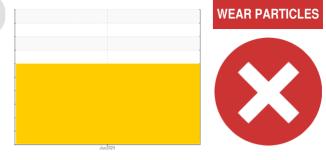




# **PROBLEM SUMMARY**



Machine Id DODGE IF-41097 Component Unknown Component Fluid {not provided} (--- GAL)

### COMPONENT CONDITION SUMMARY

No relevant graphs to display

### RECOMMENDATION

We understand that this sample is for warranty/insurance purposes. Diagnostician's Note: The wear particles from the oil pan are likely from the late stage of the failure. They do not provide any additional information regarding the failure mode.

PROBLEMATIC TEST RESULTS										
Sample Status				SEVER	E					
Nonferrous Cutting	Scale 0-10	ASTM D7684*			5					

Customer Id: IMP10TOR Sample No.: PP Lab Number: 02647503 Test Package: INS-F



To manage this report scan the QR code

To discuss the diagnosis or test data: Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1 (289)291-4641 x4641 Bill.Quesnel@wearcheck.com

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS



# FILTER DEBRIS ANALYSIS



DODGE IF-41097

Component Unknown Component Fluid {not provided} (--- GAL)

### DIAGNOSIS

#### Recommendation

We understand that this sample is for warranty/insurance purposes. Diagnostician's Note: The wear particles from the oil pan are likely from the late stage of the failure. They do not provide any additional information regarding the failure mode.

#### A Wear

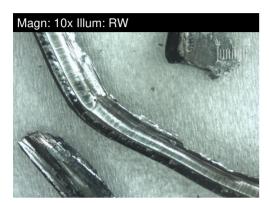
Wear particle analysis indicates that the nonferrous (aluminum) cutting particles are severe.

