

## COMMISSION REPORT ON THE RESULTS OF COMPRESSOR TREATMENT

# Reciprocating shop compressors: higher output and oil pressure — without teardown

OJSC "Pribor", compressor shop · commission: chief power engineer N. M. Barkov, head of shop No. 8  
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LLC "KASKAD", V. N. Dyudin · report approved by A. A. Zinkevich

Kursk, Russia · treatment 12.04–14.06.2003, 400 h of operation · report dated 22.07.2003

**PRODUCT**

Treatment with XADO  
technology  
compound added without  
teardown, during regular  
operation

**TEST OBJECT**

Two reciprocating  
compressors  
2VM-10-63/9 and VP3-20/9 ·  
compressor shop of the plant

**DOCUMENT TYPE**

Commission report of  
OJSC "Pribor"  
with signatures and seal

**COMPRESSOR****TREATMENT****WHAT WAS MEASURED**

Reciprocating  
2VM-10-63/9

400 h of operation,  
12.04–14.06.2003

Receiver fill time, oil pressure, 1st- and 2nd-stage  
pressures, current draw

Reciprocating VP3-20/9

400 h of operation,  
12.04–14.06.2003

Receiver fill time, oil pressure, current draw

The machines were neither taken out of service nor disassembled: the compound was added during the regular operation of the compressor shop.

## Key results

↑ **22 %**

output of VP3-20/9, receiver fill 11 → 9  
s

↑ **9.5 %**

output of 2VM-10-63/9, receiver fill 6  
min 45 s → 6 min 10 s

**↑ 38.5 %**

oil pressure of VP3-20/9, 2.6 → 3.6  
per the shop instrument

**↑ 30 %**

oil pressure of 2VM-10-63/9, 3 → 3.9  
per the shop instrument

## Compressor 2VM-10-63/9 — measurements before and after treatment

| PARAMETER          | BEFORE     | AFTER      | CHANGE                 |
|--------------------|------------|------------|------------------------|
| Receiver fill time | 6 min 45 s | 6 min 10 s | output higher by 9.5 % |
| Oil pressure       | 3          | 3.9        | +30 %                  |
| 2nd-stage pressure | 8.1        | 8.4        | +0.3                   |
| 1st-stage pressure | 1.8        | 1.6        | -0.2                   |

Measurements were taken with the standard in-line instruments of the compressor shop of OJSC "Pribor"; pressures are given on the scale of those instruments.

## Compressor VP3-20/9 — measurements before and after treatment

| PARAMETER          | BEFORE | AFTER | CHANGE                |
|--------------------|--------|-------|-----------------------|
| Receiver fill time | 11 s   | 9 s   | output higher by 22 % |
| Oil pressure       | 2.6    | 3.6   | +38.5 %               |
| Current draw       | 120 A  | 120 A | no change             |

Current draw remained the same: the gain in output was obtained without any rise in power consumption.

# Commission conclusion

The treatment ran for 400 h of regular compressor operation, without teardown and without taking the machines out of service. The commission of OJSC "Pribor" recorded in the report: "According to the measurement results, on compressor 2VM-10-63/9 the oil pressure rose (by over **30%**), the receiver fill time decreased (by 5-**6%**), and the current draw decreased slightly. On compressor VP3-20/9 the change of parameters likewise shows an improvement of its technical characteristics: the oil pressure rose (by over **35%**), the receiver fill time decreased (by 10-**15%**). In view of the improvement of the overall technical characteristics of the compressors and the economic benefit arising therefrom for the enterprise, the commission recommends the further use of XADO technology".



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The results relate to the reciprocating compressors 2VM-10-63/9 and VP3-20/9 of the compressor shop of OJSC "Pribor"; on other machines and operating modes the figures may differ. The original report dated 22.07.2003 with signatures and seal is published in full and available for download.