

MOHAWK

MADE IN THE USA



MODEL TP-20

20,000 LB. CAPACITY TWO POST VEHICLE LIFT MANUAL

**THANK YOU
FOR SENDING IN YOUR
WARRANTY REGISTRATION
CARD**

**MOHAWK SERVICE
DEPARTMENT**

- ☒ INSTALLATION
- ☒ OPERATION
- ☒ MAINTENANCE
- ☒ PARTS

MOHAWK RESOURCES LTD.

P.O. BOX 110
65 VROOMAN AVENUE
AMSTERDAM, NY 12010
TOLL FREE : 1-800-833-2006
LOCAL : 1-518-842-1431
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E-MAIL: SERVICE@MOHAWKLIFTS.COM



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 (8/3/98)

NOTE:

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.

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.

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:

MOHAWK MODEL TP-20

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

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Internet: www.MOHAWKLIFTS.com

E-Mail: Service@MOHAWKLIFTS.com

MOHAWK MODEL TP-20
MOHAWK WARRANTIES

EFFECTIVE DATE: 4/14/2003

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. 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 DOWNTIME EXPENSES INCURRED WHEN UNIT IS IN REPAIR. 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.

5-YEAR WARRANTY:

THIS WARRANTY IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: A-7, SYSTEM IA, SYSTEM IA-10, TOMAHAWK-9000, LMF-12, TP-15, TP-18, TP-20, TP-26, TP-30 AND STANDARD OPTIONS.

3-YEAR WARRANTY:

THIS WARRANTY IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: TSL-7, PL-6000, TR-19, TR-25, FL-25, TR-33, TR-35, TR-40, TR-50, TR-60, TR-75, TR-110, MP-SERIES AND RP-SERIES MOBILE COLUMN LIFTS, SL-SERIES SCISSOR LIFTS, FP-SERIES LIGHT DUTY FOUR POST LIFTS, TL-SERIES LIFTS AND STANDARD OPTIONS.

2-YEAR WARRANTY:

THIS WARRANTY IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: PARALLELOGRAM SERIES AND USL-6000 AND STANDARD OPTIONS.

1-YEAR WARRANTY:

THIS WARRANTY IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: HR-6, TD-1000, CT-1000 AND STANDARD OPTIONS.

STRUCTURAL COMPONENTS:

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

SEE MOHAWK'S "EXTENDED LIFETIME CYLINDER WARRANTY" FOR SPECIFIC WARRANTY PROVISIONS FOR HYDRAULIC CYLINDERS. THE "EXTENDED LIFETIME CYLINDER WARRANTY" IS APPLICABLE TO THE FOLLOWING MOHAWK LIFTS ONLY: A-7, SYSTEM I, LMF-12, TP-15, TP-18, TP-20, TP-26, TP-30, MP-SERIES AND TL-SERIES LIFTS.

POWER UNIT:

ALL POWER UNIT COMPONENTS (MOTOR, PUMP AND RESERVOIR) ARE GUARANTEED FOR THE ABOVE STATED TIME FRAME, SPECIFIC TO MODEL, FROM THE DATE OF INVOICE, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

ELECTRICAL COMPONENTS:

ALL ELECTRICAL COMPONENTS (EXCLUDING MOTOR) ARE GUARANTEED FOR ONE YEAR FOR PARTS ONLY (EXCLUDING LABOR), FROM THE DATE OF INVOICE, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

PNEUMATIC (AIR) COMPONENTS:

ALL PNEUMATIC (AIR) COMPONENTS (I.E. AIR CYLINDERS AND POPPET AIR VALVES) ARE GUARANTEED FOR ONE YEAR FOR PARTS ONLY (EXCLUDING LABOR), FROM THE DATE OF INVOICE, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

WARRANTY EXCEPTIONS:

ALL "SPECIAL" LIFTS AND/OR "CUSTOMIZED" OPTIONS ON THIS UNIT ARE GUARANTEED FOR ONE YEAR FOR PARTS ONLY (EXCLUDING LABOR), FROM THE DATE OF INVOICE, AGAINST DEFECTS IN WORKMANSHIP AND/OR MATERIALS WHEN THE LIFT IS INSTALLED AND USED ACCORDING TO SPECIFICATIONS.

THIS WARRANTY SUPERSEDES ALL OTHER WARRANTY POLICIES PREVIOUSLY STATED AND IN ALL OTHER MOHAWK PRODUCT SPECIFIC LITERATURE.

EXTENDED LIFETIME CYLINDER WARRANTY

AS THE ORIGINAL PURCHASER OF A MOHAWK LIFT MANUFACTURED BY MOHAWK RESOURCES, LTD. YOU ARE ENTITLED TO AN EXTENDED CYLINDER SEAL KIT REPAIR 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.
(PLEASE USE THE POSTAGE PAID WARRANTY REGISTRATION CARD ATTACHED TO THE FRONT OF THIS MANUAL.)
- ◆ ANY CYLINDER THAT IS PAST ITS NORMAL 5-YEAR WARRANTY PERIOD MUST BE SHIPPED FREIGHT PRE-PAID TO THE MOHAWK PLANT.
- ◆ UPON COMPLETION OF INSTALLING A COMPLETE SEAL KIT, MOHAWK WILL SHIP THE CYLINDER TO YOU, FREIGHT COLLECT.
- ◆ MOHAWK'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIRING ANY CYLINDER, WHICH UPON INSPECTION HAS NOT BEEN MISUSED. MOHAWK RESERVES THE RIGHT TO DECLINE RESPONSIBILITY WHEN THE REPAIRS HAVE BEEN MADE, OR ATTEMPTED BY OTHERS. THE FOREGOING CONTAINS THE ENTIRE AGREEMENT BETWEEN MOHAWK RESOURCES, LTD. AND THE PURCHASER, UNLESS SPECIFICALLY EXPRESSED IN WRITING. THIS WARRANTY IS NON-TRANSFERABLE AND RUNS TO THE ORIGINAL PURCHASER ONLY.

THIS IS NOT A "LEND A CYLINDER" POLICY. AS STATED ABOVE, YOUR ORIGINAL CYLINDER (WHEN OUT OF ITS ORIGINAL 5-YEAR WARRANTY) WILL HAVE ITS SEALS REPLACED, WITH ALL FREIGHT CHARGES THE RESPONSIBILITY OF YOU, THE CUSTOMER.

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BAY SIGHT LAYOUT	MAN 2014
POST SHIMMING	MAN 064

PARTS

PARTS LISTING	MAN 2000
ISOMETRIC FINAL ASSEMBLY	MAN 2000-A
MAIN SIDE ASSEMBLY	MAN 2000-B
OFF SIDE ASSEMBLY	MAN 2001
HYDRAULIC SYSTEM	MAN 2002
CARRIAGE SUB-ASSEMBLY	MAN 2003
CARRIAGE / LIFTING RODS / YOKE	MAN 2004
PNEUMATIC SYSTEM	MAN 2005
PARTS BOX #1 (POWER UNIT)	MAN 2006
CARRIAGE / SWING ARMS / SLIDER / LIFTING PADS	MAN 2007
MAIN AND OFF SIDE LEG ASSEMBLY	MAN 2008
TAG & DECAL LOCATIONS	MAN 659
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SMALL PARTS BAGS	MAN 2012
PARTS BOX #2	MAN 2013
DIVERTER VALVE ASSEMBLY	

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.

MOHAWK MODEL TP-20

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
P.O. BOX 110
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. SEE FIGURE 1. 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 ½". 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 **GENERAL FLOOR REQUIREMENTS**.

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 LISTED IN THE, **GENERAL FLOOR REQUIREMENTS**

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.

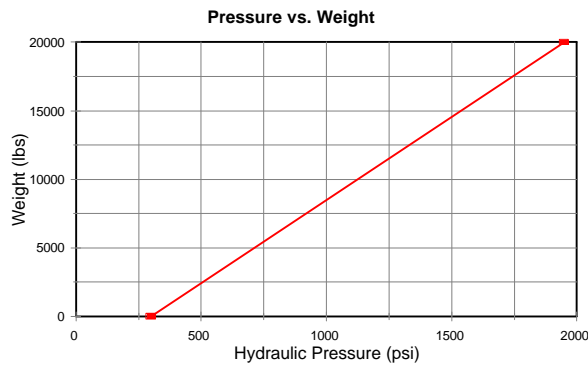
AFTER LIFTING THE VEHICLE TO THE DESIRED HEIGHT, ALWAYS LOWER THE UNIT ONTO THE MECHANICAL SAFETIES. THE FORMING OF GOOD OPERATIONAL WORK HABITS WILL ELIMINATE OVERSIGHTS IN THE USE OF PROVIDED SAFETY DEVICES.

TP-20 SPECIFICATIONS

TP-20 SPECIFICATIONS

LIFT TYPE / TWO POST	ELECTRIC / HYDRAULIC
GROSS LIFTING CAPACITY	20,000 LBS.
PER ARM CAPACITY	5,000 LBS.
LIFTING SPEED APPROX.	3 MINUTES 45 SECONDS
LIFTING HEIGHT	72 INCHES
OVERALL WIDTH	168 INCHES
WIDTH BETWEEN POST	132 INCHES
WIDTH BETWEEN CARRIAGES	108 1/2 INCHES
CYLINDER EXTENSION	162-5/8 INCHES
POST HEIGHT	121-1/2 INCHES
OVERHEAD HYDRAULIC LINES	192 INCHES
LIFTING PAD HEIGHT (MIN)	5-3/8 INCHES
LIFTING PAD HEIGHT (MAX)	77-3/8 INCHES
SHIPPING WEIGHT	8,170 LBS.

PERFORMANCE TABLE



PRE-EXISTING FLOOR REQUIREMENTS

MINIMUM THICKNESS	MINIMUM COMPRESSIVE STRENGTH	MINIMUM AGING
6 1/2"	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.

POWER UNIT SPECIFICATIONS

BRAND NAME	MONARCH
MODEL	M-4509-0101
POWER UNIT TYPE	VERTICAL
MOTOR VOLTAGE	208 / 230
F.L.A. AT RATED CAPACITY	17.4 / 146
MOTOR HORSEPOWER	2
MOTOR PHASE	SINGLE
MOTOR CYCLE / HERTZ	60
MOTOR SPEED (R.P.M.)	3,450
PUMP FLOW (G.P.M.)	2.39 @ 3450 R.P.M.
RELIEF VALVE SETTING	2,250 P.S.I.
WORKING PRESSURE	1,950 P.S.I.
RESERVOIR CAPACITY	5 GALLONS
HYDRAULIC FLUID MEDIUM	DEXRON III

SUGGESTED SITE SELECTION / BAY SIZE

WIDTH	DEPTH	HEIGHT
15 FEET	25 FEET	16 FEET

NOTE

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

AIR VALVE TRIO

FILTER / REGULATOR	LUBRICATOR / OIL TYPE
65 PSIG	SAE NO. 10

IT IS NOT RECOMMENDED TO OPERATE THE LIFT UNDER 33 deg. F. DUE TO AIR LINE FREEZING.

FLOOR MODIFICATION DATA NEW FLOOR SECTION

THICKNESS	SLAB SIZE	CUBIC YARDS
S	WIDTH x LENGTH	
12 INCHES	6 FT x 16 FT	2.8

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 WHICH IS STRUCTURALLY SOUND. CERTIFIED STRENGTH DOCUMENTATION SHOULD BE OBTAINED FROM THE FIRM WHO SUPPLIES THE CONCRETE MIXTURE AT THE TIME OF THE POUR. SEE THE TP-20 FLOOR MODIFICATION DRAWING.

NEVER HAND MIX THE CONCRETE.

RECOMMENDED TOOL LIST

SIZE / QTY	DESCRIPTION	USED IN
2 - 1/4 IN	WRENCH & SOCKET	SWING ARM PINS
1 - 1/2 IN	SOCKET	POST MOUNTING BOLTS
1 - 1/8 IN	SOCKET	POWER UNIT MOUNTING BRACKET
1 - 1/6 IN	WRENCH	POWER UNIT MOUNTING BRACKET
11/16 IN	WRENCH	HYDRAULIC LINES
5/8 IN	WRENCH	HYDRAULIC LINES
1/2 IN	WRENCH & SOCKET	ACCESS PLATES
7/16 IN	WRENCH & SOCKET	STARTER BOX
1 8 FT. MIN.	CHAIN / NYLON STRAP	ERECTING POST / POWER UNIT
1	FLAT HEAD SCREW DRIVER	AIR REGULATOR
1	RATCHET WRENCH	AS NEEDED
1	VICE GRIPS	AS NEEDED
1	CRESCENT WRENCH	AS NEEDED
1	4 FT BUBBLE LEVEL	VERIFY LEVEL ASSEMBLY
1	PRY BAR	ADJUSTING / 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 2 TON MIN.	FORK TRUCK OVERHEAD CRANE	LIFTING / ERECTING / MOVING HEAVY ITEMS
8 FT	STEP LADDER	ASSEMBLE ELEVATED ITEMS

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 IN WHICH THE LIFT WILL BE LOCATED SHALL BE FREE OF OBSTRUCTIONS. HEATERS, BUILDING SUPPORTS, ELECTRICAL CONDUIT, ETC.

DEFECTIVE CONCRETE

VISUALLY INSPECT THE BAY FLOOR AREA. THE UNIT CAN NOT BE INSTALLED ON EXPANSION SEAMS, OR CONCRETE WHICH 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 FLOOR MODIFICATION DATA SECTION IN THIS MANUAL.

LOCATE THE MAIN SIDE POST ON THE HIGH SIDE OF THE FLOOR IF A SLOPE IS NOTED.

POWER SUPPLY

THE STANDARD POWER UNIT IS 208-230 VOLT SINGLE PHASE. REFER TO THE POWER SUPPLY SPECIFICATIONS. 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

THE MAIN SIDE POST WILL REQUIRE THE AIR SUPPLY FOR THE 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. REQUIREMENTS MAY VARY ON SPECIAL ORDERS.

SPECIFICATIONS

REFERENCE ALL SPECIFICATIONS PRIOR TO INSTALLING A LIFT.

WARNING

BEFORE DRILLING THE MOUNTING HOLES

- REFERENCE ALL FIGURES PERTAINING TO DRILLING, WEJ-IT WARNINGS, AND INSTALLATION INSTRUCTIONS.
- 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 132 INCHES. SEE **FIGURE 8**.
- 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. TIGHTEN THE NUT 2 TO 3 FULL TURNS. (60 TO 80 FOOT POUNDS)
- 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 (9) NINE 3/4 INCH HOLES ON THE OUTSIDE OF THE MAIN SIDE POST USING THE HOLES AT THE BASE OF THE POST AS A GUIDE.. (DO NOT DRILL AT THE 1 INCH DIAMETER HOLES IN THE BASE PLATE.) INSERT AND TIGHTEN THE WEJ-IT ANCHOR 2 TO 3 FULL TURNS. (60 TO 80 FOOT POUNDS)
- INSURE THE INSIDE DIMENSIONS BETWEEN THE MAIN AND OFF SIDE POST IS CORRECT.
- DRILL (9) NINE 3/4 INCH HOLES ON THE OUTSIDE OF THE OFF SIDE POST USING THE HOLES AT THE BASE OF THE POST AS A GUIDE. (DO NOT DRILL AT THE 1 INCH DIAMETER HOLES IN THE BASE PLATE.) INSERT AND TIGHTEN THE WEJ-IT ANCHOR 2 TO 3 FULL TURNS. (60 TO 80 FOOT POUNDS)

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.

INSTALLING THE LIFT

USE THE PACKING LIST IN THIS MANUAL TO VERIFY ALL SUPPLIED PARTS.

WARNING

- EACH POST WEIGHS OVER 4,000 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.

ERECT THE MAIN AND OFF SIDE POSTS TO THE UP-RIGHT POSITION. ALIGN THE POST FOOTINGS TO THE DIMENSIONS SHOWN FOR SETTING OF LIFT. ENSURE THAT INSIDE POST DIMENSION IS HELD. MATCH DRILL BASE PLATE HOLES AS STATED IN PREVIOUS SECTION.

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.

- 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

SECURE THE MAIN AND OFF SIDE POSTS TO THE BAY FLOOR USING THE (18) 3/4" x 6" WEJ-IT ANCHOR BOLTS & FLAT WASHERS. SECURE THE POWER UNIT TO THE MAIN SIDE POST WITH HARDWARE INCLUDED IN PARTS BOXES.

REMOVE THE BREATHER PORT PLUG ON THE POWER UNITS RESERVOIR AND DISCARD. VERIFY FLUID LEVEL. (1/2 IN. BELOW BREATHER PORT WHEN BOTH CYLINDERS ARE FULLY RETRACTED) ADD DEXRON III AS NEEDED TO FILL. ALWAYS USE A CLEAN FUNNEL AND FILTER. INSTALL THE BREATHER CAP.

REMOVE THE PULL VALVE PORT PLUG ON THE DIVERTER VALVE. INSERT AND TIGHTEN THE PULL VALVE. TIGHTEN TO 10 FOOT POUNDS. REFER TO DIVERTER VALVE ASSEMBLY

THE AIR CYLINDERS IN THE POST AS SHOWN IN THE TP-20 PNEUMATIC SYSTEM DIAGRAM.

CONNECT OVER-HEAD HYDRAULIC LINES BETWEEN POSTS. REFER TO THE TP-20 HYDRAULIC SYSTEM. CONNECT OVER-HEAD PNEUMATIC LINES BETWEEN POSTS. REFER TO THE TP-20 PNEUMATIC SYSTEM.

AIR LINE HOOKUP

CONNECT SHOP AIR SUPPLY TO MANUAL PNEUMATIC VALVE LOCATED NEXT TO POWER UNIT. FILTER, REGULATOR AND LUBRICATOR TO BE SUPPLIED BY OTHERS. ENSURE THAT INCOMING PRESSURE TO LIFT DOES NOT EXCEED 100 PSI.

ASSEMBLE THE MANUAL PNEUMATIC VALVE TO THE POWER UNIT MOUNTING BRACKET. CONNECT AIR LINE FROM VALVE TO

INSTALLATION INSTRUCTIONS CONTINUED

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

REMOVE THE PACKING BRACKETS FROM THE MAIN AND OFF SIDE CARRIAGE.

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

LIFTING UP ON THE SWING ARM RESTRAINT. INSERT THE FOUR SWING ARMS INTO THE CARRIAGES. 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 AT THE END OF EACH SLIDER.

PLACE THE 12 HEIGHT ADAPTERS INTO PLACE ON THE SIDE OF THE MAIN AND OFF SIDE POSTS.

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 TWO MINUTES. (THIS WILL PURGE THE AIR FROM THE HYDRAULIC SYSTEM)

NOTE

- LISTEN FOR THE PRESSURE RELIEF VALVE.. A NOTICEABLE INCREASE IN POWER UNIT VOLUME THIS WILL INDICATE AN EXCESS OF SHIMS BENEATH THE YOKE ASSEMBLIES RESTRICTING THE MAIN OR OFF SIDE CYLINDERS FROM REACHING FULL STROKE. IF THIS OCCURS, REMOVE ONE SHIM FROM BENEATH THE YOKE.

