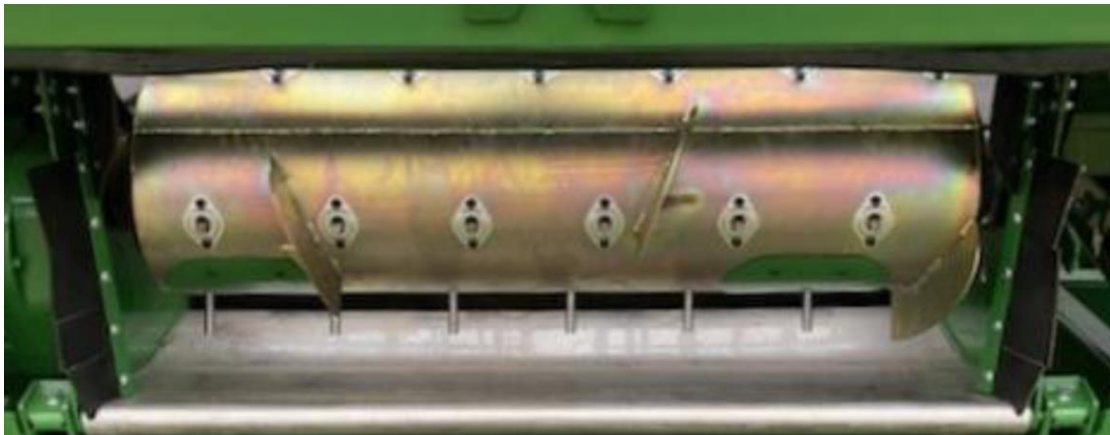


Distributed by:



John Deere 6 & 7 Series

Operation and Adjustment: iPaddock Typhoon Feed Drum

(Right and left refer to as facing forwards)

The iPaddock Typhoon for John Deere fronts has been tailor designed specifically to maximise performance in these fronts. The cluster of iPaddock's patented Paddle Flights, combined with the aggressive long throw finger pattern and the reduced barrel diameter, maximises smooth flow and minimises the dead zone 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 John Deere 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 iPaddock Typhoon is for the fingers to 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. Feeding issues are most commonly a result of excessively retarded finger timing.

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28/07/2022

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) to maximize the length of the fingers at the bottom of the stroke.

Canola and bulky/fluffy crops

Advancing the finger timing (i.e., rotating the timing lever anti-clockwise) may be useful in crops that sit up very high in the front. Modifications to the top cross auger, including adding rubber paddles in the center, can also assist in pushing high or fluffy crop down for collection by the iPaddock Typhoon feed drum.

1 INSTALLING IPADDOCK TYPHOON FOR JD 6&7 SERIES FRONTS

1.1 INSTALLATION OF THE TYPHOON FEED DRUM

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 JD manual for further detail.

Disconnect the front from the harvester and place it on the trailer. Secure the existing feed drum using a ratchet strap on the idle side as shown in Figure 1 below.



Figure 1: Securing the feed drum with a ratchet strap.

Items 29, 27, 26, 25 and 2 (highlighted in Figure 2 below) will need to be removed.

