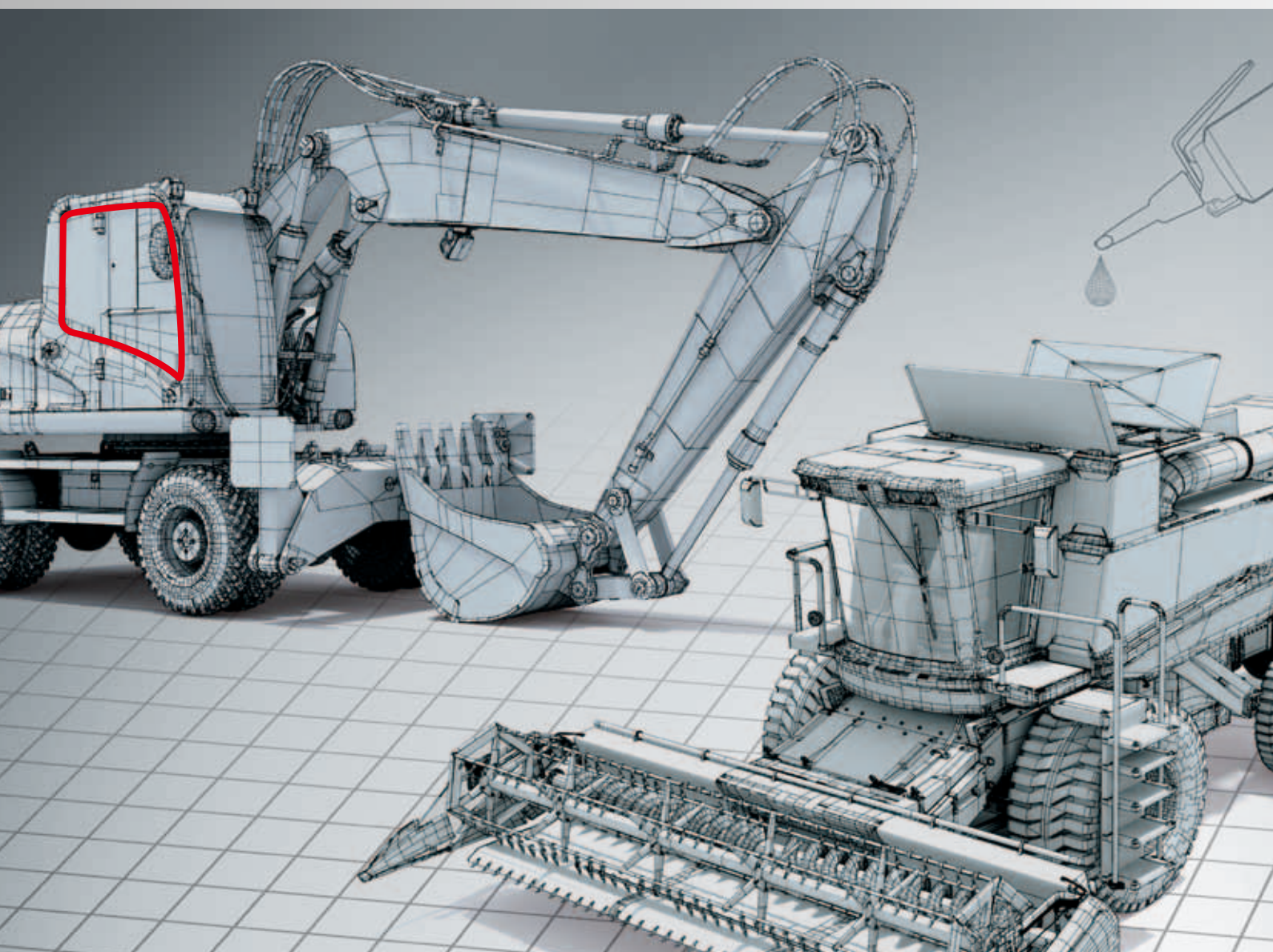


LOCTITE®
BONDERITE®
TEROSON®

Agricultural and Construction Machinery Solutions Guide



Excellence is our Passion

Best-in-Class Technical Support

Our professional engineering support empowers our customers to improve their quality & efficiency.

Design Partnership

Our large experienced team of engineers provide documented design & application support.

Global Capabilities

We are the global technology leader with extensive network to support customers' value chain.

Innovative & Sustainable Solutions

We enable customers' innovation to meet fast design changes & developments with green solutions.

Cost Saving & Reliability

Our superior adhesives & equipment improve productivity, durability & reduce overall cost.



Achieving more with less

Our commitment to leadership in sustainability is deeply embedded in our values. With our revised Sustainability Strategy for 2030, we are building on our strong track record. At the same time, we are aiming to address one of the central future challenges: to decouple growth from resource consumption. At the heart of this strategy is therefore the simple, yet challenging, ambition: to achieve more with less. It aims to create more value for our customers, consumers, communities and the company alike, while simultaneously reducing the environmental footprint.

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Challenges
Index

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FTSE4Good

We are the most trusted provider of
adhesives, sealants and functional coatings
assembling the world's largest agricultural
and construction machinery manufacturers.



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Machinery

Tractor
Loader
Excavator
Combine Harvester

Part

Engine
Cabin
Axle-Transmission-Gear Box
Hydraulic Cylinder
Fuel Tank

16 - 21 **PRODUCT SELECTOR CHART**

Threadlocking
Thread Sealing
Retaining
Flange Sealing (Anaerobic)
Flange Sealing (Silicone)
Seam Sealing
Anti-Spatter (Ceramishield)

Window Glazing (DGX)
Instant Bonding
Metal Bonding
Anti-Seize
Noise, Vibration and Harshness (NVH)
Functional Coatings

INTRODUCTION





For decades, agricultural and construction machinery manufacturers have used Henkel adhesive, sealant and functional coatings technologies to improve end-user product performance, reduce production costs, and create more efficient manufacturing processes. Their superior performance and wide reaching benefits can be successfully translated into the Agricultural and Construction Machinery Industry.

This guide provides design, manufacturing and quality engineers with the knowledge to properly qualify Henkel adhesive, sealant and functional coatings technologies for Agricultural and Construction Machinery applications.

► Machinery & Part

> Machinery

- Tractor
- Loader
- Excavator
- Combine Harvester

> Part

- Cabin
- Engine
- Axle – Transmission – Gearbox
- Hydraulic Cylinder
- Fuel Tank

► Henkel Applications & Solutions

- > Threadlocking
Prevent fastener loosening and seizure
- > Thread Sealing
Prevent leaks – air, hydraulic
- > Retaining
Prevent backlash – keyway wallow, wheel bearings, wear, corrosion
- > Flange Sealing (Anaerobic)
Seal close fitting joints between rigid metal faces and flanges
- > Flange Sealing (Silicone)
Retain flexibility and oil resistance for longer gasket life
- > Seam Sealing
Seal against polyurethane, rubber, modified silicone polymer or acrylic dispersions
- > Anti-Spatter (Ceramishield)
Prevent spatter adhesion on welding equipment, jigs and surfaces
- > Window Glazing (DGX)
Secure windows to the metal frames
- > Instant Bonding
Bond dissimilar parts quickly and easily
- > Metal Bonding
Provide tough, long-lasting bonds to metal surfaces
- > Anti-Seize
Protect metal parts from corrosion, galling and seizure
- > Noise, Vibration and Harshness (NVH)
Reduce vibration, insulate and absorb sound
- > Functional Coatings
Include coatings, surface treatment and cleaners

