Parallelogram Quick Start Procedure:

File: Parallelogram Quick Start.doc

Date: 4/28/09 (r.v.)

- Read/Review manual thoroughly.
- Check bay location for adequate space for lift. If flush mounted lift provided, verify that pits are to required dimensions and that conduits are in proper locations.
- Position platforms and console in their designated locations.
- Ensure electrical cables and air/hyd hoses are labeled at ends (#'s and Left/Right). Feed electrical wires, air lines, and hydraulic hoses thru their respective conduits to the console (Refer to Fig 7 in manual). DO NOT cut hoses or wires. Excess will be wrapped in console.
- Connect electrical wires to electrical control box per Figure 11a/11b/11c in manual. Use respective wiring diagram for a 4-leg, 6-leg or 8-leg lift.
- Connect 1/4 inch air hoses (yellow) to manifold block (dark blue valve block), and 3/8 air hoses (blue) to regulator block (Refer to Fig 17 in manual).
- Connect Hydraulic Hoses to manifold block. (Refer to Fig 8 in manual).
- Connect vent air lines (black) to tank tee fitting. (Refer to Fig 17 in manual).
- Connect incoming air supply to quick connect fitting at top of console.
- Have qualified electrician connect incoming power to junction box within console (Refer to Fig 9 in manual). Ensure proper power supply for lift.
- Turn on lift and jog raise button. Check rotation of motor to ensure it is turning the proper direction.

- Continue to raise lift. A "loss of encoder" error may periodically occur until the hoses are filled and the platforms raise. Raise lift platform to a workable height. DO NOT raise more than 5 feet.
- Rotate home switches on underside of platform ends (these are installed upside down to prevent damage to the switch during shipment). Set these switches per Fig 16. Ensure lift "homes" at fully lowered position (reads L0/D0/R0 on display) before attempting to raise lift to full height. NOTE that beeper will not stop unless the lift is in a park position for 10 seconds or is homed at the bottom for 10 seconds.
- Once the lift is raising, test the park function and the lower function. If either of these functions do not operate properly, the reed switches on the air lock cylinders may need to be adjusted. Refer to Fig 14 and Fig 15. Do not adjust these until the platforms are fully anchored to the floor, or you may end up having to adjust them again.
- To anchor the lift to the floor, use the following steps as a guide line. First, shim the right side platform, using a laser level to ensure it is raising vertically. Refer to Fig 5 and installation section in manual. Anchor this platform from the center of the base frame, outward. Then shim and anchor the left side platform to conform to the right side, ensuring it maintains equal distance between the jack rails during raising and lowering.
- Attach ramps, flip plates, jack beams, etc..
- Raise lift thru a few more complete cycles, ensuring that all functions operate properly (and to purge hydraulics of air) prior to attempting to lift any vehicles.





PARALLELOGRAM

SURFACE & FLUSH STYLE PARALLEGRAM VEHICLE LIFT MANUAL

☑ INSTALLATION

THANK YOU
FOR SENDING IN YOUR
WARRANTY REGISTRATION
CARD

☑ OPERATION

☑ MAINTENANCE

MOHAWK SERVICE
DEPARTMENT

PARTS





Certified to ANSI/ALI ALCTV.

MOHAWK RESOURCES LTD.

65 VROOMAN AVE.

AMSTERDAM, NY 12010

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Parallelogram-12-1-2015.doc

Rev Date 12-1-2015 Part #601-800-371

READ MANUAL THOROUGHLY BEFORE INSTALLING, OPERATING OR SERVICING THIS LIFT!!

Deliver these instructions to lift owner/user/employer along with other instructional materials furnished with this lift.

MOHAWK MODEL PARALLELOGRAM

IMPORTANT SAFETY INSTRUCTIONS

When using your garage equipment, basic safety precautions should always be followed, including the following:

- 1. Read this manual and review all illustrations of this manual thoroughly before attempting to install, operate or maintain this lift.
- 2. Deliver these operation, inspection, and maintenance instructions to the lift owner/user/employer along with the other instructional materials furnished with this lift.
- 3. Maintenance on this equipment is to be performed only by trained lift service personnel, and and worn or broken parts are to be replaced only with genuine Mohawk brand supplied parts.
- 4. Care must be taken as burns can occur from touching hot parts.
- 5. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified serviceman.
- 6. Do not let cord or hoses hang over edge of table, bench or counter or come in contact with hot manifolds or moving fan blades.
- 4. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
- 5. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect
- 6. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline). WARNING: Risk of Explosion: This equipment has internal arcing and sparking parts which should not be exposed to flammable vapors. This equipment is only suitable for installation in a garage having sufficient air circulation to be considered a non-hazardous location.
- 7. Adequate ventilation should be provided when working on operating internal combustion engines.
- 8. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- 9. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- 10. Use only as described in this manual. Use only manufacturer's (Mohawk) recommended attachments.
- 11. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

SAVE THESE INSTRUCTIONS Rev (10/22/99)

MOHAWK MODEL PARALLELOGRAM

APPENDAGE:

(6/19/2012)

LIFT ENVIRONMENT:

Mohawk prohibits the outdoor installation of this standard lift, which is APPROVED FOR INDOOR USAGE ONLY, in a normal garage type environment. Any concerns in applications that expose the lift to additional environmental effects, such as paint booths, wash bays, outdoors, high or low temperatures, etc. must be addressed to our engineering department, where provisions could/may be made to the lift to accommodate the area of use. Our engineering department must be made aware in advance of these conditions and any additional code requirements that must be met.

Also, the foundation for which this lift must be installed on must comply to the minimum specifications as set forth in this manual. Any drainage slopes in the bay where the lift is to be installed must be directed away from the base pads to prevent water accumulation at the anchors.

Standard foundation flooring and anchorage specifications are contained within this manual. For installation within a seismic area, a qualified person must be consulted to address seismic loads and other local or state requirements.

ACCESSORIES:

All accessories (i.e. Lifting Pads, Height Adapters, Wheel Adapters, Turf Adapters) supplied with this lift are to be used on this lift only. Accessories from other lifts are not acceptable and could result in injury to the user.

If attachments, accessories or configuration modifying components are used on this lift and, if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant (Mohawk Resources Ltd.) for information pertaining to certified attachments, accessories or configuration modifying components.

RJ-50P JACKING BEAMS:

Only certified RJ-50P Jacking Beams are intended for use on certified versions of the Mohawk Parallelogram Lifts (See next page for list of certified lifts) Follow load rating of beam dependant on what lift it is on. Use of non-certified jacking beams on certified lifts will void the certification of the lift.

Use of a pair of Jacking Beams is allowable, but the minimum distance between centerline of the beams (cylinders) is **14 feet minimum**.

Loading of the jacking beams or combinations of jacking beams above the rated capacity of the lift itself could result in personal injury to the operator and/or damage to the lift and/or vehicle. The load rating of any jacking beam or combination of jacking beams on this unit must not exceed the rated capacity of the lift.

LIGHT KIT:

Only the certified Light Kit is intended for use on certified versions of the Mohawk Parallelogram Lifts (See next page for list of certified lifts). Use only lights provided from Mohawk for this kit. Light kit receptacle is intended for lights only, and must not be used as an industrial outlet. Rating for light kit receptacle is 120 VAC, 60 Hz, 5 Amp. Lights are 40 watt, 120 VAC, 60 hz, 1/3 amp each.

LOCKOUT/TAGOUT REQUIREMENTS:

The start switch provided with this unit must not be used as a primary disconnecting means. A separate disconnecting means must be provided in accordance with all applicable codes. It is the responsibility of the owner/user of this unit to provide a proper lockout/tagout device for this unit before or during installation in conformance to ANSI Z244.1 and any local/state/national electrical codes and any OSHA regulations.

MOHAWK MODEL PARALLELOGRAM HAVE A QUESTION?

Call your local Mohawk distributor For parts, service and technical support.

	Distributor Pla	ace Card Here			
Please have this Model Nu	odel and se	erial number v	when calling	g for servic	e.

OR CONTACT:

MOHAWK RESOURCES LTD.

Serial Number

65 Vrooman Ave.

P.O. Box 110

Amsterdam, NY 12010

Toll Free: 1-800-833-2006

Local: 1-518-842-1431 Fax: 1-518-842-1289

Internet: www.MOHAWKLIFTS.com
E-Mail: Service@MOHAWKLIFTS.com

MOHAWK MODEL PARALLELOGRAM

MOHAWK WARRANTIES

EFFECTIVE DATE: 12/1/2015*
READ THIS WARRANTY IN ITS ENTIRETY

GENERAL WARRANTY INFORMATION:

MOHAWK'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIRING OR REPLACING ANY PART OR PARTS RETURNED TO THIS FACTORY, TRANSPORTATION CHARGES PREPAID BY CUSTOMER WITH AUTHORIZED RETURN (RGA), WHICH PROVE UPON INSPECTION TO BE DEFECTIVE AND WHICH HAVE NOT BEEN MISUSED. DAMAGE OR FAILURE TO ANY PART DUE TO FREIGHT DAMAGE OR LACK OF REQUIRED REGULAR DOCUMENTED MAINTENANCE IS NOT COVERED UNDER THIS WARRANTY. ALL WARRANTY CLAIMS MUST BE PERFORMED IN ACCORDANCE TO MOHAWK'S WARRANTY PARTS RETURN POLICY (CONTACT MOHAWK'S SERVICE DEPARTMENT FOR MORE INFORMATION).

THIS WARRANTY DOES NOT COVER MIS-DIAGNOSING OF UNIT OR PARTS RETURNED THAT ARE NON-DEFECTIVE. THIS WARRANTY DOES NOT COVER ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOST REVENUES OR BUSINESS HARM. THIS EQUIPMENT HAS BEEN DESIGNED FOR USE IN NORMAL VEHICLE MAINTENANCE APPLICATIONS. A SPECIFIC INDIVIDUAL WARRANTY MUST BE ISSUED FOR UNITS THAT DEVIATE FROM INTENDED USAGE, SUCH AS HIGH CYCLE USAGE IN INDUSTRIAL APPLICATIONS, OR USAGE IN EXTREMELY ABUSIVE ENVIRONMENTS. MOHAWK RESERVES THE RIGHT TO DECLINE RESPONSIBILITY WHEN REPAIRS OR MODIFICATIONS HAVE BEEN MADE OR ATTEMPTED BY OTHERS WITHOUT WRITTEN AUTHORIZATION FROM MOHAWK RESOURCES LTD.. THIS WARRANTY DOES NOT COVER LABOR OR TRANSPORTATION. THIS WARRANTY DOES NOT COVER DOWNTIME EXPENSES INCURRED WHEN UNIT IS IN REPAIR. THE LIFT MUST BE REGISTERED WITHIN 30 DAYS OF INSTALLATION BY MAILING SUPPLIED WARRANTY REGISTRATION CARD TO MOHAWK AND MUST BE SIGNED BY A LICENSED ELECTRICIAN. THE MODEL NUMBER AND SERIAL NUMBER OF THE EQUIPMENT MUST BE FURNISHED WITH ALL WARRANTY CLAIMS. THIS WARRANTY STATEMENT CONTAINS THE ENTIRE AGREEMENT BETWEEN MOHAWK RESOURCES LTD. AND THE PURCHASER UNLESS OTHERWISE SPECIFICALLY EXPRESSED IN WRITING. THIS NON-TRANSFERABLE WARRANTY APPLIES TO THE ORIGINAL PURCHASER ONLY.

THIS WARRANTY DOES NOT COVER NORMAL SURFACE WEAR ITEMS, ITEMS SUBJECT TO ABRASION, OR ITEMS USED IN A CORROSIVE ENVIRONMENT. SOME ITEMS ON LIFT ARE SUBJECT TO NORMAL "WEAR AND TEAR" AND ARE NOT COVERED UNDER THIS WARRANTY.

STRUCTURAL AND MECHANICAL COMPONENTS (ALL LIFTS):

STRUCTURAL AND MECHANICAL COMPONENTS OF THIS UNIT ARE GUARANTEED FOR THE BELOW STATED TIME FRAME, SPECIFIC TO MODEL LISTED, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

25-YEARS STRUCTURAL / 10 YEARS MECHANICAL: TWO-POST MODELS A-7, SYSTEM IA-10, LC-12, LMF-12, TP-16, TP-18, TP-20, TP-26, TP-30. STRUCTURAL ITEMS COVERED INCLUDE LEG, CARRIAGE, SWING ARM AND SLIDER WELDMENTS (EXCLUDING NORMAL WEAR AREAS AS STATED ABOVE). MECHANICAL ITEMS COVERED INCLUDE ROLLER BEARINGS AND LIFTING CHAIN.

5-YEAR: MODELS TL-7.

3-YEAR: MODELS TR-19, TR-25, FL-25, TR-30, TR-33, TR-35, TR-50, TR-75, TR-110, TR-120, MP-SERIES LIFTS.

2-YEAR: MODELS PARALLELOGRAM SERIES LIFTS.

1-YEAR: MODELS TD-1000, TD-2000, CT-1000, USL-6000.

POWER UNIT (ALL LIFTS):

ALL POWER UNIT COMPONENTS (MOTOR, PUMP AND RESERVOIR) ARE GUARANTEED FOR TWO YEARS FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED, WIRED BY A LICENSED ELECTRICIAN AND USED ACCORDING TO SPECIFICATIONS.

ELECTRICAL COMPONENTS (ALL LIFTS):

ALL ELECTRICAL COMPONENTS (EXCLUDING MOTOR) ARE GUARANTEED FOR ONE YEAR FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS. SEE WARRANTY EXCEPTIONS SECTION FOR BATTERIES.

PNEUMATIC-AIR COMPONENTS (ALL LIFTS):

ALL PNEUMATIC (AIR) COMPONENTS (I.E. AIR CYLINDERS AND POPPET AIR VALVES) ARE GUARANTEED FOR ONE YEAR FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS. COMPONENTS IN A PNEUMATIC SYSTEM THAT ARE NOT PROPERLY REGULATED, LUBRICATED AND CONDITIONED WITH AN AIR DRYING SYSTEM ARE NOT COVERED UNDER WARRANTY.

HYDRAULIC COMPONENTS (ALL LIFTS):

EXCLUDING CYLINDERS AND PUMPS (COVERED IN OTHER SECTIONS), ALL HYDRAULIC COMPONENTS (I.E. VALVES AND FITTINGS) ARE GUARANTEED FOR ONE YEAR FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

MOHAWK MODEL PARALLELOGRAM

HYDRAULIC CYLINDERS (MODEL SPECIFIC LIFTS):

THE FOLLOWING MODELS ARE GUARANTEED FOR 5 YEARS (PARTS ONLY), FROM DATE OF SHIPMENT FROM FACTORY, FOR HYDRAULIC CYLINDERS, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS: TWO-POST MODELS A-7, SYSTEM IA-10, LC-12, LMF-12, TP-16, TP-18, TP-20, TP-26, TP-30.

ALL OTHER MODELS ARE GUARANTEED FOR TWO YEARS (PARTS ONLY), FROM THE DATE OF SHIPMENT FROM FACTORY, FOR HYDRAULIC CYLINDERS, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS (EXCLUDING USL-6000, WHICH IS ONE YEAR).

THE "EXTENDED LIFETIME CYLINDER SEAL WARRANTY" (BELOW) IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: TWO-POST MODELS A-7, SYSTEM IA-10, LC-12, LMF-12, TP-16, TP-18, TP-20, TP-26, TP-30. SEE MOHAWK'S "EXTENDED LIFETIME CYLINDER SEAL WARRANTY" FOR SPECIFIC WARRANTY PROVISIONS FOR HYDRAULIC CYLINDERS.

THE "EXTENDED LIFETIME CYLINDER SEAL WARRANTY" IS AS FOLLOWS:

AS THE ORIGINAL PURCHASER OF A MOHAWK LIFT MANUFACTURED BY MOHAWK RESOURCES, LTD. YOU ARE ENTITLED TO AN EXTENDED CYLINDER SEAL WARRANTY.

MOHAWK'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO SUPPLYING MODEL SPECIFIC CYLINDER SEALS. THE CUSTOMER IS RESPONSIBLE FOR SHIPPING AND HANDLING OF THE SEALS. MOHAWK IS NOT RESPONSIBLE/LIABLE FOR THE REBUILD OF CYLINDERS BY OTHERS. THIS WARRANTY IS NON-TRANSFERABLE AND RUNS TO THE ORIGINAL PURCHASER ONLY.

STANDARD OPTIONS (ALL LIFTS):

ALL STANDARD OPTIONS OF THIS UNIT ARE GUARANTEED FOR ONE YEAR FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

CUSTOM LIFTS AND CUSTOM OPTIONS:

ALL "CUSTOM" LIFTS AND/OR "CUSTOM" OPTIONS ARE GUARANTEED FOR ONE YEAR FOR PARTS, FROM THE DATE OF SHIPMENT FROM FACTORY, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

WARRANTY EXCEPTIONS (ALL LIFTS):

ADJUSTMENTS: THIS WARRANTY DOES NOT COVER CASUAL AND ROUTINE ADJUSTMENTS SUCH AS, BUT NOT LIMITED TO: FITTINGS, SENSORS AND SWITCHES, ANCHOR BOLT RE-TIGHTENING, OR ANY SHIMMING OR ADJUSTMENTS REQUIRED DURING A PROPER AND PROFESSIONAL INSTALLATION BY A QUALIFIED INSTALLER.

MAINTENANCE AND INSPECTIONS: IF THIS UNIT IS NOT MAINTAINED AND INSPECTED IN ACCORDANCE TO THE RELEVANT SECTIONS IN THE USERS MANUAL FOR THIS SPECIFIC MODEL, WARRANTY IS VOID. OSHA, ANSI AND MOHAWK REQUIRE THAT RECORDS MUST BE MAINTAINED TO PROVE THAT INSPECTIONS AND MAINTENANCE OF THIS UNIT HAVE BEEN ROUTINELY PERFORMED BY QUALIFIED INDIVIDUALS.

ABUSE: IF THIS UNIT IS FOUND TO BE OVERLOADED (PURPOSELY OR UNKNOWINGLY), USED IN A SITUATION BEYOND ITS INTENDED FUNCTION, NOT MAINTAINED & INSPECTED REGULARLY, USED IN AN ABUSIVE ENVIRONMENT OR BEYOND NORMAL SHOP USAGE, THIS WARRANTY IS VOID IN ITS ENTIRETY.

NON-EXISTENT PROBLEMS: FOR SERVICE VISITS, PART REPLACEMENTS, LABOR, ETC. FOR PARTS FOUND TO BE NON-DEFECTIVE, OR FOR A UNIT DIS-FUNCTION THAT DOES NOT EXIST, IT IS THE LIFT OWNER THAT REQUESTED THE SERVICE VISIT WHO BEARS THE RESPONSIBILITY OF ALL RELATED EXPENSES.

BATTERIES: ALL BATTERIES CARRY THE BATTERY MANUFACTURER'S WARRANTY. MAINTENANCE REQUIREMENTS AND ABUSE PROVISIONS ARE AS STATED BY THE BATTERY MANUFACTURER. REFER TO BATTERY MANUFACTURER'S WARRANTY

SPECIAL/MODIFIED INSTALLATIONS: THIS WARRANTY DOES NOT COVER "NON-TRADITIONAL" INSTALLATIONS. INSTALLATIONS ARE TO BE DONE ACCORDING TO SPECIFICATIONS, OR THE WARRANTY IS VOID.

WEARABLE COMPONENTS: SOME ITEMS ON LIFTS ARE SUBJECT TO NORMAL "WEAR AND TEAR" AND ARE NOT COVERED UNDER THIS WARRANTY.

NON-VEHICLE / RE-PURPOSED LIFTS: THIS WARRANTY DOES NOT COVER LIFTS THAT ARE "RE-PURPOSED" TO RAISE AND LOWER EQUIPMENT THAT ARE NOT CONSIDERED VEHICLES.

* THIS WARRANTY SUPERSEDES ALL OTHER WARRANTY POLICIES PREVIOUSLY STATED AND IN ALL OTHER MOHAWK PRODUCT SPECIFIC LITERATURE (MANUALS, BROCHURES, ETC.).

Rev 12/1/2015

MODEL NAMES & VARIATIONS:

NOTE: THIS MANUAL IS SUITABLE FOR USE WITH VARIOUS LIFT MODEL CONFIGURATIONS. REFER TO SERIAL TAG ON LIFT AND TABLE BELOW FOR LIFT SPECIFICATIONS.

MODEL NAME	ALCTV Certified	CAPACITY (1000 x LBS)	TRACK LENGTH (FT)	SURFACE (S) OR FLUSH (F) MOUNT
36-28-S	YES	36	28	S
38-26-S	YES	38	26	S
40-35-S	YES	40	35	S
45-35-S	YES	45	35	S
50-26-S	YES	50	26	S
50-32-S	YES	50	32	S
50-35-S	YES	50	35	S
50-42-S	YES	50	42	S
50-48-S	YES	50	48	S
75-26-S	YES	75	26	S
75-30-S	YES	75	30	S
75-35-S	YES	75	35	S
75-42-S	YES	75	42	S
75-48-S	YES	75	48	S
100-42-S	YES	100	42	S
100-48-S	YES	100	48	S
36-28-F	YES	36	28	F
38-26-F	YES	38	26	F
40-35-F	YES	40	35	F
45-35-F	YES	45	35	F
50-26-F	YES	50	26	F
50-32-F	YES	50	32	F
50-35-F	YES	50	35	F
50-42-F	YES	50	42	F
50-48-F	YES	50	48	F
75-26-F	YES	75	26	F
75-30-F	YES	75	30	F
75-35-F	YES	75	35	F
75-42-F	YES	75	42	F
75-48-F	YES	75	48	F
100-42-F	YES	100	42	F
100-48-F	YES	100	48	F

SEE INFORMATION ON NEXT PAGE CONCERNING CERTIFIED LIFTS





THIS SECTION REFERS ONLY TO MOHAWK PARALLELOGRAM LIFT MODELS (LISTED AND DESIGNATED AS CERTIFIED ON PREVIOUS PAGE) THAT HAVE BEEN TESTED AND CERTIFIED TOM MEET THE REQUIREMENTS OF ANSI/ALI ALCTV-2006

The Automotive Lift Institute (ALI) is a trade association comprised of US and Canadian manufacturers and certain national distributors of automotive lifts. For almost 50 years, the ALI in cooperation with the American National Standards Institute (ANSI) has continued to sponsor the national standard ANSI/ALI ALCTV:2011 "Safety Requirements for Construction, Testing, and Validation for Automotive Lifts."

The new "ALI/ETL Automotive Lift Certification Program" is based on ALI developed methods and criteria for third party testing of automotive lifts to validate conformance with ANSI/ALI ALCTV:2011.

For automotive lifts to be certified, manufacturers must execute an agreement with the ALI and ETL / Intertek Testing Services and must meet certain requirements:

- Must be structurally tested in accordance with the test requirements as outlined in ANSI/ALI ALCTV:2011.
- ♦ All motor operated units must be listed by a nationally recognized testing laboratory (NRTL) in accordance with ANSI/UL-201.
- ♦ The manufacturer's production facility must meet quality control requirements as set forth in the ANSI Z34.1-1987 and the ALI/ETL Automotive Lift Certification Program Procedural Guide.
- ♦ All manufacturer-provided instructions, manuals, and operator safety documents, must meet the requirements of the ANSI/ALI ALCTV:2011 and ANSI/UL-201.

Lifts meeting these rigid requirements may be listed in the directory of certified lifts and be labeled with the "ALI/ETL certification mark" (Above on right), and, if applicable, the ETL listing mark to ANSI/UL-201.

Mohawk has been a long-standing member of ALI and most of Mohawk's popular models are currently listed and certified. Other Mohawk models are in various stages of testing. To obtain a complete and current certification listing, contact Mohawk Resources Ltd. or visit www.mohawklifts.com or www.ali-directory.org To obtain a copy of the current automotive lift standard, contact ALI or ANSI or visit www.autolift.org

Some people purchase quality products and others do not. You are assured of quality when you purchase a Mohawk product in compliance with the certification program.

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BEI INTRINSICALLY SAFE ENCODER DRAWINGS

SURFACE MOUNT INSTALLATION DRAWINGS

THIS PACKET OF DRAWINGS CONTAINS SURFACE INSTALLATION INFORMATION FOR PREPARATION OF FLOOR, GENERAL DIMENSIONS OF LIFT, AND GENERAL INSTALLATION INSTRUCTIONS FOR A STANDARD 50-26-S LIFT.

FLUSH MOUNT INSTALLATION DRAWINGS

THIS PACKET OF DRAWINGS CONTAINS FLUSH INSTALLATION INFORMATION FOR PREPARATION OF FLOOR, GENERAL DIMENSIONS OF LIFT, AND GENERAL INSTALLATION INSTRUCTIONS FOR A STANDARD 50-26-F LIFT.

PARTS DRAWINGS

THIS PACKET OF DRAWINGS CONTAINS REPRESENTATIVE ASSEMBLY DRAWINGS WITH PART BREAKDOWNS.

UNIFORM WARNING, CAUTION & SAFETY DIAGRAMS

ALL INFORMATION, ILLUSTRATIONS, AND SPECIFICATIONS IN THIS MANUAL ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF PRINTING. WE RESERVE THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE.

GENERAL NOTES & WARNINGS

RECOMMENDATIONS BY THE INDIVIDUAL USER OR USING ORGANIZATION FOR IMPROVING THIS PUBLICATION OR ANY ASPECT OF THE PRODUCT ARE ENCOURAGED AND SHOULD BE FORWARDED IN WRITING TO:

MOHAWK RESOURCES LTD. PRODUCT IMPROVEMENTS 65 VROOMAN AVE. AMSTERDAM, NY, 12010

THIS IS NOT A VEHICLE LIFTING PROCEDURE MANUAL AND NO ATTEMPT IS MADE OR IMPLIED HEREIN TO INSTRUCT THE USER IN LIFTING METHODS PARTICULARLY TO THE INDIVIDUAL APPLICATION OF THE EQUIPMENT DESCRIBED IN THIS MANUAL. RATHER, THE CONTENTS OF THIS MANUAL ARE INTENDED AS A BASE LINE FOR OPERATION, MAINTENANCE, TROUBLE SHOOTING, AND PARTS LISTING OF THE UNIT AS IT STANDS ALONE AND AS IT IS INTENDED AND ANTICIPATED TO BE USED IN CONJUNCTION WITH OTHER EQUIPMENT.

PROPER APPLICATION OF THE EQUIPMENT DESCRIBED HEREIN IS LIMITED TO THE PARAMETERS DETAILED IN THE SPECIFICATIONS AND THE USES SET FORTH IN THE DESCRIPTIVE PASSAGES. ANY OTHER PROPOSED APPLICATION OF THIS EQUIPMENT SHOULD BE DOCUMENTED AND SUBMITTED IN WRITING TO MOHAWK RESOURCES LTD. FOR EXAMINATION. THE USER ASSUMES FULL RESPONSIBILITY FOR ANY EQUIPMENT DAMAGE, PERSONAL INJURY, OR ALTERATION OF THE EQUIPMENT DESCRIBED IN THIS MANUAL OR ANY SUBSEQUENT DAMAGES.

DO NOT WELD, APPLY HEAT, OR MODIFY THIS EQUIPMENT IN ANY MANNER WITHOUT WRITTEN AUTHORIZATION FROM MOHAWK RESOURCES LTD. CERTAIN ALLOY OR HEAT-TREATED COMPONENTS MAY BE DISTORTED OR WEAKENED, RESULTING IN AN UNSAFE CONDITION.

MOHAWK RESOURCES LTD. IS NOT RESPONSIBLE FOR DISTORTIONS, WHICH RESULT FROM WELDING ON THIS EQUIPMENT AFTER MANUFACTURING IS COMPLETED. UNAUTHORIZED WELDING, APPLICATION OF HEAT, OR MODIFICATION OF THIS EQUIPMENT VOIDS ANY AND / OR ALL APPLICABLE WARRANTIES COVERING THIS EQUIPMENT.

ALL WARRANTIES APPLICABLE TO THIS EQUIPMENT ARE CONTINGENT ON STRICT ADHERENCE TO THE MAINTENANCE SCHEDULES AND PROCEDURES IN THIS MANUAL.

KEEP ALL SHIELDS AND GUARDS IN PLACE. INSURE ALL SAFETY MECHANISMS ARE OPERABLE. KEEP HANDS, FEET, AND CLOTHING AWAY FROM POWER-DRIVEN AND MOVING PARTS.

WARNING

 DO NOT INSTALL THIS UNIT IN A PIT OR DEPRESSION DUE TO FIRE OR EXPLOSION RISK

IMPORTANT NOTE

A LEVEL FLOOR IS SUGGESTED FOR A PROPER INSTALLATION SITE AND WILL ENSURE LEVEL LIFTING. SMALL DIFFERENCES IN FLOOR SLOPES MAY BE COMPENSATED FOR WITH SPECIAL LIFTING PADS. ANY MAJOR SLOPE CHANGES WILL AFFECT THE LOW PROFILE HEIGHT OF THE LIFTING PADS AND / OR THE UNITS LEVEL LIFTING PERFORMANCE. IF A FLOOR IS OF QUESTIONABLE SLOPE, CONSIDER A SURVEY OF THE SIGHT AND / OR THE POSSIBILITY OF POURING A NEW LEVEL CONCRETE SLAB SECTION. SIMPLY STATED, FOR OPTIMUM LEVEL LIFTING, THE EQUIPMENT, AT BEST, CAN LIFT ONLY AS LEVEL AS THE FLOOR ON WHICH IT IS LOCATED... AND SHOULD

NOT BE EXPECTED TO COMPENSATE FOR DRASTIC FLOOR SLOPE DIFFERENCES.

THIS EQUIPMENT MUST BE INSTALLED ON A LEVEL CONCRETE FLOOR WITH A MINIMUM THICKNESS OF **6" ON GRADE.** THE CONCRETE MUST BE AGED AT LEAST (28) TWENTY EIGHT DAYS PRIOR TO INSTALLATION AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF **4000 P.S.I.** REFER TO INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIRED SPECIFICATIONS OF FILOOR

DO NOT INSTALL THIS UNIT ON ANY ASPHALT SURFACE.

DO NOT INSTALL THIS UNIT ON ANY SURFACE OTHER THAN CONCRETE CONFORMING TO THE MINIMUM SPECIFICATIONS STATED IN THE PRE-EXISTING FLOOR REQUIREMENTS SECTION.

DO NOT INSTALL THIS UNIT ON EXPANSION SEAMS OR ON CRACKED, DEFECTIVE CONCRETE. CHECK WITH BUILDING ARCHITECT.

DO NOT INSTALL THIS UNIT ON A SECOND FLOOR OR ANY GROUND FLOOR WITH A BASEMENT BENEATH WITHOUT WRITTEN AUTHORIZATION FROM THE BUILDING ARCHITECT.

INSTALL THIS EOUIPMENT ON CONCRETE ONLY

IF, FOR ANY REASON, A NEW CONCRETE SLAB SECTION IS REQUIRED, THE MINIMUM THICKNESS, COMPRESSIVE STRENGTH, AND AGING ARE MANDATORY. FOR YOUR PROTECTION, CERTIFIED STRENGTH DOCUMENTATION SHOULD BE OBTAINED FROM THE FIRM WHO SUPPLIES THE CONCRETE MIXTURE AT THE TIME OF THE POUR. SPECIAL CONSIDERATION SHOULD BE MADE TO THE JOINING OF THE EXISTING FLOOR AND THE NEW SECTION BEING ADDED. CHECK WITH BUILDING ARCHITECT. THE SUGGESTED SIZE OF THE NEW CONCRETE SLAB SECTION IS SHOWN IN THE NEW SLAB RECOMMENDATIONS SECTION.

CAUTION

THE EQUIPMENT DESCRIBED IN THIS MANUAL COULD BE POTENTIALLY DANGEROUS IF IMPROPERLY OR CARELESSLY OPERATED. FOR THE PROTECTION OF ALL PERSONS AND EQUIPMENT, ONLY COMPETENTLY TRAINED OPERATORS WHO ARE CRITICALLY AWARE OF THE PROPER OPERATING PROCEDURES, POTENTIAL DANGERS, AND SPECIFIC APPLICATION OF THIS EQUIPMENT SHOULD BE ALLOWED TO TOUCH THE CONTROLS AT ANY TIME.

SAFE OPERATION OF THIS EQUIPMENT IS DEPENDENT ON USE, IN COMPLIANCE WITH THE OPERATION PROCEDURES OUTLINED IN THIS MANUAL ALONG WITH THE MAINTENANCE AND INSPECTION PROCEDURES WITH CONSIDERATION OF PREVAILING CONDITIONS.

THE EQUIPMENT DESCRIBED IN THIS MANUAL IS NEITHER DESIGNED NOR INTENDED FOR ANY APPLICATION ALONE OR IN CONJUNCTION WITH ANY OTHER EQUIPMENT THAT INVOLVES THE LIFTING OR MOVING OF PERSONS.

ALWAYS CONSULT THE VEHICLE LIFTING GUIDE FOR THE PROPER LIFTING POINTS ON ANY VEHICLE. THESE GUIDES ARE AVAILABLE FROM THE VEHICLE MANUFACTURERS.

AFTER LIFTING THE VEHICLE TO THE DESIRED HEIGHT, ALWAYS LOWER THE UNIT ONTO THE MECHANICAL SAFETIES. THE FORMING OF GOOD OPERATIONAL WORK HABITS WILL ELIMINATE OVERSIGHTS IN THE USE OF PROVIDED SAFETY DEVICES.

