

FIXED PRICE | REMAN PROGRAM



Hitachi Construction Machinery

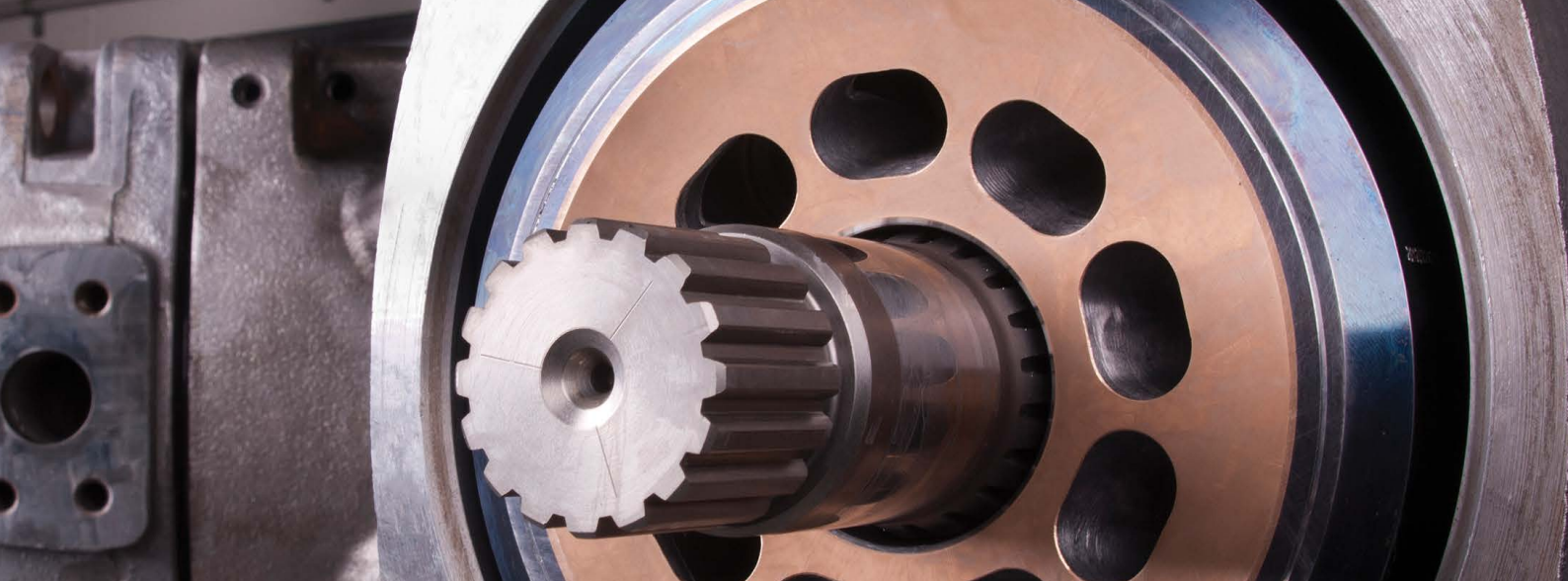
REMANUFACTURED



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DEFINITIONS

FPR	Fixed Price Reman
HCA	Hitachi Construction Machinery (Australia) Pty Ltd
REMAN	Remanufactured Components
CORE CHARGE	Additional charge to FPR List Price
CRC	Component Replacement Cost – FPR List Price plus Core Charge
OEM	Original Equipment Manufacturer
BOM	Bill of Materials

FIXED PRICE REMAN - THE PROGRAM

Hitachi Construction Machinery (Australia) Pty Ltd (HCA) provides customers of Hitachi mining excavators, mining trucks and construction equipment with a wide range of quality remanufactured components to minimise machine downtime, maximise reliability, and productivity whilst reducing operating costs.

