Test Method D7452
Report Forms
L-42

Version: L42 VERSION 20210514
Conducted For:
TSTSPON1
TSTSPON2

LABVALID	V = Valid
	I = Invalid
	N = Results Cannot Be Interpreted (See Comment Section)

TSTOIL	NR = Non-Reference Test Oil
	RO = Reference Oil Result

Test Number			
Test Stand: STAND		Stand Run Number: STRUN	
Date Completed: DTCOMP		EOT Time: EOTTIME	
Oil Code: OILCODE			
Formulation/Stand Code: FORM			
Alternate Codes:	ALTCODE1	ALTCODE2	ALTCODE3
Test Version [A:]	TVERSION		

In my opinion this test OPVALID been conducted in a valid manner in accordance with Test Method D7452 and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.

[A] Standard or Canadian

Submitted By:

SUBLAB
Testing Laboratory

SUBSIGIM
Signature

SUBNAME
Typed Name

SUBTITLE
Title

SUBSECT
Section

Test Method D7452
L-42
Form 1
Test Result Summary

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN	TMC Oil Code (reference only): IND
Oil Code: OILCODE			Lab Oil Code: LABOCODE

TYPE

Test Date Started	Test Date Completed	Drive Side Scoring (%)		Coast Side Scoring (%)			Coast Side Torque (lbf-ft)	
		EOT Pinion	EOT Ring	EOT Pinion	EOT Ring	Shock Series 1 Ring	Shock Series 1 (Average)	Shock Series 2 (Average)
DTSTRT	DTCOMP	EOTDSP	EOTDSR	ECSPFNL	ECSRFNL	SS1RFNL	SS1CSTA	SS2CSTA

Conditioning 2 Test Time: C2TT	Conditioning 4 Test Time: C4TT	End of Test Time: EOTTIME / Total Test Minutes: TESTLEN
Ring Batch: RINGBAT	Pinion Batch: PINBAT	Latest Information Letter Run Against: INFOLETN

Stand Reference Oil Test History In Chronological Order

	Test Date Started	Test Date Completed	Stand Run No.	CMIR No.	TMC Oil No.	Drive Side Scoring (%)		Coast Side Scoring (%)			Coast Side Torque (lbf-ft)	
						EOT Pinion	EOT Ring	EOT Pinion	EOT Ring	Shock Series 1 Ring	Shock Series 1 (Average)	Shock Series 2 (Average)
Discrimination [A]	DTSTRTD	DTCOMPD	STRUND	CMIRD	INDD	EDSPFNL	EDSRFN	ECSPFN	ECSRFN	SS1RFNL	SS1CSTAD	SS2CSTAD
Calibration Sequence Passing Tests Only [B]	STRTR001	COMPR001	STDRR001	CMIRR001	TMCNR00	EDSPR00	EDSRR0(	ECSPR(	ECSRR(	SS1RR001	SS1TR001	SS2TR001
	STRTR002	COMPR002	STDRR002	CMIRR002	TMCNR00	EDSPR00	EDSRR0(	ECSPR(	ECSRR(	SS1RR002	SS1TR002	SS2TR002
	STRTR003	COMPR003	STDRR003	CMIRR003	TMCNR00	EDSPR00	EDSRR0(	ECSPR(	ECSRR(	SS1RR003	SS1TR003	SS2TR003
Passing Reference Oil Test Average								ECSPAV	ECSRAV	SS1SRAV	SS1TAVG	SS2TAVG

[A] Only for non-reference tests.
[B] For non-reference and discrimination tests only.

Test Method D7452
L-42
Form 2
Conditioning Phase Operational Data Summary

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oil Code: OILCODE		

Operational Data				
	Conditioning 1		**Conditioning 3**	
	Wheel Speed (r/min)	Torques (lbf-ft)	Wheel Speed (r/min)	Torques (lbf-ft)
Maximum	C1WSPX	C1TORQX	C3WSPX	C3TORQX
Minimum	C1WSPI	C1TORQI	C3WSPI	C3TORQI
Average	C1WSPA	C1TORQA	C3WSPA	C3TORQA

Operational Data					
		Conditioning 2		**Conditioning 4**	
		Wheel Speed (r/min)	Torques (lbf-ft)	Wheel Speed (r/min)	Torques (lbf-ft)
Drive Side	Maximum	C2DSWSX	C2DSTX	C4DSWSX	C4DSTX
	Minimum	C2DSWSI	C2DSTI	C4DSWSI	C4DSTI
	Average	C2DSWSA	C2DSTA	C4DSWSA	C4DSTA
Coast Side	Maximum	C2CSWSX	C2CSTX	C4CSWSX	C4CSTX
	Minimum	C2CSWSI	C2CSTI	C4CSWSI	C4CSTI
	Average	C2CSWSA	C2CSTA	C4CSWSA	C4CSTA

