

INNOVATION.
NOT DUPLICATION.™



MINING SOLUTIONS COOLING DIVISION

COR COOLING™
CLASSIC PRODUCTS

COR
COOLING

COR
COOLING



H-E Parts International Mining Solutions Cooling Division (H-E Parts) manufactures and supplies high quality, innovative compatible replacement products that can also be tailored to our customers' specific requirements. H-E Parts in-house engineering, product and service offerings, guarantee we can support customers throughout the full product life cycle while working to award the end user with the lowest total cost of ownership.

Our experience in application specific solutions assist our customers in avoiding costly machine breakdowns caused by inappropriate or ineffective cooling systems. This results in lower maintenance costs and greater machine uptime, increasing productivity. High quality, compatible replacement cooling systems ensure longer machine life expectancy through the reduction of unnecessary overheating machine components. An engineered solution from H-E Parts also generates other potential benefits, including high machine performance through increased efficiency and reduced fuel consumption.

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CATERPILLAR

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
TRUCKS			
773F / 775F			
C18480	464-9054	CAT 773F & 775F MODULAR RAD PANEL TYPE 1	4
C18481	464-9043	CAT 773F & 775F MODULAR RAD PANEL TYPE 2	2
C18482	358-0289	CAT 773F & 775F CHARGE AIR COOLER	1
773G & 775G			
C18483	464-9055	CAT 773G & 775G MODULAR RAD PANEL TYPE 1; REPLACE 223-5092, 390-6779	4
C18484	464-9044	CAT 773G & 775G MODULAR RAD PANEL TYPE 2; REPLACE 223-5080, 390-6780	2
777F			
C18485	251-6149	CAT 777F CHARGE AIR COOLER	2
C13217	251-6149	CAT 777F CHARGE AIR COOLER - DL	2
C18486	464-9056	CAT 777F MODULAR RAD PANEL TYPE 1; REPLACE 223-5093, 390-6781	5
C18487	464-9045	CAT 777F MODULAR RAD PANEL TYPE 2; REPLACE 223-5081, 390-6782	2
777G			
C18488	357-1622	CAT 777G CHARGE AIR COOLER	2
C18489	464-9046	CAT 777G MODULAR RAD PANEL TYPE 1; REPLACE 223-5082, 380-8650	1
C18490	464-9057	CAT 777G MODULAR RAD PANEL TYPE 2; REPLACE 223-5094	6
785D			
C18492	370-9331	CAT 785D CHARGE AIR COOLER; REPLACE 327-6119	2
789D			
C18499	331-5138	CAT 789D, 793F CHARGE AIR COOLER	2
793D			
C18494	464-9040	CAT 793D OFF MODULAR RAD PANEL (TOP); REPLACE 223-5074, 387-4371	2
C18495	464-9049	CAT 793D OFF MODULAR RAD PANEL (TOP); REPLACE 223-5087, 387-4378	8
C18496	464-9041	CAT 793D OFF MODULAR RAD PANEL (BOTTOM); REPLACE 223-5075, 387-4372	2
C18497	464-9050	CAT 793D OFF MODULAR RAD PANEL (BOTTOM); REPLACE 223-5088, 387-4379	8
793F			
C18499	331-5138	CAT 789D, 793F CHARGE AIR COOLER	2
C31599	209-7824	CAT 793D, 793F, 797 & 797B REAR AXLE OIL COOLER ONLY (PART OF C30534)	1
C30534	320-8196	CAT 793D, 793F, 797 & 797B REAR AXLE OIL COOLER ASSEMBLY	1
795F			
C18500	323-1741	CAT 795F AC MINING TRUCK CAC 2 UNITS PER MACHINE	2

COR COOLING™ TRUCK COOLING SOLUTIONS



PRODUCT NAME	COR Cooling™ CAC
EQUIPMENT SUITABILITY	Caterpillar 795F Truck
H-E PARTS #	C18500
OEM PART #	323-1741

