

### Equipment required for cold temperatures

The chart below gives the minimum temperature at which a combination of engine oil, battery, starter motor and ring gear will start the engine.

Engine type	Temperature	0 °C (32 °F)	-15 °C (5 °F)	-20 °C (-4 °F)
	Lubricating oil viscosity	20W	10W	5W
402D-05	Battery	049	049	069
	Starter motor (kW)	0,8	0,8	1,2
	Ring gear teeth	88	88	88
403D-07	Battery	049	049	069
	Starter motor (kW)	0,8	0,8	1,2
	Ring gear teeth	88	88	88
403D-11	Battery	069	069	069
	Starter motor (kW)	1,1	1,1	1,4
	Ring gear teeth	96	96	96
403D-15 403D-15T	Battery	072	072	647
	Starter motor (kW)	2,0	2,0	2,0
	Ring gear teeth	109	109	109
404D-15	Battery	TBA	TBA	TBA
	Starter motor (kW)	1,4	TBA	TBA
	Ring gear teeth	96	96	96
404D-22 404D-22T 404D-22TA	Battery	647	647	655
	Starter motor (kW)	2,0	2,0	2,0
	Ring gear teeth	126	126	126