

THE NAME TO KNOW FOR THE FUTURE

TALRAD



IN THE MINING SCENE WE'RE ON TOP

WARRANTEE

1. All conventional inter coolers and radiators will be tested 1.5 Bar and tube and grommet inter coolers and radiators 2.5 Bar.
2. Units that require a high pressure test will be tested up to 10 Bar with compressed air and tests that require a higher pressure, can be tested with special equipment up to 45Bar
3. During the test period the cooler will be dipped in a cold penetrance mixture that will quickly show leaks.
4. Warrantee: Talrad warrants their core and frame work, manufactured by Talrad for 6 months from date of invoice. Under this warrantee, our obligation is limited to the repair or the replacement (at our option) of products or parts manufactured by Talrad that are proven to be defective in workmanship or material.
5. Talrad further warrants the Talrad core against seal leakage, during normal use, for 18 months from date of invoice, on new cores with viton seals.
6. New cores with viton seals damaged, due to accidents abuse or corrosion is not warranted.
7. Warrantee on components that is not manufactured by Talrad Shall be that of the individual manufacturer. Operational and maintenance requirements must be met. Talrad is not liable for consequential or incidental damages or costs.

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TAIRAD

VISION

To excel in all aspects of heat exchange, auto electrical, air conditioning and service in South Africa, Africa and the rest of the world for generations to come.

TALRAD

MISSION STATEMENT

Talrad will strive for both a manufacturing and a market service, which is conducive to economic growth, investment, employment, sound economic principals and labour relations to create a well organised, efficient, happy and safe environment, which also include a green energy mindset for customer, employer and employee.



HEAT EXCHANGERS

THE EXPERTS IN OIL COOLING

TALRAD

your answer
to leaking and
costly repairs



TALRAD

EXPERTS IN OIL COOLING



TALRAD

Warranty
against
Leakage



DEMAG H2855 FACE SHOVEL

TALRAD



DEMAG H455S FACE SHOVEL



**There is
NO LIMIT to
cooling capacity**

TALRAD

**YOUR ANSWER TO LEAKING OIL COOLERS
AND COSTLY REPAIRS**



TALRAD



**GREATER TUBE DIAMETERS
MEANS LESS MAINTENANCE**

Absorbs stresses of vibration and
thermal expansion



EXPERTS IN OIL COOLING

CORES INTERCHANGE WITH CONVENTIONAL RADIATOR CORES



1 Cores are made ready for installation into a 3,600 h.p. turbo charged diesel locomotive.

2 Eight core assemblies are bolted together to form two core banks, each bank is comprised of four assemblies.

3 The assembled radiator bank is lowered into place.



TALRAD

HEAT EXCHANGERS

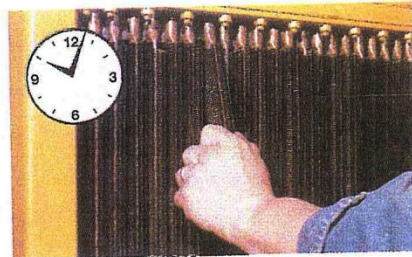
ARE FIELD-REPAIRABLE TO 100% COOLING EFFICIENCY

The procedure for removing a cooling tube for replacement or cleaning is quite simple and can be accomplished by regular maintenance personnel without any special skills, and often without removing the heat exchanger from the equipment. Photo sequence shows procedure and time elapsed to replace a single tube for replacement or cleaning.

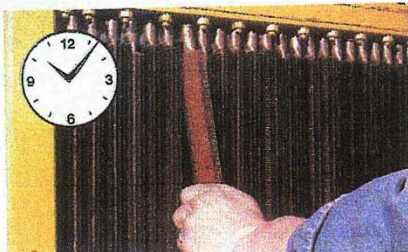
Similar procedure used for repair or replacement of oil cooler tubes.



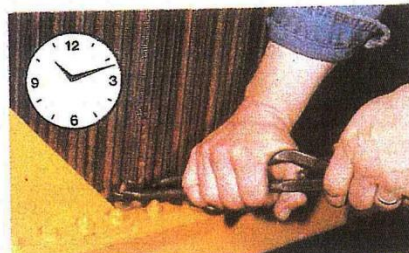
Hand tool dislodges tube from locking seal.