CATERPILLAR

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
EXCAVATORS			
6040			
C18463	533-8330	CAT 6040 RAD&CHARGE AIR COOLER COMBINED ASSEMBLY; REPLACE 151-0111, 369-1276	1
C18464		CAT 6040 CHARGE AIR COOLER (PART OF C18463)	1
C18465		CAT 6040 RAD (PART OF C18463)	1
C19333	535-4973	CAT 6040 HYD OIL COOLER; REPLACE 402-0949, 227-3620	2
6060			
C31597	534-7440	CAT 6060 RAD&CHARGE AIR COOLER COMBINED ASSEMBLY; REPLACE 402-5327, 369-4101	1
C18467	535-4527	CAT 6060 CHARGE AIR COOLER 2 PIECES COMBINED (COR); REPLACE 404-2754, 600-4553	1
C18468		CAT 6060 FS HYD SHOVEL CAC - TYPE1 - LEFT (PART OF C18467)	1
C18469		CAT 6060 FS HYD SHOVEL CAC - TYPE1 - RIGHT (PART OF C18467)	1
C18471	535-4527	CAT 6060 CHARGE AIR COOLER 1 PIECE DESIGN (OEM DESIGN) REPLACE 404-2754, 600-4553	1
C18474	535-4523	CAT 6060 RAD; REPLACE 404-2753, 600-4552	1
C19335	534-3807	CAT 6060 HYD OIL COOLER	4
C19336	533-9066	CAT 6030, 6040, 6050 & 6060 & 6090 SWING BOX OIL COOLER (PTO PUMP COOLER); REPLACE 151-0089, 152-0435, 367-8624	4
6090			
C19337	534-1029	CAT 6090 HYD OIL COOLER; REPLACE 425-3735, 600-3667	4
ANCILLARY EQUIPMENT			
854K			
C18501	387-4367	CAT 844K, 854K, 990K, 992K, 994H AMOCS RAD PANEL; REPLACE 223-5120	16
D10R			
C18571	119-4774	CAT D8L, D9R, D10R, D9N, D10N & 24H (MOTOR GRADER) AMOCS RAD PANEL	11
D10T			
C13212	528-0686	CAT D10T CHARGE AIR COOLER (LEFT) – DL; REPLACE 267-9441	1
C13214	539-8656	CAT D10T CHARGE AIR COOLER (RIGHT) – DL; REPLACE 267-9442	1
C31608	528-0686	CAT D10T CHARGE AIR COOLER TYPE 1 (LEFT); REPLACE 267-9441	1
C31609	539-8656	CAT D10T CHARGE AIR COOLER TYPE 2 (RIGHT); REPLACE 267-9442	1
C18572	213-9906	CAT D9T & D10T AMOCS RAD PANEL (LONG); REPLACE 119-4774	10
C18573	204-7184	CAT D10T AMOCS RAD PANEL (SHORT); REPLACE 213-9907, 163-4057	2
D10T2			
C18574	421-4021	CAT D10T2 CHARGE AIR COOLER	1
C18575	393-5050	CAT D10T2 RAD	2
C32848	373-6407	CAT D10T2 OIL COOLER	1
D11T / D11R			
C18577	373-8721	CAT D11T RAD (SINGLE PIECE DESIGN); REPLACE 338-2217	2
C18578	213-8188	CAT D11R & D11T AMOCS RAD PANEL; REPLACE 131-1106	12
C30446	338-2219	CAT D11T CHARGE AIR COOLER	2
C32846	338-1924	CAT OIL COOLER; HYDRAULIC - SUIT D11T & D11R; 7PZ; GEB; AMA TEMP. CONTROLLED	1
C30538	267-9443	CAT D11R & D11T CHARGE AIR COOLER – TYPE 1 – LEFT	1
C30539	267-9444	CAT D11R & D11T CHARGE AIR COOLER – TYPE 2 – RIGHT	1

CATERPILLAR

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C13220	267-9443	CAT D11R & D11T CHARGE AIR COOLER – DL – LEFT	1
C13221	267-9444	CAT D11R & D11T CHARGE AIR COOLER – DL – RIGHT	1
988G			
C18521	173-6753	CAT 834G, 834H, 836G, 836H, 988G & 988H BRAKE / AXLE COOLER	1
C18522	204-2642	CAT 988G & 988H HYD OIL COOLER; REPLACE 204-2640	1
C18523	152-7990	CAT 834G, 836G & 988G AMOCS RAD PANEL	7
988H			
C18524	387-4366	CAT 834H, 834K, 988H & 988K AMOCS RAD PANEL; REPLACE 223-5117	8
C13209	374-3545	CAT 834H, 836H & 988H CHARGE AIR COOLER – DL; REPLACE 200-1137	1
992K			
C18501	387-4367	CAT 844K, 854K, 990K, 992K, 994H AMOCS RAD PANEL; REPLACE 223-5120	14
C18530	346-0799	CAT 854K & 992K CHARGE AIR COOLER; REPLACE 280-0111	2
C18533	261-3853	CAT 844K, 854K, 990H, 990K & 992K HYD OIL COOLER	1
993K			
C18536	488-9086	CAT 993K CHARGE AIR COOLER; REPLACE 250-8617	2
C18537	250-8480	CAT 993K HYD OIL COOLER	1
C18538	387-4368	CAT 993K, 994K, 994H AMOCS RAD PANEL; REPLACE 223-5121	14
994H			
C18501	387-4367	CAT 844K, 854K, 990K, 992K, 994H AMOCS RAD PANEL; REPLACE 223-5120	13
C18538	387-4368	CAT 993K, 994K, 994H AMOCS RAD PANEL; REPLACE 223-5121	5
C18541	592-8472	CAT 994, 994D, 994F & 994H BRAKE/STEERING OIL COOLER; REPLACE 457-5675, 355-1657	1
C18542	592-8471	CAT 994, 994D, 994F & 994H HYD OIL COOLER; REPLACE 457-5674, 186-0058, 355-1656	1
16M			
C18437	349-5933	CAT 16M, 966H & 972H CHARGE AIR COOLER TYPE 1 (410 MM WIDTH)	1
C18438	260-0354	CAT 16M, 966H & 972H CHARGE AIR COOLER (445 MM WIDTH)	1
C18439	365-6876	CAT 16M, 18M, 24M, 631G & 637G HYD OIL COOLER; REPLACE 239-8530	1
C18440	256-5311	CAT 16M, 627G, 637G RAD; REPLACE 443-3189, 494-4832	1
24M			
C18443	396-9735	CAT 24M CHARGE AIR COOLER; REPLACE 274-7831	1
C18444	464-9051	CAT 24M MODULAR RAD PANEL; REPLACE 223-8985, 387-4380	3

INDUSTRIAL ENGINES

C7 / C9

C18549	186-0117	CAT C7 & C9 CHARGE AIR COOLER – INDUSTRIAL ENGINE	1
C18567	230-5006	CAT C7 & C9 RAD – INDUSTRIAL ENGINE	1

3054C / 3054E

C18445	236-8741	CAT 3054C & 3054E CHARGE AIR COOLER	1
C18448	236-8741	CAT 3054C & 3054E RADIATOR	1
C18449	236-8741	CAT B&P SUIT 3054C C3054E C4.4 INDUSTRIAL ENGINE C/W RAD / CAC ASSEMBLY	1

