ATTENTION:

PLEASE READ THIS MANUAL COMPLETELY AND THOROUGHLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR WORK ON THIS LIFT.

FOUR POST LIFT

Installation, Operation, and Maintenance Manual
MODEL 12000-4 AIR RELEASE
MODEL 12000-4 SHORT/NARROW AIR RELEASE
PART # 95087

Quest Corporation
P.O. Box 5668
2912 W. 2nd
Pine Bluff, AR 71611
Phone: (870) 534-6411 or 800-436-1327
Fax: (870) 534-3177

09/01/04

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INSTALLATION INSTRUCTIONS

Choosing A Location

- **Use architects' plans when available**. See Floor Layout on Fig. 1 for a typical floor layout. Make sure the vehicle can be raised fully without hitting overhead obstructions.

- **The Garage Bay Door** should be able to remain closed while a vehicle is on the lift.

- **The Steel Reinforced Concrete** floor should be level, have a minimum thickness of 4 inches, and retain a *commercial rating* of 3500 psi. Make sure the floor is level.

- **Before making a Final Decision**, consider the amount of workday traffic in and around the location you have chosen. Are you satisfied with your selection?

- **This unit requires pressurized air to operate.** Be certain that you choose a location with access to an air line. Also plan and obtain the fittings and extra plumbing you will need to make the connection to the air system. Also get a good grade of thread sealant or thread sealing tape to use when connecting threaded fittings. (The air valve has 1/8" pipe thread connections.)

Important General Information

1. There are numerous blends and mixes and additives these days for concrete. All of these work well when used in the proper application. However, years of experience have shown that nothing beats a properly cured, steel reinforced concrete slab for this application. Another thing to watch is any additive that comes with a claim to harden the concrete faster or reduce the cure time. Again, these things have their place, but not in this application! ***A steel rod or mesh reinforced slab cured 28-30 days with the slab kept properly hydrated gives the best results.***

2. Checking bolts for tightness to some people means that once a week they grab a wrench and go around yanking a quarter of a turn on every nut and bolt they see. This is, of course, not the proper way of handling any bolt, ***especially*** the stress anchor used to anchor your lift. ***When the anchors are installed, they must be torqued with a torque wrench to 150 foot-pounds initially***. After a period of time, they will loosen up some. This is normal. When checking the anchors just put a wrench on them and "feel of them" or apply a small amount of torque to the bolt. If it is tight, it is good to go. If it is loose, get a torque wrench and tighten it to 60-90 foot-pounds.

3. The lift is not designed for an outdoor installation because of the possible damage and degradation to the hydraulics and the electrical components caused by direct exposure to the elements. If the unit is installed in a building or outbuilding with a floor that is anything other than the recommended concrete floor, a pad can be poured. The size and construction of the pad can vary depending on the soil conditions and the local weather conditions. It is recommended that each of these situations be handled separately by a local engineer.

4. Never place a lift in a pit or depression in a garage area or any environment where gasoline is around. Gasoline fumes tend to gather at the floor and low areas, so the lift must be mounted on the main floor of the building and not in the basement or a pit.

5. Always remember that your lift is rated at 12000 pounds. This means that the lift will safely and reliably lift a load of 12000 pounds as long as that load is evenly distributed on the tracks. If the load is offset or unevenly distributed, then one crossmember can actually be operating at a load greater than that for which it was designed and the lift can be overloaded with less than the rated load. So the lift load rating is ***12000 pounds or 6000 pounds per crossmember.***

Laying-Out The Lift Area (See Fig. 1)

1. Using a carpenters chalk line, establish a base line (A-B) to locate one side of the lift. Make sure this line is about three feet longer than the layout length of the lift you are installing. See Fig. 1

2. Measure off dimensions (A-D) and (B-C) drawing an arc at these dimensions as shown in Fig. 1

3. Draw a chalk line (D-C) tangent to these two arc dimensions to establish other side of lift.

4. Locate both ends of the lift (1-2) using the recommended distance to the nearest obstructions and mark these points on the base line.

5. Measure off the diagonal dimensions (1-3) and (2-4) drawing an arc at these dimensions.

6. Draw a chalk line from point (1) to (4) and from point (2) to (3).

These four lines locate the outside corners of the base plates for each post.

ANCHORING INSTRUCTIONS

Drill holes using 3/4" carbide tipped masonary drill bit per ANSI standard B94.12.1977

Clean hole.

Run nut down just below impact section of bolt. Drive anchor into hole until nut and washer contact base.

Tighten nut with Torque wrench to 150 ft.–lbs.

(**NOTE:** If either of the chalk marks is *not* within 1/8 inch, check *all* lines and measurements to find and correct the error before proceeding.)

Setting The Main-Side Posts

1. Locate and arrange the Post and Horizontal as shown in Fig. 2 with the base of each post near the corner of the chalk line. **Note:** *Be certain to decide where you want the power unit located and go from there. The power unit can be located at any corner.*

2. Assemble both Post to the Horizontal using the hardware shown in Fig. 1 of the "Parts Manual". **Note:** *At this point it is advised that the cylinder be manually extended by pulling on the lifting chains before erecting the assembly. Be certain to remove the plug from the rod end of the cylinder first. This will make assembly to the crossmembers easier later.*

3. Erect the Post and Horizontal with the base of both posts aligned with the corners of the chalk lines. **Note**: *Make sure these parts are safely supported until the anchors are installed.*

IMPORTANT: We recommend using a forklift, an overhead hoist, or a similar *lifting device* to assist in the installation of these parts.