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 THE DIVERTER VALVE PULL KNOB.

- 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.

ENGAGE THE DOWN BUTTON, 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.
- POSITIONING OF VEHICLE AND OPERATION OF THE LIFT SHOULD BE DONE ONLY BY TRAINED AND AUTHORIZED PERSONNEL.
- 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, 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.

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.

AIR PRESSURE TO LIFT

- INSURE SUFFICIENT AIR IS AVAILABLE TO THE LIFT TO OPERATE THE PNEUMATIC LOCK SYSTEM.

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

LIFTING PROCEDURES

OPERATION

- PERFORM PRE-OPERATION CHECK LIST ITEM BY ITEM.
- POSITION THE SWING ARMS TO THE OUTSIDE OF THE UNIT.
- POSITION THE VEHICLE AS INDICATED BY THE MFG'S RECOMMENDED LIFT POINTS. SEE **ALI/LP-GUIDE**.

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 FOUR CAM FOLLOWER BEARINGS ARE FREE TO SPIN.

- PLACE THE LIFTING PADS PER MFG'S RECOMMENDED LIFT POINTS.

TO RAISE

- ENGAGE THE UP-BUTTON ON THE POWER UNIT. STOP AND VERIFY LIFTING PAD POSITION WHEN THE LIFTING PADS HAVE MADE CONTACT WITH THE VEHICLE.
- RAISE VEHICLE TO THE DESIRED WORKING HEIGHT.

- PRESS THE DOWN HANDLE AND 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.
- DEPRESS THE UP-BUTTON ON THE POWER UNIT. RAISE UNIT APPROXIMATELY TWO INCHES.
- DEPRESS THE LOCK RELEASE AND DOWN HANDLE. LOWER UNIT TO THE DESIRED WORKING HEIGHT.
- ALWAYS RAISE UNIT UNTIL BOTH MECHANICAL SAFETIES RE-ENGAGE. DEPRESS THE DOWN-HANDLE LOWERING THE UNIT ONTO THE MECHANICAL SAFETIES
- IF WORK IS COMPLETE, CONTINUE LOWERING THE UNIT UNTIL BOTH CARRIAGES ARE FULLY LOWERED.

MAINTENANCE PROCEDURES

QUALIFIED MAINTENANCE PERSONNEL ONLY

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.
- PERFORM THE HYDRAULIC SAFETY CHECKS. (SEE TROUBLE SHOOTING)
- 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.
- CHECK LUBRICATOR FLUID LEVEL. FILL IF NEEDED.
- DRAIN FILTER REGULATOR OF EXCESSIVE MOISTURE.

MONTHLY

- INSPECT ALL HYDRAULIC COMPONENTS FOR LEAKS, DEFORMATION, WEAR OR CORROSION.
- TIGHTEN ALL FASTENERS, HYDRAULIC / PNEUMATIC 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 ARE TO BE REMOVED, RE-SEALED, AND RE - INSTALLED. (SELECT - UNITE THREAD SEALANT OR EQUIVALENT ON FITTING THREADS)
- INSPECT MOUNTING BOLT CONDITIONS FOR ANY POSSIBLE CORROSION AND INSPECT THE FLOOR FOR ANY SIGNS OF FATIGUE OR FRACTURES.

SEMI- ANNUAL TRAINING

- QUALIFY / RE-QUALIFY ALL PERSONNEL IN THE SAFE OPERATION OF THIS UNIT.

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.

TROUBLE SHOOTING

WARNING : NEVER ATTEMPT TO LOOSEN HYDRAULIC FITTINGS, OR OVERRIDE SAFETY DEVICES IN AN ATTEMPT TO CORRECT A PROBLEM. ALL TEST ARE TO BE PERFORMED WITH **NO** VEHICLE.

NOTE:

- THE HYDRAULIC SAFETY CHECK IS TO BE PERFORMED WITH NO VEHICLE ON THE UNIT.
- CONTACT YOUR LOCAL MOHAWK DISTRIBUTOR OR THE MOHAWK FACTORY IF EITHER TEST FAIL.

HYDRAULIC SAFETY CHECK

MAIN SIDE SAFETY CHECK:

1. RAISE THE UNIT APPROXIMATELY 3 FEET
2. DISENGAGE THE OFF SIDE MECHANICAL SAFETY
3. LOWER THE UNIT ONTO THE MAIN SIDE MECHANICAL SAFETY
4. WHILE CONTINUING TO HOLD DOWN THE POWER UNIT LOWERING HANDLE, OBSERVE THE OFF SIDE CARRIAGE FOR MOVEMENT. THE UNIT HAS CHECKED OUT OK IF THEIR IS NO MOVEMENT (OFF SIDE CARRIAGE DOES NOT CONTINUE TO LOWER)

OFF SIDE SAFETY CHECK:

1. RAISE THE UNIT APPROXIMATELY 3 FEET
2. DISENGAGE THE MAIN SIDE MECHANICAL SAFETY
3. LOWER THE UNIT ONTO THE OFF SIDE MECHANICAL SAFETY
4. WHILE CONTINUING TO HOLD DOWN THE POWER UNIT LOWERING HANDLE, OBSERVE THE MAIN SIDE CARRIAGE FOR MOVEMENT. THE UNIT HAS CHECKED OUT OK IF THEIR IS NO MOVEMENT (MAIN SIDE CARRIAGE DOES NOT CONTINUE TO LOWER)

NOT RAISING LOAD	
POSSIBLE CAUSE	SOLUTION
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	REFER TO POWER UNIT SPECIFICATIONS.
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 TOO HEAVY TO BE RAISED
NOT LOWERING	
FLOW CONTROL VALVE	CLOSE FLOW CONTROL VALVE. OPEN TWO TURNS. RAISE UNIT THEN LOWER.
MECHANICAL LOCKS ENGAGED	RAISE UNIT. DISENGAGE MECHANICAL LOCKS.
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.
DEBRIS IN POSTS (TOOLS ETC.)	CLEAN UNIT
OBSTRUCTION UNDER VEHICLE OR LIFT	REMOVE OBSTRUCTION.
RAISING UNEVEN	
<u>RULE OF THUMB :</u> 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.
	THE CARRIAGE BEARINGS ON THE MAIN AND OFF SIDE MUST NOT CONTACT THE CARRIAGE STOPS. (RESULT OF INCORRECT ROD ADJUSTMENT.)

TROUBLE SHOOTING CONTINUED

RAISING UNEVEN CONTINUED	
POSSIBLE CAUSE	SOLUTION
POSTS OUT OF SQUARE	VERIFY LEVEL ASSEMBLY. MAKE ANY AND ALL NECESSARY ADJUSTMENTS.
SHOP FLOOR UNEVEN	VERIFY PROPER INSTALLATION OF MAIN SIDE POST. MAIN SIDE TO BE ON HIGH SIDE.
	ALSO SEE SPECIAL LIFTING PADS.
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, THEN ENGAGE THE UP BUTTON AT THE SAME TIME. RUN UNIT APPROX. 10 SEC.
EMERGENCY LOWERING VALVE OPEN	FULLY CLOSE THE VALVE. TIGHTEN SET SCREW.
POPPING NOISE WHEN RAISING	
LOAD NOT CENTERED	VEHICLE IS TOO FAR FORWARD OR TOO FAR BACK. POSITION THE VEHICLE SO THAT THE TWO TOP CAM BEARINGS (BEARINGS ON THE CARRIAGE WHICH RIDE ON THE EDGE OF THE POST CHANNEL) ARE FREE TO SPIN WHEN ALL FOUR TIRES ARE OFF THE FLOOR.
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.

DATE OF INSTALLATION: _____

12

MOHAWK MODEL TP-20

MAINTENANCE CHART

[illegible]

MOHAWK MODEL TP-20

MOHAWK

MADE IN THE U.S.A.

MODEL TP-20

PARTS MANUAL



MOHAWK RESOURCES LTD.

P.O. BOX 110

65 VROOMAN AVENUE

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

REV.	DESCRIPTION	DATE	BY	APPL.
A	ANCHORING SYSTEM WAS 3/4 x 6" LG. WE-IIT BOLTS	8/00	dgk	

MODEL TP-20

SYMMETRICAL 2-POST LIFT
CAPACITY: 20,000 LBS



THIS LIFT HAS BEEN TESTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) TO MEET THE REQUIREMENTS OF U.L. STANDARD 201 FOR GARAGE EQUIPMENT AND ANSI/ALI ALCVT-1998 FOR AUTOMOTIVE LIFT CONSTRUCTION.

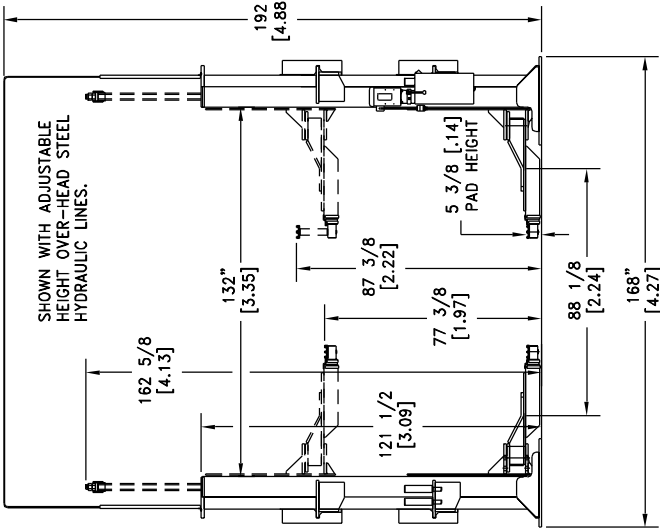
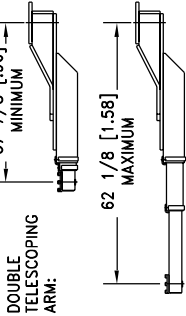
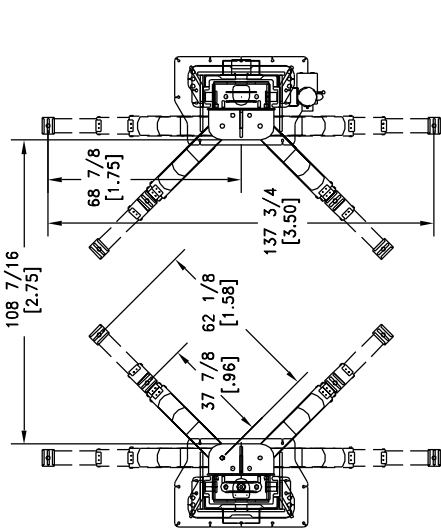
- SPECIFICATIONS:**
- CAPACITY.....20,000 LBS.
 - LIFTING SPEED.....142 SECONDS
 - MOTOR RATING.....3 HP, 220 VAC, 1 PHASE
 - SYNCHRONIZATION.....HYDRAULIC FLUID DISPLACEMENT USING NO CHAINS, CABLES NOR OVERHEAD OBSTRUCTIONS
 - MINIMUM LIFTING PAD HEIGHT.....5 3/8"
 - LIFTING HEIGHT (STROKE).....6 FEET
 - ARM HEIGHT • FULL RISE.....6"-5 3/8"
 - MAX. PAD HEIGHT WITH ADAPTERS.....7'-3 3/8"
 - OVERALL WIDTH.....14 FEET
 - WIDTH BETWEEN POSTS.....11 FEET
 - WIDTH BETWEEN CARRIAGE.....9'-0"
 - COLUMN HEIGHT.....10'-1 1/2"
 - MAX. CYLINDER HEIGHT.....13'-6 5/8"
 - OVERHEAD HYDRAULIC LINE HEIGHT.....16 FEET STANDARD (ADJUSTABLE)
 - SHIPPING WEIGHT.....7000 LBS. APPROX.
 - ANCHORING SYSTEM.....(18) 3/4 DIA x 6 1/4" WEJ-ITS IN 4000 PSI CONCRETE
 - MECHANICAL SAFETY LOCKS.....MULTI-POSITION EVERY 6"
 - MECHANICAL SAFETY RELEASE.....SINGLE POINT LOCK RELEASE • CONTROL
 - HYDRAULIC SAFETY SYSTEM.....AUTOMATIC; ALL POSITION
 - SWING ARM LOCKS.....AUTOMATIC LOCKING UPON ASCENT
 - CYLINDERS.....2 (1 PER COLUMN)
 - 5" FRAME ADAPTERS.....4 INCLUDED AS STANDARD EQUIPMENT (STACKABLE)
 - 7 1/2" FRAME ADAPTERS.....4 INCLUDED AS STANDARD EQUIPMENT (STACKABLE)
 - 10" FRAME ADAPTERS.....4 INCLUDED AS STANDARD EQUIPMENT (STACKABLE)
 - CARRIAGE BEARINGS.....(16) 5" DIAMETER (8 PER CARRIAGE)
 - THRUST BEARINGS.....(8) 4" DIAMETER (4 PER CARRIAGE)
 - FLOOR ACCESS BETWEEN POSTS.....DOUBLE SEALED SELF LUBRICATING
 - FLOOR ACCESS BETWEEN POSTS.....CLEAR AND UNOBSTRUCTED

MOHAWK RESOURCES LTD.

P.O. BOX 110
65 VROOMAN AVENUE
AMSTERDAM, NY 12010
PHN: (800) 833-2006
IN NY: (518) 842-1431
FAX: (518) 842-1289

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				FINISH TO BE 160 RING		CHECKED	
				E-POSS CODE 6.3 PLUS CODE WIRE ONLY.		DATE: 8/98	
				FILE NAME: TP-20		WEIGHT: 7000 LB.	
				NEXT ASSEMBLY		FROM: N/A	
						DRAWING NUMBER: TP-20	



UNITS = INCH [METERS]

REV.
△

DESCRIPTION

DATE

BY

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WHITE

GREEN

RED

BLACK

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M

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T4

19"±1"

#12/4

2 HP, SINGLE PHASE

208-230 VAC, 3450 RPM, 60Hz

RATING: 17.4 AMP @ 208 VAC

14.6 AMP @ 230 VAC

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-70TT CODE 3.3 FLUX CORE WIRE ONLY.

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C-SIZE

MOHAWK RESOURCES LTD.

TITLE
ELECTRICAL SCHEMATIC, 2 HP (1998)

FROM
N/A

WEIGHT
N/A

DATE
11/97

DRAWING NUMBER
007-007-091

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.

4

601-180-015

MOTOR, 2 HP, 1Ø, 208-230 VAC, W/ THERM O/L

1

REF

3

601-110-038

SWITCH, MICRO, 2 HP @ 250 VAC

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

ITEM

PART NUMBER

DESCRIPTION

QTY

REV.	DESCRIPTION	DATE	BY	APP'D.
C	ITEM 1 WAS 601-300-047	7/04	dak	



- NOTES:
1. MAXIMUM OPERATING PSI @ 20,000 LBS = 2000 PSI.
 2. HYDRAULIC FLUID MEDIUM: DEXRON III.
 3. THIS UNIT IS DIRECT DRIVE.
 4. RECOMMENDED OPERATING TEMPERATURE OF HYDRAULIC FLUID: 50° F TO 130° F.
 5. ALL HYDRAULIC LINES -6 UNLESS NOTED OTHERWISE.

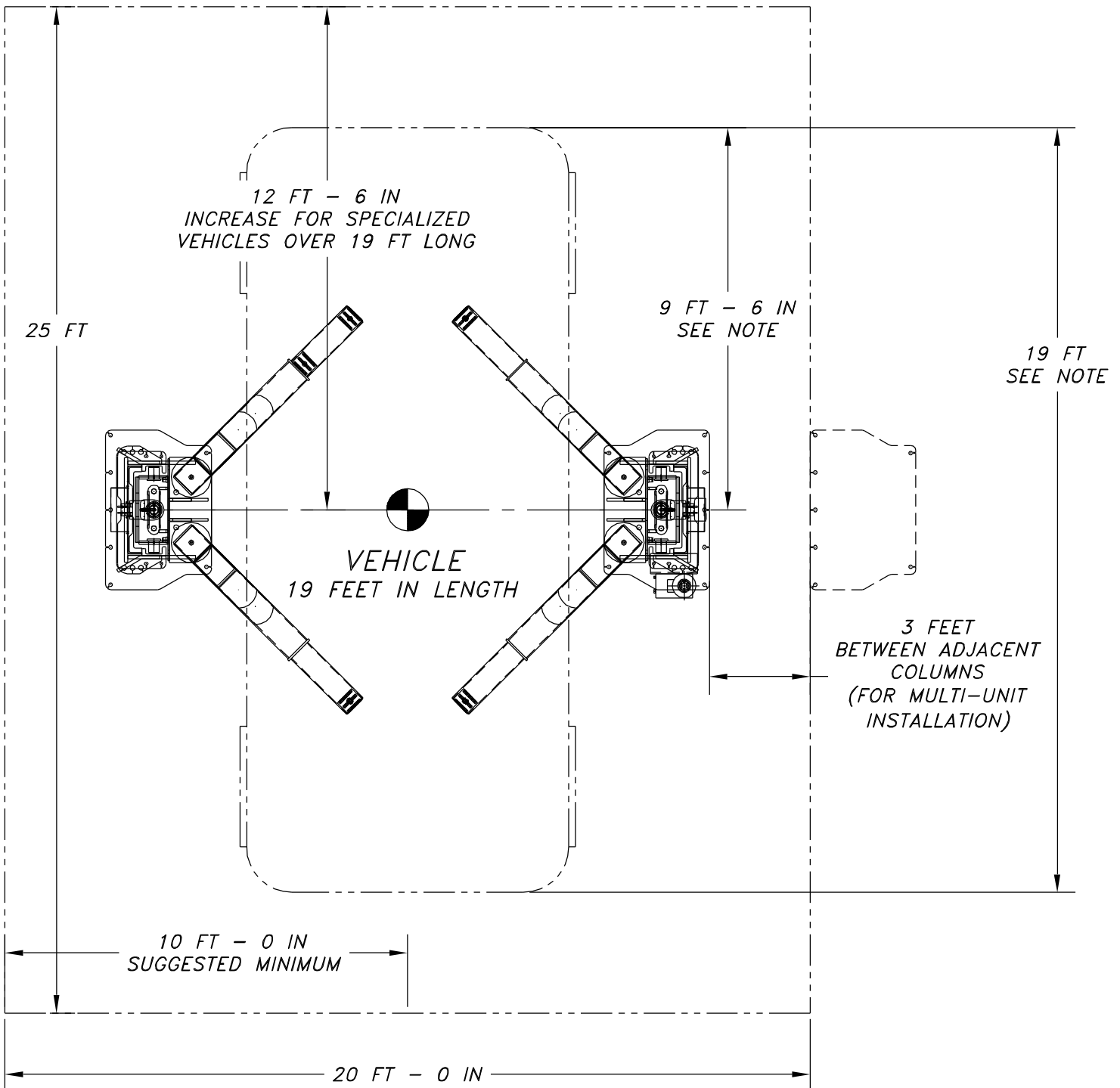
6	601-410-034	VELOCITY FUSE 6 GPM (INTERNAL) VONBERG VALVE INC #28135-6	REF
5	601-610-001	HYDRAULIC FLUID DEXRON III, 6.25 GAL	REF
4	601-410-030	DIVERTER VALVE (PULL TYPE) FLUID POWER SALES #242239AA	REF
3	026-002-008	OFFSIDE CYLINDER	REF
2	026-002-007	MAINSIDE CYLINDER	REF
1	601-300-070	POWER UNIT, 2 1/2 HP, 1Ø, 208-230 VAC MONARCH #M-4509-0102	REF

