व्यावसायिक परीक्षण रिपोर्ट COMMERCIAL TEST REPORT (Initial) संख्या / No. : T-1134/1660/2018

माह / Month : February, 2018



SONALIKA INTERNATIONAL, DI - 47 RX 4WD WL TRACTOR



भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय (कृषि, सहकारिता एवं किसान कल्याण विभाग)

GOVERNMENT OF INDIA

MINISTRY OF AGRICULTURE AND FARMERS WELFARE

(DEPARTMENT OF AGRICULTURE, CO-OPERATION AND FARMERS WELFARE)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान ट्रैक्टर नगर, बुदनी (म.प्र.) ४६६ ४४५

CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE

(An ISO: 9001 - 2015 Certified Institute)

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SONALIKA INTERNATIONAL DI 47 RX 4WD WL TRACTOR Commercial (Initial)

Manufacturer : M/s. International Tractors Limited

Vill. Chak Gujran,

P.O. Piplanwala, Jalandhar Road,

Hoshiarpur - 146 022

(Punjab)

Test requested by (applicant) : The manufacturer

Selected for test by : Applicant

Place of running-in : At manufacturer's works

Duration of said running-in (h):

- Engine : 35 - Transmission : Nil

Method of Selection : The tractor was submitted directly by

the applicant for test. Hence method of

selection is not known.

1. SPECIFICATIONS

1.1 Tractor:

Make : Sonalika International Model : DI-47 RX 4WD WL

Variants, if any : None Brand name : RX

Type : Four Wheeled, Four Wheel Driven,

General Purpose Agricultural Tractor.

Year of manufacture : 2015

Chassis number : CZVDU531850S3

Country of Origin : INDIA

1.2 Engine:

Make : SONALIKA
Model : 3102 IL

Type : Four stroke, naturally aspirated, liquid

cooled, direct injection, diesel engine.

Serial number : 3102IL53K526638F5

Engine speed (Manufacturer's recommended production setting), (rpm):

- Maximum speed at no load,(rpm) : 2200 to 2400 - Low idle speed, (rpm) : 650 to 750 - Speed at max. torque, (rpm) : 1100 to 1300

Rated speed, (rpm):

- For PTO use : 2100 - For drawbar use : 2100

1.3 Cylinder & Cylinder Head:

Numbers : Three

Disposition : Vertical, inline Bore/stroke, (mm) : 102/118 (apa)

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Any marked wear of king pin bushes

Normal

Clearance between king pins and bushes,

Not Applicable

mm

Condition of bushes for front axle

Normal

Condition of seals for front axle assemblies

Normal

Any visual damage, pitting & chipping of front

None

axle transmission gear teeth Clearance between centre pin and bush, mm 0.15 to 0.17

Against discard limit of 1.00 mm

14.6 Steering system:

Visual condition of the components of

complete steering assembly

Normal

Starter motor & Alternator: 14.7

None

Presence of soil/oil in housing

Normal

Condition of bearings and other Components

15. ADJUSTMENTS, DEFECTS, BREAKDOWNS AND REPAIRS

	15. ADJUSTMENTS, DEFECTS, BIKE-1	Category of breakdown	Tractor run hours
S. No.	Adjustments/Defects/Breakdowns and repairs	3	4
	2		5.9
1.	During the break performance test, the 4WD and the break performance test, the threaded engaging lever was not working. Thereafter, the threaded engaging lever was not working the lever in working linkage of 4WD was adjusted to bring the lever in working		
	During the break performance the times of the lever was not working. Thereafter, the times engaging lever was not working. Thereafter, the times of engaging lever was not working bring the lever in working linkage of 4WD was adjusted to bring the lever in working condition and test conducted.		NS

condition and test conducted.

