HARE&FORBES MACHINERYHOUSE

Established 1930
Distributors of new & used workshop Equipment

HAFCO METALMASTER

S654 CM-1320 3 in 1 Sheetmetal Machine
1310 x 1mm Capacity

INSTRUCTION & PARTS MANUAL

2-4-12

MODEL 3-IN-1/1320

TRI-USE MACHINE

(SHEARER/PRESS BRAKE/SLIP ROLL)

OPERATION MANUAL

1. USES

This machine is used for shearing and braking low carbon plate (mild steel) or the other metal materials which have the same intensity as the low carbon plate, but their maximum thickness is 1 mm.. It can also be used for rolling the low carbon plate (mild steel) or the other metal materials which has the same intensity as the low canbon plate, its maximum thickness is 1 mm.

2. USES AND MALNTENANCE

2.1 Before using this Kind of machine tool. you must read this direction, in order to have an intimate knowledge of structres of the machine tool, and also function of the handle, drive and lubrication systems.

2.2 According to the different using conditions, this kind of machine tool must be fixed on the ground or special machine seat, in order to avoid slide of the machine tool.

2.3 Please firmly execute the following operating rules:

2.3.1 Before packing this machine tool, antirusting agents are put on it, so when you are getting rid of the kind of rust inhibitor, you can unset the yellow coat with varnish diluent and paint flux for machine oil.

2.3.2 Place near the machine be kept clean, and materials which avoid slide can be used in this area.

2.3.3 When you move, install, clean and adjust the machine tool,you must keep away from the shears.

2.3.4 Put down the protecting cover when you don' t use the sliding roll of the roll machine.

2.3.5 Keep your hands from the die when you are working on it.

2.3.6 Operators must be familiar with the structre and function of this machine tool. Proctecting mask and theother safety devics should be used when work on it.

2.3.7 Focus your attention on the machine and operate when someone are near by the machine.

2.3.8 Any metal plate that thick ness and quality goes beyond the seope that machine demands should be refused to process.

2.4 Generally the operating handle was installed on the right side of the machine tool (Left is also acceptable).

2.5 Back-measure plate (Angle iron).

Back-measure plate is used for shearing and braking. When it's in the place of braking condition. Please screw two long bars into the nut of concave mould plate, ensure that the bars pass through the front part of the concave mould plate, tighten up the nut and then back-measure plate and concave mould plate can move mould plate can move up and down in company.

When it is in the place of shearing condition, before putting the bars into the positioning plate, screw a 2-M12 nut intothe positioning plate, and then followed the bar

which was fixed by the nut in the end.

In these two kinds of position, the circular adjustable knob was installed at the back of angle iron.

2.6 Adjustment of the braking installation

2.6.1 Adjustment of the upper die:

Loosen the screw bolt, the upper die will come off the machine. If you don't want the upper die will come off the machine or you wilking to install another new mould plate, you can put a piece of hard wood (25, 25, 160mm) or the other similar matherials on the concave mould plate,turn the handle and raise the concave mould plate until the wooden piece getting in touch with the upper die (formplunger).

Af ter putting up the new die, all the fasten bolts of the die should be tightened up. In some cases, especially the using of narrow die it is necessary to put a piece thin paper between the upper die and the lower die.

2.6.2 Adjustement of the cross girder

To make the braking work go on smoothly, and to seperate the formed metal that between the upper die and the lower die form being blocked, you must adjust the crossbeam.

First, you put a steel plate (its width echo the demand of the machine and its thicknees is 1 mm) on the concave mould plate, then, tu`rn the handle carefully to raise concave mould plate. Loosen the fasten bolt of the crossbeam when the upper die (formplunger) getting in

touch with the processing metal plate, after that, in order to fix the crossbeam, you can adjust the screw which on the crossbeam, at last, tighten up all the fasten screws. During this period, the handle is not fixed to turn an angle of 360 degrees. brake a piece of metal plate that with game width and thickness on both side of the braking system, their angles should be simiar, the job should be excessively braked when you turn the handle and fully brake the job.

