

Welcome to our Remy UK core criteria document

Objective:

To help you to identify old core that is in such a condition that is <u>acceptable</u> for return back to Remy UK for our re-manufacturing process and identify units that should be <u>rejected</u> back to the customer.

The core criteria is a visual/mechanical inspection and at no time should the person inspecting the old core be expected to dismantle units.

Core returned on an exchange basis should be of the same application type as that ordered. Units which are <u>mechanically</u> damaged or in such a condition that they cannot be remanufactured should not be accepted, for example:

- Broken / Damaged
- Burnt Starter
- Dismantled / Missing Parts
- Severe corrosion

We have included pictures showing examples of old core that should be rejected as they are unfit for our remanufacturing process.

One important note is that in certain cases, the old core maybe mechanically damaged due to an external electrical influence. In these cases we will explain the reason behind these failures and help you to understand the root cause so that if asked by your customer you can explain the reason/s to them as to why the core is being rejected.

Important note: The core must be completely removed from the box during inspection and the <u>whole</u> unit examined.

Remy

STARTER MOTORS

An OLD CORE is a unit that has been removed from a vehicle due to it not working and has been replaced by a newly remanufactured unit. You will notice that in most cases it is just a dirty unit and there should be no evidence of damage and therefore be fit for return to Remy UK for remanufacturing.

The OLD CORE has been returned to you as there is a value attached to it. The value is called



A useful tool when you need to check to see if any major components are missing from a core, is to take a look at our Remy CD Rom or our online catalogue <u>www.remyinc.eu</u> It shows pictures of all our part numbers.



BROKEN / DAMAGED (Major Components)

- Brackets
- Frame / Body / Yoke
- Solenoid Body



STARTER MOTORS

BROKEN / DAMAGED: Brackets







You will notice from the picture that the <u>NOSE HOUSING</u> is broken. This has been caused by an external force and not a fault of the starter motor.

Note:

In the event you need to reject the core back to the customer, you can inform them that the likely cause of the damage is due to a vehicle problem or mishandling and is not a fault of the Starter Motor and that the core will not be accepted back for remanufacturing.



STARTER MOTORS

BROKEN / DAMAGED: Brackets



You will notice from the pictures that the <u>BRACKET</u> is broken. On inspection of a unit, if any of the brackets show evidence of a break, then it is likely that the bracket has been broken during the removal of the unit, been dropped or even involved in a vehicle impact.

Note:

In the event you need to reject the core back to the customer, you can inform them that it is likely that the bracket has been broken during the removal of the unit, been dropped or even involved in a vehicle impact and in such a condition is unfit for remanufacture.



STARTER MOTORS

BROKEN / DAMAGED: Frame/Body/Yoke



You will notice from the picture that the Frame/Body/Yoke is damaged. On inspection of a unit, if the Frame/Body/Yoke shows any evidence of damage, then the core should be rejected.

Note:

In the event you need to reject the core back to the customer, you can inform them that if the starter motor body is damaged it is likely that it has been deliberately impacted in an attempt to re-start the vehicle. This causes damage to the starter motor's internal components meaning that the unit is unfit for remanufacturing.



STARTER MOTORS

BROKEN / DAMAGED: Solenoid Body:





You will notice from the picture that the Solenoid Body is damaged. On inspection of a unit, if the solenoid body shows any evidence of damage, then the core should be rejected.

Note:

In the event you need to reject the core back to the customer, you can inform them that if the solenoid body is damaged it is likely that it has been deliberately impacted in an attempt to restart the vehicle. This will cause damage to the solenoid's internal coil windings meaning that the unit is unfit for remanufacture.



BURNT STARTER MOTOR



STARTER MOTORS

BURNT STARTER: Blue Drive and/ or shaft (over run)



You will notice from the picture that the pinion and/or shaft is a blue colour. This has been caused due to a permanent electrical feed (external of the starter motor) to the starter motor's solenoid causing the pinion to stay engaged with the ring gear resulting in it running continually at high speed. This condition is called "Over run". In most cases you can smell the burnt insulation from the solenoid coils. Sometimes the smell is so strong that you can smell it on just opening up the box.

Note:

In the event you need to reject the core back to the customer, you can inform them that the pinion being discoloured (blued) is the result and not the cause of failure (a starter motor <u>cannot</u> burn itself out as it does not generate its own power). The cause is due to a permanent electrical feed to the starter's solenoid. The starter has been in an "Over run" condition. The core will not be accepted back for remanufacturing as this type of failure is likely to have damaged the internal components. Likely root cause: sticking key switch or relay



STARTER MOTORS

BURNT STARTER: Burnt motor (over cranked)







You will notice from the picture that the motor lead and cap is burnt. This is the result of over cranking or continual cranking where the key has been held on for a prolonged period. The heat generated due to over cranking or continual cranking will cause the starter motor to overheat. You can notice this by looking at the condition of the motor. In some cases the motor lead is so badly burnt that it has blown apart similar to a fuse.

