

TFP200 Floor Planer

Operation & Maintenance Manual



TRAINING GUIDE



TFP200

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CONTENTS

Introduction	3
Declaration of Conformity	4
Foreword	6
General Information	6
Safety	6
Risk of Hand Arm Vibration	7
Air Supply	7
Pre Start Checks (Daily)	8
Starting - Electric Motors	8
Starting - Petrol Engines	9
Starting - Air Motors	9
Machine Operation	10
Shut Down	10
Belt Installation & Adjustment	11
Maintenance & Machine Storage	11
Cutter Types & Applications	12
Changing Cutter Drums	12
Cutter Replacement & Configurations	13
Exploded Diagrams & Parts List	22
Technical Specifications	30
Vibration Levels	30
Trouble Shooting	31

INTRODUCTION

Your new Trelawny SPT power tool will more than satisfy your expectations. It has been manufactured under stringent Trelawny SPT Quality Standards to meet superior performance criteria. You will find your new tool easy and safe to operate, and, with proper care, it will give you many years of dependable service.



WARNING

Carefully read through these original instructions before using your new TRELAWNY power tool. Take special care to read the warnings. Your TRELAWNY power tool has many features that will make your job faster and easier. Safety, performance, and dependability have been given top priority in the development of this tool, making it easy to maintain and operate.



ENVIRONMENTAL PROTECTION

The machine, accessories and packaging should be sorted for environmentally friendly recycling. The plastic components are labelled for categorised recycling.



DISPOSAL

Waste products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

DECLARATION OF CONFORMITY

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DECLARATION OF CONFORMITY

We,

Trelawny SPT Limited of
Trelawny House, 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31
1XT, United Kingdom,

Declare that under our sole responsibility for supply/manufacture of the product

Name of product _____

Model, Serial Number _____

Year of production _____

to which this document relates is in conformity with the provisions of the following Directive(s), Normative Documents and their relevant Standards:

- | | |
|----------------------------|---|
| 2006/42/EC | MACHINERY DIRECTIVE |
| 2006/95/EC | LOW VOLTAGE DIRECTIVE
(Applicable only to products using electric power) |
| EN ISO 11148-4:2012 | HAND HELD NON-ELECTRIC
(Non-Rotary Percussive Tools) |

A handwritten signature in blue ink, appearing to read "A. Dickinson", written over a horizontal line.

Year and place of issue,
2019
Leamington Spa, England.

Adam Dickinson,
Managing Director.



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FOREWORD

Thank you for your purchase of the TRELAWNY TFP200 Floor Planer. This manual contains the necessary maintenance information for you to ensure proper operation and care for this machine.

Also see the manual that is supplied by the engine manufacturer. It is essential for you to read through this manual thoroughly.

In the unlikely event that you experience problems with your TFP200, please do not hesitate to contact your local Trelawny dealer or agent. We always welcome feedback and comments from our valued customers.

GENERAL INFORMATION



WARNING! Before operating, performing maintenance or repairing the TFP200 this manual must be read and understood. If in any doubt, ask your supervisor before using this equipment.

Trelawny SPT Ltd disclaims all responsibility for damage to persons or objects arising as a consequence of incorrect handling of the machine, failure to inspect the machine for damage or other faults that may influence the operation prior to starting work, or failure to follow the safety regulations listed or applicable to the job site.

Local safety regulations must be followed at all times. Failure to follow these instructions could result in damage to the TFP200 and/or personal injury.

This machine is primarily designed for the removal of paint, heavy rust, scale and for the removal of laitance from concrete and steel floor areas. It can be used both indoors and out. Electric and compressed air models are more suitable for indoor use because of the toxic gases that are produced by petrol engines.

SAFETY



WARNING! Always observe safe-working practices at all times.

- Do wear safety shoes, face mask, shatterproof glasses, helmet, gloves and any other personal protective equipment required for the working conditions. Avoid loose clothing; this may become trapped in moving parts and cause injury.
- Do avoid nuisance dust, connect an industrial vacuum cleaner (minimum 2000watts or equivalent) to the 50mm (2") vacuum port situated at the rear of the machine.
- Do ensure that the work place is well ventilated. Avoid operating engine powered machines in an enclosed area, since engine exhaust gases are poisonous.
- Do be very careful with hot components. Exhausts and other parts of the engine are hot during operation and can remain hot for some time after shutdown.
- Do not refuel the engine while the engine is hot or running, there is a very real danger from explosion – always refuel when the engine is cold, and in the open air. During transportation fasten fuel cap tightly and close fuel cock.
- Do not carry out any work on this machine without disconnecting it from its air or electrical power supply.
- Caution this machine is heavy. It weighs around 73kg dependent on power unit. Do not lift this machine manually.

IMPORTANT:

When fitted with a petrol engine, AVOID TIPPING THE TFP200 BACKWARDS, especially when hot; the engine oil can run past the piston and into the combustion chamber causing the piston to “hydraulic lock” when next attempting to start the engine. Never attempt to forcibly turn the engine over if this has taken place, severe damage to the engine can be caused, resulting in a costly major strip down and possible injury to the operator.

To remove any oil from the cylinder, first remove the spark plug and place a lint free cloth over the plughole to capture the jettisoned oil. Turn the engine over with the ignition switch and fuel cock in the off position and expel as much of the oil as possible. Clean the spark plug to remove oil from the electrodes and replace. The plug may have to be removed and cleaned several times before the engine will start. Upon starting, the engine may produce smoke for a while from the exhaust, but this should soon clear.

Finally stop the engine and recheck the engine oil level. (Ensure that the engine is level prior to carrying out this check). If the engine oil level is low, refill with the recommended motor oil - see engine manufacturers operating instructions.

RISK OF HAND-ARM VIBRATION INJURY

These tools may cause Hand-arm Vibration Syndrome injury if their use is not adequately managed.

We advise you to carry out a risk assessment and to implement measures such as; limiting exposure time [i.e. actual trigger time, not total time at work], job rotation, ensuring the tools are used correctly, ensuring the tools are maintained according to our recommendations, and ensuring that the operators wear personal protective equipment [PPE] particularly gloves and clothing to keep them warm and employers should consider setting up a programme of health surveillance to establish a benchmark for each operator and to detect any early symptoms of vibration injury.

We are not aware of any PPE that provides protection against vibration injury by attenuating vibration emissions.

See 'Specifications' section for vibration emission data.

We strongly advise you to visit the Health & Safety Executive website <http://www.hse.gov.uk/vibration> This site provides excellent advice and information on HAV and currently, includes a Hand-arm Vibration Exposure Calculator that is easy to use to work out the daily vibration exposure for each of your operators.

AIR SUPPLY

The compressed air must be free from water and dirt.

Always clear the air hose before connecting to the tool. Ensure that no moisture (condensation) is present in the air hose.

Ensure that a minimum 19mm (3/4") bore air hose is used and that all couplings are secure, leak free and in good condition.

Limit the length of air hose to 30M (100ft). Where extra length is necessary, for each additional 15M (50ft) of air hose used, the pressure drop is approximately 0.21bar (3psi).

For safe and efficient operation the correct operating pressure is 6.2bar (90 psi).

Do not let the operating pressure fall below 5.5bar (80p.s.i.) or rise above 6.9bar (100 psi). Preferably, the compressor should be able to supply a minimum of 95 L/s (200 cfm) free air.

In particularly cold weather it is recommended that a proprietary anti-freeze lubricating oil is used.

PRE START CHECK (DAILY)

- Check all bolts and screws for tightness. Ensure that all fittings are secure.
- Check the drive belt for correct tightness. There should be approximately 13mm (1/2") of free play when the belt is depressed in the middle position between the two pulleys. To check and set the belt tension, refer to the Belt installation & Adjustment section.
- Check condition of Cutter Drum Assembly and replace components as required.
- Check engine oil level. (Ensure that the engine is level prior to carrying out this check). If the engine oil level is low, refill with the relevant motor oil recommended in the engine manufacturers operating and maintenance manual.
- Check that there is sufficient petrol in the fuel tank. (Only refill when the engine is cold).

Air Models

The air pressure regulator is preset at the factory to 90psi with a blanking bleed plug fitted, the air pressure regulators gauge will only show approximately 40psi (2.75bar) when the machine is in use, this is correct. Always clear the air hose before connection to the machine. Ensure that no moisture (condensation) is present in the air hose. Check the security of all hoses clamps and fittings, and that the air pressure is correct at 90psi (6.3bar). Check that there is sufficient air tool oil in the lubricator's reservoir. The air motor requires a minimum of 180cfm of free air supply (not displaced, as given by some compressor manufactures). In particularly cold weather it is recommended that a proprietary anti-freeze lubricating oil is used.

Electric Models

The TFP200 is supplied with a specially commissioned electric motors and starter switch assembly. Each unit is fully tested and the overload relays have been calibrated and set according to the manufactures specifications. In the event of malfunction on a new machine, the owner should first check that the power supply on site is suitable and adequate. All cables should be fully uncoiled and never left wrapped around cable reels or tied in loops. The starter box is fitted with a safety feature to protect the motor and relays from damage. The starter boxes are preset and under no circumstances should they be tampered with, stripped down or adjusted, otherwise it will invalidate the warranty. The starter control box lid must be unscrewed to gain access to the Black reset button, ensure that the supply is disconnected prior to opening the lid.

110v Motor

Use a centre tap transformer with a continuous rated output of 5.0KVA and must be a 230v 20amp supply. Do not add an extension lead to the transformer input. Do not use a 230v 13amp domestic supply. The motor requires the minimum of a 32amp, 110v power supply. To avoid voltage drop the machines extension cable must also be 4.0mm² cross-section with a maximum length of 20 meters or with 2.5mm² cross-section extension cable a maximum length of 10meters.

240v and 415v Motors

Take particular care when using 240v or 415v Machines, ensure that the electrical supply is earthed and that breakers and fuses are correct for the loading. The 240v motor requires the minimum of a 13amp, 220v power supply. The 415v motor requires the minimum of a 10amp, 380v power supply. Always use the shortest possible length of extension cable. To avoid voltage drop the cable must be a minimum of 2.5mm. Maximum length of cable 50 meters.

STARTING - ELECTRIC MOTORS

Inspect the supply cable; Check that no damage has been caused to the outer casing and that there are no exposed or loose wires. Obtain the assistance of an electrician if a fault is found. Do not use the machine until it has been rectified.

Check that the cable is not running across sharp or jagged edges and that it is not in contact with any liquid.

