COTTEC

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OECD TEST REPORT OF TIENIU 804 (4WD) AGRICULTURAL TRACTOR (CODE Ⅰ)

Report on test in accordance with the OECD standard code for the official testing of agricultural tractor performance (C(87)53(Final), Code Ⅰ)



OECD Approval

No.1621 Full Code

Date 2nd July, 96

Tested Tractor
Make: TIENIU
Model: TN-804
Type: 4WD

Submitted for test by
Name: Tianjin Tractor Works
Address: Tianjin, P.R. China
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This report includes 27 pages and may only be duplicated as a whole

TABLE OF CONTENTS

Page

SPECIFICATIONS OF TRACTOR ..... (3)

TEST CONDITIONS ..... (14)

TEST RESULTS ..... (17)

COMPULSORY TESTS ..... (17)

1. Main power take-off performance ..... (17)

2. Hydraulic power and lifting force ..... (19)

3. Drawbar performance ..... (21)

4. Turning area and turning circle ..... (23)

5. Location of centre of gravity ..... (23)

6. Braking ..... (23)

7. Measurement of external noise level ..... (24)

REPAIRS AND ADJUSTMENTS DURING TESTS ..... (25)

REMARKS ..... (25)

ANNEX I Main power take-off test curves ..... (26)

This report has been approved by the OECD Co-ordinating Centre (CEMAGREF) in Antony (France) on 2nd July, 1996 Approved No. 1621 Full code

TN－804　　COTTEC Test No. 951670　　OECD No. 1621

Tractor manufacturer's name and address:	Tianjin Tractor Works Tianjin, China
Location of tractor assembly:	Tianjin Tractor Works
Submitted for test by:	Manufacturer
Selected for test by:	The manufacturer with the agreement of the COTTEC
Place of running-in:	Tianjin Tractor Works
Duration of running-in:	38 hours
Location of test:	COTTEC, Luoyang, Henan, China

SPECIFICATIONS OF TRACTOR

TRACTOR

—Make:	TIENIU
—Model:	TN-804
—Type:	4WD
—Number of driving wheels:	4
—Serial No.:	0339
—1st Serial No.:	950339

ENGINE

—Make:	Beijing Internal Combusion Engine Works
—Model:	X4115T
—Type:	4 stroke, direct injection, water cooling
—Serial No.:	01844

Cylinders

—Number:	4	
—Disposition:	Vertical, in line	
－Bore/Stroke:	115/130	mm
—Capacity:	5400	cm^3
—Compression ratio:	16.5:1	
—Arrangement of valves:	Over head, in line	
－Cylinder liners:	Wet	

Fuel system

—Fuel feed system:	Forced feed type	
—Fuel filter:		
·Make:	Bangbu Tractor Accessery Works	
·Model /type:	2CS0712A, Two-stage series connection paper cartridge, replaceable	
—Capacity of fuel tank:	106	dm^3
—Injection pump		
·Make:	First Tractor Works	
·Model/type:	BⅡ in Line, plunger	
·Serial No.:	ZHBF495－27A	
—Manufacturer's prpduction setting of injection pump:		
·Flow rate (at rated engine speed and full load):	18～19	dm^3/h
·Timing:	17＋3° before T.D.C.	
—Injectors:		
·Make:	CAV	
·Model/Type:	CAV, Low inertia, Long reach, 4 orifices, closed.	
·Injection pressure:	19.61	MPa

Governor

—Make:	First Tractor Works	
－Model/type:	Mechanical, centrifugal	
－Governed range of engine speed:	600～2160	rev/min
－Rated engine speed:	2000	rev/min

Air cleaner

－Make:	Bangbu Tractor Accessory Works	
－Model/Type:	F5/6L912A1, Oil bath with centrifugal stack cap	
－Location of air intake:	Above bonnet	
－Maintenance indicator:	None	

Lubrication system

－Type of feed pump:	Gear pump	
－Type & Number of filter(s):	QL115 Full flow, centrifugal, 1	

Cooling system

－Type of coolant:	Water	
－Type of pump:	Centrifugal	
－Description of fan:	Axial flow type, belt driven	
－Number of fan blades:	6	
－Fan diameter:	480	mm
－Coolant capacity:	28	dm^3
－Type of temperature control:	Thermostat	
－Superpressure system	None	

