

Engine 606.912 as of start of production 06/95 (MSA15.1)
Engine 606.961 as of start of production 06/96 (MSA25.1)

| | | |
|--|----------|----------|
| Engine | 606.912 | 606.961 |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing and adjusting closed throttle position op. no. 07-2053 or 07-2056 | | |
| AT selector lever position _____ Readout | P/N | P/N |
| MT clutch switch | | |
| Clutch pedal not operated _____ Readout | OFF | - |
| Clutch pedal operated _____ Readout | ON | - |
| Engine coolant temperature _____ °C | >60 | >60 |
| Engine speed _____ rpm | 610-710 | 560-660 |

Engine 606.912 as of start of production 06/95 (MSA15.1)
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| | | |
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| Engine | 606.912 | 606.961 |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing and adjusting engine op. no. 07-1100 Page 1 | | |
| Engine speed _____ rpm | 610-710 | 560-660 |
| Start of delivery or GI value _____ °CKA after TDC | 14+0.5 | 14+0.5 |
| Engine coolant temperature _____ °C | >60 | >60 |
| Fuel rack position _____ mm | 7.5-9.5 | 5.0-7.0 |
| Fuel temperature _____ °C | >20 | >20 |
| Selector lever position _____ Readout | P/N | P/N |
| MT clutch switch | | |
| Clutch pedal not operated _____ Readout | OFF | - |
| Clutch pedal operated _____ Readout | ON | - |
| Idle speed recognition, closed throttle position _____ Readout | ON | ON |
| Idle speed recognition, wide open throttle _____ Readout | OFF | OFF |
| Position sensor _____ % | CTP-0, WOT-100 | CTP-0, WOT-100 |
| Injected fuel quantity/stroke _____ ME | >5 | >5 |
| Stop lamp switch, NO contact/via CAN | | |
| Brake pedal not operated _____ Readout | OFF | OFF |
| Brake pedal operated _____ Readout | ON | ON |
| Exhaust gas recirculation _____ rpm | >1000 >3200 | >610 >3500 |
| Readout _____ | ON OFF | ON OFF |
| Max. engine speed without load | 5200 – 5600 | 5000 – 5300 |

Engine 606.912 as of start of production 06/95 (MSA15.1)
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| | | |
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| Engine | 606.912 | 606.961 |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing and adjusting engine , op. no. 07-1100 Seite 2 | | |
| Pressure control _____ rpm | 610-710 >3700 | 560-660 >3700 |
| Readout _____ | ON OFF | ON OFF |
| Distributor pipe pressure _____ mbar | | Specified/actual value comparison |
| Intake manifold absolute pressure >2000/min _____ mbar | 900-920 | - |
| Barometric pressure _____ mbar | barometer reading | barometer reading |
| Resonance flap/suction line _____ rpm | <3700 >3700 | - |
| Readout _____ | CLOSED OPEN | - |
| Resonance flap/intake manifold _____ rpm | <1300 1300-2800 2800 | - |
| Readout _____ | CLOSED OPEN CLOSED | - |
| Oil level inspection switch _____ Readout | - | √ |
| Engine speed _____ rpm | - | 560-660 2000±100 |
| EGR lift sensor _____ Specified value mm | - | 0-1 6-7 |
| Exhaust gas recirculation valve _____ % | - | 0 90±5 |
| Distributor pipe pressure > 1000/min _____ mbar | - | Specified/actual value comparison Blip throttle >1500 |
| Exhaust gas recirculation _____ Readout | - | OFF ON |

Engine 606.912 as of start of production 06/95 (MSA15.1)
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| Engine | 606.912 | 606.961 |
|--|----------|----------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Cold start op. no. 07-2320 | | |
| Engine speed_____rpm | >200 | >200 |
| Engine coolant temperature_____°C | <20 | <20 |
| Intake air temperature_____°C | <20 | <20 |
| Fuel rack position_____mm | 12-18 | 12-18 |
| Voltage at terminal 87_____V | >9 | >9 |
| Terminal 15_____Readout | ON | ON |
| Warm-up op. no. 07-2023 | | |
| Engine speed_____rpm | 610-710 | 560-660 |
| Engine coolant temperature_____°C | >20 | >20 |
| Intake air temperature_____°C | >20 | >20 |
| Fuel rack position_____mm | 5.0-7.0 | 5.0-7.0 |
| AT selector lever position_____Readout | P/N | P/N |
| MT clutch switch | OFF | - |
| Clutch pedal not operated_____Readout | ON | - |
| Clutch pedal operated_____Readout | | |

