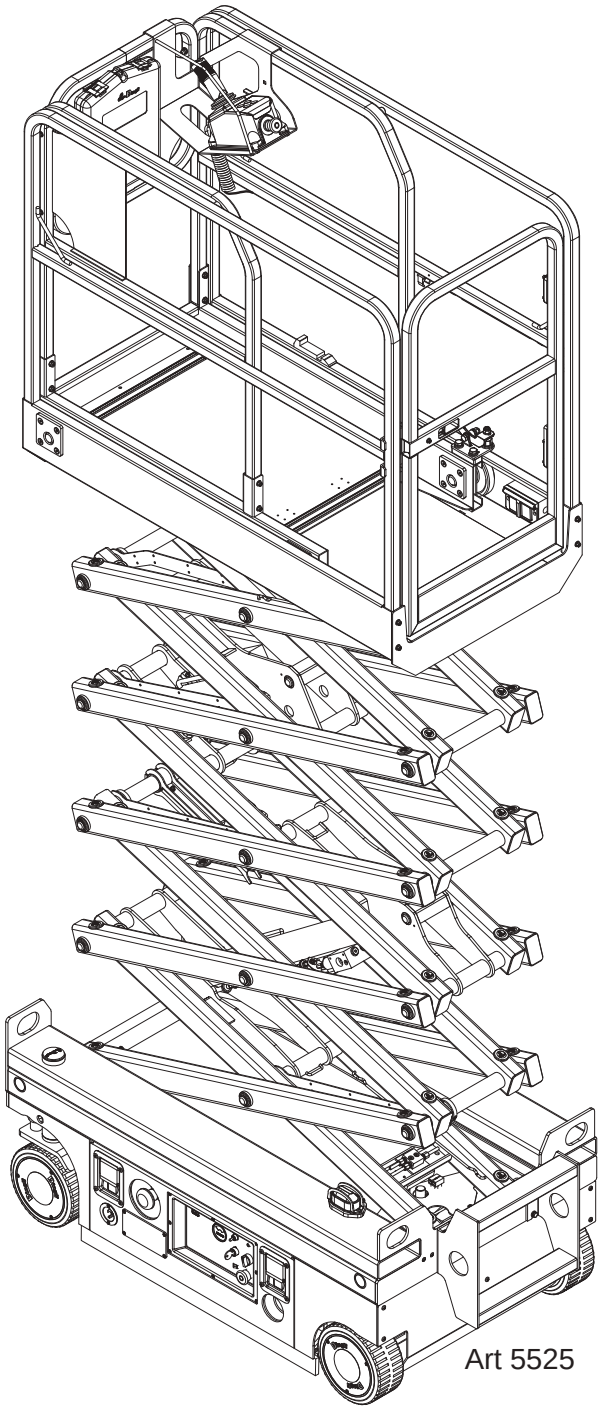
Service & Parts Manual

Micro19



Art 5525

Meets requirements of ANSI A92.20-2020 and CSA B354.6-2019.

Serial Number Range 16911000 - Up

Part # 95843
August 2024

Revision History

Date	Reason for Update
October 2021	New Release
August 2023	Added new style Drive Wheel Assembly with serial numbers Added new style Steer Linkage with serial numbers Added new style Wheels Assembly with serial numbers
May 2024	Added part #48181 to old Drive Wheel Assembly
August 2024	Updated Calibrate Height instructions

MEC Aerial Work Platforms

1401 S. Madera Avenue, Kerman, CA 93630 USA
Toll Free: 1-877-632-5438
Phone: 1-559-842-1500
Fax: 1-559-842-1520
info@MECawp.com
www.MECawp.com

Table of Contents

Service Introduction

This Service section is designed to provide you, the customer, with the instructions needed to properly maintain the MEC self-propelled aerial work platform. When used in conjunction with the illustrated Parts section in this manual and the Operator's Manual (provided separately), this manual will assist you in making necessary adjustments and repairs, and identifying and ordering the correct replacement parts.

All parts represented here are manufactured and supplied in accordance with MEC quality standards. We recommend that you use genuine MEC parts to ensure proper operation and reliable performance.

To obtain maximum benefits from your MEC Aerial Work Platforms, always follow the proper operating and maintenance procedures. Only trained authorized personnel should be allowed to operate or service this machine. Service personnel should read and study the Operator's, and the Service and Parts Manuals in order to gain a thorough understanding of the unit prior to making any repairs.

MEC Operator Policy

Note: *The best method to protect yourself and others from injury or death is to use common sense. If you are unsure of any operation,* ***don't start*** *until you are satisfied that it is safe to proceed and have discussed the situation with your supervisor.*

Service personnel and machine operators must understand and comply with all warnings and instructional decals on the body of the machine, at the ground controls, and platform control console.

DANGER

MODIFICATIONS OF THIS MACHINE FROM THE ORIGINAL DESIGN AND SPECIFICATIONS WITHOUT WRITTEN PERMISSION FROM MEC ARE STRICTLY FORBIDDEN. A MODIFICATION MAY COMPROMISE THE SAFETY OF THE MACHINE, SUBJECTING OPERATOR(S) TO SERIOUS INJURY OR DEATH.

MEC's policies and procedures demonstrate our commitment to Quality and our relentless ongoing efforts towards Continuous Improvement, due to which product specifications are subject to change without notice.

Any procedures not found within this manual must be evaluated by the individual to assure oneself that they are "proper and safe."

Your MEC Aerial Work Platform has been designed, built, and tested to provide many years of safe, dependable service. Only trained, authorized personnel should be allowed to operate or service the machine.

MEC, as manufacturer, has no direct control over machine application and operation. Proper safety practices are the responsibility of the user and all operating personnel.

If there is a question on application and/or operation, contact MEC Aerial Work Platforms:

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Safety Symbols & General Safety Tips

MEC manuals and decals use symbols, colors and signal words to help you recognize important safety, operation and maintenance information.

DANGER	**RED and the word DANGER – Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**
WARNING	**ORANGE and the word WARNING – Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**
CAUTION	**YELLOW with alert symbol and the word CAUTION – Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**
CAUTION	**YELLOW without alert symbol and the word CAUTION – Indicates a potentially hazardous situation which, if not avoided, may result in property damage.**
NOTICE	**GREEN and the word NOTICE – Indicates operation or maintenance information.**

Regular inspection and constant maintenance is the key to efficient economical operation of your aerial work platform. It will help to assure that your equipment will perform satisfactorily with a minimum of service and repair.

The actual operating environment of the machine governs the inspection schedule. Correct lubrication is an essential part of the preventative maintenance to minimize wear on working parts and ensure against premature failure. By maintaining correct lubrication, the possibility of mechanical failure and resulting downtime is reduced to a minimum.

- Never leave hydraulic components or hoses open. They must be protected from contamination (including rain) at all times.
- Never open a hydraulic system when there are contaminants in the air.
- Always clean the surrounding area before opening hydraulic systems.
- Use only recommended lubricants. Improper lubricants or incompatible lubricants may be as harmful as no lubrication.
- Watch for makeshift “fixes” which can jeopardize safety as well as lead to more costly repair.

Bolt Torque Specification - American Standard

Fasteners

Use the following values to apply torque unless a specific torque value is called out for the part being used.

American Standard Cap Screws								
SAE Grade	**5**				**8**			
Cap Screw Size (Inches)								
	Torque				**Torque**			
	Ft-lbs		**Nm**		**Ft-lbs**		**Nm**	
	Min	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
1/4 - 20	6.25	7.25	8.5	10	8.25	9.5	11	13
1/4 - 28	8	9	11	12	10.5	12	14	16
5/16 - 18	14	15	19	20	18.5	20	25	27
5/16 - 24	17.5	19	12	26	23	25	31	34
3/8 - 16	26	28	35	38	35	37	47.5	50
3/8 - 24	31	34	42	46	41	45	55.5	61
7/16 - 14	41	45	55.5	61	55	60	74.5	81
7/16 - 20	51	55	69	74.5	68	75	92	102
1/2 - 13	65	72	88	97.5	86	96	116	130
1/2 - 20	76	84	103	114	102	112	138	152
9/16 - 12	95	105	129	142	127	140	172	190
9/16 - 18	111	123	150	167	148	164	200	222
5/8 - 11	126	139	171	188	168	185	228	251
5/8 - 18	152	168	206	228	203	224	275	304
3/4 - 10	238	262	322	255	318	350	431	474
3/4 - 16	274	302	371	409	365	402	495	544
7/8 - 9	350	386	474	523	466	515	631	698
7/8 - 14	407	448	551	607	543	597	736	809
1 - 8	537	592	728	802	716	790	970	1070
1 - 14	670	740	908	1003	894	987	1211	1137

Torque values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil.

If special graphite grease, molydisulphide grease, or other extreme pressure lubricants are used, these torque values do not apply.

Bolt Torque Specification - Metric Standard

Fasteners

Use the following values to apply torque unless a specific torque value is called out for the part being used.

Metric Cap Screws								
Metric Grade	**8.8**				**10.9**			
Cap Screw Size (Millimeters)								
	Torque				**Torque**			
	Ft-lbs		**Nm**		**Ft-lbs**		**Nm**	
	Min	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
M6 × 1.00	6	8	8	11	9	11	12	15
M8 × 1.25	16	20	21.5	27	23	27	31	36.5
M10 × 1.50	29	35	39	47	42	52	57	70
M12 × 1.75	52	62	70	84	75	91	102	123
M14 × 2.00	85	103	115	139	120	146	163	198
M16 × 2.50	130	158	176	214	176	216	238	293
M18 × 2.50	172	210	233	284	240	294	325	398
M20 × 2.50	247	301	335	408	343	426	465	577
M22 × 2.50	332	404	450	547	472	576	639	780
M24 × 3.00	423	517	573	700	599	732	812	992
M27 × 3.00	637	779	863	1055	898	1098	1217	1488
M30 × 3.00	872	1066	1181	1444	1224	1496	1658	2027

Torque values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil.

If special graphite grease, molydisulphide grease, or other extreme pressure lubricants are used, these torque values do not apply.

Hydraulic Components Torque Table

Note: Always lubricate threads with clean hydraulic fluid prior to installation.

Use the following values to torque hydraulic components when a specific value is not available. Always check for torque values in the following places before relying on the Hydraulic Components Torque Table.

- Parts drawings and service instructions in this manual.
- Packaging and instruction sheets provided with new parts.
- Instruction manuals provided by the manufacturer of the component being serviced.

SAE Port Series	Cartridge Poppet		Fittings		Hoses	
	Ft-lbs	Nm	Ft-lbs	Nm	In-lbs	Nm
#4	N/A	N/A	N/A	N/A	135 - 145	15 - 16
#6	N/A	N/A	10 - 20	14 - 27	215 - 245	24 - 28
#8	25 - 30	31 - 41	25 - 30	34 - 41	430 - 470	49 - 53
#10	35 - 40	47 - 54	35 - 40	47 - 54	680 - 750	77 - 85
#12	85 - 90	115 - 122	85 - 90	115 - 122	950 - 1050	107 - 119
#16	130 - 140	176 - 190	130 - 140	176 - 190	1300 - 1368	147 - 155

Specifications

Working Height*	Indoor	24 ft 4 in	7.6 m
	Outdoor	21 ft	6.4 m
Platform Height	Indoor	18 ft 4 in	5.6 m
	Outdoor	15 ft	4.6 m
Maximum Drive Height		18 ft 4 in	5.6 m
Stowed Height	Top Guardrail	79 in	2.0 m
	Platform Floor	35 in	0.9 m
Platform Extension Length		23.6 in	0.6 m
Machine Weight** (Unloaded)		2,750 lb	1,247 kg
Maximum Lift Capacity		500 lb	227 kg
Deck Extension Capacity		250lb (113 kg)	
Maximum Occupants	Indoor	2 Person	
	Outdoor	1 Person	
Manual Force	Indoor	90 lbs	400 N
	Outdoor	45 lbs	200 N
Platform Length (Extended)		78 in	2.0 m
Platform Length (Retracted)		54 in	1.4 m
Width (Overall)		32 in	0.81 m
Platform Dimensions (Length × Width)		53.9 × 27.6 in	1.37 × 0.7 m
Wheel Base		44.5 in	1.13 m
Turning Radius - Inside		17.7 in	0.45 m
Ground Clearance - Stowed		2.4 in	6 cm
Ground Clearance - Elevated		0.6 in	1.5 cm
Drive Speed (Proportional)	Stowed	0-2.5 mph	0-4 km/h
	Raised/Extended	0-0.5 mph	0-8 km/h
Gradability		25% (14°)	
Maximum Side Slope - Stowed		5°	
Ground Pressure/Wheel	Min/Max	85/114 psi	6.0/8.0 kg/cm^2
Maximum Wheel Load		975 lb	442 kg
Occupied Floor Pressure	Full Load Platform Retracted	244 psf	1,191 kg/m^2
	Platform Deck Extended	174 psf	849 kg/m^2
Maximum Operating Wind Speed		28 mph	12.5 m/sec (45 km/h)
Tire Size		9 × 4 in	230 × 100 mm
Wheel Nut Torque		166.7 ft-lb / 226 Nm, Secured with cotter pin	
Hydraulic Pressure		2,320 psi	160 bar
Power System Voltage		24 Volt DC	
Battery Charger	Input	110-230 V AC, 50-60 Hz	
	Output	24 Volt DC	
Batteries		Two 12-Volt Deep Cycle 115Ah	
Chassis Inclination		1.5 Side, 3.0 Inline	

Meets requirements of ANSI A92.20-2020 and CSA B354.6-2019.
*Working Height adds 6 feet (2 meters) to platform height.
**Weight may increase with certain options.

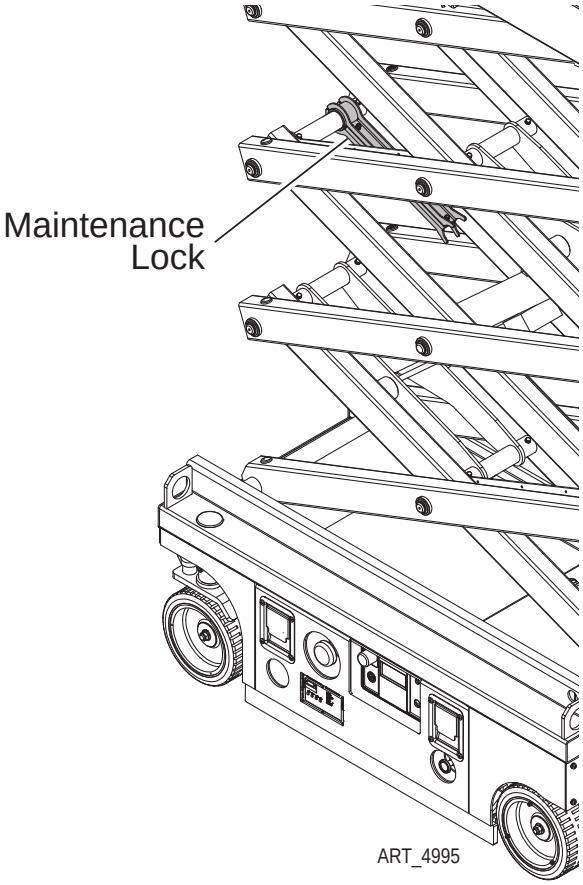
Maintenance Lock

DEATH OR SERIOUS INJURY HAZARD!

WARNING

NEVER PERFORM WORK OR INSPECTION ON THE MACHINE WITH THE PLATFORM ELEVATED WITHOUT FIRST BLOCKING THE SCISSOR ASSEMBLY WITH THE MAINTENANCE LOCK.

1. Raise the platform approximately 8 feet (2.5 meters) from the ground.
2. Rotate the Maintenance Lock away from the machine and let it hang down.
3. Lower the platform until the Maintenance Lock rests securely on the link. Keep clear of the Maintenance Lock when lowering the platform.



Machine Systems

Hydraulic System

WARNING

HYDRAULIC FLUID UNDER PRESSURE CAN PENETRATE AND BURN SKIN, DAMAGE EYES, AND MAY CAUSE SERIOUS INJURY, BLINDNESS, AND EVEN DEATH.

CORRECT LEAKS IMMEDIATELY.

CAUTION

Hydraulic fluid leaks under pressure may not always be visible. Check for pin hole leaks with a piece of cardboard, not your hand.

Electrical System

CAUTION

Prevent damage to battery and/or electrical system;

- **Always disconnect the negative battery cable first.**
- **Always connect the positive battery cable first.**

When the negative cable is installed, a spark will occur if contact is made between the positive side of the battery and a metal surface on the machine. This can cause damage to the electrical system, battery explosion, and personal injury.

Total System

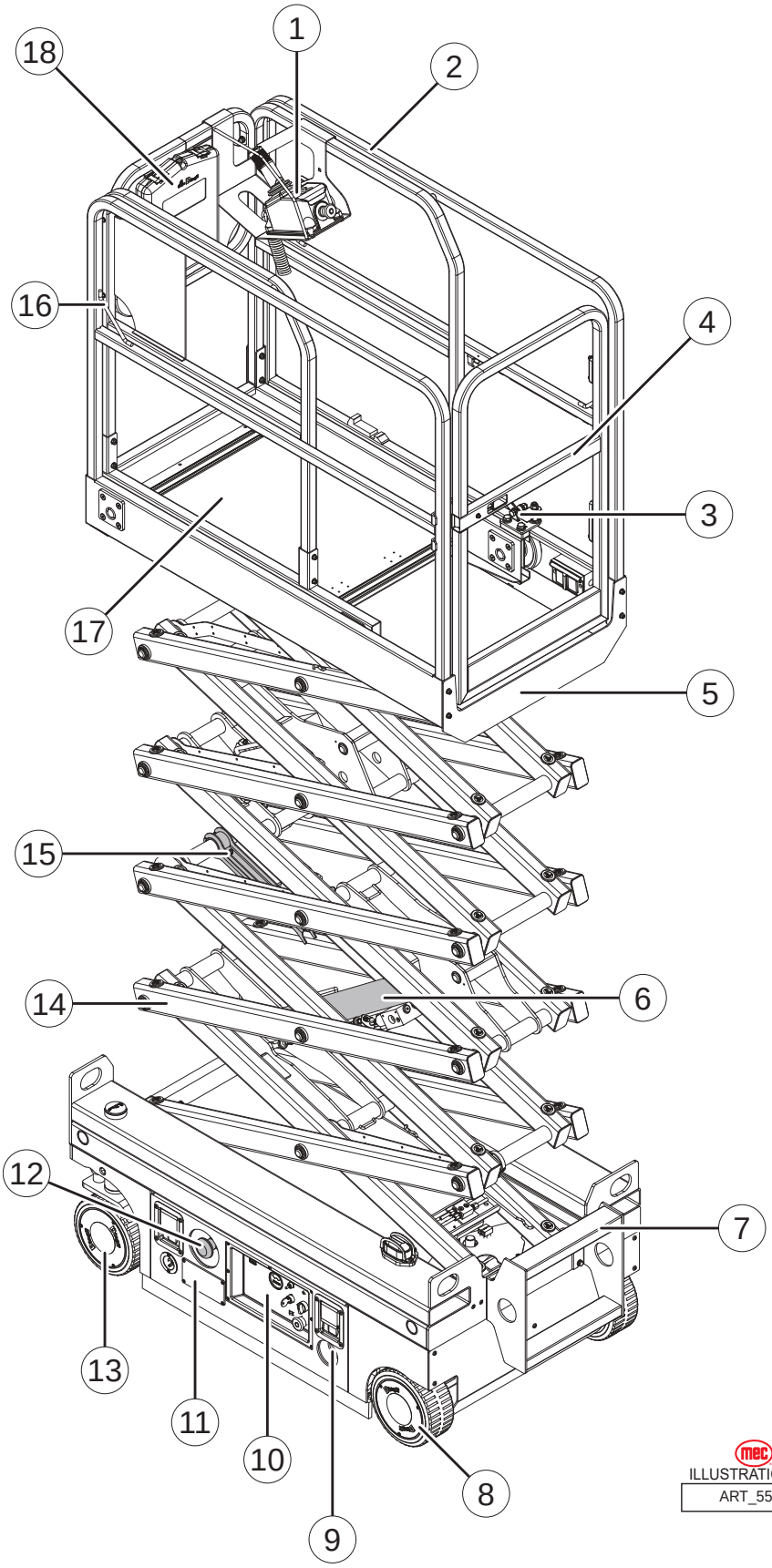
FAILURE TO PERFORM PREVENTIVE MAINTENANCE AT RECOMMENDED INTERVALS MAY RESULT IN THE UNIT BEING OPERATED WITH A DEFECT THAT COULD RESULT IN INJURY OR DEATH OF THE OPERATOR.

WARNING

IMMEDIATELY REPORT TO YOUR SUPERVISOR ANY DEFECT OR MALFUNCTION. ANY DEFECT SHALL BE REPAIRED PRIOR TO CONTINUED USE OF THE AERIAL WORK PLATFORM.

INSPECTION AND MAINTENANCE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL FAMILIAR WITH THE EQUIPMENT.

Primary Machine Components



1) Platform Controller
2) Platform Guard Rails
3) Platform Extension Release Pedal
4) Platform Entry Gate
5) Main Platform
6) Lift Cylinder
7) Entry Ladder
8) Drive Wheels
9) Emergency Lowering Knob
10) Ground Control Panel
11) Batteries Charger
12) Main Power Switch
13) Steer Wheels
14) Scissor
15) Safety Arms
16) Lanyard Anchorage Point
17) Platform Extension
18) Manual Storage Container

Emergency Systems and Procedures

WARNING

IF THE CONTROL SYSTEM FAILS WHILE THE PLATFORM IS ELEVATED, HAVE AN EXPERIENCED OPERATOR USE THE EMERGENCY LOWERING PROCEDURE TO SAFELY LOWER THE PLATFORM.

DO NOT ATTEMPT TO CLIMB DOWN ELEVATING ASSEMBLY.

Emergency Stop

The machine is equipped with an EMERGENCY STOP switch at the base controls and the platform control box.

- Press the EMERGENCY STOP switch at any time to stop all machine functions.
- Pull switch to reset.
- Either switch will stop all machine functions.
- Both switches must be reset or machine will not operate.

ART_3353

Emergency Lowering

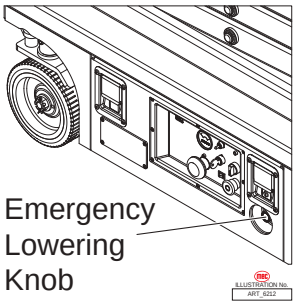
WARNING

IF THE CONTROL SYSTEM FAILS WHILE THE PLATFORM IS ELEVATED, USE THE EMERGENCY LOWERING PROCEDURE TO SAFELY LOWER THE PLATFORM.

DO NOT CLIMB DOWN THE ELEVATING ASSEMBLY OR EXIT THE PLATFORM.

The Emergency Lowering System is used to lower the platform in case of power failure.

To lower the platform, pull the Emergency Lowering Knob, located near the Base Control panel.



Free-Wheel Configuration for Winching or Towing

RUNAWAY HAZARD!

DANGER

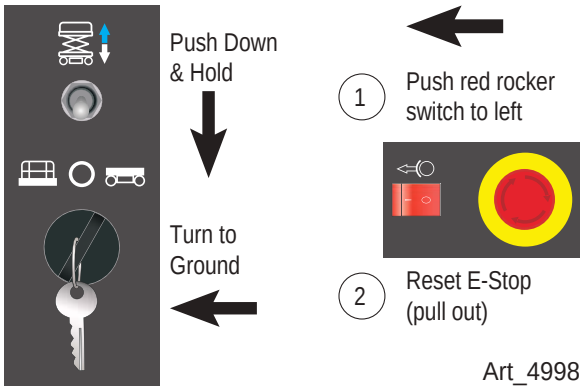
AFTER RELEASING THE BRAKES THERE IS NOTHING TO STOP MACHINE TRAVEL. MACHINE WILL ROLL FREELY ON SLOPES.

ALWAYS CHOCK THE WHEELS BEFORE MANUALLY RELEASING THE BRAKES.

The machine can be winched or towed short distances at speeds not to exceed 2.5mph (4km/h). Before towing or winching the machine, it is necessary to release the brakes. Reset the brakes after towing or winching.

Disengage Brakes Before Towing Or Winching

1. Chock the wheels.
2. Turn the Key Switch to the Off position (pushed in).
3. Pull the Red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
4. At the Ground Controls panel, push and hold the red rocker switch to the left & push down and hold the Platform Lift Switch.
5. An alarm will sound, signaling that the brakes have been released.



Resetting Brakes

Push in the Emergency Stop button or turn the Key Switch to the Off position to reset the brakes.

WARNING

BE SURE THAT THE BRAKES ARE ENGAGED BEFORE REMOVING THE WHEEL CHOCKS.

Lift and Support the Machine

DANGER

DEATH OR SERIOUS PERSONAL INJURY MAY RESULT FROM THE USE OF SUBSTANDARD LIFTING DEVICES AND/OR JACK STANDS. ENSURE THAT ALL LIFTING DEVICES AND JACK STANDS ARE OF ADEQUATE CAPACITY AND IN GOOD WORKING CONDITION BEFORE USE.

The following are needed to safely lift and support the machine;

- A jack with a lifting capacity of two (2) tons or more.
- Jack stands with a rating of two (2) tons or more.

To Raise the Machine

1. Move machine to a firm level surface capable of supporting the weight of the machine.
2. Chock tires on one end of machine and raise the other end of machine.
3. Position a jack at the end of the machine to be lifted, under a solid lifting point in the center of the frame.
4. Raise the machine and place two (2) suitable jack stands under solid support points at the outer ends of the frame.
5. Lower the machine to rest on the jack stands and inspect for stability.

To Lower the Machine

1. Raise machine slightly and remove jack stands.
2. Lower the machine and remove the jack.
3. Remove chocks.

General Machine Maintenance

Instructions in this portion of the manual are to be used in conjunction with the Pre-Start, Frequent and Annual Inspection checklists found in this machine's Operator's Manual.

IMPORTANT: Scheduled maintenance inspection checklists are included in the Operator's Manual for use only by qualified service technicians. Only qualified service technicians may perform repairs to the machine. After repairs are completed, the operator must perform a Pre-Start Inspection before proceeding to the Functions Test.