2.7 Adjustment of the shearing installation

You should adjust the zero-clearance of the upper cutter and the lower cutter.

Adjustment of the lower cutter:

Unload the pressing plate, loosen the fasten screw and the two adjustable screws of the working table, turn the handle make the upper cutter near the cutter on the working table, tighten the fasten table rom moving bake when the machine is used. Install the pressing plate once again and ensure that it run paralled to the upper cutter.

Adjustment of the positioning plate:

During the period of the shearing, there will be a powerful strengdth prcduced at the middle of the cutter, in order to avoid the clearance that between the upper and lower cutter, you should adjust the ceatral screw that behind the positioning plate.

If the adjustment was not suitable, the metal plate

will be folded in the middle of the two cutters when shearing is executed.

If the lower cutter and upper cutter still press close together after the adjustment, two parts must be examined: First, the fasten screw of the lower cutter, you can fully tighten the cutter up, then lossen the screw about 1/8 cirle. Second, the contact face of the an cover mould plate and the positioning plate. In most, cases this contact face and lubricate.

2.8 Adjustment of the rolling installation

This rolling installation can roll straight, roll taper or metal ring with the help of the liner channel roller.

When a job was finished, turn the pin to right, the left side of the roller can be taken off the machine, the job will be taken out with ease.

When you operate the slide roller, you must give enough pressure to roller for the purpose of suitable import of the job.

Adjust the cleance of the upper roller have the same learance.

2.9 When you finished your work, you must clean the machine and spread oil on the surface that not be applied a coat of paint.

3. CHIEF TECHNICAL SPECIFICATIONS

ordinal number	function parameter	3 in 1/1320 combination of shear, brake and roll
1	effective width	1320mm
2	maximum shearing thickness	1 mm low carbon plate
3	maximum braking thickness	1 mm low carbon plate
4	maximum rolling thickness	1 mm low carbon plate
5	minimum internal diameter of the roll	Φ50 mm
6	measurement of machme tool(L×W×H)	1670x 650x480 mm
7	net weight of machine tool	280 kg

