

| 13-mrt                     | HP running |    |            |
|----------------------------|------------|----|------------|
| Command sent: request data |            |    |            |
| 0                          | 104        | 68 | START      |
| 1                          | 199        | C7 | LEN        |
| 2                          | 199        | C7 | LEN        |
| 3                          | 104        | 68 | START      |
| 4                          | 8          | 8  | C FIELD    |
| 5                          | 100        | 64 | ADDRESS    |
| 6                          | 114        | 72 | CI FIELD   |
| 7                          | 1          | 1  | ID         |
| 8                          | 2          | 2  | ID         |
| 9                          | 3          | 3  | ID         |
| 10                         | 4          | 4  | ID         |
| 11                         | 45         | 2D | MID        |
| 12                         | 44         | 2C | MID        |
| 13                         | 48         | 30 | Gen        |
| 14                         | 4          | 4  | Media      |
| 15                         | 150        | 96 | Access     |
| 16                         | 0          | 0  | Access     |
| 17                         | 0          | 0  | Signature  |
| 18                         | 0          | 0  | Signature  |
| 19                         | 12         | C  | DIF 4      |
| 20                         | 120        | 78 | VIF Fab No |
| 21                         | 54         | 36 | DATA       |
| 22                         | 71         | 47 | DATA       |
| 23                         | 121        | 79 | DATA       |
| 24                         | 103        | 67 | DATA       |
| 25                         | 4          | 4  | DIF 4      |
| 26                         | 5          | 5  | VIF        |
| 27                         | 40         | 28 | DATA       |
| 28                         | 144        | 90 | DATA       |
| 29                         | 0          | 0  | DATA       |
| 30                         | 0          | 0  | DATA       |

KS dates  
t1 = 39,35  
t2 = 35,41  
delta t = 4,23  
l/h = 4278  
kw = 20,5  
e1 = 3692,1 kwh

| HP gestopt                 |     |    |            |
|----------------------------|-----|----|------------|
| Command sent: request data |     |    |            |
| 0                          | 104 | 68 | START      |
| 1                          | 199 | C7 | LEN        |
| 2                          | 199 | C7 | LEN        |
| 3                          | 104 | 68 | START      |
| 4                          | 8   | 8  | C FIELD    |
| 5                          | 100 | 64 | ADDRESS    |
| 6                          | 114 | 72 | CI FIELD   |
| 7                          | 1   | 1  | ID         |
| 8                          | 2   | 2  | ID         |
| 9                          | 3   | 3  | ID         |
| 10                         | 4   | 4  | ID         |
| 11                         | 45  | 2D | MID        |
| 12                         | 44  | 2C | MID        |
| 13                         | 48  | 30 | Gen        |
| 14                         | 4   | 4  | Media      |
| 15                         | 153 | 99 | Access     |
| 16                         | 0   | 0  | Access     |
| 17                         | 0   | 0  | Signature  |
| 18                         | 0   | 0  | Signature  |
| 19                         | 12  | C  | DIF 4      |
| 20                         | 120 | 78 | VIF Fab No |
| 21                         | 54  | 36 | DATA       |
| 22                         | 71  | 47 | DATA       |
| 23                         | 121 | 79 | DATA       |
| 24                         | 103 | 67 | DATA       |
| 25                         | 4   | 4  | DIF 4      |
| 26                         | 5   | 5  | VIF        |
| 27                         | 149 | 95 | DATA       |
| 28                         | 144 | 90 | DATA       |
| 29                         | 0   | 0  | DATA       |
| 30                         | 0   | 0  | DATA       |

