



# HYUNDAI

## Technical Service Bulletin

|                                   |   |
|-----------------------------------|---|
| GROUP<br><b>HVAC</b>              | NUMBER<br><b>18-HA-002-1</b>            |
| DATE<br><b>DECEMBER,<br/>2018</b> | MODEL(S)<br><b>ELANTRA<br/>(AD/ADA)</b> |

**SUBJECT:** HEATER PERFORMANCE IMPROVEMENT ECU UPDATE

*This TSB supersedes TSB 18-HA-002 with the addition of the Instrument Cluster Update and the corresponding Warranty Information.*

### Description:

This bulletin provides information on certain 2017-2018 model year Elantra (AD/ADA) 2.0L vehicles to update the ECM (Engine Control Module), update the HVAC ECU, and to update the engine coolant temperature gauge of the Instrument Cluster for improving heater performance.

### Applicable Vehicles:

- Certain 2017-2018 ELANTRA (AD/ADA) vehicles equipped with 2.0L Nu Atkinson engine

### GDS Information:

| Event # | Description   |
|---------|---|
| 484     | AD(A) 2.0MPI - HEATING PERFORMANCE IMPROVEMENT(ECM)             |
| 485     | AD(A) 2.0MPI - HEATING PERFORMANCE IMPROVEMENT(MTC)             |
| 486     | AD(A) 2.0MPI - HEATING PERFORMANCE IMPROVEMENT(DATC)            |
| 515     | AD(A) 2.0MPI - COOLANT TEMP. GAUGE ADJUSTMENT(SEG CLUSTER)      |
| 516     | AD(A) 2.0MPI - COOLANT TEMP. GAUGE ADJUSTMENT(MONO TFT CLUSTER) |
| 517     | AD(A) 2.0MPI - COOLANT TEMP. GAUGE ADJUSTMENT(TFT CLUSTER)      |

### NOTES:

- **Perform the ECM Update, the A/C Module Update, and the Cluster Update in this sequence.**
- All three modules must be updated with the latest calibration to properly complete this operation.
- HVAC System type will determine which A/C Module Update Event # is applicable.
  - Event #485 - (MTC) Manual Temperature Control
  - Event #486 - (DATC) Dual Automatic Temperature Control
- Instrument Cluster type will determine which Cluster Update Event # is applicable.
  - Event #515 - 3.5" (Black&White Conventional) Segment Type
  - Event #516 - 3.5" (Grayscale Supervision) Mono TFT Type
  - Event #517 - 4.2" (Full-Color Supervision) TFT Type
- Refer to TSB **15-GI-001** for additional tablet-based Mobile GDS ECU update information.
- Clear DTC(s) present after the ECU update.

### Warranty Information:

| Model  | Op Code  | Operation                          | Op Time | Causal P/N | Nature | Cause |
|--------|----------|------------------------------------|---------|------------|--------|-------|
| AD/ADA | 39171F03 | ECM & A/C MODULE & CLUSTER UPGRADE | 0.7 M/H | See NOTE   | IB2    | ZZ3   |

**NOTE:** Use the applicable ECM P/N listed in the ROM ID Information Table from the following page.

**! WARNING**



**GDS Vehicle Battery Voltage Warning:**

If voltage is below 12 volts as per the GDS warning, then select **Back** and run the engine at least 15 minutes to reach an adequate battery state of charge to prevent ECU Update failure. Cycle the ignition **OFF/ON** before retrying ECU update again.

