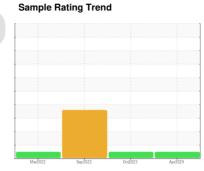


# **OIL ANALYSIS REPORT**







Machine Id **DT794** 

Transmission (Auto)

SHELL SPIRAX S6 ATF (36 QTS)

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the fluid.

### **Fluid Condition**

The condition of the fluid is acceptable for the time in service.

Cample Number   Client Info   PCA0091264   PCA0103330   PCA007486   Cample Date   Client Info   18 Apr 2024   04 Oct 2023   06 Sep 202   08 Sep 20				- OSPECIE	000000		
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         154564         129851         76496           Oil Age         mls         Client Info         101209         53355         0           Oil Changed         Client Info         Changed         NORMAL         ABNORMAL           Sample Status         NORMAL         NORMAL         ABNORMAL           CONTAMINATION         method         Imit base         current         history1         history1           WEAR METALS         method         Imit base         current         history1         history1           Iron         ppm         ASTM D5185m         >160         65         52         144           Chromium         ppm         ASTM D5185m         >5         0         0         1           Chromium         ppm         ASTM D5185m         >5         0         0         1           Vickel         ppm         ASTM D5185m         >5         0         0         0           Julianium         ppm         ASTM D5185m         >5         0         0         0           Copper         ppm         ASTM D5185m         >5         0         0         0           Copper         ppm	Sample Number		Client Info		PCA0091264	PCA0103330	PCA007486
Dil Age	Sample Date		Client Info		18 Apr 2024	04 Oct 2023	06 Sep 2022
Contamped   Client Info   Changed   NORMAL   N	Machine Age	mls	Client Info		-	129851	76496
NORMAL   NORMAL   ABNORMAL   CONTAMINATION   method   limit/base   current   history1   history2   history2   history2   history2   history2   history2   history2   history2   history2   history3   history4   history5   history5	Oil Age	mls	Client Info		101209	53355	0
NORMAL   NORMAL   ABNORMAL   ABNORMAL   CONTAMINATION   method   imit/base   current   history1   history2   history3   NEG   NEG	Oil Changed		Client Info		Changed	Not Changd	Changed
Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >160         65         52         144           Chromium         ppm         ASTM D5185m         >5         0         0         1           Nickel         ppm         ASTM D5185m         >5         0         0         0           Silver         ppm         ASTM D5185m         >5         0         0         0           Aduminum         ppm         ASTM D5185m         >50         37         26         2           Aduminum         ppm         ASTM D5185m         >50         24         23         <1           Lead         ppm         ASTM D5185m         >50         24         23         <1           Copper         ppm         ASTM D5185m         >10         4         4         2           Apartimony         ppm         ASTM D5185m         >10         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0 <td>Sample Status</td> <td></td> <td></td> <td></td> <td>NORMAL</td> <td>NORMAL</td> <td>ABNORMAL</td>	Sample Status				NORMAL	NORMAL	ABNORMAL
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	NEG
Description	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>160	65	52	144
Nicke    ppm   ASTM D5185m   >5   0   <1   <1	Chromium	ppm	ASTM D5185m	>5	0	0	1
Description	Nickel		ASTM D5185m	>5	0	<1	<1
Silver	Titanium		ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m >50 37 26 2  Lead ppm ASTM D5185m >50 24 23 <1  Copper ppm ASTM D5185m >50 24 23 <1  Copper ppm ASTM D5185m >225 41 25 34  Antimony ppm ASTM D5185m >10 4 4 2  Antimony ppm ASTM D5185m 0 0 0 0  Cadmium ppm ASTM D5185m 0 0 0 0  Cadmium ppm ASTM D5185m 0 0 0 0  Cadmium ppm ASTM D5185m 0 0 0 0  ADDITIVES method limit/base current history1 history2  Barium ppm ASTM D5185m 0 0 0 0 0  ADDITIVES	Silver		ASTM D5185m	>5	0		0
Lead         ppm         ASTM D5185m         >50         24         23         <1	Aluminum			>50	-		
Description	Lead				_		_
Trin							
Antimony	• • • • • • • • • • • • • • • • • • • •				4		
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         90         83         248           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         <1         14           Magnesium         ppm         ASTM D5185m         6         12         0           Calcium         ppm         ASTM D5185m         125         129         6           Phosphorus         ppm         ASTM D5185m         275         294         1332           Zinc         ppm         ASTM D5185m         47         36         15           Sulfur         ppm         ASTM D5185m         20         5         3         34           CONTAMINANTS         method         limit/base         current         history1         history							
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         90         83         248           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         <1         0         <1         14           Manganese         ppm         ASTM D5185m         0         <1         14         0         <1         14           Magnesium         ppm         ASTM D5185m         6         12         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         1         1         4         0         0         1         1         4         0         1	Vanadium				0	0	0
Boron	Cadmium						
Boron	ADDITIVES		method	limit/base	current	history1	history2
Description	Boron	maa	ASTM D5185m		90	•	· ·
Molybdenum         ppm         ASTM D5185m         <1         0         <1         14           Manganese         ppm         ASTM D5185m         0         <1	Barium		ASTM D5185m		0	0	0
Manganese         ppm         ASTM D5185m         0         <1         14           Magnesium         ppm         ASTM D5185m         6         12         0           Calcium         ppm         ASTM D5185m         125         129         6           Phosphorus         ppm         ASTM D5185m         275         294         1332           Zinc         ppm         ASTM D5185m         47         36         15           Sulfur         ppm         ASTM D5185m         1749         23040           CONTAMINANTS         method         limit/base         current         history1         history2					•		<1
Magnesium         ppm         ASTM D5185m         6         12         0           Calcium         ppm         ASTM D5185m         125         129         6           Phosphorus         ppm         ASTM D5185m         275         294         1332           Zinc         ppm         ASTM D5185m         47         36         15           Sulfur         ppm         ASTM D5185m         1788         1749         23040           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         5         ▲ 34           Sodium         ppm         ASTM D5185m         >20         5         5         ▲ 34           Sodium         ppm         ASTM D5185m         >20         <1	,						
Calcium         ppm         ASTM D5185m         125         129         6           Phosphorus         ppm         ASTM D5185m         275         294         1332           Zinc         ppm         ASTM D5185m         47         36         15           Sulfur         ppm         ASTM D5185m         1788         1749         23040           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         5         ▲ 34           Sodium         ppm         ASTM D5185m         >20         5         5          ▲ 34           Sodium         ppm         ASTM D5185m         >20         <1	•						
Phosphorus ppm ASTM D5185m 275 294 1332  Zinc ppm ASTM D5185m 47 36 15  Sulfur ppm ASTM D5185m 1788 1749 23040  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >20 5 5					-		
Zinc ppm ASTM D5185m 47 36 15 Sulfur ppm ASTM D5185m 1788 1749 23040  CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 5 5 3 34 Sodium ppm ASTM D5185m 6 3 5 Potassium ppm ASTM D5185m >20 <1 2 <1  VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON							
Sulfur ppm ASTM D5185m 1788 1749 23040  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >20 5 5	•						
Silicon ppm ASTM D5185m >20 5 5 34  Sodium ppm ASTM D5185m   6 3 5  Potassium ppm ASTM D5185m   20 <1 2 <1  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE  Sound Debris scalar *Visual NONE NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML NORML	Sulfur						
Sodium         ppm         ASTM D5185m         6         3         5           Potassium         ppm         ASTM D5185m         >20         <1	CONTAMINAN	TS	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         6         3         5           Potassium         ppm         ASTM D5185m         >20         <1	Silicon	ppm	ASTM D5185m	>20	5	5	<b>▲</b> 34
Potassium ppm ASTM D5185m >20 <1 2 <1  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Dodor scalar *Visual NORML NORML NORML NORML  NORML NORML	Sodium		ASTM D5185m		6	3	5
White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML	Potassium		ASTM D5185m	>20			<1
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML	White Metal	scalar					
Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORML	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLNORMLNORML		scalar	*Visual	NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NORML NORML NORML	Debris	Journal					
				NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.1 NEG NEG NEG	Sand/Dirt	scalar	*Visual				
	Debris Sand/Dirt Appearance Odor	scalar scalar	*Visual	NORML	NORML	NORML	NORML

