

PARTS & SERVICE NEWS

REF NO.	AA04168
DATE	October 19, 2004

SUBJECT: AIR CONDITIONING SYSTEM ACCUMULATOR KITS

PURPOSE: To inform the field of air conditioning accumulator kits for improving compressor service life and system efficiency.

APPLICATION: Komatsu Electric Drive Dump Trucks:
 730E: 32530-32845, A30079-A30322;
 830E: 31320-32825, A30544-A30764;
 930E: 32604-32816, A30019, A30026-A30120;
 930E-2: A30012, A30098, A30100, A30121-A30293, A30295-A30303;
 930E-2SE: A30171, A30183
 930E-3: A30294, A30304-A30346;
 930E-3SE: A30171, A30318, A30319 & A30322;
 Komatsu Mechanical Drive Dump Trucks:
 530M: A30001-A30038, 32628;
 HD1500-5: A30039 & Up

FAILURE CODE: 8700Z9

DESCRIPTION:

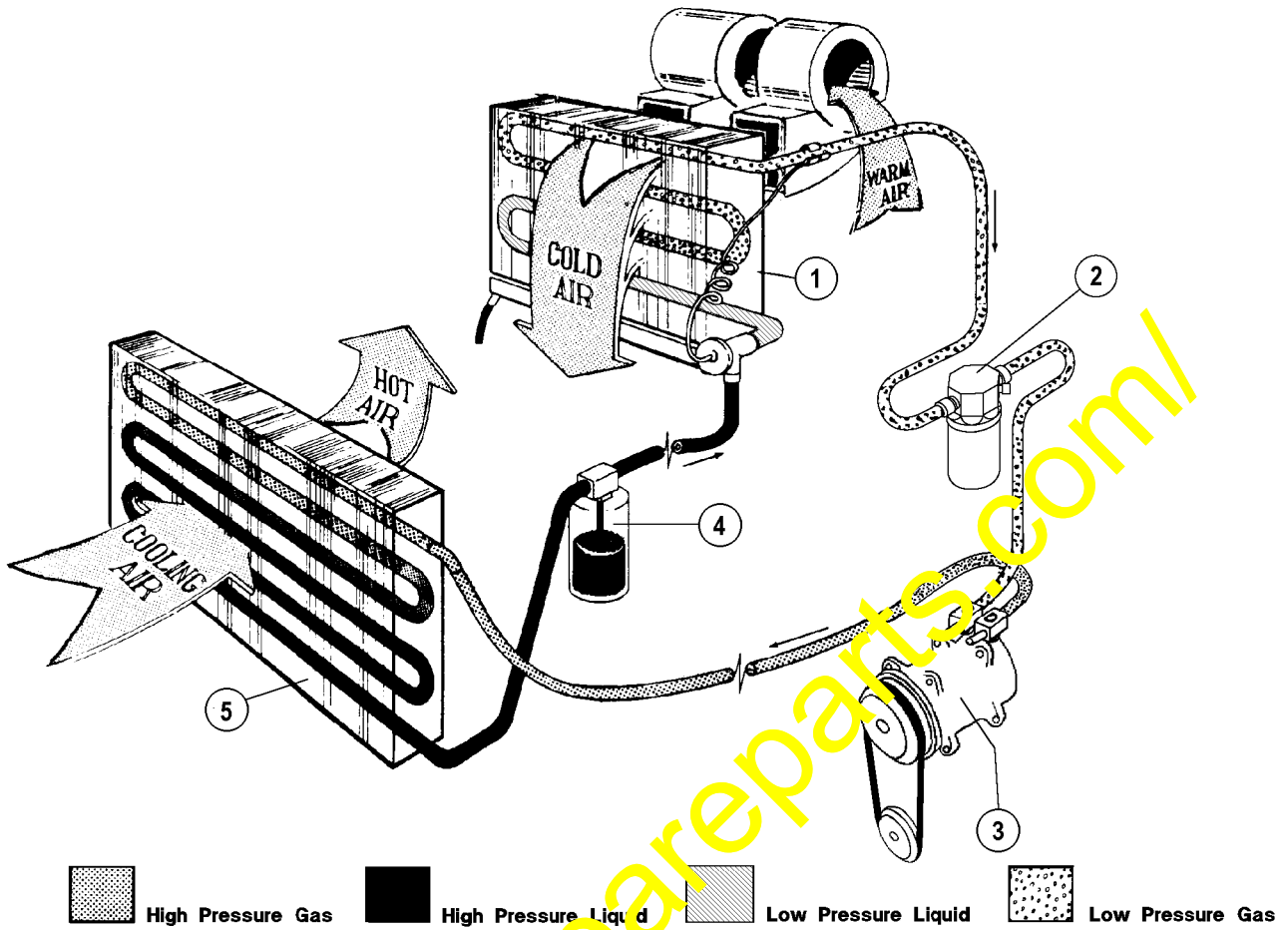
Air conditioning system compressors are susceptible to liquid slugging during system charging and operation. Slugging occurs when the compressor tries to pump liquid refrigerant through the system, as opposed to vaporized refrigerant. Because the compressor is not designed to pump a liquid, it will be damaged.

A kit containing an accumulator has been developed to help prevent liquid slugging from occurring. The kit contains all of the necessary parts for making the conversion. The accumulator (2, Figure 1) is to be installed downstream from the evaporator (1), and upstream of the compressor (3). The accumulator functions as a sump for liquid refrigerant in the system. Because of its design, the accumulator only allows vaporized refrigerant to return to the compressor, preventing compressor slugging from occurring. Desiccant is located at the bottom of the accumulators to remove moisture that is trapped in the system. Additionally, the low side service port is located on the accumulator.

Other components included in the kit are a new compressor with a dust shield and a receiver-drier. The dust shield protects the front seal area of the compressor, preventing seal damage and contaminant intrusion. Receiver-driers must be replaced each time the system is opened to the atmosphere. Refer to Tables 1-4 for the contents of each kit. Contents vary due to differences in truck models. Installation drawings containing instructions are included in each kit.

▲ IMPORTANT ▲

As stated earlier, receiver-driers must be replaced each time the system is opened. After adding the accumulator to the air conditioning system, both receiver-driers and accumulators must be replaced each time the system is opened.



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FIGURE 1. AIR CONDITIONING SYSTEM W/ ACCUMULATOR

- 1. Evaporator
- 2. Accumulator
- 3. Compressor
- 4. Receiver-Drier
- 5. Condenser

NOTE: The following kits were designed for R-134a air conditioning systems and current Cummins/ Komatsu engines. Some hose lengths and compressors/pulleys may not match other engine models. Direct any questions concerning compatibility to your customer support manager. Specifications for hose fabrication can be found in Parts & Service News, AA04017A, Improving Air Conditioning Efficiency.

TABLE 1. 930E A/C Accumulator Kit (XK0335)		
Part Number	Description	Quantity
EL3605	Drawing, Air Conditioner Kit	1
EL3602	Mounting Structure, Accumulator	1
HA8065	Hose	1
HA8066	Hose	1
MM0042	Capscrew	12
MM0056	Capscrew	1
MM0178	Nut	12
MM0461	Flatwasher	12
MM0471	Lockwasher	12
PB8689	Receiver-Drier	1
PC1816	Compressor (with dust shield)	1
PC1830	Accumulator	1
PC1831	Fitting	1
WA1056	Clamp, T-Bolt	2
WA1731	O-Ring	2
WA1732	O-Ring	1
WA1733	O-Ring	2
WB1027	O-Ring	2
WB3093	Clamp, Cushion	12

TABLE 2. 830E A/C Accumulator Kit (YK0339)		
Part Number	Description	Quantity
EL3622	Drawing, Air Conditioner Kit	1
EL3602	Mounting Structure, Accumulator	1
HA8078	Hose	1
HA8079	Hose	1
MM0042	Capscrew	14
MM0056	Capscrew	1
MM0178	Nut	18
MM0461	Flatwasher	19
MM0471	Lockwasher	17
PB8689	Receiver-Drier	1
PC1816	Compressor (with dust shield)	1
PC1830	Accumulator	1
PC1831	Fitting	1
WA1056	Clamp, T-Bolt	2
WA1731	O-Ring	2
WA1732	O-Ring	1
WA1733	O-Ring	2
WB1027	O-Ring	2
WB1304	Clamp, Cushion	3
WB3093	Clamp, Cushion	14

TABLE 3. 730E A/C Accumulator Kit (XK0341)		
Part Number	Description	Quantity
EL3623	Drawing, Air Conditioner Kit	1
EL3602	Mounting Structure, Accumulator	1
HA8070	Hose	1
HA8071	Hose	1
MM0042	Capscrew	14
MM0056	Capscrew	1
MM0178	Nut	14
MM0461	Flatwasher	14
MM0471	Lockwasher	14
PB8689	Receiver-Drier	1
PC0556	V-Belt	1
PC1830	Accumulator	1
PC1831	Fitting	1
PC1848	Compressor (with dust shield)	1
WA1056	Clamp, T-Bolt	2
WA1731	O-Ring	2
WA1732	O-Ring	1
WA1733	O-Ring	2
WB1027	O-Ring	2
WB3093	Clamp, Cushion	14

TABLE 4. 530M & HD1500-5 A/C Accumulator Kit (XK0345)		
Part Number	Description	Quantity
EL3624	Drawing, Air Conditioner Kit	1
0157221012	Seat	4
EK0193	Bracket	1
EL3516	Cover, Accumulator	1
EL3519	Mount, Accumulator	1
EL3602	Mounting Structure, Accumulator	1
HA8080	Hose	1
HA8081	Hose	1
HA8082	Hose	1
HA8083	Hose	1
MM0035	Capscrew	8
MM0042	Capscrew	14
MM0178	Nut	14
MM0461	Flatwasher	14
MM0471	Lockwasher	14
PB8689	Receiver-Drier	1
PC1816	Compressor (with dust shield)	1
PC1830	Accumulator	1
PC1831	Fitting	1
WA1056	Clamp, T-Bolt	2
WA1731	O-Ring	4
WA1732	O-Ring	1
WA1733	O-Ring	2
WB1027	O-Ring	2
WB3093	Clamp, Cushion	14