

- 5.1 Maintenance schedule**
- 5.2 Maintenance diagram**
- 5.3 Maintenance work carried out**

Maintenance

5.1 Maintenance schedule

5

check= ● set=○ clean=▲ renew= ■										Industrial engines	
↓ check 2x daily before or during the 1st trial run, during the running-in phase or when commissioning new and overhauled engines.										The engine maintenance times given are maximum permissible job times. Depending on the usage circumstances, shorter maintenance times may be necessary. Observe the instruction manual of the equipment manufacturer. # Maintenance only to be carried out by authorised service personnel	
↓ every 10 oh or daily											
E10	E20	in operating hours (oh) every year(s)						Activity			
		E30 500	E40 1,000	E45 1,500	E50 3,000	E60 6,000	E70 12,000			1	2
●	●									Lube oil level, if necessary re-fill	6.1.2
		■								Lube oil (oil change intervals depending on engine application and oil quality), see TR0199-99-3002	6.1.1/ 6.1.2
		■								Oil filter cartridge	6.1.3
			■							Fuel filter cartridge	6.2.1
						●				Electronic injector check via EMR3	#
●			■ ¹⁾							Fuel filter insert ¹⁾ (fuel pre-filter)	4.2
●		●							■	Coolant (additive concentration)	4.3.1/2/3
●	●	●								Coolant level	–
●	●		■							Intake air filter (if available, maintenance as per maintenance display)	6.4.3 /6.4.4
●			●					▲		Charge air cooler (drain lube oil/condensation)	
							▲			EGR(option)* Check non-return valve (option)	
						●			■	EGR (option) Check cap and adjustment mechanism for clearance, renew if necessary.	
							▲			Cooler EGR (option)	
			●							Check function of heating flange	
			●							Battery and cable connections	6.7.1
●			●							Engine monitoring, warning system	3.3 #
				○						Valve clearance	6.6.1
●					●	■				V-belt/tension pulley (renew when wear limit reached)	6.5.1/6.5.3
			●							Crankcase pressure bleed valve (option)	#
●	●									Engine tightness (visual inspection for leaks).	–
●			●							Engine mounting (renew in case of damage)	9.2
●			●							Fastenings, hose connections / clamps	–
							■			General overhaul	#

EGR* exhaust gas recirculation (system); If the warning system (light/siren) is activated, the fuel pre-filter must be emptied immediately.

¹⁾ The intervals can be reduced, depending on the degree of soiling of the fuel used.

5.1 Maintenance schedule

Maintenance

check= ● set= ○ clean= ▲ renew= ■							Enhancements or modifications for engines with EPA acceptance	Section
max. permissible job times in operating hours (oh) every								
E10	⇓ check 2x daily before or during the 1st trial run, during the running-in phase or when commissioning new and overhauled engines.						The engine maintenance times given are maximum permissible job times. Depending on the usage circumstances, shorter maintenance times may be necessary. Observe the instruction manual of the equipment manufacturer. # Maintenance only to be carried out by authorised service personnel	
	⇓ every 10 oh or daily							
	in operating hours (oh) every					Activity		
	E30 500	E40 6.000	E70 12.000	1	2			
		●	▲				Charge air cooler (drain lube oil/condensation)	#
		●	▲				Charge air cooler inlet surface (clean if necessary)	#
			▲			■	Crankcase pressure bleed valve (option)	#