PRODUCT HIGHLIGHT

COR COOLING™ D10T2 CHARGE AIR COOLER

PRODUCT NAME	COR Cooling™ D10T2 CAC	PRODUCT TYPE	Charge Air Cooler (CAC)
EQUIPMENT SUITABILITY	Caterpillar D10T2 Dozer	SERIAL # RANGE	D10T2 RAB1 onwards, D10T2 JJW1 onwards
H-E PARTS #	C18574	OEM PART #	421-4021

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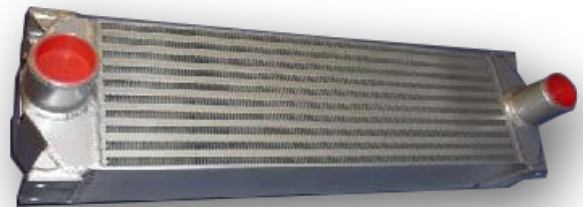
FEATURES AND BENEFITS

With our extensive range and abilities of our COR Cooling™ bar and plate product line, we are able to supply replacement components for a variety of customers across a range of industries. Benefits of this product line include:

- Heavy duty bar and plate design to suit multiple engine configurations.
- Custom designed piping system and accessories can be included.
- Sideband expansion slits allow the core to expand and contract evenly to prevent premature cracking.
- Enhanced external open fin design to prevent blockages and ease cleaning.



COR COOLING™ ANCILLARY COOLERS



PRODUCT NAME	COR Cooling™ Radiator Panel
EQUIPMENT SUITABILITY	Caterpillar D11T/R Dozer
H-E PARTS #	C18578
OEM PART #	213-8188

PRODUCT NAME	COR Cooling™ Radiator
EQUIPMENT SUITABILITY	Caterpillar 3054C/E Engine
H-E PARTS #	C18445
OEM PART #	236-8741

KOMATSU

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
TRUCKS			
HD 785-7			
C13518	56E-07-21133	KOMATSU HD785-7 CONDENSER	1
C18938	561-03-81660	KOMATSU HD785-7 CHARGE AIR COOLER – BAR & PLATE	2
C18940	561-03-81280	KOMATSU HD785-7 HYDRAULIC OIL COOLER – BAR & PLATE	1
C18941	561-03-81632	KOMATSU HD785-7 RAD PANEL TYPE 1 – BAR & PLATE	2
C18942	561-03-81652	KOMATSU HD785-7 RAD PANEL TYPE 2 – BAR & PLATE	1
C18943	561-03-81642	KOMATSU HD785-7 RAD PANEL TYPE 3 – BAR & PLATE	1
C16936	561-03-81660	KOMDAC490D KOMATSU HD785-7 CAC DL	2
C16938	561-03-81632	KOMATSU HD785-7 RAD PANEL TYPE 1 – DL	2
C16939	561-03-81652	KOMATSU HD785-7 RAD PANEL TYPE 2 – DL	2
C16940	561-03-81642	KOMATSU HD785-7 RAD PANEL TYPE 3 – DL	1



PRODUCT HIGHLIGHT

COR COOLING™ HD785-7 COOLING PACK ASSEMBLY

PRODUCT NAME	COR Cooling™ Cooling Pack Assembly
EQUIPMENT SUITABILITY	Komatsu HD785-7 Truck
H-E PARTS #	C16936, C18940 ,C18941, C18942, C19843

PRODUCT TYPE	Complete Assembly
SERIAL # RANGE	30001-UP
OEM PART #	561-03-84300

We take pride in our experience and reputation for delivering the highest quality products and service to our clients; assisting you with the design, manufacture and supply of suitable radiator, heat exchanger, or complete module solutions.

ENGINEERING CAPABILITIES

Our Engineering team utilizes 3D modeling and design verification software to design, optimize, engineer and manufacture to meet the customer's specific cooling requirements. Using computer-aided design software enables us to deliver on new projects faster and more efficiently.

ENGINEERING INNOVATION

At H-E Parts, we are continuously developing our products to offer innovative solutions that increase productivity through longer service life, more efficient products and time saved through availability.

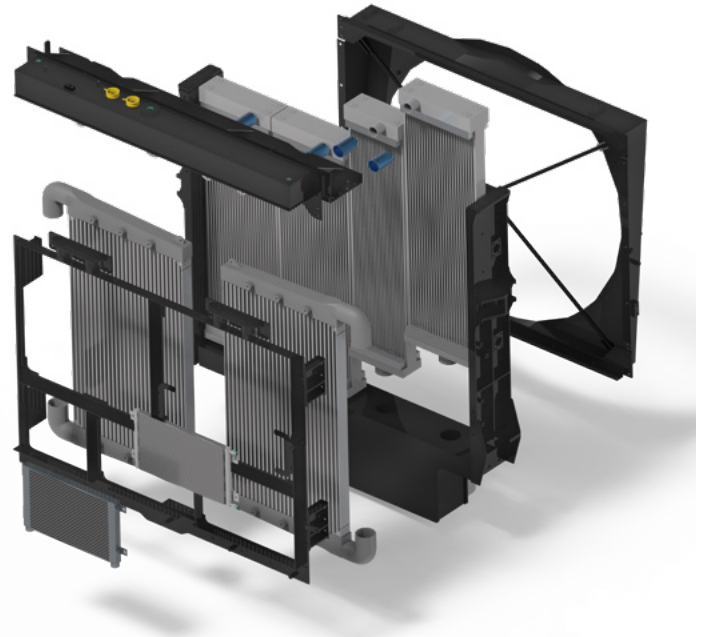
PROPRIETARY SOFTWARE

Using our proprietary software, we can continually improve our bar and plate range to better suit the specific application requirements.

