

INSTALLATION INSTRUCTIONS

Copy Part# 501005, Rev. C, 01/2014

Page 1 of 2

HYDRAULIC STEERING SPARE PARTS KIT

NOTICE Manuals can be downloaded from: www.seastarsolutions.com	This kit is designed for use in a SeaStar, BayStar, Capilano or Hynautic Hydraulic Steering System. SeaStar Solutions recommends that ALL work is completed by a Qualified Marine Technician to ensure safe operation of the vessel. Please read and adhere to ALL warnings, cautions and notices that are outlined on this page as well as in your Owner's Manual.
A WARNING	Failure to adhere to the torque specifications outlined below may lead to separation of components resulting in loss of steering control causing ejection from vessel, or collision with objects leading to property damage, personal injury and/or death.
NOTICE	Refer to your Owner's Manual for any related notices, warnings and/or cautions.
	It is good practice to check ALL fasteners after initial use and regularly thereafter to ensure proper torque setting is maintained.

Bolt Torque Specifications

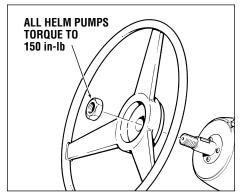


Figure A.

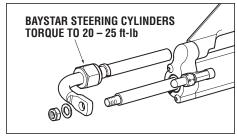


Figure B.

NOTICE

Values are stated in: in-lbs (Nm)

Bolt Size	18-8SS	Brass	Bolt Size	18-8SS	Brass
8-32	20.0 (2.25)	16.0 (1.81)	5/16"-18	132.0 (14.91)	107.0 (12.10)
8-36	22.0 (2.48)	18.0 (2.03)	5/16"-24	142.0 (16.04)	116.0 (13.11)
10-24	23.0 (2.59)	19.0 (2.14)	3/8"-16	236.0 (26.66)	192.0 (21.71)
10-32	32.0 (3.61)	26.0 (2.94)	3/8"-24	259.0 (29.20)	212.0 (23.97)
1/4"-20 1/4"-28	75.0 (8.47) 94.0 (10.6)	62.0 (7.01) 77.0 (8.70)			

These are the recommended maximum torque values for reusable dry bolts. Bolts should be torqued to this value +0% -20%. For lubricated bolts, multiply the dry bolt torque values by .75.

Values are stated in: ft-lbs (Nm)

Bolt Size	18-8SS	Brass	Bolt Size	18-8SS	Brass
7/16"-14	31.0 (42.00)	26.0 (35.25)	3/4"-10	128.0 (173.55)	104.0 (141.00)
7/16"-20	33.0 (44.74)	27.0 (36.61)	3/4"-16	124.0 (168.12)	102.0 (138.29)
1/2"-13	43.0 (58.30)	35.0 (47.45)	7/8"-9	194.0 (236.03)	159.0 (215.58)
1/2"-20	45.0 (61.01)	37.0 (50.17)	7/8"-14	193.0 (261.67)	158.0 (214.22)
9/16"-12	57.0 (77.28)	47.0 (63.72)	1"-8	287.0 (389.12)	235.0 (318.62)
9/16"-18	63.0 (85.42)	51.0 (69.15)	1"-14	259.0 (351.16)	212.0 (287.43)
5/8"-11 5/8"-18	93.0 (126.09) 104.0 (141.00)	76.0 (103.04) 85.0 (115.24)			

Torque values for 18-8 stainless steel and brass bolts are taken from a torque guide by ITT Harper. All results correspond well with basic bolt equations, using a bolt factor of 0.2 and a factor of 3/4 for a reusable connection.



INSTALLATION INSTRUCTIONS

Copy Part# 501005, Rev. C, 01/2014

Page 2 of 2

VOLVO BUSHING ADAPTER PART # HP6115

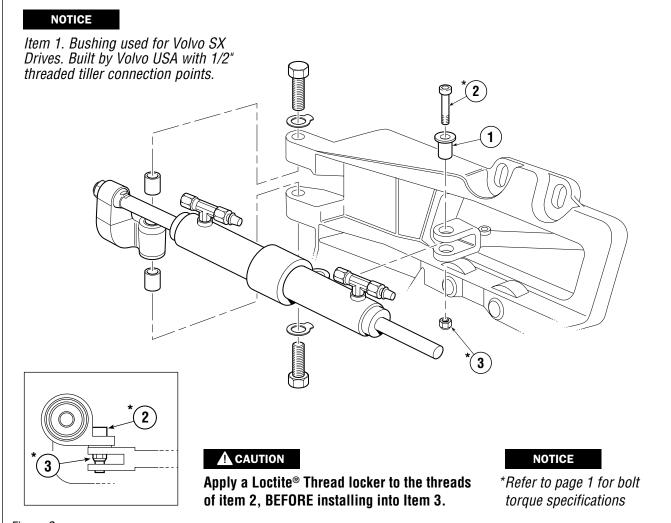


Figure C.

ITEM	PART#	QTY	DESCRIPTION
1	HP6115	1	Volvo Adapter Bushing
*2	545503	1	SHCS, 3/8" NF x 1-1/2" SS
*3	113529	1	NUT, 3/8" NF Nylok®
			thin, SS

ITEM	PART#	QTY	DESCRIPTION	