MOHAWK

MADE IN THE USA

LMF-12,TP-15,TP-16 & TP-18

(Air Release Locks)

LMF-12 – 12,000 LB. CAPACITY TWO POST
TP-15 - 15,000 LB. CAPACITY TWO POST
TP-16 – 16,000 LB. CAPACITY TWO POST
TP-18 – 18,000 LB. CAPACITY TWO POST
VEHICLE LIFT MANUAL

- ☑ INSTALLATION
- ☑ OPERATION
- ☑ MAINTENANCE
- ☑ PARTS

THANK YOU
FOR SENDING IN YOUR
WARRANTY REGISTRATION
CARD

MOHAWK SERVICE
DEPARTMENT

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

File: LMF-15-16-18 w Airlocks 10-30-2012.doc
Rev Date 10/30/2012
Part #601-800-382

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.

IMPORTANT SAFETY INSTRUCTIONS

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

1. Read all instructions.

2. Care must be taken as burns can occur from touching hot parts.

3. 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.

3. Do not let cord or hoses 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 recommended attachments.

11. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

SAVE THESE INSTRUCTIONS

Rev (8/3/98)

APPENDAGE:

Rev (2/9/2006)

LIFT ENVIRONMENT:

All standard lifts are designed for indoor usage 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 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 posts to prevent water accumulation at the post bases.

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.

LOCK WARNING:

Latches do not automatically reset after disengagement. After the latches have been manually disengaged, this lift must be raised approximately 2 inches to reactivate the latches.

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.

PROPER SELECTION OF POWER SUPPLY CORD:

Acceptable Cord Types: SO, SEO,STO, SOW, SEOO, SOW-A
Cord Size: 12/4
Cord Ampacity: 20 Amps
Cord Wiring: Use Female NEMA Plug supplied with lift and wire as follows (See Diagram Below),
G: Ground (green)
W: Neutral (white)
X: 208 VAC Hot, 110 VAC to ground (Red)
Y: 208 VAC Hot, 110 VAC to ground (Black)

Face of Plug Represented:

HAVE A QUESTION?

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

Distributor Place Card Here

Please have this unit's model and serial number when calling for service.

Model Number _____

Serial Number _____

OR CONTACT:

MOHAWK RESOURCES LTD.
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

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.

MOHAWK WARRANTIES

EFFECTIVE DATE: **8/1/2012** *

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, WHICH PROVE UPON INSPECTION TO BE DEFECTIVE AND WHICH HAVE NOT BEEN MISUSED. DAMAGE OR FAILURE TO ANY PART DUE TO FREIGHT DAMAGE OR FAULTY 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 COMMERCIAL 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, ETC.. MOHAWK RESERVES THE RIGHT TO DECLINE RESPONSIBILITY WHEN REPAIRS HAVE BEEN MADE OR ATTEMPTED BY OTHERS. THIS WARRANTY DOES NOT COVER LABOR. 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. THE MODEL NAME 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 IS APPLICABLE TO UNITS LOCATED ONLY IN THE UNITED STATES OF AMERICA AND CANADA. CONTACT MOHAWK RESOURCES LTD. FOR SPECIFIC WARRANTY PROVISIONS FOR UNITS LOCATED OUTSIDE OF THESE COUNTRIES.

STRUCTURAL 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: MODELS A-7, SYSTEM IA-10, LC-12, LC-12-3SA, LMF-12, TP-16, TP-18, TP-20, TP-26, TP-30. STRUCTURAL ITEMS COVERED INCLUDE LEG, CARRIAGE, SWING ARM AND SLIDER WELDMENTS. 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, RP-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 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.

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.

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: A-7, SYSTEM IA-10, LC-12, LC-12-3SA, 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).

AFTER THE FIRST 5 YEARS FROM DATE OF SHIPMENT FROM FACTORY, THE "*EXTENDED LIFETIME CYLINDER SEAL WARRANTY*" (BELOW) IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: A-7, SYSTEM IA-10, LC-12, LC-12-3SA, 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. TO QUALIFY FOR THIS WARRANTY, THE FOLLOWING CONDITIONS MUST BE MET:

ALL LIFTS MUST BE REGISTERED WITH MOHAWK RESOURCES, LTD., P.O. BOX 110, 65 VROOMAN AVENUE, AMSTERDAM, NY 12010, WITH THE ORIGINAL CUSTOMER NAME, ADDRESS AND PHONE NUMBER, WITHIN 30 DAYS OF INSTALLATION. (USE POSTAGE PAID WARRANTY REGISTRATION CARD ATTACHED TO THE FRONT OF THE MANUAL PROVIDED.)

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 OPTIONS:
ALL "CUSTOM" LIFTS AND/OR "CUSTOM" OPTIONS ARE GUARANTEED ON A CASE-BY-CASE BASIS. CONSULT MOHAWK FACTORY FOR DETAILS ON SPECIFIC CUSTOM LIFTS AND/OR OPTIONS.

WARRANTY EXCEPTIONS (ALL LIFTS):
ADJUSTMENTS: THIS WARRANTY DOES NOT COVER CASUAL AND ROUTINE ADJUSTMENTS SUCH AS, BUT NOT LIMITED TO: FITTINGS, 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 OR INSPECTED REGULARLY, OR USED IN AN ABUSIVE ENVIRONMENT OR BEYOND NORMAL SHOP USAGE, ETC., 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 (IE. SLIDE BLOCKS) ARE SUBJECT TO NORMAL "WEAR AND TEAR" AND ARE NOT COVERED UNDER THIS WARRANTY.

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

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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.

APPENDAGES

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 **6-1/2 INCHES** 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.

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 EQUIPMENT 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.

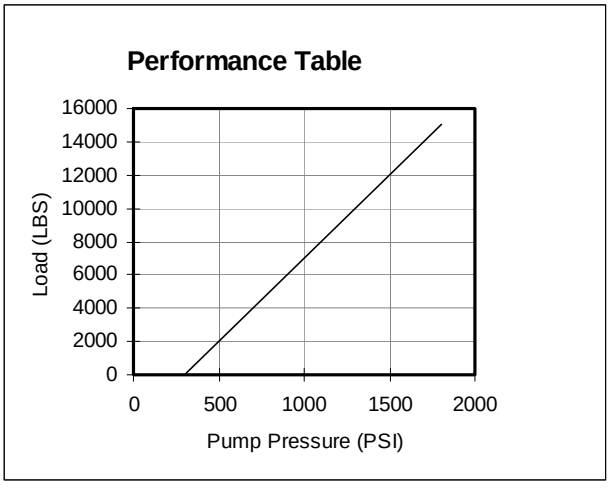
LIFT SPECIFICATIONS

LMF-12/TP-15/TP-16/TP-18 SPECIFICATIONS

LIFT TYPE / TWO POST	ELEC / HYDRAULIC
LIFTING CAPACITY – LMF-12	12,000 LBS.
LIFTING CAPACITY – TP-15	15,000 LBS.
LIFTING CAPACITY – TP-16	16,000 LBS.
LIFTING CAOACITY—TP-18	18,000 LBS
PER ARM CAPACITY – LMF-12	3,000 LBS.
PER ARM CAPACITY – TP-15	3,750 LBS.
PER ARM CAPACITY – TP-16	4,000 LBS.
PER ARM CAPACITY—TP-18	4,500 LBS
LIFTING SPEED (LOADED)	70-80 SECONDS APPROX
LOWERING SPEED (LOADED)	75 SECONDS APPROX
LIFTING HEIGHT (STROKE)	72 INCHES
OVERALL WIDTH	151-1/2 INCHES
WIDTH BETWEEN POST	120 INCHES
WIDTH BETWEEN LIFTING ARMS	102 –7/8 INCHES
POST HEIGHT	104 INCHES
CYLINDER EXTENSION	162 INCHES
OVERHEAD HYDRAULIC LINES	180 INCHES
LIFTING PAD HEIGHT (MIN)	5 INCHES
LIFTING PAD HEIGHT (MAX)	87 INCHES
SHIPPING WEIGHT	3,100 LBS.

POWER UNIT SPECIFICATIONS

BRAND NAME	MONARCH
MODEL	M-4509-0191
POWER UNIT TYPE	VERTICAL
MOTOR VOLTAGE	208 / 230
F.L.A. AT RATED CAPACITY	22.5 / 20.4
MOTOR HORSEPOWER	4
MOTOR PHASE	SINGLE
MOTOR CYCLE / HERTZ	60
MOTOR SPEED (R.P.M.)	3450
PUMP FLOW (G.P.M.)	3.2 @ 3450 R.P.M.
RELIEF VALVE SETTING – LMF-12	1650 PSI
RELIEF VALVE SETTING – TP-15	2050 PSI
RELIEF VALVE SETTING – TP-16	2150 PSI
WORKING PRESSURE – LMF-12	1430 PSI
WORKING PRESSURE – TP-15	1800 PSI
WORKING PRESSURE – TP-16	1900 PSI
RESERVOIR CAPACITY	5 GALLONS
HYDRAULIC FLUID MEDIUM	DEXRON III



SUGGESTED SITE SELECTION / BAY SIZE

WIDTH	DEPTH	HEIGHT
15 FEET	30 FEET	15 FEET

NOTE

THE PLACEMENT OF THE UNIT IS DETERMINED BY THE TYPE (LENGTH, WIDTH, HEIGHT) OF VEHICLE BEING SERVICED.

WEJ-IT ANCHOR SPECIFICATIONS

LENGTH	DRILL DEPTH	DRILL SIZE	DRILL SIZE MIN.	DRILL SIZE MAX.	TORQUE
6 IN.	THRU	3/4 IN.	.775 IN.	.787 IN.	SEE ANCHOR SPECS

PRE-EXISTING FLOOR REQUIREMENTS

MINIMUM THICKNESS	MINIMUM COMPRESSIVE STRENGTH	MINIMUM AGING
6 - 1/2 IN	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 WIDTH X LENGTH	CUBIC YARDS
12 INCHES	72 INCHES x 168 INCHES	2.1

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.

NEVER HAND MIX THE CONCRETE. **REFER TO NEW SLAB RECOMMENDATIONS SECTION.**

LMF-12/TP-15/TP-16/TP-18 WITH AIRLOCKS PACKING LIST
*** ALSO SEE DRAWINGS MAN511, MAN512, & MAN513 IN PARTS MANUAL ***

ORDER NUMBER	PART NUMBER	PART DESCRIPTION	QTY.
	015-000-014	**PARTS BOX #1CONTENTS**	1
623	007-007-075	SHIM BAG	1
040	012-012-047	LIFTING PAD	4
627	012-012-058	SMALL PARTS BAG	1
145	012-012-113	SWING ARM PIN	4
	600-670-003	WEJ-IT ANCHOR (3/4 X 6”)	16
482	600-690-008	LOCK NUT, 1-3/8-12 NF	8
460	601-170-008	HUBBLE CONNECTOR (FEMALE)	1
	016-000-019	MANUAL, LMF-12/TP-15/TP-16 (I/O/M)	1
627	**012-012-058**	**SMALL PARTS BAG CONTENTS**	
171	600-640-019	BOLT, 1/4-20 X 1-1/2	10
258	600-690-005	LOCK NUT, 1/4-20 NC	10
259	600-710-004	WASHER, 1/4 SAE FLAT	4
021	601-310-005	BREATHER CAP	1
094	601-420-011	FITTING, DOUBLE MALE UNION # 6 JIC	4
409	601-710-001	DOUBLE LINE CLIP	6
	600-710-006	WASHER, FLAT, FENDER, 5/16 ID X 1 ½ OD	6
623	**007-007-075**	**SHIM BAG CONTENTS**	
633	600-740-001	SHIM, 1/16 (BLUE)	8
634	600-740-002	SHIM, 1/8 (RED)	8
635	600-740-003	SHIM, 1/4 (BLACK)	8
	012-012-057	**PARTS BOX #2 CONTENTS**	
057	012-012-151	HEIGHT ADAPTER (7 1/2 INCH)	4
047	018-000-105	HEIGHT ADAPTER (10 INCH)	4
046	018-000-106	HEIGHT ADAPTER (5 INCH)	4
		OPTIONAL ITEMS INCLUDED in Place of 5” / 7 ½” /10” Adapters and Lift Pads IF 3-Stage Arms Supplied with Unit (LC-12-3SA)	
045	025-002-128	HEIGHT ADAPTER (6 INCH)	4
044	025-002-127	HEIGHT ADAPTER (3 INCH)	4
035	025-002-035	LIFTING PAD	4

RECOMMENDED TOOL LIST

SIZE / QTY	DESCRIPTION	USED IN
1 - 1/8 IN	WRENCH & SOCKET	WEJ-IT ANCHORS
15 / 16 IN	WRENCH & SOCKET	CARRIAGE STOPS
11/16 IN	WRENCH	HYDRAULIC LINES
5/8 IN	WRENCH	HYDRAULIC LINES
1/2 IN	WRENCH & SOCKET	BACKBOARD
7/16 IN	WRENCH & SOCKET	LINE CLIPS
1	RATCHET WRENCH	AS NEEDED
1	SNAP RING PLIERS	AS NEEDED
2IN	WRENCH & SOCKET	SWING ARM PINS
1	VICE GRIPS	AS NEEDED
2 1/4 IN	CRESCENT WRENCH	AS NEEDED
1	4 FT BUBBLE LEVEL	VERIFY LEVEL ASSEMBLY
1	PRY BAR	MOVING HEAVY ITEMS
1	TIN SNIPS	PACKAGING BANDING
1	CHALK LINE	FLOOR LAYOUT
1	SOAP STONE	FLOOR LAYOUT
1	25 FT TAPE MEASURE	FLOOR LAYOUT / SQUARING POST
1	MEDIUM HAMMER	WEJ-IT ANCHORS
1	HAMMER DRILL	DRILLING CONCRETE
1	DRILL BIT (3/4 INCH)	DRILLING CONCRETE
1 TON	LIFTING DEVICE W/SLING	LIFTING / MOVING HEAVY ITEMS
8 FT	STEP LADDER	ASSEMBLE ELEVATED ITEMS
100 FT	LEAD CORD	OPERATE ELECTRICAL TOOLS

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.

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 TWELVE FEET ABOVE THE BAY FLOOR. SEE FIGURE 1 & 8.

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 THE "NEW SLAB RECOMMENDATIONS" SECTION IN THIS MANUAL.

LOCATE THE MAIN SIDE POST ON THE HIGH SIDE OF THE FLOOR IF A SLOPE IS NOTED. REFER TO FIGURE 9.

POWER SUPPLY

THE STANDARD POWER UNIT IS 220-VOLT SINGLE PHASE. REFER TO THE POWER UNIT SPECIFICATIONS SECTION. REQUIREMENTS MAY VARY ON SPECIAL ORDERS.

THE MAIN SIDE POST WILL REQUIRE THE POWER SUPPLY FOR THE UNIT. NOTE THE LOCATION OF THE POWER SUPPLY.

AIR SUPPLY

THIS LIFT INCORPORATES AIR LOCK RELEASE. A CLEAN DRY AIR SUPPLY OF AT LEAST 60 PSI WILL BE NEEDED. THIS SUPPLY IS TO BE CONNECTED TO THE REGULATOR SUPPLIED, LOCATED NEXT TO THE HYDRAULIC POWER UNIT.

BAY SIZE

TO OPTIMIZE SHOP SPACE, IT IS ADVISED TO LOCATE A VEHICLE IN THE BAY PRIOR TO LAYOUT. NOTE WALKWAY'S OVERHEAD OBSTRUCTIONS, AND ABILITY TO MOVE EQUIPMENT IN THE BAY AREA. REFER TO FIGURE 1 & 8.

REQUIREMENTS MAY VARY ON SPECIAL ORDERS.

SPECIFICATIONS

REFERENCE ALL SPECIFICATIONS PRIOR TO INSTALLING A LIFT.

WARNING

BEFORE DRILLING THE MOUNTING HOLES

- ALL ANCHORS MUST BE A MINIMUM OF 6 INCHES AWAY FROM ANY EXPANSION SEAMS, CONTROL JOINTS, OR OTHER INCONSISTENCIES IN THE CONCRETE. REFER TO ANCHOR MANUFACTURER SPECIFICATIONS FOR SPECIFIC INFORMATION CONCERNING EDGE DISTANCES AND BOLT TO BOLT DISTANCE REQUIREMENTS. REFER TO FIGURES 3 & 4.
- REFERENCE ALL FIGURES PERTAINING TO DRILLING, WEJ-IT WARNINGS, AND INSTALLATION INSTRUCTIONS. REFER TO FIGURES 3 & 4.
- CHECK THE INSIDE DIMENSIONS OF THE POST AT THE BOTTOM FROM THE FACE OF THE MAIN SIDE POST TO THE FACE OF THE OFF SIDE POST. THE INSIDE DIMENSION IS 120 INCHES.
- USE A SHARP DRILL BIT 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. INSERT THE WEJ-IT ANCHOR SO THAT THE WASHER RESTS AGAINST THE POST FOOTING.
- NEVER USE AN IMPACT TOOL TO TIGHTEN THE WEJ-IT ANCHORS. USE A TORQUE 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.
- DRILL EIGHT 3/4-INCH HOLES ALONG THE OUTSIDE OF THE MAIN SIDE POST USING THE HOLES AT THE BASE OF THE POST AS A GUIDE. INSERT AND TIGHTEN WEJ-IT ANCHORS PER SPECS LOCATED IN THE BACK OF THIS MANUAL.
- INSURE THE INSIDE DIMENSIONS BETWEEN THE MAIN AND OFF SIDE POST IS STILL CORRECT. 120 INCHES.
- DRILL EIGHT 3/4-INCH HOLES ALONG THE OUTSIDE OF THE OFF SIDE POST USING THE HOLES AT THE BASE OF THE POST AS A GUIDE. INSERT AND TIGHTEN THE WEJ-IT ANCHORS PER SPECS LOCATED IN THE BACK OF THIS MANUAL.

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.

USING A CHALK LINE, LAYOUT THE FLOOR DIMENSIONS WHERE THE UNIT WILL BE LOCATED. REFER TO FIGURES 1 & 8.

CUT THE SWING ARM BANDING AND REMOVE THE SWING ARMS.

SECURE THE OVERHEAD LIFTING DEVICE TO THE MAIN SIDE POST USING STRAPS OR CHAINS.

WARNING

- EACH POST WEIGHS OVER 900 LBS. ERECT THE POSTS WITH CHAINS AND STRAPS ATTACHED TO THE TOP OF THE POST. DO NOT REMOVE THE CHAINS AND STRAPS UNTIL THE POST HAS BEEN SECURED.

SEPARATE THE POSTS. REMOVE THE PARTS BOX, HYDRAULIC LINES AND SUPPORTS. VERIFY PARTS BOX CONTENTS. IF MISSING PARTS ARE NOTED, THEY CAN BE OBTAINED BY CALLING 1-800-833-2006 OR BY CONTACTING YOUR LOCAL MOHAWK DISTRIBUTOR.

USING THE 5/8-INCH PACKING BOLTS, NUTS AND WASHERS, ASSEMBLE THE CARRIAGE STOPS TO THE TOP OF THE MAIN SIDE POST. TIGHTEN TO 150 FOOT POUNDS. REFER TO FIGURE 2.

ERECT THE MAIN AND OFF SIDE POSTS TO THE UP-RIGHT POSITION. ALIGN THE POST FOOTINGS TO THE CHALK LINE LAYOUTS.

SECURE THE MAIN AND OFF SIDE POSTS TO THE BAY FLOOR USING THE (16) 3/4 X 5 1/2 INCH WEJ-IT ANCHORS. REFER TO “BEFORE DRILLING THE MOUNTING HOLES“ SECTION.

USING THE 5/8-INCH PACKING BOLTS, NUTS AND WASHERS, ASSEMBLE THE CARRIAGE STOPS TO THE TOP OF THE OFF SIDE POST. TIGHTEN TO 150 FOOT POUNDS. REFER TO FIGURE 2.

ASSEMBLE THE TWO OVERHEAD HYDRAULIC LINES (FLAT ON THE FLOOR) USING THE FOUR DOUBLE MALE UNIONS. SEE MAN501.

ASSEMBLE TWO OF THE DOUBLE LINE CLIPS TO THE CENTER SPAN OF THE OVERHEAD LINES APPROXIMATELY 3 INCHES FROM THE DOUBLE UNIONS.

ASSEMBLE THE TWO OVERHEAD LINE SUPPORT BRACKETS TO THE TOP OF THE MAIN AND OFF SIDE POST.

ERECT THE OVERHEAD HYDRAULIC LINE ASSEMBLIES AND AIR HOSE. ROUTE THE LINES THROUGH THE TOP OF EACH POST. ASSEMBLE THE LINES TO THE HYDRAULIC CONNECTIONS AT THE TOP OF EACH POST.

SECURE THE LINES TO THE OVERHEAD LINE SUPPORTS USING THE DOUBLE LINE CLIPS PROVIDED.

REMOVE THE BREATHER PORT PLUG ON THE POWER UNITS RESERVOIR AND DISCARD. REFER TO FIGURE 11.

VERIFY FLUID LEVEL. (1/2 IN. BELOW BREATHER PORT IN THE POWER UNIT RESERVOIR WHEN BOTH CYLINDERS ARE FULLY RETRACTED) INSTALL THE BREATHER CAP.

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

CONNECT AN AIR SUPPLY TO THE REGULATOR NEAR THE POWER UNIT. ADJUST THE REGULATOR TO 60-80 PSI. PRESS THE LOCK RELEASE BUTTON AT THE AIR REGULAOR AND ENSURE THAT LOCKS RELEASE AND THAT THERE ARE NO LEAKS IN THE AIR SYSTEM.

ENGAGE THE UP BUTTON ON THE POWER UNIT AND RAISE THE CARRIAGES APPROX. 3 FEET, OR TO A HEIGHT SUITABLE FOR INSTALLING THE SWING ARMS.

REMOVE & REASSEMBLE THE FOUR SWING ARM RESTRAINTS ONTO THE MAIN AND OFF SIDE CARRIAGES. REFER TO MAN502.

LIFTING UP ON THE SWING ARM RESTRAINT. INSERT THE FOUR SWING ARMS INTO THE CARRIAGES. REFER TO MAN506.

ALIGN THE THROUGH HOLES IN THE CARRIAGES WITH THE THROUGH HOLES IN THE SWING ARMS. SECURE THE SWING ARMS TO THE CARRIAGES USING THE FOUR SWING ARM PINS AND EIGHT NYLON LOCK NUTS.

PLACE THE FOUR LIFTING PADS INTO PLACE IN THE MOUNTING HOLE AT THE END OF EACH SLIDER. REFER TO MAN506.

INSTALLATION INSTRUCTIONS, CONT.

BLEEDING PROCEDURE

ENGAGE THE UP BUTTON ON THE POWER UNIT. OBSERVE THE CARRIAGE. WHEN THE MAIN AND OFF SIDE CARRIAGES HAVE REACHED FULL HEIGHT, CONTINUE TO RUN THE UNIT FOR 10 SECONDS.

RELEASE THE UP BUTTON AND WAIT ONE MINUTE, THEN HOLD THE UP BUTTON AGAIN FOR 10 SECONDS. REPEAT THIS PROCEDURE THREE TIMES (THIS WILL PURGE THE AIR FROM THE HYDRAULIC SYSTEM)

NOTE

- LISTEN FOR THE PRESSURE RELIEF VALVE. A NOTICEABLE INCREASE IN POWER UNIT VOLUME THIS MAY INDICATE THAT THE NUTS ON THE LIFTING RODS NEED TO BE ADJUSTED. ADJUST THE NUTS EVENLY ON BOTH SIDES OF THE CARRIAGE TO ALLOW THE CYLINDERS TO FULLY STOKE AT THE TOP.

ASSEMBLE THE TWO HEIGHT ADAPTERS BRACKETS TO THE BACK OF THE MAIN AND OFF SIDE POST USING THE FOUR 5/16 BOLT, WASHER & NYLON LOCK NUTS. REFER TO MAN505

PLACE THE FOUR 5 INCH., 7 ½ INCH AND 10 INCH HEIGHT ADAPTERS INTO PLACE INTO THE HEIGHT ADAPTER BRACKETS.

SHIMMING THE POST

LEVEL THE POST BY INSERTING THE SUPPLIED SHIMS UNDER THE POST FOOTING AROUND THE WEJ-IT ANCHOR. 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 FIGURES 5 & 6.

- LEVEL THE MAIN SIDE POST FRONT TO REAR AND SIDE-TO-SIDE USING A BUBBLE LEVEL.
- LEVEL THE OFF SIDE POST FRONT TO REAR USING A BUBBLE LEVEL. SET THE POST PARALLEL TO THE MAIN SIDE POST USING A MEASURING TAPE, MEASURING FROM THE EDGE OF THE MAIN SIDE CHANNEL TO THE EDGE OF THE OFF SIDE CHANNEL AT THE BASE AND AT THE TOP OF THE POST.
- THE MEASUREMENT AT THE TOP OF THE POST MUST BE THE SAME AS THE MEASUREMENT AT THE BASE OF THE POST.

AT THIS TIME PERFORM THE PRE-OPERATION CHECK LIST AND MAINTENANCE PROCEDURES (DAILY - WEEKLY - MONTHLY) MAKE ALL ADJUSTMENTS PERTAINING TO THESE PROCEDURES.

DIVERTER VALVE OPERATION

WARNING

AS WITH ALL FUNCTIONS OF THE LIFT UNIT, NEVER OPERATE THE DIVERTER VALVE UNLESS YOU HAVE FIRST PERFORMED THIS OPERATION WITH NO VEHICLE, AND FULLY UNDERSTAND ITS FUNCTIONS.

BOTH MECHANICAL SAFETIES MUST BE ENGAGED BEFORE OPERATING THE DIVERTER VALVE.

PURPOSE

- THE PURPOSE OF THE DIVERTER VALVE IS TO ENABLE THE OPERATOR TO RAISE OR LOWER THE OFF SIDE CARRIAGE INDEPENDENTLY OF THE MAIN SIDE CARRIAGE.

TO OPERATE THE DIVERTER VALVE

ENGAGE THE DIVERTER VALVE BY PULLING DOWN ON THE DIVERTER VALVE PULL KNOB. REFER TO MAN504

- THIS WILL DIVERT ALL FUNCTIONS OF THE POWER UNIT TO THE OFF SIDE CYLINDER.

WITH THE VALVE ENGAGED, ENERGIZE THE POWER UNIT BY PUSHING THE UP BUTTON.

WHEN THE DESIRED HEIGHT HAS BEEN ACHIEVED, RELEASE THE DIVERTER VALVE PULL KNOB AND THE UP BUTTON.

PULLING DOWN ON THE LOWERING HANDLE, LOWER THE UNIT ONTO BOTH MECHANICAL SAFETIES ENDING THIS PROCEDURE.

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 INTO THE BAY, POSITION ARMS AND SUPPORTS TO PROVIDE UNOBSTRUCTED CLEARANCE. DO NOT HIT OR RUN OVER LIFT ARMS, ADAPTERS, OR AXLE SUPPORTS. THIS COULD DAMAGE LIFT OR VEHICLE.
- LOAD VEHICLE ON LIFT CAREFULLY. POSITION LIFT SUPPORTS TO CONTACT AT THE VEHICLE MANUFACTURER'S RECOMMENDED LIFTING POINTS. RAISE LIFT UNTIL SUPPORTS CONTACT VEHICLE. CHECK SUPPORTS FOR SECURE CONTACT WITH VEHICLE. RAISE LIFT TO DESIRED WORKING HEIGHT. CAUTION: IF YOU ARE WORKING UNDER VEHICLE, LIFT SHOULD BE RAISED HIGH ENOUGH FOR LOCKING DEVICE TO BE ENGAGED.
- 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. RELEASE LOCKING DEVICES BEFORE ATTEMPTING TO LOWER LIFT.
- BEFORE REMOVING VEHICLE FROM THE LIFT AREA, POSITION LIFT ARMS AND SUPPORTS TO PROVIDE AN UNOBSTRUCTED EXIT.

LIFT FINAL CHECKOUT (AFTER INSTALLATION):

REV (6/28/2012)

THIS PROCEDURE OUTLINES THE FINAL CHECKS TO MAKE AFTER INITIAL INSTALLATION OF THE LIFT UNIT. REPEAT THIS PROCEDURE IF THE LIFT IS RELOCATED.

AFTER THE LIFT IS FULLY ASSEMBLED, RAISE THE LIFT EMPTY A FEW TIMES TO VERIFY:

- PROPER SYNCHRONIZATION OF LIFT ARMS
- UNIT IS RAISING SMOOTHLY (AIR IS BLEED FROM HYDRAULIC SYSTEM - SEE BLEEDING PROCEDURE FOR MORE DETAILS)
- NO LEAKS PRESENT AT ANY FITTING JUNCTIONS
- LOCKS ARE ENGAGING ON BOTH POSTS AS LIFT IS RAISING
- LOCKS ARE DIS-ENGAGING ON BOTH POSTS WHEN RELEASE CABLE PULLED (SEE J-BAR ADJUSTMENT PROCEDURE)
- LOCKS ARE RE-ENGAGING AFTER DIS-ENGAGED WHEN LIFT IS RAISED
- LIFT IS NOT DRIFTING DOWN WHEN RAISED (RAISE LIFT, THEN STOP, AND VERIFY DRIFT DOWN OF CYLINDERS)
- NO VIBRATIONS FROM LOOSE CLAMPING, ETC.
- SWING ARMS ROTATE SMOOTHLY WHEN LIFT FULLY LOWERED AND LOCK IN PLACE WHEN LIFT RAISED

ONCE THIS IS COMPLETE, LOCATE A REPRESENTATIVE VEHICLE INTO THE LIFTING AREA. USE A VEHICLE THAT WEIGHS AT LEAST 75 PERCENT OF THE CAPACITY OF THE LIFT. OBSERVING LIFTING PROCEDURES CONTAINED IN THIS MANUAL TO LOCATE VEHICLE IN LIFTING AREA, AND TO LOCATE LIFTING PADS AT LIFTING POINTS FOR VEHICLE, AND WHILE RAISING AND LOWERING.

RAISE LIFT APPROXIMATELY 1 FOOT. VERIFTY THE FOLLOWING:

- PROPER SYNCHRONIZATION OF LIFT ARMS
- NO LOOSENING OF REAR ANCHOR BOLTS IN BASE PLATES AT FLOOR (LOOK FOR GAP BETWEEN FLOOR AND BASES)
- UNIT IS RAISING SMOOTHLY (AIR IS BLEED FROM HYDRAULIC SYSTEM - SEE BLEEDING PROCEDURE FOR MORE DETAILS)
- NO LEAKS PRESENT AT ANY FITTING JUNCTIONS
- LOCKS ARE ENGAGING ON BOTH POSTS AS LIFT IS RAISING
- LIFT IS NOT DRIFTING DOWN WHEN RAISED (RAISE LIFT, THEN STOP, AND VERIFY DRIFT DOWN OF CYLINDERS)
- NO VIBRATIONS FROM LOOSE CLAMPING, ETC.

RELEASE LOCKS AND LOWER UNIT. VERIFY THE FOLLOWING:

- PROPER SYNCHRONIZATION OF LIFT ARMS
- UNIT IS LOWERING SMOOTHLY (AIR IS BLEED FROM HYDRAULIC SYSTEM - SEE BLEEDING PROCEDURE FOR MORE DETAILS)
- NO LEAKS PRESENT AT ANY FITTING JUNCTIONS
- NO VIBRATIONS FROM LOOSE CLAMPING, ETC.
- LOCKS ARE NOT RE-ENGAGING WHILE LOWERING

RAISE LIFT TO FULL STROKE. VERIFY THE FOLLOWING:

- PROPER SYNCHRONIZATION OF LIFT ARMS
- NO EXCESSIVE DEFLECTION OF POSTS OR ARMS
- NO LOOSENING OF REAR ANCHOR BOLTS IN BASE PLATES AT FLOOR (LOOK FOR GAP BETWEEN FLOOR AND BASES)
- UNIT IS RAISING SMOOTHLY (AIR IS BLEED FROM HYDRAULIC SYSTEM - SEE BLEEDING PROCEDURE FOR MORE DETAILS)
- NO LEAKS PRESENT AT ANY FITTING JUNCTIONS
- LOCKS ARE ENGAGING ON BOTH POSTS AS LIFT IS RAISING
- LIFT IS NOT DRIFTING DOWN WHEN RAISED (RAISE LIFT, THEN STOP, AND VERIFY DRIFT DOWN OF CYLINDERS)
- NO VIBRATIONS FROM LOOSE CLAMPING, ETC.