C

ITEM	PART NUMBER	DESCRIPTION	QTY
6	601-410-034	VELOCITY FUSE 6 GPM (INTERNAL) VONBERG VALVE INC #28135-6	REF
5	601-610-001	HYDRAULIC FLUID DEXRON III, 6.25 GAL	REF
4	601-410-030	DIVERTER VALVE (PULL TYPE) FLUID POWER SALES #242239AA	REF
3	026-002-008	OFFSIDE CYLINDER	REF
2	026-002-007	MAINSIDE CYLINDER	REF
1	601-300-070	POWER UNIT, 2 1/2 HP, 1Ø, 208-230 VAC MONARCH #M-4509-0102	REF

SCALE	DRAWN	APPROVED	TITLE
N/A	R.V.		HYDRAULIC SCHEMATIC, TP-20
CHECKED	DATE	WEIGHT	FROM
	8/98	N/A	N/A
FILE NAME	FILE NAME	FILE NAME	FILE NAME
020-000-000	020-000-000	020-000-000	020-000-000
NEXT ASSEMBLY			
TOLERANCES:			
± .000	± .000	± .000	± .000
ANGULAR	DECIMAL	DECIMAL	DECIMAL
0.XX	0.XXX	0.XXX	0.XXX
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-70TT CODE 5.3 FLUX CORE WIRE ONLY.			
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPERTY OF MOHAWK RESOURCES LTD. IT SHALL BE USED SOLELY FOR THE PURPOSES OF INSPECTION, INSTALLATION, OR MAINTENANCE. THE INFORMATION SHALL NOT BE USED OR DISCLOSED BY THE RECIPIENT FOR ANY OTHER PURPOSES WHATSOEVER.			
NOTICE OF CONFIDENTIAL INFORMATION			
MOHAWK RESOURCES LTD.			
DRAWING NUMBER 020-000-080			

BAY SIGHT LAYOUT



IMPORTANT NOTE

MOST VEHICLES' CENTER OF GRAVITY (C.O.G.)  LIE BETWEEN WHEEL BASE CENTERS, HOWEVER, SOME VEHICLES C.O.G. MAY BE OFFSET. VERIFY THE CENTER OF GRAVITY ON THE VEHICLE FLEET TO INSURE REAR AND FRONT ACCESS OF THE VEHICLE.

FIG. A
CORRECT

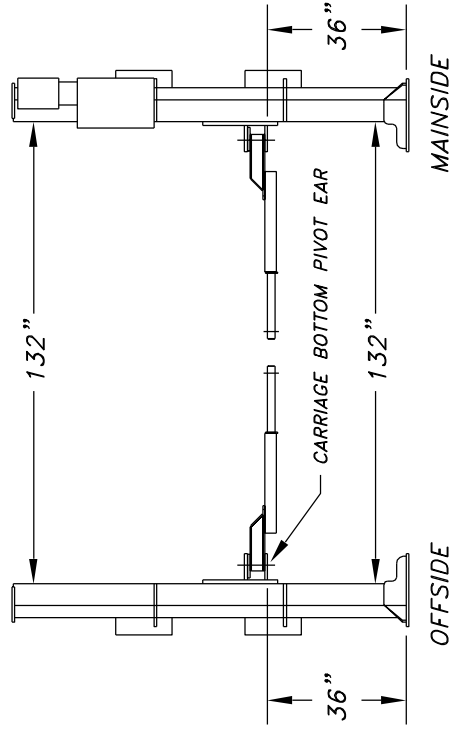


FIG. C
INCORRECT

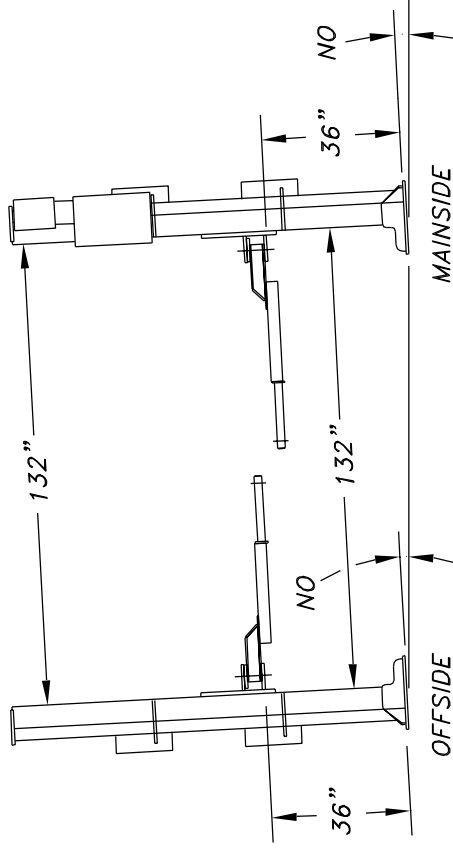


FIG. B
INCORRECT

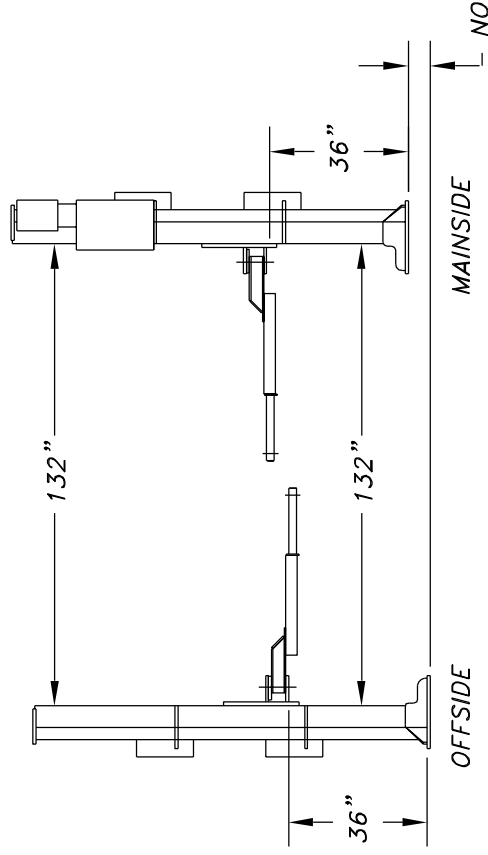
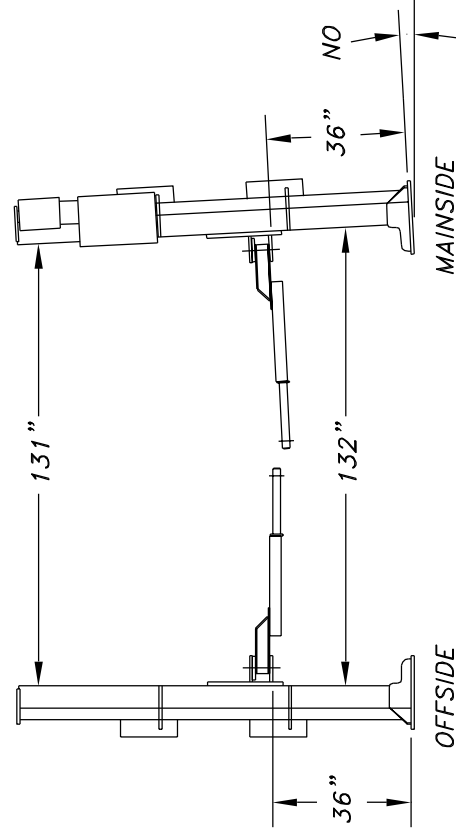


FIG. D
INCORRECT



SEE MANUAL DRAWINGS BELOW FOR FURTHER INFORMATION

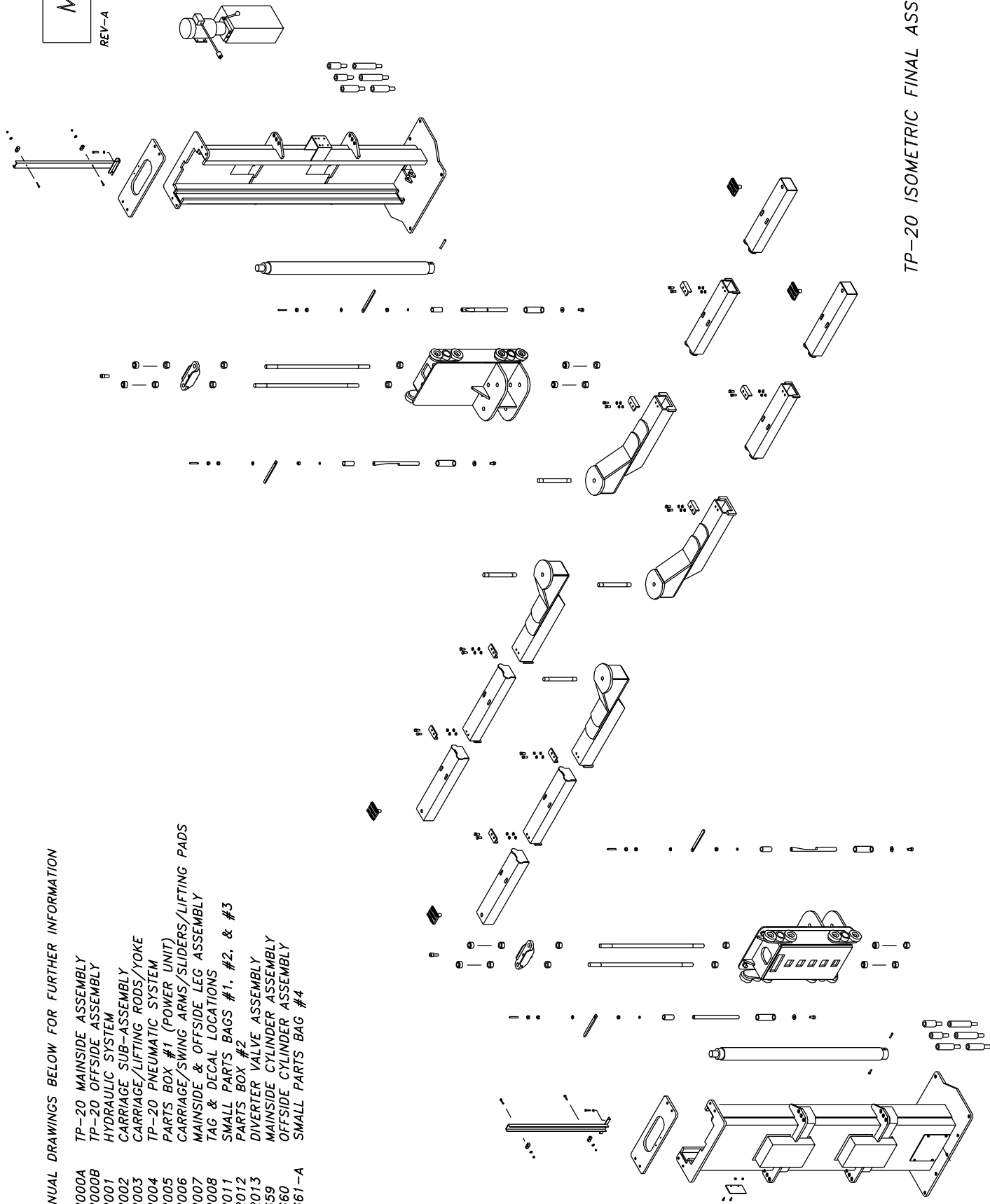
MAN2000A TP-20 MAINSIDE ASSEMBLY
 MAN2000B TP-20 OFFSIDE ASSEMBLY
 MAN2001 HYDRAULIC SYSTEM
 MAN2002 CARRIAGE SUB-ASSEMBLY
 MAN2003 CARRIAGE/LIFTING RODS/YOKE
 MAN2004 TP-20 PNEUMATIC SYSTEM
 MAN2005 PARTS BOX #1 (POWER UNIT)
 MAN2006 CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS
 MAN2007 MAINSIDE & OFFSIDE LEG ASSEMBLY
 MAN2008 TAG & DECAL LOCATIONS
 MAN2011 SMALL PARTS BAGS #1, #2, & #3
 MAN2012 PARTS BOX #2
 MAN2013 DIVERTER VALVE ASSEMBLY
 MAN659 MAINSIDE CYLINDER ASSEMBLY
 MAN660 OFFSIDE CYLINDER ASSEMBLY
 MAN661-A SMALL PARTS BAG #4

MAN2000

REV-A 3/99

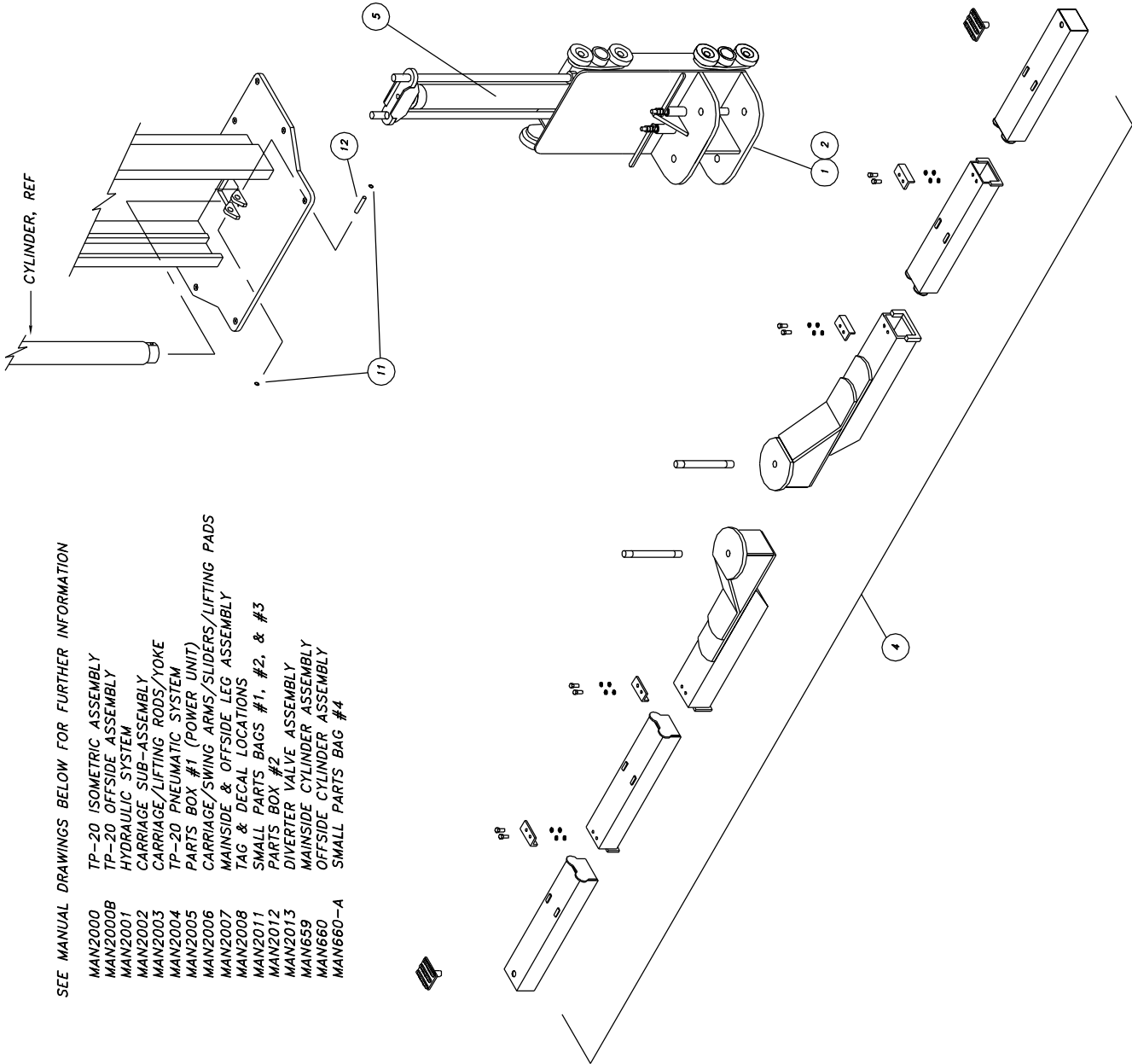
TP-20 ISOMETRIC FINAL ASSEMBLY

FILE: MAN2000
 DATE: 9/98



SEE MANUAL DRAWINGS BELOW FOR FURTHER INFORMATION

- MAN2000 TP-20 ISOMETRIC ASSEMBLY
- MAN2000B TP-20 OFFSIDE ASSEMBLY
- MAN2001 HYDRAULIC SYSTEM
- MAN2002 CARRIAGE SUB-ASSEMBLY
- MAN2003 CARRIAGE/LIFTING RODS/YOKE
- MAN2004 TP-20 PNEUMATIC SYSTEM
- MAN2005 PARTS BOX #1 (POWER UNIT)
- MAN2006 MAINSIDE & OFFSIDE LEG ASSEMBLY
- MAN2007 TAG & DECAL LOCATIONS
- MAN2008 SMALL PARTS BAGS #1, #2, & #3
- MAN2011 DIVERTER VALVE ASSEMBLY
- MAN2012 MAINSIDE CYLINDER ASSEMBLY
- MAN2013 OFFSIDE CYLINDER ASSEMBLY
- MAN659 SMALL PARTS BAG #4
- MAN660-A



MAN2000A

REV-A 3/99

ITEM	PART NUMBER	DESCRIPTION	QTY
12	026-002-128	MAIN CYLINDER RETAINING PIN	1
11	600-870-002	SNAP RING, 1"	2
10	600-690-001	NUT, LOCK, 5/16-18 NC	2
9	600-640-020	BOLT, 5/16-18 NC x 3 1/2 LG. HEX HEAD CAP	2
8	MAN2013	DIVERTER VALVE, 3000 PSI MAX, 6 GPM	1
7	MAN2001	HYDRAULIC SYSTEM	1
6	601-300-046	POWER UNIT	1
5	MAN659	MAINSIDE CYLINDER ASSEMBLY	1
4	MAN2006	CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS	1
3	MAN2007	LEG ASSEMBLY	1
2	MAN2003	CARRIAGE/LIFTING RODS/YOKE	1
1	MAN2002	CARRIAGE SUB-ASSEMBLY	1

