

# **ACCU 8902**

**COMPUTER WHEEL BALANCER FOR TRUCK, LIGHT TRUCK  
AND CAR WHEELS**

INSTALLATION AND OPERATION INSTRUCTIONS  
MAINTENANCE INSTRUCTIONS

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## 1.0 INTRODUCTION

Congratulations on purchasing the ACCU 8902 computer wheel balancer.

This wheel balancer is designed for ease of operation, accuracy, reliability and speed.

With a minimum of maintenance and care your wheel balancer will provide many years of trouble-free operation.

Instructions on use, maintenance and operational requirements of the machine are covered in this manual.



STORE THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE. READ THIS MANUAL THOROUGHLY BEFORE USING THE MACHINE.

## 1.1 USE LIMITATIONS

The wheel balancer model ACCU 8902 is intended to be used as a device to balance truck, light commercial vehicle and car wheels with the following specifications:

Maximum wheel diameter : 1200mm (47")  
Maximum wheel width : 500mm (20")  
Maximum wheel weight : 200 kg (440lbs)

This device shall be only used in the application for which it is specifically designed.

Any other use shall be considered as improper and thus not reasonable.

The manufacturer shall not be considered liable for possible damages caused by improper, wrong or non reasonable use.

## 1.2 NOTICE

This manual is a part of the product. Read carefully the warnings and instructions of this manual since they provide important information concerning safety and maintenance.

## 1.3 GENERAL SAFETY INSTRUCTIONS

THE USE OF THIS DEVICE IS ALLOWED ONLY TO PERSONNEL DULY TRAINED BY AN AUTHORIZED ACCU DEALER.

ANY MISUSE OR MODIFICATION OF THIS DEVICE OR OF ITS PARTS OR COMPONENTS NOT PREVIOUSLY AUTHORIZED BY THE MANUFACTURER WAIVE THE MANUFACTURER FROM ANY DAMAGE CONSEQUENT OR RELATED TO THE ABOVE MENTIONED MISUSES.

REMOVING OR BYPASSING SAFETY DEVICES WARNING LABELS OF THE MACHINE IS A VIOLATION OF THE SAFETY REGULATIONS.

THE USE OF THIS DEVICE IS ALLOWED ONLY IN LOCATIONS WITH NO EXPLOSION OR FIRE HAZARD.

THIS EQUIPMENT IS DESIGNED TO RECEIVE ORIGINAL SPARE PARTS AND ACCESSORIES ONLY.

THE INSTALLATION SHALL BE CARRIED OUT ONLY BY QUALIFIED PERSONNEL AND WITHIN THE SCOPE OF INSTRUCTIONS PROVIDED IN THIS MANUAL.

CHECK FOR POSSIBLE DANGEROUS CONDITIONS DURING THE OPERATION OF THE MACHINE. IN SUCH A CASE STOP THE MACHINE IMMEDIATELY.

IN CASE A DEFECTIVE FUNCTIONING CONDITION IS DETECTED, STOP USING THE MACHINE AND CALL AN AUTHORIZED G.S. DISTRIBUTOR FOR ASSISTANCE.



ALL ELECTRICAL CONNECTIONS SHALL BE PERFORMED BY A LICENCED TECHNICIAN. ALL SERVICE MUST BE PERFORMED BY AN AUTHORIZED SERVICE TECHNICIAN.

## 1.4 NOMENCLATURE

Before installing and using the wheel balancer suggested that you become familiar with the nomenclature of the machine's components.

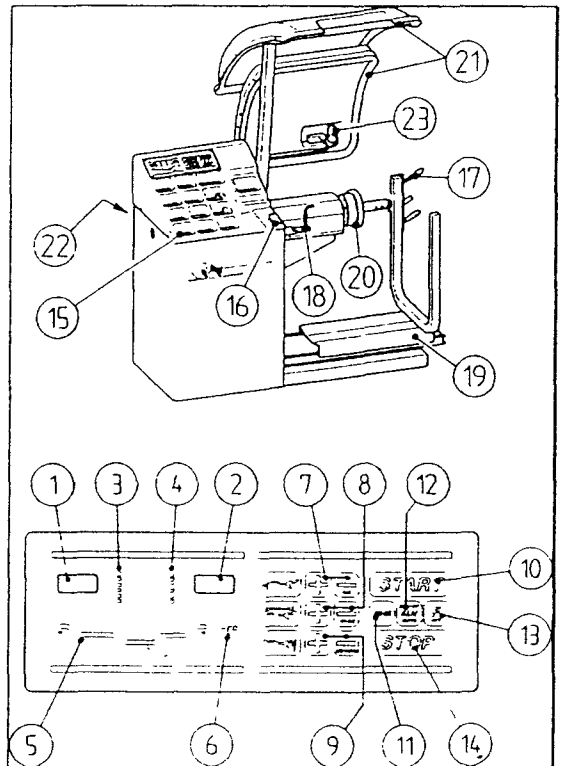


Fig.1

1. *Display for inner plane imbalance*
2. *Display for outer plane imbalance*
3. *Display for position of inner plane imbalance*
4. *Display for position of outer plane imbalance*
5. *Display for wheel weight location*
6. *Display for automobile program*
7. *Rim offset buttons*
8. *Rim width buttons*
9. *Rim diameter buttons*
10. *START button*
11. *'FINE' balancing button*
12. *Balancing programs button*
13. *Multi-function/OPTimizing button*
14. *STOP button*
15. *Wheel weight tray*
16. *Anvil*
17. *Accessories location*
18. *Rim offset gauge*
19. *Wheel lift*
20. *Arbor*
21. *Wheel guard*
22. *Main switch*
23. *Wheel lift control*

**1.5 SPECIFICATIONS**

Microprocessor wheel balancer for truck, light commercial vehicle and car wheels.

Weight with standard accessories	295 kg (649 lbs)
Electric specifications	230VAC, 1ph, 50-60Hz, 0.3A
	115VAC, 1ph, 50-60Hz, 0.6A
Air pressure	6-12 bar (85-170 psi)
Rim diameter range	12"-28" (300-700mm)
Rim width range	3"-20" (80-500mm)
Max. tire diameter	1200mm (47")
Max. tire width	500 mm (20")
Max. wheel weight	200 kg (440lbs)
Acoustic pressure	70dBA

**1.6 DIMENSIONS OF THE MACHINE**

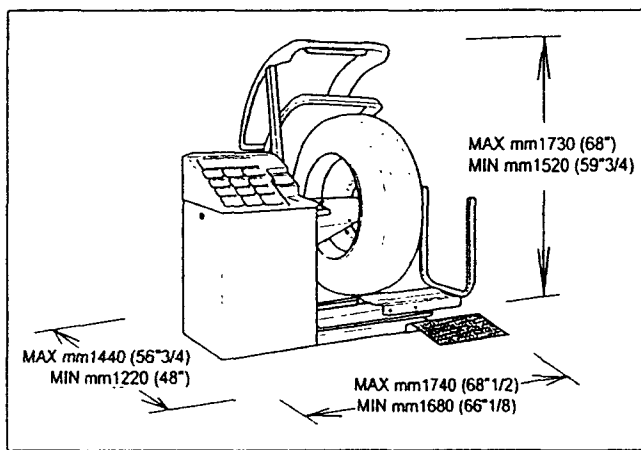


Fig. 2

**1.7 STANDARD ACCESSORIES**

#14009498 Wheel caliper (Fig.3).  
To measure the rim width.

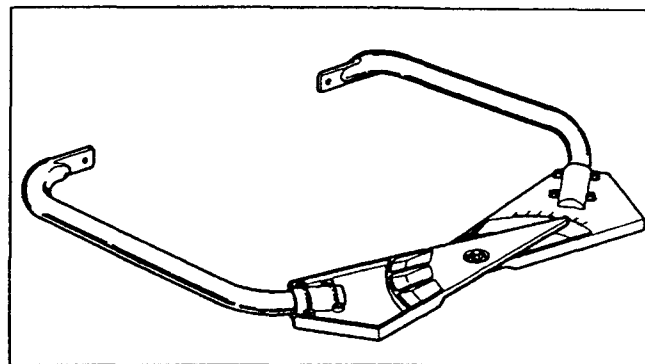


Fig.3

#14021324 Truck adaptor kit (Fig.4).  
For centering of wheels with center holes of diameter 130 - 224mm (5.11" - 8.81") by mean of 2 centering cones:

- #1 from 130 to 177 mm (5.1" to 6.9 6")
- #2 from 196 to 224 mm (7.71" to 8.81")

Description on use is in section 5.1.

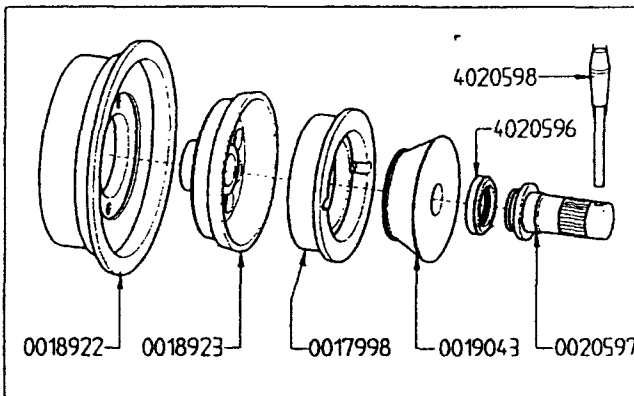


Fig.4

**#10006452 Weight pliers (Fig.5).**  
Necessary to fit and remove the wheel weights from the rim edge.

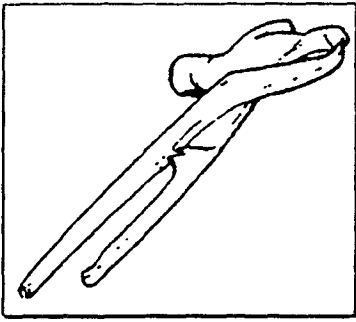


Fig.5

**#14020484 Wheel guard (Fig.6).**  
Protects the operator from abrasions or projections of wheel weights and debris.

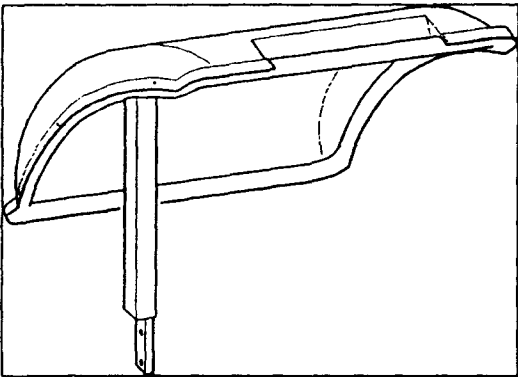


Fig.6

**#14020592 Car cone kit (Fig.7).**  
For centering of wheels with center holes of diameter 50- 134 mm (1.96" - 5.27") by mean of 1 single and 1 twin centering cone:

- #1 from 50 to 83 mm (1.96" to 3.26")
- #2 from 76 to 134mm (3" to 5.27") (twin)

Description on use is in section 5.3.

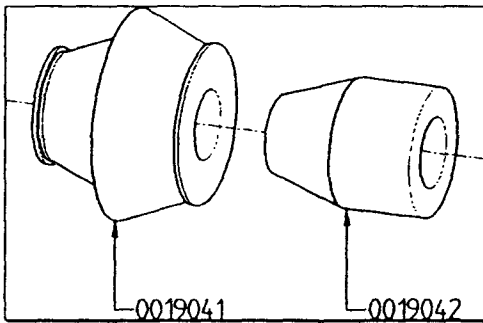


Fig.7

**1.8 ACCESSORIES ON REQUEST**

**#10018924 Truck cone (Fig.8).**  
For centering of wheels with center holes of diameter 272- 284 mm (10.7" - 11.18").

Description on use is in section 5.1.

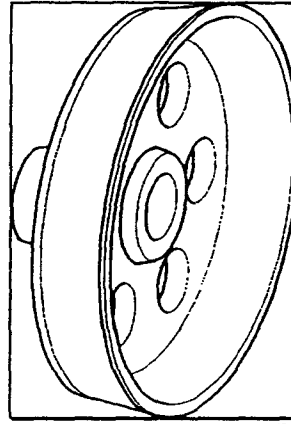


Fig.8

**#14017456 UF345 adapter (Universal flange for centerless wheels - Fig.8/a).**  
Allows to center 3,4,5,6 studs wheels without a center hole. To be used with spacer #14020418 (option).  
Description on use is provided in section 5.4.