Starting system

－Make:	Kaifeng Tractor Electrical Machinery Factory	
－Model/Type:	QD1501, D.C. solenoid engaged	
－Starter motor power rating:	3.7	kW
－Cold starting aid:	Eletrothermic plug or Preheater	
－Safety device:	Clutch pedal in depressed position	

Electrical system

－Voltage:	12 (Negative earth)	V
－Generator:		
·Make:	Shanghai Automobile Electrical Machinery Factory	
·Model/Type:	JFZ1514Y, Alternator, belt driven	
·Power:	0.5	kW
－Battery(number of accumulators):		
·Model/Type:	6－QA－150, Lead acid	
·Number:	1	
·Rating:	150	Ah

Exhaust system

－Make:	Own make
－Model/Type:	Tie Niu baffler
－Location:	Right-hand side of the engine, vertical

TRANSMISSION TO WHEELS

Clutch(Travel and Power Take-off)

－Make:	Own make
－Model/Type:	Dry, Constant engaging, Independent.
－Number of plate(s):	2 for travel and P.T.O
－Diameter of plate(s):	328 mm for travel, 316 mm for P.T.O
－Method of operation:	By pedal for travel, by lever for P.T.O

Gear box

－Make:	Own make
－Model/Type:	TN－804, Spur gear, (3＋1)×4 Compound,
－Arrangment:	Gear box with 4 speeds, GROUP GEAR with 4 ranges (L、M、H and Reverse)
－Number of gears:	12 forward and 4 reverse gears
－Available options:	None

Rear axle and final drives

－Make:	Own make
－Model/Type:	Crown wheel and pinion bevel gear differential, spur gear final drives fixed inside of the rear box.
－Differential Look:	
・Type	Mechanical
・Method of engagement:	By pedal
・Method of disengagement:	Self disengaging

Front axle and final drives

－Make:	Own make
－Model/Type:	Crown wheel and pinion bevel gear differential, spur gear final drives, machanical differential lock, engagement or disengagement by lever.

Total ratios and travelling speeds

Gear No.	Group	Range	Number of engine revolutions for one revolution of the driving wheels	Number travellings at rated engine speed 2000 rev/min km/h
1	L	1	157.3	3.55
2	M	1	133.6	4.18
3	L	2	100.2	5.57
4	M	2	85.2	6.55
5	L	3	73.5	7.59
6	M	3	62.4	8.94
7	L	4	55.5	10.05
8	H	1	53.3	10.47
9	M	4	47.2	11.82
10	H	2	34.0	16.41
11	H	3	24.9	22.41
12	H	4	18.8	29.68
R1		1	94.2	5.92
R2		2	60.0	9.30
R3		3	44.0	12.68
R4		4	33.2	16.81

* Calculated with a tyre dynamic radius index of 740mm ISO 4251/1－1992
Number of revolutions of front wheels for one revolution of rear wheels: 1.530

POWER TAKE-OFF

Main power take-off

－Type:	Independent
－Method of engagement:	By hand lever
－Number of shafts:	1
－Method of changing power take-off shaft ends and speeds:	Manually, by exchanging p.t.o shafts

Power take-off proportional to engine speed

540 rev/min

－Location:	At rear of the tractor	
－Diameter of power take-off shaft end:	35	mm
－Number of splines:	6, in conformity with ISO 500/1991	
－Height above ground:	677.5	mm
－Distance from the median plane of the tractor:	0	mm
－Distance behind rear wheel axis:	484	mm
－PTO speed at rated engine speed:	616	rev/min
－Engine speed at standard power take-off speed:	1750	rev/min
—Ratio of rotation speeds (engine speed/p.t.o. speed):	3.25	
－Power restriction and maximum torque: (Manufacturers recomendation)	47.8 kW　740 N·m	
－Direction of rotation(viewed from behind tractor):	Clockwise	

1000 rev/min

－Location:	At rear of the tractor	
－Diameter of power take-off shaft end:	34.67	mm
－Number of splines:	21, in conformity with ISO 500/1991	
－Height above ground:	677.5	mm
－Distance from the median plane of the tractor:	0	mm
－Distance behind rear wheel axis:	484	mm
－PTO speed at rated engine speed:	1121	rev/min
－Engine speed at standard power take-off speed:	1782	rev/min
－Ratio of rolation speeds (engine speed/p.t.o. speed):	1.78	
－Power restriction and maximun torque:	58.8 kW　500 N·m	
－Direction of rotation (viewed from behind tractor):	Clockwise	

