

MOHAWK



INSTALLATION-OPERATION-SERVICE MANUAL ELECTRIC-HYDRAULIC LIFT

4-POST ARRANGEMENT WITH DRIVE-ON RUNWAYS

MODELS:	TR-30	TR-40	TR-60
CAPACITY:	30,000	40,000	60,000 Lb

MOHAWK RESOURCES LTD.

65 VROOMAN AVENUE
P.O. BOX 110
AMSTERDAM, NY 12010
TOLL FREE: 1-800-833-2006
FAX: 1-518-842-1289
LOCAL: 1-518-842-1431

**READ MANUAL THOROUGHLY
BEFORE INSTALLING,
OPERATING OR MAINTAINING
LIFT!!**



File: TR-30-40-60.doc
Rev: 6/16/2003

SAFETY INSTRUCTIONS:

1. Read all instructions.
2. Inspect lift daily. Do not operate if it malfunctions or problems have been encountered.
3. Never attempt to overload the lift. The manufacturer's rated capacity is shown on the identification label on the power side column. Do not override the operating controls or the warranty will be void.
4. Only trained and authorized personnel should operate the lift. Do not allow customers or bystanders to operate the lift or be in the lift area.
5. Position the lift support pads to contact the vehicle manufacturer's recommended lifting points. Raise the lift until the pads contact the vehicle. Check pads for secure contact with the vehicle, then raise the lift to the desired working height.
6. Some pickup trucks may require an optional truck adapter to clear running boards or other accessories.

NOTE: Always use all 4 arms to raise and support vehicle.

7. Caution! Never work under the lift unless the mechanical safety locks are engaged.
8. Note that the removal or installation of some vehicle parts may cause a critical load shift in the center of gravity and may cause the vehicle to become unstable. Refer to the vehicle manufacturer's service manual for recommended procedures.
9. Always keep the lift area free of obstructions and debris. Grease and oil spills should always be cleaned up immediately.
10. Never raise vehicle with passengers inside.
11. Before lowering check area for any obstructions.
12. Before driving vehicle between the towers, position the arms to the drive-through position to ensure unobstructed clearance. Do not hit or run over as this could damage the lift and/or vehicle.
13. Before removing the vehicle from the lift area, position the arms to the drive-through position to prevent damage to the lift and/or vehicle.
14. Care must be taken as burns can occur from touching hot parts.
15. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until a qualified serviceman has examined it.
16. Do not let cord hang over the table, bench or counter or come in contact with hot manifolds or moving fan blades.
17. If an extension cord is necessary, a cord with a current rating of two or more than that of the equipment should be used. Cords rates 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.
18. Always unplug the 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.
19. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
20. Adequate ventilation should be provided when working on operating internal combustion engines.
21. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
22. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
23. Use only as described in this manual. Use only manufacturer's recommended attachments.
24. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses, only have impact resistant lenses, they are NOT safety glasses.

SAVE THESE INSTRUCTIONS

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.

4-POST LIFT INSTALLATION MANUAL:

This manual contains important installation and service instructions for the Mohawk Electric/Hydraulic 4-post lift. Please read through this manual first, before installing, operating or maintaining the lift(s), to ensure full comprehension of the procedures and methods of operation.

NOTE: THE LIFT INSTALLER IS RESPONSIBLE TO GIVE ALL DOCUMENTS TO THE LIFT OPERATOR.

If 3 phase unit check!

The rotation of the electric motor.

If the motor does not turn or turns anti-clockwise, rotate the wires in the power supply plug.

WARNING INSTALLERS!

BEFORE INSTALLATION:

Please ensure that you have proper incoming electric line power supply in the building.

For single PHASE motors - each motor 220V – 20AMP service is required.

For 3 PHASE 230V – 10AMP for each motor.

If you don't have that power contact lift manufacturer for instructions.

Do not install lift!

You will responsible for costs involve with changing motors or pumps to accommodate low power supply.

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2	MAINTENANCE INSTRUCTIONS
3	AUTOMOTIVE LIFT SAFETY TIPS
4	TR-40-25 INSTRUCTIONAL DRAWINGS
5	TR-40-25 PARTS LIST DRAWINGS

NOTE:

THIS MANUAL IS BASED ON THE STANDARD TR-40 LIFT WITH 25' TRACKS. MODELS TR-30 AND TR-60 HAVE SIMILAR INSTALLATION AND OPERATION CHARACTERISTICS. USE THIS MANUAL AS A GUIDELINE FOR THESE MODELS.

1. 4-POST LIFT INSTALLATION INSTRUCTIONS:

NOTE: DO NOT ANCHOR LIFT UNTILL REQUIRED BY THESE INSTRUCTIONS.

1. Unpack the lift and identify parts
2. Locate on shop floor where the 4-post lift will be installed. (See **Figure 1** for lift dimensions)
3. Identify the location of the power unit for the 4-post lift. (See **Figure 6** for power unit placement options)
4. Using **Figure 2** as a guide, mark the footprint for each column on the shop floor. (Using chalk, marker, or paint)
5. Place columns on marked footprints. (ensure that the main control column is placed at the power unit)
6. Place crossbeams between the front and rear columns. (for ease of installation it is recommended that the crossbeams be elevated slightly on wooden blocks)
7. Ensure that conduits are placed on the outside of the lift (See **Figure 5**)
8. Using **Figure 3** as a guide, connect the wire rope cable to the wire rope anchor on the bottom of each column and to the wire rope adjustment on the top of each column.
9. Using **Figure 4** as a guide, install the Hydraulic Cylinder to the top of each column
10. Using **Figure 1** and **DWG FP4025001** as guides, place runways on the top of the crossbeams at a desired wheelbase width. (For multipurpose use the recommended center gap between runways is 48")
11. Install power units (use **Figure 1** & **DWG FP4025001** as installation guide)
12. Connect hydraulic hose routing (use **Figure 7**, as installation guide)
13. Using **Figure 8** as guides,
 - connect the Air Line,
 - Install electric box and bring power supply to electric control box,
 - connect air supply to air filter lubrication system
14. Press air valve to check air lines for leaks
15. Fill the hydraulic fluid reservoir with 32 Grade Hydraulic Fluid
16. Adjust columns so that the crossbeam bearing shoes are even with the columns and fit between the guides on the column
17. Check all hydraulic connections and ensure the all connections are tight
18. Connect power to power unit
19. Press "UP" button located on the electric control box
 - elevate lift 2-3ft
 - if lift does not move but motor noise is present, then check motor rotor rotation and adjust as necessary
20. Lower Lift: To lower the lift, the operator must continuously hold down the "down button"
21. To remove air from hydraulic system raise and lower the lift 3-4 times to a maximum height of 3 feet
22. Raise the lift to the maximum limit and then lower
23. Ensure that all column and crossbeam connections are square (make adjustments as necessary)
24. Ensure that columns are plumb (use shimmies for adjustment)
25. Anchor all columns using **Figure 2** as guide
26. Use **Figure 5** as guide for the installation of Front Stop and Approach Ramp Assembly

27. Using plastic ties and clamps connect all loose hydraulic and air lines.
28. Elevate the lift 3ft and engage the safety latches by pressing the down button (refer to **Figure 4**)
29. Adjust the level of runways and crossbeams by adjusting the $\frac{3}{4}$ NC Hex Nut on the top of each lift (refer to **Figure 4**)
30. Use **Figure 3** as guide to adjust wire rope tension (information is provided on **Figure 3**)
31. FINAL TEST: Elevate the lift to its limit and hold for no more than 4 seconds. This will test the lifting system for maximum load capacity. Following this test: CHECK FOR ANY HYDRAULIC FLUID LEAKS and tighten any loose connections as necessary.
32. Lower Lift: To lower the lift, the operator must continuously hold down the "down button".

2. MAINTENANCE INSTRUCTIONS:

1. The 4-post lift does not use bearings or seals that require regular or frequent lubrication. The column sections where the crossbeam slider blocks ride should be greased once a year using a high-pressure grease.
2. The power supply and interconnecting cables should be checked daily, or if the lift has not been used for a period of time, to ensure that there are no nicks or cuts which may reduce the insulation. Also, an inspection is recommended to check the hydraulic hose connections for leaks and tighten or repair as necessary.
3. The hydraulic fluid should be changed once every two years using a good quality ISO32 HYDRAULIC OIL. It is necessary only to drain the reservoir tank when the cradle is in the lowered position. Add 3US Gal. (12 litres).
4. Every three months check and re-tighten bolts on wheels, power unit and carriage lock rack attachment. Apply a light coating of grease to the column rails front and rear.
5. In case of electrical break down have qualified service personnel service the lift Always refer to Operation manual when operating lift.
6. Call your Distributor or Factory direct if you have any questions with regards to operating the lift.
7. The visual inspection of the latches on the master column can be done manually by using a flash light.

NOTE: ONLY TRAINED LIFT SERVICE PERSONNEL IS PERMITTED TO REPLACE WORN OR BROKEN PARTS.

3. AUTOMOTIVE LIFT SAFETY TIPS

Post these safety tips where they will be constant reminder to your lift operator.
For information specification to the lift, always refer to the lift manufacturer's manual

1. Inspects your lift daily. Never operates if it malfunctions or if it has broken or damaged parts. Repairs should be made with original equipment parts.
2. Operating controls are designed to close when released. Do not block open or override them.
3. Never overload your lift. Manufacturers rated capacity is shown on nameplate affixed to the lift.
4. Positioning of the vehicle and operation of the lift should be done only by trained and authorized personnel.
5. Never raise vehicle with anyone inside it. Customers or bystanders should not be in the lift. During operation.
6. Always keep lift area free of obstructions, grease, while, trash and other debris.
7. Before driving vehicle over lift, position arms and supports to provide unobstructed clearance. Do not hits or run over the lift arms, adapters, or axle supports. This could damage the lift or vehicle.
8. Load vehicle on lift carefully. Positioning lift supports to contact at the vehicle manufacturers recommended lifting points. Raise lift until supports contact the vehicle. Check supports for secure contact with vehicle. Raise lift the desired working heights. CAUTION: if you are working under the vehicle, lift should be raised high enough for locking device to be engaged.
9. Note that with some vehicles, the removal (or installation) of components may cause a critical shift in the centre of gravity and results in raised vehicle instability. Refer to the vehicle manufacturers service manual for recommended procedures when vehicle components are removed.
10. Before lowering lift, be sure cool trays, stands, etc. are removed from under the vehicle. Release locking devices before attempting to lower lift.
11. Before removing vehicle from lift area, position lift arms and supports to provide and unobstructed exit (refer back to No. 7)

These "Safety Tips" along with "Lifting it Right" a general lift safety manual, are presented as an industry service by the Automotive Lift Institute. For more information on this topic, writes to ALI, P.O. Box 33116, Indialantic, FL 32903-3116

⚠ WARNING



Clear area if vehicle is in danger of falling.

©

⚠ WARNING



Remain clear of lift when raising or lowering vehicle.

©

⚠ WARNING



Keep clear of pinch points when lift is moving.

©

⚠ WARNING



Keep feet clear of lift while lowering.

©

⚠ WARNING



Do not override self-closing lift controls.

©

⚠ WARNING



Chock wheel to prevent vehicle movement.

©

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

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL 32903.

They are protected by copyright. Set of labels may be obtained from ALI or its member companies.

⚠ CAUTION



Lift to be used
by trained operator
ONLY.

©

⚠ CAUTION



Authorized personnel
only in lift area.

©

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.

©

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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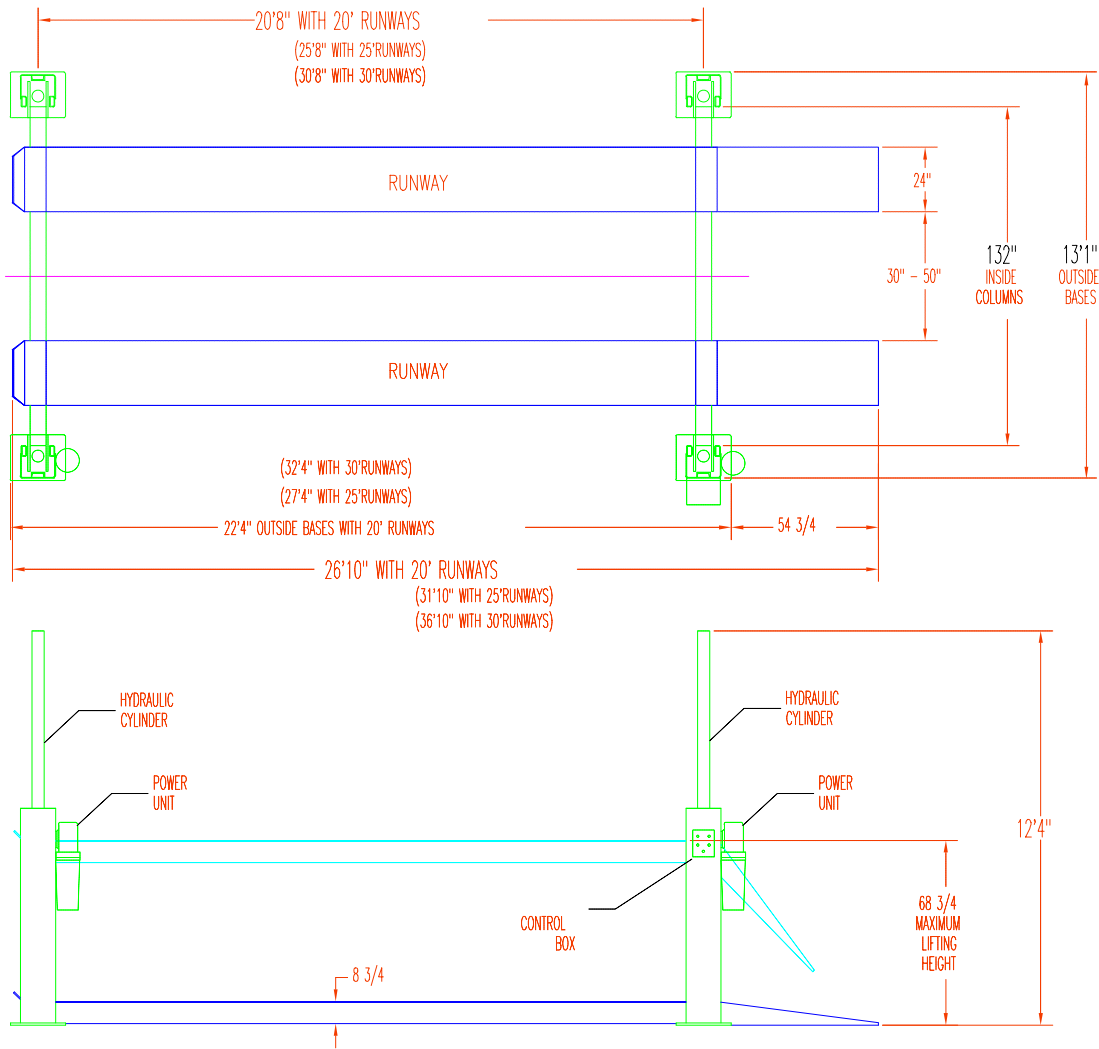
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ALI/WL200s