PARALLELOGRAM SPECIFICATIONS

MODEL SPECIFIC SPECIFICATIONS

Model	Capacity	Track	Working	Relief
Name	(x 1000)	Length	Pressure	Pressure
	(lbs)	(ft)	(psi)	(psi)
36-28-S / 36-28-F	36	28	2150	2450
38-26-S / 38-26-F	38	26	2200	2500
40-28-S / 40-28-F	40	28	2350	2650
40-35-S / 40-35-F	40	35	1800	2650
45-35-S / 45-35-F	45	35	1950	2200
50-26-S / 50-26-F	50	26	2850	3100
50-32-S / 50-32-F	50	32	2100	2400
50-35-S / 50-35-F	50	35	2150	2450
50-42-S / 50-42-F	50	42	1750	2000
50-48-S / 50-48-F	50	48	1800	2050
75-26-S / 75-26-S	75	26	2850	3200
75-30-S / 75-30-F	75	30	2875	3200
75-35-S / 75-35-F	75	35	2900	3200
75-42-S / 75-42-F	75	42	2150	2500
75-48-S / 75-48-F	75	48	2200	2500
100-42-S / 100-42-F	100	42	2850	3100
100-48-S / 100-48-F	100	48	2875	3100

DIMENSIONAL SPECIFICATIONS

DIMENSIONAL SPECIFICAT	10113
LIFT TYPE / PARALLELOGRAM	ELECTRIC / HYDRAULIC
LIFTING SPEED APPROX.	90 SEC APPROX
	FOR 4 LEG MODELS
	120 SEC APPROX
	FOR 6 LEG MODELS
	150 SEC APPROX
	FOR 8 LEG MODELS
LIFTING HEIGHT	63 INCH
(TOP OF DECK TO FLOOR	
SURFACE)	
OVERALL WIDTH	109 INCH STANDARD
WIDTH BETWEEN PLATFORMS	45 INCH STANDARD
PLATFORM HEIGHT (FULLY	13 INCH (SURFACE)
LOWERED)	16 INCH (FLUSH)
SHIPPING WEIGHT	17000 LBS. PACKED
	APPROX (Depends on Model)

POWER UNIT SPECIFICATIONS

MANUFACTURER	FPS
MODEL	M-12193A
POWER UNIT TYPE	VERTICAL (T-STYLE)
MOTOR VOLTAGE	208-230 / 460 VAC
FLA @ RATED CAPACITY	60 / 30 AMPS
MOTOR HORSEPOWER	20 HP
MOTOR PHASE	THREE
MOTOR FREQUENCY	60 HZ
MOTOR SPEED	1800 RPM
PUMP FLOW	10.2 @ 1800 RPM
RELIEF VALVE SETTING	DEPENDANT ON LIFT MODEL
WORKING PRESSURE	DEPENDANT ON LIFT MODEL
RESERVOIR CAPACITY	30 GALLONS
HYDRAULIC FLUID MEDIUM	DEXRON III ATF

SUGGESTED SITE SELECTION / BAY SIZE

WIDTH	DEPTH	HEIGHT
17 FT	40 FT	20 FT MIN
	(Dependent on model length)	

NOTE

THE PLACEMENT OF THE UNIT IS DETERMINED BY THE TYPE (LENGTH, WIDTH, HEIGHT) OF VEHICLE BEING SERVICED AS WELL AS THE CLEARANCES DESIRED AROUND THE LIFT AND THE VEHICLES BEING SERVICED.

WEJ-IT ANCHOR SPECIFICATIONS

LENGTH	DRILL	DRILL	DRILI	SIZE	TORQUE
	DEPTH	SIZE	MIN.	MAX.	(N/A)
6 INCH	6 INCH	3/4	.775	.787	3-5 TURNS
	MIN *	INCH	INCH	INCH	PAST HAND
					TIGHT

PRE-EXISTING FLOOR REQUIREMENTS

MINIMUM	MINIMUM COMPRESSIVE	MINIMUM
THICKNESS	STRENGTH	AGING
6 INCH	4000 P.S.I.	28 DAYS

DO NOT INSTALL ANY MOHAWK LIFT ON ANY SURFACE OTHER THAN CONCRETE CONFORMING TO THE MINIMUM COMPRESSIVE STRENGTH, MINIMUM AGING, AND THE MINIMUM THICKNESS STATED ABOVE.

DO NOT INSTALL ANY MOHAWK LIFT ON EXPANSION SEAMS OR ON CRACKED, OR DEFECTIVE CONCRETE.

DO NOT INSTALL ANY MOHAWK LIFT ON SECONDARY FLOOR LEVELS OR ANY SURFACE WITH A BASEMENT BENEATH WITHOUT WRITTEN AUTHORIZATION FROM THE BUILDING ARCHITECT. NEVER HAND MIX YOUR OWN CONCRETE.

IF FOR ANY REASON A NEW CONCRETE SLAB SECTION IS REQUIRED, FOLLOW THE INSTRUCTIONS FOR THE FLOOR MODIFICATION DATA.

FLOOR MODIFICATION DATA NEW FLOOR SECTION

THICKNESS	SLAB SIZE	CUBIC
	WIDTH x LENGTH	YARDS
12 INCHES	12 FT x (LIFT LENGTH + 12')	VARIABLE

IF, FOR ANY REASON, A NEW CONCRETE SLAB SECTION IS REQUIRED, MINIMUM THICKNESS, COMPRESSIVE STRENGTH, AND PROPER AGING IS MANDATORY.

THE NEW SLAB SECTION MUST BE TOTALLY SURROUNDED BY AN EXISTING CONCRETE FLOOR THAT IS STRUCTURALLY SOUND. CERTIFIED STRENGTH DOCUMENTATION SHOULD BE OBTAINED FROM THE FIRM WHO SUPPLIES THE CONCRETE MIXTURE AT THE TIME OF THE POUR.

 $\underline{\text{NEVER}}$ HAND MIX THE CONCRETE.. REFER TO NEW SLAB RECOMMENDATIONS SECTION.

PARALLELOGRAM PACKING LIST *** ALSO SEE PACKING DRAWINGS IN END OF MANUAL ***

ORDER NUMBER	PART NUMBER	PART DESCRIPTION	QTY.
		PLATFORM ASSEMBLY	2
		RAMP WELDMENT	2
		WHEEL STOP WELDMENT	2
		FLIP PLATE	2
		FLIP PLATE SUPPORT	2
		CONTROL CONSOLE	1
		FLOOR SERVICE COVER	2
		FLOOR SERVICE COVER BRACKET	2
		PARTS BOX	1
		PARTS BOX CONTENTS	

RECOMMENDED TOOL LIST

TOOL DESCRIPTION	USED IN
FLOOR LAYOUT	
30 FT TAPE MEASURE	FLOOR LAYOUT / VERIFY LEVEL ASSEMBLY
CHALK LINE	FLOOR LAYOUT
SOAP STONE	FLOOR LAYOUT
4 FT BUBBLE LEVEL	VERIFY LEVEL FLOORING / PREDICT SHIMMING
MOVING AND UNPACKING	
LIFTING DEVICE, 4 TON	LIFTING / MOVING HEAVY ITEMS
WRENCH & SOCKET, 1 1/8 INCH	3/4 INCH PACKING BOLTS
CRESCENT WRENCH, 1 1/8 INCH	¾ INCH PACKING BOLTS
TIN SNIPS	PACKAGING BANDING
PLATFORM SETUP & DRILLING	
LIFTING DEVICE, 4 TON	LIFTING / MOVING HEAVY ITEMS
LEAD CORD OR AIRLINE, 100 FT LG	OPERATE ELECTRICAL/PNEUMATIC TOOLS
PORTA POWER	TO ADJUST ALIGNMENT OF PLATFORMS
PRY BAR	MOVING HEAVY ITEMS
HAMMER DRILL	DRILLING CONCRETE
HAND DRILL FOR 3/4 INCH BIT	DRILLING CONCRETE BEHIND LEGS
DRILL BIT, 3/4 INCH	DRILLING CONCRETE BEHIND LEGS DRILLING CONCRETE
DRILL BIT, 3/4 INCH, SHORT	DRILLING CONCRETE BEHIND LEGS
DRILL BIT, 3/4 INCH, SHOKT DRILL BIT, 3/4 INCH, REBAR CUTTING TYPE	DRILLING CONCRETE BEHIND LEGS DRILLING CONCRETE AND REBAR
MEDIUM HAMMER	34 INCH WEJ-IT ANCHORS
WRENCH & SOCKET, 1 1/8 INCH	34 INCH WEJ-IT ANCHORS
4 FT BUBBLE LEVEL	VERIFY LEVEL ASSEMBLY
ASSEMBLE ATTACHMENTS	
WRENCH & SOCKET, 13/16 INCH	ASSEMBLE STOPS, FLIP PLATES, ETC, 7/16 BOLTS
WRENCH & SOCKET, 3/4 INCH	ASSEMBLE LIGHTS, ETC, 1/2 BOLTS
CONSOLE & UNDERGROUND ROUTING	FIGURE WIDES TUDIL CONTRACT
FISH WIRE, 30'	FISHING WIRES THRU CONDUIT
MECHANICS WIRE	FISHING WIRES THRU CONDUIT
DUCT TAPE	FISHING WIRES THRU CONDUIT
FLAT HEAD SCREW DRIVER, SMALL	CONNECTING WIRES @ CONSOLE
CUTTING KNIFE	CUTTING AIR LINES
WIRE CRIMPERS	WIRE CRIMPS @ LIFT CONNNECTIONS
WRENCH & SOCKET, 3/8 INCH	REMOVE PANELS FROM CONSOLE, 1/4 BOLTS
TABLE VISE	ASSEMBLY OF RE-USABLE HOSE FITTINGS
LARGE 2' LONG CRESCENT WRENCH	ASSEMBLY OF RE-USABLE HOSE FITTINGS

BEFORE INSTALLING A LIFT

IMPORTANT

BEFORE INSTALLING A MOHAWK LIFT THERE ARE A FEW ITEMS THAT MUST BE INSPECTED. EACH REPAIR SHOP BAY IS DIFFERENT. IN AN ATTEMPT TO PREVENT OVERSIGHTS, ALL OF THE FOLLOWING INFORMATION IS TO BE VERIFIED AND INVESTIGATED.

OVERHEAD OBSTRUCTIONS

THE AREA WHERE THE LIFT WILL BE LOCATED SHALL BE FREE OF OBSTRUCTIONS. HEATERS, BUILDING SUPPORTS, ELECTRICAL CONDUIT; ALL OF THESE ITEMS ARE TO BE TWENTY (20) FEET ABOVE THE BAY FLOOR.

DEFECTIVE CONCRETE

VISUALLY INSPECT THE BAY FLOOR AREA. THE UNIT CANNOT BE INSTALLED ON EXPANSION SEAMS, OR CONCRETE THAT IS CRACKED. THE UNIT IS ONLY AS STRONG AS THE FLOOR IT IS INSTALLED ON.

FLOOR REQUIREMENTS

THIS INFORMATION IS IN THE GENERAL FLOOR REQUIREMENTS. IF THE BAY FLOOR DOES NOT CONFORM TO THESE SPECIFICATIONS, REFER TO INSTALLATION INSTRUCTIONS.

POWER SUPPLIES

THE STANDARD POWER UNIT IS 220 VAC THREE PHASE. THE USER IS TO SUPPLY CIRCUIT PROTECTION, DISCONNECTING MEANS AND LOCKOUT TAGOUT FOR INCOMING POWER TO LIFT. REFER TO THE POWER UNIT SPECIFICATIONS SECTION. REQUIREMENTS MAY VARY ON SPECIAL ORDERS.

ALSO, AN AIR SUPPLY OF 60 PSI MINIMUM @ 25 CFM MINIMUM IS ALSO REQUIRED. THE USER IS TO PROVIDE DRYER, MAIN SHUTOFF, FILTER/LUBRICATOR/REGULATOR FOR INCOMING AIR SUPPLY TO LIFT.

THE CONTROL CONSOLE WILL REQUIRE THE ELECTRICAL POWER SUPPLY AND PNEUMATIC AIR SUPPLY FOR THE UNIT. NOTE THE LOCATION OF THE POWER SUPPLY.

BAY SIZE

TO OPTIMIZE SHOP SPACE, IT IS ADVISED TO LOCATE A VEHICLE IN THE BAY PRIOR TO LAYOUT. NOTE WALKWAYS, OVERHEAD OBSTRUCTIONS, AND ABILITY TO MOVE EQUIPMENT IN THE BAY AREA.

REQUIREMENTS MAY VARY ON SPECIAL ORDERS.

SPECIFICATIONS

REFERENCE ALL SPECIFICATIONS PRIOR TO INSTALLING A LIFT.

INSTALLATION INSTRUCTIONS

IMPORTANT!!

READ THIS MANUAL IN ITS ENTIRETY. BE FAMILIAR WITH PART NAMES AND HAVE A GOOD UNDERSTANDING OF HOW THIS UNIT IS TO BE ASSEMBLED AND OF HOW INDIVIDUAL

PARTS OPERATE, BEFORE ASSEMBLING THE UNIT.

REFER TO ANSI/ALI ALIS, SAFETY REQUIREMENTS FOR INSTALLATION AND SERVICE OF AUTOMOTIVE LIFTS.

REFER TO ATTACHED DRAWING SET FOR FLOOR PREPARATION. VERIFY THAT FLOOR DIMENSIONALLY CONFORMS TO SPECIFICATIONS PRIOR TO BRING LIFT COMPONENTS INTO BAY.

USING A CHALK LINE, LAYOUT THE FLOOR DIMENSIONS WHERE THE UNIT WILL BE LOCATED.

MOVE THE PACKED UNIT NEAR THE SETUP AREA AND COLLECT ALL NEEDED TOOLS (SEE RECOMMENDED TOOL LIST).

PLACE CONSOLE IN VICINITY WHERE IT WILL BE LOCATED.

FISH ALL HYDRAULIC LINES, PNEUMATIC LINES AND ELECTRICAL CABLES AS SHOWN IN DIAGRAM ENCLOSED. DO NOT TRIM ANY EXCESS UNTIL CONNECTIONS ARE READY TO BE MADE.

-- IMPORTANT NOTE ON FORKTRUCKS--

EACH PLATFORM WEIGHTS APPROX 8000 LBS. IT IS HIGHLY RECOMMENDED TO USE A SINGLE 4 TON FORKLIFT TO MOVE THESE. A PAIR OF 2 TON FORKLIFTS CAN PERFORM THE SAME FUNCTION, BUT MANEVERABILITY WILL BE A CHALLENGE AND SHOULD BE EXPECTED. ENSURE THAT THERE IS PROPER CLEARANCE IN THE BAY TO MANEUVER FORKTRUCKS WHERE THEY WILL HAVE TO GO TO POSITION THE PLATFORMS PROPERLY.

CUT THE BANDING AND OPEN THE PARTS. VERIFY PARTS BOX CONTENTS. **REFER TO PARTS PACKING DRAWING SECTION IN THIS MANUAL.** IF MISSING PARTS ARE NOTED, THEY CAN BE OBTAINED BY CALLING 1-800-833-2006 OR BY CONTACTING YOUR LOCAL MOHAWK DISTRIBUTOR.

POSITION THE PLATFORMS ON THE FLOOR. ENSURE THAT THE ENDS HAVING THE CONNECTION LINES ARE AT THE UNDERGROUND CONDUITS. A SPACING OF 45 INCHES (+1/4 / -0) IS REQUIRED BETWEEN PLATFORMS IN BOTH LOWERED AND RAISED POSITIONS. POSITIONING IS APPROXIMATE FOR NOW UNTIL THE LIFT IS CONNECTED AND CYLCLED UP AND DOWN.

CONNECT ALL ELECTRICAL, PNEUMATIC AND HYDRAULIC LINES AT BASE OF PLATFORMS.

CONNECT ALL ELECTRICAL, PNEUMATIC AND HYDRAULIC LINES AT CONSOLE. REFER TO DIAGRAMS IN BACK OF MANUAL FOR ELECTRICAL CONNECTIONS INSIDE OF CONSOLE ENCLOSURE.

ENSURE THAT ALL HYDRAULIC AND AIR LINE CONNECTIONS ARE TIGHT TO PREVENT LEAKAGE.

AT THIS TIME HAVE A QUALIFIED ELECTRICIAN CONNECT THE POWER SUPPLY TO THE UNIT

REFER TO ELECTRICAL SCHEMATIC FOR WIRING OF POWER UNIT TO POWER SUPPLY.

VERIFY PROPER MOTOR ROTATION BY JOGGING THE RAISE BOTTON. ENSURE THAT THE MOTOR IS ROTATING CLOCK-WISE AS VIEWED FROM THE TOP OF THE MOTOR. REVERSE INCOMING POWER LEADS IF ROTATION IS REVERSED.

ENSURE THAT THERE IS PROPER AIR SUPPLY TO CONSOLE AIR REGULATOR (SET REGULATOR TO 80 PSI).

REVIEW THE CONTROL INSTRUCTIONS AND OPERATION PROCEDURES TO ACHIEVE A GOOD UNDERSTANDING OF HOW TO OPERATE THE LIFT.

PRESS THE RAISE BUTTON AND THE F4 BUTTON
SIMULTANEOUSLY. THE PLATFORMS WILL NOT RAISE
IMMEDIATELY UNTIL THE HYDRAULIC LINES FROM THE
CONSOLE TO THE LIFT ARE FILLED WITH HYDRAULIC FLUID.
ONCE MOTION IN THE PLATFORMS IS SEEN, PRESS THE RAISE
BUTTON ONLY. CONTINUE PRESSING THE RAISE BUTTON UNTIL
THE PLATFORMS ARE AT FULL HEIGHT.

PRESS THE LOWER BUTTON AND THE PLATFORMS WILL RAISE FOR A FEW SECONDS, RELEASE THE LOCKS, THEN LOWER. IF THEY DO NOT LOWER, VERIFY THE "LOCKS OPEN" REED SWITCHES ARE ADJUSTED PROPERLY. REFER TO FIGURE IN BACK OF MANUAL.

PRESS THE LOWER BUTTON TO LOWER LIFT COMPLETELY. THE CONTROL SCREEN SHOULD READ ZERO HEIGHT FOR BOTH PLATFORMS WHEN LIFT IS FULLY LOWERED. IF THE PLATFORMS ARE STILL READING A VALUE WHEN FULLY LOWERED, THE HOME SWITCHES IN THE PLATFORMS MAY NEED TO BE ADJUSTED. REFER TO FIGURE IN BACK OF MANUAL.

PRESS THE UP BUTTON AND RAISE THE LIFT FULLY. WAIT A FEW MINUTES, THEN PRESS LOWER AND LOWER FULLY. REPEAT THIS A FEW TIMES UNTIL THE PLATFORMS MOVE SMOOTHLY. (THIS WILL BLEED THE AIR FROM THE HYDRAULIC SYSTEM). PLATFORMS SHOULD "ZERO" OUT EVERYTIME THE LIFT IS FULLY LOWERED.

RAISE AGAIN AND WITNESS THAT THE PARK LIGHT ILLUMINATES WHEN THE LOCKS FALL INTO THE LATCHES. RELEASE UP BUTTON WHEN PARK LIGHT ACTIVATES AND PRESS THE PARK BUTTON. HOLD PARK BUTTON UNTIL THE CONTROL SCREEEN READING STOP CHANGING. IF THE PARK LIGHT DOES NOT COME ON, OR IF AN ERROR MESSAGE APPEARS WHEN ATTEMPTING TO PARK THE LIFT, THE "LOCKS CLOSED" REED SWITCHES MAY NEED TO BE ADJUSTED. REFER TO FIGURE IN BACK OF MANUAL.

RAISE THE LIFT A FEW MORE TIMES TO VERIFY THAT IT IS RUNNING SMOOTHLY WITHOUT ERRORS.

PLATFORM SHIMMING

LEVEL THE PLATFORMS BY INSERTING THE SUPPLIED SHIMS UNDER THE BASE FOOTINGS AROUND THE WEJ-IT ANCHORS. THE LIFT MUST BE LEVEL BOTH FRONT TO REAR AND SIDE TO SIDE. A LEVELING DEVICE AND A MEASURING TAPE MUST BE USED. REFER TO FIGURE IN BACK OF MANUAL.

ENSURE THAT PLATFORMS ARE SQUARE AND LEVEL AT FULLY RAISED AND FULLY LOWERED POSITION. A SPACING OF 45 INCHES (+1/4 / -0) IS REQUIRED BETWEEN PLATFORMS IN BOTH LOWERED AND RAISED POSITIONS. USE HORSESHOE SHAPED SHIMS AS NEEDED TO LEVEL AND SQUARE THE PLATFORMS FIRST, THEN SHIFT PLATFORMS AND SHIM TO OBTAIN THE 45 INCH DIMENSION. REFER TO PLATFORM SHIMMING DIAGRAM FURTHER ON IN THIS MANUAL.

SECURE THE PLATFORMS TO THE BAY FLOOR USING THE $3/4 \times 6$ INCH WEJ-IT ANCHORS. REFER TO THE FOLLOWING: "DRILLING THE MOUNTING HOLES" AND WEJ-IT INSTALLATION DIAGRAMS AND INSTRUCTIONS IN THE END OF THIS MANUAL. OBSERVE TIGHTENING SEQUENCE DEPICTED IN INSTALLATION DRAWINGS (TIGHTEN BOLTS FROM CENTER OF BASE OUTWARD TO ENDS).

-- WARNING --

FAILURE TO FOLLOW THE INSTRUCTIONS FOR DRILLING THE MOUNTING HOLES AND PROPERLY INSTALLING THE WEJ-IT ANCHORS MAY RESULT IN COLLAPSE OF THE LIFT AND/OR FATAL INJURY. THIS LIFT IS ONLY AS STRONG AS THE WEJ-ITS THAT HOLD IT TO THE CONCRETE FLOOR. ENSURE THAT THE WEJ-IT ANCHORS ARE INSTALLED PROPERLY!

-- IMPORTANT – DRILLING THE MOUNTING HOLES

- ♦ REFERENCE ALL FIGURES PERTAINING TO DRILLING, WEJ-IT WARNINGS. AND INSTALLATION INSTRUCTIONS.
- ♦ WHEN DRILLING THE HOLES, USE A SHARP DRILL BIT (PER ANSI STANDARD) TO PREVENT DRILLING AN UNDERSIZED HOLE. DRILL THE HOLE EQUAL TO THE LENGTH OF THE WEJ-IT ANCHOR. BLOW OUT THE HOLE WITH SHOP AIR, OR VACUUM
- WHEN INSERTING THE WEJ-IT ANCHORS, INSERT THEM SO THAT THE WASHER RESTS AGAINST THE POST FOOTING. TIGHTEN THE NUT 3 TO 5 FULL TURNS PAST HAND TIGHT.
- NEVER USE AN IMPACT TOOL TO TIGHTEN THE WEJ-IT ANCHORS, USE A WRENCH ONLY.
- MAKE SURE THE CONCRETE IS SOLID WHEN DRILLING. CRACKS AND EXPANSION SEAMS REDUCE THE EFFECTIVENESS OF THE WEJ-IT ANCHOR. NEVER INSTALL THE ANCHOR UNDER THESE CONDITIONS.
- ♦ MATCH DRILL SIX 3/4-INCH HOLES THRU THE BASE PLATE OF THE MAIN SIDE POST. INSERT AND TIGHTEN THE WEJ-IT ANCHOR 3-5 FULL TURNS PAST HAND TIGHT.
- INSURE THE INSIDE DIMENSIONS BETWEEN THE MAIN AND OFF SIDE POST IS STILL CORRECT.
- MATCH DRILL SIX 3/4-INCH HOLES THRU THE BASE PLATE OF THE OFF SIDE POST. INSERT AND TIGHTEN THE WEJ-IT ANCHOR 3-5 FULL TURNS PAST HAND TIGHT.

AFTER LIFT IS ANCHORED TO FLOOR, VERIFY SMOOTH OPERATION UP AND DOWN AGAIN.

ASSEMBLY ANY REMOVE COVERS TO LIFT. ATTACH AUTOMATIC WHEEL CHOCKS TO ENDS OF PLATFORMS WITH HARDWARE SUPPLIED.

APPLY SEALING FOAM TO UNDERGROUND CONDUIT CONNECTIONS AT LIFT AND AT CONSOLE

PLACE COVERS OVER FLOOR SERVICES AT END OF PLATFORMS. ANCHOR RAMPS TO FLOOR (FOR SURFACE MOUNT LIFT ONLY).

ATTACH ALL COVERS TO CONSOLE.

HOW THIS LIFT OPERATES:

THIS LIFT HAS BASICALLY **THREE MAIN FUNCTIONS**. THE TASKS OF EACH OF THESE FUNCTIONS IS DESCRIBED BELOW:

- RAISE PLATFORMS RAISES BOTH PLATFORMS SYNCHRONOUSLY WHILE BUTTON IS PRESSED.
- LOWER PLATFORMS RAISES BOTH PLATFORMS FOR A FEW SECONDS, RELEASES ALL MECHANICAL LOCKS, THEN CONTINUES TO LOWER BOTH PLATFORMS SYNCHRONOUSLY WHILE BUTTON IF PRESSED.
- PARK PLATFORMS LOWERS BOTH PLATFORMS ONTO MECHANICAL LOCKS. THIS FUNCTION ONLY OPERABLE WHEN THE BUTTON IS ILLUMINATED.

EACH OPERATION REQUIRES THE LIFT UNIT TO DETECT AND ENSURE CERTAIN **CONDITIONS** ARE MET IN ORDER TO OPERATE. UNDERSTANDING HOW THESE CONDITIONS EFFECT THE PERFORMANCE (OR LACK OF PERFORMANCE) OF THIS LIFT WILL GREATLY BENEFIT THE USER IN PROPERLY OPERATING AND TROUBLESHOOTING THIS LIFT. THESE CONDITIONS ARE AS FOLLOWS:

- ADEQUATE AIR SUPPLY: A MINIMUM OF 60 PSI AIR IS REQUIRED TO ACTIVATE THE LOCK
 RELEASES ON THIS LIFT. IF PRESSURIZED AIR IS NOT SUPPLIED, CONTROL DISPLAY SCREEN WILL
 GIVE AN ERROR MESSAGE AND WILL NOT ALLOW ANY MAIN FUNCTIONS TO OPERATE UNTIL
 THIS IS CORRECTED.
- ENCODER PRESENCE: EACH PLATFORM HAS A ROTARY ENCODER THAT PERFORMS COUNTS AS THE LIFT IS RAISED AND LOWERED. THESE ARE THE HEART OF THE SYNCHRONIZATION OF THIS LIFT. IF READINGS ARE NOT RECEIVED FROM THE LIFT TO THE CONTROL CONSOLE FROM THESE ENCODERS, THE CONTROL DISPLAY SCREEN WILL GIVE AN ERROR MESSAGE AND WILL NOT ALLOW ANY MAIN FUNCTIONS TO OPERATE UNTIL THIS IS CORRECTED.
- SYNCHRONOUS LIMITS: WHILE RECEIVING ENCODERS COUNTS FROM EACH PLATFORM, THE CONTROLS ALSO VERIFY THAT THESE COUNTS ARE WITHIN A CERTAIN DEGREE OF TOLERANCE TO MAINTAIN LEVEL AND SYNCHRONOUS LIFTING. IF THE COUNTS ARE NOT MAINTAINED WITHIN A DIFFERENTIAL VALUE OF ~100, THEN THE CONTROL DISPLAY SCREEN WILL GIVE AN ERROR MESSAGE AND WILL NOT ALLOW ANY MAIN FUNCTIONS TO OPERATE UNTIL THIS IS CORRECTED.
- LOCKS RELEASED: ON EACH LOCK RELEASE AIR CYLINDER, THERE IS A REED SWITCH THAT DETECTS WHEN THE LOCK IS FULLY RELEASED. ALL THESE LOCK RELEASE REED SWITCHES MUST BE ACTIVATED IN ORDER FOR THE LIFT TO LOWER, OTHERWISE ANY LOWERING OPERATION WILL HALT.
- LOCKS ENGAGED: ON EACH LOCK RELEASE AIR CYLINDER, THERE IS A REED SWITCH THAT DETECTS WHEN THE LOCK IS FULLY ENGAGED. ALL THESE LOCK ENGAGE REED SWITCHES MUST BE ACTIVATED IN ORDER FOR THE LIFT PARK LIGHT TO ILLUMINATE AND ALLOW THE LIFT TO BE PARKED ON THE MECHANICAL LOCKS.
- HOME POSITION: AT THE END OF EACH PLATFORM IS A SWITCH THAT IS ACTIVATED WHEN EACH PLATFORM IS FULLY LOWERED. THESE SWITCHES "ZERO" OUT THE ENCODER COUNTS FOR EACH PLATFORM AND TELL THE SYSTEM THAT THE LIFT IS IN "HOME" POSITION.
- CONTROL DISPLAY STATUS: THE DISPLAY SHOWS ERROR MESSAGES AND THE STATUS OF THE LIFT. SOME MESSAGES MUST BE CANCELLED IN ORDER FOR THE LIFT TO BE IN OPERATION MODE. ALSO, WHILE LIFTING OR LOWERING, THE "COUNTING" HEIGHT OF THE PLATFORMS CAN BE SEEN. THIS WILL GIVE THE USER A GOOD INDICATION OF HOW SYNCHRONOUS THE PLATFORMS ARE MOVING AND WHEN THE UNIT HAS CEASED MOVEMENT (FOR PARKING).

PARALLELOGRAM CONTROL INSTRUCTIONS:

BELOW IS A QUICK REFERENCE CHART FOR THE CONTROLS ON THE PANEL:

FUNCTION KEYS:

F1: ACTIVATE AUXILIARY JACK HEIGHT

(CAN ONLY BE ACTIVATED IN HOME POSITION) DE-ACTIVATE AUXILIARY JACK STOP HEIGHT

F2: DE-ACTIVATE AUXILIARY JACK STOP HEIGHT (CAN ONLY BE ACTIVATED IN HOME POSITION)

F4: CLEARS ERROR FAULT AS NEEDED

F8: USER SETTINGS F9: FACTORY SETTINGS

F10: PASSWORD

OPERATOR PUSH BUTTONS:

RAISE (BLACK): RAISES LIFT

LOWER (RED): RAISES LIFT ~2 SECONDS TO CLEAR MECHANICAL LOCKS,

THEN LOWERS LIFT

PARK (AMBER): ONLY FUNCTIONS WHEN ILLUMINATED. LOWERS LIFT ONTO

MECHANICAL LOCKS (AFTER ~2 SECOND DELAY)

DISCONNECT SWITCH:

DISCONNECTS POWER TO LIFT CONTROLS.

WARNING: POWER IS STILL "LIVE" TO BOTTOM OF DISCONNECT SWITCH WHEN IT IS OFF. BEFORE SERVICING ANY ELECTRICAL COMPONENTS ON THIS LIFT, MAIN ELECTRICAL FEED TO LIFT MUST BE DISCONNECTED AND LOCKED OUT.

MANUAL OVER-RIDE CONTROLS: (EMERGENCY LOWERING)

(LOCATED WITHIN CONSOLE ENCLOSURE)

HAND PUMP: USED FOR RAISING LIFT OFF OF LOCKS IN CASE OF

ELECTRICAL OUTAGE. MUST BE USED IN CONJUNCTION WITH DIRECTIONAL KNOB.

DIRECTIONAL KNOB (BLK): DETERMINES WHICH PLATFORM RAISES WITH MANUAL PUMP.

LEFT LOWERING KNOB (RED): LOWERS LEFT PLATFORM. RIGHT LOWERING KNOW (RED): LOWERS RIGHT PLATFORM.

SAFETY TIPS

PLEASE POST THE AUTOMOTIVE LIFT SAFETY TIPS CARD, (A COPY IS INCLUDED IN THE PARTS BOX) WHERE THEY WILL BE CONSTANTLY REMINDED TO YOUR LIFT OPERATOR. FOR INFORMATION SPECIFIC TO THE LIFT, ALWAYS REFER TO THE MOHAWK MANUAL.

- INSPECT YOUR LIFT DAILY. NEVER OPERATE IT IF IT MALFUNCTIONS OR IF IT HAS BROKEN OR DAMAGED PARTS. REPAIRS SHOULD BE MADE WITH ORIGINAL MOHAWK PARTS.
- OPERATING CONTROLS ARE DESIGNED TO CLOSE WHEN RELEASED. DO NOT BLOCK OPEN OR OVERRIDE THEM.
- NEVER OVERLOAD YOUR LIFT BEYOND STATED LIFTING CAPACITY. RATED CAPACITY IS SHOWN ON NAMEPLATE AFFIXED TO THE LIFT.
- ONLY TRAINED AND AUTHORIZED PERSONNEL SHOULD DO POSITIONING OF VEHICLE AND OPERATION OF THE LIFT.
- DO NOT ALLOW CUSTOMERS OR BY- STANDERS TO OPERATE THE LIFT OR TO BE IN A LIFTING AREA DURING ITS OPERATION. ONLY PROPERLY TRAINED PERSONNEL SHOULD BE ALLOWED TO OPERATE LIFT.
- NEVER RAISE A VEHICLE WITH PERSONS INSIDE.
- ALWAYS KEEP LIFT AREA FREE OF OBSTRUCTIONS, DEBRIS, GREASE, AND OIL.
- PERFORM THE PRE-OPERATION CHECK LIST, PER INSTRUCTIONS, BEFORE RAISING VEHICLE TO DESIRED HEIGHT.