Drilling And Anchoring

1. To Properly Drill the Holes, follow these instructions:

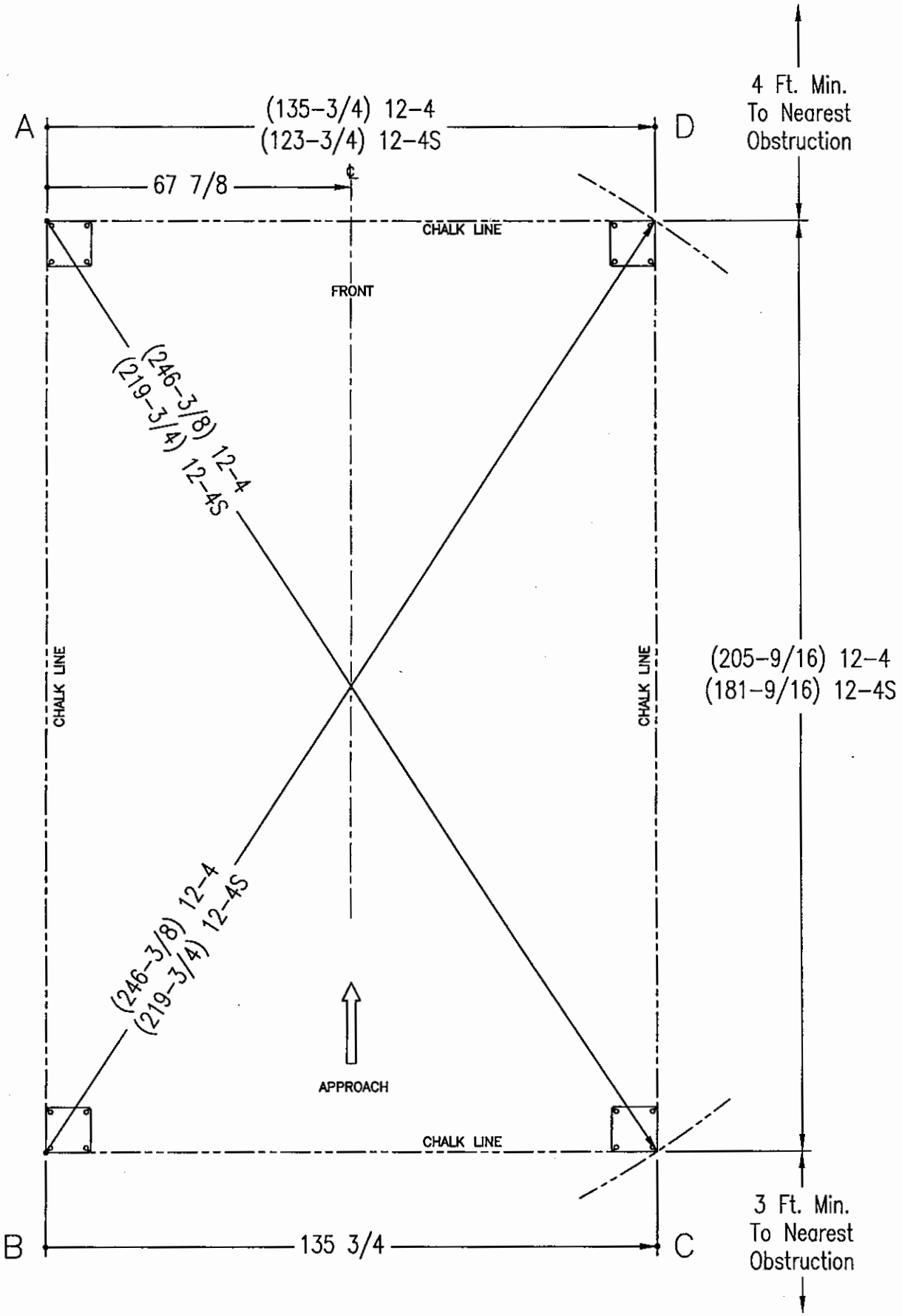
A. Drill eight 3/4 x 4 1/2 inch (minimum depth) holes in the *concrete* floor, using the holes in the base plates of the Main-Side Posts as guides. Drill the holes perpendicular to the surface, being sure not to enlarge them by allowing the drill to wobble. **Do not ream-out the holes**. See Anchoring Instruction Attached. **Tip:** After drilling the first hole, insert an anchor bolt in the hole to prevent the base plate from shifting as the other holes are being drilled.

B. Blow all the dust and debris from the holes, then clean around the openings with a wire brush. A clean hole will improve the prospect of solid anchoring.

2. To install Anchor:

A. Assemble the washer and the nut onto the anchor bolt with nut just below impact section of bolt

FLOOR LAYOUT FOR 12-4 AIR AND 12-4S AIR
Figure 1



B. With a hammer, ***carefully*** tap the anchor bolt into the concrete until the washer is resting on the base plate of the post. **DO NOT DAMAGE THE NUT OR THREADS!**

C. Before tightening the nuts, level and plumb the posts, using the shims provided. **Note**: If more than 1/2" of shims is required to level the post, **Do Not Use the Anchors supplied with this lift.**

D. When the Main-Side Posts are level and plumb, tighten the nuts with a *Torque Wrench* to 150 ft lb.

NOTE:

NEVER USE AN IMPACT WRENCH TO TIGHTEN ANCHOR BOLTS!

Connecting Lifting Chain To The Cross Tube Assemblies

1. Remove the plug from the "rod end" port of the Cylinder.

2. Extend the Cylinder by manually pulling the two Lifting Chains attached to the Cylinder.

3. Feed the Lifting chains through the holes located in the tops of the Main-Side Posts. Connect the chains to the Cross-Tube Assemblies. See Fig. 3 of the "Parts Manual".

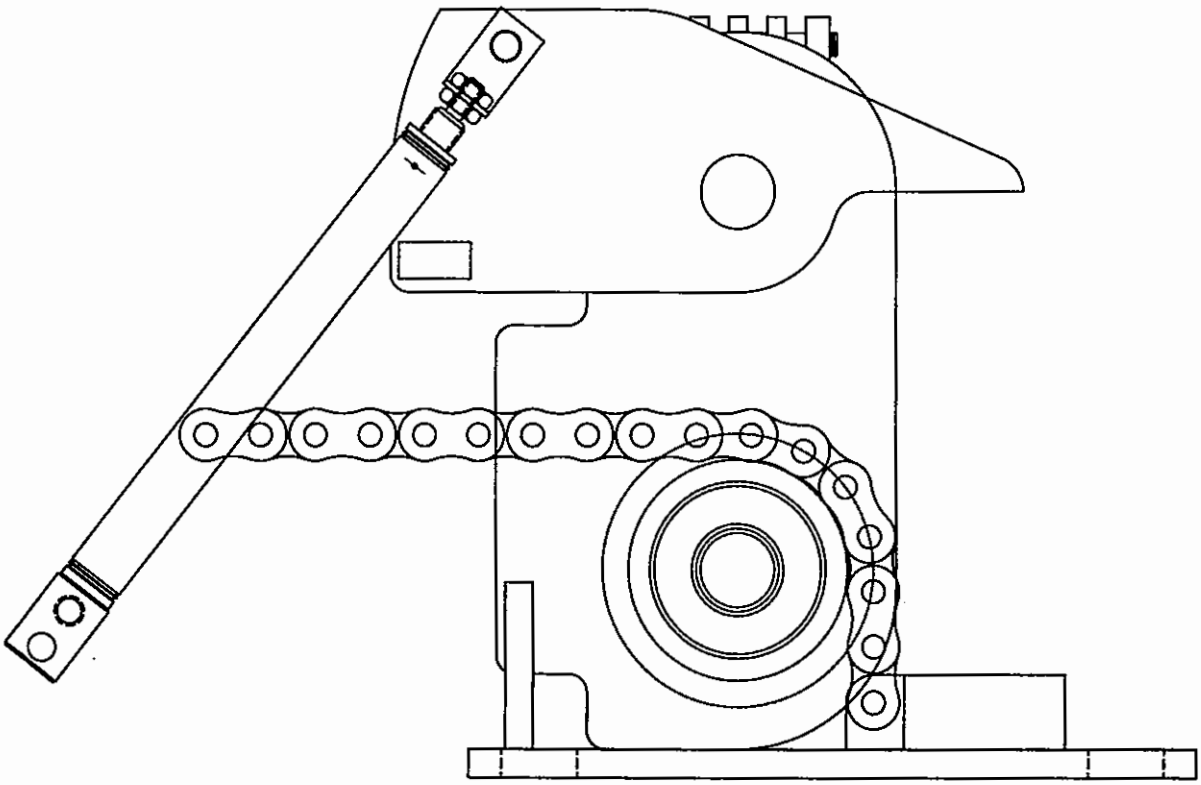
4. Loosen the bolts connecting the Main-Side Posts and the Horizontal Assembly. Make sure the holes are properly aligned.

