BRAKE DRUM/DISC LATHE

MODEL : C9335

INSTRUCTION MANUAL

SERIAL NO.:

Index

Ⅰ、DESCRIPTION AND SAFETY NOTES

1. Description

This machine is a metal cutting machine which is used to bore, cut and repair the brake drum (plate) of cars and mini-cars. Some accessories of Santana and Audi are supplied with the machine, and accessories of other types can be self-made or be specially ordered.

The machine is with simple structure, convenient operation, high rigidity, quick cutting and high machining efficiency.

2. Safety notes

The mentioned warning information, attentions and the probable malfunctions involved in the manual only include some foreseeable situations instead of all the situations that might happen.

1) Read the manual carefully and get familiar with the structure, performance & relevant information of the machine before operating to ensure correct operation.

2) Wear necessary labor protection appliance in operation! Do not wear loose clothes or jewelry and prevent the hair from winding about the machine to avoid accidents.

3) Make the working environment clean and tidy before operation to avoid accidents like stumbling or slipping.

4) Before operation, check whether the safety shield is reliable, whether the movable parts work smooth in the stroke range, whether there are tools/things lost on the machine or on the work piece and whether the operation handles are in correct positions, etc.

5) Make sure that the cutters are clamped reliably and it is forbidden to mount or dismount them before machine stops.

6) Do not touch the turning work-piece or the cutter, keep the body away from the turning/moving parts and no overload work while working.

7) Make relative safety check and ensure that the machine is grounded reliably before power on. Do not touch the electrical parts with wet hands while working. The repair work can only be carried out by professionals and the power should be shut off first.

8) Shut off the main power when work is over to avoid accidents or fire.

Ⅱ、SPECIFICATIONS

1、Processing.....180-350 mm

2、Slide travel.....100 mm

3、Rotation speed of shaft..... 90 r.p.m.

4、Feed.....0.15mm/r

5、Motor..... ..... Model Y801-2 B3 Power 1.1 kw

6、Overall dimensions(L×W×H)..... 600×1000×600 mm

Ⅲ、MAIN STRUCTURE

Main structure of the machine is composed of body, shaft box & electrics.

1、BODY: It consists of base, upper slide board & lower slide board, and tool-carrier. The shaft box was set on the body, and the feed screw is fixed on base. Front end of feed screw connects shaft box with change gear, and the lead screw moves lower slide boards by a nut. There is an alter lever in the middle to realize auto feeding or manual feed.

The upper slide board is above the lower slide board, cross movement of it gets by lead screw. The tool-carrier is fixed above the slide boards, and the tool-arbor is fixed on it by 2 coach screws. There are two positions to fix tool-arbor, one is for cutting brake drum and the other is for cutting brake disc. A jack screw at the front end of the tool-arbor is for tightening the cutter.

Motor is mounted inside base, and we could adiust the V-type belt by loosening the bolt.

2、SHAFT BOX: The speed change mechanism in shaft box achieves rotation of 2 shafts by belt wheel, worm wheel/arbor and spiral gear. The shaft parrel to body guide-way is for lathing brake drums and the other is for lathing brake discs.

3、ELECTRICS: The electric components are all mounted inside base.

Customer should prepare a knife-break switch at own cost, and electrical principle & the list of electrical elements are shown in Fig.3.

Ⅳ、LUBRICATION

Shaft box should be filled up with oil No.20, the oil level should be always slightly higher than the centre oil gauge, neither too high or too low. Make the 1st oil change after 1 working week, then the 2nd oil change 20 working days later and every half a year from then on. Other lubricating positions should be lubricated by adding oil into oil cup hole(with oil gun) or oiling part surface (As Fig.2).

Ⅴ、LIFTING AND INSTALLATION

Packed machine should be lifed/transported as the position and the direction marked on case surface, strike or severe vibration should be prevented to avoid damage.

Unpack the machine: Take off the upper cover first and then remove the four side boards, check the appearance of the machine and check the accessories as the “Packing list”, finally dismount the case base when the machine reaches installation position.

To move the machine without package, 2 round steel bars (25× 500 mm) should be inserted into four lifting holes at the side of base, then lift the machine up with ropes. Soft things should be put where the machine & rope touches to avoid scratching.

The machine should be fixed into a concrete base, the dimensions are shown in Fig.4. The base depth is more than 400 mm, and 4 foundation bolts (M12×300 mm) should be preset.

Base should be levelled when fixing the machine into the foundation. Put wedge cushion iron between base and foundation (the cushion iron should be close to foundation bolts). Put frame level on body guideways(in both directions), adjust the cushion iron separatly until the error in two direction is no more than 0.12/1000 mm, then fix the foundation bolts firmly.