MACHINERY



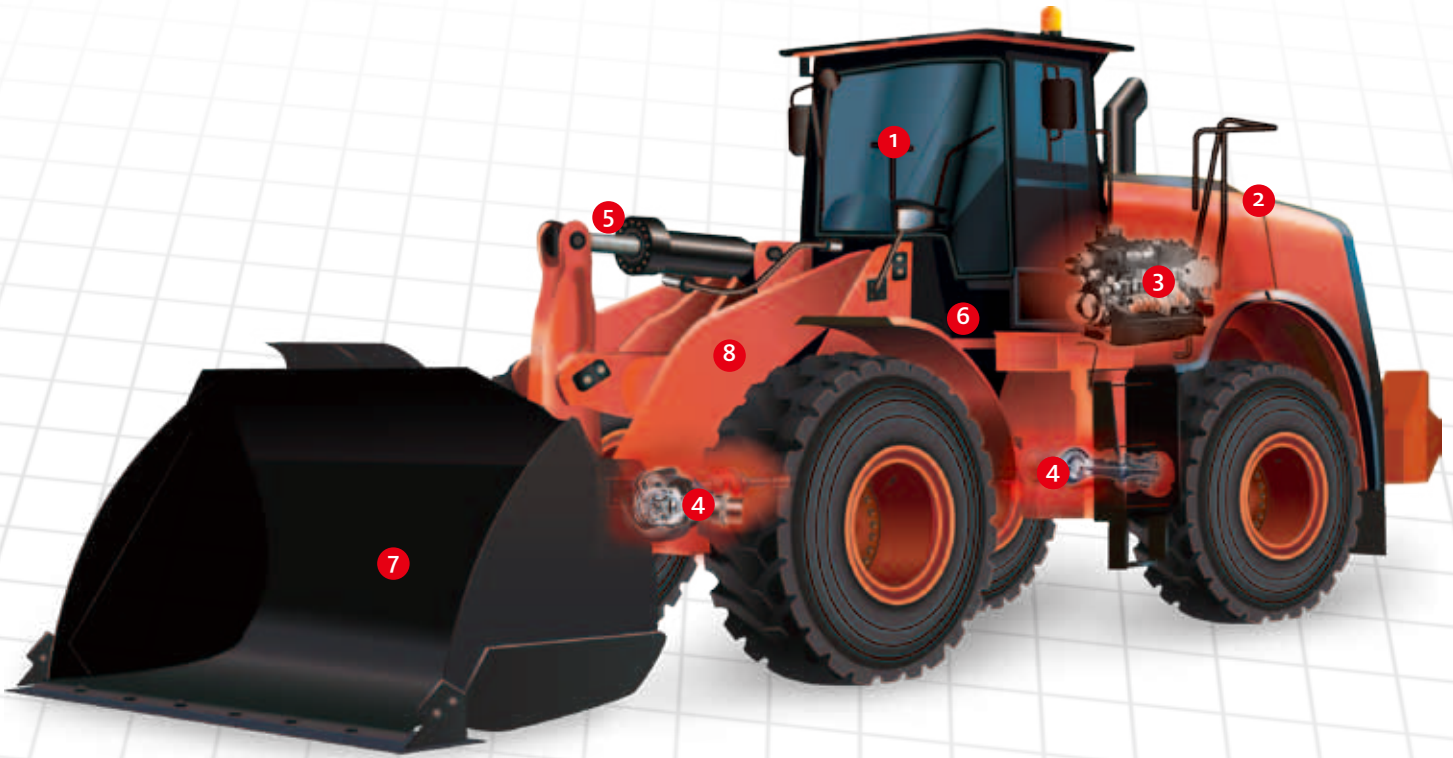
TRACTOR



	LOCATIONS	BENEFITS
SEAM SEALING	1 Cabin	<ul style="list-style-type: none"> • High temperature resistance • Good durability • Diversified cure condition
WINDOW GLAZING (DGX)	1 Cabin	<ul style="list-style-type: none"> • High position tack • Fast cure • Primerless
NOISE, VIBRATION AND HARSHNESS (NVH)	1 Cabin (sound package) 2 Engine hood (acoustic treatment)	<ul style="list-style-type: none"> • Total solution to reduce exterior noise / cabin noise • Full engineering service • High performance acoustic material
THREAD SEALING	1 Cabin 4 Engine 5 Transmission	<ul style="list-style-type: none"> • Good oil resistance • High temperature resistance • Various viscosity
THREADLOCKING	1 Cabin 4 Engine 5 Transmission 6 Various mounting assembly	<ul style="list-style-type: none"> • Controllable strength • Applicable on inactive surface • High temperature resistance
FUNCTIONAL COATINGS	3 Thin sheet & structural & component part 7 Whole metal surface	<ul style="list-style-type: none"> • Environment friendly • Good performance with painting • Simple processing and control

	LOCATIONS	BENEFITS
METAL BONDING	1 Cabin	<ul style="list-style-type: none"> • High crash resistance • High bonding strength • Good durability
PLASTIC BONDING	1 Cabin	<ul style="list-style-type: none"> • Instant bonding • Tough bonding • Easy application
ANTI-SPATTER (CERAMISHIELD)	1 Cabin	<ul style="list-style-type: none"> • Less down time • Easy application • Automatic production
ANTI-SEIZE	4 Engine 5 Transmission	<ul style="list-style-type: none"> • High lubricity • High temperature resistance • Good chemical resistance
RETAINING	4 Engine 5 Transmission	<ul style="list-style-type: none"> • High strength • Good oil resistance • High temperature resistance
FLANGE SEALING	4 Engine 5 Transmission	<ul style="list-style-type: none"> • Good oil tolerance • High flexibility • Good blow out resistance

LOADER


MACHINERY


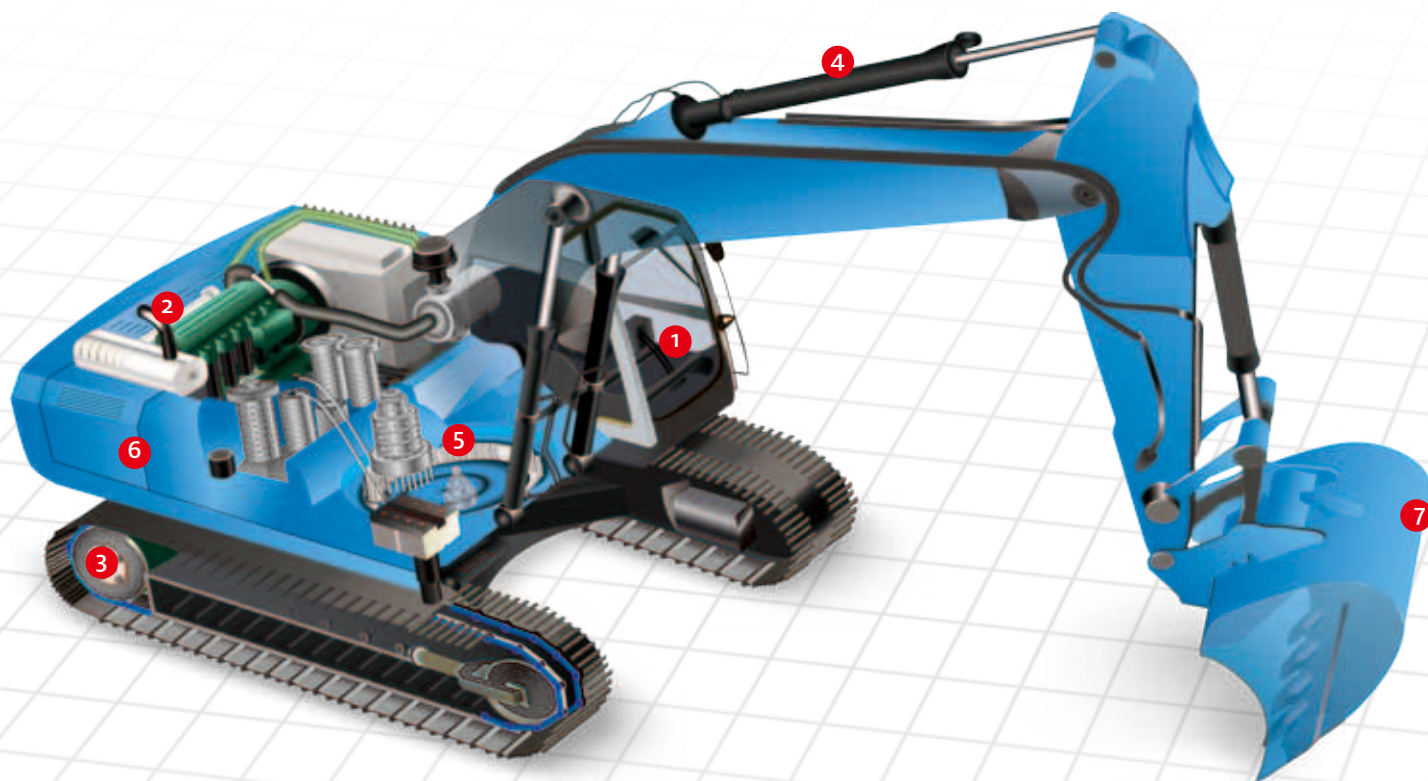
	LOCATIONS	BENEFITS
SEAM SEALING	1 Cabin	<ul style="list-style-type: none"> High temperature resistance Good durability Diversified cure condition
WINDOW GLAZING (DGX)	1 Cabin	<ul style="list-style-type: none"> High position tack Fast cure Primerless
NOISE, VIBRATION AND HARSHNESS (NVH)	1 Cabin (sound package) 2 Engine hood (acoustic treatment)	<ul style="list-style-type: none"> Total solution to reduce exterior noise / cabin noise Full engineering service High performance acoustic material
THREAD SEALING	1 Cabin 3 Engine 4 Transmission 5 Hydraulic cylinder	<ul style="list-style-type: none"> Good oil resistance High temperature resistance Various viscosity
THREADLOCKING	1 Cabin 3 Engine 4 Transmission 5 Hydraulic cylinder 6 Various mounting assembly	<ul style="list-style-type: none"> Controllable strength Applicable on inactive surface High temperature resistance
FUNCTIONAL COATINGS	7 Whole metal surface 8 Thin sheet & structural & component part	<ul style="list-style-type: none"> Environment friendly Good performance with painting Simple processing and control

