

## VOLVO A40G 342253

Wet Disc Brake

MOBIL MOBILFLUID 424 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

V	N	F	Δ	R
		-		

The copper level is abnormal. All other component wear rates are normal.

## CONTAMINATION

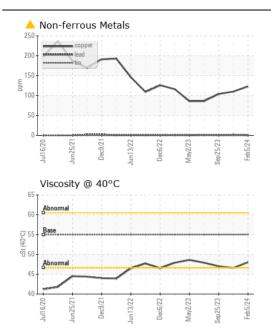
There is no indication of any contamination in the oil.

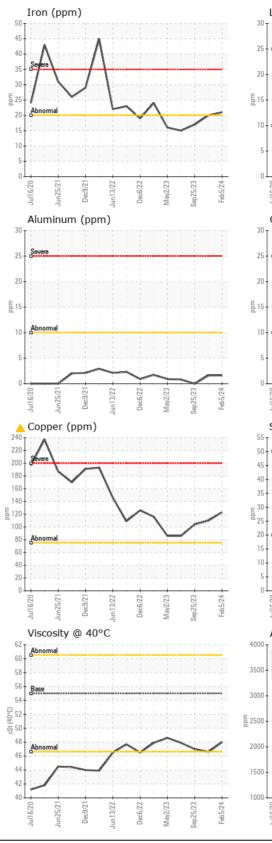
## FLUID CONDITION

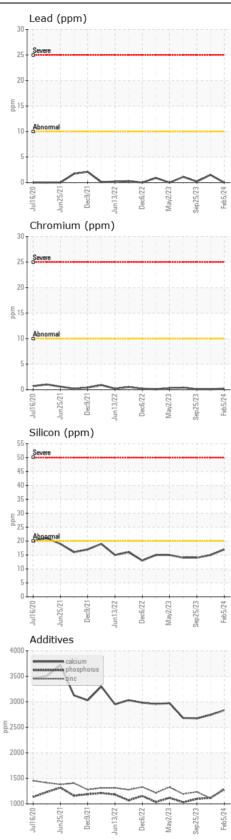
The condition of the oil is acceptable for the time in service.