**NOTICE**

**You must initially perform all GDS ECU Updates in Auto Mode.**

If the ECU Update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

**ROM ID Information Table:**

- Perform the ECM Update first, and then perform the A/C Module Update afterwards.
- Verify the ECM ROM ID before updating the software. Refer to the table below.

| MODEL  | MY   | IMMO | ECM P/N                               | ECM ROM ID   |                  |
|--|------|------|---------------------------------------|--|------------------|
|  |      |      |                                       | OLD  | NEW (EVENT #484) |
| ELANTRA<br>(AD/ADA)<br>2.0L Nu<br>Atkinson MPI | 17MY | O    | 39171-2EFB0 (AD)<br>39171-2EFD0 (ADA) | AD7SP2AS655A<br>AD7SP2AS657A<br>AD7SP2AS657B<br>AD7SP2AS65AA<br>AD7SP2AS65DA | AD7SP2AF65DB     |
|  |      | X    | 39173-2EFB0 (AD)<br>39173-2EFD0 (ADA) | AD7SP2US655A<br>AD7SP2US657A<br>AD7SP2US657B<br>AD7SP2US65AA<br>AD7SP2US65DA | AD7SP2UF65DB     |
|  |      | O    | 39171-2EFC0 (AD)<br>39171-2EFE0 (ADA) | AD7UP2AS655A<br>AD7UP2AS657A<br>AD7UP2AS657B<br>AD7UP2AS65AA<br>AD7UP2AS65DA | AD7UP2AF65DB     |
|  |      | X    | 39173-2EFC0 (AD)<br>39173-2EFE0 (ADA) | AD7UP2US655A<br>AD7UP2US657A<br>AD7UP2US657B<br>AD7UP2US65AA<br>AD7UP2US65DA | AD7UP2UF65DB     |

**NOTES:**

- **IMMO (O)** = Start Stop Button
- **NON IMMO (X)** = Key Start
- **AD** = HMC Korea built (1st 3-digit VIN: KMH)
- **ADA** = HMMA USA built (1st 3-digit VIN: 5NP)
- ECM ROM ID table for 18MY continued on next page.

| MODEL  | MY   | IMMO | ECM P/N                               | ECM ROM ID                                   |                  |
|--|------|------|---------------------------------------|--|------------------|
|  |      |      |                                       | OLD  | NEW (EVENT #484) |
| ELANTRA<br>(AD/ADA)<br>2.0L Nu<br>Atkinson MPI | 18MY | O    | 39171-2EFB2 (AD)<br>39171-2EFD2 (ADA) | AD8SP2AS673A<br>AD8SP2AS673B<br>AD8SP2AS673C | AD8SP2AS673D     |
|  |      | X    | 39173-2EFB2 (AD)<br>39173-2EFD2 (ADA) | AD8SP2US673A<br>AD8SP2US673B<br>AD8SP2US673C | AD8SP2US673D     |
|  |      | O    | 39171-2EFC2 (AD)<br>39171-2EFE2 (ADA) | AD8UP2AS673A<br>AD8UP2AS673B<br>AD8UP2AS673C | AD8UP2AS673D     |
|  |      | X    | 39173-2EFC2 (AD)<br>39173-2EFE2 (ADA) | AD8UP2US673A<br>AD8UP2US673B<br>AD8UP2US673C | AD8UP2US673D     |

**NOTES:**

- **IMMO (O)** = Start Stop Button
- **NON IMMO (X)** = Key Start
- **AD** = HMC Korea built (1st 3-digit VIN: KMH)
- **ADA** = HMMA USA built (1st 3-digit VIN: 5NP)
- Perform the A/C Module Update after performing the ECM Update, and then perform the Cluster Update afterwards.
- Verify the A/C Module ROM ID before updating the software. Refer to the table below.

| MODEL  | HVAC SYSTEM TYPE | HVAC CONTROL UNIT<br>(BASE P/N FOR REFERENCE ONLY) | A/C MODULE ROM ID                    |      |
|--|------------------|--|--------------------------------------|------|
|  |                  |  | OLD                                  | NEW  |
| ELANTRA<br>(AD/ADA)<br>2.0L Nu<br>Atkinson MPI | MTC              | 97250-F2060<br>97250-F2061                         | 0100<br>0101<br>0102<br>0103         | 0205 |
|  |                  | 97250-F2062  | 0104                                 | 0105 |
|  | DATC             | 97250-F2230<br>97250-F2231                         | 1.00<br>1.01<br>1.02<br>1.03<br>1.04 | 1.05 |

**NOTES:** Confirm the correct event number according to the equipped HVAC system type.

- **Event #485 - (MTC) Manual Temperature Control**
- **Event #486 - (DATC) Dual Automatic Temperature Control**

- Perform the Cluster Update after performing the A/C Module Update.
- Verify the Cluster ROM ID before updating the software. Refer to the table below.

| MODEL  | INSTRUMENT CLUSTER TYPE  | CLUSTER P/N  | CLUSTER ROM ID   |  |                |
|--|--|--|--|--|----------------|
|  |  |  | OLD  | NEW  |                |
| ELANTRA<br>(AD/ADA)<br>2.0L Nu<br>Atkinson MPI | <b>SEG CLUSTER<br/>(Event #515)</b>                                      | 94001-F2040<br>94001-F2060<br>94001-F3000<br>94001-F3010 | 94001F2040_100<br>94001F2060_100<br>94001F3000_100<br>94001F3010_100     | 9400*F****_110   |                |
|  |  |  | 94001F2040_103<br>94001F2060_103<br>94001F3000_103<br>94001F3010_103     | 9400*F****_113   |                |
|  |  |  | 94001F2040_105<br>94001F2060_105<br>94001F3000_105<br>94001F3010_105     | 9400*F****_115   |                |
|  |  |  | 94001F2040_300<br>94001F2060_300<br>94001F3000_300<br>94001F3010_300     | 9400*F****_310   |                |
|  |  | 94001-F3001<br>94001-F3011                               | 94001F3001_202<br>94001F3011_202   | 9400*F****_212   |                |
|  | <b>MONO TFT CLUSTER<br/>(Event #516)</b>                                 | 94011-F2060<br>94011-F2061<br>94011-F3011<br>94011-F3021 | 94011-F2060_100<br>94011-F2061_100<br>94011-F3011_100<br>94011-F3021_100 | 9401*F****_110   |                |
|  |  |  | 94011-F2060_103<br>94011-F2061_103<br>94011-F3011_103<br>94011-F3021_103 | 9401*F****_113   |                |
|  |  |  | 94011-F2060_105<br>94011-F2061_105<br>94011-F3011_105<br>94011-F3021_105 | 9401*F****_115   |                |
|  |  |  | 94011-F2060_300<br>94011-F2061_300<br>94011-F3011_300<br>94011-F3021_300 | 9401*F****_310   |                |
|  |  | 94011-F3012<br>94011-F3022                               | 94011-F3012_202<br>94011-F3022_202                                       | 9401*F****_212   |                |
|  |  |  | 94011-F3012_203<br>94011-F3022_203                                       | 9401*F****_213   |                |
|  |  | <b>TFT CLUSTER<br/>(Event #517)</b>                      | 94021-F2020<br>94021-F2100<br>94021-F3000<br>94021-F3020                 | 94021-F2020_100<br>94021-F2100_100<br>94021-F3000_100<br>94021-F3020_100 | 9402*F****_110 |
|  |  |  |  | 94021-F2020_103<br>94021-F2100_103<br>94021-F3000_103<br>94021-F3020_103 | 9402*F****_113 |
|  | 94021-F2020_105<br>94021-F2100_105<br>94021-F3000_105<br>94021-F3020_105 |  |  | 9402*F****_115   |                |
|  | 94021-F2020_300<br>94021-F2100_300<br>94021-F3000_300<br>94021-F3020_300 |  |  | 9402*F****_310   |                |
|  | 94021-F3021  |  | 94021-F3021_202  | 9402*F****_212   |                |

If the Automatic ECU Upgrade process fails, cycle the ignition key to OFF for at least 10 seconds to reset the control unit. Then resume programming using the Manual ECU Upgrade processes.