	LOCATIONS	BENEFITS
METAL BONDING	1 Cabin	<ul style="list-style-type: none"> High crash resistance High bonding strength Good durability
PLASTIC BONDING	1 Cabin	<ul style="list-style-type: none"> Instant bonding Tough bonding Easy application
ANTI-SPATTER (CERAMISHIELD)	1 Cabin	<ul style="list-style-type: none"> Less down time Easy application Automatic production
ANTI-SEIZE	3 Engine 4 Transmission	<ul style="list-style-type: none"> High lubricity High temperature resistance Good chemical resistance
RETAINING	3 Engine 4 Transmission	<ul style="list-style-type: none"> High strength Good oil resistance High temperature resistance
FLANGE SEALING	3 Engine 4 Transmission	<ul style="list-style-type: none"> Good oil tolerance High flexibility Good blow out resistance

MACHINERY



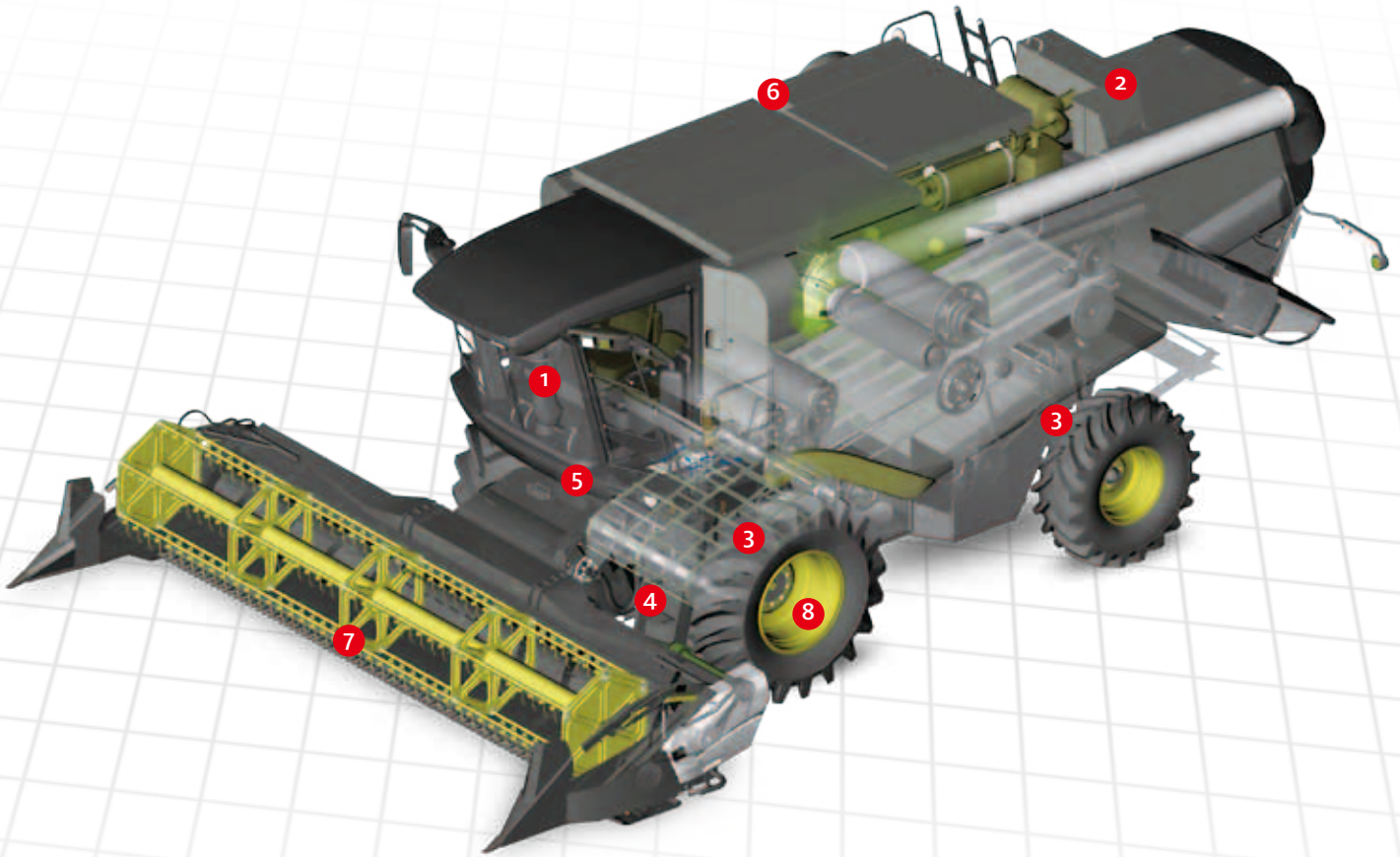
EXCAVATOR



	LOCATIONS	BENEFITS
SEAM SEALING	1 Cabin	<ul style="list-style-type: none"> • High temperature resistance • Good durability • Diversified cure condition
WINDOW GLAZING (DGX)	1 Cabin	<ul style="list-style-type: none"> • High position tack • Fast cure • Primerless
NOISE, VIBRATION AND HARSHNESS (NVH)	1 Cabin (sound package) 2 Engine hood (acoustic treatment)	<ul style="list-style-type: none"> • Total solution to reduce exterior noise / cabin noise • Full engineering service • High performance acoustic material
THREAD SEALING	1 Cabin 2 Engine 3 Final drive 4 Hydraulic cylinder	<ul style="list-style-type: none"> • Good oil resistance • High temperature resistance • Various viscosity
THREADLOCKING	1 Cabin 2 Engine 3 Final drive 4 Hydraulic cylinder 5 Slewing bearing 6 Various mounting assembly	<ul style="list-style-type: none"> • Controllable strength • Applicable on inactive surface • High temperature resistance
FUNCTIONAL COATINGS	4 6 7 Thin sheet & structural & component part	<ul style="list-style-type: none"> • Environment friendly • Good performance with painting • Simple processing and control

	LOCATIONS	BENEFITS
METAL BONDING	1 Cabin	<ul style="list-style-type: none"> • High crash resistance • High bonding strength • Good durability
PLASTIC BONDING	1 Cabin	<ul style="list-style-type: none"> • Instant bonding • Tough bonding • Easy application
ANTI-SPATTER (CERAMISHIELD)	1 Cabin	<ul style="list-style-type: none"> • Less down time • Easy application • Automatic production
ANTI-SEIZE	2 Engine 3 Final drive	<ul style="list-style-type: none"> • High lubricity • High temperature resistance • Good chemical resistance
RETAINING	2 Engine 3 Final drive	<ul style="list-style-type: none"> • High strength • Good oil resistance • High temperature resistance
FLANGE SEALING	2 Engine 3 Final drive 5 Slewing bearing	<ul style="list-style-type: none"> • Good oil tolerance • High flexibility • Good blow out resistance