1. Adjust the Handle Bar to a comfortable working height.
2. Before starting work be sure that the Cutter Drum is clear of the ground by turning the Hand Wheel anti-clockwise to its full height, In this position the machine's wheels are locked in position, acting as a hand brake; the machine cannot then accidentally roll away if left unattended.
3. Pull the 'Deadmans handle towards the handle bar and hold in position. (The motor will stop immediately if this lever is released)
4. Press the green start button on the starter control box and the motor will start.

STARTING - PETROL ENGINES

1. Adjust the Handle Bar to a comfortable working height.
2. Before starting work be sure that the Cutter Drum is clear of the ground by turning the Hand Wheel anti-clockwise to its full height. In this position the machine's wheels are locked in position, acting as a hand brake; the machine cannot then accidentally roll away if left unattended.
3. Check that there is sufficient fuel in the fuel tank. (See manufactures hand book for type)
4. Check that the engine oil level is correct. (See pre-start check)
5. Open fuel valve lever to the "ON" position.
6. Set the throttle lever on the engine to quarter open position.
7. For cold engine starting, move the carburettor's choke lever to the choke "full on" position. (5.5hp engine)
8. Check that the engine stop switch is in the "on" position.
9. Pull the 'Deadmans' handle towards the handle bar and hold in position. (The motor will stop immediately if this lever is released)



IMPORTANT! Do not pull the recoil starter cord to the end of its travel as it may cause damage to the engine or injury to the operator.

When the engine starts, recoil the cord slowly. Do not allow the cord to snap back to its start position.

10. Pull the recoil starter cord handle.
11. On the 5.5hp engine, after the engine starts, open the choke approximately halfway, or until the engine runs smoothly. Warm the engine up for at least 3~4 minutes at the quarter open throttle setting. Fully open the choke once the engine is sufficiently warm, this will take longer during particularly cold weather.

STARTING - AIR MOTORS

Check the security of all hoses clamps and fittings, and that the supply air pressure is correct at (90psi / (6.2bar). Check that there is sufficient air tool oil in the lubricator's reservoir.



IMPORTANT! See pre-start check before altering the machine's pressure regulator.

1. Adjust the Handle Bar to a comfortable working height.
2. Before starting work be sure that the Cutter Drum is clear of the Ground. By turning the Hand Wheel anti-clockwise to its full height, the machine's wheels are automatically locked in position, acting as a hand brake; the machine cannot then accidentally roll away if left unattended.
3. Turn the tap on the air lubricator so that it is inline with the lubricator, the air motor will then start to rotate the drum.
4. Check in the sight glass that the lubricator is supplying approximately one drop of oil every 30 seconds, this is most important to prevent the air motor from seizing. This has been set high during manufacture and will need adjusting on site. Check that there is sufficient oil in the reservoir at regular intervals. Be aware, the warranty does not cover a seized or damaged motor due to lack of oil supply.

See separate lubricator sheet for instruction on filling the air lubricator reservoir and for oil supply adjustment.

MACHINE OPERATION



CAUTION! Engine versions beware of POISONOUS FUMES. Start and operate only in well-ventilated areas. Be careful with HOT COMPONENTS. Exhausts and other engine parts are hot during and for some time after operation. **Do not touch them.**

1. After starting the engine or motor, rotate the Hand Wheel clockwise until the "Handbrake effect" is off and the machine can move. Reduce the height until the cutters make contact with the surface. It is essential that the cutters are not lowered too far and too hard onto the surface as damage could be caused to the machine and cutter drum assembly. Allow the cutters to "float" on the cutter shafts without heavy downward pressure. As a guide between half and one full clockwise turn on the hand wheel should be sufficient. This floating action will allow the cutters to perform as intended.

2. Complete a small area observing the performance; reduce the throttle to tick over and on both electric motor and engine powered machines, release the Deadmans handle, inspect the finish produced.

See Cutter types & Applications for advice on cutter configurations.

3. Remember two light passes are quicker and more cost effective than one slow heavy pass. Tests have proved conclusively that heavy downward pressure reduces cutter and drum life by over 50%.

4. Nuisance dust should be removed by connecting an industrial vacuum cleaner (2000watts) to the 50mm port at the rear of the machine.

5. Alternatively on engine-powered machines, it is acceptable to spray water on the surface being worked or introduced via the vacuum port. The Cutter Drum assembly life is increased by around 10% when operating the machine in this method.

Do not use the above method when using electric machines due to the inherent danger of the trailing cable becoming immersed in water.

NOTE: Electrical motors and switches are not totally waterproof; but are protected to IP44; take special care to protect them from water to ensure safety.

6. The TFP200 is normally used in a forward motion; the rotation of the drum also helps with the natural drive produced during its operation. The operator can vary the speed of travel to determine the final finish having already set the depth control. It is permissible to operate the machine with a backward and forwards action, each pass should be overlapped to produce a uniform finish.

7. In emergency, when the cutter drum must be lifted quickly from the work surface, it is not necessary to turn the hand wheel, simply pull backwards and downwards on the handlebar to lift the front wheels and Cutter Drum off the floor, and then release the Deadmans handle.

SHUT DOWN

1. Turn the Hand Wheel clockwise to its full height, until the machine's wheels are locked and act as a brake.

2. **Air Motors versions**, turn the tap on the lubricator anti-clockwise until at right angles to the lubricator.

Electric versions, release the Deadmans handle, and disconnect from the supply.

Petrol versions, still holding the Deadmans handle, move the engine's throttle lever to the slow speed position and run the engine for 10 seconds. (This avoids the engine from becoming washed internally by neat fuel if switched off from high engine revolutions)

3. Release the Deadmans handle or switch off main engine switch the engine will then stop.

4. Switch off the main engine switch.

5. Close the engine fuel cock.



EMERGENCY SHUTDOWN! Petrol & Electric models: Release deadmans handle.
Air Motor: Turn off lubricator stop tap.

BELT INSTALLATION & ADJUSTMENT

- Ensure that all power or air line to the machine is switched off and disconnected.
- Remove the belt guard by unscrewing the bolt in the centre of the belt guard.
- Loosen the engine mounting plate bolts to allow the engine to move along the chassis's engine mounting bolt slots and on electric motors loosen also the motor to slide mounting fixing bolts.
- Slide the toothed belt off the engine pulley, then remove the belt from the drive pulley. It may be necessary to lift the left hand end (viewed from the front of machine) of the engine/motor slightly to facilitate removal and also during installation.
- Place the new belt partially onto the drive pulley first; locate the belt's teeth in the drive pulley's tooth grooves.
- Then slide the belt over the engine drive pulley, slide the belt fully into position, and ensure that both pulleys have the belt's teeth engaged in the grooves and that the engine/motor pulley is positioned directly above the drive pulley.
- Adjust the belt tension by moving the engine towards the front of the machine. When the engine is in the correct position, normal slack should be approx 13mm (1/2") lightly tighten the engine retaining bolts and recheck the belt tension.
- The engine must also be parallel to the front of the engine mounting plate otherwise the belt will not run true.
- Please bear in mind that the belt will also tighten further as the engine mounting bolts are tightened.
- Adjust the engine position until the correct belt tension is achieved. Carefully rotate the drive pulley by hand to ensure that the belt is running true.
- Finally tighten all engine bolts, refit the belt guard and tighten the belt guard-retaining bolt.



IMPORTANT! Normal slack should be approximately 10-15mm (1/2") when the belt is depressed on one side in the middle position between the engine pulley and drive pulley.

MAINTENANCE & MACHINE STORAGE

- After use, clean the machine to remove all build up of dust and surface residues. If using a hosepipe or pressure washer take care not to direct water at electrical components and switches.
- **Note: Motors and switches are not waterproof.**
- Ensure that the height adjustment thread is cleaned and then lightly greased. Periodically it should be completely removed and the female thread section cleaned and greased. At the same time the self aligning bearing at the top of the shaft should be greased using a grease gun.
- The clevis pin should be lubricated regularly with oil to maintain a light, smooth height adjustment.
- The toothed Drive Belt will give a long and trouble free life if basic procedures are followed.
- Daily check the drive pulleys for build up of deposits and any trapped debris etc.
- Check the belt and teeth for surface cuts and cracks, as once the surface of the belt is damaged it will soon fail.
- Build up of dirt can cause the belt to become over tightened through the build up of dirt underneath the teeth and therefore may no longer mesh correctly, all of the power is then transmitted by the tip of the teeth with negative results.
- Serious damage could result to the drive shaft, bearings and drive motor if the belt is excessively tight. Generally when the motor is started and run a tight belt can be detected by a low hum or whistle.
- **Warning: Never operate the TFP200 without a belt guard.**
- All fastenings should be checked daily for tightness and the drive belt for tension.
- Check the individual motor or engine manufactures instructions for details on their service recommendations.

Short period storage: up to 3 months.

- Clean outside of machine, inspect the Drum, flail shafts and cutters for wear; replace any worn parts as required.
- Remove any build up of material from inside of the Cutter Drum area.
- Cover the machine to protect it: Store the machine in a dry place.
- Be sure to check security of all fastenings after any lay up period.
- See also engine manufactures operation and maintenance instruction book.

Long period storage: over 3 months

- Clean outside of machine, inspect the Drum, flail shafts and cutters for wear; replace any worn parts as required.
- Remove any build up of material from inside of Cutter Drum area and vacuum tube.
- When engine is cold, remove the fuel from the fuel tank and carburettor float chamber; see engine manufactures operation and maintenance instruction book for method.
- Cover the machine to protect it: Store the machine in a dry place.
- After any long lay up period be sure to check security of all fastenings, change engine oil as per engine manufactures instructions and refill the tank with fresh petrol.
- See also engine manufactures operation and maintenance instruction book.



NOTE: Always follow local regulations on the storage of petrol and for the disposal of used engine oil.

CUTTER TYPES & APPLICATIONS

T.C.T Cutters

Hardened steel cutter with tungsten carbide inserts. For all general cleaning applications, including concrete texturing, Scabbling, the grooving of concrete, removal of embedded roof chippings, brittle coatings from steel work. Use TCT Cutters on heavy applications, for longer life and higher output. Produces "tramlines" on concrete and small indentations on steelwork.

Star Cutters

Heat-treated steel cutters used for the aggressive removal of paint and coatings from floor areas, but with a shorter life span than Beam Cutters. Can be used for the general removal of dirt and ice deposits and to produce a texture on concrete surfaces. Produces roughened surface on concrete and light marking on steelwork.

Beam Cutters

Heat-treated steel cutters used for the removal of paint and coatings from floor areas, but with a shorter life span than TCT Cutters, not as aggressive as Star Cutters. Can be used for the general removal of dirt and ice deposits. Produces a fine texture on concrete surfaces and slight marking on steelwork.