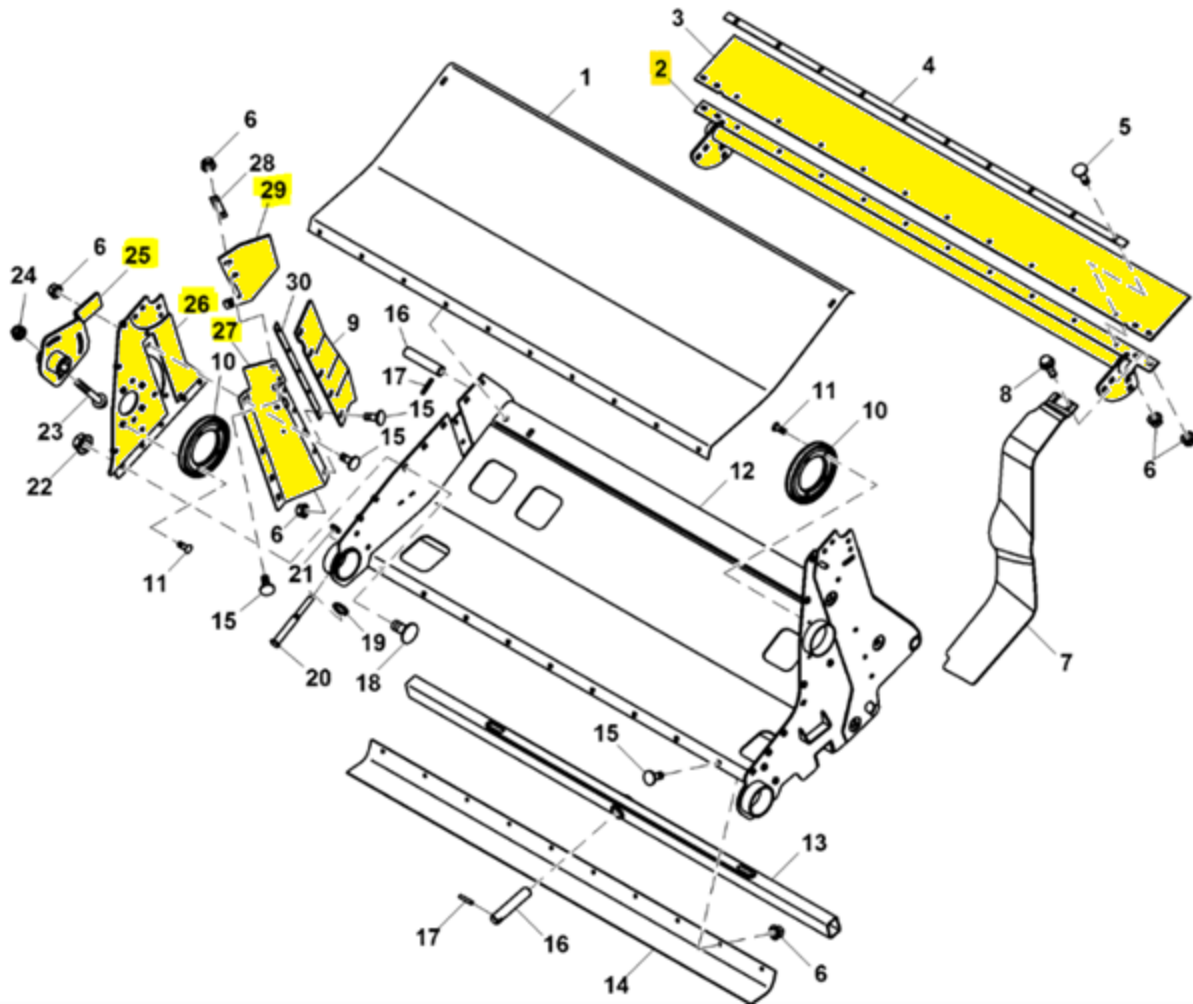


Figure 2: Items to remove on the JD header front.

Starting with items 29 and 27, remove the following bracket that is secured by the bolts shown in red (left image) of Figure 3 below. Note the bolts behind the rubber guards as well. The removal of this bracket also requires the removal of the bolts shown in red of the right image of Figure 3 (the bracket is removed in this image).



Figure 3: Location of bolts securing bracket (left). Bolts on top of header front (bracket is removed) (right).

Item 26 can now be disassembled by removing the bolts securing the bracket on the idle side as shown in Figure 4. Also remove the bolt that secures the idle shaft from moving axially (item 25).

Note: You may need to use a penetrating lubricant to facilitate the removal of item 25 off the shaft (right image - Figure 4).