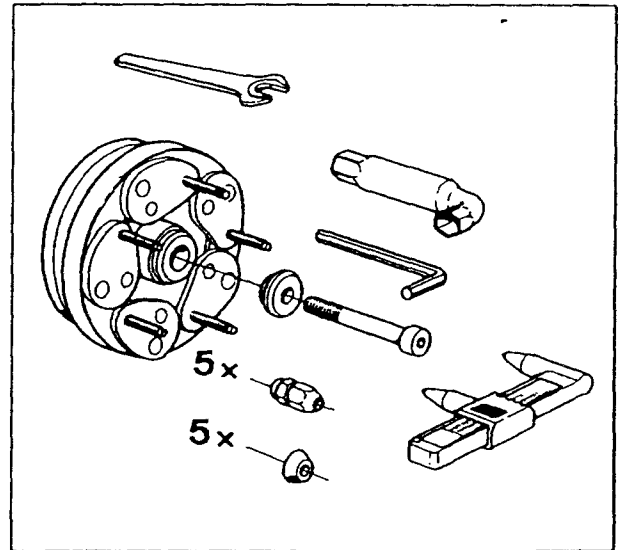


Fig.8/a

**#14020418 Spacer for universal flange (Fig.9).**  
Necessary when using the universal flange #14017456.  
Description on use is provided in section 5.4.

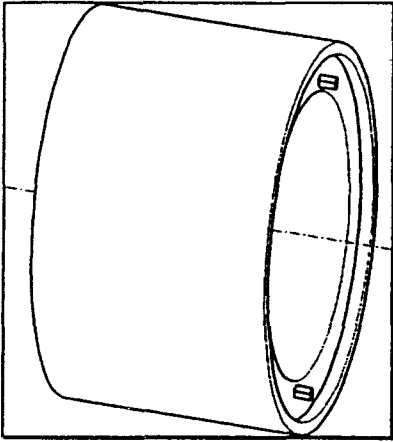


Fig.9

**#14009746 Dayton adaptor 22.5" (Fig.11).**  
For mounting 20"-22.5" Dayton wheels.  
Description on use is provided in section 5.2.

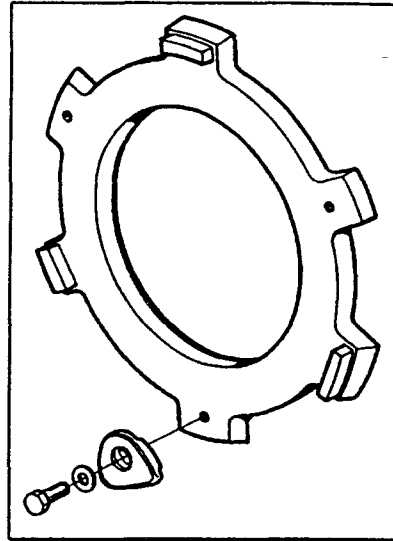


Fig.11

**#14010360 Fischer adaptor 22.5" (Fig.10).**  
For mounting 20"-22.5" Fischer wheels.  
Description on use is provided in section 5.2.

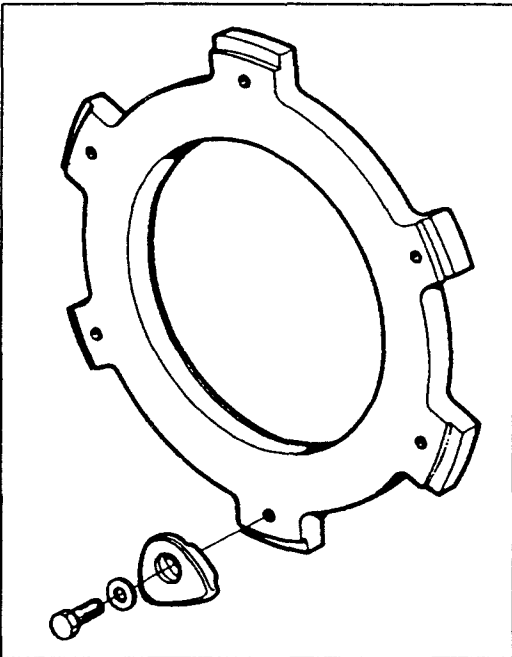


Fig.10

**#14009749 Dayton adaptor 24.5" (Fig.12).**  
For mounting 22"-24.5" Dayton wheels.  
Description on use is provided in section 5.2.

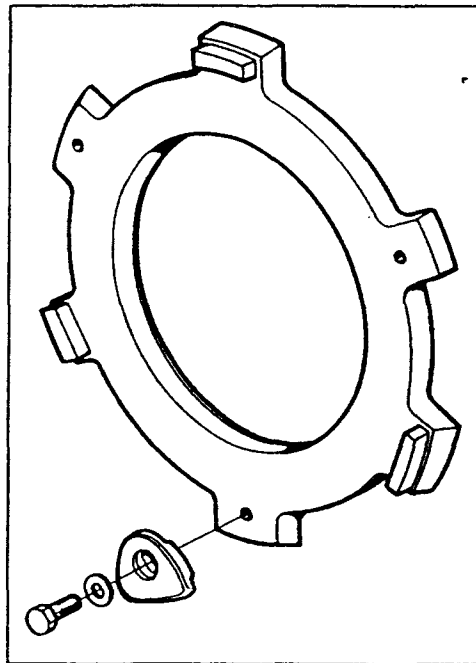


Fig.12

**NOTE:**  
**OTHER SPECIAL ACCESSORIES ARE AVAILABLE.**  
**CONSULT THE AUTHORIZED G.S. DISTRIBUTOR FOR MORE INFORMATION.**

## 1.9 SAFETY PRECAUTIONS

**A. DURING THE USE AND MAINTENANCE OF THE MACHINE IT IS MANDATORY TO COMPLY WITH ALL LAWS AND REGULATIONS FOR ACCIDENT PREVENTION**

**B. THE ELECTRIC POWER SOURCE MUST HAVE A GROUND CABLE AND THE GROUND CABLE OF THE MACHINE (YELLOW WITH GREEN) MUST BE CONNECTED TO THE GROUND CABLE OF THE POWER SOURCE.**

**C. BEFORE ANY MAINTENANCE OR REPAIRS ARE ACCOMPLISHED THE MACHINE MUST BE DISCONNECTED FROM THE AIR AND ELECTRIC SUPPLY.**

**D. NEVER WEAR TIES, CHAINS OR OTHER LOOSE ARTICLES WHEN USING, MAINTAINING OR REPAIRING THE MACHINE. LONG HAIR IS ALSO DANGEROUS AND SHOULD BE KEPT UNDER A HAT. THE USER MUST WEAR PROPER SAFETY ATTIRE IE; GLOVES, SAFETY SHOES AND GLASSES.**

**E. MAINTAIN ALL ELECTRIC CORDS AND AIR HOSES IN GOOD REPAIR.**

**F. KEEP GUARD AND SAFETY FEATURES IN PLACE AND IN WORKING ORDER.**

**G. KEEP WORKING AREA CLEAN. CLUTTERED AREAS INVITE ACCIDENTS.**

**H. AVOID DANGEROUS ENVIRONMENTS. DON'T USE POWER TOOLS OR ELECTRICAL EQUIPMENT IN DAMP OR WET LOCATIONS, OR EXPOSE THEM TO RAIN.**

**J. KEEP THE WORK AREA WELL LIGHTED.**

## 1.10 SAFETY DEVICES

This machine is provided with a wheel guard to protect the operator from hazards due to loose wheels, abrasion and projection of wheel weights and debris. The machine cannot be activated if the wheel guard is not lowered.

The machine will stop in case the wheel guard is lifted. There is a **STOP** button on the control panel.

The machine is equipped with a foot and side protector on the wheel lift.

## 2.0 CARRIAGE INSTRUCTIONS

The machine is crated in a corrugated box of appropriate strength.

The box is mounted to the pallet.

Handling of the machine must be made with an appropriate lifting device (fork lift) (Fig.13).

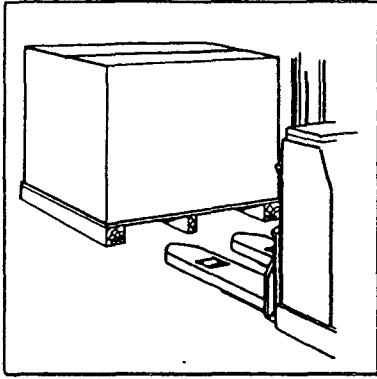


Fig.13

## 2.1 UNCRATING INSTRUCTIONS


Uncrate the machine paying attention when cutting the plastic straps or during any other operation which may be hazardous.

After removing the carton check for any visible damage to the machine and its components.

In case of doubts call qualified personnel for assistance.

The packing materials (plastic bags, polystyrene, nails, screws, wood etc.) must be properly disposed of.

Place the above mentioned materials into a trash container and dispose per local regulations.



**ALWAYS WEAR GLOVES WHEN UNCRATING THE MACHINE TO PREVENT SCRATCHES OR ABRASIONS DUE TO THE CONTACT WITH PACKING MATERIALS.**

## 2.2 INSTALLATION AREA

Install the machine in a covered and dry area. The installation of the machine requires a free space of at least cm 264 X 300 (8'8"x10') (Fig.14).

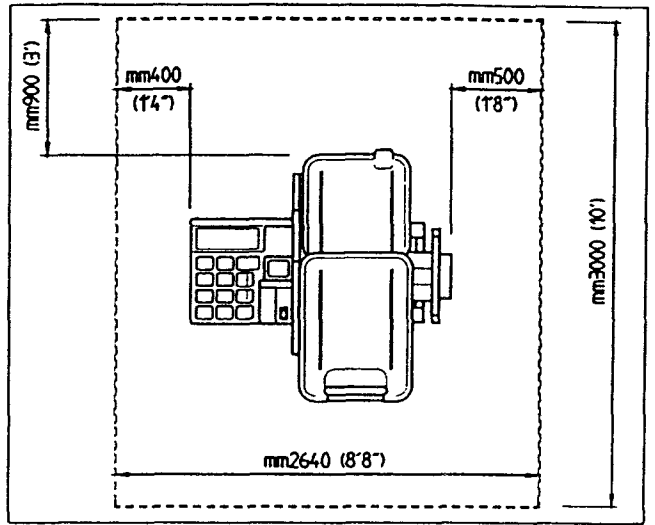


Fig.14

Make sure that from the operating position the user can see all of the machine and the surrounding area. The operator shall forbid, in such an area, the presence of non authorized persons and of objects which may create possible hazards.

The machine shall be installed on a horizontal floor preferably even. Do not install the machine on a sinking or irregular floor.

In case the machine is installed on a raised floor, the floor must have a capacity of at least 7000 N/m<sup>2</sup> ( 700 kg/m<sup>2</sup> - 150lbs x sqft ).

It is not required to secure the machine to the floor.

### 3.0 INSTALLATION INSTRUCTIONS

To install the machine proceed as follows:

A. Install the accessories pegs (fig. 15). Tighten them firmly.

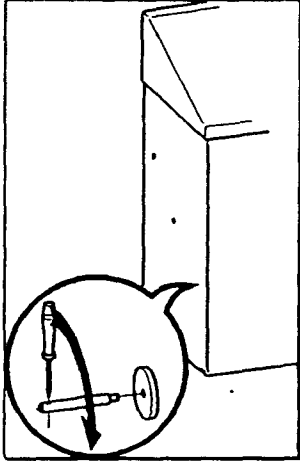


Fig.15

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B. Remove the screws that secure the machine to the pallet and slide it onto the floor where it is to be installed (Fig. 15/A).

**CAUTION!**  
CAREFULLY REMOVE THE BALANCER FROM THE PALLET.  
THE UNIT IS HEAVY AND THE WEIGHT IS NOT EVENLY DISTRIBUTED.  
DROPPING THE UNIT MAY CAUSE PERSONAL INJURY OR EQUIPMENT DAMAGE.

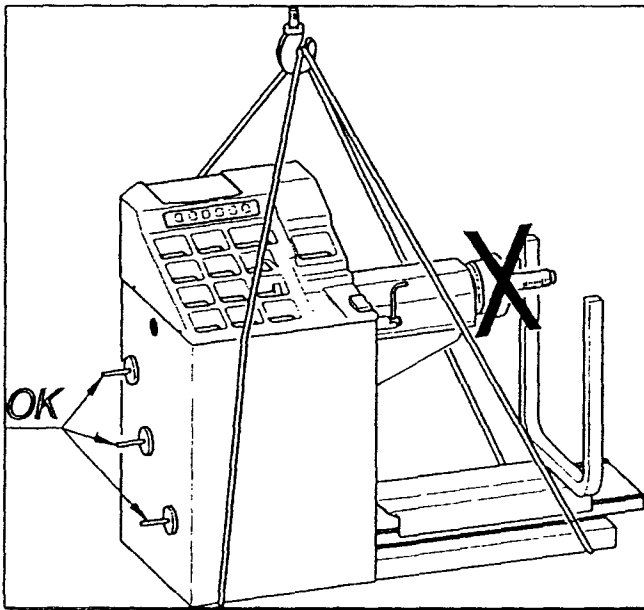
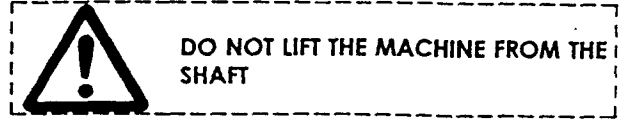


Fig.15/A

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C. Install the wheel guard (Fig.16).