16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS Evaluative (mandatory) / Non-evaluation (Non-mandatory) parameter applicable for Qualifying Minimum (Non-evaluation (Non-mandatory) of IS: 12207-2014 for Qualifying Minimum (Non-evaluation (Non-mandatory) parameter applicable for Qualifying Minimum (Non-evaluation (Non-eval qualifying Minimum Performance criteria as per Clause-4 (Table-1) of IS: 12207-2014 for qualifying Minimum Performance criteria as per Subsidies/NABARD financia: Taginying Minimum Performance criteria as per Clause-4 (Table-1) of 15: 12207-2014 for acceptance of the tractor for the purpose of subsidies/NABARD financing are Summarized. 16.1

S	acceptance of the summarized as unde	Category (Evaluative	Requirements as per IS: 12207-2014	Values declared by the applicant(D)/ Requirement	As observed	meets the requirem ents (Yes/No.)
S. No.	Characteristic	/ NIOH		(R) 5	6	7
		Evaluative)	4			Vaa
1		3	to be	30.52 (D)	29.7	Yes
16.1.1	PTO Performance	:	Declared Will +10%			
a)	Maximum power	Evaluative	tolerance of: -5 / FTO tolerance of: -5 / FTO power > 26kW.			
	under 2 h test, (kW)	Evan	for PTO power for 27.5/+10% for power \le 26kW power \le do-	30.52 (D)	29.7	Yes
	(Natural ambient condition)	Non	power -do-	272 (D)	261	Yes
b)	Power at rated engine speed,	Evaluative	+ 5%	212 (5)		
	(kW)	Non	+ 570			
c)	Specific fuel	Evaluative		- PUDA	II Pag	je 39 of 49
	maximum power,		TOTING INSTI	TUTE - BOD.		
	(g/kWh)	1141	NG & TESTIN			
CENTR	AL FARM MACHIN	ERY TRAINI	NG & TESTING INSTI			

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				4	5	6	-	7
1		2	3	-	168 (D)	172.3	3	Yes
d)	Max	imum	Non	± 8%				
/	200000000000000000000000000000000000000	valent	Evaluative					
		kshaft torque,				07.0	_	Yes
	(Nm	2022		10 percent, min.	10 percent,	27.6	3	res
e)	_	k-up torque,	Non	10 percent,	min (R)			
<i>c)</i>	Date	k-up torque,	Evaluative	- 0				
100/01-01	perc	cent cimum operating	temperature	The declared value	132 (D)	105		Yes
	Iviax	imum operating	Non	should not exceed the	32			
	1)	Engine oil	Evaluative	should he specified by				
			LValuation	the oil company and the			- 1	
				the oil company and to observed value under observed value under				
			19	chould not exceed				
				Jaclaration.	118 (D)	107	'	Yes
			- Lativo	The declared value				
	2)	Coolant	Evaluative	should not exceed of				
	'	(water)		boiling temperature the				
		,		COULD otherwise				
				pressurized of otherwise and the observed value and the bigh ambient				
				l files.				
				exceed the declaration.		0.0	-	Yes
					2.61 (R)	0.2	0	163
			- 1:00	Not exceeding power	1% of SFC,	1		
g)	Enc	jine oil	Evaluative	SFC at ambient	max. (D)			
5,		sumption,		under high amount	BOSCH No.	0.2	4	Yes
		Wh)		conditions	5.2	pe		
	(9/10		Evaluative	Maximum coefficient of absorption metre or		met	er	
h)	Sm	oke level	Evaluati	1 2 2 DO: - CCH NO.				
	155500000			3.25 per metre 0. a.25 per BOSCH No. equivalent BOSCH value				
	1			equivalent BOSCH (to 5.2 or 75 Hatridge value 5.2 or 76 MVR)				
				INC DEL OIL	7.45 (D)	24.0	06	Yes
				tatic mass	17.15 (D)	2		
6.1.2	-	wbar performance	:	Minimum 65% of static real	18.10 (R)			
a)			Non	of tractor	Minimum			
-/	pull	. Hoct	Evaluative		12 5 12 6 12 6 12 6 12 6 12 6 12 6 12 6	19.9	01	Yes
	Corr	esponding to 15		tic mass	14.18 (D)	19.	91	100
	Derc	cent wheel slip,		Minimum 65% of static mass				
	(kN))	Evaluative	Minimum 65% of static index of tractor without ballast	14.18 (R)			
b)	May	imum drawbar	Evalua		Minimum			
	null	without ballast			24.41 (D)	25	.9	Yes
	COTT	esponding to 19		Minimum 80% of PTO power Minimum 80% of PTO power oferred in St. No. i) a) of PTO oferred in St. No. of tractors	24.41(0)			
	perd	cent wheel slip,		Minimum 80% of PTO power Minimum 80% of PTO power as referred in SI. No. i) a) of PTO as referred in SI. No. i) a) of PTO as referred in SI. No. i) a) of PTO as referred in SI. No. i) and SI. No. i) and SI. No. i) and SI. No. ii) and SI. No. ii) and SI. No. ii) and SI. No. iii) and SI. No. ii) and SI. No. ii) and SI. No. ii) and SI. No. iii) and SI. No. ii) and SI. No. iii) and SI. No. ii		-		
	(kN).		as reichance in caso >1500	23.8 (R)			
c)	Max	ximum drawbar	Evaluative	perform total static of PTO power	Minimum			
	pov	ver without		kg. Winderred in St. case of light			1	
	ball	last (kW).		as referred in St. to case of light as referred in case of light performance in case of light performance. Minimum 75% of weight tractors. Minimum 75% of weight tractors are referred in power as referred in power as referred in the power as refer				
				performance in Minimum 75% of weight tractors. Minimum 75% of the engine power as referred in the engine power as referred in the engine power as referred in the engine power as which do not				
					130 (D)	8	8	Yes
	1							
				The declared value should not exceed the maximum not exceed by oil				
				not expecified				
d)	Ma	ximum ::	Non	value mpany:			00 1	No
	tran	nsmission oil	Evaluative	mance: (KN):	16 (D)	12	.86	MO
	ten	perature (°C)	pump perfe	ormance of lift, (kN). minus	A SECOND SEC			
16.1.3	Da	nsmission oil operature (°C) wer lift and hydrau operatum lifting capace	lic punip	prmance: ne range of lift, (kN): Tolerance of minus 10%				
-1	Ma	vimum lifting capac	ity through	10%]		T		
	11	At hitch	Evaluative		HE BIID	IN	Pag	e 40 of 49
	1)	noints	Evalue	c INST	ITUIE - BOD			
		points		IING & TESTING INST				
			TRAIN	IING a				
CEA		ALLO	IERY TRAIN					
TIME	RAL	FARM MACHIN						
_								