- BEFORE DRIVING VEHICLE ONTO THE LIFT, ENSURE THAT THE PLATFORMS ARE FULLY LOWERED (ZERO READINGS ON CONTROL DISPLAY FOR RIGHT AND LEFT PLATFORM ELEVATIONS).
- LOAD VEHICLE ON LIFT CAREFULLY. ONCE VEHICLE IS CENTERED ON PLATFORMS, SET THE BRAKES AND POSITION THE WHEEL CHOCKS AROUND THE TIRES. RAISE LIFT TO DESIRED WORKING HEIGHT, THEN PARK LIFT. VEHICLE IS NOW READY TO BE SERVICED.
- NOTE THAT WITH SOME VEHICLES, THE REMOVAL OR INSTALLATION OF COMPONENTS MAY CAUSE A CRITICAL SHIFT IN THE CENTER OF GRAVITY, AND RESULT IN RAISED VEHICLE INSTABILITY. REFER TO THE VEHICLE MANUFACTURER'S SERVICE MANUAL FOR RECOMMENDED PROCEDURES WHEN VEHICLE COMPONENTS ARE REMOVED.
- BEFORE LOWERING LIFT, BE SURE TOOL TRAY'S, STANDS, ETC. ARE REMOVED FROM UNDER VEHICLE.
- BEFORE REMOVING VEHICLE FROM THE LIFT AREA, ENSURE THAT PLATFORMS ARE FULLY LOWERED AND WHEEL CHOCKS ARE REMOVED FROM TIRES.

PRE - OPERATION CHECK LIST

TRAINED OPERATOR

 THE OPERATOR MUST BE FULLY TRAINED AND QUALIFIED TO SAFELY AND EFFECTIVELY OPERATE THIS EQUIPMENT OF THIS SPECIFIC MAKE AND MODEL.

ABSENCE OF OBSTRUCTIONS

 THE TOTAL WORK AREA MUST BE FREE OF ANY AND ALL OBSTRUCTIONS AND BE GENERALLY CLEAN. (FREE OF OIL AND DEBRIS)

VISUAL INSPECTION

 THOROUGHLY INSPECT THE UNIT WITH A TRAINED EYE, NOTING ANY PROBLEM AREAS. INSPECT THE FLOOR AND THE ANCHORING FASTENERS AS WELL. REPORT ANY QUESTIONABLE ITEMS.

NO LOAD PERFORMANCE CHECK

- ALL MECHANICAL SAFETIES OPERATE PROPERLY AND CONSISTENTLY.
- NO EXTERNAL FLUID LEAKS.
- NO BLEED DOWN.
- EFFORTLESS AND SIMULTANEOUS MOVEMENT.
- LEVEL LIFTING.
- CONTROLS FUNCTION PROPERLY.
- ALL SAFETY MECHANISMS FULLY FUNCTIONAL.

PREVIOUS DAY'S OPERATION REPORT

 VERIFY WITH SUPERVISOR THAT THERE WAS NO PROBLEMS EXPERIENCED THE PREVIOUS DAY. IF THERE WERE ANY PROBLEMS, VERIFY THAT ALL NECESSARY REPAIRS HAVE BEEN COMPLETED.

LIFTING PROCEDURES

PRE-OPERATION CHECK

PERFORM PRE-OPERATION CHECK LIST ITEM BY ITEM.

POSITION VEHICLE

• DRIVE THE VEHICLE ONTO THE LIFT ENSURING IT IS CENTERED LENGTHWISE AND WIDTHWISE ON THE PLATFORMS. SEE ALI/LP-GUIDE.

-- WARNING --

FAILURE TO PLACE THE VEHICLE'S CENTER OF GRAVITY OVER THE LIFTS PLATFORM CENTERLINE MAY CAUSE SERIOUS INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

 SET BRAKES ON VEHICLE AND POSITION WHEEL CHOCKS AROUND TIRES.

-- WARNING --

DO NOT PLACE WHEELS, WHEEL CHOCKS, OR WING PLOW SHOES ON FLIP PLATES. FLIP PLATES MUST BE FREE TO PIVOT DURING THE WHOLE LIFTING CYCLE. IF THESE PLATES ARE OBSTRUCTED, SERIOUS INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT MAY OCCUR.

TO RAISE

- ENGAGE THE UP-BUTTON ON THE CONTROL PANEL.
- RAISE VEHICLE TO THE DESIRED WORKING HEIGHT.
- LOWER THE UNIT ONTO THE MECHANICAL SAFETIES USING THE PARK BUTTON. (NOTE, THIS BUTTON WILL FUNCTION ONLY WHEN LIT) CONTINUE PRESSING BUTTON UNTIL CONTROL DISPLAY INDICATES ZERO MOVEMENT.

NOTE: IF FOR ANY REASON, THE LIFT BECOMES INOPERATIVE IN THE RAISED POSITION WITH A VEHICLE ON IT, CONTACT YOUR LOCAL MOHAWK REPRESENTATIVE OR THE MOHAWK FACTORY

TO LOWER

- INSPECT THE LIFTING AREA TO INSURE THAT ALL PERSONNEL AND DEBRIS HAVE BEEN CLEARED FROM THE LIFTING AREA.
- ENGAGE THE DOWN-BUTTON ON THE CONTROL PANEL.
 (LIFT WILL RAISE APPROXIMATELY 2 SECONDS UNTIL THE LOCKS ARE RELEASED, THEN CONTINUE TO LOWER)
- LOWER UNIT TO THE DESIRED WORKING HEIGHT.
- IF WORK IS COMPLETE, CONTINUE LOWERING THE UNIT UNTIL BOTH PLATFORMS ARE FULLY LOWERED AND THE CONTROL SCREEN READS ZERO FOR BOTH PLATFORM ELEVATIONS.

MAINTENANCE PROCEDURES

QUALIFIED MAINTENANCE PERSONNEL ONLY

DAILY

- PERFORM THE PRE-OPERATION CHECK LIST.
- REPORT ANY AND ALL EQUIPMENT MALFUNCTIONS IMMEDIATELY.
- CLEAN ALL MOVING PARTS. IF OXIDIZATION IS OCCURRING USE A LIGHT LUBRICANT. (WD - 40 OR EOUIVALENT)
- KEEP AREA AROUND THIS EQUIPMENT FREE OF DIRT, SAND, WATER, ETC. ENSURE THAT WATER DRAINS AROUND LIFT ARE NOT CLOGGED.

WEEKLY

- PERFORM THE DAILY OPERATION CHECK LIST.
- WIPE CLEAN, THE CYLINDER RODS TO REMOVE ANY WEEPING OIL AND DUST.
- VERIFY FLUID LEVEL. WITH THE UNIT FULLY LOWERED, THE FLUID LEVEL WILL BE MIDRANGE ON THE FLUID LEVEL GAUGE. USE DEXRON III AS REPLACEMENT FLUID.
- ENSURE FLIP PLATES ROTATE FREELY AND HAVE SMOOTH OPERATION.
 (DO NOT USE GREASE)

MONTHLY

- INSPECT ALL HYDRAULIC COMPONENTS FOR LEAKS, DEFORMATION, WEAR OR CORROSION.
- TIGHTEN ALL FASTENERS AND HYDRAULIC FITTINGS AS REOUIRED.
 - ALL O-RING BOSS (ORB) FITTINGS ARE TO BE TIGHTENED TO: 25-FOOT POUNDS TORQUE MINIMUM FOR #6 ORB AND 45-FOOT POUNDS TORQUE MINIMUM FOR #8 ORB.

- 2. ALL <u>PIPE</u> FITTINGS, IF LEAKING IS TO BE REMOVED, RE-SEALED, AND RE INSTALLED. (SELECT UNITE THREAD SEALANT OR EQUIVALENT ON FITTING THREADS)
- INSPECT ANCHOR CONDITIONS FOR ANY POSSIBLE CORROSION AND INSPECT THE FLOOR FOR ANY SIGNS OF FATIGUE OR FRACTURES.

SEMI- ANNUAL

- QUALIFY / RE-QUALIFY ALL PERSONNEL IN THE SAFE OPERATION OF THIS UNIT.
- VERIFY ALL FASTENERS TO PROPER TORQUE:
 FLIP PLATE BOLTS TO 70 FT-LB
 PIN RETAINING BOLTS TO 75 FT-LB
 ANCHORS (SEE ANCHOR SPECIFICATION SECTION)
- LUBRICATE ALL PIVOT PINS WITH A LIGHT LUBRICANT (WD-40 OR EQUIVALENT) ENSURING SMOOTH MOTION. DO NOT USE GREASE.

ANNUALLY

- CHECK YOUR HYDRAULIC FLUID ANNUALLY. EVERY FIVE YEARS REPLACE THE HYDRAULIC FLUID. ALWAYS USE A CLEAN FUNNEL AND FILTER. USE DEXRON III HYDRAULIC FLUID.
- INSPECT ALL LOAD PIVOT PINS FOR UNUSUAL OR EXCESSIVE WEAR. (REPLACE IF NEEDED, CONTACT MOHAWK PARTS DEPARTMENT)
- PERFORM THE DAILY, WEEKLY, AND MONTHLY MAINTENANCE PROCEDURES.

MANUAL OVERRIDE CONTROLS

QUALIFIED MAINTENANCE PERSONNEL ONLY

--- WARNING ---

THE MANUAL OVERRIDE CONTROLS ARE SUPPLIED TO THE USER IN THE EVENT OF POWER OUTTAGE OR OUT OF LEVEL CONDITIONS AND ARE NOT MEANT TO BE ROUTINELY USED TO CORRECT LIFT MALFUNCTIONS. IF THE LIFT EXPERIENCES MALFUNCTIONS OR FAULTS, CONTACT MOHAWK RESOURCES SERVICE DEPARTMENT.

WHEN YOU MAY NEED TO USE THESE CONTROLS:

- WHEN THE LIFT GIVES AN OUT OF PARALLEL FAULT AND YOU WISH TO RELEVEL THE PLATFORMS
- DURING A POWER OUTAGE, YOU WILL NEED TO LIFT THE PLATFORMS OFF THE LOCKS AND LOWER THE LIFT TO THE FLOOR.
- ONE PLATFORM DOES NOT OR WAS NOT FULLY LOWERED TO HIT THE HOME SWITCH AND YOU MAY WANT TO LOWER IT MANUALLY TO RESYNCHRONIZE THE PLATFORMS.

WHAT THESE CONTROLS DO:

(LOCATED WITHIN CONSOLE ENCLOSURE. SEE FIGURE ENCLOSED)

HAND PUMP: USED FOR RAISING LIFT OFF OF LOCKS IN CASE OF

ELECTRICAL OUTAGE. MUST BE USED IN CONJUNCTION WITH DIRECTIONAL KNOB.

DIRECTIONAL KNOB (BLK): DETERMINES WHICH PLATFORM RAISES WITH MANUAL PUMP.

LEFT LOWERING KNOB (RED): LOWERS LEFT PLATFORM.

RIGHT LOWERING KNOW (RED): LOWERS RIGHT PLATFORM.

AIR BYPASS PROCEDURE:

(LOCATED WITHIN CONSOLE ENCLOSURE. SEE FIGURE ENCLOSED)

DURING MANUAL DESCENT OF LIFT, YOU MUST OVERRIDE THE LOCKS. TO DO THIS:

- TURN OFF THE AIR REGULATOR
- REMOVE BOTH YELLOW AIR CYLINDER TUBES FROM MANIFOLD BLOCK (SEE FIGURE)
- REMOVE SHORT JUMPER TUBE FROM RIGHT HAND SIDE OF REGULATOR BLOCK (SEE FIGURE)
- REPOSITION AIR CYLINDER TUBES TO RIGHT HAND SIDE OF REGULATOR BLOCK
- TURN ON THE AIR REGULATOR (LOCKS SHOULD DISENGAGE NOW IF LIFT RAISED HIGH ENOUGH ABOVE LOCK POSITION)
- WHEN COMPLETE WITH MANUAL ADJUSTMENTS, RETURN ALL TUBES TO THEIR NORMAL POSITIONS.

TROUBLE SHOOTING

WARNING!

NEVER ATTEMPT TO LOOSEN HYDRAULIC FITTINGS, OR OVERRIDE SAFETY DEVICES IN AN ATTEMPT TO CORRECT A PROBLEM. ALL TESTS ARE TO BE PERFORMED WITH ${\bf NO}$ VEHICLE.

POSSIBLE CAUSE	SOLUTION
NOT RAISING	
NO AIR TO LOCKS	ENSURE THAT SUFFICIENT PNEUMATIC PRESSURE (60 PSI) IS PROVIDED TO CONSOLE. CONNECTION IS AT REGULATOR WITHIN CONSOLE.
UNIT OVERLOADED	REFER TO LIFT SPECIFICATIONS AND CHECK WEIGHT OF VEHICLE TO ENSURE THAT IT IS NOT OVERLOADING THE RATING OF THE LIFT UNIT.
PRESSURE RELIEF CONTAMINATION	REFER TO POWER UNIT SPECIFICATIONS. RELIEF VALVE MAY NEED TO BE ADJUSTED TO PROPER PRESSURE REMOVE AND CLEAN DEBRIS FROM VALVE ASSEMBLY IF NECESSARY.
INCORRRECT VOLTAGE TO POWER UNIT.	REFER TO POWER UNIT SPECIFICATIONS. CONSULT AN ELECTRICIAN
REVERSE ROTATION ON MOTOR	SWAP INCOMING POWER FEEDS TO LIFT. MOTOR SHOULD ROTATE CLOCKWISE AS VIEWED FROM TOP OF MOTOR.
PLATFORMS OUT OF SYNCHRONIZATION	MANUALLY LOWER PLATFORMS UNTIL THEY ARE LEVELED AND RAISE AGAIN. PLATFORMS MUST BE WITHIN 100 COUNTS TO BE SYCHRONIZED.
NOT LOWERING	
LIFT STOPPING TO REMIND YOU TO MOVE JACK TO END OF PLATFORM	ENSURE THAT JACK IS AT END OF PLATFORM WHERE POCKET IN FLOOR IS LOCATED (NOT APPLICABLE TO SURFACE). PRESS LOWER BUTTON AGAIN.
NO AIR TO LOCKS	ENSURE THAT SUFFICIENT PNEUMATIC PRESSURE (60 PSI) IS PROVIDED TO CONSOLE. CONNECTION IS AT REGULATOR WITHIN CONSOLE.
PNEUMATIC AIR LINE LEAKING	LISTEN FOR AIR LEAK AND REPAIR WHERE NEEDED
MECHANICAL LOCKS NOT DIS-ENGAGED	RAISE UNIT SLIGHTLY AND RE-PRESS THE LOWER BUTTON TO DISENGAGE MECHANICAL LOCKS.
LOSS OF ENCODER SIGNAL	VERIFY THAT BOTH ENCODERS ARE RECEIVING A SIGNAL. WHILE LOOKING AT DISPLAY SCREEN, HAVE SOMEONE STOMP ON BOTH PLATFORMS AND CONFIRM THAT COUNT VALUES ARE CHANGING.
REED SWITCHES ON AIR LOCK CYLINDERS OUT OF POSITION AND NOT DETECTING THAT MECHANICAL LOCKS ARE DISENGAGED PROPERLY	REFER TO DIAGRAM IN BACK OF MANUAL FOR PROPERLY ADJUSTING THE POSTION OF THE "LOCKS OPEN" REED SWITCHES.
PLATFORMS OUT OF SYNCHRONIZATION	RAISE UNIT TO FULL HEIGHT TO EQUALIZE. THEN LOWER OR USE MANUAL LOWERING VALVES TO EQUALIZED, THEN LOWER WITH BUTTON
DEBRIS IN POSTS (TOOLS ETC.)	REMOVE DEBRIS AND CLEAN UNIT
OBSTRUCTION UNDER VEHICLE OR LIFT	REMOVE OBSTRUCTION.
RAISING/LOWERING UNEVE	N
ENCODERS NOT SYNCHRONIZED	LOWER LIFT COMPLETELY AND PRESS BOTH HOME SWITCHES TO ZERO LIFT AT BOTTOM
HOME SWITCHES NOT ADJUSTED PROPERLY	ENSURE THAT WHEN LIFT IS COMPLETELY LOWERED, BOTH HOME SWITCHES ZERO LIFT ON BOTH SIDES.
FAULTY PROPORTIONAL VALVE	REPLACE FAULTY COMPONENT. CONTACT MOHAWK SERVICE DEPARTMENT.

TROUBLE SHOOTING, CONT.

POSSIBLE CAUSE	SOLUTION						
NOT PARKING (LIGHT DOES NOT ILLUMINATE)							
FAULTY LIGHT BULB	REMOVE BUTTON CASING AND CHECK BULB TO VERIFY IF IT IS DEFECTIVE. REPLACE WITH 24 VDC BULB.						
REED SWITCHES ON AIR LOCK CYLINDERS OUT OF POSITION AND NOT DETECTING THAT MECHANICAL LOCKS ARE ENGAGED PROPERLY.	REFER TO DIAGRAM IN BACK OF MANUAL FOR PROPERLY ADJUSTING THE POSTION OF THE "LOCKS CLOSED" REED SWITCHES.						
LIFT NOT IN POSITION WHERE ALL LOCKS ENGAGED.	RAISE LIFT UNTIL "CLUNK" IS HEARD FROM ALL LOCKS. ONCE ALL LOCKS DROP IN TO ENGAGE, LIGHT SHOULD COME ON AND ALLOW PARKING OF THE LIFT.						
HYDRAULIC LEAKS							
CYLINDER	THOROUGHLY CLEAN THE CYLINDER. VERIFY LEAK ORIGIN. FITTINGS ARE TO BE TIGHTENED PER SPECIFICATIONS						
BAD FLARE OR FITTING	REMOVE THE HYDRAULIC LINE AND INSPECT FLAIR AND FITTING FOR DEFORMATION. REPLACE IF NEEDED.						
BAD O-RING (O-RING TYPE FITTINGS)	CHANGE O-RING						
LOOSE PIPE FITTING	REMOVE, RESEAL, AND RE-INSTALL FITTING. SEAL ALL PIPE FITTING CONNECTIONS WITH THREAD SEALANT MOHAWK PART # 601-610-002 NOTE: DO NOT USE TEFLON TAPE.						

TROUBLE SHOOTING, CONT.

CONTROL DISE	PLAY ERROR MESSAGES
MESSAGE:	POSSIBLE RESOLUTION:
LOCK LIFT NOT ALLOW – LOCKS NOT CLOSED	LIFT IS NOT ALLOWED TO PARK ON LOCKS UNLESS COMPUTER DETECTS THAT ALL LOCKS ARE CLOSED. IF ANY SINGLE LOCK IS NOT CLOSED, THIS ERROR WILL OCCUR. TRY RAISING AND PARKING AGAIN.
	2. IF ERROR RECURS, ADJUSTMENT TO "LOCKS CLOSED" REED SWITCHES MAY BE NECESSARY (SEE FIGURE IN BACK OF MANUAL).
	3. CHECK THAT REED SWITCH CABLE CONNECTIONS ARE SECURE TO TERMINAL STRIP IN ENCODER BOX AND CONTROL PANEL.
F4 – TO RESET FAULT – LOW AIR FAULT	1. AIR SUPPLY TO LIFT IS NOT PRESENT OR TOO LOW OF PRESSURE (NEED 80 PSI MINIMUM). PRESS F4 TO CLEAR MESSAGE WHEN AIR IS OBTAINED.
	2. CHECK THAT AIR REGULATOR WITHIN CONSOLE IS SET TO AT LEAST 80 PSI. RESET PRESSURE AND PRESS F4 ON PANEL TO CLEAR MESSAGE.
	3. POSSIBLE FAULTY AIR PRESSURE SENSOR MAY NEED REPLACEMENT.
PUMP MOTOR – OVER LOAD	DISCONNECT POWER FROM CONTROL CONSOLE. WAIT APPROXIMATELY 5 MINUTES FOR MOTOR OVERLOAD TO RESET. CONNECT POWER AGAIN AND RETRY LIFT.
	2. DISCONNECT POWER FROM CONTROL CONSOLE. OPEN ELECTRICAL CONTROL BOX DOOR AND CHECK THAT OVERLOAD SETTING ON MOTOR STARTER IS SET TO MAXIMUM VALUE AND RESET BUTTON IS SET TO AUTO (NOT MANUAL). ENSURE THAT TRIP WINDOW ON OVERLOAD RELAY IS NOT SHOWING A COLORED TRIP STRIP.
	3. LIFT IS POSSIBLY OVERLOADED. CHECK CAPACITY.
F4 - TO RESET FAULT – OUT OF PARALLEL	1. THERE MAY HAVE BEEN A TEMPORARY DIFFERENTIAL OF ENCODER READINGS BETWEEN LEFT AND RIGHT SIDE THAT HAS CORRECTED ITSELF. PRESS F4 TO CLEAR ERROR.
	2. USE MANUAL CONTROLS TO LEVEL LIFTING PLATFORMS. PRESS F4 TO CLEAR ERROR.
	3. SPEED OF LIFT MAY BE TOO FAST FOR CONTROLS TO COMPENSATE FOR OFFSET LOADING ON LIFT. CONTACT MOHAWK RESOURCES FOR RESETTING SPEED SETTING.
F4 - TO RESET FAULT – LEFT/RIGHT STOP BAR TRIP	1. TAPE SWITCH UNDER PLATFORM HAS DETECTED AN OBSTRUCTION AND HAS SHUT DOWN LIFT. REMOVE OBSTRUCTION AND PRESS F4 TO CLEAR MESSAGE. NOTE: THIS MESSAGE ONLY PRESENT WHEN LIFT PROVIDED WITH OPTIONAL TAPESWITCH (NOT STANDARD FEATURE).
F4 – TO RESET FAULT – LOSS OF LEFT/RIGHT ENCODER	1. LIFT HAS EXPERIENCED NO MOTION FOR 2 SECONDS IN A PLATFORM AFTER CONTROLS HAVE BEEN PRESSED. IF LOWERING, POSSIBLE HANG UP ON LOCKS. RAISE AND LOWER AGAIN. IF RAISING, POSSIBLE LOSS OF POWER TO MOTOR. CHECK MOTOR OVERLOAD.
	2 VERIFY THAT CONTROLS ARE RECEIVING SIGNAL FROM ENCODER. OBTAIN SCREEN ON CONTROL DISPLAY TO SHOW LIFT ELEVATIONS (LEFT, DIFFERENTIAL, RIGHT). STOMP ON EACH PLATFORM AND ENSURE THAT VALUES ON DISPLAY CHANGE.
	3. ENSURE THAT ENCODER CABLE CONNECTIONS ARE SECURE TO TERMINAL STRIP IN ENCODER BOX AND IN CONTROL PANEL.
	4. POSSIBLE FAULTY SOLENOID ON MANIFOLD NOT SHIFTING FLOW TO PLATFORM, RESULTING IN NO MOTION FOR 2 SECONDS AFTER CONTROLS PRESSED. CONTACT MOHAWK RESOURCES FOR REPLACEMENT PART.
	5. POSSIBLE HYDRAULIC LEAK IN LEFT OR RIGHT PLATFORM HOSE. VERIFY AND TIGHTEN FITTING WHERE NECESSARY. MORE DEXRON III MAY NEED TO BE ADDED TO RESERVOIR IF LEAK FOUND.
F4 – TO RESET FAULT – LOCKS NOT OPEN	1. LIFT IS NOT ALLOWED TO LOWER UNLESS COMPUTER DETECTS THAT ALL LOCKS ARE OPEN. IF ANY SINGLE LOCK IS NOT OPEN, THIS ERROR WILL OCCUR. TRY RAISING AND LOWERING AGAIN.
	2. IF ERROR RECURS, ADJUSTMENT TO "LOCKS OPEN" REED SWITCHES MAY BE NECESSARY (SEE FIGURE IN BACK OF MANUAL).
	3. CHECK THAT REED SWITCH CABLE CONNECTIONS ARE SECURE TO TERMINAL STRIP IN ENCODER BOX AND CONTROL PANEL.
WARNING: MOVE JACK TO END OF PLATFORM	1. LIFT HAS STOPPED TO REMIND YOU TO MOVE JACK TO END OF PLATFORM WHERE CUTOUT IN FLOOR IS PROVIDED (FLUSH MOUNT LIFT ONLY). PRESS LOWER BUTTON AGAIN TO RESUME MOTION.
	2. IF REMINDER NOT NEEDED (SURFACE LIFT), BRING LIFT TO HOME POSITION AND PRESS F2.

MODEL:		
SERIAL NUMBER:		
DATE OF INSTALLATION:		
	SERVICE CHART	

DATE PART REPLACED / SERVICE COMPANY SERVICE DBY COMPANY SERVICE OF THE PLACED BY COMPANY SERVICE OF THE PLACED BY COMPANY SERVICE OF THE PLACED BY COMPANY

MAINTENANCE CHART

DATE	MAINTENANCE PERFORMED	SERVICE COMPANY	SERVICED BY

MOHAWK

PARALLELOGRAM

FIGURES & DIAGRAMS



MOHAWK RESOURCES LTD.

65 VROOMAN AVE. AMSTERDAM, NY 12010 **TOLL FREE:** 1-800-833-2006

LOCAL: 1-518-842-1431 **FAX:** 1-518-842-1289

INTERNET: WWW.MOHAWKLIFTS.COM **E-MAIL:** SERVICE@MOHAWKLIFTS.COM

WEJ-IT INSTALLATION



USE HAND WRENCH ONLY

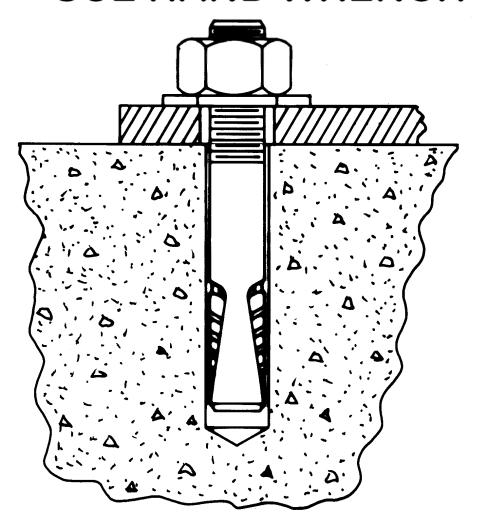


Figure 1



The Original wej-it Wedge Anchors

KEY FEATURES/BENEFITS

■ Time-Tested, Pr ven Reliability. An industry standard for over 45 years.



- Fully Assembled and Ready to Use. Unparalleled job-site convenience.
- **BOLT SIZE IS HOLE SIZE.** Allows precision placement of equipment through pre-drilled holes.
- Exclusive "Positive Wedge Connections." Minimizes wedge loosening due to vibratory loads.

SPECIFICATIONS, APPROVALS AND LISTINGS

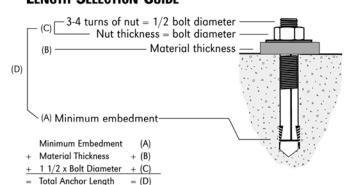
TYPE	
Zinc Plating	ASTM B-633, Type III, SCI
ICBO-ES	Report #1821
City of Los Angeles	#RR 24939
DOT	Please call Customer Service for
	specific information by state.
Federal	QQZ-325C, Type II, Class 3
Specifications	(Clear Chromate added)
	FFS-325, Group II, Type 4, Class 1

MAXIMUM TENSILE AND SHEAR CAPACITY FOR STATIC LOADS

Source		1					2					2	
1	•	•	•	7	17837	•	29728	33083	41619	35700	•	•	•
1	·	•	•	5 1/2	16351	•	27252	33083	38153	35700	4 1/2	21616	31666
3/4	•	•	•	7	15444	15537	25740	21000	36036	23103		•	•
3/4	•	•	•	3	11579	15537	19299	21000	27019	23103	3 1/2	17293	19050
Size	(in)	(lbs)	(lbs)	(in)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(lbs)	(in)	(lbs)	(lbs)
& Hole	ment	Tension	Shear	ment	Tension	Shear	Tension	Shear	Tension	Shear	ment	Tension	Shear
Anchor	Embed-	2000) psi	Embed-	300	0 psi	500	0 psi	7000) psi	Embed-	5000) psi
		Aggregati	E		ZIN PLATED ARBON STEEL					Lightweight (Idealite)			
		LIMESTONE			Unreinforced Stone Aggregate oncrete					Unreinforced			

Sources (available upon request): 1) University of Texas, Austin, TX (using new ICBO-ES testing criteria); 1993. 2) AA Engineers & Associates, Inc., Denver, O; 1981.

LENGTH SELECTION GUIDE





EDGE DISTANCE AND SPACING REQUIREMENTS

Embedment (E) in	Spacing	Edge Distance
Anchor Diameters (d)		
E < 6d (shallow)	3.50E	1.75E
$6d \le E \le 8d$ (standard)	2.00E	1.00E
8d < E (deep)	1.50E	0.75E

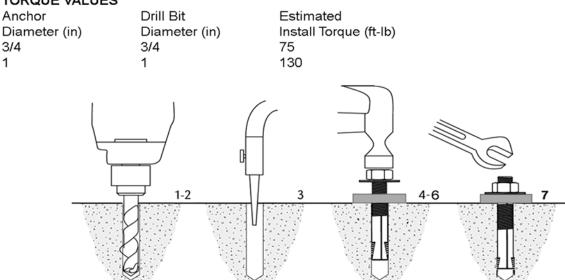
Notes:

- Information provided only for the use of a qualified design engineer. Use of technical data by persons not qualified could cause serious damage, injury, or even death.
- Ultimate values shown. For static loads, use one-fourth of the maximum tensile and shear capacities for the recommended 4:1 safety factor.

INSTALLATION INSTRUCTIONS - MOHAWK LIFTS

- 1. Drill the hole perpendicular to the work surface.* The drill bit diameter will be the same as the anchor diameter that you are installing. To assure full holding power, do not ream the hole or allow the drill to wobble. Ensure all holes are a minimum of 6 inches away from any cracks, seams or defects in the concrete.
- 2. Drill the hole 1 diameter deeper than the intended embedment of the anchor, but not closer than two diameters to the bottom (opposite) surface of the concrete.
- 3. Clean the hole using compressed air and a nylon brush. A clean hole is necessary for proper performance.
- **4.** For ease of installation, make certain that the spear heads are located up against the wedge pockets.
- 5. Turn the nut onto the anchor until contact is made with the top of the spears and the bottom of the washer. Insert anchor into hole.
- 6. Tap anchor into hole with a 2 ½ lb. hammer until the washer rests solidly against the base plate.
- 7. Tighten the nut from 1 ½ to 3 turns past hand tight position to estimated installation torque below. Use of an Impact wrench for Installation of the anchor is NOT recommended.

TORQUE VALUES



INSPECTION & MAINTENANCE INSTRUCTIONS

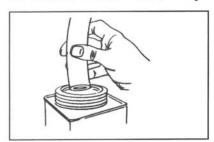
- 1. Verify torque on anchors to 70 ft-lbs for 3/4 anchors and 120 ft-lbs for 1" anchors for future/annual inspections.
- * Always wear safety glasses. Follow the drill manufacturer's safety instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards as listed on back cover.

Figure 3

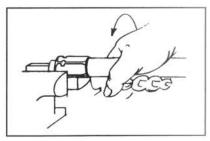
30 Series Hose Assembly Instructions

30 Series Fittings
Use with 301, 301LT, and 381 hoses.

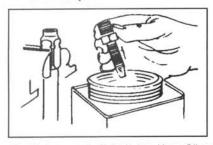
30 Series Hose Assembly Instructions



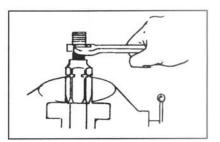
 Identify Over All Length (OAL) of hose assembly and the Cut Off Allowance (COA) length of fitting(s) on hose ends by use of the fitting data table. Properly measure, mark and cut hose to desired length using fine tooth hacksaw or a cutoff machine. Dip hose end into Hoze-Oil or heavy oil.



Place socket in vice and screw in hose counterclockwise until hose bottoms. Back hose out 1/2 turn.



 Dip hose end of nipple into Hoze-Oil or other heavy oil up to the hex. When assembling fittings of 316 stainless steel lubricate the threads of both the socket and nipple with Dow Corning Molykote G-n or equivalent metal assembly lubricant.



Screw nipple assembly into socket using wrench on nipple hex until nipple hex shoulders against socket.

Note: Disassemble in reverse order.