DANGER

HYDRAULIC FLUID UNDER PRESSURE CAN PENETRATE AND BURN SKIN, DAMAGE EYES, AND MAY CAUSE SERIOUS INJURY, BLINDNESS, AND DEATH. REPAIR LEAKS IMMEDIATELY. FLUID LEAKS UNDER PRESSURE MAY NOT ALWAYS BE VISIBLE. CHECK FOR PIN HOLE LEAKS WITH A PIECE OF CARDBOARD, NOT YOUR HAND.

WARNING

NEVER PERFORM WORK OR INSPECTION ON THE MACHINE WITH THE PLATFORM ELEVATED WITHOUT FIRST BLOCKING THE SCISSOR ASSEMBLY WITH THE MAINTENANCE LOCK (SEE THE INTRODUCTION PORTION OF THIS MANUAL).

PERFORM SCHEDULED MAINTENANCE AT RECOMMENDED INTERVALS. FAILURE TO PERFORM SCHEDULED MAINTENANCE AT RECOMMENDED INTERVALS MAY RESULT IN A DEFECTIVE OR MALFUNCTIONING MACHINE AND MAY RESULT IN INJURY OR DEATH OF THE OPERATOR. KEEP MAINTENANCE RECORDS CURRENT AND ACCURATE.

IMMEDIATELY REPORT ANY DAMAGE, DEFECT, UNAUTHORIZED MODIFICATION OR MALFUNCTION TO YOUR SUPERVISOR. ANY DEFECT MUST BE REPAIRED PRIOR TO CONTINUED USE. DO NOT USE A DAMAGED, MODIFIED OR MALFUNCTIONING MACHINE.

CAUTION

Never leave hydraulic components or hoses open. Plug all hoses and fitting immediately after disassembly to protect the system from outside contamination (including rain).

Never open a hydraulic system when there are contaminants in the air.

Always clean the surrounding area before opening hydraulic systems.

Use only recommended lubricants. Improper lubricants or incompatible lubricants may cause as much damage as no lubrication.

Watch for makeshift "fixes" which can jeopardize safety as well as lead to more costly repair.

Inspection and maintenance should be performed by qualified personnel familiar with the equipment.

Pre-Start Inspection Checklist

Items on this checklist should be inspected before each work shift. Refer to the Operator's Manual.

30-Day Service

The 30 day maintenance procedure is a **one-time** procedure to be performed after the first 30 days or 40 hours of usage.

Maintaining the tires and wheels in good condition is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

1. Check the tire surface and sidewalls for cuts, cracks, punctures and unusual wear.
2. Check each wheel for damage, bends and cracks.
3. Remove the wheel covers and check each center lock nut for proper torque and presence of cotter pin.

Front	
Castle Nut Torque, Dry	166.7 ft-lbs (226 Nm)
Castle Nut Torque, Lubricated	125.4 ft-lbs (170 Nm)

Back	
Locknut	100ft-lbs (135 Nm)

Frequent Inspection Checklist

WARNING

THIS CHECKLIST MUST BE USED AT 3-MONTH INTERVALS OR EVERY 150 HOURS OF MACHINE USE, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.

Frequent Maintenance Inspections should be conducted by qualified service technicians only. Photocopy the Frequent Inspection Checklist page from the Operator's Manual to keep record of this inspection. Keep inspections records up to date. Record and report all discrepancies to your supervisor.

Perform all checks listed on Pre-Start Inspection, then proceed with the following checks.

Hydraulic Fluid

Inspect the condition of hydraulic fluid in the reservoir. Oil should be a clear and amber in color.

Batteries

Proper battery condition is essential to good machine performance and operational safety. Improper or damaged cables and connections can result in component damage and hazardous conditions.

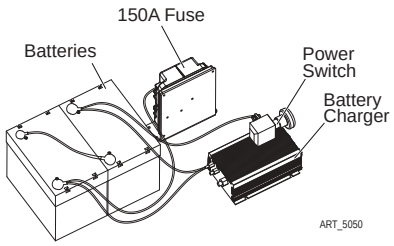
ELECTROCUTION / BURN HAZARD. CONTACT WITH ELECTRICALLY CHARGED CIRCUITS COULD RESULT IN DEATH OR SERIOUS INJURY.

WARNING

REMOVE ALL RINGS, WATCHES AND OTHER JEWELRY.

BODILY INJURY HAZARD. BATTERIES CONTAIN ACID. AVOID SPILLING OR CONTACTING BATTERY ACID. NEUTRALIZE BATTERY ACID SPILLS WITH BAKING SODA AND WATER.

1. Put on protective clothing and eye wear.
2. Slide out the component tray from the chassis.
3. Be sure that the battery cable connections are free of corrosion.



Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate corrosion on the battery terminals and cables.

4. Be sure that the battery retainers and cable connections are tight.
5. Fully charge the batteries. Allow the batteries to rest 24 hours before performing this procedure to allow the battery cells to equalize.
6. Check each battery pack and verify that the batteries are wired correctly.
7. Inspect the battery charger plug and pigtail for damage or excessive insulation wear. Replace as required.
8. Connect the battery charger to a properly grounded 110-230V (50-60 Hz) single phase AC

power supply.

- **Result:** The charger should operate and begin charging the batteries.
- **Result:** If, simultaneously, the charger alarm sounds and the LEDs blink, correct the charger connections at the fuse and battery. The charger will then operate correctly and begin charging the batteries.

Note: For best results, use an extension cord of adequate size with a length no longer than 50 feet (15 meters).

Note: If you have any further questions regarding the battery charger operation, please contact the MEC Customer Service.

Electrical Wiring

Maintaining electrical wiring in good condition is essential to safe operation and good machine performance. Failure to find and replace burnt, chafed, corroded or pinched wires could result in unsafe operating conditions and may cause component damage.

WARNING

ELECTROCUTION / BURN HAZARD. CONTACT WITH ELECTRICALLY CHARGED CIRCUITS COULD RESULT IN DEATH OR SERIOUS INJURY.

REMOVE ALL RINGS, WATCHES AND OTHER JEWELRY.

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1. Inspect the following areas for burnt, chafed, corroded and loose wires:
   - Ground Control Panel
   - Hydraulic Power Unit Module Tray
   - Platform Controls
2. Turn the key switch to ground control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls
3. Raise the platform approximately 8 feet (2.5 meters) from the ground.
4. Lift the safety arm, move it to the center of the scissor arm and rotate up to a vertical position.
5. Lower the platform onto the safety arm.

WARNING

CRUSHING HAZARD. KEEP HANDS CLEAR OF THE SAFETY ARM WHEN LOWERING THE PLATFORM.

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6. Inspect the center chassis area and scissor arms for burnt, chafed and pinched cables.
7. Inspect the following areas for burnt, chafed, corroded, pinched and loose wires:
   - Scissor Arms
   - ECU to Platform Controls
   - Power to Platform Wiring
8. Inspect for a liberal coating of dielectric grease in the following locations:
   - Between the ECU and platform controls
   - All wire harness connectors Level sensor
9. Raise the platform and return the safety arm to the stowed position.
10. Lower the platform to the stowed position and turn the machine off.

Tires and Wheels

Maintaining the tires and wheels in good condition is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

- Check the tire surface and sidewalls for cuts, cracks, punctures and unusual wear.
- Check each wheel for damage, bends and cracks.
- Remove the wheel covers and check each center lock nut for proper torque and presence of cotter pin.

Front	
Castle Nut Torque, Dry	166.7ft-lbs (226Nm)
Castle Nut Torque, Lubricated	125.4ft-lbs (170Nm)

Back	
Locknut	100ft-lbs (135Nm)

Emergency Stop

A properly functioning Emergency Stop system is essential for safe machine operation. An improperly operating red Emergency Stop button will fail to shut off power and stop all machine functions, resulting in a hazardous situation.

As a safety feature, selecting and operating from the ground controls will override all platform controls except the platform red Emergency Stop button.

1. Turn the key switch to ground control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
2. Push in the red Emergency Stop button at the ground controls to the Off position (pushed in).
   - **Result:** No machine functions should operate.
3. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
4. Push in the red Emergency Stop button at the platform controls to the Off position (pushed in).
   - **Result:** No machine functions should operate.

Note: The red Emergency Stop button at the ground controls will stop all machine operation, even if the key switch is switched to platform control.

Key Switch

Proper key switch action and response is essential to safe machine operation. The machine can be operated from the ground or platform controls and the activation of one or the other is accomplished with the key switch. Failure of the key switch to activate the appropriate control panel could cause a hazardous operating situation.

Perform this procedure from the ground using the platform controls. Do not stand in the platform.

1. Pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
2. Turn the key switch to platform control.
3. Check the platform up/down function from the ground controls.
   - **Result:** The machine functions should not operate.

4. Turn the key switch to ground control.
5. Check the machine functions from the platform controls.
   - **Result:** The machine functions should not operate.
6. Turn the key switch to the Off position (pushed in).
   - **Result:** No function should operate.

Horn

The horn is activated at the platform controls and sounds at the ground as a warning to ground personnel. An improperly functioning horn will prevent the operator from alerting ground personnel of hazards or unsafe conditions.

1. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
2. Push down the horn button at the platform controls.
   - **Result:** The horn should sound.

Drive Brake

Proper brake action is essential to safe machine operation. The drive brake function should operate smoothly, free of hesitation, jerking and unusual noise. Hydraulically released individual wheel brakes can appear to operate normally when not fully operational.

Perform this procedure with the machine on a firm level surface that is free of obstructions, with the platform extension deck fully retracted and the platform in the stowed position.

1. Mark a test line on the ground for reference.
2. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
3. Press the drive function select button.
4. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the test line.
5. Bring the machine to top drive speed before reaching the test line. Release the function enable switch or the joystick when your reference point on the machine crosses the test line.
6. Measure the distance between the test line and your machine reference point.
   - **The maximum braking distance at high speed on a paved surface is 24 inches±11.8 inches (61 centimeters±30 centimeters)**
   - **Result:** The machine stops within the specified braking distance. No action required.
   - **Result:** The machine does not stop within the specified braking distance.

Note: The brakes must be able to hold the machine on any slope it is able to climb.

7. Replace the brakes and repeat this procedure beginning with step 1.

Drive Speed, Lowered Platform

Proper drive functions are essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking and unusual noise over the entire proportionally controlled speed range.

Perform this procedure with the machine on a firm, level surface that is free of obstructions.

1. Create start and finish lines by marking two lines on the ground 40 feet (12.2 meters) apart.
2. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
3. Lower the platform to the stowed position.
4. Press the drive function select button.
5. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.
6. Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.
7. Continue at full speed and note the time when your reference point on the machine passes over the finish line. The time should be 9-11 sec.

Drive Speed, Raised Platform

Proper drive functions are essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking and unusual noise over the entire proportionally controlled speed range.

Perform this procedure with the machine on a firm, level surface that is free of obstructions.

1. Create start and finish lines by marking two lines on the ground 40 feet (12.2 meters) apart.
2. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
3. Press the lift function select button.
4. Press and hold the function enable switch on the joystick.
5. Raise the platform approximately 4 feet (1.2 meters) from the ground.
6. Press the drive function select button.
7. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.
8. Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.
9. Continue at full speed and note the time when your reference point on the machine passes over the finish line. The time should be 35-40 sec.

Drive Speed, Slow

Proper drive functions are essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking and unusual noise over the entire proportionally controlled speed range.

Perform this procedure with the machine on a firm, level surface that is free of obstructions.

1. Create start and finish lines by marking two lines on the ground 40 feet (12.2 meters) apart.
2. Turn the key switch to platform control and pull the red Emergency Stop button out to the On position (pulled out) at both the ground and platform controls.
3. Lower the platform to the stowed position.
4. Press the slow speed select button.
5. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when

crossing the start and finish lines.

6. Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.
7. Continue at full speed and note the time when your reference point on the machine passes over the finish line. The time should be 18-22 sec.

Hydraulic Oil Analysis

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more often.

Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary.

Hydraulic oil should be tested yearly and replaced if it fails. If the hydraulic oil is not replaced at the Annual Inspection, test the oil quarterly. Replace the oil when it fails the test.

Tank Venting System

A free-breathing hydraulic tank cap is essential for good machine performance and service life. A dirty or clogged cap may cause the machine to perform poorly. Extremely dirty conditions may require that the cap be inspected more often.

1. Remove the breather cap from the hydraulic tank.
2. Check for proper venting.
   - **Result:** Air passes through the breather cap.
   - **Result:** If air does not pass through the cap, clean or replace the cap. Proceed to step 3.

Note: When checking for positive tank cap venting, air should pass freely through the cap.

3. Using a mild solvent, carefully wash the cap venting system. Dry using low pressure compressed air. Repeat step 2.
4. Install the breather cap onto the hydraulic tank.

Annual Inspection Checklist

WARNING

THIS CHECKLIST MUST BE USED AT 12-MONTH INTERVALS OR EVERY 600 HOURS OF MACHINE USE, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.

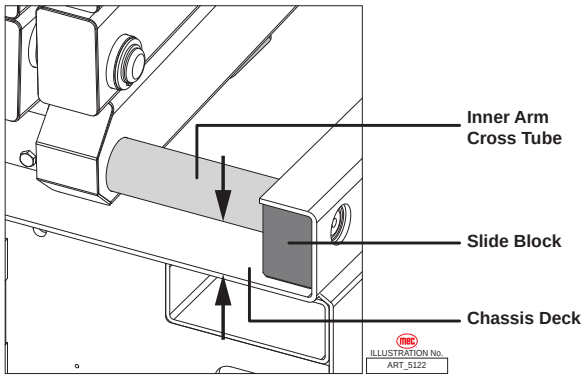
Annual Maintenance Inspections should be conducted by qualified service technicians only. Photocopy the Annual Inspection Checklist page from the Operator's Manual to keep record of this inspection. Keep inspections records up to date. Record and report all discrepancies to your supervisor.

Perform all checks listed on Pre-Start Inspection and the Frequent Inspection, then check all items listed on the Annual Inspection Report. See specific instructions below.

Scissor Slide Blocks

Maintaining the condition of the scissor arm slide blocks is essential to safe machine operation. Continued use of worn out wear pads may result in component damage and unsafe operating conditions.

Perform this procedure with the platform in the stowed position.



1. Measure the distance between the number one inner arm cross tube and the chassis deck at the ground controls side of the non-steer end of the machine.
   - **Result:** The measurement is 1.18 inches (30 millimeters) or more. Proceed to step 2.
   - **Result:** The measurement is less than 1.18 inches (30 millimeters). Replace both wear pads.
2. Measure the distance between the number one inner arm cross tube and the chassis deck at the battery pack side of the non-steer end of the machine.
   - **Result:** The measurement is 1.18 inches (30 millimeters) or more. Proceed to step 3.
   - **Result:** The measurement is less than 1.18 inches (30 millimeters). Replace both wear pads.
3. Apply a thin layer of dry film lubricant to the area of the chassis where the scissor arm wear pads make contact.

Hydraulic Tank Breather Cap

The hydraulic tank is a vented-type tank. The breather cap has an internal air filter that can become clogged or, over time, can deteriorate.

If the breather cap is faulty or improperly installed, impurities can enter the hydraulic system which may cause component damage. Extremely dirty conditions may require that the cap be inspected more often.

1. Remove and discard the hydraulic tank breather cap.
2. Install a new cap onto the tank.

Hydraulic Oil Inspection

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more often.

Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary.

Hydraulic oil should be tested yearly and replaced if it fails. If the hydraulic oil is not replaced at the Annual Inspection, test the oil quarterly. Replace the oil when it fails the test.

Note: Perform this procedure with the platform in the stowed position.

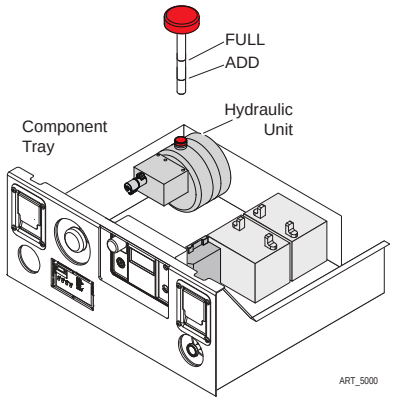
1. Slide out the Component Tray.
2. Disconnect the battery pack from the machine.

WARNING

ELECTROCUTION / BURN HAZARD. CONTACT WITH ELECTRICALLY CHARGED CIRCUITS COULD RESULT IN DEATH OR SERIOUS INJURY.

REMOVE ALL RINGS, WATCHES AND OTHER JEWELRY.

3. Tag and disconnect the hydraulic pump outlet line and remove the line from the pump. Cap the fitting on the pump.
4. Loosen the bolts and remove the hydraulic power pack form the tray.
5. Open the oil plug of tank. Drain all of the oil into a suitable container.
6. Loosen and remove the bolts and separate the tank from the pump body.



WARNING

BODILY INJURY HAZARD. SPRAYING HYDRAULIC OIL CAN PENETRATE AND BURN SKIN. LOOSEN HYDRAULIC CONNECTIONS VERY SLOWLY TO ALLOW THE OIL PRESSURE TO DISSIPATE GRADUALLY. DO NOT ALLOW OIL TO SQUIRT OR SPRAY.

7. Clean up any oil that may have spilled. Properly discard the used oil.
8. Clean the inside of the hydraulic tank using a mild solvent. Allow the tank to dry completely.
9. Install the hydraulic tank and install and tighten the hydraulic tank retaining fasteners. Torque to specification.
   - Hydraulic Tank Retaining Fasteners, Dry: 35in-lbs (4Nm)
   - Hydraulic Tank Drain Plug, Lubricated: 26in-lbs (3Nm)
10. Install the hydraulic power pack into the component tray. Install the fitting and hydraulic hoses

onto the hydraulic power pack and torque.

11. Fill the tank with hydraulic oil to the middle of the dipstick. Do not overfill.
12. Activate the pump to fill the hydraulic system with oil and bleed the system of air.

CAUTION

COMPONENT DAMAGE HAZARD. THE PUMP CAN BE DAMAGED IF OPERATED WITHOUT OIL. BE CAREFUL NOT TO EMPTY THE HYDRAULIC TANK WHILE IN THE PROCESS OF FILLING THE HYDRAULIC SYSTEM. DO NOT ALLOW THE PUMP TO CAVITATE.

Maintenance Inspection Report

SE & MICRO Series Scissors

Fleet Equipment Number _____ Date _____

Inspector Name _____ Inspector Co. _____

Model Number _____ Address _____

Serial Number _____

Hour Meter _____ Signature _____

Machine Owner & address _____

Maintain all service records in accordance with ANSI A92.24-2019

***** If an inspection receives an “N”, remove from service. Once repaired, place an “R” in the box.
***** Refer to the proper service manual for specific information, settings and torque specifications.

Key **Y** = Yes, Acceptable **N** = No, Remove from Service **R** = Repaired **0** = Not Applicable

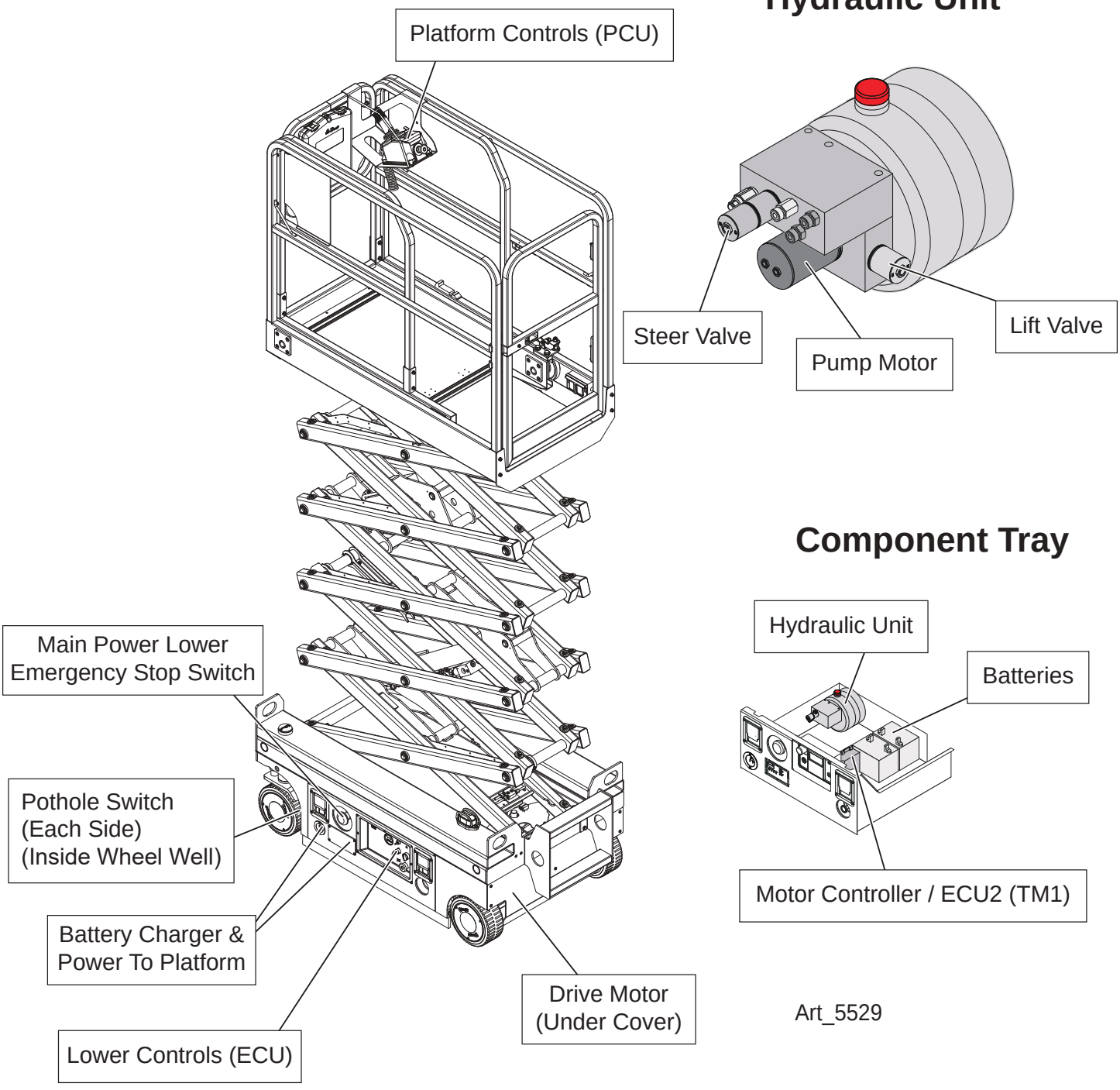
☐ **QUARTERLY** - Inspect only those marked “Q” ☐ **ANNUAL** - Inspect all items

	Q/A	Y/N/O	R
DECALS:			
Legible - undamaged/readable	Q		
Capacity decal correct for model	Q		
RAILS:			
Not damaged, all in place	Q		
All rail fasteners secure	Q		
Entry gate secure, closes properly	Q		
Manual box in good condition	Q		
Operators Manual in manual box	Q		
PLATFORM EXTENSION:			
Rolls in and out freely	Q		
Lock holds deck in place	Q		
Release pedal moves freely (lube)	Q		
ELEVATING ASSEMBLY:			
Scissor Slide Blocks, lubed	Q		
Maintenance Stand, good Cond	Q		
Beam structures: Straight, no cracks	A		
Welds: secure, no cracks	A		
Retaining Rings	A		
Cylinder Pins, secure	A		
ELECTRICAL:			
GFCI operates correctly	Q		
Wire harnesses good cond, secure	A		
Comm cable no damage, secure	A		
BASE:			
Fasteners tight	Q		
Cover panels secure	Q		
Welds	A		

	Q/A	Y/N/O	R
WHEELS:			
Tire damage	Q		
Lug nuts (Wheel mounting) torqued correctly	Q		
King Pins lubed	A		
COMPONENT AREA:			
Hydraulic - no leaks	Q		
Hydraulic tank, correct level	Q		
Hoses not damaged - Fittings tight	Q		
Valve manifold secure, no leaks	Q		
Power unit secure, no leaks	Q		
Batteries properly filled and cables clean	Q		
Emergency stop, cuts power/operation	Q		
Battery switch cuts battery feed	Q		
Plastic cover secure (door end 2632-4555 only)	A		
Hydraulic tank, oil clean	A		
Replace Hydraulic Filter (if equipped)	A		
Clean or replace tank breather filter	A		
OPERATIONAL INSPECTION:			
All functions, operate smooth and quiet	Q		
All functions, speeds correct.	Q		
Upper control box, operates correctly	Q		
Emergency Down, operates correctly	Q		
Limit switches slows drive when elevated	Q		
Pothole switch test	Q		
Steering pressure relief, set correctly	Q		
Lift pressure relief, set correctly	Q		
**Check Platform Overload Sensing operation	Q		

