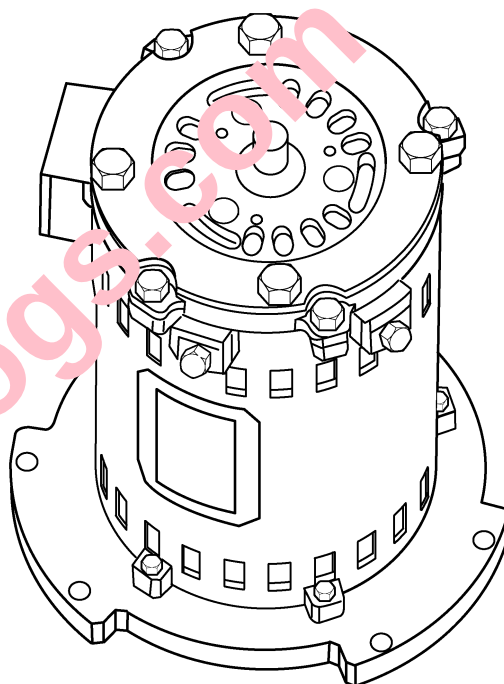


AC MOTOR REPAIR

N35ZDR, N45ZR [C264];
N30ZDR, N35-40ZR [D470];
N30ZDRS, N35-40ZRS [A265]



HYSTER

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This section is for the following models:

N35ZDR, N35ZR [C264];
N30ZDR, N35-4 ZR [D470];
N30ZDRS, N35-40ZRS [A265]

General

This section describes disassembly, assembly, inspection, and checks for malfunctions of AC motors.

AC traction motors and AC hydraulic pump motors are similar in function. See Figure 1, Figure 2, and Figure 3. Disassembly and repair of these motors is similar.

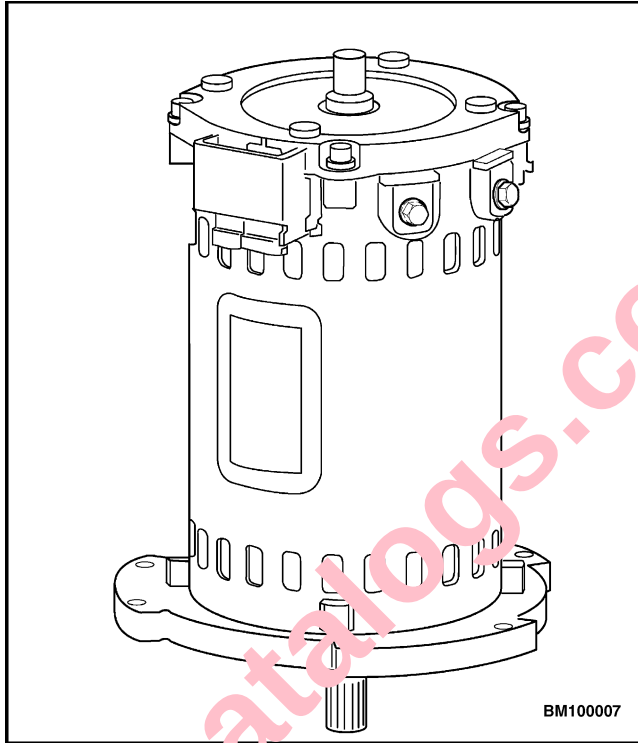


Figure 1. AC Traction Motor

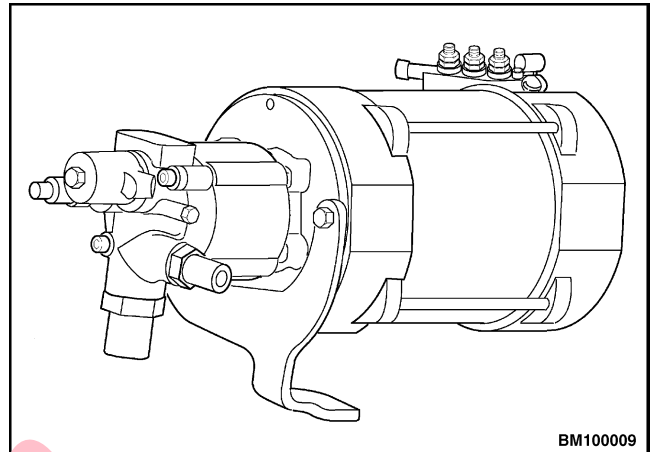


Figure 2. AC Hydraulic Motor (N35ZDR, N45ZR, N30ZDR, N35-40ZR)

