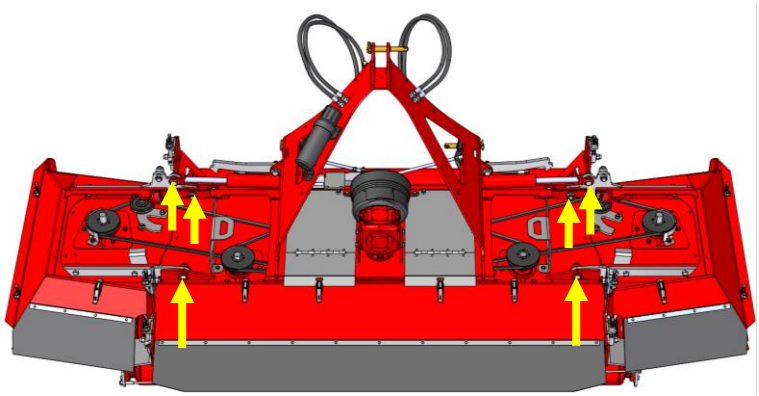
SPARE PARTS INSTRUCTIONS #01

Date Created: 19/07/2017 **Product:** Stealth S3

Title: Wing Hinge Arms - Composite Bush Replacement

SAFETY! Before attempting to make any adjustments or carry out maintenance on the mower, review the hazard identification table (section 3a of your Operator Manual) and take all necessary precautions.



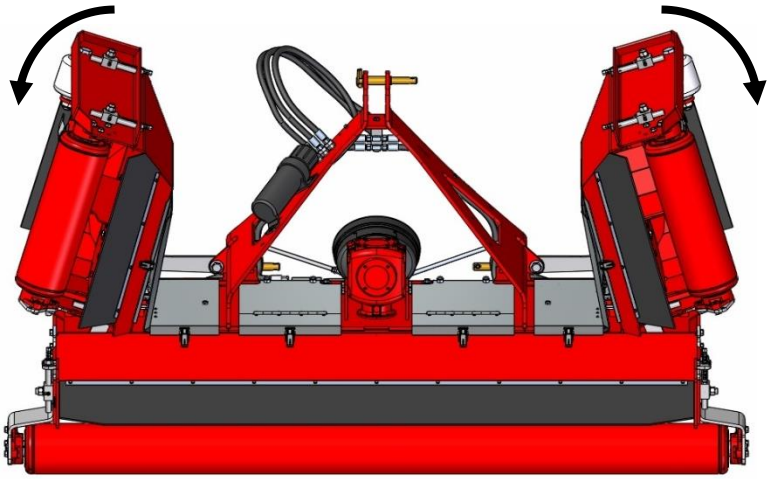
Stealth S3 Wing Hinge Arms are assembled with Composite Bushes **(402-000-093)**

These items will wear over time.

This document details the replacement process for the Left-Hand Wing, the Right-Hand Wing uses the same process.

The locations of the six Hinge Arm Bushes are highlighted in this image.

IMPORTANT:
Prior to starting, ensure that the Stealth S3 is clean, especially around the Wing Hinge areas.



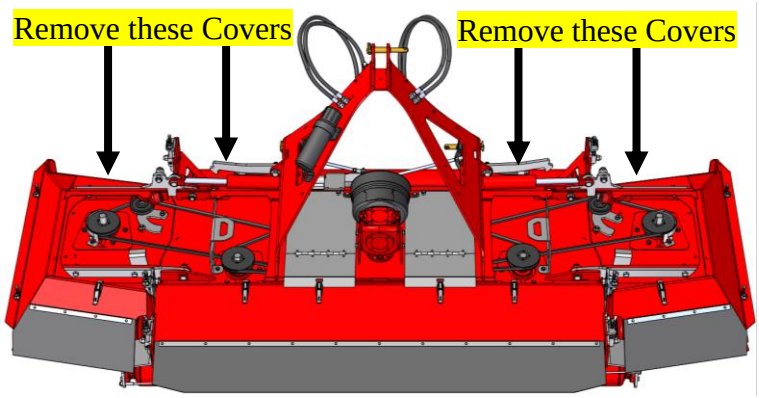
Position the Stealth S3 on a hard, level surface.

Ensure that the area is clear of obstructions.

Operate the Transport Lock System to unlock the Wings.

