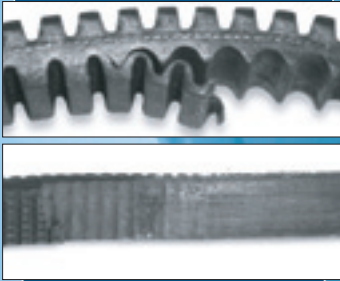


DRIVE BELT ANALYSIS

DELAMINATION



DESCRIPTION:
Drive belt delamination can be identified by the separation of the inner and outer layers.

CAUSE:
Delamination is the separation of the layers due to improper bonding.

RECOMMENDATIONS:
Replace the drive belt.

WARRANTY: NO YES

HOUR GLASSING



DESCRIPTION:
A belt that is worn narrower or uneven in one section is commonly referred to as "hour glassed".

CAUSE:
Hour glassing is a result of heat that is generated when the drive clutch is slipping and the belt remains stationary. This type of failure can be caused before a belt is too short, belt-to-drive clearance is incorrect, belt deflection is inadequate, an improper gear ratio is selected, or the drive system is locked and/or jammed.

RECOMMENDATIONS:
Verify that the clutch and gear ratio are being used. Adjust deflection and ensure that belt-to-drive clearance is correct. See that the drive system moves freely before installing a new belt; repair if needed.

WARRANTY: NO YES

GLAZING



DESCRIPTION:
This belt has been overheated, causing it to look melted and shiny in appearance.

CAUSE:
Glazing is usually caused by belt slippage due to an oil contaminated belt, inadequate belt break in, or improper gear ratio selection for the application.

RECOMMENDATIONS:
Ensure that the drive system is setup properly for the rider and application, consider a lower gear ratio. Make certain that the clutch sheaves and belt are clean and free of contaminants. Review proper belt break in procedure with the customer. See Owner's Manual, Service Manual, and applicable Team Tips for additional information.

WARRANTY: NO YES

BROKEN BELT



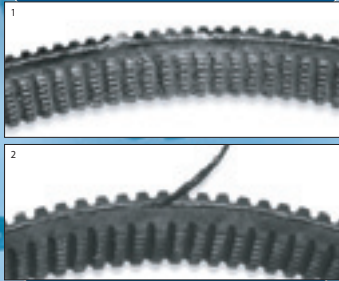
DESCRIPTION:
Shock loading a drive belt will often cause breakage as shown above.

CAUSE:
Shock loading can be caused by excessive engagement RPM, too short of a belt (causes binding on the bottom of secondary), improper gear ratio, clutch center-to-center distance being too long, or jammed/locked drive train. Driving at top speed or in "neutral" for extended periods can also cause belt breakage.

RECOMMENDATIONS:
Verify that the correct belt is being used and the drive train moves freely without resistance. Ensure that engagement RPM is appropriate, clutch center-to-center is correct and gear ratio is not too low. Avoid twisting at top speed for extended periods.

WARRANTY: NO YES

BROKEN CORD



DESCRIPTION:
Photo 1 shows a frayed cord in the first stage of this failure. In photo 2 the drive belt cord has been severed and has begun to unravel.

CAUSE:
This failure is caused by extreme heat and friction on the side of the belt from clutch misalignment, excessive slip speed, or by an impinger that break in procedure. As the heat builds away the edge of the belt, the cords become exposed and are slowly pulled out by the constant scrubbing of the clutch sheaves.

RECOMMENDATIONS:
Rig idler(s) to prevent offset, reduce slip speed, review proper belt break in procedure with the customer. See Owner's Manual, Service Manual, and applicable Team Tips for additional information. Do not continue riding further use will cause belt deterioration. When replacing a drive belt always verify the integrity of the motor mounts and torque stop.

WARRANTY: NO YES

SPLICE BREAK



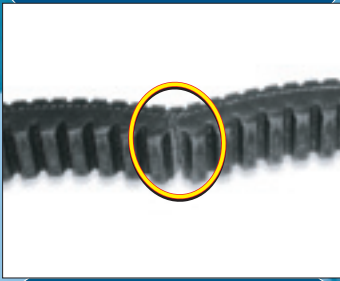
DESCRIPTION:
This is an example of a clean break at the splice.

CAUSE:
This type of failure is typically caused by a poor bond between the belt halves.