LOWER LIFT ONTO LOCKS. VERIFY THE FOLLOWING:

- LOCK IS ENGAGING UPON DESCENT
- PROPER SYNCHRONIZATION OF LIFT ARMS

RAISE, THEN RELEASE LOCKS, THEN LOWER VEHICLE TO FLOOR. VERIFY THE FOLLOWING:

- PROPER SYNCHRONIZATION OF LIFT ARMS
- UNIT IS RAISING & LOWERING SMOOTHLY (AIR IS BLEED FROM HYDRAULIC SYSTEM - SEE BLEEDING PROCEDURE FOR MORE DETAILS)
- NO LEAKS PRESENT AT ANY FITTING JUNCTIONS
- NO VIBRATIONS FROM LOOSE CLAMPING, ETC.
- LOCKS ARE NOT RE-ENGAGING WHILE LOWERING
- NO LOOSENING OF REAR ANCHOR BOLTS IN BASE PLATES AT FLOOR (LOOK FOR GAP BETWEEN FLOOR AND BASES)

ENSURE THAT ALL MANUALS AND OTHER INSTRUCTIONAL MATERIALS ARE DELIVERED TO OWNER/USER/EMPLOYER. ENSURE THAT USERS ARE INSTRUCTED IN THE SAFE AND PROPER USER OF THE LIFT.
FINAL CHECKOUT OF LIFT IS COMPLETE.

2-POST LIMITATIONS AND ADAPTER USAGE:

REV (2/9/2006)

2-POST LIMITATIONS:

ALL MOHAWK 2-POST LIFTS ARE FOR INDOOR USE UNLESS SPECIFICALLY QUALIFIED AND MODIFIED FOR A CUSTOM ENVIRONMENT.

ALL MOHAWK 2-POST LIFTS MUST ACCOMPLISH THREE MAIN CRITERIA IN ORDER TO LIFT A VEHICLE SAFELY:

1. **PROPER FRAME ENGAGEMENT WITH PADS.** ALL 2-POST FRAME ENGAGING LIFTS ARE DESIGNED TO LIFT STANDARD VEHICLES WITHIN THEIR RATED CAPACITY BY THE VEHICLE FRAME. IF SUITABLE FRAME CONTACT LIFT POINTS CAN NOT BE REACHED OR ACCOMMODATED BY THE LIFTING PADS, THE VEHICLE MUST NOT BE RAISED WITH THE LIFT. REFER TO VEHICLE MANUFACTURER LIFTING POINT SPECIFICATIONS (AND VEHICLE LIFT POINT LABEL PER SAE J2184, VEHICLE LIFT POINTS FOR SERVICE GARAGE LIFTING).
2. **PROPER CENTER OF GRAVITY PLACEMENT OF VEHICLE ON LIFT** ENSURE THAT THE CENTER OF GRAVITY OF THE VEHICLE LIES CENTERED BETWEEN THE LIFTING ARMS. THIS SHOULD PLACE THE CENTER OF GRAVITY OF THE VEHICLE IN LINE WITH THE CENTER OF THE POSTS AS WELL.
3. **PROPER LOADING OF ARMS.** INDIVIDUAL ARM CAPACITIES ARE ¼ OF THE RATED LIFT CAPACITY, AND MUST NOT BE EXCEEDED. FOR INSTANCE, A 10,000 LB RATED 2-POST LIFT HAS ARMS THAT ARE RATED FOR 2,500 LBS EACH. IT IS POSSIBLE THAT A 10,000 LB VEHICLE CAN OVERLOAD THE ARMS ON A 10,000 LB LIFT IF THE FRONT AND REAR LOADING ARE NOT EQUAL.

WITH RESPECT TO HEAVY ENDED VEHICLES SUCH AS FORK TRUCKS, DELIVERY VANS, PICKUP TRUCKS, ETC, ATTENTION MUST BE MADE TO ENSURE THAT THE PER ARM CAPACITY OF THE LIFTING ARMS IS NOT EXCEEDED AND THAT THE CENTER OF GRAVITY OF THE VEHICLE LIES CENTERED BETWEEN THE LIFTING ARMS.

SPECIAL SAFETY PRECAUTIONS MUST BE OBSERVED IN APPLICATIONS INVOLVING VERY LONG AND VERY SHORT WHEELBASE VEHICLES. 2-POST LIFTS ARE NOT DESIGNED TO RAISE STRETCHED LIMOS AND OTHER TYPES OF LONG WHEEL BASE VEHICLES. AS A RULE OF THUMB, THE VEHICLE LENGTH ON A 2-POST MUST BE LIMITED TO 4 TIMES THE LENGTH OF THE ARM SPREAD TO RAISE IT. THE CENTER OF GRAVITY ON THIS VEHICLE MUST LIE BETWEEN THE LIFTING PADS TO ACCOMPLISH THIS. NOTE THAT SOME VEHICLES, PER VEHICLE MANUFACTURER GUIDELINES, ARE NOT TO BE RAISED BY THE FRAME. REFER TO VEHICLE MANUFACTURER GUIDELINES FOR PROPER LIFTING TECHNIQUES.

THIS LIFT IS NOT INTENDED, NOR DESIGNED, TO LIFT VEHICLE FRONT OR BACK ENDS USING ONLY TWO ARMS.

CARE MUST BE OBSERVED WHEN REMOVING ANY HEAVY COMPONENTS FROM A VEHICLE AND THEREBY DRASTICALLY SHIFTING THE VEHICLE CENTER OF GRAVITY (I.E. ENGINE REMOVAL, TRANSMISSION REMOVAL, ETC.). THE USE OF JACK STANDS AT THE FRONT AND REAR ENDS OF THE VEHICLE IS HIGHLY RECOMMENDED WHEN PERFORMING THIS TYPE OF WORK.

ADAPTER USAGE AND LIMITATIONS:

THE USE OF HEIGHT ADAPTERS IS COMMON FOR MOST LIFTING SITUATIONS TO ACCOMMODATE HIGH FRAMES AND LOW OVERHANGING BODIES OF VEHICLES.

FOR A-7, A-7A, SYSTEM IA, SYSTEM IA-10, TOMAHAWK-9000:
THESE LIFTS COME STANDARD WITH (4) 3” AND (4) 6” HEIGHT ADAPTERS.
THESE LIFTS ARE ONLY ALLOWED TO USE 2 ADAPTERS WHEN STACKED: ONE (1) 6” AND ONE (1) 3” ADAPTER, RESULTING IN 9” MAXIMUM STACKING HEIGHT. LONGER CUSTOM SINGLE PIECE ADAPTERS ARE AVAILABLE UPON REQUEST.

FOR LMF-12, TP-15, TP-16, TP-18, TP-20, TP-26, TP-30:
THESE LIFTS COME STANDARD WITH (4) 5”, (4) 7 ½”, AND (4) 10” HEIGHT ADAPTERS.
THESE LIFTS ARE ONLY ALLOWED TO USE 2 ADAPTERS WHEN STACKED: ONE (1) 10” AND ONE (1) 7½” ADAPTER, RESULTING IN 17 1/2” MAXIMUM STACKING HEIGHT. LONGER CUSTOM SINGLE PIECE ADAPTERS ARE AVAILABLE UPON REQUEST.

THE USER SHOULD BE WARNED THAT ANY SITUATION PRODUCING AN OFF-VERTICAL SLANTING OF THE HEIGHT ADAPTERS, SUCH AS DEFLECTION OF THE ARM DUE TO HEAVY LOAD, DEFLECTION OF THE ARM DUE TO SLOP, ECCENTRIC CORNER LOADING OF THE LIFT PAD, ETC. MUST BE AVOIDED. CUPPED OR YOKE STYLE LIFTING PADS (WHICH DO NOT RELY ON FRICTION) ARE ALSO AVAILABLE FOR SITUATIONS INVOLVING LIFTING NON-FLAT SURFACES. CONSULT MOHAWK SERVICE DEPARTMENT FOR CUSTOM PAD REQUESTS FOR YOU APPLICATION.

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

LIFT PREPARATION AND VEHICLE POSITIONING

- PERFORM PRE-OPERATION CHECK LIST ITEM BY ITEM.
- POSITION THE SWING ARM TO THE OUTSIDE OF THE UNIT.
- POSITION THE VEHICLE CENTERED BETWEEN THE POSTS

NOTE:

ALIGN THE VEHICLE'S CENTER OF GRAVITY WITH THE CENTERLINE OF THE POSTS. THIS CAN BE VERIFIED BY VIEWING THE CAM FOLLOWER BEARINGS ON THE CARRIAGE. THESE BEARINGS ARE LOCATED AT EACH CORNER OF THE CARRIAGE. CENTERING OF VEHICLE IS ACHIEVED WHEN ALL 4 CAM FOLLOWER BEARINGS ARE FREE TO SPIN.

- PLACE THE LIFTING PADS PER MFG'S RECOMMENDED LIFT POINTS FOR THE VEHICLE. REFER TO ALI/LP-GUIDE, ALI/SM01-2 "LIFTING IT RIGHT" GUIDE, AND REFER TO THE RECOMMENDED LOCATION AND FORMAT OF THE VEHICLE LIFT POINT LABEL PER ANSI/SAE J2184-OCT92.

CAUTION:

IF PROPER AND SAFE LIFTING POINTS ON THE FRAME OF THE VEHICLE CAN NOT BE REACHED BY THE LIFTING PADS, DO NOT RAISE THIS VEHICLE!

TO RAISE

- ENGAGE THE UP-BUTTON ON THE POWER UNIT.
- RAISE VEHICLE TO THE DESIRED WORKING HEIGHT.
- LOWER THE UNIT ONTO THE MECHANICAL SAFETIES.

TO LOWER

- INSPECT THE LIFTING AREA TO INSURE THAT ALL PERSONNEL AND DEBRIS HAVE BEEN CLEARED FROM THE LIFTING AREA.
- ENGAGE THE UP-BUTTON ON THE POWER UNIT.
- RAISE UNIT APPROXIMATELY TWO INCHES.
- DISENGAGE THE MECHANICAL SAFETIES BY PRESSING THE AIR LOCK RELEASE BUTTON NEAR THE POWER UNIT.
- WHILE HOLDING THE LOCK RELEASE BUTTON, PRESS THE LOWER HANDLE AND LOWER UNIT TO THE DESIRED WORKING HEIGHT.
- ALWAYS ENGAGE THE UP-BUTTON ON THE POWER UNIT AND RAISE UNIT UNTIL BOTH MECHANICAL SAFETIES RE-ENGAGE.
- LOWER THE UNIT ONTO THE MECHANICAL SAFETIES BY PRESSING THE LOWER HANDLE ONLY.
- IF WORK IS COMPLETE, CONTINUE LOWERING THE UNIT (PRESSING THE LOWER HANDLE AND THE LOCK RELEASE SIMULTANEOUSLY) UNTIL BOTH CARRIAGES ARE FULLY LOWERED.

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.

MAINTENANCE PROCEDURES

-- TRAINED LIFT SERVICE PERSONNEL ONLY –
REFER TO ANSI/ALI ALIS, SAFETY REQUIREMENTS FOR INSTALLATION AND SERVICE OF AUTOMOTIVE LIFTS.

DAILY

- PERFORM THE PRE-OPERATION CHECK LIST.
- REPORT ANY AND ALL EQUIPMENT MALFUNCTIONS IMMEDIATELY.
- CLEAN ALL MOVING PARTS. (IT IS NOT RECOMMENDED TO GREASE THE INSIDE OF THE CHANNEL ON THE POST, SWING ARMS OR SWING ARM RESTRAINTS.) IF OXIDIZATION IS OCCURRING USE A LIGHT LUBRICANT. (WD - 40 OR EQUIVALENT)
- KEEP AREA AROUND THIS EQUIPMENT FREE OF DIRT, SAND, WATER, ETC.

WEEKLY

- PERFORM THE DAILY OPERATION CHECK LIST.
- WIPE CLEAN, THE CYLINDERS' WIPER SEALS AND THE BASE OF EACH POST TO REMOVE ANY WEEPING OIL AND DUST.
- VERIFY FLUID LEVEL. WITH THE UNIT FULLY LOWERED, THE FLUID LEVEL WILL BE 1/2 INCH BELOW THE BREATHER CAP PORT. USE DEXRON III AS REPLACEMENT FLUID.
- LUBRICATE THE ARM RESTRAINT ASSEMBLIES AS NEEDED TO INSURE FREE, AND SMOOTH OPERATION.
  (**DO NOT USE GREASE)**
- CYCLE UNIT TO FULL HEIGHT, AND BLEED APPROXIMATELY 30 SECONDS.

MONTHLY

- INSPECT LIFTING COMPONENTS FOR DEFORMATION, WEAR OR CORROSION.
- INSPECT ALL HYDRAULIC COMPONENTS FOR LEAKS, DEFORMATION, WEAR OR CORROSION.
- TIGHTEN ALL FASTENERS AND HYDRAULIC FITTINGS AS REQUIRED.
  1. ALL O - RING BOSS FITTINGS JAM NUTS ARE TO BE TIGHTENED TO 15-FOOT POUNDS TORQUE.
  2. ALL PIPE 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:
  SWING ARM NUTS 500 FT-LB (ARMS TO PIVOT FREELY)
  CARRIAGE STOP FASTENERS TO 170 FT-LB
  CARRIAGE SIDE ROLLER NUTS TO 300 FT-LB
  LIFTING ROD NUTS TO 720 FT-LB
  CYLINDER TOP BOLT TO 720 FT-LB
  ANCHORS (SEE ANCHOR SPECIFICATION SECTION)
- LUBRICATE LOCK BODY MAIN PIVOT PINS. REMOVE WITH SNAP RING PLIERS WHEN FULLY LOWERED AND CLEAN LOCK PIVOT PIN AND LOCK BODY HOLE. SPRAY PIN WITH A LIGHT LUBRICANT (WD-40 OR EQUIVALENT), THEN RE-ASSEMBLE, ENSURING SMOOTH MOTION.
- THE CHANNEL SECTIONS WHERE THE CARRIAGE BEARINGS RIDE AGAINST SHOULD BE CLEANED AND LUBRICATED USING A LIGHT LUBRICANT (WD-40).
- THE MAIN CARRIAGE BEARINGS ARE FACTORY LUBRICATED AND DO NOT REQUIRE ANY ADDITIONAL PERIODIC LUBRICATION. HOWEVER, IF ADDITIONAL LUBRICATION IS DESIRED ON THESE UNDER THE CUSTOMER'S OWN INSPECTION AND MAINTENANCE PROGRAM, IT IS RECOMMENDED TO USE CAM2 – MULTIPURPOSE #2 GREASE (PART NO. 86035) OR EQUIVALENT. USE APPROXIMATELY 2 OZ. PER BEARING.

ANNUALLY

- REPLACE AND RE-BLEED THE HYDRAULIC FLUID. ALWAYS USE A CLEAN FUNNEL AND FILTER. USE DEXRON III HYDRAULIC FLUID.
- INSPECT ALL BEARINGS FOR UNUSUAL OR EXCESSIVE WEAR. (REPLACE IF NEEDED)
- REMOVE THE SWING ARM RESTRAINTS. THOROUGHLY CLEAN. USE A LIGHT LUBRICANT (WD-40 OR EQUIVALENT) REINSTALL. **DO NOT USE GREASE.**
- REMOVE THE SWING ARMS. THOROUGHLY CLEAN. USE A LIGHT LUBRICANT (WD-40 OR EQUIVALENT) REINSTALL. **DO NOT USE GREASE.**
- PERFORM THE DAILY, WEEKLY, AND MONTHLY MAINTENANCE PROCEDURES.

PART REPLACEMENT NOTES

- REPLACE ALL WORN OR BROKEN PARTS WITH GENUINE LIFT MANUFACTURER SUPPLIED PARTS (FROM MOHAWK RESOURCES LTD. ONLY)
- ALL REPLACEMENTS OF PARTS ARE TO BE PERFORMED BY TRAINED LIFT SERVICE PERSONNEL ONLY.
- UPON PART REPLACEMENT, LIFT MUST PASS A FULL LIFT INSPECTION AS DEEMED SUITABLE BY TRAINED LIFT SERVICE PERSONNEL.

HYDRAULIC SAFETY CHECKS / 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 **NO** VEHICLE.

NOTE: THE HYDRAULIC SAFETY CHECK IS TO BE PERFORMED WITH NO VEHICLE ON THE UNIT. THE HYDRAULIC SYSTEM CHECKS WILL DETECT INTERNAL HYDRAULIC LEAKS. CONTACT YOUR LOCAL MOHAWK DISTRIBUTOR OR THE MOHAWK FACTORY SERVICE DEPARTMENT IF A CHECK SHOULD FAIL.

MAINSIDE SAFETY CHECK:

1. RAISE THE UNIT APPROXIMATELY 3 FEET
2. DISENGAGE THE **OFFSIDE** MECHANICAL SAFETY
3. LOWER THE UNIT ONTO THE **MAINSIDE** MECHANICAL SAFETY
4. WHILE CONTINUING TO HOLD DOWN THE POWER UNIT LOWERING HANDLE, OBSERVE THE **OFFSIDE** CARRIAGE FOR MOVEMENT. THE UNIT HAS CHECK OUT OK IF THERE IS NO MOVEMENT (**OFFSIDE** CARRIAGE DOES NOT CONTINUE TO LOWER)

OFFSIDE SAFETY CHECK:

1. RAISE THE UNIT APPROXIMATELY 3 FEET
2. DISENGAGE THE **MAINSIDE** MECHANICAL SAFETY
3. LOWER THE UNIT ONTO THE **OFFSIDE** MECHANICAL SAFETY
4. WHILE CONTINUING TO HOLD DOWN THE POWER UNIT LOWERING HANDLE, OBSERVE THE **MAINSIDE** CARRIAGE FOR MOVEMENT. THE UNIT HAS CHECK OUT OK IF THERE IS NO MOVEMENT (**MAINSIDE** CARRIAGE DOES NOT CONTINUE TO LOWER)

OFFSIDE CYLINDER / DIVERTER VALVE CHECK:
(TO BE PERFORMED WHEN OFFSIDE CYLINDER DRIFTS DOWN)

1. RAISE THE UNIT APPROXIMATELY 3 FEET
2. DISENGAGE BOTH MECHANICAL SAFETIES
3. REMOVE THE BLEED LINE FROM THE TOP OF THE OFFSIDE CYLINDER AND CAP USING MOHAWK PN #601-420-001.
4. IF THE OFFSIDE CYLINDER NO LONGER DRIFTS DOWN, THEN THE OFFSIDE CYLINDER WILL NEED TO BE SERVICED.
5. IF THE OFFSIDE CYLINDER CONTINUES TO DRIFT DOWN, THEN THE DIVERTER PULL VALVE WILL NEED TO BE SERVICED.

MAINSIDE CYLINDER PISTON CHECK:
(THIS CHECK IS TO BE PERFORMED AFTER ALL THE OTHER HYDRAULIC SAFETY CHECKS HAVE BEEN PERFORMED)

1. RAISE A VEHICLE SO THAT ALL FOUR TIRES ARE OFF THE FLOOR.
2. MEASURE AND RECORD THE CARRIAGE HEIGHTS ON THE MAINSIDE AND OFFSIDE.
3. CYCLE THE LIFT UP AND DOWN FOUR TIMES WITHOUT GOING TO FULL HEIGHT OR LETTING THE VEHICLE TIRES CONTACT THE FLOOR.
4. LOWER THE UNIT, STOPPING WHEN THE TIRES ARE AT THE APPROXIMATE HEIGHT AT THE BEGINNING.
5. MEASURE MAINSIDE AND OFFSIDE CARRIAGE HEIGHTS AGAIN.
6. THE CHECK HAS FAILED IF THE MEASUREMENTS CHANGE MORE THAN ¼ INCH.

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 **NO** VEHICLE.

POSSIBLE CAUSE	SOLUTION
NOT RAISING LOAD	
LOW HYDRAULIC FLUID LEVEL	LOWER UNIT. REMOVE RESERVOIR BREATHER CAP. FILL UNIT TO WITHIN 1/2 INCH BELOW PORT. USE DEXRON III TRANSMISSION / HYDRAULIC FLUID.
PRESSURE RELIEF ADJUSTMENT	CONTACT MOHAWK SERVICE DEPARTMENT.
PRESSURE RELIEF CONTAMINATION	REFER TO POWER UNIT SPECIFICATIONS. REMOVE AND CLEAN DEBRIS FROM VALVE ASSEMBLY.
VOLTAGE TO POWER UNIT	REFER TO POWER UNIT SPECIFICATIONS. CONSULT AN ELECTRICIAN
UNIT OVERLOADED	VEHICLE IS TO HEAVY TO BE RAISED
NOT LOWERING	
MECHANICAL LOCKS ENGAGED	RAISE UNIT. PRESS LOCK RELEASE BUTTON. WHILE HOLDING LOCK RELEASE BUTTON, PRESS THE LOWER HANDLE.
NO AIR SUPPLY FOR AIRLOCK RELEASE	VERIFY AT REGULATOR THAT AIR SUPPLY IS BETWEEN 60-80 PSI.
UNIT UNEVEN (SIDE TO SIDE)	RAISE UNIT TO FULL HEIGHT TO EQUALIZE. THEN LOWER OR USE DIVERTER VALVE TO EQUALIZE
POSTS OUT OF SQUARE	VERIFY LEVEL ASSEMBLY. MAKE ANY AND ALL NECESSARY ADJUSTMENTS. SEE FIGURE 5 & 6..
DEBRIS IN POSTS (TOOLS ETC.)	CLEAN UNIT
OBSTRUCTION UNDER VEHICLE OR LIFT	REMOVE OBSTRUCTION.
RAISING UNEVEN **RULE OF THUMB: IF THE MAIN SIDE IS HIGH, RUN UNIT TO FULL HEIGHT. IF THE MAIN SIDE IS LOW, LOWER UNIT TO FLOOR. ALLOW TIME FOR THE OFF SIDE TO EQUALIZE.**	
AIR IN SYSTEM	BLEED UNIT. REFER TO BLEEDING PROCEDURES.
CARRIAGE BEARINGS CONTACTING CARRIAGE STOPS	CARRIAGE BEARINGS ON THE MAIN SIDE MUST NOT CONTACT CARRIAGE STOPS. (RESULT OF INCORRECT ADJUSTMENT OF NUTS ON LIFTING RODS.) SEE FIGURE 7.
POSTS OUT OF SQUARE	VERIFY LEVEL ASSEMBLY. MAKE ANY AND ALL NECESSARY ADJUSTMENTS. SEE FIGURE 5 & 6.
SHOP FLOOR UNEVEN	VERIFY PROPER INSTALLATION OF MAIN SIDE POST. MAIN SIDE TO BE ON HIGH SIDE. SEE FIGURE 9.

TROUBLE SHOOTING, CONTINUED

POSSIBLE CAUSE	SOLUTION
RAISING UNEVEN, CONTINUED	
SHOP FLOOR UNEVEN	USE SPECIAL LIFT PADS. SEE FIGURE 10.
DIVERTER VALVE	REMOVE BLEED LINE FROM THE TOP OF THE OFF SIDE CYLINDER AND CAP USING MOHAWK PART # 601-420-001. IF THE UNIT CONTINUES TO DRIFT DOWN THE DIVERTER PULL VALVE WILL NEED TO BE CLEANED OR REPLACED.
OFF SIDE CYLINDER	REMOVE BLEED LINE FROM THE TOP OF THE OFF SIDE CYLINDER AND CAP USING MOHAWK PART # 601-420-001. IF THE UNIT NO LONGER DRIFTS DOWN THE OFF SIDE CYLINDER WILL NEED TO BE SERVICED..
MAIN SIDE CYLINDER	PERFORM HYDRAULIC SAFETY CHECKS. CHECK FOR INTERNAL HYDRAULIC LEAKS
SLOW DRIFT DOWN	
SAFETIES NOT ENGAGED	RAISE UNIT TO RE-ENGAGE SAFETIES. THEN LOWER UNIT ONTO SAFETIES.
POWER UNIT LOWERING VALVE CONTAMINATION	BACK FLUSH POWER UNIT: PULL DOWN ON THE LOWERING HANDLE, AND THEN ENGAGE THE UP BUTTON AT THE SAME TIME. RUN UNIT APPROX. 10 SECONDS
DIVERTER VALVE	REMOVE BLEED LINE FROM THE TOP OF THE OFF SIDE CYLINDER AND CAP USING MOHAWK PART # 601-420-001. IF THE UNIT CONTINUES TO DRIFT DOWN THE DIVERTER PULL VALVE WILL NEED TO BE CLEANED OR REPLACED.
OFF SIDE CYLINDER	REMOVE BLEED LINE FROM THE TOP OF THE OFF SIDE CYLINDER AND CAP USING MOHAWK PART # 601-420-001. IF THE UNIT NO LONGER DRIFTS DOWN THE OFF SIDE CYLINDER WILL NEED TO BE SERVICED..
EXTERNAL HYDRAULIC LEAKS NOTE: TIGHTEN ALL FITTINGS PER SPECIFICATIONS	
MAIN SIDE CYLINDER	THOROUGHLY CLEAN THE CYLINDER. VERIFY LEAK ORIGIN. FITTINGS ARE TO BE TIGHTENED PER SPECIFICATIONS
OFF SIDE CYLINDER	THOROUGHLY CLEAN THE CYLINDER. VERIFY LEAK ORIGIN. FITTINGS ARE TO BE TIGHTENED PER SPECIFICATIONS.
BAD FLAIR 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.**

SERVICE CHART

MODEL: _____
SERIAL NUMBER: _____
DATE OF INSTALLATION: _____

DATE	PART REPLACED / SERVICED	SERVICE COMPANY	SERVICED BY

MAINTENANCE CHART

DATE	MAINTENANCE PERFORMED	SERVICE COMPANY	SERVICED BY

MOHAWK

MODEL LMF-12
TP-15, TP-16 & TP-18

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-MAIN: SERVICE@MOHAWKLIFTS. COM

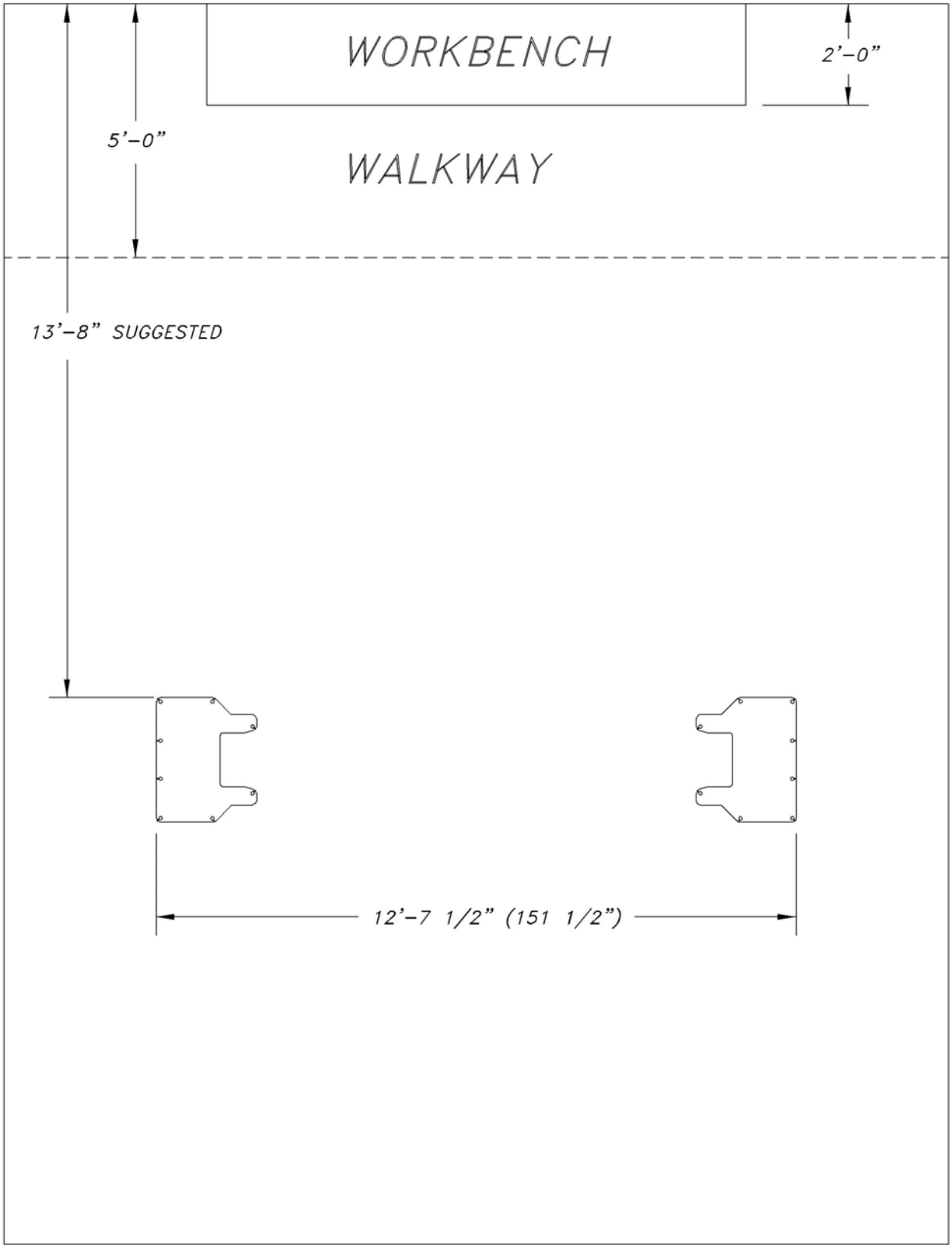

WORKBENCH
2'–0"
5'–0"
WALKWAY
13'–8" SUGGESTED
12'–7 1/2" (151 1/2")
BAY SIGHT LAYOUT
MAN514

Figure 1

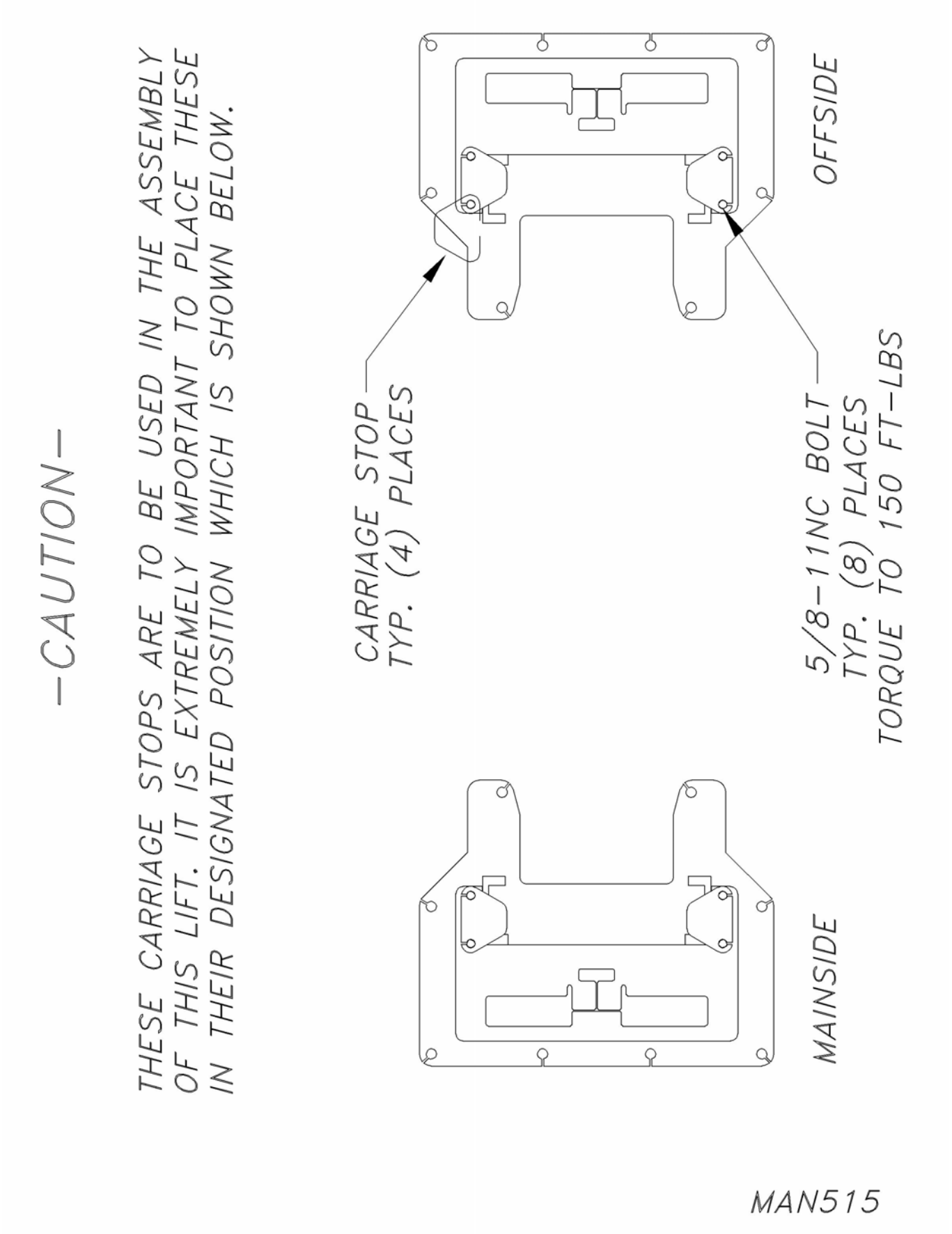

-CAUTION-
THESE CARRIAGE STOPS ARE TO BE USED IN THE ASSEMBLY OF THIS LIFT. IT IS EXTREMELY IMPORTANT TO PLACE THESE IN THEIR DESIGNATED POSITION WHICH IS SHOWN BELOW.
CARRIAGE STOP TYP. (4) PLACES
5/8-11NC BOLT TYP. (8) PLACES TORQUE TO 150 FT-LBS
OFFSIDE
MAINSIDE
MAN515

Figure 2

WEJ-IT INSTALLATION

DO NOT USE IMPACT WRENCH

USE HAND WRENCH ONLY

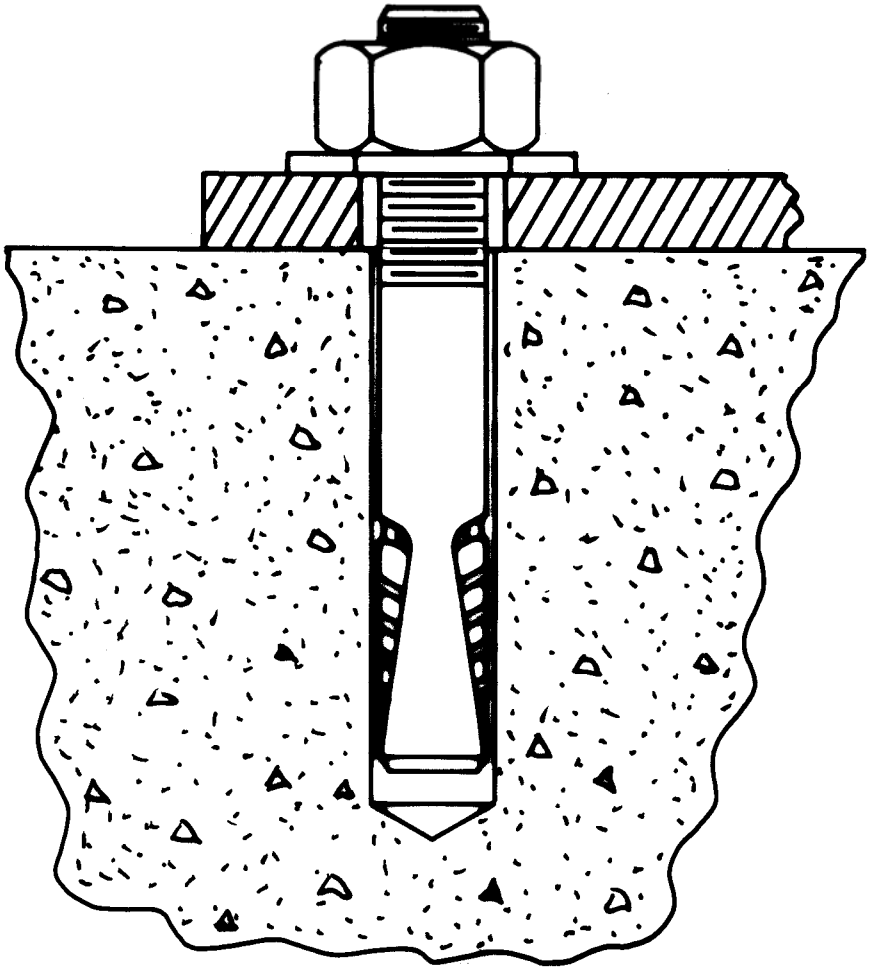
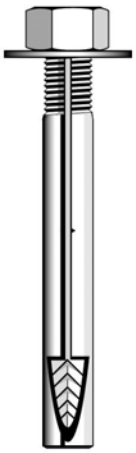


Figure 3



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.

