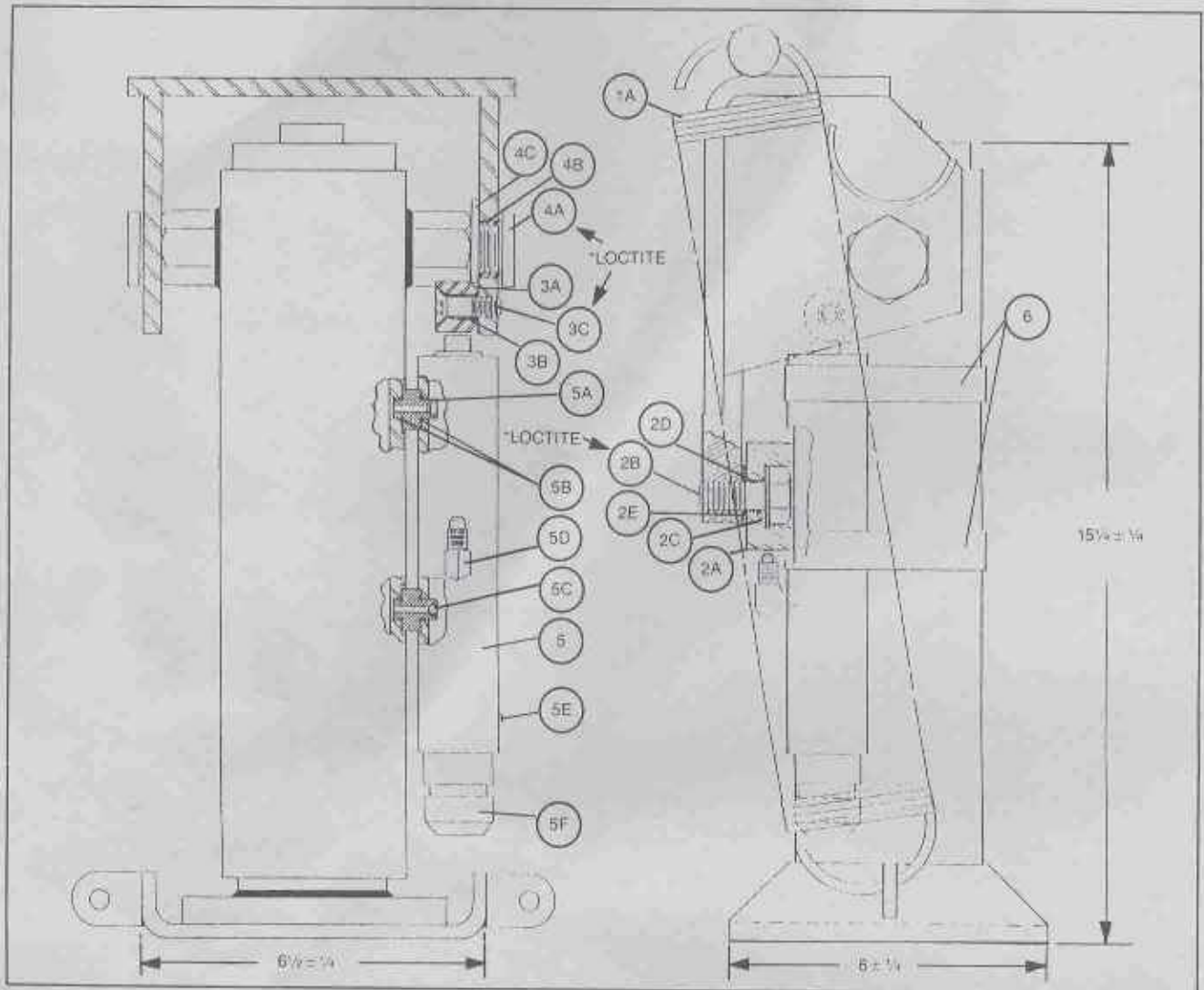


EXPLODED VIEW/PARTS LIST

MANUAL HYDRAULIC HEAVY-DUTY LEVELER
845041 Large Std. Leveler For Systems With Four Lever Control

EXPLODED VIEW/PARTS LIST



NO.	PART NO.	QTY.	DESCRIPTION
—	845041-R		Leveler STD/LG (Complete) (Replaces 845041)
1	845112-R	1	Spring Kit 2 3/4 × 13 1/2
1A		2	Spring 2 3/4 × 13 1/2
2	845115-R	1	Stop Kit 2" DIA
2A		1	Bumper Urethane 2" OD
2B		1	Hex Capscrew 1/2-13 × 1 1/4
2C		1	Washer Structural 1/2"
2D		1	Spacer 3/8 OD
2E		1	Washer Flat 1/2"
3	845113-R	1	Roller Kit 1" OD
3A		1	Roller 1"
3B		1	Bushing Brass 1/2 OD
3C		1	Flat Capscrew 3/8-16 × 1 1/4
4	845114-R	1	Pivot Bolt Kit 7/8 Hex
4A		2	Hex Capscrew 7/8" Special
4B		2	Bushing 1 1/2 OD Plated
4C		1	Washer 7/8 SAE 1 1/2 OD (Used on actuator side or ...)

NO.	PART NO.	QTY.	DESCRIPTION
5	845060-R	1	Actuator STD/LG
5A		2	Cylinder Port Open
5B		4	O Ring
5C		1	Steel Ball 3/16 DIA GR 25 (Used in Lower Port Only)
5D		1	4-CTX-S Male Elbow
5E		1	Set Screw #10-24 × 3/16
5F		1	End Plug Actuator
5D	143427-R	1	4-CTX-S Male Elbow
6	143439-R	2	Clamp Band W/T Bolt (2 Clamps Per 143439-R)

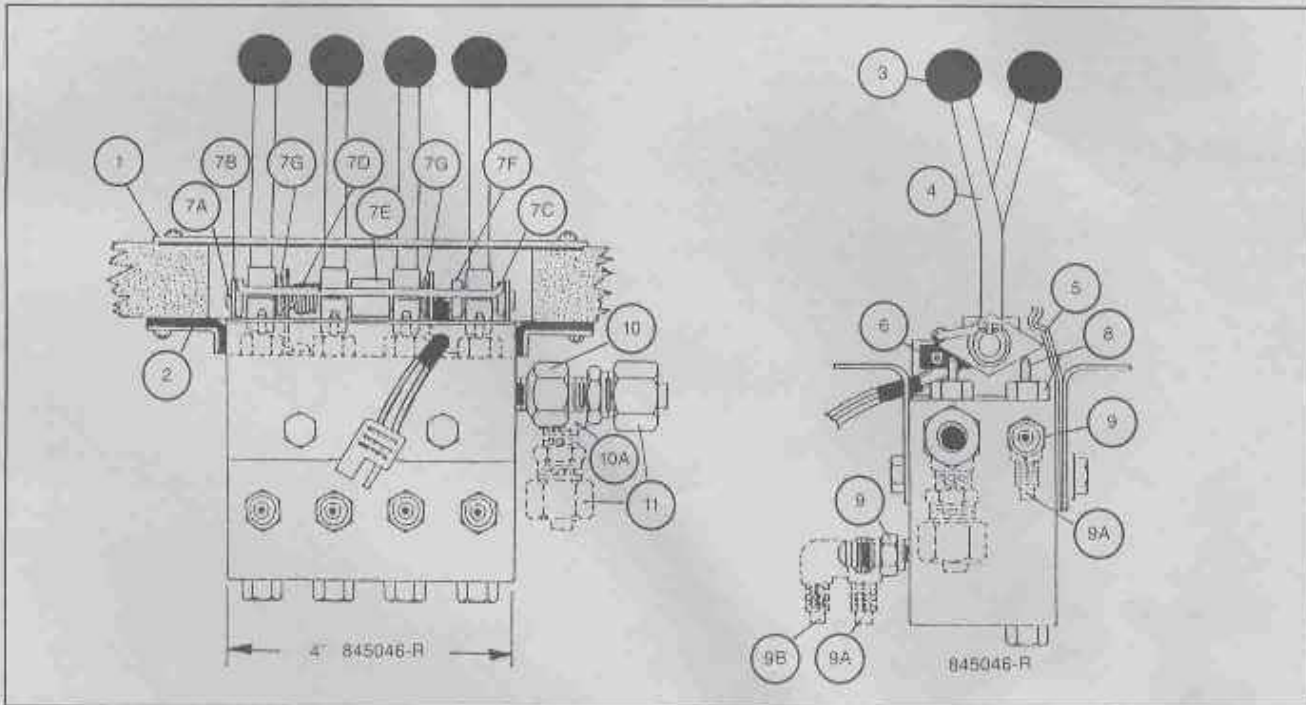
Indented items are included with preceding item.
*Apply a thread locking adhesive such as Loctite #271, 277, 242 or 569.



EXPLODED VIEW/PARTS LIST

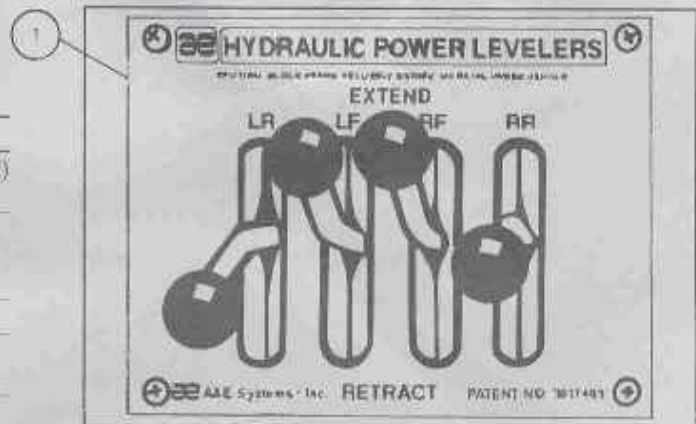
STANDARD MANUAL HYDRAULIC CONTROL VALVE ASSEMBLY Four Lever Control Valve With 4" Body

EXPLODED VIEW/PARTS LIST



REPLACEMENT VALVES AND ACCESSORIES

ITEM	PART NO.	DESCRIPTION
—	845046-R	Valve Assy. 4" (Excluding Items 1 & 2) (All Straight Fittings)
—	845159-R	Valve 90° Fitting Kit (Fittings For Above Valves To Direct All Lines Downward.)
1	845045-R	A&E Bezel Plate W/Gasket
2	845047-R	End Shield Kit With Seal 845047-R Includes 2 End Shields)



VALVE REPAIR PARTS

NO.	PART NO.	QTY.	DESCRIPTION
3	143442-R	4	Black Knob (4 Knobs Per 143442-R)
4	845165-R	4	Valve Handle With Knob (1 Handle Per 845165-R)
5	745034-R	2	Detent Plate (2 Plates Per 745034-R)
6	845079-R	1	Switch Kit With Brkt.
7	845164-R	1	Valve Pivot Kit
	7A	1	Pivot Rod
	7B	2	Snap Ring
	7C	1	Switch Activating Rod
	7D	1	Spring Torsion
	7E	1	Spacer .59
	7F	1	Spacer .15
	7G	2	Spacer .10

NO.	PART NO.	QTY.	DESCRIPTION
8	845080-R	8	Plunger And Guide (8 Plunger And Guide Per 845080-R)
9	143428-R	5	4-FTX-S Male Connector (1/8 NPT x 7/16-20 For 1/4 HYD Line) (1 Fitting Per 143428-R)
10	143429-R	1	222P-4-2 1/8 x 1/4 Adapter (1/8 NPT Male x 1/4 NPT Female)
11	143430-R	1	68 NTA-8-4 1/2 Tube x 1/4 NPT (1/4 NPT x 1/2 OD Tube)

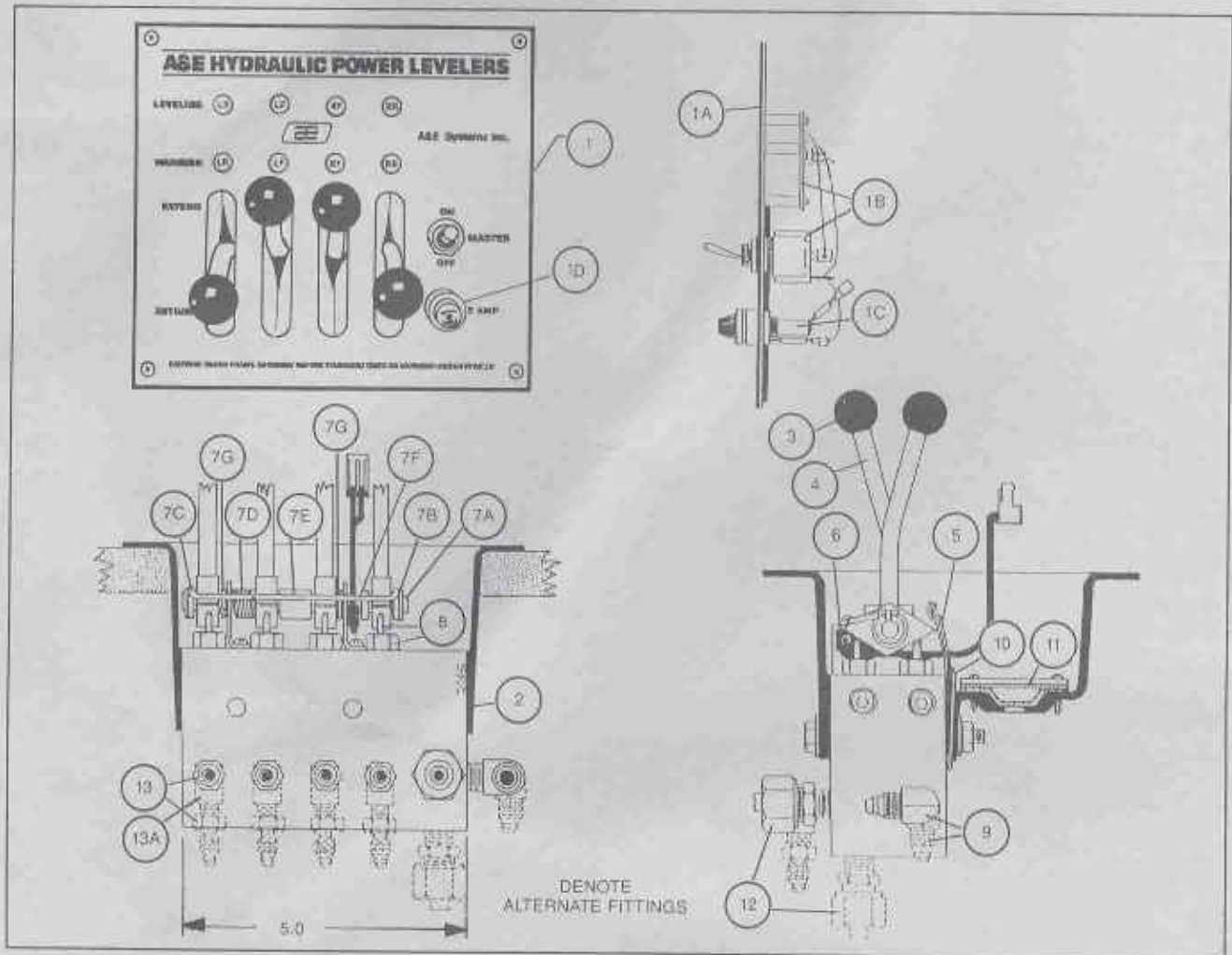
Indented items are included with preceding item.

EXPLODED VIEW/PARTS LIST

DELUXE MANUAL HYDRAULIC CONTROL VALVE ASSEMBLY

Four Lever Control Valve With Integral Light Plate

EXPLODED VIEW/PARTS LIST



NO.	PART NO.	QTY.	DESCRIPTION
—	845136		Deluxe Valve Assembly (Complete w/Sensor & Harness)
1	845149-R	1	Light Plate W/ Board
1A		1	Light Plate
1B		1	Circuit Board W/ SW
1C		1	Fuse Holder Black
1D		1	Fuse AGC 5
1D	101054-R	1	Fuse AGC 5 (5 Fuses Per 101054-R)
2	845148-R	1	Valve W/ Box STR Fitting (Does Not Include Item 1)
—	845159-R		Valve 90° Fitting Kit (Fittings For Above Valve To Direct All Lines Downward)
3	843442-R	4	Knob Black (4 Knobs Per 143442-R)
4	845165-R	4	Valve Handle W/ Knob (1 Handle Per 845165-R)
5	745634-R	2	Detent Plate (2 Plates Per 745634-R)
6	845152-R	1	Switch Kit
7	845164-R	1	Valve Pivot Kit

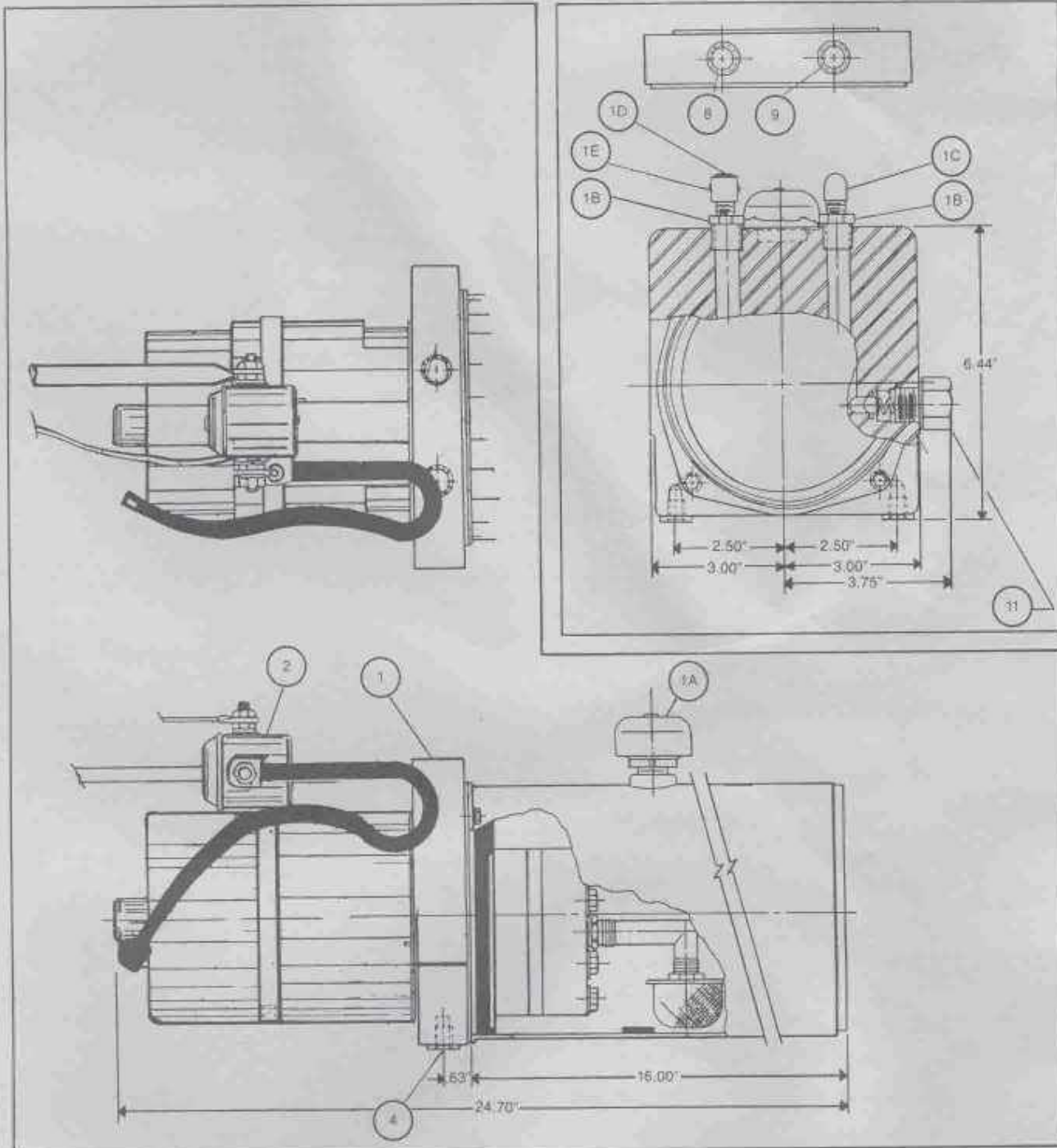
NO.	PART NO.	QTY.	DESCRIPTION
7A		1	Pivot Rod
7B		2	Snap Ring
7C		1	Switch Activating Rod
7D		1	Spring Torsion
7E		1	Spacer .59
7F		1	Spacer .15
7G		2	Spacer .10
8	845080-R	8	Plunger And Guide (8 Plunger And Guide Per 845080-R)
9	143427-R	1	4-CTX-S Male Elbow (1/4 NPT x 7/16-20 For 1/4 Line)
10		1	Backing Plate
11		1	Hole Cover W/ Seal
12	143430-R	1	68NTA-B-4 1/2 Tube x 1/4 NPT (1/4 NPT x 1/2 OD Tube)
13	143428-R	4	4-FTX-S Male Connector (1/4 NPT x 7/16-20 For 1/4 HYD Line) (1 Fitting Per 143428-R)