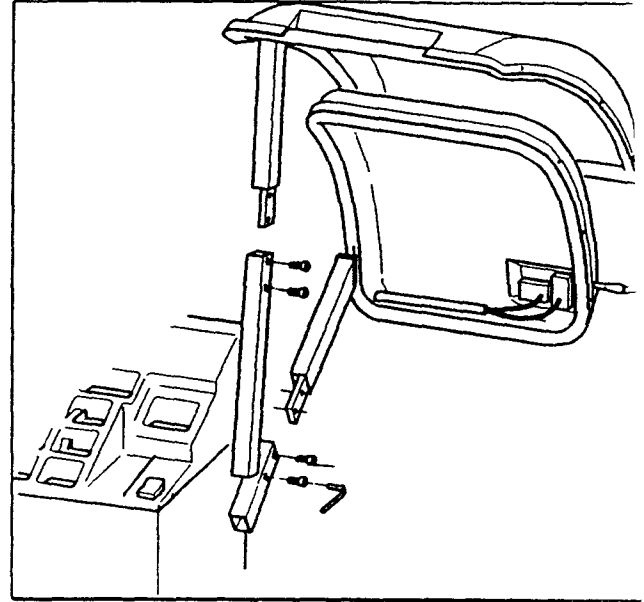



Fig.16

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**CAUTION!**  
CAREFULLY HOLD THE HOOD WHILE INSTALLING THE SCREWS.

D. Place the cones and other accessories onto the supports provided.

### 3.1 ELECTRIC INSTALLATION

 ALL ELECTRICAL CONNECTIONS SHALL BE PERFORMED BY A LICENCED TECHNICIAN. ALL SERVICE MUST BE PERFORMED BY AN AUTHORIZED SERVICE TECHNICIAN.

Check on the plate of the machine that the electrical specifications of the power source are the same as the machine. The machine uses 230VAC, 50-60Hz, 1Ph, 0.3A or 115VAC, 50-60Hz, 1Ph, 0.6A. Electrical specifications are clearly marked on a label at the end of the electric cord.

Before connecting the machine to the power source, check that the power supply has an efficient grounding system.

There should be less than 1  $\Omega$  between the ground pin and earth ground.

**NOTE:**

The outlet installation must be verified by a licensed electrician before connecting the balancer.

**NOTE:**

The yellow with green wire in the cord is the grounding wire.

Never connect the grounding wire to a live terminal.

Check that the power supply has an automatic circuit breaker with a differential circuit set at 30 mA.

### 3.2 AIR INSTALLATION

The machine requires an air pressure of 6 to 12 bar (85-170 psi), as marked on the plate of the machine and on a sticker attached to the cabinet next to the air inlet.

Ensure that the line pressure is within the limits required by the machine.

If the air pressure is lower than the minimum required of 6 bar (85psi) the capacity of the wheel lift and the power of the spinning system might be insufficient for certain wheels.

If the air pressure exceeds 12 bar (170 psi) it is mandatory to install a pressure regulator before the air inlet of the machine.

Connect the machine to the air supply with a rubber hose (rated for the pressure) with an inside diameter of 6 mm (1/4") (Fig. 17).

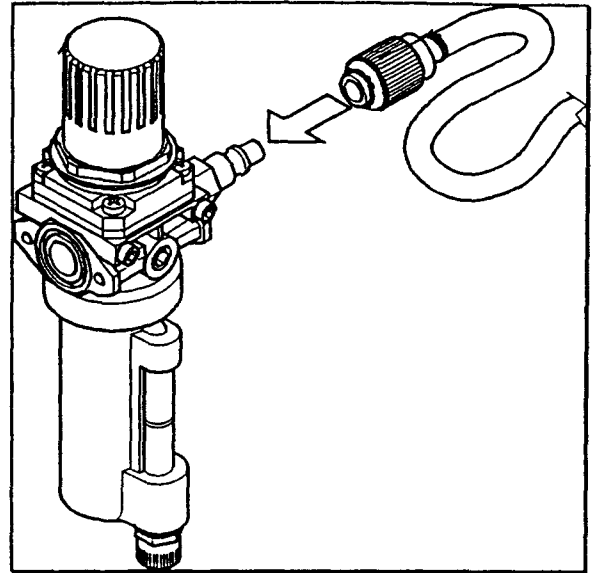


Fig.17

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Check the correct functioning of the air-filter and lubricator (section 9.0).

### 4.0 CONTROLS

The function of all the controls is very easily understood while you use the machine.

Refer to section 6.1 - 8.4.

Remember that in case of any problem or emergency the **STOP** button will stop all functions of the machine.

## 5.0 MOUNTING THE WHEEL

Before starting any balancing procedure it is very important that the wheel is mounted on the machine with the proper adaptors.

A non correct centering of the wheel may result in considerable imbalance.

There are many types of wheels and ACCU supplies adaptors of good quality and durability for the large majority.

However if you meet special wheels which may require a specific adaptor, call your authorized ACCU distributor.

The rims may be divided into these major groups:

- A. *Truck rims with flange*
- B. *Truck rims without flange (Dayton, Fischer)*
- C. *Car rims with center hole*
- D. *Car rims without center hole*

### 5.1 CENTERING TRUCK WHEELS WITH FLANGE (BUDD)

This is the most common type of truck or light truck rims, either in steel or light alloy.

These rims can be correctly centered on the middle hole with a steel cone included in the standard accessories, and with cone #10018924 (on request).

- A. Mount the spacer disc on the balancer shaft (Fig.18).

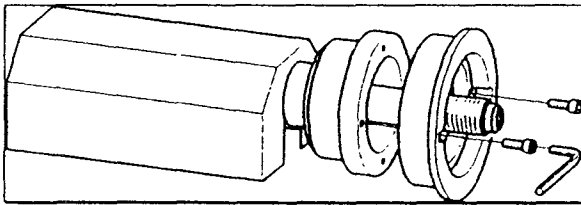


Fig.18

Use the small aluminium spacer in combination with the light truck cone.

Use the larger spacer for standard 8 or 10 holes truck wheels in combination with the two largest cones.

### IMPORTANT!

CHECK THAT THE MATING SURFACES ARE PERFECTLY CLEAN AND NOT DAMAGED. AN INCORRECT MOUNTING MAY RESULT IN SIGNIFICANT IMBALANCE.

- B. Move the sliding plate of the wheel lift all the way out and roll the wheel onto it (Fig.19).

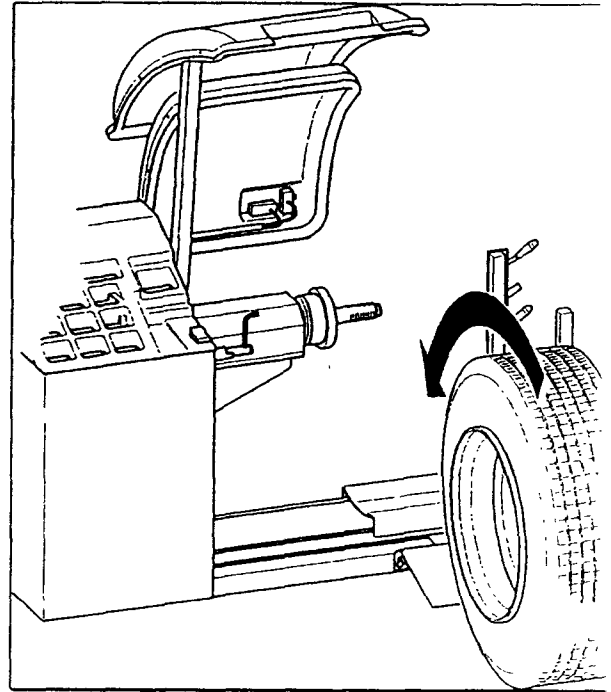


Fig.19

- C. Lift the wheel approximately to the same height as the machine shaft. Slide the wheel towards the machine and center the wheel with a cone from the side (Fig.20).

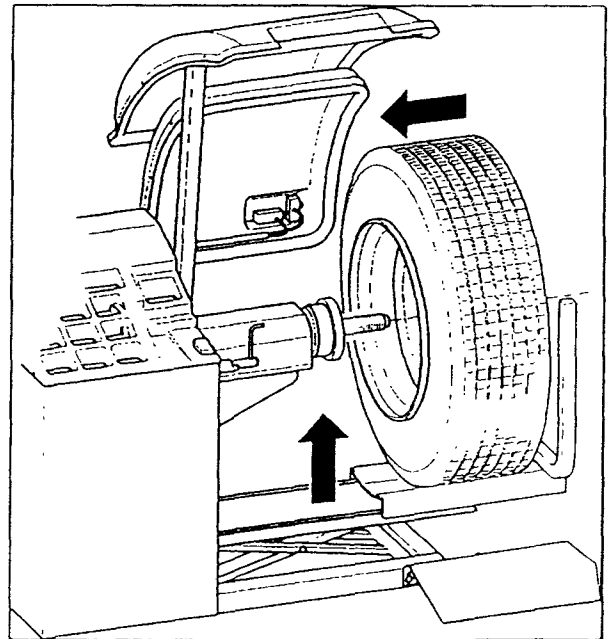


Fig.20

D. Tighten the nut firmly with the removable handle provided (Fig.21).

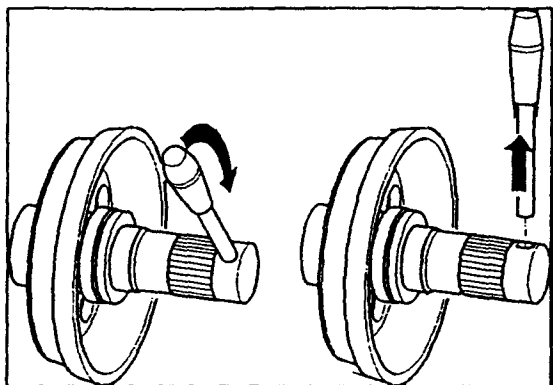


Fig.21

E. Check that the wheel runs correctly by turning the wheel by hand.

**IMPORTANT!**  
REMEMBER TO REMOVE THE TIGHTENING HANDLE FROM THE NUT AFTER MOUNTING THE WHEEL.

**5.2 CENTERING TRUCK WHEELS WITHOUT FLANGE**

There are on the market truck wheels without flange. These wheels (Dayton, Fischer) are mounted on the spoken rotors of the vehicle with special clamps.

To center these wheels use the appropriate adaptors :

- #14010360 for 20"-22.5" Fischer wheels
- #14009746 for 20"-22.5" Dayton wheels
- #14009749 for 22"-24.5" Dayton wheels.

A. Mount the adaptor to the rim. Tighten the clamps in cross pattern with equal torque (Fig.22).

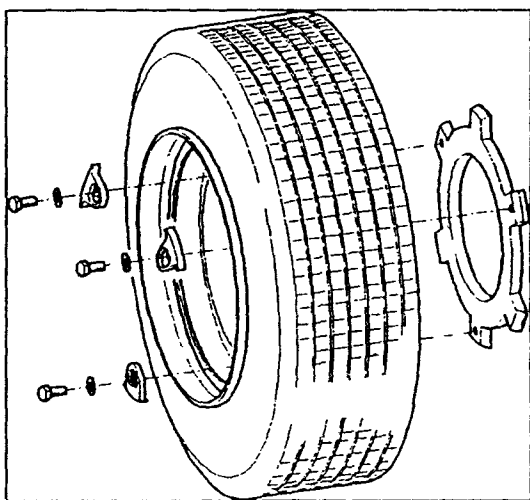


Fig.22

B. Mount the assembly onto the balancer as if it was a truck wheel with flange.

**5.3 CENTERING CAR WHEELS WITH CENTER HOLE**

This is the most common type of car rims, either in steel or light alloy. These rims can be correctly centered on the middle hole with a steel cone included in the car cone kit #14020592.

A. Choose the cone that best fits the size of the center hole of the wheel.

B. Mount the wheel and slide the cone onto the shaft of the balancer (Fig.23). Tighten the nut firmly.

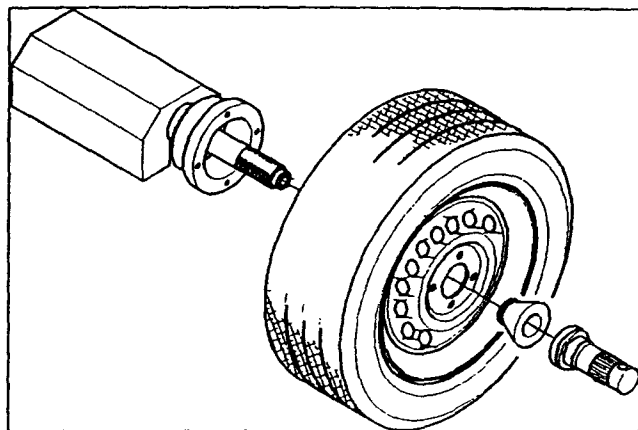


Fig.23

C. Check that the wheel runs correctly by turning the wheel by hand.

**IMPORTANT!**  
TO MINIMIZE MOUNTING ERRORS IT IS SUGGESTED THAT THE WHEEL IS MOUNTED ON THE BALANCER AND ON THE VEHICLE WITH THE VALVE STEM IN THE SAME POSITION (I.E. 12 O'CLOCK).

