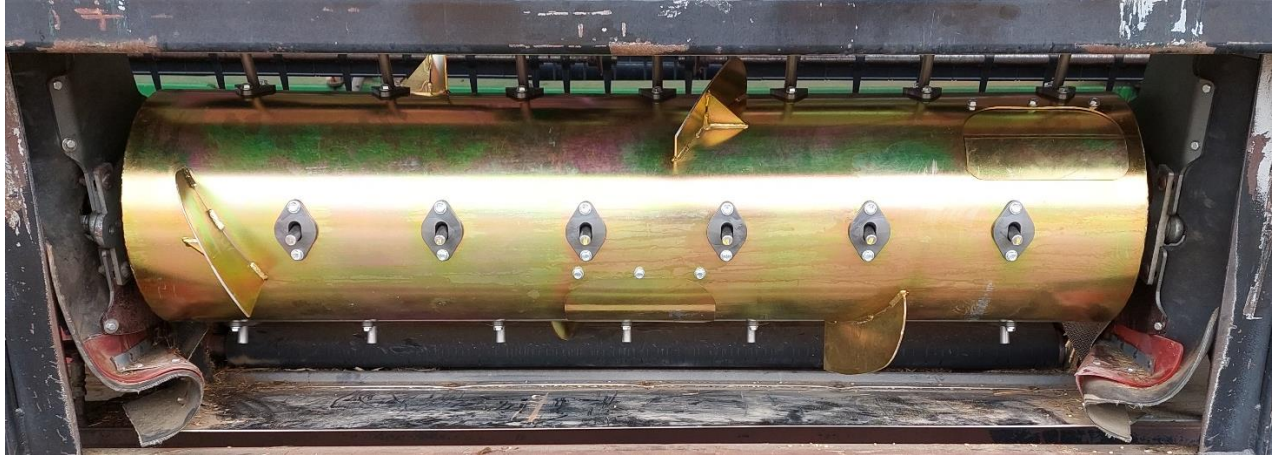


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## Midwest Durus & Crophawk Draper Platform

### **Operation and Adjustment: i-paddock Typhoon Feed Drum**

(Right and left refer to as facing forwards)

The **i-paddock Typhoon** for Midwest fronts has been designed specifically to maximise performance in these fronts. The unique cluster of i-paddock's patented Paddle Flights, "overreach" long throw finger pattern, and reduced barrel diameter, maximises smooth flow and minimises the dead zone, particularly on the edges coming off the side mats, into the feed drum on these fronts.

### **Retractable Finger Timing**

Adjust the finger timing by rotating the original timing lever at the right-hand end of the adaptor, as per the Midwest instructions. NOTE: It is important to fine tune the finger timing with small incremental adjustments until you find the optimum timing to suit the crop conditions.

The recommended initial position for the retractable fingers on the i-paddock Typhoon is at setting 7. In this setting the fingers reach maximum extension around 45 degrees forward from top dead center (about 2 O'clock when looking from the RH side of the machine), allowing them to be fully retracted by the time they are coming up the back side of the rotation, which minimizes the chance of catching crop and creating repeats over the drum.

If you experience repeating around the drum, this is generally improved by advancing the finger timing. This is done by rotating the timing lever anti-clockwise to a higher setting number. Feeding issues are most commonly a result of excessively retarded finger timing.

## Light and Droughted Crops

In very short and light crops it may be an advantage to retard the finger timing (i.e., rotate the timing lever clockwise or reduce the setting number) to maximize the length of the fingers at the bottom of the stroke.

If light crop material is perching on the deck in front of the center mat, adding sections of corflute (or similar plastic or rubber batts) to the reel fingers with self-tapping screws may help move the material further towards the back of the mats, while creating a fan effect in the center, both of which can help to minimize this issue.

## Canola, frosted and bulky/fluffy Crops

Advancing the finger timing (i.e., rotating the timing lever anti-clockwise or increasing to a higher setting number) may be useful in crops that sit up very high in the front. For full performance from your i-paddock Typhoon, it is critical to also optimise the top cross auger. Adding rubber paddles in the center of the top auger can significantly assist in pushing high or fluffy crop down for collection by the i-paddock Typhoon feed drum. In lighter bushy crops, moving the auger forwards and down can also increase harvest speed with an i-paddock Typhoon fitted.



