

PRACTITIONER'S MANUAL

DAW Industries

4P10™ KD

Engineered with True-KD™ Biomechanics

Stock#: T GK-4P10

IMPORTANT:

Adjusting alignment beyond recommended limits described within will adversely affect patient's gait, and could cause premature wear.

HEADQUARTERS:

6610 Nancy Ridge Road
San Diego, CA 92121-2252
Orders: (800) 252-2828 • (858) 622-4962
Fax: (800) 856-8563
www.daw-usa.com

Technical Support
(800) 242-8669

CENTRAL/EASTERN

DISTRIBUTION CENTER:

5579-B Chamblee Dunwoody Road
Suite 227
Atlanta, GA 30338-4154
Orders: (800) 824-7192
Fax: (800) 865-8563



Sitting Position



4P10™ KD

Engineered with True-KD™ Biomechanics

Stock#: TKG-4P10

True-KD™ Biomechanics:

not only serves your KD Amputee's unique cosmetic needs, True-KD Knees are also engineered to maximize stability & efficiency by exploiting your Patient's distinct biomechanical advantages!

Learn more @ daw-usa.com/true-kd-biomechanics

Benefits:

- ✓ Engineered specifically to serve the needs of KD Amputees
- ✓ Ultra-Lite, high strength carbon fiber construction
- ✓ Decades of proven reliability
- ✓ Safe, natural toe-clearance in swing for added efficiency
- ✓ Separate extension / flexion pneumatic adjustments
- ✓ Completely maintenance free

Includes: Adjustment Wrench, Washer & Lock Washer



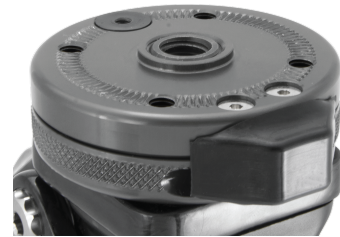
IMPORTANT:

Read technical information thoroughly before using knee.

Popular Proximal Options



**KD-Adapter, 3-Prong
Stainless Steel** (#: TSC-KDL)
Provides Rotational Adjustment



Lo-Pro Rotator™
(#: TKR-01)
Provides Rotational Adjustment
Attach any 4-Hole connector

Suggested L-Codes*: **L5984**

Browse our complete selection of Unique Components at
daw-usa.com/all-connectors

Recommended K3 Foot



K3 Pro-Action™ Foot
Engineered for the low to moderately active K3 Individual
Provides 3 Dynamic Energy Returning Carbon Keel Options
& Multi-Axial Ankle Motion with Rotation.

Suggested L-Codes*: **L5981** **L5986**

*Please refer to the complete reimbursement disclaimer at www.daw-usa.com

Patient Notes

Contents

Page #

Recommended Order of Adjustments 1 (Below)

KD Adapter Lamination / Connection Procedure 2-3

Build Height 4

Torque Settings 4

Alignment 5

Extension Stop (Stability & Swing Phase Trigger Point) 6

Swing Phase Adjustments (Flexion & Extension Dampening) 7

Returning Flexion & Extension to Factory Setting 8

Extension Assist Adjustment 9

Replacing or Trimming the Extension Assist Spring 10

Cleaning Pneumatic Components 11

DAW Prosthetic Knee Limited Warranty 12

Specifications 13

Patient Notes 14-16

Popular Proximal Options (inside back cover)

ADJUSTABLE FUNCTIONS

Recommended Order of Adjustments

1. Extension Stop
2. Flexion Dampening
3. Extension Dampening
4. Extension Assist



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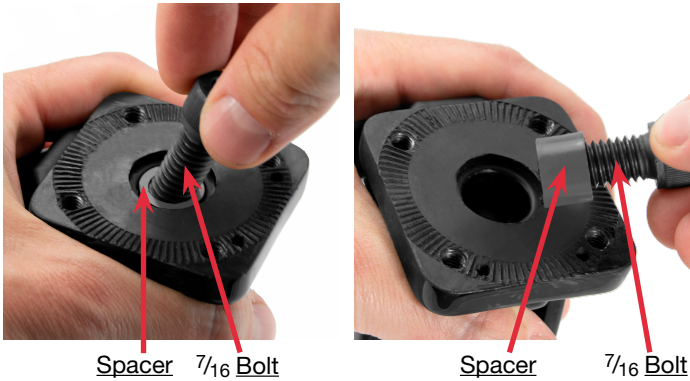
True-KD™ Series Knee Connection to KD Adapter (TSC-KDL)