RECOMMENDATIONS:
Replace the drive belt. New splices/belts do not exhibit this type of failure.

WARRANTY: NO YES

FLEX CRACK BETWEEN COGS



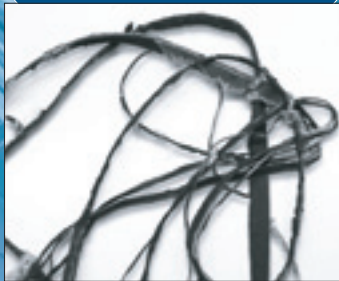
DESCRIPTION:
This drive belt is cracked on the inner cog.

CAUSE:
This type of failure can occur if the belt is worn out of its service limit, flexed in extremely cold weather, or simply broke out at any time.

RECOMMENDATIONS:
Do not use drive belts that are out of spec and never turn a drive belt inside out. On a snowmobile, always use an appropriate fit to warm the belt, engine, and track. To further improve drive away during extremely cold temps, warm the belt to room temperature before operating.

WARRANTY: NO YES

DISINTEGRATION



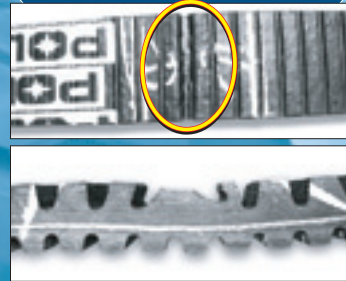
DESCRIPTION:
This drive belt has been abused and/or used beyond its capabilities.

CAUSE:
This type of failure can be caused by different belt conditions such as hour glazing, glazing, broken cords, flex cracks or misalignment.

RECOMMENDATIONS:
Verify that the correct belt is being used. Check deflection and belt-to-drive clearance. Ensure that the proper gear ratio is being used and that the belt and sheaves are clean. Review proper belt break in procedure with the customer. See Owner's Manual, Service Manual, and applicable Team Tips for additional information. Never turn a belt inside out, and warm the belt to room temperature during extremely cold conditions. Verify integrity and adjustment of motor mounts and torque stop.

WARRANTY: NO YES

MANUFACTURING DEFECT



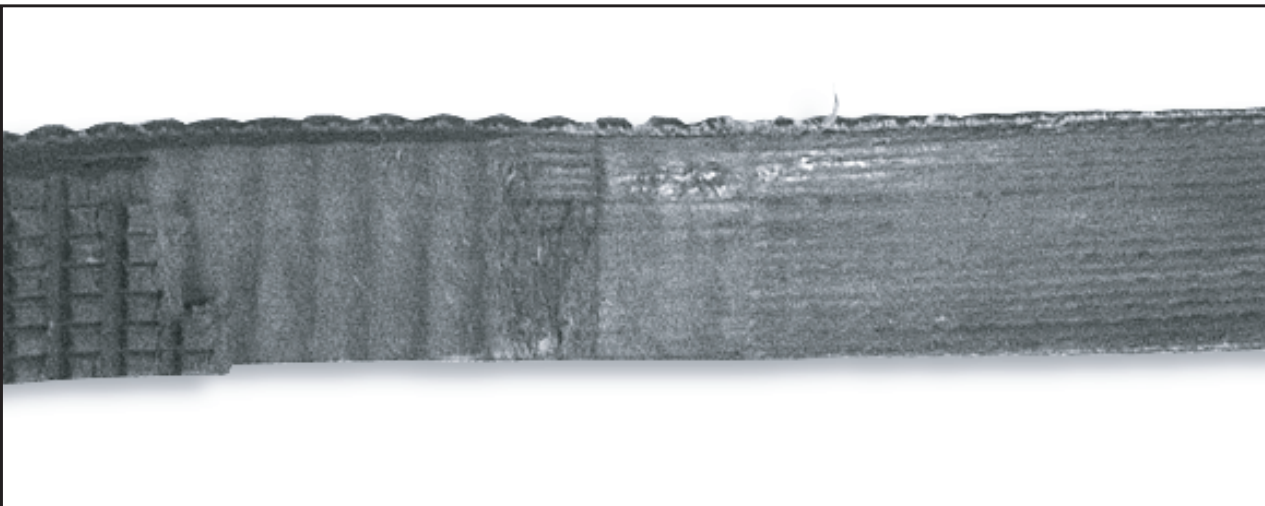
DESCRIPTION:
These drive belts have molding flaws in the top and bottom cogs.