IF YOU HAVE QUESTIONS CONCERNING THE PRODUCTS OR APPLICATION OF THE PRODUCTS CONTAINED IN THIS CATALOG, PLEASE CALL:

PARKER HOSE PRODUCTS DIVISION - TECHNICAL SERVICES DEPARTMENT

PHONE: 216 / 943-5700 FAX: 216 / 943-3129 www.parkerhose.com

+ Non-Standard



B-197

Hose Products Division Parker Hannifin Corporation Wickliffe, Ohio www.parkerhose.com

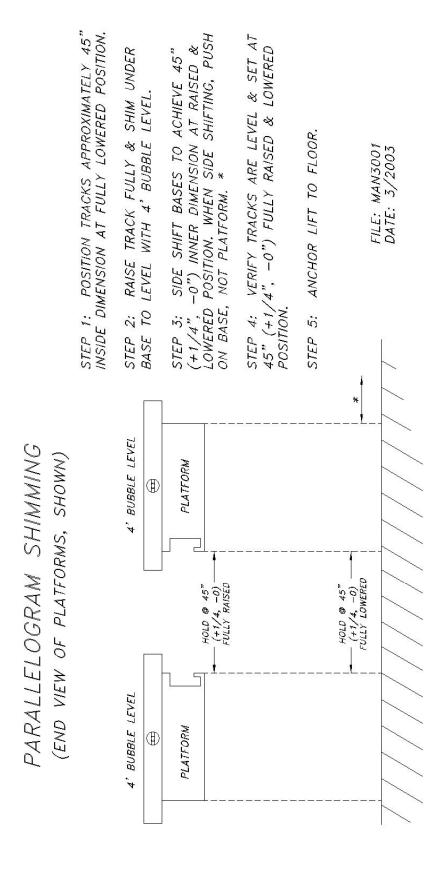


Figure 5

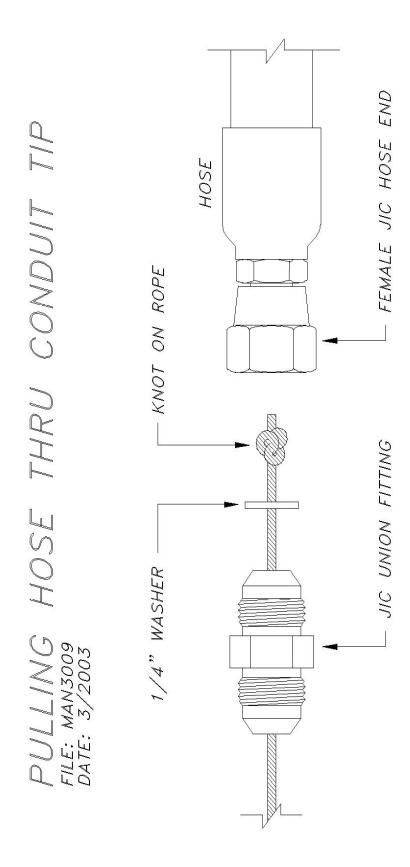


Figure 6

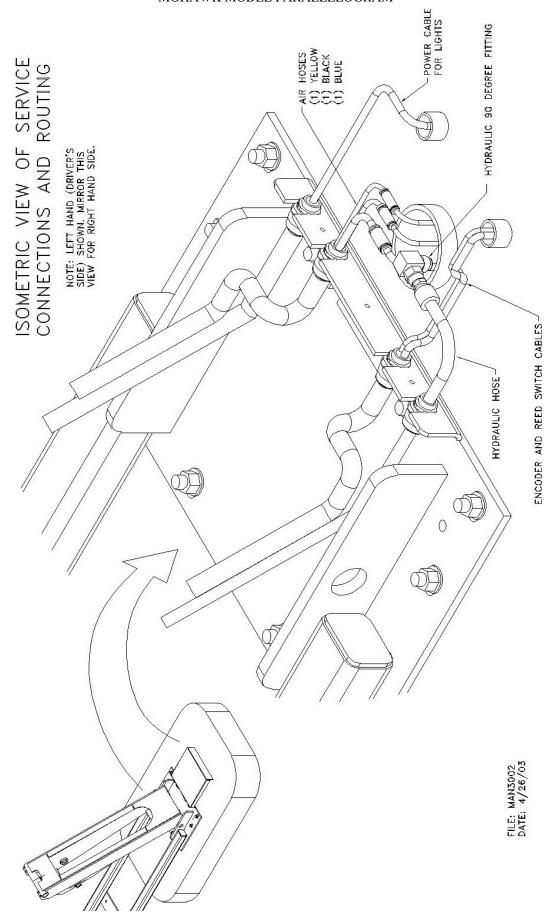


Figure 7

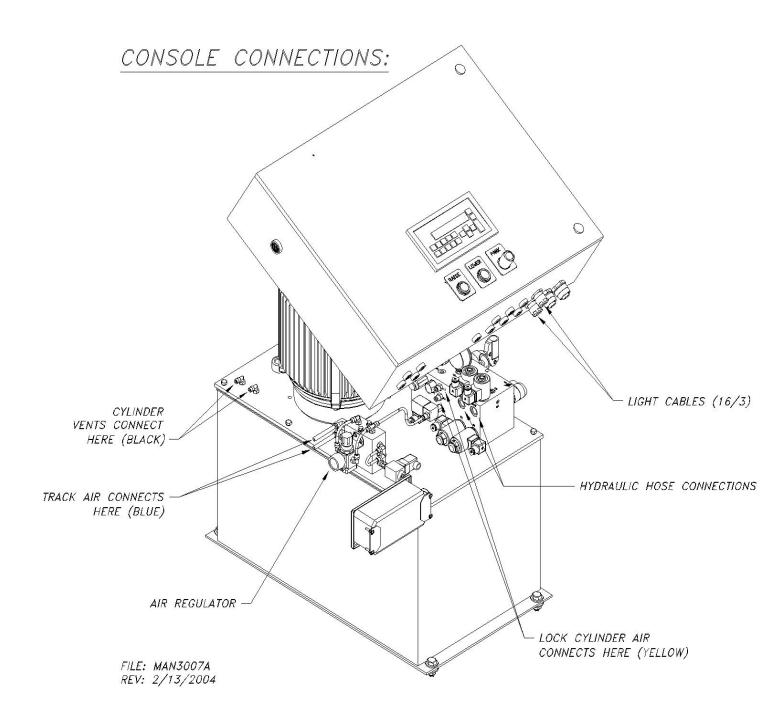


Figure 8

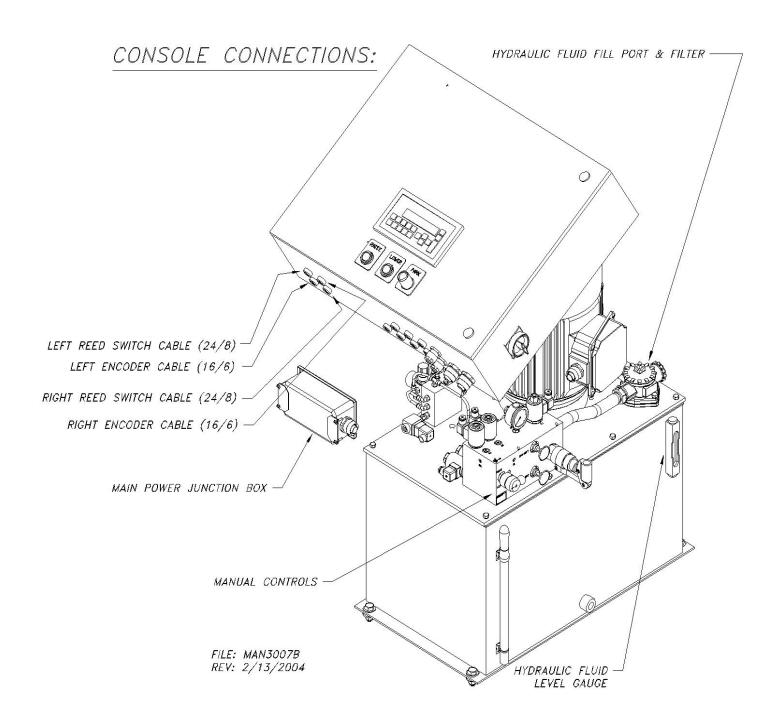
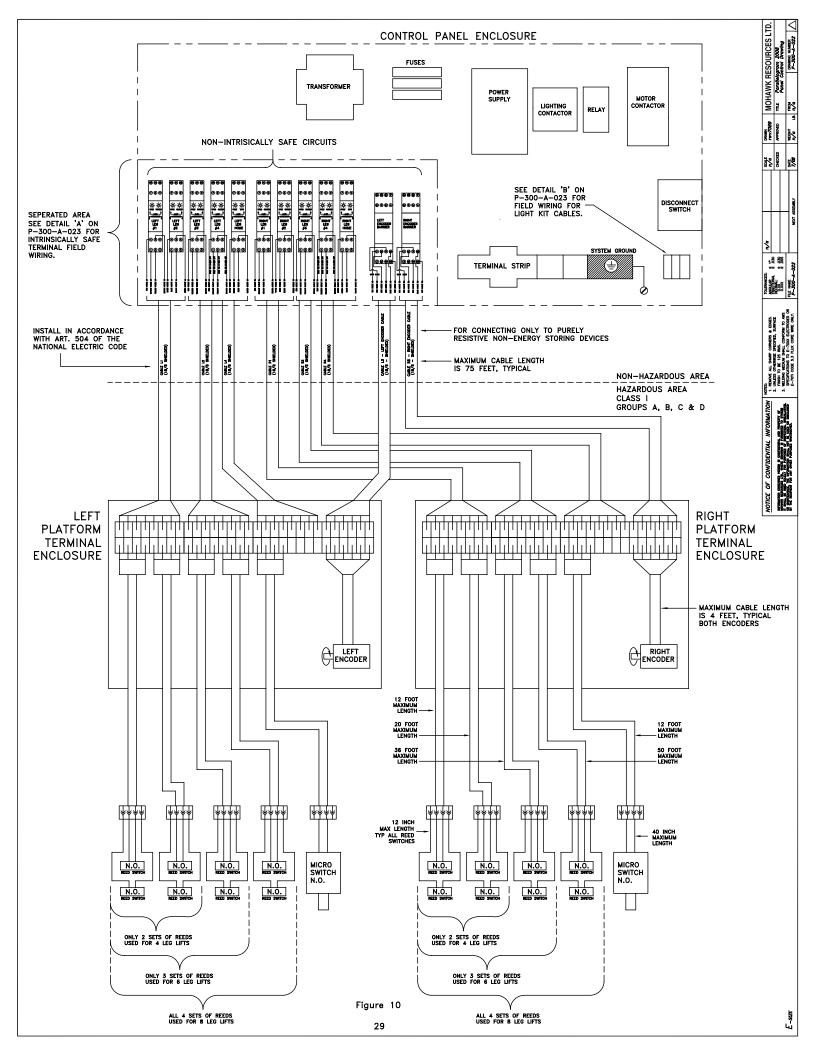
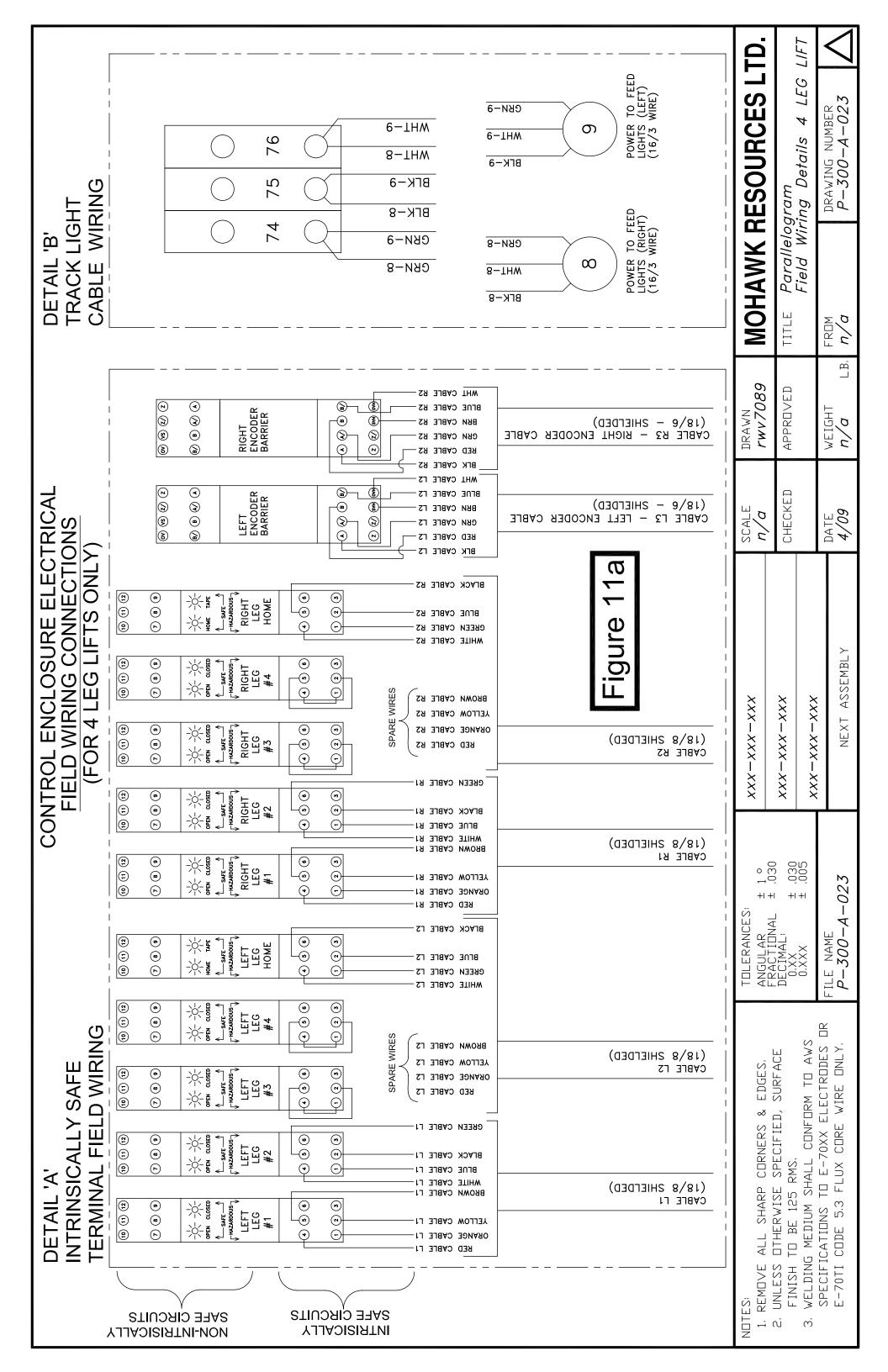
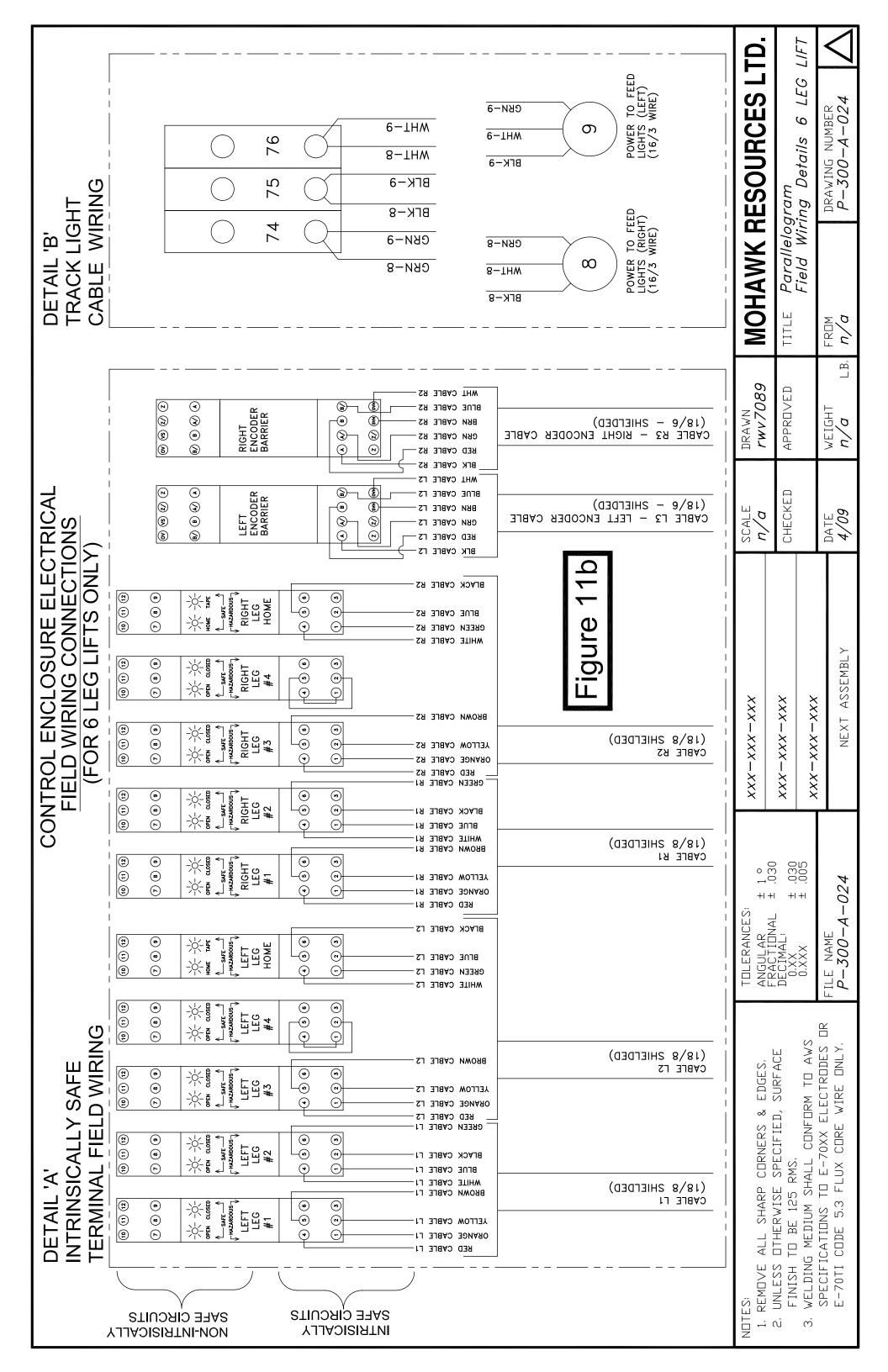
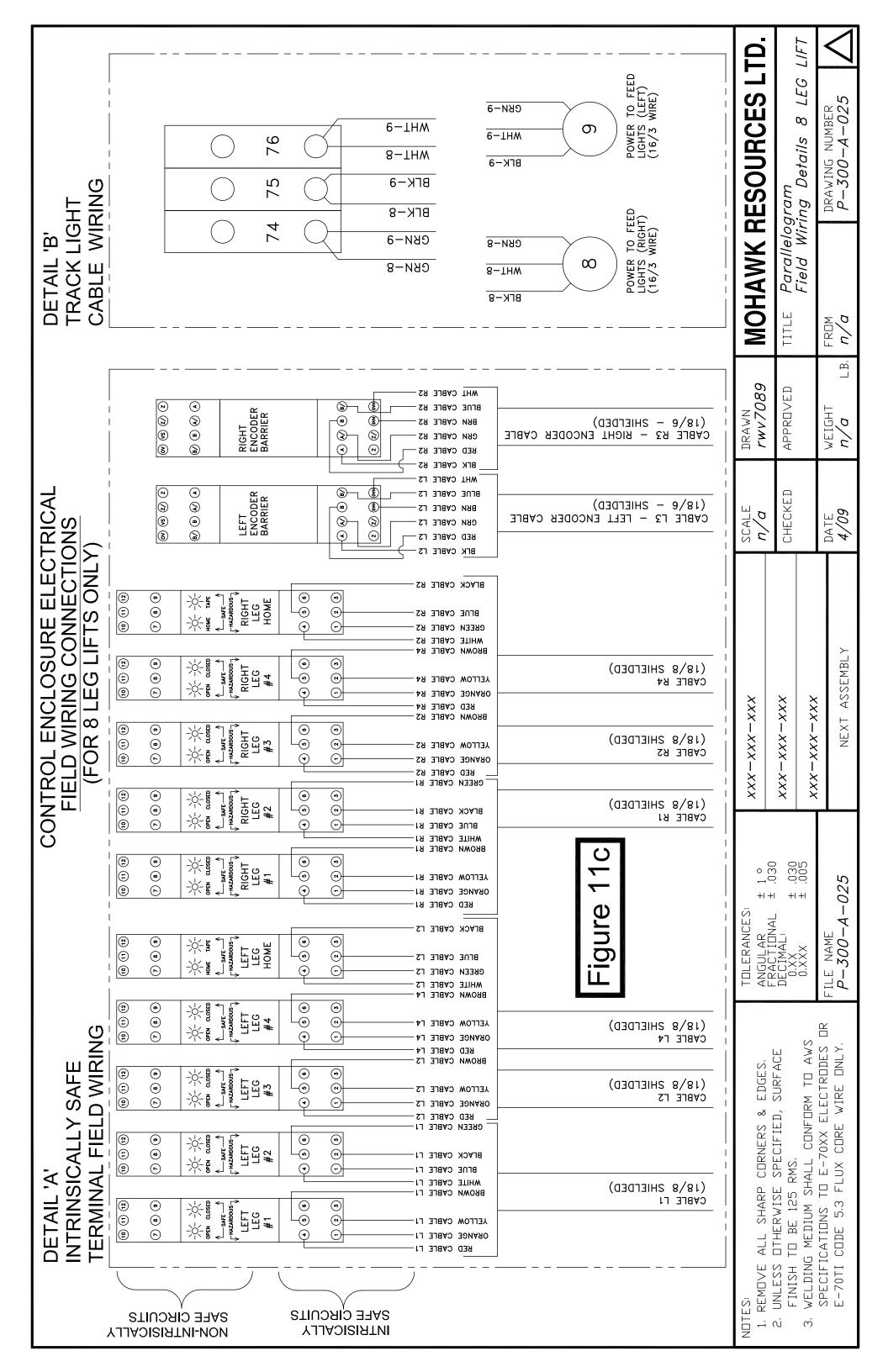


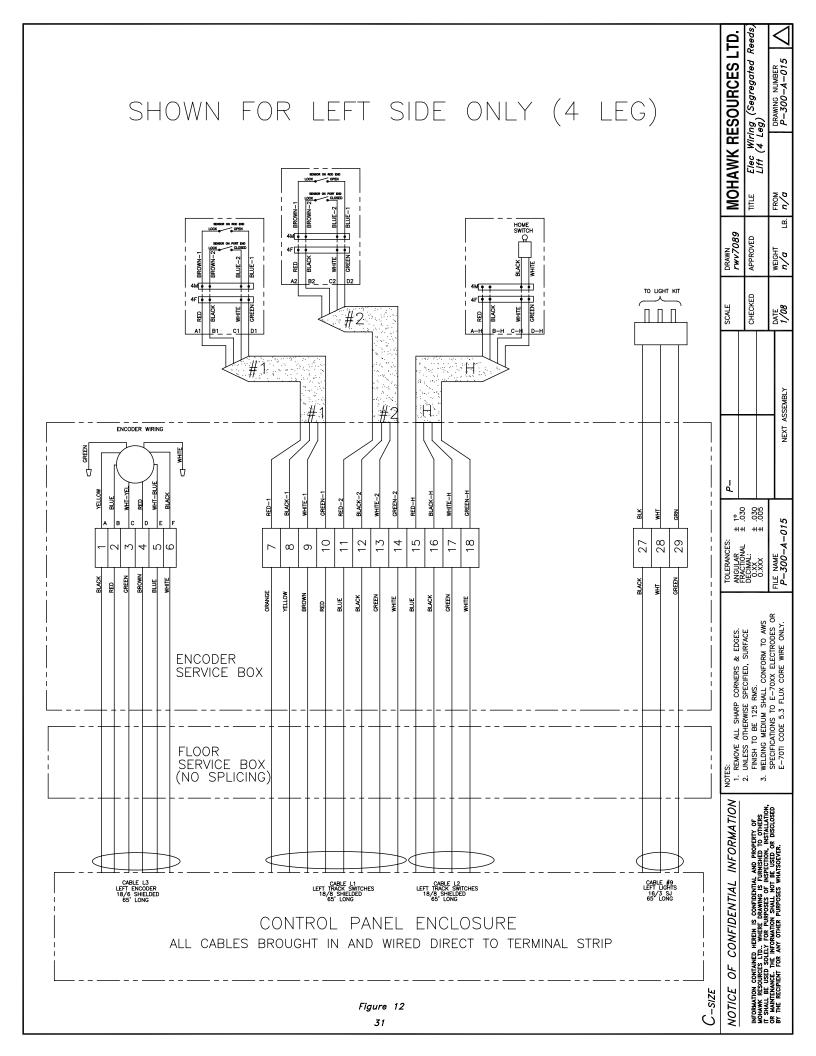
Figure 9

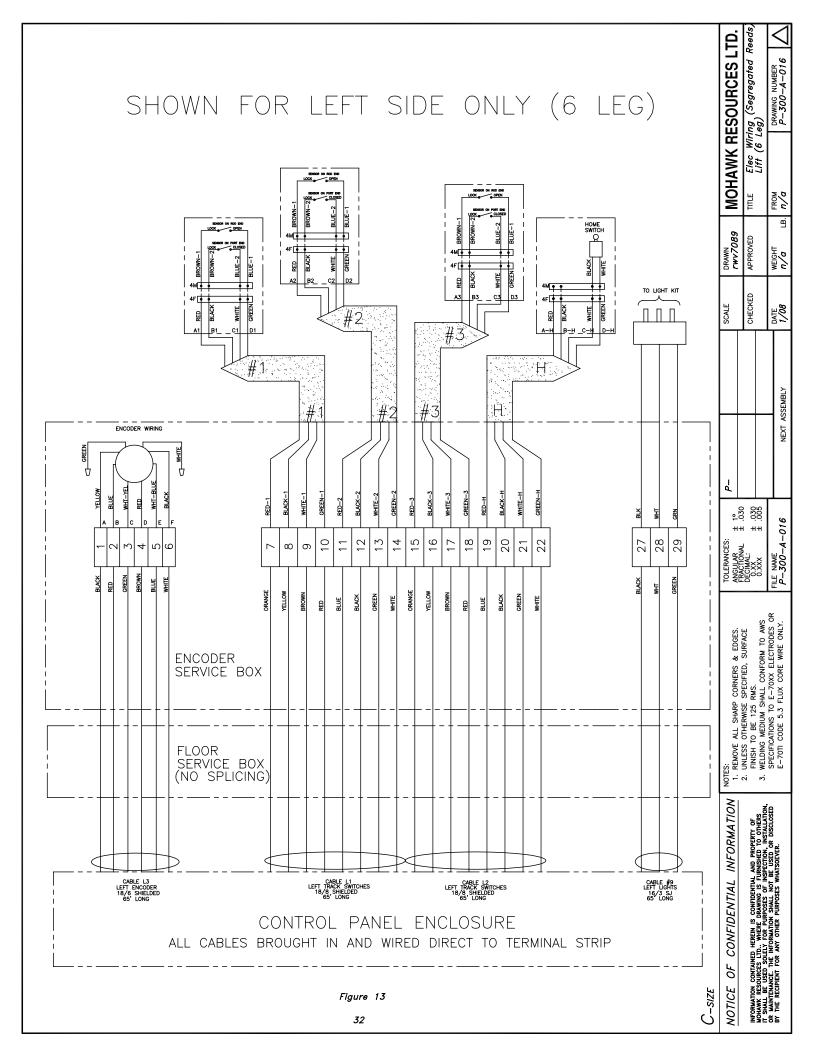












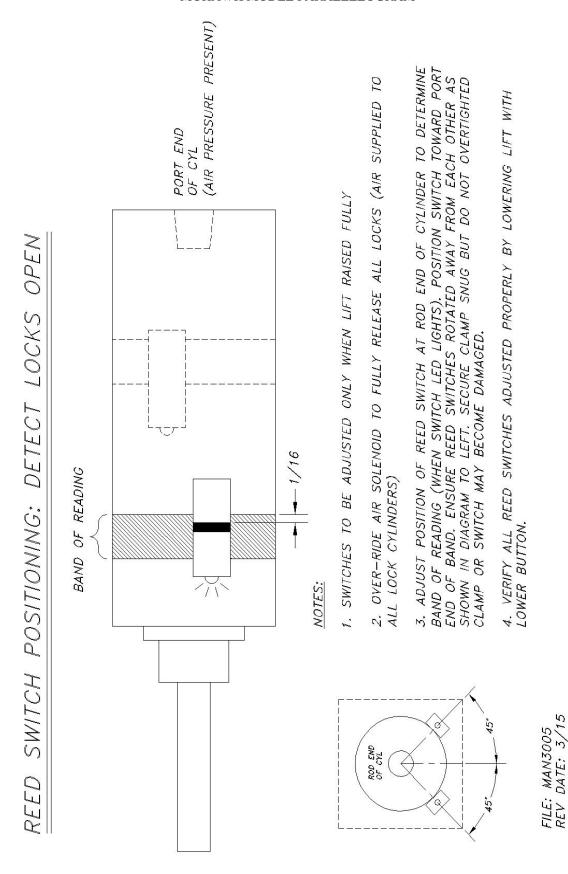


Figure 14

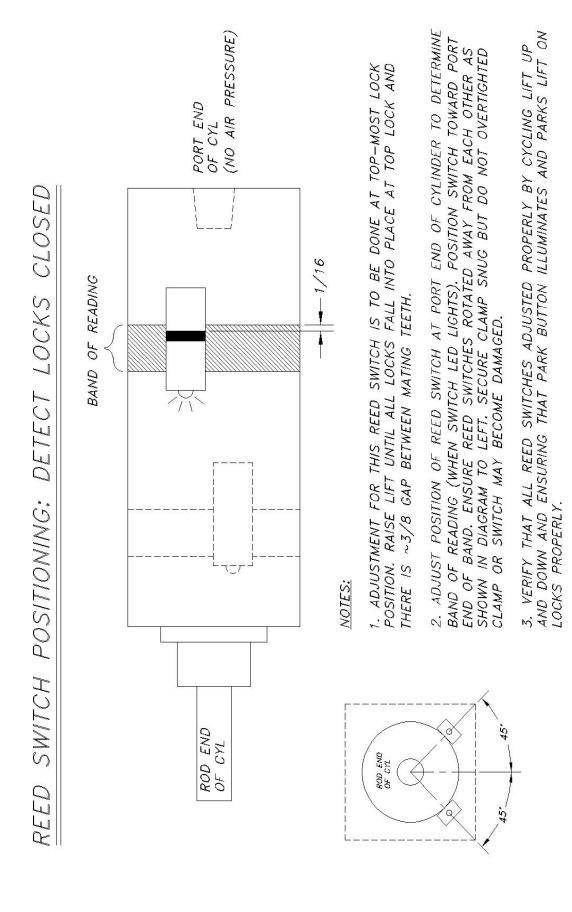


Figure 15

FILE: MAN3006 DATE: 3/15

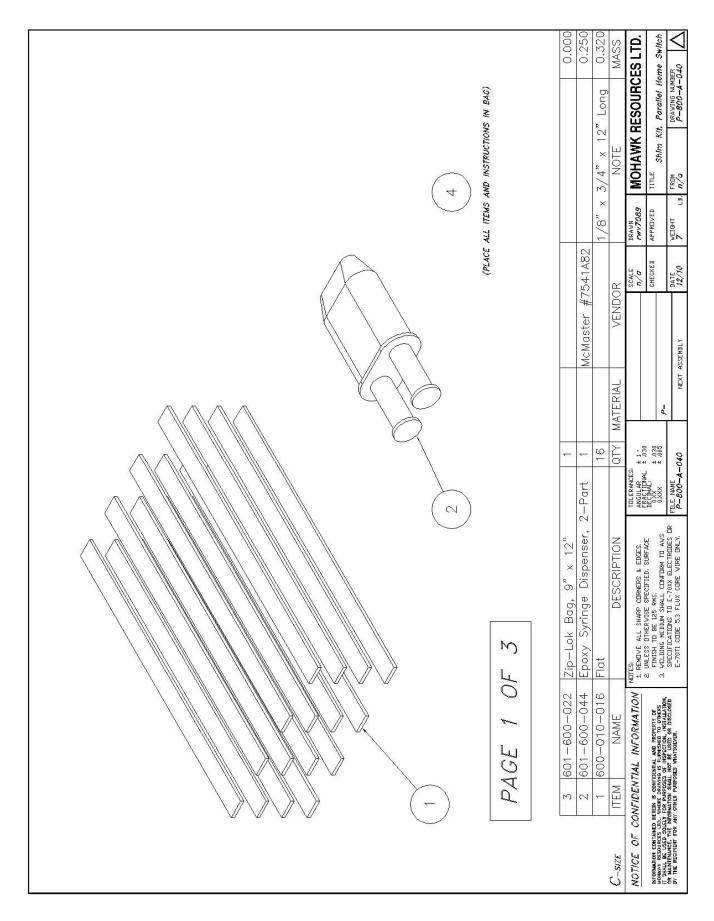


Figure 16A

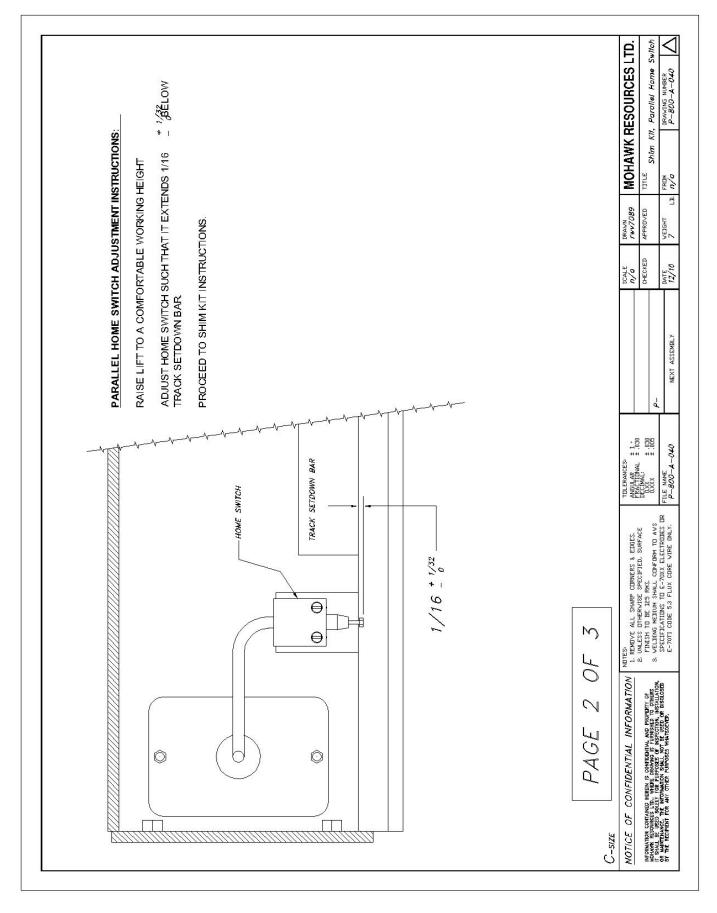


Figure 16B

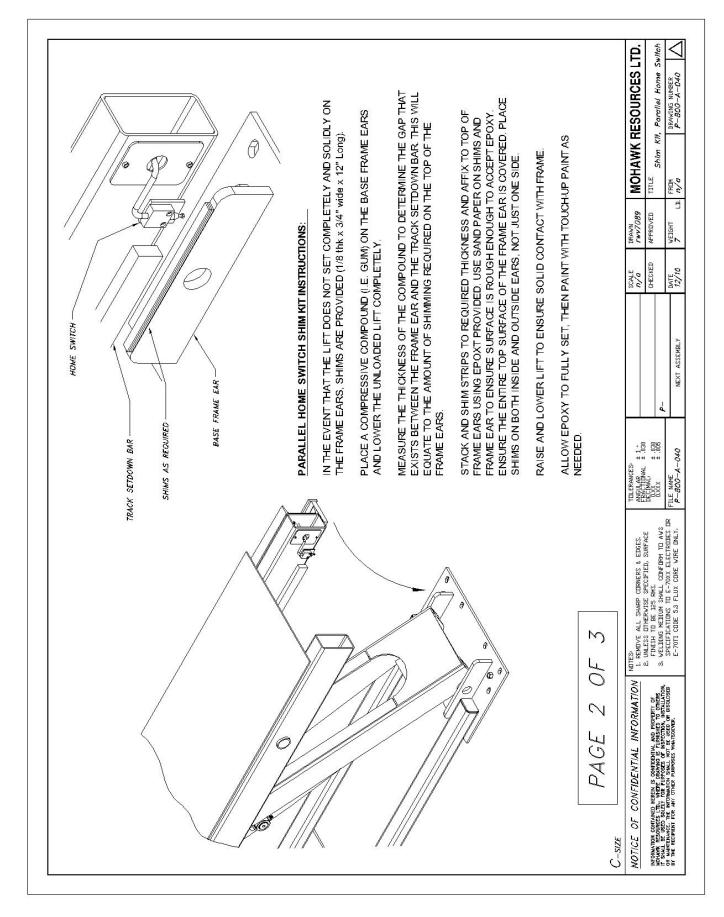
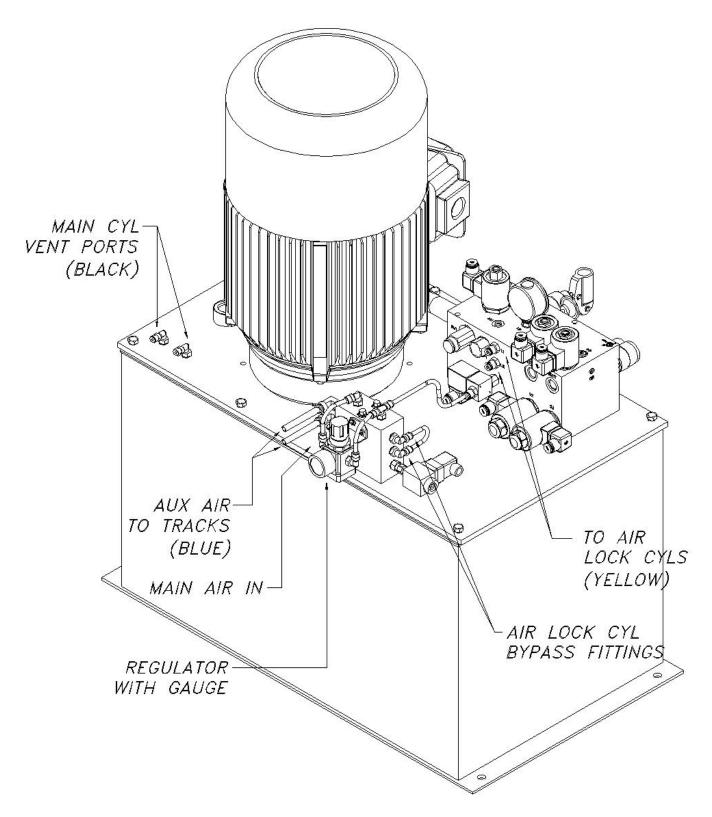


