

OPERATION AND PARTS MANUAL



COLLOMIX[®] SERIES MODEL XM2650 FORCED ACTION MIXER

Revision #0 (03/15/10)

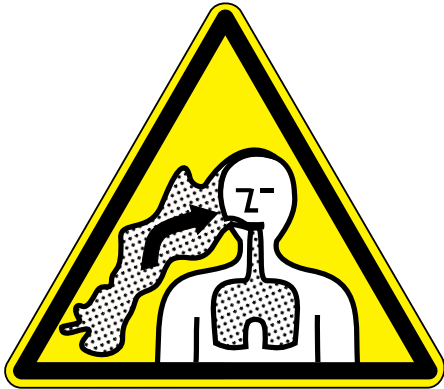
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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

SILICOSIS/RESPIRATORY WARNINGS

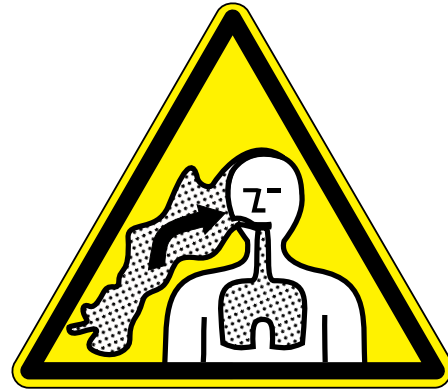
⚠️ WARNING



SILICOSIS WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.

⚠️ WARNING



RESPIRATORY HAZARDS

Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturers or suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by NIOSH/MSHA for the materials being used.

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NOTICE

Specifications and part numbers are subject to change without notice.

PARTS ORDERING PROCEDURES

www.multiquip.com

Ordering parts has never been easier! Choose from three easy options:

Effective:
January 1st, 2006



Order via Internet (Dealers Only):

Order parts on-line using Multiquip's SmartEquip website!

- View Parts Diagrams
- Order Parts
- Print Specification Information



If you have an MQ Account, to obtain a Username and Password, E-mail us at: parts@multiquip.com.

To obtain an MQ Account, contact your District Sales Manager for more information.

Goto www.multiquip.com and click on **Order Parts** to log in and save!

Use the **internet** and qualify for a **5% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Fax (Dealers Only):

All customers are welcome to order parts via Fax.

Domestic (US) Customers dial:
1-800-6-PARTS-7 (800-672-7877)

Fax your order in and qualify for a **2% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Phone: Domestic (US) Dealers Call:
1-800-427-1244

Non-Dealer Customers:

Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



International Customers should contact their local Multiquip Representatives for Parts Ordering information.

When ordering parts, please supply:

- | | |
|---|--|
| <input type="checkbox"/> Dealer Account Number | <input type="checkbox"/> Specify Preferred Method of Shipment: |
| <input type="checkbox"/> Dealer Name and Address | <input checked="" type="checkbox"/> UPS/Fed Ex <input checked="" type="checkbox"/> DHL |
| <input type="checkbox"/> Shipping Address (if different than billing address) | <input type="checkbox"/> Priority One <input checked="" type="checkbox"/> Truck |
| <input type="checkbox"/> Return Fax Number | <input type="checkbox"/> Ground |
| <input type="checkbox"/> Applicable Model Number | <input type="checkbox"/> Next Day |
| <input type="checkbox"/> Quantity, Part Number and Description of Each Part | <input type="checkbox"/> Second/Third Day |

NOTICE

All orders are treated as *Standard Orders* and will ship the same day if received prior to 3PM PST.

WE ACCEPT ALL MAJOR CREDIT CARDS!



SAFETY INFORMATION


Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.




SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: **DANGER, WARNING, CAUTION** or **NOTICE**.


SAFETY SYMBOLS

 **DANGER**

Indicates a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**.

 **WARNING**

Indicates a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.

 **CAUTION**

Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE INJURY**.

NOTICE

Addresses practices not related to personal injury.

Potential hazards associated with the operation of this equipment will be referenced with hazard symbols which may appear throughout this manual in conjunction with safety messages.

GENERAL SAFETY

CAUTION

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, respiratory protection, hearing protection, steel-toed boots and other protective devices required by the job or city and state regulations.



- Avoid wearing jewelry or loose fitting clothes that may snag on the controls or moving parts as this can cause serious injury.

- **NEVER** operate this equipment when not feeling well due to fatigue, illness or when under medication.



- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **ALWAYS** clear the work area of any debris, tools, etc. that would constitute a hazard while the equipment is in operation.

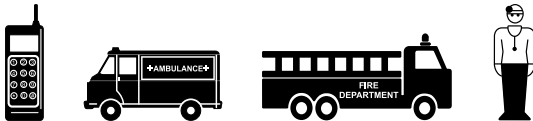
- **ALWAYS** check the equipment for loosened threads or bolts before starting.

- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.

SAFETY INFORMATION


NOTICE

- This equipment should only be operated by trained and qualified personnel 18 years of age and older.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- **NEVER** use accessories or attachments that are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **ALWAYS** know the location of the nearest **fire extinguisher**. 
- **ALWAYS** know the location of the nearest **first aid kit**. 
- **ALWAYS** know the location of the nearest phone or **keep a phone on the job site**. Also, know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.




MIXER SAFETY

DANGER

- **NEVER** operate the equipment in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**. 
- **DO NOT** mix **flammable** or **explosive** substances.

WARNING

- **NEVER** place your hands inside the drum while starting or operating this equipment. 
- **NEVER** disconnect any **emergency** or **safety devices**. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these devices will void all warranties.
- Before operating mixer, ensure that guard hood is in position and correctly fitted.

CAUTION

- **NEVER** lubricate components or attempt service on a running machine.

NOTICE

- **ALWAYS** keep the machine in proper running condition.
- **ALWAYS** ensure mixer is on level ground before mixing
- **ALWAYS** operate and load the mixer from the front only.
- Fix damage to machine and replace any broken parts immediately.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.

SAFETY INFORMATION

ELECTRIC MOTOR SAFETY

NOTICE

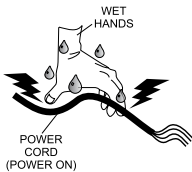
- Operate electric motor only at the specified voltage indicated on the nameplate.
- **DO NOT** spray water onto electric motor.
- **ALWAYS** disconnect AC power plug from power source before moving mixer, changing mixing tool, or performing maintenance..
- **ALWAYS** make sure the ON/OFF switch on the electric motor is in the OFF position when not in use and before inserting the mixer's power plug into an AC receptacle.



Power Cord/Cable Safety

! DANGER

- **NEVER** let power cords or cables lay in water.
- **NEVER** use **damaged** or **worn** cables or cords when connecting equipment to generator. Inspect for cuts in the insulation.
- **NEVER** grab or touch a live power cord or cable with wet hands. The possibility exists of **electrical shock, electrocution or death.**
- Make sure power cables are securely connected. Incorrect connections may cause electrical shock and damage to the mixer.



! CAUTION

- Ensure that cables and cords will not be tripped over or trapped underneath the mixer.
- Never use the cable to pull out the plug from the power source.

NOTICE

- **ALWAYS** make certain that proper power or extension cord has been selected for the job.
- Protect the cable from heat, oil, and sharp edges.

TRANSPORTING SAFETY

! CAUTION

- **NEVER** allow any person or animal to stand underneath the equipment while lifting.

NOTICE

- **ALWAYS** make sure forklift forks are inserted into pockets (if applicable) as far as possible when lifting the mixer.
- **ALWAYS** shutdown motor before transporting.
- **NEVER** lift the equipment while the motor is running.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- **DO NOT** lift machine to unnecessary heights.
- **ALWAYS** tie down equipment during transport by securing the equipment with rope.