Patient Notes

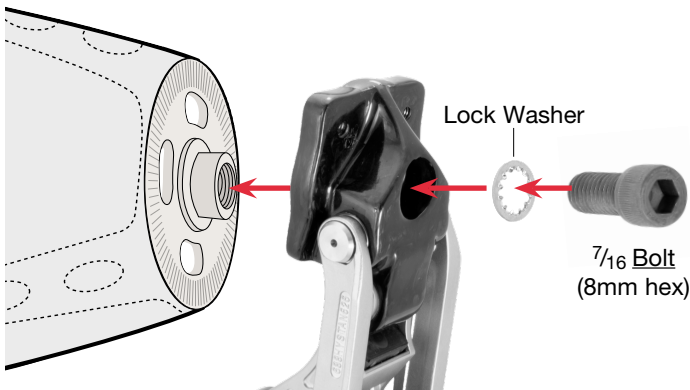
The instructions below apply to True-KD™ Series Knees, when using the KD Adapter (TSC-KDL):

After lamination of the KD Adapter (TSC-KDL) is complete,

- A. Use the included $\frac{7}{16}$ Bolt to remove the black Spacer from the center of the top of the knee.



- B. Remove the Kneecap.
- C. Flex the 4P10 KD™ True-KD Knee approx. 90-degrees.
- D. Select your desired degree of external knee rotation.
Each notch of the KD Adapter and knee top is an adjustment of 2 degrees.
- E. Secure the knee to the KD Adapter using the included $\frac{7}{16}$ Bolt (8mm hex). **Torque the bolt to 9ft-lb (12.2Nm).**

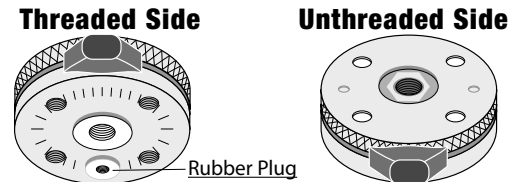


Patient Notes

True-KD™ Series Knee Connection to Wire Basket Adapter (TSC-BX) with Lo-Pro Rotator™

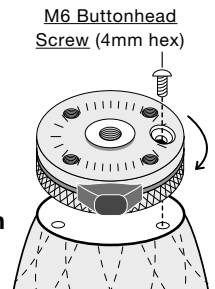
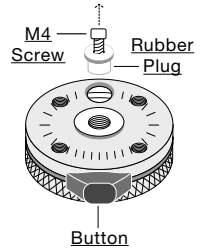
The Lo-Pro Rotator attaches directly to the top of any DAW True-KD™ Series knee. It's low build height allows KD Amputees the convenience of knee rotation while still maintaining cosmetic appearance in the sitting position.

The Lo-Pro Rotator features an **Unthreaded Side** (with an unthreaded 4-Hole pattern) and a **Threaded Side** (with a threaded 4-Hole pattern*Rubber Plug).

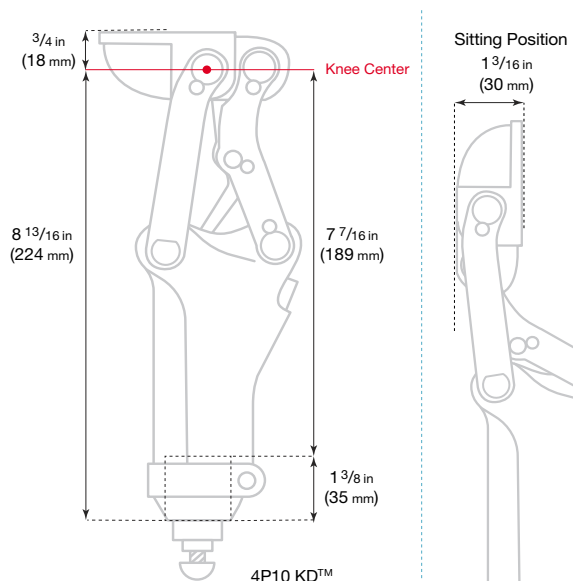


Connection of the Lo-Pro Rotator to the 4P10 KD™:
After lamination of the Wire Basket Adapter (TSC-BX) is complete,