|    |     |    |                              |
|----|-----|----|------------------------------|
| 31 | 4   | 4  | DIF 4                        |
| 32 | 133 | 85 | VIF                          |
| 33 | 255 | FF | VIFE                         |
| 34 | 2   | 2  | VIFE                         |
| 35 | 114 | 72 | DATA                         |
| 36 | 18  | 12 | DATA                         |
| 37 | 0   | 0  | DATA                         |
| 38 | 0   | 0  | DATA                         |
| 39 | 4   | 4  | DIF 4                        |
| 40 | 255 | FF | VIF                          |
| 41 | 7   | 7  | VIFE                         |
| 42 | 179 | B3 | DATA                         |
| 43 | 229 | E5 | DATA                         |
| 44 | 4   | 4  | DATA                         |
| 45 | 0   | 0  | DATA                         |
| 46 | 4   | 4  | DIF 4                        |
| 47 | 255 | FF | VIF                          |
| 48 | 8   | 8  | VIFE                         |
| 49 | 171 | AB | DATA                         |
| 50 | 120 | 78 | DATA                         |
| 51 | 4   | 4  | DATA                         |
| 52 | 0   | 0  | DATA                         |
| 53 | 4   | 4  | DIF 4                        |
| 54 | 19  | 13 | VIF Volume Flow 0.001m3      |
| 55 | 91  | 5B | DATA                         |
| 56 | 249 | F9 | DATA                         |
| 57 | 12  | C  | DATA                         |
| 58 | 0   | 0  | DATA                         |
| 59 | 4   | 4  | DIF 4                        |
| 60 | 34  | 22 | VIF Power 100 J/h (averaged) |
| 61 | 200 | C8 | DATA                         |
| 62 | 4   | 4  | DATA                         |
| 63 | 0   | 0  | DATA                         |

|    |     |    |             |
|----|-----|----|-------------|
| 31 | 4   | 4  | DIF 4       |
| 32 | 133 | 85 | VIF         |
| 33 | 255 | FF | VIFE        |
| 34 | 2   | 2  | VIFE        |
| 35 | 114 | 72 | DATA        |
| 36 | 18  | 12 | DATA        |
| 37 | 0   | 0  | DATA        |
| 38 | 0   | 0  | DATA        |
| 39 | 4   | 4  | DIF 4       |
| 40 | 255 | FF | VIF         |
| 41 | 7   | 7  | VIFE        |
| 42 | 104 | 68 | DATA        |
| 43 | 233 | E9 | DATA        |
| 44 | 4   | 4  | DATA        |
| 45 | 0   | 0  | DATA        |
| 46 | 4   | 4  | DIF 4       |
| 47 | 255 | FF | VIF         |
| 48 | 8   | 8  | VIFE        |
| 49 | 0   | 0  | DATA        |
| 50 | 124 | 7C | DATA        |
| 51 | 4   | 4  | DATA        |
| 52 | 0   | 0  | DATA        |
| 53 | 4   | 4  | DIF 4       |
| 54 | 19  | 13 | VIF Volume  |
| 55 | 154 | 9A | DATA        |
| 56 | 2   | 2  | DATA        |
| 57 | 13  | D  | DATA        |
| 58 | 0   | 0  | DATA        |
| 59 | 4   | 4  | DIF 4       |
| 60 | 34  | 22 | VIF Power : |
| 61 | 200 | C8 | DATA        |
| 62 | 4   | 4  | DATA        |
| 63 | 0   | 0  | DATA        |

|    |     |    |                                  |
|----|-----|----|----------------------------------|
| 64 | 0   | 0  | DATA                             |
| 65 | 52  | 34 | DIF 4                            |
| 66 | 34  | 22 | VIF Power 100 J/h (averaged)     |
| 67 | 244 | F4 | DATA                             |
| 68 | 0   | 0  | DATA                             |
| 69 | 0   | 0  | DATA                             |
| 70 | 0   | 0  | DATA                             |
| 71 | 2   | 2  | DIF 2                            |
| 72 | 89  | 59 | VIF Flow Temp 0.01C              |
| 73 | 68  | 44 | DATA                             |
| 74 | 15  | F  | DATA                             |
| 75 | 2   | 2  | DIF 2                            |
| 76 | 93  | 5D | VIF Return Temp 0.01C            |
| 77 | 199 | C7 | DATA                             |
| 78 | 13  | D  | DATA                             |
| 79 | 2   | 2  | DIF 2                            |
| 80 | 97  | 61 | VIF                              |
| 81 | 125 | 7D | DATA                             |
| 82 | 1   | 1  | DATA                             |
| 83 | 4   | 4  | DIF 4                            |
| 84 | 45  | 2D | VIF                              |
| 85 | 187 | BB | DATA                             |
| 86 | 0   | 0  | DATA                             |
| 87 | 0   | 0  | DATA                             |
| 88 | 0   | 0  | DATA                             |
| 89 | 20  | 14 | DIF 4                            |
| 90 | 45  | 2D | VIF                              |
| 91 | 38  | 26 | DATA                             |
| 92 | 1   | 1  | DATA                             |
| 93 | 0   | 0  | DATA                             |
| 94 | 0   | 0  | DATA                             |
| 95 | 4   | 4  | DIF 4                            |
| 96 | 59  | 3B | VIF Volume Flow mm3/h (averaged) |