5. Retighten Bolts.

Connecting The Cross Chains

1. Position the Crossmember Assemblies on the floor, adjacent to the base plates with the end of the Crossmember approximately 1 ft. from the Main-Side Posts. **Note**: Make sure the end of the Crossmember Assembly with the bearing in the bottom hole is on the Main Post side. See Page 7.

2. From the offside end, feed the chain through the Crossmember assembly as shown. This can be accomplished using a pull wire, or by lifting the offside end of the Crossmember and letting the chain gravity feed to the other side.



3. Using the Pins provided, attach the Crossover Chain to the Chain Anchor located in the bottom of the Main-Side Posts.

4. While pulling the slack out of the chain, move the Crossmember Assemblies into place directly above the Chain Anchor. Place a 2 x 4 shipping block approximately 1' from each end of the Crossmember Assemblies.

Setting The Off-Side Posts

A. Situate the Off-Side Posts with their base in the offside corners created by the chalk line.

B. Attach the chain to the Off-Side Posts by inserting the threaded stud through the hole in the top of the post, and tightening the nut until the slack is removed from the chain. **Do not over-tighten!** See Fig. 1 of the "Parts Manual".

DO NOT ANCHOR THE POST AT THIS TIME!

Attaching The Power Unit

1. Bolt the Power Unit to the Mounting Bracket located on the Main-Side Post. At this time also mount the air valve mounting bracket using the power unit mounting bolts.

2. Remove the metal pipe plug from the power unit block with an allen wrench. This is a 3/8" pipe thread connection. Screw the 3/8"tube elbow into the opening leaving the tube connection oriented upward.

CAUTION! *THERE ARE TWO OPENINGS IN THE POWER UNIT BLOCK THAT GET CONNECTIONS. THEY HAVE DIFFERENT TYPES OF THREADS AND THE POWER UNIT COULD BE DAMAGED IF A FITTING IS INSTALLED IN THE WRONG OPENING. IF IT DOES NOT FIT, DO NOT FORCE IT!*

3. Remove the plastic plug from the power unit block and install the straight o-ring adapter into the ORB opening. Do not over tighten the fitting. It could damage the O-ring.

4. Install the JIC adapter elbow into the port in the rod end of the cylinder. Leave the fitting pointing toward the power unit.

5. At the other end of the cylinder, install the other 3/8" tube elbow at the rear of the cylinder pointing toward the power unit.

6. Locate the 3/8" polyethelene tube and attach one end of the tube to the fitting on the cylinder and the other end to the fitting on the power unit. This is done by loosening the nut on the fitting, inserting the tube into the end of the fitting, and tightening the nut. Make sure the nut is not too tight.

7. Attach straight end of the long pressure hose to the fitting at the rod end of the cylinder and run the hose to the power unit and attach the elbow end of the hose to the O-ring adapter. Do not over-tighten the fittings!

ELECTRICAL CONNECTION

IMPORTANT:

WE STRONGLY RECOMMEND THAT YOU USE QUALIFIED, LICENSED ELECTRICIAN TO INSTALL POWER TO YOUR MODEL 12000-4 FOUR-POST LIFT!

Filling The Hydraulic Fluid Tank

Remove the vent-cap from the top of the Hydraulic Fluid Tank attached to the Power Unit. Using a funnel, carefully pour in the Hydraulic Fluid (approximately 12 quarts) Replace the vent-cap.

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We Recommend Using One Of The Following Fluids:

Dextron II Non-Detergent
Shell Tellus #32
10 Weight Hydraulic Jack Fluid

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Installing the Tracks

Place both Tracks onto Crossmember Assemblies between the pairs of stop blocks welded on both ends of the top surface of the crossmember.
Note: Make sure the sides of the tracks with the jack rails are to the inside.

Securing the Off-Side Posts

1. Raise the Lift until the Crossmember Assemblies clear the floor by pushing the "up" button on the Power Unit.

2. Recheck the bases for alignment with the chalk lines. Level the Post. Shim if necessary, then drill and anchor the Off-Side Posts.

(***Important:*** Follow the instructions on proper drilling and anchoring provided in the ***Drilling and Anchoring*** section.)

3. Lower the Lift by pressing the Lowering Valve on the Power Unit.

CAUTION! ***KEEP FEET CLEAR OF LIFT WHILE LOWERING!***

Installing the Approach Ramps and Track Stops

1. Raise the lift to a convenient working height. Locate the ramp mounting brackets and mount them with the hardware provided. The ramp mounting bracket has tubes welded at the ends.

2. Locate the ramp pivot pins and put a 3/4" snap ring on one end of the pin.

3. Position the ramp in the bracket and slip the pin through both the bracket and the ramp then put another snap ring on the other end of the pin. Repeat this process for the other side.

NOTE: *When the track is lowered the ramps will more than likely close before the crossmembers reach the bottom. This is normal. The concrete in most bays tends to slope to the outside and the ramps are designed to compensate for this condition. The ramps will bend to conform to the contour of the slab with use.*

4. Locate the brackets for the track end stops and mount them on the front of the tracks with the hardware provided.

5. Locate the end stop pivot pins and put a 3/4" snap ring on one end of each pin.

6. Position the rotating end stop between the plates on the bracket so that the latching pin is next to the end of the track. Then slip the pin through the bracket and the stop and put a snap ring on the other end to secure it.

Leveling the Crossmember Assemblies

Tighten or loosen the adjustment nuts on the tops of the Off-Side Posts to level the Cross Tube Assemblies.

Installing the Air Actuating System

1. When installing the air system, it is recommended that all the pipe threads be coated with a good grade of thread sealant or wrapped with a thread sealing tape.

2. Get the air valve from the hardware box and screw the tube connector in to the "CYL" port and any necessary adapter(s) for air input into the "NC" port. (Refer to the diagram in figure 2.)

3. Mount the air valve to the bracket using the nut with the valve actuator kit supplied with the lift.

4. Locate the anchor couplings and attach one of them to the tab near the bottom of the power unit post. This is done by removing the nut and lock washer from the coupling and slipping the body of the coupling through the hole in the tab. Then replace the lockwasher and nut, but leave it loose for now.

5. Get the other anchor coupling and attach it through the hole in the tab on the track closest to the power unit. Leave this coupling loose as well.

6. Obtain the 1/4" run tee and screw it into the anchor coupling underneath the track. This can be done by holding the tee in position and rotating the coupling.

7. Attach the coil hose to the other end of the coupling first at the track. Tighten the coupling at the track. Attach the coil hose at the post by holding the fitting on the coil hose and rotating the coupling at the post. Tighten the coupling at the post with the tube elbow pointing upward toward the power unit.

8. Locate the four air cylinders and put them in position on the crossmembers as shown in figure [redacted]. Screw the 1/8" pipe threaded elbows into the cylinders with the tube connections pointing toward the tracks.