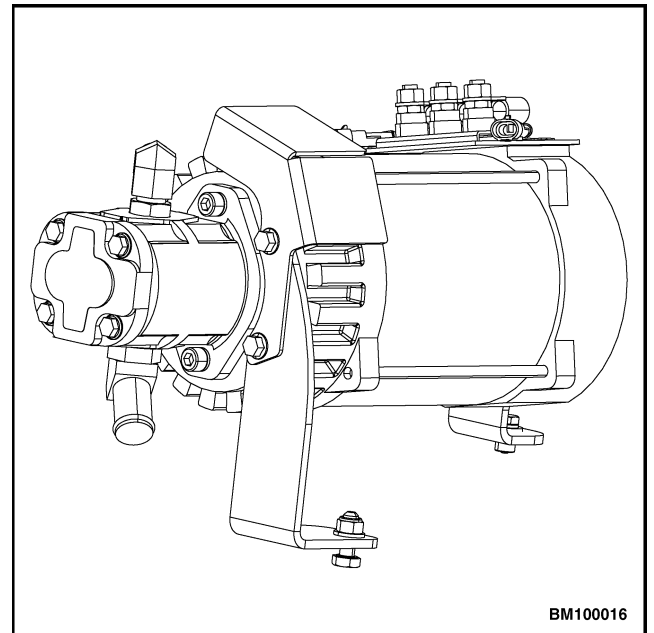


Figure 3. AC Hydraulic Motor (N30ZDRS, N35-40ZRS)

Traction Motor Repair

DISASSEMBLE

WARNING

The bearings and seals on the traction motor are serviceable parts. The AC traction motor weighs 109 kg (240 lb). To prevent injury, use a lifting device of adequate capacity for lifting the assembly.

NOTE: When replacing the encoder bearing, also replace the bearing on the drive end of the motor.

1. Remove traction motor from the lift truck. See **Master Drive Unit** 630 SRM 1022 for removal information.
2. Screw lifting eye into the threaded hole in the end of the rotor shaft and connect a chain to the lifting eye.
3. Remove temperature sensor wire and encoder wire from holding bracket. See Figure 4.
4. Remove screws from the non drive rear end bell.
5. Place alignment marks on the end bell and motor case. Marks will be used to correctly align the end bell on the motor case during assembly.
6. Lift end bell and rotor assembly from AC motor case. Place horizontally on a flat surface.
7. Remove chain and lifting eye.
8. Remove screws from air guide.
9. Remove end bell from rotor assembly. See Figure 5.
10. Remove air guide, being careful not to damage encoder bearing wire.

CAUTION

Never reuse a bearing that has been removed from a rotor shaft.

NOTE: Before removing the encoder bearing, note its orientation and install the new encoder bearing in the same orientation.

11. Using a bearing puller, remove encoder bearing. See Figure 6.

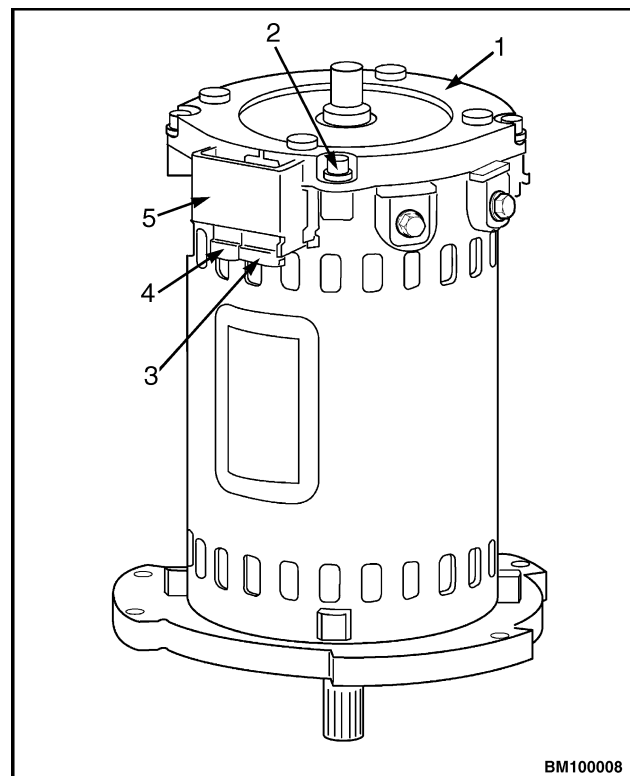
CAUTION

Never reuse a bearing that has been removed from a rotor shaft.