Optional Power Take-off: None

Power take-off proportional to ground speed: None

POWER LIFT

－Make:	Own make	
－Type of hydraulic system:	Separated units, Open center system	
－Type and number of cylinders:	Single acting, 1	
—Opening pressure of cylinder safety valve:	20	MPa
－Type of linkage lock for transport:	Hydraulic lock	
－Relief valve pressure setting:	15±0.5	MPa
－Lift pump type:	CBT E528, gear pump	
－Transmission between pump and engine:	By gear transmission	
－Type and number of filter(s):	Metal mesh, 1	
－Site of oil reservior:	Above rear axle, under seat.	
—Tapping point(s)		
・Type:	ISO standard quick coupler	
・Number:	6	
・Location:	At the rear of tractor	
－Maximum volume of oil available to external cylinders:	15	dm^3

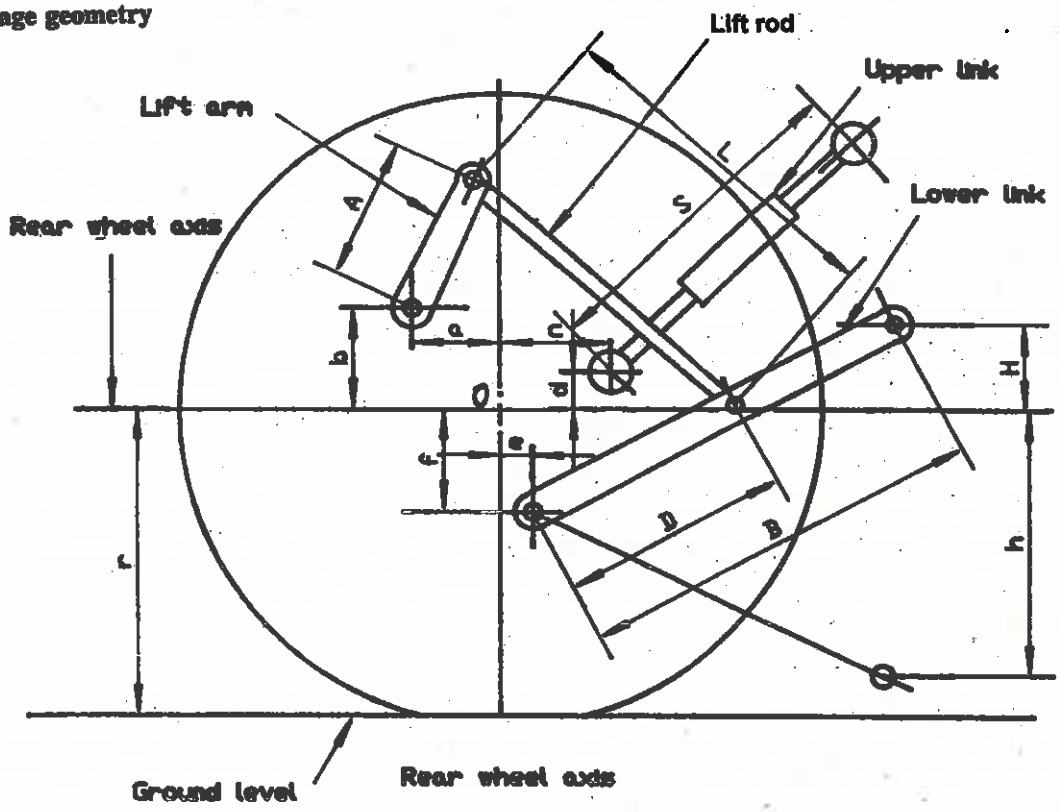
Three point linkage

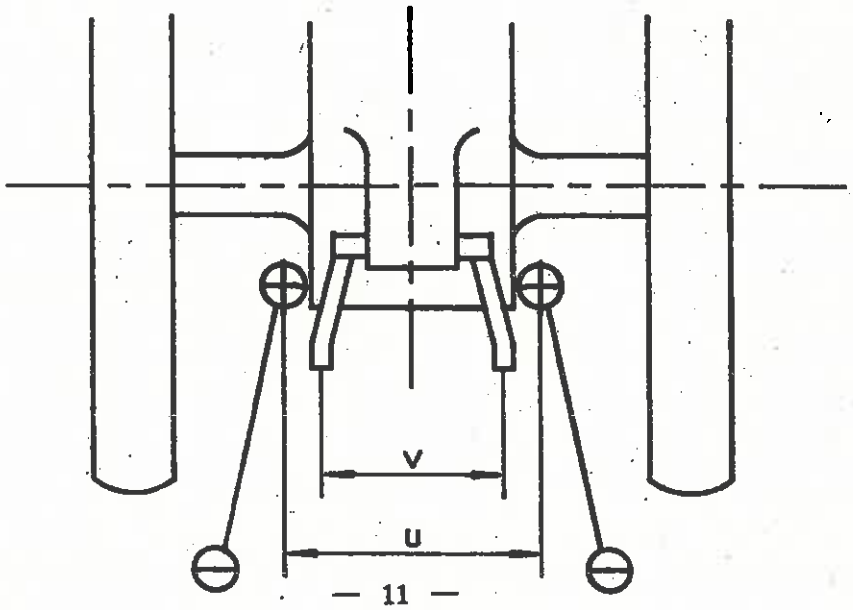
－Category:	Ⅱ to ISO standard 730/I－1990
－Category adapter:	None
－Linkage geometry:	See next page and following table

		Dimension or range * mm	Setting used in test mm
Length of lift arms	(A)	260	260
Length of lower links	(B)	896	896
Distance of lift arm pivot point from rear wheel axis: Horizontally	(a)	－161.7	－161.7
Vertically	(b)	435	435
Horizontal distance between the 2 lower link points:	(u)	529	529
Horizontal distance between the 2 lift arm end points	(v)	620	620
Length of upper link	(S)	from 630 to 800	700
Distance of upper link pivot point from rear wheel axis: Horizontally	(c)	422.7	422.7
Vertically	(d)	187	187
Distance of lower link pivot point from rear wheel axis: Horizontally	(e)	235	235
Vertically	(f)	227	227
Distance of lower link pivot points to lift rod pivot points on lower links	(D)	480	480
Length of lift rods	(L)	from 715 to 850	810
Height of lower hitch points relative to the rear wheel axis:			
in low position	(h)	from 390 to 695	590