NOTE: *The track where the air connections are made is designed to be moveable. It can be left stationary if desired, but if you want the track to be moveable, be sure to leave enough hose looped under the track to allow the track to be moved without damaging the hose or the fittings.*

9. Locate the 1/4" polyethelene tubing supplied with the lift. Using the diagram in Figure 2, route the tubing through the track to the cylinders at all four corners of the lift.

NOTE: *Route the tubing through the shields mounted on the cross members to prevent damage from track jacks, jacking beams, and other rolling accessories mounted on the jack rails.*

Final Assembly

1. Check all nuts and bolts, making sure they are tight.

2. Check hydraulic fittings and air fittings for possible leaks.

3. Raise and lower the lift, making sure that there is no rubbing or binding. Check the air lines to be sure they are not rubbing during normal operation. The locks should engage and release freely without binding.

4. Place a vehicle on the lift and raise the lift while observing the operation of the ramps and the locks. Run the lift through three or four full cycles, Checking the fluid level at the top and bottom of the stroke. Add fluid if necessary.

5. Check the cross members for level. Adjust if necessary.

Operation

1. Lift must be fully lowered before attempting to load vehicles on lift.

2. Position vehicle with tires centered on tracks. Adjust track width if necessary.

3. Push the up button and raise the lift.

4. When the vehicle reaches the desired working height, release the up button and push the down lever until the Safety Latch engages.

5. To lower lift, push the up button until the Safety Latch clears. Press the actuating lever on the air valve to disengage the latches. Push down lever to lower the vehicle.

MAKE SURE AREA UNDER THE LIFT IS CLEAR WHEN LOWERING.

KEEP FEET CLEAR

MAINTENANCE SCHEDULE

DAILY:

1. Always keep bolts tight.
2. Check for oil leaks.
3. Stroke the cylinder fully to allow oil to coat the inside of the cylinder.

MONTHLY:

1. Re-torque the anchor bolts.
2. Lubricate chains with spray lubricant.
3. Check all chain connectors, bolts and pins to insure proper mounting.
4. Make a visual inspection of all hydraulic hoses and air hoses for possible wear or interference.

CAUTION

ALL ANCHOR BOLTS SHOULD BE TIGHT. *When checking anchors, see* ***Important General Information*** *(#4) at the beginning of this manual.*

EVERY SIX (6) MONTHS:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check all chains for proper lubrication.
3. Check and adjust as necessary, cross chains to insure level lifting.
4. Check columns for plumb.
5. Check fluid level of power unit.
6. Grease all bearings.

TROUBLE SHOOTING

1. Motor does not run:

   A. Breaker or fuse blown.
   B. Motor thermal overload tripped.
   C. Defective UP switch. Replace.
   D. Faulty wiring connections. Call electrician.

2. Motor runs but lift will not raise:

   A. Trash is under check valve. Push handle down and push the UP button at the same time. Hold for 15 seconds. This should flush the system
   B. Remove the check valve cover with an Allen wrench. Clean the ball and seat and replace the cover.
   C. Oil level low. Oil level should be just under the vent cap port when the lift is down.

3. Motor runs but lift picks up partial load only:

   A. Relief valve setting too low. Remove hex cap on pump and adjust the relief valve with a screwdriver.
   B. Oil is coming out of breather on cylinder. Seals damaged.

4. Oil blows out of breather:

   A. Oil reservoir overfilled.
   B. Lift lowered too quickly while under a heavy load.

5. Motor hums and will not run:

   A. Impeller fan cover is dented in. Take off and straighten.
   B. Faulty wiring - Call an Electrician.
   C. Bad capacitor - Call an Electrician.
   D. Low voltage - Call an Electrician.
   E. Lift over loaded.

5 YEAR LIMITED WARRANTY

The structural components of Ben Pearson Tubemaster surface mounted lifts are warranted to the original owner to be free from defects in material and workmanship under normal use for a period of five years from invoice date. Ben Pearson Tubemaster will replace those parts returned to the factory which prove to be defective for the full five year warranty period. Ben Pearson Tubemaster will pay labor cost for replacement of defective parts for the first twelve months with the exception of air cylinders and electrical switchs which have a six month labor warranty. Ben Pearson will pay reasonable transportation cost for the first 12 months and purchaser will bear the cost of transportation for the remainder of the warranty.

Power units and hydraulic cylinders are warranted for a full three years from invoice date against defective material when the product is installed and used according to Ben Pearson Tubemaster specifications. Electrical switchs,air cylinders(if used) ,rolling jacks and turntables are warranted for one year. Warranty obligation is limited to the repair or replacement of parts returned to the factory, freight prepaid which prove upon inspection to have been defective and have not been misused.

This warranty does not cover normal maintenance, cable and chain adjustments, damage as a result of improper installation, abuse, misuse, overloading, negligence, or normal wear and tear, concrete floor problems, or defects caused by lack of required maintenance. This warranty does not cover equipment when repairs have been attempted or made by anyone other than a Ben Pearson Tubemaster authorized service representative.

All parts must be returned freight prepaid and adequately packaged to prevent damage in transit.

This warranty is exclusive and is in lieu of all other warranties expressed or implied including any implied warranty of fitness for a particular purpose, which implied warranties are hereby expressly excluded.

In no event will the sales representative, wholesale dealer, Ben Pearson Tubemaster, or any company affiliated with it or them be liable for incidental or consequential damages or injuries, including but not limited to the loss of profit, rental or substitute equipment or other commercial loss purchaser's sole and exclusive remedy being as provided here in above.

This warranty may not be enlarged or modified in any manner except in writing signed by an executive officer of Ben Pearson Tubemaster. It is the policy of Ben Pearson Tubemaster to improve it products whenever it is possible and practical to do so. Ben Pearson Tubemaster reserves the right to make changes and or add improvement at any time without incurring any obligation to make such changes or add such improvements to products preciously sold.

Ben Pearson Tubemaster products must only be operated by persons who have been trained in its safe and proper use.

To VALIDATE this warranty, the attached form must be completed and returned to the address shown below:

Ben Pearson Tubemaster **P.O. Box 5668** **Pine Bluff, AR 71601**
870-534-6411 **Fax: 870-534-3177** **Toll Free: 1-800-436-1327**

WARRANTY REGISTRATION

Model No. _____ **Serial No.** _____

Date Purchased: _____ **Invoice No.** _____

Name of Purchaser: _____

Mailing Address: _____

Physical Address of Lift: _____

City: _____ **State:** _____ **Zip:** _____

Telephone No.: _____

Name of Seller: _____

City: _____ **State:** _____ **Zip:** _____

Telephone No.: _____

Return to:

QUEST CORPORATION
d.b.a., BEN PEARSON TUBEMASTER
P.O. Box 5668
Pine Bluff, AR 71611