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1	-	2	3	The lift capacity should	5 8 (D)	11.00	Yes
-	2)	With the	Evaluative	- Loast he 24 KU/PIU I			
	۷)	standard		LIM and it should be 21.3	6.99 (R)		1
		frame		- /- raing kW where the	Minimum		
1		Ilaillo		tractor is not provided			
				with a PTO shaft	50 (D)	65	No
			Non		30 (D)		11.0.12
b)	Max	imum drop in	Evaluative	The observed value	50 (R)		
	the	height of the	Evaluative	should not exceed 50	30 (11)		
	poin	t of application		mm			
1	of t	he force after					
	each	n 5 minutes					
1	inter	val for a total					_
	dura	ition of 30					
	min	ute, (mm)	-4 25 kmph:	- loce than	600 N on brake	pedal with	n road
6.1.4	Bra	ke performance	at 25 kmp	rce, equal to or less thar	, , , , , , , , , , , , , , , , , , , ,		
a)	Max	imum stopping d	istance at a	10	10 (R)	8.46	Yes
,	balla	ast, (111).	Evaluative		10 (R)	0	Yes
	1)	Cold brake	Evaluative	10		328	\\
	2)	Hot brake	Evaluativo	600	600 (R)	to	Yes
b)		imum force	Evaluative	900		331	
,	exe		Evaluative				
	brak	1 1 to					
	ach	eve a					-
	dec	eleration of 2.5			(D)	Yes	Yes
	m/s	² , (N)		Yes/No	Yes (R)	103	
c)	W/h	ether parking	Evaluative	Yes/110	1		
-,	hral	e is effective	Evaluative				
	at a	force of 600 IN					
	at f	not pedal(s) or					
	400	N at hand			1 00 (D)	83	Yes
	love	·r		As per CMVR	88 (R)		
16.1.5	Moi	se measuremer	it:	As per Civit			
a)			Evaluative				
۹)	100000000000000000000000000000000000000	ximum hient noise				02	Yes
	THE SHIP SHADOW LAN	DICITE		214)/P	96 (R)	93	163
	em			As per CMVR			
	trac	ctor, dB(A)	Evaluative	6000 K			
b)	Ma	ximum noise	1				
	at	operator's ear		1.	100 (R)	220	No
	lev	el dB(A)	Lyibrati	ions at .	100 (R)	220	No
16.1.6	Δ	plitude of mech	anical visi	100 microns (max)	100 (R)	150	No
1.0	Am	operator's ear el, dB(A) plitude of mech Left foot rest		100 111013	100 ()		
	_')	Right foot rest			100 (R)	170	No
	2)	Right loot loot	Non		100 ()		
	3)	Seat (with	Evaluative				
		driver seated)	7		Dry type air		
	4)	Steering		0.25 %	cleaner is	, NA	NA
164=		wheel		(maximum)	provided		
16.1.7	Air	cleaner:	Non	(Maxii			
	Air	cleaner oil pull	Evaluative		T		Yes
	OVE	er, (%)			5.5 (D)	5.5	
16.4		iami	ents:):	6.0 (D)	6.0	Yes
16.1.8	Ha	ulage requirements of the t	railers, (tones				==1
a)	Gro	oss mass of the t	Non	11 -20/1):	4.5 to 6.0 (E) 4.49 to 4	1.50 No
	1)	Two wheel	Evaluative	aumption, (km/1).	4.5 to 6.0 (L 4.5 to 6.0 (L) 4.35 to 4	1.40 No
	2)	Four wheel	of fuel co	nsum	4.5 to 6.0 (L		
b)	2)	to a travelled /	litre of too				
٠,	Dis	stance travellos	Non	nsumption, (km/l):	- RIIDI	NI Pa	ige 41 of 4
	1)	Two wileon	Evaluative	INS	TITUIE - BOD.		
	2)	Four wheel		NING & TESTING INS			
_			- 418	IING or			
			- TD AII	411.			