CUSTOM SOLUTIONS

Our experience in application specific solutions assist our customers in avoiding costly machine breakdowns caused by inappropriate or ineffective cooling systems. This results in lower maintenance costs and more machine uptime, increasing productivity.

High quality cooling systems ensure longer machine life expectancy through the reduction of unnecessary overheating machine components. An engineered solution from H-E Parts also generates other potential benefits, including high machine performance through increased efficiency and reduced fuel consumption.



KOMATSU

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
EXCAVATORS			
PC 1250			
C18953	21N-03-37412	KOMATSU PC1250-8 HYD OIL COOLER	1
C18955	21N-03-41110	KOMATSU PC1250LC-8 RADIATOR PANEL	3
C31622	21N-03-43510	KOMATSU PC1250LC-8 CHARGE AIR COOLER (OEM TANK REQ'D)	1
PC 2000			
C18968	21T-03-31160	KOMATSU PC2000-8 CHARGE AIR COOLER	2
C18969	21T-03-31711	KOMATSU PC2000-8 RAD PANEL	3
PC 3000			
C18987	95019940	KOMATSU PC3000-6 HYDRAULIC OIL COOLER	1
PC 4000 / PC 5500			
C19007	95809040	KOMATSU PC4000 & PC5500 HYDRAULIC OIL COOLER	1
ANCILLARY EQUIPMENT			
WA 600			
C19075	426-03-37591	KOMATSU WA600-6 CHARGE AIR COOLER	1
C19076	426-03-37571	KOMATSU WA600-6 RAD	4
WA 900			
C19085	427-S05-1810	KOMATSU WA800-3, 900-3, 1200-3 & WD900-3 BRAKE OIL COOLER	2
D375			
C18922	195-03-63114	KOMATSU D375A-5 RAD	3
C18923	195-03-65181	KOMATSU D375A-6 CHARGE AIR COOLER	2

COR COOLING™ EXCAVATOR COOLING SOLUTIONS



PRODUCT NAME	COR Cooling™ Radiator
EQUIPMENT SUITABILITY	Komatsu PC 2000 Excavator
H-E PARTS #	C18969
OEM PART #	21T-03-31711

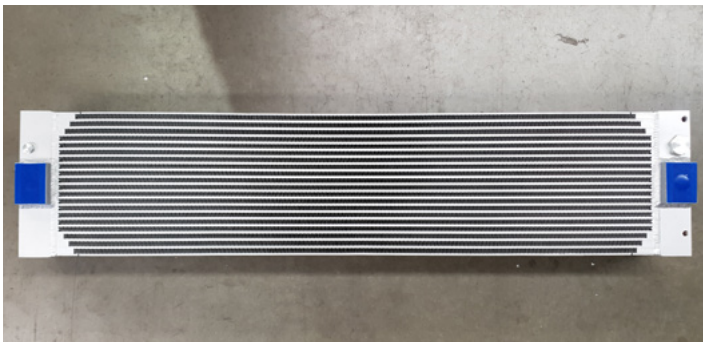


PRODUCT NAME	COR Cooling™ CAC
EQUIPMENT SUITABILITY	Komatsu WA 600 Loader
H-E PARTS #	C19075
OEM PART #	426-03-37591

LIEBHERR

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
EXCAVATORS			
R9350			
C19105	10000392	LIEBHERR 994B & R9350 HYD OIL COOLER (LARGE); PART OF 103271133	1
C19106	5617986	LIEBHERR 994B & R9350 HYD OIL COOLER (SMALL); PART OF 10327134	1
C19107	5617987	LIEBHERR 994B & R9350 GEARBOX OIL COOLER; PART OF 10327134	2
R9400			
C19095	11823532	LIEBHERR 9400 HYD OIL COOLER (LARGE); REPLACE 10800651	1
C19096	11821219	LIEBHERR 9400 HYD OIL COOLER (SMALL)	1
C19097	11821218	LIEBHERR 9400 GEARBOX OIL COOLER	1
R996			
C19112	5611936	LIEBHERR 996 HYD OIL COOLER	4
C19114	5611937	LIEBHERR 996 SPLITTER BOX OIL COOLER	4
R9800			
C19098	10333648	LIEBHERR 9800 HYDRAULIC OIL COOLER	1
C19101	10333649	LIEBHERR 9800 GEARBOX OIL COOLER - TO SUIT PUMP DRIVE	1

COR COOLING™ EXCAVATOR COOLING SOLUTIONS



PRODUCT NAME	COR Cooling™ Splitter Box Oil Cooler
EQUIPMENT SUITABILITY	Liebherr R996 Excavator
H-E PARTS #	C19114
OEM PART #	5611937

PRODUCT NAME	COR Cooling™ Gearbox Oil Cooler
EQUIPMENT SUITABILITY	Liebherr R9800 Excavator
H-E PARTS #	C19101
OEM PART #	10333649