4. LUBRICATION OF THE MACHINE TOOL

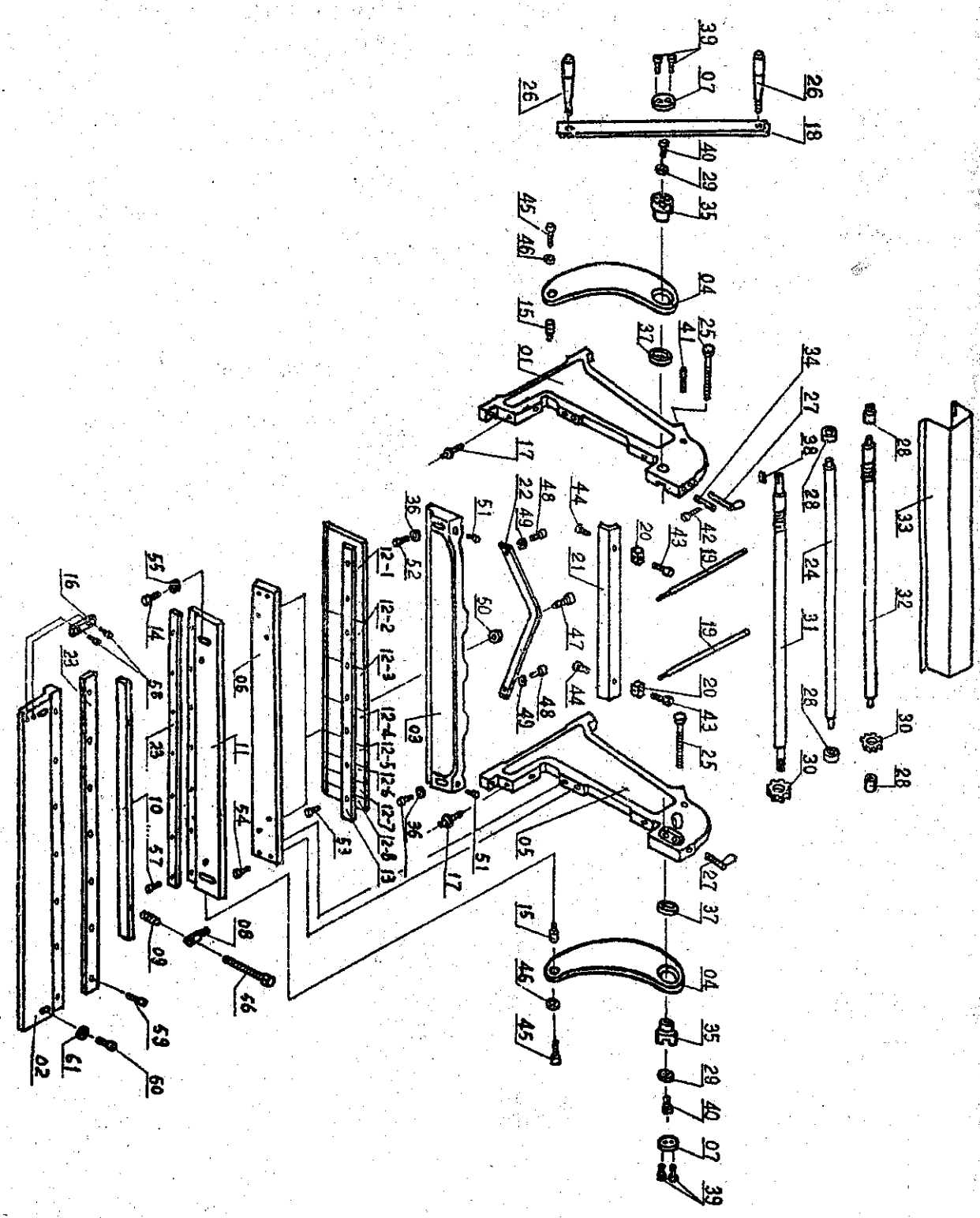
Oilling the machine oil into eccentric mechanism and clearance once for a day.

5. ACCESSORIES OF THE MACHINE TOOL

Allen keys (5 mm, 12mm, two kinds in all) with every set of machine tool.

6. DETAIL LIST OF PARTS

FIGURE OF PARTS



Part No.	Rescription	Qty	Part No.	Rescription	Qty
01	Left wall	1	25	Screw	2
02	Workbench	1	26	Handle jacket	2
03	Crossbeam	1	27	Adjustable bolt	2
04	Crankarm	2	28	Jacket	4
05	Right wall	1	29	Press cover	4
06	Bear farme	1	30	Gear	2
07	Cover	2	31	Lower pressing roll	1
08	Bear farme	2	32	Upper press roll	1
09	Spring	2	33	Protecting cover	1
10	Pressing plate	1	34	Rotation shaft	1
11	Moving cutter plate	1	35	Eccentric shaft	2
12	Ipper braking die	1	36	Gasket(Washer	2
13	Pressing plate	1	37	Jacket	2
14	Bolt	2	38	Flat key	2
15	Cranking arm rolli-ng wheel	2	39	Hexagon head bolt	4
16	Positioner	1	40	Hexagon screw	2
17	Adjustable bolt	2	41	Hexagon head cap bolts	2
18	Handle	1	42	Hexagon screw	1
19	Screw	2	43	Hexagon head screw	2
20	Position piece	2	44	Hexagon head screw	2
21	Position plate	2	45	Hexagon screw	2
22	Support plate	1	46	Gasket(washer)	2
23	Cutter	2	47	Hexagon head bolt	1
24	Back pressing	1	48	Hexagon head bolt	2