The Fixed Price Reman Program (**FPR**) has been designed to ensure components are built to exacting standards and are fully tested to Original Equipment Manufacturer (**OEM**) design criteria prior to being made available to customers. The **HCA** reman facilities have been purposely designed and built to provide effective and efficient environments, as well as specialised tooling and equipment to enable **HCA** to achieve consistent and exacting standards. Our dedicated specialised workforce minimise our **FPR** component costs by the efficient application of our in house developed reman systems and processes.

As part of **HCA'S** vision of creating total customer satisfaction all remanufactured components that **HCA** supply through the program are covered by an extensive warranty. Parts usability and reclamation guides have also been developed and implemented to ensure the **FPR** components provide in service operating lives at least equal to the original equipment component life.

Subject to the returned core condition the **FPR** Program provides an upfront guaranteed fixed price for each component. If the core return criteria is met there will be no additional charges, therefore the customer will know the component cost in advance which will assist budgeting for their scheduled maintenance in a more accurate manner.

Where the core return criteria conditions are not met due to damage the additional charges will be identified and quoted separately from the original **FPR** invoice. Regardless of the component damage the maximum customer charge is limited to the **CRC** price.



REMANUFACTURING FACILITIES

In order to improve our Customer Support Services **HCA** has been expanding and standardising our remanufacturing components, processes and facilities. This ongoing process will ensure we provide the most efficient and cost effective component support to the mining industry as well as our major construction contractors.

HCA supports the remanufacturing of our components in several **HCA** Australian based facilities.

CORE RETURN - STANDARD BILL OF MATERIALS

HYDRAULIC CYLINDERS & TRACK ADJUSTERS

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- Return core has been sealed and protected from ingress of water
- Transport stand returned with no damage
- No evidence of operational damage or abuse
- Returned core was an original **OEM** supplied component

ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Cylinder rod is damaged – bent, broken or rod or eye damaged beyond repair
- Barrel is damaged – casing fractured, barrel ballooned, eye damaged or scored beyond reclamation dimension
- Hydraulic tubing and valving is broken or unusable
- Unit is disassembled and core has missing or damaged parts
- Transport stand is returned damaged

STANDARD BILL OF MATERIALS (BOM) FOR REMAN HYDRAULIC CYLINDERS

Each component has a standard Bill of Materials (**BOM**) and a rebuild work scope. The following items are included in each standard remanufactured component price:

- Standard labour charge to clean component, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, assemble, test, apply protective coating to exposed piece parts, paint, shrink wrap component, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts
- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Reclamation of major piece parts in accordance with approved engineering principles
 - Chrome of cylinder rod
 - Minor face repairs of rod and barrel eyes and machining of same
 - Honing of cylinder barrel
 - Repairs to piston
 - Reclamation of barrel gland
- Fill cylinder with HN46 hydraulic oil and provide workshop consumables to complete rebuild
- Provide all specialised tools and equipment to complete scope of work
- Replacement of major piece parts that are worn beyond reclamation dimensions
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component



/ HYDRAULIC PUMPS MOTORS / CENTER JOINT

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- Transport box returned with no damage
- Return core has been sealed and protected from ingress of water
- No evidence of operational damage or abuse
- Returned core was an original **OEM** supplied component

ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Significant corrosion damage due to the ingress of water
- Significant damage to the main housing requiring replacement
- Core has been disassembled and has missing or damaged parts
- Transport box or stand is not returned or damaged

STANDARD BILL OF MATERIALS (**BOM**) FOR REMAN HYDRAULIC PUMPS / MOTORS

Each component has a standard **BOM** and a rebuild work scope. The following items are included in each standard remanufactured component price:

- Standard labour charge to clean component, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, assemble, test, apply protective coating to exposed piece parts, paint, package component, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts
- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Reclamation of major piece parts in accordance with approved engineering principles
 - Reclamation of servo bores to **OEM** specifications
 - Reclamation of bearing journals to **OEM** Specifications
 - Reclamation of all sealing surfaces
- Provide all specialised tools and equipment to complete scope of work
- Provide workshop consumables to complete rebuild
- Replacement of major piece parts that are worn beyond reclamation dimensions
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component