Maintenance

5.1 Maintenance schedule

5

check= ● set= ○ clean= ▲ renew= ■										Vehicle engines		
↓ check 2x daily before or during the 1st trial run, during the running-in phase or when commissioning new and overhauled engines.										Service group I <30 000km 20 approx.km/h		
										The engine maintenance times given are maximum permissible job times. Depending on the usage circumstances, shorter maintenance times may be necessary. Observe the instruction manual of the equipment manufacturer. # Maintenance only to be carried out by authorised service personnel		
↓ every 200 km or daily										group	Yearly op. performance km	Average Drive speed approx.km/h
OPERATIONAL PERFORMANCE IN (km) year(s)										I	<30 000	20
										II	>30 to 100 000	40
										III	>100 000	60
E10	E20	E30	E40	E45	E50	E60	E70	1	2	Activity	Section	
		5,000	10,000	20,000	30,000	120,000	240,000					
●	●									Lube oil level, if necessary re-fill	6.1.2	
		■								Lube oil (oil change intervals depending on engine application and oil quality), see TR 0199-99-3002	6.1.1/ 6.1.2	
		■								Oil filter cartridge	6.1.3	
			■							Fuel filter cartridge	6.2.1	
						●				Electronic injector check via EMR3	#	
●			■ ¹⁾							Fuel filter insert ¹⁾ (fuel pre-filter)	4.2	
●		●							■	Coolant (additive concentration)	4.3.1/2/3	
●	●	●								Coolant level	—	
●	●		■							Intake air filter (if available, maintenance as per maintenance display)	6.4.3 /6.4.4	
●			●					▲		Charge air cooler (drain lube oil/condensation)		
							▲			EGR(option)* Check non-return valve (option)		
						●			■	EGR(option) Check cap and adjustment mechanism for clearance, renew if necessary.		
							▲			Cooler EGR (option)		
			●							Check function of heating flange		
			●							Battery and cable connections	6.7.1	
●			●							Engine monitoring, warning system &	3.3 #	
				○						Valve clearance	6.6.1	
●					●	■				V-belt/tension pulley (renew when wear limit reached)	6.5.1/6.5.3	
			●							Crankcase pressure bleed valve (option)	#	
●	●									Engine tightness (visual inspection for leaks).	—	
●			●							Engine mounting (renew in case of damage)	9.2	
●			●							Fastenings, hose connections / clamps	—	
							■			General overhaul	#	

5.1 Maintenance schedule

Maintenance

5

check= ● set= ○ clean= ▲ renew= ■ ↓ check 2x daily before or during the 1st trial run, during the running-in phase or when commissioning new and overhauled engines. ↓ every 200 km or daily OPERATIONAL PERFORMANCE IN (km) year(s)										Vehicle engines Service group II 100 000km 40 approx.km/h The engine maintenance times given are maximum permissible job times. Depending on the usage circumstances, shorter maintenance times may be necessary. Observe the instruction manual of the equipment manufacturer. # Maintenance only to be carried out by authorised service personnel	
										Service Yearly op. Average group performance Drive speed km approx.km/h	
										I <30 000 20 II >30 to 100 000 40 III >100 000 60	
E10	E20	E30	E40	E40	E50	E60	E70	1	2	Activity	Section
●	●									Lube oil level, if necessary re-fill	6.1.2
		■								Lube oil (oil change intervals depending on engine application and oil quality), see TR 0199-99-3002	6.1.1/ 6.1.2
		■								Oil filter cartridge	6.1.3
			■							Fuel filter cartridge	6.2.1
						●				Electronic injector check via EMR3	#
●			■ ¹⁾							Fuel filter insert ¹⁾ (fuel pre-filter)	4.2
●		●							■	Coolant (additive concentration)	4.3.1/2/3
●	●	●								Coolant level	—
●	●		■							Intake air filter (if available, maintenance as per maintenance display)	6.4.3/6.4.4
●			●					▲		Charge air cooler (drain lube oil/condensation)	
							▲			EGR(option)* Check non-return valve (option)	
						●			■	EGR (option) Check cap and adjustment mechanism for clearance, renew if necessary.	
							▲			Cooler EGR (option)	
			●							Check function of heating flange	
			●							Battery and cable connections	6.7.1
●			●							Engine monitoring, warning system &	3.3 #
				○						Valve clearance	6.6.1
●					●	■				V-belt/tension pulley (renew when wear limit reached)	6.5.1/6.5.3
			●							Crankcase pressure bleed valve (option)	#
●	●									Engine tightness (visual inspection for leaks).	—
●			●							Engine mounting (renew in case of damage)	9.2
●			●							Fastenings, hose connections / clamps	—
							■			General overhaul	#

EGR* Exhaust gas recirculation (system); If the warning system (light/siren) is activated, the fuel pre-filter must be emptied immediately.

¹⁾ The intervals can be reduced, depending on the degree of soiling of the fuel used.