- A. First, screw in the included **M4 Screw** (by hand) partially into the **Rubber Plug** and pull up to remove it.
- B. Push and hold down the **Button** and rotate until the **Plug's Hole** lines up with one of the unthreaded holes on the rotator's other side. If it is difficult to rotate, screw in 2 **M6 Button Head Screws** partially into the **Threaded Side** to use as leverage.
- C. With the **Unthreaded Side** against the adapter, insert one of the included **M6 Button Head Screws** (4mm hex) through the 2 holes into a threaded hole of the **Wire Basket**. Screw in, but do not tighten. It's recommended the button be positioned facing forward.
- D. Repeat steps B. & C. until all 4 **M6 Button Head Screws** are screwed in. **Torque each screw to 7.4ft-lb (9.9Nm)**.
- E. Return the **Rubber Plug** to its hole.
- F. Now you may secure the knee to the bottom of the Lo-Pro Rotator using the included **7/16 Bolt** (8mm hex). **Torque the bolt to 9ft-lb (12.2Nm)**.



BUILD HEIGHT

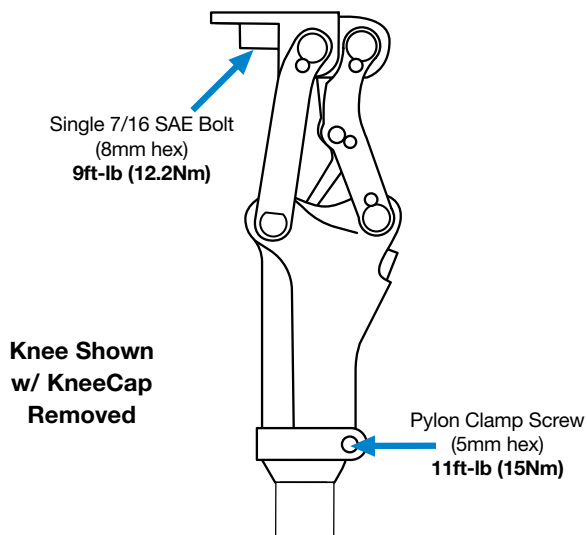


TORQUE SETTINGS

Important:

Use blue Loctite™ 242 on all screws referenced here. It is not recommended to use Ottobock Titanium Pylon. Do not use a spacer for height adjustment. Ensure pylon is cut straight.

It is recommended these torques be checked within 30 days and then 6 months after your delivery of this prosthesis.



Specifications

Patient profile:

Body weight	Under 275lb (125kg)
Functional level	K3 / K4
Amputation level	Knee Disarticulation

Knee Specifications:

Stock number	TGK-4P10
Max weight limit	275lb (125kg)
Knee weight	2.4 lb (1084g)
Proximal connection	M6 threaded 4-hole or, Unthreaded single hole
Swing Controls	Separate DAW Pneumatics™ Extension/Flexion Adjustments, Extension Assist Adjustment & Adjustable Swing Phase Trigger
Stability Controls	True-KD™ Biomechanics Stability, Adjustable Extension Stop
Distal connection	30mm tube clamp
Warranty	2 years, upgrade for additional 3 years

DAW Prosthetic Knee Limited Warranty

The knee comes with a Limited Warranty for 2-years. It covers manufacturer defects (excluding wear & tear). An additional 3 years of warranty coverage can be purchased for +15% of the original cost of the knee. See full warranty statement at:

www.daw-usa.com/practitioner-resources/

Weight limit of this knee is 275lb (125kg)

Bumpers are not under warranty.

Tight screws and a straight cut of the tubing are a must. Not following recommended use of components, including weight limit and alignment, will void the warranty. Make sure to read all instructions enclosed with the knee unit.

All repairs on the knee module must be done by a factory-trained DAW technician. Any disassembly done on the knee during the warranty period(s) will void the warranty (excluding disassembly of the extension spring housing).

Service Under Warranty

For all component repairs call DAW Industries right away. We will ship a replacement knee the same day, which will become your patient's new knee. The replacement component is under warranty for the time remaining on the original component.

The overnight shipping charge will be credited upon receipt of the failed knee component.