4. TR-40-25 INSTRUCTIONAL DRAWINGS

- FIG.1 - SPECIFICATION
- FIG.2 – COLUMN BASE LAYOUT TR-4025
- FIG.3 – WIRE ROPE EQUALIZATION SYSTEM
- FIG.4 – COLUMN AND CROSSBEAM END ASSY
- FIG.5 – FRONT STOP & APPROACH RAMP ASSY
- FIG.6 – POWER UNIT – LIFT ORIENTATION
- FIG.7 – HYDRAULIC LINE ROUTING
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- FIG.9 – ANCHOR INSTALLATION
- FIG.10 – ELECTRIC SCHEMATIC

FOUR POST LIFT TR-40



SPECIFICATION

CAPACITY	40,000 LBS	INSIDE COLUMN CLEARANCE	132'
FOUR HYDRAULIC CYLINDERS		RUNWAY HEIGHT	8-3/4
DUAL POWER UNITS		RUNWAY WIDTH	24"
SAFETY DEVICES ON EACH COLUMN(MECH. HYDR.)		OVERALL HEIGHT	12'4"
ELECTRICAL 2 X 2HP (230/460 V)		OVERALL WIDTH	13'10"
SPEED OF RISE	72 SEC	OVERALL LIFTING HEIGHT	68-3/4"
WHEELBASE 220" (280"-25',340"-30')		OPTIONAL - 25' & 30' RUNWAYS	
OPTIONAL - 220 V SINGLE PHASE		OPTIONAL - ROLLING JACKING BEAM	

MOHAWK

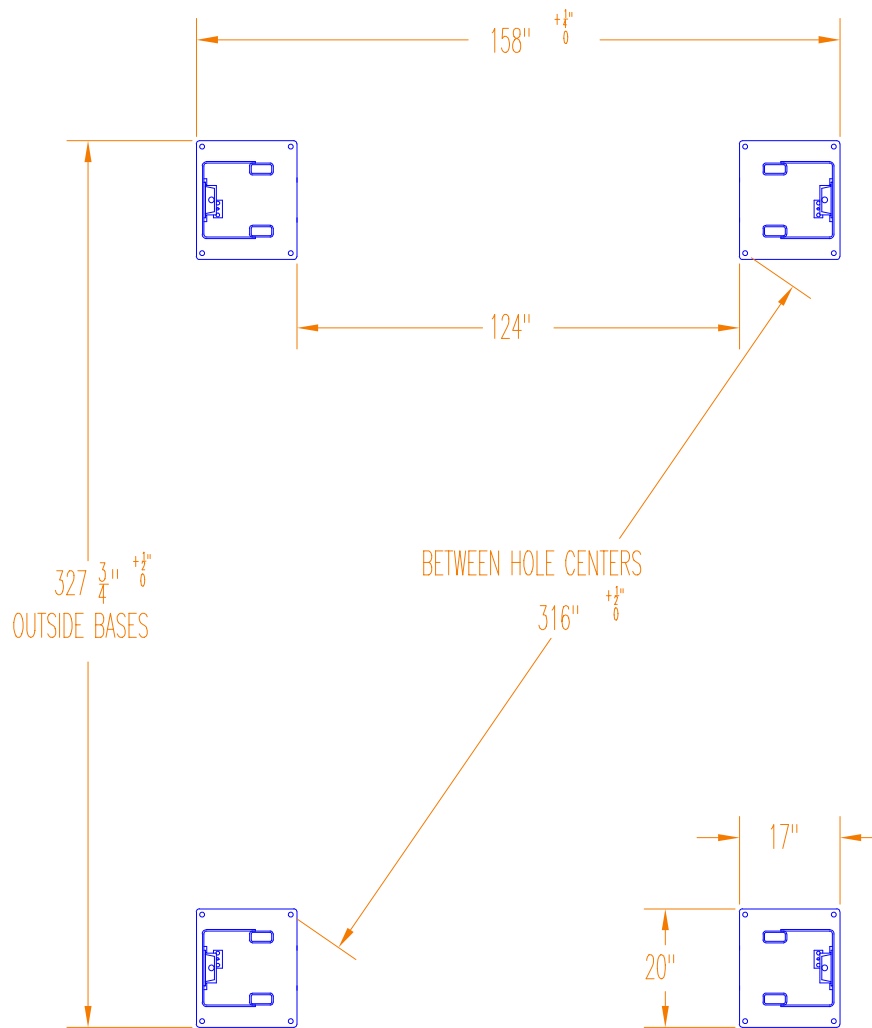
JUNE07/2001

DWG

FIG.1

B

COLUMN BASE LAYOUT (25' RUNWAYS)



FLOOR

THE FLOOR SHOULD BE LEVEL. CONCRETE SHOULD BE IN GOOD CONDITION, MINIMUM 4000 PSI, MINIMUM THICKNESS OF 4 INCHES, AND STEEL REINFORCED AS PER COMMERCIAL STANDARDS PRACTICE.

IMPORTANT

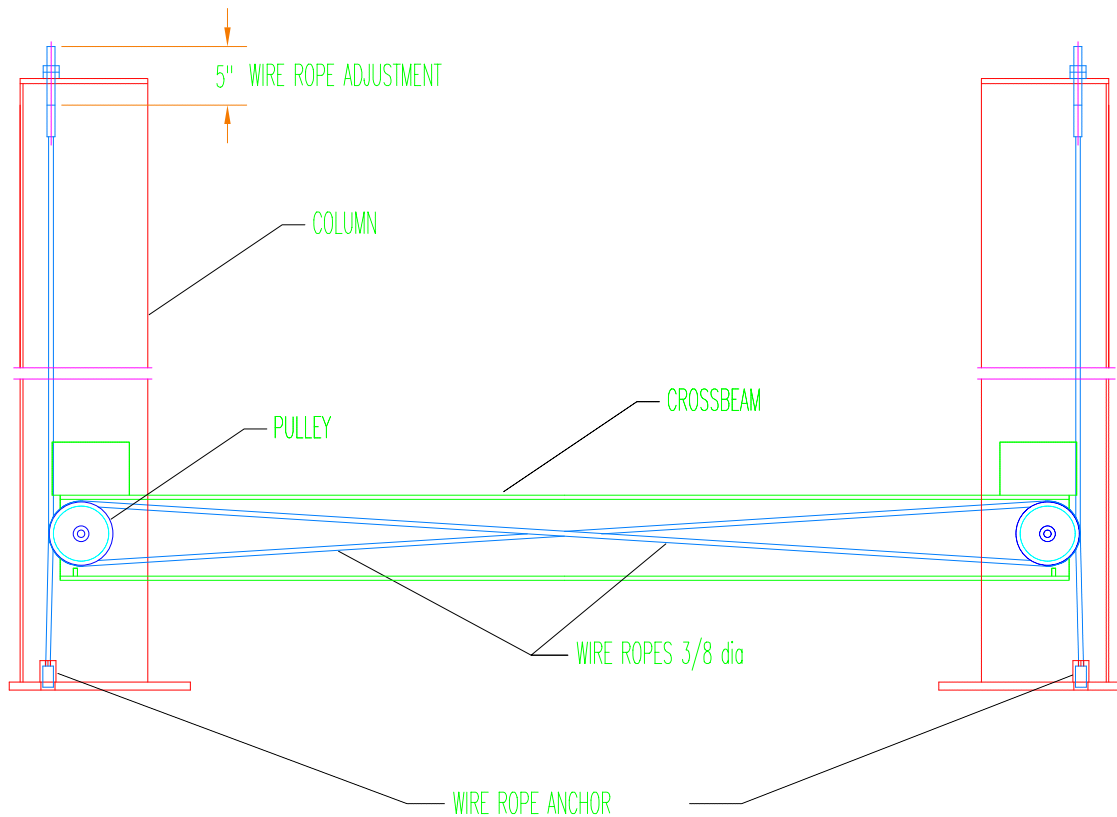
DO NOT DRILL MOUNTING HOLES UNTIL THE LIFT HAS BEEN CYCLED UP AND DOWN AND IS RUNNING FREELY. INSURE ALL SAFETY LATCHES ARE FREE AND PERFORMANCE IS PROPER AND ABSOLUTE.

TR4025

FIG. 2

A

WIRE ROPE EQUALIZATION SYSTEM



WIRE ROPE ADJUSTMENT

1. LOWER THE UNIT COMPLETELY.
2. ATTACH WIRE ROPE BUTTON WITH ANCHOR TO THE COLUMN BASE,
USING TWO 1/2NC 2-1/2LG BOLTS, AND 1/2 LOCK WASHERS.
2. TIGHTEN THE WIRE ROPE NUTS AT THE TOP OF THE POST.
3. THE ADJUSTMENT IS COMPLETE WHEN BOTH WIRE ROPE ARE TAUT.

FIGURE 3

A

COLUMN AND CROSSBEAM END ASSY

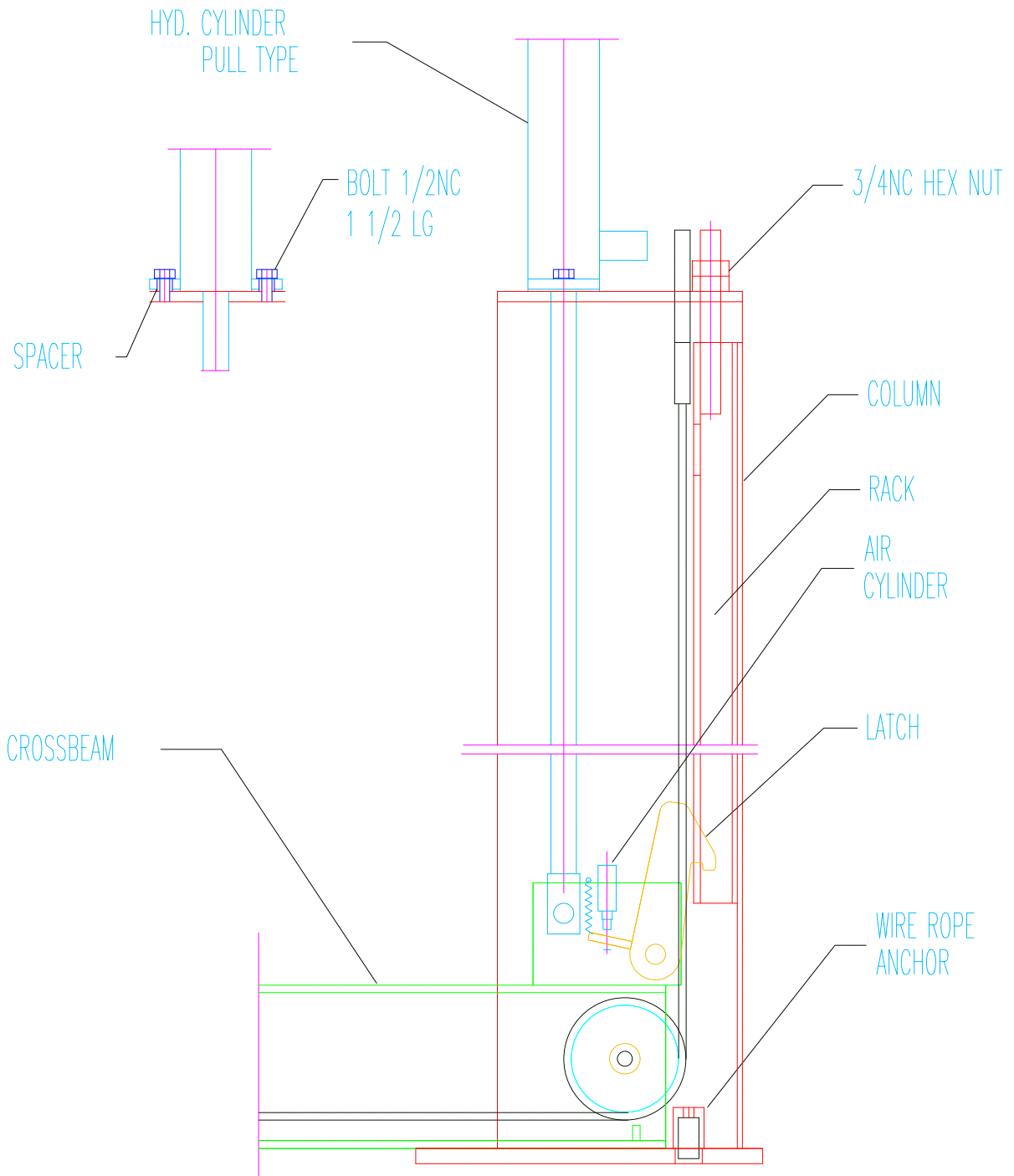
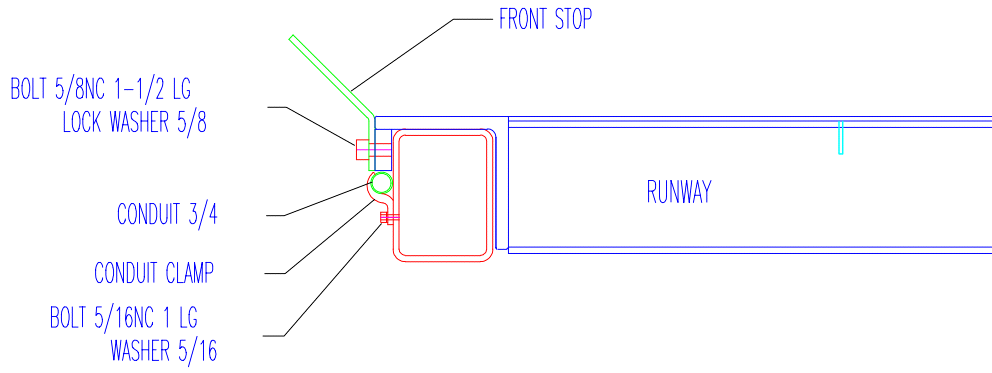