MECHANICAL DRIVE COMPONENTS

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- Transport stand returned with no damage
- Returned core was an original **OEM** supplied component
- Return core has been sealed and protected from ingress of water*
- No evidence of operational damage or abuse*
- Housings not visibly cracked, broken or welded*

*Not applicable for track idlers, drive tumblers and H-Link



ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Gears, drive shaft broken
- Housings cracked
- Output pinion gear teeth broken or cracked
- Transport stand is returned damaged
- Unit is disassembled and core has missing or damaged parts

STANDARD BILL OF MATERIALS (BOM) FOR MECHANICAL DRIVE COMPONENTS

Each component has a standard **BOM** and a rebuild work scope. The following items are included in each standard reman price:

- Standard labour charge to clean component, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, assemble, test, apply protective coating to exposed piece parts, paint, shrink wrap component, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts
- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Reclamation of major piece parts in accordance with approved engineering principles
 - Reclamation of shafts, housings, couplings and carriers
- Provide workshop consumables to complete rebuild
- Provide all specialised tools and equipment to complete scope of work
- Replacement of major piece parts that are worn beyond reclamation dimension
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component

/ ROTATING ELECTRICAL COMPONENTS

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- No evidence of operational damage or abuse
- Return core has been sealed and protected from ingress of water
- Transport stand returned with no damage
- Returned core was an original **OEM** supplied component
- Passes winding insulation pre-test
- Alternator rotor transport locking mechanism is in place

ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Component housing is visibly damaged
- Unit is disassembled and core has missing or damaged parts
- Traction motor external harness fails continuity test
- Alternator & wheel motor rotor shafts are damaged or scored beyond reclamation dimension
- Winding insulation does not pass post-test
- Transport stand is returned damaged
- Alternator is damaged caused by transporting without rotor locking mechanism in place
- Additional labour costs due to severe contamination of major piece parts by oils and grease
- Damage to commutators in alternator (HCM trucks) & grid blower (HTM trucks) due to metal contact from brush holders



STANDARD BILL OF MATERIALS (BOM) FOR ROTATING ELECTRICAL COMPONENTS

Each component has a standard **BOM** and a rebuild work scope. The following items are included in each standard reman price:

- Standard labour charge to clean component, perform insulation test, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, balance rotor and fan assemblies as required, assemble, test, apply protective coating to exposed piece parts, paint, shrink wrap component, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts
- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Reclamation of major piece parts in accordance with approved engineering principles
 - Repairs to rotor shaft and bearing housing
 - Repairs to terminal box
 - Repair to fan, fan housing and associated parts
 - Repairs to housings, frames and covers
 - Minor insulation repairs
- Pack bearings, pre-charge grease lines and provide workshop consumables to complete rebuild
- Provide all specialised tools and equipment to complete scope of work
- Replacement of major piece parts that have not been damaged and are worn beyond reclamation dimensions or fail a continuity test.
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component

/ NON-ROTATING ELECTRICAL COMPONENTS (APPLICABLE ONLY TO HCM INVERTER MODULES, IGBT'S AND RECTIFIERS)

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- Return core has been sealed and protected from ingress of water
- Transport stand returned with no damage
- No evidence of operational damage or abuse
- Returned core was an original **OEM** supplied component

ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Component is visibly damaged
- Unit is disassembled and core has missing or damaged parts
- Water cooled heat sink does not pass pressure test
- Transport stand is returned damaged

STANDARD BILL OF MATERIALS (BOM) FOR INVERTER MODULES

Each component has a standard **BOM** and a rebuild work scope. The following items are included in each standard reman price:

- Standard labour charge to clean component, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, assemble, test, shrink wrap component, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts



- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Provide workshop consumables to complete rebuild
- Provide all specialised tools and equipment to complete scope of work
- Replacement of major piece parts that are worn beyond reclamation dimensions
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component

/ RADIATORS AND HYDRAULIC COOLERS

STANDARD CORE RETURN CONDITIONS:

- Fixed Price Reman (**FPR**) part number returned to **HCA** is correct
- Component is fully assembled and complete
- Return core has been sealed and protected from ingress of water or contaminants
- Transport stand returned with no damage
- No evidence of operational damage or abuse
- Returned core was an original **OEM** supplied component

ADDITIONAL CHARGES WILL APPLY FROM THE STANDARD FPR LIST PRICE IF:

- Component is visibly damaged
- Unit is disassembled and core has missing or damaged parts
- Cores have deposits due to poor coolant maintenance that can't be cleaned or flushed
- Cores are worn either internally or externally and are not capable of achieving another full service life
- Transport stand is returned damaged

STANDARD BILL OF MATERIALS (BOM) FOR RADIATORS & HYDRAULIC COOLERS

Each component has a standard **BOM** and a rebuild work scope. The following items are included in each standard reman price:

- Standard labour charge to clean component, dismantle, clean piece parts, measure, repair or replace the standard **BOM** parts, assemble, test, prepare for return to stock and complete appropriate technical, rebuild and test reports
- Replacement of all standard 100% **BOM** parts
- Replacement on an as required basis on all **BOM** parts that have been allowed in the rebuild on a <100% basis
- Provide workshop consumables to complete rebuild
- Provide all specialised tools and equipment to complete scope of work
- Replacement of major piece parts that are worn beyond reclamation dimensions
- Rebuild component to latest **OEM** specifications
- Install factory released upgrades to each component

/ CUSTOMER INVOICING PROCEDURES

The following processes have been established to explain the invoicing process for all reman invoices:

INVOICING REMAN COMPONENTS

Following receipt of a customer purchase order all reman components are invoiced by the supplying branch directly to the customer's trading account for the full **FPR** value at the time of dispatch of the component. Standard **HCA** payment terms applies to all **FRP** invoices.



CALCULATION OF ADDITIONAL CHARGES TO THE CUSTOMER

Once the component is received at the reman facility and dismantled or tested to a level where final core assessment can be complete, an adjudication of additional charges will be made. If additional charges are appropriate the reman facility will calculate the additional charges as follows:

- The list price of the new part or parts is identified from our Dealer Business system (Irium)
- The applicable **BOM** allowance for the part, parts or sub contract is identified from the appropriate standard component **BOM**
- The additional charge is calculated as per the additional charge – method of calculation listed below
- The reman facility advises the selling branch of the customer additional charge value, calculation and provides necessary reports for justification.

INVOICING ADDITIONAL CHARGES TO THE CUSTOMER

Once the supplying branch is advised of the additional charges by the reman facility the supplying branch invoices the customer with an appropriate order number at the value as advised by the reman facility.

On request the customer will have the opportunity to inspect the components at our facilities.

ADDITIONAL CHARGES - METHOD OF CALCULATION

METHOD OF CALCULATION OF ADDITIONAL CHARGES

For major piece parts that fail to meet the core return conditions the part will be either replaced with an original **OEM** part or remanufactured as a new replacement part. The cost of these parts will be charged to the customer as follows:

- Additional charge = cost of new part – allowance in **BOM** for the standard reclamation of the part

For components that have more than one major piece part that fails to meet the core return condition the sum of the additional charges will be charged to the customer. Regardless of the quantity of major piece parts replaced or the cost to replace them the maximum customer total charge will equal the Component Replacement Cost (**CRC**) cost.

EXAMPLE CALCULATION:

EX1900-6 arm cylinder part number 4472306RM cylinder returned with broken cylinder rod.

