

SOUTHLAND RESOURCES
KENNY HERRING
PO BOX 770
COTTONDALE, AL 35453

COMPANY NAME : SOUTHLAND RESOURCES INC
CUSTOMER EQUIP NUM : T95709
COMPARTMENT NAME : ENGINE
SERIAL NUMBER : 7P200982
MANUFACTURER : CATERPILLAR
MODEL : D11R
JOB SITE : SHANNON PIT #2
EXT WARR NUMBER :
SHOP JOB NUM :
COMP SERIAL NUM :
COMPARTMENT MODEL :
COMP MANUFACTURER :
SAMPLE LABEL NUM : P
FLUID BRAND/WEIGHT : QTGO15W40
FLUID TYPE :
EXT WARR EXPIRE DATE :
FUEL CONSUMED :
SAMPLE SHIP TIME (days) : 6

Fluids Analysis Laboratory
2401 Pinson Hwy.
Tarrant, AL 35217-0367
205-244-7868
www.thompsontractor.com



LAB CONTROL NUMBER	SAMPLE DATE	PROCESS DATE	EQUIPMENT METER	METER ON FLUID	FLUID CHANGED	MAKE UP FLUID	MAKE UP FLUID UNITS	FILTER CHANGED
DA30-50106-0149	09-Apr-2020	15-Apr-2020	31357 HR	344 HR	Yes			Yes
WEAR METAL READINGS ARE ACCEPTABLE. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								
DA30-50013-0521	09-Jan-2020	13-Jan-2020	31013 HR	532 HR	Yes			Yes
WEAR METAL READINGS ARE ACCEPTABLE COMPARED WITH HOURS ON THIS OIL. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								
DA30-49316-0365	05-Nov-2019	12-Nov-2019	30481 HR	507 HR	Yes			Yes
UNACCEPTABLE IRON, ALUMINUM AND LEAD MAY INDICATE BEARING DAMAGE. CHECK FOR ABNORMAL NOISE OR VIBRATION. RESAMPLE AND INSPECT FILTER IN 125 HOURS TO MONITOR.								
Action Required								
DA30-49175-0745	21-Jun-2019	24-Jun-2019	29374 HR	29374 HR	Yes			Yes
MONITOR COMPARTMENT								
COPPER INCREASE MAY BE FROM HARMLESS OXIDATION. OTHER READINGS SHOW IMPROVEMENT. RESAMPLE IN 250 HOURS TO MONITOR.								

Wear Metals (ppm)															
Cu	Fe	Cr	Al	Pb	Sn	Si	Na	K	B	Mo	Ni	Ag	Ti	V	Mn
DA30-50106-0149	11	51	1	3	2	3	0	5	2	32	68	0	0	0	1
DA30-50013-0521	12	58	1	4	6	2	0	0	2	210	109	0	0	0	1
DA30-49316-0365	33	96	2	9	14	4	12	4	3	225	130	1	0	0	1
DA30-49175-0745	112	53	1	6	0	0	0	0	2	469	116	0	0	0	1
Oil Condition / Particle Count (ct/ml)															
ST	OXI	NT	SUL	W	A	F	V100								
DA30-50106-0149	36	16	10	20	N	N	13.3								
DA30-50013-0521	8	8	4	16	N	N	13.3								
DA30-49316-0365	52	19	10	22	N	N	13.7								
DA30-49175-0745	46	19	9	25	N	N	14.6								

Ag = Silver, Al = Aluminum, B = Boron, Ca = Calcium, Cr = Chromium, Cu = Copper, Fe = Iron, P = Phosphorus, K = Potassium, Li = Lithium, Mg = Magnesium, Mo = Molybdenum, Na = Sodium, Ni = Nickel, Pb = Lead, Si = Silicon, Sn = Tin, S = Sulfur, V = Vanadium, Zn = Zinc, A = Antifreeze, F = Fuel, W = Water, P = Positive, N = Negative, T = Trace, E = Excessive, OXI = Oxidation, ST = Soot, SUL = Sulfation, ISO = ISO Rating, PFC = Percent Fuel Content, PCI = Particle Quantifying Index, NaW = Salt Water, FL Pt = Flash Point, TAN = Total Acid Number, TBN = Total Base Number, H2O = Karl Fisher result, V100 = Viscosity@100C, V40 = Viscosity@40C, PVI = Particle Volume Indicator

Notice: This analysis is intended as an aid in predicting mechanical wear. No guarantee, expressed or implied, is made against failure of this piece of equipment or a component thereof.

