Sun

CUSTOMER MESSAGE & VEHICLE TEST LIMITS

PROGRAMMING
PROCEDURES

CUSTOMER MESSAGE PROGRAMMING

```
┌─────────────────────────────────────────────┐
│                                               │
│              OPEL EUROSERVICE                 │
│                                               │
│   THIS SPACE RESERVED FOR CUSTOMER MESSAGE    │
│                                               │
│   VEHICLE UNDER TEST :                        │
│         ******          18E       HEI-H       │
│                                               │
│            DATE         ******                │
│            ODOMETER     ******                │
│   MAKE SELECTION        THEN PUSH #           │
│                                               │
└─────────────────────────────────────────────┘
```

When vehicle data selection is completed, during PREPARATION FOR TESTING, the
tester automatically prints data of vehicle under test as shown above with a
space reserved for customer message, e.g. name and address of the service centre.
The tester can be programmed to retain this customer message in the computer
memory to be included on all automatic print-outs.

CUSTOMER MESSAGE PROGRAMMING PROCEDURE

```
┌───────────────────────────────────────────┐
│            CUSTOMER MESSAGE EDITOR          │
│                                             │
│    * * * * * * * * * * * * * * * * * *      │
│    *                               *        │
│    *                               *        │
│    *                               *        │
│    * * * * * * * * * * * * * * * * * *      │
│                                             │
│        ROW        :  2                      │
│        COL        :  1                      │
│        INT ASC II :  32 CHAR                │
│                                             │
│        PRESS  :  >  FOR NEXT CHAR           │
│                  +/- TO REVIEW              │
│                  #  FOR NEXT LINE           │
│                  *  TO CLEAR MESSAGE        │
│                  P  TO ABORT                │
│                                             │
└───────────────────────────────────────────┘
```

1. PUSH P for TEST PROGRAM SELECTION page.

2. Select RECEPTION DIAGNOSIS or VEHICLE TEST LIMITS

3. Select 'NOT LISTED' PUSH #

4. Enter special code by pressing 8 6 4 2 0 1 this will be acknowledged
    with asterisks * * * * * * showing on VDU.

5. PUSH # and tester will display the CUSTOMER MESSAGE EDITOR.

6. Use the following keys to control the programming:

        PUSH >   for next character.

        PUSH +/-   to go back one position.

        PUSH #   to proceed to next line.

        PUSH *   to clear message.

        PUSH P   to abort (new message will not be saved).

TABLE 1

CHARACTER CODES

CHAR : CODE		CHAR : CODE		CHAR : CODE		CHAR : CODE	
@	0	P	16	SPACE	32	0	48
A	1	Q	17	!	33	1	49
B	2	R	18	"	34	2	50
C	3	S	19	#	35	3	51
D	4	T	20	Ω	36	4	52
E	5	U	21	%	37	5	53
F	6	V	22	&	38	6	54
G	7	W	23	'	39	7	55
H	8	X	24	(	40	8	56
I	9	Y	25	)	41	9	57
J	10	Z	26	*	42	:	58
K	11	°	27	+	43	;	59
L	12	△	28	,	44	<	60
M	13	↓	29	-	45	=	61
N	14	↑	30	.	46	>	62
O	15	_	31	/	47	?	63

COLUMNS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
LINE1 CHAR					T	U	N	E	D			F	O	R			E	C	O	N	O	M	Y			B	Y			
LINE1 CODE	32	32	32	32	20	21	14	5	4	32	32	6	15	18	32	32	5	3	15	14	15	13	25	32	32	2	25	32	32	32
LINE2 CHAR			S	U	N			E	L	E	C	T	R	I	C			U	K			L	I	M	I	T	E	D		
LINE2 CODE	32	32	19	21	14	32	32	5	12	5	3	20	18	9	3	32	32	21	11	32	32	12	9	13	9	20	5	4	32	32
LINE3 CHAR					K	I	N	G	'	S			L	Y	N	N			N	O	R	F	O	L	K					
LINE3 CODE	32	32	32	32	11	9	14	7	39	19	32	32	12	25	14	14	32	32	14	15	18	6	15	12	11	32	32	32	32	32

7. Use the CHARACTER CODE TABLE 1 to construct a matrix for the message to be programmed as per the above example.

8. Select the appropriate code for the required character to be entered and the according character appears after 'INT ASC-II' on the display. PUSH ⟩ key, character is now entered and appears at LINE 1 column 1 and the next character code can now be selected for entry.

> NOTE: It is not possible to go back to a previous line.
> In the event of an error proceed until message
> is completed and 'NEW DATA BEING WRITTEN' is
> displayed then repeat the procedure.

9. After LINE 3 is entered PUSH # until 'NEW DATA BEING WRITTEN' is displayed. The programming is now completed and customer message is stored in the memory.

VEHICLE TEST LIMITS PROGRAMMING

The computer has sufficient memory storage capacity, so that when new vehicle models are introduced, the specifications for up to eight vehicles can be entered, stored and used as programmed limits.

PROCEDURE

1. PUSH 'P' for TEST PROGRAM SELECTION page.

2. Select VEHICLE TEST LIMITS

3. Select 'NOT LISTED', PUSH #

4. From SPECIAL MODEL LIST select the first available free line (1-8) by aligning cursor (>) arrow.

    NOTE: If 'LIMITS IN COMPUTER' is displayed against any line entry this indicates that previous programming has been carried out and this line entry is full.