Lubricant Temperature Data				
Phase	Specification	Average	Minimum	Maximum
Gear Conditioning (After reaching 215 ºF)	225 ± 10 ºF	GCOILTA	GCOILTI	GCOILTX

Percent Deviation						
	Entire Conditioning Phase		Conditioning Phase 1		Conditioning Phase 3	
Parameter	Limits	% Out	Limits	% Out	Limits	% Out
Axle Oil Temp.	5.0%	ATEMPOUT				
Axle r/min			5.0%	ASPDOUT1	5.0%	ASPDOUT3
Pinion Torque			5.0%	TORQOUT1	5.0%	TORQOUT3

Test Method D7452
L-42
Form 3
Shock Series Operational Summary

Lab: LAB	Stand No.: STAND	Stand Run No: STRUN
Oilcode: OILCODE		

Stand Set-up				
	Shock Series 1		**Shock Series 2**	
Parameter	Acceleration	Deceleration	Acceleration	Deceleration
Potentiometer Setting	POTACSS1	POTDESS1	POTACSS2	POTDESS2
Stand Set-up Version	SSUV			

Gear Loading Data							
		Shock Series 1			**Shock Series 2**		
Gear Side		Wheel Speed (r/min)	Torques (lbf-ft)	Cycle Time (Seconds)	Wheel Speed (r/min)	Torques (lbf-ft)	Cycle Time (Seconds)
Drive	Maximum	SS1DSWSX	SS1DSTX	SS1DSCTX	SS2DSWSX	SS2DSTX	SS2DSCTX
	Minimum	SS1DSWSI	SS1DSTI	SS1DSCTI	SS2DSWSI	SS2DSTI	SS2DSCTI
	Average	SS1DSWSA	SS1DSTA	SS1DSCTA	SS2DSWSA	SS2DSTA	SS2DSCTA
Coast	Maximum	SS1CSWSX	SS1CSTX	SS1CSCTX	SS2CSWSX	SS2CSTX	SS2CSCTX
	Minimum	SS1CSWSI	SS1CSTI	SS1CSCTI	SS2CSWSI	SS2CSTI	SS2CSCTI
	Average	SS1CSWSA	SS1CSTA	SS1CSCTA	SS2CSWSA	SS2CSTA	SS2CSCTA

Lubricant Temperature Data			
Phase	Specification	Start Value	Maximum
Shock Series 1	SS1TSPEC	SS1OILTS	SS1OILTX
Shock Series 2	SS2TSPEC	SS2OILTS	SS2OILTX

Test Method D7452
L-42
Form 4
Measurement Summary

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oil Code: OILCODE		

Axle Codes				
Assembly Date	Match No.	Serial Number	Pinion Batch	Ring Batch
DTASSEM	MATCHNO	SERIALNO	PINBAT	RINGBAT

Contact Pattern Measurements			
		Drive Side	**Coast –Side**
Length Rating	As Received	DSCPLRAR	CSCPLRAR
	As Tested	DSCPLRAT	CSCPLRAT
Flank Rating	As Received	DSCPFRAR	CSCPFRAR
	As Tested	DSCPFRAT	CSCPFRAT
Contact Pattern Rater Initials		CPRATER	

Test Axle Build Data									
Backlash (in.)	**Mfg. Specification**	**Mfg. Measurement**	**Laboratory's Position Measurements**						
			1	2	3	4	Min	Max	Avg.
Initial	.004 -.012 in.	BKLSMFG	BKLSIN	BKLSIN	BKLSIN	BKLSIN	TABKL	TABKLIN	TABKLI
Final			BKLSFI	BKLSFN	BKLSFI	BKLSFN	TABKL	TABKLFI	TABKLI
Increase									TABKLI
Initial Pinion Torque (lbf -in)			Break	TAIPNTBK					
			Turn	TAIPNTTN					

Inspection	**Ring% Scoring**		**Pinion % Scoring**	
	Drive Side	Coast Side	Drive Side	Coast Side
Inspection 1	INS1DSRS	INS1CSRS		
Inspection 2	INS2DSRS	INS2CSRS		
EOT	EOTDSR	ECSR	EOTDSP	ECSP