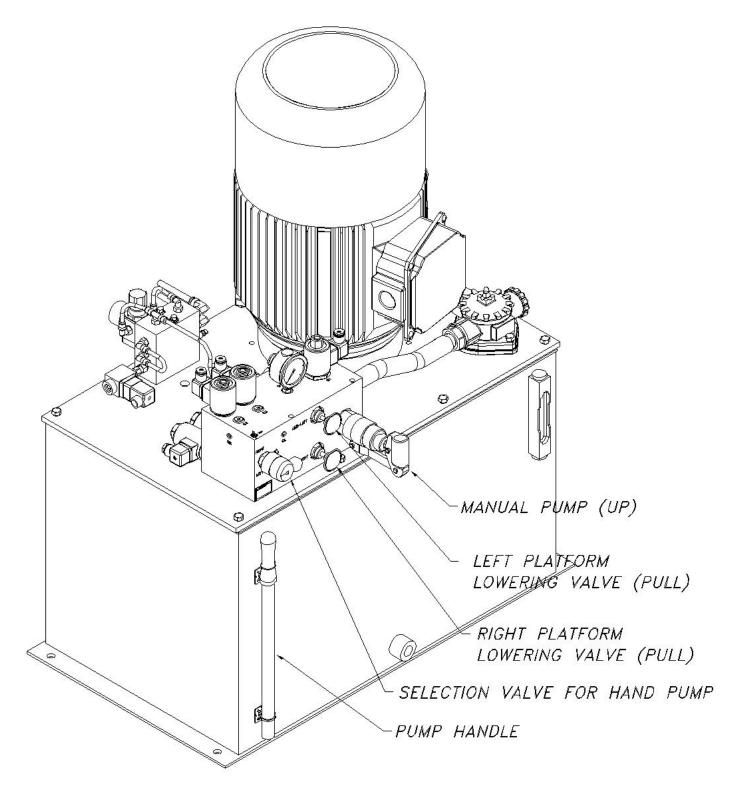
Figure 16C



CONSOLE PNEUMATIC CONNECTIONS

FILE: MAN3008A

Figure 17



CONSOLE MANUAL OVERRIDE CONTROLS

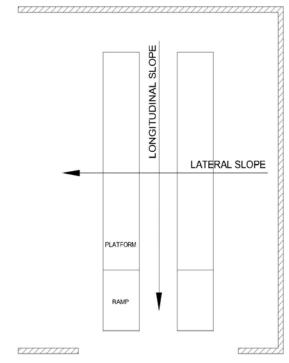
FILE: MAN3008B

Figure 18

Parallelogram Shimming Notes:

File: Parallel Shim.doc Date: 10/3/2003

The ideal surface to install Mohawk Parallelogram style lifts in on a perfectly flat and level floor. This, however, is usually the exception rather than the norm when installing these lifts in the field. When a non-flat or non-level floor is encountered, the following shimming guidelines should be followed:



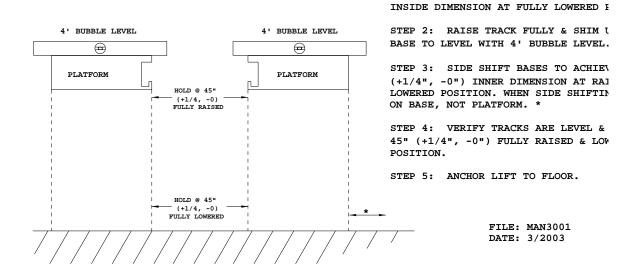
TYPICAL BAY INSTALLATION FOR A MOHAWK PARALLELOGRAM STYLE LIFT FILE MANSOIZ

Lateral Shimming (Left to Right):

The lift must be shimmed plum and level with respect to each other, to ensure that both platforms raise evenly.

PARALLELOGRAM SHIMMING

(END VIEW OF PLATFORMS, SHOWN)



POSITION TRACKS APPROXIMAT

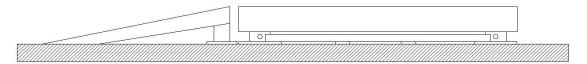
STEP 1:

MOHAWK MODEL PARALLELOGRAM

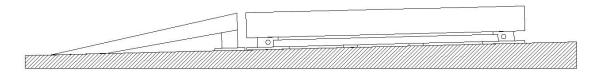
Longitudinal Shimming (Front to Back):

Usually the floor is sloped from the back of the bay downward to the front of the bay towards some drainage system. If this slope is in less than 3" from end to end of base frame, it is not necessary for shimming this lift level. It is left to the installer and the customer to decide if shimming the lift level is desired. Regardless, shimming may still be required to ensure the platforms are level with respect to themselves. If the slope is greater than 3" from front to end of base frame, it is recommended to shim the end of the base to within the acceptable range slope (less than 3"). The use of additional base plates, stringer plates, longer anchors and grout may be necessary to shim along the whole length of the base frame to achieve this. Also note that the ramps themselves may need to be shimmed up to meet the level of the platforms. If this is the case, the ramp angle will be increased, and the customer should be made aware of this.

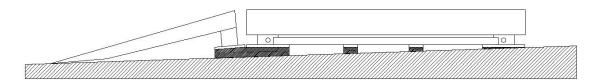
LIFT ON FLAT AND LEVEL FLOOR (LONGITUDINALLY)



LIFT ON UN-LEVEL FLOOR (LONGITUDINALLY) WITHOUT SHIMMING



LIFT ON UN-LEVEL FLOOR (LONGITUDINALLY) WITH SHIMMING



LONGITUDINAL SHIMMING OF A MOHAWK PARALLELOGRAM STYLE LIFT

FILE: MAN3013

In conclusion, without shimming, this lift can only be as level as the floor it is put on. If shimming is required to correct floor slopes, uneven floors, etc., additional time will be required for installation, and additional costs may be incurred for extra shims, base plates, grout, etc.

Figure 19

PARALLELOGRAM

MISCELLANEOUS INFO



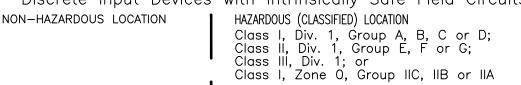
MOHAWK RESOURCES LTD.

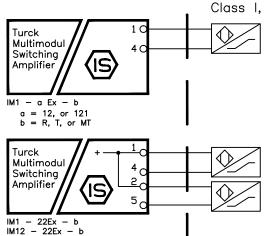
65 VROOMAN AVE. AMSTERDAM, NY 12010 **TOLL FREE:** 1-800-833-2006

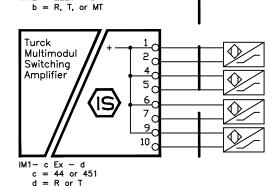
LOCAL: 1-518-842-1431 **FAX:** 1-518-842-1289

INTERNET: WWW.MOHAWKLIFTS.COM E-MAIL: SERVICE@MOHAWKLIFTS.COM

Discrete Input Devices with Intrinsically Safe Field Circuits







Entity Parameters:	Class I,	Division	1; CI	lass II	, Division	1;	Class	III,	Division	1
	Circuit (Characte	ristic:	Line	or					

Model	Terminals	V _{oc} (V)	I _{sc} (mA)	P _o (mW)	C _a (uF) AB/CE/DFG	La (mH) AB/CE/DFG
IM1-12Ex		0.0	11	27	7.0./00.0./040	050 (000 (411
IM1-121Ex	1-4	9.6	- ' '	2/	3.6/26.0/210	250/922/1H
IM1-22Ex	1-4, 2-5	9.6	11	27	3.6/26.0/210	250/922/1H
IM12-22Ex	1-1, 2-0	3.0	''		3.0/ 20.0/ 210	250/ 922/ 111
IM1-44Ex	1-2, 4-5, 6-7, 9-10	11.5	12.8	37	1.6/11.2/46.0	222/781/1H
IM1-451Ex	1-2, 4-3, 0-7, 3-10	11.5	12.0		1.0/ 11.2/ 40.0	222/701/111
						ı
Model	Terminals	Vt (V)	lt (mA)	P _o (mW)	Ca(uF) AB/CE/DFG	La (mH) AB/CE/DFG
IM1-22Ex	1-2-4-5	9.6	22	54	3.6/26.0/210	67/246/579
IM12-22Ex	1-2-4-3	9.0	22] 34	3.0/20.0/210	67/246/379
IM1-44Ex	1-2-4-5-6-7-9-10	11.5	51	147	1.6/11.2/46.0	12.5/49.0/108
IM1-451Ex	1-2-4-3-0-/-9-10	11.5	"	' + ′	1.0/ 11.2/ 40.0	12.5/ 49.0/ 106

Entity Parameters: Class I, Zone 0, 1, or 2 Circuit Characteristic: Linear

Model	Terminals	U. (V)	l _o (mA)	P _o (mW)	C _o (uF) IIC/IIB/IIA	L。(mH) IIC/IIB/IIA
IM1-12Ex	1-4	9.6	11	26	3.6/11.3/30.1	282/981/1H
IM1-22Ex	1-4, 2-5	9.6	11	26	3.6/11.3/30.1	282/981/1H
IM1-22Ex	1-2-4-5	9.6	22	54	3.6/26.0/210	67/246/579
IM12-22Ex IM1-44Ex	1-2, 4-5, 6-7, 9-10	11.5	12.8	37	1.6/11.2/46.0	222/781/1H
IM1-451Ex						, ,
IM1-451Ex	1-2-4-5-6-7-9-10	11.5	51	147	1.6/11.2/46.0	12.5/49.0/108

Notes:

- 1. The symbol designates third party approved with correct entity parameters meeting the relations shown in Table 1, or simple apparatus.
- 2. Multiple circuits extending from the same piece of Associated Apparatus equipment must be installed in separate cables or in one cable having suitable insulation. Refer to Instrument Society of America Recommended Practice ISA RP12.6 for installing intrinsically safe equipment.
- 3. A simple apparatus is defined as an electrical component or combination of components of simple construction with well—defined electrical parameters that does not generate more than 1.5V, 100mA, and 25mW, or a passive component that does not dissipate more than 1.3W and is compatable with the intrinsic safety of the circuit in which it is used.
- 4. Capacitance and inductance of the field wiring from the intrinsically safe equipment to the barrier should be calculated and should be included in the system calculations as shown in Table 1. Cable capacitance (Cc) plus intrinsically safe equipment capacitance (Ci) must be less than the marked capacitance (Ca) shown on any barrier used. The same applies for inductance (Lc, Li and La, respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used: Cc = 60 pF/ft, Lc = 0.2 uH/ft.

LS	Equipment	Table 1	Barr	ier
		•		
	Vmax	≥	Voc	(or V _t) (or I _t)
	Imax	≥	Isc	(or It)
	Ci+ Cc Li+ Lc	≤	Ca	
	Li+ Lc	≤	La	
	Ui	≥	Uo	
	li i	≥	١٥	
C:	+ C _{cable} + L _{cable}	<	c,	
- 7 '	Cubie	7	10	
۱		2	-0	
	P:	>	Po	
	* 1	_	. 0	

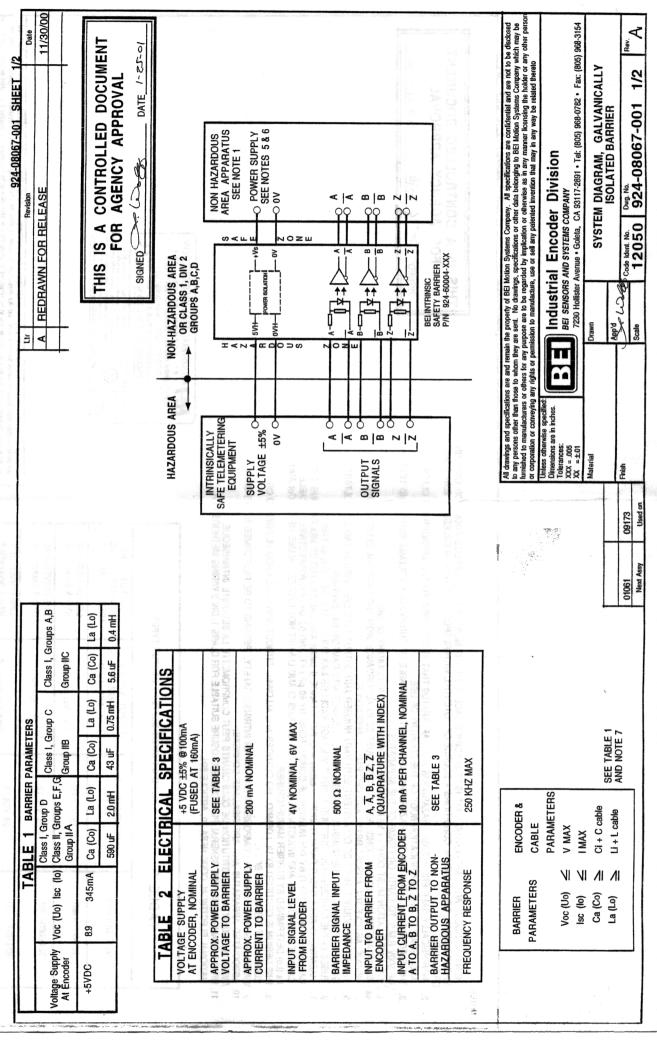
If Po of the barrier is not known, it may be calculated using the formula Po = (Voc *Isc)/4

- 5. Barriers must be installed in accordance with barrier manufacturer's control drawing and Article 504 of the National Electrical Code, ANSI/NFPA 70, for installation in the United States.
- 6. Control equipment must not use or generate more than 250V rms or dc with respect to earth.
- 7. WARNING: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

IS-1.301 Plymouth, MN 55441 Phone: (763) 553-7300	Drawing No.: IS-1.301	3000 Campus Drive Plymouth, MN 55441 Phone: (763) 553-7300
---	-----------------------	--

Title: Control Drawing for UL Listed
IM1-...Ex-. and IM12-..Ex-. Isolator Barriers
with I/S (Entity) Field Circuits

Α	Release	B∨L	6/6/07		with I/S (Entity) Field Cincuits
Rev	Description	Drft	Date	Scale:	NONE	Sheet 1 of 1



CONTROLLED DOCUMENT

IS A

FOR AGENCY APPROVAL

DATE 01-02-0(

1 ESB

SIGNED

NOTES:

- NON-HAZARDOUS AREA APPARATUS THAT IS UNSPECIFIED EXCEPT THAT IT MUST NOT BE SUPPLIED FROM NOR CONTAIN UNDER NORMAL OR ABNORMAL CONDITIONS A SOURCE OF POTENTIAL WITH RESPECT TO EARTH IN EXCESS OF 250V R.M.S.
- Intrinsically safe encoders: Hazardous area apparatus that is certified to the appropriate class
- THE ELECTRICAL CIRCUITS IN THE HAZARDOUS AREA MUST BE CAPABLE OF SURVIVING A VOLTAGE WITHSTAND TEST AND GROUP BY THE CERTIFICATION BODY OF THE COUNTRY OF USE
 - THE INSTALLATION MUST COMPLY WITH THE REGULATIONS OF THE COUNTRY OF USE. OF 500V R.M.S. TO EARTH OR FRAME OF THE APPARATUS.
- NORTH AMERICAN INSTALLATIONS: INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE NFPA70, ARTICLE 504, ANSI/ISA-RP12.6 AND CEC PART 1, APPENDIX F.
- THE POWER SOURCE MUST BE CONSISTENT WITH PART NUMBER AND OUTPUT TYPE SPECIFIED IN TABLE 3. VOLTAGES Greater Than 5% of the nominal barrier supply voltage may damage the barrier
 - CAPACITANCE (C cable) AND INDUCTANCE (I cable) VALUES PLUS CI AND LI MUST NOT EXCEED VALUES OF CA (Co) AND HAZARDOUS AREA CABLE CAPACITANCE (C cable) AND INDUCTANCE (I cable) ARE CALCULATED BY MULTIPLYING THE CABLE LENGTH (IN FEET) BY THE NUMBER OF CONDUCTORS BY 60 pF / FT. AND 0.2 uH / FT. RESPECTIVELY. CABLE FUSES IN THE BARRIERS MAY RUPTURE IF INPUT VOLTAGE EXCEEDS MAX SUPPLY VOLTAGE (Vs) IN TABLE 3.
 - THIS DESIGN IS CERTIFIED BY UL / DEMKO. NO CHANGES ARE ALLOWED WITHOUT APPROVAL FROM UL / DEMKO OR La (Lo) DETERMINED BY BARRIER MANUFACTURER.
- Warning: Substitution of Components may Impair Intrinsic Safety. Repairs to be Performed by Bei Only. 10. ASSOCIATED APPARATUS AND APPAREILLAGE CONNEXE; EQUIVALENT CERTIFYING BODY
- 11. DIV 2 INSTALLATIONS: USE GENERAL PURPOSE ENCLOSURE SUITABLE FOR CLASS 1, DIV 2 WIRING METHODS PER AVERTISSEMENT: LA SUBSTITUTION DE COMPONANTS PEUT COMPROMETTE LA SECURITE INTRINSEQUE.
 - NATIONAL ELECTRICAL CODE NFPA 70, ARTICLE 501

IABLE 3 POWER SUPPLY / OUTPUT TYPES

FABLE

Tel: (805) 968-0782 www.belied.com GALVANICALLY ISOLATED BARRIER C BEI TECHNOLOGIES INC 7230 Hollister Avenue • Goleta, CA 93117-2891 • PROCESS CONTROL EQUIPMENT BEI TECHNOLOGIES, Ex DENKO 006.0000 los de Class I,

OUTPUT TYPE NON-HAZARDOUS AREA APPARATUS

TO NON-HAZARDOUS AREA APPARATUS

BARRIER SUPPLY

+/- 5% ۸s

PART NUMBER

LINE DRIVER 4469

100mA Source/Sink

Vout=5V

2-24 VOLTS

924-60004-002

LINE DRIVER 4469 100mA Source/Sink

Vout=Vin (nominal)

2-15 VOLTS

924-60004-001

LINE DRIVER 7272 100mA Source/Sink

/out=Vin (nominal)

12-24 VOLTS

924-60004-003

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Industrial Encoder Division Dimensions are in inches. folerances: 7230 Hollister Avenue • Goleta, CA 93117-2891 • Tel: (805) 968-0782 • Fax: (805) 968-3154 SYSTEM DIAGRAM, GALVANICALLY

BEI SENSORS AND SYSTEMS COMPANY

XXX = .005 XX = ±.01

OPEN COLLECTOR

OPEN COLLECTOR

12-24 VOLTS

924-60004-004

40mA Source/Sink

ISOLATED BARRIER 12050 Code Ident. No. April Com Scale inish Used on Next Assy

924-08067-001 2/2

V MAX MAX CASS Cas		TAE	TABLE 1					924-08062-001 SHEET 1/2 Revision	Chate
V Max 1 Max Class		Group	Group (No.	America)			100	NO DIVISION	12/12/96
2.A A,B C,D E,F,G .75 μF 0 mH ELECTRICAL SPECIFICATIONS 4.5 VDC ±5% 11 VDC 4.5 VDC ±5% 14 V	V Max I MAX	(Europe)	Class I	Class 11	Encoder Ci	Encoder Li	711		1/15/98
11 VDC 11 VDC 12 VOC = 15 VDC MAX 13 VOC = 15 VDC MAX 14 VOC = 15 VDC MAX 15 C = 150 MA 140 MA 150 MA 160 MA 160 MA 170 MA	+5VDC 1.2 A	A,B	C'D	E,F,G	75 µ.	0 mH	And part of the control of the contr	IS A	T
11 VDC ±5% 11 VDC ±15W 12 VDC ±5% 14 VDC ±15W 15 = 300 mA MAX 150 mA 140 mA 150 mA = 30 mA TYPICAL 16 mA 170 mA 180 mA = 30 mA TYPICAL 190 mA 190	2	TRICAL	- 1	IFICATIO	SNC			FOR AGENCY APP	45
11 VDC Noc = 15VDC MAX SAF SAF SAF SAF SAF SAF SAF S	UPPLY R	+5 VI	10				HAZARDOUS AREA		1
Voc = 15VDC MAX Isc = 300 mA MAX Voc = 15VDC MAX. Isc = 150mA MAX. FER BARRIER CHANNEL 140 mA 10 mA 110 mA 110 mA 120 mA - 30 mA = 110mA MAX 120 mA - 30 mA = 90 mA TYPICAL	APPROX. POWER SUPPLY VOLTAGE TO BARRIER	N.H.	DC				PAT CHARGES AND THE STATE OF TH	ACC & BRAT OF BRANC LA LIBERT TO BE	
Voc = 150DC MAX. Isc = 150mA MAX. PER BARRIER CHANNEL 140 mA 150 mA 10 mA 140 mA 150 mA 160 mA = 30 mA TYPICAL	Input Barrier	Voc =	= 15VDC MA = 300 mA M/	ΑX			SAFE ENCODER EEX IS IIB T4	AREA APPARATUS SEE NOTE 1	
140 mA (500 Ω) (500 Ω) (500 Ω) (500 Ω) (120 mA (10 mA (10 mA (120 mA = 30 mA TYPICAL	OUTPUT BARRIER	Voc : Isc = PER	= 15VDC MA 150mA MA BARRIER C	X. X. HANNEL				<u> </u> -	
10 mA 10 mA 10 mA 10 mA 10 mA 120 mA - 30 mA = 110mA MAX 120 mA - 30 mA = 90 mA TYPICAL	MAXIMUM CURRENT REQ'D BY ENCODER (OUTPUT IMPEDANCE)	140 г	ξα					NO C CONTRACT SAMES ENAMED TO A CONTRACT OF THE CONTRACT OF TH	Appropriate and the
10 mA 10 mA 10 mA 10 mA 120 mA - 30 mA = 110mA MAX 120 mA - 30 mA TYPICAL	TYPICAL CURRENT REQ'D BY ENCODER	120 m	nA.				ल ू च	2 A CLYSE MALHE MALE	
10 mA 10 mA = 10 mA TYPICAL	OUTPUT CURRENT FROM A OR A	10 m	A) () () () () () () () () () (2 P	
10 mA - 30 mA = 110mA MAX 120 mA - 30 mA = 90 mA TYPICAL	OUTPUT CURRENT FROM B OR B	10 m	V				15 T		
140 mA - 30 mA = 110mA MAX 120 mA - 30 mA = 90 mA TYPICAL	OUTPUT CURRENT FROM Z OR \overline{Z}	10 m	A				CASE GROUND		District.
	CURRENT TAKEN BY NON! DRIVE CIRCUIT	140 m	nA - 30 mA : nA - 30 mA	=110mA MAX = 90 mA TYF	ical		Ш	SEE NOTE 5	
	OF ENCODER						All drawings and specifications are and remain the property of any persons other ham hose to whom they are sent. No districtly of the parts and the parts an	El Molion Systems Company. All specifications are confidential and are not to be ings, specifications of other data belonging to BEI Molion Systems Company whereas pecifications or other data belonging to BEI Molion Systems Company with a contraction of the contractions of the contractions of the contraction of the	oe disclosed nich may be

7230 Hollister Avenue • Goleta, CA 93117-2891 • Tel: (805) 968-0782 • Fax: (805) 968-3154

Industrial Encoder Division BEI SENSORS AND SYSTEMS COMPANY

••

Dimensions are in inches.
Tolerances:
XXX = .005
XX = ±.01 Unless otherwise specified

Material

Finish

Used on 09173

Next Assy 01061

SEE TABLE 1 AND NOTES 8 AND 9

Ci + C cable Li + L cable

N N N

1

BARRIER PARAMETERS

V MAX MAX

VI

SYSTEM DIAGRAM, INTRINSICALLY SAFE ENCODER TYPE 4469

1/2

924-08062-001

Code Ident. No. 12050

App'd Co.

JAQuero Contraction

CONTROLLED DOCUMENT

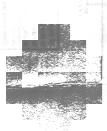
SA

FOR AGENCY APPROVAL

DATE: 4-28-88

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SIGNED



 NON-HAZARDOUS AREA APPARATUS THAT IS UNSPECIFIED EXCEPT THAT IT MUST NOT BE SUPPLIED FROM NOR CONTAIN Input and output barriers: Safety barriers that are certified to the appropriate class and group by UNDER NORMAL OR ABNORMAL CONDITIONS A SOURCE OF POTENTIAL WITH RESPECT TO EARTH IN EXCESS OF 250V A.M.S. all safety barriers are to be of the same polarity and incorporate a fuse THE CERTIFICATION BODY OF THE COUNTRY OF USE.

ALL INTRINSICALLY SAFE WIRING SHALL BE KEPT SEPARATE FROM NON-INTRINSICALLY SAFE WIRING. REFER TO ARTICLE THE ELECTRICAL CIRCUITS IN THE HAZARDOUS AREA MUST BE CAPABLE OF SURVIVING A VOLTAGE WITHSTAND TEST THE INSTALLATION MUST COMPLY WITH THE REGULATIONS OF THE COUNTRY OF USE. OF 500V R.M.S. TO EARTH OR FRAME OF THE APPARATUS.
5. THE INSTALLATION MUST COMPLY WITH THE REGULAT
5a. NORTH AMERICAN INSTALLATIONS: CLASS I, GROUP C.D. CLASS I, GROUP E.F.G CLASS I, ZONE 0, GROUP I I I B INTRINSICALLY SAFE WHEN INSTALLED PER DWG 924-08062-

TELEMETERING EQUIPME

EExia 11B T4

7. FUSES IN THE ZENER BARRIERS MAY RUPTURE IF INPUT VOLTAGE EXCEEDS MAX BARRIER VOLTAGE (Voc) IN TABLE 2. 8. HAZARDOUS AREA CABLE CAPACITANCE (C cable) AND INDUCTANCE (I cable) ARE CALCULATED BY MULTIPLYING THE CABLE LENGTH (IN FEET) BY THE NUMBER OF CONDUCTORS BY 60 pF / F1. AND 0.2 mH / F1. RESPECTIVELY. CABLE CAPACITANCE (C cable) AND INDUCTANCE (I cable) VALUES PLUS CI AND LI MUST NOT EXCEED VALUES OF CA AND LA

THE POWER SOURCE MUST BE ADJUSTED TO PROVIDE THE ENCODER VOLTAGE SPECIFIED IN TABLE 2. VOLTAGES

OF THE NATIONAL ELECTRICAL CODE.

504

GREATER THAN 10% OF THE NOMINAL ENCODER OPERATING VOLTAGE MAY DAMAGE THE ENCODER

BEI SENSORS AND SYSTEMS COMPANY 7220 Holister Avenue • Golela, CA 93117-2891 • Tet (805) 999-0782 • Industrial Encoder Division SER. NO CUST. NO. PART NO. MOD. NO.

DATE

TYPICAL MODEL NUMBER:

H25D-1024-ABZC-4469-SM18-EX-S

DENOTE STANDARD MECHANICAL VARIATONS. THE "-S" IS USED TO DENOTE NON-STANDARD VARIATIONS. SYMBOLS IN THESE AREAS MAY BE VARIED TO

11. WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY. REPAIRS TO BE PERFORMED BY BEI ONLY.

10. THIS DESIGN IS CERTIFIED BY UL / DEMKO. NO CHANGES ARE ALLOWED WITHOUT APPROVAL FROM UL / DEMKO OF PARAMETERS, WITH ALL INPUT AND OUTPUT BARRIER CHANNELS CONNECTED IN PARALLEL. REFER TO TABLE 2 FOR

INDIVIDUAL CHANNEL BARRIER SPECIFICATIONS.

EQUIVALENT CERTIFYING BODY.

DETERMINED BY BARRIER MANUFACTURER.

SYSTEM EVALUATED WITH ALL BARRIERS CONNECTED IN PARALLEL. VT AND IT ARE TOTAL SYSTEM BARRIER

tunished to manulacturers or others for any purpose are to be regarded by implication or otherwise as in any manner licensing the holder or any other perso or corporation or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be ruialed thereto to any persons other than those to whom they are sent. No drawings, specifications or other data belonging to BEI Motion Systems Company which may be All drawings and specifications are and remain the property of BEI Motion Systems Company. All specifications are confidential and are not to be disclosed Jnless otherwise specif

Industrial Encoder Division Dimensions are in inches.