**For machine equipped with Platform Overload Protection system only

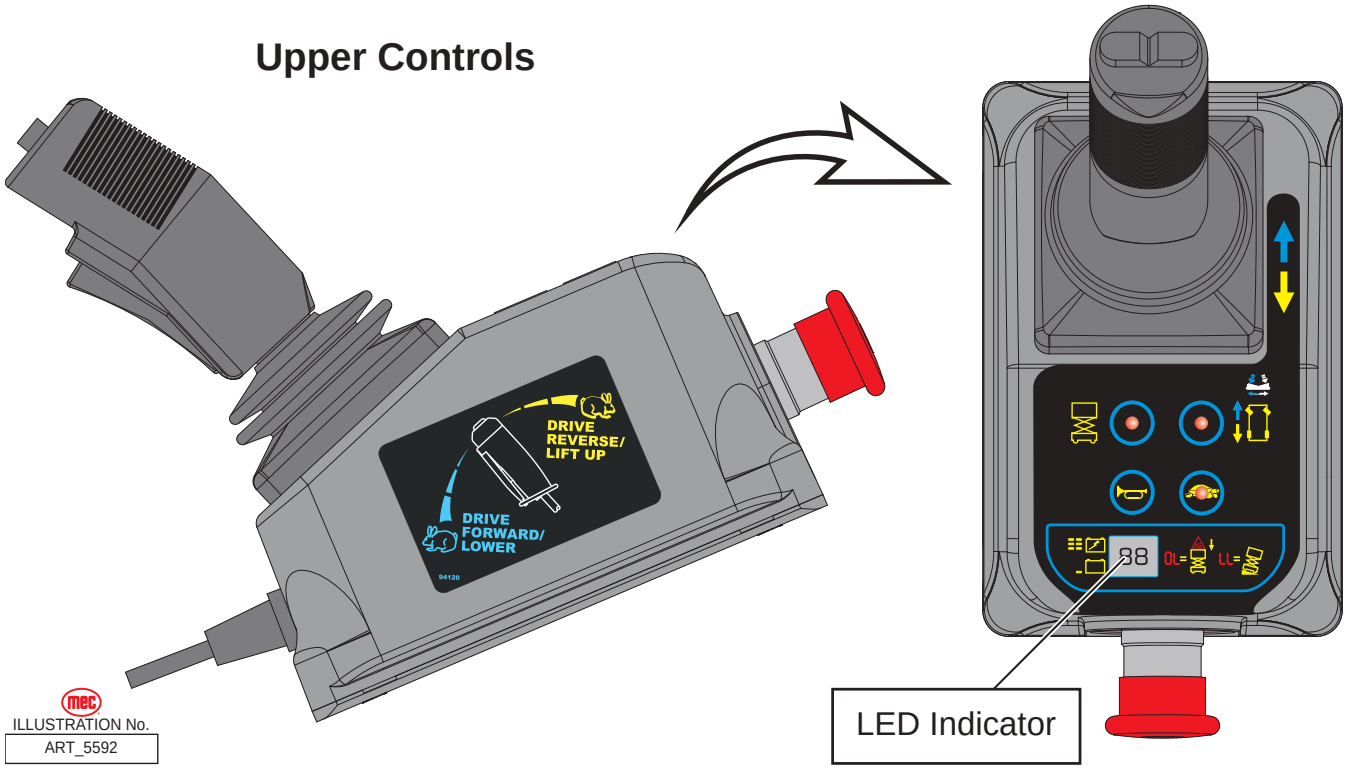
Control Component Locations



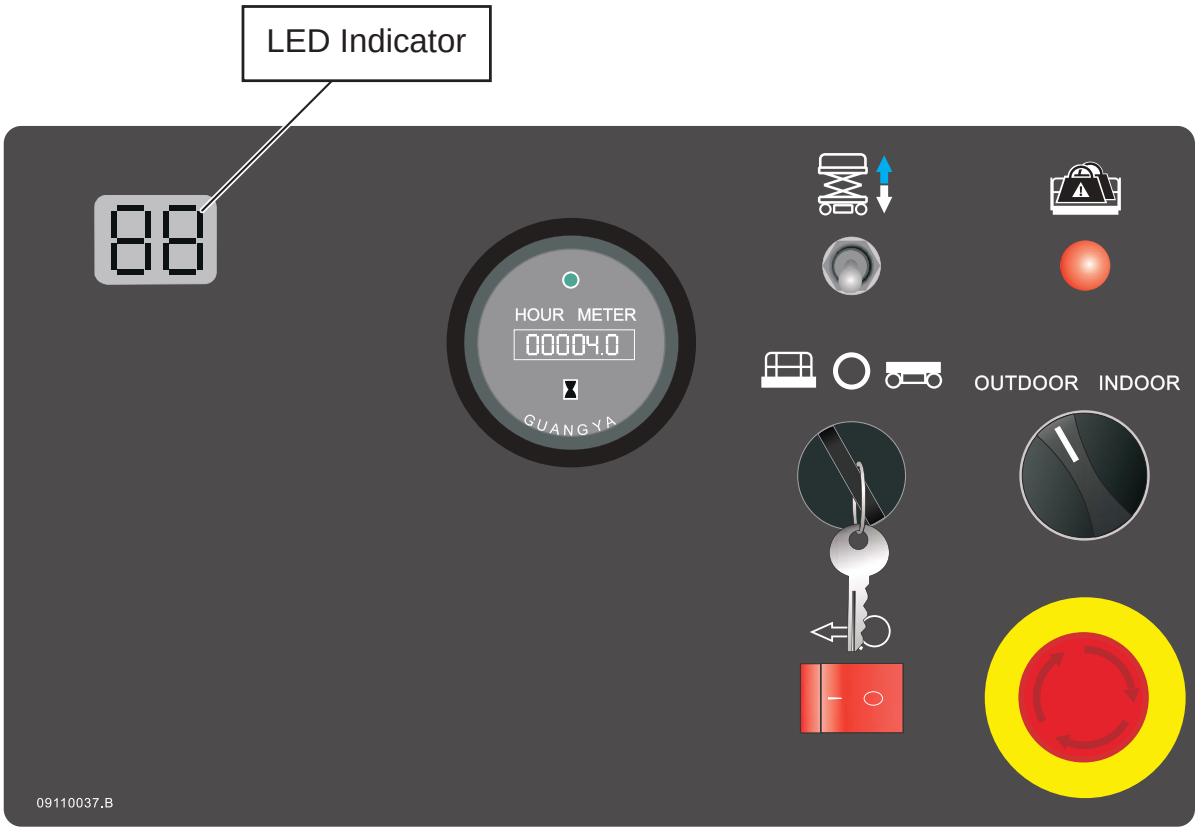
Fault Codes

Fault Codes, when present, appear on the LED Indicator at the Upper Controls station and on the LED Screen at the Lower Controls station.

Upper Controls



Micro19 Lower Controls



Error Indicator Readout

If the LED diagnostic readout displays an error code, such as LL, push in and turn the red Emergency Stop button to reset the system.

Art_5533

Fault	Description	Models	Solutions
01/10	System Initialization Fault	All Models	Check ECU
02/20	System Communication Fault	All Models	Check platform control box, check wiring to platform connector, check ECU, check battery voltage, check relay in lower cabinet
		Micro26®	Check height sensor, check pressure sensor
03	Invalid Option Setting	All Models	Reset option code
12	Chassis Up Or Down Switch ON At Power-Up	All Models	Check wiring to toggle switch, check toggle switch
18	Pothole Guard Fault	All Models	Check pothole limit switch, check pothole bar functionality, recalibrate height
30/35	No Functions	All Models	Remove telematics from hour meter
31	Pressure Sensor Fault	All Models	Check option code (older machines), check wiring to pressure sensor, check pressure sensor, recalibrate overload
32	Angle Sensor Fault	All Models	Check wiring to angle sensor (operating range 1.9-3.8V), check option code
36	Low Voltage Fault	All Models (Newer Machines)	Check battery voltage, check battery connections, load test batteries, replace batteries ONLY if necessary, charge machine
42	Left Turn Switch ON At Power-Up	All Models	Check joystick left steer button, check platform controller, replace joystick
43	Right Turn Switch ON At Power-Up	All Models	Check joystick right steer button, check platform controller, replace joystick
46	Joystick Enable Switch ON At Power-Up	All Models	Enable pushed before self-check finished, check dead-man switch, replace joystick
47	Joystick Not In Neutral At Power-Up	All Models	Check joystick for centering, replace joystick
52	Drive Forward Coil Fault	All Models	Check option code
53	Drive Reverse Coil Fault	All Models	Check option code
54	Up Coil Fault	All Models	Check lift coil for voltage, check resistance on coil, replace lift coil
55	Down Coil Fault	All Models	Check down coil for voltage, check resistance on coil, replace down coil
56	Right Steer Coil Fault	All Models	Check steer coil for voltage, check resistance on coil, replace steer coil
57	Left Steer Coil Fault	All Models	Check steer coil for voltage, check resistance on coil, replace steer coil
58	Brake Coil Fault • Brakes Are 46 Ohms	All Models	Check brake module and wiring, check brakes and wiring, check battery voltage
60	Motor Controller Fault	All Models	Cycle power to machine, replace motor controller

Fault	Description	Models	Solutions
61	Motor Controller Sensor Fault	All Models	Check drive motor and wiring, check motor controller wiring, change option code, replace motor controller
62	Motor Controller Hardware Fail Safe Fault	All Models	Cycle power, check brake switch functionality and wiring, tighten drive motor connections, replace motor controller
63	Motor Controller Output Fault	All Models	Cycle power, tighten drive motor connections, replace motor controller
64	Motor Controller Fault	All Models	Replace motor controller
65	Motor Controller Throttle Fault	All Models	Check wiring to controller, replace motor controller
66	Motor Controller Reverse Fault	All Models	Replace motor controller
67	Motor Controller HPD Fault	All Models	Check contactor, change option code, replace ECU, replace motor controller
68	Low Voltage Fault	All Models	Check battery voltage, check battery connection, load test batteries, replace batteries ONLY if necessary, charge machine
69	High Neutral Current Fault	All Models	Motor controller thinks the brakes are on and the motors are still running (this message comes just before other faults, should be ignored in those cases), replace motor controller
70	Steer Input Out Of Range	All Models	Check for loose connection at motor controller, replace motor controller
71	Motor Controller Main Contactor Fault	All Models	Check wiring to contactor (check white & black for connection & voltage), check drive motor and wiring, check motor controller wiring
72	Motor Controller Over Voltage Fault	All Models	Check battery voltage (battery charger must NOT be connected), cycle power to machine, replace motor controller
73	Motor Controller	All Models	Drive or lift motor may be overheating (let the lift cool down), cycle power to machine, replace motor controller
74	Motor Controller Motor Fault	All Models	Check connections to motors, check wiring to motors, cycle power to the lift, replace motor controller
75	Motor Controller Pump Motor Fault	All Models	Check connections on pump motor, tap on pump motor (brushes possibly stuck), cycle power to machine, replace pump, replace motor controller
76	Motor Controller Left Drive Motor Fault	All Models	Check drive motor terminals, cycle power to the lift, replace motor controller
77	Motor Controller Right Drive Motor Fault	All Models	Check drive motor terminals, cycle power to the lift, replace motor controller
78	Pump Motor Short Fault • Should Be 0.8 To 1.4 Ohms	All Models	Check connections on pump motor, tap on pump motor (brushes possibly stuck), cycle power to machine, replace motor controller
79	Left Drive Motor Short • Should Be 0.5 To 2.0 Ohms For Micro19	1930SE ONLY	Check left drive motor terminal, check motor controller wiring
		Micro19®	Swap drive motor wires (if code changes trace wiring, if it does not replace motor controller), tighten drive motor terminals

Fault	Description	Models	Solutions
80	Over 80% Load Warning	All Models	Platform capacity close to limit of weight (consider not adding more load)
81	Right Drive Motor Short	1930SE/Micro19®	Check right drive motor and wiring, check motor controller and wiring
82	Right Brake Coil • Brakes Should Be 46 Ohms On Micro19 And 26 Ohms For All Others	All Models	Check battery voltage, check right brake terminals, check brake module and wiring, check contactor, check option code, check fuse near motor controller, replace ECU
83	Left Brake Coil	All Models	Check battery voltage, check left brake terminals, check brake module wiring, check contactor
		1930SE/Micro19®	Check drive motor terminals, check fuse connected to motor controller, replace motor controller
85	Brake Release Switch Closed	1930SE/Micro19® ONLY	Turn brake release switch off
86	Raised Brake Release Fault	1930SE ONLY	Brake release switch engaged when elevated
87	Brake Release Switch Fault	1930SE ONLY	Brake release switch is open
89	Drive Motor Field Open Fault	All Models	Check wiring on motors, check wiring to motor controller
90	Over 90% Load Warning	All Models	Platform getting close to weight capacity
91	Left Drive Motor Short	All Models	Check wiring to motor, check wiring to motor controller
92	Right Drive Motor Short	All Models	Check wiring to motor, check wiring to motor controller
99	Over 99% Load Warning	All Models	Platform has reached load capacity.
OL	Platform Overloaded	All Models	Remove excess load
LL	Tilted	All Models	Check wiring to tilt sensor, recalibrate tilt
H9	Height Not Calibrated	All Models	Calibrate height
CH	Not A Fault Code	All Models	Machine is in chassis controls

Option Code For Machines		
Model	**Older**	**With Overload (Yellow Gate)**
MICRO19®	To Serial #16900460 58 From Serial #16900461 62	E3
MICRO19XD®	N/A	E3
MICRO26®	N/A	27
1930SE	58	--
2632SE, 3346SE, 4046SE, 4555SE	30,26	A7
MME20, MME25	N/A	A7

Calibration Instructions

These calibration instructions only apply to Micro19s after serial number 16911000.

The Platform Overload Sensing System may require calibration in the event of a malfunction or after replacing an Overload System component. Proper and correct calibration of the Overload system is critical for normal and trouble-free machine operation. Please read and understand the instructions before beginning the calibration process.

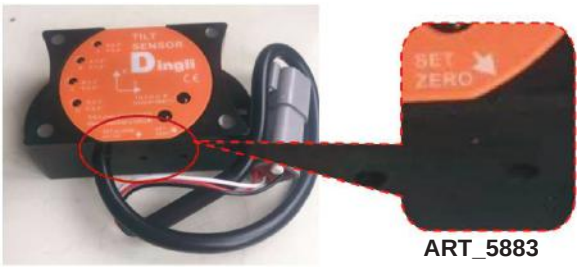
Calibrate Tilt Sensor

Tilt Sensor calibration is necessary only when the level indication is not correct. It is not necessary to calibrate the Tilt Sensor during Height and Overload Calibrations unless the level indication is not correct. The Tilt Sensor is located in the rear of the chassis. It will be necessary to remove the Drive Motor Cover Plate to gain access to the Tilt Sensor. The diagram below shows the Tilt Sensor removed from the machine for clarity.

1. Park the machine on flat level surface.

Note: Calibrating the level sensor requires that the machine be perfectly level on both the X and Y axis. An inclinometer should be used when ensuring machine level. Machine power must be on.

2. Using the diagram below, locate the “SET ZERO” button often located on the side of the sensor but may be on the top of the sensor. Press and hold the “SET ZERO” button until the LEDs alternate between red and green flashes. Release the button.
3. Immediately press the “SET ZERO” button three times. The LEDs will turn off then only the green LED will illuminate. Calibration is complete.



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Calibrate Height

Note: The platform must lift to full height to properly calibrate height. If low overhead obstructions prevent full elevation. Move the machine to a location that will not limit elevation. If machine cannot be moved, perform the full Height calibration at the maximum possible height. The Upper Point Calibration can be redone once the machine can be moved. It is a good idea to alert others to the need to re-calibrate if it cannot be calibrated correctly.

1. Make sure the platform is lowered to its fully stowed position.
2. Remove the upper control box from the guard rail and unplug it from the guard rail connection. Plug the upper control box into the connector located inside the lower control drawer.
3. Turn the Key Switch to the lower control position and turn all switches on.
4. Push the platform Emergency Stop (E-stop) Switch in.
5. Press and hold the Drive and Turtle buttons while pulling out the platform E-stop. Continue holding the buttons until “H9” (or “Hg“) appears in the upper control box display. Release the buttons. The system is now in Height Calibration mode.
6. Set the lower point calibration by simultaneously pressing and holding the Joystick Enable

Trigger and the Right Steer button (the horn will sound for a couple seconds). When the horn turns off, the Lower Point Calibration will be set. Release the switches.

7. Set the Upper Point calibration by first elevating the platform. Use the lift switch in the lower panel to lift the platform to its highest position, the platform must be completely elevated (see Note above).
8. Simultaneously press and hold the Joystick Enable Trigger and the Left Steer button (the horn will sound for a couple seconds). When the horn turns off, the Upper Point Calibration will be set. Release the switches.
9. Set the Outdoor point calibration by first lowering the platform 5 feet only (from full elevation) using the lift switch on the lower panel. Simultaneously press and hold the Joystick Enable Trigger and the Lift button on the touch pad (the horn will sound for a couple seconds). When the horn turns off, the Outdoor Height Limit Calibration will be set. Release the switches.
10. Set the safe down point calibration by first lowering the platform about halfway (from full elevation) using the lift switch on the lower panel. Simultaneously press and hold the Joystick Enable Trigger and the Horn button on the touch pad (the horn will sound for a couple seconds). When the horn turns off, the Outdoor Height Limit calibration will be set. Release the switches.
11. Press the E-stop Switch in to turn the system off. This will finalize the calibration.
12. Pull the E-stop switch out to turn the machine back on, lower the platform and move the upper control cord back to the guard rail connection. Reconnect the lower plug and test all functions.

Calibrate Overload System

Note: The platform **will lift automatically** once the calibration has been initiated. Be sure that there are **no overhead obstructions** when choosing a location on which to calibrate the overload system.

Note: If a safety concern arises anytime during the automated lift/lower sequence, press the Emergency Stop switch immediately. The procedure can be restarted once it is safe to do so.

Empty Platform Sequence

1. Park the machine on flat level surface. Machine power must be on with the key switch in the Upper control position. Ensure that the platform is completely empty and there are no ‘extra’ items attached to the platform or guard rails that may add weight beyond that of an empty platform.
2. Using the lower Lift Switch (located on the lower control panel) perform the following sequence of up and down movement of the toggle switch.
   1) Down 5 times
   2) Up 1 time
   3) Down 5 times
   4) Up 1 time
   5) Down 1 time
   6) Up 1 time
   7) Down 3 times
3. The Platform will run through a series of lift and lower cycles. The process will be complete when the platform returns to the fully lowered and the horn stops sounding. Cycle Emergency Stop power and continue to the Loaded calibration steps.

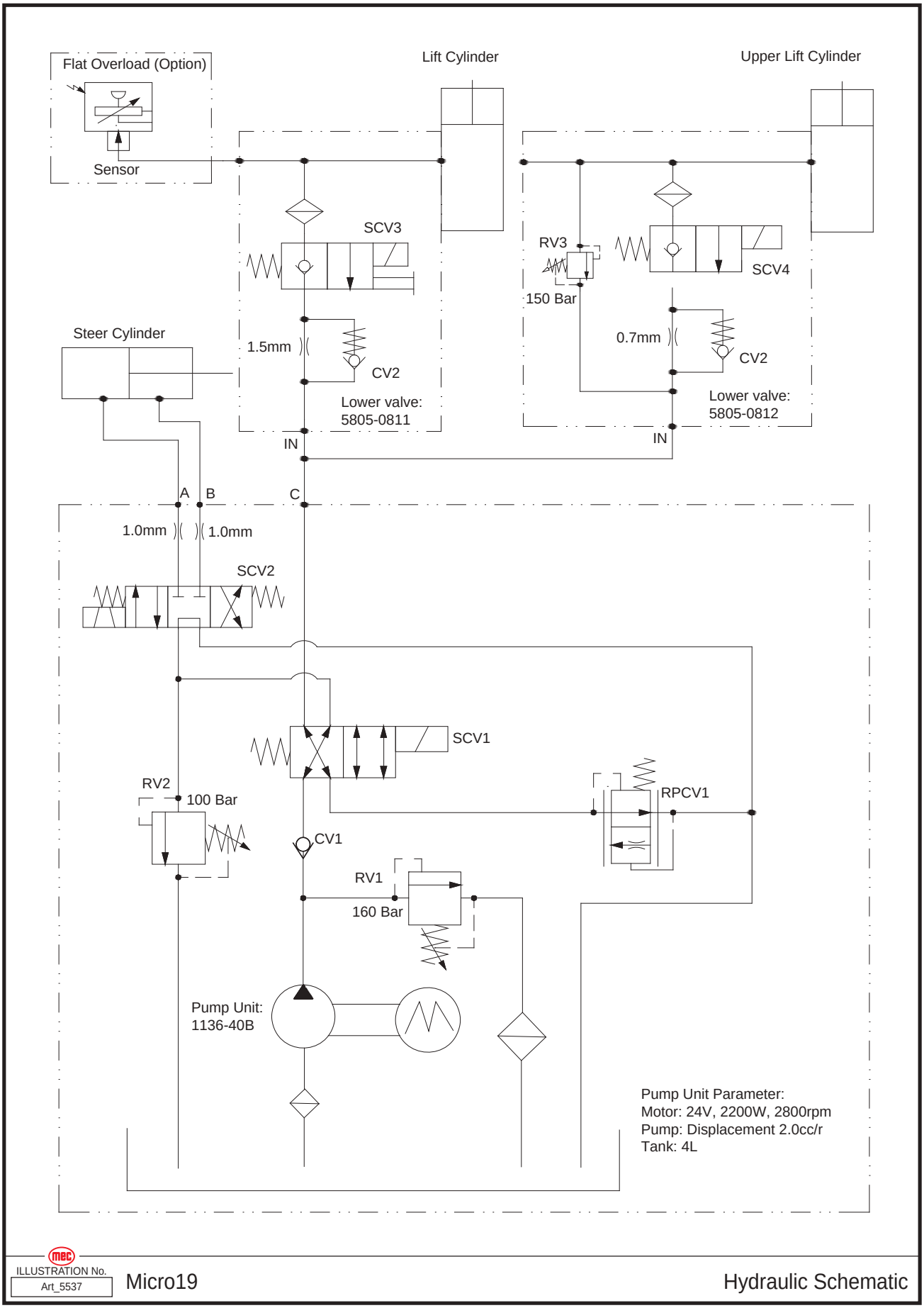
Loaded Platform Sequence

1. Park the machine on flat level surface. Machine power must be on with the key in the Platform position. Ensure that the platform is completely empty and there are no 'extra' items attached to the platform or guard rails that may add weight to the platform beyond that of an empty platform.
2. Locate the decal showing the Maximum Platform Capacity and record that weight number. Place recorded weight in the center of the platform.
3. Using the lower Lift Switch (located on the lower control panel) perform the following sequence of up and down movement of the toggle switch.
   1) Down 5 times
   2) Up 1 time
   3) Down 5 times
   4) Up 1 time
   5) Down 5 time
4. The platform will run through a series of lift and lower cycles. The process will be complete when the platform returns to the fully lowered and the horn stops sounding. Once the Empty and the Loaded sequences are complete, the Platform Overload Calibration is complete. Remove weight from platform and test all machine operations in accordance with the Pre-Inspection Check List located in the machine's operator's manual.

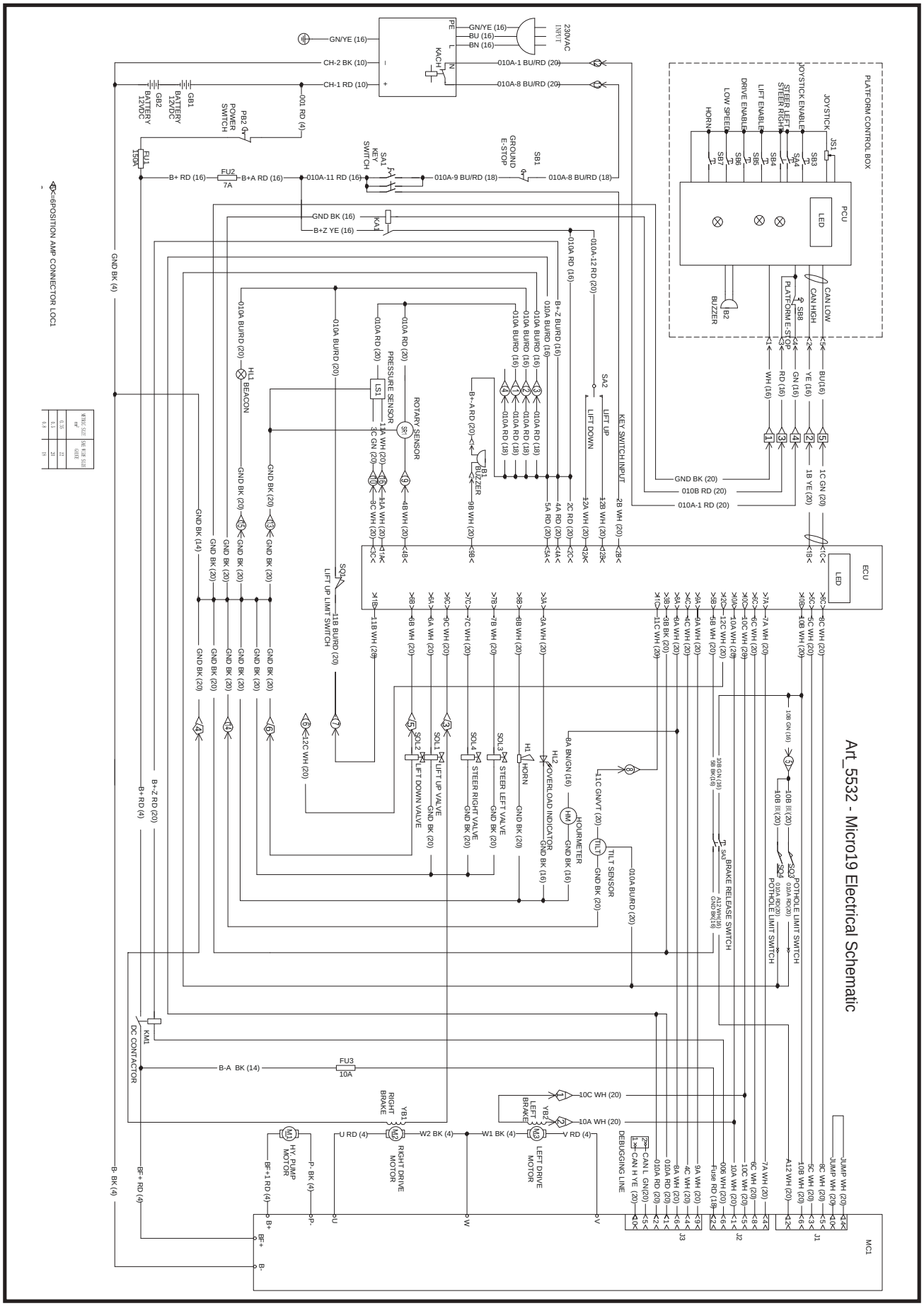
Platform Overload Test Procedure

1. Park the machine on firm, level surface and remove all contents from platform.
2. Consult the Platform Capacity data plate for the Maximum Platform Weight Capacity information.
3. Load (approximately) 90% of that weight in the platform.
4. Lift the platform using the lower control lift switch.
   - The platform should raise and the display should read "90" indicating 90% load.
5. Add 50lbs (22.7kg) to the platform in addition to the weight added in step 3 then lift the platform.
   - The platform should lift 5-7 feet (1.5-2.1 meters) then stop lifting automatically. The alarms should sound and the display should read "OL". Use Emergency Lowering cable to lower the platform.
6. **Results:**
   - The platform stops lifting with less than the maximum rated platform capacity in the platform **OR**
   - The platform continues to lift with excessive weight in the platform.
     - Test Failed – recalibrate the overload system (refer to Overload Calibration in this section).
   - The Platform Overload Sensing System operates as described – Passed Test - Complete.

Hydraulic Schematic



Electrical Schematic



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Parts Introduction

This Parts sections consists of illustrated parts sections and is designed to provide you, the customer, with illustrations and the list of associated parts needed to properly maintain the MEC self-propelled aerial work platform. When used in conjunction with the Service section in this manual and the Operator's Manual (provided separately), this manual will assist you in making necessary adjustments and repairs, and identifying and ordering the correct replacement parts.

