Splashwell	.50 (12.7)	9 (228)	N/A	9.3 (152.1)	<i>Replaces HC5380</i>
SeaStar	HC5375-3	Outboard Catamaran	.75 (19.0)	8 (203)	HS5157	8.34 (136.6)	
SeaStar	HC5343	Outboard Cat Fixed	.75 (19.0)	10 (254)	HS5157	8.13 (133.2)	
SeaStar	HC5445-3	Outboard Limited Stroke	.75 (19.0)	6.75 (171)	HS5157	7.04 (115)	
SeaStar	HC6845	Outboard Tournament	.875 (22.2)	8 (203)	HP6160	8.34 (136.6)	
SeaStar	HC6845S	Outboard Tournament	.875 (22.2)	8 (203)	HP6160	8.34 (136.6)	
SeaStar	HC6850	Tournament Limited Stroke	.875 (22.2)	7 (178)	HP6160	8.34 (136.6)	
Hynautic	K-6-NI	Outboard	.875 (22.2)	7.75 (197)	KS-19	9.00	
SeaStar	HC5374-3	Outboard Cat Fixed	.75 (19.0)	10 (254)	KS-06	13.3 (217.9)	
SeaStar	HC5340-42	Outboard Slide	.75 (19.0)	10 (254)	HS5157	8.34 (133.2)	<i>Discontinued</i>
SeaStar	HC5342	Outboard Slide	.75 (19.0)	10 (254)	HS5157	8.34 (133.2)	<i>Discontinued</i>

*Table 12-4.*

## NOTICE

Theoretical torque about pivot point at 35° articulation with 1000 psi (70 bar) system pressure.

### Table E: SeaStar Sterndrive Cylinders (For NEW -3 cylinders see table H.)

MAKER	PART NUMBER	MODEL NUMBER	BORE DIA IN (mm)	SHAFT DIA IN (mm)	STROKE IN (mm)	SEAL KIT	TORQUE IN-LB (Kg-m)	VOLUME CU. IN. (cc)	NOTES
SeaStar	HC5311	BA125-6.25ATM	1.25 (31.7)	0.63 (16.0)	6.25 (15.9)	HS5154	N/A	5.66 (92.7)	Obsolete
SeaStar	HC5332	BA135-7EM	1.35 (34.9)	.625 (15.9)	7 (178)	HS5155	5741 (66.1)	8.3 (135.2)	
SeaStar	HC5327	BA135-8EM	1.35 (34.9)	.63 (16.0)	8 (203)	HS5155	6557 (75.5)	9.5 (155.4)	Obsolete
SeaStar	HC5326	BA150-7EM	1.50 (38.1)	.625 (15.9)	7 (178)	HS5156	8853 (102.0)	8.3 (135.2)	Replaced by HC5326-3
SeaStar	HC5328	125-8EM	1.25 (31.7)	.50 (12.7)	8 (203)	HS5154	7142 (82.3)	8.3 (135.2)	Replaced by HC5328-3
SeaStar	HC5329	125-8VPEM	1.25 (31.7)	.50 (12.7)	8 (203)	HS5154	N/A	8.3 (135.2)	Obsolete
SeaStar	HC5331	92VPS	1.25 (31.7)	.50 (12.7)	8 (203)	HS5154	N/A	8.3 (135.2)	Replaced by HC5331-3
SeaStar	HC5330	BA125-8EMV	1.25 (31.7)	.50 (12.7)	8 (203)	HS5154	7142 (82.3)	8.3 (135.2)	Replaced by HC5330-3

Table 12-5.