Service Outside of Warranty

Knees not under warranty may be repaired by DAW. While any unwarranted knee is being serviced, DAW will provide a rental knee subject to availability. The DAW rental fee is listed in the price list under each knee. The rental fee covers the period DAW takes to complete the repair with ten (10) days allowed for shipping in both directions. The same rental fee will be charged every 30 days passed the initial rental fee period.

For any repair you must first contact our Technical Services at 1(800)242-8669. This will allow DAW to best understand the issue. Our Technical Support will immediately assess if the repair qualifies as a "minor" or "substantial" repair. A "minor" repair will be completed, as a courtesy, free of charge (you will just pay for return shipping). A "substantial" repair will be billed at a flat rate according to knee model. Upon return of your repaired knee, you will be invoiced for the repair charge, if any. When DAW receives the rental knee, your account will be credited for the value of the returned knee (Gold Preferred+ = FREE rental; Preferred = 33% off).

In the event your knee is unrepairable, you will be notified immediately. The rental must then be returned to DAW, 2nd day, within five (5) working days. The rental fee may be applied toward the purchase of a new DAW knee.

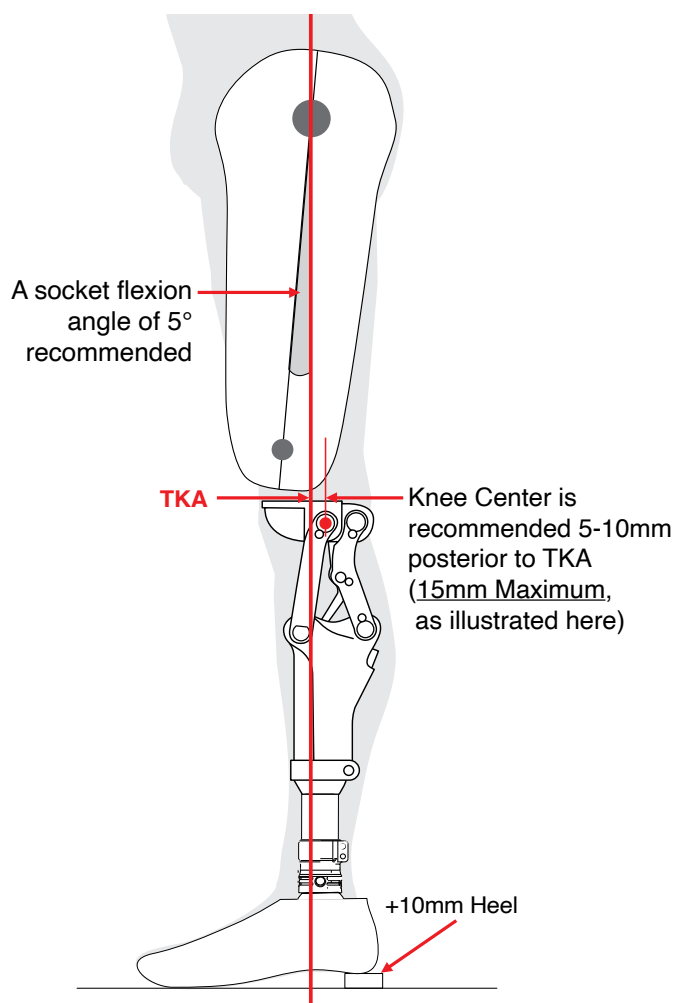


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RECOMMENDED BENCH & STATIC ALIGNMENT

Standard alignment procedure must be observed to obtain the maximum benefits offered by this knee. All alignment references should be taken from the center of the anterior superior knee axis (commonly referred to as the Knee Center).



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Adjusting the Extension Stop Bumper

(Stability & Swing Phase Trigger Point)

To customize the “trigger point” of swing-phase, adjust the Extension Stop Screw. Max adjustment is 2°.

Note: This adjustment will affect socket flexion slightly.