Engine 606.912 as of start of production 06/95 (MSA15.1)
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| Engine | 606.912 | 606.961 |
|---|----------|-----------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA15.1 | MSA25.1 |
| Testing engine output 1) and exhaust emission op. no. 07-1203 or 07-1206 | | |
| Engine speed_____rpm | 4900 | 4900 |
| Fuel rack position_____mm | >12 | >12 |
| Injected fuel quantity/stroke_____ME | >30-33 | >30-33 |
| Intake air temperature_____°C | <30 | <30 |
| Engine coolant temperature_____°C | >60 | >60 |
| Resonance flap/intake manifold_____rpm | 4900 | - |
| Readout_____ | OPEN | - |
| Resonance flap/suction line_____rpm | 4900 | - |
| Readout_____ | OPEN | - |
| Intake manifold absolute pressure_____bar | >950 2) | - |
| Distributor pipe pressure_____mbar | - | 1750-1850 |
| AT selector lever position 3_____kW | 71 | 76 |
| MT 3rd gear_____kW | 75 | - |
| Opacity (absorption coefficient)_____1/m | <1.6 | <1.6 |
| Start of delivery_____°CKA before TDC | +2 to +6 | +2 to +6 |

- 1) The test values are minimum outputs. Speed not in excess of 130 km/h. Use workshop test tires.
2) Barometer reading is dependent, refer to Specified/actual value, engine test HHT. Reading approx. 30 mbar lower than closed throttle position value.

Engine 606.912 as of start of production 06/95 (MSA15.1)
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| Engine | 606.912 | 606.961 |
|---|----------|-----------------------------------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA15.1 | MSA25.1 |
| Testing cruise control op. no. 30-7100 | | |
| Safety contact_____Readout | - | OFF |
| Selector lever position_____Readout | - | P/N |
| Move cruise control switch into following positions, Readout is subdivided:_____ | V/B/SP/A | V/B/SP/A |
| Stop lamp switch NO contact/via CAN | | |
| Brake pedal not operated_____Readout | ON | ON |
| Brake pedal operated_____Readout | OFF | OFF |
| Vehicle speed_____Readout | - | Specified/actual value comparison |

| Drive authorization | | | |
|--|---------|-----|-----|
| Engine control module identified | Readout | YES | YES |
| Engine control module locked | Readout | YES | YES |
| Start enable | Readout | YES | YES |
| Vehicle locked with RCL | Readout | NO | NO |
| RCL and engine control module compatible | Readout | YES | YES |
| Engine control module | Readout | ✓ | ✓ |
| CAN reception from RCL | Readout | ✓ | ✓ |

V = Decelerate
SP = Resume
B = Accelerate
A = OFF

Engine 606.912 as of start of production 06/95 (MSA15.1)

Engine 606.961 as of start of production 06/96 (MSA25.1)

| Engine | 606.912 | 606.961 |
|--|---------|---------|
| IFI designation | MSA15.1 | MSA25.1 |
| CAN bus | | |
| Engine control module or CAN bus | Readout | ✓ |
| IFI receives from ETS/ABS/ASR | Readout | YES |
| IFI receives from ETC | Readout | YES |
| IFI transmits to ASR/ESP/(Automatic) A/C/ETC | Readout | YES |
| IFI transmits to ETC/IC | Readout | YES |
| IFI transmits to ETC/ASR | Readout | YES |
| IFI transmits to IC/ASR/ETC | Readout | YES |
| IFI receives from ETS/ABS | Readout | YES |
| IFI receives from CL | Readout | YES |

Engine 606.912 as of start of production 06/95 (MSA15.1)

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| Engine | 606.912 | 606.961 |
|--|-----------------|----------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing fuel pump op. no. 07-5701 | | |
| Closed throttle position | rpm | 610-710 |
| Delivery rate after 30 s | cm ³ | >200 |
| Testing fuel pressure op. no. 07-1603 | | |
| Closed throttle position | bar | >0.3 |
| Wide open throttle | bar | >0.5 |
| Testing vacuum pump op. no. 43-0500 | | |
| Engine coolant temperature | °C | <20 |
| Closed throttle position after 30 s | mbar | >700 |
| Testing vacuum control valve op. no. 27-0037 | | |
| Closed throttle position | mbar | >400 |
| Engine switched off, accelerator control to wide open throttle | mbar | <0 |
| Testing injection nozzles op. no. 07-6712 | | |
| Spray pressure | | |
| with new injection nozzles | bar | 115-125 |
| with used injection nozzles | bar | >110 |