*Figure 1: Rubber paddles in the center of the top auger*

# 1 INSTALLING I-PADDOCK TYPHOON FOR MIDWEST DURUS & CROPHAWK DRAPER PLATFORM

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## 1.1 INSTALLATION OF THE I-PADDOCK TYPHOON FEED DRUM

### 1.1.1 Removing the Original Feed Drum

The following instructions are to act as a guide for the removal of the original feed drum. Refer to the Midwest manual for further detail.

It is not necessary to remove the adaptor for this job. However, it will be necessary to remove the front from the header (combine) to allow access for removing the drum and installing the i-paddock Typhoon.

#### 1. Disconnection

Disconnect the front from the harvester and place it on the trailer. Remove the PTO shaft and drum rubbers (items A and B in figure 3). Secure the existing feed drum using a ratchet strap as shown in figure 2 below. An extra strap and wooden planks may be used as levers to assist in lifting and strapping the feed drum securely. Alternatively use a forklift or similar if available as the feed drum weighs more than 80kgs.



*Figure 2: Securing the feed drum with a ratchet strap.*

## 2. Bolt Removal

Disconnect the height adjustment bolts (C), bearing pivot mounts (D) and feed drum pivot bolts (E) on both sides of the feed drum.

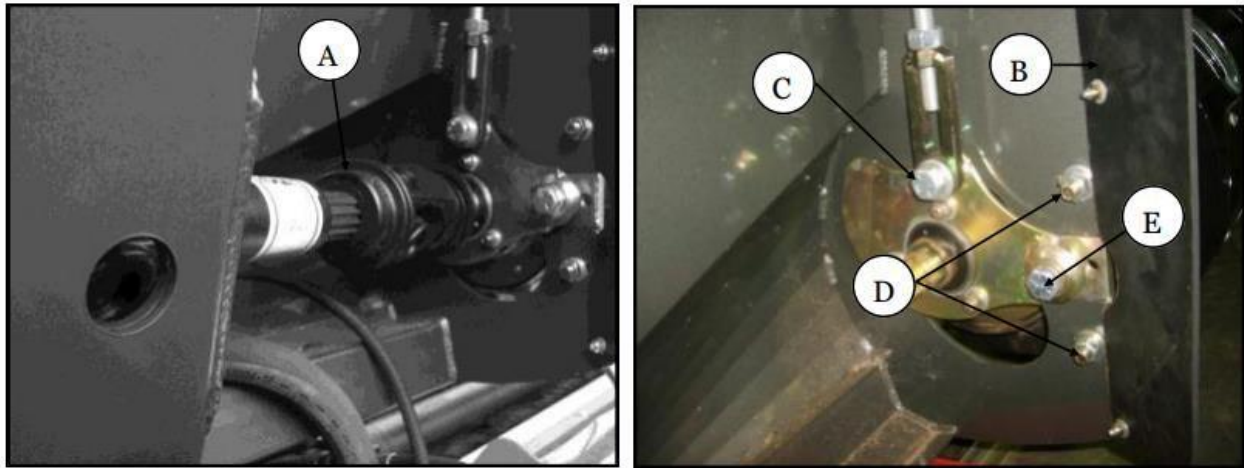


Figure 3: Disconnecting bolts (Image: Midwest)

## 3. Drum Removal.

The feed drum can now be removed from the front. Use straps, levers, slings and/or a forklift for easier removal.

### 1.1.2 Replacing the Bearings

#### 1. Drive Hub and Timing Plate Removal

Remove items 13 (Float Arm – RH Feed Drum), 12 (Mount – Feed Drum Pivot – Straight), 37 (Float Arm – LH Feed Drum), 10 (Housing - Pressed), 38 (Bearing – 1 3/8” Wide Race), 39 (Hub – Drum Drive) and 40 (Disc – Drum Drive) from the feed drum.

Item 13 need not be separated from items 12, and item 39 need not be separated from items 40, 10, 38, 37 and 12.

Keep the fasteners (bolts, grubs screws, washers and nuts) safe as they will be needed in the next step.