EOT Rating Date	**EOT Rater Initials**	**Rater Calexp**
RATEDATE	RINIT	RCALEXP

Test Method D7452
L-42
Form 5
Downtime and Comments

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oil Code: OILCODE		

DWNOCR

Number of Downtime Occurrences			
Test Hours	**Date**	**Downtime**	**Reasons**
DOWNR001	DDATR001	DTIMR001	DREAR001
DOWNR002	DDATR002	DTIMR002	DREAR002
DOWNR003	DDATR003	DTIMR003	DREAR003
DOWNR004	DDATR004	DTIMR004	DREAR004
DOWNR005	DDATR005	DTIMR005	DREAR005
DOWNR006	DDATR006	DTIMR006	DREAR006
DOWNR007	DDATR007	DTIMR007	DREAR007
DOWNR008	DDATR008	DTIMR008	DREAR008
DOWNR009	DDATR009	DTIMR009	DREAR009
DOWNR010	DDATR010	DTIMR010	DREAR010
DOWNR011	DDATR011	DTIMR011	DREAR011
DOWNR012	DDATR012	DTIMR012	DREAR012
DOWNR013	DDATR013	DTIMR013	DREAR013
DOWNR014	DDATR014	DTIMR014	DREAR014
DOWNR015	DDATR015	DTIMR015	DREAR015
		TOTLDOWN	**Total Downtime (hours)**

Other Comments		
Number of Comment Lines	TOTCOM	
OCOMR001		
OCOMR002		
OCOMR003		
OCOMR004		
OCOMR005		
OCOMR006		
OCOMR007		
OCOMR008		
OCOMR009		
OCOMR010		
OCOMR011		
OCOMR012		
OCOMR013		
OCOMR014		
OCOMR015		

Test Method D7452
L-42
Form 5A
Downtime and Comments

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

Number of Downtime Occurrences		DWNOCR	
Test Hours	**Date**	**Downtime**	**Reasons**
DOWNR016	DDATR016	DTIMR016	DREAR016
DOWNR017	DDATR017	DTIMR017	DREAR017
DOWNR018	DDATR018	DTIMR018	DREAR018
DOWNR019	DDATR019	DTIMR019	DREAR019
DOWNR020	DDATR020	DTIMR020	DREAR020
DOWNR021	DDATR021	DTIMR021	DREAR021
DOWNR022	DDATR022	DTIMR022	DREAR022
DOWNR023	DDATR023	DTIMR023	DREAR023
DOWNR024	DDATR024	DTIMR024	DREAR024
DOWNR025	DDATR025	DTIMR025	DREAR025
DOWNR026	DDATR026	DTIMR026	DREAR026
DOWNR027	DDATR027	DTIMR027	DREAR027
DOWNR028	DDATR028	DTIMR028	DREAR028
DOWNR029	DDATR029	DTIMR029	DREAR029
DOWNR030	DDATR030	DTIMR030	DREAR030
		TOTLDOWN	**Total Downtime (hours)**

Other Comments		
Number of Comment Lines	TOTCOM	
OCOMR016		
OCOMR017		
OCOMR018		
OCOMR019		
OCOMR020		
OCOMR021		
OCOMR022		
OCOMR023		
OCOMR024		
OCOMR025		
OCOMR026		
OCOMR027		
OCOMR028		
OCOMR029		
OCOMR030		

Test Method D7452
L-42
Form 6

Conditioning Phase 1 & 2 – Wheel Speed vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

WSVSTC12

Test Method D7452
L-42
Form 7

Conditioning Phase 3 & 4 – Wheel Speed vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

WSVSTC34

Test Method D7452
L-42
Form 8

Shock Series 1 – Wheel Speed vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

WSVSTSS1

Test Method D7452
L-42
Form 9

Shock Series 2 – Wheel Speed vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

WSVSTSS2

Test Method D7452
L-42
Form 10

Conditioning Phase 1 & 2 – Pinion Torque vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTC12

Test Method D7452
L-42
Form 11

Conditioning Phase 3 & 4 – Pinion Torque vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTC34

Test Method D7452
L-42
Form 12

Conditioning Phase 2 – Pinion Torque vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTC2

Test Method D7452
L-42
Form 13

Conditioning Phase 4 – Pinion Torque vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTC4

Test Method D7452
L-42
Form 14

Shock Series 1 – Pinion Torque vs. Time (5 shocks)

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTSS1

Test Method D7452
L-42
Form 15

Shock Series 2 – Pinion Torque vs. Time (10 shocks)

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

PTVSTSS2

Test Method D7452
L-42
Form 16

Axle Oil Temperature vs. Time

Lab: LAB	Stand No.: STAND	Stand Run No.: STRUN
Oilcode: OILCODE		

AXOTIMG

Test Method D7452
L-42
Form 17

Test Result Worksheet

Lab: LAB	Stand: STAND	Stand Run : STRUN
Start Date: DTSTRT	Date Completed: DTCOMP	EOT Time: EOTTIME
TMC Oil Code: IND	Laboratory Oil Code: LABOCODE	
Oil Code: OILCODE		

	Coast Side Scoring	
	Pinion	**Ring**
Original Results (%)	ECSP	ECSR
Correction Factor	ECSPCF	ECSRCF
Final Result (%)	ECSPFNL	ECSRFNL