PROCUREMENT SPECIFICATIONS
For the
MODEL S40B PRECISION SPEEDOMETER

Date: 5/12/95, revised 6/14/98

GENERAL:

The speedometer shall be the Model S40B Precision Speedometer as manufactured by Micro Systems Development Inc., 46 Marco Lane, Dayton, Ohio 45458.

MECHANICAL:

2.1 The speedometer shall be enclosed in a cast aluminum cabinet, coated with weather-resistant epoxy enamel or nylon powder coat. The panel markings shall be resistant to water and normal paint thinning solvents.

2.2 The speedometer shall have a single MS type circular connector on the rear panel for electrical connections.

2.3 The speedometer shall be mounted by two handwheels to a customer supplied mounting yoke.

2.4 Size shall not exceed 4.5 inches wide, 3.6 inches high, and 2.5 inches deep (exclusive of connector).

2.5 The speedometer shall have a 4-digit LCD display with characters of 0.7 inches height minimum, illuminated from the rear by an array of light emitting diodes.

2.6 The speedometer shall have three (3) light emitting diodes (LED) of contrasting colors on the front panel to indicate underspeed, overspeed and acceptable speed condition.

2.7 The speedometer shall have an audible alert signal to indicate an overspeed or underspeed condition. This alert shall produce a steady tone for overspeed, and an interrupted tone for underspeed. The signal may be enabled or disabled by the operator.

FUNCTIONAL:

3.1 The speedometer shall indicate the current speed of the vehicle to a resolution of 0.1

MPH over a range of 0.0 to 99.9 MPH or km/hr.

3.2 The speedometer shall have a speed alarm system with operator settable speed limits. The speed limit values shall be operator settable while the vehicle is stationary or moving.

3.3 The speed alarm system shall operate as follows:
If the vehicle speed is above the upper limit, the red LED shall come on, along with a constant audible tone. If the vehicle speed is below the lower limit, the yellow LED shall come on, along with a pulsating tone. If the vehicle speed is between the upper limit and the lower limit, the green LED shall be illuminated, and no tone will sound. The speed alarm system shall be disabled at speeds of below one-half of the lower limit, and at speeds of 10 MPH (km/hr) or more above the upper limit.

3.4 The speedometer shall have an electronic calibration system capable of accepting sender pulses at rates of from 2.7 to 15 pulses per foot of travel. This calibration shall be adjustable from the front panel. There shall not be necessary to disassemble the speedometer to perform any adjustments.

3.5 The speedometer shall be capable of operating in metric units, with speed indicated in Km/Hr and the odometer indicating kilometers.

3.6 The speedometer shall have a response speed of 1.4 seconds maximum in MPH mode, 2.2 seconds maximum in metric mode.

3.7 The speedometer shall have a resettable odometer, capable of reading in integer miles (or kilometers) from 0 to 9999.

3.8 All programmed and accumulated information shall be stored in a non-volatile memory for later recall. This memory shall not use batteries to retain the data, and shall retain all data even if all power is removed and the speedometer is removed from the vehicle.

ELECTRICAL:

4.1 The input signal shall be 2.7 to 15 pulses per foot of travel, supplied by any of MSDI's senders or Sender Adapters. The speedometer shall operate properly in conjunction with an MSDI Skipline Controller from a common sender.

4.2 Power input shall be 11 to 14 volts DC, negative ground. If used with an MSDI Skipline Controller, the S40B will obtain its power from the Controller, and no additional power wiring will be necessary.