

OPERATION MANUAL

**EXCAVATOR
R55-7A**

HYUNDAI

[*http://marengine.com/r55-7a-excavator*](http://marengine.com/r55-7a-excavator)

CONTENTS

| | | | |
|--|------|--|------|
| Foreword | 0-1 | 6. Efficient working method | 4-10 |
| Before servicing this machine | 0-2 | 7. Operation in the special work sites | 4-14 |
| EC regulation approved | 0-3 | 8. Normal operation of excavator | 4-16 |
| Table to enter S/No and distribution | 0-4 | 9. Attachment lowering pattern | 4-17 |
| Safety labels | 0-5 | 10. Storage | 4-18 |
| Machine data plate | 0-13 | 11. RCV lever operating pattern | 4-20 |
| Guide(Direction, S/No, Symbol) | 0-14 | | |

SAFETY HINTS

| | |
|---------------------------------------|------|
| 1. Before operating the machine | 1-1 |
| 2. During operating the machine | 1-6 |
| 3. During maintenance | 1-13 |
| 4. Parking | 1-16 |

SPECIFICATIONS

| | |
|---|------|
| 1. Major components | 2-1 |
| 2. Specifications | 2-2 |
| 3. Working range | 2-3 |
| 4. Weight | 2-4 |
| 5. Lifting capacities | 2-5 |
| 6. Bucket selection guide | 2-7 |
| 7. Undercarriage | 2-8 |
| 8. Specification for major components | 2-9 |
| 9. Recommended oils | 2-12 |

CONTROL DEVICES

| | |
|-------------------------------------|------|
| 1. Cab devices | 3-1 |
| 2. Cluster | 3-2 |
| 3. Switches | 3-7 |
| 4. Levers and pedals | 3-11 |
| 5. Air conditioner and heater | 3-14 |
| 6. Others | 3-16 |

OPERATION

| | |
|---|-----|
| 1. Suggestion for new machine | 4-1 |
| 2. Check before starting the engine | 4-2 |
| 3. Starting and stop the engine | 4-3 |
| 4. Operation of the working device | 4-6 |
| 5. Traveling of the machine | 4-7 |

TRANSPORTATION

| | |
|---|-----|
| 1. Preparation for transportation | 5-1 |
| 2. Dimension and weight | 5-2 |
| 3. Loading the machine | 5-4 |
| 4. Fixing the machine | 5-6 |
| 5. Loading and unloading by crane | 5-7 |

MAINTENANCE

| | |
|---------------------------------------|------|
| 1. Instruction | 6-1 |
| 2. Tightening torque | 6-6 |
| 3. Fuel, coolant and lubricants | 6-9 |
| 4. Maintenance check list | 6-11 |
| 5. Maintenance chart | 6-16 |
| 6. Service instruction | 6-18 |
| 7. Electrical system | 6-36 |
| 8. Air conditioner and heater | 6-39 |

TROUBLESHOOTING GUIDE

| | |
|----------------------------|-----|
| 1. Engine | 7-1 |
| 2. Electrical system | 7-2 |
| 3. Others | 7-3 |

HYDRAULIC BREAKER AND QUICK CLAMP

| | |
|---|-----|
| 1. Selecting hydraulic breaker | 8-1 |
| 2. Circuit configuration | 8-2 |
| 3. Maintenance | 8-3 |
| 4. Precaution while operating the breaker | 8-4 |
| 5. Quick clamp | 8-6 |

| | |
|-------------|-----|
| INDEX | 9-1 |
|-------------|-----|

FOREWORD

This manual contains a number of instructions and safety recommendations regarding driving, handling, lubrication, maintenance, inspection and adjustment of the excavator.

The manual is to promote safety maintenance and enhance machine performance.

Keep this manual handy and have all personnel read it periodically.

If you sell the machine, be sure to give this manual to the new owners.

This machine complies with EC directive "2006/42/EC".

1. **Read** and **understand** this manual before operating the machine.

This operator's manual may contain attachments and optional equipment that are not available in your area. Please consult your local Hyundai distributor for those items you require.