HITACHI

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
EXCAVATORS			
EX1200			
C15179	1386-621-1000	HITACHI EX1200-6 CHARGE AIR COOLER (DL)	1
C18753	1381-639-8010 1381-639-8020 1381-639-8030	HITACHI EX1200-6 RAD PANEL	3
C18754	4682425 4682426	HITACHI EX1200 HYD OIL COOLER	2
C18755	4444691	HITACHI EX1200-5 CHARGE AIR COOLER	1
C18758	4658096	HITACHI EX1200 OIL COOLER	1
EX1900			
C32806	4456797	HITACHI 1900-5 EXCAVATOR CHARGE AIR COOLER	2
EX2500 / EX2600			
C18760	4427952	HITACHI EX2500-1, EX2500-5 & EX25006 OIL COOLER; REPLACE 9227508	4
C18762	4729782	HITACHI EX2600-6 HYDRAULIC OIL COOLER	2
EX3600			
C18765	4421620	HITACHI EX3600 HYD OIL COOLER	4
C18766	335611	HITACHI EX3600 OIL COOLER	1
EX5500 / EX5600			
C18769	4439687	HITACHI EX1900 & EX5500 HYD OIL COOLER; REPLACE 4412356, 4665529	4
C18770	YA00008446	HITACHI EX5600-6 HYDRAULIC OIL COOLER; REPLACE 10887335	4

COR COOLING™ EXCAVATOR COOLING SOLUTIONS



PRODUCT NAME	COR Cooling™ Radiator
EQUIPMENT SUITABILITY	Hitachi EX1200 Excavator
H-E PARTS #	C18753
OEM PART #	1381-639-8010 / 1381-639-8020 / 1381-639-8030



PRODUCT NAME	COR Cooling™ Oil Cooler
EQUIPMENT SUITABILITY	Hitachi EX1200 Excavator
H-E PARTS #	C18754
OEM PART #	4682425 / 4682426

ATLAS COPCO / EPIROC

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
SURFACE DRILL RIGS			
FLEXIROC D65			
C18272		ATLAS COPCO / EPIROC D65 COMPRESSOR OIL COOLER	1
C18273		ATLAS COPCO / EPIROC D65 COMPRESSOR OIL & CHARGE AIR COOLER (DUAL)	1
FLEXIROC T45			
C30972		ATLAS COPCO / EPIROC T45 RAD	1
ECM 720			
C18275		ATLAS COPCO ECM720 COMPRESSOR OIL COOLER	1
C18276		ATLAS COPCO ECM720 CHARGE AIR COOLER	1
C18277		ATLAS COPCO ECM720 HYD OIL COOLER	1
C18278		ATLAS COPCO ECM720 RADIATOR	1
L7 / L8			
C18303	3222 3313 98	ATLAS COPCO L7 COMPRESSOR OIL COOLER TYPE 1	1
C18304		ATLAS COPCO L7 COMPRESSOR OIL COOLER (1342MM X 458MM X 140MM)	1
C18305	3222 3049 48	ATLAS COPCO L7 HYD OIL COOLER	1
C18306	3222 3178 90	ATLAS COPCO L7 & L8 CHARGE AIR COOLER	1
C18308	3222 3178 89	ATLAS COPCO L7 & L8 RAD	1
C18310	3222 3175 51	ATLAS COPCO L8 HYD OIL COOLER TYPE 1	1
C18312	3222 3175 92	ATLAS COPCO L8 COMPRESSOR OIL COOLER TYPE 2	1
C18314	4563 419 0000	ATLAS COPCO L8 COMPRESSOR OIL COOLER TYPE 3	1
C18315		ATLAS COPCO L8 HYD OIL COOLER (1490MM X 305 X 140MM)	1
C18316	3222 3157 67	ATLAS COPCO L8 COMPRESSOR AUXILIARY COOLER	1
C18319	3222 3313 22	ATLAS COPCO L7-40, L8-30 & EPIROC D65 COMPRESSOR OIL COOLER	1
C18320	3222 3313 82	ATLAS COPCO L7-40, L8-30 & EPIROC D65 CHARGE AIR COOLER	1
C18321	3222 3313 85	ATLAS COPCO L7-40, L8-30 & EPIROC D65 FUEL COOLER	1
C18322	3222 3313 21	ATLAS COPCO L7-40, L8-30 & EPIROC D65 HYD OIL COOLER	1
C18323	3222 3313 79	ATLAS COPCO L7-40, L8-30 & EPIROC D65 RAD	1
C18341		ATLAS COPCO L7 & L7-40CR COMPRESSOR OIL COOLER (1090MM X 1020MM X 140MM)	1
D65			
C32674		ATLAS COPCO / EPIROC OIL COOLER TYP 1 1090 X 478 X 140MM, 4 PORTS	1

CASE STUDY

DRILL RIG COOLING SOLUTIONS

H-E PARTS ARE A LEADING PROVIDER OF RELIABLE, APPLICATION SPECIFIC HEAT TRANSFER SOLUTIONS. H-E PARTS MANUFACTURE AND SUPPLY HIGH QUALITY, INNOVATIVE PRODUCTS THAT ARE TAILORED TO OUR CUSTOMERS SPECIFIC REQUIREMENTS. H-E PARTS IN-HOUSE ENGINEERING, PRODUCT AND SERVICE OFFERINGS, GUARANTEE WE SUPPORT CUSTOMERS THROUGHOUT THE FULL PRODUCT LIFECYCLE AND ENSURES THE LOWEST TOTAL COST OF OWNERSHIP IS ACHIEVED.

Hagstrom Drilling approached H-E Parts with overheating issues relating to a possible engine fan and radiator concern in their Morooka MST 1500 Drill Rig. This machine is designed and manufactured in Japan where the ambient temperatures are approximately 30° C / 86° F. Most Australian industrial sites average 50° C / 122° F.

After struggling with this issue for many years working in these high temperature areas, it was apparent that the fan and radiator required urgent assessment. In addition to the radiator and fan assessment, the question was asked what options were available to improve/increase the cooling capacity of the hydraulic system.