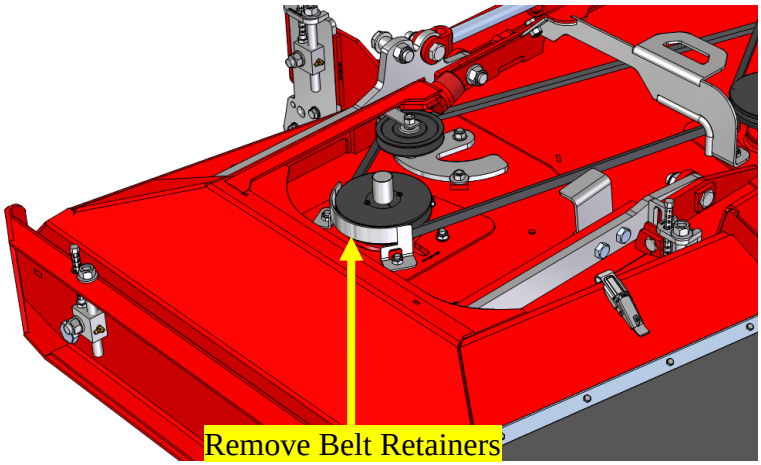
Use the Tractor hydraulics to lower the Wings onto the ground.

IMPORTANT:
Please see your Operators Manual for further detail on this process.



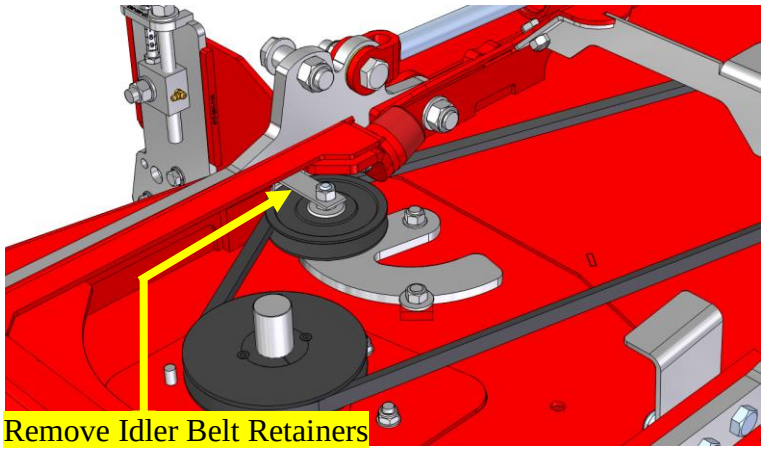
Remove the Left and Right-Hand Intermediate Covers and the Left and Right-Hand Outer Covers to allow access to the Hinge Arms.

IMPORTANT:
Please see your Operators Manual for further detail on this process.



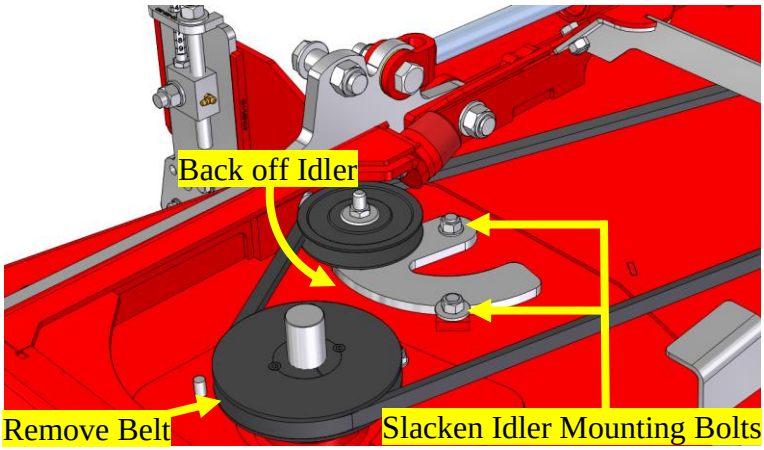
Unbolt and remove **BOTH** the Left and Right-Hand Belt Retainers **(417-001-157)**

One shown.



Remove the Left and Right-Hand Wing Idler Belt Retainers **(417-001-178)**.

One shown.



Slacken the Idler Adjuster Nuts.

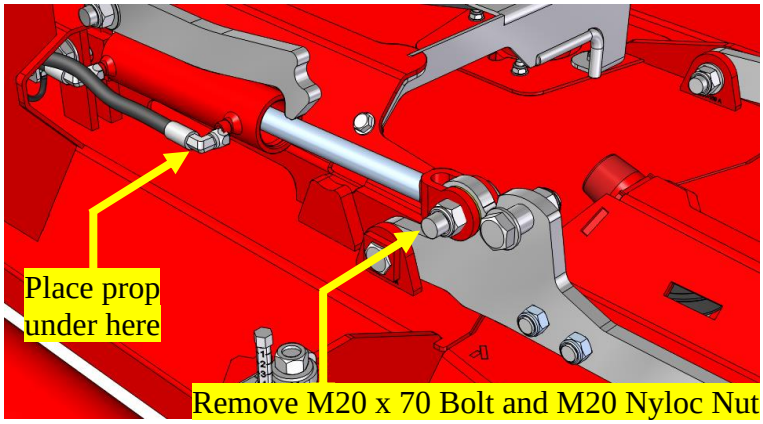
Back off the Idler away from the Wing Belt to relieve belt tension.

