



## ENGINE GOVERNING SYSTEMS

PRODUCT  
INFORMATION  
BULLETIN

PIB4082

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# EAM103 BC LOAD SHARING INTERFACE

## DESCRIPTION

The EAM 103 from Governors America Corp. is an electronic interface device that allows the Barber Colman Dyna 2 Load Sharing units (types 80100, 80101, 80104, and 80105) to be operated with the GAC ESD5100 and ESD5200 Series Speed Control Units.

In installations where a GAC governed generator set is to be installed along with existing generators controlled by BC paralleling modules, and upgrading them with GAC paralleling equipment is not practical, the EAM103 can be used to match the output of the Dyna 2 system with the ESD speed control units.

The EAM103 is powered by the 24 V DC battery supply and supplies the DYNA 2 unit with +4 V and +8 V DC power. The output of the DYNA 2 is amplified, conditioned, and level shifted to match the speed control unit input. The output of the EAM103, Terminal N, is directly connected to the AUXiliary terminal of the speed control unit (Terminal N).

## OPERATION

The instructions for installing the Dyna 2 Load Sharing and Synchronizing system should be followed as specified in the appropriate literature. The installation instructions for the ESD 5100 and 5200 Series speed control units are detailed in publications PTI1000 and PTI1030. The EAM103 will translate the output signal from the Dyna 2 output to a signal of opposite sign for the speed control unit assuring positive response of the governor to the load correction.

## WIRING

The wiring for a typical generator set is partially shown in the Wiring Diagram. Attention should be given to connection of the signal ground references to Terminal G of the ESD speed control unit. Note that shielded cables are recommended for all input and output connections to the EAM103.

Caution should be observed to connect the terminals of the EAM103 directly to the terminals of the speed control unit as shown to avoid ground loops.

The only deviation to the BC connection diagram should be the connection of Terminals 13, 14, 15, and 16 to the GAC speed control unit instead of the BC unit.

## TESTING AND TROUBLESHOOTING

With 24 V DC battery voltage applied to Terminals F (+) and G (-) of the EAM103, measure the voltage at the following terminals:

13	0 V DC
14	4 V DC $\pm 0.1$
15	4 V DC $\pm 0.1$
16	8 V DC $\pm 0.2$
N	4 V DC $\pm 0.2$

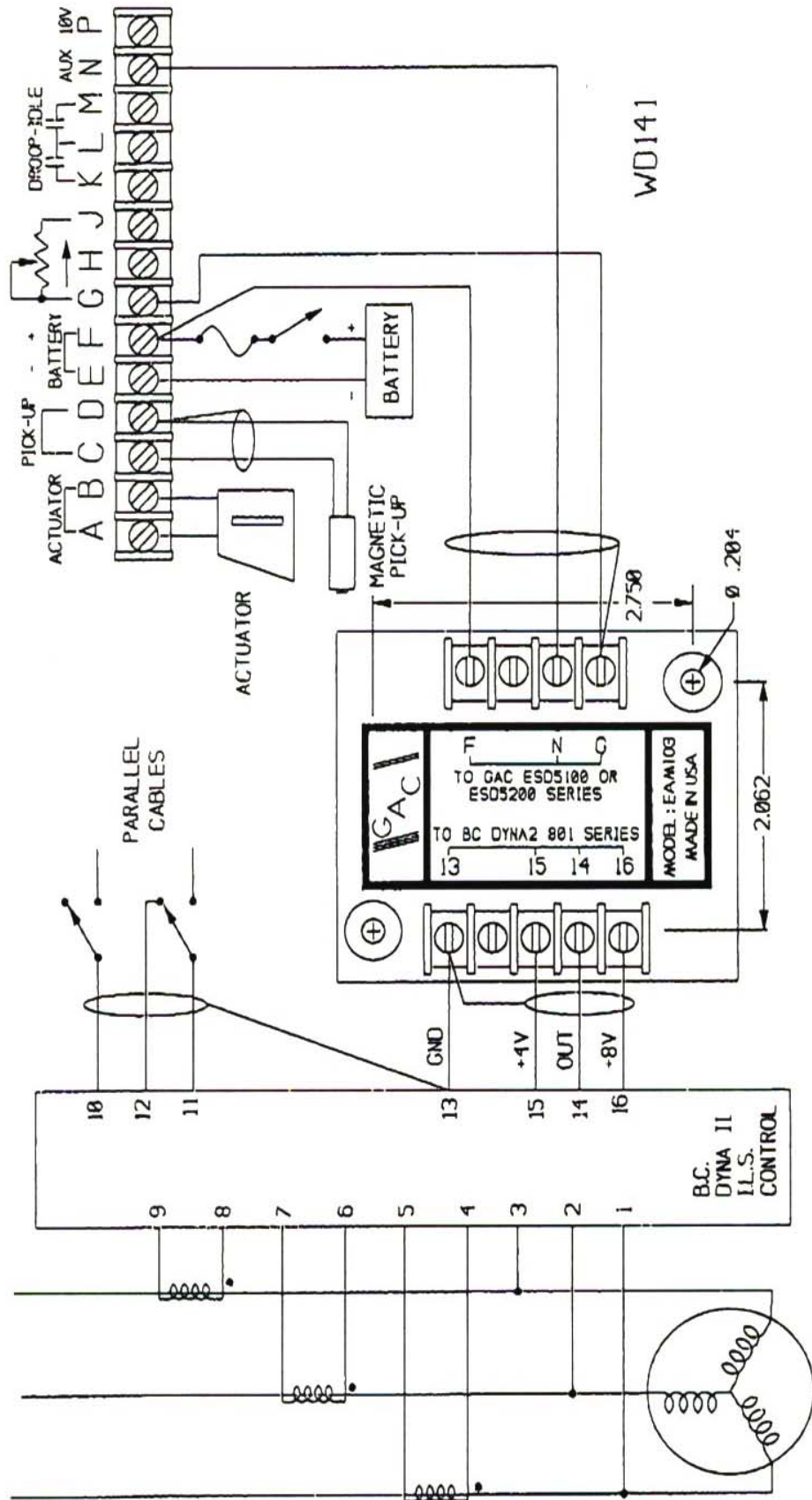
These voltages should not change appreciably when the EAM103 is connected to the speed control unit or the Dyna 2 unit when the system is in a zero or isolated load condition.

To further test the EAM103 operation, remove the connection to Terminal 14 of the EAM103. Temporarily connect EAM103 Terminals 13 and 14 and measure the voltage at Terminal N. This voltage should be greater than 7.5 V DC if the EAM103 is working properly.

If the above measurements are correct, the EAM103 meets its operating specifications.

# Wiring Diagram and Outline

GAC ESD5100 OR 5200 SERIES  
SPEED CONTROL UNITS



REFER TO BC. PUBLICATION  
FOR WIRING INFORMATION