Note:

In the event you need to reject the core back to the customer, you can inform them that the motor lead being burnt/overheated is the result and not the cause of the failure (a starter motor <u>cannot</u> burn itself out as it does not generate its own power). You can inform the customer that the unit has been over-cranked or continually cranked over a prolonged period of time generating heat resulting in damage to the motor. Also, if the motor strap is burnt then it is likely that the internal motor is burnt out too. The core will not be accepted back for remanufacturing as this type of failure is likely to have damaged internal motor components. Likely root cause: Low system voltage.



DISMANTLED / MISSING PARTS



STARTER MOTORS

DISMANTLED UNIT: (An old core that has been taken apart)



A Starter Motor that has been removed from a vehicle should only be accepted if it is complete and has not been dismantled.

Note :

In the event you need to reject the core back to the customer, you can inform them that the core should be complete (as it would be on removal from the vehicle). There is no reason for it to be dismantled and you cannot be certain that all components are present.



STARTER MOTORS

MAJOR COMPONENT MISSING: (Missing solenoid, nose housing, rear bracket, frame)





In the example pictured the <u>SOLENOID</u> is missing. Units that have any major parts missing should be rejected back to the customer.

Note :

In the event you need to reject the core back to the customer, you can inform them that the core would have been complete on removal from the vehicle and there is no reason for any parts to have been removed. <u>All major</u> components are required for Remy to be able to remanufacture the unit.



SEVERE CORROSION



STARTER MOTORS

SEVERE CORROSION: (Where the corrosion on the frame/body is extreme)



Where the frame/body shows evidence of severe corrosion. You will notice that the picture on the right has a severely corroded outer frame.

Note:

In the event you need to reject the core back to the customer, you can inform them that it is likely that the starter motor has not recently been removed from a vehicle and due to the condition of the frame/ body, it is likely that the internal components are also corroded.



STARTER MOTORS

SEVERE CORROSION: (Where the corrosion on the shaft and pinion is extreme)



The pinion and shaft end of the starter motor would be expected to be in a reasonably clean condition with no signs of corrosion. You should be able to rotate the pinion by hand. If the starter is in such a condition that the pinion will not rotate and is severely corroded then it is likely that the unit has not recently been removed from the vehicle and should be rejected back to the customer.

Note:

In the event you need to reject the core back to the customer, you can inform them that it is likely that the starter motor has not recently been removed from a vehicle. This is due to the severely corroded frame/body/pinion or shaft. It is likely that other internal components are also corroded.



SOLENOID CAP AND TERMINALS



STARTER MOTORS

SOLENOID CAP and TERMINALS :



In the case where the Solenoid Cap (Plastic) and Terminals are:

- > Broken (Damaged)
- Cracked
- Missing
- Terminals broken off
- > Terminals missing
- Terminals cross threaded

Note: All of the above will be <u>ACCEPTED</u>

ALTERNATORS

Remy

An OLD CORE is a unit that has been removed from a vehicle due to it not working and has been replaced by a newly remanufactured unit. You will notice that in most cases it is just a dirty unit and there should be no evidence of damage and therefore be fit for return to Remy UK for remanufacturing.

The OLD CORE has been returned to you as there is a value attached to it. The value is called the surcharge.



A useful tool when you need to check to see if any major components are missing from a core, is to take a look at our Remy CD Rom or our online catalogue <u>www.remyinc.eu</u> It shows pictures of all our part numbers.



BROKEN / DAMAGED (Major Components)

- Broken/Damaged/Cracked Brackets
- Damaged Rotor Shaft



ALTERNATORS

BROKEN / DAMAGED / CRACKED BRACKETS: (Broken Fins)

Alternators with 2 or more broken fins on the same side of the same bracket- NOT ACCEPTABLE









You will notice from the picture that the <u>BRACKET</u> is broken/damaged. Units that have broken brackets should be rejected back to the customer. In some cases the bracket will show evidence of a clean break and it is likely that the bracket has been broken/damaged during the removal of the unit, dropped or even a vehicle impact.

Note:

In the event you need to reject the core back to the customer, you can inform them that this type of damage has been caused by mishandling. The fins are required to protect the internal components in a remanufactured unit, and multiple breaks can compromise the strength of the bracket. Therefore a core which has this type of damage cannot be accepted for remanufacture.



ALTERNATORS

BROKEN / DAMAGED / CRACKED BRACKETS : (Broken Fins)

Alternator casings consist of 2 brackets which are bolted together.