Table 1. XMS2650 Specifications	
Capacity	17 gals./2 cu ft.
Power Supply	110V / 21A
Motor	1.5 HP
Motor Protection Class	IP 54
Paddle Speed	120/600 rpm
Scraper Speed	31 rpm
Mixing Cycles	90,180 sec, continuous
Weight	312 lb (141.5 kg)
Sound Pressure Level	70 dB (A)
Sound Power Level	<85 dB (A)

GENERAL INFORMATION

The MQ XM2650 Forced-Action Mixer is a mobile electric mixer that offers a powerful Planetary Gear Drive System mixing device designed for mixing light to very heavy viscous materials in short mixing times.

The Planetary Gear Drive System converts the power into three different speeds to the mixing tools and the edge scraper. In the mixing tub, two counter-rotating mixing tools are guided through the mixing material while rotating around their own axes and the middle of the gear unit at the same time. The edge scraper, which moves continuously around the edge of the container, forces the material back into the middle. This ensures that the material is mixed very quickly and thoroughly.

FEATURES

The XM2650 has the following features:

- Posi-lock mixing head for operator safety.
- Counter-rotating mixing paddles that force materials through high intensity mixing zone for optimum mixing results.
- High torque mixing generated through powerful gearing system.
- Mixing timer that provides 90 sec., 180 sec., and continuous mixing modes.
- Emergency ON/OFF switch.
- Powerful 1.5 HP, 110V/60 Hz motor.
- Easy carry handle.
- Rugged mobile 2-cu ft. plastic tub.
- Oversized wheels for easy transportation.

EXTENSION CABLES

When an extension cable is used, it should be a 3-wire configuration that includes a ground wire that conforms to UL code. Choose the correct size of an extension cord as shown in Table 2. Remember **distance** affects the wire size of the extension cable. Ensure that the extension cable is carefully laid out avoiding **wet areas**, **sharp edges** and locations where vehicles might run over it.

Table 2. Extension Cord Sizes

Ampere Rating Range	Volts	Length of Cord in Feet					
	115V	25 ft.	50 ft.	100 ft.	150 ft.	200 ft.	250 ft.
	230V	50 ft.	100 ft.	200 ft.	300 ft.	400 ft.	500 ft.
0-2	18	18	18	16	16	14	
2-3	18	18	16	14	14	12	
3-4	18	18	16	14	12	12	
4-5	18	18	14	12	12	10	
5-6	18	16	14	12	10	10	
6-8	18	16	12	10	10	8	
8-10	18	14	12	10	8	8	
10-12	16	14	10	8	8	6	
12-14	16	12	10	8	6	6	
14-16	16	12	10	8	6	6	
16-18	14	12	8	8	6	4	
18-20	14	12	8	6	6	4	



Figure 1. XM2650 Components

COMPONENTS

Refer to Figure 1 for the location of the following mixer components.

1. **Timer Switch** — Used to select mixing time of 90 sec, 180 sec or continuous mixing mode.
2. **Emergency ON/OFF Switch** — Switches the power on and off. The switch automatically jumps to the off position in the event of undervoltage which prevents the machine from being started up again unintentionally.
3. **Lifting Rings (2)** — Used to attach belts for lifting and moving the mixer using a forklift or crane.
4. **Motor** — Provides 1.5 HP, 110V/ 60 Hz power to the mixer.
5. **Carrier Handle** — Used to hold the mixer and move the machine on flat surfaces. Handle can be locked in place which prevents the machine from tipping forward when lifted.
6. **Tub Control Pin** — Enables the mixer when a suitable tub is placed on the mixer. The control pin ensures that the mixer will not start without a tub in place.
7. **Wheels** — Easily transports the mixer from one location to another.
8. **Tub Mount** — Holds the tub in place.
9. **Tub** — Holds up to 17 gallons of mixing material.
10. **Mixing Paddles** — Counter-rotates at optimum rpm to mix material. Paddles are changeable to accommodate thin and thick materials.
11. **Rim Scraper** — Continuously moves around the rim of the tub and forces the material back into the middle of the tub.
12. **Guard Hood** — Protects the gear unit and the mixing tools from direct access. Hood is has opening on top, with a mesh guard, to allow operator to see the inside of the tub.
13. **Latch Bar** — Releases the swivel arm when pulled out, to open and close the mixer.
14. **Swivel Arm** — Opens the mixer when pulled up and closes the mixer when pulled down.

OPERATION

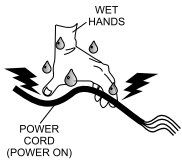
POWER CONNECTION

CAUTION

Before plugging the power cable, check and make sure that the ON/OFF switch is off (position 0).

1. Connect the mixer power cable to a 110V, 60 Hz power source. Make sure you conform to the specifications on the nameplate of the mixer.
2. If necessary, use an extension cord (see Table 2) of adequate current carrying capacity (type SJNW 3X13 AWG). **NEVER** use a **worn** or **frayed** extension cord. Insert the electric motor's power plug into one end of the extension cord.

DANGER



NEVER touch the power cord with **wet hands** or while **standing in water** when it is connected to a power source. The possibility exists of electrical shock (electrocution) even death. **NEVER** spray water directly on the electric motor.

NOTICE

To prevent personnel from tripping over the extension cord, position the extension cord so that it lays flat and is not curled.

OPENING THE MIXER

1. Stand in front of the mixer and grab the swivel arm and latch bar with one hand at the same time. See Figure 2.

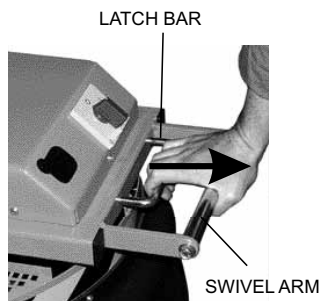


Figure 2. Pulling the Latch Bar

2. Pull out the latch bar. This unlocks the mixer.

3. Pull up the swivel arm to open the mixer. See Figure 3.

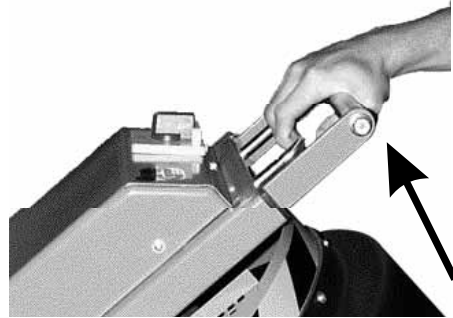


Figure 3. Opening the Mixer

CAUTION

Do not open or close the mixer at any other point other than with the swivel arm to prevent the risk of crushing.

CAUTION

Do not reach into the area between the tub and the guard hood while opening and closing the mixer.

4. Check the tub and make sure it is completely empty.

NOTICE

Use original tub only. Other tubs normally do not have the same dimensions and will prevent rim scraper from working properly. If a higher tub is used, it may not be possible to close the mixer.

OPERATING THE MIXER

1. Make sure the tub is seated properly on the tub mount. The mixer will not start without a tub in place. The mixer is enabled by the control pin as soon as the tub is in place.

CAUTION

Never bridge the control pin or press it without a tub in place. Make sure that the control pin moves freely and is kept clean at all times.

2. Fill the tub with material to be mixed.
3. Set the timer to the desired mixing time (90 seconds,

180 seconds, or continuous). See Figure 4.

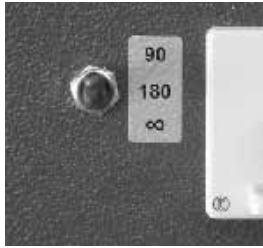


Figure 4. Timer Switch

NOTICE

When you mix new and unfamiliar materials, determine the time required for mixing when you mix them for the first time. By setting the correct mixing time, you will achieve evenly and thoroughly mixed material every time.