**5.4 CENTERING CAR WHEELS WITHOUT CENTER HOLE**

In this case the wheel shall be mounted on the studs with the UF345 adapter #14017546 and the spacer #14020418 (on request).

The UF345 adapter can be easily preset to mount wheels with 3,4,5 and 6 studs or multiples, in the following way:

A. Mount the spacer and the UF345 adapter onto the arbor (Fig.24). Tighten the screw firmly.

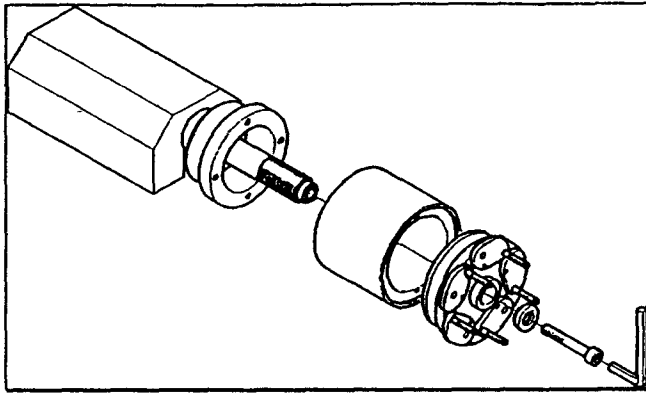


Fig.24

**IMPORTANT!**  
CHECK THAT THE MATING SURFACES ARE PERFECTLY CLEAN AND NOT DAMAGED. AN INCORRECT MOUNTING MAY RESULT IN SIGNIFICANT IMBALANCE.

B. Remove all of the nuts (#1 Fig.25) on the back of the flange except the zinc plated self-locking nut (#2 Fig.25).

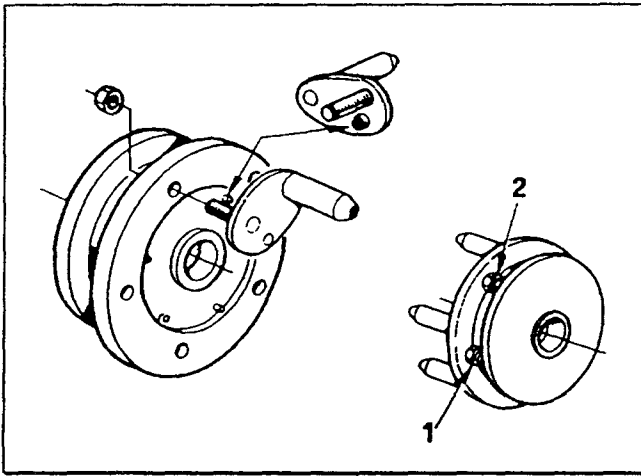


Fig.25

NOTE:  
THE ZINC PLATED SELF-LOCKING NUT HOLDS THE REFERENCE STUD, THAT IS NEVER TO BE REMOVED!

C. Remove all the studs, except the reference stud. Reassemble the studs on the flange by inserting the threaded pins into the holes marked with the number of the desired configuration (3,4 or 5). Ensure that the guide groove is engaged in the matching pin (Fig. 25). Look at the numbers stamped on the flange to match hole and pin (Fig.26).

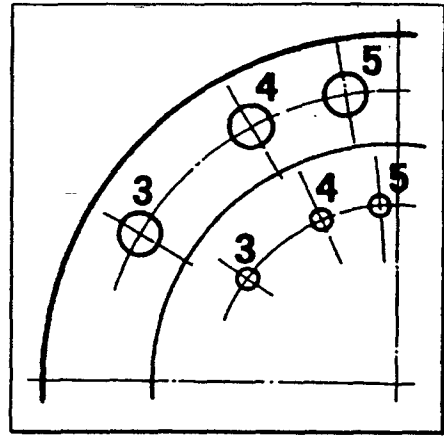


Fig.26

D. Fit the nuts onto the threaded pins to hold the studs in place. Do not tighten the nuts.

E. Expand and retract the studs to check that all of them are synchronized.

F. Adjust the studs at the right diameter (Fig.27).

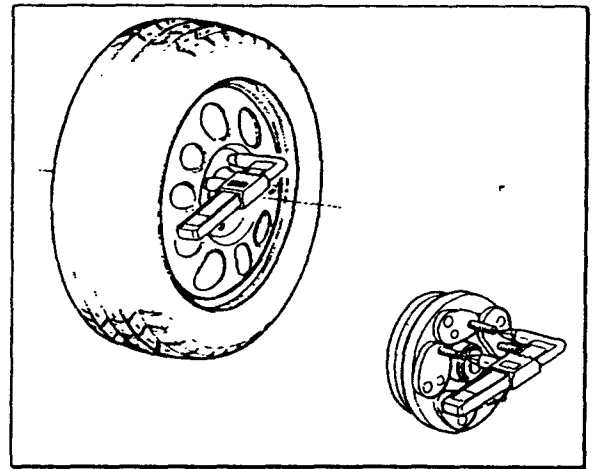


Fig.27

G. Tighten the nuts with finger pressure only.

H. Choose the type of nut that best fits to the shape of the rim stud holes. Mount the wheel on the adapter and tighten the nuts in cross pattern with equal torque.

**6.0 BALANCING PROCEDURE**

Once the wheel is properly mounted onto the balancer, turn the machine on. The machine shows all the displays illuminated for two seconds, as a check. After that, the imbalance displays blink [dis] [105]. Remove all wheel weights from the rim including tape weights.

**6.1 WHEEL DATA ENTRY**

A. Measure the rim offset with gauge (Fig. 28).

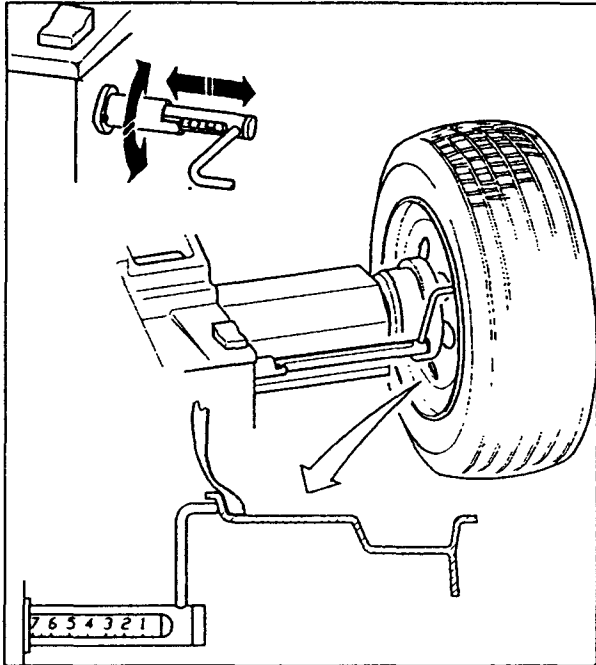


Fig.28

Press button #1 or #2 (Fig. 29) to enter rim offset.

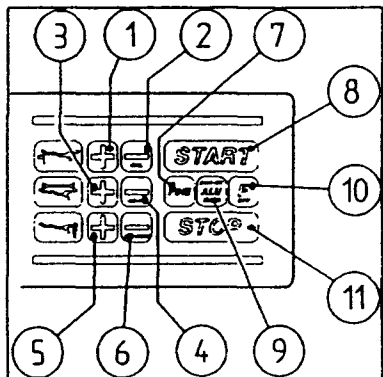


Fig.29

B. Read the rim diameter, always marked on the side wall of the tire (Fig.30). Press button #5 or #6 (Fig. 29) to enter rim diameter.

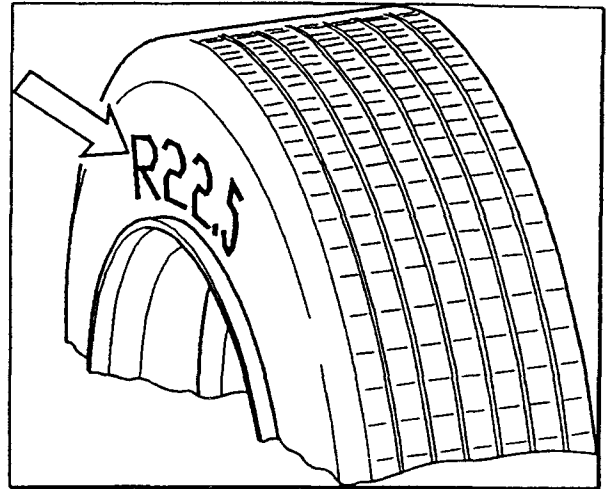


Fig.30

C. Measure the rim width with the wheel caliper (Fig.31).

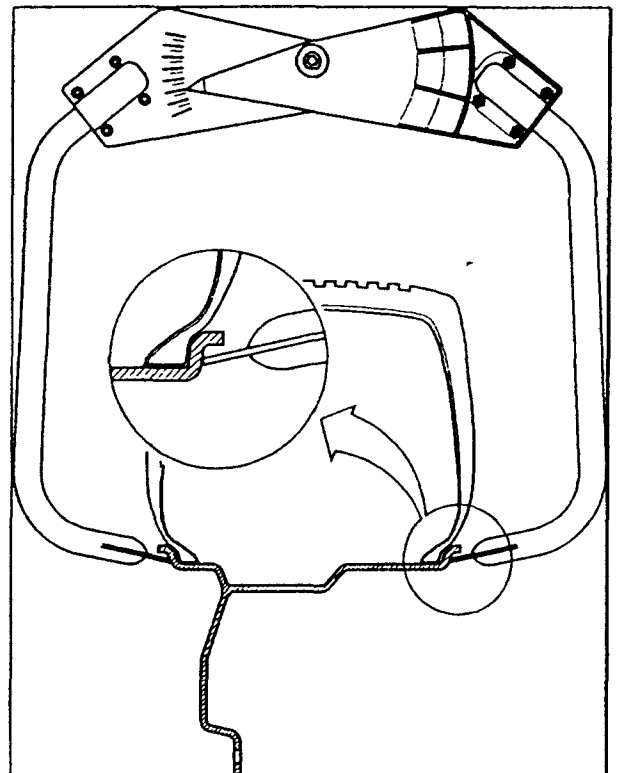


Fig.31

D. Enter rim width with the appropriate buttons (#3 and #4 Fig.29).

E. To enter all data with an increased resolution press the button 'FINE' first (#7 Fig.29). Press the button again to restore the standard accuracy.

## 6.2 BALANCING PROGRAMS. ALU FUNCTIONS.

Before spinning the wheel (although it could be made afterwards) choose the adequate balancing program.

To select the different truck balancing programs press the button **ALU** (#9 Fig.29). The balancing programs available are :

**A. TRUCK DYNAMIC** (two planes), suggested for all steel truck rims. In this case the wheel weights must be clipped onto the rim edges. This function is selected as a default and the LEDs corresponding to the wheel weight location are lit on (Fig.32).

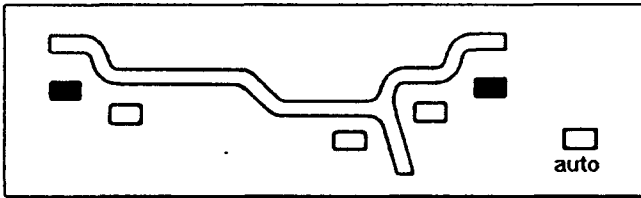


Fig. 32

**B. TRUCK ALU.** The wheel weights position is as indicated in Fig.33. In this case use hidden tape weights.

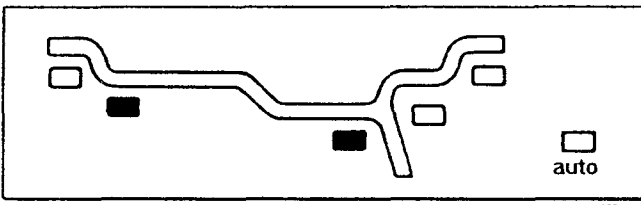


Fig.33

**C. TRUCK STATIC** (one plane - Fig.33/A). To enter the Static program press the **ALU** button and hold it for 3 sec). Do the same operation to return to the previous active balancing program.

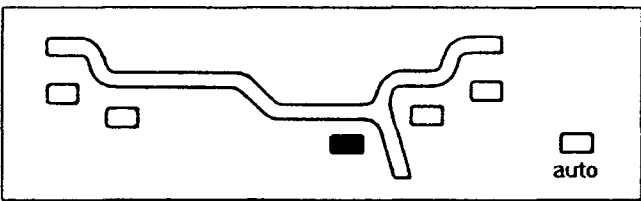


Fig.33/A

To switch to the automobile (auto) balancing programs press **F** and **ALU** : the **AUTO** LED will lit. Repeat this step to return to the truck balancing programs (**AUTO** LED off).