in high position	(H)	from 310 to 90	204
Height above ground of lower hitch points when locked in transport position		Any height within lift range	

* Assuming (r) with a tyre dynamic radius index of 740mm(ISO 4251/1－1992)

Linkage geometry





SWINGING DRAWBAR

－Type:	Longitudinally adjustable	
－Height above ground:	495	mm
－Type of adjustment:	step adjusting	
－Distance of hitch point from rear wheel axis, horizontally:	885	mm
－Distance of hitch point from P.T.O shaft end:		
・Vertically:	182	mm
・Horizontally:	401	mm
－Lateral adjustment (Centre of clevis)		
・Right hand:	200	mm
・Left hand:	200	mm
－Distance of pivot point from rear wheel axis, horizontally:	45	mm
－Diameter of drawbar pin hole:	36	mm
－Maximum vertical permissible load:	7	kN

TRAILER HITCH

－Type:	Fixed	
－Hole diameter:	36	mm
－Height above ground:	900	mm
－Distance of hitch point from rear wheel axis, horizontally:	503	mm
－Distance of hitch point from power take-off shaft end:		
・Vertically:	222.5	mm
・Horizontally:	19	mm
－Maximum vertical permissible load:	10	kN

STEERING

－Make:	Jining Hydraulic Part Factory	
－Model/Type:	BZZI－100, Hydrostatic steering system	
—Method of operation:	Manual operated	
－Working pressure:	6.5	MPa

BRAKES

－Make:	Own make	
－Model/Type	Dry disc	
－Method of operation:	By pedals, coupled or independent	

－Trailer braking take-off: Pneumatic braking, operated by tractor pedals

Parking brake

－Type: Mechanical, shoe brake

－Method of operation: By hand

WHEELS

－Number

・Front: 2, steering and driving

・Rear: 2, driving

－Wheelbase: 2543 mm

－Track width adjustment:

	Minimum mm	Maximum mm	Adjustment method
Front	1440	1840	Reversing wheels or Off-set lug rims, four steps.
Rear	1500	1800	shifting wheels on the shaft.

DRIVER'S SEAT

－Make: Shanghai Tractor and Internal Combustion Engine Co.