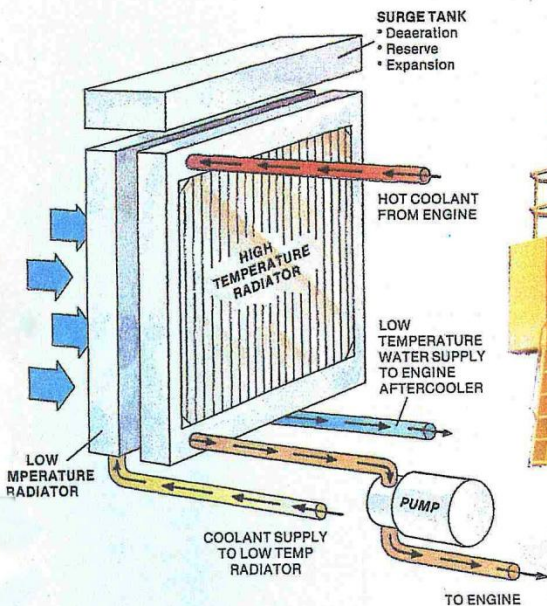
Tube is removed from header plate.



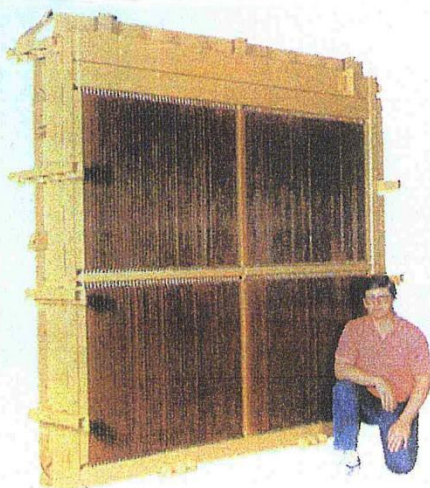
New tube is inserted into new Viton® seal.



Tool seats tube in new lower seal.



Engine cooling in the Haulpak 830E is achieved through the Radiator "split flow" concept.



TALRAD



The Talrad cooler comprises of three replaceable parts:

The individual lightweight aluminum cooling tubes with integral circular finning.

Tube turbulators to increase heat transfer rate and

Viton seals which join the tubes to heater sheets. The viton seals absorb the vibrations that crack the connections of conventional oil coolers, and also let any number of cooling tubes be removed and replaced for cleaning or repair

TALRAD DESIGN OF RAND CARBIDE T8MHE COOLERS:

THERMAL DATA: 2 X 4M Faus

Mass flow kg/hr	Air: 253m3/sec	Water: 400 000 kg/hr
Delta T		8 C
Altitude:	1600	
Ambient:		32 C
Passes:		4
Heat Load:		3720.83 KW
Pressure drop. Tube side:		20.9291 kpa
Pressure drop. Air side:		0.0819 kpa
Overdesign:		35%

Ineke Vorster

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RADIATOR DESIGN OVERCOMES PROBLEM LEAKING

The Talrad radiator and oil cooler cores are designed to overcome problem leaking by using shock absorber rubber seals, instead of rigid solder to hold a core comprised of individual cooling tubes in header plates.

The design also enables the core to be quickly repaired should it be punctured. Damaged tubes are slipped free from header seals and replaced with new tubes and seals to return the core to 100% cooling capacity.

The Talrad core is available as a complete oil cooler and radiator or as a replacement cooling core for all heavy duty engines using bolt-on radiators.

The core has been used extensively in mining and construction around the world and is warranted against leaking for 24 months.

Talrad Radiators fit coolers to specific physical openings. Oil coolers can be supplied for working pressures to 18 Bar and temperatures to 135° C