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FAX: 205-553-3099
 PHONE: 205-554-1550
 SAMPLE TYPE: **OIL**
 SAMPLE SHIP TIME (days): 6

COMPANY NAME: SOUTHLAND RESOURCES INC
 CUSTOMER EQUIP NUM: 1P5709
 COMPARTMENT NAME: HYDRAULIC SYSTEM
 SERIAL NUMBER: 7P200982
 MANUFACTURER: CATERPILLAR
 MODEL: D11R
 JOB SITE: SHANNON PT #2
 EXT WARR NUMBER:

SHOP JOB NUM:
 COMP SERIAL NUM:
 COMPARTMENT MODEL:
 COMP MANUFACTURER:
 SAMPLE LABEL NUM: P
 FLUID BRAND/WEIGHT: 10W
 FLUID TYPE:
 EXT WARR EXPIRE DATE:
 FUEL CONSUMED:

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LAB CONTROL NUMBER	SAMPLE DATE	PROCESS DATE	EQUIPMENT METER	METER ON FLUID	FLUID CHANGED	MAKE UP FLUID	MAKE UP FLUID UNITS	FILTER CHANGED
DA30-50106-0150	09-Apr-2020	15-Apr-2020	31357 HR	31357 HR	Yes			Yes
NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								
DA30-50013-0522	09-Jan-2020	13-Jan-2020	31013 HR	31013 HR	No			No
NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								
DA30-49316-0366	05-Nov-2019	12-Nov-2019	30481 HR	30481 HR	No			Yes
NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								

Wear Metals (ppm)																		
Cu	Fe	Cr	Al	Pb	Sn	Si	Na	K	B	Mo	Mn	Ag	Ti	V	Mn	Cd	Ca	Mg
1	4	0	3	0	0	0	5	1	8	3	0	0	0	0	0	0	1966	22
1	3	0	2	1	0	0	1	0	6	2	0	0	0	0	0	0	2316	16
5	3	0	3	0	2	7	4	1	2	0	1	0	0	0	0	0	2368	8
																	812	673

Oil Condition																		
Particle Count (ct/ml)	ST	OXI	NIT	SUL	W	A	V100	ISO	4u	6u	10u	14u	18u	21u	38u	50u		
DA30-50106-0150	0	5	4	13	N	N	7.6	21/15/12	10493	302	43	21	13	9	4	3		
DA30-50013-0522	0	5	4	14	N	N	8.0	20/15/12	5160	257	55	22	10	7	2	1		
DA30-49316-0366	0	5	4	13	N	N	7.3	22/20/15	33967	8142	1064	232	68	37	7	3		

Ag = Silver, Al = Aluminum, B = Boron, Ca = Calcium, Cr = Chromium, Cu = Copper, Fe = Iron, P = Phosphorus, K = Potassium, Li = Lithium, Mg = Magnesium, Mo = Molybdenum, Na = Sodium, Ni = Nickel, Pb = Lead, Si = Silicon, Sn = Tin, S = Sulfur, V = Vanadium, Zn = Zinc, A = Antifreeze, F = Fuel, W = Water, P = Positive, N = Negative, T = Trace, E = Excessive, NIT = Nitration, OXI = Oxidation, ST = Soot, SUL = Sulfation, ISO = ISO Rating, PFC = Percent Fuel Content, PCI = Particle Counting Index, NaW = Salt Water, FL Pt = Flash Point, TAN = Total Acid Number, TBN = Total Base Number, H2O = Karl Fisher result, V100 = Viscosity@100C, V40 = Viscosity@40C, PVI = Particle Volume Indicator