4. Turn the ON/OFF switch on (position 1). See Figure 5.

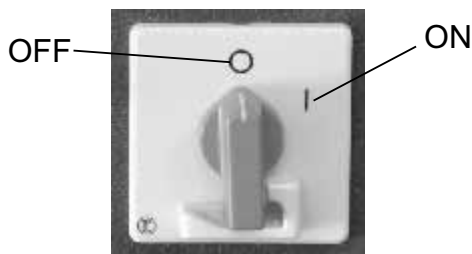


Figure 5. ON/OFF Switch

5. Unlock the mixer by pulling out the latch bar.
6. Pull down the swivel arm to close the mixer and release the latch bar. The mixer should lock in place on its own.
7. Mixing will start and then automatically stop after the set mixing time. The ON/OFF switch will stay at position 1. If the machine is closed again, the set time will start all over again.
8. If timer was set to **continuous**, the ON/OFF switch has to be turned off (position 0) to stop mixing.

9. If mixer is opened while mixing is in progress, mixing will stop immediately. The ON/OFF switch will stay at position 1. The mixer will start again when it is closed. If a time was set, it will start all over again.

NOTICE

Never start the mixer if there is any hardened material in the mixing tub or if any of the mixing tools are jammed.

Always make sure that the mixer has completely stopped before taking any material samples.

EMERGENCY STOP

1. If it necessary to stop the mixer at any time, turn the ON/OFF switch to position 0. This completely turns off the mixer.
2. The ON/OFF switch also has an undervoltage release which ensures that the switch automatically jumps to position 0 when there is an undervoltage. This prevents the mixer from starting up again accidentally.

Cases of undervoltage are as follows:

- a. power failure
- b. power cable pulled from the plug.
- c. power supply breakdown
- d. drive unit overheats.

NOTICE

If drive unit overheats, allow the drive unit to cool down before trying to restart mixer. Reduce the amount of mixing material if necessary.

CAUTION

ALWAYS disconnect the mixer from the power supply before cleaning, changing the mixing tool, or performing any maintenance.

CAUTION

To assure product safety and reliability, repairs, maintenance, and adjustments should be performed by an authorized service center or qualified technician to prevent any misplaced wires and components that could cause serious hazards.

1. Clean the machine and mixing tool after every use.
2. Apply grease to all moving parts at regular intervals.
3. Replace all damaged or bent machine parts.
4. Replace mixing tub and mixing tool with genuine replacement parts to guarantee that the machine will work properly.

ADJUSTING THE HEIGHT OF MIXING TOOLS

In order to prevent deposits of residual material collecting at the bottom of the tub, the mixing tools are height-adjustable. To adjust:

1. Loosen the hexagon nut on the drive spindle and move the mixing tool up or down as required by turning it to the left or right. See Figure 6.

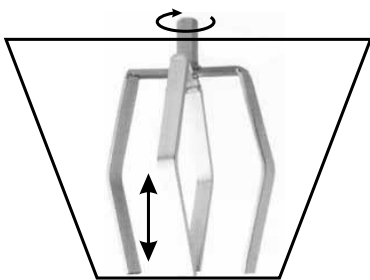


Figure 6. Mixing Tool Height Adjustment

2. Make sure that the mixing tools are approximately 1 to 2 mm above the bottom of the tub. If they are too low they will scrape against the bottom of the tub and damage it beyond repair.

CHANGING THE MIXING TOOLS

The mixing tools are fitted and adjusted at the factory. To remove them:

1. Loosen the locking nut slightly with an open-ended wrench while holding the mixing tool firmly with a second open-ended wrench. See Figure 7.

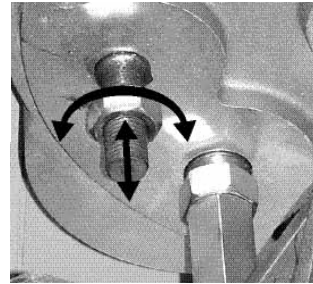


Figure 7. Changing Mixing Tool

2. Unscrew the mixing tool.

READJUSTING RIM SCRAPER

1. The rim scraper is adjusted at the factory. If it necessary to readjust it, make sure that the arm of the rim scraper does not scrape against the edge of the tub. See Figure 8.

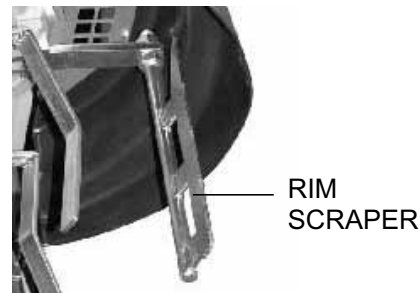


Figure 8. Rim Scraper

2. Use the hexagon nut to adjust the rim scraper so that it is as close as possible to the edge and bottom of the tub. However, it must not be in contact with these surfaces.

TROUBLESHOOTING CHART

Table 3. Mixer Troubleshooting

Symptom	Possible Problem	Solution
Mixer does not start.	Cable too long and cable cross-section not large enough?	Check cable cross-section. Must be 2.5 mm ² . Reduce cable length..
	ON/OFF switch is set to "0"?	Set ON/OFF switch to "1".
	Plug not connected?	Connect plug to power outlet.
	No power from main power supply?	Check main power supply.
	No mixing tub in mixer?	Insert mixing tub correctly.
	Incorrect mixing tub in mixer?	Use the correct mixing tub.
Machine turns off after a short time and cannot be restarted.	Bimetal element triggered (machine overload)?	Allow the mixer to cool down for about 2 minutes. If necessary, reduce the amount of mixing material.
	Cable too long and cable cross-section not large enough?	Check cable cross-section. Must be 2.5 mm ² . Reduce cable length..
	Plug got disconnected?	Reconnect plug to power outlet.
	Loss of power from main power supply?	Check main power supply.
Mixing tub or mixing tool is damaged	Mixing tool set too low?	Set the mixing tool to the correct height.

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT.....	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.....		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN....	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:
 “INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:
 “S/N XXXXX AND BELOW”
 “S/N XXXX AND ABOVE”
 “S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:
 “XXXXX ONLY”
 “NOT USED ON XXXX”

