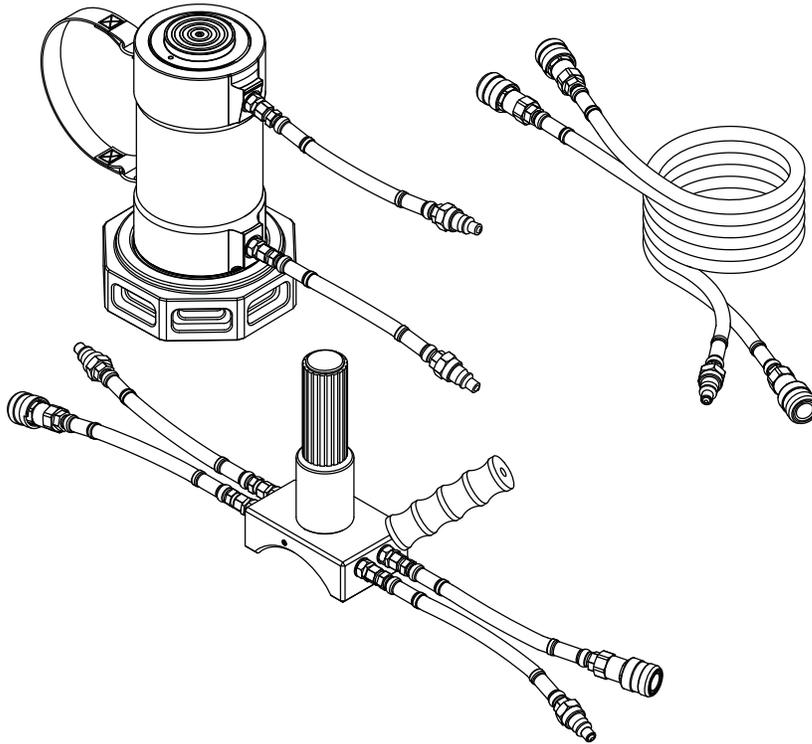




AMK-100R LIFTING JACK User Information Manual

⚠ DANGER

Understand manual before use. Operating AMKUS Rescue Systems without understanding the manual, receiving proper training, and using appropriate personal protective equipment is a misuse of AMKUS equipment. This manual does not fully address safety. Additional safety information is published in AMKUS Safety Manual LAA-001. Obtain safety information at www.amkus.com/



Thank you for choosing AMKUS Rescue Systems. Read this User Information Manual thoroughly. If you have any questions, please contact your local dealer or AMKUS Rescue Systems.

Please complete the tool registration form included with your equipment and return it to AMKUS Rescue Systems. You may also register your equipment on-line at www.amkus.com.

The serial number for your tool is identified on the product label which is located on the cylinder of the tool. Please have the serial number available if you need to contact your local dealer or AMKUS Rescue Systems.

⚠ DANGER

PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. It is your responsibility to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called upon to use.
3. It is your responsibility to know that you have been properly trained in Firefighting and /or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. It is your responsibility to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. It is your responsibility to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.



Fire and Emergency Manufacturers and Service Association
P.O. Box 147, Lynnfield, MA 01940 • www.FEMSA.org

AMKUS RESCUE SYSTEMS
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1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI standard Z535.6-2011, the definitions of the four signal words are as follows:



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to physical injury.

2.0 SPECIFICATIONS

Lifting Capacity	50 tons (45 metric tons)
Stroke	6" (152mm)
Collapsed Height	10" (254mm)
Extended Height	16" (406mm)
Interlocking Shim Plates	1" 2" 3" (25mm, 50mm, 75mm)
Remote Operated Valve With Extension Hose	10' (3m)
Maximum Operating Pressure	10,500 psi (724 bar)
Weight of Jack	20.1 lbs (9.1kg)
Operating Temperature Range	-25 to 140 deg. F (-32 to 60 deg. C)
Hydraulic Fluid	AMKUS MV1
Safety Data Sheet (SDS) for AMKUS MV1 Hydraulic Fluid is available at AMKUS.com and CHEMTREC.com	

AMK-100R	Cylinder Body	Including 1" Shim	Including 2" Shim	Including 3" Shim
Width X Depth	6.0" X 10.0" 151 X 255 mm	7.9" X 11.0" 200 X 280 mm	7.9" X 12.0" 200 X 306 mm	7.9" X 13.0" 200 X 331 mm
Length Closed	10.0" (255 mm)	11.0" (280 mm)	12.0" (306 mm)	13.0 (331 mm)
Length Open	15.9" (404 mm)	16.9" (429 mm)	17.9" (454 mm)	18.9" (480 mm)
Weight (Lifting Jack Cylinder and Shim)	20.1 lbs (9.1 kg)	24.3 lbs (10.9 kg)	27.9 lbs (12.6 kg)	30.8 lbs (13.9 kg)

3.0 OPERATING INSTRUCTIONS

Amkus 50t Lifting Jack includes a 50t lifting cylinder, a remote control valve, a 10' (3m) black and yellow extension hose, and three stacking shims 1" (25 mm), 2" (50 mm), and 3" (75 mm).

The lifting jack includes a remotely operated control valve so lifting jack may be operated from a location outside the crush zone.

Select a position to place the lifting jack which can fully support the load. Support on soft ground can be increased with cribbing and support plates. Potential for loads sliding sideways is reduced by avoiding metal-to metal contact when supporting the load.

Interconnect the hoses to the jack, remote control valve, and power unit. Start the power unit and retract the jack to the fully closed position. Take up space between the jack and the load by adding interlocking spacers supplied with the jack or by cribbing to minimize the lifting required.

Identify the crush zone. These are areas under the load and around the load with risk of crushing from a falling or rolling load. Select a position outside the crush zone from which to operate the lifting jack.

Extend the lifting head to the object being displaced. Insure nearby people are clear of the crush zone before lifting or retracting. Displace the object only as far as needed. Stop to stabilize the load in increments as the load is lifted or lowered. All AMKUS rescue tools are equipped with a twist grip control valve. The 100k Lifting Jack performs only lifting operations. Do not attempt to pull using the equipment. Rotating the control valve counter clock wise retracts the piston. Rotating the control valve clock wise extends the jack's piston. The control valve is equipped with a deadman safety feature, which causes the handgrip to return to the center (neutral) position when it is released. The movement of the tool will stop. The tool will continue to contain the internal pressure that was present at the time the control valve handgrip was released.



Loads supported by lifting jacks present a crushing hazard to people under or near the load. Reduce crush hazard by insuring people and equipment remain out of the crush zone during lifting and retracting operations.

As the lifting jack extends, the angle of the lifting head may change in relation to the object being displaced. If this movement places you or others in jeopardy, you should immediately release the control valve handgrip. The deadman safety feature of the control valve will return the handgrip to the center (neutral) position, and the movement of the lifting jack will stop.

NOTICE

The minimum safe bend radius of the hydraulic hoses is 4 inches (101.6 mm).

4.0 ROUTINE MAINTENANCE



Avoid contact with escaping hydraulic fluid under pressure. If hydraulic fluid punctures skin, seek medical treatment immediately. Contact with escaping hydraulic fluid under pressure could result in serous injury or death.

Inspect all hose, hose fittings and couplings for leakage and damage (see routine maintenance for hoses and couplings). Periodically inspect all hydraulic fittings for tightness. Clean excess dirt away from the area where the rod reenters the cylinder.

Periodically check the 100k Lifting Jack for leakage, damage to the cylinder body, damage to the piston, damage to the pads, loose or missing screws, and loose coupling connections. Because the cylinder rod is lubricated by the hydraulic fluid and wiped clean using a unique T-seal O-ring, no lubrication is necessary for the AMKUS hydraulic lifting jacks.

4.1 ROUTINE MAINTENANCE FOR HOSES

- Always disconnect the hoses at the control valve first before disconnecting the provided extension hoses from the lifting jack.
- After each use, hoses should be wiped clean with a light cleaning solvent such as Simple Green®.
- Inspect hoses for damage to the rubber outer cover. (Damage which exposes the wire braided reinforcement subjects the wire to corrosion and may weaken the hose.)
- Damaged hoses should be replaced before use.

4.2 ROUTINE MAINTENANCE FOR COUPLINGS



Damaged couplings should be replaced immediately. Damaged couplings could cause hydraulic fluid to escape under high pressure. Contact with escaping hydraulic fluid under pressure could result in serious injury or death. Loss of hydraulic pressure prevents the rescue tool from operating properly and may result in serious injury or death.

- Couplings should be kept free of dirt and contaminants. (They may be most easily cleaned by immersing in, or scrubbing with, a petroleum based solvent such as SAFE- SOL® 140.)
- Couplings should then be lubricated with a non-water based lubricant such as WD-40®.
- The rubber dust caps which are provided with the tools should also be cleaned periodically. (Be aware that while the couplings may be clean, the dust caps will accumulate dirt during use.)
- Do not cover a clean coupling with a dirty dust cap.

4.3 MAINTENANCE RECORDS

It is a user's responsibility to keep maintenance records for each component of the rescue system. Maintenance shall be performed in accordance with the recommendations as outlined in this manual.

5.0 PROTECTIVE CLOTHING

It is the responsibility of the user to insure that appropriate protective clothing and equipment are used to provide protection from those hazards to which personnel are exposed or could be exposed while working with this product.

6.0 TRAINING

This product is designed to be used by emergency services personnel to facilitate the extrication of victims from entrapment. Its use should be limited to trained personnel only. All personnel using this equipment are assumed to have completed a course of instruction acknowledged as being educationally sound by the local authority having jurisdiction over such training. This document contains basic operating and maintenance instructions only.

7.0 SET-UP PROCEDURE

AMKUS equipment is manufactured with superior craftsmanship and quality backed by a factory warranty.

NOTICE

Only use AMKUS tools with AMKUS equipment. Mixing AMKUS tools with another manufacturer's equipment may cause operational problems, equipment failure, or denial of warranty claims.

NOTICE

Only use AMKUS MV1 hydraulic fluid in AMKUS equipment. Using another manufacturer's hydraulic fluid in AMKUS equipment may cause operational problems, equipment failure, or denial of warranty claims.

Normally, AMKUS equipment is prepared and serviced by your dealer prior to delivery. If, however, you have decided to place the equipment into service yourself, please review the following instructions carefully.

1. Remove equipment from the packing cartons and carefully inspect for damage. Damage that occurs during shipment should be reported immediately to the carrier.
2. Connect the tool connection hoses to the hose lines from the AMKUS hydraulic power unit.
 - a. If you have Standard Couplings: Please note that the male and female couplings on the hose lines leading from the power unit should be connected to the corresponding male and female couplings on the tool connection hoses. To connect the couplings, twist the sleeve on the female coupling so that the notch in the sleeve lines up with the pin. Push the sleeve back so the pin fits into the notch. While holding the sleeve back, push the male coupling into the female coupling. Release the sleeve; it will spring forward into place. Twist the sleeve 1/4 turn so that the pin no longer lines up with the notch. Pull on the couplings to check that they are securely connected.
 - b1. If you have Mono Couplings: Please note that the female coupling on the hose lines leading from the power unit should be connected to the corresponding male coupling on the tool connection hoses. To connect the couplings, place the male coupling into the female coupling. Rotate clockwise until you feel the coupling latch. Pull on the couplings to check that they are securely connected.
 - b2. In most cases, the Mono Couplings can be connected and disconnected while the hose line is under flow. It is usually not necessary to place the directional control of the power unit in the neutral position before connecting and disconnecting. However, certain circumstances such as back pressure in the return line and/or cold temperatures, may make connecting and disconnecting under flow extremely difficult or impossible. If you are unable to connect and disconnect while the line is under flow, place the directional control valve of the power unit in the neutral position and then disconnect or connect.

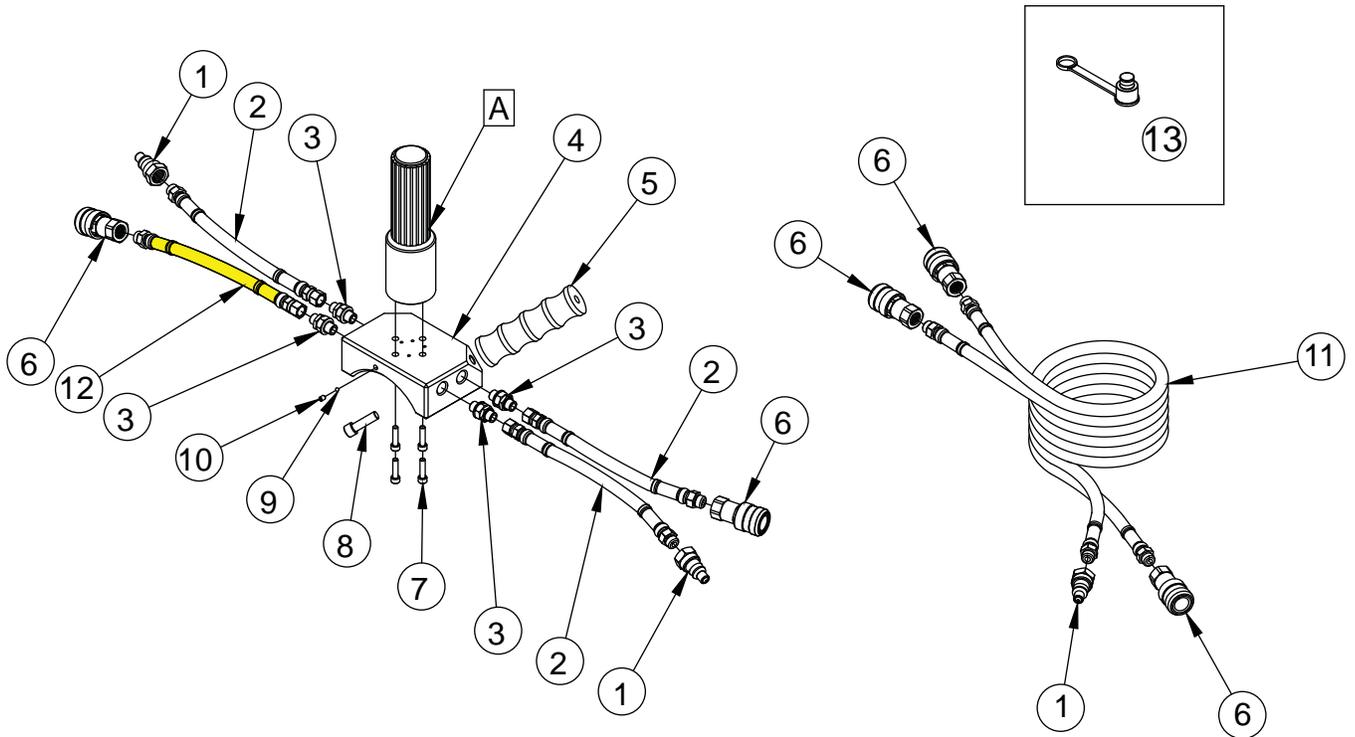
8.0 GETTING STARTED

Connect the hydraulic hoses as directed above matching hose color to hose color. Start the power unit (refer to power unit and engine manuals). Following the instructions in the power unit manual, operate the selector valve to charge the hose line to which the tool is connected.