H-E Parts offered three improvements for the customer:

- Re-build the radiator with a high efficiency core to better suit the high ambient temperatures
- Redesign a replacement fan suitable to the engine and capable of cooling at high ambient temperatures
- Custom designed a hydraulic oil cooling package including 4 x 24V electric thermo fans removing the need for the two existing under capacity units

H-E Parts replaced the radiator core with a more efficient core that allows for a larger cooling capacity with better airflow. In combination with the radiator re-build, H-E Parts worked closely with Multi-Wing to redesign a suitable replacement fan that provides higher airflow. The radiator and fan combination work better to achieve a more efficient cooling solution, better suited to Australia's ambient temperatures of 50° C / 122° F.

H-E Parts also supplied a hydraulic oil cooling pack, which was a combination of a heavy-duty aluminum bar and plate oil cooler, 4 thermo fans and fan housing. The hydraulic cooler design will attach to the side of the machine providing superior cooling for the hydraulic oil circuit.

H-E Parts offered the customer a timely solution that reduced associated costs with equipment downtime while being considerate of their time constraints.

More COR Cooling™ case studies can found on our website under the whitepaper and resource sections.

LOCATION	Western Australia
APPLICATION	Morooka MST 1500 Drill Rig
PRODUCT	COR Cooling™ Hydraulic Cooler



ATLAS COPCO / EPIROC

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
ROTARY BLASTHOLE DRILL RIGS			
ROC F9 / ROC F9-11			
C18279		ATLAS COPCO F9 OIL COOLER TYPE 1 (1040MM X 409MM X 113MM)	1
C18280		ATLAS COPCO F9 OIL COOLER TYRE 2 (1040MM X 448MM X 113MM)	1
C18281		ATLAS COPCO F9 CHARGE AIR COOLER (938MM X 300MM X 140MM)	1
C18282		ATLAS COPCO F9 RAD (940MM X 565MM X 140MM)	1
C18283	3222 2901 90	ATLAS COPCO F9-11 COMPRESSOR OIL COOLER (1040MM X 418MM X 113MM)	1
C18284		ATLAS COPCO F9-11 CHARGE AIR COOLER (940MM X 295MM X 140MM)	1
C18285		ATLAS COPCO F9-11 HYD OIL COOLER (1040MM X 449MM X 113MM)	1
C18286		ATLAS COPCO F9 -11 RAD (940MM X 570MM X 140MM)	1
DM45 / V			
C18274		ATLAS COPCO DM45E HYD OIL COOLER (1640MM X 645MM X 140MM)	1
C18822		ATLAS COPCO DM45 COMPRESSOR OIL COOLER (ALSO INGERSOLL RAND) (1575MM X 807MM X 140MM)	1
C18823		ATLAS COPCO DM45 COMPRESSOR OIL COOLER C18822 IN ASSEMBLY (ALSO INGERSOLL RAND)	1
C18824		ATLAS COPCO DM45 HYD AND COMPRESSOR DUAL OIL COOLER (ALSO INGERSOLL RAND) (1490mm X 1448mm X 140mm)	1
C18825		ATLAS COPCO DM45 HYD OIL COOLER (ALSO INGERSOLL RAND) (1573mm X 576mm X 140mm)	1
C18826		ATLAS COPCO DM45 HYD OIL COOLER C18825 IN ASSEMBLY (ALSO INGERSOLL RAND)	1
C18827		ATLAS COPCO DM50 COMPRESSOR OIL COOLER (ALSO INGERSOLL RAND) (1828mm X 896mm X 140mm)	1
C18828		ATLAS COPCO DM50 COMPRESSOR OIL COOLER C18828 IN ASSEMBLY (ALSO INGERSOLL RAND)	1
PV-235			
C18332		ATLAS COPCO / EPIROC PV235 HYD OIL COOLER (1640MM X 930MM X 140MM)	1
PV-271 / PV-275			
C18333	2657 9018 94	ATLAS COPCO / EPIROC PV271 & DML60 CHARGE AIR COOLER TYPE 1 (LEFT)	1
C18334	2657 9019 02	ATLAS COPCO / EPIROC PV271 & DML60 CHARGE AIR COOLER (RIGHT)	1
C18335		ATLAS COPCO / EPIROC PV271 & PV275 FUEL COOLER (750MM X 508MM X 40MM)	1
C18336	2658 6351 43	ATLAS COPCO / EPIROC PV271 & PV275 OIL COOLER (1598MM X 450MM X 140MM)	1
C18337	2657 8949 66	ATLAS COPCO / EPIROC PV271, PV275 & DML60 COMPRESSOR OIL COOLER (1640MM X 895MM X 140MM)	1
C18339	2657 8949 74	ATLAS COPCO / EPIROC PV271, PV275 & DML60 HYD OIL COOLER (1640MM X 780MM X 140MM)	1
C18340	2657 8004 50	ATLAS COPCO / EPIROC PV271, PV275 & DML60 RAD (1715MM X 770MM X 140MM)	1

PRODUCT HIGHLIGHT

COR COOLING™ R2900 RADIATOR ARRANGEMENT

PRODUCT NAME	COR Cooling™ R2900 Radiator
EQUIPMENT SUITABILITY	Caterpillar R2900 Underground Loader
H-E PARTS #	C30992 (C30919 without frame)

PRODUCT TYPE	Radiator
SERIAL # RANGE	ZLK1-UP
OEM PART #	529-6144

H-E Parts manufactures and supplies high quality, innovative COR Cooling™ products that can also be tailored to our customers' specific requirements. H-E Parts in-house engineering, COR Cooling™ product and associated service offerings, guarantee we can support customers throughout the full product life cycle while working to award the end user with the lowest total cost of ownership.