－Model/Type: C3N2, Adjustable suspension

－Type of suspension: Spring with damper

－Type of damping: Hydraulic damper

－Range of adjustment:

・Longitudinal: 50 mm

・Vertical: 90 mm

MISCELLANEOUS

－Additional seat: On the left fender

－Number of places: 1

LIGHTING

	Height above ground of center mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlight	1207	D132	270
Sidelight	1750	102×88	890
Rearlight	2600	143×70	600
Brakelight	1545	85×80	708

TEST CONDITIONS

OVERALL DIMENSIONS

	Length mm	Width		Height at top of	
		Minimum mm	Maximum mm	protective structure mm	exhaust silencer mm
Ballasted	4620	2040	2460	2710	2505
Unballasted	4370	2040	2460	2710	2505

GROUND CLEARANCE(unballasted tractor):

—Clearance limiting part:　　470 mm　under the front axle
418 mm　under the swinging drawbar.

TRACTOR MASS

Without protective structure and full fuel:

	Ballasted		Unballasted	
	Without driver kg	With driver kg	Without driver kg	With driver kg
Front	1801	1806	1560	1570
Rear	2901	2971	2820	2885
Total	4702	4777	4380	4455

BALLAST

	Weights		Water kg
	Number	Total mass kg	
Front	4	172	—
Rear	4	150	—

TYRE SPECIFICATIONS

	Front	Rear
Tyres:		
Dimensions	9.5—24	16.9—34
Ply rating	6	8
Type	Cross ply	Cross ply
Maximum load (tyre manufacturer's)	6.75 kN	19.85 kN
Inflation pressure (tyre manufacturer's)	118 kPa	118 kPa
Dynamic radius index	500 mm	740 mm
Chosen track width:	1540 mm	1570 mm

OILS AND LUBRICATION

Capacity and change interval:

	Capacity dm^3	Oil change h	Filter change h
Engine	20	200	200
Gear box	44	one year	—
Rear axle	Common with gear box		—
Final drive (rear)	Common with gear box		—
Hydraulic system	38	1000	—
Steering	Common with hydraulic system		—
Front axle	4.4	1000	—
Final drive (front)	2.8	1000	—

TN－804　　COTTEC Test No. 951670　　OECD No. 1621

Specifications:

	Recommended	Used during test
Engine oil		
Type:	SAE 10W/30	CC30(Winter)CC40(Summer)
Viscosity:	11.4 mm^2/s at 100℃	10 mm^2/s at 100℃
Classification:	API CC	GB 5323－85
Transmission oil		
Type:	SAE 80W/90	80W/90
Viscosity:	9.3 mm^2/s at 100℃	15～19 mm^2/s at 100℃
Classification:	API GL－4	SH0350—92
Hydraulic fluid		(China standard)
Type:	Same as trans. oil	YB－N68
Viscosity:		(China standard)
Classification:		
Steering oil		
Type:	Same as trans. oil	YB－N68
Viscosity:		
Classification:		

Grease

－Type: ZFD－12 complex calcium base grease
ZBE 36003－88(China standard)

－Number of lubrication points: 20

Fuel

－Type: Standard diesel fuel in conformity with GB 10327－89

－Density at 15℃: 0.848 g/cm^3

TEST RESULTS

COMPULSORY TESTS RESULTS

1. MAIN POWER TAKE-OFF

－Date and location of tests: 6th Nov. 1995, COTTEC

－Type of dynamometer: LPA－Bedienpult 250 Elec. dynamometer

Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O.	Hourly		Specific	
kW	rev/min		kg/h	1/h	g/kW·h	kW·h/l
1.1 MAXIMUM POWER－TWO HOUR TEST						
54.14	2000	1124	14.56	17.17	269	3.15
1.2 POWER AT RATED ENGINE SPEED						
54.14	2000	1124	14.56	17.17	269	3.15
1.3 STANDARD POWER TAKE-OFF SPEED 1000±25 rev/min						
51.41	1780	1000	13.89	16.38	270	3.14
1.4 PART LOADS						
1.4.1 The torque corresponding to max. power at rated engine speed						
54.14	2000	1124	14.56	17.17	269	3.15
1.4.2 85% of the torque obtained in 1.4.1						
46.92	2040	1146	12.49	14.73	266	3.19
1.4.3 75% of the torque defined in 1.4.2						
35.71	2065	1160	10.07	11.88	282	3.01
1.4.4 50% of the torque defined in 1.4.2						
24.07	2088	1173	7.83	9.23	325	2.61
1.4.5 25% of the torque defined in 1.4.2						
12.12	2102	1181	5.88	6.93	485	1.75
1.4.6 Unloaded						
2.24	2113	1187	4.26	5.02	—	—