It is acceptable for a maximum of 2 fins to be broken on <u>each bracket</u> (4 in total per core) BUT if there are 2 broken fins on one bracket, they <u>must</u> be on different sides.

ACCEPTABLE





ALTERNATORS

BROKEN / DAMAGED / CRACKED BRACKETS : (Cracked Brackets)



You will notice from the picture that the <u>BRACKET</u> is damaged. Units with this type of damage should be rejected back to the customer. On inspection of a unit, if any of the brackets show evidence of a break, then it is likely that the bracket may have been broken during the removal of the unit, been dropped or even involved in a vehicle impact.

Note:

Remy

In the event you need to reject the core back to the customer, you can inform them that this type of damage has resulted in the unit being unfit for remanufacture as the damage cannot be repaired.

ALTERNATORS

BROKEN / DAMAGED / CRACKED BRACKETS : (Broken Mounting Bracket)



Remy





You will notice from the picture that the <u>MOUNTING BRACKET</u> is broken/damaged. Units that have broken brackets should be rejected back to the customer. On inspection of a unit, if any of the brackets show evidence of a break, then it is likely that the bracket may have been broken during the removal of the unit, been dropped or even involved in a vehicle impact.

Note:

In the event you need to reject the core back to the customer, you can inform them that this type of damage has resulted in the unit being unfit for remanufacture as the damage cannot be repaired.



ALTERNATORS

BROKEN / DAMAGED / CRACKED BRACKETS: (Hairline Cracks)



You will notice from the picture that the <u>BRACKET</u> is cracked. Units that have hairline cracks in the bracket should be rejected back to the customer.

Note:

In the event you need to reject the core back to the customer, you can inform them that this type of damage makes the core unsuitable for remanufacture as the damage cannot be repaired.



DAMAGED BRACKET: DRIVE END (D/E) BRACKET





You will notice from the picture that the DRIVE END BRACKET (D/E Bracket) is damaged. If the clutch pulley is missing the unit will be accepted as old core under the condition that the drive end bracket is in good condition with no signs of damage.

Regardless of whether the pulley is on the unit or not, if on visual inspection you can see that the D/E bracket is damaged then the core is rejected.

Note:

In the event you need to reject the core back to the customer, you can inform them that this type of bracket damage makes the core unsuitable for remanufacture as the damage cannot be repaired.



DAMAGED ROTOR SHAFT:







You will notice from the picture that the ROTOR SHAFT is damaged. If the clutch pulley is missing the unit will be accepted as old core providing the rotor shaft is in good condition, with no signs of thread, heat and/or mechanical damage.

Note:

In the event you need to reject the core back to the customer, you can inform them that this type of bracket damage makes the core unsuitable for remanufacture as the damage cannot be repaired.



DISMANTLED / MISSING PARTS



ALTERNATORS

MAJOR COMPONENT MISSING: (Missing Vacuum Pump)







Missing Vacuum Pump

You will notice from the picture that the <u>VACUUM PUMP</u> is missing. Units that have any major parts missing should be rejected back to the customer.

Note :

In the event you need to reject the core back to the customer, you can inform them that the core should be complete (as it would be on removal from the vehicle). There is no reason for it to be dismantled and you cannot be certain that all components are present.



ALTERNATORS

MAJOR COMPONENT MISSING: (Missing Regulator)





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MISSING Regulator

You will notice from the picture that the <u>REGULATOR</u> is missing. Units that have any major parts missing should be rejected back to the customer.

Note :

In the event you need to reject the core back to the customer, you can inform them that the core should be complete (as it would be on removal from the vehicle). There is no reason for it to be dismantled and you cannot be certain that all components are present.

SEVERE CORROSION

ALTERNATORS

SEVERE CORROSION AND PULLEY SEIZED: (Where severe corrosion has resulted in a seized pulley)

The alternator's pulley should be in reasonably clean condition as it is covered by the drive belt and is continually rotating while the vehicle's engine is running.

If the pulley and unit show evidence of <u>severe corrosion</u> and the pulley will not rotate, then the unit should be rejected back to the customer as it is likely that this unit has not recently been removed from a vehicle. (If the pulley is seized/locked up with no signs of corrosion/damage then the core will be accepted).

Note:

In the event you need to reject the core back to the customer, you can inform them that it is likely that the alternator has not recently been removed from as the pulley would be protected by the belt on the vehicle. The condition of the pulley tells us it is likely that the internal components are also corroded and the unit is unsuitable for remanufacture.

REAR COVER AND TERMINALS

ALTERNATORS

REAR COVERS AND TERMINALS :

Acceptable Damage

In the case where the Cover and Terminals are:

- Broken (Damaged)
- Cracked
- Missing
- Terminals broken off
- Terminals missing
- Terminals cross threaded

Note: All of the above will be ACCEPTED