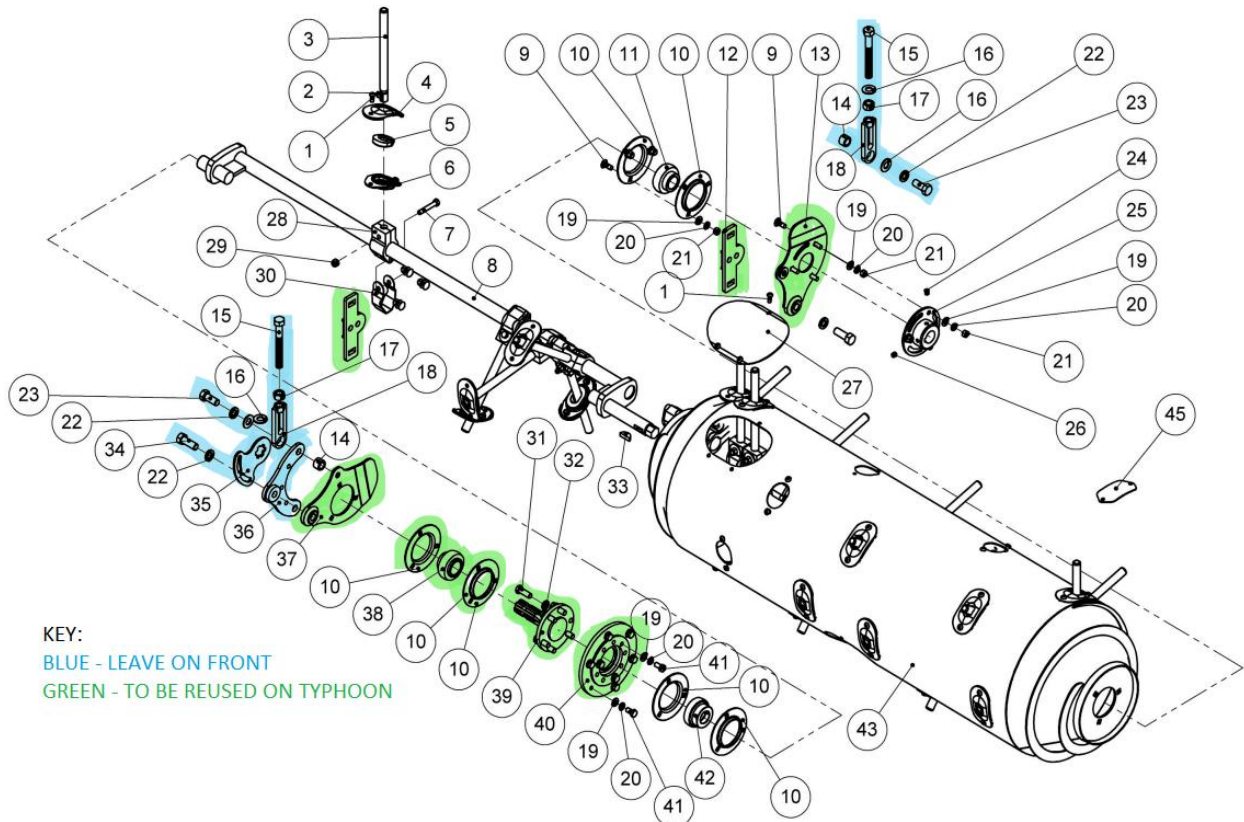
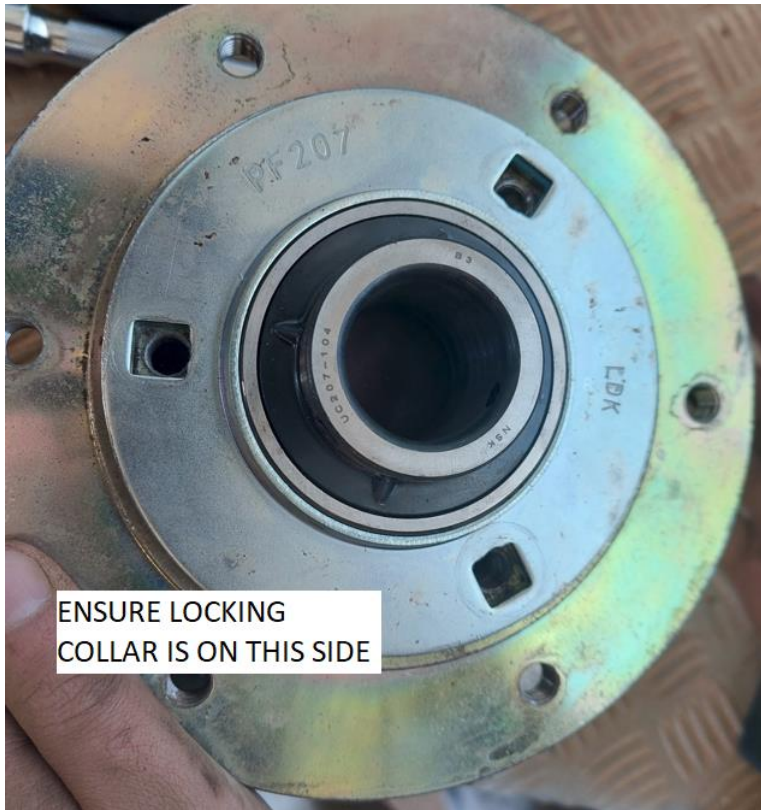


