



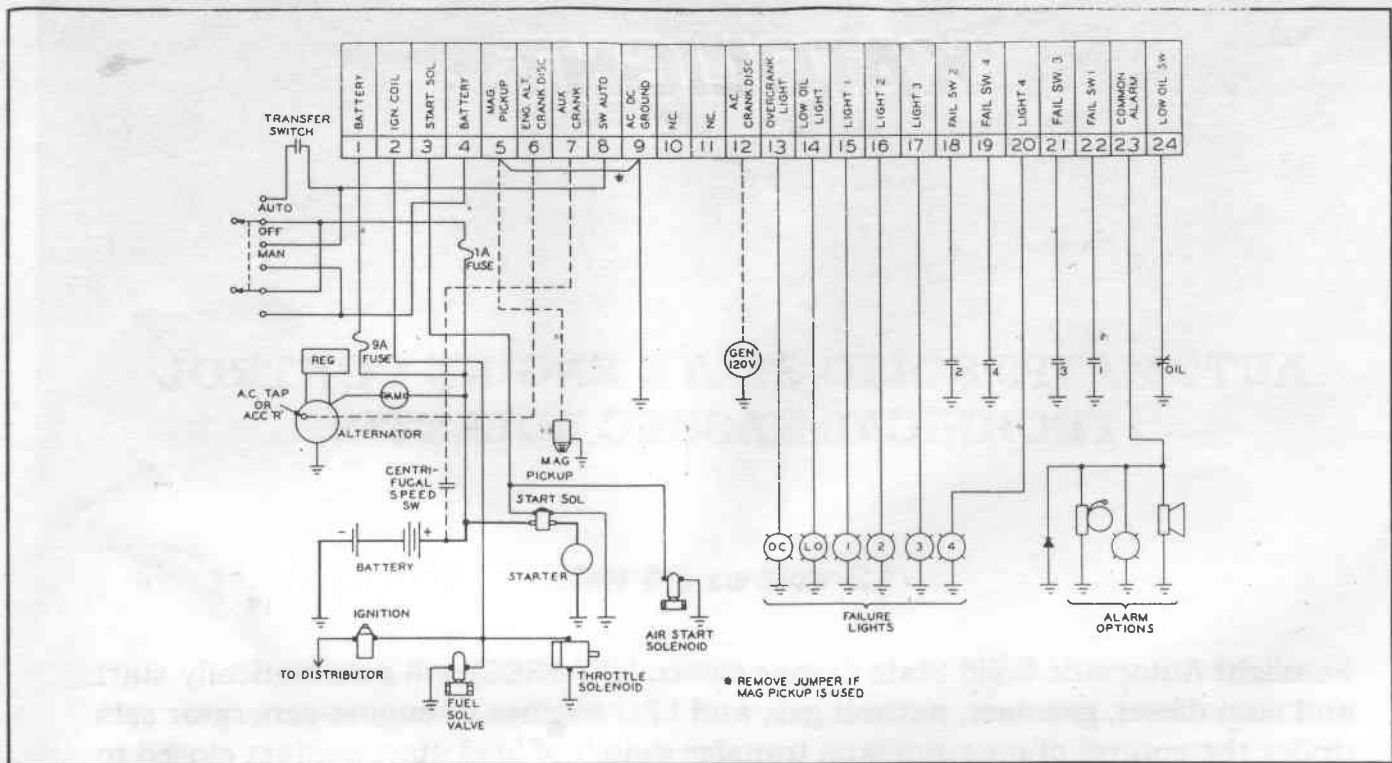
AUTOMATIC SOLID STATE ENGINE CONTROL TECHNICAL KASSEC BULLETIN

12 volt or 24 volt

Katolight Automatic Solid State Engine Control (KASSEC) will automatically start and stop diesel, gasoline, natural gas, and LPG engines or engine-generator sets under the control of an automatic transfer switch of load start contact closed to run. KASSEC is manufactured and tested to the highest quality control standards to ensure reliability.

Features:

- Consistent operation from -30°C (-22°F) to $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$) degrees.
- Reliable Katolight solid-state design.
- Accommodates requirements for NFPA-110 annunciator for hospital application.
- Compatibility with virtually all engines in today's market place.
- Ease of installation, simple mounting bracket.
- Barrier screw type terminals U.L. and C.S.A. Listed, with approved means for solderless connection of conductors.
- Adjustable seven (7) to fifty (50) second engine cranking circuit.
- Adjustable one (1) or five (5) crank, rest cycles.
- Adjustable seven (7) to fifty (50) second oil failure circuit.
- External alarm circuit for remote failure indication. Source 2 Amp Resistive.
- Available for 12 or 24 volt negative ground battery systems.
- Four (4) crank disconnects are available. (Mag pickup, engine alternator, 110 VAC, and auxiliary 12V DC or 24V DC.) The mag pickup and engine alternator crank disconnects are adjustable.
- Positive lockout circuits prohibit recharging while engine is running.
- First failure shutdown lockout.
- 8 Amp relay contacts for start and ignition system.
- Unit is sealed with a durable conformal coating.



Trouble Shooting Chart:

SYMPTOM	CHECK FOR	CAUSE
FAIL TO CRANK	Blown Fuse on Terminal #1	Shorted leads when hooking up or overloaded circuits. Replace fuse with 9 amp fuse.
	Low Battery	Defective battery. Charger not functioning. Corroded or loose battery connection.
	Voltage at Start Solenoid	If voltage is present at starter solenoid, may have defective starter or solenoid. If no voltage at starter solenoid, may have open leads to solenoid.
	Voltage present at Terminal #7	If present, check for voltage source. There should be no voltage present.
	Unused Terminal #5	Terminal #5 should be connected to the KASSEC Terminal #9, ground, when not in use or it may prevent unit from starting.
UNIT CRANKS, DOES NOT START	Failure lights	Unit will not crank if any failure lamps are on. Correct failure before trying to start.
	Fuel Supply	Empty fuel tank. Air in fuel lines. Wrong pressure on Natural Gas or LPG units.
UNIT WILL START THEN FAIL	Voltage on Terminal #2 while cranking	If present may have defective fuel valve, defective ignition system, or loose connection.
	Loss of Fuel	Empty fuel tank. Restricted fuel filter. Restricted, broken, or loose fuel line.
	Failure Lights	Overcrank light lit - Lost signal on Mag Pickup Crank Disconnect Terminal or lost signal on Auxiliary Crank Disconnect Terminal after unit started. Low Oil light lit - Low oil in crankcase. Oil pump failed. Defective pressure switch. High Water Temperature light lit - Low water level in radiator. Thermostat closed. Broken fan belt. Restricted flow through radiator. Ambient temperature too high. Defective temperature switch. Overspeed light lit - Lost governor control. Defective overspeed switch.
UNIT STARTS BUT STARTER DOES NOT DISENGAGE	Loose or Open connections	May have lost power to control or ignition system.
	Voltage on Terminal #3 after unit running	Signal must be present at either Terminal #5, 6, 7, or 12 after unit starts to operate crank disconnect of control.
	No voltage on Terminal #3 after unit is running	Starter drive could be hanging up or the solenoid on starter is not disengaging.