Reman price **\$35,511.04**

Core charge **\$37,925.45**

CRC price = \$35,511.04 + \$37,925.45 = \$73,436.49

Cylinder rod part number 0834503L Price **\$16,313.40**

Cylinder rod rechrome included in **BOM \$3,881.25**

Net cost of replacement cylinder Rod = **\$16,313.40 - \$3,881.25 = \$12,432.15**

Total customer charge = \$35,511.04 + \$12,432.15 = \$47,943.19



/ CORE CHARGES

Core charges are only charged to our customers under the following key circumstances:

- A component has not been returned within the nominated period (30 days or as agreed).
- Part number returned is incorrect
- The core is a non original **OEM** component
- The cost to repair the operational damaged parts as listed under each component above exceeds the component replacement value **CRC**
- **HCA** agrees in advance to sell the reman component to the customer as a one off outright sale

/ REMAN COMPONENT REPORTS AND ANALYSIS

There are three levels of report available for the Reman Components the Standard Strip Report, a more detailed Technical Report and a Failure Analysis Report. The Standard Report will be available for all returned components. If the Customer requires either the Technical Report or a Failure Analysis Report these will need to be requested in advance, **HCA** cannot guarantee the provision of these reports if the component is already under going the Reman process.

The Standard Strip Report is provided FOC to the Customer. Both the Technical and Failure Analysis Reports will be provided on a cost charge basis to the Customer.

/ COMPONENT CONDITION/ STRIP DOWN REPORTS

For all Reman Components a Standard Inspection report will be provided with a core return assessment, general observations, damage identification, comments and photographs identifying component condition at the time of disassembly. **HCA** has prepared and released ISO 9001 QA Documents for each component type, these standard documents will be used to provide each individual report. The report would include details of:

- Confirmation on Core return acceptance
- Visible damage
- Obvious failure mode
- Abnormalities observed during strip down

/ TECHNICAL REPORT

Technical reports are available from the Reman branch on an as request basis, this would include details of:

- Wear Measurements
- Test Results
- Test Methods

It is the responsibility of the Customer to ensure the request for a Technical Report is made to the respective **HCA** Branch in a timely manner and that all relevant information to generate the required details in the report is supplied to **HCA**.



/ FAILURE ANALYSIS REPORT

A detailed failure analysis report can be provided and will be conducted only under the direction of the relevant **HCA** Product Support Manager.

The Failure Analysis Report would include when appropriate the details of:

- An overview of the supplied data related to the failure
- The process taken to complete the investigation
- Individual assessment of the piece parts
- Metallurgical analysis measuring the following and drawing a comparison to the original design specifications
 - Hardness
 - Surface hardening
 - Composite
- Lubrication and vibration reports if appropriate
- Event reconstruction/modelling
- Summary of investigation and failure cause
- Other possible actions either as requested or identified as necessary to complete a detailed investigation

HCA will facilitate such investigations during the normal strip down process.

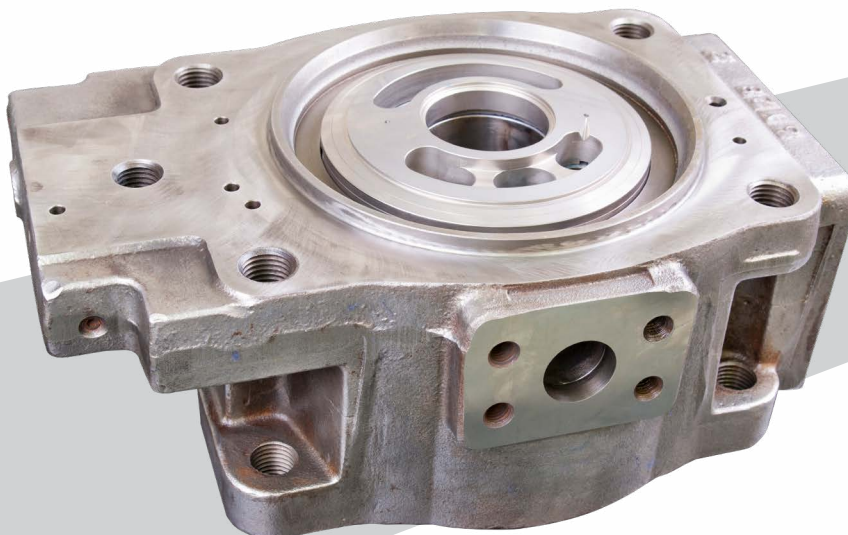
If any additional checks or reports are required outside of the normal strip process then these items need to be requested in advance via the **HCA** Product Support Manager who will co-ordinate the required activities with the respective **HCA** Reman facility. Time, Material and services will be charged to the customer for non standard and outsourced reports or analysis.