9.0 DRAWINGS AND PARTS LISTS

Cylinder Body			
ITEM	DESCRIPTION	QTY	PART #
1	ROD T-SEAL - T-SEAL TR031 P/N TSR-333	1	KD0004
2	CYLINDER PLUG	1	KR0101
3	BACKUP RING-237 TEFLON	1	VOB-237T
4	VO-237	1	O-RING-237
5	PISTON ROD	1	KR0102
6	T-SEAL PISTON SEAL TP-035 (TSP-338)	1	KR0108
7	ADAPTER 9/16-18 ORB (M) X 9/16-18 ORB(M)	2	KHC0029
8	HOSE PUMP SINGLE 9" YELLOW 5FJ-6OR	1	KHPY-0009
9	STD CPL FD35(M) X 9/16 ORB(F) (6OR GOLD)	2	KHC002
10	M5X0.8-16 FLAT HEAD CAP SCREW	3	VTM5B0.8FH16
11	WEAR PLATE	1	KR0104
12	CYLINDER BODY	1	KR0100
13	CIRCLE COTTER	2	U182
14	CARRYING STRAP	4	AY303
15	M6-1.0 X 12MM CONE POINT SOCKET SET SCREW	1	VTM6-1.0CP12
16	5/32 X 1-3/4 HD SPIROL PIN	2	VP156X1.75HD
17	3" SHIM PLATE	1	KR0107
18	2" SHIM PLATE	1	KR0106
19	5/32 X 7/8 HDP SPIROL PIN	1	V1900
20	1" SHIM PLATE	1	KR0105
21	DUST CAP	2	KHC006
22	SHOULDER STRAP	1	U150
23	HOSE PUMP 9" BLACK 5FJ-6OR	2	KHP0-0009

9.0 DRAWINGS AND PARTS LISTS



Remote Manifold			
ITEM	DESCRIPTION	QTY	PART #
1	STD CPL FD35(M) X 9/16 ORB(F) (6OR GOLD)	3	KHC002
2	HOSE PUMP SINGLE 9" BLK 5FJ-6OR	3	KHP0-0009
3	ADAPTER 9/16-18 ORB (M) X 9/16-18 ORB(M)	4	KHC0029
4	REMOTE MANIFOLD	1	KV0006
5	HANDLE TOP	1	XX625
6	STD CPLG FD35(F) X 9/16 ORB(F) (6OR)	5	KHC003
7	M6-1 X 25 MM SOCKET HEAD CAP SCREW	4	VTM6C1.0SH25
8	3/8-16 X 1-1/2 SOCKET HEAD CAP SCREW	1	VT37-16SH1.5
9	BALL 4MM GRADE 25 CHROME	1	VB4MMCH
10	M5-0.8 X 8MM SOCKET SET SCREW	1	VTM5G0.8SS8
11	HOSE ASSY TWIN 120" YEL-BLK 6OR-6OR	1	KHE0Y-0120
12	HOSE PUMP 9" YELLOW 5FJ-6OR	2	KHPY-0009
13	DUST CAP	8	KHC006

10.0 TROUBLE SHOOTING GUIDE

PROBLEM	SOLUTION
Lifting Jack Does Not Extend	Check to see that hoses are properly connected. Check hydraulic fluid level in power unit reservoir. Check to see that the power unit is running. Check to see that the line is charged.
Tool lacks power or speed	Check hydraulic fluid level in power unit reservoir.
Tool lacks power or speed	Check tightness of hose fittings. Replace damaged hoses.

11.0 GENERAL MAINTENANCE AND STORAGE

1. Always store the tool in a clean dry space.
2. Never store a tool under pressure.
3. Store jacks in a slightly extended position.

After each use:

1. Check to see that important tool markings are legible.
Contact your local dealer or AMKUS Rescue Systems for replacement labels.
2. Wipe tool, hoses, fittings and couplings clean (see routine maintenance for hoses and couplings).
3. Inspect the tool, hoses, fittings and couplings after each use for damage, leakage and excessive wear.
4. If damage or excessive wear is noticed, do not use the tool; contact your local dealer or AMKUS Rescue Systems.

12.0 PARTS, SERVICE AND TECHNICAL INFORMATION

Parts, service and technical information may be obtained from your local AMKUS dealer, or by contacting AMKUS Rescue Systems.