

**WEAR CONTAMINATION FLUID CONDITION** 

**NORMAL ABNORMAL** NORMAL

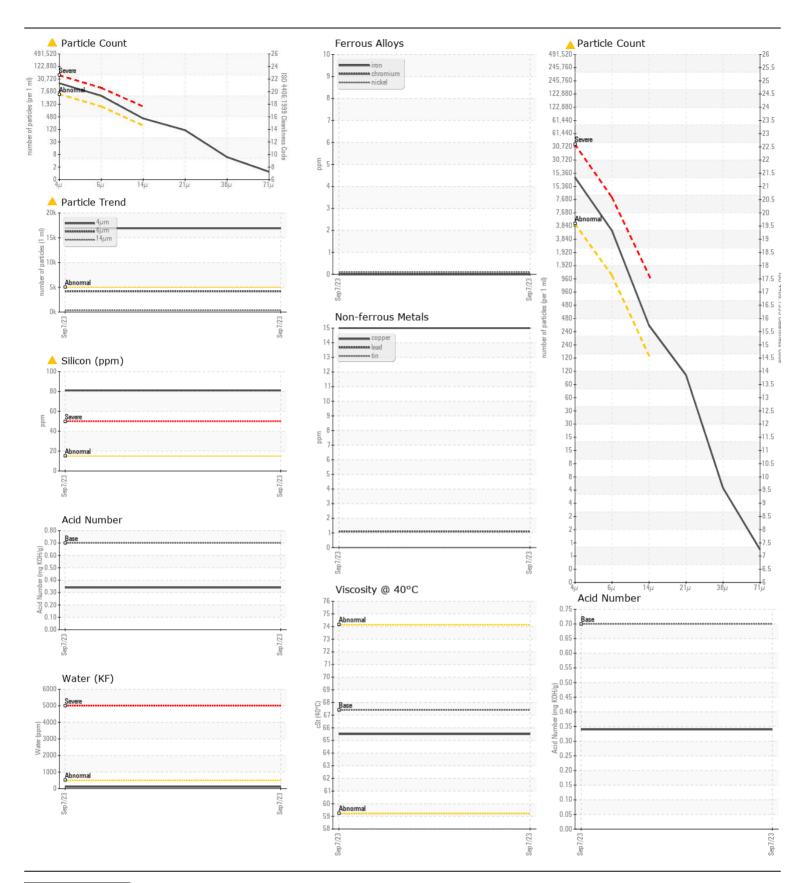
**EMPE** 

P210-6-1028 (S/N V604)

Component Hydraulic System

TÜLCO LUBSOIL SUPER HYDRAULIC AW 68 (200 GAL)

