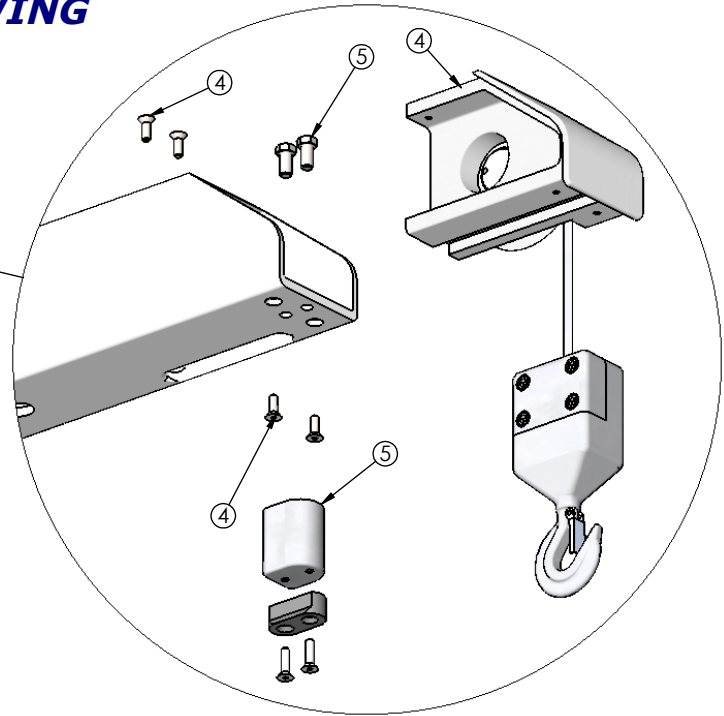
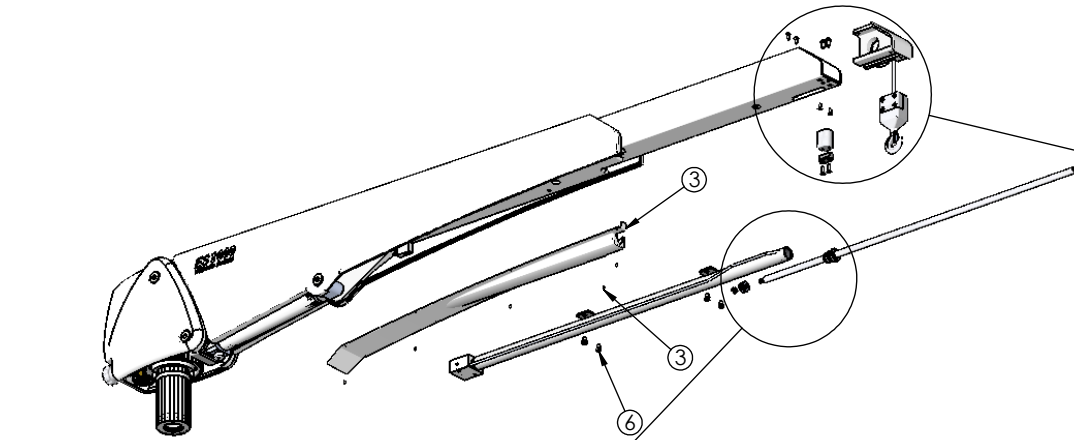
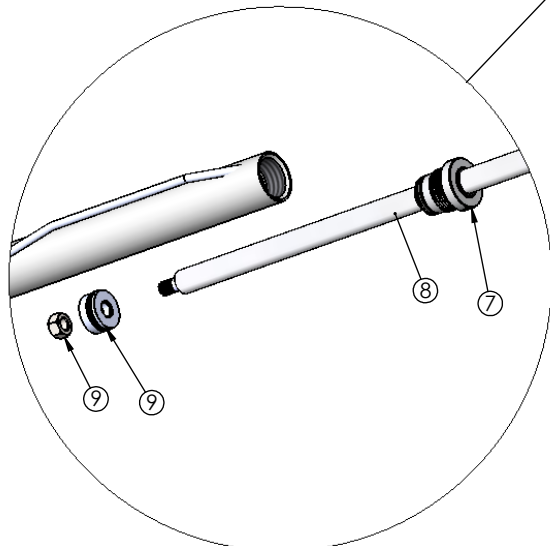