All parts represented here are manufactured and supplied in accordance with MEC quality standards.

We recommend that you use genuine MEC parts to ensure proper operation and reliable performance.

To obtain maximum benefits from your MEC Aerial Work Platforms, always follow the proper operating and maintenance procedures. Only trained authorized personnel should be allowed to operate or service this machine. Service personnel should read and study the Operator's, and the Service and Parts Manuals in order to gain a thorough understanding of the unit prior to making any repairs.

Steer Linkage and Wheels Assembly, To Serial #16921529

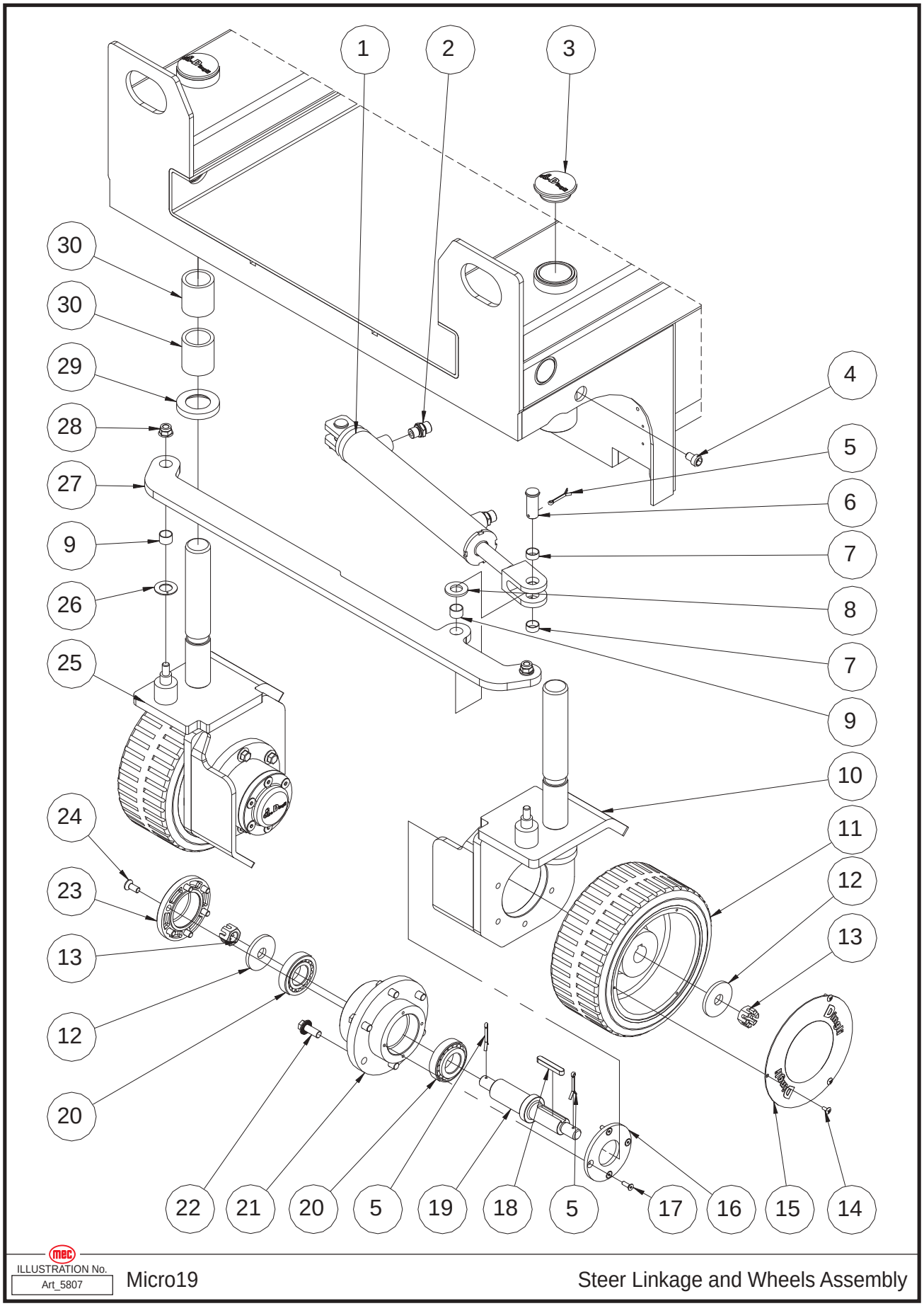

ILLUSTRATION No. Art_5807 Micro19 Steer Linkage and Wheels Assembly

Item	Part Number	Description	Qty.
1	41223	Steer Cylinder Assembly	1
--	41594	Seal Kit	1
2	41298	Straight Fitting	2
3	41596	Cover	2
4	41794	Screw	2
5	41322	Cotter Pin	6
6	41321	Pin	2
7	41225	Bearing	4
8	43564	Washer	2
9	41210	Bearing	4
10	44607	Steer Yoke Weldment	1
11	42414	Wheel (To Serial #16921529)	2
	45265	Wheel (From Serial #16921530)	2
12	41327	Washer	4
13	53347	Castle Nut M16 × 1.50	4
14	53348	Screw THMS M04-0.70 × 10	6
15	41323	Cover	2
16	41230	Bearing Cover	2
17	53269	Screw CSCS M05-0.80 × 16	8
18	41232	Key	2
19	42415	Wheel Shaft	2
20	41024	Bearing	4
21	41234	Connection Plate	2
22	50429	Screw HHCS M10-1.50 × 25 Serrated Flange	12
23	41328	Cap	2
24	53282	Screw CSCS M08-1.25 × 20	12
25	44608	Steer Yoke Weldment	1
26	41222	Bearing	2
27	42412	Tie Rod	1
28	50311	Nut NNYL M10-1.50 Flange	2
29	41792	Washer	2
30	41595	Bearing	4

Drive Wheel Assembly, To Serial #16921529

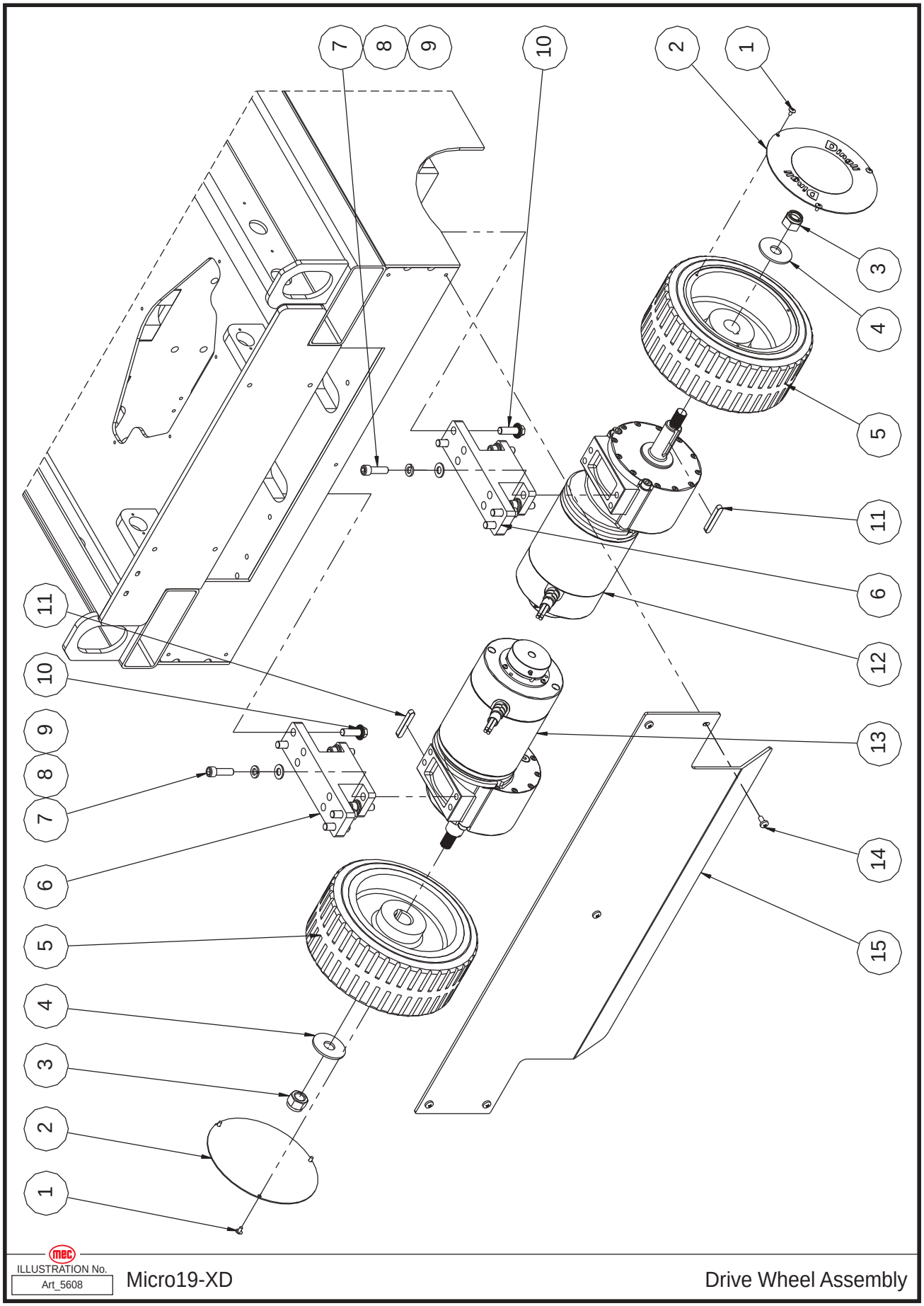

ILLUSTRATION No. Art_5608 Micro19-XD Drive Wheel Assembly

Item	Part Number	Description	Qty.
1	53263	Screw THMS M04-0.70 × 8	6
2	41323	Cover	2
3	53313	Nut NNYL M16 × 1.50	2
4	53314	WSHR M16 Flat Fender Washer	2
5	42414	Wheel (To Serial #16921529)	2
	45265	Wheel (From Serial #16921530)	2
6	41239	Support	2
7	53315	Screw SHCS 3/8-24 × 1 1/4	8
8	53316	WSHR 3/8 Spring Washer	8
9	53317	WSHR 3/8 Standard Flat Narrow Washer	8
10	53268	Screw HHCS M10-1.50 × 30 Serrated Flange	8
11	41232	Key	2
12	42421	Right Drive Motor Assembly	1
--	42886	Right Motor	1
--	42889	Brake	1
--	42887	Reducer (To Serial #16921529)	1
	47472	Reducer (From Serial #16921530)	1
13	42419	Left Drive Motor Assembly	1
--	42890	Left Motor	1
--	42889	Brake	1
--	42887	Reducer (To Serial #16921529)	1
	47472	Reducer (From Serial #16921530)	1
--	47192	Coupler, Brake To Motor	1
14	53318	Screw PHMS M06-1.00 × 12	5
15	42407	Plate (Without Outlet Hole)	1
	48181	Plate (With Outlet Hole)	1
--	42883	Terminal Connector, Drive Motor Wires	2

Steer Linkage and Wheels Assembly, From Serial #16921530

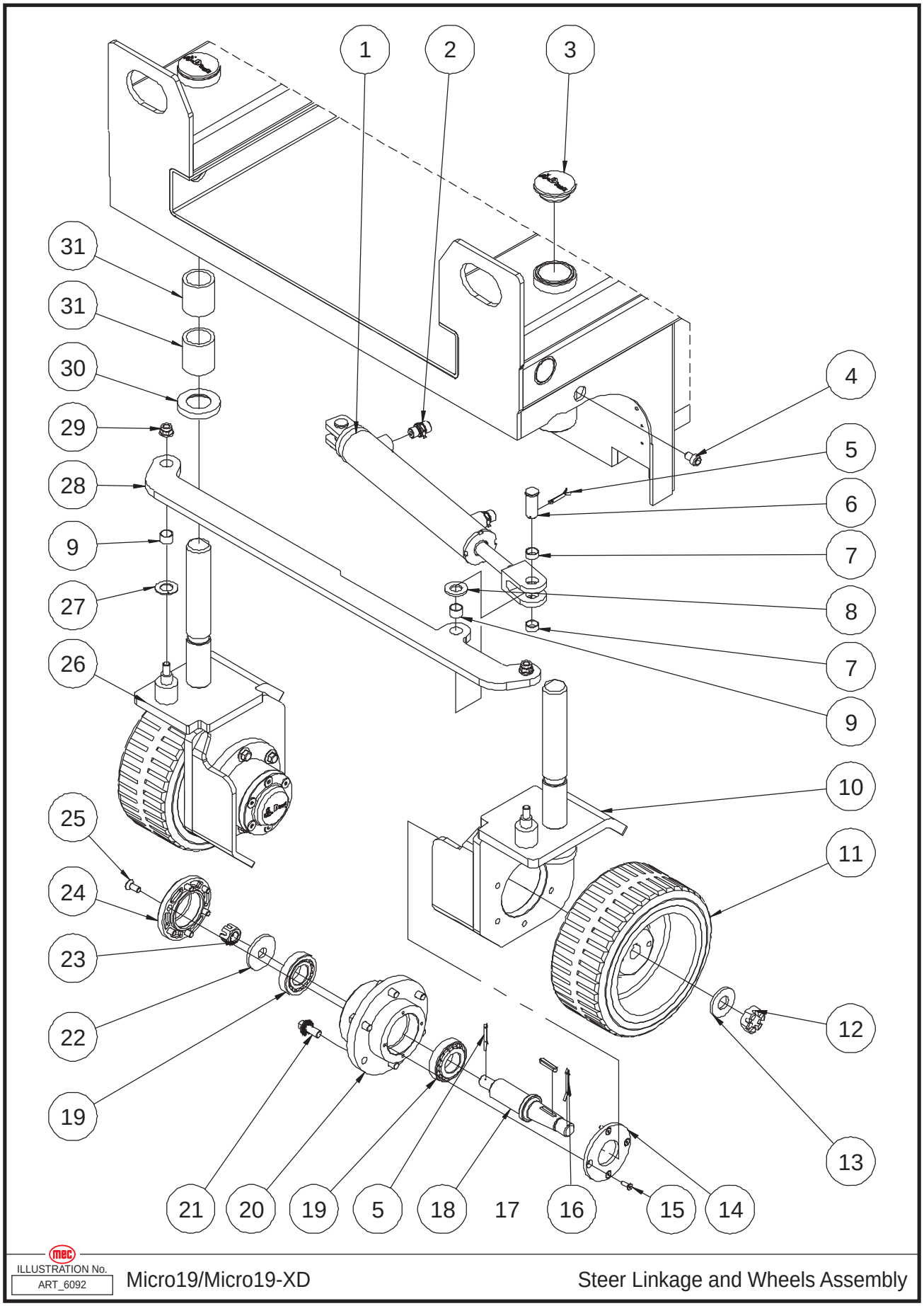

ILLUSTRATION No. ART_6092 Micro19/Micro19-XD Steer Linkage and Wheels Assembly

Item	Part No.	Description	Qty.
1	41223	Steer Cylinder Assembly	1
--	41594	Seal Kit	1
2	41298	Straight Fitting	2
3	41596	Cover	2
4	41794	Screw	2
5	41322	Cotter Pin	4
6	41321	Pin	2
7	41225	Bearing	4
8	43564	Washer	2
9	41210	Bearing	4
10	44607	Steer Yoke Weldment	1
11	45265	Wheel	2
12	46738	Nut	2
13	46739	Washer	2
14	41230	Bearing Cover	2
15	53269	Screw CSCS M05-0.80 × 16	8
16	43563	Cotter Pin	2
17	46745	Key	2
18	47526	Wheel Shaft	2
19	41024	Bearing	4
20	41234	Connection Plate	2
21	50429	Screw HHCS M10-1.50 × 25 Serrated Flange	12
22	41327	Washer	2
23	53347	Castle Nut M16-1.50	2
24	41328	Cap	2
25	53282	Screw CSCS M08-1.25 × 20	12
26	44608	Steer Yoke Weldment	1
27	41222	Bearing	2
28	42412	Tie Rod	1
29	50311	Nut NNYL M10-1.50 Flange	2
30	41792	Washer	2
31	41595	Bearing	4

Drive Wheel Assembly, From Serial #16921530

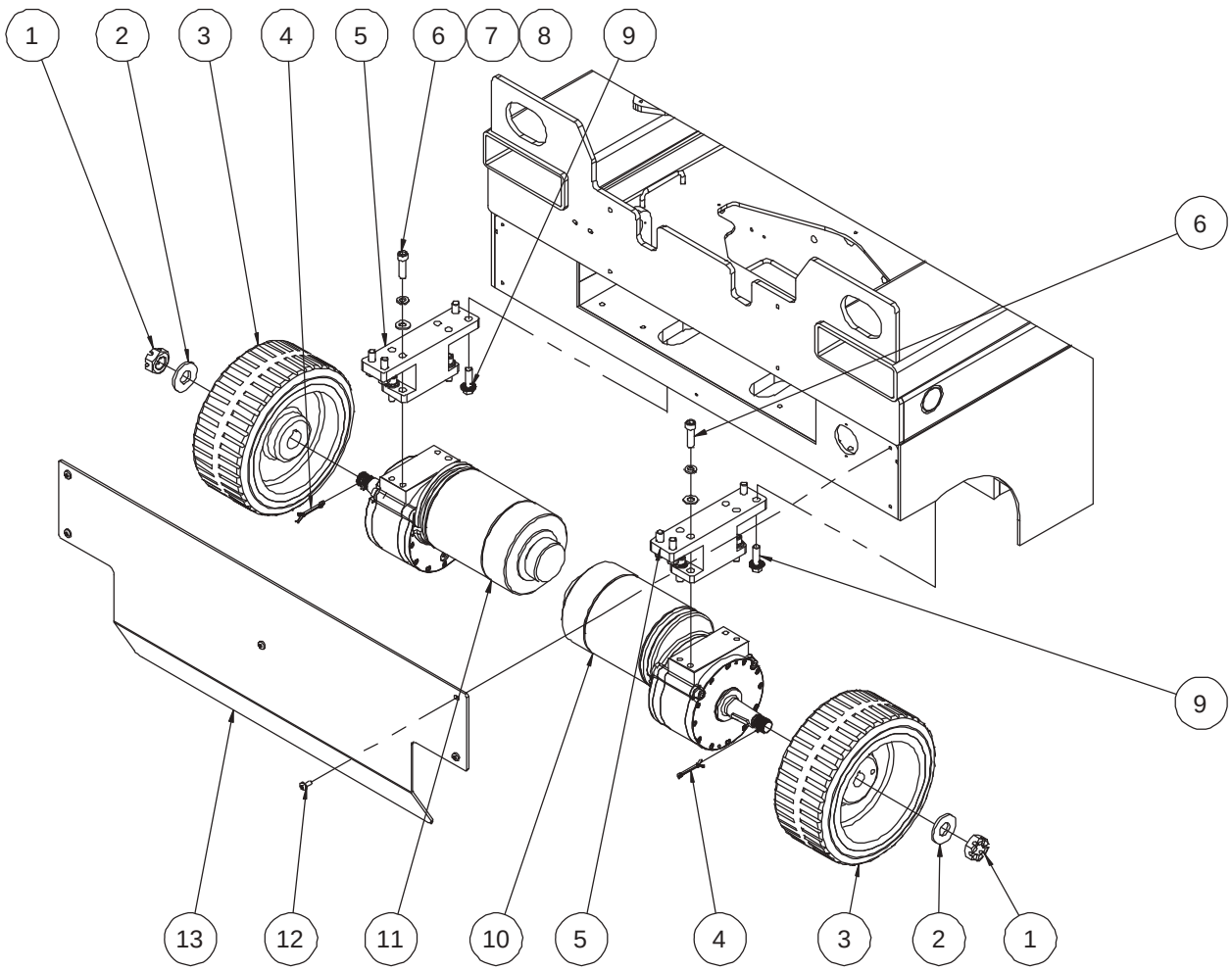

ILLUSTRATION No.
ART_6093

Micro19/Micro19-XD

Steer Linkage and Wheels Assembly

Item	Part No.	Description	Qty.
1	46738	Nut	2
2	46739	Washer	2
3	45265	Wheel	2
4	43563	Cotter Pin	2
5	41239	Support	2
6	53315	Screw SHCS 3/8-24 × 1 1/4	8
7	53316	WSHR 3/8 Spring Washer	8
8	53317	WSHR 3/8 Standard Flat Narrow Washer	8
9	53268	Screw HHCS M10-1.50 × 30 Serrated Flange	8
10	47527	Right Drive Motor Assembly	1
--	47528	Right Motor	1
--	42889	Brake	1
--	47472	Reducer	1
--	46745	Key	1
11	47529	Left Drive Motor Assembly	1
--	47530	Left Motor	1
--	42889	Brake	1
--	47472	Reducer	1
--	46745	Key	1
12	53318	Screw PHMS M06-1.00 × 12	5
13	42407	Plate	1

Pothole Protection Assembly

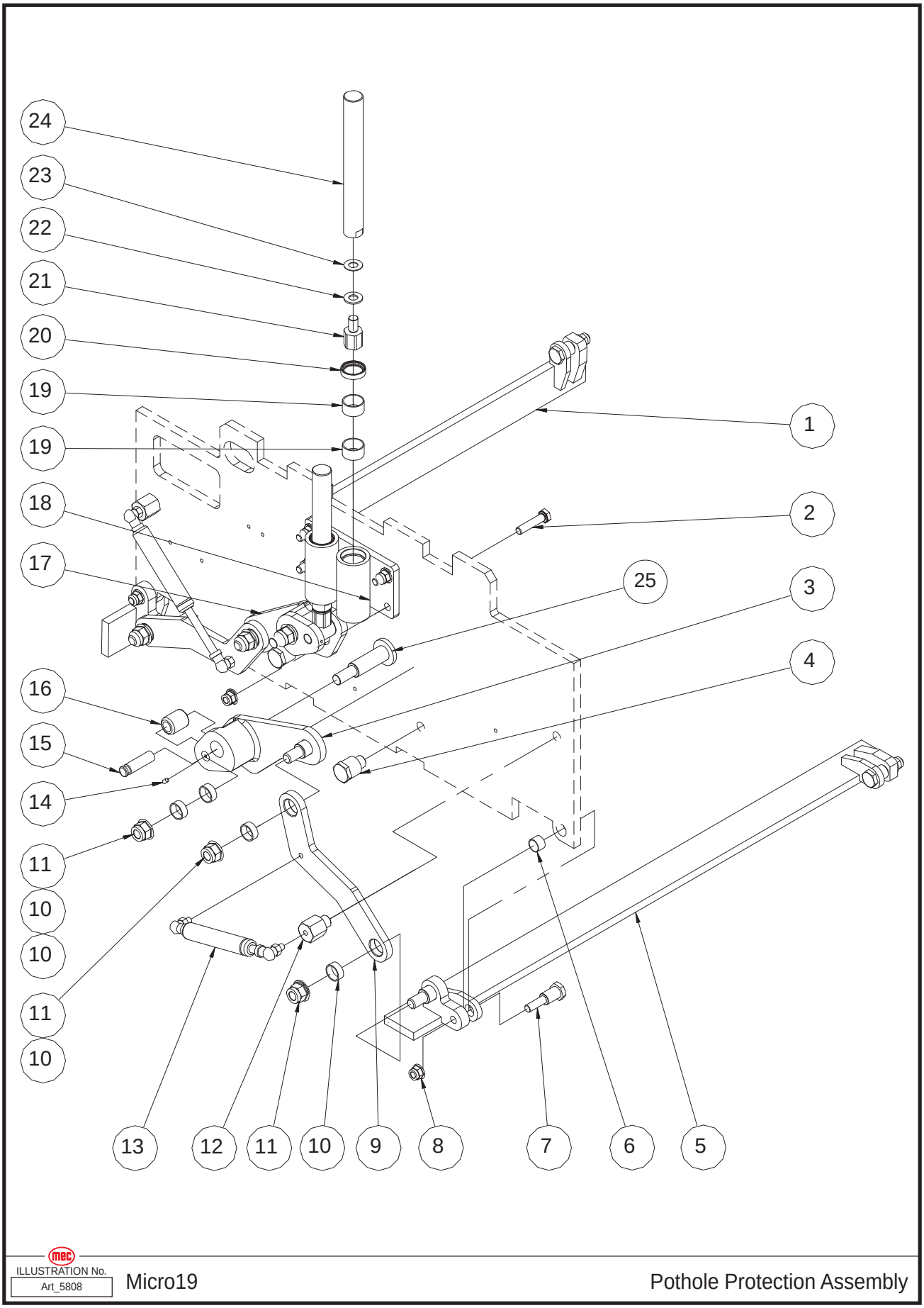

ILLUSTRATION No. Art_5808 Micro19 Pothole Protection Assembly

Item	Part Number	Description	Qty.
1	42409	Pothole Guard Weldment	1
2	50430	Screw HHCS M10-1.50 × 45	4
3	41319	Linkage Weldment	1
4	41211	Pin	2
5	42410	Pothole Guard Weldment	1
6	41210	Bearing	4
7	41209	Pin	4
8	50311	Nut NNYL M10-1.50 Flange	8
9	42411	Pothole Link Plate	2
10	41214	Bearing	8
11	53349	Nut NNYL M14-2.00 Flange	6
12	41212	Gas Shock Strut	2
13	41215	Gas Shock	2
14	53283	Set Screw M05-0.80 × 10 Cone Point	2
15	41216	Pin	2
16	41217	Roller	2
17	41320	Linkage Weldment	1
18	44609	Pothole Guide	1
19	41203	Bearing	4
20	44610	Seal	2
21	41204	Pothole Hole Pusher Pin	2
22	44007	Adjusting Washer 2	2
23	44008	Adjusting Washer 3	2
24	44611	Pothole Hole Pusher Rod	2
25	47376	Pivot Pin, Pothole Weld	1