|    |     |    |             |
|----|-----|----|-------------|
| 64 | 0   | 0  | DATA        |
| 65 | 52  | 34 | DIF 4       |
| 66 | 34  | 22 | VIF Power : |
| 67 | 244 | F4 | DATA        |
| 68 | 0   | 0  | DATA        |
| 69 | 0   | 0  | DATA        |
| 70 | 0   | 0  | DATA        |
| 71 | 2   | 2  | DIF 2       |
| 72 | 89  | 59 | VIF Flow Te |
| 73 | 75  | 4B | DATA        |
| 74 | 15  | F  | DATA        |
| 75 | 2   | 2  | DIF 2       |
| 76 | 93  | 5D | VIF Return  |
| 77 | 125 | 7D | DATA        |
| 78 | 14  | E  | DATA        |
| 79 | 2   | 2  | DIF 2       |
| 80 | 97  | 61 | VIF         |
| 81 | 206 | CE | DATA        |
| 82 | 0   | 0  | DATA        |
| 83 | 4   | 4  | DIF 4       |
| 84 | 45  | 2D | VIF         |
| 85 | 0   | 0  | DATA        |
| 86 | 0   | 0  | DATA        |
| 87 | 0   | 0  | DATA        |
| 88 | 0   | 0  | DATA        |
| 89 | 20  | 14 | DIF 4       |
| 90 | 45  | 2D | VIF         |
| 91 | 38  | 26 | DATA        |
| 92 | 1   | 1  | DATA        |
| 93 | 0   | 0  | DATA        |
| 94 | 0   | 0  | DATA        |
| 95 | 4   | 4  | DIF 4       |
| 96 | 59  | 3B | VIF Volume  |

|     |     |    |                                  |
|-----|-----|----|----------------------------------|
| 97  | 176 | B0 | DATA                             |
| 98  | 16  | 10 | DATA                             |
| 99  | 0   | 0  | DATA                             |
| 100 | 0   | 0  | DATA                             |
| 101 | 20  | 14 | DIF 4                            |
| 102 | 59  | 3B | VIF Volume Flow mm3/h (averaged) |
| 103 | 201 | C9 | DATA                             |
| 104 | 16  | 10 | DATA                             |
| 105 | 0   | 0  | DATA                             |
| 106 | 0   | 0  | DATA                             |
| 107 | 2   | 2  | DIF 2                            |
| 108 | 253 | FD | VIF                              |
| 109 | 23  | 17 | VIFE                             |
| 110 | 0   | 0  | DATA                             |
| 111 | 0   | 0  | DATA                             |
| 112 | 4   | 4  | DIF 4                            |
| 113 | 109 | 6D | VIF TIME & DATE                  |
| 114 | 18  | 12 | DATA                             |
| 115 | 42  | 2A | DATA                             |
| 116 | 109 | 6D | DATA                             |
| 117 | 35  | 23 | DATA                             |
| 118 | 68  | 44 | DIF 4                            |
| 119 | 5   | 5  | VIF                              |
| 120 | 111 | 6F | DATA                             |
| 121 | 81  | 51 | DATA                             |
| 122 | 0   | 0  | DATA                             |
| 123 | 0   | 0  | DATA                             |
| 124 | 68  | 44 | DIF 4                            |
| 125 | 133 | 85 | VIF                              |
| 126 | 255 | FF | VIFE                             |
| 127 | 2   | 2  | VIFE                             |
| 128 | 21  | 15 | DATA                             |
| 129 | 18  | 12 | DATA                             |

|     |        |    |            |
|-----|--------|----|------------|
| 97  | 18     | 12 | DATA       |
| 98  | 0      | 0  | DATA       |
| 99  | 0      | 0  | DATA       |
| 100 | 0      | 0  | DATA       |
| 101 | 20     | 14 | DIF 4      |
| 102 | 59 3B  |    | VIF Volume |
| 103 | 201 C9 |    | DATA       |
| 104 | 16     | 10 | DATA       |
| 105 | 0      | 0  | DATA       |
| 106 | 0      | 0  | DATA       |
| 107 | 2      | 2  | DIF 2      |
| 108 | 253 FD |    | VIF        |
| 109 | 23     | 17 | VIFE       |
| 110 | 0      | 0  | DATA       |
| 111 | 0      | 0  | DATA       |
| 112 | 4      | 4  | DIF 4      |
| 113 | 109 6D |    | VIF TIME & |
| 114 | 52     | 34 | DATA       |
| 115 | 42 2A  |    | DATA       |
| 116 | 109 6D |    | DATA       |
| 117 | 35     | 23 | DATA       |
| 118 | 68     | 44 | DIF 4      |
| 119 | 5      | 5  | VIF        |
| 120 | 111 6F |    | DATA       |
| 121 | 81     | 51 | DATA       |
| 122 | 0      | 0  | DATA       |
| 123 | 0      | 0  | DATA       |
| 124 | 68     | 44 | DIF 4      |
| 125 | 133    | 85 | VIF        |
| 126 | 255 FF |    | VIFE       |
| 127 | 2      | 2  | VIFE       |
| 128 | 21     | 15 | DATA       |
| 129 | 18     | 12 | DATA       |

|     |     |    |                                  |
|-----|-----|----|----------------------------------|
| 130 | 0   | 0  | DATA                             |
| 131 | 0   | 0  | DATA                             |
| 132 | 68  | 44 | DIF 4                            |
| 133 | 255 | FF | VIF                              |
| 134 | 7   | 7  | VIFE                             |
| 135 | 253 | FD | DATA                             |
| 136 | 241 | F1 | DATA                             |
| 137 | 2   | 2  | DATA                             |
| 138 | 0   | 0  | DATA                             |
| 139 | 68  | 44 | DIF 4                            |
| 140 | 255 | FF | VIF                              |
| 141 | 8   | 8  | VIFE                             |
| 142 | 7   | 7  | DATA                             |
| 143 | 187 | BB | DATA                             |
| 144 | 2   | 2  | DATA                             |
| 145 | 0   | 0  | DATA                             |
| 146 | 68  | 44 | DIF 4                            |
| 147 | 19  | 13 | VIF Volume Flow 0.001m3          |
| 148 | 74  | 4A | DATA                             |
| 149 | 228 | E4 | DATA                             |
| 150 | 7   | 7  | DATA                             |
| 151 | 0   | 0  | DATA                             |
| 152 | 84  | 54 | DIF 4                            |
| 153 | 45  | 2D | VIF                              |
| 154 | 54  | 36 | DATA                             |
| 155 | 1   | 1  | DATA                             |
| 156 | 0   | 0  | DATA                             |
| 157 | 0   | 0  | DATA                             |
| 158 | 84  | 54 | DIF 4                            |
| 159 | 59  | 3B | VIF Volume Flow mm3/h (averaged) |
| 160 | 218 | DA | DATA                             |
| 161 | 16  | 10 | DATA                             |
| 162 | 0   | 0  | DATA                             |

|     |     |    |            |
|-----|-----|----|------------|
| 130 | 0   | 0  | DATA       |
| 131 | 0   | 0  | DATA       |
| 132 | 68  | 44 | DIF 4      |
| 133 | 255 | FF | VIF        |
| 134 | 7   | 7  | VIFE       |
| 135 | 253 | FD | DATA       |
| 136 | 241 | F1 | DATA       |
| 137 | 2   | 2  | DATA       |
| 138 | 0   | 0  | DATA       |
| 139 | 68  | 44 | DIF 4      |
| 140 | 255 | FF | VIF        |
| 141 | 8   | 8  | VIFE       |
| 142 | 7   | 7  | DATA       |
| 143 | 187 | BB | DATA       |
| 144 | 2   | 2  | DATA       |
| 145 | 0   | 0  | DATA       |
| 146 | 68  | 44 | DIF 4      |
| 147 | 19  | 13 | VIF Volume |
| 148 | 74  | 4A | DATA       |
| 149 | 228 | E4 | DATA       |
| 150 | 7   | 7  | DATA       |
| 151 | 0   | 0  | DATA       |
| 152 | 84  | 54 | DIF 4      |
| 153 | 45  | 2D | VIF        |
| 154 | 54  | 36 | DATA       |
| 155 | 1   | 1  | DATA       |
| 156 | 0   | 0  | DATA       |
| 157 | 0   | 0  | DATA       |
| 158 | 84  | 54 | DIF 4      |
| 159 | 59  | 3B | VIF Volume |
| 160 | 218 | DA | DATA       |
| 161 | 16  | 10 | DATA       |
| 162 | 0   | 0  | DATA       |