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COMPANY NAME : SOUTHLAND RESOURCES INC
 CUSTOMER EQUIP NUM : TP5709
 COMPARTMENT NAME : TRANSMISSION POWER SHIFT
 SERIAL NUMBER : 7P200982
 MANUFACTURER : CATERPILLAR
 MODEL : D11R
 JOB SITE : SHANNON PT #2
 EXT WARR NUMBER :
 SAMPLE TYPE : OIL
 PHONE: 205-554-1550
 FAX: 205-553-3099
 SAMPLE SHIP TIME (days) : 6
 EXT WARR EXP. DATE :
 FUEL CONSUMED :



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LAB CONTROL NUMBER	SAMPLE DATE	PROCESS DATE	EQUIPMENT METER	METER ON FLUID	FLUID CHANGED	MAKE UP FLUID	MAKE UP FLUID UNITS	FILTER CHANGED
D430-50106-0151	09-Apr-2020	15-Apr-2020	31367 HR	876 HR	Yes			Yes
No Action Required NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
D430-49316-0367	05-Nov-2019	12-Nov-2019	30481 HR	30481 HR	Yes			Yes
Action Required ELEVATED COPPER AND IRON. DETERMINE HOURS ON THIS OIL. THIS OIL CHANGE SHOULD REMOVE BUILD-UP. RESAMPLE AND INSPECT FILTER IN 125 HOURS TO MONITOR.								

Wear Metals (ppm)	Cu	Fe	Cr	Al	Pb	Sn	Si	Na	K	B	Mo	Ni	Ag	Ti	V	Mn	Cd	Ca	Mg	Zn	P	Ba
D430-50106-0151	24	17	0	1	10	1	0	5	1	6	2	0	0	0	0	0	0	2506	24	978	812	0
D430-49316-0367	160	60	0	1	52	1	6	4	1	6	2	2	0	0	0	1	0	3413	14	992	849	0

Oil Condition Particle Count (ct/ml)	ST	OXI	NT	SUL	W	A	V100	ISO	4µ	6µ	10µ	14µ	18µ	21µ	30µ	50µ
D430-50106-0151	0	5	5	14	N	N	11.6	22/19/14	23503	4056	507	117	42	25	6	4
D430-49316-0367	0	8	5	15	N	N	11.6	23/21/13	54600	11917	294	61	26	14	3	2

Ag = Silver, Al = Aluminum, B = Boron, Ca = Calcium, Cr = Chromium, Cu = Copper, Fe = Iron, P = Phosphorus, K = Potassium, Li = Lithium, Mg = Magnesium, Mo = Molybdenum, Na = Sodium, Ni = Nickel, Pb = Lead, Si = Silicon, Sn = Tin, S = Sulfur, V = Vanadium, Zn = Zinc, A = Antifreeze, F = Fuel, W = Water, P = Positive, N = Negative, T = Trace, E = Excessive, NIT = Nitration, OXI = Oxidation, ST = Soot, SUL = Sulfation, ISO = ISO Rating, PFC = Percent Fuel Content, PQL = Particle Quantity Index, NaW = Salt Water, FL Pt = Flash Point, TAN = Total Acid Number, H2O = Karl Fisher result, V100 = Viscosity@100C, V40 = Viscosity@40C, PVI = Particle Volume Indicator

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COTTONDALE, AL 35453

MODEL: D11R

1000

SAMPLE SHIP TIME (days):

EXP. WORK ENGINE DATE: _____

FUEL CONSUMED -

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.com

LAB CONTROL NUMBER	SAMPLE DATE	PROCESS DATE	EQUIPMENT METER	METER ON FLUID	FLUID CHANGED	MAKE UP FLUID	MAKE UP FLUID UNITS	FILTER CHANGED
D430-50106-0153	09-Apr-2020	15-Apr-2020	31357 HR	876 HR	Yes			Yes
NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
No Action Required								
D430-49316-0369	05-Nov-2019	12-Nov-2019	30481 HR	30481 HR	Yes			Yes
ELEVATED IRON HERE. INSPECT MAGNETIC PLUG. IF NO LARGE METAL PARTICLES, CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
Monitor Compartment								