Figure 4: Items to remove or reuse highlighted (Image: Midwest)

## 2. Assembling Drive Hub & Timing plate to i-paddock Typhoon

Remove the inspection hatch cover on the drive end of the i-paddock Typhoon.

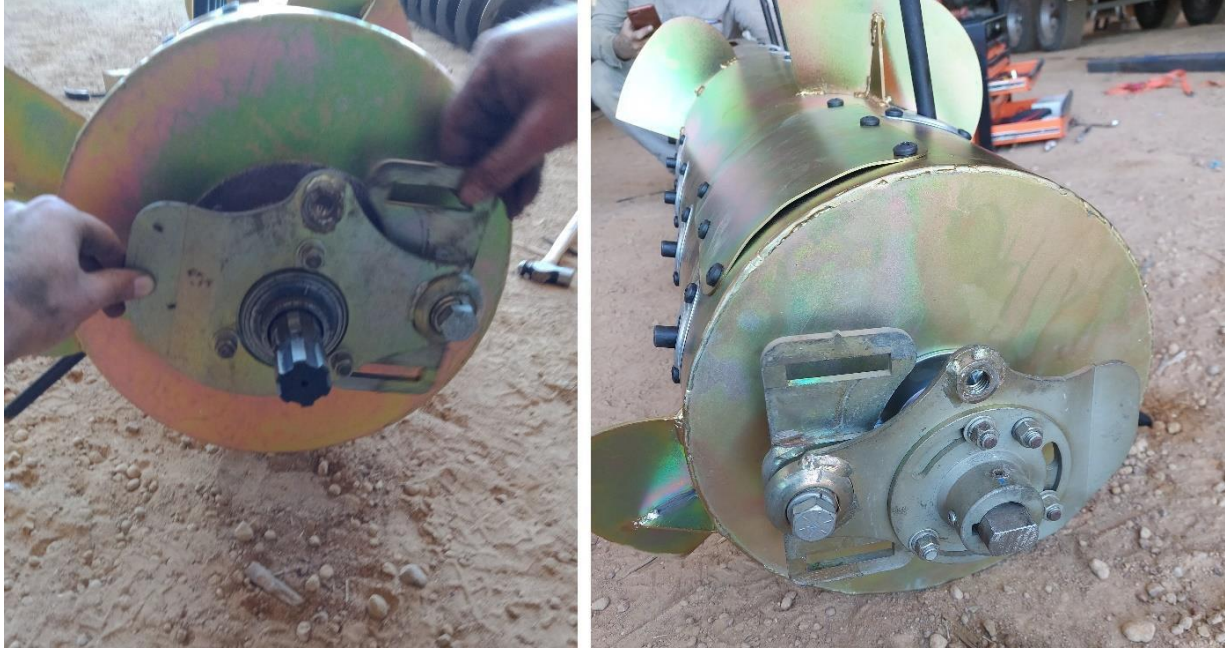
Loosely bolt the new supplied bearing onto the drive hub (Item 40) with the locking collar facing outwards (away from the drive stub shaft side).