CAUSE:
Manufacturing defect.

RECOMMENDATIONS:
Replace the drive belt. Visually inspect drive belts before installation. Do not use or install a drive belt if defects are present.

WARRANTY: NO YES

DELAMINATION



DESCRIPTION:

Drive belt delamination can be identified by the separation of the inner and outer layers.

CAUSE:

Delamination is the separation of the layers due to improper bonding.

RECOMMENDATIONS:

Replace the drive belt.

WARRANTY: NO YES

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HOUR GLASSING



DESCRIPTION:

A belt that is worn narrow or uneven in one section is commonly referred to as "hour glassed"

CAUSE:

Hour glassing is a result of heat that is generated when the drive clutch is spinning and the belt remains stationary. This type of failure can be caused when a belt is too short, belt-to-sheave clearance is incorrect, belt deflection is inadequate, an improper gear ratio is selected, or the drive system is locked and/or jammed.

RECOMMENDATIONS:

Verify that the correct belt and gear ratio are being used; adjust deflection and ensure that belt-to-sheave clearance is correct. See that the drive system moves freely before installing a new belt; repair if needed.

WARRANTY:

NO



YES



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GLAZING



DESCRIPTION:

This belt has been overheated, causing it to look melted and shiny in appearance.

CAUSE:

Glazing is usually caused by belt slippage due to an oil contaminated belt, inadequate belt break-in, or improper gear ratio selection for the application.

RECOMMENDATIONS:

Ensure that the drive system is setup properly for the rider and application; consider a lower gear ratio. Make certain that the clutch sheaves and belt are clean and free of contaminants. Review proper belt break-in procedure with the customer. See Owner's Manuals, Service Manuals and applicable Team Tips for additional information.

WARRANTY:

NO

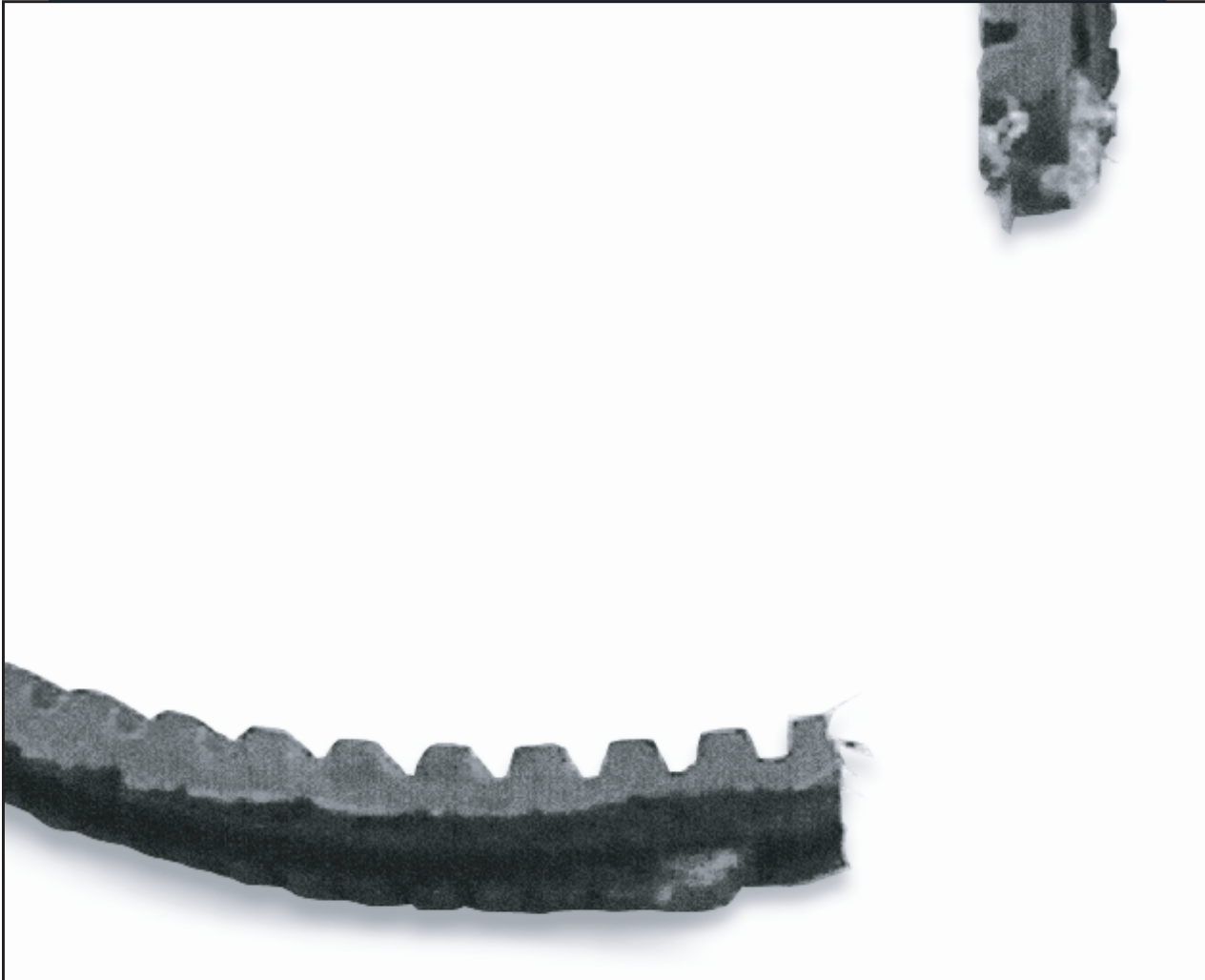


YES



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BROKEN BELT



DESCRIPTION:

Shock loading a drive belt will often cause breakage as shown above.

CAUSE:

Shock loading can be caused by excessive engagement RPM, too short of a belt (causes binding on the bottom of secondary), improper gear ratio, clutch center-to-center distance being too long, or jammed/locked drive train. Driving at top speed or in "overdrive" for extended periods can also cause belt breakage.

RECOMMENDATIONS:

Verify that the correct belt is being used and the drive train moves freely without resistance. Ensure that engagement RPM is appropriate, clutch center-to-center is correct, and gear ratio is not too low. Avoid traveling at top speed for extended periods.

WARRANTY:

NO



YES



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BROKEN CORD

1



2



DESCRIPTION:

Photo 1 shows a frayed cord in the first stage of this failure. In photo 2 the drive belt cord has been severed and has begun to unravel.

CAUSE:

This failure is caused by extreme heat and friction on the side of the belt from clutch misalignment, excessive idle speed, or by an improper belt break-in procedure. As the heat melts away the edge of the belt, the cords become exposed and are slowly pulled out by the constant scrubbing of the clutch sheaves.

RECOMMENDATIONS:

Align clutches to proper offset, reduce idle speed, review proper belt break-in procedure with the customer. See Owner's Manuals, Service Manuals and applicable Team Tips for additional information. Do not continue using; further use will cause belt disintegration. When replacing a drive belt always verify the integrity of the motor mounts and torque stop.

WARRANTY:

NO

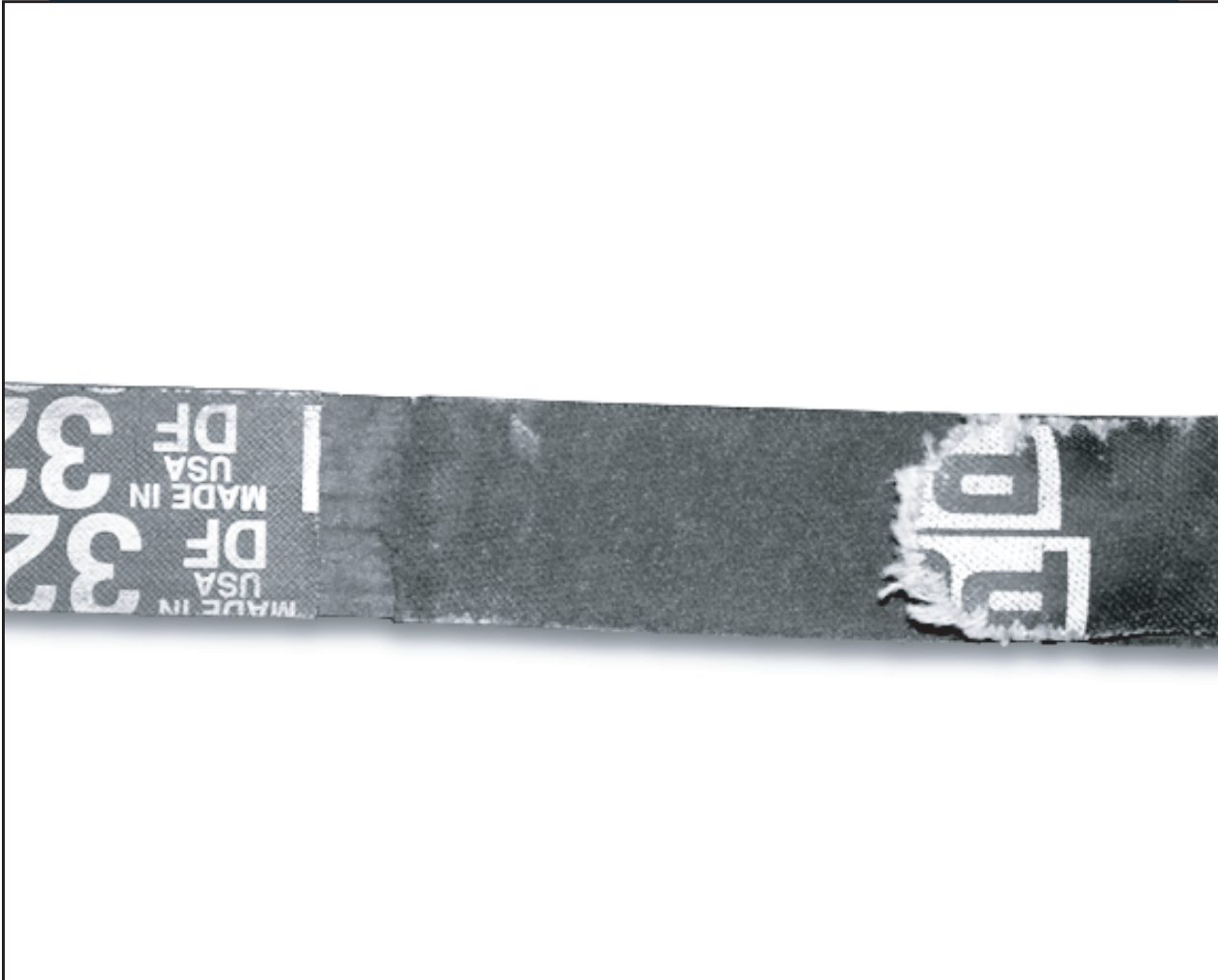


YES



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SPLICE BREAK



DESCRIPTION:

This is an example of a clean break at the splice.

CAUSE:

This type of failure is typically caused by a poor bond between the belt halves.