To select the different auto balancing programs press the button **ALU** (#9 Fig.29). The balancing programs available are :

**D. AUTO DYNAMIC** (two planes), suggested for all car steel rims. In this case the wheel weights must be clipped onto the rim edges. The LEDs corresponding to the wheel weight location are lit on (Fig.34).

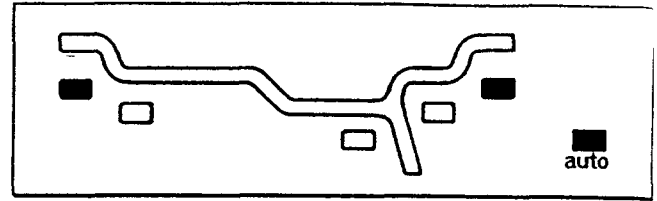


Fig. 34

**E. AUTO ALU1.** The wheel weights position is as indicated in Fig.35. In this case use tape weights.

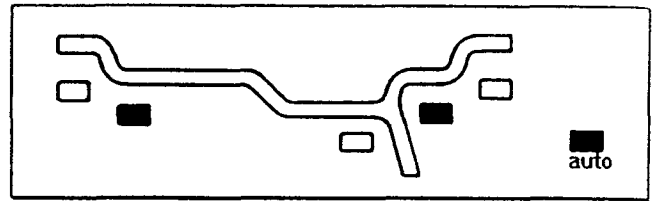


Fig.35

**F. AUTO ALU2.** The wheel weights position is as indicated in Fig.36. In this case use one tape weight on the inside and a clip-on weight on the outer edge.

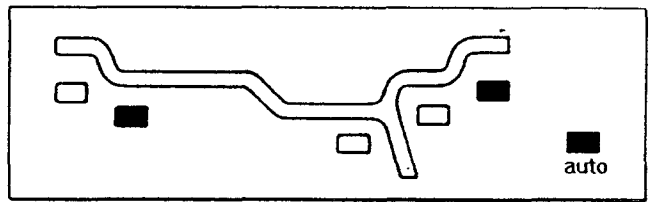


Fig.36

**G. AUTO ALU3.** The wheel weights position is as indicated in Fig.37. In this case use one tape weight on the outside and a clip-on weight on the inner edge.

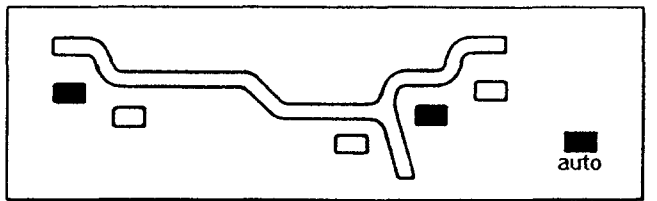


Fig.37

**H. AUTO ALU4.** The wheel weights position is as indicated in Fig.38. In this case use hidden tape weights.

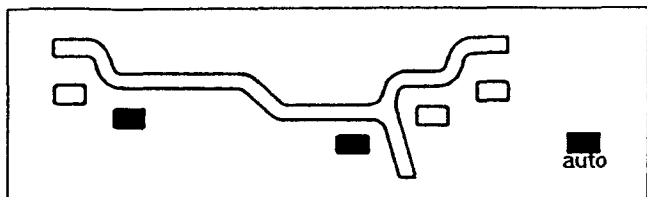


Fig.38

I. **AUTO ALU5.** The wheel weights position is as indicated in Fig.39. In this case use one tape weight on the inside and a clip-on weight on the inner edge.

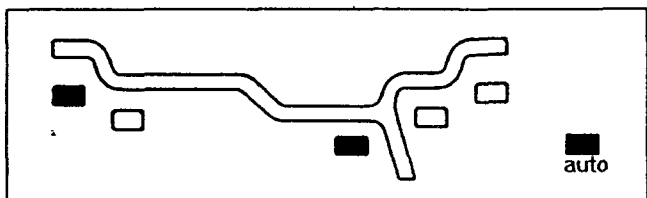


Fig.39

J. **AUTO ALU6.** The wheel weights position is as indicated in Fig.40. In this case use one hidden tape weight on the inside and a clip-on weight on the outer edge.

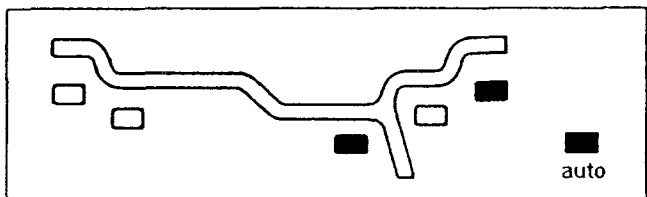


Fig.40

K. **AUTO STATIC** (one plane - Fig.41). Suggested for narrow car rims (3" or less). To enter the *Static* program press the **ALU** button and hold it for 3 sec). Do the same operation to return to the previous active balancing program.

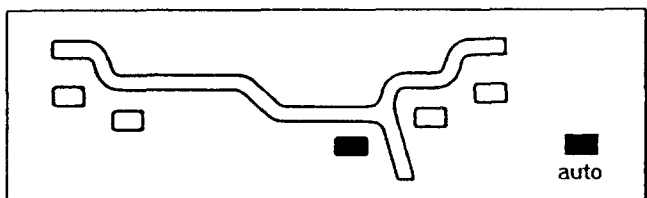



Fig.41

### 6.3 CORRECTION OF THE IMBALANCE

A. The machine as a default is set in the *autostart* mode: it will automatically spin the wheel as soon as the wheel guard is lowered.



**DO NOT LIFT THE WHEEL GUARD UNTIL THE DISPLAYS SHOW A READ-OUT. IF FOR ANY REASON THE DISPLAY DOES NOT COME UP WITH A READ-OUT OR INDICATE AN ERROR CONDITION THE AUTOMATIC BRAKING SYSTEM FOR THE WHEEL MAY BE DEFECTIVE. OPERATE THE LIFT TO STOP THE WHEEL PRIOR TO LIFTING THE WHEEL GUARD.**

When the balancing cycle is completed (about 20 sec. for an average truck wheel) the wheel will stop automatically and the imbalance values will appear on the LED's.

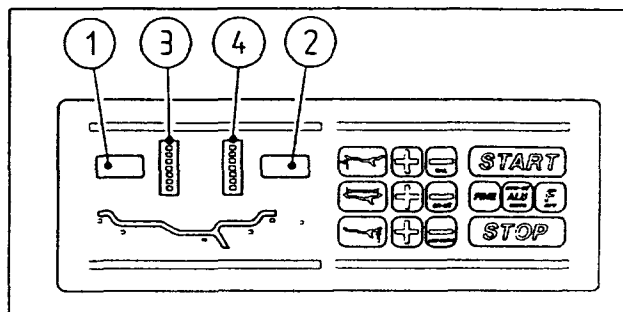


Fig. 42

B. Read the imbalance amount on the outer display (#2 Fig.42). Values are displayed in grams but can be displayed in ounces (see section 8.1) and are automatically rounded to the nearest commercial wheel weight.

Turn the wheel until the displays of the outer plane imbalance position indicator (#4 Fig.42) are illuminated and blinking.

Stop the wheel with the air lift and put the wheel weight on the outer plane at 12 o'clock.

If the program selected is an ALU function, put the wheel weight in accordance to the function chosen.

C. Correct the imbalance on the inner plane in the same way (reading the data on display #1 Fig.42 and LED's #3 Fig.42). If the balancing program selected is *Static*, the correction is made on one plane only.

### 6.4 VERIFICATION OF THE RESULTS

Spin the wheel again and check that the readout is [0] [0].

If a residual imbalance is displayed:

A. Check the data input. If some value is incorrect, amend as needed and press the F button. Imbalance values will be automatically recomputed.

B. Check if the balancing program selected is the most appropriate. If not choose the right program and imbalance values will be automatically recomputed.

C. The wheel weight could have been placed at a wrong angle. To check this, position the wheel at the correction position for the outer plane.

If the wheel weight previously attached is in sector 'L' or 'R' ( Fig.43), move the wheel weight up about 2cm (1").

If the wheel weight is in sector 'D' cut a piece of the wheel weight of an approximate value corresponding to the value shown on the right display, or replace the wheel weight with a lighter one.

If the wheel weight is in sector 'U' add a weight of value indicated by the display or replace the wheel weight with a heavier one. Repeat the same operation for the inner plane.

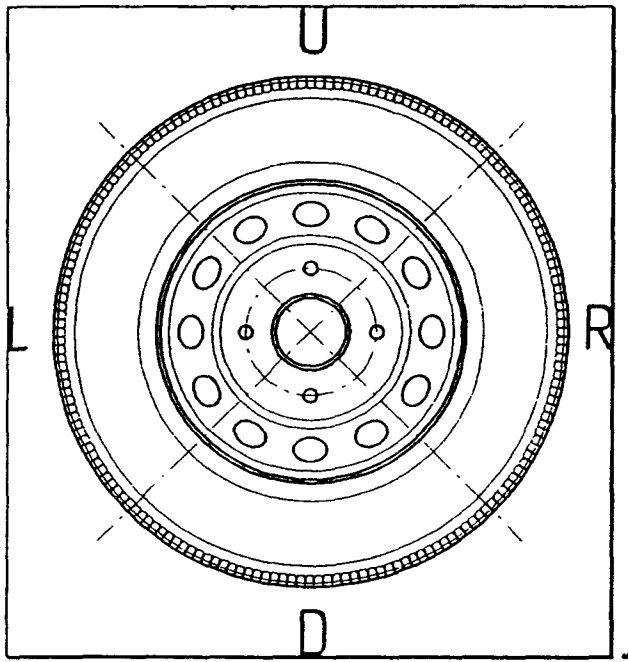


Fig.43

**NOTE:**

If this situation is repeated, your machine could be out of calibration and a calibration operation might be required (section 8.0).

D. If an ALU function was selected ensure that the wheel weights have been placed in accordance to the program chosen.

E. Check that the nut is well tightened.

F. Check that the wheel and adaptors are clean.

## 6.5 AFTER BALANCE VIBRATION PROBLEMS

If vibration is still present after balancing , check the following possible sources of vibration:

1. Stones caught in the tire tread.
2. Tire slippage on the wheel.
3. Incorrectly mounted wheel.
4. Imbalanced wheel covers.
5. Radial or lateral run out in the tire or wheel.
6. Damaged wheel bolt holes.
7. Worn universal joints.
8. Imbalanced brake rotors or drums.

## 7.0 TIRE MATCHING PROGRAM (AUTO)

The matching program assists the user in determining the best possible mating of the tire and rim.

The mating of tire and wheel normally allows the least amount of additional weight required for balancing and total run out.

The matching program is helpful when:

- Excessive radial run out is noticed.
- The balancer calls for weights in excess of 50gr on either plane in the Dynamic mode.

The ACCU 8902 computer wheel balancer feature 2 different matching programs:

- *Static*, when the tire has an imposed direction of rotation and cannot be reversed on the rim (i.e. white band tires).
- *Dynamic*, when the mating may require to rotate and reverse the tire onto the rim.

### 7.1 DYNAMIC TIRE MATCHING

A. Mount the wheel on the machine and enter wheel data as usual. Lower the wheel guard to spin the wheel.

B. Once the wheel stops, push and hold the F button for 3 seconds or more. The displays show [Opt] and blink [0--] [--0].

#### NOTE :

If the imbalance is lower than 50 gr (2 oz) the displays show: [Opt] [no].

To force tire matching, press F again.

Press F for more than 3 sec. to exit the matching program.

C. Mark the tire in line with the valve stem (Fig.44 #A), which is usually on the outer plane of the wheel.

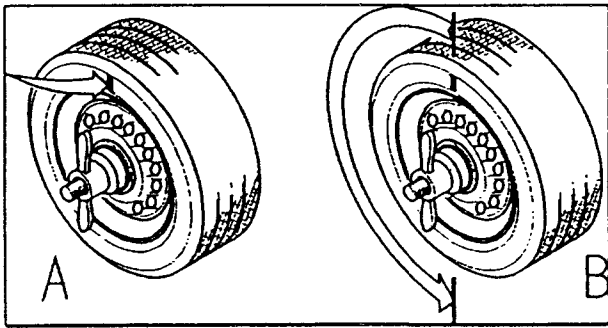


Fig.44

D. Rotate the wheel so that the valve is at 12 o'clock and press F.

Displays show [Opt] and blink [1--] [--1].

E. Dismount the wheel from balancer.

Deflate tire and rotate the tire 180 degrees on the rim (the mark on the tire and the valve shall be at 180 degrees) (Fig.44 #B). Inflate tire to the right pressure **respecting all safety precautions**.

F. Mount the wheel onto the balancer with valve at 12 o'clock.

#### NOTE:

**Check that the rim is mounted in the same angular position with respect to the arbor.**

G. Spin the wheel.

Displays show : [Opt] and blink [2--] [--2].