Benefits for the Talrad customer

- Reliability of the Talrad radiator or oil cooler is attributed to the rubber seal and its ability to absorb vibration, shock, frame twist and thermal Expansion thereby eliminating fatigue type failures.
 - Lower maintenance costs are the result of being able to repair the Talrad radiator or oil cooler on location with unskilled labour and simple hand tools.
 - Less down time results from being able to repair the Talrad radiator and oil cooler without removing the complete radiator assembly, in most cases, from the machine or unbolting the top tank or bottom tanks.
 - No hazardous open flame is required to repair a Talrad radiator or oil cooler core.
 - Repairs can be made without fear of toxic solder (lead) fumes.
- No solder is in contact with liquid coolant thus internal plugging due to solder bloom is eliminated.
- A lower inventory investment is required since it is not necessary to stock a complete radiator or oil cooler when a machine is equipped with a Talrad cooler. If an accident occurs, individual replacement parts such as tubes, seals and washers can be installed. A considerable less expensive and more sensible approach to repairs.
 - An abrasion resistant copper alloy prolongs tube fin life where sand blast conditions exist. Following initial erosion on one side, the first row of damaged tubes can be replaced. It is not necessary to replace the entire core.
 - Cleanable with up to 1000 P.S.I. Of steam or water without fin deformation providing reasonable care is used. Eliminates bend fins common to soft alloy type radiators and assures continues maximum cooling efficiency.
 - If repairs become necessary the Talrad cooler can be returned to 100% efficiency.
 - Temporary action can be taken to allow the cooler to keep on functioning till a replacement tube can be installed.

Chemical Analysis of the copper tubes and viton seals

Copper Tube analysis

Cu:	Balance	Ni:	< 5	Cd:	< 5
Sn:	< 5	Sb:	< 5	Zn:	< 5
Pb:	< 5	As:	< 5	Bi:	< 5
Fe:	< 5	P :	< 400	Ag:	< 15
Al:	< 5	Mg:	< 5	Se:	< 5
Mn:	< 5	Si:	< 5	S :	< 13
Co:	< 5	Cr:	< 5	Mg:	< 5

Physical Properties

HARNESS (HV5)	97 - 100
TENSTILE STRENGHT (mpa)	> 250
YIELD STRENGTH	N/A
ELONGATION (%MIN)	> 30
GRAIN SIZE	UNIFORM
FLATTENING TEST	N/A
DRIFT TEST	N/A
EDDY CURRENT TEST	PASS

Viton Seals: Applications where to use the viton seal

Chemicals	Viton
A:	
Acetylene	A
Aluminium Chloride Solutions	A
Aluminium Sulphate Solutions	A
Ammonium Hydroxide Solutions	A
Amyl Alcohol	A (100°)
Aniline	A - B
ASTM Oil nr1	A (150°)
ASTM Reference Fuel A	A
ASTM Reference Fuel B	A
ASTM Reference Fuel C	A
Asphalt	A (204°)
B:	A
Barium Hydroxide Solutions	A
Beer	A

Butane

A

C:

Calcium Bisulphite Solutions	A
Calcium Hydroxide	A
Carbon Bisulphite	A
Carbon Dioxide	A
Caster Oil	A
Chlorobenzene	A
Chloroform	A
Copper Chloride Solutions	A
Copper Sulphate Solutions	A
Cottonseed Oil	A (150°)
Creosote Oil	A (100°)

D:

Dowtherm A	A(100°)
Dowtherm A	B(204°)

E:

Ethyl Alcohol	A
Ethylene Glycol	A(121°)
Exxon 2380 turbo Oil (Lubricant)	A(200°)

F:

FREON*11	A - B
FREON 12	A - B

S:

Sulphur Dioxide Gas	A
Sulphur Dioxide Liquid	A
Sulphuric Acid 10 - 50%	A
Sulphuric Acid 50 -80%	A
Sulphuric Acid 60%	A (121°)
Sunoco XS - 820 (EP Lubricant)	A (150°)

T:

Tartaric Acid	A
Trichloroethylene	A
Trichresyl Phosphate	A(150°)
Tung Oil	A

W:

Water	A(110°)
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Z:

Zinc Chloride Solutions	A
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7 March 1998

EASTERN CHROME MINES

P.O. Box 3 / Private bag X 505

Stellenbosch

7133

Tel. (013) 230 7000 / 230 7050

Fax (013) 230 9153 / 230 9172 / 230 9117


samancor

To whom it may concern.

Talrad radiators built three after / oil coolers for 1500 cfm Broom Wade Compressors.

These units have been operating for + 2 years and have been a great success. No maintenance has been necessary and the units are very efficient.

Regards



J.A. PRETZ
EQUIPMENT ENGINEER

KOMATSU

Komatsu Southern Africa (Pty) Ltd

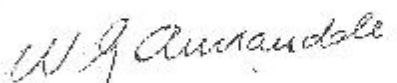
Cnr Diesel & Isando Roads
P.O. Box 186, Isando 1600
Rep. of South Africa

TO WHOM IT MAY CONCERN

This serves to confirm that Talrad has been appointed by us as our main supplier of large oil coolers and radiators. They have been suppliers to us for the past three years and have proven to be reliable and professional.