COMBINE HARVESTER

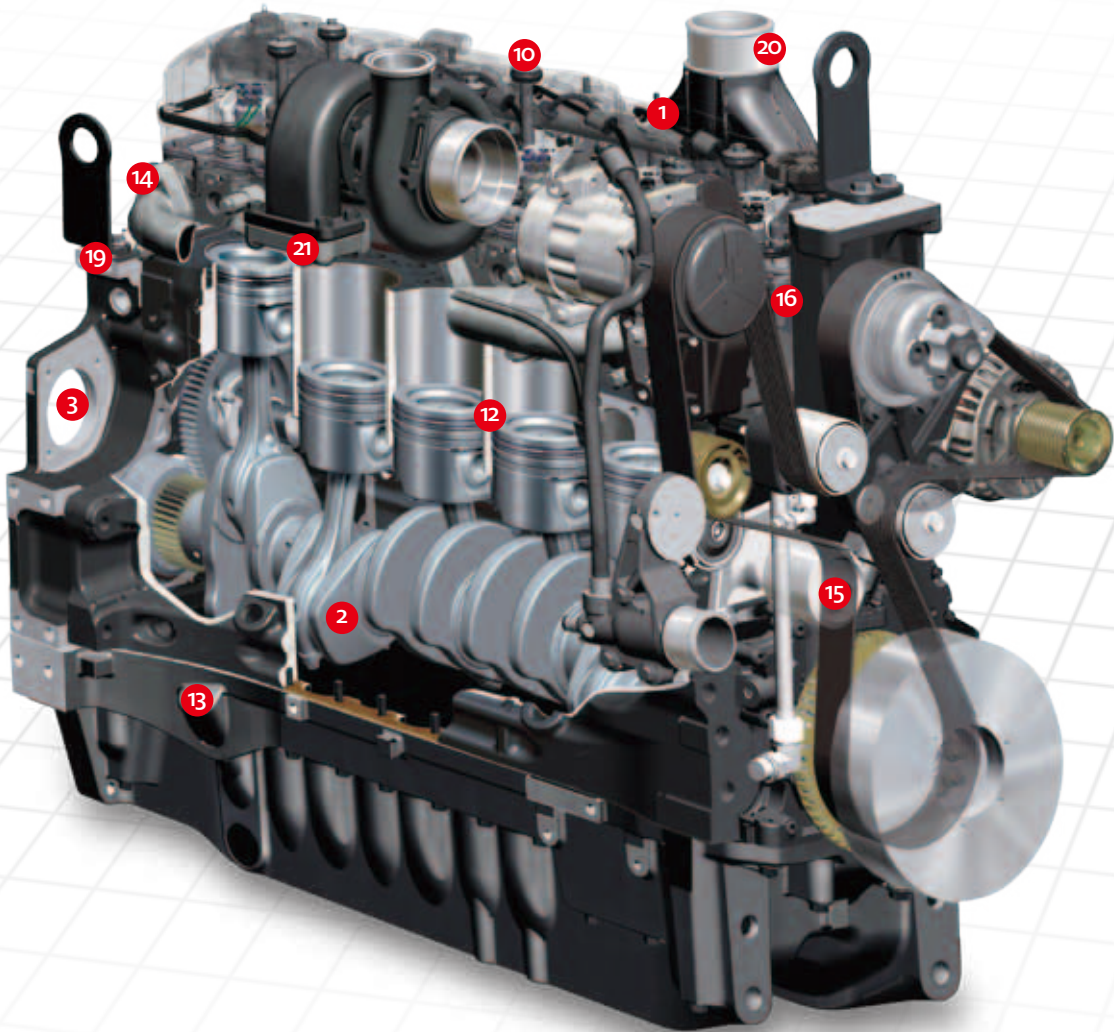

MACHINERY


	LOCATIONS	BENEFITS
SEAM SEALING	1 Cabin	<ul style="list-style-type: none"> High temperature resistance Good durability Diversified cure condition
WINDOW GLAZING (DGX)	1 Cabin	<ul style="list-style-type: none"> High position tack Fast cure Primerless
NOISE, VIBRATION AND HARSHNESS (NVH)	1 Cabin (sound package) 2 Engine hood (acoustic treatment)	<ul style="list-style-type: none"> Total solution to reduce exterior noise / cabin noise Full engineering service High performance acoustic material
THREAD SEALING	1 Cabin 2 Engine 3 Transmission 4 Hydraulic cylinder	<ul style="list-style-type: none"> Good oil resistance High temperature resistance Various viscosity
THREADLOCKING	1 Cabin 2 Engine 3 Transmission 4 Hydraulic cylinder 5 Various mounting assembly	<ul style="list-style-type: none"> Controllable strength Applicable on inactive surface High temperature resistance
FUNCTIONAL COATINGS	6 7 8 Thin sheet & structural & component part	<ul style="list-style-type: none"> Environment friendly Good performance with painting Simple processing and control

	LOCATIONS	BENEFITS
METAL BONDING	1 Cabin	<ul style="list-style-type: none"> High crash resistance High bonding strength Good durability
PLASTIC BONDING	1 Cabin	<ul style="list-style-type: none"> Instant bonding Tough bonding Easy application
ANTI-SPATTER (CERAMISHIELD)	1 Cabin	<ul style="list-style-type: none"> Less down time Easy application Automatic production
ANTI-SEIZE	2 Engine 3 Transmission	<ul style="list-style-type: none"> High lubricity High temperature resistance Good chemical resistance
RETAINING	2 Engine 3 Transmission	<ul style="list-style-type: none"> High strength Good oil resistance High temperature resistance
FLANGE SEALING	2 Engine 3 Transmission	<ul style="list-style-type: none"> Good oil tolerance High flexibility Good blow out resistance

PART 

ENGINE / FRONT

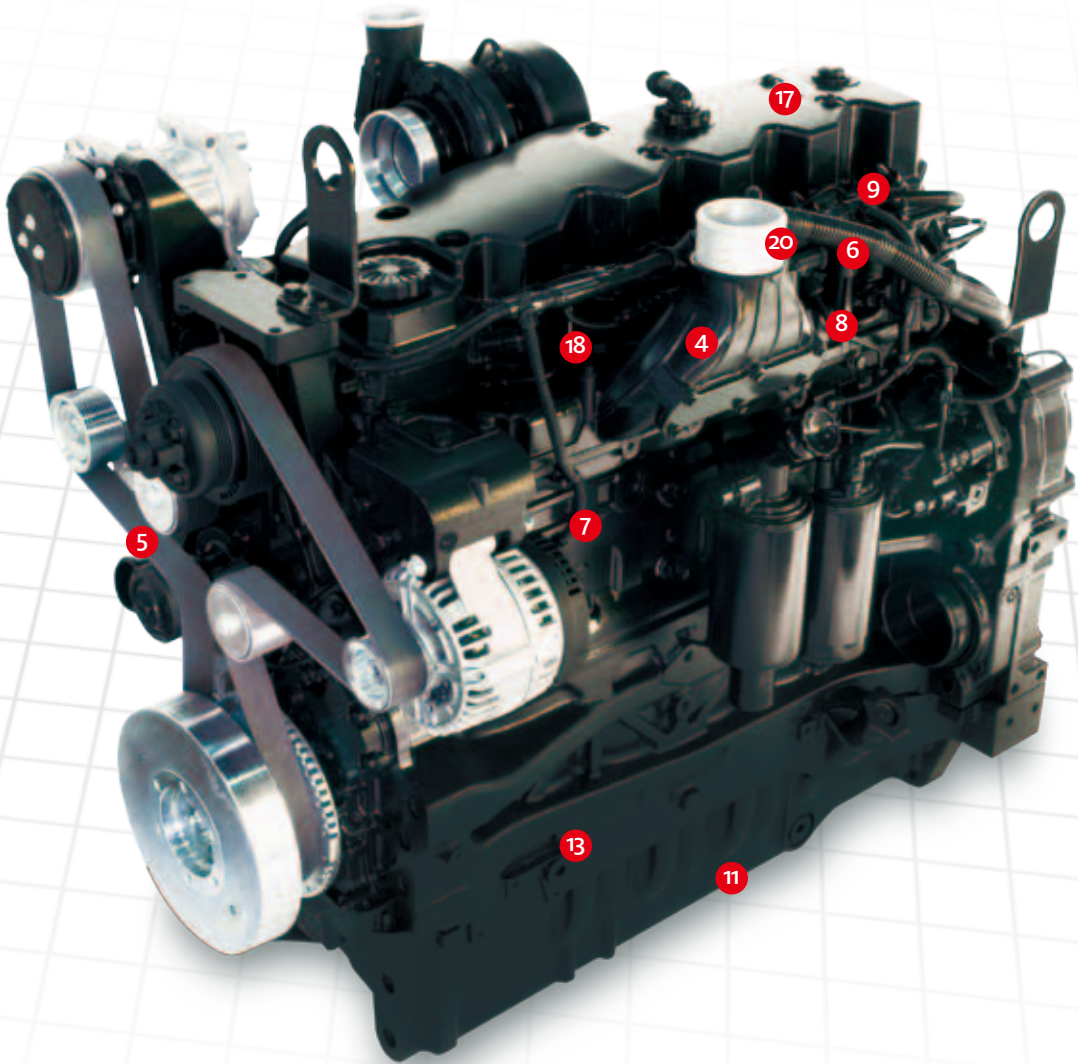


	LOCATIONS	BENEFITS
THREADLOCKING	<ul style="list-style-type: none">1 Intake manifold bolts2 Connecting rod cap bolts3 Flywheel bolts4 Harmonic balance bolts5 Clutch fan bolt6 Diesel injector bolt7 Pulley assembly8 Cylinder head bolts9 Pre-assembled bolts on alternators and air conditioning belts	<ul style="list-style-type: none">• Controllable strength• Applicable on inactive surface• High temperature resistance
THREAD SEALING	<ul style="list-style-type: none">7 Threaded core plugs8 Oil and coolant lines9 Fuel line sealing12 Hydraulic line fittings14 Threaded water pump fittings15 Water pump bolt threads	<ul style="list-style-type: none">• Good oil resistance• High temperature resistance• Various viscosity
FUNCTIONAL COATINGS	<ul style="list-style-type: none">10 11 Whole metal surface	<ul style="list-style-type: none">• Long antirust time• Simple processing and control• Good cleaner ability