Battery Pack Module

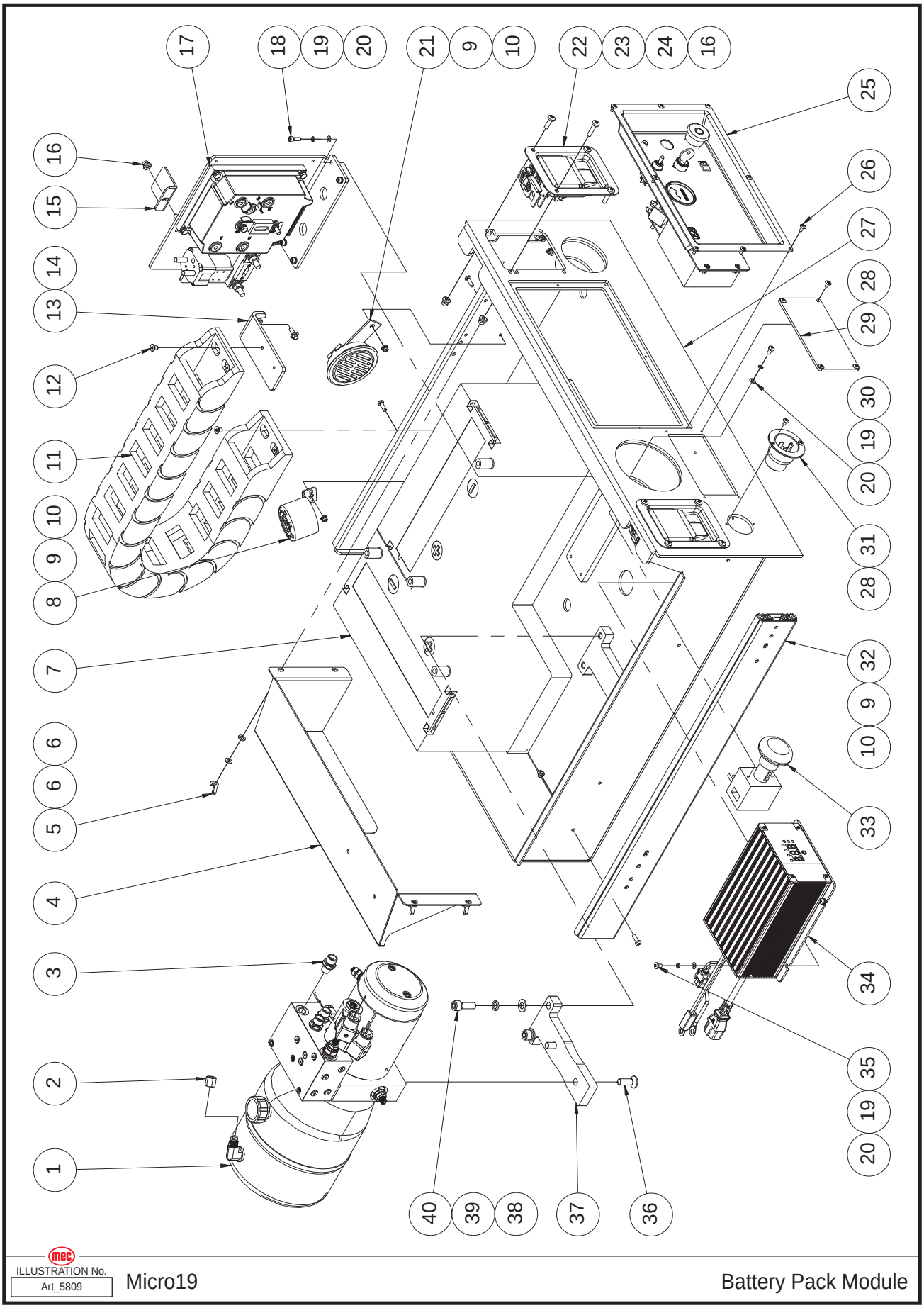

ILLUSTRATION No. Art_5809 Micro19 Battery Pack Module

Item	Part Number	Description	Qty.
1	42422	Hydraulic Power Unit (Refer to page 50)	1
2	41413	Nut	1
3	41296	Straight Fitting	3
4	42491	Ground Control Cover	1
5	53350	Wing Nut M06-1.00	4
6	50000	WSHR M06 Standard Flat Washer	4
7	44019	Battery	2
8	41074	Alarm	1
9	53281	Nut NNYL M05-0.80 Flange	8
10	53351	Screw PHMS M05-0.80 × 16	8
11	43987	Towline	1
12	53352	Screw CSCS M06-1.00 × 10	4
13	42430	Towline Bracket	1
14	53273	Screw HHCS M06-1.00 × 14 Serrated Flange	2
15	42431	Press Plate	1
16	50568	Nut NNYL M06-1.00 Flange	9
17	REF	Motor Controller Assembly (Refer to page 52)	1
18	50359	Screw SHCS M05-0.80 × 16	4
19	53043	WSHR M05 Spring Washer	10
20	53038	WSHR M05 Standard Flat Washer	10
21	41075	Horn	1
22	43977	Latch	2
23	53264	Screw PHMS M06-1.00 × 20	4
24	53353	Screw PHMS M06-1.00 × 25	4
25	REF	Ground Control Assembly (Refer to page 54)	1
26	53348	Screw THMS M04-0.70 × 10	8
27	43988	Battery Tray Weldment	1
28	53263	Screw THMS M04-0.70 × 8	6
29	44612	Cover	1
30	53354	Screw PHMS M05-0.80 × 10	2
31	41575	Plug	1
32	41255	Glide Track	2
33	42071	Power Switch	1
34	42904	Charger	1
35	53222	Screw PHMS M05-0.80 × 8	4
36	53225	Screw CSCS M10-1.50 × 30	2
37	41337	Bracket	1
38	50002	WSHR M10 Standard Flat Washer	2
39	53054	WSHR M10 Spring Washer	2
40	50127	Screw SHCS M10-1.50 × 30	2
41	43978	Striker, Latch (Not Shown)	2

REF - Reference

Hydraulic Power Unit

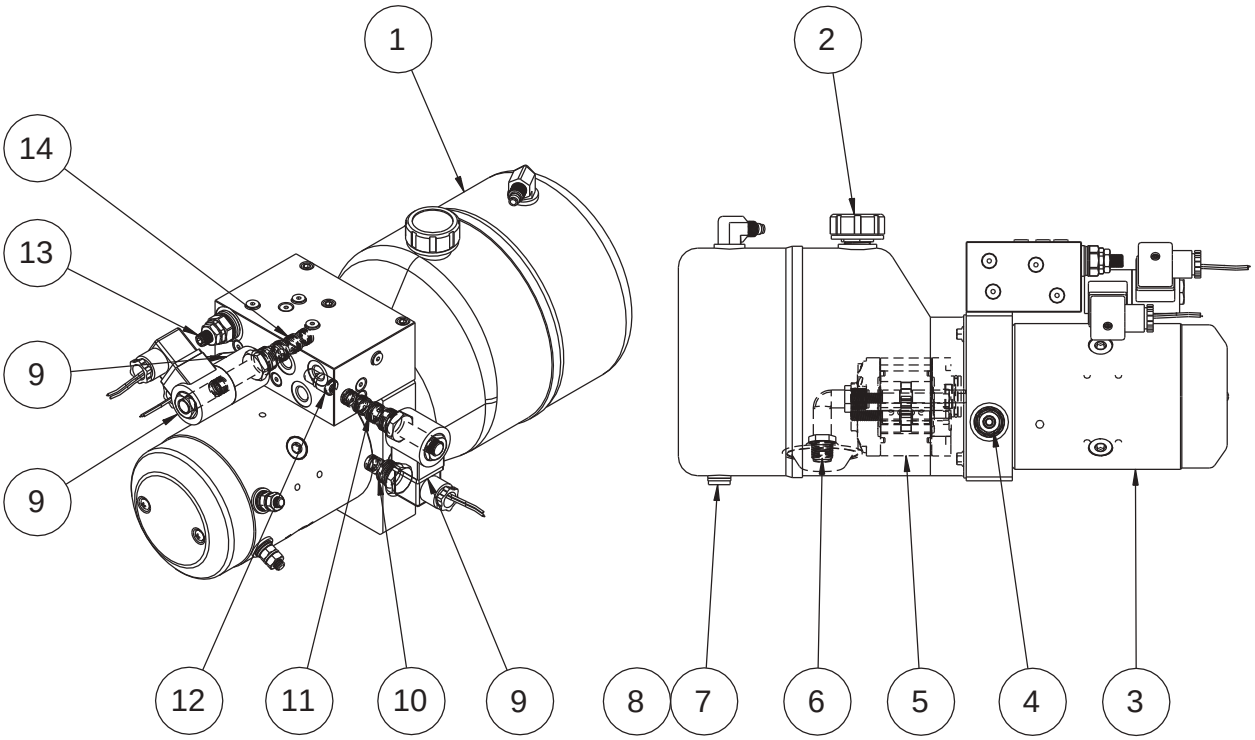

ILLUSTRATION No.
Art_5612

Micro19-XD

Hydraulic Power Unit

Item	Part Number	Description	Qty.
1	42426	Tank	1
--	43771	O-Ring, Tank Seal	1
2	43784	Tank Cover	1
3	42424	Motor	1
4	44009	Relief Valve	1
5	42425	Pump	1
--	44855	O-Ring, Pump Seal	1
--	44856	O-Ring, Pump-Face Seal	1
6	44010	Filter Web	1
7	43776	Plug	1
8	43777	Washer	1
9	44011	Coil	3
10	44013	Check Valve	1
11	45305	Solenoid Valve Spool	1
12	42427	Pressure Compensation Valve	1
13	44012	Relief Valve	1
14	41246	Solenoid Valve Spool	1

Motor Controller Assembly

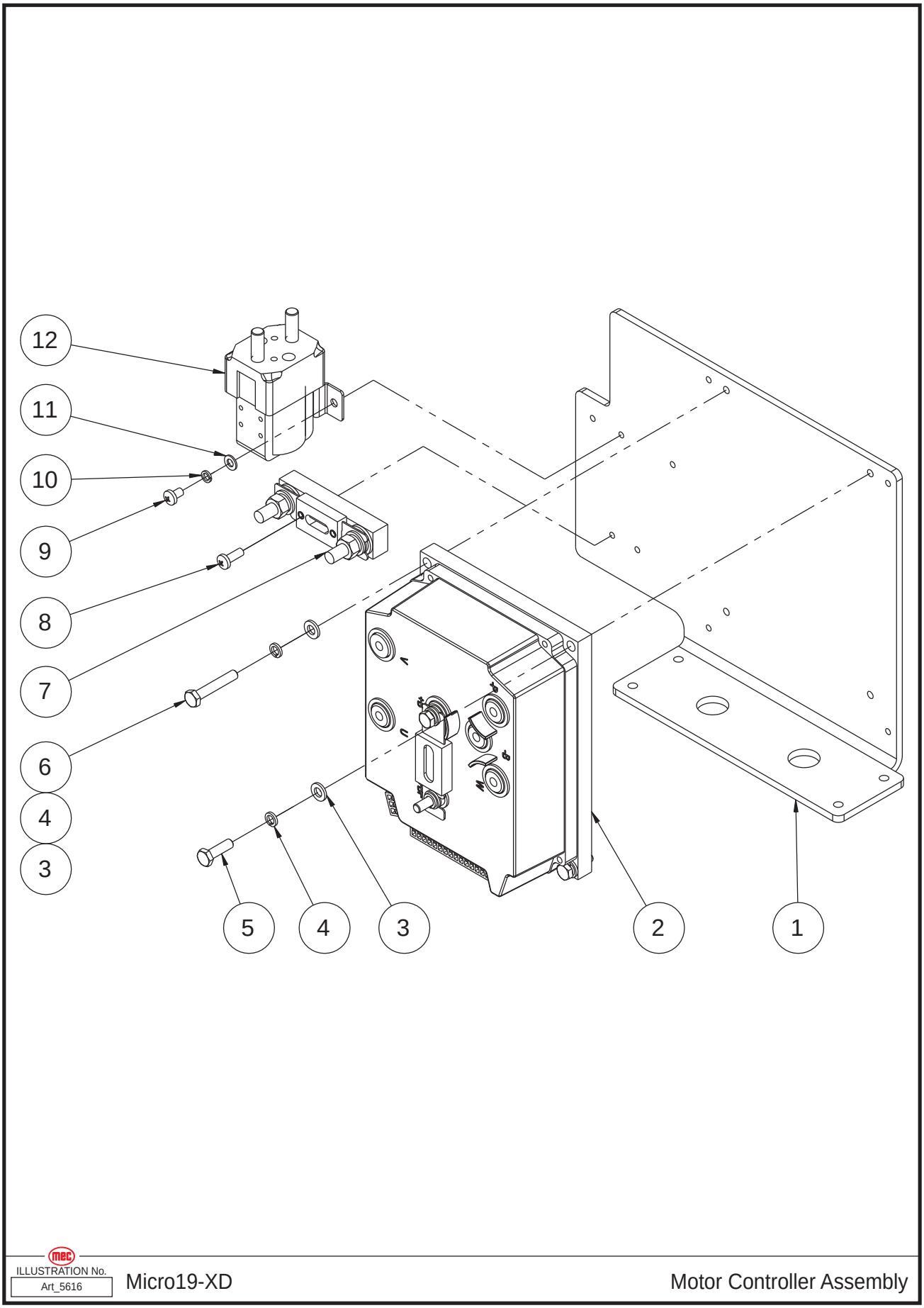

ILLUSTRATION No.
Art_5616

Micro19-XD

Motor Controller Assembly

Item	Part Number	Description	Qty.
1	42431	Mounting Plate	1
2	42496	Motor Controller	1
3	50000	WSHR M06 Standard Flat Washer	4
4	53046	WSHR M06 Spring Washer	4
5	50028	Screw HHCS M06-1.00 × 20	3
6	50327	Screw HHCS M06-1.00 × 35	1
7	42432	200A Fuse Assembly	1
--	44014	200A Fuse	1
--	41092	Fuse Seat	1
8	53355	Screw PHMS M05-0.80 × 14	2
9	53222	Screw PHMS M05-0.80 × 8	2
10	53043	WSHR M05 Spring Washer	2
11	53038	WSHR M05 Standard Flat Washer	2
12	41331	DC Contactor	1

Ground Control Assembly

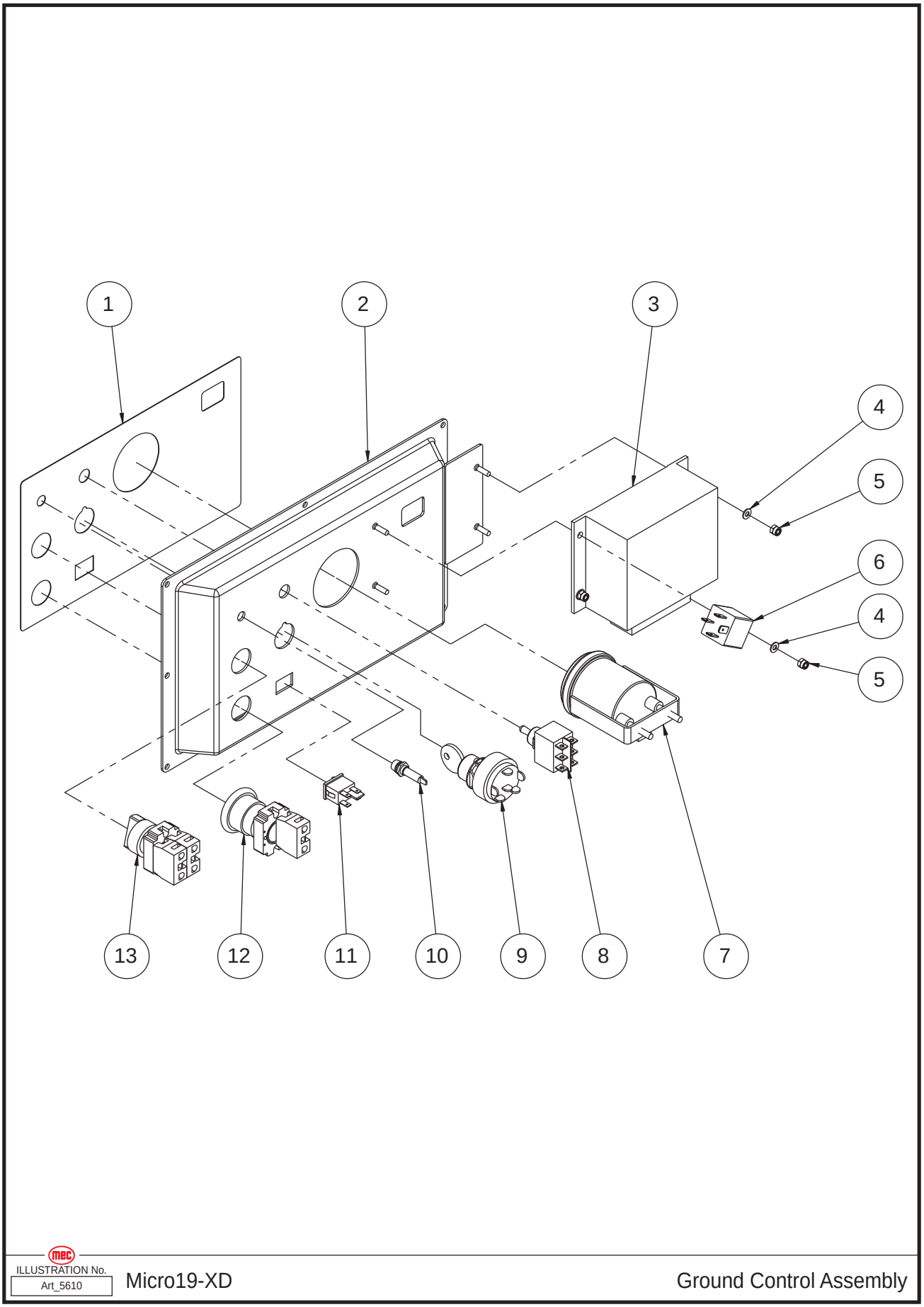

ILLUSTRATION No.
Art_5610

Micro19-XD

Ground Control Assembly

Item	Part Number	Description	Qty.
1	44536	Decal, Ground Control Panel	1
2	43990	Ground Control Panel Weldment	1
3	44580	Controller	1
4	50284	WSHR M04 Standard Flat Washer	4
5	50285	Nut NNYL M04 × 0.70	4
6	41334	Relay 24V	1
7	41070	Hour Meter	1
8	41419	Toggle Switch	1
9	41418	Key Switch	1
--	91574	Key	1
10	41421	Indicator	1
11	43991	Brake Release Switch	1
12	41422	Emergency Stop Assembly	1
--	43098	Red Mushroom Head	1
--	43097	Base With 1 NC Contact	1
13	43992	Select Switch Assembly	1
--	43993	Select Switch Head	1
--	43994	Base With 1 NO Contact	1
--	43096	NC Contact	1

Chassis and Accessories

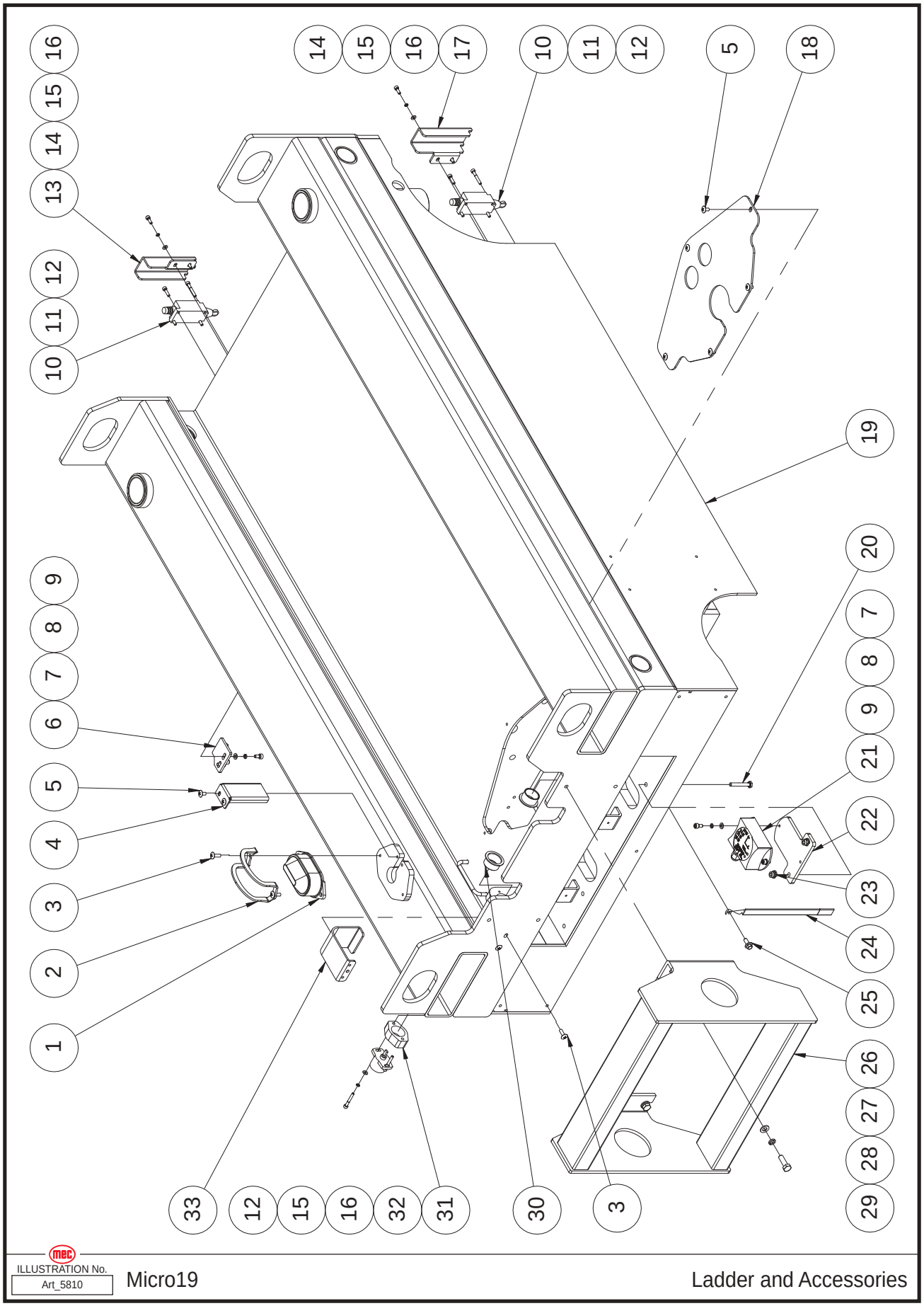

ILLUSTRATION No. Art_5810 Micro19 Ladder and Accessories

Item	Part Number	Description	Qty.
1	41310	Beacon	1
2	41309	Beacon Cover	1
3	53223	Screw THMS M05-0.80 × 16	4
4	44613	Baffle Plate	1
5	53265	Screw THMS M05-0.80 × 10	7
6	43978	Lock Clasp	2
7	53173	Screw SHCS M05-0.80 × 10	6
8	53043	WSHR M05 Spring Washer	6
9	53038	WSHR M05 Standard Flat Washer	6
10	41197	Limit Switch	2
11	53113	Screw SHCS M04-0.70 × 16	4
12	53065	Screw SHCS M04-0.70 × 30	6
13	41315	Switch Cover	1
14	50423	Screw SHCS M04-0.70 × 12	4
15	53062	WSHR M04 Spring Washer	6
16	50284	WSHR M04 Standard Flat Washer	6
17	41198	Switch Cover	1
18	42401	Cover	1
19	44614	Frame Weldment	1
20	50289	Screw HHCS M06-1.00 × 40	2
21	41098	Tilt Sensor	1
22	42403	Sensor Bracket	1
23	50568	Nut NNYL M06-1.00 Flange	2
24	41003	Ground Strap	1
25	53273	Screw HHCS M06-1.00 × 14 Serrated Flange	1
26	44615	Ladder	1
27	50001	WSHR M08 Standard Flat Washer	4
28	53055	WSHR M08 Spring Washer	4
29	50031	Screw HHCS M08-1.25 × 25	4
30	41257	Bearing	2
31	41194	Sensor Bracket	1
32	41195	Rotary Sensor	1
33	44616	Cover	1