Improper operation and maintenance of this machine can be hazardous and could result in serious injury or death.

Some actions involved in operation and maintenance of the machine can cause a serious accident, if they are not done in a manner described in this manual.

The procedures and precautions given in this manual apply only to intended uses of the machine.

If you use your machine for any unintended uses that are not specifically prohibited, you must be sure that it is safe for you and others. In no event should you or others engage in prohibited uses of actions as described in this manual.

2. **Inspect** the jobsite and **follow** the safety recommendations in the **safety hints** section before operating the machine.

3. Use **genuine Hyundai spare parts** for the replacement of parts.

We expressly point out that Hyundai will not accept any responsibility for defects resulting from non-genuine parts or non workmanlike repair.

In such cases Hyundai cannot assume liability for any damage.

Continuing improvements in the design of this machine can lead to changes in detail which may not be reflected in this manual. Consult Hyundai or your Hyundai distributor for the latest available information for your machine or for questions regarding information in this manual.

BEFORE SERVICING THIS MACHINE

It is the responsibility of the owner and all service and maintenance personnel to avoid accidents and serious injury by keeping this machine properly maintained.

It also is the responsibility of the owner and all service and maintenance personnel to avoid accidents and serious injury while servicing the machine.

No one should service or attempt to repair this machine without proper training and supervision.

All service and maintenance personnel should be thoroughly familiar with the procedures and precautions contained in this manual.

All personnel also must be aware of any federal, state, provincial or local laws or regulations covering the use and service of construction equipment.

The procedures in this manual do not supersede any requirements imposed by federal, state, provincial or local laws.

Hyundai can not anticipate every possible circumstance or environment in which this machine may be used and serviced.

All personnel must remain alert to potential hazards.

Work within your level of training and skill.

Ask your supervisor if you are uncertain about a particular task. Do not try to do too much too fast.

Use your common sense.

EC REGULATION APPROVED

- Noise level (EN474-1 : 2006 and 2000/14/EC) are as followings.
LWA : 98dB(EU only)
LPA : 78dB
- The value of vibrations transmitted by the operator's seat are lower than standard value of (EN474-1 : 2006 and 2002/44/EC)