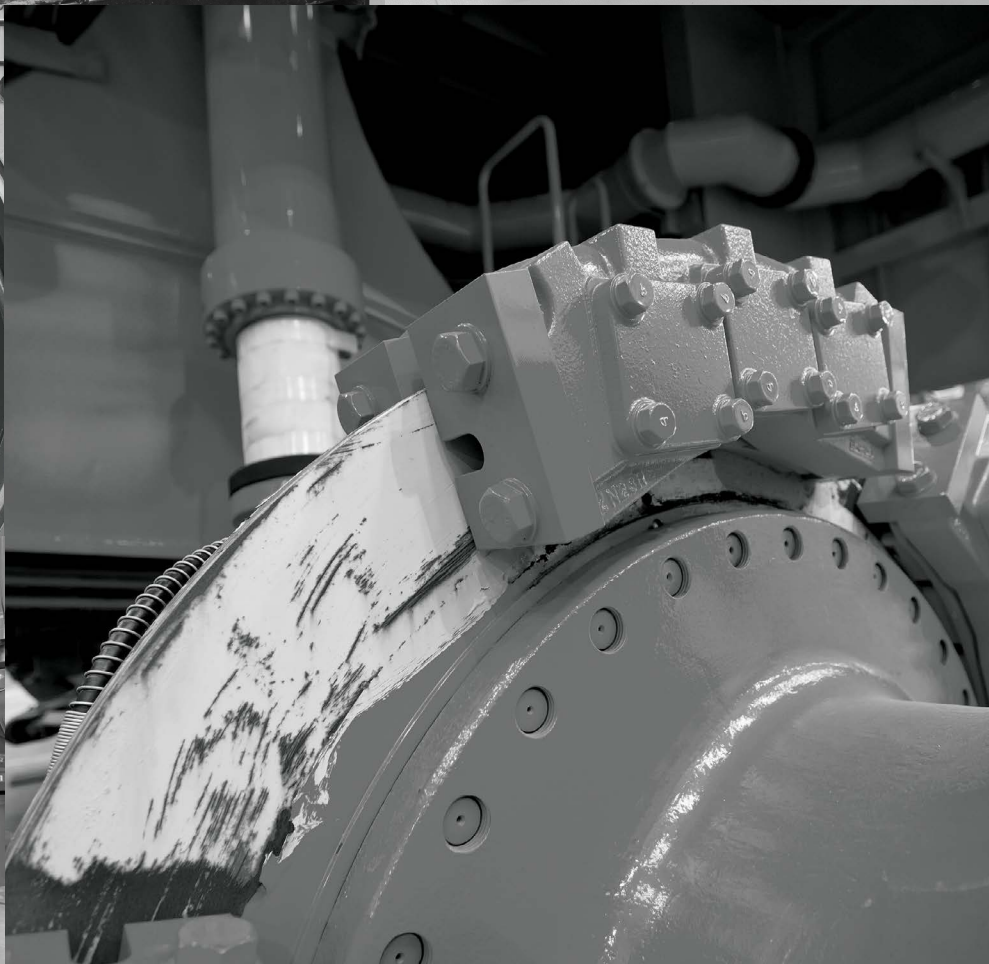
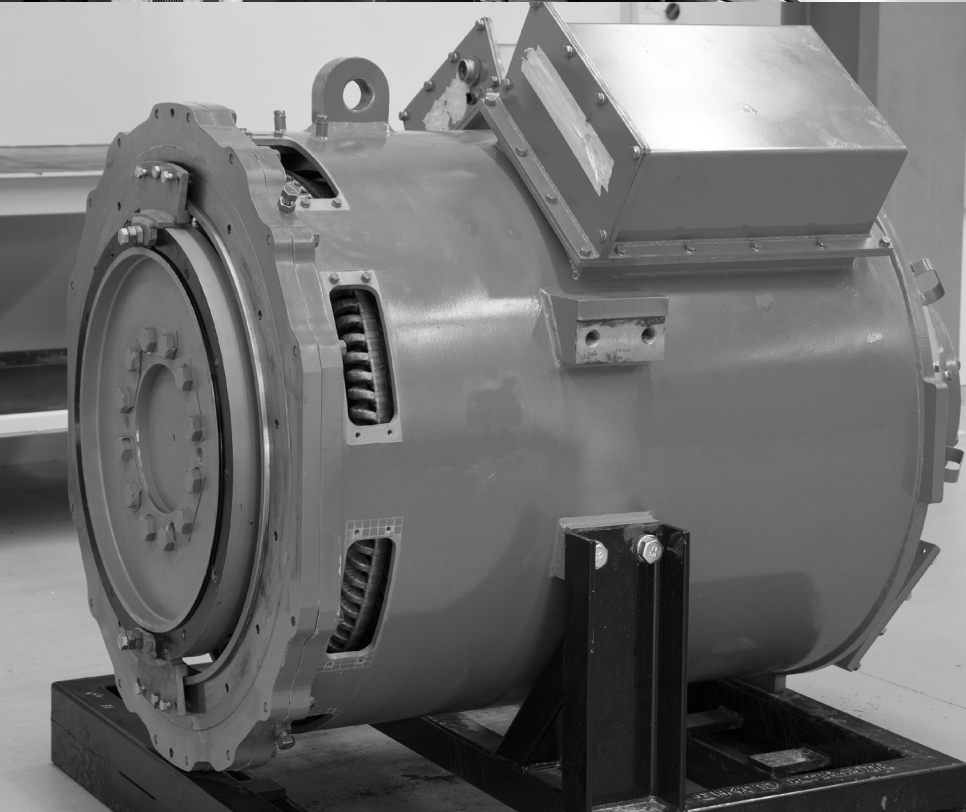
/ WARRANTY