TN－804　　COTTEC Test No. 951670　　OECD No: 1621

Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O.	Hourly		Specific	
1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED 1000 rev/min						
1.5.1 The torque corresponding to maximum power						
51.41	1780	1000	13.89	16.38	270	3.14
1.5.2 85% of the torque obtained in 1.5.1						
48.12	1962	1102	12.56	14.81	261	3.25
1.5.3 75% of the torque defined in 1.5.2						
36.53	1978	1111	10.03	11.83	274	3.09
1.5.4 50% of the torque defined in 1.5.2						
24.62	2003	1125	7.70	9.08	313	2.71
1.5.5 25% of the torque defined in 1.5.2						
12.94	2022	1136	5.65	6.66	437	1.94
1.5.6 Unloaded						
2.15	2033	1142	3.97	4.68	—	—

－ No load maximum engine speed:	2113	rev/min
－ Equivalent crankshaft torque at maximum power at rated engine speed	258.4	N·m
－ Maximum Equivalent crankshaft torque: (Engine speed: 1290 rev/min)	297.2	N·m
－ Mean atmospheric conditions		
·Temperature:	28.2	℃
·Pressure:	99.7	kPa
·Relative humidity:	62	%
－ Maximum temperatures		
·Coolant:	83	℃
·Fuel:	27.3	℃
·Engine air intake:	33	℃
·Engine oil:	93	℃

2. HYDRAULIC POWER AND LIFTING FORCE

－Date and location of tests:　15th Nov., 1995, COTTEC

2.1 HYDRAULIC POWER TEST

－Sustained pressure with relief valve open:　15.1　MPa

－Pump delivery rate at minimum pressure:　46.0　1/min

	Flow rate 1/min	Pressure MPa	Power kW
Flow rate corresponding to a hydraulic pressure equivalent to 90 per cent of the actual relief valve pressure setting and corresponding hydraulic power	41.5	13.59	9.96
Flow rate and hydyaulic pressure corresponding to max. hydraulic power	43.3	14.0	10.10

－Tapping point used for test:　At rear part of the tractor

－Temperature of hydraulic fluid:　65.5　℃

－Opening pressure of the unloading valve:　None

－Closing pressure of the unloading valve:　None.

2.2 POWER LIFT TEST

	At the hitch point	On the frame at the 610 mm point
Height of lower hitch points above ground in down position (with lifting load) mm	193	167
Vertical movement (with lifting load) mm	665	792
Maximum corrected force exerted throught full range kN	19.69	18.05
Corresponding pressure of hydraulic fluid MPa	13.59	13.59
Moment about rear wheel axle kN·m	21.86	31.05
Maximum tilt angle of mast from vertical degrees	—	10.1

－Linkage setting for test: see above table and figures on page 11

Lifting heights relative to the horizontal plane inculding the lower link pivot points											
mm	－346	－320	－200	－100	0	100	200	300	345	400	446
Lifting forces (the values of force measured are corrected to correspond to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting of the hydraulic lift system).											
At the hitch point kN	—	19.69	23.90	25.89	27.35	25.58	29.70	31.55	26.64	—	—
Corresponding pressure: 13.59 MPa											
At the frame kN	19.21	19.68	21.88	22.80	23.33	23.56	23.39	23.07	23.00	21.27	18.05
Corresponding pressure: 13.59 MPa											

3. DRAWBAR PERFORMANCE

—Date of tests: 9th～11th Nov., 1995

—Type of track: Concrete

	Height of drawbar above ground mm	Tyre inflation pressure kPa	
		Front	Rear
Unballasted	480	118	118
Ballasted	475	118	118

Gear and range	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atmospheric conditions		
								Fuel	Coolant	Engine oil	Temperature	Relative humidity	Pressure
	kW	kN	km/h	rev/min	%	g/kW·h	kW·h/l	℃	℃	℃	℃	%	kPa
3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)													
1 L1	32.21	36.01	3.22	2068	15.0	344	2.47	25	75	83	17	62	99.8
2 M1	37.70	36.19	3.75	2055	15.0	332	2.56	26	77	84	17	62	99.8
3 L2	45.34	31.63	5.16	2023	11.4	319	2.66	26	78	86	17	62	99.8
4 M2	46.34	26.60	6.27	2041	8.8	314	2.71	26	79	86	17	62	99.8
5 L3	47.35	23.06	7.39	2041	7.4	309	2.75	27	79	86	17	62	99.8
6 M3	47.88	19.72	8.74	2028	6.7	306	2.78	27	80	88	17	62	99.8
7 L4	48.19	17.45	9.94	2042	6.0	303	2.81	27	81	89	17	62	99.8
8 H1	49.03	16.97	10.40	2040	5.7	295	2.88	28	83	92	17	62	99.8
9 M4	47.72	14.77	11.63	2027	4.9	304	2.80	28	83	93	17	62	99.8