BEN PEARSON

PARTS MANUAL – 12000-4 AIR RELEASE
12000-4 SN AIR RELEASE

2912 W. 2ND.
PINE BLUFF, ARKANSAS 71601
1-800-436-1327

FIG. 1

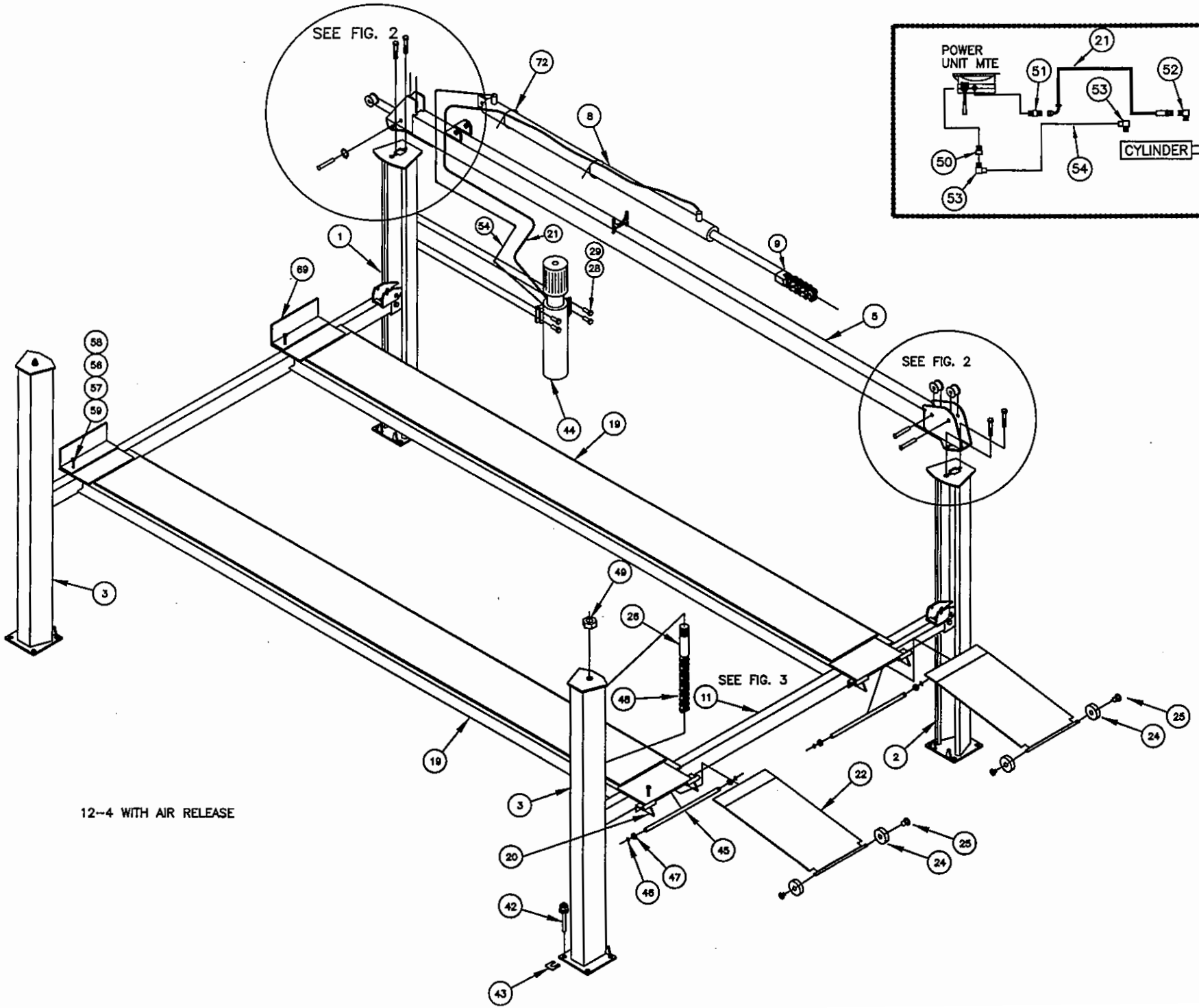
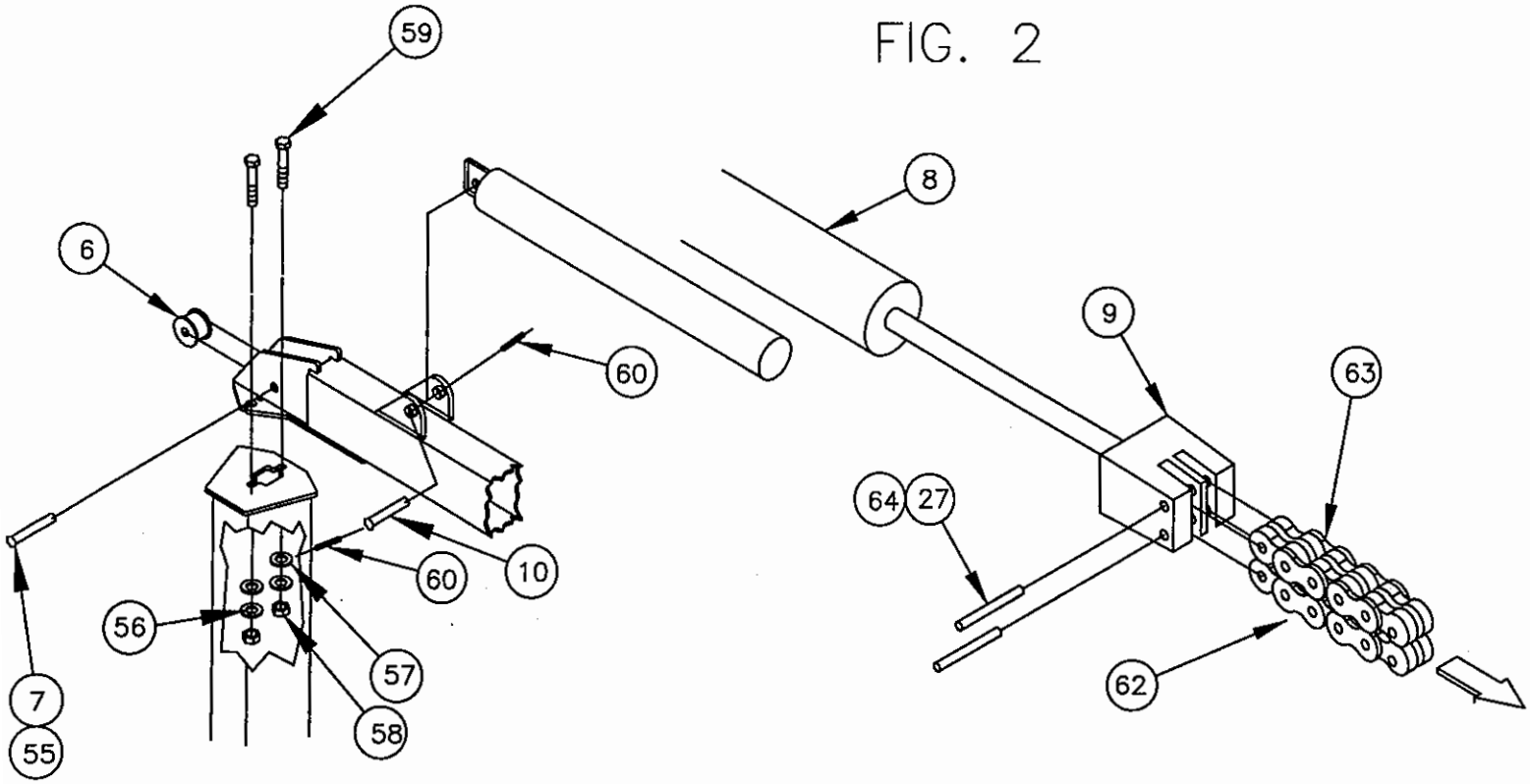
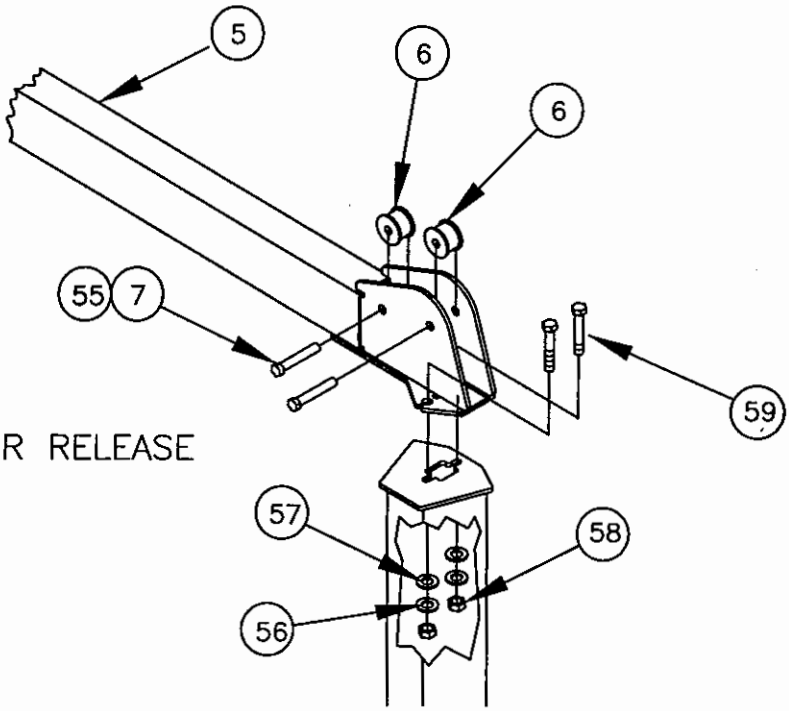