They have manufactured units for our 650ton mining shovels as well as our 350ton mining shovels. These machines are spread throughout Southern Africa where various mining conditions are experienced and all have been successful. Talrad have manufactured as well as reconditioned many units successfully.

We have no hesitation in recommending them as a supplier.



GERALD ANNANDALE
Technical Manager Mining Shovels

Registration No. 98/06540/07

Directors: M.K. Allen* (Chairman), M. Balazs** (Managing Director), M.K. Davies, T. Haywood, N.M. Harvey, K. Nakaz***, T. Taleghani**
*Appointed Director of Komatsu



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Journal of Management Education 36(8)

Certified in accordance with the requirements of DIN EN ISO 9002 - 1994 Quality Management System

18 March 1999

Taird co has joined Higweld Steel as a "Radiator Repairer and Oil Cooler Manufacturer" specialist in 1998.

They have been thoroughly exposed to all the requirements of cooling systems as found in a modern integrated Iron Works and acquit themselves with diligence to all tasks given.

I have no hesitation at all to recommend them as a suitable contractor on cooling systems.

Yours faithfully

B DE SOUSA
DIVISIONAL ENGINEER IP 1



Talrad in its first and second year started out as a radiator shop.

We became a franchise of Silverton Radiators and was appointed as the winners in category C, for 1999 and 2000.

Silverton Radiators is operating under the umbrella of BEHR who is the third largest radiator company on the globe.



We have a large variety of consumables that is ever increasing to satisfy your specific need and preference.



We supply tools and test equipment for different trades

Join the COOL CLUB

For your total cooling solutions

PRODUCT RANGE



PRODUCT RANGE



CORES



CONDENSER



HEATER RADIATORS



INTERCOOLER



RADIATOR FAN



VISCO FAN BLADE



VISCO FAN CLUTCHES



POLLEN FILTERS



ANTI-FREEZE



EXPANSION TANKS PLASTICS



PRESSURE CAPS



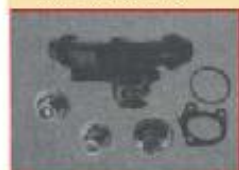
OIL COOLER



PLASTIC TANKS



RADIATOR HOSES



THERMOSTATS



BATTERIES



WATER PUMPS



ENGINE PROTECTION

NEW PRODUCT RANGE

Apart from the products, Talrad offers expert advice and a comprehensive range of services on automotive cooling systems therefore saving you money in the long run. There is also a country wide warranty honored at 120 outlet nation wide.



RATING AGENCY

Broad-Based Black Economic Empowerment
EME Verification Certificate

Talrad Radiators CC.

Reg: 1996/050170/23

Address: 3 Simon du Toit st, Burgersfort.

Certificate No: EME L4/IC151/2014

Verification Standard Applied: B-BBEE of Good Practice and Relevant
Sector Codes

Broad-Based BEE Status Level	Level 4
Black Ownership Percentage	31%
Black Women Ownership Percentage	0%
Black Procurement Recognition Percentage	100%
Value Adding Supplier	NO
Size of the Enterprise	EME (< R5 million annual turnover)

For: NIB Rating Agency

Effective Date : 13 June 2014

Expiry Date : 12 June 2015

Based on our procedure, which do not constitute an audit or review, we have determined that the turnover/income is less than, or equal to R5 million, we have performed the agreed upon procedure (not included) for the period ended 28 February 2013 in determining the turnover/income levels, although the abovementioned is the current level of turnover and is closely related to the economic indicators, it may be more or less in future, consequently, this certificate does not serve as a guarantee that the income reflected will continue at the same levels, we do not accept or assume responsibility to anyone other than, Talrad Radiators CC. for our work, for this report, or for the conclusion we have reached.

This certificate is issued in terms of Government Gazette Vol. 500 no. 29617 dates 9 February 2007 and is valid for twelve (12) months only.



IRBA

PGW GROBLER CA (SA) RA: IRBA 901346-0000

Registered Auditor B-BBEE Approved Registered Auditor 621714B

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