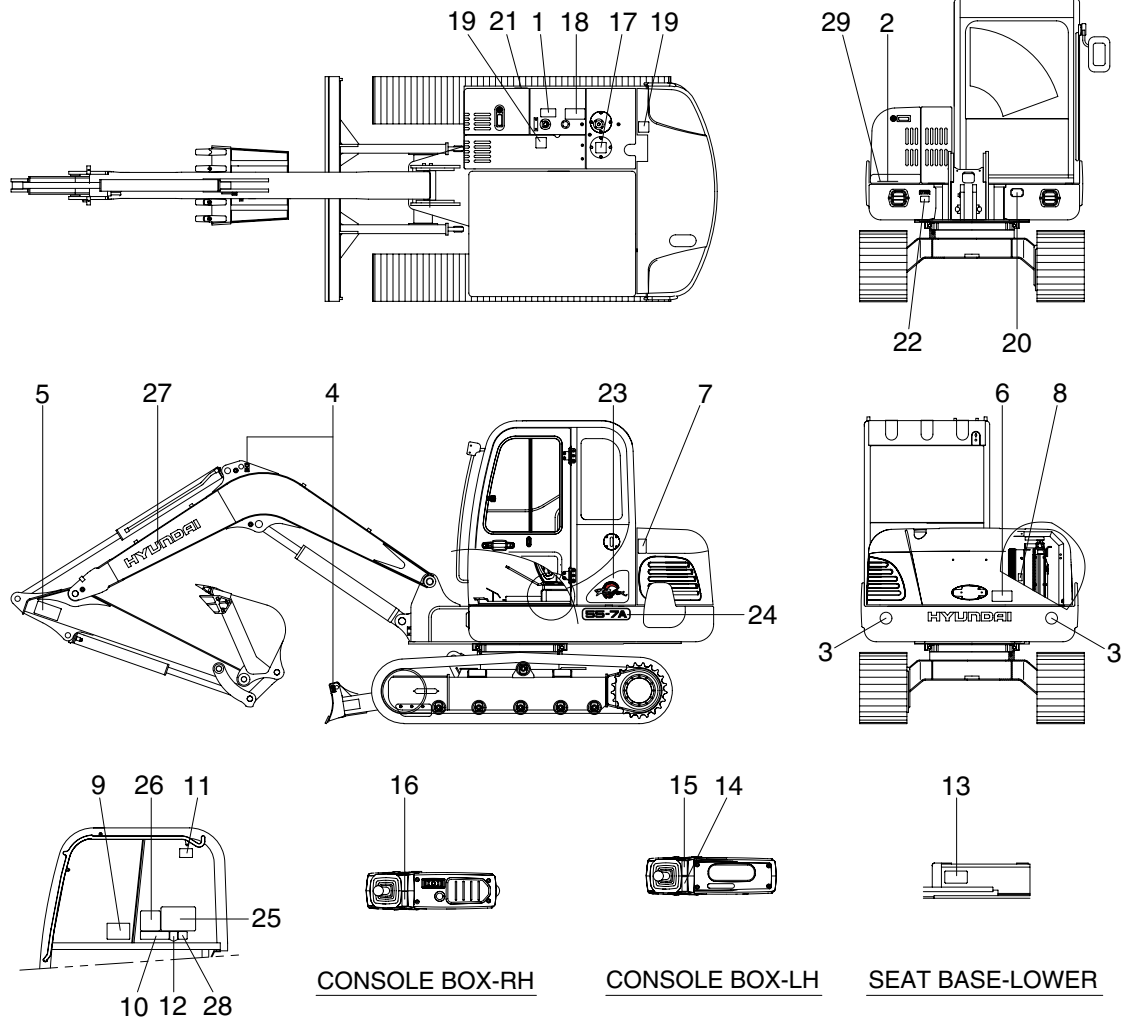
TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

| | |
|-----------------------------------|---|
| Machine Serial No. | |
| Engine Serial No. | |
| Manufacturing year | |
| Manufacturer Address | Hyundai Heavy Industries co., Ltd. 1 Chonha-Dong, Dong-Ku Ulsan The Republic of Korea. |
| Distributor for U.S.A Address | Hyundai Heavy Industries U.S.A, Inc 955 Estes Avenue Elk Grove village IL, 60001 U.S.A |
| Distributor for Europe Address | Hyundai Heavy Industries Europe N. V. Vossendal 11 2240 Geel Belgium |
| Dealer Address | |

SAFETY LABELS

1. LOCATION

Always keep these labels clean. If they are lost or damaged, attach them again or replace them with a new label.