Turn the Extension Stop Screw (2.5mm hex):

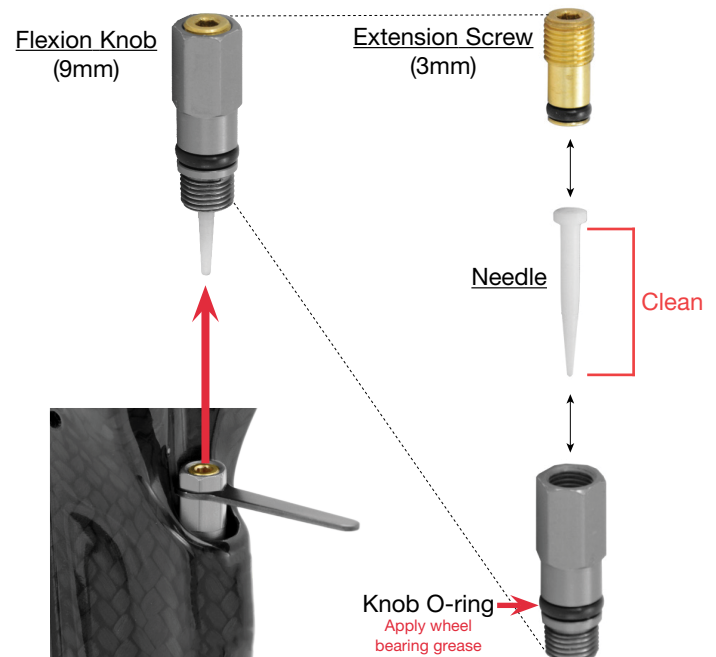
Clockwise for earlier swing-phase initiation
(& less stance phase stability)

Counter-clockwise for later swing-phase initiation
(& more stance phase stability)



Cleaning Pneumatic Components

- A. Using the Swing Adjustment Wrench (or 9mm wrench), completely remove the Flexion Knob. Turn the Knob **counter-clockwise** until it no longer appears to be unthreading. The Knob pulls out of its chamber with a small amount of force.
- B. With the Knob removed, flex the Knee quickly & repeatedly to clear out any debris from the air passage. Air should flow smoothly with no restriction.
- C. Using a Q-Tip, clean the chamber from which the Knob was removed. The entire chamber should be dry.
- D. Remove the Extension Screw (3mm Hex) from the Knob. Remove the Needle and clean it of any debris or lubricant.
- E. Apply a very light coat of wheel-bearing grease to the Knob O-ring. Be sure the Needle remains dry.
- F. Return the Needle to the Knob. Do not yet return the Screw to the Knob. Press the Knob and Needle back into the chamber of the knee. You will hear a “click” as the Knob seats back into the chamber.
- G. Turn the Flexion Knob **clockwise**. Initially, apply a small amount of downward force while you turn to ensure the threads catch. Gently screw it in until it stops. Do not tighten.
- H. Turn the Knob **counter-clockwise** 2 rotations (the factory setting for Extension).
- I. While holding the Knob stationary with the Swing Adjustment Wrench (or 9mm wrench), screw the Extension Screw back into the Knob until 1 thread shows above the Knob (the factory setting for Flexion).



Replacing or Trimming the Extension Assist Spring

To replace the current Extension Assist Spring with the Stronger spring included with your knee:

- A. Completely remove the Pylon Clamp Screw (5mm hex).
- B. Remove the pylon.
- C. Flex the knee to full flexion.
- D. Using a 12mm wrench, or crescent wrench, twist the Lock Nut ① **clockwise**, the Spring Housing ② will extend out of the knee as you twist the Lock Nut.
- E. You can now pull the Spring ③ out of the Housing ②.
- F. Insert your new Spring ③ into the Housing ②.
- G. Unflex the knee to full extension and return the housing to the knee making sure the groove for the Pylon Clamp Screw lines up properly.

After returning the Pylon. Retighten Pylon Clamp Screw (5mm hex) to **11ft-lb (15Nm)**

Too much Extension Assist even with the lighter spring?

Complete steps A. through E. above

Using a grinding wheel, trim one or two coils (maximum) off one end of the Spring. Smooth the trimmed end. Return the Spring to the housing, **trimmed end down**. Continue with step G. above.



Adjusting Swing Phase Controls (Flexion & Extension Dampening)

It is recommended your Patient take their first steps slowly!

This knee is engineered to conserve your Patient's energy & strength throughout the day. Very little energy is required to initiate gate.

The DAW Pneumatics™ Knob-and-Screw-Adjustment provides exceptionally precise control of heel rise and extension dampening. Perform these adjustments in $\frac{1}{8}$ -turn increments.