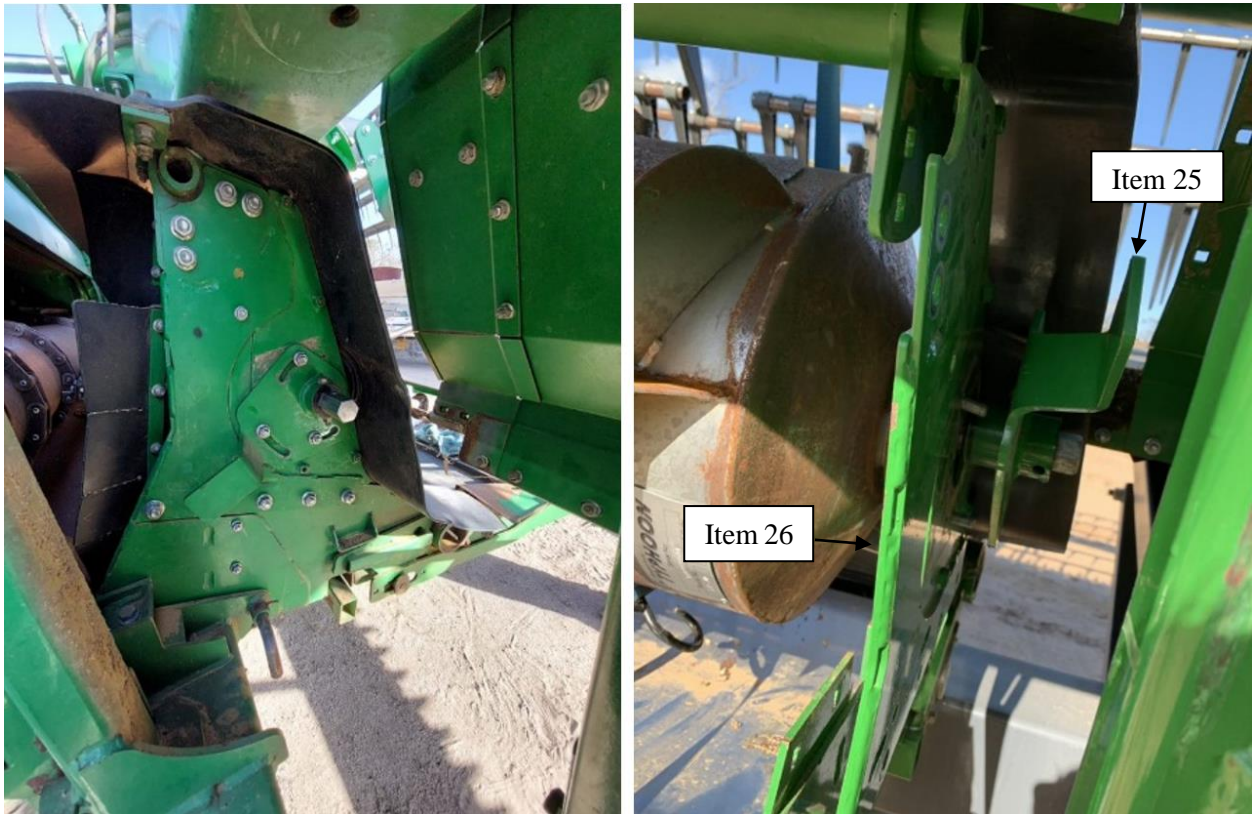


Figure 4: Removal of brackets securing the idle side.

Item 2 can now be removed by removing the four bolts securing the top cover on the drive side (left image – Figure 5). This cover (right image – Figure 5) should now be able to come off.



Figure 5: Removal of bolts securing top cover on drive side (left). Top cover removed (right).

Before dislocating the drive shaft from the bearing located in the drum shell, ensure there is adequate clearance between the drum and the Draper belt as highlighted in the left image of Figure 6 below. The Draper belt can be moved by turning the bolt located in the right image of Figure 6.

For **6 Series** fronts, the amount of clearance required is around 100mm. For **7 Series** fronts, around 70mm.



Figure 6: Clearance between the drum and Draper belt (left). Bolt (shown in red) used to move the Draper belt (right).

The drive shaft can now be disconnected from the internal drum shell bearing.

For **7 Series** models, remove the inspection hatch cover on the drive end, and remove the flanged bolt as shown in Figure 7 below (left image).

For **6 Series** models, remove the two socket head Allen screws as shown in the right image of Figure 7.

