

Pow-R-Surge
BATTERIES

Eastpenn
CANADA

COMBINATION STARTING AND AUXILIARY POWER

ENGINEERED TO WITHSTAND DEMANDING CYCLE SERVICE



- ▶ Heavier, thicker plates for more power and longer life
- ▶ Specially formulated oxide for more power-per-pound and longer life
- ▶ Special dual insulated fiberglass separators lock paste to the plates for maximum power and longer life

COMMERCIAL DUAL PURPOSE BATTERIES

EAST PENN CANADA

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A SYSTEMS APPROACH ENGINEERED TO MEET THE RIGOROUS DEMANDS OF COMMERCIAL STARTING AND AUXILIARY POWER

- ▶ When to use dual purpose batteries is a common question in Class 8 tractor applications with fully loaded sleeper cabs. Newer commercial vehicles require more than reliable starting power. Many are being designed with a heavy complement of driver comfort options and an even heavier complement of sophisticated communication options (satellite uplinks, vehicle tracking and scheduling systems, EDI cellular phone, fax hook ups, on board computers, etc.).
- ▶ Starting batteries simply cannot deliver all of the starting power required... and hold up under the continuous deep cycle power drains required by all the new auxiliary equipment. To provide the necessary starting and auxiliary power, a "Battery Management System" approach is required. The benefit of a management system approach is longer and more reliable battery life.
- ▶ The at rest discharge value or what is referred as a "key off load" is predetermined at 5 amps or 40 amp-hours as the threshold to determine if starting or starting/deep cycle batteries are required. If this key off load is less than 5 amps we recommend that you use one of our starting batteries. The starting battery or batteries required needs to be determined by the cranking capacity needed for the particular engine and the number of batteries being installed.
- ▶ If the key off load exceeds 5 amps a battery management system approach is required. We recommend that you use four of our dual purpose starting/cycling batteries for this type of application (this is called a 4+0 system). This will allow the accessories (for example: a television, refrigerator, heater, interior lights etc.) to operate without jeopardizing the engine's starting ability and will maximize the life of the truck's batteries. (This system should also be equipped with a low voltage disconnect in the truck's electrical system which will shut down the sleeper accessory circuits at a pre-set voltage to prevent the batteries from becoming discharged to the point where they will not start the vehicle.)
- ▶ Here are some typical accessory item current loads and a realistic example of how this management system will work:

Typical Accessory Current Loads

Electric blanket	3.0 amps
Refrigerator	3.5 amps
Cooler	7.0 amps
Television	1.0 amp
Satellite	2.0 amps
Radio	1.0 amp
Dome light - low	0.5 amps
Dome light - high	1.3 amps

An Example of Capacity Required

Refrigerator	3.5 amps for 12 hrs (3.5 x 12)	42 Ah
Television	1.0 amp for 3 hrs (1 x 3)	3 Ah
Electric blanket	3.0 amps for 8 hrs (3 x 8)	24 Ah
Radio	1.0 amp for 2 hrs (1 x 2)	2 Ah
		<hr/>
		71 Ah

4+0 System Using the 7T31

- ▶ 100 Ah batteries
- ▶ 4 batteries
- ▶ Maximum recommended DOD 25%
- ▶ Ah per battery: 25
- ▶ 4 x 25 Ah = 100 Ah available

Therefore, there is ample Ah capacity available to meet this 71 Ah requirement

* depth of discharge

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