FIG. 4

A

FRONT STOP ASSY



APPROACH RAMP ASSY

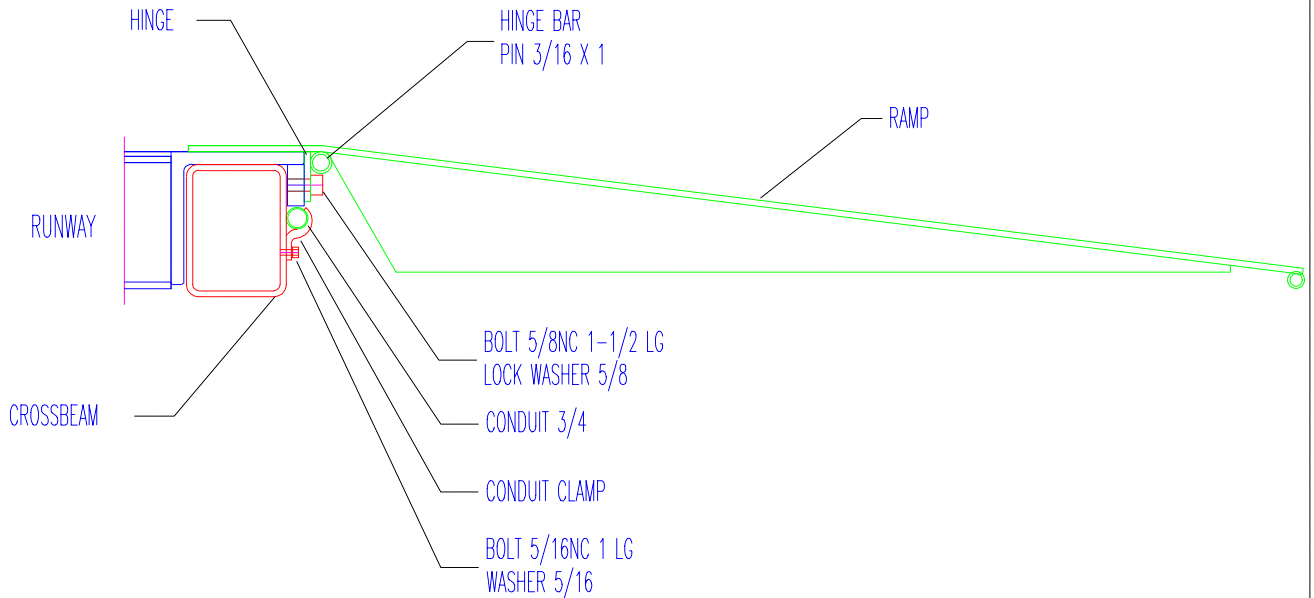
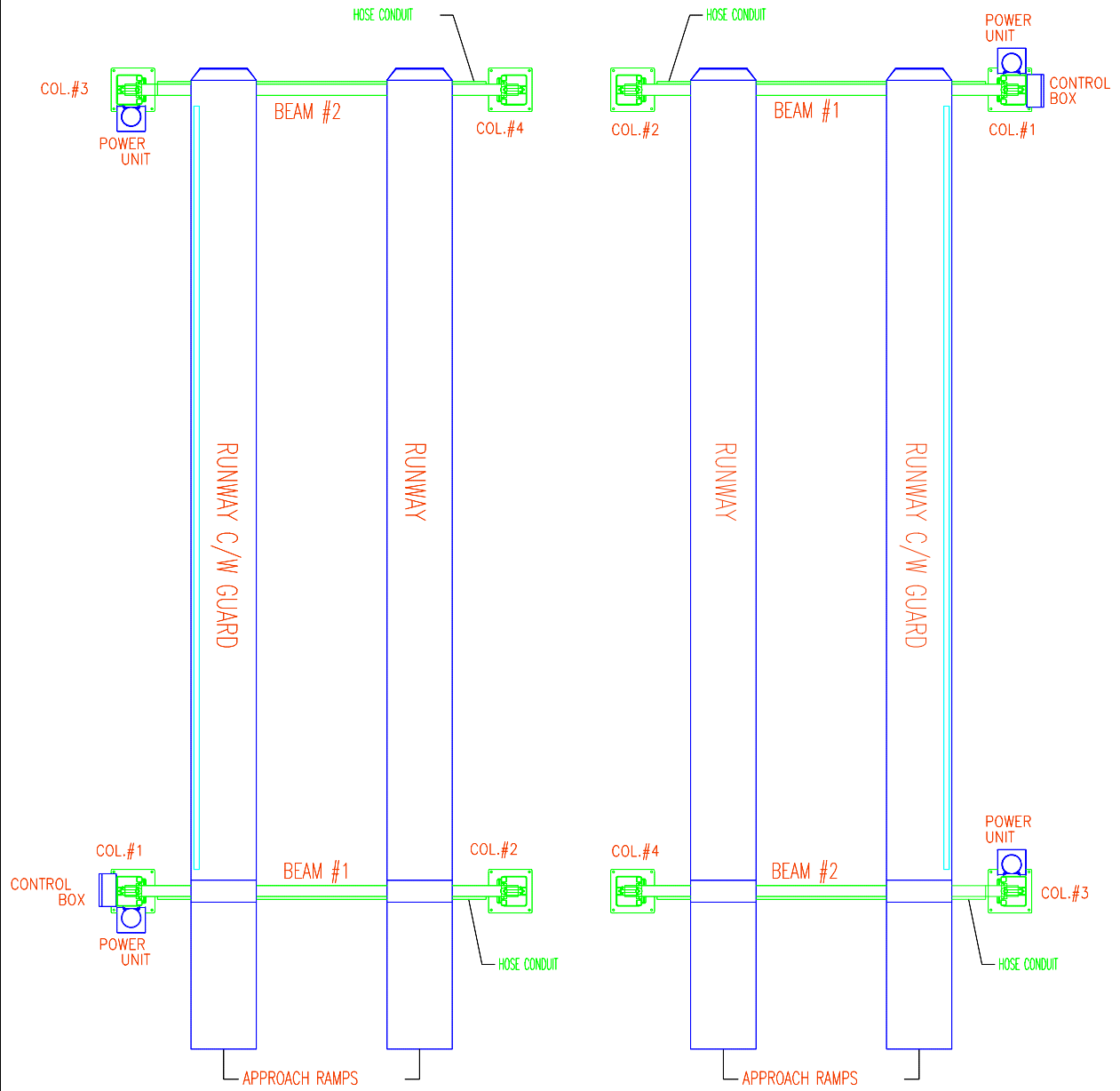


FIG. 5

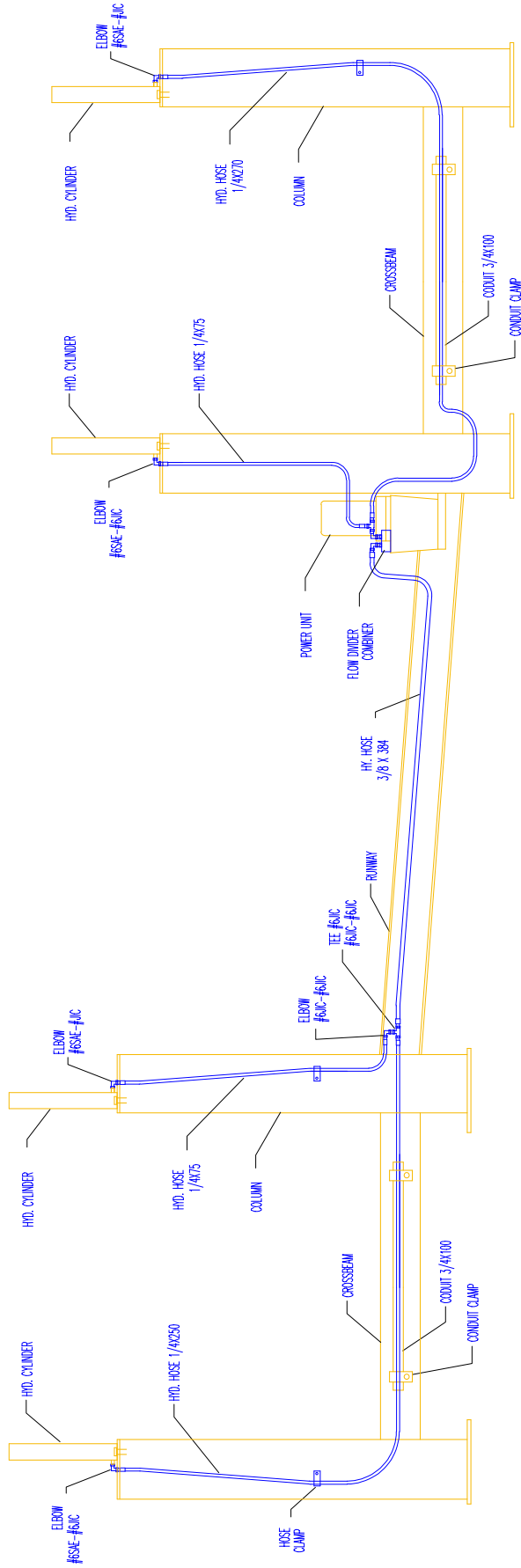
A

POWER UNIT – – LIFT ORIENTATIONS



4 POST LIFT – TR30/40

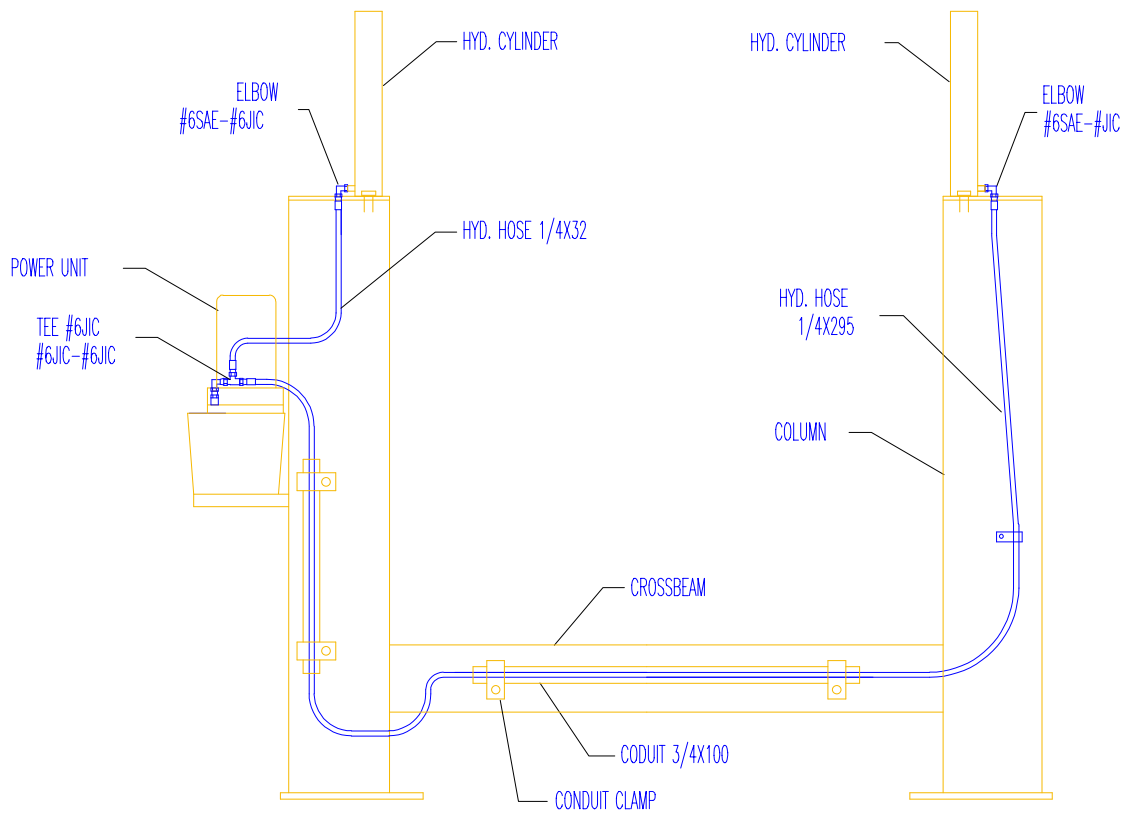
HYDRAULIC LINE ROUTING



NOTICE:

HYDRAULIC LINE ROUTING FOR FRONT & REAR CROSSBEAM

HYDRAULIC LINE ROUTING



NOTICE:

HYDRAULIC LINE ROUTING FOR FRONT & REAR
CROSSBEAM/COLUMNS ARE IDENTICAL

FIG. 7

A

AIR LINES ROUTING

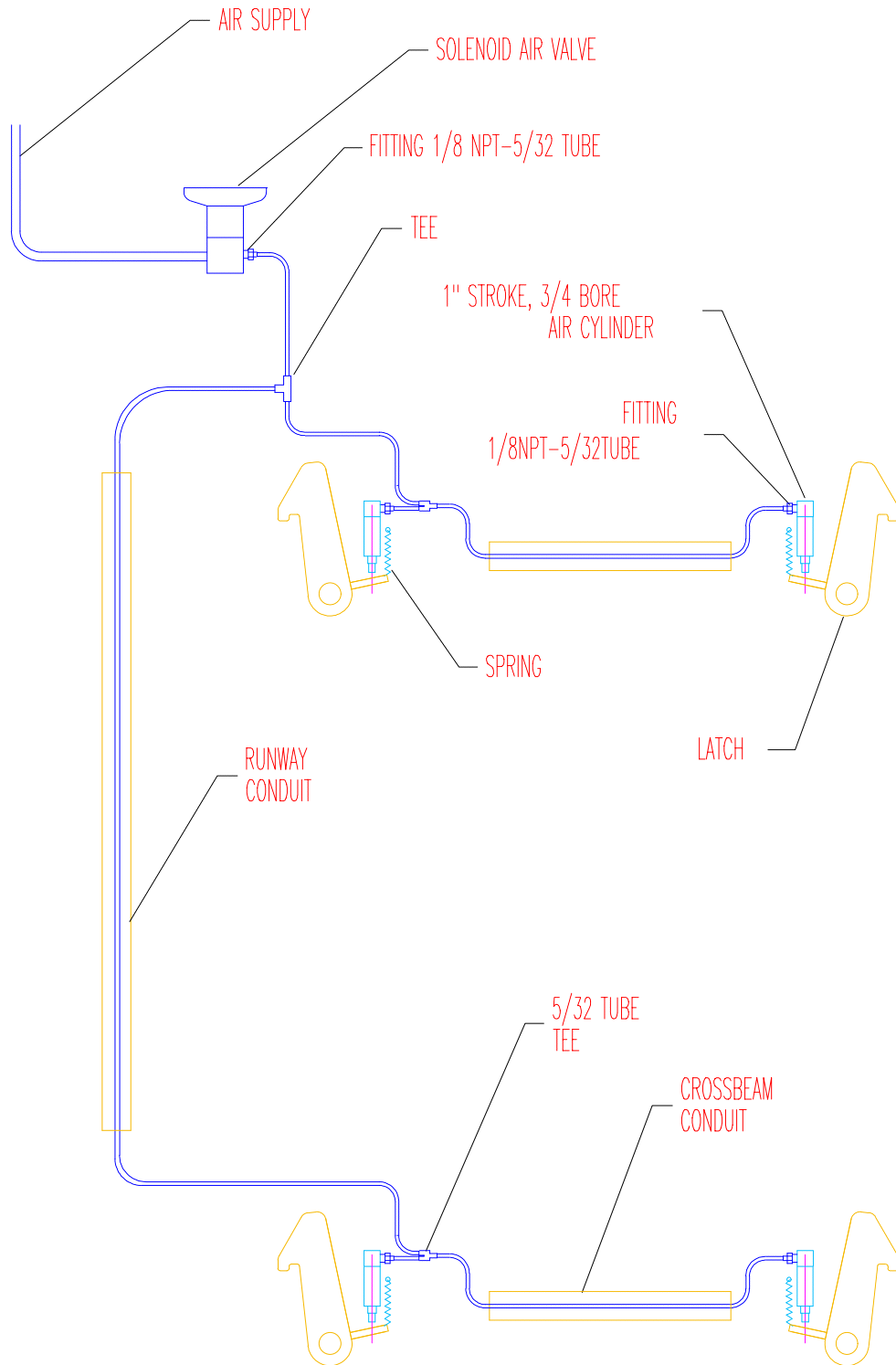
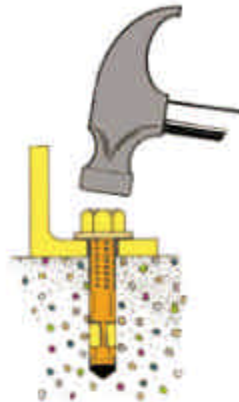


FIG. 8

A

Quick, Easy Wedge Anchor Installation



1.
Drill hole in concrete (hole diameter same as thread diameter) maximum depth of hole could be any depth beyond minimum recommended depth. Clean the hole with compressed air.

2.
Drive wedge anchor into drilled hole through fixture so that nuts is flush with fixture

3.
Tighten nut until wrench resistance is felt (approximately 3 to 4 turns of the nut after first resistance) anchorage is now complete.

MORE HELPFUL INSTRUCTIONS

1. Always wear safety glasses.
2. Follow the drill manufacturer's safety instructions.
3. Use only solid carbide-tipped bits meeting the ANSI B94-12 tip diameter as shown below in bottom Table.
4. Drill the hole perpendicular to the work surface. To assure full holding power, do not ream the hole or allow the drill to wobble.
5. Drill the hole as deep as the full length of the anchor, but not close then two anchor diameters to the bottom (opposite surface of the concrete)
6. Clean the hole using compressed air and a wire brush. A clean hole is necessary for proper performance.
7. Assemble the washer and nut on the anchor so the nut is recessed slightly below the head of the anchor.
8. Tap the anchor through the fixture (must be 1/8" larger then diameter of the anchor) and into the hole making sure the nut and washer rest solidly against the fixture or tap the anchor into the hole and then place bracket over the anchor.
9. Tighten the nut with a torque wrench to proper torque according to the table
10. If spinning occurs, pull up on the anchor using the claw end of a hammer and then torque.

DRILL TOLERANCE – ANSI B-94-12 AND TORQUE REQUIREMENT

Anchor Diameter	Minimum	Maximum	Torque Range
¼"	.260"	.268"	5-10ft-lbs
3/8"	.390"	.398"	25-30ft-lbs
½"	.520"	.530"	50-60ft-lbs
5/8"	.650"	.660"	75-90ft-lbs
¾"	.775"	.787"	150-175ft-lbs
7/8"	.905"	.917"	200-250ft-lbs
1"	1.030"	1.042"	250-300ft-lbs
1 ¼"	1.285"	1.300"	400-450ft-lbs

Wedge-Kit Dia (in)	¼"	3/8"	½"	5/8"	¾"	7/8"	1"	1 ¼"	1 ½"
Bit Size (in)	¼"	3/8"	½"	5/8"	¾"	7/8"	1"	1 ¼"	1 ½"
Fixture Hole (in)	5/16"	7/16"	9/16"	1 1/16"	1 1/8"	1 1/8"	1 1/8"	1 5/8"	1 5/8"
Wrench Size (in)	7/16"	9/16"	¾"	10/16"	1 1/16"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

FIG.9

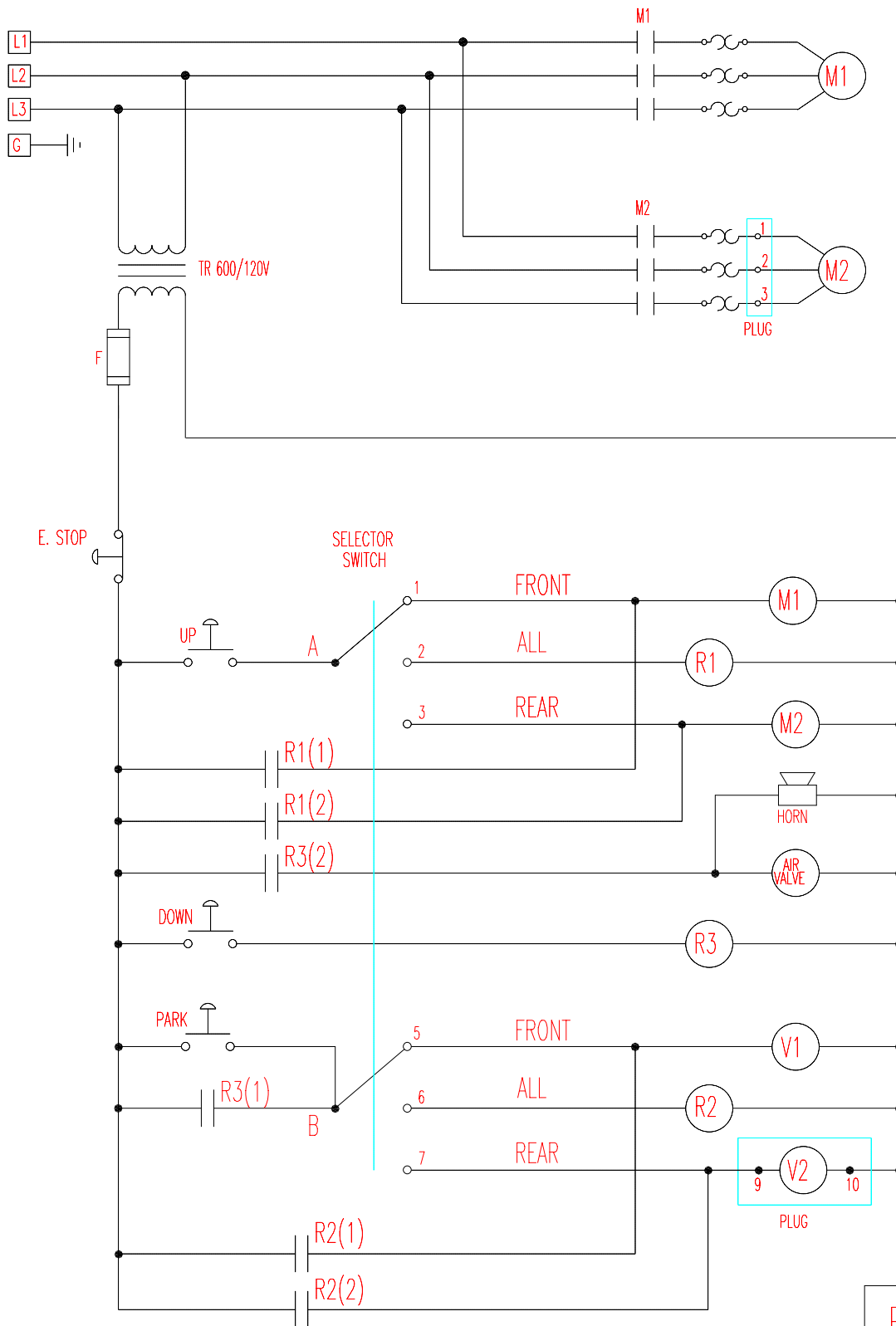


FIG.10

TITLE: FOUR POST LIFT TR-30/40		ATG SYSTEMS		DATE: JAN.10,2003	REV.: A
TR30/40-230V/3PH		DRAWN BY: ANDRE G.	CHECKED:	DWG.NO: TR3040EL3PH	SHT.NO: 1 OF 1