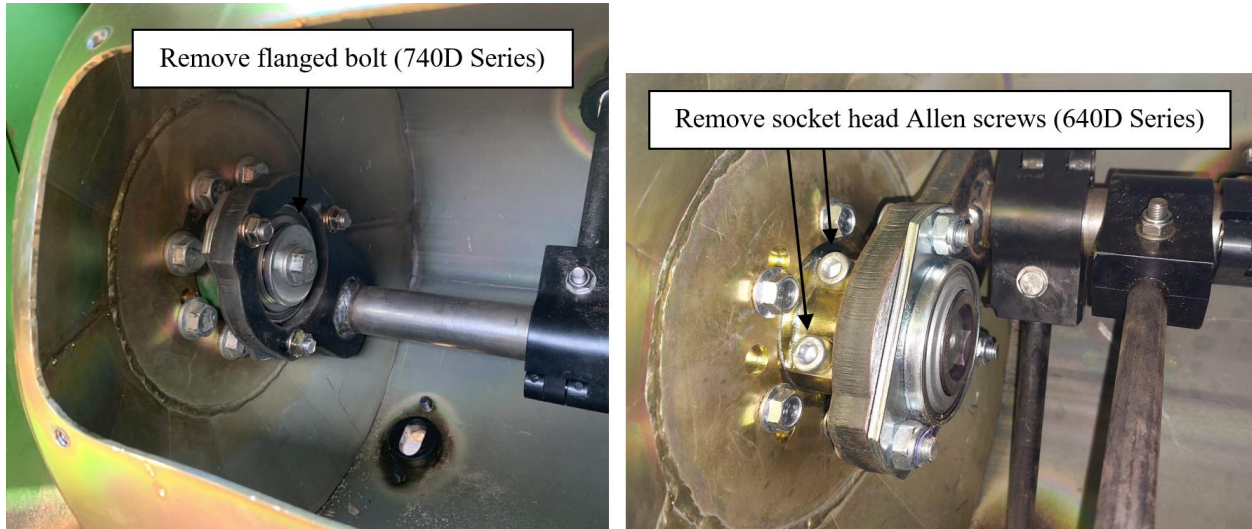


Figure 7: Drive shaft secured to the bearing for 740D series (left), for 640D series (right).

The drum shell should now be able to slide off the drive shaft. To facilitate removal, use can be made of wooden beams to lever and maneuver the drum shell as shown in Figure 8. Beware that the drum weighs approximately 80-90kg, hence at least two people are required to remove the drum shell manually. Otherwise, use a forklift or similar.



Figure 8: Using wooden beams to lever and maneuver the drum shell.

Removal of the drive stub shaft (Figure 10) is only required on **older 6 series** machines which require the drive stub shaft to be cut shorter such that it matches the dimension shown in the sketch below.

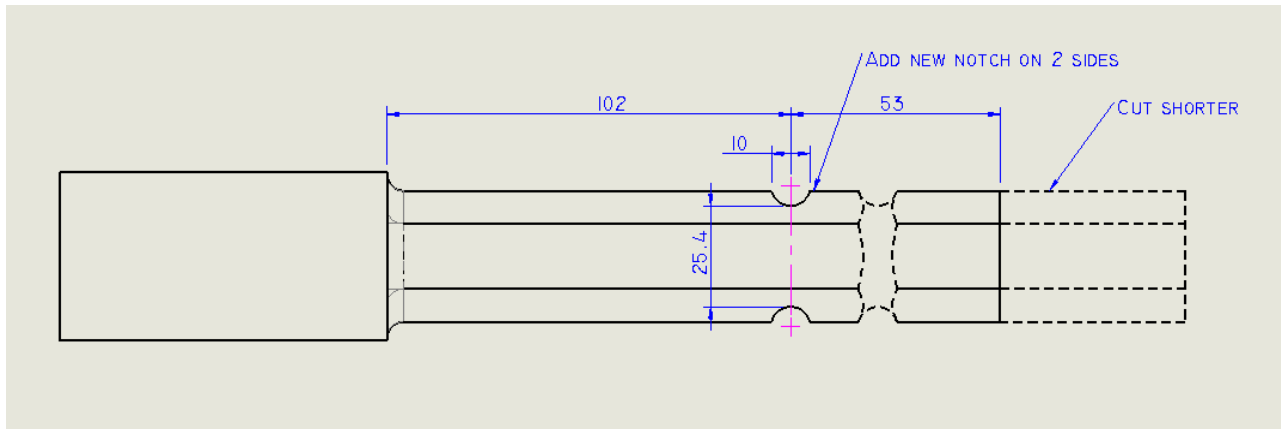


Figure 9: Drive stub shaft modification for older 6 series machines.

This shaft may be difficult to remove from the gearbox due to compacted dust buildup on the splines. There are no retainers on this shaft but working a penetrating lubricant into the splines and tapping the shaft back and forth should allow it to be removed without excessive axial load on the gearbox.