ENGINE / BACK



PART

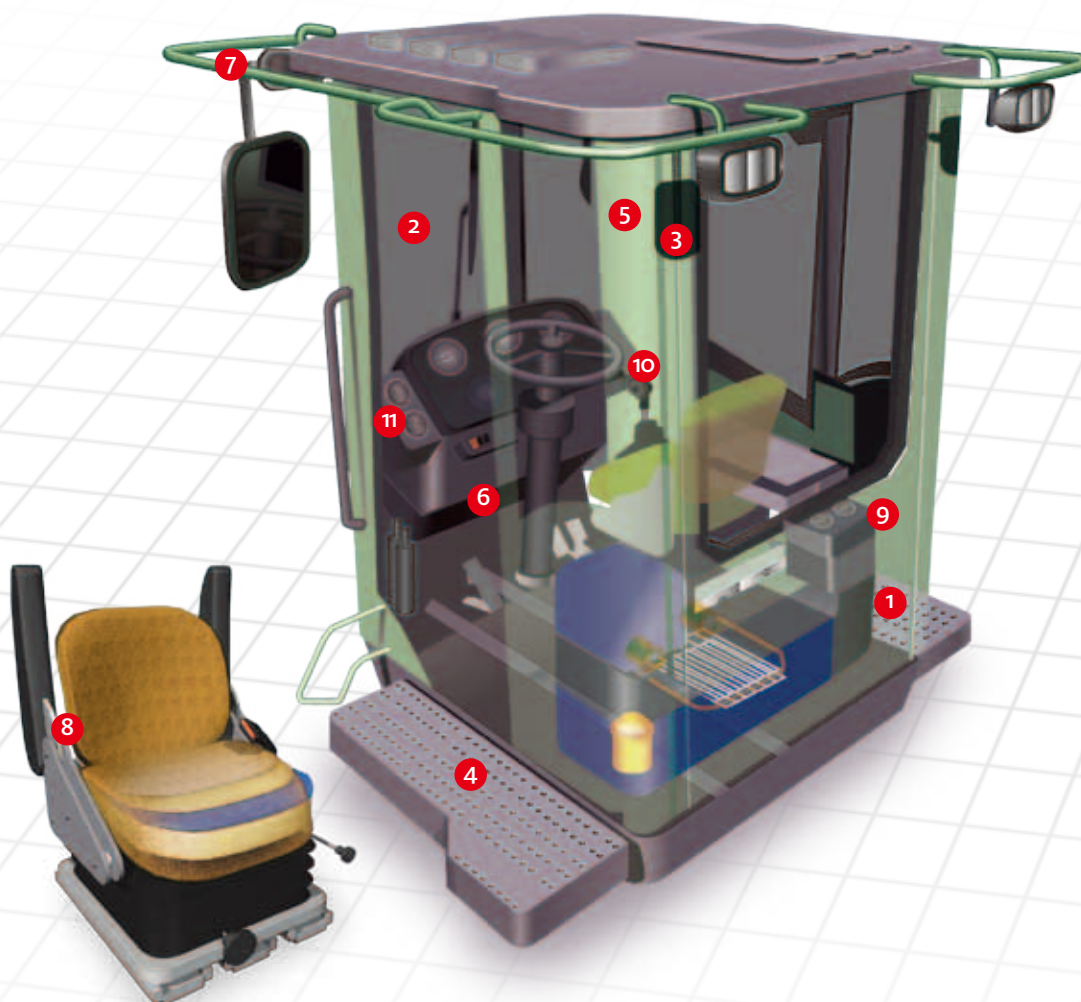


	LOCATIONS	BENEFITS
RETAINING	<ul style="list-style-type: none">12 Cylinder liners<ul style="list-style-type: none">• Key ways and splines• Valve sleeves• Dipstick sleeve• Bolt on final drive• Retaining pins	<ul style="list-style-type: none">• High strength• Good oil resistance• High temperature resistance
FLANGE SEALING	<ul style="list-style-type: none">13 Oil pans<ul style="list-style-type: none">• Intake manifold gasket• Turbo mounting flange14 Exhaust gasket<ul style="list-style-type: none">• Timing cover15 Water pump16 Thermostat housing17 Valve cover gasket18 Diesel injectors<ul style="list-style-type: none">• Rubber, paper, cork and metal gaskets	<ul style="list-style-type: none">• Good oil tolerance• High flexibility• Good blow out resistance
ANTI-SEIZE	<ul style="list-style-type: none">19 Exhaust manifold studs<ul style="list-style-type: none">• Fuel filter fittings20 Glow plug21 Turbo mounting flange<ul style="list-style-type: none">• Spark plug threads installed in aluminum• General purpose use and excellent low temperature lubricity	<ul style="list-style-type: none">• High lubricity• High temperature resistance• Good chemical resistance

PART



CABIN



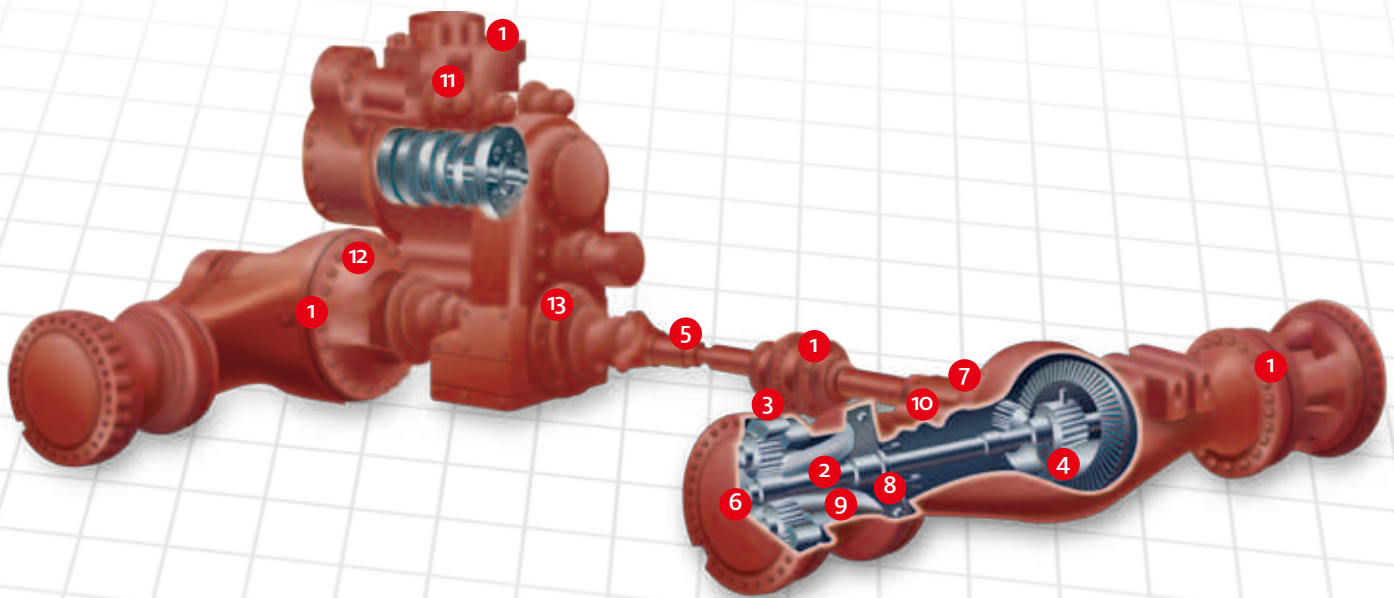
	LOCATIONS	BENEFITS
SEAM SEALING	1 Interior welding • Window glass to frame	• High temperature resistance • Good durability • Diversified cure condition
WINDOW GLAZING (DGX)	2 Window Shield	• High position tack • Fast cure • Primerless
NOISE, VIBRATION AND HARSHNESS (NVH)	3 Cabin (noise and vibration reduction)	• Total solution to reduce exterior noise / cabin noise • Full engineering service • High performance acoustic material
FUNCTIONAL COATINGS	4 Whole metal surface 5 Thin sheet & structural & component part	• Environment friendly • Good performance with painting • Simple processing and control
THREAD SEALING	6 Fluid line connectors	• Good oil resistance • High temperature resistance • Various viscosity

	LOCATIONS	BENEFITS
THREADLOCKING	7 Hood mounting bolts • Mounting screws 8 Seat hardware	• Controllable strength • Applicable on inactive surface • High temperature resistance
METAL BONDING	9 Body panels to frame • Hood to cab • Light bracket • Seat mounting brackets	• High crash resistance • High bonding strength • Good durability
PLASTIC BONDING	10 Control knobs / levers / buttons	• Instant bonding • Tough bonding • Easy application
ANTI-SPATTER (CERAMISHIELD)	11 Cabin frame welding	• Less down time • Easy application • Automatic production