Sample Number     Client Info     PP         Sample Date     Client Info     152211         Machine Age     kms     Client Info     0         Oil Age     kms     Client Info     0         Oil Changed     Kms     Client Info     0         Sample Status     Client Info     N/A          Sample Status     Client Info     N/A          Sample Status      Imit/base     current     history1     history2       Water     WC Method     NEG          FLTER WEAR PARTICLES     method     imit/base     current     history1     history2       Ferrous Sulling     Sale 0-10     ASTM D7884*           Ferrous Sulling     Sale 0-10     ASTM D7884*           Ferrous Sulling     Sale 0-10     ASTM D7884*           F	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Date       Client Info       27 Jun 2024           Machine Age       kms       Client Info       152211           Oil Age       kms       Client Info       0           Oil Changed       Client Info       N/A            Sample Status       Imit/base       current       history1       history2         Water       WC Method       NEG           FLTER WEAR PARTICLES       method       limit/base       current       history1       history2         Ferrous Sliding       Sale 0-10       ASTM D7684*       -       -       -       -         Ferrous Sliding       Sale 0-10       ASTM D7684*       -       -       -       -         Ferrous Black Oxides       Sale 0-10       ASTM D7684*       -       -       -       -         Ferrous Slack Oxides       Sale 0-10       ASTM D7684*       -       -       -       -         Ferrous Slack Oxides       Sale 0-10       ASTM D7684*       -       -       -       -       -	Sample Number		Client Info		PP		
Oil Age     kms     Client Info     N/A         Sample Status     Client Info     N/A         Sample Status     Client Info     N/A         CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     NEG          FLTER WEAR PARTICLES     method     limit/base     current     history1     history2       Ferrous Suiding     Scale-10     ASTM D7684*          Ferrous Suiding     Scale-10     ASTM D7684*          Ferrous Break-in     Scale-10     ASTM D7684*          Ferrous Black Oxides     Scale-10     ASTM D7684*          Ferrous Cotrosive     Scale-10     ASTM D7684*          Ferrous Subding     Scale-10     ASTM D7684*          Ferrous Subding     Scale-10     ASTM D7684*          Nonferrous			Client Info	27 Jun 2024			
Oil Changed     Client Info     N/A         Sample Status     Image     SEVERE         CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     NEG         FILTER WEAR PARTICLES     method     limit/base     current     history1     history2       Ferrous Rubbing     Scale-10     ASTM D7684*          Ferrous Stiding     Scale-10     ASTM D7684*          Ferrous State-10     Scale-10     ASTM D7684*           Ferrous State-10     Scale-10     ASTM D7684*           Ferrous State-10     Scale-10     ASTM D7684*           Ferrous Corrosive     Scale-10     ASTM D7684*           Nonferrous Rubbing     Scale-10     ASTM D7684*           Nonferrous Cutting     Scale-10     ASTM D7684* <t< th=""><th>Machine Age</th><th>kms</th><th>Client Info</th><th></th><th>152211</th><th></th><th></th></t<>	Machine Age	kms	Client Info		152211		
Sample Status   Image   SEVERE   Image   Image<	Oil Age	kms	Client Info		0		
CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     NEG         FILTER WEAR PARTICLES     method     limit/base     current     history1     history2       Ferrous Rubbing     Scale 0.10     ASTM D7684*          Ferrous Sliding     Scale 0.10     ASTM D7684*          Ferrous Rolling     Scale 0.10     ASTM D7684*          Ferrous Break-in     Scale 0.10     ASTM D7684*          Ferrous Spheres     Scale 0.10     ASTM D7684*          Ferrous Corrosiv     Scale 0.10     ASTM D7684*          Nonferrous Rubbing     Scale 0.10     ASTM D7684*	Oil Changed		Client Info		N/A		
Water   WC Method   NEG      FLTER WEAR PARTICLES   method   limit/base   current   history1   history2     Ferrous Rubbing   Scale 0-10   ASTM D7684*       Ferrous Sliding   Scale 0-10   ASTM D7684*       Ferrous Rubbing   Scale 0-10   ASTM D7684*       Ferrous Rubling   Scale 0-10   ASTM D7684*       Ferrous Rubling   Scale 0-10   ASTM D7684*       Ferrous Rubling   Scale 0-10   ASTM D7684*       Ferrous Black Oxides   Scale 0-10   ASTM D7684*       Ferrous Rubbing   Scale 0-10   ASTM D7684*       Ferrous Rubbing   Scale 0-10   ASTM D7684*       Nonferrous Rubbing   Scale 0-10   ASTM D7684* <th>Sample Status</th> <th></th> <th></th> <th></th> <th>SEVERE</th> <th></th> <th></th>	Sample Status				SEVERE		