*Figure 5: Bearing orientation determined by locking collar*

Loosely bolt the drive hub onto the i-paddock Typhoon. Ensure it all seats down properly before tightening the bolts taking care not to strip any threads.

Tighten all bearing locking collars to lock the crankshaft in position.



*Figure 6: After bolting mounts onto the i-paddock Typhoon (left: drive end, right: idle end)*



*Figure 7: Bearing at the drive end, when looking from the inspection slot*

### 1.1.3 Installing the i-Paddock Typhoon

#### 1. Insertion and Bolting

Using straps, wooden planks as levers and/or a forklift, insert the i-paddock Typhoon in place of the stock feed drum on the draper front, reversing the steps described in section [1.1.1](#). Beware of the correct orientation of the idle and drive ends.

Install the new timing hub ensuring the orientation as below.

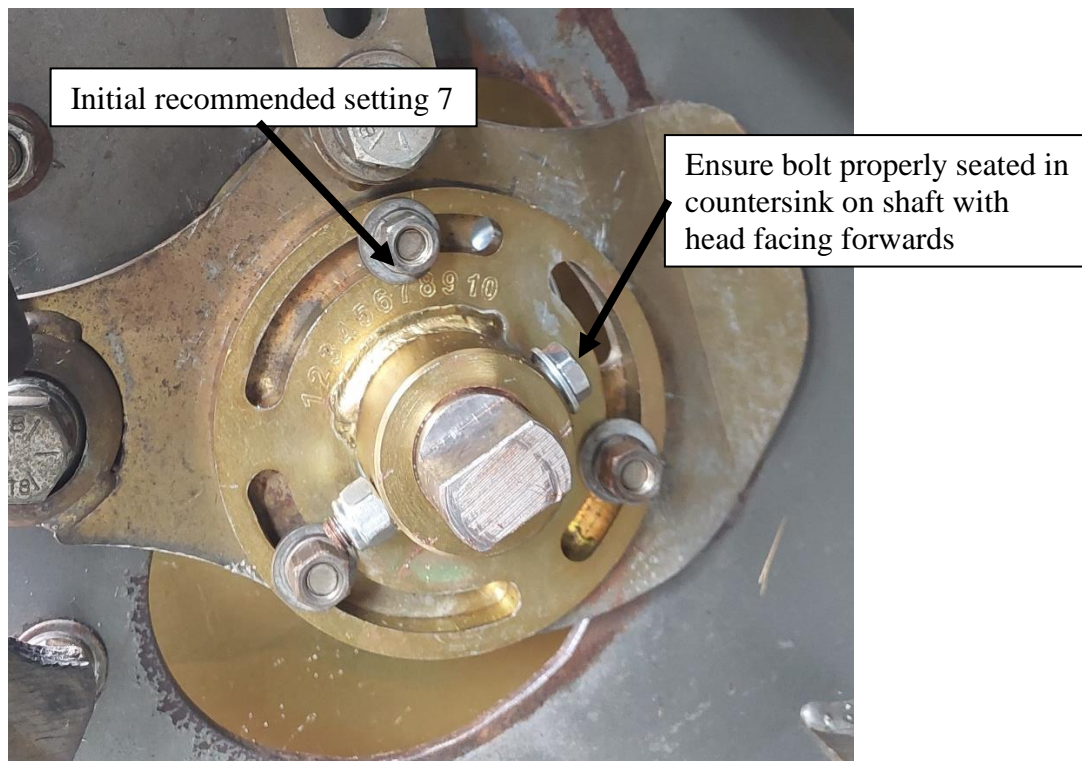


Figure 8: Timing plate

**IMPORTANT:** Once installed, make sure the internal crankshaft is orientated towards the cutter bar. As a guide, the fingers should be fully extended near the forward horizontal position when the Midwest timing adjustment lever is in mid-range. This is critical to allow the recommended timing to be set for correct performance of the feed drum.

**IMPORTANT (RISK OF FIRE OR DAMAGE):** Due to the large diameter flights on the Typhoon there may be minimal clearance to the feeder house chain on the harvester. It is important to initially set the Typhoon position to be as far forward as possible allowing around 10mm clearance between the drum shell and the side drapers when fully tensioned allowing for stretch. Additionally it is important to ensure the side drapers when fully stretched have sufficient clearance that they will not contact the Typhoon outer flight or finger. The drapers may need to be shortened to avoid clashing.