### Table F: SeaStar/Capilano Inboard Cylinders (For NEW -3 cylinders see table H.)

MAKER	PART NUMBER	MODEL NUMBER	BORE DIA IN (mm)	SHAFT DIA IN (mm)	STROKE IN (mm)	SEAL KIT	TORQUE IN-LB (Kg-m)	VOLUME CU. IN. (cc)	NOTES
SeaStar	HC5303	BA125-3ATM	1.25 (31.7)	.63 (16.0)	3 (76)	HS5154		3.12 (51)	Replaced by HC5303-3
SeaStar	HC5312 & HC5312-2	BA125-7ATM	1.25 (31.7)	.63 (16.0)	7 (178)	HS5154	5025 (57.9)	7.2 (118)	Replaced by HC5312-3
SeaStar	HC5313	BA135-7ATM	1.35 (34.9)	.63 (16.0)	7 (178)	HS5155	5741 (66.1)	8.3 (136)	Replaced by HC5313-3
SeaStar	HC5314	BA150-7ATM	1.50 (38.1)	.63 (16.0)	7 (178)	HS5156	7117 (82.0)	10.2 (167)	Replaced by HC5314-3
SeaStar	HC5318	BA150-7TM	1.50 (38.1)	.63 (16.0)	7 (178)	HS5182	7117 (82.0)	10.2 (167)	Brass Cylinder
SeaStar	HC5319	BA175-7TM	1.75 (44.4)	.75 (19.0)	7 (178)	HS5183	9569 (110.2)	13.7 (225)	Brass Cylinder
SeaStar	HC5369	BA150-9TM	1.50 (38.1)	.63 (16.0)	9 (229)	HS5182	9375 (107.7)	13.1 (215)	Brass Cylinder
Capilano	HC5349	BA150-7TM	1.50 (38.1)	.63 (16.0)	7 (178)	HS5182	7117 (82.0)	10.2 (167)	Brass Cylinder
Capilano	HC5350	BA175-7TM	1.75 (44.4)	.75 (19.0)	7 (178)	HS5183	9569 (110.2)	13.7 (225)	Brass Cylinder
Capilano	HC5351	BA200-7TM	2.00 (50.8)	.75 (19.0)	7 (178)	HS5184	13200 (151)	18.9 (310)	Brass Cylinder
Capilano	HC5373	BA175-9TM	1.75 (44.4)	.75 (19.0)	9 (229)	HS5183	12600 (145.5)	17.7 (290)	Brass Cylinder
Capilano	HC5378	BA200-11TM	2.00 (50.8)	1 (25.4)	11 (279)	HS5185	23140 (267.2)	26.0 (426)	Brass Cylinder
Capilano	HC5379	BA200-11TMC	2.00 (50.8)	1 (25.4)	11 (279)	HS5185	23140 (267.2)	26.0 (426)	Brass Cylinder Clevis Connection
SeaStar	HC5802	BA200-9TM	2.00 (50.8)	1 (25.4)	9 (229)	HS5198	18900 (218.3)	21.25 (345)	Brass Cylinder
SeaStar	HC5804	BA200-11TM	2.00 (50.8)	1 (25.4)	11 (279)	HS5198	23140 (267.2)	26.0 (426)	Brass Cylinder

Table 12-6.

### Table G: Hynautic Cylinders

MAKER	PART NUMBER	CYLINDER TYPE	SHAFT DIA IN (mm)	STROKE IN (mm)	SEAL KIT	VOLUME CU. IN. (cc)	NOTES
Hynautic	K-1	N/A	.75 (19.0)	9 (229)	KS-11	11.9 (195)	Replaced by HC5369
Hynautic	K-2	N/A	.75 (19.0)	9 (229)	KS-12	17.7 (290)	Replaced by HC5373
Hynautic	K-3	N/A	.875 (22.2)	9 (229)	KS-13, or KS-17	22.9 (375)	Replaced by HC5802
Hynautic	K-4	N/A	.875 (22.2)	12 (305)	KS-13, or KS-17	30.5 (500)	Replaced by HC5378
Hynautic	K-5	Unbalanced	.875 (22.2)	9 (229)	KS-15	15.9 (261)	
Hynautic	K-6	N/A	.875 (22.2)	7.75 (197)	KS-19	9 (147)	
Hynautic	K-8	N/A	1 (25.4)	9.5 (241)	KS-09 or KS-18	39.2 (642)	Replaced by HC5806
Hynautic	K-9	N/A	1 (25.4)	14.5 (168)	KS-09 or KS-18	55 (901)	
Hynautic	K-10	N/A	.75 (19.0)	9.5 (241)	KS-07	7.5 (123)	Replaced by HC53XX
Hynautic	K-11	Unbalanced	.75 (19.0)	9 (229)	KS-01	11 (117)	Replaced by HC5370-3
Hynautic	K-12	Unbalanced	.75 (19.0)	7 (178)	KS-01	8.6 (141)	Replaced by HC5370-3
Hynautic	K-13	N/A	.75 (19.0)	9 (229)	KS-01	11 (117)	Replaced by HC5380-3
Hynautic	K-14	N/A	.75 (19.0)	7 (178)	KS-01	8.6 (141)	Replaced by HC5380-3
Hynautic	K-18	N/A	.75 (19.0)	7 (178)	KS-02	7 (115)	Replaced by HC5322-3
Hynautic	K-19	N/A	.75 (19.0)	9 (229)	KS-02	9 (147)	Replaced by HC5323-3

Table 12-7.

