

# ENDOLITE

## Instructions for Pneumatic Swing Phase Control Cylinder

*A pneumatic cylinder used to control the swing in a Trans-femoral or Knee Disarticulation lower limb external prosthesis during normal locomotion.*

*To be fitted only as part of an Endolite Modular Limb System.*

**PSPC Only 239130  
SFESK Module 019158  
140° SFESK Module 019171  
ESK/MKL Module 019161  
EUK Module 019152  
EUK 4 Bolt Module 019352  
All ESK+ Modules**

  
**125 kg** Maximum amputee weight  
when used during normal walking

**PSPC Only for E4BKD 239126  
E4BKD Module 019136**

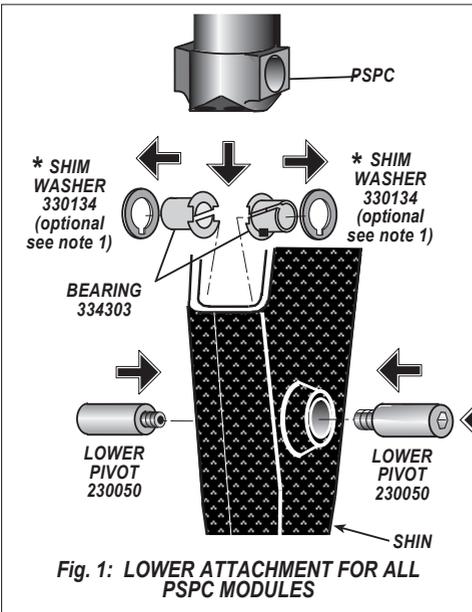
  
**100 kg** Maximum amputee weight  
when used during normal walking

## Fitting Instructions for PSPC For E4BKD refer to Instruction 938012

**User/attendant should be aware of potential finger trap hazards at all times.**

Fitting Kits: SFESK 019958 , EUK 019952, SFESK+ Full Form Shin 019858, ESK+ Demountable Shin 019758

	<p><b>NOTE:</b></p> <p>Chassis Rear Pivot Bearings (923700) are approximately 1mm longer than the Lower Pivot Bearing (334303) in shin. Identify these correctly before proceeding with assembly. (not applicable to ESK+)</p>
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### LOWER ATTACHMENTS except ESK+ ( Fig.1)

1. Where sufficient clearance exists, assemble Thrust Washers onto Bearings, as shown, before inserting Bearings into shin. Ensure the anti-rotation key on each Bearing is correctly located in the appropriate slot in the Washer and shin.  
Before the final assembly of the Lower Pivots, put the PSPC into the shin and position between the Lower Pivot Bearings.

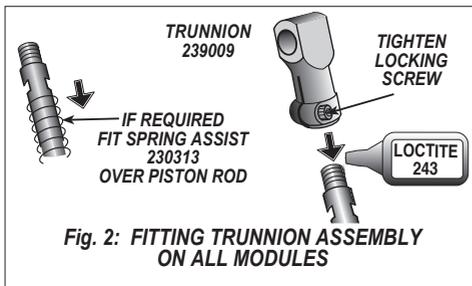
\* If there is insufficient clearance between the bearings and the PSPC then BOTH Shim Washers must be removed.

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2. Apply a very light smear of STP Oil Treatment (928105) to each Lower Pivot.



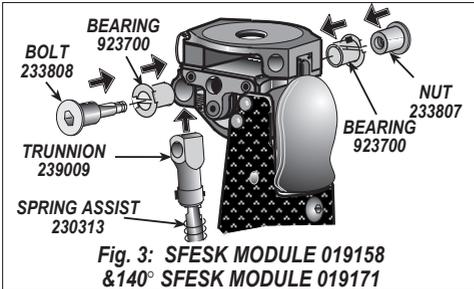
3. Apply Loctite 222 Screw Lock (926001) to threads on Lower Pivots and with PSPC positioned with assembly holes aligned with Bearings, insert Pivots and carefully tighten into the PSPC base.