Scissor Assembly

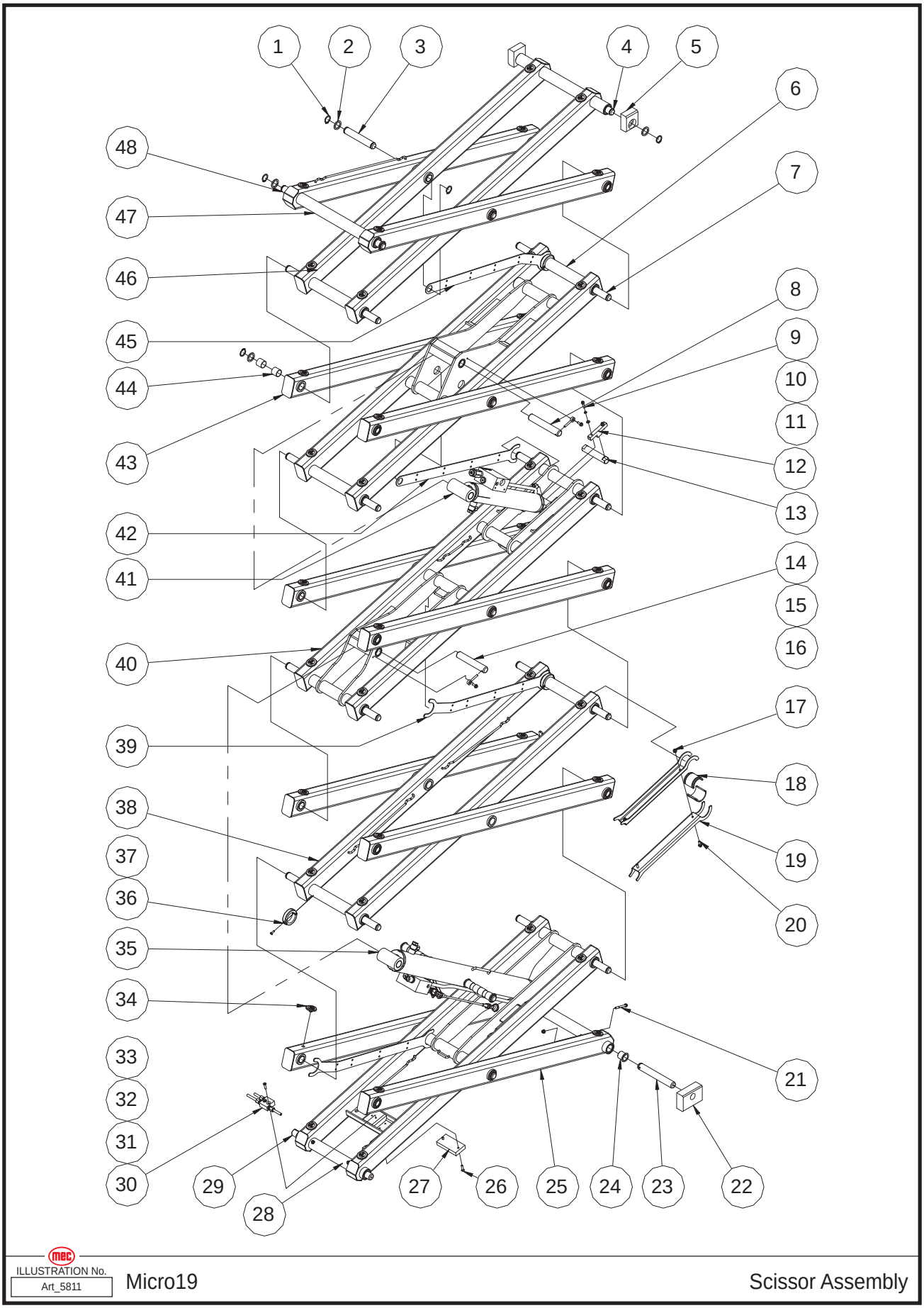

ILLUSTRATION No. Art_5811 Micro19 Scissor Assembly

Item	Part Number	Description	Qty.
1	42437	Circlips	36
2	41354	Washer	34
3	41349	Pin	6
4	41576	Pin	1
5	41256	Platform Slider	2
6	44617	Inner Arm 4	1
7	41577	Pin	10
8	42454	Pin	1
9	53123	Screw SHCS M06-1.00 × 25	4
10	53046	WSHR M06 Spring Washer	4
11	50000	WSHR M06 Standard Flat Washer	4
12	42439	Lock Plate	2
13	42440	Pin	1
14	41345	Pin	2
15	42449	Pin	3
16	53256	Screw HHCS M06-1.00 × 16 Serrated Flange	3
17	50568	Nut NNYL M06-1.00 Flange	6
18	41262	Safety Arm Bushing	2
19	41263	Safety Arm	2
20	53255	Screw HHCS M06-1.00 × 20 Serrated Flange	2
21	53357	Screw HHCS M06-1.00 × 55 Flange	4
22	44801	Chassis Slider	2
23	41338	Pin	2
24	42446	Bearing	28
25	44802	Outer Arm 1	1
26	50386	Screw CSCS M06-1.00 × 25	4
27	41350	Pothole Pusher	1
28	44803	Inner Arm 1	1
29	41258	Pin	1
30	41112	Hydraulic Hoses Manifolds	1
31	43601	Hose	1
32	44015	Hose	1
33	43997	Hose	1
34	41114	Block	40
35	REF	Lower Lift Cylinder Assembly (Refer to page 74)	1
36	44050	Collar	3
37	53269	Screw CSCS M05-0.80 × 16	3
38	44804	Inner Arm 2	1
39	44805	Cable Bridge	2
40	44806	Inner Arm 3	1
41	REF	Upper Lift Cylinder Assembly (Refer to page 76)	1
42	42438	Cable Bridge	1
43	44807	Outer Arm 2	6
44	41287	Bearing	64
45	43744	Cable Bridge	1

46	44808	Inner Arm 5	1
47	44809	Outer Arm 5	1
48	42457	Pin	1

REF - Reference

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Main Platform Assembly

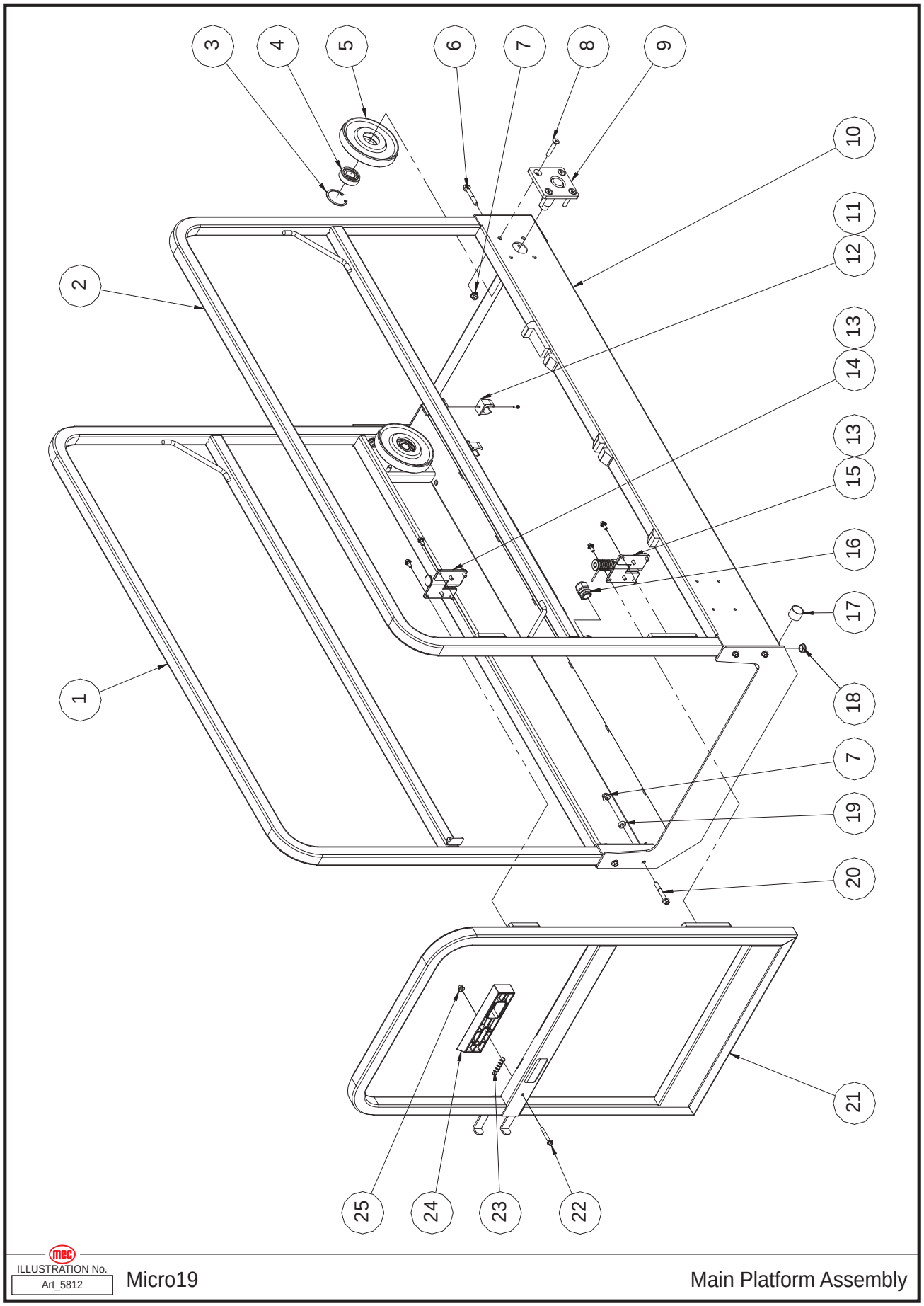


ILLUSTRATION No.
Art_5812

Micro19

Main Platform Assembly

Item	Part Number	Description	Qty.
1	44810	Left Main Rail	1
2	44811	Right Main Rail	1
3	43618	Circlips	2
4	41131	Bearing	2
5	41269	Roller	2
6	53358	Screw HHCS M08-1.25 × 50 Flange	4
7	50313	Nut NNYL M08-1.25 Flange	8
8	53275	Screw CSCS M08-1.25 × 45	8
9	41360	Roller Bracket	2
10	42461	Main Deck Weldment	1
11	53276	Screw PHMS M04-0.70 × 8	2
12	41134	Clip	2
13	53273	Screw HHCS M06-1.00 × 14 Serrated Flange	12
14	41127	Hinge A	1
15	41128	Hinge B	1
16	41273	Water-Proof Joint	1
17	41046	Bearing	2
18	41275	Sheath	1
19	42462	Washer	4
20	53359	Screw HHCS M08-1.25 × 55 Flange	4
21	44584	Entry Gate	1
22	53360	Screw HHCS M06-1.00 × 45 Flange	1
23	41277	Spring	1
24	41278	Latch Handle	1
25	50568	Nut NNYL M06-1.00 Flange	1

Platform Extension Assembly

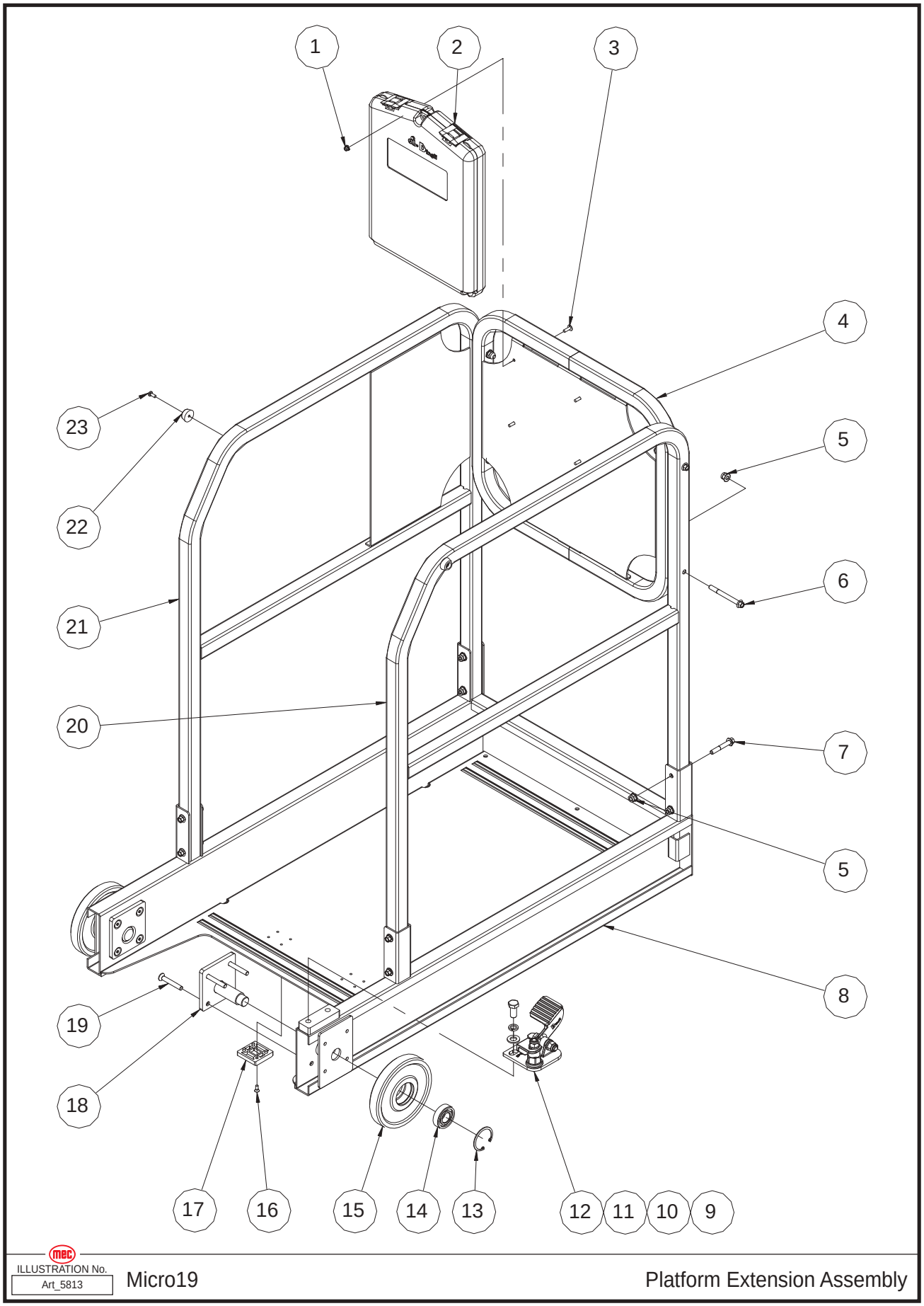


ILLUSTRATION No.
Art_5813

Micro19

Platform Extension Assembly

Item	Part Number	Description	Qty.
1	53281	Nut NNYL M05-0.80 Flange	4
2	43319	Manual Box	1
3	53223	Screw THMS M05-0.80 × 16	4
4	41283	Front Rail	1
5	50313	Nut NNYL M08-1.25 Flange	12
6	53409	Screw HHCS M08-1.25 × 80 Flange	4
7	53358	Screw HHCS M08-1.25 × 50 Flange	8
8	44586	Extension Deck Weldment	1
9	50038	Screw HHCS M12-1.50 × 25	2
10	53148	WSHR M12 Spring Washer	2
11	50003	WSHR M12 Standard Flat Washer	2
12	44599	Platform Locking Device Assembly (Refer to page 66)	1
13	43618	Circlips	2
14	41131	Bearing	2
15	41141	Roller 2	2
16	53279	Screw CSCS M05-0.80 × 12	8
17	41284	Slide Pad	2
18	41360	Roller Bracket	2
19	53280	Screw CSCS M08-1.25 × 55	8
20	44812	Right Extension Rail	1
21	44800	Left Extension Rail	1
22	41120	Bumper	2
23	53378	Screw PHMS M05-0.80 × 12	2

Platform Locking Device Assembly

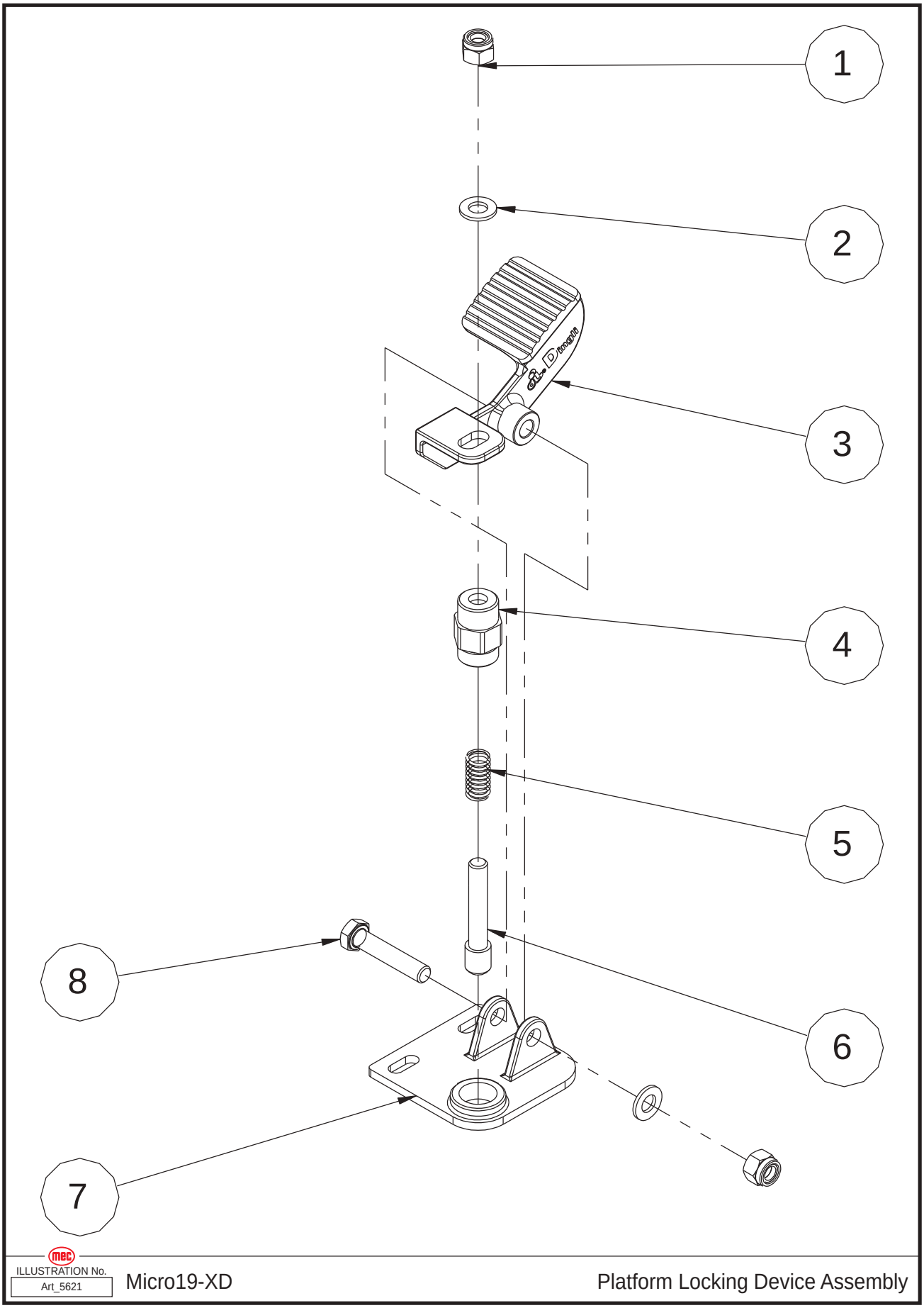


ILLUSTRATION No. Art_5621 Micro19-XD Platform Locking Device Assembly

Item	Part Number	Description	Qty.
1	50049	Nut NNYL M10 × 1.50	2
2	50002	WSHR M10 Standard Flat Washer	2
3	41143	Foot Pedal	1
4	41144	Lock Pin Housing	1
5	41145	Spring	1
6	41146	Lock Pin	1
7	44767	Bracket	1
8	50020	Screw HHCS M10-1.50 × 50	1

Platform Control Assembly

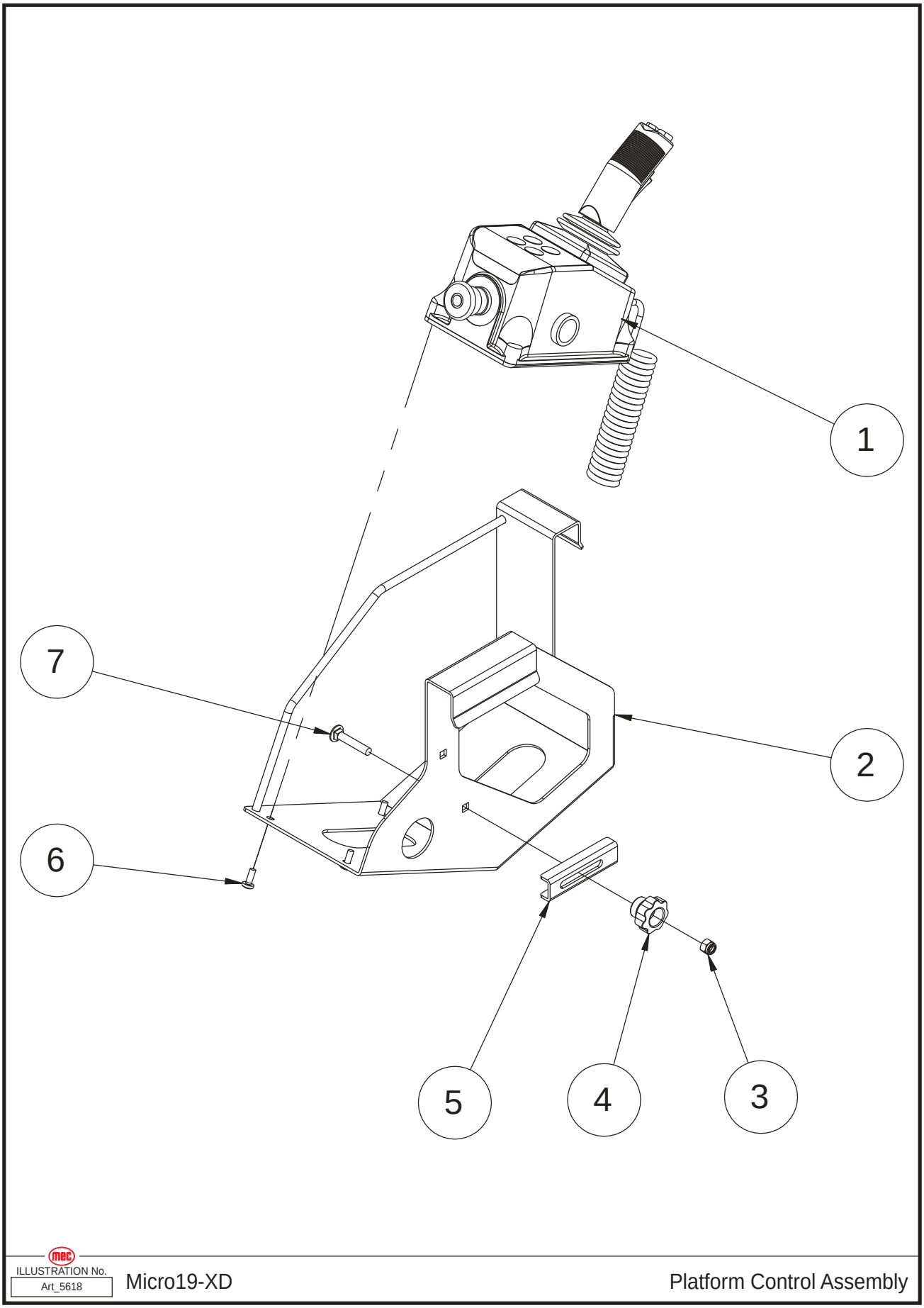


ILLUSTRATION No.
Art_5618

Micro19-XD

Platform Control Assembly

Item	Part Number	Description	Qty.
1	41137	Platform Control Box Assembly (Refer to page 70)	1
2	42499	Platform Control Box Mount Bracket	1
3	50048	Nut NNYL M08 × 1.25	1
4	42501	Handle	1
5	42500	Locating Plate	1
6	53231	Screw PHMS M06-1.00 × 16	4
7	53248	Screw CARB M08-1.25 × 45	1

Platform Control Box Assembly

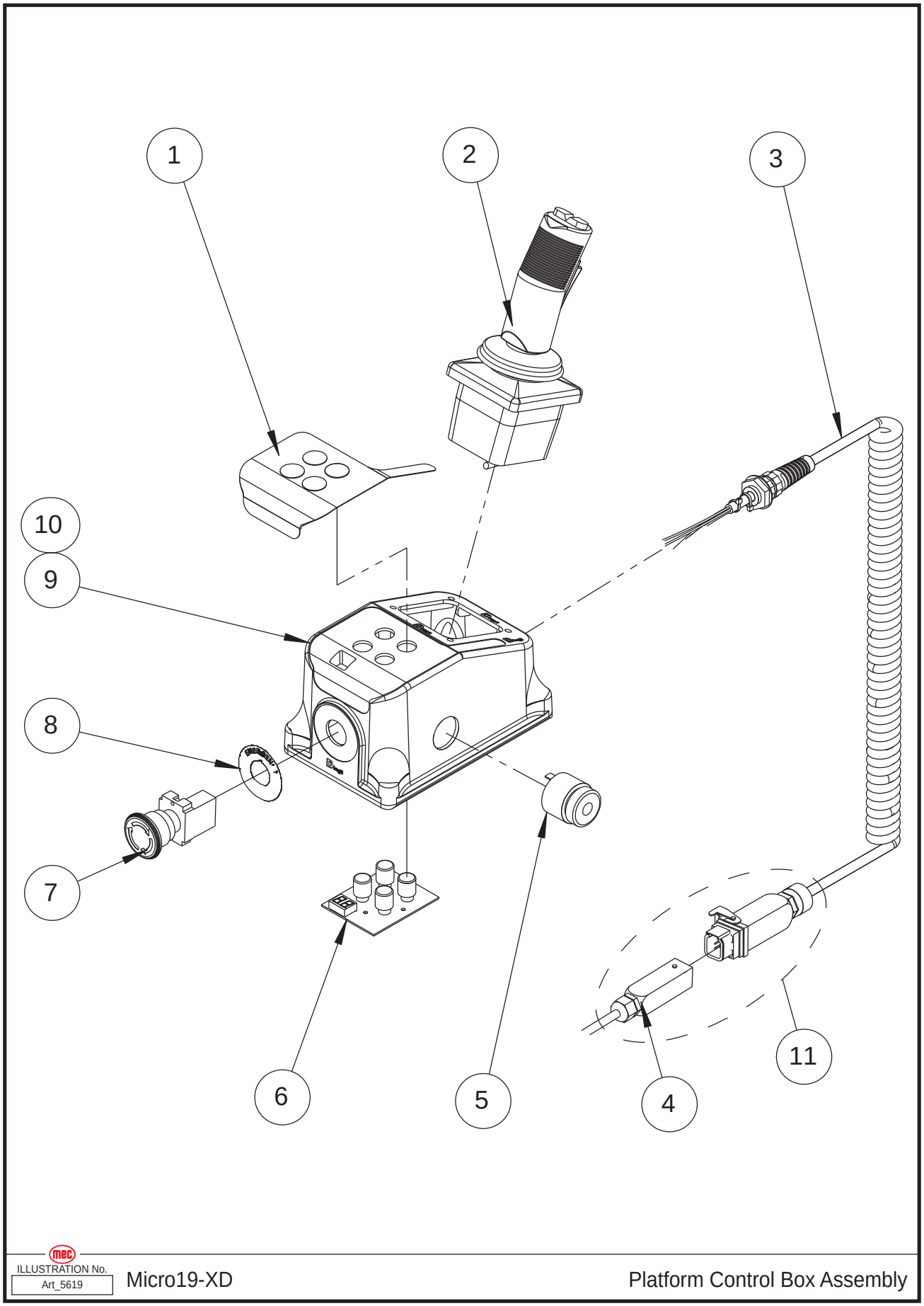


ILLUSTRATION No. Art_5619 Micro19-XD Platform Control Box Assembly

Item	Part Number	Description	Qty.
1	41632	Decal, Platform Control Panel	1
2	41149	Joystick	1
--	43621	Function Enable Switch	1
--	41150	Joystick Cover	1
--	43622	Joystick Steer Switch	1
--	43623	Switch Boot	1
3	41152	Coil Cord	1
--	43624	Housing	1
--	43625	Male Insert	1
--	43626	Male Contacts	5
--	43627	Cable Gland	1
4	42483	Platform Control Box Harness	1
--	43628	Hood	1
--	43629	Female Insert	1
--	43630	Female Contacts	5
--	43627	Cable Gland	1
5	41568	Alarm	1
--	43631	Alarm Nut	1
6	41156	Main Board	1
--	41155	Button	4
7	41157	Emergency Stop Switch	1
--	43632	Red Mushroom Head	1
--	43633	Base With 1 NC Contact	1
8	42915	Decal, Emergency Stop Panel	1
9	43634	Enclosure	1
10	43635	Cover Bottom	1
11	41271	Connector Kit	1