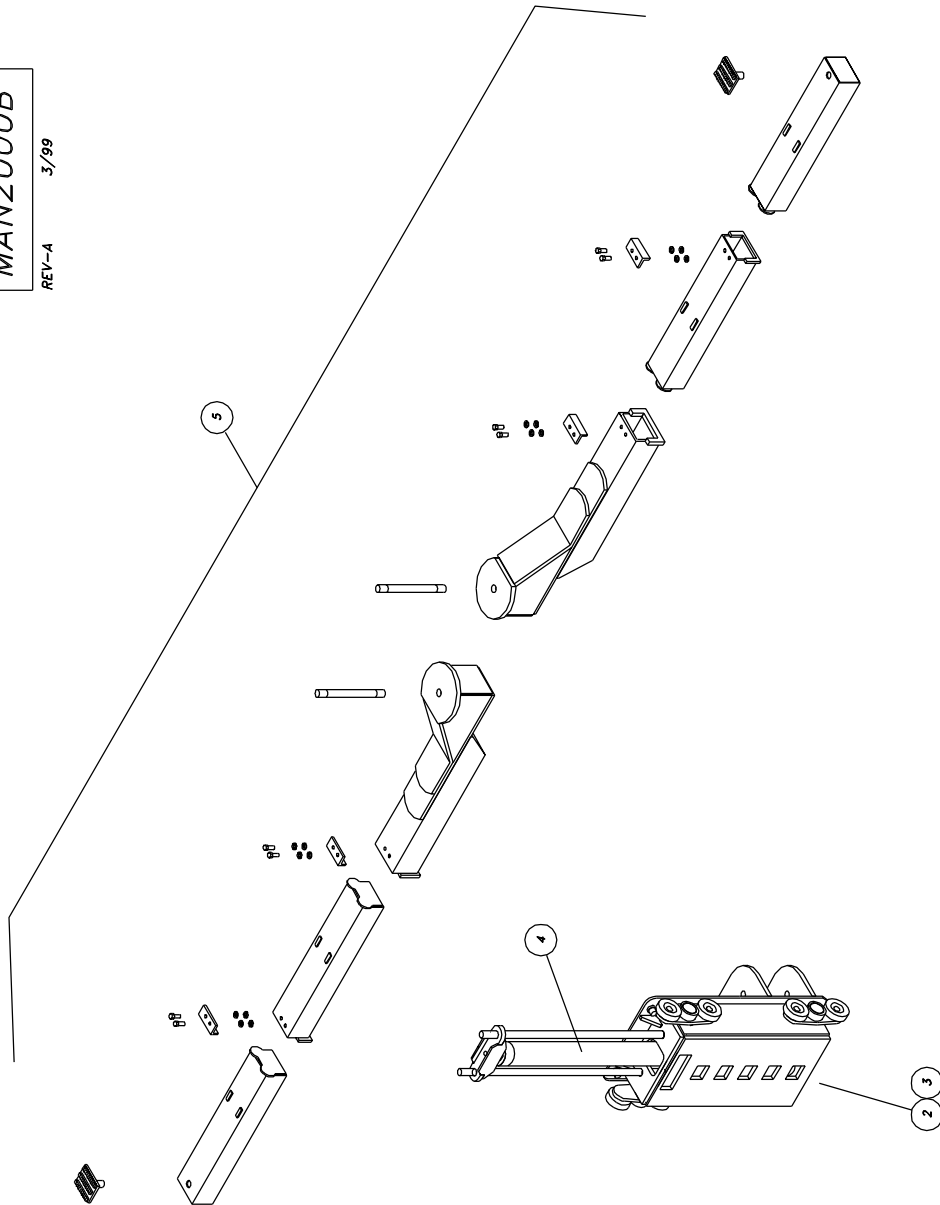
TP-20 MAINSIDE ASSEMBLY

MAN2000B

REV-A 3/99

SEE MANUAL DRAWINGS BELOW FOR FURTHER INFORMATION

- MAN2000 TP-20 ISOMETRIC ASSEMBLY
MAN2000A TP-20 MAINSIDE ASSEMBLY
MAN2001 HYDRAULIC SYSTEM
MAN2002 CARRIAGE SUB-ASSEMBLY
MAN2003 CARRIAGE/LIFTING RODS/YOKE
MAN2004 TP-20 PNEUMATIC SYSTEM
MAN2005 PARTS BOX #1 (POWER UNIT)
MAN2006 CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS
MAN2007 MAINSIDE & OFFSIDE LEG ASSEMBLY
MAN2008 TAG & DECAL LOCATIONS
MAN2011 SMALL PARTS BAGS #1, #2, & #3
MAN2012 PARTS BOX #2
MAN2013 DIVERTER VALVE ASSEMBLY
MAN659 MAINSIDE CYLINDER ASSEMBLY
MAN660 OFFSIDE CYLINDER ASSEMBLY
MAN661-A SMALL PARTS BAG #4



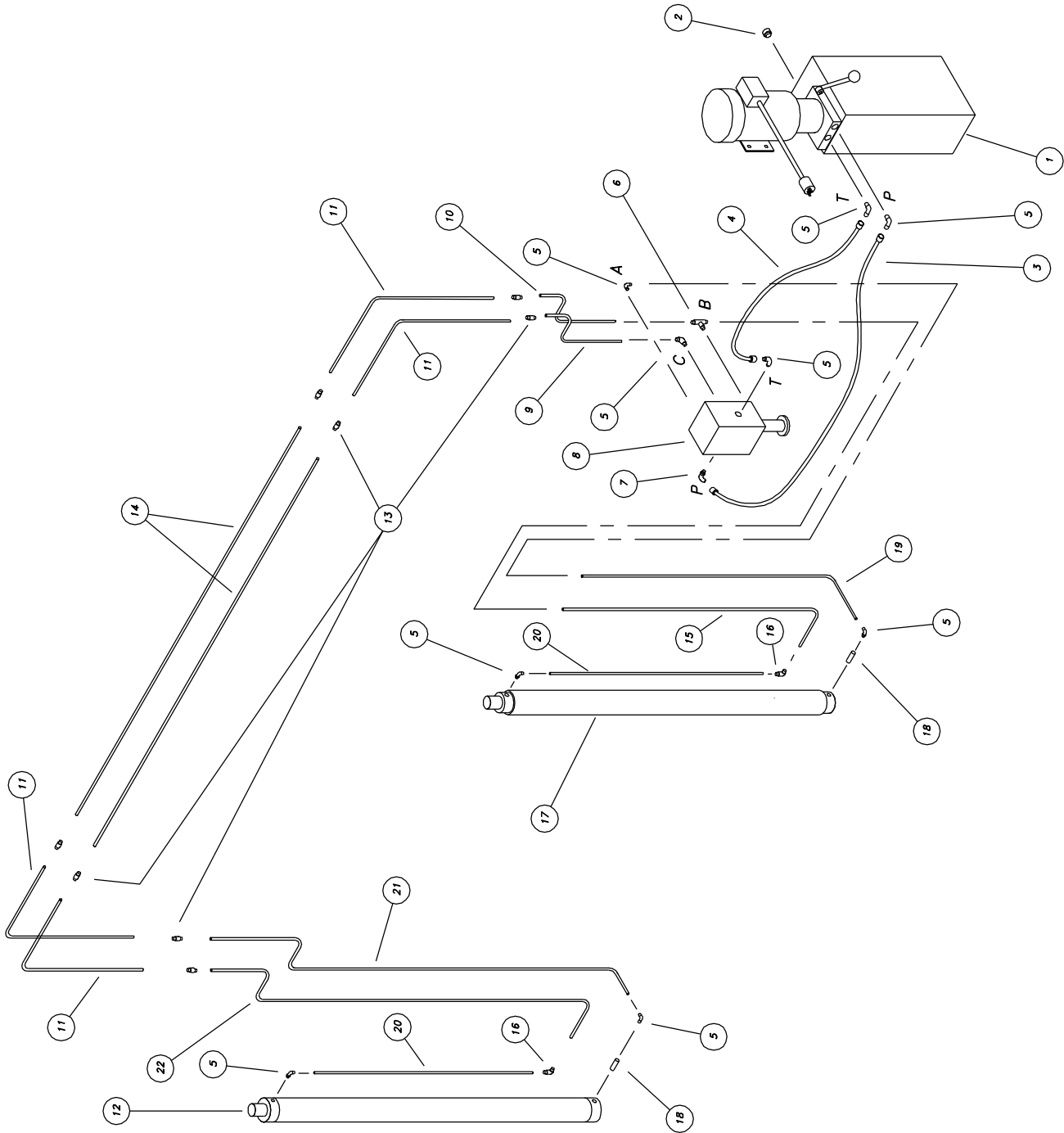
ITEM	PART NUMBER	DESCRIPTION	QTY
9	600-690-001	NUT, LOCK, 5/16-18 NC	2
8	600-640-012	BOLT, 5/16-18 NC x 3/4 LG, HEX HEAD CAP	2
7	028-002-132	COVER	1
6	600-640-038	BOLT, 1/2-13 NC x 1", HEX HEAD CAP	2
5	MAN2006	CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS	1
4	MAN660	OFFSIDE CYLINDER ASSEMBLY	1
3	MAN2003	CARRIAGE/LIFTING RODS/YOKE	1
2	MAN2002	CARRIAGE SUB-ASSEMBLY	1
1	MAN2007	LEG ASSEMBLY	1

TP-20 OFFSIDE ASSEMBLY

FILE: MAN2000B
DATE: 9/98

MAN2001

REV-A 3/99

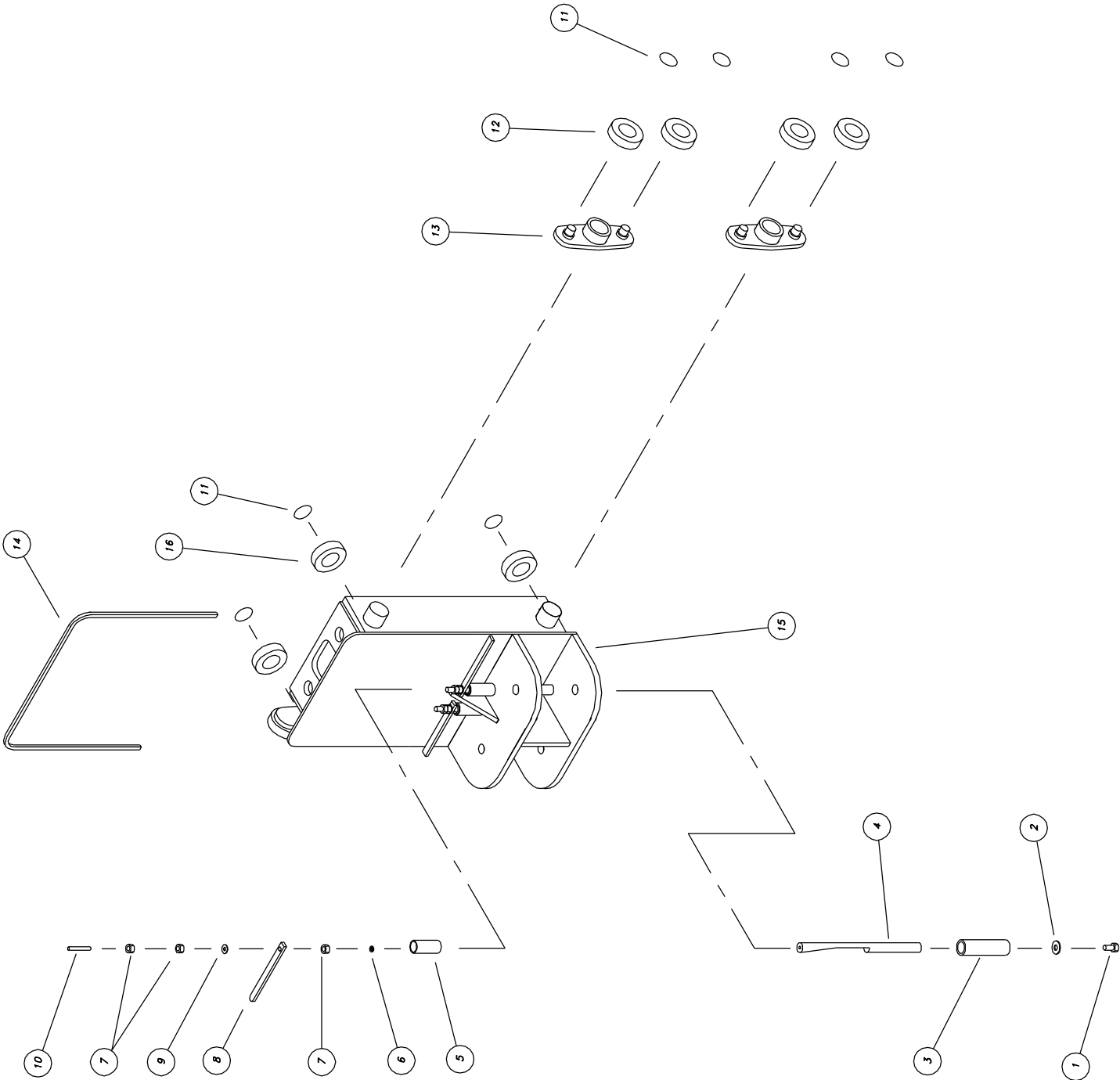


ITEM	PART NUMBER	DESCRIPTION	QTY
22	020-000-026	TUBING ASSEMBLY, 136 1/2"	1
21	018-012-018	TUBING ASSEMBLY, 136 1/2"	1
20	000-001-035	TUBING ASSEMBLY, 76"	2
19	026-002-013	TUBING ASSEMBLY, 70 3/4"	1
18	601-410-034	VELOCITY FUSE, 6 GPM	2
17	MAN659	MAINSIDE CYLINDER ASSEMBLY	1
16	601-420-052	ELBOW, 90°, #6 JIC TO #6 JIC	2
15	026-002-014	TUBING ASSEMBLY, 68 1/2"	1
14	000-001-032	TUBING ASSEMBLY, 108"	2
13	601-420-011	UNION, STRAIGHT, #6 JIC TO #6 JIC	8
12	MAN660	OFFSIDE CYLINDER ASSEMBLY	1
11	018-012-019	TUBING ASSEMBLY, 93 3/4"	1
10	018-012-015	TUBING ASSEMBLY, 63 1/4"	1
9	018-012-015	TUBING ASSEMBLY, 63 1/4"	1
8	601-410-030	DIVERTER VALVE, 3000 PSI MAX, 6 GPM	1
7	601-420-061	ELBOW, 45°, #6 ORB TO #6 JIC	1
6	601-420-046	TEE, #6 ORB TO 6 JIC	1
5	601-420-017	ELBOW, 90°, #6 ORB TO #6 JIC	9
4	020-000-031	HOSE ASSEMBLY, 1/4 ID x 3/4" LG	1
3	020-000-030	HOSE ASSEMBLY, 3/8 ID x 24" LG	1
2	601-310-005	BREATHER CAP	1
1	601-300-046	POWER UNIT ASSEMBLY	1

TP-20 HYDRAULIC SYSTEM

MAN2002

REV A 4/99



ITEM	PART NUMBER	DESCRIPTION	QTY
16	600-860-012	CARRIAGE ROLLER ASSEMBLY, 4"	4
15	020-000-010	CARRIAGE WELDMENT	1
14	026-000-404	TRIM-LOK, 68"	1
13	026-000-007	BEARING HOLDER	4
12	026-000-046	CARRIAGE ROLLER ASSEMBLY, 5"	8
11	600-870-001	SNAP RING, #5100-137	12
10	018-000-102	ALL THREAD ROD, 1/2-13 NC x 4"	2
9	600-710-008	WASHER, FLAT, 1/2	2
8	018-000-101	HANDLE	2
7	600-860-001	NUT, PLAIN, 1/2-13 NC	6
6	600-720-005	WASHER, LOCK, 1/2	2
5	018-000-103	SLEEVE	2
4	020-000-101	ARM RESTRAINT	2
3	020-000-114	SPRING, 7" LG	2
2	600-710-001	WASHER, FLAT, 3/4	2
1	600-640-031	BOLT, 3/4-16 NF x 1 1/2, HEX HEAD CAP	2