Gear and range	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atmospheric conditions		
								Fuel	Coolant	Engine oil	Temperature	Relative humidity	Pressure
	kW	kN	km/h	rev/mfn	%	g/kW·h	kW·h/l	℃	℃	℃	℃	%	kPa
3.2 MAXIMUM POWER IN TESTED GEARS (Ballasted tractor)													
1 L1	33.04	37.75	3.15	2062	15.1	344	2.47	26	76	83	17	62	99.8
2 M1	38.96	37.80	3.71	2047	15.0	323	2.63	27	77	84	17	62	99.8
3 L2	45.56	32.28	5.08	2012	10.2	320	2.66	27	78	86	17	62	99.8
4 M2	46.05	27.17	6.10	2017	7.9	312	2.73	27	79	87	17	62	99.8
5 L3	47.30	23.32	7.30	2031	5.9	302	2.82	28	79	88	17	62	99.8
6 M3	47.15	19.78	8.58	2029	5.2	309	2.75	28	80	89	17	62	99.8
7 L4	47.14	17.33	9.79	2009	4.5	300	2.84	28	80	90	17	62	99.8
8 H1	48.19	17.04	10.18	2021	4.1	301	2.83	29	81	92	17	62	99.8
9 M4	46.78	14.90	11.30	1983	3.8	313	2.72	30	82	94	17	62	99.8
3.3 TEN-HOUR TEST (ballasted tractor)													
3.3.1 FIVE-HOUR TEST at 75 per of pull at maximum power													
5 L3	36.55	17.47	7.53	2060	4.1	310	2.74	27	80	92	19	63	99.8
3.3.2 FIVE-HOUR TEST at pull corresponding to 15 per cent wheelslip without additional ballast													
2 M1	39.10	37.73	3.73	2040	14.8	320	2.66	27	80	94	18	63	99.8

Oil consumption during ten hours duration of tests 3.3.1 and 3.3.2 : 61 g/h

4. TURNING AREA AND TURNING CIRCLE

Details of wheel equipment:

	Tyre size	Track mm
Front	9.5－24	1540
Rear	16.9－34	1570

	With brakes		Without brakes	
	Right hand m	Left hand m	Right hand m	Left hand m
Radius of turning area	4.32	4.74	5.08	5.40
Radius of turning circle	4.20	4.62	4.96	5.28

5. LOCATION OF CENTRE OF GRAVITY

- Height above ground: 859 mm
- Distance forward from the vertical plane containing the axle of the rear wheels: 896 mm
- Distance from the median plane of the tractor: From right 6.5 mm

6. BRAKING

- Date of tests: 15th Nov., 1995
- Type of track: Concrete
- Speed before application of brakes: 32.0 km/h

6.1 COLD SERVICE BRAKING DEVICE TEST

Ballasted tractor	Braking device control force N	165	230	308	395	486	554
	Mean deceleration m/s^2	1.05	1.61	2.45	2.95	3.17	3.22
Unballasted tractor	Braking device control force N	130	223	301	429	518	566
	Mean deceleration m/s^2	0.81	1.88	2.76	3.25	3.35	3.39

6.2 FADE TEST

Ballasted tractor	Braking device control force N	146	192	270	373	453	541
	Mean deceleration m/s^2	1.15	1.67	2.34	3.01	3.28	3.31

- Maximum deviation of tractor from its original course: 30 mm
- Abnormal vibration: None
- The brakes were heated by: Driving

6.3 PARKING BRAKING DEVICE TEST

	Up	Down
Braking device control force N	441	441

7. MEASUREMENT OF EXTERNAL NOISE LEVEL

- Date of tests: 15th Nov., 1995 COTTEC
- Sound level meter, Make/Model/Type: B & K 2209
- Type of track: Concrete
- Gear number: 12(H4)
- Travelling speed before acceleration: 24.1 km/h
- Sound level: 87.0 dB(A)

TN－804　　COTTEC Test No. 951670　　OECD No. 1621

REPAIRS AND ADJUSTMENTS DURING TESTS:

None

REMARKS:

In COTTEC the safety limit speed of drawbar testing equipment is 12 km/h , so we only do drawbar power test in the gears which the speed is below 12 km/h.