USA ENGINEERED & MANUFACTURED

Specifications, Approvals and Listings

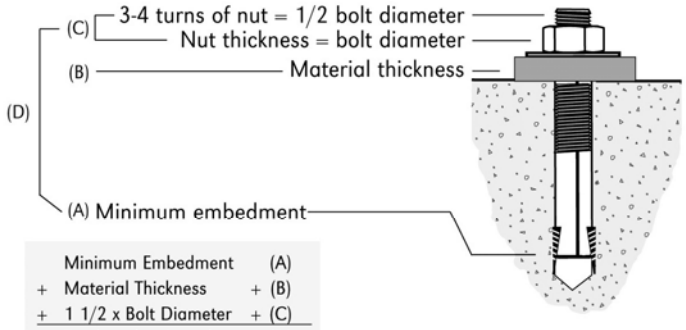
Type	
Zinc Plating	ASTM B-633, Type III, SCI
ICBO-ES	Report #1821
City of Los Angeles	#RR 24939
DOT	Please call Customer Service for specific information by state.
Federal Specifications	QQZ-325C, Type II, Class 3 (Clear Chromate added) FFS-325, Group II, Type 4, Class 1

Maximum Tensile and Shear Capacity for Static Loads

	Limestone Aggregate			Unreinforced Stone Aggregate oncrete Zin Plated arbon Steel							Unreinforced Lightweight (Idealite)		
Anchor & Hole Size	Embed-ment (in)	2000 psi Tension (lbs)	Shear (lbs)	Embed-ment (in)	3000 psi Tension (lbs)	Shear (lbs)	5000 psi Tension (lbs)	Shear (lbs)	7000 psi Tension (lbs)	Shear (lbs)	Embed-ment (in)	5000 psi Tension (lbs)	Shear (lbs)
3/4	•	•	•	3	11579	15537	19299	21000	27019	23103	3 1/2	17293	19050
3/4	•	•	•	7	15444	15537	25740	21000	36036	23103	•	•	•
1	•	•	•	5 1/2	16351	•	27252	33083	38153	35700	4 1/2	21616	31666
1	•	•	•	7	17837	•	29728	33083	41619	35700	•	•	•
Source	1			2							2		

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



	Minimum Embedment	(A)
+	Material Thickness	+ (B)
+	1 1/2 x Bolt Diameter	+ (C)
=	Total Anchor Length	= (D)

The Original™ Wej-it Since 1952

Edge Distance and Spacing Requirements

Embedment (E) in Anchor Diameters (d)	Spacing	Edge Distance
E < 6d (shallow)	3.50E	1.75E
6d ≤ E ≤ 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.

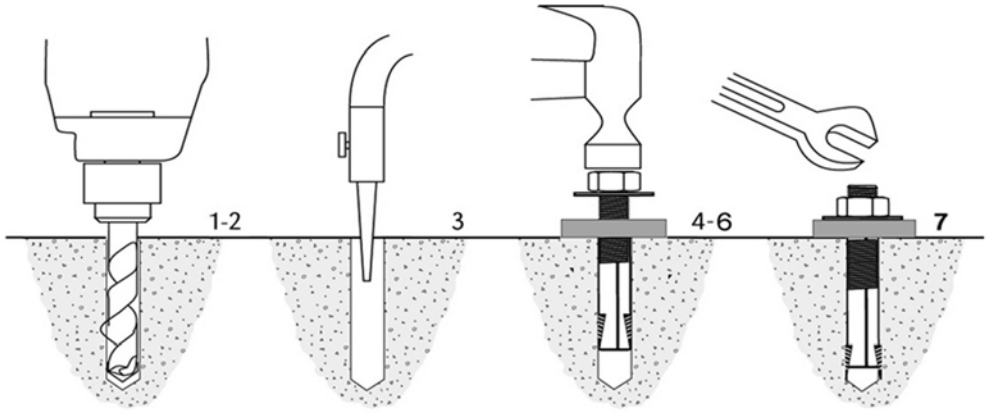
Figure 4a

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

Anchor Diameter (in)	Drill Bit Diameter (in)	Estimated Install Torque (ft-lb)
3/4	3/4	75
1	1	130



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.

REV: 11/07

Figure 4b

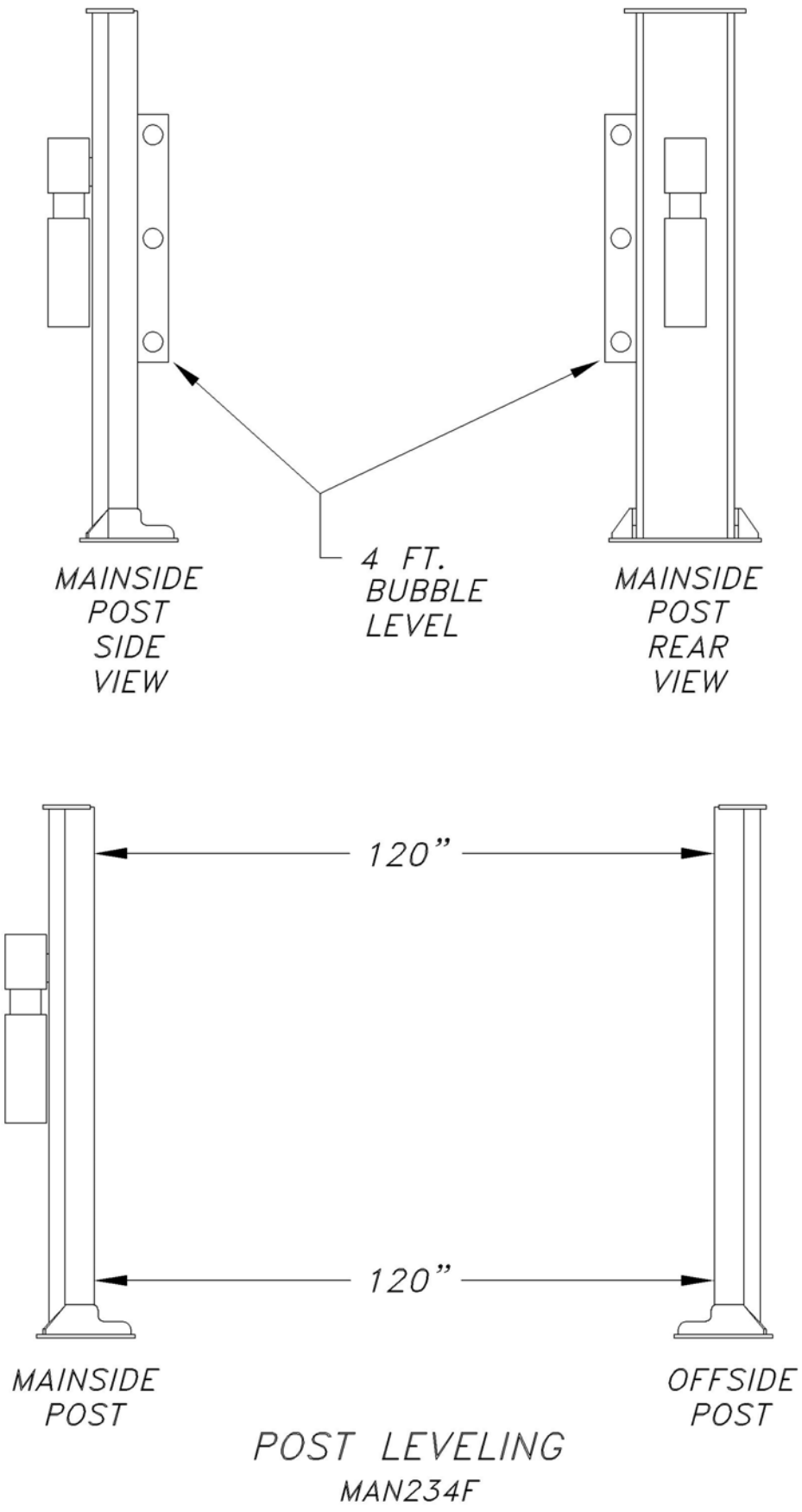

MAINSIDE POST SIDE VIEW
4 FT. BUBBLE LEVEL
MAINSIDE POST REAR VIEW
120"
120"
MAINSIDE POST
OFFSIDE POST
POST LEVELING
MAN234F

Figure 5

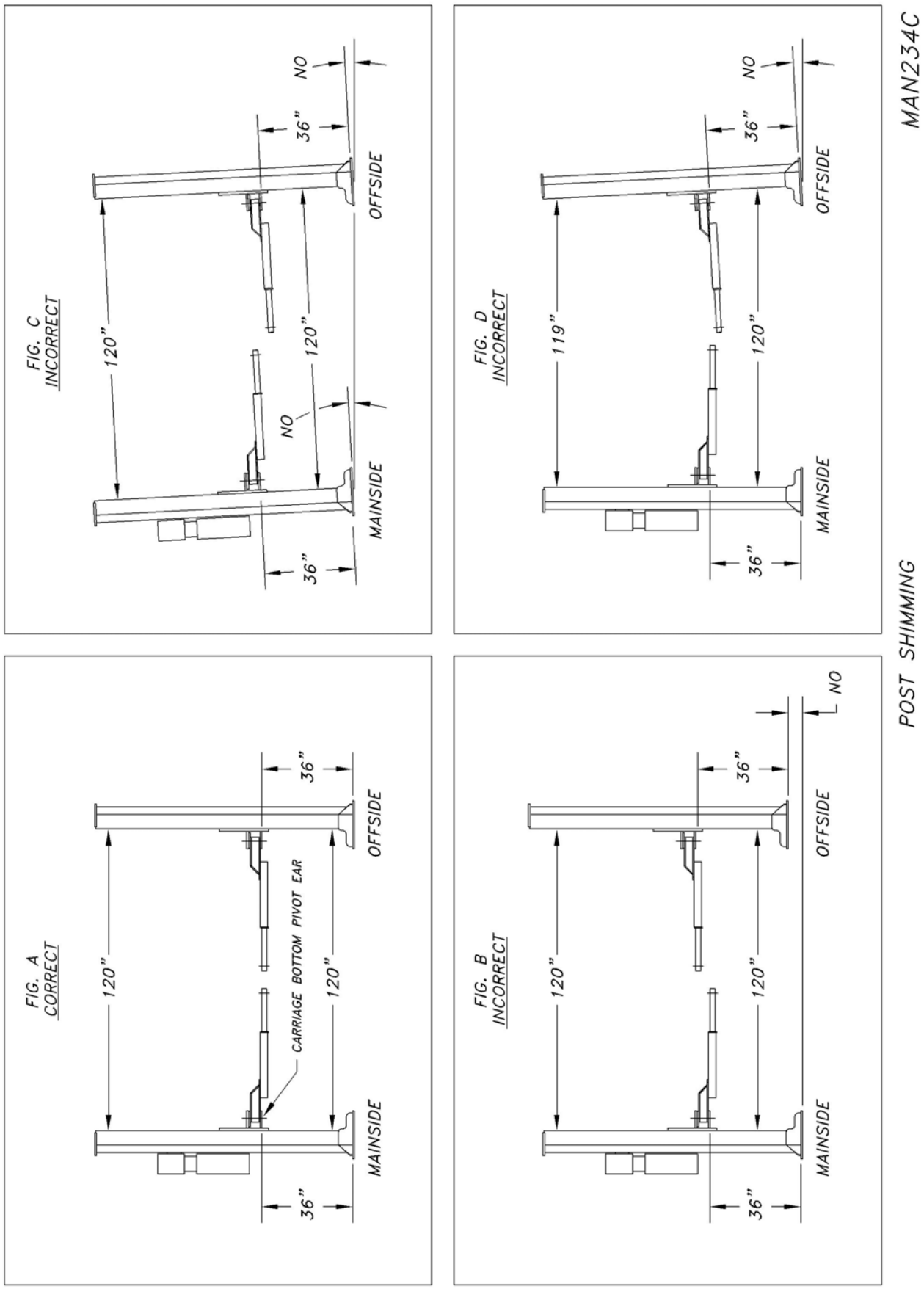


FIG. A
CORRECT
120"
120"
36"
36"
CARRIAGE BOTTOM PIVOT EAR
OFFSIDE
MAINSIDE
FIG. B
INCORRECT
120"
120"
36"
36"
NO
OFFSIDE
MAINSIDE
FIG. C
INCORRECT
120"
120"
36"
36"
NO
NO
OFFSIDE
MAINSIDE
FIG. D
INCORRECT
119"
120"
36"
36"
NO
OFFSIDE
MAINSIDE
POST SHIMMING
MAN234C

Figure 6

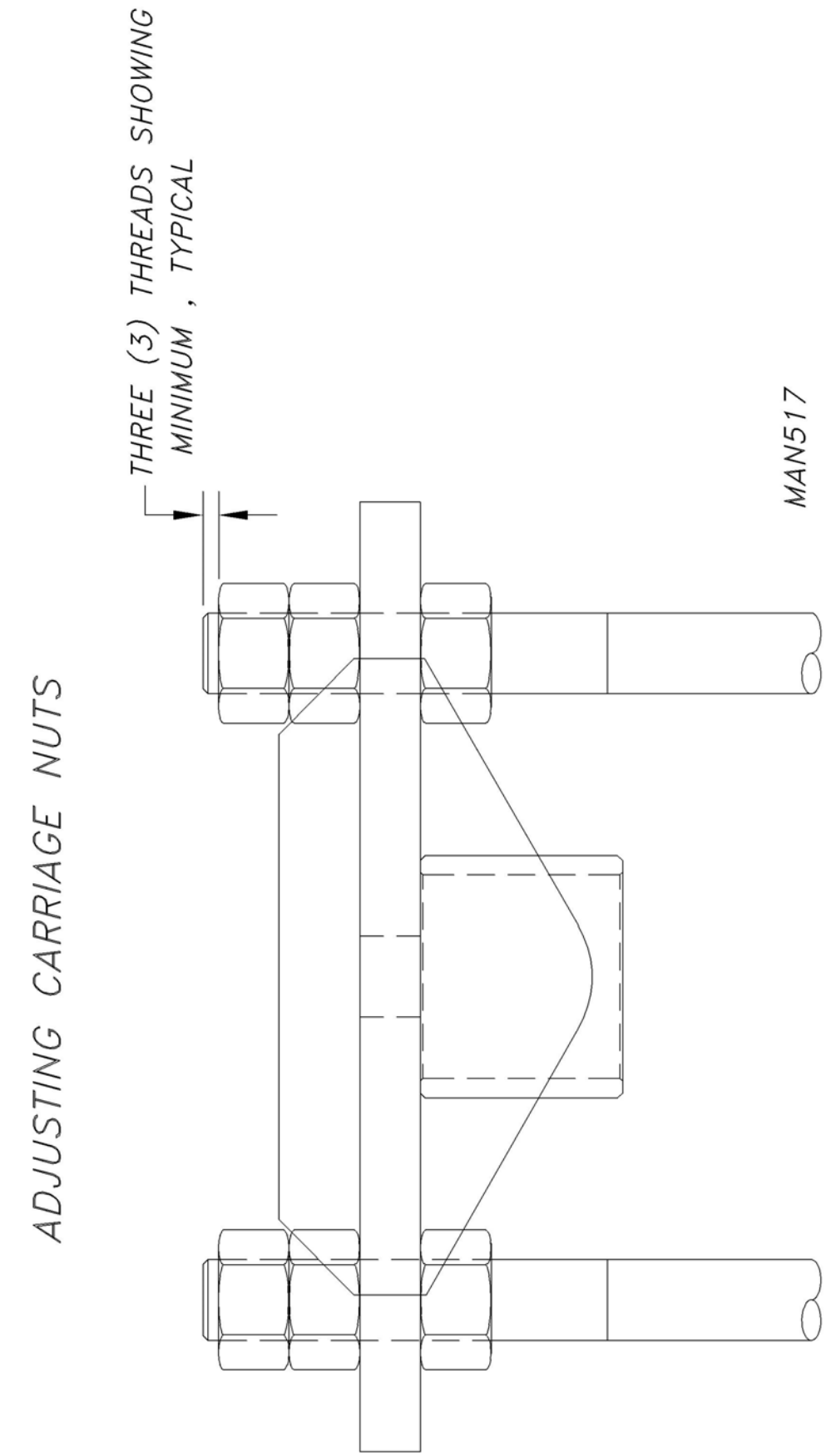

ADJUSTING CARRIAGE NUTS
THREE (3) THREADS SHOWING MINIMUM , TYPICAL
MAN517

Figure 7

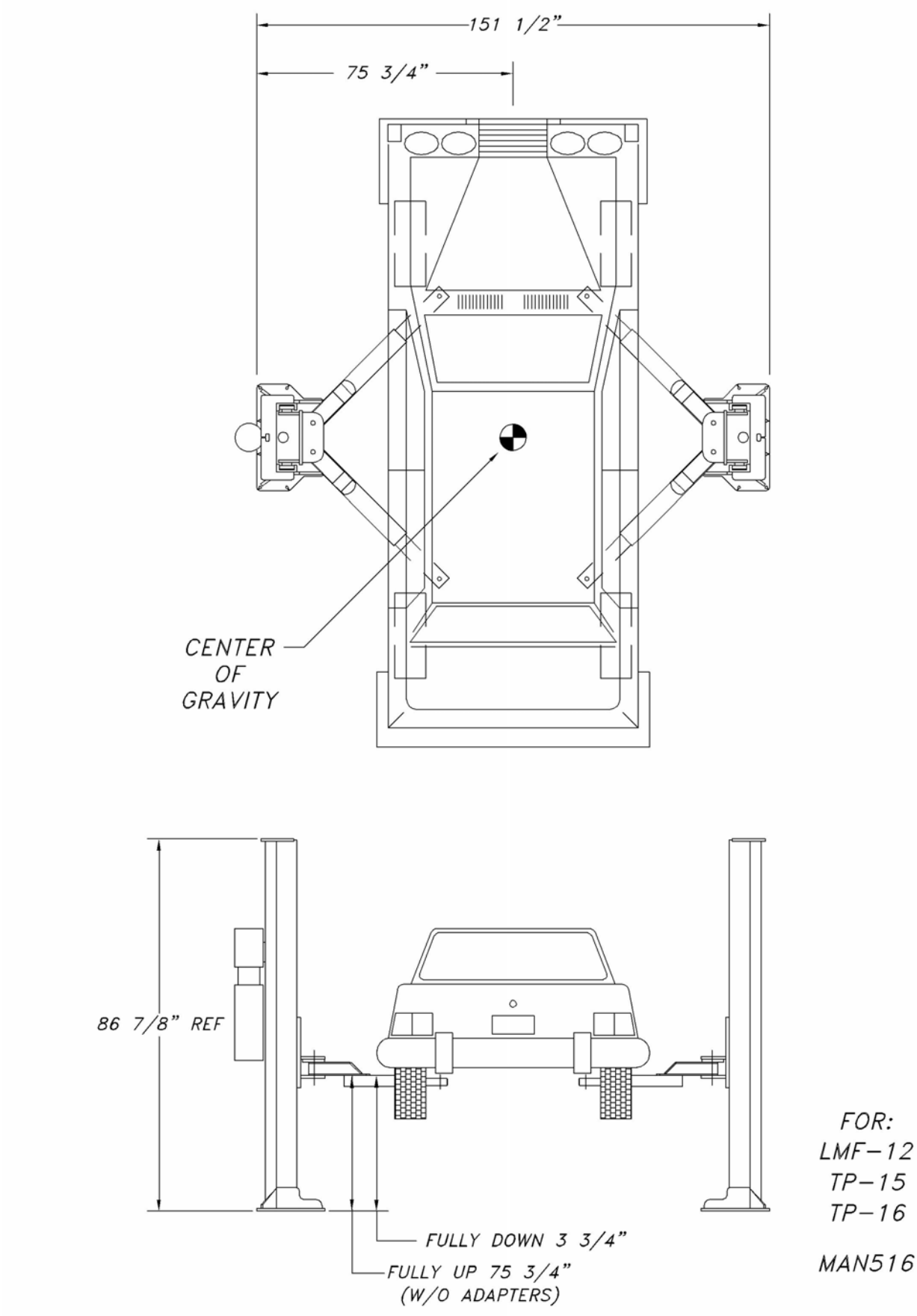

151 1/2"
75 3/4"
CENTER
OF
GRAVITY
86 7/8" REF
FULLY DOWN 3 3/4"
FULLY UP 75 3/4"
(W/O ADAPTERS)
FOR:
LMF-12
TP-15
TP-16
MAN516

Figure 8

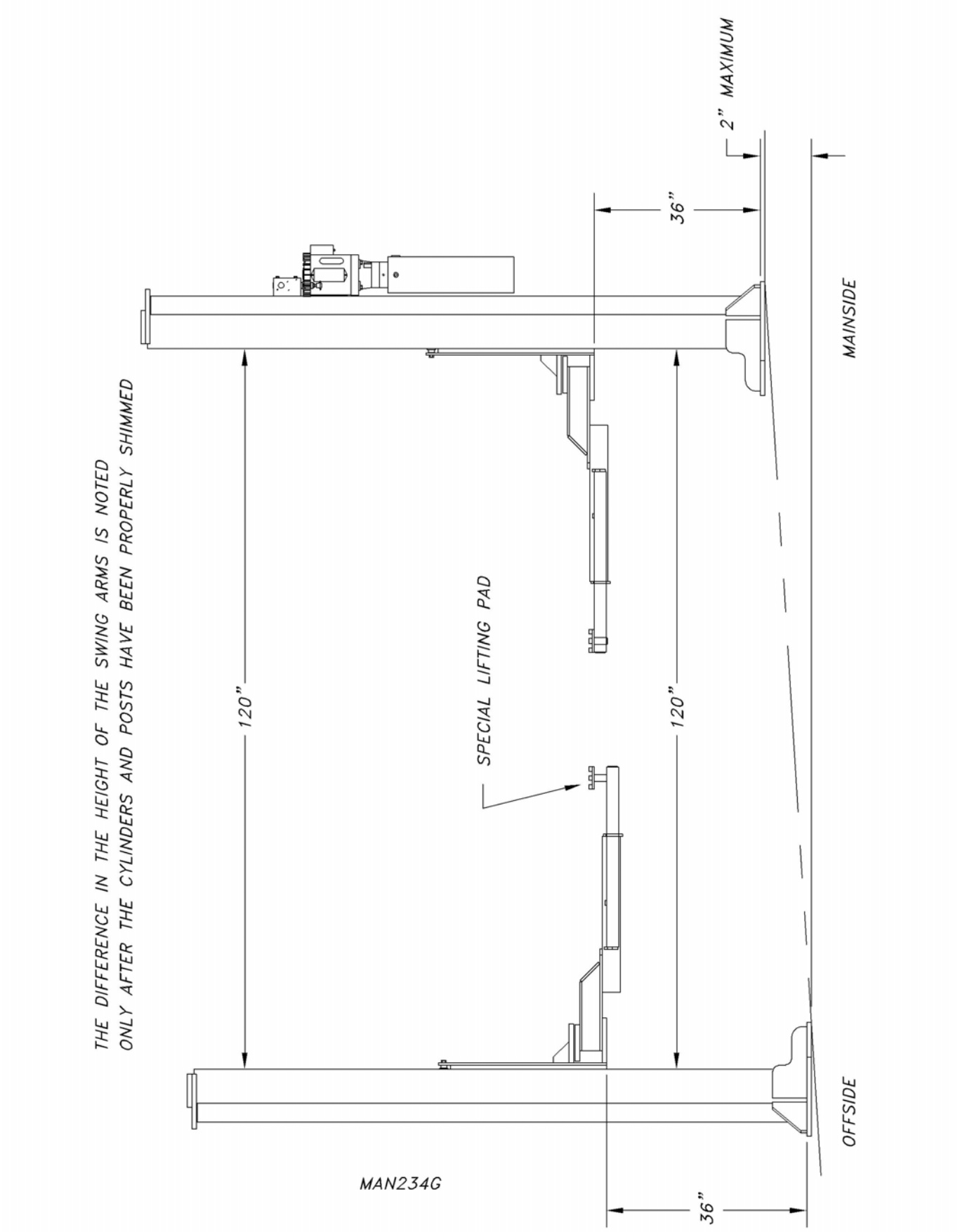

2" MAXIMUM
36"
MAINSIDE
THE DIFFERENCE IN THE HEIGHT OF THE SWING ARMS IS NOTED
ONLY AFTER THE CYLINDERS AND POSTS HAVE BEEN PROPERLY SHIMMED
120"
SPECIAL LIFTING PAD
120"
OFFSIDE
MAN234G
36"