SEE FIG. 2
POWER UNIT MTE
CYLINDER
SEE FIG. 2
SEE FIG. 3
12--4 WITH AIR RELEASE

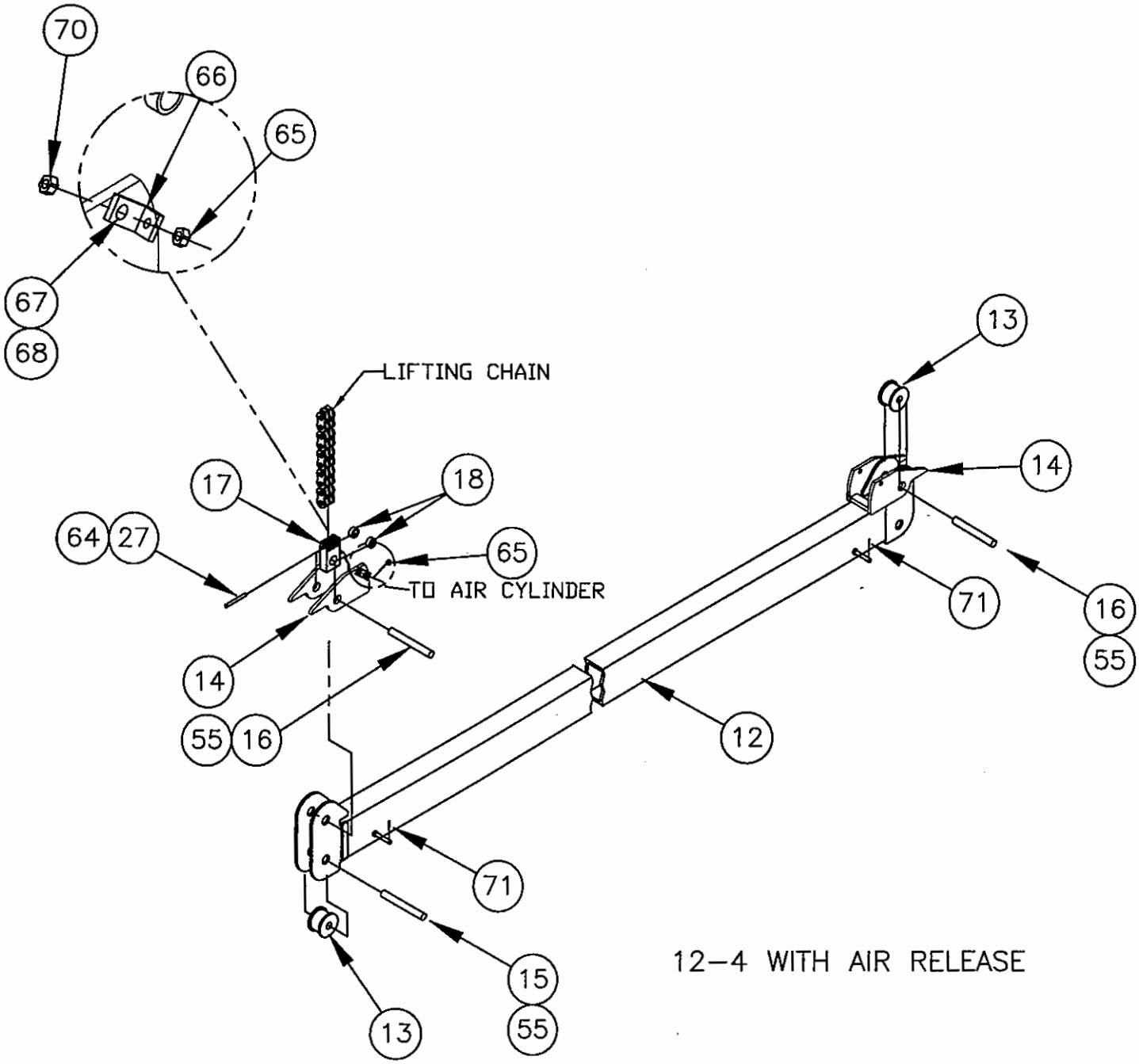
FIG. 2





12-4 WITH AIR RELEASE

FIG. 3


70
66
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67
68
LIFTING CHAIN
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27
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TO AIR CYLINDER
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14
55
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71
15
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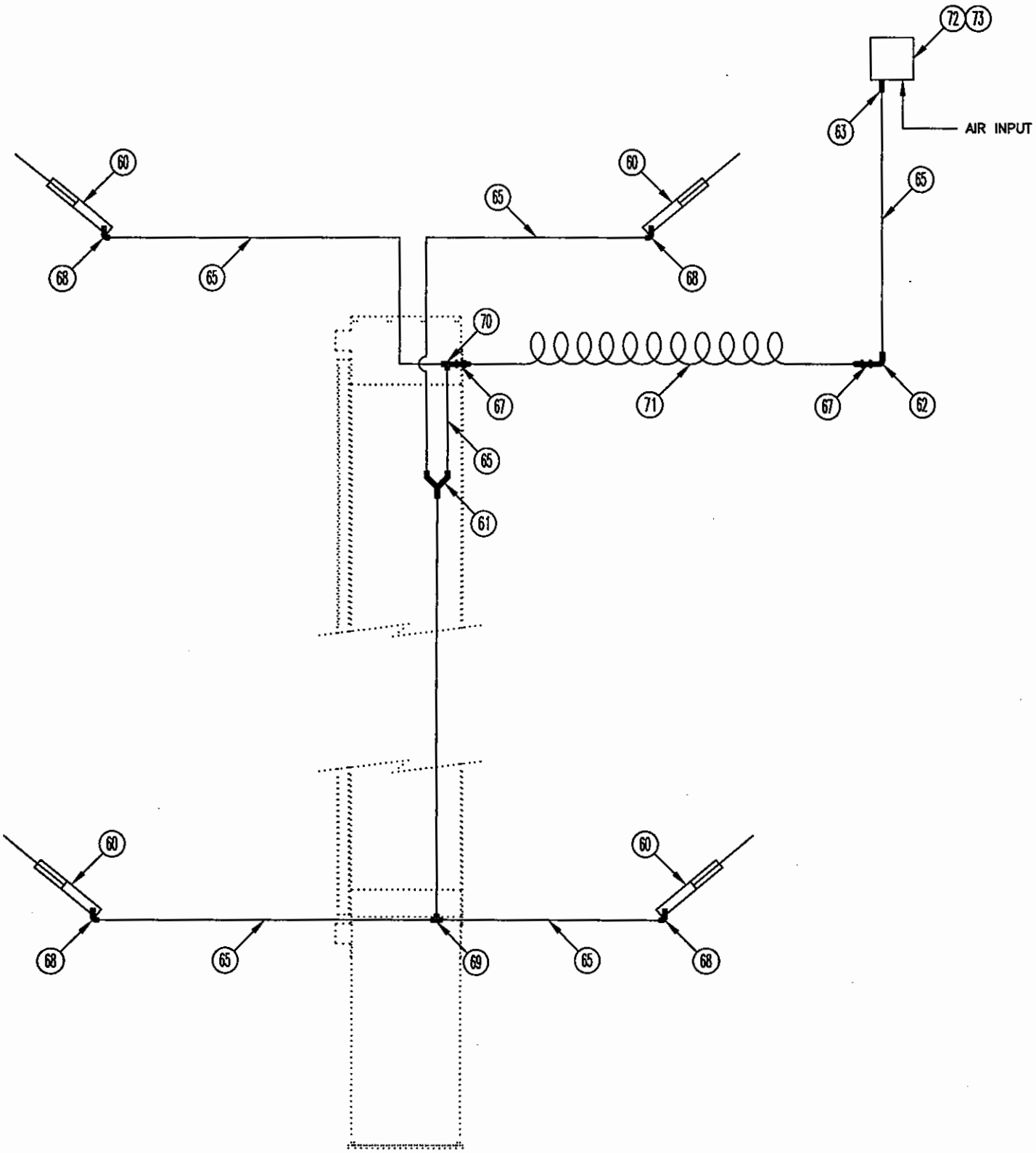
13
12-4 WITH AIR RELEASE