### UPPER ATTACHMENT (Figs.2 to 6)

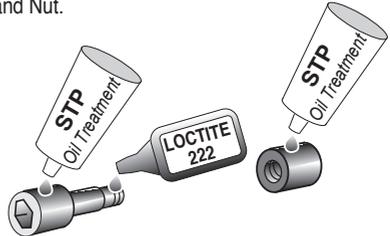
1. If Spring Assist is required, fit over PSPC piston rod.
2. Apply a small quantity of Loctite 243 to threaded end PSPC piston rod, attach Trunnion Assembly and tighten locking screw.(Fig. 2)

## Fitting Instructions for the PSPC (except ESK+)

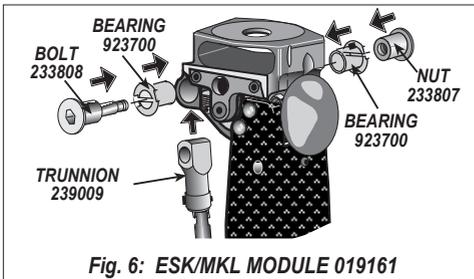
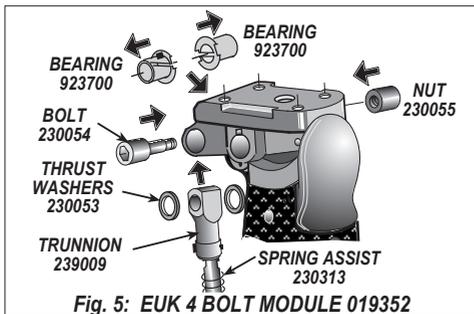
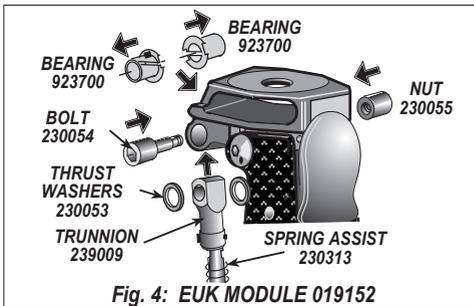


### UPPER ATTACHMENT (Figs.2 to 6) (Continued)

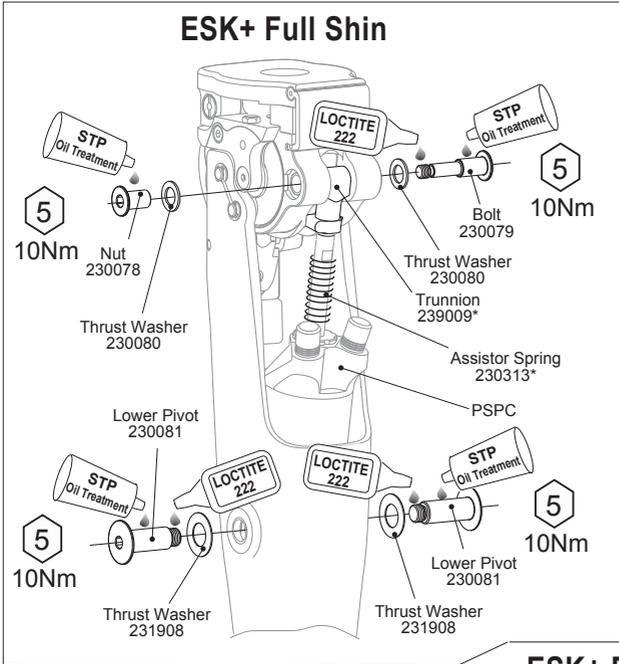
- 3 Ensure anti-rotation key on each bearing is correctly located in the appropriate slot.  
SFESK chassis, outside of lugs.  
EUK and EUK 4 Bolt chassis inside of lugs.
- 4 Apply a very light smear of STP Oil Treatment (928105) to the bearing surfaces only of the Bolt and Nut.