Marke charge that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	We advise that you check all areas where dirt can enter the system.  The filter change at the time of sampling has been noted. We	Sample Number		Client Info		TO5002459		
recommend an early resample to monitor this condition.    Oi   Filter Age   Prise   Prise   Prise   Client Info   Client Info   Client Info   Client Info   Client Info   Client Info   Changed   Changed   Client Info   Changed   Changed   Client Info   Changed   Change		Sample Date		Client Info		07 Sep 2023		
Filter Age   hiss   Client Info   O   O   O   O   O   O   O   O   O		Machine Age	hrs	Client Info		12055		
Oil Changed   Cilent Info   Changed   Cilent Info   Changed   Changed   Cilent Info   Changed   Changed   Cilent Info   Changed   Cilent Info   Changed		Oil Age	hrs	Client Info		0		
Filter Changed   Sample Status   Chent in   Changed   Chent   Changed   Chent   Changed   Chan		Filter Age	hrs	Client Info		0		
Name		Oil Changed		Client Info		Not Changd		
Iron		Filter Changed		Client Info		Changed		
All component wear rates are normal.    Chromium   ppm   ASTIL DSISS   20   1		Sample Status				ABNORMAL		
All component wear rates are normal.    Chromium   ppm   ASTIL DSISS   20   1								
All component wear rates are normal.    Nickel   ppm   ASTM D5165m   20	WEAR		• • • • • • • • • • • • • • • • • • • •					
Titianium   ppm   ASTIND598m   0	All component wear rates are normal.							
Silver   ppm   ASTM 05185m   >20   0					>20			
Aluminum   ppm   ASTM 0588m   >20   0   1								
Lead   ppm   ASTM D5185m   >20   15			• • • • • • • • • • • • • • • • • • • •					
Copper   ppm								
Tin			• • • • • • • • • • • • • • • • • • • •					
Vanadium   ppm   ASTM D5185m   NONE								
White Metal   Scalar   Visual   NONE   NON			• • • • • • • • • • • • • • • • • • • •		>20	-		
Yellow Metal   Scalar   Visual   NONE   NONE           Potassium   ppm   ASTM D5185m   >2   2           Particles >4µm   ASTM D5184   >500   109           Particles >4µm   ASTM D7647   >5000   A 16892           Particles >4µm   ASTM D7647   >600   A 352           Particles >14µm   ASTM D7647   >40   A 36           Particles >14µm   ASTM D7647   >40   A 36           Particles >3µm   ASTM D7647   >40   A 36           Particles >14µm   ASTM D7647   >40   A 36   A 36           Particles >14µm   ASTM D7647   >40   A 36   A 36           Particles >14µm   ASTM D7647   >40   A 36					NONE	-		
Silicon   ppm   ASTM 05185m   >-15								
Potassium   ppm   ASTM D6186m   >20   2		Yellow Metal	scalar	"VISUAI	NONE	NONE		
Potassium   ppm   ASTM D6186m   >20   2	CONTAMINATION	Silicon	nnm	ASTM D5185m	<b>\15</b>	A 81		
Water   96	There is a high amount of particulates present in the oil. Elemental		• • • • • • • • • • • • • • • • • • • •					
Particles   September   Part								
Particles > 4µm   Particles > 5µm   Particles > 7µm   Particles								
Particles > 6   m		• •	ррпп					
Particles >14 µm								
Particles >21 μm								
Particles >38µm   Particles >71µm   ASTM D7647   >10   5         Particles >71µm   ASTM D7647   >3   1         Oil Cleanliness   ISO 4406 (c)   >191/17/14   ≥ 21/19/16         Sitt   scalar   *Visual   NONE   NONE   NONE     Debris   Scalar   *Visual   NONE   NONE   NONE         Sand/Dirt   scalar   *Visual   NONE   NONE   NONE         Appearance   scalar   *Visual   NORM   NO								
Particles >71 µm								
Oil Cleanliness   ISO 4406 (c)   59/17/14								
Silt   Scalar   *Visual   NONE   LIGHT         Debris   Scalar   *Visual   NONE   LIGHT         Sand/Dirt   Scalar   *Visual   NONE   NONE   NONE         Sand/Dirt   Scalar   *Visual   NONE   N								
Debris   Scalar   Visual   NONE   N		Silt	scalar	. ,				
Appearance   Scalar   Visual   NORML				*Visual				
Appearance   Scalar   *Visual   NORML   NORM		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water   scalar *Visual   >0.05   NEG		Appearance	scalar	*Visual		NORML		
Sodium   ppm   ASTM D5185m   1           Boron   ppm   ASTM D5185m   0           Barium   ppm   ASTM D5185m   0           Molybdenum   ppm   ASTM D5185m   0           Magnesium   ppm   ASTM D5185m   71           Calcium   ppm   ASTM D5185m   57           Phosphorus   ppm   ASTM D5185m   425   305           Zinc   ppm   ASTM D5185m   500   388           Sulfur   ppm   ASTM D5185m   1900   1707           Acid Number (AN)   mg KOHg   ASTM D8045   0.7   0.34           Visc @ 40°C   CSt   ASTM D445   67.4   65.5           Visc @ 100°C   CSt   ASTM D445   8.8   8.5		Odor	scalar	*Visual	NORML	NORML		
Boron   ppm   ASTM D5185m   0           Barium   ppm   ASTM D5185m   0           Molybdenum   ppm   ASTM D5185m   0           Manganese   ppm   ASTM D5185m   71           Calcium   ppm   ASTM D5185m   57           Phosphorus   ppm   ASTM D5185m   425   305           Zinc   ppm   ASTM D5185m   500   388           Sulfur   ppm   ASTM D5185m   1900   1707           Acid Number (AN)   mg KOHlg   ASTM D8045   0.7   0.34           Visc @ 40°C   CSt   ASTM D445   67.4   65.5           Visc @ 100°C   CSt   ASTM D445   8.8   8.5		<b>Emulsified Water</b>	scalar	*Visual	>0.05	NEG		