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					5		6	7
1		2	3	4				
c)	Fuel	consumption, (m	I/km/tonne):		28.0 to 3	8.0 (D)	40.4	No
	1)	Two wheel	NOU		28.0 to 3	88.0 (D)	37.9 to 38.3	No
	2)	Four wheel	Evaluative	eration):			I NI-	Yes
16.1.9	Wet	Four wheel land cultivation	(Puddling Op	The identified	There s	should	No ingress of	165
	Sea	ling for the	Evaluative	assemblies should	be no ir	water	water	
	follo	wing assemblies		essentially meet the requirement of IS:	of and/or n		and/or	
	1)	Clutch	-do-	14082 No water ingress	and/or in	luu	mud was	
		assembly	-do-	in the identified			observed	
	2)	Brake	u.	assembly given				
		housings	-do-	column-2. If tractor does not meet				
	3)	Front axle		the requirements				
		hubs Engine oil	-do-	ho recommended				
	4)	Transmission	-do-	for dry land operation				
	5)	oil		only				
				nullovs			eets the	Yes
16.1.10	Saf	ety features :	Evaluative	Belt drives, pulleys,		req	uirement	
a)	Gu	ards against	1	silencer, hydraulic pipes (As per IS				
,		ving and hot		12239 Part 2)		N.4	eets the	Yes
	par			As per CMVR		regu	uirements	100
	 	1.11-2	Evaluative	As por			s not meet	No
b)	Lig	hting		Should meet the		thore	equirement	
	arr	angement	Non	isoments of IS		tile it	equilonien	
c)	Se	ating	Evaluative	100/12 /25 411101100-				
	rec	luirements actors having		from time to time)				
	(Tr	actors having				Doe	s not meet	No
	mc	ore than 1150		Should meet the	- 55	the r	equirement	
	mr	n track width)	Non	requirements		tile i	cquirement	
d)	Te	chnical	Evaluative				-t-most	No
	rec	ullemente		from time to the	·-	Doe	s not meet equirement	140
	PT	O shaft	Non	Should to of IS 446	88	ther	equirement	
e)	Dir	mensions of	- Luctive		, q			Yes
٠,	thr		Lvaius	from time to time, the			Meets the	res
		kage	Non	Should meet of IS		rec	quirements	
£)	Co	ecifications of	Evaluative	requirements of IS 12953 (as amended				-
f)	Sp	kage drawbar	Evaluative	from time to the		No	ot provided	NA
	HITT	kage di a		Chauld Illeat				1
		:Cations of	Non	requirements 3) (as	8 L			
	Sp	CONTICATION	allialivo	12362 (Part 3) (amended from time to				
	SW	inging drawbar		amendo				Yes
				beling plate):		INTE	RNATIONAL RACTORS	168
		beling of tractors	(Provision of la	beling plate): Should conform to			LIMITED	
16.1.11	La	beling of tractore	Evaluative	the requirements		DI-47	7 RX 4WD WL	Yes
	1)	Make		of CMVK		-	2015	Yes
			Evaluative					
	2)	Model	Evaluative			3102	IL53K526638F5	Ye
	3)	Voar of		_		3,02	10000	
	3)	manufacture	Evaluative					
	1	- :	Evalue			C7\/	DU531850S3	Ye
	4)	serial				020		
		number	Evaluative	9				
		at -soic	Evaluation				Springer Street	
	5)	number						
1		Humbo		CTING INS		2115	NII Page	e 42 of

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					5		6	7
1		2	3	4		30.52		Yes
•	6)	Declaration of PTO	Evaluative					
		power, (kW)			102.	102.02	to 102.08	Yes
6.1.12		ard limit for:	Evaluative	To be specified by	346	256.5		CC
(a)	Cylii	nder bore	Lvaicas	the manufacturer and supported by	0.45	0.137	to 0.156	Yes
/L\		neter, (mm)	Non	printed literature.				
(b)	bote	arance veen piston &	Evaluative	printed more				
		nder liner at						
	skirt	(mm)	<u> </u>		2.0		1.00	Yes
(c)	Rin	g end gap (mr	n):	-do-	2.0			
	-	Top comp.			2.0	0.60) to 0.70	Yes
		ring.	Evaluative	-do-	2.0			
	10-	2 nd comp.	Evaluative		2.0	0.70) to 0.80	Yes
		ring.	-	-do-				
	-	0:1 -:	/mm):		0.20	Tap	er rings	
(d)	Rin	g groove clea	rance (IIIII).	-do-				
	-	Top comp.			0.20	0.05	7 to 0.083	Yes
		ring.	Evaluative	-do-				
		2 nd comp.	Evaluative	1:	0.20	0.04	1 to 0.047	Yes
		ring.		-do-			11-0.001	Yes
	-		rings (mm):	0.20	0.04	1 to 0.081	163
(e)	Cle	Oil ring.	bearings	-do-	0.60		0.25	Yes
	-	Diametrical	Evaluative	-do-	0.00			
		clearance Crankshaft	Evaluative				0.081 to	Yes
		end float	zrings. (I	mm):	T 0	.20	0.081 to	103
(f)	Cle	end float arance of big e	nd bearings,	-do-		.60	0.25	Yes
	-	Diametrical	Evaluative	-do-		.00		
			Evaluative	Ų.	1	.00	NA	
	-	Axial	Non	-do-				
(g)	Cle	arance	Evaluative				0.15 to	Yes
	bet	ween king pin	LVais		1	.00	0.17	
(h)	and	d bush, (mm) earance	Non	do			enomethicost	
(11)	het	ween center	Evaluative					T
	pin	and bush,	Evalue	-ncv):	Pro	vided	Provided	Yes
	(mı	m)	seion to test a	Provided/				1/-
16.1.13	Lite	and bush, m) erature (Submis	Evaluative	Not provided	Pro	ovided	Provided	Yes
(a)	Op	perator manual		Provided/				Yes
			Evaluative	Net provideu	Pro	ovided	Provided	Yes
(b)	Pa	rts Catalogue		2.01/106/11				
			Evaluative	Not provided				
(c)	W	orkshop/						
2716.70	Se	ervice manual	1					

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Characteristic	(Evaluative /		observed	requirements
	Non			(Yes/No.)
	Evaluative)	I brookdown	None	Yes
Critical	Evaluative	No critical breakdown.	None	Yes
Major	Fugluative	them should be repetitive in		
	Evaluativo	nature.	None	Yes
Minor	= Luctive	of each should not be more than		
Evalua	Evaluative	two.	None	Yes
Total breakdowns	Evaluative	breakdowns should except the tig (2 major + 3 minor) or 5		
1	Major Minor Total	Major Evaluative Minor Evaluative	Major Evaluative Not more than two and fielder of them should be repetitive in nature. Not more than five and frequency of each should not be more than two. Fotal breakdowns Evaluative Evaluative Evaluative Evaluative Evaluative Foreakdowns Evaluative Foreakdowns Foreakdowns	Major Evaluative Not more than two and heither of them should be repetitive in nature. Not more than five and frequency of each should not be more than two. In no case, the total number of breakdowns should exceed five, breakdowns should exceed five, breakdowns should exceed five, breakdowns or 5