FILTER WEAR PARTICLES     method     limit/base     current     history1     history2       Ferrous Rubbing     Scale 0-10     ASTM D7684*	CONTAMINATION	1	method	limit/base	current	history1	history2
Ferrous Rubbing     Scale 0-10     ASTM D7684*       Ferrous Silding     Scale 0-10     ASTM D7684*       Ferrous Rolling     Scale 0-10     ASTM D7684*       Ferrous Break-in     Scale 0-10     ASTM D7684*       Ferrous Spheres     Scale 0-10     ASTM D7684*       Ferrous Black Oxides     Scale 0-10     ASTM D7684*       Ferrous Red Oxides     Scale 0-10     ASTM D7684*       Nonferrous Rubbing     Scale 0-10     ASTM D7684*       Nonferrous Silding     Scale 0-10     ASTM D7684*       Nonferrous Subbing     Scale 0-10     ASTM D7684*       Nonferrous Rubling     Scale 0-10     ASTM D7684*       Nonferrous Subling     Scale 0-10     ASTM D7684*       Nonferrous Rubling     Scale 0-10     ASTM D7684*       Nonferrous Subling     Scale 0-10     ASTM D7684*       Nonferrous Subling     Scale 0-10     ASTM D7684*       N/A	Water		WC Method		NEG		
Ferrous Silding     Scale 0-10     ASTM D7684*     Image       Ferrous Qutting     Scale 0-10     ASTM D7684*     Image       Ferrous Black Oxides     Scale 0-10     ASTM D7684*     Image       Ferrous Corrosive     Scale 0-10     ASTM D7684*     Image       Ferrous Corrosive     Scale 0-10     ASTM D7684*     Image       Ferrous Corrosive     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Quther     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Rubbing     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Quther     Scale 0-10     ASTM D7684*     Image     Image <th>FILTER WEAR PAP</th> <th>RTICLES</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	FILTER WEAR PAP	RTICLES	method	limit/base	current	history1	history2
Ferrous CuttingScale 010ASTM D7684*Ferrous BollingScale 010ASTM D7684*Ferrous Break-inScale 010ASTM D7684*Ferrous SpheresScale 010ASTM D7684*Ferrous Black OxidesScale 010ASTM D7684*Ferrous CorrosiveScale 010ASTM D7684*Nonferrous RubbingScale 010ASTM D7684*Nonferrous RublingScale 010ASTM D7684*Nonferrous RublingScale 010ASTM D7684*Scale 010ASTM D7684*Imit/baseCutrenthistory1history2Scale 010ASTM D7684*FibresScale 010Scale 010ASTM D7684*SpheresScale 010Scale 010ASTM D7684*Patch WeightmgmgASTM D7684*Patch WeightmgASTM D7684*Imit/baseColorimit/baseColorimit/baseImit/baseimit/baseImit/baseimit/baseImit/baseimi	Ferrous Rubbing	Scale 0-10	ASTM D7684*				
Ferrous Rolling     Stale 0:10     ASTM D7684*       Ferrous Break-in     Scale 0:10     ASTM D7684*       Ferrous Spheres     Scale 0:10     ASTM D7684*       Ferrous Black Oxides     Scale 0:10     ASTM D7684*       Ferrous Red Oxides     Scale 0:10     ASTM D7684*       Ferrous Red Oxides     Scale 0:10     ASTM D7684*       Ferrous Corrosive     Scale 0:10     ASTM D7684*       Ferrous Other     Scale 0:10     ASTM D7684*       Ferrous Rubbing     Scale 0:10     ASTM D7684*       Nonferrous Rubbing     Scale 0:10     ASTM D7684*       Nonferrous Cutting     Scale 0:10     ASTM D7684*       Nonferrous Cutting     Scale 0:10     ASTM D7684*       Nonferrous Cutter     Scale 0:10     ASTM D7684*       Nonferrous Cutter     Scale 0:10     ASTM D7684*       Scale 0:10     ASTM D7684*     Imit/base     current     history1     history2       Sand/Dirt     Scale 0:10     ASTM D7684*     Imit/base     Im	Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Break-in     Scale 0:10     ASTM D7684*       Ferrous Spheres     Scale 0:10     ASTM D7684*       Ferrous Red Oxides     Scale 0:10     ASTM D7684*       Ferrous Red Oxides     Scale 0:10     ASTM D7684*       Ferrous Corrosive     Scale 0:10     ASTM D7684*       Ferrous Other     Scale 0:10     ASTM D7684*       Ferrous Other     Scale 0:10     ASTM D7684*       Nonferrous Rubbing     Scale 0:10     ASTM D7684*       Nonferrous Sliding     Scale 0:10     ASTM D7684*       Nonferrous Cutting     Scale 0:10     ASTM D7684*       Nonferrous Rolling     Scale 0:10     ASTM D7684*       Nonferrous Other     Scale 0:10     ASTM D7684*       Nonferrous Other     Scale 0:10     ASTM D7684*       Nonferrous Other     Scale 0:10     ASTM D7684*       Sand/Dirt     Scale 0:10     ASTM D7684*       Fibres     Scale 0:10     ASTM D7684*       Spheres     Scale 0:10     ASTM D7684*       Patch Weight     mg     ASTM D7684*       Patch Weight     mg     ASTM D7684*       Color     method     limit/base     current	Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Spheres     Scale 0-10     ASTM D7684*     Image     Image       Ferrous Black Oxides     Scale 0-10     ASTM D7684*     Image     Image       Ferrous Red Oxides     Scale 0-10     ASTM D7684*     Image     Image       Ferrous Corrosive     Scale 0-10     ASTM D7684*     Image     Image       Ferrous