Remove the Wing Belt from the Wing Spindle Pulley.

Tuck the Belt out of the way so it does not get damaged during the repair process.

Repeat for the other side.

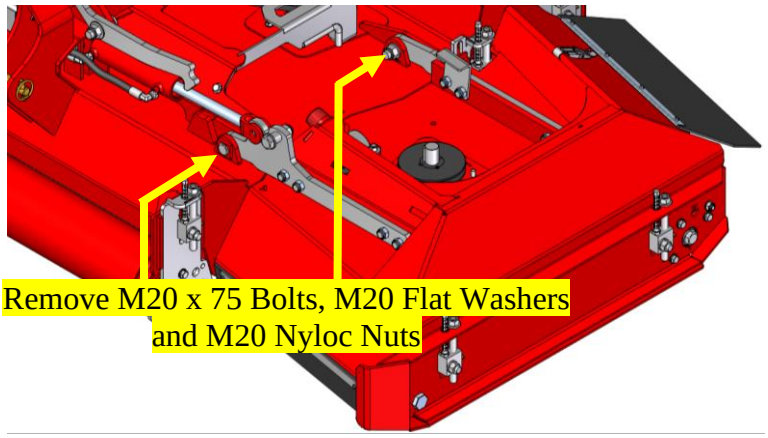
Note:
DO NOT remove the Idler Mounting Nuts!



Remove the M20 x 70 Bolt and M20 Nyloc Nut which secures the Hydraulic Ram Spear to the Wing Hinge Arm.

Repeat for the other side.

IMPORTANT:
Place a prop under the Hydraulic Ram Cylinder to prevent the Ram from dropping when removing the Wing.

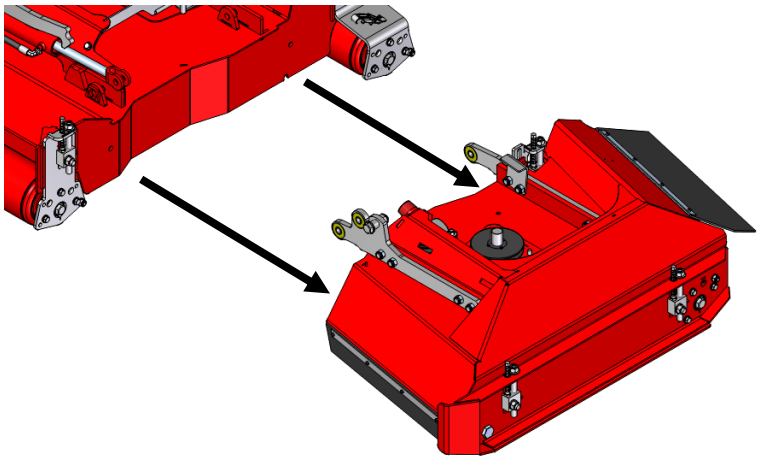


Remove the M20 Nyloc Nuts, M20 Flat Washers and M20 x 75 Bolts used to secure the Hinge Arms to the Centre Body.

Note:

The heads of these Bolts are retained by hex shaped profiles.

It may be necessary to drive these Bolts out using a suitable Pin Punch.

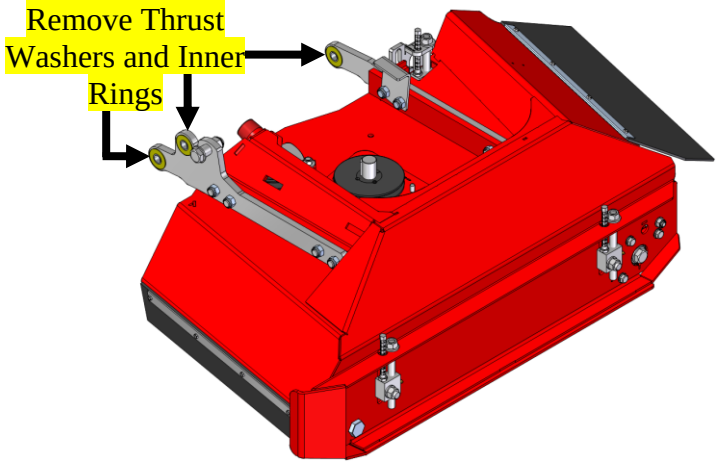


Move the Wing clear of the Centre Body by sliding in the direction shown.

Repeat for the other side.