HCA has an accredited ISO 9001 Quality Management System and under this accreditation **HCA** offer remanufactured component warranties in accordance with our QA documents:

- Fixed Price Reman Warranty Document ED173
- Fixed Price Reman Extended Warranty Document ED174

HCA customers have a choice of either our standard Fixed Price Reman Warranty of 6 months or the Extended Warranty of 12 months. Conditions apply to both options refer to **HCA** QA documents for further details.





- **Sydney Corporate Support Group**
3/1 Foundation Pl, Pemulwuy, NSW 2145
Locked Bag 6726, Blacktown, NSW 2148
P 02 8863 4800 F 02 8863 4899
- **Brisbane Corporate Support Group**
121 Coulson St, Wacol, QLD 4076
PO Box 228, Carole Park, QLD 4300
P 07 3423 5600 F 07 3423 5699
- **Adelaide**
Port Wakefield Rd, Cavan, SA 5094
PO Box 79, Enfield Plaza, SA 5085
P 08 8360 5300 F 08 8360 5340
- **Brisbane**
UNTIL 31ST MARCH 2020
539 Boundary Rd, Archerfield, QLD 4108
PO Box 658, Archerfield, QLD 4108
P 07 3276 4500 F 07 3216 7866
- **Brisbane**
FROM 1ST APRIL 2020
128 Tile St, Wacol, QLD 4076
PO Box 228, Carole Park, QLD 4300
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- **Dalby**
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- **Melbourne**
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- **Tom Price**
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PO Box 447, Tom Price, WA 6751
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- **Townsville**
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PO Box 7314, Garbutt, QLD 4814
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9 Oborn St, Whyalla Norrie, SA 5608
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