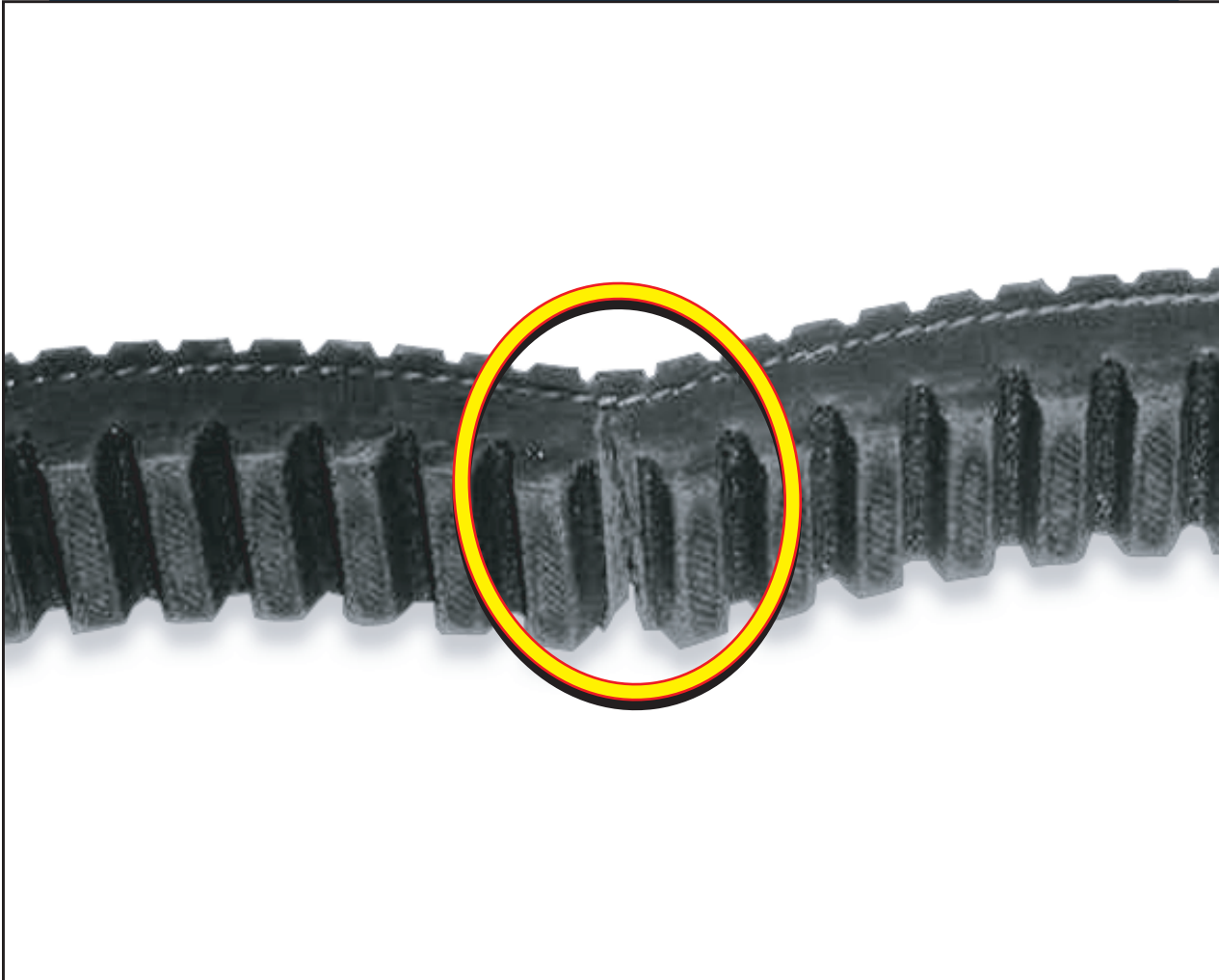
RECOMMENDATIONS:

Replace the drive belt. New spliceless belts do not exhibit this type of failure.

WARRANTY: NO YES

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FLEX CRACK BETWEEN COGS



DESCRIPTION:

This drive belt is cracked on the inner cogs.

CAUSE:

This type of failure can occur if the belt is worn out of its service limit, flexed in extremely cold weather, or turned inside out at any time.

RECOMMENDATIONS:

Do not use drive belts that are out of spec and never turn a drive belt inside out. On a snowmobile, always use an appropriate lift to warm the belt, engine, and track. To further improve drive-away during extremely cold temps, warm the belt to room temperature before operating.

WARRANTY:

NO



YES



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DISINTEGRATION



DESCRIPTION:

This drive belt has been abused and/or used beyond its capabilities.

CAUSE:

This type of failure can be caused by different belt conditions such as: hour glassing, glazing, broken cords, flex cracks, or misalignment.

RECOMMENDATIONS:

Verify that the correct belt is being used. Check deflection and belt-to-sheave clearance. Ensure that the proper gear ratio is being used and that the belt and sheaves are clean. Review proper belt break-in procedure with the customer. See Owner's Manuals, Service Manuals and applicable Team Tips for additional information. Never turn a belt inside out, and warm the belt to room temperature during extremely cold conditions. Verify integrity and adjustment of motor mounts and torque stop.