IMPORTANT:

USE CAUTION, the Wing weighs approximately **170Kg (374lbs)**

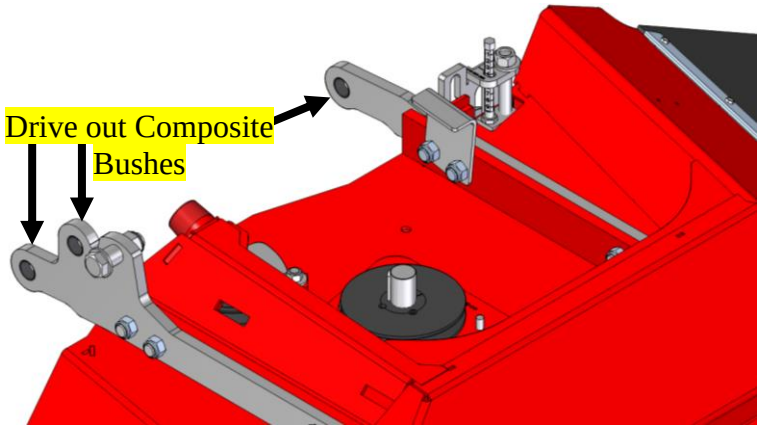


Remove the three Inner Rings (**401-000-013)** and Six Thrust Washers **(402-000-088)** from the Hinge Arms.

Repeat for the other side.

Thoroughly clean the Inner Rings (**401-000-013)** and Thrust Washers **(402-000-088)** using white spirits and a clean rag.

Place to one side.

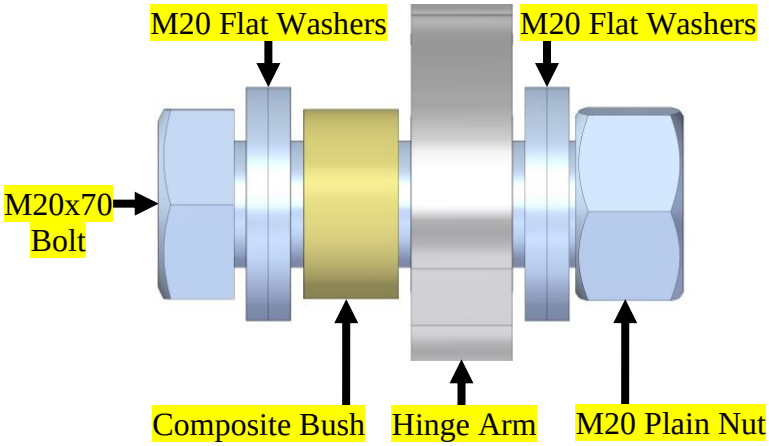


Using a suitably sized Drift or Punch, drive the worn Composite Bushes **(402-000-093)** out of the Hinge Arms.

Discard the worn Composite Bushes

Composite Bush measurements:

Inside Diameter	30mm **(1 3/16")**
Outside Diameter	25mm **(1")**
Length	15mm **(9/16")**

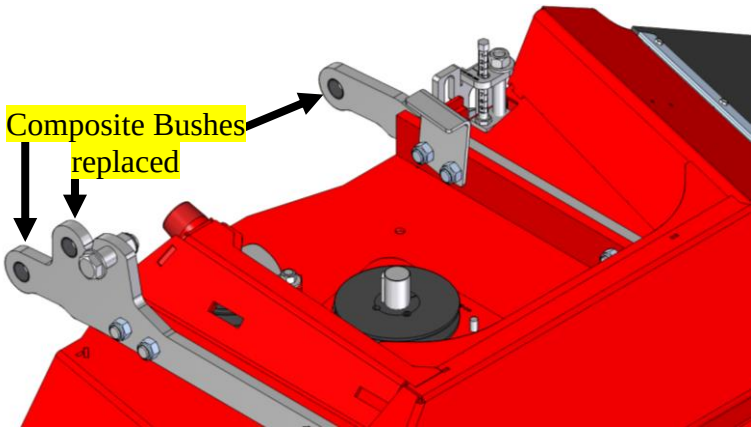


Set up an M20 x 70 along with four M20 Heavy Flat Washers, M20 Plain Nut, a new Composite Bush **(402-000-093)** and the Hinge Arm as shown.

Nip up the Bolt.

Ensure that the Bush is **SQUARE** with the Hinge Arm.

Gradually tighten the Bolt to press the Composite Bush into the Hinge Arm.



Repeat the above for **ALL** remaining Composite Bushes **(402-000-093)**

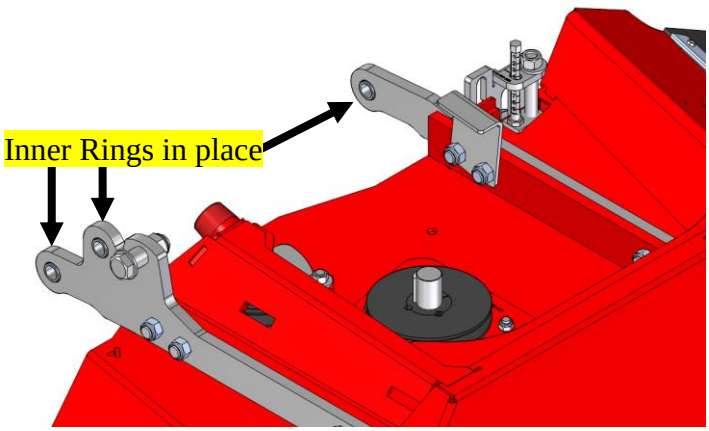
There are **SIX** in total, **THREE** per Wing.