AXLE-TRANSMISSION -GEAR BOX



PART

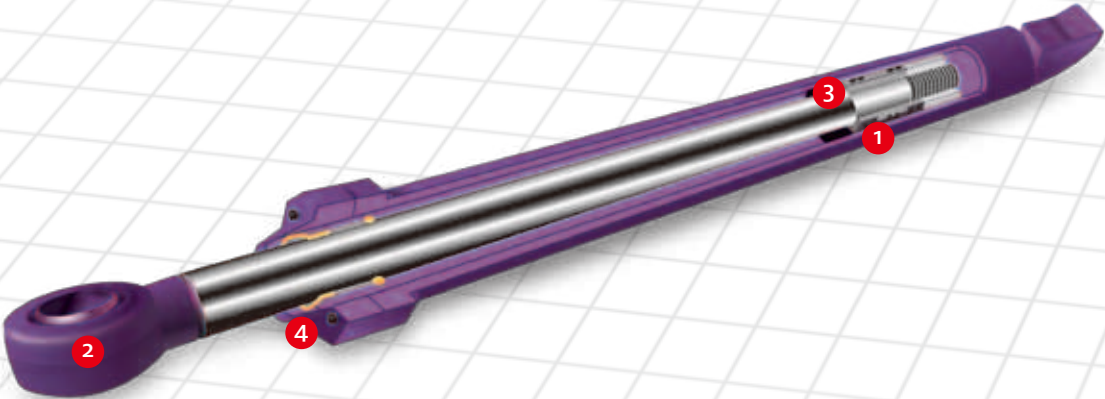


	LOCATIONS	BENEFITS
THREADLOCKING	<ul style="list-style-type: none"> 1 Transmission case cover bolts 11 Ring gear 2 Bearing caps 3 Drive shaft 12 Transaxle detent screw 	<ul style="list-style-type: none"> Controllable strength Applicable on inactive surface High temperature resistance
THREAD SEALING	<ul style="list-style-type: none"> Pneumatic connections for air locking 4 Rear axle fill plug Wheel bearings Transmission fluid fittings Brake fittings 	<ul style="list-style-type: none"> Good oil resistance High temperature resistance Various viscosity
FUNCTIONAL COATINGS	<ul style="list-style-type: none"> 5 Thin sheet & structural & component part 	<ul style="list-style-type: none"> Environment friendly Good performance with painting Simple processing and control

	LOCATIONS	BENEFITS
ANTI-SEIZE	<ul style="list-style-type: none"> 6 Brake shoe slides Drum brake hardware Ideal for high contact pressure applications 	<ul style="list-style-type: none"> High lubricity High temperature resistance Good chemical resistance
RETAINING	<ul style="list-style-type: none"> 7 Input shaft seal Axle studs Bolt on final drive 8 Keyways and splines 9 Ball, roller and needle bearings 10 Wheel bearings Press fit bearings 	<ul style="list-style-type: none"> High strength Good oil resistance High temperature resistance
FLANGE SEALING	<ul style="list-style-type: none"> Heavy die cut gasket 11 Gearbox covers 2 Transaxle casings 13 Differential cover High torque applications Rubber, paper, cork and metal gaskets 	<ul style="list-style-type: none"> Good oil tolerance High flexibility Good blow out resistance



HYDRAULIC CYLINDER

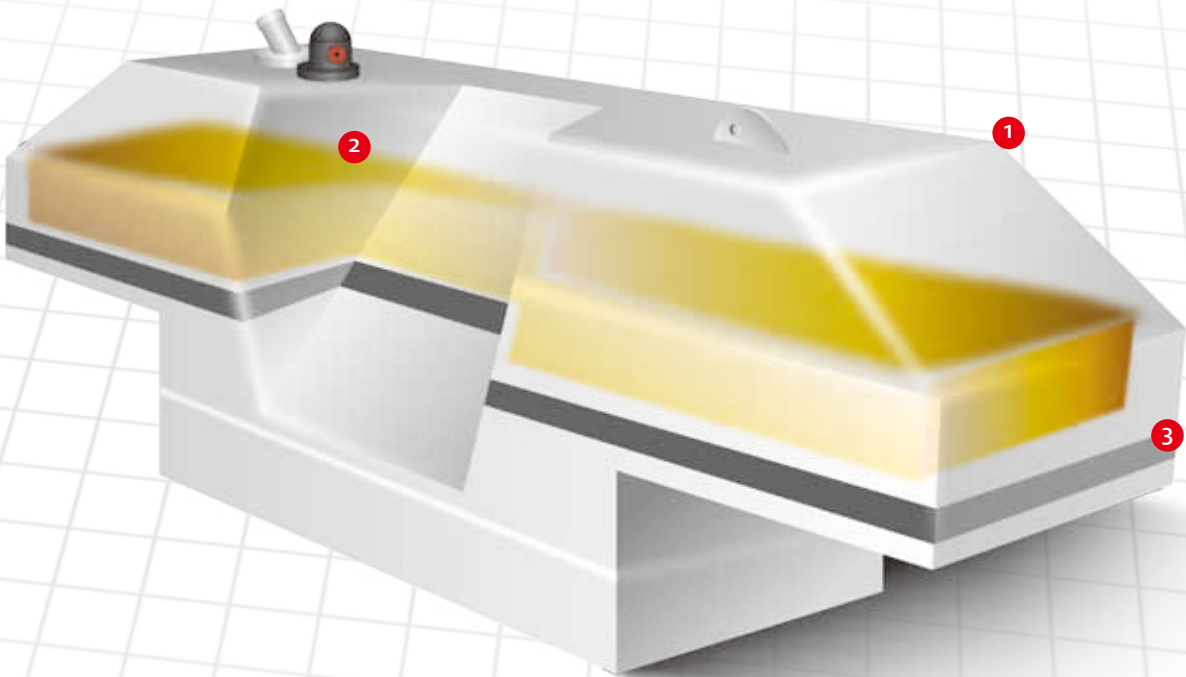


	LOCATIONS	BENEFITS
FUNCTIONAL COATINGS	1 2 Thin sheet & structural & component part	<ul style="list-style-type: none">• Environment friendly• Good performance with painting• Simple processing and control
THREAD SEALING	3 Hydraulic line fittings	<ul style="list-style-type: none">• Good oil resistance• High temperature resistance• Various viscosity
THREADLOCKING	4 Cylinder block blots	<ul style="list-style-type: none">• Controllable strength• Applicable on inactive surface• High temperature resistance

FUEL TANK



PART



LOCATIONS

FUNCTIONAL COATINGS

1 2 Thin sheet & structural & component part

ANTI-SPATTER (CERAMISHIELD)

3 Fuel pan welding

BENEFITS

- Environment friendly
- Good performance with painting
- Simple processing and control
- Less down time
- Easy application
- Automatic production

PRODUCT SELECTOR CHART

► Threadlocking

Prevent fastener loosening and seizure



Product	IDH No.	Package Size	Typical Application	Color	Viscosity (mPa.s)	Average Prevail Torque (N.m)	Average Breakaway Torque (N.m)	Curing Speed (Initial Cure / Full Cure)
LOCTITE® 204	243324	20kg	High strength, preapplied adhesive	Pink	75,000 - 100,000	25	25	10min / 72h
LOCTITE® 222	142486 135335 228582	250ml	Low strength, easy disassembly	Purple	1,200 - 5,000	304	6	20min / 24h
LOCTITE® 243	1335868 1329505 1335924 1311322	250ml	Medium strength, good oil tolerance	Blue	1,300 - 3,000	5	26	10min / 24h
LOCTITE® 263	1307416 1330335 1331536	250ml	High strength, primerless	Red	400 - 600	33	33	5min / 24h
LOCTITE® 2701	195725 1246330 229255 229253	250ml	High strength, good oil resistance	Green	700	15	26 - 50	25min / 24h
LOCTITE® 272	195542 161919 1008096	250ml	High temperature resistance	Red	9,500	25	23	60min / 24h
LOCTITE® 277	232083 88449 1070184 1496860	250ml	High strength, high viscosity	Red	7,000	32	32	60min / 24h
LOCTITE® 248	462476 525715 902327	19g	Stick, medium strength	Blue	N / A	N / A	13 - 27	5min / 24h
LOCTITE® 268	826035 525717 902328	19g	Stick, high strength	Red	N / A	N / A	25 - 50	5min / 24h