H. Move the wheel with the valve at 12 o'clock and press F.

Displays show [Opt] [End].

J. Rotate the wheel until the angular indicators are all lit (Fig.45)

#### NOTE :

In this program either angular display could be activated.

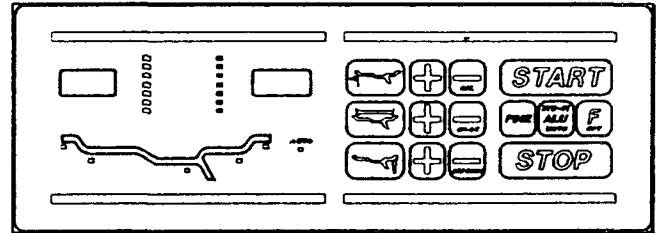


Fig.45

K. Mark the rim on the inner or outer plane (as indicated by the angular displays lit on) (Fig.46).

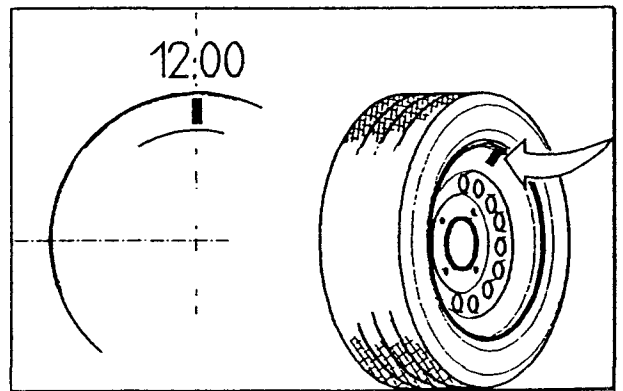


Fig. 46

L. Remove the wheel from the balancer and with a tire changer match the marks on the rim and the tire.

M. Press F to exit the program.  
Balance the wheel normally.

## 7.2 STATIC TIRE MATCHING

A. Mount the wheel on the machine using the suitable flange and enter data as usual. Lower the wheel guard to spin the wheel.

B. Once the wheel stops, push and hold the F button for 3 seconds. The displays show [Opt] and blink [0--] [--0].

### NOTE :

If the imbalance is lower than 50 gr (2oz) the displays show: [Opt] [no].

To force tire matching, press F again, or hold F for more than 3 sec. to exit the matching program.

C. Press DYN-ST(ALU) .

Displays show:

[Opt] [0-0] .

D. Mark the tire in line with valve stem (Fig.44 #A), which is usually on the outer plane of the wheel.

E. Move the wheels so that the valve is at 12 o'clock and press F.

Displays show [Opt] [1--1].

F. Dismount the wheel from balancer.

Deflate tire and rotate the tire 180 degrees on the rim (the mark on the tire and the valve shall be at 180 degrees) (Fig.44 #B). Inflate tire to the right pressure respecting all safety precautions.

G. Mount the wheel onto the balancer with valve at 12 o'clock.

### NOTE:

Check that the rim is mounted in the same angular position with respect to the arbor.

H. Spin the wheel.

Displays show : [Opt] [ 2-2].

J. Move the wheel with the valve at 12 o'clock and press F.

Displays show [Opt] [ 3-3], then [Opt] [End] .

K. Rotate the wheel until the outer angular indicators are all lit (Fig.45)

L. Mark the rim on the outer plane (as indicated by the angular displays lit).

M. Remove the wheel from the balancer and with a tire changer match the marks on the rim and the tire.

N. Press F to exit the program.  
Balance the wheel normally.

**8.0 SELF CALIBRATION**

All balancers are carefully calibrated by the manufacturer and do not require a new calibration, except after many years of service or in case of replacement of any electronic component.

To recalibrate the machine proceed as follows:

A. Switch the machine off.

B. Mount a car wheel with an average size steel rim (i.e. 14"), even unbalanced.

**IMPORTANT!**  
**THE DISTANCE OF THE INNER PLANE OF THE RIM SHALL NOT BE LOWER THAN 250 mm.**

Note:

To obtain a higher precision on calibration, it is suggested to mount the wheel reversed ( Fig.46/A).

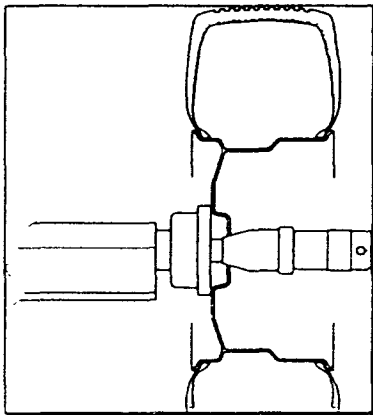


Fig.46/A

C. Press **CAL** while turning the machine on. Hold the button for at least 5 sec.

After the lamp test, the displays blink: **[CAL] [Usr]** then display **[dis] [105]**.

D. Enter the correct wheel data (section 6.1) and press **F**. The displays show: **[CAL] [ 1 ]**.

**IMPORTANT!**  
**IF THE WHEEL DATA ENTERED ARE NOT CORRECT, A WRONG CALIBRATION WILL BE MADE AND ALL SUBSEQUENT BALANCING READOUTS WILL BE WRONG.**

E. Lower the wheel guard to spin the wheel. While the wheel is cycling the displays show: **[CAL] [ 1 ]** and when the wheel stops : **[100] [Add] [[4.00] [Add] in ounces]** The inner plane angular displays are illuminated.

F. Attach 100gr (4 oz) weight on the inner plane at top, when the angular displays of the inner plane are illuminated. Spin the wheel. While the wheel is cycling the displays show: **[CAL] [ 2 ]**.

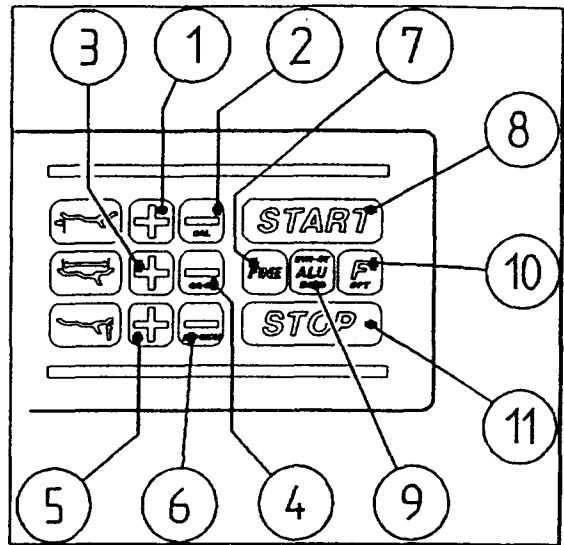


Fig.47

G. When the wheel stops the displays show two numbers. Press the buttons 1 or 2 (Fig. 47) to change the values. Adjust the numbers to be closest to **[100] [ 0 ]** (**[4.00] [ 0 ]**). Press **F** to confirm.

H. The displays show : **[Add] [100] ([Add] [4.00])**. The outer plane angular displays are illuminated. Remove the 100gr (4 oz) weight from the inner plane and attach it to the outer plane at top, when the angular displays of the outer plane are illuminated. Spin the wheel. While the wheel is cycling the displays show: **[CAL] [3]**.

J. When the wheel stops the displays show two numbers. Press the buttons 1 or 2 (Fig. 47) to change the values. Adjust the numbers to be closest to **[ 0 ] [100]** (**[0] [4.00]**). Press **F** to confirm.

K. The displays show **[CAL] [End]**. The program switches automatically to *Dynamic* balancing.

Although it is preferable to calibrate the machine with a car wheel, it is possible to calibrate the balancer with an average steel truck wheel (i.e. 22.5").

**IMPORTANT!**  
**THE DISTANCE OF THE INNER PLANE OF THE RIM SHALL NOT BE LOWER THAN 250 mm.**

To activate the calibration procedure in this case press **CAL** and **ALU** while turning the machine on. The balancer will call for a weight of 350gr (12 oz) instead of 100gr (4oz).

The other steps of the procedure are exactly as above described.

## 8.1 OUNCE/GRAMS CONVERSION

When the machine is first turned on it is preset to display the imbalance in grams.

If the display in ounces is desired, press and hold **F** (#10 Fig. 47) then press **GR-OZ** (#4 Fig.47).

Repeat the procedure for converting back to grams.

It is possible to check if the machine is preset in grams or ounces by observing the displays.

If after turning on the machine the displays show [ 0 ] [ 0 ] the machine is preset in grams.

If after turning on the machine displays show [0.00] [ 0.00] the machine is preset in ounces.

## 8.2 FINE BALANCING MODE

This balancer always measures with the maximum precision available (10 gr or 1 oz in the truck mode and 1gr or 0.1 oz in the auto mode), however values below 50 gr (2 oz) in the truck mode and below 5gr (0.25oz) in the auto mode are shown as zero.

Values exceeding the tolerance values are rounded to the amount of the nearest commercial wheel weight.

Press and hold the button **FINE** (#7 Fig.47) to display the residual imbalance or in any case the value of imbalance with the highest resolution .

## 8.3 RIM DIAMETER IN MILLIMETERS

The rim diameter is normally displayed in inches, however if the value in millimeters is desired, press button 5 or 6 (Fig. 47) , press and hold **F** (#10 Fig. 47) then press **MM- INCH** (#6 Fig.47).

Repeat the above operation to convert back to inches.

### NOTE:

Although only the rim diameter may have a need to be displayed in millimeters (TRX,TDX rims), also the rim offset and width can be entered in millimeters or inches.

The conversion procedure is similar to the one above described.

## 8.4 SELF-DIAGNOSTIC PROGRAM

During the working cycle of the wheel balancer the microprocessor can display some errors which are shown as follows:

### Err 1 :

balancing cycle interrupted with the **STOP** button.

### Err 2 :

balancing cycle interrupted with the wheel lift.

### Err 3 :

balancing cycle interrupted by lifting the wheel guard.

### Err 4 :

the wheel did not reach the balancing speed.

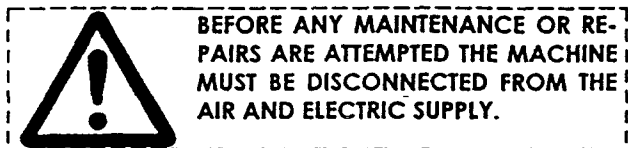
### Err 5 :

wheel guard open.

### Err 6 :

no spin before tire matching.

9.0 MAINTENANCE



This balancer does not require any special maintenance, but the following precautions are required:

- A. Periodically wash all plastic parts with a glass cleaner. Wipe with a dry cloth.
- B. Clean all adapters regularly with a non-flammable liquid detergent all adaptors. Lubricate with a thin layer of oil.

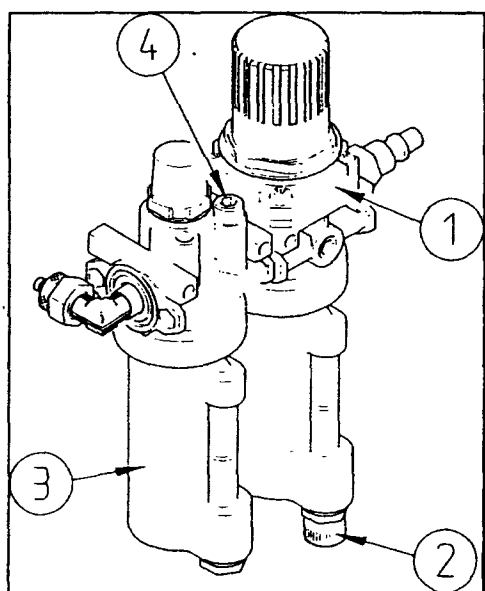


Fig.48

C. Daily drain water from water separator (#1 Fig. 48). To do so pull the fitting (#2 Fig.48).

D. Weekly check the oil level in the air lubricator. When adding oil to the lubricator, disconnect the air supply first, remove the metal cup (#3 Fig.48) by twisting 1/4 of a turn counter-clockwise, and add oil as needed. Make sure seals are in place when repositioning the cup.

**IMPORTANT!**  
**USE ONLY OIL FOR AIR DEVICES, DO NOT USE BRAKE FLUID OR OTHER NON SUGGESTED LUBRICANTS.**

Suggested oils for the filter/lubricator unit:

TAMOIL : WHITE MINERAL OIL 15

SHELL : ONDINA OIL 15  
 BP : ENERGOIL WT3  
 TOTAL : LOBELIA SB15  
 ESSO : MARCOL 82

E. Periodically check the lubricator efficiency. One drop every 10 operations of the wheel lift indicates that the correct amount of oil is being dispersed in the system. If necessary adjust oil flow with screw #4 Fig.48.

10.0 MOVING THE MACHINE

In case the machine is to be moved from one area to another, proceed as follows:

Disconnect the machine from the air and electric supply. Remove all objects that may fall during the relocation and create a hazard. Do not use metal ropes to lift the machine. Slide the machine on the forks of a forklift. Hold the machine as depicted in Fig. 49.