One side shown.

Apply a thin coating of Grease to the **OUTSIDE** surfaces the Inner Rings **(401-000-013).**

One shown.

Note:
Keep these clean and **DO NOT** allow contaminants to enter the Grease!



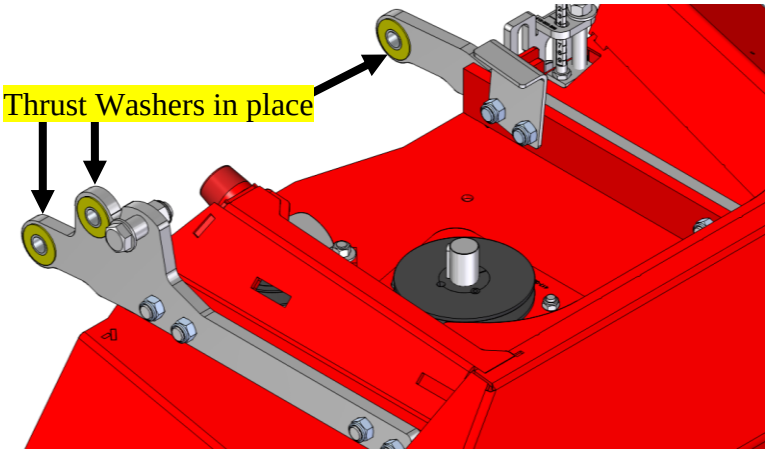
Refit three Inner Rings **(401-000-013)** to their original locations.

Repeat for the other side.

Apply a thin coating of Grease to one side each of Thrust Washers (**402-000-088)**

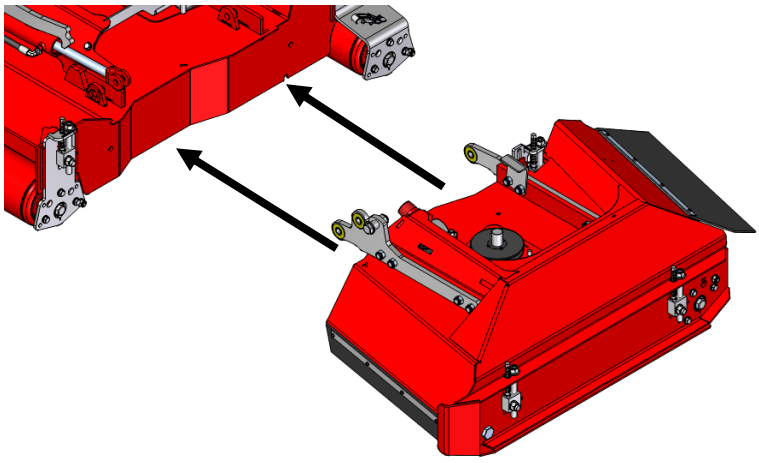
One shown.

Note:
Keep these clean and **DO NOT** allow contaminants to enter the Grease!



Refit six Thrust Washers (**402-000-088)** to their original locations with the **GREASED** side **FACING** the Hinge Arm.

Repeat for the other side.

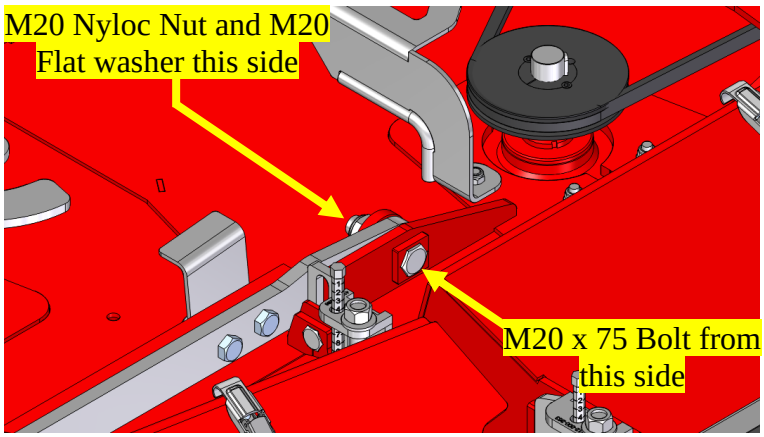


Move the Wing back into position and align the Inner Rings with the Mounts present on the Centre Body by sliding in the direction shown.

An assistant may be required to align the Wing with its Mounting Points

Repeat for the other side.