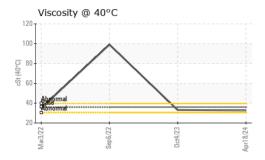
nder NEWWDUN - JangescThreatt

NEG

scalar \*Visual

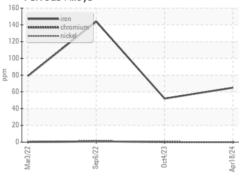


## **OIL ANALYSIS REPORT**

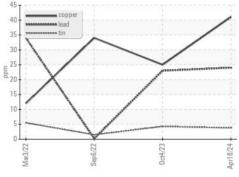


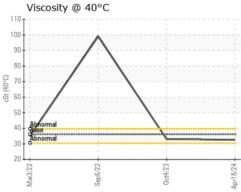


# Ferrous Alloys



# Non-ferrous Metals









Certificate 12367

Laboratory Sample No. Lab Number : 06158617 Unique Number : 10994040

: PCA0091264

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 Apr 2024 Tested

: 24 Apr 2024 Diagnosed : 24 Apr 2024 - Wes Davis

NW WHITE & CO - ANDERSON DIVISION

2605 RIVER RD PIEDMONT, SC US 29673

Contact: James Threatt jthreatt@nwwhite.com T: (864)918-4646

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: NWWPIE [WUSCAR] 06158617 (Generated: 04/25/2024 15:02:33) Rev: 1