12. Using a bearing puller, remove bearing from drive end of rotor shaft.

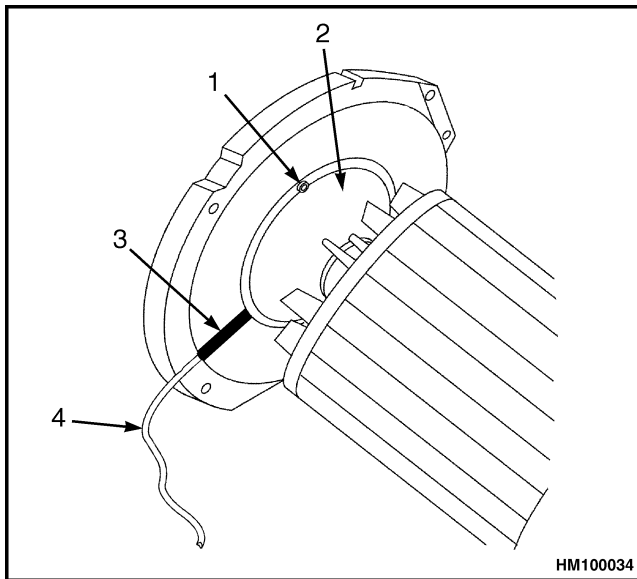
INSPECT

Inspect the rotor and the inside of the motor case for marks or grooves indicating contact between the rotor and the motor case. Replace if damaged. Bearings should fit snug where they seat on the shaft. If there is excessive wear, replace the bearing and/or shaft. Check the bearings for smooth operation. If a bearing does not roll smoothly, it must be replaced. Check that resistance between the windings and the case is above 50,000 ohms. Resistance of the windings (line to line) should be within specification. See Table 1.



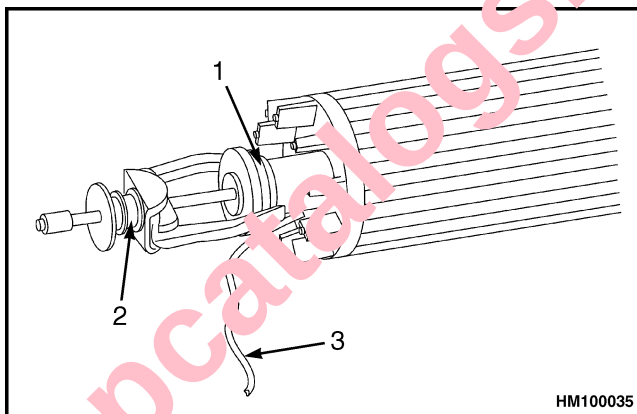
1. END BELL
2. SCREW
3. ENCODER WIRE
4. TEMPERATURE SENSOR WIRE
5. HOLDING BRACKET

Figure 4. AC Motor Assembly



1. SCREW
2. AIR GUIDE
3. END BELL SLOT
4. ENCODER WIRE

Figure 5. Rotor Disassembly



1. ENCODER BEARING
2. BEARING PULLER
3. ENCODER WIRE

Figure 6. Bearing Removal

Table 1. Traction Motor Windings

Voltage	Winding to Line Resistance (Ohm)	
	Min	Max
24	3.22	3.83
36	3.22	3.83

ASSEMBLE



CAUTION

To avoid damage to the encoder bearing electronics, use a bearing driver and arbor press. Press only on the inner race of the bearing.

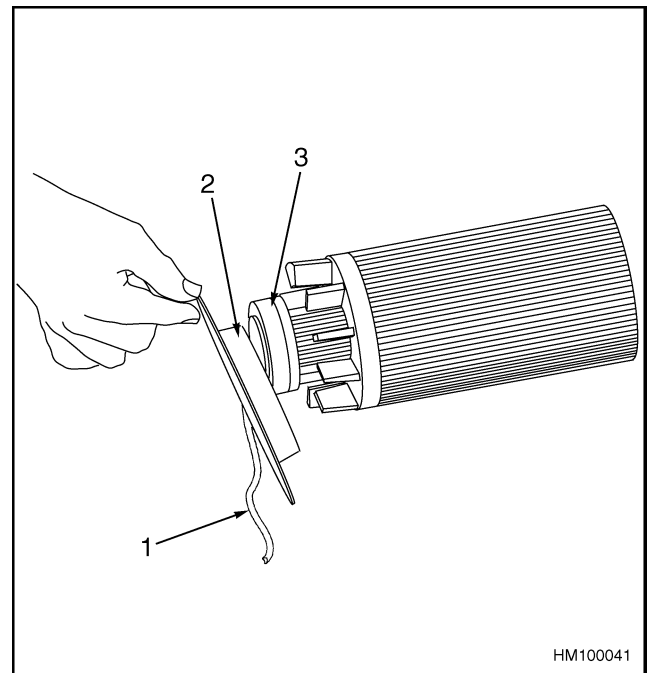
1. Install the bearing on the drive end of the rotor shaft using a bearing driver and arbor press.

NOTE: The encoder bearing must be oriented as noted during removal.

2. Using a bearing driver and arbor press, install the encoder bearing as noted during removal. Press only on the inner race of the bearing during installation.

3. Place encoder wire through air guide and move air guide back over encoder bearing. See Figure 7.

4. Place end bell on rotor assembly.



1. ENCODER WIRE
2. AIR GUIDE
3. ENCODER BEARING

Figure 7. Alignment of Air Guide and End Bell

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