► Thread Sealing

Prevent leaks – air, hydraulic



Product	IDH No.	Package Size	Typical Application	Color	Viscosity (mPa.s)	Pressure Resistance (MPa)
LOCTITE® 542	234405 234408 142427	250ml	Medium strength for metal tube	Brown	400 - 800	69
LOCTITE® 545	195662 1327769	250ml	Hydraulic / Pneumatic pipe sealing	Purple	9,000 - 20,000	69
LOCTITE® 565	88552 449139	250ml	General purpose	White	175,000 - 525,000	21
LOCTITE® 567	234458 234453 270921	250ml	High temperature resistance	Ivory	280,000 - 800,000	90
LOCTITE® 569	209605 234475	250ml	Hydraulic / Pneumatic pipe sealing	Brown	300 - 500	69
LOCTITE® 577	88564 281823 234566	250ml	General purpose, coarse thread	Yellow	70,000 - 130,000	69
LOCTITE® 592	1147605 230556	250ml	Medium strength, low curing speed	White	200,000 - 500,000	69
LOCTITE® 561	463973 943428	19g	Stick, vertical application	White	N / A	69



► Retaining

Prevent backlash – keyway wallow, wheel bearings, wear, corrosion

Product	IDH No.	Package Size	Typical Application	Color	Max Filling Gaps (mm)	Viscosity (mPa.s)	Sheer Strength (MPa)	Curing Speed (Initial Cure / Full Cure)
LOCTITE® 603	142443 421797 231101	250ml	Small gap, good oil tolerance	Green	0.13	125	26	10min / 24h
LOCTITE® 620	142466 135515 231128	250ml	High temperature resistance	Green	0.38	8,500	26	1h / 24h
LOCTITE® 638	1803042 1767237 421798	250ml	High strength	Green	0.26	2,500	31	5min / 24h
LOCTITE® 641	234866 234868	250ml	Medium strength	Yellow	0.2	525 - 1,950	12	20min / 24h
LOCTITE® 660	267328 135527	50ml	Maintenance	Silvery	0.2	250,000 - 1,500,000	23	20min / 24h
LOCTITE® 680	1835196 1800574 232115	250ml	High strength	Green	0.38	1,250	28	10min / 24h
LOCTITE® 648	88585	250ml	High strength	Green	N / A	400 - 600	4,480	15min / 24h
LOCTITE® 2701HV	1923191 1923190	250ml	High strength	Green	N / A	9,500 - 18,000	20	15min / 24h

► Flange Sealing (Anaerobic)

Seal close fitting joints between rigid metal faces and flanges

Product	IDH No.	Package Size	Typical Application	Color	Max Filling Gaps (mm)	Viscosity (mPa.s)	Curing Speed (Initial Cure / Full Cure)
LOCTITE® 515	88541 232089 265605	300ml	High flexibility	Dark purple	0.25	275,000 - 950,000	60min / 12h
LOCTITE® 518	235269 135482 88542 88543	300ml	General purpose	Red	0.25	800,000 - 3,750,000	4h / 24h
LOCTITE® 5127	449138	300ml	Good flexibility	Blue	0.25	100,000 - 500,000	4h / 24h
LOCTITE® 574	231561 88561 246628	250ml	Fast curing	Orange	0.25	23,000 - 35,000	15min / 24h
LOCTITE® 510	135325	300ml	Medium strength	Opaque pink	0.25	200,000 - 750,000	2h / 24h
LOCTITE® 5128	1864475	300g	High flexibility	Red	0.25	35,000 - 65,000	3h / 24h
LOCTITE® 5182	329560 88128 250607	850ml	High viscosity	Red	0.5	300,000 - 900,000	1h / 24h
LOCTITE® 5188	1104312 1333494	300ml	Highest flexibility	Red	0.13	14,000 - 32,000	25min / 24h



► Flange Sealing (Silicone)

Retain flexibility and oil resistance for longer gasket life



Product	IDH No.	Package Size	Typical Application	Color	Skin Over Time (min.)	Hardness	Elongation (%)	Tensile Strength (N / mm²)
LOCTITE® 587	576854 333949	300ml	Good engine oil resistance	Metallic blue	10 - 15	A26 - 40	≥350	≥1.6
LOCTITE® 598	231571	300ml	Good engine oil resistance	Metallic black	≤25	A26 - 40	≥325	≥1.31
LOCTITE® 5020	295291	300ml	Low viscosity, low odor	Grey	≤60	D25	≥260	≥1.1
LOCTITE® 5699	473152	300ml	Non-corrosive	Grey	≤30	A45 - 75	≥100	≥2.4
LOCTITE® 5900	585104	50ml	Good blow out resistance	Black	7 - 24	A35	≥400	≥1.4
LOCTITE® 5910	652996	300ml	Excellent adhesion to substrate	Black	≤40	A30	≥400	≥1.7
LOCTITE® 5902	576852	20kg	Non-slumping, non-corrosive, low odor, long open time	Black	90 - 300	D45	350	1.9
LOCTITE® 5989B	1769325	388g	Non-slumping, non-corrosive	Black	8 - 20	A35 - 55	≥200	≥1.7
LOCTITE® 5999	649254	300ml	Blow-out resistance, non-corrosive	Grey	≤30	A45-75	≥100	≥2.4

► Seam Sealing

Seal against polyurethane, rubber, modified silicone polymer or acrylic dispersions



Product	IDH No.	Package Size	Color	Hardness Shore A (DIN EN ISO 868)	Curing Speed (mm / 24h)	Tensile Strength (MPa)	Elongation (%)
TEROSON® MS 930	1338879 1338844 1338094	310ml	White, grey, black	30	4	1	250
TEROSON® MS 939	1480678 1480729	310ml	White, grey, black	55	3	3	250
TEROSON® MS 937	1483161 1480762	310ml	White, grey, black	50	4	3	220
TEROSON® MS 935	1459622 1459683	310ml	White, grey, black	50	3	2.8	230
TEROSON® MS 9360	1483608	310ml	Black	50	3	3.5	200
TEROSON® PV 3046	1532726	250kg	Light ivory	N / A	N / A	2.4	180
TEROSON® RB1244 BX-25	813971	310ml	Black	40 - 60	N / A	N / A	N / A
TEROSON® MS 9399	964329	400ml	White, grey, black	60	N / A	2	150
TEROSON® EP-234H	356824	400g	White	N / A	N / A	1.5	>150
LOCTITE® 5016	1748024	310ml	White	N / A	N / A	1	>200

► Anti-Spatter (Ceramishield)

Prevent spatter adhesion on welding equipment, jigs and surfaces



Product	IDH No.	Package Size	Typical Application	Color Before Cure	Color After Cure	Viscosity (mPa.s)	Odor
LOCTITE® SF 7900 Ceramishield	1238883	400ml	Solvent based, manual application	Translucent liquid	White	N / A	Yes
LOCTITE® LW-1 Ceramishield	1611920	0.36kg	Water based, automatic application with ceramishield robot IQ	White emulsion	White	100 - 250	No

PRODUCT SELECTOR CHART

► Window Glazing (DGX)

Secure windows to the metal frames



Product	IDH No.	Package Size	Typical Application / Product Characteristics	Skin Over Time (min.)	Viscosity (mPa.s)	Tensile Strength (MPa)	Curing Rate (23°C, 50%RH)
TEROSON® 8590	149996 263216	310ml	General purpose	30	3,000,000 - 4,500,000	8	4mm / 24h
TEROSON® 8590UHV	1703903	600ml	High viscosity	25	6,000,000 - 7,500,000	8	4mm / 24h
TEROSON® 8900LV	1474242	310ml	Primerless	20	3,000,000 - 5,000,000	8	4mm / 24h
TEROSON® 8910	1127436	310ml	Primerless, high position tack	20	5,000,000 - 6,500,000	7.5	4mm / 24h
TEROSON® 9095HV	–	310ml	Primerless, high position tack	30	8,000,000 - 11,000,000	8	4mm / 24h
TEROSON® 8700	1403586	600ml	Fast curing (low temperature and low humidity)	10	4,000,000 - 5,500,000	>6	>5mm / 24h

► Instant Bonding

Bond dissimilar parts quickly and easily



Product	IDH No.	Package Size	Typical Application	Color	Viscosity (mPa.s)	Curing Speed (Initial cure / full cure)	Sheer Strength (MPa)
LOCTITE® 401	142575 135429 195758 233651 135430	20g	General purpose	Transparent	90	15s / 24h	22
LOCTITE® 406	142580 233690 233693 246500 231474	20g	General purpose	Transparent	20	15s / 24h	22
LOCTITE® 414	142585 231476 270809	20g	Plastic bonding	Transparent	110	20s / 24h	22
LOCTITE® 480	142411 852269 230217 135250 135466	20g	Toughening purpose, small gap	Black	200	90s / 24h	26
LOCTITE® 495	270821 195750 231478 88535	20g	General purpose	Transparent	45	20s / 24h	19
LOCTITE® 403	255299 135433 142579	20g	Low bloom application and the good appearance area	Transparent	100	15s / 24h	22