WARRANTY:

NO

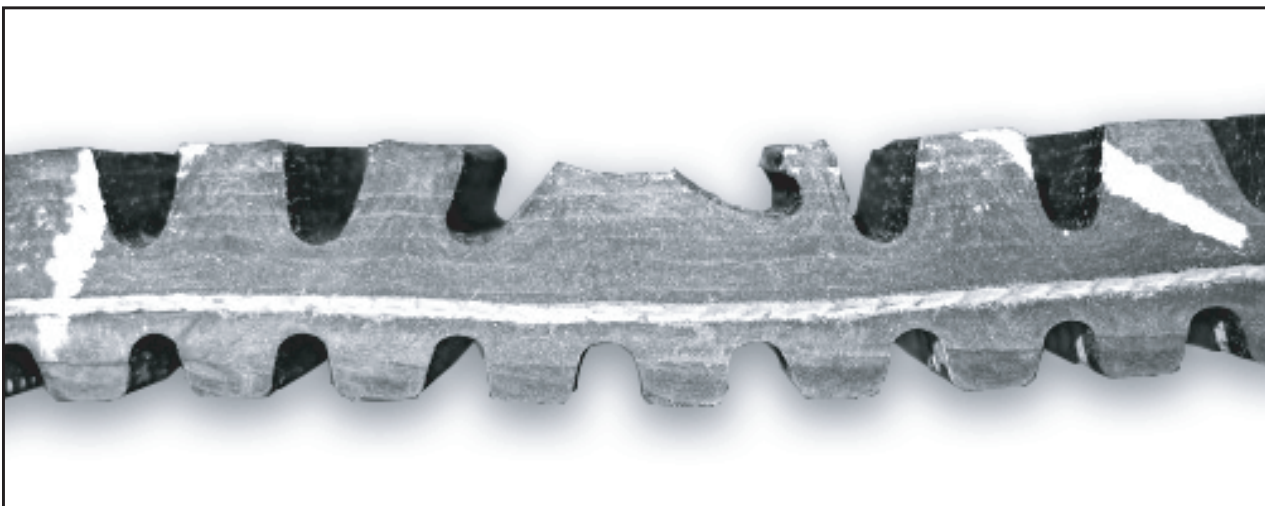
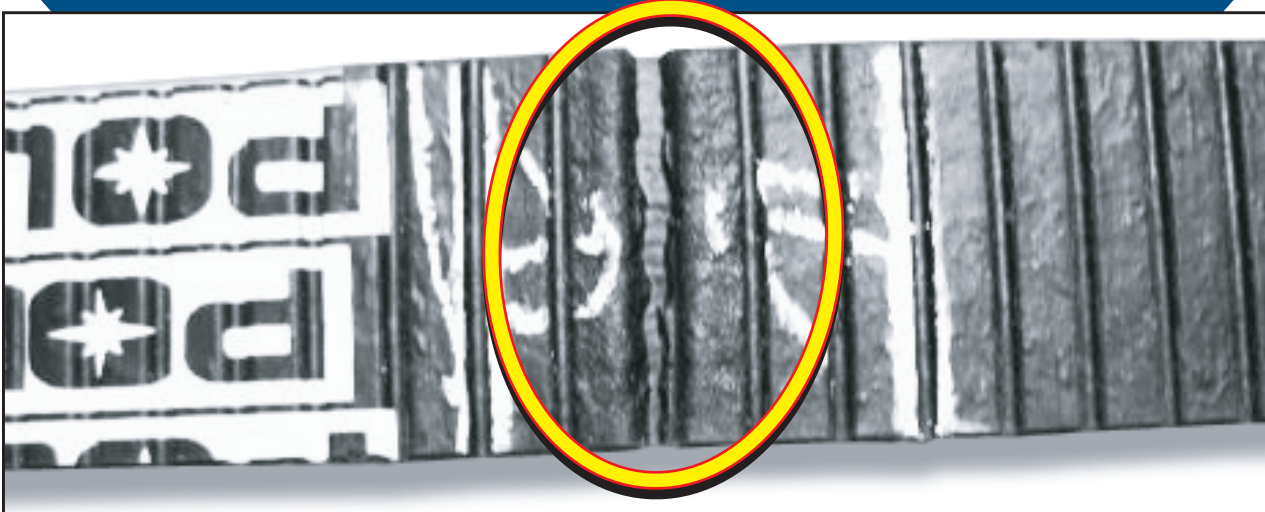


YES



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MANUFACTURING DEFECT



DESCRIPTION:

These drive belts have molding flaws in the top and bottom cogs.

CAUSE:

Manufacturing defect.

RECOMMENDATIONS:

Replace the drive belt. Visually inspect drive belts before installation. Do not use or install a drive belt if defects are present.

WARRANTY: NO YES

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