Figure 10: Drive stub shaft.

Installation of the iPaddock Typhoon Feed Drum

The new iPaddock Typhoon is supplied preassembled with a full set of fingers and drive hub.

By the reverse of the removal steps, install the new iPaddock Typhoon, by first hoisting the idle end with a hatchet strap as shown in Figure 1 earlier.

IMPORTANT: Once installed, make sure the internal crankshaft is orientated towards the cutter bar, as shown below. The fingers should be fully extended near the forward horizontal position when the John Deere timing adjustment lever is in mid-range. This is critical for correct performance of the feed drum.

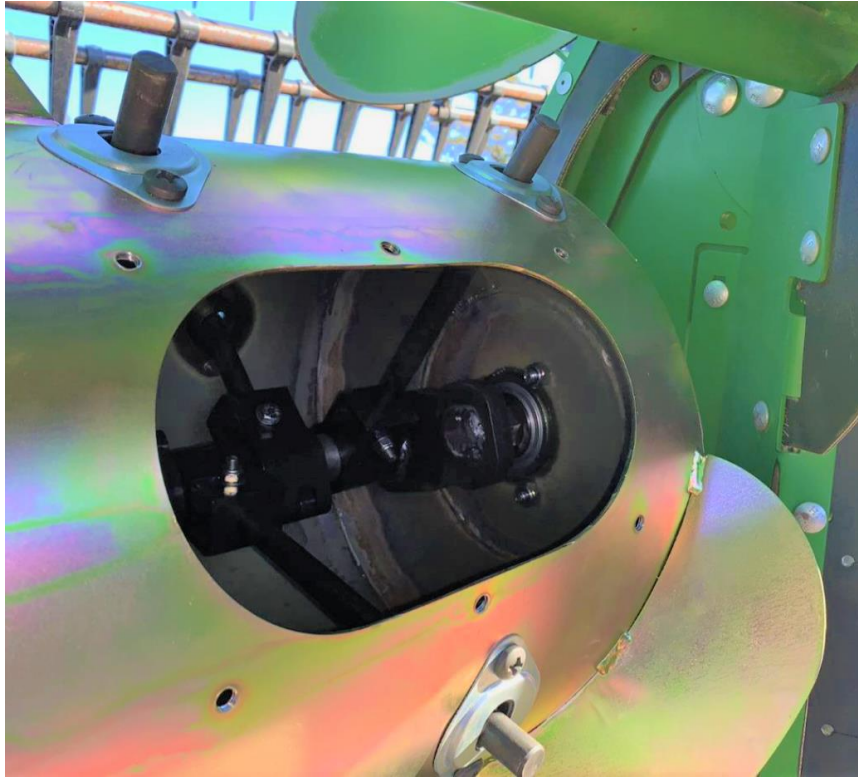


Figure 11: Internal crankshaft orientated towards the cutter bar.

Once installed and the inspection cover plates are assembled (Figure 13 below), make sure to move the Draper mats back to their original position as highlighted earlier (refer Figure 6).



Figure 12: Default timing adjuster plate position.



Figure 13: Fully installed new iPaddock Typhoon.

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 contact.

It is recommended to run the 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.

1.2 INSTALLING THE INTERNAL CRANKSHAFT AND FINGERS

Place the drum shell (TY-JD-DS) onto a workbench. Press one of the pairs of the bearing housings around one of the hex bearings, as shown in the left image below, and bolt the bearing housing pair onto the drive side of the internal crankshaft (TY-JD-ICS), as shown in the right image below. Use the cup head bolts. (This will come already installed from the factory).



Figure 14: Bearing fitting in bearing housings (left). Bearing housing fitted to drive end of crankshaft (right).

NOTE: The right image above is displayed for a 640D series. For 740D series models, the bearing flanges must be bolted on the opposite side of the crankshaft plate (refer Figure 15).

Assemble the other bearing housing onto the idle side of the drum, using the flanged bolts. Leave them hand tightened, to facilitate the insertion of the crankshaft.

Bolt the drive hub (mounting plate) onto the drum shell, then insert the internal crankshaft into the shell (the idle shaft should be inserted first through the larger access hole). Make sure the crankshaft is orientated as shown in Figure 15 below (left image).

Using a torque setting of 21 Nm, fasten the bolts on the bearing housing at the idle end (refer right image of Figure 15).