FEATURES AND BENEFITS

With our extensive range and abilities of our COR Cooling™ bar and plate product line, we are able to supply replacement components for a variety of customers across a range of industries. Benefits of this product line include a combination of the below features:

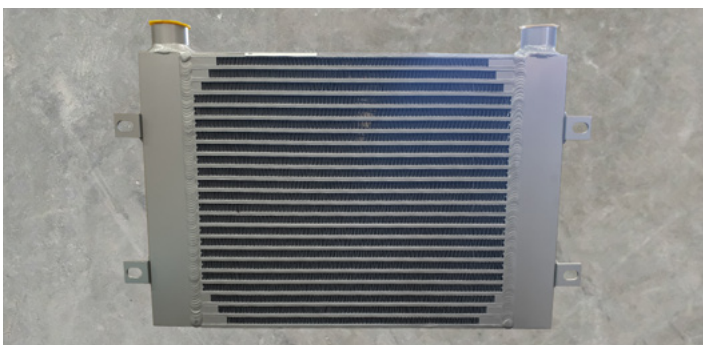
- Heavy duty bar and plate design to suit multiple engine configurations
- Corner block reinforcements prevent premature failure of end tubes
- Anodized cores and aluminum for extended service life resulting in less downtime and resistant to corrosion
- Sideband expansion slits allow the core to expand and contract evenly to prevent premature cracking
- Enhanced external open fin design to prevent blockages and ease cleaning
- A range of customized seals, clamps, blanking plates, end caps and other accessories



UNDERGROUND EQUIPMENT

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
CATERPILLAR			
R1700			
C14471	186-9526	CAT R1700G, R2900G CHARGE AIR COOLER (CORE ONLY) – DL	1
C19313	166-2347	CAT R1700 HYD OIL COOLER	1
C19314	7E-4136	CAT R1700G & R2900G BRAKE OIL COOLER	1
C19315	166-2374	CAT R1700G & R2900 HYD OIL COOLER	1
R2900			
C19319	481-2591	CAT R2900G OIL COOLER; REPLACE 293-3085	1
C14474	2725592	CAT R2900G CHARGE AIR COOLER (SINGLE CORE) – DL	1
C19314	7E-4136	CAT R1700G & R2900G BRAKE OIL COOLER	1
ATLAS COPCO / EPIROC			
MT426			
C18324		ATLAS COPCO / EPIROC MT426 HYD OIL COOLER	1
MT5010 / MT6020			
C18325	5574 2362 00	ATLAS COPCO / EPIROC MT5010 & MT6020 AUXILIARY OIL COOLER,	1
C18326	N/A	ATLAS COPCO / EPIROC MT5010 & MT6020 DROPBOX COOLER ONLY	1
C18327	N/A	ATLAS COPCO / EPIROC MT5010 & MT6020 DROPBOX COOLER; 12V ASSY	1
C18328	5541 0255 00	ATLAS COPCO / EPIROC MT5010 & MT6020 DROPBOX COOLER; 24V ASSY	1
C18331	55407808000	ATLAS COPCO / EPIROC MT6020 HYDRAULIC OIL COOLER	1
C21421	5590 0066 98	ATLAS COPCO / EPIROC MT5010 & MT6020 RAD BRASS FIN (COMPLETE ASSEMBLY)	1
C21422	N/A	ATLAS COPCO / EPIROC MT5010 & MT6020 RAD BRASS FIN (CORE ONLY)	1
MT65			
C30968	5508 0260 09	ATLAS COPCO / EPIROC MT65 UP COOLER PART OF 5508 0263 08	1
C32109	5590 0168 96	ATLAS COPCO / EPIROC MT65 DROPBOX COOLER CO4 PART OF 5590 0170 93	1
C32111	5590 0168 96	ATLAS COPCO / EPIROC MT65 DROPBOX COOLER CO7 PART OF 5590 0170 93	1
ST18			
C32631		ATLAS COPCO / EPIROC ST18 OIL COOLER W/ PRESSURE RELIEF BLOCK REUSE PRESSURE RELIEF VALVE	1
ST1030B			
C18342		ATLAS COPCO / EPIROC ST1030B HYD & TRANS OIL COOLER ASSEMBLY	1
C18343		ATLAS COPCO / EPIROC ST1030B HYD OIL COOLER (PART OF C18342)	1
C18344		ATLAS COPCO / EPIROC ST1030B TRANS OIL COOLER (PART OF C18342)	1

COR COOLING™ UNDERGROUND COOLING SOLUTIONS



PRODUCT NAME	COR Cooling™ Oil Cooler
EQUIPMENT SUITABILITY	Atlas Copco / Epiroc MT5010 / MT6020 Underground Truck
H-E PARTS #	C18326
OEM PART #	N/A

COR COOLING™ FOLDED CORES

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C13582-1	2W0181	CAT RAD REPLACEMENT PANEL FOR 785B, 785C, 785D, 789B, 793C ETC...	26
C13584-1	2W5539	CAT RAD REPLACEMENT PANEL FOR 789C, 793B, 793C ETC...	58
C13587-1	2W5540	CAT RAD REPLACEMENT PANEL FOR 16H, 793C ETC...	60
C13591-1	2W6632	CAT RAD REPLACEMENT PANEL FOR 797B, D10N ETC...	40
C13627-1	7W2173	CAT RAD REPLACEMENT PANEL FOR 777C, 777D, 797B ETC...	23
C13634-1	9Y3318	CAT RAD REPLACEMENT PANEL FOR 789D, 795F ETC...	58