Needed for This Adjustment:

- ✓ 3mm hex key
- ✓ Swing Adjustment Wrench (included) or a 9mm wrench

NOTE: Excessive adjustment of Extension Screw can jam needle pin, eliminating full range-of-motion resistance control.

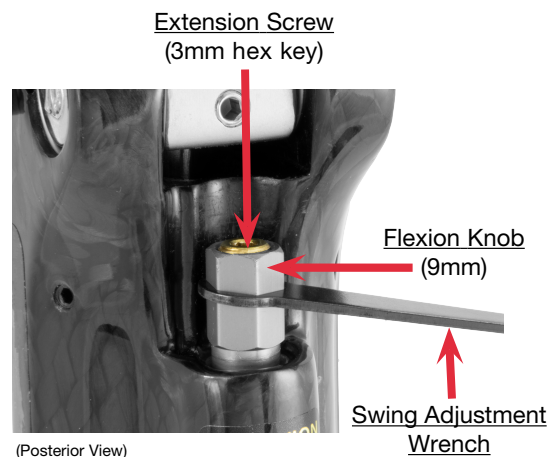
It is recommended to make your Extension Adjustment first, *then* your Flexion Adjustment. Repeat adjusting Extension *then* Flexion as needed.

Adjusting Extension Dampening:

In $\frac{1}{8}$ -turn increments, turn the brass Extension Screw:
Clockwise to increase resistance
Counter-Clockwise to decrease resistance

Adjusting Flexion Dampening:

While holding the Extension Screw stationary (3mm hex key), in $\frac{1}{8}$ -turn increments turn the Flexion Knob:
Clockwise to increase resistance
Counter-Clockwise to decrease resistance



Returning Flexion & Extension Adjustments to Factory Settings

- Unscrew and remove the brass Extension Screw (3mm Hex) from the center of the Flexion Knob.
- Using the included Swing Adjustment Wrench (or a 9mm wrench), gently screw the Flexion Knob **clockwise** until it stops. Do not tighten.
- Now turn the Knob **counter-clockwise 2 full rotations**.
- While holding the Knob stationary, screw the Extension Screw back into the Knob (**fig. 1**) until one thread shows above the Knob (**fig. 2**).

The knee's Flexion & Extension Controls are now at their factory settings.

Fig. 1

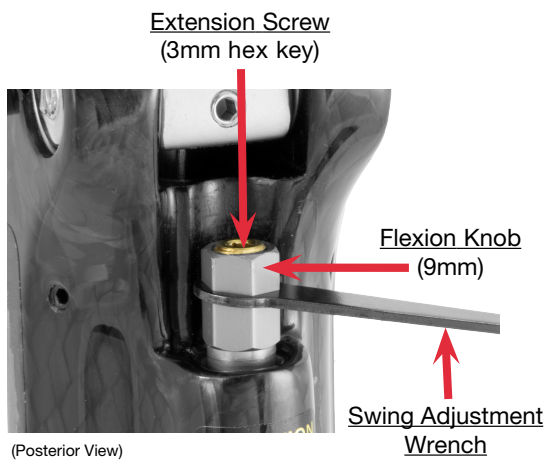
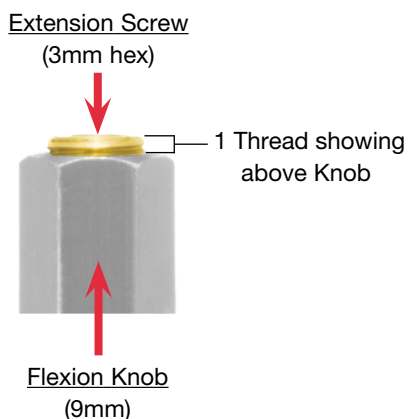


Fig. 2



Adjusting Extension Assist

To Adjust Extension Assist:

- Loosen the Pylon Clamp Screw (5mm hex) and remove the Pylon
- Loosen the Lock Nut (12mm wrench)
- Turn the Extension Assist Control Screw (5mm hex): **Clockwise** to increase extension assist **Counter-clockwise** to decrease extension assist
- Re-tighten the Lock Nut, **Hand Tighten** (12mm wrench) After returning the pylon, re-tighten Pylon Clamp Screw to **11ft-lb (15Nm)**.