Figure 9

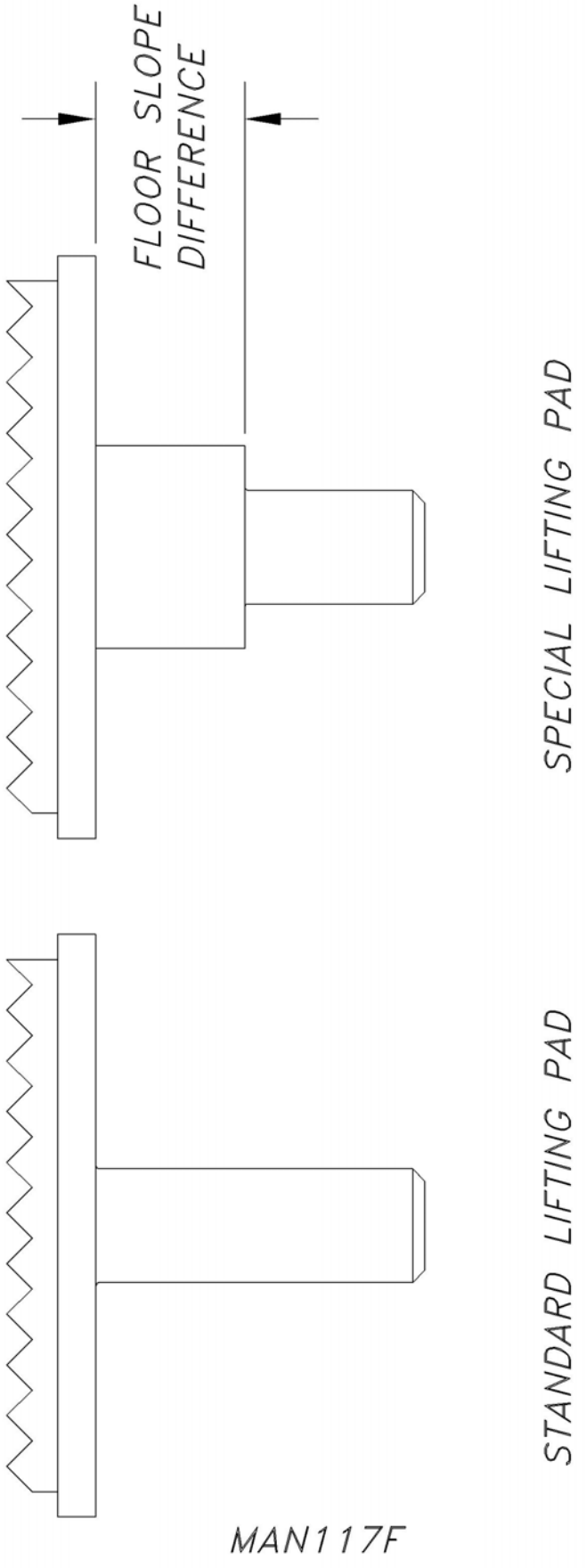

FLOOR SLOPE DIFFERENCE
SPECIAL LIFTING PAD
STANDARD LIFTING PAD
MAN117F

Figure 10

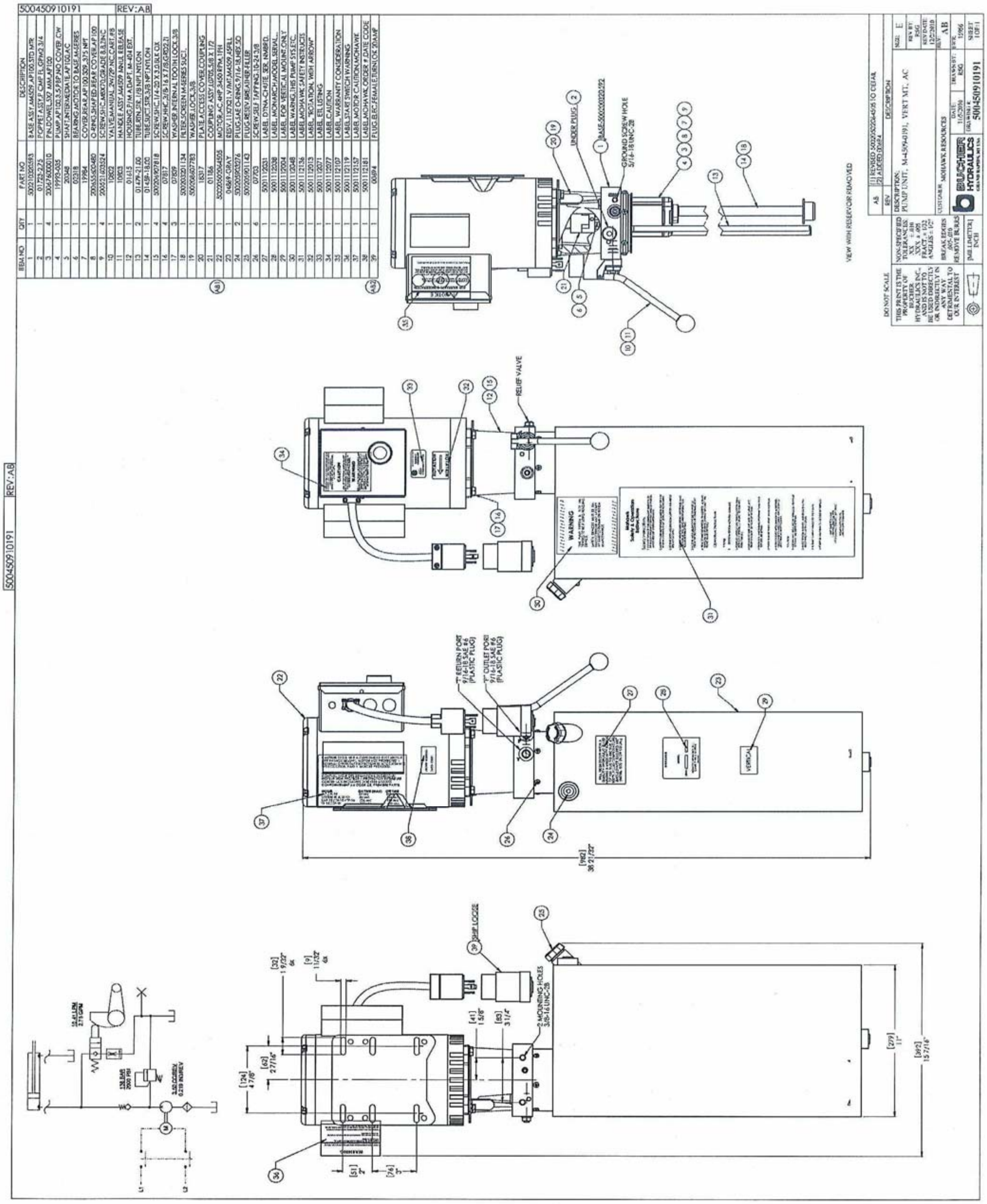


Figure 11

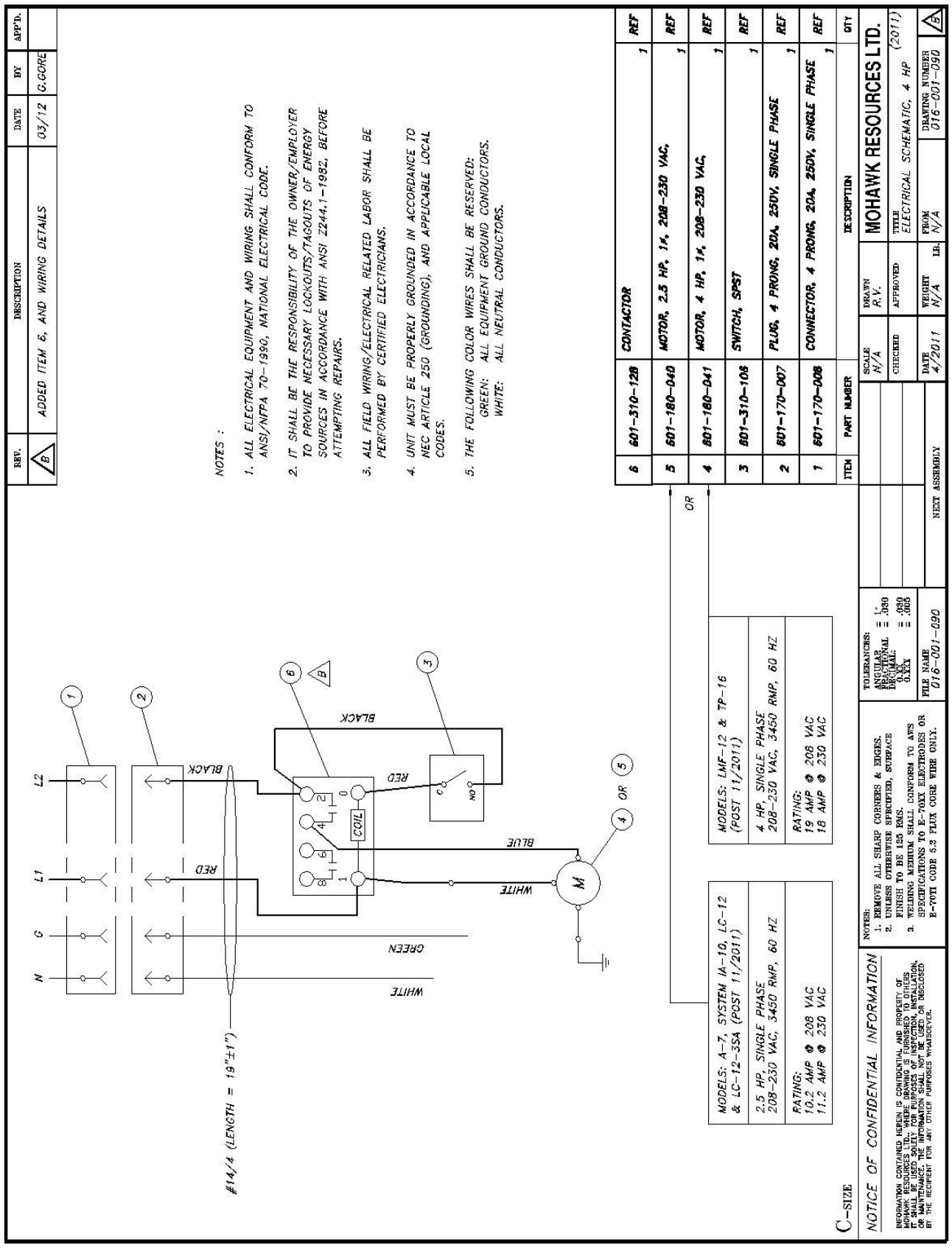

REV. DESCRIPTION DATE BY APP'D.
B ADDED ITEM 6, AND WIRING DETAILS 03/12 G.GORE
NOTES :
1. ALL ELECTRICAL EQUIPMENT AND WIRING SHALL CONFORM TO ANSI/NFPA 70-1990, NATIONAL ELECTRICAL CODE.
2. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/EMPLOYER TO PROVIDE NECESSARY LOCKOUTS/TAGOUTS OF ENERGY SOURCES IN ACCORDANCE WITH ANSI Z244.1-1982, BEFORE ATTEMPTING REPAIRS.
3. ALL FIELD WIRING/ELECTRICAL RELATED LABOR SHALL BE PERFORMED BY CERTIFIED ELECTRICIANS.
4. UNIT MUST BE PROPERLY GROUNDED IN ACCORDANCE TO NEC ARTICLE 250 (GROUNDING), AND APPLICABLE LOCAL CODES.
5. THE FOLLOWING COLOR WIRES SHALL BE RESERVED:
GREEN: ALL EQUIPMENT GROUND CONDUCTORS.
WHITE: ALL NEUTRAL CONDUCTORS.
ITEM PART NUMBER DESCRIPTION QTY
6 601-310-128 CONTACTOR 1 REF
5 601-180-040 MOTOR, 2.5 HP, 1¢, 208-230 VAC, 1 REF
4 601-180-041 MOTOR, 4 HP, 1¢, 208-230 VAC, 1 REF
3 601-310-108 SWITCH, SPST 1 REF
2 601-170-007 PLUG, 4 PRONG, 20A, 250V, SINGLE PHASE 1 REF
1 601-170-008 CONNECTOR, 4 PRONG, 20A, 250V, SINGLE PHASE 1 REF
NEXT ASSEMBLY
SCALE N/A
CHECKED
DATE 4/2011
DRAWN R.V.
APPROVED
WEIGHT N/A LB.
MOHAWK RESOURCES LTD.
TITLE ELECTRICAL SCHEMATIC, 4 HP (2011)
FROM N/A
DRAWING NUMBER 016-001-090 B
FILE NAME 016-001-090
TOLERANCES: ANGULAR ± 1° DECIMAL .XX ± .030 .XXX ± .005
NOTES: 1. REMOVE ALL SHARP CORNERS & EDGES. 2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS. 3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-70T1 CODE 6.8 FLUX CORE WIRE ONLY.
C-SIZE
NOTICE OF CONFIDENTIAL INFORMATION
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPERTY OF MOHAWK RESOURCES LTD., WHERE DRAWING IS FURNISHED TO OTHER THAN MOHAWK RESOURCES LTD. FOR BIDDING, INSTALLATION, OR MAINTENANCE, THE INFORMATION SHALL NOT BE USED OR DISCLOSED BY THE RECIPIENT FOR ANY OTHER PURPOSES WHATSOEVER.
#14/4 (LENGTH = 19"±1")
L2 L1 G N
BLACK RED WHITE GREEN BLUE BLACK RED BLUE WHITE
COIL
NO C
M
OR
MODELS: A-7, SYSTEM IA-10, LC-12 & LC-12-3SA (POST 11/2011)
2.5 HP, SINGLE PHASE 208-230 VAC, 3450 RMP, 60 HZ
RATING: 10.2 AMP @ 208 VAC 11.2 AMP @ 230 VAC
MODELS: LMF-12 & TP-16 (POST 11/2011)
4 HP, SINGLE PHASE 208-230 VAC, 3450 RMP, 60 HZ
RATING: 19 AMP @ 208 VAC 18 AMP @ 230 VAC

Figure 12

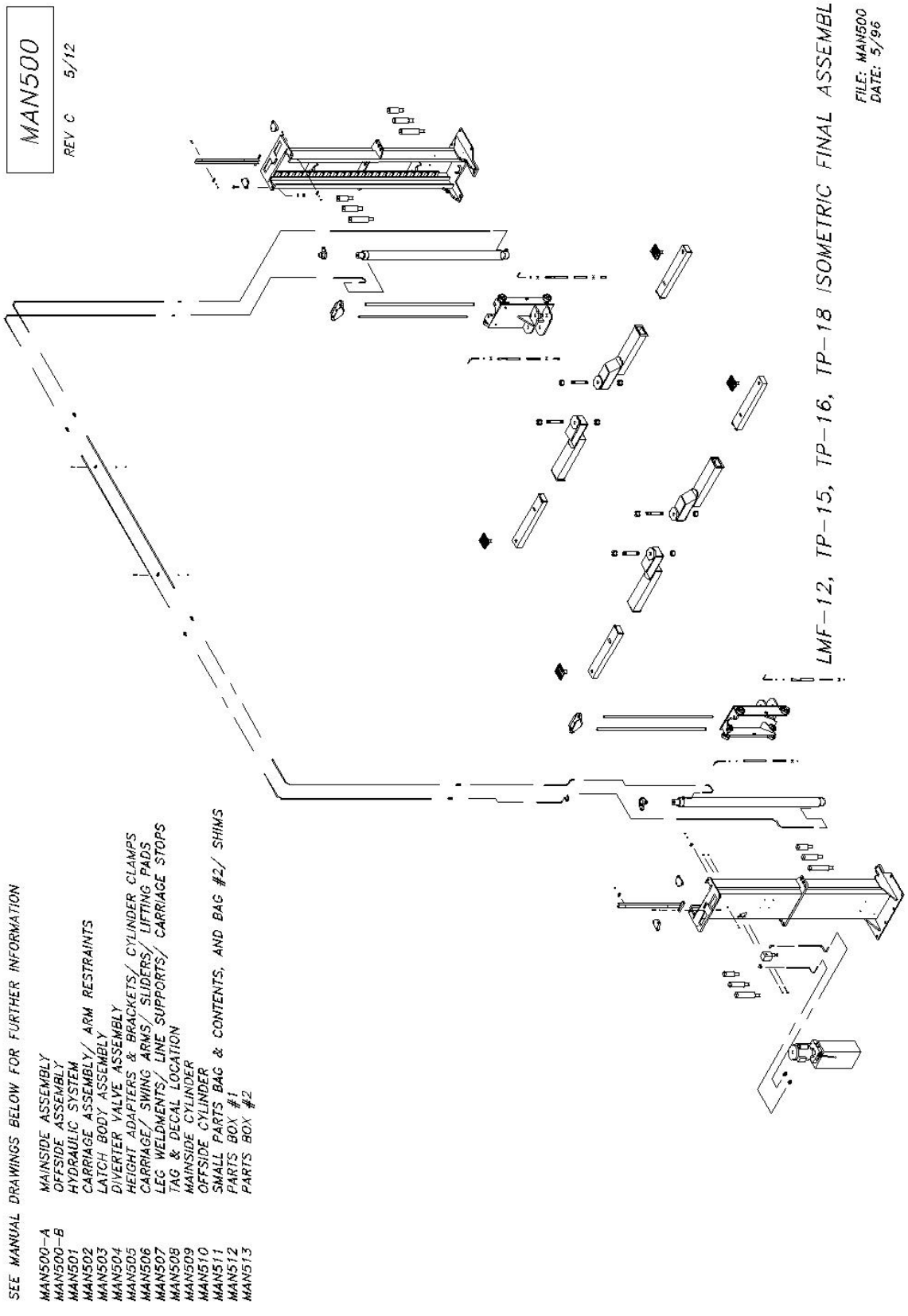
MOHAWK

MODEL LMF-12
TP-15, TP-16 & TP-18

PARTS

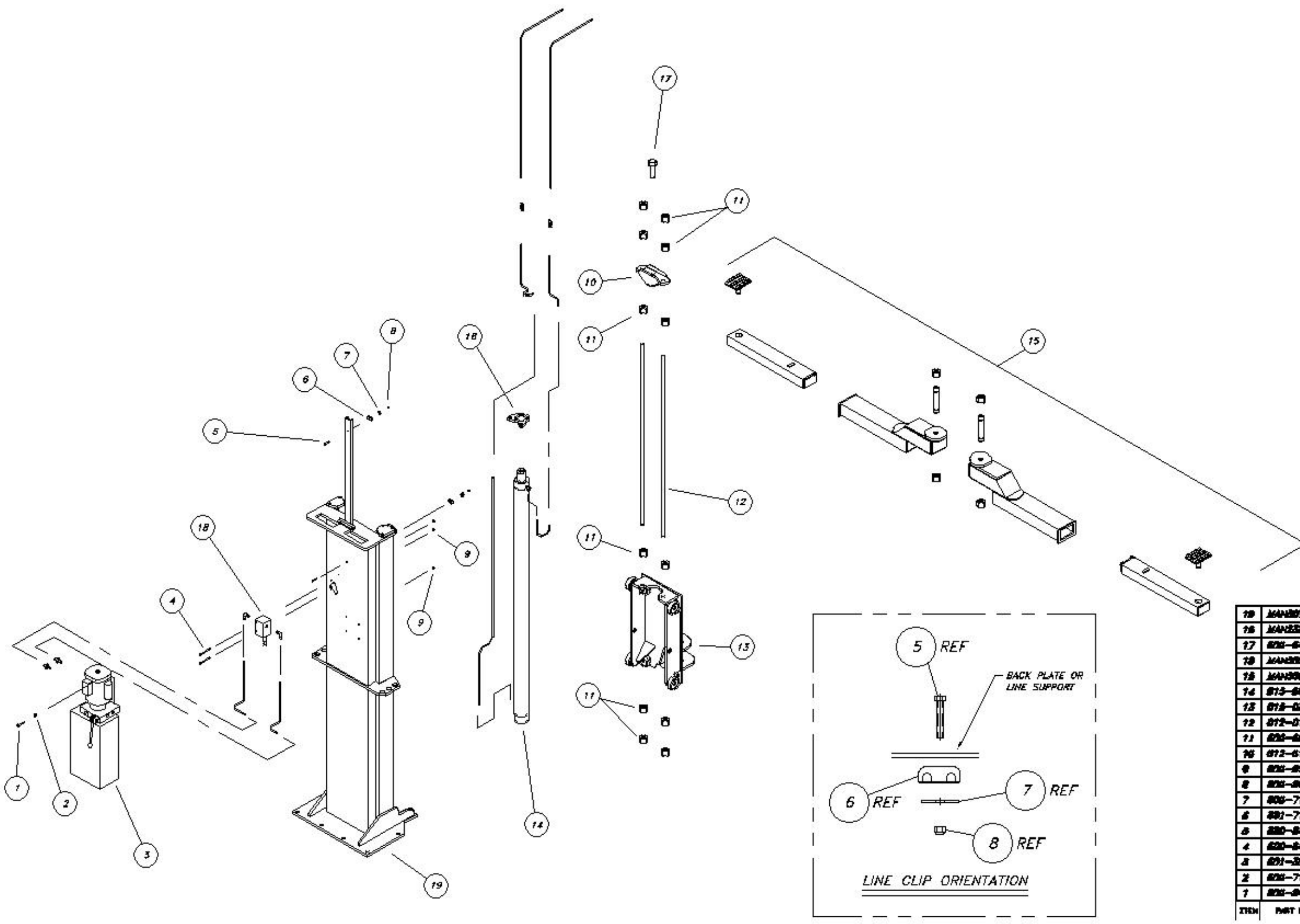
MOHAWK RESOURCES LTD.

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-MAIN: SERVICE@MOHAWKLIFTS.


MAN500
REV C 5/12
LMF-12, TP-15, TP-16, TP-18 ISOMETRIC FINAL ASSEMBLY
FILE: MAN500
DATE: 5/96
SEE MANUAL DRAWINGS BELOW FOR FURTHER INFORMATION
MAN500-A MAINSIDE ASSEMBLY
MAN500-B OFFSIDE ASSEMBLY
MAN501 HYDRAULIC SYSTEM
MAN502 CARRIAGE ASSEMBLY/ ARM RESTRAINTS
MAN503 LATCH BODY ASSEMBLY
MAN504 DIVERTER VALVE ASSEMBLY
MAN505 HEIGHT ADAPTERS & BRACKETS/ CYLINDER CLAMPS
MAN506 CARRIAGE/ SWING ARMS/ SLIDERS/ LIFTING PADS
MAN507 LEG WELDMENTS/ LINE SUPPORTS/ CARRIAGE STOPS
MAN508 TAG & DECAL LOCATION
MAN509 MAINSIDE CYLINDER
MAN510 OFFSIDE CYLINDER
MAN511 SMALL PARTS BAG & CONTENTS, AND BAG #2/ SHIMS
MAN512 PARTS BOX #1
MAN513 PARTS BOX #2

MAN500-A

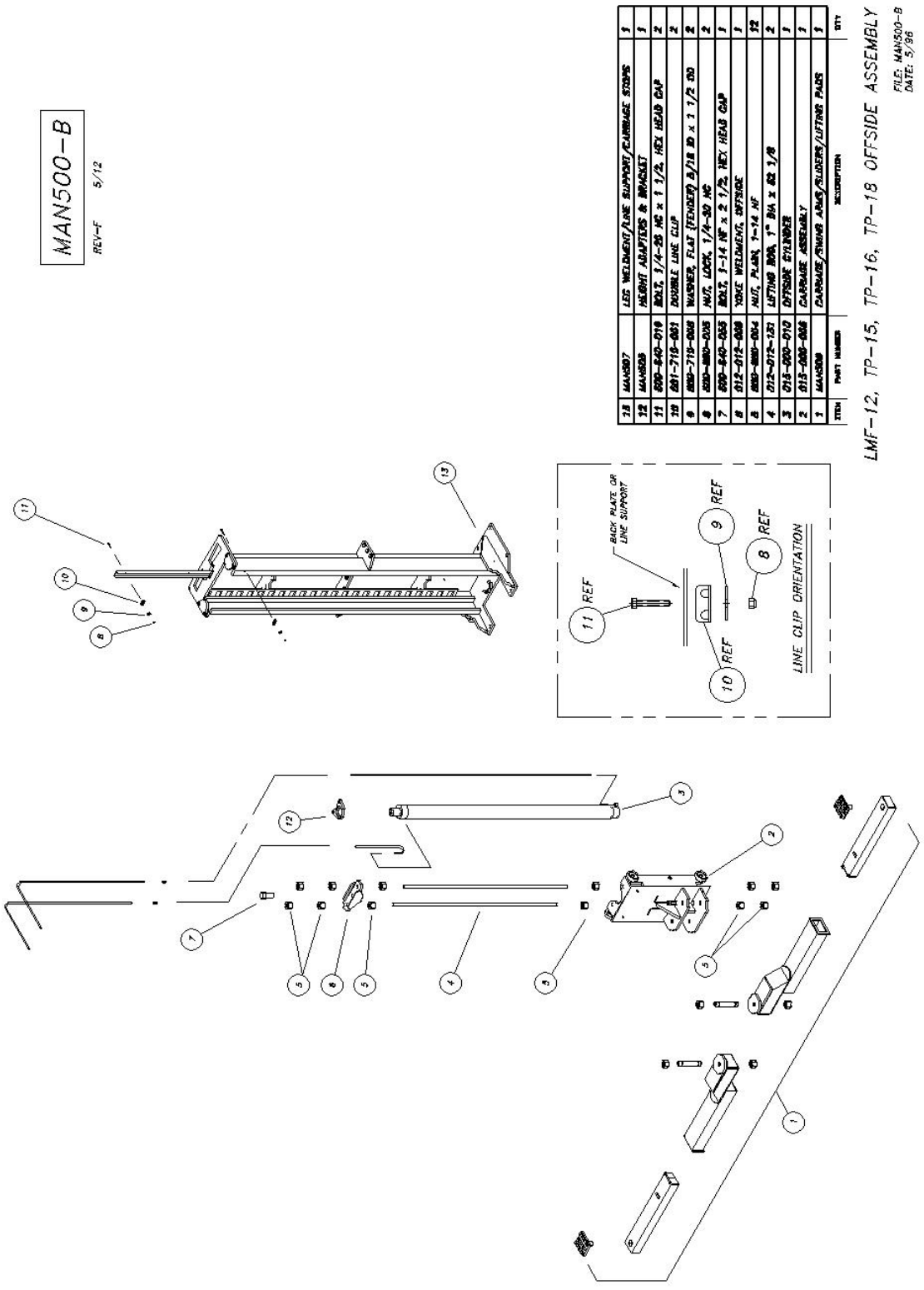
REV-G 5/12



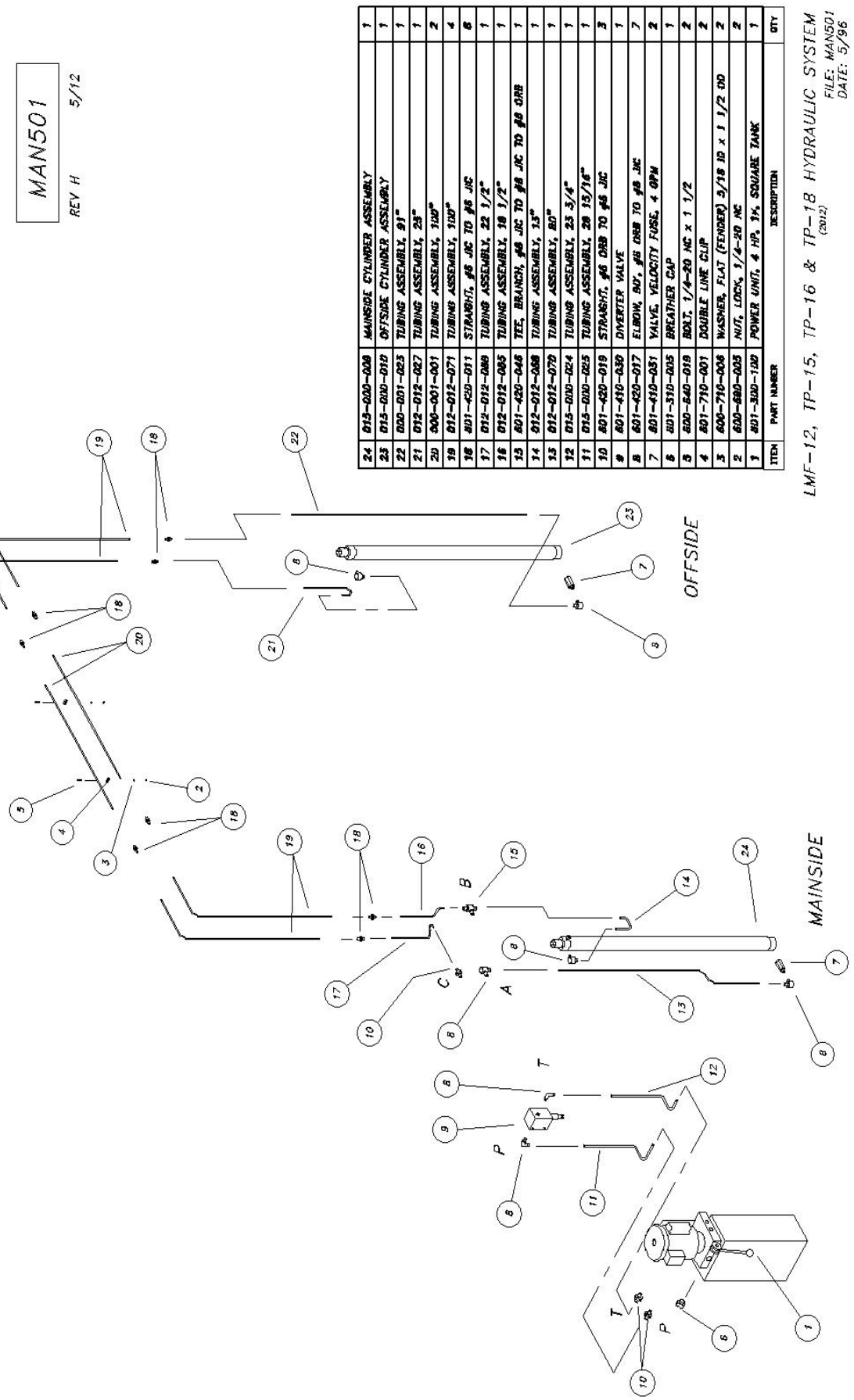
ITEM	PART NUMBER	DESCRIPTION	QTY
19	MAN307	LEG WELDMENTS/LINE SUPPORTS/CARRIAGE STOPS	1
18	MAN333	DIVERTER VALVE ASSEMBLY	1
17	020-040-058	BOLT, 1-14 NF x 2 1/2, HEX HEAD CAP	1
16	MAN308	HEIGHT ADAPTERS & BRACKET/CYLINDER CLAMPS	1
15	MAN309	CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS	1
14	015-600-090	MAINSIDE CYLINDER	1
13	015-020-226	CARRIAGE ASSEMBLY	1
12	012-012-131	LIFTING ROD, 1" DIA x 62 1/8	2
11	020-085-004	NUT, PLAIN, 1-14 NF	12
10	012-012-016	YOKE WELDMENT, MAINSIDE	1
9	020-085-001	NUT, LOCK, 5/16-18 NC	8
8	020-085-005	NUT, LOCK, 1/4-20 NC	2
7	020-710-090	WASHER, FLAT (FENDER) 5/16 ID x 1 1/2 OD	2
6	001-710-001	DOUBLE LINE CLIP	2
5	020-040-019	BOLT, 1/4-20 NC x 1 1/2, HEX HEAD CAP	2
4	020-040-020	BOLT, 5/16-18 NC x 5 1/2, HEX HEAD CAP	2
3	031-326-447	POWER UNIT, 3 HP, SINGLE PHASE, 3G TANK	1
2	020-710-008	WASHER, FLAT, 5/16	4
1	020-040-001	BOLT, 5/16-18 NC x 1", HEX HEAD CAP	4

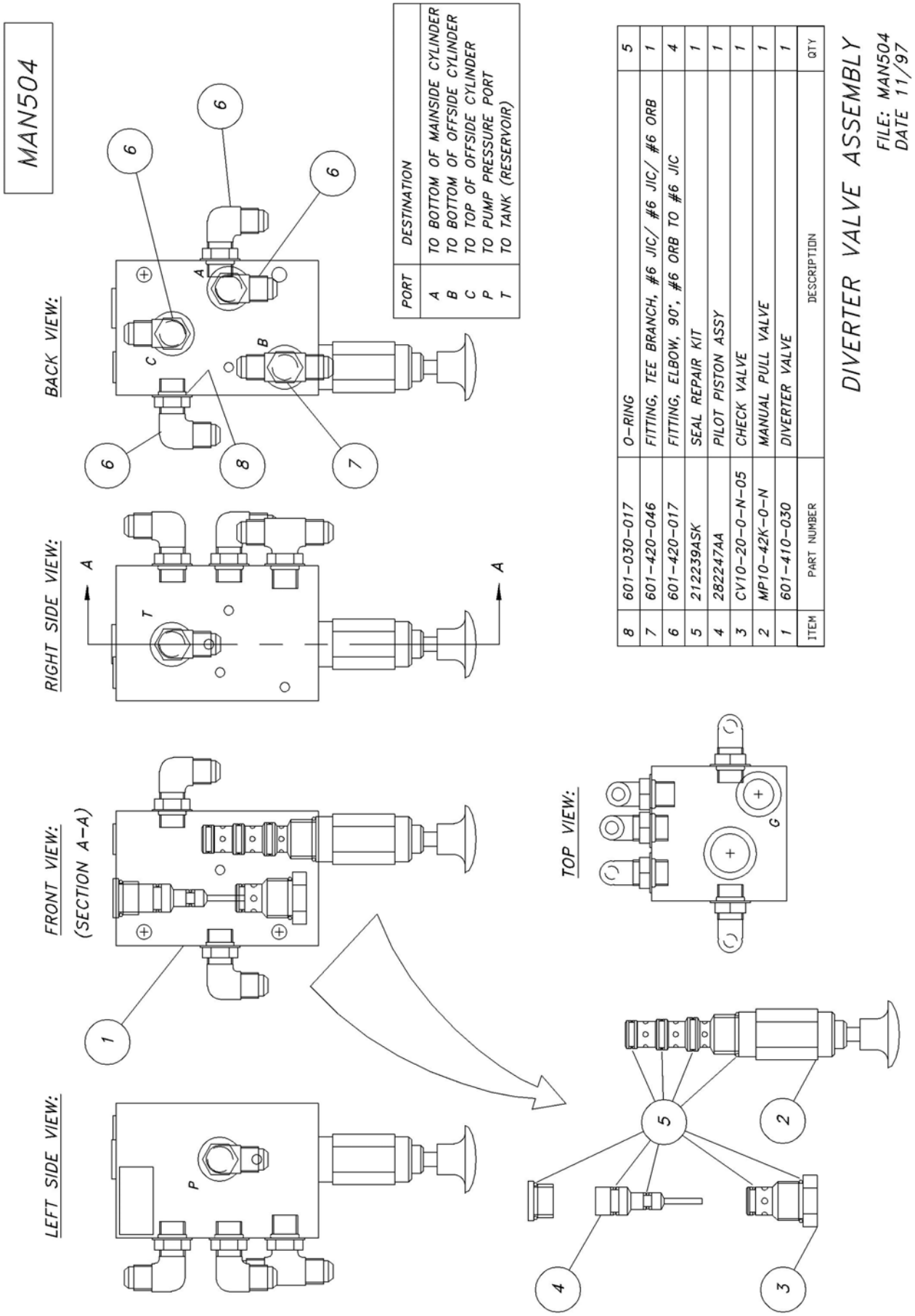
LMF-12, TP-15, TP-16, TP-18 MAINSIDE ASSEMBLY