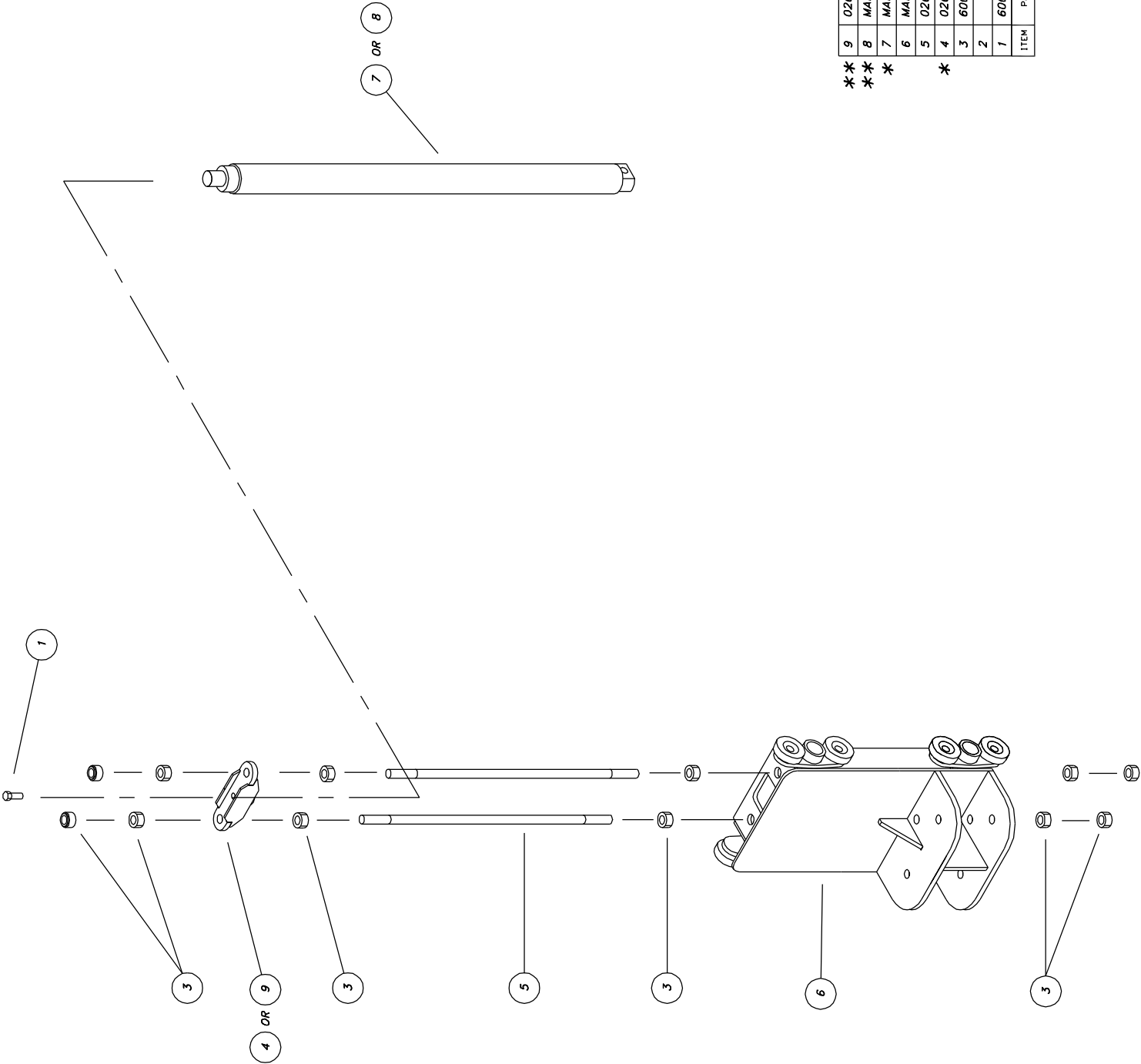
CARRIAGE SUB-ASSEMBLY

FILE: MAN2002
DATE: 9/98

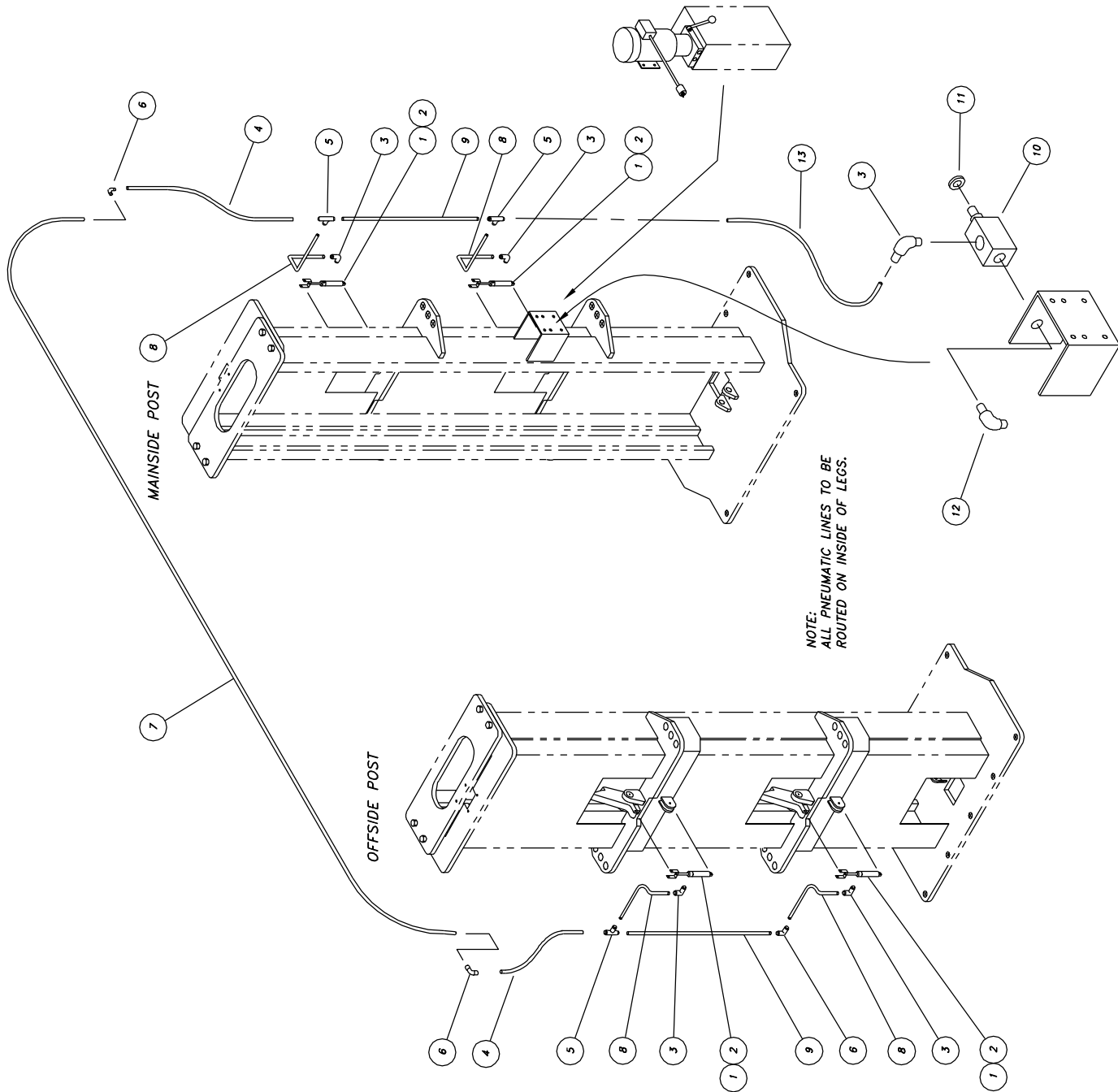
MAN2003

REV-A 8/99

* USED ON MAINSIDE
** USED ON OFFSIDE

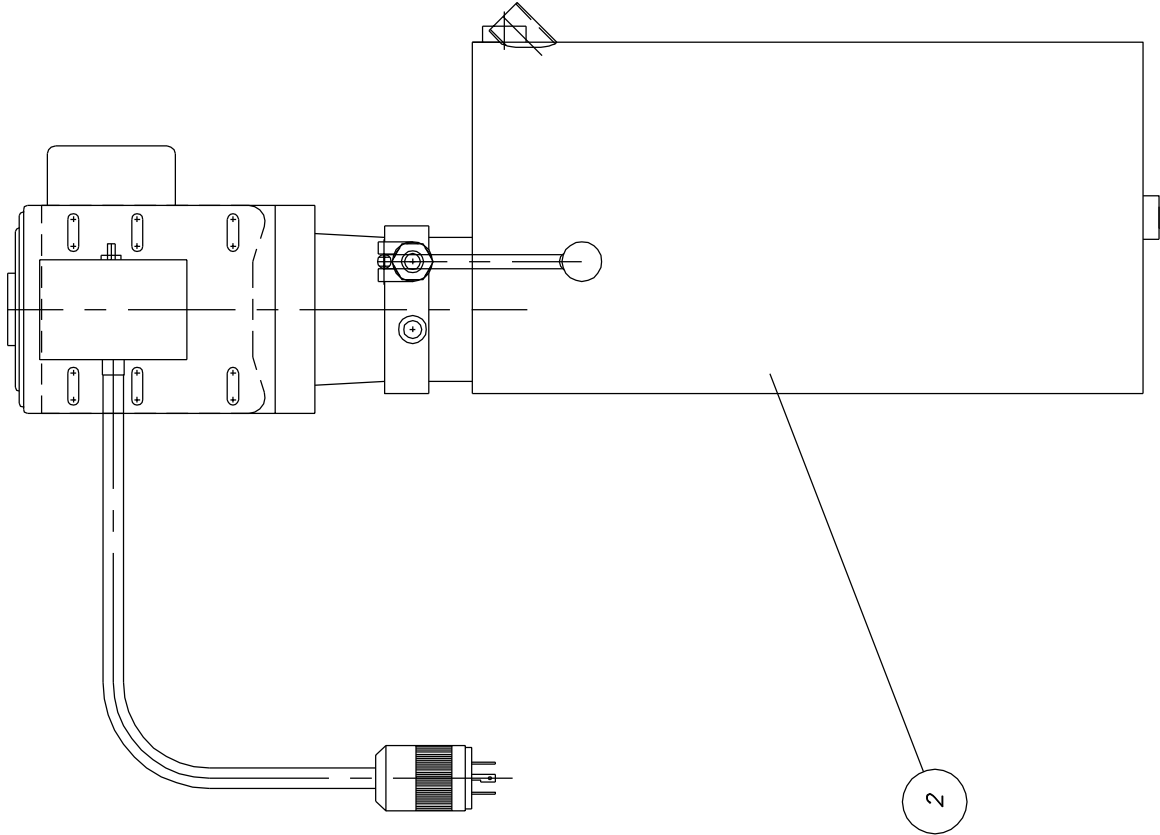


**	9	026-000-013	YOKE WELDMENT (OFFSIDE)	1
**	8	MAN660	CYLINDER ASSEMBLY (OFFSIDE)	(REF)
**	7	MAN659	CYLINDER ASSEMBLY (MAINSIDE)	(REF)
*	6	MAN2002	CARRIAGE SUB-ASSEMBLY	(REF)
	5	026-002-126	LIFTING ROD, 1 1/2 DIA	2
*	4	026-000-010	YOKE WELDMENT (MAINSIDE)	1
	3	600-680-007	NUT, PLAIN, 1 1/2-12 NF	12
	2			
	1	600-640-055	BOLT, 1-14 NF x 2 1/2, HEX HEAD CAP	1
ITEM	PART NUMBER		DESCRIPTION	QTY



ITEM	PART NUMBER	DESCRIPTION	QTY
13	020-000-409	TUBING, 1/4 ID x 30"	1
12	601-420-121	ELBOW, 90°, 1/8 MALE NPT TO 1/4 FEM NPT	1
11	601-S10-005	POPPET VALVE PUSH BUTTON	1
10	601-S10-004	POPPET VALVE, PNEUMATIC, 3 WAY	1
9	028-002-407	TUBING, 1/4" x 42" LG	2
8	028-002-406	TUBING, 1/4" x 11" LG	4
7	020-000-406	TUBING, 1/4" x 302	1
6	601-S20-006	90° ELBOW, 1/4 TUBE TO 1/4 TUBE	1
5	601-S20-004	UNION TEE, 1/4" TUBE	1
4	020-000-405	TUBING, 1/4" x 40"	2
3	601-S20-002	90° ELBOW SWIVEL, 1/8 NPT TO 1/4 TUBE	5
2	028-002-106	CLEVIS	4
1	601-S10-006	AIR CYLINDER	4

TP-20 PNEUMATIC SYSTEM

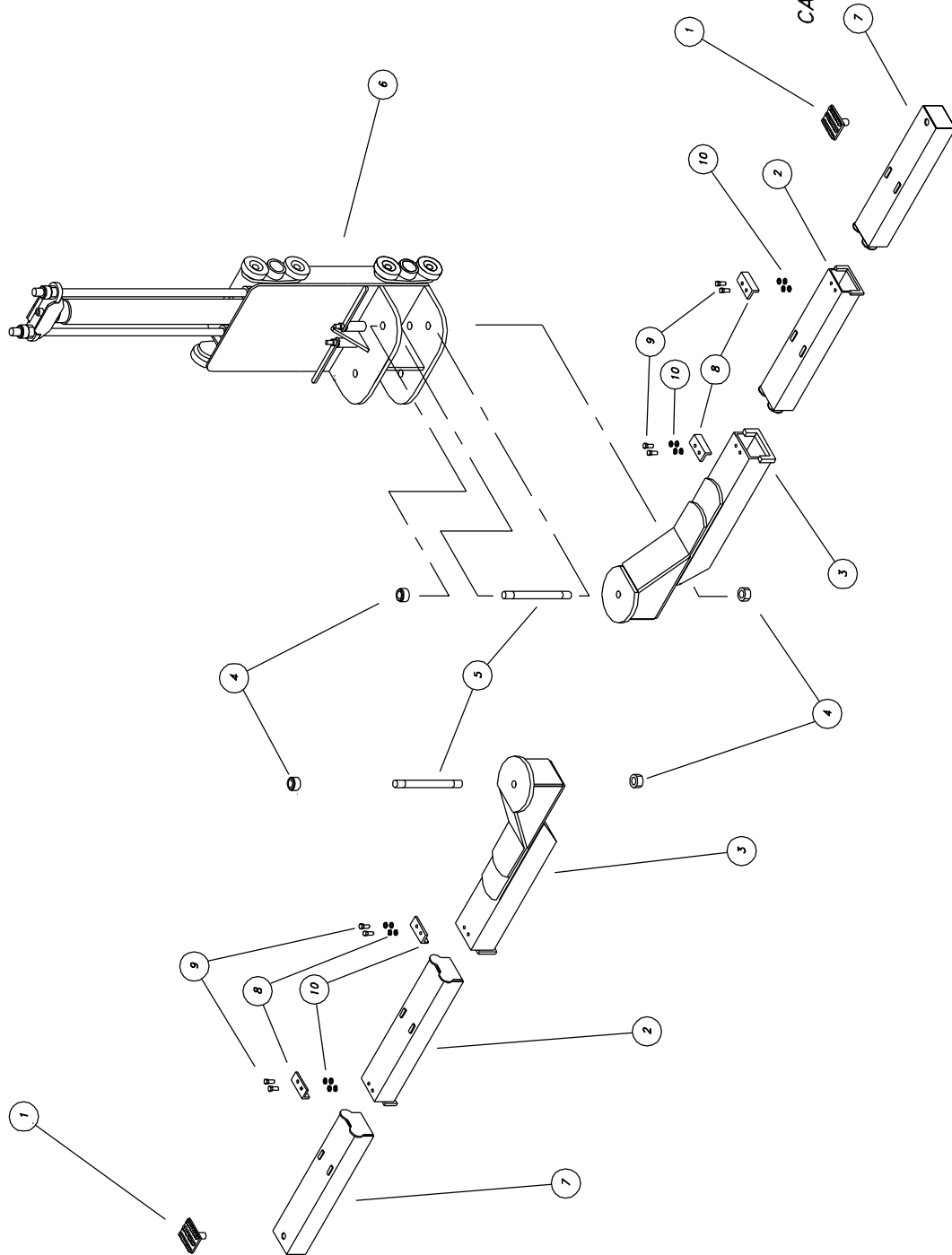


MAN2005

2	601-300-046	POWER UNIT, 2 HP, SINGLE PHASE	1
1	601-600-023	BOX, CORRUGATED	1
ITEM	PART NUMBER	DESCRIPTION	QTY

TP-20 POWER UNIT & BOX
(020-000-036)

MAN2006



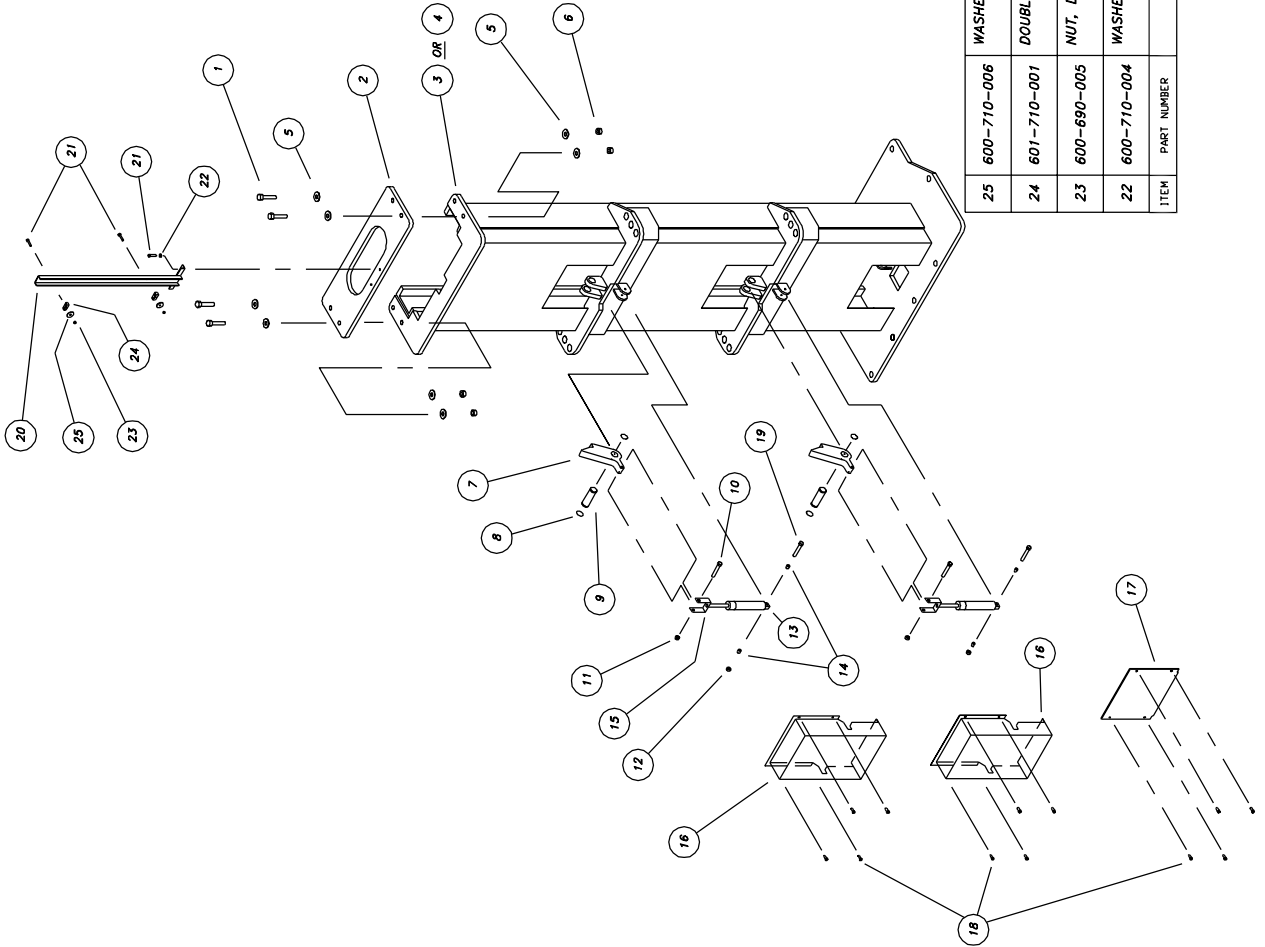
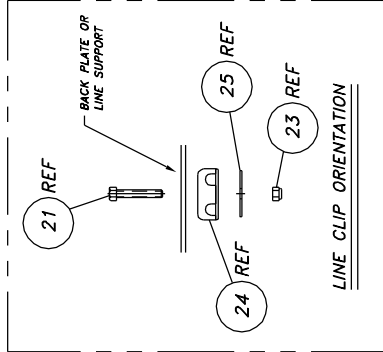
ITEM	PART NUMBER	DESCRIPTION	QTY
10	600-710-003	WASHER, FLAT, 5/16	16
9	600-600-004	SCREW, 5/16-24 NF x 5/8, SELF TAP, HEX HEAD	8
8	020-000-116	SLIDER ARM STOP	4
7	020-000-019	SLIDER ARM WELDMENT (LIFT PAD)	2
6	MAN2003	CARRIAGE/LIFTING RODS/YOKE	1
5	026-000-153	SWING ARM PIN	2
4	600-690-013	NUT, LOCK, 1 1/2-12 NF	4
3	020-000-017	SWING ARM WELDMENT	2
2	020-000-020	SLIDER ARM WELDMENT (CENTER)	2
1	012-012-047	LIFTING PAD WELDMENT	2