Engine 606.912 as of start of production 06/95 (MSA15.1)



Engine 606.961 as of start of production 06/96 (MSA25.1)



| Engine | 606.912 | 606.961 |
|--------------------------|-------------------------|-------------------------|
| Model | 210.020/220 | 140.135 |
| Version/Code | TWC/62/0 | TWC/62/0 |
| Injection pump | | |
| Bosch designation | PES 6 M 55 C 320 RS 204 | PES 6 M 60 C.320 RS 206 |
| MB part number | 606 070 05 01 | 606 070 06 01 |
| Bosch combination number | 0 400 196 002 | 0 400 196 003 |
| Fuel pump | | |
| Bosch designation | FP/KG M 150 | FP/KG 24 M 152 |



| | | |
|-------------------------|-------------|-------------|
| Injection nozzle | | |
| Injection nozzle | | |
| Bosch designation _____ | DN O SD 310 | DN O SD 310 |
| Lucas designation _____ | NB 001 R | NB 001 R |
| | | |
| Nozzle holder assembly | | |
| Bosch designation _____ | KCE 27 S3 | KCE 27 S3 |
| Lucas designation _____ | LDC 001 R02 | LDC 001 R02 |



Engine 606.912  version as of start of production 09/95 (MSA15.1) up to 05/96
 version as of 06/96 (MSA25.1)

| | | |
|--|---|---|
| Engine | 606.912  version | 606.912  version |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing and adjusting closed throttle position op. no. 07-2053 or 07-2056 | | |
| AT selector lever position _____ Readout | P/N | P/N |
| Engine coolant temperature _____ °C | >60 | >60 |
| Engine speed _____ rpm | 610-710 | 610-710 |

Engine 606.912  version as of start of production 09/95 (MSA15.1) up to 05/96
 version as of 06/96 (MSA25.1)

| | | |
|--|---|---|
| Engine | 606.912  version | 606.912  version |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing and adjusting engine op. no. 07-1100 Page 1 | | |
| Engine speed _____ rpm | 610-710 | 610-710 |
| Start of delivery or GI value _____ °CKA after TDC | 14+0.5 | 14+0.5 |
| Engine coolant temperature _____ °C | >60 | >60 |
| Fuel rack position _____ mm | 7.5-9.5 | 7.5-9.5 |
| Fuel temperature _____ °C | >20 | >20 |
| Selector lever position _____ Readout | P/N | P/N |
| Idle speed recognition, closed throttle position _____ Readout | ON | ON |
| Idle speed recognition, wide open throttle _____ Readout | OFF | OFF |
| Position sensor _____ % | CTP-0, WOT-100 | CTP-0, WOT-100 |
| Injected fuel quantity/stroke _____ ME | >5 | >5 |
| Stop lamp switch, NO contact | | via CAN |
| Brake pedal not operated _____ Readout | OFF | OFF |
| Brake pedal operated _____ Readout | ON | ON |
| Exhaust gas recirculation _____ rpm | >1000 2) >3200 | >1000 >3200 |
| Readout | ON OFF | ON OFF |
| Pressure control flap _____ rpm | 610-710 >3700 | 610-710 >3700 |
| Readout | ON OFF | EIN AUS |
| Intake manifold absolute pressure >2000 rpm _____ mbar | 900-920 | 900-920 |
| Barometric pressure _____ mbar | refer to barometer reading | refer to barometer reading |

Engine 606.912  version as of start of production 09/95 (MSA15.1) up to 05/96
 version as of 06/96 (MSA25.1)

| | | |
|-----------------|---|---|
| Engine | 606.912  version | 606.912  version |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |

| | | | | | |
|---|-------------|-----------------------------------|--------------------------|-----------------------------------|--------------------------|
| Resonance flap/suction line _____ rpm | 610-710 | >3700 | without load | <3700 | >3700 without load |
| Resonance intake manifold switchover valve Y22/6 or resonance intake manifold switch S35/14) Readout | CLOSED | OPEN | | CLOSED | OPEN |
| Resonance flap/intake manifold _____ rpm | 610-710 | 1300-2800 | >2800 3) | <1300 | 1300-2800 >2800 3) |
| Resonance intake line switchover valve Y22/7 or resonance intake pipe switch S35/14) Readout | CLOSED | OPEN | CLOSED | CLOSED | OPEN CLOSED |
| Oil level inspection switch _____ Readout | - | | | ✓ | |
| Engine speed _____ rpm | 610-690 2) | | 1900-2100 | 610-690 2) | 1900-2100 |
| EGR lift sensor _____ Specified value mm | 1.5 ± 0.1 | | Specif./act. value comp. | 1.5 ± 0.1 | Specif./act. value comp. |
| Specif. val. remains at 1.5 mm for approx. 50 s after end of EGR | 0 2) | | | 0 2) | |
| EGR lift sensor _____ Actual value mm | 2 2) | | | 2 2) | |
| Actual value after end of EGR and after (approx. 50 s) | | | 30 ± 5 | | 30 ± 5 |
| Exhaust gas recirculation valve _____ % | | | | | |
| Value after end of EGR and after (approx. 50 s) | | | | | |
| Intake manifold absolute pressure > 1000 rpm _____ mbar | | Specified/actual value comparison | ON | Specified/actual value comparison | ON |
| Exhaust gas recirculation _____ Readout | OFF | | ON | OFF | ON |
| Readout after end of EGR and after (approx. 50 s) | | | | | |
| Max. engine speed without load | 5200 – 5600 | | | 5200 – 5600 | |

1) If the position sensor is operated > 50%, the resonance flap/suction line opens

2) If exhaust gas was recirculated previously, an after-running time of approx. 50 s is to be taken into account, then the values can be checked

3) Except limit speed.

4) On MSA 25.1 only.

Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96

(USA) version as of 06/96 (MSA25.1)

| Engine | 606.912 (USA) version | 606.912 (USA) version |
|--|-----------------------|-----------------------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Cold start op. no. 07-2320 | | |
| Engine speed _____ rpm | >200 | >200 |
| Engine coolant temperature _____ °C | <20 | <20 |
| Intake air temperature _____ °C | <20 | <20 |
| Fuel rack position _____ mm | 12-18 | 12-18 |
| Voltage at terminal 87 _____ V | >9 | >9 |
| Terminal 15 _____ Readout | ON | ON |
| Warm-up op. no. 07-2023 | | |
| Engine speed _____ rpm | 610-710 | 610-710 |
| Engine coolant temperature _____ °C | <20 | <20 |
| Intake air temperature _____ °C | - | >20 |
| Fuel rack position _____ mm | - | P/N |
| AT selector lever position _____ Readout | P/N | |

Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96

(USA) version as of 06/96 (MSA25.1)

| Engine | 606.912 (USA) version | 606.912 (USA) version |
|---|-----------------------|-----------------------|
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing engine output 1) and exhaust emission op. no. 07-1203 or 07-1206 | | |
| Engine speed _____ rpm | 4900 | 4900 |
| Fuel rack position _____ mm | >12 | >12 |
| Injected fuel quantity/stroke _____ ME | >30-33 | >30-33 |
| Intake air temperature _____ °C | <30 | <30 |
| Engine coolant temperature _____ °C | >60 | >60 |
| Resonance flap/intake manifold _____ rpm | 4900 | 4900 |
| Readout | OPEN | OPEN |
| Resonance flap/suction line _____ rpm | 4900 | 4900 |
| Readout | OPEN | OPEN |
| Intake manifold absolute pressure _____ mbar | >950 2) | >950 2) |
| AT selector lever position 3 _____ kW | 71 | 71 |
| Opacity (absorption coefficient) _____ 1/m | <1.6 | <1.6 |
| Start of delivery _____ °CKA before TDC | +2 to +6 | +2 to +6 |

1) The test values are minimum outputs. Speed not in excess of 130 km/h. Use workshop test tires.

2) Barometer reading is dependent, refer to Specified/actual value, engine test HHT. Reading approx. 30 mbar lower than closed throttle position value.

V = Decelerate

SP = Resume

B = Accelerate

A = OFF

Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96
 (USA) version as of 06/96 (MSA25.1)

| | | |
|--|-----------------------|-----------------------|
| Engine | 606.912 (USA) version | 606.912 (USA) version |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA15.1 | MSA25.1 |
| Testing cruise control op. no. 30-7100 | | |
| Safety contact _____ Readout | ON | P/N |
| Pushbutton switch operated _____ Readout | OFF | |
| Not operated _____ Readout | P/N | |
| Selector lever position _____ Readout | | |
| Move cruise control switch into following positions, Readout is subdivided: | V/B/SP/A | V/B/SP/A |
| Stop lamp switch, NO contact | | via CAN |
| Brake pedal not operated _____ Readout | ON | ON |
| Brake pedal operated _____ Readout | OFF | OFF |
| Vehicle speed _____ Readout | - | |