5. Enter special code by pressing 9 7 5 3 1 0 this will be acknowledged with asterisks ***** showing on VDU.

```
┌─────────────────────────────────────────┐
│               TEST LIMITS                 │
│   MODEL    *           ENGINE   *         │
│  IGNITION-SYSTEM        *                 │
│  IDLE-REGULATOR         *                 │
│      TEST 1: STARTER-SYSTEM               │
│  DATA FOR MINIMUM OILTEMP  20°C           │
│  ENGINE RPM    MIN         RPM            │
│  CURRENT       MAX         AMP            │
│  BATTERY MIN               VOLT           │
│  COIL +/ KL 15   MIN       VOLT           │
│  COIL -/ KL 1          -   VOLT           │
│  DWELL                 -   DEG            │
│  IGNITION TIMING     MARK +/- °           │
│      TDC-SENOR         -  °               │
│  COMPRESSION   MIN         AMP            │
│  COMPR.DIFF.   MAX         AMP            │
└─────────────────────────────────────────┘
```

6. PUSH # for first page of test limits.

    NOTE: Prior to programming, it may be of assistance to print out all five test limit pages and enter the codes in manuscript against the parameters to be entered.

7. Use the following keys to control the programming:

    PUSH > to proceed to the next position.

    PUSH +/- to go back one position.

    PUSH #   to proceed to the next page of test limits.

    NOTE: There are a total of five test limit pages.

8. Note that cursor will be pointing at 'MODEL' type. From TABLE 2 select and enter the appropriate code for the vehicle model required.

9. From TABLE 3 select and enter ENGINE type code.

10. From TABLE 4 select and enter IGNITION typecode.

TABLE 2
VEHICLE MODEL CODES

MODEL	CODES	
OPEL	1984	1985
CORSA A/B	1	9
KADETT D/E	2	10
ASCONA C/D	3	11
MANTA B/C	4	12
RECORD E/F	5	13
COMMODORE C/D	6	14
SENATOR /B	7	15
MONZA /B	8	16
NOT DEFINED - CODE 0		

TABLE 3
ENGINE TYPE CODES

ENGINE : CODE		ENGINE : CODE		ENGINE : CODE		ENGINE : CODE	
10S	1	16N	11	19N	21	22I	40
12N	2	16S	12	19S	47	23D	29
12S	3	16SH	13	19E	48	25S	30
12ST	4	16D	14	20N	22	25E	31
S12ST	5	S16SH	15	20S	23	S25E	32
13N	6	17N	16	20E	24	25I	41
13S	7	18N	17	20D	25	28H	33
13SB	8	18S	18	S20S	26	30H	34
S13N	9	18E	19	S20E	27	30E	35
S13S	10	S18E	20	20I	39	S30E	36
13N	45	18I	38	21D	28	30I	42
13S	46	S18I	43	22E	37	S30I	44
NOT DEFINED - CODE 0							

TABLE 4
IGNITION TYPE CODES

IGNITION	CODE	IGNITION	CODE
Breaker points	1	EZL system	4
Delco transistor	2	Bosch transistor	5
Diesel	3	Bosch #2 transistor	6
NOT DEFINED - CODE 0			

TABLE 5
ENGINE REGULATOR

REGULATOR	CODE
LFR/IMC	1
ELS/ISC	2
ELS/ISC with AC	3
NO REGULATOR - CODE 0	

11. From TABLE 5 select and enter REGULATOR code.

12. Proceed through the remaining test limits page using the character code from TABLE 1 to enter the required values etc until all five pages of test limits have been entered.

    NOTE: Some values have minimum and maximum limits, first set min. then move cursor and set max.

13. After all pages have been entered PUSH #, the tester displays 'NEW DATA BEING WRITTEN', the programming is now completed and stored in the memory.

14. PUSH 'P' for TEST PROGRAM SELECTION.

    NOTE: Line Entry 1 - 8 of the 'SPECIAL MODEL LIST' may be used to program vehicle test limits of non OPEL vehicles by entering code 0 at para 8-11 of this procedure.

DATA ENTRY DELETION

From 'SPECIAL MODEL LIST' select the line entry (1-8) to be deleted by aligning the cursor arrow. Enter special code 6 6 4 4 2 2 and PUSH #, tester will display 'NEW DATA BEING WRITTEN' and deletion of that entry is now completed.

TO REVIEW STORED VEHICLE TEST LIMITS

1. From 'SPECIAL MODEL LIST' align cursor arrow to the required line entry and PUSH #

VEHICLE TESTING USING PROGRAMMED LIMITS

1. Select RECEPTION DIAGNOSIS/FINAL INSPECTION/WORKSHOP TEST - LIMITS make selection and PUSH #

2. For 'VEHICLE MODEL' type, select 'NOT LISTED' and PUSH #

3. From 'SPECIAL MODEL LIST' align cursor arrow to the line entry (1-8) where programmed limits are stored and PUSH #

4. Enter vehicle test date and odometer reading and PUSH #

5. Make connections to vehicle and follow instructions on VDU until tester advances to initial test page of selected program and continue testing.

CUSTOMER MESSAGE MATRICES

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
LINE 1	CHAR																														
	CODE																														
LINE 2	CHAR																														
	CODE																														
LINE 3	CHAR																														
	CODE																														

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
LINE 1	CHAR																														
	CODE																														
LINE 2	CHAR																														
	CODE																														
LINE 3	CHAR																														
	CODE																														

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
LINE 1	CHAR																														
	CODE																														
LINE 2	CHAR																														
	CODE																														
LINE 3	CHAR																														
	CODE																														

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
LINE 1	CHAR																														
	CODE																														
LINE 2	CHAR																														
	CODE																														
LINE 3	CHAR																														
	CODE																														

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