

Compressor Forensic Teardown Analysis



Tag No. *Tag*
Incoming Model No. *IMN*
Incoming Serial No. *ISN*
Return Material Authorization *RMA*
Internet Reference
Failure Root Cause Code *RC*

| | |
|-------------------------------|----------------------------------|
| Tag No. | 9588 |
| Incoming Model No. | 6DH1-3500-FSD |
| Incoming Serial No. | N1G11SS04 |
| Return Material Authorization | No RMA information was provided. |
| Internet Reference | 6DH111SS04.pdf |
| Failure Root Cause Code | M1AA0171A47 |

1 **Failure Type** **Mechanical**

2 **Root Cause** **Liquid Refrigerant Floodback**

Condition: Note Mechanical and Compression Components below.
Causes: Liquid refrigerant returning to the compressor during the running-cycle, resulting in loss of lubrication to the load-bearing surfaces.
System Checks & Corrections: >> Check for proper evaporator and compressor superheat?
 >> Check and correct for any abnormal low-load conditions.
 >> If possible and practical, install accumulator(s) to stop liquid return.
 >> Review piping and expansion device operation.

| | | |
|--------------------------------|-----------------------------|----|
| 3 Electrical Components | Terminal Plate | Ok |
| | Internal Connections/Wiring | Ok |
| | Rotor | Ok |
| | Stator | Ok |

| | | |
|---------------------------------|------------------|-------------|
| 4 Compression Components | Suction Valves | Ok |
| | Discharge Valves | Ok |
| | Pistons | Ok |
| | Rings | Normal Wear |

| | | |
|--------------------------------|-----------------|--------|
| 5 Mechanical Components | Oil Pump | Ok |
| | Main Bearings | Ok |
| | Crankshaft | Scored |
| | Rods | Scored |
| | Thrust Bearings | Ok |
| | Check Valves | Ok |

| | | |
|--|---------------|----|
| 6 Heads & Safety Components | Heads | Ok |
| | PRV | Ok |
| | Motor Sensors | Ok |

| | | |
|------------------------|------------------|-------------------|
| 7 Oil Condition | Oil Charge/Acid | No acid |
| | Non-Condensables | Water and/or dirt |
| | Solids | Yes |

| | | |
|-------------------------|--------------------|-----|
| 8 Core Condition | Data Plate | Yes |
| | Service Covers | No |
| | Head Discoloration | No |

| | | |
|----------------------------|--------------------------------|--|
| 9 Field Information | Field Inspection? | Startup Sheet was not returned. |
| | Determine Root Cause in Field? | This failure could have been assessed on site. |



Date of Forensic Analysis: April 16, 2009
 Analysis performed by: Nate Sanders