Boron   ppm   ASTM D5185m   0								
Barium   ppm   ASTM D5185m   0         Magnesium   ppm   ASTM D5185m   71         Calcium   ppm   ASTM D5185m   57         Phosphorus   ppm   ASTM D5185m   425   305         Zinc   ppm   ASTM D5185m   500   388         Sulfur   ppm   ASTM D5185m   1900   1707         Acid Number (AN)   mg KOH/g   ASTM D8045   0.7   0.34         Visc @ 40°C   CSt   ASTM D445   67.4   65.5         Visc @ 100°C   CSt   ASTM D445   8.8   8.5	FLUID CONDITION		• • • • • • • • • • • • • • • • • • • •					
Acceptable for the time in service.    Molybdenum   ppm   ASTM D5185m   C1         Manganese   ppm   ASTM D5185m   C1         Magnesium   ppm   ASTM D5185m   C71         Calcium   ppm   ASTM D5185m   57         Phosphorus   ppm   ASTM D5185m   425   305         Zinc   ppm   ASTM D5185m   500   388         Sulfur   ppm   ASTM D5185m   1900   1707         Acid Number (AN)   mg KOH/g   ASTM D8045   0.7   0.34         Visc @ 40°C   CSt   ASTM D445   67.4   65.5         Visc @ 100°C   CSt   ASTM D445   8.8   8.5						-		
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 71 Calcium ppm ASTM D5185m 57 Sulfur ppm ASTM D5185m 500 388 Sulfur ppm ASTM D5185m 1900 1707 Acid Number (AN) mg KOH/g ASTM D8045 0.7 0.34 Visc @ 40°C cSt ASTM D445 67.4 65.5 Visc @ 100°C cSt ASTM D445 8.8 8.5								
Magnesium         ppm         ASTM D5185m         71             Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         425         305             Zinc         ppm         ASTM D5185m         500         388             Sulfur         ppm         ASTM D5185m         1900         1707             Acid Number (AN)         mg KOH/g         ASTM D8045         0.7         0.34             Visc @ 40°C         cSt         ASTM D445         67.4         65.5             Visc @ 100°C         cSt         ASTM D445         8.8         8.5		•						
Calcium         ppm         ASTM D5185m         57             Phosphorus         ppm         ASTM D5185m         425         305             Zinc         ppm         ASTM D5185m         500         388             Sulfur         ppm         ASTM D5185m         1900         1707             Acid Number (AN)         mg KOH/g         ASTM D8045         0.7         0.34             Visc @ 40°C         cSt         ASTM D445         67.4         65.5             Visc @ 100°C         cSt         ASTM D445         8.8         8.5			• • • • • • • • • • • • • • • • • • • •					
Phosphorus         ppm         ASTM D5185m         425         305             Zinc         ppm         ASTM D5185m         500         388             Sulfur         ppm         ASTM D5185m         1900         1707             Acid Number (AN)         mg KOH/g         ASTM D8045         0.7         0.34             Visc @ 40°C         cSt         ASTM D445         67.4         65.5             Visc @ 100°C         cSt         ASTM D445         8.8         8.5		•						
Zinc         ppm         ASTM D5185m         500         388             Sulfur         ppm         ASTM D5185m         1900         1707             Acid Number (AN)         mg KOH/g         ASTM D8045         0.7         0.34             Visc @ 40°C         cSt         ASTM D445         67.4         65.5             Visc @ 100°C         cSt         ASTM D445         8.8         8.5			• • • • • • • • • • • • • • • • • • • •		405			
Sulfur         ppm         ASTM D5185m         1900         1707             Acid Number (AN)         mg KOH/g         ASTM D8045         0.7         0.34             Visc @ 40°C         cSt         ASTM D445         67.4         65.5             Visc @ 100°C         cSt         ASTM D445         8.8         8.5							1	
Acid Number (AN)       mg KOH/g       ASTM D8045       0.7       0.34           Visc @ 40°C       cSt       ASTM D445       67.4       65.5           Visc @ 100°C       cSt       ASTM D445       8.8       8.5								
Visc @ 40°C       cSt       ASTM D445       67.4       65.5           Visc @ 100°C       cSt       ASTM D445       8.8       8.5								
Visc @ 100°C cSt ASTM D445 8.8 8.5		. ,						
		_						
viscosity littlex (VI) Scale ASTW DZZ/O TOZ								
		VISCOSILY IIIUGA (VI)	Scale	AOTIVI DZZI U	102	33		





Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: TO5002459 : 06036082

: 10791311

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 15 Dec 2023 Diagnosed : 19 Dec 2023 Diagnostician : Don Baldridge

Test Package : IND 2 (Additional Tests: KF, KV100, VI) 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) **JAMAK FABRICATION** 

1401 NORTH BOWIE DRIVE WEATHERFORD, TX US 76086

Contact: LARRY NORRIS lano@jamak.com

T:

F: