Section 240
ELECTRICAL EQUIPMENT

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Group 16—Electrical Diagrams GPT w/o SGB (S.N. 618 700L-)

Parts designations in Electrical Circuit and Wiring Diagrams 240-16-1

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SPECIFICATIONS

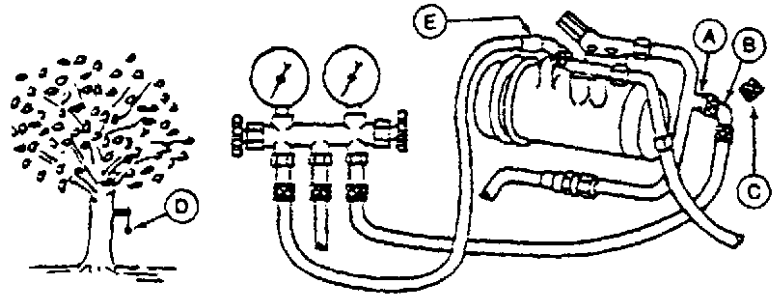
Item	Measurement	Specification
Refrigerant R134a	Capacity	4 lb (1.8 kg)
Compressor pressure at engine speed of 800 to 2000 rpm.		
SUCTION	Pressure	700 to 2100 kPa, (7 to 21 bar), (100 to 300 psi)
DISCHARGE	Pressure	7 to 240 kPa, (0.07 to 2.4 bar), (1 to 35 psi)
Compressor relief valve opens at	Pressure	3000 kPa, (30 bar), (440 psi)
Full charge of oil (new or service exchange compressor, PAG-OIL)		312 cm^3 (11 fl.oz.)
Compressor clutch coil		
Current draw (at 12 V)		2.5 amps
Resistance at 27°C (80°F)		3 ohms
Temperature control switch setting (evaporator refrigerant temperature)		
low limit	Contact points open	-1°C (30°F)
high limit	Contact points close	+3°C (37°F)

LX,29010 009460-19-01MAY96

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1 SYSTEM STATIC PRESSURE CHECK



RW16343 -UN-27APR89

Install Manifold Pressure Gauge Assembly as follows:

Close pressure gauge valves. Remove cap (C) from discharge fitting (A) and install high pressure hose (B). Connect low pressure hose to suction fitting (E) on compressor.

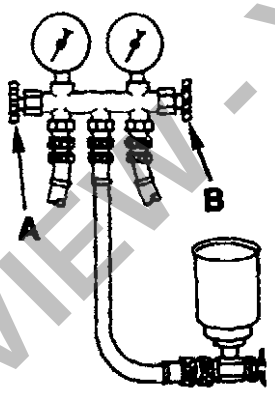
Put a thermometer (D) in shade

NOTE: Purge air from hoses

GO TO 2

LX,29005 009440-19-01MAY96

2



LX014019 -UN-06AUG96

Compressor "OFF". Connect R134a can valve to gauge manifold as shown.

"OPEN" low and high side valves (A and B) to stabilize pressures.

Compare gauge readings to chart.

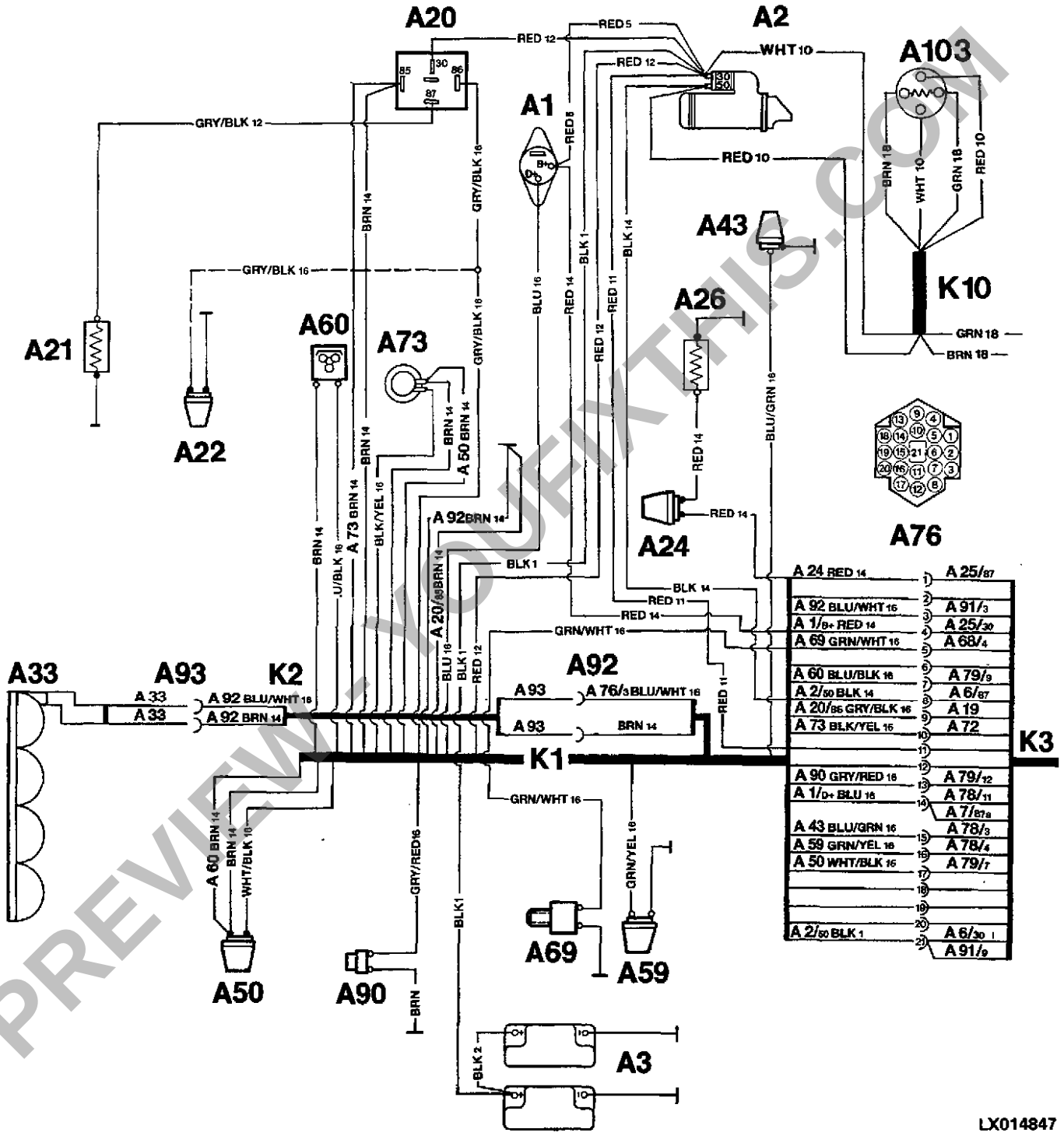
CAUTION: "CLOSE" high and low side valves after pressures stabilize.

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WIRING DIAGRAM - ENGINE (UP TO TRACTOR SERIAL NO. 637 100L)



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Temp.		Pressure		
°F	°C	kPa	bar	psi
60	15	390	3.90	56
65	18	435	4.35	63
70	21	490	4.90	71
75	24	540	5.40	79
80	27	600	6.00	88
85	29	650	6.50	94
90	32	700	7.00	103
95	35	800	8.00	114
100	38	850	8.50	125
105	41	950	9.50	136
110	43	1000	10.00	144
115	46	1100	11.00	157

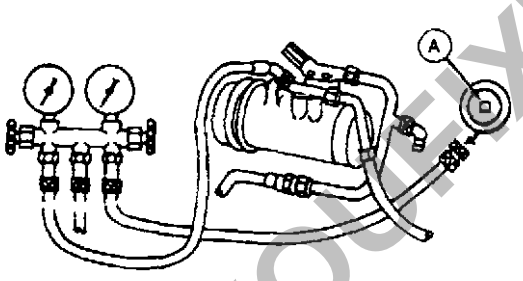
OK: GO TO ❺

No pressure: GO TO ❸

Low pressure: GO TO ❹

LX,29010 009459-19-01MAY96

❸



RW16344 -UN-27APR89

Check test hoses for missing or damaged schrader valve depressor (A).

Repair and reconnect hoses.

Check gauges for pressure.

Compare reading to chart in step 2.

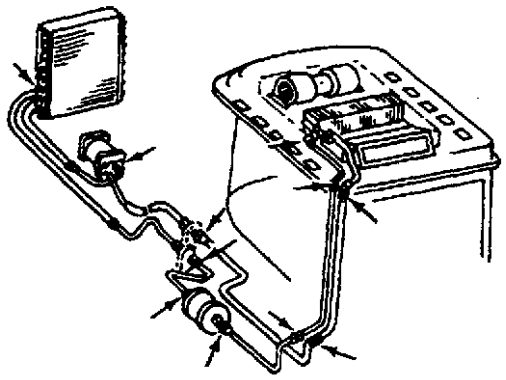
OK: GO TO ❷

NOT OK: GO TO ❹

LX,29010 009463-19-01MAY96

❹

Compressor "OFF" Purge air from charging hose. "OPEN" low and high side valves.



RW16785 -UN-27APR89

Open R134a can valve and add refrigerant until pressure stabilizes.

⚠ **CAUTION: Close manifold valves before starting compressor.**

Check all components, joints and line connections for refrigerant leakage with a leakage detector.

NO LEAKS: GO TO ❺

LEAKS: Discharging, evacuating and charging may be necessary.

See TECHNICAL MANUAL, 90-05.

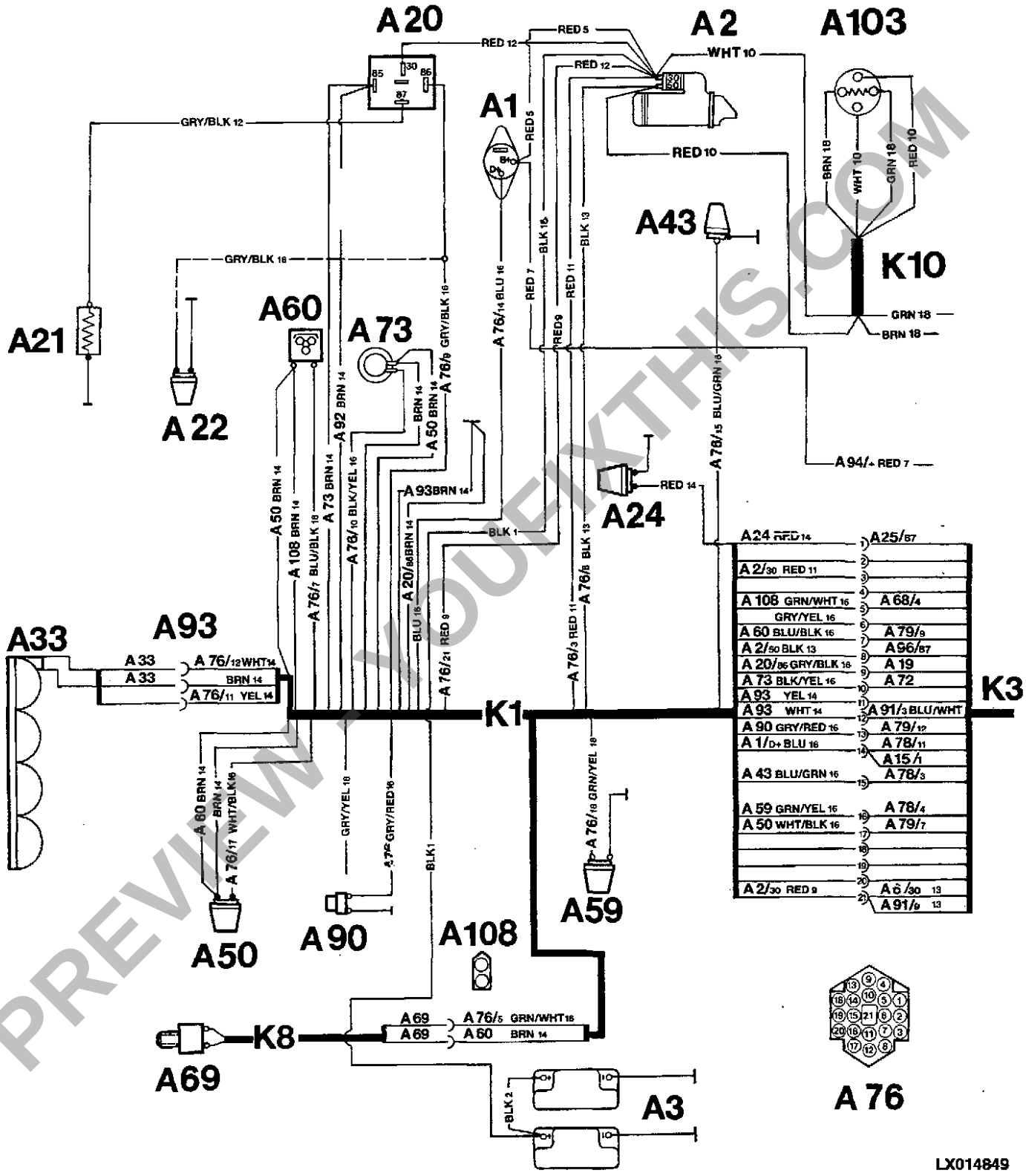
Then GO TO ❶

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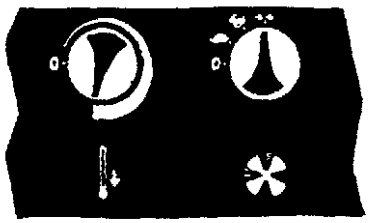
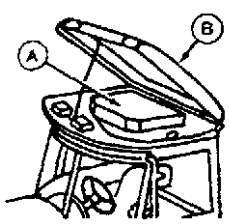
WIRING DIAGRAM - ENGINE (FROM TRACTOR SERIAL NO. 637 101L TO NO. 769 019L)



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5 Ⓐ **TEMPERATURE CONTROL SWITCH CHECK**	 LX014702 -UN-08AUG96	Key switch ON. Engine at 2000 rpm. Blower switch at HIGH. Temp. control switch at MAXIMUM cooling. SGB door and windows CLOSED. Operate system for 10 minutes. Observe time compressor clutch is on. SPEC: Below 85°F (29°C) Minimum cycle time 30 seconds. *NOTE: The clutch may fail to cycle when ambient temperature is above 85°F (29°C).*	Clutch on more than 30 sec. GO TO 8 Clutch on less than 30 sec. GO TO Ⓑ LX,29010 010174-19-01MAY96
Ⓑ **Causes of frequent clutch cycling are:**	• Blower motor inoperative • Fresh air and recirculating filters dirty • Evaporator dirty • Temperature control switch capillary tube incorrectly located in evaporator. • Temperature control switch temperature range set too cold, (first attempt capillary tube).		Correct condition. Then GO TO 5Ⓐ GO TO 6 LX,29010 009465-19-01MAY96
6	 RW16744 -UN-27APR89	Raise SGB roof (B). Remove pressurizer cover (A). *NOTE: Reinstall all roof and cover screws after testing or repair.*	**Continued on next page**

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Group 06—Air Conditioning System R134a

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SAFETY AT WORK

CAUTION: Certain basic safety regulations apply when dealing with air conditioning systems, and must be observed at all times. They are backed up by legislation covering safety precautions for air conditioning systems. The following excerpts are particularly important:

1. Air conditioning systems may be operated, serviced or repaired by authorized, trained personnel only.

2. Adolescents should not be allowed to carry out service work on air conditioning systems involving the discharge of Category 1 or 2 refrigerants, unless trade training of adolescents over 16 years old requires such work. In this case, the adolescent must be supervised by a trained adult.

3. Before repairing components carrying refrigerant, remove refrigerant as far as necessary to ensure that the work can be carried out safely.

4. Refrigerant should be extracted by suction and re-used. When refrigerant is discharged into the air, there is the danger of asphyxiation, especially if work is being performed in an inspection pit, since refrigerant is heavier than air and concentrates at the lowest level. Moreover, refrigerant is odorless and colorless, so small quantities emerging from a leak cannot be detected. In such a case, ensure that there is adequate ventilation at the place of work.

5. Smoking and naked flames are not permitted in enclosed spaces where refrigerant has been released. High temperatures cause chemical reactions in the refrigerant gas, and highly poisonous substances can form. If inhaled, these substances have serious effects on health.

6. High temperatures produced by welding and soldering cause very high pressures inside components of the air conditioning system, and these pressures may result in an explosion.

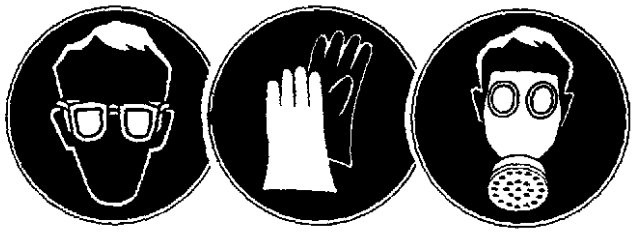
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SAFETY EQUIPMENT

This equipment consists of safety glasses, safety gloves and, where approriate, a breathing mask (if there is the risk of poisonous gases being released).