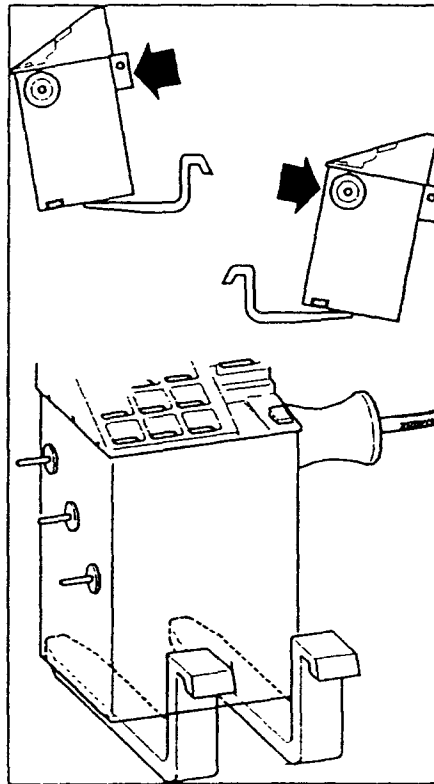
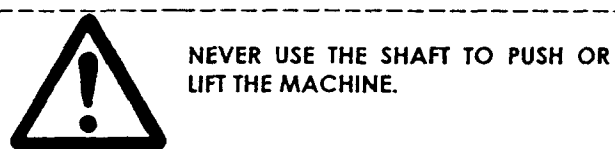


Fig.49

## **11.0 PUTTING THE MACHINE OUT OF SERVICE**

In case the machine is not to be used for a long period of time (6 months or more) it is necessary to disconnect all power sources and protect all parts that may be damaged.

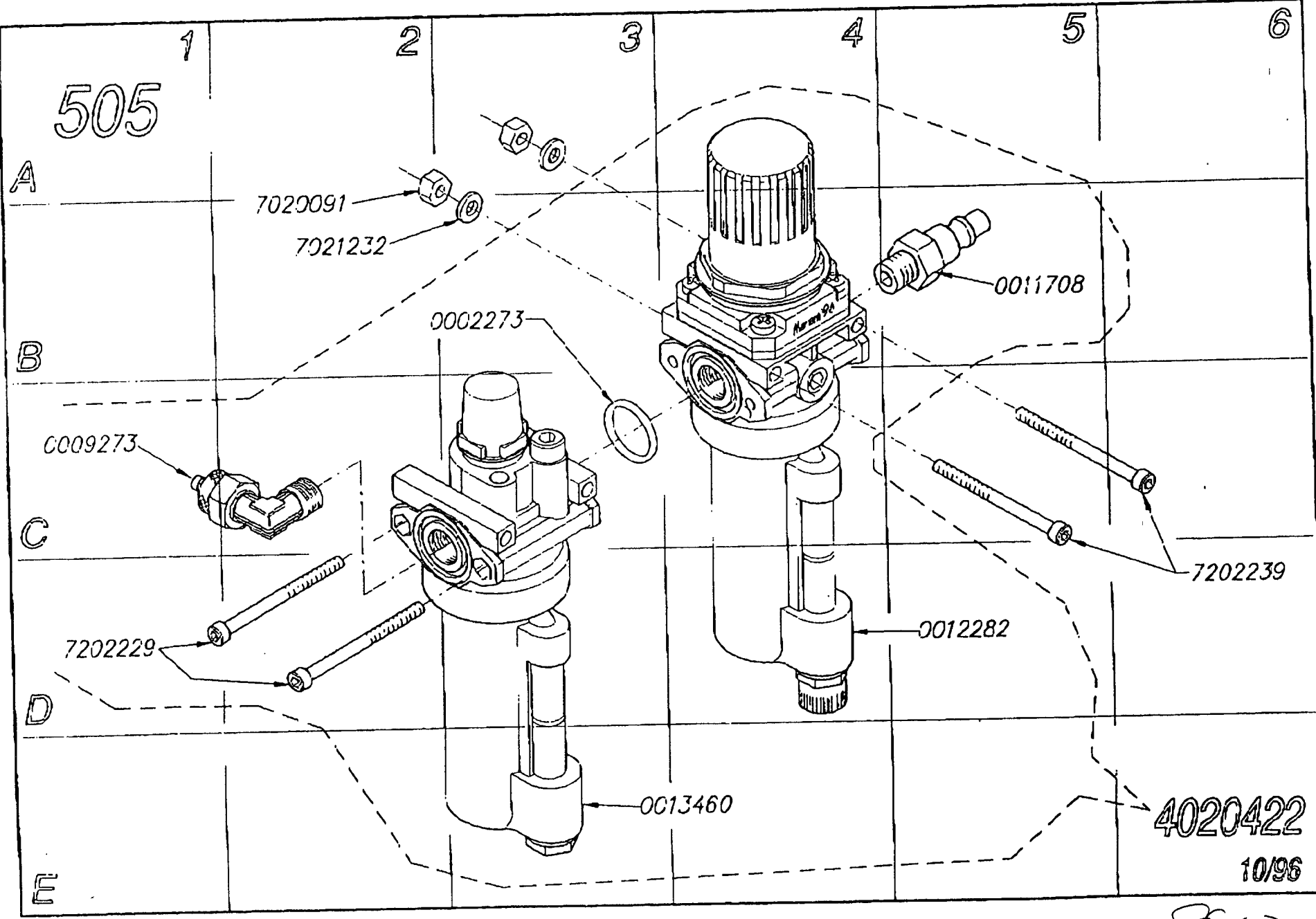
When putting the machine back in operation, check first the condition of all previously protected parts, and check for correct functioning of all devices before using the machine again.

## **12.0 SCRAPPING THE MACHINE**

Once it is decided to no longer use this machine it is required to make it inoperable by cutting the electric cord and the air supply hose.

Consider the machine as a special waste, dismantle the machine into homogeneous parts (metal, plastic, oils etc) and dispose of according to loca regulations.

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### 13.0 TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
When turning the machine on, the displays do not light.	<ul style="list-style-type: none"><li>• No electric power.</li><li>• Defect in the electric / electronic system.</li></ul>	<ul style="list-style-type: none"><li>• Check the input voltage</li><li>• Call the authorized ACCU service center for assistance</li></ul>
The machine gives random read-outs.	<ul style="list-style-type: none"><li>• Machine unstable on the floor</li><li>• Water in the tire</li><li>• Loose adaptor</li><li>• Defective electronic board</li></ul>	<ul style="list-style-type: none"><li>• Check that machine is stable</li><li>• Remove water from tire</li><li>• Tighten the adaptor firmly</li><li>• Call the ACCU service center for assistance</li></ul>
The machine does not stop after the balancing cycle	<ul style="list-style-type: none"><li>• Defective electronic component</li><li>• Low air pressure</li></ul>	<ul style="list-style-type: none"><li>• Stop immediately using the machine and call the authorized ACCU service center for assistance</li></ul>



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A

B

C

D

E

1

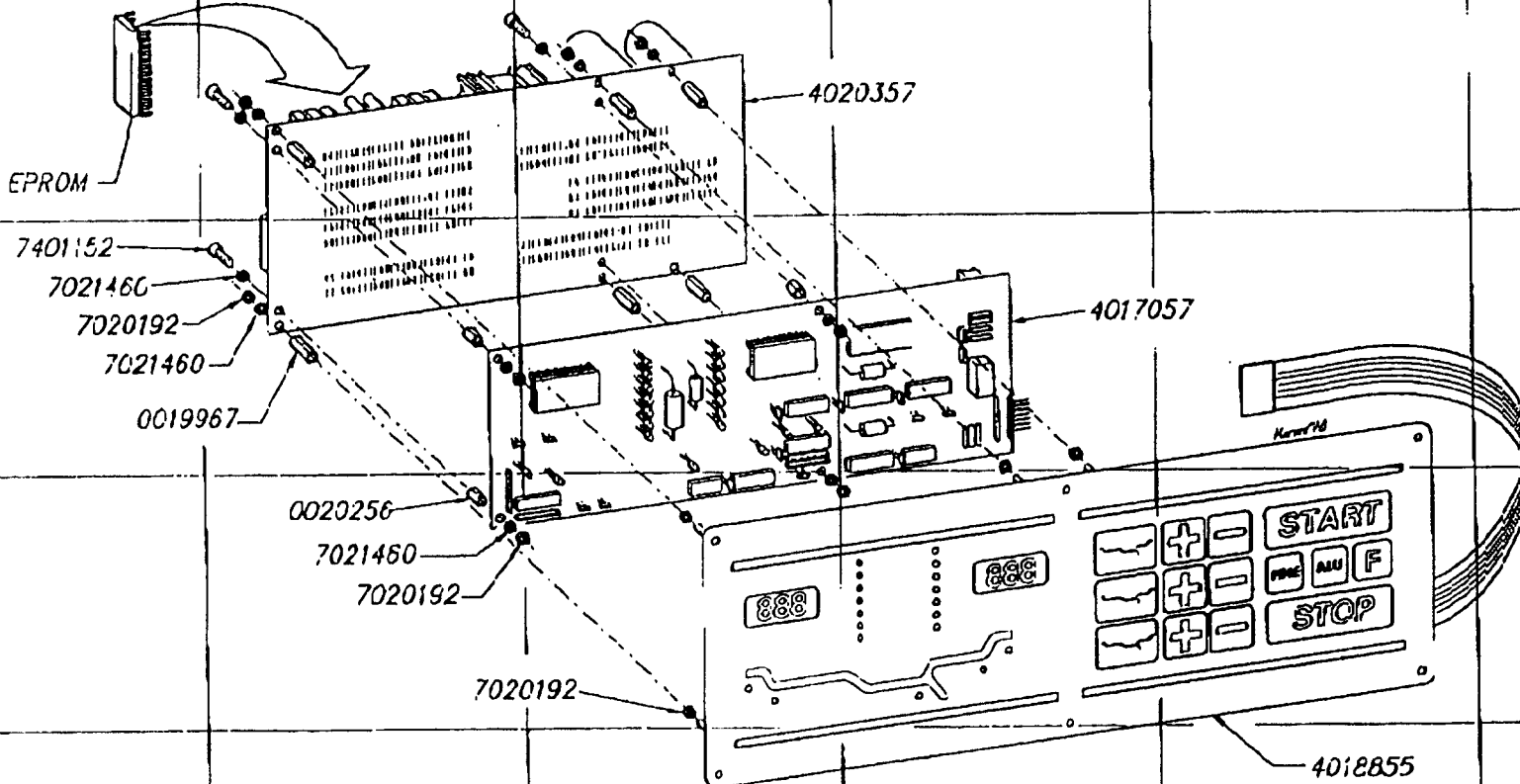
2

3

4

5

6



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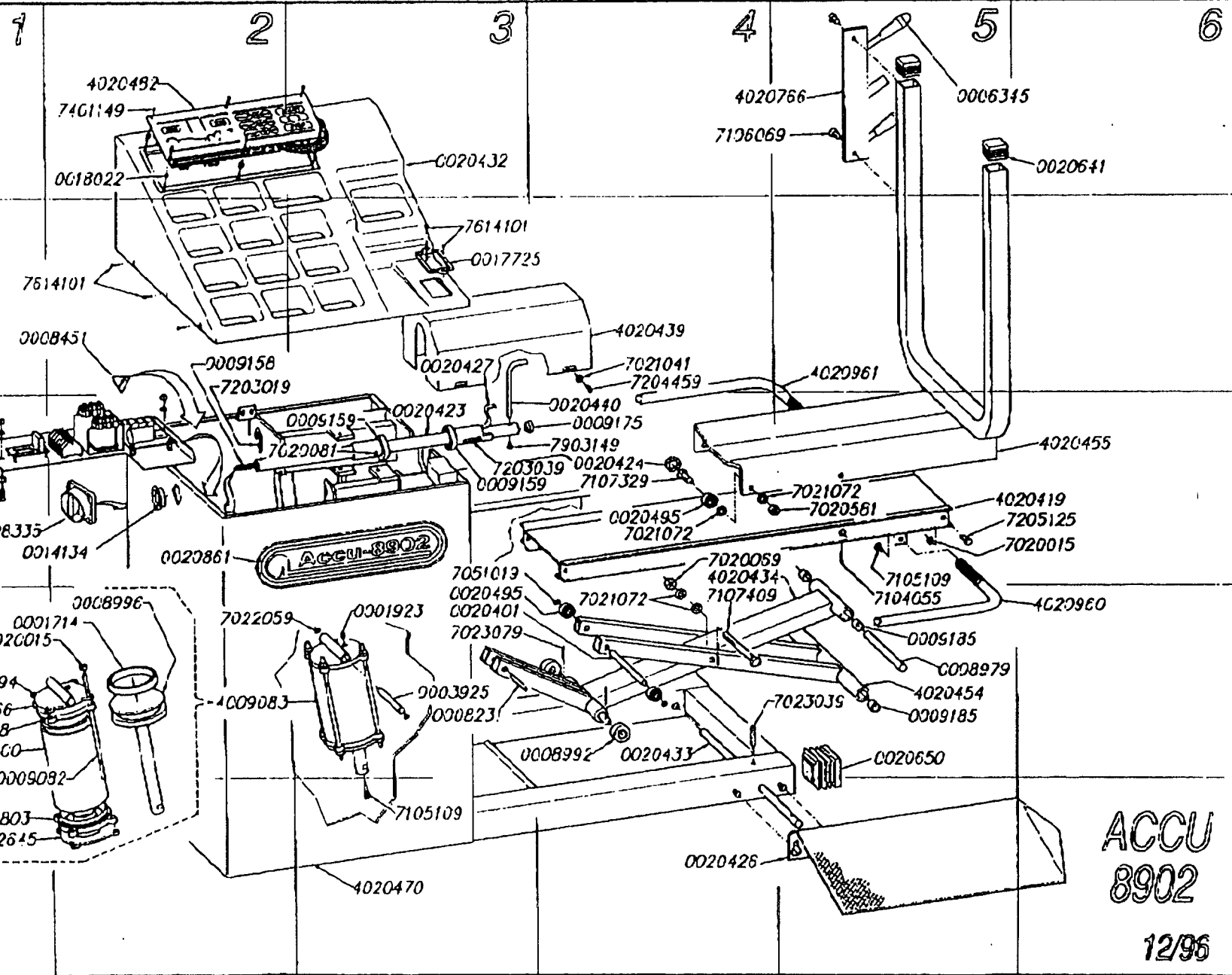
A