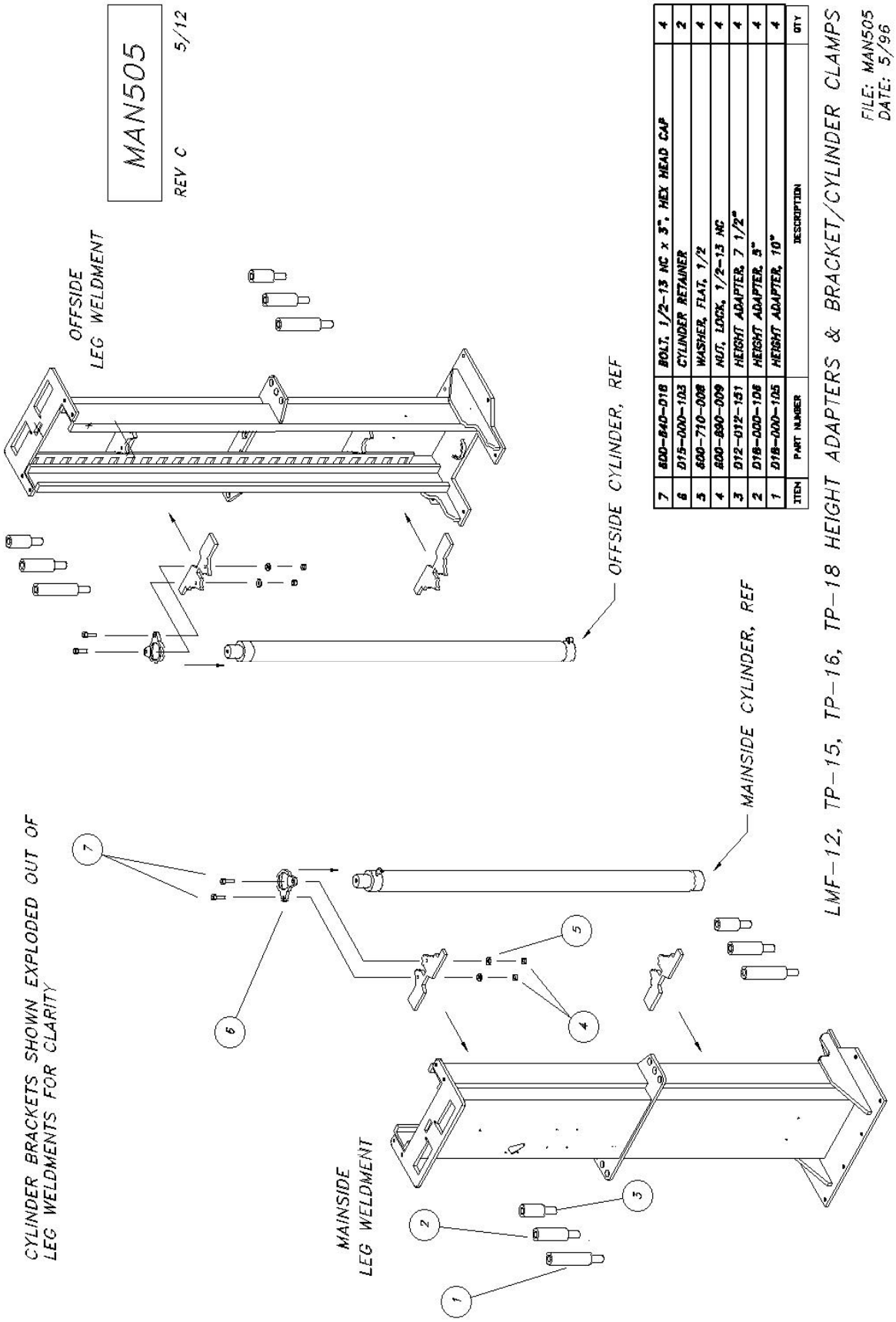
FILE: MAN500-A
DATE: 5/96



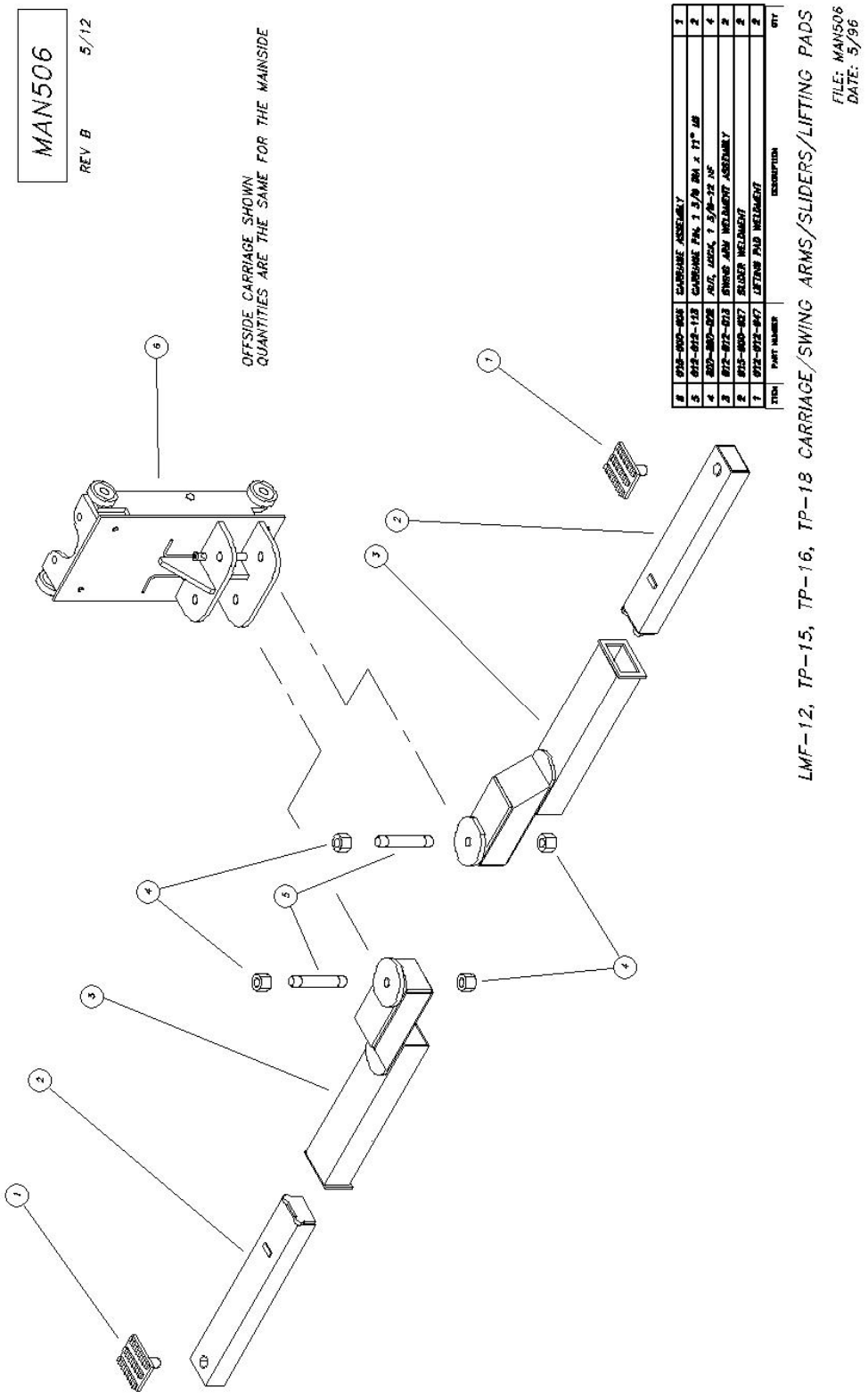
ITEM	PART NUMBER	DESCRIPTION	QTY
13	MAN5007	LEG WELDMENT/LINE SUPPORT/CARRIAGE STOPS	1
12	MAN5009	HEIGHT ADAPTERS & BRACKET	1
11	890-640-019	BOLT, 3/4-16 NC x 1 1/2, HEX HEAD CAP	2
10	891-718-001	DOUBLE LINE CLIP	2
9	885-718-008	WASHER, FLAT (TEMPERED 3/16 ID x 1 1/2 OD	2
8	885-880-005	NUT, LOCK, 1/4-20 NC	2
7	890-640-035	BOLT, 1-14 NF x 2 1/2, HEX HEAD CAP	1
6	012-012-008	YOKE WELDMENT, OFFSIDE	1
5	885-880-004	NUT, PLAIN, 1-14 NF	12
4	012-012-131	LIFTING BAR, 1" DIA x 82 1/8	2
3	013-000-010	OFFSIDE CYLINDER	1
2	013-000-006	CARRIAGE ASSEMBLY	1
1	MAN5008	CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS	1

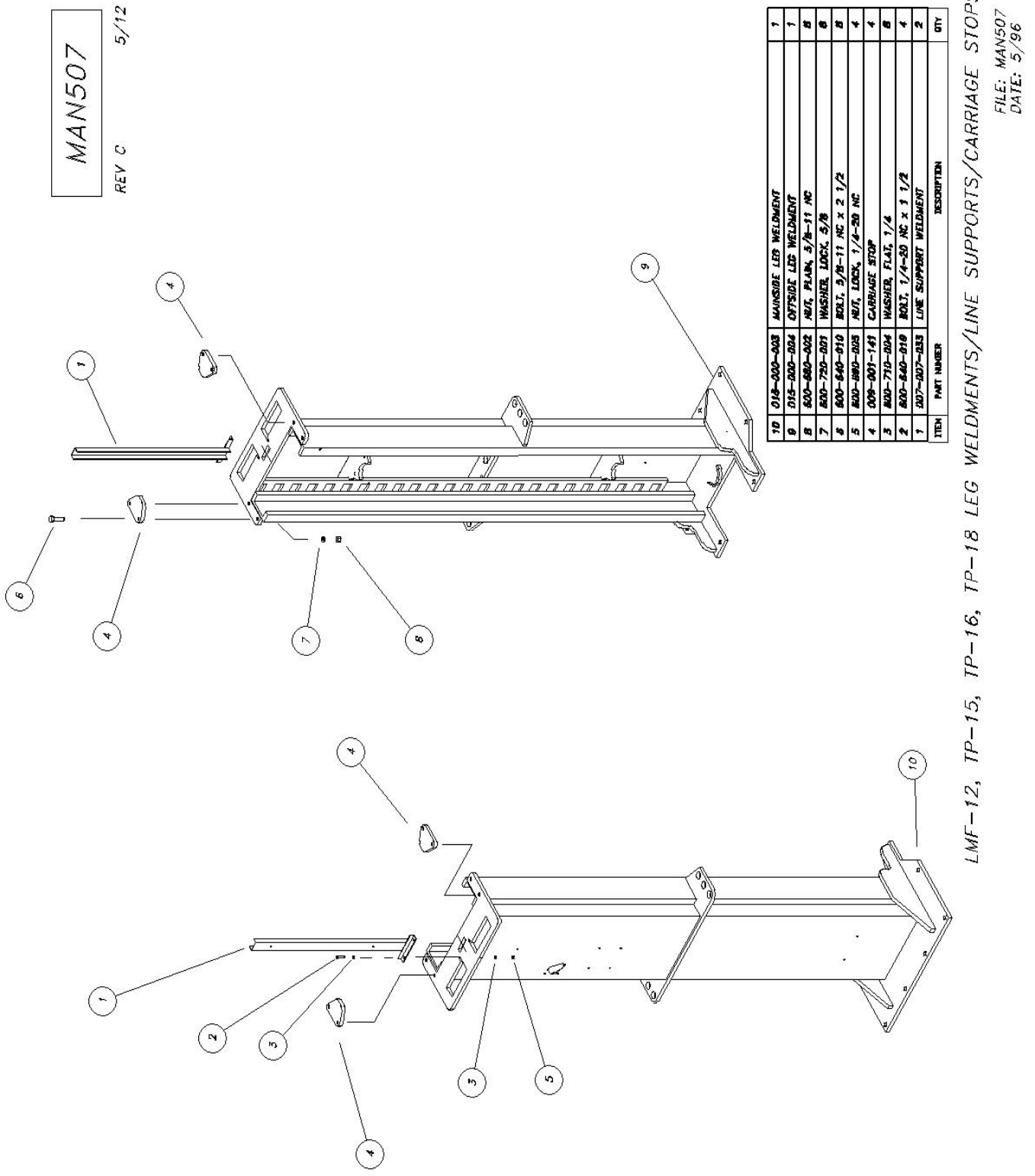

MAN501
REV H 5/12
LMF-12, TP-15, TP-16 & TP-18 HYDRAULIC SYSTEM (2012)
FILE: MAN501
DATE: 5/96
ITEM | PART NUMBER | DESCRIPTION | QTY
24 | 013-000-009 | MAINSIDE CYLINDER ASSEMBLY | 1
23 | 015-000-019 | OFFSIDE CYLINDER ASSEMBLY | 1
22 | 000-001-023 | TUBING ASSEMBLY, 91" | 1
21 | 012-012-027 | TUBING ASSEMBLY, 25" | 1
20 | 000-001-001 | TUBING ASSEMBLY, 120" | 2
19 | 012-012-071 | TUBING ASSEMBLY, 100" | 4
18 | 801-420-011 | STRAIGHT, #6 JIC TO #6 JIC | 6
17 | 012-012-069 | TUBING ASSEMBLY, 22 1/2" | 1
16 | 012-012-065 | TUBING ASSEMBLY, 18 1/2" | 1
15 | 801-420-048 | TEE, BRANCH, #6 JIC TO #8 JIC TO #8 ORB | 1
14 | 012-012-068 | TUBING ASSEMBLY, 13" | 1
13 | 012-012-079 | TUBING ASSEMBLY, 80" | 1
12 | 015-000-024 | TUBING ASSEMBLY, 23 3/4" | 1
11 | 015-000-025 | TUBING ASSEMBLY, 28 13/16" | 1
10 | 801-420-019 | STRAIGHT, #6 ORB TO #6 JIC | 3
9 | 801-410-030 | DIVERTER VALVE | 1
8 | 801-420-017 | ELBOW, 90°, #6 ORB TO #6 JIC | 7
7 | 801-410-031 | VALVE, VELOCITY FUSE, 4 GPM | 2
6 | 801-330-005 | BREATHER CAP | 1
5 | 820-640-018 | BOLT, 1/4-20 NC x 1 1/2 | 2
4 | 801-710-001 | DOUBLE LINE CLIP | 2
3 | 600-710-006 | WASHER, FLAT (FENDER) 5/16 ID x 1 1/2 OD | 2
2 | 820-680-005 | NUT, LOCK, 1/4-20 NC | 2
1 | 801-300-102 | POWER UNIT, 4 HP, 1K, SQUARE TANK | 1
OFFSIDE
MAINSIDE
T
P
A
B
C

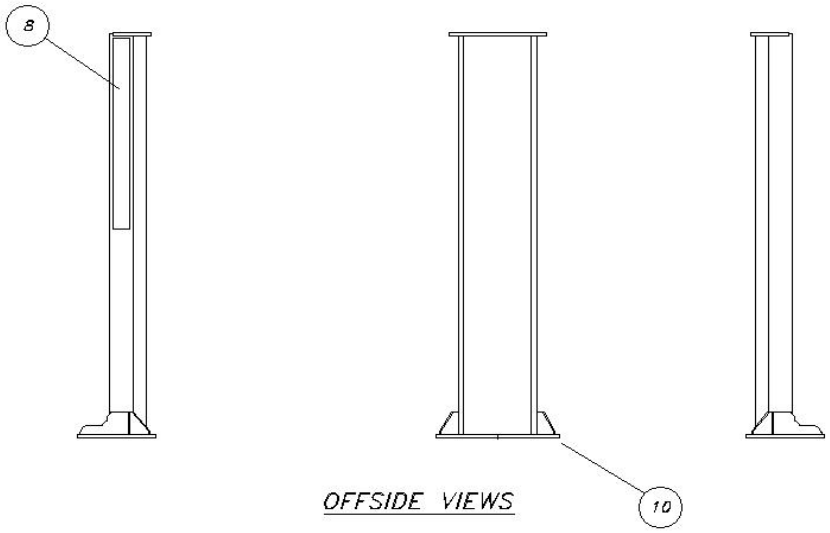

MAN504
BACK VIEW:
RIGHT SIDE VIEW:
FRONT VIEW:
(SECTION A-A)
LEFT SIDE VIEW:
TOP VIEW:
PORT
DESTINATION
A
TO BOTTOM OF MAINSIDE CYLINDER
B
TO BOTTOM OF OFFSIDE CYLINDER
C
TO TOP OF OFFSIDE CYLINDER
P
TO PUMP PRESSURE PORT
T
TO TANK (RESERVOIR)
ITEM
PART NUMBER
DESCRIPTION
QTY
8
601-030-017
O-RING
5
7
601-420-046
FITTING, TEE BRANCH, #6 JIC/ #6 JIC/ #6 ORB
1
6
601-420-017
FITTING, ELBOW, 90°, #6 ORB TO #6 JIC
4
5
212239ASK
SEAL REPAIR KIT
1
4
282247AA
PILOT PISTON ASSY
1
3
CV10-20-0-N-05
CHECK VALVE
1
2
MP10-42K-0-N
MANUAL PULL VALVE
1
1
601-410-030
DIVERTER VALVE
1
DIVERTER VALVE ASSEMBLY
FILE: MAN504
DATE 11/97



ITEM	PART NUMBER	DESCRIPTION	QTY
7	600-640-018	BOLT, 1/2-13 NC x 3", HEX HEAD CAP	4
6	015-000-103	CYLINDER RETAINER	2
5	600-710-008	WASHER, FLAT, 1/2	4
4	600-690-009	NUT, LOCK, 1/2-13 NC	4
3	012-012-151	HEIGHT ADAPTER, 7 1/2"	4
2	018-000-106	HEIGHT ADAPTER, 3"	4
1	018-000-105	HEIGHT ADAPTER, 10"	4


MAN506
REV B 5/12
OFFSIDE CARRIAGE SHOWN
QUANTITIES ARE THE SAME FOR THE MAINSIDE
ITEM | PART NUMBER | DESCRIPTION | QTY
1 | 012-012-047 | LIFTING PAD WELDMENT | 2
2 | 015-000-027 | SLIDER WELDMENT | 2
3 | 012-012-013 | SWING ARM WELDMENT ASSEMBLY | 2
4 | 800-000-008 | NUT, JACK, 1 5/8-12 NF | 4
5 | 012-012-113 | CARRIAGE Pin, 1 3/8 DIA. x 13" LG | 2
6 | 015-000-009 | CARRIAGE ASSEMBLY | 1
LMF-12, TP-15, TP-16, TP-18 CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS
FILE: MAN506
DATE: 5/96


MAN507
REV C
5/12
LMF-12, TP-15, TP-16, TP-18 LEG WELDMENTS/LINE SUPPORTS/CARRIAGE STOPS
FILE: MAN507
DATE: 5/96
ITEM | PART NUMBER | DESCRIPTION | QTY
10 | 018-000-003 | MAINSIDE LEG WELDMENT | 1
9 | 015-000-004 | OFFSIDE LEG WELDMENT | 1
8 | 800-680-002 | NUT, PLAIN, 5/8-11 NC | 8
7 | 820-720-001 | WASHER, LOCK, 5/8 | 8
6 | 800-640-010 | BOLT, 5/8-11 NC x 2 1/2 | 8
5 | 820-880-005 | NUT, LOCK, 1/4-20 NC | 4
4 | 009-001-141 | CARRIAGE STOP | 4
3 | 820-710-004 | WASHER, FLAT, 1/4 | 8
2 | 800-640-010 | BOLT, 1/4-20 NC x 1 1/2 | 4
1 | 007-007-033 | LINE SUPPORT WELDMENT | 2



OFFSIDE VIEWS

MAN508

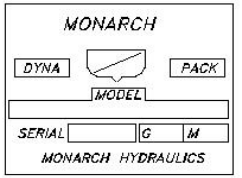
REV F 2/06

NOTES:

1. PLACE ITEM 5 IN POSITION SHOWN & MATCH DRILL (2) 3/32 DIA HOLES THRU BACK PLATE. SEE DETAIL A.

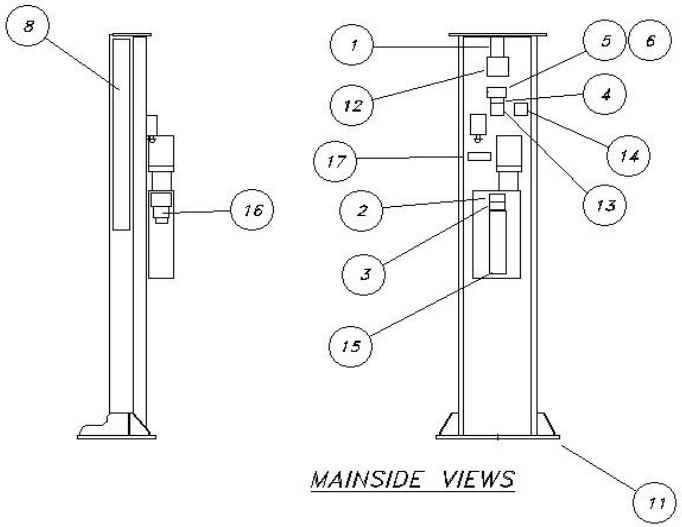
(MOHAWK SERIAL TAG)

5

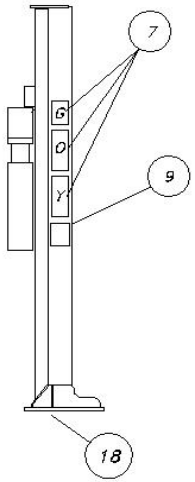


(MONARCH POWER UNIT DECAL)

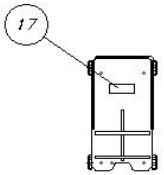
16



MAINSIDE VIEWS



ATTACHED TO BOTTOM OF MAINSIDE BASE PLATE



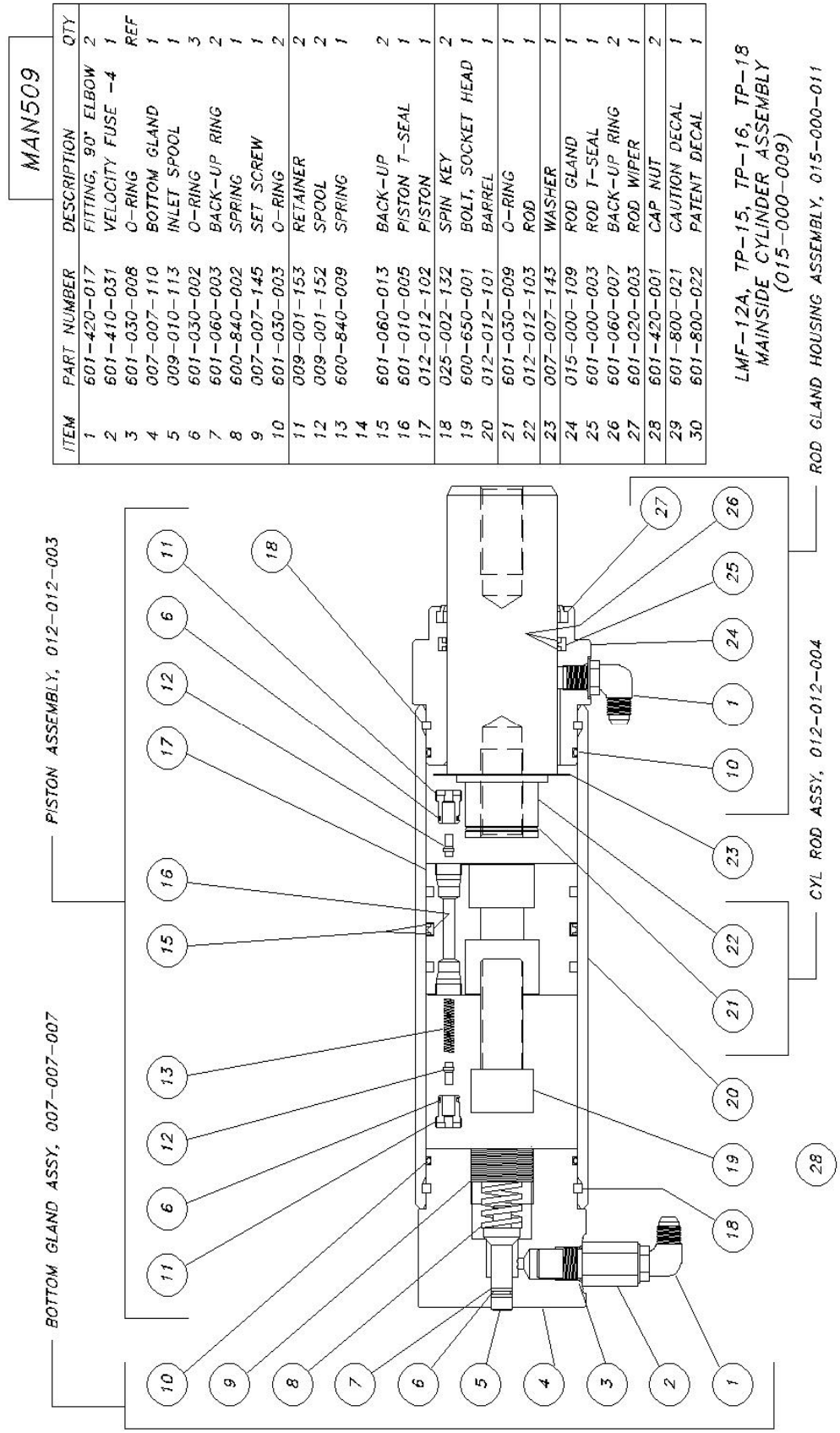
TYPICAL, BOTH CARRIAGES

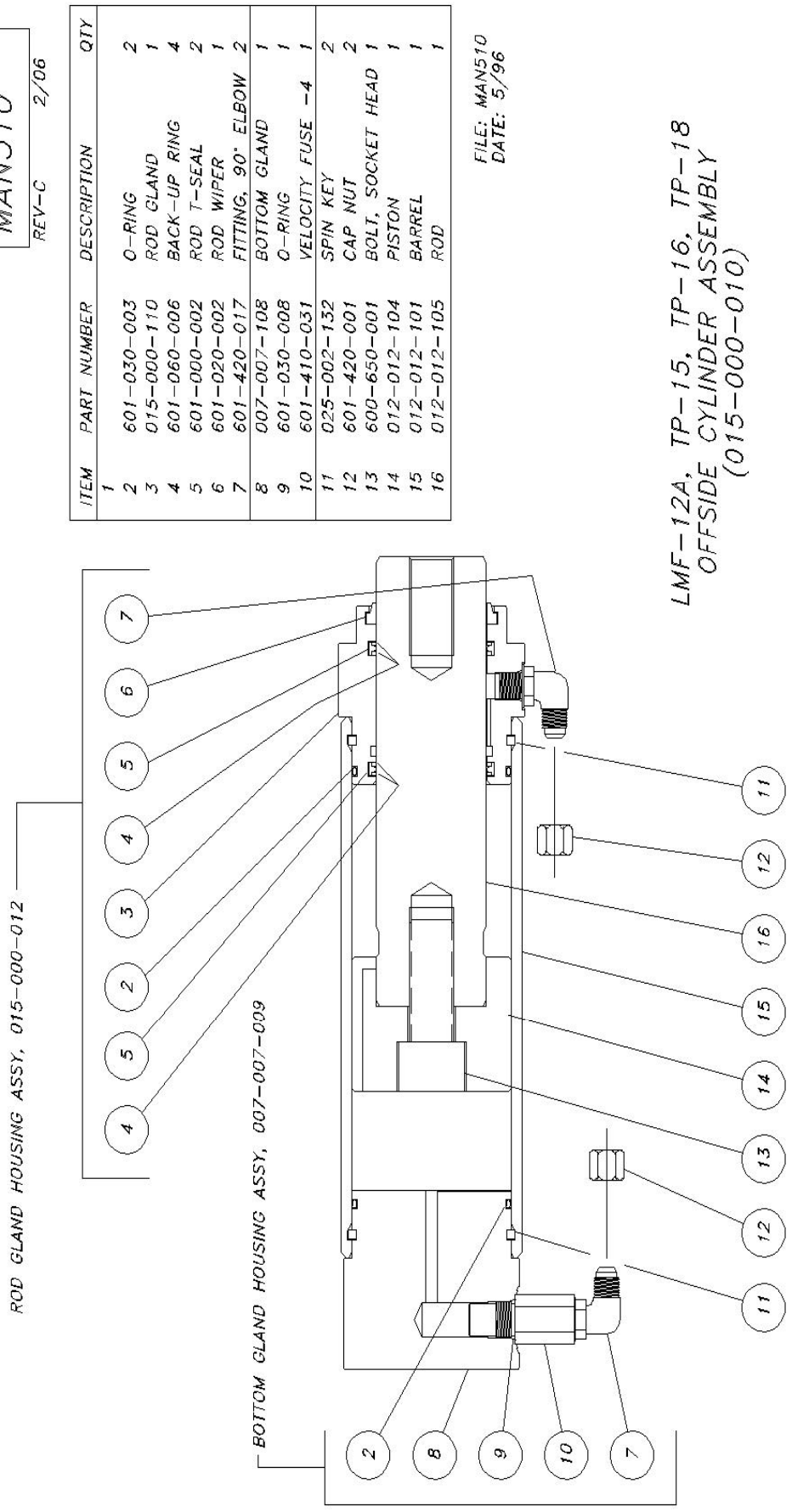
DEPENDANT ON CAPACITY OF LIFT

ITEM	PART NUMBER	DESCRIPTION	QTY
18	801-800-116	PACKING LIST ENVELOPE, 5 1/2 x 7 1/2	1
17	801-802-109	DECAL, WARNING, 2 1/2 x 6 1/2	3
16	---	MONARCH POWER UNIT DECAL	REF
15	801-800-001	"OPERATIONAL INSTRUCTION" DECAL	1
14	801-802-215	"SAFETY INSTRUCTIONS..."	1
13	801-800-036	"ALI/ETL CERTIFIED" DECAL, 3" x 3"	1
12a	801-800-044	"MAXIMUM CAPACITY 10000 LBS" DECAL, 5" x 5"	1
12b	801-802-212	"MAXIMUM CAPACITY 12000 LBS" DECAL, 5" x 5"	1
12c	801-800-049	"MAXIMUM CAPACITY 15000 LBS" DECAL, 5" x 5"	1
12d	801-800-043	"MAXIMUM CAPACITY 12000 LBS" DECAL, 5" x 5"	1
11	815-002-001	MAINSIDE LEG ASSEMBLY	REF
10	815-005-002	OFFSIDE LEG ASSEMBLY	REF
9	801-800-206	"MAXIMUM SWING ARM CAPACITY..."	1
8	801-802-081	"MOHAWK" DECAL, 5 3/8" x 41 3/4"	2
7	801-805-032	"CAUTION, WARNING, SAFETY" SET, 4" x 29 3/4"	1
6	820-820-001	SCREW, DRIVE, #4 x 1/4, ROUND HEAD, TYPE II	2
5	801-800-028	"SERIAL, SPEC, PATENT", 2 7/16" x 4 9/16"	1
4	801-805-037	"ALI" PLATE, 1 1/2" x 3 1/4"	1
3	801-800-038	"CAUTION" DECAL, 2" x 3 1/2"	1
2	801-800-034	"WARNING" DECAL, 2" x 3 1/2"	1
1	801-805-035	"MADE IN AMERICA" DECAL, 5 1/2" x 5 5/16"	1

TAG & DECAL LOCATIONS

FILE: MAN508
DATE: 5/96


MAN509
ITEM | PART NUMBER | DESCRIPTION | QTY
1 | 601-420-017 | FITTING, 90° ELBOW | 2
2 | 601-410-031 | VELOCITY FUSE -4 | 1
3 | 601-030-008 | O-RING | REF
4 | 007-007-110 | BOTTOM GLAND | 1
5 | 009-010-113 | INLET SPOOL | 1
6 | 601-030-002 | O-RING | 3
7 | 601-060-003 | BACK-UP RING | 2
8 | 600-840-002 | SPRING | 1
9 | 007-007-145 | SET SCREW | 1
10 | 601-030-003 | O-RING | 2
11 | 009-001-153 | RETAINER | 2
12 | 009-001-152 | SPOOL | 2
13 | 600-840-009 | SPRING | 1
14
15 | 601-060-013 | BACK-UP | 2
16 | 601-010-005 | PISTON T-SEAL | 1
17 | 012-012-102 | PISTON | 1
18 | 025-002-132 | SPIN KEY | 2
19 | 600-650-001 | BOLT, SOCKET HEAD | 1
20 | 012-012-101 | BARREL | 1
21 | 601-030-009 | O-RING | 1
22 | 012-012-103 | ROD | 1
23 | 007-007-143 | WASHER | 1
24 | 015-000-109 | ROD GLAND | 1
25 | 601-000-003 | ROD T-SEAL | 1
26 | 601-060-007 | BACK-UP RING | 2
27 | 601-020-003 | ROD WIPER | 1
28 | 601-420-001 | CAP NUT | 2
29 | 601-800-021 | CAUTION DECAL | 1
30 | 601-800-022 | PATENT DECAL | 1
LMF-12A, TP-15, TP-16, TP-18
MAINSIDE CYLINDER ASSEMBLY
(015-000-009)
BOTTOM GLAND ASSY, 007-007-007
PISTON ASSEMBLY, 012-012-003
CYL ROD ASSY, 012-012-004
ROD GLAND HOUSING ASSEMBLY, 015-000-011
ITEM 29 APPEARS ON ITEM 4
ITEM 30 APPEARS ON ITEM 24
(NOT SHOWN)
FILE: MAN509
REV 2/06