Milling Cutters

Flat tungsten carbide cutters for the removal of thermo-plastic road and runway markings. Very efficient and cost effective with none of the problems associated with burning off. These can also be used for the removal of bituminous and rubber deposits. Very effective for the removal of two part epoxy floor paint, may require finishing with beam cutters or the Trelawny floor grinder to achieve the required finish.

Note: Care must be taken with milling cutters to ensure that the Drum and its Cutters are fitted the correct way round, the tungsten carbide tips must face towards the vacuum port at the bottom as the drum rotates, otherwise the tips will be damaged in use. Produces a "strip" on concrete and tarmac, is not recommended on steelwork unless for "braking up" coatings.

NB: Increasing or decreasing the number of spacers used can alter the performance and finish characteristics of each cutter type. Ensure that the same type and quantity of spacers and cutters are fitted to the opposite cutter shaft to maintain the drums balance. An out of balance drum can be very dangerous and will also dramatically increase the vibration emissions.

CHANGING CUTTER DRUMS

Turn off and stop the machine, making sure the cutter drum has come to a complete standstill.



NOTE: If electric or air powered, disconnect the machine from the power source.

Adjust the height adjustment hand wheel so that the cutters are clear of the ground.

Remove the four Side Plate retaining bolts and remove the Side Plate. If the Side Plate is stuck in it's opening or on the dowel pins, use two of the Side plate retaining bolts inserted into the threaded holes on each side of the Side Plate. Screw in both of these bolts equally until the Side Plate is free.

With the side plate removed the Cutter Drum will simply slide off the Drive Shaft. The fitting of the drum is the reverse of the removal procedure.

When changing cutter drums always check that the flail shafts are not excessively worn with pronounced grooves, also that the centres of the cutters, spacers and the drum flail shaft location holes are not elongated. The screws which hold the drum end plates in position must be tight and in good condition.

Note: In general use it is expected that normally two sets of flail shafts will be used to one set of TCT cutters. While changing the drum the condition of the drive shaft, the drum's hexagon drive, the drive shaft bearings and side plate bearing should be checked. If any roughness, side play or leakage of grease is detected then new bearings should be fitted. Lightly oiling the drive shaft will prevent a build up of rust, which could cause difficulty when changing the drum later. While the Drum is removed, check that the vacuum port is free from blockages and that the wear strip, which also retains the dust skirt are both in good condition. Replace any damaged, worn or suspect parts. Ensure that all the bolts are tight at all times, recheck at regular intervals.

CUTTER REPLACEMENT & CONFIGURATIONS

Replacing cutters/spacers/flail shafts

- Remove Drum; see Changing Cutter Drums.
- Unscrew the four countersunk screws and locknuts from either end of the cutter drum.
- Using a suitable drift, push out each of the flail shafts. Check each of the flail shafts for wear and replace as required. Check also the Drum, Cutters and Spacers for elongation and hole enlargement, replace as necessary.
- See the table below for the examples of the sequence of spacers /cutters for each style of drum.
- Before loading any cutters, establish which is "Position 1". (See next)
- Position the two shorter rows to the left and at the top as you look at the drum; identify the short row on the left furthest away from you (at the "back" of the drum), this is "Position 1" For ease of assembly, mark the end of the drum to help identify each flail shaft, rotate the drum away from you marking each position in order. 1,2,3,4.

Note: The drum's web plate thickness and positions can vary slightly; because of this, the quantity of cutter and/or spacers may need to be adjusted, ensure that the same amount of cutters and spacers are fitted to opposite shaft to keep the drum balanced. These examples are for illustrative purposes only.

Method as per Single Web Drum

Insert a flail shaft into the drum from the left side, in position 1, so that its end is in the middle of the short row, start to load with a single spacer first, fit the 9 cutters alternating with a spacer until the last cutter, pushing the flail shaft further through as the shaft fills, in this case end the short row with 1 single spacer. Continue with the long row on the same shaft, but no spacer is fitted before or after the last cutter (See example below) Rotate the drum away from you to complete shaft 2,3 and 4. Finally secure the end plates with the four countersunk screws and four new locknuts.

CUTTERS & SPACER QUANTITIES FITTED TO SINGLE WEB DRUM

CUTTER TYPE	PART NO	CUTTERS	SPACERS
TCT	320.5500	80	88
Beam	320.5120	264	0
Star	320.3658	208	0
Milling (Economy)	320.5600	16	144
Milling (Standard)	320.5600	24	72
Milling (Full Load)	320.5600 / 320.5650	28 full - 8 half	0
Spacer	320.4140	-	-

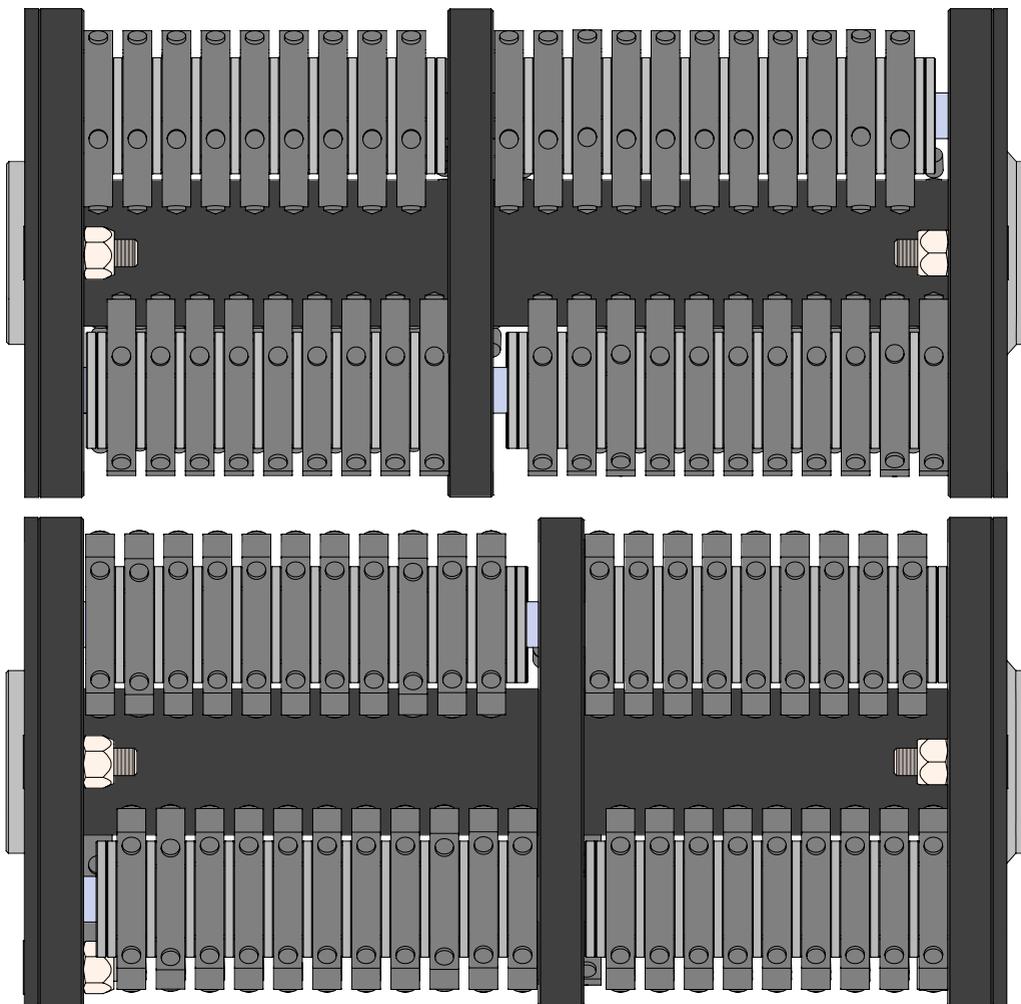
CUTTERS & SPACER QUANTITIES FITTED TO DOUBLE WEB DRUM

CUTTER TYPE	PART NO	CUTTERS	SPACERS
TCT	320.5500	76	80
Beam	320.5120	268	0
Star	320.3658	200	0
Milling (Full Load)	320.5600	22 full / 4 half	54

WIRE BRUSH QUANTITIES FITTED TO BRUSH HOLDER

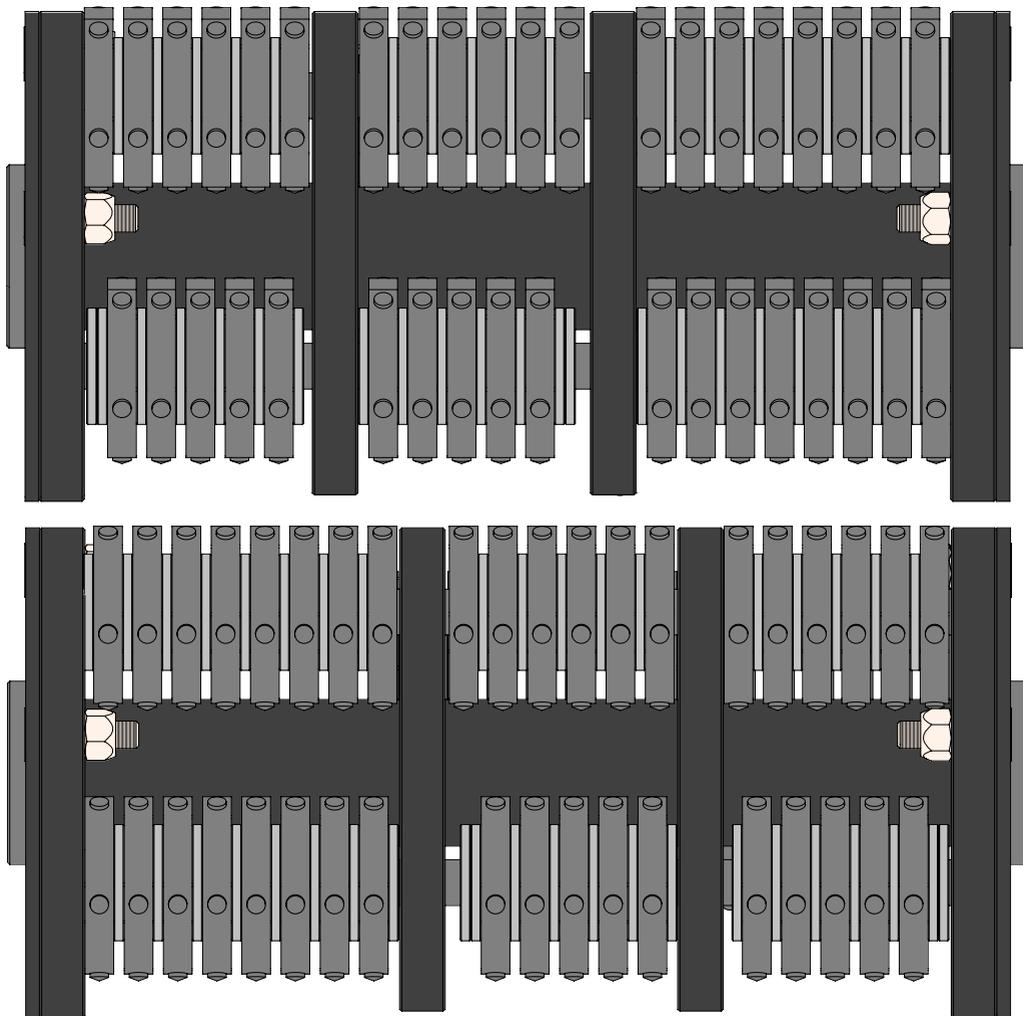
	Wire Brush	Spacers
Crimped Wire Brush	14	14
Twisted Wire Brush	21	23