IMPORTANT:
USE CAUTION, the Wing weighs approximately **170Kg (374lbs)**

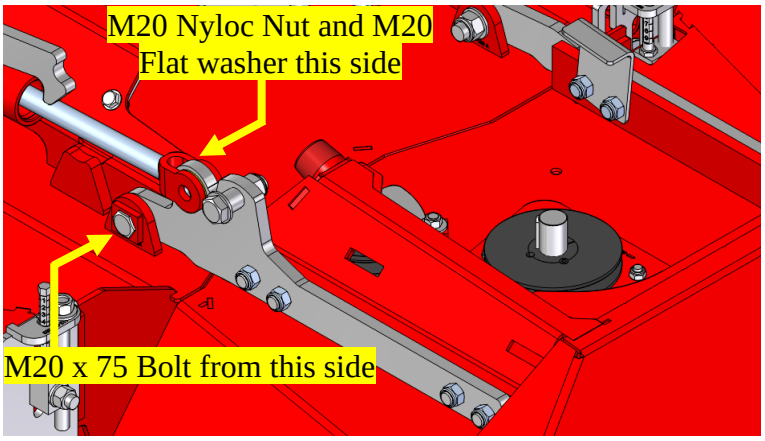


Align the holes and insert an M20 x 75 Bolt through the Rear Hinge Arm as shown

Secure using an M20 Flat Washer and a **NEW** M20 Nyloc Nut. Hand tight **ONLY!**

Repeat for the other side.

Note:
Ensure the Bolt Head is secure in the hex shaped profile!

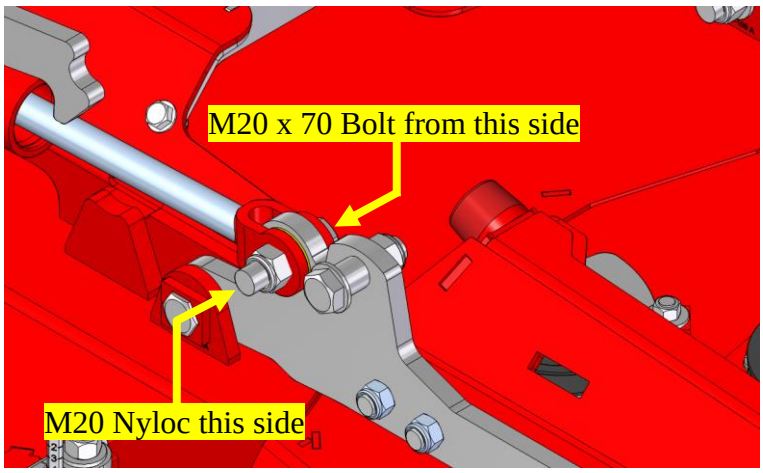


Align the holes and insert an M20 x 75 Bolt through the Front Hinge Arm.

Secure using an M20 Flat Washer and a **NEW** M20 Nyloc Nut. Hand tight **ONLY!**

Repeat for the other side.

Note:
Ensure the Bolt Head is secure in the hex shaped profile!

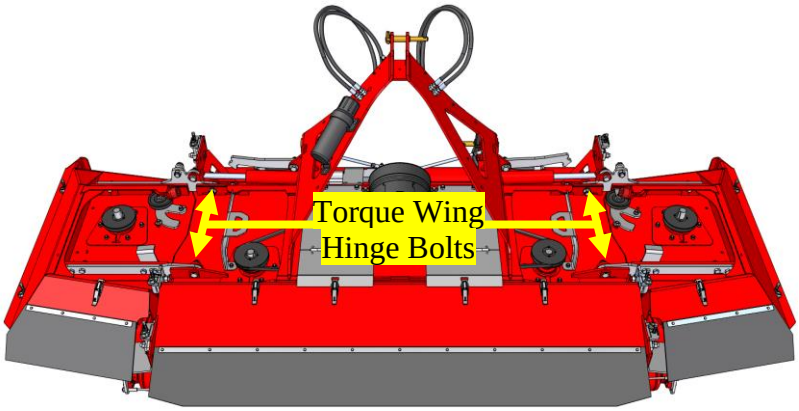


Insert an M20 x 70 Bolt through the Ram End and the Hinge Arm.

Secure using an M20 Flat Washer and M20 Nyloc Nut.

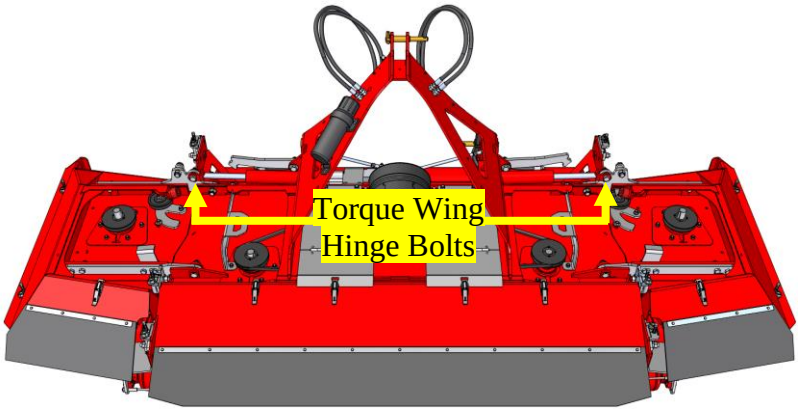
Repeat for the other side.