PARTS LISTING 09/01/04

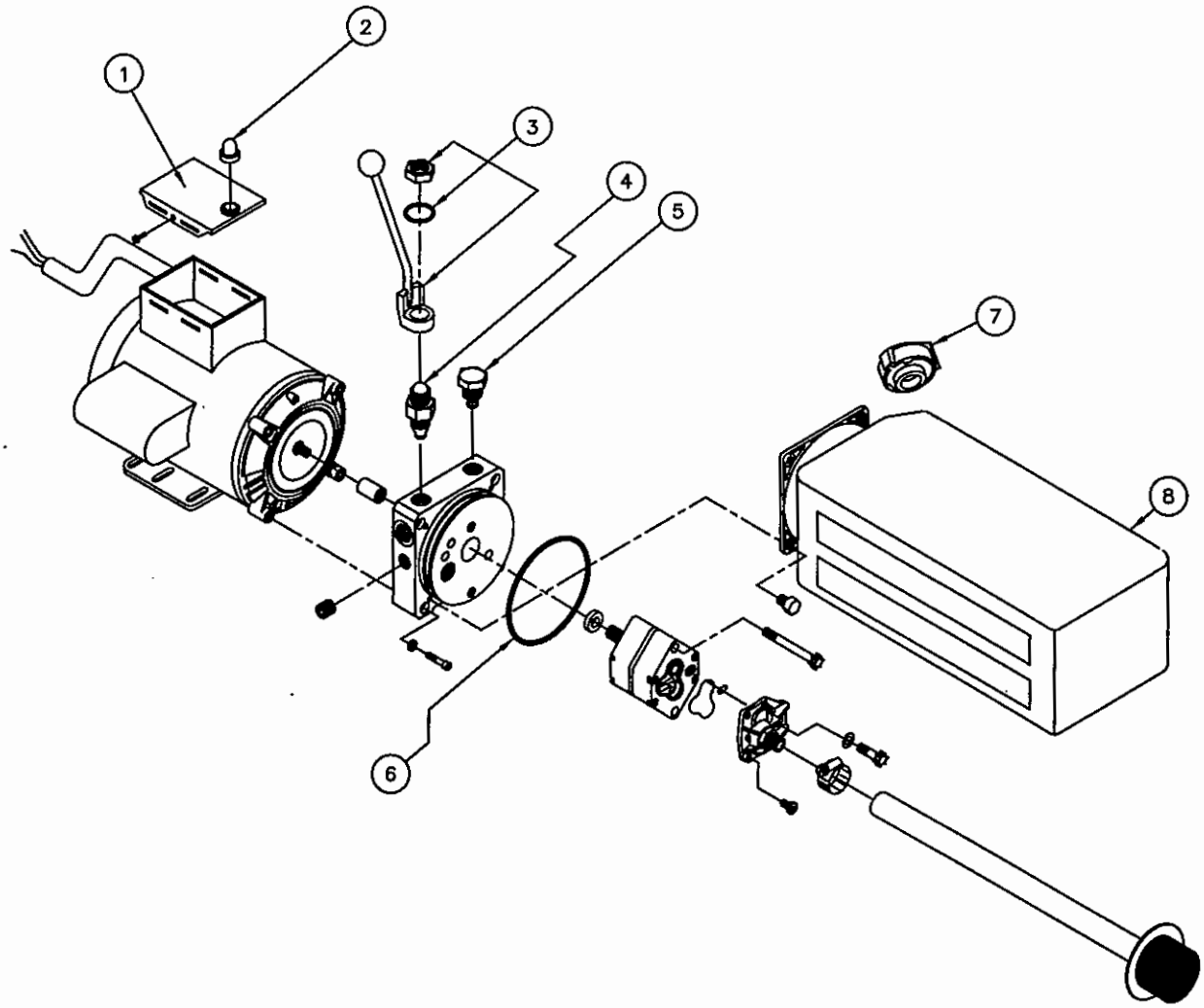
	MODEL	12-4 AIR		12-4 AIR SHORT	
	LIFT PART NUMBER	90130	QT	90132	QT
1	POST STRUCTURE - MAIN P/U	91794	1	91794	1
2	POST STRUCTURE - MAIN REAR	91802	1	91802	1
3	POST STRUCTURE - OFFSIDE	91804	2	91804	2
	5 HORIZONTAL BEAM STR.	91807	1	91875	1
	6 SHEAVE ASSEMBLY	91816	3	91816	3
	7 SHAFT ASSEMBLY - UPPER, HORIZONTAL	91862	3	91862	3
8	CYLINDER	91132	1	91132	1
9	CHAIN ANCHOR - CYLINDER	91776	1	91776	1
10	CYLINDER PIN	91134	2	91134	2
11	CROSS TUBE ASSEMBLY	91819	2	91878	2
	12 CROSS TUBE STRUCTURE	91820	1	91879	1
	13 SHEAVE ASSEMBLY - CROSS CHAIN	91825	2	91825	2
	14 LATCH STRUCTURE	91826	4	91826	4
	15 SHAFT ASSEMBLY - LOWER, CROSSMEMBER	91863	2	91863	2
	16 SHAFT ASSEMBLY - UPPER, CROSSMEMBER	91864	4	91864	4
	17 CHAIN ANCHOR - LIFTING	91775	2	91775	2
	18 SPACER 1" PIPE X .44	91859	4	91859	4
19	TRACK STRUCTURE	91830	2	91881	2
20	BAR STRUCTURE - ADAPTER, RAMP	91839	2	91839	2
69	STOP - TRACK END	91772	1	91772	1
#	RAMP ASSEMBLY	91865	2	91865	2
	22 RAMP STRUCTURE	91850	2	91850	2
	# TREAD PAPER	56500	6	56500	6
	24 ROLLER RAMP	91793	4	91793	4
	25 RETAINER 1/2"	91801	4	91801	4
45	PIN - HINGE, RAMP	91792	2	91792	2
62	CHAIN - LONG (279-3/4") SHORT (252-3/4")	91790	1	91887	1
63	CHAIN - SHORT (95-1/4")	91788	2	91788	2
48	CHAIN - CROSS (206-1/4") SHORT (192-3/4")	91789	1	91888	1
	26 ANCHOR - ADJUSTABLE	91781	2	91781	2
	27 PIN - CHAIN - LIFTING	91778	2	91778	2
	# PIN - CHAIN - CROSSOVER	91779	1	91779	1
	64 RETAINING RING 5/16"	103032	16	103032	16
21	HYDRAULIC HOSE 145" / 125"	91860	1	91889	1
50	ADAPTER 9/16ORB X 3/8 NPT	105065	1	105065	1
51	ADAPTER 9/16ORB X 9/16 JIC	60544	1	60544	1
52	ELBOW 3/8 MALE NPT X 9/16JIC	105004	1	105004	1
53	MALE ELBOW 3/8NPT X 3/8 TUBING	105049	2	105049	2
54	3/8" TUBING - BLACK 75" / 61"	91861	1	91892	1
#	HARDWARW KIT - POWER UNIT	95009	1	95009	1
	28 HHFL SCREW 5/16 X 18NC X 3/4 GR.5	100234	4	100234	4
	29 HH FL NUT 5/16 X 18NC	100237	4	100237	4
#	AIR KIT	91866	1	91866	1
	30 VALVE - AIR	105038	1	105038	1