Sample DateClient Info05 Feb 202406 Dec 202325 Sep 2023Machine AgehrsClient Info111961094910423Oil AgehrsClient Info215019031377Filter AgehrsClient Info000Oil ChangedClient InfoChangedNot ChangedNot ChangedFilter ChangedClient InfoChangedChangedChangedSample StatusClient InfoABNORMALABNORMALABNORMALIronppmASTM D5185m>20212017ChromiumppmASTM D5185m>10<1<1<1NickelppmASTM D5185m>10323TitaniumppmASTM D5185m>10320AuminumppmASTM D5185m>10000AuminumppmASTM D5185m>102<11104TinppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>201101ValueNORE	<u>L</u> )						
Sample DateClient Info05 Feb 202406 Dec 202225 Sep 2023Machine AgehrsClient Info111961094910423Oil AgehrsClient Info215019031377Filter AgehrsClient Info000Oil ChangedClient InfoChangedNot ChangedChangedFilter ChangedClient InfoChangedNot ChangedChangedSample StatusClient InfoChangedABNORMALABNORMALIronppmASTM D5185>202212017ChromiumppmASTM D5185>10c1<1<1NickelppmASTM D5185>10323TitaniumppmASTM D5185>10000AluminumppmASTM D5185>10020LeadppmASTM D5185>10000VanadiumppmASTM D5185>10000VanadiumppmASTM D5185>10000VanadiumppmASTM D5185>20171514PotassiumppmASTM D5185>20171514PotassiumppmASTM D5185>20171514PotassiumppmASTM D5185>20171514PotassiumppmASTM D5185>20171514Potassiumppm </th <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Into111961094910423Oil AgehrsClient Info215019031377Filter AgehrsClient Info000Oil ChangedClient InfoChangedNot ChangedChangedFilter ChangedClient InfoChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedSample StatusSample StatusASTM D5185m20212017IronppmASTM D5185m210<1<1<1NickelppmASTM D5185m10323TitaniumppmASTM D5185m102200LeadppmASTM D5185m10220LeadppmASTM D5185m10000VanadiumppmASTM D5185m10000VanadiumppmASTM D5185m2011000VanadiumppmASTM D5185m201101VaterWC Method2.1NONENONENONENONESiliconppmASTM D5185m201101VaterWC Method0.1NORENONENONENONESiliconppmASTM D5185m201101VaterWC Method0.1NORENONENONESiliconppmASTM D518	Sample Number		Client Info		VCP441985	VCP442854	VCP392532
Oil AgehrsClient Info215019031377Filter AgehrsClient Info000Oil ChangedClient InfoChangedNot ChangedNot ChangedFilter ChangedOClient InfoChangedChangedChangedSample StatusClient InfoChangedChangedAstNorMALIronppmASTM D5185m>2002120017ChromiumppmASTM D5185m>1004<	Sample Date		Client Info		05 Feb 2024	06 Dec 2023	25 Sep 2023
Filter AgehrsClient Info000Oil ChangedClient InfoChangedNot ChangedNot ChangedFilter ChangedClient InfoChangedChangedChangedSample StatusABNORMALABNORMALABNORMALABNORMALIronppmASTM D5185m>20212017ChromiumppmASTM D5185m>10323TitaniumppmASTM D5185m>10323TitaniumppmASTM D5185m10220LeadppmASTM D5185m>1002<1CopperppmASTM D5185m>10000VanadiumppmASTM D5185m>100<10White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>20171514PotassiumppmASTM D5185m>20171514PotassiumppmASTM D5185m>201001WaterwC Method0.1NORENONENONENONESoliconppmASTM D5185m>201101Qatar*VisualNONENONENONENONENONESoliconppmASTM D5185m>201601Qatar*VisualNONENONENONENONESoliconppm <th>Machine Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>11196</th> <th>10949</th> <th>10423</th>	Machine Age	hrs	Client Info		11196	10949	10423
Oli Changed Filter ChangedClient InfoChanged ChangedNot Changed Changed Changed Changed Changed ASTM D5185m S10AbNORMAL ABNORMAL ABNORMALNot Changed Changed ABNORMAL ABNORMAL ABNORMALIronppmASTM D5185m S10212017ChromiumppmASTM D5185m S10323TitaniumppmASTM D5185m S10323TitaniumppmASTM D5185m S101020AluminumppmASTM D5185m S1010210LeadppmASTM D5185m S1010000VanadiumppmASTM D5185m S1010000VanadiumppmASTM D5185m S101001010White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m S20171514PotassiumppmASTM D5185m S20171514PotassiumppmASTM D5185m S2010NONENONESoliconppmASTM D5185m S20171514PotassiumppmASTM D5185m S20171514PotassiumppmASTM D5185m S2010NONENONESoliconppmASTM D5185m S20171514PotassiumppmASTM D5185m S2010NONENONESodium <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>2150</th> <th>1903</th> <th>1377</th>	Oil Age	hrs	Client Info		2150	1903	1377
Filter Changed Client Info Changed Ch	Filter Age	hrs	Client Info		0	0	0
Sample StatusABNORMALABNORMALABNORMALABNORMALIronppmASTM D5185m>20212017ChromiumppmASTM D5185m>10323TitaniumppmASTM D5185m>10323TitaniumppmASTM D5185m>10323SilverppmASTM D5185m>10220LeadppmASTM D5185m>1002<1CopperppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>20171514PotassiumppmASTM D5185m>20171514PotassiumppmASTM D5185m>201101WaterWC Method>.0.1NONENONENONENONESiliconppmASTM D5185m>201101Debrisscalar*VisualNONENONENONENONESilitscalar*VisualNORNORMNORMNORMAppearancescalar*VisualNORNORMNORMNORMAppearancescalar*VisualNORNORMNORMNORM <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th>Not Changd</th> <th>Not Changd</th>	Oil Changed		Client Info		Changed	Not Changd	Not Changd