Figure 15: Internal crankshaft orientation (left). Securing the crankshaft at the idle end (right).

To assemble the fingers onto the shaft, take one of the finger holders (*TY-FH-KIT*) and encase it around the crankshaft as shown in the right image below. The fingers (*TY-FG-260*) insert into the finger holders as shown in the left image of Figure 16. Use washers on both the nuts and Hex bolts.



Figure 16: Finger in finger holder (left). Finger holder assembly onto crankshaft (right).

Once all 24 fingers are installed, slide the finger guides onto the fingers (left image - Figure 17), and screw the metal plates onto the drum (right image - Figure 17). **Beware not to screw the metal plates too tightly, to avoid stripping the threads.** The finger guides, metal plates and screws are supplied in the *Finger Guide Kit (TY-FG-KIT)*.



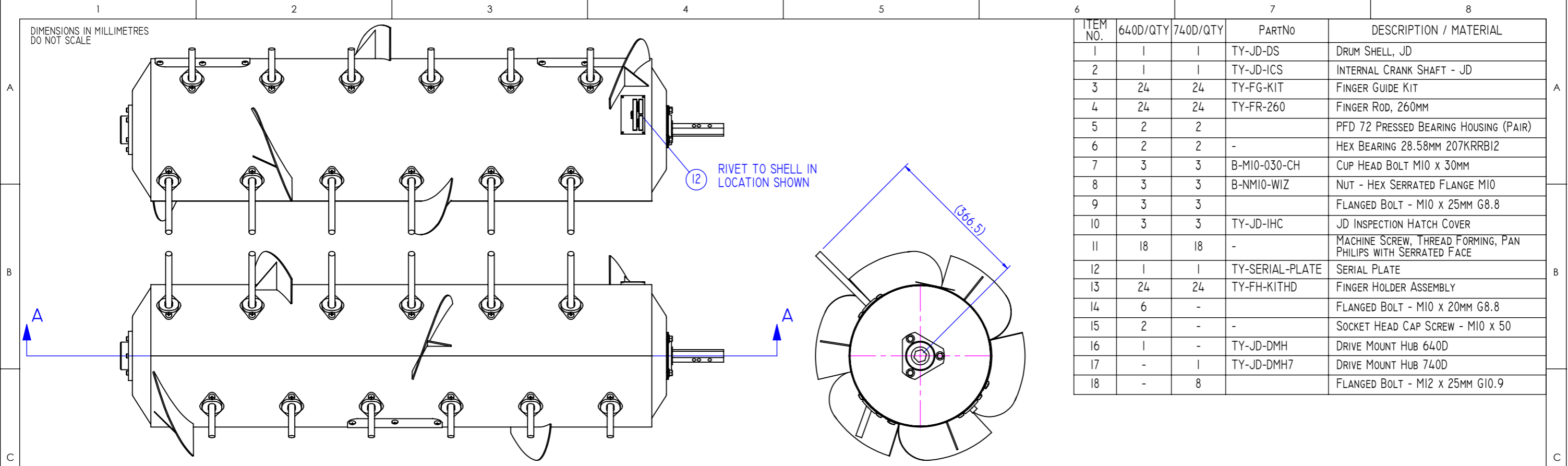
Figure 17: Assembling the finger guides.

The inspection hatch covers (TY-JD-IHC) may now be screwed on as shown below.