**Table H: NEW -3 Steering Cylinders**

MAKER	PART NUMBER	MODEL NUMBER	BORE DIA IN (mm)	SHAFT DIA IN (mm)	STROKE IN (mm)	SEAL KIT	TORQUE IN-LB (Kg-m)	VOLUME CU. IN. (cc)	NOTES
SeaStar	HC5303-3	BA125-3ATM	1.25 (31.7)	.63 (16.0)	3 (76)	HP6026	N/A	3.12 (51)	
SeaStar	HC5312-3	BA125-7ATM	1.25 (31.7)	.63 (16.0)	7 (178)	HP6026	5025 (57.9)	7.2 (118)	
SeaStar	HC313-3	BA135-7ATM	1.35 (34.9)	.63 (16.0)	7 (178)	HP6025	5741 (66.1)	8.3 (136)	
SeaStar	HC5314-3	BA150-7ATM	1.50 (38.1)	.63 (16.0)	7 (178)	HP6025	7117 (82.0)	10.2 (167)	
SeaStar	HC5326-3	BA150-7EM	1.50 (38.1)	.63 (16.0)	7 (178)	HP6086	8853 (102.0)	8.3 (136.2)	
SeaStar	HC5328-3	125-8EM	1.25 (31.7)	.50 (12.7)	8 (203)	HP6087	7142 (82.3)	8.3 (136.2)	
SeaStar	HC5329-3	125-8VPEM	1.25 (31.7)	.50 (12.7)	8 (203)	HP6027	N/A	8.3 (136.2)	
SeaStar	HC5331-3	125-8EM 92VPS	1.25 (31.7)	.50 (12.7)	8 (203)	HP6027	N/A	8.3 (136.2)	
SeaStar	HC5330-3	BA125-8EMV	1.25 (31.7)	.50 (12.7)	8 (203)	HP6027	7142 (82.3)	8.3 (136.2)	

Table 12-8.



# Quick Reference Turns Chart

## BayStar Helm Pumps Turns

GOOD

OPTIMAL

		BAYSTAR HELM DISPLACEMENT (in <sup>3</sup> /rev)			
		1.1	1.4		
OUTBOARD CYLINDERS	DISP. (in <sup>3</sup> )				
HC4645H – SINGLE	7.17	6.6	5.2		
INBOARD CYLINDERS	DISP. (in <sup>3</sup> )				
BA125-6.25	6.7	6.1	4.8		
BA100-6	3.53	3.2	2.5		

Table 12-9.

## SeaStar Helm Pumps Turns

GOOD

OPTIMAL

		SEASTAR HELM DISPLACEMENT (in <sup>3</sup> /rev)				
FRONT MOUNT, OUTBOARD PIVOT CYLINDERS***	DISP. (in <sup>3</sup> )	1.4	1.7	2.0	2.4	3.0
SINGLE	8.3	5.9	4.9	4.2	3.5	2.8
DUAL**	16.6	11.9	9.8	8.3	6.9	5.5*
TRIPLE**	24.9	17.8	14.6	12.5	10.4	8.3*
QUAD**	33.2	23.7	19.5	16.6	13.8	11.1*
INBOARD CYLINDERS	DISP. (in <sup>3</sup> )					
BA125-7	7.2	5.1	4.2	3.6	3.0	2.4*
BA135-7	8.2	5.9	4.8	4.1	3.4	2.7*
BA150-7	10.2	7.3	6.0	5.1	4.3	3.4*
BA175-7	13.7	9.8	8.1	6.9	5.7	4.6*
BA150-9	13.1	9.4	7.7	6.6	5.5	4.4*
BA175-9	17.7	12.6	10.4	8.9	7.4	5.9*
BA200-7	18.9	13.5	11.1	9.5	7.9	6.3*
BA200-9	21.25	15.2	12.5	10.6	8.9	7.1*
BA200-11	29.7	21.2	17.5	14.9	12.4	9.9

Table 12-10.

## Capilano Helm Pumps Turns

GOOD

OPTIMAL

		CAPILANO HELM DISPLACEMENT (in <sup>3</sup> /rev)				
		1250V MIN	1250V MAX	1275 MIN	1275 MAX	1350
FRONT MOUNT, OUTBOARD PIVOT CYLINDERS***	DISP. (in <sup>3</sup> )	1.7	3.4	2.7	5.4	8.0
SINGLE	8.3	4.9	2.4	3.1	1.5	1.0
DUAL**	16.6	9.8	4.9	6.1	3.1	2.1
TRIPLE**	24.9	14.6*	7.3*	9.2*	4.6*	3.1
QUAD**	33.2	19.5*	9.5*	12.3*	6.1*	4.2
INBOARD CYLINDERS	DISP. (in <sup>3</sup> )					
BA125-7	7.2	4.2	2.1	2.7	1.3	0.9
BA135-7	8.2	4.8	2.4	3.0	1.5	1.0
BA150-7	10.2	6.0	3.0	3.8	1.9	1.3
BA175-7	13.7	8.1*	4.0*	5.1	2.5	1.7
BA150-9	13.1	7.7*	3.9*	4.9	2.4	1.6
BA175-9	17.7	10.4*	5.2*	6.6*	3.3*	2.2
BA200-7	18.9	11.1*	5.6*	7.0*	3.5*	2.4
BA200-9	21.25	12.5*	6.25*	7.9*	3.9*	2.7
BA200-11	29.7	17.5	8.7	11.0*	5.5*	3.7

Table 12-11.