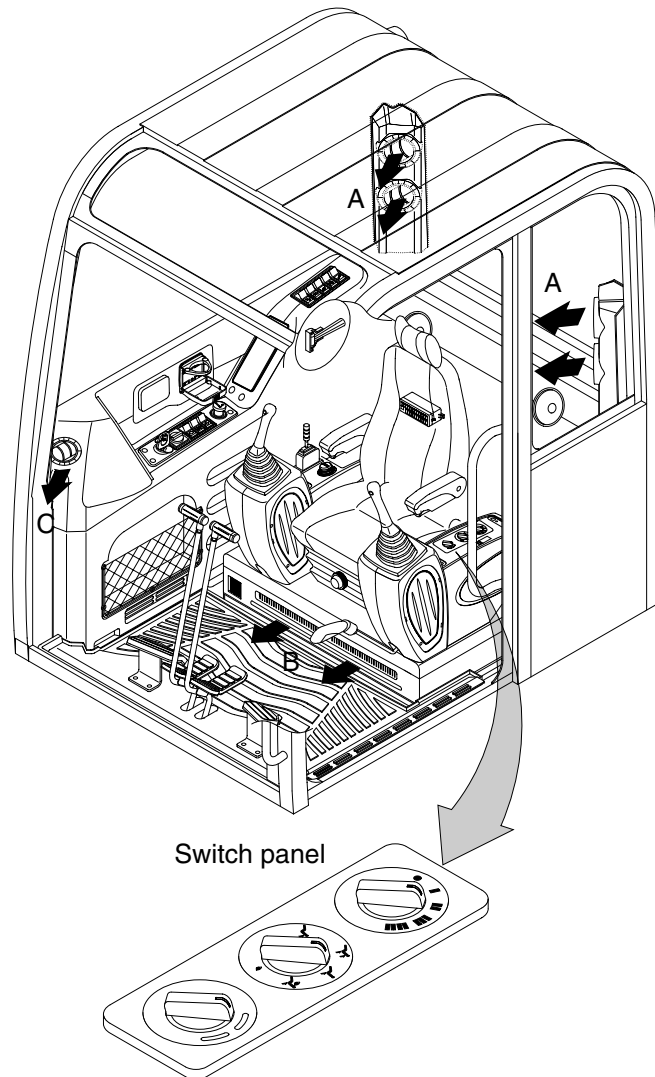
- | | | | | | |
|----|------------------------|----|---------------------------|----|-----------------------|
| 1 | Fueling | 11 | Safety front window | 21 | General warning-frame |
| 2 | Battery-accident | 12 | Emergency exit | 22 | Indicate-grease |
| 3 | Reflecting | 13 | Decal-aircon filter | 23 | Robex |
| 4 | Lifting point ideogram | 14 | Decal console tilting | 24 | Model name |
| 5 | Keep clear-boom/arm | 15 | Control ideogram-LH | 25 | Service instruction |
| 6 | Keep clear-rear | 16 | Control ideogram-RH | 26 | Lifting chart |
| 7 | Keep clear-side | 17 | Hydraulic oil lubrication | 27 | Trade mark-boom |
| 8 | Caution-engine room | 18 | Falling | 28 | Boom swing lock |
| 9 | Control ideograms | 19 | No step-engine hood | 29 | ECM connector |
| 10 | General cautions-cabin | 20 | Name plate | | |

R557A0SL01

5. AIR CONDITIONER AND HEATER

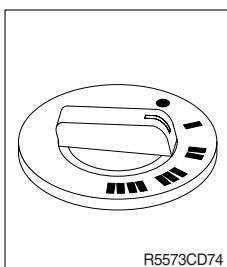
Air conditioner and heater are equipped for pleasant operation against outside temperature.

- Location of air flow ducts






R557A3CD45

1) FAN SWITCH



R5573CD74

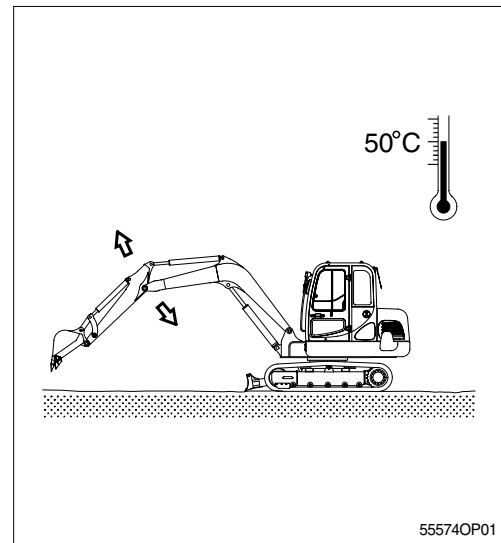
It is possible to control the fan to four steps.

-  : Low
-  : Medium-Low
-  : Medium-High
-  : High

7. OPERATION IN THE SPECIAL WORK SITES

1) OPERATION THE MACHINE IN A COLD WEATHER

- (1) Use proper engine oil and fuel for the weather.
- (2) Fill the required amount of antifreeze in the coolant.
- (3) Refer to the starting engine in cold weather.
Start the engine and extend the warming up operation.
- (4) Be sure to open the heater cock when using the heater.
- (5) Always keep the battery completely charged.
※ **Discharged batteries will freeze more easily than fully charged.**
- (6) Clean the machine and park on the wood plates.



