EPA OTM 33A Appendix B
GMAP-REQ-DA Mast System Mechanical Drawings and Wiring Schematics

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Introduction

The following appendix contains GMAP-REQ-DA mechanical system drawings for a vehicle-mounted mast system along with basic wiring control schematics for a GMAP system. These mast and control system examples have been deployed on several EPA-developed GMAP systems.

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1. GMAP-REQ-DA Mast Systems mechanical drawings

The following appendix contains mechanical drawings of the EPA model 2 GMAP mast system. This mast system has been deployed on several EPA-developed GMAP systems. The mast system shown here is for the configuration employing ¼ inch diameter sampling probes. Concentration measurement instruments (CMIs) that required higher sampling flow rates will generally use larger diameter tubing.
1.1 Mast system assembly drawing
1.2 Lower mount base plate
1.3 Hinge block

[Diagram of a hinge block with dimensions and annotations]

[Table of specifications for the hinge block]
1.4 Hinge plate
1.5 Hinge and lower mount hardware
1.6 Base socket
1.7 Mast pivot
1.8 Mast connector
1.9 Survey mount plate
1.10 Survey mount body
1.11 Compass mount
1.12 Lower sight clamp
1.13 Upper sight clamp
1.14 Survey key

- **AS 16**
- **SS KEY STOCK**
- **3/16 x 3/16 undersized MAJASTR PIN B2530A.117**

- **440 UNC 2B TAP**
- **THRU**
- **6 HOLE**

- **4.3 DRIILL (0.069)**
1.15 Mast top cap
1.16 Instrument crossbar
1.17 Lower mast section
1.18 Center mast section
1.19 Upper mast section

TURN BOTH ENDS TO Ø2.850 FOR 305
1.20 Mount base
1.21 Lower assembly
1.22 Center assembly
1.23 Survey mount assembly
1.24 Upper assembly
1.25 Sample probe
2. Control System Wiring Schematics for GMAP-REQ Systems

The following section contains control system wiring schematics examples for typical GMAP-REQ systems developed by EPA. This information is illustrative and does not constitute method requirements. Systems may utilize a subset of equipment illustrated depending on application and on communication requirements for various components.

2.1 System connection overview for EPA NEIC unit
2.2 Equipment interface connections for EPA NEIC unit
2.3 Mast interface connections for EPA NEIC unit
2.4 System power connections for EPA NEIC unit
2.5 Mast system connections for EPA R5 unit