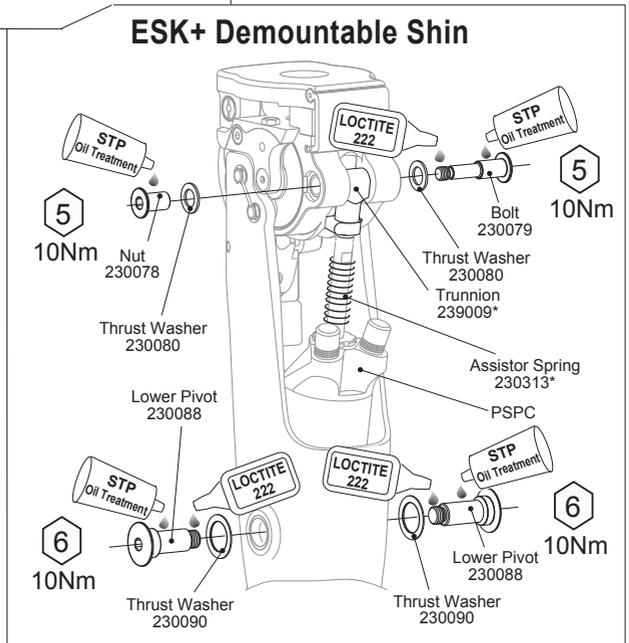
- 5 Apply Loctite 222 (926001) to the threads of the Bolt.
- 6 For EUK and EUK 4 Bolt (Fig. 4 and 5) only.  
Fit Thrust Washers between Trunnion and inside lugs of chassis.
- 7 Insert Bolt and Nut through bearings in chassis, ensuring that the Thrust Washers are in line (EUK and EUK 4 Bolt only) and tighten.



## Fitting Instructions for the PSPC to ESK+ Shin Modules

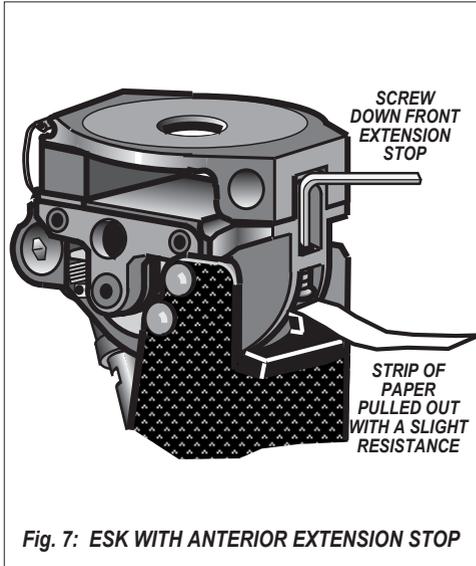


Remove silencing ring and discard prior to fitting cylinder into either ESK+ shin.



# PNEUMATIC SWING PHASE CONTROL

## SFESK and ESK/MKL with Anterior Extension Stop



**Note:** When used with SFESK or ESK/MKL with Anterior Extension Stop, the stop should be adjusted as follows:

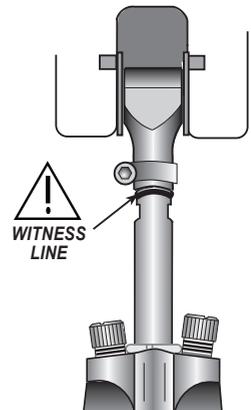
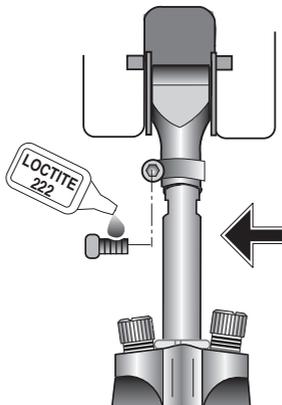
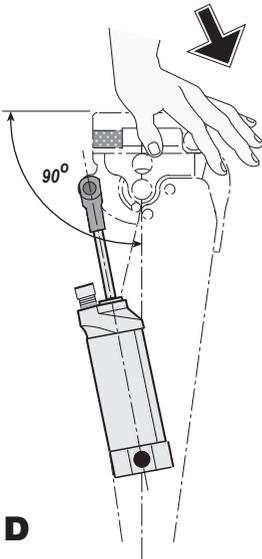
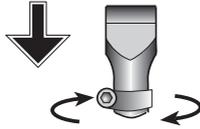
1. Slacken Trunnion Clamping Screw.
2. Using a 6mm Spanner rotate piston rod until Knee Lock Patella locks into place without rock and with ease.
3. Retighten the Trunnion Clamping Screw.
4. Remove Patella (except MKL).
5. Using a strip of paper 5mm wide, place on top of the front buffer. Screw down front extension stop until paper can be pulled out with a slight resistance. A light extension movement should be applied to the top of the socket whilst carrying out this adjustment.
6. Replace the Patella(except MKL).