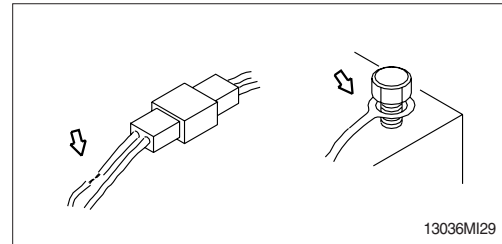
2) OPERATION IN SANDY OR DUSTY WORK SITES

- (1) Inspect air cleaner element frequently. Clean or replace element more frequently, if warning lamp comes ON and buzzer sounds simultaneously, regardless of inspection period.
※ **Replace the inner and outer element after 6 times of cleaning.**
- (2) Inspect radiator frequently, and keep cooling fins clean.
- (3) Prevent sand or dust from getting into fuel tank and hydraulic tank during refilling.
- (4) Prevent sand or dust from penetrating into hydraulic circuit by tightly closing breather cap of hydraulic oil tank. Replace hydraulic oil filter frequently.
- (5) Keep all lubricated part, such as pins and bushings, clean at all times.
- (6) If the air conditioner and heater filters clogged, the heating or cooling capacity will drop. Clean or replace the filter element more frequently.

7. ELECTRICAL SYSTEM

1) WIRING, GAUGES

Check regularly and repair loose or malfunctioning gauges when found.



2) BATTERY

(1) Check and repair

① Check the electrolyte level and fill with distilled water to the prescribed level as necessary.

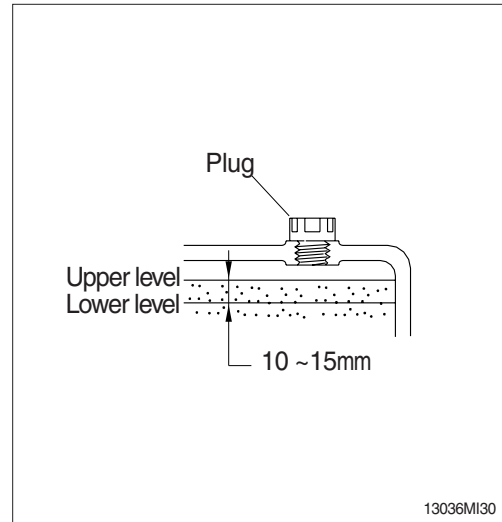
② Wash the terminal with hot water if it is contaminated, and apply grease to the terminals after washing.

⚠ **Do not stain clothes or skin with electrolyte as it is acid.**

Be careful not to get the electrolyte in eyes.

Wash with clean water and go to the doctor if it enters the eyes.

※ **Remove the fire and spark around battery.**

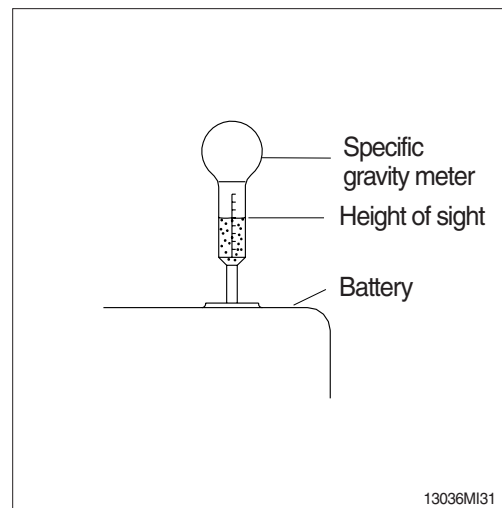


(2) Specific gravity of battery

Judge the charging rate of battery by the specific gravity. The specific gravity changes by the ambient temperature.

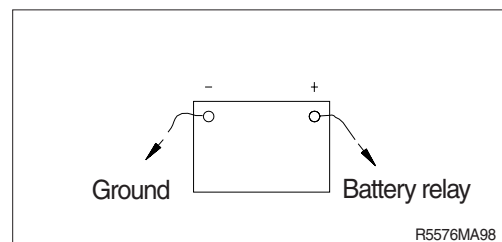
Check the charging rate by referring to the chart below.

| Temperature | 20°C (68°F) | 10°C (50°F) | -10°C (14°F) |
|---------------|----------------|----------------|-----------------|
| Charging rate | | | |
| 100% | 1.26 | 1.27 | 1.28 |
| 90% | 1.24 | 1.25 | 1.26 |
| 80% | 1.22 | 1.23 | 1.24 |
| 75% | 1.21 | 1.22 | 1.23 |



(3) Method of removing the battery cable

Remove the cable from the ground connection first(⊖ terminal side) and reconnect it last when reassembling.



A

| | |
|--------------------------------|------|
| After engine start | 4-4 |
| Air breather element | 6-29 |
| Air cleaner filter | 6-24 |
| Air conditioner & heater | 3-14 |
| Air conditioner filter | 6-39 |
| Attachment lowering | 4-17 |

B

| | |
|--------------------------------|------|
| Battery | 6-36 |
| Before starting engine | 4-2 |
| Boom lowering | 4-18 |
| Bucket replacement | 6-33 |
| Bucket selection guide | 2-7 |
| Bucket tooth replacement | 6-34 |

C

| | |
|--|------|
| Cab device | 3-1 |
| Cassette & radio | 3-16 |
| Changing machine control pattern | 4-21 |
| Cigar lighter | 3-23 |
| Coolant | 6-20 |
| Cooling fan | 6-24 |

D

| | |
|---------------------|-----|
| Dozer control | 4-7 |
|---------------------|-----|

E

| | |
|----------------------------------|------|
| Emergency exit | 0-9 |
| Engine oil filter | 6-18 |
| Engine oil level | 6-18 |
| Engine starting & stop | 4-3 |
| Engine starting by booster | 6-37 |
| Engine stop | 4-5 |

F

| | |
|----------------------------|------|
| Fan belt | 6-23 |
| Fuel filter | 6-26 |
| Fuel leakage | 6-26 |
| Fuel system bleeding | 6-26 |
| Fuel tank | 6-25 |
| Fuse box | 3-24 |

H

| | |
|------------------------------|------|
| Hydraulic breaker | 8-1 |
| Hydraulic oil changing | 6-28 |
| Hydraulic oil filling | 6-27 |
| Hydraulic oil level | 6-27 |

L

| | |
|-------------------------------|------------|
| Levers & pedals | 3-11 |
| Lifting capacities | 2-5 |
| Lubricant specification | 2-16, 6-10 |

M

| | |
|--------------------------------|------|
| Maintenance check list | 6-11 |
| Major component | 2-1 |
| Monitor panel | 3-2 |
| Mounting and dismounting | 1-12 |

N

| | |
|-----------------------------|-----|
| New machine operation | 4-1 |
|-----------------------------|-----|

O

| | |
|-------------------------|------|
| Oil cooler | 6-20 |
| Operating pattern | 4-21 |

P

| | |
|------------------------------------|------|
| Pedals | 3-11 |
| Periodical replacement parts | 6-5 |
| Prefilter | 6-25 |
| Pilot line filter | 6-29 |

R

| | |
|---------------------------|------------|
| Radiator flushing | 6-20 |
| Radio | 3-16 |
| RCV lever lubricate | 6-31 |
| Recommended oils | 2-16, 6-10 |
| Relieving pressure | 6-3 |
| Return filter | 6-29 |

S

| | |
|---------------------|------|
| Safety hints | 1-1 |
| Safety labels | 0-5 |
| Safety parts | 6-5 |
| Seat | 3-23 |
| Service meter | 3-3 |

| | |
|--------------------------------------|------|
| Speciation for major component | 2-13 |
| Specification | 2-2 |
| Start switch | 3-7 |
| Storage | 4-19 |
| Suction strainer | 6-28 |
| Swing bearing grease | 6-30 |
| Swing reduction gear oil | 6-30 |
| Switch panel | 3-7 |
| Switches | 3-7 |