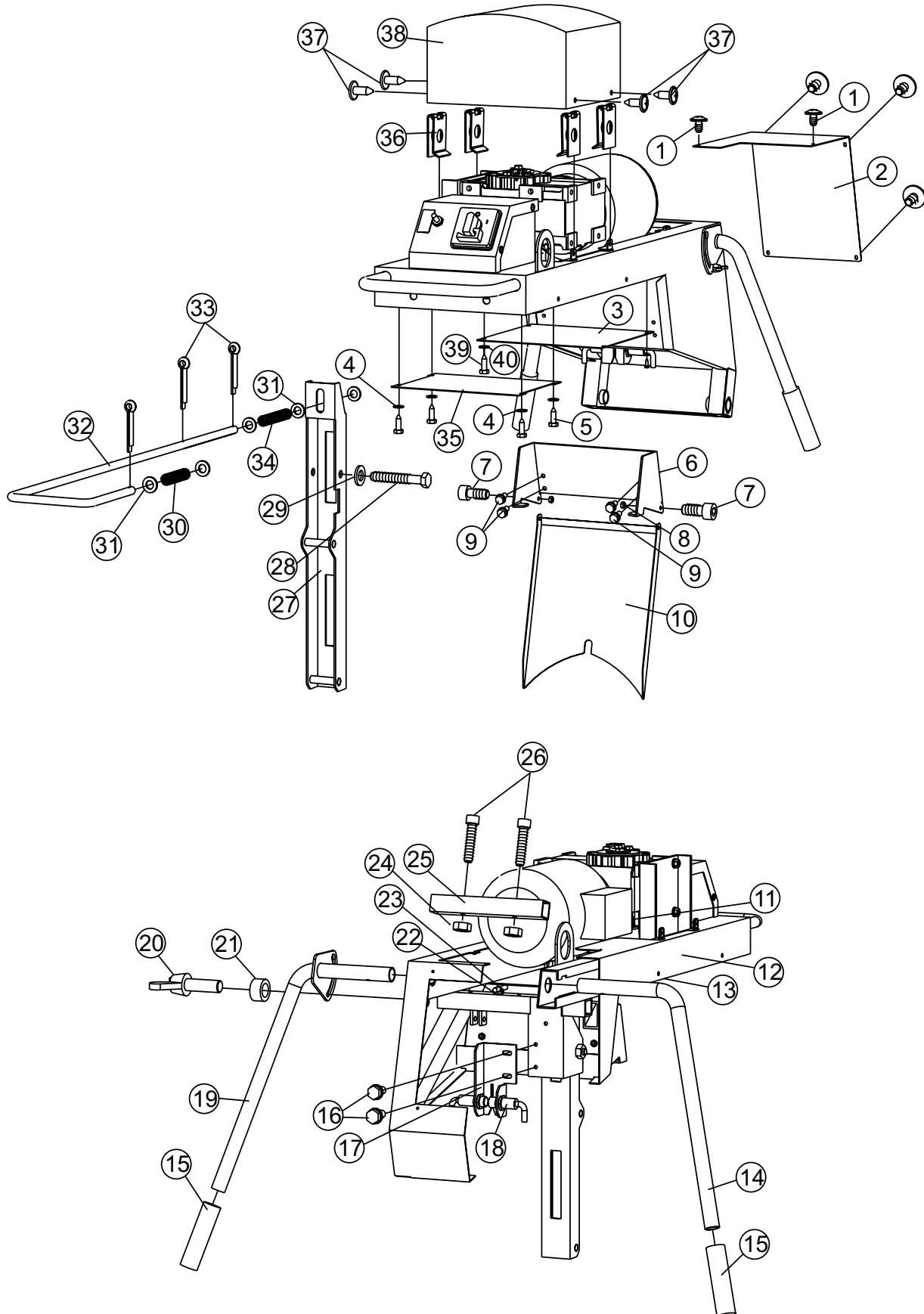
“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

SUGGESTED SPARE PARTS

AX2650 FORCED ACTION MIXERS (NO SUGGESTED SPARE PARTS)

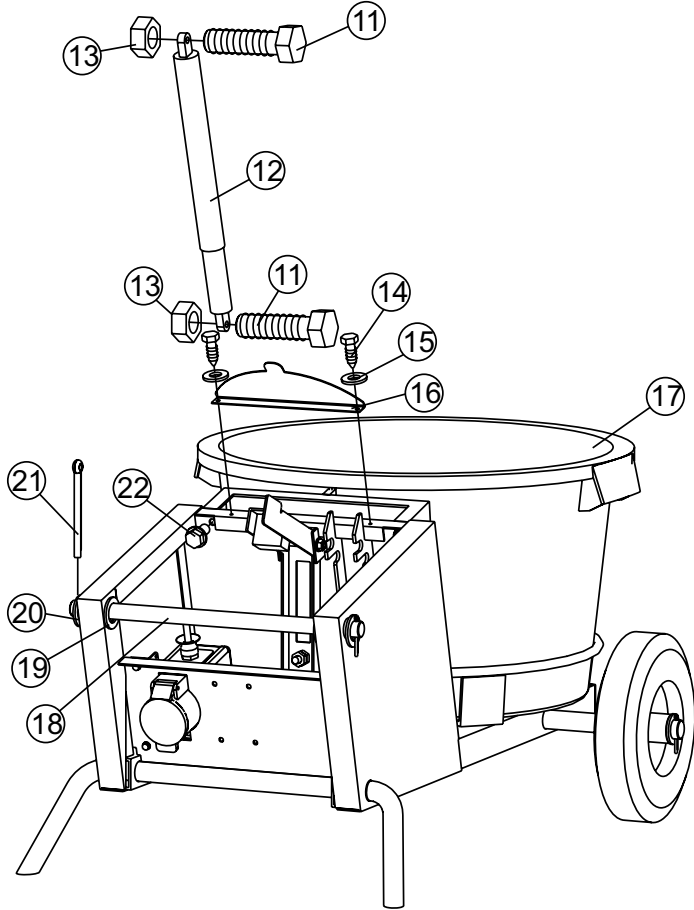
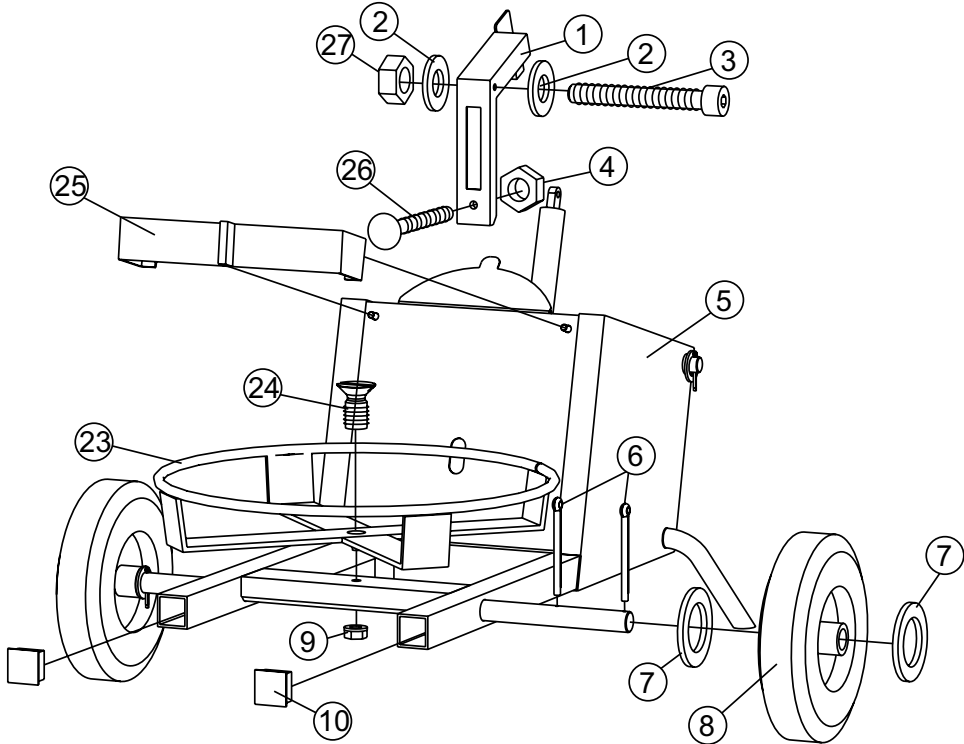
ARM ASSY