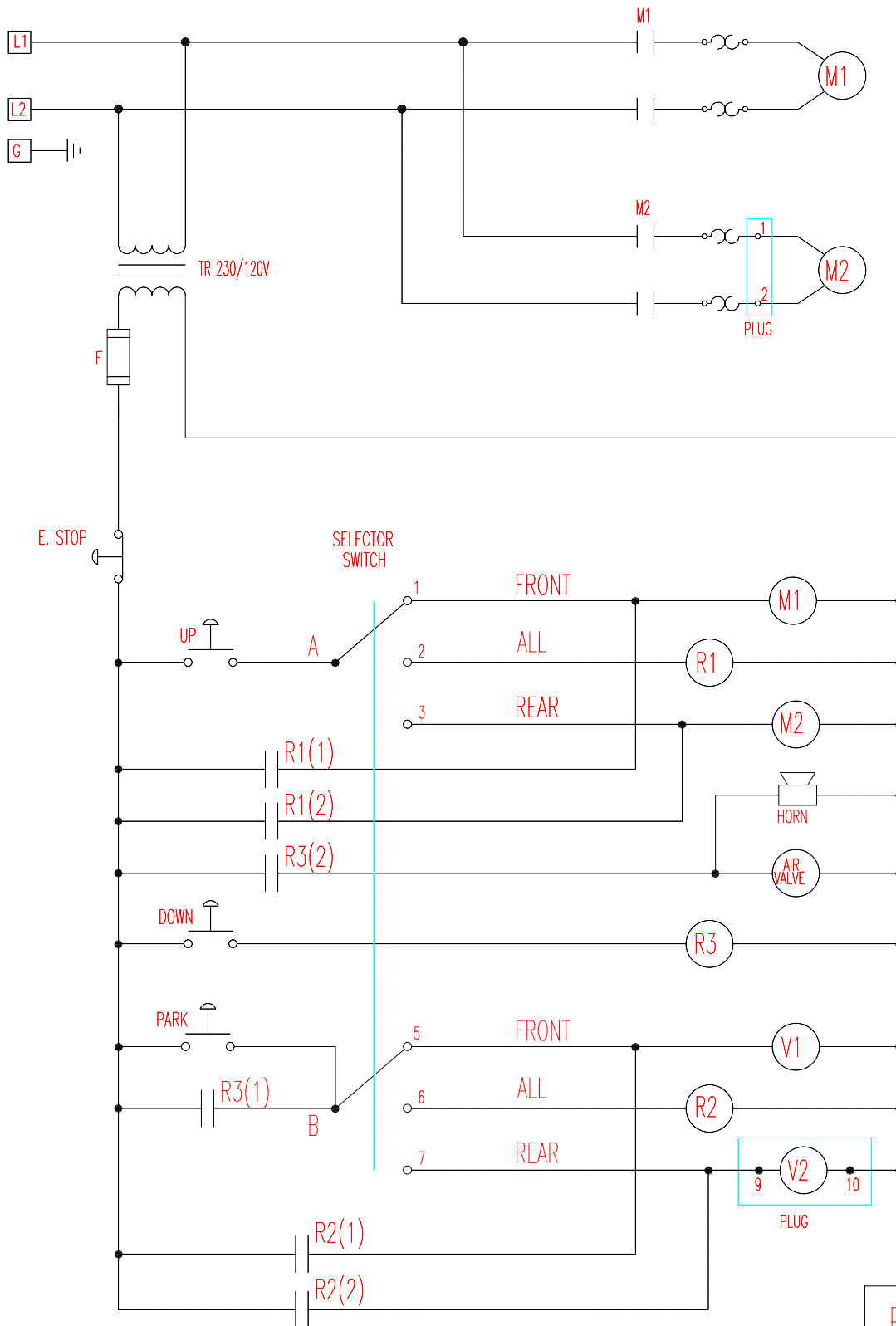


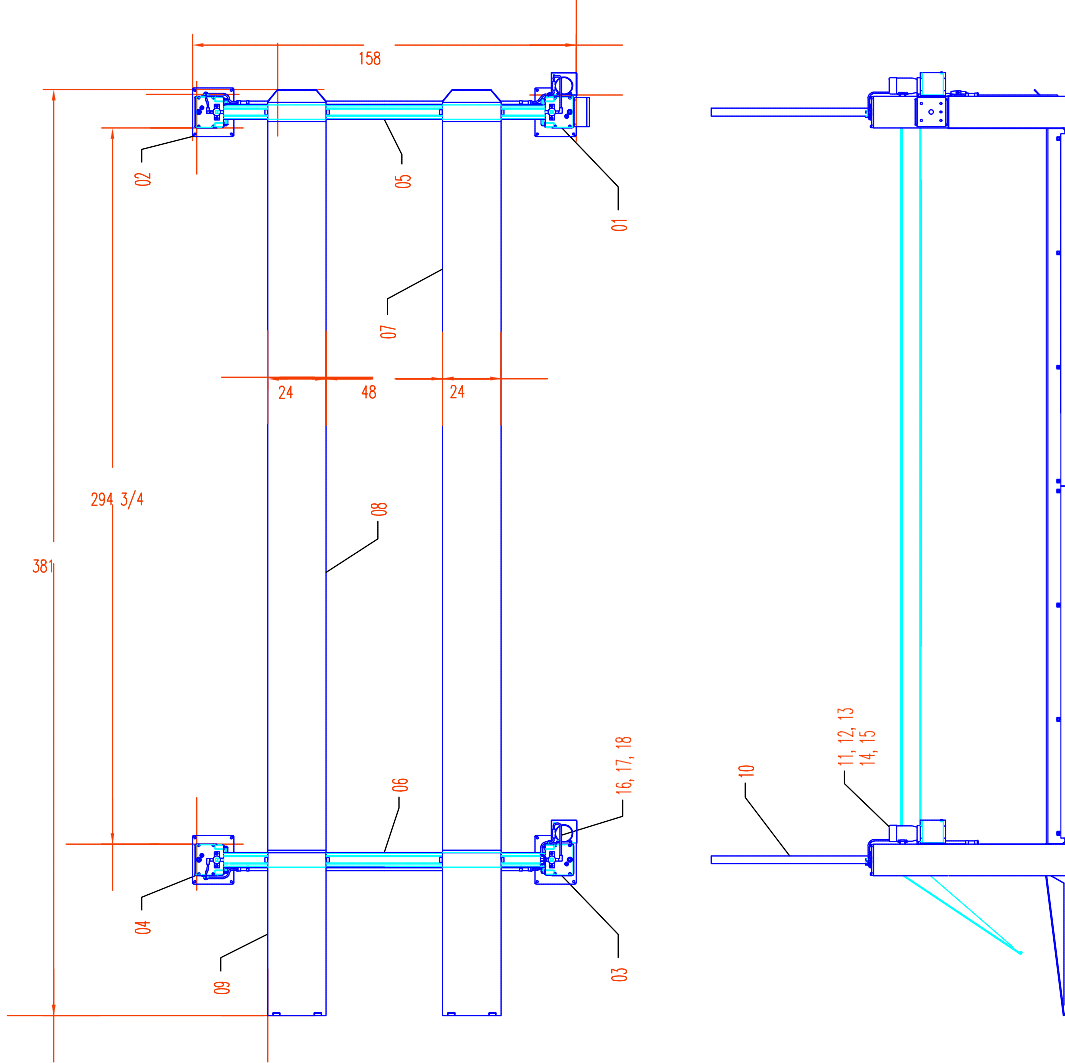
FIG.10

TITLE: FOUR POST LIFT TR-30/40		ATG SYSTEMS		DATE: JAN.10,2003	REV.: A
TR30/40-230V/1PH		DRAWN BY: ANDRE G.	CHECKED:	DWG.NO: TR3040EL1PH	SHT.NO: 1 OF 1

5. TR-40-25 PARTS LIST DRAWINGS

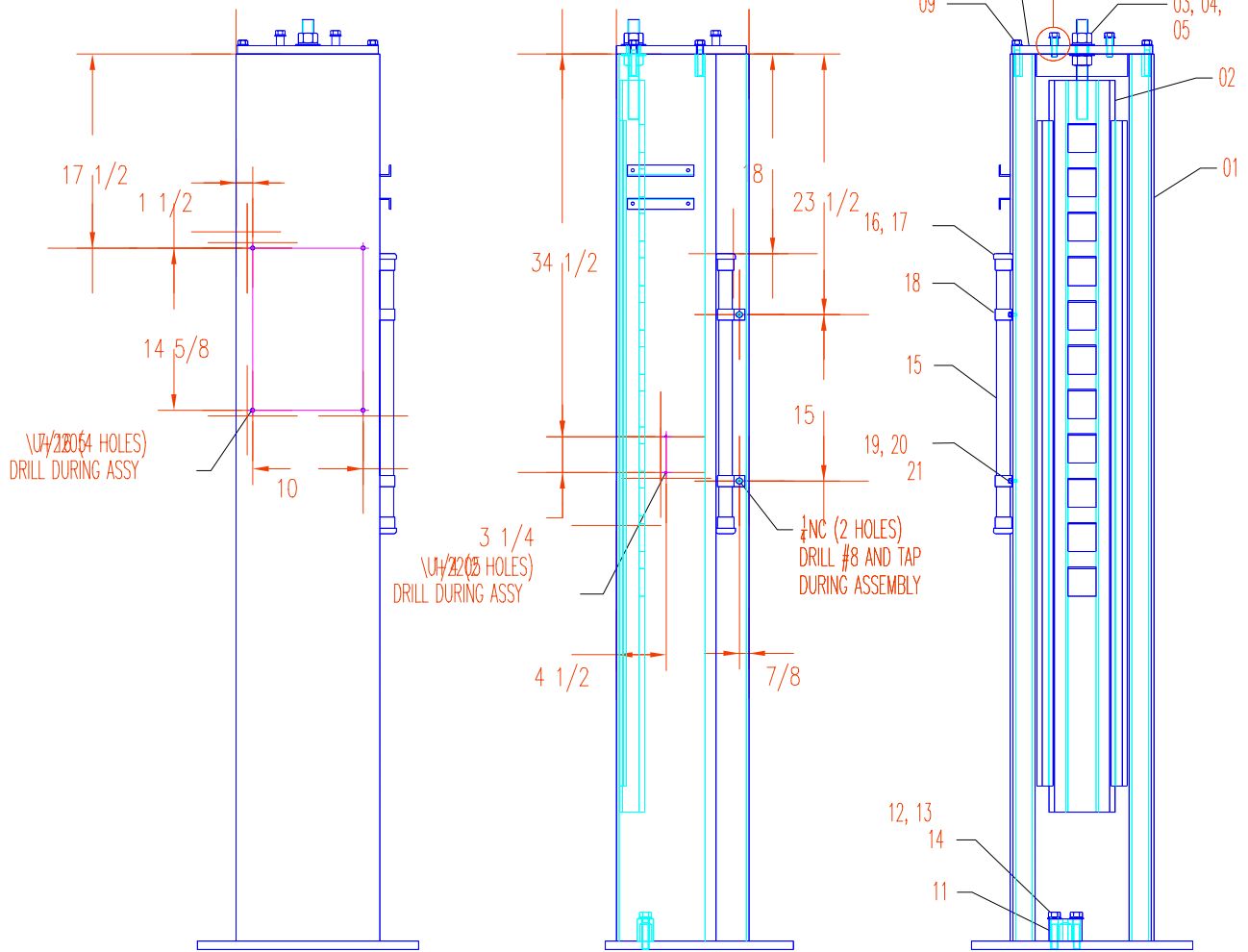
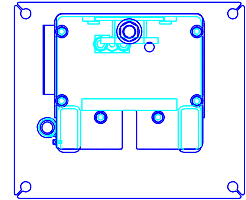
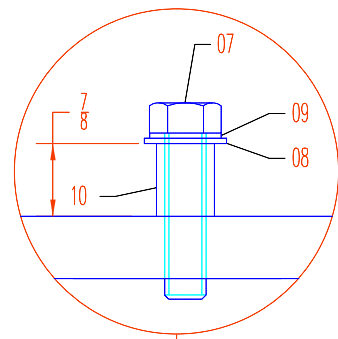
- DWG. FP4025001 – ASSEMBLY
- DWG. FP40147 – COLUMN ASSY #1
- DWG. FP40240 – COLUMN ASSY #2
- DWG. FP40347 – COLUMN ASSY #3
- DWG. FP40440 – COLUMN ASSY #4
- DWG. FP40051 – BEAM ASSY #1
- DWG. FP40052 – BEAM ASSY #2
- DWG. FP4025123 – RUNWAY ASSY
- DWG. FP4025223 – RUNWAY ASSY C/W GUARD
- DWG. FP40063 – HYDRAULIC CYLINDER ASSY
- DWG. FP40501 – AIR SOLENOID ASSY

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
01	1	FP40147	COLUMN ASSY #1	A
02	1	FP40240	COLUMN ASSY #2	A
03	1	FP40347	COLUMN ASSY #3	A
04	1	FP40440	COLUMN ASSY #4	A
05	1	FP40051	BEAM ASSY #1	B
06	1	FP40052	BEAM ASSY #2	B
07	1	FP40123	RUNWAY ASSY C/W GUARD	B
08	1	FP40223	RUNWAY ASSY	B
09	2	FP40030	APPROACH RAMP	B
10	4	FP40063	HYDRAULIC CYLINDER ASSY	A
11	2		POWER UNIT	P
12	4	HBO25,100	HEX BOLT 1/4NC x 1LG.	P
13	8	HNO25	WASHER 1/4	P
14	4	HLW025	LOCK WASHER 1/4	P
15	4	HNO25	NUT 1/4	P
16	6	HYF033	ELBOW M.#6JIC TO F.SW.#6JIC	P
17	2	HYF036	TEE F.SW.#6JIC TO M.#6JIC TO M.#6JIC	P
18	2	HYH036	HYD. HOSE ID1/4 x 32, F.SW.#6JIC B.E.	P
19	4	HYF031	ELBOW M.#6JIC TO M.#6SAE	P
20	1	AIR020	AIR FILTER/REGULATOR	P
21	2	HHS#10,100	FLAT HEAD SCREW #10 x 1	P
22	2	HW#10	WASHER #10	P
23	2	HLW#10	LOCK WASHER #10	P
24	2	HN#10	NUT #10	P
25	1	AIR013	MALE CONNECTOR 1/8NPT	P
26	1	AIR031	SOLENOID 3-WAY AIR VALVE	P
27	1	AIR004	CONNECTOR M.1/8NPT TO S/3200 TUBE	P
28	1	AIR010	3"LG. NYLON TUBING 5/32 OD	M
29	1	AIR003	UNION TEE TUBE TO TUBE 5/32 OD	P
30	1	AIR010	360"LG. NYLON TUBING 5/32 OD	M
31	16	HAB075,550	ANCHOR BOLT 3/4 x 5-1/2	P