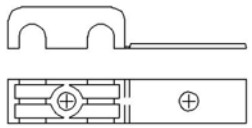

MAN510
REV-C 2/06
ITEM | PART NUMBER | DESCRIPTION | QTY
1 | | | |
2 | 601-030-003 | O-RING | 2
3 | 015-000-110 | ROD GLAND | 1
4 | 601-060-006 | BACK-UP RING | 4
5 | 601-000-002 | ROD T-SEAL | 2
6 | 601-020-002 | ROD WIPER | 1
7 | 601-420-017 | FITTING, 90° ELBOW | 2
8 | 007-007-108 | BOTTOM GLAND | 1
9 | 601-030-008 | O-RING | 1
10 | 601-410-031 | VELOCITY FUSE -4 | 1
11 | 025-002-132 | SPIN KEY | 2
12 | 601-420-001 | CAP NUT | 2
13 | 600-650-001 | BOLT, SOCKET HEAD | 1
14 | 012-012-104 | PISTON | 1
15 | 012-012-101 | BARREL | 1
16 | 012-012-105 | ROD | 1
FILE: MAN510
DATE: 5/96
LMF-12A, TP-15, TP-16, TP-18
OFFSIDE CYLINDER ASSEMBLY
(015-000-010)
ROD GLAND HOUSING ASSY, 015-000-012
BOTTOM GLAND HOUSING ASSY, 007-007-009

MAN511

REV D 10/01

SMALL PARTS BAG & CONTENTS (012-012-058)

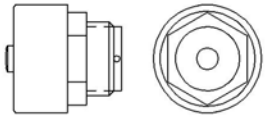
ITEM 10



ITEM 4

ITEM 11

ITEM 3



ITEM 5

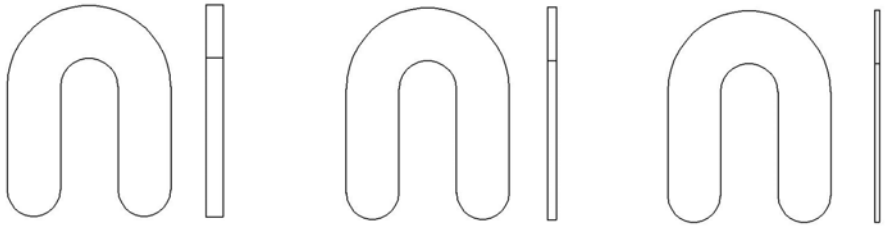
ITEM 2

ITEM 6

ITEM 1

BAG#2/ SHIMS (007-007-075)

ITEM 10



ITEM 7 ITEM 8 ITEM 9

ITEMS 1 THRU 9 = SMALL PARTS BAG & CONTENTS

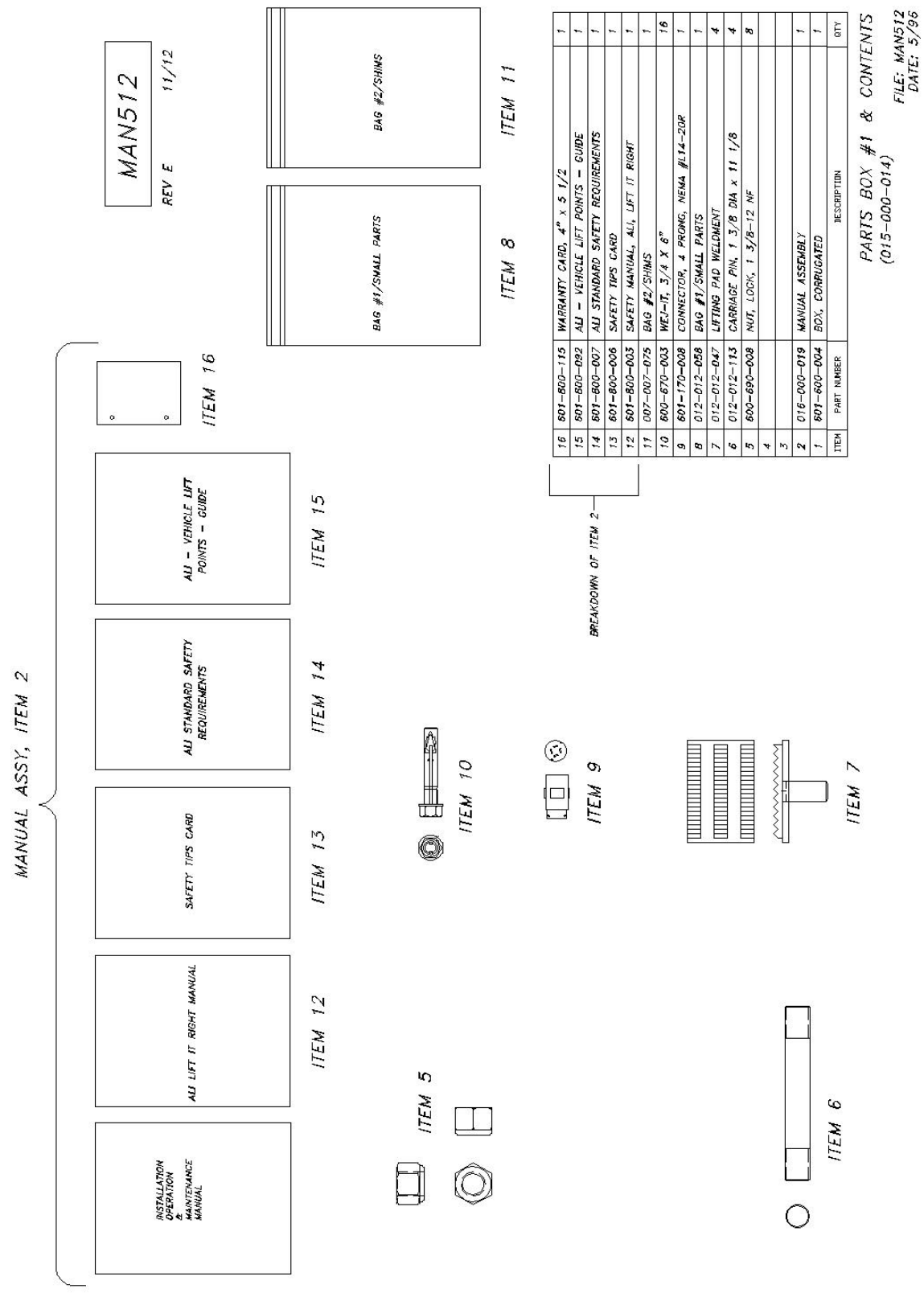
ITEMS 12 THRU 14 = BAG #2/ SHIMS

ITEM	PART NUMBER	DESCRIPTION	QTY
11	600-710-006	WASHER, FLAT (FENDER) 5/16 ID x 1 1/2 OD	6
10	601-600-022	BAG, ZIP-LOK, TRANSPARENT, 9" x 12"	2
9	600-740-001	SHIM, HORSESHOE, PLASTIC, BLUE, 1/16" THK	8
8	600-740-002	SHIM, HORSESHOE, PLASTIC, RED, 1/8" THK	8
7	600-740-003	SHIM, HORSESHOE, PLASTIC, BLACK, 1/4" THK	8
6	601-420-011	UNION, #6 JIC TO #6 JIC	4
5	601-310-005	BREATHER CAP	1
4	601-710-001	DOUBLE LINE CLIP	6
3	600-640-019	BOLT, 1/4-20 NC x 1 1/2, HEX HEAD CAP	10
2	600-690-005	NUT, LOCK, 1/4-20 NC	10
1	600-710-004	WASHER, FLAT, 1/4	8

SMALL PARTS BAG & CONTENTS, AND BAG #2/SHIMS

FILE: MAN511

DATE: 5/96



ITEM	PART NUMBER	DESCRIPTION	QTY
16	601-800-115	WARRANTY CARD, 4" x 5 1/2	1
15	601-800-092	ALI - VEHICLE LIFT POINTS - GUIDE	1
14	601-800-007	ALI STANDARD SAFETY REQUIREMENTS	1
13	601-800-006	SAFETY TIPS CARD	1
12	601-800-003	SAFETY MANUAL, ALI, LIFT IT RIGHT	1
11	007-007-075	BAG #2/SHIMS	1
10	600-670-003	WEJ-IT, 3/4 X 6"	16
9	601-170-008	CONNECTOR, 4 PRONG, NEMA #L14-20R	1
8	012-012-058	BAG #1/SMALL PARTS	1
7	012-012-047	LIFTING PAD WELDMENT	4
6	012-012-113	CARRIAGE PIN, 1 3/8 DIA x 11 1/8	4
5	600-690-008	NUT, LOCK, 1 3/8-12 NF	8
4			
3			
2	016-000-019	MANUAL ASSEMBLY	1
1	601-600-004	BOX, CORRUGATED	1

PARTS BOX #1 & CONTENTS
(015-000-014)

FILE: MAN512
DATE: 5/96

MAN513

ITEM	PART NUMBER	DESCRIPTION	QTY
4	601-600-004	CARTON, CORRUGATED, 11" x 15" x 12 1/4	1
3	018-000-105	HEIGHT ADAPTER (10") 2 1/2 DIA x 13 3/8 LG	4
2	012-012-151	HEIGHT ADAPTER (7 1/2") 2 1/2 DIA x 10 7/8 LG	4
1	018-000-106	HEIGHT ADAPTER (5") 2 1/2 DIA x 8 3/8 LG	4

PARTS BOX #2
(012-012-057)

FILE: MAN513
DATE 5/96

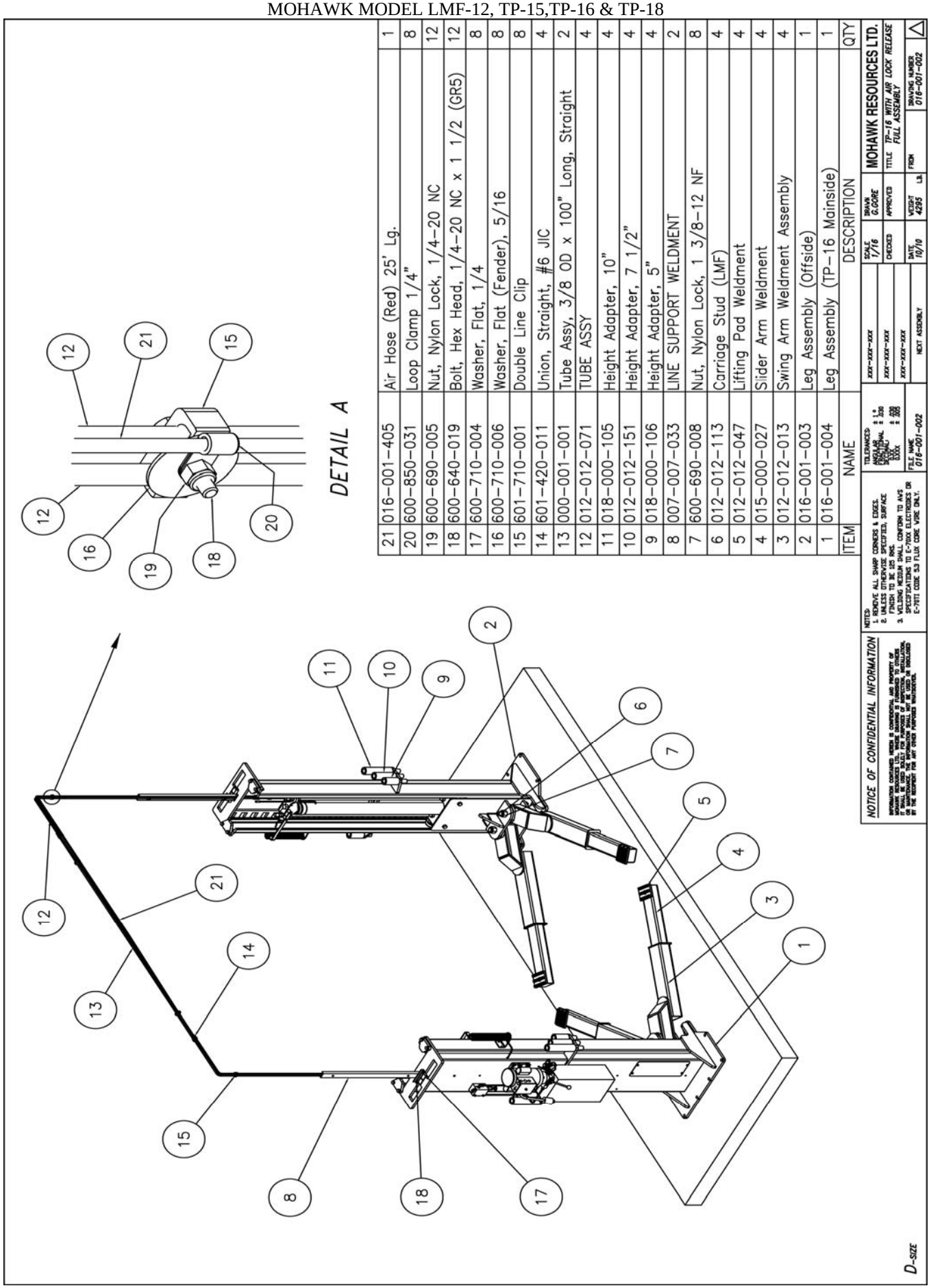
MOHAWK

MODEL LMF-12
TP-15 TP-16 TP-18

SUPPLEMENTAL
AIRLOCK PARTS

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-MAIN: SERVICE@MOHAWKLIFTS.



ITEM	QTY	DESCRIPTION	NAME
21	1	Air Hose (Red) 25' Lg.	016-001-405
20	8	Loop Clamp 1/4"	600-850-031
19	12	Nut, Nylon Lock, 1/4-20 NC	600-690-005
18	12	Bolt, Hex Head, 1/4-20 NC x 1 1/2 (GR5)	600-640-019
17	8	Washer, Flat, 1/4	600-710-004
16	8	Washer, Flat (Fender), 5/16	600-710-006
15	8	Double Line Clip	601-710-001
14	4	Union, Straight, #6 JIC	601-420-011
13	2	Tube Assy, 3/8 OD x 100" Long, Straight	000-001-001
12	4	TUBE ASSY	012-012-071
11	4	Height Adapter, 10"	018-000-105
10	4	Height Adapter, 7 1/2"	012-012-151
9	4	Height Adapter, 5"	018-000-106
8	2	LINE SUPPORT WELDMENT	007-007-033
7	8	Nut, Nylon Lock, 1 3/8-12 NF	600-690-008
6	4	Carriage Stud (LMF)	012-012-113
5	4	Lifting Pad Weldment	012-012-047
4	4	Slider Arm Weldment	015-000-027
3	4	Swing Arm Weldment Assembly	012-012-013
2	1	Leg Assembly (Offside)	016-001-003
1	1	Leg Assembly (TP-16 Mainside)	016-001-004

NOTICE OF CONFIDENTIAL INFORMATION

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPERTY OF MOHAWK RESOURCES LTD. AND IS LOANED SUBJECT TO RESTRICTIONS. IT SHALL BE USED SOLELY FOR PURPOSES OF INSPECTION, INSTALLATION, OPERATION OR MAINTENANCE OF EQUIPMENT AS SPECIFIED BY THE RECIPIENT AND FOR ANY OTHER PURPOSES WHATSOEVER.

NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS FOR CARBON STEELS, OR E-7011 CODE 53 FLUX CODE, VDE ENL.

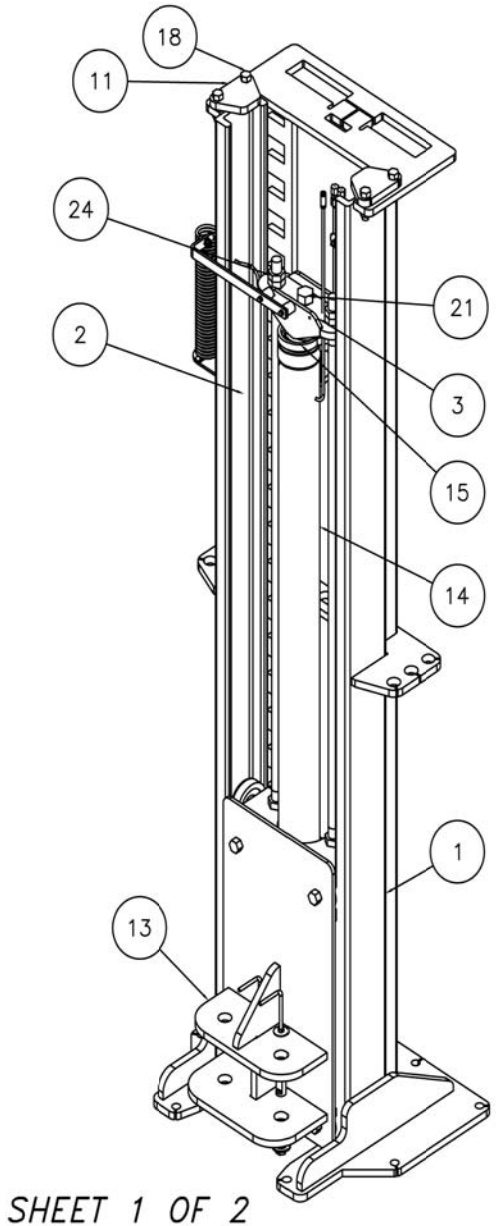
TOLERANCES: ANGULAR ± 1°, DECIMAL ± .030, FRACTIONAL ± .015, XXX ± .005

FILE NAME 016-001-002

XXX-XXX-XXX
XXX-XXX-XXX
XXX-XXX-XXX
NEXT ASSEMBLY

SCALE 1/16
DRAWN G.GORE
CHECKED
APPROVED
DATE 10/10
WEIGHT 4295 LB.

MOHAWK RESOURCES LTD.
TITLE TP-16 WITH AIR LOCK RELEASE FULL ASSEMBLY
FROM
DRAWING NUMBER 016-001-002
D-SIZE



SHEET 1 OF 2

ITEM	NAME	DESCRIPTION	QTY
38	601-710-001	Double Line Clip	1
37	601-520-006	Union 90 Deg, 1/4 Tube to 1/4 Tube	1
36	601-420-011	Union, Straight, #6 JIC	2
35	601-420-001	Nut, Cap, 9/16-18 NF, #6 JIC	2
34	601-200-055	Air Fitting, 90 Deg, 1/4 Tube To 1/4 Tube	1
33	601-200-041	Air Tube Fitting, Straight Union, 1/4 Tube to 1/4 Tube	1
32	600-850-031	Loop Clamp 1/4"	3
31	600-720-011	Washer, Lock, 3/8	1
30	600-720-001	Washer, Lock, 5/8	4
29	600-710-008	Washer, Flat, 1/2	4
28	600-710-006	Washer, Flat (Fender), 5/16	1
27	600-710-004	Washer, Flat, 1/4	4
26	600-690-009	Nut, Nylon Lock, 1/2-13 NC	2
25	600-690-005	Nut, Nylon Lock, 1/4-20 NC	1
24	600-680-004	Nut, Plain, 1-14 NF	4
23	600-680-002	NUT, 5/8-11 NC	4
22	600-640-071	Bolt, Hex Head, 3/8-16 NC x 1" (GR5)	1
21	600-640-055	Bolt, Hex Head, 1-14 NF x 2 1/2 (GR8)	1
20	600-640-019	Bolt, Hex Head, 1/4-20 NC x 1 1/2 (GR5)	1
19	600-640-018	Bolt, Hex Head, 1/2-13 NC x 3" (GR5)	2
18	600-640-010	Bolt, Hex Head, 5/8-11 NC x 2 1/2 (GR5)	4
17	600-640-004	Bolt, Hex Head, 1/4-20 NC x 1" (GR5)	4
16	600-600-006	Screw, Slotted Round Head, #10-32 NF x 1/2 Lg	2
15	015-000-103	Cylinder Retainer	1
14	015-000-009	Mainside Cylinder Assembly	1
13	016-001-005	Carriage Assy w/ Airlock Release	1
12	012-012-027	TUBE ASSY	1
11	009-001-141	Carriage Stop	2
10	000-001-018	Tube Assy, 3/8 OD x 12" Long, Straight	1
9	016-001-404	Air Hose (Red) 28" Lg.	1
8	016-001-402	Air Hose (Red) 14" Lg.	1
7	016-001-401	Air Hose (Red) 87" Lg.	1
6	016-001-122	AIR HOSE GUIDE	1
5	016-001-113	ACCESS COVER	1
4	016-001-109	COIL TUBE (RED)	1
3	016-001-014	Yoke Weldment (Mainside)	1
2	016-001-012	UPPER TUBE BRACKET ASSEMBLY	1
1	016-001-010	Leg Weldment,OFFSIDE (Modified)	1

NOTICE OF CONFIDENTIAL INFORMATION

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NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-70T1 CODE 5.9 FLUX CORE WIRE ONLY.

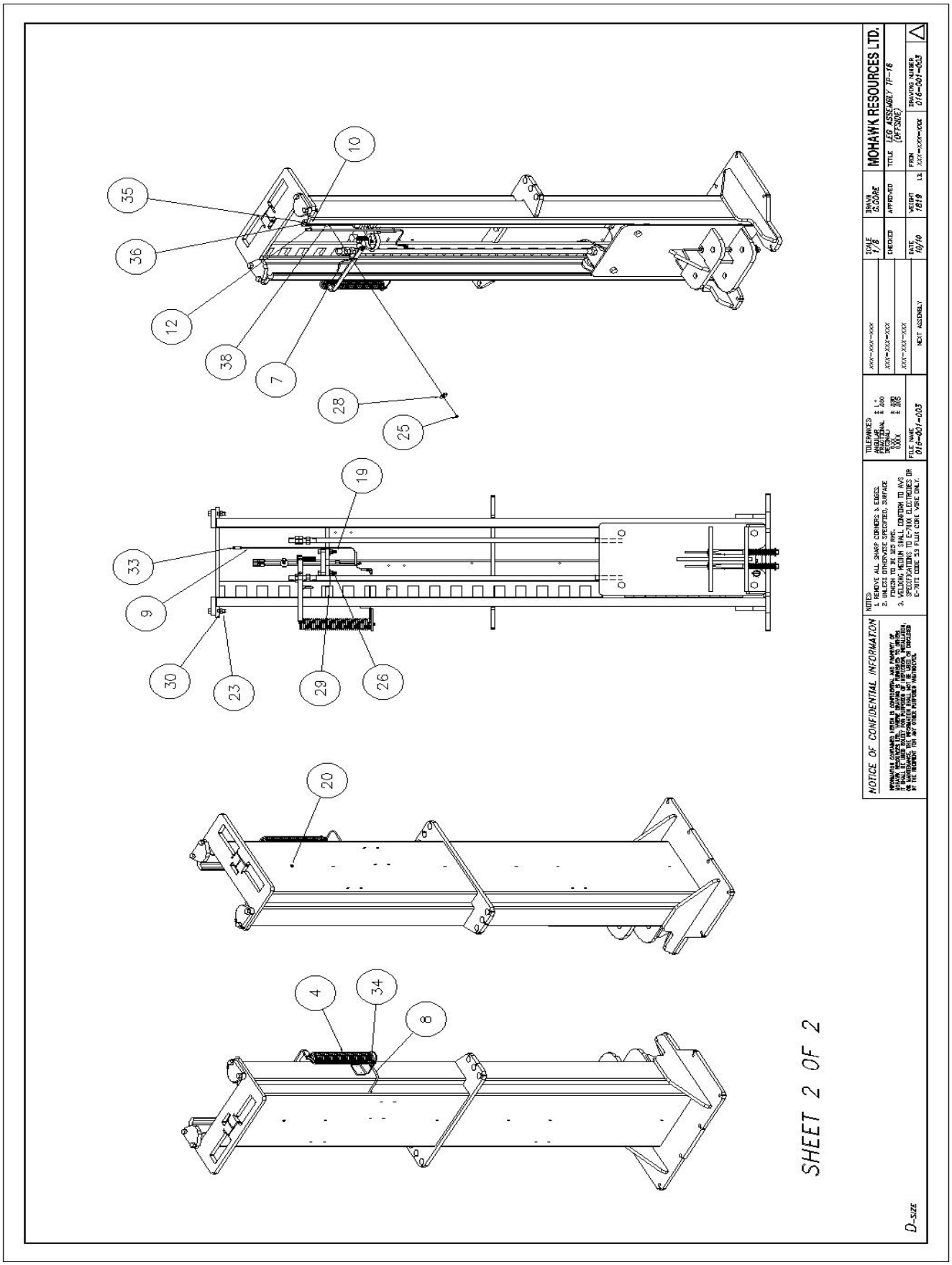
TOLERANCES:
ANGULAR ± 1°
FRACTIONAL ± 1/32
DECIMAL:
.XX ± .030
.XXX ± .005

FILE NAME 016-001-003

xxx-xxx-xxx
xxx-xxx-xxx
xxx-xxx-xxx
NEXT ASSEMBLY

SCALE 1/8 | DRAWN G.GORE | MOHAWK RESOURCES LTD.
CHECKED | APPROVED | TITLE LEG ASSEMBLY TP-16 (OFFSIDE)
DATE 10/10 | WEIGHT 1819 LB. | FROM xxx-xxx-xxx | DRAWING NUMBER 016-001-003 | △

D-SIZE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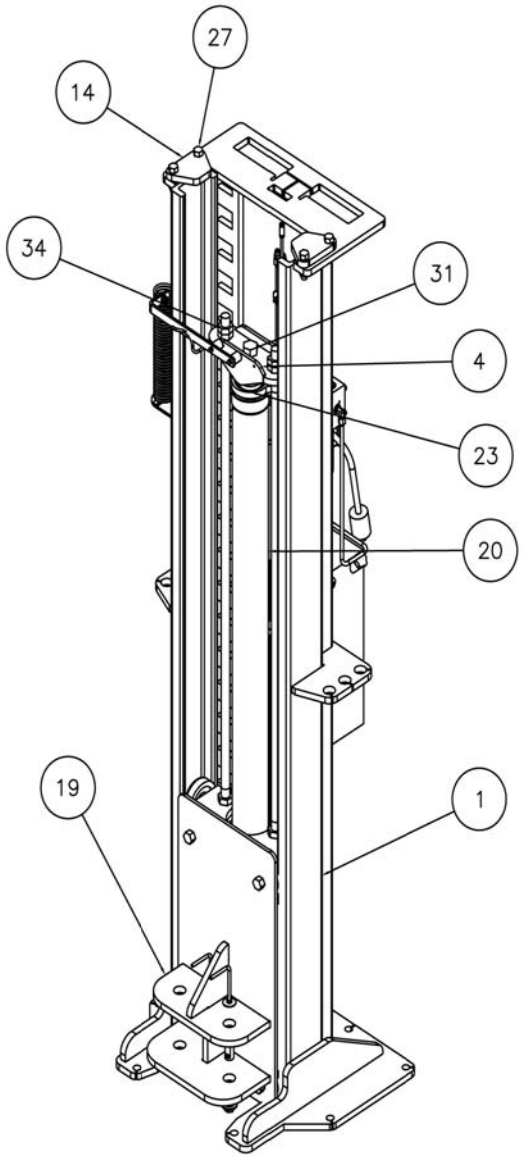
SHEET 2 OF 2
D-SIZE
NOTICE OF CONFIDENTIAL INFORMATION
NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATION E7018 FOR E-7018 CODE 43 FLUX CORE WIRE ONLY.
TOLERANCES:
ANGULAR ±1°
FRACTIONAL ±1/64
DECIMAL ±.010
XXX ±.005
XXXX ±.0005
FILE NAME
016-001-003
XXX-XXX-XXX
XXX-XXX-XXX
XXX-XXX-XXX
NEXT ASSEMBLY
SCALE 1/8
CHECKED
DATE 10/10
DRAWN C.Cooke
APPROVED
WEIGHT 1819 LB
MOHAWK RESOURCES LTD.
TITLE LEG ASSEMBLY TP-18 (OFFSET)
FSCM XXX-XXX-XXX
DRAWING NUMBER 016-001-003



SHEET 1 OF 2

D-SIZE

ITEM	NAME	DESCRIPTION	QTY
54	601-710-001	Double Line Clip	1
53	601-520-004	Union Tee, 1/4 Tube All	1
52	601-420-046	Tee, #6 ORB to #6 JIC (Branch)	1
51	601-420-019	Straight, #6 ORB to #6 JIC	3
50	601-420-017	Elbow, 90 Deg, #6 ORB to #6 JIC	3
49	601-420-011	Union, Straight, #6 JIC	2
48	601-410-030	Diverter Valve Assembly	1
47	601-300-100	Power Unit Assembly, Standard, TP-15, 2 1/2 HP, Single Phase	1
46	601-200-055	Air Fitting, 90 Deg, 1/4 Tube To 1/4 Tube	1
45	601-200-041	Air Tube Fitting, Straight Union, 1/4 Tube to 1/4 Tube	1
44	600-850-031	Loop Clamp 1/4"	3
43	600-720-011	Washer, Lock, 3/8	1
42	600-720-001	Washer, Lock, 5/8	4
41	600-710-008	Washer, Flat, 1/2	4
40	600-710-006	Washer, Flat (Fender), 5/16	1
39	600-710-004	Washer, Flat, 1/4	4
38	600-710-003	Washer, Flat, 5/16	4
37	600-690-009	Nut, Nylon Lock, 1/2-13 NC	2
36	600-690-005	Nut, Nylon Lock, 1/4-20 NC	1
35	600-690-001	Nut, Nylon Lock, 5/16-18 NC	6
34	600-680-004	Nut, Plain, 1-14 NF	4
33	600-680-002	NUT, 5/8-11 NC	4
32	600-640-071	Bolt, Hex Head, 3/8-16 NC x 1" (GR5)	1
31	600-640-055	Bolt, Hex Head, 1-14 NF x 2 1/2 (GR8)	1
30	600-640-020	Bolt, Hex Head, 5/16-18 NC x 3 1/2 Lg (Gr 5)	2
29	600-640-019	Bolt, Hex Head, 1/4-20 NC x 1 1/2 (GR5)	1
28	600-640-018	Bolt, Hex Head, 1/2-13 NC x 3" (GR5)	2
27	600-640-010	Bolt, Hex Head, 5/8-11 NC x 2 1/2 (GR5)	4
26	600-640-004	Bolt, Hex Head, 1/4-20 NC x 1" (GR5)	4
25	600-640-002	Bolt, Hex Head, 5/16-18 NC x 1 1/2 (GD5)	4
24	600-600-006	Screw, Slotted Round Head, #10-32 NF x 1/2 Lg	2
23	015-000-103	Cylinder Retainer	1
22	015-000-025	TUBE ASSY	1
21	015-000-024	TUBE ASSY	1
20	015-000-009	Mainside Cylinder Assembly	1
19	016-001-005	Carriage Assy w/ Airlock Release	1
18	012-012-070	TUBE ASSY	1
17	012-012-069	TUBE ASSY	1
16	012-012-068	TUBE ASSY	1
15	012-012-065	TUBE ASSY	1
14	009-001-141	Carriage Stop	2
13	007-007-174	Rubber Pad	1
12	007-007-146	Cam Spacer (Carriage)	4
11	016-001-404	Air Hose (Red) 28" Lg.	1
10	016-001-403	Air Hose (Red) 16" Lg.	1
9	016-001-402	Air Hose (Red) 14" Lg.	1
8	016-001-401	Air Hose (Red) 87" Lg.	1
7	016-001-122	AIR HOSE GUIDE	1
6	016-001-113	ACCESS COVER	1
5	016-001-109	COIL TUBE (RED)	1
4	016-001-014	Yoke Weldment (Mainside)	1
3	016-001-012	UPPER TUBE BRACKET ASSEMBLY	1
2	016-001-011	Air Valve/Regulator Assembly	1
1	016-001-009	Leg Weldment, Mainside (Modified)	1

NOTICE OF CONFIDENTIAL INFORMATION

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NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-70T1 CODE 5.3 FLUX CORE WIRE ONLY.