Indented items are included with preceding item.

EXPLODED VIEW/PARTS LIST

MANUAL HYDRAULICS POWER UNIT ASSEMBLY

EXPLODED VIEW/PARTS LIST



NO.	PART NO.	QTY.	DESCRIPTION
—	—	1	1.5 Gal. Power Unit Ass'y.
1	845161-R	1	Pump/Motor Ass'y. BMS/1.5 (Less Solenoid)
—	845163-R	1	Bottom/Side Mount Kit (Converts Bottom Mount Pump To Side Mount)
1A	143437-R	1	Breather Cap
1B*	143433-R	2	Reducer, 1/2 x 1/4 PTR-S
1C*	143431-R	1	90° Elbow, 4-4 CFX-S

NO.	PART NO.	QTY.	DESCRIPTION
1D*	143432-R	1	90° Brass Elbow, 2202 P-4-4
1E*	143430-R	1	Connector, 1/2 Tube x 1/4 NPT
2	845160-R	1	Solenoid Kit (Includes Solenoid, Clamp And Cable)
2A	845062-R	1	Solenoid (Only)

Indented items are included with preceding item.

*These fittings available as Pump Fitting Kit 845006.



EXPLODED VIEW/PARTS LIST

EXPLODED VIEW/PARTS LIST

MANUAL HYDRAULIC ACCESSORIES

PART NO.	DESCRIPTION	USE
845071	Air Bag Dump Kit (4 point)	Use with manual or automatic leveling systems to dump air bags prior to leveling vehicle.
845158	Air Bag Dump Kit (3 point)	
845074	Leveler Pad 12" (for 9000 lb.)	Use appropriate size under leveler foot to increase load bearing area (instead of wooden block, etc.)
845106	Leveler Pad 14" (for 16000 lb.)	
845107	Leveler Pad 16" (for 24000 lb.)	
845075	Adapter (Large to Small Leveler)	Use on certain Gillig chassis to convert built-in leveler mounting to small leveler dimensions.
845076	Chevy (Rear) Bolt-on Bracket Kit	
845130	John Deere RV Model 1200 (Long) (Front & Rear) Bolt-on Bracket Kit	Use to ease mounting of levelers to John Deere 1200 chassis.
845140	John Deere RV Model 1000 (Short) (Front & Rear) Bolt-on Bracket Kit	Use to ease mounting of levelers to John Deere 1000 chassis.
845147	Henschen Suspension (Rear) Bolt-on Bracket Kit	Use to ease mounting of levelers to Henschen Suspension.

EXPLODED VIEW/PARTS LIST

MANUAL HYDRAULICS LEVELEZE LIGHT SYSTEM

PART NO.	DESCRIPTION
845003	Levelaze Light System (complete)
845049-R	Levelaze Light Box Assembly
101143 -R**	Short Warning Switch (for Standard & High-Profile Levelers)
143349-R**	Small Band Clamp (H-40) (2 per 143349-R)
845007-R	Hardware Kit for Levelaze System
845048-R	Sensing Unit 21'
101263 -R**	Long Warning Switch (for Heavy-Duty Levelers)
143424 -R**	Mounting Clamp for Long Warning Switch (2 per 143424-R)
101264 -R*	15A Fuse (AGC-15) (5 per 101264-R)
101252 -R*	SPST Toggle Switch (Microswitch HTS-95-2 or equivalent)

*Denotes Standard Hardware Items (Locally Available)