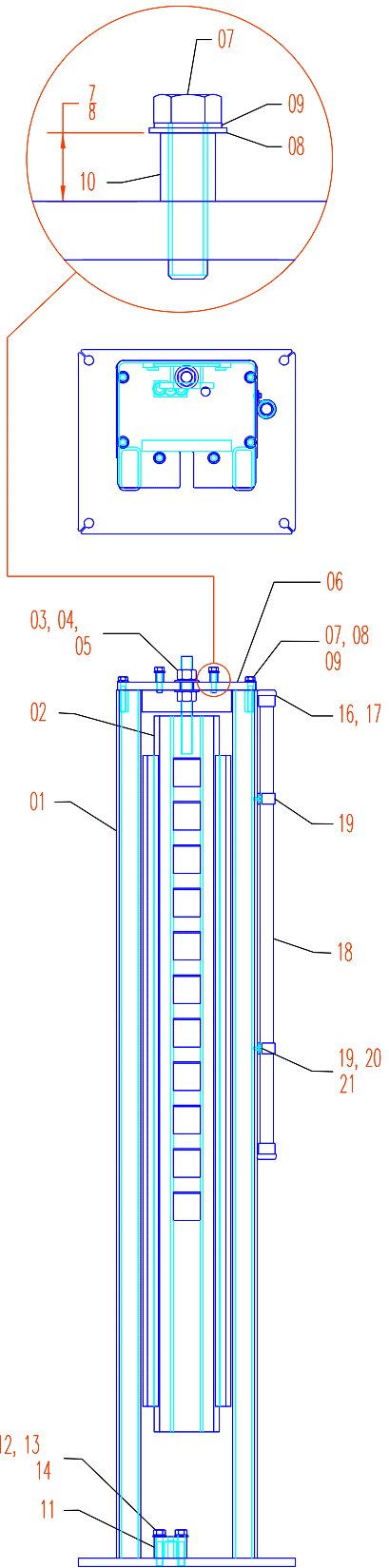


TITLE	4-POST LIFT ASSY	NOTES	TR-4025
	MOHAWK	DWG	FP4025001
			APR.15/2002
			A

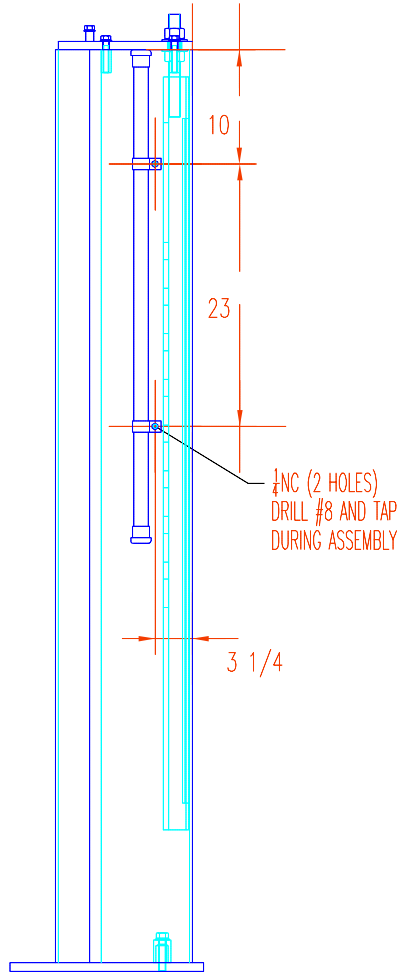
ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
01	1	FP40047	P/U COLUMN WELDMENT	B
02	1	FP40045	RACK WELDMENT	B
03	2	HN100	NUT 1NC	P
04	2	HW100	WASHER 1	P
05	1	HLW100	LOCK WASHER 1	P
06	1	FP40044B	COLUMN TOP PLATE	A
07	6	HBO50,200	HEX BOLT 1/2NC x 2LG.	P
08	6	HW050	WASHER 1/2	P
09	6	HLW050	LOCK WASHER 1/2	P
10	2	HSP050	7/8"LG. STD. PIPE 1/2	M
11	1	FP40071	WIRE ROPE ANCHORE	A
12	2	HBO625,300	HEX BOLT 5/8NC x 3LG.	P
13	2	HW0625	WASHER 5/8	P
14	2	HLW0625	LOCK WASHER 5/8	P
15	1	MSC094	24"LG. ELEC. METTALIC COND. 1	M
16	2	MSC095	CONNECTOR FOR EMT CONDUIT	P
17	2	MSC097	PLASTIC BUSHING 1	P
18	2	MSC096	ELEC. CONDUIT CLAMP	P
19	2	HBO25,050	HEX BOLT 1/4NC x 1/2LG.	P
20	2	HW025	WASHER 1/4	P
21	2	HLW025	LOCK WASHER 1/4	P
22				



TITLE	COLUMN ASSY #1	MATERIAL		NOTES	U40
	MOHAWK	DEC.19/2002	DWG	FP40147	A

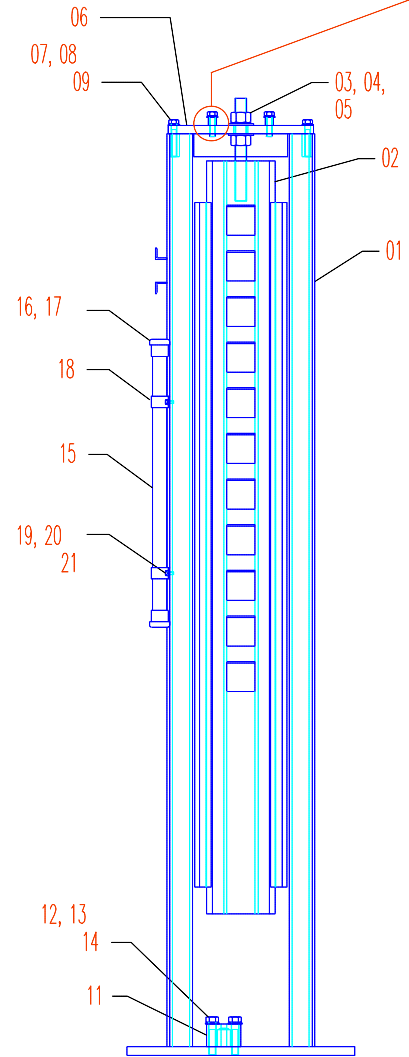
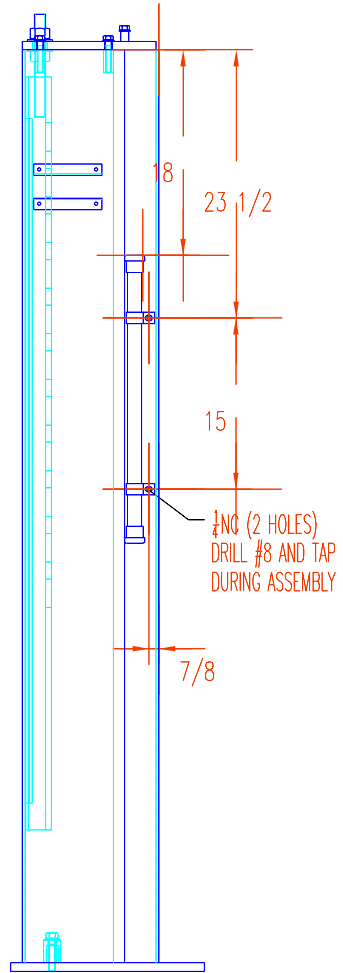
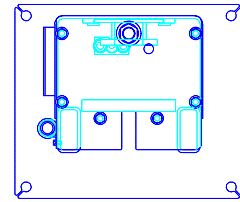
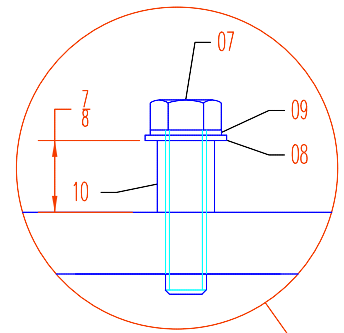


ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	
01	1	FP40047	P/U COLUMN WELDMENT		B
02	1	FP40045	RACK WELDMENT		B
03	2	HN100	NUT 1NC		P
04	2	HW100	WASHER 1		P
05	1	HLW100	LOCK WASHER 1		P
06	1	FP40044B	COLUMN TOP PLATE		A
07	6	HB050,200	HEX BOLT 1/2NC x 2LG.		P
08	6	HW050	WASHER 1/2		P
09	6	HLW050	LOCK WASHER 1/2		P
10	2	HSP050	7/8"LG. STD. PIPE 1/2		M
11	1	FP40071	WIRE ROPE ANCHORE		A
12	2	HB0625,300	HEX BOLT 5/8NC x 3LG.		P
13	2	HW0625	WASHER 5/8		P
14	2	HLW0625	LOCK WASHER 5/8		P
15	1	MSC094	42"LG. ELEC. METTALIC COND. 1		M
16	2	MSC095	CONNECTOR FOR EMT CONDUIT		P
17	2	MSC097	PLASTIC BUSHING 1		P
18	2	MSC096	ELEC. CONDUIT CLAMP		P
19	2	HB025,050	HEX BOLT 1/4NC x 1/2LG.		P
20	2	HW025	WASHER 1/4		P
21	2	HLW025	LOCK WASHER 1/4		P
22					



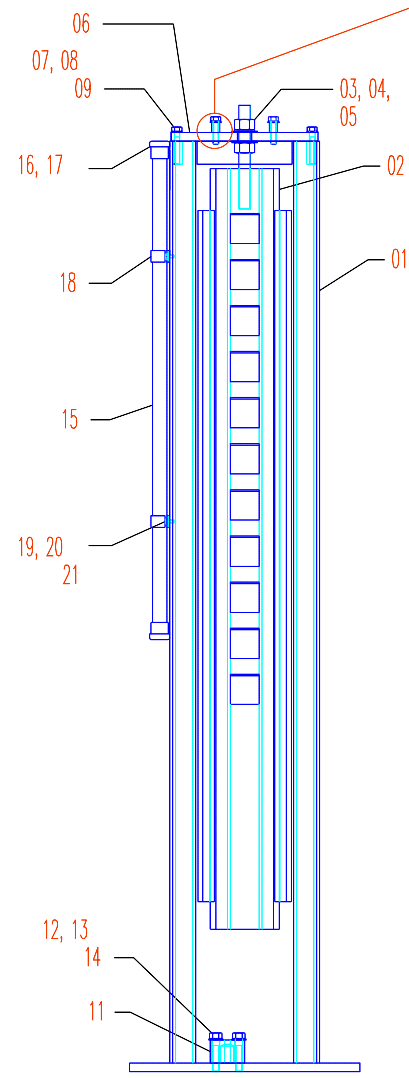
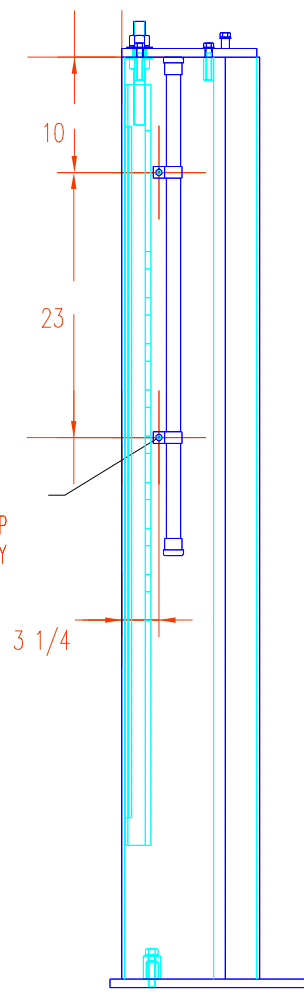
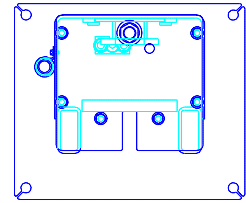
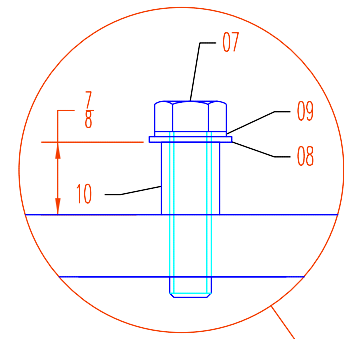
TITLE	COLUMN ASSY #2	MATERIAL		NOTES	U40
	MOHAWK	DEC.19/2002	DWG	FP40240	A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	
01	1	FP40047	P/U COLUMN WELDMENT		B
02	1	FP40045	RACK WELDMENT		B
03	2	HN100	NUT 1NC		P
04	2	HW100	WASHER 1		P
05	1	HLW100	LOCK WASHER 1		P
06	1	FP40044B	COLUMN TOP PLATE		A
07	6	HB050,200	HEX BOLT 1/2NC x 2LG.		P
08	6	HW050	WASHER 1/2		P
09	6	HLW050	LOCK WASHER 1/2		P
10	2	HSP050	7/8"LG. STD. PIPE 1/2		M
11	1	FP40071	WIRE ROPE ANCHORE		A
12	2	HB0625,300	HEX BOLT 5/8NC x 3LG.		P
13	2	HW0625	WASHER 5/8		P
14	2	HLW0625	LOCK WASHER 5/8		P
15	1	MSC094	24"LG. ELEC. METTALIC COND. 1		M
16	2	MSC095	CONNECTOR FOR EMT CONDUIT		P
17	2	MSC097	PLASTIC BUSHING 1		P
18	2	MSC096	ELEC. CONDUIT CLAMP		P
19	2	HB0375,075	HEX BOLT 3/8NC x 3/4LG.		P
20	2	HW0375	WASHER 3/8		P
21	2	HLW0375	LOCK WASHER 3/8		P
22					