	31 ACTUATOR - VALVE	105039	1	105039	1
	32 MALE CONNECTOR - 1/4]TUBE X 1/8 PIPE	105048	1	105048	1
	33 1/4 O.D. TUBING	50100	50	50100	50
	34 MALE ELBOW - 1/4 TUBING X 1/4 PIPE	105047	1	105047	1
	35 ANCHOR COUPLING	105050	2	105050	2
	36 COIL HOSE	105018	1	105018	1
	37 MALE RUN TEE - 1/4 TUBE X 1/8 PIPE	105053	1	105053	1
	38 MALE ELBOW - 1/4 TUBE X 1/8 PIPE	105051	4	105051	4
	39 CYLINDER - AIR, ACTUATING	91787	4	91787	4

	MODEL	12-4 AIR		12-4 AIR SHORT	
	LIFT PART NUMBER	90130	QT	90132	QT
	40 UNION "Y" CONNECTOR - 1/4 TUBE	105046	1	105046	1
	41 UNION TEE - 1/4 TUBE	105052	1	105052	1
42	ANCHOR BOLT 3/4 X 4-3/4	9500	16	9500	16
43	SHIMS	95001	24	95001	24
44	POWER UNIT	95011	1	95011	1
46	SNAP RINGS 3/4"	103000	8	103000	8
47	FLATWASHER 3/4"	100512	10	100512	10
49	NYLOCK NUT 3/4 X 10NC	101035	2	101035	2
55	1" SNAP RING	103029	13	103029	13
56	LOCKWASHER 1/2	100125	20	100125	20
57	FLATWASHER 1/2	100152	36	100152	36
58	HEX NUT 1/2 X 13NC	100124	20	100124	20
59	HEX SCREW 1/2 X 13NC X 2 GR. 5	100016	20	100016	20
60	ROLL PIN 1/4" X 2	103003	2	103003	2
65	1/4-28NF HEX NUT	101034	4	101034	4
66	LINK - AIR CYLINDER	91867	4	91867	4
67	HFHSL SCREW 3/8-16NC X 1-1/4"	100382	4	100382	4
68	LOCKING NUT 3/8-16NC	100083	4	100083	4
70	1/4-28NF NYLONNUT	101022	4	101022	4
71	COTTER PIN 1/8 X 3/4	100175	4	100175	4
#	KFR - 17 RELIEF VALVE	105028	1	105028	1
#	NAME PLATE	62249	1	62249	1
72	PLASTIC TIE	103015	3	103015	3
#	BEN PEARSON DECAL	95005	2	95005	2
#	PB\800 DECAL 2 X 5 MYLAR	95006	1	95006	1
#	CAUTION DECAL	95008	1	95008	1
#	MANUAL	95087	1	95087	1
#	BLUE TOUCH-UP PAINT (SPRAY)	103007	1	103007	1
#	YELLOW TOUCH-UP PAINT (SPRAY)	103008	1	103008	1
#	ALI DECALS, 4-POST	95164	1	95164	1

Schematic for Air Release System
12000AL – AIR



95011



ITEM NO.	DESCRIPTION	PART #	QTY.
1	MICROSWITCH WIRING ASSY	95086	1
2	MICROSWITCH BOOT	95075	1
3	MANUAL RELEASE ASSY	95041	1
4	MANUAL RELEASE VALVE	95035	1
5	VALVE CARTRIDGE CHECK	95036	1
6	RESERVOIR O-RING	95076	1
7	BREATHER	95044	1
8	RESERVOIR	95040	1