

TOYOTA

SERVICE BULLETIN

TOYOTA MOTOR SALES, U.S.A., INC.

VOLUME
10

| | |
|-----------|-----------------|
| REFERENCE | ENGINE |
| NUMBER | 024 |
| DATE | 08-31-90 |
| MODEL | MX8 MA7 '86-'90 |

Page 1 of 3

7M-G(T)E ECU / COLD START INJECTOR TIME SWITCH MODIFICATION

This bulletin contains additional information to TSB Volume 10, Engine #010 previously issued 09-01-89.

The modified cold start thermal time switch listed in Engine TSB #010 is still available for 1986-1989 Supras and Cressidas equipped with 7M series engines to improve **startability only**.

A modified TCCS ECU is now available for 1989-1990 Supras and Cressidas which improves both **cold driveability** and **startability**.

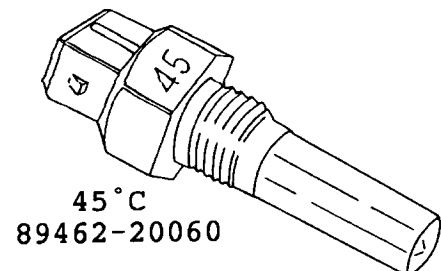
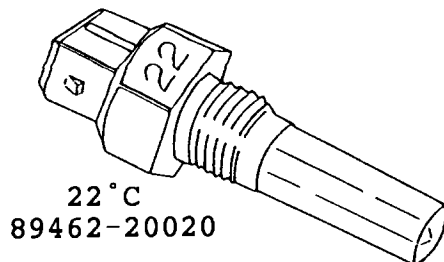
The proper repair for these conditions should be determined by the customer complaint as listed below:

| CONDITION | MODEL APPLICATION/REPAIR | | |
|---|-------------------------------|-------------------------------|--------------|
| | 1986-1988 MA7 | 1989 MX8/MA7 | 1990 MX8/MA7 |
| Hard Starting/Long Cranking Time <u>Only</u> | New 45° C Thermal Time Switch | New 45° C Thermal Time Switch | New TCCS ECU |
| Cold Driveability <u>OR</u> Hard Starting and Cold Driveability | | New TCCS ECU | |

NOTE: 1989 model Cressidas and Supras have **both** repairs available. If the only complaint is hard starting, the Thermal Time Switch should be replaced. If there is a cold driveability complaint, you **must** install the ECU.

CAUTION: The new TCCS ECU **should not be used** with the new 45° C Thermal Time Switch. This ECU has improved cold start injector control logic and is designed to work with the original 22° C time switch only.

The illustration below shows how to identify the temperature range of a cold start injector time switch.



7M-G(T)E ECU / COLD START INJECTOR TIME SWITCH MODIFICATION (CONT'D)

PART NUMBER INFORMATION:

| PART NAME | PREVIOUS P/N | NEW PART NO. | MODEL APPLICATION |
|---------------------------|------------------------|-----------------------|--|
| TCCS ECU | 89661 -22170 | 89661-22171-84 | '89-'90 7M-GE Cressida CAL |
| TCCS ECU | 89661 -22210 | 89661-22330-84 | '89-'90 7M-GE Cressida FED |
| TCCS ECU | 89661 -14300 -14301 | 89661-14302-84 | '89-'90 7M-GE Supra CAL MTM |
| TCCS ECU | 89661 -14310 -14311 | 89661-14312-84 | '89-'90 7M-GE Supra CAL ATM |
| TCCS ECU | 89661 -14320 -14321 | 89661-14430-84 | '89-'90 7M-GE Supra FED MTM |
| TCCS ECU | 89661 -14330 -14331 | 89661-14440-84 | '89-'90 7M-GE Supra FED ATM |
| TCCS ECU | 89661 -14240 -14241 | 89661-14242-84 | '89-'90 7M-GTE Supra CAL MTM |
| TCCS ECU | 89661 -14250 -14251 | 89661-14252-84 | '89-'90 7M-GTE Supra CAL ATM |
| TCCS ECU | 89661 -14260 -14261 | 89661-14450-84 | '89-'90 7M-GTE Supra FED MTM |
| TCCS ECU | 89661 -14270 -14271 | 89661-14460-84 | '89-'90 7M-GTE Supra FED ATM |
| Thermal Time Switch | 89462 -20020 (22°C) | 89462-20060 (45°C) | '89 7M-GE and 7M-GTE Supra and Cressida |
| Thermal Time Switch | 89462 -40010 (22°C) | 89462-20050 (45°C) | '86-'88 7M-GE and 7M-GTE Supra |

7M-G(T)E ECU / COLD START INJECTOR TIME SWITCH MODIFICATION (CONT'D)

PRODUCTION EFFECTIVE:

The new (45°C) cold start injector time switches are available for field repair parts only.

Production change information for the modified TCCS ECU is as follows:

| <u>From Frame No.</u> | | <u>Production Date</u> |
|-----------------------|-----------|------------------------|
| JT2MX83E*L0044138 | (ALL) | November, 1989 |
| JT2MA70#*L0145025 | (CAL MTM) | February, 1990 |
| JT2MA70#*L0143961 | (CAL ATM) | December, 1989 |
| JT2MA70#*L0143374 | (FED MTM) | December, 1989 |
| JT2MA70#*L0143191 | (FED ATM) | November, 1989 |
| JT2MA71#*L0145051 | (CAL MTM) | February, 1990 |
| JT2MA71#*L0144197 | (CAL ATM) | January, 1990 |
| JT2MA71#*L0143974 | (FED MTM) | December, 1989 |
| JT2MA71#*L0143976 | (FED ATM) | December, 1989 |

SERVICING INFORMATION:

Before replacing an ECU or a cold start injector time switch, perform a thorough inspection to verify that all engine mechanical, fuel and electrical/electronic systems are to recommended specifications.

PARTS RETURN INFORMATION:

The replacement ECU's are remanufactured by Nippondenso—Los Angeles (NDLA). In order to maintain cores for rebuilt units, the original ECU must be sent to NDLA as soon as it has been replaced.

Note: Please complete the core information and core credit forms which are enclosed with the remanufactured ECU.

Return Cores to: Toyota Motor Distributors
C/O Nippondenso—Los Angeles
3900 Via Oro Avenue
Long Beach, CA 90810