Part No.	Rescription	Qty	Part No.	Rescription	Qty
49	Gaskdet(Washer)	1	56	Hexagon head blot	2
50	Hexagon nut	1	57	Hexagon screw	2
51	Hexagon head bolts	1	58	Hexagon screws	2
52	Hexagon screws	2	59	Hexagon screws	2
53	Hexagon screws	1	60	Hexagon screws	4
54	Hexagon screws	1	61	Gasket (Washer)	2
55	Gasket (Washer)	2			

⚠WARNING

General Machinery Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

1. **Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
2. **Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
3. **Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
4. **Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
5. **Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
6. **Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
7. **Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
8. **Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
9. **Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
10. **Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
11. **Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
12. **Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
13. **Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
14. **Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
15. **Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
16. **Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
17. **Do not overreach.** Keep proper footing and balance at all times.
18. **Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
19. **Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
20. **Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
21. **Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
22. **Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
23. **Lock mobile bases.** Make sure any mobile bases are locked before using machine.
24. **Allergic reactions.** Certain metal shavings and cutting fluids may cause an ellergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
25. **Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

⚠WARNING

3 in 1 Sheet Machine Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

1. **Maintenance.** Make sure all moving parts are locked down before any inspection, adjustment or maintenance is carried out. Place a block of timber between the blades to save blades from shearing hands or fingers.

2. **Machine Condition.** Machine must be maintained for a proper working condition. Never operate this machine with damaged or worn parts. Scheduled routine maintenance should performed on a scheduled basis.

3. **Blade/Rolls Condition.** Never operate a Guillotine with a damaged or badly worn blades. Replace if required.

4. **Hand Hazard.** Keep hands and fingers clear from moving parts. Serious injury can occur if hand or finger tips come between blades and rolls.

5. **Gloves & Glasses.** Always wear leather gloves and approved safety glasses when using this machine.

6. **Authorized and trained personnel.** The machine must be operated by authorized and trained personnel. The shear is designed to be operated be a single user. Using the machine with more than one operator is forbidden, except for certain maintenance situations.

7. **Work area hazards.** Keep the area around the Guillotine clean from oil, tools, objects & chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.

8. **Guards.** Do not operate this machine without the correct guards in place. Necessary guards protect you from injuries by the blades and rolls.

9. **Material.** Material must NOT be hardened ceramic or glass-originated, non flat metals (at origin) e.g. rods, bars, tubes & pipes.

10. **Blade gap adjustment.** Do NOT operate the machine without proper blade gap adjustment according to sheet thickness.

11. **Warning Labels.** Take note of any warning labels on the machine and do not remove them.

12. **Backgauge Area.** Do not access the backgauge area, while the machine is working.

13. **Squaring arm.** Do not use side squaring arm and front support arms for intermediate storage of workpieces.

14. **Operation.** During the operation process, the workpiece may slide or move unexpectedly. Therefore, the material must be handled carefully.

15. **Level machine.** Level the machine on a flat concrete surface by using a spirit level.

16. **Hearing protection and hazards.** Always wear hearing protection as noise generated from machine and workpiece can cause permanent hearing loss over time.

17. **Heating Material.** Heating metal with a torch while the metal is in the panbrake will weaken the fingers.

18. **Pinching.** Prevent pinching by lowering the panbrake fingers when not in use.

19. **Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

(3 in 1) Panbrake/Folder/Guillotine/Rolls

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures
This program is based upon the Safe Work Australia, Code of Practice - Managing Risks of Plant in the workplace (WHSA 2011 No10)

Item No.	Hazard Identification	Hazard Assessment	Risk Control Strategies (Recommended for Purchase / Buyer / User)
B	CRUSHING	LOW	Secure & support work material on table etc. Ensure machine is bolted down.
C	CUTTING, STABBING, PUNCTURING	MEDIUM	Wear gloves to prevent cuts from sharp material offcuts. Ensure guards are properly fitted Care must be taken when handling blades.
D	SHEARING	MEDIUM	Keep hands clear of all blades and rolls when using machine.
F	STRIKING	MEDIUM	Ensure material clamps are correctly adjusted.
Plant Safety Program to be read in conjunction with manufactures instructions			

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Authorised and signed by:
Safety officer:.....
Manager:.....

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