TCT CUTTERS FITTED TO SINGLE WEB DRUM



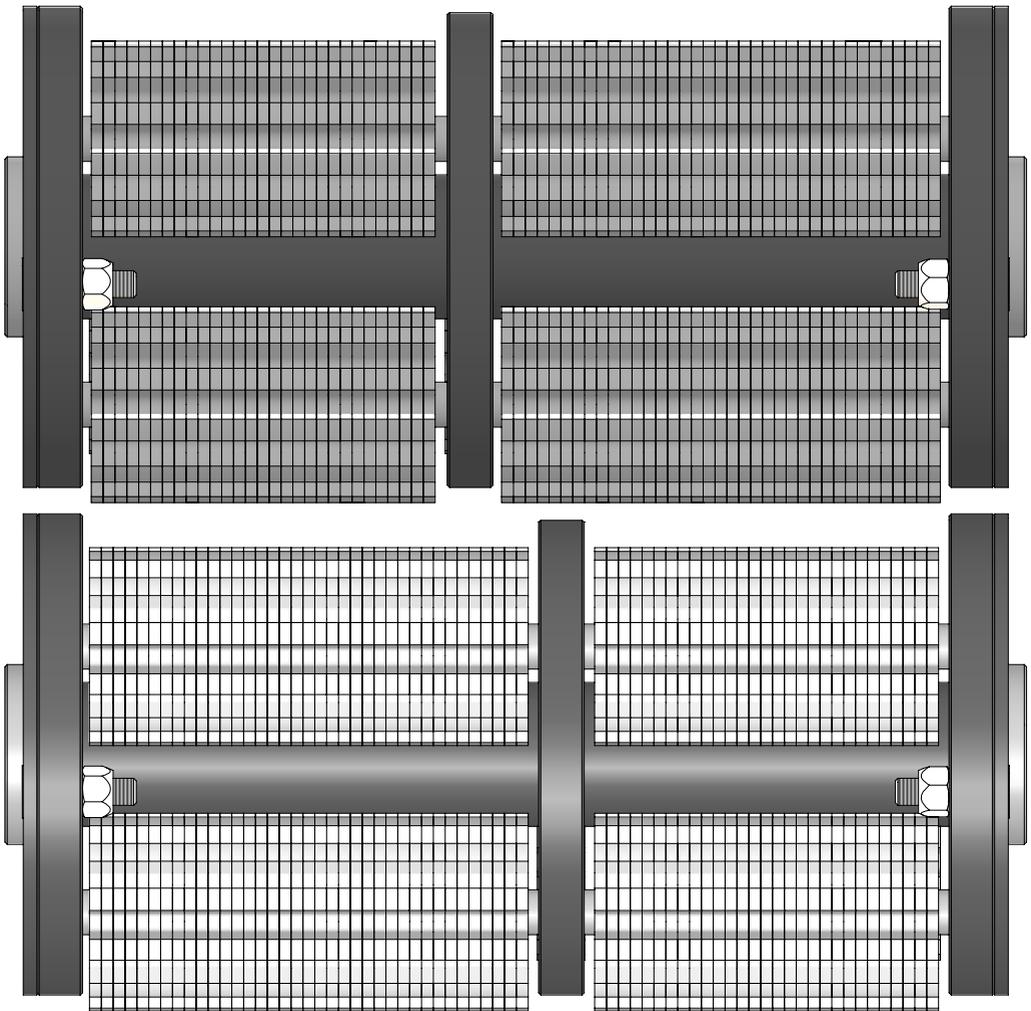
Part Number: 320.1020ST
 Consists of: 80 TCT Cutters + 88 Spacers

TCT CUTTERS FITTED TO DOUBLE WEB DRUM



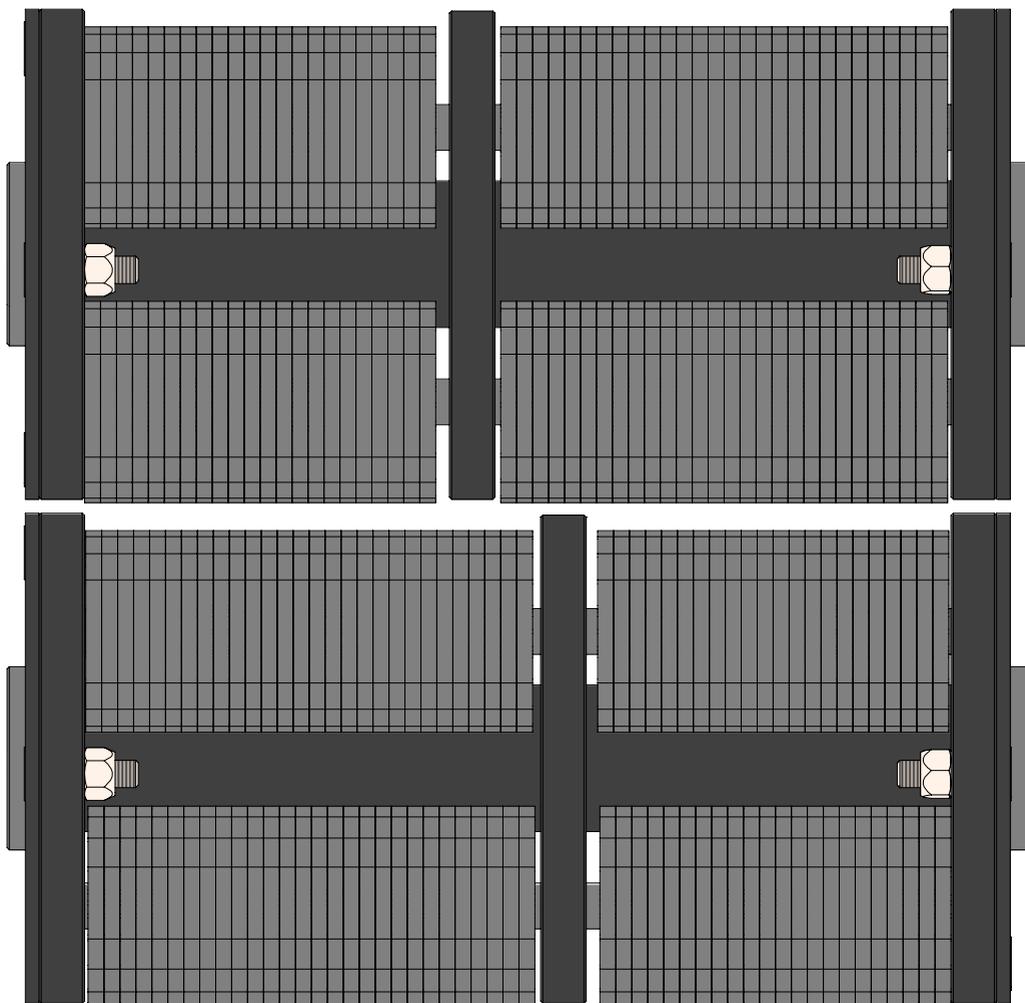
Part Number: 320.1020DT
 Consists of: 76 TCT Cutters + 80 Spacers

BEAM CUTTERS FITTED TO SINGLE WEB DRUM



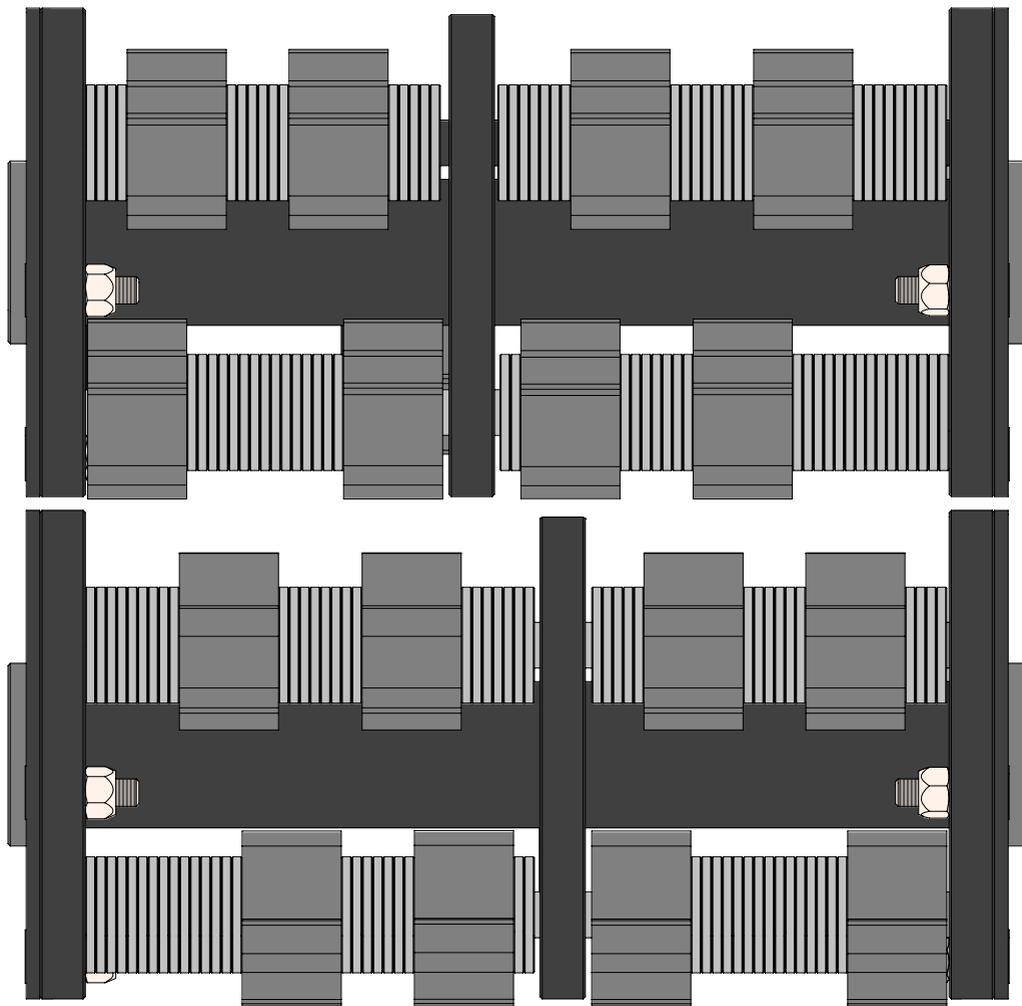
Part Number: 320.1020SB
Consists of: 264 Beam Cutters (37 cutters per long run and 29 per short run)