**Also used on Deluxe Systems

EXPLODED VIEW/PARTS LIST

MANUAL HYDRAULICS HARDWARE KITS & MISCELLANEOUS PARTS

PART NO.	DESCRIPTION
845008-R	Mounting Hardware Kit for Standard Manual Hydraulics Part No. 945001
845082-R	Mounting Hardware Kit for Heavy Duty Manual Hardware Part No. 945002
845006	Pump Fitting Kit
745015-R	Pump Mounting Bracket
745013-R	Standard Leveler Mounting Plate (2 per 745013-R)
745014-R	Heavy Duty Leveler Mounting Plate (2 per 745014-R)

TROUBLE-SHOOTING GUIDE

MANUAL HYDRAULICS

PRIOR TO TROUBLE-SHOOTING

As with any DC unit, it is imperative that the battery system be in proper working order and that all batteries within that system be charged properly. This system can have an amp draw of up to 300 amps. Thus the integrity of the battery is mandated to be at least 13 volts. If the battery on the system you are trouble-shooting is less than 13 volts, recharge as necessary before proceeding. This system will not operate from a converter or battery charger. Its energy source **MUST** be a battery.

Also make sure the reservoir is full of oil. It is important that the four leveling units are in the retracted position before checking the oil level. To check simply remove the breather plug from the top of the hydraulic oil reservoir. The oil level should be approximately one inch below the top of the reservoir. Fill as necessary using oil as called out in specification section.

WARNING: NEVER USE brake fluid or hydraulic jack oil as these fluids will cause extensive damage to the neoprene seals located throughout the system. When reinstalling the breather plug take care not to cross thread the plastic threads of the plug.

Take a few minutes to review the electrical circuit diagram. There are ground wires from virtually every component in this system. All components must be properly grounded at all times as an OPEN circuit can occur just as easily on the negative side as the positive side. If other components on the coach do not work as well, chances are the problem is in the battery system and not within the hydraulic leveling system.

The following is a list of troubles and possible causes.

1. Hydraulic pump activates, but the leveling units will not extend.
 - a. Control valve lever not in full "on" position
 - b. Oil supply low in reservoir
 - c. Relief valve stuck in "open" position
 - d. Broken hydraulic line
2. Leveling unit will not retract completely
 - a. Bent linkage
 - b. Leveler clogged with mud or ice
 - c. Scored rod
 - d. Valve plunger not completely depressed by valve handles (see detent plate adjustment)
3. Hydraulic pump activates without use of control valve handles
 - a. Short in valve assembly
 - b. Microswitch out of adjustment
 - c. Broken spring on pivot rod
4. Ignition switch on, but no power to hydraulic pump
 - a. Faulty wire or connection at ignition wire
 - b. Bad microswitch
 - c. Blown fuse
5. Unit is extended but not vertical
 - a. Vertical adjustment
 - b. Leveler clogged with mud or ice

TWO-YEAR LIMITED WARRANTY

A&E Systems, Inc. warrants this RV Leveling System to the original owner for a period of two (2) years from the date of purchase against defective workmanship and parts, provided:

1. It was installed according to instructions.
2. A proof of purchase is presented.
3. The Warranty Registration Card has been completed and mailed to A&E Systems within 15 days after purchase.
4. The damaged unit is returned to A&E Systems transportation prepaid.
5. Hoses, couplings and/or swaging tools are supplied by A&E. Use of any hose, other than that supplied, A&E Part No. 143344 (which carries the marking HWH04) or the use of couplings, other than A&E Part No. 143345 or swaging tools, other than A&E Part No. 845036 will Void the warranty.

Unit MUST have a return authorization number before factory will accept it. Please write or call A&E Systems for a return authorization number. When return authorization is given, send the defective unit to factory prepaid, along with proof of purchase date. Your unit will be repaired or replaced at A&E Systems' option, and returned to you freight prepaid.

Your RV Leveling System is not warranted against abuse or misuse such as:

1. Immersion of working parts in water.
2. Moving the vehicle without retracting the levelers.
3. Improper installation, operation or service as per A&E instructions.

NOTE: A&E Systems will pay reasonable labor and freight charges on authorized parts replacement provided notice of the defect is received within 12 months (for labor) or 90 days (for freight) from date of purchase. This is a Limited Warranty as defined by federal law. Liability for indirect or consequential damages for any incidental expenses is excluded. A&E Systems shall be liable only to the extent and for the time expressed in this warranty and no further. This warranty is non-transferable.