Ⅵ、TEST

1、After the machine is fixed, dismantle the shaft shield cap, cleanse the slushing oil on the parts with gasoline or kerosene, do not scratch with hard things/emery cloth or wipe painted surface with gasoline. The clean surface should be coated with oil for lubricating/rust-proof .

2、Learn and grasp the function of various parts and that of each operating levers/switches .

3、Fill in shaft box with oil as lubrication requirements, and every lubricating position ought to be oiled.

4、Set clutch lever at position"0", cover the shaft for lathing brake disc with shield cap and start motor to examine if the rotation direction coincide with the arrow on belt cover, otherwise we should change power connection.

5、Tryout the rotation speed and the feed capacity, and idle running is no less than 5 minutes. Do not steer levers before motor stops to avoid damage.

Ⅶ、OPERATION

1、Lathing brake drums

Clamp brake drum as Fig.5, and fix shield cap on the cutting-plate-shaft to avoid injuries.

1)、Select sleeves corresponding to the brake drum . (All have been marked).

2)、Set corresponding cone sleeves onto the cutting-brake-drum-shaft(outer bearing position).

3)、Clean the upper/lower outer ring of bearing of brake drum, fix it on the cutting-brake-drum-shaft .

4)、Set the corresponding cone sleeves(inner bearing position) onto the cutting-brake-drum-shaft.

5)、Set the cushion ring , and clamp it by nut .

6)、Steer lever to position "manual", turn combination switch to rotate brake drum. Rotate feed-screw by right hand and rotate feed lever by left hand to achieve tool-setting, and replace the cutter with a dial to get ideal cutting depth.

7)、Move lever to position "feed" and start lathing.

8)、After cutting , move lever to position "manual", rotate tool-carrier lever to take cutter off and turn combination switch to stop the machine.

9)、Loosen nut, take off the cone sleeves and the workpiece, then cutting finishes.

2、Lathing brake discs

Dismantle the shield cap, and set it on the cutting-plate-shaft to avoid injuries .

Lathing brake discs can be carried out with the clamps supplied with the machine, mounting is shown in Fig.6

(It is also ok if fixing the brake plate in opposite direction according to its various shape and size or adding/reducing washer as the position for covenient cutting).

1)、Select position sleeves corresponding to the brake plate.

2)、Set the front half part of the special clamp on the shaft.

3)、Put the brake plate to the shaft and fix appropriate taper sleeve.

4)、Tighten the nut.

5)、Steer the lever to position of "manual feed", press combination switch "on" to rotate the brake plate. Rotate the feed screw by right hand and rotate the feed lever by left hand to make tool-setting, and replace the cutter with a dial to get ideal cutting depth.

6)、Set the lever to position "auto feed " to start cutting .

7)、Repeat (5)& (6) again to After cutting , take the handle to the " manual" , and stop the machine .

8)、 When lathing finishes, move lever to position "manual", rotate tool-carrier lever to take cutter off and turn combination switch to stop the machine and rotate feed screw to return tool-carrier.

9)、Loosen nut, the workpiece, then cutting finishes.

Ⅷ、MAINTENANCE

1、Check the oil in shaft box frequently, the oil should not be too high or too low to oil gauge center.

2、All the lubricating parts must keep clean and be with clean oiling.

3、The machine should be wiped clean when work of per team is over.

4、 Surface of parts like the guideway, main shaft and cone sleeve must be wiped clean and be coated with slushing oil.

5、Run the machine idly for 5 minutes to lubricate bearings .

6、Inspect the motor V-belt periodically.

7、All the electrical components should be clean with no dust/dirt to avoid damage, and it should be repaired or changed it in time if damage exits.

8、Pull off the knife switch to shut power off when the machine will not be used.

Ⅸ、MULFUNCTIONS AND POSSIBLE REMEDIES

Mulfunctions	Causes	Possible remedies
Loud noise	A、The clearance in bearings is too large . B、Bearing wear seriously.	A、Adjust the jacking screw in the bearing cap . B、Replace the bearing.
The driving is not stable .	A、Belts are loose . B、The clearance of guideway is not suitable . C、The clearance between the feed screw and nut is too big .	A、Regulate motor bolt . B、Regulate strip. C、Replace the nut .
The tool-carrier handle roating unsmoothly.	The round nut on the handle shaft is over tightened .	Adjust it well.
The workpiece in wrong position .	Select wrong locating cone sleeves .	Choose them again .
Processing precision is not satisfied	A、The workpiece is out of position . B、The clearance in bearings of spindle is not suitable . C、Unsuitable cutter tool . D、Unsmooth base and Unfirm fix .	A、Mount it again . B、Adjust the clearance . C、Use the recommand tool . D、Adjust the cushion iron

QUALITY CERTIFICATE

MODEL : C9335

NAME：BRAKE DRUM/DISC LATHE
(MAX. PROCESSING DIA.：350 mm)

SERIAL NO：

INSPECTOR：_____ DATE：_____