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Senior engineer

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Luo Guanghui

Vice-director of the COTTEC
Senior engineer

朱荫梧

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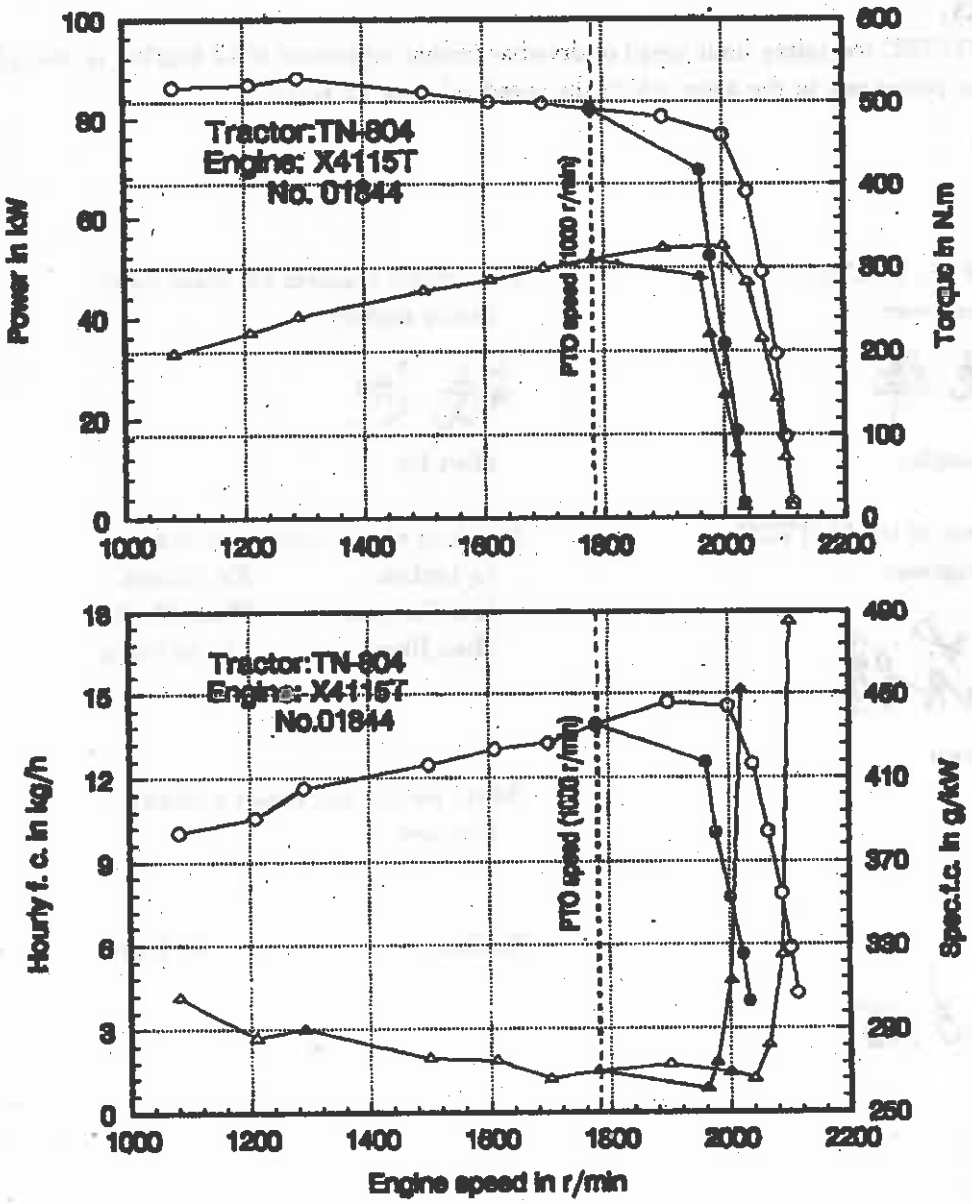
Xu Xiao　　Qi Liang

Date:

1996.5.15

ANNEX I

MAIN POWER TAKE – OFF TEST CURVES



TN – 804 COTTEC Test No. 951670 OECD No. 1621

MAIN POWER TAKE – OFF TEST CURVES