V = Decelerate
 SP = Resume
 B = Accelerate
 A = OFF

Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96
 (USA) version as of 06/96 (MSA25.1)

| | | |
|--|-----------------------|-----------------------|
| Engine | 606.912 (USA) version | 606.912 (USA) version |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Drive authorization | | |
| Engine control module identified _____ Readout | YES 1) | YES |
| Engine control module locked _____ Readout | YES 1) | YES |
| Start enable _____ Readout | YES | YES |
| Vehicle locked with RCL _____ Readout | NO | NO |
| RCL and engine control module compatible _____ Readout | YES | YES |
| Engine control module _____ Readout | ✓ | ✓ |
| CAN reception from RCL _____ Readout | ✓ | ✓ |
| Readiness to test OBD II | | |
| Ready to test (OBD II) _____ Readout | YES | YES |

1) The readout can be on NO on (USA) version vehicles



Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96
 (USA) version as of 06/96 (MSA25.1)



| | | |
|--|-----------------------|-----------------------|
| Engine | 606.912 (USA) version | 606.912 (USA) version |
| IFI designation | MSA15.1 | MSA25.1 |
| CAN bus | | |
| Engine control module or CAN bus _____ Readout | | ✓ |
| IFI receives from ETS/ABS/ASR _____ Readout | | YES |
| IFI receives from ETC _____ Readout | | YES |
| IFI transmits to ASR/ESP/(Automatic) A/C/ETC _____ Readout | | YES |
| IFI transmits to ETC/IC _____ Readout | | YES |
| IFI transmits to ETC/ASR _____ Readout | | YES |
| IFI transmits to IC/ASR/ETC _____ Readout | | YES |
| IFI receives from ETS/ABS _____ Readout | | YES |
| IFI receives from CL _____ Readout | | YES |

Engine 606.912 (USA) version as of start of production 09/95 (MSA15.1) up to 05/96
 (USA) version as of 06/96 (MSA25.1)

| | | |
|---|-----------------------|-----------------------|
| Engine | 606.912 (USA) version | 606.912 (USA) version |
| Version/Code | TWC/62/0 | TWC/62/0 |
| IFI designation | MSA 15.1 | MSA 25.1 |
| Testing fuel pump op. no. 07-5701 | | |
| Closed throttle position _____ rpm | 610-710 | 610-710 |
| Delivery rate after 30 s _____ cm ³ | >200 | >200 |
| Testing fuel pressure op. no. 07-1603 | | |
| Closed throttle position _____ bar | >0.3 | >0.3 |
| Wide open throttle _____ bar | >0.5 | >0.5 |
| Testing vacuum pump op. no. 43-0500 | | |
| Engine coolant temperature _____ °C | <20 | <20 |
| Closed throttle position after 30 s _____ mbar | >700 | >700 |
| Testing vacuum control valve op. no. 27-0037 | | |
| Closed throttle position _____ mbar | >400 | >400 |
| Engine switched off, accelerator control to wide open throttle _____ mbar | <0 | <0 |

| | | |
|--|---------|---------|
| Testing injection nozzles op. no. 07-6712 | | |
| Spray pressure | | |
| with new injection nozzles _____ bar | 115-125 | 115-125 |
| with used injection nozzles _____ bar | >110 | >110 |

Engine 606.912  version as of start of production 09/95 (MSA15.1) up to 05/96
 version as of 06/96 (MSA25.1)

| Engine | 606.912  version | 606.912  version |
|--------------------------------|---|---|
| Typ | 210.020 | 210.020 |
| Version/Code | TWC/62/0 | TWC/62/0 |
| Injection pump | | |
| Bosch designation _____ | PES 6 M 55 C 320 RS 204 | PES 6 M 55 C 320 RS 204 |
| MB part number _____ | 606 070 05 01 | 606 070 05 01 |
| Bosch combination number _____ | 0 400 196 002 | 0 400 196 002 |
| Fuel pump | | |
| Bosch designation _____ | FP/KG M 150 | FP/KG M 150 |
| Injection nozzle | | |
| Injection nozzle | | |
| Bosch designation _____ | DN O SD 310 | DN O SD 310 |
| Lucas designation _____ | NB 001 R | NB 001 R |
| Nozzle holder assembly | | |
| Bosch designation _____ | KCE 27 S3 | KCE 27 S3 |
| Lucas designation _____ | LDC 001 R02 | LDC 001 R02 |