7230 Hollister Avenue • Goleta, CA 93117-2891 • Tel: (805) 968-0782 • Fax: (805) 968-3154 SYSTEM DIAGRAM, INTRINSICALLY SAFE ENCODER TYPE 4469 BEI SENSORS AND SYSTEMS COMPANY April 6

Code Ident. No. Dwg. No. 12050 924-08062-001 XX = ±.01 **Material** Finish Used on 09173

> Next Assv 01061

Tolerances: XXX = .005

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Voltage Supply			Culput ballier					Encoder	Encoder		O	ECN 3227 REVERSED SYMBOLS ON BARRIER PARAMETERS	4/15/98
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VOLTAGE SUPPLY	UPPLY	Section Comments	+5 VDC ±5%	C ±5%	The second secon					N STOCK CHOCKER	CALL MA	BO CHOSE JU NOM CALL ATTACHMENT NOW	

924-08062-002 SHEET 1/2

oN) dn	up (No. America)	Ĺ		REVISED NAMEPLATE
ISS	Class 11	Ci	Encoder	D ECN 3227 REVENSED SYMBOLS ON BARRIER PARAMETERS 4/15/98
Q.	E,F,G	.75 µF	Hm 0	THIS IS A CONTROLLED DOCUMENT
				FOR AGENCY APPROVAL
S				SIGNED (C.) BATE 4.28-98
				HAZARDOUS AREA NON-HAZARDOUS AREA
	·	MED BA CO.	MED BY AND CONTRACT OF CONTRAC	BEI INTRINSICALLY SAFE ENCODER EEK IB 18 T4 SEE NOTE 1
		AND THE WAY	AND THE VI	1 INPUT 1 OF
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				A O S S S S S S S S S S S S S S S S S S
				SIGNALS B SIGNAL
				Z O S BARRIER Z S S S S S S S S S S S S S S S S S S
				CASE GROUND

Isc = 0 mA MAX. PER BARRIER CHANNEL

140 mA (500 Ω)

(OUTPUT IMPEDANCE)

MAXIMUM CURRENT

120 mA

REQ'D BY ENCODER TYPICAL CURRENT

OUTPUT CURRENT FROM A OR A

10 mA

10 mA

OUTPUT CURRENT FROM B OR B

Voc = 28VDC MAX

OUTPUT BARRIER

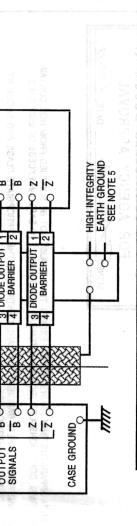
Voc = 22VDC MAX Isc = 450 mA MAX

APPROX. POWER SUPPLY

AT ENCODER

VOLTAGE TO BARRIER

INPUT BARRIER



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BEI SENSORS AND SYSTEMS COMPANY

7230 Hollister Avenue • Goleta, CA 93117-2891 • Tel: (805) 968-0782 • Fax: (805) 968-3154

SYSTEM DIAGRAM, DIODE OUTPUT BARRIERS, INTRINSICALLY SAFE ENCODEN TYPE 4469,

1/2

Code Ident. No. Dwg. No. 12050 924-08062-002

App'd Call

Scale

Drawn

Material

Finish

Used on 09173

Next Assy 01061

SEE TABLE 1 AND NOTES 8 AND 9

Ci + C cable

Li + L cable

ΛI ۲

140 mA - 30 mA =110mA MAX 120 mA - 30 mA = 90 mA TYPICAL

CURRENT TAKEN BY NON- DRIVE CIRCUIT OF ENCODER

10 mA

OUTPUT CURRENT FROM Z OR Z

BARRIER PARAMETERS

V MAX IT 🚄 IMAX CA |}

VI

924-08062-002

12050

Scale

Used on

Next Assy

PARALLELOGRAM

50-26-S SURFACE MOUNT INSTALLATION REQUIREMENT DRAWINGS



MOHAWK RESOURCES LTD.

65 VROOMAN AVE. AMSTERDAM, NY 12010 **TOLL FREE:** 1-800-833-2006

LOCAL: 1-518-842-1431 **FAX:** 1-518-842-1289

INTERNET: WWW.MOHAWKLIFTS.COM E-MAIL: SERVICE@MOHAWKLIFTS.COM

INSERT 50-26-S SURFACE INSTALLATION DRAWINGS HERE

PARALLELOGRAM

50-26-F FLUSH MOUNT INSTALLATION REQUIREMENT DRAWINGS



MOHAWK RESOURCES LTD.

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INTERNET: WWW.MOHAWKLIFTS.COM E-MAIL: SERVICE@MOHAWKLIFTS.COM

INSERT 50-26-F SURFACE INSTALLATION DRAWINGS HERE

PARALLELOGRAM

PARTS DRAWINGS

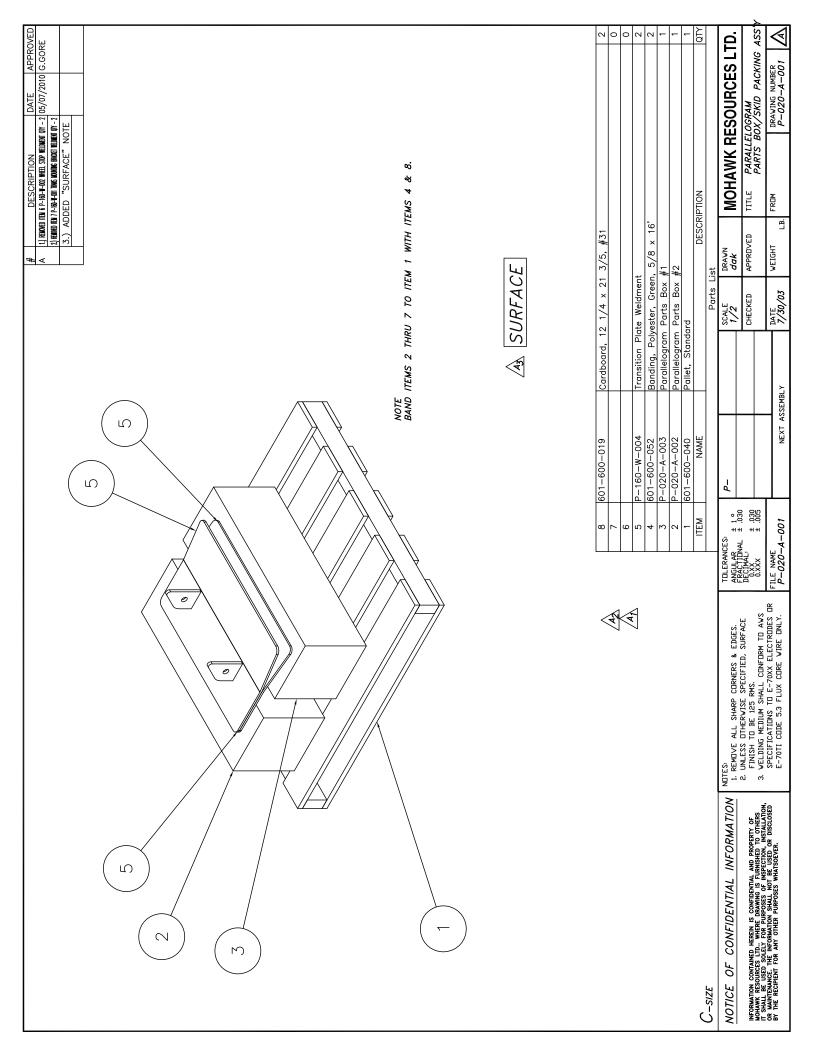


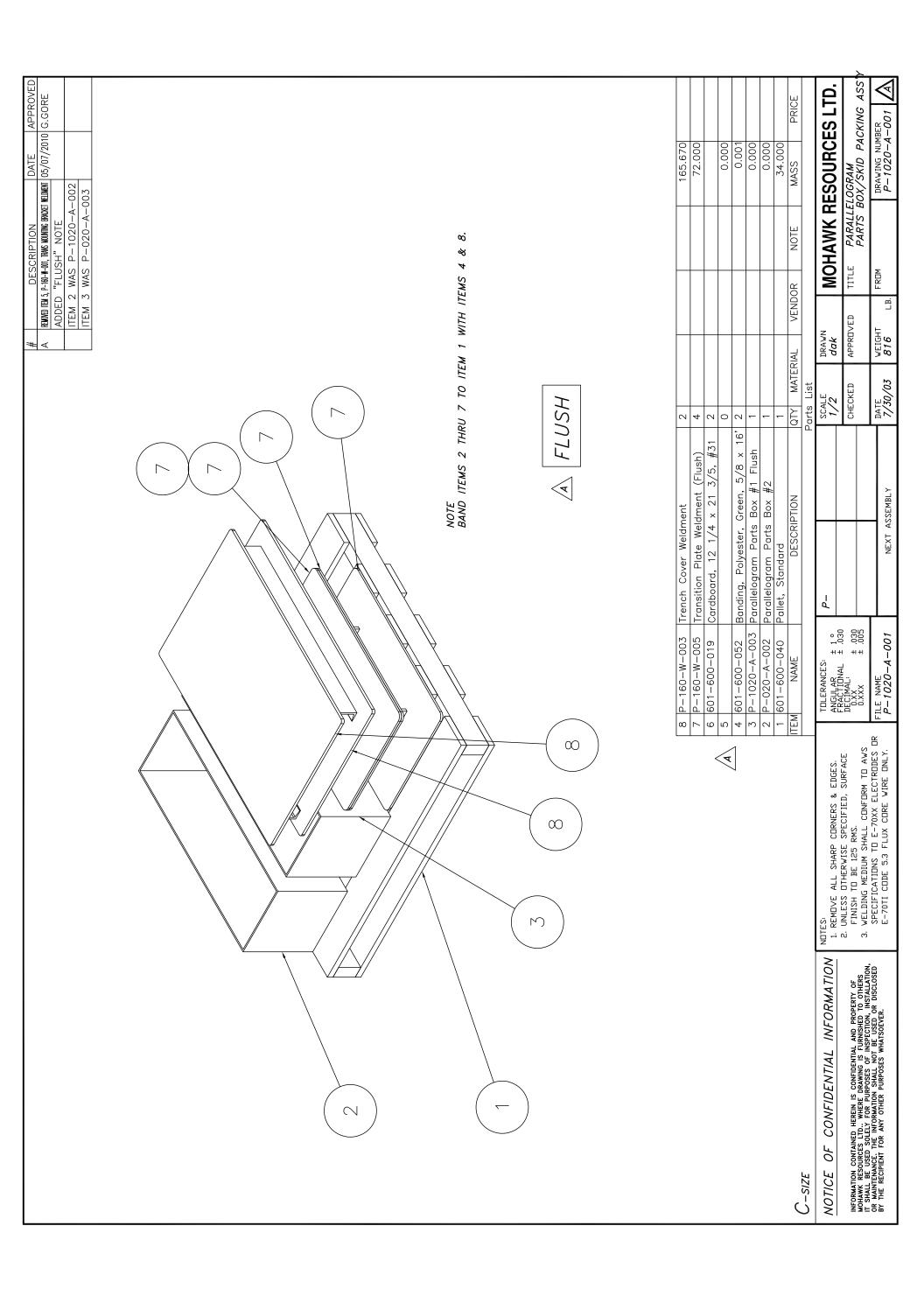
MOHAWK RESOURCES LTD.

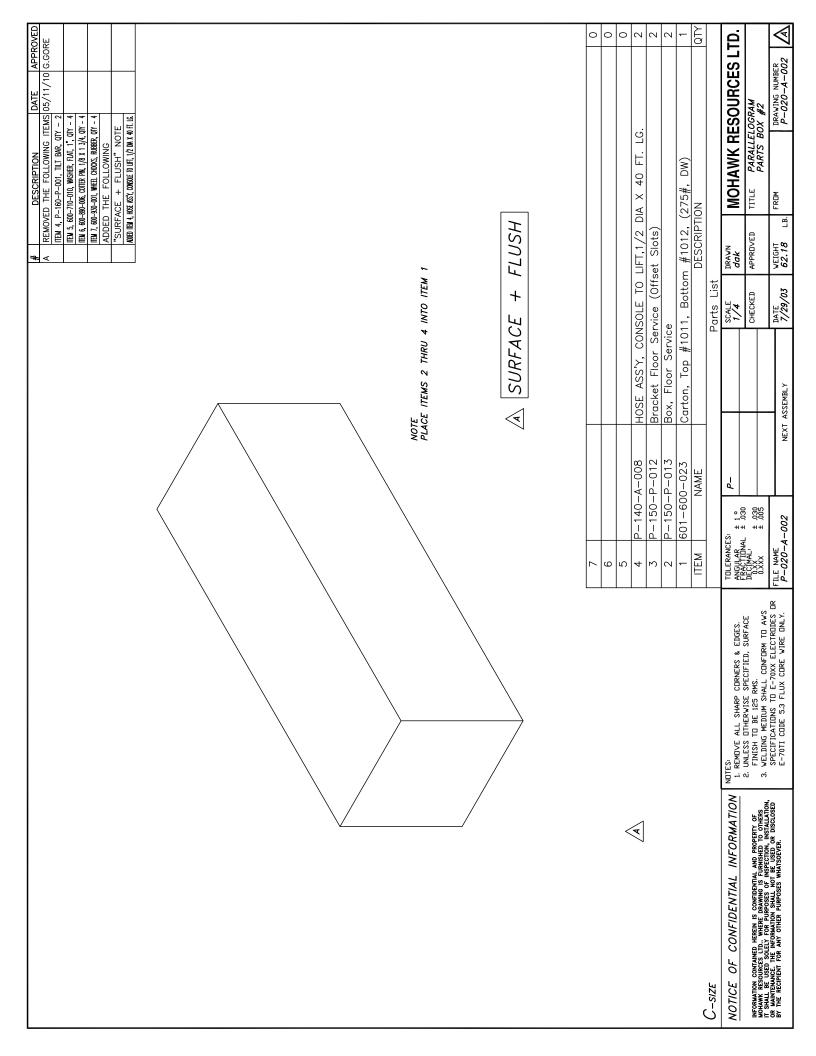
65 VROOMAN AVE. AMSTERDAM, NY 12010 TOLL FREE: 1-800-833-2006 LOCAL: 1-518-842-1431

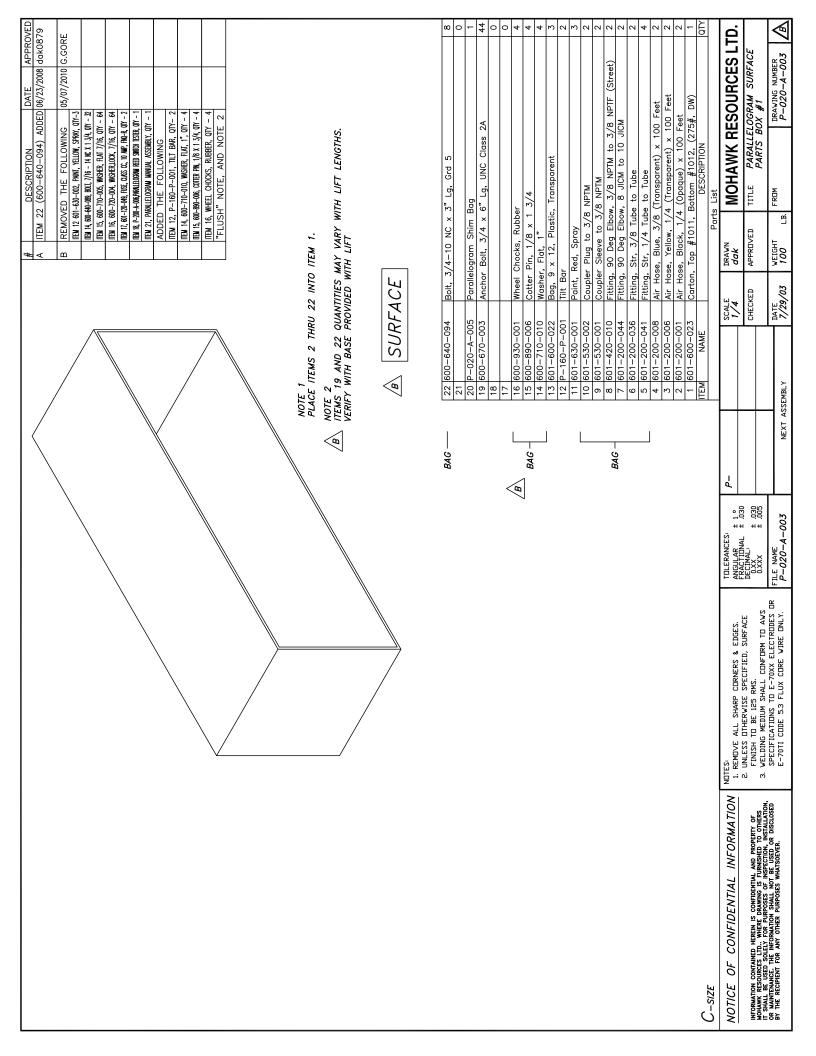
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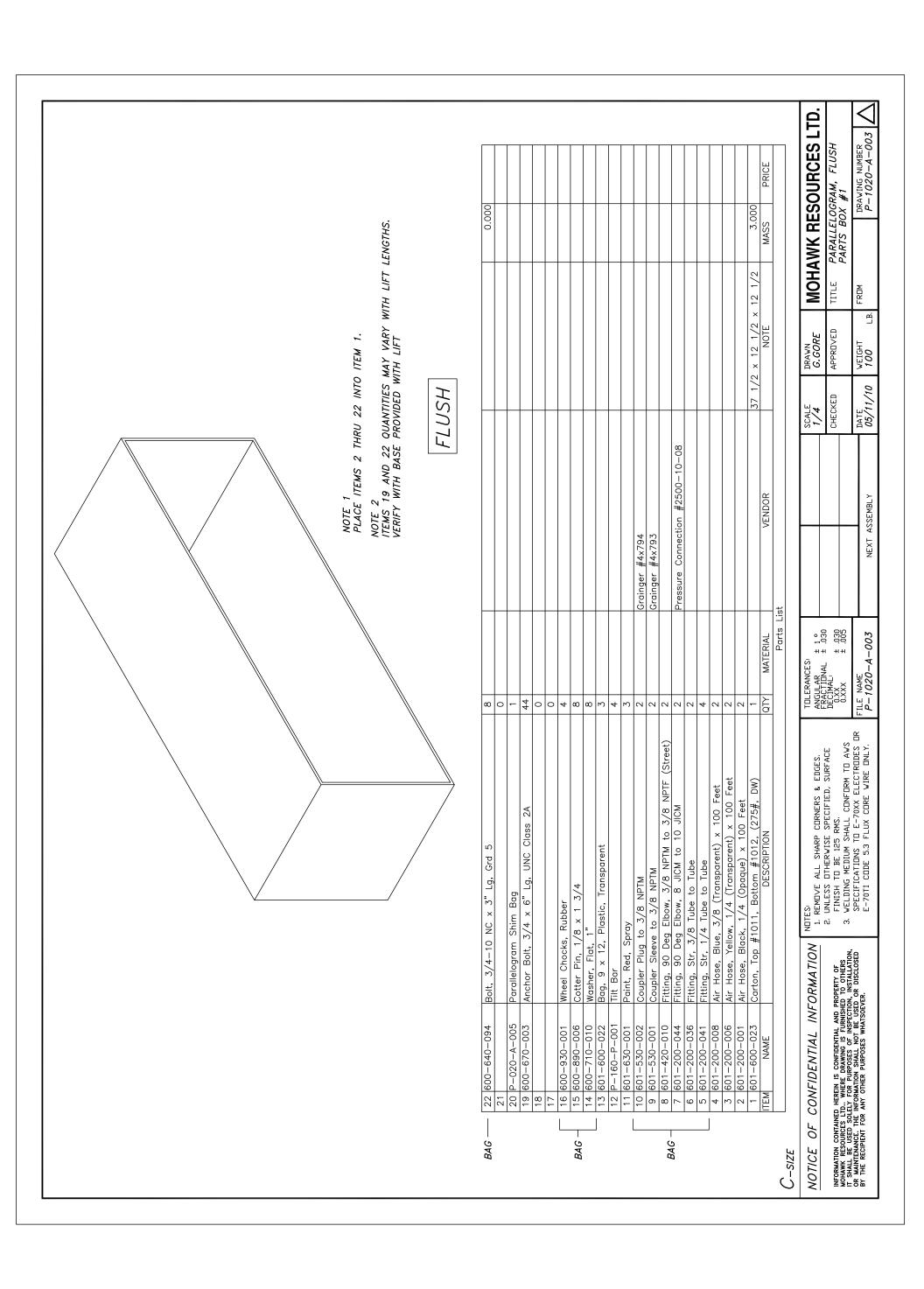
INTERNET: WWW.MOHAWKLIFTS.COM E-MAIL: SERVICE@MOHAWKLIFTS.COM