IMPORTANT:
The Bolt **MUST** face as shown! This is required for clearance when raising or lowering the Wings!



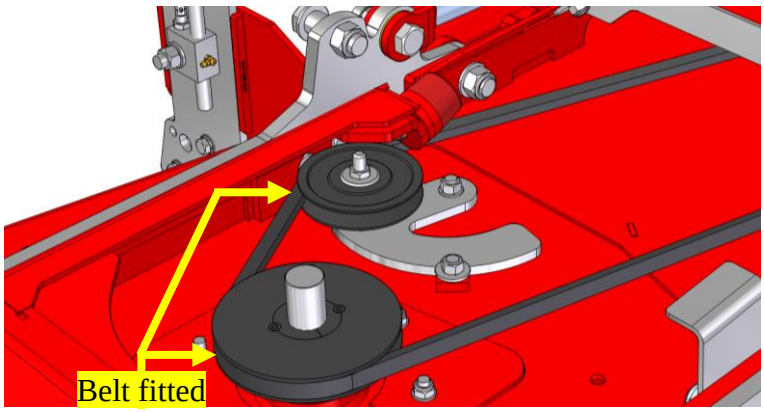
Torque **ALL** four Wing Hinge Bolts **200Nm (184ft/lbs)**

IMPORTANT:
This is torque figure is **CRITICAL** to ensuring the retention of the Wings!



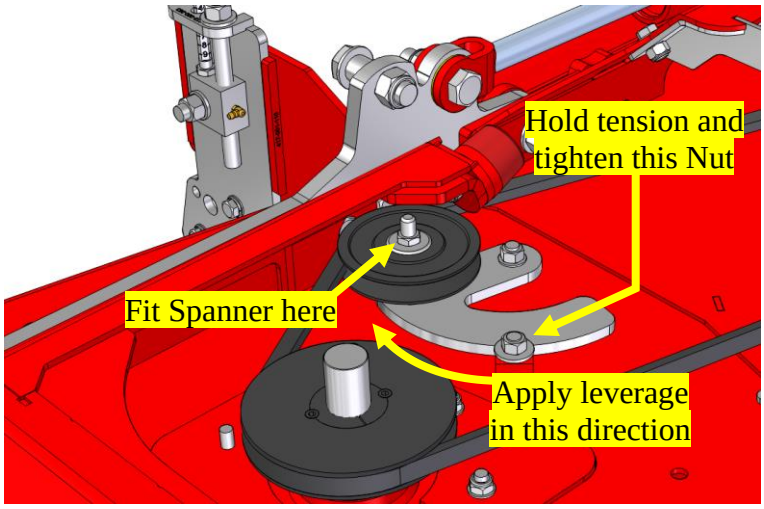
Torque **BOTH** Ram Mounting Bolts to **200Nm (184ft/lbs)**

IMPORTANT:
This is torque figure is **CRITICAL** to ensuring the retention of the Hydraulic Rams!



Refit the Wing Drive Belts around the Wing Spindle Pulley and the Wing Idler.

One shown.

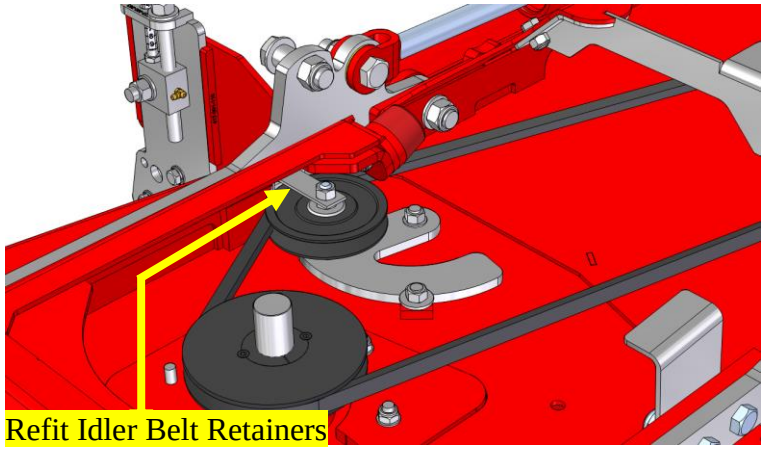


Re-tension the Wing Belts by using a Spanner on the M12 Plain Nut on **TOP** of the Idler Pulley.

Apply pressure in the direction shown until tension is achieved.