IronppmASTM D5185m< >20212017ChromiumppmASTM D5185m>10<	Filter Changed		Client Info		Changed	Changed	Changed
Chromium   ppm   ASTM D5185m   >10   <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Chromium   ppm   ASTM D5185m   >10   <1					• ·		
Nickel   ppm   ASTM D5185m   >10   3   2   3     Titanium   ppm   ASTM D5185m    <1   <1   <1     Silver   ppm   ASTM D5185m   >10   2   2   0     Aluminum   ppm   ASTM D5185m   >10   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   <123   <104   104     Tin   ppm   ASTM D5185m   >10   0   <1   0   0     Vanadium   ppm   ASTM D5185m   >20   17   15   14     Tin   ppm   ASTM D5185m   >20   17   15   14     Valow   MONE   NONE   NONE   NONE   NONE   NONE     Silicon   ppm   ASTM D5185m   20	-						
Titanium   ppm   ASTM D5185m   <1							
Silver   ppm   ASTM D5185m   0   0   0     Aluminum   ppm   ASTM D5185m   >10   2   2   0     Lead   ppm   ASTM D5185m   >10   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   0   0   0     Vanadium   ppm   ASTM D5185m   >10   0   <110   104     Vanadium   ppm   ASTM D5185m   >10   0   <110   0     White Metal   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Yellow Metal   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Silicon   ppm   ASTM D5185m<>20   17   15   14   1     Water   WC Method   >0.1   NORE   NORE   NORE   NORE     Sand/Dirt   scalar   *Visual   NORE   NORE   NORE   NORE     Appearance   scal				>10	-		
Aluminum   ppm   ASTM D5185m   >10   2   2   0     Lead   ppm   ASTM D5185m   >10   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   0   2   <1     Copper   ppm   ASTM D5185m   >10   0   0   0   0     Vanadium   ppm   ASTM D5185m   >10   0   <10   0   0     White Metal   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Yellow Metal   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Silicon   ppm   ASTM D5185m<>20   17   15   14     Potassium   ppm   ASTM D5185m   >20   1   0   1     Water   wC Method   >0.1   NEG   NORE   NORE   NORE     Debris   scalar   *Visual   NORE   NORE   NORE   NORML   NORML							
Lead   ppm   ASTM D5185m   >10   0   2   <1					-		
Copper   ppm   ASTM D5185m   >75   ▲ 123   ▲ 110   ▲ 104     Tin   ppm   ASTM D5185m   >10   0   0   0     Vanadium   ppm   ASTM D5185m   >10   0   <1   0     White Metal   scalar   *Visual   NONE   NONE   NONE   NONE     Yellow Metal   scalar   *Visual   NONE   NONE   NONE   NONE     Silicon   ppm   ASTM D5185m<>20   17   15   14     Potassium   ppm   ASTM D5185m<>20   1   0   1     Water   WC Method   >0.1   NEG   NEG   NEG     Silt   scalar   *Visual   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE   NORML   NORML     Appearance   scalar   *Visual   NORML   NORML   NORML   NORML   NORML     Emulsified Water   scalar   *Visua							÷
Tin   ppm   ASTM D5185m   >10   0   0   0     Vanadium   ppm   ASTM D5185m   NONE   NORE   <					-		
Vanadium   ppm   ASTM D5185m   0   0   <1					-		
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>20171514PotassiumppmASTM D5185m>20101WaterWC Method>0.1NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORNORENONENONEAppearancescalar*VisualNORNORMLNORMLNORMLOdorscalar*VisualNORHNORMLNORMLNORMLOdorscalar*VisualNORNORMLNORMLNORMLBoronppmASTM D5185m0301BoronppmASTM D5185m12011MolybdenumppmASTM D5185m<				>10		÷	
Yellow Metal   scalar   *Visual   NONE   NONE   NONE   NONE     Silicon   ppm   ASTM D5185m   >20   17   15   14     Potassium   ppm   ASTM D5185m   >20   1   0   1     Water   WC Method   >0.1   NEG   NEG   NEG     Silt   scalar   *Visual   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE   NONE   NONE     Sand/Dirt   scalar   *Visual   NONE   NORE   NONE   NONE   NONE     Appearance   scalar   *Visual   NORM   NORML   NORML   NORML   NORML     Odor   scalar   *Visual   NOR   NORML   NORML   NORML   NORML     Emulsified Water   scalar   *Visual   >0.1   NEG   NEG   NEG     Sodium   ppm   ASTM D5185m   0   3   0   1					-		÷
SiliconppmASTM D5185m>20171514PotassiumppmASTM D5185m>20101WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBoronppmASTM D5185m030BariumppmASTM D5185m1201ManganeseppmASTM D5185m13010CalciumppmASTM D5185m283427432674PhosphorusppmASTM D5185m122611101234SulfurppmASTM D5185m122652395637		scalar			-		
PotassiumppmASTM D5185m>20101WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m030BariumppmASTM D5185m1201MolybdenumppmASTM D5185m<11<1<1MagnesiumppmASTM D5185m283427432674PhosphorusppmASTM D5185m122611101234SulfurppmASTM D5185m129611101234SulfurppmASTM D5185m129652395637	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m0301BariumppmASTM D5185m12011MolybdenumppmASTM D5185m<1301010CalciumppmASTM D5185m283427432674PhosphorusppmASTM D5185m122611101234JincppmASTM D5185m523956371110	Silicon	ppm	ASTM D5185m	>20	17	15	14