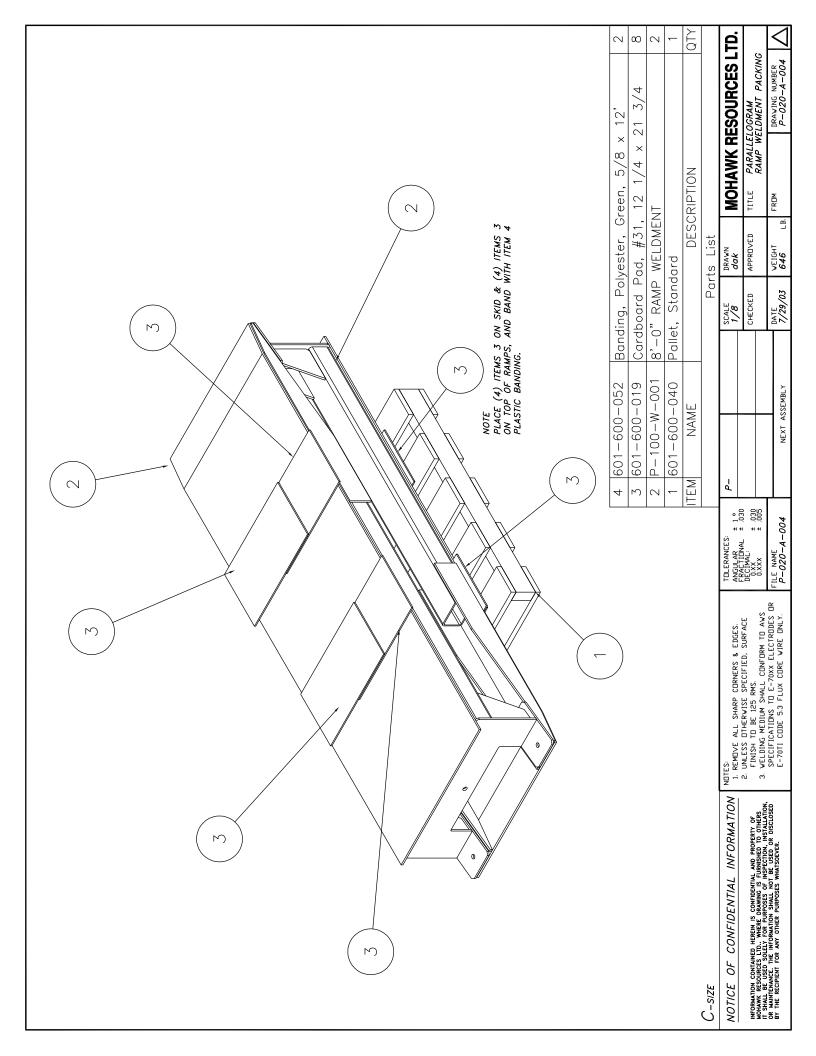


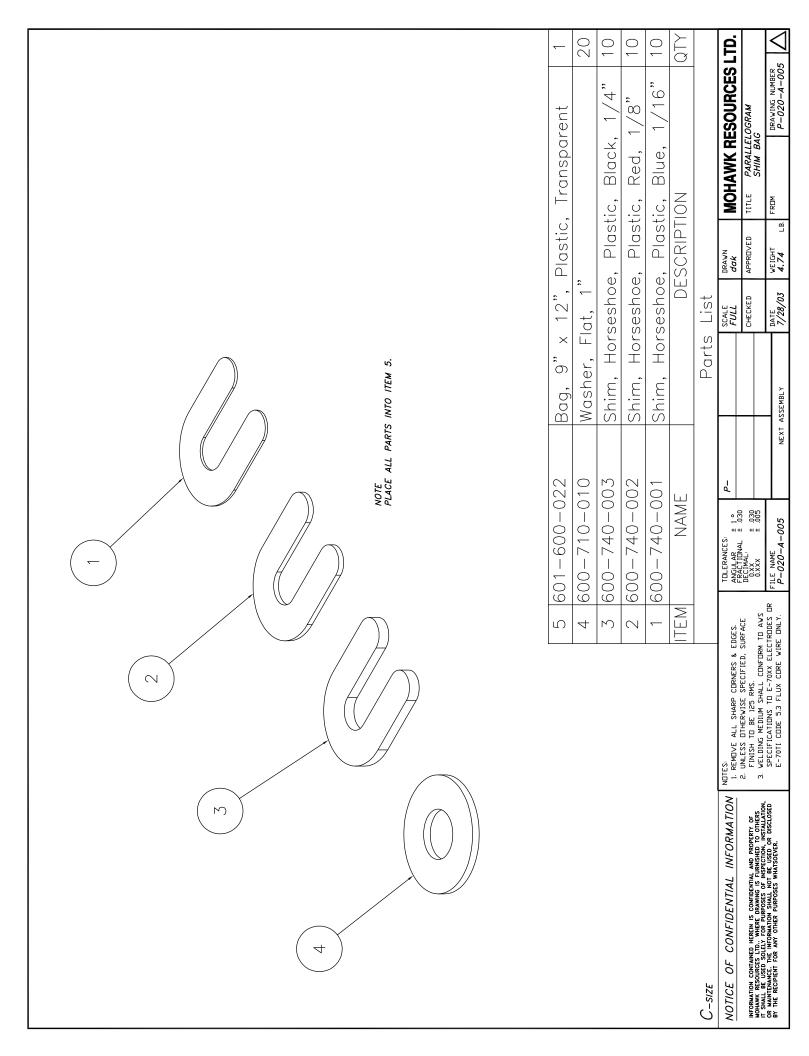


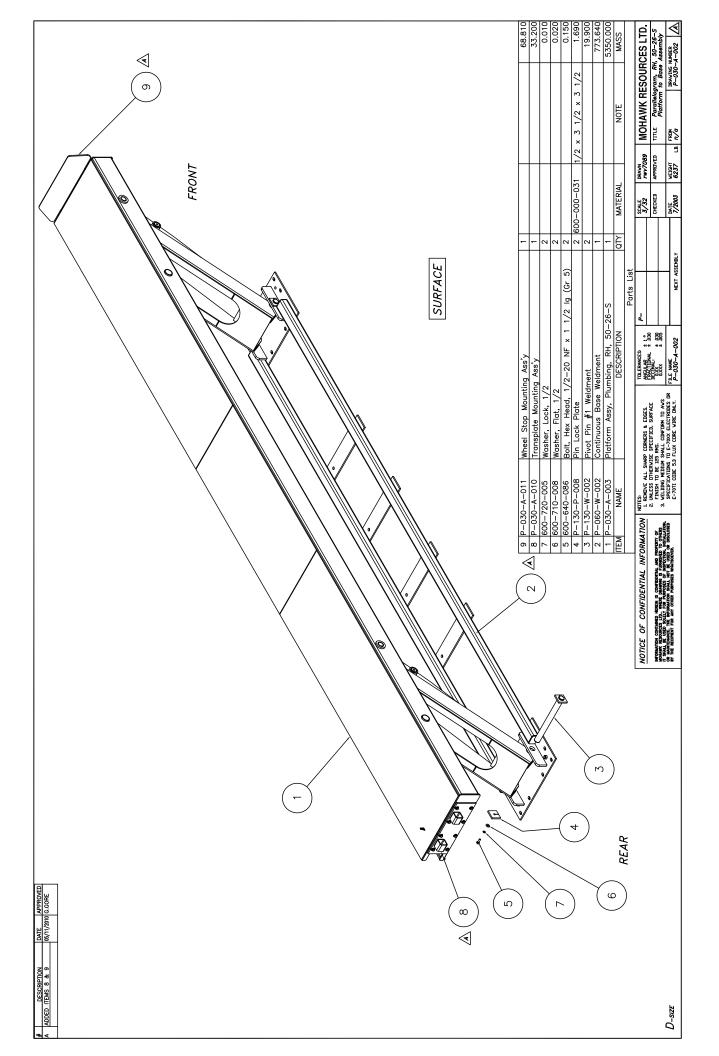


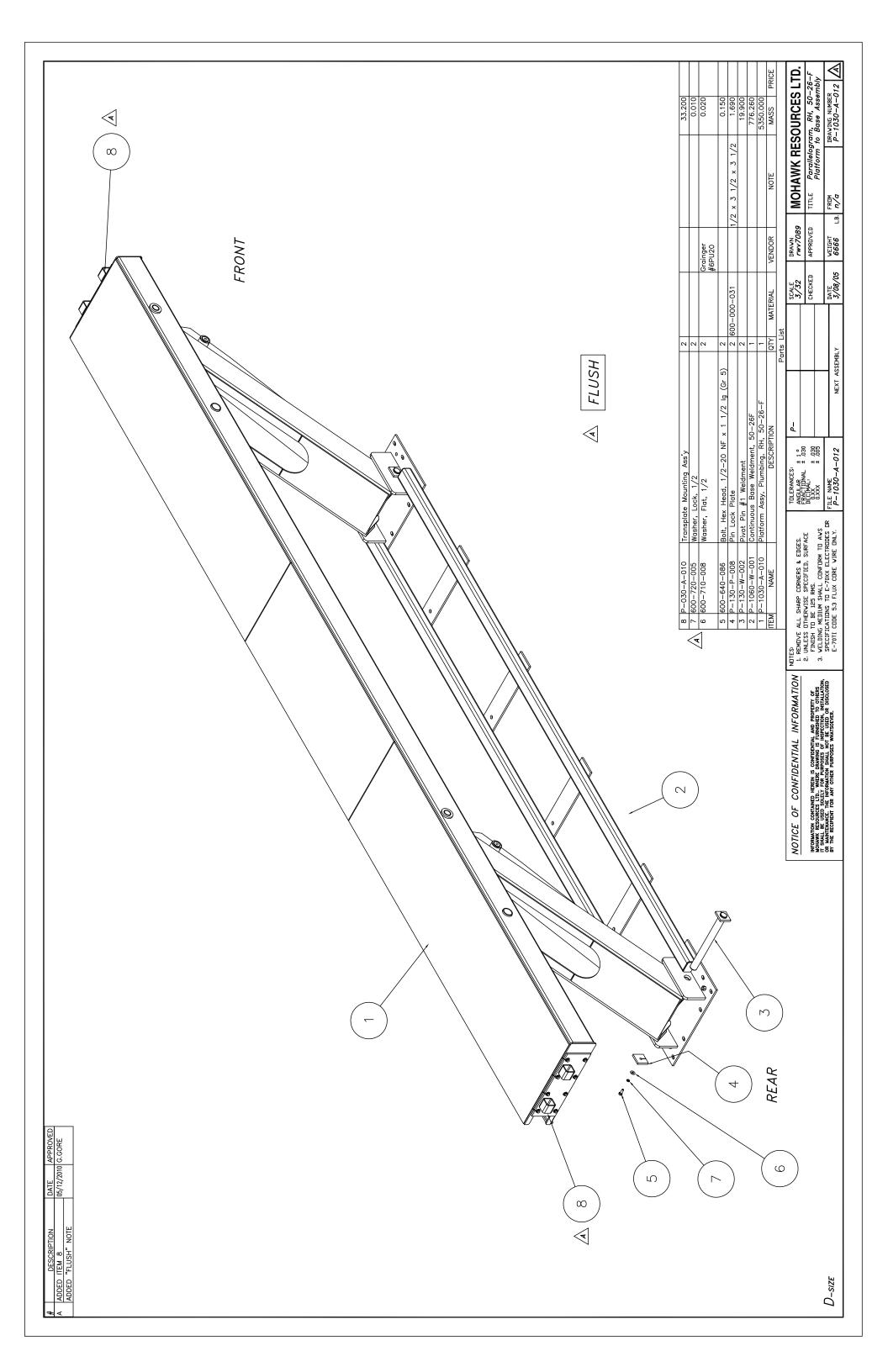


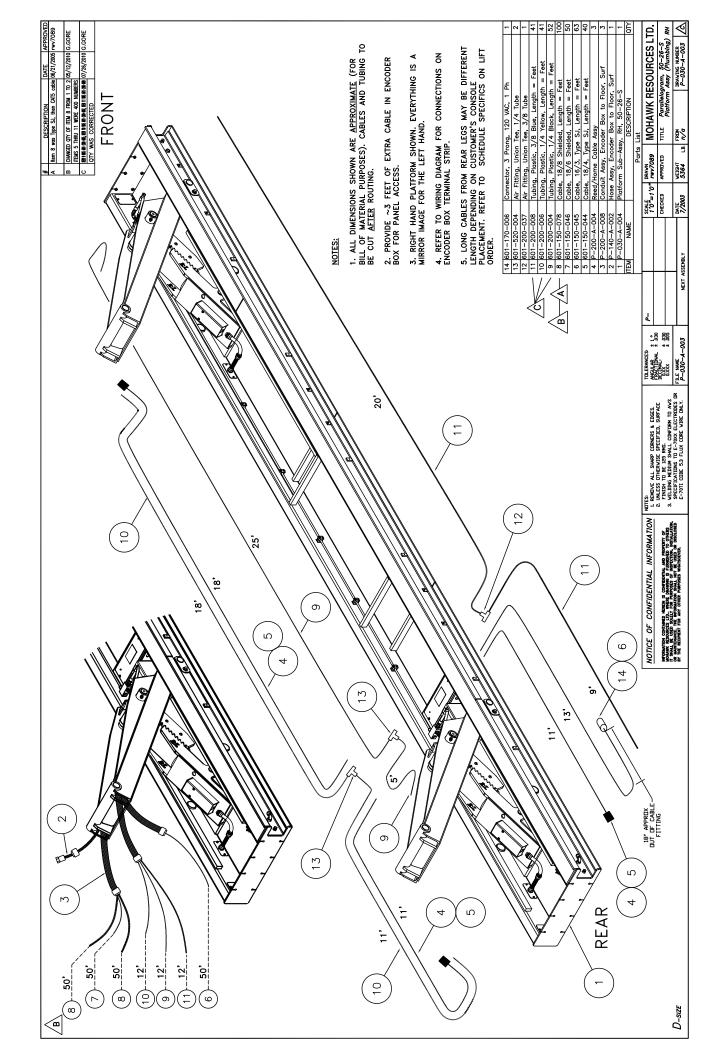


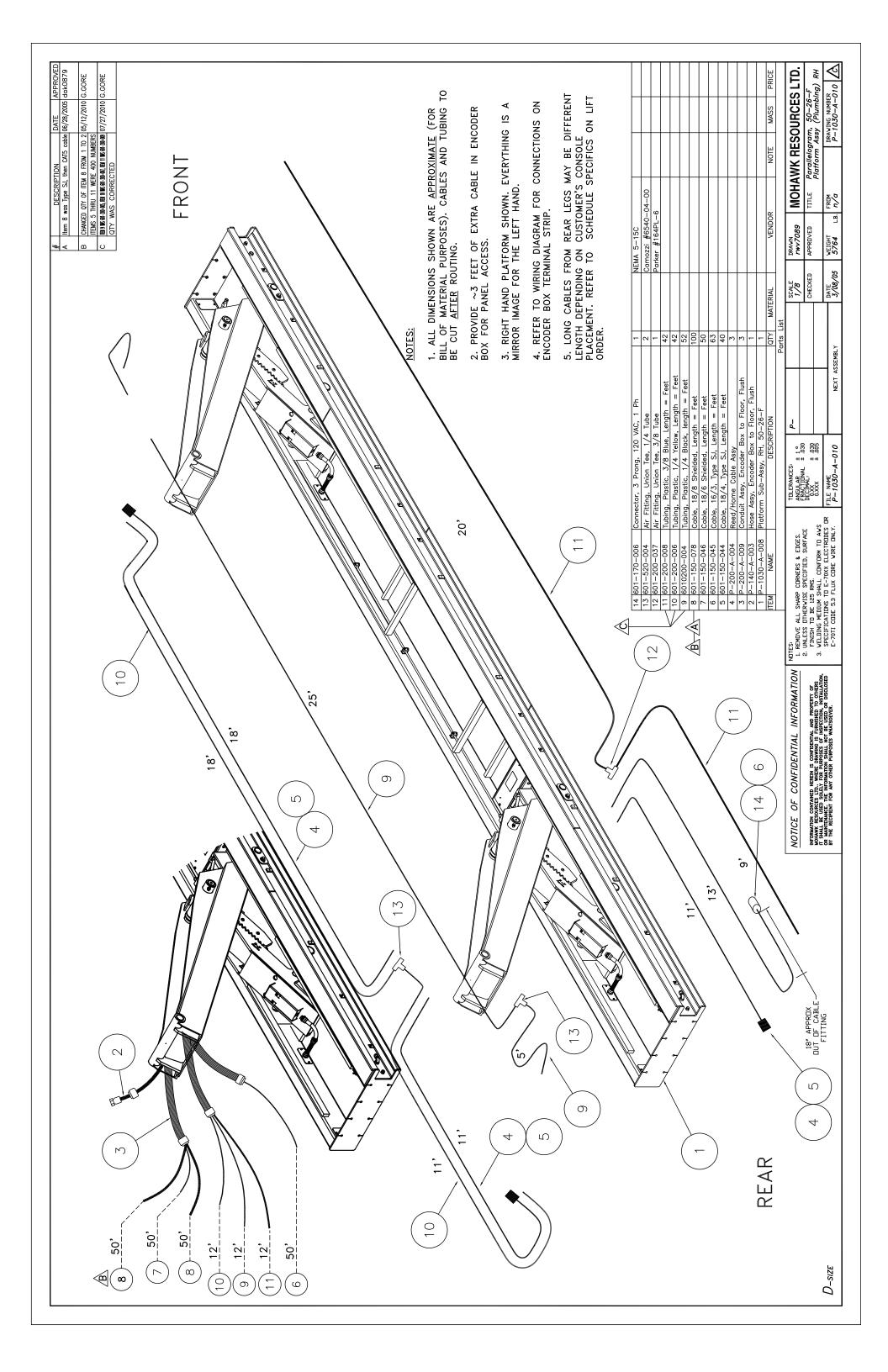


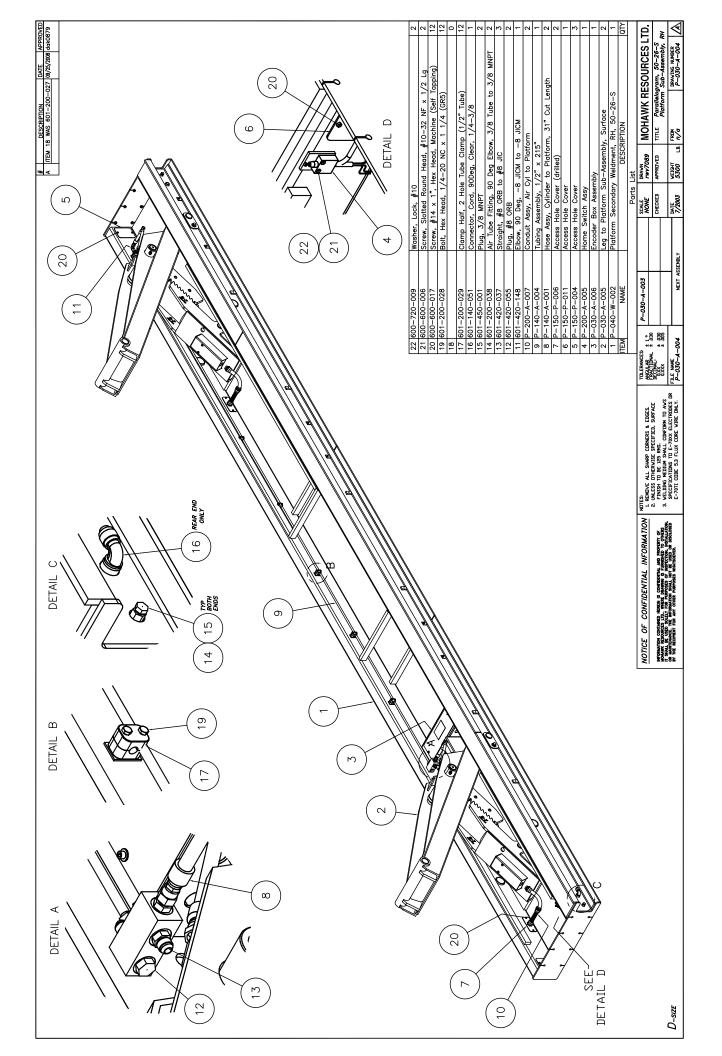


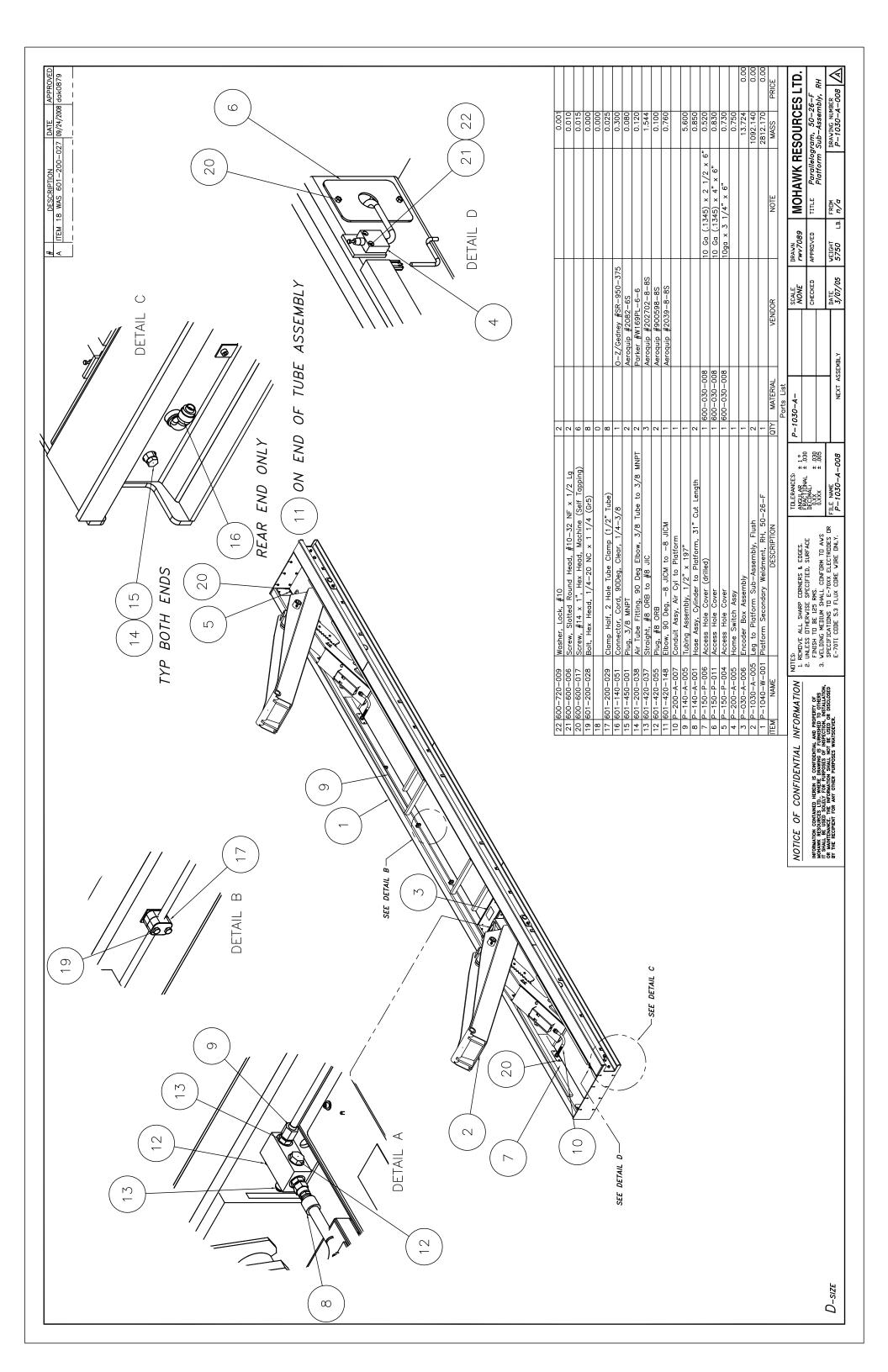


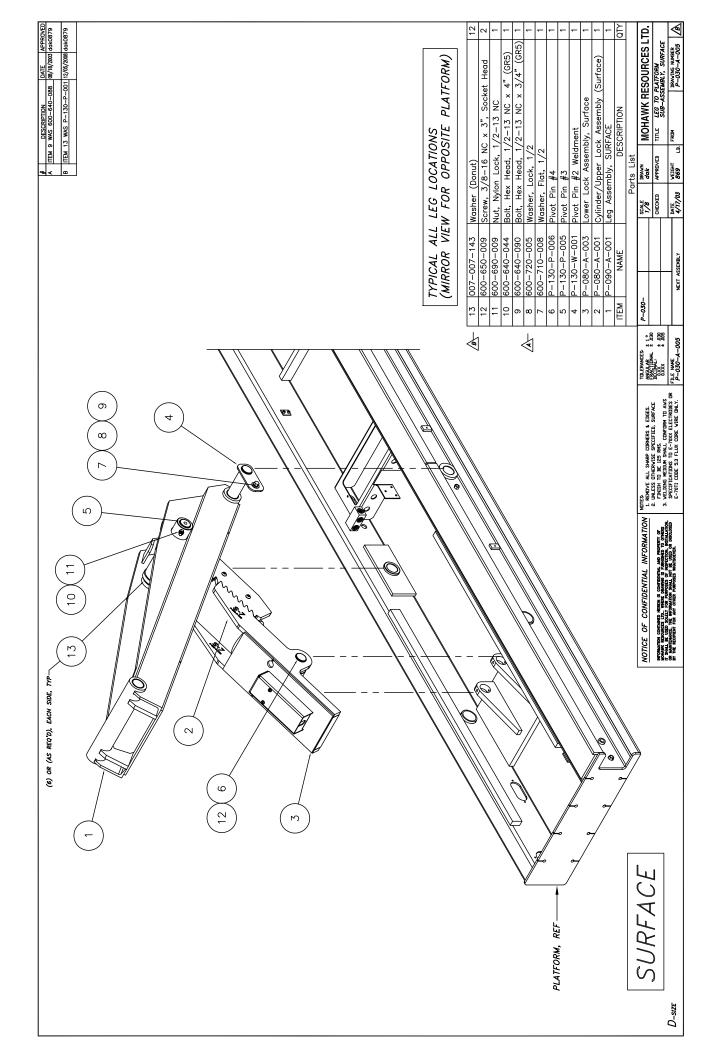


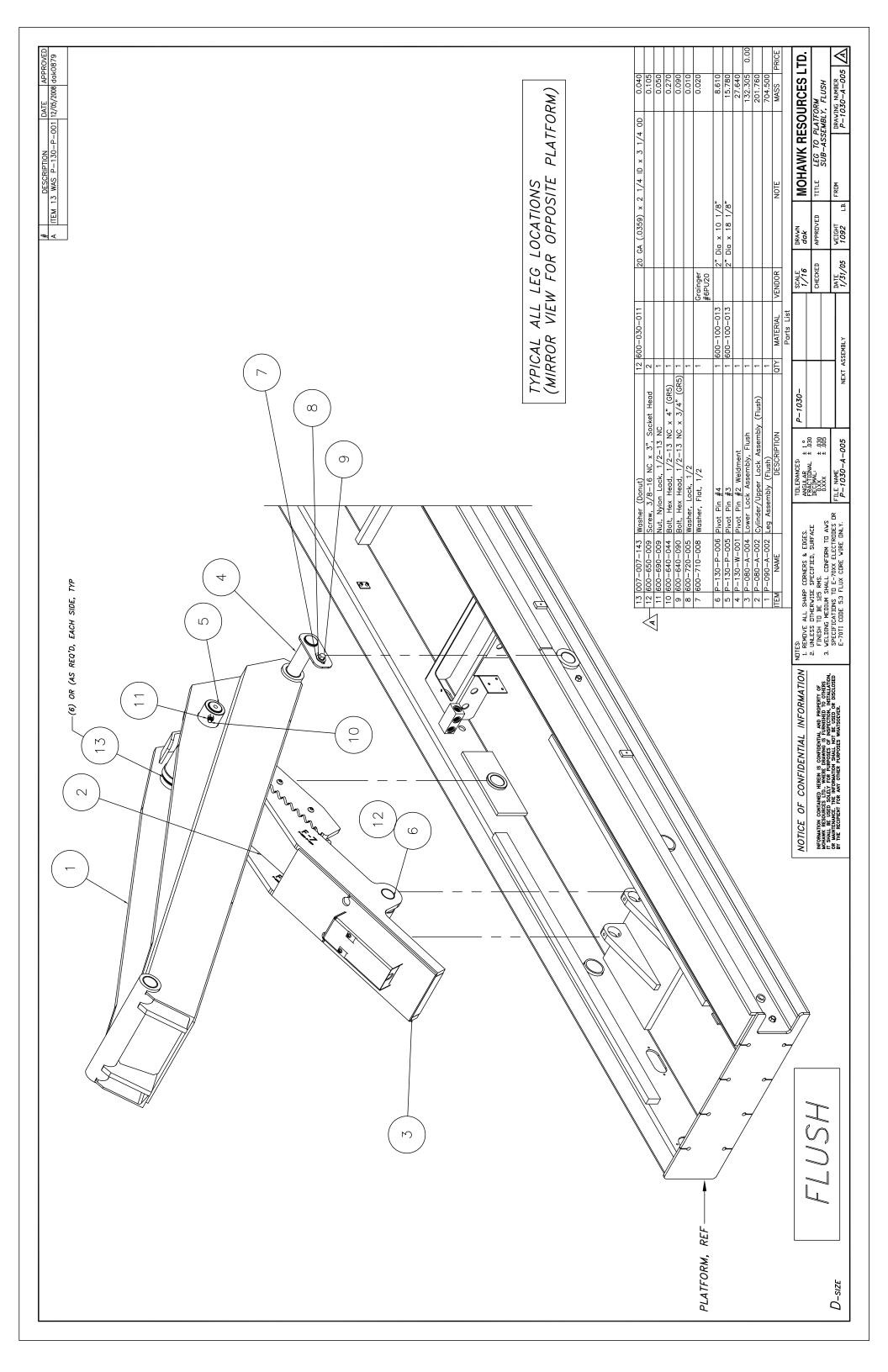


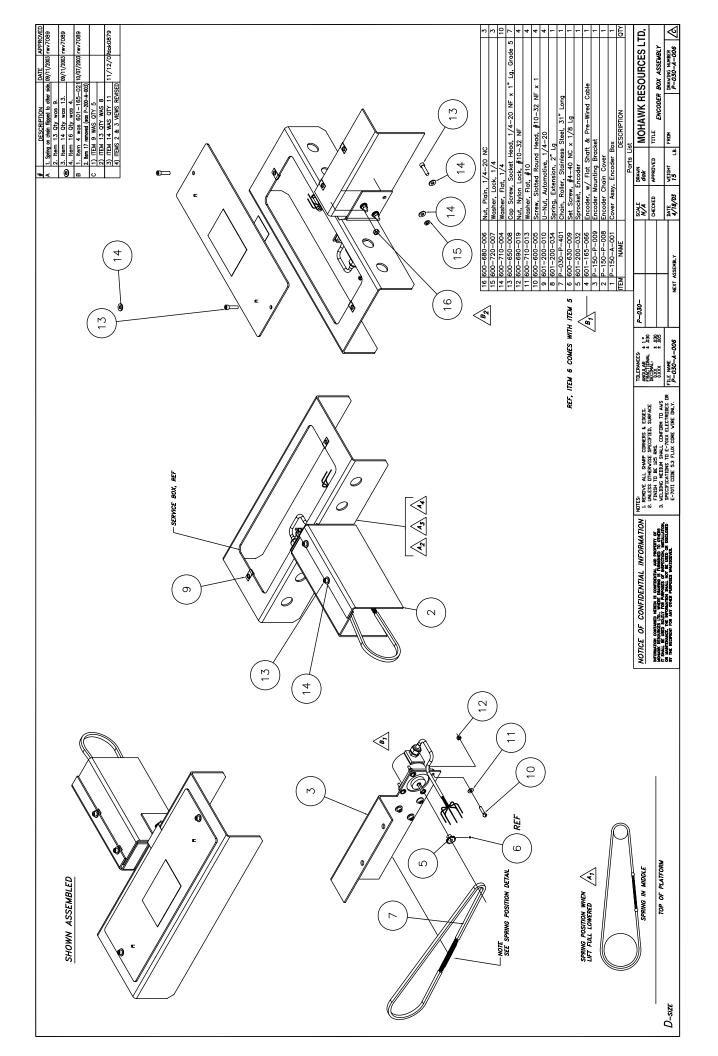


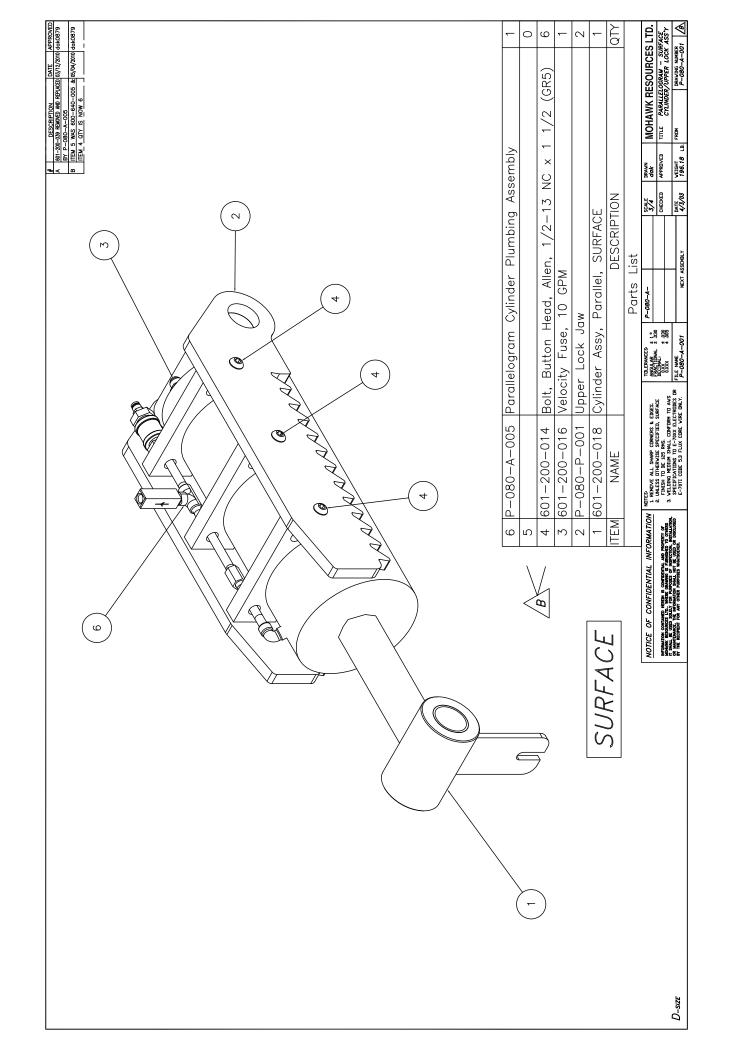


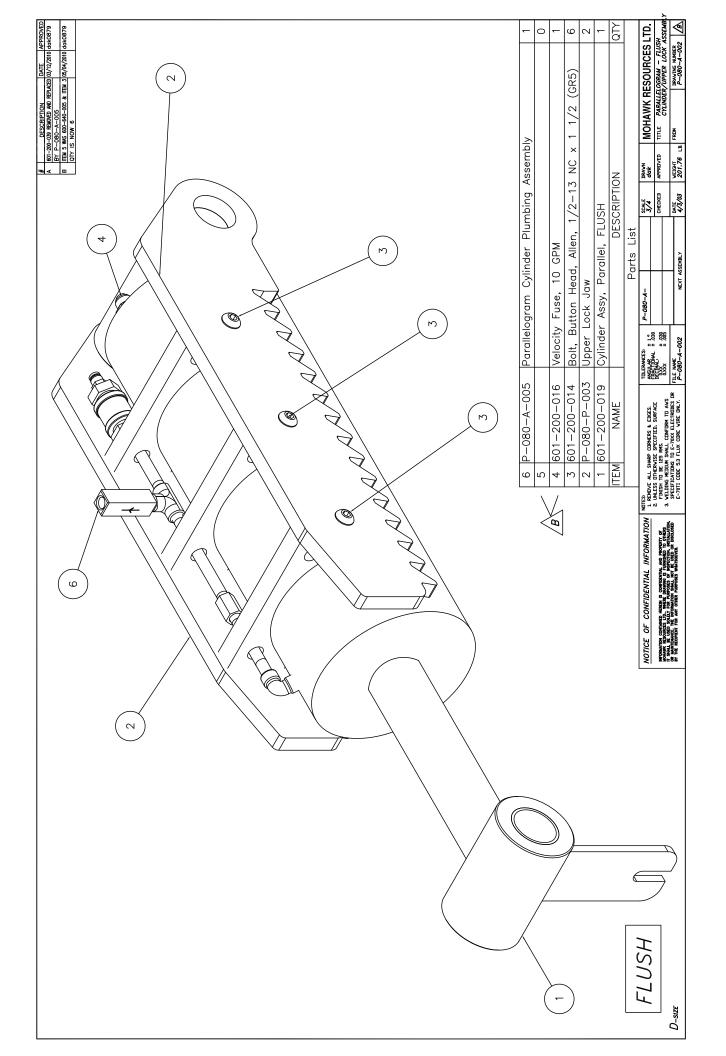


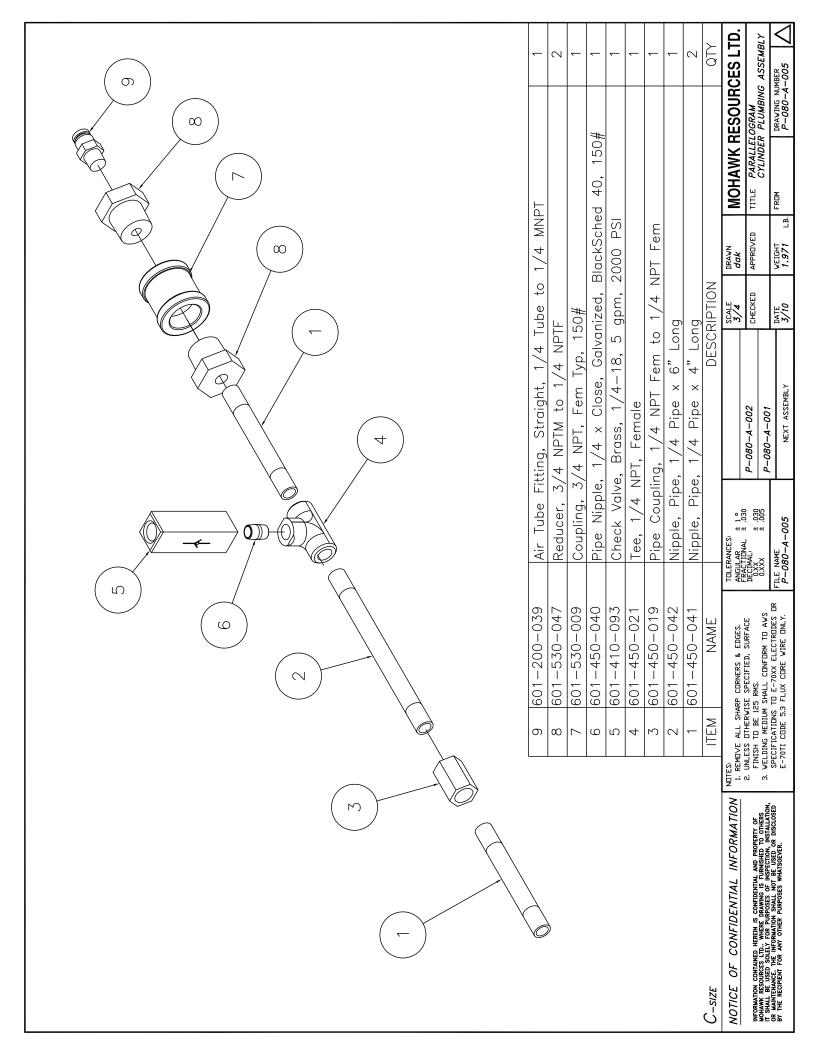


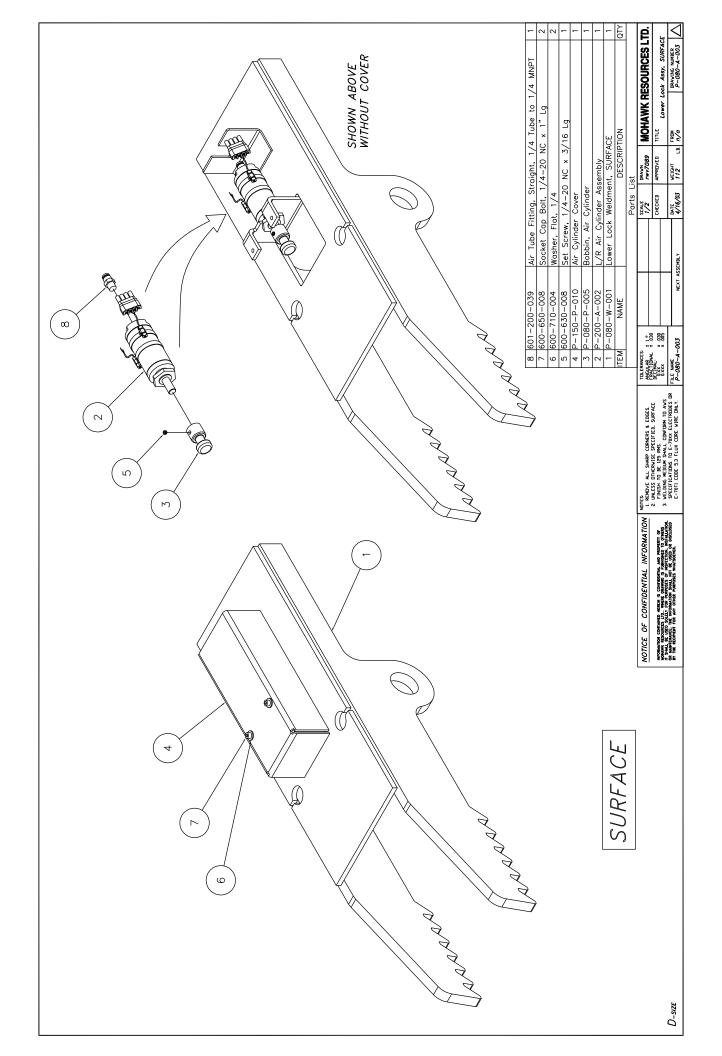


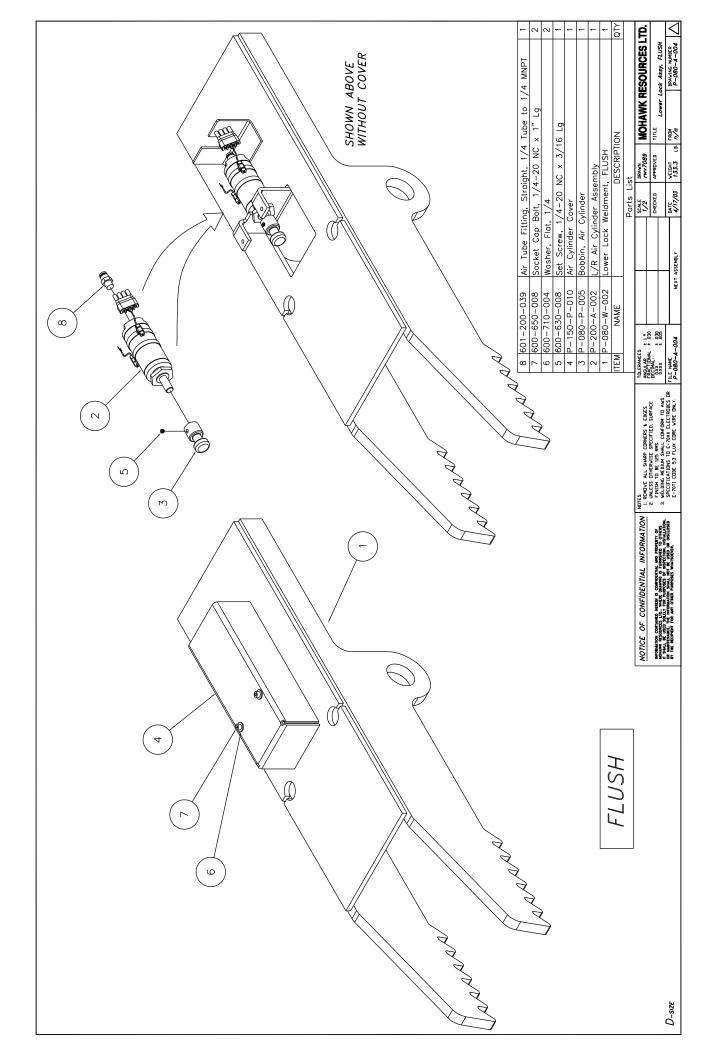


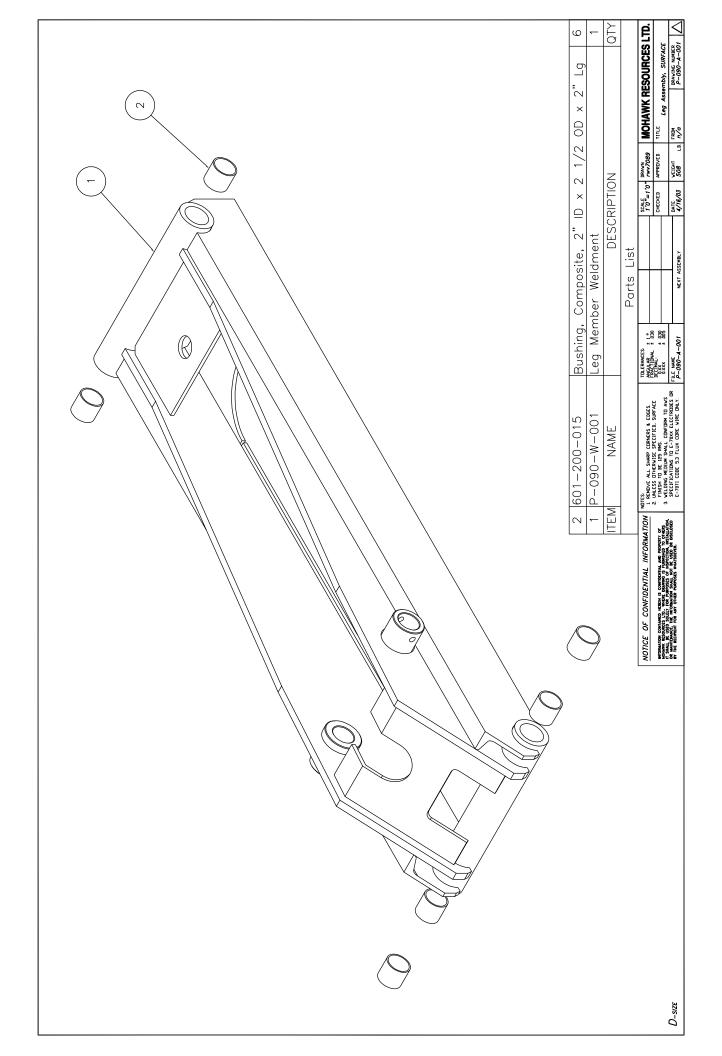


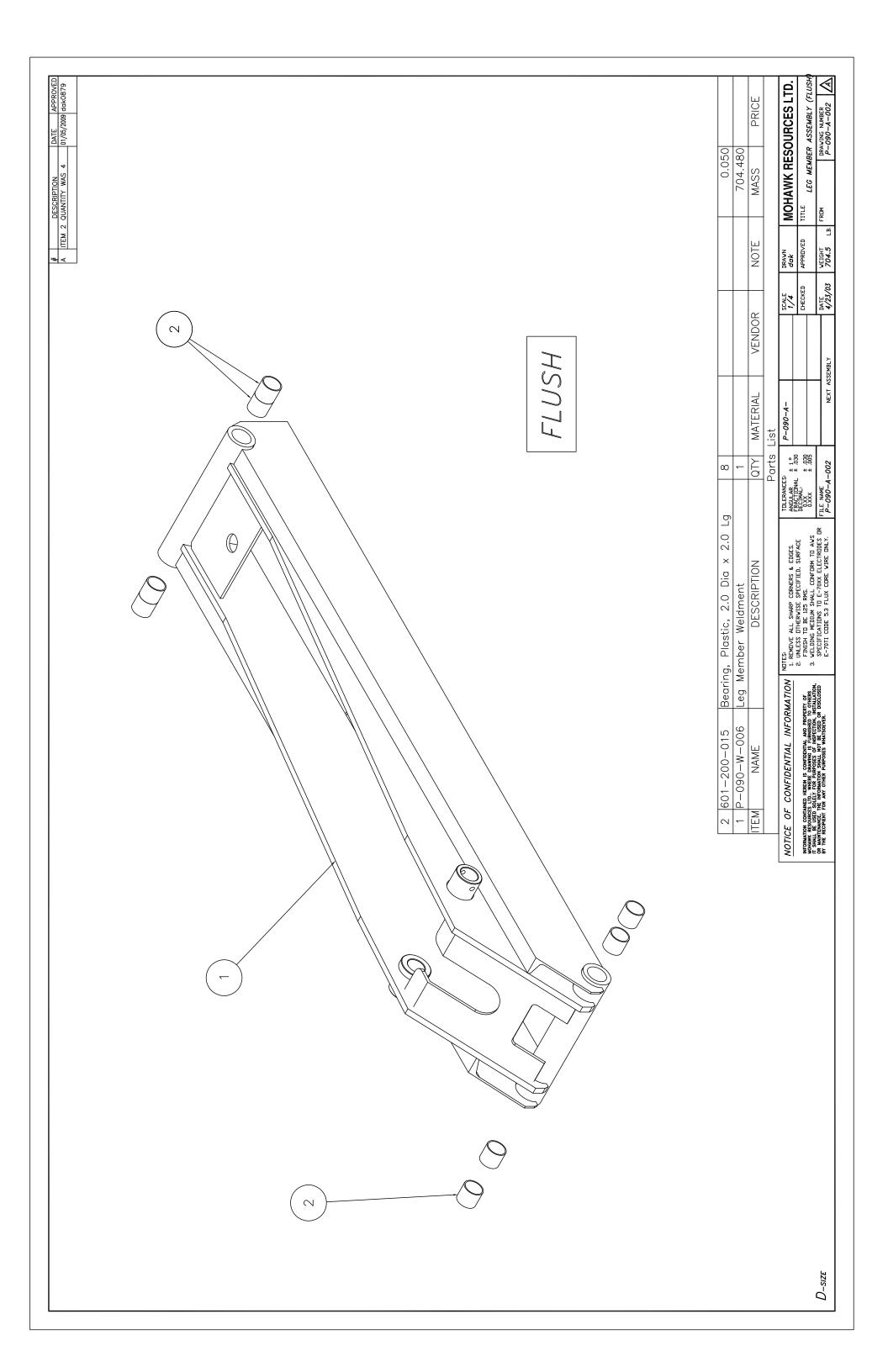


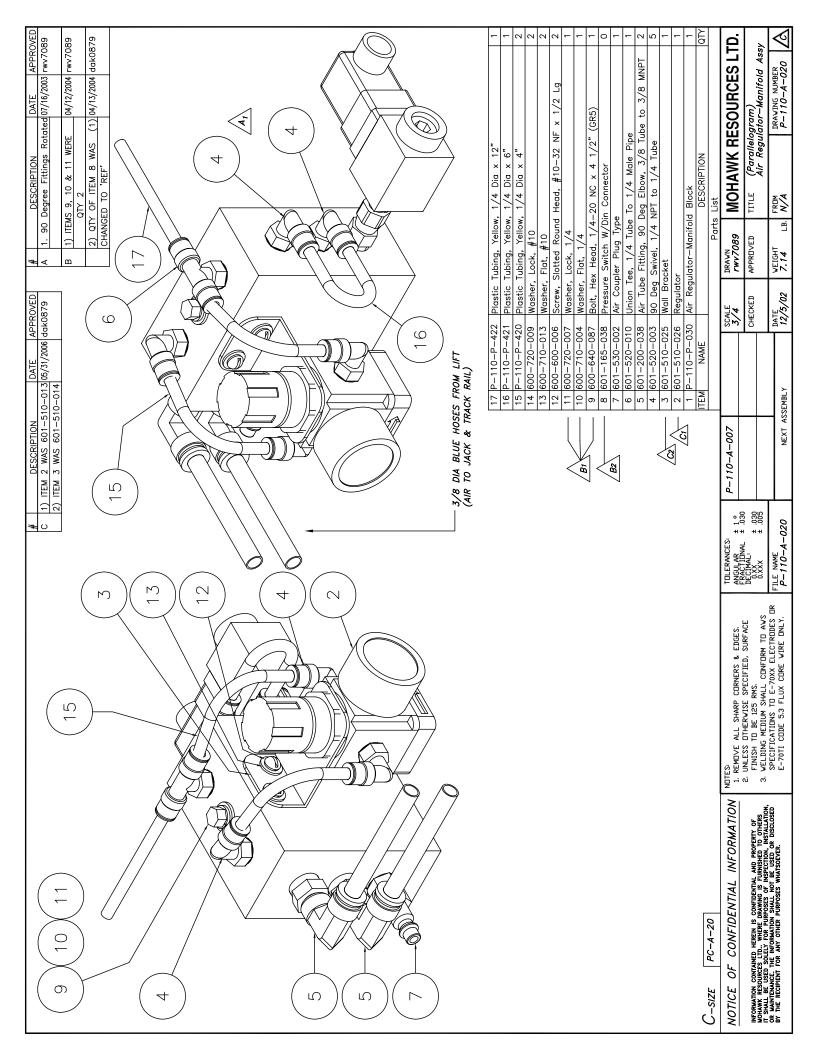


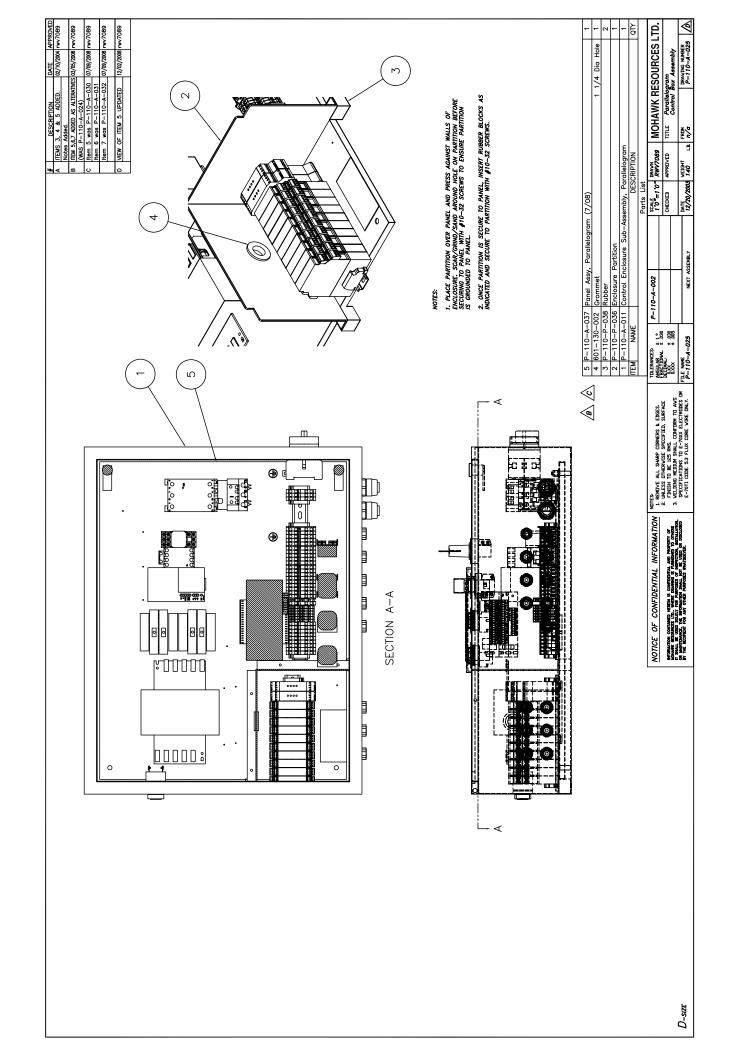


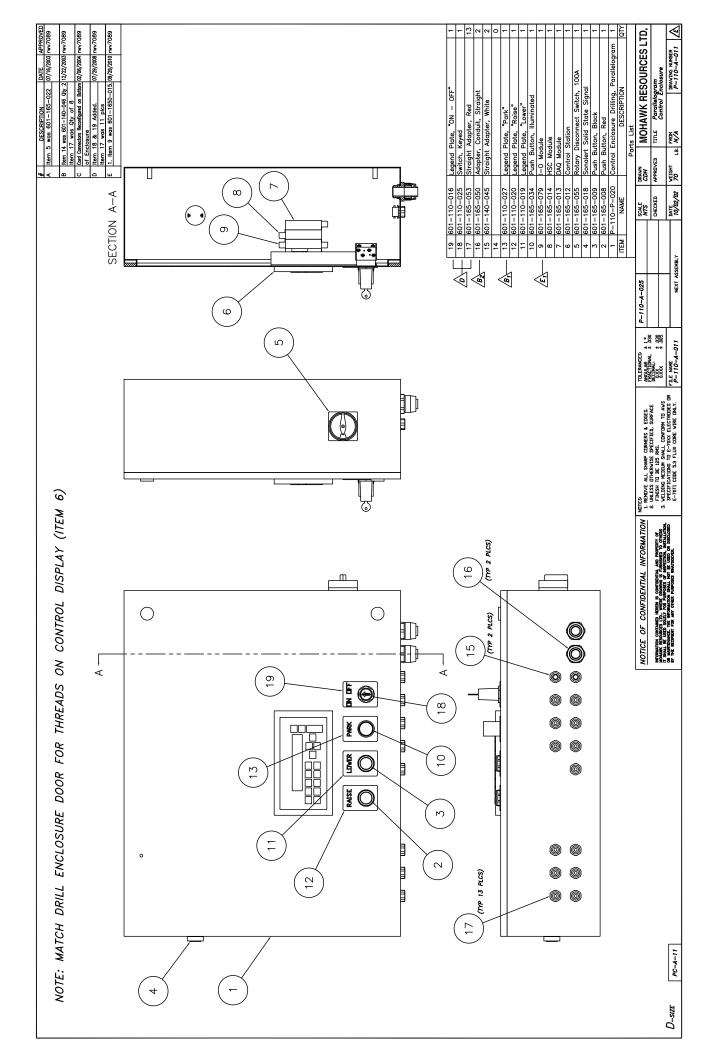


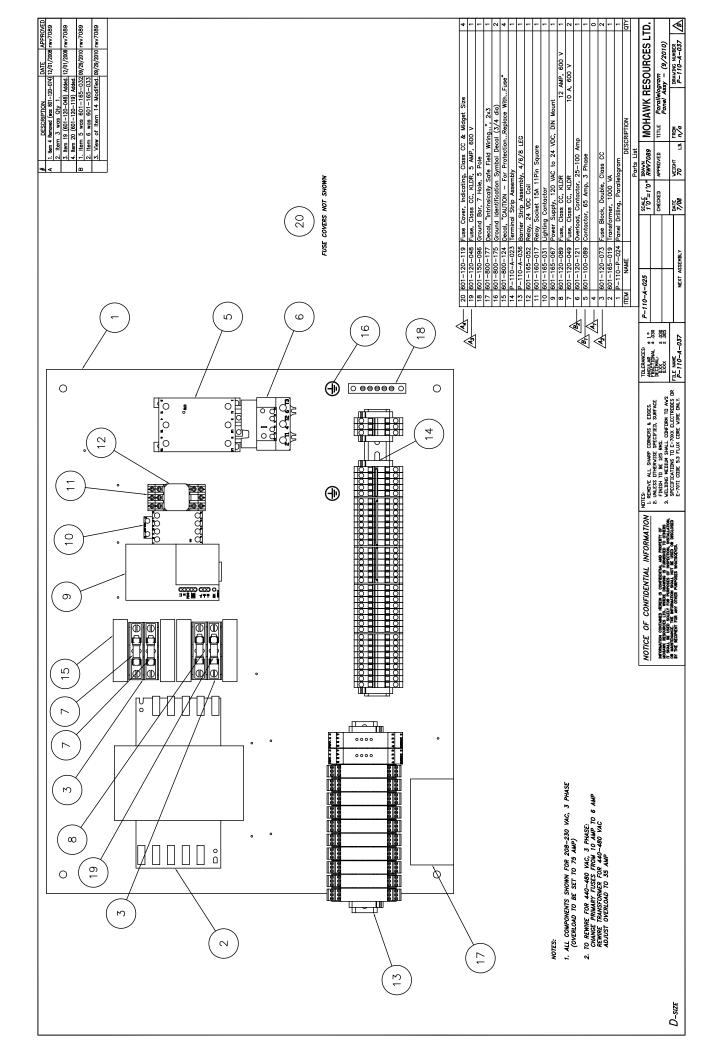


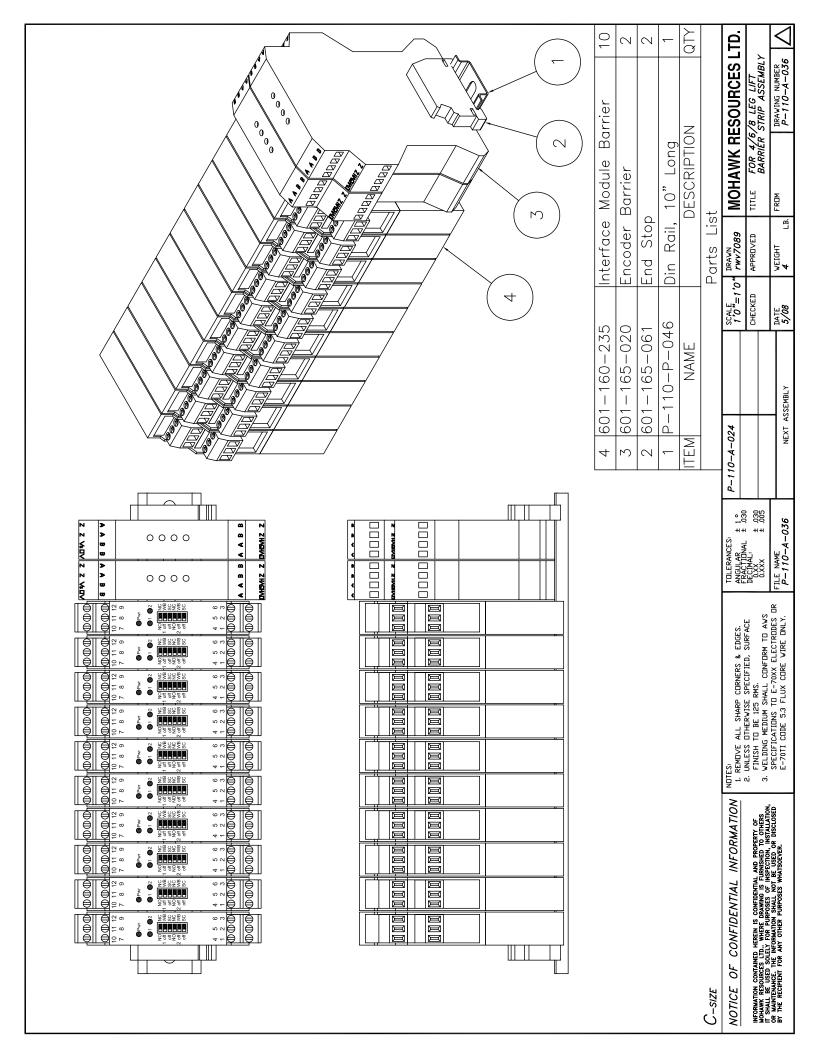


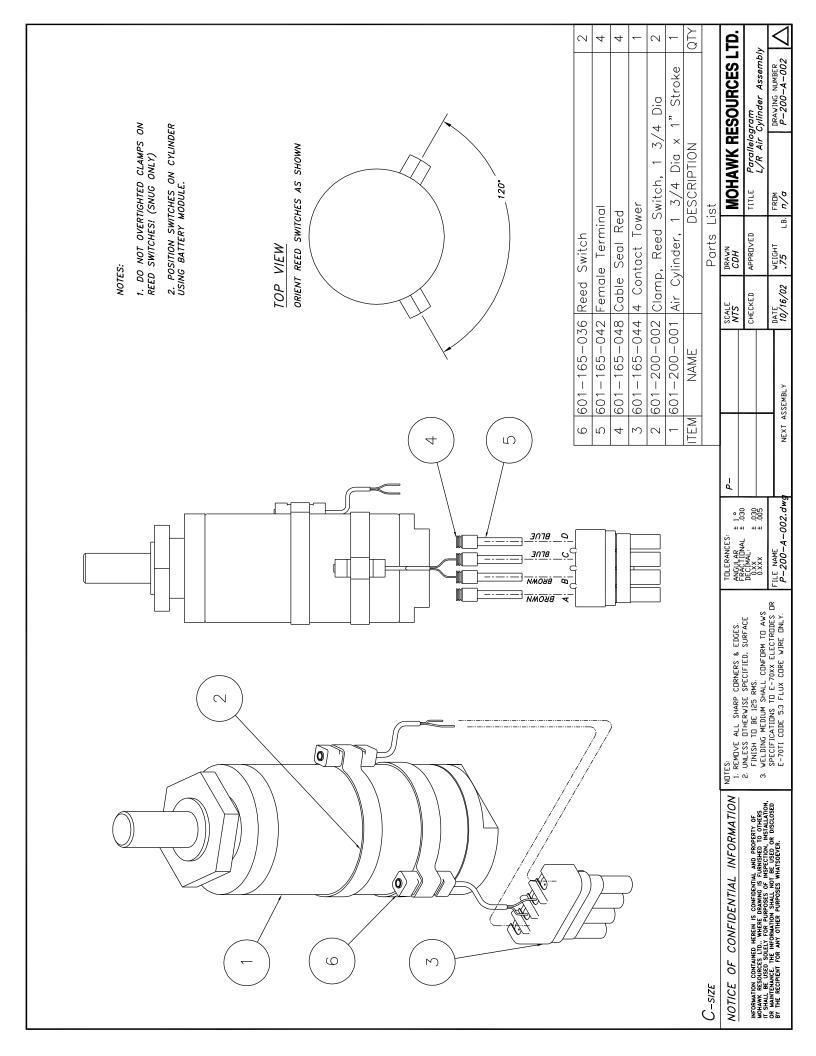


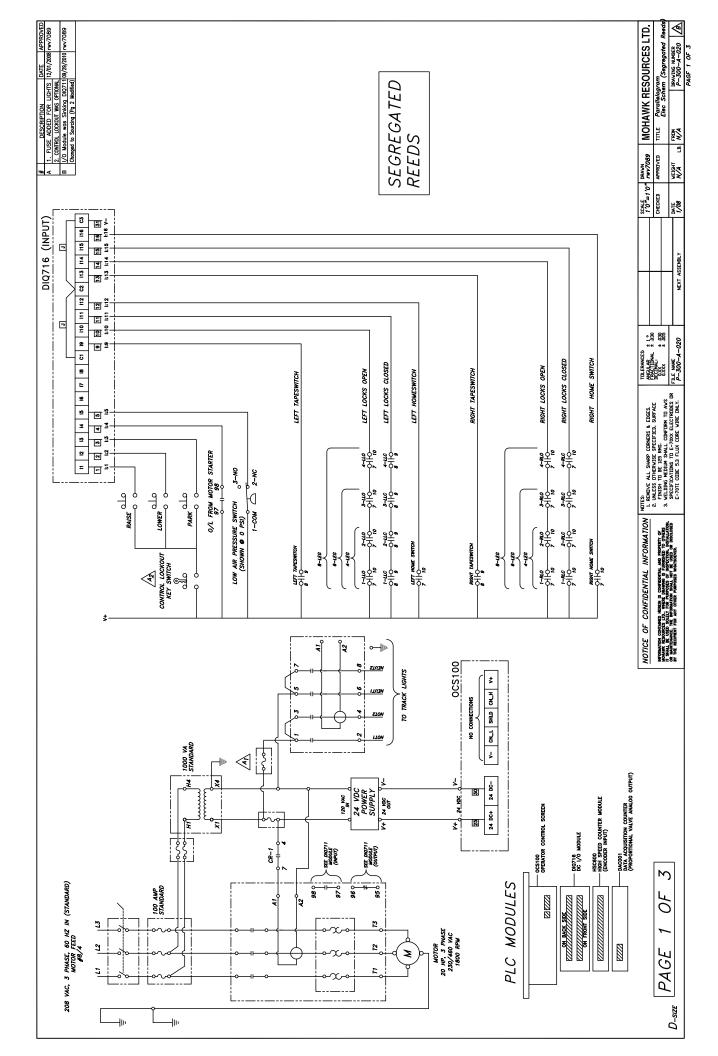


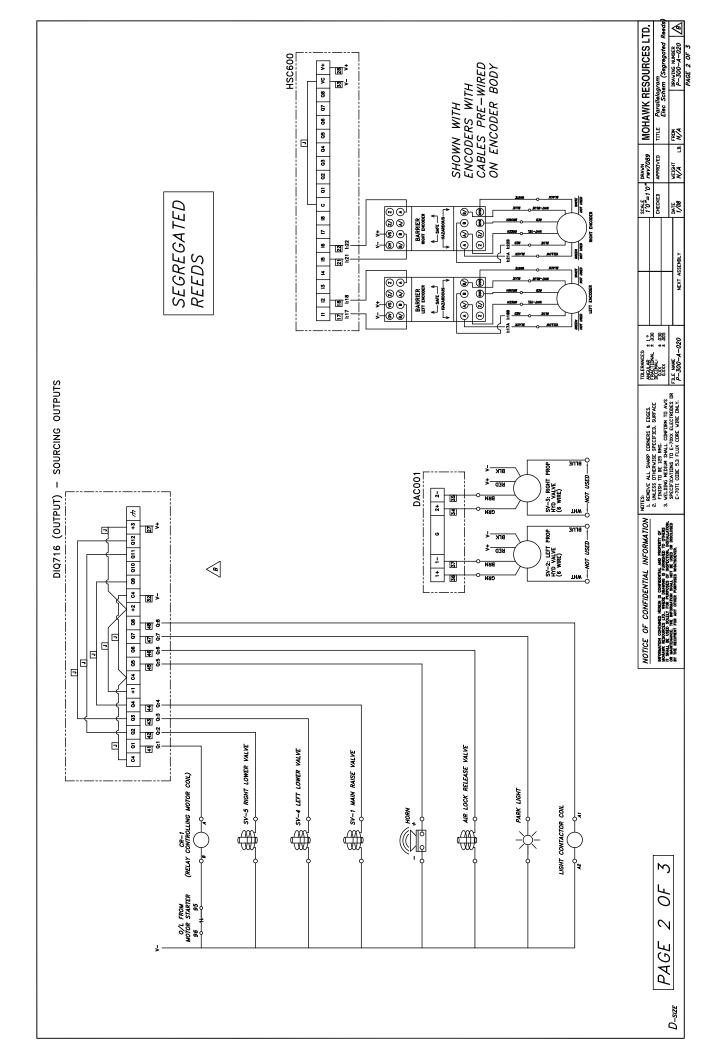


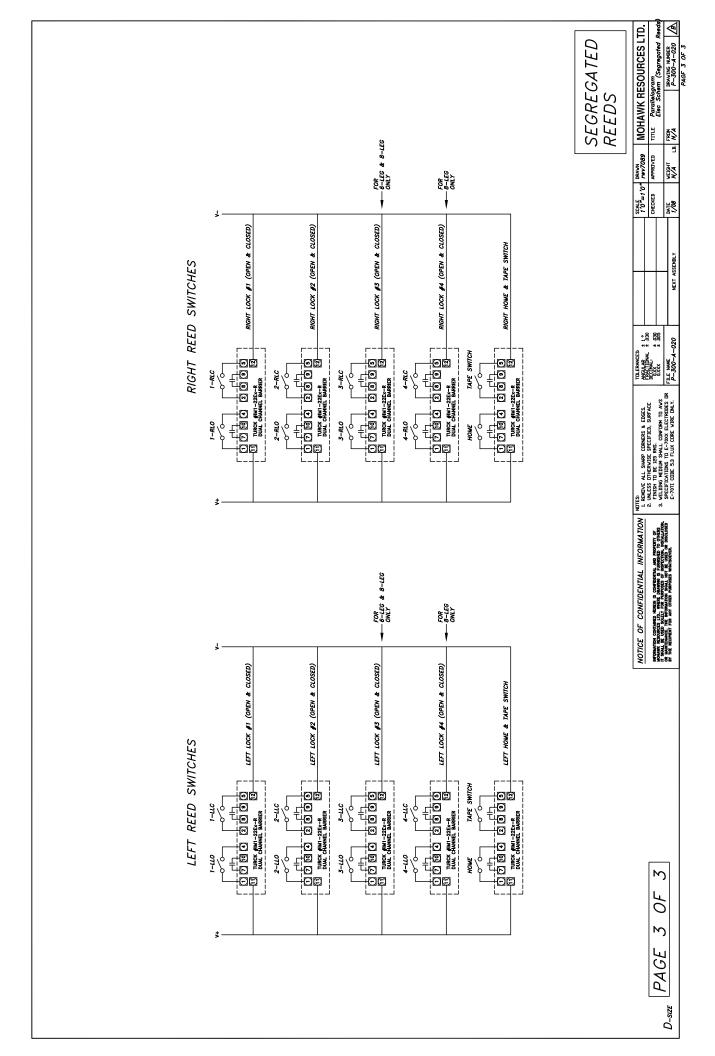


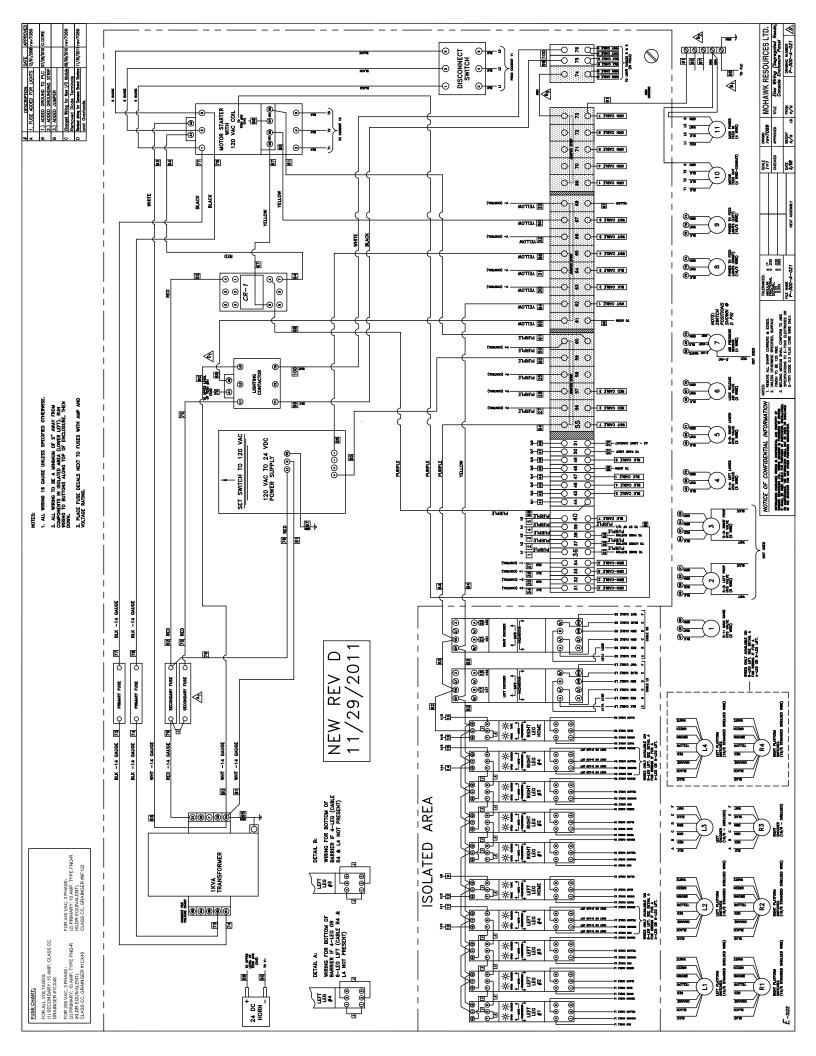


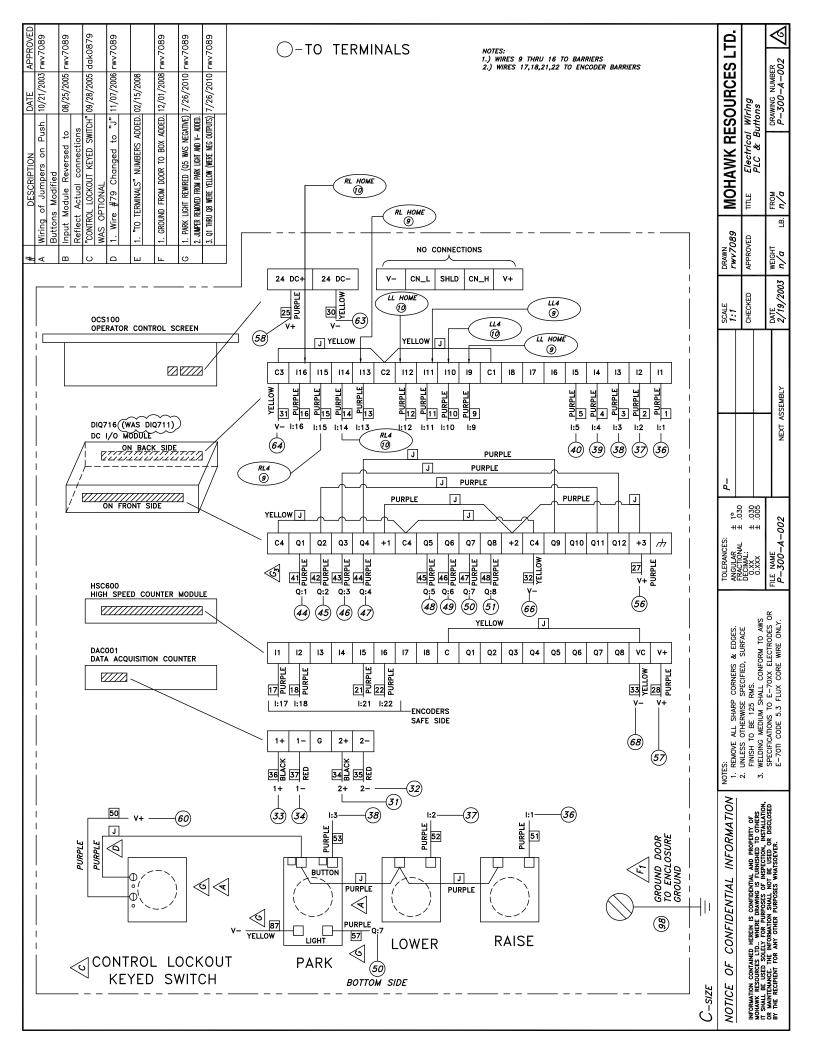












Automotive Lift Institute, Inc.

A CAUTION A C

Lift to be used by trained operator ONLY.



(C)

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

©

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.

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NOTICE



Read operating and safety manuals before using lift.

NOTICE



Proper maintenance and inspection is necessary for safe operation.

NOTICE



Do not operate a damaged lift.

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

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ALI/WL200s

WL200 Series Label Kit



Clear area if vehicle is in danger of falling.

WARNING

Remain clear of lift when raising or lowering vehicle.

@

WARNING



Keep clear of pinch points when lift is moving.