*Figure 9: Excessive feed drum clearance to side drapers*

The flighting on the Typhoon should be checked using a straightedge as shown below that it does not protrude past the mounting face of the adapter. On some older Crophawk machines there may be limited adjustment to move the Typhoon far enough forward. It may be necessary to further drill/slot the existing Midwest mounting holes to allow the flighting to not protrude past the adapter mount face.



*Figure 10: Typhoon flights excessively protruding past the adapter mount face.*

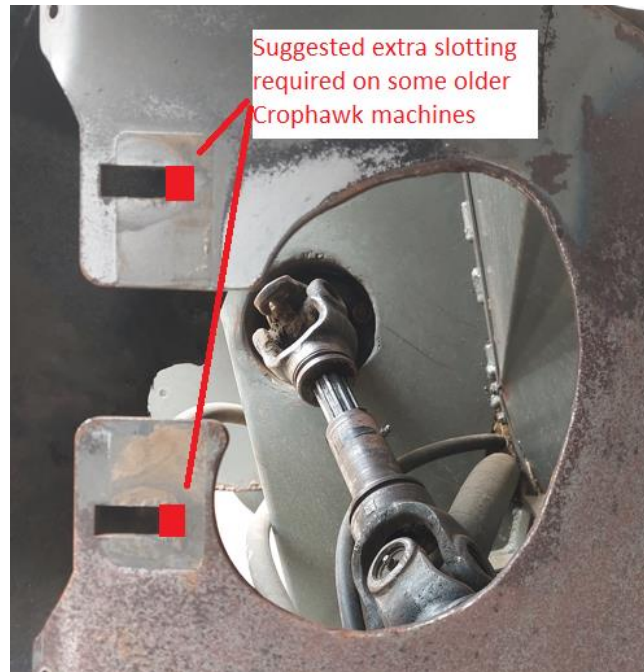


Figure 11: Extra slotting if required.

Ensure the feederhouse chain has sufficient clearance so that it will not protrude past the adapter mount face even when stretched. It may be required to remove a half-link in the chain to give sufficient clearance.