16.2 S. No.	Optional require	ements as per Clause-4 (Table-3 Requirements as per IS: 12207-2014	2) of IS:12207-2014: As observed	Whether meets the requireme nts (Yes/No.)
1.	Fitment of ROPS	With a provision for fitment of ROPS. If ROPS fitted it should meet ironwent of IS: 11821-	1,010	No Not applicable
2.	Accessories	If ROPS fitted it should the requirement of IS: 11821-1992. Trailer hitch, front tow hook may be provided.	bobines	No

		10.
	Conformity with following	JO.
16.3	Conformity WITH TOHOL	of t
10.5	Comorning laration (ווע

Guide lines for declaration of power and specific fuel consumption and labeling of agricultural tractors (First revision) [IS 10273:1987 (Reaffirmed in March, 2009)] i)

Agricultural tractors – Rear mounted power take-off Types 1, 2 and 3 (third revision) [IS: 4931-1995 ii)

- Three-point linkage: (Reaffirmed in March, 2009)]

Part 1 Categories 1, 2, 3 & 4 (Fourth Revision) 4468 (Part-1):1997/ ISO 730-1:1994 (Reaffirmed in iii)

Drawbar for agricultural tractors – Link type iv)

[IS 12953:1990 (Reaffirmed in March, 2007)]

Agricultural tractors - Operator's seat technical requirement [IS 12343 -1998 (First revision) (Reaffirmed in 12343) V)

Guide for safety & comfort of operator of agricultural tractors: Part 1 General requirements (first revision): [IS 12239 (PT-1) 1996 (Reaffirmed in February, vi)

Tractors and machinery for agriculture and forestry,

powered lawn and garden equipment – Symbols for operator controls and other displays [IS: 6283 (Part-1) – 2006 (Reaffirmed in March, 2009) and IS: 6283 Vii) (Part-2)-2007 (Reaffirmed in March, 2009)]/ISO 3767-

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Conforms

Conforms

Does not conform

Does not conform

Conforms

Does not conform

Does not conform

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x)

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Tractors and machinery for agriculture and forestry - : Does not conform viii) Technical means for ensuring safety Part 2: Tractors (first revision) [(IS 12239 (PT-2) 1999) (Re-affirmed

Guide lines for location and operation of operator : Does not conform controls on agricultural tractors and machinery (first ix) revision) (IS: 8133 - 1983) (Re-affirmed in March,

Agricultural Tractor & Machinery Lighting device for : Conforms travel on public roads (IS: 14683-1999) (Re-affirmed in March, 2009)

Salient Observations: 16.4

Laboratory tests: 16.4.1

PTO Performance: 16.4.1.1

- The maximum PTO power was observed as 29.7 kW against the declaration of 30.52 kW which meets the requirement of IS: 12207-2014 with regard to i)
- The specific fuel consumption corresponding to maximum power was recorded The specific fuel consumption soll as 261 g/kWh against the declaration of 272 g/kWh, which is within the ii) tolerance limit of IS: 12207-2014.
- The backup torque is 27.63 %. iii)

16.4.1.2

The creeping of RHS tyre over rim was recorded as 15 mm during ten hours The creeping of Kno tyre over this should be looked into for necessary corrective drawbar performance test. This should be looked into for necessary corrective Drawbar performance: action.

Hydraulic Performance: 16.4.1.3

- The lifting capacity at lower hitch point was observed as 12.86 kN which is less The lifting capacity at lower filter point and observed as 12.00 km which is less than the declaration of 16.00 km which doesn't meets the requirement of IS than the declaration of 16.00 km which doesn't meets the requirement of IS than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the declaration of 10.00 km miles access and the requiremental than the i)
- The maximum drop in the height of point of application of force was recorded as The maximum drop in the neight of point of application of force was recorded as 65 mm which is higher than the maximum limit of 50 mm as per IS: 12207 -2014. This should be looked into for necessary corrective action. ii)

16.4.1.4

The amplitude of mechanical vibration on various assemblies marked as (*) in The amplitude of mechanical vibration of very higher side, especially at the steering control Chapter-8 of this test report is on very higher side, especially at the steering control Chapter-8 of this test report is calls for dampening down of vibrations to incompanion of the control of the Chapter-8 of this test report is on very figure, stage of dampening down of vibrations to improve wheel, foot rests & driver seat. This calls for dampening down of vibrations to improve wheel, foot rests & driver seat service life of components. the operational comfort and service life of components.

16.4.1.5

The distance travelled per liter & specific fuel consumption with two and four wheel The distance travelled per liter & specific fuer consumption with two and four wheel trailer does not meet the values declared by the applicant. This should be looked into.

16.4.1.6

Power take off Shaft:

Take-Off Shaft does not meet the requirements of The dimension "B" of Power Take-Off Shaft does not meet the requirements of The dimension "B" abouted he looked into for necessary corrective action. The dimension "B " of Power Lake-On Shart uses not meet the rec 18:4931-1995. This should be looked into for necessary corrective action.

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Three point linkage: 16.4.1.7

The lateral distance from lower hitch point to centre line of tractor does not meet the requirement of IS: 4468 (Part-1) -1997. This should be looked into for necessary corrective action.

16.4.1.6

The length of seat and the longitudinal distance from seat index point to the centre of differential lock pedal does not meet the requirement of IS: 12343-1998. This should be looked into for necessary corrective action.

Field performance test: 16.4.2

Wet land cultivation (Puddling operation): 16.4.2.1

No ingress of water/or mud in various assemblies/components was noticed during wetland cultivation of tractor. Hence, it meets the requirements of IS: 11082-1984 wettand cultivation of tractor. Florido, it mosts the requirements of agricultural tractors for wetland operation). The tractor is found suitable for wetland operation (Puddling).

16.5

No noticeable maintenance or service problem was observed during the test.

Recommendation with regard to safety on tractor: 16.6

The following requirements, inter-alia, may be considered for incorporation on the . Provision for spark arresting device in exhaust system. tractor:

- i) ii)
- Longitudinal distance from seat index point to centre of differential lock pedal should be within the limit of easy handling of tractor. iii)
- The length of seat is less than the minimum requirement. Fuel cut off knob is provided but does not remain in stop position
- iv) v)
- Water temperature blue zone colour code is not provided.
- Water temperature plue zone colos, social so vi) sufficient for operating the lever. vii)

Adequacy of Literature supplied with machine: Adequacy of Literature supplied with the tractor for reference during the test: The following literature was supplied with the tractor for reference during the test: 16.7

16.7.1

- Operator Manual
- Service manual

 The printed literature supplied with the test sample is in English. The literature may be Reaffirmed in March. 2009) for the guidance of the printed literature supplied with the test sample is in English. The literature may be The printed literature supplied with the test sample is in English. The literature may be brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for the guidance of user brought out as per IS: 8132-1999 (Reaffirmed in March, 2009) for brought out as per 15: 8132-1333 (1364) (1364) To the and service personnel in national as well as other regional languages. 16.7.2

16.8

Labeling plate:

The labeling plate riveted on LHS mudguard of tractor meets the requirements of IS:

The labeling plate riveted in March, 2009). However the tractor make declared in March, 2009. The labeling plate riveted on Lmo managements of IS: 10273 - 1987 (Reaffirmed in March, 2009). However the tractor make declared by the 10273 - 1987 (Reaffirmed is different from the tractor make embessed 10273 - 1987 (Reaffirmed in March, 2003). However the tractor make declared by the applicant in its specifications is different from the tractor make embossed on the specification plate.

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17. CITIZEN CHARTER

Time frame for Testing & Evaluation as per Citizen Charter	Duration of test	Whether the report is released within the time frame given in the Citizen Charter	Remark
10 Months	11 Months (July, 2016 to June, 2017)	No	Due to waiting in drawbar test.

TESTING AUTHORITY:

C. K. TIJARE AGRICULTURAL ENGINEER

Allumak C. V. CHIMOTE TEST ENGINEER

Y. K. RAO SENIOR AGRICULTURAL **ENGINEER**

J.J.R. NARWARE DIRECTOR

18. APPLICANT'S COMMENTS

	10. 7.	Applicant's comments
	200	Applicant s community has studied & necessary action
Para No.	1 20 3 1.20.4,	Observations will be studied & necessary action will be incorporated.
18.1	1.20.5 (i), (ii),	Necessary quality check implemented in quality
18.2	16.3 (ii), (iii),(ix).	system.