Maintain the desired tension and secure the Idler in place by tightening the M12 Plain Nut shown opposite. Remove the Spanner and tighten the second M12 Plain Nut. Repeat for the other side.

Note:
Check Belt Tension before continuing, Belts should have **10-15mm (3/8" to 9/16")** of belt deflection!

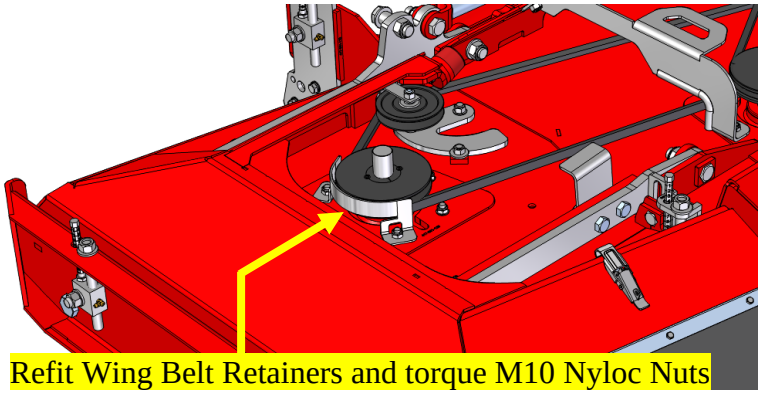


Refit the Idler Belt Retainers **(417-001-178)** onto each Wing Idler Assembly.

Secure using a M12 Plain Nut with **MEDIUM STRENGTH THREAD LOCKING COMPOUND** applied to the thread.

Fully Tighten. One side shown.

Note:
Ensure that the Guides are **2-3mm (1/8")** clear of the Belts!

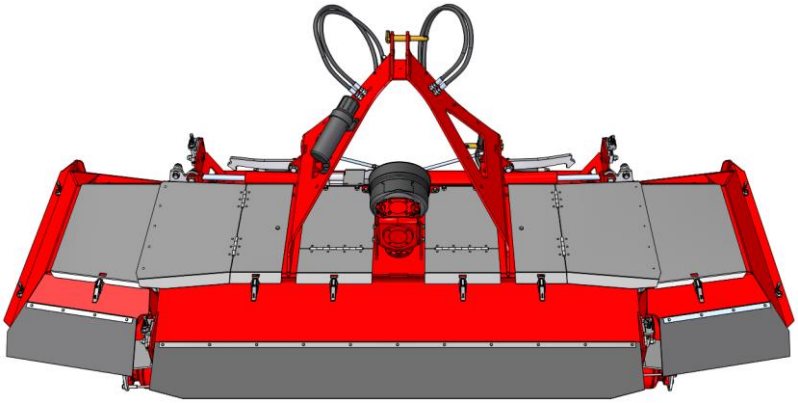


Refit **BOTH** the Wing Belt Retainers **(417-001-157)**

Secure using **NEW** M10 Nyloc Nuts. One side shown.

Torque **ALL** four Wing Belt Retainers Nuts to **43Nm (32ft/lbs)**

IMPORTANT:
This is torque figure is **CRITICAL** as these Nuts also retain the Spindle to the Wing!



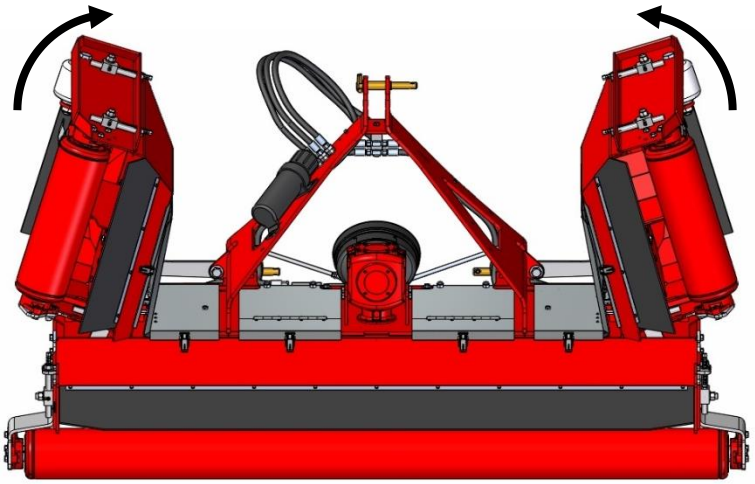
Check that all Bolts and Nuts are tight.

Check that no tools or loose items are left inside the Stealth S3.

Refit the Covers to the Stealth S3.

The process is the reverse of removal.

IMPORTANT:
Please see your Operators Manual for further detail on this process.



Use the Tractor hydraulics to raise the Wings.

Operate the Transport Lock System to lock the Wings in place.

IMPORTANT:
Please see your Operators Manual for further detail on this process.

This process is now complete.