► Metal Bonding

Provide tough, long-lasting bonds to metal surfaces



Product	IDH No.	Package Size	Typical Application / Product Characteristics	Color	Viscosity (mPa.s)	Sheer Strength (MPa)	Curing Speed (Full Cure)	Highest Application Temperature
LOCTITE® EA E-20HP	237107	50ml	2C, general purpose	Off - white	65,000	39	24h at 25°C	177°C
LOCTITE® EA E-120HP	237128 1403943	50ml	2C, general purpose	Amber - beige	41,000 - 61,000	30	12h at 65°C	177°C
LOCTITE® EA E-214HP	234001	300ml	1C, general purpose	Grey	800,000 - 1,500,000	31	4h at 22°C	150°C
TEROSON® EP 5089	1579071	310ml	2C, high crash resistant	Purple	250,000	20	10min at 150°C	>175°C
LOCTITE® H8600	827562	50ml	2C, excellent impact and peel strength	Blue	60,000 - 120,000	23	44min at 22°C	150°C
LOCTITE® H8700	1064166	50ml	2C, good durability	Blue	12,100	15	72min at 22°C	177°C
LOCTITE® 331	1057673 1256398	25ml	1C, general purpose	Light yellow	20,000	20	24h at 25°C (with activator 7387)	177°C
LOCTITE® 330	1689439	1000ml	1C, requires no mixing	Pale Yellow	67,500	30	24h at 25°C (with activator 7387)	121°C



► Anti-Seize

Protect metal parts from corrosion, galling and seizure

Product	IDH No.	Package Size	Typical Application / Product Characteristics	Color	Viscosity (mPa.s)	Curing Speed (Initial Cure / Full Cure)	Operating Temperature Range / °C
LOCTITE® Nickel Anti-Seize Lubricant	135543	1 pound	Heavy-duty application, high temperature and good chemical resistance	Silver	Paste	Non-curing	- 54 ~ +1315
LOCTITE® C5-A Cooper Anti-Seize Lubricant	328181	1 pound	High temperature and galling resistance	Copper colored	Coarse particles	Non-curing	- 29 ~ +982
LOCTITE® 8012 Moly Paste	1680620	1 pound	Unsurpassed lubricating quality	Black	Paste	Non-curing	- 29 ~ +400
LOCTITE® Moly 50	1114937	1 pound	General purpose	Gray	Paste	Non-curing	- 29 ~ +398

► Noise, Vibration and Harshness (NVH)

Reduce vibration, insulate and absorb sound



Function	Product	IDH No.	Package Size	Color	Chemistry	Application Area	Application Method	Cure Method	Cure Method	Features
Damping	TEROSON® RB D203	1947706	1.2T x 200 x 1,000 (mm)	Black	Buytl rubber based	Panel	Self adhesion	Needn't	N / A	• Constraint layer damping, loss factor 0.25~0.5 • Attenuate vibration of cabin panel
		1947707	1.2T x 175 x 1,000 (mm)							
		1947708	1.2T x 160 x 1,000 (mm)							
	TEROSON® WT 123WF	1138705	250kg	Beige	Water based	Panel	Sprayable	Dry at RT	15h at RT	• Free layer damping, loss factor 0.2~0.3 • Attenuate vibration of cabin panel, engine hood etc.
	TEROSON® AL 7150	1845761	280kg	Dark grey	Acrylate based water dispersion	Panel	Sprayable	Heat	20min at 165°C	• Free layer damping, loss factor 0.2 • Attenuate vibration of cabin panel, engine hood etc.
		1845762	1,400kg							
Reinforcement	TEROSON® EP 301P	1142266	1.5T x 100 x 300 (mm)	Grey	1K epoxy	Panel	Self adhesion	Heat	20min at 140 - 170°C	• Reinforcement pad • Increase stiffness and resonant frequency of panel • Attenuate vibration
	TEROSON® EP 1401	587030	400ml	Grey	2K epoxy	3D structure	Injection	Reaction after mixing	90min at 20°C	• 2 component reinforcement foam • Increase stiffness and resonant frequency of structure • Attenuate vibration
	TEROSON® EP 1450	1681386	N / A	Grey	1K epoxy	3D structure	Preformed parts	Heat	20min at 165°C	• Preformed 1 component reinforcement foam parts • Increase stiffness and resonant frequency of structure • Attenuate vibration
Sound barrier	TEROSON® EV B2020	1486551	840 x 513 x 2 (mm)	Dark grey	EVA based	Panel	Self adhesion	Needn't	N / A	• High performance sound barrier • Fire retardant
		1843528	1,989.5 x 1,775 x 2 (mm)							
		1843526	2,080 x 760 x 2 (mm)							
		1843525	2,080 x 1,770 x 2 (mm)							



► Functional Coatings

Include coatings, surface treatment and cleaners



Category	Product	IDH No.	Package Size	Chemistry	Time (min.)	Temperature	Concentration (%)	Features
Coatings	BONDERITE® M-PP series	1197548 619296	30kg	Paint	1 - 2	Room temperature	10 - 20	<ul style="list-style-type: none"> Displace E-coating Good cost performance
		1056531	209kg					
Traditional Phosphating of Painting Pretreatment	BONDERITE® M-ZN 958	619121 619123	30kg	Zinc phosphate	2 - 5	43 - 50°C	4 - 7	<ul style="list-style-type: none"> Best corrosion protection Polycrystalline surface coating
	BONDERITE® M-ZN 35 CR	670344	35kg	Zinc phosphate	2 - 5	Room temperature	4 - 7	<ul style="list-style-type: none"> Heavy coating weight Room temperature
	BONDERITE® M-FE 1070	848805	25kg	Iron phosphate	1 - 5	43 - 66°C	4 - 7	<ul style="list-style-type: none"> Degreasing & phosphating 2 in 1 Control easily
	BONDERITE® M-FE 2557L	697722	30kg	Iron phosphate	1 - 5	Room temperature	4 - 7	<ul style="list-style-type: none"> Degreasing & phosphating 2 in 1 Room Temperature
New Generation Coating of Painting Pretreatment	BONDERITE® M-NT NT-1	1076335	25kg	Phosphate free	1 - 5	Room temperature	2 - 7	<ul style="list-style-type: none"> Environment friendly Control easily
	BONDERITE® M-NT 20120	1830411	25kg	Phosphate free	1 - 5	Room temperature	1 - 3	<ul style="list-style-type: none"> Good corrosion protection Control easily
	BONDERITE® TT Series	1268453 1268456 1711581 1711582	25kg	Phosphate free	1 - 5	Room temperature	1 - 3	<ul style="list-style-type: none"> Environment friendly Good performance with E-coat



Category	Product	IDH No.	Package Size	Type	Application	Substrate Compatibility	Concentration (%)	Features
Cleaner & Antirust	BONDERITE® C-NE N	1618892	25kg	Neutral cleaner	Derust	Ferrous only	2 - 10	<ul style="list-style-type: none"> Neutral No damage to workpiece
	BONDERITE® S-FN 6748	619028	25kg	Neutral cleaner	Antirust	Ferrous only	0.1 - 0.3	<ul style="list-style-type: none"> Temporary antirust
	BONDERITE® C-NE 5088	619006	25kg	Neutral cleaner	Cleaning	All	1 - 3	<ul style="list-style-type: none"> Clean & antirust 2 in 1 Good cleaning performance
	BONDERITE® C-NE 750	619005	25kg	Neutral cleaner	Antirust	All	1 - 3	<ul style="list-style-type: none"> Clean & antirust 2 in 1 Good antirust performance
	BONDERITE® C-NE 6771	619367	25kg	Neutral cleaner	Antirust	All	4 - 10	<ul style="list-style-type: none"> Clean & antirust 2 in 1 Best antirust performance
	BONDERITE® C-AK 930	1470307	227kg	Alkaline stripper	Stripper	Ferrous only	10 - 100	<ul style="list-style-type: none"> Alkaline stripper for remanufacturing
	BONDERITE® C-AK RM 21	1924246	25kg	Alkaline cleaner	Cleaning & rust removing	Ferrous only	15 - 100	<ul style="list-style-type: none"> Alkaline cleaner & deruster for remanufacturing
	BONDERITE® C-1523	619051	30kg	Alkaline cleaner	Cleaning	Ferrous only	1 - 5	<ul style="list-style-type: none"> Best cleaning performance
		619052	25kg					
	BONDERITE® C-AK 1022	1586488	30kg	Alkaline cleaner	Cleaning	Ferrous only	1 - 5	<ul style="list-style-type: none"> Environment friendly Good cleaning performance
		1628343	25kg					

LOCTITE® BONDERITE® TECHNOMELT® TEROSON® AQUENCE®

Henkel products are designed to meet the specifications and testing standards of a variety of agencies. Because such standards change or may be modified, no warranty is given regarding such compliance. The information provided may be used as a quick reference tool to aid in design or application. For up-to-the-minute information on agency approvals, or to inquire about additional agency approvals, please contact Henkel Product Management team or local Technical Support team.

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