CARRIAGE/SWING ARMS/SLIDERS/LIFTING PADS

FILE: MAN2006
DATE: 9/98

MAN2007

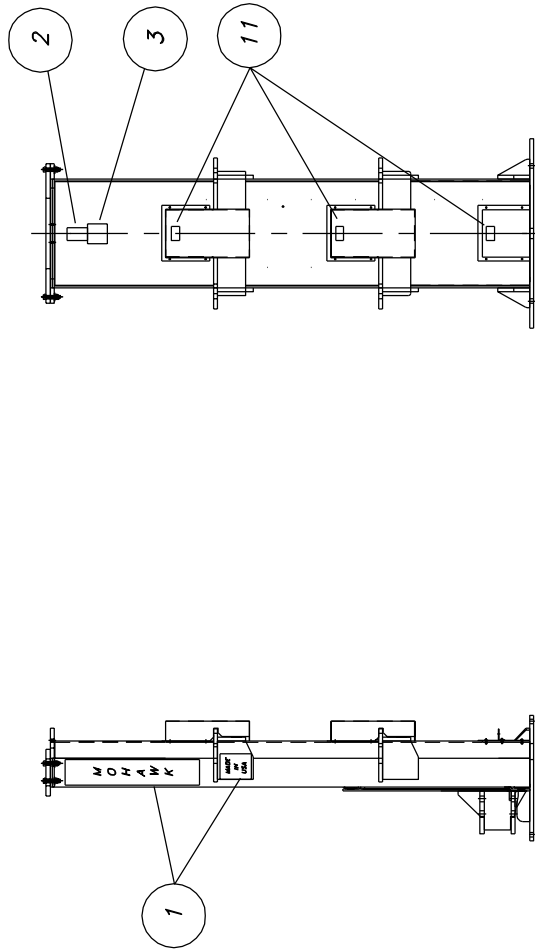
REV-B 10/01



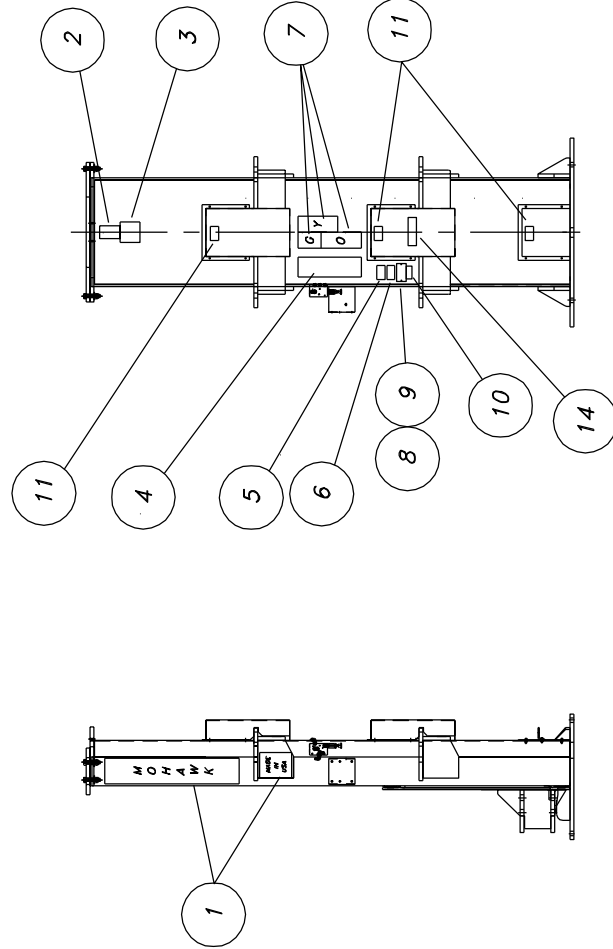
ITEM	PART NUMBER	DESCRIPTION	QTY
25	600-710-006	WASHER, FLAT (FENDER) 5/16 ID x 1 1/2 OD	2
24	601-710-001	DOUBLE LINE CLIP	2
23	600-690-005	NUT, LOCK, 1/4-20 NC	4
22	600-710-004	WASHER, FLAT, 1/4	2

21	600-640-019	BOLT, 1/4-20 NC x 1 1/2	4
20	007-007-033	LINE SUPPORT	1
19	600-640-067	BOLT, 1/4-20 NC x 3" HEX HEAD CAP	2
18	600-640-053	BOLT, 5/16-18 NC x 1/2" HEX HEAD CAP	12
17	026-002-105	ACCESS HOLE COVER	1
16	026-002-104	LOCK COVER	2
15	026-002-106	LOCK CYLINDER CLEVIS	2
14	601-420-003	SLEEVE, 3/8 TUBE	4
13	601-510-006	AIR CYLINDER	2
12	600-690-005	NUT, LOCK, 1/4-20 NC	2
11	600-690-001	NUT, LOCK, 5/16-18 NC	2
10	600-640-068	BOLT, 5/16-18 NC x 3" HEX HEAD CAP	2
9	026-002-130	LOCK BODY PIN, 1 1/2 DIA	2
8	600-870-004	SNAP RING, #5100-150	4
7	026-002-107	LOCK BODY	2
6	600-690-003	NUT, LOCK, 3/4-16 NF	4
5	600-710-001	WASHER, FLAT, 3/4	8
4	020-000-014	OFFSIDE LEG WELDMENT	1
3	020-000-012	MAINSIDE LEG WELDMENT	1
2	026-002-114	CARRIAGE STOP	1
1	600-640-011	BOLT, 3/4-16 NF x 3 1/2 HEX HEAD CAP	4

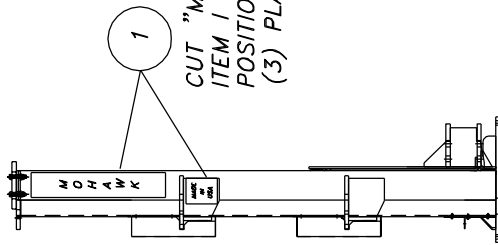
MAINSIDE & OFFSIDE LEG ASSEMBLY
FILE: MAN2007
DATE: 9/98



OFFSIDE LEG



MAINSIDE LEG



MAN2008
REV-A 3/99

12 13

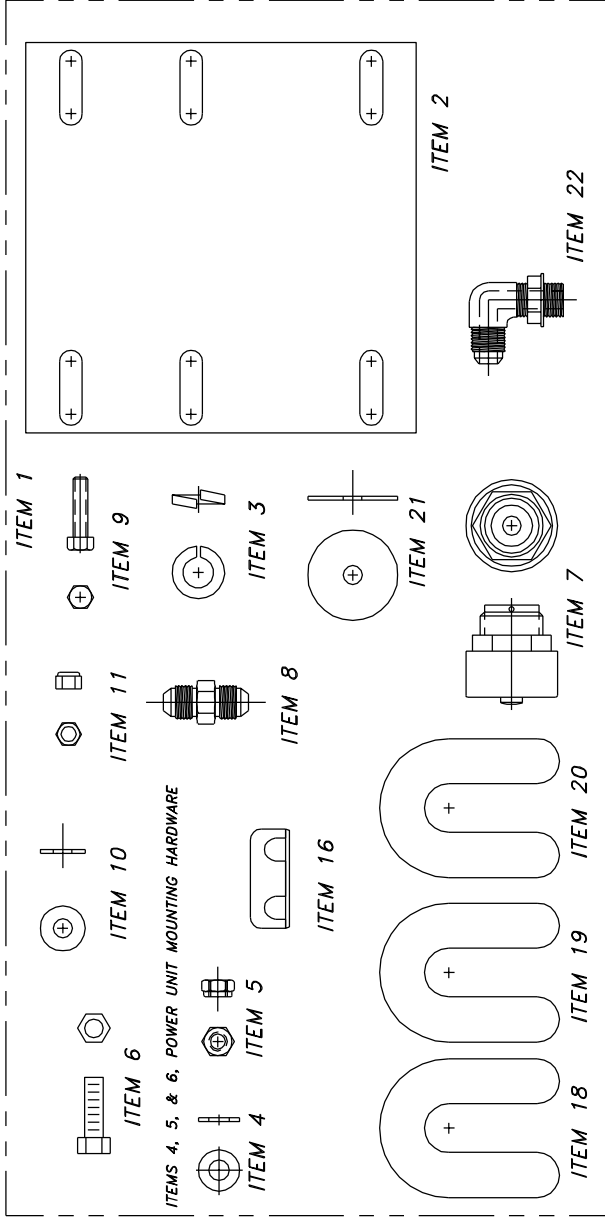
SHOWN ON MAINSIDE CYLINDER (018-002-007)

14	601-800-118	DECAL, WARNING, 2" x 6 1/2	1
13	600-800-022	PATENT DECAL	1
12	601-800-021	"NO USER SERVICEABLE PARTS" DECAL	1
11	601-800-094	"GUARD & COVER" DECAL, 2" x 3 1/2	6
10	601-800-037	"ALI" PLATE, 1 1/2 x 3 1/4	1
9	601-800-026	SERIAL, SPEC, PATENT PLATE, 2 7/16 x 4 9/16	1
8	600-620-001	SCREW, DRIVE, #4 x 1/4, ROUND HEAD, TYPE U	2
7	601-800-052	"CAUTION, WARNING, & SAFETY" DECAL SET (2 POST)	1
6	601-800-035	"CAUTION" DECAL, 2" x 3 1/2	1
5	601-800-034	"WARNING" DECAL, 2" x 3 1/2	1
4	601-800-001	OPERATIONAL INSTRUCTION DECAL, 5" x 16"	1
3	601-800-112	"MAXIMUM CAPACITY" DECAL, 5" x 5" (20000 LBS)	2
2	601-800-030	"MADE IN AMERICA" DECAL, 3 1/8 x 5 3/16	2
1	601-800-061	"MOHAWK" DECAL, 6 3/8 x 41 3/4	4
ITEM	PART NUMBER	DESCRIPTION	QTY

TP-20 & TP-20B TAG & DECAL LOCATION

FILE: MAN2008
DATE: 9/98

BAG #1 (020-000-033)

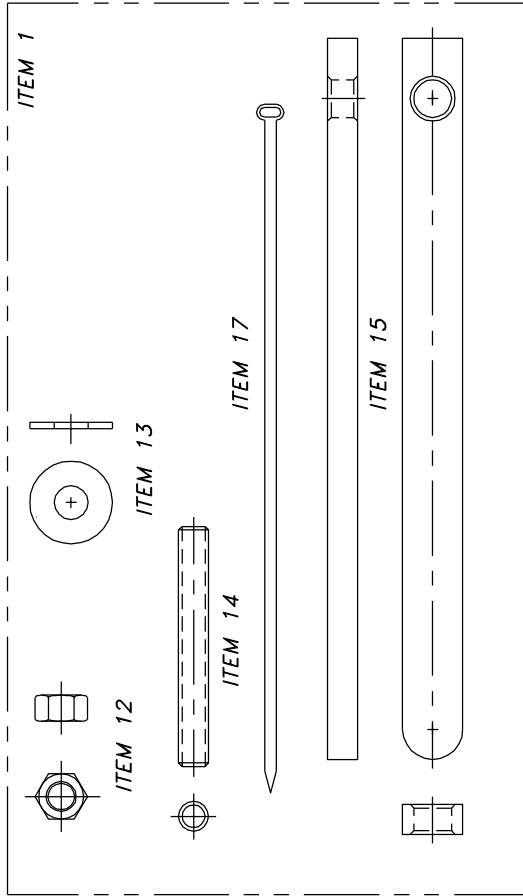


MAN2011

REV B

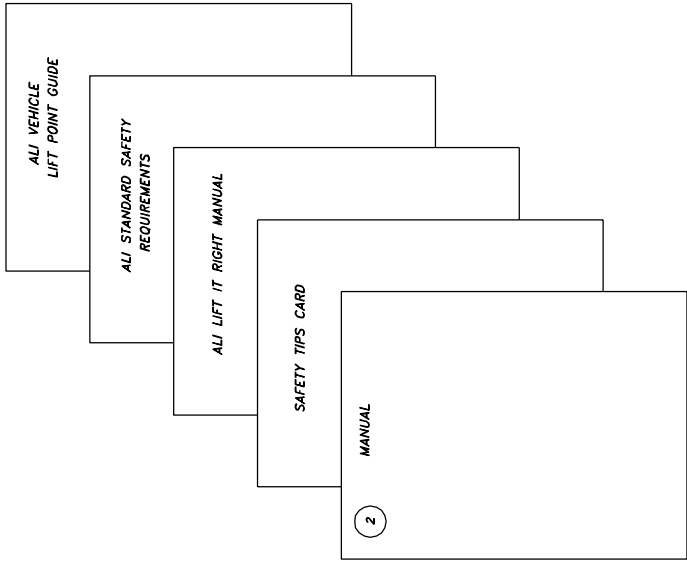
4/02

BAG #2 (020-000-034)



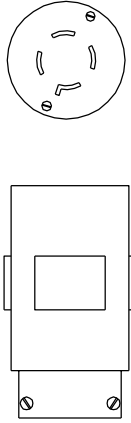
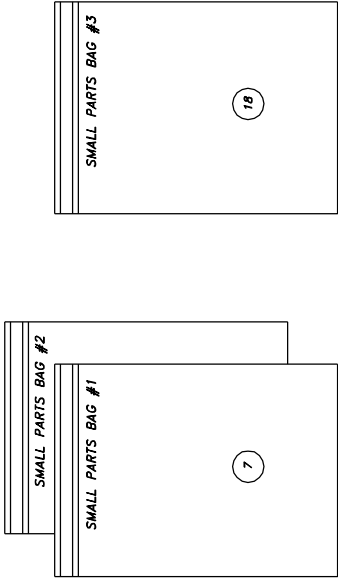
22	601-420-017	ELBOW, 90 °, #6 ORB MALE TO #6 JIC MALE	2
21	600-710-006	WASHER, FLAT (FENDER) 5/16 ID x 1 1/2 OD	6
20	600-740-003	SHIM, BLACK, 1/4	9
19	600-740-002	SHIM, RED, 1/8	9
18	600-740-001	SHIM, BLUE, 1/16	9
17	601-600-036	PLASTIC PULL TIE, 8" LG	25
16	601-710-001	DOUBLE LINE CLIP	6
15	018-000-101	HANDLE	4
14	018-000-102	ALL THREAD ROD, 1/2-13 NC x 5 1/2	4
13	600-710-008	WASHER, FLAT, 1/2	4
12	600-680-001	NUT, PLAIN, 1/2-13 NC	12
11	600-680-005	NUT, LOCK, 1/4-20 NC	10
10	600-710-004	WASHER, FLAT, 1/4	4
9	600-640-019	BOLT, 1/4-20 NC x 1 1/2	10
8	601-420-011	UNION, #6 JIC TO #6 JIC	4
7	601-310-005	BREATHER, VENT PLUG	1
6	600-640-001	BOLT, 5/16-18 NC x 1" LG	4
5	600-680-001	NUT, LOCK, 5/16-18 NC	4
4	600-710-003	WASHER, FLAT, 5/16	4
3	600-720-005	WASHER, LOCK, 1/2	4
2	007-007-174	RUBBER PAD (POWER UNIT) 1/8 x 6 1/2 x 6 1/2	1
1	601-600-022	BAG, ZIP-LOK, 9" x 12"	3
ITEM	PART NUMBER	DESCRIPTION	QTY

BAG #1/PULL VALVE, BAG #2/SMALL PARTS, & SHIMS, BAG #3/CARRIAGE LOCK PARTS
FILE: MAN2011
DATE: 9/98

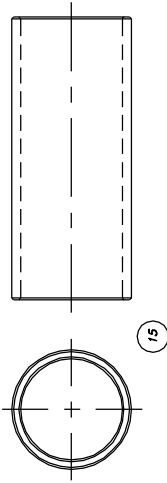


MAN2012

REV-F 5/02

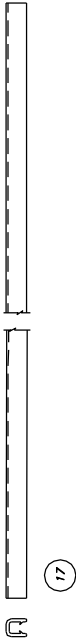


16



15

NOTE: PLACE ALL ITEMS IN ITEM 1.