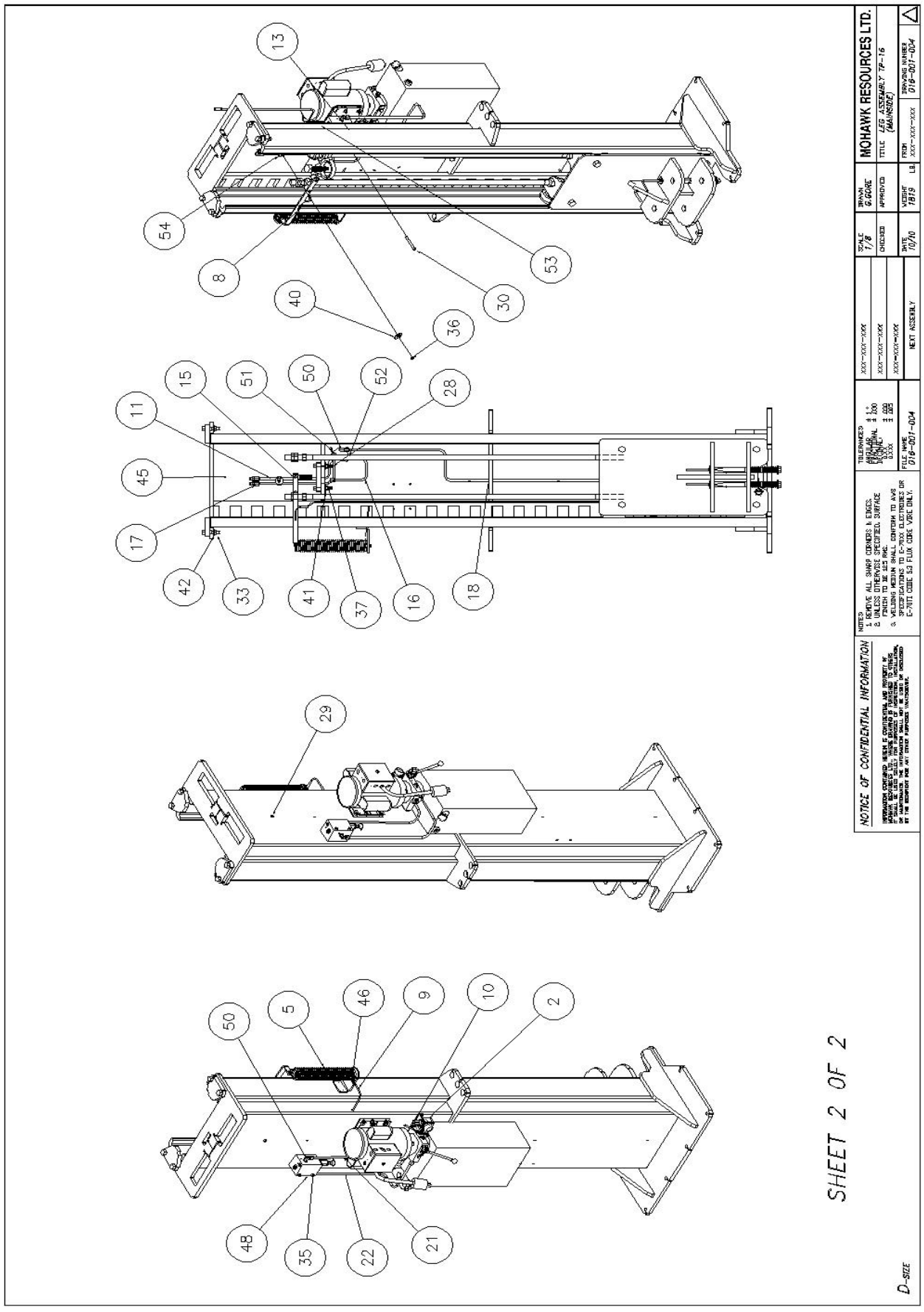
TOLERANCES:
ANGULAR ± 1°
FRACTIONAL ± .030
DECIMAL:
.XXX ± .030
.XXXX ± .005

FILE NAME: 016-001-004

xxx-xxx-xxx
xxx-xxx-xxx
xxx-xxx-xxx
NEXT ASSEMBLY

SCALE: 1/8
DRAWN: G.GORE
CHECKED
APPROVED
DATE: 10/10
WEIGHT: 1819 LB.

MOHAWK RESOURCES LTD.
TITLE: LEG ASSEMBLY TP-16 (MAINSIDE)
FROM: xxx-xxx-xxx
DRAWING NUMBER: 016-001-004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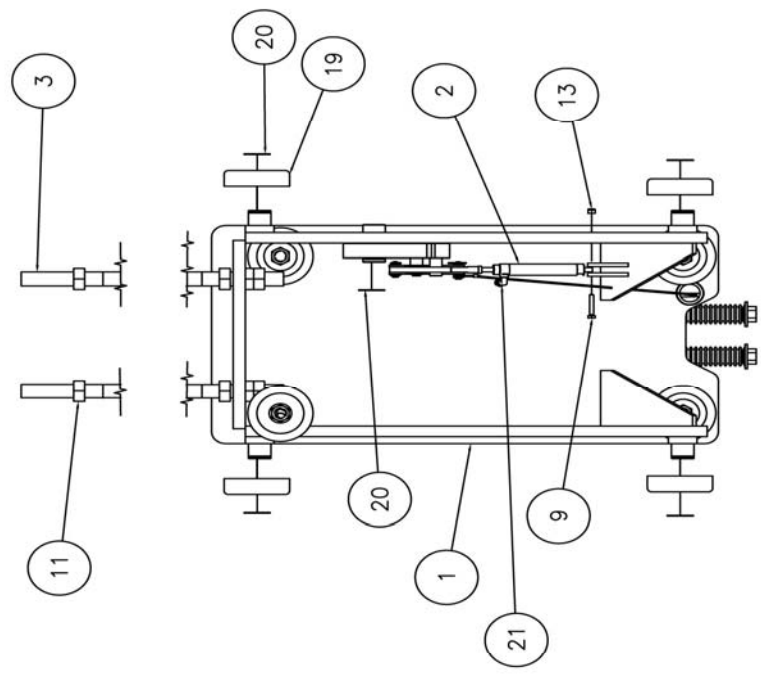
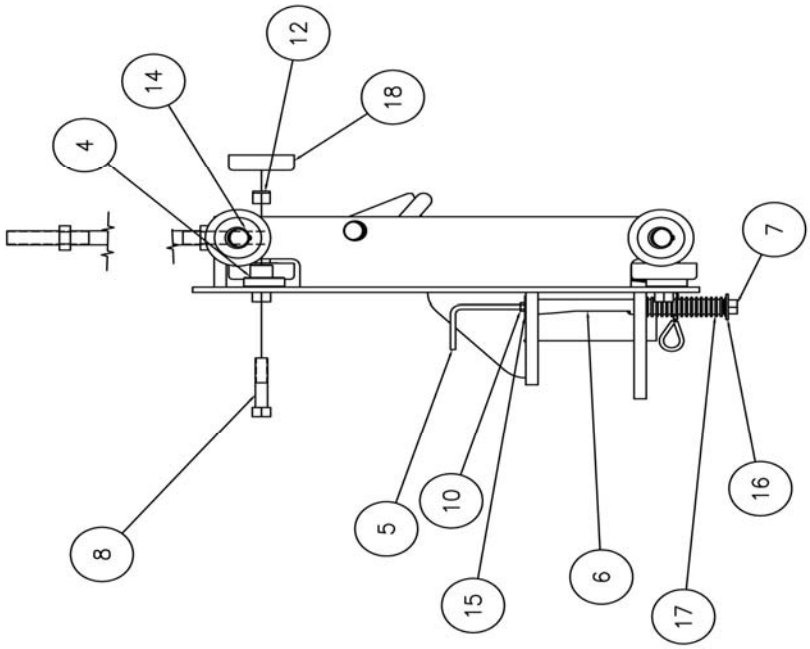
SHEET 2 OF 2
D-SIZE
NOTICE OF CONFIDENTIAL INFORMATION
NOTES
1 REMOVE ALL SHARP CORNERS & EDGES.
2 UNLESS OTHERWISE SPECIFIED SURFACE FINISH TO BE 125 RMS.
3 WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-7XXX ELECTRODES OR E-70T1 CORE 5/3 FLUX CORE WIRE ONLY.
TOLERANCES
FILE NAME
018-001-004
SCALE
1/8
DRAWN
G.GUNE
CHECKED
APPROVED
DATE
10/10
VERIF
1819
LBL
NEXT ASSEMBLY
MOHAWK RESOURCES LTD.
TITLE
LEG ASSEMBLY TP-16
(MAINSIDE)
FROM
XXX-XXX-XXX
DRAWING NUMBER
018-001-004





ITEM	QTY	DESCRIPTION	NAME
21	1	90° Elbow Swiv, 1/8 NPT To 1/4 Tube	601-520-002
20	5	Snap Ring, 1 3/8 Shaft	600-870-001
19	4	Heavy Duty Bearing, 4" Dia	600-860-015
18	4	Bearing, 4" Dia	600-860-012
17	2	Spring, 1.343 OD x 7.09 Lg	600-840-006
16	2	Washer, Flat, 5/8	600-710-007
15	2	Washer, Flat (Fender), 5/16	600-710-006
14	4	Washer, Flat, 3/4	600-710-001
13	1	Nut, Nylon Lock, 1/4-20 NC	600-690-005
12	4	Nut, Nylon Lock, 3/4-16 NF	600-690-003
11	1	Nut, Plain, 1-14 NF	600-680-004
10	2	Nut, Plain, 5/16-18 NC	600-680-003
9	4	Bolt, Hex Head, 1/4-20 NC x 1 1/2 (GR5)	600-640-019
8	4	Bolt, Hex Head, 3/4-16 NF x 3 1/2 (GR5)	600-640-011
7	2	Bolt, Hex Head, 5/8-11 NC x 2 1/2 (GR5)	600-640-010
6	2	Arm Restraint	009-001-156
5	2	Arm Lock Pin Handle	007-007-141
4	2	Bearing Pivot	012-012-152
3	4	Lifting Rod, 1" DIA x 62 1/8 LG	012-012-131
2	1	Latch Body Assembly	016-001-007
1	1	Carriage Weldment w/ Airlock Release	016-001-006

NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING TO CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-71T1 CODE 53 FLUX CORE WIRE ONLY.

TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/64 DECIMAL ± .030 XXX ± .005

FILE NAME: 016-001-005

xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | NEXT ASSEMBLY

SCALE: 1/4 | DRAWN: G.GORE | CHECKED | APPROVED | DATE: 9/10 | WEIGHT: 203 LB

MOHAWK RESOURCES LTD.

TITLE: CARRIAGE ASSEMBLY

FSCM: xxx-xxx-xxx | DRAWING NUMBER: 016-001-005 | △

NOTICE OF CONFIDENTIAL INFORMATION

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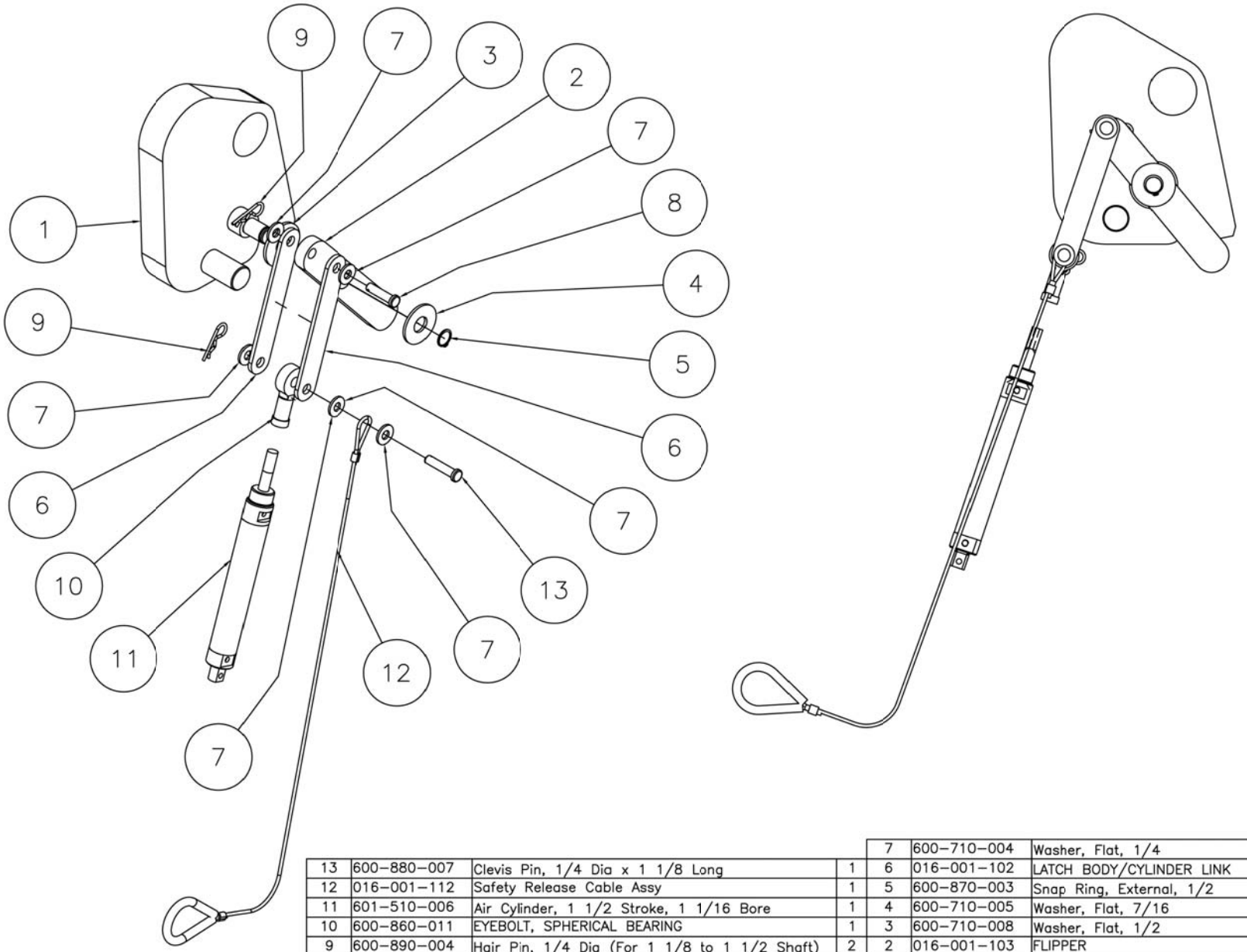
D-SIZE



ITEM	NAME	DESCRIPTION	QTY	ITEM	NAME	DESCRIPTION	QTY
13	600–880–007	Clevis Pin, 1/4 Dia x 1 1/8 Long	1	6	016–001–102	LATCH BODY/CYLINDER LINK	2
12	016–001–112	Safety Release Cable Assy	1	5	600–870–003	Snap Ring, External, 1/2	1
11	601–510–006	Air Cylinder, 1 1/2 Stroke, 1 1/16 Bore	1	4	600–710–005	Washer, Flat, 7/16	1
10	600–860–011	EYEBOLT, SPHERICAL BEARING	1	3	600–710–008	Washer, Flat, 1/2	1
9	600–890–004	Hair Pin, 1/4 Dia (For 1 1/8 to 1 1/2 Shaft)	2	2	016–001–103	FLIPPER	1
8	600–880–006	Clevis Pin, 1/4 Dia x 1" Long	1	1	015–000–007	Latch Body Weldment	1
				7	600–710–004	Washer, Flat, 1/4	5

C–SIZE

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NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-70TI CODE 5.3 FLUX CORE WIRE ONLY.

TOLERANCES:
ANGULAR ± 1°
FRACTIONAL ± .030
DECIMAL:
0.XX ± .030
0.XXX ± .005

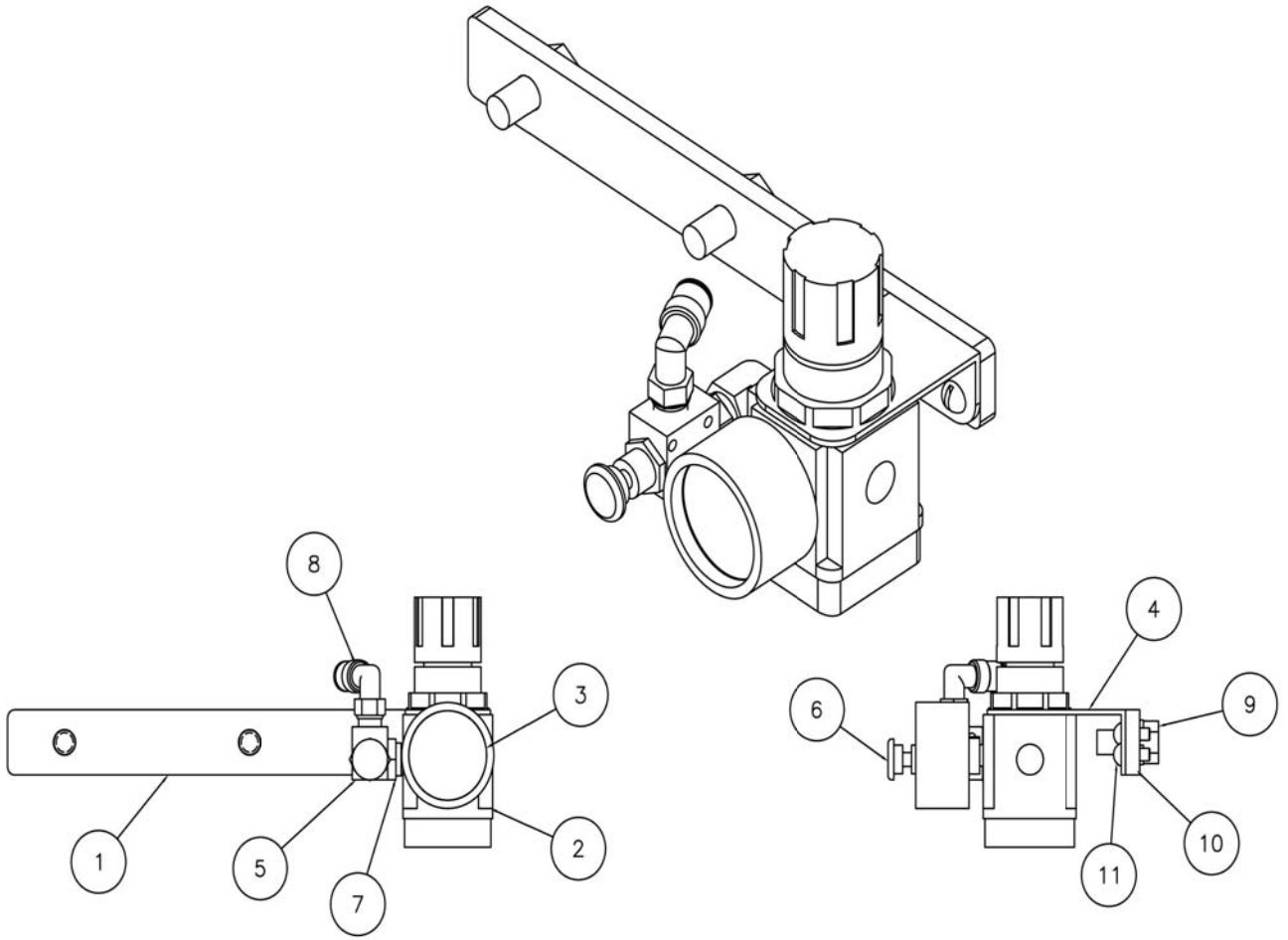
FILE NAME *016–001–007*

xxx–xxx–xxx
xxx–xxx–xxx
xxx–xxx–xxx
NEXT ASSEMBLY

SCALE *HALF* | DRAWN *G.GORE* | **MOHAWK RESOURCES LTD.**

CHECKED | APPROVED | TITLE *LATCH BODY ASSEMBLY*

DATE *9/10* | WEIGHT L.B. | FROM *xxx–xxx–xxx* | DRAWING NUMBER *016–001–007*



ITEM	NAME	DESCRIPTION	QTY
11	600-600-001	Screw, Pan Head, #10-32 NF x 1/2 Lg	2
10	600-720-011	Washer, Lock, 3/8	2
9	600-640-034	Bolt, Hex Head, 3/8-16 NC x 3/4 (GR8)	2
8	601-520-002	90° Elbow Swiv, 1/8 NPT To 1/4 Tube	1
7	601-420-275	Elbow, 90 Deg, 1/4 MNPT to 1/4 MNPT	1

ITEM	NAME	DESCRIPTION	QTY
6	601-510-005	Poppet Valve Push Button	1
5	601-510-004	Poppet Valve, 3-Way	1
4	601-510-025	Wall Bracket	1
3	601-510-024	Gauge	1
2	601-510-026	Regulator	1
1	016-001-111	VALVE/REGULATOR BRACKET	1

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NOTES:
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2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-70XX ELECTRODES OR E-70T1 CODE 53 FLUX CORE WIRE ONLY.

TOLERANCES:
ANGULAR ± 1°
FRACTIONAL ± .030
DECIMAL:
XXX ± .030
OXXX ± .005

FILE NAME 016-001-011

xxx-xxx-xxx
xxx-xxx-xxx
xxx-xxx-xxx
NEXT ASSEMBLY

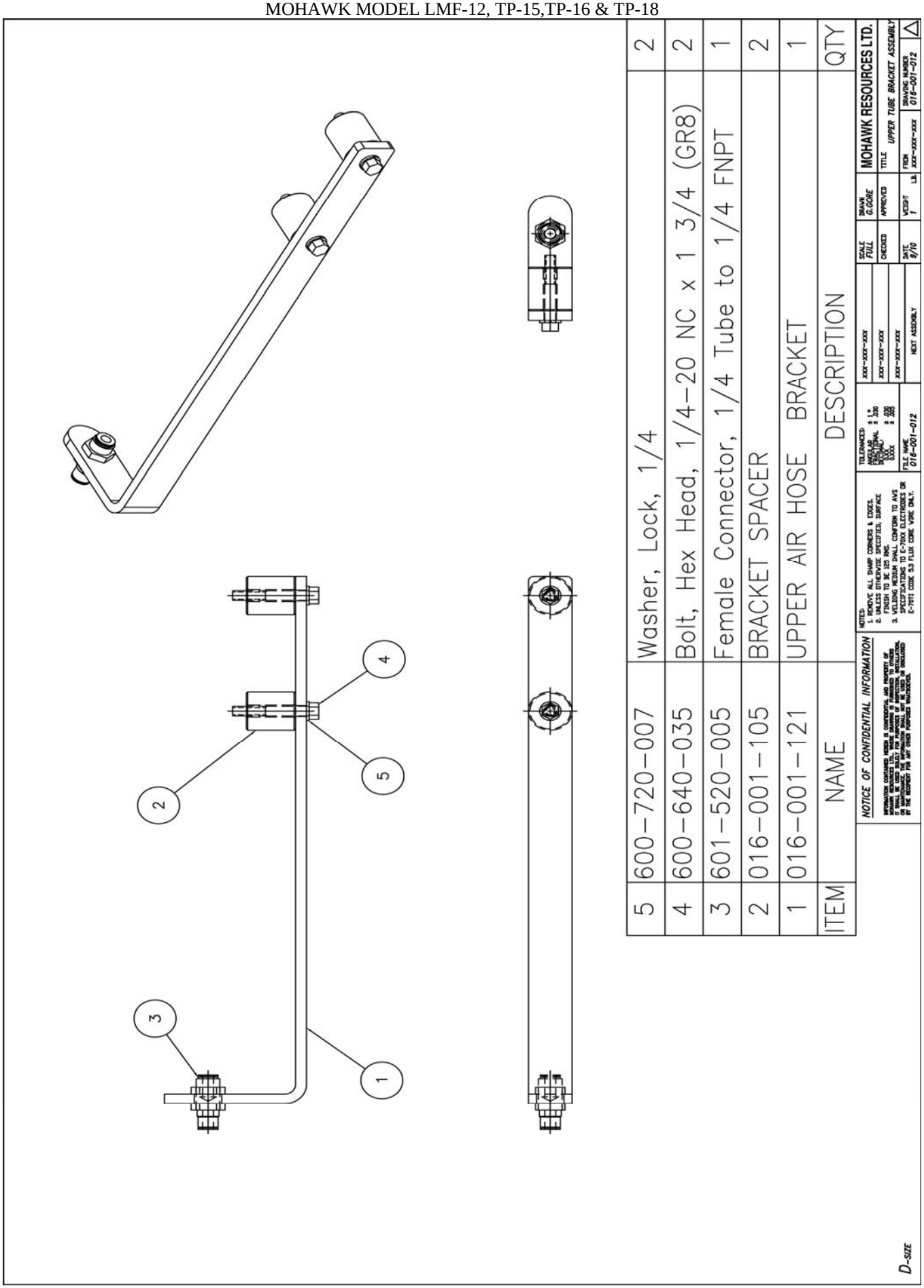
SCALE FULL | DRAWN G.GORE | CHECKED | APPROVED | DATE 9/10 | WEIGHT 1.86 LB

MOHAWK RESOURCES LTD.

TITLE AIR VALVE/REGULATOR ASSEMBLY

FROM xxx-xxx-xxx | DRAWING NUMBER 016-001-011

D-SIZE



ITEM	NAME	DESCRIPTION	QTY
5	600-720-007	Washer, Lock, 1/4	2
4	600-640-035	Bolt, Hex Head, 1/4-20 NC x 1 3/4 (GR8)	2
3	601-520-005	Female Connector, 1/4 Tube to 1/4 FNPT	1
2	016-001-105	BRACKET SPACER	2
1	016-001-121	UPPER AIR HOSE BRACKET	1

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NOTES:
1. REMOVE ALL SHARP CORNERS & EDGES.
2. UNLESS OTHERWISE SPECIFIED, SURFACE FINISH TO BE 125 RMS.
3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E-7000 ELECTRODES OR E-7011 CODE 5.3 FLUX CORE WIRE DIA1.

TOLERANCES
ANGULAR ± 1°
FRACTIONAL ± 1/32
DECIMAL
XXX ± .010
XXXX ± .005

FILE NAME 016-001-012

XXX-XXX-XXX
XXX-XXX-XXX
XXX-XXX-XXX
NEXT ASSEMBLY

SCALE FULL
CHECKED
DATE 9/10

DRAWN G.GORE
APPROVED
WEIGHT 1 LB

MOHAWK RESOURCES LTD.
TITLE UPPER TUBE BRACKET ASSEMBLY
FROM XXX-XXX-XXX
DRAWING NUMBER 016-001-012

D-SIZE

MOHAWK

PRE-EXISTING SLAB REQUIREMENTS & NEW SLAB RECOMMEDATIONS

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-MAIN: Service@MOHAWKLIFTS.com

Mohawk Resources Ltd.

PRE-EXISTING Minimum Floor Requirements

Mohawk Lift Model	Minimum Slab Thickness	Minimum Compressive Strength	Reinforcement Size	Reinforcement Spacing (Rebar)
A-7	4-1/2”	4000 psi with 28 day aging	#6 rebar	12 in.
System IA	4-1/2”	4000 psi with 28 day aging	#6 rebar	12 in.
System IA-10	4-1/2”	4000 psi with 28 day aging	#6 rebar	12 in.
LC-12	6 1/2”	4000 psi with 28 day aging	#6 rebar	12 in.
LMF-12	6 1/2”	4000 psi with 28 day aging	#6 rebar	12 in.
TP-15	6 1/2”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-16	6 1/2”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-18 (2012)	6 1/2”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-20	8”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-20-WB	6 1/2”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-26	12”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-26-WB	8”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-30	12”	4000 psi with 28 day aging	#6 rebar	10 in.
TP-30-WB	8”	4000 psi with 28 day aging	#6 rebar	10 in.
TR-19	4 1/2”	n/a	ACI Temp only*	ACI Temp only*
FL-25	4 1/2”	n/a	ACI Temp only*	ACI Temp only*
TR-25A	4 1/2”	n/a	ACI Temp only*	ACI Temp only*
TR-30	4 1/2”	n/a	ACI Temp only*	ACI Temp only*
TR-33	6” or (4 1/2” **)	n/a	ACI Temp only*	ACI Temp only*
TR-35	6” or (4 1/2” **)	n/a	ACI Temp only*	ACI Temp only*
TR-50	6” or (4 1/2” **)	n/a	ACI Temp only*	ACI Temp only*
TR-75	6” or (4 1/2” **)	n/a	ACI Temp only*	ACI Temp only*

* The floor must be properly aged to American Concrete Institute specifications. The floor does not require reinforcement, but a minimum of 4” x 4” x 10/10 wire mesh is recommended.
** Larger 4’ x 4’ base pads (available from Mohawk) required for floors with a thickness range less than 6”, but greater or equal to 4 1/2”.

The floor should be test drilled to verify minimum floor thickness and to confirm building drawings. A core sample should be obtained and tested to verify minimum floor compressive strength. When investigating floor properties, consult building drawings to verify proper floor reinforcement.

All 2-post lifts require a continuous single slab. Spanning expansion seams or positioning posts on separate slabs is not acceptable.

--- ALL MOHAWK LIFTS MUST BE INSTALLED ON CONCRETE ONLY ---

DO NOT install any Mohawk lift on any surface other than concrete, conforming to the minimum compressive strength, aging, reinforcement, and thickness stated in the table above.
DO NOT install any Mohawk lift on expansion seams or on cracked or defective concrete. All ¾ inch diameter anchors must be a minimum of 6 inches away from any expansion seams, control joints or other inconsistencies in the concrete. All 1 inch diameter anchors must be a minimum of 7 ½ inches away from any expansion seams, control joints or other inconsistencies in the concrete. Refer to anchor manufacturer specifications for specific information concerning edge distances and bolt to bolt distance requirements.
NEVER, NEVER install a Mohawk lift on hand mixed concrete.
DO NOT install any Mohawk lift on a secondary floor level or on any ground floor with a basement beneath without written authorization from the building architect and prior consultation and approval from Mohawk Resources Ltd.

If the floor does not meet these minimum pre-existing floor requirements, it is suggested to construct a slab as outlined in ***New Slab Recommendations***. If the location of the lift is in a seismic zone, additional provisions will need to be considered, and it is recommended to consult a building architect or engineer.

File: Pre-Existing Floor-Requirements.doc
Rev Date: 5/2012

New Slab Recommendations:

The information contained in this appendage supercedes any other information given in the accompanied manual. This information is presented for design recommendations for a new concrete slab in the event that the pre-existing floor does not meet minimum requirements of the applicable lift type. Please read all instructions below carefully before producing new slab.

Basic Concrete Requirements:

Minimum Tensile Strength of Concrete:	4,000 P.S.I.
Minimum Aging of New Concrete Slab:	28 days (cure time)
Minimum Thickness of Concrete Slab:	See New Slab Table & Figure Attached
Minimum Width and Length of Slab:	See New Slab Table & Figure Attached

All properties of the new concrete slab are mandatory and must conform to the above stated properties before installation of the lift is deemed acceptable. The new slab must be totally surrounded by an existing concrete floor. Certified strength documentation should be obtained from the firm who supplies the concrete mixture at the time of the pour.

The slab above is designed as “stand alone” and does not take into account the contribution of strength from surrounding concrete. It may be desirable to reinforce the new slab to the pre-existing surrounding floor. Care should be taken to locate these specific reinforcement bars away from any anchor positions of the specific lift.

This new slab design does not account for second floor installations or installations in a ground floor with a basement beneath. For this case, the lift should not be installed without written authorization from the building architect.

All ¾ inch diameter anchors must be a minimum of 6 inches away from any expansion seams, control joints or other inconsistencies in the concrete. All 1 inch diameter anchors must be a minimum of 7 ½ inches away from any expansion seams, control joints or other inconsistencies in the concrete. Refer to anchor manufacturer specifications for specific information concerning edge distances and bolt to bolt distance requirements.

NEVER, NEVER, hand mix your own concrete.