Keep feet clear of lift while lowering.

AMAD

WARNING



Do not overide self-closing lift controls.

▲ WARNING



Chock wheel to prevent vehicle movement.

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

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ALI/WL200w

MOHAWK Because Quality Lasts Forever



Model A-7

The A-7 is a 7,000 lb. capacity asymmetric lift that allows full opening of all vehicle doors as well as total undercar/underdash access, thanks to Mohawk's unique "clear floor" design. Low 4" arms accommodate all imports and low-riding sports cars. Includes both 3" and 6" adapters.

Parallelogram Lifts

Standard models from 36,000 to 100,000 lb. capacities with track lengths from 26'-48'. Available in surface or flush mount with full under-vehicle access for all trucks, buses and heavy equipment.



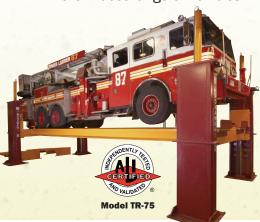


Models System I, LC-12, LMF-12, TP-16, TP-18, TP-26 & TP-30

These 10,000 to 30,000 lb. capacity models are the ideal heavyduty lifts for up to Class VI trucks. Mohawk's unique "clear floor" design makes these the perfect lifts for all fleet applications. Truck adapters are also standard equipment.

MP-Series Mobile Column

Mohawk's mobile columns are capable of lifting 32,000 to 240,000 lbs. All columns operate together, individually or can be divided into separate pairs. Adjustable lifting forks accommodate the widest range of vehicles. No wheel reducer sleeves needed.



TR-Series Ramp Style Lifts

Standard models from 19,000 to 120,000 lbs. for total undervehicle access. Available in 20', 25', and 30' long runways. Completely operated by a single technician and feature fully interlocked, redundant safety systems.



Mohawk Resources, LTD. • P.O. Box 110 65 Vrooman Ave • Amsterdam, NY 12010 (800) 833-2006 or (518) 842-1431

www.mohawklifts.com

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VISIT <u>WWW.MOHAWKLIFTS.COM/PR/</u> AND MAYBE WE CAN ADD YOUR PHOTOS TO OUR COLLECTION. (JPG FORMATS PREFERED)

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