

May 18, 2009

• **TEST REPORT** •

PN 84149

ARDL Engineering

Timing Belt Testing

Prepared For:

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SUBJECT: Testing per SAEJ2432, Section 7 with modifications.

RECEIVED: 3 Timing belts identified as Forkom White Lettering, Forkom Blue Lettering and Carquest-Gates.

PROCEDURE: Five Pulley Flex, Belt Testing

SAEJ2432 Specifications

Pulley description: STA, 22 pulley grooves.

Belt sample to be subjected to the following (see figure #2):

1. Driver speed = 3900 RPM
2. Vertical hub load = 800 ± 40 N
3. Belt tension = 400 ± 20 N
4. Weigh belt prior to installation.
5. Install in temperature environment = 100°C
6. After 50 hours remove belt inspect and weigh.
7. If belt passes, repeat test with temperature raised by 5°C .
8. Repeat steps 4 through 7 until 115°C is reached

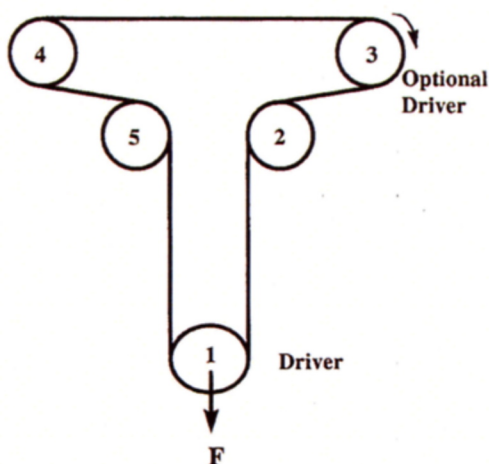


Figure 2

Belt failure criteria and intermittent test:

1. Belt breakage, (fracture of cord anywhere).
2. Belt chunking, loss of rib stock anywhere.
3. Delamination of belt layers.
4. Belt fraying or tensile cord separation.
5. Maximum number of B or C level cracks = 8
6. In-line crack across the belt cross section.
7. Weight loss in excess of 10% of original weight at end of test.
8. Pilling in excess of level 7. (See J2432).

RESULTS:

Belt Type	SAE 5-Pulley Comments
Forkom White Letter	No visible defects after 200 hours.
Forkom Blue Letter	No visible defects after 200 hours.
Carquest-Gates	No visible defects after 200 hours.

SUBJECT: Physical Testing on timing belts.

RECEIVED: 3 Timing belts identified as Forkom White Lettering, Forkom Blue Lettering and Carquest-Gates.

BREAKING STRENGTH, ASTM D 378-00

Specimens pulled at 4 in/min.

	<u>Forkom White</u>	<u>Forkom Blue</u>	<u>Gates</u>
Breaking Strength, lbf.	3880	4150	5670
Elongation, %	5.73	6.02	6.56

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OZONE RESISTANCE< ASTM D 1171-99, METHOD B

Ozone Chamber Exposure Method B.

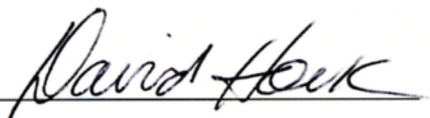
Test specimens per ASTM D 518-99, Method B (Bent Loop).

Specimens exposed 72 hours @ 50 pphm @ 40 °C.

Observations made @ 7X magnification.

Quality Retention Rating, %	<u>RESULTS</u>	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
Forkom White	100	100	Pass
Forkom Blue	100	100	Pass
Carquest-Gates	100	100	Pass

Prepared By: _____



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