STAR CUTTERS FITTED TO SINGLE WEB DRUM



Part Number: 320.1020SS
Consists of: 208 Star Cutters (29 cutters per long run and 23 per short run)

MILLING CUTTERS FITTED TO SINGLE WEB DRUM (ECONOMY LOAD)



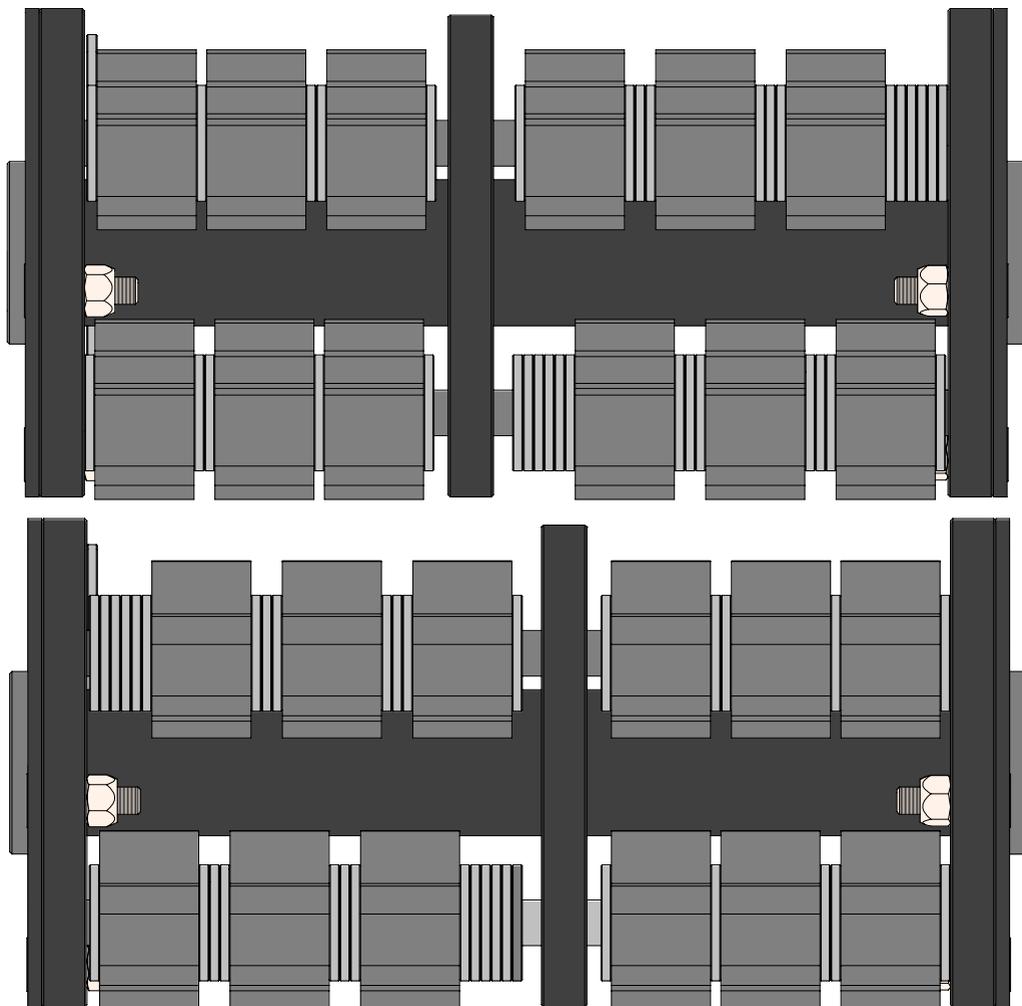
Part Number:

N/A

Consists of:

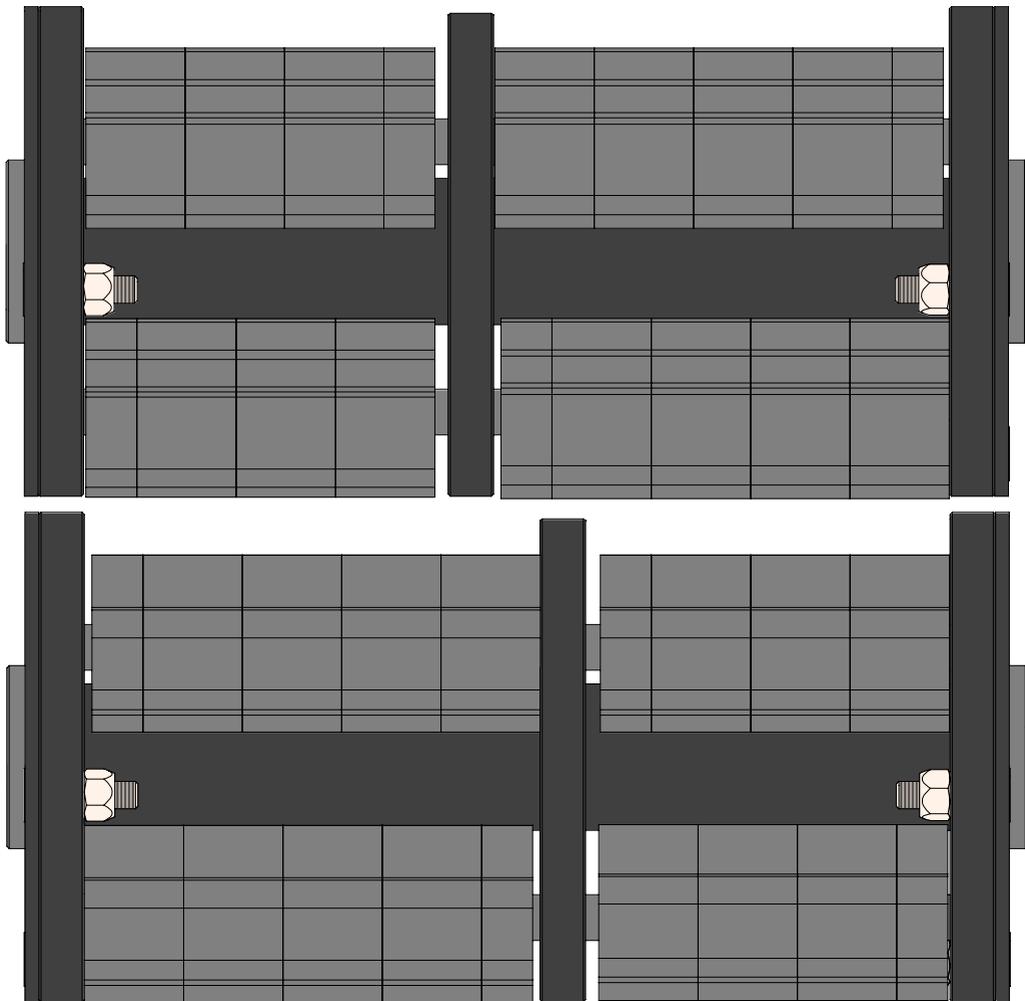
16 Milling Cutters + 144 Spacers

MILLING CUTTERS FITTED TO SINGLE WEB DRUM (STANDARD LOAD)



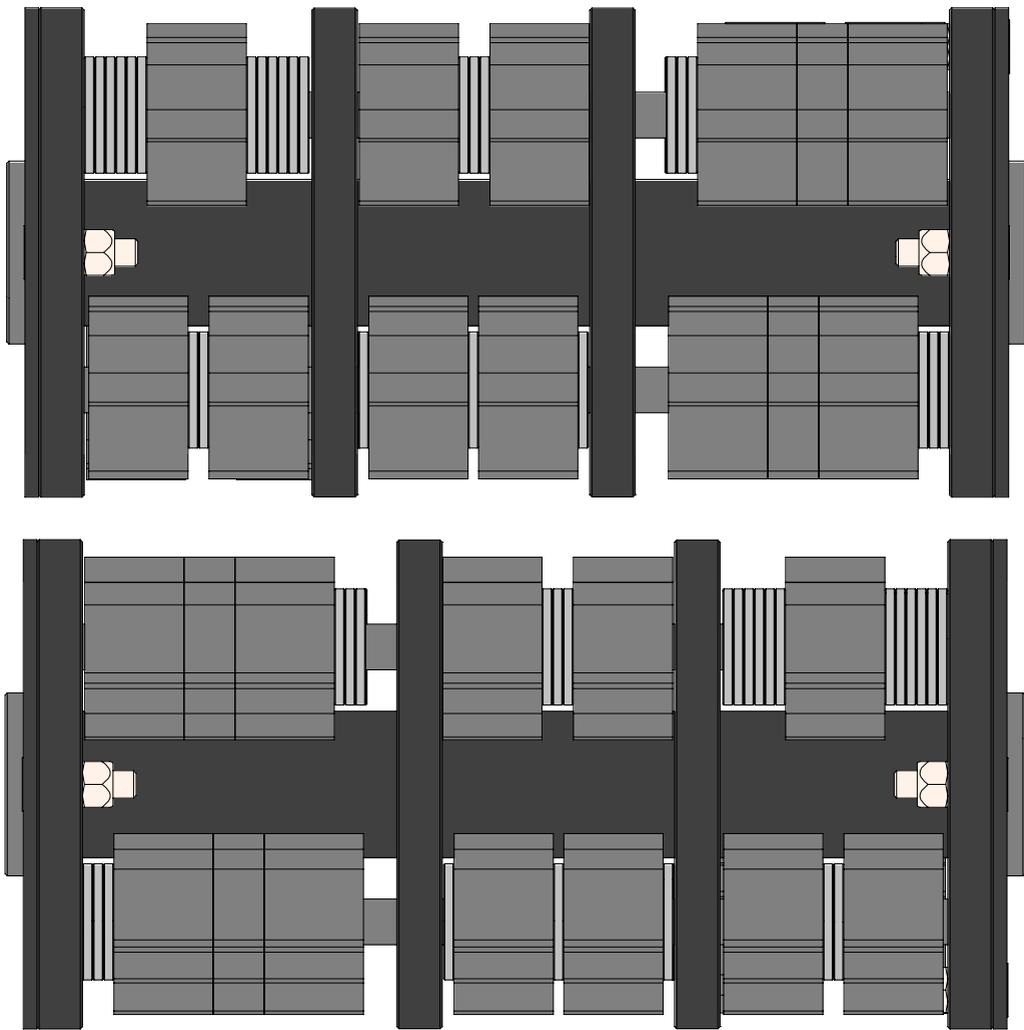
Part Number: 320.1020SM
 Consists of: 24 Milling Cutters + 72 Spacers