|     |     |    |       |
|-----|-----|----|-------|
| 163 | 0   | 0  | DATA  |
| 164 | 66  | 42 | DIF 2 |
| 165 | 108 | 6C | VIF   |
| 166 | 124 | 7C | DATA  |
| 167 | 34  | 22 | DATA  |
| 168 | 7   | 7  | DIF 8 |
| 169 | 255 | FF | VIF   |
| 170 | 15  | F  | VIFE  |
| 171 | 48  | 30 | DATA  |
| 172 | 119 | 77 | DATA  |
| 173 | 10  | A  | DATA  |
| 174 | 4   | 4  | DATA  |
| 175 | 0   | 0  | DATA  |
| 176 | 0   | 0  | DATA  |
| 177 | 0   | 0  | DATA  |
| 178 | 0   | 0  | DATA  |
| 179 | 4   | 4  | DIF 4 |
| 180 | 255 | FF | VIF   |
| 181 | 17  | 11 | VIFE  |
| 182 | 135 | 87 | DATA  |
| 183 | 184 | B8 | DATA  |
| 184 | 0   | 0  | DATA  |
| 185 | 0   | 0  | DATA  |
| 186 | 4   | 4  | DIF 4 |
| 187 | 255 | FF | VIF   |
| 188 | 18  | 12 | VIFE  |
| 189 | 0   | 0  | DATA  |
| 190 | 32  | 20 | DATA  |
| 191 | 203 | CB | DATA  |
| 192 | 0   | 0  | DATA  |
| 193 | 2   | 2  | DIF 2 |
| 194 | 255 | FF | VIF   |
| 195 | 26  | 1A | VIFE  |

|     |        |    |       |
|-----|--------|----|-------|
| 163 | 0      | 0  | DATA  |
| 164 | 66     | 42 | DIF 2 |
| 165 | 108 6C |    | VIF   |
| 166 | 124 7C |    | DATA  |
| 167 | 34     | 22 | DATA  |
| 168 | 7      | 7  | DIF 8 |
| 169 | 255 FF |    | VIF   |
| 170 | 15 F   |    | VIFE  |
| 171 | 48     | 30 | DATA  |
| 172 | 119    | 77 | DATA  |
| 173 | 10 A   |    | DATA  |
| 174 | 4      | 4  | DATA  |
| 175 | 0      | 0  | DATA  |
| 176 | 0      | 0  | DATA  |
| 177 | 0      | 0  | DATA  |
| 178 | 0      | 0  | DATA  |
| 179 | 4      | 4  | DIF 4 |
| 180 | 255 FF |    | VIF   |
| 181 | 17     | 11 | VIFE  |
| 182 | 135    | 87 | DATA  |
| 183 | 184 B8 |    | DATA  |
| 184 | 0      | 0  | DATA  |
| 185 | 0      | 0  | DATA  |
| 186 | 4      | 4  | DIF 4 |
| 187 | 255 FF |    | VIF   |
| 188 | 18     | 12 | VIFE  |
| 189 | 0      | 0  | DATA  |
| 190 | 32     | 20 | DATA  |
| 191 | 203 CB |    | DATA  |
| 192 | 0      | 0  | DATA  |
| 193 | 2      | 2  | DIF 2 |
| 194 | 255 FF |    | VIF   |
| 195 | 26 1A  |    | VIFE  |

|     |     |    |                     |
|-----|-----|----|---------------------|
| 196 | 1   | 1  | DATA                |
| 197 | 24  | 18 | DATA                |
| 198 | 2   | 2  | DIF 2               |
| 199 | 253 | FD | VIF                 |
| 200 | 14  | E  | VIFE                |
| 201 | 1   | 1  | DATA                |
| 202 | 8   | 8  | DATA                |
| 203 | 137 | 89 | DIF 1CHECKSUM VALID |
| 204 | 22  | 16 | DIFEEND             |

|     |     |    |            |
|-----|-----|----|------------|
| 196 | 1   | 1  | DATA       |
| 197 | 24  | 18 | DATA       |
| 198 | 2   | 2  | DIF 2      |
| 199 | 253 | FD | VIF        |
| 200 | 14  | E  | VIFE       |
| 201 | 1   | 1  | DATA       |
| 202 | 8   | 8  | DATA       |
| 203 | 27  | 1B | DIF 3CHECK |
| 204 | 22  | 16 | VIF END    |