Other     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Rubbing     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Sulding     Scale 0-10     ASTM D7684*     Image     Image       Nonferrous Rolling     Scale 0-10     ASTM D7684*     Image     Image     Image       Nonferrous Rolling     Scale 0-10     ASTM D7684*     Image     Image     Image       Sand/Dirt     Scale 0-10     ASTM D7684*     Image     Image     Image     Image       Spheres     Scale 0-10     ASTM D7684*     Image     Image     Image     Image       Patch Weight     mg     ASTM D7684*     Image     Image     Image     Image       Color     Image     Image     Image     Image     Image </th <th>Ferrous Rolling</th> <th>Scale 0-10</th> <th>ASTM D7684*</th> <th></th> <th></th> <th></th> <th></th>	Ferrous Rolling	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides     Scale 0-10     ASTM D7684*       Ferrous Red Oxides     Scale 0-10     ASTM D7684*       Ferrous Corrosive     Scale 0-10     ASTM D7684*       Ferrous Other     Scale 0-10     ASTM D7684*       Ferrous Other     Scale 0-10     ASTM D7684*       Nonferrous Rubbing     Scale 0-10     ASTM D7684*       Nonferrous Suiding     Scale 0-10     ASTM D7684*       Nonferrous Cutting     Scale 0-10     ASTM D7684*       Nonferrous Rubbing     Scale 0-10     ASTM D7684*       Nonferrous Rolling     Scale 0-10     ASTM D7684*       Nonferrous Cutting     Scale 0-10     ASTM D7684*       Nonferrous Other     Scale 0-10     ASTM D7684*       Nonferrous Cutting     Scale 0-10     ASTM D7684*       Sand/Dirt     Scale 0-10     ASTM D7684*       Fibres     Scale 0-10     ASTM D7684*       Other     Scale 0-10     ASTM D7684*       Patch Weight     rng     ASTM D7684*       Patch Weight     rng     ASTM D7684*       Color     wethod     imit/base     current     history1       N/A </th <th>Ferrous Break-in</th> <th>Scale 0-10</th> <th>ASTM D7684*</th> <th></th> <th></th> <th></th> <th></th>	Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides     Scale 0-10     ASTM D7684*       Ferrous Corrosive     Scale 0-10     ASTM D7684*       Ferrous Other     Scale 0-10     ASTM D7684*       Nonferrous Rubbing     Scale 0-10     ASTM D7684*       Nonferrous Sliding     Scale 0-10     ASTM D7684*       Nonferrous Sliding     Scale 0-10     ASTM D7684*       Nonferrous Sulting     Scale 0-10     ASTM D7684*       Nonferrous Cutting     Scale 0-10     ASTM D7684*       Nonferrous Other     Scale 0-10     ASTM D7684*       Sand/Dirt     Scale 0-10     ASTM D7684*       Fibres     Scale 0-10     ASTM D7684*       Other     Scale 0-10     ASTM D7684*       Other     Scale 0-10     ASTM D7684*       Patch Weight     mg     ASTM D7684*       Patch Weight     mg     ASTM D7684*       Color     method     Imit/base     current     history1     history2       Scale 0-10     ASTM D7684*<	Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous CorrosiveScale 0.10ASTM D7684*Ferrous OtherScale 0.10ASTM D7684*ImageNonferrous RubbingScale 0.10ASTM D7684*ImageNonferrous SlidingScale 0.10ASTM D7684*ImageNonferrous CuttingScale 0.10ASTM D7684*ImageNonferrous RoblingScale 0.10ASTM D7684*ImageNonferrous CuttingScale 0.10ASTM D7684*ImageNonferrous RoblingScale 0.10ASTM D7684*ImageNonferrous OtherScale 0.10ASTM D7684*ImageSand/DirtScale 0.10ASTM D7684*ImageFiltresScale 0.10ASTM D7684*ImageSpheresScale 0.10ASTM D7684*ImagePatch WeightmgASTM D7684*ImagePatch WeightmgASTM D7684*ImageColorImageImageImageImageImageImageImageImageImage	Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Other     Scale 0.10     ASTM D7684*     Image       Nonferrous Rubbing     Scale 0.10     ASTM D7684*     Image       Nonferrous Sliding     Scale 0.10     ASTM D7684*     Image       Nonferrous Sliding     Scale 0.10     ASTM D7684*     Image     Image       Nonferrous Sliding     Scale 0.10     ASTM D7684*     Image     Image       Nonferrous Rolling     Scale 0.10     ASTM D7684*     Image     Image       Nonferrous Other     Scale 0.10     ASTM D7684*     Image     Image       Nonferrous Other     Scale 0.10     ASTM D7684*     Image     Image       Sand/Dirt     Scale 0.10     ASTM D7684*     Image     Image       Fibres     Scale 0.10     ASTM D7684*     Image     Image       Spheres     Scale 0.10     ASTM D7684*     Image     Image       Other     Scale 0.10     ASTM D7684*     Image     Image       Patch Weight     mg     ASTM D7684*     Image     Image       Color     Image     Image     Image     Image     Image	Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing Nonferrous SlidingScale 0-10ASTM D7684*ImageNonferrous SlidingScale 0-10ASTM D7684*ImageImageNonferrous CuttingScale 0-10ASTM D7684*ImageImageNonferrous RollingScale 0-10ASTM