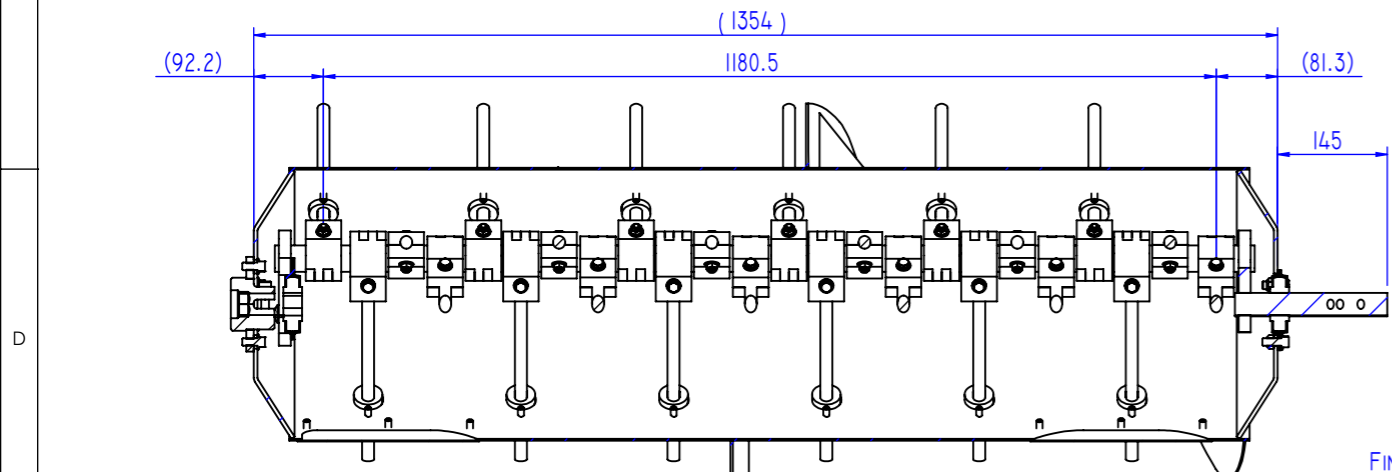


Figure 18: Fitted inspection hatch cover.

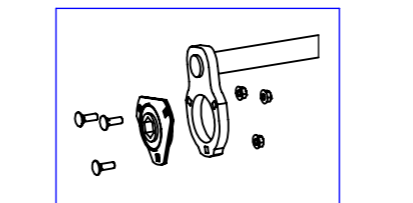
DIMENSIONS IN MILLIMETRES
DO NOT SCALE



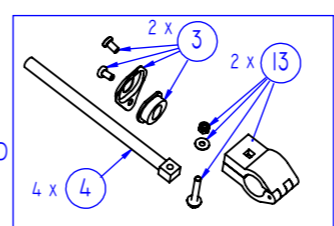
ITEM NO.	640D/QTY	740D/QTY	PARTNo	DESCRIPTION / MATERIAL
1	1	1	TY-JD-DS	DRUM SHELL, JD
2	1	1	TY-JD-ICS	INTERNAL CRANK SHAFT - JD
3	24	24	TY-FG-KIT	FINGER GUIDE KIT
4	24	24	TY-FR-260	FINGER ROD, 260MM
5	2	2		PFD 72 PRESSED BEARING HOUSING (PAIR)
6	2	2	-	HEX BEARING 28.58MM 207KRRB12
7	3	3	B-M10-030-CH	CUP HEAD BOLT M10 x 30MM
8	3	3	B-NM10-WIZ	NUT - HEX SERRATED FLANGE M10
9	3	3		FLANGED BOLT - M10 x 25MM G8.8
10	3	3	TY-JD-IHC	JD INSPECTION HATCH COVER
11	18	18	-	MACHINE SCREW, THREAD FORMING, PAN PHILIPS WITH SERRATED FACE
12	1	1	TY-SERIAL-PLATE	SERIAL PLATE
13	24	24	TY-FH-KITHD	FINGER HOLDER ASSEMBLY
14	6	-		FLANGED BOLT - M10 x 20MM G8.8
15	2	-		SOCKET HEAD CAP SCREW - M10 x 50
16	1	-	TY-JD-DMH	DRIVE MOUNT HUB 640D
17	-	1	TY-JD-DMH7	DRIVE MOUNT HUB 740D
18	-	8		FLANGED BOLT - M12 x 25MM G10.9