Hindley Platform Controls

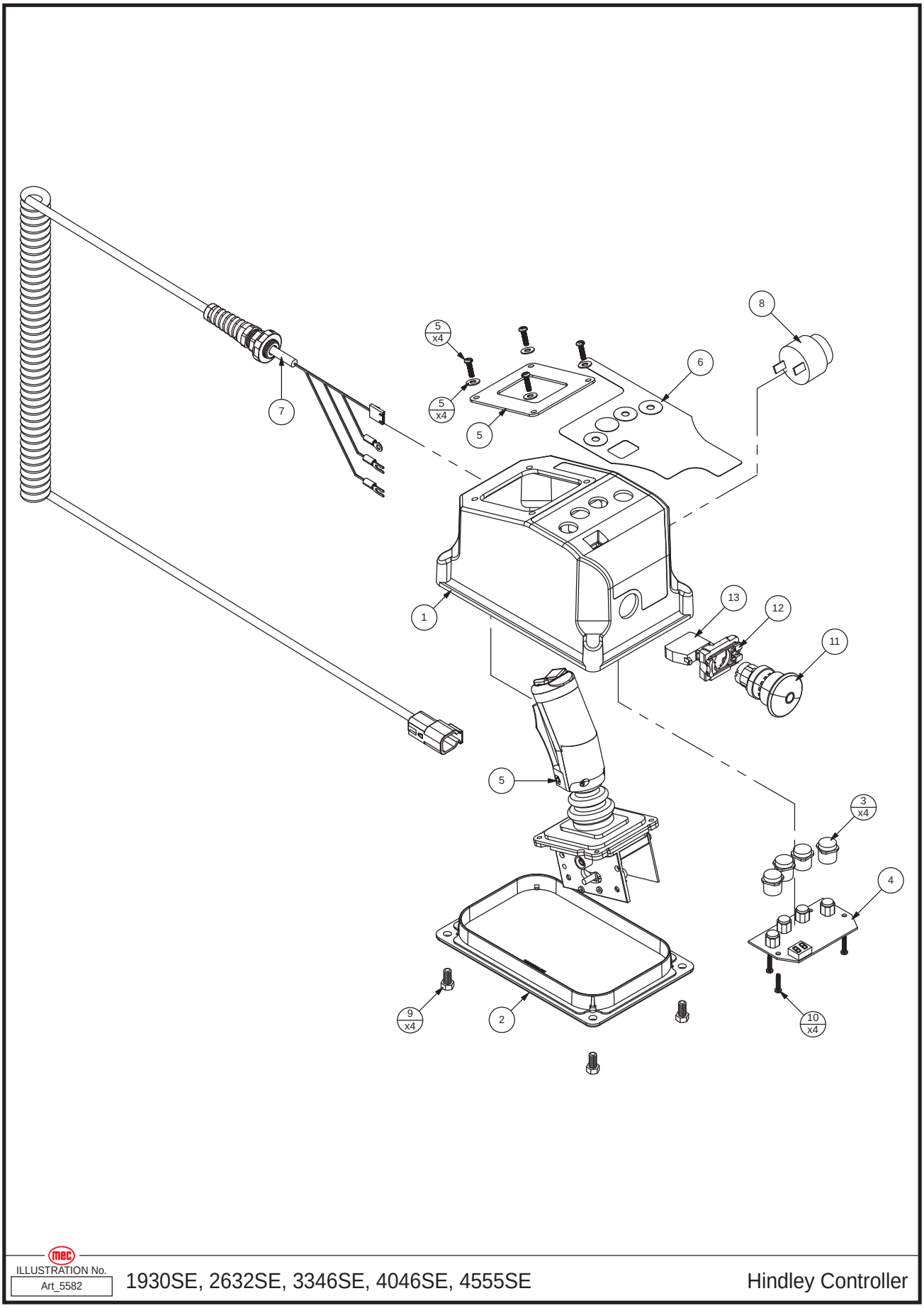


ILLUSTRATION No. Art_5582

1930SE, 2632SE, 3346SE, 4046SE, 4555SE

Hindley Controller

Item	Part Number	Description	Qty.
1	43819	Enclosure	1
2	43820	Control Box Bottom	1
3	43821	Clear Switch Actuator	4
4	43822	Circuit Bd Push Button	1
5	43823	Joystick	1
6	43835	Decal, Upper Control Box	1
7	43824	Coil Cord Assembly (Includes Connector)	1
8	43825	Continuous Tone Alarm, 6-28V	1
9	53306	HHMS 1/4-20 × 1/2	4
10	43826	Fastener, Thread Forming, Plastite #4	4
11	43827	E-Stop Button	1
12	43828	Switch Mount	1
13	94433	Single Contact Block, 1 NC, 22mm, Harmony XB4	1

Lower Lift Cylinder Assembly

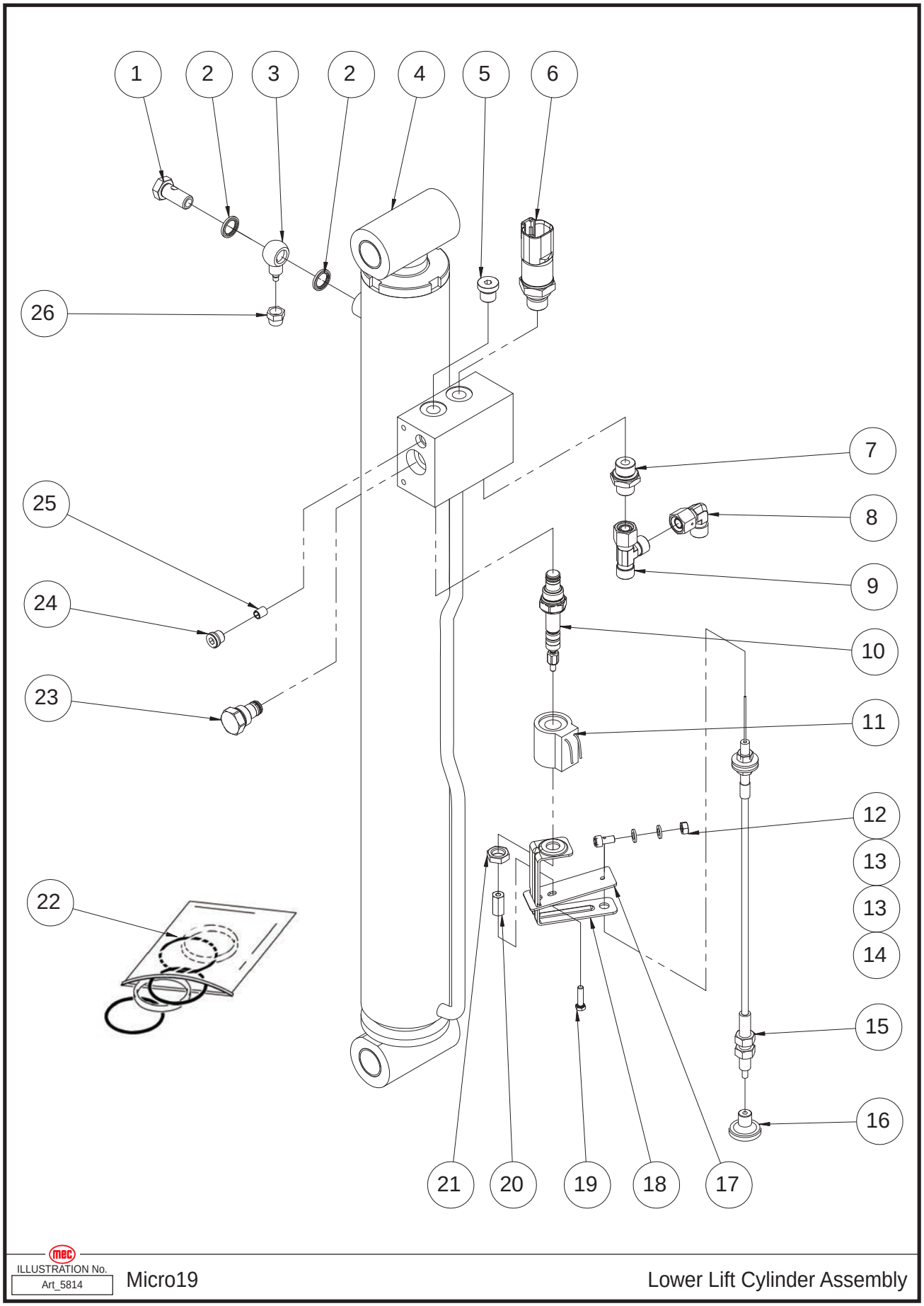


ILLUSTRATION No. Art_5814 Micro19 Lower Lift Cylinder Assembly

Item	Part Number	Description	Qty.
1	41166	Fitting	1
2	43361	Washer	2
3	41167	Fitting	1
4	44832	Lower Lift Cylinder	1
5	42480	Plug	1
6	44448	Pressure Sensor	1
7	43638	Straight Fitting	1
8	43639	Elbow	1
9	43640	Tee Fitting	1
10	44003	Solenoid Valve Spool	1
11	41929	Coil	1
12	53361	Nut NHEX M06-1.00	1
13	50000	WSHR M06 Standard Flat Washer	2
14	42466	Screw	1
15	42465	Emergency Down Cable Assembly	1
16	41162	Lowering Knob	1
17	44833	Plate	1
18	44834	Support	1
19	53179	Screw HHCS M05-0.80 × 20	1
20	44004	Cable Connector	1
21	53362	Nut NHEX 1/2-20 UNF	1
22	42470	Seal Kit	1
23	43369	Check Valve	1
24	42821	Plug	1
25	43370	Orifice	1
26	41413	Nut	1

Upper Lift Cylinder Assembly

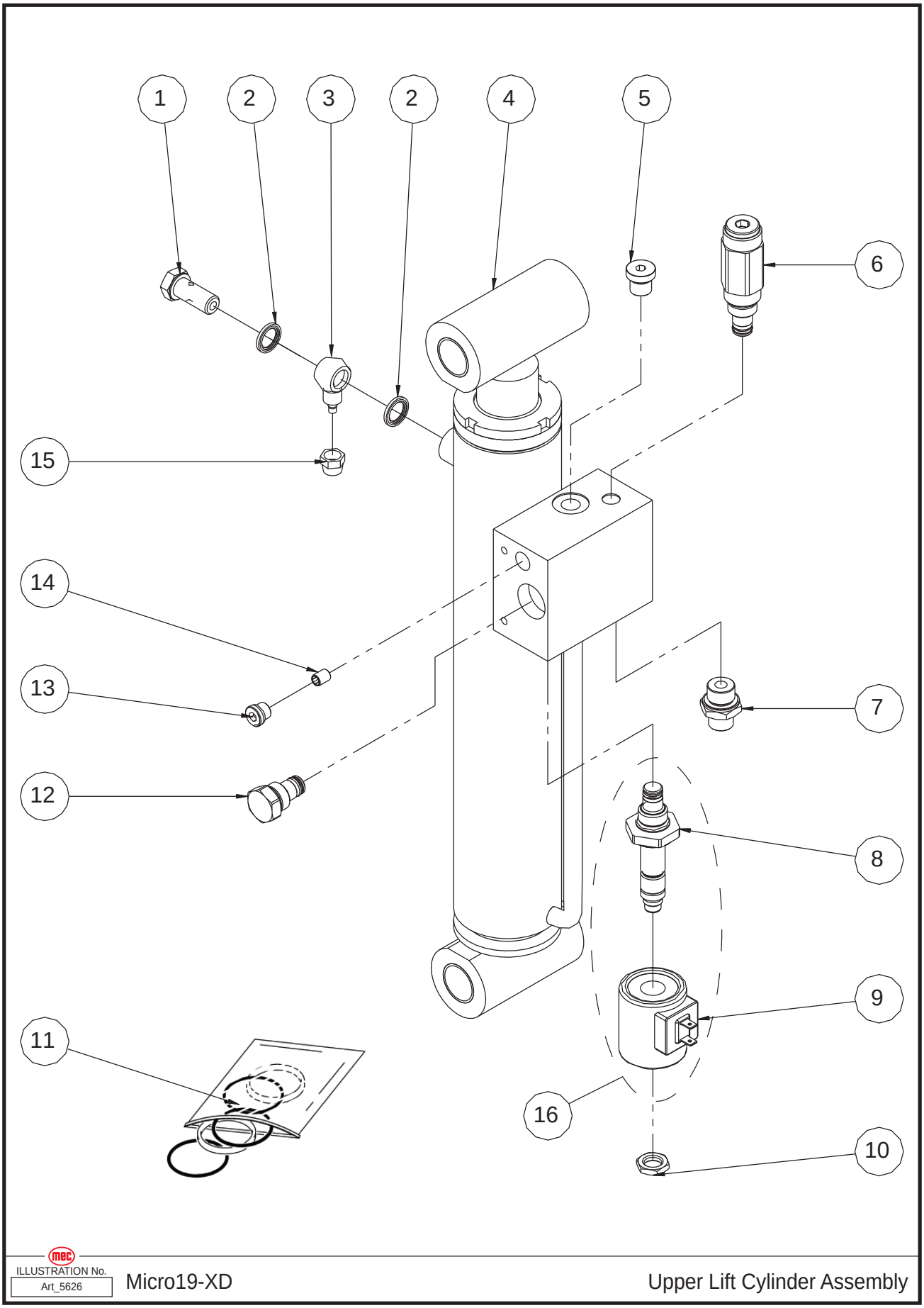
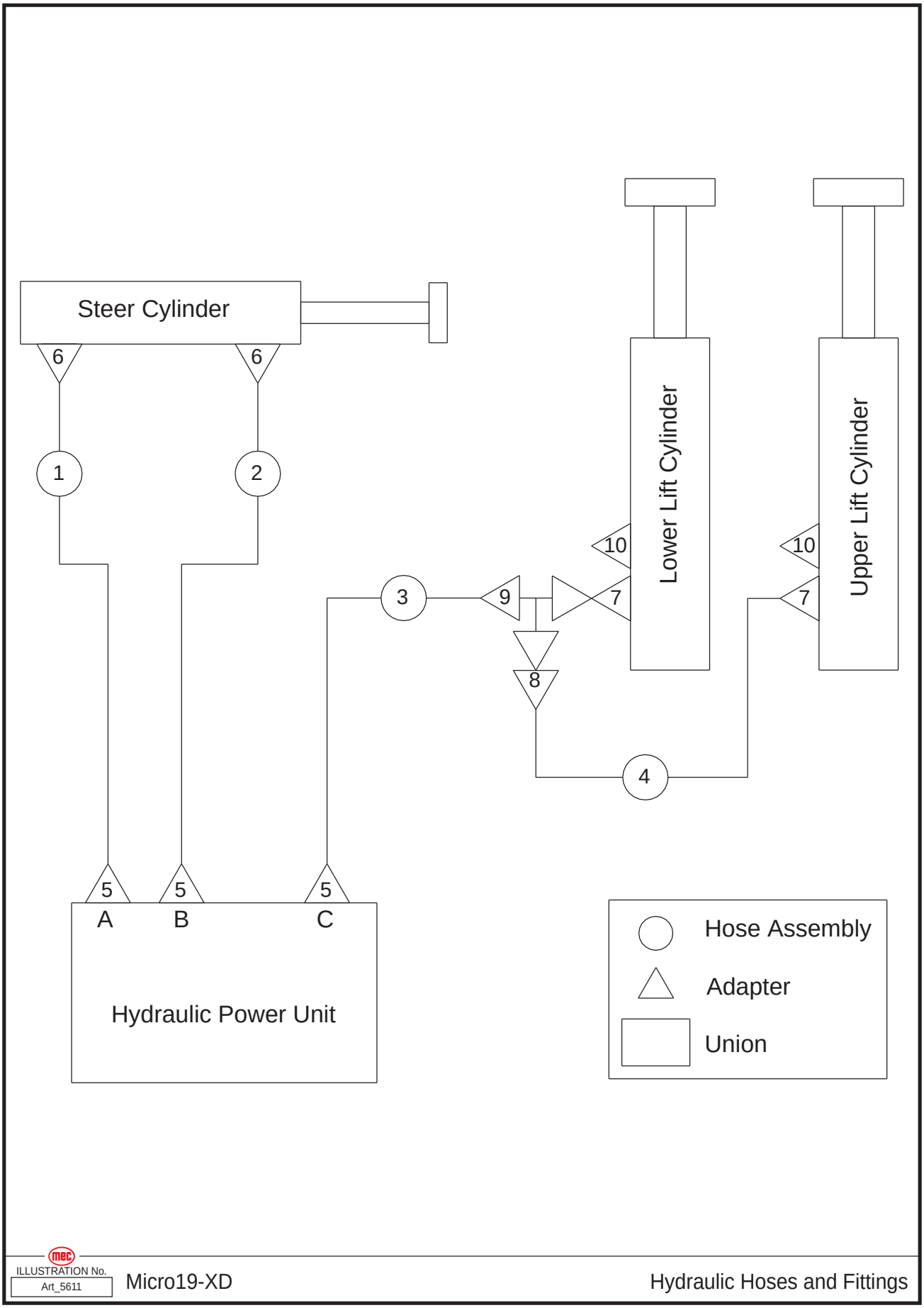


ILLUSTRATION No. Art_5626 Micro19-XD Upper Lift Cylinder Assembly

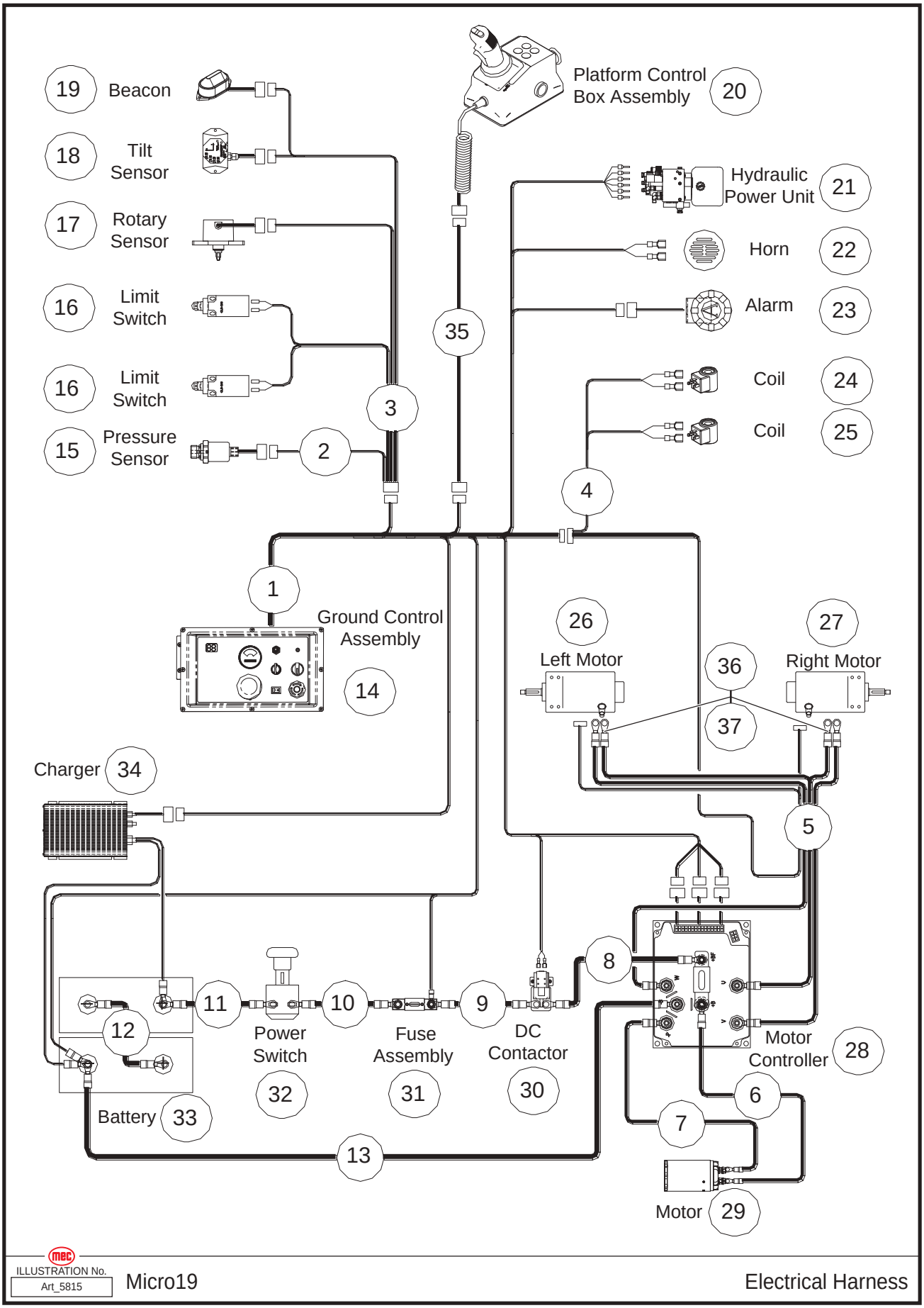
Item	Part Number	Description	Qty.
1	41166	Fitting	1
2	43361	Washer	2
3	41167	Fitting	1
4	44835	Upper Lift Cylinder	1
5	42480	Plug	1
6	41169	Relief Valve	1
7	43638	Straight Fitting	1
8	43372	Solenoid Valve Spool	1
9	41551	Coil	1
10	42795	Nut	1
11	42475	Seal Kit	1
12	43369	Check Valve	1
13	42821	Plug	1
14	44017	Orifice	1
15	41413	Nut	1
16	42473	Valve with Coil	1

Hydraulic Hoses and Fittings



Item	Part Number	Description	Qty.
1	42476	Hose Assembly	1
2	42477	Hose Assembly	1
3	45185	Hose Assembly	1
4	44018	Hose Assembly	1
5	41296	Straight Fitting	3
6	41298	Straight Fitting	2
7	43638	Straight Fitting	2
8	43639	Elbow	1
9	43640	Tee Fitting	1
10	42480	Plug	2

Electrical Harness



Item	Part Number	Description	Qty.
1	42481	ECU Harness	1
2	44836	Pressure Sensor Harness	1
3	42540	Accessories Harness	1
4	43755	Lowering Valve	1
5	42484	Drive Motor Harness	1
6	41921	Pump Motor Positive Harness	1
7	44055	Pump Motor Negative Harness	1
8	41917	Motor Controller Harness	1
9	42485	DC Contactor Harness	1
10	42486	Fuse Harness	1
11	42487	Battery Positive Harness	1
12	42488	Battery Harness	1
13	45189	Battery Negative Harness	1
14	REF	Ground Control Assembly (Refer to page 54)	1
15	REF	Pressure Sensor (Refer to page 74)	1
16	REF	Limit Switch, Pothole (Refer to page 56)	2
17	REF	Rotary Sensor (Refer to page 56)	1
18	REF	Tilt Sensor (Refer to page 56)	1
19	REF	Beacon (Refer to page 56)	1
20	REF	Platform Control Box Assembly (Refer to page 70)	1
21	REF	Hydraulic Power Unit (Refer to page 50)	1
22	REF	Horn (Refer to page 48)	1
23	REF	Alarm (Refer to page 48)	1
24	REF	Coil (Refer to page 74)	1
25	REF	Coil (Refer to page 76)	1
26	REF	Left Motor (Refer to page 40 and page 44)	1
27	REF	Right Motor (Refer to page 40 and page 44)	1
28	REF	Motor Controller (Refer to page 52)	1
29	REF	Motor (Refer to page 50)	1
30	REF	DC Contactor (Refer to page 52)	1
31	REF	200A Fuse Assembly (Refer to page 52)	1
32	REF	Power Switch (Refer to page 48)	1
33	REF	Battery (Refer to page 48)	2
34	REF	Charger (Refer to page 48)	1
35	42483	Harness, Platform Control Box	1
36	42883	Screw Terminal Connector (Serial #16900100-16918098)	2
	47281	Connector, Drive Motor (From Serial #16918099)	2
37	47282	Terminal (For 47281 Only)	4

REF - Reference

Power to Platform

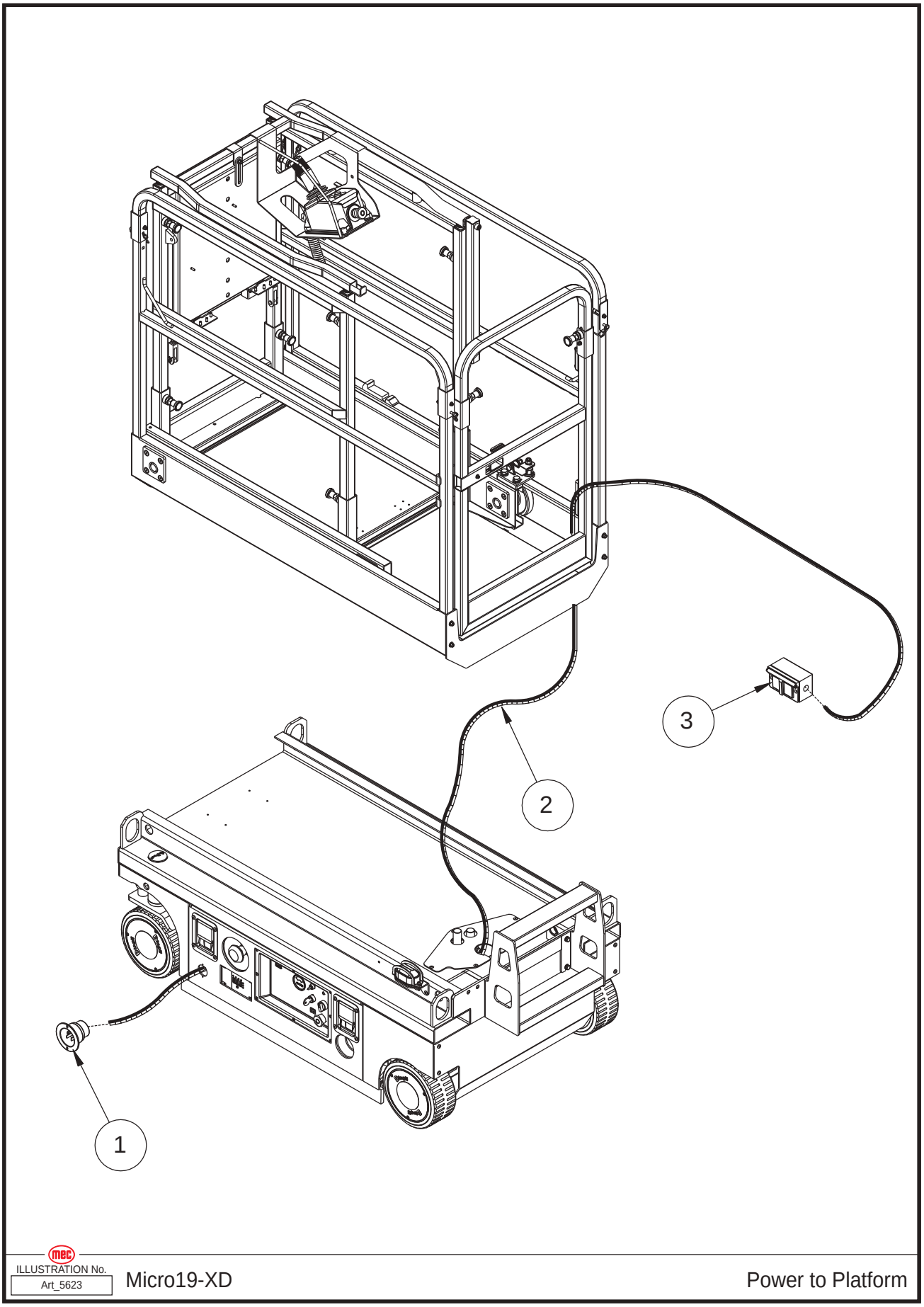


ILLUSTRATION No. Art_5623 Micro19-XD Power to Platform

Item	Part Number	Description	Qty.
1	41575	AC Plug (Refer to page 48)	1
2	44005	Wire Cable, Platform AC Power	1
3	42613	AC Socket	1