Wear Metals (ppm)	Cu																					
	Fe	Cr	Al	Pb	Sn	Si	Na	K	B	Mo	Ni	Ag	Ti	V	Mn	Cd	Ca	Mg	Zn	P	Ba	
D430-50106-0153	3	53	1	5	0	1	1	3	3	4	2	3	0	0	1	0	2728	14	986	834	0	
D430-49316-0369	39	406	5	6	8	0	27	9	1	63	0	15	0	0	5	0	1577	8	448	530	0	

Particle Count (cl/ml)	Oil Condition /														
	ST	OXD	NT	SUL	W	V100	ISO	4μ	6μ	10μ	14μ	18μ	21μ	38μ	50μ
D430-50105-0153	0	5	6	14	N	17.9	23/22/14	63547	22016	659	96	39	23	5	2
D430-49316-0369	0	9	6	15	N	19.0	23/22/15	73196	37278	1758	167	61	34	5	2

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PO BOX 770
COTTONDALE, AL 35463

FAX: 205-553-3099
 PHONE: 205-554-1550
 SAMPLE TYPE: **OIL**
 SAMPLE SHIP TIME (days): 6

COMPANY NAME: SOUTHLAND RESOURCES INC
 CUSTOMER EQUIP NUM: TP5709
 COMPARTMENT NAME: FINAL DRIVE REAR LEFT
 SERIAL NUMBER: 7PZ00982
 MANUFACTURER: CATERPILLAR
 MODEL: D11R
 JOB SITE: SHANNON PIT #2
 EXT WARR NUMBER:
 SHOP JOB NUM:
 COMP SERIAL NUM:
 COMPARTMENT MODEL:
 COMP MANUFACTURER:
 SAMPLE LABEL NUM: P
 FLUID BRAND/WEIGHT: 60
 FLUID TYPE:
 EXT WARR EXPIRE DATE:
 FUEL CONSUMED:

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LAB CONTROL NUMBER	SAMPLE DATE	PROCESS DATE	EQUIPMENT METER	METER ON FLUID	FLUID CHANGED	MAKE UP FLUID	MAKE UP FLUID UNITS	FILTER CHANGED
D430-50106-0152	09-Apr-2020	15-Apr-2020	31357 HR	876 HR	Yes			Yes
No Action Required NORMAL WEAR METAL READINGS. NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								
D430-49316-0368	05-Nov-2019	12-Nov-2019	30481 HR	30481 HR	Yes			Yes
No Action Required NO PROBLEMS PRESENTLY ASSOCIATED WITH THIS SAMPLE. CONTINUE SAMPLING AT THE NORMAL INTERVAL.								

Wear Metals (ppm)																
Cu	Fe	Cr	Al	Pb	Sn	Si	Na	K	B	Mo	Ni	Ag	Ti	V	Mn	Cd
3	26	1	1	1	0	0	5	1	4	2	2	0	0	0	0	2637
17	210	3	4	3	0	25	8	1	52	1	8	0	0	0	2	1914
																10
																575
																584
																0

Oil Condition: Particle Count (cc/ml)																
ST	OXI	NTT	SUL	W	V100	ISO	4μ	6μ	10μ	14μ	18μ	21μ	38μ	50μ		
0	5	6	14	N	17.1	23/21/15	59940	18391	1005	201	77	46	6	2		
0	8	5	15	N	19.3	23/22/15	65082	30286	1726	193	61	35	7	4		

Ag = Silver, Al = Aluminum, B = Boron, Ca = Calcium, Cr = Chromium, Cu = Copper, Fe = Iron, P = Phosphorus, K = Potassium, Li = Lithium, Mg = Magnesium, Mo = Molybdenum, Na = Sodium, Ni = Nickel, Pb = Lead, Si = Silicon, Sn = Tin, S = Sulfur, V = Vanadium, Zn = Zinc, A = Antifreeze, F = Fuel, W = Water, P = Positive, N = Negative, T = Trace, E = Excessive, NT = Nitration, OXI = Oxidation, ST = Soot, SUL = Sulfation, ISO = ISO Rating, PFC = Percent Fuel Content, PFI = Particle Quantifying Index, NAW = Sulf Water, FL = Flash Point, TAN = Total Acid Number, TBN = Total Base Number, H2O = Karl Fisher result, V100 = Viscosity@100C, V40 = Viscosity@40C, PVI = Particle Volume Indicator

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