17



5



4



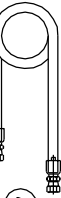
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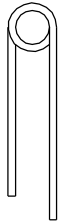
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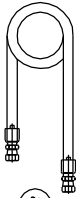
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13



14



8

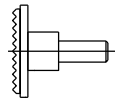


10



9

18



10

9

19	020-011-003	LIFTING PAD WELDMENT (2" SHOULDER)	4
18	MAN651-A	SMALL PARTS BAG #3	1
17	026-000-404	TRIM-LOK.68"	2
16	601-170-008	CONNECTOR, 4 PRONG, 20 A, 250 V, SINGLE PHASE	1
15	018-000-103	SLEEVE	4
14	020-000-406	HOSE, 1/4 ID x 302" LG	1
13	600-670-003	WEL-IT, 3/4 x 6"	18
12	020-000-030	HOSE ASSEMBLY, 3/8 ID (24")	1
11	020-000-031	HOSE ASSEMBLY, 1/4 ID (34")	1
10	601-630-002	PAINT, SPRAY, YELLOW	2
9	601-630-001	PAINT, SPRAY, RED	4
8	007-007-033	LINE SUPPORT	2
7	MAN2011	SMALL PARTS BAGS #1 & 2	1
6	012-012-047	LIFTING PAD WELDMENT	4
5	018-000-105	HEIGHT ADAPTER, 10"	4
4	012-012-151	HEIGHT ADAPTER, 7 1/2"	4
3	018-000-106	HEIGHT ADAPTER, 5"	4
2	020-000-043	TP-20 MANUAL ASSEMBLY	1
1	601-600-023	BOX, CORRUGATED	1
ITEM	PART NUMBER	DESCRIPTION	QTY

TP-20 PARTS BOX & CONTENTS
(020-000-035)

MAN2013

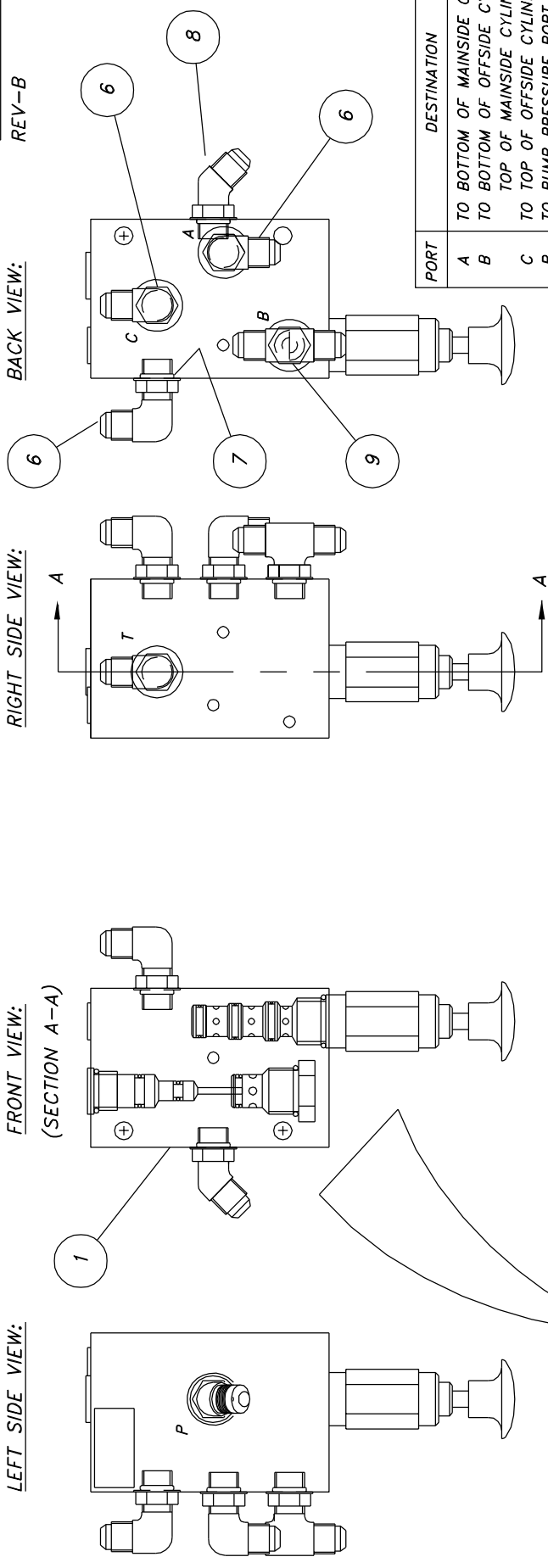
REV-B 4/99

LEFT SIDE VIEW:

FRONT VIEW:
(SECTION A-A)

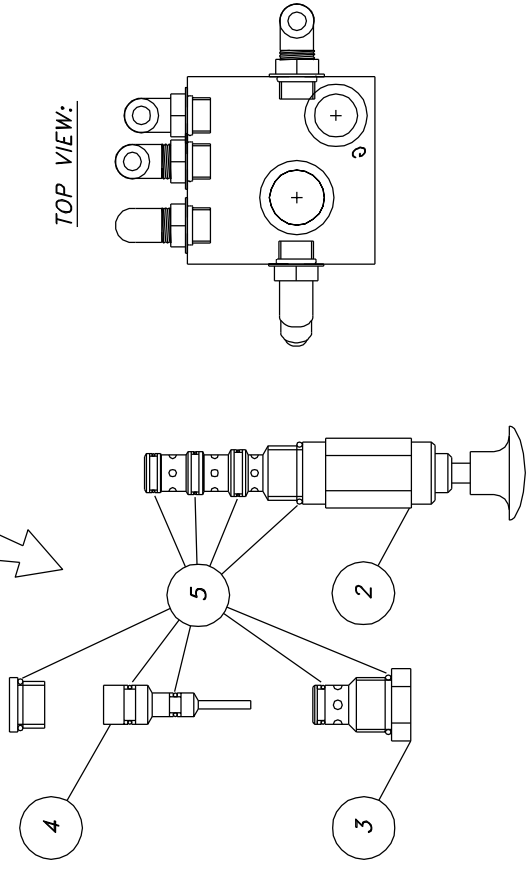
RIGHT SIDE VIEW:

BACK VIEW:



PORT	DESTINATION
A	TO BOTTOM OF MAINSIDE CYLINDER
B	TO BOTTOM OF OFFSIDE CYLINDER
C	TO TOP OF MAINSIDE CYLINDER
P	TO PUMP PRESSURE PORT
T	TO TANK (RESERVOIR)

TOP VIEW:



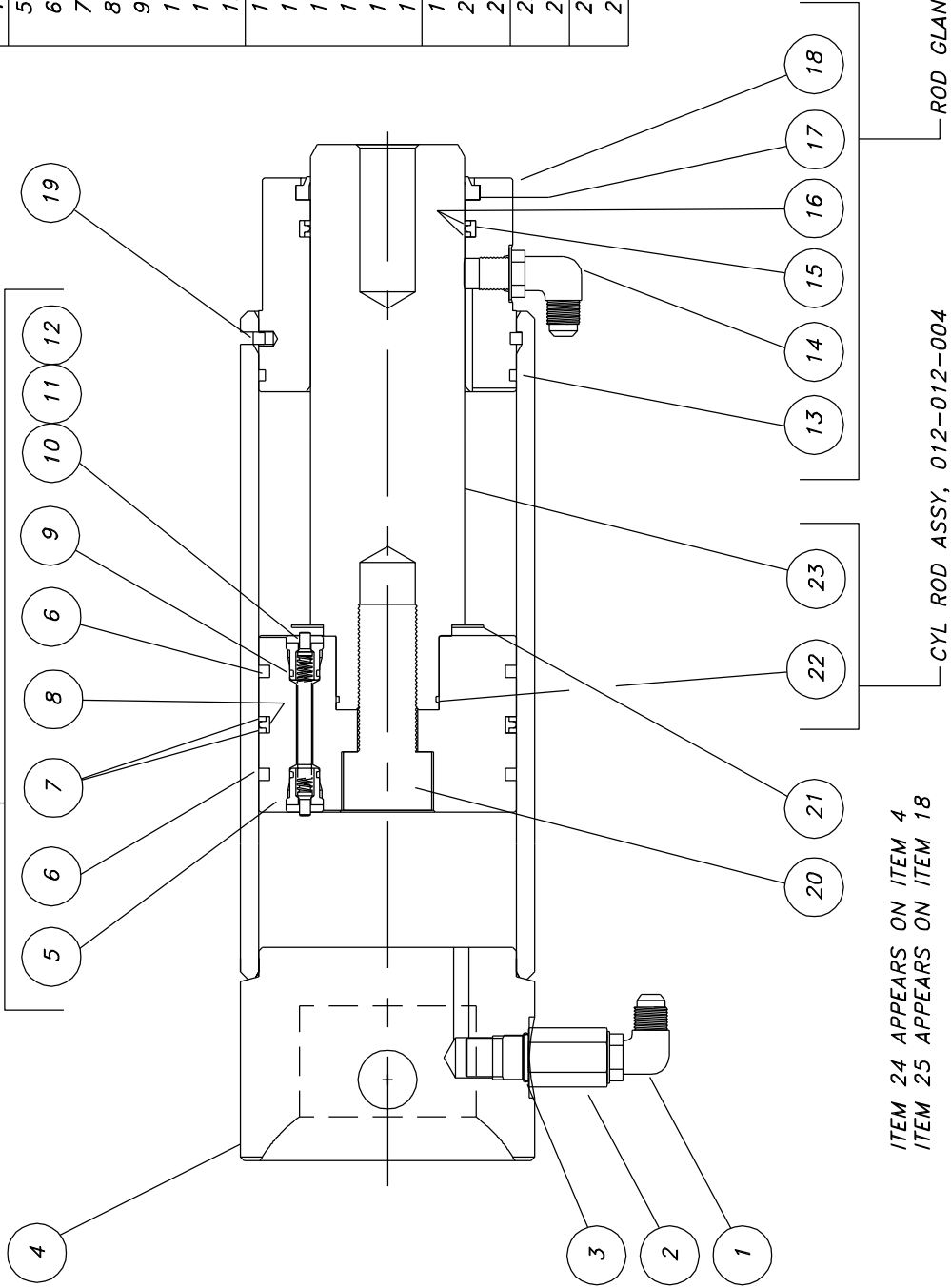
ITEM	PART NUMBER	DESCRIPTION	QTY
9	601-420-046	TEE, BRANCH, #6 ORB TO #6 JIC TO #6 JIC	1
8	601-420-061	ELBOW, 45°, #6 ORB TO #6 JIC	1
7	601-030-017	O-RING	5
6	601-420-017	ELBOW, 90°, #6 ORB TO #6 JIC	3
5	212239ASK	SEAL REPAIR KIT	1
4	282247AA	PILOT PISTON ASSY	1
3	CV10-20-0-N-05	CHECK VALVE	1
2	MP10-42K-0-N	MANUAL PULL VALVE	1
1	601-410-030	DIVERTER VALVE	1

DIVERTER VALVE ASSEMBLY
(020-000-032)
FILE: MAN2013
DATE 9/98

MAN659

ITEM	PART NUMBER	DESCRIPTION	QTY
1	601-420-017	FITTING	1
2	601-410-034	VELOCITY FUSE -6	1
3	601-030-008	O-RING	REF
4	026-002-010	BARREL WELDMENT	1
5	026-000-112	PISTON	1
6	601-050-003	SEAL POLYPACK	2
7	601-060-011	BACK-UP RING	2
8	601-010-001	PISTON T-SEAL	1
9	601-030-002	O-RING	2
10	009-001-152	SPOOL	2
11	600-840-009	SPRING	1
12	009-001-153	RETAINER	2
13	601-030-011	O-RING	1
14	601-420-017	FITTING	1
15	601-000-003	ROD T-SEAL	1
16	601-060-007	BACK-UP RING	2
17	601-020-003	WIPER	1
18	026-000-111	ROD GLAND	1
19	026-000-183	SPIN KEY	1
20	600-650-001	BOLT	1
21	007-007-143	WASHER	1
22	601-030-009	O-RING	1
23	012-012-103	ROD	1
24	601-800-021	DECAL, CAUTION	1
25	601-800-022	DECAL, PATENT	1

PISTON ASSY, 026-000-012

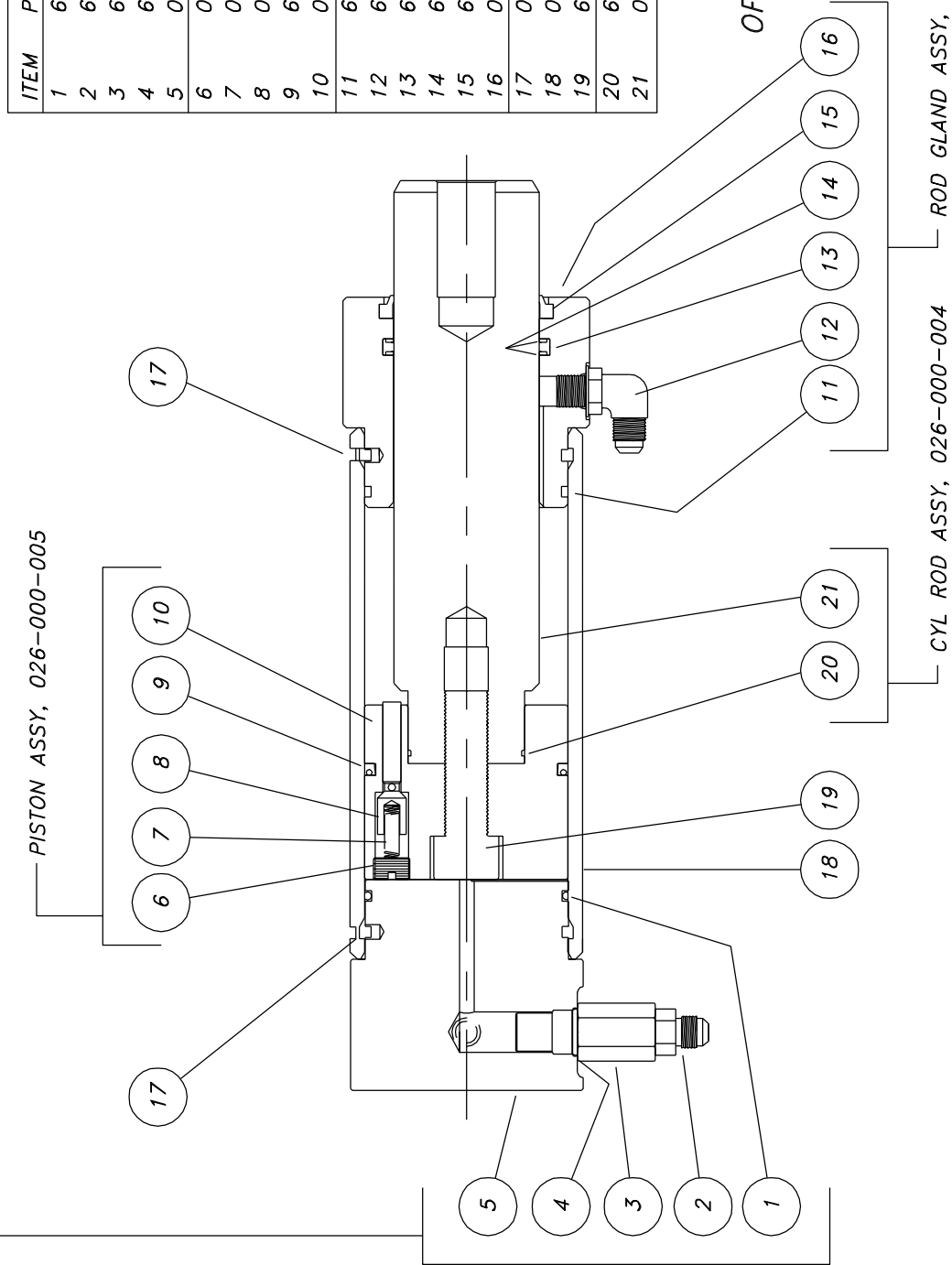


TP-18A, 20, 26A, & 30A
MAINSIDE CYLINDER ASSEMBLY
(026-002-007)

FILE: MAN659

DATE: 11/97

BOTTOM GLAND ASSY, 026-002-009



ITEM	PART NUMBER	DESCRIPTION	QTY
1	601-030-005	O-RING	1
2	601-420-019	FITTING, STRAIGHT	1
3	601-410-034	VELOCITY FUSE -6	1
4	601-030-008	O-RING	REF
5	026-002-122	BOTTOM GLAND	1
6	026-000-107	SET SCREW	1
7	026-000-417	SPRING	1
8	026-000-106	CHECK VALVE	1
9	601-050-002	POLY-PAK SEAL	1
10	026-000-105	PISTON	1
11	601-030-005	O-RING	1
12	601-420-017	FITTING, 90° ELBOW	1
13	601-000-002	ROD T-SEAL	1
14	601-060-006	BACK-UP RING	2
15	601-020-002	ROD WIPER	1
16	026-000-102	ROD GLAND	1
17	026-000-184	SPIN KEY	2
18	026-000-108	BARREL	1
19	600-650-002	BOLT	1
20	601-030-010	O-RING	1
21	026-000-104	ROD	1

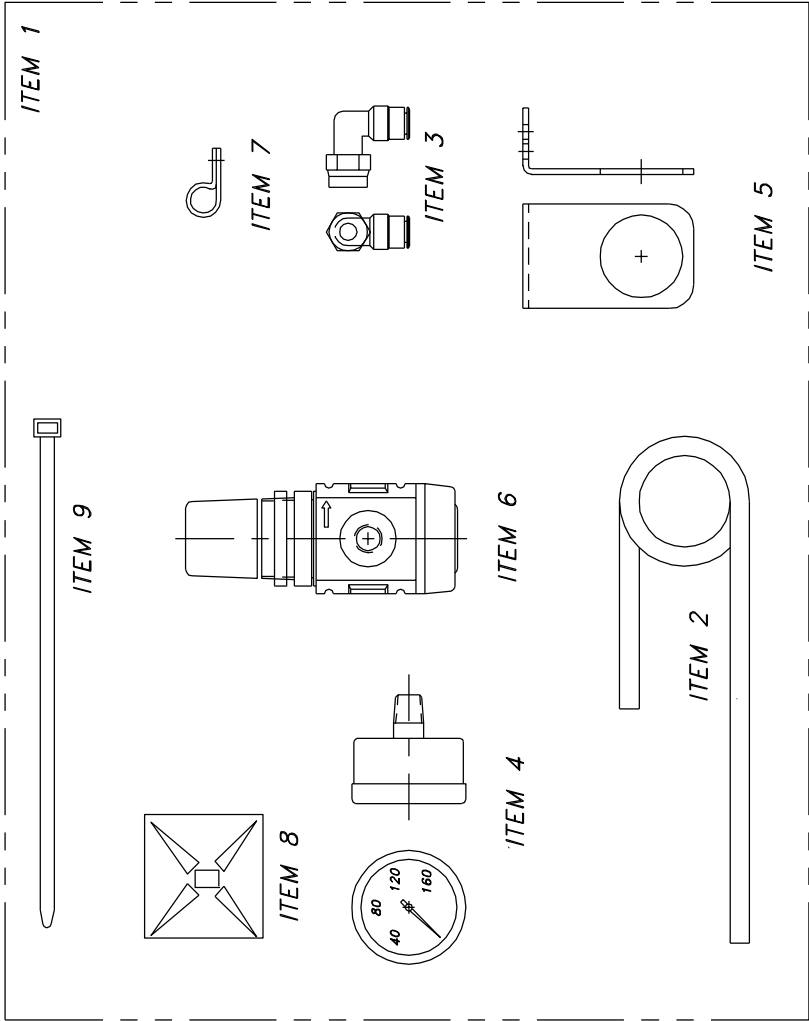
TP-18A, 20, 26A, & 30A
OFFSIDE CYLINDER ASSEMBLY
(026-002-008)

MAN661-A

REV-C

4/02

BAG #3 (026-002-034)



9	601-600-045	CABLE TIE HOLDER	10
8	601-600-036	PLASTIC PULL TIE, 8"	10
7	601-430-036	PLASTIC CLIPS	8
6	601-510-026	AIR LINE REGULATOR	1
5	601-510-025	L-BRACKET	1
4	601-510-024	GAUGE	1
3	601-520-003	ELBOW, 90°, SWIVEL, 1/4 NPT TO 1/4 TUBE	2
2	026-002-412	TUBING, BLACK, 1/4" x 120"	1
1	601-600-022	BAG, ZIP-LOK, 9" x 12"	1
ITEM	PART NUMBER	DESCRIPTION	QTY

BAG #4/FILTER, REGULATOR & SMALL PARTS
FILE: MAN661-A
DATE: 9/98

MOHAWK

NEW SLAB RECOMMENDATIONS



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

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.

Never, Never, hand mix your own concrete.

New Slab Recommendations

File: New-slab.xls

Rev Date: 3/18/2005

NEW SLABS MUST BE 12" THICK MINIMUM !!