Maintenance

5.1 Maintenance schedule

5

check= ● set= ○ clean= ▲ renew= ■ ↓ check 2x daily before or during the 1st trial run, during the running-in phase or when commissioning new and overhauled engines ↓ every 200 km or daily										Vehicle engines Service group III >100 000 km 60 approx. km/h The engine maintenance times given are maximum permissible job times. Depending on the usage circumstances, shorter maintenance times may be necessary. Observe the instruction manual of the equipment manufacturer. # Maintenance only to be carried out by authorised service personnel	
OPERATIONAL PERFORMANCE IN (km) every year(s) Service group III										Service Yearly op. group performance km I <30 000 II >30 to 100 000 III >100 000	Average Drive speed approx. km/h 20 40 60
E10	E20	E30	E40	E45	E50	E60	E70	1	2	Activity	Section
●	●									Lube oil level, if necessary re-fill	6.1.2
		■								Lube oil (oil change intervals depending on engine application and oil quality), see TR 0199-99-3002	6.1.1/ 6.1.2
		■								Oil filter cartridge	6.1.3
			■							Fuel filter cartridge	6.2.1
						●				Electronic injector check via EMR3	#
●			■ ¹⁾							Fuel filter insert ¹⁾ (fuel pre-filter)	4.2
●		●							■	Coolant (additive concentration)	4.3.1/2/3
●	●	●								Coolant level	—
●	●		■							Intake air filter (if available, maintenance as per maintenance display)	6.4.3/6.4.4
●			●					▲		Charge air cooler (drain lube oil/condensation)	
							▲			EGR(option)* Check non-return valve (option)	
						●			■	EGR (option) Check cap and adjustment mechanism for clearance, renew if necessary.	
							▲			Cooler EGR (option)	
			●							Check function of heating flange	
			●							Battery and cable connections	6.7.1
●			●							Engine monitoring, warning system &	3.3 #
				○						Valve clearance	6.6.1
●					●	■				V-belt/tension pulley (renew when wear limit reached)	6.5.1
			●							Crankcase pressure bleed valve (option)	#
●	●									Engine tightness (visual inspection for leaks).	—
●			●							Engine mounting (renew in case of damage)	9.2
●			●							Fastenings, hose connections / clamps	—
							■			General overhaul	#

EGR* Exhaust gas recirculation (system); If the warning system (light/siren) is activated, the fuel pre-filter must be emptied immediately.

¹⁾ The intervals can be reduced, depending on the degree of soiling of the fuel used.

Maintenance

5.1 Maintenance schedule

5.1.1 Standard maintenance schedule

Intervals at/after	Deutz maintenance and service schedules	Activity	Execution by:
50 oh	E 10	after commissioning and E 50-E 70	authorised specialists
daily	E 20	daily inspection round	the user / authorised specialists
500 oh	E 30	inspection	authorised specialists
1000 oh	E 40	intermediate overhaul	authorised specialists
1500 oh	E 45	extended intermediate overhaul	authorised specialists
3000 oh	E 60	partial overhaul	authorised specialists
6000 oh	E 60	partial overhaul	authorised specialists
10 000 oh (2012)	E 70	overhaul	authorised specialists
13 000 oh (2013)	E 70	overhaul	authorised specialists

*) approximate value, depends on the type of engine application and/or regular engine maintenance.
Please contact your responsible DEUTZ Service partner.