MILLING CUTTERS FITTED TO SINGLE WEB DRUM (FULL LOAD)



Part Number: N/A
 Consists of: 28 Milling Cutters + 8 Half Milling Cutters

MILLING CUTTERS FITTED TO DOUBLE WEB DRUM



Part Number:

320.1020DM

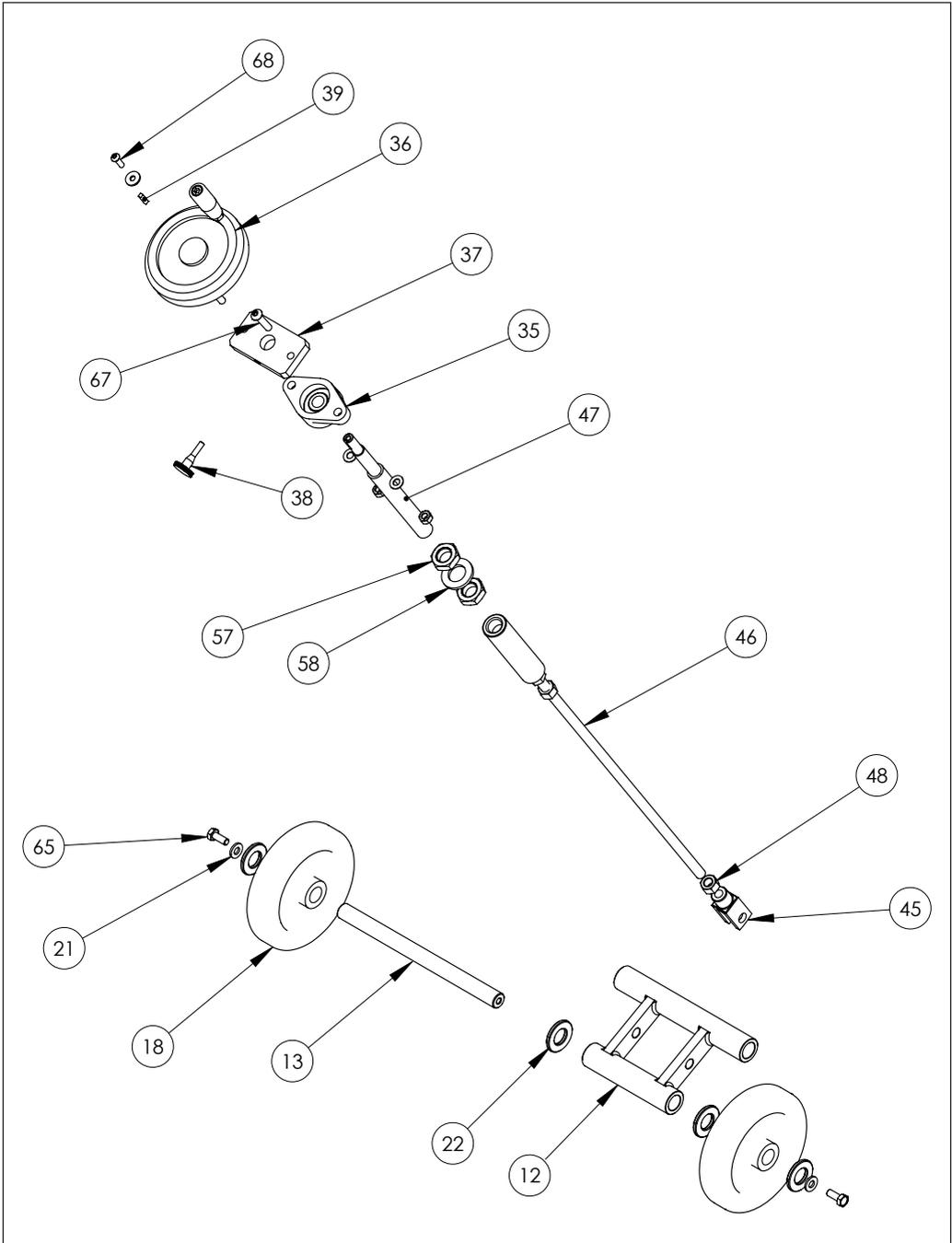
Consists of:

22 Milling Cutters + 4 Half Milling Cutters + 54 Spacers

TFP200 PARTS LIST

SPARE PARTS			
ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
1	320.002H	12mm Cutter Drum inc Cutter Shafts	1
1A	320.002S	12mm Double Web Drum inc Cutter Shafts	1
1B	320.002G	12mm Grooving Drum inc Cutter Shafts	1
2	320.00EP	End Plate HD Drum TFP 200	2
3	320.5500	TCT Cutter	80
3A	320.5120	Beam Cutter	264
3B	320.3658	Star Cutter	208
3C	320.5600	Milling Cutter	24
3D	320.5650	1/2 Milling Cutter	48
4	320.4140	Spacer	88 TCT, 232 Grooving, 72 Milling
5	320.0020	12mm Cutter Shafts	4
6	320.2021	Chassis less Drum	1
7	320.9101	Side plate for TFP200	1
9	822.2000	Rubber Grip	2
10	320.9103	Handle Bar Assembly	1
11	320.9107	Front Axle	2
14	320.9114A	Hexagon Bush	1
15	320.9115A	Bearing Housing S/P	1
16	320.9116	Bearing Housing for TFP 200	1
17	320.9120	TFP200 Front Wheel	2
19	320.9123A	Bearing 62x30x16	1
20	320.9124	Drive Shaft Bearing for TFP200	2
21	806.0612	M6 X 12 Cap Head Screw	4
23	320.9102A	Bearing Shim	1
25	320.9125	Spacer	1
27	320.9126	Honda Engine Pulley	1
27A	320.9127	Electric Motor Pulley TFP 200	1
29	320.9128	Drive Pulley	1
30	320.9129	Key Engine TFP 200	1
30A	320.9130	Motor Pulley Key TFP 200	1
32	320.9131	Key Drive Pulley	1
33	320.9132	Circlip For Drive Shaft	2
34	320.9133	Circlip S/P	2
42A	320.9140A	Driveshaft (full length hex)	1
43	320.9132A	Internal Circlip 55 x 2mm	1
44	320.9151	Spinner plate (drive shaft)	1
50	320.9110D	Swing Arm Spindle	1
51	320.9109	Vacuum take-off	1
52	320.9106	TFP200 Dust skirt	1
53	320.9105	TFP200 Wear strip	1
54	320.9154	Vacuum Hose	1
55	320.9137	Drive Belt 640mm long	1
56	320.9138	Belt Guard Metal	1
56A	320.9138A	Rear Guard TFP 200	1
58	320.9148F	Mounting Rail Front	1
58A	320.9148R	Mounting Rail Rear	1
59	831.0825	M8x25mm lg hex Bolt	4
60	320.9159	Engine Clamp Plate	2
61	320.9149	T Bolt (Mounting Rail)	4
63	320.9126A	Engine Pulley Retaining Washer	1
63	320.9127A	Motor Pulley Retaining Washer	1
63A	806.5610	5/16"UNFx1.0" sckt head scw	1
64	325.9124	Drive Pulley Retaining Washer	1
64A	853.1020	Countersunk Socket M10x20	1
65	831.0820	M8 x 20mm lg hex hd bolt	8
66	831.0815	M8 x 15mm lg hex hd bolt	4
67	831.0840	M8 x 40mm hexagon head bolt	2
69	508.D220	10mmx1.5x20 Hex Head Bolt	1
70	320.00SC	M6 x 25 C/Sunk Screw	8
71	320.00NY	M6 Nyloc Nut	8
74	831.0620	M6 x 20 Hex head bolt	4