Figure 12: Feeder house chain

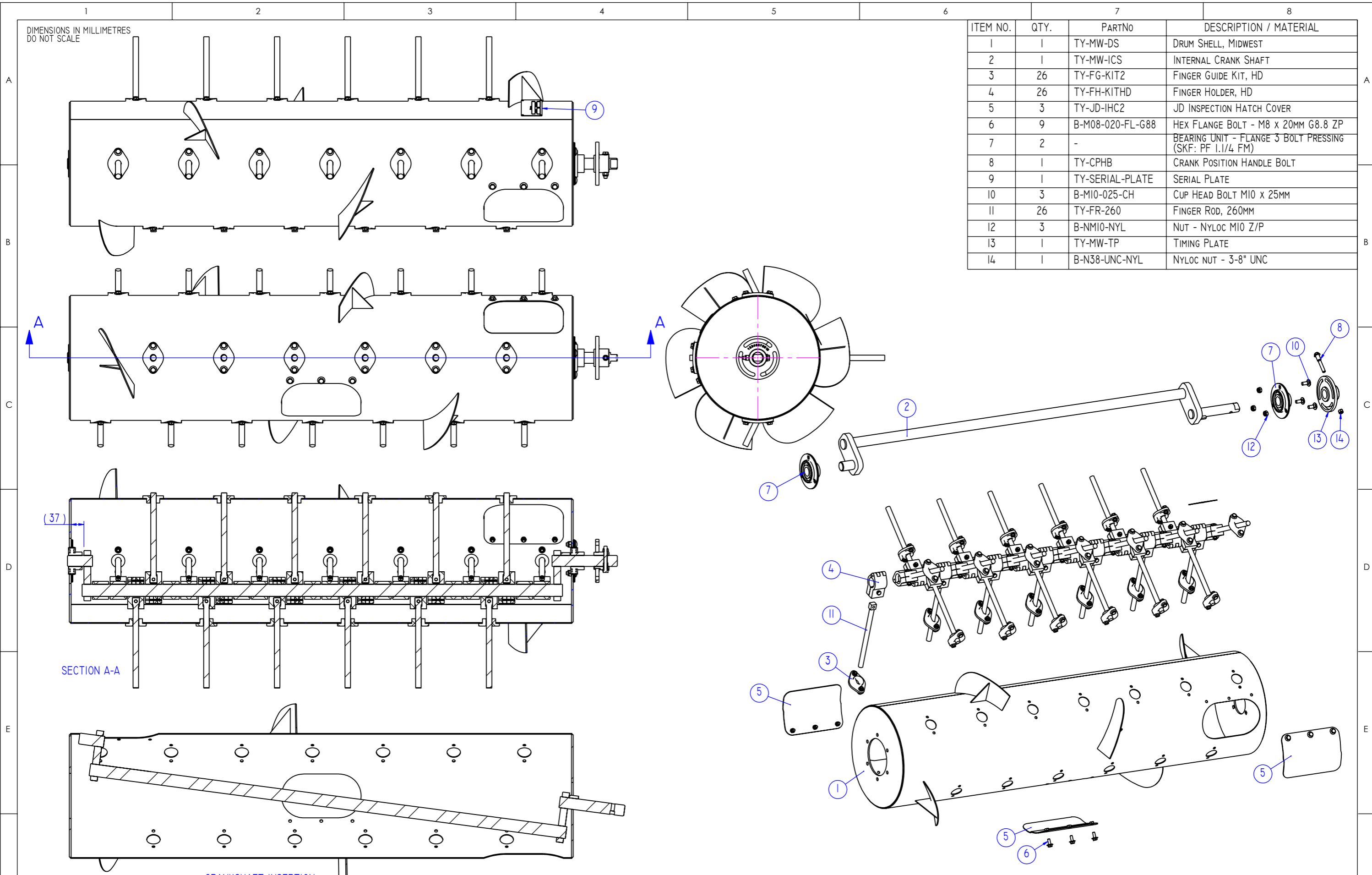
**IMPORTANT (RISK OF FIRE OR DAMAGE):** Check that all moving parts have sufficient clearance when rotating to avoid any contact. Rotate the drum manually prior to startup to confirm that there are no points of seizure or contact.

Connect the front to the harvester and check that there are no clash points with the Typhoon flights and the feeder house chain allowing for wear in the chain and any movement of the adapter.

It is recommended to run the i-paddock Typhoon for 2-5 minutes at full operating speed and checking the temperatures of the fingers thereafter for any excessive points by hand or using a temperature gun.

DIMENSIONS IN MILLIMETRES  
DO NOT SCALE

ITEM NO.	QTY.	PARTNO	DESCRIPTION / MATERIAL
1	1	TY-MW-DS	DRUM SHELL, MIDWEST
2	1	TY-MW-ICS	INTERNAL CRANK SHAFT
3	26	TY-FG-KIT2	FINGER GUIDE KIT, HD
4	26	TY-FH-KITHD	FINGER HOLDER, HD
5	3	TY-JD-IHC2	JD INSPECTION HATCH COVER
6	9	B-M08-020-FL-G88	HEX FLANGE BOLT - M8 x 20MM G8.8 ZP
7	2	-	BEARING UNIT - FLANGE 3 BOLT PRESSING (SKF: PF 1.1/4 FM)
8	1	TY-CPHB	CRANK POSITION HANDLE BOLT
9	1	TY-SERIAL-PLATE	SERIAL PLATE
10	3	B-M10-025-CH	CUP HEAD BOLT M10 x 25MM
11	26	TY-FR-260	FINGER ROD, 260MM
12	3	B-NM10-NYL	NUT - NYLOC M10 Z/P
13	1	TY-MW-TP	TIMING PLATE
14	1	B-N38-UNC-NYL	NYLOC NUT - 3-8" UNC



CRANKSHAFT INSERTION

REV.	DRAWING REVISION	DATE	BY	CHKD

DRAWING NOTES:

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DRN BY SBJ  
DRN DATE 3/09/2021  
CHKD BY MF  
CHKD DATE 3/09/2021

TITLE	PART NO	WEIGHT(KG)
IPM TYPHOON KIT, MIDWEST	TY-MW	77.05
	TY-MW-INS	-