**MODE PASSWORD INFORMATION TABLE: ECM**

| ECM MENU (#484 ECM)               | PASSWORD |
|-----------------------------------|----------|
| AD(A) 2.0MPI -IMMO 39173-2EFB0/D0 | 3200     |
| AD(A) 2.0MPI -IMMO 39173-2EFC0/E0 | 3201     |
| AD(A) 2.0MPI -IMMO 39173-2EFB2/D2 | 3222     |
| AD(A) 2.0MPI -IMMO 39173-2EFC2/E2 | 3223     |
| AD(A) 2.0MPI +IMMO 39171-2EFB0/D0 | 1200     |
| AD(A) 2.0MPI +IMMO 39171-2EFC0/E0 | 1201     |
| AD(A) 2.0MPI +IMMO 39171-2EFB2/D2 | 1222     |
| AD(A) 2.0MPI +IMMO 39171-2EFC2/E2 | 1223     |

**MODE PASSWORD INFORMATION TABLE: A/C Module**

| A/C MODULE MENU (#485 MTC)      | PASSWORD |
|---------------------------------|----------|
| AD(A) 2.0MPI MTC 97250-F2060/61 | 2051     |
| AD(A) 2.0MPI MTC 97250-F2062    | 2052     |

(MTC is only for vehicles with Manual Temperature Control)

| A/C MODULE MENU (#486 DATC)      | PASSWORD |
|----------------------------------|----------|
| AD(A) 2.0MPI DATC 97250-F2230/31 | 2231     |

(DATC is only for vehicles with Dual Automatic Temperature Control)

**MODE PASSWORD INFORMATION TABLE: Cluster**

| INSTRUMENT CLUSTER MENU (#515 SEG)                    | PASSWORD |
|---|----------|
| AD(A) SEG CLU (94001-F2040/60,F3000/10) [ROM ID: 100] | 3020     |
| AD(A) SEG CLU (94001-F2040/60,F3000/10) [ROM ID: 103] | 3021     |
| AD(A) SEG CLU (94001-F2040/60,F3000/10) [ROM ID: 105] | 3022     |
| AD(A) SEG CLU (94001-F2040/60,F3000/10) [ROM ID: 300] | 3023     |
| AD(A) SEG CLU (94001-F3001/11) [ROM ID: 202]          | 3024     |

(SEG is only for vehicles with 3.5" Black&White Conventional Segment Type cluster.)

| INSTRUMENT CLUSTER MENU (#516 MONO TFT)                    | PASSWORD |
|--|----------|
| AD(A) MONO TFT CLU (94011-F2060/61,F3011/21) [ROM ID: 100] | 3011     |
| AD(A) MONO TFT CLU (94011-F2060/61,F3011/21) [ROM ID: 103] | 3012     |
| AD(A) MONO TFT CLU (94011-F2060/61,F3011/21) [ROM ID: 105] | 3013     |
| AD(A) MONO TFT CLU (94011-F2060/61,F3011/21) [ROM ID: 300] | 3014     |
| AD(A) MONO TFT CLU (94011-F3012/22) [ROM ID: 202]          | 3015     |
| AD(A) MONO TFT CLU (94011-F3012/22) [ROM ID: 203]          | 3016     |

(MONO TFT is only for vehicles with 3.5" Grayscale Supervision Mono TFT Type cluster.)

| <b>INSTRUMENT CLUSTER MENU (#517 TFT)</b>              | <b>PASSWORD</b> |
|--|-----------------|
| AD(A) TFT CLU (94021-F2020/100,F3000/20) [ROM ID: 100] | 2020            |
| AD(A) TFT CLU (94021-F2020/100,F3000/20) [ROM ID: 103] | 2021            |
| AD(A) TFT CLU (94021-F2020/100,F3000/20) [ROM ID: 105] | 2022            |
| AD(A) TFT CLU (94021-F2020/100,F3000/20) [ROM ID: 300] | 2023            |
| AD(A) TFT CLU (94021-F3021) [ROM ID: 202]              | 2024            |

**(TFT is only for vehicles with 4.2" Full-Color Supervision TFT Type cluster.)**

After all ECU updates are complete, check the engine, HVAC control system, and instrument cluster operation.

- Clear any ECM DTC(s) after the ECU update, if present.
- Cycle through the various air intake modes, flow direction modes, set temperatures, and blower motor speeds to verify that the HVAC system is operating correctly.
- Confirm that the engine coolant temperature gauge is operating.