Lift Model	W Slab Width, (Feet)	L Slab Length, (Feet)	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	4 Ft	14 Ft	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
Tomahawk-9000	4 Ft	14 Ft	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
System IA	4 Ft	14 Ft	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
System IA-10	4 Ft	14 Ft	8 - #4 - Main Bars 21 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	5 in
LMF-12	6 Ft	15 Ft	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-15	6 Ft	15 Ft	12 - #4 - Main Bars 23 - #4 - Temperature Bars	6 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-18	6 Ft	16 Ft	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-20	6 Ft	16 Ft	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	3/4 in	6 in
TP-26	6 Ft	16 Ft	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	10 in
TP-30	6 Ft	16 Ft	18 - #4 - Main Bars 24 - #4 - Temperature Bars	4 in - Long Bars 8 in - Short Bars	1 in	10 in
TR-19*	2 Ft	2 Ft	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
FL-25*	2 Ft	2 Ft	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
TR-25*	2 Ft	2 Ft	4 - #4 Bars 8 Bars Total	6 in - Each Way	3/4 in	5 in
TR-33*	6 Ft	6 Ft	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-35*	6 Ft	6 Ft	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-50*	6 Ft	6 Ft	12 - #4 Bars 24 Bars Total	6 in - Each Way	3/4 in	5 in
TR-75*	6 Ft	6 Ft	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.

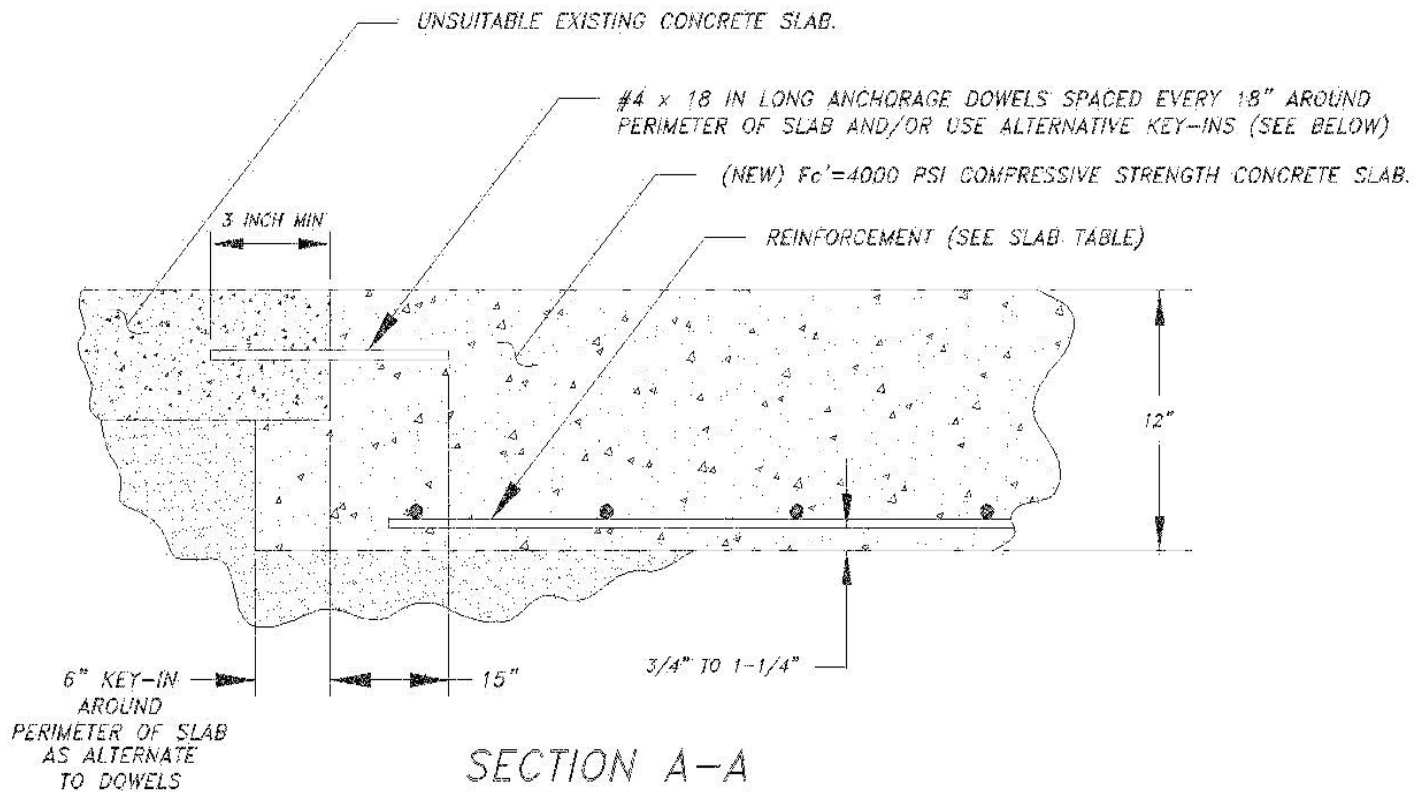
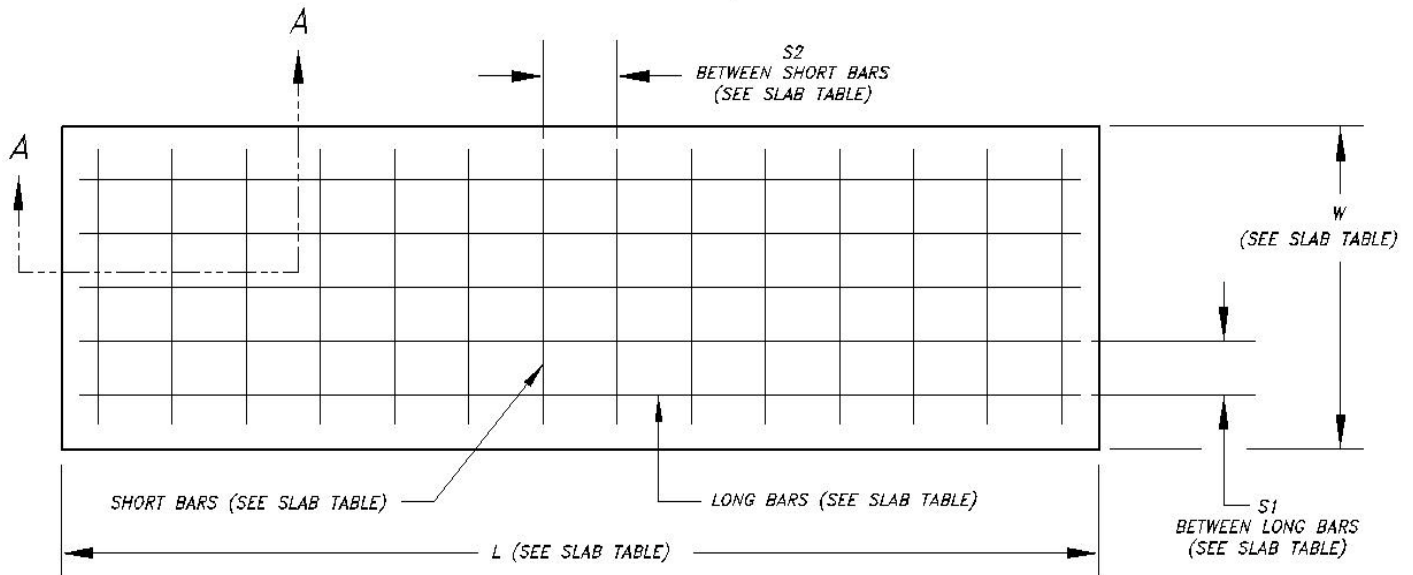
Note 2: The main reinforcing and lower temperature steel shall be Grade 60 deformed bars

NEW RECOMMENDED SLAB DESIGN FOR 2-POST LIFTS

FILE: MAN066

DATE: 2/98

REV DATE: 7/2003

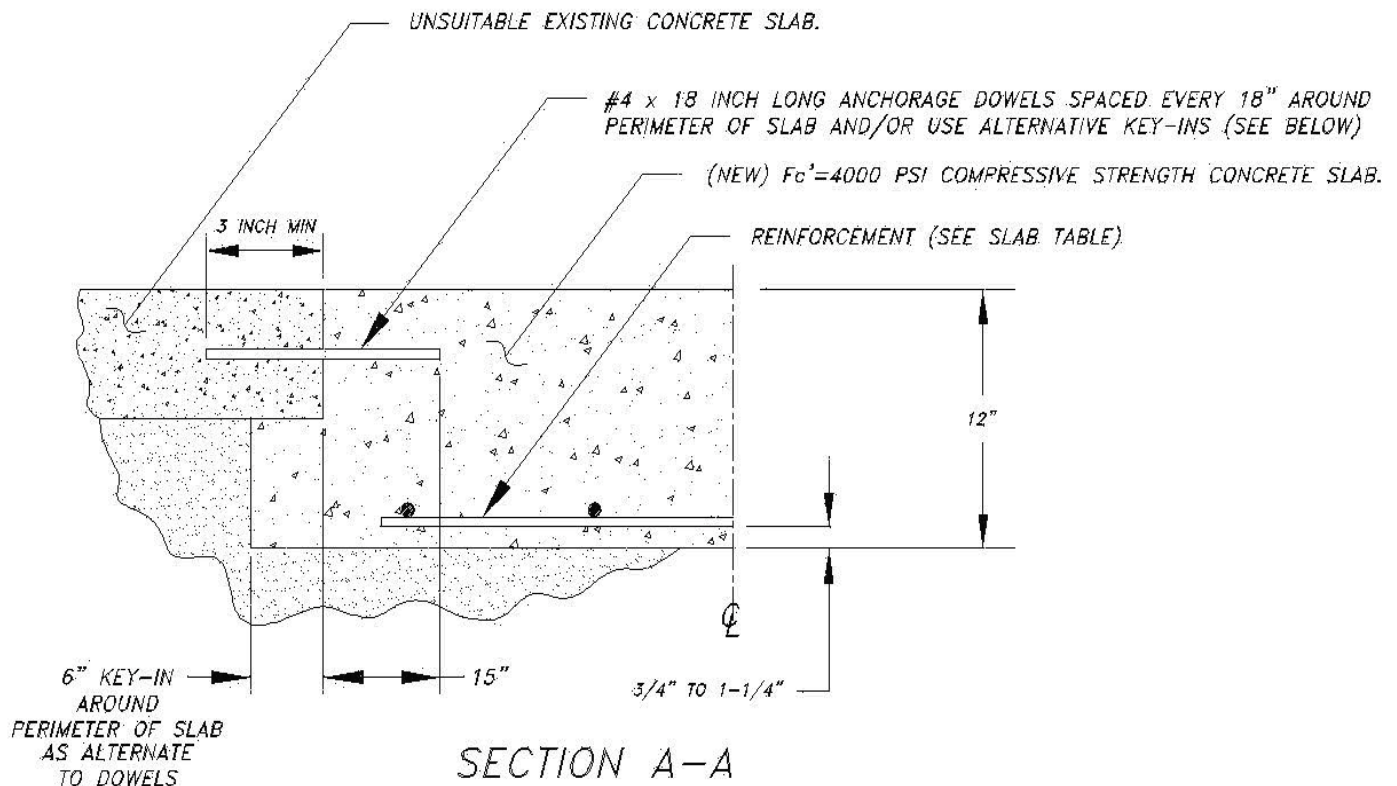
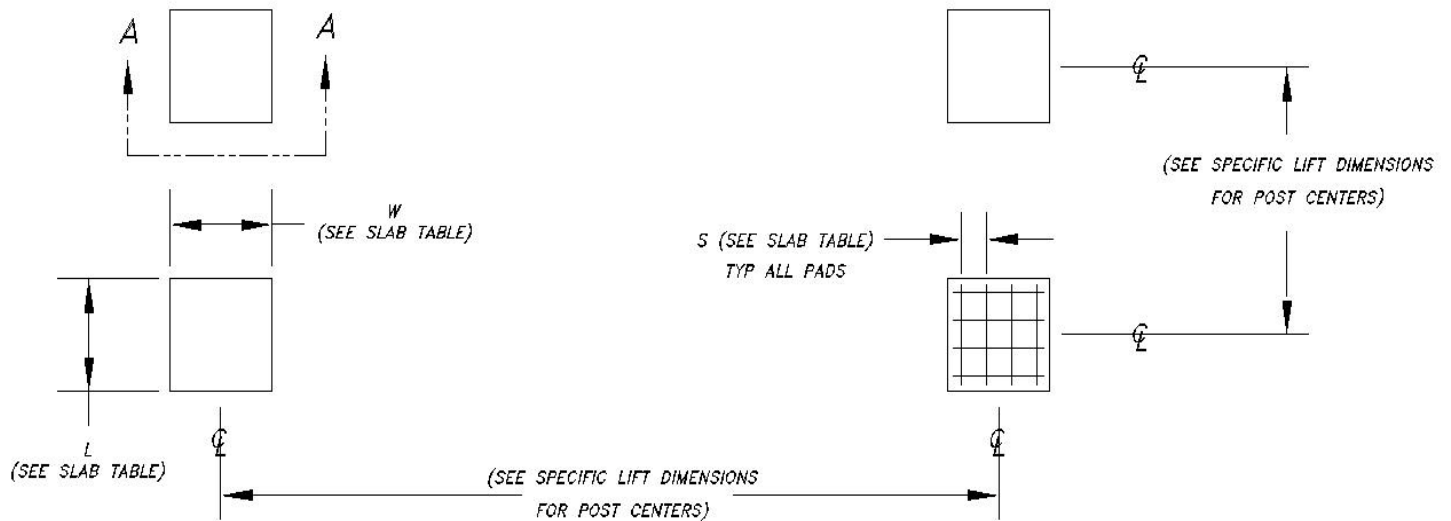


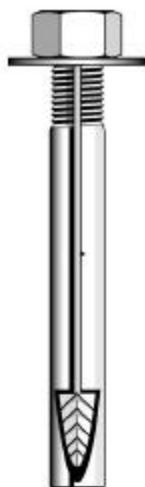
NEW RECOMMENDED SLAB DESIGN FOR 4-POST LIFTS

FILE: MAN089

DATE: 10/00

REV DATE: 7/2003





The Original **wej-it**® Wedge Anchors

KEY FEATURES/BENEFITS

- **Time-Tested, Proven Reliability.** An industry standard for over 45 years.
- **Fully Assembled and Ready to Use.** Unparalleled job-site convenience.
- **BOLT SIZE IS HOLE SIZE.®** Allows precision placement of equipment through pre-drilled holes.
- **Exclusive "Positive Wedge Connections."** Minimizes wedge loosening due to vibratory loads.



SPECIFICATIONS, APPROVALS AND LISTINGS

TYPE	
Zinc Plating	ASTM B-633, Type III, SCl
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 CONCRETE ZIN PLATED ARBON STEEL								UNREINFORCED LIGHTWEIGHT (IDEALITE)			
Anchor & Hole Size	Embed- ment (in)	2000 psi Tension (lbs)	2000 psi Shear (lbs)	Embed- ment (in)	3000 psi Tension (lbs)	3000 psi Shear (lbs)	5000 psi Tension (lbs)		5000 psi Shear (lbs)	7000 psi Tension (lbs)		7000 psi Shear (lbs)	Embed- ment (in)	5000 psi Tension (lbs)	5000 psi 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, CO; 1981.

EDGE DISTANCE AND SPACING REQUIREMENTS

Embedment (E) in Anchor Diameters (d)	Spacing	Edge Distance
$E < 6d$ (shallow)	3.50E	1.75E
$6d \leq E \leq 8d$ (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.

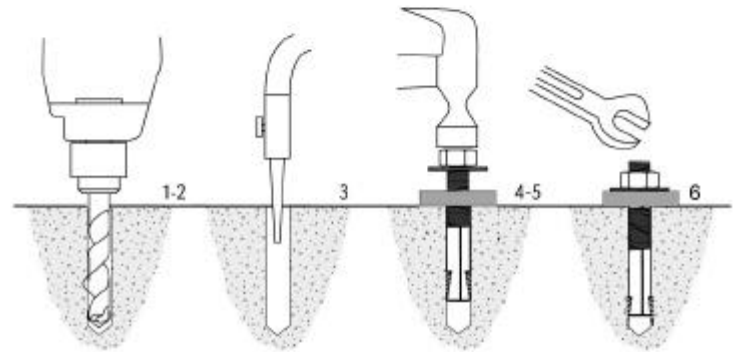


ORDER INFORMATION

Catalog Number	Anchor Diameter & Length (in)	Minimum Embedment (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

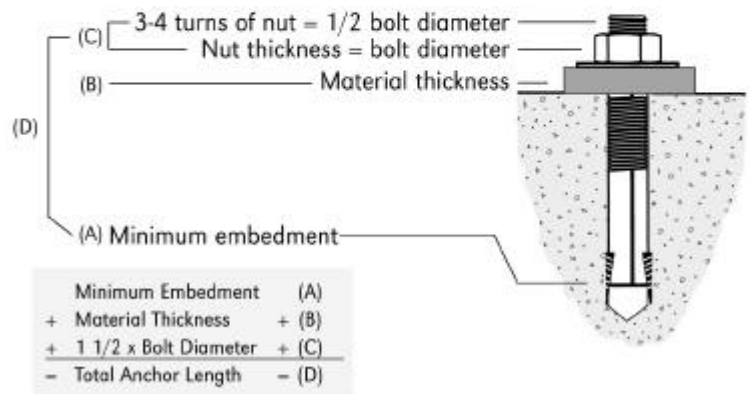
INSTALLATION INSTRUCTIONS - MOHAWK LIFTS

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. 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.
5. Tap anchor into hole with a 2 1/2 lb. hammer until the washer rests solidly against fixture.
6. Tighten the nut to 175 Ft. Lbs. maximum torque and 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 anchor is not recommended)



* 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



⚠ CAUTION



Lift to be used
by trained operator
only.

©

⚠ CAUTION



Authorized personnel
only in lift area.

©

⚠ WARNING



Clear area if vehicle
is in danger of falling.

©

⚠ WARNING



Position vehicle
with center of gravity
midway between
adapters.

©

⚠ CAUTION



Use vehicle
manufacturer's
lift points.

©

⚠ CAUTION



Always use
safety stands when
removing or installing
heavy components.

©

⚠ WARNING



Remain clear of lift
when raising or
lowering vehicle.

©

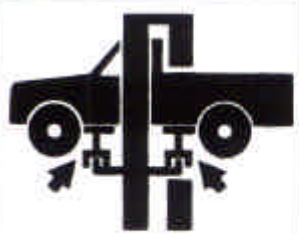
⚠ WARNING



Avoid excessive
rocking of vehicle
while on lift.

©

⚠ CAUTION



Use height extenders
when necessary
to ensure
good contact.

©

⚠ CAUTION



Auxiliary adapters
may reduce
load capacity.

©

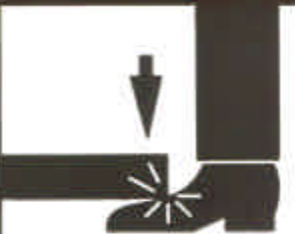
⚠ WARNING



Do not override
self-closing
lift controls.

©

⚠ WARNING



Keep feet
clear of lift
while lowering.

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

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SAFETY INSTRUCTIONS



Read operating and safety manuals before using lift.



SAFETY INSTRUCTIONS



Proper maintenance and inspection is necessary for safe operation.



SAFETY INSTRUCTIONS



Do not operate a damaged lift.



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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

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FAX 518-842-1289



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