B

C

D

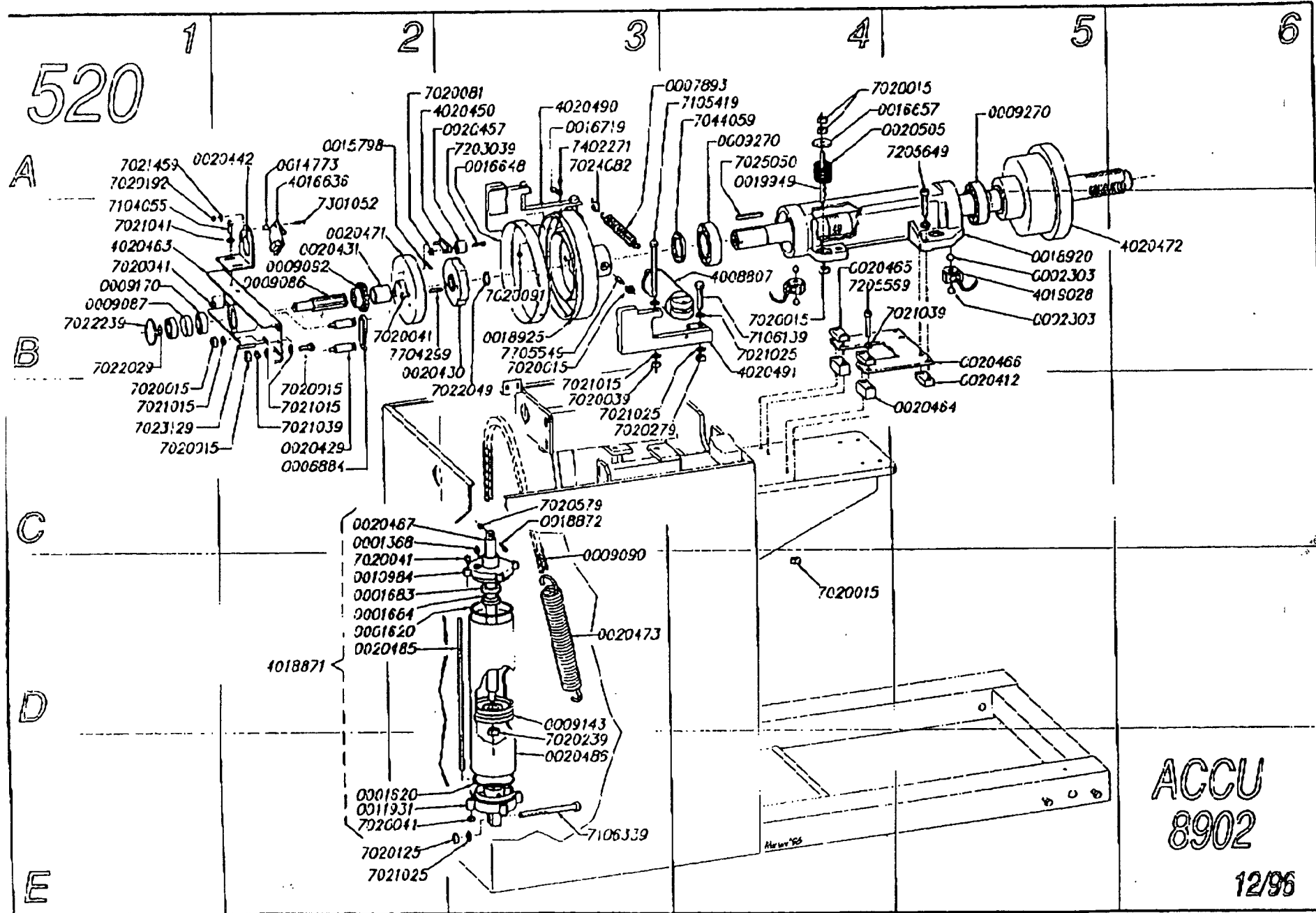
E



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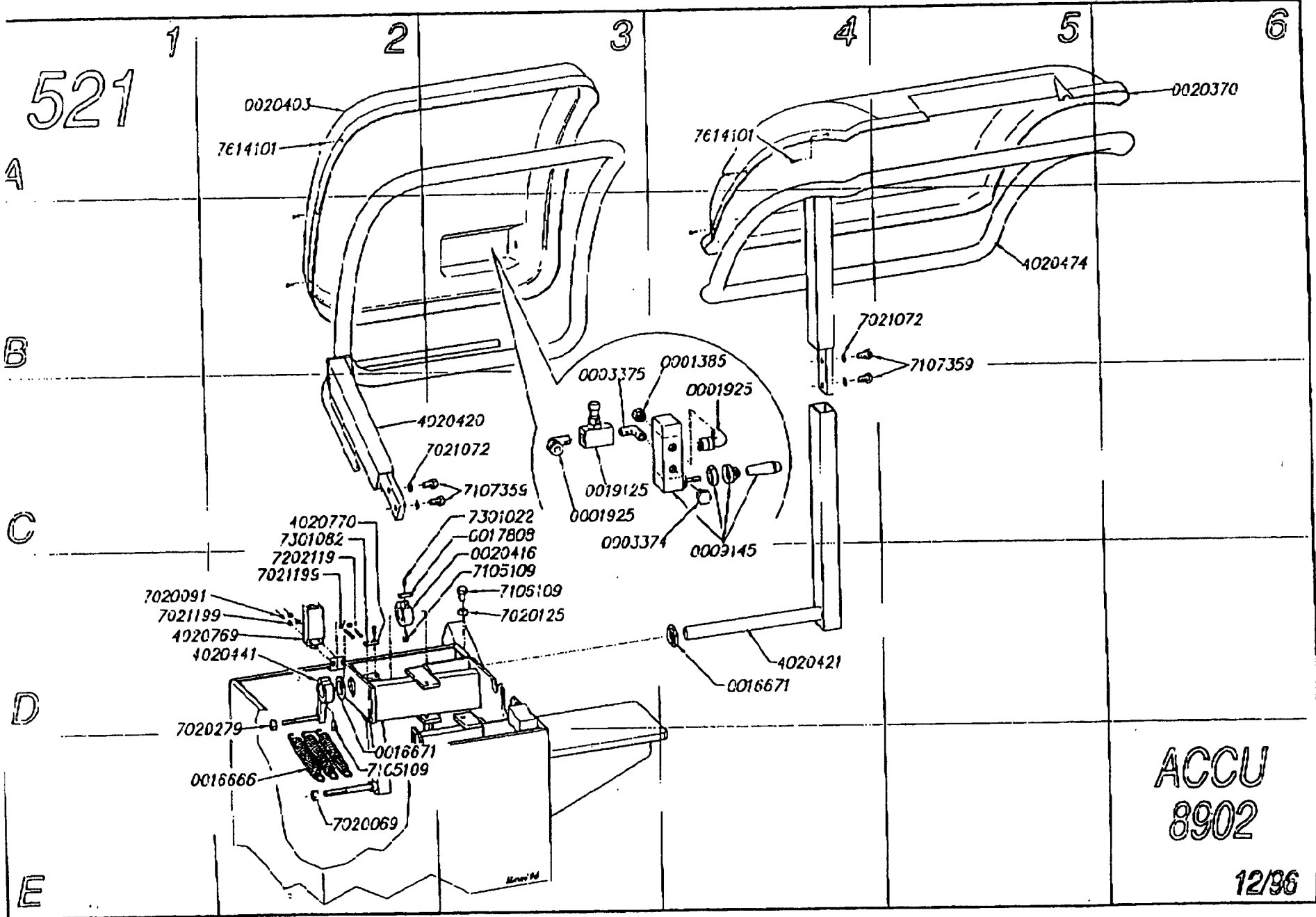
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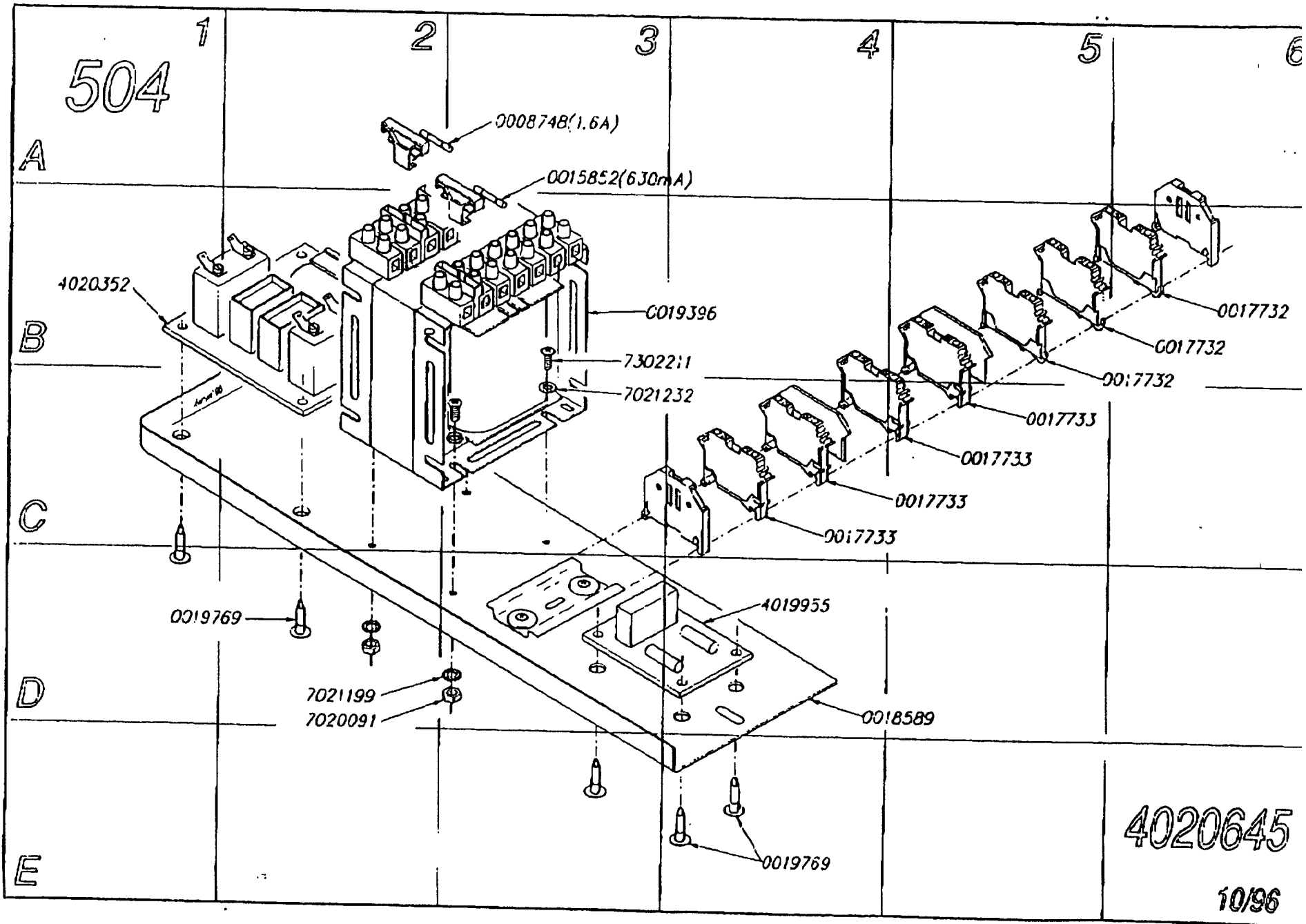
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