ARM ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15125	SCREW PZD M4X8 4.8	6	
2	CM15124	COVER XM2-650	1	
3	CM15035	COVER ARM REAR	1	
4	CM15034	125 DIN WASHER B 5,3 ST ZN	4	
5	CM15033	7976 DIN TAPPING SCREW 4,2X13 ZN	4	
6	CM15111	BUCKET FIXATION 65L	1	
7	CM15105	SOCKET HEAD SCREW M6X12	2	
8	CM15106	985 DIN SELF-LOCKING NUT M6 ZN	2	
9	CM15112	SELF-LOCKING SCREW M6X12 8.8	4	
10	CM15107	APRON	1	
11	CM15268	CABLE MOTOR 110V 50/60HZ	1	
12	CM15031	SWIVEL ARM	1	
13	CM15287	CABLE STRAP 295MM	1	
14	CM15116	GRIP, RIGHT	1	
15	CM15120	HANDLE	2	
16	CM15040	SELF-LOCKING SCREW M6X12 8.8	2	
17	CM15039	ATTACHMENT FOR PROXIMITY SWTCH	1	
18	CM15148	PROXIMITY SWITCH 18 MM WITH CABLE	1	
19	CM15117	GRIP, LEFT	1	
20	CM15257	DIN 316 THUMBSCREW M8X20 ZN	1	
21	CM15118	PRESS-IN NUT M8 S-M8-1	1	
22	CM15061	CABLE STRAP 295MM	1	
23	CM15060	SOCKET PM 2H25-M	1	
24	CM15122	985 DIN HEX NUT M8 ZN	1	
25	CM15119	CONNECTOR BAR FOR HANDLE	1	
26	CM15121	912 DIN SOCKET HEAD SCREW M 8X40 ZN	2	
27	CM15041	SLOT LEVER GALV.	1	
28	CM15043	933 DIN HEX SCREW M12X85 ZN 8.8	1	
29	CM15042	127 DIN SPLIT WASHER B 12 ZN	1	
30	CM15045	COMPRESSION SPRING D 215	1	
31	CM15046	125 DIN WASHER A13 ZN	5	
32	CM15044	LOCKING BOLT	1	
33	CM15047	DIN EN ISO 1234 SPLINT 4X25 ZN	3	
34	CM15048	COMPRESSION SPRING D 216 A	1	
35	CM15032	COVER ARM FRONT	1	
36	CM15065	SHEET-METAL NUT 4.8 15MM	4	
37	CM15066	SELF-TAPPING SCREW 4.8 X 13ZN SW	4	
38	CM15064	GEAR COVER	1	
39	CM15036	7976 DIN TAPPING SCREW 4,2X13 ZN	4	
40	CM15037	125 DIN WASHER B 5,3 ST ZN	4	

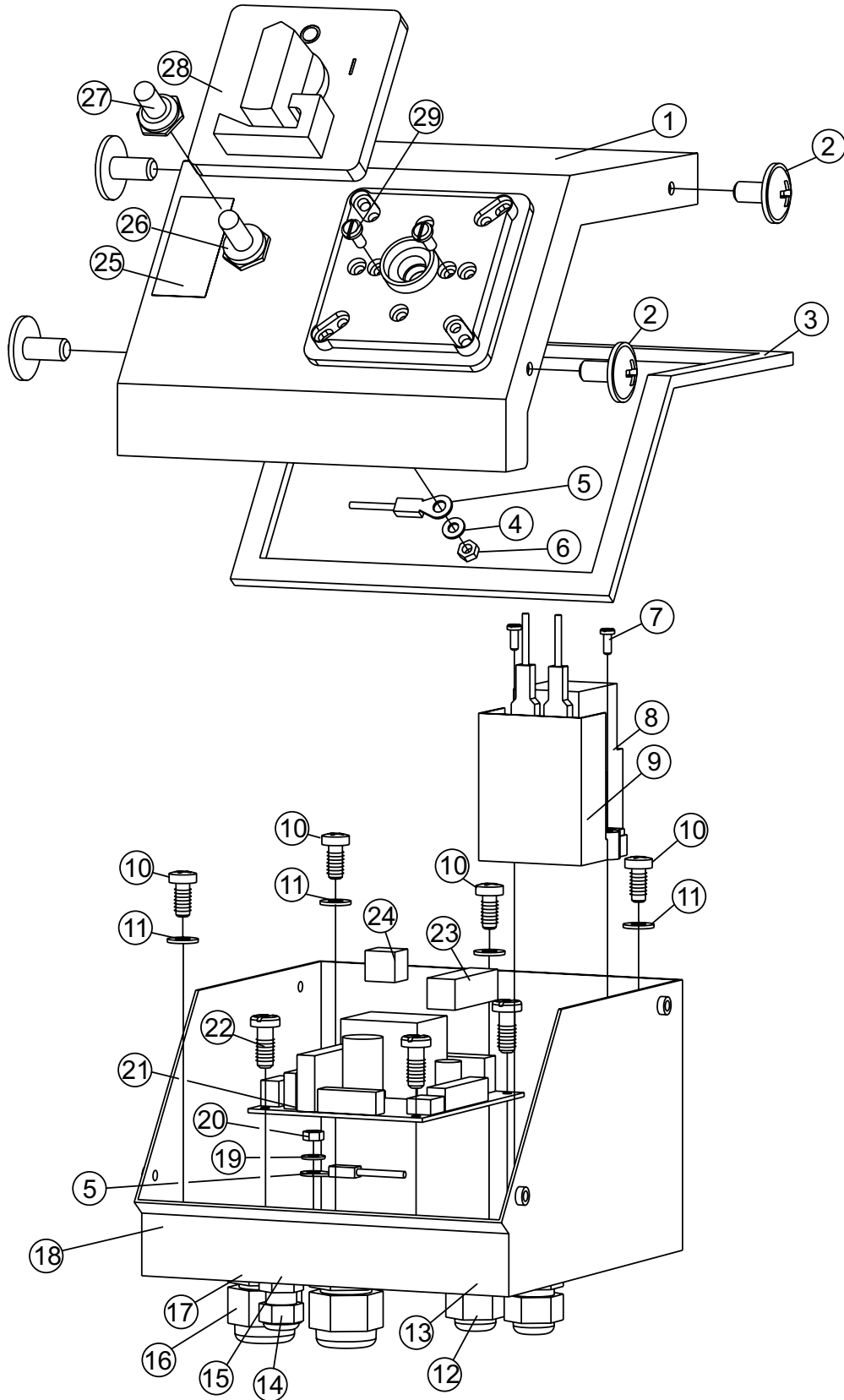
CART ASSY



CART ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15017	ROCKER	1	
2	CM15020	125 DIN WASHER B 8.4 ZN	2	
3	CM15018	CHEESE HEAD SCREW M8X65 ZN 8.8	1	
4	CM15022	934 DIN HEX NUT M 10 ZN	1	
5	CM15002	CART	1	
6	CM15004	094 DIN SPLINT 4X40 ZN	2	
7	CM15005	DIN 1440 WASHER D 26 ZN	4	
8	CM15003	WHEEL FOR 65/2K AND 90/2K	2	
9	CM15010	SELF-LOCKING NUT M10 ZN F90	1	
10	CM15006	FILLER PLUG	2	
11	CM15024	933 DIN HEX SCREW M 8X30 GALV.	2	
12	CM15023	GAS PRESS. ACTUATED SPRING W/TUBE	1	
13	CM15025	985 DIN HEX NUT M8 ZN	2	
14	CM15015	7976 DIN TAPPING SCREW 4,2X13 ZN	2	
15	CM15016	125 DIN WASHER B 4.3 ZN	2	
16	CM15014	DEFLECTOR	1	
17	CM15277	MORTAR BUCKET 65 L, BLACK	1	
18	CM15026	AXLE SWIVEL ARM D20 ZN	1	
19	CM15027	DISC PA 6 DIN 125 D21X3	1	
20	CM15028	433 DIN ST WASHER 21 GALV.	2	
21	CM15029	094 DIN SPLINT 4X40 ZN	2	
22	CM15013	SELF-LOCKING SCREW M8X16 ZN F90	1	
23	CM15007	BUCKET GUIDANCE 65/2K	1	
24	CM15009	COUNTERSUNK SOCKET HEAD SCREW M10X20 ZN 8.8	1	
25	CM15011	BUCKET STOP 65L	1	
26	CM15021	DIN 603 SCREW M10X100ZN	1	
27	CM15019	985 DIN HEX NUT M8 ZN	1	