5.2 Maintenance diagram

Maintenance

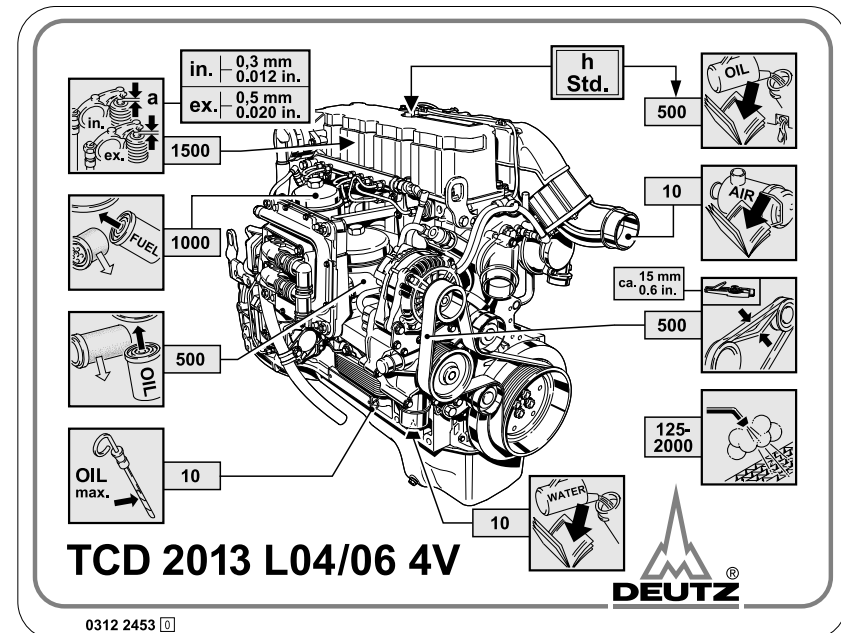
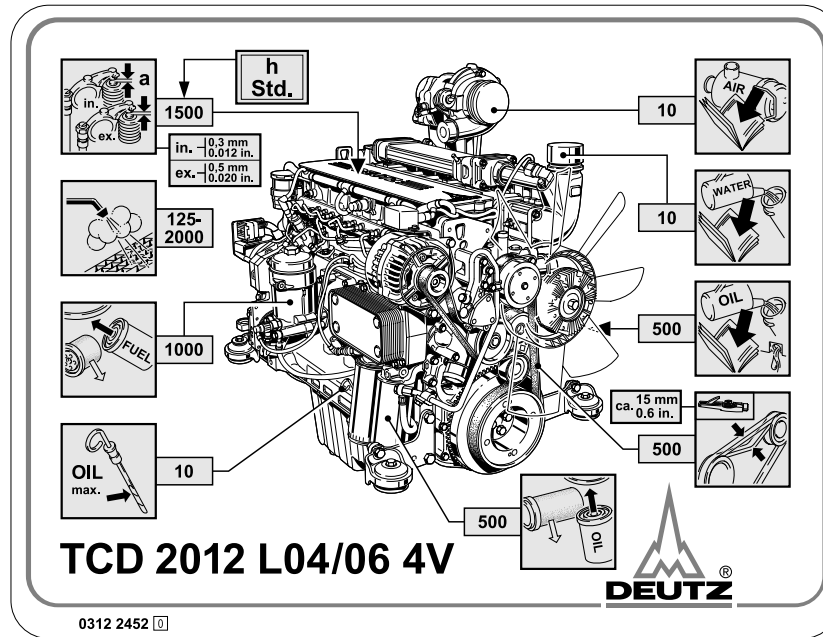
5

The maintenance diagram shown on this page is supplied with every engine in self-adhesive form. It should be stuck onto a well visible location on the engine or equipment.

Check that this is the case!

If not, request a replacement from your engine or equipment supplier!

The maintenance schedule is decisive for standard maintenance, see 5.1.



All maintenance work should only be carried out when the engine is not running.

5.3 Maintenance work carried out

Maintenance

Op. hrs.	Date	Signature / stamp	Op. hrs.	Date	Signature / stamp
50-150*			-		
125			250		
375			500		
625			750		
875			1000		
1125			1250		
1375			1500		
1625			1750		
1875			2000		
2115			2250		
2375			2500		
			2750		
* after commissioning new and overhauled engines The maintenance work carried out methodically can be recorded in the table and confirmed.					

Maintenance

5.3 Maintenance work carried out

5

Op. hrs.	Date	Signature / stamp	Op. hrs.	Date	Signature / stamp
2875			3000		
3125			3250		
3375			3500		
3625			3750		
3875			4000		
4125			4250		
4375			4500		
4625			4750		
4875			5000		
5125			5250		
5375			5500		
5625			5750		

The maintenance work carried out methodically can be recorded in the table and confirmed.

5.3 Maintenance work carried out

Maintenance

Op. hrs.	Date	Signature / stamp	Op. hrs.	Date	Signature / stamp
5875			6000		
6125			6250		
6375			6500		
6625			6750		
6875			7000		
7125			7250		
7375			7500		
7625			7750		
7825			8000		
8125			8250		
8375			8500		
8625			8750		
The maintenance work carried out methodically can be recorded in the table and confirmed.					

Maintenance

5.3 Maintenance work carried out

5

Op. hrs.	Date	Signature / stamp	Op. hrs.	Date	Signature / stamp
8875			9000		
9125			9250		
9375			9500		
9625			9750		
9875			10000		
10125			10250		
10375			10500		
10625			10750		
10875			10000		
10125			10250		
10375			10500		
10625			10750		
The maintenance work carried out methodically can be recorded in the table and confirmed.					