## SFESK+ Anterior Extension Stop

When fitted with a PSPC, the ESK+ extension stop should be wound fully home. No adjustment is necessary.

## Length Adjustment for the PSPC

For modules supplied with control cylinder already assembled into the shin, the following has already been carried out.



**WITNESS LINE  
MUST NOT BE VISIBLE  
BELOW TRUNNION  
AFTER ADJUSTMENT**

# PNEUMATIC SWING PHASE CONTROL

## Adjustment Instructions for the PSPC

*The adjustment at the fitting stage should be carried out to suit the individual wearer*

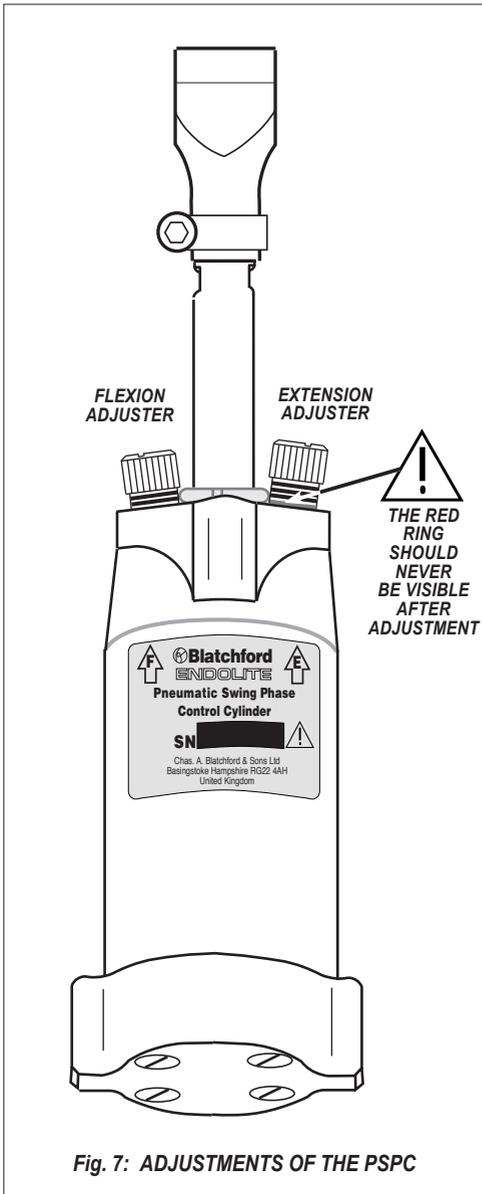
### SETTING THE FLEXION AND EXTENSION VALVE

The Flexion and Extension Valves should be adjusted to suit the individual wearers gait characteristics. Turn each adjuster within the range specified below, clockwise to increase resistance and anti-clockwise to reduce resistance.

### APPROXIMATE RANGE OF ADJUSTMENT

**EXTENSION:** MAX. - NO RINGS SHOWING  
MIN. - 3 RINGS SHOWING  
**FLEXION:** MAX. - NO RINGS SHOWING  
MIN. - 3 RINGS SHOWING

**WARNING:** The Red Ring on each adjuster should never be visible after adjustment.



**Fig. 7: ADJUSTMENTS OF THE PSPC**

## Functional Checks for the PSPC

THE FOLLOWING MANUAL CHECKS MAY BE MADE TO ENSURE CORRECT FUNCTION OF THE CYLINDER  
NON RETURN VALVES AND SEALS

VALVE POSITIONS	OUTSTROKE	INSTROKE
Extension Resistance Minimum Flexion Resistance Maximum	Free	Cushioned
Extension Resistance Maximum Flexion Resistance Minimum	Cushioned	Free

## Maintenance Instructions for PSPC

No specific maintenance is required of this device; however in normal service an Endolite limb should be inspected annually to check for correct function, lubrication and security of assembly.

The wearer should be advised that any change in performance of the device must be reported to the practitioner.

### STORAGE AND HANDLING

No special storage or handling requirements are associated with this device.  
Use product packaging supplied.

**ENDOLITE**  
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