CAUTION: A breathing mask provides NO protection against lack of oxygen.

Prepare a 1% boric acid solution for rinsing the eyes and a solution consisting of 1 part essence of vinegar and 5 parts water for washing affected parts of the body. Also provide a first aid kit.



LX002150 -UN-26JUL94

LX002150

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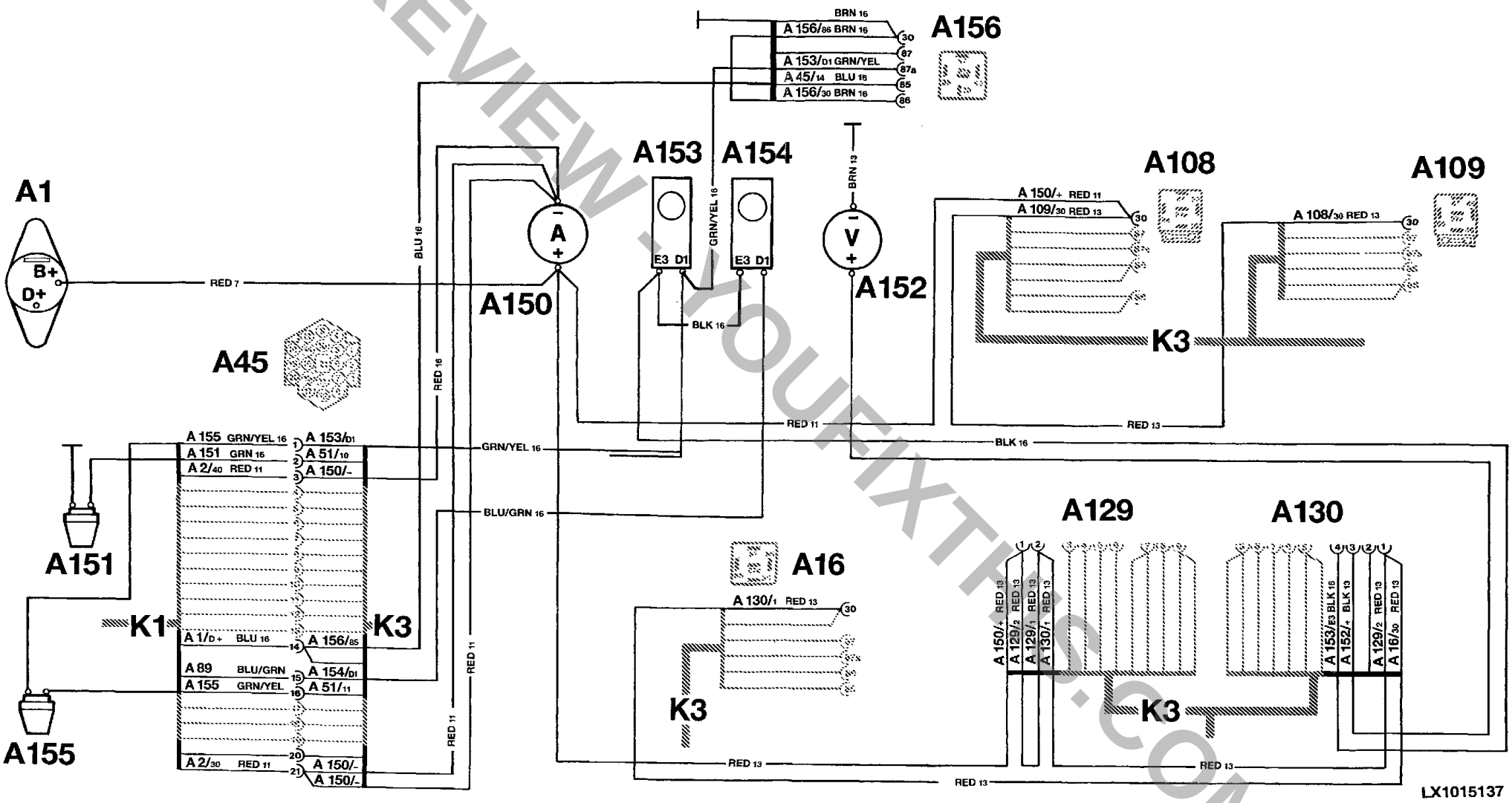
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WIRING DIAGRAM - AMMETER, VOLTMETER AND BUZZ LITE (2755 GP TRACTORS ONLY)



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