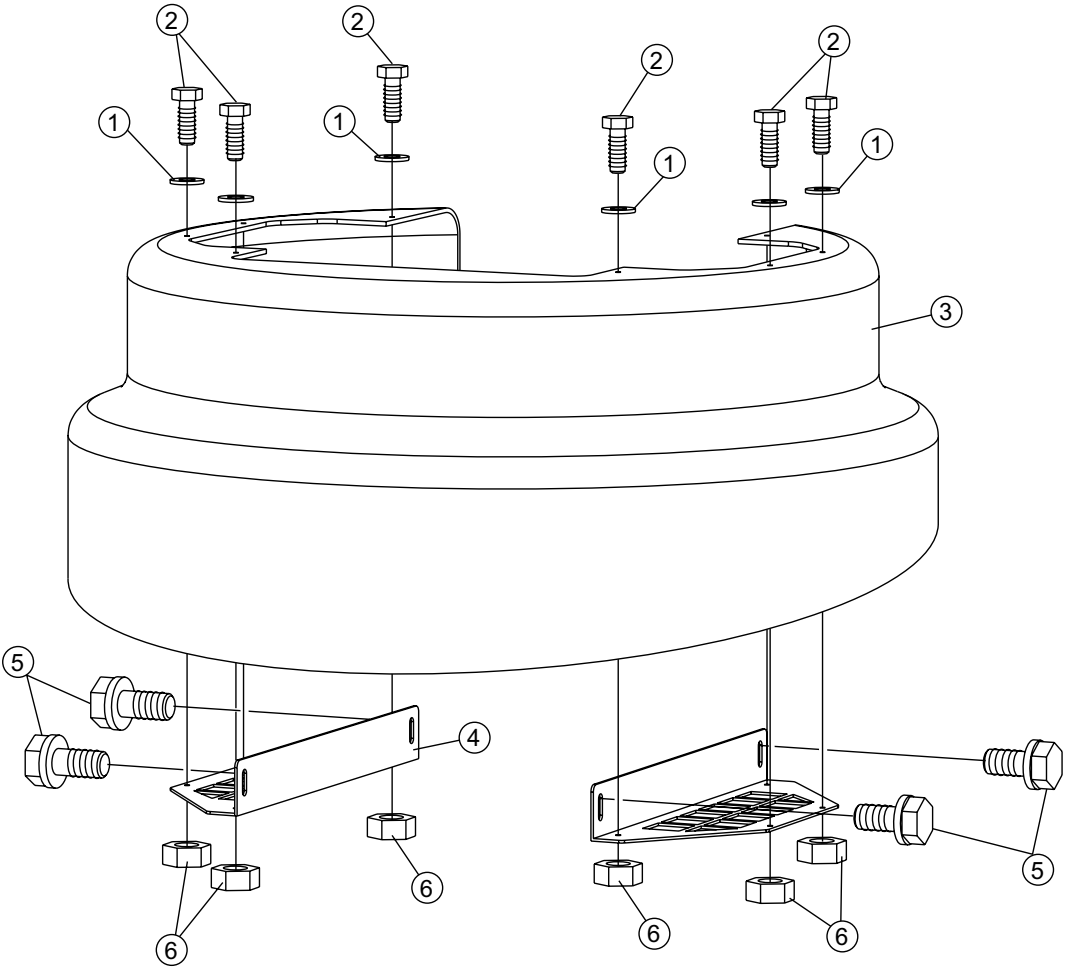
CONTROL ASSY



CONTROL ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15127	COVER, CONTROL UNIT	1	
2	CM15137	SCREW PZD M4X8 4.8	4	
3	CM15133	MAIN MOTOR VIBA 25 230 V 0,9 KW	1	
4	CM15135	127 DIN SPLIT WASHER B 4 ZN	1	
5	CM15193	PROTECTIVE GROUNDING	2	
6	CM15136	934 DIN HEX NUT M 4 ZN	1	
7	CM15144	84 DIN CHEESE HEAD SCREW M3X10 ZN	2	
8	CM15284	RELAYS 110 V 50 / 60 HZ 4S	1	
9	CM15143	RELAYS BRACKET	1	
10	CM15157	7985 DIN OVAL HEAD SCREW M 4X10 ZN	4	
11	CM15158	127 DIN SPLIT WASHER B 4 ZN	4	
12	CM15151	SCREW CONNECTION M16 X1,5	1	
13	CM15152	NUT M16X1,5	1	
14	CM15153	SCREW CONNECTION M12X1,5	1	
15	CM15154	NUT M12X1,5	1	
16	CM15149	SCREW CONNECTION M 20 X1,5	1	
17	CM15150	74361 DIN NUT M20X1,5 ZN	1	
18	CM15139	ATTACHMENT FOR BOARD	1	
19	CM15155	127 DIN SPLIT WASHER B 4 ZN	1	
20	CM15156	934 DIN HEX NUT M 4 ZN	1	
21	CM15286	MOTHERBOARD XM2-650 110V	1	
22	CM15142	84 DIN CHEESE HEAD SCREW M3X10 ZN	4	
23	CM15146	PLUG FK MC 0,5 5POLIG RASTER 2.5	1	
24	CM15147	PLUG FK MC 0,5 3POLIG RASTER 2.5	1	
25	CM15134	STICKER	1	
26	CM15186	CABLE, TIME SELECTION SWITCH COMPL.	1	
27	CM15132	SWITCH	1	
28	CM15283	MAIN SWITCH/EMERGENCY STOP 110V 60HZ	1	
29	CM15131	84 DIN CHEESE HEAD SCREW M4X8 ZN	4	

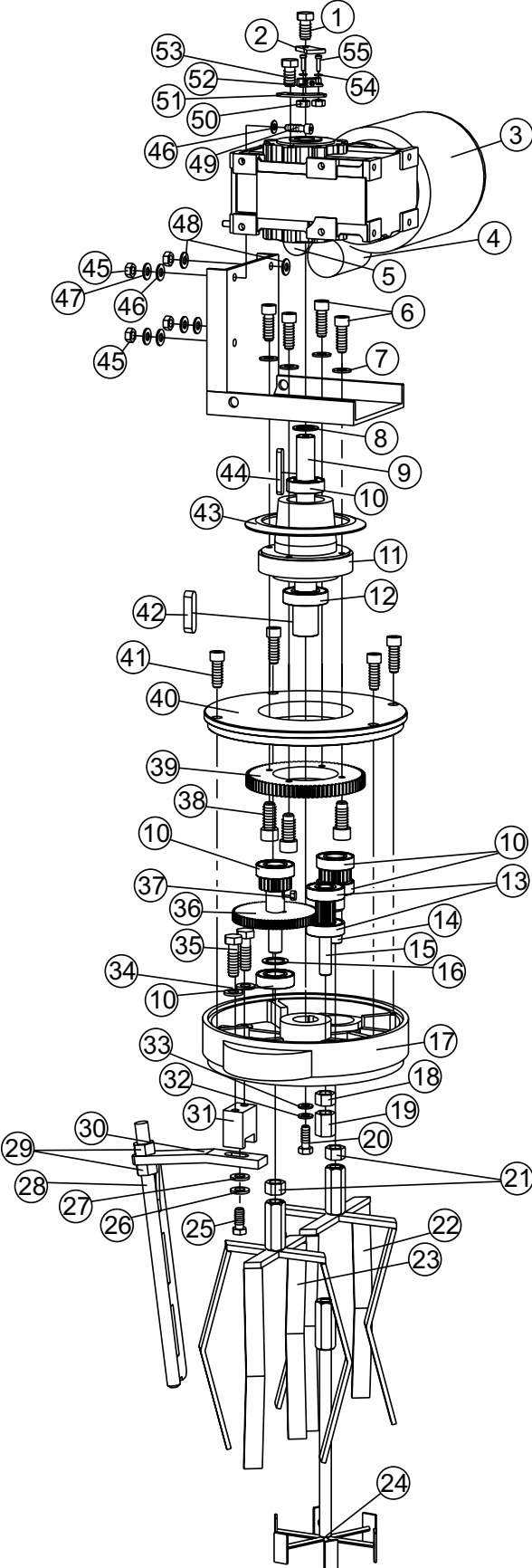
GUARD HOOD ASSY



GUARD HOOD ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15250	9021 DIN WASHER D 4,3 ZN	6	
2	CM15249	933 DIN HEX SCREW M4X12 ZN	6	
3	CM15248	PROTECTIVE COVER 65L	1	
4	CM15247	ATTACHMENT FOR PROTECTIVE COVER	2	
5	CM15241	SELF-LOCKING SCREW M6X12 8.8	4	
6	CM15251	985 DIN HEX NUT M 4 ZN	6	

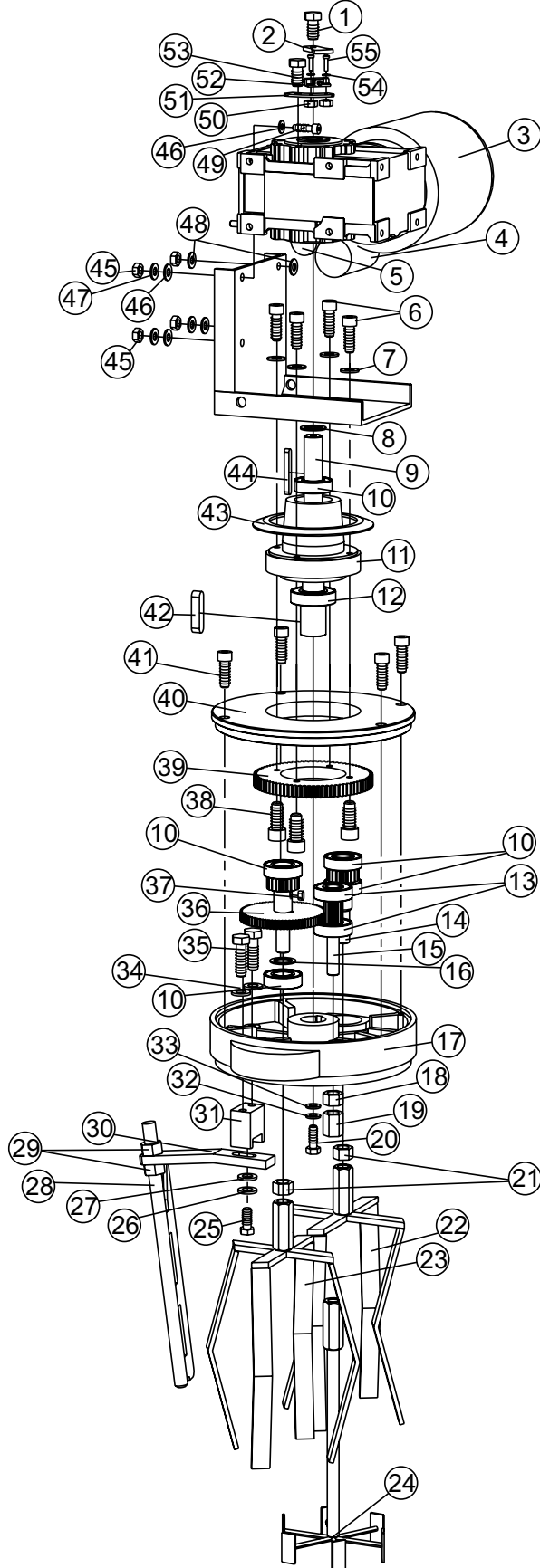
MIXING TOOL ASSY



MIXING TOOL ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15063	6912 DIN CHEESE HEAD M8X10 ZN 8.8	1	
2	CM15062	ROTATION ENCODER	1	
3	CM15051	GEAR MOTOR 110V; 1,1KW; 60 HZ	1	
4	CM15057	START UP CAPACITOR 100 µF 130/480 V	1	
5	CM15059	CAPACITOR 90 µF / 450V	1	
6	CM15103	912 DIN SOCKET HEAD SCREW M 8X20 8.8 GAL	4	
7	CM15104	127 DIN SPLIT WASHER B 8 ZN	4	
8	CM15071	988 DIN SHIM RING D35/D25/S2	1	
9	CM15081	DRIVE SHAFT	1	
10	CM15084	DEEP GROOVE BALL BEARING 6205 ZZ	5	
11	CM15087	BEARING FLANGE	1	
12	CM15085	DEEP GROOVE BALL BEARING 6206 ZZ	1	
13	CM15086	DEEP GROOVE BALL BEARING 6304 ZZ	2	
14	CM15080	PLANET WHEEL WITH THREAD FOR 65/2K-3	2	
15	CM15082	SPUR-TOOTHED WHEEL 12 H00H	1	
16	CM15075	988 DIN SHIM RING D35D25S1,5	1	
17	CM15090	BEARING HOUSE FOR 65/2K-3+90/2K-3	1	
18	CM15264	934 DIN HEX NUT M 16 GALV.	1	
19	CM15265	THREAD PLUG M 16 / 65/2K-3	1	
20	CM15074	933 DIN HEX SCREW M 10X35 8.8 ZN	1	
21	CM15263	934 DIN HEX NUT M 18 GALV.	2	
22	CM15234	MIXING-TOOL XM 195, GALV. M 18	2	
23	CM15233	MIXING-TOOL XM 160, GALV. M 18	1	
24	CM15232	STARMIXER STR 160/90 GALV. M16	1	
25	CM15239	933 DIN HEX SCREW M 12X30 GALV.	1	
26	CM15276	127 DIN SPLIT WASHER B 12 ZN	1	
27	CM15240	125 DIN WASHER A13 ZN	1	
28	CM15237	SCRAPER	1	
29	CM15236	934 DIN HEX NUT M 18 GALV.	1	
30	CM15238	ATTACHMENT FOR WIPER	1	

MIXING TOOL ASSY

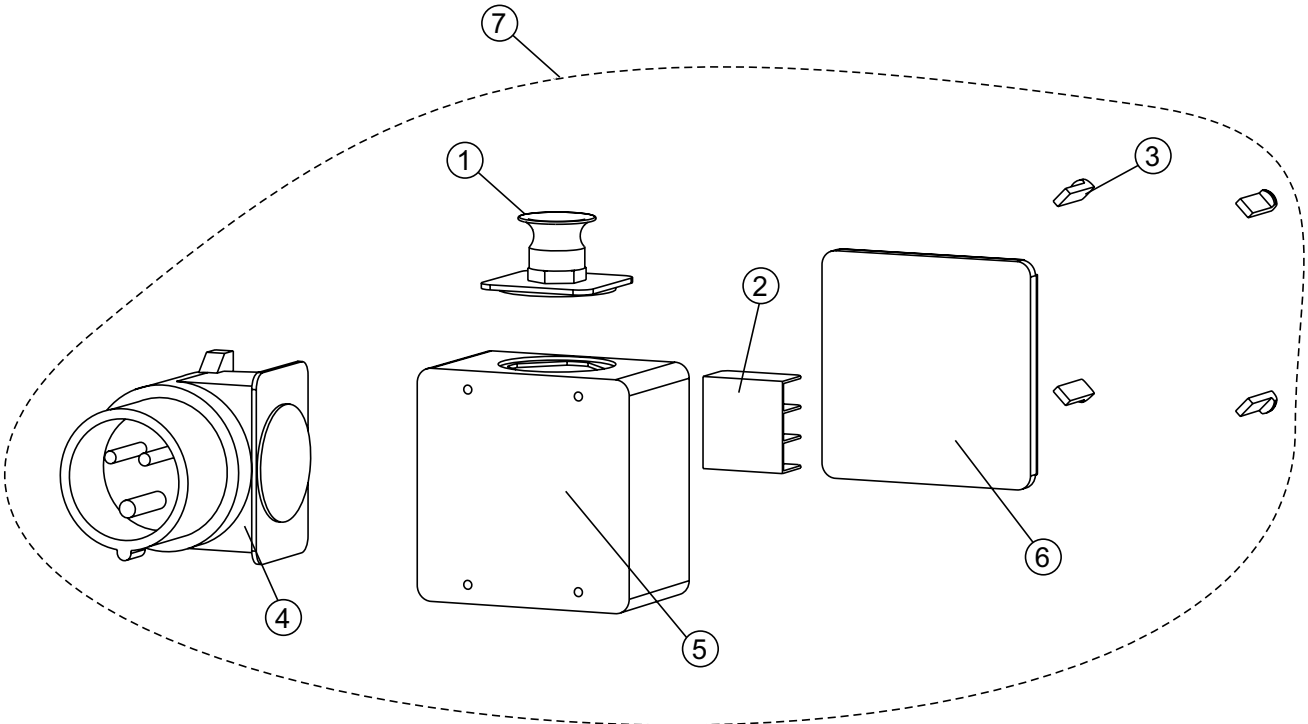


MIXING TOOL ASSY

CONTINUED

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
31	CM15096	SUPPORT FOR SCRAPER 65/2K-3 COMPL	1	
32	CM15261	127 DIN SPLIT WASHER B 10 ZN	1	
33	CM15260	125 DIN WASHER B10,5 ZN	1	
34	CM15101	127 DIN SPLIT WASHER B 10 ZN	2	
35	CM15100	933 DIN HEX SCREW M 10X35 8.8 ZN	2	
36	CM15083	GEAR 17 CRNIMO 6	1	
37	CM15281	6885 DIN FEATHER KEY FORM A 6X6X12	1	
38	CM15073	912 DIN SOCKET HEAD SCREW M 8X20 8.8 GAL	4	
39	CM15079	SUN WHEEL FOR 65/2K-3	1	
40	CM15093	BEARING HOOD	1	
41	CM15072	912 DIN SOCKET HEAD SCREW M8X25 8.8 GALV	4	
42	CM15076	6885 DIN FEATHER KEY FORM A 8X7X32	1	
43	CM15078	SEALING RING 90 SHORES	1	
44	CM15077	6885 DIN FEATHER KEY FORM A 8X7X63	1	
45	CM15055	934 DIN HEX NUT M 8 ZN	4	
46	CM15053	125 DIN WASHER B 8.4 ZN	4	
47	CM15054	127 DIN SPLIT WASHER B 8 ZN	3	
48	CM15259	6797 DIN SERRATED LOCK WASHER J 8.4 ZN	2	
49	CM15052	DIN EN ISO4762 SOCKET HEAD SCREW M8X30	1	
50	CM15165	934 DIN HEX NUT M3 A2	2	
51	CM15161	BRACKET FOR REED SENSOR	1	
52	CM15160	REED SENSOR XM2-65/XM3-900	1	
53	CM15162	6912 DIN CHEESE HEAD M8X10 ZN 8.8	1	
54	CM15164	127 DIN SPLIT WASHER B3 A2	2	
55	CM15163	7985 DIN OVAL HEAD SCREW M3X16 A 2	2	

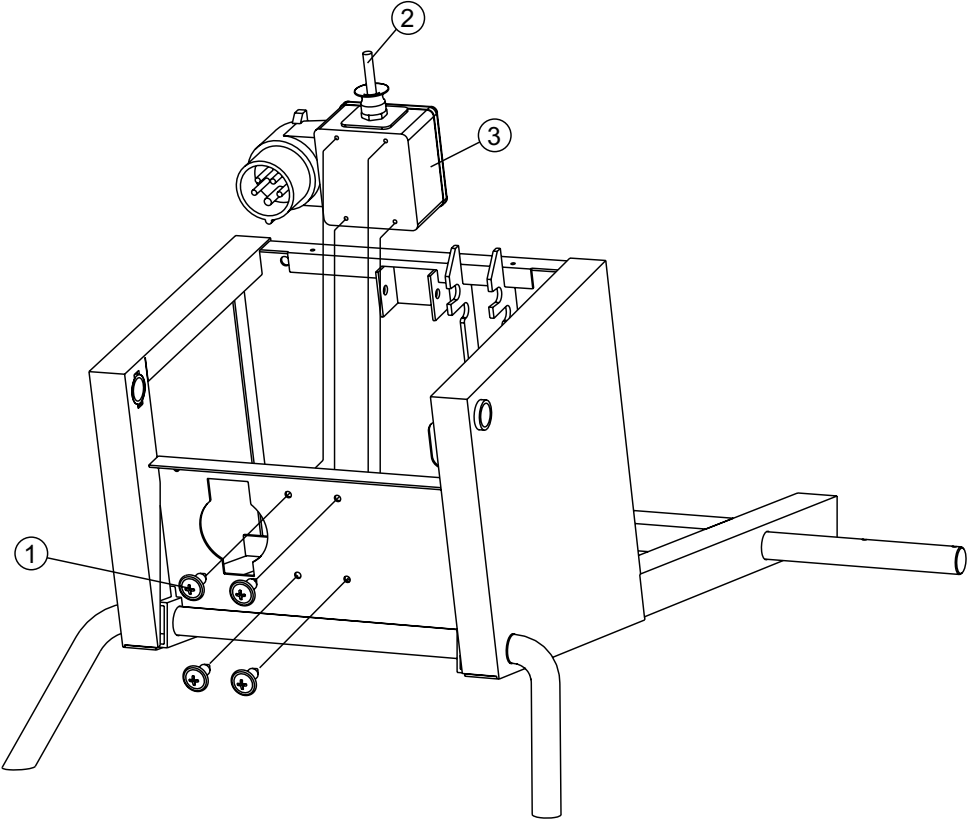
PLUG ASSY



PLUG ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	CM15211	CABLE ENTRY PG 13,5	1	
2#	CM15213	CLAMP 3 POLES	1	
3#	CM15216	INTERLOCK BLACK	4	
4#	CM15214	DEVICE PLUG 110V 20A	1	
5#	CM15212	HOUSING	1	
6#	CM15215	CAP FLAT BLACK	1	
7	CM15210	PLUG COLLAR 110V COMPL.	1INCLUDES ITEMS W/ #

SWITCH ASSY



SWITCH ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	CM15219	PAN-HEAD TAPPING SCREW DIN 7981 HC4,2X13	4	
2	CM15275	MAINS CABLE XM2-650 110V	1	
3	CM15210	PLUG COLLAR 110V COMPL.	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
 - a. The parts numbers and descriptions must match the current parts price list.
 - b. The list must be typed or computer generated.
 - c. The list must state the reason(s) for the return.
 - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
 - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.

5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
 - a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
 - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
 - c. Any line item with an extended dealer net price of less than \$5.00.
 - d. Special order items.
 - e. Electrical components.
 - f. Paint, chemicals, and lubricants.
 - g. Decals and paper products.
 - h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A \$35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave. Tel. (800) 421-1244
Carson, CA 90746 Fax (800) 537-3927
Contact: mq@multiquip.com

Mayco Parts

800-306-2926 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Service Department

800-421-1244 Fax: 310-537-4259
310-537-3700

MQ Parts Department

800-427-1244 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Warranty Department

800-421-1244, Ext. 279 Fax: 310-537-1173
310-537-3700, Ext. 279

Technical Assistance

800-478-1244 Fax: 310-631-5032

MEXICO

MQ Cipsa

Carr. Fed. Mexico-Puebla KM 126.5 Tel: (52) 222-225-9900
Momoxpan, Cholula, Puebla 72760 Mexico Fax: (52) 222-285-0420
Contact: pmastretta@cipsa.com.mx

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Multiquip

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Laval, Quebec, Canada H7L 6V3 Tel: (877) 963-4411
Contact: jmartin@multiquip.com Fax: (450) 625-8664

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