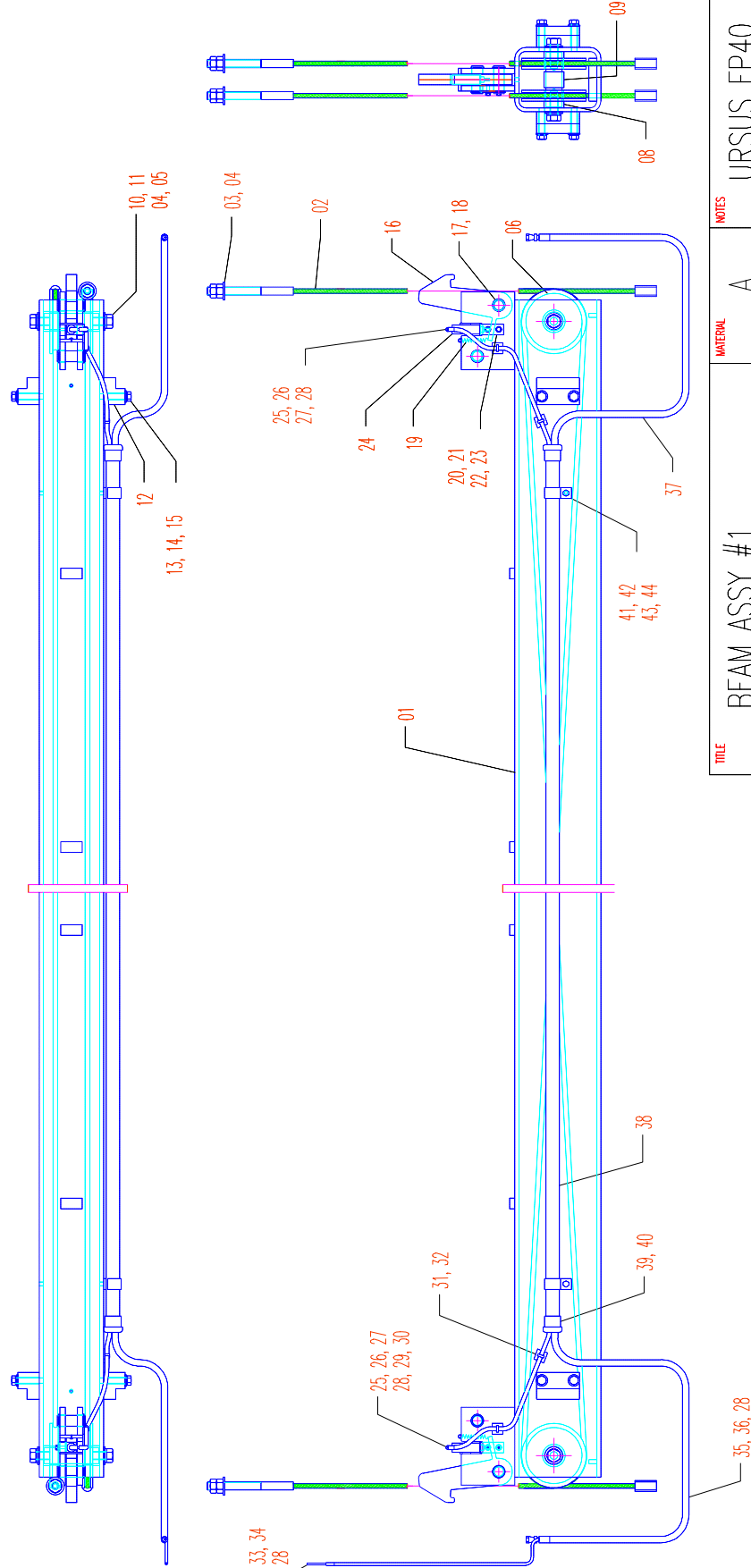
TITLE	COLUMN ASSY #3	MATERIAL		NOTES	U40
	MOHAWK	DEC.19/2002	DWG	FP40347	A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	
01	1	FP40047	P/U COLUMN WELDMENT		B
02	1	FP40045	RACK WELDMENT		B
03	2	HN100	NUT 1NC		P
04	2	HW100	WASHER 1		P
05	1	HLW100	LOCK WASHER 1		P
06	1	FP40044B	COLUMN TOP PLATE		A
07	6	HB050,200	HEX BOLT 1/2NC x 2LG.		P
08	6	HW050	WASHER 1/2		P
09	6	HLW050	LOCK WASHER 1/2		P
10	2	HSP050	7/8"LG. STD. PIPE 1/2		M
11	1	FP40071	WIRE ROPE ANCHORE		A
12	2	HB0625,300	HEX BOLT 5/8NC x 3LG.		P
13	2	HW0625	WASHER 5/8		P
14	2	HLW0625	LOCK WASHER 5/8		P
15	1	MSC094	42"LG. ELEC. METTALIC COND. 1		M
16	2	MSC095	CONNECTOR FOR EMT CONDUIT		P
17	2	MSC097	PLASTIC BUSHING 1"		P
18	2	MSC096	ELEC. CONDUIT CLAMP		P
19	2	HB025,050	HEX BOLT 1/4NC x 1/2LG.		P
20	2	HW025	WASHER 1/4		P
21	2	HLW025	LOCK WASHER 1/4		P
22					



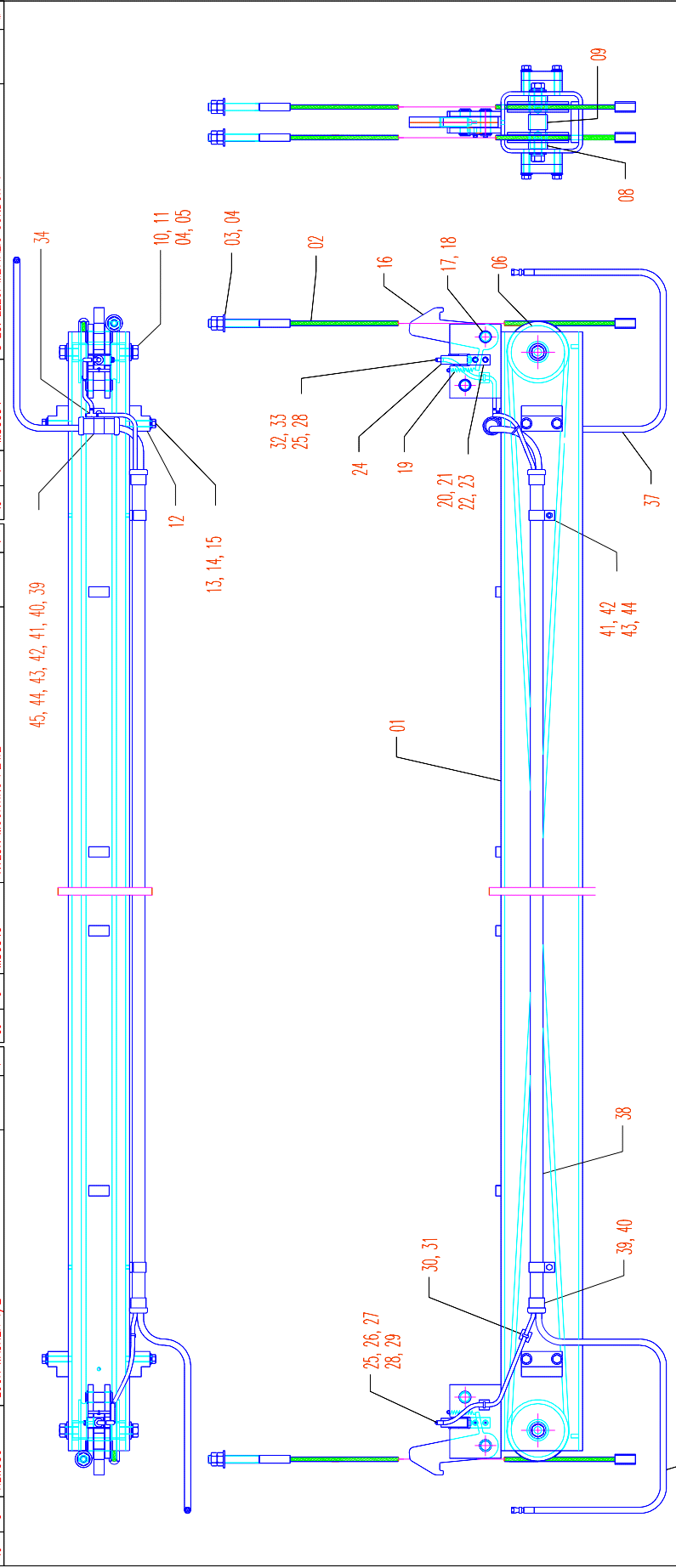
TITLE		COLUMN ASSY #4	MATERIAL		NOTES	U40
		MOHAWK	DEC.19/2002	DWG	FP40440	A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
01	1	FP40051	BEAM WELDMENT	B	16	2	FP40090	LATCH		A	31	4	MSC049	NYLON MOUNTING PLATE
02	2	FP40070	WIRE ROPE ASSY	A	17	4	FP40091	LATCH SHAFT		A	32	6	MSC050	NYLON CABLE TIES 7.4"
03	2	HN075	NUT 3/4NC	P	18	8	HERR100	EXTERNAL RETAINING RING 1"SH.DIA.		P	33	1	ARO10	120"LG. PLASTIC TUBE 5/32 OD
04	6	HW075	WASHER 3/4	P	19	2	MP18314	LATCH SPRING		P	34	1	MSC046	40"LG FLEXGARD LOOM 1/4
05	4	HLW075	LOCK WASHER 3/4	P	20	2	FP40055	AIR CYL. BRACKET		A	35	1	HY4077	HMD. HOSE 1/4"IDx295"LG - #61C FEM.SIM.
06	4	FP40180	6 DIA. SHEAVE ASSY	A	21	4	HB025.075	HEX BOLT 1/4NC x 3/4		P	36	1	MSC047	80"LG. HOSE PROTECTION
07	4	HSP150	5/8 STD. PIPE 1-1/2	M	22	4	HW025	LOCK WASHER 1/4		P	37	1	MSC047	90"LG. HOSE PROTECTION
08	2	HSP150	1-1/2 STD. PIPE 1-1/2	M	23	4	HLW025	LOCK WASHER 1/4		P	38	1	MSC094	120"LG. ELEC. METALLIC COND. 1"
09	2	HSP150	1-1/2 STD. PIPE 1-1/2	M	24	2	ARO29	AIR CYLINDER 3/4B x 1S		P	39	2	MSC095	CONNECTOR FOR EMT CONDUIT
10	4	FP40081	SHAFT	A	25	2	ARO06	ELBOW MALE 1/8NPT TO 5/32OD TUBE		P	40	2	MSC097	PLASTIC BUSHING 1"
11	4	HB075.150	HEX BOLT 3/4NC x 1-1/2	P	26	1	ARO10	150"LG. PLASTIC TUBE 5/32 OD		M	41	2	MSC096	ELEC. CONDUIT CLAMP 1"
12	4	FP30053	GUIDING BLOCK	A	27	2	MSC046	40"LG FLEXGARD LOOM 1/4		M	42	2	HB0375.075	HEX BOLT 3/8NC x 3/4
13	8	HB050.275	HEX BOLT 1/2NC x 2-3/4	P	28	6	MSC048	HEAT SHRINK TUBING 1"		P	43	2	HW0375	WASHER 3/8
14	8	HW050	WASHER 1/2	P	29	1	ARO10	24"LG. PLASTIC TUBE 5/32 OD		M	44	2	HLW0375	LOCK WASHER 3/8
15	8	HLW050	LOCK WASHER 1/2	P	30	1	ARO05	UNION "M" TUBE TO TUBE 5/32 OD		P				