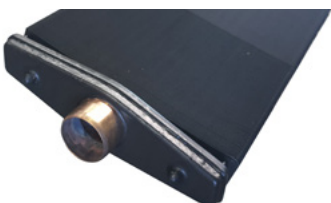
SEALS

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C21772	272-5437	CAT REPLACEMENT SEAL (SMALL), SUIT 777D, 793D, 980H ETC...	20
C21773	272-5438	CAT REPLACEMENT SEAL (LARGE), SUIT 777D, 793D, 980H ETC...	20
C21774	6i-2431	CAT REPLACEMENT SEAL FOR AMOCS RAD PANEL, SUIT 992K, 993K, 994H ETC...	20
C21775	160-6387	CAT REPLACEMENT SEAL FOR FOLDED CORES PANEL (LONG), SUIT 777D, 789D, 793C ETC...	50
C21776	160-6386	CAT REPLACEMENT SEAL FOR FOLDED CORES PANEL (SHORT), SUIT 777D, 789D, 793C ETC...	50



FOLDED CORES

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C13583	2W0181	CAT RAD REPLACEMENT PANEL FOR 785B, 785C, 785D, 789B, 793C ETC...	26
C13585	2W5539	CAT RAD REPLACEMENT PANEL FOR 789C, 793B, 793C ETC...	58
C13588	2W5540	CAT RAD REPLACEMENT PANEL FOR 16H, 793C ETC...	60
C13592	2W6632	CAT RAD REPLACEMENT PANEL FOR 797B, D10N ETC...	40
C13628	7W2173	CAT RAD REPLACEMENT PANEL FOR 777C, 777D, 797B ETC...	23
C13635	9Y3318	CAT RAD REPLACEMENT PANEL FOR 789D, 795F ETC...	58



COR COOLING™ END CAPS

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C30805	N/A	END CAP; 1-3/4" VINYL PORT COVER (BLACK)	N/A
C30806	N/A	END CAP; 2" VINYL PORT COVER (BLACK)	N/A
C30810	N/A	END CAP; 3" VINYL PORT COVER (BLACK)	N/A
C30811	N/A	END CAP; 3.5" VINYL PORT COVER (BLACK)	N/A
C30812	N/A	END CAP; 4" VINYL PORT COVER (BLACK)	N/A
C30813	N/A	END CAP; 4.5" VINYL PORT COVER (BLACK)	N/A
C30814	N/A	END CAP; 5" VINYL PORT COVER (BLACK)	N/A
C30815	N/A	END CAP; 5.5" VINYL PORT COVER (BLACK)	N/A
C30816	N/A	END CAP; 6" VINYL PORT COVER (BLACK)	N/A

COR COOLING™ CLAMPS

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C14329	N/A	32 - 54MM - 200 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14330	N/A	45 - 67MM - 250 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14331	N/A	57 - 79MM - 300 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14332	N/A	70 - 92 MM - 350 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14333	N/A	83 - 105MM - 400 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14334	N/A	95 - 118MM - 450 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14335	N/A	108 - 130MM - 500 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A
C14336	N/A	121 - 143MM - 550 L STAINLESS STEEL CONSTANT TORQUE SS CLAMP	N/A

COR COOLING™ BLANKING PLATES

H-E PARTS #	OEM PART #	FULL DESCRIPTION	QTY PER MACHINE
C30404	N/A	PLATE; PORT COVER DIMENSION 140 X 140 MM 1.6MM GALV PLATE OR ALUM	N/A
C30405	N/A	PLATE; PORT COVER DIMENSION 63 X 63 MM 1.6MM GALV PLATE OR ALUM	N/A
C30406	N/A	PLATE; PORT COVER DIMENSION 172 X 172 MM 1.6MM GALV PLATE OR ALUM	N/A
C30407	N/A	PLATE; PORT COVER DIMENSION 83 X 96.5 MM 1.6MM GALV PLATE OR ALUM	N/A
C30410	N/A	PLATE; PORT COVER DIMENSION 110 X 110 MM 1.6MM GALV PLATE OR ALUM	N/A
C30411	N/A	PLATE; PORT COVER DIMENSION 127 X 140 MM 1.6MM GALV PLATE OR ALUM	N/A
C30412	N/A	PLATE; PORT COVER DIMENSION 127 X 137 MM 1.6MM GALV PLATE OR ALUM	N/A
C30413	N/A	PLATE; PORT COVER DIMENSION 158 X 158MM 1.6MM GALV PLATE OR ALUM	N/A
C30414	N/A	PLATE; PORT COVER DIMENSION 130 X 137 MM 1.6MM GALV PLATE OR ALUM	N/A
C30422	N/A	BLANKING PLATE KIT - CAT 785C 5 BLANKING PLATES	N/A
C30782	N/A	BLANKING PLATE KIT; CAT 785D 5 BLANKING PLATES	N/A
C30783	N/A	BLANKING PLATE KIT; CAT 789C 5 BLANKING PLATES	N/A
C30496	N/A	BLANKING PLATE KIT-CAT789D 5 BLANKING PLATES	N/A
C30423	N/A	BLANKING PLATE KIT; CAT793C 6 BLANKING PLATES	N/A
C30424	N/A	BLANKING PLATE KIT; CAT 793D 8 BLANKING PLATES	N/A
C30421	N/A	BLANKING PLATE KIT; CAT793F 7 BLANKING PLATES	N/A

INNOVATION.
NOT DUPLICATION.™

H-E PARTS, GLOBAL LOCATIONS, FOR GLOBAL SOLUTIONS.



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MINING SOLUTIONS COOLING DIVISION

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