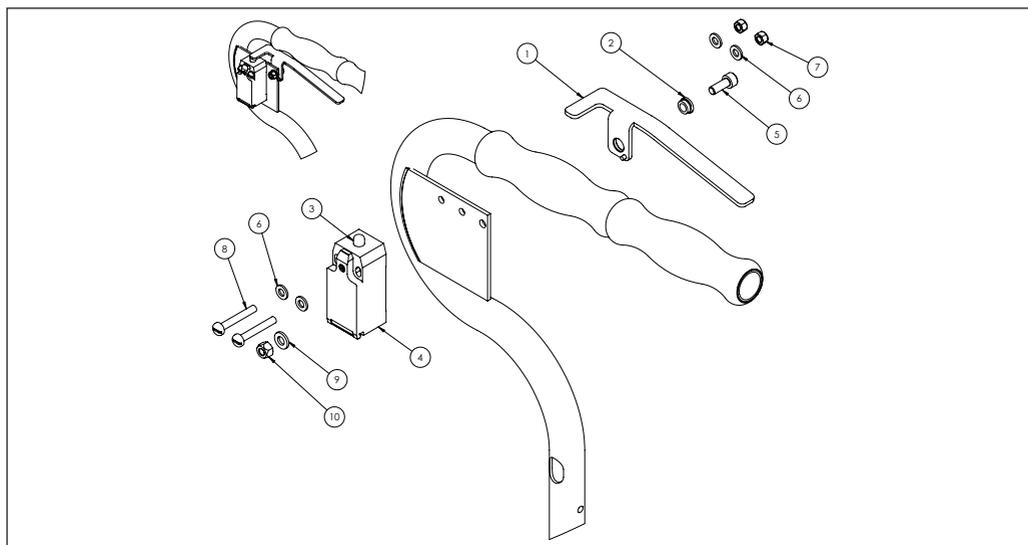
TFP200 EXPLODED DIAGRAM



TFP200 PARTS LIST

SPARE PARTS

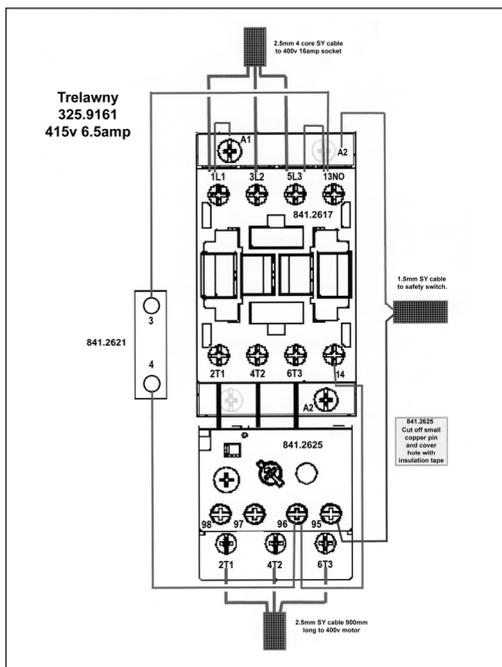
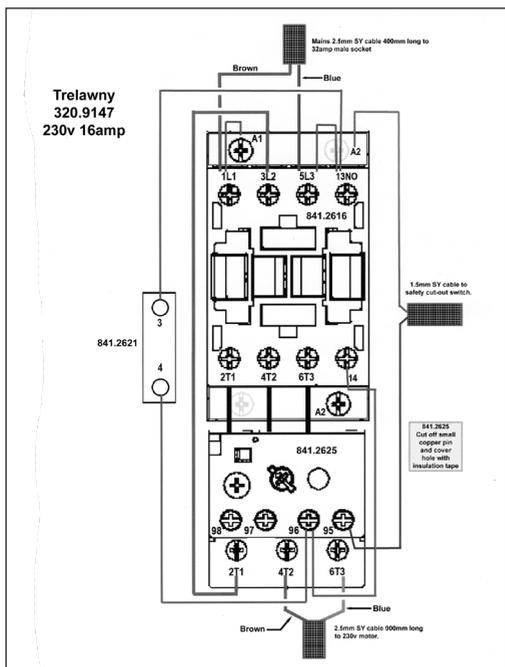
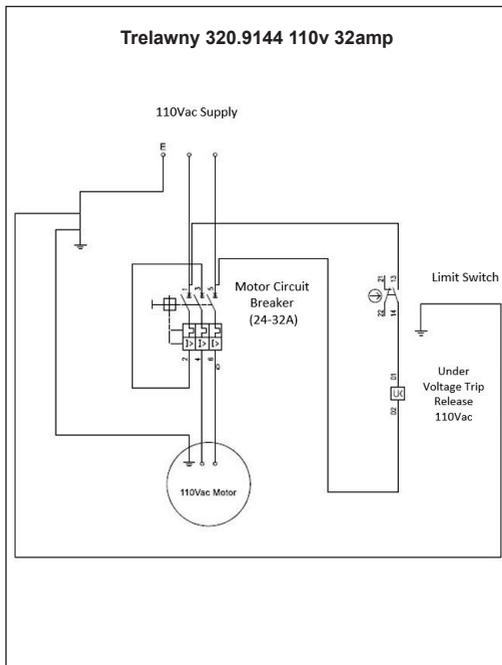
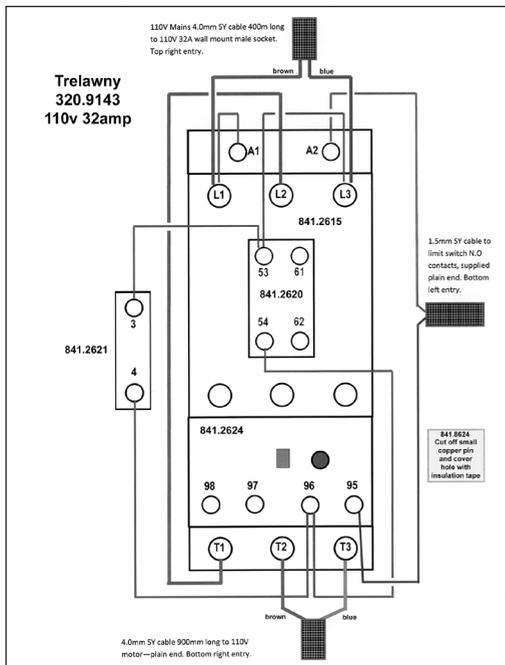
ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
12	320.9110	Swinging Arm	1
13	320.9111	Axle	1
18	320.9121	TFP200 Rear Wheel	1
21	812.1080	M8 Plain Washer	2
22	320.9157	Spacer Washer	2
35	320.9134	Bearing Housing	1
36	320.9135	Hand Wheel	1
36A	320.9136	Handwheel Handle	1
37	320.9155	Lockscrew Plate	1
38	320.9158	Wing Screw M8 x 40mm	1
39	855.4414	4 x 4 x 14mm Key	1
45	320.9122	M12 Clevis and pin	1
46	320.9112	Height Rod	1
47	320.9113	Height Screw	1
48	824.0012	M12 Hexagon Nut thin	1
57	824.0020	M20 Hexagon nut thin	2
58	320.9113A	Lift Shaft Tab Washer	1
65	831.0820	M8 x 20mm lg hex hd bolt	1
67	831.0840	M8 x 40mm hexagon head bolt	1
68	806.0620	M6x20 Socket cap head screw	1



DEADMAN'S HANDLE SPARE PARTS

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
1	320.9832	Deadman Handle Trigger	1
2	345.9833	Pivot Bush	1
3	345.9830	Operating Head	1
4	345.9800	Deadman's Switchbox	1
5	806.0619	M6 x 16 Cap Head Bolt	1
6	320.9310	M5 Washer	4
7	320.9305	M5 Nyloc Nut	2
8	320.9299	M5 x 35 Bolt	2
9	812.1060	M6 Washer	1
10	320.00NY	M6 Nyloc Nut	1
N/A	320.9836	DMH conversion Kit (includes items: 1,2,3,5,9,10)	
N/A		DMH Handle Kit (includes items 1,2,3,4,5,6,7,8,9,10)	

TFP200 STARTER BOX WIRING DIAGRAM & COMPONENTS



TFP200 STARTER BOX WIRING DIAGRAM & COMPONENTS PARTS LIST

110v LOVATO STARTER BOX & COMPONENTS (09/04/2018 - PRESENT)

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9144	Electric Starter 1ph 110v	1
N/A	841.2631	110v Starter Box Enclosure	1
N/A	841.2612	Motor Circuit Breaker	1
N/A	841.2613	Under Voltage Trip	1
N/A	669.3125	Yellow 110v x 15mtr Cable	1

110v LOVATO STARTER BOX & COMPONENTS (01/05/2015 TO 06/04/2018)

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9143	Electric Starter 1ph 110v	1
N/A	841.2630	Plastic Starter Box 110v	1
N/A	841.2615	110v Contactor	1
N/A	841.2620	Start Contactor	1
N/A	841.2624	110v O-load Relay 24/32amp	1
N/A	841.2621	Start Contact	1
N/A	841.2022	110V Panel Mounting Plug	1
N/A	841.2102	110v 32amp Lead Plug	1
N/A	841.2634	Red Stop Button (Lovato)	1
N/A	841.2635	Green Start Button (Lovato)	1
N/A	669.3125	Yellow 110v x 15mtr Cable	1

230v LOVATO STARTER BOX & COMPONENTS (01/01/2019 - PRESENT)

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9145	Electric Starter 1ph 230v	1
N/A	669.3150	Blue 230v x 30mtr Cable	1
N/A	841.2608	Motor Circuit Breaker (9-14A) - 230v	1
N/A	841.2609	Under Voltage Trip Release - 230v	1

230v LOVATO STARTER BOX & COMPONENTS (01/05/2015 - 31/12/2018)

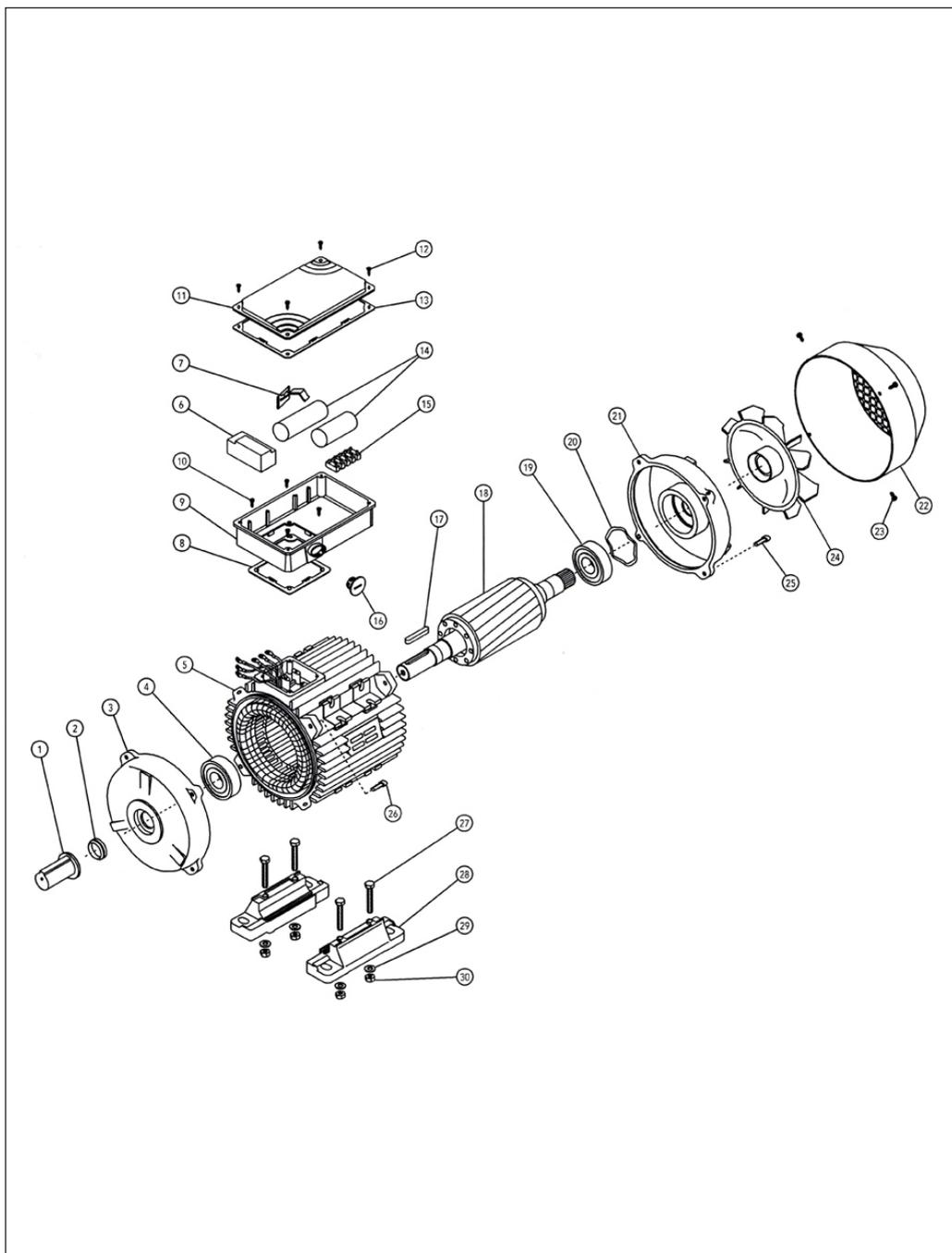
ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9147	Electric Starter 1ph 230v	1
N/A	841.2632	Plastic Starter Box 230/415v	1
N/A	841.2616	230v Contactor	1
N/A	841.2625	230/415v O-load Relay 4/6.5amp	1
N/A	841.2621	Start Contact	1
N/A	841.2024	230v Panel Mounting Plug	1
N/A	841.2104	230v 16amp Lead Plug	1
N/A	841.2634	Red Stop Button (Lovato)	1
N/A	841.2635	Green Start Button (Lovato)	1
N/A	669.3150	Blue 230v x 50mtr Cable	1