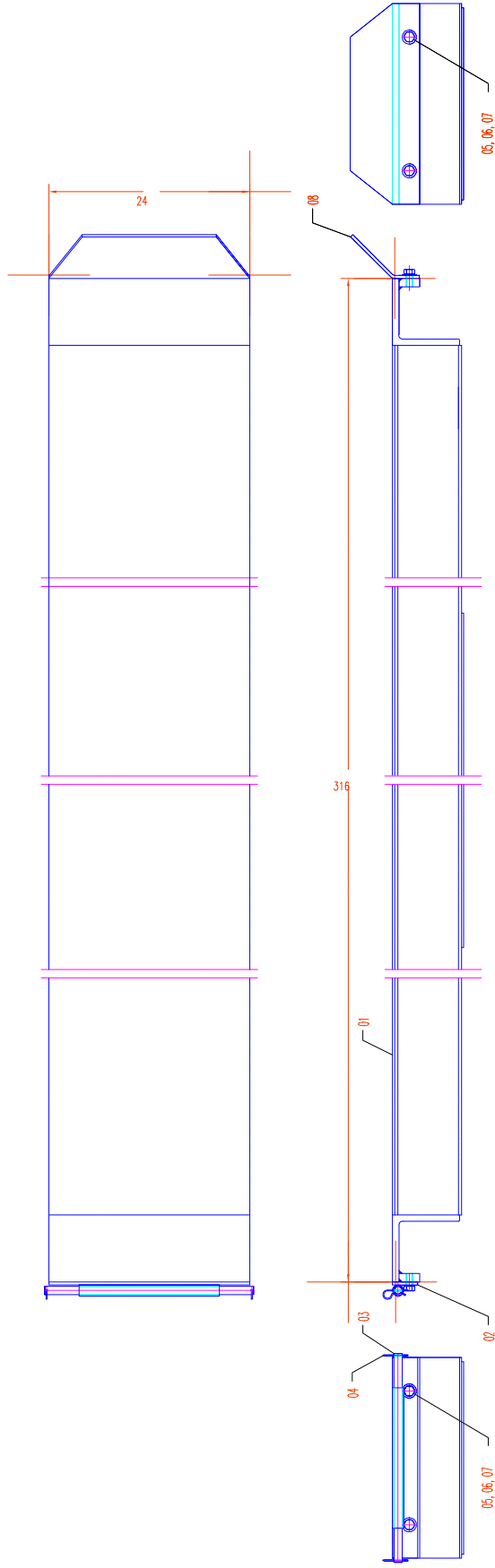
TITLE	MATERIAL	NOTES
BEAM ASSY #1	A	URSUS FP40
MOHAWK	MAR.28/2002	FP40051
		A

ITEM QTY.	PART NO.	DESCRIPTION	MATERIAL	ITEM QTY.	PART NO.	DESCRIPTION	MATERIAL	ITEM QTY.	PART NO.	DESCRIPTION	MATERIAL
01	FP40051	BEAM WELDMENT	B	16	FP40090	LATCH		31	MSC050	NYLON CABLE TIES 7.4"	P
02	FP40070	WIRE ROPE ASSY	A	17	FP40091	LATCH SHAFT		32	AR010	12"LG. PLASTIC TUBE 5/32 OD	M
03	HN075	NUT 3/4NC	P	18	HERR100	EXTERNAL RETAINING RING 1"SH.DIA.		33	MSC046	12"LG. FLEXGARD LOOM 1/4	P
04	HW075	WASHER 3/4	P	19	MP18314	LATCH SPRING		34	AR010	UNION TEE TUBE TO TUBE 5/32 OD	P
05	HLW075	LOCK WASHER 3/4	P	20	FP40055	AIR CYL. BRACKET		35	HYW077	HMD. HOSE 1/4"IDx295"LG. - #616 FEM.SW.	P
06	FP40180	6 DIA. SHEAVE ASSY	A	21	HB025.075	HEX BOLT 1/4NC x 3/4		36	MSC047	80"LG. HOSE PROTECTION	M
07	HSP150	5/8 STD. PIPE 1-1/2	M	22	HW025	LOCK WASHER 1/4		37	MSC047	90"LG. HOSE PROTECTION	M
08	HSP150	1-1/2 STD. PIPE 1-1/2	M	23	HLW025	LOCK WASHER 1/4		38	MSC094	120"LG. ELEC. METALLIC COND. 1"	P
09	FP40081	SHAFT	A	24	AR029	AIR CYLINDER 3/4B x 1S		39	MSC095	CONNECTOR FOR EMT CONDUIT	P
10	HB075.150	HEX BOLT 3/4NC x 1-1/2	P	25	AR006	ELBOW MALE 1/8NPT TO 5/32OD TUBE		40	MSC097	PLASTIC BUSHING 1"	P
11	FP30053	GUIDING BLOCK	A	26	AR010	150"LG. PLASTIC TUBE 5/32 OD		41	MSC096	ELEC. CONDUIT CLAMP 1"	P
12	HB050.275	HEX BOLT 1/2NC x 2-3/4	P	27	MSC046	24"LG. FLEXGARD LOOM 1/4		42	HB0375.075	HEX BOLT 3/8NC x 3/4	P
13	HW050	WASHER 1/2	P	28	MSC048	HEAT SHRINK TUBING 1"		43	HW0375	WASHER 3/8	P
14	HLW050	LOCK WASHER 1/2	P	29	AR010	24"LG. PLASTIC TUBE 5/32 OD		44	HLW0375	LOCK WASHER 3/8	P
15	HLW050	LOCK WASHER 1/2	P	30	MSC049	NYLON MOUNTING PLATE		45	MSC084	3"LG. ELEC. METALLIC CONDUIT 1"	M



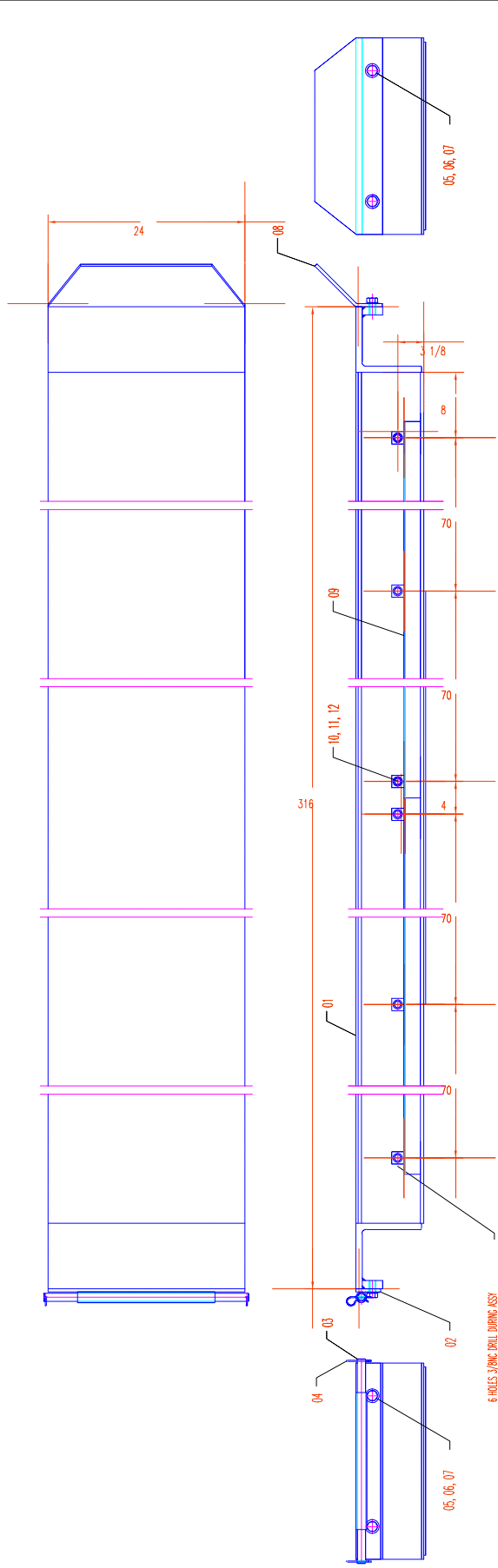
TITLE	MATERIAL	NOTES
BEAM ASSY #2	A	URSUS FP40
MOHAWK	MAR.28/2002	FP40052
		A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
01	1	FP402523	RUNWAY 24 x 316	B
02	1	FP40035	HINGE	B
03	1	FP40036	HINGE SHAFT	B
04	2	HHP009,3062	HITCH PIN CLIP G:#9 x 3-1/16	P
05	4	HB075,150	BOLT 3/4NC x 1-1/2LG.	P
06	4	HW075	WASHER 3/4	P
07	4	HLW075	LOCK WASHER 3/4	P
08	1	FP40025	FRONT STOP	B



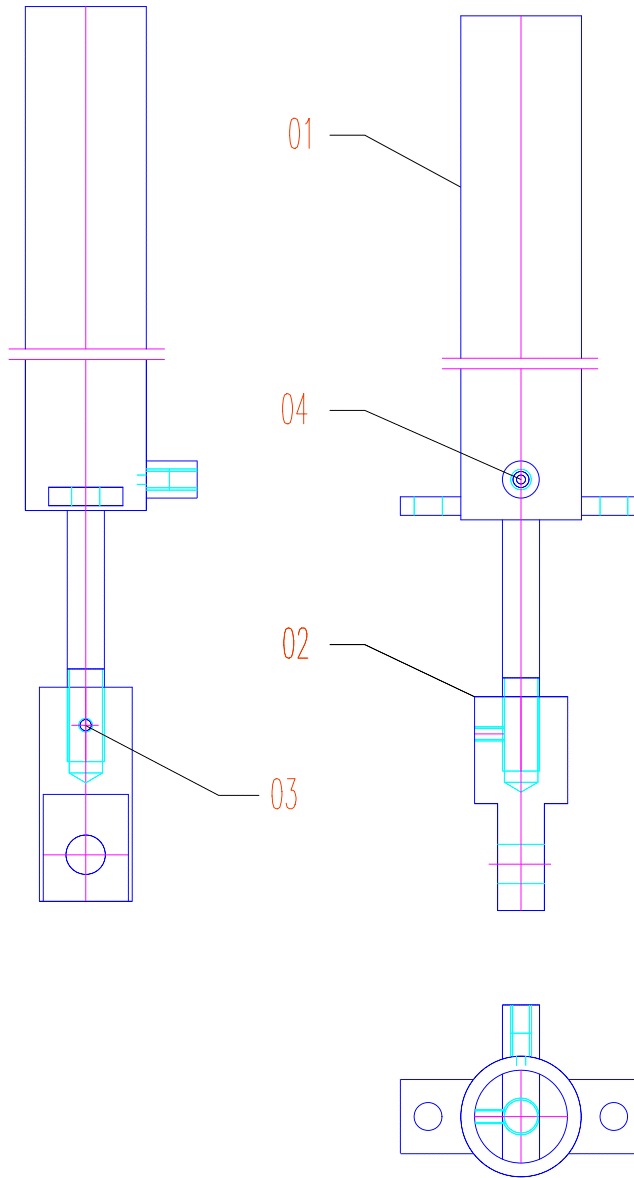
TITLE	MATERIAL	NOTES
RUNWAY ASSY 24 x 316	URSUS 40	25'
MOHAWK	DWG	FP4025123
	AUG. 14/2002	A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
01	1	FP402523	RUNWAY 24 x 316	B
02	1	FP40035	HINGE	B
03	1	FP40036	HINGE SHAFT	B
04	2	HHP009,3062	HITCH PIN CLIP G.#9 x 3-1/16	P
05	4	HB075,150	BOLT 3/4NC x 1-1/2LG.	P
06	4	HW075	WASHER 3/4	P
07	4	HLW075	LOCK WASHER 3/4	P
08	1	FP40025	FRONT STOP	B
09	1	FP402526	RUN. HOSE GUARD (25)	B
10	6	HB0375,100	BOLT 3/8NC x 1LG.	P
11	6	HW375	WASHER 3/8	P
12	6	HLW375	LOCK WASHER 3/8	P



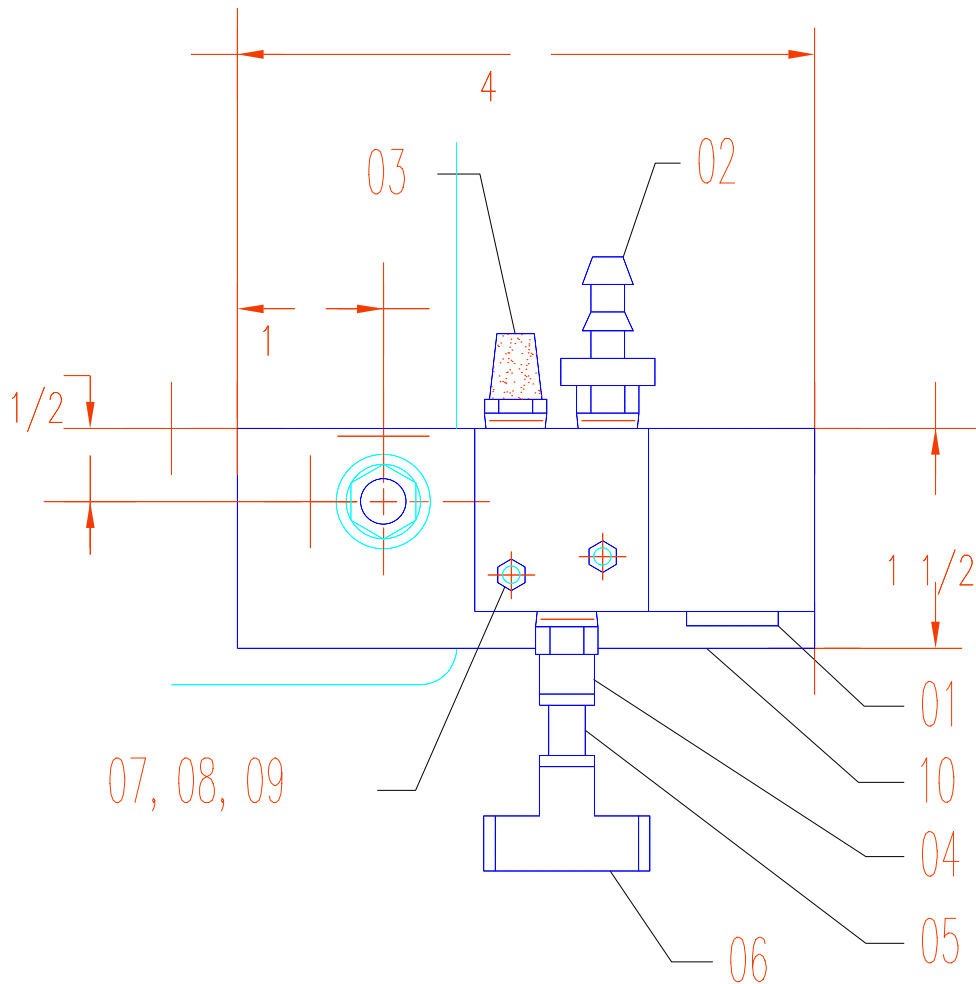
TITLE	MATERIAL	NOTES
RUNWAY ASSY C/W GUARD	URSUS 40	25'
MOHAWK	DWG AUG. 14/2002	FP4025223
		A

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	
01	1	FP40060	HYDRAULIC CYLINDER		P
02	1	FP40061	CYLINDER CLEVIS		A
03	1	HSSS0375,050	SOCKET SET SCREW 3/8NC x 1/2LG.		P
04	1	HY030	VELOCITY FUSE		P



TITLE	HYD. CYLINDER ASSY	MATERIAL	A	NOTES	URSUS 40
MOHAWK	NOV.19/2001	DWG	FP40063		A

ITEM	QTY.	PART NO.	DESCRIPTION	MAT.	
01	1	AIR031	AIR SOLENOID 1/8NPT		P
02	1	AIR012	HOSE CONNECTOR 1/8NPT TO 1/4 ID		P
03	1	AIR015	AIR BREATHER 1/8NPT		P
04	1	AIR004	CONNECTOR MALE 1/8NPT TO 5/32"OD TUBE		P
05	1	AIR010	1"LG. NYLON TUBE 5/32"OD		M
06	1	AIR003	TEE 5/32"OD TUBE ALL		P
07	2	HS#8,125	FL. HEAD SCREW #8 x 1-1/4		P
08	2	HLW#8	LOCK WASHER #8		P
09	2	HN#8	NUT #8		P
10	1	FP40502	AIR SOLENOID BRACKET		A



TITLE AIR SOLENOID ASSY		MATERIAL A	NOTES URSUS 40
MOHAWK	AUG. 29/2002	DWG FP40501	A