D7684*ImageImageNonferrous OtherScale 0-10ASTM D7684*ImageImageFILTER CONTAMINANTSmethodImageImageImageSand/DirtScale 0-10ASTM D7684*ImageImageSand/DirtScale 0-10ASTM D7684*ImageImageSpheresScale 0-10ASTM D7684*ImageImageOtherScale 0-10ASTM D7684*ImageImagePatch WeightmgASTM D7684*ImageImageColorImageImageImageImage	Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Nonferrous SlidingScale 0-10ASTM D7684*5Nonferrous CuttingScale 0-10ASTM D7684*5Nonferrous RollingScale 0-10ASTM D7684*5Nonferrous OtherScale 0-10ASTM D7684*1Sand/DirtScale 0-10ASTM D7684*1FILTER CONTAMINANTSmethodlimit/basecurrentSand/DirtScale 0-10ASTM D7684*1FibresScale 0-10ASTM D7684*1SpheresScale 0-10ASTM D7684*1OtherScale 0-10ASTM D7684*1Patch WeightmgASTM D7684*1Colormethodlimit/basecurrentNonferrousmethodlimit/basecurrentNonferrousScale 0-10ASTM D7684*no imageOtherScale 0-10ASTM D7684*no imageOtherScale 0-10ASTM D7684*no imageColorImit/basecurrenthistory1N/A	Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Cutting Nonferrous Rolling Scale 0-10ASTM D7684* ASTM D7684*5Nonferrous Rolling Nonferrous OtherScale 0-10ASTM D7684*5FILTER CONTAMINANTSmethodlimit/basecurrenthistory1history2Sand/DirtScale 0-10ASTM D7684*FibresScale 0-10ASTM D7684*SpheresScale 0-10ASTM D7684*OtherScale 0-10ASTM D7684*Patch WeightmgASTM D7684*N/ASAMPLE IMAGESmethodlimit/basecurrenthistory1history2ColorImathodIimit/basecurrentno imageno image	Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Rolling Nonferrous Other     Scale 0-10     ASTM D7684*       FILTER CONTAMINANTS     method     limit/base     current     history1     history2       Sand/Dirt     Scale 0-10     ASTM D7684*           Fibres     Scale 0-10     ASTM D7684*            Spheres     Scale 0-10     ASTM D7684*              Other     Scale 0-10     ASTM D7684* <th< th=""><th>Nonferrous Sliding</th><th>Scale 0-10</th><th>ASTM D7684*</th><th></th><th></th><th></th><th></th></th<>	Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Other     Scale 0-10     ASTM D7684*       FILTER CONTAMINANTS     method     limit/base     current     history1     history2       Sand/Dirt     Scale 0-10     ASTM D7684*	Nonferrous Cutting	Scale 0-10	ASTM D7684*		<b>▲</b> 5		
FILTER CONTAMINANTS     method     limit/base     current     history1     history2       Sand/Dirt     Scale 0-10     ASTM D7684* <th>Nonferrous Rolling</th> <th>Scale 0-10</th> <th>ASTM D7684*</th> <th></th> <th></th> <th></th> <th></th>	Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Sand/Dirt       Scale 0-10       ASTM D7684*         Fibres       Scale 0-10       ASTM D7684*       Image: Control of Contro	Nonferrous Other	Scale 0-10	ASTM D7684*				
Fibres     Scale 0-10     ASTM D7684*     Image     Image       Spheres     Scale 0-10     ASTM D7684*     Image     Image       Other     Scale 0-10     ASTM D7684*     Image     Image       Patch Weight     mg     ASTM D7684*     Image     Image       SAMPLE IMAGES     method     Imit/base     current     history1     history2       Color     Image     Image     Image     Image     Image     Image	FILTER CONTAM	INANTS	method	limit/base	current	history1	history2
Spheres     Scale 0-10     ASTM D7684*       Other     Scale 0-10     ASTM D7684*     Image     Image     Image       Patch Weight     mg     ASTM D7684*     Image     Image     Image     Image       SAMPLE IMAGES     method     limit/base     current     history1     history2       Color     Image     Image     Image     Image     Image     Image	Sand/Dirt	Scale 0-10	ASTM D7684*				
Other     Scale 0-10     ASTM D7684*     N/A         Patch Weight     mg     ASTM D7684*     N/A         SAMPLE IMAGES     method     limit/base     current     history1     history2       Color     Image     Image     Image     Image     Image     Image	Fibres	Scale 0-10	ASTM D7684*				
Patch Weight     mg     ASTM D7684*     N/A         SAMPLE IMAGES     method     limit/base     current     history1     history2       Color     Image     Image     Image     Image     Image     Image       Loss     Image     Image     Image     Image     Image     Image     Image	Spheres	Scale 0-10	ASTM D7684*				
SAMPLE IMAGES     method     limit/base     current     history1     history2       Color     Image     no image     no image     no image	Other	Scale 0-10	ASTM D7684*				
Color no image no image	Patch Weight	mg	ASTM D7684*		N/A		
	SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Bottom no image no image	Color					no image	no image
	Bottom					no image	no image



# **FILTER REPORT**

#### Machine Id DODGE IF-41097 Component Unknown Component Fluid {not provided} (--- GAL)



## WEAR

Wear particle analysis indicates that the nonferrous (aluminum) cutting particles are severe.