415v LOVATO STARTER BOX & COMPONENTS (01/01/2019 - PRESENT)

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9162	Electric Starter 3ph 415v	1
N/A	669.3175	Grey 380v x 30mtr Cable	1
N/A	841.2605	Motor Circuit Breaker (4-6.5A) - 415v	1
N/A	841.2606	Under Voltage Trip Release - 415v	1

415v LOVATO STARTER BOX & COMPONENTS (01/05/2015 - 31/12/2018)

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9161	Electric Starter 3ph 380/440V 50/60Hz	1
N/A	841.2632	Plastic Starter Box 230/415v	1
N/A	841.2617	415v Contactor	1
N/A	841.2625	230/415v O-load Relay 4/6.5amp	1
N/A	841.2621	Start Contact	1
N/A	841.2026	415v Panel Mounting Plug	1
N/A	841.2106	415v Lead plug	1
N/A	841.2634	Red Stop Button (Lovato)	1
N/A	841.2635	Green Start Button (Lovato)	1
N/A	669.3175	Grey 400v x 50mtr Cable	1

TFP200 MOTOR EXPLODED DIAGRAM

TFP200 MOTOR PARTS LIST

REPLACEMENT ENGINE

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9141	Honda GX160 Petrol Engine	1

REPLACEMENT AIR MOTORS

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9500	Air Motor Kit	1
N/A	320.9258	Air Motor TFP200	1
N/A	320.9258V	Gast Air Motor Vanes	4

REPLACEMENT MOTORS

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
N/A	320.9142	Electric Motor 1ph 110v 50Hz	1
N/A	320.9146	Electric Motor 1ph 230V 50/60Hz	1
N/A	320.9160	Electric Motor 3ph 230/400v 50Hz	1
N/A	320.9165	Electric Motor 1ph 110V 60Hz	1
N/A	320.9198	Electric Motor 3ph 230V 60Hz UL	1

MOTOR SPARE PARTS

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY REQUIRED
1	N/A	Shaft Protection	1
2	N/A	Dust Seal Drive End	1
3	N/A	End Shield Drive End	1
4	N/A	Bearing Drive End	1
5	N/A	Starter Frame	1
6	841.2670	SE01 Electronic Starter Switch	1
7	N/A	Fixing Device Capacitor	1
8	N/A	Gasket Terminal Box	1
9	841.2694	Terminal Box & Lid	1
10	N/A	Fixing Screw Terminal Box	1
11	841.2694	Terminal Box & Lid	1
12	N/A	Fixing Screw Terminal Box Lid	1
13	N/A	Gasket Terminal Box Lid	1
14	841.2650	Starter Capacitor (Black)	1
14A	841.2660	Run Capacitor (White)	1
15	N/A	Connecting Block	1
16	N/A	Blank Gland Plug	1
17	N/A	Key	1
18	N/A	Rotor Complete	1
19	N/A	Bearing Non-Drive End	1
20	N/A	Pre-Load Washer	1
21	N/A	Endshield Non Drive End	1
22	841.2690	Fan Cover	1
23	N/A	Fixing Screw Fan Cover	1
24	841.2680	Fan	1
25	N/A	Fixing Bolt Endshield Non Drive End	1
26	N/A	Fixing Bolt Endshield Drive End	1
27	N/A	Fixing Bolt Motor Feet	1
28	N/A	Motor Feet	1
29	N/A	Fixing Washer Motor Feet	1
30	N/A	Fixing Nut Motor Feet	1

TECHNICAL SPECIFICATIONS

	TFP200 Petrol	TFP200 110v 50Hz	TFP200 230v 50/60Hz	TFP200 400v 40/60Hz	TFP 200 110v 60Hz	TFP200 AIR
Part Numbers	320.2000B 320.2000M 320.2000S 320.2000T	320.2002B 320.2002M 320.2002S 320.2002T	320.2004B 320.2004M 320.2004S 320.2004T	320.2006B 320.2006M 320.2006S 320.2006T	320.2016B 320.2016M 320.2016S 320.2016T	320.2012B 320.2012M 320.2012S 320.2012T
Power	5.5HP - 4.1kW	3HP - 2.2kW				3.5HP - 2.6kW
Voltage	-	110v	230v	400v	110v	-
Cycle	-	50Hz	50/60Hz	50/60Hz	60Hz	-
Engine Type	Honda GX160	-				
Air Consumption	-					78lbs - 165cfm
Transformer Size	-	5 Kva*	-		5 Kva*	-
Plug Size	-	32 Amp	16 Amp		32 Amp	-
Cable Size	-	2.5-4mm core	Min. 2.5core		2.5-4mm core	-
Cable Length	-	15 - 30m	30m		15 - 30m	-
Cutter Speed	1833rpm	1650rpm				1528rpm
Cutting Width						195mm
Working Dist. From Wall						55mm
Max. Cutting Depth						3mm
Vacuum Take Off Dia.						50mm
Length						900mm
Width						350mm
Height						900m
Weight	64kg	68kg				64kg
Noise Level						

VIBRATION LEVELS

Vibration Levels at Handle Bar (Petrol Engine)	Concrete Surface	Steel Surface
TCT Cutters	6.9m/s ² (K=+1.25m/s ²)	7.6m/s ² (K=+0.46m/s ²)
Star Cutters	8.2m/s ² (K=+2.62m/s ²)	9.5m/s ² (K=+0.65m/s ²)
Beam Cutters	13.0m/s ² (K=+1.42m/s ²)	12.2m/s ² (K=+1.05m/s ²)
Milling Cutters	9.5m/s ² (K=+1.26m/s ²)	12.6m/s ² (K=+1.36m/s ²)
Wire Brush	7.6m/s ² (K=+2.49m/s ²)	11.9m/s ² (K=+3.16m/s ²)

Vibration Levels at Handle Bar (Electric & Pneumatic)	Concrete Surface	Steel Surface
TCT Cutters	4.4m/s ² (K=+1.43m/s ²)	2.9m/s ² (K=+0.63m/s ²)
Star Cutters	3.7m/s ² (K=+0.70m/s ²)	3.8m/s ² (K=+0.98m/s ²)
Beam Cutters	4.8m/s ² (K=+0.79m/s ²)	5.4m/s ² (K=+0.90m/s ²)
Milling Cutters	7.0m/s ² (K=+1.41m/s ²)	4.8m/s ² (K=+1.30m/s ²)
Wire Brush	2.4m/s ² (K=+0.92m/s ²)	3.8m/s ² (K=+0.79m/s ²)

(k) ** Equals the factor of uncertainty, which allows for variations in measurement and production. Vibration Data figures are tri-axial, which gives the total vibration emission. Because of various factors, the range of vibration emission during intended use can vary. The vibration is dependent on the task, the operators grip, and feed force employed etc.

NOTE: The above vibration levels were obtained from tri-axial measurements to comply with the requirements of "The Control of Vibration at Work Regulations 2005*" and the revisions to the (8662) now EN ISO 28927:2012 and EN ISO 20643:2005 series of standards. These values are at least 1.4 times larger than the values obtained from single axis measurements.

*Based on European Union Council Directive 2002/44/EC (Physical Agents (Vibration) Directive)

Machinery Directive Information

This tool has been designed and produced in accordance with the following directives: 2006/42/EC Machinery Directive

If your company has any problem with our products or would like to discuss the possibility of an improvement being made to them, then please do not hesitate to contact us. Your comments are both important and appreciated.

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This applies to trademarks, model denominations, part numbers and drawings.

Use only genuine Trelawny spares. The use of non-Trelawny spare parts invalidates the warranty.

TROUBLE SHOOTING

FAULT	CAUSE	ACTION
Engine stops suddenly or does not run correctly	No fuel in the fuel tank	Refuel fuel tank (see safety section)
	Spark plug faulty	Replace spark plug
	Fuel blockage	Check fuel line and strainer
	Air cleaner blocked	Replace air cleaner element
	Low oil level (A low oil cut out is fitted)	Rectify leaks and replenish oil
Electric motor stops suddenly	Blown electrical supply fuse	Replace fuse
	Motor overload protection activated	Disconnect electricity supply at mains and reset button inside starter box
Electric motor will not start	Deadmans handle not engaged	Pull Deadmans lever against handle bar and press start button.
Planer is slow or erratic	Drive belt slack or failed	Replace belts or adjust tension
	Worn cutter drums	Replace cutters
	Loose or a failed drive belt	Replace belts and adjust tension
	Surface too rough	Use Trelawny TFP260 surface Planer to increase production
	Low air supply or air pressure	Requires a minimum of 160cfm @ 90psi
Engine will not start	No fuel in the fuel tank	Refuel fuel tank, see safety precautions
	Water in fuel/wrong fuel type	Rectify leaks, replenish oil
	Low oil level	Drain fuel tank, float chamber, and refuel with correct fuel type.
	Spark plug faulty	Replace spark plug
Engine will not turn over	Oil in Cylinder	See page 6 - Safety Precautions
Use above information in conjunction with the engine manufacturers Operation and Maintenance Manual.		
If problem has not been cured by above actions, contact your local Trelawny agent or engine manufacturer for advice or rectification.		

TRELAWNY

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Manual Part Number:
735.5200