900W Inverter

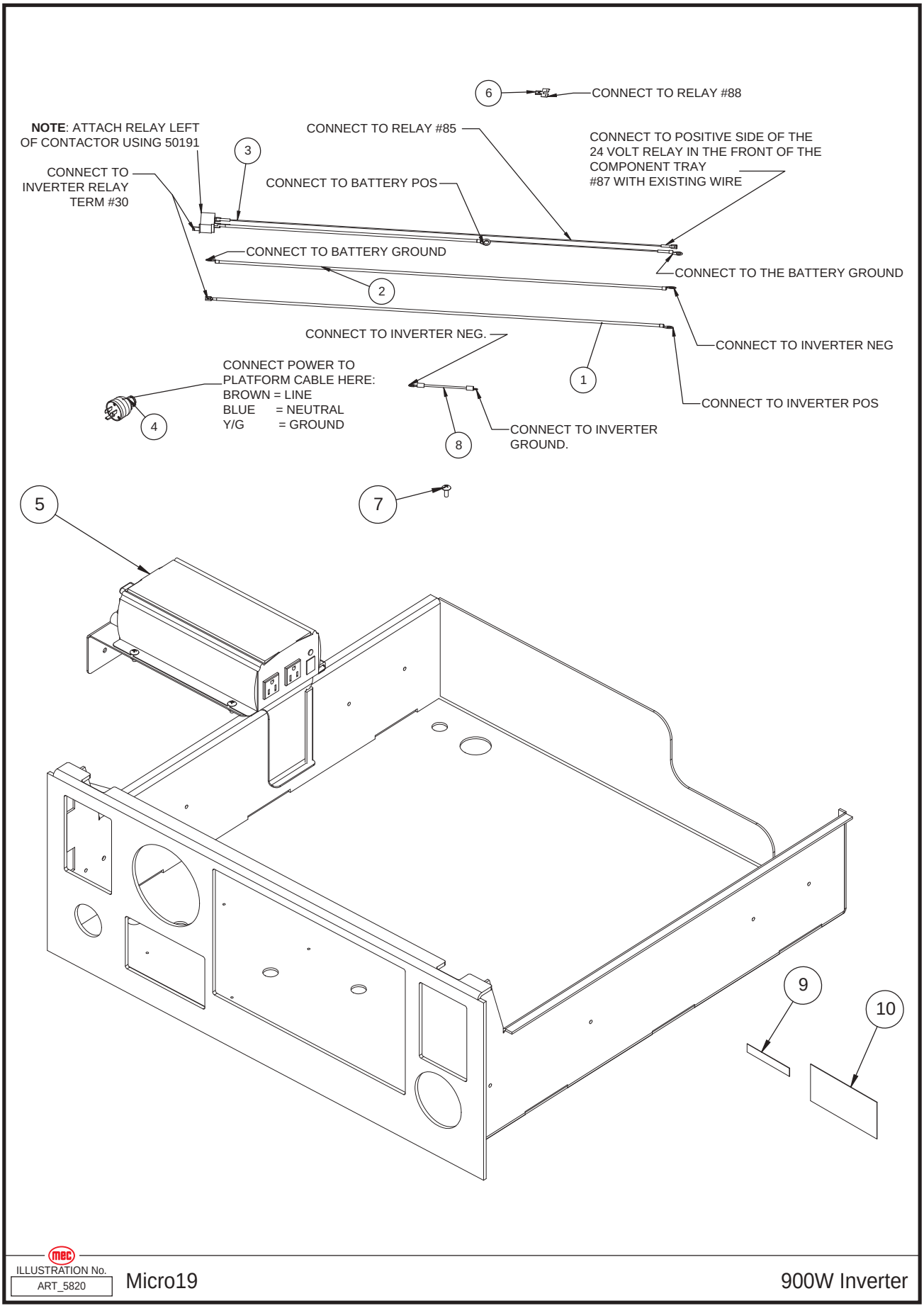


ILLUSTRATION No. ART_5820 Micro19 900W Inverter

Item	Part Number	Description	Qty.
1	41673	Option, Inverter Positive Cable 1330 & Micro19	1
2	41674	Option, Inverter Negative Cable 1330 & Micro19	1
3	42489	Inverter Relay Harness	1
4	91544	Plug, Male 3 Prong 15 Amp	1
5	43764	Inverter, Bracket Assy	1
--	42508	Bracket, Inverter	1
--	50191	THMS #10-32X00.50 ZP	4
--	50238	NNYL #10-32 05 Z	4
--	92535-1	Trimlok 150B2X1/4, 3/4 in	1
--	92535-2	Trimlok 150B2X1/4, 2-1/2 in	1
--	92535-3	Trimlok 150B2X1/4, 4-1/2 in	1
--	92535-4	Trimlok 150B2X1/4, 6 in	1
--	94359	Power Inverter, 900W 24V DC To AC	1
6	94416	Quick-Disconnect Terminal Splitter, Side-by-side, Male, 0.25"	1
7	50191	THMS #10-32X00.50 ZP	1
8	43754	Inverter Option: Ground Cable	1
9	90750	Decal, Battery Charger	1
10	94648	Decal, AC/DC Inverter	1

Leak Containment System

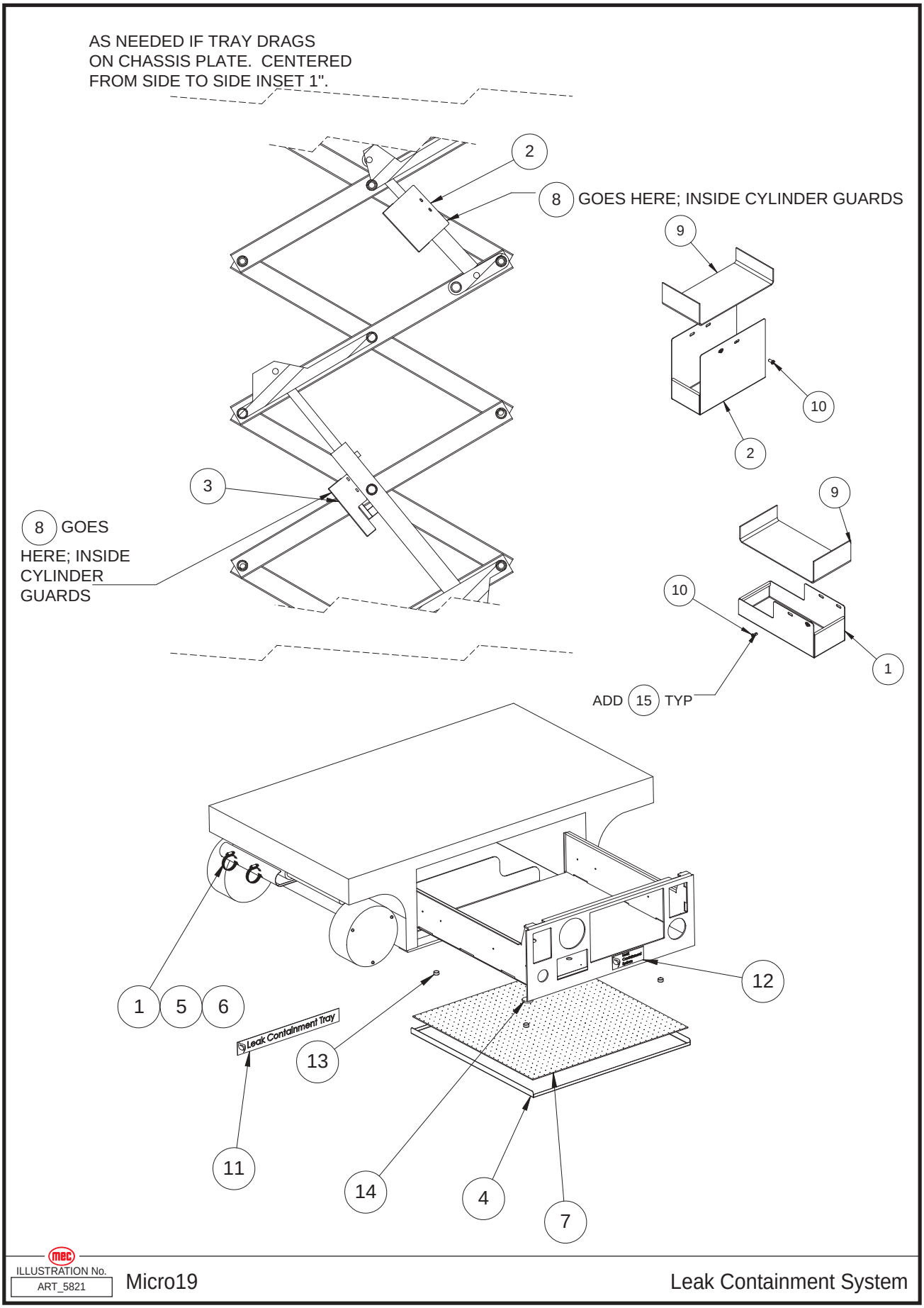


ILLUSTRATION No. ART_5821 Micro19 Leak Containment System

Item	Part Number	Description	Qty.
1	7545	Clamp Hose #28 1 5/16-2 1/4	2
2	31415	Upper Cylinder Guard	1
3	31416	Lower Cylinder Guard	1
4	41979	Oil Containment Tray	1
5	42897	Steer Cylinder Tray	1
6	42932	Absorbent Pad For Steer Cylinder	1
7	42935	Absorbent Pad For Tray	1
8	44238	Cylinder Guard Hose Wrap	2
9	44266	Absorbent Pad For LCS Cylinder Guards	2
10	53370	SHCS M6 X 10 Black Oxide Ultra Low Profile	4
11	94866	Decal, Leak Containment System, Long	2
12	94867	Decal, Leak Containment System, Short	1
13	95048	Magnet 30 LB (Max Pull Force)	4
14	95082	Disc Magnet 44 LB	1
15	A0005	Loctite 565	REF

REF - Reference

Proactive Platform Safety System (PPSS)

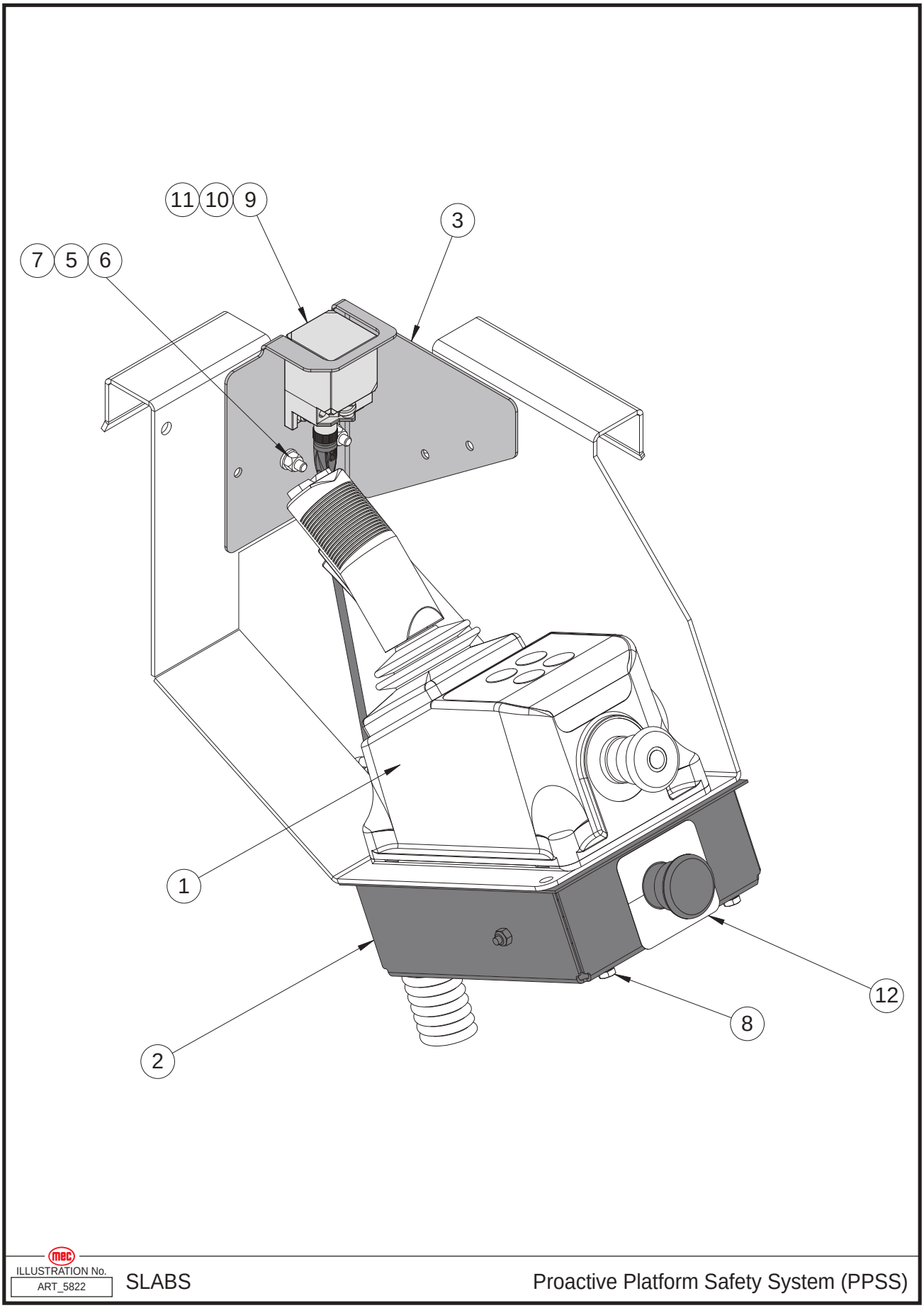
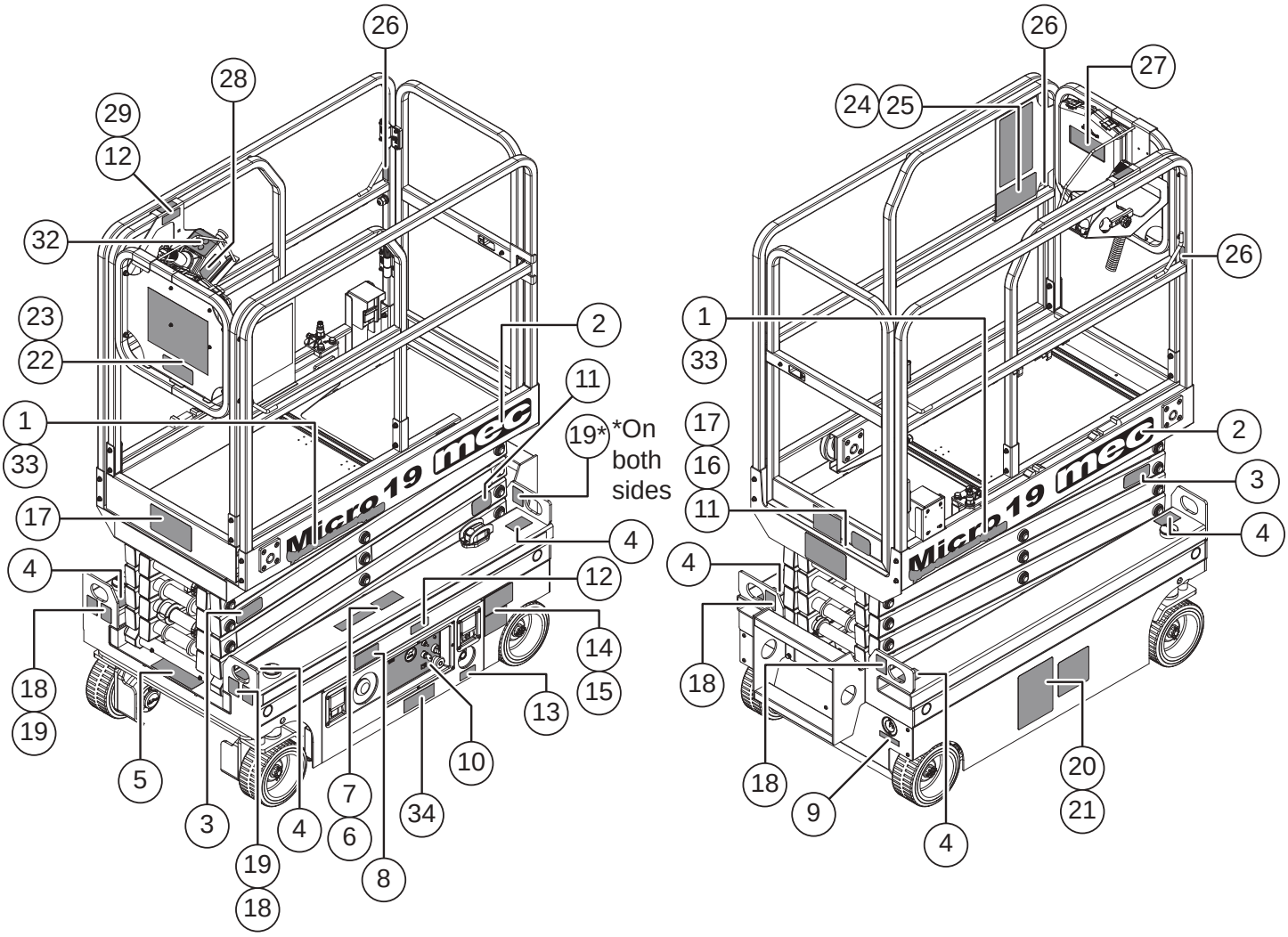


ILLUSTRATION No. ART_5822 SLABS Proactive Platform Safety System (PPSS)

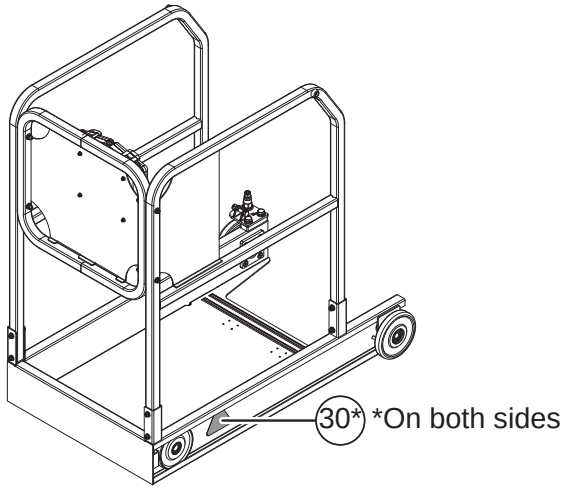
Item	Part Number	Description	Qty.
1	41137	Upper Control Box	REF
2	41974	Slab PPSS Box Assembly	1
3	41949	PPSS Bracket	1
4	--	--	--
5	50000	WSHR M06 ZP Standard Flat	2
6	50028	HHCS M06-1.00X020 08 ZP F	2
7	50047	NNYL M06X1.00 08 ZP Nylock	2
8	50291	HHCS M06-1.00X80 08 ZP P	4
9	50524	NNYL M05-0.80 Nylon Lock Nut	2
10	53035	BHCS M05-0.80 X 16, G08, ZP	2
11	94143	Sensor, Ultrasonic, UC4000	1
12	95681	Decal, PPSS Override	1

REF - Reference

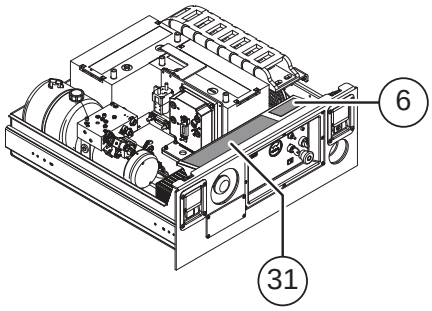
Decals

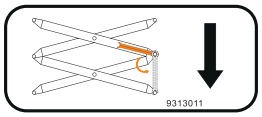
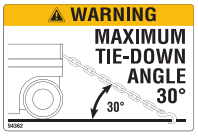
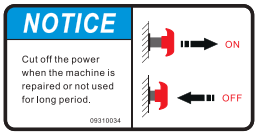
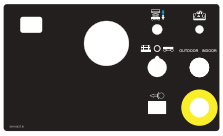
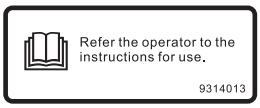
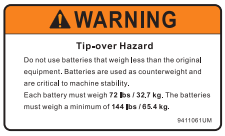
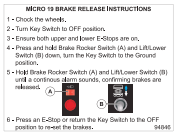
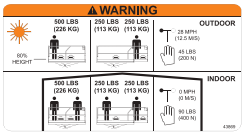
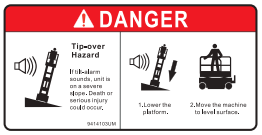
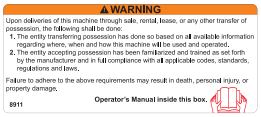
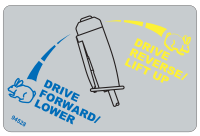


PLATFORM EXTENDED



CONTROL MODULE



1 Micro19 94559 Qty. - 2	2 mec 94114 Qty. - 2	3  41638 Qty. - 2	4  94362 Qty. - 4	5  95215 Qty. - 1
6  90732 Qty. - 2	7  42534 Qty. - 1	8  43910 Qty. - 1	9  94659 Qty. - 1	10  44536 Qty. - 1
11  95254 Qty. - 2	12  41639 Qty. - 2	13  41636 Qty. - 1	14  42493 Qty. - 1	15  94846 Qty. - 1
16  95301 Qty. - 1	17  43869 Qty. - 2	18  41635 Qty. - 4	19  41634 Qty. - 4	20  41649 Qty. - 1
21  41641 Qty. - 1	22  94423 Qty. - 1	23  90719 Qty. - 1	24  43885 Qty. - 1	25  41647 Qty. - 1
26  41648 Qty. - 3	27  8911 Qty. - 1	28  94528 Qty. - 1	29  41640 Qty. - 1	30  91850 Qty. - 2
31  43879 Qty. - 1	32  41632 Qty. - 1	33  94866 Qty. - 2	34  94867 Qty. - 1	

Notes

Notes

MEC Parts Order Form

Phone: 559-842-1523
Fax: 559-400-6723
Email: Parts@mecawp.com

Please Fill Out Completely:

Date: _____ **Ordered By:** _____
Account: _____ **Your Fax No.:** _____
Bill to: _____ **Ship to:** _____
_____ _____
_____ _____

Purchase Order Number _____ **Ship VIA** _____

*** All orders MUST have a Purchase Order Number*

*****Fed Ex shipments require Fed Ex account number*

Part Number	Description	Quantity	Price

All back-ordered parts will be shipped when available via the same ship method as original order unless noted below:

_____ Ship complete order only - No Backorders
_____ Ship all available parts and contact customer on disposition of back-ordered parts
_____ Other (Please specify)

Signature _____

Limited Owner Warranty

MEC Aerial Platform Sales Corp. warrants its equipment to the original purchaser against defects in material and/or workmanship under normal use and service for one (1) year from date of registered sale or date the unit left the factory if not registered. MEC Aerial Platform Sales Corp. further warrants the structural weldments of the main frame and scissor arms to be free from defects in material or workmanship for five (5) years from date of registered sale or date unit left the factory if not registered. Excluded from such warranty is the battery(s) which carries a ninety (90) day warranty from described purchase date. Warranty claims within such warranty period shall be limited to repair or replacement, MEC Aerial Platform Sales Corp's option, of the defective part in question and labor to perform the necessary repair or replacement based on MEC Aerial Platform Sales Corp's then current flat rate, provided the defective part in question is shipped prepaid to MEC Aerial Platform Sales Corp. and is found upon inspection by MEC Aerial Platform Sales Corp. to be defective in material and/or workmanship. MEC Aerial Platform Sales Corp. shall not be liable for any consequential, incidental or contingent damages whatsoever. Use of other than factory authorized parts; misuse, improper maintenance, or modification of the equipment voids this warranty. The foregoing warranty is exclusive and in lieu of all other warranties, express or implied. All such other warranties, including implied warranties of merchantability and of fitness for a particular purpose, are hereby excluded. No Dealer, Sales Representative, or other person purporting to act on behalf of MEC Aerial Platform Sales Corp. is authorized to alter the terms of this warranty, or in any manner assume on behalf of MEC Aerial Platform Sales Corp. any liability or obligation which exceeds MEC Aerial Platform Sales Corp's obligations under this warranty.

MEC Aerial Work Platforms

1401 S. Madera Avenue, Kerman, CA 93630 USA
Toll Free: 1-877-632-5438
Phone: 1-559-842-1500
Fax: 1-559-842-1520
info@MECawp.com
www.MECawp.com