SECTION A-A

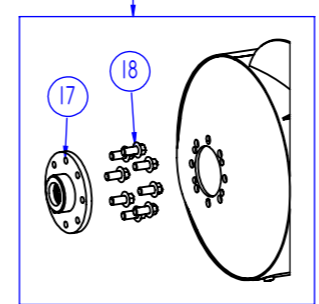


ASSEMBLY FOR 740D MACHINES

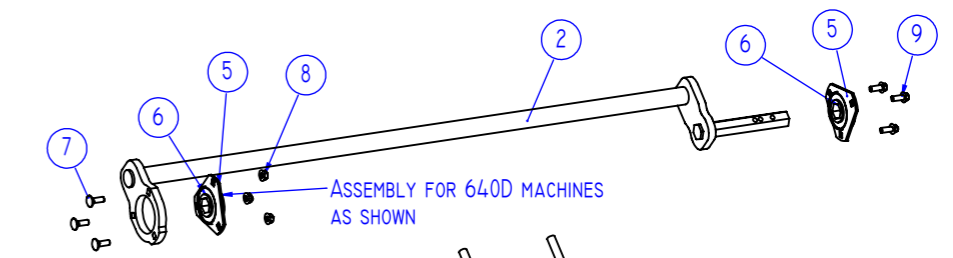


FINGER STARTER KIT
PART No: TY-FR-KIT260HD

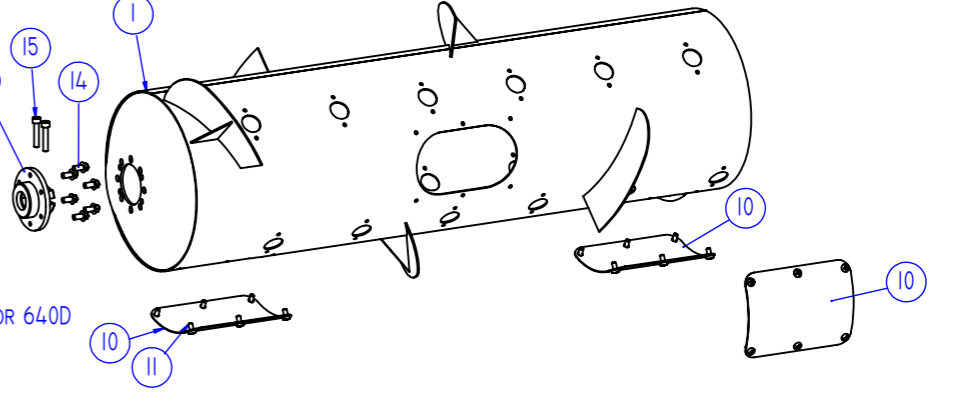
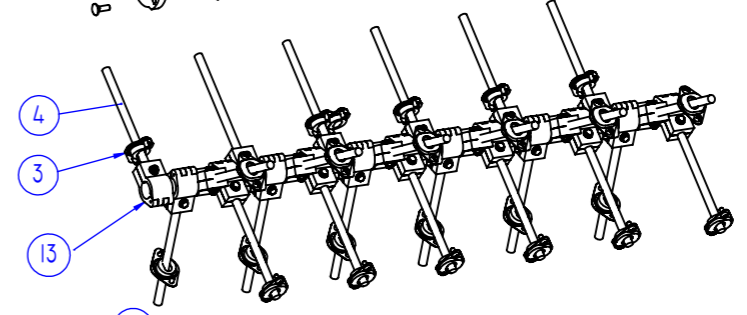
ASSEMBLY FOR 740D MACHINES



ASSEMBLY FOR 640D MACHINES



ASSEMBLY FOR 640D MACHINES
AS SHOWN



CRANKSHAFT INSERTION

REV.	DRAWING REVISION	DATE	BY	CHKD
A	DWG No was TY-JD, ITEM 11 QTY REDUCED, TY-JD-DMH SHOWN, ITEM 13 WAS PART OF ITEM 4	9/05/2022	SBJ	MF
B	HUB AND CRANKSHAFT ASSEMBLY DRAWINGS FOR 740D MACHINES ADDED, ITEM 8 CHANGED, COLUMN ADDED TO BOM, ITEM 18 CHANGED, ITEMS 14-18 ADDED	6/07/2022	ACO	SBJ

DRAWING NOTES:

TOLERANCES IF NOT SPECIFIED (COARSE SERIES)						
LINEAR:	NOMINAL DIMENSION					
OVER TO	30	120	400	1000	6000	
TOL.	±0.5	±0.8	±1.2	±2.0	±3.0	±5.0
ANGULAR:						
FORMED:	±1°		OTHER: ±0.5°			

TYPHOON
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DRN BY	SBJ	DRN DATE	16/07/2021
CHKD BY	MF	CHKD DATE	16/07/2021

TITLE		IPM TYPHOON KIT, JD	
PART NO	TY-JD6 & TY-JD7	WEIGHT(KG)	70.89
DRAWING NO	TY-JD2-INS	REVISION	B