\* Any system using a helm greater than 2.4 in 3 /rev & Power Assist , requires dual SPA's in parallel.  
 \*\* Displacement is total effective cylinder volume (assumes cylinders are plumbed in parallel not series).  
 \*\*\* Includes Tournament Series and -3 outboard cylinders.

# Rudder Torque Data Sheet

Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Displacement Hull:.....  Yes  No

Planning Hull: .....  Yes  No

Sail Boat:.....  Yes  No

Catamaran: .....  Yes  No

Vessel – Length:..... \_\_\_\_\_ ft.

Vessel – Make/Model: \_\_\_\_\_

Vessel – Top Speed: ..... \_\_\_\_\_ Knots

Vessel – Cruising Speed: ..... \_\_\_\_\_ Knots

Vessel – Displacement: ..... \_\_\_\_\_ cu.ft.

Vessel – Use:..... \_\_\_\_\_

Number of Engines:..... \_\_\_\_\_

Each Engine Shaft Horsepower ..... \_\_\_\_\_ HP

Prop. Diameter:..... \_\_\_\_\_ in.

Rudder Arc: (Midship to Hardover)..... \_\_\_\_\_ Degrees

Number of Rudders:..... \_\_\_\_\_

Rudder Cross Section:

Foil  Flat Plate  Other (please specify)

Estimated load per rudder:..... \_\_\_\_\_ ft-lbs.  
(It is suggested that you confirm load with your Naval Architect.)

Perpendicular distance from the rudder shaft to the propeller:..... \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(See figure 12-13, dimension 'A'.)

Distance parallel to the rudder shaft from rudder base to the center of lower rudder bearing..... \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(See figure 12-13, dimension 'B'.)

Perpendicular distance from the waterline to the rudder base:..... \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(See figure 12-13, dimension 'C'.)

Rudder drawing included:.....  Yes  No  
(See notice below left.)

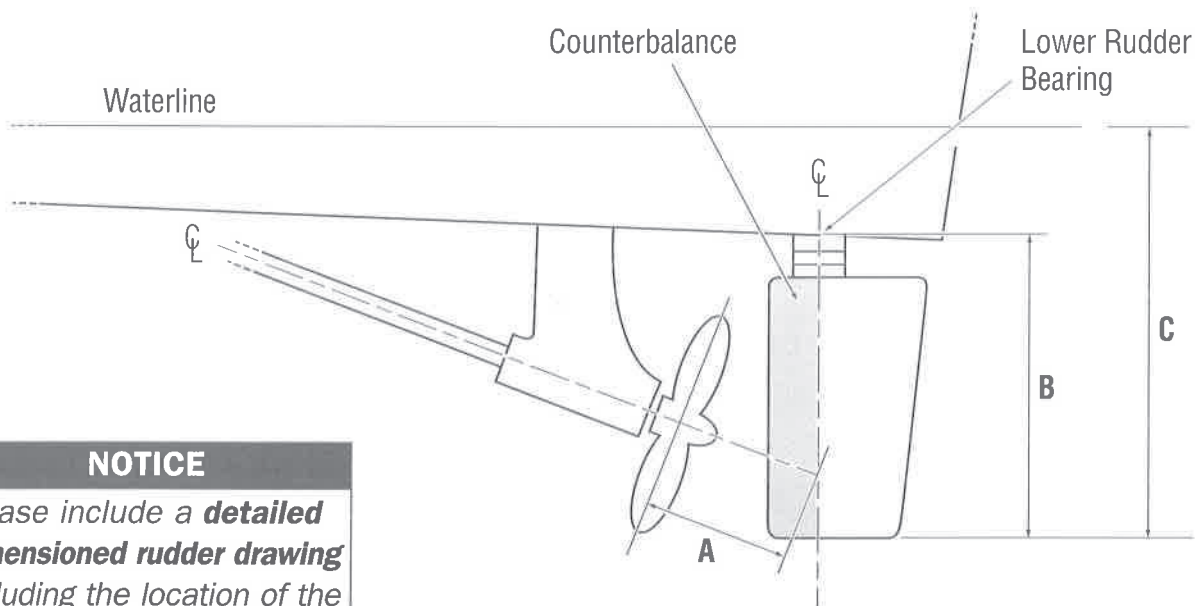


Figure 12-13.

**NOTICE**

Please include a **detailed dimensioned rudder drawing** including the location of the rudder post. This **MUST** be provided to get a steering system recommendation.