T

| | |
|---------------------------------|------|
| Torques-major component | 6-8 |
| Torques-fastener | 6-6 |
| Towing machine | 4-10 |
| Track adjustment | 6-32 |
| Track shoe | 2-12 |
| Transportation | 5-1 |
| Travel reduction gear oil | 6-31 |
| Travelling machine | 4-8 |
| Troubleshooting guide | 7-1 |

U

| | |
|---------------------|------|
| Undercarriage | 2-12 |
|---------------------|------|

W

| | |
|--------------------------------|------|
| Warming up operation | 4-5 |
| Warning lamps | 3-4 |
| Weight | 2-4 |
| Working device operation | 4-7 |
| Working method | 4-11 |
| Working range | 2-3 |

Diesel Engines

| | |
|----------------|-------------|
| ABS | Agco-Sisu |
| Akasaka | Baudouin |
| BMW | Bukh |
| Caterpillar | CHN 25/34 |
| Cummins | Daihatsu |
| Detroit | Deutz |
| Doosan-Daewoo | Fiat |
| Ford | GE |
| Grenaa | Guascor |
| Hanshin | Hatz |
| Hino | Honda |
| Hyundai | Isotta |
| Isuzu | Iveco |
| John-Deere | Kelvin |
| Kioti | Komatsu |
| Kubota | Liebherr |
| Lister | Lombardini |
| MAK | MAN B&W |
| Mercedes | Mercruiser |
| Mirrlees BS | Mitsubishi |
| MTU | MWM |
| Niigata | Paxman |
| Perkins | Pielstick |
| Rolls / Bergen | Ruggerini |
| Ruston | Scania |
| Shibaura | Sisu-Valmet |
| SKL | Smit-Bolnes |
| Sole | Stork |
| VM-Motori | Volvo |
| Volvo Penta | Westerbeke |
| Wichmann | Yanmar |

Machinery

| | |
|---------------|-------------|
| ABG | Airman |
| Akerman | Ammann |
| Astra | Atlas Copco |
| Atlas Weyha. | Atlet |
| Bell | Bendi |
| Bigjoe | Bobcat |
| Bomag | BT |
| Carelift | Case |
| Caterpillar | Cesab |
| Challenger | Champion |
| Claas | Clark |
| Combilift | Crown |
| Daewoo-Doosan | Demag |
| Deutz-Fahr | Dressta |

Machinery

| | |
|----------------|--------------|
| Drott | Dynapack |
| Extec | Faun |
| Fendt | Fiat |
| Fiatallis | Flexicoil |
| Furukawa | Gehl |
| Genie | Grove-gmk |
| Halla | Hamm |
| Hangcha | Hanix |
| Hanomag | Hartl |
| Haulpack | Hiab |
| Hidromek | Hino truck |
| Hitachi | Hyster |
| Hyundai | IHI |
| Ingersoll-rand | JCB |
| JLG | John-Deere |
| Jungheinrich | Kalmar |
| Kato | Kioti |
| Kleeman | Kobelco |
| Komatsu | Kramer |
| Kubota | Lamborghini |
| Landini | Liebherr |
| Linde | Link-belt |
| Manitou | Massey-Ferg. |
| Mccormick | MDI-Yutani |
| Mitsubishi | Moxy |
| Mustang | Neusson |
| New-Holland | Nichiyu |
| Nissan | OK |
| OM-Pimespo | others-tech |
| Pel-Job | PH-mining |
| Poclain | Powerscreen |
| Same | Samsung |
| Sandvik | Scania |
| Schaefer | Schramm |
| Sennebogen | Shangli |
| Shibaura | Steiger |
| Steinbock | Steyr |
| Still | Sumitomo |
| Super-pac | Tadano |
| Takeuchi | TCM |
| Terex | Toyota |
| Valpadana | Venieri |
| Versatile | Vogele |
| Volvo | Weidemann |
| Wirtgen | Yale |
| YAM | Yanmar |