Rev: 6/7/06
File: New-Slab.doc

New Slab Recommendations

File: New-slab.xls

Rev Date: 5/16/2012

NEW SLABS MUST BE 12" THICK MINIMUM !! (See Notes Below)

Lift Model	W Slab Width, (Inches)	L Slab Length, (Inches)	R Reinforcement Size, (Inch) (See Note 1 & 2)	S1 & S2 Reinforcement Spacing, (Inch) (See Note 3)	D Wej-it Dia, (Inch)	I Wej-it Length, (Inch)
A-7	48" Min	144" Min	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
System IA	48" Min	161" Min	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
System IA-10	48" Min	161" Min	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
LC-12	72" Min	168" Min	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
LMF-12	72" Min	168" Min	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-15	72" Min	168" Min	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-16	72" Min	168" Min	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-18 (2012)	72" Min	168" Min	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-20	72" Min	186" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-20-WB	72" Min	186" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-26	72" Min	198" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	10 in
TP-26-WB	72" Min	220" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	8 in
TP-30	72" Min	198" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	10 in
TP-30-WB	72" Min	220" Min	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	8 in
TR-19 *	24" Min	24" Min	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
FL-25 *	24" Min	24" Min	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
TR-25 *	24" Min	24" Min	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
TR-30 *	48" Min	48" Min	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
TR-33 *	72" Min	72" Min	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-35 *	72" Min	72" Min	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-50 *	72" Min	72" Min	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-75 *	72" Min	72" Min	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in

* Four Separate Slabs Formed at each Post.

Note 1: An additional layer of 6 x 6 - 10/10 WWF at mid height of new slab would be advisable in any extremely hot or cold climate to control cracking due to temperature fluctuations and shrinkage.
At anchor bolt locations only keep WWF mesh below the elevation of the anchorage to avoid drilling interference with the wire.

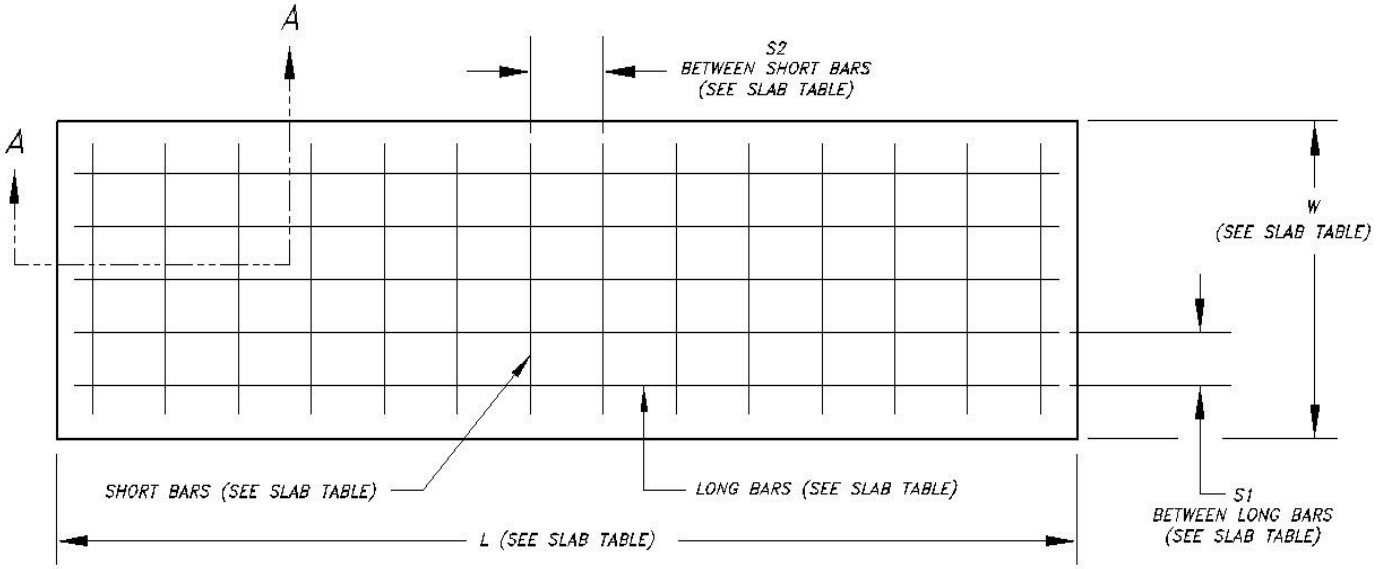
Note 2: The main reinforcing and lower temperature steel shall be Grade 60 deformed bars

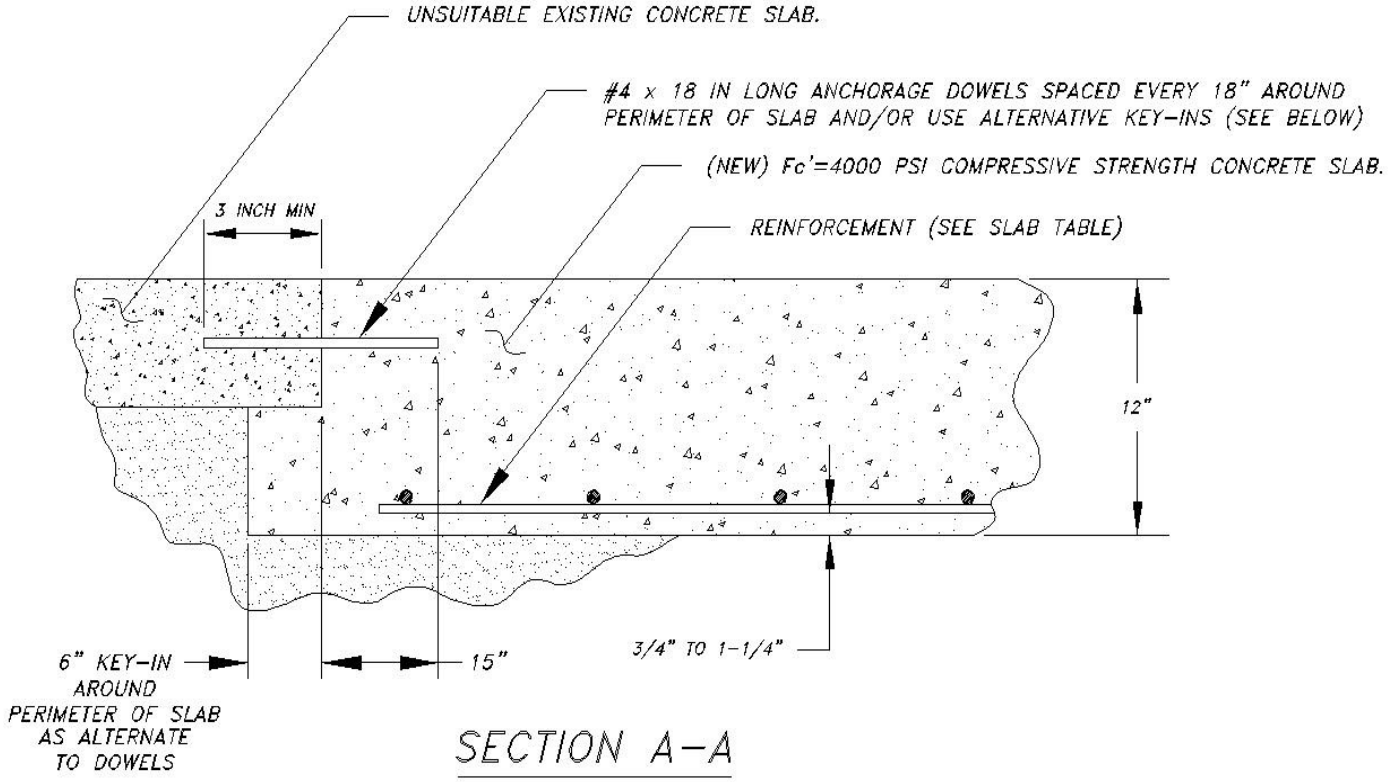
Note 3: The tolerance on spacing of the bars in each direction shall be the value shown, plus or minus 1 inch. In addition, the number of bars specified in the table must be used.

Note 4: The concrete outline dimensions and the reinforcing shown are for a foundation bed allowable bearing capacity of not less than 2,000 lb/sq ft (1 ton per square foot). Many clays, and most all firm clay, hard clay, sand & clay mixes, dry sands, course dry sands, dry sand and silt mixes, sand and gravel mixes, and gravel type soils meet or exceed this allowable bearing capacity. If there is question regarding the foundation bed allowable bearing capacity, a soils testing engineer should be consulted. Situations where the allowable bearing capacity is lower than this value will require special attention.

NEW RECOMMENDED SLAB DESIGN FOR 2-POST LIFTS

FILE: MAN066
DATE: 2/98
REV DATE: 7/2003

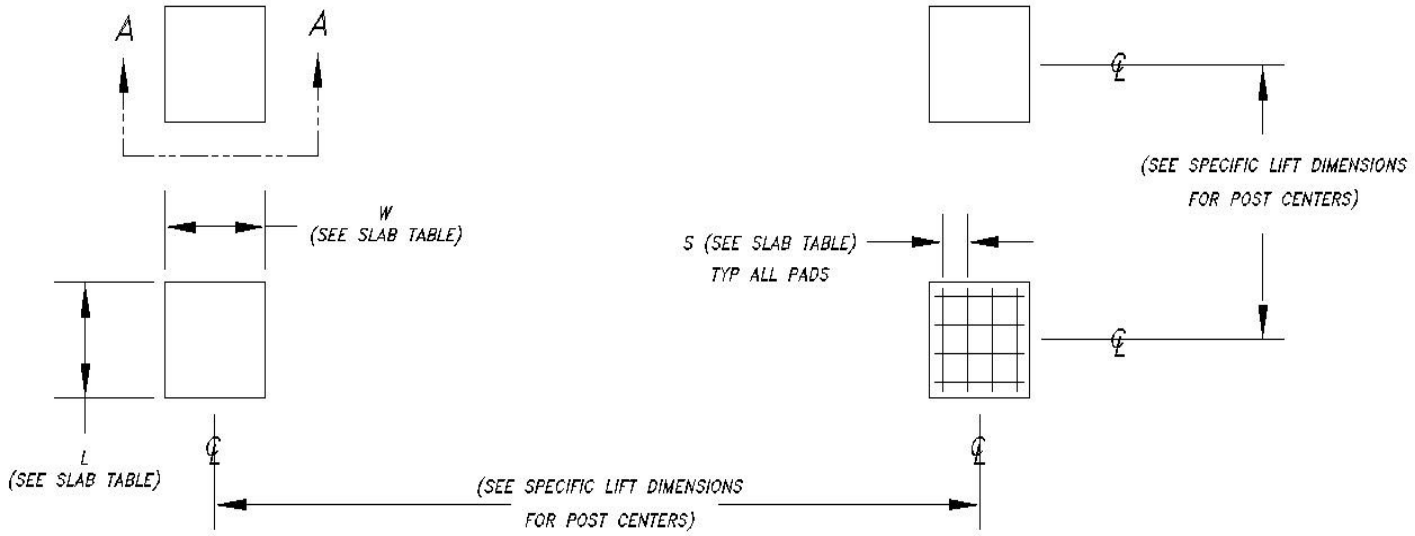


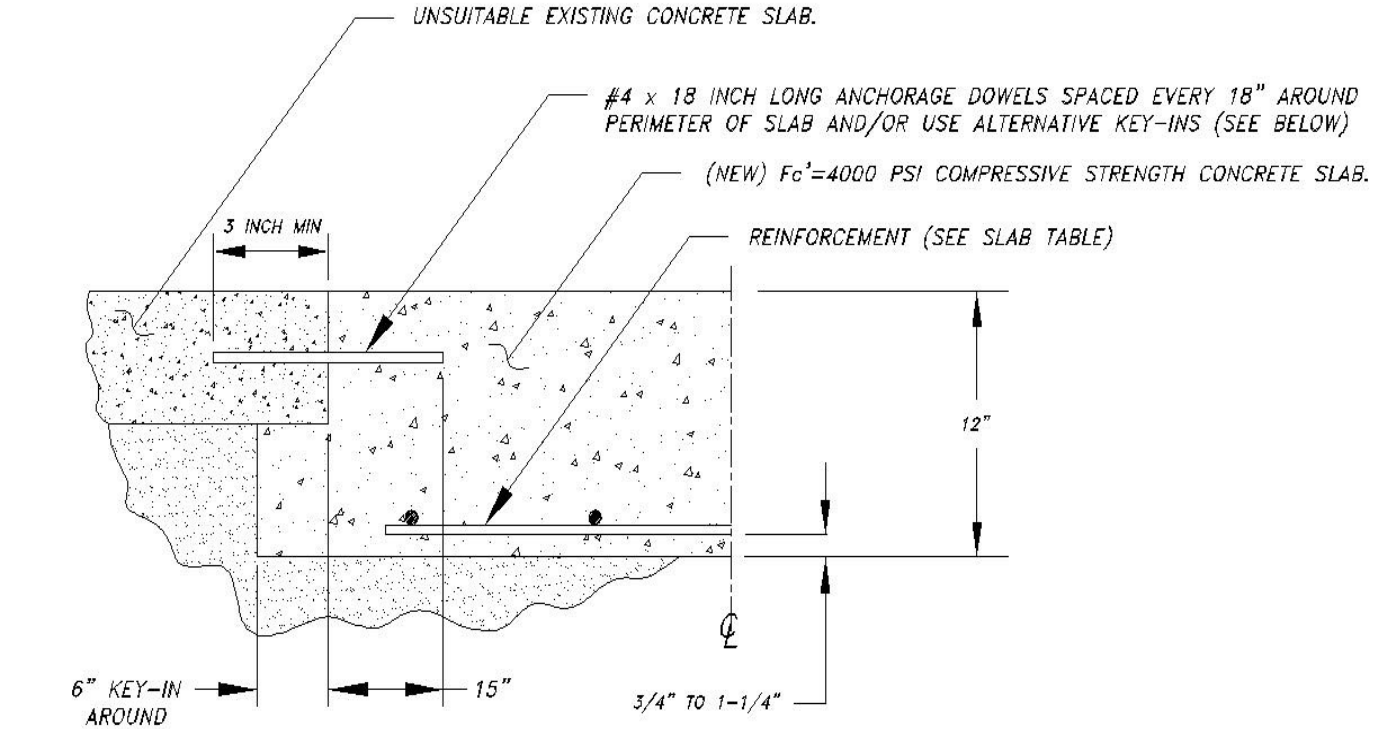


SECTION A-A

NEW RECOMMENDED SLAB DESIGN FOR 4-POST LIFTS

FILE: MAN089
DATE: 10/00
REV DATE: 7/2003

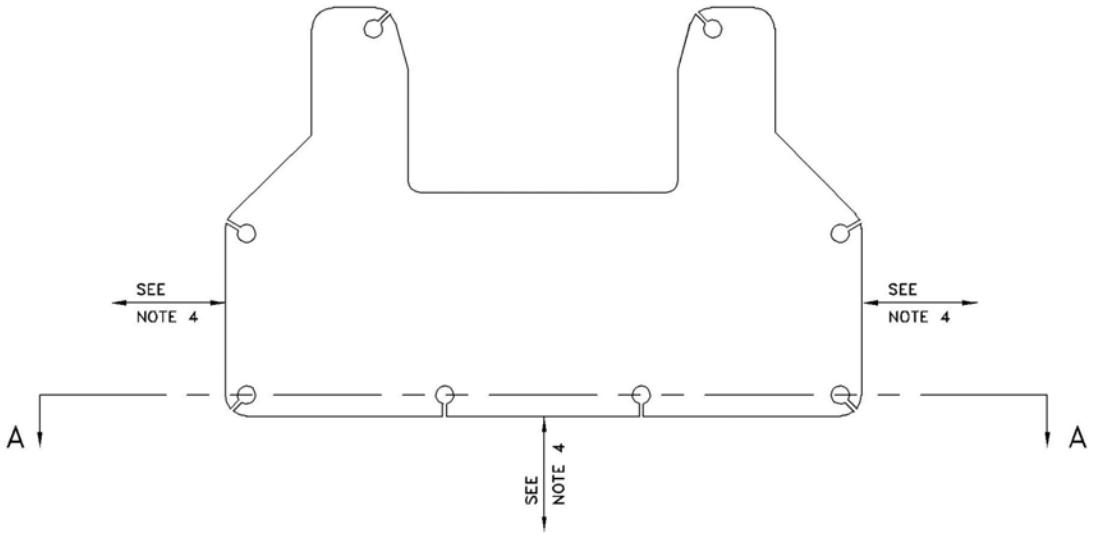


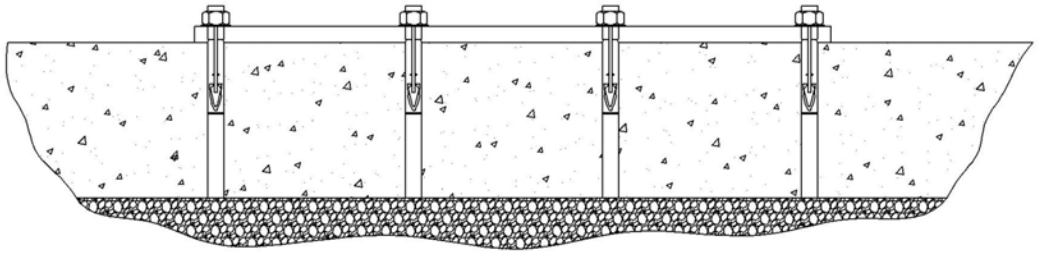


SECTION A-A

REV.	DESCRIPTION	DATE	BY	APP'D.
△				

TYPICAL BASE PLATE DETAIL
(SYSTEM IA SHOWN BELOW – 8 ANCHORS PER BASE PLATE)





SECTION A–A:

BASE PLATE ANCHORING INSTRUCTIONS:

1. LOCATE POSTS IN DESIRED LOCATION OF BAY, PER LIFT SETUP DIMENSIONS. REFER TO LIFT MANUAL FOR INSIDE DIMENSIONS OF COLUMNS, ETC.
(FOR SYSTEM IA–10, THE INSIDE POST DIMENSION IS 120")

2. MATCH DRILL ALL BASE PLATE HOLES. REFER TO ANCHOR BOLT INSTALLATION SPECIFICATIONS ATTACHED FOR DRILL SIZE. (3/4" DIAMETER ORIGINAL WEJ–IT STYLE EXPANSION ANCHOR BOLTS).

3. INSTALL ANCHORS PER ANCHOR BOLT INSTALLATION SPECIFICATIONS ATTACHED. SHIM UNDER BASE PLATE AS NEEDED TO ENSURE THAT POSTS ARE SQUARE AND PLUMB (MAXIMUM OF 1/4") WITH COLORED SHIMS PROVIDED (HORSESHOE SHAPED).

4. ALL ANCHORS MUST BE A MINIMUM OF 6" AWAY FROM ANY EXPANSION SEAM, CONTROL JOINT, OR OTHER FLOOR INCONSISTENCIES.

5. DRILLING THRU ENTIRE SLAB THICKNESS IS PREFERED WHEN POSSIBLE. THIS ALLOWS ANCHORS TO BE HAMMERED FLUSH TO CONCRETE IF LIFT IS RE–LOCATED.

C–SIZE

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NOTES:
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3. WELDING MEDIUM SHALL CONFORM TO AWS SPECIFICATIONS TO E–70XX ELECTRODES OR E–70T1 CODE 5.3 FLUX CORE WIRE ONLY.

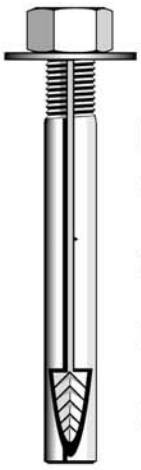
TOLERANCES:
ANGULAR ± 1°
FRACTIONAL ± .030
DECIMAL:
0.XX ± .030
0.XXX ± .005

FILE NAME ZZ912

009–010–006

NEXT ASSEMBLY

SCALE 1/4	DRAWN rwv7089	**MOHAWK RESOURCES LTD.**		
CHECKED R.V.	APPROVED	TITLE *Base Plate Anchoring Detail*		
DATE 2/05	WEIGHT N/A LB.	FROM N/A	DRAWING NUMBER ZZ912	△



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.

USA ENGINEERED & MANUFACTURED

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 Specifications	QQZ-325C, Type II, Class 3 (Clear Chromate added) FFS-325, Group II, Type 4, Class 1

Maximum Tensile and Shear Capacity for Static Loads

	Limestone Aggregate			Unreinforced Stone Aggregate oncrete Zin Plated arbon Steel							Unreinforced Lightweight (Idealite)		
Anchor & Hole Size	Embed-ment (in)	2000 psi Tension (lbs)	Shear (lbs)	Embed-ment (in)	3000 psi Tension (lbs)	Shear (lbs)	5000 psi Tension (lbs)	Shear (lbs)	7000 psi Tension (lbs)	Shear (lbs)	Embed-ment (in)	5000 psi Tension (lbs)	Shear (lbs)
1/4	1 1/8	1132	1211	1 1/8	1320	1751	1760	2316	2464	2494	1 1/2	1861	1947
1/4	1 3/4	1256	1211	1 1/2	1856	1751	2473	2316	3462	2494	•	•	•
5/16	1 1/4	1308	1210	1 1/4	2057	1839	2742	2530	3939	3439	1 1/2	2493	3064
5/16	2	1181	1210	1 3/4	2389	1839	3185	2530	4459	3439	•	•	•
3/8	1 1/4	994	1223	1 1/2	2876	4286	3834	5213	5368	5658	1 3/4	3125	4289
3/8	4	1728	1223	4	3488	4286	4650	5213	6510	5658	•	•	•
1/2	1 3/4	1542	3009	2 1/4	3473	7138	5789	10748	8105	11550	2 1/4	4778	9833
1/2	6	2695	3009	5	4809	7138	8015	10748	11221	11550	•	•	•
5/8	•	•	•	3 1/2	7582	10719	12636	15583	17690	16700	2 1/2	6455	12500
5/8	•	•	•	4 3/4	9179	10719	15299	15583	21419	16700	•	•	•
3/4	•	•	•	3	11579	15537	19299	21000	27019	23103	3 1/2	17293	19050
3/4	•	•	•	7	15444	15537	25740	21000	36036	23103	•	•	•
7/8	•	•	•	4 1/2	15266	•	25444	25099	33622	28718	•	•	•
7/8	•	•	•	7	16992	•	28320	25099	39648	28718	•	•	•
1	•	•	•	5 1/2	16351	•	27252	33083	38153	35700	4 1/2	21616	31666
1	•	•	•	7	17837	•	29728	33083	41619	35700	•	•	•
Source	1			2							2		

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.

Edge Distance and Spacing Requirements

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

Notes:

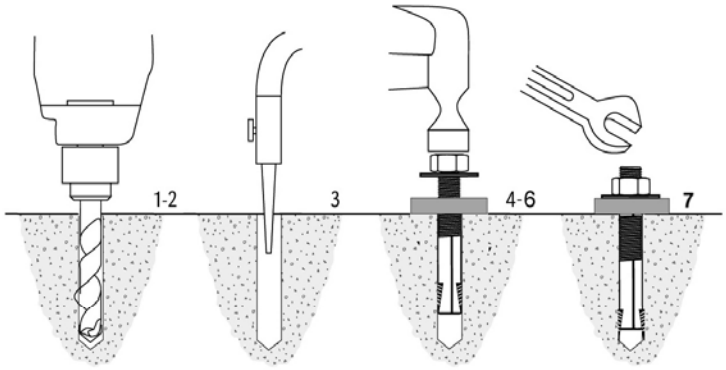
- Information provided only for the use of a qualified design engineer. Use of technical data by persons not qualified could cause serious damage, injury, or even death.
- Ultimate values shown. For static loads, use one-fourth of the maximum tensile and shear capacities for the recommended 4:1 safety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

Order Information

Catalog Number	Anchor Diameter & Length (in)	Minimum Embed-ment (in)	Thread Length (in)	Quantity Box/ Carto
1413	1/4 x 1 3/4	1	1/2	100/600
1423	1/4 x 2 3/4	1	1/2	100/600
1430	1/4 x 3	1	1/2	100/600
5620	5/16 x 2	1 1/4	5/8	100/600
5630	5/16 x 3	1 1/4	5/8	100/600
3820	3/8 x 2	1 1/2	3/4	100/600
3823	3/8 x 2 3/4	1 1/2	3/4	100/600
3832	3/8 x 3 1/2	1 1/2	3/4	50/300
3850	3/8 x 5	1 1/2	3/4	50/300
3860	3/8 x 6	1 1/2	3/4	50/300
1223	1/2 x 2 3/4	2	1	50/300
1232	1/2 x 3 1/2	2	1	50/300
1250	1/2 x 5	2	1	25/150
1260	1/2 x 6	2	1	25/150
1270	1/2 x 7	2	1	25/150
5832	5/8 x 3 1/2	3	1 1/4	25/150
5842	5/8 x 4 1/2	3	1 1/4	25/150
5850	5/8 x 5	3	1 1/4	20/120
5860	5/8 x 6	3	1 1/4	15/90
5870	5/8 x 7	3	1 1/4	15/90
3440	3/4 x 4	3	1 1/2	18/108
3450	3/4 x 5	3	1 1/2	12/72
3460	3/4 x 6	3	1 1/2	12/72
3470	3/4 x 7	3	1 1/2	10/60
3482	3/4 x 8 1/2	3	1 1/2	10/30
3410	3/4 x 10	3	1 1/2	10/30
7880	7/8 x 8	4 1/2	1 3/4	10/30
7810	7/8 x 10	4 1/2	1 3/4	10/30
7812	7/8 x 12	4 1/2	1 3/4	5/15
1080	1 x 8	5 1/2	2	10/30
1010	1 x 10	5 1/2	2	5/15
1012	1 x 12	5 1/2	2	5/15

Installation Instructions – Mohawk Lifts

1. Drill the hole perpendicular to the work surface.* To assure full holding power, do not ream the hole or allow the drill to wobble.
2. Drill the hole deeper than the intended embedment of the anchor, but not closer than two anchor 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 on to 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 fixture.
7. Tighten the nut to not less than 3 full turns but not more than 5 turns past the hand tight position. Use of an Impact wrench for Installation of the anchor is NOT recommended.

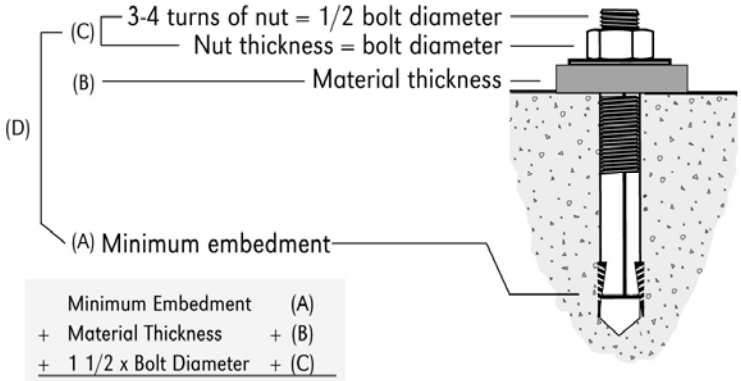


Inspection & Maintenance Instructions

1. Verify torque on anchors to 85 Ft. Lbs. for future/annual inspections.

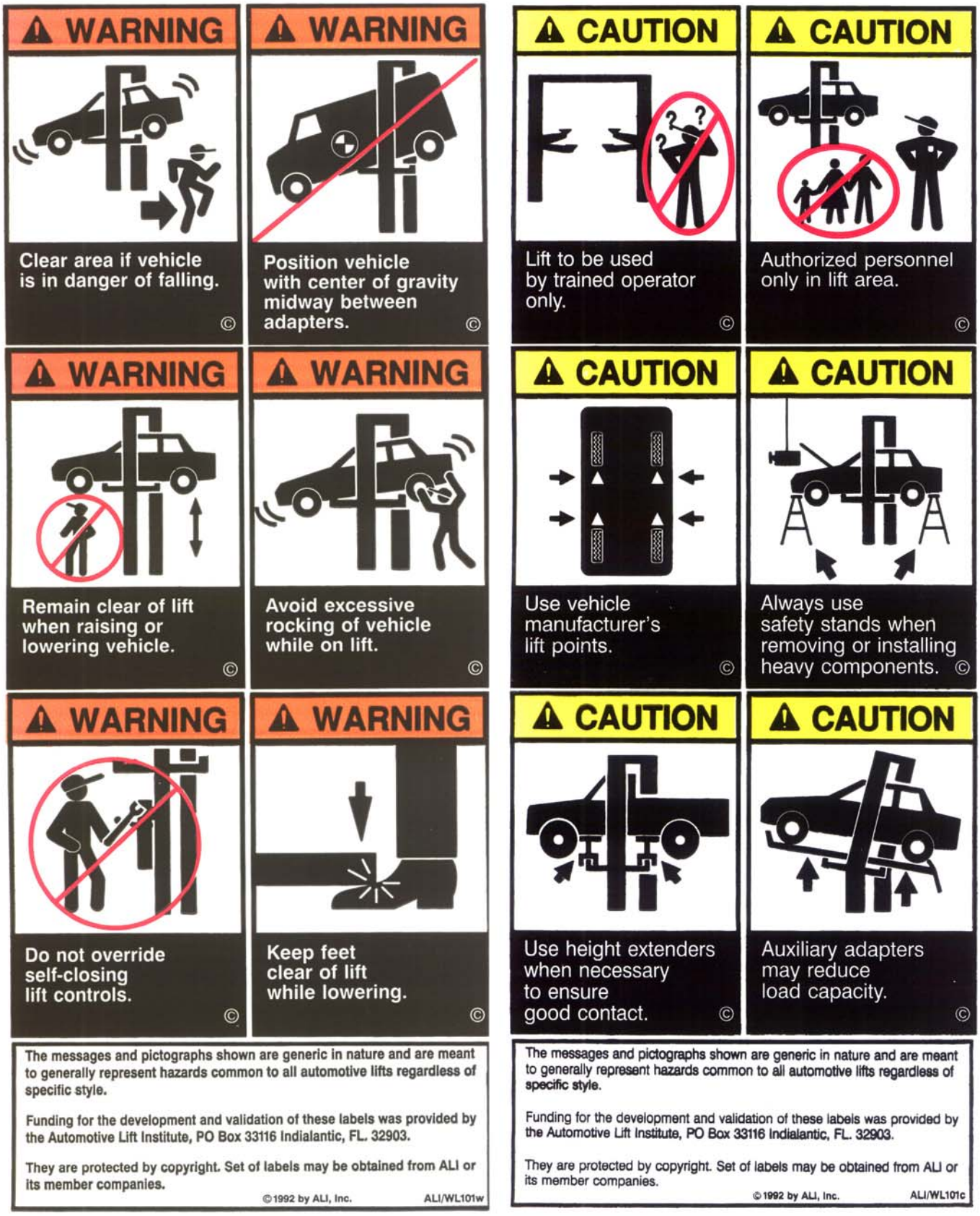
* Always wear safety glasses. Follow the drill manufacturer's safety instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards as listed on back cover.

Length Selection Guide



	Minimum Embedment	(A)
+	Material Thickness	+ (B)
+	1 1/2 x Bolt Diameter	+ (C)
=	Total Anchor Length	= (D)

REV: 11/06



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MOHAWK.

Because Quality Lasts Forever.

Model USL-6000

Full rise, space-saving, no-post, portable scissors lift, offers full under-car access.

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" truck adapters.

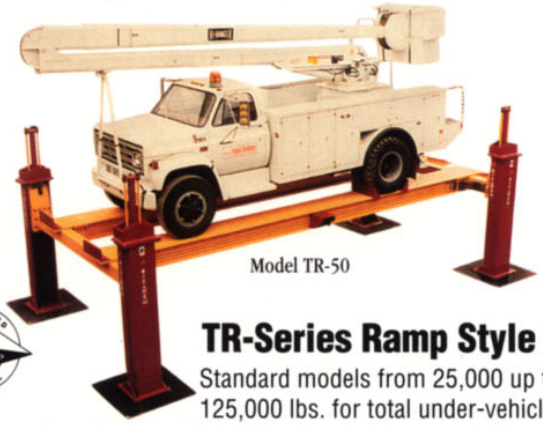
Model System I

The 9,000 lb. capacity System I, like all Mohawk lifts, features Mohawk's patented hydraulic equalization system with adjustable overhead (or optional underground) hydraulic lines. Offers low 3 1/2" swing arms and comes standard with truck adapters.

Model LMF-12, TP-15, TP-18, TP-26 & TP-30

These 12,000 to 30,000 lb. capacity models are the ideal heavy-duty 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 standard equipment.

Model LMF-12



Model TR-50

TR-Series Ramp Style Lifts

Standard models from 25,000 up to 125,000 lbs. for total under-vehicle access. Ramp lengths from 20' to 50'. Completely operated by a single technician, and features fully interlocked, redundant safety systems.

MOHAWK

Mohawk Industrial Park • P.O. Box 110
Amsterdam, NY 12010
1-800-833-2006 or 518-842-1431
FAX 518-842-1289

www.mohawklifts.com

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(JPG FORMATS PREFERED)

E-MAIL YOUR PHOTOS AND COMMENTS TO:
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YOUR FRIENDS AT MOHAWK LIFTS