# ES1000/ES1500 EXTENSION CYLINDER REPAIR/REPLACEMENT DRAWING



DETAIL A  
SCALE 1 : 6



DETAIL B  
SCALE 1 : 6

## EXTENSION CYLINDER REPAIR INSTRUCTIONS:

1. PAY-OUT APPROX. 6FT OF ROPE
2. EXTEND BOOM APPROX. 2FT (FOR EASIER ACCESS)
3. REMOVE BOTTOM BOOM COVER
4. REMOVE BOOM TIP SCREWS AND PULL BOOM TIP ASSEMBLY OUT OF BOOM
5. REMOVE PUSH BLOCK MOUNTING SCREWS AND UN-THREAD PUSH BLOCK FROM ROD
6. REMOVE EXTENSION CYLINDER, REMOVING MOUNTING SCREWS AND HYDRAULIC HOSES
7. REMOVE EXTENSION CYLINDER GLAND
8. REMOVE CYLINDER ROD ASSEMBLY
9. REMOVE PISTON LOCKING NUT, REMOVE AND REPLACE PISTON
10. REINSTALL PISTON LOCKING NUT (TORQUE NUT TO 52 LB-FT USING LUBRICANT OR LOC-TITE)
11. REINSTALL ROD ASSEMBLY, TIGHTEN GLAND (JUST UNTIL FACES SEAT)
12. REINSTALL EXTENSION CYLINDER (TORQUE MOUNTING SCREWS TO 32 LB-FT, USING LOC-TITE)
13. THREAD PUSH BLOCK BACK ONTO ROD ASSEMBLY
14. REINSTALL PUSH BLOCK MOUNTING SCREWS (TORQUE TO 32 LB-FT USING LOC-TITE)
15. REINSTALL BOOM TIP ASSEMBLY, ENSURING THE ROPE IS PROPERLY SEATED IN SHEAVE
16. REINSTALL BOOM TIP SCREWS USING LOC-TITE (TORQUE TO 9 LB-FT) INSTALLING BOTTOM SCREWS FIRST

THE INFORMATION CONTAINED IN THIS DRAWING CONSTITUTES THE INTELLECTUAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, KNOWLEDGE, TRADE SECRETS, AND PROPRIETARY INFORMATION WHICH IS THE EXCLUSIVE PROPERTY OF STEELHEAD MARINE LTD.. ALL INFORMATION CONTAINED IN THIS DRAWING IS TO BE HELD IN THE STRICTEST CONFIDENCE BY THE RECIPIENT, AND IS NOT TO BE COPIED, DISCLOSED TO, OR TRANSMITTED TO ANY THIRD PARTIES WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF STEELHEAD MARINE LTD.

CAD GENERATED DRAWING.  
DO NOT MANUALLY UPDATE.  
\*\*\* DO NOT SCALE \*\*\*  
UNLESS OTHERWISE SPECIFIED  
ALL DIMENSIONS ARE IN  
INCHES.

TOLERANCES:  
FRACTIONS =  $\pm 1/16$   
0, 0.0 =  $\pm 0.030$   
0.00 =  $\pm 0.010$   
0.000 =  $\pm 0.005$   
ANGLES =  $\pm 1.0$

3rd ANGLE PROJ.

STEELHEAD  
MARINE

2 - 5367 271 Street, Langley, B.C. Canada  
Tel: 604-607-0091 Fax: 604-607-0092  
Web: www.steelheadmarine.net  
E-mail: sales@steelheadmarine.net

DRAWN:	G.R.
DATE:	27/11/2014
CHECKED:	
APPROVED:	
SCALE:	1:24

**ES1000/ES1500 EXTENSION  
CYLINDER REPLACEMENT  
PROJECT: ES1000**

DWG. NO.:	SHEET:	REV.:
ES1000 Ext Rplmt	1 OF 1	