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m0301BoronppmASTM D5185m12011MolybdenumppmASTM D5185m12011ManganeseppmASTM D5185m<11301010CalciumppmASTM D5185m283427432674PhosphorusppmASTM D5185m122611101234SulfurppmASTM D5185m52395637	Potassium	ppm	ASTM D5185m	>20	1	0	1
Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m0301BoronppmASTM D5185m12011MolybdenumppmASTM D5185m12011MagnesiumppmASTM D5185m1301010CalciumppmASTM D5185m283427432674PhosphorusppmASTM D5185m129611101234ZincppmASTM D5185m725452395637	Water		WC Method	>0.1	NEG	NEG	NEG
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m0300BoronppmASTM D5185m869879BariumppmASTM D5185m1201MolybdenumppmASTM D5185m<11<1<1MagnesiumppmASTM D5185m13010CalciumppmASTM D5185m12742674PhosphorusppmASTM D5185m127611101234SulfurppmASTM D5185m52395637	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m03030BoronppmASTM D5185m12011MolybdenumppmASTM D5185m12011ManganeseppmASTM D5185m1301010CalciumppmASTM D5185m1283427432674PhosphorusppmASTM D5185m129611101234ZincppmASTM D5185m129611101234SulfurppmASTM D5185m52395637	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m03030BoronppmASTM D5185m86987931BariumppmASTM D5185m12011111MolybdenumppmASTM D5185m<<1<1<11	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water   scalar   *Visual   >0.1   NEG   NEG   NEG     Sodium   ppm   ASTM D5185m   0   3   0     Boron   ppm   ASTM D5185m   86   98   79     Barium   ppm   ASTM D5185m   12   0   1     Molybdenum   ppm   ASTM D5185m   <1   <1   <1     Manganese   ppm   ASTM D5185m   <13   0   10     Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1277   1118   1096     Sulfur   ppm   ASTM D5185m   1296   1110   1234	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium   ppm   ASTM D5185m   0   3   0     Boron   ppm   ASTM D5185m   86   98   79     Barium   ppm   ASTM D5185m   12   0   1     Molybdenum   ppm   ASTM D5185m   <1   <1   <1     Manganese   ppm   ASTM D5185m   <1   <1   <1     Magnesium   ppm   ASTM D5185m   13   0   10     Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   5239   5637	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron   ppm   ASTM D5185m   86   98   79     Barium   ppm   ASTM D5185m   12   0   1     Molybdenum   ppm   ASTM D5185m   <1   <1   <1     Manganese   ppm   ASTM D5185m   <1   <1   <1     Magnesium   ppm   ASTM D5185m   13   0   10     Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   5239   5637	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Boron   ppm   ASTM D5185m   86   98   79     Barium   ppm   ASTM D5185m   12   0   1     Molybdenum   ppm   ASTM D5185m   <1   <1   <1     Manganese   ppm   ASTM D5185m   <1   <1   <1     Magnesium   ppm   ASTM D5185m   <13   0   10     Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   5239   5637	Sodium	ppm	ASTM D5185m		0	3	0
Molybdenum   ppm   ASTM D5185m   <1	Boron		ASTM D5185m		86	98	79
Manganese   ppm   ASTM D5185m   <1	Barium	ppm	ASTM D5185m		12	0	1
Magnesium   ppm   ASTM D5185m   13   0   10     Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   7254   5239   5637	Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Calcium   ppm   ASTM D5185m   2834   2743   2674     Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   7254   5239   5637	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus   ppm   ASTM D5185m   1277   1118   1096     Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   7254   5239   5637	Magnesium	ppm	ASTM D5185m		13	0	10
Zinc   ppm   ASTM D5185m   1296   1110   1234     Sulfur   ppm   ASTM D5185m   7254   5239   5637	Calcium	ppm	ASTM D5185m		2834	2743	2674
Sulfur   ppm   ASTM D5185m   7254   5239   5637	Phosphorus	ppm	ASTM D5185m		1277	1118	1096
	Zinc	ppm	ASTM D5185m		1296	1110	1234
Visc @ 40°C cSt ASTM D445 55 48.0 46.6 47.0	Sulfur	ppm	ASTM D5185m		7254	5239	5637
	Visc @ 40°C	cSt	ASTM D445	55	48.0	46.6	47.0

Contact/Location: SCOTT ARMSTRONG - SCHGRE









: WearCheck USA - 501 Madison Ave., Cary, NC 27513 SCHILDBERG CONSTRUCTION COMPANY Laboratory : VCP441985 : 14 Feb 2024 PO BOX 358 Sample No. Received GREENFIELD, IA Lab Number : 06089147 Tested : 15 Feb 2024 Unique Number : 10876592 : 16 Feb 2024 - Jonathan Hester US 50849 Diagnosed Test Package : MOB 1 Contact: SCOTT ARMSTRONG Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. sarmstrong@schildberg.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (641)743-8237 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (641)743-2486

Contact/Location: SCOTT ARMSTRONG - SCHGRE